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

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

LAW

VOLUME 1 OF 3

BID BOOKLET

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND REQUIRED FOR:

PROJECT ID: PV176ITF1

RECONSTRUCTION AND REHABILITATION OF
BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
BRONX RIVER PARKING LOT AND OVERFLOW LOT
INTERSECTION OF JUNGLE WORLD ROAD
AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

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

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

FOR THE DEPARTMENT OF TRANSPORTATION
PREPARED BY
THE RBA GROUP

JULY 25, 2014

NYSDOT PIN X770.77
Fed. Aid Project No. _____

Bid Opening 11:00 A.M. on _____
Location 1st Floor Bid Room, 30-30 Thomson Ave., Long Island City, N.Y. 11101

N 5-043

Bid Tab

Description	RECONSTRUCTION AND REHABILITATION OF BRONX ZOO INTERMODAL TRANSPORTATION FACILITY, ETC... - BOROUGH OF THE BRONX		
Bid Date	11/19/2014	FMS ID	PV176ITF1
Estimated Cost	$8,553,986.00	Client Agency	DOT
Bid Security	Not less than 2% of Total Bid Price	PLA	No
Time Allowed	425 CCD	Contract Manager	Tia Clarke
Addendum	7	Project Manager	Rawal, Aniruddh
PIN	8502014HW0019C	E-PIN	85014B0082
Selective Bidding	☐Yes ☒No	Consultant	The RBA Group

Bid Rank	Vendor	Bid Amount	Security Type
1	RESTANI CONSTRUCTION CORP.	$8,775,045.40	Bond
2	BOVE INDUSTRIES, INC.	$9,170,100.00	Bond
3	GAZEBO CONTRACTING INC	$9,718,553.47	Bond
4	PAUL J. SCARIANO INC.	$9,761,000.00	Bond
5	FGI CORP.	$9,952,169.00	Bond
6	MONTESANO BROS. INC.	$9,999,975.00	Bond
7	COPPOLA PAVING & LANDSCAPING CORP.	$10,398,000.00	Bond
8	PERFETTO CONTRACTING CO. INC.	$10,869,798.17	Bond
9	BEYS SPECIALTY, INC.	$12,717,000.00	Bond

Recorder: Melanie Sanchez ext. 3430 Approver: Lorraine Holley

Bid Tab
Pin: 8502014HW0019C

Department of Design and Construction

DR. FENIOSKY A. PEÑA-MORA
Commissioner

Lorraine Holley
Deputy Agency Chief
Contracting Officer

February 11, 2016

CERTIFIED MAIL - RETURN RECEIPT REQUEST
RESTANI CONSTRUCTION CORP.
42-04 BERRIAN BLVD.
ASTORIA, NY 11105

RE: FMS ID: PV176ITF1
E-PIN: 85014B0082001
DDC PIN: 8502014HW0019C
Reconstruction and Rehabilitation of Bronx Zoo Intermodal Transportation Facility, etc. - Borough of the Bronx
NOTICE OF AWARD

Dear Contractor:

You are hereby awarded the above referenced contract based upon your bid in the amount of $8,775,045.40 submitted at the bid opening on November 19, 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.

Department of Design and Construction

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

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

Sincerely,

Lorraine Holley

Lorraine Holley

30 - 30 Thomson Ave L.I.C., NY 11101 Telephone: (718) 391-2601 Facsimile: (718) 391-2615 www.nyc.gov/buildnyc

Department of Design and Construction

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

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

Sincerely,

Lorraine Holley

Lorraine Holley

30 - 30 Thomson Ave L.I.C., NY 11101 Telephone: (718) 391-2601 Facsimile: (718) 391-2615 www.nyc.gov/buildnyc

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

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

PROJECT ID: PV176ITF1

RECONSTRUCTION AND REHABILITATION OF BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
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INTERSECTION OF JUNGLE WORLD ROAD
AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

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

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORKN

Name of Bidder: Restani Construction Corp.

Date of Bid Opening: November 19, 2014

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

Place of Business of Bidder: 4204 Berrian Blvd, Astoria NY 11105

Bidder's Telephone Number: 718 728 0870 Fax Number: 718 728 0873

Bidder's E-Mail Address: ckazerani@restani.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: Salvatore Restivo
1 Blvd Malba, NY 11357

Name and Home Address of Secretary: _____

Name and Home Address of Treasurer: _____

BID FORM

The above-named Bidder affirms and declares:

1. The said bidder is of lawful age and the only one interested in this bid; and no person, firm or corporation other than hereinbefore named has any interest in this bid, or in the Contract proposed to be taken.

2. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief: (1) the prices in this bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor; (2) unless otherwise required by law, the prices quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and (3) No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

3. No councilman or other officer or employee or person whose salary is payable in whole or in part from the City Treasury is directly or indirectly interested in this bid, or in the supplies, materials, equipment, work or labor to which it relates, or in any of the profits thereof.

4. The bidder is not in arrears to the City of New York upon debt or contract or taxes, and is not a defaulter, as surety or otherwise, upon any obligation of the City of New York, and has not been declared not responsible, or disqualified, by any agency of the City of New York or State of New York, nor is there any proceeding pending relating to the responsibility or qualification of the bidder to receive public contracts except as set forth on the Affirmation included as page C-6 of this Bid Booklet.

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

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

BID FORM

PROJECT ID. PV176ITF1

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

TOTAL BID PRICE:
(a/k/a BID PROPOSAL) $ 8,775,045.40

BIDDER'S SIGNATURE AND AFFIDAVIT

Bidder: Restani Construction Corp

By: _____
(Signature of Partner or corporate officer)

_____
Secretary of Corporate Bidder

Attest:
(Corporate Seal)

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

BID FORM (TO BE NOTARIZED)

AFFIDAVIT WHERE BIDDER IS AN INDIVIDUAL

STATE OF NEW YORK, COUNTY OF _____ ss:

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

_____
(Signature of the person who signed the Bid)

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

_____
Notary Public

AFFIDAVIT WHERE BIDDER IS A PARTNERSHIP

STATE OF NEW YORK, COUNTY OF _____ ss:

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

_____
(Signature of Partner who signed the Bid)

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

_____
Notary Public

AFFIDAVIT WHERE BIDDER IS A CORPORATION

STATE OF NEW YORK, COUNTY OF Queens ss:

I am the President of Salvatore Restivo being duly sworn says:
executed the foregoing bid. I reside at 1 Blvd Malba NY 11357.
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
19 day of November, 2014

Notary Public

MICHAEL CALDERONE
Notary Public, State of New York
No. 01CA6203919
Qualified in Suffolk County
Commission Expires April 13, 2017

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: Restani Construction Corp.
Address: 4204 Berrian Blvd.
City Astoria State New York Zip Code 11105

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

/X/ C- Corporation
EMPLOYER IDENTIFICATION NUMBER
11-2814769

By: _____
Signature

Title: President

If a corporation, place seal here

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

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

(NO TEXT ON THIS PAGE)

BID SCHEDULE

NOTICE TO BIDDERS

Items listed in this Bid Schedule which have one (1) digit followed by a decimal (e.g. 4.01 RAE), excluding items beginning with the number "8.01", shall comply with the requirements of the corresponding numerical Sections of the New York City Department of Transportation Standard Highway Specifications, as amended by Addendum No. 1 herein Volume 3 of 3.

Items listed in this Bid Schedule which have two (2) digits beginning with the numbers "5", "6" and "7" followed by a decimal (e.g. 52.11D12, 60.12D06, and 70.31FN) shall comply with the requirements of the New York City Department of Environmental Protection (NYCDEP) STANDARD SEWER AND WATER MAIN SPECIFICATIONS dated July 1, 2014, as amended by Addendum No. 3 herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with the number 8.01 followed by a letter (e.g. 8.01 C2) shall comply with the requirements of the corresponding numerical Sections of the SPECIFICATIONS FOR HANDLING, TRANSPORTATION AND DISPOSAL OF NON-HAZARDOUS AND POTENTIALLY HAZARDOUS CONTAMINATED MATERIALS contained in Addendum No. 4, herein Volume 3 of 3.

Items listed in this Bid Schedule which have three (3) digits followed by a decimal (e.g. 640.23), shall comply with the requirements of the corresponding numerical Sections of the STATE OF NEW YORK, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS (US CUSTOMARY UNITS), dated May 1, 2008, and as currently amended.

Items listed in this Bid Schedule beginning with the prefix "NYC-" (e.g. NYC-640.2500001 and NYC-640.2500002) are modified versions of the New York State, Department of Transportation, Special Specifications (US Customary Units) and shall comply with the corresponding alphanumeric Sections in Addendum No. 1 herein Volume 3 of 3.

However in the Specifications for items referred to in the above two paragraph, all references to the "Department", "Materials Bureau", "Regional Engineer", etc., shall be deemed to mean the "Engineer". Where any reference is made on the contract drawings or specifications to the "State" or any of its officials, the Contractor shall substitute the City of New York, Department of Design and Construction, or any of its appropriate officials. The NYSDOT Specifications described above neither imply the State's involvement in any testing and approval of materials, nor in the supervision of construction.

Items listed in this Bid Schedule beginning with the prefix "E" (e.g. E 260533 CF-1) shall comply with the requirements of the corresponding alphanumeric Sections in Addendum No. 1 herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with the prefix "PK-" (e.g. PK-320) shall comply with the requirements of the corresponding alphanumeric Sections incorporated in Addendum No. 1, herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with the prefix "SL-" (e.g. SL-21.09.05) are Street Lighting Items, less the prefix, which shall be done in accordance with the requirements of Sub-Section 1.06.23.(D) and Section 1.06.49 in the Standard Highway Specifications.

BID SCHEDULE

NOTE: (1) The Agency may reject a bid if it contains unbalanced bid prices. An unbalanced bid is considered to be one containing lump sum or unit items which do not reflect reasonable actual costs plus a reasonable proportionate share of the Bidder's anticipated profit, overhead costs, and other indirect costs, anticipated for the performance of the items in question.

(2) The following bid prices on Unit Price Contracts are to be paid for the actual quantities of the item numbers in the completed work or structure, and they cover the cost of all work, labor, material, tools, plant and appliances of every description necessary to complete the entire work, as specified, and the removal of all debris, temporary work and appliances.

(3) PLEASE BE SURE A LEGIBLE BID IS ENTERED, IN INK, FOR EACH ITEM.
Alterations must be initialed in ink by the bidder.

(4) The Extended Amount entered in Column 6 shall be the product of the Estimated Quantity in Column 3 times the Unit Price Bid in Column 5.

(5) Prospective bidders must examine the Bid Schedule carefully and, before bidding, must advise the Commissioner, in writing, if any pages are missing, and must request that such missing pages be furnished them. The pages of this Bid Schedule are numbered consecutively, as follows:
B - 3 [REVISION # 1] Through B -38 [REVISION # 1]

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

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

PROJECT ID: PV176ITF1
CONTRACT PIN: 8502014HW0019C

BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
001	4.01 RAE ASPHALT MACADAM PAVEMENT, 4" THICK	4,241.00	S.Y.	20.	—	84,820.	—
002	4.01 RAF ASPHALT MACADAM PAVEMENT, 5" THICK	10,707.00	S.Y.	25.	—	267,675.	—
003	4.02 AF-R ASPHALTIC CONCRETE WEARING COURSE, 2" THICK	17,816.00	S.Y.	15.	—	267,240.	—
004	4.02 AG ASPHALTIC CONCRETE WEARING COURSE, 3" THICK	164.00	S.Y.	20.	—	3,280.	—
005	4.02 CB ASPHALTIC CONCRETE MIXTURE	2,650.00	TONS	150.	—	397,500.	—
006	4.04 AC CONCRETE BASE FOR PAVEMENT, 6" THICK, CLASS B-32	33.00	C.Y.	300.	—	9,900.	—

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

PROJECT ID: PV176ITF1
CONTRACT PIN: 8502014HW0019C

BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
007	4.05 A NON-REINFORCED CONCRETE PAVEMENT	11.00	C.Y.	565	-	6,215	-
008	4.06 CONCRETE IN STRUCTURES, CLASS A-40	110.00	C.Y.	1,000.	-	110,000.	-
009	4.07 CB NEW GRANITE CURB, STRAIGHT	203.00	L.F.	95.	-	19,285.	-
010	4.07 CC NEW GRANITE CURB, CORNER	21.00	L.F.	120.	-	2,520.	-
011	4.08 AA CONCRETE CURB (18" DEEP)	919.00	L.F.	35.	-	32,165.	-
012	4.08 AC CONCRETE CURB (19" DEEP)	5,563.00	L.F.	38.	-	211,394.	-

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

PROJECT ID: PV176ITF[illegible]
CONTRACT PIN: 8502014HW0019C

BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
013	4.08 AI CONCRETE CURB (26" DEEP)	3,358.00	L.F.	43.	—	144,394.	—
014	4.08 AI-SC SCUPPERED CONCRETE CURB (26" DEEP)	531.00	L.F.	65.	—	34515.	—
015	4.11 AS EARTH EXCAVATION FOR STRUCTURES	40.00	C.Y.	50.	—	2,000.	—
016	4.11 CA FILL, PLACE MEASUREMENT	192.00	C.Y.	50.	—	9,600.	—
017	4.13 AAS 4" CONCRETE SIDEWALK (UNPIGMENTED)	16,599.00	S.F.	7.	—	116,193.	—
018	4.13 BR 7" REINFORCED CONCRETE SIDEWALK (UNPIGMENTED)	1,358.00	S.F.	12	—	16,296.	—

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

PROJECT ID: PV176ITF1
CONTRACT PIN: 8502014HW0019C

BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATED QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE IN FIGURES DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
019	4.13 DE EMBEDDED PREFORMED DETECTABLE WARNING UNITS	143.00	S.F.	30.	—	4,290.	—
020	4.14 STEEL REINFORCEMENT BARS	82.00	LBS.	3.	—	246.	—
021	4.14 W WELDED STEEL WIRE FABRIC	868.00	LBS.	2.	—	1,736.	—
022	4.15 TOPSOIL	269.00	C.Y.	70.	—	18,830.	—
023	4.15 WPM WETLAND PLANTING MIX	676.00	C.Y.	130.	—	87,880.	—
024	4.16 AA TREES REMOVED (4" TO UNDER 12" CALIPER)	9.00	EACH	600.	—	5,400.	—

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

PROJECT ID: PV176ITF[illegible]
CONTRACT PIN: 8502014HW0019C

BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
025	4.16 AC TREES REMOVED (18" TO UNDER 24" CALIPER)	4.00	EACH	1,200.	—	4,800.	—
026	4.16 BA TREES PLANTED, 2-1/2" TO 3" CALIPER, ALL TYPES	29.00	EACH	800.	—	23,200.	—
027	4.16 CA TREES PLANTED, 3" TO 3-1/2" CALIPER, ALL TYPES	59.00	EACH	1,000.	—	59,000.	—
028	4.17 AC SHRUBS PLANTED, 18" TO 24" HIGH, ALL TYPES	76.00	EACH	50.	—	3,800.	—
029	4.17 PP PERENNIALS PLANTED, 6" - 12" HIGH, ALL TYPES.	3,123.00	EACH	15.	—	46,845.	—
030	4.18 A MAINTENANCE TREE PRUNING (UNDER 12" CAL.)	19.00	EACH	160.	—	3,040.	—

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

PROJECT ID: PV176ITF1
CONTRACT PIN: 8502014HW0019C

BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
031	4.18 B MAINTENANCE TREE PRUNING (12" TO UNDER 18" CAL.)	8.00	EACH	250.	—	2,000.	—
032	4.18 C MAINTENANCE TREE PRUNING (18" TO UNDER 24" CAL.)	6.00	EACH	270.	—	1,620.	—
033	4.18 D MAINTENANCE TREE PRUNING (24" CAL. AND OVER)	7.00	EACH	450.	—	3,150.	—
034	4.20 SEEDING	6,560.00	S.Y.	1	50	9,840.	—
035	4.21 TREE CONSULTANT	924.00	P/HR	75.	—	69,300.	—
036	50.31MC15 15" E.S.V.P. STORM SEWER, ON CONCRETE CRADLE	385.00	L.F.	800.	—	308,000.	—

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

PROJECT ID: PV176ITF[illegible]
CONTRACT PIN: 8502014HW0019C

BID SCHEDULE FORM

COL. 1 SEQ. NO.	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
037	**50.31MC18** 18" E.S.V.P. STORM SEWER, ON CONCRETE CRADLE	107.00	L.F.	900.	–	96,300.	–
038	**50.31ME15** 15" E.S.V.P. STORM SEWER, ENCASED IN CONCRETE	122.00	L.F.	900.	–	109,800.	–
039	**51.12S000** STORMWATER TREATMENT SYSTEM (SWTS) CHAMBER	1.00	EACH	123,000.	–	123,000.	–
040	**51.21S0A1000E** STANDARD MANHOLE TYPE A-1 ON EXISTING SEWER	2.00	EACH	10,000.	–	20,000.	–
041	**51.21S0A1000V** STANDARD MANHOLE TYPE A-1	2.00	EACH	10,000	–	20,000.	–
042	**51.21S0A3000V** STANDARD SHALLOW MANHOLE TYPE A-3	1.00	EACH	10,000.	–	10,000.	–

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BID SCHEDULE FORM

COL. 1 SEQ. NO.	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
043	51.23RF REPLACEMENT OF EXISTING MANHOLE FRAME AND COVER	5.00	EACH	1,800.	—	9,000.	—
044	51.41D002 STANDARD DOUBLE CATCH BASIN, TYPE 2	1.00	EACH	20,000	—	20,000.	—
045	51.41P000 SPECIAL CATCH BASIN	1.00	EACH	10,000.	—	10,000.	—
046	51.41S001 STANDARD CATCH BASIN, TYPE 1	8.00	EACH	10,000.	—	80,000.	—
047	51.41S002 STANDARD CATCH BASIN, TYPE 2	5.00	EACH	10,000.	—	50,000.	—
048	51.61F000 OUTFALL	1.00	EACH	10,000.	—	10,000.	—

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049	52.11D12 12" DUCTILE IRON PIPE BASIN CONNECTION	559.00	L.F.	600.	—	335,400.	—
050	53.11DR TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS	598.00	L.F.	7.	—	4,186.	—
051	55.11AB ABANDONING BASINS AND INLETS	6.00	EACH	450.	—	2,700.	—
052	6.02 AAN UNCLASSIFIED EXCAVATION	5,714.00	C.Y.	40.	—	228,560.	—
053	6.06 AA GRANITE BLOCK SIDEWALK (SAND JOINTS) (FURNISH BLOCK)	415.00	S.Y.	150.	—	62,250.	—
054	6.06 ABPC GRANITE BLOCK SIDEWALK ON CONCRETE BASE (GROUTED JOINTS) (FURNISH BLOCK) (1" MORTAR BASE)	11.00	S.Y.	400.	—	4,400.	—

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055	6.09 AC CONCRETE HEADER (6" WIDE X 20" DEEP)	1,768.00	L.F.	45.	—	79,560.	—
056	6.22 F ADDITIONAL HARDWARE	660.00	LBS.	10.	—	6,600.	—
057	6.25 RS TEMPORARY SIGNS	113.00	S.F.	35.	—	3,955.	—
058	6.26 TIMBER CURB	924.00	L.F.	5.	—	4,620.	—
059	6.28 AA LIGHTED TIMBER BARRICADES	531.00	L.F.	15.	—	7,965.	—
060	6.31 PC PRECAST CONCRETE CAPSTONE	429.00	L.F.	50.	—	21,450.	—

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061	6.31 WS PRECAST CONCRETE WHEEL STOPS	32.00	EACH	150.	—	4,800.	—
062	6.34 X REMOVE AND DISPOSE OF EXISTING CHAIN LINK FENCE	539.00	L.F.	10.	—	5,390.	—
063	6.36 DR STRUCTURAL REPAIR AND ADJUSTMENT OF UTILITY STRUCTURES	4.00	C.Y.	600.	—	2,400.	—
064	6.40 C ENGINEER'S FIELD OFFICE (TYPE C)	20.00	MONTH	3,000.	—	60,000.	—
065	6.43 PHOTOGRAPHS	330.00	SETS	15.	—	4,950.	—
066	6.44 THERMOPLASTIC REFLECTORIZED PAVEMENT MARKINGS (4" WIDE)	5,366.00	L.F.	1.	—	5,366.	—

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067	6.47 PC FURNISH AND INSTALL PERMEABLE INTERLOCKING CONCRETE PAVERS (PLAZA AREA)	36,317.00	S.F.	18.	—	653,706.	—
068	6.49 TEMPORARY PAVEMENT MARKINGS (4" WIDE)	1,540.00	L.F.	1.	—	1,540.	—
069	6.50 CLEANING OF DRAINAGE STRUCTURES	10.00	EACH	500.	—	5,000.	—
070	6.52 FED UNIFORMED FLAGPERSON PRICE BID SHALL BE FOR THE FIXED SUM OF $ 26,400.00	1.00	F.S.	26,400	00	26,400	00
071	6.53 REMOVE EXISTING LANE MARKINGS (4" WIDE)	1,210.00	L.F.	1.	—	1,210.	—

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072	6.55 SAWCUTTING EXISTING PAVEMENT	17,589.00	L.F.	2.	—	35,178.	—
073	6.67 SUBBASE COURSE, SELECT GRANULAR MATERIAL	2,176.00	C.Y.	40.	—	87,040.	—
074	6.68 PLASTIC FILTER FABRIC	5,638.00	S.Y.	6.	—	33,828.	—
075	6.73 PARCS PARKING ACCESS AND REVENUE CONTROL SYSTEM	1.00	L.S.	955,000.	—	955,000.	—
076	6.75 GRINDING EXISTING ASPHALTIC CONCRETE WEARING COURSE	1,171.00	C.Y.	40.	—	46,840.	—
077	6.82 A REMOVING EXISTING TRAFFIC AND STREET NAME SIGNS	220.00	S.F.	3.	—	660.	—

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078	6.82 B REMOVING EXISTING TRAFFIC AND STREET NAME SIGN POSTS	502.00	L.F.	3.	—	1,506.	—
079	6.83 AA FURNISHING NEW NON-REFLECTORIZED TRAFFIC SIGNS	39.00	S.F.	15.	—	585.	—
080	6.83 AB FURNISHING NEW TRAFFIC SIGN POSTS	647.00	L.F.	12.	—	7,764.	—
081	6.83 AR FURNISHING NEW REFLECTORIZED TRAFFIC SIGNS	288.00	S.F.	20.	—	5,760.	—
082	6.83 BA INSTALLING TRAFFIC SIGNS	326.00	S.F.	15.	—	4,890.	—
083	6.83 BB INSTALLING TRAFFIC SIGN POSTS	647.00	L.F.	12.	—	7,764.	—

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084	6.84 B LOLLIPOP TYPE BUS STOP SIGNS PRICE BID SHALL BE FOR THE FIXED SUM OF $ 5,000.00	1.00	F.S.	5,000	00	5,000	00
085	6.86 WF-AG1 FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE AG1)	1.00	EACH	3,500.	—	3,500.	—
086	6.86 WF-AG2 FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE AG2)	2.00	EACH	2,650.	—	5,300.	—
087	6.86 WF-PAY FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE PAY)	4.00	EACH	1,500.	—	6,000.	—
088	6.86 WF-PDIR01 FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE PDIR-LG-GROUND MOUNT)	6.00	EACH	1,750.	—	10,500.	—

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089	**6.86 WF-PDIR02** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE PDIR-LG-FENCE MOUNT)	2.00	EACH	1,250.	—	2,500.	—
090	**6.86 WF-PDIR03** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE PDIR-SM-GROUND MOUNT)	2.00	EACH	1,750.	—	3,500.	—
091	**6.86 WF-PDIR04** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE PDIR-SM-GROUND MOUNT, DOUBLE)	2.00	EACH	1,750.	—	3,500.	—
092	**6.86 WF-PRK01** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE PRK-GROUND MOUNT)	22.00	EACH	1,750.	—	38,500.	—
093	**6.86 WF-PRK02** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE PRK-FENCE MOUNT)	17.00	EACH	1,150.	—	19,550.	—
094	**6.86 WF-PRK03** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE PRK-WALL MOUNT)	2.00	EACH	1,340.	—	2,680.	—

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095	**6.86 WF-VDIR01** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE VDIR-LG)	1.00	EACH	1,250.	—	1,250.	—
096	**6.86 WF-VDIR02** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE VDIR-LG, DOUBLE SIDED)	3.00	EACH	2,150.	—	6,450.	—
097	**6.86 WF-VDIR03** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE VDIR-SM)	2.00	EACH	1,100.	—	2,200.	—
098	**6.86 WF-VDIR04** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE VDIR-SM, DOUBLE SIDED)	2.00	EACH	1,750.	—	3,500.	—
099	**6.86 WF-VOH** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE VOH-OVERHEAD MOUNT)	1.00	EACH	5,000.	—	5,000.	—
100	**6.87** PLASTIC BARRELS	319.00	EACH	8.	—	2,552.	—

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101	6.91 REFLECTIVE CRACKING MEMBRANE (18" WIDE)	258.00	L.F.	5.	—	1,290.	—
102	6.99 AUDIO AND VIDEO DOCUMENTATION SURVEY	1.00	L.S.	10,000.	—	10,000.	—
103	60.11R606 FURNISHING AND DELIVERING 6-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	143.00	L.F.	50.	—	7,150.	—
104	60.11R608 FURNISHING AND DELIVERING 8-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	87.00	L.F.	70.	—	6,090.	—
105	60.11R612 FURNISHING AND DELIVERING 12-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	77.00	L.F.	120.	—	9,240.	—
106	60.12D06 LAYING 6-INCH DUCTILE IRON PIPE AND FITTINGS	211.00	L.F.	100.	—	21,100.	—

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107	**60.12D08** LAYING 8-INCH DUCTILE IRON PIPE AND FITTINGS	165.00	L.F.	125.	—	20,625.	—
108	**60.12D12** LAYING 12-INCH DUCTILE IRON PIPE AND FITTINGS	153.00	L.F.	150.	—	22,950.	—
109	**60.13M0A24** FURNISHING AND DELIVERING DUCTILE IRON MECHANICAL JOINT 24 -INCH DIAMETER AND SMALLER FITTINGS, INCLUDING WEDGE TYPE RETAINER GLANDS	3.00	TONS	9,200.	—	27,600.	—
110	**60.41CPL06** RECONSTRUCTION OF EXISTING 6-INCH DIAMETER WATER MAIN, USING D.E.P. APPROVED CIPP LINING METHOD	499.00	L.F.	145.	—	72,355.	—
111	**60.41CPL08** RECONSTRUCTION OF EXISTING 8-INCH DIAMETER WATER MAIN, USING D.E.P. APPROVED CIPP LINING METHOD	158.00	L.F.	160.	—	25,280.	—
112	**60.41CPL12** RECONSTRUCTION OF EXISTING 12-INCH DIAMETER WATER MAIN, USING D.E.P. APPROVED CIPP LINING METHOD	649.00	L.F.	187.	—	121,363.	—

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113	**61.11DMM06** FURNISHING AND DELIVERING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	5.00	EACH	1,100.	—	5,500.	—
114	**61.11DMM08** FURNISHING AND DELIVERING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	1.00	EACH	1,600.	—	1,600.	—
115	**61.11DMM12** FURNISHING AND DELIVERING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	2.00	EACH	3,100.	—	6,200.	—
116	**61.12DMM06** SETTING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	5.00	EACH	1,500.	—	7,500.	—
117	**61.12DMM08** SETTING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	1.00	EACH	1,600.	—	1,600.	—

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118	**61.12DMM12** SETTING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	2.00	EACH	2,000.	—	4,000.	—
119	**62.11SD** FURNISHING AND DELIVERING HYDRANTS	4.00	EACH	6,000.	—	24,000.	—
120	**62.12SG** SETTING HYDRANTS COMPLETE WITH WEDGE TYPE RETAINER GLANDS	4.00	EACH	10,000.	—	40,000.	—
121	**62.13RH** REMOVING HYDRANTS	4.00	EACH	3,000.	—	12,000.	—
122	**62.14FS** FURNISHING, DELIVERING AND INSTALLING HYDRANT FENDERS	8.00	EACH	395.	—	3,160.	—
123	**63.11VC** FURNISHING AND DELIVERING VARIOUS CASTINGS	4.00	TONS	8,000.	—	32,000.	—

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124	640.20 WHITE PAINT REFLECTORIZED PAVEMENT STRIPES - 20 MILS	19,440.00	L.F.	1.	—	19,440.	—
125	640.21 YELLOW PAINT REFLECTORIZED PAVEMENT STRIPES - 20 MILS	2,522.00	L.F.	1.	—	2,522.	—
126	640.22 WHITE PAINT REFLECTORIZED PAVEMENT LETTERS - 20 MILS	60.00	EACH	55.	—	3,300.	—
127	640.23 WHITE PAINT REFLECTORIZED PAVEMENT SYMBOLS - 20 MILS	44.00	EACH	160.	—	7,040.	—
128	65.11BR FURNISHING, DELIVERING AND INSTALLING BANDS, RODS, WASHERS, ETC., COMPLETE, FOR RESTRAINING JOINTS	827.00	LBS.	10.	—	8,270.	—
129	65.21PS FURNISHING AND PLACING POLYETHYLENE SLEEVE **Unit price bid shall not be less than: $ 0.50**	338.00	L.F.	1.	—	338.	—

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130	**65.31FF** FURNISHING, DELIVERING AND PLACING FILTER FABRIC **Unit price bid shall not be less than: $ 0.10**	7,394.00	S.F.	0.	10	739.	40
131	**65.71SG** FURNISHING, DELIVERING AND PLACING SCREENED GRAVEL OR SCREENED BROKEN STONE BEDDING	37.00	C.Y.	150.	–	5,550.	–
132	**7.07 ALB** FURNISHING AND INSTALLING NEW ALUMINIUM BOLLARDS	25.00	EACH	1,200.	–	30,000.	–
133	**7.07 BHS** FURNISHING AND INSTALLING NEW STEEL BOLLARDS FOR HANDICAP SIGNAGE	14.00	EACH	1,500.	–	21,000.	–
134	**7.07 MT** MECHANICAL TRUNSTILE	2.00	EACH	15,000.	–	30,000.	–
135	**7.13 B** MAINTENANCE OF SITE	14.00	MONTH	5,000.	–	70,000.	–

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136	7.16 D TEST PITS	218.00	C.Y.	150.	—	32,700.	—
137	7.36 PEDESTRIAN STEEL BARRICADES	1,485.00	L.F.	10.	—	14,850.	—
138	7.88 AA RODENT INFESTATION SURVEY AND MONITORING **Unit price bid shall not be less than: $ 6,413.00**	1.00	L.S.	6,500.	—	6,500.	—
139	7.88 AB RODENT BAIT STATIONS **Unit price bid shall not be less than: $ 60.00**	226.00	EACH	60.	—	13,560.	—
140	7.88 AC BAITING OF RODENT BAIT STATIONS **Unit price bid shall not be less than: $ 9.50**	226.00	EACH	10.	—	2,260.	—
141	7.88 AD WATERBUG BAIT APPLICATIONS **Unit price bid shall not be less than: $ 65.00**	339.00	BLOCK	65.	—	22,035.	—

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142	70.31FN FENCING Unit price bid shall not be less than: $ 2.00	3,012.00	L.F.	2.	—	6,024.	—
143	70.51EO EXCAVATION OF BOULDERS IN OPEN CUT Unit price bid shall not be less than: $ 75.00	6.00	C.Y.	75.	—	450.	—
144	70.61RE ROCK EXCAVATION	211.00	C.Y.	220.	—	46,420.	—
145	70.71RR RIPRAP	21.00	C.Y.	150.	—	3,150.	—
146	70.71SB STONE BALLAST Unit price bid shall not be less than: $ 15.00	5.00	C.Y.	15.	—	75.	—
147	70.81CB CLEAN BACKFILL Unit price bid shall not be less than: $ 15.00	533.00	C.Y.	15.	—	7,995.	—

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CONTRACT PIN: 8502014HW0019C

BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
148	70.91SW12 FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 12-INCH IN DIAMETER AND LESS	77.00	S.F.	40.	—	3,080.	—
149	73.11AB ADDITIONAL BRICK MASONRY **Unit price bid shall not be less than: $ 62.50**	5.00	C.Y.	65.	—	325.	—
150	73.21AC ADDITIONAL CONCRETE **Unit price bid shall not be less than: $ 62.50**	7.00	C.Y.	65.	—	455.	—
151	73.31AE0 ADDITIONAL EARTH EXCAVATION INCLUDING TEST PITS (ALL DEPTHS) **Unit price bid shall not be less than: $ 20.00**	7.00	C.Y.	20.	—	140.	—
152	73.41AG ADDITIONAL SELECT GRANULAR BACKFILL **Unit price bid shall not be less than: $ 15.00**	7.00	C.Y.	15.	—	105.	—
153	73.51AS ADDITIONAL STEEL REINFORCING BARS **Unit price bid shall not be less than: $ 1.00**	400.00	LBS.	1.	—	400.	—

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

PROJECT ID: PV176ITF1
CONTRACT PIN: 8502014HW0019C

BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
154	8.01 C1 HANDLING, TRANSPORTING AND DISPOSAL OF NON-HAZARDOUS CONTAMINATED SOIL	4,200.00	TONS	40.	–	168,000.	–
155	8.01 C2 SAMPLING AND TESTING OF CONTAMINATED/POTENTIALLY HAZARDOUS SOIL FOR DISPOSAL PURPOSES	7.00	SETS	1,100.	–	7,700.	–
156	8.01 H HANDLING, TRANSPORTING AND DISPOSAL OF HAZARDOUS SOIL	140.00	TONS	240.	–	33,600.	–
157	8.01 S HEALTH AND SAFETY	1.00	L.S.	10,000.	–	10,000.	–
158	8.01 W1 REMOVAL, TREATMENT, AND DISCHARGE/DISPOSAL OF CONTAMINATED WATER	7.00	DAY	1,500.	–	10,500.	–
159	8.01 W2 SAMPLING AND TESTING OF WATER	2.00	SETS	1,000.	–	2,000.	–

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

PROJECT ID: PV176ITF1
CONTRACT PIN: 8502014HW0019C

BID SCHEDULE FORM

COL. 1 SECTION	COL. 2 ITEM NUMBER AND DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
160	8.02 A SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	165.00	S.F.	5.	–	825.	–
161	8.02 B SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	380.00	L.F.	21.	–	7,980.	–
162	9.04 HW ALLOWANCE FOR ANTI-FREEZE ADDITIVE IN CONCRETE PRICE BID SHALL BE FOR THE FIXED SUM OF $ 50,000.00	1.00	F.S.	50,000	00	50,000	00
163	9.13 HD8 8" HIGH-DENSITY POLYETHYLENE DRAINAGE PIPE	73.00	L.F.	25.	–	1,825.	–
164	9.13 HDP4 4" PERFORATED HIGH-DENSITY POLYETHYLENE UNDERDRAIN PIPE	1,647.00	L.F.	15.	–	24,705.	–

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

PROJECT ID: PV176ITF1
CONTRACT PIN: 8502014HW0019C

BID SCHEDULE FORM

COL. 1 SEQ NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
165	9.13 PVC-12C 12" PVC UNDERDRAIN CLEANOUT	4.00	EACH	1,500.	—	6,000.	—
166	9.30 STORM WATER POLLUTION PREVENTION	1.00	L.S.	225,000.	—	225,000.	—
167	9.60 KRL RELOCATE KIOSK	1.00	EACH	50,000.	—	50,000.	—
168	9.60 TB1 PRE-FABRICATED TICKET BOOTH - TYPE 1	2.00	EACH	60,000.	—	120,000.	—
169	9.60 TB2 PRE-FABRICATED TICKET BOOTH - TYPE 2	1.00	EACH	70,000.	—	70,000.	—
170	9.99 M FLASHING ARROW BOARD	8.00	MONTH	500.	—	4,000.	—

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

PROJECT ID: PV176ITF1
CONTRACT PIN: 8502014HW0019C

BID SCHEDULE FORM

COL. 1 SEQ. NO.	COL. 2 ITEM NUMBER AND DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS.	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS.
171	**E 260519 B** LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 2 AWG WIRE)	2,720.00	L.F.	5.	—	13,600.	—
172	**E 260519 C** LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 4 AWG WIRE)	4,146.00	L.F.	4.	—	16,584.	—
173	**E 260519 D** LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 6 AWG WIRE)	1,220.00	L.F.	3.	—	3,660.	—
174	**E 260519 G** LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 10 AWG WIRE)	1,980.00	L.F.	3.	—	5,940.	—
175	**E 260533 AC** METAL CONDUIT AND TUBING (2" GALVANIZED RIGID STEEL CONDUIT)	116.00	L.F.	55.	—	6,380.	—
176	**E 260533 AC3.0** METAL CONDUIT AND TUBING (3" GALVANIZED RIGID STEEL CONDUIT)	75.00	L.F.	120.	—	9,000.	—

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

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CONTRACT PIN: 8502014HW0019C

BID SCHEDULE FORM

COL. 1 SEQ. NO.	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITTY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
177	E 260533 CE LOAD CENTER - ELECTRICAL	3.00	EACH	26,000.	—	78,000.	—
178	E 260533 CF-1 LOAD CENTER - COMMUNICATIONS (TYPE 1 - RELOCATE SWITCH)	1.00	EACH	55,000.	—	55,000.	—
179	E 260533 CF-2 LOAD CENTER - COMMUNICATIONS (TYPE 2- NEW SWITCH)	4.00	EACH	52,000.	—	208,000.	—
180	E 260533 D HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING	24.00	EACH	2,000.	—	48,000.	—
181	E 260533 P1.5 RIGID NON-METALLIC CONDUIT (1 1/2" PVC SCHEDULE 40 CONDUIT)	2,627.00	L.F.	22.	—	57,794.	—
182	E 260533 P2.0 RIGID NON-METALLIC CONDUIT (2" PVC SCHEDULE 40 CONDUIT)	3,118.00	L.F.	15.	—	46,770.	—

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
183	E 265600 A LIGHT POLE FOUNDATION AND SITE LIGHTING	4.00	EACH	28,000.	—	112,000.	—
184	E 271000 A FIBER OPTIC COMMUNICATIONS CABLING - 12 STRAND, SINGLE MODE	1,224.00	L.F.	30.	—	36,720.	—
185	E 271000 B CATEGORY 6 COMMUNICATIONS CABLING	1,426.00	L.F.	7.	—	9,982.	—
186	HW-900H ALLOWANCE FOR CITY WORK ACCELERATION PRICE BID SHALL BE FOR THE FIXED SUM OF $ 20,000.00	1.00	F.S.	20,000	00	20,000	00
187	HW-908 ALLOWANCE FOR EXTRA WORK DUE TO ARCHAEOLOGICAL DISCOVERIES PRICE BID SHALL BE FOR THE FIXED SUM OF $ 75,000.00	1.00	F.S.	75,000	00	75,000	00

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
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BID SCHEDULE FORM

COL. 1 SEQ. NO.	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
188	NYC-640.2500001 BLUE REFLECTORIZED PAVEMENT MARKING PAINT FOR HANDICAPPED SPACES - 20 MILS	2,450.00	L.F.	1.	—	2,450.	—
189	NYC-640.2500002 BLUE REFLECTORIZED PAVEMENT MARKING PAINT FOR HANDICAPPED SPACES SYMBOLS - 20 MILS	24.00	EACH	22.	—	528.	—
190	PK-305 CHAIN LINK FENCE 8'-0" HT.	894.00	L.F.	75.	—	67,050.	—
191	PK-308 CHAIN LINK FENCE 12'-0" HT., 2" MESH	307.00	L.F.	160.	—	49,120.	—
192	PK-316 SINGLE GATE FOR CHAIN LINK FENCE 8' HT. & OVER	3.00	EACH	4,000.	—	12,000.	—
193	PK-319 DOUBLE GATE FOR CHAIN LINK FENCE 8' HT.	1.00	EACH	6,800.	—	6,800.	—

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
194	**PK-320** DOUBLE GATE FOR CHAIN LINK FENCE 10' HT. & OVER	1.00	EACH	8,000.	—	8,000.	—
195	**PK-35** SHREDDED BARK MULCH	1,014.00	S.Y.	8.	—	8,112.	—
196	**PK-367** TIMBER BARRIER RAIL - TWO RAIL (TYPE D)	528.00	L.F.	90.	—	47,520.	—
197	**SL-20.08.01** REMOVE STANDARD TYPE ANCHOR BOLT CONCRETE FOUNDATION	4.00	EACH	600.	—	2,400.	—
198	**SL-21.02.02** FURNISH AND INSTALL A STANDARD WOOD POLE	4.00	EACH	4,000.	—	16,000.	—
199	**SL-21.09.05** REMOVE STANDARD FABRICATED STEEL, SPUN ALUMINUM NO. 10, ETC. WITH ARM(S), LUMINAIRE(S), CONTROL(S) WITH ALL ATTACHMENTS, IF ANY.	4.00	EACH	600.	—	2,400.	—

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

PROJECT ID: PV176ITF1
CONTRACT PIN: 8502014HW0019C

BID SCHEDULE FORM

COL. 1 SEQ. NO.	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS.	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
						SUB-TOTAL: $ 8,445,045.40	
200	6.39 A MOBILIZATION BID PRICE OF MOBILIZATION SHALL NOT EXCEED 4% OF THE ABOVE SUB-TOTAL PRICE.	1.00	L.S.	330,000.	00	330,000.	00
						TOTAL BID PRICE: $ 8,775,045.40	

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

APT E- PIN #: 85014B0082

Tax ID #: _____

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 #	85014B0082	**FMS Project ID#**	PV176ITF1
Project Title/ Agency PIN #	RECONSTRUCTION AND REHABILITATION OF BRONX ZOO INTERMODAL TRANSPORTATION FACILITY / 8502014HW0019C		
Bid/Proposal Response Date			
Contracting Agency	Department of Design and Construction		
Agency Address	30-30 Thomson Ave. **City** Long Island City **State** NY **Zip Code** 11101		
Contact Person	Jessica Lavides	**Title**	MWBE Liaison & Compliance Analyst
Telephone #	(718) 391-1065	**Email**	LavidesJe@ddc.nyc.gov

Project Description *(attach additional pages if necessary)*

RECONSTRUCTION AND REHABILITATION OF
BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
BRONX RIVER PARKING LOT AND OVERFLOW LOT
INTERSECTION OF JUNGLE WORLD ROAD
AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

INCLUDING SEWER, WATER MAIN, STREET LIGHTING, TRAFFIC,
AND LANDSCAPING WORK
Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

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

Prime Contract Industry: Construction

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

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

Tax ID #: _____ APT E-PIN #: _____

SCHEDULE B - Part II: M/WBE Participation Plan

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

Section I: Prime Contractor Contact Information

Tax ID # _____ **FMS Vendor ID #** _____

Business Name _____ **Contact Person** _____

Address _____

Telephone # _____ **Email** _____

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

PRIME CONTRACTOR ADOPTING AGENCY M/WBE PARTICIPATION GOALS

☐ **For Prime Contractors (including Qualified Joint Ventures and M/WBE firms) adopting Agency M/WBE Participation Goals.** Calculate the total dollar value of your total bid that you agree will be awarded to M/WBE subcontractors for services and/or credited to an M/WBE prime contractor or Qualified Joint Venture. Please review the Notice to Prospective Contractors for more information on how to obtain credit for M/WBE participation.	**Total Bid/Proposal Value**		**Agency Total Participation Goals (Line 1, Page 13)**		**Calculated M/WBE Participation Amount**
	$	X		=	$ Line 2

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

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

SAMPLE

APPRENTICESHIP PROGRAM REQUIREMENTS

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

__√__ YES _____ NO

(1) Apprenticeship Program Requirements

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

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

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

(2) Apprenticeship Program Questionnaire

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

APPRENTICESHIP PROGRAM QUESTIONNAIRE

PROJECT ID. PV176ITF1

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

Name of Bidder: Restani Construction Corp.

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

   ✓ YES _____ NO

2. Has the bidder's Apprenticeship Program been registered with, and approved by, the New York State Commissioner of Labor?

   ✓ YES _____ NO

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

   ✓ YES _____ NO

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

We have 2 apprentices that will become full time employees

Bidder: Restani Construction Corp.

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

Date: 11/19/2014

Project ID. PV176ITF1

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: Restani Construction Corp.

DDC Project Number: PV 176 ITF 1

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.

Project ID. PV176 ITF1

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

YEAR	INTRASTATE RATE	INTERSTATE RATE
2013	0.73	0.73
2012	0.72	0.72
2011	0.93	0.93

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

____ YES X 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.

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

YEAR	TOTAL NUMBERS OF HOURS WORKED BY EMPLOYEES	INCIDENT RATE
2013	195,744.25	2.0
2012	128,905.75	1.6
2011	155,108.5	1.3

Project ID. PV 176 ITF1

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: 11/19/2014 By: _____
(Signature of Owner, Partner, Corporate Officer)

Title: President

(NO TEXT ON THIS PAGE)

Tax ID #: _____

APT E-PIN #: _____

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? % ____

✓ Scopes of Subcontract Work

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

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

Tax ID #: _____

APT E-PIN #: _____

Section V: Vendor Certification and Required Affirmations

I hereby:

1) acknowledge my understanding of the M/WBE participation requirements as set forth herein and the pertinent provisions of Section 6-129 of the Administrative Code of the City of New York ("Section 6-129"), and the rules promulgated thereunder;

2) affirm that the information supplied in support of this M/WBE Utilization Plan is true and correct;

3) agree, if awarded this Contract, to comply with the M/WBE participation requirements of this Contract, the pertinent provisions of Section 6-129, and the rules promulgated thereunder, all of which shall be deemed to be material terms of this Contract;

4) agree and affirm that it is a material term of this Contract that the Vendor will award the total dollar value of the M/WBE Participation Goals to certified MBEs and/or WBEs, unless a full waiver is obtained or such goals are modified by the Agency; and

5) agree and affirm, if awarded this Contract, to make all reasonable, good faith efforts to meet the M/WBE Participation Goals, or If a partial waiver is obtained or such goals are modified by the Agency, to meet the modified Participation Goals by soliciting and obtaining the participation of certified MBE and/or WBE firms.

Signature _____ **Date** _____

Print Name _____ **Title** _____

N.A.

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

Contract Overview

Tax ID # _____ **FMS Vendor ID #** _____

Business Name _____

Contact Name _____ **Telephone #** _____ **Email** _____

Type of Procurement ☐ **Competitive Sealed Bids** ☐ **Other** **Bid/Response Due Date** _____

APT E-PIN # (for this procurement): _____ **Contracting Agency:** _____

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

_____ % **Agency M/WBE Participation Goal**

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

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

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

☐ **Vendor does not subcontract services, and has the capacity and good faith intention to perform all such work itself with its own employees.**

☐ **Vendor subcontracts *some* of this type of work but at a *lower* % than bid/solicitation describes, and has the capacity and good faith intention to do so on this contract. (Attach subcontracting plan outlining services that the vendor will self-perform and subcontract to other vendors or consultants.)**

☐ **Vendor has other legitimate business reasons for proposing the M/WBE Participation Goal above. Explain under separate cover.**

References

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

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

Total Contract Amount $ _____ **Total Amount Subcontracted** $ _____

Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____

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

Total Contract Amount $ _____ **Total Amount Subcontracted** $ _____

Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____

CONTRACT NO. **AGENCY** **DATE COMPLETED**

Total Contract Amount $ **Total Amount Subcontracted** $

Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____

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

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

TYPE OF Contract _____ **ENTITY** _____ **DATE COMPLETED** _____

Manager at entity that hired vendor (Name/Phone No./Email) _____

Total Contract Amount $ _____ **Total Amount Subcontracted** $ _____

Type of Work Subcontracted _____

TYPE OF Contract _____ **AGENCY/ENTITY** _____ **DATE COMPLETED** _____

Manager at agency/entity that hired vendor (Name/Phone No./Email) _____

Total Contract Amount $ _____ **Total Amount Subcontracted** $ _____

Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____

TYPE OF Contract _____ **AGENCY/ENTITY** _____ **DATE COMPLETED** _____

Manager at entity that hired vendor (Name/Phone No./Email) _____

Total Contract Amount $ _____ **Total Amount Subcontracted** $ _____

Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____

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

Signature: _____ **Date:** _____

Print Name: _____ **Title:** _____

Shaded area below is for agency completion only

BID BOND 1
FORM OF BID BOND

KNOW ALL MEN BY THESE PRESENTS. That we, _____

Restani Construction Corp.

42-04 Berrian Boulevard Astoria NY 11105

hereinafter referred to as the "Principal", and _____

Arch Insurance Company

300 Plaza Three Jersey City NJ 07311

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

Ten Percent of Amount Bid

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

Whereas, the Principal is about to submit (or has submitted) to the City the accompanying proposal, hereby made a part hereof, to enter into a contract in writing for CONTRACT #PV176ITF1 - RECONSTRUCTION AND REHABILITATION OF BRONX ZOO INTERMODAL TRANSPORTATION FACILITY/BRONX

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 fulfullment 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 19th day of November, 2014.

(Seal) Restani Construction Corp. (L.S.)
Principal

By: _____

(Seal) Arch Insurance Company
Surety

By: _____
Dennis M. O'Brien Attorney-in-Fact

CONR 391 (8-94)

(Acknowledgment by principal, unless it be a corporation)
STATE OF NEW YORK

SS:

COUNTY OF _____

On this _____ day of _____ _____, before me personally came _____ to me known and known to me to be the person described in and who executed the foregoing instrument, and acknowledged that he/she executed the same.

_____
Notary Public County

(Acknowledgment by principal, if a corporation)
STATE OF NEW YORK

SS:

COUNTY OF Queens

On this 19 day of November 2014, before me personally came Salvatore Restivo to me known who being by me duly sworn, did depose and say that he/she resides in 1 Blvd Malba NY 11357; that he/she is the President of the Restivo Construction; the corporation described in and which executed the foregoing instrument; that he/she knew the seal of said corporation; that the seal affixed to said instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he/she signed his/her name thereto by like order.

Michael Calderone Suffolk
Notary Public County

MICHAEL CALDERONE
Notary Public, State of New York
No. 01CA6203919
Qualified in Suffolk County
Commission Expires April 13, 20_17

(Acknowledgment by Surety Company)
STATE OF NEW YORK

SS:

COUNTY OF WESTCHESTER

On this 19th day of November 2014, before me personally came DENNIS M. O'BRIEN to me known who being by me duly sworn, did depose and say that he/she resides in NORTH MERRICK, NEW YORK; that he/she is the ATTORNEY-IN-FACT of the ARCH INSURANCE COMPANY; the corporation described in and which executed the within 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 order of the Board of Directors of said corporation, and that he/she signed his/her name thereto by like order.

Alice McCarthy
Notary Public County

ALICE McCARTHY
NOTARY PUBLIC, State of New York
No 01MC5079342
Qualified in Dutchess County
Commission Expires June 08, 2015

S-4116/GEEF 2/98

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	312,730,603
Total Assets	$ 2,840,864,274

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	301,130,327
Total Liabilities	2,104,236,877
Surplus as regards policyholders	736,627,397
Total Surplus and Liabilities	$ 2,840,864,274

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

Allison M. Kelly

ALLISON M. KELLY
Commission # 2411013
Notary Public, State of New Jersey
My Commission Expires
August 03, 2016

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:

Dennis M. O'Brien

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.

Surety Bond Number: Bid Bond

Principal: Restani Construction Corp.

Obligee: The City of New York

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 19th day of November, 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.

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
HELEN SZAFRAN, Notary Public
City of Philadelphia, Phila. County
My Commission Expires October 3, 2017

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 November 19, 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 19th day of November, 2014.

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 R ELATING TO THIS BOND TO THE FOLLOWING ADDRESS:

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

ATTACH TO CONTRACT DOCUMENTS

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

PROJECT ID: PV176ITF1

RECONSTRUCTION AND REHABILITATION OF
BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
BRONX RIVER PARKING LOT AND OVERFLOW LOT
INTERSECTION OF JUNGLE WORLD ROAD
AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

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

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

ADDENDUM NO. 5

DATED: November 13, 2014

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

1. Refer to the Bid and Contract Documents, Volume 1 of 3, Bid Schedule, pages B-3 through B-38;
   Delete the Bid Schedule, as contained on Pages B-3 through B-38, in its entirety;
   Substitute the revised Bid Schedule on attached pages B-3 [REVISION # 1] through B-38 [REVISION # 1] to change in the Engineer's Estimate of Quantity for Item No. 6.44.

2. Refer to the Bid and Contract Documents, Volume 3 of 3, page A1-1;
   Change the words "PROJECT ID: SV176ITF1" to "PROJECT ID: PV176ITF1" on page A1-1.

3. Refer to the Bid and Contract Documents, Volume 3 of 3, page A2-1;
   Change the words "PROJECT ID: SV176ITF1" to "PROJECT ID: PV176ITF1" on page A2-1.

4. Refer to the Bid and Contract Documents, Volume 3 of 3, page A2-1;
   Change the words "ADDENDUM NO. 1" to "ADDENDUM NO. 2" on page A2-1.

5. Refer to the Contract Drawing, SHEET 56 of 78;
   Delete SHEET 56 of 78, in its entirety;
   Substitute the attached revised SHEET 56 of 78.

END OF ADDENDUM NO. 5

By signing in the space provided below, the bidder acknowledges receipt of this Addendum consisting of two (2) pages plus thirty-six (36) pages of attachments and one (1) sheet of drawings.

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

Mohsen Zargarelahi

MOHSEN ZARGARELAHI, P.E.
Assistant Commissioner

Restani Construction Corp.
Name of Bidder

By: Cyrus Kazerani

ATTACH TO CONTRACT DOCUMENTS

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

PROJECT ID: PV176ITF1

RECONSTRUCTION AND REHABILITATION OF
BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
BRONX RIVER PARKING LOT AND OVERFLOW LOT
INTERSECTION OF JUNGLE WORLD ROAD
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INCLUDING SEWER, WATER MAIN, STREET LIGHTING, TRAFFIC,
AND LANDSCAPING WORK

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

ADDENDUM NO. 6

DATED: November 14, 2014

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

1. Refer to the Bid and Contract Documents, Volume 3 of 3, Addendum No. 1, page A1-18, Subsection 6.73PARCS.2.A;
Add the following text to the end of the paragraph: "The contact person at Gateway System is Mr. Jamie Flaherty and he can be contacted at the main number 610-987-4002, at extension 4145."

END OF ADDENDUM NO. 6

By signing in the space provided below, the bidder acknowledges receipt of this Addendum consisting of one (1) page.

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

For MOHSEN ZARGARELAHI, P.E.
Assistant Commissioner

Rostami Construction Corp.
Name of Bidder

By: Cyrus Kazerani

ATTACH TO CONTRACT DOCUMENTS

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

PROJECT ID: PV176ITF1

RECONSTRUCTION AND REHABILITATION OF
BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
BRONX RIVER PARKING LOT AND OVERFLOW LOT
INTERSECTION OF JUNGLE WORLD ROAD
AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

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

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

ADDENDUM NO. 7

DATED: November 17, 2014

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

1. See attached Questions Submitted by Bidders and DDC's Responses.

END OF ADDENDUM NO. 7

By signing in the space provided below, the bidder acknowledges receipt of this Addendum consisting of one (1) page and one (1) page of attachment.

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

Mohsen Zargarelahi

MOHSEN ZARGARELAHI, P.E.
Assistant Commissioner

Rostami Construction Corp.
Name of Bidder

By: Cyrus Kazerani

GET UPFRONT CAPITAL

TO COMPETE ON CITY CONTRACTS

Contract Financing for NYC Small Businesses

NYC Business Solutions helps small businesses, including Minority or Women-owned Business Enterprises (M/WBEs), across all industries secure low-rate loans to compete on City contracts.

Whether your firm has been selected to perform a construction project, provide professional services, or supply the City with goods, businesses across all industries can access up to $150,000 in capital to cover contract-related labor and equipment costs.

The ideal business should:

- Currently be in operation
- Have plans to bid on a City contract
- Need early-stage resources (e.g. working capital, inventory, or equipment)

Call 311 and ask for "contract financing" or visit **www.nyc.gov/contractfinancing** for more information

NYC Small Business Services

NYC BUSINESS SOLUTIONS

(NO TEXT ON THIS PAGE)

CITY OF NEW YORK

DEPARTMENT OF DESIGN AND CONSTRUCTION DIVISION OF INFRASTRUCTURE

BID BOOKLET

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND REQUIRED FOR:

PROJECT ID: PV176ITF1

RECONSTRUCTION AND REHABILITATION OF BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD BRONX RIVER PARKING LOT AND OVERFLOW LOT INTERSECTION OF JUNGLE WORLD ROAD AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

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

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BOROUGH OF THE BRONX
CITY OF NEW YORK

(NO TEXT ON THIS PAGE)

PROJECT ID: PV176ITF1

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

BID BOOKLET

TABLE OF CONTENTS

(NO TEXT ON THIS PAGE)

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

SPECIAL NOTICE TO BIDDERS

BID SUBMISSION REQUIREMENTS

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

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

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

4. Safety Questionnaire
5. Construction Employment Report (if bid is $1,000,000 or more)
6. Contract Certificate (if bid is less than $1,000,000)
7. Confirmation of Vendex Compliance
8. Bidder's Certification of Compliance with Iran Divestment Act
9. Special Experience Requirements (if applicable)
10. Apprenticeship Program Questionnaire (if applicable)
11. Any addenda issued prior to the receipt of bids

FAILURE TO SUBMIT ITEMS (4) THROUGH (11)
MAY RESULT IN THE DISQUALIFICATION OF THE BID.

NOTES:

(1) All of the above referred to blank forms to be completed and submitted with the bid are included in the BID BOOKLET.

(2) If the bidder has any questions or requires additional information, please contact the Department of Design and Construction by phone (718-391- 2601) or by fax (718-391-2615).

(3) VENDEX QUESTIONNAIRES: The Bidder is advised that Vendex Questionnaires and procedures have been changed. Vendex Questionnaires, as well as detailed instructions, may be obtained at www.nyc.gov/vendex. The bidder may also obtain Vendex forms and instructions by contacting the Agency Chief Contracting Officer or the contact person for this contract.

(4) SPECIAL EXPERIENCE REQUIREMENTS: The Bidder is advised that Special Experience Requirements may apply to this contract. Such requirements are set forth on pages 3, 3a, 3b, and 4 of this Bid Booklet.

(5) Apparent low bidder, as determined at the bid opening or subsequently notified that its firm is the low Bidder, will be required to submit within 7 days a complete DBE Pre-Award Utilization Package in compliance with SECTION 102-12H of the NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS using the approved civil rights reporting software called EBO.

SPECIAL NOTICE TO BIDDERS

SPECIAL EXPERIENCE REQUIREMENTS (Revised 03/2014)

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

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

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

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

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

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

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

☐ The individual serving as the Restoration Specialist (Construction Monitor) must be a Registered Landscape Architect licensed by the state of New York, or must have equivalent professional experience.

☐ The individual serving as the Erosion and Sediment Control Licensed/Certified Professional must be a Certified Professional in Erosion and Sediment Control (CPESC), certified by CPESC, Inc.

☐ **Micro-Tunneling/Pipe Jacking Work:** The entity that will perform the micro-tunneling/pipe jacking work must, within the last five (5) consecutive years prior to the bid opening, have successfully completed in a timely fashion at least two (2) projects similar in scope and type to the required work.

☐ **OTHER:**_____

_____.

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

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

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

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

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

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

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

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

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

■ **OTHER:** Under Item 6.47 PC, the contractor shall be a company specializing in the installation of permeable interlocking concrete pavers with a minimum of 5 years' experience and shall provide the names and contact information for (3) similar projects in the last 5 years.

Under Item No. 6.73 PARCS, the proposed parking access and revenue control system, the manufacturer, and the certified supplier/installer shall be submitted by the General Contractor to the Engineer for approval, in consultation with the Wildlife Conservation Society, prior to the start of construction.

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

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

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

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

- Any principal or other employee on whose prior experience the bidder is relying to demonstrate compliance with this special experience requirement must have held the following: (a) a significant management role in the prior entity with which he/she was affiliated, and (b) a significant management role in the entity submitting the bid for a period of six (6) months or more from the inception of the bidding entity.

- The bidder may not rely on the experience of its principals or other employees to demonstrate compliance with any other requirements, including without limitation, financial requirements or requirements for a specified minimum amount of annual gross revenues.

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

Qualification Form

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

Name of Contractor: _____

Name of Project: _____

Location of Project: _____

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

Name: _____
Title: _____ Phone Number: _____

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

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

Amount of Contract, Subcontract or Sub-subcontract: _____

Start Date and Completion Date: _____

****

Name of Contractor: _____

Name of Project: _____

Location of Project: _____

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

Name: _____
Title: _____ Phone Number: _____

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

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

Amount of Contract, Subcontract or Sub-subcontract: _____

Start Date and Completion Date: _____

(NO TEXT ON THIS PAGE)

ATTACHMENT 1 - BID INFORMATION

PROJECT ID: PV176ITF1
PIN: 8502014HW0019C

Description and Location of Work:

RECONSTRUCTION AND REHABILITATION OF
BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
BRONX RIVER PARKING LOT AND OVERFLOW LOT
INTERSECTION OF JUNGLE WORLD ROAD
AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

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

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

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

Submission of Bids To: 30-30 Thomson Avenue
First Floor Bid Procurement Room
Long Island City, New York 11101
Before 11:00 A.M. on **NOVEMBER 19, 2014**

Bid Opening: 30-30 Thomson Avenue
First Floor Bid Procurement Room
Long Island City, New York 11101

Time and Date: 11:00 A.M. on **NOVEMBER 19, 2014**

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

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

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

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

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

Agency Contact Person: Lorraine Holley
Phone: 718-391-2601 FAX: 718-391-2615

(NO TEXT ON THIS PAGE)

BID SCHEDULE

NOTICE TO BIDDERS

Items listed in this Bid Schedule which have one (1) digit followed by a decimal (e.g. 4.01 RAE), excluding items beginning with the number "8.01", shall comply with the requirements of the corresponding numerical Sections of the New York City Department of Transportation Standard Highway Specifications, as amended by Addendum No. 1 herein Volume 3 of 3.

Items listed in this Bid Schedule which have two (2) digits beginning with the numbers "5", "6" and "7" followed by a decimal (e.g. 52.11D12, 60.12D06, and 70.31FN) shall comply with the requirements of the New York City Department of Environmental Protection (NYCDEP) STANDARD SEWER AND WATER MAIN SPECIFICATIONS dated July 1, 2014, as amended by Addendum No. 3 herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with the number 8.01 followed by a letter (e.g. 8.01 C2) shall comply with the requirements of the corresponding numerical Sections of the SPECIFICATIONS FOR HANDLING, TRANSPORTATION AND DISPOSAL OF NON-HAZARDOUS AND POTENTIALLY HAZARDOUS CONTAMINATED MATERIALS contained in Addendum No. 4, herein Volume 3 of 3.

Items listed in this Bid Schedule which have three (3) digits followed by a decimal (e.g. 640.23), shall comply with the requirements of the corresponding numerical Sections of the STATE OF NEW YORK, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS (US CUSTOMARY UNITS), dated May 1, 2008, and as currently amended.

Items listed in this Bid Schedule beginning with the prefix "NYC-" (e.g. NYC-640.2500001 and NYC-640.2500002) are modified versions of the New York State, Department of Transportation, Special Specifications (US Customary Units) and shall comply with the corresponding alphanumeric Sections in Addendum No. 1 herein Volume 3 of 3.

However in the Specifications for items referred to in the above two paragraph, all references to the "Department", "Materials Bureau", "Regional Engineer", etc., shall be deemed to mean the "Engineer". Where any reference is made on the contract drawings or specifications to the "State" or any of its officials, the Contractor shall substitute the City of New York, Department of Design and Construction, or any of its appropriate officials. The NYSDOT Specifications described above neither imply the State's involvement in any testing and approval of materials, nor in the supervision of construction.

Items listed in this Bid Schedule beginning with the prefix "E" (e.g. E 260533 CF-1) shall comply with the requirements of the corresponding alphanumeric Sections in Addendum No. 1 herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with the prefix "PK-" (e.g. PK-320) shall comply with the requirements of the corresponding alphanumeric Sections incorporated in Addendum No. 1, herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with the prefix "SL-" (e.g. SL-21.09.05) are Street Lighting Items, less the prefix, which shall be done in accordance with the requirements of Sub-Section 1.06.23.(D) and Section 1.06.49 in the Standard Highway Specifications.

BID SCHEDULE

NOTE: (1) The Agency may reject a bid if it contains unbalanced bid prices. An unbalanced bid is considered to be one containing lump sum or unit items which do not reflect reasonable actual costs plus a reasonable proportionate share of the Bidder's anticipated profit, overhead costs, and other indirect costs, anticipated for the performance of the items in question.

(2) The following bid prices on Unit Price Contracts are to be paid for the actual quantities of the item numbers in the completed work or structure, and they cover the cost of all work, labor, material, tools, plant and appliances of every description necessary to complete the entire work, as specified, and the removal of all debris, temporary work and appliances.

(3) PLEASE BE SURE A LEGIBLE BID IS ENTERED, IN INK, FOR EACH ITEM. Alterations must be initialed in ink by the bidder.

(4) The Extended Amount entered in Column 6 shall be the product of the Estimated Quantity in Column 3 times the Unit Price Bid in Column 5.

(5) Prospective bidders must examine the Bid Schedule carefully and, before bidding, must advise the Commissioner, in writing, if any pages are missing, and must request that such missing pages be furnished them. The pages of this Bid Schedule are numbered consecutively, as follows: B - 3 Through B - 38

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

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

PROJECT ID: PV176ITF1
CONTRACT PIN: 8502014HW0019C

BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
001	4.01 RAE ASPHALT MACADAM PAVEMENT, 4" THICK	4,241.00	S.Y.				
002	4.01 RAF ASPHALT MACADAM PAVEMENT, 5" THICK	10,707.00	S.Y.				
003	4.02 AF-R ASPHALTIC CONCRETE WEARING COURSE, 2" THICK	17,816.00	S.Y.				
004	4.02 AG ASPHALTIC CONCRETE WEARING COURSE, 3" THICK	164.00	S.Y.				
005	4.02 CB ASPHALTIC CONCRETE MIXTURE	2,650.00	TONS				
006	4.04 AC CONCRETE BASE FOR PAVEMENT, 6" THICK, CLASS B-32	33.00	C.Y.				

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
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CONTRACT PIN: 8502014HW0019C

BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
007	4.05 A NON-REINFORCED CONCRETE PAVEMENT	11.00	C.Y.				
008	4.06 CONCRETE IN STRUCTURES, CLASS A-40	110.00	C.Y.				
009	4.07 CB NEW GRANITE CURB, STRAIGHT	203.00	L.F.				
010	4.07 CC NEW GRANITE CURB, CORNER	21.00	L.F.				
011	4.08 AA CONCRETE CURB (18" DEEP)	919.00	L.F.				
012	4.08 AC CONCRETE CURB (19" DEEP)	5,563.00	L.F.				

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
013	4.08 AI CONCRETE CURB (26" DEEP)	3,358.00	L.F.				
014	4.08 AI-SC SCUPPERED CONCRETE CURB (26" DEEP)	531.00	L.F.				
015	4.11 AS EARTH EXCAVATION FOR STRUCTURES	40.00	C.Y.				
016	4.11 CA FILL, PLACE MEASUREMENT	192.00	C.Y.				
017	4.13 AAS 4" CONCRETE SIDEWALK (UNPIGMENTED)	16,599.00	S.F.				
018	4.13 BR 7" REINFORCED CONCRETE SIDEWALK (UNPIGMENTED)	1,358.00	S.F.				

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COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
019	4.13 DE EMBEDDED PREFORMED DETECTABLE WARNING UNITS	143.00	S.F.				
020	4.14 STEEL REINFORCEMENT BARS	82.00	LBS.				
021	4.14 W WELDED STEEL WIRE FABRIC	868.00	LBS.				
022	4.15 TOPSOIL	269.00	C.Y.				
023	4.15 WPM WETLAND PLANTING MIX	676.00	C.Y.				
024	4.16 AA TREES REMOVED (4" TO UNDER 12" CALIPER)	9.00	EACH				

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
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COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
025	4.16 AC TREES REMOVED (18" TO UNDER 24" CALIPER)	4.00	EACH				
026	4.16 BA TREES PLANTED, 2-1/2" TO 3" CALIPER, ALL TYPES	29.00	EACH				
027	4.16 CA TREES PLANTED, 3" TO 3-1/2" CALIPER, ALL TYPES	59.00	EACH				
028	4.17 AC SHRUBS PLANTED, 18" TO 24" HIGH, ALL TYPES	76.00	EACH				
029	4.17 PP PERENNIALS PLANTED, 6" - 12" HIGH, ALL TYPES.	3,123.00	EACH				
030	4.18 A MAINTENANCE TREE PRUNING (UNDER 12" CAL.)	19.00	EACH				

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
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COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
031	4.18 B MAINTENANCE TREE PRUNING (12" TO UNDER 18" CAL.)	8.00	EACH				
032	4.18 C MAINTENANCE TREE PRUNING (18" TO UNDER 24" CAL.)	6.00	EACH				
033	4.18 D MAINTENANCE TREE PRUNING (24" CAL. AND OVER)	7.00	EACH				
034	4.20 SEEDING	6,560.00	S.Y.				
035	4.21 TREE CONSULTANT	924.00	P/HR				
036	50.31MC15 15" E.S.V.P. STORM SEWER, ON CONCRETE CRADLE	385.00	L.F.				

BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
037	50.31MC18 18" E.S.V.P. STORM SEWER, ON CONCRETE CRADLE	107.00	L.F.				
038	50.31ME15 15" E.S.V.P. STORM SEWER, ENCASED IN CONCRETE	122.00	L.F.				
039	51.12S000 STORMWATER TREATMENT SYSTEM (SWTS) CHAMBER	1.00	EACH				
040	51.21S0A1000E STANDARD MANHOLE TYPE A-1 ON EXISTING SEWER	2.00	EACH				
041	51.21S0A1000V STANDARD MANHOLE TYPE A-1	2.00	EACH				
042	51.21S0A3000V STANDARD SHALLOW MANHOLE TYPE A-3	1.00	EACH				

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
043	51.23RF REPLACEMENT OF EXISTING MANHOLE FRAME AND COVER	5.00	EACH				
044	51.41D002 STANDARD DOUBLE CATCH BASIN, TYPE 2	1.00	EACH				
045	51.41P000 SPECIAL CATCH BASIN	1.00	EACH				
046	51.41S001 STANDARD CATCH BASIN, TYPE 1	8.00	EACH				
047	51.41S002 STANDARD CATCH BASIN, TYPE 2	5.00	EACH				
048	51.61F000 OUTFALL	1.00	EACH				

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
049	52.11D12 12" DUCTILE IRON PIPE BASIN CONNECTION	559.00	L.F.				
050	53.11DR TELEVISION INSPECTION AND DIGITAL AUDIO-VISUAL RECORDING OF SEWERS	598.00	L.F.				
051	55.11AB ABANDONING BASINS AND INLETS	6.00	EACH				
052	6.02 AAN UNCLASSIFIED EXCAVATION	5,714.00	C.Y.				
053	6.06 AA GRANITE BLOCK SIDEWALK (SAND JOINTS) (FURNISH BLOCK)	415.00	S.Y.				
054	6.06 ABPC GRANITE BLOCK SIDEWALK ON CONCRETE BASE (GROUTED JOINTS) (FURNISH BLOCK) (1" MORTAR BASE)	11.00	S.Y.				

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
055	6.09 AC CONCRETE HEADER (6" WIDE X 20" DEEP)	1,768.00	L.F.				
056	6.22 F ADDITIONAL HARDWARE	660.00	LBS.				
057	6.25 RS TEMPORARY SIGNS	113.00	S.F.				
058	6.26 TIMBER CURB	924.00	L.F.				
059	6.28 AA LIGHTED TIMBER BARRICADES	531.00	L.F.				
060	6.31 PC PRECAST CONCRETE CAPSTONE	429.00	L.F.				

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COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
061	6.31 WS PRECAST CONCRETE WHEEL STOPS	32.00	EACH				
062	6.34 X REMOVE AND DISPOSE OF EXISTING CHAIN LINK FENCE	539.00	L.F.				
063	6.36 DR STRUCTURAL REPAIR AND ADJUSTMENT OF UTILITY STRUCTURES	4.00	C.Y.				
064	6.40 C ENGINEER'S FIELD OFFICE (TYPE C)	20.00	MONTH				
065	6.43 PHOTOGRAPHS	330.00	SETS				
066	6.44 THERMOPLASTIC REFLECTORIZED PAVEMENT MARKINGS (4" WIDE)	4,266.00	L.F.				

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
067	6.47 PC FURNISH AND INSTALL PERMEABLE INTERLOCKING CONCRETE PAVERS (PLAZA AREA)	36,317.00	S.F.				
068	6.49 TEMPORARY PAVEMENT MARKINGS (4" WIDE)	1,540.00	L.F.				
069	6.50 CLEANING OF DRAINAGE STRUCTURES	10.00	EACH				
070	6.52 FED UNIFORMED FLAGPERSON PRICE BID SHALL BE FOR THE FIXED SUM OF $ 26,400.00	1.00	F.S.	26,400	00	26,400	00
071	6.53 REMOVE EXISTING LANE MARKINGS (4" WIDE)	1,210.00	L.F.				

BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
072	6.55 SAWCUTTING EXISTING PAVEMENT	17,589.00	L.F.				
073	6.67 SUBBASE COURSE, SELECT GRANULAR MATERIAL	2,176.00	C.Y.				
074	6.68 PLASTIC FILTER FABRIC	5,638.00	S.Y.				
075	6.73 PARCS PARKING ACCESS AND REVENUE CONTROL SYSTEM	1.00	L.S.				
076	6.75 GRINDING EXISTING ASPHALTIC CONCRETE WEARING COURSE	1,171.00	C.Y.				
077	6.82 A REMOVING EXISTING TRAFFIC AND STREET NAME SIGNS	220.00	S.F.				

NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
078	6.82 B REMOVING EXISTING TRAFFIC AND STREET NAME SIGN POSTS	502.00	L.F.				
079	6.83 AA FURNISHING NEW NON-REFLECTORIZED TRAFFIC SIGNS	39.00	S.F.				
080	6.83 AB FURNISHING NEW TRAFFIC SIGN POSTS	647.00	L.F.				
081	6.83 AR FURNISHING NEW REFLECTORIZED TRAFFIC SIGNS	288.00	S.F.				
082	6.83 BA INSTALLING TRAFFIC SIGNS	326.00	S.F.				
083	6.83 BB INSTALLING TRAFFIC SIGN POSTS	647.00	L.F.				

BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
084	6.84 B LOLLIPOP TYPE BUS STOP SIGNS PRICE BID SHALL BE FOR THE FIXED SUM OF $ 5,000.00	1.00	F.S.	5,000	00	5,000	00
085	6.86 WF-AG1 FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE AG1)	1.00	EACH				
086	6.86 WF-AG2 FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE AG2)	2.00	EACH				
087	6.86 WF-PAY FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE PAY)	4.00	EACH				
088	6.86 WF-PDIR01 FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE PDIR-LG-GROUND MOUNT)	6.00	EACH				

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

PROJECT ID: PV176ITF1
CONTRACT PIN: 8502014HW0019C

BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
089	**6.86 WF-PDIR02** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE PDIR-LG-FENCE MOUNT)	2.00	EACH				
090	**6.86 WF-PDIR03** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE PDIR-SM-GROUND MOUNT)	2.00	EACH				
091	**6.86 WF-PDIR04** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE PDIR-SM-GROUND MOUNT, DOUBLE)	2.00	EACH				
092	**6.86 WF-PRK01** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE PRK-GROUND MOUNT)	22.00	EACH				
093	**6.86 WF-PRK02** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE PRK-FENCE MOUNT)	17.00	EACH				
094	**6.86 WF-PRK03** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE PRK-WALL MOUNT)	2.00	EACH				

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BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
095	**6.86 WF-VDIR01** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE VDIR-LG)	1.00	EACH				
096	**6.86 WF-VDIR02** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE VDIR-LG, DOUBLE SIDED)	3.00	EACH				
097	**6.86 WF-VDIR03** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE VDIR-SM)	2.00	EACH				
098	**6.86 WF-VDIR04** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE VDIR-SM, DOUBLE SIDED)	2.00	EACH				
099	**6.86 WF-VOH** FURNISHING AND INSTALLING NEW WAYFINDING SIGNS (TYPE VOH-OVERHEAD MOUNT)	1.00	EACH				
100	**6.87** PLASTIC BARRELS	319.00	EACH				

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COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITTY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
101	6.91 REFLECTIVE CRACKING MEMBRANE (18" WIDE)	258.00	L.F.				
102	6.99 AUDIO AND VIDEO DOCUMENTATION SURVEY	1.00	L.S.				
103	60.11R606 FURNISHING AND DELIVERING 6-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	143.00	L.F.				
104	60.11R608 FURNISHING AND DELIVERING 8-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	87.00	L.F.				
105	60.11R612 FURNISHING AND DELIVERING 12-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	77.00	L.F.				
106	60.12D06 LAYING 6-INCH DUCTILE IRON PIPE AND FITTINGS	211.00	L.F.				

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COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
107	**60.12D08** LAYING 8-INCH DUCTILE IRON PIPE AND FITTINGS	165.00	L.F.				
108	**60.12D12** LAYING 12-INCH DUCTILE IRON PIPE AND FITTINGS	153.00	L.F.				
109	**60.13M0A24** FURNISHING AND DELIVERING DUCTILE IRON MECHANICAL JOINT 24 -INCH DIAMETER AND SMALLER FITTINGS, INCLUDING WEDGE TYPE RETAINER GLANDS	3.00	TONS				
110	**60.41CPL06** RECONSTRUCTION OF EXISTING 6-INCH DIAMETER WATER MAIN, USING D.E.P. APPROVED CIPP LINING METHOD	499.00	L.F.				
111	**60.41CPL08** RECONSTRUCTION OF EXISTING 8-INCH DIAMETER WATER MAIN, USING D.E.P. APPROVED CIPP LINING METHOD	158.00	L.F.				
112	**60.41CPL12** RECONSTRUCTION OF EXISTING 12-INCH DIAMETER WATER MAIN, USING D.E.P. APPROVED CIPP LINING METHOD	649.00	L.F.				

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COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
113	**61.11DMM06** FURNISHING AND DELIVERING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	5.00	EACH				
114	**61.11DMM08** FURNISHING AND DELIVERING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	1.00	EACH				
115	**61.11DMM12** FURNISHING AND DELIVERING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	2.00	EACH				
116	**61.12DMM06** SETTING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	5.00	EACH				
117	**61.12DMM08** SETTING 8-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	1.00	EACH				

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COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
118	61.12DMM12 SETTING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	2.00	EACH				
119	62.11SD FURNISHING AND DELIVERING HYDRANTS	4.00	EACH				
120	62.12SG SETTING HYDRANTS COMPLETE WITH WEDGE TYPE RETAINER GLANDS	4.00	EACH				
121	62.13RH REMOVING HYDRANTS	4.00	EACH				
122	62.14FS FURNISHING, DELIVERING AND INSTALLING HYDRANT FENDERS	8.00	EACH				
123	63.11VC FURNISHING AND DELIVERING VARIOUS CASTINGS	4.00	TONS				

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COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
124	640.20 WHITE PAINT REFLECTORIZED PAVEMENT STRIPES - 20 MILS	19,440.00	L.F.				
125	640.21 YELLOW PAINT REFLECTORIZED PAVEMENT STRIPES - 20 MILS	2,522.00	L.F.				
126	640.22 WHITE PAINT REFLECTORIZED PAVEMENT LETTERS - 20 MILS	60.00	EACH				
127	640.23 WHITE PAINT REFLECTORIZED PAVEMENT SYMBOLS - 20 MILS	44.00	EACH				
128	65.11BR FURNISHING, DELIVERING AND INSTALLING BANDS, RODS, WASHERS, ETC., COMPLETE, FOR RESTRAINING JOINTS	827.00	LBS.				
129	65.21PS FURNISHING AND PLACING POLYETHYLENE SLEEVE **Unit price bid shall not be less than: $ 0.50**	338.00	L.F.				

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COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
130	65.31FF FURNISHING, DELIVERING AND PLACING FILTER FABRIC **Unit price bid shall not be less than: $ 0.10**	7,394.00	S.F.				
131	65.71SG FURNISHING, DELIVERING AND PLACING SCREENED GRAVEL OR SCREENED BROKEN STONE BEDDING	37.00	C.Y.				
132	7.07 ALB FURNISHING AND INSTALLING NEW ALUMINIUM BOLLARDS	25.00	EACH				
133	7.07 BHS FURNISHING AND INSTALLING NEW STEEL BOLLARDS FOR HANDICAP SIGNAGE	14.00	EACH				
134	7.07 MT MECHANICAL TRUNSTILE	2.00	EACH				
135	7.13 B MAINTENANCE OF SITE	14.00	MONTH				

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COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
136	7.16 D TEST PITS	218.00	C.Y.				
137	7.36 PEDESTRIAN STEEL BARRICADES	1,485.00	L.F.				
138	7.88 AA RODENT INFESTATION SURVEY AND MONITORING **Unit price bid shall not be less than: $ 6,413.00**	1.00	L.S.				
139	7.88 AB RODENT BAIT STATIONS **Unit price bid shall not be less than: $ 60.00**	226.00	EACH				
140	7.88 AC BAITING OF RODENT BAIT STATIONS **Unit price bid shall not be less than: $ 9.50**	226.00	EACH				
141	7.88 AD WATERBUG BAIT APPLICATIONS **Unit price bid shall not be less than: $ 65.00**	339.00	BLOCK				

BID SCHEDULE FORM

COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
142	70.31FN FENCING **Unit price bid shall not be less than: $ 2.00**	3,012.00	L.F.				
143	70.51EO EXCAVATION OF BOULDERS IN OPEN CUT **Unit price bid shall not be less than: $ 75.00**	6.00	C.Y.				
144	70.61RE ROCK EXCAVATION	211.00	C.Y.				
145	70.71RR RIPRAP	21.00	C.Y.				
146	70.71SB STONE BALLAST **Unit price bid shall not be less than: $ 15.00**	5.00	C.Y.				
147	70.81CB CLEAN BACKFILL **Unit price bid shall not be less than: $ 15.00**	533.00	C.Y.				

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COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
148	70.91SW12 FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 12-INCH IN DIAMETER AND LESS	77.00	S.F.				
149	73.11AB ADDITIONAL BRICK MASONRY **Unit price bid shall not be less than: $ 62.50**	5.00	C.Y.				
150	73.21AC ADDITIONAL CONCRETE **Unit price bid shall not be less than: $ 62.50**	7.00	C.Y.				
151	73.31AE0 ADDITIONAL EARTH EXCAVATION INCLUDING TEST PITS (ALL DEPTHS) **Unit price bid shall not be less than: $ 20.00**	7.00	C.Y.				
152	73.41AG ADDITIONAL SELECT GRANULAR BACKFILL **Unit price bid shall not be less than: $ 15.00**	7.00	C.Y.				
153	73.51AS ADDITIONAL STEEL REINFORCING BARS **Unit price bid shall not be less than: $ 1.00**	400.00	LBS.				

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COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
154	8.01 C1 HANDLING, TRANSPORTING AND DISPOSAL OF NON-HAZARDOUS CONTAMINATED SOIL	4,200.00	TONS				
155	8.01 C2 SAMPLING AND TESTING OF CONTAMINATED/POTENTIALLY HAZARDOUS SOIL FOR DISPOSAL PURPOSES	7.00	SETS				
156	8.01 H HANDLING, TRANSPORTING AND DISPOSAL OF HAZARDOUS SOIL	140.00	TONS				
157	8.01 S HEALTH AND SAFETY	1.00	L.S.				
158	8.01 W1 REMOVAL, TREATMENT, AND DISCHARGE/DISPOSAL OF CONTAMINATED WATER	7.00	DAY				
159	8.01 W2 SAMPLING AND TESTING OF WATER	2.00	SETS				

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COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
160	8.02 A SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	165.00	S.F.				
161	8.02 B SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	380.00	L.F.				
162	9.04 HW ALLOWANCE FOR ANTI-FREEZE ADDITIVE IN CONCRETE PRICE BID SHALL BE FOR THE FIXED SUM OF $ 50,000.00	1.00	F.S.	50,000	00	50,000	00
163	9.13 HD8 8" HIGH-DENSITY POLYETHYLENE DRAINAGE PIPE	73.00	L.F.				
164	9.13 HDP4 4" PERFORATED HIGH-DENSITY POLYETHYLENE UNDERDRAIN PIPE	1,647.00	L.F.				

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165	9.13 PVC-12C 12" PVC UNDERDRAIN CLEANOUT	4.00	EACH				
166	9.30 STORM WATER POLLUTION PREVENTION	1.00	L.S.				
167	9.60 KRL RELOCATE KIOSK	1.00	EACH				
168	9.60 TB1 PRE-FABRICATED TICKET BOOTH - TYPE 1	2.00	EACH				
169	9.60 TB2 PRE-FABRICATED TICKET BOOTH - TYPE 2	1.00	EACH				
170	9.99 M FLASHING ARROW BOARD	8.00	MONTH				

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COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITIY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
171	E 260519 B LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 2 AWG WIRE)	2,720.00	L.F.				
172	E 260519 C LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 4 AWG WIRE)	4,146.00	L.F.				
173	E 260519 D LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 6 AWG WIRE)	1,220.00	L.F.				
174	E 260519 G LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 10 AWG WIRE)	1,980.00	L.F.				
175	E 260533 AC METAL CONDUIT AND TUBING (2" GALVANIZED RIGID STEEL CONDUIT)	116.00	L.F.				
176	E 260533 AC3.0 METAL CONDUIT AND TUBING (3" GALVANIZED RIGID STEEL CONDUIT)	75.00	L.F.				

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177	E 260533 CE LOAD CENTER - ELECTRICAL	3.00	EACH				
178	E 260533 CF-1 LOAD CENTER - COMMUNICATIONS (TYPE 1 - RELOCATE SWITCH)	1.00	EACH				
179	E 260533 CF-2 LOAD CENTER - COMMUNICATIONS (TYPE 2- NEW SWITCH)	4.00	EACH				
180	E 260533 D HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING	24.00	EACH				
181	E 260533 P1.5 RIGID NON-METALLIC CONDUIT (1 1/2" PVC SCHEDULE 40 CONDUIT)	2,627.00	L.F.				
182	E 260533 P2.0 RIGID NON-METALLIC CONDUIT (2" PVC SCHEDULE 40 CONDUIT)	3,118.00	L.F.				

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183	E 265600 A LIGHT POLE FOUNDATION AND SITE LIGHTING	4.00	EACH				
184	E 271000 A FIBER OPTIC COMMUNICATIONS CABLING - 12 STRAND, SINGLE MODE	1,224.00	L.F.				
185	E 271000 B CATEGORY 6 COMMUNICATIONS CABLING	1,426.00	L.F.				
186	HW-900H ALLOWANCE FOR CITY WORK ACCELERATION PRICE BID SHALL BE FOR THE FIXED SUM OF $ 20,000.00	1.00	F.S.	20,000	00	20,000	00
187	HW-908 ALLOWANCE FOR EXTRA WORK DUE TO ARCHAEOLOGICAL DISCOVERIES PRICE BID SHALL BE FOR THE FIXED SUM OF $ 75,000.00	1.00	F.S.	75,000	00	75,000	00

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COL. 1 SEQ. NO	COL. 2 ITEM NUMBER and DESCRIPTION	COL. 3 ENGINEER'S ESTIMATE OF QUANTITY	COL. 4 UNIT	COL. 5 UNIT PRICE (IN FIGURES) DOLLARS	CTS	COL. 6 EXTENDED AMOUNT (IN FIGURES) DOLLARS	CTS
188	NYC-640.2500001 BLUE REFLECTORIZED PAVEMENT MARKING PAINT FOR HANDICAPPED SPACES - 20 MILS	2,450.00	L.F.				
189	NYC-640.2500002 BLUE REFLECTORIZED PAVEMENT MARKING PAINT FOR HANDICAPPED SPACES SYMBOLS - 20 MILS	24.00	EACH				
190	PK-305 CHAIN LINK FENCE 8'-0" HT.	894.00	L.F.				
191	PK-308 CHAIN LINK FENCE 12'-0" HT., 2" MESH	307.00	L.F.				
192	PK-316 SINGLE GATE FOR CHAIN LINK FENCE 8' HT. & OVER	3.00	EACH				
193	PK-319 DOUBLE GATE FOR CHAIN LINK FENCE 8' HT.	1.00	EACH				

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194	PK-320 DOUBLE GATE FOR CHAIN LINK FENCE 10' HT. & OVER	1.00	EACH				
195	PK-35 SHREDDED BARK MULCH	1,014.00	S.Y.				
196	PK-367 TIMBER BARRIER RAIL - TWO RAIL (TYPE D)	528.00	L.F.				
197	SL-20.08.01 REMOVE STANDARD TYPE ANCHOR BOLT CONCRETE FOUNDATION	4.00	EACH				
198	SL-21.02.02 FURNISH AND INSTALL A STANDARD WOOD POLE	4.00	EACH				
199	SL-21.09.05 REMOVE STANDARD FABRICATED STEEL, SPUN ALUMINUM NO. 10, ETC. WITH ARM(S), LUMINAIRE(S), CONTROL(S) WITH ALL ATTACHMENTS, IF ANY.	4.00	EACH				

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200	6.39 A MOBILIZATION BID PRICE OF MOBILIZATION SHALL NOT EXCEED 4% OF THE ABOVE SUB-TOTAL PRICE.	1.00	L.S.				

SUB-TOTAL: $ _____

TOTAL BID PRICE: $ _____

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

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

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

PROJECT ID: PV176ITF1

RECONSTRUCTION AND REHABILITATION OF BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
BRONX RIVER PARKING LOT AND OVERFLOW LOT
INTERSECTION OF JUNGLE WORLD ROAD
AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

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

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORKN

Name of Bidder: _____

Date of Bid Opening: _____

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

Place of Business of Bidder: _____

Bidder's Telephone Number: _____ Fax Number: _____

Bidder's E-Mail Address: _____

Residence of Bidder (If Individual): _____

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

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

If Bidder is a Corporation, fill in the following blanks:
Organized under the laws of the State of _____

Name and Home Address of President: _____
_____

Name and Home Address of Secretary: _____
_____

Name and Home Address of Treasurer: _____
_____

BID FORM

The above-named Bidder affirms and declares:

1. The said bidder is of lawful age and the only one interested in this bid; and no person, firm or corporation other than hereinbefore named has any interest in this bid, or in the Contract proposed to be taken.

2. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief: (1) the prices in this bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor; (2) unless otherwise required by law, the prices quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and (3) No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

3. No councilman or other officer or employee or person whose salary is payable in whole or in part from the City Treasury is directly or indirectly interested in this bid, or in the supplies, materials, equipment, work or labor to which it relates, or in any of the profits thereof.

4. The bidder is not in arrears to the City of New York upon debt or contract or taxes, and is not a defaulter, as surety or otherwise, upon any obligation of the City of New York, and has not been declared not responsible, or disqualified, by any agency of the City of New York or State of New York, nor is there any proceeding pending relating to the responsibility or qualification of the bidder to receive public contracts except as set forth on the Affirmation included as page C-6 of this Bid Booklet.

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

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

6. Compliance Report

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

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

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

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

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

(NO TEXT ON THIS PAGE)

BID FORM

PROJECT ID. PV176ITF1

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

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

BIDDER'S SIGNATURE AND AFFIDAVIT

Bidder:_____

By: _____
(Signature of Partner or corporate officer)

_____

Attest:
(Corporate Seal)

Secretary of Corporate Bidder

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

BID FORM (TO BE NOTARIZED)

AFFIDAVIT WHERE BIDDER IS AN INDIVIDUAL

STATE OF NEW YORK, COUNTY OF_____ ss:

_____ being duly sworn says:

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

_____

(Signature of the person who signed the Bid)

Subscribed and sworn to before me this

_____ day of_____, _____

_____

Notary Public

AFFIDAVIT WHERE BIDDER IS A PARTNERSHIP

STATE OF NEW YORK, COUNTY OF_____ ss:

_____ being duly sworn says:

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

_____

(Signature of Partner who signed the Bid)

Subscribed and sworn to before me this

_____ day of_____, _____

_____

Notary Public

AFFIDAVIT WHERE BIDDER IS A CORPORATION

STATE OF NEW YORK, COUNTY OF_____ ss:

_____ being duly sworn says:

I am the _____ of the above named corporation whose name is subscribed to and which executed the foregoing bid. I reside at _____.

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

_____

(Signature of Corporate Officer who signed the Bid)

Subscribed and sworn to before me this

_____ day of_____, _____

_____

Notary Public

AFFIRMATION

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

_____

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

Full Name of Bidder: _____

Address: _____

City _____ State _____ Zip Code _____

CHECK ONE BOX AND INCLUDE APPROPRIATE NUMBER:

/__/ A - Individual or Sole Proprietorship*
SOCIAL SECURITY NUMBER

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

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

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

/__/ C- Corporation
EMPLOYER IDENTIFICATION NUMBER

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

By: _____
Signature

Title: _____

If a corporation, place seal here

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

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

(NO TEXT ON THIS PAGE)

BID BOND 1
FORM OF BID BOND

KNOW ALL MEN BY THESE PRESENTS. That we, _____

_____

_____

hereinafter referred to as the "Principal", and _____

_____

_____

_____

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

_____

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

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

_____

_____

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

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

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

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

BID BOND 2

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

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

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

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

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

(Seal) _____(L.S.)
Principal

By: _____

(Seal) _____
Surety

By: _____

BID BOND 3

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

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

_____
Notary Public

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP

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

_____
Notary Public

ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL

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

_____
Notary Public

AFFIX ACKNOWLEDGMENTS AND JUSTIFICATION OF SURETIES

(NO TEXT ON THIS PAGE)

M/WBE PROGRAM

M/WBE UTILIZATION PLAN

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

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

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

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

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

NOTICE TO ALL PROSPECTIVE CONTRACTORS

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

ARTICLE I. M/WBE PROGRAM

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

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

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

PART A

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(i) The Contractor advertised opportunities to participate in the Contract, where appropriate, in general circulation media, trade and professional association publications and small business media, and publications of minority and women's business organizations;

(ii) The Contractor provided notice of specific opportunities to participate in the Contract, in a timely manner, to minority and women's business organizations;

(iii) The Contractor sent written notices, by certified mail or facsimile, in a timely manner, to advise MBEs or WBEs that their interest in the Contract was solicited;

(iv) The Contractor made efforts to identify portions of the work that could be substituted for portions originally designated for participation by MBEs and/or WBEs in the M/WBE Utilization Plan, and for which the Contractor claims an inability to retain MBEs or WBEs;

(v) The Contractor held meetings with MBEs and/or WBEs prior to the date their bids or proposals were due, for the purpose of explaining in detail the scope and requirements of the work for which their bids or proposals were solicited;

(vi) The Contractor made efforts to negotiate with MBEs and/or WBEs as relevant to perform specific subcontracts, or act as suppliers or service providers;

(vii) Timely written requests for assistance made by the Contractor to Agency's M/WBE liaison officer and to DSBS;

(viii) Description of how recommendations made by DSBS and Agency were acted upon and an explanation of why action upon such recommendations did not lead to the desired level of participation of MBEs and/or WBEs.

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

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

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

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

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

PART B: MISCELLANEOUS

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

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

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

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

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

ARTICLE II. ENFORCEMENT

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

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

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

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

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

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

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

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

Tax ID #: _____

APT E-PIN #: 85014B0082

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 #	85014B0082	**FMS Project ID#:**	PV176ITF1
Project Title/ Agency PIN #	RECONSTRUCTION AND REHABILITATION OF BRONX ZOO INTERMODAL TRANSPORTATION FACILITY / 8502014HW0019C		
Bid/Proposal Response Date			
Contracting Agency	Department of Design and Construction		
Agency Address	30-30 Thomson Ave. **City** Long Island City **State** NY **Zip Code** 11101		
Contact Person	Jessica Lavides	**Title**	MWBE Liaison & Compliance Analyst
Telephone #	(718) 391-1065	**Email**	LavidesJe@ddc.nyc.gov

Project Description *(attach additional pages if necessary)*

RECONSTRUCTION AND REHABILITATION OF
BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
BRONX RIVER PARKING LOT AND OVERFLOW LOT
INTERSECTION OF JUNGLE WORLD ROAD
AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

INCLUDING SEWER, WATER MAIN, STREET LIGHTING, TRAFFIC,
AND LANDSCAPING WORK
Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

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

Prime Contract Industry: Construction

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

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

Tax ID #: _____

APT E-PIN #: _____

SCHEDULE B - Part II: M/WBE Participation Plan

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

Section I: Prime Contractor Contact Information

Tax ID # _____ **FMS Vendor ID #** _____

Business Name _____ **Contact Person** _____

Address _____

Telephone # _____ **Email** _____

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

PRIME CONTRACTOR ADOPTING AGENCY M/WBE PARTICIPATION GOALS

☐ **For Prime Contractors (including Qualified Joint Ventures and M/WBE firms) adopting Agency M/WBE Participation Goals.**	**Total Bid/Proposal Value**		**Agency Total Participation Goals (Line 1, Page 13)**		**Calculated M/WBE Participation Amount**
Calculate the total dollar value of your total bid that you agree will be awarded to M/WBE subcontractors for services and/or credited to an M/WBE prime contractor or Qualified Joint Venture. Please review the Notice to Prospective Contractors for more information on how to obtain credit for M/WBE participation.	$	X		=	$ Line 2

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

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

SAMPLE

Tax ID #: _____ APT E-PIN #: _____

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? % ____

✓ Scopes of Subcontract Work

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

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

Tax ID #: _____

APT E-PIN #: _____

Section V: Vendor Certification and Required Affirmations

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

Signature _____ **Date** _____

Print Name _____ **Title** _____

N.A.

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

Contract Overview

Tax ID # _____ **FMS Vendor ID #** _____

Business Name _____

Contact Name _____ **Telephone #** _____ **Email** _____

Type of Procurement ☐ **Competitive Sealed Bids** ☐ **Other** **Bid/Response Due Date** _____

APT E-PIN # (for this procurement): _____ **Contracting Agency:** _____

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

_____ % **Agency M/WBE Participation Goal**

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

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

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

☐ **Vendor does not subcontract services, and has the capacity and good faith intention to perform all such work itself with its own employees.**

☐ **Vendor subcontracts *some* of this type of work but at a *lower* % than bid/solicitation describes, and has the capacity and good faith intention to do so on this contract. (Attach subcontracting plan outlining services that the vendor will self-perform and subcontract to other vendors or consultants.)**

☐ **Vendor has other legitimate business reasons for proposing the M/WBE Participation Goal above. Explain under separate cover.**

References

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

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

Total Contract Amount $ _____ **Total Amount Subcontracted** $ _____

Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____

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

Total Contract Amount $ _____ **Total Amount Subcontracted** $ _____

Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____

CONTRACT NO. **AGENCY** **DATE COMPLETED**

Total Contract Amount $ **Total Amount Subcontracted** $

Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____

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

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

TYPE OF Contract _____ **ENTITY** _____ **DATE COMPLETED** _____

Manager at entity that hired vendor (Name/Phone No./Email) _____

Total Contract Amount $ _____ **Total Amount Subcontracted** $ _____

Type of Work Subcontracted _____

TYPE OF Contract _____ **AGENCY/ENTITY** _____ **DATE COMPLETED** _____

Manager at agency/entity that hired vendor (Name/Phone No./Email) _____

Total Contract Amount $ _____ **Total Amount Subcontracted** $ _____

Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____

TYPE OF Contract _____ **AGENCY/ENTITY** _____ **DATE COMPLETED** _____

Manager at entity that hired vendor (Name/Phone No./Email) _____

Total Contract Amount $ _____ **Total Amount Subcontracted** $ _____

Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____ Item of Work Subcontracted and Value of subcontract _____

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

Signature: _____ **Date:** _____

Print Name: _____ **Title:** _____

Shaded area below is for agency completion only

AGENCY CHIEF CONTRACTING OFFICER APPROVAL

Signature: _____ **Date:** _____

CITY CHIEF PROCUREMENT OFFICER APPROVAL

Signature: _____ **Date:** _____

Waiver Determination

Full Waiver Approved ☐

Waiver Denied ☐

Partial Waiver Approved ☐

Revised Participation Goal _____ %

APPRENTICESHIP PROGRAM REQUIREMENTS

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

__√__ YES _____ NO

(1) Apprenticeship Program Requirements

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

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

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

(2) Apprenticeship Program Questionnaire

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

APPRENTICESHIP PROGRAM QUESTIONNAIRE

PROJECT ID. PV176ITF1

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

Name of Bidder: _____

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

   _____ YES _____ NO

2. Has the bidder's Apprenticeship Program been registered with, and approved by, the New York State Commissioner of Labor?

   _____ YES _____ NO

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

   _____ YES _____ NO

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

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Bidder: _____

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

Date: _____

Project ID. _____

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.

Project ID. _____

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

YEAR	INTRASTATE RATE	INTERSTATE 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.

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

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

Project ID. _____

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

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

5. Safety Performance on Previous DDC Project(s)

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

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

____ YES ____ NO Accident on previous DDC Project(s).

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

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

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

Date: _____ By: _____

(Signature of Owner, Partner, Corporate Officer)

Title: _____

(NO TEXT ON THIS PAGE)

Pre-Award Process

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

****

(A) **Project Reference Form**: If required, the bidder must complete and submit the Project Reference Form set forth on pages 26 through 28 of this Bid Booklet. The Project Reference Form consists of 3 parts: (1) Similar Contracts Completed by the Bidder, (2) Contracts Currently Under Construction by the Bidder, and (3) Pending Contracts Not Yet Started by the Bidder.

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

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

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

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

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

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

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

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

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

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

A. PROJECT REFERENCES – SIMILAR CONTRACTS COMPLETED BY THE BIDDER

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

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

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

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

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

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

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

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

(NO TEXT ON THIS PAGE)

OFFICE OF THE MAYOR
BUREAU OF LABOR SERVICES
CONTRACT CERTIFICATE

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

Contractor: _____

Address: _____

_____

Telephone Number: _____

Name and Title of Signatory: _____

_____

Contracting Agency or Owner: _____

Project Number: _____

Proposed Contract Amount: _____

Description and Address of Proposed Contract: _____

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

_____
_____
_____

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

_____ Date

_____ Signature

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

(NO TEXT ON THIS PAGE)

VENDEX COMPLIANCE

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

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

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

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

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

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

Date of Submission: _____

By: _____
(Signature of Partner or corporate officer)

Print Name: _____

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

By: _____
(Signature of Partner or corporate officer)

Print Name: _____

(NO TEXT ON THIS PAGE)

Certificate of No Change Form

Mayor's Office of Contract Services

- 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.

Mayor's Office of Contract Services

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

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

Certification *This section is required.*

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

Certified By:

_____
Name (Print)

_____
Title

_____
Name of Submitting Entity

_____ _____
Signature *Date*

Notarized By:

_____ _____ _____
Notary Public *County License Issued* *License Number*

Sworn to before me on: _____
Date

Certificate of No Change Form

Mayor's Office of Contract Services

- 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.

Mayor's Office of Contract Services

	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:

NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

INFRASTRUCTURE DIVISION
BUREAU OF DESIGN

VOLUME 1 OF 3

PROJECT ID: PV176ITF1

RECONSTRUCTION AND REHABILITATION OF
BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
BRONX RIVER PARKING LOT AND OVERFLOW LOT
INTERSECTION OF JUNGLE WORLD ROAD
AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

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

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

_____
Contractor.

_____

Dated_____, **20**_____

_____

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

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

VOLUME 2 OF 3

INFORMATION FOR BIDDERS
CONTRACT
PERFORMANCE AND PAYMENT BONDS
PREVAILING WAGE SCHEDULE

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND REQUIRED FOR:

PROJECT ID: PV176ITF1

RECONSTRUCTION AND REHABILITATION OF
BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
BRONX RIVER PARKING LOT AND OVERFLOW LOT
INTERSECTION OF JUNGLE WORLD ROAD
AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

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

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

FOR THE DEPARTMENT OF TRANSPORTATION
PREPARED BY
THE RBA GROUP

JULY 25, 2014

NYSDOT PIN X770.77
Fed. Aid Project No. _____

Bid Opening 11:00 A.M. on _____
Location 1st Floor Bid Room, 30-30 Thomson Ave., Long Island City, N.Y. 11101

15-043

NEW YORK CITY DEPARTMENT OF DESIGN + CONSTRUCTION

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

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

VOLUME 2 OF 3

INFORMATION FOR BIDDERS
CONTRACT
PERFORMANCE AND PAYMENT BONDS
PREVAILING WAGE SCHEDULE

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND REQUIRED FOR:

FOR THE DEPARTMENT OF TRANSPORTATION
PREPARED BY
IN-HOUSE DESIGN

SEPTEMBER 1, 2008

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.

ARTICLE14 FINAL ACCEPTANCE OF WORK
ARTICLE 44 SUBSTANTIAL COMPLETION PAYMENT

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

ARTICLE 15 LIQUIDATED DAMAGES

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

ARTICLE 17 SUBCONTRACTS

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

ARTICLE 19 SECURITY DEPOSIT

The provisions governing the return of bid deposits are clarified.

ARTICLE 20 PAYMENT GUARANTEE

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

ARTICLE 28 RECORDKEEPING FOR EXTRA OR DISPUTED WORK

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

ARTICLE 35 EMPLOYEES

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

ARTICLE 38 PAYROLL REPORTS
ARTICLE 77 RECORDS RETENTION

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

ARTICLE 42 PARTIAL PAYMENTS

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

ARTICLE 62 TAX EXEMPTION

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

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CITY OF NEW YORK

DEPARTMENT OF
DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURES

INFORMATION FOR BIDDERS

SEPTEMBER 2008

(NO TEXT ON THIS PAGE)

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

TABLE OF CONTENTS

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INFORMATION FOR BIDDERS

1. Description and Location of Work

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

2. Time and Place for Receipt of Bids

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

3. Definitions

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

4. Invitation For Bids and Contract Documents

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

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

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

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

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

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

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

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

5. Pre-Bid Conference

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

6. Agency Contact

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

7. Bidder's Oath

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

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

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

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

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

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

9. Examination of Proposed Contract

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

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

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

10. Form of Bid

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

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

11. Irrevocability of Bid

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

12. Acknowledgment of Amendments

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

13. Bid Samples and Descriptive Literature

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

14. Proprietary Information/Trade Secrets

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

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

15. Pre-Opening Modification or Withdrawal of Bids

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

16. Bid Evaluation and Award

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

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

17. Late Bids, Late Withdrawals and Late Modifications

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

18. Withdrawal of Bids.

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

19. Mistake in Bids

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

(B) Mistakes Discovered Before Award

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

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

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

therein is strictly prohibited.

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

20. Low Tie Bids

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

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

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

21. Rejection of Bids

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

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

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

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

(1) All otherwise acceptable bids received are at unreasonable prices, or only one bid is received and the Agency Chief Contracting Officer cannot determine the reasonableness of the bid price, or no responsive bid has been received from a responsible bidder; or

(2) In the judgment of the Agency Chief Contracting Officer, the bids were not independently arrived at in open competition, were collusive, or were submitted in bad faith.

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

(1) prior notice of the intention to negotiate and a reasonable opportunity to negotiate have been given by the contracting officer to each responsible bidder that submitted a bid in response to the Invitation for Bids;

(2) the negotiated price is the lowest negotiated price offered by a responsible bidder; and

(3) the negotiated price is lower than the lowest rejected bid price of a responsible bidder that submitted a bid in response to the Invitation for Bids.

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

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

23. Affirmative Action and Equal Employment Opportunity

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

24. VENDEX Questionnaires

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

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

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

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

25. Complaints About the Bid Process

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

26. Bid, Performance and Payment Security

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

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

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

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

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

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

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

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

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

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

27. Failure to Execute Contract

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

28. Bidder Responsibilities and Qualifications

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

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

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

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

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

29. Employment Report

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

30. Labor Law Requirements

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

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

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

31. Insurance

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

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

32. Lump Sum Contracts

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

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

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

33. Unit Price Contracts

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

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

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

34. Excise Tax

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

35. Licenses and Permits

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

36. Multiple Prime Contractors

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

37. Locally Based Enterprise Requirements (LBE)

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

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

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

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

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

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

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

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

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

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

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

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

(b) advertisement where appropriate in general circulation media, trade association publications and small business media of the specific subcontracts that would be at least equal to the percentage goal for LBE utilization specified by the contractor;

(c) written notification to association of small, minority and women contractors soliciting specific subcontractors;

(d) written notification by certified mail to LBE firms that their interest in the contract is solicited for specific work items and their estimated values;

(e) demonstration of efforts made to select portions of the work for performance by LBE firms in order to increase the likelihood of achieving the stated goal;

(f) documented efforts to negotiate with LBE firms for specific subcontracts, including at a minimum:

(i) The names, address and telephone numbers of LBE firms that are contacted;

(ii) A description of the information provided to LBE firms regarding the plans and specifications for portions of the work to be performed;

(iii) Documentation showing that no reasonable price can be obtained from LBE firms;

(iv) A statement of why agreements with LBE firms were not reached;

(g) a statement of the reason for rejecting any LBE firm which the contractor deemed to be unqualified; and

(h) documentation of efforts made to assist the LBE firms contacted that needed assistance in obtaining required insurance.

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

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

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

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

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

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

39. Comptroller's Certificate

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

40. Procurement Policy Board Rules

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

41. DDC Safety Requirements

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

CITY OF NEW YORK

DEPARTMENT OF DESIGN AND CONSTRUCTION

SAFETY REQUIREMENTS

THE DDC SAFETY REQUIREMENTS INCLUDE THE FOLLOWING SECTIONS:

I. POLICY ON SITE SAFETY

The City of New York Department of Design and Construction (DDC) is committed to a policy of injury and illness prevention and risk management for construction work that will ensure the safety and health of the workers engaged in the projects and the protection of the general public. Therefore, it is DDC's policy that work carried out by Contractors on DDC jobsites must, at a minimum, comply with applicable federal, state and city laws, rules and regulations, including without limitation:

- U. S. Department of Labor 29 Code of Federal Regulations (CFR) Part 1926 and applicable Sub-parts of Part 1910 – U.S. Occupational Safety and Health Administration (OSHA) including, but not limited to "Respiratory Protection" (29 CFR 1910.134), "Permit-Required Confined Spaces" (29 CFR 1910.146), and "Hazard Communication" (29 CFR 1910.1200);
- New York State Department of Labor Industrial Code Rule 23 – Protection in Construction, Demolition and Excavation;
- New York City Construction Codes, Title 28
- NYC Department of Transportation Title 34 Chapter 2 – Highway Rules
- New York State Department of Labor Industrial Code Rule 753
- NYC Local Law No. 113 (2005) Noise Control Code

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

II. PURPOSE

The purpose of this policy is to ensure that Contractors perform their work and supervise their employees in accordance with all applicable federal, state and city rules and regulations. Further, Contractors will be expected to minimize or eliminate jobsite and public hazard, through a planning, inspection, auditing and corrective action process. The goal is to control risks so that injuries, illnesses and accidents to contractors' employees, DDC employees and the general public, as well as damage to city-owned and private property, are reduced to the lowest level feasible.

III. DEFINITIONS

Agency Chief Contracting Officer (ACCO): The ACCO shall mean the person delegated authority by the Commissioner to organize and supervise the procurement activity of subordinate Agency staff in conjunction with the CCPO.

Competent Person: As defined by OSHA, an individual who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to employees or the general public, and who has authorization to take prompt corrective measures to eliminate them.

Construction Safety Auditor: A representative of the QACS Construction Safety Unit who provides inspection and assessment services to enhance health and safety on all DDC construction projects. The activities of the Construction Safety Auditor include performing site surveys, reviewing health and safety plans, reviewing construction permits, and rendering technical advice and assistance to DDC Resident Engineers and Project Managers.

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

Construction Superintendent: A representative of the contractor responsible for overseeing performance of the required construction work. This individual must engage in sound construction practices, and is responsible to maintain a safe work site. In the case of a project involving the demolition, alteration or new construction of buildings, the Construction Superintendent must be licensed by the NYC Department of Buildings.

Contractor: For purposes of these Safety Requirements, the term "Contractor" shall mean any person or entity that enters into a contract for the performance of construction work on a DDC project. The term "Contractor" shall include any person or entity which enters into any of the following types of contracts: (1) a prime construction contract for a specific project, (2) a prime construction contract using the Job Order Contracting System ("JOCS Contract"), and (3) a subcontract with a CM/Builder ("First Tier Subcontract").

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

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

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

Qualified Person: As defined by OSHA, an individual who, by possession of a recognized degree, certificate, license or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his or her ability to solve problems relating to the subject matter, the work, or the project. Qualified Persons are required under regulation to address issues pertaining, but without limit, to fall protection, scaffold design and trenching and shoring, among others.

Resident Engineer (RE) / Construction Project Manager (CPM): Representative of the Commissioner duly designated by the Commissioner to be his/her representative at the site of the work. (The RE/CPM may be a third-party consultant, including a CM, retained by DDC.)

Safety Program: Established by the Contractor that covers all operations of that Contractor and establishes the Contractor's overall safety policy, regulatory compliance plan and minimum safety standards. The Safety Program must be submitted prior to the commencement of work at the site and is subject to review and acceptance by the Construction Safety Unit.

Safety Questionnaire: Used by DDC to evaluate Contractor's current and past safety performance. It is required to be completed by all Contractors initially when submitting bids for Construction work, or when being pre-qualified and updated annually or as requested by the DDC.

Site Safety Plan: A site-specific safety plan developed by the Contractor for a specific project. The Site Safety Plan must identify hazards associated with the project, and include specific safety precautions and training appropriate and necessary to complete the work. The Site Safety Plan must be submitted prior to the commencement of work at the site and is subject to review and acceptance by the Construction Safety Unit.

Unsafe or Unhealthy Condition: A condition that could be potentially hazardous to the health and safety of personnel or the public, and/or damaging to equipment, machinery, property or the environment.

Weekly Safety Meetings: Weekly documented jobsite safety meetings, given to all jobsite personnel by contractor, with the purpose of discussing general safety topics and job specific requirements encountered at the DDC work site.

IV. RESPONSIBILITIES

All persons who manage, perform, and provide support for construction projects shall conduct operations in compliance with the requirements identified in this Policy and all applicable governing regulatory agency requirements and guidelines pertaining to safety in construction.

A. Resident Engineer / Construction Project Manager / Construction Manager

- Monitors the issuance of safety- related permits, approvals and drawings and maintains copies on site.
- Monitors construction-related work activities to confirm that they are conducted in accordance with DDC policies and all applicable regulations that pertain to construction safety.
- Maintains documentation and periodically attends weekly safety meeting.
- Notifies the Construction Safety Unit and the ACCO's Insurance and Risk Management Unit of project- related accidents and emergencies, as per DDC's Construction Safety Emergency Protocol.
- Gathers facts related to all accidents and prepares DDC Accident Reports.
- Notifies the Construction Safety Unit of outside regulatory agency inspections and forwards a copy of the inspection report within three days of its receipt.
- Monitors the conditions at the site for conformance with the Site Safety Plan and DDC construction documents.
- Notifies the contractor and DDC in the event that any condition or activity exists that is not in compliance with the Site Safety Plan, applicable federal, state or local codes or any condition that presents a potential risk of injury to the public or workers or possible damage to property.
- Notifies DDC of any emergency condition and directs the contractor to provide such labor, materials, equipment and supervision to abate such conditions.
- Reports gross safety violations to the Construction Safety Unit immediately.

B. Contractors

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

- 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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CITY OF NEW YORK

STANDARD CONSTRUCTION CONTRACT

December 2013

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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.

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[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 requite 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.

20.4.2In 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.

26.1.1For 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**.

26.1.2If 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) x (HP rating) x (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) x (HP rating) x (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 asses, identify, and actively recruit employees from under-represented religious groups with potential for further advancement; and

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

69.4 The **Contractor** agrees that the covenants and representations in Article 69.2 are material conditions to this **Contract**. In the event the **Agency** receives information that the **Contractor** who made the stipulation required by this Article 69 is in violation thereof, the **Agency** shall review such information and give the **Contractor** an opportunity to respond. If the **Agency** finds that a violation has occurred, the **Agency** shall have the right to declare the **Contractor** in default in default and/or terminate this **Contract** for cause and procure supplies, services or **Work** from another source in the manner the **Agency** deems proper. In the event of such termination, the **Contractor** shall pay to the **Agency**, or the **Agency** in its sole discretion may withhold from any amounts otherwise payable to the **Contractor**, the difference between the **Contract** price for the uncompleted portion of this **Contract** and the cost to the **Agency** of completing performance of this **Contract** either itself or by engaging another **Contractor** or **Contractors**. In the case of a requirement **Contract**, the **Contractor** shall be liable for such difference in price for the entire amount of supplies required by the **Agency** for the uncompleted term of **Contractor's Contract**. In the case of a construction **Contract**, the **Agency** shall also have the right to hold the **Contractor** in partial or total default in accordance with the default provisions of this **Contract**, and/or may seek debarment or suspension of the **Contractor**. The rights and remedies of the **Agency** hereunder shall be in addition to, and not in lieu of, any rights and remedies the **Agency** has pursuant to this **Contract** or by operation of **Law**.

ARTICLE 70. ELECTRONIC FILING/NYC DEVELOPMENT HUB

70.1 The **Contractor** shall electronically file all alteration type-2 and alteration type-3 applications via the New York City Development Hub Web site, except applications for the following types of minor alterations: enlargements, curb cuts, legalizations, fire alarms, builders pavement plans, and jobs filed on Landmark Preservation Commission calendared properties. All such filings must be professionally certified. Information about electronic filing via the New York City Development Hub is available on the **City** Department of Buildings Web site at www.nyc.gov/buildings.

ARTICLE 71. PROHIBITION OF TROPICAL HARDWOODS

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

ARTICLE 72. CONFLICTS OF INTEREST

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

ARTICLE 73. MERGER CLAUSE

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

ARTICLE 74. STATEMENT OF WORK

74.1 The **Contractor** shall furnish all labor and materials and perform all **Work** in strict accordance with the **Specifications** and **Addenda** thereto, numbered as shown in Schedule A.

ARTICLE 75. COMPENSATION TO BE PAID TO CONTRACTOR

75.1 The **City** will pay and the **Contractor** will accept in full consideration for the performance of the **Contract**, subject to additions and deductions as provided herein, the total sum shown in Schedule A, this said sum being the amount at which the **Contract** was awarded to the **Contractor** at a public letting thereof, based upon the **Contractor's** bid for the **Contract**. Eight million, seven hundred seventy five thousand, forty five dollars and 40 - 8,775,045.40

ARTICLE 76. ELECTRONIC FUNDS TRANSFER

76.1 In accordance with Section 6-107.1 of the Administrative Code, the **Contractor** agrees to accept payments under this **Contract** from the **City** by electronic funds transfer (EFT). An EFT is any transfer of funds, other than a transaction originated by check, draft or similar paper instrument, which is initiated through an electronic terminal, telephonic instrument or computer or magnetic tape so as to order, instruct or authorize a financial institution to debit or credit an account. Prior to the first payment made under this **Contract**, the **Contractor** shall designate one financial institution or other authorized payment agent and shall complete the attached "EFT Vendor Payment Enrollment Form" in order to provide the Commissioner of the **City** Department of Finance with information necessary for the **Contractor** to receive electronic funds transfer payments through a designated financial institution or authorized payment agent. The crediting of the amount of a payment to the appropriate account on the books of a financial institution or other authorized payment agent designated by the **Contractor** shall constitute full satisfaction by the **City** for the amount of the payment under this **Contract**. The account information supplied by the **Contractor** to facilitate the electronic funds transfer shall remain confidential to the fullest extent provided by **Law**.

76.2 The **Commissioner** may waive the application of the requirements of this Article 76 to payments on contracts entered into pursuant to Section 315 of the **City** Charter. In addition, the Commissioner of the Department of Finance and the Comptroller may jointly issue standards pursuant to which the **Agency** may waive the requirements of this Article 76 for payments in the following

circumstances: (i) for individuals or classes of individuals for whom compliance imposes a hardship; (ii) for classifications or types of checks; or (iii) in other circumstances as may be necessary in the interest of the **City**.

ARTICLE 77. RECORDS RETENTION

77.1 The **Contractor** agrees to retain all books, records, and other documents relevant to this **Contract** for six years after the final payment or termination of this **Contract**, whichever is later. **City**, state, and federal auditors and any other persons duly authorized by the **City** shall have full access to and the right to examine any such books, records, and other documents during the retention period.

ARTICLE 78. PARTICIPATION BY MINORITY-OWNED AND WOMEN-OWNED BUSINESS ENTERPRISES IN CITY PROCUREMENT

NOTICE TO ALL PROSPECTIVE CONTRACTORS

ARTICLE I. M/WBE PROGRAM

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

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

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

PART A

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

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

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

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

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

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

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

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

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

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

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

6. MBE and WBE firms must be certified by DSBS in order for the Contractor to credit such firms' participation toward the attainment of the **Participation Goals**. Such certification must occur prior to the

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

PART B: MISCELLANEOUS

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

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

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

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

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

ARTICLE II. ENFORCEMENT

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

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

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

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

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

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

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

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

IN WITNESS WHEREOF, the Deputy Commissioner, on behalf of the City of New York, and the Contractor, have executed this agreement in quadruplicate, two parts of which are to remain with the Commissioner, another to be filed with the Comptroller of the City, and the fourth to be delivered to the Contractor.

THE CITY OF NEW YORK

By: _____
Deputy Commissioner

CONTRACTOR:

By: _____
(Member of Firm or Officer of Corporation)

Title: PRESIDENT

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

_____
Secretary

(Seal)

_____

ACKNOWLEDGEMENT OF PRINCIPAL, IF A CORPORATION

State of NEW YORK County of QUEENS ss:

On this 26th day of FEBRUARY, 2016, before me personally came SALVATORE RESTIVO to me known who, being by me duly sworn did depose and say that he resides at 408 E79th ST NY, NY 10075 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.

JUAN C. CEVALLOS
NOTARY PUBLIC, State of New York
No. 01CE6068240
Qualified in Westchester County
Certificate Filed in Queens County
Commission Expires 12/31/2017

Notary Public or Commissioner of Deeds

ACKNOWLEDGEMENT OF PRINCIPAL, IF A PARTNERSHIP

State of _____ County of _____ ss:

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

_____
Notary Public or Commissioner of Deeds

ACKNOWLEDGEMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of _____ County of _____ ss:

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

_____
Notary Public or Commissioner of Deeds

ACKNOWLEDGEMENT BY COMMISSIONER

State of New York County of Queens ss:

On this 2nd day of March, 2016, before me personally came Eric MacFarlane to me known, and known to be the Deputy Commissioner of the Department of Design and Construction of The City of New York, the person described as such in and who as such executed the foregoing instrument and acknowledged to me that he executed the same as Deputy Commissioner for the purposes therein mentioned.

Simone Smith

Notary Public or Commissioner of Deeds

SIMONE SMITH
Commissioner of Deeds
City of New York No. 4-6760
Certificate Filed in New York County
Commission Expires 07/01/16

AUTHORITY

MAYOR'S CERTIFICATE NO. CBX DATED
BUDGET DIRECTOR'S CERTIFICATE NO. 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

Eight million Seven hundred Seventy five thousand, forty five dollars 00/40-

Dollars ($ 8,775,045.40

is chargeable to the fund of the Department of Design and Construction entitled Code

PV176 Ltf1

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

Performance Bond #2 (Pages 94 to 97): Use if the total contract price is more than $5 Million.

PERFORMANCE BOND #2

KNOW ALL PERSONS BY THESE PRESENTS, That we,

Restani Construction Corp.

42-04 Berrian Boulevard

Astoria, NY 11105

hereinafter referred to as the "Principal", and

Arch Insurance Company

300 Plaza Three

Jersey City, NJ 07311

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

Eight Million Seven Hundred Seventy Five Thousand Forty Five Dollars and 40/100

($ 8,775,045.40) Dollars, lawful money of the United States, for the payment of which said sum of money well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal is about to enter, or has entered, into a Contract in writing with the City for

FMS ID: PV176ITF1 DDC PIN: 8502014HW0019C - RECONSTRUCTION AND REHABILITATION OF BRONX ZOO INTERMODAL TRANSPORTATION FACILITY, ETC./THE BRONX

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal, his or its representatives or assigns, shall well and faithfully perform the said Contract and all modifications, amendments, additions and alterations thereto that may hereafter be made, according to its terms and its true intent and meaning, including repair and or replacement of defective work and guarantees of maintenance for the periods stated in the Contract, and shall fully indemnify and save harmless the City from all cost and damage which it may suffer by reason of the Principal's default of the Contract, and shall fully reimburse and repay the City for all outlay and expense which the City may incur in making 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.

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 24th day of February, 2016.

(Seal) Restani Construction Corp. (L.S.)
Principal
By: _____

(Seal) Arch Insurance Company
Surety
By: _____
Dennis M. O'Brien, Attorney-in-Fact

(Seal) _____
Surety
By: _____

(Seal) _____
Surety
By: _____

(Seal) _____
Surety
By: _____

(Seal) _____
Surety

Bond Premium Rate 12.65 SLIDE

Bond Premium Cost $59,230.00

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.

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of NEW YORK County of QUEENS ss:

On this 24th day of FEBRUARY, 2016 before me personally came SALVATORE RESTIVO to me known, who, being by me duly sworn did depose and say that he/she resides at 408 E 79th ST NY, NY 10075 ; that he/she is the PRESIDENT of RESTANI CONSTRUCTION CORP 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.

JUAN C. CEVALLOS
NOTARY PUBLIC, State of New York
No. 01CE6068240
Qualified in Westchester County
Certificate Filed in Queens County
Commission Expires 12/31/17

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP

State of _____ County of _____ ss:

On this _____ day of _____, _____ before me personally came _____ to me known, who, being by me duly sworn did depose and say that he/she resides at _____ ; that he/she is _____ partner of _____, a limited/general partnership existing under the laws of the State of _____, the partnership described in and which executed the foregoing instrument; and that he/she signed his/her name to the foregoing instrument as the duly authorized and binding act of said partnership.

_____
Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of _____ County of _____ ss:

On this _____ day of _____, _____ before me personally came _____ to me known, who, being by me duly sworn did depose and say that he/she resides at _____ , and that he/she is the individual whose name is subscribed to the within instrument and acknowledged to me that by his/her signature on the instrument, said individual executed the instrument.

_____
Notary Public or Commissioner of Deeds

Each executed bond should be accompanied by: (a) appropriate acknowledgments of the respective parties; (b) appropriate duly certified copy of Power of Attorney or other certificate of authority where bond is executed by agent, officer or other representative of Principal or Surety; (c) a duly certified extract from By-Laws or resolutions of Surety under which Power of Attorney or other certificate of authority of its agent, officer or representative was issued, and (d) certified copy of latest published financial statement of assets and liabilities of Surety.

* * * * * * * *

Affix Acknowledgments and Justification of Sureties.

ACKNOWLEDGMENT OF SURETY COMPANY

STATE OF NEW YORK
COUNTY OF WESTCHESTER } ss

On this .....February 24, 2016....., before me personally came .Dennis M. O'Brien.....

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

.NORTH MERRICK, 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 is 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 .Dennis M. O'Brien..... his/her certificate of qualification evidencing the qualification of said Company and its sufficiency under any law of the State of New York as surety and guarantor, and the propriety of accepting and approving it as such; and that such certificate has not been revoked.

.....
ALICE MCCARTHY Notary Public

WESTCHESTER
Notary Public County

June 2, 2019
Notary Public Commission Expiration Date

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

ARCH INSURANCE COMPANY
STATEMENT OF FINANCIAL CONDITION
DECEMBER 31, 2014

Assets

Cash in Banks	$ 127,486,649
Bonds owned	2,003,424,640
Stocks	441,536,973
Premiums in course of collection	318,366,265
Accrued interest and other assets	310,044,748
Total Assets	$ 3,200,859,275

Liabilities

Reserve for losses and adjustment expenses	$ 1,356,487,805
Reserve for unearned premiums	347,898,150
Ceded reinsurance premiums payable	168,613,930
Amounts withheld or retained by company for account of others	199,971,426
Reserve for taxes, expenses and other liabilities	349,520,028
Total Liabilities	2,422,491,339
Surplus as regards policyholders	778,367,936
Total Surplus and Liabilities	$ 3,200,859,275

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, 2014.

Subscribed and sworn to before me, this 10th day of March, 2015

Notary Public

Mary E Keating

MARY E. KEATING
NOTARY PUBLIC OF NEW JERSEY
ID # 2449626
My Commission Expires 8/28/2015

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:

Dennis M. O'Brien

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.

Surety Bond Number: SU 111 7755

Principal: Restani Construction Corp.

Obligee: The City of New York

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 24th day of February, 2016.

Attested and Certified

Arch Insurance Company

Arch Insurance Company CORPORATE SEAL 1971 Missouri

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.

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
HELEN SZAFRAN, Notary Public
City of Philadelphia, Phila. County
My Commission Expires October 3, 2017

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 February 24, 2016 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 24th day of February, 2016.

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 R ELATING TO THIS BOND TO THE FOLLOWING ADDRESS:

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

Arch Insurance Company CORPORATE SEAL 1971 Missouri

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 2/29/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER

City Underwriting Agency Inc.
2001 Marcus Avenue
Suite W180
Lake Success NY 11042

CONTACT NAME: Brendan Mulholland
PHONE (A/C, No, Ext): 516-358-3500 FAX (A/C, No): 516-358-3540
E-MAIL ADDRESS: bmulholland@cuagency.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Starr Indemnity & Liability Company	38318
INSURER B : Endurance American Insurance Co.	10641
INSURER C : National Union Fire Ins.Co.of Pitts	19455
INSURER D :	
INSURER E :	
INSURER F :	

INSURED

Restani Construction Corp.
42-04 Berrian Blvd
Astoria NY 11105

COVERAGES **CERTIFICATE NUMBER:** 450797312 **REVISION NUMBER:**

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

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY	Y	Y	1000025359151	3/1/2016	3/1/2017	EACH OCCURRENCE	$2,000,000
	X COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$50,000
	CLAIMS-MADE X OCCUR						MED EXP (Any one person)	$5,000
	X Contract Liab						PERSONAL & ADV INJURY	$2,000,000
	X XCU Included						GENERAL AGGREGATE	$4,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	$4,000,000
	POLICY X PRO-JECT LOC							$
A	AUTOMOBILE LIABILITY			SISIPCA08287215	3/1/2016	3/1/2017	COMBINED SINGLE LIMIT (Ea accident)	$1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$
	ALL OWNED AUTOS / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS / X NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$
								$
B	UMBRELLA LIAB X OCCUR			EXC10004636201	3/1/2016	3/1/2017	EACH OCCURRENCE	$1,000,000
	X EXCESS LIAB CLAIMS-MADE						AGGREGATE	$2,000,000
	DED RETENTION $							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	N / A		1000001642	3/1/2016	3/1/2017	X WC STATU-TORY LIMITS / OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N: N (Mandatory In NH) If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. EACH ACCIDENT	$1,000,000
							E.L. DISEASE - EA EMPLOYEE	$1,000,000
							E.L. DISEASE - POLICY LIMIT	$1,000,000
C	Excess Umbrella			BE011573140	3/1/2016	3/1/2017	Occurrance:	24,000,000
							Aggregate	24,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, If more space is required)

Re: FMS ID: PV176ITF1
E-Pin: 85014B0082001
DDC Pin: 8502014HW0019C
Reconstruction and Rehabilitation of Bronx Zoo Intermodal Transportation Facility

The City of New York, including its officials and employees, New York State, including its officials and employees, FHWA, including its officials and employees are included as additional insured as required by written contract.

CERTIFICATE HOLDER

New York City Department of Design & Construction
30-30 Thomson Avenue
Long Island City NY 11101

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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STATE OF NEW YORK
WORKERS' COMPENSATION BOARD

CERTIFICATE OF NYS WORKERS' COMPENSATION INSURANCE COVERAGE

1a. Legal Name & Address of Insured (Use street address only) Restani Construction Corp. 42-04 Berrian Blvd Astoria, NY 11105 **Work Location of Insured** ***(Only required if coverage is specifically limited to certain locations in New York State, i.e., a Wrap-Up Policy)***	**1b. Business Telephone Number of Insured** 718 728-0870 **1c. NYS Unemployment Insurance Employer Registration Number of Insured** **1d. Federal Employer Identification Number of Insured or Social Security Number** 112814769
2. Name and Address of the Entity Requesting Proof of Coverage (Entity Being Listed as the Certificate Holder) New York City Department of Design and Construction 30-30 Thomson Avenue Long Island City, NY 11101	**3a. Name of Insurance Carrier** Starr Indemnity & Liability Co. **3b. Policy Number of entity listed in box "1a"** 100001642 **3c. Policy effective period** 03/01/2016 to 03/01/2017 **3d. The Proprietor, Partners or Executive Officers are** ☑ **included.** **(Only check box if all partners/officers included)** ☐ **all excluded or certain partners/officers excluded.**

This certifies that the insurance carrier indicated above in box "3" insures the business referenced above in box "1a" for workers' compensation under the New York State Workers' Compensation Law **(To use this form, New York (NY) must be listed under Item 3A on the INFORMATION PAGE of the workers' compensation insurance policy).** The Insurance Carrier or its licensed agent will send this Certificate of Insurance to the entity listed above as the certificate holder in box "2".

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

Please Note: Upon the cancellation of the workers' compensation policy indicated on this form, if the business continues to be named on a permit, license or contract issued by a certificate holder, the business must provide that certificate holder with a new Certificate of Workers' Compensation Coverage or other authorized proof that the business is complying with the mandatory coverage requirements of the New York State Workers' Compensation Law.

Under penalty of perjury, I certify that I am an authorized representative or licensed agent of the insurance carrier referenced above and that the named insured has the coverage as depicted on this form.

Approved by: Brendan Mulholland
(Print name of authorized representative or licensed agent of insurance carrier)

Approved by: [signature] 02/29/16
(Signature) (Date)

Title: ACCOUNT EXECUTIVE

Telephone Number of authorized representative or licensed agent of insurance carrier: 516-358-3500

Please Note: *Only insurance carriers and their licensed agents are authorized to issue Form C-105.2 Insurance brokers are* ***NOT*** *authorized to issue it*

Workers' Compensation Law

Section 57. Restriction on issue of permits and the entering into contracts unless compensation is secured.

1 The head of a state or municipal department, board, commission or office authorized or required by law to issue any permit for or in connection with any work involving the employment of employees in a hazardous employment defined by this chapter, and notwithstanding any general or special statute requiring or authorizing the issue of such permits, shall not issue such permit unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that compensation for all employees has been secured as provided by this chapter. Nothing herein, however, shall be construed as creating any liability on the part of such state or municipal department, board, commission or office to pay any compensation to any such employee if so employed

2. The head of a state or municipal department, board, commission or office authorized or required by law to enter into any contract for or in connection with any work involving the employment of employees in a hazardous employment defined by this chapter, notwithstanding any general or special statute requiring or authorizing any such contract, shall not enter into any such contract unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that compensation for all employees has been secured as provided by this chapter.

SCHEDULE OF WORKMEN, MECHANICS AND LABORERS

The following is a list of classifications for workmen, mechanics and laborers which are anticipated to be employed in the performance of work under this contract, followed by a schedule of the prevailing wage rates and supplemental benefits for all classifications as established by the Comptroller of the City of New York.

Request for interpretation or correction under Subsection A of Section No. 3 in the Information for Bidders includes all requests for clarification of the classification of trades to be employed in the performance of the work under this contract.

In the event that a trade not listed in the classification of trades required to be used at the time of the award of the contract is in fact employed during the performance of this contract, the Contractor shall be required to obtain from the agency the prevailing wage rates and supplementary benefits for the trades used and to complete the performance of this contract at the price at which the contract was awarded.

CODE	CLASSIFICATION
15 42 001	Rigger
15 42 002	Sign Erector
16 11 001	Gardener
16 11 002	Tree Pruner
16 11 003	Tree Remover
16 11 011	Asphalt Raker (Highway & Paving)
16 11 012	Tamper (Highway & Paving)
16 11 013	Curbsetter (Highway & Paving)
16 11 014	Formsetter (Highway & Paving)
16 11 015	Rammerman (Highway & Paving)
16 11 016	Laborer (Highway & Paving)
16 11 017	ALL OTHER TITLES (Highway & Paving)
16 23 001	Laborer
16 23 002	Operating Engineer (Heavy Construction-Maintenance)
16 23 003	Junior Operating Engineer
16 23 004	Junior Operating Engineer
16 23 005	Junior Operating Engineer
16 23 006	Fireman (Heavy Construction)
16 23 007	Oiler (Heavy Construction)
16 23 051	Surveyor-Heavy Construction
16 23 052	Surveyor-Heavy Construction-Instrument Man
16 23 053	Surveyor-Heavy Construction-Rodman
16 23 057	Surveyor-Land Surveying-Party Chief
16 23 058	Surveyor-Land Surveying-Instrument Man
16 23 059	Surveyor-Land Surveying-Rodman

CODE	CLASSIFICATION
16 23 061	Operating Engineer-Road & Heavy Construction
16 23 062	Operating Engineer-Paving
16 23 063	Operating Engineer-Concrete
16 23 071	Teamster-Heavy Equipment Trailer Driver
16 23 072	Teamster-Dump Truck Driver
16 23 073	Teamster-Flat Bed Trailer Driver (3-Axle)
16 23 074	Teamster-Redi-Mix (Sand and Gravel)
16 29 011	Drill Runners
17 11 001	Plumbers
17 21 001	Painter (Brush & Roller)
17 31 001	Electrician
17 41 001	Bricklayer
17 41 002	Mason Tender
17 41 004	Cement Mason
17 42 002	Metallic Lather
17 51 001	Carpenter
17 51 002	Dock Builder
17 71 001	Cement & Concrete Worker
17 91 001	Structural Iron Worker
17 95 001	Barman
17 96 021	Derrickmen & Riggers
17 99 001	Ornamental Iron Worker
17 99 002	Sandblaster
17 99 005	Pointers (Waterproofer)
17 99 011	Welders

Each classification may include trainees depending upon project staffing schedules and as required by the terms of this contract.

LABOR LAW §220 PREVAILING WAGE SCHEDULE

Workers, Laborers and Mechanics employed on a public work project must receive not less than the prevailing rate of wage and benefits for the classification of work performed by each upon such public work. Pursuant to Labor Law §220 the Comptroller of the City of New York has promulgated this schedule solely for Workers, Laborers and Mechanics engaged by private contractors on New York City public work contracts.

This schedule is a compilation of separate determinations of the prevailing rate of wage and supplements made by the Comptroller for each trade classification listed herein pursuant to New York State Labor Law section 220 (5). The source of the wage and supplement rates, whether a collective bargaining agreement, survey data or other, is listed at the end of each classification.

Agency Chief Contracting Officers should contact the Bureau of Labor Law's Classification Unit with any questions concerning trade classifications, prevailing rates or prevailing practices with respect to procurement on New York City public works contracts. Contractors are advised to review the Comptroller's Prevailing Wage Schedule before bidding on public works contracts. Contractors with questions concerning trade classifications, prevailing rates or prevailing practices with respect to public works contracts in the procurement stage must contact the contracting agency responsible for the procurement.

Any error as to compensation under the prevailing wage law or other information as to trade classification, made by the contracting agency in the contract documents or in any other communication, will not preclude a finding against the contractor of prevailing wage violation.

Any questions concerning trade classifications, prevailing rates or prevailing practices on New York City public works contracts that have already been awarded may be directed to the Bureau of Labor Law's Classification Unit by calling (212) 669-7974. All callers must have the agency name and contract registration number available when calling with questions on public works contracts. Please direct all other compliance issues to: Bureau of Labor Law, Attn: Wasyl Kinach, P.E., Office of the Comptroller, 1 Centre Street, Room 1122, New York, N.Y. 10007; Fax (212) 669-4002.

The appropriate schedule of prevailing wages and benefits must be posted at all public work sites pursuant to Labor Law §220 (3-a) (a).

This schedule is applicable to work performed during the effective period, unless otherwise noted. Changes to this schedule are published on our web site www.comptroller.nyc.gov. Contractors must pay the wages and supplements in effect when the worker, laborer, mechanic performs the work. Preliminary schedules for future one-year periods appear in the City Record on or about June 1 each succeeding year. Final schedules appear on or about July 1 in the City Record and on our web site www.comptroller.nyc.gov.

The Comptroller's Office has attempted to include all overtime, shift and night differential, Holiday, Saturday, Sunday or other premium time work. However, this schedule does not set forth every prevailing practice with respect to such rates with which employers must comply. All such practices are nevertheless part of the employer's prevailing wage obligation and contained in the collective bargaining agreements of the prevailing wage unions. These collective bargaining agreements are available for inspection by appointment. Requests for appointments may be made by calling (212) 669-4443, Monday through Friday between the hours of 9 a.m. and 5 p.m.

Prevailing rates and ratios for apprentices are attached to this schedule in the Appendix. Pursuant to Labor Law §220 (3-e), only apprentices who are individually registered in a bona fide program to which the employer contractor is a participant, registered with the New York State Department of Labor, may be employed on a public work project. Workers who are not journey persons or not registered apprentices pursuant to Labor Law §220 (3-e) may not be substituted for apprentices and must be paid as journey persons.

Public Work construction, reconstruction, demolition, excavation, rehabilitation, repair, renovation, alteration, or improvement contracts awarded pursuant to a Project Labor Agreement ("PLA") in accordance with Labor Law section 222 may have different labor standards for shift, premium and overtime work. Please refer to the PLA's pre-negotiated labor agreements for wage and benefit rates applicable to work performed outside of the regular workday. More information is available at the Mayor's Office of Contract Services (MOCS) web page at http://www.nyc.gov/html/mocs/html/vendors/pla.shtml.

All the provisions of Labor Law section 220 remain applicable to PLA work including, but not limited to, the enforcement of prevailing wage requirements by the Comptroller; however, we will enforce shift, premium, overtime and other non-standard rates as they appear in a project's pre-negotiated labor agreement.

In order to meet their obligation to provide prevailing supplemental benefits to each covered employee, employers must either:

1) Provide bona-fide benefits which cost the employer no less than the prevailing supplemental benefits rate; or
2) Supplement the employee's hourly wage by an amount no less than the prevailing supplemental benefits rate; or
3) Provide a combination of bona-fide benefits and wage supplements which cost the employer no less than the prevailing supplemental benefits rate in total.

Particular attention should be given to the supplemental benefits requirement. Although in most instances the payment or provision for supplemental benefits is for each hour worked, some classifications require the payment or provision of supplemental benefits for each hour paid. Consequently, some prevailing practices require benefits to be purchased at the overtime, shift differential, Holiday, Saturday, Sunday or other premium time rate.

Benefits are paid for *EACH HOUR WORKED* unless otherwise noted.

Wasyl Kinach, P.E.
Director of Classifications
Bureau of Labor Law

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

Asbestos Handler

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $45.70
Supplemental Benefit Rate per Hour: $39.69

Blaster (Hydraulic)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $46.49
Supplemental Benefit Rate per Hour: $39.69

Blaster - Trac Drill Hydraulic

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $41.20
Supplemental Benefit Rate per Hour: $39.69

Blaster - Wagon: Air Trac: Quarry Bar: Drillrunners

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $40.44
Supplemental Benefit Rate per Hour: $39.69

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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $39.43
Supplemental Benefit Rate per Hour: $39.69

Blaster - Powder Carriers

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $35.66
Supplemental Benefit Rate per Hour: $39.69

Blaster - Hydraulic Trac Drill Chuck Tender

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $34.42
Supplemental Benefit Rate per Hour: $39.69

Blaster - Chuck Tender & Nipper

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $33.69
Supplemental Benefit Rate per Hour: $39.69

Blaster - Magazine Keepers: (Watch Person)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $20.30
Supplemental Benefit Rate per Hour: $39.69

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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $50.45
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $49.88
Supplemental Benefit Rate per Hour: $44.10

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.
Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).
New Year's Day
Washington's Birthday
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays
None

Shift Rates
The second shift will receive one hour at the double time rate of pay for the last hour of the shift; eight hours pay for seven hours of work, nine hours pay for eight hours of work. There must be a first shift in order to work a second shift.

(Carpenters District Council)

CARPENTER - HEAVY CONSTRUCTION WORK
(Construction of Engineering Structures and Building Foundations)

Heavy Construction Work

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $48.35
Supplemental Benefit Rate per Hour: $46.12

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.
Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays
Double time the regular rate for work on the following holiday(s).
New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays
None

Shift Rates
Off shift work commencing between 5:00 P.M. and 11:00 P.M. shall work eight and one half hours allowing for one half hour for lunch. The wage rate shall be 113% of the straight time hourly wage rate.

(Carpenters District Council)

CEMENT & CONCRETE WORKER

Cement & Concrete Worker

Effective Period: 7/1/2014 - 6/30/2015
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
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $38.88
Supplemental Benefit Rate per Hour: $39.80
Supplemental Note: For time and one half overtime - $49.05; For double overtime - $58.30

Overtime Description

Time and one-half the regular rate after an 8 hour day, double time the regular rate after 10 hours. Time and one-half the regular rate on Saturday, double time the regular rate after 10 hours. Double time the regular rate on Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).
New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

Any worker who reports to work on Christmas Eve or New Year's Eve pursuant to his employer's instruction shall be entitled to three (3) hours afternoon pay without working.

Shift Rates

For an off shift day, (work at times other than the regular 7:00 A.M. to 3:30 P.M. work day) a cement mason shall be paid at the regular hourly rate plus a 25% per hour differential. Four Days a week at Ten (10)hour day.

(Local #780)

CORE DRILLER

Core Driller

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $35.71
Supplemental Benefit Rate per Hour: $21.69

Core Driller Helper

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $28.60
Supplemental Benefit Rate per Hour: $21.69

Core Driller Helper(Third year in the industry)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $25.74
Supplemental Benefit Rate per Hour: $21.69

Core Driller Helper (Second year in the industry)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $22.88
Supplemental Benefit Rate per Hour: $21.69

Core Driller Helper (First year in the industry)

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $42.25
Supplemental Benefit Rate per Hour: $47.81
Supplemental Note: The above supplemental rate applies for work performed in Manhattan, Bronx, Brooklyn and Queens. $49.23 - For work performed in Staten Island.

Overtime Description
The first two hours of overtime on weekdays and the first seven hours of work on Saturdays are paid at time and one half for wages and supplemental benefits. All additional overtimes is paid at double time for wages and supplemental benefits. Deduct $1.42 from the Staten Island hourly benefits rate before computing overtime.

Overtime
Double time the regular rate for Sunday.

Overtime Holidays
Double time the regular rate for work on the following holiday(s).
New Year's Day
Washington's Birthday
Good Friday
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays
1/2 day on Christmas Eve if work is performed in the A.M.

(Local #197)

DIVER

Diver (Marine)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $61.30
Supplemental Benefit Rate per Hour: $46.12

Diver Tender (Marine)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $43.45
Supplemental Benefit Rate per Hour: $46.12

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.
Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays
Double time the regular rate for work on the following holiday(s).
New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays
None

Shift Rates
When three shifts are utilized each shift shall work seven and one half-hours (7 1/2 hours) and paid for 8 hours, allowing for one half hour for lunch.

(Carpenters District Council)

DOCKBUILDER - PILE DRIVER

Dockbuilder - Pile Driver

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $48.35
Supplemental Benefit Rate per Hour: $46.12

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.
Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays
Double time the regular rate for work on the following holiday(s).
New Year's Day
President's Day

Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays
None

Shift Rates
Off shift work commencing between 5:00 P.M. and 11:00 P.M. shall work eight and one half hours allowing for one half hour for lunch. The wage rate shall be 113% of the straight time hourly wage rate.

(Carpenters District Council)

DRIVER: TRUCK (TEAMSTER)

Driver - Dump Truck

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $38.86
Supplemental Benefit Rate per Hour: $40.44
Supplemental Note: Over 40 hours worked: time and one half rate $16.94, double time rate $22.59

Driver - Tractor Trailer

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $38.88
Supplemental Benefit Rate per Hour: $41.70
Supplemental Note: For over 40 hours worked: at time and one half - $15.90; at double time - $21.21

Driver - Euclid & Turnapull Operator

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $39.44
Supplemental Benefit Rate per Hour: $41.70
Supplemental Note: Over 40 hours worked: time and one half rate $15.90, double time rate $21.21

Overtime Description
For Paid Holidays: Holiday pay for all holidays shall be prorated based two hours per day for each day worked in the holiday week, not to exceed 8 hours of holiday pay. For Thanksgiving week, the prorated share shall be 5 1/3 hours of holiday pay for each day worked in Thanksgiving week.

Overtime
Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).
New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Driver Redi-Mix (Sand & Gravel)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $36.05
Supplemental Benefit Rate per Hour: $38.60
Supplemental Note: Over 40 hours worked: time and one half rate $13.53, double time rate $18.04

Overtime Description

For Paid Holidays: Employees working two (2) days in the calendar week in which the holiday falls are to paid for these holidays, provided they shape each remaining workday during that calendar week.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).
President's Day
Columbus Day
Veteran's Day

Triple time the regular rate for work on the following holiday(s).
New Year's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Election Day
Thanksgiving Day
Christmas Day

(Local #282)

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

Electrician "A" (Regular Day)

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $53.00
Supplemental Benefit Rate per Hour: $47.54

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $54.00
Supplemental Benefit Rate per Hour: $50.03

Electrician "A" (Regular Day Overtime)

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $79.50
Supplemental Benefit Rate per Hour: $50.86

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $81.00
Supplemental Benefit Rate per Hour: $53.41

Electrician "A" (Day Shift)

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $53.00
Supplemental Benefit Rate per Hour: $47.54

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $54.00
Supplemental Benefit Rate per Hour: $50.03

Electrician "A" (Day Shift Overtime After 8 hours)

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $79.50
Supplemental Benefit Rate per Hour: $50.86

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $81.00
Supplemental Benefit Rate per Hour: $53.41

Electrician "A" (Swing Shift)

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $62.19
Supplemental Benefit Rate per Hour: $54.07

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $63.36
Supplemental Benefit Rate per Hour: $56.94

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

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $93.29
Supplemental Benefit Rate per Hour: $57.97

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $95.04
Supplemental Benefit Rate per Hour: $60.91

Electrician "A" (Graveyard Shift)

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $69.66
Supplemental Benefit Rate per Hour: $59.59

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $70.97
Supplemental Benefit Rate per Hour: $62.78

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

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $104.49
Supplemental Benefit Rate per Hour: $63.96

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $106.46
Supplemental Benefit Rate per Hour: $67.23

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 $23.63. Effective 5/13/2015 - $24.39.

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: 7/1/2014 - 5/12/2015
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

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $27.50
Supplemental Benefit Rate per Hour: $20.82
First and Second Year "M" Wage Rate Per Hour - Hired on or before 5/10/07: $26.80
First and Second Year "M" Supplemental Rate- Hired on or before 5/10/07: $20.46
First and Second Year "M" Wage Rate Per Hour - Hired after 5/10/07: $23.00
First and Second Year "M" Supplemental Rate- Hired after 5/10/07: $18.56

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: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $40.50
Supplemental Benefit Rate per Hour: $22.01
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

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $41.25
Supplemental Benefit Rate per Hour: $22.54
First and Second Year "M" Wage Rate Per Hour - Hired on or before 5/10/07: $40.20
First and Second Year "M" Supplemental Rate- Hired on or before 5/10/07: $22.14
First and Second Year "M" Wage Rate Per Hour - Hired after 5/10/07: $34.50
First and Second Year "M" Supplemental Rate- Hired after 5/10/07: $20.00

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).
New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day

Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays
None

(Local #3)

ELECTRICIAN - ALARM TECHNICIAN
(Scope of Work - Inspect, test, repair, and replace defective, malfunctioning, or broken devices, components and controls of Fire, Burglar and Security Systems)

Alarm Technician

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $30.40
Supplemental Benefit Rate per Hour: $13.90
Supplemental Note: $12.40 only after 8 hours worked in a day

Overtime Description
Time and one half the regular rate for work on the following holidays: Columbus Day, Veterans Day, Day after Thanksgiving.
Double time the regular rate for work on the following holidays: New Year's day, Martin Luther King Jr. Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day.

Overtime
Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Paid Holidays
New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Shift Rates

Night Differential is based upon a ten percent (10%) differential between the hours of 4:00 P.M. and 12:30 A.M. and a fifteen percent (15%) differential for the hours 12:00 A.M. to 8:00 A.M.

Vacation

At least 1 year of employment.....ten (10) days
5 years or more of employment.....fifteen (15) days
10 years of employment.....twenty (20) days
Plus one Personal Day per year

Sick Days:
One day per Year

(Local #3)

ELECTRICIAN-STREET LIGHTING WORKER

Electrician - Electro Pole Electrician

Effective Period: 7/1/2014 - 5/19/2015
Wage Rate per Hour: $53.00
Supplemental Benefit Rate per Hour: $49.34

Effective Period: 5/20/2015 - 6/30/2015
Wage Rate per Hour: $54.00
Supplemental Benefit Rate per Hour: $51.86

Electrician - Electro Pole Foundation Installer

Effective Period: 7/1/2014 - 5/19/2015
Wage Rate per Hour: $40.18
Supplemental Benefit Rate per Hour: $37.73

Effective Period: 5/20/2015 - 6/30/2015
Wage Rate per Hour: $40.93
Supplemental Benefit Rate per Hour: $39.46

Electrician - Electro Pole Maintainer

Effective Period: 7/1/2014 - 5/19/2015
Wage Rate per Hour: $34.40
Supplemental Benefit Rate per Hour: $34.00

Effective Period: 5/20/2015 - 6/30/2015
Wage Rate per Hour: $35.05
Supplemental Benefit Rate per Hour: $35.51

Overtime Description

Electrician - Electro Pole Electrician: Time and one half the regular rate after a 7 hour day and after 5 consecutive days worked per week.
Electrician - Electro Pole Foundation Installer: Time and one half the regular rate after 8 hours within a 24 hour period and Saturday and Sunday.
Electrician - Electro Pole Maintainer: Time and one half the regular rate after a 7 hour day and after 5 consecutive days worked per week. Saturdays and Sundays may be used as a make-up day at straight time when a day is lost during the week to inclement weather.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).
New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

(Local #3)

ELEVATOR CONSTRUCTOR

Elevator Constructor

Effective Period: 7/1/2014 - 3/16/2015
Wage Rate per Hour: $58.23
Supplemental Benefit Rate per Hour: $29.47

Effective Period: 3/17/2015 - 6/30/2015
Wage Rate per Hour: $59.55
Supplemental Benefit Rate per Hour: $31.07

Overtime Description

For New Construction: work performed after 7 or 8 hour day, Saturday, Sunday or between 4:30pm and 7:00am shall be paid at double time rate.

Existing buildings: work performed after an 8 hour day, Saturday, Sunday or between 5:30pm and 7:00 am shall be paid time and one half.

Overtime

Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Vacation

Employer contributes 8% of regular basic hourly rate as vacation pay for employees with more than 15 years of service, and 6% for employees with 5 to 15 years of service, and 4% for employees with less than 5 years of service.

(Local #1)

ELEVATOR REPAIR & MAINTENANCE

Elevator Service/Modernization Mechanic

Effective Period: 7/1/2014 - 3/16/2015
Wage Rate per Hour: $46.00
Supplemental Benefit Rate per Hour: $28.78

Effective Period: 3/17/2015 - 6/30/2015
Wage Rate per Hour: $46.92
Supplemental Benefit Rate per Hour: $30.91

Overtime Description

For Service Work: Double time - all work performed on Sundays, Holidays, and between midnight and 7:00am.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.
Time and one half the regular rate for work on a holiday plus the day's pay.

Paid Holidays

New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day

Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Shift Rates

For Modernization Work (4pm to 12:30am) - regularly hourly rate plus a (15%) fifteen percent differential.

Vacation

Employer contributes 8% of regular basic hourly rate as vacation pay for employees with more than 15 years of service, and 6% for employees with 5 to 15 years of service, and 4% for employees with less than 5 years of service.

(Local #1)

ENGINEER

Engineer - Heavy Construction Operating Engineer I

Cherrypickers 20 tons and over and Loaders (rubber tired and/or tractor type with a manufacturer's minimum rated capacity of six cubic yards and over).

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $61.05
Supplemental Benefit Rate per Hour: $31.93
Supplemental Note: $57.46 on overtime
Shift Wage Rate: $97.68

Engineer - Heavy Construction Operating Engineer II

Backhoes, Basin Machines, Groover, Mechanical Sweepers, Bobcat, Boom Truck, Barrier Transport (Barrier Mover) & machines of similar nature. Operation of Churn Drills and machines of a similar nature, Stetco Silent Hoist and machines of similar nature, Vac-Alls, Meyers Machines, John Beam and machines of a similar nature, Ross Carriers and Travel Lifts and machines of a similar nature, Bulldozers, Scrapers and Turn-a-Pulls: Tugger Hoists (Used exclusively for handling excavated material); Tractors with attachments, Hyster and Roustabout Cranes, Cherrypickers. Austin Western, Grove and machines of a similar nature, Scoopmobiles, Monorails, Conveyors, Trenchers: Loaders-Rubber Tired and Tractor: Barber Greene and Eimco Loaders and Eimco Backhoes; Mighty Midget and similar breakers and Tampers, Curb and Gutter Pavers and Motor Patrol, Motor Graders and all machines of a similar nature. Locomotives 10 Tons or under. Mini-Max, Break-Tech and machines of a similar nature; Milling machines, robotic and demolition machines and machines of a similar nature, shot blaster, skid steer machines and machines of a similar nature including bobcat, pile rig rubber-tired excavator (37,000 lbs. and under), 2 man auger.

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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 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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $53.22
Supplemental Benefit Rate per Hour: $31.93
Supplemental Note: $57.46 on overtime
Shift Wage Rate: $85.15

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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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.
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

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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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $51.40
Supplemental Benefit Rate per Hour: $31.93
Supplemental Note: $57.46 on overtime

Engineer - Building Work Oilers II

Oilers on Crawler Cranes, Backhoes, Trenching Machines, Gunite Machines, Compressors (three or more in Battery).

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $35.55
Supplemental Benefit Rate per Hour: $17.65

Instrument Person

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $29.41
Supplemental Benefit Rate per Hour: $17.65

Rodperson

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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).

Field Engineer - BC Rodperson

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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).

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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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)

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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

Utility Compressors

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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

Concrete Pumps, Concrete Plant, Stone Crushers, Double Drum Hoist, Power Houses (other than above).

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $59.21
Supplemental Benefit Rate per Hour: $28.60
Supplemental Note: $51.75 overtime hours
Shift Wage Rate: $94.74

Operating Engineer - Road & Heavy Construction XVIII

Tower Crane

Effective Period: 7/1/2014 - 6/30/2015
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, Autograde (C.M.I.), Roto/Mil

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $70.32
Supplemental Benefit Rate per Hour: $28.60
Supplemental Note: $51.75 overtime hours

Operating Engineer - Concrete II

Compressors

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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.

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $64.26
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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.

(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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $49.88
Supplemental Benefit Rate per Hour: $44.10

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

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: 7/1/2014 - 10/31/2014
Wage Rate per Hour: $42.50
Supplemental Benefit Rate per Hour: $35.09
Supplemental Note: Supplemental Benefit Overtime Rate: $43.59

Effective Period: 11/1/2014 - 6/30/2015
Wage Rate per Hour: $42.85
Supplemental Benefit Rate per Hour: $35.59

Supplemental Note: Supplemental Benefit Overtime Rate: $44.09

Overtime Description

An optional 8th hour can be worked at straight time rate. If 9th hour is worked, then both hours or more (8th & 9th or more) will be at the double time rate of pay.

Overtime

Double time the regular rate after a 7 hour day.
Double time the regular time rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).
New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

Shift Rates

Shifts shall be any 7 hours beyond 4:00 P.M. for which the glazier shall receive 8 hours pay for 7 hours worked.

(Local #1281)

GLAZIER - REPAIR & MAINTENANCE

(For the Installation of Glass - All repair and maintenance work on a particular building, whenever performed, where the total cumulative contract value is under $105,000. Except where enumerated (i.e. plate glass windows) does not apply to non-residential buildings.)

Craft Jurisdiction for repair, maintenance and fabrication

Plate glass replacement, Residential glass replacement, Residential mirrors and shower doors, Storm windows and storm doors, Residential replacement windows, Herculite door repairs, Door closer repairs, Retrofit apartment house (non commercial buildings), Glass tinting.

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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 will be Tier A House Wreckers (i.e. 1st, 2nd, 11th, 14th etc). Other House Wreckers may be Tier B House Wreckers.

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $34.51
Supplemental Benefit Rate per Hour: $25.59

House Wrecker - Tier B

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $42.70
Supplemental Benefit Rate per Hour: $45.77
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $47.75
Supplemental Benefit Rate per Hour: $65.35
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

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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $39.85
Supplemental Benefit Rate per Hour: $34.88

Overtime
Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays
Double time the regular rate for work on the following holiday(s).
New Year's Day
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $25.75
Supplemental Benefit Rate per Hour: $13.80

Landscaper (3 - 6 years experience)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $24.75
Supplemental Benefit Rate per Hour: $13.80

Landscaper (up to 3 years experience)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $22.25
Supplemental Benefit Rate per Hour: $13.80

Groundperson

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $22.25
Supplemental Benefit Rate per Hour: $13.80

Tree Remover / Pruner

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $30.75
Supplemental Benefit Rate per Hour: $13.80

Landscaper Sprayer (Pesticide Applicator)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $20.75
Supplemental Benefit Rate per Hour: $13.80

Watering - Plant Maintainer

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $15.75
Supplemental Benefit Rate per Hour: $13.80

Overtime Description

For all overtime work performed, supplemental benefits shall include an additional seventy-five ($0.75) cents per hour.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.
Time and one half the regular rate for work on a holiday plus the day's pay.

Paid Holidays

New Year's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Shift Rates

Work performed on a 4pm to 12am shift has a 15% differential. Work performed on a 12am to 8am shift has a 20% differential.

(Local #175)

MARBLE MECHANIC

Marble Setter

Effective Period: 7/1/2014 - 12/31/2014
Wage Rate per Hour: $50.85
Supplemental Benefit Rate per Hour: $34.21

Effective Period: 1/1/2015 - 6/30/2015
Wage Rate per Hour: $51.15
Supplemental Benefit Rate per Hour: $34.87

Marble Finisher

Effective Period: 7/1/2014 - 12/31/2014
Wage Rate per Hour: $39.99
Supplemental Benefit Rate per Hour: $33.34

Effective Period: 1/1/2015 - 6/30/2015
Wage Rate per Hour: $40.26
Supplemental Benefit Rate per Hour: $33.90

Marble Polisher

Effective Period: 7/1/2014 - 12/31/2014
Wage Rate per Hour: $35.96
Supplemental Benefit Rate per Hour: $25.92

Effective Period: 1/1/2015 - 6/30/2015
Wage Rate per Hour: $36.25
Supplemental Benefit Rate per Hour: $26.28

Overtime Description
Supplemental Benefit contributions are to be made at the applicable overtime rates. Time and one half the regular rate after a 7 hour day or time and one half the regular rate after an 8 hour day - chosen by Employer at the start of the project and then would last for the full duration of the project.

Overtime
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays
Double time the regular rate for work on the following holiday(s).
New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays
None

(Local #7)

MASON TENDER

Mason Tender

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $36.05
Supplemental Benefit Rate per Hour: $26.74

Overtime
Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.
Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays
Double time the regular rate for work on the following holiday(s).
New Year's Day
President's Day

Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

The Employer may work two (2) shifts with the first shift at the straight time wage rate and the second shift receiving eight (8) hours paid for seven (7) hours work at the straight time wage rate.

(Local #79)

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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $34.99
Supplemental Benefit Rate per Hour: $21.10

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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $24.18
Supplemental Benefit Rate per Hour: $15.42

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).
New Year's Day

President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

(Local #79)

METALLIC LATHER

Metallic Lather

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $42.03
Supplemental Benefit Rate per Hour: $41.07
Supplemental Note: Supplemental benefits for overtime are paid at the appropriate overtime rate.

Overtime Description

Overtime would be time and one half the regular rate after a seven (7) or eight (8) hours workday, which would be set at the start of the job.

Overtime

Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).
New Year's Day
Washington's Birthday
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.
1/2 day on New Year's Eve if work is performed in the A.M.

Shift Rates

There shall be either two (2) or three (3) shifts, each shift shall be eight (8) hours with nine (9) hours pay, including one half (½) 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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $48.44
Supplemental Benefit Rate per Hour: $50.52

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.
Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).
New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.
1/2 day on New Year's Eve if work is performed in the A.M.

Shift Rates

The first shift shall receive the straight time rate of pay. The second shift receives the straight time rate of pay plus fifteen (15%) per cent. Members of the second shift shall be allowed one half hour to eat, with this time being included in the hours of the workday established. There must be a first shift to work a second shift. All additional hours worked shall be paid at the time and one-half rate of pay plus fifteen (15%) per cent for weekday hours.

(Local #740)

MOSAIC MECHANIC

Mosaic Mechanic - Mosaic & Terrazzo Mechanic

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $45.23
Supplemental Benefit Rate per Hour: $36.59
Supplemental Note: Supplemental benefits for overtime to be paid at the rate of $47.56 per hour.

Mosaic Mechanic - Mosaic & Terrazzo Finisher

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $43.63
Supplemental Benefit Rate per Hour: $36.57
Supplemental Note: Supplemental benefits for overtime to be paid at the rate of $47.54 per hour.

Mosaic Mechanic - Machine Operator Grinder

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $43.63
Supplemental Benefit Rate per Hour: $36.57
Supplemental Note: Supplemental benefits for overtime to be paid at the rate of $47.54per hour.

Overtime

Time and one half the regular rate after a 7 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).
New Year's Day
Washington's Birthday
Good Friday
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

(Local #7)

PAINTER

Painter - Brush & Roller

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $36.15
Supplemental Benefit Rate per Hour: $9.66

Journeyperson

Effective Period: 7/1/2014 - 6/30/2015
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.

(Local #8A-28A)

PAINTER - STRIPER

Striper (paint)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $34.00
Supplemental Benefit Rate per Hour: $12.60
Supplemental Note: Overtime Supplemental Benefit rate - $8.35 New Hire Rate (0-3 months) - $0.00

Lineperson (thermoplastic)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $38.00
Supplemental Benefit Rate per Hour: $12.60
Supplemental Note: Overtime Supplemental Benefit rate - $8.35; 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)

PAINTER - STRUCTURAL STEEL

Painters on Structural Steel

Effective Period: 7/1/2014 - 9/30/2014
Wage Rate per Hour: $47.00
Supplemental Benefit Rate per Hour: $33.58

Effective Period: 10/1/2014 - 6/30/2015
Wage Rate per Hour: $48.75
Supplemental Benefit Rate per Hour: $34.58

Painter - Power Tool

Effective Period: 7/1/2014 - 9/30/2014
Wage Rate per Hour: $53.00
Supplemental Benefit Rate per Hour: $33.58

Effective Period: 10/1/2014 - 6/30/2015

Wage Rate per Hour: $54.75
Supplemental Benefit Rate per Hour: $34.58

Overtime Description
Supplemental Benefits shall be paid for each hour worked, up to forty (40) hours per week for the period of May 1st to November 15th or up to fifty (50) hours per week for the period of November 16th to April 30th.

Overtime
Time and one half the regular rate after a 7 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.

Overtime Holidays
Double time the regular rate for work on the following holiday(s).
New Year's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays
None

Shift Rates
Regular hourly rates plus a ten per cent (10%) differential

(Local #806)

PAPERHANGER

Paperhanger

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $44.19
Supplemental Benefit Rate per Hour: $35.15

Paver & Roadbuilder - Laborer

Paving and road construction work, regardless of material used, including but not limited to preparation of job sites, removal of old surfaces, asphalt and/or concrete, by whatever method, including but not limited to milling; laying of concrete; laying of asphalt for temporary, patchwork, and utility paving (but not production paving); site preparation and incidental work before the installation of rubberized materials and similar surfaces; installation and repair of temporary construction fencing; slurry seal coating, maintenance of safety surfaces; play equipment installation, and other related work.

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $40.32
Supplemental Benefit Rate per Hour: $35.15

Production Paver & Roadbuilder - Screed Person

(Production paving is asphalt paving when using a paving machine or on a project where a paving machine is traditionally used)

Adjustment of paving machinery on production paving jobs.

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $45.24
Supplemental Benefit Rate per Hour: $35.15

Production Paver & Roadbuilder - Raker

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $44.73
Supplemental Benefit Rate per Hour: $35.15

Production Paver & Roadbuilder - Shoveler

General laborer (except removal of surfaces - see Paver and Roadbuilder-Laborer) including but not limited to tamper, AC paint and liquid tar work.

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $41.44
Supplemental Benefit Rate per Hour: $35.15

Overtime Description

Veteran's Day is a Paid Holiday for employees working on production paving.

If an employee works New Year's Day or Christmas Day, they receive the single time rate plus 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
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 15% 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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $42.43
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

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: 7/1/2014 - 6/30/2015

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

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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $65.27
Supplemental Benefit Rate per Hour: $25.78
Supplemental Note: Overtime supplemental benefit rate per hour: $40.78

Plumber - Temporary Services

Temporary Services - When there are no Plumbers on the job site, there may be three shifts designed to cover the entire twenty-four hour period, including weekends if necessary, at the following rate straight time.

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $52.24
Supplemental Benefit Rate per Hour: $20.20

Overtime Description

Double time the regular rate after a 7 hour day - unless for new construction site work where the plumbing contract price is $1.5 million or less, the hours of labor can be 8 hours per day at the employers option. On Alteration jobs when other mechanical trades at the site are working an eighth hour at straight time, then the plumber shall also work an eighth hour at straight time.

Overtime

Double time the regular time rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).
New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Shift Rates

Shift work, when directly specified in public agency or authority documents where plumbing contract is $8 million or less, will be permitted. 30% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shifts Monday to Friday. 50% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shift work performed on weekends. For shift work on holidays, double time wages and fringe benefits shall be paid.

(Plumbers Local #1)

PLUMBER (MECHNICAL EQUIPMENT AND SERVICE)
(Mechanical Equipment and Service work shall include any repair and/or replacement of the present plumbing system.)

Plumber

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $45.19
Supplemental Benefit Rate per Hour: $18.79

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
Oil Trades (Installation and Maintenance)

Plumber - Pump & Tank

Effective Period: 7/1/2014 - 6/30/2015
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
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $47.41
Supplemental Benefit Rate per Hour: $24.40

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.
Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).
New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

All work outside the regular work day (an eight hour workday between the hours of 6:00 A.M. and 4:30 P.M.) is to be paid at time and one half the regular rate.

(Bricklayer District Council)

ROOFER

Roofer

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $40.70
Supplemental Benefit Rate per Hour: $28.67

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).
New Year's Day

President's Day
Memorial Day
Independence Day
Labor Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays
None

Shift Rates
Second shift - Regular hourly rate plus a 10% differential. Third shift - Regular hourly rate plus a 15% differential.

(Local #8)

SANDBLASTER - STEAMBLASTER
(Exterior Building Renovation)

Sandblaster / Steamblaster

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $47.41
Supplemental Benefit Rate per Hour: $24.40

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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $46.21
Supplemental Benefit Rate per Hour: $43.89
Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

Sheet Metal Worker - Fan Maintenance

(The temporary operation of fans or blowers in new or existing buildings for heating and/or ventilation, and/or air conditioning prior to the completion of the project.)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $36.97
Supplemental Benefit Rate per Hour: $43.89

Sheet Metal Worker - Duct Cleaner

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $12.90
Supplemental Benefit Rate per Hour: $8.07

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 journeyperson engaged in fan maintenance shall work in excess of forty (40) hours in any work week.

(Local #28)

SHEET METAL WORKER - SPECIALTY (Decking & Siding)

Sheet Metal Specialty Worker

The first worker to perform this work must be paid at the rate of the Sheet Metal Worker. The second and third workers shall be paid the Specialty Worker Rate. The ratio of One Sheet Metal Worker, then Two Specialty Workers shall be utilized thereafter.

Effective Period: 7/1/2014 - 6/30/2015
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)

SHIPYARD WORKER

Shipyard Mechanic - First Class

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $23.83
Supplemental Benefit Rate per Hour: $2.87

Shipyard Mechanic - Second Class

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $15.44
Supplemental Benefit Rate per Hour: $2.54

Shipyard Laborer - First Class

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $19.28
Supplemental Benefit Rate per Hour: $2.69

Shipyard Laborer - Second Class

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $12.36
Supplemental Benefit Rate per Hour: $2.43

Shipyard Dockhand - First Class

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $22.68
Supplemental Benefit Rate per Hour: $2.82

Shipyard Dockhand - Second Class

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $14.22
Supplemental Benefit Rate per Hour: $2.50

Overtime Description

Work performed on holiday is paid double time the regular hourly wage rate plus holiday pay.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.
Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

New Year's Day
Martin Luther King Jr. Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Based on Survey Data

SIGN ERECTOR
(Sheet Metal, Plastic, Electric, and Neon)

Sign Erector

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $44.20
Supplemental Benefit Rate per Hour: $44.10

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: 7/1/2014 - 6/30/2015
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
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: 7/1/2014 - 6/30/2015
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

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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $38.30
Supplemental Benefit Rate per Hour: $12.76

Refrigeration and Air Conditioner Service Person V

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $31.47
Supplemental Benefit Rate per Hour: $11.55

Refrigeration and Air Conditioner Service Person IV

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $26.07
Supplemental Benefit Rate per Hour: $10.52

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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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
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: 7/1/2014 - 6/30/2015
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

Paid Holidays

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: 7/1/2014 - 12/30/2014
Wage Rate per Hour: $45.32
Supplemental Benefit Rate per Hour: $22.66

Effective Period: 12/31/2014 - 6/30/2015
Wage Rate per Hour: $45.82
Supplemental Benefit Rate per Hour: $22.66

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

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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $39.18
Supplemental Benefit Rate per Hour: $13.19
Supplemental Note: The above rate applies for Manhattan, Bronx, Brooklyn, Queens. $12.64 for Staten Island only.

Overtime
Time and one half the regular rate after a 7 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.

Overtime Holidays
Time and one half the regular rate for work on the following holiday(s).
New Year's Day
Lincoln's Birthday
Washington's Birthday
Memorial Day
Independence Day
Labor Day
Columbus Day
Election Day
Veteran's Day
Thanksgiving Day
Christmas Day

Paid Holidays
New Year's Day
Lincoln's Birthday
Washington's Birthday
Memorial Day
Independence Day
Labor Day
Columbus Day
Election Day
Veteran's Day
Thanksgiving Day
Christmas Day
Employees have the option of observing either Martin Luther King's Birthday or the day after Thanksgiving instead of Lincoln's Birthday

Shift Rates
For any workday that starts before 8A.M. or ends after 6P.M. there is a 10% differential for the applicable worker's hourly rate.

Vacation

After 6 months.....one week.
After 12 months but less than 7 years.....two weeks.
After 7 or more but less than 15 years.....three weeks.
After 15 years or more but less than 25 years.....four weeks.

(C.W.A.)

TILE FINISHER

Tile Finisher

Effective Period: 7/1/2014 - 6/30/2015
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.

(Local #7)

TILE LAYER - SETTER

Tile Layer - Setter

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $49.88
Supplemental Benefit Rate per Hour: $32.36

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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $44.33
Supplemental Benefit Rate per Hour: $45.39

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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $54.20
Supplemental Benefit Rate per Hour: $48.20

Tunnel Workers (Compressed Air Rates)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $52.31
Supplemental Benefit Rate per Hour: $46.59

Top Nipper (Compressed Air Rates)

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $50.42
Supplemental Benefit Rate per Hour: $44.92

Changehouse Attendant: Powder Watchperson (Compressed Air Rates)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $43.94
Supplemental Benefit Rate per Hour: $42.55

Blasters (Free Air Rates)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $51.72
Supplemental Benefit Rate per Hour: $46.03

Tunnel Workers (Free Air Rates)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $49.48
Supplemental Benefit Rate per Hour: $44.06

All Others (Free Air Rates)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $45.73
Supplemental Benefit Rate per Hour: $40.75

Microtunneling (Free Air Rates)

Effective Period: 7/1/2014 - 6/30/2015
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.
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.

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ASBESTOS HANDLER
(Ratio of Apprentice Journeyperson: 1 to 1, 1 to 3)

Asbestos Handler (First 1000 Hours)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 78% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $15.45

Asbestos Handler (Second 1000 Hours)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $15.45

Asbestos Handler (Third 1000 Hours)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 83% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $15.45

Asbestos Handler (Fourth 1000 Hours)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 89% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $15.45

(Local #78)

BOILERMAKER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Boilermaker (First Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $29.74

Boilermaker (Second Year: 1st Six Months)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $31.40

Boilermaker (Second Year: 2nd Six Months)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $33.05

Boilermaker (Third Year: 1st Six Months)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 80% of Journeyperson's rat
Supplemental Benefit Rate Per Hour: $34.69

Boilermaker (Third Year: 2nd Six Months)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 85% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $36.34

Boilermaker (Fourth Year: 1st Six Months)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $38.00

Boilermaker (Fourth Year: 2nd Six Months)

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $17.10

Bricklayer (Second 750 Hours)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 60% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: $17.10

Bricklayer (Third 750 Hours)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $17.10

Bricklayer (Fourth 750 Hours)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $17.10

Bricklayer (Fifth 750 Hours)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $17.10

Bricklayer (Sixth 750 Hours)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 95% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $17.10

(Bricklayer District Council)

CARPENTER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Carpenter (First Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $30.25

Carpenter (Second Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $30.25

Carpenter (Third Year)

Effective Period: 7/1/2014 - 6/30/2015

Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $30.25

Carpenter (Fourth Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $30.25

(Carpenters District Council)

CEMENT MASON
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Cement Mason (First Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 50% of Journeyperson's Rate

Cement Mason (Second Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 60% of Journeyperson's Rate

Cement Mason (Third Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 70% of Journeyperson's Rate

(Local #780)

CEMENT AND CONCRETE WORKER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Cement & Concrete Worker (0 - 500 hours)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $18.04

Cement & Concrete Worker (501 - 1000 hours)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $18.87

Cement & Concrete Worker (1001 - 2000 hours)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $24.25

Cement & Concrete Worker (2001 - 4000 hours)

Effective Period: 7/1/2014 - 6/30/2015
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 4)

Derrickperson & Rigger (stone) - First Year

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $31.26

Dockbuilder/Pile Driver (Second Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $31.26

Dockbuilder/Pile Driver (Third Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $31.26

Dockbuilder/Pile Driver (Fourth Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: $31.26

(Carpenters District Council)

ELECTRICIAN
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Electrician (First Term: 0-6 Months)

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $12.50
Supplemental Benefit Rate per Hour: $11.10
Overtime Supplemental Rate Per Hour: $11.93

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $13.00
Supplemental Benefit Rate per Hour: $11.61
Overtime Supplemental Rate Per Hour: $12.47

Electrician (First Term: 7-12 Months)

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $13.50
Supplemental Benefit Rate per Hour: $11.62
Overtime Supplemental Rate Per Hour: $12.51

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $14.00
Supplemental Benefit Rate per Hour: $12.12
Overtime Supplemental Rate Per Hour: $13.04

Electrician (Second Term: 0-6 Months)

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $14.50
Supplemental Benefit Rate per Hour: $12.13
Overtime Supplemental Rate Per Hour: $13.08

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $15.00
Supplemental Benefit Rate per Hour: $12.63
Overtime Supplemental Rate Per Hour: $13.62

Electrician (Second Term: 7-12 Months)

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $15.50
Supplemental Benefit Rate per Hour: $12.64
Overtime Supplemental Rate Per Hour: $13.66

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $16.00
Supplemental Benefit Rate per Hour: $13.14
Overtime Supplemental Rate Per Hour: $14.19

Electrician (Third Term: 0-6 Months)

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $16.50
Supplemental Benefit Rate per Hour: $13.15
Overtime Supplemental Rate Per Hour: $14.23

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $17.00

Supplemental Benefit Rate per Hour: $13.65
Overtime Supplemental Rate Per Hour: $14.77

Electrician (Third Term: 7-12 Months)

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $17.50
Supplemental Benefit Rate per Hour: $13.65
Overtime Supplemental Rate Per Hour: $14.81

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $18.00
Supplemental Benefit Rate per Hour: $14.16
Overtime Supplemental Rate Per Hour: $15.34

Electrician (Fourth Term: 0-6 Months)

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $18.50
Supplemental Benefit Rate per Hour: $14.16
Overtime Supplemental Rate Per Hour: $15.38

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $19.00
Supplemental Benefit Rate per Hour: $14.67
Overtime Supplemental Rate Per Hour: $15.92

Electrician (Fourth Term: 7-12 Months)

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $20.50
Supplemental Benefit Rate per Hour: $15.18
Overtime Supplemental Rate Per Hour: $16.53

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $21.00
Supplemental Benefit Rate per Hour: $15.68
Overtime Supplemental Rate Per Hour: $17.07

Electrician (Fifth Term: 0-12 Months - Hired on or after 5/10/07)

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $22.50
Supplemental Benefit Rate per Hour: $18.06
Overtime Supplemental Rate Per Hour: $19.47

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $23.00
Supplemental Benefit Rate per Hour: $18.56
Overtime Supplemental Rate Per Hour: $20.00

Electrician (Fifth Term: 13-18 Months - Hired on or after 5/10/07)

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $27.00
Supplemental Benefit Rate per Hour: $20.32
Overtime Supplemental Rate Per Hour: $22.01

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $27.50
Supplemental Benefit Rate per Hour: $20.82
Overtime Supplemental Rate Per Hour: $22.54

Electrician (Fifth Term: 0-18 Months - Hired before 5/10/07)

Effective Period: 7/1/2014 - 5/12/2015
Wage Rate per Hour: $26.30
Supplemental Benefit Rate per Hour: $19.96
Overtime Supplemental Rate Per Hour: $21.61

Effective Period: 5/13/2015 - 6/30/2015
Wage Rate per Hour: $26.80
Supplemental Benefit Rate per Hour: $20.46
Overtime Supplemental Rate Per Hour: $22.14

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)

Elevator (Constructor) - First Year

Effective Period: 7/1/2014 - 3/16/2015
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: $25.46

Effective Period: 3/17/2015 - 6/30/2015
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: $26.94

Elevator (Constructor) - Second Year

Effective Period: 7/1/2014 - 3/16/2015
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: $25.86

Effective Period: 3/17/2015 - 6/30/2015
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: $27.35

Elevator (Constructor) - Third Year

Effective Period: 7/1/2014 - 3/16/2015
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Rate Per Hour: $26.66

Effective Period: 3/17/2015 - 6/30/2015
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Rate Per Hour: $28.17

Elevator (Constructor) - Fourth Year

Effective Period: 7/1/2014 - 3/16/2015
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Rate Per Hour: $27.46

Effective Period: 3/17/2015 - 6/30/2015
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Rate Per Hour: $29.00

(Local #1)

ELEVATOR REPAIR & MAINTENANCE
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 2)

Elevator Service/Modernization Mechanic (First Year)

Effective Period: 7/1/2014 - 3/16/2015
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Benefit Per Hour: $24.85

Effective Period: 3/17/2015 - 6/30/2015
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Benefit Per Hour: $26.87

Elevator Service/Modernization Mechanic (Second Year)

Effective Period: 7/1/2014 - 3/16/2015
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Benefit Per Hour: $25.24

Effective Period: 3/17/2015 - 6/30/2015
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Benefit Per Hour: $27.27

Elevator Service/Modernization Mechanic (Third Year)

Effective Period: 7/1/2014 - 3/16/2015
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Benefit Per Hour: $26.02

Effective Period: 3/17/2015 - 6/30/2015
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Benefit Per Hour: $28.08

Elevator Service/Modernization Mechanic (Fourth Year)

Effective Period: 7/1/2014 - 3/16/2015
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Benefit Per Hour: $26.81

Effective Period: 3/17/2015 - 6/30/2015
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Benefit Per Hour: $28.89

(Local #1)

ENGINEER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 5)

Engineer - First Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $22.49
Supplemental Benefit Rate per Hour: $20.68

Engineer - Second Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $28.11
Supplemental Benefit Rate per Hour: $20.68

Engineer - Third Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $20.92
Supplemental Benefit Rate per Hour: $20.68

Engineer - Fourth Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $33.73
Supplemental Benefit Rate per Hour: $20.68

(Local #15)

ENGINEER - OPERATING
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 5)

Operating Engineer - First Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour 40% of Journeyperson's Rate
Supplemental Benefit Per Hour: $18.60

Operating Engineer - Second Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 50% of Journeyperson's Rate
Supplemental Benefit Per Hour: $18.60

Operating Engineer - Third Year

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Rate Per Hour: $30.25

Floor Coverer (Second Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: $30.25

Floor Coverer (Third Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Rate Per Hour: $30.25

Floor Coverer (Fourth Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: $30.25

(Carpenters District Council)

GLAZIER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Glazier (First Year)

Effective Period: 7/1/2014 - 10/31/2014
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Rate Per Hour: $12.97

Effective Period: 11/1/2014 - 6/30/2015
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Rate Per Hour: $13.12

Glazier (Second Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: $22.25

Glazier (Third Year)

Effective Period: 7/1/2014 - 10/31/2014
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: $24.75

Effective Period: 11/1/2014 - 6/30/2015
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: $25.10

Glazier (Fourth Year)

Effective Period: 7/1/2014 - 10/31/2014
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: $29.87

Effective Period: 11/1/2014 - 6/30/2015
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: $30.02

(Local #1281)

HEAT & FROST INSULATOR
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Heat & Frost Insulator (First Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 40% of Journeyperson's rate

Heat & Frost Insulator (Second Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Heat & Frost Insulator (Third Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 70% of Journeyperson's rate

Heat & Frost Insulator (Fourth Year)

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $20.52
Supplemental Benefit Rate per Hour: $16.60

House Wrecker - Second Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $21.67
Supplemental Benefit Rate per Hour: $16.60

House Wrecker - Third Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $23.27
Supplemental Benefit Rate per Hour: $16.60

House Wrecker - Fourth Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $25.83
Supplemental Benefit Rate per Hour: $16.60

(Mason Tenders District Council)

IRON WORKER - ORNAMENTAL
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Iron Worker (Ornamental) - 1st Ten Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: $35.15

ron Worker (Ornamental) - 11 -16 Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: $36.21

Iron Worker (Ornamental) - 17 - 22 Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: $37.27

Iron Worker (Ornamental) - 23 - 28 Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: $39.40

Iron Worker (Ornamental) - 29 - 36 Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: $41.52

(Local #580)

IRON WORKER - STRUCTURAL
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 6)

Iron Worker (Structural) - 1st Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $24.98
Supplemental Benefit Rate per Hour: $45.53

Iron Worker (Structural) - 7- 18 Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $25.58
Supplemental Benefit Rate per Hour: $45.53

Iron Worker (Structural) - 19 - 36 months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $26.18
Supplemental Benefit Rate per Hour: $45.53

(Local #40 and #361)

LABORER (FOUNDATION, CONCRETE, EXCAVATING, STREET PIPE LAYER & COMMON)
(Ratio Apprentice to Journeyperson: 1 to 1, 1 to 3)

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - First 1000 hours

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: $34.88

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Second 1000 hours

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: $34.88

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Third 1000 hours

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Rate Per Hour: $34.88

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Fourth 1000 hours

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Rate Per Hour: $34.88

(Local #731)

MARBLE MECHANICS
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Cutters & Setters - First 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 50% of Journeyperson's rate

NO BENEFITS PAID DURING THE FIRST TWO MONTHS (PROBATIONARY PERIOD)

Cutters & Setters - Second 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 55% of Journeyperson's rate

Cutters & Setters - Third 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 65% of Journeyperson's rate

Cutters & Setters - Fourth 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

Cutters & Setters - Fifth 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 85% of Journeyperson's rate

Cutters & Setters - Sixth 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 95% of Journeyperson's rate

Polishers & Finishers - First 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Polishers & Finishers - Third 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

Polishers & Finishers - Fourth 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $20.99
Supplemental Benefit Rate per Hour: $17.86

Mason Tender - Second Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $22.14
Supplemental Benefit Rate per Hour: $17.86

Mason Tender - Third Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $23.84
Supplemental Benefit Rate per Hour: $17.86

Mason Tender - Fourth Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $26.50
Supplemental Benefit Rate per Hour: $17.86

(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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $26.64

Supplemental Benefit Rate per Hour: $32.84

Millwright (Second Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $31.49
Supplemental Benefit Rate per Hour: $36.18

Millwright (Third Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $36.33
Supplemental Benefit Rate per Hour: $40.66

Millwright (Fourth Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $46.02
Supplemental Benefit Rate per Hour: $46.24

(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: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $26.61
Supplemental Benefit Rate per Hour: $16.50

Paver and Roadbuilder - Second Year (Minimum 1000 hours)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $28.22
Supplemental Benefit Rate per Hour: $16.50

(Local #1010)

PAINTER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Painter - Brush & Roller - First Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $15.80
Supplemental Benefit Rate per Hour: $11.88

Painter - Brush & Roller - Second Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $19.75
Supplemental Benefit Rate per Hour: $15.73

Painter - Brush & Roller - Third Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $23.70
Supplemental Benefit Rate per Hour: $18.64

Painter - Brush & Roller - Fourth Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $31.60
Supplemental Benefit Rate per Hour: $24.02

(District Council of Painters)

PAINTER - STRUCTURAL STEEL
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Painters - Structural Steel (First Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 40% of Journeyperson's rate

Painters - Structural Steel (Second Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Painters - Structural Steel (Third Year)

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 80% of Journeyperson's rate

(Local #806)

PLASTERER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Plasterer - First Year: 1st Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Rate Per Hour: $15.76

Plasterer - First Year: 2nd Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 45% of Journeyperson's rate
Supplemental Rate Per Hour: $16.24

Plasterer - Second Year: 1st Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: $18.21

Plasterer - Second Year: 2nd Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: $19.29

Plasterer - Third Year: 1st Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: $21.46

Plasterer - Third Year: 2nd Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Rate Per Hour: $22.54

(Local #530)

PLUMBER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Plumber - First Year: 1st Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $14.00
Supplemental Benefit Rate per Hour: $0.71

Plumber - First Year: 2nd Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $14.00
Supplemental Benefit Rate per Hour: $2.96

Plumber - Second Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $23.87
Supplemental Benefit Rate per Hour: $11.46

Plumber - Third Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $25.97
Supplemental Benefit Rate per Hour: $11.46

Plumber - Fourth Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $28.82
Supplemental Benefit Rate per Hour: $11.46

Plumber - Fifth Year: 1st Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $30.22
Supplemental Benefit Rate per Hour: $11.46

Plumber - Fifth Year: 2nd Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $42.29
Supplemental Benefit Rate per Hour: $11.46

(Plumbers Local #1)

POINTER - WATERPROOFER, CAULKER MECHANIC (EXTERIOR BUILDING RENOVATION)
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Pointer - Waterproofer, Caulker Mechanic - First Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $25.01
Supplemental Benefit Rate per Hour: $4.75

Pointer - Waterproofer, Caulker Mechanic - Second Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $27.25
Supplemental Benefit Rate per Hour: $9.70

Pointer - Waterproofer, Caulker Mechanic - Third Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $32.24
Supplemental Benefit Rate per Hour: $12.45

Pointer - Waterproofer, Caulker Mechanic - Fourth Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $38.66
Supplemental Benefit Rate per Hour: $12.45

(Bricklayer District Council)

ROOFER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 2)

Roofer - First Year

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 35% of Journeyperson's Rate

Roofer - Second Year

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 50% of Journeyperson's Rate

Roofer - Third Year

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 60% of Journeyperson's Rate

Roofer - Fourth Year

Effective Period: 7/1/2014 - 6/30/2015
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 (0-6 Months)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 25% of Journeyperson's rate
Supplemental Rate Per Hour: $6.15

Sheet Metal Worker (7-18 Months)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 35% of Journeyperson's rate
Supplemental Rate Per Hour: $16.21

Sheet Metal Worker (19-30 Months)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 45% of Journeyperson's rate
Supplemental Rate Per Hour: $22.23

Sheet Metal Worker (31-36 Months)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: $26.16

Sheet Metal Worker (37-42 Months)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: $28.13

Sheet Metal Worker (43-48 Months)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: $32.09

Sheet Metal Worker (49-54 Months)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Rate Per Hour: $34.07

Sheet Metal Worker (55-60 Months)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: $36.03

(Local #28)

SIGN ERECTOR
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Sign Erector - First Year: 1st Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 35% of Journeyperson's rate
Supplemental Rate Per Hour: $5.96

Sign Erector - First Year: 2nd Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Rate Per Hour: $6.75

Sign Erector - Second Year: 1st Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 45% of Journeyperson's rate
Supplemental Rate Per Hour: $7.55

Sign Erector - Second Year: 2nd Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: $8.34

Sign Erector - Third Year: 1st Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: $9.13

Sign Erector - Third Year: 2nd Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: $9.92

Sign Erector - Fourth Year: 1st Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Rate Per Hour: $10.72

Sign Erector - Fourth Year: 2nd Six Months

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: $11.51

Sign Erector - Fifth Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Rate Per Hour: $12.30

Sign Erector - Sixth Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: $12.30

(Local #137)

STEAMFITTER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Steamfitter - First Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate and Supplemental Per Hour: 40% of Journeyperson's rate

Steamfitter - Second Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate and Supplemental Rate Per Hour: 50% of Journeyperson's rate.

Steamfitter - Third Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate and Supplemental Rate per Hour: 65% of Journeyperson's rate.

Steamfitter - Fourth Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate and Supplemental Rate Per Hour: 80% of Journeyperson's rate.

Steamfitter - Fifth Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate and Supplemental Rate Per Hour: 85% of Journeyperson's rate.

(Local #638)

STONE MASON - SETTER
(Ratio Apprentice of Journeyperson: 1 to 1, 1 to 2)

Stone Mason - Setters - First 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Second 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 60% of Journeyperson's rate

Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Third 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Fourth 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Fifth 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Sixth 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 100% of Journeyperson's rate
Supplemental Rate Per Hour: 50% of Journeyperson's rate

(Bricklayers District Council)

TAPER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Drywall Taper - First Year

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 40% of Journeyperson's rate

Drywall Taper - Second Year

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Drywall Taper - Third Year

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 80% of Journeyperson's rate

(Local #1974)

TILE LAYER - SETTER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Tile Layer - Setter - First 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 50% of Journeyperson's rate

Tile Layer - Setter - Second 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 55% of Journeyperson's rate

Tile Layer - Setter - Third 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 65% of Journeyperson's rate

Tile Layer - Setter - Fourth 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

Tile Layer - Setter - Fifth 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 85% of Journeyperson's rate

Tile Layer - Setter - Sixth 750 Hours

Effective Period: 7/1/2014 - 6/30/2015
Wage and Supplemental Rate Per Hour: 95% of Journeyperson's rate

(Local #7)

TIMBERPERSON
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 6)

Timberperson - First Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Rate Per Hour: $30.89

Timberperson - Second Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: $30.89

Timberperson - Third Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Rate Per Hour: $30.89

Timberperson - Fourth Year

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: $30.89

(Local #1536)

NYC ADMINISTRATIVE CODE § 6-109 SCHEDULE OF "LIVING WAGES"

Contractors who provide the following services to the City of New York must post a copy of this Living Wage Schedule at their work site(s) as required by New York City Administrative Code § 6-109:

- Building Services,
- Day Care Services,
- Food Services,
- Head Start Services,
- Homecare Services,
- Services to Persons with Cerebral Palsy, and
- Temporary Services.

In accordance with NYC Administrative Code § 6-109, the Comptroller of the City of New York promulgated this schedule of living wages for the above services on contracts for non-emergency work in excess of the small purchase limit set by the Procurement Policy Board; contracting agencies must annex this schedule to such contracts.

This schedule is a compilation of separate determinations of the prevailing rate of wage and supplements made by the Comptroller for each trade classification listed herein pursuant to New York City Administrative Code section 6-109. The source of the wage and supplement rates, whether a collective bargaining agreement, survey data or other, is listed at the end of each classification.

A city service contractor or subcontractor that provides homecare services, day care services, head start services or services to persons with cerebral palsy must pay its covered employees that directly render such services in performance of the city service contract or subcontract no less than the living wage and must provide its employees health benefits (supplemental benefits) or must supplement their hourly wage rate by an amount no less than the health benefits supplement rate. This requirement applies for each hour that the employee works performing the city service contract or subcontract.

A city service contractor or subcontractor that provides building services, food services or temporary services must pay its employees that are engaged in performing the city service contract or subcontract no less than the living wage or the prevailing wage, whichever is greater. Where the living wage is greater than the prevailing wage, the city service contractor or subcontractor must either provide its employees health benefits or must supplement their hourly wage rate by an amount no less than the health benefits supplement rate. Where the prevailing wage is greater than the living wage, the city service contractor or subcontractor must provide its employees the prevailing wage and supplements. These requirements apply for each hour that the employee works performing the city service contract or subcontract.

The appropriate schedule of living wages must be posted at all work sites pursuant to NYC Administrative Code 6-109.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

The schedule is applicable for work performed during the effective period, unless otherwise noted. You will be notified of any changes to this schedule by addenda published on our web site www.comptroller.nyc.gov. Schedules for future one-year periods will be published annually in the City Record on or about July 1st of each succeeding year and on our web site www.comptroller.nyc.gov.

The living wage rate and the health benefit supplement rate are known through June 30 of each year and those rates are listed in this schedule.

The living wage rates listed in this schedule may not include all hourly wage calculations for overtime, shift differential, Holiday, Saturday, Sunday or other premium time work. Similarly, this schedule does not set forth every living wage practice with which employers must comply.

Some of the rates in this schedule are based on collective bargaining agreements. These agreements are available for inspection by appointment. Requests for appointments may be made by calling (212) 669-4443, Monday through Friday between the hours of 9 a.m. and 5 p.m.

Answers to questions concerning prevailing wage practices may be obtained from the Classification Unit by calling (212) 669-7974. Please direct all other compliance issues to; Bureau of Labor Law, Attn: Wasyl Kinach, P.E., Office of the Comptroller, 1 Centre Street, Room 1122, New York, N.Y. 10007; Fax (212) 669-4002.

Contractors are solely responsible for maintaining original payroll records, which delineate, among other things, the hours each employee worked within a given classification. Contractors using rates and/or classifications not promulgated by the Comptroller do so at their own risk. Additionally, prior to bid, an agency's chief contracting officer must contact the Bureau of Labor Law to obtain a wage determination for a work classification not published in this schedule.

The information listed below is intended to assist you in meeting your living wage and prevailing wage obligation. Contractors are advised to review the Comptroller's Living Wage Schedule prior to submitting a bid for City work. Any wage rate error made by the contracting agency in the contract documents will not preclude a finding against the contractor for an underpayment of the applicable living wage or the applicable prevailing wage.

This schedule sets forth the living wage and benefit rates required to be annexed to and form part of the contract specifications for work covered by New York City Administrative Code § 6-109. Contractors performing such work are required to pay not less that the rates specified in this schedule for the applicable trade or occupation.

Benefits are paid for *EACH HOUR WORKED* unless otherwise noted.

Wasyl Kinach, P.E.
Director of Classifications
Bureau of Labor Law

TABLE OF CONTENTS

BUILDING CLEANER AND MAINTAINER (OFFICE)

For the above building service classification, see the Labor Law Section 230 Schedule.

BUILDING CLEANER AND MAINTAINER (RESIDENTIAL)

For the above building service classification, see the Labor Law Section 230 Schedule.

CLEANER (PARKING GARAGE)

For the above building service classification, see the Labor Law Section 230 Schedule.

DAY CARE SERVICES

Day Care Services

'Day Care Services' means provision of day care services through the city's center-based day care program administered under contract with the city's Administration for Children's Services. No other day care programs shall be covered, including family-based day care programs administered by city-contracted day care centers.

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $10.00
Supplemental Benefit Rate per Hour: $1.50

(NYC Administrative Code §6-109)

FOOD SERVICE EMPLOYEES

Cook

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $16.35
Supplemental Benefit Rate per Hour: $1.63

Cafeteria Attendant

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $10.41
Supplemental Benefit Rate per Hour: $1.63

Counter Attendant

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $11.00
Supplemental Benefit Rate per Hour: $1.63

Kitchen Helper / Dishwasher

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $9.99
Supplemental Benefit Rate per Hour: $1.63

Overtime

Time and one half the regular hourly rate after 40 hours in any work week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics)

GARDENER

For the above building service classification, see the Labor Law Section 230 Schedule.

HEAD START SERVICES

Head Start Services

'Head Start Services' means provision of head start services through the city's center-based head start program administered under contract with the city's Administration for Children's Services. No other head start programs shall be covered.

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $10.00
Supplemental Benefit Rate per Hour: $1.50

(NYC Administrative Code §6-109)

HOMECARE SERVICES

Home Care Services

'Homecare Services' means the provision of homecare services under the city's Medicaid Personal Care/Home Attendant or Housekeeping Programs, including but not limited to the In-Home Services for the Elderly Programs administered by the Department for the Aging.
For homecare services provided under the Personal Care Services program, the wage and supplemental benefit rate above shall apply only as long as the state and federal government maintain their combined aggregate proportionate share of funding and approved rates for homecare services in effect as of the date of the enactment of this section.
For contractors or subcontractors providing homecare services, the supplemental benefit rate may be waived by the terms of a bona fide collective bargaining agreement with respect to employees who have never worked a minimum of eighty (80) hours per month for two consecutive months for that covered employer, but such provision may not be waived for any employee once a minimum of eighty (80) hours for two consecutive months has been achieved.

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $10.00
Supplemental Benefit Rate per Hour: $1.50

(NYC Administrative Code §6-109)

SECURITY GUARD (ARMED)

For the above building service classification, see the Labor Law Section 230 Schedule.

SECURITY GUARD (UNARMED)

For the above building service classification, see the Labor Law Section 230 Schedule.

SERVICES TO PERSONS WITH CEREBRAL PALSY

Services To Person With Cerebral Palsy

'Services to Persons with Cerebral Palsy' means provision of services which enable persons with cerebral palsy and related disabilities to lead independent and productive lives through an agency that provides health care, education, employment, housing and technology resources to such persons under contract with the city or the department of education.

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $10.00

Supplemental Benefit Rate per Hour: $1.50

(NYC Administrative Code §6-109)

TEMPORARY OFFICE SERVICES

Administrative Assistant

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $33.29
Supplemental Benefit Rate per Hour: None

Cashier

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $11.50
Supplemental Benefit Rate per Hour: None

Clerk (various)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $14.82
Supplemental Benefit Rate per Hour: None

Computer Assistant

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $19.94
Supplemental Benefit Rate per Hour: None

Data Entry Operator

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $16.44
Supplemental Benefit Rate per Hour: None

Receptionist

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $15.03
Supplemental Benefit Rate per Hour: None

Secretary (various)

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $19.31

Supplemental Benefit Rate per Hour: None

Word Processor

Effective Period: 7/1/2014 - 6/30/2015
Wage Rate per Hour: $18.49
Supplemental Benefit Rate per Hour: None

Overtime

Time and one half the regular hourly rate after 40 hours in any work week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics or NYC Administrative Code §6-109)

WINDOW CLEANER

For the above building service classification, see the Labor Law Section 230 Schedule.

Leonard A. Mancusi
SENIOR ASSISTANT COMPTROLLER

THE CITY OF NEW YORK
OFFICE OF THE COMPTROLLER
1 CENTRE STREET ROOM 1120
NEW YORK, N.Y. 10007-2341

ALAN G. HEVESI
COMPTROLLER

TELEPHONE: (212) 669-3622
FAX NUMBER: (212) 669-8499

MEMORANDUM

November 6, 2000

To *Agency Chief Contracting Officers*

From: *Leonard A. Mancusi*

Re: *Security at Construction Sites*

Prior to the enactment of Administrative Code §6-109, security guards on construction sites were not subject to prevailing wages. Security guards under the New York State labor law are covered under §230 which provides that prevailing wages are to be paid for security guards in existing buildings. §6-109 of the Administrative Code which was enacted in 1996 closed this loophole by including all security guards working pursuant to a city contract as a prevailing wage trade.

Although some construction contract boilerplate language has been amended to include §6-109, sub-contractors performing security services have advised us that they were not aware of this provision and, since traditionally, security guards were not a covered trade on construction sites, and they were not advised by a prime contractor that they would have to pay prevailing wages, they have not been doing so.

To avoid the possibility of issuing stop payments against prime contractors for the failure of their security service sub-contractors to pay

prevailing wages, we suggest that you write to all your existing security guard sub-contractors and their primes and in the future, upon approval of a security guard sub-contractor, advise the contractors of their obligation to pay prevailing wages under §6-109 of the Administrative Code.

As always, your cooperation is appreciated.

LAM:er
ACCO.SECURITY AT SITES

NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

INFRASTRUCTURE DIVISION
BUREAU OF DESIGN

VOLUME 2 OF 3

_____

Contractor.

_____

Dated_____, **20**__

_____

APPROVED AS TO FORM
CERTIFIED AS TO LEGAL AUTHORITY

_____

Acting Corporation Counsel

_____

Dated_____, **20**__

_____

NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

INFRASTRUCTURE DIVISION
BUREAU OF DESIGN

VOLUME 2 OF 3

PROJECT ID: PV176ITF1

RECONSTRUCTION AND REHABILITATION OF
BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
BRONX RIVER PARKING LOT AND OVERFLOW LOT
INTERSECTION OF JUNGLE WORLD ROAD
AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

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

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

Prestani Construction Corp.
Contractor.

Dated_____, **20**____

APPROVED AS TO FORM
CERTIFIED AS TO LEGAL AUTHORITY

Acting Corporation Counsel 9/29/2014

Dated September 29, **20** 14

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

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

VOLUME 3 OF 3

SCHEDULE A
ADDENDA NOS. 1 TO 4

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND REQUIRED FOR:

PROJECT ID: PV176ITF1

RECONSTRUCTION AND REHABILITATION OF
BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
BRONX RIVER PARKING LOT AND OVERFLOW LOT
INTERSECTION OF JUNGLE WORLD ROAD
AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

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

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

FOR THE DEPARTMENT OF TRANSPORTATION
PREPARED BY
THE RBA GROUP

JULY 25, 2014

NYSDOT PIN X770.77
Fed. Aid Project No. _____

Bid Opening 11:00 A.M. on _____
Location 1st Floor Bid Room, 30-30 Thomson Ave., Long Island City, N.Y. 11101

5-043

SPECIFICATIONS AND STANDARDS OF NEW YORK CITY

The following New York City Department of Transportation (NYCDOT) reference documents are available on-line at: http://www.nyc.gov/html/ddc/html/pubs/pubs_infrastdts.shtml or for purchase between 9:00 A.M. and 3:00 P.M. at 55 Water St., Ground Floor, NYC, N.Y. 10041. Contact: Ms Vivian Valdez, Tel. (212) 839-9434

1. NYCDOT Standard Highway Specifications, November 1, 2010
2. NYCDOT Standard Highway Details of Construction, July 1, 2010
3. NYCDOT Division of Street Lighting Specifications
4. NYCDOT Division of Street Lighting Standard Drawings
5. NYCDOT Standard Specifications for Traffic Signals
6. NYCDOT Standard Drawings for Traffic Signals

The following reference documents for New York City Department of Environmental Protection (NYCDEP) are available on-line at: http://www.nyc.gov/html/ddc/html/pubs/pubs_infrastdts.shtml or for pick up between 8:00 A.M. and 4:00 P.M. at 30-30 Thomson Avenue, 3rd Floor, Division of Infrastructure, Long Island City, N.Y. 11101.
Contact: Mr. Waqar Ahmad, Tel. (718) 391-2056

1. NYCDEP Standard Sewer and Water Main Specifications, July 1, 2014
2. NYCDEP Instructions for Concrete Specifications, Jan. 92
3. NYCDEP General Specification 11-Concrete, November 1991
4. NYCDEP Sewer Design Standards, (September 2007) Revised January 2009

The following reference documents for New York City Department of Environmental Protection (NYCDEP) are available on-line at: http://www.nyc.gov/html/ddc/html/pubs/pubs_infrastdts.shtml or for pick up between 8:00 A.M. and 4:00 P.M. at 30-30 Thomson Avenue, 3rd Floor, Division of Infrastructure, Long Island City, N.Y. 11101.
Contact: Mr. Robert Kuhlmann, Tel. (718) 391-2145

1. NYCDEP Water Main Standard Drawings
2. Specifications for Trunk Main Work, dated July 2014
3. Standards for Green Infrastructure, latest version, available only on-line at: http://www.nyc.gov/html/dep/pdf/green_infrastructure/bioswales-standard-designs.pdf

Water main work material specifications are available at the Department of Environmental Protection, 59-17 Junction Boulevard, 3rd Floor Low-Rise Building, Flushing, N.Y. 11373-5108.
Contact: Mr. Tarlock Sahansra, P.E., Tel. (718) 595-5302
E-mail: TSAHANSRA@DEP.NYC.GOV

Standard Specifications and Drawings for Fire Department Communications facilities of New York City are available at 87 Union Street, Engineering Office, Brooklyn, N.Y. 11231-1416.
Contact: Mr. Ed Durkin, Tel. (718) 624-3752

Tree Planting Standards of the City of New York Parks & Recreation are available at the following Department of Parks & Recreation website: http://www.nycgovparks.org/pagefiles/53/Tree-Planting-Standards.pdf

SPECIFICATIONS AND STANDARDS OF PRIVATE UTILITIES

The Following reference document for Private Utility Work is available for pick up between 8:30 A.M. and 4:00 P.M. at 30-30 Thomson Avenue, First Floor Bid Procurement Room, L.I.C., N.Y. 11101.

1. CET SPECIFICATIONS AND SKETCHES dated November 2010

(NO TEXT ON THIS PAGE)

SCHEDULE A

(GENERAL CONDITIONS TO CONSTRUCTION CONTRACT (INCLUDING GENERAL CONDITIONS RELATED TO ARTICLE 22 – INSURANCE)

PART I. REQUIRED INFORMATION

INFORMATION FOR BIDDERS SECTION 26 BID SECURITY The **Contractor** shall obtain a bid security in the amount indicated to the right.	See Attachment 1 (page A-1 of the Bid Booklet).
INFORMATION FOR BIDDERS SECTION 26 PERFORMANCE AND PAYMENT BONDS The **Contractor** shall obtain performance and payment bonds in the amount indicated to the right.	See Attachment 1 (page A-1 of the Bid Booklet).
CONTRACT ARTICLE 14 DATE FOR SUBSTANTIAL COMPLETION The **Contractor** shall substantially complete the **Work** in the number of calendar days indicated to the right.	See Page SA-4
CONTRACT ARTICLE 15 LIQUIDATED DAMAGES If the **Contractor** fails to substantially complete the **Work** within the time fixed for substantial completion plus authorized time extensions or if the **Contractor**, in the sole determination of the **Commissioner**, has abandoned the **Work**, the **Contractor** shall pay to the **City** the amount indicated to the right.	$1,500. for each consecutive calendar day over substantial completion time
CONTRACT ARTICLE 17. SUB-CONTRACTOR The **Contractor** shall not make subcontracts totaling an amount more than the percentage of the total **Contract** price indicated to the right.	Not to exceed 50 % of the **Contract** price
CONTRACT ARTICLE 21. RETAINAGE The **Commissioner** shall deduct and retain until the substantial completion of the **Work** the percent value of the **Work** indicated to the right.	0 % of the value of the **Work**

CONTRACT ARTICLE 22. **(Per Directions Below)**	See pages SA-5 through SA-11
CONTRACT ARTICLE 24. **DEPOSIT GUARANTEE** As security for the faithful performance of its obligations, the **Contractor**, upon filing its requisition for payment on **Substantial Completion**, shall deposit with the **Commissioner** a sum equal to the percentage of the **Contract** price indicated to the right.	1% of **Contract** price
CONTRACT ARTICLE 24. **PERIOD OF GUARANTEE** Periods of maintenance and guarantee other than the period set forth in Article 24.1 are indicated to the right.	Twelve (12) Months, excluding Trees Twenty-four (24) Months for Tree Planting
CONTRACT ARTICLE 74. **STATEMENT OF WORK** The **Contractor** shall furnish all labor and materials and perform all **Work** in strict accordance with the **Contract Drawings**, **Specifications,** and all **Addenda** thereto.	See Contract Article 74
CONTRACT ARTICLE 75. **COMPENSATION TO BE PAID TO CONTRACTOR** The **City** shall pay and the **Contractor** shall accept in full consideration for the performance of the **Contract**, subject to additions and deductions as provided in Contract Article 75, this said sum being the amount at which the **Contract** was awarded to the **Contractor** at a public letting thereof, based upon the **Contractor's** bid for the **Contract.**	See Contract Article 75
CONTRACT ARTICLE 78. **PARTICIPATION BY MINORITY-OWNED AND WOMEN-OWNED BUSINESS ENTERPRISES IN CITY PROCUREMENT**	See M/WBE Utilization Plan in the Bid Booklet

STANDARD HIGHWAY SPECIFICATIONS SECTION 6.40 LIQUIDATED DAMAGES FOR ENGINEER'S FIELD OFFICE If the Contractor fails to satisfactorily provide the field office and all equipment specified in **Section 6.40 - Engineer's Field Office**, and/or if a cited deficiency exceed seventy two (72) hours after notice from the Engineer in writing, or is permitted to recur, liquidated damages will be assessed in the amount specified herein for each subsequent calendar day or part thereof that a cited deficiency resulting in nonpayment, as described in **Section 6.40.5**, is not corrected.	$ 250.00 for each calendar day of deficiency
STANDARD HIGHWAY SPECIFICATIONS SECTION 6.70 LIQUIDATED DAMAGES FOR MAINTENANCE AND PROTECTION OF TRAFFIC	$ 250.00 for each instance of failure to comply with the Maintenance and Protection of Traffic requirements within three (3) hours after written notice from the Engineer $ 500.00 for each and every hour of failing to open the entire width of roadway to traffic the morning following a night/weekend work operation
STANDARD HIGHWAY SPECIFICATIONS SECTION 7.13 LIQUIDATED DAMAGES FOR MAINTENANCE OF SITE If the Contractor fails to comply, within three (3) consecutive hours after written notice from the Engineer, with the requirements of **Section 7.13 - Maintenance of Site**, the Contractor shall pay to the City of New York, until such notice has been complied with or rescinded, the sum specified above per calendar day, for each instance of such failure, as liquidated damages and not as a penalty, for such default.	$ 250.00 for each calendar day, for each occurrence

Date for Substantial Completion (Reference: Article 14)

The Contractor shall substantially complete the Work within the Final Contract Duration determined in accordance with the terms and conditions set forth herein.

The Base Contract Duration for this project is __425__ consecutive calendar days ("ccds").

The Final Contract Duration shall be the Base Contract Duration when a check mark is indicated before the word "NO", below, and shall be the Base Contract Duration adjusted by the table set forth below when a check mark is indicated before the word "YES", below.

__√__ YES _____ NO

When the Final Contract Duration is indicated above to be adjusted by the table below, the table may increase the Base Contract Duration depending on the date of scheduled substantial completion to avoid a scheduled substantial completion of the Work during the winter months. The date of scheduled substantial completion shall be determined by adding the Base Contract Duration to the date specified to commence work in the written Notice to Proceed. The Final Contract Duration shall then be determined as follows:

(a) Find the row that corresponds to the month of substantial completion based on the Base Contract Duration added to the date specified to commence work in the written Notice to Proceed.

(b) Find the number of days to be added to the Base Contract Duration in the table below. Add that number of days to the Base Contract Duration to obtain the Final Contract Duration in consecutive calendar days.

Month of Substantial Completion based on the Base Contract Duration	Number of Days of adjustment
January	150
February	120
March	90
April	60
May	30
June	0
July	0
August	0
September	0
October	0
November –December 15	0
December 16 – December 31	180

In addition, should Item No. 9.30, "Storm Water Pollution Prevention," exist in the Contract and the required Storm Water Pollution Prevention Plan (SWPPP) does not conform to NYSDEC's recommended Standards, an additional 60 ccd shall be added to the above Final Contract Duration.

(GENERAL CONDITIONS RELATING TO ARTICLE 22 – INSURANCE)

PART II. TYPES OF INSURANCE, MINIMUM LIMITS AND SPECIAL CONDITIONS

Note: All certificate(s) of insurance submitted pursuant to Contract Article 22.3.3 must be accompanied by a Certification by Broker consistent with Part III below and include the following information:

- **For each insurance policy, the name and NAIC number of issuing company, number of policy, and effective dates;**
- **Policy limits consistent with the requirements listed below;**
- **Additional insureds or loss payees consistent with the requirements listed below; and**
- **The number assigned to the Contract by the City (in the "Description of Operations" field).**

Insurance indicated by a blackened box (■) or by X in a □ to left will be required under this contract

Types of Insurance (per Article 22 in its entirety, including listed paragraph)	Minimum Limits and Special Conditions
■ Commercial General Liability Art. 22.1.1	The minimum limits shall be $ 3,000,000 per occurrence and $ 6,000,000 per project aggregate applicable to this **Contract.** Additional Insureds: 1. City of New York, including its officials and employees, with coverage at least as broad as ISO Form CG 20 10 and CG 20 37, 2. All person(s) or organization(s), if any, that Article 22.1.1(b) of the **Contract** requires to be named as Additional Insured(s), with coverage at least as broad as ISO Form CG 20 26. The Additional Insured endorsement shall either specify the entity's name, if known, or the entity's title (e.g., Project Manager), 3. New York State, including its officials and employees, 4. FHWA, including its officials and employees.

■ Workers' Compensation Art. 22.1.2 ■ Disability Benefits Insurance Art. 22.1.2 ■ Employers' Liability Art. 22.1.2 ☐ Jones Act Art. 22.1.3 ☐ U.S. Longshoremen's and Harbor Workers Compensation Act Art. 22.1.3	Workers' Compensation, Employers' Liability, and Disability Benefits Insurance: Statutory per New York State law without regard to jurisdiction. **Note:** The following forms are acceptable: (1) New York State Workers' Compensation Board Form No. C-105.2, (2) State Insurance Fund Form No. U-26.3, (3) New York State Workers' Compensation Board Form No. DB-120.1 and (4) Request for WC/DB Exemption Form No. CE-200. The City will not accept an ACORD form as proof of Workers' Compensation or Disability Insurance. Jones Act and U.S. Longshoremen's and Harbor Workers' Compensation Act: Statutory per U.S. Law. ☐ Additional Requirements: (1) NYCT "OUTSIDE CONTRACT" INSURANCE REQUIREMENTS: Workers' Compensation Insurance (including Employer's Liability Insurance) with limits of not less than $2,000,000, which limit may be met by a combination of primary and excess insurance meeting the statutory limits of New York State. (2) Two (2) certificates of such insurance shall be furnished to the Director, Risk Management, MTA Risk and Insurance Management Standards, Enforcement and Claims Unit, 2 Broadway, 21st Floor, New York, NY 10004.

☐ Builders' Risk	Art. 22.1.4	100 % of total value of **Work** **Contractor** the Named Insured; the **City** both an Additional Insured and one of the loss payees as its interests may appear. 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. Note: Builders Risk Insurance may terminate upon **Substantial Completion** of the **Work** in its entirety.
■ Commercial Auto Liability	Art. 22.1.5	$ 2,000,000 per accident combined single limit 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 Additional Insureds: (1) City of New York, including its officials and employees, and (2) New York State, including its officials and employees, (3) FHWA, including its officials and employees.

☐ Contractors Pollution Liability	Art. 22.1.6	$_____ per occurrence $_____aggregate Additional Insureds: 1. City of New York, including its officials and employees, and 2. _____ 3. _____
☐ Marine Protection and Indemnity	Art. 22.1.7(a)	$_____ each occurrence $_____ aggregate Additional Insureds: 1. City of New York, including its officials and employees, and 2. _____ 3. _____
☐ 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. _____
☐ Marine Pollution Liability	Art. 22.1.7(c)	$_____ per occurrence $_____ aggregate Additional Insureds: 1. City of New York, including its officials and employees, and 2. _____ 3. _____

[OTHER] Art. 22.1.8 ☐ Railroad Protection Liability Policy (ISO-RIMA or equivalent form) approved by Permittor covering the work to be performed at the designated site and affording protection for damages arising out of bodily injury or death, physical damage to or destruction of property, including damage to the Insured's own property and conforming to the following: • Policy Endorsement CG 28 31 - Pollution Exclusion Amendment is required to be endorsed onto the policy when environmental-related work and/or exposures exist. • Indicate the Name and address of the Contractor to perform the work, the Contract # and the name of the railroad property where the work is being performed and the Agency Permit. • Evidence of Railroad Protective Liability Insurance, must be provided in the form of the Original Policy. A detailed Insurance Binder (ACORD or Manuscript Form) will be accepted pending issuance of the Original Policy, which must be provided within 30 days of the Binder Approval.	$ 2,000,000 per occurrence $ 6,000,000 annual aggregate Named Insureds: 1. New York City Transit Authority (NYCTA), the Manhattan and Bronx Surface Transit Operation Authority (MaBSTOA), the Staten Island Rapid Transit Operation Authority (SIRTOA), MTA Capital Construction Co., the Metropolitan Transportation Authority (MTA) including its subsidiaries and affiliates, and the City of New York (as Owner) and all other indemnified parties.

[OTHER] Art. 22.1.8

☐ Professional Liability

A. The Contractor's Professional Engineer shall maintain and submit evidence of Professional Liability Insurance in the minimum amount of $1,000,000 per claim. The policy or policies shall include an endorsement to cover the liability assumed by the Contractor under this Contract arising out of the negligent performance of professional services or caused by an error, omission or negligent act of the Contractor's Professional Engineer or anyone employed by the Contractor's Professional Engineer.

B. Claims-made policies will be accepted for Professional Liability Insurance. All such policies shall have an extended reporting period option or automatic coverage of not less than two (2) years. If available as an option, the Contractor's Professional Engineer shall purchase extended reporting period coverage effective on cancellation or termination of such insurance unless a new policy is secured with a retroactive date, including at least the last policy year.

[OTHER] Art. 22.1.8	
■ Engineer's Field Office **Section 6.40, Standard Highway Specifications**	Fire insurance, extended coverage and vandalism, malicious mischief and burglary, and theft insurance coverage in the amount of <u>$40,000</u>

[OTHER] Art. 22.1.8

☐ The Following Additional Insurance Must Be Provided:

Umbrella/Excess Liability Insurance - The Contractor shall provide Umbrella/Excess Liability Insurance in the minimum amount of $10,000,000 per Occurrence and $10,000,000 in Aggregate. The policy terms and condition should be at least as broad as the underlying policies. The underlying policies should comply with the insurance provision as outlined by the contract. Defense cost should be in addition to the limit of liability. The City of New York, including its officials and employees, should be included as additional insured as respects to the noted project.

SCHEDULE A
(GENERAL CONDITIONS TO CONSTRUCTION CONTRACT)
(GENERAL CONDITIONS RELATING TO ARTICLE 22 – INSURANCE)

PART III. 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

(GENERAL CONDITIONS TO CONSTRUCTION CONTRACT)

PART IV. ADDRESS OF COMMISSIONER

Wherever reference is made in Article 7 or Article 22 to documents to be sent to the **Commissioner** (e.g., notices, filings, or submissions), such documents shall be sent to the address set forth below or, in the absence of such address, to the **Commissioner's** address as provided elsewhere in this **Contract**.

DDC Director, Insurance Risk Manager

30 – 30 Thomson Avenue, 4th Floor (IDCNY Building)

Long Island City, NY 11101

ATTACH TO CONTRACT DOCUMENTS

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

PROJECT ID: SV176ITF1

RECONSTRUCTION AND REHABILITATION OF
BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
BRONX RIVER PARKING LOT AND OVERFLOW LOT
INTERSECTION OF JUNGLE WORLD ROAD
AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

INCLUDING SEWER, WATER MAIN, STREET LIGHTING, TRAFFIC,
AND LANDSCAPING WORK
Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

ADDENDUM NO. 1

DATED: February 24, 2014

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

The New York City Department of Transportation Standard Highway Specifications, dated November 1, 2010, (which include, but are not limited to, "General Conditions", "Basic Materials of Construction", "Combined Materials of Construction", "Construction Methods", "Inspection and Testing of Materials, Adjustments for Deficiencies, and Maintenance", and "Supplemental Construction Methods"), as modified by addenda issued prior to the opening of bids, shall apply to and become a part of the contract.

All references contained herein are to the New York City Department of Transportation, Standard Highway Specifications, dated November 1, 2010. The said Specifications are hereby revised. Included hereunder are the following REVISIONS:

1. Amendments to Standard Highway Specifications, Volume I
2. Amendments to Standard Highway Specifications, Volume II, including Section 7.88 (Revised) and new Sections 6.44 PO and 6.52 CG.
3. New Sections
4. Special Provisions

1. AMENDMENTS TO STANDARD HIGHWAY SPECIFICATIONS, VOLUME I

The following amendments to the Contract Requirements shall become a part of and apply to the contract:

[Added 12-09-2010]

1. Refer to Page 15, **Subsection 1.06.23.(C) CONFORMANCE WITH FEDERAL, STATE AND CITY AGENCIES;**
   Add the following new paragraphs:

"The Contractor is notified that all vehicles that are owned, leased or operated by the Contractor or its subcontractors and used in connection with the Project shall comply with the following requirement:

Every truck, tractor, and tractor-trailer or semitrailer combination, having a gross vehicle weight rating of twenty-six thousand pounds or more, and a conventional cab configuration in which more than half of the engine length is forward of the foremost point of the windshield base, and the steering wheel hub is in the forward quarter of the vehicle length shall be equipped with a convex mirror on the front of such vehicle or combination of vehicles. Such convex mirror shall be adjusted so as to enable the operator of such vehicle or combination of vehicles to see all points on an imaginary horizontal line which is three feet above the road, is one foot directly forward from the midpoint of the front of such vehicle or combination of vehicles, and extends the full width of the front of such vehicle or combination of vehicles.

Any vehicle that does not comply with this provision may be prohibited from entering the Project site and/or supplying equipment or materials to the Project. The Contractor shall not be entitled to any damages as a result of such prohibition."

[Added 01-09-2011]

2. Refer to Page 240, **Subsection 4.16.5.(B) STUMP REMOVAL;**
   Delete **Subsection 4.16.5.(B) STUMP REMOVAL**, in its entirety:
   Substitute the following revised **Subsection 4.16.5.(B)**:

"(B) STUMP REMOVAL

1. Tree stumps designated to be removed and their roots shall be completely excavated to a minimum depth of three (3) feet below the existing grade. A portable stump cutter may be required in some locations. It may be necessary to remove concrete, asphalt, pavers, and/or other types of material surrounding the base of the stump. All excess debris, including chips from tree stumps, shall be removed and disposed of by the Contractor, away from the site prior to backfilling and the area shall be restored by completion of the workday, to the satisfaction of the Engineer. The disposal of tree stumps by burning in open fires will not be permitted.

2. All voids and excavations left after the removal of the stump and roots shall be backfilled to grade with clean earth fill. Fill shall be placed and compacted to a minimum of 95 percent of Standard Proctor Maximum Density by acceptable methods to the satisfaction of the Engineer. Where paving blocks exist, they are to be reset to the existing grade as directed.

3. Maximum safety and care must be used by Contractor during stump removal. The Contractor shall carefully protect against damage all existing trees, plants, curbs, sidewalks and utilities and other features to remain. The Contractor is responsible for locating and protecting underground utilities from damage during stump removal procedures. During stump grinding operations, plywood must be used to protect adjacent vehicles, real property, and pedestrians. If, when removing stumps, existing sidewalks or curbs are disturbed, the Contractor shall restore and/or reset these sidewalks and curbs, at no additional cost to the City. Restoration work shall be done to match the existing, to the satisfaction of the Engineer. All damaged trees, curbs, sidewalks, real property, vehicles and utilities must be addressed within three (3) days."

[Added 04-18-2011]

3. Refer to Pages 218 and 219, **Subsection 4.13.4.(H) PIGMENT;**
   Delete the first three (3) paragraphs on page 219:
   Substitute the following revised three (3) paragraphs:

"Where the color of the concrete is required to simulate the color of dark gray bluestone, the concrete shall be integrally pigmented to produce a gray color equivalent to: Davis Colors No. 884-3%; Lansco Color No. 437 "Strong Black" 5 lbs. per 94 lbs. Light Grey Portland Cement and 3 parts sand; L.M. Scofield "Cool Black No. 4"; Bayferrox Limestone 330, 2 lbs. per 94 lbs. Light Gray Portland Cement; or an approved equivalent, unless otherwise specified.

Where the color of the concrete is required to simulate the color of light to medium gray granite, the concrete shall be integrally pigmented to produce a gray color equal to: Davis Colors No. 884-1%; Lansco Color No. 437 "Strong Black" 2.5 lbs. per 94 lbs. Light Grey Portland Cement and 3 parts sand; L.M. Scofield "Cool Black No. 1"; Bayferrox Silver 330, 1 lb. per 94 lbs. Light Gray Portland Cement; or an approved equivalent, unless otherwise specified.

Where the sidewalk is designated to have a saw cut joint finish the color of the concrete shall be integrally pigmented to produce a gray color equivalent to L.M. Scofield "Landmarks Grey" K-157-4; L.M. Scofield "Cool Black No. 4"; Davis Colors No. 884-3%; Lansco Color No. 437 "Strong Black" 5 lbs. per 94 lbs. Light Grey Portland Cement and 3 parts sand; Bayferrox NYC Landmark Commission Gray, 3.5 lbs. per 94 lbs. Light Gray Portland Cement; or an approved equivalent, unless otherwise specified."

[Added 07-01-2011]

4. Refer to Page 14, **Subsection 1.06.23.(A) PERMITS;**
   Delete line (b) under the first paragraph;
   Substitute the following text:

"(b) Any planned work requiring a DOT Construction Permit that may potentially be within 100 feet of a bridge structure will be placed on a Bridge Hold. If any proposed work is within 100 feet of a bridge structure, permittees must submit a scaled drawing showing the work and exact location, along with the following:

- Plan layout of the project area.
- The scope of work.
- The contractor's means and methods.
- Indicate if work will be done of the bridge itself or its abutments, and the type of work.

If the work is more than 100 feet away from the bridge structure, permittees may send a certification by e-mail stating so. Either response must be sent to the Division of Bridges at bridgeshold@dot.nyc.gov for review and release prior to commencing work. Emergency work will not be placed on hold and shall proceed in accordance with the New York City Highway Rules, section 2-11 (g);

(c) Permits from the Department of Sanitation for use of City landfills;"

[Added 07-27-2011]

5. Refer to Page 37, **Subsection 1.06.46.(A) 6. Sign Graphics;**
   Delete article "a." beginning with the words "All visual components of the sign are in an Adobe *.pdf file, . . ." and ending with the words ". . . DDC to the Contractor (on a CD or via E-mail) for printing.", in its entirety;
   Substitute the following revised article "a":

   "a. All visual components of the sign are in an Adobe *.pdf file, which is provided by the Commissioner's representative. The file is not to be altered for composition, type font or image from the version provided by DDC. The Commissioner's representative shall provide a complete file with data and image. The digital file shall be provided by DDC to the Contractor (on a CD or via E-mail) for printing."

[Added 09-27-2012]

6. Refer to Page 36, **Subsection 1.06.46. Project Sign;**
   Delete the words "Unless otherwise specified in the Special Provisions of the contract, the following shall apply:";
   Substitute the following revised text:

   "The Contractor is notified that he shall be required to furnish, install, maintain, and remove, when directed, Construction Project Information Signs (CPIS) as per Sec. 2-02(c)(4) and (5) of the NYC DOT Highway Rule and the cost shall be deemed included under all scheduled items of the contract. In addition, unless otherwise specified in the Special Provisions of the contract, the following Project Sign shall also apply:"

[Added 04-08-2013]

7. Refer to Page 200, **Subsection 4.11.2.(B), first paragraph, sixth line;**
   Delete the word "porcelain,".

8. Refer to Page 201, **Subsection 4.11.3.(B) FILL AND BACKFILL, second and third paragraphs;**
   Delete the second and third paragraphs under Subsection 4.11.3.(B), in their entirety;
   Substitute the following revised two paragraphs:

"Glass or Recycled Porcelain Aggregate (RPA) from recycling facilities that meets the requirements of **Subsection 4.11.3.(E)** for Glass and **Subsection 4.11.3.(F)** for RPA shall be considered suitable material for mixing with fill provided the Contractor maintains the gradations specified herein. However, glass shall not be placed in contact with synthetic liners, geogrids, geotextiles or other geosynthetics.

Glass and/or RPA incorporated into fill shall be thoroughly mixed with other suitable material so that glass, RPA or combination of both constitutes no more than 30 percent by volume anywhere in the fill as visually determined by the Engineer."

9. Refer to Page 202, **Subsection 4.11.3.(E) GLASS;**
Add the following new **Subsection 4.11.3.(F) RECYCLED PORCELAIN AGGREGATE (RPA):**

"(F) RECYCLED PORCELAIN AGGREGATE (RPA)

All porcelain to be used as RPA shall be crushed by a New York City Department of Environmental Protection (NYCDEP) approved recycling facility to a maximum particle size of 3/8 inch and graded to meet the gradation specified above for use in either fill, backfill or select fill, as may be required. RPA from any other source will not be permitted. The NYCDEP approved recycling facility will also certify that the RPA being furnished is free from organic material and other unsuitable material.

Should the Contractor desire to use RPA in his fill or backfill material, he shall contact Mr. Vasyl Kravchyk at NYCDEP (Tel. No. 718-595-7512) to determine the availability of RPA and from which recycling facility it can be obtained.

The Contractor shall be required to make arrangement with the recycling plant, at least two (2) weeks in advance of when he would need the material, to schedule the time, date and quantity available for pickup. The Contractor shall be required to furnish the recycling facility with a complete list of his trucks involved in transporting the material, which shall include the name of the registered owner (Contractor), Consumer Affairs or DOS Permit numbers, body license plate number, and truck volume. This information must be supplied to the facility prior to the start of picking up the RPA.

Weight ticket receipt slips given by the recycling facility to each truck driver picking up RPA shall be collected by the Contractor and given to the Engineer upon delivering fill or backfill material to the site that contains RPA, and the Contractor agrees and warrants that in obtaining the RPA that such material has originated only from a NYCDEP approved recycling plant and it has not been mixed with porcelain material from any other source.

The Contractor shall be required to transport said material from the approved recycling facility to his yard for storage and mixing with his fill material; however, there is not guarantee that the material will actually be available.

The Contractor is advised that there is no guarantee that RPA will in fact be available for his use from a NYCDEP approved recycling plant and he shall make no claim against the City for loss of anticipated profits should the material not be available upon request by the Contractor.

All excess RPA not used in the fill or backfill shall remain the property of the DDC Contractor.

The Contractor must comply with all rules and regulations of the Department of Transportation and the Department of Environmental Protections governing the use of RPA in its fill and backfill material."

10. Refer to Pages 218 and 219, **Subsection 4.13.4.(H) PIGMENTING, first four paragraphs;**
Delete the first four paragraphs under Subsection 4.13.4.(H), in their entirety;
Substitute the following revised four paragraphs:

"Where pigmenting is specified, the concrete sidewalks shall be pigmented with an admixture complying with the requirements of **Section 2.19** and the following requirements:

'Commercial Gray': In commercial districts C4–4 through C4–7, C5 and C6, as defined in the Zoning Resolution of the City of New York, and in areas under the jurisdiction of the Lower Manhattan Development Corporation the color of the concrete shall be integrally pigmented to produce a gray color equivalent to L.M. Scofield 'Landmarks Grey' K-157-4; L.M. Scofield 'Cool Black No. 4'; Davis Colors No. 884-3%; Lansco Color No. 437 'Strong Black' 5 lbs. per 94 lbs. Light Grey Portland Cement and 3 parts sand; Bayferrox NYC Landmark Commission Gray, 3.5 lbs. per 94 lbs. Light Gray Portland Cement; or an approved equivalent, unless otherwise specified.

'Bluestone': Where the color of the concrete is required to simulate the color of dark gray bluestone, the concrete shall be integrally pigmented to produce a gray color equivalent to: Davis Colors No. 884-3%; Lansco Color No. 437 'Strong Black' 5 lbs. per 94 lbs. Light Grey Portland Cement and 3 parts sand; L.M. Scofield 'Cool Black No. 4'; Bayferrox Limestone 330, 2 lbs. per 94 lbs. Light Gray Portland Cement; or an approved equivalent, unless otherwise specified.

'Granite': Where the color of the concrete is required to simulate the color of light to medium gray granite, the concrete shall be integrally pigmented to produce a gray color equal to: Davis Colors No. 884-1%; Lansco Color No. 437 'Strong Black' 2.5 lbs. per 94 lbs. Light Grey Portland Cement and 3 parts sand; L.M. Scofield 'Cool Black No. 1'; Bayferrox Silver 330, 1 lb. per 94 lbs. Light Gray Portland Cement; or an approved equivalent, unless otherwise specified."

[Added 05-24-2013]

11. Refer to Page 14, **Subsection 1.06.23.(A) PERMITS**, first paragraph as modified by Article 4 on page A1-1b;
Add the following new text:

"(d) All necessary permits from the Department of Environmental Protection which may include, but are not limited to, permits for use of City water."

12. Refer to Page 14, **Subsection 1.06.23.(A) PERMITS**, second paragraph;
Add the following as the third paragraph:

"No fee permits for use of City water necessary to complete roadway pavement reconstruction project in conjunction with installation of sewers and/or water mains, will be issued by the Department of Environmental Protection. However, for all other type projects (such as installation of sidewalks, installation of pedestrian ramps, pavement milling, resurfacing, rehabilitation of retaining walls, and bridge reconstruction type projects) the Contractor will be required to obtain the water use permit at its own cost."

[Added 08-05-2013]

13. Refer to page 116, second paragraph up from the bottom of the page, first line;
Change the words "Concrete of Type IA and IIA shall have . . ." to read "Concrete of Type IA, IIA and IIIA shall have . . ."

[Added 09-04-2013]

14. Refer to page 100, **Subsection 3.01.3.(C)1.(c)**;
Delete the last two lines of text beginning with the words "The proportion of reclaimed asphalt pavement permitted within each mix . . .";
Substitute the following sentence: "The proportion of reclaimed asphalt pavement permitted within each mix shall be not less than 30 percent for the top and bottom courses as per Local Law #71 of 2011."

15. Refer to page 110, **Subsection 3.05.2.(A)**, **Table 3.05-I**;
Insert the following text at the bottom of **Table 3.05-I**:

"Note: The above proportions shown for non-High-Early mixes shall be modified by pozzolan substitutes as per **Subsection 3.05.4**."

16. Refer to page 112, **Subsection 3.05.3.(C)**, second paragraph;
Delete the second paragraph in its entirety;
Substitute the following paragraph:

"Water shall be potable and drawn from municipal water mains."

17. Refer to page 113, first line of text, beginning with the words "condition making up one (1) cubic yard of concrete.";
Insert the following sentence between the words "condition making up one (1) cubic yard of concrete." and "The range of water-cement ratio within which the . . .":

"The calculated yield of the mix shall be within ± 2% of the Theoretical one (1) cubic yard."

18. Refer to Page 113, second paragraph beginning with the words "The Contractor may substitute Portland cement . . .";
Delete the second paragraph under **Subsection 3.05.4.**, in its entirety;
Substitute the following revised paragraph:

"With the exception of high-early strength concrete, the Contractor shall be required to substitute Portland cement with pozzolans (Fly Ash or GGBFS) such that the maximum amount of Portland cement per cubic yard of concrete does not exceed 400 pounds, and with the use of an approved non-corrosive, non-chloride admixture as required to obtain a minimum compressive strength of 3,000 psi in seven (7) days. For high-early strength concrete the Contractor may substitute Portland cement with pozzolans (Fly Ash or GGBFS), pound for pound, up to 20% (or up to 25% for tidal/sea water spray areas) of the weight of cement specified for any concrete mixture provided the Contractor can obtain a minimum compressive strength of 3,000 p.s.i. in three (3) days. The Contractor, immediately following but not later than eight weeks after the date of the Contractor's Notice to Proceed, shall file with the Engineer, Age-Strength data of the job mix he proposes to use for the various ambient temperatures anticipated during the period of concrete placement. This data shall be presented in both tabular and graphical form for those various ambient temperatures with a maximum setting period of seven (7) days for Class B-32 concrete or seventy-two (72) hours for High-Early Strength Concrete."

19. Refer to Page 115, **TABLE 3.05-III - INGREDIENT MATERIALS**;
Change in the third row, second column, the type of Portland Cement from "Type III*" to read "Type II or Type III*"

20. Refer to page 132, **Subsection 3.06.3.(D)**;
Change the words "Water shall be drawn from mains owned by The City of New York." to read "Water shall be potable and drawn from municipal water mains."

21. Refer to page 133, **Subsection 3.07.3.(D)**;
Change the words "Water shall be drawn from mains owned by or supplying water to The City of New York." to read "Water shall be potable and drawn from municipal water mains."

22. Refer to page 134, **Subsection 3.08.4.(D)**;
Change the words "Water shall be drawn from mains owned by or supplying water to The City of New York." to read "Water shall be potable and drawn from municipal water mains."

23. Refer to Page 166, **Subsection 4.05.2.(A)**;
Delete **Subsection 4.05.2.(A)**, in their entirety;
Substitute the following revised **Subsection 4.05.2.(A)**:

"(A) Concrete Pavement shall be of the following types:

Type 1--Non-reinforced
Type 2--Reinforced (Unpigmented or pigmented if specified)
Type 3--High Early Strength Reinforced (Unpigmented or pigmented if specified)

Type 2 and Type 3 pavements shall consist of a concrete surface course, which shall be unpigmented or pigmented if specified, laid on a concrete base course, which may or may not be pigmented at the Contractor's option, while the base course is still plastic, of the thickness shown on the Contract Drawings, with reinforcement placed between the surface and base courses."

24. Refer to Page 166, **Subsection 4.05.3.(A)**;
Insert the following new **Subsection 4.05.3.(A1)**:

"(A1) PIGMENTING

Where pigmenting is specified, the surface course of the concrete bus pad shall be pigmented with an admixture complying with Section 2.19 and the following requirements:

Where the color of the concrete is required to simulate the red color of the Red Bus Lane Pavement Overlay (Item 6.44 POR in Section 6.44 PO), the surface course concrete shall be integrally pigmented to produce a red color equivalent to Scofield's quarry red.

Except for the use of an air-entraining agent complying with ASTM Designation C 260 and water reducing admixtures complying with ASTM Designation C 494 used in combination with the Pigment Admixture as per the pigment manufacturer's instruction, no other admixtures (including, but not limited to, calcium chloride) shall be used unless stated in writing by the manufacturer of the Pigment Admixture to be of no consequence to the colorfastness of the concrete mixture and is approved by the Engineer.

All pigmented concrete at different locations shall be identical, unless otherwise directed. Variations in color/tint/hue will not be acceptable. Therefore, the same brand and type of cement and the same source and type of aggregate shall be used throughout the project.

Prior to the mix design being made, the cement intended for use shall be checked to determine that its lightness/darkness is similar to the cement used in the original approved sample. The Pigmented Admixture shall be added in the standard proportion specified by the manufacturer."

25. Refer to Page 170, **Subsection 4.05.5.(A) GENERAL**;
Insert the following two new paragraphs:

"For pigmented concrete, the Contractor shall within eight weeks of the notice to proceed, submit the name of its proposed roadway installer upon which his bid is based, along with their respective work history experience in placing pigmented concrete. The installer shall have documented experience in working with pigmented concrete.

Prior to making any field samples and the placing of any pigmented concrete, the Contractor, its concrete supplier, installer, cement producer, laboratory, the pigmented admixture's representative, and the Engineer shall meet and agree on the specifications and methods of handling the pigmented concrete."

26. Refer to Page 183, **Subsection 4.05.9. PRICES TO COVER**, 4th line; Insert in the fourth line, the words "pigment when specified" between the words "specifications, including, but not limited to," and "furnishing and installing . . .":

27. Refer to Page 183, **Subsection 4.05.9. PRICES TO COVER**; Insert the following two new Items to the list of Item Nos. at the bottom of **Subsection 4.05.9**:

"4.05 ACP	REINFORCED CONCETE PAVEMENT (BUS STOPS)(PIGMENTED)	C.Y.
4.05 AXP	HIGH-EARLY STRENGTH REINFORCED CONCRETE PAVEMENT (BUS STOPS)(PIGMENTED)	C.Y."

2. AMENDMENTS TO STANDARD HIGHWAY SPECIFICATIONS, VOLUME II

[Added 01-25-2012]

1. Refer to Pages 365 and 366, **Subsection 6.40.2.(C)(c)(1) Personal Computer(s) - Workstation Configuration**;
   Delete the text under **Subsections (a), (b), (c), (d)**, (h), (i), and (m), in their entirety;
   Substitute the following revised text:

"(a)	Make and Model:	Dell; HP; Gateway; Acer; or, an approved equivalent. (Note: an approved equivalent requires written approval of the Assistant Commissioner of ITS.)
(b)	Processor:	i5-2400 (6MB Cache, 3.1GHz) or faster computer - Single Processor.
(c)	System Ram:	Minimum of 4GB (Gigabytes) Dual Channel DDR3 SDRAM at 1333MHz – 2 DIMMSs
(d)	Hard Disk Drive(s):	500 GB (Gigabytes) Serial ATA (7200RPM) w/DataBurst Cache, or larger."
"(h)	Video Display Card:	HD Graphics (VGA, HDMI) with a minimum of 64 MB of RAM.
(i)	Monitor:	22" W, 23.0 Inch VIS, Widescreen, VGA/DVI LCD Monitor."
"(m)	Software Requirements:	Microsoft Windows 7 Professional SP1, 64 bit; Microsoft Office Professional 2010; Microsoft Project 2010; Adobe Acrobat reader; Anti-Virus software package with 2 year updates subscription; and, either Auto Cad 2012 LT or Microsoft Visio 2010 Standard Edition, as directed by the Engineer."

~~2. Refer to Page 366, **Subsection 6.40.2.(C)(c)(2)(b)**;~~
~~Delete the text under **Subsection (b)**, which begins with the words "(b) One (1) 600 DPI HP Laser Jet . . .", in its entirety;~~
~~Substitute the following revised text:~~

~~"(b) One (1) 600 DPI HP Color Laser Jet all-in-one Printer/Scanner/Copier/Fax (twelve (12) pages per minute or faster) with one (1) Extra Paper Tray (Legal Size) networked to all office computers."~~

3. Refer to Page 367, **Subsection 6.40.3. SPECIFIC REQUIREMENTS FOR ENGINEERS FIELD OFFICE (TYPE A, B, C, CU, D OR DU)**, first paragraph;
Delete the text in the first paragraph of **Subsection 6.40.3.**, in its entirety;
Substitute the following revised text:

6.40.3. SPECIFIC REQUIREMENTS FOR ENGINEER'S FIELD OFFICE (TYPE A, B, C, CU, D, OR DU). In addition to the general requirements, each type of Field Office shall have the minimum floor area indicated in Table 6.40-I calculated based on usable area only, excluding any loss factors. Loss factors are defined as those areas such as lobby, sidewalk window ledge, elevator shafts and stairways. The Contractor shall provide and maintain furnishings for each type of Field Office in the quantity specified in Table 6.40-I. The furnishings shall be new or used equipment satisfactory to the Engineer:

4. Refer to Page 368, TABLE 6.40-I, ADDITIONAL REQUIREMENTS SPECIFIC REQUIREMENTS;
Delete the requirements for a Photocopy Machine shown in the 15th row of TABLE 6.40-I, in its entirety;
Substitute the following revised requirements:

Photocopying Machine – Stand-alone, heavy duty, electric, dry-process color photocopying type with a minimum production rate of 70 pages per minute and an adequate supply of copy paper, toner, etc. The machine shall be capable of duplex copying paper sizes of 8-1/2 x 11 inches, 8-1/2 x 14 inches and 11 x 17 inches, and have separate trays for each paper size. It shall have a document feeder, collator, stapler, and the capability to reduce/enlarge copies between each paper size. The supply of each size copy paper, toner, etc. shall be replenished and the machines shall be maintained for the duration of the contract by the Contractor as required by the Engineer. Make and model can be Minolta, Canon, IBM, Epson, or an approved equivalent, and shall be networked to the office computers.	1	1	1	1	1	1

5. Refer to Page 368, TABLE 6.40-I, ADDITIONAL REQUIREMENTS SPECIFIC REQUIREMENTS;
Insert the following two additional requirements:

Heavy duty commercial grade diamond cut shredder with automatic start. The shredder shall be able to receive 8-1/2 inch wide paper and shred a minimum of 15 sheets simultaneously along with CDs and staples.	1	1	1	1	1	1
Projector – 1080p LCD with a min. of 2200 ANSI Lumins, 1920 x 1080, 16:9, 40,000:1 contrast ratio, HDMI, VGA, USB, and a 10 feet diagonal, 16:9 Projection Screen.	-	-	1	1	1	1

6. Refer to Page 496, Subsection **7.20.4. METHODS**, last paragraph beginning with the words "When directed by the Engineer, due to the original conditions . . .";
Add the following sentence to the end of the last paragraph under **Subsection 7.20.4:**

"However, if the owner at his own expense supplies the replacement frame and doors or hatch covers the Contractor shall install the replacement frame and doors or hatch covers under this Item 7.20, as a basement access reset, in lieu of the steel safety closure plate."

[Added 07-16-2012]

7. Refer to Page 365, **Subsection 6.40.2.(C)(c)(1) "Personal Computer(s) - Workstation Configuration"**;
Delete the text under **Subsections (g) and (k)**, in their entirety;
Substitute the following revised text:

"(g)	I/O Ports:	Must have at least one (1) Serial Port, one (1) Parallel Port, and three (3) USB Ports.
(k)	Network Interface:	Integrated 10/100/1000 Ethernet card."

8. Refer to Page 366, **Subsection 6.40.2.(C)(c)(2) "All field offices requiring computers shall be provided with the following:"**;
Delete the text under **Subsection (a)**, in its entirety;
Substitute the following revised text:

"(a) One (1) broad-band internet service account. Wideband Internet connectivity at a minimum throughput of 15 Mbps download and 5 Mbps upload is required at each field office location with 1-5 staffers. For larger field offices see table below for minimum required upload speeds. Telephone service should be bundled together with Internet connectivity. Because of throughput requirements Verizon FIOS is the preferred connectivity provider where available.

Office Personnel #	**Upload Speeds (*Minimum*)**
1 - 5	5 Mbps
6 - 10	10 Mbps
11 - 15	15 Mbps
16 - 20 ...	20 Mbps

This account will be active for the life of the project. The e-mail name for the account shall be the DDC Field Office/project Id (e.g. FLD K HWK666 McGuinness@earthlink.com)."

[Added 08-09-2012]

9. Refer to Page 366, **Subsection 6.40.2.(C)(c)(2)(b)**, as amended by Article 2 on page A1-2 of this Addendum;
   Delete the text under **Subsection (b)**, in its entirety;
   Substitute the following words: "**(b) (No Text)**."

10. Refer to Page 368, TABLE 6.40-I, ADDITIONAL REQUIREMENTS SPECIFIC REQUIREMENTS;
    Delete the requirements for a Photocopy Machine shown in the 15th row of TABLE 6.40-I, as modified by Article 4 on page A1-2a of this Addendum, in its entirety;
    Substitute the following revised requirements:

Photocopying Machine – Stand-alone, heavy duty, electric, dry-process color photocopying type with color scan and send capability via e-mail, a minimum production rate of 70 pages per minute and an adequate supply of copy paper, toner, etc. The machine shall be capable of duplex copying paper sizes of 8-1/2 x 11 inches, 8-1/2 x 14 inches and 11 x 17 inches, and have separate trays for each paper size. It shall have a document feeder, collator, stapler, and the capability to reduce/enlarge copies between each paper size. The supply of each size copy paper, toner, etc. shall be replenished and the machines shall be maintained for the duration of the contract by the Contractor as required by the Engineer. Make and model can be Minolta, Canon, IBM, Epson, or an approved equivalent, and shall be networked to the office computers.	1	1	1	1	1	1

[Added 11-26-2012]

11. Refer to Pages 504 through 508, **SECTION 7.88 – Rodent and Waterbug Pest Control**;
    Delete **Section 7.88**, in its entirety;
    Substitute SECTION 7.88 (Revised), as contained on the following pages A1-2d through A1-2i.

[Added 02-08-2013]

12. (NO TEXT)

SECTION 7.88 (Revised)
Rodent and Waterbug Pest Control

7.88.1. DESCRIPTION. The Contractor shall provide all labor, materials, plant and equipment, and incidentals required to survey and monitor rodent activity and control any infestation or outbreak of rodents and waterbugs (American cockroaches) within the project limit.

7.88.2. MATERIALS. All materials shall be approved by the New York State Department of Environmental Conservation and comply with the New York City Health Code for the intended usage.

Rodenticide weatherproof bait blocks shall be multiple dose anticoagulants such as Chlorophacinone or Dephacinone, or single feed rodenticides such as ContraMeal, ContracBait block, Quintox pellets or TalonG pellets, or an approved equivalent.

Tamper proof bait station boxes shall be designed to exclude other mammals and shall be used with poisoned bait to attract rats. Information on "tamper proof bait station boxes" is available from the NYC Bureau of Regulatory & Environmental Health Services, Pest Control Office (718-956-7103/4).

Live traps shall be of proper dimensions for trapping rats and shall <u>not</u> be used with poisoned bait.

Insecticide bait shall be a residual type such as phenol methyl carbamate (2%) bait or an approved equivalent.

(A) SUBMITTALS

Prior to commencement of construction activities the Contractor shall submit to the Engineer manufacturer's installation instructions for all materials required for rodent and waterbug pest control work and product data which shall include illustrations, catalog data, product characteristics, typical use, performance, and limitation criteria of all rodent and waterbug pest control materials required.

7.88.3. PERSONNEL. The Contractor shall employ two independent licensed exterminators: one to engage in survey and monitoring work to establish the level of infestation of rodents and insects and provide recommendations for specific Integrated Pest Management (IPM) actions, and one to execute the rodent and waterbug pest control work to deal with such infestations. All pest control personnel employed by each exterminator company must be supervised by an exterminator licensed in categories 7A & 8. The Contractor shall submit the names and license credentials of the two exterminator companies to the Engineer for approval prior to the commencement of any work under this section.

7.88.4. METHODS. Application and dosage of all materials shall be done in strict compliance with the manufacturer's recommendations. All surveying, monitoring, baiting, and/or live trapping work shall be performed in the presence of the Engineer, without which no payment will be made under this Section.

(A) GENERAL

The Contractor's construction activity is expected to disturb any established rodent and/or waterbug population that may exist within the project limits, possibly causing their dispersion. The Contractor shall take all appropriate action to eliminate and/or control these populations within the construction corridor: the construction corridor shall be defined as being the full width of streets under the contract and intersecting streets up to the limits of construction, from property line to property line, excluding buildings and under sidewalk building vaults.

Under the Maintenance of Site requirements for the contract, any unsanitary conditions, such as uncollected garbage or debris, resulting from the Contractor's activities which will provide food and shelter to the resident rodent population shall be corrected by the Contractor immediately after notification of such condition by the Engineer. Non-compliance shall be subject to the application of the "Nonconformance" provisions of the Item for Maintenance of Site, and no payment will be made for any additional application of rodenticide or insecticide needed to control resultant infestations.

(B) SURVEY AND MONITORING WORK

(1) Prior to Construction - The Contractor's designated survey and monitoring exterminator shall execute a survey of the project area and estimate the level of rodent (Norway rat, House mouse) infestation and the waterbug population within the construction corridor. An appropriate sample of utility manholes (sewer, electrical, telephone, etc.) and catch basins should be opened and surveyed to the satisfaction of the Engineer. Contractor shall maintain all survey records in the manner described in 7.88.6., Records and Reports.

(2) During Construction - The Contractor shall monitor the rodent activity through trapping (snap, glue traps or live traps), fecal count methods, and inspection of the conditions of all installed baits every week during construction activity or as otherwise directed by the Engineer. Contractor shall maintain all monitoring records in the manner described in 7.88.6., Records and Reports.

(C) RODENT CONTROL WORK

(1) Wetlands, Woodlands and Areas Within Seventy-five (75') feet of a Stream. In wetlands, woodlands and areas adjacent to a stream, special precautions must be taken to protect water quality and to ensure the safety of other wildlife. To prevent poisoned bait from entering streams, no poisoned bait shall be used in areas within seventy-five (75') feet of either streambank. Live traps must be used in these seventy-five (75') feet buffer zone areas and within wetland and woodland areas.

(2) Outside Wetland Areas, Woodland Areas and Beyond Seventy-five (75') feet of a Stream. In areas outside the seventy-five foot zone of protection adjacent to streams, and areas outside wetlands and woodlands, tamper proof bait stations with poisoned bait shall be established during the period of construction and any consumed or decomposed bait shall be replenished as directed.

Rodent control shall be achieved in two stages as follows:

Stage I. At least one month prior to initiation of the construction work, and periodically thereafter, live traps and/or rodenticide bait, as directed above, shall be placed at locations [e.g., burrows, utility manholes (sewer, electrical, phone, etc.), and catch basins] that are inaccessible to pets, human beings, children and other non-target species, particularly wildlife (e.g., birds) in the construction corridor. Locations of initial bait placement and quantities of bait shall be determined by the survey and monitoring exterminator's written report of his survey and monitoring results, or as otherwise directed by the Engineer.

Stage II. During Construction - Infested sites as determined by the survey and monitoring exterminator's monitoring report shall be baited and/or rebaited, and live traps shall be collected and replaced, the rates and quantities of which shall be determined by the written monitoring reports submitted weekly or as otherwise directed by the Engineer in consultation with the City's Office of Pest Control.

The baiting exterminator shall be responsible for collecting and disposing of all trapped and poisoned rodents found in live traps and tamper proof bait stations. The baiting exterminator shall also be responsible for posting and maintaining signs announcing the baiting of each particular location.

The Contractor, under his maintenance of site operations, shall be responsible for the immediate collection and disposal of any visible rodent remains found on streets or sidewalk within the project limits. Any visible remains shall be placed into double plastic bags. No more than five (5) carcasses shall be placed into each bag. Each bag shall be a minimum of 3 mils thick, black plastic. No additional payment will be made for this work.

It is anticipated that public complaints will be addressed to the Engineer's Field Office. The Contractor, where directed by the Engineer, shall take appropriate Integrated Pest Management (IPM) actions, such as baiting, trapping, proofing, etc., to remedy the source of a complaint within the next six (6) hours of normal working time, which is defined herein, for the purposes of this section, as 7 A.M. to 6 P.M. on Mondays through Saturdays.

(D) WATERBUG (AMERICAN COCKROACH) CONTROL

Infested sites (e.g., sewers) shall be baited at least 2 times per month with insecticides, or as directed by the Engineer in consultation with the exterminator monitoring the work and the City's Office of Pest Control.

7.88.5. EDUCATION & TRAINING. The Contractor shall post notices in all Construction Bulletin Boards advising workers, employees, and residents to call the Engineer's Field Office to report rodent and waterbug infestations. The Contractor shall provide and distribute literature pertaining to IPM techniques of rodent control to affected businesses and superintendents of nearby residential buildings to ensure their participation in maintaining their establishments free of unsanitary conditions, harborage removal and rodent proofing.

Prior to application of any chemicals, the Contractor shall furnish copies or sample labels for each pesticide, antidote information, and Material Data Safety Sheets (MSDS) for each chemical used.

7.88.6. RECORDS AND REPORTS.

(A) GENERAL

The Contractor shall be responsible for assigning within the construction corridor an identifying number to each manhole, catch basin, and other location where bait and/or live trap placement and/or waterbug control work is proposed by the survey and monitoring exterminator. The Contractor shall then provide that list of locations and corresponding reference numbers along with a drawing showing the locations, as a reference for the exterminator(s) performing the work, to indicate locations of bait placement and waterbug control work and rodent and waterbug activity (droppings, bait consumed, dead rodents, etc.).

(B) SURVEY AND MONITORING WORK

(1) Prior to Construction – Contractor shall submit to the Engineer, for approval, a written survey report including proposed IPM procedures, including specific materials, quantities, locations, methods, and time schedule for the implementation of the exterminating work. The written report shall also include a survey with a drawing (provided by the Contractor) marked with locations indicating all signs of rodent (Norway rat, House mouse) infestation and waterbug activity discovered during the execution of the survey indicating that rodent and waterbug pest control work is necessary.

(2) During Construction - Based on monitoring results, Contractor shall submit to the Engineer a weekly written monitoring report identifying all locations and conditions of installed bait and/or other rodent control work. The monitoring report shall also include any other recommended IPM techniques, such as baiting, trapping, proofing, etc., proposed for rodent and waterbug pest control.

The survey and monitoring exterminator shall keep a record of all rodent and waterbug infestation surveys s/he has conducted. The Contractor shall be required to submit a copy of all survey and monitoring reports to the Engineer each week, prior to payment.

(C) RODENT AND WATERBUG CONTROL WORK

The baiting exterminator shall maintain records of all locations baited along with the type and quantity of rodenticide and insecticide bait used. These records will be kept by the City Inspector. A weekly report shall be prepared, signed and certified by the approved licensed exterminator, and such reports shall be submitted to the Engineer each week, prior to payment.

7.88.7. NONCONFORMANCE. If the Contractor fails to perform as directed to control the rodent and/or waterbug population at any location within the project limits for a period of more than one week, the Engineer will correct the adverse conditions by any means he deems appropriate, including but not limited to, the use of "outside services" and shall deduct the cost of the corrective work from any monies due to the Contractor. The deducted cost of this work shall be in addition to the non-payment for rodent and waterbug pest control.

7.88.8. MEASUREMENT.

(A) RODENT INFESTATION SURVEY AND MONITORING

The quantity to be measured for payment under Item No. 7.88 AA, RODENT INFESTATION SURVEY AND MONITORING, shall be a Lump Sum measurement.

(B) RODENT BAIT STATIONS

The quantity to be measured for payment under Item No. 7.88 AB, RODENT BAIT STATIONS, shall be the number of tamper-proof rodent bait station boxes and/or live traps satisfactorily installed or reinstalled after inspection within the construction corridor, as approved by the Engineer. However, the initial baiting, and subsequent rebaiting as may be required, of any bait station will be paid for under Item 7.88 AC.

(C) BAITING OF RODENT BAIT STATIONS

The quantity to be measured for payment under Item No. 7.88 AC, BAITING OF RODENT BAIT STATIONS, shall be the number of tamper-proof rodent bait station boxes, utility manholes, catch basins, or other locations approved by the Engineer, satisfactorily baited or rebaited to replenish consumed or decomposed bait within the construction corridor, as approved by the Engineer.

(D) WATERBUG BAIT APPLICATION

The quantity to be measured for payment under Item No. 7.88 AD, WATERBUG BAIT APPLICATIONS, shall be the number of blocks satisfactorily treated with insecticide bait within the construction corridor, as approved by the Engineer. A block shall be defined as the area of street, measured between property lines, from intersection to intersection. Each rebaiting of any block shall be considered as a new block for measurement purposes.

7.88.9. PRICES TO COVER.

(A) RODENT INFESTATION SURVEY AND MONITORING

Payment will be made at the lump sum price bid for RODENT INFESTATION SURVEY AND MONITORING which shall include the cost of furnishing all the labor, materials, plant, equipment (traps, etc.), insurance, and other incidentals required, including but not limited to providing all required maintenance of traffic equipment, to perform a rodent infestation survey of the project area and then monitor the site each week for rodent activity, all in accordance with the specifications and the directions of the Engineer.

Ten (10%) percent of the lump sum price bid will be paid when the initial survey of the project area has been completed and the written survey report has been submitted to the satisfaction of the Engineer. The remainder will be paid in proportion to the percentage of contract completion.

(B) RODENT BAIT STATIONS

The Contract price bid for RODENT BAIT STATIONS shall be a unit price per each tamper proof bait station box and/ or live trap installed or reinstalled after inspection and shall cover the cost of furnishing all labor, materials, plant, equipment (bait stations, etc.), insurance, and other incidentals, including but not limited to providing all required maintenance of traffic equipment, required to control the rodent population found within the project limits in accordance with the specifications and the directions of the Engineer.

In addition to the payment for Rodent Bait Stations installed or reinstalled under this Item 7.88 AB, the Contractor will also be paid for each baiting or rebaiting, when required, of each bait station, under Item No. 7.88 AC.

(C) BAITING OF RODENT BAIT STATIONS

The Contract price bid for BAITING OF RODENT BAIT STATIONS shall be a unit price per each bait station, utility manhole, catch basin or other location approved by the Engineer satisfactorily baited or rebaited, when required, and shall cover the cost of furnishing all labor, materials, plant, equipment (bait), insurance, and other incidentals, in accordance with the specifications and directions of the Engineer. Installation or resetting of the bait station will be paid for under Item 7.88 AB.

(D) WATERBUG BAIT APPLICATION

The Contract price bid for WATERBUG BAIT APPLICATION shall be a unit price per block treated by the exterminator and shall include the cost of furnishing all the labor, materials, plant, equipment (bait, etc.), insurance, and other incidentals, including but not limited to providing all required maintenance of traffic equipment, necessary to control the waterbug population found within the project limits for the duration of the contract in accordance with the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
7.88 AA	RODENT INFESTATION SURVEY AND MONITORING	L.S.
7.88 AB	RODENT BAIT STATIONS	EACH
7.88 AC	BAITING OF RODENT BAIT STATIONS	EACH
7.88 AD	WATERBUG BAIT APPLICATION	BLOCK

[Added 05-24-2013]

13. Refer to Page 366, **Subsection 6.40.2.(C)(c)(1)(m) Software Requirements**, as modified by Article 1 on page A1-2;
    Delete the text under **Subsection (m)**, in its entirety;
    Substitute the following revised text:

"(m) Software Requirements: Microsoft Windows 7 Professional SP1, 32 bit; Microsoft Office Professional 2010; Microsoft Project 2010; Adobe Acrobat reader; Anti-Virus software package with 2 year updates subscription; and, either Auto Cad LT or Microsoft Visio Standard Edition, as directed by the Engineer."

[Added 09-04-2013]

14. Refer to Page 384, the end of **Section 6.44 - White and Yellow Thermoplastic Reflectorized Pavement Markings**;
    Insert new **SECTION 6.44 PO,** after **Section 6.44**, as contained on the following pages A1-2k through A1-2m.

[Added 02-10-2014]

15. Refer to Pages 393 and 394, **SECTION 6.52 - Uniformed Full-Time Flagperson**;
    Delete **Section** 6.52 on pages 393 and 394, but do not delete examples on pages 395 and 396;
    Substitute SECTION 6.52 CG, as contained on the following pages A1-2n and A1-2o.

The asphalt pavement coating shall only be applied in the correct environmental conditions as instructed by the coating supplier, and as approved by the Engineer.

Refer to the instructions provided by the coating supplier regarding when the painted lane may be opened to traffic. Wait time is typically a function of the dry rate of the coating, and climate conditions.

The Engineer may, at his discretion, require the Contractor to remove all extraneous marks on the pavement made by the agents or employees of the Contractor, or made by others due to improper control or protection of the work area by the Contractor, his agents or employees. Any installation which, in the opinion of the Engineer, is not acceptable, whether by reason of poor workmanship, poor appearance, poor performance, poor materials, improper width or improper alignment, shall be reworked by the Contractor at no cost to the City. The Contractor shall replace rejected installation as directed by the Engineer, within fifteen (15) days after receiving written notification of the rejection of such completed work.

6.44PO.6. **MEASUREMENT.** The quantities to be measured for payment shall be the number of square yards of Lane Pavement Overlay, of each color, placed as specified to the satisfaction of the Engineer.

6.44PO.7. **PRICES TO COVER.** The unit prices bid per square yard of Green Bicycle Lane Pavement Overlay and Red Bus Lane Pavement Overlay shall cover the cost of all labor, materials, plant, equipment, insurance, and necessary incidentals required including, but not limited to, testing, cleaning, preparation of surfaces, and application of the lane pavement overlay materials, all in accordance with the contract plans and specifications, and as directed by the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
6.44 POG	GREEN BICYCLE LANE PAVEMENT OVERLAY	S.Y.
6.44 POR	RED BUS LANE PAVEMENT OVERLAY	S.Y.

SECTION 6.52 CG
Crossing Guard

6.52CG.1. INTENT. This section describes the employment of full-time uniformed crossing guards to direct and detour traffic.

6.52CG.2. DESCRIPTION. The Contractor shall furnish an adequate number of competent crossing guards to control vehicular and pedestrian traffic when it is necessary to maintain alternating one-way traffic in one lane of a two-way roadway, and at all other locations where construction operations, construction vehicles and equipment, and temporary traffic patterns related to the construction operations require positive temporary traffic control for safe, efficient traffic operations.

6.52CG.3. METHODS. All crossing guards, whether paid for under this item or not, shall be proficient in speaking, writing and reading English and adequately trained, as approved by the Engineer, in controlling vehicular and pedestrian traffic at construction sites.

All crossing guards, whether paid for under this item or not, their apparel, hand-signaling devices, and active two-way radios shall be appropriate for use at roadway construction sites as approved by the Engineer.

Prior to the start of crossing guard operations, the Contractor shall provide to the Engineer a list of crossing guards to be used in the contract, identifying the source of crossing guard training for each individual. When requested by the Engineer, crossing guards shall demonstrate their competency in crossing guard procedures. Crossing guards not competent in controlling vehicular and pedestrian traffic procedures to the satisfaction of the Engineer shall be retrained or replaced at once. Each crossing guard paid under this item must be a full-time crossing guard. If any worker performing services under this item is also assigned the task of directing construction equipment (as per attached Example #2, worker acting as a flagperson 'A') or any laborer tasks, then such worker shall be deemed to be subject to the provisions of Labor Law §220 Prevailing Wage Schedule and will not be paid for under this Item.

6.52CG.4. MEASUREMENT. The quantity to be measured for payment shall be the number of person-hours of uniformed crossing guard service actually performed, as authorized by the Engineer. Laborers who are not full-time crossing guard will not be measured for payment as crossing guards under this or any other item. Each uniformed crossing guard shall be required to work a minimum of eight (8) hours a day and the Contractor will be given a minimum of twelve (12) hours advanced notice by the Engineer as to when to furnish a crossing guard.

6.52CG.5. PRICE TO COVER. The contract price per person-hour shall cover the cost of all labor, materials, equipment, and insurance necessary to employ a uniformed full-time crossing guard, and equip him/her with safety vests, hard hats, and signaling devices, including all other incidental costs necessary to control and detour traffic, as shown on the Contract Drawings, the Examples #1 and #2 on pages 395 and 396 (excluding worker acting as a flagperson "A" in Example #2), or as directed by the Engineer.

Payment for flagperson "A" in Example #2, shall be deemed to be included under other items of work, as appropriate.

Where there is no scheduled item for Crossing Guard, the cost of furnishing Crossing Guards as required shall be deemed included in the unit price bid for the Maintenance and Protection of Traffic item.

Payment will be made under:

Item No.	Item	Pay Unit
6.52 CG	CROSSING GUARD	PERSON-HOUR (P/HR)

[Added 02-24-2014]

16. Refer to Pages 480 and 481, **Subsection 7.13.2.(B) MAINTENANCE OF STREETS**, 4th paragraph, beginning with the words "The Contractor shall maintain the traveled way . . .;
    Delete the 4th paragraph, in its entirety;
    Substitute the following text:

"The Contractor shall maintain the traveled way in such a condition and conduct operations in such a manner that snow and ice may be readily removed by others as and when necessary, and in such a manner that proper drainage is provided for the melting of snow in the banks resulting from normal plowing. However, the Contractor will not be responsible for snow or ice removal on the pavement or traveled way opened for public usage, except within the limits of the work zone(s) which may include, but is not be limited to, stairways, promenades, esplanade areas, and sidewalk, including those fronting his office and the Engineer's field office all of which will be the responsibility of the Contractor."

3. NEW SECTIONS

TABLE OF CONTENTS

(NO TEXT)

SECTION 4.08 AI-SC
Scuppered Concrete Curb (26" Deep)

4.08 AI-SC.1. INTENT. This section describes the construction of Scuppered Concrete Curb.

4.08 AI-SC.2. DESCRIPTION. Scuppered Concrete Curb shall be made of concrete six (6") inches wide on top, eight (8") inches wide on the bottom, twenty-six (26") inches deep or as otherwise specified, measured on the back.

Scuppered Concrete Curb shall be constructed to the lines and grades and details shown on the Contract Drawings.

4.08 AI-SC.3. MATERIALS AND METHODS. All materials and methods shall comply with the requirements in Sub-Sections 4.08.3 and 4.08.4, of the Standard Highway Specifications.

4.08 AI-SC.4. MEASUREMENT. The quantity to be measured for payment shall be the length of scuppered concrete curb constructed, complete, in place, as required, measured along the top of the exposed face of curb.

Payment for concrete header will be adjusted in accordance with the strength provisions of Section 5.04 of the Standard Highway Specifications.

4.08 AI-SC.5. PRICE TO COVER. The contract price per linear foot of scuppered concrete curb shall cover the cost of furnishing all labor, materials, plant, equipment, insurance, and incidentals required to construct scuppered concrete curb, complete, in place, and shall include excavation (except rock excavation), backfilling and all necessary incidentals, furnishing such samples for testing as may be required and maintaining the concrete curb in good condition as required in Section 5.05 of the Standard Highway Specifications, all, in full compliance with the Contract Drawings, the specifications and directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
4.08 AI-SC	SCUPPERED CONCRETE CURB (26" DEEP)	L.F.

SECTION 4.15 WPM
WETLAND PLANTING MIX

4.15 WPM.1. DESCRIPTION.

Under this section, the Contractor shall furnish and place Wetland Planting Mix in accordance with the plans and specifications and as directed by the Engineer.

4.15 WPM.2. MATERIAL.

Sand shall be Type 1A and comply with the requirements of Section 2.21 of the NYCDOT Standard Highway Specifications.

Topsoil shall comply with the requirements of Section 2.26 of the NYCDOT Standard Highway Specifications.

Compost shall be commercially or municipally produced and shall be an organic substance produced by the biological and biochemical decomposition of source-separated compostable material that is separated at the point of waste generation. Compost materials may include, but are not limited to, leaves and yard trimmings, food scraps food processing residues, manure and/or other agricultural residuals, forest residues and bark and soiled and/or recyclable paper Compost shall be reasonably free of sticks, stones, refuse, materials deleterious to soil structure, or any material toxic or detrimental to plant germination and growth. Compost shall also meet the following requirements:

i. Minimum organic matter shall be 30%(dry weight basis) as determined by loss on ignition;
ii. Product shall be loose and friable, not dusty and have a moisture content of 35%-60%;
iii. Particle size shall be less than 1/2", (100% passing).
iv. Soluble salts content shall be less than 4.0 mmhos/cm (ds/m);
v. Compost shall be stable to very stable according to the test method current on the date of advertisement for bids.
vi. pH shall be between 6.0-7.0.
vii. All materials regulated by the New York State Department of Environmental Conservation shall meet all applicable regulatory requirements
viii. Tests: All rain garden areas shall have a minimum of one test. Each test shall consist of both, the standard soil test for pH, phosphorus, and potassium and additional test of organic matter, and soluble salts. A textural analysis is required from topsoil stockpiled on site. If topsoil is imported, then a texture analysis shall be performed for each location where the top soil was excavated. All testing results shall come from the same testing facility. Should the pH fall out of the acceptable range, it may be modified (higher) with lime or (lower) with iron sulfate plus sulfur.

4.15 WPM.3. METHODS.

EXCAVATION

i. It is very important to minimize compaction of both, the base of the rain garden area and the required backfill. When possible, the Contractor shall use excavation hoes to remove original soil. If rain garden areas are excavated using a loader, the

Contractor shall use wide track or marsh track equipment, or light equipment with turf type tires. The use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high pressure tires is NOT ACCEPTABLE, since it will cause excessive compaction resulting in reduced infiltration rates and storage volumes. Compaction will significantly contribute to design failure.

ii. Compaction shall be alleviated at the base of the rain garden facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations shall be used to refractor the soil profile through the twelve inch (12") compaction zone. Substitute methods must be approved be the Engineer.

iii. The Contractor shall rototill two to three inches (2-3") of sand into the base of the rain garden before back filling the required sand layer. The Contractor shall pump any ponded water before preparing (rototilling) the base.

BACKFILLING

i. Wetland Planting Mix shall be thoroughly blended to the proportions of 50% sand, 30% topsoil and 20% compost. Unless otherwise shown on the plans, and placed to the depths and dimensions shown on the contract plans, or as directed by Engineer. Blending of materials shall be undertaken during dry weather conditions and stockpiles of blended materials shall be protected from precipitation and located away from runoff or drain inlets to prevent contamination of storm water, until installation at approved rain garden locations.

ii. The Contractor shall place soil in lifts of twelve inches (12") lifts or greater. No heavy equipment shall be used within the rain garden. Heavy equipment may be used around the perimeter of the garden to supply soils and sand. The rain garden materials shall be graded by hand or with light equipment such as a compact loader or a dozer/loader with marsh tracks.

iii. Contractor shall presoak the placed soil filter mix to speed up the natural compaction process. If time and construction schedule permits, Contractor shall allow natural settlement to occur with the help of rain events, before planting the areas.

4.15 WPM.4. MEASUREMENT.

The quantity of Wetland Planting Mix to be measured for payment under this item will be the number of cubic yards of wetland planting mix that actually was placed in final compacted position, to the satisfaction of the Engineer, computed from payment lines indicated on the plans.

4.15 WPM.5. PRICE TO COVER.

The unit price bid per cubic yards for Wetland Planting Mix shall cover the cost of all labor, materials (including excavation of rain garden planting beds), sand, topsoil, compost, equipment, insurance, and incidentals necessary to complete the work under this section in accordance with the plans, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
4.15 WPM	WETLAND PLANTING MIX	C.Y.

SECTION 6.06 ABPC
GRANITE BLOCK SIDEWALK ON CONCRETE BASE

6.06ABPC.1. INTENT.

This section describes the construction of Granite Block Sidewalk on a Concrete Base, as shown on the plans.

6.06ABPC.2. DESCRIPTION.

Granite Block Sidewalk on Concrete Base shall consist of blocks furnished by the Contractor, laid on a mortar bed with cement-grout joints in the required patterns, on a concrete base.

6.06ABPC.3. MATERIALS.

(A) GRANITE BLOCKS

Granite block for use hereunder shall meet the requirements of Section 2.06, Grade 2, of the Standard Highway Specifications, except that permissible tolerances in dimensions shall be as follows:

	Tolerance	
	Plus	Minus
Length	2-1/2"	1/2"
Width	1/2"	0"
Depth	1/4"	1/4"

(B) CEMENT-GROUT

Cement-grout shall meet the requirements of Section 3.06, Type 2, of the Standard Highway Specifications.

(C) MORTAR BED

Mortar Bed shall meet the requirements of Section 3.03 of the Standard Highway Specifications.

(D) CONCRETE BASE AND FOUNDATION MATERIAL

Concrete base for granite block pavers shall be Class B-32, Type IA, comply with the requirements of Subsection 4.04.3. in the NYCDOT Standard Highway Specifications. Foundation material shall comply with the requirements of Subsection 4.13.3.(A) in the NYCDOT Standard Highway Specifications.

6.06ABPC.4. METHODS.

(A) INSTALLING CONCRETE BASE ON FOUNDATION MATERIAL

The Contractor shall install concrete base for pavers in sidewalk areas on foundation material in accordance with the requirements of Subsection 4.04.4.(C) in the NYCDOT Standard Highway Specifications, except that the concrete base shall be four (4") inches thick and the foundation material shall be three (3") inch thick as shown on the Contract Drawings.

(B) LAYING BLOCKS

Blocks shall be carefully laid on a one (1") inch thick mortar bed according to the patterns shown on the Contract Drawings or as directed by the Engineer and shall be rammed solidly in position. Joints between blocks shall be approximately one inch in width. Joints in adjacent courses shall be staggered, except where otherwise specified, shown on the Contract Drawings, or directed by the Engineer. All blocks shall be clean when placed in the work. Blocks, which in the opinion of the Engineer are not satisfactorily clean, shall be well washed before being placed. Cutting of blocks to meet the pattern requirement will be permitted, subject to the approval of the Engineer.

After a sufficient area of granite blocks has been laid, the surfaces shall be tested with a ten foot straight edge laid parallel with the center line and any depression exceeding one-quarter (1/4") inch shall be corrected and brought to the proper grade. All stones disturbed in making replacements or correcting depressions shall be settled into place by carefully ramming or tamping to grade by the use of hand tamper.

Each section of sidewalk must be acceptable to the Engineer before the joints in that section are filled.

(C) JOINT FILLER

Where cement-grout joints are called for, the joints shall be completely filled with a grout mixture of one (1) part Portland cement and two (2) parts sand.

6.06ABPC.5. MAINTENANCE. The Contractor shall maintain all granite block sidewalk on concrete base in accordance with the provisions of Section 5.05 of the Standard Highway Specifications, and to the satisfaction of the Engineer.

6.06ABPC.6. MEASUREMENT. The quantity of granite block sidewalk on concrete foundation to be measured for payment shall be the number of square yards of granite blocks placed to the lines, grades and patterns shown on the Contract Drawings, specified or directed, measured in place in final position.

6.06ABPC.7. PRICE TO COVER. The contract price per square yard for Granite Block Sidewalk on Concrete Base shall cover the cost of furnishing all labor, materials, plant, equipment, insurance, and incidentals required to complete all work required under this Section including, but not limited to, all excavation and backfilling, as may be required, furnishing and placing four (4") inches of concrete base on three (3") inches of foundation material, furnishing and installing new granite blocks on a mortar setting bed with grouted joints, and maintaining the sidewalk in conformity with Section 5.05; all in full compliance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
6.06 ABPC	GRANITE BLOCK SIDEWALK ON CONCRETE BASE (GROUTED JOINTS) (FURNISH BLOCK) (1" MORTAR BASE)	S.Y.

SECTION 6.09 AC
Concrete Header (6" Wide x 20" Deep)

6.09AC.1. INTENT. This section describes the construction of Concrete Header.

6.09AC.2. DESCRIPTION. Concrete Header shall be rectangular in shape, six (6") inches wide and twenty (20") inches deep.

Concrete header shall be constructed to the lines and grades shown on the Contract Drawings.

6.09AC.3. MATERIALS AND METHODS. All materials and methods shall comply with the requirements in Sub-Sections 6.09.3 and 6.09.4, of the Standard Highway Specifications.

6.09AC.4. MEASUREMENT. The quantity to be measured for payment hereunder shall be the number of linear feet of concrete header constructed, complete, in place, measured along the center line of the header.

Payment for concrete header will be adjusted in accordance with the strength provisions of Section 5.04 of the Standard Highway Specifications.

6.09AC.5. PRICE TO COVER. The contract price per linear foot of concrete header shall cover the cost of furnishing all labor, materials, plant, equipment, insurance, and incidentals required to construct concrete header, complete, in place, and shall include excavation (except rock excavation), backfilling and all necessary incidentals, furnishing such samples for testing as may be required and maintaining the concrete header in good condition as required in Section 5.05 of the Standard Highway Specifications, all, in full compliance with the Contract Drawings, the specifications and directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
6.09 AC	CONCRETE HEADER (6" WIDE X 20" DEEP)	L.F.

SECTION 6.31 PC – Precast Concrete Capstone

6.31PC.1. WORK TO INCLUDE. Under this section, the Contractor shall furnish and install precast concrete capstone in accordance with the details indicated on the Contract Drawings, the specifications and the directions of the Engineer.

6.31PC.2. SUBMITTALS.

(A) SHOP DRAWINGS
The Contractor shall provide shop drawings in accordance with Section 1.06.13. of the NYCDOT Standard Highway Specifications, indicating the size, dimensions and installation of precast concrete capstone for review and approval.

(B) SAMPLES
The Contractor shall provide two (2) samples of the capstone, not less than two (2') feet in length, demonstrating the shape, color and finished texture of the capstone.

6.31PC.3. MATERIALS.

(A) CONCRETE
(B) Precast concrete capstone shall comply with requirements of the NYCDOT Standard Highway Specifications, Section 3.05, Class A-40, Type IIA. An approved air entraining agent shall be added at the time concrete ingredients are mixed with water.

(B) MORTAR
Bedding, setting, and backup mortar shall be Type 1 mortar, complying with the requirements of Section 3.03 in the NYCDOT Standard Highway Specifications.

(C) DOWELS AND REINFORCMENT
All anchors, pins, dowels, and other anchoring devices and reinforcement bars shall be Type 304 stainless steel of the types and sizes shown on the approved shop drawings.

(D) SILICON JOINT SEALANT
Silicon Joint Sealant shall meet requirements of Section 2.22, Type 2 – Cold application sealer, in the NYCDOT Standard Highway Specifications.

6.31PC.4. METHODS.

The Contractor shall furnish and submit detailed shop drawings for approval by the Engineer, showing accurately the dimensions, sections, and joining of capstone work.

Precasting of capstones shall be done at a location selected by the Contractor, subject to the approval of the Engineer. Casting beds and longitudinal forms shall be made with metal forms. Longitudinal forms shall be adequately braced to prevent displacement during concreting operations. Wooden or metal braces will not be permitted to remain in the concrete after pouring.

The Contractor shall use extreme care in handling and moving the precast concrete capstones. Capstones damaged in storage, handling, hauling, delivery, or setting shall be replaced by the Contractor at its own expense.

All surfaces of the capstones which will be exposed after installation shall be smooth and uniform in color with no coarse aggregate showing through. Mortar, used in filling holes, honeycombs or pock marks, shall be a 1:1 mix of cement and sand, colored to match the color of the capstone on which it is to be used. Mortar shall be applied to fill all depressions and shall be rubbed flush with adjacent surfaces.
The setting of capstones will not be permitted in freezing weather. All setting shall be done by competent

stone setters in accordance with approved shop drawings. Before setting, all capstones shall be free of ice and frost.

The Contractor shall set the capstone in full beds of mortar, true to the lines of the retaining wall, including, but not limited to, the drilling of dowel holes where necessary.

All joints of the capstone shall then be pointed and a silicon joint sealant applied thereon.

Damaged and rejected material shall be replaced promptly, so there will be no delay in completion of work.

6.31PC.5. MEASUREMENT.

The quantity to be measured for payment shall be the number of linear feet of Precast Concrete Capstone installed to the satisfaction of the Engineer, measured in place along the top surfaces of the center line of the capstone.

6.31PC.6. PRICE TO COVER.

The contract price bid per linear foot for Precast Concrete Capstone shall include the cost of all labor, materials, plant, equipment, insurance, and incidentals required to furnish and install precast concrete capstone, including, but not limited to, furnishing and installing stainless steel dowels and reinforcement bars, mortar, and joint sealant, and the drilling of holes, all in accordance with the Contract Drawings, the specifications and directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
6.31 PC	PRECAST CONCRETE CAPSTONE	L.F.

SECTION 6.47 PC
FURNISH AND INSTALL PERMEABLE INTERLOCKING CONCRETE PAVERS

6.47PC.1. INTENT.

This section describes the furnishing and installation of permeable interlocking concrete pavers.

6.47PC.2. MATERIALS.

The interlocking concrete pavers shall be of one the following types or an approved equivalent:

a. Eco-Priora pavers, Series 3,000, size to be 5"x10", color to be Mocha Brown, as manufactured by Unilock® New York, 51 International Blvd., Brewster, NY 10509, Tel.: (845) 406-8294.

b. Eco-Ridge pavers, size to be 4.75"x9.50", color to be Oyster, as manufactured by Nicolock New York, 640 Muncy Avenue, Lindenhurst, NY 11757, Tel.: (631) 669-0700.

c. Permeable 4.5"x9.0" Pavers, color to be Tan, as manufactured by Hanover Architectural Products, 5000 Hanover Road, Hanover, PA 17331, Tel.: 1 (800) 426-4242.

Crushed Stone Filler and Bedding shall be Type 2 conforming to the grading requirements of ASTM C 33 No 8 in accordance with Section 2.02 of NYCDOT Standard Highway Specifications.

Base Aggregate shall be Type 2 conforming to the grading requirements of ASTM C 33 No 57 in accordance with Section 2.02, of NYCDOT Standard Highway Specifications.

Subbase Aggregate shall be Type 2 conforming to the grading requirements of ASTM C 33 No 2 in accordance with Section 2.02, of NYCDOT Standard Highway Specifications.

Pavers shall have a minimum compressive strength of 7,000 psi.

The Contractor shall submit four sample pavers of each color and shape clearly identified by the manufacturer's name, date of production and contract number and these sample pavers shall represent the range of colors to be produced, the size, shape, intensity and surface texture of the blocks he plans to use in the work. Blocks with discolorations, cracks, honeycombs extreme surface irregularities shall not be considered acceptable for the work or as samples.

The Contractor shall hand deliver samples to the Engineer with transmittal letter and obtain a signed receipted acceptance of delivery. There will be no material delivery to job site without prior written approval; all material delivered to site without such approval shall be rejected. Contractor shall submit samples in sufficient time as to not delay progress of construction.

6.47PC.3. QUALITY CONTROL.

Contractor shall be a company specializing in the installation of permeable interlocking concrete pavers with a minimum of 5 years' experience and shall provide the names and contact information for (3) similar projects in the last 5 years.

6.47PC.4. METHODS.

The Contractor shall remove from the subgrade all debris, foreign material, and all other undesirable material designated by the Engineer. The fine grade shall not be muddy or otherwise unsatisfactory when material is placed upon it. If the fine grade becomes rutted or displaced, due to any cause whatsoever, the Contractor shall regrade same without additional payment.

Subbase and Base Aggregates for pavers shall be installed at proper elevation per the typical sections and construction plans to accept pavers and crushed stone bedding. Before any pavement is placed upon the fine grade, the fine grade shall be prepared to line and grade and compacted to a minimum of 95% standard Proctor density per ASTM D 698. All hollows and depressions shall be filled with acceptable material and shall again be compacted. This process of shaping, filling, and rolling shall be repeated until no depressions develop. Provide written density test results for soil subgrade to the Engineer.

Prior to placing the subbase and base aggregates, the finished subgrade surface shall not extend above the design elevation at any location and filter fabric material shall be fumished and installed in accordance with Section 6.68 of NYCDOT Standard Specifications, on the prepared surface.

Subbase and base aggregates shall be evenly spread on a prepared sub-grade in the position shown on the plans or directed by the Engineer, in four inch (4") layers, each layer to be rolled while wet with a seven (7) to twelve (12) ton tandem roller (or other approved method satisfactory to the Engineer), to the thickness shown on the plans or as directed by the Engineer.

Pavers shall be laid on a compacted two (2) inch crushed stone bedding, in straight courses with hand tight joints and uniform top surfaces, keeping good alignment and starting rows alternately with full and half pavers, or according to pattern shown on the plans. Newly laid pavers must be protected at all times by panels of plywood on which the paver stands. These panels can be advanced as work progresses; however, the plywood protection must be kept in areas which will be subjected to the continued movement of material and equipment. These precautions must be taken in order to avoid depressions and protect paver alignment.

Pavers shall also be adequately protected from discoloration, due to adjacent paving operations, by an approved method. Pavers shall be placed at right angles with the center of the paving surface. Alignment shall be verified periodically.

Pavers shall be arranged with the rows touching so that the "ends" of the pavers will form the proper corresponding angle and the proper distance between "ends" not to exceed 1/8 inch. Joints between the pavers shall be maintained according to the unit integral spacer bars. A plate vibrator shall be used to compact and level the pavers after they have been installed. It is important that the correct type and size compactor be used.

After the pavers are laid, crushed stone filler is to be swept into the hand tight joints until the joints are filled. All uncompleted edges and end of pavers shall be adequately braced and/or retained at the end of each work-day with temporary asphaltic concrete mixture or other approved method. All cutting and setting of pavers shall progress with the setting operation. Under no circumstances shall area requiring cut pavers be permitted to remain at the end of each work day.

After a sufficient area of pavement has been laid, the pavement shall be tested with a ten foot straight edge and any depressions exceeding one-quarter inch (1/4") shall be corrected and brought to proper grade. Any pavers disturbed in making replacements or correcting depressions shall be settled into place by ramming. Only full crews shall be permitted to install pavers. Under no circumstances shall one or two man crews be permitted to install pavers

6.47PC.5. MEASUREMENT.

The quantity to be measured for payment under Item 6.47 PC, Furnish and Install Permeable Interlocking Concrete Pavers, shall be the number of square feet of Interlocking Concrete Paving Block installed to the satisfaction of the Engineer, measured in place.

6.47PC.6. PRICE TO COVER.

The contract price per S.F. for furnishing and installing permeable interlocking concrete pavers (plaza area), shall be a unit price per square foot and shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to furnish and install permeable interlocking concrete pavers in designated areas. The unit price bid shall also include, but not be limited to, the cost of furnishing and installing the concrete pavers, bedding course with No. 8 aggregate, open graded stone base with ASTM No. 57 stone, subbase course with No. 2 stone; all in accordance with the plans, the specifications and the directions of the Engineer.

The cost of furnishing and installing filter fabric and underdrain pipe shall be paid separately under their respective pay items.

Payment will be made under:

Item No.	Description	Pay Unit
6.47 PC	FURNISH AND INSTALL PERMEABLE INTERLOCKING CONCRETE PAVERS (PLAZA AREA)	S.F.

SECTION 6.52 FED
Uniformed Flagperson

6.52FED.1. INTENT. This section describes the employment of uniformed flagpersons to direct and detour traffic.

6.52FED.2. DESCRIPTION. The Contractor shall furnish an adequate number of flagpersons to control vehicular and pedestrian traffic when it is necessary to maintain alternating one-way traffic in one lane of a two-way roadway, and at all other locations where construction operations, construction vehicles and equipment, and temporary traffic patterns related to the construction operations require positive temporary traffic control for safe, efficient traffic operations.

6.52FED.3. METHODS. All flagpersons shall be English speaking and adequately trained in flagging operations by a recognized training program such as that provided by the American Traffic Safety Services Association, the National Safety Council, unions or construction industry associations, or by an individual who holds a current certification as a flagger training instructor from such a program.

All flagpersons, their apparel, hand-signaling devices, active two-way radios, and procedures to be used by them shall be in compliance with the requirements of Chapter 6E. FLAGGER CONTROL, in the Federal "Manual on Uniform Traffic Control Devices for Streets and Highways" 2009 Edition, or later edition.

Prior to the start of flagging operations, the Contractor shall provide to the Engineer a list of certified flagpersons to be used in the contract, identifying the source of flagger training for each individual. When requested by the Engineer, flagpersons shall demonstrate their competency in flagging procedures. Flagpersons not competent in flagging procedures to the satisfaction of the Engineer shall be retrained or replaced at once.

Flagpersons are to be paid not less than the most recent prevailing wages rates established for Laborers as set by the NYC Comptroller or the US Department of Labor, whichever is higher at the time the work is being performed.

The Contractor will be given a minimum of 12 hours advanced notice by the Engineer as to when to furnish a flagperson.

6.52FED.4. METHOD OF MEASUREMENT. The fixed price lump sum shown in the bid proposal for this item shall be considered the price bid, although actual payment will be based on the authorized work performed by the Uniformed Flagpersons. The fixed sum is not to be altered in any manner by the bidder.

It is agreed that the quantity to be measured for payment shall be the number of person-hours of uniformed flagperson service actually performed, as authorized by the Engineer.

Laborers who are not uniformed flagperson will not be measured for payment as flagperson under this item.

6.52FED.5. BASIS OF PAYMENT. The Contract price for this item shall be a lump sum price for the work performed under this item and shall be equal to the total sum of the amount of wages paid for all authorized Uniformed Flagpersons performing vehicular and pedestrian traffic

management, with a twelve (12%) percent markup for Overhead, except that no percentage for overhead will be allowed on Payroll Taxes or on the premium portion of overtime pay or on sales and personal property taxes; plus ten (10%) as compensation for Profit, except that no percentage for profit will be allowed on Payroll Taxes or on the premium portion of overtime pay or on sales and personal property taxes; as described in Article 26 of the Standard Construction Contract.

Overhead shall include without limitation, all costs and expenses in connection with administration, management superintendence, and all material costs for their apparel, hand-signaling devices, active two-way radios, and any other equipment required, and insurance required by Schedule A of the General Conditions other than Workers' Compensation Insurance.

The hourly rate per person-hour shall be the prevailing wage rate for Laborers in effect at the time of the work to control and detour traffic, as shown on the Contract Drawings or as directed by the Engineer.

The Contactor shall be required to submit to the Engineer satisfactory evidence of payment on a New York State certified payroll report forms. No retainage will be withheld by the Department on such payments made under this section.

The total estimated cost of this item is the "fixed sum" amount shown for this item in the Bid Schedule. No guarantee is given that the actual total cost for this item will in fact be the "fixed sum" amount. The "fixed sum" amount is included in the total bid solely to insure that sufficient monies will be available to pay the Contractor for these services.

The "fixed sum" is for bidding purposes only and shall not be varied in the bid. The Contractor will be paid for the actual amount regardless of the fixed sum, which may be more or less than the fixed sum amount.

The Contractor shall maintain separate books of accounts and shall not charge any portion of the cost of wages for Uniformed Flagpersons to another part of the work. Payment and partial payments under this item shall be treated separately from the rest of the contract items.

The New York State certified payroll report forms shall be submitted to the Engineer on a monthly basis and shall include the signed copies of the daily report.

Payment will be made under:

Item No.	Item	Pay Unit
6.52 FED	UNIFORMED FLAGPERSON	FIXED SUM

SECTION 6.73 PARCS
PARKING ACCESS AND REVENUE CONTROL SYSTEM

6.73PARCS.1. DESCRIPTION.

Under this item, an authorized reseller and installation Contractor shall furnish and install a Parking Access and Revenue Control System (PARCS) in accordance with the plans, specifications and directions of the Engineer in consultation with the Wildlife Conservation Society (WCS). In addition, the Contractor shall furnish all necessary software, programming and training services to the Wildlife Conservation Society to operate the new system. The proposed parking access and revenue control system, the manufacturer, and the certified supplier/installer shall be submitted by the General Contractor to the Engineer for approval, in consultation with the Wildlife Conservation Society, prior to the start of construction.

6.73PARCS.2. PERFORMANCE REQUIREMENTS.

The Parking Access and Revenue Control System shall, at a minimum, meet the following criteria as follows:

A. The parking system's software shall be capable of interfacing with the Wildlife Conservation Society existing membership and admissions system: Galaxy® point-of-sale system manufactured by Gateway Ticketing Systems, Inc.
B. The revenue control system shall be capable of permitting:
    1) Payment via credit card or cash when on-site including contactless options that utilize radio frequency identification,
    2) A bar code print out when purchased at home, and
    3) A mobile phone bar code when purchased on a mobile device.

C. The system shall contain a single, standard interface that uses a standard module through which all exposed application programming interfaces may be accessed by third party applications.
D. The system shall contain a structured query language database management system with open database connectivity accessibility.
E. The system shall be interoperable with the capability for third party hardware to be recognized by the platform.
F. The system shall consist of a single source manufacturer of both hardware and software.
G. The system shall be obtainable from an approved manufacturer and its certified combination supplier/installers.
H. The system shall be capable of accommodating all of the operational procedures functionality, and material requirements specified herein.
I. Software enables the user to configure a graphic representation of their parking facility.
J. Three (3) integrated loop detectors are required in the gate logic.
K. The Parking Access and Revenue Control System must have an integrated credit card module that manages credit card approval requests for all payment devices
L. Lane devices must be capable of being configured at the device, at the data base level or at the client level.
M. The Parking Access and Revenue Control System should be capable of operating even if the lane equipment is off line to the Facility Management System server.

6.73PARCS.3. SUBMITTALS.

All submittal shall be as per NYCDOT Highway Specifications under Division 1 Contract Requirements, Section **1.06.13. Shop and Working Drawings**.

A. SHOP DRAWINGS: The Contractor shall submit Shop Drawings depicting the overall design layout and catalog cuts for each component of the PARC system, in accordance with the requirements of the NYCDOT Highway Specifications under Division 1 Contract Requirements, Subsection 1.06.13.(G) SUBMISSION OF SHOP AND WORKING DRAWINGS.

B. PERFORMANCE REQUIREMENTS: The Contractor shall provide documentation demonstrating that the proposed parking, access and revenue control system meets or exceeds the performance standards, operability requirements and material specifications described herein. Documentation shall be submitted to the Engineer who in consultation with WCS shall give approval, prior to contract award.

6.73PARCS.4. ENTRY AND EXIT PROCEDURES.

A. ENTRY OPERATION

The Entry procedure shall be initiated upon a vehicle traversing over the arming loop located adjacent to the ticket dispenser. Transient parkers shall have the capability to pull a magnetically encoded ticket from the ticket dispenser. Bar code is not acceptable. As an option, the system shall also have the capability for the transient patron to insert a credit card into the ticket dispenser to be used as their identification in lieu of taking a ticket. The ticket dispenser only allows one identification type to be used. Once a ticket is requested or a credit card inserted, no other identification may be used. If a ticket is pulled, the entry date and time, lane identification, ticket number, rate code and other pertinent information is encoded on the ticket prior to its issuance to the patron. If either a ticket or credit card is used as the entry identification, an entry record in the form of a "Ticket Issued" message is created and sent to the facility management system to be recorded in an active ticket stack. Record data includes fields such as:

- Ticket number
- Rate Code
- Facility and Device location
- Entry Date and Time

Upon completion of either pulling an issued ticket or inserting a valid credit card, the ticket dispenser will open the barrier gate allowing the vehicle to proceed through the lane. The transient parker completes the entry cycle by proceeding through the entry lane in the proper direction. A single detector loop shall be used to reset the barrier gate. Directional control shall be achieved through the combination of the arming and reset loop, eliminating the need to install an additional reset loop. Should the patron back out after having pulled a ticket, the ticket number shall be broadcast to all devices in the facility that accept tickets and compute parking fees and detected as a Stolen Ticket if used at any of these devices.

Entry for Employees including contract and Very Important Person (VIP) parkers shall be accomplished through the use of an integrated card reading device in the lane. A patron approaching the entry lane equipped with a card reader shall have the capability of their

card being read and validated by the reader. Upon detecting a valid card, the card reader shall open the barrier gate allowing the vehicle to proceed through the lane. The employee or contract parker completes the entry cycle by proceeding through the entry lane in the proper direction. A single detector loop is used to reset the barrier gate. The card reader shall generate an "Access Granted" or "Access Denied – (reason)" message and communicate that message to the facility management system. In this way, the operator may track the usage of the facility by employee and contract parkers. Reports shall be available to the operator showing the number and types of employee or contract parkers that have entered the facility.

B. EXIT OPERATON

The exit process for the transient patrons shall maximize efficiency with a high regard to patron convenience.

C. TRANSIENT CENTRAL CASHIER PAY ON ENTRY

When a patron is paying to enter the park at Bronx Zoo Gate "A" they can pay for their parking as well. The patron hands their parking ticket to the cashier who simply inserts the ticket into the magnetic ticket transport, which in turn automatically computes the fee due eliminating any possible cashier error or shrinkage. The parking fee can be viewed on the fee display. After the patron satisfies the fee due (cash, coin or credit card) the transport re-encodes the magnetic stripe ticket as paid and issues a predetermined grace period to exit the Premises.

In the exit lane the patron inserts the re-encoded ticket into a Credit Card Exit Verifier (CCEV) unit if the ticket is encoded for exit the CCEV will send to vend signal to vend the gate allowing the patron to leave. If a vehicle pulls up to the CCEV and inserts their ticket before paying at the entrance Cashier / Automatic Pay Station or after their grace period has expired the CCEV will display the amount due allowing the patron to pay for their parking via credit card. If the patron has lost their ticket they can call for assistance using the intercom.

D. TRANSIENT / AUTOMATIC PAY STATION EXIT

Patrons proceed to the nearest Automatic Pay Station (APS) going into or out of the park. The patron will insert their magnetic-stripe ticket into the APS unit, which will then read the magnetic stripe ticket and calculate the amount due and display it on the Fee Display for the patron to view. After the patron inserts the proper amount due (cash or credit card) the APS re-encodes the magnetic stripe ticket as paid and issues a predetermined grace period to exit the Premises.

In the exit lane the patron inserts the re-encoded ticket into the Credit Card Exit Verifier (CCEV) if the ticket is encoded for exit the CCEV will send to vend signal to vend the gate allowing the patron to leave. If a vehicle pulls up to the CCEV and inserts their ticket before going to the Central Cashier / APS or after their grace period has expired the CCEV will display the amount due allowing the patron to pay for their parking via credit card. If the patron has lost their ticket they can call for assistance using the intercom.

E. TRANSIENT / TICKET IN / CREDIT CARD OUT

A transient vehicle enters the Premises by pressing the green button located on the ticket dispenser after the ticket is removed a signal is sent to vend the gate allowing the vehicle to enter. The magnetic stripe ticket will be encoded with the following information: ticket number, time & date of issue, status of the ticket and fee number. To exit the Premises the patron simply inserts their magnetic stripe ticket into the Credit Card Exit Verifier at which time the fee is calculated and displayed. The patron can now pay their parking fees via credit card. A receipt can be printed on demand. Once the fee is satisfied a signal is sent to vend the gate allowing the vehicle to exit.

F. TRANSIENT / CREDIT CARD IN / CREDIT CARD OUT

Transient/Credit Card In/Credit Card Out: This online system shall enable the parking patron to enter the Premises by inserting a credit card into the ticket dispenser, which captures the lane and card information and sends it to the parking system Element Database creating a ticket number that is associated with the credit card. To exit the Premises the patron simply inserts the same credit card into the Credit Card Exit Verifier. The information captured and analyzed by the Element Database, sent to the on-board programming terminal to compute the fee due and processed allowing the vehicle to exit. A receipt can be printed on demand.

G. EMPLOYEE, MONTHLY & VIP EXIT OPERATION

Exit for Employees including contract and Very Important Persons (VIP) parkers, shall be accomplished through the use of an integrated card reading device in the lane. A patron approaching the exit lane equipped with a card reader shall have the capability of their card being read and validated by the reader. Upon detecting a valid card, the card reader shall open the barrier gate allowing the vehicle to proceed through the lane. The employee or contract parker completes the entry cycle by proceeding through the entry lane in the proper direction. A single detector loop is used to reset the barrier gate. The card reader shall generate an "Access Granted" or "Access Denied – (reason)" message and communicate that message to the FMS. In this way, the operator may track the usage of the facility by employee and contract parkers. Reports shall be available to the operator showing the number and types of employee or contract parkers that have exited the facility.

H. FORCED RATE OPTION

If a patron's ticket is damaged or unreadable they can ask for assistance via the intercom. The patron simply reads the ticket number to the parking representative at which time the staff member can query the ticket by using the Enterprise Facility Management Software and automatically determine the fee due. Once the fee is calculated it can be sent to the appropriate exit device (Automatic Payment Station or Credit Card Exit Kiosk) for payment. The fee due will be display for the patron to view, once the fee is satisfied via cash or credit (depending on device) the patron is cleared to exit the facility.

I. eNET VALIDATION OPTION

eNet is an online validation system designed exclusively for the PARC system. eNet

utilizes standard features of the facility management system with a web based interface to create, monitor and review all validations Ticket Validations are completed in 3 Easy Steps 1. Log In 2. Enter the ticket number (optional swipe reader) 3. Validate. The eNet Validation system shall allow the operator full control over merchants and enable the operator to set-up various merchants, assign specific roles and run full reports for selected time periods. The eNet Validation system shall provide tools and reports for the merchants allowing them to accurately track validation usage generate validation reports and monitor employee usage of the eNet validation system. The cost of this feature shall include unlimited licenses.

6.73PARCS.5. MATERIALS.

A. MANUFACTURER: The Parking Access and Revenue Control System (PARCS) shall be manufactured by an industry-leading parking management system specialist that can exhibit proof of a minimum of five (5) years of experience prior to the bid opening in state-of-the-art parking access control and revenue collection system manufacturing, hardware and software development, computer integration, and design, with at least three (3) successfully completed projects of equivalent type and similar scope to this Project.

B. SUPPLIER AND INSTALLER: The Parking Access and Revenue Control System shall be furnished and installed by an authorized supplier and installer approved by the manufacturer of the proposed system and shall have at least five (5) years of experience with that manufacturer.

C. EQUIPMENT: The Parking Access and Revenue Control System shall include all equipment, materials, and appurtenances required by the manufacturer and the plans and specifications herein to provide a completely operational and functional system.

1. Barrier Gate Housing: The barrier gate cabinet shall be constructed of heavy-gauge aluminum and armored with an element-resistant finish. All reducers and motors shall be mounted onto a single, 1/4 inch (6.25mm) unibracket weldment for maximum strength in high load applications. The integrated lane controller shall plug into the power board/connection panel inside the gate housing by way of 37 and 25 pin connectors.

2. Barrier Gate Drive Unit: The Barrier Gate shall be driven by a 1/3-horse power heavy duty, high output torque, 115 VAC, single-phase, instant reversing motor connected by double V belts. The integrated lane controller inside the gate provides the intelligence for the gate. The lane controller shall be a microcomputer that provides 11 inputs and 14 outputs, and integrated LCD display, six-button keypad to perform on-board programming and provide a user-friendly information center. It also shall send commands and monitor lane operations. Three built-in and automatically self-tuning vehicle detectors shall be available. These high-speed detectors shall provide a sensitive, tailgate recognition system capable of recognizing two separate vehicles traveling over a detector loop simultaneously.

3. Barrier Gate Arm: The standard gate arm shall be constructed of aluminum and finished in highly visible enamel. Gate arms shall be straight-arm. The height of the gate arm in the closed position is designed to prevent any vehicle from

passing under the arm. This height shall nominally be forty (40) inches above the roadway surface inclusive of the curb height. Each gate arm shall be equipped with a rubberized bottom edge to protect vehicles should the gate lower upon a vehicle or another object.

4. Ticket Dispenser: The ticket dispenser shall be constructed of heavy-duty gauge aluminum and utilize contemporary technology to provide a completely flexible system for machine-readable parking operations. The ticket dispenser shall utilize a modular mechanism that features robust components including, magnetic read/write heads, a thermal printer, and a Ticket Burster/Feeder mechanism that snaps apart tickets. The transport shall be a clamshell design that provides easy access to the ticket stream and magnetic read/write heads. The detachable Ticket Burster/Feeder mechanism shall be easily removed without tools. The Ticket Burster/Feeder mechanism shall eliminate the need for a cutter assembly by bursting the perforated tickets apart as they ascent into the transport mechanism.

5. Exit Verifier: The Exit Verifier shall provide for continuous unattended exiting of pre-paid patrons, as well as computing fees and accepting payment for exiting patrons who have not utilized an Automatic Pay Station. The Exit Verifier shall be constructed of heavy-duty gauge aluminum and utilize contemporary technology to provide a completely flexible system for machine-readable, unattended parking operations. The unit utilizes a modular mag-stripe Transport mechanism that features robust components including, magnetic read/write heads, a thermal printer and a liquid crystal display customer display. The Exit Verifier transport mechanism shall be capable of processing daily (transient) tickets, access cards, bank credit cards and proprietary debit cards.

6. Automatic Pay Station: The Automatic Pay Station shall provide an automatic, user-friendly pedestrian system for patrons to satisfy their parking fee. The Automatic Pay Station shall recognize either Magstripe tickets or Optional proximity cards, calculate the patron's fee (including any vouchers or validations), then accept credit card, coin or bank notes. The patron can also elect to receive a receipt from the thermal printer. The 15" display shall direct the patron throughout the transaction. The Automatic Pay Station shall be constructed of heavy-duty gauge aluminum.

7. Fee Computer: The Fee Computer shall serve as the central control point for payment for both attended and unattended locations. The fee computer shall be a revenue control device that processes all parking and non-parking related transactions. It shall provide machine-readable fee calculation and reporting features. The Fee Management System shall include at a minimum the following functionality:
   - ☐ Control of parker exit events
   - ☐ Control and monitoring of barrier gates
   - ☐ Read/Write functions for ticket validation
   - ☐ Full/Open/Closed sign control
   - ☐ Counting of exit transactions
   - ☐ Interface for online operation
   - ☐ Display of parking fee due
   - ☐ Acceptance of credit card for payment

8. Facility Management System: The Facility Management System shall consist of a suite of software services operating upon a Windows-based interoperable platform. The underlying software shall conform to a modular architectural approach, with a standard communications protocol managed by the platform. The total solution shall deliver attributes including Accessibility, Security, Availability, Scalability, Usability and Interoperability.

D. CONFIGURATION: The Parking Access and Revenue Control System (PARCS) shall include all equipment, materials, and appurtenances required by the manufacturer and as shown on the plans and will include the following configuration as described below:

Jungle World Road Toll Plaza

1. Entrance lane for monthlies & transients - Ticket Dispenser, IP* Intercom, Reader & Gate
2. Reversible Entrance lane for monthlies & transients - Ticket Dispenser, IP Intercom, Reader & Gate
3. Reversible Exit lane for monthlies & transients - Credit Card Exit Kiosk, IP Intercom, Reader & Gate
4. Exit lane for monthlies & transients - Credit Card Exit Kiosk, IP Intercom, Reader & Gate

Overflow Lot Toll Plaza

1. Entrance lane for monthlies & transients - Ticket Dispenser, IP Intercom, Reader & Gate
2. Reversible Entrance lane for monthlies & transients - Ticket Dispenser, IP Intercom, Reader & Gate
3. Reversible Exit lane for monthlies & transients - Credit Card Exit Kiosk, IP Intercom, Reader & Gate
4. Exit lane for monthlies & transients - Credit Card Exit Kiosk, IP Intercom, Reader & Gate

Bronx River Lot (Lot B) Toll Plaza

1. Entrance lane for monthlies & transients - Ticket Dispenser, IP Intercom, Reader & Gate
2. Reversible Entrance lane for monthlies & transients - Ticket Dispenser, IP Intercom, Reader & Gate
3. Reversible Exit lane for monthlies & transients - Credit Card Exit Kiosk, IP Intercom, Reader & Gate
4. Exit lane for monthlies & transients - Credit Card Exit Kiosk, IP Intercom, Reader & Gate

Bronx River Lot (Lot B) South East Exit Plaza

Exit lane for monthlies & transients - Credit Card Exit Kiosk, IP Intercom, Reader & Gate

Gate "B" Bronx River Ticket Booth

Central Cashiering Station: - Fee Computer / Mass Validator – 2 each

Gate "A" Asia Ticket Booth

Central Cashiering Station: - Fee Computer / Mass Validator – 2 each

**Note: IP stands for Internet Protocol*

Pay on Foot Locations:

Bronx River (Lot B) Pedestrian Walkway (adjacent to bridge):

- Automatic Payment Station - Accepts notes & Credit Cards – 1 each
- Credit Card Kiosk - Accepts Credit Card Only – 2 each

Bronx River (Lot B) Walkway Island:

- Automatic Payment Station - Accepts notes & Credit Cards – 1 each
- Credit Card Kiosk - Accepts Credit Card Only – 1 each

Asia Lot (Lot A) Pedestrian Walkway:

- Automatic Payment Station - Accepts notes & Credit Cards – 2 each
- Credit Card Kiosk - Accepts Credit Card Only – 2 each

Administrative Office:

Main Computer for the Facility Management Software and Internet Protocol (IP) master intercom.

SECTION: 6.86 WF
FURNISH AND INSTALL NEW WAYFINDING SIGNS

6.86WF.1. DESCRIPTION.

Under these items, the Contractor shall furnish and install Bronx Zoo Wayfinding Signage in accordance with the plans, specifications, manufacturer's requirements and directions of the Engineer.

6.86WF.2. MATERIALS.

Wayfinding Signage items shall be furnished by the following suppliers, or an approved equivalent supplier:

DCL - Design Communications LTD.
27 West 24th St., suite 804
New York, NY
202.255.3226
www.dclboston.com
Email: LVallier@dclnyc.com

Dura Architectural Signage
48-15 32nd Place
Long Island City, NY 11101
718.706.6400
www.duracorp.com
Email: dforst@duracorp.com

Signs + Decal Corp.
410 Morgan Avenue
Brooklyn, NY 11211
Tel: 718.486.6400
www.signsanddecal.com
Email: Abbas@SignsandDecal.com

A. Sign Panels: See attached *Wayfinding Sign Schedule.*

B. Mounting: See attached *Wayfinding Sign Schedule.*

C. Finishes for Sign Structures: Color to be specified by the Wildlife Conservation Society.

D. Touch-up and Repair: For minor damage caused by installation or transportation, touch-up finish in conformance with manufacturer's recommendations. Provide touch-up such that repair is not visible from a distance of six (6') feet.

E. Hardware: All anchor bolts, nuts, and washers used to secure sign posts to concrete footings shall be stainless steel. Type and dimensions of all bolts, nuts, and washers shall be per manufacturer's recommendations. Threads of all bolts shall have the ends upset after installation of nuts so as to render the connection vandal resistant.

F. Concrete: Concrete for slabs or footings shall be "Concrete in Structures" as

described in NYCDOT Highway Specifications under Division IV Construction Methods Section 4.06 and shall be of the dimensions indicated on the plans.

G. Graphics: Artwork and graphics for the signs shall be provided in electronic format by the Wildlife Conservation Society for Contractor's use in sign panel fabrication.

6.86WF.3. METHOD.

Post Mounted Signs:

a. Excavate, 12" diameter by 36" deep hole and place concrete for footings in accordance with Section 4.06.
b. Posts shall include a welded base plate assembly for surface mounting to concrete footings.
c. Posts shall be set plumb and surface mounted with base plates on concrete bases at the size as indicated by the manufacturer's requirements. The top of footing shall be brought to a smooth grade line.

Wall Mounted Signs:

a. Secure sign panel to concrete wall utilizing concrete anchor bolt and mounting system as approved by the Engineer.

Fence Mounted Signs:

a. Secure sign panel to chain link fence utilizing a mounting system as approved by the Engineer.

6.86WF.4. SUBMITTALS.

All submittals shall be as per NYCDOT Highway Specifications under Division 1 Contract Requirements, Section **1.06.13. Shop and Working Drawings**.

A. Shop Drawings: The Contractor shall submit Shop Drawings in accordance with the requirements of the NYCDOT Highway Specifications under Division 1 Contract Requirements, Subsection 1.06.13.(G) SUBMISSION OF SHOP AND WORKING DRAWINGS.
B. Finishes: Submit color palettes for posts and sign structures for WCS selection.
C. Mountings: Submit catalog cuts of all materials and provide shop drawings for each mounting type.

6.86WF.6. MEASUREMENT.

The quantities of WAYFINDING SIGNS to be measured for payment shall be the number of WAYFINDING SIGNS of each type, incorporated in the work, complete, as shown, specified or required.

6.86WF.7. PRICES TO COVER.

The contract price for "WAYFINDING SIGNAGE" shall be the unit price bid per each type of wayfinding sign and shall cover the cost of all labor, materials, plant, equipment, samples, tests and insurance required and necessary to construct the wayfinding sign of the sizes and dimensions and of the types and at the locations and to the elevations shown, including the

earth excavation of all materials of whatever nature encountered (See Section 4.11 - Earth Excavation); backfilling; cleaning up; furnishing and installing base plates and mounting connections; furnishing and placing concrete for footings; and furnishing and installing all other items necessary to complete this work and do all work incidental thereto, all in accordance with the contract plans, specifications, manufacturer's requirements and as directed by the Engineer.

Payment will be made under:

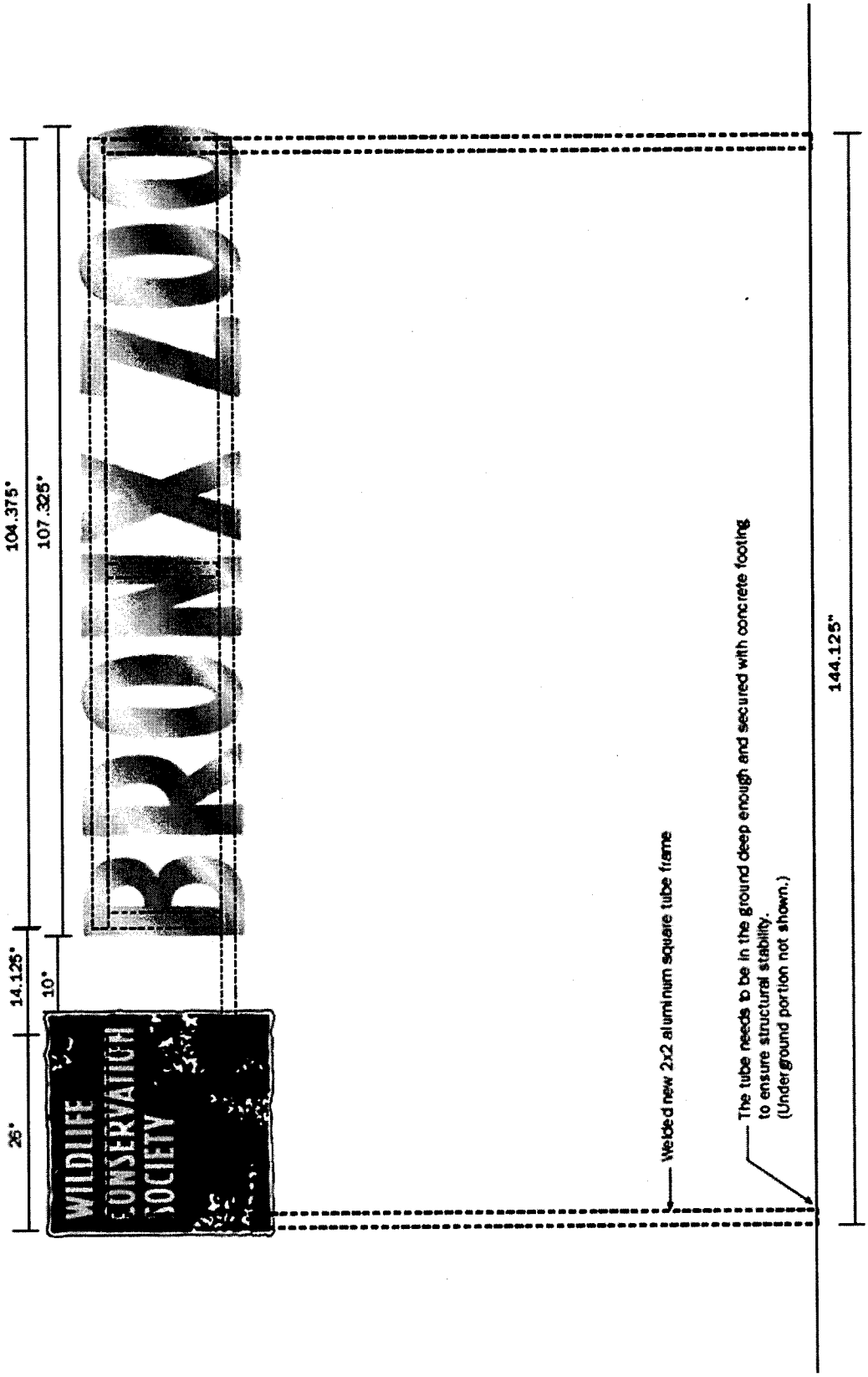
Item No.	Item	Pay Unit
6.86 WF-PRK01	FURNISH AND INSTALL NEW WAYFINDING SIGNS (TYPE PRK-GROUND MOUNT)	EACH
6.86 WF-PRK02	FURNISH AND INSTALL NEW WAYFINDING SIGNS (TYPE PRK-FENCE MOUNT)	EACH
6.86 WF-PRK03	FURNISH AND INSTALL NEW WAYFINDING SIGNS (TYPE PRK-WALL MOUNT)	EACH
6.86 WF-PDIR01	FURNISH AND INSTALL NEW WAYFINDING SIGNS (TYPE PDIR-LG-GROUND MOUNT)	EACH
6.86 WF-PDIR02	FURNISH AND INSTALL NEW WAYFINDING SIGNS (TYPE PDIR-LG-FENCE MOUNT)	EACH
6.86 WF-PDIR03	FURNISH AND INSTALL NEW WAYFINDING SIGNS (TYPE PDIR-SM-GROUND MOUNT)	EACH
6.86 WF-PDIR04	FURNISH AND INSTALL NEW WAYFINDING SIGNS (TYPE PDIR-SM-GROUND MOUNT, DOUBLE SIDED)	EACH
6.86 WF-VOH	FURNISH AND INSTALL NEW WAYFINDING SIGNS (TYPE VOH-OVERHEAD MOUNT)	EACH
6.86 WF-VDIR01	FURNISH AND INSTALL NEW WAYFINDING SIGNS (TYPE VDIR-LG)	EACH
6.86 WF-VDIR02	FURNISH AND INSTALL NEW WAYFINDING SIGNS (TYPE VDIR-LG, DOUBLE SIDED)	EACH
6.86 WF-VDIR03	FURNISH AND INSTALL NEW WAYFINDING SIGNS (TYPE VDIR-SM)	EACH
6.86 WF-VDIR04	FURNISH AND INSTALL NEW WAYFINDING SIGNS (TYPE VDIR-SM, DOUBLE SIDED)	EACH
6.86 WF-PAY	FURNISH AND INSTALL NEW WAYFINDING SIGNS (TYPE PAY)	EACH
6.86 WF-AG1	FURNISH AND INSTALL NEW WAYFINDING SIGNS (TYPE AG1)	EACH
6.86 WF-AG2	FURNISH AND INSTALL NEW WAYFINDING SIGNS (TYPE AG2)	EACH

WAYFINDING SIGN SCHEDULE - BRONX ZOO (Materials, Sizes and Mounting)

Item No.	Bronx Zoo Sign Type ID	Size	Sign Panel Material	Structure / Mounting
6.86 WF-PRK01	PRK-P	7'-00" x 4'-00"	4C printed, matte laminated vinyl on .125" aluminum with wrapped edges or equivalent; back side to be neat.	Ground Mount: On two (2) 4"x4" square aluminum posts with welded base plate assemblies for surface mounting on concrete footings, painted in one color. Bottom of the sign needs to be no less than 6' from the finished ground surface.
6.86 WF-PRK02	PRK-F	7'-00" x 4'-00"	4C printed, matte laminated vinyl on .125" aluminum with wrapped edges or equivalent; back side to be neat.	Fence Mount: Secured to the existing / proposed chain link fencing by approved method. Bottom of the sign needs to be no less than 6' from the finished ground surface.
6.86 WF-PRK03	PRK-W	7'-00" x 4'-00"	4C printed, matte laminated vinyl on .125" aluminum with wrapped edges or equivalent; back side to be neat.	Wall Mount: Secured to existing concrete wall or bridge abutment by approved method. Bottom of the sign needs to be no less than 6' from the finished ground surface.
6.86 WF-PDIR01	PDIR-LGP	7'-00" x 4'-00"	4C printed, matte laminated vinyl on .125" aluminum with wrapped edges or equivalent; back side to be neat.	Ground Mount: On two (2) 4"x4" square aluminum posts with welded base plate assemblies for surface mounting on concrete footings, painted in one color. Bottom of the sign needs to be no less than 6' from the finished ground surface.
6.86 WF-PDIR02	PDIR-LGF	7'-00" x 4'-00"	4C printed, matte laminated vinyl on .125" aluminum with wrapped edges or equivalent; back side to be neat.	Fence Mount: Secured to the existing / proposed chain link fencing by approved method. Bottom of the sign needs to be no less than 6' from the finished ground surface.
6.86 WF-PDIR03	PDIR-SM	2'-00" x 4'-00"	4C printed, matte laminated vinyl on .80 aluminum with wrapped edges or equivalent; back side needs to be neat. Single-sided.	Ground Mount: On two (2) 3"x3" square aluminum posts with welded base plate assemblies for surface mounting on concrete footings, painted in one color. Bottom of the sign needs to be no less than 6' from the finished ground surface.
6.86 WF-PDIR04	PDIR-SM	2'-00" x 4'-00"	4C printed, matte laminated vinyl on .80 aluminum with wrapped edges or equivalent. Double-sided.	Ground Mount: On two (2) 3"x3" square aluminum posts with welded base plate assemblies for surface mounting on concrete footings, painted in one color. Bottom of the two signs need to be no less than 6' from the finished ground surface.

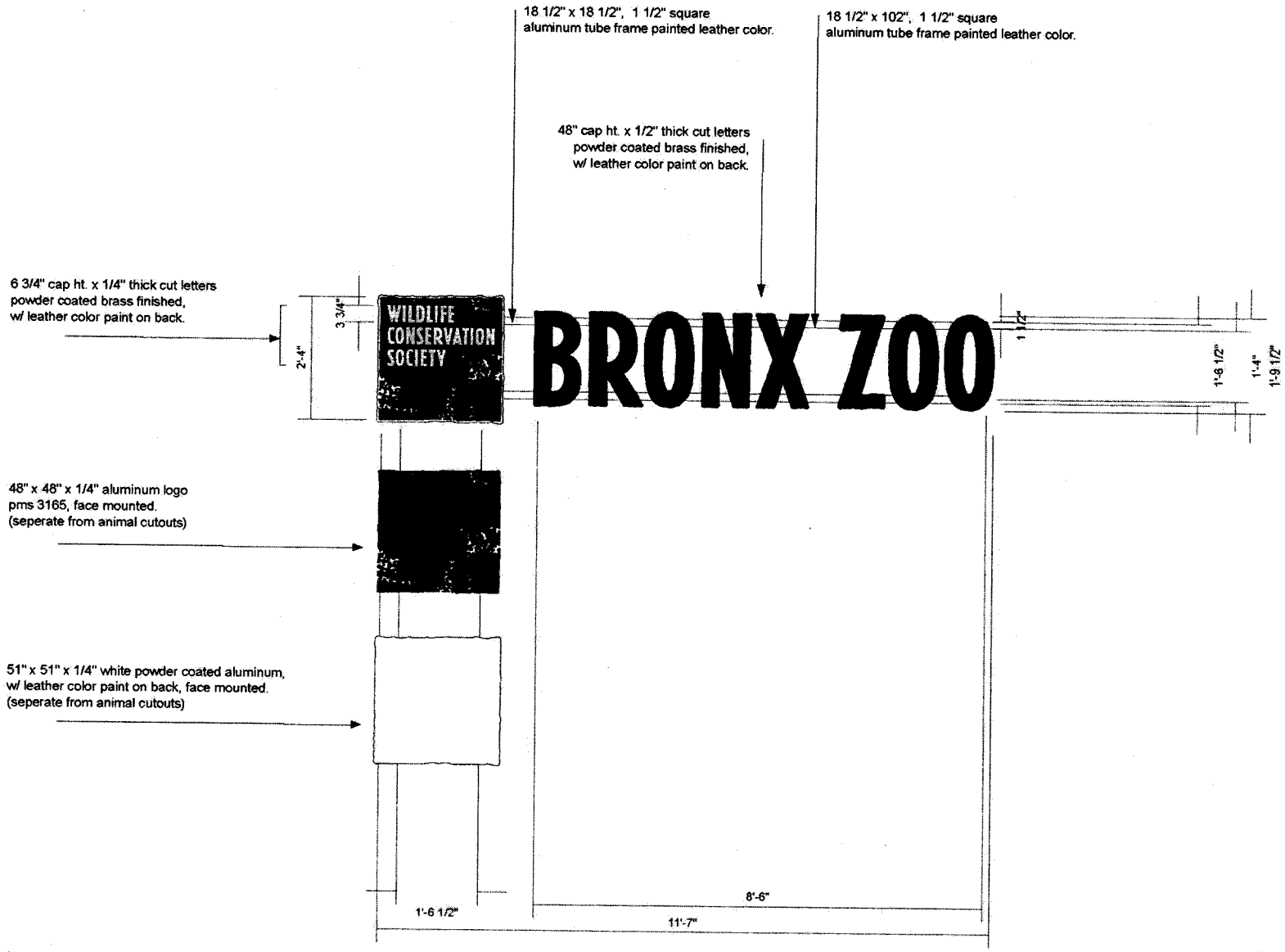
WAYFINDING SIGN SCHEDULE - BRONX ZOO (Materials, Sizes and Mounting)

6.86 WF-VOH	VOH	16'-00" x 4'-00"	Cut vinyl lettering on 1/4" aluminum sheet, painted or powder-coated in 1C. Double-sided.	Overhead Mount: Secured to the top of the new perimeter 12'-high double gate structure. Posts for gate shall extend a minimum of 4' -6" higher than the gate to receive double-sided ovehead sign.
6.86 WF-VDIR01	VDIR-LG	7'-00" x 4'-00"	4C printed, matte laminated vinyl on .80 aluminum with wrapped edges or equivalent; back side needs to be neat. Single-sided.	Ground Mount: On two (2) 4"x4" square aluminum posts with welded base plate assemblies for surface mounting on concrete footings, painted in one color. Bottom of the sign needs to be no less than 6' from the finished ground surface.
6.86 WF-VDIR02	VDIR-LG	7'-00" x 4'-00"	4C printed, matte laminated vinyl on .80 aluminum with wrapped edges or equivalent. Double-sided.	Ground Mount: On two (2) 4"x4" square aluminum posts with welded base plate assemblies for surface mounting on concrete footings, painted in one color. Bottom of the two signs need to be no less than 6' from the finished ground surface.
6.86 WF-VDIR03	VDIR-SM	3'-00" X 4'-00"	4C printed, matte laminated vinyl on .80 aluminum with wrapped edges or equivalent; back side needs to be neat. Single-sided.	Ground Mount: On two (2) 3"x3" square aluminum posts with welded base plate assemblies for surface mounting on concrete footings, painted in one color. Bottom of the sign needs to be no less than 6' from the finished ground surface.
6.86 WF-VDIR04	VDIR-SM	3'-00" X 4'-00"	4C printed, matte laminated vinyl on .80 aluminum with wrapped edges or equivalent. Double-sided.	Ground Mount: On two (2) 3"x3" square aluminum posts with welded base plate assemblies for surface mounting on concrete footings, painted in one color. Bottom of the two signs need to be no less than 6' from the finished ground surface.
6.86 WF-PAY	PAY	24" x 72"	4C printed, matte laminated vinyl on .80 aluminum with wrapped edges or equivalent; back side needs to be neat. Single-sided.	Ground Mount: On two (2) 3"x3" square aluminum posts with welded base plate assemblies for surface mounting on concrete footings, painted in one color.
6.86 WF-AG1	AG1	11'-07" x 2'-04"	Cut metal - see attached "AG1 " sign and frame details.	Ground Mount: On two (2) 4"x4" square aluminum posts in concrete footings, painted in one color. Bottom of the sign needs to be no less than 6' from the finished ground surface. Install as per attached detail.
6.86 WF-AG2	AG2	2'-00" x 8'-00"	Four-sided. Affix printed sign to each side of the existing structure. The printed sign: 4C printed, matte laminated vinyl on 1/8" Sintra with wrapped edges.	One sign shall be installed on existing four-sided structure, and one shall be installed on an existing four-sided structure that shall also be relocated. The relocated structure shall be installed on with four (4) 8"x8" in-ground timber posts to match existing.



NOTE: Spacing for BRONX ZOO lettering is wider than on shop drawing and space between logo and letters has increased.

Rainey Gate Scale: ½" = 1'



WCS Bronx Zoo Inter-Modal Project Sign Type AG1 fabrication reference
10/31/2013

SECTION 7.07 ALB
FURNISH AND INSTALL NEW ALUMINUM BOLLARD

7.07ALB.1. DESCRIPTION.

Under this section, the Contractor shall furnish all labor, material, plant, equipment, and incidentals necessary to furnish and install bollards in accordance with the plans, the specifications, and the directions of the Engineer.

7.07ALB.2. MATERIAL.

Aluminum Pipe Bollard shall be as manufactured by:

1. Sentry Lighting, Freeport, NY, Dumor, Inc.,
2. PA, Keystone Ridge Designs, Butler, PA,
3. or approved equivalent manufacturer.

The bollard shaft shall be made from ASTM 6063 extruded aluminum. The top cap shall be an aluminum dome with a self-centering lip and t-shaped anchor.

To insure product durability, the bollard shall be finished with a high performance coating consisting of high gloss Super Durable polyester powder coat paint to be applied utilizing a multi stage process that includes phosphate pretreatment, electrostatic powder application, and convection curing. Paint shall be weather, corrosion, abrasion, and UV resistant in compliance with the American Architectural Manufacturers Association's specification AAMA 2604-05. Color to be specified by the Wildlife conservation Society.

Concrete for footings and fill shall comply with the requirements of Section 4.06 of the Standard Specifications for Class A-40 concrete, Type I A; cement - Type I Portland; sand - Type 1 A; coarse aggregate - Type 1, Grade B, or Type 2, ASTM Size No. 57. An approved air-entraining agent shall be added at the time concrete ingredients are mixed with water.

All materials shall be as approved by the Engineer.

7.07ALB.3. CONSTRUCTION DETAILS.

Special care shall be exercised to avoid abrasion, staining, or other damage to the painted surface. Stacking and storing of painted bollards in the shop, in transit, and at the job site shall be done using softeners and timbers to keep individual members free from contract with the ground and with each other. Also, bollards shall be protected from soiling by adjacent fabrication or construction operations.

The Contractor shall carefully excavate the area by hand to the required depth necessary to install bollards in concrete footings as shown on the plans. The bollard shall be direct burial and affixed in place with concrete that is poured to the top of the shaft. The top cap shall become affixed to the bollard shaft by centering and then plunging the t-shaped anchor into the wet concrete, and then seating the dome directly onto the top of the shaft. Bollards shall be shim and level as necessary such that bollards are vertical, in plumb, and at equal elevations in their final position.

Touchup after erection shall be performed in accordance with the manufacturer's recommendations and requirements.

7.07ALB.4. SHOP DRAWINGS.

Shop drawings shall be submitted by the Contractor to the Engineer for approval prior to installation.

7.07ALB.5. METHOD OF MEASUREMENT.

The quantity to be measured for payment shall be the number of bollards actually installed to the satisfaction of the Engineer.

7.07ALB.6. BASIS OF PAYMENT.

The contract price bid per each bollard furnished and installed shall cover the cost of all labor, insurance, material, plant, equipment, and incidentals necessary to complete the work, including, but not limited to, fabrication, painting of bollards, concrete foundations, concrete for bollard filling, t-shaped anchor, all excavation and backfilling, and shop drawings, all in accordance with the plans, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
7.07 ALB	FURNISH AND INSTALL NEW ALUMINUM BOLLARD	EACH

SECTION 7.07 BHS
FURNISH AND INSTALL NEW STEEL BOLLARD FOR HANDICAP SIGNAGE

7.07BHS.1. DESCRIPTION.

Under this section, the Contractor shall furnish all labor, material, plant, equipment, and incidentals necessary to furnish and install bollards in accordance with the plans, the specifications, and the directions of the Engineer.

7.07BHS.2. MATERIAL.

Steel Pipe Bollard shall be as manufactured by:

1. All City Play Equipment, Brooklyn, NY
2. Boundary Fence, Jamaica, NY
3. Bayside Fencing, Inc., Brooklyn, NY
4. or an approved equivalent manufacturer.

All steel shall be manufactured in the United States to conform to the requirements of the Buy America Act, and appropriate certification shall be required.

Steel pipe for bollards shall be of the size and dimensions shown on the plans and shall comply with the requirements of ASTM designation A53 for hot-dipped galvanized steel pipe, except that the pipe shall be untested for water pressure. Prior to galvanizing, welded seams shall be ground smooth or otherwise dressed and not readily readable on casual inspection or otherwise objectionable to the Engineer.

Concrete for collars and fill shall comply with the requirements of Section 4.06 of the Standard Specifications for Class A-40 concrete, Type I A; cement - Type I Portland; sand - Type 1 A; coarse aggregate - Type 1, Grade B, or Type 2, Size ASTM No. 57. An approved air-entraining agent shall be added at the time concrete ingredients are mixed with water.

The galvanized steel pipe shall be powder coated with triglycidyl isocyanurate (TGIC) Polyester.

Galvanizing shall provide an acceptable substrate for applied powder coatings. No lacquer, urethane or other coatings which would prevent proper adhesion of powder coating shall be applied to the pipe and fittings.

The powder coating shall be applied to the galvanized pipe and fittings in such a manner that the coating will not peel off. Insure surfaces to be coated are clean and dry and free of grease, dust, rust, etc. All coated parts shall first receive phosphating and chromatizing treatments to improve the adhesion of the surface coating. Color to be Federal Standard FS 15183 Bright Blue. The TGIC-Polyester shall be applied at a film thickness of 3 to 4 mils by electrostatic spray process and bake finished per manufacturer's directions. The TGIC-Polyester shall be applied without voids, tears or cuts that reveal the substrate and shall thoroughly adhere to the metal without peeling when scratched with a pick device or knife blade point.

Bollard Covers shall be installed on each steel pipe and shall be 1/8" thick high density polyethylene, blue in color with two white reflective stripes at the top.

All materials shall be as approved by the Engineer.

7.07BHS.3. CONSTRUCTION DETAILS.

Handling, shipping and erecting of painted steel bollards shall not be performed until coatings are thoroughly dry. Special care shall be exercised to avoid abrasion, staining, or other damage to the painted surface.

Stacking and storing of painted bollards in the shop, in transit, and at the job site shall be done using softeners and timbers to keep individual members free from contract with the ground and with each other. Also, bollards shall be protected from soiling by adjacent fabrication or construction operations.

The Contractor shall carefully excavate existing sidewalk areas by hand to the required depth necessary to install bollards in concrete collars as shown on the plans. Bollards shall be shim and level as necessary such that bollards are vertical, in plumb, and at equal elevations in their final position. Concrete collars shall be finished to match the proposed new adjacent sidewalk. Then backfill around concrete collars to the subgrade of proposed pavement or sidewalk.

New adjacent sidewalk around concrete collars shall be placed under the appropriate sidewalk item.

Touchup after erection shall consist of smoothing all abraded areas and building back each coat damaged to achieve the initial condition. Surface areas that have been abraded to bare metal shall be cleaned and then painted in proper recoating intervals.

For minor damaged caused by installation or transportation, clean damaged area, then;

1. On damaged galvanized surfaces, apply organic zinc repair paint complying with ASTM A780, then repair powder coating per number 2 below. Galvanizing repair paint shall have 65 percent zinc by weight. Thickness of repair paint shall be not less than that required by ASTM A123.

2. On damaged powder coated surfaces, touch-up finish in conformance with manufacturer's recommendations. Provide touch-up such that repair is not visible from a distance of 6 (six) feet in daylight.

7.07BHS.4. SHOP DRAWINGS.

Shop drawings shall be submitted by the Contractor to the Engineer for approval prior to installation.

7.07BHS.5. METHOD OF MEASUREMENT.

The quantity to be measured for payment shall be the number of bollards actually installed to the satisfaction of the Engineer.

7.07BHS.6. BASIS OF PAYMENT.

The contract price bid per each steel bollard furnished and installed shall cover the cost of all labor, insurance, material, plant, equipment, and incidentals necessary to complete the work, including, but not limited to, fabrication, painting of bollards, HDPE bollard covers, concrete

foundations, concrete for bollard filling, all excavation and backfilling, and shop drawings, all in accordance with the plans, the specifications and the directions of the Engineer.

Furnishing and installing of handicap signage shall be paid under its appropriate item 6.83 AA and 6.83 AB, 6.83 BA, 6.83 BB.

Payment will be made under:

Item No.	Item	Pay Unit
7.07 BHS	FURNISH AND INSTALL NEW STEEL BOLLARD FOR HANDICAP SIGNAGE	EACH

SECTION 7.07 MT
MECHANICAL TURNSTILE

7.07MT.1. WORK TO INCLUDE.

Under this section, the Contractor shall furnish and install a high security, ADA compliant, mechanical turnstile in the manner shown on the Contract Drawings. The purpose of the turnstile is to provide a No Entry – Free Exit system which allows park visitors to exit the facility once the main gates are closed. The mechanical turnstile shall be installed in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

7.07MT.2. MATERIALS.

The Full Height Security Turnstile is intended to provide Free Exit /No Entry access with ADA compliant handicap accessibility and mechanical operation. Features of the turnstile shall include a self-centering mechanism to maintain rotor at the stop position, a tamper proof ceiling with no exposed fasteners and shall be design for outdoor use. All materials shall meet the ASTM standards as set forth by the materials industry.

A. Mechanism Housing: shall be constructed from a structural steel channel. All mechanical components shall be attached to the channel. The channel shall be covered by a 16 gauge stainless steel cover.
B. Ceiling Plate: shall be fabricated from 16 gauge steel attached to the mechanism housing and spans the shield assembly, providing stability and support.
C. Rotor assembly: shall consist of 3 rotor posts of 2" square x 11gauge steel tubing, each containing 12 arm spaced equally, 5-1/4" apart. Each rotor post is set at a position 120 degrees apart from each other. The top and bottom of the rotor assembly shall be held together by a flange, to which the rotor posts are attached. Each arm shall be welded to the rotor posts.
D. Barrier: shall consist of a barrier post and eleven arms equally spaced at an offset to the rotor assembly. The barrier post shall be constructed from 2" x 4" 11 gauge carbon steel tubing, with carbon steel 1 ½" schedule 40 pipe barrier arms.
E. Shield Assembly: consists of 2 welded frames that are installed adjacent to each other to form the passageway. The shield assembly is constructed from 2" x 2" square tubes and 1 3/8" round tubes.
F. Arms: 1-1/2" scheduled 40 carbon steel pipe, each arm shall be rounded and closed end with plastic caps.
G. Bottom Bearing: pre-greased thrust Axial Deep Groove Ball Bearing. The bearing is on a 9"x1" clear anodized aluminum base plate. The base plate attaches to the floor with 3 anchor bolts, 3/8"x4" long. It has a dynamic load capacity in excess of 14,300lbs., a static load capacity of over 39,500 lbs. and maximum rated RPM of 1800.
H. All components shall be constructed in such a manner as to eliminate all structural weaknesses.
I. One-way mechanical turnstiles shall use a hardened ratchet assembly to direct traffic flow.
J. Standard self-centering feature automatically returns rotor assembly to the home position assuring the correct starting position of the rotor.
K. The operating mechanism is fabricated using extra heavy duty components to accommodate the high rotor weight. Rotation speed is controlled by hydraulic shock absorber and gear system. All internal operating components are enclosed in a fabricated stainless steel top cover.

L. Sealed top and bottom bearings provide free, easy rotation even in hostile environments.
M. Finish: Powder coated, black.
N. Concrete: Concrete for slabs or footings shall be "Concrete in Structures" as described in NYCDOT Highway Specifications under Division IV Construction Methods Section 4.06 and shall be of the dimensions indicated on the plans.

7.07MT.3. QUALITY CONTROL.

Manufacturer shall be a company specializing in the supply of security turnstiles with a minimum of 5 years' experience.

7.07MT.4. SUBMITTALS.

A. Submit project specific shop drawings and finish samples.
B. Indicate pertinent dimensions, general construction, component connections and location, anchorage methods and location, hardware, and installation details.

7.07MT.5. DELIVERY, STORAGE AND HANDLING.

A. Deliver material to job site in manufacturer's packaging undamaged, compete with installation instructions.
B. Store off ground, under cover, protected from weather and construction activities.

7.07MT.6. PROJECT/SITE CONDITIONS.

A. Install security turnstile on the finished floor. Floor must be deal level at any point within the footprint of the turnstile. Concrete slab/sidewalk to be a minimum of 5 inches thick as shown on the plans.

7.07MT.7. METHOD.

A. General: All work shall be performed in accordance with the manufacturer's specifications for turnstile installation and the contract plans, specifications, and directions of the engineer in consultation with the Wildlife Conservation Society.
B. Inspection: Installer must examine the location and advise the Contractor of any site conditions unacceptable for proper installation of product. These conditions include but are not limited to the following:
   - Floor must be deal level at any point within the footprint of the turnstile.
   - Install shall not begin until these unacceptable conditions are rectified.
C. Erection: Install turnstiles in accordance with manufacturer's printed instructions. Set units level, plumb and with uniform hairline joints. Anchor securely into place. Use only factory trained installers.
D. Adjustment: Installer shall adjust turnstile, hardware and sensors for smooth operation and proper performance.
E. Maintenance: Follow maintenance procedures as outlined in the Instruction or Operation Maintenance Manual.
F. Cleaning: Clean metal and glass surfaces carefully after installation to remove excess caulk, dirt and labels.

7.07MT.8. MEASUREMENT.

The quantity of MECHANICAL TURNSTILE, to be measured for payment under this item, shall be the number of EACH turnstile system installed in accordance with the plans, specifications, and directions of the Engineer.

7.07MT.9. PRICE TO COVER.

The price bid shall be a unit price per EACH turnstile system furnished and installed and shall include the cost of all labor, materials, equipment, insurance and incidentals necessary, including turnstile, mechanism housing, rotor assembly, barrier post and arms, bearings and base plates, powder coating, and hardware, all in accordance with the plans and specifications, to the satisfaction of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
7.07 MT	MECHANICAL TURNSTILE	EACH

SECTION 9.13 HD
HIGH-DENSITY POLYETHYLENE DRAINAGE PIPE

9.13 HD.1. INTENT.

This section describes the furnishing and installation of High-Density Polyethylene (HDPE) Pipe and all its components as part of this project, as shown on the Contract Drawings and as directed by the Engineer.

9.13 HD.2. DESCRIPTION.

Under this Item, the Contractor shall furnish and install HDPE pipe in accordance with the Contract Drawings, specifications and directions of the Engineer. All work of connecting and joining to other pipes or drainage structures, including connecting pieces, and excavation, bedding and backfill, shall be included under this item.

9.13 HD.3. MATERIALS.

(A) PIPE: HDPE pipe shall have a full circular cross-section, with a corrugated exterior wall and a smooth inner wall (waterway). Corrugations may be either annular or spiral. HDPE pipe shall be made from virgin polyethylene compounds. All pipe and pipe connections shall be soil-tight and shall by the same manufacturer to ensure compatibility of materials.

Acceptable manufacturers for HDPE pipe:

1. Advanced Drainage Systems, Inc., Ludlow, MA
2. ISCO Industries, Lousville, KY
3. JM Eagle, Livingston, NJ
4. Hancor, New York, NY
5. or an approved equivalent.

(B) FITTINGS: Pipe fittings shall not reduce or impair the overall integrity or function of the pipe line. Fittings may be either molded or fabricated. Common corrugated fittings include in-line joint fittings, such as couplers, and branch or complimentary assembly fittings such as tees, and end caps, etc. These fittings may be installed by various methods, such as snap-on, screw on, bell and spigot, and wrap around. Couplings shall provide sufficient longitudinal strength to preserve pipe alignment and prevent separation at the joints. Only fittings supplied or recommended by the pipe manufacturer shall be used to ensure compatibility of materials. Where recommended by manufacturer, a neoprene or rubber gasket shall be supplied for joint fittings. All pipe fittings and pipe connections shall be soil-tight.

Acceptable manufacturers for HDPE pipe fittings:

1. Advanced Drainage Systems, Inc., Ludlow, MA.

2. ISCO Industries, Lousville, KY
3. JM Eagle, Livingston, N.J
4. Hancor, New York, N.Y
5. or an approved equivalent.

All approved pipe and fittings shall be sourced and purchased from the same manufacturer only and installed as shown on the Contract Drawings.

(C) SELECT GRANULAR FILL: for select granular fill gradation requirements, see **NYCDOT Standard Highway Specifications - Section 4.11.3.(C)**.

9.13 HD.4. SUBMITTALS.

Contractor shall submit for Engineer's approval product data and installation details and instructions for HDPE pipe, pipe fittings, and connections.

9.13 HD.5. METHODS.

(A) Installation of the pipe shall be in accordance with ASTM Recommended Practice D 2321, unless specified otherwise in the Contract Documents.

(B) Installation:

1. Install and maintain proper Erosion and Sediment Control Measures during construction (under Item No. 9.30), as directed by the Engineer, to avoid clogging of the pipes. During the progress of the work, the exposed ends of the pipe shall be provided with approved temporary covers fitted to the pipe so as to exclude earth and other materials.

2. Unless otherwise directed, the trench shall be fully excavated for its entire length before any pipes are laid therein. Refer to Contract Drawings for pipe inverts. Where trench bottom is unstable, the Contractor shall excavate to a depth as required by the Engineer and replace with suitable material or select granular fill as specified by the Engineer. Width of trench shall be as per pipe manufacturer's recommendations.

3. Place and compact bedding material as shown on the plans.

4. Pipe damaged from handling or any cause whatsoever, whether in or out of the trench, shall be replaced and removed from the site of the work by and at the sole expense of the Contractor.

5. Install geotextile filter fabric per manufacturer's recommendations using a properly sized filter fabric sock for perforated pipe where and as shown on the plans.

6. Lay HDPE pipe as per manufacturer's recommendations over bedding material. All pipe shall be laid in reasonably close conformity to line and grade and shall have a full, firm and even bearing at each joint and along the entire length of pipe. Joint misalignment shall not result in offsets, in the interior smooth liner, greater than one-quarter (1/4") inch. Pipe laying shall begin at the downstream end and progress upstream. Any single run of pipe, excluding end sections, shall consist wholly of the same type material unless otherwise directed by the Engineer. No section of pipe used shall be less than three (3') feet in length. Keep trenches dry during pipe laying.

7. Provide for and install all joints, couplings, fittings, rings and connections as per manufacturers' instructions and applicable ASTM and ANSI standards. Clean joint contact surfaces immediately prior to joining. Use lubricants, primers, or adhesives as recommended by the pipe or joint manufacturer.

8. Initial backfill material shall be select granular fill and shall envelope the pipe, under the haunches and around the sides up to a minimum height of six (6") inch above the pipe, and compacted in six inch (6") layers. Trench and backfill width shall be as per manufacturer's recommendations

9. Any sediment which enters pipes during construction shall be removed within 24 hours.

10. Prior to project completion, and as directed by Engineer, the Contractor shall clean pipes by removing all accumulated sediment and debris.

11. Do not remove Erosion and Sediment Control measures until site is fully stabilized.

9.13 HD.6. MEASUREMENT.

The quantity of High-Density Polyethylene Pipe in the diameter noted to be measured for payment shall be the number of linear feet (laying length) of HDPE pipe, including fittings, measured in their final position, installed to the satisfaction of the Engineer.

9.13 HD.7. PRICES TO COVER.

The contract price bid shall be a unit price per linear foot of each size High-Density Polyethylene Pipe in the diameter noted, furnished and installed as shown on the Contract Drawings and shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work, including, but not limited to, excavation of all materials of whatsoever nature encountered (except the excavation of boulders in open cut and ledge rock), furnishing and installing bedding, sheeting and bracing, backfilling, cleaning up, furnishing and installing pipe and fittings, and connecting and joining pipe to other pipes or drainage structures, furnishing and installing filter fabric wrap/sock; all in accordance with the Contract Drawings, the specifications and directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
9.13 HD8	8" HIGH-DENSITY POLYETHYLENE DRAINAGE PIPE	L.F.
9.13 HDP4	4" PERFORATED HIGH-DENSITY POLYETHYLENE UNDERDRAIN PIPE	L.F.

SECTION 9.13 PVC-12C
12" PVC UNDERDRAIN CLEANOUT

9.13PVC-12C.1. INTENT.

This section describes the furnishing and installation of Poly Vinyl Chloride (PVC) cleanout and all its components as part of this project, as shown on the Contract Drawings and as directed by the Engineer.

9.13PVC-12C.2. DESCRIPTION.

Under this Item, the Contractor shall furnish and install PVC cleanout in accordance with the Contract Drawings, specifications and directions of the Engineer. All work of connecting and joining to other pipes, including connecting pieces, and excavation, bedding and backfill, shall be included under this item.

9.13PVC-12C.3. MATERIALS.

(A) CLEANOUT: The cleanout required for this contract shall be manufactured from PVC pipe stock, utilizing a thermo-molding process to reform the pipe stock to the specified configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The pipe bell spigot shall be joined to the main body of the drain basin or catch basin. The pipe stock used to manufacture the main body and pipe stubs of the surface drainage inlets shall meet the mechanical property requirements for fabricated fittings as described by ASTM D3034, Standard for Sewer PVC Pipe and Fittings; ASTM F1336, Standard for PVC Gasketed Sewer Fittings.

Acceptable manufacturers for PVC drain basins/cleanouts:

1. Advanced Drainage Systems, Inc., Ludlow, MA
2. ISCO Industries, Lousville, KY
3. JM Eagle, Livingston, NJ
4. Hancor, New York, NY
5. Or an approved equivalent.

(B) FITTINGS: Pipe fittings shall not reduce or impair the overall integrity or function of the pipe line. Fittings may be either molded or fabricated. Common corrugated fittings include in-line joint fittings, such as couplers, and branch or complimentary assembly fittings such as tees, and end caps, etc. These fittings may be installed by various methods, such as snap-on, screw on, bell and spigot, and wrap around. Couplings shall provide sufficient longitudinal strength to preserve pipe alignment and

prevent separation at the joints. Only fittings supplied or recommended by the pipe manufacturer shall be used to ensure compatibility of materials. Where recommended by manufacturer, a neoprene or rubber gasket shall be supplied for joint fittings. All pipe fittings and pipe connections shall be soil-tight.

Acceptable manufacturers for HDPE pipe fittings:

1. Advanced Drainage Systems, Inc., Ludlow, MA.
2. ISCO Industries, Lousville, KY
3. JM Eagle, Livingston, N.J
4. Hancor, New York, N.Y
5. Or an approved equivalent.

All approved pipe and fittings shall be sourced and purchased from the same manufacturer only and installed as shown on the Contract Drawings.

(C) SELECT GRANULAR FILL: for select granular fill gradation requirements, see **NYCDOT Standard Highway Specifications - Section 4.11.3.(C)**.

(D) FRAMES AND GRATES: The grates and frames for each cleanout assembly are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The casting and cover furnished for all surface cleanouts shall be ductile iron castings made specifically for each basin so as to provide a round bottom flange that closely matches the diameter of the surface cleanout. Frames and covers for cleanouts shall be capable of supporting HS-20 loading for vehicular traffic. Metal used in the manufacture of the castings shall conform to ASTM A-48-83 class 30B for the cast iron frames. Covers shall be 12" diameter and painted black.

9.13PVC-12C.4. SUBMITTALS.

Contractor shall submit for Engineer's approval product data, installation details and instructions for pipe, pipe fittings, frames, covers, and connections.

9.13PVC-12C.5. METHODS.

(A) Installation of the pipe shall be in accordance with as per manufacturer's instructions and in accordance with Section 9.13HD herein these specifications.

(B) The specified PVC cleanout shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1 or 2 material as defined in ASTM D2321. The surface drainage

inlets shall be bedded and back-filled uniformly in accordance with ASTM D2321. The drain basin body will be cut at the time of the final grade so as to maintain a one piece, leak proof structure. No brick, stone or concrete block will be used to set the grate to the final grade height.

(C) Installation:

1. Install and maintain proper Erosion and Sediment Control Measures during construction, as directed by the Engineer, to avoid clogging of the pipes. During the progress of the work, the exposed ends of the pipe shall be provided with approved temporary covers fitted to the pipe so as to exclude earth and other materials.

2. Trench excavation shall be to a minimum depth of 6" below the outside bottom of the pipe. Unless otherwise directed, the trench shall be fully excavated for its entire length before any pipes are laid therein. Refer to Contract Drawings for pipe inverts. Where trench bottom is unstable, the Contractor shall excavate to a depth as required by the Engineer and replace with suitable material as specified by the Engineer. Width of trench shall be as per pipe manufacturer's recommendations.

3. Place a 6" minimum depth of bedding material. Bedding material shall be compacted select granular fill.

4. Pipe damaged from handling or any cause whatsoever, whether in or out of the trench, shall be replaced and removed from the site of the work by and at the sole expense of the Contractor.

5. Provide for and install all joints, couplings, fittings, rings and connections as per manufacturers' instructions and applicable ASTM and ANSI standards. Clean joint contact surfaces immediately prior to joining. Use lubricants, primers, or adhesives as recommended by the pipe or joint manufacturer

6. Initial backfill material shall be select granular fill and shall envelope the pipe, under the haunches and around the sides up to a minimum height of six (6") inch above the pipe, and compacted in six inch (6") layers. Trench and backfill width shall be as per manufacturer's recommendations.

7. Any sediment which enters pipes during construction shall be removed within 24 hours.

8. Prior to project completion, and as directed by Engineer, the Contractor shall clean pipes by removing all accumulated sediment and debris

9. Do not remove Erosion and Sediment Control measures until site is fully stabilized.

9.13PVC-12C.6. MEASUREMENT.

The quantity to be paid for under this item will be measured by the number of EACH size cleanout assembly installed in accordance with the plans, specifications and directions of the Engineer

9.13PVC-12C.7. PRICE TO COVER.

The contract price bid shall be a unit price per linear foot of each size Cleanout Assembly in the diameter noted, furnished and installed as shown on the Contract Drawings and shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work, including, but not limited to, excavation of all materials of whatsoever nature encountered (except the excavation of boulders in open cut and ledge rock), furnishing and installing bedding, sheeting and bracing, backfilling, cleaning up, furnishing and installing cleanout and fittings, and connecting and joining pipe to other pipes, furnishing and installing casting (frames and grates), paint, couplings, and all necessary incidentals necessary to complete the work; all in accordance with the Contract Drawings, the specifications and directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
9.13 PVC-12C	12" PVC UNDERDRAIN CLEANOUT	EACH

SECTION 9.60 KRL
RELOCATION OF PREFABRICATED METAL KIOSK

9.60KRL.1. WORK TO INCLUDE.

Under this section, the Contractor shall remove an existing prefabricated ticket booth kiosk and relocate to a new location in the manner shown on the Contract Drawings. The scope of work shall include proper disconnection of electrical and communication services and reconnection at the new location. The prefabricated kiosk shall be installed in accordance with the Contract Drawings, the specifications and manufacturer's requirements. Any damage to the existing kiosk shall be repaired or replaced by the Contractor to the satisfaction of the Engineer and WCS.

This Section includes relocation of a prefabricated metal kiosk ticket booth.

Related Sections include the following:

E 260500 COMMON WORK RESULTS FOR ELECTRICAL
E 260519 LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES
E 260526 GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS
E 260529 HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS
E 260533 RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS
E 260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS
E 262726 WIRING DEVICES

9.60KRL.2. MATERIALS.

A. Existing Kiosk: The existing prefabricated metal kiosk is identified by Serial No. B49559 as manufactured by B.I.G. Enterprises, 9702 East Rush Street, S. El Monte, CA 91733. Contact at BIG Enterprises is Jeff Crooymans: Phone: (626) 448-1449 x 112; Email: JeffC@bigbooth.com; Website: www.bigbooth.com.

B. Existing Kiosk Plans: *See attached floor plan, elevations, electrical stub up detail, general notes and building component descriptions. Plans dated 12/17/03 – Bronx Zoo / EGAD Office Vehicular Booth, Sheet Nos. 2 thru 5, by B.I.G. Enterprises, Inc.*

C. Hardware: All anchorage hardware shall conform to the requirements of the manufacturers requires as detailed on the original building plans.

9.60KRL.3. SUBMITTALS.

Submit documentation describing proposed methodology, equipment and materials for lifting and relocating the kiosk including, temporary supports, component connections and location, anchorage methods and location, hardware, and installation details.

9.60KRL.4. PROJECT / SITE CONDITIONS

A. Pre-Relocation Conference: Conduct conference at Project site with WCS and the Engineer prior to removal of existing kiosk.

B. Field Measurements: Verify actual locations of slabs, utilities, walls, fences gates and posts, and other construction contiguous with kiosk by field measurements before relocation and indicate measurements on Shop Drawings.

Coordinate installation of anchorages for kiosk. 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.

9.60KRL.5. METHOD:

GENERAL

A. General: All work shall be performed in accordance with the manufacturer's specifications for kiosk installation and the contract plans, specifications, and directions of the Engineer.

B. Inspection: Contractor must perform a complete examination of the existing kiosk and gain a full understanding of the existing anchorage and utility systems prior to removal.

C. Examination: Examine substrates, areas, and conditions, with WCS and Engineer present, for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been approved and corrected.

REMOVAL

A. Shut off and disconnect all electrical and communication services.

B. Carefully remove, disconnect and properly store air conditioning units.

C. The kiosk does not contain lifting eyes. Contractor shall pry up along the long side of the kiosk and set on 4"x4" (minimum) timber supports, which shall be plumb and properly aligned. Level base supports true to plane with full bearing on the supports at all corners.

D. Lift and transport to new location utilizing a fork lift, flatbed truck or other method as approved by the Engineer.

E. The Contractor shall take special precautions to prevent damage to the kiosk in disconnecting, moving, and reassembling same.

INSTALLATION

A. Install kiosk on continuous 7 inch thick concrete slab, approved by the Engineer. Concrete installed as per NYCDOT Standard Highway Specifications - Item 4.13 BR.

B. Set kiosk plumb and aligned. Level base plates true to plane with full bearing on concrete bases. Kiosk shall be properly aligned over 4"x12" clear opening in concrete slab floor associated with electrical stub-up area.

C. Fasten kiosk to base with anchor bolts as shown on the plans and as per manufacturer's instructions. Contractor will provide anchors to match existing and as approved by the Engineer.

D. Any component part damaged through the Contractor's operations shall be replaced at his own expense with equipment equivalent to the material damaged.

E. Connect electrical power service to power distribution system according to requirements specified in the kiosk drawings (attached herein) and Sections E260500, E260519, E260526 E260529, E260533 E260553, and E 262726.

ADJUSTING AND CLEANING

A. Adjust doors, operable windows, and hardware to operate smoothly, easily, properly, and without binding. Confirm that locks engage accurately and securely without forcing or binding.

B. Lubricate hardware and other moving parts.

C. After completing installation, inspect exposed finishes and repair damaged finishes in accordance with manufacturer's recommendations. Contractor shall furnish and utilize touch up paint as ordered by the Engineer. Paint color and type to match existing as shown on building drawings.

9.60KRL.6. MEASUREMENT.

The quantity of RELOCATION OF PREFABRICATED METAL KIOSK, to be measured for payment under this item, shall be the number of EACH Metal Kiosk relocated in accordance with the plans, specifications, and directions of the Engineer.

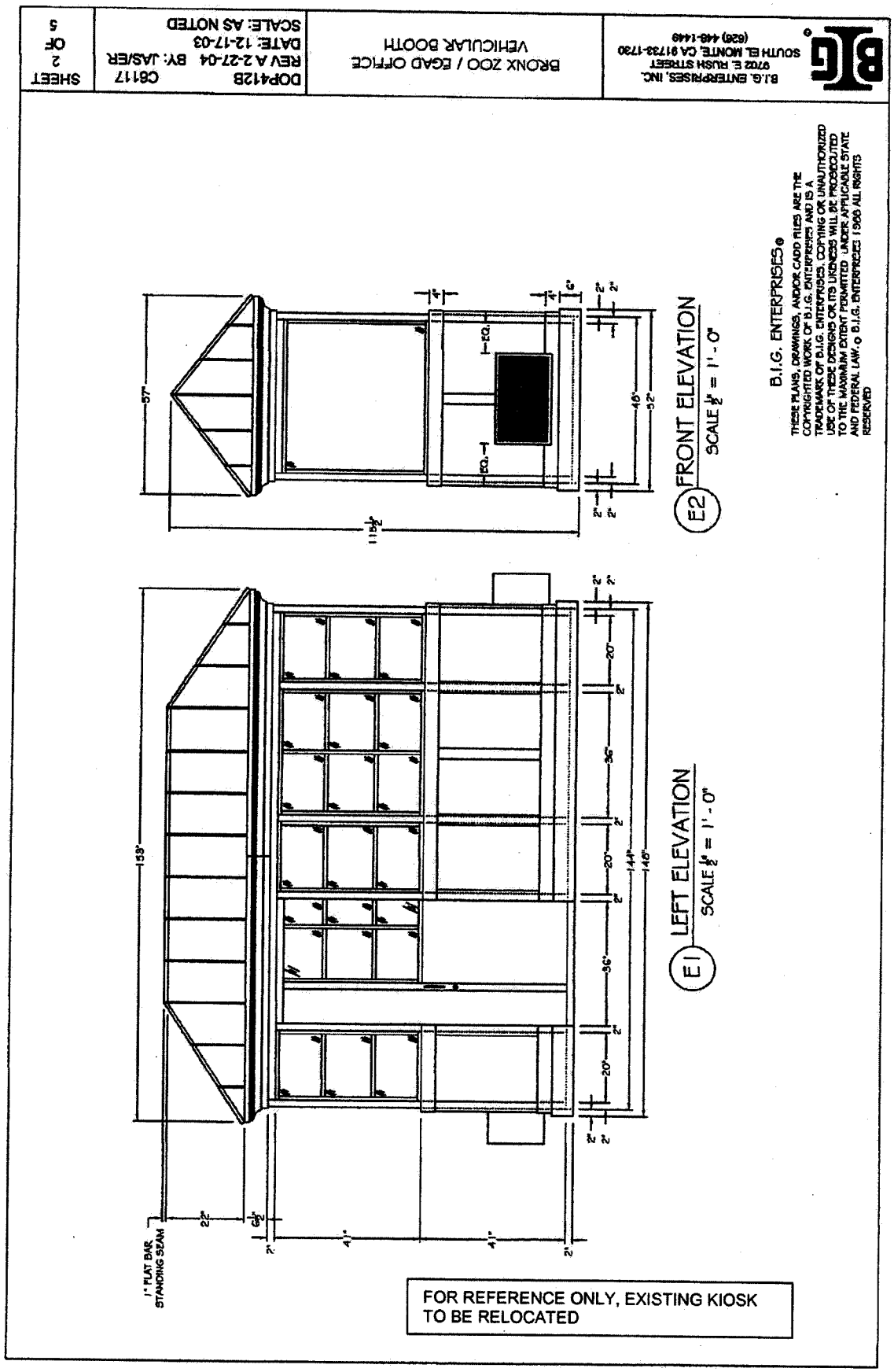
9.60KRL.7. PRICE TO COVER.

The price bid shall be a unit price per EACH Metal Kiosk removed, stored, relocated and reinstalled, which shall include the cost of all labor, insurance, materials, equipment, and incidentals necessary, including temporary supports, hardware, incidentals, all in accordance with the plans and specifications, manufacturers' requirements, to the satisfaction of the Engineer.

Concrete slab installation shall be installed and paid under Section 4.13 BR – 7" Reinforced Concrete Sidewalk (Unpigmented). Electrical power service to power distribution system connections shall be paid under the appropriate Sections E260519 and E260533.

Payment will be made under:

Item No.	Item	Pay Unit
9.60 KRL	RELOCATION OF PREFABRICATED METAL KIOSK	EACH


B.I.G. ENTERPRISES, INC.
9702 E. RUSH STREET
SOUTH EL MONTE, CA 91733-1730
(626) 448-1449
BRONX ZOO / EGAD OFFICE
VEHICULAR BOOTH
DOP4128 C6117
REV A 2-27-04 BY: JAS/ER
DATE: 12-17-03
SCALE: AS NOTED
SHEET 2 OF 5
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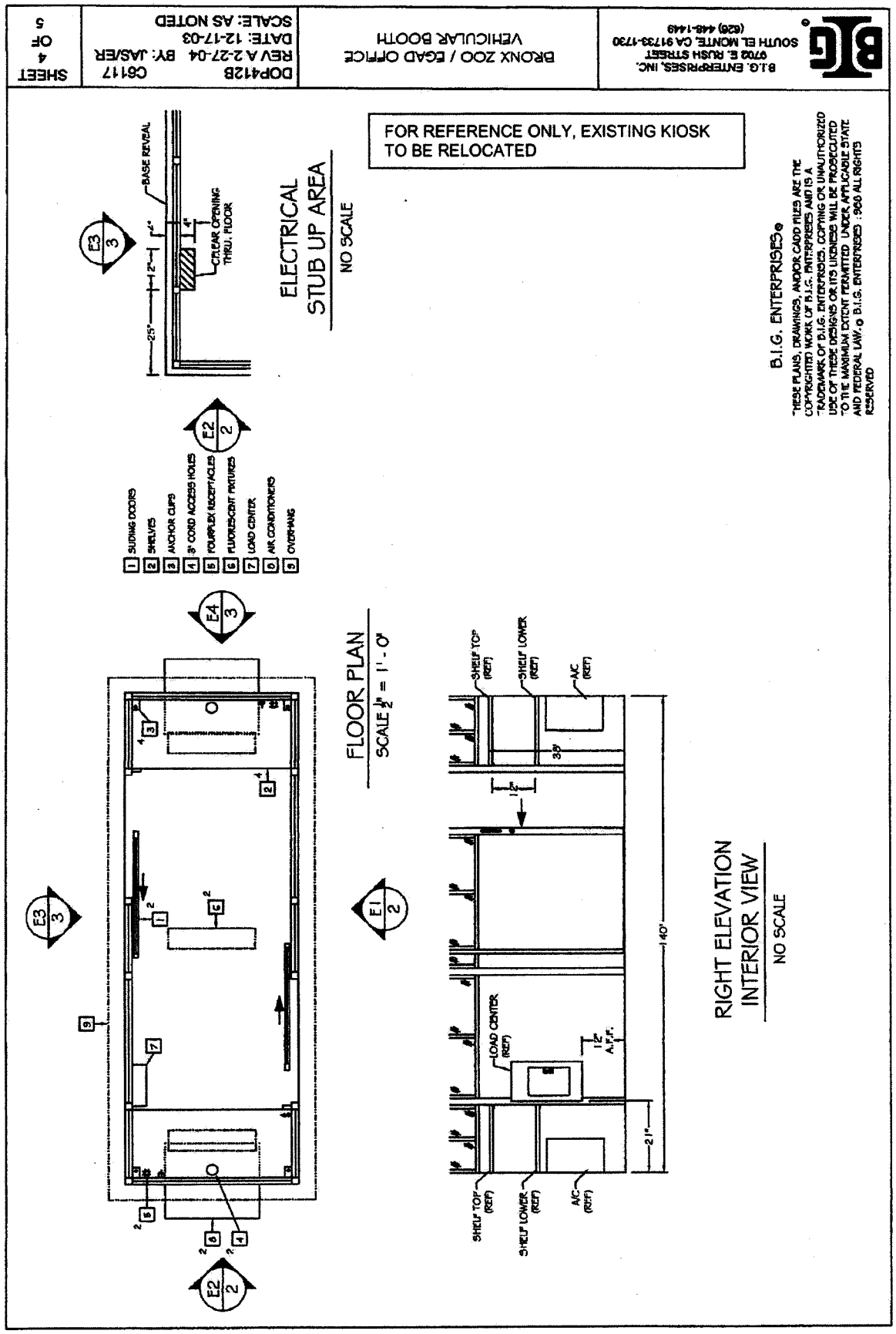
E2 FRONT ELEVATION
SCALE 1/2" = 1'-0"
E1 LEFT ELEVATION
SCALE 1/2" = 1'-0"
1" FLAT BAR, STANDING SEAM
FOR REFERENCE ONLY, EXISTING KIOSK TO BE RELOCATED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9702 E. RUSH STREET
SOUTH EL MONTE, CA 91733-1730
(626) 448-1449
BRONX ZOO / EGAD OFFICE
VEHICULAR BOOTH
DOP412B C6117
REV A 2-27-04 BY: JAS/ER
DATE: 12-17-03
SCALE: AS NOTED
SHEET 4 OF 5
FOR REFERENCE ONLY, EXISTING KIOSK TO BE RELOCATED
ELECTRICAL STUB UP AREA
NO SCALE
BASE REVEAL
CLEAR OPENING THRU. FLOOR
1 SLIDING DOORS
2 SHELVES
3 ANCHOR CLIPS
4 3" CORD ACCESS HOLES
5 FOURPLEX RECEPTACLES
6 FLUORESCENT FIXTURES
7 LOAD CENTER
8 AIR CONDITIONERS
9 OVERHANG
FLOOR PLAN
SCALE 1/2" = 1'-0"
RIGHT ELEVATION
INTERIOR VIEW
NO SCALE
SHELF TOP (REF)
SHELF LOWER (REF)
A/C (REF)
LOAD CENTER (REF)
A.F.F.
40'
21'
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GENERAL NOTES:

1. Frame work to be 2" x 2" x .083" A500 tube.
2. Unit to have half glazed 16ga galvanized steel walls with 16ga galvanized interior liners.

2a. Walls to have 4" horizontal reveal channels, 3" vertical reveal channels and 6" stepped base.

3. Unit to have custom 3/8" x 1" flat bar standing seam Hip style roof with a 6 1/2" fascia and 4 1/2" overhang on all sides. Soffit to have standard crown molding.
4. Unit to have 11ga A569 steel floor covered with 1/8" thick x 19" square, black rubber tiles with 4" high black perimeter cove molding. Floor to be mounted on a 2" stainless steel tube frame. Underside of floor to be fully coated with bituminous undercoating sealant.
5. Unit to have two B.I.G. interior sliding doors with rigid steel rollers, Best mortise hook type locking hardware and Best 7 pin construction core, keyed outside thumb turn inside, and weather stripping. Doors keyed alike.
6. Unit to have 1/4" clear tempered safety glass throughout.

6a. All windows, except for the front elevation, to have 1" painted applied mullions inside and outside. No mullions at front.

7. Unit to have one 3 wire single phase, 12 pole, 125 amp 120 / 240 volt, surface mounted load center. All electrical equipment to be U.L. listed and all wiring to be per current published NEC standards. Exposed wiring to be in surface mounted EMT conduit. Concealed wiring to be in flexible aluminum conduit. Final power connection and grounding to be done on site by others. All work to be done by a qualified electrician in accordance with all applicable local codes. Unit to be classified by Underwriters Laboratories to the 2002 National Electrical Code.
8. Unit to have three 6" x 24" fluorescent light fixtures recessed in steel ceiling and controlled by a single pole wall switch.
9. Unit to have one fourplex outlet mounted under each shelf. (2 total)
10. Unit to have two wall mount air conditioners with 8,000 BTU cooling and 4,100 BTU electric heat at 115V.

10a. A/C to be plug and cord connected and have a dedicated outlet.

10b. A/C to be mounted in a painted louver grill.

11. Unit to have two 20" straight front shelves and two 20" straight rear shelf. Each shelf to have one 3" electric access grommet insert. Shelves to be painted same color as the booth interior. Top shelf to be mounted 38" above finished floor, with the lower shelf mounted 12" below.
12. Unit to have insulation with the following "R" values: walls R-10, roof R-19.
13. Unit to have four interior anchor clips. Four 5/8" Hilti Quik Bolts with 3" minimum imbedment in 2500 LB concrete are required for placement of booth. Concrete to be level. If sloped, slope towards drain opening(s) on booth. Concrete, bolts and mounting shall be by others.
14. All exposed steel surfaces to be coated with two component high solids polyurethane rust inhibitive primer, and two component high solids polyurethane finish coat.

    Color to be Green #6409-73408.

FOR REFERENCE ONLY, EXISTING KIOSK TO BE RELOCATED

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SHEET 5 OF 5

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REV A 2-27-04 BY: JAS/ER
DATE: 12-17-03
SCALE: AS NOTED

BRONX ZOO / EGAD OFFICE
VEHICULAR BOOTH

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SECTION 9.60 TB
PREFABRICATED TICKET BOOTH

9.60TB.1. WORK TO INCLUDE.

Under this section, the Contractor shall furnish and install a prefabricated ticket booth kiosk of the types shown on the Contract Drawings and described herein. Prefabricated ticket booth, shall be installed in accordance with the Contract Drawings, the specifications and manufacturer's requirements. Any damage to the ticket booth kiosk shall be repaired or replaced by the Contractor to the satisfaction of the Engineer in consultation with Wildlife Conservation Society (WCS).

This Section includes furnishing and installing of a new prefabricated metal kiosk ticket booth.

Related Sections include the following:
E 260500 COMMON WORK RESULTS FOR ELECTRICAL
E 260519 LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES
E 260526 GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS
E 260529 HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS
E 260533 RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS
E 260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS
E 262726 WIRING DEVICES

9.60TB.2. MATERIALS.

A. Building materials for the booths including type of framing, wall construction, roof system, flooring, doors, hardware, windows, electrical load center, lighting, outlets, shelving, heating/air conditioning unit, and painted finishes shall be as specified on the Drawings.

9.60TB.3. SUBMITTALS.

A. Submit documentation from prefabrication manufacturer describing all building material systems as described above. Manufacturer, ticket booth model, and shop drawings shall be approved the Engineer prior to the Contractor placing the order for production of the proposed ticket booth.
B. Submit documentation describing proposed methodology, equipment and materials for lifting and installing the kiosk including, temporary supports, component connections and location, anchorage methods and location, hardware, and installation details.
C. Submit shop drawings in compliant to Section 1.06.13 of NYCDDC Standard Highway Specifications.

9.60TB.4. PROJECT / SITE CONDITIONS.

A. Pre-Installation Conference: Conduct conference at Project site with WCS and the Engineer prior to installation of the new ticket booth kiosk.

B. Field Measurements: Verify actual locations of slabs, utilities, walls, fences gates and posts, and other construction contiguous with kiosk by field measurements before installation and indicate measurements on Shop Drawings.

C. Coordinate installation of anchorages for ticket booth kiosk. 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.

9.60TB.5. METHOD.

GENERAL

A. General: All work shall be performed in accordance with the manufacturer's specifications for ticket booth kiosk installation and the contract plans, specifications, and directions of the Engineer.

B. Inspection: Contractor must perform a complete examination of the new ticket booth kiosk and gain a full understanding of the anchorage and utility systems prior to installation.

C. Examination: Examine substrates, areas, and conditions, with WCS and Engineer present, for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected as approved by the Engineer.

INSTALLATION

A. Install kiosk on continuous seven (7") inch thick concrete slab, approved by the Engineer. Concrete installed as per NYCDOT Standard Highway Specifications - Item 4.13 BR.

B. Set kiosk plumb and aligned. Level base plates true to plane with full bearing on concrete bases. Kiosk shall be properly aligned over 5"x12" clear opening in concrete slab floor associated with electrical stub-up area as shown on drawing.

C. Fasten kiosk to base with anchor bolts as shown on the plans and as per manufacturer's instructions. Contractor will provide anchors to match existing and as approved by the Engineer.

D. Any component part damaged through the Contractor's operations shall be replaced at his own expense with equipment equivalent to the material damaged.

E. Connect electrical power service to power distribution system according to requirements specified in the Contract Drawings and Sections E260500, E260519, E260526, E260529, E260533 E260553, and E 262726 of these Specifications.

ADJUSTING AND CLEANING

A. Adjust doors, operable windows, and hardware to operate smoothly, easily, properly, and without binding. Confirm that locks engage accurately and securely without forcing or binding. Lubricate hardware and other moving parts.

B. After completing installation, inspect exposed finishes and repair damaged finishes in accordance with manufacturer's recommendations. Contractor shall furnish and utilize

touch up paint as ordered by the Engineer. Paint color and type to match existing as shown on building drawings.

9.60TB.6. MEASUREMENT.

The quantity of PREFABRICATED TICKET BOOTH, to be measured for payment under this item, shall be the number of EACH type of Prefabricated Metal Ticket Booth Kiosk actually installed to the satisfaction of the Engineer.

9.60TB.7. PRICES TO COVER.

The price bid shall be a unit price per EACH Prefabricated Metal Ticket Booth Kiosk of the type specified, which shall include the cost of all labor, materials, equipment, insurance and incidentals necessary including but not limited to, the furnishing, delivery, storing, and installation of the pre-engineered and pre-manufactured building system and all specified components including all electrical, lighting, air conditioner, windows, doors, supports, hardware, incidentals, (excluding items to be paid for under Sections E260519 and E260533 all in accordance with the plans and specifications, manufacturers' requirements, and to the satisfaction of the Engineer.

Concrete slab installation shall be installed and paid under Section 4.13 BR – 7" Reinforced Concrete Sidewalk (Unpigmented). Electrical power service and connections to the building's power distribution (load center) system shall be paid under the appropriate Sections E260519 and E260533.

Payment will be made under:

Item No.	Item	Pay Unit
9.60 TB1	PREFABRICATED TICKET BOOTH – TYPE 1	EACH
9.60 TB2	PREFABRICATED TICKET BOOTH – TYPE 2	EACH

ITEM NYC-640.2500001
BLUE REFLECTORIZED PAVEMENT MARKING PAINT FOR HANDICAPPED PARKING SPACES

All of the provisions of NYCDOT Spec. (latest) Section 640 pertaining to White Paint Reflectorized Pavement Stripes shall apply except for the following:

The pavement marking paint shall be tinted blue prior to application. The color of the paint shall be such that a prepared color chip shall be a reasonable visual match to Federal Color Standard No. 595B, Color 15180. Viewing shall be done under normal daylight.

Application of the blue reflectorized pavement marking paint will be restricted to parking and passenger loading zones and other marking which are specifically intended for accessibility by handicapped persons, as detailed in the plans.

NYC-640.2500001.1 PRICE TO COVER: The price bid shall be a unit price per linear foot of the type specified, which shall include the cost of all labor, materials, equipment, insurance and incidentals necessary including but not limited to, the furnishing, installation and delivery, to the satisfaction of the Engineer

Payment will be made under:

Item No.	Item	Pay Unit
NYS-640.2500001	BLUE REFLECTORIZED PAVEMENT MARKING PAINT FOR HANDICAPPED PARKING SPACES	L.F.

ITEM NYC-640.2500002
BLUE REFLECTORIZED PAVEMENT MARKING SYMBOLS FOR HANDICAPPED PARKING SPACES

All of the provisions of NYCDOT Spec. (latest) Section 640 pertaining to White Paint Reflectorized Pavement Symbols shall apply except for the following:

The pavement marking paint shall be tinted blue prior to application. The color of the paint shall be such that a prepared color chip shall be a reasonable visual match to Federal Color Standard No. 595B, Color 15180. Viewing shall be done under normal daylight.

Application of the blue reflectorized pavement marking paint will be restricted to parking and passenger loading zones and other marking which are specifically intended for accessibility by handicapped persons, as detailed in the plans.

NYC-640.2500002.1 PRICE TO COVER: The price bid shall be a unit price per EACH of the type specified, which shall include the cost of all labor, materials, equipment, insurance and incidentals necessary including but not limited to, the furnishing, installation and delivery, to the satisfaction of the Engineer

Payment will be made under:

Item No.	Item	Pay Unit
NYS-640.2500002	BLUE REFLECTORIZED PAVEMENT MARKING SYMBOLS FOR HANDICAPPED PARKING SPACES	EACH

ITEM NO. PK-35
SHREDDED BARK MULCH

WORK.

Under this Item, the Contractor shall furnish and place SHREDDED BARK MULCH in accordance with the plans, specifications, and directions of the Engineer.

MATERIAL.

Shredded Bark Mulch shall be a natural forest product composed of shredded bark or wood not exceeding three inches (3") in length and one inch (1") in width. Mulch shall be derived from tree material, not from wood waste or by-products like sawdust, shredded palettes, or other debris. Mulch shall be natural in color and not dyed. It shall be of a uniform grade with no additives or any other treatment. Mulch with leaves, twigs, and/or debris shall not be acceptable. The pH factor should range from 5.8 to 6.2.

Commercial Fertilizer Low Phosphorus (Slow Release): shall have the following composition by weight: Nitrogen (N) shall be min. 7% - max. 10%, of which min. of 50% is slow-release; available Phosphorus (P) shall be min. 1% - max. 2%; and soluble Potash (K) shall be min. 4% - max. 12%.

Fertilizer shall be a *pesticide free* (no weed-and-feed) product such as "Healthy Turf (8-1-9)" as manufactured by Plant Health Care, Inc, Pittsburgh, PA; or Safer Ringer Lawn Restore (10-2-6) as manufactured by Woodstream Corp., Lifitz, PA; or Nutrients Plus (7-2-12) as manufactured by Nutrients Plus, Virginia Beach VA, or approved equivalent.

All Commercial Fertilizer Low Phosphorous (Slow Release) shall be delivered in standard size bags of the manufacturer, showing weight, analysis, and name of manufacturer. It shall be stored as directed by the Engineer in such a manner that its effectiveness will not be impaired.

METHOD.

Upon completion of planting and prior to application of shredded bark, Commercial Fertilizer Low Phosphorous (Slow Release) shall be incorporated into soil to a depth of three inches (3") at the rate of twenty pounds per thousand square feet. (20 lbs./1,000 s.f.)

Shredded bark mulch shall be applied to the surface of the beds and tree pit areas, as shown on the plans or Standard Details and as directed by the Engineer. Mulch shall be applied to a uniform depth of three to four inches (3"-4") over the tree pit and shrub bed areas and two to three inches (2"-3") over groundcover beds, and shall be so distributed as to create a smooth level cover over the exposed soil. Plants shall not be covered.

MEASUREMENT AND PAYMENT.

The quantity of SHREDDED BARK MULCH to be paid for under this item shall be the number of SQUARE YARDS of mulch measured in final position, furnished and installed in accordance with the plans, specifications, and directions of the Engineer.

The price bid shall be a unit price per SQUARE YARD and shall include the cost of all labor, materials, and equipment necessary or required to complete the work including furnishing and applying Commercial Fertilizer Low Phosphorous (Slow Release), mulch, and watering, all in accordance with the plans and specifications, to the satisfaction of the Engineer.

Landscape Fabric shall be paid for separately under its own item.

Payment will be made under:

Item No.	Item	Pay Unit
PK-35	SHREDDED BARK MULCH	S.Y.

ITEM NO. PK-305 CHAIN LINK FENCE 8'-0' HT., 2" MESH
ITEM NO. PK-308 CHAIN LINK FENCE 12'-0" HT., 2" MESH
ITEM NO. PK-316 SINGLE GATE FOR CHAIN LINK FENCE 8' HT. & OVER
ITEM NO. PK-319 DOUBLE GATE FOR CHAIN LINK FENCE 8' HT.
ITEM NO. PK-320 DOUBLE GATE FOR CHAIN LINK FENCE 10'HT. & OVER

WORK.

Under these Items, the Contractor shall furnish and erect powder coated chain link fences and powder coated chain link fence gates of the heights and sizes and footing types shown on the contract drawings, in accordance with the plans, specifications, New York City Department of Parks and Recreation (NYCDPR) standard details and directions of the Engineer.

INTENT.

It is the intent of these items to effectively enclose the areas shown on the plans, and when new fences terminate at existing or new structures or fences within the areas or adjacent to the areas, the clear spaces between the fences and structures shall not exceed three and one half (3-1/2") inches. Closures, if necessary, shall be made by the Contractor in a manner approved by the Engineer. Payment for such closures will be made per linear foot or a fraction thereof, at the unit prices bid for the fences.

MATERIAL.

All fittings, hardware and equipment shall be designed to carry one hundred percent (100%) overload.

Malleable iron castings shall be powder coated after hot dipped galvanizing in accordance with ASTM Serial Designation: A-153-82.

Pressed steel fittings and appurtenances shall be powder coated after hot dipped galvanizing in accordance with ASTM Serial Designation: A-123-89.

All fittings, hardware and equipment shall be powder coated of a color to match the framework and shall be of the materials listed in the following schedule:

FENCE/GATE PART	MATERIAL
Boulevards, Corner (Split)	Malleable Iron or Pressed Steel-3/16" thick Fittings and End Fittings
Post Caps and Post Line Tops	Malleable Iron or Pressed Steel - 3/16" thick
Couplings	Galv. Steel Pipe - 1/8" thick with 1/4" Dia. Full Depth Rivet
Gate Hinges	Malleable Iron or Pressed Steel-1/4" thick with 1" Dia. Stainless Steel Pin Welded to 1/2" thick Pin Support
Bolts and Nuts	Galv. Steel or Stainless Steel as indicated on NYCDPR standard details

Tension Bars	1/4" x 3/4" Galv. Steel for 2" and 1-3/4" Mesh, 3/16" x 3/8" Galv. Flat Steel for 1" Mesh
Tension Bands	1/8" x 1" Pressed
Steel Truss Rods	1/2" Dia. Galv. Steel Truss
Tightener	3/8" x 1" Galv. Steel Truss
Clamp	1/4" Pressed Steel
Locking Device	Outer Housing - Malleable Iron Inner Parts, including Bolt- Stainless Steel, 18-8, 14 gauge
Gate Stop	7/16" malleable iron
Drive Pins and Set Screws	Stainless Steel, 18-8

POSTS AND RAILS: TYPE I - Posts and rails shall be standard weight galvanized steel pipe of the sizes shown on the plans and shall conform to ASTM Serial Designation F-1083 Schedule 40, except for chain link fence posts 20'-0" height, which shall be Schedule 80.Posts and rails shall be hot dip galvanized inside and outside in accordance with ASTM Serial Designation F-1083 or:

For fence up to and including ten (10) feet height, posts and rails may be TYPE II, SS-40 steel tubing as manufactured by Allied Tube and Conduit Corp. of Harvey, Illinois, or approved equivalent. Tubing must conform to ASTM A-569, cold rolled steel pipe and coated with a minimum of 0.9 ounces of zinc per square foot, a minimum of 15 micrograms of zinc chromate per square inch. Steel pipe supplied under this option shall be of the same outside diameter as Schedule 40 pipe and achieve minimum yield strength of 50,000 p.s.i.

SURFACE COATINGS: All posts, rails and fittings shall be powder coated with either polyvinyl chloride (PVC) or TGIC-Polyester (with the exception of the turnbuckles and threaded ends of the truss rods, both of which shall be sprayed with powder coat touch-up after installation).

Galvanizing of all components shall provide an acceptable substrate for applied powder coatings. No lacquer, urethane or other coatings which would prevent proper adhesion of powder coating shall be applied to the pipe.

The powder coating shall be applied to the galvanized surfaces in such a manner that the coating will not peel off. Insure surfaces to be coated are clean and dry and free of grease, dust, rust, etc. All galvanized parts, prior to powdercoating, shall first receive phosphating and chromatizing treatments to improve the adhesion of the surface coating. Color to be black unless otherwise indicated on the plans.

The entire fence installation shall be coated with one of the two following types of powder coating, (with the exception of gates, all of which shall be TGIC-Polyester and fabric which shall always be PVC). All Fence components shall be coated on all surfaces, of a color to match the framework. All coated surfaces shall comply with the adhesion specifications listed in ASTM F1043.

TYPE A - Polyvinyl Chloride Powder Coating: PVC Powder coating shall be applied to the galvanized steel or iron by the fluid bed method to a preheated base which has been cleaned and primed prior to submersion in vinyl, resulting in a firm bond between the PVC and the metal.

PVC shall be applied to a film thickness of 10 to 15 mils on framework and fittings, and 7 to 12 mils on fabric without voids, tears or cuts that reveal the substrate and shall thoroughly adhere to the metal without peeling when scratched with a pick device or knife blade point.

TYPE B - TGIC-Polyester Powder Coating: TGIC-Polyester Powder shall be applied to the galvanized steel or iron in such a manner that the coating will not peel off. The TGIC-Polyester shall be applied at a film thickness of 3 to 6 mils by electrostatic spray process and bake finished per manufacturer's directions. The TGIC-Polyester shall be applied without voids, tears or cuts that reveal the substrate and shall thoroughly adhere to the metal without peeling when scratched with a pick device or knife blade point.

TEST.

Field Test for PVC Powder Coating: As per ASTM F668, three sample sections of the PVC powder coated fence shall be tested for bonding of the powder coat to the metal. Each test will consist of making two cuts parallel to the axis of the pipe or fitting, through the coating, appx. 1/16 inch (1.6 mm) apart, at least 1/2 inch (12.7 mm) long. With a knife peel back a section of the coating between1/8 inch (3.2 mm) and 1/4 inch (6.4 mm) long to produce a tab. Attempt to remove the 1/16 inch strip of coating by pulling the tab. The fence shall be deemed acceptable if the coating breaks rather than separates from the metal on all three samples.

Laboratory Test for TGIC-Polyester Powder Coat: At the discretion of the Engineer, a sample of the TGIC-Polyester powder coated fence shall be laboratory tested for bonding of the powder coating to the metal. Test shall be the Cross Hatch test per ASTM D3359, Method B. Failure to satisfactorily pass this test shall be a basis for rejection.

TOUCH-UP & REPAIR: For minor damage caused by installation, transportation, field welding and cutting of metal powder coated surfaces: clean welds, bolted connections, abraded or sawcut areas, then:

1. On welded and cut surfaces, apply organic zinc repair paint complying with ASTM A780, then repair powder coating per number 2 below. Galvanizing repair paint shall have 65 percent zinc by weight. Thickness of repair paint shall be not less than that required by ASTM A123.
2. On damaged powder coated surfaces, touch-up finish in conformance with manufacturer's recommendations. Provide touch-up such that repair is not visible from a distance of six feet (6').

FABRIC.

Fabric shall be hot dip galvanized steel wire mesh as per ASTM A641, with a thermally fused polyvinyl chloride powder coating of 7 to 12 mils thick as per ASTM F668 class 2b. Color to match framework. Fabric shall be produced by methods recognized as good commercial practices. Core wire tensile strength shall be 75,000 psi (517 MPa).

Wire used for the manufacture of fabric shall meet the requirements of ASTM F668 and shall be capable of being woven into fabric without the PVC coating cracking or peeling. PVC coating shall be a dense, impervious covering free of voids. Excessive roughness, bubbles, blisters, bruises and flaking will be a basis for rejection. PVC shall be thermally fused. Bonded or extruded and glued surface coating will not be permitted. Fabric shall be stretched to provide a smooth, taut, uniform appearance free from sag.

Field Test: PVC coating on fabric shall be field tested for adherence to the metal as outlined elsewhere in this specification.

Thickness of Fabric: One (1) Inch Mesh: Uncoated wire dimension shall be .120 inches in diameter
(11 gauge). Zinc coating shall be 0.30 ounces per square foot of wire surface.

One and Three Quarter (1-3/4) Inch and Two (2) Inch Mesh: Uncoated wire dimension shall be .148 inches in diameter (9 gauge). Zinc coating shall be .3 ounces per square foot of wire surface.

Selvages: Fabric shall be barbed at the top and knuckled at the bottom on fences over 6'-0" high. Fabric on fences 4'-0" and 6'-0" shall be knuckled top and bottom. Loops of knuckled fabric shall be closed or nearly closed. The wire ends of barbed selvages shall be twisted in a closed helix of 1- matching turns and cut at an acute angle. The length of the ends beyond the twist shall be at least 1/4 inch long. One (1) inch mesh shall be knuckled both top and bottom.

TIES: Tie-wire core thickness shall be 9 gauge (.148") wrought aluminum alloy 1100-H16 wire with an extruded vinyl coating in accordance with ASTM A641 Class 3. PVC shall be applied to a film thickness of 20 to 22 mils. Ties shall be spaced fifteen (15) inches apart on rails and twelve (12) inches apart on posts. The ends of ties shall be wound in a telegraph twist two and one half turns. Color to match mesh. Contractor shall touch-up PVC coating on ties damaged as result of installation. The top tension wire shall be run through the top rail hole in the barb arm. The fabric shall be secured to the top tension wire and the barb arm using a #6 gage aluminum wire tie.

GATES: Gates shall be furnished and installed on reinforced concrete slabs where indicated on the plans or directed by the Engineer. All gates shall be galvanized steel and shall be TGIC-Polyester powder coated after fabrication per requirements for fence framework outlined elsewhere in this specification. Welded joints shall have a suitable rust preventive coating applied to the welds prior to powder coating. Gate fabric shall match line fabric adjacent to gate opening. Gates shall be installed plumb, level and secure for full opening without interference. The hinges shall be so designed to permit the gate to swing a full 180 degrees.

Gate Locking Device: This latch shall be a stainless steel drop rod or plunger bar arranged to engage the gate stop. Gate Stop shall be installed as per the plans. Locking device shall be constructed so that the center drop rod or plunger bar cannot be raised when the gate is locked. The locking device bolt hardware shall be tack welded and filed smooth after installation to prevent loosening. The locking device shall have provisions for a padlock. All necessary fittings and gate holders to lock gates in both open and closed positions shall be furnished. The locking device shall be entirely enclosed as shown on the plans or shall be an approved equivalent locking device.

PADLOCK: The Contractor shall furnish one (1) padlock for each single gate and each leaf of double gates. The padlocks shall be American No. 5571 as manufactured by American Lock Co. of Crete, Illinois, or approved equivalent. All padlocks for the same park facility shall be keyed alike, with two (2) inch width by three-quarter (3/4) inch thick brass body, maximum security, five (5) pin tumblers with hardened alloy steel chrome plated shackle no less than three-eighths (3/8) inch diameter and two (2) inch clearance (elongated shackle). A galvanized steel chain, nine (9) inches long shall be fastened to the gate and body of each lock. The chain shall

be five-sixteenths (5/16) inch by one and three-eighths (1-3/8) inch. The Contractor shall furnish two (2) keys for each padlock.

BOLT AND HARDWARE INSTALLATION.
Nuts and bolts shall be galvanized but not powder coated. Cans of TGIC-Polyester or PVC touch-up powder coating shall be used to paint the nuts and bolts per manufacturer's recommendations. The ends of all bolts shall be peened after tightening. Bolts which are installed six feet (6') or less above grade shall not protrude more than 1/4" beyond the nut after tightening. All rough edges resulting from the cutting of bolts to achieve this requirement shall be filed smooth to the satisfaction of the Engineer. All post caps, corner and end fittings, and gate hinges on all fence elevations are to be secured in place with #14 SS drive screws to the satisfaction of the Engineer.

ERECTION: The posts shall be set in holes which shall have been formed in the concrete curb as shown on the plans or directed by the Engineer. Voids for posts shall be formed in the concrete by removable waxed sonotubes or galvanized sheet metal sleeves to remain. Core drilling is not permitted. After the posts have been set in place and properly supported to hold them in line and grade, the resulting space shall be neatly filled with a grout consisting of one (1) part cement and two (2) parts sand or approved equivalent. All gates and all end, corner and gateposts, regardless of height of fence shall have a 1/2" diameter truss rod and turnbuckle. Rod shall be tied to the mesh every 12 inches on center with tie-wires. Bolts on the turnbuckle shall be tack welded to prevent loosening. The only exception to the above is that truss rods are not required for end, corner and gateposts for fences 4'-0" ht. and under.

Chain link fabric shall be attached to line and corner posts and top, intermediate and bottom rails. Maintain a min. 1" (inch) clearance between finished grade and fence fabric. Posts shall be set plumb and true to line and grade. Any post not set true to line and grade shall be removed and replaced at the Contractor's expense. Bending posts to make them plumb will not be permitted.

Where single or double barbed wire assemblies are indicated on the plans, the top tension wire shall be run through the top rail hole in the barb arm. The fabric shall be secured to the top tension wire and the barb arm using a #6 gage aluminum wire tie.

The Contractor shall maintain the chain link fences and gates during the life of the contract and shall repair and replace all members that are disturbed, damaged, or destroyed from any cause at no cost to the City.

SUBMITTALS.
Submittals shall be made by the Contractor to the Engineer for approval prior to installation.

Certification: The Contractor shall submit, at his own expense, a certification from the supplier for the following:

1. All castings are made from malleable iron.
2. All hot-dipped galvanized items have met the ASTM serial designations as indicated in this specification.
3. All powder coating meets the ASTM serial designations as indicated in these specifications.

Shop Drawings: Before the work in the shop is started, the Contractor shall submit shop drawings for approval. Include complete details of fence and gate construction, fence height, post spacing, dimensions and unit weights of framework and concrete footing detail.

Samples: Prior to erection of the fence the following shall be submitted:
Fence framework: One piece of each pipe size, twelve (12") inches long.
Fence Fabric: One piece twelve (12") inches square.

Shipping Lists: The shipping list for the materials furnished shall be endorsed with the manufacturer's voucher certifying that the materials used comply with these specifications.

MEASUREMENT.

The quantity of **CHAIN LINK FENCE** to be paid for shall be the number of **LINEAR FEET** of each height, furnished and erected complete in accordance with the plans, specifications and directions of the Engineer.

The quantity of **GATES** for chain link fence with PVC powder coated fabric shall be the number of TGIC-Polyester powder coated gates for chain link fence with PVC powder coated steel fabric (including both leaves of two-leaf gates, gate posts, gate stop, barb arms and barb wires, and chain link fence over the gates) furnished and erected complete in accordance with the plans, specifications, and directions of the Engineer.

PRICES TO COVER.

The price bid shall be a unit price per **LINEAR FOOT** of **CHAIN LINK FENCE** of each height and shall include the cost of all labor, insurance, material, equipment and all incidental expenses necessary to complete the work, including excavation and disposal, removal and disposal of existing fencing, gates, curbs and footings that interfere with new work, installation of concrete footings, foundations and curb walls, furnishing and installation of barb arms and barb wires, powder coating and powder coating touch-up, connections and modifications to existing fencing to remain, and all other requirements to furnish and erect chain link fence with PVC powder coated steel fabric, all in accordance with the contract plans, NYCDPR details, specifications, and to the satisfaction of the Engineer.

The price bid for PVC powder coated gates shall be a unit price for **EACH GATE** for the height of fence specified and shall include the cost of all labor, insurance, material, equipment and all incidental expenses necessary to complete the work, including excavation and disposal, installation of concrete footings and curb walls, removal and disposal of existing fencing, footings and gates, furnishing and installation of barb arms and barb wires, gate stop, powder coating and powder coating touch-up, connections and modifications to existing fencing to remain, and all other requirements to furnish and erect gates with PVC powder coated steel fabric and incidentals, all in accordance with the plans, NYCDPR details, specifications, and to the satisfaction of the Engineer.

The cost of excavation and concrete shall be included under the fence and gate items. No separate payment will be paid for removal of existing fencing, gates, and/or concrete footings. No deductions will be made for openings in fence except where gates occur. The cost for installing portals, as shown on the plans, shall be deemed included in the unit prices bid for these items.

Payment will be made under:

Item No.	Item	Pay Unit
PK-305	CHAIN LINK FENCE 8'-0' HT.	L.F.
PK-308	CHAIN LINK FENCE 12'-0" HT., 2" MESH	L.F.
PK-316	SINGLE GATE FOR CHAIN LINK FENCE 8' HT. & OVER	EACH
PK-319	DOUBLE GATE FOR CHAIN LINK FENCE 8' HT.	EACH
PK-320	DOUBLE GATE FOR CHAIN LINK FENCE 10'HT. & OVER	EACH

ITEM NO. PK-367
TIMBER BARRIER RAIL TWO RAIL (TYPE D)

WORK.

Under these items, the Contractor shall furnish and erect timber barrier railing in accordance with the contract plans and specifications and directions of the Engineer. The work under these items includes necessary excavation and backfill. Unless otherwise indicated, the barrier rail shall conform to NYC Department of Parks & Recreation Standard Detail Sheet "Barrier Rail Types A-D".

MATERIALS.

Posts and Rails: Shall be manufactured of No. 1 common Douglas Fir or Yellow Pine. The posts and rails shall be well manufactured in accordance with details shown on the plans. All exposed corners and faces shall be free from damage, dog holes, and pike or cant holes.

Hardware: All hardware shall be hot-dipped galvanized and shall include bolts with necessary nuts and washers, timber connectors, nails, and other metal fastenings. Bolts and nuts shall conform to ASTM A307.

Foundation Material: Each post shall be supported by a foundation of bagged stone as shown on the standard detail. Recycled concrete (3/4)-inch blend in a burlap bag is acceptable.

PERSERVATIVE TREATMENT.

All wood components shall be pressure preservation treated in strict accordance with the provisions of the AWPA standards. Wood shall be seasoned, either by air- drying or kiln drying, and the moisture content prior to treatment shall be not more than 25%. Wood shall be treated to a net retention of .40 pounds per cubic foot with ACQ (ammoniacal copper quatenary), Copper Azole preservation, or approved equivalent. The preservative shall penetrate 2.5 inches or 85% of the sapwood. All details of treatment methods, quality, control and product testing shall be in accordance with the appropriate AWPA standards. In accordance with New York State law, Bills A102 and S7167, CCA (chromated copper arsenate) treatment is prohibited as a wood preservative treatment material.

If any other preservative treatment is proposed, the Contractor shall submit documentation that such treatment conforms to the AWPA Standards for treatment of the wood for the intended use.

Posts shall be dried at least thirty days after treatment and prior to installation. All fabrication shall be performed prior to treatment. Where field cuts have to be made, the cut ends shall have two coats of concentrated preservative brushed on. Certificate of compliance from the treating plant shall be forwarded to the Engineer.

EXECUTION.

All barrier rail shall be assembled and installed in accordance with the Standard Detail.
Set all carpentry work accurately to required levels and lines, with all members plumb, true, and

accurately cut and fitted. Securely attach carpentry work to substrates by anchoring and fastening as shown on drawings and as required by recognized standards. Do all cutting, fitting, and patching required to properly fit rough carpentry work. Make tight connections between members. Install fasteners without splitting wood. Deep tool marks in wood surfaces shall be considered evidence of poor workmanship and cause for rejection of the pieces affected.

Contractor shall backfill surrounding area to provide positive drainage and in accordance with the drawings. All bolts shall be cut and peened as directed by the Engineer.

WOOD TREATMENT AFFIDAVIT: The Contractor shall provide at his own expense a sworn affidavit as to the type, grade and quality of preservative treatment provided, and the net final retention in pounds per cubic foot of wood impregnated all conforms to the requirements of the specifications.

SHOP DRAWINGS: Contractor shall submit for Engineer's approval product data, installation details, materials and connections.

MEASUREMENT.

The quantity of TIMBER BARRIER RAIL to be paid for under this item shall be the number of LINEAR FEET of each type, measured along the axis of each railing, furnished and erected in accordance with the plans, NYCDPR details, and specifications and directions of the Engineer.

PRICE TO COVER.

The price bid shall be a unit price per LINEAR FOOT of each type of rail and shall include the cost of all labor, insurance, material, equipment and all incidental expenses necessary to complete the work including preservative treatment, excavating, backfilling, bagged stone, cut and peen of bolts, and all other expenses necessary to complete the work in accordance with the plans, NYCDPR details, and specifications to the satisfaction of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
PK-35	TIMBER BARRIER RAIL TWO RAIL (TYPE D)	L.F.

SECTION HW-900H
Allowance for City Work Acceleration

Under this Section, the Contractor will be paid for City work deemed necessary by DDC's Commissioner to accelerate the City work items in the project during critical periods but the use of this item will expire on the original contract substantial completion date. Such accelerated City work includes:

A. 100% of the premium portions of overtime pay for working during non-scheduled work hours which shall be defined as those hours of work outside the permissible hours stated in the original contract OCMC Traffic Stipulations; or,

B. The premium portion of overtime pay for overtime actually worked beyond the 40-hour work week but within the permissible hours of work stated in the original contract OCMC Traffic Stipulations; or,

C. All other incidental expenditures caused by modifications of project site regulations or administrative requirements ordered by the Commissioner that result in additional costs to perform contract work as specified.

Such accelerated City work shall be paid for under this item in accordance with the requirements of **Articles 25 and 26** of the Standard Construction Contract.

Payment made under this Fixed Sum item shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to accelerate the City work as ordered by DDC's Commissioner.

No guarantee is given that this allowance item will in fact be required in this contract. The estimated "fixed sum" amount shown in the Bid Schedule is included in the total bid solely to insure a method of payment for any accelerated work performed by the Contractor, as directed by DDC's Commissioner.

Payment will be made under:

Item No.	Item	Pay Unit
HW-900H	ALLOWANCE FOR CITY WORK ACCELERATION	F.S.

SECTION HW-908
ALLOWANCE FOR EXTRA WORK DUE TO ARCHAEOLOGICAL DISCOVERIES

In accordance with the Special Provisions article titled "ARCHAEOLOGICAL DISCOVERIES", should extra work be ordered by the Resident Engineer as a result of any archaeological discoveries being found under this project, it shall be paid for under this item as extra work in accordance with the requirements of Article 26 in the Standard Construction Contract dated December 2013.

Payment made under this Fixed Sum item shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to complete any extra work ordered by the Resident Engineer due to archaeological discoveries found at the site.

No guarantee is given that this allowance item will in fact be required in this contract. The estimated "fixed sum" amount shown in the Bid Schedule is included in the total bid solely to insure a method of payment for any extra work performed by the Contractor, as directed by the Engineer in consultation with the City's Archaeologist due to archaeological discoveries found at the site.

Payment will be made under:

Item No.	Item	Pay Unit
HW-908	ALLOWANCE FOR EXTRA WORK DUE TO ARCHAEOLOGICAL DISCOVERIES	F.S.

SECTION E 260500
(NOT A BID ITEM)
COMMON WORK RESULTS FOR ELECTRICAL

PART 1 - GENERAL.

1.1 SUMMARY.

A. Section Includes:

1. Electrical equipment coordination and installation.

2. Grout.

3. Common electrical installation requirements.

1.2 COORDINATION

A. Coordinate arrangement, mounting, and support of electrical equipment:

1. To provide for ease of disconnecting the equipment with minimum interference to other installations.

2. To allow right of way for piping and conduit installed at required slope.

3. So connecting raceways, cables, wireways, cable trays, and busways will be clear of obstructions and of the working and access space of other equipment.

B. Coordinate installation of required supporting devices in cast-in-place concrete, masonry walls, and other structural components as they are constructed.

PRODUCTS.

1.3 GROUT

A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

EXECUTION.

1.4 COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION

A. Comply with NECA 1.

B. Measure indicated mounting heights to bottom of unit for suspended items and to center of unit for wall-mounting items.

C. Equipment: Install to facilitate service, maintenance, and repair or replacement of components of both electrical equipment and other nearby installations. Connect in such a way as to facilitate future disconnecting with minimum interference with other items in the vicinity.

D. Right of Way: Give to piping systems installed at a required slope.

MEASUREMENT AND PAYMENT.

No separate payment will be made for work under this Section. The cost of all work under this Section shall be deemed to be included in the cost of other electrical work associated with this project.

SECTION E 260519
LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL.

1.1 SUMMARY.

A. This Section includes the following:

1. Building wires and cables rated 600 V and less.
2. Connectors, splices, and terminations rated 600 V and less.

1.2 SUBMITTALS.

A. Product Data: For each type of product indicated.

B. Field quality-control test reports.

1.3 QUALITY ASSURANCE.

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in the New York City Electrical Code, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Comply with New York City Electrical Code.

PRODUCTS.

1.4 CONDUCTORS AND CABLES

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:

1. Alcan Products Corporation; Alcan Cable Division.
2. American Insulated Wire Corp.; a Leviton Company.
3. General Cable Corporation.
4. Senator Wire & Cable Company.
5. Southwire Company.
6. AFC Cable Systems, Inc.
7. or an approved equivalent.

B. Copper Conductors: Comply with NEMA WC 70.

C. Conductor Insulation: Comply with NEMA WC 70 for Types XHHW.

1.5 CONNECTORS AND SPLICES

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:

1. AFC Cable Systems, Inc.
2. Hubbell Power Systems, Inc.
3. O-Z/Gedney; EGS Electrical Group LLC.

4. 3M; Electrical Products Division.
5. Tyco Electronics Corp.
6. or an approved equivalent.

B. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

EXECUTION.

1.6 CONDUCTOR MATERIAL APPLICATIONS

A. Feeders: All feeders shall be copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

B. Branch Circuits: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

1.7 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

A. Service Entrance: Type XHHW, single conductors in raceway.

B. Feeders: Type XHHW, single conductors in raceway.

C. Branch Circuits: Type XHHW, single conductors in raceway.

1.8 INSTALLATION OF CONDUCTORS AND CABLES

A. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

B. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.

C. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.

1.9 CONNECTIONS

A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

B. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.

C. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches of slack.

1.10 FIELD QUALITY CONTROL

A. Perform tests and inspections and prepare test reports.

B. Tests and Inspections:

1. After installing conductors and cables and before electrical circuitry has been energized, test service entrance and feeder conductors, and branch conductors for compliance with requirements.
2. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.

3. Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform an infrared scan of each splice in cables and conductors No. 3 AWG and larger. Remove box and equipment covers so splices are accessible to portable scanner.

a. Instrument: Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.

b. Record of Infrared Scanning: Prepare a certified report that identifies splices checked and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

C. Test Reports: Prepare a written report to record the following:

1. Test procedures used.
2. Test results that comply with requirements.
3. Test results that do not comply with requirements and corrective action taken to achieve compliance with requirements.

D. Remove and replace malfunctioning units and retest as specified above.

MEASUREMENT AND PAYMENT.

1.11 MEASUREMENT

A. The quantity of Conductors and Cables to be paid for under items E 260519 B, E 260519 C, and E 260519 D shall be the actual number of linear feet of each size conductors and cables actually installed to complete the work, to the satisfaction of the Engineer. When multiple lengths of conductors are used as a cable, each length of conductor shall be measured separately.

1.12 PRICES TO COVER

A. The unit price bid per linear foot of each size Conductor or Cable shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing conductor and cable, and all associated connectors and splices, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
E 260519 B	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 2 AWG WIRE)	L.F.
E 260519 C	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 4 AWG WIRE)	L.F.
E 260519 D	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 6 AWG WIRE)	L.F.

SECTION E 260526
(NOT A BID ITEM)
GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL.

1.1 SUMMARY

A. This Section includes methods and materials for grounding systems and equipment.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Qualification Data: For testing agency and testing agency's field supervisor.

C. Field quality-control test reports.

1.3 QUALITY ASSURANCE

A. Testing Agency Qualifications: An independent agency, with the experience and capability to conduct the testing indicated, that is a member company of the InterNational Electrical Testing Association (NETA) is a nationally recognized testing laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7, and that is acceptable to authorities having jurisdiction.

1. Testing Agency's Field Supervisor: Person currently certified by the InterNational Electrical Testing Association to supervise on-site testing specified in Section 1.11

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in New York City Electrical Code, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

C. Comply with UL 467 for grounding and bonding materials and equipment.

PRODUCTS.

1.4 CONDUCTORS

A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.

B. Bare Copper Conductors:

1. Solid Conductors: ASTM B3.
2. Stranded Conductors: ASTM B8.

3. Tinned Conductors: ASTM B33.
4. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor, 1/4 inch in diameter.
5. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
6. Bonding Jumper: Copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.
7. Tinned Bonding Jumper: Tinned-copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.

1.5 CONNECTORS

A. Listed and labeled by a nationally recognized testing laboratory acceptable to authorities having jurisdiction for applications in which used, and for specific types, sizes, and combinations of conductors and other items connected.

B. Bolted Connectors for Conductors and Pipes: Copper or copper alloy, bolted pressure-type, with at least two bolts.

1. Pipe Connectors: Clamp type, sized for pipe.

C. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

1.6 GROUNDING ELECTRODES

A. Ground Rods: Copper-clad steel; 5/8 by 144 inches in length.

EXECUTION.

1.7 APPLICATIONS

A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger, unless otherwise indicated.

B. Conductor Terminations and Connections:

1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.

2. Underground Connections: Welded connectors, except at test wells and as otherwise indicated.

1.8 GROUNDING UNDERGROUND DISTRIBUTION SYSTEM COMPONENTS

A. Comply with IEEE C2 grounding requirements.

B. Grounding Manholes and Handholes: Install a driven ground rod through manhole or handhole floor, close to wall, and set rod depth so 4 inches will extend above finished floor. If necessary, install ground rod before manhole is placed and provide No. 1/0 AWG bare, tinned-copper conductor from ground rod into manhole through a waterproof sleeve in manhole wall. Protect ground rods

passing through concrete floor with a double wrapping of pressure-sensitive insulating tape or heat-shrunk insulating sleeve from 2 inches above to 6 inches below concrete. Seal floor opening with waterproof, nonshrink grout.

C. Grounding Connections to Manhole Components: Bond exposed-metal parts such as inserts, cable racks, pulling irons, ladders, and cable shields within each manhole or handhole, to ground rod or grounding conductor. Make connections with No. 4 AWG minimum, stranded, hard-drawn copper bonding conductor. Train conductors level or plumb around corners and fasten to manhole walls. Connect to cable armor and cable shields as recommended by manufacturer of splicing and termination kits.

1.9 EQUIPMENT GROUNDING

A. Install insulated equipment grounding conductors with all feeders and branch circuits.

B. Metal and Wood Poles Supporting Outdoor Lighting Fixtures: Install grounding electrode and a separate insulated equipment grounding conductor in addition to grounding conductor installed with branch-circuit conductors.

1.10 INSTALLATION

A. Grounding Conductors: Route along shortest and straightest paths possible, unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

B. Ground Rods: Drive rods until tops are 2 inches below finished floor or final grade, unless otherwise indicated.

1. Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating, if any.

2. For grounding electrode system, install at least two rods spaced at least one-rod length from each other and located at least the same distance from other grounding electrodes, and connect to the service grounding electrode conductor.

C. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance, except where routed through short lengths of conduit.

1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.

2. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install so vibration is not transmitted to rigidly mounted equipment.

3. Use exothermic-welded connectors for outdoor locations, but if a disconnect-type connection is required, use a bolted clamp.

1.11 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing and inspecting agency to perform the following field tests and inspections and prepare test reports:

1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.

2. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal. Make tests at ground rods before any conductors are connected.

   a. Measure ground resistance not less than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.

   b. Perform tests by fall-of-potential method according to IEEE 81.

B. Report measured ground resistances that exceed the following values:

1. Power and Lighting Equipment or System with Capacity 500 kVA and Less: 10 ohms.

2. Substations and Pad-Mounted Equipment: 5 ohms.

3. Manhole Grounds: 10 ohms.

C. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify the Engineer promptly and include recommendations to reduce ground resistance.

MEASUREMENT AND PAYMENT.

No separate payment will be made for work under this Section. The cost of all work under this Section shall be deemed to be included in the cost of other electrical work associated with this project.

SECTION E 260529
(NOT A BID ITEM)
HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL.

1.1 SUMMARY

A. This Section includes the following:
   1. Hangers and supports for electrical equipment and systems.
   2. Construction requirements for concrete bases and electrical enclosure bollards.

1.2 DEFINITIONS

A. RMC: Rigid metal conduit.

1.3 PERFORMANCE REQUIREMENTS

A. Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.

1.4 SUBMITTALS

A. Product Data: For the following:
   1. Steel slotted support systems.
   2. Steel pipe for electrical enclosure bollards.

B. Shop Drawings: Signed and sealed by a qualified Professional Engineer licensed in the State of New York. Show fabrication and installation details and include calculations for the following:
   1. Steel slotted channel systems. Include Product Data for components.
   2. Equipment supports.

C. Welding certificates.

1.5 QUALITY CONTROL

A. Welding: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."

B. Comply with New York City Electrical Code.

1.6 COORDINATION

A. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements.

PRODUCTS.

1.7 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

A. Steel Slotted Support Systems: Comply with MFMA-4, factory-fabricated components for field assembly.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:

a. Allied Tube & Conduit.
b. Cooper B-Line, Inc.; a division of Cooper Industries.
c. ERICO International Corporation.
d. GS Metals Corp.
e. Thomas & Betts Corporation.
f. Unistrut; Tyco International, Ltd.
g. Wesanco, Inc.
h. or an approved equivalent.

2. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
3. Nonmetallic Coatings: Manufacturer's standard PVC, polyurethane, or polyester coating applied according to MFMA-4.
4. Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-4.
5. Channel Dimensions: Selected for applicable load criteria.

B. Raceway and Cable Supports: As described in NECA 1-2010 and NECA 101-2006.

C. Conduit and Cable Support Devices: Steel and malleable-iron hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.

D. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for non-armored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be malleable iron.

E. Structural Steel for Fabricated Supports and Restraints: ASTM A 36/A 36M, steel plates, shapes, and bars; black and galvanized.

F. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:

1. Powder-Actuated Fasteners: Threaded-steel stud, for use in hardened portland cement concrete, steel, or wood, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.

   a. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:

      1) Hilti Inc.
      2) ITW Ramset/Red Head; a division of Illinois Tool Works, Inc.
      3) MKT Fastening, LLC.
      4) Simpson Strong-Tie Co., Inc.; Masterset Fastening Systems Unit.
      5) or an approved equivalent.

2. Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated steel, for use in hardened portland cement concrete with tension, shear, and pullout capacities appropriate for supported loads and building materials in which used.

   a. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

      1) Cooper B-Line, Inc.; a division of Cooper Industries.
      2) Empire Tool and Manufacturing Co., Inc.
      3) Hilti Inc.
      4) ITW Ramset/Red Head; a division of Illinois Tool Works, Inc.
      5) MKT Fastening, LLC.
      6) Or an approved equivalent.

3. Concrete Inserts: Steel or malleable-iron, slotted support system units similar to Manufacturers Standardized Society (MSS) Type 18; complying with MFMA-4 or MSS SP-58.
4. Clamps for Attachment to Steel Structural Elements: MSS SP-58, type suitable for attached structural element.
5. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
6. Toggle Bolts: All-steel springhead type.
7. Hanger Rods: Threaded steel.

1.8 FABRICATED METAL EQUIPMENT SUPPORT ASSEMBLIES

A. Description: Welded or bolted, structural-steel shapes, shop or field fabricated to fit dimensions of supported equipment.

1.9 STEEL PILE ELECTRICAL ENCLOSURE BOLLARDS

A. Description: Steel pipe bollards for electrical box enclosures shall be furnished and painted in accordance with the details shown on the Contract Drawings.

EXECUTION.

1.10 APPLICATION

A. Comply with NECA 1 and NECA 101 for application of hangers and supports for electrical equipment and systems except if requirements in this Section are stricter.

1.11 SUPPORT INSTALLATION

A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this Article.

B. Raceway Support Methods: In addition to methods described in NECA 1, Electrical Metallic Tubing (EMT), Intermediate Metal Conduit (IMC), and Rigid Metal Conduit (RMC) may be supported by openings through structure members, as permitted in New York City Electrical Code.

C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb.

D. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:

1. To Wood: Fasten with lag screws or through bolts.
2. To New Concrete: Bolt to concrete inserts.
3. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
4. To Existing Concrete: Expansion anchor fasteners.
5. Instead of expansion anchors, powder-actuated driven threaded studs provided with lock washers and nuts may be used in existing standard-weight concrete 4 inches thick or greater. Do not use for anchorage to lightweight-aggregate concrete or for slabs less than 4 inches thick.
6. To Steel: Beam clamps (MSS Type 19, 21, 23, 25, or 27) complying with MSS SP-69.
7. To Light Steel: Sheet metal screws.
8. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate by means that meet seismic-restraint strength and anchorage requirements.

E. Drill holes for expansion anchors in concrete at locations and to depths that avoid reinforcing bars.

1.12 INSTALLATION OF FABRICATED METAL SUPPORTS

A. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.

B. Field Welding: Comply with AWS D1.1/D1.1M.

1.13 PAINTING

A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.

1. Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils.

B. Touchup: Comply with requirements for cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint on miscellaneous metal.

C. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

PART 3 - MEASUREMENT AND PAYMENT.

No separate payment will be made for work under this Section. The cost of all work under this Section shall be deemed to be included in the cost of other electrical work associated with this project.

SECTION E 260533
RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL.

1.1 SUMMARY

A. This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.

1.2 DEFINITIONS

A. LFMC: Liquidtight flexible metal conduit.

1.3 SUBMITTALS

A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.

B. Shop Drawings: For the following raceway components. Include plans, elevations, sections, details, and attachments to other work.

1. Custom enclosures and cabinets.

2. For handholes and boxes for underground wiring, including the following:

a. Duct entry provisions, including locations and duct sizes.
b. Frame and cover design.
c. Grounding details.
d. Dimensioned locations of cable rack inserts, and pulling-in and lifting irons.
e. Joint details.

1.4 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in New York City Electrical Code, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Comply with New York City Electrical Code.

PRODUCTS.

1.5 METAL CONDUIT AND TUBING

A. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:

1. AFC Cable Systems, Inc.
2. Alflex Inc.
3. Allied Tube & Conduit; a Tyco International Ltd. Co.

4. Anamet Electrical, Inc.; Anaconda Metal Hose.
5. Electri-Flex Co.
6. Manhattan/CDT/Cole-Flex.
7. Maverick Tube Corporation.
8. O-Z Gedney; a unit of General Signal.
9. Wheatland Tube Company.
10. or an approved equivalent.

B. Rigid Steel Conduit: ANSI C80.1.

C. LFMC: Flexible steel conduit with PVC jacket.

D. Joint Compound for Rigid Steel Conduit: Listed for use in cable connector assemblies, and compounded for use to lubricate and protect threaded raceway joints from corrosion and enhance their conductivity.

1.6 RIGID NON-METALLIC CONDUIT

A. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:

1. Carlon Electrical Sciences.
2. National Pipe Company.
3. Can-Tex Industries.
4. Southern Pipe, Inc.
5. Or an approved equivalent

B. Description: PVC conduit conforming to ASTM D 1784, Class 12454-B. Conduit shall exceed all the property requirements include impact strength, chemical resistance, and flammability as listed in UL 651 and NEMA TC 2. Conduit shall be Type II, Schedule suitable for direct burial.

Fittings and Accessories: Use fittings that are made from high impact PVC, are the socket type, and are joined to the conduit using PVC solvent.

1.7 BOXES, ENCLOSURES, AND CABINETS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:

1. Cooper Crouse-Hinds; Div. of Cooper Industries, Inc.
2. EGS/Appleton Electric.
3. Erickson Electrical Equipment Company.
4. Hoffman.
5. Hubbell Incorporated; Killark Electric Manufacturing Co. Division.
6. O-Z/Gedney; a unit of General Signal.
7. RACO; a Hubbell Company.
8. Robroy Industries, Inc.; Enclosure Division.
9. Scott Fetzer Co.; Adalet Division.
10. Spring City Electrical Manufacturing Company.

11. Thomas & Betts Corporation.
12. Walker Systems, Inc.; Wiremold Company (The).
13. Woodhead, Daniel Company; Woodhead Industries, Inc. Subsidiary.
14. or an approved equivalent.

B. Sheet Metal Outlet and Device Boxes: NEMA OS 1.

C. Hinged-Cover Enclosures: NEMA 250, Type 4X, with continuous-hinge cover with flush vandal resistant latch, unless otherwise indicated.

1. Load Center Enclosure: Aluminum Alloy 5052-H32

1.8 HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING

A. Description: Comply with Society of Cable Telecommunications Engineers Specification SCTE 77.

1. Color of Frame and Cover: Gray in hardscaped areas and Green in landscaped areas.
2. Configuration: Units shall be designed for flush burial and have open bottom, unless otherwise indicated.
3. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure.
4. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
5. Cover Legend: Molded lettering, as indicated for each service.
6. Conduit Entrance Provisions: Conduit-terminating fittings shall mate with entering ducts for secure, fixed installation in enclosure wall.
7. Handholes 12 inches wide by 24 inches long and larger shall have inserts for cable racks and pulling-in irons installed before concrete is poured.

B. Polymer-Concrete Handholes and Boxes with Polymer-Concrete Cover: Molded of sand and aggregate, bound together with polymer resin, and reinforced with steel or fiberglass or a combination of the two.

1. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following manufacturers:

a. Armorcast Products Company.
b. Carson Industries LLC.
c. CDR Systems Corporation.
d. NewBasis.
e. or an approved equivalent.

EXECUTION.

1.9 RACEWAY APPLICATION

A. Outdoors: Apply raceway products as specified below, unless otherwise indicated:

1. Exposed Conduit: Rigid steel conduit.
2. Concealed Conduit, Aboveground: Rigid steel conduit.
3. Underground Conduit: Rigid Non-Metallic Conduit, direct buried.
4. Boxes and Enclosures, Aboveground: NEMA 250, Type 4X.

B. Minimum Raceway Size: 11/2-inch trade size.

C. Raceway Fittings: Compatible with raceways and suitable for use and location.

1. Rigid Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.
2. Rigid Non-Metallic Conduit shall be PVC, Type II, Schedule 40 suitable for direct burial underground. Use fittings that are made from high impact PVC, are the socket type, and are joined to the conduit using PVC solvent cement.

1.10 INSTALLATION

A. Comply with NECA 1 for installation requirements applicable to products specified in Part 2 except where requirements on Drawings or in this Article are stricter.

B. Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.

C. Complete raceway installation before starting conductor installation.

D. Arrange stub-ups so curved portions of bends are not visible above the finished slab.

E. Install no more than the equivalent of three 90-degree bends in any conduit run except for communications conduits, for which fewer bends are allowed.

F. Conceal conduit, unless otherwise indicated.

G. Raceways Embedded in Slabs:

1. Run conduit larger than 1-inch trade size, parallel or at right angles to main reinforcement. Where at right angles to reinforcement, place conduit close to slab support.

H. Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.

I. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors, including conductors smaller than No. 4 AWG.

J. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull wire.

K. Raceways for Optical Fiber and Communications Cable: Install raceways, metallic and nonmetallic, rigid and flexible, as follows:

1. 3/4-Inch Trade Size and Smaller: Install raceways in maximum lengths of 50 feet.

2. 1-Inch Trade Size and Larger: Install raceways in maximum lengths of 75 feet.

3. Install with a maximum of two 90-degree bends or equivalent for each length of raceway unless Drawings show stricter requirements. Separate lengths with pull or junction boxes or terminations at distribution frames or cabinets where necessary to comply with these requirements

L. Install raceway sealing fittings at suitable, approved, and accessible locations and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings at the following points:

1. Where required by New York City Electrical Code.

1.11 INSTALLATION OF UNDERGROUND CONDUIT

A. Direct-Buried Conduit:

1. Excavate trench bottom to provide firm and uniform support for conduit. Prepare trench bottom for pipe less than 6 inches in nominal diameter.

2. Install backfill.

3. After installing conduit, backfill and compact. Start at tie-in point, and work toward end of conduit run, leaving conduit at end of run free to move with expansion and contraction as temperature changes during this process. Firmly hand tamp backfill around conduit to provide maximum supporting strength. After placing controlled backfill to within 12 inches of finished grade, make final conduit connection at end of run and complete backfilling with normal compaction.

a. Install manufactured PVC conduit elbows for stub-ups at poles.

b. Rigid Metallic Conduits core drilled through the building wall shall have conduit link seals installed.

4. Warning Planks: Bury warning planks approximately 12 inches above direct-buried conduits, placing them 24 inches o.c. Align planks along the width and along the centerline of conduit.

1.12 INSTALLATION OF UNDERGROUND HANDHOLES AND BOXES

A. Install handholes and boxes level and plumb and with orientation and depth coordinated with connecting conduits to minimize bends and deflections required for proper entrances.

B. Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1/2-inch sieve to No. 4 sieve and compacted to same density as adjacent undisturbed earth.

C. Elevation: In paved areas, set so cover surface will be flush with finished grade. Set covers of other enclosures 1 inch above finished grade.

D. Install removable hardware, including pulling eyes, cable stanchions, cable arms, and insulators, as required for installation and support of cables and conductors and as indicated. Select arm lengths to be long enough to provide spare space for future cables, but short enough to preserve adequate working clearances in the enclosure.

E. Field-cut openings for conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

1.13 PROTECTION

A. Provide final protection and maintain conditions that ensure coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.

1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.

2. Repair damage to paint finishes with matching touchup coating recommended by manufacturer.

MEASUREMENT AND PAYMENT.

1.14 MEASUREMENT

A. The quantity of Metal Conduit And Tubing to be paid for under ITEMS E 260533 AC, and E 260533 AC3.0 shall be the actual number of linear feet of Metal Conduit and Tubing, installed to complete the work, to the satisfaction of the Engineer.

B. The quantity of Rigid Non-Metallic Conduit to be paid for under ITEM E 260533 P1.5 and E 260533 P2.0 shall be the actual number of linear feet of Rigid Non-Metallic Conduit, installed to complete the work, to the satisfaction of the Engineer.

C. The quantity of Load Centers to be paid for under ITEMS E 260533 CE, E 260533 CF-1 and E 260533 CF-2 shall be the actual number of Load Centers installed to complete the work, to the satisfaction of the Engineer.

D. The quantity of Junction Boxes for exterior underground wiring to be paid for under ITEM E 260533 D shall be the actual number of Junction Boxes for exterior underground wiring, installed to complete the work, to the satisfaction of the Engineer.

1.15 PRICES TO COVER

A. The unit price bid per linear foot of Metal Conduit And Tubing, under items E 260533 AC and E 260533 AC3.0 shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing Metal Conduit and Tubing,, furnishing and installing ground wire and all associated connectors and splices, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

B. The unit price bid per linear foot of Rigid Non-Metallic Conduit, under ITEMS E 260533 P1.5 and E 260533 P2.0 shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing Rigid Non- Metallic Conduit, furnishing and installing ground wire and all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

C. The unit price bid per each Load Center - Electrical, under ITEM E 260533 CE shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing concrete foundations and footings, furnishing and installing load center enclosure, panel board, circuit breakers, duplex GFCI receptacle, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

D. The unit price bid per each Load Center – Communications (Type 1 – Relocated Switch), under Item E 260533 CF-1 shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including,

but not limited to, furnishing and placing concrete foundations and footings and furnishing and installing the Communications Cabinet Enclosure and duplex receptacles, relocating existing communication equipment from the existing Bronx Zoo Parking Booth to the new Communications Load Center Enclosure all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

E. The unit price bid per each Load Center – Communications (Type 2 – New Switch), under Item E 260533 CF-2 shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing concrete foundations and footings, furnishing and installing the new Communications Load Center Enclosure, new network switch, new fiber optic transceiver, new UPS and duplex receptacles, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer

F. The unit price bid per each Junction Box for exterior underground wiring, under ITEM E 260533 D, shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing the Junction Boxes for exterior underground wiring, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
E 260533 AC	METAL CONDUIT AND TUBING (2" GALVANIZED RIGID STEEL CONDUIT)	L.F.
E 260533 AC3.0	METAL CONDUIT AND TUBING (3" GALVANIZED RIGID STEEL CONDUIT)	L.F.
E 260533 P1.5	RIGID NON-METALLIC CONDUIT (11/2" PVC SCHEDULE 40 CONDUIT)	L.F.
E 260533 P2.0	RIGID NON-METALLIC CONDUIT (2" PVC SCHEDULE 40 CONDUIT)	L.F.
E 260533 CE	LOAD CENTER – ELECTRICAL	EACH
E 260533 CF-1	LOAD CENTER - COMMUNICATIONS (Type 1 – Relocated Switch)	EACH
E 260533 CF-2	LOAD CENTER - COMMUNICATIONS (Type 2 - New Switch)	EACH
E 260533 D	HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING	EACH

SECTION E 260553
(NOT A BID ITEM)
IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL.

1.1 SUMMARY

A. Section Includes:

1. Identification for raceways.
2. Identification of power and control cables.
3. Identification for conductors.
4. Underground-line warning tape.
5. Warning labels and signs.
6. Instruction signs.
7. Equipment identification labels.
8. Miscellaneous identification products.

1.2 SUBMITTALS

A. Product Data: For each electrical identification product indicated.

B. Samples: For each type of label and sign to illustrate size, colors, lettering style, mounting provisions, and graphic features of identification products.

C. Identification Schedule: An index of nomenclature of electrical equipment and system components used in identification signs and labels.

1.3 QUALITY ASSURANCE

A. Comply with ANSI A13.1 and IEEE C2.

B. Comply with New York City Electrical Code.

C. Comply with OSHA 29 CFR 1910.144 and OSHA 29 CFR 1910.145.

D. Comply with ANSI Z535.4 for safety signs and labels.

E. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

1.4 COORDINATION

A. Coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Contract Drawings, Shop Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual; and with those required by codes, standards, and OSHA 29 CFR 1910.145. Use consistent designations throughout Project.

B. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.

C. Coordinate installation of identifying devices with location of access panels and doors.

D. Install identifying devices before installing acoustical ceilings and similar concealment.

PRODUCTS.

1.5 POWER RACEWAY IDENTIFICATION MATERIALS

A. Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway size.

B. Colors for Raceways Carrying Circuits at 600 V or Less:

1. Black letters on an orange field.

2. Legend: Indicate voltage and system or service type.

C. Self-Adhesive Vinyl Labels for Raceways Carrying Circuits at 600 V or Less: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

D. Snap-Around Labels for Raceways Carrying Circuits at 600 V or Less: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeve, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

E. Snap-Around, Color-Coding Bands for Raceways Carrying Circuits at 600 V or Less: Slit, pretensioned, flexible, solid-colored acrylic sleeve, 2 inches long, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

F. Metal Tags: Brass or aluminum, 2 by 2 by 0.05 inch, with stamped legend, punched for use with self-locking cable tie fastener.

G. Write-On Tags: Polyester tag, 0.010 inch thick, with corrosion-resistant grommet and cable tie for attachment to conductor or cable.

1. Marker for Tags: Permanent, waterproof, black ink marker recommended by tag manufacturer.

1.6 POWER AND CONTROL CABLE IDENTIFICATION MATERIALS

A. Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway and cable size.

B. Self-Adhesive Vinyl Labels: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

C. Metal Tags: Brass or aluminum, 2 by 2 by 0.05 inch, with stamped legend, punched for use with self-locking cable tie fastener.

D. Write-On Tags: Polyester tag, 0.010 inch thick, with corrosion-resistant grommet and cable tie for attachment to conductor or cable.

1. Marker for Tags: Permanent, waterproof, black ink marker recommended by tag manufacturer.

E. Snap-Around Labels: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeve, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

1.7 CONDUCTOR IDENTIFICATION MATERIALS

A. Color-Coding Conductor Tape: Colored, self-adhesive vinyl tape not less than 3 mils thick by 1 to 2 inches wide.

B. Self-Adhesive Vinyl Labels: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

C. Snap-Around Labels: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeve, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

D. Snap-Around, Color-Coding Bands: Slit, pretensioned, flexible, solid-colored acrylic sleeve, 2 inches long, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

E. Marker Tapes: Vinyl or vinyl-cloth, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process.

F. Write-On Tags: Polyester tag, 0.010 inch thick, with corrosion-resistant grommet and cable tie for attachment to conductor or cable.

1. Marker for Tags: Machine-printed, permanent, waterproof, black ink marker recommended by printer manufacturer.

1.8 UNDERGROUND-LINE WARNING TAPE

A. Tape:

1. Recommended by manufacturer for the method of installation and suitable to identify and locate underground electrical and communications utility lines.

2. Printing on tape shall be permanent and shall not be damaged by burial operations.

3. Tape material and ink shall be chemically inert, and not subject to degrading when exposed to acids, alkalis, and other destructive substances commonly found in soils.

B. Color and Printing:

1. Comply with ANSI Z535.1 through ANSI Z535.5.

2. Inscriptions for Red-Colored Tapes: ELECTRIC LINE, HIGH VOLTAGE.

3. Inscriptions for Orange-Colored Tapes: TELEPHONE CABLE, CATV CABLE, COMMUNICATIONS CABLE, OPTICAL FIBER CABLE, FIRE ALARM.

C. Material:

1. Detectable three-layer laminate, consisting of a printed pigmented polyolefin film, a solid aluminum-foil core, and a clear protective film that allows inspection of the continuity of the conductive core, bright-colored, continuous-printed on one side with the inscription of the utility, compounded for direct-burial service.

2. Overall Thickness: 5 mils.

3. Foil Core Thickness: 0.35 mil.

4. Weight: 28 lb/1000 SF.

5. 3-Inch Tensile According to ASTM D 882: 70 lbf, and 4600 psi.

1.9 WARNING LABELS AND SIGNS

A. Comply with New York City Electrical Code and OSHA 29 CFR 1910.145.

B. Self-Adhesive Warning Labels: Factory-printed, multicolor, pressure-sensitive adhesive labels, configured for display on front cover, door, or other access to equipment unless otherwise indicated.

C. Baked-Enamel Warning Signs:

1. Preprinted aluminum signs, punched or drilled for fasteners, with colors, legend, and size required for application.

2. 1/4-inch grommets in corners for mounting.
3. Nominal size, 7 by 10 inches.

D. Metal-Backed, Butyrate Warning Signs:

1. Weather-resistant, nonfading, preprinted, cellulose-acetate butyrate signs with 0.0396-inch galvanized-steel backing; and with colors, legend, and size required for application.

2. 1/4-inch grommets in corners for mounting.

3. Nominal size, 10 by 14 inches.

E. Warning label and sign shall include, but are not limited to, the following legends:

1. Multiple Power Source Warning: "DANGER - ELECTRICAL SHOCK HAZARD - EQUIPMENT HAS MULTIPLE POWER SOURCES."

2. Workspace Clearance Warning: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36 INCHES."

1.10 INSTRUCTION SIGNS

A. Engraved, laminated acrylic or melamine plastic, minimum 1/16 inch thick for signs up to 20 sq. inches and 1/8 inch thick for larger sizes.

1. Engraved legend with black letters on white face.

2. Punched or drilled for mechanical fasteners.

3. Framed with mitered acrylic molding and arranged for attachment at applicable equipment.

B. Adhesive Film Label: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch.

C. Adhesive Film Label with Clear Protective Overlay: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch. Overlay shall provide a weatherproof and UV-resistant seal for label.

1.11 EQUIPMENT IDENTIFICATION LABELS

A. Adhesive Film Label: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch.

B. Adhesive Film Label with Clear Protective Overlay: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch. Overlay shall provide a weatherproof and UV-resistant seal for label.

C. Self-Adhesive, Engraved, Laminated Acrylic or Melamine Label: Adhesive backed, with white letters on a dark-gray background. Minimum letter height shall be 3/8 inch.

D. Engraved, Laminated Acrylic or Melamine Label: Punched or drilled for screw mounting. White letters on a dark-gray background. Minimum letter height shall be 3/8 inch.

E. Stenciled Legend: In nonfading, waterproof, black ink or paint. Minimum letter height shall be 1 inch.

1.12 CABLE TIES

A. General-Purpose Cable Ties: Fungus inert, self-extinguishing, one piece, self-locking, Type 6/6 nylon.

1. Minimum Width: 3/16 inch.

2. Tensile Strength at 73 deg F, According to ASTM D 638: 12,000 psi.

3. Temperature Range: Minus 40 to plus 185 deg F.

4. Color: Black except where used for color-coding.

B. UV-Stabilized Cable Ties: Fungus inert, designed for continuous exposure to exterior sunlight, self-extinguishing, one piece, self-locking, Type 6/6 nylon.

1. Minimum Width: 3/16 inch.

2. Tensile Strength at 73 deg F, According to ASTM D 638: 12,000 psi.

3. Temperature Range: Minus 40 to plus 185 deg F.

4. Color: Black.

1.13 MISCELLANEOUS IDENTIFICATION PRODUCTS

A. Paint: Select paint system applicable for surface material and location (exterior or interior).

B. Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

EXECUTION.

1.14 INSTALLATION

A. Verify identity of each item before installing identification products.

B. Location: Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.

C. Apply identification devices to surfaces that require finish after completing finish work.

D. Self-Adhesive Identification Products: Clean surfaces before application, using materials and methods recommended by manufacturer of identification device.

E. System Identification Color-Coding Bands for Raceways and Cables: Each color-coding band shall completely encircle cable or conduit. Place adjacent bands of two-color markings in contact, side by side. Locate bands at changes in direction, at penetrations of walls and floors, at 50-foot maximum intervals in straight runs, and at 25-foot maximum intervals in congested areas.

F. Aluminum Wraparound Marker Labels and Metal Tags: Secure tight to surface of conductor or cable at a location with high visibility and accessibility.

G. Cable Ties: For attaching tags. Use general-purpose type, except as listed below:

1. Outdoors: UV-stabilized nylon.

H. Underground-Line Warning Tape: During backfilling of trenches install continuous underground-line warning tape directly above line at 6 to 8 inches below finished grade. Use multiple tapes where width of multiple lines installed in a common trench or concrete envelope exceeds 16 inches overall.

I. Painted Identification: Comply with requirements in Division 09 painting Sections for surface preparation and paint application.

1.15 IDENTIFICATION SCHEDULE

A. Accessible Raceways and Metal-Clad Cables, 600 V or Less, for Service, Feeder, and Branch Circuits More Than 50 A, and 120 V to ground: Identify with self-adhesive vinyl tape applied in bands. Install labels at 30-foot maximum intervals.

B. Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use color-coding conductor tape to identify the phase.

1. Color-Coding for Phase and Voltage Level Identification, 600 V or Less: Use colors listed below for ungrounded service feeder and branch-circuit conductors.

a. Color shall be factory applied or field applied for sizes larger than No. 8 AWG, if authorities having jurisdiction permit.

b. Colors for 208/120-V Circuits:

1) Phase A: Black.

2) Phase B: Red.
3) Phase C: Blue.

c. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches from terminal points and in boxes where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding. Locate bands to avoid obscuring factory cable markings.

C. Install instructional sign including the color-code for grounded and ungrounded conductors using adhesive-film-type labels.

D. Conductors to Be Extended in the Future: Attach marker tape to conductors and list source.

E. Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.

1. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, and pull points. Identify by system and circuit designation.

2. Use system of marker tape designations that is uniform and consistent with system used by manufacturer for factory-installed connections.

3. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual.

F. Locations of Underground Lines: Identify with underground-line warning tape for power, lighting, communication, and control wiring and optical fiber cable.

1. Install underground-line warning tape for both direct-buried cables and cables in raceway.

G. Workspace Indication: Install floor marking tape to show working clearances in the direction of access to live parts. Workspace shall be as required by New York City Electrical Code and OSHA 29 CFR 1926.403 unless otherwise indicated. Do not install at flush-mounted panelboards and similar equipment in finished spaces.

H. Warning Labels for Indoor Cabinets, Boxes, and Enclosures for Power and Lighting: Self-adhesive warning labels.

1. Comply with OSHA 29 CFR 1910.145.

2. Identify system voltage with black letters on an orange background.

3. Apply to exterior of door, cover, or other access.

4. For equipment with multiple power or control sources, apply to door or cover of equipment including, but not limited to, the following:

a. Power transfer switches.
b. Controls with external control power connections.

I. Operating Instruction Signs: Install instruction signs to facilitate proper operation and maintenance of electrical systems and items to which they connect. Install instruction signs with approved legend where instructions are needed for system or equipment operation.

J. Emergency Operating Instruction Signs: Install instruction signs with white legend on a red background with minimum 3/8-inch- high letters for emergency instructions at equipment used for power transfer.

K. Equipment Identification Labels: On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and the Operation and Maintenance Manual. Apply labels to disconnect switches and protection equipment, central or master units, control panels, control stations, terminal cabinets, and racks of each system. Systems include power, lighting, control, communication, signal, monitoring, and alarm systems unless equipment is provided with its own identification.

1. Labeling Instructions:

   a. Indoor Equipment: Self-adhesive, engraved, laminated acrylic or melamine label. Unless otherwise indicated, provide a single line of text with 1/2-inch- high letters on 1-1/2-inch- high label; where two lines of text are required, use labels 2 inches high.
   b. Outdoor Equipment: Engraved, laminated acrylic or melamine label.
   c. Elevated Components: Increase sizes of labels and letters to those appropriate for viewing from the floor.
   d. Unless provided with self-adhesive means of attachment, fasten labels with appropriate mechanical fasteners that do not change the NEMA or NRTL rating of the enclosure.

2. Equipment to Be Labeled:

   a. Panelboards: Typewritten directory of circuits in the location provided by panelboard manufacturer. Panelboard identification shall be self-adhesive, engraved, laminated acrylic or melamine label.
   b. Enclosures and electrical cabinets.
   c. Access doors and panels for concealed electrical items.
   d. Enclosed switches.
   e. Enclosed circuit breakers.
   f. Enclosed controllers.
   g. Contactors.

MEASUREMENT AND PAYMENT.

No separate payment will be made for work under this Section. The cost of all work under this Section shall be deemed to be included in the cost of other electrical work associated with this project.

SECTION E 262726
(NOT A BID ITEM)
WIRING DEVICES

PART 1 - GENERAL.

1.1 RELATED DOCUMENTS

A. Drawings and general conditions of the Contract apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Receptacles, receptacles with integral GFCI, and associated device plates.
2. Power pedestals.
3. Toggle switches.
4. Spring wound mechanical timers.
5. Utility light fixtures.
6. Electric heaters.

1.3 DEFINITIONS

A. GFCI: Ground-fault circuit interrupter.

B. Pigtail: Short lead used to connect a device to a branch-circuit conductor.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: List of legends and description of materials and process used for premarking wall plates.

C. Field quality-control test reports.

D. Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing label warnings and instruction manuals that include labeling conditions.

1.5 QUALITY ASSURANCE

A. Source Limitations: Obtain each type of wiring device and associated wall plate through one source from a single manufacturer. Insofar as they are available, obtain all wiring devices and associated wall plates from a single manufacturer and one source.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in the New York City Electrical Code, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

C. Comply with the New York City Electrical Code.

PRODUCTS.

1.6 MANUFACTURERS

A. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other articles:

1. Cooper Wiring Devices; a division of Cooper Industries, Inc. (Cooper).
2. Hubbell Incorporated; Wiring Device-Kellems (Hubbell).
3. Leviton Mfg. Company Inc. (Leviton).
4. Pass & Seymour/Legrand; Wiring Devices & Accessories (Pass & Seymour).
5. or an approved equivalent manufacturer.

1.7 GFCI RECEPTACLES

A. General Description: Straight blade, feed-through type. Comply with NEMA WD 1, NEMA WD 6, UL 498, and UL 943, Class A, and include indicator light that is lighted when device is tripped.

B. Duplex GFCI Convenience Receptacles, 125 V, 20 A:

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include the following:

a. Cooper; GF20.
b. Pass & Seymour; 2084.
c. Hubbell.
d. Leviton.
e. or an approved equivalent.

1.8 WALL PLATES

A. Single and combination types to match corresponding wiring devices.

1. Plate-Securing Screws: Metal with head color to match plate finish.

2. Material: 0.05-inch - thick, anodized aluminum.

1.9 FINISHES

A. Color: Wiring device catalog numbers in Section Text do not designate device color.

1. Wiring Devices Connected to Normal Power System: As selected by the Engineer, unless otherwise indicated or required by the New York City Electrical Code or device listing.

EXECUTION.

1.10 INSTALLATION

A. Comply with NECA 1, including the mounting heights listed in that standard, unless otherwise noted.

B. Coordination with Other Trades:

1. Take steps to insure that devices and their boxes are protected. Do not place wall finish materials over device boxes and do not cut holes for boxes with routers that are guided by riding against outside of the boxes.
2. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables
3. Install device boxes in brick or block walls so that the cover plate does not cross a joint unless the joint is troweled flush with the face of the wall.
4. Install wiring devices after all wall preparation, including painting, is complete.

C. Conductors:

1. Do not strip insulation from conductors until just before they are spliced or terminated on devices.
2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.
3. The length of free conductors at outlets for devices shall meet provisions of the New York City Electrical Code, Article 300, without pigtails.
4. Existing Conductors:

   a. Cut back and pigtail, or replace all damaged conductors.
   b. Straighten conductors that remain and remove corrosion and foreign matter.
   c. Pigtailing existing conductors is permitted provided the outlet box is large enough.

D. Device Installation:

1. Replace all devices that have been in temporary use during construction or that show signs that they were installed before finishing operations were complete.
2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
4. Connect devices to branch circuits using pigtails that are not less than 6 inches in length.

5. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, 2/3 to 3/4 of the way around terminal screw.
6. Use a torque screwdriver when a torque is recommended or required by the manufacturer.
7. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections.
8. Tighten unused terminal screws on the device.
9. When mounting into metal boxes, remove the fiber or plastic washers used to hold device mounting screws in yokes, allowing metal-to-metal contact.

E. Receptacle Orientation:

1. Install ground pin of vertically mounted receptacles down, and on horizontally mounted receptacles to the right.

F. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.

G. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.

H. Adjust locations of outlets and service poles as may be required.

Load Center Enclosure: Distance between grade and the bottom of the GFI receptacles shall be 12 inches minimum. Load Center Enclosure shall be installed on a concrete base as per the Contract Drawings. Concrete shall comply with the requirements of the NYCDOT Standard Highway Specifications, Section 3.05, Class B-32, Type IIA, and the cost shall be deemed included under Item E 260533 CE-Load Center Enclosure.

1.11 FIELD QUALITY CONTROL

A. Perform tests and inspections and prepare test reports.

1. Test Instruments: Use instruments that comply with UL 1436.
2. Test Instrument for Convenience Receptacles: Digital wiring analyzer with digital readout or illuminated LED indicators of measurement.

B. Tests for Convenience Receptacles:

1. Line Voltage: Acceptable range is 105 to 132 V.
2. Percent Voltage Drop under 15-A Load: A value of 6 percent or higher is not acceptable.
3. Ground Impedance: Values of up to 2 ohms are acceptable.
4. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.
5. Using the test plug, verify that the device and its outlet box are securely mounted.

6. The tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault current path, defective devices, or similar problems. Correct circuit conditions, remove malfunctioning units and replace with new ones, and retest as specified above.

MEASUREMENT AND PAYMENT.

No separate payment will be made for work under this Section. The cost of all work under this Section shall be deemed to be included in the cost of other electrical work associated with this project.

SECTION 265600
EXTERIOR LIGHTING

PART 1- GENERAL.

1.1 SUMMARY

A. This Section includes the following:

1. Area Lighting Poles
2. Area Lighting Luminaires

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Field quality-control test reports.

1.3 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in the New York City Electrical Code, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Comply with New York City Electrical Code.

PRODUCTS.

1.4 AREA LIGHTING POLES

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:

1. Hapco.
2. Flagpoles, Inc.
3. Union Metal Corp.
4. On an approved equivalent.

B. MATERIALS

1. SHAFT

The shaft shall be square and shall be constructed of seamless extruded tube of 6063 or 6061aluminum alloy per the requirements of ASTM B221 of sufficient nominal thickness to meet the design requirements without the use of internal reinforcing sleeve.

No longitudinal shaft welds shall be allowed. The shaft shall be full-length heat-treated after welding to produce a T6 temper. The heat-treating oven used shall be certified to meet the requirements of ASTM B597 and Mil-H-6088 specifications. Pole shaft cap shall be cast aluminum of 443 or 356F aluminum alloy and attached utilizing stainless steel screws.

2. BASE FLANGE

The base flange for the attachment of the shaft to the transformer base shall be one piece cast socket of aluminum alloy 356 per ASTM B26 or B108. Base flange shall be joined to pole shaft by means of complete circumferential welds; externally at the top of flange and internally at bottom of shaft tube. Four anchor bolt covers of cast aluminum and stainless steel screws for their attachment shall be provided.

3. TRANSFORMER BASE

The breakaway transformer base shall be an aluminum casting (alloy 356-T6) with removable access door held in place with one stainless steel screw. The base shall be 17" tall with access door 11-3/4" high with a width of 9-1/4" at the top and 9-3/4" at the bottom. It shall connect to 1" diameter anchorage. The base shall meet 2001AASHTO breakaway requirements. Four 1" diameter galvanized steel hex-head machine bolts with nuts and washer shall be supplied to attach the transformer bases to the base flange of the pole shaft. Eight 1/2" thick x 2-3/4" diameter galvanized steel heavy washers shall be provided to properly distribute the bolt forces in the top and bottom flanges of the transformer base.

4. ANCHORAGE

Each anchor base pole shall be supplied with anchor bolts. Anchor bolts shall have minimum yield strength of 55,000 psi per AASHTO M314-90. Steel anchor bolts threaded and hot-dipped galvanized at the threaded end per ASTM A153 shall be supplied with each lighting pole. The bolts shall include a right angle hook at the unthreaded end. One hex nut, one flatwasher and one lockwasher galvanized per ASTM A153 shall be supplied with each anchor bolt.

5. GROUNDING

Each pole shaft shall contain an internal ground provision for the purpose of attaching a grounding connector.

6. MISCELLANEOUS HARDWARE

All nuts, bolts, and washers used in the fabrication of the pole shall be Grade 18-8 stainless steel, except for anchorage hardware.

7. WELDING

Welding shall be done by inert gas shielded metal arc method with consumable electrode. Aluminum alloy 4043 electrode shall be used. Welding shall be in accordance with AWS Specification 01.2, Structural Welding Code - Aluminum.

8. SURFACE FINISH

The pole shaft shall be provided with a satin finish accomplished by mechanical rotary. The mast, truss and floodlight cross arm bracket shall be provided with a satin etched finish by mechanically abrading. The davit bracket arms shall have the same finish as is on the shaft. All materials shall be cleaned and free from dents and unsightly scratches.

9. SURFACE PREPARATION

Pole shafts shall be satin ground, chemically etched or shot blasted to ensure proper powder coat surface adhesion. To ensure that the prepared parts are kept clean and not exposed to dirt, dust, grease or oil and to ensure maximum powder coat adhesion, the product shall proceed continuously and immediately to the powder coating process within the same facility where the poles and arms are manufactured.

10. POWDER COATING

Powder coating material shall be a thermosetting Polyester Powder Coating. A minimum coating 2.0 mils shall be maintained. Application of powder shall be electrostatically applied by a closed loop automated powder coating system featuring twelve automatic spray guns with computerized controls and positioners to assure mil thickness conformance. The powder coating system shall employ a powder recovery system utilizing closed loop quick-change technology to achieve efficient and contamination free color changes. The powder shall be applied only when both the ambient and part temperatures are 50 degrees F. or above. Once powder coated, the product shall proceed through a curing oven operating at 400 degrees F. that has been surveyed and certified for temperature uniformity. The product shall move continuously through the oven from beginning to end and shall attain the time at temperature in accordance with the paint manufacturer's recommendations. Once oven cured, the product shall move immediately to and continuously through a forced air cooling tunnel designed to restore the product to acceptable packaging temperature prior to inspection and packaging. Upon exiting the cooling tunnel the product shall be immediately inspected and packaged.

11. FINISH

Area lighting poles shall be powder coated bronze.

1.5 LUMINAIRE

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:
   1. Cooper Lighting
   2. Holophane
   3. Hadco
   4. Or an approved equivalent

B. MATERIALS

1. LED Luminaire
2. Extruded aluminum driver enclosure thermally isolated from LED panels.
3. Heavy wall die cast aluminum end caps.
4. 3G Vibration rated.
5. IP66 rated housing and light squares.
6. Operates in -40 degrees C 40 degrees C ambient.
7. 120V-277V 50/60 HZ, 480V 60HZ operation.
8. 21,000 Lumens, 515W

EXECUTION.

1.6 INSTALLATION

A. Bolt the pole securely to the foundation as per the contract drawings.
B. Concrete shall comply with the requirements of the NYCDOT Standard Highway Specifications, Section 3.05, Class B-32, Type IIA.
C. Install leveling shims to a maximum height of 1/4".
D. Provide and install the pole with ground studs in the base.
E. Install a ground wire that extends to the ground rod from the pole.
F. Install luminaire with 2-#10 wires from the terminal block to the base of the pole.

MEASUREMENT AND PAYMENT.

1.7 MEASUREMENT

A. The quantity of Light Pole Foundation and Site Lighting to be paid for under item E 265600 A, shall be for the actual number of complete site lighting assemblies including light pole foundation, pole, transformer base, and light fixtures actually installed to complete the work, to the satisfaction of the Engineer.

1.8 PRICES TO COVER

A. The unit price bid per each of Light Pole Foundation and Site Lighting shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and installing light pole, transformer base and luminaires, concrete foundation, 2#10 wires from the terminal block to the base of the pole, and all associated fused connectors and

splices, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
E 265600 A	LIGHT POLE FOUNDATION AND SITE LIGHTING	EACH

SECTION 271000
CONDUCTORS AND CABLES FOR NETWORK COMMUNICATIONS

PART 1 – GENERAL.

SUMMARY

Section Includes:

Outdoor Network Cable
Single Mode Fiber Optic Cable.
Identification products.

DEFINITIONS

BICSI: Building Industry Consulting Service International.

EMI: Electromagnetic interference.

IDC: Insulation displacement connector.

Low Voltage: As defined in NFPA 70 for circuits and equipment operating at less than 50 V or for remote-control and signaling power-limited circuits.

Open Cabling: Passing telecommunications cabling through open space (e.g., between the studs of a wall cavity).

RCDD: Registered Communications Distribution Designer.

ACTION SUBMITTALS

Product Data: For each type of product.

For cable, include the following installation data for each type used:

Nominal OD.
Minimum bending radius.
Maximum pulling tension.

INFORMATIONAL SUBMITTALS

Qualification Data: Provide certifications from the fiber optic splice unit, OTDR, and power meter equipment manufacturer that verify the qualifications of each individual employed to perform the work.

Source quality-control reports.

Field quality-control reports.

QUALITY CONTROL

Testing Agency Qualifications: An NRTL.

Testing Agency's Field Supervisor: Currently certified by BICSI as an RCDD to supervise on-site testing.

DELIVERY, STORAGE, AND HANDLING

Test cables upon receipt at Project site.

Test optical fiber cable to determine the continuity of the strand end to end. Use optical fiber flashlight or optical loss test set.
Test optical fiber cable on reels. Use an optical time domain reflectometer to verify the cable length and locate cable defects, splices, and connector; include the loss value of each. Retain test data and include the record in maintenance data.
Test each pair of Category 6 cable for open and short circuits.

FIELD CONDITIONS

Do not install conductors and cables that are wet, moisture damaged, or mold damaged.

Indications that wire and cables are wet or moisture damaged include, but are not limited to, discoloration and sagging of factory packing materials.

PART 2 - PRODUCTS

2.1 OUTDOOR NETWORK CABLE

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

ADC;
American Technology Systems Industries, Inc.;
AMP Netconnect; a brand of Tyco Electronics Corporation;
Belden Inc.;
Or an approved equivalent manufacturer.

Specifications:

Category 6 Communication cable shall consist of 24 AWG solid bare copper conductors, Category 6 or better rated twisted pairs, polyolefin insulation, inner LLPE jacket, overall shield (100% coverage), 24 AWG stranded TC drain wire, industrial grade sunlight- and oil-resistant LLPE jacket.

Specifications for the cable shall be as follows:

Number of Conductor Pairs:	4
Total Number of Conductors:	8 # 24 AWG
Conductor Stranding:	Solid
Conductor Material:	Bare Copper
Insulation Material:	Polyolefin
Waterblocking Material:	Polymer Gel
Conductor Color Code:	1 - White/Blue Stripe & Blue 2 - White/Orange Stripe & Orange 3 - White/Green Stripe & Green 4 - White/Brown Stripe & Brown
Inner Jacket Material:	Linear Low Density Polyethylene
Inner Jacket Diameter:	0.230 inches
Outer Shield Type:	Tape
Outer Shield Material:	Aluminum Foil-Polyester Tape
Outer Shield %Coverage:	100 %
Outer Shield Drain Wire AWG:	24
Outer Shield Drain Wire Stranding:	7x32
Outer Shield Drain Wire Conductor Material:	Tinned Copper
Outer Jacket Material:	Linear Low Density Polyethylene
Outer Jacket Ripcord:	No
Overall Nominal Diameter:	0.276 inches
Operating Temperature Range:	-40°C To +75°C
Installation Temperature Range:	-25°C To +75°C
Bulk Cable Weight:	33 lbs/1000 feet
Max. Recommended Pulling Tension:	40 lbs.
Min. Bend Radius (Install):	2.75 inches
IEC Specification:	11801 Category 6
EU RoHS Compliant (Y/N):	Yes
EU RoHS Compliance Date	01/01/2004
TIA/EIA Specification:	568-B.2 Category 6
Other Specification:	NEMA WC-63.1 Category 6
Suitability - Outdoor:	Yes
Suitability - Burial:	Yes
Sunlight Resistance:	Yes
Oil Resistance:	Yes
Non-halogenated:	Yes
Plenum:	No
Nom. Mutual Capacitance @ 1 KHz:	15 pF/ft
Nominal Velocity of Propagation:	70 %
Maximum Delay (ns/100 m):	NEMA WC-63.1 Category 6
Maximum Delay Skew (ns/100m):	Yes
Maximum Conductor DC Resistance @ 20 Deg. C:	Yes
Maximum DCR Unbalance @ 20 Deg. C:	Yes
Max. Operating Voltage - UL:	Yes

2.2 FIBER OPTIC CABLE

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

AMP Netconnect; a brand of Tyco Electronics Corporation;
Belden Inc.;
Optical Cable Corporation;
Or an approved equivalent manufacturer.

B. Specifications

Fiber Optic Cable - Single Mode shall be tight buffered breakout type cable. No splices are permitted, except as required for terminations, unless shown on the Plans.

The fiber optic communications cable shall be of twelve fiber configuration as shown on the plans, each fiber with a color coded Polyvinyl Chloride inner sub-cable jacket, containing Aramid strength fibers all surrounded by a yellow Fluoropolymer outer jacket with rip cord.. (If exposed to sunlight, the outer jacket shall be black.) The single mode fibers shall be structured with 9/125/900 micron diameter. Optical fibers shall be protected in individual color coded, breakout buffer tubes. The buffer tubes shall be cabled around a central dielectric strength element with a gel-less water blocking system to inhibit water migration. The cable shall be suitable for use in cable tray, direct burial, underground duct and aerial installations. The optical and physical characteristics of the cable shall be as listed below:

Single Mode Fiber Type:	Low Water Peak
Core Diameter:	9 +/- 1 Microns (single mode)
Cladding:	125 +/- 2 Microns
Coating:	245+/- 15 Microns
Buffer:	900+/- 25 Microns
Color Coded Breakout Tube	2 mm or 2.5 mm
Attenuation @ 1310nm:	0.5 dB/Km Maximum
@ 1550nm:	0.5 dB/Km Maximum
Proof Test:	100KPSI
Cable Type:	Breakout; Tight Buffer; Indoor/Outdoor
Operating Temperature:	-40°C to +85°C
Storage Temperature:	-40°C to +85°C
Installation Temperature:	0°C to +60°C (actual temperature of cable)
Fiber Count:	12
Outer Jacket Color:	Yellow (Black if exposed to sunlight)
Weight:	107 lbs/kft
Maximum Load for Installation:	670 lbs
Max Load for Long Term Apps:	270 lbs
Min Bend Radius for Installation:	5.7"

Min Radius for Long Term Apps:	3.8"
Crush Resistance:	High
Flame Resistance:	UL 1666 (OFNR); IEEE383
Solar Radiation Resistance:	High

2.3 OPTICAL FIBER CABLE HARDWARE

Manufacturers: Subject to compliance with requirements, provide products by one of the following:

ADC;
Optical Cable Corporation;
Belden Inc.;
Or an approved equivalent manufacturer.

Cable Connecting Hardware: Meet the Optical Fiber Connector Intermateability Standards (FOCIS) specifications of TIA-604-2-B, TIA-604-3-B, and TIA/EIA-604-12. Comply with TIA/EIA-568-B.3.

2.3.1 IDENTIFICATION PRODUCTS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

Brady Worldwide, Inc.;
HellermannTyton North America;
Kroy LLC.;
Panduit Corp.;
Or an approved equivalent.

Comply with UL 969 for a system of labeling materials, including label stocks, laminating adhesives, and inks used by label printers.

Comply with requirements in Section 260553 "Identification for Electrical Systems."

2.3.2 SOURCE QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to evaluate cables.

B. Factory test Category 6 and optical fiber cables on reels according to TIA/EIA-568-B.1.

C. Factory test Category 6 cables according to TIA/EIA-568-B.2.

D. Factory test single mode optical fiber cables according to TIA-526-14-A and TIA/EIA-568-B.3.

E. Cable will be considered defective if it does not pass tests and inspections.

F. Prepare test and inspection reports.

PART 3 - EXECUTION

3.1 INSTALLATION OF HANGERS AND SUPPORTS

A. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for installation of supports for cables.

3.2 WIRING METHOD

A. Install wiring in underground conduits.

Minimum conduit size shall be 1 1/2 inch. Control and data transmission wiring shall not share conduit with power wiring systems.

B. Wiring within Enclosures:

Bundle, lace, and train conductors to terminal points with no excess and without exceeding manufacturer's limitations on bending radii.
Install lacing bars and distribution spools.
Separate power-limited and non-power-limited conductors as recommended in writing by manufacturer.
Install conductors parallel with or at right angles to sides and back of enclosure.
Mark each terminal according to system's wiring diagrams.
Make all connections with approved crimp-on terminal spade lugs, pressure-type terminal blocks, or plug connectors.

3.3 INSTALLATION OF CONDUCTORS AND CABLES

B. Comply with NECA 1.

a. Conductors: Size according to system manufacturer's written instructions unless otherwise indicated.

b. General Requirements for Cabling:

- Comply with TIA/EIA-568-B.1.
- Comply with BICSI ITSIM, Ch. 6, "Cable Termination Practices."
- Terminate all conductors; no cable shall contain unterminated elements. Make terminations only at indicated outlets, terminals, and cross-connect and patch panels.
- Cables may not be spliced.
- Bundle, lace, and train conductors to terminal points without exceeding manufacturer's limitations on bending radii, but not less than radii specified in BICSI ITSIM, "Cabling Termination Practices" Chapter.
- Install lacing bars and distribution spools.

- Do not install bruised, kinked, scored, deformed, or abraded cable.
- Do not splice cable between termination, tap, or junction points.
- Remove and discard cable if damaged during installation and replace it with new cable.

  Cold-Weather Installation:
- Bring cable to room temperature before dereeling.
- Heat lamps shall not be used for heating.
- Pulling Cable: Comply with BICSI ITSIM, Ch. 4, "Pulling Cable."
- Monitor cable pull tensions.

c. Category 6 Cable Installation: Install using techniques, practices, and methods that are consistent with Category 6 rating of components and that ensure Category 6 performance of completed and linked signal paths, end to end.

Comply with TIA/EIA-568-B.

Do not untwist Category 6 cables more than 1/2 inch (12 mm) from the point of termination to maintain cable geometry.

d. Optical Fiber Cable Installation:

Comply with TIA/EIA-568-B.3.

Cable shall be terminated on connecting hardware that is rack or cabinet mounted.

e. Open-Cable Installation:

Install cabling with horizontal and vertical cable guides in telecommunications spaces with terminating hardware and interconnection equipment.

f. Separation from EMI Sources:

Comply with BICSI TDMM and TIA-569-B recommendations for separating unshielded copper voice and data communication cable from potential EMI sources, including electrical power lines and equipment.

Separation between open communications cables or cables in nonmetallic raceways and unshielded power conductors and electrical equipment shall be as follows:

1. Electrical Equipment Rating Less Than 2 kVA: A minimum of 5 inches (127 mm).

2. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 12 inches (300 mm).

3. Electrical Equipment Rating More Than 5 kVA: A minimum of 24 inches (600 mm).

Separation between communications cables in grounded metallic raceways and unshielded power lines or electrical equipment shall be as follows:

1. Electrical Equipment Rating Less Than 2 kVA: A minimum of 2-1/2 inches (64 mm)

2. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 6 inches (150 mm).

3. Electrical Equipment Rating More Than 5 kVA: A minimum of 12 inches (300 mm).

Separation between cables in grounded metallic raceways and power lines and electrical equipment located in grounded metallic conduits or enclosures shall be as follows:

1. Electrical Equipment Rating Less Than 2 kVA: No requirement.

2. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 3 inches (75 mm).

3. Electrical Equipment Rating More Than 5 kVA: A minimum of 6 inches (150 mm).

Separation between Cables and Electrical Motors and Transformers, 5 kVA or HP and Larger: A minimum of 48 inches (1200 mm).

Separation between Cables and Fluorescent Fixtures: A minimum of 5 inches (127 mm).

3.7 GROUNDING

A. For communications wiring, comply with J-STD-607-A and with BICSI TDMM, "Grounding, Bonding, and Electrical Protection" Chapter.

3.8 IDENTIFICATION

B. Identify system components, wiring, and cabling complying with TIA/EIA-606-A. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.9 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.

B. Perform the following tests and inspections:

Visually inspect Category 6 and optical fiber cable jacket materials for NRTL certification markings. Inspect cabling terminations to confirm color-coding for pin assignments, and inspect cabling connections to confirm compliance with TIA/EIA-568-B.1.

Visually inspect cable placement, cable termination, grounding and bonding, equipment and patch cords, and labeling of all components.

1. Test Category 6 cabling for DC loop resistance, shorts, opens, intermittent faults, and polarity between conductors. Test operation of shorting bars in connection blocks. Test cables after termination but not cross connection.

   a. Test instruments shall meet or exceed applicable requirements in TIA/EIA-568-B.2. Perform tests with a tester that complies with performance requirements in "Test Instruments (Normative)" Annex, complying with measurement accuracy specified in "Measurement Accuracy (Informative)" Annex. Use only test cords and adapters that are qualified by test equipment manufacturer for channel or link test configuration.

2. Optical Fiber Cable Tests:

   a. Test instruments shall meet or exceed applicable requirements in TIA/EIA-568-B.1. Use only test cords and adapters that are qualified by test equipment manufacturer for channel or link test configuration.
   b. Link End-to-End Attenuation Tests:

      1) OTDR: Test each individual fiber after completion of all splicing and connections. Perform the testing at 1310 and 1550 nm in both directions. Ensure that the maximum decibel loss for any single event is not greater than 0.3 decibels at 1310 nanometers; however, ensure that the OTDR machine threshold is set to record all events greater than or equal in absolute value to 0.05 decibels along the positive and negative axes. Events revealed to by the OTDR machine bi-directional trace average to exceed 0.3 decibels are cause for rejection.
      2) Power Meter: Measure and record all fiber segment optical budgets including each end connector, according to the meter manufacturer instructions. Perform power meter tests at 1310 nanometers and 1550 nanometers in both directions after completion of al cable and connector splicing. Ensure that the maximum connector loss tested at 1310 nanometers is 0.8 decibels with the average of all connectors in the tested fiber segment being 0.5 decibels.

C. Document data for each measurement. Print data for submittals in a summary report that is formatted using Table 10.1 in BICSI TDMM as a guide, or transfer the data from the instrument to the computer, save as text files, print, and submit.

D. End-to-end cabling will be considered defective if it does not pass tests and inspections.

E. Prepare test and inspection reports.

PART 4 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

The quantity of Conductors and Cables to be paid for under items E 271000A and E 271000B shall be the actual number of linear feet of each size conductors and cables actually installed to complete the work, to the satisfaction of the Engineer. When multiple lengths of conductors are used as a cable, each length of conductor shall be measured separately.

4.2 PRICES TO COVER

The unit price bid per linear foot of each size Conductor or Cable shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing conductor and cable, all terminations, testing and all associated connectors and splices, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
E 271000 A	FIBER OPTIC COMMUNICATION CABLE	L.F.
E 271000 B	CATEGORY 6 COMMUNICATION CABLE	L.F.

4. SPECIAL PROVISIONS

The following shall become a part of and apply to the Contract:

A. LINES AND GRADES. The Contractor shall furnish lines and grades in accordance with Section 1.06.27 of the Standard Specifications, except that survey controls established for this project may no longer exist and the Contractor shall be required to re-establish the survey control information using official Borough Survey Control Monuments and Bench Marks, where they exist. The Contractor shall check with Topographic Section of the Borough President's Office as to the reliability and accuracy of the data to be used for lines and grades.

B. SPECIFIC TRAFFIC STIPULATIONS. Under this contract, the Contractor shall perform the work in strict accordance with the requirements of Section 6.70 in the Standard Highway Specifications, specific traffic stipulations as called for on the plans, OCMC Traffic Stipulations attached to the end of these Special Provisions, and the directions of the Engineer. In case of a conflict, the Engineer's decision shall be final.

In addition, the cost of compliance with requirements of the OCMC Traffic Stipulations, unless otherwise provided for, shall be deemed included in the prices bid for all scheduled items.

C. HOLIDAY CONSTRUCTION EMBARGO. A special Holiday Construction Embargo shall be in effect on the Friday of the week preceding Thanksgiving Day week from 6:00 AM to 11:59 PM and again from the Monday of Thanksgiving Day week from 6:00 AM through January 2, at 11:59 PM. Roadway and sidewalk construction activities will be restricted during the embargo period on the streets listed below*.

Any permits issued prior to the date of this notice, for work during this embargo period on the streets listed below which do not already have the permit stipulation "410" are hereby suspended for the period noted above. All permittees must comply with this embargo unless a special waiver is granted by OCMC. Waiver requests must be filed at least thirteen days before Thanksgiving Day, in the Permit Office by filing a "Request for Roadway/Sidewalk Permits During Embargo Periods" and submitting supporting documentation. Waiver requests should only be submitted for critical reasons for a specific project. If a waiver is granted, the applicant will be notified so

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*** Please note that this embargo only applies to NYCDOT construction permits.**

*** List of street and maps of the affected locations are available by borough on the Department of Transportation's website at: http://www.nyc.gov/html/dot/html/motorist/trafalrt.shtml**

they can apply for the approved permits. Waivers **are not** required for ongoing Building Construction Activity Permits which already include the "410" permit stipulation. Waiver request forms may be obtained at any Permit Office or on the Department of Transportation's website at: **http://www.nyc.gov/html/dot/downloads/pdf/holidayembapp.pdf**

Prior to this embargo period all necessary measures must be taken so that all roadways and sidewalks are in proper condition to allow for the expeditious and safe movement of vehicular, bicycle and pedestrian traffic. Tool carts, cable reels, containers, and material stored on roadways must be removed during the embargo period.

The opening of utility access covers is prohibited on any of the streets noted below between the hours of 6:00 AM and midnight unless the utility or Contractor files for an Emergency Authorization Number as required by section 2-07 of the Department of Transportation's Highway Rules. The planned opening of utility access covers may occur during the hours of 12:01 AM and 5:59 AM where no authorization number is required.

Temporary restoration of the streets and sidewalks and removal thereof, if required for the Holiday Embargo period, will be paid for under the appropriate scheduled items.

No extension of time due to the shutdown period will be granted to the Contractor for completion of the work.

D. DISPOSAL OF EXCESS EXCAVATED MATERIAL. All excess excavated material, with the exception of contaminated material, shall become the property of the Contractor and shall be properly disposed of away from the site, at the Contractor's expense. Contaminated material shall be disposed of separately in accordance with contract requirements.

E. SCHEDULING PRESENTATION. The Contractor shall submit construction schedule in the form of a bar chart using "Microsoft Project 2010", or in an approved equivalent program which shall be directly and fully translatable into Microsoft Project 2010 format, within seven days of the initial Pre-Construction Meeting. Each bar in the chart shall show dates the Contractor plans to start and complete each construction activity after the initial Pre-Construction Meeting. Bar chart shall show the order and interdependence of all activities necessary to complete the work and the sequence in which activity is to be accomplished as planned by the Contractor and in accordance with all subcontractors or suppliers whose work shall be shown on the bar chart. The Contractor shall submit the bar chart for the Engineer's review and revise it, if required, until approved by the Engineer.

The Contractor shall submit weekly progress status update reports or as otherwise directed by the Engineer. The Contractor shall submit updated bar chart every month. The revised bar chart shall be made in the same form and detail as the original submittal and shall be accompanied by an explanation of the reasons for the revisions all of which shall be subject to approval by the Engineer.

F. ACCELERATED PROJECT SCHEDULE AND COMBINATION OF STAGES. Contractor shall plan and/or stage his/her work schedule using all hours/days available. Contractor is advised that all applicable unit prices shall include, for the purpose of this contract, all overtime costs, premium time costs, shift differentials required to complete construction within the specified "Time(s) of Completion" stipulated in this contract.

Contractor shall be permitted to accelerate this project, to combine stages and/or work sequences. Any such changes shall be shown in the construction schedule, to be furnished in accordance with the General Provisions of the Standard Specifications and the above "SCHEDULING PRESENTATION" Article, and shall be submitted for approval of the Engineer.

G. NO EXTENSION OF TIME FOR WINTER SHUT-DOWN. Where the Contractor's approved work schedule for installing sidewalk, curb, roadway base and/or pavement falls within the winter period of December 1st through April 1st, the Contractor will NOT be granted an extension of time for completion of this contract due to the winter shut-down period, unless otherwise provided in Schedule A.

H. PRIVATE UTILITY HARDWARE ADJUSTMENTS will be performed by the owning utility company or its agent, at its expense. The Contractor shall notify the utility company 72 hours prior to start of work at each location where it's hardware requires adjustment.

I. SURVEY MONUMENTS. When working in the vicinity of survey monument the Contractor shall hand excavate per Item 8.02 A and 8.02 B at City Survey Monuments, for a distance of five (5) feet around each monument, as directed by the Engineer.

J. RESTORATION OF ADJACENT AREAS. The Contractor shall be required to remove all form work. In planting strip areas, the Contractor shall be required to restore areas damaged as a result of his operations, to the satisfaction of the Engineer, with sod. The Contractor shall also, as directed by the Engineer, make safe adjacent areas to his work, such as: restoring missing or damaged pavement markings that were removed or damaged as a result of the Contractor's operations (as per requirements of Section 6.44 in the Standard Specifications); resetting granite blocks in tree pits; and, applying asphaltic concrete mixture (Item 4.02 CB) where badly broken sidewalk or curb may create a dangerous condition just outside his area of operation, where and when directed by the Engineer.

All restoration work shall be done to the satisfaction of the Engineer.

K. NOISE CONTROL. The Contractor is directed to Title 24, Chapter 2 of the Administration Code of the City of New York, known as the "New York City Noise Code" by the Department of Environmental Protection. The provisions of this code and its most recent additions and revisions shall apply to this contract. In the event of a conflict between the requirements of the New York City Noise Code and the requirements of Noise Control contained in these special notes, the more stringent of the two shall apply.

The Contractor shall plan and carry out work on this Project to ensure that the noise from construction equipment and activities does not exceed the limits specified herein. The noise abatement operations and conditions

specified shall be carried out by the Contractor to limit noise in project and adjacent areas. The Contractor shall conduct a continuous educational effort for the workers on the site to ensure that they are aware of their roles in minimizing noise propagating from the site.

In order to monitor noise abatement operations the Contractor shall employ services of "Noise Control Specialist" for the duration of construction activity. The Contractor shall submit qualifications and experience of the prospective specialist/firm to the Engineer for prior approval. The specialist/firm must satisfy the eligibility requirements of qualifications and work experience as required by the N.Y.C.D.E.P.

The monitoring protocol shall be as follows:

(a) There shall be one outdoor and one indoor monitoring station for each work area or 1,000 ft. of street length whichever is less.

(b) Monitoring of noise level shall be done prior to start of construction and during construction for each station at the same work hours specified in the contract.

(c) Locations of monitoring stations shall be recommended by the noise control specialist for approval of the Engineer.

(d) Engineer shall provide indoor station locations to the contractor after ascertaining availability of the said station from the Community Board.

Should the Contractor fail to carry out the noise abatement operations and conditions specified herein, the Engineer shall have the authority to suspend all work until such time as the Engineer deems that the Contractor has complied with the requirements.

The following additional requirements for noise control shall apply to this contract:

1. Noise Level Requirements for Construction Equipment

(a) The Contractor shall ensure that all Contractor and Subcontractor equipment, of the types listed in Table A to be used on-site for a total duration greater than 5 days, shall be tested for compliance with the stated noise emission limits during the first day of use on the construction site or at an alternative site acceptable to the Engineer.

(b) All equipment as described in (a) above shall be re-tested at 6 month intervals while in use on site.

(c) All compliance tests shall be performed by the Contractor.

(d) For each piece of equipment tested, the Contractor shall provide a noise report to the Engineer as shown in Figure A.

(e) Equipment of the types listed in Table A, as described above, shall not be used on-site without valid certificates of noise compliance.

(f) The Contractor shall provide to the Engineer two noise meters meeting the requirements of Section 2(d) herein. Two acoustic

calibrators of the type recommended by the meter manufacturer shall also be provided.

TABLE A

CONSTRUCTION EQUIPMENT NOISE EMISSION LIMITS:
MEASURED AT 50 FEET FROM CONSTRUCTION EQUIPMENT

Equipment Category	Noise Level, dBA(SLOW)
Auger	83
Backhoe	80
Bar Bender	80
Cherry Picker	80
Chain Saw	86
Compactor	80
Compressor	70
Concrete Mixer	86
Concrete Pump	82
Concrete or Diamond Saw	90
Crane	86
Crawler Miller	90
Dozer	86
Front End Loader	80
Generator	82
Gradall	86
Grader	86
Jackhammer	88
Man Lift	80
Mounted Impact Hammer	95
Paver	86
Pneumatic Tools	86
Roller	80
Scraper	86
Shotcrete Liner (tire-mounted)	79
Striper (walk-behind)	80
Tractor	84
Traffic Line Remover	80
Truck (including truck-mounted equipment)	84
Vibrator	80
Vibratory Pile Driver	95
All Other Equipment with Engines	
Larger than 3750W	86
Impact Pile Driver	105 dBC(FAST)

FIGURE A

CERTIFICATE OF EQUIPMENT NOISE COMPLIANCE

Contractor Name: _____
Contract Name & Number: _____

Equipment Type: _____
Manufacturer & Model Number: _____
Identification Number: _____
Rated Power & Capacity: _____
Operating Condition During Test: _____

Measured Sound Levels at 6 to 15 meters:

Measured Values and Distance:
Engine-Powered or Concrete-Breaking Equipment:
Right Side: _____ dBA(SLOW), at _____meters
Left Side: _____ dBA(SLOW), at _____meters
Impact Pile Driving Equipment:
Right Side: _____ dBC(FAST), at _____meters
Left Side: _____ dBC(FAST), at _____meters

Equivalent Values at 50 Feet Distance:
Engine-Powered or Concrete-Breaking Equipment:
Right Side: _____ dBA(SLOW).
Left Side: _____ dBA(SLOW).
Impact Pile Driving Equipment:
Right Side: _____ dBC(FAST).
Left Side: _____ dBC(FAST).

Maximum Values Allowed for this Equipment: _____dBA(SLOW) at 15 meters
_____dBC(FAST) at 15 meters

If equipment sound level exceeds maximum value allowed, indicate action taken to achieve compliance:

_____

_____

_____

Name, Work Address & Phone No.
of NYSDOT Inspector _____

_____

_____

_____

Authorized Signature: _____ Date: _____

CONTRACTOR'S ACCEPTANCE: _____ Date: _____

2. Noise Level Test Procedures of Construction Equipment

(a) All engine-powered equipment shall be operated by the Contractor or Contractor's representative at high idle (maximum governed rpm) under full load conditions during the tests.

(b) Portable and mounted impact hammers, such as hoe rams and jackhammers to be used to concrete breaking, shall be tested during the first day of actual operation at the construction site under maximum load conditions as rated by the equipment manufacturer.

(c) Pile driving equipment shall be tested at the construction site under maximum load conditions as rated by the manufacturer.

(d) All noise certification measurements shall be performed with an instrument that is in compliance with the criteria for a Type 1 (Precision) or Type 2 (General Purpose) Sound Level Meter as defined in the current revision of ANSI Standard S1.4. An acoustic calibrator of the type recommended by the sound level meter manufacturer shall be used prior to all measurements.

(e) If possible, measurements shall be made at 50 feet (±1.5 feet) from the right and left sides of the equipment casing, at a height of 5 feet above ground level, with the equipment operating as indicated in items (a), (b) or (c) above for a minimum period of 1 minute. Measurements made at less than 50 feet, because of space limitations at the test site, shall be reduced by the values given in Table B to estimate the 50-feet sound level.

TABLE B

ADJUSTMENTS FOR CLOSE-IN EQUIPMENT NOISE MEASUREMENTS

Measurement Distance (Feet)	Values to be Subtracted from Measured Sound Level to Estimate Sound Level at 50 Feet (dBA)
20 to under 21	8
21 to under 23	7
23 to under 26	6
26 to under 29	5
29 to under 33	4
33 to under 37	3
37 to under 41	2
41 to under 47	1
47 to under 50	0

3. Compliance with Equipment Noise Level Requirements

(a) The Engineer shall retain a copy of the noise report from the Contractor with each piece of equipment used on the project of the types listed in Table A. The report shall be on the form shown in Figure A with certification by the noise control specialist hired by the contractor that equipment noise emissions do not exceed those prescribed.

(b) If the noise levels obtained during the tests exceed those specified in Table A the Contractor shall promptly modify or alter such equipment and retest, or substitute other equipment to meet the noise level requirements.

(c) Upon compliance, (including the certification date and equipment identification number) the Engineer will keep the noise reports readily available on file in the Construction field office for inspection upon request.

(d) The Certification of Noise Compliance will remain valid for a period of 6 months only. Delays caused by certification refusal or by time lost in improving the rejected equipment or finding alternate acceptable equipment shall not be a basis for any monetary or time delay claims or for avoidance of late completion penalties.

(e) All equipment shall be subject to spot noise level testing by the Engineer at his discretion as necessary to determine that the equipment in use meets the requirements specified in Table A. For this purpose, the Contractor shall furnish noise-measurement instrumentation that complies with the standards specified in paragraph 2. (d). If such tests are requested by the Engineer, the Contractor shall locate and operate the equipment as directed by the Engineer so as to facilitate the measurements. The Engineer shall provide the Contractor with a copy of the results of the measurements. If such tests demonstrate that any equipment does not comply with the requirements specified in Table A, its Certificate of Noise Compliance shall be revoke and equipment shall be taken out of use until compliance is achieved. A new Certificate of Noise Compliance will then be issued.

4. Construction Noise Level Exposure Limits

(a) In no case shall the public be exposed to construction noise levels exceeding 100 dBA (SLOW) or to impulsive noise levels exceeding 125 dBC (FAST).

(b) Construction activities shall be conducted in such a manner that the equivalent noise level (Leq) over any one-hour period does not exceed 85 dBA at any noise-sensitive locations (e.g. residence and hotels).

5. Construction Noise Level Exposure Test Procedures

(a) All noise exposure measurements will be performed with an integrating sound level meter. An acoustic calibrator will be used prior to all measurements.

(b) The measurement microphone of the sound level meter shall be fitted with an appropriate windscreen, and will be located 1.5 meters above the ground and at least 5 feet away from the nearest sound-reflective surface for the tests.

(c) Noise exposure measurements will be taken at noise-sensitive locations closest to the construction activities at least once each week and as dictated by construction activities. Measurement periods at each location shall be a minimum of one hour.

(d) Construction noise exposure measurements will coincide with periods of maximum noise-generating construction activity, and will be performed during the construction phase or activity that the greatest potential to create annoyance or to exceed the noise exposure limits.

6. Compliance with Construction Noise Level Exposure Limits

(a) Construction noise exposure data will be collected by the Contractor on a weekly basis. The noise report will include (1) a sketch indicating the locations of the measurements and of all nearby construction equipment operating during the measurement period, (2) the measured maximum A-weighted noise level at each location, in terms of dBA (SLOW), (3) the measured maximum C-weighted noise level, in terms of dBC (FAST) and (4) the measured one-hour Leq (in dBA).

(b) In the event that the measured noise levels exceed the limits specified in paragraph 4 above, the Engineer will immediately notify the Contractor and the Contractor shall implement corrective actions as directed by the Engineer.

(c) All construction activities will be subject to spot noise level testing by the Engineer at his discretion as necessary to determine that the noise levels meet the exposure limits specified in paragraph 4 above. If such tests demonstrate that the noise levels exceed the specified limits, the Contractor shall implement corrective actions as directed by the Engineer.

7. General Requirements for Construction Equipment Noise Control

(a) The Contractor shall minimize the use of impact devices, such as jackhammers, pavement breakers, and hoe rams. Where possible, concrete crushers or pavement saws shall be used rather than hoe rams for tasks such as grillage removal and pavement demolition.

(b) All pneumatic impact tools and equipment used at the construction site shall have intake and exhaust mufflers recommended by the manufacturers thereof, to meet relevant noise ordinance limitations.

(c) All impact devices (i.e. jackhammers and pavement breakers) shall be equipped with acoustically attenuating shields or shrouds recommended by the manufacturers thereof, to meet relevant noise ordinance limitations.

(d) Hoppers, conveyors transfer points, storage bins, and chutes shall be line or covered with sound-deadening material.

(e) The Contractor shall minimize the use of air or gasoline-driven hand tools.

(f) All other equipment, including internal combustion engines, shall have mufflers and shield paneling recommended by the manufacturers thereof.

8. General Operational Requirements for Construction Noise Control

(a) The Contractor shall operate equipment so as to minimize banging, clattering, buzzing, and other annoying types of noises, especially near noise-sensitive locations.

(b) The Contractor, to the extent feasible, shall configure the construction site in a manner that keeps noisier equipment and activities as far as possible from noise-sensitive locations and nearby buildings.

(c) The Contractor shall minimize noise from the use of backup alarms near residential buildings by using self-adjusting, ambient noise-sensitive backup alarms that meet OSHA regulations.

(d) In no case shall the above restrictions limit the Contractor's responsibility for compliance with all applicable Federal, state and local safety ordinances and regulations and other sections of these construction specifications.

9. Acoustic Shed Requirements

(a) All noise-generating mechanical equipment that is operated by the Contractor at any time other than weekdays between the hours of 7:00 a.m. and 6:00 p.m. shall be enclosed within an acoustic shed. Such equipment includes, but is not limited to, generators for traffic sign boards and lighting.

(b) Acoustic sheds shall consist of three-sided, closed-top enclosures, oriented such that the open end of the shed faces away from residential or hotel buildings.

(c) The shed shall be constructed of 0.5 inch plywood sheeting, or other acceptable material weighing at least 1.5 pounds per square foot, on timber framing with no gaps at joints or corners. Gaps between the bottom edge of the shed panels and the ground shall not exceed 1 inch in width and shall be closed off with solid strips of rubber, neoprene or other suitably dense material.

(d) The inside of the shed shall be lined with glass fiber or mineral wool type sound-absorbing material at least 2 inches thick, protected by wire mesh or perforated sheets that have at least 30 percent open area.

10. Cost of Work

(a) The cost of all labor, materials, equipment, insurance necessary for noise abatement measures as described in this section, any necessary modifications of construction methods or equipment and any delays to construction due to work suspension due to non-compliance with noise control requirements or due to necessary modifications to construction methods for compliance with the noise control requirements is deemed included in the prices bid for the items of work for which the equipment is used.

Equipment used shall be capable of a uniform application over the surface to be covered. There will be no separate measurement or payment for this work but the cost thereof is deemed to be included in the other various items of work.

L. Refer to the New York City Standard Highway Specifications, Volume II, dated November 1, 2010, page 356, Subsection 6.31.4, second paragraph; Delete the second paragraph in its entirety; and, Substitute the following paragraphs:

"Precasting of wheel stops shall be done in accordance with the either subsections (A) or (B), below:

(A) When precasting of wheel stops are supplied by an approved manufacturer, the Contractor shall furnish the manufacturer's certification that the precast wheel stops furnished are, at a minimum, in compliance with the requirements of this Section 6.31; or,

(B) When precasting of wheel stops are made by the Contractor, the location of casting shall be as selected by the Contractor, subject to the approval of the Engineer. Casting beds and longitudinal forms shall be made with metal forms. Longitudinal forms shall be adequately braced to prevent displacement during concreting operations. Wooden braces will not be permitted to remain in the concrete after pouring."

M. THE CONTRACTOR IS NOTIFIED that for use of City water under this project the Contractor shall be required to obtain a water use permit from the Department of Environmental Protection at the Contractor's own cost.

N. THE CONTRACTOR IS NOTIFIED that the fuel cost per gallon used in the formula under Sub-Article 26.2.8 of the Standard Construction Contract for **Extra Work** will be derived from the fuel price index for the United States East Coast published weekly by the United States Energy Information Administration ("USEIA"), and available on its website at http://www.eia.gov/petroleum/gasdiesel/. The USEIA-published cost per gallon for the applicable fuel on the East Coast for the week in which the first day of each calendar quarter during the contract term occurs (i.e., January 1st, April 1st, July 1st and September 1st) will be used in the reimbursement formula for all **Extra Work** invoiced that was performed during that calendar quarter. Should the USEIA stop publishing this fuel price index, the fuel cost per gallon will be determined by reference to a substitute index to be agreed upon by the Contractor and the City.

O. ARCHAEOLOGICAL DISCOVERIES. The Contractor is notified that the Resident Engineer will retain the services of an Archaeologist (the "City's Archaeologist") for this project.

The City's Archaeologist shall be notified in advance and shall be present on site during sub-surface excavations as he deems necessary. The City's Archaeologist shall be authorized to halt construction at any time in order to record and/or recover any archaeological resources encountered during excavations, and to stabilize in place any human remains encountered. For the purpose of evaluating and recording archaeological resources, the City's Archaeologist shall be allowed to enter trenches provided all standard safety requirements are met. It is understood that some construction down time may be necessary.

In the event that human remains and/or other significant archaeological deposits are encountered during construction or archaeological investigations, Landmarks Preservation Commission (LPC) shall be notified as directed by the City's Archaeologist and the State Historic Preservation Office (SHPO) requires that the following protocol is implemented:

- At all times human remains must be treated with the utmost dignity and respect. Should human remains be encountered work in the general area of the discovery will stop immediately and the location will be immediately secured and protected from damage and disturbance.

- Human remains or associated artifacts will be left in place and not disturbed. No skeletal remains or materials associated with the remains will be collected or removed until appropriate consultation has taken place and a plan of action has been developed.

- The County coroner and local law enforcement as well as the SHPO and the involved agency will be notified immediately. The coroner and local law enforcement will make the official ruling on the nature of the remains, being either forensic or archeological. If the remains are archeological in nature, a bioarchaeologist will confirm the identification as human.

- If human remains are determined to be Native American, the remains will be left in place and protected from further disturbance until a plan for their protection or removal can be generated. The involved agency will consult SHPO and appropriate Native American groups to determine a plan of action that is consistent with the Native American Graves Protection and Repatriation Act (NAGPRA) guidance.

- If human remains are determined to be Euro-American, African-American, etc., the remains will be left in place and protected

from further disturbance until a plan for their avoidance or removal can be generated. Consultation with the SHPO and other appropriate parties will be required to determine a plan of action.

Should extra work be ordered by the Resident Engineer as a result of any archaeological discoveries, it shall be paid for as extra work in accordance with the requirements of Article 26 in the Standard Construction Contract dated December 2013.

P. START OF CONTRACT WORK. The Contractor is notified that a Notice To Proceed (NTP) date will be issued for work to commence within 21 to 30 Days of Contract Registration.

Q. PRICES TO INCLUDE. No direct payment will be made for costs incurred in complying with the foregoing Special Provisions, unless otherwise provided. Said costs will be deemed to have been included in the prices bid for all the scheduled contract items.

NEW YORK CITY DOT

Department of Transportation

JANETTE SADIK-KHAN, Commissioner

OCMC TRAFFIC STIPULATIONS

12/5/2013

OCMC FILE NO: BXEC-13-558
CONTRACT NO: PV176ITF1
PROJECT: BRONX ZOO INTERMODAL FACILITY

LOCATION(S): BRONX RIVER PARKWAY RD, BETWEEN BOSTON ROAD AND BRONX RIVER PARKWAY

PERMISSION IS HEREBY GRANTED TO THE **NYCDDC** AND ITS DULY AUTHORIZED AGENT, TO ENTER UPON AND RESTRICT THE FLOW OF TRAFFIC AT THE ABOVE LOCATION AND ITS LOCAL ADJACENT STREETS FOR THE PURPOSE OF CARRYING OUT THE ABOVE NOTED PROJECT, SUBJECT TO THE STIPULATIONS, AS NOTED BELOW:

A. SPECIAL STIPULATIONS

1. **EMBARGOES** – A CONSTRUCTION EMBARGO WILL APPLY TO THOSE LOCATIONS BELOW WHICH FALL WITHIN THE **HOLIDAY EMBARGO** OR ANY OTHER SPECIAL EVENT EMBARGOES AS PUBLISHED BY THE BUREAU OF PERMIT MANAGEMENT AND CONSTRUCTION CONTROL.
2. **BIKE LANES** – IF WORK IS IN OR AFFECTING A BIKE LANE, THE CONTRACTOR MUST POST ADVANCE WARNING SIGNS 350 FEET AND 200 FEET PRIOR TO THE WORK ZONE STATING **"CONSTRUCTION IN BIKE LANE AHEAD PROCEED WITH CAUTION"**, AND ALSO POST A SIGN AT THE WORK ZONE STATING **"CONSTRUCTION IN BIKE LANE PROCEED WITH CAUTION"**. SUCH SIGNS SHALL BE ORANGE, 3' X 3', DIAMOND-SHAPED WITH 4" BLACK LETTERING. SIGNS SHALL BE POSTED IN ACCORDANCE WITH THE FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
3. **BIKE SHARE STATIONS:** THE PERMITTEE SHALL NOT REMOVE, RELOCATE, DAMAGE OR DISRUPT THE OPERATION OF EXISTING BIKE SHARE STATIONS WITHOUT FIRST CONTACTING NYC BIKE SHARE AT 855-245-3311 FOR THEIR REQUIREMENTS PRIOR TO COMMENCING WORK.
4. **BUS STOPS** – THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO NYC DOT OCMC AND NEW YORK CITY TRANSIT (NYCT) A MINIMUM OF FIVE (5) WEEKS IN ADVANCE FOR LANE/STREET CLOSURES THAT AFFECT BUS ROUTES/BUS STOPS.
5. **STREET LIGHTS / TRAFFIC SIGNALS:** THE PERMITTEE SHALL NOT REMOVE OR RELOCATE EXISTING STREET LIGHTS OR TRAFFIC SIGNALS WITHOUT FIRST OBTAINING APPROVAL FROM NYCDOT STREET LIGHTING / TRAFFIC SIGNALS UNIT.
6. **TRAFFIC CAMERAS, DETECTION/COMMUNICATION EQUIPMENT:** IF AT ANY TIME DURING THE APPROVED WORK, THE PERMITTEE ENCOUNTERS TRAFFIC SURVEILLANCE CAMERAS, DETECTION EQUIPMENT OR ANY TYPE OF COMMUNICATION EQUIPMENT (WIRELESS OR HARD-WIRED) ON ANY NYC DOT FACILITY, THAT IS NOT INCLUDED ON THE DESIGN/BUILD DRAWINGS, THE PERMITTEE SHALL IMMEDIATELY NOTIFY NYC DOT TRAFFIC MANAGEMENT BY PHONE AT 718-433-3390 OR 718-433-3340 AND VIA EMAIL AT TMC@DOT.NYC.GOV AND AWAIT DIRECTION PRIOR TO CONTINUING WORK.
7. **METERS** – THE PERMITTEE SHALL NOT REMOVE OR RELOCATE PARKING METERS WITHOUT FIRST OBTAINING APPROVAL FROM NYCDOT PARKING METER DIVISION AT 718 – 894 – 8651.
8. **TEST PITS** – THE BELOW TRAFFIC STIPULATIONS DO NOT APPLY TO TEST PIT WORK RELATED TO THIS CONTRACT. WORK HOURS AND OTHER REQUIREMENTS FOR TEST PIT OPERATIONS MAY DIFFER FROM THE STIPULATIONS IDENTIFIED BELOW. THE PERMITTEE SHALL BE REQUIRED TO OBTAIN SEPARATE PERMITS RELATED TO TEST PITS.
9. **TEMPORARY PARKING REGULATIONS/PAVEMENT MARKINGS** – THE PERMITTEE IS REQUIRED TO INSTALL, MAINTAIN AND REMOVE ALL NECESSARY TEMPORARY PARKING AND REGULATORY SIGNS AND PAVEMENT MARKINGS, AND RESTORE THEIR ORIGINAL CONDITION PER NYC DOT STANDARDS, PRIOR TO EXPIRATION OF THEIR PERMITS. THE PERMITTEE OR AGENCY PERFORMING PUBLIC OUTREACH SHALL POST AND MAINTAIN ADVISORY SIGNS A MINIMUM OF 48 HOURS PRIOR TO CHANGING EXISTING PARKING REGULATION SIGNS TO APPROVED TEMPORARY CONSTRUCTION PARKING REGULATION SIGNS. THE ADVISORY SIGNS SHOULD BE POSTED ON ALL POLES AND DRIVE RAILS ON THE SEGMENT AFFECTED, INDICATING THE DATE OF THE CHANGE, THE NEW REGULATIONS AND A TELEPHONE NUMBER TO OBTAIN MORE INFORMATION.
10. **ACCESS TO ABUTTING PROPERTIES** – THE PERMITTEE SHALL COORDINATE ALL ACTIVITIES WITH ABUTTING PROPERTY OWNERS TO ENSURE ACCESS IS PROVIDED TO/FROM ENTRANCES/DRIVEWAYS AT ALL TIMES.

NYC Department of Transportation
Bureau of Permit Management and Construction Control
55 Water Street - 7th Floor, New York, NY 10041
T: 212.839.9621 F: 212.839.8970
www.nyc.gov/dot

OCMC FILE NO: BXEC-13-558
CONTRACT NO: PV176ITF1
PROJECT: BRONX RIVER PARKWAY RD, BETWEEN BOSTON ROAD AND BRONX RIVER PARKWAY

11. **AUTHORIZED PARKING** – PRIOR TO PERFORMING WORK WHICH IMPACTS AUTHORIZED PARKING, THE PERMITTEE SHALL SUBMIT IN WRITING, AND COPY OCMC-STREETS, A REQUEST TO OCCUPY SPACE CURRENTLY USED BY AUTHORIZED VEHICLES. APPROVAL MUST BE RECEIVED FROM AUTHORIZED PARKING PRIOR TO OCCUPYING THESE AREAS.

12. **NOTIFICATION** – THE PERMITTEE MUST AT LEAST TWO (2) WORKING DAYS BEFORE THE START OF CONSTRUCTION NOTIFY THE NYC FIRE DEPARTMENT, NYC POLICE DEPARTMENT, NYCEMS, LOCAL COMMUNITY BOARD, BOROUGH PRESIDENT'S OFFICE-CHIEF ENGINEER, NYCDOT OCMC OFFICE, AND ALL ABUTTING PROPERTY OWNERS.

13. **CONSTRUCTION INFORMATIONAL SIGNS** – THIS PROJECT REQUIRES A CONSTRUCTION PROJECT INFORMATIONAL SIGN (CPIS) IN ACCORDANCE WITH NYCDOT HIGHWAY RULE SECTION 2-02 (4) AND (5). CRITERIA AND A PROTOTYPE FOR THIS SIGN MAY BE FOUND ON THE NYCDOT WEBSITE AT:
HTTP://WWW.NYC.GOV/HTML/DOT/DOWNLOADS/PDF/DOT_CPIS_DIRECTIONS.PDF

14. **ENHANCED MITIGATIONS**

   - ENHANCED MITIGATIONS FOR PEDESTRIAN FLOW, INCLUDING METAL FENCING, SHALL BE PROVIDED TO ENSURE PEDESTRIANS STAY WITHIN THEIR DESIGNATED PATH/ROUTE. FLAGGERS SHALL BE PROVIDED TO ASSIST WITH PEDESTRIANS AT THE DESIGNATED CROSSWALK AREAS. THESE FLAGGERS SHALL BE ASSIGNED TO THIS FUNCTION ONLY.

   - COMMUNITY OUTREACH SHALL BE PROVIDED FOR THE DURATION OF THE PROJECT.

B. MAINTENANCE AND PROTECTION OF TRAFFIC

1. BRONX RIVER PARKWAY RD, BETWEEN BOSTON ROAD AND BRONX RIVER PARKWAY

- Work hours shall be as follows: 9PM-5AM NIGHTLY 7 DAYS A WEEK
- During work hours, the contractor must maintain one 10ft lane for a two-way traffic with the assistance of the flaggers positioned on both ends of the work zone.
- After work hours, the contractor must restore full width of the roadway to traffic.
- Must coordinate with the Bronx Zoo Administration prior to mobilizing.

C. GENERAL NOTES

1. **THIS IS NOT A PERMIT.** THIS STIPULATION SHEET MUST BE SUBMITTED WITH ALL REQUESTS FOR PERMITS PERTAINING TO THE ABOVE CONTRACT AND PRESENT AT THE WORK SITE ALONG WITH ALL ACTIVE CONSTRUCTION PERMITS WHEN THE APPROVED WORK IS BEING PERFORMED.

2. ALL RELOCATION WORK BY THE UTILITIES SUCH AS; CON EDISON, TELEPHONE, GAS AND CABLE COMPANIES SHALL PRECEDE THE CONTRACTORS' START OF WORK ON ALL AFFECTED ROADWAYS IN THE IMPACTED CONTRACT AREA.

3. THE CONTRACTOR IS ADVISED THAT OTHER CONTRACTORS MAY BE WORKING IN THE GENERAL AREA DURING THE TERM OF THIS STIPULATION. IN WHICH EVENT, THE CONTRACTOR MAY REQUIRE MODIFICATIONS BY THE OCMC-STREETS.

4. THE PERMITTEE IS NOT AUTHORIZED TO ENTER, OCCUPY OR USE ANY PUBLICLY-OWNED OR PRIVATELY OWNED, NON-PAVED, LANDSCAPE OR NON-LANDSCAPED LOCATION WITHOUT SPECIFIC WRITTEN PERMISSION. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF A LIMITED-ACCESS ARTERIAL HIGHWAY, **WRITTEN** APPROVAL FROM THE NYCDOT OCMC-HIGHWAYS IS REQUIRED. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF A PUBLIC STREET OR PUBLIC PARK, **WRITTEN** APPROVAL FROM THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION OR NEW YORK CITY DEPARTMENT OF PARKS AND RECREATION IS REQUIRED. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF ANY OTHER JURISDICTION SUCH AS PRIVATE PROPERTY, STATE, FEDERAL ETC., IT IS THE PERMITTEE'S RESPONSIBILITY TO DETERMINE THE PROPERTY OWNER AND OBTAIN THE WRITTEN APPROVAL.

5. THE PERMITTEE SHALL ADHERE TO THE NYCDOT BUREAU OF BRIDGES' SPECIAL PROVISIONS FOR LANDSCAPE PROTECTION, MAINTENANCE AND RESTORATION, ITEMS 1.18.15 THROUGH 1.18.19, WHENEVER AND WHEREVER ANY OF THE PERMITTEE'S ACTIVITIES OCCUR WITHIN A LIMITED ACCESS ARTERIAL HIGHWAY RIGHT - OF - WAY.

6. NO DEVIATION OR DEPARTURE FROM THESE STIPULATIONS WILL BE PERMITTED WITHOUT THE PRIOR WRITTEN APPROVAL FROM THE OCMC-STREETS. REQUEST FOR SUCH MODIFICATIONS SHALL BE SUBMITTED TO THE OFFICE OF THE OCMC-STREETS, NEW YORK CITY DEPARTMENT OF TRANSPORTATION, A MINIMUM OF TWENTY (20) DAYS IN ADVANCE FOR CONSIDERATION.

7. FOR THIS PROJECT THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN ALL NECESSARY ADVANCE WARNING AND DETOUR SIGNS, TEMPORARY CONTROL DEVICES, BARRICADES, LIGHTS AND FLASHING ARROW BOARDS IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," THE TYPICAL SCHEMES INCLUDED IN THIS SPECIFICATION; AND AS ORDERED BY THE ENGINEER-IN-CHARGE AND THE OCMC-STREETS.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING HIS CONSTRUCTION SIGNAGE. THE IDENTIFICATION SHALL INCLUDE THE CONTRACTOR'S NAME, SPONSORING AGENCY NAME AND THE CONTRACT NUMBER. THE IDENTIFICATION SHALL BE PLACED ON THE BACK OF THE SIGN. THE LETTERING SHALL BE THREE (3) INCHES HIGH.

OCMC FILE NO: BXEC-13-558
CONTRACT NO: PV176ITF1
PROJECT: BRONX RIVER PARKWAY RD, BETWEEN BOSTON ROAD AND BRONX RIVER PARKWAY

9. THE OCMC-STREETS RESERVES THE RIGHT TO VOID OR MODIFY THESE STIPULATIONS SHOULD CONSTRUCTION FAIL TO COMMENCE WITHIN TWO (2) YEARS OF THE SIGNED DATE OF THESE STIPULATIONS.
10. THE CONTRACTOR MUST COMPLY WITH ALL CONSTRUCTION EMBARGOS ISSUED BY THE NYCDOT INCLUDING THE HOLIDAY EMBARGO.

JOSEPH P. NOTO
EXECUTIVE DIRECTOR
OCMC-STREETS

ILIR LUGJI
PROJECT MANAGER
OCMC-STREETS

JPN/il

THE CITY OF NEW YORK Department of Sanitation

S. ELIZABETH SEARLE
Assistant Commissioner
for Legal Affairs

Bureau of Legal Affairs
44 Beaver Street
New York, NY 10004
Telephone (212) 837-8110
FAX (212) 837-8243

Department of Sanitation Rules and Regulations Governing Non-Putrescible Solid Waste Transfer Stations

INTERPRETIVE MEMORANDUM # 2
February 14, 1995

Subject: Temporary Storage and Processing of Construction and Demolition Debris by New York City Agency Contractors

Contractors performing construction work for New York City agencies may be required to excavate dirt, concrete, rock, gravel and similar materials ("construction materials") from a contract site or to remove from a contract site construction materials resulting from construction, demolition, alteration, repair or renovation of structures, streets or buildings. On street construction projects, construction materials required to be excavated or removed may also include asphalt. The purpose of this Interpretive Memorandum is to (a) define the circumstances under which the Department of Sanitation (the "Department") will not deem its Rules and Regulations Governing Non-Putrescible Solid Waste Transfer Stations (the "Rules") to apply to the temporary storage, processing and/or stockpiling (collectively, "stockpiling") of such construction materials and (b) the procedure for ensuring such exemption. It is the responsibility of the contracting agency to oversee its contractors' compliance with the Rules and with this Interpretive Memorandum.

1. <u>When No Transfer Station Permit is Required</u>

Where a City contractor has:

(a) set aside an area of a contract site for stockpiling construction materials excavated from and/or intended for that site; <u>or</u>

(b) received written approval from the contracting agency for an off-site stockpiling location,

the Department will not deem such stockpiling location a transfer station and will not require the contractor to obtain a transfer station permit so long as:

(c) no construction materials or debris from off the contract site are received at the designated location for subsequent transfer to another location (other than the contract site); <u>and</u>

(d) the temporary stockpiling location is clearly described as such in the contract or clearly approved by the construction agency and designated as such in writing to the Department by the agency; <u>and</u>

(e) the construction agency represents in writing to the Department that such agency will monitor the temporary stockpiling location and ensure its clean-up and restoration pursuant to the procedures set out in this memorandum.

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Help Reduce New York's Waste.

Example: *Street Construction Projects*

As part of a contract for street construction, the contractor may be working at one end of a street and using an area at the other end of the street for the temporary stockpiling of construction materials. Both ends of the street are part of the construction contract site. In addition, the contractor may have leased an off-site location for temporary stockpiling of materials, which, following processing, will be reincorporated into the contract site, with some portion of the remainder designated for delivery to a Department disposal facility. Neither location will be regulated by the Department as a transfer station so long as the procedures set out in this memorandum are followed.

2. Procedure for Exception.

Upon a City construction agency's approval of any location to be designated as a temporary processing, storage or stockpiling area, that agency must determine that (a) its contract with the contractor provides for clean-up and restoration of such area by, for example, the contractor's posting of a restoration bond and/or by contractual set-off and (b) the agency has adequate procedures for monitoring the designated area to ensure that it does not violate the provisions set forth in this memorandum and that such location is cleaned up and restored at the completion of the contract work.

The City construction agency must submit an official letter to the Department acknowledging compliance with both (a) and (b) immediately above and representing that the agency will ensure the contractor's compliance. *The letter to be submitted must be in substantially the following form, addressed to the Director, Bureau of Waste Disposal,* Department of Sanitation, 125 Worth Street, Room 726, New York, NY 10013:

"The New York City Department of _____ (the "Agency") has awarded a construction contract to _____(Contractor)_____ _____ (the "Contractor") for work to be performed at _____(Contract Site)_____ .

a. This Agency has approved the following locations to be used by the Contractor for the temporary storage, processing and/or stockpiling of construction materials (the "Stockpiling Locations") excavated from the construction site or intended for the construction site:

_____

_____

_____

_____

b. The terms of the contract require the Contractor to clean up and restore the Stockpiling Locations, whether on or off the contract site, at or before the completion of the contract work.

c. This Agency assumes responsibility for the monitoring of Stockpiling Locations to ensure that only materials received from and/or intended for the construction site are stockpiled at such locations and we will enforce clean-up and restoration of such Locations at the end of their use for temporary stockpiling or at the termination of the contract, whichever occurs earlier, through restoration

bonding requirements and/or contractual set-off provisions such that the costs of clean-up and restoration will not become a charge to the Department or the City. "

3. When a Transfer Station Permit is Required

A transfer station permit will be required under any circumstances other than those outlined above. Except in the specifically defined circumstances set forth in this memorandum, any operator of a location or facility which receives, processes, stores or stockpiles construction and demolition debris or fill material for purposes of transfer to another location, including to a New York City Department of Sanitation facility, and whether or not under contract to the Department for the delivery of such materials, will be fully subject to the Department's transfer station rules and liable for enforcement for violations.

ATTACH TO CONTRACT DOCUMENTS

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

PROJECT ID: SV176ITF1

RECONSTRUCTION AND REHABILITATION OF
BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
BRONX RIVER PARKING LOT AND OVERFLOW LOT
INTERSECTION OF JUNGLE WORLD ROAD
AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

INCLUDING SEWER, WATER MAIN, STREET LIGHTING, TRAFFIC,
AND LANDSCAPING WORK
Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

ADDENDUM NO. 1

DATED: February 24, 2014

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

1. Any substantial modification of the Contract shall be subject to approval by the State Commissioner of Transportation and the Federal Highway Administration, in addition to the City agencies involved.

2. The Contractor shall be responsible for compliance with all the provisions of the following Schedules of Federal and State requirements which are hereby made a part of the original contract documents and are annexed hereto:

Attachment "A" - Required Contract Provisions for Federal-Aid Construction Contracts - FHWA 1273

Attachment "B" - New York State Contract Requirements - including Worker's Compensation and Liability Insurance, Appendix A - Standard Clauses for New York State Contracts, Labor and Employment, Non-Assignment of Agreement, Non-Collusive Bidding Certifications, Debarment History Certification, Appendix C (Disclosure of Lobbying Activities)

Attachment "C" - Assurance of Non-Discrimination, Subcontracts, Appendix A-1 Supplemental Title VI Provisions (Civil Rights Act)

Attachment "D" - Provisions Relating to the NYS Labor Law, Prevailing Wages, and the Use of Convict Labor and Materials on Federal & State Contracts

Attachment "E" - "Buy America" Requirements & Waivers

Attachment "F" - Equal Employment Opportunity Requirements

Attachment "G" - NO TEXT

Attachment "H" - Disadvantaged Business Enterprises Requirements for Federal Aid Contracts

Attachment "I" - Requirements Regarding Training in Federal Aid Contracts - Training Special Provision

Attachment "J" - NO TEXT

Attachment "K" - Changed Conditions and Disputed Work Provisions, Extra Force Account Work, Dispute Compensation and Record Keeping, Differing Site Conditions, Suspensions of Work, Significant Changes in the Character of the Work Provisions

Attachment "L" - Contractor Initiated Value Engineering Change Proposals (CIVEC)

Attachment "M" - NO TEXT

Attachment "N" - Itemized Proposal

Attachment "O" - US DOT Hotline / NYS Inspector General Hotline

Attachment "P" - Prompt Payments by the Contractor / Civil Rights Monitoring and Reporting

Attachment "Q" - Appendix 2 - Iran Divestment Act

In addition to compliance with the above Federal and State requirements, the Contractor shall also be required to comply with all City requirements as depicted in the Information for Bidders and Standard Construction Contract herein. Wherever a conflict may exist, the Federal Regulations shall take precedence.

3. The Contractor shall not pay less than the highest minimum hourly rates as set forth by Federal, State or City laws.

4. The Contractor shall maintain his records in conformity with the current NYSDOT "Manual for Uniform Record Keeping", referred to as MURK, copies of which are available on line at the NYSDOT website www.dot.ny.gov/publications.

5. In accordance with 23 US C315 and Order 1321.1C, FHWA Directives Management, issued January 6, 2010, the construction work performed under this Contract shall be available to be subject to inspection at all times by the New York State Department of Transportation and the Federal Highway Administration.

6. Amendments to Information for Bidders:

   a) Refer to Page 6, SECTION 20. Low Tie Bids;
   Delete Article 20 in its entirety and substitute the words "20. (NO TEXT)."

   b) Refer to Pages 6 and 7, Subsection 21.(C), Rejection of All Bids and Negotiation With All Responsible Bidders;
   Delete Sub-Article 21.(C) in its entirety and substitute the words "(C) (NO TEXT)."

   c) Refer to Pages 8 and 9, SECTION 26. Bid, Performance and Payment Security;
   Add the following:

"(F) Bidders are hereby advised that the apparent low Bidder, as determined at the bid opening or subsequently notified that its firm is the low Bidder, will be required to submit within seven (7) days a complete DBE Pre-Award Utilization Package in compliance with SECTION 102-12H of the NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS using their approved civil rights reporting software called EBO. For EBO software see Attachment 'P', CIVIL RIGHTS MONITORING AND REPORTING. Failure to submit the above documents within the specified seven (7) days after the date of the bids may be cause for a determination of non-responsiveness."

   d) Refer to Page 9, SECTION 27. Failure to Execute Contract, 6th, 7th and 8th lines;
   Delete the sentence beginning with the words: "No plea of mistake in such..." in its entirety.

e) Refer to Page 10, SECTION 30. Labor Law Requirements, Sub-Article (A) General:
Add the following at the end of the Sub-Article (A): "This provision shall apply to subcontractors also."

f) Refer to Page 11, Subsection 33.(B), Variations from Engineer's Estimate;
Delete Subsection 33.(B) in its entirety. See Attachment "K", Page A2-K2 and A2-K3, Significant Changes in the Character of Work, Sub-Article 3.(iv)(B).

g) Refer to Pages 12 and 13, SECTION 37. Locally Based Enterprise Requirements (LBE);
Delete the SECTION, in its entirety. See Attachment "H" Disadvantaged Business Enterprise Utilization Requirements.

7. Amendments to Standard Construction Contract:

a) Refer to Page 5, Sub-Article 5.2, "Procurement Policy Board Rules";
Delete the second sentence starting with the words: "In the event of..." and ending with the words "... shall take precedence."

b) Refer to Pages 11 and 12, ARTICLE 7. PROTECTION OF WORK AND OF PERSONS AND PROPERTY; NOTICES AND INDEMNIFICATION;
Add the following:

"7.6 In addition to the requirements stipulated herein, all work performed under this Contract shall comply with the safety and health standards of the Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor."

c) Refer to Page 13, Sub-Article 9.3;
Delete the first sentence starting with the words: "If the Contractor..." and ending with the words "... progress schedule."

d) Refer to Pages 22 and 23, ARTICLE 16. OCCUPATION OR USE PRIOR TO COMPLETION;
Delete Sub-Article 16.1.4, in its entirety.

e) Refer to Pages 23 and 24, ARTICLE 17. SUBCONTRACTS;
Delete Sub-Article 17.11.1, in its entirety;
Substitute the following revised Article 17.11.1:

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

f) Refer to Page 26, ARTICLE 19. SECURITY DEPOSIT;
Delete Sub-Article 19.2, in its entirety;
Substitute the following Sub-Article 19.2:

"19.2 If performance and payment bonds are not required, the bid security shall be retained by the **City** as security for the **Contractor**'s faithful performance of the Contract. If partial payments are provided, the bid security will be returned to the **Contractor** subject to the other provisions of this **Contract**. If partial payments are not provided, the bid security will be released when final payment is certified by the **City** for payment."

g) Refer to Page 29, ARTICLE 21. RETAINED PERCENTAGE;
Delete Article 21, in its entirety;
Substitute the following:

"**ARTICLE 21. (NO TEXT)**"

h) Refer to Page 36, ARTICLE 24. MAINTENANCE AND GUARANTY;
Add the following to Sub-Article 24.9:

"On any contract, which requires the furnishing and/or installing of electrical or mechanical equipment, the **Contractor** shall provide the following:

(1) Manufacturer's warranties or guarantees on all electrical and mechanical equipment, consistent with those provided as customary trade practice.

(2) Contractor's warranties or guarantees providing for satisfactory in-service operation of the mechanical and electrical equipment and related components for a period not less than one (1) year following project acceptance."

i) Refer to Page 37, ARTICLE 25. CHANGES;
Add the following paragraph:

"25.5 Extra Work: It is anticipated that the preliminary engineering and the preparation of plans, specifications and contract documents have been performed with sufficient thoroughness, accuracy and care, and that changes and extra work during the construction can be held to a minimum and limited almost exclusively to revisions and additions necessitated by conditions that could not reasonably be anticipated before the project was advertised for bids or force account operations commenced."

j) Refer to Pages 50, 51 and 52, ARTICLE 36. NO DISCRIMINATION;
Change in Paragraph 36.1.1, 4th line, "citizen of the State of New York" to "person";
Delete Paragraphs 36.1.3, 36.1.4, 36.2.2 and 36.2.4 in their entireties;
Add "or sex or age" to the expression "race, creed, color or national origin", and "or sex or age" to the expression "race, color or creed", wherever these expressions appear in Article 36.

k) Refer to Page 59, ARTICLE 43. PROMPT PAYMENT;
Add the following sentence to the end of Sub-Article 43.5:

"The Contractor shall not hold any retainage, but may deduct an amount necessary to satisfy any claims, liens or judgements against a Subcontractor or materialman which have not been fully discharged."

l) Refer to Pages 59 and 60, ARTICLE 44. SUBSTANTIAL COMPLETION PAYMENT;
Delete Sub-Articles 44.2 and 44.3, in their entirety;
Substitute the following:

"44.2 The **Commissioner** shall issue a voucher calling for payment of any part or all of the balance due for **Work** performed under the **Contract**, less any and all deductions authorized to be made by the **Commissioner**, under this **Contract** or by **Law**, and less twice the amount the **Commissioner** considers necessary to ensure the completion of the balance of the **Work** by the **Contractor**. Such a payment shall be considered a Partial and not a Final Payment. No **Substantial Completion** payment shall be made under this Article 44 where the **Contractor** shall fail to complete the **Work** within the time fixed for such completion in the Schedule A of the General Conditions, or within the time to which completion may have been extended, until an extension or extensions of time for the completion of **Work** have been acted upon pursuant to Article 13.

44.3 No further partial payments shall be made to the **Contractor** after **Substantial Completion**, except the **Substantial Completion** payment and **Contractor's** requisition that were properly filed with the **Commissioner** prior to the date of **Substantial Completion**; however, the **Commissioner** may grant a waiver for further partial payments after the date of **Substantial Completion** to permit payments for change order **Work**. Such waiver shall be in writing."

m) Refer to Pages 60 and 61, ARTICLE 45. FINAL PAYMENT;
Delete Sub-Article 45.1, in its entirety;
Substitute the following:

"45.1 After completion and **Final Acceptance** of the **Work**, the **Contractor** shall submit all required certificates and documents, together with a requisition for the balance claimed to be due under the **Contract**. Such submission shall be within 90 days of the date of the **Commissioner's** written determination of **Final Acceptance**, or within such additional time as may be granted by the **Commissioner** in writing. If the **Contractor** fails to submit all required certificates and documents within the time allowed, no payment of the balance claimed shall be made to the **Contractor** and the **Contractor** shall be deemed to have forfeited its right to payment of any balance claimed. A verified statement similar to that required in connection with applications for partial payments shall also be submitted to the **Commissioner**."

n) Refer to Page 67, ARTICLE 59. SERVICE OF NOTICES;
Delete the words "deposited in a post office box regularly maintained by the United States Postal Service in a properly addressed, postage prepaid envelope".

o) Refer to Pages 71, 72 and 73, ARTICLE 64. TERMINATION BY THE CITY;
Delete the text of the 1st paragraph;
Substitute the following:

"64.1 In addition to termination pursuant to any other article of this Contract, the Commissioner may, by written notice, terminate the Contract or any portion thereof after determining that for reasons beyond either Department or Contractor control it is not feasible to proceed with or complete the work as originally contracted for, and that termination would therefore be in the public interest. Such reasons for termination may include, but need not be necessarily limited to, executive orders of the President relating to prosecution of war or national defense, national emergency which creates a serious shortage of materials, orders from duly constituted authorities relating to energy conservation, and restraining orders or injunctions obtained by third-party citizen action resulting from national or local laws or regulations, or where the issuance of such order or injunction is primarily caused by acts or omissions of persons or agencies other than the Contractor, or where the orderly progression of a project is interfered with or delayed by acts or omissions of persons or agencies other than the Contractor. The Contractor specifically understands that the issuance of such notice by the Commissioner shall be conclusive as to its necessity. In such event the Contractor shall upon receipt of such notice:"

p) Refer to Pages 74 and 75, ARTICLE 67. LOCALLY BASED ENTERPRISE PROGRAM;
Delete Article 67, in its entirety. See Attachment "H" Disadvantaged Business Enterprise Utilization Requirements.

q) Refer to Pages 75, 76 and 77, ARTICLE 69. MacBRIDE PRINCIPLES PROVISIONS;
Delete Article 69, in its entirety, and Substitute the following "ARTICLE 69. (NO TEXT)"

r) Refer to Page 78, ARTICLE 75. COMPENSATION TO BE PAID TO CONTRACTOR;
Delete Article 75, in its entirety and Substitute the following "ARTICLE 75. (NO TEXT)".

s) Add the following to Pages 92, 93, 94, 95, 96, 97, 98, and 99, PERFORMANCE BOND:

"Prior to or at the time of execution of the contract, successful bidder must deliver to the City of New York an executed bond equal to one hundred percent (100%) of the contract price, to secure the faithful performance of the contract, and an executed bond in an amount equal to one hundred percent (100%) of the contract price, as security for the payment of all persons performing labor or furnishing materials in connection with this contract, prepared on the forms of bonds authorized by The City of New York, and made a part of the contract documents, copies of which are annexed hereto, and having as surety thereunder such surety company or companies as are approved by The City of New York and are authorized to do business in the State of New York. Premium of such bonds shall be included in the base bid.

In lieu of a performance and completion bond and labor and material bond, a contractor may deposit with the Comptroller, money or obligations of The City of New York which the Comptroller shall approve as of equal value with the amount of the performance and completion bond required.

Whenever a contractor deposits obligations of The City of New York, in lieu of a performance and completion bond and a labor and material bond, it shall be with the understanding that the Comptroller of the City of New York, or his successors, may sell and use the proceeds thereof, for any purpose for which the principal or surety on such bond would be liable under the terms of the contract. If money is deposited with the Comptroller, the Contractor shall not be entitled to receive interest on such money from The City of New York.

If the bidder to whom the contract is awarded refuses to execute it, or fails to furnish the required security and insurance within ten (10) days after receipt of notice to him of the award, the amount of his deposit, or as much thereof as may be applicable to the amount of the award made to him, shall be forfeited and shall be retained by the City as liquidated damages."

8. Amendments to General Conditions of the Standard Highway Specifications:

a) Refer to Page 14 of the Standard Highway Specifications, Article 1.06.23. Rules, Laws, and Requirements; Add the following:

"Certain items of work are to be performed in accordance with the general specifications of the following departments of the City of New York:

Bureau of Traffic Operations
Police Department
Fire Department
Department of Environmental Protection
Bureau of Water Supply and Sewer Operations
Street Lighting

Copies of these specifications may be examined at their offices."

b) Refer to Pages 16 and 17 of the Standard Highway Specifications, Article 1.06.23.(G) Rules Governing Navigation, last paragraph;
Delete the word "asbestos" wherever it occurs.

c) Refer to Pages 36, 37 and 38, of the Standard Highway Specifications, Article 1.06.46. Project Sign;
Delete the Article 1.06.46, in its entirety;
Substitute the following:

"1.06.46. Project Sign. No project signs will be required on this project."

d) Refer to Page 40 of the Standard Highway Specifications, Sub-Article 1.06.48.(C) Access Ramps, 2nd paragraph, 1st line;
Change the maximum grade from "one (1) vertical on three (3) horizontal" to "one (1) vertical on six (6) horizontal".

9. Amendments to the Standard Highway Specifications:

a) Refer to Page 83, Subsection 2.18.3(A), 4th paragraph;
Change "." to "," after "... and Appeals";
Add the following words: "and the health standards of OSHA of the U.S. Department of Labor."

b) Refer to Page 187, Subsection 4.06.12;
Delete the Subsection 4.06.12, in its entirety and substitute the words "**4.06.12. (NO TEXT).**" The use of rubble aggregate will not be permitted.

10. The Contractor is hereby notified that this is a City contract funded through apportionment available under Title 23, U.S. Code, as amended, and that the contract will be awarded by the City of New York, subject to the approval of the Commissioner of the New York State Department of Transportation and the Federal Highway Administration. Furthermore, no extensions in time for completion or other changes affecting the contract work can be granted by the City of New York without concurrence of the State of New York and approval of the Federal Highway Administration.

11. All reference to the delivery of salvageable materials to a designated City-owned yard do not apply to this Contract. All salvageable materials designated by the Engineer shall be stored on site for pick-up by City forces.

12. Wherever references are made within these specifications to "race, creed, color, national origin or sex," they shall be construed to include "sexual orientation and marital status".

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

ATTACHMENTS

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of

potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency

may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The

contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses

and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of

Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program

shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. **Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this

transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR

Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

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

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

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

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5.The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

WORKER'S COMPENSATION AND LIABILITY INSURANCE

The CONTRACTOR agrees to procure and maintain, until final acceptance by the City of the work covered by this Agreement, insurance of the kinds and in amounts hereinafter provided in insurance companies authorized to do business in the State of New York, covering all operations under this Agreement whether performed by him or subcontractors. Before commencing the work, the CONTRACTOR shall furnish to the COMMISSIONER and to the City of New York a certificate or certificates, in form satisfactory to the COMMISSIONER and to the CITY, showing that he has complied with this requirement, which certificate or certificates, shall provide that the policies shall not be changed or cancelled until thirty (30) days written notice has been given to the COMMISSIONER and to the City of New York. The kinds and amounts of insurance required are as specified in Schedule "A" shown on Pages SA-1 to SA-10, in Volume 3 of 3.

This Agreement shall be void and of no force and effect unless the Contractor shall provide coverage for the benefit of, and keep covered during the life of this agreement, such employees as are required to be covered by the provisions of the Worker's Compensation Law. (State Finance Law Section 142)

NO FURTHER TEXT ON THIS PAGE

APPENDIX A

STANDARD CLAUSES FOR NEW YORK STATE CONTRACTS

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STANDARD CLAUSES FOR NYS CONTRACTS

The parties to the attached contract, license, lease, amendment or other agreement of any kind (hereinafter, "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract (the word "Contractor" herein refers to any party other than the State, whether a contractor, licenser, licensee, lessor, lessee or any other party):

1. EXECUTORY CLAUSE. In accordance with Section 41 of the State Finance Law, the State shall have no liability under this contract to the Contractor or to anyone else beyond funds appropriated and available for this contract.

2. NON-ASSIGNMENT CLAUSE. In accordance with Section 138 of the State Finance Law, this contract may not be assigned by the Contractor or its right, title or interest therein assigned, transferred, conveyed, sublet or otherwise disposed of without the State's previous written consent, and attempts to do so are null and void. Notwithstanding the foregoing, such prior written consent of an assignment of a contract let pursuant to Article XI of the State Finance Law may be waived at the discretion of the contracting agency and with the concurrence of the State Comptroller where the original contract was subject to the State Comptroller's approval, where the assignment is due to a reorganization, merger or consolidation of the Contractor's business entity or enterprise. The State retains its right to approve an assignment and to require that any Contractor demonstrate its responsibility to do business with the State. The Contractor may, however, assign its right to receive payments without the State's prior written consent unless this contract concerns Certificates of Participation pursuant to Article 5-A of the State Finance Law.

3. COMPTROLLER'S APPROVAL. In accordance with Section 112 of the State Finance Law (or, if this contract is with the State University or City University of New York, Section 355 or Section 6218 of the Education Law), if this contract exceeds $50,000 (or the minimum thresholds agreed to by the Office of the State Comptroller for certain S.U.N.Y. and C.U.N.Y. contracts), or if this is an amendment for any amount to a contract which, as so amended, exceeds said statutory amount, or if, by this contract, the State agrees to give something other than money when the value or reasonably estimated value of such consideration exceeds $10,000, it shall not be valid, effective or binding upon the State until it has been approved by the State Comptroller and filed in his office. Comptroller's approval of contracts let by the Office of General Services is required when such contracts exceed $85,000 (State Finance Law Section 163.6-a). However, such pre-approval shall not be required for any contract established as a centralized contract through the Office of General Services or for a purchase order or other transaction issued under such centralized contract.

4. WORKERS' COMPENSATION BENEFITS. In accordance with Section 142 of the State Finance Law, this contract shall be void and of no force and effect unless the Contractor shall provide and maintain coverage during the life of this contract for the benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.

5. NON-DISCRIMINATION REQUIREMENTS. To the extent required by Article 15 of the Executive Law (also known as the Human Rights Law) and all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex (including gender identity or expression), national origin, sexual orientation, military status, age, disability, predisposing genetic characteristics, marital status or domestic violence victim status. Furthermore, in accordance with Section 220-e of the Labor Law, if this is a contract for the construction, alteration or repair of any public building or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this contract shall be performed within the State of New York, Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, disability, sex, or national origin: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. If this is a building service contract as defined in Section 230 of the Labor Law, then, in accordance with Section 239 thereof, Contractor agrees that neither it nor its subcontractors shall by reason of race, creed, color, national origin, age, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. Contractor is subject to fines of $50.00 per person per day for any violation of Section 220-e or Section 239 as well as possible termination of this contract and forfeiture of all moneys due hereunder for a second or subsequent violation.

6. WAGE AND HOURS PROVISIONS. If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof, neither Contractor's employees nor the employees of its subcontractors may be required or permitted to work more than the number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, Contractor and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law. Additionally, effective April 28, 2008, if this is a public work contract covered by Article 8 of the Labor Law, the Contractor understands and agrees that the filing of payrolls in a manner

consistent with Subdivision 3-a of Section 220 of the Labor Law shall be a condition precedent to payment by the State of any State approved sums due and owing for work done upon the project.

7. NON-COLLUSIVE BIDDING CERTIFICATION. In accordance with Section 139-d of the State Finance Law, if this contract was awarded based upon the submission of bids, Contractor affirms, under penalty of perjury, that its bid was arrived at independently and without collusion aimed at restricting competition. Contractor further affirms that, at the time Contractor submitted its bid, an authorized and responsible person executed and delivered to the State a non-collusive bidding certification on Contractor's behalf.

8. INTERNATIONAL BOYCOTT PROHIBITION. In accordance with Section 220-f of the Labor Law and Section 139-h of the State Finance Law, if this contract exceeds $5,000, the Contractor agrees, as a material condition of the contract, that neither the Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating, or shall participate in an international boycott in violation of the federal Export Administration Act of 1979 (50 USC App. Sections 2401 et seq.) or regulations thereunder. If such Contractor, or any of the aforesaid affiliates of Contractor, is convicted or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the contract's execution, such contract, amendment or modification thereto shall be rendered forfeit and void. The Contractor shall so notify the State Comptroller within five (5) business days of such conviction, determination or disposition of appeal (2NYCRR 105.4).

9. SET-OFF RIGHTS. The State shall have all of its common law, equitable and statutory rights of set-off. These rights shall include, but not be limited to, the State's option to withhold for the purposes of set-off any moneys due to the Contractor under this contract up to any amounts due and owing to the State with regard to this contract, any other contract with any State department or agency, including any contract for a term commencing prior to the term of this contract, plus any amounts due and owing to the State for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. The State shall exercise its set-off rights in accordance with normal State practices including, in cases of set-off pursuant to an audit, the finalization of such audit by the State agency, its representatives, or the State Comptroller.

10. RECORDS. The Contractor shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertinent to performance under this contract (hereinafter, collectively, "the Records"). The Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter. The State Comptroller, the Attorney General and any other person or entity authorized to conduct an examination, as well as the agency or agencies involved in this contract, shall have access to the Records during normal business hours at an office of the Contractor within the State of New York or, if no such office is available, at a mutually agreeable and reasonable venue within the State, for the term specified above for the purposes of inspection, auditing and copying. The State shall take reasonable steps to protect from public disclosure any of the Records which are exempt from disclosure under Section 87 of the Public Officers Law (the "Statute") provided that: (i) the Contractor shall timely inform an appropriate State official, in writing, that said records should not be disclosed; and (ii) said records shall be sufficiently identified; and (iii) designation of said records as exempt under the Statute is reasonable. Nothing contained herein shall diminish, or in any way adversely affect, the State's right to discovery in any pending or future litigation.

11. IDENTIFYING INFORMATION AND PRIVACY NOTIFICATION. (a) Identification Number(s). Every invoice or New York State Claim for Payment submitted to a New York State agency by a payee, for payment for the sale of goods or services or for transactions (e.g., leases, easements, licenses, etc.) related to real or personal property must include the payee's identification number. The number is any or all of the following: (i) the payee's Federal employer identification number, (ii) the payee's Federal social security number, and/or (iii) the payee's Vendor Identification Number assigned by the Statewide Financial System. Failure to include such number or numbers may delay payment. Where the payee does not have such number or numbers, the payee, on its invoice or Claim for Payment, must give the reason or reasons why the payee does not have such number or numbers.

(b) Privacy Notification. (1) The authority to request the above personal information from a seller of goods or services or a lessor of real or personal property, and the authority to maintain such information, is found in Section 5 of the State Tax Law. Disclosure of this information by the seller or lessor to the State is mandatory. The principal purpose for which the information is collected is to enable the State to identify individuals, businesses and others who have been delinquent in filing tax returns or may have understated their tax liabilities and to generally identify persons affected by the taxes administered by the Commissioner of Taxation and Finance. The information will be used for tax administration purposes and for any other purpose authorized by law. (2) The personal information is requested by the purchasing unit of the agency contracting to purchase the goods or services or lease the real or personal property covered by this contract or lease. The information is maintained in the Statewide Financial System by the Vendor Management Unit within the Bureau of State Expenditures, Office of the State Comptroller, 110 State Street, Albany, New York 12236.

12. EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITIES AND WOMEN. In accordance with Section 312 of the Executive Law and 5 NYCRR 143, if this contract is: (i) a written agreement or purchase order instrument, providing for a total expenditure in excess of $25,000.00, whereby a contracting agency is committed to expend or does expend funds in return for labor, services, supplies, equipment, materials or any combination of the foregoing, to be performed for, or rendered or furnished to the contracting agency; or (ii) a written agreement in excess of $100,000.00 whereby a contracting agency is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon; or (iii) a written agreement in excess of $100,000.00 whereby the owner of a State assisted housing project is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon for such project, then the following shall apply and by signing this agreement the Contractor certifies and affirms that it is Contractor's equal employment opportunity policy that:

(a) The Contractor will not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability or marital status, shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on State contracts and will undertake or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination. Affirmative action shall mean recruitment, employment, job assignment, promotion, upgradings, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation;

(b) at the request of the contracting agency, the Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein; and

(c) the Contractor shall state, in all solicitations or advertisements for employees, that, in the performance of the State contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.

Contractor will include the provisions of "a", "b", and "c" above, in every subcontract over $25,000.00 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work") except where the Work is for the beneficial use of the Contractor. Section 312 does not apply to: (i) work, goods or services unrelated to this contract; or (ii) employment outside New York State. The State shall consider compliance by a contractor or subcontractor with the requirements of any federal law concerning equal employment opportunity which effectuates the purpose of this section. The contracting agency shall determine whether the imposition of the requirements of the provisions hereof duplicate or conflict with any such federal law and if such duplication or conflict exists, the contracting agency shall waive the applicability of Section 312 to the extent of such duplication or conflict. Contractor will comply with all duly promulgated and lawful rules and regulations of the Department of Economic Development's Division of Minority and Women's Business Development pertaining hereto.

13. CONFLICTING TERMS. In the event of a conflict between the terms of the contract (including any and all attachments thereto and amendments thereof) and the terms of this Appendix A, the terms of this Appendix A shall control.

14. GOVERNING LAW. This contract shall be governed by the laws of the State of New York except where the Federal supremacy clause requires otherwise.

15. LATE PAYMENT. Timeliness of payment and any interest to be paid to Contractor for late payment shall be governed by Article 11-A of the State Finance Law to the extent required by law.

16. NO ARBITRATION. Disputes involving this contract, including the breach or alleged breach thereof, may not be submitted to binding arbitration (except where statutorily authorized), but must, instead, be heard in a court of competent jurisdiction of the State of New York.

17. SERVICE OF PROCESS. In addition to the methods of service allowed by the State Civil Practice Law & Rules ("CPLR"), Contractor hereby consents to service of process upon it by registered or certified mail, return receipt requested. Service hereunder shall be complete upon Contractor's actual receipt of process or upon the State's receipt of the return thereof by the United States Postal Service as refused or undeliverable. Contractor must promptly notify the State, in writing, of each and every change of address to which service of process can be made. Service by the State to the last known address shall be sufficient. Contractor will have thirty (30) calendar days after service hereunder is complete in which to respond.

18. PROHIBITION ON PURCHASE OF TROPICAL HARDWOODS. The Contractor certifies and warrants that all wood products to be used under this contract award will be

in accordance with, but not limited to, the specifications and provisions of Section 165 of the State Finance Law, (Use of Tropical Hardwoods) which prohibits purchase and use of tropical hardwoods, unless specifically exempted, by the State or any governmental agency or political subdivision or public benefit corporation. Qualification for an exemption under this law will be the responsibility of the contractor to establish to meet with the approval of the State.

In addition, when any portion of this contract involving the use of woods, whether supply or installation, is to be performed by any subcontractor, the prime Contractor will indicate and certify in the submitted bid proposal that the subcontractor has been informed and is in compliance with specifications and provisions regarding use of tropical hardwoods as detailed in §165 State Finance Law. Any such use must meet with the approval of the State; otherwise, the bid may not be considered responsive. Under bidder certifications, proof of qualification for exemption will be the responsibility of the Contractor to meet with the approval of the State.

19. MACBRIDE FAIR EMPLOYMENT PRINCIPLES (APPLICABLE ONLY IN NON-FEDERAL AID NEW YORK STATE CONTRACTS). In accordance with the MacBride Fair Employment Principles (Chapter 807 of the Laws of 1992), the Contractor hereby stipulates that the Contractor either (a) has no business operations in Northern Ireland, or (b) shall take lawful steps in good faith to conduct any business operations in Northern Ireland in accordance with the MacBride Fair Employment Principles (as described in Section 165 of the New York State Finance Law), and shall permit independent monitoring of compliance with such principles.

20. OMNIBUS PROCUREMENT ACT OF 1992 (APPLICABLE ONLY IN NON-FEDERAL AID NEW YORK STATE CONTRACTS). It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority and women-owned business enterprises as bidders, subcontractors and suppliers on its procurement contracts.

Information on the availability of New York State subcontractors and suppliers is available from:

NYS Department of Economic Development
Division for Small Business
Albany, New York 12245
Telephone: 518-292-5100
Fax: 518-292-5884
email: opa@esd.ny.gov

A directory of certified minority and women-owned business enterprises is available from:

NYS Department of Economic Development
Division of Minority and Women's Business Development
633 Third Avenue
New York, NY 10017
212-803-2414
email: mwbecertification@esd.ny.gov
https://ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp

The Omnibus Procurement Act of 1992 requires that by signing this bid proposal or contract, as applicable, Contractors certify that whenever the total bid amount is greater than $1 million:

(a) The Contractor has made reasonable efforts to encourage the participation of New York State Business Enterprises as suppliers and subcontractors, including certified minority and women-owned business enterprises, on this project, and has retained the documentation of these efforts to be provided upon request to the State;

(b) The Contractor has complied with the Federal Equal Opportunity Act of 1972 (P.L. 92-261), as amended;

(c) The Contractor agrees to make reasonable efforts to provide notification to New York State residents of employment opportunities on this project through listing any such positions with the Job Service Division of the New York State Department of Labor, or providing such notification in such manner as is consistent with existing collective bargaining contracts or agreements. The Contractor agrees to document these efforts and to provide said documentation to the State upon request; and

(d) The Contractor acknowledges notice that the State may seek to obtain offset credits from foreign countries as a result of this contract and agrees to cooperate with the State in these efforts.

21. RECIPROCITY AND SANCTIONS PROVISIONS. Bidders are hereby notified that if their principal place of business is located in a country, nation, province, state or political subdivision that penalizes New York State vendors, and if the goods or services they offer will be substantially produced or performed outside New York State, the Omnibus Procurement Act 1994 and 2000 amendments (Chapter 684 and Chapter 383, respectively) require that they be denied contracts which they would otherwise obtain. NOTE: As of May 15, 2002, the list of discriminatory jurisdictions subject to this provision includes the states of South Carolina, Alaska, West Virginia, Wyoming, Louisiana and Hawaii. Contact NYS Department of Economic Development for a current list of jurisdictions subject to this provision.

22. COMPLIANCE WITH NEW YORK STATE INFORMATION SECURITY BREACH AND

NOTIFICATION ACT. Contractor shall comply with the provisions of the New York State Information Security Breach and Notification Act (General Business Law Section 899-aa; State Technology Law Section 208).

23. **COMPLIANCE WITH CONSULTANT DISCLOSURE LAW.** If this is a contract for consulting services, defined for purposes of this requirement to include analysis, evaluation, research, training, data processing, computer programming, engineering, environmental, health, and mental health services, accounting, auditing, paralegal, legal or similar services, then, in accordance with Section 163 (4-g) of the State Finance Law (as amended by Chapter 10 of the Laws of 2006), the Contractor shall timely, accurately and properly comply with the requirement to submit an annual employment report for the contract to the agency that awarded the contract, the Department of Civil Service and the State Comptroller.

24. **PROCUREMENT LOBBYING.** To the extent this agreement is a "procurement contract" as defined by State Finance Law Sections 139-j and 139-k, by signing this agreement the contractor certifies and affirms that all disclosures made in accordance with State Finance Law Sections 139-j and 139-k are complete, true and accurate. In the event such certification is found to be intentionally false or intentionally incomplete, the State may terminate the agreement by providing written notification to the Contractor in accordance with the terms of the agreement.

25. **CERTIFICATION OF REGISTRATION TO COLLECT SALES AND COMPENSATING USE TAX BY CERTAIN STATE CONTRACTORS, AFFILIATES AND SUBCONTRACTORS.**
To the extent this agreement is a contract as defined by Tax Law Section 5-a, if the contractor fails to make the certification required by Tax Law Section 5-a or if during the term of the contract, the Department of Taxation and Finance or the covered agency, as defined by Tax Law 5-a, discovers that the certification, made under penalty of perjury, is false, then such failure to file or false certification shall be a material breach of this contract and this contract may be terminated, by providing written notification to the Contractor in accordance with the terms of the agreement, if the covered agency determines that such action is in the best interest of the State.

26. **IRAN DIVESTMENT ACT**. By entering into this Agreement, Contractor certifies in accordance with State Finance Law §165-a that it is not on the "Entities Determined to be Non-Responsive Bidders/Offerers pursuant to the New York State Iran Divestment Act of 2012" ("Prohibited Entities List") posted at:
http://www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf

Contractor further certifies that it will not utilize on this Contract any subcontractor that is identified on the Prohibited Entities List. Contractor agrees that should it seek to renew or extend this Contract, it must provide the same certification at the time the Contract is renewed or extended. Contractor also agrees that any proposed Assignee of this Contract will be required to certify that it is not on the Prohibited Entities List before the contract assignment will be approved by the State.

During the term of the Contract, should the state agency receive information that a person (as defined in State Finance Law §165-a) is in violation of the above-referenced certifications, the state agency will review such information and offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment activity which is in violation of the Act within 90 days after the determination of such violation, then the state agency shall take such action as may be appropriate and provided for by law, rule, or contract, including, but not limited to, imposing sanctions, seeking compliance, recovering damages, or declaring the Contractor in default.

The state agency reserves the right to reject any bid, request for assignment, renewal or extension for an entity that appears on the Prohibited Entities List prior to the award, assignment, renewal or extension of a contract, and to pursue a responsibility review with respect to any entity that is awarded a contract and appears on the Prohibited Entities list after contract award.

LABOR AND EMPLOYMENT

The provisions of NYS Labor Law, as amended, and referred to in §102-08, *Standard Clauses for All New York State Contracts*, shall be applicable. On contracts financed with Federal-Aid, any provisions of NYS Labor Law that are in conflict with mandatory Federal-Aid construction contract compliance requirements, as contained in 23 CFR 635.117 are superseded. Any provisions of NYS Labor Law that are not in conflict with mandatory Federal-Aid construction contract compliance requirements or the Davis-Bacon Act, but are more restrictive, shall apply.

The Contractor shall directly employ those members of its own organization. Employee leasing and other similar arrangements under which workers are employed by another organization will only be considered under a subcontract approved in accordance with §108-05, *Subletting or Assigning the Contract.*

A. Wages. The Department will provide the Contractor with prevailing wage rate schedules. When both State and Federal wage rate schedules are provided, the Contractor shall pay the higher of the two wages and supplemental (fringe) benefits. If prevailing wage rate schedules are attached, all onsite work shall be paid prevailing wages. The Contractor shall ensure that workers are paid the appropriate wages and supplemental (fringe) benefits. The Contractor shall obtain periodic wage rate schedule updates from the NYS Department of Labor (NYSDOL). Wage rate amendments and supplements are available on the NYSDOL web site at *www.labor.state.ny.us.* All changes or clarification of labor classification(s) and applicability of prevailing wage rates shall be obtained in writing from the Office of the Director, NYSDOL Bureau of Public Work. The Contractor shall include the cost of changes in wage rate schedules and supplements (fringes) over the contract duration in the contract bid prices.

On-site Contractor or Subcontractor employees shall be paid prevailing wages required under the Davis-Bacon Act. In accordance with 29 CFR 5.2(l), "site of the work" is defined as the physical place or places where the construction called for in the contract will remain when work on it has been completed. Facilities such as fabrication plants, mobile factories, batch plants, borrow pits, etc. are part of the site of the work provided that they are dedicated exclusively to the performance of the contract. Not included in the site of the work are facilities whose continuance in operation are determined wholly without regard to a particular contract. Such permanent, previously established facilities are not a part of the "site of the work," even where the operations for a period of time may be dedicated exclusively to the performance of a contract.

In accordance with NYS Labor Law, Sections 220 and 220-d:

1 No laborer, worker, or mechanic, in the employ of the Contractor, Subcontractor or other person doing or contracting to do the whole or any part of the work contemplated by the contract shall be permitted or required to work more than eight (8) hours in any one calendar day or more than five days in any one week, except in the emergencies set forth in the Labor Law.

2. The wages paid for a legal day's work shall be not less than the prevailing rate of wages as defined by law.

3. The minimum hourly rate of wages to be paid shall not be less than that stated in the contract documents, and any redetermination of the prevailing rate of wages after the contract is approved shall be deemed to be incorporated herein by reference as of the effective date of redetermination and shall form a part of these contract documents.

4. The contract may be forfeited and no sum paid for any work done thereunder on a second conviction for willfully paying less than:

a. the stipulated wage scale as provided in Labor Law, §220 (3), as amended, or;
b. the stipulated minimum hourly wage scale as provided in Labor Law, §220-d, as amended.

B. Overtime Dispensation. All bidders, in submitting their bids, should base their bids and work progression on the assumption that Overtime Dispensation pursuant to Article 8 of the New York State Labor Law, for any workers, laborers, and mechanics to work more than 8 hours in any one calendar day or more than 5 days in any one week will not be granted for any operation for the contract duration. Regardless of approval or disapproval of overtime by the NYSDOL, no adjustment will be made in any bid prices.

Subsequent to award, where the contract proposal has imposed specific scheduling and/or phasing requirements or where it is determined by the Department to be in the best interest of the public, the Department may process, for approval by the NYSDOL, requests for overtime dispensation on certain specific operations

The Contractor shall submit requests for overtime dispensation to the Department on Form PW- 30, Application for Dispensation for Hours, which will be provided by the Engineer upon request. The Department will review applications for overtime dispensation submitted by the Contractor associated with contracts subject to (A+B) Bidding, Incentive/Disincentive (I/D) or Lane Rental work favorably, but the application should not request more than 60 hours per week. The 60 hours per week may be either 6 - 10 hour days or 5 - 12 hour days. Overtime dispensations will be supported by the Department to advance Department goals and priorities, subject to specific circumstances and conditions associated with each contract.

The Department cannot guarantee that the NYSDOL will grant dispensation from restrictions pursuant to the provisions of Article 8 of the State Labor Law, however with the Department's certification, it is anticipated that they will act favorably, provided that the Contractor is in compliance with Labor Law requirements at the time of application.

C. Payrolls. The Contractor shall furnish the Engineer, each week, a certified payroll and statement of compliance with respect to the wages paid each of its employees, (including apprentices, trainees, watch persons and guards) and a certified payroll from each Subcontractor engaged on work during the preceding weekly payroll period.

Certified payrolls shall contain work class, hours worked, wage rate, payroll taxes and withholdings. Certified payrolls shall be annotated by race and gender, and shall be submitted on Form WH-347 or Form HC-231-1 for Federal-Aid contracts, and on HC-231-1 for non Federal-Aid contracts. At the Contractor's option, computer printed payroll records, which supply the required data and certifications may be used.

D. Training. An apprentice is defined as an individual who is enrolled in an apprenticeship training program that is registered with the NYS Department of Labor. A trainee is defined as an individual who is enrolled in an On-the-Job Training (OJT) program that is approved by the Federal Highway Administration (FHWA).

A number of sources to obtain training for apprentices/trainees are available. These include:
- A NYSDOL-approved apprenticeship program sponsored by a union or a temporary project level agreement with a union which has a NYSDOL approved apprenticeship program.
- A NYSDOL-approved apprenticeship program sponsored by a contractor.
- A NYSDOL-approved apprenticeship program sponsored by a contractor signatory with an apprenticeship sponsor consortium for certain services.
- An FHWA-approved OJT program (where applicable).

Approved OJT Programs are currently limited to apprenticeable occupations as determined by NYSDOL or USDOL. A list of approved OJT programs can be found in the On-the-Job Training and Apprenticeship Program Construction Catalogue which is available through the Department's Office of Equal Opportunity Development and Compliance.

Training under Training Special Provisions, if required, will be shown in the contract documents. In order to fulfill training requirements required under Training Special Provisions and/or §102-11 *Equal Employment Opportunity Requirements*, training should begin as early as possible during a construction contract. The Department recommends that all bidders have an approved apprenticeship or OJT program prior to bidding.

The Contractor shall furnish the apprentice/trainee a copy of the program to be followed in providing the training. The Contractor shall provide each apprentice/trainee with a certification showing the type and length of training satisfactorily completed.

When training is required under Training Special Provisions and/or §102-11 *Equal Employment Opportunity Requirements*, the Contractor shall designate to the Engineer, at the preconstruction meeting, a person (or persons) from its existing workforce as the Trainer and Training Coordinator for any apprentice(s)/ trainee(s).

The Trainer shall:
1. Be located on the contract site generally on a daily basis; and
2. Be responsible for the day-to-day supervision and training of persons on the contract; and
3. Be responsible for the preparation and submission of a monthly training progress report, after consultation with designated apprentices/trainees.

The Training Coordinator shall:
1. Be knowledgeable about the contract and the Apprenticeship/OJT programs to be used; and
2. Be responsible for ensuring on-the-job orientation of apprentice/trainees; and
3. Be responsible for ensuring meaningful and effective training for the duration of training.

E. Public Notices. Before commencing any work on the site, the Contractor shall provide a satisfactory weather resistant surface, and post, in a location accessible to all workers, a copy of the NYSDOL schedules of prevailing wages and supplements for this contract, a copy of all redeterminations of such schedules for the contract, the Workers' Compensation Law notice, required safety notices, and all other notices required by law to be posted at the site. The Contractor shall maintain such notices in a legible manner and shall replace any notice or schedule which is damaged, defaced, illegible or removed for any reason. The Notices shall be maintained until all work on the site is complete.

F. Federal-Aid Requirements. No procedures or requirement shall be imposed by any state which will operate to discriminate against the employment of labor from any other state, possession or territory of the United States, in the construction of a Federal-Aid project. The selection of labor to be employed by the Contractor on any Federal-Aid project shall be of its choosing.

The Contractor shall not use convict labor unless performed by convicts who are on parole, supervised release, or probation for construction, maintenance or any other purpose at the site or within the contract limits of any Federal-Aid highway construction project from the time of contract award or the start of work on force account until final acceptance of the work by the Department.

NON-ASSIGNMENT OF AGREEMENT

In accordance with Section 138 of the State Finance Law, the Contractor agrees not to assign, transfer, convey, sublet or otherwise dispose of this agreement or any part thereof, or of its right, title or interest therein or its power to execute such agreement to any person, company or corporation without the previous consent in writing of the City and of the Commissioner of the Department of Design and Construction and any attempts to assign the agreement without the City's written consent are null and void.

No further Text on This Page

BID DEPOSIT

Accompanying this proposal is a bid bond, certified check or bank cashier's check for the specified amount of deposit required. In the event this proposal is accepted by the Department of Transportation and the undersigned shall fail to execute the contract and in all respects comply with the provisions of Section 38 of the Highway Law, as amended, or where applicable, Section 30 of the Canal Law, as amended, the moneys represented by such bid bond, certified check or Bank cashier's check shall be regarded as liquidated damages and shall be forfeited and become the property of the State of New York; otherwise to be returned to the depositor in accordance with the provisions of said Section 38 of the Highway Law, as amended, or where applicable with Section 30 of the Canal Law, as amended.

On acceptance of this proposal for said work the undersigned does or do hereby bind herself/himself or itself/themselves to enter into written contract, within ten days of date of notice of award, with the said Department of Transportation, and comply in all respects with § 38(6) of the Highway Law, as amended, or where applicable with §30 (7) of the Canal Law, as amended, in relation to security for the faithful performance of the terms of said contract.

NOTICE TO ALL PROSPECTIVE BIDDERS
FEDERAL-AID CONTRACTS

ASSURANCE OF NON-DISCRIMINATION

The New York State Department of Transportation, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation and Title 23 Code of Federal Regulations, Part 200, Title VI Program and Related Statutes, as amended, issued pursuant to such Acts, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, sex, age, disability/handicap and income status in consideration for an award.

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SUBCONTRACTS

The attention of the Contractor is directed to the requirement that the standard contract clauses, as set forth in the Proposal and in the Labor Compliance Manual (Federal-aid Construction, Appendix D-2, 3) must be physically incorporated in all subcontracts.

Copies of the Labor Compliance Manual referred to above may be examined in the office of the Regional Director.

Rev. 2/27/70
4/20/72
8/30/73
12/7/76

APPENDIX A-1 SUPPLEMENTAL TITLE VI PROVISIONS (CIVIL RIGHTS ACT)

(To be included in all contracts)

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

(1) Compliance with Regulations: The contractor shall comply with the Regulation relative to nondiscrimination in Federally assisted programs of the Department of Transportation of the United States, Title 49, Code of Federal Regulations, Part 21, and the Federal Highway Administration (hereinafter "FHWA") Title 23, Code of Federal Regulations, Part 200 as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

(2) Nondiscrimination: The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, religion, age, color, sex or national origin, sex, age, and disability/handicap in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by 49 CFR, section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

(3) Solicitations for Subcontractors, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin, sex, age, and disability/handicap.

(4) Information and Reports: The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by NYSDOT or the FHWA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to NYSDOT's Office of Civil Rights or FHWA, as appropriate, and shall set forth what efforts it has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, NYSDOT shall impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

a) Withholding of payments to the contractor under the contract until the contractor complies; and/or
b) Cancellation, termination or suspension of the contract, in whole or in part.

(6) Incorporation of Provisions: The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The contractor shall take such action with respect to any subcontractor procurement as NYSDOT or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request NYSDOT to enter into such litigation to protect the interests of NYSDOT, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

PROVISIONS RELATING TO THE NEW YORK STATE LABOR LAW, PREVAILING WAGES, AND THE USE OF CONVICT LABOR AND MATERIALS ON FEDERAL & STATE CONTRACTS

GENERAL PROVISIONS. All projects funded with Federal aid and let to contract in New York State shall conform to the provisions of the New York State Labor Law, except that in accordance with the authorization in Article 4, Section 85 of the New York State Highway Law, any provisions of the above referenced Labor Law which are in conflict with the following enumerated mandatory Federal Aid highway construction compliance requirements, as contained in Section 635 of the Code of Federal Regulations, Title 23-Highways, and other Federal legislation, rules, and regulations, as referenced below, are superseded:

CONVICT LABOR. No convict labor, unless performed by convicts who are on parole, supervised release, or probation, shall be employed in construction or used for maintenance or any other purposes at the site or within the limits of any Federal Aid highway construction project from the time of award of the contract or the start of work on force account until final acceptance of the work by the Owner.

SELECTION OF LABOR. No procedures or requirements shall be imposed by any state or municipal subdivision thereof which will operate to discriminate against the employment of labor from any other state, possession, or territory of the United States, in the construction of a Federal Aid project. The selection of labor to be employed by the Contractor on any Federal Aid project shall be of his/her own choosing.

WAGE RATES ON FEDERAL AID PROJECTS. Attention is directed to the statutory provisions governing the prevailing rates of wages for workmen, mechanics, and laborers who are employed on this project. Section 220 of the New York State Labor Law, as amended, requires that the wages paid for a legal day's work shall be not less than the rate of wages plus the supplements prevailing at the time the work is performed, the current schedules of which shall be included in the contract documents. Such schedules may be amended or supplemented from time to time, and such amendments or supplements shall be forwarded to the Contractor.

The Federal Aid Highway Act of 1968 provides for the payment of wages at rates not less than those determined in accordance with the Davis-Bacon Act (40 USC, Section 276-a), the schedule of which shall also be included in the contract documents.

On-site materials suppliers, in addition to all subcontractors, are subject to the provisions of the Davis-Bacon Act. This will not necessarily be construed as causing the on-site material suppliers to be classified as subcontractors as part of the 50% limitation on the subcontracting of this project.

In case of a variance between (1) the schedules of prevailing rates of wages and supplements as determined under Section 220 of the New York State Labor Law, and (2) the schedule of rates of wages as determined pursuant to the Davis-Bacon Act, the Contractor shall accept and use the schedule or schedules that establish the higher rate of wages as the minimum for the workmen who are employed on the project.

CONSTRUCTION BY FEDERAL AGENCIES. When construction on Federal Aid highways is being performed by any Federal agency under its procedures and by Federal contract, the labor standards relating to direct federal contracts shall be applicable.

NON-DISCRIMINATION. Employment shall be provided without regard to race, color, religion, sex, or national origin.

CONVICT-PRODUCED MATERIALS. The use of convict-produced materials on any Federal or Federally-assisted contract must comply with the following requirements:

a. Materials produced by convict labor may only be incorporated in a Federal Aid highway construction project if such materials have been:

1. Produced by convicts who are on parole, supervised release, or probation from a prison; or

2. Produced in a qualified prison facility and the cumulative annual production amount of such materials for use in Federal Aid highway construction does not exceed the amount of such materials produced in such facility for use in Federal Aid highway construction during the 12-month period ending July 1, 1987.

b. "Qualified prison facility" means any prison facility in which convicts, during the 12-month period ending July 1. 1997, produced materials for use in Federal Aid highway construction projects.

c. Standard State and Federal Aid contract procedures may be used to assure compliance with the requirements of this paragraph.

FEDERAL WAGE RATES

>

General Decision Number: NY140003 08/29/2014 NY3

Superseded General Decision Number: NY20130003

State: New York

Construction Types: Building, Heavy, Highway and Residential

Counties: Bronx, Kings, New York, Queens and Richmond Counties in New York.

BUILDING & RESIDENTIAL CONSTRUCTION PROJECTS (includes single family homes and apartments up to and including 4 stories), HEAVY AND HIGHWAY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	01/03/2014
1	01/17/2014
2	01/24/2014
3	03/07/2014
4	04/04/2014
5	06/06/2014
6	06/20/2014
7	06/27/2014
8	07/04/2014
9	07/11/2014
10	07/18/2014
11	07/25/2014
12	08/15/2014
13	08/22/2014
14	08/29/2014

ASBE0012-001 12/30/2013

	Rates	Fringes
Asbestos Workers/Insulator Includes application of all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems	$ 64.73	30.44
HAZARDOUS MATERIAL HANDLER	$ 40.00	10.75

BOIL0005-001 01/01/2013

	Rates	Fringes
BOILERMAKER	$ 49.47	33%+22.87+a

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Thanksgiving Day, Memorial

Day, Independence Day, Labor Day and Good Friday, Friday after Thanksgiving, Christmas Eve Day and New Year's Eve

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BRNY0001-001 07/01/2013

	Rates	Fringes
BRICKLAYER	$ 49.09	22.93
MASON - STONE	$ 55.56	26.75

BRNY0001-002 07/01/2014

	Rates	Fringes
Pointer, cleaner and caulker	$ 40.78	27.57

BRNY0004-001 07/01/2014

	Rates	Fringes
MARBLE MASON	$ 55.85	29.73

BRNY0007-001 07/01/2014

	Rates	Fringes
TERRAZZO FINISHER	$ 47.28	32.16
TERRAZZO WORKER/SETTER	$ 48.88	32.18

BRNY0020-001 07/01/2014

	Rates	Fringes
MARBLE FINISHER	$ 44.54	29.31

BRNY0024-001 07/01/2014

	Rates	Fringes
BRICKLAYER		
MARBLE POLISHERS	$ 38.96	23.00

BRNY0052-001 06/01/2014

	Rates	Fringes
Tile Layer	$ 52.58	30.63

BRNY0088-001 06/01/2014

	Rates	Fringes
TILE FINISHER	$ 40.78	27.86

CARP0001-009 07/01/2014

	Rates	Fringes
CARPENTER		

Carpenters & Soft floor
layers.....$ 49.88 42.97

CARP0740-001 07/01/2014

	Rates	Fringes
MILLWRIGHT	$ 48.44	49.83

CARP1456-004 07/01/2014

	Rates	Fringes
Dock Builder & Piledrivermen		
DOCKBUILDERS	$ 48.35	45.07

CARP1456-005 07/01/2014

	Rates	Fringes
Diver Tender	$ 43.45	45.07
Diver	$ 61.30	45.07

CARP1536-001 07/01/2014

	Rates	Fringes
Carpenters:		
TIMBERMEN	$ 44.33	44.34

ELEC0003-001 05/14/2014

	Rates	Fringes
ELECTRICIAN		
Electricians	$ 53.00	27.06
Jobbing, and maintenance and repair work	$ 25.30	15.13+a

PAID HOLIDAYS:

a. New Years Day, Martin Luther King, Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Election Day, Thanksgiving Day, the day after Thanksgiving Day, and Christmas Day

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ELEC1049-001 03/30/2014

QUEENS COUNTY

	Rates	Fringes
Line Construction (Substation and Switching structures pipe type cable installation and maintenance jobs or projects; Railroad electrical distribution/transmission systems maintenance (when		

work is not performed by
railroad employees) Overhead
and Underground
transmission/distribution
line work. Fiber optic,
telephone cable and equipment)

Groundman	$ 29.71	18.9
Heavy Equipment Operator	$ 39.62	21.55
Lineman and Cable Splicer	$ 49.52	24.28
Tree Trimmer	$ 23.06	28.5%+9.75

ELEV0001-002 03/17/2013

	Rates	Fringes
ELEVATOR MECHANIC		
Elevator Constructor	$ 57.01	27.605+a+b
Modernization and Repair	$ 45.14	27.455+a+b

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Good Friday, President's Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

b. PAID VACATION: An employee who has worked less than 5 years shall recieve vacation pay credit on the basis of 4% of his hourly rate for all hours worked; an employee who has worked 5 to 15 years shall receive vacation pay credit on the basis of 6% of his hourly rate for all hours worked; an employee who has worked 15 or more years shall receive vacation pay credit on the basis of 8% of his hourly rate for all hours worked.

ENGI0014-001 07/01/2013

	Rates	Fringes
Pavement equipment operator		
Asphalt Plants	$ 54.17	28.65+a
Asphalt roller	$ 64.04	28.65+a
Asphalt spreader	$ 65.76	28.65+a
Power Equipment Operator (HEAVY & HIGHWAY)		
GROUP 1	$ 85.00	28.65
GROUP 10	$ 61.53	28.65
GROUP 11	$ 57.46	28.65
GROUP 12	$ 58.74	28.65
GROUP 13	$ 59.21	28.65
GROUP 14	$ 44.63	28.65
GROUP 15	$ 41.44	28.65
GROUP 2	$ 70.10	28.65
GROUP 3	$ 72.34	28.65
GROUP 4	$ 70.63	28.65
GROUP 5	$ 69.23	28.65
GROUP 6	$ 66.45	28.65
GROUP 7	$ 67.70	28.65

GROUP 8	$ 65.76	28.65
GROUP 9	$ 64.34	28.65
Steel erector		
Compressors, Welding Machines	$ 41.84	28.65
Cranes, Hydraulic Cranes, 2 drum derricks, Forklifts, Boom Trucks	$ 70.50	28.65
Three drum derricks	$ 73.37	28.65
Utility Laborer		
Horizontal Boring Rig	$ 62.53	28.65
Off shift compressors	$ 51.93	28.65
Utility Compressors	$ 41.18	28.65

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Tower crane

GROUP 2: Backhoes, power shovel, Hydraulic clam shells, moles and machines of a similar type

GROUP 3: Mine hoists and crane, etc. used as mine hoists

GROUP 4: Gradalls, keystones, cranes (with digging buckets), bridge cranes, trenching machines, vermeer cutter and machines of a similar nature

GROUP 5: Piledrivers, derrick boats, tunnel shovels

GROUP 6: All drills, and machines of a similar nature

GROUP 7: Back filling machines, cranes, mucking machines, dual drum pavers

GROUP 8: Mixers (concrete w/loading attachments), concrete pavers, cableways, land derricks, power house (low pressure units), concrete pumps

GROUP 9: Concrete plants, well drilling machines, stone crushers double drum hoist, power house (other than above)

GROUP 10: Concrete mixers

GROUP 11: Elevators

GROUP 12: Concrete breaking machine, Hoists (single drum), load masters, locomotive and dinkies over 10 tons

GROUP 13: Vibratory console

GROUP 14: Compressors (portable 3 or more in battery), tugger machine (caissons), well point pumps, chum drill

GROUP 15: Boilers, (high pressure, compressors (portable, single, or 2 in battery, not over 100' apart), pumps (river cofferdam and welding machines (except where arc is operated by members of local 15) push button machines, all engines irrespective of power (power pac) used to drive auxilliary equipment, air, hydraulic etc.

PREMIUMS ON CRANES (Crawler or Truck):
100' to 149' boom - add .50
150' to 249' boom - add .75
250' to 349' boom - add 1.00
350' to 450' boom - add 1.50

Premiums for Cranes on Steel Erection:
100' to 149' boom - add 1.75
150' to 249' boom - add 2.00
250' to 349' boom - add 2.25
350' to 450' boom - add 2.75
Tower crane - add 2.00

FOOTNOTE:
a. Paid Holidays: New Year's Day; Lincoln's Birthday; Washington's Birthday; Memorial Day; Independence Day; Labor Day; Veterans Day; Columbus Day; Election Day; Thanksgiving Day; and Christmas Day; provided the employee works one day the payroll week in which the holiday occurs.

ENGI0014-002 07/01/2013

	Rates	Fringes
Power Equipment Operator		
BUILDING & RESIDENTIAL		
GROUP 1	$ 65.83	28.65+a
GROUP 2	$ 69.74	28.65+a
GROUP 3	$ 63.58	28.65+a
GROUP 4	$ 57.82	28.65+a
GROUP 5	$ 43.28	28.65+a

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Double drum

GROUP 2: Stone derrick, cranes, hydraulic cranes, boom trucks

GROUP 3: 4 pole Hoist, Single Drum Hoists

GROUP 4: Fork lift, house cars, plaster (platform machine), plaster bucket, concrete pump and all other equipment used for hoisting material

GROUP 5: Compressors, welding machines (cutting concrete work), paint spraying, sand blasting, pumps (with the exclusion of concrete pumps), house car (settlement basis only), all engines irrespective of power (power pac) used to drive auxiliary equipment, air, hydraulic, etc., boilers

Premiums for Cranes:
100'-149' boom - add 1.75
150'-249' boom - add 2.00
250'-349' boom - add 2.25
350'-450' boom - add 2.75
Tower cranes add 2.00

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Lincoln's Birthday, Memorial Day, Independence Day, Labor Day, Veteran's Day, Columbus Day, Election Day, Thanksgiving Day, and Christmas Day, provided the employee works one day in the payroll week in which the holiday occurs

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IRON0040-002 07/01/2013

BRONX, NEW YORK, RICHMOND

	Rates	Fringes
IRONWORKER, STRUCTURAL	$ 46.75	50.98

IRON0046-003 07/01/2013

	Rates	Fringes
IRONWORKER METALLIC LATHERS AND REINFORCING IRONWORKERS	$ 40.00	30.16

IRON0197-001 06/01/2013

	Rates	Fringes
IRONWORKER STONE DERRICKMAN	$ 41.00	36.57

IRON0361-002 07/01/2013

KINGS, QUEENS

	Rates	Fringes
Ironworkers: (STRUCTURAL)	$ 46.75	50.98

IRON0580-001 07/01/2013

	Rates	Fringes
IRONWORKER, ORNAMENTAL	$ 42.30	42.12

LABO0006-001 07/01/2013

	Rates	Fringes
LABORER (Cement and Concrete Workers)	$ 42.38	20.52

LABO0029-001 07/01/2013

	Rates	Fringes
Laborers: Heavy Blasters (hydraulic trac drill)	$ 41.30	29.10

Blasters	$ 40.55	29.10
Hydraulic Trac Drill	$ 29.92	29.10
Jackhammers, Chippers, Spaders, Concrete Breakers, All Other Pneumatic Tools, Walk Behind Self-Propelled Hydraulic Asphalt and Concrete Breaker	$ 34.64	29.10
Powder Carriers	$ 31.08	29.10
Wagon; Airtrac; Quarry Bar Drill Runners	$ 35.07	28.00

LABO0078-001 02/01/2013

	Rates	Fringes
LABORERS		
BUILDING CONSTRUCTION		
ASBESTOS (Removal, Abatement, Encapsulation or Decontamination of asbestos); LEAD; & HAZARDOUS WASTE LABORERS (Hazardous Waste, Hazardous Materials, Biochemical and Mold Remediation, HVAC, Duct Cleaning, Re-spray Fireproofing, etc)	$ 35.90	14.75

LABO0079-001 07/01/2014

	Rates	Fringes
Laborers Building Construction		
Demolition Laborers		
Tier A	$ 37.02	23.53
Tier B	$ 25.92	17.56
Mason Tenders	$ 38.05	24.35

CLASSIFICATIONS

TIER A: Responsible for the removal of all interior petitions and structural petitions that can consist of sheet rock, block or masonry. Also, all structural slab openings for ducts, mechanical, shafts, elevators, slab openings and exterior walls where the building is not being completely demolitioned.

TIER B: Responsible for shoveling of debris into containers, pushing containers from the inside to the outside of the building.

LABO0147-001 07/01/2013

	Rates	Fringes
LABORERS (FREE AIR & TUNNEL)	$ 52.23	37.23

Maintenance Men, Inside Muck Lock Tenders, Pump Men, Electricians, Cement Finishers, Caulkers, Hydraulic Men, Shield Men, Monorail Operators, Motor Men, Conveyor Men, Powder Carriers, Pan Men, Riggers, Chuck Tenders, Track Men Painters, Nippers, Brakemen, Cable Men, Hose Men, Grout Men, Gravel Men, Form Workers, Concrete Workers, Tunnel Laborers, Mole Nipper (one (1) Mole Sipper per Working Shaft per Shift for up to and including Two (2) Moles

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LABO0731-001 07/01/2014

	Rates	Fringes
LABORER		
Building, Heavy and Residential Construction		
LABORER: (Asbestos, Lead, Hazardous Waste Removal (including soil)/CEMENT/CONCRETE.....	$ 39.85	34.78
UTILITY LABORER.....	$ 39.70	34.78

Paid Holidays: Labor Day and Thanksgiving Day

LABO1010-001 07/01/2011

	Rates	Fringes
Laborers:		
HIGHWAY CONSTRUCTION		
Fence Installer & Repairer.	$ 38.34	30.25
FORMSETTERS.....	$ 42.21	30.25
LABORERS.....	$ 38.34	30.25
Landscape Planting & Maintenance.....	$ 38.34	30.25
Maintenance Safety Surface.	$ 38.34	30.25
Slurry/Sealcoater/Play Equipment Installer.....	$ 38.34	30.25
Small Equipment Operator (Not Operating Engineer)...	$ 38.34	30.25
Small Power Tools Operator.	$ 38.34	30.25

FOOTNOTES:

a. PAID HOLIDAYS: Memorial Day, Fourth of July, Labor Day, Columbus Day, Election Day and Thanksgiving Day, provided the employee has worked one (1) day in the calendar week in which the said holiday occurs.

LABO1010-002 07/01/2011

	Rates	Fringes
Laborers-Asphalt Construction:		
Micro Paver.....	$ 44.86	30.25
Raker.....	$ 44.37	30.25
Screedperson.....	$ 44.86	30.25

Shoveler (Production
Paving Only).....$ 41.08 30.25
Small Equipment Operator
(Asphalt).....$ 41.08 30.25

PAIN0009-001 05/01/2014

	Rates	Fringes
GLAZIER	$ 42.50	26.59
PAINTER		
Painters, Drywall Finishers, Lead Abatement Worker	$ 41.75	20.87
Spray, Scaffold and Sandblasting	$ 46.75	21.87

PAIN0806-001 10/01/2012

	Rates	Fringes
Painters:		
Structural Steel and Bridge	$ 47.00	32.08

PAIN1974-001 12/26/2012

	Rates	Fringes
Painters:		
Drywall Tapers/Pointers	$ 43.82	22.01

PLAS0262-001 02/01/2012

	Rates	Fringes
PLASTERER	$ 40.78	26.80

PLAS0262-002 02/01/2012

KINGS AND QUEENS COUNTIES

	Rates	Fringes
PLASTERER	$ 40.78	26.80

PLAS0780-001 07/01/2014

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 45.88	39.70

PLUM0001-001 07/01/2014

	Rates	Fringes
PLUMBER		
MECHANICAL EQUIPMENT AND SERVICE		
Any repair and/or replacement of the		

present plumbing system
that does not change the
existing roughing.....$ 38.27 12.56
PLUMBERS:.....$ 65.27 25.50

PLUM0638-001 06/27/2012

	Rates	Fringes
PLUMBER		
SERVICE FITTERS.....	$ 26.30	2.55
SPRINKLER FITTERS, STEAMFITTERS.....	$ 51.25	49.54

Service Fitter work shall consist of all repair, service and maintenance work on domestic, commercial and industrial refrigeration, air conditioning and air cooling, stoker and oil burner apparatus and heating apparatus etc., including but not exclusively the charging, evacuation, leak testing and assembling for all machines for domestic, commercial and industrial refrigeration, air conditioning and heating apparatus. Also, work shall include adjusting, including capacity adjustments, checking and repairing or replacement of all controls and start up of all machines and repairing all defects that may develop on any system for domestic, commercial and industrial refrigeration and all air conditioning, air cooling, stoker and oil burner apparatus and heating apparatus regardless of size or type.

ROOF0008-003 07/01/2014

	Rates	Fringes
ROOFER.....	$ 40.70	25.14

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* SHEE0028-002 07/31/2014

	Rates	Fringes
SHEET METAL WORKER		
BUILDING CONSTRUCTION.....	$ 50.91	36.70
RESIDENTIAL CONSTRUCTION....	$ 27.22	16.48

TEAM0282-001 07/01/2014

	Rates	Fringes
TRUCK DRIVER		
Asphalt.....	$ 39.34	41.6025+a
Euclids & Turnapulls.....	$ 38.875	41.6025+a
High Rise.....	$ 47.01	41.6025+a

FOOTNOTES:

PAID HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Election Day, Veterans' Day (Armistice Day), Thanksgiving Day, Day after Thanksgiving and Christmas Day. Employees working two (2) days in the calendar week in which a holiday falls are to

be paid for such holiday, provided that they shape each remaining workday during such calendar week.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates,

LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

"BUY AMERICA" REQUIREMENTS & WAIVERS

GENERAL BUY AMERICA BID REQUIREMENTS AND DEFINITION. In accordance with New York State Department of Transportation Official Order No. 1511 establishing consistency for application of Section 146 of the State Finance Law, and Section 165 of the U. S. Surface Transportation Act of 1982, as amended, the Bidder must submit a bid based on permanently incorporating only domestic steel and/or iron in the construction of this contract.

The Bidder may also submit a bid based upon being allowed to permanently incorporate foreign steel and/or iron into the work of the contract. If the Bidder chooses to submit such a bid, the Bidder should purchase an additional proposal for this contract and legibly print the following in ink on the proposal cover and at the bottom of the proposal sheet which contains the phrase "Total gross sum written in words": TOTAL BID BASED UPON USING FOREIGN STEEL AND/OR IRON.

When bids are submitted based upon domestic and foreign steel and/or iron, both bids are to be submitted in the same envelope.

To qualify as domestic, all manufacturing processes (including the fabrication of any product containing steel and/or iron) must have been performed in the United States. To further define the coverage, a domestic product is a manufactured steel and/or iron construction material that was produced in one of the 50 States, the District of Columbia, Puerto Rico, or in the territories and possessions of the United States. Raw material used in the steel and/or iron may be imported. All manufacturing processes to produce steel and/or iron products must occur domestically. Raw materials are materials such as iron ore, limestone, waste products, etc., which are used in the manufacturing process to produce the steel and/or iron products. Waste products would include scrap; i.e., steel and/or iron no longer useful in its present form from old automobiles, machinery, pipe, railroad tracks, and the like. Also, steel and/or iron trimmings from mills or product manufacturing are considered waste. Extracting, crushing, and handling the raw material which is customary to prepare them for transporting are exempt from Buy America.

AWARD OF CONTRACT. Award of this contract will be made to the lowest bidder who submits the lowest total bid based upon furnishing domestic steel and/or iron unless such total bid exceeds the lowest total bid based upon furnishing foreign steel and/or iron by more than 25 percent, in which case award will be made to the lowest responsible bidder based upon furnishing foreign steel and/or iron.

CONTROL OF MATERIALS. All items, regardless or origin, shall comply with their individual specification requirements. In the event the contract is awarded based upon using only domestic steel and/or iron, the Contractor must supply only domestic steel and/or iron and will be paid the domestic steel and/or iron bid prices. The Contractor will be responsible for ensuring that the domestic steel and/or iron is supplied in conformance with the above referenced laws. Such responsibility extends to informing all affected subcontractors and material suppliers of these specific requirements and ascertaining that steel and/or iron being supplied is in conformance with the standard specifications.

In the event that the contract is awarded based upon being allowed to permanently incorporate foreign steel and/or iron in the work, the Contractor may supply either domestic or foreign steel and/or iron and will be paid the foreign steel and/or iron bid prices. If the contract is awarded based upon the domestic steel and/or iron bid, the Contractor may permanently incorporate in the construction of this contract a minimal amount of foreign steel and/or iron if the combined cost of such materials does not exceed one-tenth of one percent (0.1 percent) of the total contract cost or $2,500.00, whichever is greater. The combined cost of foreign steel and/or iron will be that shown to be the value of the steel and/or iron products as they are delivered to the project.

BUY AMERICA WAIVERS. In addition to the award of a bid based on foreign steel and/or iron materials, waivers to the Buy America requirement may be requested by the State to the Division Federal Highway Administration if it can be demonstrated that the use of domestic steel and/or iron materials would be inconsistent with the public interest, such materials and products are not produced in the United States in sufficient and reasonably available quantities and of satisfactory quality provided one or more of the above requirements are met, the Contractor may submit a request for a waiver to the Engineer. The request shall include copies of all documentation verifying the unavailability of the material or product, and/or justification of the application for a waiver. For Federally Aided contracts, final approval of the Buy America Waiver request will be made by the Division Federal Highway Administration and concurred with by the Director, Construction Division. For non-Federally Aided contracts, upon final approval of the affected Department program areas, notification and approval of the Buy America Waiver request will be made by the Director, Construction Division.

Note: The following is a list of materials or products which have been granted waivers or exclusions from the "BUY AMERICA" provisions:

1. Hollow 'I'-shaped steel extrusions

CERTIFICATIONS AND TRACKING OF FOREIGN STEEL/IRON. In order to ensure compliance with this contract requirement, all manufacture's certifications for steel and/or iron and items including steel and/or iron must contain a statement of domestic origin, and material suppliers must certify that what they provide is the same material certified by the manufacturer. If the material or product certification does not properly identify conformance to the specification the product will be rejected and must be removed from the project site. If however the manufacturer and/or material supplier requests to leave the product in place and provide a revised certification only, the revised certification must be accompanied with a letter of explanation to the satisfaction of the Resident Engineer. The explanation shall indicate the basis for using the revised certification rather than the original supplied. The letter shall also include corrective action to assure that future certifications will be representative of the material or product supplied. The letter must be signed by a company representative that can legally bind the firm.

If the Contractor proposes to use foreign steel/iron in small amounts under the threshold, the amount allowed will be based on the material price to the Contractor, as verified by invoice and approved by the Resident Engineer. The amount is cumulative for the entire contract, so subsequent requests will have to be added to any previous requests before comparison to the allowable threshold.

The "Buy America" contract specification does not apply to iron or steel that is to be used for temporary means which will be removed during or at the end of the project.

DEFINITIONS:

Steel - Steel material of any type, including welding rod.

Iron - Iron material of any type, including cast and ductile iron, but not pig iron.

Domestic - The 50 States, the District of Columbia, Puerto Rico and territories/possessions of the US.

Foreign - Any location other than those defined as Domestic.

Manufacturing Processes - Steel and/or iron manufacturing processes must be domestic; e.g. manufacture, fabrication, grinding, drilling, welding, finishing and coating of steel. Ore, scrap, and pig iron may be foreign or domestic; however, transformation into steel and/or iron and all subsequent processes and fabrication must be domestic. The fabrication of composite items using domestic steel (e.g. casting reinforced concrete box culvert using reinforcing cut and bent to final shapes) is not considered a manufacturing process, and the composite item is acceptable.

Fabricated Product Containing Steel and/or Iron - Items, products or materials containing any amount of steel and/or iron materials; e.g., a metal pipe may be steel or iron, a reinforced concrete pipe contains steel, a prestressed beam contains steel, iron castings are iron, a steel beam is steel and steel laminated bridge bearings contain steel.

(NO TEXT ON THIS PAGE)

EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS

[SEE SECTION 102-11 OF THE
NEW YORK STATE
DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS]

GOALS FOR MINORITY PARTICIPATION IN THE CONSTRUCTION INDUSTRY

COUNTY	% GOAL	COUNTY	% GOAL	COUNTY	% GOAL
Albany	3.2	Herkimer	2.1	Richmond	*
Allegany	6.3	Jefferson	2.5	Rockland	22.6
Broome	1.1	Kings	*	St Lawrence	2.5
Bronx	*	Lewis	2.5	Saratoga	3.2
Cattaraugus	6.3	Livingston	5.3	Schenectady	3.2
Cayuga	2.5	Madison	3.8	Schoharie	2.6
Chautauqua	6.3	Monroe	5.3	Schuyler	1.2
Chemung	2.2	Montgomery	3.2	Seneca	5.9
Chenango	1.2	Nassau	5.8	Steuben	1.2
Clinton	2.6	New York	*	Suffolk	5.8
Columbia	2.6	Niagara	7.7	Sullivan	17.0
Cortland	2.5	Oneida	2.1	Tioga	1.1
Delaware	1.2	Onondaga	3.8	Tompkins	1.2
Dutchess	6.4	Ontario	5.3	Ulster	17.0
Erie	7.7	Orange	17.0	Warren	2.6
Essex	2.6	Orleans	5.3	Washington	2.6
Franklin	2.5	Oswego	3.8	Wayne	5.3
Fulton	2.6	Otsego	1.2	Westchester	22.6
Genesee	5.9	Putnam	22.6	Wyoming	6.3
Greene	2.6	Queens	*	Yates	5.9
Hamilton	2.6	Rensselaer	3.2		

*** The following goal ranges are applicable to the indicated trades in the counties of Bronx, Kings, New York, Queens, and Richmond:**

Electricians	9.0 to 10.2
Carpenters	27.6 to 32.0
Steam Filters	2.2 to 13.5
Metal Lathers	26.0 to 28.6
Operating Engineers	25.6 to 26.0
Plumbers	12.0 to 14.5
Iron Workers (Structural)	25.9 to 32.0
Elevator Constructors	5.5 to 6.5
Bricklayers	13.4 to 15.5
Asbestos Workers	22.8 to 28.0
Roofers	6.3 to 7.5
Iron Workers (Ornamental)	22.4 to 23.0
Cement Masons	23.0 to 27.0
Glaziers	16.0 to 20.0
Plasterers	15.8 to 18.0
Teamsters	22.0 to 22.5
Boilermakers	13.0 to 15.5
All Others	16.4 to 17.5

GOALS FOR WOMEN

Female Goals -6.9%

Goals for the utilization of women by Federal and Federally. assisted construction contractors were last published on April 7, 1978 (43 CFR 4988, 149000). That April 7, 1978 publication included a 6.9% goal for the period from April 1, 1980 until March 31, 1981. Pursuant to 41 CFR 60-4.6, the 6.9% goal for female utilization is extended until further notice

THESE MUST BE INCLUDED IN EACH BID ROPOSAL REGARDLESS OF WHOSE SPECIFICATIONS ARE USED.

NO TEXT

ATTACHMENT "H"

GOALS FOR DISADVANTAGED/MINORITY/WOMEN'S BUSINESS ENTERPRISE (D/M/WBE) PARTICIPATION

The Department has established the following utilization goal(s) for this contract, expressed as a percentage of the total contract bid amount. For clarification of Disadvantaged Business Enterprise (DBE) Utilization, Minority Business Enterprise (MBE) Utilization or Women's Business Enterprise (WBE) Utilization requirements refer to §102-12 *D/M/WBE Utilization* of the Standard Specifications.

Disadvantaged Business Enterprise (DBE) Utilization Goal	10 % (Federal-Aid Only)
Minority Business Enterprise (MBE) Utilization Goal	0 % (Non Federal-Aid Only)
Women's Business Enterprise (WBE) Utilization Goal	0 % (Non Federal-Aid Only)

Directories and/or Information related to the current certification status of Disadvantaged Business Enterprises can be obtained from the NYS Unified Certification Program website at: http://biznet.nysucp.net

Direct questions concerning Disadvantaged Business Enterprise Utilization to:

NYS Department of Transportation
Office of Construction
50 Wolf Road Pod 51
Albany, New York 12232
(518) 457-6472

Direct questions concerning Disadvantaged Business Enterprise Certification to:

NYS Department of Transportation
Contract Audit Bureau
DBE Certification
50 Wolf Road, 6th Floor
Avenue F, 1st Street
Albany, New York 12232
(518) 457-3180

Directories and/or information related to the current certification status of Minority and Women's Business Enterprises, can be obtained by contacting the:

Empire State Development Corporation
Office of Minority and Women's Business Development
30 S. Pearl Street
Albany, NY 12245
(518) 292-5250
http://www.empire.state.ny.us/MWBE.html

DISADVANTAGED BUSINESS ENTERPRISE REQUIREMENTS FOR FEDERAL AID CONTRACTS

[SEE SECTION 102-12 OF THE
NEW YORK STATE
DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS]

REQUIREMENTS REGARDING TRAINING IN FEDERAL AID CONTRACTS TRAINING SPECIAL PROVISION

GENERAL. The primary objective of this Training Special Provision is to provide training opportunities to minority and disadvantaged[1] persons and women in construction trades for two purposes:

1. To maintain a pool of qualified minority and disadvantaged persons and women to replace those journeyworkers[2] who, to the natural course of events, will leave the workforce; and

2. To provide minority and disadvantaged persons and women as Indentured apprentices or trainees in those geographic areas where shortages in minority and women journeyworkers are recognized because the Contractor's inability to meet the Equal Employment Opportunity (EEO) goals set forth in this contract.

This work shall consist of the employment and meaningful and effective training of minority and disadvantaged persons and women in training programs approved by the N.Y.S. Department of Transportation leading to their qualifications as journeyworkers in the skilled trades required in highway construction. This Training Special Provision supplements the Equal Employment Opportunity requirements included elsewhere in this Proposal entitled either "Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246) or "Equal Employment Opportunity Requirements." Each of the foregoing prescribe specific percentage goals for utilization of minorities and women in the performance of work for the geographic area location of the Contract.

Each contract which contains this Training Special Provision shall require the training of at least one minority or woman indentured apprentice or trainee. Such individual shall be either approved or selected by the Owner with concurrence by the Department of Transportation. Other than this initial training obligation, to be undertaken and provided by the Contractor, no additional training obligations will exist under this Training Special Provision unless the goals for minority and women employment and training in the skilled workforce (exclusive of laborers) are not continuously met on the contract and generally distributed amongst the trades. In the five counties of New York City, the goals specified for each trade are applicable. Whenever the goals are not met, additional minority and/or women indentured apprentices and/or trainees will be assigned or approved in numbers necessary to meet the goals. Data necessary to determine if goals are being met will be provided on Contractor and Subcontractor Monthly Employment Utilization Reports (Form AAP 33LL) submitted by the Contractor on a monthly basis to the Engineer-in-Charge of construction contract, or other agent of the Owner responsible for administering the contract, or other forms approved by the Department of Transportation.

The data will be verified by the visual observance of the Engineer-in-Charge, or designated project inspectors, or other agent of the Owner, and hours of employment reported on Contractor and Subcontractor certified weekly payrolls. The number of minority and women indentured apprentices and trainees required to be trained under this Item shall not exceed the equivalent of 12 1/2% of the total journeyworker workforce on the contract (counted in hours worked), i.e., no more than 1 in 8 of the skilled workforce is required to be a minority or woman Indentured apprentice or trainee. This limitation applies regardless of minority or women representation in the trades. However, this limit on required training in no way absolves the Contractor of the responsibility to comply with the EEO contract requirements.

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[1] Disadvantaged means a person who is either. (a) a member of a family the receives public assistance, or (b) a member of a family whose income during the previous six (6) months or an annualized basis, was such that (1) the family would have qualified for public assistance, if it had applied for such assistance; or (2) it does not exceed the poverty level. NOTE: The name, address, and social security number of candidates to be trained under the disadvantaged criteria must be submitted to the Owner accompanied by related economic documentation for approval prior to commencing training.

[2] Journeyworker means a person who is capable of performing all the duties within a trade or a given work classification of a trade approval prior to commencing training, subject to concurrence by the Department of Transportation.

REQUIREMENTS REGARDING TRAINING ON FEDERAL AID CONTRACTS

PRECONSTRUCTION MEETING. Before the Contractor will be allowed to begin work, the Contractor shall attend a Preconstruction Meeting and shall submit for the Owner's use and acceptance, a Manpower and Training Utilization Schedule (Form AAP 35LL) which shall be correlated to the Contractor's work schedule. The Schedule shall include at least the following information:

1. A work schedule for the entire contract,
2. An estimate of the work force required to conform to the work schedule on a monthly basis including an estimate of the work force in each trade and/or work classification projected to be used,
3. Separate estimates of the number of minority and women indentured apprentices or trainees that would be required in each skilled trade to meet the contract EEO employment goals for that trade assuming no minority or women journeyworkers in the workforce,
4. The approved training programs to be used and the proposed starting dates for training in each trade and/or work classification,
5. An estimate of the availability of minority and women journeyworkers in numbers sufficient to meet the EEO contract goals, and
6. Any proposal by the Contractor to use trainees or indentured apprentices to make up for anticipated EEO goal shortfalls. Such proposals shall include the name and craft of any individual proposed by the Contractor as the required trainee or indentured apprentice. In the case of an indentured apprentice, evidence of indentureship and registration of the approved apprenticeship program must be included.

No contract work may be undertaken until the Owner has accepted the Schedule and obtained the concurrence of the Department of Transportation. The Contractor shall submit a revised Manpower and Training Utilization Schedule at such times as major changes in the contract work schedule or a significant workforce buildup occurs which substantially affect the previously submitted Schedule.

RECRUITMENT. Although the training requirements of this Training Special Provision are not intended, and shall not be used to discriminate against any applicant for training, whether a member of a protected class or not, it is recognized that non-minority males have traditionally been and continue to be trained, either formally or on-the-job in an informal manner, for in the trades utilized in construction work. Therefore, until such time that representative numbers of minorities and women complete training and their utilization as journeyworkers is demonstrated to the extent of the participation goals set forth in the Department of Transportation's construction contracts, training required under this Training Special Provision will be primarily limited to minorities, women, and disadvantaged individuals.

Thus, the Contractor shall demonstrate compliance with the intent of this Training Special provision by affording the Owner, with the concurrence of the Department of Transportation's appropriate Regional Compliance Specialist (RCS), the opportunity to:

1. First, approve the use of a minority or woman indentured apprentice known to the Contractor through an existing Joint Apprenticeship Training Program, or
2. Second, provide a partially-trained minority or woman trainee who is currently enrolled in a New York State Department of Transportation approved training program, or
3. Third, work cooperatively with the Contractor in recruitment of new minority or women trainees, when needed.

In conformance with the foregoing, the Contractor should submit a Department of Transportation Form AAP-17, Request for Personnel, to the Owner at the Preconstruction Meeting, and the Owner should seek concurrence of that from Department of Transportation's Regional Compliance Specialist. The Contractor is responsible for ensuring that on-the-job orientation for approved indentured apprentices or assigned trainees is provided to such individuals within their first month of employment.

Contract Requirements

WORK HISTORY. No individual shall be employed as a trainee or indentured apprentice in any trade and/or work classification in which such person has successfully completed a training course providing journeyworker status in the same trade or work classification, or in which such person has been gainfully employed as a journeyworker by virtue of informal on-the-job training. Detection of individuals in the above categories may be accomplished by including appropriate questions on employee application forms, inquiries to the Department of Transportation Regional Compliance Specialist, checking personal references, or by other suitable means. Regardless of the method used, the Contractor shall document the findings for each indentured apprentice or trainee provided training under this requirement. A copy of the findings shall be given to the Owner's Engineer or agent in charge of the project, who shall request concurrence of the Department of Transportation. In the case of indentured apprentices, evidence of indentureship in a registered approved apprenticeship program shall also be provided.

SUBCONTRACTING. In the event the Contractor subcontracts a portion of the contract work, the Contractor shall ensure that the requirements of this Training Special Provision are physically incorporated into such subcontracts to ensure that the workforce utilized by the Subcontractor meets the goals for minority and women employment and training, either independently or in combination with the Contractor's workforce. The Contractor must determine the hours of training, if any, and in which trade or work classifications, minority or women indentured apprentices or trainees are to be trained by the Subcontractor(s). However, the Contractor shall retain the primary responsibility for meeting the training requirements of this Training Special Provision. Subcontractors are herewith advised that disregard of these requirements may result in the Department of Transportation either rescinding approval or disapproving their use on subsequent contracts let by the Department of Transportation or on contracts let by other agencies under agreement to the Department of Transportation.

TRAINING AND APPRENTICESHIP PROGRAMS. The minimum length, type of training, and rate of pay for the trade or the work classification of the trade will be specified in the training program approved or sanctioned by the New York State Department of Transportation with the concurrence of the Federal Highway Administration. Both of these agencies shall approve or sanction a training program if it meets the Equal Employment Opportunity obligation of the Contractor and qualifies the trainee for journeyworker status in the trade or work classification concerned by the end of the training period. Furthermore apprenticeship programs registered with the U. S. Department of Labor, Office of Manpower Development, Apprentice Training Section, and training programs approved, but not necessarily sponsored, by the U. S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training, shall also be considered acceptable provided they are administered in a manner consistent with the Equal Employment Opportunity obligations of New York State Department of Transportation construction contracts. A copy of the training programs approved by the NYSDOT will be made available by the NYSDOT upon request by the Owner or the Contractor. The Contractor shall provide a copy of the approved apprenticeship or training program to the indentured apprentice or trainee.

Where training is to be provided under this Training Special Provision, the Contractor shall obtain acceptance or approval of the training or apprenticeship program to be used, and the starting time for training, prior to commencing training. The Contractor shall provide on-the-job training directed toward developing journeyworkers in the trade, or work classification(s) of the trade, involved. To the extent that the work involved on the contract permits, such training should include all phases and facets of a trade, or work classification of a trade, to satisfy usual construction industry requirements for continued or future employment therein. Additionally, the Contractor shall provide a minimum of 144 hours per calendar year of related classroom training at an approved facility for each individual so enrolled, in accordance with Article 23 of the New York State Labor Law, Section 815.3.

WAGES. Indentured apprentices will be paid at least 60 percent of the appropriate prevailing wage rate specified in the contract for the same trade or work classification for which they are being trained for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period. Trainees will be paid the appropriate prevailing wage specified in the contract for the same trade or work classification for which they are being trained.

Indentured apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits apprentices must be paid the full amount of fringe benefits listed on the wage determinations for the applicable classification. On-the-job (OJT) trainees shall be paid fringe benefits in accordance with the provisions of the prevailing wage rates.

If the trainee program does not mention fringe benefits trainees shall be paid the full amount of fringe benefits listed on the wage determinations unless the Administrator of Wage and Hour Division determines that there is an

apprenticeship program associated with the corresponding journeyworker wage rate on the wage determination which provides for less than full benefits for apprentices.

DURATION OF TRAINING. Once an indentured apprentice is approved or a trainee is assigned to the contract under this Training Special Provision, that individual shall be trained in the designated trade throughout the duration of the contract whenever such trade is in use on the contract until the trainee or indentured apprentice has completed the approved training program. Where training is provided under a multi-phase apprenticeship or training program, it is expected that training will be provided continually through all phases to the extent that opportunities for such training exist in the work under contract. Upon satisfactory completion of a phase of training under a multi-phase apprenticeship or training program, if training in the remaining phases is not available and work in the completed phase is available, the minority or woman indentured apprentice or trainee shall continue employment, and be compensated at the prevailing journeyworker wage rate for such work. Hours of employment as a journeyworker described above will not be credited toward training hours required by the approved training or apprenticeship program.

A trainee may be terminated at any time during training for excessive absenteeism, lack of punctuality accident-proneness, lack of interest, poor attitude and continued failure to conduct his/herself in a professional manner. However, termination will not occur prior to proper counseling, documentation, and notification in writing to the Owner's Engineer or agent in charge of the project, and to the Department of Transportation's Regional Compliance Specialist, and subsequently the concurrence of the Owner's engineer or agent and the NYSDOT Regional Compliance Specialist, with that termination.

REQUIRED RECORDS. The Contractor shall provide each minority or woman trained under this provision with a certification showing the type and length of training satisfactorily completed. In addition, the Contractor shall keep records on the job site indicating. the nature and hours of training provided to each trainee or indentured apprentice documenting performance under this Training Special Provision to the Owner's Engineer or agent in charge of the project and to the Department of Transportation's Regional Compliance Specialist Form AAP-42a, Training Report will be submitted once the trainee or indentured apprentice commences training, competes training, or is terminated and each December 31st that individual is in training. Form AAP 26LL, Monthly Training Progress Report, will be submitted every month after the individual commences training. No measurement will be made of training provided to indentured apprentices or trainees for whom no work history has been provided to the. Owner's Engineer or agent in charge of the project. In addition, no measurement will be made of the training provided to apprentices for whom no evidence of indentureship in a registered program has been provided to the Owner's Engineer or agent in charge of the project.

NO PAYMENT FOR TRAINING. No payment will be made to the Contractor for the training required by this Training Special Provision. The required training is a labor cost which is included in the unit prices bid by the Contractor for the items of work comprising the contract.

LISTS OF OJT & REGISTERED APPRENTICESHIP PROGRAMS. Effective April 1,1992, the New York State Department of Transportation commenced a demonstration program in NYSDOT Regions 2, 3, 5, and 11 requiring the exclusive use of apprenticeship training to fulfill the Training Special Provision and supplement EEO goal attainment. The remaining NYSDOT Regions, contractors will be allowed to use on-the-job training (OJT) programs during the period of the demonstration project. However, only OJT programs for crafts that have been deemed as apprenticeable occupations will be approved. In order to ease the transition from OJT to apprenticeship, it is required that all OJT will participants receive related classroom instruction.

It is the policy of the New York State Department of Transportation to afford equal employment opportunity to traditionally socially and economically disadvantaged persons by providing training opportunities to minority and disadvantaged persons and women to improve their potential for construction employment. NYSDOT, therefore, provides training as a contract requirement on selected construction contracts, including those let by other agencies and local governments under an agreement with NYSDOT.

When OJT is to be provided under this Training Special Provision, the Contractor shall obtain acceptance from the Owner and NYSDOT for the OJT Program to be utilized and the starting time frame for training, prior to commencing training. Accordingly, the following is a listing of OJT programs which have been approved by the NYSDOT and the Federal Highway Administration (FHWA) for utilization in NYSDOT Regions 1, 4, 6, 7, 8, and 10.

NOTE: A contractor in these Regions may opt to use either OJT or apprenticeship programs. However, the use of apprenticeship programs is strongly encouraged.

FOR LISTS OF CURRENTLY APPROVED APPRENTICESHIP PROGRAMS SEE THE FOLLOWING NEW YORK STATE DEPARTMENT OF LABOR's WEB SITE:

http://www.labor.ny.gov/apprenticeship/sponsor/index.asp

NO TEXT

CHANGED CONDITIONS AND DISPUTED WORK PROVISIONS:

It is the goal of the Department to resolve disputes that may arise under the contract in a timely, just and fair manner consistent with the terms of the contract. Towards this goal, the Department is specifying the dispute resolution and disputed work provisions of this Section. This dispute resolution process may be undertaken at any time from the contract award to the submission of the final estimate for payment by the Department. The process recognizes and will take into consideration the risks and controls inherent in construction which the Contractor or the Department have agreed to assume pursuant to the terms of the contract.

If the Contractor considers its disputes unresolved after following the requirements of this Section then at any time prior to the submission of the final agreement for payment to the Department, the Contractor may request in writing a meeting with the Department, or its designated representative, to review any outstanding dispute or items of a dispute that have not been previously resolved to the satisfaction of the Contractor through the dispute resolution process. If the contractor fails to comply with the requirements of this section, any claim of the Contractor with respect thereto shall be deemed waived.

A. TIME RELATED DISPUTES. Whenever the Contractor believes that it is or will be entitled to additional compensation for time related disputes, whether due to delay, extra work, disputed work, breach of contract, or other causes, the Contractor shall follow the procedures set forth in this Section. All subcontracts, supply or equipment contracts shall incorporate these provisions of Dispute Resolution and Disputed Work Provisions. If such subcontracts or supply or equipment contracts do not have similar provisions, then the Department's payments to the Contractor for such subcontract or supply or equipment work shall be limited to only that which are provided by the provisions of this Section as if it were in effect for such subcontract or supply or equipment contract.

1. a. The term 'dispute' shall mean a matter of contract performance or contract compensation, including granting of extensions of time, in which there is or may be disagreement between the Contractor and the Department and which may involve adjustment of contract items or the addition of new items to the contract, extension of time for performance and/or adjustments in compensation necessitated by the resolution of such disagreement.

   b. The term 'time related dispute' shall mean any dispute arising from any event not within the Contractor's control, performance, action, force, or factor which affects the scheduled time of performance depicted in the Contractor's most recent Department approved progress schedule submitted to the Department. This Subsection is intended to cover all such events which include termination, major deductions or increases to quantities of work, Contingencies, Extra Work, Deductions, and suspension of work and cancellation of contract, Right to Suspend Work and Cancel Contract, as well as actions, forces or factors, whether they be termed 'delay', 'disruption', 'interference', 'inefficiencies', 'impedance', 'hindrance', 'acceleration', or otherwise. This subsection shall cover all such applicable events under Differing Site Conditions, Suspensions of Work, Significant Changes in the Character of the Work Provisions. Notwithstanding the foregoing, for time related compensation requests, the Department will compensate the Contractor for only those instances arising out of the issuance by the Department of a stop work order relative to a substantial portion of the work, or arising out of the unavailability of critical rights of way parcels, either of which are determined by the Department to significantly affect the scheduled completion of the work.

2. Strict compliance with the notice provisions of this Section and compliance with the record keeping provisions of this section and Extra, Force Account Work, Dispute Compensation and Record Keeping, shall be an essential precedent condition under the contract provisions to any recovery of time related damages by the Contractor whether it be under the contract provisions, court actions and proceedings or otherwise.

3. Except for situations that come within the terms of Differing Site Conditions, Suspensions of Work, Significant Changes in the Character of the Work Provisions, subsection (2), Suspensions of Work, within ten work days after the Contractor has knowledge or should have had knowledge of an event, matter or occasion, that will result in time related damages, the Contractor must provide the Engineer with written notice of a dispute for time related damages.

   The Department shall have no liability and no adjustment will be made for any time related damages which accrued more than ten work days prior to the filing of such a notice with the Engineer. Failure of the Contractor to give such written notice in a timely fashion will be grounds for denial of the dispute and the Department does not have to show prejudice to its interest before such denial is made. In the event the Contractor fails to provide the required written notice within the ten work day period and the Contractor demonstrates justifiable excuse or cause as determined by the Department for not providing the required written notice, then said 10 day notice period may be lengthened but only if the Contractor has maintained and submits the specified records set forth in these provisions and the Department has knowledge of the matter or occasion that may result in time related damages. In the event the Contractor fails to maintain and submit such specified records, or fails to demonstrate justifiable excuse or cause if such notice is not given, or demonstrates such justifiable excuse or cause but fails to maintain and continue to maintain and submit such specified records, the Contractor hereby agrees to waive the dispute for compensation, notwithstanding the fact that the Department may have actual notice of the facts and circumstances which comprise such dispute and is not prejudiced by said failure.

   As directed by the Engineer, the work shall continue during the pendency of the dispute. The Engineer shall make the initial determination in writing on the dispute and the Contractor, if it considers the issue unresolved, shall promptly notify, within ten (10) work days after receipt of the Engineer's decision, notify the Department, in writing with copies to the Engineer of its contentions relative to the dispute, indicating the substance of previous communication on the issue with the Engineer and its rebuttal of his or her previous findings or determinations. The Department, or its designee, shall make a finding thereon and notify the Contractor of same in writing.

   Adjustments of contract items, or adjustments to the time of performance, or the addition of new items to the contract necessitated by such dispute determination may be made until the time the final agreement is submitted for payment to the Department, provided that the requirements of this Section are complied with.

4. If time related damages are presumed to have been incurred and after giving the Department notice of a dispute for time related damages, the Contractor must keep daily records of all labor, material, and equipment costs and hours incurred for the affected operations. These daily records must identify each operation affected and the specific locations where work is affected. On a "weekly basis," beginning the week following the date of giving notice of a dispute for time related damages, the Contractor shall meet with the Engineer and present the daily records for the preceding week. If

the Engineer disagrees with the accuracy, applicability, or reasonableness of any portion of the Contractor's submission, he/she shall promptly notify the Contractor who shall correct its records. If there is a dispute as to records, the Contractor must follow the requirements of this specification, Part C. The dispute shall first be submitted to the Regional Director and if unresolved will be submitted in writing to the Department or his/her designee whose decision shall be final and conclusive subject to the Contractor's right to assert a claim in New York State Court of Claims. Lack of substantial compliance with the requirements to attend weekly meetings or present its records will constitute a waiver by the Contractor of said dispute for time related damages.

5. After giving notice of a dispute for time related damages, the Contractor shall prepare and submit to the Engineer, if requested, weekly written reports until complete resolution of the dispute, which shall be available at the next scheduled job meeting, providing the following information:

   a. Potential effect to the Contractor's schedule caused by the time related dispute;

   b. Identification of all operations that have been affected or delayed, or are or may be affected or delayed;

   c. Explanation of how the Department's act or omission affected or delayed each operation, and estimation of how much more time is required to complete the project;

   d. Itemization of all extra costs being incurred, including:

      (1) An explanation as to how those extra costs relate to the effect or delay and how they are being calculated and measured.
      (2) Identification of all project employees for whom costs are being compiled.
      (3) Identification of all manufacturers' numbers of all items of equipment for which costs are being compiled.

6. In addition, after submitting the required notice specified in this section, the contractor shall complete its dispute submission by complying with Extra Force Account Work, Dispute Compensation and Record Keeping, Part (E), Required Content of Dispute Submission, when such information is ascertainable by the contractor and Part (F), Required Certification of Disputes.

B. ACCELERATION DISPUTES. The Contractor may not maintain a dispute for costs associated with acceleration of the work unless the Department has given prior express written direction by the Engineer to the Contractor to accelerate its effort. The Contractor shall always have the basic obligation to complete the work in the time frames set forth in the contract. For purposes of this Subsection, lack of express written direction on the part of the Department shall never be construed as assent.

If the Contractor does accelerate its work efforts pursuant to a written order or express written approval by the Department, the Contractor shall be compensated for its effort, in the same manner and as limited by Extra Force Account Work, Dispute Compensation and Record Keeping, Part (D). The Department, in determining whether or not any compensation under this Section is warranted, will evaluate the facts and circumstances which led to the acceleration to determine whether they were in the Contractor's control.

If the Contractor is claiming a "constructive acceleration," it must follow the requirements of this section, Part A.

C. DISPUTED WORK. If the Contractor is of the opinion that any work ordered by the Engineer to be done as contract work is extra work and not contract work, or that any order of the Engineer exceeds the work requirements of the provisions of the contract, the Contractor shall promptly, within ten work days of receipt of the order or direction, notify the Engineer in writing of its contentions thereto. The Contractor must progress the work as required and ordered. In the meantime, the Contractor, if it considers the issue unresolved, shall promptly, within ten work days of receipt of the Engineer's written decision, notify the Department in writing with copies to the Engineer, of its contentions relative to the dispute, indicating the substance of previous communication on the issue with the Engineer and its rebuttal of their previous findings. The Department, or its designated representative, shall make a finding thereon and notify the Contractor of same in writing. If such work is determined by the Department or its designee to be extra work pursuant to the provisions of this Section, compensation will be made pursuant to Extra Force Account Work, Dispute Compensation and Record Keeping, Part (B). In addition, after submitting the required notice specified in this section, the contractor shall complete its dispute submission by complying with Extra Force Account Work, Dispute Compensation and Record Keeping, Part (E), Required Content of Dispute Submission, when such information is ascertainable by the contractor and Part (F), Required Certification of Disputes. This subsection shall cover all such applicable extra work under Differing Site Conditions, Suspensions of Work, Significant Changes in the Character of the Work Provisions. During the progress of such disputed work, the Contractor and Engineer shall keep daily records and make reports of all labor, material and equipment used in connection with such work and the cost thereof as specified in Extra Force Account Work, Dispute Compensation and Record Keeping, Part (C), Force Account Reports.

If the Department or its designated representative determines that the work in question is contract work and not extra work, or that the order complained of is proper, he/she shall again direct the Contractor to continue the disputed work and the Contractor must promptly comply. The Contractor's right to pursue a dispute under this Section for extra compensation or damages will not be affected in any way by the Contractor's complying with the directions of the Department or Engineer to proceed with the work, provided the Contractor continues to keep and furnish the Engineer with Force Account Reports as specified in Extra Force Account Work, Dispute Compensation and Record Keeping, Part (C), Force Account Reports.

If the Department, or its designated representative, determines that such work is extra work and not contract work, or that the order complained of is not proper, then the Department or his/her designated representative shall have prepared, if necessary, an order on contract covering such work as soon as is practical after the determination is made. Payment will be made for such work via agreed price or force account pursuant to Extra Force Account Work, Dispute Compensation and Record Keeping, Part (B), New Item Charges. The Department, or its designee, will notify the Contractor in writing of the date upon which the Department has approved the order on contract. Performance of work until receipt of the order on contract by the Contractor shall be considered disputed work. The Contractor must progress the work of the contract, including the work covered by any such order on contract, as directed by the Engineer. Adjustments to contract items, or adjustments to the time of performance, or the addition of new items to the contract necessitated by such determination may be made up until the time the final agreement is submitted for payment to the Department, provided that all the requirements of Extra Force Account Work, Dispute Compensation and Record Keeping are complied with. In addition, documented, additional, actual and reasonable costs incurred by the Contractor pursuant to following a written order to perform work (that was subsequently contained in an order on contract which was disapproved) will be considered as reimbursable.

This work will be considered disputed work for which the Contractor will be compensated. Eligibility for compensation shall cease upon notification of the order on contract's disapproval. Failure by the Contractor to promptly notify, in writing, the Engineer and the Department of its contentions relative to any dispute or to maintain and furnish force account reports for disputed work shall constitute a waiver of the disputed work claim.

D. AUDITING OF RECORDS. The Contractor who has filed a dispute must have the following records available for audit at any time following the filing of such dispute, whether or not such dispute is part of a suit pending in the courts of this State. If a dispute is filed on behalf of a subcontractor or supplier, such subcontractor or supplier must also have substantially the following records available for audit any time following the filing of such dispute, whether or not such dispute is part of a suit pending in the courts of this State. The audit may be performed by employees of the Department or by an independent auditor appointed by the Department. The audit may begin on ten days' notice to the Contractor, subcontractor, or supplier as is appropriate. The Contractor, subcontractor, or supplier shall cooperate with the auditors. The Department will maintain the audit, its backup, reports, schedules and conclusions as confidential material. Failure of the Contractor, subcontractor, or supplier to maintain and retain sufficient records shall constitute a waiver of that portion of such dispute that cannot be verified and shall bar recovery thereunder.

Without limiting the generality of the foregoing, the auditors shall have available to them and the Contractor agrees to provide access to substantially the following documents:

1. Daily time sheets, job superintendent diaries or log sheets and foreman's daily reports.

2. Union agreements and reports, if any.

3. Insurance policies, welfare and benefits records or plans for union and non-union personnel.

4. Payroll register.

5. Individual employee earnings records.

6. Payroll tax returns.

7. Material invoices, purchase orders, and all material and supply acquisition contracts.

8. Material cost distribution work sheet.

9. Equipment records (list of company equipment, rates, depreciation schedules, daily equipment reports or logs, fueling logs or records, equipment lease purchase agreements, and equipment purchase invoices).

10. Vendor rental agreements, subcontractor invoices, agreements and back charge records.

11. Subcontractor payment certificates.

12. Canceled checks (payroll and vendors).

13. Job cost ledger or report.

14. Job payroll ledger, petty cash journal and supporting vouchers.

15. General ledger, general journal (if used), and all subsidiary ledgers and journals together with all supporting documentation pertinent to entries made in these ledgers and journals.

16. Cash receipts, cash disbursements journal, and purchase journal.

17. Audited and unaudited financial statements for all years reflecting the operation on this project.

18. Depreciation records on all company equipment whether such records are maintained by the company involved, its accountant, or others.

19. If a source other than depreciation records is used to develop costs for the Contractor's internal purposes in establishing the actual cost of owning and operating equipment, all such other source documents.

20. All documents which reflect the Contractor's actual overhead during the years this Project was being performed.

21. All documents related to the preparation of the Contractor's bid including the final calculations on which the bid was based.

22. All documents which relate to each and every dispute together with all documents which support the amount of damages as to each dispute.

23. Work sheets used to prepare the dispute establishing the cost components for items of the dispute including, but not limited to, labor, benefits, insurance, materials, equipment, subcontractors, and all documents which establish the time periods, individuals involved, the hours and the rates for the individuals.

In the event the Contractor fails to substantially furnish the above required reports and accounting records, such failure shall constitute a waiver of the dispute for payment other than for payment at contract unit prices for the work performed.

E. CONTRACTOR'S RESPONSIBILITY FOR WORK. The Contractor is responsible for carrying out the provisions of the contract at all times, regardless of whether an authorized inspector is present or not. Any work or item that is, at any time, found to be out of specification or not in compliance with the plans shall remain the responsibility of the Contractor and shall be subject to such corrective measures that are approved in writing by the Engineer.

EXTRA FORCE ACCOUNT WORK, DISPUTE COMPENSATION AND RECORD KEEPING

(A) CONTRACT ITEM CHARGES. When an order-on-contract provides for similar items of work or materials which increase or decrease the itemized quantity provided for in the primary contract, the price to be paid therefor shall not exceed the unit bid price in the primary contract for such items.

(B) NEW ITEM CHARGES.

1. Agreed Prices. Agreed prices for new items of work or materials may be incorporated in the order-on-contract as the Department may deem them to be just and fair and beneficial to the Department. These prices must be supported by a complete price analysis in the order-on-contract or, by reference to average bid prices for similar type and quantity of work from other recent contracts. The price analysis will be based on an estimated breakdown of charges listed in the following paragraph 2. "Force Account Charges," unless some other basis is approved by the Department.

2. Force Account Charges

3. Contractor Charges. Where there are no applicable unit prices for extra work ordered and agreed prices cannot be readily established or substantiated, the Contractor shall be paid the actual and reasonable cost of the following:

(1) Necessary Materials (including transportation to the site.) Materials is defined to include all products incorporated in the temporary or permanent work. The following items consumed in progressing the work are also considered to be materials for which reimbursement with an allowance for profit and overhead will be made. These are oxygen, acetylene, propane, welding rods, grinding wheels, and saw blades. Separate reimbursement will not be made for all other products which may be consumed in progressing the work and reimbursement for these items is considered to be included in the reimbursement for overhead. Material used, if acquired by direct purchase, must be documented by bills or acceptable invoices. All prices on used material incorporated in either temporary or permanent work shall be billed at a fair value, less than the original cost when new. A reasonable salvage credit shall be given for substantial salvageable material recovered. Salvage value of substantial material recovered shall be determined by the Engineer-in-Charge in coordination with the Contractor.

(2) Necessary labor costs including supplemental benefit payments. Each class of labor shall be billed separately at actual payroll rates. Average rates based on different classes of labor will not be accepted.

(3) Necessary payroll taxes and insurance payments and other such reasonable charges that are paid by the Contractor pursuant to existing written agreements with its employees and/or labor organizations.

(4) Sales taxes, if any, required to be paid on materials not permanently incorporated into the work under the order-on-contract.

(5) Equipment, truck and plant rentals, other than small tools. The Contractor shall be reimbursed for the number of hours that the equipment truck or plant is actually used on a specified force account job. Equipment used

by the Contractor shall be specifically described by the manufacturer, model number and date of manufacture and be of suitable size and suitable capacity required for the work to be performed. In the event the Contractor elects to use equipment of a higher rental rate than the equipment suitable for the work, payment will be made at the rate applicable to the suitable equipment. The equipment actually used and the suitable equipment upon which the rental rate is based will be recorded as a part of the record for force account work. The Engineer shall determine the suitability of the equipment. If there is a differential in the rate of pay of the operator of oversize or higher rate equipment, the rate paid for the operator will likewise be related to the suitable equipment.

(a) Contractor Owned Equipment, Trucks and Plant -- Contractor shall be reimbursed for its ownership costs and for its operating costs for self owned equipment at the rates listed in the Rental Rate Blue Book published by the Dataquest, Inc. applied in the following manner as modified by the 'Rate Adjustment Table'.

[1.0] Ownership Costs -- It is mutually understood that the rates for ownership costs reimburse the Contractor for all nonoperating costs of owning the equipment, truck or plant including depreciation on the original purchase, insurance, applicable taxes, interest on investment, storage, overhead, repairs, moving the equipment onto and away from the project or work site, and profit. Reimbursement will be made for the hours of actual use as described below:

[1.1] Less than 8 hours of actual use, the product of the actual number of hours used or fraction thereof multiplied by the hourly rate, or the daily rate, whichever is less.

[1.2] Between 8 hours and 40 hours of actual use, the product of the actual number of hours used divided by 8 multiplied by the daily rate, or the weekly rate, whichever is less.

[1.3] Between 40 and 176 hours of actual use, the product of the actual number of hours used divided by 40 multiplied by the weekly rate, or the monthly rate, whichever is less.

[1.4] Over 176 hours of actual use, the product of the actual number of hours used divided by 176 multiplied by the monthly rate.

[2.0] Operating Costs -- the rate for operating costs includes fuel, lubricants, other operating expendables, and preventative and field maintenance. Operating cost does not include the operator's wages. The Contractor shall be reimbursed the product of the number of hours of actual use multiplied by the Estimated Operating Cost/Hour.

[3.0] The rates used shall be those in effect at the time the force account work is done as reflected in the then current publication of the Rental Rate Blue Book. When force account type analysis are used to establish agreed prices in accordance with Section

(B)1 above, the rates used shall be those in effect when the agreed price is developed by the Contractor and submitted to the Engineer-in-Charge.

[4.0] The geographic Area Adjustment Factor shown on the map at the beginning of each section of the Rental Rate Blue Book shall not be applied to the equipment rates subsequently listed in each section, and shall not be used as a basis for payment.

[5.0] In the event that a rate is not established in the Rental Rate Blue Book for Construction Equipment for a particular piece of equipment, truck or plant, the Owner shall establish rates for ownership costs and operating costs for that piece of equipment, truck or plant that is consistent with its cost and expected life.

(b) Rented Equipment, Trucks and Plant --

[1.0] In the event that the Contractor does not own a specific type of equipment and must obtain it by rental, it shall be paid the actual rental rate for the equipment for the time that the equipment is used to accomplish the work or is required by the Engineer-in-Charge to be present, not to exceed the adjusted rental rate in the Rental Rate Blue Book, plus the reasonable cost of moving the equipment onto and away from the project site.

[2.0] The Contractor shall also be reimbursed for the operating cost of the equipment unless reflected in the rental price. Such operating cost shall be determined in the same manner as specified for Contractor Owned Equipment above.

[3.0] In the event that area practice dictates the rental of fully manned or fueled and maintained equipment, truck or plants, payment will be made on the basis of an invoice for the rental of the fully manned, fueled and/or maintained equipment, trucks or plants including all costs incidental to its use, including costs of moving to and from the site, provided the rate is substantiated by area practice.

(c) Maximum Amount Payable -- The maximum amount of reimbursement for the ownership costs of Contractor owned or the rental cost of rented equipment, trucks or plant is limited to the original purchase price of the equipment, truck or plant for any force account work as listed in the Green Guide for Construction Equipment published by the Dataquest, Inc. In the specific event when the ownership or rental reimbursement is limited by the original purchase price, the Contractor shall, nevertheless, be reimbursed for the Operating Cost/Hour for each hour of actual use.

(6) Profit and Overhead. Profit and overhead cost shall be computed at 20 percent of the following:

(a) Total Direct Labor Cost (actual hours worked multiplied by the basic hourly wage rate) plus supplemental benefits payments, payroll

taxes, insurance payments and other labor related fringe benefits payments, payroll taxes, insurance payments and other related fringe benefit payments as defined in (2) and (3) above, but not including the overtime additive payments. Profit and overhead shall not be paid on the premium portion of overtime.

(b) Total Cost of Materials as defined in (1) above including the cost of transportation to the project site.

(7) Overhead shall be defined to include the following:

(a) Premium on bond;

(b) Premium on insurance required by the owner other than Workers Compensation Insurance, premium on public liability and property damage insurance, unemployment insurance, Federal old-age benefits, other payroll taxes and such reasonable charges that are paid by the Contractor pursuant to written agreement with its employee;

(c) All salary and expenses of executive officers, supervising officers or supervising employees;

(d) All clerical or stenographic employees;

(e) All charges for minor equipment such as small tools, including shovels, picks, axes, saws, bars, sledges, lanterns, jacks, cables, pails, wrenches, etc, and other miscellaneous supplies and services;

(f) All drafting room accessories such as paper, tracing cloth, reproduction costs, etc.

(8) Subcontractor Charges. When the work is performed by a subcontractor, the Contractor shall be paid the actual and reasonable cost of such subcontracted work as outlined above in items (1) through (5) under 3, Contractor Charges, but profit and overhead shall be figured at (25%) unless some other basis is approved by the Owner.

(9) Service Charges. When work is performed by, or a fee is paid to, a service provider, the contractor shall be paid the actual cost of the service fee plus a maximum five percent (5%) for contract supervision, overhead and profit. This 5% shall be applied once to the service fee regardless of who makes direct payments to the service provider.

(C) FORCE ACCOUNT REPORT. Payment for force account work will be made on the basis of the following reports.

1. The Contractor will deliver to the Engineer-in-Charge a daily summary of FORCE ACCOUNT WORK done on the contract. This summary on 8-1/ 2" x 11" paper will be delivered to the Engineer-in-Charge not later than closing time on the day following that for which the work is reported.

The summary shall contain:

a. A list of materials used indicating the amount and nature of each material. The cost (if known) should also be included. This must be documented later by proper receipts.

b. A list of equipment used indicating the number of hours used and the kind, type, and size of equipment.

c. A list of personnel by name, including the hours worked, and labor classification at which they were used on the force account work and the location by station or station of the work proposed.

d. A statement of the work accomplished by force account for that day.

e. This summary will be dated and signed by the Contractor's authorized representative and the Engineer-in-Charge.

f. The contract number and other identification as well as the name of the Contractor shall appear on the statement.

g. The Engineer-in-Charge will make any notations, remarks or comments on this form that may assist in final payments.

2. Within 5 calendar days after the end of each pay period, the Contractor shall deliver to the Engineer-in-Charge a FORCE ACCOUNT SUMMARY OF LABOR used on the work which shall include the name, hourly rate of pay, hours worked, fringe benefits, and/or other items as shown on the actual payroll.

3. On completion of the specific force account work, the Contractor shall within 10 calendar days, deliver to the Engineer-in-Charge a Force Account Summation wherein all materials, equipment, and labor charges are shown and totaled together with such other expenditures as are concerned with the force account item. This summation shall be dated and signed by the Contractor's authorized representative and the Engineer-in-Charge.

4. In the event the contractor fails to deliver the required force account documentation to the EIC within the time period specified in subsection (C), of these General specifications, and as a result the Order-on-Contract for the force account work is not fully approved at the date of final acceptance, the number of calendar days of the time period between final acceptance and the issuance of this force account Order-on-Contract, attributable to the Contractor's late force account submissions will extend the required payment data by an equal period of time.

(D) TIME RELATED DISPUTE COMPENSATION.

1. As limited by Differing Site Conditions, Suspensions of Work, Significant Changes in the Character of the Work Provisions, the following elements of damage, and only the following elements, will be recoverable by the Contractor as "time related dispute damages" provided that they are actual and reasonable:

a. Documented additional or escalated job site labor expenses;

b. Documented additional or escalated costs for materials;

c. Documented additional or escalated equipment costs less appropriate credits, as such are determined in accordance with this Section;

d. Documented costs of extended job-site overhead (field costs, including field supervision); job-site overhead would include job superintendent, office engineer and clerical staff, but would not include working foremen;

e. An additional 10 percent of the total of items a, b, c and d for home office overhead and 10% for profit thereon except for the differing site conditions or significant change in character of the work clauses (Differing Site Conditions, Suspensions of Work, Significant Changes in the Character of the Work Provisions, Part A (1) and (3)) apply, no anticipated profits shall be allowed and where the suspension of work clause (Part A (2)) applies, no profit or anticipated profits shall be allowed;

f. Documented additional or escalated insurance and bond costs;

g. When the work is performed by a subcontractor, the Contractor shall be paid the actual and reasonable cost of such subcontracted work as outlined above in paragraphs 1(a) through 1(d) and the Contractor's main office overhead and profit shall be figured at 15% and 10% respectively, except for where the differing site conditions or significant change in character of the work clauses (Part A (1) and (3)) apply, no anticipated profits shall be allowed and where the suspension of work clause (Part A (2)) applies, no profit or anticipated profits shall be allowed;

h. The phrase "additional expenses" shall include expenses above or below those normally incurred in the performance of the work, less any appropriate credit. The phrase "escalation expenses" shall include unanticipated higher or lower costs and expenses attributable, with appropriate credits, to the performance of work or portions of work in a different time period than that which was indicated on the Owner approved progress schedule.

2. Equipment, truck or plant rentals, other than small tools:

a. Equipment used by the Contractor shall be specifically described by the manufacturer, model number and date of manufacture and be of suitable size and capacity required for the work to be performed. In the event the Contractor elects to use equipment of a higher cost than the equipment suitable for the work, payment will be made at the actual cost rate applicable to the suitable equipment unless otherwise provided for in this section. The Engineer shall determine the suitability of equipment.

For purposes of computing Contractor's self-owned equipment, truck or plant costs, the rate used shall be based on the rate listed in the Rental Rate Blue Book published by Dataquest, Inc., with the appropriate adjustments noted in this specification, Part (B) (2).

b. In the event that a rate is not established in the Rental Rate Blue Book for Construction Equipment for a particular piece of equipment, truck or plant, the Owner shall establish a rate for ownership costs and operating costs for that piece of equipment, truck or plant that is consistent with its cost and expected life.

c. The Contractor shall be reimbursed for its operating costs for self-owned equipment based on actual cost data. Operating costs shall include fuel, lubricants, other operating expendables and preventive and field maintenance. Operating costs do not include the operator's wages. In the event, after documented and demonstrated due diligence, actual operating costs are not ascertainable, then the Contractor will be compensated utilizing not more than 50% of the operating costs set forth in the "Rental Rate Blue Book" and the Contractor shall be reimbursed the product of the number of hours of actual use multiplied by the operating cost per hour.

d. The rate for idle equipment and stand-by equipment, shall be based upon the rate of depreciation specified in the Contractor's books and records, or 50% of the rate set forth in the "Rental Rate Blue Book," published by Dataquest, Inc. with the appropriate adjustments noted in this specification, whichever is greater. In the event the equipment is fully depreciated, the Department will pay the actual ownership costs based upon Department audit of the Contractor's books and records.

e. The maximum amount of reimbursement for the ownership costs of Contractor owned or the rental cost of rented equipment, trucks or plant is limited to the original purchase price of the equipment, truck or plant as listed in the Green Guide for Construction Equipment published by the Dataquest, Inc. In the specific event when the ownership or rental reimbursement is limited by the original purchase price, the Contractor shall, nevertheless, be reimbursed for the operating cost per hour for each hour of actual use.

f. For purposes of rented equipment, the provisions of this specification, Part (B), New Item Charges, are controlling.

3. The parties agree that, in any dispute for time related damages, the Department will have no liability for the following items and the Contractor further agrees it shall make no claim for the following items:

a. Profit, in excess of that provided in this specification, Part (D) (1)(e) and (g);

b. Loss of anticipated or unanticipated profit;

c. Labor inefficiencies and loss of productivity;

d. Home office overhead in excess of that provided in this specification, Part (D) (1)(e) and (g);

e. 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 on retainage or investment, or any resultant insolvency;

f. Indirect costs or expenses of any nature;

g. Direct or indirect costs attributable to performance of work where the Contractor, because of situations or conditions within its control, has not progressed in a manner satisfactory to the Engineer.

h. Attorneys fees, or claims preparation expenses.

4. REMEDIES EXCLUSIVE: With respect to time related dispute compensation provisions, the parties agree that the Department shall have no liability to the Contractor for expenses, costs, or items of damage other than those which are specifically identified as payable under this specification, Part (D). In the event any legal action is instituted against the Department by the Contractor on account of any such dispute for additional compensation, whether on account of time related dispute, delay, acceleration, breach of contract, or otherwise, the Contractor agrees that the Department's liability will be limited to those items which are specifically identified as compensable under this specification, Part (D). The Contractor further agrees to make no claim for expenses other than those which are specifically identified as compensable under this specification, Part (D). Nothing in this Section is intended to create any liability of the Department not existing at common law or pursuant to the terms of this contract or to prevent the Contractor from filing a claim in a court of law.

(E) REQUIRED CONTENT OF DISPUTE SUBMISSION. All disputes must be submitted in writing to the Engineer, and must be in sufficient detail to enable the Engineer to ascertain the basis and the amount of each dispute. If requested and as a minimum, the following information must be provided when such information is ascertainable by the Contractor:

1. TIME RELATED DISPUTE SUBMISSIONS.

a. A description of the operations that were delayed, the reasons for the delay, how they were delayed, including the report of all scheduling experts or other consultants, if any.

b. An as-built chart, "Critical Path Method" scheme or other diagram or chart depicting in graphic form how the operations were or are presumed to be adversely affected.

c. The date on which actions resulting in the dispute occurred or conditions resulting in the dispute became evident.

d. A copy of the notice of dispute required as per Dispute Resolution and Disputed Work Provisions, Part A(3) for the specific dispute by the Contractor.

e. To the extent known, the name, function, and activity of each Department official, or employee or agent, involved in, or knowledgeable about facts that gave rise to such dispute.

f. The name, function, and activity of each Contractor or subcontractor official, or employee, involved in, or knowledgeable about facts that gave rise to such dispute.

g. The identification of any pertinent documents, and the substance of any material oral communication relating to such dispute.

h. A statement as to whether the additional compensation or extension of time if requested is based on the provisions of the contract or is an alleged breach of contract.

I. The amount of additional compensation sought and a breakdown of that amount into the categories specified as payable under this specification, Part (D) above.

j. If an extension of time is also requested, the specific days for which it is sought and the basis for such request as determined by an analysis of the construction progress schedule.

2. FOR OTHER DISPUTES INCLUDING ACCELERATION DISPUTES.

a. A detailed factual statement of the dispute providing all necessary dates, locations and items of work affected by the dispute.

b. The date on which actions resulting in the dispute occurred or conditions resulting in the dispute became evident.

c. A copy of the "notice of dispute" required for the specific dispute by the contract pursuant to Dispute Resolution and Disputed Work Provisions, Parts B or C.

d. The name, function, and activity of each Department official or employee or agent involved in, or knowledgeable about facts that gave rise to such dispute.

e. The name, function and activity of each Contractor or subcontractor official, employee or agent involved in or knowledgeable about facts that gave rise to such dispute.

f. The specific provisions of the contract which support the dispute and a statement of the reasons why such provisions support the dispute.

g. The identification of any pertinent documents and the substance of any material oral communications relating to such dispute.

h. A statement as to whether the additional compensation or extension of time requested is based on the provisions of the contract or an alleged breach of contract.

I. If an extension of time is also requested, the specific days for which it is sought and the basis for such request as determined by an analysis of the construction schedule.

j. The amount of additional compensation sought and a breakdown of that amount shall conform to the requirements of this specification, Part (B) except for acceleration disputes which shall conform to the requirements and categories specified in Part (D) above.

(F) REQUIRED CERTIFICATION OF DISPUTES. When submitting any dispute over $50,000, the Contractor must certify in writing, under oath and in accordance with the formalities required by the contract, as to the following:

1. That supportive data is accurate and complete to the Contractor's best knowledge and belief;

2. That the amount of the dispute and the dispute itself accurately reflects what the Contractor in good faith believes to be the Department's liability;

3. If the Contractor is an individual, the certification shall be executed by that individual. If the Contractor is not an individual, the certification shall be executed by:

   (1) Senior company official in charge at the Contractor's plant or location involved;

   or

   (2) An officer or general partner of the Contractor having overall responsibility for the conduct of the Contractor's affairs.

(G) CONTRACTOR'S COST RECORDS. The Contractor shall maintain records of all required payrolls, and of the details that comprise its total cost pursuant to any and all records maintained pursuant to Dispute Resolution and Disputed Work Provisions and Extra Force Account Work, Dispute Compensation and Recordkeeping, and it shall, at any time within six years following the date of final payment of the project, make such records available, upon request therefor, to the Department for review and audit, if deemed necessary by the Department. In case all or a part of such records are not made so available, the Contractor understands and agrees that any items not supported by reason of such unavailability of the records shall be disallowed, or if payment therefor has already been made, the Contractor shall, upon demand in writing by the Department, refund to the Department the amount so disallowed.

DIFFERING SITE CONDITIONS, SUSPENSIONS OF WORK, SIGNIFICANT CHANGES IN THE CHARACTER OF THE WORK PROVISIONS.

The following provisions shall apply to this contract:

A.(1) Differing site conditions.

(i) During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before the site is disturbed and before the affected work is performed.

(ii) Upon written notification, the Engineer will investigate the conditions and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding anticipated profits, will be made and the contract modified in writing accordingly. The Engineer will notify the Contractor of the determination whether or not an adjustment of the contract is warranted.

(iii) No contract adjustment which results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice.

(iv) The aforesaid differing site condition clause (Part A.(1)) shall be governed by the notice provisions set forth above, and the recordkeeping and other requirements of Dispute Resolution and Disputed Work Provisions, and additional compensation via order on contract(s), if any, shall be made pursuant to Extra Force Account Work, Dispute Compensation and Recordkeeping, Part (B), New Item Charges, 1 (Agreed Prices) or 2 (Force Account Charges) and (E), Required Content of Dispute Submission (2) and (F), Required Certification of Dispute. However, the equipment compensation provisions shall be governed and controlled by the provisions of Part (D) (2).

(2) Suspensions of Work ordered by the Engineer.

(I) If the performance of all or any portion of the work is suspended or delayed by the Engineer in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the Contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the Contractor shall submit to the Engineer in writing a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment. The record keeping requirements of Section 10.02 must be complied with in connection with any requests for reimbursement.

(ii) Upon receipt, the Engineer will evaluate the Contractor's request. If the Engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the Contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the Engineer will make an adjustment (excluding profit) and modify the

contract in writing accordingly. The Contractor will be notified of the Engineer's determination whether or not an adjustment of the contract is warranted.

(iii) No contract adjustment will be allowed unless the Contractor has submitted the request for adjustment within the time prescribed.

(iv) No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided for or excluded under any other term or condition of this contract.

(v) The aforesaid suspension of work clause (Part A.(2)) shall be governed by the notice provisions set forth above, and the recordkeeping and other requirements of Dispute Resolution and Disputed Work Provisions, and additional compensation via order on contract(s), if any, shall be made pursuant to Extra Force Account Work, Dispute Compensation and Recordkeeping, Part (D), Time Related Dispute Compensation, (E), Required Content of Dispute Submission and (F), Required Certification of Disputes.

(3) Significant changes in the character of work.

(i) The Engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the Contractor agrees to perform the work as altered.

(ii) If the alterations or changes in quantities significantly change the character of the work under the contract, whether such alterations or changes are in themselves significant changes to the character of the work, or by affecting other work, cause such other work to become significantly different in character, an adjustment excluding anticipated profit, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the Contractor in such amount as the Engineer may determine to be fair and equitable.

(iii) If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.

(iv) The term "significant change" shall be construed to apply only to the following circumstances:

(A) When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction; or

(B) When a major item of work, as defined elsewhere in the contract, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed.

(C) The term "major item" of work shall mean any item for which the original bid price multiplied by the original contract quantity exceeds $50,000 or 2% of the total contract bid price, whichever is less.

(D) Certain items of work may be "fixed quantity" items. That is, payment will be restricted to the quantity stated in the Estimate of Quantities. If, during the progress of the work the stated quantity is determined to be in error, the terms of Dispute Resolution and Disputed Work Provisions, Part (3)(iv)(B) shall apply with the following alterations:

1. The major item of work requirement shall not apply.

2. Significant change shall be defined as an actual quantity in excess of 125 percent of the stated quantity, or less than 75 percent of the stated quantity.

(v) The aforesaid significant change in character of work clause (Part (A)(3)) shall be governed by the notice, recordkeeping and other requirements of Dispute Resolution and Disputed Work Provisions, and additional compensation via order on contract(s) shall be made for time related costs, if any, pursuant to Extra Force Account Work, Dispute Compensation and Recordkeeping, Parts (D) and (E) and (F) and for increased costs, if any, pursuant to Part (B), New Item Charges, 1 (Agreed Price) or 2 (Force Account Charges) and (E)2, Required Content of Dispute Submission and (F), Required Certification of Dispute, but, the equipment compensation shall be governed and controlled by the provisions of Part (D)2.

(vi) With respect to the aforesaid significant changes in the character of work clause (this specification, Part (A)(3)), the contractor or the Department, as the case may be, must make written notification to the other party of the existence of the 'significant change'. This notice shall be given in a timely manner with respect to the date that either party had, or should have had, knowledge of an event, matter, occurrence of work order which results in a significant change in the work. If the affected work is in progress, notice shall be given within 3 days of knowledge of the change. If the affected work is not in progress, notice shall be given within 10 days of knowledge of the change. The timely issuance of a notice of 'significant change' shall be a necessary requirement for consideration of contract alterations as provided in this section.

(4) Definitions.

(a) "Commissioner" and "Engineer" are defined in Article 2 of the Agreement.

(b) See Paragraph 1 (i) above – Subsurface or latent physical conditions "differing materially" from those "originally encountered" and "generally recognized" are defined as conditions at the site materially differing from any shown on the contract plans or indicated in the specifications, or such 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.

(c) See paragraph 1 (ii) above – "written notification" is defined as written notice sent by the Contractor by Registered Mail addressed to the Commissioner, Department of Design and Construction, City of New York, 30-30 Thomson Avenue, Long Island City, NY 11101.

(d) See paragraph 2 (i) above –

1. "Unreasonably period of time" is defined as a period of time not anticipated in the Contract Documents and beyond the control of the Contractor.

2. "Not originally anticipated" is defined as it relates to delay in completing the work caused solely by the acts or omissions of The City, its officers, agents or employees; or the acts or omissions of other contractors on this project; or supervening conditions entirely beyond the control of either the Contractor or the City (such as but not limited to: Acts of God, 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).

(e) See paragraphs 3 (ii) and 3 (iii) above – "significantly change the character of the work" is defined as it relates to alterations or changes in quantities in a manner which materially affected the substances of the contract, or increase the price to be paid by more than ten percent (10%) of the price bid on a lump sum contract; ten percent (10%) of the total bid cost, determined by summating the products of each of the Engineer's estimated quantities and their respective unit bid price on a unit price contract; and determined by multiplying the Engineer's Estimate of Total cost by the Contractor's bid percentage on a Percentage-Bid Contract.

(f) See paragraph 3 (iv) (B) above – "major item of work" is defined as any scheduled item for which the original bid with the bidding quantities exceed 2% of the total contract bid price.

B. If the Department determines that as a result of the aforesaid differing site condition, suspension of work clauses and significant change in the character of work clauses, that an adjustment in the contract price is warranted, the Department shall first attempt to arrive at an agreed price with the contract. If unsuccessful, the Department may make such adjustments to the contract as is determined to be fair and equitable utilizing Owner estimates. Commencing with the issuance of notice, and through the date of agreement between the Department and the contractor, all work subject to these provisions shall be treated as Disputed Work, with daily recordkeeping in accordance with the provisions of Dispute Resolution and Disputed Work Provisions.

C. If any of the notice or other provisions of this specification, Part A are in conflict with any other of the provisions of the Standard Specifications, then the provisions of this specification, Part (A) shall prevail and take precedence and be of force over and against any said conflicting provision of said contract.

D. Solely for purposes of the aforesaid specification, Parts A(1),(2) and (3), and solely for purposes of disputes as to records pursuant to Dispute Resolution and Disputed Work Provisions, Part (A)(4), the Engineer shall be the Engineer-in-Charge.

CONTRACTOR INITIATED VALUE ENGINEERING CHANGE PROPOSAL (CIVEC)

A. Purpose and Scope

The term "proposal" as used in this Subsection is construed to mean a Contractor Initiated Value Engineering Change (CIVEC) Proposal submitted by the Contractor for changing the Plans, Specifications, or other requirements of the Contract. The Value Engineering Change Proposal shall conform with the following:

It is the intent of this provision to share with the Contractor any cost savings which may be generated on this Contract as the result of CIVEC proposals offered by the Contractor and approved by the Department. The purpose is to encourage the use of the Contractor's ingenuity and experience in arriving at a lower cost alternative with any time-saving construction methods other than those reflected in the Contract Documents, by the sharing of savings resulting therefrom. The proposals contemplated are those that could produce a savings to the Department, without, in the sole judgment of the Deputy Chief Engineer, impairing the essential functions and characteristics of the Project or a portion of the Work involved. They include, but are not limited to: safety, service, life, stage construction, economy of operation, ease of maintenance and desired appearance.

B. Submittal of CIVEC Proposal

The Contractor may submit a CIVEC only after Award of the Contract. The CIVEC may be accepted within 30 (thirty) days after Award of Contract and should be approved by the New York State Department of Transportation.

B-1. Submittal of Initial CIVEC Proposal

An initial proposal is required for all CIVEC proposals and shall outline the general technical concepts associated with the proposal and the estimated savings which will result. The initial proposal will be reviewed by the Department and, if found to be conceptually acceptable, approval to submit a Final Proposal will be granted by the Department. A finding of "conceptual acceptability" of the initial proposal however, in no way obligates the Department to approve the final proposal. Further, the Contractor shall have no claim against the City as a result of the rejection of any such initial or final proposal.

B-2. Submittal of Final CIVEC Proposal

At a minimum, the following materials and information shall be submitted with each CIVEC proposal, plus any additional information requested by the Department.

a) A statement that the CIVEC is submitted as the "Final Value Engineering Change Proposal," as per Department approval of the Initial CIVEC Proposal.

b) A description of the difference between the existing contract requirements and the proposed change, and the comparative advantages of each, including considerations of service life, economy of operation, ease of maintenance, desired appearance and safety.

c) Complete plans and specifications showing the proposed revisions relative to the original contract features and requirements.

d) A complete cost analysis indicating the Final Estimate costs and quantities to be replaced by the CIVEC proposal, the new costs and quantities generated by the CIVEC proposal, and the cost effects of the proposed changes on operational, maintenance and other considerations.

e) Pursuant to Article 25 of the Agreement, Value Engineering Change Proposals are considered Change Orders, therefore, a statement of the time, by which adopting of the proposal must be executed so as to obtain the maximum benefit during the remainder of the Contract, is required. The date must be selected to allow the Department ample time for review and processing of the Change Order, but without affecting the Contractor's schedule. Should the Department find that insufficient time is available for review and processing, it may reject the CIVEC proposal solely on such basis. If the Department fails to respond by the date specified, the Contractor shall consider the CIVEC proposal rejected unless otherwise notified in writing by the Department; and shall in any event have no claims against the City as a result thereof.

f) A statement as to the effect the CIVEC proposal will have on the time for completion of the contract.

g) A description of any previous use or testing of the CIVEC proposal on another Department project, indicate the date, contract number and the action taken by the Department.

C. Conditions

CIVEC proposals will not be considered in determining the lowest responsible bidder. CIVEC proposals will only be considered after award, and only when all of the following conditions are met:

1. The Contractor is cautioned not to base any bid prices on the anticipated approval of the CIVEC proposal and to recognize that such proposal may be rejected and that the Contractor will thus, be required to complete the Contract in accordance with the plans and specifications bid.

2. All CIVEC proposals, whether or not approved by the Department for use in this contract, apply only to the on-going Contract or Contracts referenced in the CIVEC proposal and become the property of the Department without restriction as may otherwise be imposed by the Contractor, on their use and disclosure. The Department shall have the right to use, duplicate and disclose in whole or in part any data necessary for the utilization of the proposal. The Department retains the right to utilize any accepted CIVEC proposal or part thereof, on any subsequent project without any obligation to the Contractor submitting the same.

3. If the Department already has under consideration certain revisions to the Contract or has approved certain changes in specifications or standards for general use which are then subsequently incorporated in a CIVEC proposal submitted by the Contractor, the Department shall reject the Contractor's proposal and proceed with such revisions if it so desires without any obligation to the Contractor.

4. The Contractor shall have no claim against the City for any costs or delays incidental to the Department's rejection or approval of a CIVEC proposal, including but not limited to development costs, anticipated profits, or increased material and labor costs resulting from delays in the review of such CIVEC proposal.

5. The Department shall be the sole judge as to whether a CIVEC proposal qualifies for consideration and evaluation. It may reject, at will, any CIVEC proposal that requires excessive time or costs for review, evaluation and/or investigations, or which is not consistent with the Department's design policies and basic design criteria for the project; as well as, for any other reason the Department deems appropriate, without explanation.

6. The Engineer may reject all or any portion of the work performed pursuant to an approved CIVEC proposal if it is believed that unsatisfactory results are being obtained. The Engineer may direct the removal of such rejected work and require the Contractor to proceed in accordance with the original Contract requirements without reimbursement for any work performed under the CIVEC proposal, or for its removal. Where modifications to the CIVEC are approved in order to adjust to field or other conditions, reimbursement will be limited to the total amount payable for the work at the Contract bid prices as if it were constructed in accordance with the original Contract requirements. Such rejection or limitation of reimbursement shall not constitute the basis of any claim against the City for delay or for any other costs.

7. The CIVEC proposal shall not be experimental in nature but shall have been proven to the Department's satisfaction under similar or acceptable conditions on another Department project or at another location acceptable to the Department.

8. CIVEC Proposals shall be considered only if equivalent options are not already provided in the Contract documents.

9. The savings generated by the CIVEC proposal must be of sufficient significance, in the sole judgment of the Department, to warrant review and processing.

10. A CIVEC proposal changing the types and or thickness of the pavement structure will not be considered.

11. If additional information is deemed necessary by the Engineer to evaluate the CIVEC proposal, this information must be provided in a timely manner to allow sufficient time for review. Failure to do so will result in rejection of the CIVEC proposal. Such additional information should include but not be limited to design changes, field investigation and survey results, design computations, and field change sheets.

12. No changes to the work shall be considered as CIVEC eligible, if they are the result of design errors or omissions which would have needed correction notwithstanding any CIVEC provision in the specification; even if the need for such correction is first brought to the Engineer's attention by the Contractor.

D. Payment

If the CIVEC proposal is accepted by the Department, the changes and payments will be made in accordance with the applicable sections of the Procurement Policy Board (PPB) Rules and this contract. Reimbursement to the Contractor shall be made as follows:

1. The changes will be incorporated into the original Contract proposal as submitted by the Contractor via changes in the quantity of unit bid items, changes in the amounts of lump sum items and new agreed priced items, as appropriate.

2. The cost of the revised work as determined from the aforementioned changes in quantities, or new items will be paid directly. In addition to such payment, the Department will pay to the Contractor, via a separate item, 50 percent of the savings to the Department as reflected by the difference between the above payment and the cost of the related construction required by the original Contract plans and specifications computed at Contract bid prices.

3. The Contractor's costs for development, design and implementation of the CIVEC proposal are not eligible for reimbursement.

4. **The Contractor may submit CIVEC proposals on behalf of an approved subcontract, provided that reimbursement is made by the Department to the Contractor and that the terms of the pass through to the subcontractor are satisfactorily negotiated and accepted by the Contractor and Subcontractor before the CIVEC proposal is submitted to the Department. Subcontractors may not otherwise submit a CIVEC proposal, except through the prime Contractor.**

NO TEXT

ITEMIZED PROPOSAL

To the State Department of Transportation:

In submitting this bid the undersigned declares to be the only person or persons interested in the said bid; that it is made without any connection with any person making another bid for the same contract; that the bid is in all respects fair and without collusion, fraud or mental reservation; and that no official of the State, or any person in the employ of the State is directly or indirectly interested in said bid or in the supplies or work to which it relates, or in any portion of the profits thereof.

The undersigned also hereby declares to have carefully examined the plans, specifications and form of contract, and to have personally inspected the actual location of the work together with the local sources of supply, to be satisfied as to all the quantities and conditions, and understands that in signing this proposal waives all right to plead any misunderstanding regarding the same.

The undersigned further understands and agrees to furnish and provide for the respective item price bid all the necessary material, machinery, implements, tools, labor services and other items of whatever nature, and to do and perform all the work necessary under the aforesaid conditions, to complete the improvement of the aforementioned project in accordance with the plans and specifications for said improvement, which plans and specifications it is agreed are a part of this proposal, and to accept in full compensation therefore the amount of the summation of the products of the approximate quantities multiplied by the unit prices bid. This summation will hereinafter be referred to as the gross sum bid.

The undersigned further agrees to accept the aforesaid unit bid prices as compensations for any additions or deductions caused by variation in quantities due to more accurate measurement, and for use in the computation of the value of the work performed for monthly estimates.

The undersigned further agrees that at any time during the progress of work the State adds, alters or omits portions of the work it shall so perform such work and accept compensation in accordance with the Standard Specifications.

The undersigned further understands and agrees not to start any work until the contract agreement is signed by the Commissioner or the Commissioner's duly authorized representative. In case the undersigned voluntarily undertakes to start work, other than that expressly prohibited in this Subsection, after the contract agreement is signed by the Commissioner but prior to approval by the State Comptroller, the undersigned does so entirely at its own risk and without obligation or responsibility on the part of the State unless and until the awarded contract becomes effective pursuant to Section 112 of the State Finance Law by approval of the State Comptroller and filing in the Office of the State Comptroller; and hereby agrees and warrants that, as a prerequisite to the start of any such voluntary work, accepts, assumes and undertakes all of the provisions of this proposal and of the plans and specifications of the proposed contract, including all of the provisions and responsibilities thereof relative to (1) damage, indemnification and holding the State harmless as set forth in said contract documents, and (2) actually furnishing in advance of any contract operations, the required insurance policies of each and every kind and amount as called for in said contract documents, particularly with relation to workers compensation and liability insurance policies as set forth in the related specifications; and also agrees and warrants that all of such policies will be in force and effect on the date of the start of any such contract operations, whether or not the contract documents have been executed and filed as aforesaid. In no event shall the undersigned start any contract work which involves a disturbance of the contract site prior to execution of the contract by the Comptroller.

UNITED STATES DEPARTMENT OF TRANSPORTATION HOTLINE

Persons with knowledge of bid collusion (i.e. contractors, suppliers, workpersons, etc.), or other questionable contract related practices (inadequate materials, poor workmanship, theft of materials, etc.), are encouraged to report such activities by calling the **U.S. D.O.T. HOTLINE.** The **HOTLINE** number is 1-800-424-9071 and calls will be answered from 8:00 A.M. to 5:00 P.M. EST, Monday through Friday.

This HOTLINE is under the direction of the U.S.D.O.T.'s Inspector General. All information will be treated confidentially and the caller's anonymity will be respected.

NEW YORK STATE INSPECTOR GENERAL HOTLINE

Reports of New York State Governmental Misconduct may be made in strict confidence to the New York State Inspector General on the Toll Free Statewide HOTLINE or by writing to the Office of the Inspector General. The Toll Free Statewide HOTLINE telephone number is 1-800-367-4448 and calls will be answered between 8:00 A.M. and 4:30 P.M., Monday through Friday. The address of the Office of the State Inspector General is the State Capital, Executive Chamber, Albany, New York 12224.

PROMPT PAYMENTS BY THE CONTRACTOR. In accordance with Section 139-f(2) of the State Finance Law, the Contractor shall pay each Subcontractor and materialman for the value of work performed pursuant to contract no later than seven (7) calendar days from the receipt of each payment the Contractor receives from NYC Department of Design and Construction (NYCDDC). Payment by the Contractor to Subcontractors or materialmen shall reflect the quantities or percentage of work completed by the Subcontractor or materials furnished by the materialmen, and paid by NYCDDC; and such payment shall be based upon the actual conditions of the subcontract or purchase order. The Contractor shall not hold any retainage, but may deduct an amount necessary to satisfy any claims, liens or judgments against a Subcontractor or materialman which have not been fully discharged.

The Contractor shall maintain an accounting system acceptable to the NYCDDC to track payments made by the City to the Contractor and payments made by the Contractor to each Subcontractor, Manufacturer, Fabricator or Material Supplier by item and by date.

CIVIL RIGHTS MONITORING AND REPORTING.

SEE SECTION 105-21 OF THE
NEW YORK STATE
DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS

The Contractor shall use the current version of NYS Department of Transportation approved Construction Civil Rights Reporting Software (EBO) which is available at the following website:

https://ebo.dot.ny.gov

The software is free. Prime contractors, vendors (subcontractors, suppliers, etc.), and agency compliance staff will have access to the software. The prime contractor shall be required to print reports from EBO for submission to the Resident Engineer each month, not later than the 15th of the following month. Data shall be current through the end of the last full payroll week for that month, or as otherwise approved by the Engineer to coordinate with contract payment submittals.

APPENDIX 2
IRAN DIVESTMENT ACT

As a result of the Iran Divestment Act of 2012 (Act), Chapter 1 of the 2012 Laws of New York, a new provision has been added to the State Finance Law (SFL), § 165-a, effective April 12, 2012. Under the Act, the Commissioner of the Office of General Services (OGS) will be developing a list (prohibited entities list) of "persons" who are engaged in "investment activities in Iran" (both are defined terms in the law). Pursuant to SFL § 165-a(3)(b), the initial list is expected to be issued no later than 120 days after the Act's effective date, at which time it will be posted on the OGS website.

By entering into this Contract, Contractor (or any assignee) certifies that once the prohibited entities list is posted on the OGS website, it will not utilize on such Contract any subcontractor that is identified on the prohibited entities list. Additionally, Contractor agrees that after the list is posted on the OGS website, should it seek to renew or extend the Contract, it will be required to certify at the time the Contract is renewed or extended that it is not included on the prohibited entities list. Contractor also agrees that any proposed Assignee of the Contract will be required to certify that it is not on the prohibited entities list before the New York State Department of Transportation (NYSDOT) may approve a request for Assignment of Contract

During the term of the Contract, should NYSDOT receive information that a person is in violation of the above-referenced certification, NYSDOT will offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment which is in violation of the Act within 90 days after the determination of such violation, then NYSDOT shall take such action as may be appropriate including, but not limited to, imposing sanctions, seeking compliance, recovering damages, or declaring the Contractor in default.

NYSDOT reserves the right to reject any request for assignment for an entity that appears on the prohibited entities list prior to the award of a contract, and to pursue a responsibility review with respect to any entity that is awarded a contract and appears on the prohibited entities list after contract award.

(NO TEXT ON THIS PAGE)

ATTACH TO CONTRACT DOCUMENTS

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

PROJECT ID: PV176ITF1

RECONSTRUCTION AND REHABILITATION OF BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
BRONX RIVER PARKING LOT AND OVERFLOW LOT
INTERSECTION OF JUNGLE WORLD ROAD
AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

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

Together With All Work Incidental Thereto

BOROUGH OF THE BRONX

ADDENDUM NO. 3

DATED: September 8, 2014

This Addendum is issued for the purpose of amending the requirements of the contract documents and is hereby made part of said contract documents to the same extent as if it was originally included therein.

The Standard Sewer And Water Main Specifications of the Department of Environmental Protection (dated July 1, 2014), Sewer Design Standards of the Department of Environmental Protection (dated (September 2007) Revised January 2009), Water Main Standard Drawings of the Department of Environmental Protection (latest revisions), and the Standard Highway Specifications (Volumes I and II) of the Department of Transportation (dated November 1, 2010) of The City of New York, shall be included as part of the contract documents. These said specifications and standard drawings are hereby revised under the following section headings:

A. NOTICE TO BIDDERS
B. AMENDMENTS TO THE STANDARD HIGHWAY SPECIFICATIONS
C. AMENDMENTS TO THE STANDARD SEWER AND WATER MAIN SPECIFICATIONS

A. NOTICE TO BIDDERS

(1) (A) The Contractor is advised that copies of the Standard Sewer And Water Main Specifications (dated July 1, 2014), Sewer Design Standards (dated (September 2007) Revised January 2009), Specifications For Trunk Main Work (dated July 2014) and Water Main Standard Drawings (latest revisions) are available to all prospective bidders at no cost upon presentation of receipt of purchase of Bid Package at the following location:

Department of Design and Construction
Division of Infrastructure
Design Services, Specifications, 3rd Floor
30-30 Thomson Avenue
Long Island City, NY 11101

(B) The Contractor is advised that copies of the Standard Highway Specifications (Volume I and II) (dated November 1, 2010), Standard Highway Details of Construction (latest revisions), Division of Street Lighting Specifications (latest revisions), Division of Street Lighting Standard Drawings (latest revisions), Standard Specifications for Traffic Signals (latest revisions), and Standard Drawings for Traffic Signals (latest revisions) are available to all prospective bidders for a fee at the following location:

Department of Transportation
55 Water Street, Ground Floor
New York City, NY 10041

(2) The Contractor is notified that a Notice To Proceed (NTP) date will be issued for work to commence within twenty-one (21) to thirty (30) days of Contract Registration.

(3) The Contractor shall furnish, install, maintain and subsequently remove temporary Protective Tree Barriers. Protective Tree Barriers shall be Type B, unless otherwise directed by the Engineer, and shall be constructed and installed as shown on the Protective Tree Barrier sketch in Department Of Transportation, Standard Highway Details Of Construction, Drawing No. H-1046A, as directed by the Engineer, and in accordance with Department of Parks and Recreation requirements.

(4) All utility locations and invert elevations are not guaranteed, nor is there any guarantee that all existing utilities, whether functional or abandoned within the project area are shown.

(5) All existing house connections shall be maintained and supported during construction. The Contractor shall replace any existing house connection damaged as a result of the Contractor's construction operations as ordered by the Engineer at no cost to the City.

(6) The Contractor is advised that any City owned light poles, traffic signals, street name signs, traffic signs and encumbrances including, but not limited to, underground conduit displaced as the result of the installation of the new sewers, water mains, catch basins, catch basin connections and appurtenances shall be replaced in kind and as directed by the Engineer. The cost of such work shall be deemed included in the prices bid for all items of work under this contract.

(7) The Contractor is notified that Victaulic Style 77 Coupling is no longer acceptable for use in any steel water main work. All reference to Victaulic Style 77 Coupling within the Standard Sewer And Water Main Specifications of the Department of Environmental Protection (dated July 1, 2014), the Water Main Standard Drawings of the Department of Environmental Protection (latest revisions), the Specifications For Trunk Main Work (dated July 2014), and the contract drawings, shall be replaced with Bolted Split-Sleeve Restrained Coupling.

(8) The Contractor is notified that wherever the Item No. "6.52" and words "flagger", "flagperson" and "flagman" are used in the contract documents and drawings it shall mean the Item No. "6.52 CG" and the words "Crossing Guard", respectively.

(9) The Contractor is notified that the fuel cost per gallon used in the formula under **Sub-Article 26.2.8** of the Standard Construction Contract for **Extra Work** will be derived from the fuel price index for the United States East Coast published weekly by the United States Energy Information Administration ("USEIA"), and available on its website at http://www.eia.gov/petroleum/gasdiesel/ . The USEIA published cost per gallon for the applicable fuel on the East Coast for the week in which the first day of each calendar quarter during the contract term occurs (i.e., January 1st, April 1st, July 1st and September 1st) will be used in the reimbursement formula for all **Extra Work** invoiced that was performed during that calendar quarter. Should the USEIA stop publishing this fuel price index, the fuel cost per gallon will be determined by reference to a substitute index to be agreed upon by the Contractor and the City.

(10) The Contractor is responsible for any damage to the existing street and traffic signal equipment, including underground conduits and the safety of both pedestrian and vehicular traffic for the duration of the contract.

Should any conduits, cables or foundations need repair due to the Contractor's negligent operations during construction, all work shall be performed according to NYCDOT Bureau of Traffic's Standard Drawings and Specifications at the sole expense of the Contractor.

It is the Contractor's responsibility to secure an approved electrical contractor to perform all traffic signal work (if any). For list of approved electrical contractors, contact Mr. Michael R. LeFosse of New York City Department of Transportation at (718) 786-2236.

B. AMENDMENTS TO THE STANDARD HIGHWAY SPECIFICATIONS

(NO TEXT)

C. AMENDMENTS TO THE STANDARD SEWER AND WATER MAIN SPECIFICATIONS

(1) **Refer** to **Subsection 10.15 - Notice To Utility Companies, Etc., To Remove Structures Occupying Place Of Sewers, Water Mains Or Appurtenances**, Page I-11:
Add the following to **Subsection 10.15**:

(1) CONSOLIDATED EDISON COMPANY OF NEW YORK (CON EDISON)

There are CON EDISON facilities in the area of construction. The Contractor shall notify CON EDISON at least seventy-two (72) hours prior to the start of construction by contacting Ms. Theresa Kong at (212) 460-4834 or Mr. Noel Leon at (718) 275-2852.

(2) VERIZON

There are VERIZON facilities in the area of construction. The Contractor shall notify VERIZON at least seventy-two (72) hours prior to the start of construction by contacting Mr. Michael Fitzpatrick at (718) 977-8142.

(3) TIME WARNER CABLE OF NEW YORK CITY

There are TIME WARNER CABLE facilities in the area of construction. The Contractor shall notify TIME WARNER CABLE at least seventy-two (72) hours prior to the start of construction by contacting Mr. Mark Larm at (917) 335-9181.

(4) NATIONAL GRID

There are NATIONAL GRID facilities in the area of construction. The Contractor shall notify NATIONAL GRID at least seventy-two (72) hours prior to the start of construction by contacting Mr. Neville Jacobs Jr. at (718) 963-5612.

(2) **Refer** to **Subsection 10.21 - Contractor To Notify City Departments**, Page I-13:
Add the following to **Subsection 10.21**:

(1) N.Y.C. D.E.P., BUREAU OF WATER AND SEWERS OPERATIONS

The Contractor shall notify Mr. James Garin, P.E., Director, Engineering at the Department of Environmental Protection, 59-17 Junction Blvd., 3rd floor low rise, Corona N.Y. 11368, at least thirty (30) days prior to the start of construction.

(2) NEW YORK CITY FIRE DEPARTMENT

The Contractor shall notify the Bureau of Fire Communications at least thirty (30) days prior to the start of construction by contacting Mr. Cleanthis Meimaroglou at (718) 999-1719.

(3) N.Y.C. DEPARTMENT OF TRANSPORTATION

The Contractor shall notify Mr. Steve Galgano, P.E. Chief of Signal/Street Lighting Operations, 34-02 Queens Blvd., Long Island City, N.Y. 11101 at (718) 786-3550, at least seventy-two (72) hours prior to the start of construction.

(4) N.Y.C. DEPARTMENT OF PARKS AND RECREATION

The Contractor shall notify the Parks Department at least seventy-two (72) hours prior to the start of construction by contacting Mr. James Cruickshank at (718) 965-7739.

(5) N.Y.C. TRANSIT AUTHORITY

The Contractor is advised that bus routes as well as bus stops, within the scope of this project may be affected during construction operations. The Contractor shall notify the Transit Authority at least two (2) weeks prior to the start of construction, in order to make the necessary arrangements.

Arrangements shall be made through:

Ms. Sarah Wyss
Director Of Short Range, Bus Service Planning (SRB)
New York City Transit
2 Broadway, 17th Floor
New York, N.Y. 10004
Telephone No. (646) 252-5517
sarah.wyss@nyct.com

(3) **Refer** to **Subsection 10.30 - Contractor To Provide For Traffic**, Page I-15:
Add the following to **Subsection 10.30**:

(1) Traffic Stipulations:

The Contractor shall refer to Traffic Stipulations identified in the maintenance of traffic requirements under Highway Contract No. PV176ITF1.

(4) **Refer** to Page V-77:
Add the following new **Section 51.12**:

SECTION 51.12
STORMWATER TREATMENT SYSTEM (SWTS) CHAMBERS

51.12.1 DESCRIPTION

Stormwater Treatment System (SWTS) Chambers shall be precast reinforced concrete structures constructed of the sizes and shapes shown, specified or ordered, complete with frames and covers.

51.12.2 MATERIALS

(A) Concrete shall comply with the requirements of **General Specification 11 - Concrete, as modified in Section 23.01**, except that the concrete shall have a concrete design mix for five thousand (5,000) pounds per square inch (minimum twenty-eight (28) day compressive strength of four thousand (4,000) pounds per square inch). The maximum allowable chloride content in the concrete shall not exceed one-tenth (1/10) of one percent by weight of cement. The maximum water/cement ratio shall not exceed forty-seven (47) percent by weight.

(B) Portland Cement shall comply with the requirements of **General Specification 11 - Concrete, as modified in Section 23.01**, and shall be Type II unless otherwise specified. Coarse and Fine Aggregate for concrete shall be well graded in accordance with **Subsection 2.6.1.1 of General Specification 11 - Concrete, as modified in Section 23.01**. Size of Coarse Aggregate shall be three-quarter (3/4) inch unless smaller size aggregate is required due to nature of work.

(C) Reinforcement shall comply with the requirements of **General Specification 11 - Concrete, as modified in Section 23.01**.

(D) Welded Steel Wire Fabric shall comply with the requirements of **General Specification 11 - Concrete, as modified in Section 23.01** and shall have a minimum specified yield strength of sixty-five thousand (65,000) pounds per square inch.

(E) High range water reducing admixtures meeting the requirements of ASTM C494 Type F and having been previously approved by the New York State Department of Transportation may be used.

(F) Brick and brick masonry shall comply with the requirements of **Section 23.02**.

(G) Frames and covers shall be of cast iron, unless otherwise shown on the contract plans, complying with the requirements of **Section 22.01**, Type 1. Malleable iron or cast steel covers, when required, shall comply with the requirements of **Section 22.01 and Section 22.04**.

(H) Steps shall be cast iron and shall comply with the requirements of **Section 22.01**, Type 1, or shall be copolymer polypropylene plastic manhole steps with one-half (1/2) inch Grade 60 steel reinforcement and shall comply with the Sewer Design Standards.

(I) Cement mortar shall comply with the requirements of **Section 23.03**.

(J) Structural steel shall comply with the requirements of **Section 23.05**.

(K) Granite slabs shall comply with the requirements of **Section 23.07**.

(L) Internal aluminum plate components shall be aluminum alloy 5052-H32 in accordance with ASTM B209.

(M) Sealant to be utilized at the base of the swirl chamber shall be 60 durometer extruded nitrile butadiene rubber (Buna N).

(N) A bitumen sealant in conformance with ASTM C990 shall be utilized in the sealing of the joint between the swirl chamber and the vault at the long wall tangent points. Butyl material shall be 3/4-inch thick by 3/4-inch wide.

(O) The stormwater treatment system chambers shall meet the following performance criteria:

(1) Include a circular aluminum "swirl chamber" (or "grit chamber") with a tangential inlet to induce a swirling flow pattern that will accumulate and store settleable solids in a manner and a location that will prevent re-suspension of previously captured particles.

(2) Shall be of a hydraulic design that includes flow controls designed and certified by a professional engineer using accepted principles of fluid mechanics that raise the water surface inside the tank to a pre-determined level in order to prevent the re-entrainment of trapped floating contaminants.

(3) Shall determine the rise in Hydraulic Grade Line (HGL) of the drainage system upstream of the stormwater treatment system chamber. This shall consist of a stage-discharge table indicating the water surface elevation at the entrance of the stormwater treatment system chamber for the full range of flows that may pass through the system. Documentation of these performance standards must be submitted to the Engineer.

(4) Must be evaluated and accepted for removal efficiency using one of the following stormwater management practice evaluation systems: the U.S. Environmental Protection Agency (EPA) Environmental Technology Verification Program; the State of Washington Technology Assessment Protocol-Ecology (TAPE; the Technology Acceptance Reciprocity Partnership Protocol (TARP), New Jersey Corporation for Advance Technology (NJCAT); or, the State of Maryland Proprietary Practice Acceptance Program.

(5) Shall be capable of a removal efficiency greater than or equal to the performance criteria required by the State of New York (i.e. 80% TSS removal and 40% phosphorus removal). The removal efficiency must be verified using field studies (include records of in-ground installation and maintenance) and the practice must have been in the ground for at least one (1) year at the time of monitoring. The performance criteria must be verified and certified by one of the sources listed in **Subsection 51.12.2 (O) (4)**.

(6) Removal efficiency models shall be based on documented removal efficiency performance from full scale laboratory tests. Annual TSS removal efficiency models shall only be considered valid if they are corroborated by independent third party field testing. Field testing

shall include influent and effluent composite samples from a minimum of ten (10) storms at one location. Individual stormwater treatment system chambers shall have the Design Flow Rates as required in **Subsection 51.12.2 (O) (11)** and shall not re-suspend trapped sediments or re-entrain floating contaminants at flow rates up to and including the specified Design Treatment Capacity.

(7) Shall have usable sediment storage capacity of not less than the corresponding volume listed in **Subsection 51.12.2 (O) (11)**. Shall be designed such that the pump-out volume is less than one-half (1/2) of the total system volume. Shall be designed to not allow surcharge of the upstream piping network during dry weather conditions.

(8) A water-lock feature shall be incorporated into the design to prevent the introduction of trapped oil and floatable contaminants to the downstream piping during routine maintenance and to ensure that no oil escapes the system during the ensuing rain event. Direct access shall be provided to the sediment and floatable contaminant storage chambers to facilitate maintenance. There shall be no appurtenances or restrictions within these chambers.

(9) Systems shall be completely housed within one rectangular structure.

(10) Shall be designed to withstand a minimum live load of AASHTO H20-44 or Contractor's heavier equipment loads that will fall within the influence line of the structure in-place (i.e. cranes, concrete trucks, etc.), whichever is greater, plus an impact factor of thirty-three (33) percent.

(11) Stormwater treatment system chambers, as shown on the contract drawings, shall adhere to the following performance specifications:

System	NYSDEC Approved Flow Rate (cfs)	System Design Flow Rate (cfs)	Sediment Storage (cu.yd.)
Stormwater Treatment System Chamber	3.40	8.50	3.20

51.12.3 SUBMITTALS

(A) SHOP DRAWING AND DESIGN CALCULATIONS: The Contractor shall submit for approval six (6) copies of shop drawings together with design calculations for the precast reinforced concrete stormwater treatment system chambers. These shop drawings shall show details for construction, reinforcement, joints, cast-in-place and not integrally cast-in-place appurtenances, and all materials to be used within the chamber (e.g. swirl chamber, etc.). Materials to be used shall be accompanied by applicable standards for the materials, required tests of materials and design assumptions for structural analysis. The Contractor shall submit shop drawings and all associated documentation in order to allow a minimum of three (3) weeks for review.

The Contractor shall have these drawings prepared by a Licensed Professional Engineer, currently registered in the State of New York. Such drawings shall be submitted together with design calculations and both drawings and design calculations shall bear the imprint of the Licensed Professional Engineer's seal and signature. These shop drawings shall be on sheets twenty-seven (27) inches by forty (40) inches with one-half (1/2) inch marginal space on three (3) sides and a two (2) inch marginal space for binding on the left side. Each shop drawing shall be dated and contain the name of the project and the contract number

(B) DRILL SHEETS: Prior to the delivery of the precast reinforced concrete stormwater treatment system chambers the Contractor shall submit three (3) copies of the manufacturer's Drill Sheets to the Engineer for review. These sheets shall note all pipe entries, final grades, etc. The Engineer's review shall in no way absolve the Contractor from full responsibility as to correctness of each precast structure with regard to details, contract plans, standards and specifications.

(C) INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTION MANUALS: Ten (10) days prior to installation of the precast reinforced concrete stormwater treatment system chambers the Contractor shall provide to the Engineer the manufacturer's installation detail instructions manual and operation and maintenance instruction manuals.

(D) MANUFACTURER: Only Stormwater Management Practices (SMP) which have received Interim Certification from the New Jersey Department of Environmental Protection and meet the performance

criteria for redevelopment applications as defined in the New York State Stormwater Management Design Manual (Design Manual) will be accepted.

51.12.4 INSPECTION AND TESTING

(A) Concrete utilized in the construction of the precast reinforced concrete stormwater treatment system chambers shall be tested in conformance with **General Specification 11 - Concrete, as modified in Section 23.01**, with the exception that the concrete, steel reinforcement, fabrication and manufacture shall be tested and certified as to compliance by an independent Testing Laboratory licensed in the State of New York and approved by the Department of Design and Construction.

(B) Hydrostatic Tests, identical to those performed for Reinforced Concrete Pipe, and as defined in these specifications shall be performed and must be satisfactorily completed prior to acceptance.

(C) Testing shall also conform to all applicable sections of **DIVISION III - INSPECTION OF MATERIALS, SAMPLING, AND METHODS OF TEST** of these specifications.

(D) In addition all manufacture of structures shall be witnessed by an approved licensed independent Testing Laboratory and Certified as to Compliance with the standard drawings and specifications.

(E) All structures shall be inspected for general appearance, dimensions, soundness, etc. The surface shall be dense, close textured and free of blisters, cracks, roughness and exposure of reinforcement.

(F) Field tested shall be performed in accordance with the manufacturer's requirements as outlined in the Operation and Maintenance Manual for the system.

(G) The cost of all testing as described above shall be deemed included in the price bid per drop-pipe manhole.

51.12.5 CONSTRUCTION METHODS

(A) GENERAL: Precast reinforced concrete stormwater treatment system chambers shall be constructed of the sizes and dimensions, and at the locations and to the elevations shown, specified or ordered.

(B) GENERAL CONSTRUCTION PROVISIONS: The requirements of **DIVISION IV - GENERAL CONSTRUCTION PROVISIONS** shall apply to the work to be done hereunder.

(C) INSTALLATION:

(1) Stormwater Treatment System Chamber shall be installed in accordance with the manufacturer's recommendations and as directed by the Engineer.
(2) The precast structures base or base section shall be placed on a crushed stone leveling pad subbase of a minimum thickness of six (6) inches after compaction.
(3) The subbase shall be checked for level prior to setting and the precast structures base or base section shall be checked for level at all four corners after it is set. If the slope from any corner to any other corner exceeds one-half percent (0.5%) the precast structures base or base section shall be removed and the crushed stone subbase shall be re-leveled.
(4) Prior to setting subsequent sections place bitumen sealant in conformance with ASTM C990 along the construction joint in the section that is already in place.
(5) If the swirl chamber is not completely installed integral with the precast reinforced concrete stormwater treatment system chamber the following procedures shall be implemented. After setting the precast structure or the base and walls or riser sections, prepare to install the swirl chamber. Place the 3/4-inch thick by 3/4-inch (19-mm) wide butyl mastic seal vertically on the outside of the swirl chamber starting one (1) inch above the bottom of the swirl chamber and continuing to a height equal to the elevation of the bottom pf the upper aperture of the swirl chamber. The butyl mastic seal should abut the downstream side or the predrilled mounting holes that attach the swirl chamber to the long walls of the concrete vault. Next, install the extruded

Buna N seal on the bottom edge of the 180-degree downstream section of the swirl chamber by first applying a bead of Sikaflex-1a polyurethane elastomeric sealant into the extruded slot then slide the seal onto the swirl chamber. The extruded seal should extend 3-inches upstream of the mounting holes, toward the inlet end of the vault. Set the swirl chamber into position and keep the seal approximately 1/2-inch above the floor of the concrete vault. Apply a continuous bead of Sikaflex-1a sealant under the cupped bottom of the seal. Set the circular swirl chamber on the floor of the vault and anchor it by bolting the swirl chamber to the side walls of the concrete vault at the three (3) tangent points and at the inlet tab using stainless steel drop-in wedge anchors or equivalent 3/8-inch by 2.75-inch minimum length at heights of approximately three (3) inches off the floor and at fifteen (15) inch intervals to approximately the same height of the butyl mastic sealant (at locations of pre-drilled holes in aluminum component). Apply a continuous bead of Sikaflex-1a sealant to the intersection of the inside bottom edge of the extruded seal and the vault floor.

(6) If the oil baffle wall (Baffle A) and flow control wall (Baffle B) are not integrally cast-in to riser/wall sections then the baffle wall panels shall be placed in the formed keyways or between bolted-in-place angle flanges as provided by the manufacturer. The Contractor shall apply non-shrink grout or Sikaflex-1a sealant to each end of Baffle A and Baffle B at the upstream intersection with the side walls of the concrete vault.

(7) Prior to setting the precast roof section, bitumen sealant equal to ASTM C990 shall be placed along the top of the oil baffle wall (Baffle A), using more than one layer of mastic if necessary, to a thickness at least 1-inch (25-mm) greater than the nominal gap between the top of the baffle and the roof section. The nominal gap shall be determined either by field measurement or the shop drawings. Do not seal the top of Baffle B unless specified on the shop drawings to do so.

(8) After placement of the roof section has compressed the butyl mastic sealant in the gap over Baffle A, finish sealing the gap with an approved non-shrink grout on both sides of the gap using the butyl mastic as a backing material to which to apply the grout. If roof section is "clamshell" or "bathtub" halves, then finish sealing the ends of the baffle walls by applying non-shrink grout or Sikaflex-1a sealant to each end of Baffle A at the upstream intersection with the side walls of the concrete vault and to each end of Baffle B at the downstream intersection with the side walls of the concrete vault.

(9) After setting the precast roof section of the precast reinforced concrete stormwater treatment system chambers, set precast concrete manhole riser sections, to the height required to bring the cast iron manhole covers to grade, so that the sections are vertical and in true alignment with a 3/4-inch maximum tolerance allowed. Backfill in a careful manner, bring the fill up in 6-inch lifts on all sides. If leaks appear, clean the inside joints and caulk with an approved caulk to the satisfaction of the Engineer. Precast sections shall be set in a manner that will result in a watertight joint. In all instances, installation of precast reinforced concrete stormwater treatment system chambers shall conform to ASTM C891.

(10) Holes made in the concrete sections for handling or other purposes shall be plugged with a non-shrink grout or by using grout in combination with concrete plugs.

(11) Where holes must be in the precast sections to accommodate pipes, do all cutting before setting the sections in place to prevent any subsequent jarring which may loosen the mortar joints. The Contractor shall make all pipe connections.

(12) The Contractor shall be responsible for cleaning the system when needed, maintaining performance/efficiency, and keeping a record of maintenance inspections for the duration of the contract. If the system is not functioning as outlined in the Operation and Maintenance Manual for the system, the Contractor, with the approval of the Engineer, shall take the necessary steps to diagnose and correct problems at no additional cost to the City.

(13) Final approval of the installation will be made by the Engineer verifying that the system has been installed, field tested and functioning as outlined in the Operation and Maintenance Manual for the system.

(D) STEPS AND LADDERS: The Contractor shall furnish and install in the chambers, steps and ladders of the size, shape and spacing shown on the plans and on the Sewer Design Standards.

(E) SETTING FRAMES AND COVERS: The brick masonry or concrete for the chambers shall be built to within such distance of the final grade as shown, specified or ordered. Frames and covers

shall be as shown on the Sewer Design Standards. The frames shall be set on the masonry or concrete in a full bed of stiff fresh cement mortar.

(F) REINFORCEMENT AND STRUCTURAL STEEL: The steel reinforcement shall be of the dimensions and shapes shown, and installed in the manner specified in **General Specification 11 - Concrete, as modified in Section 23.01**. Structural steel shall be of the shapes and sizes shown, and installed as directed.

(G) REMOVAL OF FORMS: Forms shall be removed in accordance with **General Specification 11 - Concrete, as modified in Section 23.01**.

(H) BULKHEADS: Approved construction joint bulkheads with provisions for keying and doweling for future sewers shall be provided, where shown or required.

(I) CONNECTIONS: All connections to chambers of existing, new or future sewers and catch basin connections shall be constructed as shown on the plans or as directed. All connections for future sewers shall be closed with bulkheads of brick masonry eight (8) inches thick, unless otherwise shown on the plans or specified.

(J) OPENINGS FOR LATERAL CONNECTIONS: All sewer pipe openings shall conform to the sizes, dimensions and requirements shown, specified or ordered. All sewer pipe openings shall be provided with two (2) number four (4) reinforcement bar hoops around each opening and each opening shall be provided for at the time of manufacture.

Openings installed in the field will only be permitted for twelve (12) inch diameter basin chutes. The maximum-cored opening for basin chutes shall be sixteen (16) inches. The Engineer must approve coring machines and coring methods.

Pipe openings will not be permitted through joints. The distance from the top or bottom of any structure to the opening shall be a minimum of three (3) inches plus the joint depth for cast pipe openings and a minimum of twelve (12) inches plus the joint depth for cored openings for basin connections.

(K) MANUFACTURE: Precast structures shall be cast in steel forms. Devices used to position reinforcement shall be made of, or coated with material so that corrosion of the device will not occur. Sufficient devices shall be provided to position the reinforcement for required concrete cover.

(L) CURING: All precast structures shall be subjected to curing by one of the following methods:

(1) STEAM CURING - Structures may be placed in a curing chamber, free from outside drafts, and cured in a moist atmosphere maintained at a temperature between one hundred (100) degrees Fahrenheit and one hundred sixty (160) degrees Fahrenheit, by the injection of steam for a period of not less than twelve (12) hours or, when necessary, for such additional time as may be needed to enable the pipe to meet the strength requirements. Steam curing shall not commence until at least two (2) hours have elapsed since completion of placement of concrete in the forms. When a curing chamber is not available, structures may be placed in an enclosure of canvas and subjected to steam around the entire structure at the temperature and for the time specified above. The enclosure shall be so erected as to allow full circulation of steam around the entire structure. The interior surface of the curing room or canvas jackets and the surfaces of the structure shall be entirely moist at all times.

(2) WATER SPRAY CURING - Under the conditions of enclosure described in the above paragraph on "Steam Curing", structures may be cured by subjecting them to a continuous fine spray of water in an enclosure maintained at a temperature of not less than seventy (70) degrees Fahrenheit for a period of not less than seventy-two (72) hours or such additional time as may be necessary to meet the strength requirements.

(3) SATURATED COVER CURING - The sides and top of each structure shall be covered with heavy burlap or other suitable material saturated with water before applying and kept saturated at a temperature of not less than seventy (70) degrees Fahrenheit for seventy-two (72) hours or such additional time as may be necessary to meet the strength requirements.

Precast Structures shall not be subjected to freezing temperatures until the required twenty-eight (28) day compressive strength is achieved.

(M) MARKINGS: The manufacturer shall mark each individual piece with permanent markings on the inside of each structure. The following minimum information shall be listed:

(1) Date of Manufacture
(2) Manufacturer's Logo
(3) Individual Piece Identification
(4) ASTM Designation

(N) DELIVERY OF STRUCTURES: No structures shall be delivered to the job site until they have attained the specified twenty-eight (28) day compressive strength as evidenced by cylinder testing. In addition, five (5) copies of all test results, steel supplier certifications, independent Testing Laboratory certifications, and fabrication and manufacture certifications must be submitted to the Engineer prior to delivery or at the time of delivery.

51.12.6 MEASUREMENT

The quantities of stormwater treatment system chambers to be measured for payment shall be the number of stormwater treatment system chambers of each size and type, incorporated in the work, complete, as shown, specified or required.

51.12.7 PRICE TO COVER

The contract price for "STORMWATER TREATMENT STSTEM (SWTS) CHAMBERS" shall be the unit price bid per each size and type stormwater treatment system chamber and shall cover the cost of all labor, materials, plant, equipment, samples, tests and insurance required and necessary to construct the stormwater treatment system chambers of the sizes and dimensions and of the types and at the locations and to the elevations shown, including the earth excavation of all materials of whatever nature encountered (See **Section 40.03 - Earth Excavation**); reinforcement and structural steel; all sheeting and bracing; pumping; fluming; bridging; breaking down and filling in of abandoned sewer appurtenances; connections; maintaining flow in sewers; backfilling; cleaning up; stormwater treatment system aluminum swirl chamber; placement of crushed stone leveling pad; and furnishing and installing all other items necessary to complete this work and do all work incidental thereto, all in accordance with the plans and specifications, and as directed by the Engineer. Included in the price hereunder shall be the cost for all labor and materials required to install, manhole frames and covers, manhole steps and all other hardware in accordance with the plans and specifications, or as directed by the Engineer.

The contract price hereunder shall also include the cost of all labor and materials required to connect at the stormwater treatment system chamber all existing and new sewers and basin connections; and all required structural steel, reinforcement and bulkheads for future sewer connections, as shown on the plans or as directed by the Engineer.

In addition, included in the price hereunder shall be the cost of all labor and materials necessary to remove all specified or ordered existing sewers, manholes, structures and appurtenances that may be in the line of the work and do all work incidental thereto, all in accordance with **Subsections 10.13 and 10.28** of the specifications and as directed by the Engineer.

No additional or separate payments will be made for any work associated with the installation of precast reinforced stormwater treatment system chambers.

Payment for Stormwater Treatment System (SWTS) Chambers will be made under the Item Number as calculated below:

The Item Numbers for Stormwater Treatment System (SWTS) Chambers have nine characters. (The decimal point is considered a character, the third character.)

(1) The first five characters shall define Stormwater Treatment System (SWTS) Chambers:
51.12

(2) The sixth character shall define the Kind of Chamber:
S - Stormwater Treatment System (SWTS) Chamber

(3) The seventh, eighth and ninth characters shall define either the Number of the Stormwater Treatment System (SWTS) Chamber. See examples below:
000 - No Number
002 - No. 2
011 - No. 11
03A - No. 3A

(4) Examples of Item Numbers together with Description and Pay Unit as provided in the Bid Schedule are provided below:

Item No.	Description	Pay Unit
51.12S000	STORMWATER TREATMENT SYSTEM (SWTS) CHAMBER	EACH
51.12S001	STORMWATER TREATMENT SYSTEM (SWTS) CHAMBER NO. 1	EACH
51.12S002	STORMWATER TREATMENT SYSTEM (SWTS) CHAMBER NO. 2	EACH
51.12S010	STORMWATER TREATMENT SYSTEM (SWTS) CHAMBER NO. 10	EACH
51.12C03A	STORMWATER TREATMENT SYSTEM (SWTS) CHAMBER NO. 3A	EACH

(5) **Refer** to Page VI-45:
Add the following new **Section 60.41**:

SECTION 60.41
RECONSTRUCTION OF EXISTING WATER MAINS USING D.E.P. APPROVED CURED-IN-PLACE-PIPE (CIPP) LINING METHOD

60.41.1 INTENT

It is the intent of this section to provide for the reconstruction of existing water mains by the installation of a resin-impregnated flexible tube that is inflated within the existing pipe to form a hard, impermeable, corrosion resistant pipe within a pipe. When cured, the cured-in-place-pipe (CIPP) will be formed to the original water main.

60.41.2 REQUIREMENTS

(A) DESCRIPTION OF WORK

All work shall comply with the terms of this specification and with the manufacturer's standards set forth for cured-in-place-pipe lining method selected by the Contractor and approved by the Engineer.

Under this method the Contractor shall reconstruct existing water mains by the insertion of a flexible lining tube consisting of two concentric, tubular, felt or woven polyester jackets with a watertight polymeric membrane bonded to the interior that has been saturated with a thermosetting resin. The liner shall be inserted into the existing water main either by direct inversion (ASTM F1216) using a head of water, or by pulling the tube into place by winching and then inflating it by inversion of a calibration hose (ASTM F1743). The shaping of the liner may be achieved by pushing a pig through

the hose using water pressure. The thermosetting resin shall then be cured only by circulating hot water through the tube to cure the resin into a hard impermeable pipe. Use of hot air or circulating steam shall not be permitted during installation process.

The Contractor shall be responsible for the successful completion of all work required herein; failure of the Contractor's selected cured-in-place-pipe lining method to be satisfactorily installed in the existing water main shall not relieve the Contractor responsibility to provide satisfactorily reconstructed water mains.

Any cost associated with the removal of the unsatisfactorily installed liner and the subsequent, satisfactory reinstallation of an approved liner shall be borne solely by the Contractor, and the Contractor shall not make any claim against the City for this additional required work.

Once installed, the liner shall extend from start to end points specified in a continuous tight fitting watertight pipe-within-a-pipe, and the service connections shall be re-opened. During the warranty period any defects that might affect the integrity or strength of the liner shall be immediately repaired or replaced by the Contractor, at the Contractor's expense, pursuant to the manufacturer's recommendations, and to the satisfaction of the Engineer.

(B) REFERENCE SPECIFICATIONS AND STANDARDS

The latest editions and revisions of ASTM D638, D790, D792, F1216 and F1743, and NSF/ANSI 61 and the manufacturer's standards are hereby made a part of this specification.

(C) DELIVERY, STORAGE, AND HANDLING

(1) The Contractor shall transport, handle, and store liner and thermosetting resin as recommended by manufacturer.

(2) The Contractor shall deliver, store and handle other materials as recommended by the manufacturers to prevent damage.

(3) Liner materials that are defective or damaged prior to installation shall be rejected and replaced at the Contractor's expense. Liner materials damaged during installation shall be repaired or replaced as recommended by the manufacturer and approved by the Engineer.

(D) QUALIFICATIONS

The Contractor shall be certified by the cured-in-place-pipe liner manufacturer that the Contractor is a fully trained user of the liner method. Installation of the liner method shall be performed by trained personnel. Such training shall have been conducted by a qualified representative of the liner method manufacturer. Certificates of such training for all personnel involved in the operation of the liner method shall be provided to the Engineer prior to the start of liner installation.

(E) LINER SIZE AND LENGTH

The liner shall be fabricated to a size that when installed will neatly fit the internal circumference of the water main to be lined. The liner thickness shall be designed to adequately resist the full internal pressure and all external pressures and conditions (e.g. deflection, ring bending, buckling and minimum stiffness). The length of the liner shall be that deemed necessary to effectively span the distance and carry out the insertion and seal of the liner at the end points. The Contractor shall verify the lengths in the field before cutting the liner to length. Prior to the start of work the manufacturer of the cured-in-place-pipe liner will be required to submit design calculations for wall thickness to the Engineer.

Allowance for circumferential and longitudinal stretching of the liner during insertion shall be made as per the manufacturer's standards.

(F) DESIGN PARAMETERS

The following design parameters shall be used in the design of pipe liners in addition to the manufacturer's standards and ASTM F1216:

(1) Ovality of Existing Pipe	2% Minimum
(2) Existing Pipe Condition	Fully Deteriorated
(3) Modulus of Soil Reaction	700-psi Minimum
(4) Factor of Safety Against Buckling	2 Minimum
(5) Allowable Deflection	5% Maximum
(6) Ratio of Pipe to Soil Strength	10% Minimum
(7) Live Load	AASHTO HS20-44 Loading under Roadways AASHTO E-80 Loading under Railroads
(8) Soil Unit Weight	120-pcf Minimum (If no Boring Data is available in vicinity.)
(9) Creep Reduction Factor	50% Maximum
(10)Internal Pressure	125-psi Minimum

Liner material shall be tested in accordance with ASTM F1216, Section 8 - Inspection Practices. Certificates of tests shall be provided to the Engineer.

(G) LINER MATERIAL

The cured-in-place-pipe liner shall be composed of two (2) concentric, tubular, felt or woven polyester jackets with a polymeric membrane bonded to the interior. The polymeric inner membrane shall be designed to ensure water tightness. The fully cured-in-place-pipe liner shall conform to the minimum structural standards as follows:

Tensile Strength @ Yield	3,000-psi	(ASTM D638)
Flexural Strength	4,500-psi	(ASTM D790)
Flexural Modulus	250,000-psi	(ASTM D790)

The cured-in-place-pipe lining method selected by the Contractor shall be certified by NSF to ANSI/NSF Standard 61 and be listed on the NSF website.

The Contractor shall furnish, prior to use of the lining materials, satisfactory written guarantee of the Contractor's compliance with these specifications and the liner manufacturer's standards for all materials (felt or woven polyester jackets, watertight polymeric membrane bonded to the interior, and the thermosetting resin) and techniques being used in the method.

Prior to the start of work the Contractor will be required to submit to the Engineer the types of resins and the resultant cure schedules for each length and size of water main to be lined. The finished liner shall incorporate thermosetting materials that will withstand the corrosive effects of normal existing chemical additives to the water supply.

(H) SAFETY

The Contractor shall carry out the Contractor's operations in strict accordance with all OSHA and manufacturer's safety requirements. Emphasis shall be placed upon safety requirements for entering confined spaces and working with hot water.

The Contractor shall erect such signs and other devices as are necessary for the safety of the work site and shall secure the site and conform all work to the safety requirements of all pertinent regulatory agencies.

(I) AIR QUALITY

The Contractor is advised that all liner installation work shall be carried out in full compliance with all City, State, and Federal laws, rules, and regulations regarding Air Quality and Safety.

(J) TEMPORARY WATER SERVICE

Prior to the start of construction the Contractor shall submit to the Engineer for approval the Contractor's method of providing temporary water service to customers and to emergency fire crews. This shall include the Contractor's method to provide maintenance and protection during the entire length of the contract to ensure continued water service.

The temporary water line shall be disinfected and acceptable samples obtained and approved by the Engineer prior to connection to the customers.

(K) PREPARATION OF EXISTING WATER MAIN

(1) EXCAVATION OF INSERTION/EXTRACTION PITS, REMOVAL OF PIPE, AND ROUTE SURVEY

The exact location of insertion/extraction pits shall be as shown, specified or ordered and shall be of a length and width as recommended by the pipe liner manufacturer and as approved by the Engineer.

The Contractor shall excavate the insertion/extraction pits at the locations and to the dimensions specified and approved.

The Contractor shall excavate and remove the minimum length of pipe necessary for the liner insertion and receiving operations as per manufacturer's recommendations and as ordered by the Engineer.

The existing main shall be cut square using an approved cutting machine, leaving no split or fractured ends. All cut faces of the existing main shall be chamfered on the inside surface to a suitable profile to prevent damage to the liner pipe during or after insertion.

Edge guards or other means of protecting the liner from host pipe edges at insertion points must be submitted to the Engineer for review and approval.

A thorough examination of the route of the existing water main shall be made after cutting of the main. This should include a pipeline location survey with equipment for locating any changes in direction, valves, bends, intrusions, and other fittings that may impede the insertion and/or proper inflation of the cured-in-place-pipe liner.

(2) CLEANING

The cleaning of the existing water main is a critical step in the reconstruction of the existing water main with a cured-in-place-pipe liner method. It is anticipated that the existing water main will have a fair amount of rust and scale deposits on the inside walls of the pipe.

The Contractor shall clean the existing water mains using a cleaning method that is approved by the Engineer. The cleaning method shall remove all rust, scales, tuberculation, deposits, loose or deteriorated remains of any original coatings and other foreign materials from the inside of the pipe so as to produce a smooth metal surface finish that will allow the new composite liner to adhere to the existing host pipe.

After cleaning, and again immediately before pipe liner insertion the main shall be plunged with a tight fitting rubber plunger and foam swab to clear the pipe bore of debris and water.

(L) TELEVISION INSPECTION PRIOR TO INSTALLATION

The Contractor shall perform a television inspection and digital audio-visual recording of the existing water main after the cleaning of the water main is completed. This inspection will be performed, utilizing a radial eye camera, to determine that the rust and scale deposits have been adequately removed, that the latest condition of the water main makes lining feasible, to check for leaking service connections, and to accurately identify the location of service connections. Each service connection location shall be logged for use when re-opening of service connections is required.

Prior to installation television inspection and digital audio-visual recording shall be done in accordance with **Section 53.11** and as directed by the Engineer with the exception that payment for this work shall be made in accordance with **Subsection 60.41.5**.

(M) WATER SERVICE CONNECTIONS

(1) Prior to installation of the cured-in-place-pipe liner the Contractor shall locate all existing water service laterals, and plug the service laterals as recommended by the manufacturer and approved by the Engineer. The insertion of plugs into the service connections may be done simultaneous with the above mentioned television inspection. The plugs are inserted so as to prevent any accumulation of epoxy inside the service line thus blocking them, and to prevent any water infiltration from a customer's leaking shut-off valve. Furthermore, special plugs shall be inserted so as to make visible any non-penetrating service connections in the lined pipe, and allow the operators to locate the non-penetrating service connections after they have been covered with the composite liner.

(2) The Contractor shall plug the customer's service lateral and provide temporary water service to the customers.

(3) Water tightness at the service laterals must be maintained by the adherence of the liner to the existing pipe and the presence of epoxy around the threads of the corporation stop. Modifying the existing lateral by removing the protruding end and/or installing anything into the lateral that will remain as a permanent restriction or reduce the interior diameter of the existing service lateral will not be allowed.

(4) Upon completion of installation of liner, preliminary television inspection and pressure testing the Contractor shall re-open the existing service laterals to the customers from within the pipeline.

(N) EQUIPMENT SPECIFICATION

The Contractor shall provide suitable temperature and pressure gauges in accordance with the manufacturer's standards and specifications. Puller unit/winch cable shall be equipped with manufacturer recommended tension gauge and shall be smooth running and variable speed. The cutting device shall be a remote monitored device for use inside the lined pipe.

The Contractor shall prepare and inspect all necessary tools and any spare parts that are required for equipment that suffer frequent breakdowns, and shall ensure that said tools and spare parts are available at the site. The Contractor shall also prepare and make operable all necessary communication equipment for the Contractor's field crew.

(O) INSTALLATION OF LINER

Prior to the installation of liner, the Contractor shall fully comply with **Subsection 60.41.2(C) through Subsection 60.41.2(N),** inclusively, and with any additional requirements set forth in the specific provisions applicable to the respective lining method. The Contractor shall not proceed with the installation of liner until the Engineer, in writing, certifies such compliance and directs the Contractor to proceed with the lining installation. The approved liner shall be installed pursuant to the specific provisions set forth for the lining method. If any problem occurs during the installation operation the Contractor shall investigate with a television camera from the remote end.

(P) PRELIMINARY TELEVISION INSPECTION OF INSTALLED LINER

After the liner is sufficiently cool (below one hundred degrees Fahrenheit (100°F)) and before opening the service laterals, a preliminary television inspection and digital audio-visual recording of the newly installed liner shall be performed to determine if the liner is properly installed.

Preliminary television inspection and digital audio-visual recording shall be done in accordance with **Section 53.11** and as directed by the Engineer with the exception that payment for this work shall be made in accordance with **Subsection 60.41.5**.

(Q) PRESSURE TESTING

After preliminary television inspection is completed, the lined existing water main shall be pressure tested in accordance with **Subsection 60.12.3(N) - Field Test Of Mains**, and/or as ordered by the Engineer. The Contractor shall subject the water main and appurtenances to a proof test by water pressure of not less than 125-psi.

(R) SERVICE CONNECTIONS

After the pressure testing is completed, the Contractor shall re-open all existing service connections as ordered by the Engineer. These service connections shall be re-opened in accordance with **Section 52.61** and paid for consistent with **Subsection 60.41.6**.

The re-opening of connections shall be done without excavation and from the interior of the newly installed liner by the use of a remote controlled cutting device. A closed circuit television system shall be used for monitoring the operation. All connections that are to be re-opened shall be satisfactorily opened to the size of the original opening, and to the depth required to completely open the water service connection to the customer. Opening shall be smooth and flush.

(S) FINAL TELEVISION INSPECTION AFTER INSTALLATION

A final television inspection and digital audio-visual recording of the newly lined water main including the restored service connections shall be performed immediately after work is completed. Should the results of this final inspection reveal any defects that are determined by the Engineer to be repairable the Contractor will be required to repair these defects as ordered by the Engineer at the sole expense of the Contractor. Should the results of this final inspection reveal any defects that are determined by the Engineer <u>not</u> to be repairable the Contractor will be required to remove and replace the existing water main as ordered by the Engineer at the sole expense of the Contractor.

Final television inspection and digital audio-visual recording shall be done in accordance with **Section 53.11** and as directed by the Engineer with the exception that payment for this work shall be made in accordance with **Subsection 60.41.5**.

(T) PIECING-UP

After final television inspection after installation is completed the removed sections of the existing pipeline (e.g. at insertion/reception pits, valves, connections, etc.) shall be reconstructed in accordance with the contract plans and specifications and/or as ordered by the Engineer. The necessary end pieces shall be installed so as to make proper connection to the cut and lined existing water main pipe.

(U) DISINFECTION/CHLORINATION

Once all pipe work is completed to the satisfaction of the Engineer, the Contractor shall perform chlorine disinfection of the newly installed water mains in accordance with **Subsection 60.12.3(E)(2)**, and/or as ordered by the Engineer.

(V) RECOMMISSIONING

After disinfection and thorough flushing of main, water samples shall be obtained and tested. After the test results have been found acceptable by the Engineer, the main shall be recommissioned and customer service shall be restored.

(W) WORK SCHEDULE

The Contractor shall be permitted to occupy the lane immediately above the water main location and the parking lane immediately adjacent to the site of work unless otherwise specified. Unless otherwise specified in the traffic stipulations, no further roadway or traffic restrictions shall be permitted.

60.41.3 INSTALLATION

(A) PREPARING AND INSERTING THE LINER

The Contractor shall designate a location where the uncured resin in the original containers and the unimpregnated liner will be impregnated prior to installation. The Contractor shall allow the Engineer and/or the Engineer's representative to inspect the materials and chemical impregnation "wet out" procedure. A resin and catalyst system recommended by the liner manufacturer and approved by the Engineer shall be used. The quantities of the liquid thermosetting materials inserted into the lining tube shall be as per manufacturer's standards so as to fully saturate the liner material and provide the lining thickness specified.

Immediately after cutting and prior to installation of liner, the ends of the adjacent existing water main that are not to be lined at the insertion/extraction points shall be covered/plugged so that no debris shall enter into them during reconstruction work.

The chemical impregnated liner material shall be inserted into the water main being reconstructed through the insertion point by either the direct inversion method or by the pull-in-place method, as recommended by the manufacturer. The head used to extend the liner tube shall be sufficient enough to fully extend the tube both circumferentially and longitudinally. The shaping of the liner may be achieved by pushing a pig through the tube using water pressure. The head used will fall within the manufacturer's guidelines to insure that a proper finished thickness is achieved and that the liner fit snug to the existing pipe wall producing dimples and/or bulges at service connections and flared ends at the entrance and exit points.

Puller unit/winch cable shall be equipped with a tension gauge to measure tension during pull through.

Inflation of liners used shall be accomplished in accordance with manufacturer's standards and specifications. However, only circulating hot water shall be used as a heat source to cure the resin into a hard impermeable pipe. Use of hot air or circulating steam <u>shall not</u> be permitted during installation process.

Curing temperatures and pressures shall be monitored so as not to overstress the liner and cause damage or failure of the liner prior to cure.

The use of a lubricant is recommended and such lubricant shall be compatible with liner and resin.

(B) CURING OF LINER

After inflation or inversion is completed, the Contractor shall supply a hot water heat source. The equipment shall be capable of delivering hot water to the far end of the liner to uniformly raise the temperature in the entire liner above the temperature required to initiate and effect curing of the resin system. The temperature shall be determined by the resin/catalyst system employed. The heat source shall be fitted with suitable monitors to gauge the temperature and pressure of the incoming and outgoing heat exchanger circulating heating medium. Thermocouples or temperature gauges or infra-red gun shall be used at insertion and extraction points so as to determine and record the temperature of the liner and time of exotherm.

Initial cure shall be deemed to be completed when inspection of the exposed portions of the liner show it to be hard and sound; and when temperature reading(s) at the interface of the liner with the host pipe indicate sufficient heating has occurred. The cure period shall be of a duration recommended by the resin manufacturer; modified for the site specific conditions at the time curing is effected. During this cure time, the temperature inside the liner will be continuously maintained in the range required.

Once the cure is complete, the Contractor shall cool the hardened liner to a temperature below one hundred degrees Fahrenheit (100°F) before relieving the internal pressure. Cool down shall be accomplished as recommended by the manufacturers. Care shall be taken in the release of the internal pressure so that a vacuum will not develop that could damage the newly installed liner.

The finished lining shall be continuous over the entire length and be free from visual defects such as foreign inclusions, dry spots, pinholes and delaminations. The lining shall be impervious and free of any leakage from the pipe to the surrounding ground or from the ground to the inside of the lined pipe.

If at the insertion/extraction ends the lining fails to make a tight seal, the Contractor shall apply a seal of a resin mixture compatible with the liner.

After the curing has been completed, any residual water that adheres to the inner wall of the liner shall be removed. This residual water shall be collected and pumped from the channel of the insertion/extraction points and discharge into a sanitary or combined sewer manhole.

60.41.4 MEASUREMENT

The quantity of reconstructed existing water main using cured-in-place-pipe liner to be measured for payment shall be the number of linear feet of existing water main actually reconstructed by a cured-in-place-pipe lining method, complete, all in accordance with the contract drawings and specifications and to the satisfaction of the Engineer, measured along the centerline of the water main from insertion point to extraction point.

60.41.5 PRICE TO COVER

The contract price for "RECONSTRUCTION OF EXISTING WATER MAIN USING CURED-IN-PLACE PIPE LINING METHOD" shall be the unit price bid per linear foot for the size water main reconstructed by a cured-in-place-pipe lining method and shall cover the cost of all labor, materials, plant, equipment, samples, tests and insurance required and necessary for the designing, fabricating, furnishing, delivering, cleaning, inspecting/surveying, installing, testing, reconnecting, disinfecting, and recommissioning of the existing water main reconstructed by using a cured-in-place-pipe liner method and do all work incidental thereto, all in accordance with the contract drawings and specifications and as directed by the Engineer.

Included in the price bid hereunder shall be the cost of all labor, material and equipment required to locate, excavate and setup insertion and receiving pits (including saw cutting and removal of the existing pavements, earth excavation of all materials of whatever nature encountered (See **Section 40.03 - Earth Excavation**); sheeting and bracing; pumping; bridging; carefully hand excavating if required, removal of existing pipe, backfilling and compaction, cleaning up, disposal of surplus and rejected excavated materials, etc.), and cut/remove portion of water main at insertion and extraction points.

Included in the price hereunder shall be the cost of any temporary water service provided to the customers. No separate or additional payment will be made for this work.

In addition, included in the price hereunder shall be the cost for all television inspection and digital audio-visual recording specified in **Subsections 60.41.2(L), 60.41.2(P) and 60.41.2(S)**. No separate or additional payment will be made for this work.

60.41.6 SEPARATE PAYMENT

Payment for re-opening of house water service connections shall be made under the contract Item No. 52.61RC - RE-OPENING OF SERVICE CONNECTIONS.

Payment for all labor, materials and equipment required or ordered to reconstruct, complete, those portions of existing water mains removed so as to provide access for cured-in-place-pipe lining process at the insertion/extraction pits with new pipe, valves, appurtenances, connections, etc. shall be made under the respective bid items for furnishing, delivering, laying, installing and setting pipe, valves, appurtenances, connections, etc. Also included in the prices bid for the respective bid items shall be the cost for all labor, materials and equipment required for any additional excavation, and additional or removed and reinstalled sheeting and bracing required in order to remove the portions of existing water mains required or ordered.

Payment for Reconstruction Of Existing Water Mains Using D.E.P. Approved Cured-In-Place-Pipe (CIPP) Lining Method will be made under the Item Number as calculated below:

The Item Numbers for Reconstruction Of Existing Water Mains Using D.E.P. Approved Cured-In-Place-Pipe (CIPP) Lining Method have ten characters. (The decimal point is considered a character, the third character.)

(1) The first five characters shall define Reconstruction Of Existing Water Mains Using D.E.P. Approved Cured-In-Place-Pipe (CIPP) Lining Method:
60.41

(2) The sixth, seventh and eighth characters shall define Reconstruction Of Existing Water Mains Using D.E.P. Approved Cured-In-Place-Pipe (CIPP) Lining Method:
CPL - Reconstruction Of Existing Water Mains Using D.E.P. Approved Cured-In-Place-Pipe (CIPP) Lining Method

(3) The ninth and tenth characters shall define the Diameter of the Existing Water Main to be lined. (The ninth and tenth characters representing the unit of inches for the Diameter of the Existing Water Main to be lined.) See examples below:
08 - 8"
12 - 12"

(4) Examples of Item Numbers together with Description and Pay Unit as provided in the Bid Schedule are provided below:

Item No.	Description	Pay Unit
60.41CPL08	RECONSTRUCTION OF EXISTING 8-INCH DIAMETER WATER MAIN, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.
60.41CPL12	RECONSTRUCTION OF EXISTING 12-INCH DIAMETER WATER MAIN, USING D.E.P. APPROVED CIPP LINING METHOD	L.F.

(6) **Refer** to **Subsection 71.41.4 - Specific Pavement Restoration Provisions**, Page VII-67:
Add the following to **Subsection 71.41.4**:

(E) Specific Pavement Restoration Provisions:

(1) Highway and roadway reconstruction shall be accomplished and paid for in accordance with Highway Construction Plans, Details and Specifications for Highway Project ID. PV176ITF1.

END OF ADDENDUM NO. 3
This Addendum consists of twenty-one (21) pages.

NO TEXT ON THIS PAGE

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

NOVEMBER 20, 2013

ADDENDUM NO. 4 **PROJECT ID: PV176ITF1**

RECONSTRUCTION AND REHABILITATION OF
BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
BRONX RIVER PARKING LOT AND OVERFLOW LOST
INTERSECTION OF JUNGLE WORLD ROAD
AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

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

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

SPECIFICATIONS FOR HANDLING, TRANSPORTATION AND DISPOSAL OF NON-HAZARDOUS AND POTENTIALLY HAZARDOUS CONTAMINATED MATERIALS

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and hereby made part of said Contract Documents to the same extent as if it was originally included herein.

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ITEM 8.01 C1 HANDLING, TRANSPORTING AND DISPOSAL OF NON-HAZARDOUS CONTAMINATED SOILS

8.01 C1.1 WORK TO INCLUDE

General: This work shall consist of the handling, transportation and disposal of non-hazardous contaminated soils. The materials covered by this specification are soils that are contaminated with petroleum or chemical products but cannot be classified as hazardous waste. For the purpose of this specification, soil shall be defined as any material excavated below the pavement and base for pavement.

Non-hazardous contaminated soils are defined as soils exhibiting one or more of the following characteristics:

- Elevated Photo-Ionization Detector (PID) readings, subsequently confirmed by lab analysis
- Visual evidence of contamination
- Petroleum and/or chemical odors
- Soils that have been documented as contaminated in previous environmental reports

Non-hazardous contaminated soils must be stockpiled at an off-site approved location or secured on-site by the Contractor, meeting all required Federal, State and Local stipulations. Sampling and laboratory analysis must be conducted to determine if the soils are hazardous, unless the alternative procedure as defined under subsection 8.01 C1.1 A.5 has been agreed upon by treatment facilities. Contaminated soils determined to be non-hazardous shall be handled in accordance with the specifications herein for Item 8.01 C1. Contaminated soils determined to be hazardous shall be handled in accordance with the specifications for Item 8.01 H – Handling, Transporting and Disposal of Hazardous Soils.

The Contractor shall retain the services of an independent Environmental Consultant, as specified under Item 8.01 S – Health and Safety, to oversee the work required under this Item.

Non-hazardous soils shall be delivered to the disposal or treatment facility within thirty (30) calendar days after excavation.

The Contractor shall conduct sampling and analysis of the impacted soils as specified under Item 8.01 C2 – Sampling and Testing of Contaminated/Potentially Hazardous Soils for Disposal Parameters. The laboratory results shall be forwarded to DDC Program Administration, Engineering Support Services (ESS) for review to determine if the soils will be handled and disposed of as contaminated regulated soils or hazardous waste. No other soils shall be sampled or tested without the DDC's approval or direction.

The Contractor shall ensure that all operations associated with the handling, sampling, loading, transportation, and disposal of non-hazardous contaminated soils are in compliance with all applicable Federal, State, and City statutes and regulations.

The Contractor shall document the excavation, handling, transportation and disposal of non-hazardous contaminated soils. The Contractor shall supply all equipment, material and labor required to conduct the specified work of this Item.

A. Material Handling Plan: Within forty-five (45) calendar days after award of Contract, the Contractor shall submit to the Program Administration, ESS for review, a Material Handling Plan (MHP). The MHP must be approved by the Program Administration, ESS, prior to the Contractor's commencement of work. The MHP shall, at a minimum, consist of:

1. The Contractor's procedures for identifying non-hazardous contaminated soils during excavation, including the specific model and manufacturer of intended organic vapor monitoring equipment and calibration procedures to be used. It should also include the training and experience of the personnel who will operate the equipment.
2. The Contractor's procedures for safely handling non-hazardous contaminated soils. The procedures must include personnel safety and health as well as environmental protection considerations.
3. Name, address, New York State Department of Health's (DOH) Environmental Laboratories Accreditation Program (ELAP) status and telephone number of the proposed laboratory for analysis of representative soil samples. The ELAP for the intended analysis must approve the laboratory.
4. Identification of the Contractor's proposed waste transporter(s). This information shall include:
   a. Name and Waste Transporter Permit Number
   b. Address
   c. Name of responsible contact for the hauler
   d. Telephone number for the contact
   e. Any and all necessary permit authorizations for each type of waste transported
   f. Previous experience in performing the type of work specified herein
5. All staging/stockpiling areas (if stockpiling areas are intended and available), or alternate procedures that will be used. Alternate procedures may include, but are not limited to, agreements from the intended disposal or treatment facilities to accept boring data and/or analytical data previously obtained during the site characterization so that materials may be directly loaded into vehicles for shipment to the disposal facility.
6. A backup facility should the staging/stockpile areas become unavailable, insufficient in area or not be present by some other unforeseen difficulty.
7. Identification of the Contractor's two proposed Treatment Storage or Disposal (TSD) facilities for non-hazardous contaminated soils (primary and back-up) for final disposal of the soils. The primary TSD shall be an approved soil recycling/treatment facility. The backup facility may be a recycling/treatment facility or a New York State Department of Environmental Conservation (DEC) approved lined landfill or other facility approved by DEC to accept this material. The information required for each facility shall include:
   a. Facility name and the State identification number
      (1) Facility location
      (2) Name of responsible contact for the facility
      (3) Telephone number for contact
      (4) Signed letter of agreement to accept waste as specified in this contract
      (5) Unit of measure utilized at facility for costing purposes
   b. A listing of all permits, licenses, letters of approval, and other authorizations to operate, which are currently held and valid for the proposed facility.

c. A listing of all permits, licenses, letters of approval, and other authorizations to operate which have been applied for by the proposed facility but not yet granted or issued.

d. The Contractor shall specify and describe the disposal/containment unit(s) that the proposed facility will use to manage the waste. The Contractor shall identify the capacity available in the units and the capacity reserved for the subject waste.

e. The Contractor shall provide the date of the proposed facility's last compliance inspection.

f. A list of all active (unresolved) compliance orders (or agreements), enforcement notices, or notices of violations issued to the proposed facility shall be provided. The source and nature of the cause of violation shall be stated, if known.

8. Description of all sampling and field/laboratory analyses that will be needed to obtain disposal facility approval.

8.01 C1.2 MATERIALS

A. Containers shall be as required in the United State Department of Transportation (DOT) regulations.

B. Polyethylene to be placed under (20 mil. thickness minimum) and over (10 mil. thickness minimum) soil piles.

C. The Contractor shall assure that the waste hauler's appropriate choice of vehicles and operating practices shall prevent spillage or leakage of contaminated material from occurring en route.

D. The Contractor shall provide, install and maintain any temporary loading facilities on site as required until completion of material handling activities. The location and design of any facilities shall be included in the MHP and be approved by the Program Administration, ESS.

8.01 C1.3 CONSTRUCTION DETAILS

A. Material Handling

1. Immediately after excavation of non-hazardous contaminated soil the Contractor shall:

   a. Load material directly onto trucks/tankers/roll offs for disposal off site; or

   b. If interim stockpiling is required, place on a minimum of 20 mil. or equivalent plastic ground cloth and cover by minimum of 10 mil. polyethylene sheeting or equivalent to protect against leaching or runoff of contaminants into groundwater or stormwater. Weight or secure the sheeting by appropriate means and seal seams as approved by the DDC to prevent tearing or removal by weather. Grade surrounding surface to provide for positive drainage away from pile. Stockpile shall not exceed 100 cubic yards.

2. Institute appropriate procedures and security measures to ensure the protection of site personnel and the public from contaminated materials as described in the approved MHP and Item 8.01 S - Health and Safety.

3. Any soil encountered that appears to contain unknown contaminants (based on visual, odor, or other observation), or that vary substantially from the material originally

identified must be segregated in stockpiles and the independent Environmental Consultant promptly notified. Construct stockpiles to the same requirements as stated in subsection A.1.b above.

4. Provide any dewatering that is necessary to complete the work. Contaminated water shall be disposed of in accordance with Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.

5. Provide and operate field organic vapor test equipment, a PID or a flame ionization detector (FID), to detect general organic vapor levels at intervals of approximately fifty (50) cubic yards of soil excavated, when visual or odor observations indicate the material may substantially differ from the soil previously excavated and/or as directed by the independent Environmental Consultant.

B. Off-Site Transportation to Disposal or Treatment Facility

1. General

a. The Contractor shall furnish all labor, equipment, supplies and incidental costs required to transport contaminated material from the work area to the off-site disposal or treatment facility, and any other items and services required for transporting contaminated material for disposal at an off-site facility.

b. The Contractor shall submit the name and location of the facility where an off-site scale is located. The Contractor shall also submit a plan to the DDC for review outlining procedures on controlling trucks leaving the work site and en-route to the off-site scale. The Contractor shall be responsible for tracking all material/vehicles from the site to the off-site scale.

c. The Contractor shall provide to the DDC certified tare and gross weight slips for each load received at the accepted facility which shall be attached to each returned manifest.

d. The Contractor shall coordinate the schedule for truck arrival and material deliveries at the job site to meet the approved project schedule.

e. The Contractor shall inspect all vehicles leaving the project site to ensure that contaminated soils adhering to the wheels or undercarriage are removed prior to the vehicle leaving the site.

f. The Contractor shall obtain letters of commitment from the waste haulers and the treatment, disposal or recovery facility to haul and accept shipments. The letter shall indicate agreement to handle and accept the specified estimated quantities and types of material during the time period specified in the project schedule and any time extension as deemed necessary.

g. **The Program Administration, ESS shall review and approve waste profiles before transportation to the TSD facility.**

2. Hauling

a. The Contractor shall coordinate manifesting, placarding of shipments, and vehicle decontamination. All quantities shall also be measured and recorded upon arrival at the disposal or treatment facility. If any deviation between the two records occurs, the matter is to be reported immediately to the DDC and to be resolved by the Contractor to the satisfaction of the DDC.

b. The Contractor shall be held responsible, at its own cost for any and all actions necessary to remedy situations involving material spilled in transit or mud and dust tracked off-site.

c. The Contractor shall ensure that trucks are protected against contamination by properly covering and lining them with compatible material (such as polyethylene) or by decontaminating them prior to and between acceptances of loads.

d. The Contractor shall be responsible for inspecting the access routes for road conditions, overhead clearance, and weight restrictions.

e. The Contractor shall only use the transporter(s) identified in the MHP for the performance of work. Any use of substitute or additional transporters must have previous written approval from the Program Administration, ESS at no additional cost to the City.

f. The Contractor shall develop, document, and implement a policy for accident prevention.

g. The Contractor shall not combine contaminated materials from other projects with material from this project.

h. No material shall be transported until approved by the DDC.

3. Off-Site Disposal

a. The Contractor shall use only the facility(ies) identified in the MPH for the performance of the work. Substitutions or additions shall not be permitted without prior written approval from the Program Administration, ESS, and if approved shall be at no extra cost to the City.

b. The Contractor shall be responsible for acceptance of the materials at an approved facility, for ensuring that the facility is properly permitted to accept the stated materials, and that the facility provides the stated treatment and/or disposal services.

c. The DDC reserves the right to contact and visit the disposal or treatment facility and regulatory agencies to verify the agreement to accept the stated materials and to verify any other information provided.

d. In the event that the identified and approved facility ceases to accept the stated materials or the facility ceases operations, it is the Contractor's responsibility to locate an alternate approved and permitted facility(ies) for accepting materials. The alternate facility(ies) must be approved in writing by the DDC in the same manner and with the same requirements as for the original facility(ies). This shall be done at no extra cost or delay to the City.

e. The Contractor shall obtain manifest forms, and complete the shipment manifest records required by the appropriate regulatory agencies for verifying the material and quantity of each load in unit of volume and weight. Copies of each manifest shall be submitted to the DDC within four (4) business days following shipment, and within three (3) business days after notification of receipt of the facility. Any manifest discrepancies shall be reported immediately to the DDC and be resolved by the Contractor to the satisfaction of the DDC.

4. Equipment and Vehicle Decontamination

a. The Contractor shall design and construct a portable decontamination station to be used to decontaminate equipment and vehicles exiting from the exclusion zone. The cost for this work will be paid under Item 8.01 S - Health and Safety.

b. Water generated during the decontamination process shall be disposed of in accordance with Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.

8.01 C1.4 METHOD OF MEASUREMENT

Quantities for non-hazardous contaminated soils shall be measured in tons. The tonnage will be determined by off-site truck scales, as per Subsection 8.01 C1.3.B1, that are capable of generating load tickets.

8.01 C1.5 PRICE TO COVER

A. The unit bid price bid per ton for Item 8.01 C1 shall include the cost of furnishing all labor, materials, plant, equipment, and insurance for excavation, handling, transportation, disposal, documentation, fees, permits, loading, stockpiling, hauling, and any other incidentals necessary to complete all the work as specified herein for handling, transporting, and disposal of non-hazardous contaminated soil.

B. Final disposal of hazardous soil shall be paid for under Item 8.01 H – Handling, Transporting and Disposal of Hazardous Soils. Disposal of decontamination water shall be paid for under Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.

C. Backfill will be paid for under its respective item as specified in the contract document.

D. The independent Environmental Consultant shall be paid under Item 8.01 S – Health and Safety.

Payment will be made under:

ITEM NUMBER	ITEM	PAYMENT UNIT
8.01 C1	Handling, Transporting, and Disposal of Non-Hazardous Contaminated Soil	Tons

ITEM 8.01 C2 SAMPLING AND TESTING OF CONTAMINATED/ POTENTIALLY HAZARDOUS SOIL FOR DISPOSAL PARAMETERS

8.01 C2.1 WORK TO INCLUDE

A. Description

The work shall consist of collecting and analyzing representative soil samples for parameters typically requested by the disposal facilities.

B. Sampling and Laboratory Analysis

1. At least thirty (30) days prior to the commencement of work, the Contractor's independent Environmental Consultant must submit a Soil Sampling Plan/Field Sampling Plan (SSP/FSP) to the Program Administration, Engineering Support Services (ESS) for review and approval. The plan shall include the name, address, DOH's ELAP status, and telephone numbers of the proposed laboratory. The plan shall also include training and experience of the personnel who will collect the samples.

2. The Contractor shall sample and analyze representative samples of the contaminated/potentially hazardous soils. For stockpiled soils, the Contractor shall collect and analyze one (1) composite sample per 100 cubic yards or fraction thereof. Each composite sample shall consist of a minimum of five (5) grab samples collected from greater than two (2) feet below the soil surface. For drummed soil, the Contractor shall collect one (1) composite sample per (ten) 10 drums or fraction thereof. Each composite sample shall consist of a grab sample from each of the ten (10) drums or fraction thereof. Each composite sample shall be analyzed for Resource Conservation and Recovery Act (RCRA) hazardous waste characteristics (Ignitability, Reactivity, Corrosivity), Full Toxicity Characteristic Leaching Procedure (TCLP) (including RCRA metals, volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), pesticides, herbicides), Total Petroleum Hydrocarbons (TPH) and Polychlorinated Biphenyls (PCBs). All samples collected should be analyzed on a rush four (4) calendar days turn around time and analytical results must be submitted to Program Administration, ESS within five (5) calendar days after sample collection.

3. All sampling shall be conducted by a person trained in sampling protocols using standard accepted practices for obtaining representative samples.

4. The Contractor must also contact the disposal facility where the waste will be sent for permanent disposal, and arrange to collect any additional samples required by the facility. The cost associated with additional sampling and testing shall be included in the bid price of this Item.

5. The quality of the data from the sampling program is the Contractor's responsibility. The Contractor must furnish all qualified personnel, equipment and instruments necessary to carry out the sampling. Unless directed otherwise, all sampling procedures must follow the DEC sampling guidelines and protocols.

6. All sample containers shall be marked and identified with legible sample labels which shall indicate the project name, sample location and/or container, the sample number, the date and time of sampling, preservatives utilized and other information that may be useful in determining the character of the sample. Chain-of-custody shall be tracked from laboratory issuance of sample containers through laboratory receipt of the samples.

7. The Contractor shall maintain a bound sample logbook. The Contractor shall provide DDC access to it at all times and shall turn it over to the DDC in good condition at the completion of the work. The following information, as a minimum shall be recorded to the log:

    1. Sample identification number
    2. Sample location
    3. Field observation
    4. Sample type
    5. Analyses
    6. Date/time of collection
    7. Collector's name
    8. Sample procedures and equipment utilized
    9. Date sent to laboratory and name of laboratory

8. The City reserves the right to direct the Contractor to conduct alternative sampling in lieu of the parameters described in subsection B2, if the situation warrants. The substitute sampling parameters shall be of equal or lesser monetary value than those described in subsection B2, as determined by industry laboratory pricing standards.

9. Only dedicated sampling equipment may be used to collect these samples. All equipment involved in field sampling must be decontaminated before being brought to the sampling location, and must be properly disposed after use.

10. Soils exceeding any of the hazardous characteristic criteria meet the legal definition of hazardous soils (rather than non-hazardous contaminated soils) and shall be transported or disposed of under Item 8.01 H – Handling, Transporting and Disposal of Hazardous Soils. All analyses must be done by a laboratory that has received approval from the ELAP for the methods to be used. The Contractor must specify the laboratory in the MHP.

8.01 C2.2 METHOD OF MEASUREMENT

Quantities for samples shall be measured as the number of sets of samples that are tested. A set shall be defined as one (1) composite sample analyzed for the full range of parameters as specified in subsection B2.

8.01 C2.3 PRICE TO COVER

The unit price bid per set for Item 8.01 C2 shall include the cost of furnishing all labor materials, plant, equipment, and insurance necessary for sampling, handling, transporting, testing, documentation, fees, permits and any other incidentals necessary to complete the work as specified herein for sampling and testing of contaminated/potentially hazardous soil.

Payment will be made under:

ITEM NUMBER	ITEM	PAYMENT UNIT
8.01 C2	Sampling and Testing of Contaminated/ Potentially Hazardous Soil for Disposal Parameters	Set

ITEM 8.01 H HANDLING, TRANSPORTING, AND DISPOSAL OF HAZARDOUS SOILS

8.01 H.1 WORK TO INCLUDE

General: This work shall consist of the handling, transportation and disposal of soils or materials that are listed as hazardous wastes or exhibit any of the characteristics of a hazardous waste, namely ignitability, corrosivity, reactivity, and toxicity, as defined in 6 NYCRR Part 371, Section 371.3 and 40 CFR Section 261. For the purpose of this specification, soils shall be defined as any materials excavated below the pavement and base for pavement.

Contaminated soils determined to be hazardous under Item 8.01 C2 shall be handled, transported, and disposed of under Item 8.01 H in accordance with the specifications herein.

The independent Environmental Consultant retained by the Contractor, as specified under Item 8.01 S – Health and Safety, shall conduct sampling and analysis of above soils to determine which soils are hazardous.

All work under Item 8.01 H shall be performed under the direct supervision of the Contractor's Environmental Consultant, as approved by the Program Administration, Engineering Support Services (ESS).

The Contractor shall ensure that all operations associated with the handling, sampling, loading, transportation, and disposal of hazardous materials are in compliance with the applicable Federal, State, and Local statutes and regulations.

The Contractor shall document the excavation, handling, sampling, and testing, transportation and disposal of hazardous soils. The City shall be listed in the disposal documents as the waste generator.

The Contractor shall supply all equipment, material and labor required to conduct the specified work of this section.

The Contractor shall ensure that all operations associated with the handling, sampling, loading, transportation and disposal of hazardous soils are conducted in a manner to protect site personnel, the public and the environment, in accordance with all applicable Federal, State, and Local laws and regulations.

The Contractor shall decontaminate all equipment prior to its removal from the exclusion zone and/or following contact with hazardous materials, as detailed in Item 8.01 S - Health and Safety. Water generated during the decontamination process shall be disposed of under Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.

A. Material Handling Plan: Within forty-five (45) calendar days after award of Contract, the Contractor shall submit to the Program Administration, ESS for review, a Material Handling Plan (MHP). The MHP must be approved by the Program Administration, ESS, prior to the Contractor's commencement of work. The MHP shall, at a minimum, consist of:

   1. The Contractor's procedures for identifying contaminated/potentially hazardous soils during excavation, including instrumentation and calibration procedures to be used.

   2. The Contractor's procedures for safely handling hazardous soils or soils which have not yet been tested but are believed to be potentially hazardous.

   3. Identification of the Contractor's proposed waste transporter(s). This information shall include:

      a. Name and waste transporter permit number

b. Address

c. Name of responsible contact for the hauler

d. Telephone number for the contact

e. Any and all necessary permit authorizations for each type of waste transported

f. Previous experience in performing the type of work specified herein

4. All staging/stockpiling areas (if stockpiling areas are intended and available), or alternate procedures that will be used. Alternate procedures could include, but are not limited to, agreements from the intended disposal or treatment facilities to accept boring data and/or analytical data previously obtained during the site characterization so that materials may be directly loaded into vehicles for shipment to the disposal facility or the use of off-site stockpiling locations approved by the DEC.

5. A backup facility, should the staging/stockpile areas become unavailable, insufficient in area or not be present by some other unforeseen difficulty.

6. Identification of the Contractor's two proposed United State Environmental Protection Agency (EPA) or DEC approved RCRA TSD facilities for hazardous soils.

7. The Contractor shall submit the following information prior to any transportation of soils regarding the temporary and final off-site TSD or facilities where it is proposing to take hazardous soils. The expense of furnishing all information will be included in the Contractor's bid price:

   a. General Information

      (1) Facility name and the EPA identification number

      (2) Facility location

      (3) Name of responsible contact for the facility

      (4) Telephone number for contact

      (5) Signed letter of agreement to accept waste as specified in this contract

      (6) Signed letter of agreement with a TSD for disposal of waste that may not be land-disposed

      (7) Unit of measure utilized at each facility for costing purposes

   b. A listing of all permits, licenses, letters of approval, and other authorizations to operate, which are currently held and valid for the proposed facility as they pertain to receipt and management of wastes derived from this Contract.

   c. A listing of all permits, licenses, letters of approval, and other authorizations to operate which have been applied for by the proposed facility.

   d. The Contractor shall specify and describe the disposal/containment unit(s) that the proposed facility will use to manage the waste. The Contractor shall identify the capacity available in the units and the capacity reserved for the subject waste.

   e. The Contractor shall provide the date of the proposed facility(ies) last compliance inspection under RCRA.

f. A list of all active (unresolved) compliance orders, agreements, enforcement notices or notices of violations issued to the proposed facility shall be approved. The source and nature of the cause of violation shall be stated, if known.

8. Description of all sampling and analyses that will be needed to obtain disposal facility approval.

8.01 H.2 MATERIALS

A. Containers shall be watertight as required in the DOT regulations and must meet all applicable regulations including but not limited to those in Attachment 2.

B. Polyethylene (20 mil. thickness minimum) to be placed under and (10 mil. thickness minimum) over soil piles. If soils are placed in drums, polyethylene must be placed over the drums.

8.01 H1.3 CONSTRUCTION DETAILS

A. Material Handling

1. The Contractor shall institute procedures to protect site personnel and the public from the non-hazardous and hazardous materials as described in Section 8.01 S - Health and Safety.

2. The Contractor shall handle hazardous soil as approved in the MHP.

3. Stockpiled materials at the temporary TSD facility shall be handled according to the facility requirements but at a minimum: shall be drummed or placed on and covered with polyethylene to protect against erosion and leaching into surrounding soils, the stockpile area shall be graded for positive drainage away from the pile, and shall be labeled while being held for sampling prior to permanent disposal.

4. Provide any dewatering that is necessary to complete the work. Water shall be disposed of in accordance with Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.

B. Off-Site Transportation and Disposal

1. The Contractor shall furnish all labor, equipment and supplies required to transport hazardous materials from the work area to the off-site TSD facility(ies) and to acquire any other items and services required for transporting hazardous materials for storage and/or disposal at an approved off-site facility.

2. Weight Measurement

a. The Contractor shall submit the name and location of the facility where an off-site scale is located. The Contractor shall also submit a plan to the DDC for review outlining procedures on controlling trucks leaving the work site and on-route to the off-site scale. The Contractor shall be responsible for tracking all materials/vehicles from the site to the off-site scale.

b. The Contractor shall provide to the DDC certified tare and gross weight slips for each load received at the accepted facility which shall be attached to each returned manifest.

3. General

   a. Manifests: The Contractor shall organize and maintain the material shipment records/manifests required by law.

   b. The Contractor shall coordinate the schedule for truck arrival and material deliveries at the job site to meet the approved project schedule. The schedule shall be compatible with the availability of equipment and personnel for material handling at the job site.

   c. The Contractor shall inspect all vehicles leaving the project site to ensure that hazardous soils adhering to the wheels or under carriage are removed prior to the vehicle leaving the site.

   d. The Contractor shall obtain letters of commitment from the waste haulers and the TSD facility to haul and accept shipments. The letter shall indicate agreement to handle and accept the specified estimated quantities and types of material during the time period specified in the project schedule and any time extension as deemed as necessary.

4. Hauling

   a. The Contractor shall not deliver waste to any facility other than the TSD facility(ies) listed on the shipping manifest.

   b. The Contractor shall coordinate manifesting, placarding, of shipments, and vehicle decontamination. All quantities shall also be measured and recorded upon arrival at the TSD facility. If any deviation between the two records occurs, the matter is to be reported immediately to the DDC and to be resolved by the Contractor to the satisfaction of the DDC.

   c. The Contractor shall be held responsible, at its own expense, for any and all actions necessary to remedy situations involving material spilled in transit or mud and dust tracked off-site.

   d. The Contractor shall ensure that trucks are protected against contamination by properly covering and lining them with compatible material (such as polyethylene) or by decontaminating them prior to any use other than hauling hazardous materials.

   e. The Contractor shall be responsible for inspecting the access routes for road conditions, overhead clearance, and weight restrictions.

   f. The Contractor shall only use the transporter(s) identified in the MHP for the performance of work. Only a transporter with a current Part 364 Waste Transporter Permit from the DEC may transport this material. Any use of substitute or additional transporters must have previous written approval from the DDC at no additional cost to the City.

   g. The Contractor shall develop, document, and implement a policy for accident prevention.

   h. The Contractor shall not combine hazardous materials from other projects with material from this project.

i. **The Contractor shall obtain for the City an EPA hazardous waste generator identification number and a representative of Program Administration, ESS will review and sign the manifest as the generator.**

j. No materials shall be transported until approved by the DDC.

5. Off-Site Disposal

a. The Contractor shall be responsible for acceptance of the materials at an approved TSD facility, for ensuring that the facility is properly permitted to accept the stated materials, and that the facility provides the stated storage and/or disposal services.

b. In the event that the identified and approved facility ceases to accept the stated materials or the facility ceases operations, it is the Contractor's responsibility to locate an alternate approved and permitted facility(ies) for accepting materials. The Contractor is responsible for making the necessary arrangements to utilize the facility(ies), and the alternate facility(ies) must be approved in writing by the DDC in the same manner and with the same requirements as for the original facility(ies). This shall be done with no extra cost or delay to the City.

c. The Contractor shall submit all results and weights to the DDC.

d. **The Contractor is responsible to pay <u>all fees</u> associated with the generation and disposal of all excavated hazardous waste. These fees include, but are not limited to, the <u>New York State Department of Finance and Taxation (DFT) quarterly fees</u> for hazardous waste and the <u>New York State DEC annual hazardous waste regulatory fee program</u>. The Contractor shall submit a copy of proof of payment to the DDC and Program Administration, ESS.**

6. Equipment and Vehicle Decontamination

The Contractor shall design and construct a portable decontamination station to be used to decontaminate equipment and vehicles exiting from the exclusion zone. The cost for this work shall be paid under Item 8.01 S - Health and Safety. Disposal of decontamination liquids is described under Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.

7. Record Keeping

The Contractor shall obtain manifest forms, and complete the shipment manifest records required by the appropriate regulatory agencies for verifying the material and quantity of each load in unit of volume and weight. Copies of each manifest shall be submitted to the DDC within four (4) business days following shipment, and within three (3) business days after notification of receipt of the facility. Any manifest discrepancies shall be reported immediately to the DDC and be resolved by the Contractor to the satisfaction of the DDC.

8.01 H.4 METHOD MEASUREMENT

Quantities for hazardous soil shall be measured in tons satisfactorily delivered to the treatment, storage or disposal facility. The tonnage will be determined by off-site truck scales, as per subsection 8.01 H1.3.B.2, that are capable of generating load tickets.

8.01 H.5 PRICE TO COVER

A. The unit price bid per ton for Item 8.01 H shall include the cost of furnishing all labor, materials, plant, equipment, and insurance for excavation, handling, transportation, disposal, documentation, permits, fees, taxes, stockpiling, hauling, and any other incidentals necessary to complete the work as specified herein for handling, transporting and disposal of hazardous soils.

B. Final disposal of non-hazardous materials shall be paid for under Item 8.01 C1 – Handling, Transporting and Disposal of Non-Hazardous Soils. Disposal of decontamination water shall be paid under Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.

C The independent Environmental Consultant shall be paid under Item 8.01 S – Health and Safety.

D. Backfill will be paid for under its respective item.

Payment will be made under:

ITEM NUMBER	ITEM	PAYMENT UNIT
8.01 H	Handling, Transporting, and Disposal of Hazardous Soils	Tons

ITEM 8.01 S HEALTH AND SAFETY

8.01 S.1 WORK TO INCLUDE

Health and Safety Requirements

A. Scope of Work

It is the Contractor's responsibility to stage and conduct his work in a safe manner. The Contractor shall implement a Health and Safety Plan (HASP) for contaminated/hazardous soil intrusive activities as set forth in Occupational Safety and Health Administration (OSHA) Standards 1910.120 and 1926.650-652. The Contractor shall ensure that all workers have at a minimum hazard awareness training. The Contractor shall segregate contaminated work area in secured exclusion zones. These zones shall limit access to Contractor personnel specifically trained to enter the work area. The exclusion zone shall be set up to secure the area from the public and untrained personnel. The project health and safety program shall apply to all construction personnel including persons entering the work area. In addition, the Contractor shall protect the public from on-site hazards, including subsurface contaminants associated with on-site activities. The HASP shall be signed off by a Certified Industrial Hygienist and reviewed by Program Administration, Engineering Support Services (ESS).

Work shall include, but not be limited to:

1. Implementation of a baseline medical program.
2. Providing safety equipment and protective clothing for site personnel, including maintenance of equipment on a daily basis; replacement of disposable equipment as required; decontamination of clothing, equipment and personnel; and providing all other health and safety measures.
3. Providing, installing, operating and maintaining on-site emergency medical first aid equipment as specified in this section for which payment is not provided under other pay items in this Contract.
4. Providing, installing, operating, maintaining and decommissioning all equipment and personnel decontamination facilities specified within this section, including, but not limited to, the decontamination pad, decontamination water supply, decontamination water collection equipment and all other items and services required for the implementation of the health and safety requirements for which pay items are not provided elsewhere in this Contract.
5. Provide the minimum health and safety requirements for excavation activities within the limits of this Contract.
6. Implement and enforce a HASP: The HASP as presented in these specifications is dynamic with provisions for change to reflect new information, new practices or procedures, changing site environmental conditions or other situations which may affect site workers and the public. The HASP will also address measures for community protection, accident prevention, personnel protection, emergency response/contingency planning, air monitoring, odor control and hazardous chemicals expected on site. Providing a Confined Space Entry Program as defined in the Occupational Safety and Health Act, Confined Space Entry Standard, 29 CFR 1910.146.

B. Environmental Consulting Services

The Contractor shall retain an independent Environmental Consultant to obtain all permits and perform all field screening, air monitoring, community air monitoring, soil sampling, and health and safety services. The independent Environmental Consultant shall at a minimum provide documentation to the Program Administration, ESS demonstrating the minimum requirements as set forth below:

1. The independent Environmental Consultant project supervisor on site and other designated key personnel shall have a minimum of three (3) years experience in the environmental field dealing with issues associated with contaminated soils. Such experience shall include oversight on environmental, specifically volatile organic compound and dust monitoring services as a routine part of its daily operations.
2. The independent Environmental Consultant must be experienced in work of this nature, size, and complexity and must have previous experience in working with the DEC.
3. The independent Environmental Consultant shall furnish a project listing identifying the location, nature of services provided, owner, owner's contact, contact's telephone number, project duration and value for at least five (5) projects within the last three (3) years.
4. If conditions within the exclusion zone are deemed hazardous, then the Contractor and its independent Environmental Consultant shall ensure that all personnel working within identified exclusion zones and/or involved (direct contact) with the handling, storage or transport of hazardous and contaminated materials shall have completed a minimum of forty (40) hours of Health and Safety Training on Hazardous Waste Sites in accordance with 29 CFR 1910.120(e). The training program shall be conducted by a qualified safety instructor. If conditions in the exclusion zone are deemed to be non-hazardous, the independent Environmental Consultant shall provide site specific training.
5. The Contractor shall ensure that on-site management and supervisors directly responsible for or who supervise employees engaged in hazardous waste operations shall receive the training specified in above and at least eight (8) additional hours of specialized training on managing such operations at the time of job assignment.

C. Submittals

1. The Contractor shall submit, within forty-five (45) calendar days after the contract award, a written HASP as specified herein, to Program Administration, ESS for review and comment. The Contractor shall make all necessary revisions required by Program Administration, ESS and resubmit the HASP to the Program Administration, ESS for acceptance. Start-up work for the project will not be permitted until written acceptance has been issued by the Program Administration, ESS.
2. Daily safety logs shall be maintained by the Contractor and shall be submitted to the DDC either on request or on completion of the work. Training logs shall be maintained by the Contractor and submitted to the DDC either on request or on completion of the work. Daily logs on air monitoring during excavation activities shall be prepared and maintained by the Contractor and submitted to the DDC either on request or upon completion of the work.
3. A closeout report shall be submitted by the Contractor to the DDC upon completion of the work within the defined exclusion zones. This report shall summarize the daily safety and monitoring logs and provides an overview of the Contractor's performance

regarding environmental and safety issues. The report shall carefully document all areas where contamination has been found including pictures, addresses of locations, and potential sources.

4. Medical Surveillance Examinations: The Contractor shall submit to the DDC the name, office address and telephone number of the medical consultant utilized. Evidence of baseline medical examinations together with the evidence of the ability to wear National Institute for Occupational Safety and Health (NIOSH) approved respirators (as specified in American National Standards Institute (ANSI) Z88.6) shall be provided to the DDC for all construction personnel who are to enter the exclusion zones.

5. Accident Reports: All accidents, spills, or other health and safety incidents shall be reported to the DDC.

D. Health and Safety Plan

The HASP shall comply with OSHA regulations 29 CFR 1910.120/1926.65. This document shall at a minimum contain the following:

1. Description of work to be performed
2. Site description
3. Key personnel
4. Worker training procedures
5. Work practices and segregation of work area
6. Hazardous substance evaluation
7. Hazard assessment
8. Personal and community air monitoring procedures and action levels
9. Personal protective equipment
10. Decontamination procedures
11. Safety rules
12. Emergency procedures
13. Spill control, dust control, vapor/odor suppression procedures
14. Identification of the nearest hospital and route
15. Confined space procedures
16. Excavation safety procedures

8.01 S.2 MEASUREMENT

Health and Safety Requirements

A. 25% of the lump sum price will be paid when the following items are implemented or mobilized:

Medical surveillance program
Health and safety training
Health and safety plan
Environmental and personnel monitoring
Instrumentation
Spill control
Dust control
Personnel and equipment decontamination facilities
Personnel protective clothing
Communications
Mobilization

B. 50% will be paid in proportional monthly amounts over the period of work.

C 25% will be paid when the operation is demobilized and removed from the project site.

8.01 S.3 PRICE TO COVER

Health and Safety Requirements

The lump sum price bid for the health and safety requirements shall include all labor, materials, equipment, and insurance necessary to complete the work in accordance with these specifications. The price bid shall include, but not be limited to, the following:

A. Providing training, safety personnel, air monitoring and medical examinations as specified.

B. Providing safety equipment and protective clothing for site personnel, including maintenance of equipment on a daily basis; replacement of disposable equipment as required; decontamination of clothing, equipment and personnel; and all other health and safety activities or costs not paid for under other pay items in this Contract.

C. Providing, installing, operating and maintaining on-site emergency medical and first aid equipment. This includes all furnishings, equipment, supplies and maintenance of all medical equipment, and all other health and safety items and services for which payment is not provided under other pay items in this Contract.

D. Providing, installing, operating, maintaining, and decommissioning all personnel and equipment decontamination facilities, including decontamination pad, decontamination water supply, and all other items and services required for the implementation of the health and safety requirements for which pay items are not provided elsewhere in this Contract. Vehicle decontamination pads shall be included in the price of this item. Disposal of decontamination fluid shall be paid for under Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.

E. Spill Control

1. Payment shall account for furnishing, installing, and maintaining all spill control equipment and facilities. Payment will include equipment and personnel to perform emergency measures required to contain any spillage and to remove spilled materials and soils or liquids that become contaminated due to spillage during work within the exclusion zones and handling of excavated soils and liquids from these areas. This collected spill material will be properly disposed of.

2. Payment under this item shall not include testing, handling, transportation or disposal of petroleum-contaminated/potentially hazardous soils excavated during construction. The price for this work will be paid for under Items 8.01 C1 – Handling, Transporting and Disposal of Non-Hazardous Contaminated Soils, 8.01 C2 – Sampling and Testing of Contaminated/Potentially Hazardous Soil for Disposal Parameters or 8.01 H – Handling, Transporting and Disposal of Hazardous Soils, as appropriate.

F. Dust Control

Payment shall account for furnishing, installing, and maintaining dust control equipment and facilities to be used whenever applicable dust levels are exceeded. Payment will include all necessary labor, equipment, clean water, foam, and all other materials required by the Dust Control Plan. The DOH Community Air Monitoring Plan (CAMP) may be used as guidance.

G. Vapor/Odor Suppression

Payment shall account for furnishing, installing and maintaining vapor/odor control equipment and facilities to be used whenever organic vapor monitoring or the presence of odors indicates that vapor suppression is required to protect workers or the public. Payment will include all necessary labor, equipment, clean water, foam and all other materials required by the Vapor/Odor Suppression Plan.

H. Mobilization/Demobilization

1. Mobilization

Payment shall include but not be limited to:

a. All work required to furnish, install and maintain all signs, fencing, support zone facilities, parking areas and all temporary utilities;

b. All work required to furnish, install, and maintain an office space with phone and utilities for health and safety personnel;

c. All work required for complete preparation of lay down area for roll-off containers, including sampling, and any required fencing;

d. All direct invoiced cost from bonding companies and government agencies for permits and costs of insurance; and

e. All other items and services required for mobilization and site preparation.

2. Demobilization

Payment shall include but not be limited to: All work required to sample the area; remove from the site all equipment, temporary utilities and supporting facilities; performance of necessary decontamination and repairs; disposal of disposable equipment and protective gear and other items and services required for complete demobilization.

Payment will be made under:

ITEM NUMBER	ITEM	PAYMENT UNIT
8.01 S	Health and Safety	Lump Sum

ITEM 8.01 W1 REMOVAL, TREATMENT AND DISCHARGE/DISPOSAL OF CONTAMINATED WATER

8.01 W1.1 WORK TO INCLUDE

General: This work shall consist of the proper removal and disposal of all contaminated groundwater and decontamination water generated during construction operations. The Contractor shall be solely responsible for the proper disposal or discharge of all contaminated water generated at the job site. The Contractor will have the option of treating water on-site for discharge to the combined sanitary/storm sewer system or removing contaminated water for off-site disposal. The Contractor shall be responsible to choose a method compatible to the construction work and shall be compensated on a per day basis regardless of method employed. The Contractor will be compensated for only those days where the system is in full operation.

The Contractor shall retain a dewatering/water treatment Specialist (hereinafter the "Specialist") and laboratory as specified under Item 8.01 W2 – Sampling and Testing of Contaminated Water, to conduct any testing that may be required for disposal of impacted water.

The dewatering/water treatment Specialist is responsible to obtain all permits; perform all water sampling, testing; and provide ancillary services related to dewatering and water treatment. The Specialist shall at a minimum provide documentation to the Program Administration, Engineering Support Services (ESS) demonstrating the minimum requirements as set forth below:

1. The Specialist shall demonstrate that it has, at a minimum, three (3) years experience in the design of dewatering plans. The Specialist should demonstrate expertise dealing with issues associated with contaminated water. During that three (3) year period, the Specialist shall demonstrate that it provided dewatering and water treatment systems as a routine part of its daily operations.
2. The Specialist must be experienced in work of this nature, size, and complexity and must have previous experience in working with the DEC.
3. The Specialist shall furnish a project listing identifying the location, nature of services provided, owner, owner's contact, contact's telephone number, project duration and value for at least five (5) projects within the last three (3) years of a similar nature, size, and complexity to this one.
4. If conditions within the exclusion zone are deemed hazardous, then the Contractor and its independent Environmental Consultant shall ensure that all personnel working within identified exclusion zones and/or involved (direct contact) with the handling, storage or transport of hazardous and contaminated material shall have completed a minimum of forty (40) hours of Health and Safety Training on Hazardous Waste Sites in accordance with 29 CFR 1910.120(e). The training program shall be conducted by a qualified safety instructor. If conditions in the exclusion zone are deemed to be non-hazardous, the Specialist shall be responsible to provide site-specific training to its employees and other affected personnel.
5. The Contractor shall ensure that on-site management and supervisors directly responsible for or who supervise employees engaged in hazardous waste operations shall receive the training specified in above and at least eight (8) additional hours of specialized training on managing such operations at the time of job assignment.

The Contractor shall document all operations associated with the handling, sampling and disposal of contaminated water, and ensure that they are in compliance with applicable Federal, State and Local statutes and regulations.

The Contractor shall supply all labor, equipment, transport, plant, material, treatment, and other incidentals required to conduct the specified work of this section.

If water will be disposed of into the combined sanitary/storm sewer system, the Contractor shall ensure the Specialist treats the water to comply with the New York City Department of Environmental Protection (DEP) Sanitary/Combined and Storm Sewer Effluent Limit concentrations prior to discharge. The Contractor is responsible for providing settling or filtering tanks and any other apparatus required by DEP. Alternatively, the Contractor can provide a plan for transport and disposal at an off-site waste disposal facility.

Within forty-five (45) calendar days after award of Contract, the Contractor shall submit to the Program Administration, ESS for review, a Water Handling Plan (WHP). The WHP must be approved by the Program Administration, ESS, prior to the Contractor's commencement of work. The minimum requirements for the WHP are specified herein Item 8.01W 1.2, for each type of disposal (disposal into the combined sanitary/storm sewer or off-site disposal). The Contractor shall maintain a complete, up to date copy of the WHP on the job site at all times.

8.01 W1.2 CONSTRUCTION DETAILS

For each disposal method the Contractor proposes to utilize (disposal to combined sanitary/storm sewer or off-site disposal), the WHP shall include the information required in paragraphs A and B below, as appropriate.

A. <u>On-site treatment and discharge into New York City combined sanitary/storm sewers.</u>

1. Regulations: The Contractor shall comply with all applicable regulations. This includes but may not be limited to:

   Title 15-New DEP Sewer Use Regulations.

2. Permits: The Contractor is solely responsible to obtain all necessary and appropriate Federal, State and Local permits and approvals. The Contractor will be responsible for performing all and any system pilot tests required for permit approval. This includes but may not be limited to:

   a. Industrial waste approval for the New York City sewer system.

   b. Groundwater discharge permit for the New York City sewer system (DEP Division of Sewer Regulation and Control), if discharge to sewer exceeds 10,000 gallons per day.

   c. The Contractor shall comply with DEC State Pollutant Discharge Elimination System (SPDES) Permit Number GP-0-10-001, General Permit for Stormwater Discharges.

   d. Long Island well point permit for Brooklyn and Queens sites, if well points are used for dewatering.

   e. Wastewater quality control application, DEP.

3. The WHP for this portion of the work shall include at a minimum:

a. Identification and design of Contractor's proposed treatment to assure that the water meets the DEP sewer use guidelines prior to discharge to the sewer, including identification of all materials, procedures, settling or filtering tanks, filters and other appurtenances proposed for treatment and disposal of contaminated water.

b. The name, address and telephone number of the contact for the Contractor's proposed chemical laboratory, as well as the laboratory's certifications under Federal, State or non-governmental bodies.

c. The name, address and telephone number of the contact for the Contractor's proposed independent Environmental Consultant.

d. Copies of all submitted permit applications and approved permits the Contractor have received.

4. Materials

The Contractor shall supply all settling or filtering tanks, pumps, filters, treatment devices and other appurtenances for treatment, temporary storage and disposal of contaminated water. All equipment shall be suitable for the work described herein.

5. Execution

a. The Contractor is solely responsible for disposal of all water, in accordance with all Federal, State and Local regulations.

b. The Contractor is solely responsible for any treatment required to assure that water discharged into the sewer is in compliance with all permits and Federal, State and Local statutes and regulations.

c. The Contractor is solely responsible for the quality of the water disposed of into the sewers.

d. The Contractor is responsible for sampling and testing of water for the DEP Sanitary/Combined and Storm sewer Effluent Limit concentrations. The quality of the data is the Contractor's responsibility. Any sampling and testing shall be conducted and paid in accordance with Item 8.01 W2 – Sampling and Testing of Contaminated Water.

e. The Contractor shall be responsible to maintain the discharge rate to the sewer such that all permit requirements are met, the capacity of the sewer is not exceeded and no surcharging occurs downstream due to the Contractor's actions. Dewatering by means of well points or deep wells will not be allowed in the Boroughs of Brooklyn or Queens where the rate of pumping exceeds forty-five (45) gallons per minute unless the appropriate permit has been secured from the DEC.

f. Disposal of Treatment Media

(1) The Contractor shall be responsible for disposal or recycling of treatment media in accordance with all Federal, State and Local regulations.

(2) The Contractor shall provide the DDC with all relevant documentation concerning the disposal of treatment media, including manifests, bills of

lading, certificates of recycling or destruction and other applicable documentation.

(3) **Disposal of treatment media shall not be considered as a separate pay item; instead it shall be considered as incidental work thereto and included in the unit price bid.**

B. Off-Site Disposal

1. Regulations: The Contractor shall conform to all applicable Federal, State and Local regulations pertaining to the transportation, storage and disposal of any hazardous and/or non-hazardous materials as listed in Attachment 2.

2. The following shall be submitted to the DDC prior to initiating any off-site disposal:

a. (1) Name and waste transporter permit number

(2) Address

(3) Name of responsible contact for the hauler

(4) Any and all necessary permit authorizations for each type of waste transported

(5) Previous experience in performing the type of work specified herein

b. General information for each proposed treatment/disposal facility and at least one backup treatment/disposal facility

(1) Facility name and EPA identification number

(2) Facility location

(3) Name of responsible contact for the facility

(4) Telephone number for contact

(5) Unit of measure utilized at facility for costing purposes

c. A listing of all permits, licenses, letters of approval and other authorizations to operate, which are currently held and valid for the proposed facility as they pertain to receipt and management of the wastes derived from this Contract.

d. A listing of all permits, licenses, letters of approval and other authorizations to operate which have been applied for by the proposed facility but not yet granted or issued. Provide dates of application(s) submitted. Planned submittals shall also be noted.

e. The Contractor shall specify and describe the disposal/containment unit(s) that the proposed facility will use to manage the waste and provide dates of construction and beginning of use, if applicable. Drawings may be provided. The Contractor shall identify the capacity available in the units and the capacity reserved for the subject waste.

f. The Contractor shall provide the date of the proposed facility's last compliance inspection.

g. A list of all active (unresolved) compliance orders, agreements, enforcement notices or notices of violations issued to the proposed facility shall be submitted. The source and nature of the cause of violation shall be stated, if known. If groundwater contamination is noted, details of the facility's groundwater monitoring program shall be provided.

h. Description of all sampling and field/laboratory analyses that will be needed to obtain disposal facility approval.

3. Materials

All vessels for temporary storage and transport to an off-site disposal facility shall be as required in DOT regulations.

4. Execution

a. General

(1) The Contractor shall organize and maintain the material shipment records/manifests required by Federal, State and Local law. The Contractor shall include all bills of lading, certificates of destruction, recycling or treatment and other applicable documents.

(2) The Contractor shall coordinate the schedule for truck arrival and material deliveries at the job site to meet the approved project schedule. The schedule shall be compatible with the availability of equipment and personnel for material handling at the job site.

(3) The Contractor shall inspect all vehicles leaving the project site to ensure that contaminated liquids are not spilling and are contained for transport.

(4) The Contractor shall obtain letters of commitment from the waste haulers and the treatment, disposal or recovery facility to haul and accept shipment. The letter shall indicate agreement to handle and accept the specified estimated quantities and types of material during the time period specified in the project schedule and any time extension as deemed as necessary.

(5) The Contractor shall verify the volume of each shipment of water from the site.

(6) The Contractor is responsible for sampling and testing of water for off-site disposal. The quality of the data is the Contractor's responsibility. Any sampling and testing shall be conducted and paid in accordance with Item 8.01 W2 – Sampling and Testing of Contaminated Water.

(7) The Contractor shall be responsible for any additional analyses required by the TSD facility, and for the acceptance of the water at an approved TSD facility.

b. Hauling

(1) The Contractor shall not deliver waste to any facility other than the TSD facility(ies) listed on the shipping manifest.

(2) The Contractor shall coordinate manifesting, placarding of shipments, and vehicle decontamination. All quantities shall also be measured and recorded upon arrival at the TSD facility(ies). If any deviation between the two records occurs, the matter is to be reported immediately to the DDC and shall be resolved by the Contractor to the satisfaction of the DDC.

(3) The Contractor shall be held responsible for any and all actions necessary to remedy situations involving material spilled in transit or mud and dust tracked off-site. This cleanup shall be accomplished at the Contractor's expense.

(4) The Contractor shall be responsible for inspecting the access routes for road conditions, overhead clearance and weight restrictions.

(5) The Contractor shall only use the transporter(s) identified in the WHP for the performance of work. Only a transporter with a current Part 364 Waste Transporter Permit from DEC may transport this material. Any use of substitute or additional transporters must have previous written approval from the DDC at no additional cost to the City.

(6) The Contractor shall develop, document, and implement a policy for accident prevention.

(7) The Contractor shall not combine waste materials from other projects with material from this project.

(8) The Contractor shall obtain for the City a hazardous waste generator identification number and will sign the manifest as the generator, if necessary.

(9) No material shall be transported until approved by the DDC.

c. Disposal Facilities

(1) The Contractor shall use only the TSD facility(ies) identified in the WHP for the performance of the work. Substitutions or additions shall not be permitted without prior written approval from the Program Administration, ESS, and, if approved, shall be at no extra cost to the City.

(2) The Contractor shall be responsible for acceptance of the material at an approved TSD facility, for ensuring that the facility is properly permitted to accept the stated material, and that the facility provides the stated storage and/or disposal services.

(3) The DDC reserves the right to contact and visit the disposal facility and regulatory agencies to verify the agreement to accept the stated material and to verify any other information provided. This does not in any way relieve the Contractor of his responsibilities under this Contract.

(4) In the event that the identified and approved facility ceases to accept the stated materials or the facility ceases operations, it is the Contractor's responsibility to locate an alternate approved and permitted facility(ies) for accepting materials. The Contractor is responsible for making the necessary arrangements to utilize the facility(ies), and the alternate facility(ies) must be

approved in writing by the DDC in the same manner and with the same requirements as for the original facility(ies). This shall be done with no extra cost or delay to the City.

d. Equipment and Vehicle Decontamination

(1) The Contractor shall design and construct a portable decontamination station to be used to decontaminate equipment and vehicles exiting the exclusion zone. The cost for this work shall be paid under Item 8.01 S – Health and Safety.

8.01 W1.3 METHOD OF MEASUREMENT

The quantity for on-site treatment and discharge or off-site disposal shall be on a per day basis.

8.01 W1.4 PRICE TO COVER

A. The per day price bid for Item 8.01 W1 shall include the cost of furnishing all labor, materials, plant, equipment, and insurance for handling, transportation, disposal, documentation, permits, hauling, mobilization and demobilization, and any other incidentals thereto to complete the work.

B. The Contractor will not be paid for water that is within the DEP Sewer Discharge Limits.

Payment will be made under:

ITEM NUMBER	ITEM	PAYMENT UNIT
8.01 W1	Removal, Treatment and Disposal/Discharge of Contaminated Water	Day

ITEM 8.01 W2 SAMPLING AND TESTING OF CONTAMINATED WATER

8.01 W2.1 WORK TO INCLUDE

A. Description

The work shall consist of sampling and testing of potentially contaminated groundwater, surface runoff within the excavated area and all contaminated water generated during the decontamination process.

B. Sampling and Testing

1. The Contractor is responsible, at a minimum, for sampling and testing of contaminated water for the DEP Sanitary/Combined and Storm Sewer Effluent Limit concentrations as listed in Attachment 1. The quality of the data is the Contractor's responsibility. Any additional testing required by the Federal, State and/or disposal facilities shall be included in the bid price of this Item.

2. All sampling and testing shall be conducted by a person trained in sampling protocols using accepted standard practices and/or the DEC sampling guidelines and protocols.

3. All sample containers shall be marked with legible sample labels which shall indicate the project name, sample location and/or container, the sample number, the date and time of sampling, preservatives utilized, how the sample was chilled to 4 degrees Celsius, and other information that may be useful in determining the character of the sample.

4. Chain-of-custody shall be tracked from laboratory issuance of sample containers through receipt of the samples.

5. The Contractor shall maintain a bound sample log book. The Contractor shall provide the DDC access to it at all times and shall turn it over to the DDC in good condition at the completion of the work. The following information, as a minimum, shall be recorded to the log:

   a. Sample identification number

   b. Sample location

   c. Field observation

   d. Sample type

   e. Analyses

   f. Date/time of collection

   g. Collector's name

   h. Sample procedures and equipment used

   i. Date sent to laboratory/name of laboratory

6. Only dedicated sampling equipment may be used to collect these samples. All equipment involved in field sampling must be decontaminated before being brought to the site, and must be properly disposed of after use.

7. Samples shall be submitted to the Contractor's laboratory within the holding times for the parameters analyzed.

8. All analyses must be done by a laboratory that has received approval from the DOH's ELAP for the methods to be done. The Contractor must specify the laboratory in the WHP.

9. Analytical results for water discharged to the sewer and for off-site disposal must be submitted to the DDC no later than five (5) days after sample collection.

10. The City reserves the right to direct the Contractor to conduct alternative sampling in lieu of the parameters described above, if the situation warrants. The substitute sampling parameters shall be of equal or lesser monetary value than those described above, as determined by industry laboratory pricing standards.

8.01 W2.2 METHOD OF MEASUREMENT

Quantities for samples shall be measured as the number of sets of samples that are tested for the DEP Sanitary/Combined and Storm Sewer Effluent Limit concentrations. A set shall be defined as one (1) representative sample analyzed for the full range of DEP parameters as specified in attachment 1.

8.01 W2.3 PRICE TO COVER

The unit price bid per set for Item 8.01 W2 shall include the cost of furnishing all labor, materials, plant, equipment, and insurance for handling, transport, sampling, testing, documentation, permits, other incidentals necessary to complete the work of sampling and testing of contaminated water. Any additional costs incurred by the Contractor for sampling and testing of contaminated water shall be included in the bid price of this Item.

Payment will be made under:

ITEM NUMBER	ITEM	PAYMENT UNIT
8.01 W2	Sampling and Testing of Contaminated Water	Set

ATTACHMENT 1

New York City Department of Environmental Protection

Limitations for Discharge To Storm, Sanitary/Combined Sewer

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF WASTEWATER TREATMENT

Limitations for effluent to storm, sanitary or combined sewers

Parameter	Daily Limit	Units	Sample Type	Monthly Limit
Oil & Grease	15	mg/l	Instantaneous	
Total Petroleum Hydrocarbons	50	mg/l	Instantaneous	
pH Range (Storm sewer) (Sanitary sewer)	6.5-8.5 5-11	SU's	Instantaneous	
Benzene	134	ppb	Instantaneous	57
Ethyl benzene	380	ppb	Instantaneous	142
Toluene	74	ppb	Instantaneous	28
Xylenes Total	74	ppb	Instantaneous	28
Temperature	< 150	°F	Instantaneous	
Cadmium	2 0.69	mg/l mg/l	Instantaneous Composite	
Chromium VI	5	mg/l	Instantaneous	
Copper	5	mg/l	Instantaneous	
Lead	2	mg/l	Instantaneous	
Mercury	0.05	mg/l	Instantaneous	
Nickel	3	mg/l	Instantaneous	
Zinc	5	mg/l	Instantaneous	
Flash Point	> 140	°F	Instantaneous	
Total Suspended Solids	350	ppm	Instantaneous	
PCB's Total*	1	ppb	Composite	
Perc (Tetrachloroethylene)	20	ppb	Instantaneous	
MTBE (Methyl-Tert-Butyl-Ether)	10	ppb	Instantaneous	10
Naphthalene	47	ppb	Instantaneous	19

* Analysis for PCB's are requested only if both conditions listed below are met:

1) If proposed discharge > 10,000 gpd
2) If duration of discharge > 10 days

Analysis for PCB's must be conducted by USEPA Method 608 only with MDL = 65ppt

ATTACHMENT 2

Applicable Regulations

Applicable regulations include, but are not limited to:

1. 49 CFR 100 to 179 - DOT Hazardous Materials Transport and Manifest System Requirements
2. New York State Department of Environmental Conservation (DEC), Spills Technology and Remediation Series (STARS) Memo #1
3. 6 NYCRR 360-1 DEC Solid Waste Management Facilities
4. 6 NYCRR 364- Waste Transporter permits
5. Local restrictions on transportation of waste/debris
6. 40 CFR 260 to 272 - Hazardous Waste Management (RCRA)
7. 6 NYCRR 371 - Identification and Listing of Hazardous Wastes
8. 6 NYCRR 372 - Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities
9. 6 NYCRR 373-1 - Hazardous Waste Treatment, Storage and Disposal Facility Permitting Requirements
10. 6 NYCRR 376 - Land Disposal Restrictions
11. Posted weight limitations on roads or bridges
12. Transportation Skills Programs, Inc. 1985 - Hazardous Materials and Waste Shipping Papers and Manifests
13. Other local restrictions on transportation of waste/debris
14. Occupational Safety and Health Administration (OSHA), Standards and Regulations, 29 CFR 1910 (General Industry)
15. OSHA 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response
16. OSHA Safety and Health Standards 29 CFR 1926 (Construction Industry)
17. OSHA 29 CFR 1910.146 Confined Space Entry Standard
18. Standard Operating Safety Guidelines, EPA Office of Emergency and Remedial Response Publication, 9285.1-03
19. NIOSH / OSHA / USCG / EPA Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1986)
20. U.S. Department of Health and Human Services (DHHS) "NIOSH Sampling and Analytical Methods," DHHS (NIOSH) Publication 84-100
21. ANSI, Practice for Respiratory Protection, Z88.2 (1980)
22. ANSI, Emergency Eyewash and Shower Equipment, Z41.1 (1983)
23. ANSI, Protective Footwear, Z358.1 (1981)
24. ANSI, Physical Qualifications for Respirator Use, Z88.6 (1984)
25. ANSI, Practice for Occupational and Educational Eye and Face Protection, Z87.1 (1968)
26. Water Pollution Control Federation "Manual of Practice No. 1, Safety in Wastewater Works"

27. NFPA No. 327 "Standard Procedures for Cleaning and Safeguarding Small Tanks and Containers"
28. Occupational Safety and Health Act Confined Space Entry Standard 29 CFR 1910.146.87
29. Department of Transportation 49 CFR 100 through 179
30. Department of Transportation 49 CFR 387 (46 FR 30974, 47073)
31. Environmental Protection Agency 40 CFR 136 (41 FR 52779)
32. Environmental Protection Agency 40 CFR 262 and 761
33. Resource Conservation and Recovery Act (RCRA)
34. Any transporter of hazardous or non-hazardous materials shall be licensed in the State of New York and all other states traversed in accordance with all applicable regulations.

ATTACHMENT 3

Definitions

Contaminated Groundwater and Decontamination Fluids: Groundwater within the excavation trench or decontamination water that contains regulated compounds above the NYCDEP Discharge to Sanitary/Combined Sewer Effluent limits.

Disposal or Treatment Facility: A facility licensed to accept either non-hazardous regulated waste or hazardous waste for either treatment or disposal.

Exclusion Zone: Work area that will be limited to access by Contractor personnel specifically trained to enter the work area only. The exclusion zone will be set up to secure the area from the public and untrained personnel. The project health and safety program will apply to all construction personnel including persons entering the work area.

Hazard Assessment: An assessment of any physical hazards that may be encountered on a work site.

Hazardous Soils: Soils that exhibit any of the characteristics of a hazardous waste, namely ignitability, corrosivity, reactivity, and toxicity, as defined in 6 NYCRR Part 371, Section 371.3 and 40 CFR Section 261.

Hazardous Substance Evaluation: An evaluation of the possible or known presence of any hazardous substances that may be encountered on a job site. This evaluation is included in the Health and Safety Plan and will include the identification and description of any hazardous substances expected to be encountered. Material Safety Data Sheets (MSDS) will be included for each substance.

Health and Safety Plan: A plan employed at a work site that describes all the measures that will be taken to assure that all work is conducted in a safe manner, and that the health of the workers and the public will be insured.

Material Handling Plan: A plan outlining the methods that will be employed to handle, transport and dispose of contaminated materials.

Non-Hazardous Contaminated Soils: Soils which exhibit a distinct chemical or petroleum odor, or exhibit elevated photoionization detector readings but are not classified as hazardous waste under 6 NYCRR Part 371, Section 371.3 and 40 CFR Section 261.

New York State Health Department's Environmental Laboratory Approval Program: A program by which the state of New York approves and accredits environmental testing laboratories.

PCBs: Polychlorinated biphenyls are a group of toxic compounds commonly used as a coolant in transformers and other electrical components.

Photoionization Detector: A hand held instrument used to measure volatile organic compounds in air. The instrument ionizes the organic molecules through the use of an ultraviolet lamp.

RCRA Hazardous Waste Characteristics: Characteristics of a material which may indicate the material is hazardous. These include: ignitability corrosivity, reactivity, and toxicity.

Total Petroleum Hydrocarbons: An analytical procedure used to determine the total amount of petroleum compounds in a material.

ATTACHMENT 4

Subsurface (Phase II) Investigation

Bronx Zoo Transportation Facility
Tax Block 4333, Lot 1

BRONX, NEW YORK

Subsurface (Phase II) Investigation

NYCDEP Project No. 13DEPTECH065X
CEQR No. 13CLA002X
NYSDOT PIN No. X770.77
AKRF Project No. 10956

Prepared for:

Wildlife Conservation Society
2300 Southern Boulevard
Bronx, NY 104605

Prepared by:

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440 Park Avenue South
New York, NY 10016
212-696-0670

JUNE 2013

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1.0 INTRODUCTION

AKRF, Inc. (AKRF) conducted a Subsurface (Phase II) Investigation at a portion of the Bronx Zoo in the Bronx, New York (the site), also identified as Tax Block 4333, Lot 1 (Figure 1). The investigation was intended to ascertain whether past uses have adversely affected subsurface conditions. The site comprises an approximately 15-acre area in the northeastern portion of the Zoo and consists of paved parking areas, an eco-restroom, a transformer house, entrance gates, and a paved roadway (Jungle World Road). The site is designated for redevelopment with a new surface parking facility, as described in more detail in Section 3.0. The proposed architectural plans are provided in Appendix A. It should be noted that the portion of the Bronx River (including its banks, soil, sediments, waters, etc.) located beneath the bridge connecting the parking area to Jungle World Road is not included as part of this assessment.

The scope of this investigation was based on the findings of the previous investigations/assessments conducted, as described in Section 2.0, and included the advancement of borings with the collection and laboratory analysis of soil and soil vapor samples. The investigation was conducted on June 7, 2013 in accordance with AKRF's February 2013 *Sampling Protocol and Health and Safety Plan* (HASP), which was approved by the New York City Department of Environmental Protection (NYCDEP) in a letter dated May 21, 2013. This report describes the methods and results of the investigation conducted in preparation for the redevelopment of the Site.

Deviations from the Sampling Protocol

The *Sampling Protocol* assumed that the grassy area in the northern portion of the site would be part of the proposed development project. This area has now been removed from the project scope and, therefore, a more limited investigation was conducted. The final scope of the investigation is described in Section 4.0 and the final project site boundary is shown on Figure 2.

2.0 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

Phase I Environmental Site Assessment (ESA), Bronx Zoo Intermodal Facility, New York, NY, AKRF, Inc., June 2008

AKRF conducted a Phase I ESA of a portion of the site on June 28, 2008, which did not include the area of the Jungle World Road between the Bronx River Gate and the Asia Plaza. The ESA did include the northern grassy area that is no longer part of the proposed project. The ESA revealed the following:

- According to Ms. Brenda J. Burbach of the Wildlife Conservation Society, one 550-gallon No. 2 fuel oil UST was formerly at the location of the current Eco-Restroom. The tank was reportedly removed in June 2006 by Northeast Environmental and a spill was reported as petroleum-contaminated soil was encountered. Remediation was conducted in July 2006 and NYSDEC closed the spill status on September 28, 2006. However, some residual soil contamination from the former tank could remain.
- The regulatory databases, historical land-use atlases, and visual site inspection indicated that the site had been used for parking and a restroom for over 30 years. An 1868 map indicated that the grassy portion in the adjacent area to the north was occupied with a group of structures labeled as "Thomas Bolton & Sons Bronx Bleach & Dye Works." Historical maps indicated that the site was subsequently developed (prior to 1898) with a Methodist Church and numerous residences.
- The on-site transformer house located in the eastern portion of the site was not accessible during the reconnaissance but may contain equipment with fluids containing PCBs. However, releases inside the transformer house would be expected to remain contained. . Based on the age of the 2006 restroom building, lighting fixtures and electrical equipment are not anticipated to contain PCBs or mercury.

- The 2006restroom building is not likely to include asbestos-containing materials (ACMs) or lead-based paint, and no suspect ACMs were observed during the reconnaissance. ACMs and lead-based paint may be present within the transformer house, guard house and entrance gate..
- According to Ms. Burbach, 28 underground storage tanks and 36 aboveground storage tanks were registered for the Bronx Zoo with the New York State Department of Environmental Conservation (NYSDEC). AKRF was not provided with a Petroleum Bulk Storage (PBS) registration certificate. These tanks were not identified by the regulatory database search conducted for this Phase I ESA because the tanks were all reportedly registered with an address of 2300 Southern Boulevard, located outside of the ASTM search radius. Based on information provided by Ms. Burbach, only the above-mentioned 550-gallon UST was within the site. Based on the locations provided by Ms. Burbach, the off-site tanks were likely in a downgradient groundwater flow direction and thus are not suspected to have affected the site.
- Historical land use maps and the regulatory database search indicated that the neighborhood had a history of residential, commercial and manufacturing use. Reported and unknown releases from surrounding properties, particularly in presumed upgradient groundwater flow locations, may have affected local groundwater quality, which may have migrated to the site.

Phase I Environmental Site Assessment (ESA), Bronx Zoo Transportation Facility, New York, NY, AKRF, Inc., February 2013

AKRF conducted a Phase I ESA in February 2013, which included a portion of Jungle World Road not assessed during the 2008 Phase I ESA (and the grassy area to the north that was subsequently eliminated). In addition to the environmental conditions noted in 2008, six electrical transformers and panels were observed along Jungle/Boston Road between Asia Parking and Bronx River Parking. A label was noted on the transformer located near the Bronx River Gate indicating that the fluid was "non-PCB", but other equipment was not labeled. .

3.0 PHYSICAL SETTING AND PROPOSED DEVELOPMENT

The topography of the area generally slopes down to the south and towards the Bronx River on both east and west portions of the site. According to maps compiled by the U.S. Geological Survey, the site lies at an elevation ranging between 30 and 60 feet above mean sea level. Based on topography, the depth to groundwater is expected to exceed 20 feet below grade. Bedrock outcrops are present throughout the site. Groundwater flow, which may include flow within bedrock, is most likely towards the Bronx River. However, actual groundwater flow can be affected by many factors, including past filling, bedrock, underground utilities and other subsurface openings or obstructions or other factors beyond the scope of this study. Groundwater in the Bronx is not used as a source of potable water.

The proposed project includes expansion of the current parking area and Jungle World Road. The work would entail shallow soil disturbance to: 1) re-grade areas for construction of surface parking and roadways (including a roundabout near the park entrance), 2) install storm water drainage structures, and 3) widen the existing Jungle World Road. The existing eco-restroom and comfort station will remain. The deepest soil disturbance is anticipated to be approximately 5 feet for the widening of Jungle World Road, but will primarily be less than 2 feet. No new enclosed structures will be constructed. No dewatering will be required. The proposed architectural plans are provided in Appendix A.

4.0 FIELD ACTIVITIES

Field activities were conducted on June 7, 2013 by AKRF personnel and Zebra Environmental Corp. (Zebra) of Lynbrook, New York. The *Sampling Protocol and HASP* assumed that the grassy area in the northern portion of the site would be part of the proposed development project, but this is no longer the case so four proposed soil boring locations and one soil vapor sampling location were not performed. The final project site boundary is shown on Figure 2. As such, the scope included:

- The advancement of 11 borings with the collection of 12 soil samples for laboratory analysis; and
- The installation of soil probes for the collection of two soil vapor samples for laboratory analysis.

4.1 Soil Sampling and Analysis

A Geoprobe® Direct-Push Probe (DPP) drill rig was used to advance 11 borings at the locations shown on Figure 2 to approximately 5 feet below grade. Soil cores were obtained in a stainless steel, macro-core sampler with an internal acetate liner and field-screened using a photoionization detector (PID), which measures relative concentrations of volatile organic compounds (VOCs). Groundwater, anticipated to be more than 20 feet below grade, was not encountered.

One soil sample was selected for laboratory analysis from each of the borings and collected as a discrete "grab" sample in accordance with the following procedures:

- The soil core was inspected for evidence of contamination including staining, sheen, or odor or PID readings (the probe was placed in small holes made in the core at approximately one-foot intervals).
- The core was characterized according to the modified Burmister soil classification system and subsurface conditions and field screening results were documented;
- The laboratory-supplied sample jars were filled with the soil from the selected interval (in the absence of evidence of contamination, the uppermost 2 feet); and
- Sample jars were sealed,labeled and placed in a cooler for shipment to the laboratory.

The samples were analyzed by Alpha Analytical Laboratories, a New York State Department of Health-certified laboratory, for volatile organic compounds (VOCs) by EPA Method 8260, semi-volatile organic compounds (SVOCs) by EPA Method 8270, polychlorinated biphenyls (PCBs) by EPA Method 8082, pesticides by EPA Method 8081, and Target Analyte List (TAL) metals (6000/7000 series).

4.2 Soil Vapor Sample Collection and Analysis

Two soil vapor probes were installed and a soil vapor sample was collected from each at the locations shown on Figure 2. Soil vapor sampling logs are included in Appendix A. Methodologies conformed to the NYS Department of Health (DOH) *Final Guidance on Soil Vapor Intrusion*, dated October 2006.

Using the geoprobe, hollow probe rods were driven to approximately four to five feet below grade then removed after inserting a soil probe with tubing extending above the ground surface. Each hole was then backfilled with clean silica sand and hydrated bentonite around the sampling tubing to ground surface. Prior to sampling, each soil vapor point was purged of three sampler volumes using a peristaltic pump. During purging, an inverted one-gallon bucket was placed over the sampling point and helium gas was introduced through a small hole in the bucket to saturate the atmosphere around the sample port with helium gas. The purged vapors were collected into a Tedlar bag and monitored using a portable helium detector to check for short-circuiting of

ambient air into the vapor sampling point and verify the adequacy of the bentonite seal. Helium concentrations of less than 10 percent were considered sufficient to verify an adequste seal. Both soil vapor points passed this tests with helium readings below detectable levels. Purged vapors were also field-screened for organic vapors using a PID; no detectable levels were found.

After purging, the tubing was connected to a laboratory-supplied 6-liter SUMMA canister equipped with a 0.1 liter per minute (L/min) flow regulator and samples were collected over 2 hours. The samples were analyzed for VOCs by EPA Method TO-15 by Alpha's Westborough, Massachusetts laboratory.

4.3 Quality Control Sampling

For quality assurance/quality control (QA/QC) purposes, one blind duplicate soil sample and one trip blank were sent with the samples for laboratory analysis. The duplicate was analyzed for the same soil parameters, but the trip blank was analyzed only for VOCs only (to check for contamination during transport or sampling).

Sample SB-12 (2'-3') was a duplicate of SB-5 (2'-3'). The trip blank had no VOCs above laboratory detection limits.

4.4 Field Observations

Soil encountered comprised mainly sand, silt and gravel. Clay was present in some borings as were fragments of brick (suggesting the presence of urban fill, likely from roadway and parking lot construction activities). No PID readings or other evidence of contamination (e.g., odors or staining) were found. Groundwater was not encountered. Soil descriptions, observations, and PID readings were recorded on the soil boring logs provided in Appendix A.

5.0 FINDINGS

5.1 Soil Sampling Results

Laboratory results were compared to 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (USCOs) and Part 375 Soil Cleanup Objectives for Restricted-Commercial Use (CSCOs). The complete laboratory analytical data sheets are located in Appendix B.

Volatile Organic Compounds

Six VOCs were detected in 8 of the 12 soil samples, including 1,2,4,5-tetramethylbenzene, 1,2,4-trimethylbenzene, 2-butanone, acetone, tetrachloroethene, and trichloroethene. However, all concentrations (which ranged from 0.00062 parts per million (ppm) to 0.017 ppm), well below their respective USCOs (and the less stringent CSCOs).

The detected VOCs likely originated in the urban fill materials and are not indicative of a release or spill. However, since the samples were collected from parking and roadway areas, some influence from vehicles is possible. Acetone is a common laboratory contaminant and its detection is not likely from a release.

Soil analytical results for VOCs are presented in Table 1.

Semivolatile Organic Compounds

Twenty one SVOCs were detected in 11 of the 12 samples at concentrations ranging from 0.05 ppm to 46 ppm. SVOCs detected at concentration above the USCOs comprised benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene,

dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene. Some concentrations were also above the CSCOs. No SVOCs were detected in sample SB-6 (2'-3').

The detected SVOCs, which are all polycyclic aromatic hydrocarbons (PAHs) are commonly found in urban fill materilas and are not likely indicative of a spill or release. Detected SVOCs may also be due to fragments of asphalt.

Soil analytical results for SVOCs are presented in Table 2.

Some of the samples had to be diluted by factors ranging between 2 and 10 because of the presence of elevated non-target compounds. Therefore, additional SVOCs may be present in the samples at concentrations below the (elevated) detection limits.

Metals

Five metals (chromium, copper, lead, mercury, and zinc) exceeded their respective USCOs. None exceeeded CSCOs. These metals are attributable to the urban fill, which typically contains highly variable concentrations of metals.

Soil analytical results for metals are presented in Table 3.

PCBs and Pesticides

No PCBs were detected in any sample.

The pesticides 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT were detected in 5 of the 12 samples ranging from 0.00203 ppm to 0.21 ppm. The concentrations were above the USCO of 0.0033 ppm, but well below their respective CSCOs. Endosulfan II was detected in SB-5 (2'-3'), at a concentration of 0.00204 ppm, well below the USCO of 2.4 ppm and CSCO of 200 ppm. No other pesticides were detected.

Based on the concentrations detected and on the history of the site, the presence of these pesticides in the samples could be attributable to historical use on-site and/or the urban fill materials, but is, nonetheless, not indicative of a significant release.

Soil analytical results for pesticides are presented in Table 4.

Some of the samples had to be diluted by factors ranging between 2 and 20 because of the presence of elevated non-target compounds. Therefore, additional pesticide compounds may be present in the samples at concentrations below the (elevated) detection limits.

5.2 Soil Vapor Sampling Results

In the absence of soil vapor criteria, laboratory results were (conservatively) compared to indoor air criteria, specifically *EPA Building Assessment and Survey Evaluation (BASE)* 90th percentile value, and the criteria published in the 2006 *NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, specifically 90th percentile indoor air values from *"Table C2. EPA 2001: Building Assessment and Survey Evaluation (BASE) Database, SUMMA Canister Method"* and NYSDOH Air Guideline Values (AGVs). The proposed development project includes no enclosed structures, so the potential for adverse impact from soil vapor would be limited to the excavation work.

Soil vapor analytical results are presented in Table 5 and laboratory analytical data sheets are located in Appendix B.

Ten VOCs (1,2,4-trimethylbenzene, acetone, benzene, dichlorodifluoromethane, ethanol, ethylbenzene, heptane, toluene, trichlorofluoromethene, and xylenes) exceeded one or more of

the indoor air criteria with concentrations ranging from 9.12 micrograms per cubic meter ($\mu g/m^3$) to 5,390 $\mu g/m^3$.

The highest detections were two chlorofluorocarbon refrigerants, dichlorodifluoromethane (949 $\mu g/m^3$) and trichlorofluoromethane (5,390 $\mu g/m^3$), in sample SV-2. Neither compound was detected in SV-1. These detections could be related to a historical release or may in fact be laboratory contaminants. In any event, the detected levels, though above indoor air criteria, were measured in sub-grade vapors so exposure at these levels is not occurring. Furthermore the detected levels are more than 1,000 times below the Occupational Safety and Health Administration (OSHA) permissible exposure limits (PELs) —4,950,000 $\mu g/m^3$ and 5,600,000 $\mu g/m^3$, respectively. Similarly, all other detected compounds were orders of magnitude below OSHA PELs. The other VOCs above the indoor air criteria were seemingly petroleum-related and may be attributable to incidental releases from vehicles, though they could also be due to past petroleum spills on site or nearby.

Acetone was detected in the soil vapor samples at 3,350 $\mu g/m^3$ and 1,150 $\mu g/m^3$. Acetone is a common laboratory contaminant and is not suspected to be actually present in soil vapor at these levels.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

AKRF, Inc. (AKRF) conducted a Subsurface (Phase II) Investigation that included the advancement of 11 soil borings with the collection and laboratory analysis of 12 soil and two soil vapor samples. With the exception of the removal of four proposed soil boring locations and one soil vapor sampling location as the project area was reduced, the investigation was conducted in accordance with AKRF's February 2013 *Sampling Protocol and Health and Safety Plan* (HASP), which was approved by the New York City Department of Environmental Protection (NYCDEP) in a letter dated May 21, 2013. The purpose of the investigation was to determine whether current or former on- or off-site activities had adversely affected subsurface conditions at the site.

Soil encountered comprised mainly sand, silt and gravel. Clay was present in some of borings as were fragments of brick, suggesting the presence of urban fill material. No evidence of contamination (e.g., PID readings, odors or staining) was noted in the field screening. Groundwater was not encountered in the borings which extended to a depth of 5 feet.

The soil samples were analyzed by Alpha Analytical's Westborough, Massachusetts facility for Target Compound List (TCL) Volatile Organic Compounds (VOCs), TCL semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls, and Target Analyte List (TAL) metals. Soil vapor samples were analyzed for VOCs only.

Soil analytical results were compared to New York State Department of Environmental Conservation (NYSDEC) Part 375 Unrestricted Use Soil Cleanup Objectives (USCOs) and Part 375 Soil Cleanup Objectives for Restricted – Commercial Use (CSCOs). In the absence of soil vapor criteria, the results of the soil vapor samples were (conservatively) compared to indoor air criteria: *EPA Building Assessment and Survey Evaluation (BASE)* 90th percentile value; the criteria published in the 2006 *NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, specifically 90th percentile indoor air values from *"Table C2. EPA 2001: Building Assessment and Survey Evaluation (BASE) Database, SUMMA Canister Method";* and NYSDOH Air Guideline Values (AGVs). Results included:

- VOCs were not detected above USCOs (or the less stringent CSCOs) in any soil sample.
- SVOCs were detected in 11 of the 12 soil samples; some compounds at levels above USCOs or CSCOs. However, these are attributable to the urban fill material (including the likely presence of asphalt) and are not likely indicative of a spill or release.
- Five metals (chromium, copper, lead, mercury, and zinc) exceeded USCOs in the soil samples, but none were CSCOs. Similar exceedances are typical of urban fill materials which contain highly variable levels of metals.
- No PCBs were detected in the soil samples.
- Three pesticides (4,4'-DDD, 4,4'-DDE and 4,4'-DDT) were detected in the soil samples above USCOs, but all well below CSCOs. These may be attributable to historical use on-site and/or the urban fill materials. Nonetheless, the levels were not indicative of a significant release.
- The soil vapor samples contained ten compounds exceeding one or more of the indoor air criteria. The highest levels were of two chlorofluorocarbon (CFC) refrigerants (dichlorodifluoromethane and trichlorofluoromethane) which may be laboratory contaminants or relate to a release in the area. Other compounds were primarily petroleum-related and may

be attributable to incidental releases from vehicles. Although the levels were above the indoor air criteria, the proposed project would not create enclosed spaces. Furthermore, though exposure could occur during excavation associated with the proposed project, the detected levels were orders of magnitude below OSHA Permissible Exposure Levels.

6.2 Recommendations

The site is designated for redevelopment with a new surface parking facility, which would entail shallow soil disturbance (maximum of 5 feet below grade) to re-grade areas for construction, install storm water drainage structures, and widen the existing Jungle World Road. Dewatering will not be required. Based on the findings of this investigation, the following recommendations are made:

- To avoid the potential for adverse effects to human health and the environment during construction, subsurface disturbance for the proposed project should be conducted in accordance with a NYCDEP-approved *Remedial Action Plan* (RAP) and *Construction Health and Safety Plan* (CHASP). The RAP/CHASP, which would be based on the results of the sampling, would specify procedures for identifying and managing any unexpectedly encountered contaminated soil and/or underground storage tanks (including procedures for soil stockpiling and off-site transportation and disposal), and appropriate health and safety procedures, including the need for dust suppression and air monitoring.
- Although various VOCs were detected in soil vapor, the proposed project does not include construction of enclosed structures. As such, vapor mitigation measures are not warranted.
- Soil/fill materials excavated as part of site development activities should be managed in accordance with applicable regulatory requirements. Soil intended for off-site disposal should be tested in accordance with the requirements of the intended receiving facility. Transportation of material leaving the site for off-site disposal must be in accordance with federal, state and local regulatory requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc.
- Should any underground storage tanks, petroleum-contaminated soil or other evidence of a release or spill be encountered during excavation for the proposed project, it should be reported to the New York State Department of Environmental Conservation (NYSDEC) and addressed in accordance with applicable regulations.

7.0 LIMITATIONS

The findings set forth in this report are strictly limited in scope and time to the date of the evaluation described herein. The conclusions and recommendations presented in the report are based solely on the services and any limitations described in this report.

This report may contain conclusions that are based on the analysis of data collected at the time and locations noted in the report through intrusive or non-intrusive sampling. However, further investigation might reveal additional data or variations of the current data, which may differ from our understanding of the conditions presented in this report and require the enclosed recommendations to be reevaluated or modified.

Chemical analyses may have been performed for specific parameters during the course of this investigation, as summarized in the text and tables. It should be noted that additional chemical constituents, not searched for during this investigation, may be present at the Site. Due to the nature of the investigation and the limited data available, no warranty, expressed or implied, shall be construed with respect to undiscovered liabilities. The presence of biological hazards, radioactive materials, lead-based paint and asbestos-containing materials was not investigated, unless specified in the report.

Interpretations of the data, including comparison to regulatory standards, guidelines or background values, are not opinions that these comparisons are legally applicable. Furthermore, any conclusions or recommendations should not be construed as legal advice. For such advice, the client is recommended to seek appropriate legal counsel. Disturbance, handling, transportation, storage and disposal of known or potentially contaminated materials is subject to all applicable laws, which may or may not be fully described as part of this report.

The analytical data, conclusions, and/or recommendations provided in this report should not be construed in any way as a classification of waste that may be generated during future disturbance of the Site. Waste(s) generated at the Site including excess fill may be considered regulated solid waste and potentially hazardous waste. Requirements for intended disposal facilities should be determined beforehand as the data provided in this report may be insufficient and could vary following additional sampling.

This report may be based solely or partially on data collected, conducted, and provided by, AKRF and/or others. No warranty is expressed or implied by usage of such data. Such data may be included in other investigation reports or documentation. In addition, these reports may have been based upon available previous reports, historical records, documentation from federal, state and local government agencies, personal interviews, and geological mapping. This report is subject, at a minimum, to the limitations of the previous reports, historical documents, availability and accuracy of collected documentation, and personal recollection of those persons interviewed. In certain instances, AKRF has been required to assume that the information provided is accurate with limited or no corroboratory evidence.

This report is intended for the use solely by The RBA Group and the Wildlife Conservation Society. Reliance by third parties on the information and opinions contained herein is strictly prohibited and requires the written consent of AKRF. AKRF accepts no responsibility for damages incurred by third parties for any decisions or actions taken based on this report. This report must be used, interpreted, and presented in its entirety.

8.0 REFERENCES

1. U.S. Geological Survey, *Central Park, NY Quadrangle*, 7.5 minute Series (Topographic), Scale 1:2,500, 1966.
2. *Phase I Environmental Site Assessment (ESA) – Bronx Zoo Intermodal Facility, New York, NY, AKRF, Inc.*, June 2008.
3. *Phase I Environmental Site Assessment (ESA) – Bronx Zoo Transportation Facility, New York, NY, AKRF, Inc.*, February 2013.
4. 6 NYCRR § 375, effective December 14, 2006, New York State Department of Environmental Conservation Rules and Regulations, Remedial Program Requirements.
5. NYSDOH, *Guidance for Evaluating Soil Vapor Intrusion in the State of New York,* October 2006.
6. EPA Building Assessment and Survey Evaluation (BASE) 90th percentile values.
7. NYSDOH, *Soil Vapor Intrusion Guidance 2003 Indoor Air Guidance Upper Fence Values,* 2003.

TABLES

Table 1
Bronx Zoo Transportation Facility
Tax Block 4333, Lot 1
Bronx, NY
Subsurface (Phase II) Investigation Soil Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled mg/kg	NYSDEC Part 375 Unrestricted SCO mg/kg	NYSDEC Part 375 Commercial SCO mg/kg	SB-1 (1-2') L1310472-01 6/7/2013	SB-2 (2-3') L1310472-02 6/7/2013	SB-3 (2-3') L1310472-03 6/7/2013	SB-4 (2-3') L1310472-04 6/7/2013	SB-5 (2-3') L1310472-05 6/7/2013	SB-6 (2-3') L1310472-06 6/7/2013
1,1,1,2-Tetrachloroethane	NS	NS	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
1,1,1-Trichloroethane	0.68	500	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
1,1,2,2-Tetrachloroethane	NS	NS	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
1,1,2-Trichloroethane	NS	NS	0.0017 U	0.0018 U	0.0017 U	0.0018 U	0.0018 U	0.0018 U
1,1-Dichloroethane	0.27	240	0.0017 U	0.0018 U	0.0017 U	0.0018 U	0.0018 U	0.0018 U
1,1-Dichloroethene	0.33	500	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
1,1-Dichloropropene	NS	NS	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
1,2,3-Trichlorobenzene	NS	NS	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
1,2,3-Trichloropropane	NS	NS	0.012 U	0.012 U	0.011 U	0.012 U	0.012 U	0.012 U
1,2,4,5-Tetramethylbenzene	NS	NS	0.0046 U	0.0048 U	0.0045 U	0.0048 U	0.0047 U	0.0049 U
1,2,4-Trichlorobenzene	NS	NS	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
1,2,4-Trimethylbenzene	3.6	190	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
1,2-Dibromo-3-chloropropane	NS	NS	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
1,2-Dibromoethane	NS	NS	0.0046 U	0.0048 U	0.0045 U	0.0048 U	0.0047 U	0.0049 U
1,2-Dichlorobenzene	1.1	500	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
1,2-Dichloroethane	0.02	30	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
1,2-Dichloropropane	NS	NS	0.004 U	0.0042 U	0.004 U	0.0042 U	0.0041 U	0.0042 U
1,3,5-Trimethylbenzene	8.4	190	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
1,3-Dichlorobenzene	2.4	280	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
1,3-Dichloropropane	NS	NS	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
1,4-Dichlorobenzene	1.8	130	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
1,4-Diethylbenzene	NS	NS	0.0046 U	0.0048 U	0.0045 U	0.0048 U	0.0047 U	0.0049 U
1,4-Dioxane	0.1	130	0.12 U	0.12 U	0.11 U	0.12 U	0.12 U	0.12 U
2,2-Dichloropropane	NS	NS	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
2-Butanone	0.12	500	0.012 U	0.012 U	0.0066 J	0.012 U	0.012 U	0.012 U
2-Hexanone	NS	NS	0.012 U	0.012 U	0.011 U	0.012 U	0.012 U	0.012 U
4-Ethyltoluene	NS	NS	0.0046 U	0.0048 U	0.0045 U	0.0048 U	0.0047 U	0.0049 U
4-Methyl-2-pentanone	NS	NS	0.012 U	0.012 U	0.011 U	0.012 U	0.012 U	0.012 U
Acetone	0.05	500	0.017	0.0065 J	0.044	0.012 U	0.012 U	0.012 U
Acrylonitrile	NS	NS	0.012 U	0.012 U	0.011 U	0.012 U	0.012 U	0.012 U
Benzene	0.06	44	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
Bromobenzene	NS	NS	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
Bromochloromethane	NS	NS	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
Bromodichloromethane	NS	NS	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
Bromoform	NS	NS	0.0046 U	0.0048 U	0.0045 U	0.0048 U	0.0047 U	0.0049 U
Bromomethane	NS	NS	0.0023 U	0.0024 U	0.0023 U	0.0024 U	0.0023 U	0.0024 U
Carbon disulfide	NS	NS	0.012 U	0.012 U	0.011 U	0.012 U	0.012 U	0.012 U
Carbon tetrachloride	0.76	22	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
Chlorobenzene	1.1	500	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
Chloroethane	NS	NS	0.0023 U	0.0024 U	0.0023 U	0.0024 U	0.0023 U	0.0024 U
Chloroform	0.37	350	0.0017 U	0.0018 U	0.0017 U	0.0018 U	0.0018 U	0.0018 U
Chloromethane	NS	NS	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
cis-1,2-Dichloroethene	0.25	500	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
cis-1,3-Dichloropropene	NS	NS	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
Dibromochloromethane	NS	NS	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
Dibromomethane	NS	NS	0.012 U	0.012 U	0.011 U	0.012 U	0.012 U	0.012 U
Dichlorodifluoromethane	NS	NS	0.012 U	0.012 U	0.011 U	0.012 U	0.012 U	0.012 U
Ethyl ether	NS	NS	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
Ethylbenzene	1	390	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
Hexachlorobutadiene	NS	NS	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
Isopropylbenzene	NS	NS	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
Methyl tert butyl ether	0.93	500	0.0023 U	0.0024 U	0.0023 U	0.0024 U	0.0023 U	0.0024 U
Methylene chloride	0.05	500	0.012 U	0.012 U	0.011 U	0.012 U	0.012 U	0.012 U
n-Butylbenzene	12	500	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
n-Propylbenzene	3.9	500	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
o-Chlorotoluene	NS	NS	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
o-Xylene	0.26	500	0.0023 U	0.0024 U	0.0023 U	0.0024 U	0.0023 U	0.0024 U
p/m-Xylene	0.26	500	0.0023 U	0.0024 U	0.0023 U	0.0024 U	0.0023 U	0.0024 U
p-Chlorotoluene	NS	NS	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
p-Isopropyltoluene	NS	NS	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
sec-Butylbenzene	11	500	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
Styrene	NS	NS	0.0023 U	0.0024 U	0.0023 U	0.0024 U	0.0023 U	0.0024 U
tert-Butylbenzene	5.9	500	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
Tetrachloroethene	1.3	150	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
Toluene	0.7	500	0.0017 U	0.0018 U	0.0017 U	0.0018 U	0.0018 U	0.0018 U
trans-1,2-Dichloroethene	0.19	500	0.0017 U	0.0018 U	0.0017 U	0.0018 U	0.0018 U	0.0018 U
trans-1,3-Dichloropropene	NS	NS	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
trans-1,4-Dichloro-2-butene	NS	NS	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
Trichloroethene	0.47	200	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
Trichlorofluoromethane	NS	NS	0.0058 U	0.006 U	0.0056 U	0.006 U	0.0058 U	0.0061 U
Vinyl acetate	NS	NS	0.012 U	0.012 U	0.011 U	0.012 U	0.012 U	0.012 U
Vinyl chloride	0.02	13	0.0023 U	0.0024 U	0.0023 U	0.0024 U	0.0023 U	0.0024 U

Table 1
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Subsurface (Phase II) Investigation Soil Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled mg/kg	NYSDEC Part 375 Unrestricted SCO mg/kg	NYSDEC Part 375 Commercial SCO mg/kg	SB-7 (2-3') L1310472-07 6/7/2013	SB-8 (2-3') L1310472-08 6/7/2013	SB-9 (2-3') L1310472-09 6/7/2013	SB-10 (2-3') L1310472-10 6/7/2013	SB-11 (2-3') L1310472-11 6/7/2013	SB-12 (2-3') L1310472-12 6/7/2013
1,1,1,2-Tetrachloroethane	NS	NS	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
1,1,1-Trichloroethane	0.68	500	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
1,1,2,2-Tetrachloroethane	NS	NS	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
1,1,2-Trichloroethane	NS	NS	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
1,1-Dichloroethane	0.27	240	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
1,1-Dichloroethene	0.33	500	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
1,1-Dichloropropene	NS	NS	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
1,2,3-Trichlorobenzene	NS	NS	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
1,2,3-Trichloropropane	NS	NS	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
1,2,4,5-Tetramethylbenzene	NS	NS	0.00091 J	0.0048 U	0.0047 U	0.0048 U	0.0048 U	0.0047 U
1,2,4-Trichlorobenzene	NS	NS	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
1,2,4-Trimethylbenzene	3.6	190	0.0013 J	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
1,2-Dibromo-3-chloropropane	NS	NS	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
1,2-Dibromoethane	NS	NS	0.0051 U	0.0048 U	0.0047 U	0.0048 U	0.0048 U	0.0047 U
1,2-Dichlorobenzene	1.1	500	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
1,2-Dichloroethane	0.02	30	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
1,2-Dichloropropane	NS	NS	0.0045 U	0.0042 U	0.0041 U	0.0042 U	0.0042 U	0.0041 U
1,3,5-Trimethylbenzene	8.4	190	0.00084 J	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
1,3-Dichlorobenzene	2.4	280	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
1,3-Dichloropropane	NS	NS	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
1,4-Dichlorobenzene	1.8	130	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
1,4-Diethylbenzene	NS	NS	0.0051 U	0.0048 U	0.0047 U	0.0048 U	0.0048 U	0.0047 U
1,4-Dioxane	0.1	130	0.13 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
2,2-Dichloropropane	NS	NS	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
2-Butanone	0.12	500	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
2-Hexanone	NS	NS	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
4-Ethyltoluene	NS	NS	0.0051 U	0.0048 U	0.0047 U	0.0048 U	0.0048 U	0.0047 U
4-Methyl-2-pentanone	NS	NS	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Acetone	0.05	500	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Acrylonitrile	NS	NS	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Benzene	0.06	44	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
Bromobenzene	NS	NS	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
Bromochloromethane	NS	NS	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
Bromodichloromethane	NS	NS	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
Bromoform	NS	NS	0.0051 U	0.0048 U	0.0047 U	0.0048 U	0.0048 U	0.0047 U
Bromomethane	NS	NS	0.0026 U	0.0024 U	0.0023 U	0.0024 U	0.0024 U	0.0024 U
Carbon disulfide	NS	NS	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Carbon tetrachloride	0.76	22	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
Chlorobenzene	1.1	500	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
Chloroethane	NS	NS	0.0026 U	0.0024 U	0.0023 U	0.0024 U	0.0024 U	0.0024 U
Chloroform	0.37	350	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
Chloromethane	NS	NS	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
cis-1,2-Dichloroethene	0.25	500	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
cis-1,3-Dichloropropene	NS	NS	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
Dibromochloromethane	NS	NS	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
Dibromomethane	NS	NS	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Dichlorodifluoromethane	NS	NS	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Ethyl ether	NS	NS	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
Ethylbenzene	1	390	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
Hexachlorobutadiene	NS	NS	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
Isopropylbenzene	NS	NS	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
Methyl tert butyl ether	0.93	500	0.0026 U	0.0024 U	0.0023 U	0.0024 U	0.0024 U	0.0024 U
Methylene chloride	0.05	500	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
n-Butylbenzene	12	500	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
n-Propylbenzene	3.9	500	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
o-Chlorotoluene	NS	NS	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
o-Xylene	0.26	500	0.0026 U	0.0024 U	0.0023 U	0.0024 U	0.0024 U	0.0024 U
p/m-Xylene	0.26	500	0.0026 U	0.0024 U	0.0023 U	0.0024 U	0.0024 U	0.0024 U
p-Chlorotoluene	NS	NS	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
p-Isopropyltoluene	NS	NS	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
sec-Butylbenzene	11	500	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
Styrene	NS	NS	0.0026 U	0.0024 U	0.0023 U	0.0024 U	0.0024 U	0.0024 U
tert-Butylbenzene	5.9	500	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
Tetrachloroethene	1.3	150	0.0014	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
Toluene	0.7	500	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
trans-1,2-Dichloroethene	0.19	500	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
trans-1,3-Dichloropropene	NS	NS	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
trans-1,4-Dichloro-2-butene	NS	NS	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
Trichloroethene	0.47	200	0.0024	0.001 J	0.0018	0.0012 U	0.00074 J	0.00062 J
Trichlorofluoromethane	NS	NS	0.0064 U	0.006 U	0.0059 U	0.006 U	0.006 U	0.0059 U
Vinyl acetate	NS	NS	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U
Vinyl chloride	0.02	13	0.0026 U	0.0024 U	0.0023 U	0.0024 U	0.0024 U	0.0024 U

Table 2
Bronx Zoo Transportation Facility
Tax Block 4333, Lot 1
Bronx, NY
Subsurface (Phase II) Investigation Soil Analytical Results
Semivolatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution mg/kg	NYSDEC Part 375 Unrestricted SCO mg/kg	NYSDEC Part 375 Commercial SCO mg/kg	SB-1 (1-2') L1310472-01 6/7/2013 2	SB-2 (2-3') L1310472-02 6/7/2013 1	SB-3 (2-3') L1310472-03 6/7/2013 6	SB-4 (2-3') L1310472-04 6/7/2013 1	SB-5 (2-3') L1310472-05 6/7/2013 1	SB-6 (2-3') L1310472-06 6/7/2013 1
1,2,4,5-Tetrachlorobenzene	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
1,2,4-Trichlorobenzene	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
1,2-Dichlorobenzene	1.1	500	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
1,3-Dichlorobenzene	2.4	280	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
1,4-Dichlorobenzene	1.8	130	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
2,4,5-Trichlorophenol	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
2,4,6-Trichlorophenol	NS	NS	0.22 U	0.12 U	0.67 U	0.12 U	0.11 U	0.12 U
2,4-Dichlorophenol	NS	NS	0.34 U	0.18 U	1 U	0.18 U	0.17 U	0.18 U
2,4-Dimethylphenol	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
2,4-Dinitrophenol	NS	NS	1.8 U	0.96 U	5.3 U	0.94 U	0.91 U	0.96 U
2,4-Dinitrotoluene	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
2,6-Dinitrotoluene	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
2-Chloronaphthalene	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
2-Chlorophenol	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
2-Methylnaphthalene	NS	NS	0.45 U	0.24 U	1.3 U	0.38	0.23 U	0.24 U
2-Methylphenol	0.33	500	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
2-Nitroaniline	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
2-Nitrophenol	NS	NS	0.81 U	0.43 U	2.4 U	0.42 U	0.41 U	0.43 U
3,3'-Dichlorobenzidine	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
3-Methylphenol/4-Methylphenol	0.33	500	0.54 U	0.29 U	1.6 U	0.28 U	0.27 U	0.29 U
3-Nitroaniline	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
4,6-Dinitro-o-cresol	NS	NS	0.97 U	0.52 U	2.9 U	0.51 U	0.49 U	0.52 U
4-Bromophenyl phenyl ether	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
4-Chloroaniline	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
4-Chlorophenyl phenyl ether	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
4-Nitroaniline	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
4-Nitrophenol	NS	NS	0.52 U	0.28 U	1.6 U	0.27 U	0.26 U	0.28 U
Acenaphthene	20	500	0.3 U	0.16 U	0.89 U	0.55	0.15 U	0.16 U
Acenaphthylene	100	500	0.3 U	0.16 U	0.89 U	0.2	0.51	0.16 U
Acetophenone	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
Anthracene	100	500	0.14 J	0.05 J	0.67 U	0.7	0.3	0.12 U
Benzo(a)anthracene	1	5.6	0.57	0.23	0.5 J	**1.4**	**1.2**	0.12 U
Benzo(a)pyrene	1	1	0.49	0.19	0.47 J	**1.4**	**1.4**	0.16 U
Benzo(b)fluoranthene	1	5.6	0.63	0.29	0.58 J	**1.8**	**1.9**	0.12 U
Benzo(ghi)perylene	100	500	0.3	0.13 J	0.33 J	0.79	0.89	0.16 U
Benzo(k)fluoranthene	0.8	56	0.3	0.12	0.3 J	0.58	0.64	0.12 U
Benzoic Acid	NS	NS	1.2 U	0.65 U	3.6 U	0.64 U	0.61 U	0.65 U
Benzyl Alcohol	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
Biphenyl	NS	NS	0.85 U	0.46 U	2.5 U	0.11 J	0.43 U	0.46 U
Bis(2-chloroethoxy)methane	NS	NS	0.4 U	0.22 U	1.2 U	0.21 U	0.2 U	0.22 U
Bis(2-chloroethyl)ether	NS	NS	0.34 U	0.18 U	1 U	0.18 U	0.17 U	0.18 U
Bis(2-chloroisopropyl)ether	NS	NS	0.45 U	0.24 U	1.3 U	0.24 U	0.23 U	0.24 U
Bis(2-Ethylhexyl)phthalate	NS	NS	0.37 U	0.2 U	1.1 U	0.15 J	0.11 J	0.2 U
Butyl benzyl phthalate	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
Carbazole	NS	NS	0.37 U	0.2 U	1.1 U	0.47	0.052 J	0.2 U
Chrysene	1	56	0.57	0.25	0.52 J	**1.6**	**1.4**	0.12 U
Dibenzo(a,h)anthracene	0.33	0.56	0.22 U	0.12 U	0.67 U	0.18	0.17	0.12 U
Dibenzofuran	7	350	0.37 U	0.2 U	1.1 U	0.56	0.19 U	0.2 U
Diethyl phthalate	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
Dimethyl phthalate	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
Di-n-butylphthalate	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
Di-n-octylphthalate	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
Fluoranthene	100	500	1	0.5	0.98	4.1	1.9	0.12 U
Fluorene	30	500	0.37 U	0.2 U	1.1 U	0.47	0.19 U	0.2 U
Hexachlorobenzene	0.33	6	0.22 U	0.12 U	0.67 U	0.12 U	0.11 U	0.12 U
Hexachlorobutadiene	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
Hexachlorocyclopentadiene	NS	NS	1.1 U	0.57 U	3.2 U	0.56 U	0.54 U	0.58 U
Hexachloroethane	NS	NS	0.3 U	0.16 U	0.89 U	0.16 U	0.15 U	0.16 U
Indeno(1,2,3-cd)Pyrene	0.5	5.6	0.31	0.15 J	0.32 J	**0.81**	**1.1**	0.16 U
Isophorone	NS	NS	0.34 U	0.18 U	1 U	0.18 U	0.17 U	0.18 U
Naphthalene	12	500	0.37 U	0.2 U	1.1 U	1.2	0.19 U	0.2 U
Nitrobenzene	NS	NS	0.34 U	0.18 U	1 U	0.18 U	0.17 U	0.18 U
NitrosoDiPhenylAmine(NDPA)/DPA	NS	NS	0.3 U	0.16 U	0.89 U	0.16 U	0.15 U	0.16 U
n-Nitrosodi-n-propylamine	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
P-Chloro-M-Cresol	NS	NS	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
Pentachlorophenol	0.8	6.7	0.3 U	0.16 U	0.89 U	0.16 U	0.15 U	0.16 U
Phenanthrene	100	500	0.41	0.24	0.61 J	5.1	0.69	0.12 U
Phenol	0.33	500	0.37 U	0.2 U	1.1 U	0.2 U	0.19 U	0.2 U
Pyrene	100	500	0.9	0.45	0.81	3.6	1.8	0.12 U

Note: * = Dilution rates vary.

Table 2
Bronx Zoo Transportation Facility
Tax Block 4333, Lot 1
Bronx, NY
Subsurface (Phase II) Investigation Soil Analytical Results
Semivolatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution mg/kg	NYSDEC Part 375 Unrestricted SCO mg/kg	NYSDEC Part 375 Commercial SCO mg/kg	SB-7 (2-3') L1310472-07 6/7/2013 2/10 *	SB-8 (2-3') L1310472-08 6/7/2013 1	SB-9 (2-3') L1310472-09 6/7/2013 1	SB-10 (2-3') L1310472-10 6/7/2013 10	SB-11 (2-3') L1310472-11 6/7/2013 1	SB-12 (2-3') L1310472-12 6/7/2013 1
1,2,4,5-Tetrachlorobenzene	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	1.1	500	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	2.4	280	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	1.8	130	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
2,4,5-Trichlorophenol	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
2,4,6-Trichlorophenol	NS	NS	0.25 U	0.12 U	0.12 U	1.2 U	0.12 U	0.12 U
2,4-Dichlorophenol	NS	NS	0.38 U	0.18 U	0.17 U	1.8 U	0.18 U	0.18 U
2,4-Dimethylphenol	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
2,4-Dinitrophenol	NS	NS	2 U	0.96 U	0.92 U	9.4 U	0.96 U	0.94 U
2,4-Dinitrotoluene	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
2,6-Dinitrotoluene	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
2-Chloronaphthalene	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
2-Chlorophenol	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
2-Methylnaphthalene	NS	NS	1.8	0.24 U	0.59	2.4 U	0.24 U	0.084 J
2-Methylphenol	0.33	500	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
2-Nitroaniline	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
2-Nitrophenol	NS	NS	0.9 U	0.43 U	0.41 U	4.2 U	0.43 U	0.42 U
3,3'-Dichlorobenzidine	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
3-Methylphenol/4-Methylphenol	0.33	500	0.6 U	0.29 U	0.28 U	2.8 U	0.29 U	0.28 U
3-Nitroaniline	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
4,6-Dinitro-o-cresol	NS	NS	1.1 U	0.52 U	0.5 U	5.1 U	0.52 U	0.51 U
4-Bromophenyl phenyl ether	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
4-Chloroaniline	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
4-Chlorophenyl phenyl ether	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
4-Nitroaniline	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
4-Nitrophenol	NS	NS	0.58 U	0.28 U	0.27 U	2.7 U	0.28 U	0.27 U
Acenaphthene	20	500	0.92	0.16 U	0.13 J	1.6 U	0.16 U	0.076 J
Acenaphthylene	100	500	10	0.43	1.6	11	0.11 J	1.8
Acetophenone	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
Anthracene	100	500	9.1	0.23	1.4	4.1	0.08 J	0.96
Benzo(a)anthracene	1	5.6	20	1	3.3	18	0.31	3.9
Benzo(a)pyrene	1	1	17	1.2	3.6	22	0.28	4.6
Benzo(b)fluoranthene	1	5.6	22	1.3	3.4	26	0.39	5.4
Benzo(ghi)perylene	100	500	11	0.77	1.6	13	0.14 J	4.5
Benzo(k)fluoranthene	0.8	56	13	0.94	2.5	13	0.32	3.3
Benzoic Acid	NS	NS	1.4 U	0.65 U	0.62 U	6.4 U	0.65 U	0.63 U
Benzyl Alcohol	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
Biphenyl	NS	NS	0.26 J	0.46 U	0.075 J	4.5 U	0.46 U	0.44 U
Bis(2-chloroethoxy)methane	NS	NS	0.45 U	0.22 U	0.21 U	2.1 U	0.22 U	0.21 U
Bis(2-chloroethyl)ether	NS	NS	0.38 U	0.18 U	0.17 U	1.8 U	0.18 U	0.18 U
Bis(2-chloroisopropyl)ether	NS	NS	0.5 U	0.24 U	0.23 U	2.4 U	0.24 U	0.23 U
Bis(2-Ethylhexyl)phthalate	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
Butyl benzyl phthalate	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
Carbazole	NS	NS	1.5	0.064 J	0.39	0.6 J	0.2 U	0.11 J
Chrysene	1	56	22	1.2	3.5	22	0.35	4
Dibenzo(a,h)anthracene	0.33	0.56	9.4	0.19	0.61	3.8	0.12 U	2
Dibenzofuran	7	350	2.3	0.2 U	0.42	2 U	0.2 U	0.2 U
Diethyl phthalate	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
Dimethyl phthalate	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
Di-n-butylphthalate	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
Di-n-octylphthalate	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
Fluoranthene	100	500	43	1.3	6.4	24	0.55	4.6
Fluorene	30	500	5.8	0.2 U	0.77	0.95 J	0.2 U	0.2 U
Hexachlorobenzene	0.33	6	0.25 U	0.12 U	0.12 U	1.2 U	0.12 U	0.12 U
Hexachlorobutadiene	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
Hexachlorocyclopentadiene	NS	NS	1.2 U	0.58 U	0.55 U	5.6 U	0.57 U	0.56 U
Hexachloroethane	NS	NS	0.33 U	0.16 U	0.15 U	1.6 U	0.16 U	0.16 U
Indeno(1,2,3-cd)Pyrene	0.5	5.6	12	0.82	2	12	0.18	3.1
Isophorone	NS	NS	0.38 U	0.18 U	0.17 U	1.8 U	0.18 U	0.18 U
Naphthalene	12	500	1.3	0.2 U	1.6	2 U	0.2 U	0.2 U
Nitrobenzene	NS	NS	0.38 U	0.18 U	0.17 U	1.8 U	0.18 U	0.18 U
NitrosoDiPhenylAmine(NDPA)/DPA	NS	NS	0.33 U	0.16 U	0.15 U	1.6 U	0.16 U	0.16 U
n-Nitrosodi-n-propylamine	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
P-Chloro-M-Cresol	NS	NS	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
Pentachlorophenol	0.8	6.7	0.33 U	0.16 U	0.15 U	1.6 U	0.16 U	0.16 U
Phenanthrene	100	500	25	0.4	4.6	6.6	0.23	1.7
Phenol	0.33	500	0.42 U	0.2 U	0.19 U	2 U	0.2 U	0.2 U
Pyrene	100	500	37	1.3	5.6	26	0.51	4.8

Note: * = Dilution rates vary.

Table 3
Bronx Zoo Transportation Facility
Tax Block 4333, Lot 1
Bronx, NY
Subsurface (Phase II) Investigation Soil Analytical Results
Metals

Client ID Lab Sample ID Date Sampled Dilution mg/kg	NYSDEC Part 375 Unrestricted SCO mg/kg	NYSDEC Part 375 Commercial SCO mg/kg	SB-1 (1-2') L1310472-01 6/7/2013 2/1 *	SB-2 (2-3') L1310472-02 6/7/2013 2/1 *	SB-3 (2-3') L1310472-03 6/7/2013 2/1 *	SB-4 (2-3') L1310472-04 6/7/2013 2/1 *	SB-5 (2-3') L1310472-05 6/7/2013 2/1 *	SB-6 (2-3') L1310472-06 6/7/2013 2/1 *
Aluminum	NS	NS	7,300	11,000	8,600	15,000	16,000	12,000
Antimony	NS	NS	4.4 U	4.6 U	4.3 U	4.6 U	4.5 U	4.6 U
Arsenic	13	16	3.4	3.4	3.7	5.6	5.5	2.8
Barium	350	400	70	68	99	100	120	54
Beryllium	7.2	590	0.64	0.29 J	0.34 J	0.5	0.35 J	0.32 J
Cadmium	2.5	9.3	0.37 J	0.43 J	0.33 J	0.39 J	0.42 J	0.28 J
Calcium	NS	NS	66,000	1,700	64,000	1,400	2,100	1,300
Chromium	30	1,500	15	26	16	27	24	25
Cobalt	NS	NS	8.2	6.9	5.2	8	8.2	6.7
Copper	50	270	30	23	21	35	43	31
Iron	NS	NS	14,000	16,000	13,000	19,000	22,000	16,000
Lead	63	1,000	**68**	**79**	**100**	**68**	**250**	21
Magnesium	NS	NS	38,000	3,900	33,000	3,400	3,900	3,800
Manganese	1600	10,000	360	330	230	360	310	140
Mercury	0.18	2.8	0.08 J	0.14	0.06 J	0.17	0.07 J	0.18
Nickel	30	310	13	16	10	16	14	15
Potassium	NS	NS	1,600	1,600	1,100	2,100	1,300	1,300
Selenium	3.9	1,500	1.8 U	1.8 U	1.7 U	1.8 U	1.8 U	1.8 U
Silver	2	1,500	0.88 U	0.91 U	0.86 U	0.92 U	0.9 U	0.91 U
Sodium	NS	NS	150 J	170 J	240	80 J	220	200
Thallium	NS	NS	1.8 U	1.8 U	1.7 U	1.8 U	1.8 U	1.8 U
Vanadium	NS	NS	27	44	24	38	39	33
Zinc	109	10,000	70	74	88	77	99	53

Note: * = The dilution rate for Mercury is 1.

Table 3
Bronx Zoo Transportation Facility
Tax Block 4333, Lot 1
Bronx, NY
Subsurface (Phase II) Investigation Soil Analytical Results
Metals

Client ID Lab Sample ID Date Sampled Dilution mg/kg	NYSDEC Part 375 Unrestricted SCO mg/kg	NYSDEC Part 375 Commercial SCO mg/kg	SB-7 (2-3') L1310472-07 6/7/2013 2/1 *	SB-8 (2-3') L1310472-08 6/7/2013 2/1 *	SB-9 (2-3') L1310472-09 6/7/2013 2/1 *	SB-10 (2-3') L1310472-10 6/7/2013 2/1 *	SB-11 (2-3') L1310472-11 6/7/2013 2/1 *	SB-12 (2-3') L1310472-12 6/7/2013 2/1 *
Aluminum	NS	NS	5,000	15,000	11,000	12,000	13,000	18,000
Antimony	NS	NS	4.9 U	4.7 U	4.5 U	4.5 U	4.7 U	4.5 U
Arsenic	13	16	2.2	4.6	3.9	5.1	3.6	5
Barium	350	400	57	91	72	86	100	85
Beryllium	7.2	590	0.49 U	0.34 J	0.25 J	0.14 J	0.37 J	0.44 J
Cadmium	2.5	9.3	0.62 J	0.46 J	0.4 J	0.68 J	0.42 J	0.35 J
Calcium	NS	NS	11,000	4,000	3,000	6,400	1,600	2,300
Chromium	30	1,500	22	26	21	**32**	27	24
Cobalt	NS	NS	4.9	9.1	9	10	14	8.1
Copper	50	270	46	**64**	**55**	**79**	**54**	28
Iron	NS	NS	11,000	19,000	18,000	18,000	18,000	22,000
Lead	63	1,000	**78**	57	**100**	**120**	**79**	**81**
Magnesium	NS	NS	6,600	4,800	4,100	5,400	4,100	4,400
Manganese	1600	10,000	260	240	260	260	450	360
Mercury	0.18	2.8	**0.57**	0.17	**0.28**	**0.3**	0.16	0.07 J
Nickel	30	310	12	21	16	25	28	14
Potassium	NS	NS	1,600	3,000	2,000	2,600	2,600	950
Selenium	3.9	1,500	2 U	1.9 U	1.8 U	1.8 U	1.9 U	1.8 U
Silver	2	1,500	0.98 U	0.95 U	0.9 U	0.91 U	0.94 U	0.9 U
Sodium	NS	NS	220	540	280	660	220	160 J
Thallium	NS	NS	2 U	1.9 U	1.8 U	1.8 U	1.9 U	1.8 U
Vanadium	NS	NS	33	41	53	53	39	36
Zinc	109	10,000	**160**	89	91	**140**	90	64

Note: * = The dilution rate for Mercury is 1

Table 4
Bronx Zoo Transportation Facility
Tax Block 4333, Lot 1
Bronx, NY
Subsurface (Phase II) Investigation Soil Analytical Results
Pesticides

Client ID Lab Sample ID Date Sampled Dilution mg/kg	NYSDEC Part 375 Unrestricted SCO mg/kg	NYSDEC Part 375 Commercial SCO mg/kg	SB-1 (1-2') L1310472-01 6/7/2013 20	SB-2 (2-3') L1310472-02 6/7/2013 10	SB-3 (2-3') L1310472-03 6/7/2013 20	SB-4 (2-3') L1310472-04 6/7/2013 2	SB-5 (2-3') L1310472-05 6/7/2013 1	SB-6 (2-3') L1310472-06 6/7/2013 1
4,4'-DDD	0.0033	92	0.0359 U	**0.00956** J	0.0356 U	0.00203 J	0.00183 U	0.00187 U
4,4'-DDE	0.0033	62	0.0359 U	**0.0164** J	0.0356 U	**0.21**	0.00183 U	0.00187 U
4,4'-DDT	0.0033	47	0.0672 U	0.0355 U	0.0667 U	**0.108**	0.00343 U	0.0035 U
Aldrin	0.005	0.68	0.0359 U	0.019 U	0.0356 U	0.00378 U	0.00183 U	0.00187 U
Alpha-BHC	0.02	3.4	0.0149 U	0.0079 U	0.0148 U	0.00157 U	0.000762 U	0.000778 U
Beta-BHC	0.036	3	0.0359 U	0.019 U	0.0356 U	0.00378 U	0.00183 U	0.00187 U
Chlordane	0.094	24	0.291 U	0.154 U	0.289 U	0.0307 U	0.0149 U	0.0152 U
cis-Chlordane	0.094	24	0.0448 U	0.0237 U	0.0445 U	0.00472 U	0.00229 U	0.00233 U
Delta-BHC	0.04	500	0.0359 U	0.019 U	0.0356 U	0.00378 U	0.00183 U	0.00187 U
Dieldrin	0.005	1.4	0.0224 U	0.0118 U	0.0222 U	0.00236 U	0.00114 U	0.00117 U
Endosulfan I	2.4	200	0.0359 U	0.019 U	0.0356 U	0.00378 U	0.00183 U	0.00187 U
Endosulfan II	2.4	200	0.0359 U	0.019 U	0.0356 U	0.00378 U	0.00204	0.00187 U
Endosulfan sulfate	2.4	200	0.0149 U	0.0079 U	0.0148 U	0.00157 U	0.000762 U	0.000778 U
Endrin	0.014	89	0.0149 U	0.0079 U	0.0148 U	0.00157 U	0.000762 U	0.000778 U
Endrin ketone	NS	NS	0.0359 U	0.019 U	0.0356 U	0.00378 U	0.00183 U	0.00187 U
Heptachlor	0.042	15	0.0179 U	0.00948 U	0.0178 U	0.00189 U	0.000915 U	0.000933 U
Heptachlor epoxide	NS	NS	0.0672 U	0.0355 U	0.0667 U	0.00708 U	0.00343 U	0.0035 U
Lindane	0.1	9.2	0.0149 U	0.0079 U	0.0148 U	0.00157 U	0.000762 U	0.000778 U
Methoxychlor	NS	NS	0.0672 U	0.0355 U	0.0667 U	0.00708 U	0.00343 U	0.0035 U
Toxaphene	NS	NS	0.672 U	0.355 U	0.667 U	0.0708 U	0.0343 U	0.035 U
trans-Chlordane	NS	NS	0.0448 U	0.0237 U	0.0445 U	0.00472 U	0.00229 U	0.00233 U

Table 4
Bronx Zoo Transportation Facility
Tax Block 4333, Lot 1
Bronx, NY
Subsurface (Phase II) Investigation Soil Analytical Results
Pesticides

Client ID Lab Sample ID Date Sampled Dilution mg/kg	NYSDEC Part 375 Unrestricted SCO mg/kg	NYSDEC Part 375 Commercial SCO mg/kg	SB-7 (2-3') L1310472-07 6/7/2013 20	SB-8 (2-3') L1310472-08 6/7/2013 20	SB-9 (2-3') L1310472-09 6/7/2013 20	SB-10 (2-3') L1310472-10 6/7/2013 20	SB-11 (2-3') L1310472-11 6/7/2013 1	SB-12 (2-3') L1310472-12 6/7/2013 1
4,4'-DDD	**0.0033**	**92**	0.0394 U	0.038 U	0.0352 U	0.037 U	0.00314	0.0018 U
4,4'-DDE	**0.0033**	**62**	0.0394 U	0.038 U	0.0352 U	0.037 U	**0.0502**	0.0018 U
4,4'-DDT	**0.0033**	**47**	0.0738 U	0.0714 U	**0.0526** J	**0.126**	**0.0815**	0.00337 U
Aldrin	**0.005**	**0.68**	0.0394 U	0.038 U	0.0352 U	0.037 U	0.00192 U	0.0018 U
Alpha-BHC	**0.02**	**3.4**	0.0164 U	0.0158 U	0.0147 U	0.0154 U	0.0008 U	0.000749 U
Beta-BHC	**0.036**	**3**	0.0394 U	0.038 U	0.0352 U	0.037 U	0.00192 U	0.0018 U
Chlordane	**0.094**	**24**	0.32 U	0.309 U	0.286 U	0.3 U	0.0156 U	0.0146 U
cis-Chlordane	**0.094**	**24**	0.0492 U	0.0476 U	0.0441 U	0.0462 U	0.0024 U	0.00225 U
Delta-BHC	**0.04**	**500**	0.0394 U	0.038 U	0.0352 U	0.037 U	0.00192 U	0.0018 U
Dieldrin	**0.005**	**1.4**	0.0246 U	0.0238 U	0.022 U	0.0231 U	0.0012 U	0.00112 U
Endosulfan I	**2.4**	**200**	0.0394 U	0.038 U	0.0352 U	0.037 U	0.00192 U	0.0018 U
Endosulfan II	**2.4**	**200**	0.0394 U	0.038 U	0.0352 U	0.037 U	0.00192 U	0.0018 U
Endosulfan sulfate	**2.4**	**200**	0.0164 U	0.0158 U	0.0147 U	0.0154 U	0.0008 U	0.000749 U
Endrin	**0.014**	**89**	0.0164 U	0.0158 U	0.0147 U	0.0154 U	0.0008 U	0.000749 U
Endrin ketone	**NS**	**NS**	0.0394 U	0.038 U	0.0352 U	0.037 U	0.00192 U	0.0018 U
Heptachlor	**0.042**	**15**	0.0197 U	0.019 U	0.0176 U	0.0185 U	0.00096 U	0.000898 U
Heptachlor epoxide	**NS**	**NS**	0.0738 U	0.0714 U	0.0661 U	0.0693 U	0.0036 U	0.00337 U
Lindane	**0.1**	**9.2**	0.0164 U	0.0158 U	0.0147 U	0.0154 U	0.0008 U	0.000749 U
Methoxychlor	**NS**	**NS**	0.0738 U	0.0714 U	0.0661 U	0.0693 U	0.0036 U	0.00337 U
Toxaphene	**NS**	**NS**	0.738 U	0.714 U	0.661 U	0.693 U	0.036 U	0.0337 U
trans-Chlordane	**NS**	**NS**	0.0492 U	0.0476 U	0.0441 U	0.0462 U	0.0024 U	0.00225 U

Table 5
Bronx Zoo Transportation Facility
Tax Block 4333, Lot 1
Bronx, NY
Subsurface (Phase II) Investigation Soil Vapor Analytical Results
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution µg/m³	NYSDOH 2003 Soil Vapor Intrusion Air Guideline Value µg/m³	NYSDOH 2003 Soil Vapor Indoor Upper Fence µg/m³	EPA 2001 BASE 90th percentile µg/m³	SV-1 L1310488-01 6/7/2013 10	SV-2 L1310488-02 6/7/2013 10
1,1,1-Trichloroethane	NS	2.5	20.6	10.9 U	10.9 U
1,1,2,2-Tetrachloroethane	NS	0.4	NS	13.7 U	13.7 U
1,1,2-Trichloroethane	NS	0.4	<1.5	10.9 U	10.9 U
1,1-Dichloroethane	NS	0.4	<0.7	8.09 U	8.09 U
1,1-Dichloroethene	NS	0.4	<1.4	7.93 U	7.93 U
1,2,4-Trichlorobenzene	NS	0.5	<6.8	14.8 U	14.8 U
1,2,4-Trimethylbenzene	NS	9.8	9.5	18.8	31.8
1,2-Dibromoethane	NS	0.4	<1.5	15.4 U	15.4 U
1,2-Dichlorobenzene	NS	0.5	<1.2	12 U	12 U
1,2-Dichloroethane	NS	0.4	<0.9	8.09 U	8.09 U
1,2-Dichloropropane	NS	0.4	<1.6	9.24 U	9.24 U
1,3,5-Trimethybenzene	NS	NS	NS	9.83 U	12.4
1,3-Butadiene	NS	0.5	<3.0	4.42 U	4.42 U
1,3-Dichlorobenzene	NS	0.5	<2.4	12 U	12 U
1,4-Dichlorobenzene	NS	1.2	5.5	12 U	12 U
1,4-Dioxane	NS	NS	NS	7.21 U	7.21 U
2,2,4-Trimethylpentane	NS	5	NS	9.34 U	9.34 U
2-Butanone	NS	16	12	5.9 U	7.28
2-Hexanone	NS	NS	NS	8.2 U	8.2 U
3-Chloropropene	NS	NS	NS	6.26 U	6.26 U
4-Ethyltoluene	NS	NS	3.6	9.83 U	9.83 U
4-Methyl-2-pentanone	NS	1.9	6	8.2 U	8.2 U
Acetone	NS	115	98.9	3,350	1,150
Benzene	NS	13	9.4	6.39 U	15
Benzyl chloride	NS	NS	<6.8	10.4 U	10.4 U
Bromodichloromethane	NS	NS	NS	13.4 U	13.4 U
Bromoform	NS	NS	NS	20.7 U	20.7 U
Bromomethane	NS	0.5	<1.7	7.77 U	7.77 U
Carbon disulfide	NS	NS	4.2	6.23 U	6.23 U
Carbon tetrachloride	NS	1.3	<1.3	12.6 U	12.6 U
Chlorobenzene	NS	0.4	<0.9	9.21 U	9.21 U
Chloroethane	NS	0.4	<1.1	5.28 U	5.28 U
Chloroform	NS	1.2	1.1	9.77 U	9.77 U
Chloromethane	NS	4.2	3.7	4.13 U	4.13 U
cis-1,2-Dichloroethene	NS	0.4	<1.9	7.93 U	7.93 U
cis-1,3-Dichloropropene	NS	0.4	<2.3	9.08 U	9.08 U
Cyclohexane	NS	6.3	NS	6.88 U	6.88 U
Dibromochloromethane	NS	NS	NS	17 U	17 U
Dichlorodifluoromethane	NS	10	16.5	9.89 U	949
Ethanol	NS	1,300	210	286	92
Ethyl Acetate	NS	NS	5.4	18 U	18 U
Ethylbenzene	NS	6.4	5.7	8.69 U	21.8
Freon-113	NS	2.5	3.5	15.3 U	15.3 U
Freon-114	NS	0.4	NS	14 U	14 U
Heptane	NS	18	NS	103	77.9
Hexachlorobutadiene	NS	0.5	<6.8	21.3 U	21.3 U
Isopropanol	NS	NS	250	13.9	12.3 U
Methyl tert butyl ether	NS	14	11.5	7.21 U	7.21 U
Methylene chloride	0.06	16	10	34.7 U	34.7 U
n-Hexane	NS	14	10.2	7.05 U	7.05 U
o-Xylene	NS	7.1	7.9	9.12	25.1
p/m-Xylene	NS	11	22.2	20.2	86.4
Propylene	NS	NS	NS	16.1	8.61 U
Styrene	NS	1.4	1.9	8.52 U	8.52 U
Tetrachloroethene	0.1	2.5	15.9	13.6 U	13.6 U
Tetrahydrofuran	NS	0.8	NS	5.9 U	5.9 U
Toluene	NS	57	43	18.5	112
trans-1,2-Dichloroethene	NS	NS	NS	7.93 U	7.93 U
trans-1,3-Dichloropropene	NS	NC	<1.3	9.08 U	9.08 U
Trichloroethene	0.005	0.5	4.2	10.7 U	10.7 U
Trichlorofluoromethane	NS	12	18.1	11.2 U	5,390
Vinyl acetate	NS	NS	NS	7.04 U	7.04 U
Vinyl bromide	NS	NS	NS	8.74 U	8.74 U
Vinyl chloride	NS	0.4	<1.9	5.11 U	5.11 U

Tables 1-5
Bronx Zoo Transportation Facility
Tax Block 4333, Lot 1
Bronx, NY
Subsurface (Phase II) Investigation Analytical Results
Notes

GENERAL

NS : No soil cleanup objective listed.

U : The analyte was not detected at the indicated concentration.

J : The concentration given is an estimated value.

SOIL

Exceedences of Part 375 Unrestricted SCO are highlighted in bold font.

Exceedences of Part 375 Commerical SCO are highlighted in gray.

Part 375 Soil Cleanup Objectives : Soil Clean-up Objectives listed in NYSDEC (New York State Department of Environmental Conservation) "Part 375" Regulations (6 NYCRR Part 375).

mg/kg : milligrams per kilogram = parts per million (ppm)

SOIL VAPOR

Exceedences of NYSDOH Soil Vapor Indoor Upper Fence are highlighted in bold font.

Exceedences of EPA Base 90th Percentile are highlighted in gray.

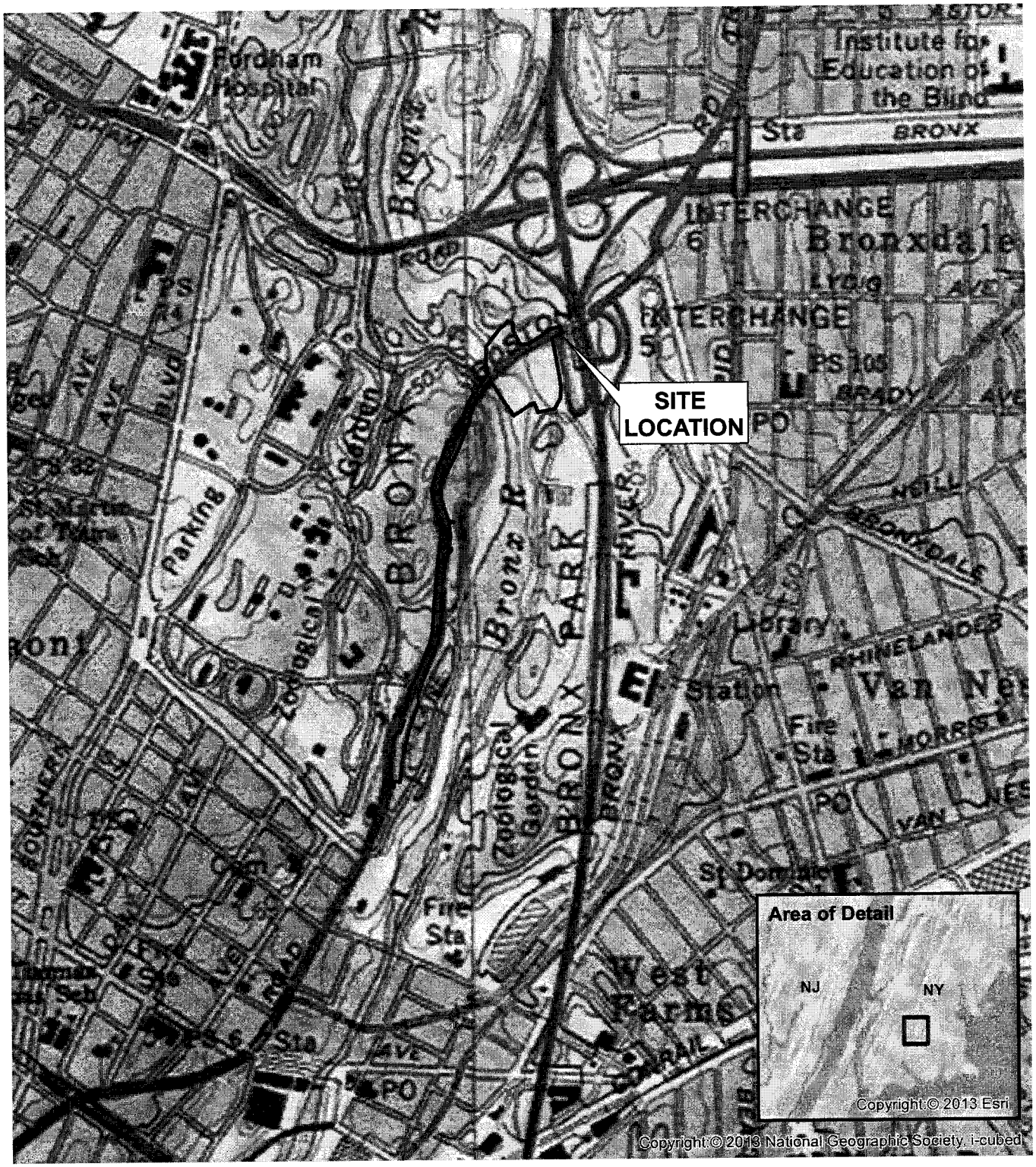
$\mu g/m^3$: micrograms per cubic meter of air

NYSDOH 2003 Soil Vapor Indoor Upper Fence : Upper fence indoor air values from "Table C1. NYSDOH 2003: Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes", published in the NYSDOH Soil Vapor Intrusion Guidance Document, Appendix C" (October 2006).

EPA 2001 BASE 90th percentile : 90th Percentile indoor air values from "Table C-2. EPA 2001: Building Assessment and Survey Evaluation (BASE) Database, SUMMA canister method", published in the NYSDOH Soil Vapor Intrusion Guidance Document, Appendix C" (October 2006).

NYSDOH Soil Vapor Intrusion Air Guidance Value : NYSDOH Air Guideline Values (AGVs) presented in the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006 ("NYSDOH Vapor Intrusion Guidance Document").

FIGURES

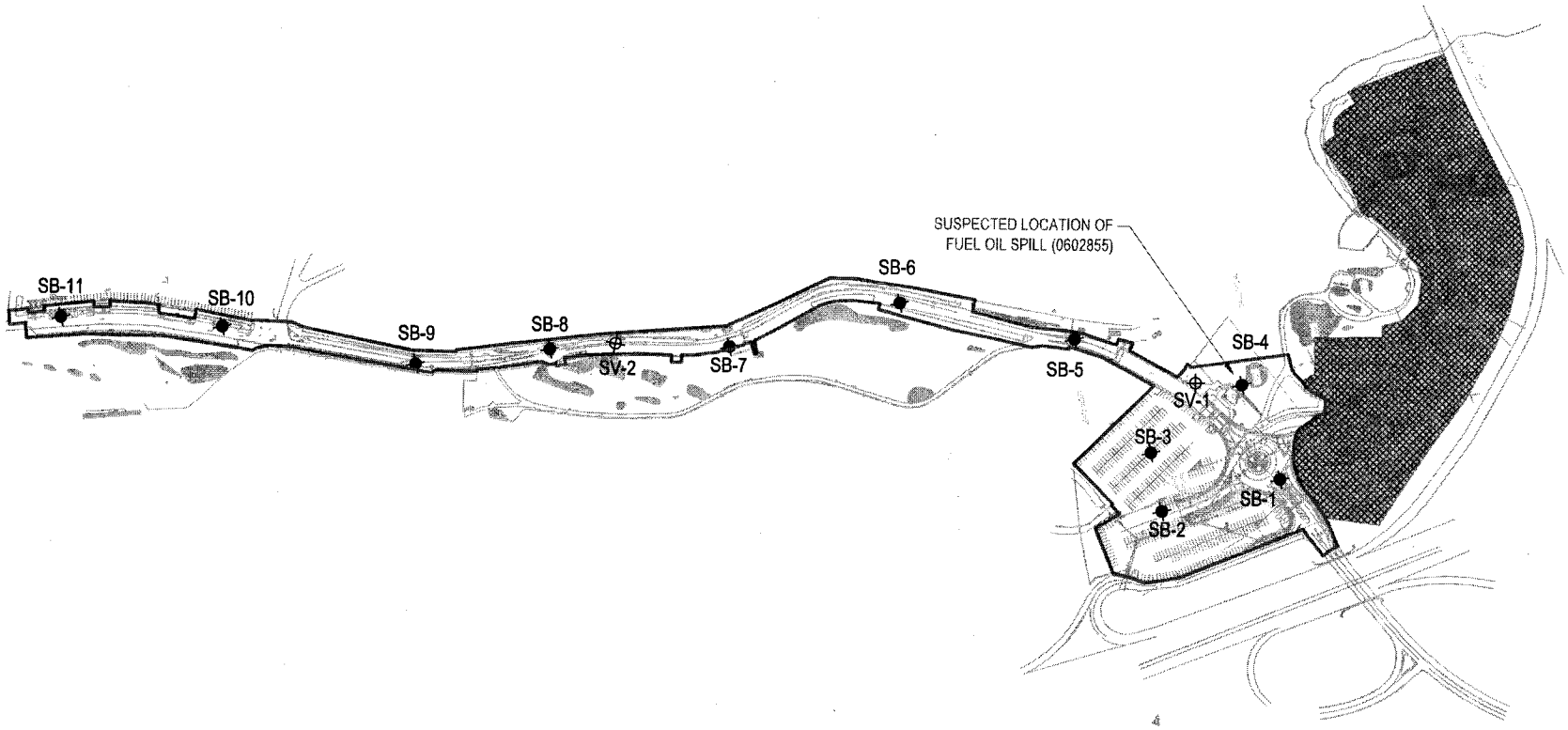


SOURCE
USGS 7.5 Minute Topographic Map
CENTRAL PARK and FLUSHING Quad 1995

0 1,000 2,0

Bronx Zoo Transportation Facility Bronx, New York	AKRF Environmental Consultants 440 Park Avenue South, New York, N.Y. 10016	DATE **6/27/2013**
		PROJECT No. **10956**
SITE LOCATION		FIGURE **1**

©2013 AKRF, Inc. Environmental Consultants O:\Projects\10956 - BRONX ZOO INTERMODAL TRANS FACILITY\hazmat Fig 1 loc



LEGEND:

- PROJECT SITE BOUNDARY
- SB-1 SOIL BORING LOCATION
- SV-1 SOIL VAPOR LOCATION
- GRASSY AREA FORMERLY PART OF PROJECT

0' 150' 300' 600'
SCALE IN FEET

Map Source:
NYCDCP (NYC Dept. of City Planning) GIS database

AKRF Environmental Consultants
440 Park Avenue South, New York, NY 10016

BRONX ZOO TRANSPORTATION FACILITY
BRONX, NEW YORK

PROPOSED SAMPLE LOCATIONS

DATE	6.27.2013
PROJECT NO.	10956
SCALE	as shown
FIGURE	2

APPENDIX A

BORING LOGS

SOIL BORING LOG

Bronx Zoo
10956-2503

Boring No. **SB-1**
Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY 10016
Phone (212) 696-0670 Fax (212) 726-0942

Drilling Method: Geoprobe
Sampling Method: Macrocore
Driller : Zebra
Sampler: Greg Baird

Drilling
Start **Time** 9:30
Finish **Time** 9:45
Date 6/7/2013
Weather: Heavy Rains

Depth (feet)	Recovery (Inches)	Blows	Surface Condition: Asphalt	Odor	Moisture	PID	NAPL	Samples Collected for Lab Analysis
1			Gray, brown SAND, Silt and Gravel, some Brick.	None	Dry	ND	ND	SB-1 @ 2'
2								
3								
4								
5								
6								
7			End of Boring 2' below grade.					
8								

Notes:

SB-1 was hand augered to 2' below grade.

Groundwater was not encountered.

PID = photoionization detector ppm = parts per million ND = Not Detected

SOIL BORING LOG

Bronx Zoo
10956-2503

Boring No. **SB-2**
Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY 10016
Phone (212) 696-0670 Fax (212) 726-0942

Drilling Method: Geoprobe
Sampling Method: Macrocore
Driller : Zebra
Sampler: Greg Baird

Drilling
Start **Time** 10:00
Finish **Time** 10:10
Date 6/7/2013
Weather: Heavy Rains

Depth (feet)	Recovery (Inches)	Blows	Surface Condition: Asphalt	Odor	Moisture	PID	NAPL	Samples Collected for Lab Analysis
1 2 3 4	31		Gray, brown SAND, Silt and Gravel, some Brick.	None	Dry	ND	ND	SB-2 @ 2-3'
5 6 7 8	5		Gray, brown SAND, Silt and Gravel, some Brick. End of Boring 5' below grade.	None	Dry	ND	ND	

Notes:
Groundwater was not encountered.
PID = photoionization detector ppm = parts per million ND = Not Detected

SOIL BORING LOG

Bronx Zoo
10956-2503

Boring No. **SB-3**
Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY 10016
Phone (212) 696-0670 Fax (212) 726-0942

Drilling Method: Geoprobe
Sampling Method: Macrocore
Driller : Zebra
Sampler: Greg Baird

Drilling
Start **Time** 10:15 | **Finish** **Time** 10:25
Date 6/7/2013
Weather: Heavy Rains

Depth (feet)	Recovery (Inches)	Blows	Surface Condition: Asphalt	Odor	Moisture	PID	NAPL	Samples Collected for Lab Analysis
1 2 3 4	34		Gray, brown SAND, Silt and Gravel, some Brick.	None	Dry	ND	ND	SB-3 @ 2-3'
5 6 7 8	6		Gray, brown SAND, Silt and Gravel, some Brick. End of Boring 5' below grade.	None	Dry	ND	ND	

Notes:
Groundwater was not encountered.
PID = photoionization detector ppm = parts per million ND = Not Detected

SOIL BORING LOG

Bronx Zoo
10956-2503

Boring No. **SB-4**
Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY 10016
Phone (212) 696-0670 Fax (212) 726-0942

Drilling Method: Geoprobe
Sampling Method: Macrocore
Driller : Zebra
Sampler: Greg Baird

Drilling
Start Time 10:30
Finish Time 10:45
Date 6/7/2013
Weather: Heavy Rains

Depth (feet)	Recovery (Inches)	Blows	Surface Condition: Asphalt	Odor	Moisture	PID	NAPL	Samples Collected for Lab Analysis
1 2 3 4	30		Gray, brown SAND, Silt and Gravel, some Brick.	None	Dry	ND	ND	SB-4 @ 2-3'
5 6 7 8	6		Gray, brown SAND, Silt and Gravel, some Brick. End of Boring 5' below grade.	None	Dry	ND	ND	

Notes:
Groundwater was not encountered.
PID = photoionization detector ppm = parts per million ND = Not Detected

SOIL BORING LOG

Bronx Zoo
10956-2503

Boring No. **SB-5**
Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY 10016
Phone (212) 696-0670 Fax (212) 726-0942

Drilling Method: Geoprobe
Sampling Method: Macrocore
Driller : Zebra
Sampler: Greg Baird

Drilling
Start Time 11:30
Finish Time 11:25
Date 6/7/2013
Weather: Heavy Rains

Surface Condition: Asphalt

Depth (feet)	Recovery (Inches)	Blows		Odor	Moisture	PID	NAPL	Samples Collected for Lab Analysis
1	48		Top 10": Dark brown, brown SAND and Silt.	None	Dry	ND	ND	SB-5 @ 2-3'
2			Bottom 38": Light brown CLAY, some Gravel.	None	Dry	ND	ND	
3								
4								
5	10		Light brown CLAY, some Gravel.	None	Dry	ND	ND	
6								
7								
8			End of Boring 5' below grade.					

Notes:

Duplicate collected SB-12

Groundwater was not encountered.

PID = photoionization detector ppm = parts per million ND = Not Detected

SOIL BORING LOG

Bronx Zoo
10956-2503

Boring No. **SB-6**
Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY 10016
Phone (212) 696-0670 Fax (212) 726-0942

Drilling Method: Geoprobe
Sampling Method: Macrocore
Driller : Zebra
Sampler: Greg Baird

Drilling
Start Time 11:30
Finish Time 11:40
Date 6/7/2013
Weather: Heavy Rains

Depth (feet)	Recovery (inches)	Blows	Surface Condition: Grass	Odor	Moisture	PID	NAPL	Samples Collected for Lab Analysis
1	30		Top 12": Degraded Bedrock, some Sand and Silt.	None	Dry	ND	ND	SB-6 @ 2-3'
2			Bottom 18": Light brown, brown SILT and Clay, some Gravel.	None	Dry	ND	ND	
3								
4								
5								
6								
7								
8			End of Boring 4' below grade.					

Notes:
Groundwater was not encountered.
PID = photoionization detector ppm = parts per million ND = Not Detected

SOIL BORING LOG

Bronx Zoo
10956-2503

Boring No. **SB-7**
Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY 10016
Phone (212) 696-0670 Fax (212) 726-0942

Drilling Method: Geoprobe
Sampling Method: Macrocore
Driller : Zebra
Sampler: Greg Baird

Drilling
Start Time 11:45
Finish Time 11:55
Date 6/7/2013
Weather: Heavy Rains

Depth (feet)	Recovery (Inches)	Blows	Surface Condition: Grass	Odor	Moisture	PID	NAPL	Samples Collected for Lab Analysis
1			Top 5": Dark brown, brown SAND and Silt.	None	Dry	ND	ND	SB-7 @ 2-3'
2	24		Bottom 19": Light brown SILT and Sand.	None	Dry	ND	ND	
3								
4								
5								
6								
7								
8			End of Boring 4' below grade.					

Notes:

Groundwater was not encountered.

PID = photoionization detector ppm = parts per million ND = Not Detected

SOIL BORING LOG

Bronx Zoo
10956-2503

Boring No. **SB-8**
Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY 10016
Phone (212) 696-0670 Fax (212) 726-0942

Drilling Method: Geoprobe
Sampling Method: Macrocore
Driller : Zebra
Sampler: Greg Baird

Drilling
Start Time 12:00
Finish Time 12:30
Date 6/7/2013
Weather: Heavy Rains

Depth (feet)	Recovery (Inches)	Blows	Surface Condition: Grass	Odor	Moisture	PID	NAPL	Samples Collected for Lab Analysis
1	40		Top 5": Dark brown, brown SAND and Silt.	None	Dry	ND	ND	SB-8 @ 2-3'
2			Middle 30": Dark brown, brown, gray SILT, some Gravel and Brick.	None	Dry	ND	ND	
3			Bottom 5": Degraded Bedrock, some Sand and Silt.	None	Dry	ND	ND	
4								
5								
6								
7			End of Boring 4' below grade.					
8								

Notes:
Groundwater was not encountered.
PID = photoionization detector ppm = parts per million ND = Not Detected

SOIL BORING LOG

Bronx Zoo
10956-2503

Boring No. **SB-9**
Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY 10016
Phone (212) 696-0670 Fax (212) 726-0942

Drilling Method: Geoprobe
Sampling Method: Macrocore
Driller : Zebra
Sampler: Greg Baird

Drilling
Start **Time** 12:35
Finish **Time** 12:55
Date 6/7/2013
Weather: Heavy Rains

Depth (feet)	Recovery (Inches)	Blows	Surface Condition: Grass	Odor	Moisture	PID	NAPL	Samples Collected for Lab Analysis
1			Top 5": Dark brown, brown SAND and Silt.	None	Dry	ND	ND	SB-9 @ 2-3'
2	20		Bottom 15": Light brown SILT, some Clay and Gravel.	None	Dry	ND	ND	
3								
4								
5								
6								
7								
8			End of Boring 4' below grade.					

Notes:

Groundwater was not encountered.

PID = photoionization detector ppm = parts per million ND = Not Detected

SOIL BORING LOG

Bronx Zoo
10956-2503

Boring No. **SB-10**
Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY 10016
Phone (212) 696-0670 Fax (212) 726-0942

Drilling Method: Geoprobe
Sampling Method: Macrocore
Driller : Zebra
Sampler: Greg Baird

Drilling
Start Time 13:00
Finish Time 13:15
Date 6/7/2013
Weather: Heavy Rains

Depth (feet)	Recovery (Inches)	Blows	Surface Condition: Grass	Odor	Moisture	PID	NAPL	Samples Collected for Lab Analysis
1	20"		Top 5": Dark brown, brown SAND and Silt.	None	Dry	ND	ND	SB-10 @ 2-3'
2			Bottom 15": Light brown SILT, some Clay and Gravel.	None	Dry	ND	ND	
3								
4								
5	5		Light brown SILT, some Clay and Gravel.					
6								
7								
8			End of Boring 5' below grade.					

Notes:
Groundwater was not encountered.
PID = photoionization detector ppm = parts per million ND = Not Detected

SOIL BORING LOG

Bronx Zoo
10956-2503

Boring No. **SB-11**
Sheet 1 of 1

AKRF
440 Park Avenue South, New York, NY 10016
Phone (212) 696-0670 Fax (212) 726-0942

Drilling Method: Geoprobe
Sampling Method: Macrocore
Driller : Zebra
Sampler: Greg Baird

Drilling
Start **Time** 13:15
Finish **Time** 13:30
Date 6/7/2013
Weather: Heavy Rains

Depth (feet)	Recovery (Inches)	Blows	Surface Condition: Grass	Odor	Moisture	PID	NAPL	Samples Collected for Lab Analysis
1	28"		Top 5": Dark brown, brown SAND and Silt.	None	Dry	ND	ND	SB-11 @ 2-3'
2			Bottom 23": Light brown SILT, some Clay and Gravel.	None	Dry	ND	ND	
3								
4								
5	10		Light brown SILT, some Clay and Gravel.					
6								
7								
8			End of Boring 5' below grade.					

Notes:
Groundwater was not encountered.
PID = photoionization detector ppm = parts per million ND = Not Detected

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No: 10956 **Client:** Bronx Zoo

Project Location: Bronx Zoo, NY **Sampled By:** Greg Baird

Date: 6/7/13

Sample ID: SV-1

Canister ID: 999

Flow Controller ID: 0426

Purging

Time Started: 1055

Time Stopped: 1100

Vol. Purged: 3 liters

Flow Rate: 1 L/min

Laboratory Sample (Summa Canister)

Time Started: 1105 **Vacuum:** -30.01 inHg

Time Stopped: 1155 **Vacuum:** -1.05 inHg

Field Sample

PID Calibration: 0815

Time Started: 1101

Time Stopped: 1104

PID Reading: ND ppm

He Reading 0 %

AKRF, Inc.
Environmental Consultants

Soil Vapor Sampling Log

Job No:	10956	**Client:**	Bronx Zoo
Project Location:	Bronx Zoo, NY	**Sampled By:**	Greg Baird
Date:	6/7/13		

Sample ID: SV-2
Canister ID: 961
Flow Controller ID: 0271

Purging

Time Started: 1220
Time Stopped: 1225
Vol. Purged: 3 liters
Flow Rate: 1 L/min

Laboratory Sample (Summa Canister)

Time Started:	1230	**Vacuum:**	-29.61 inHg
Time Stopped:	1325	**Vacuum:**	-2.67 inHg

Field Sample

PID Calibration: 0815
Time Started: 1225
Time Stopped: 1227
PID Reading: ND ppm
He Reading 658 ppm

APPENDIX B

LABORATORY ANALYTICAL DATA SHEETS

ANALYTICAL REPORT

Lab Number:	L1310472
Client:	AKRF, Inc. 440 Park Avenue South 7th Floor New York, NY 10016
ATTN:	Axel Schwendt
Phone:	(646) 388-9529
Project Name:	BRONX ZOO PHASE II
Project Number:	10956-2503
Report Date:	06/14/13

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1310472-01	SB-1 (1-2')	BRONX, NY	06/07/13 09:20
L1310472-02	SB-2 (2-3')	BRONX, NY	06/07/13 10:00
L1310472-03	SB-3 (2-3')	BRONX, NY	06/07/13 10:15
L1310472-04	SB-4 (2-3')	BRONX, NY	06/07/13 10:40
L1310472-05	SB-5 (2-3')	BRONX, NY	06/07/13 11:25
L1310472-06	SB-6 (2-3')	BRONX, NY	06/07/13 11:40
L1310472-07	SB-7 (2-3')	BRONX, NY	06/07/13 11:55
L1310472-08	SB-8 (2-3')	BRONX, NY	06/07/13 12:30
L1310472-09	SB-9 (2-3')	BRONX, NY	06/07/13 12:55
L1310472-10	SB-10 (2-3')	BRONX, NY	06/07/13 13:05
L1310472-11	SB-11 (2-3')	BRONX, NY	06/07/13 13:20
L1310472-12	SB-12 (2-3')	BRONX, NY	06/07/13 11:25
L1310472-13	TRIP BLANK	BRONX, NY	06/07/13 00:00

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

L1310472-01 through -12: Any reported concentrations that are below 200 ug/kg may be biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Semivolatile Organics

L1310472-01 and -10 have elevated detection limits due to the dilutions required by the sample matrices.
L1310472-03 has elevated detection limits due to the dilution required by the matrix interferences encountered during the concentration of the sample and the analytical dilution required by the sample matrix.

Pesticides

L1310472-01, -02, -03 and -07 through -10 have elevated detection limits due to the dilutions required by the sample matrices.
The surrogate recoveries for L1310472-01, -03 and -07 through -10 are below the acceptance criteria for 2,4,5,6-Tetrachloro-m-xylene and Decachlorobiphenyl (all 0%) due to the dilutions required to quantitate the samples. Re-extraction was not required; therefore, the results of the original analyses are reported.
The dual column RPDs for L1310472-04 and -11 are above the acceptance criteria for 4,4'-DDD; however, obvious column interferences are present. Due to these interferences, the lower of the two results is reported and qualified with a "P".
The dual column RPD for L1310472-05 is above the acceptance criteria for Endosulfan II; however, no obvious column interferences are present. The higher of the two results is reported and qualified with a "P".

Metals

L1310472-01 through -12 have elevated detection limits for all elements, except Mercury, due to the analytical dilutions required by the sample matrices.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative

Date: 06/14/13

ORGANICS

VOLATILES

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-01
Client ID: SB-1 (1-2')
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/10/13 10:44
Analyst: BN
Percent Solids: 86%

Date Collected: 06/07/13 09:20
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	12	2.3	1
1,1-Dichloroethane	ND		ug/kg	1.7	0.20	1
Chloroform	ND		ug/kg	1.7	0.43	1
Carbon tetrachloride	ND		ug/kg	1.2	0.24	1
1,2-Dichloropropane	ND		ug/kg	4.0	0.26	1
Dibromochloromethane	ND		ug/kg	1.2	0.36	1
1,1,2-Trichloroethane	ND		ug/kg	1.7	0.35	1
Tetrachloroethene	ND		ug/kg	1.2	0.16	1
Chlorobenzene	ND		ug/kg	1.2	0.40	1
Trichlorofluoromethane	ND		ug/kg	5.8	0.14	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.17	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Bromodichloromethane	ND		ug/kg	1.2	0.26	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.14	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
1,1-Dichloropropene	ND		ug/kg	5.8	0.53	1
Bromoform	ND		ug/kg	4.6	0.48	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.20	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	ND		ug/kg	1.7	0.13	1
Ethylbenzene	ND		ug/kg	1.2	0.17	1
Chloromethane	ND		ug/kg	5.8	0.91	1
Bromomethane	ND		ug/kg	2.3	0.39	1
Vinyl chloride	ND		ug/kg	2.3	0.16	1
Chloroethane	ND		ug/kg	2.3	0.36	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	0.24	1
Trichloroethene	ND		ug/kg	1.2	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	5.8	0.21	1
1,3-Dichlorobenzene	ND		ug/kg	5.8	0.21	1
1,4-Dichlorobenzene	ND		ug/kg	5.8	0.28	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-01
Client ID: SB-1 (1-2')
Sample Location: BRONX, NY

Date Collected: 06/07/13 09:20
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.3	0.12	1
p/m-Xylene	ND		ug/kg	2.3	0.37	1
o-Xylene	ND		ug/kg	2.3	0.31	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.17	1
Dibromomethane	ND		ug/kg	12	0.19	1
Styrene	ND		ug/kg	2.3	0.36	1
Dichlorodifluoromethane	ND		ug/kg	12	0.25	1
Acetone	17		ug/kg	12	3.6	1
Carbon disulfide	ND		ug/kg	12	2.3	1
2-Butanone	ND		ug/kg	12	0.41	1
Vinyl acetate	ND		ug/kg	12	0.56	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.28	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.26	1
2-Hexanone	ND		ug/kg	12	0.22	1
Bromochloromethane	ND		ug/kg	5.8	0.23	1
2,2-Dichloropropane	ND		ug/kg	5.8	0.26	1
1,2-Dibromoethane	ND		ug/kg	4.6	0.20	1
1,3-Dichloropropane	ND		ug/kg	5.8	0.20	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.37	1
Bromobenzene	ND		ug/kg	5.8	0.24	1
n-Butylbenzene	ND		ug/kg	1.2	0.23	1
sec-Butylbenzene	ND		ug/kg	1.2	0.24	1
tert-Butylbenzene	ND		ug/kg	5.8	0.65	1
o-Chlorotoluene	ND		ug/kg	5.8	0.18	1
p-Chlorotoluene	ND		ug/kg	5.8	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.8	0.91	1
Hexachlorobutadiene	ND		ug/kg	5.8	0.49	1
Isopropylbenzene	ND		ug/kg	1.2	0.19	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.22	1
Acrylonitrile	ND		ug/kg	12	0.28	1
n-Propylbenzene	ND		ug/kg	1.2	0.14	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.8	0.19	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.8	0.91	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.8	0.16	1
1,2,4-Trimethylbenzene	ND		ug/kg	5.8	0.66	1
1,4-Dioxane	ND		ug/kg	120	20.	1
1,4-Diethylbenzene	ND		ug/kg	4.6	0.18	1
4-Ethyltoluene	ND		ug/kg	4.6	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.6	0.15	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503
Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-01
Client ID: SB-1 (1-2')
Sample Location: BRONX, NY

Date Collected: 06/07/13 09:20
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Ethyl ether	ND		ug/kg	5.8	0.31	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.8	0.52	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	103		70-130

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-02
Client ID: SB-2 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/10/13 11:17
Analyst: BN
Percent Solids: 83%

Date Collected: 06/07/13 10:00
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	12	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.8	0.21	1
Chloroform	ND		ug/kg	1.8	0.45	1
Carbon tetrachloride	ND		ug/kg	1.2	0.25	1
1,2-Dichloropropane	ND		ug/kg	4.2	0.28	1
Dibromochloromethane	ND		ug/kg	1.2	0.37	1
1,1,2-Trichloroethane	ND		ug/kg	1.8	0.37	1
Tetrachloroethene	ND		ug/kg	1.2	0.17	1
Chlorobenzene	ND		ug/kg	1.2	0.42	1
Trichlorofluoromethane	ND		ug/kg	6.0	0.15	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.18	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Bromodichloromethane	ND		ug/kg	1.2	0.28	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.14	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
1,1-Dichloropropene	ND		ug/kg	6.0	0.55	1
Bromoform	ND		ug/kg	4.8	0.50	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.21	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	ND		ug/kg	1.8	0.14	1
Ethylbenzene	ND		ug/kg	1.2	0.18	1
Chloromethane	ND		ug/kg	6.0	0.94	1
Bromomethane	ND		ug/kg	2.4	0.41	1
Vinyl chloride	ND		ug/kg	2.4	0.17	1
Chloroethane	ND		ug/kg	2.4	0.38	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.26	1
Trichloroethene	ND		ug/kg	1.2	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	6.0	0.22	1
1,3-Dichlorobenzene	ND		ug/kg	6.0	0.22	1
1,4-Dichlorobenzene	ND		ug/kg	6.0	0.29	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-02
Client ID: SB-2 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 10:00
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.4	0.12	1
p/m-Xylene	ND		ug/kg	2.4	0.39	1
o-Xylene	ND		ug/kg	2.4	0.33	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.18	1
Dibromomethane	ND		ug/kg	12	0.20	1
Styrene	ND		ug/kg	2.4	0.37	1
Dichlorodifluoromethane	ND		ug/kg	12	0.26	1
Acetone	6.5	J	ug/kg	12	3.7	1
Carbon disulfide	ND		ug/kg	12	2.4	1
2-Butanone	ND		ug/kg	12	0.43	1
Vinyl acetate	ND		ug/kg	12	0.58	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.30	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.27	1
2-Hexanone	ND		ug/kg	12	0.23	1
Bromochloromethane	ND		ug/kg	6.0	0.24	1
2,2-Dichloropropane	ND		ug/kg	6.0	0.27	1
1,2-Dibromoethane	ND		ug/kg	4.8	0.21	1
1,3-Dichloropropane	ND		ug/kg	6.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.38	1
Bromobenzene	ND		ug/kg	6.0	0.25	1
n-Butylbenzene	ND		ug/kg	1.2	0.24	1
sec-Butylbenzene	ND		ug/kg	1.2	0.25	1
tert-Butylbenzene	ND		ug/kg	6.0	0.68	1
o-Chlorotoluene	ND		ug/kg	6.0	0.19	1
p-Chlorotoluene	ND		ug/kg	6.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.0	0.95	1
Hexachlorobutadiene	ND		ug/kg	6.0	0.51	1
Isopropylbenzene	ND		ug/kg	1.2	0.20	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.23	1
Acrylonitrile	ND		ug/kg	12	0.29	1
n-Propylbenzene	ND		ug/kg	1.2	0.15	1
1,2,3-Trichlorobenzene	ND		ug/kg	6.0	0.20	1
1,2,4-Trichlorobenzene	ND		ug/kg	6.0	0.95	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.0	0.17	1
1,2,4-Trimethylbenzene	ND		ug/kg	6.0	0.69	1
1,4-Dioxane	ND		ug/kg	120	21.	1
1,4-Diethylbenzene	ND		ug/kg	4.8	0.19	1
4-Ethyltoluene	ND		ug/kg	4.8	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.8	0.16	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-02
Client ID: SB-2 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 10:00
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Ethyl ether	ND		ug/kg	6.0	0.32	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.0	0.54	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	106		70-130

Serial_No:06141317:00

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-03
Client ID: SB-3 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/10/13 11:51
Analyst: BN
Percent Solids: 88%

Date Collected: 06/07/13 10:15
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	11	2.3	1
1,1-Dichloroethane	ND		ug/kg	1.7	0.20	1
Chloroform	ND		ug/kg	1.7	0.42	1
Carbon tetrachloride	ND		ug/kg	1.1	0.24	1
1,2-Dichloropropane	ND		ug/kg	4.0	0.26	1
Dibromochloromethane	ND		ug/kg	1.1	0.35	1
1,1,2-Trichloroethane	ND		ug/kg	1.7	0.34	1
Tetrachloroethene	ND		ug/kg	1.1	0.16	1
Chlorobenzene	ND		ug/kg	1.1	0.39	1
Trichlorofluoromethane	ND		ug/kg	5.6	0.14	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.16	1
1,1,1-Trichloroethane	ND		ug/kg	1.1	0.12	1
Bromodichloromethane	ND		ug/kg	1.1	0.26	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.14	1
cis-1,3-Dichloropropene	ND		ug/kg	1.1	0.14	1
1,1-Dichloropropene	ND		ug/kg	5.6	0.52	1
Bromoform	ND		ug/kg	4.5	0.47	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.1	0.19	1
Benzene	ND		ug/kg	1.1	0.13	1
Toluene	ND		ug/kg	1.7	0.13	1
Ethylbenzene	ND		ug/kg	1.1	0.17	1
Chloromethane	ND		ug/kg	5.6	0.88	1
Bromomethane	ND		ug/kg	2.3	0.38	1
Vinyl chloride	ND		ug/kg	2.3	0.16	1
Chloroethane	ND		ug/kg	2.3	0.36	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	0.24	1
Trichloroethene	ND		ug/kg	1.1	0.17	1
1,2-Dichlorobenzene	ND		ug/kg	5.6	0.21	1
1,3-Dichlorobenzene	ND		ug/kg	5.6	0.21	1
1,4-Dichlorobenzene	ND		ug/kg	5.6	0.27	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-03
Client ID: SB-3 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 10:15
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.3	0.12	1
p/m-Xylene	ND		ug/kg	2.3	0.36	1
o-Xylene	ND		ug/kg	2.3	0.31	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.17	1
Dibromomethane	ND		ug/kg	11	0.18	1
Styrene	ND		ug/kg	2.3	0.35	1
Dichlorodifluoromethane	ND		ug/kg	11	0.25	1
Acetone	44		ug/kg	11	3.5	1
Carbon disulfide	ND		ug/kg	11	2.3	1
2-Butanone	6.6	J	ug/kg	11	0.40	1
Vinyl acetate	ND		ug/kg	11	0.54	1
4-Methyl-2-pentanone	ND		ug/kg	11	0.28	1
1,2,3-Trichloropropane	ND		ug/kg	11	0.25	1
2-Hexanone	ND		ug/kg	11	0.21	1
Bromochloromethane	ND		ug/kg	5.6	0.22	1
2,2-Dichloropropane	ND		ug/kg	5.6	0.26	1
1,2-Dibromoethane	ND		ug/kg	4.5	0.20	1
1,3-Dichloropropane	ND		ug/kg	5.6	0.20	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.1	0.36	1
Bromobenzene	ND		ug/kg	5.6	0.24	1
n-Butylbenzene	ND		ug/kg	1.1	0.22	1
sec-Butylbenzene	ND		ug/kg	1.1	0.23	1
tert-Butylbenzene	ND		ug/kg	5.6	0.63	1
o-Chlorotoluene	ND		ug/kg	5.6	0.18	1
p-Chlorotoluene	ND		ug/kg	5.6	0.17	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.6	0.89	1
Hexachlorobutadiene	ND		ug/kg	5.6	0.48	1
Isopropylbenzene	ND		ug/kg	1.1	0.19	1
p-Isopropyltoluene	ND		ug/kg	1.1	0.22	1
Acrylonitrile	ND		ug/kg	11	0.27	1
n-Propylbenzene	ND		ug/kg	1.1	0.14	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.6	0.19	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.6	0.89	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.6	0.16	1
1,2,4-Trimethylbenzene	ND		ug/kg	5.6	0.65	1
1,4-Dioxane	ND		ug/kg	110	20.	1
1,4-Diethylbenzene	ND		ug/kg	4.5	0.18	1
4-Ethyltoluene	ND		ug/kg	4.5	0.13	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.5	0.15	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-03
Client ID: SB-3 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 10:15
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Ethyl ether	ND		ug/kg	5.6	0.30	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.6	0.51	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	119		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	103		70-130

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-04
Client ID: SB-4 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/10/13 12:25
Analyst: BN
Percent Solids: 84%

Date Collected: 06/07/13 10:40
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	12	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.8	0.21	1
Chloroform	ND		ug/kg	1.8	0.44	1
Carbon tetrachloride	ND		ug/kg	1.2	0.25	1
1,2-Dichloropropane	ND		ug/kg	4.2	0.27	1
Dibromochloromethane	ND		ug/kg	1.2	0.37	1
1,1,2-Trichloroethane	ND		ug/kg	1.8	0.36	1
Tetrachloroethene	ND		ug/kg	1.2	0.17	1
Chlorobenzene	ND		ug/kg	1.2	0.42	1
Trichlorofluoromethane	ND		ug/kg	6.0	0.14	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.17	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Bromodichloromethane	ND		ug/kg	1.2	0.27	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.14	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
1,1-Dichloropropene	ND		ug/kg	6.0	0.54	1
Bromoform	ND		ug/kg	4.8	0.50	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.20	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	ND		ug/kg	1.8	0.13	1
Ethylbenzene	ND		ug/kg	1.2	0.18	1
Chloromethane	ND		ug/kg	6.0	0.94	1
Bromomethane	ND		ug/kg	2.4	0.40	1
Vinyl chloride	ND		ug/kg	2.4	0.17	1
Chloroethane	ND		ug/kg	2.4	0.38	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.25	1
Trichloroethene	ND		ug/kg	1.2	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	6.0	0.22	1
1,3-Dichlorobenzene	ND		ug/kg	6.0	0.22	1
1,4-Dichlorobenzene	ND		ug/kg	6.0	0.29	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-04
Client ID: SB-4 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 10:40
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.4	0.12	1
p/m-Xylene	ND		ug/kg	2.4	0.38	1
o-Xylene	ND		ug/kg	2.4	0.32	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.18	1
Dibromomethane	ND		ug/kg	12	0.20	1
Styrene	ND		ug/kg	2.4	0.37	1
Dichlorodifluoromethane	ND		ug/kg	12	0.26	1
Acetone	ND		ug/kg	12	3.7	1
Carbon disulfide	ND		ug/kg	12	2.4	1
2-Butanone	ND		ug/kg	12	0.42	1
Vinyl acetate	ND		ug/kg	12	0.57	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.29	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.27	1
2-Hexanone	ND		ug/kg	12	0.22	1
Bromochloromethane	ND		ug/kg	6.0	0.24	1
2,2-Dichloropropane	ND		ug/kg	6.0	0.27	1
1,2-Dibromoethane	ND		ug/kg	4.8	0.21	1
1,3-Dichloropropane	ND		ug/kg	6.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.38	1
Bromobenzene	ND		ug/kg	6.0	0.25	1
n-Butylbenzene	ND		ug/kg	1.2	0.24	1
sec-Butylbenzene	ND		ug/kg	1.2	0.25	1
tert-Butylbenzene	ND		ug/kg	6.0	0.67	1
o-Chlorotoluene	ND		ug/kg	6.0	0.19	1
p-Chlorotoluene	ND		ug/kg	6.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.0	0.94	1
Hexachlorobutadiene	ND		ug/kg	6.0	0.50	1
Isopropylbenzene	ND		ug/kg	1.2	0.20	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.23	1
Acrylonitrile	ND		ug/kg	12	0.28	1
n-Propylbenzene	ND		ug/kg	1.2	0.15	1
1,2,3-Trichlorobenzene	ND		ug/kg	6.0	0.20	1
1,2,4-Trichlorobenzene	ND		ug/kg	6.0	0.94	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.0	0.17	1
1,2,4-Trimethylbenzene	ND		ug/kg	6.0	0.68	1
1,4-Dioxane	ND		ug/kg	120	21.	1
1,4-Diethylbenzene	ND		ug/kg	4.8	0.19	1
4-Ethyltoluene	ND		ug/kg	4.8	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.8	0.16	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-04
Client ID: SB-4 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 10:40
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Ethyl ether	ND		ug/kg	6.0	0.32	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.0	0.54	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	105		70-130

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-05	Date Collected:	06/07/13 11:25
Client ID:	SB-5 (2-3')	Date Received:	06/07/13
Sample Location:	BRONX, NY	Field Prep:	Not Specified
Matrix:	Soil		
Analytical Method:	1,8260C		
Analytical Date:	06/10/13 12:59		
Analyst:	BN		
Percent Solids:	86%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	12	2.3	1
1,1-Dichloroethane	ND		ug/kg	1.8	0.21	1
Chloroform	ND		ug/kg	1.8	0.43	1
Carbon tetrachloride	ND		ug/kg	1.2	0.24	1
1,2-Dichloropropane	ND		ug/kg	4.1	0.27	1
Dibromochloromethane	ND		ug/kg	1.2	0.36	1
1,1,2-Trichloroethane	ND		ug/kg	1.8	0.36	1
Tetrachloroethene	ND		ug/kg	1.2	0.16	1
Chlorobenzene	ND		ug/kg	1.2	0.41	1
Trichlorofluoromethane	ND		ug/kg	5.8	0.14	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.17	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Bromodichloromethane	ND		ug/kg	1.2	0.27	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.14	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
1,1-Dichloropropene	ND		ug/kg	5.8	0.53	1
Bromoform	ND		ug/kg	4.7	0.48	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.20	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	ND		ug/kg	1.8	0.13	1
Ethylbenzene	ND		ug/kg	1.2	0.17	1
Chloromethane	ND		ug/kg	5.8	0.92	1
Bromomethane	ND		ug/kg	2.3	0.40	1
Vinyl chloride	ND		ug/kg	2.3	0.16	1
Chloroethane	ND		ug/kg	2.3	0.37	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.25	1
Trichloroethene	ND		ug/kg	1.2	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	5.8	0.21	1
1,3-Dichlorobenzene	ND		ug/kg	5.8	0.21	1
1,4-Dichlorobenzene	ND		ug/kg	5.8	0.28	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-05
Client ID: SB-5 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:25
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.3	0.12	1
p/m-Xylene	ND		ug/kg	2.3	0.38	1
o-Xylene	ND		ug/kg	2.3	0.32	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.17	1
Dibromomethane	ND		ug/kg	12	0.19	1
Styrene	ND		ug/kg	2.3	0.36	1
Dichlorodifluoromethane	ND		ug/kg	12	0.26	1
Acetone	ND		ug/kg	12	3.6	1
Carbon disulfide	ND		ug/kg	12	2.3	1
2-Butanone	ND		ug/kg	12	0.42	1
Vinyl acetate	ND		ug/kg	12	0.56	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.28	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.26	1
2-Hexanone	ND		ug/kg	12	0.22	1
Bromochloromethane	ND		ug/kg	5.8	0.23	1
2,2-Dichloropropane	ND		ug/kg	5.8	0.26	1
1,2-Dibromoethane	ND		ug/kg	4.7	0.21	1
1,3-Dichloropropane	ND		ug/kg	5.8	0.20	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.37	1
Bromobenzene	ND		ug/kg	5.8	0.24	1
n-Butylbenzene	ND		ug/kg	1.2	0.23	1
sec-Butylbenzene	ND		ug/kg	1.2	0.24	1
tert-Butylbenzene	ND		ug/kg	5.8	0.66	1
o-Chlorotoluene	ND		ug/kg	5.8	0.19	1
p-Chlorotoluene	ND		ug/kg	5.8	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.8	0.92	1
Hexachlorobutadiene	ND		ug/kg	5.8	0.49	1
Isopropylbenzene	ND		ug/kg	1.2	0.20	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.22	1
Acrylonitrile	ND		ug/kg	12	0.28	1
n-Propylbenzene	ND		ug/kg	1.2	0.15	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.8	0.20	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.8	0.92	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.8	0.17	1
1,2,4-Trimethylbenzene	ND		ug/kg	5.8	0.67	1
1,4-Dioxane	ND		ug/kg	120	20.	1
1,4-Diethylbenzene	ND		ug/kg	4.7	0.19	1
4-Ethyltoluene	ND		ug/kg	4.7	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.7	0.15	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-05
Client ID: SB-5 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:25
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Ethyl ether	ND		ug/kg	5.8	0.31	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.8	0.52	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	127		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	111		70-130

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-06
Client ID: SB-6 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/10/13 13:33
Analyst: BN
Percent Solids: 82%

Date Collected: 06/07/13 11:40
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	12	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.8	0.22	1
Chloroform	ND		ug/kg	1.8	0.45	1
Carbon tetrachloride	ND		ug/kg	1.2	0.26	1
1,2-Dichloropropane	ND		ug/kg	4.2	0.28	1
Dibromochloromethane	ND		ug/kg	1.2	0.37	1
1,1,2-Trichloroethane	ND		ug/kg	1.8	0.37	1
Tetrachloroethene	ND		ug/kg	1.2	0.17	1
Chlorobenzene	ND		ug/kg	1.2	0.42	1
Trichlorofluoromethane	ND		ug/kg	6.1	0.15	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.18	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Bromodichloromethane	ND		ug/kg	1.2	0.28	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
1,1-Dichloropropene	ND		ug/kg	6.1	0.55	1
Bromoform	ND		ug/kg	4.9	0.50	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.21	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	ND		ug/kg	1.8	0.14	1
Ethylbenzene	ND		ug/kg	1.2	0.18	1
Chloromethane	ND		ug/kg	6.1	0.95	1
Bromomethane	ND		ug/kg	2.4	0.41	1
Vinyl chloride	ND		ug/kg	2.4	0.17	1
Chloroethane	ND		ug/kg	2.4	0.38	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.26	1
Trichloroethene	ND		ug/kg	1.2	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	6.1	0.22	1
1,3-Dichlorobenzene	ND		ug/kg	6.1	0.22	1
1,4-Dichlorobenzene	ND		ug/kg	6.1	0.29	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-06
Client ID: SB-6 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:40
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.4	0.13	1
p/m-Xylene	ND		ug/kg	2.4	0.39	1
o-Xylene	ND		ug/kg	2.4	0.33	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.18	1
Dibromomethane	ND		ug/kg	12	0.20	1
Styrene	ND		ug/kg	2.4	0.38	1
Dichlorodifluoromethane	ND		ug/kg	12	0.26	1
Acetone	ND		ug/kg	12	3.8	1
Carbon disulfide	ND		ug/kg	12	2.4	1
2-Butanone	ND		ug/kg	12	0.43	1
Vinyl acetate	ND		ug/kg	12	0.58	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.30	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.27	1
2-Hexanone	ND		ug/kg	12	0.23	1
Bromochloromethane	ND		ug/kg	6.1	0.24	1
2,2-Dichloropropane	ND		ug/kg	6.1	0.27	1
1,2-Dibromoethane	ND		ug/kg	4.9	0.22	1
1,3-Dichloropropane	ND		ug/kg	6.1	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.39	1
Bromobenzene	ND		ug/kg	6.1	0.25	1
n-Butylbenzene	ND		ug/kg	1.2	0.24	1
sec-Butylbenzene	ND		ug/kg	1.2	0.25	1
tert-Butylbenzene	ND		ug/kg	6.1	0.68	1
o-Chlorotoluene	ND		ug/kg	6.1	0.19	1
p-Chlorotoluene	ND		ug/kg	6.1	0.19	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.1	0.96	1
Hexachlorobutadiene	ND		ug/kg	6.1	0.51	1
Isopropylbenzene	ND		ug/kg	1.2	0.20	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.23	1
Acrylonitrile	ND		ug/kg	12	0.29	1
n-Propylbenzene	ND		ug/kg	1.2	0.15	1
1,2,3-Trichlorobenzene	ND		ug/kg	6.1	0.20	1
1,2,4-Trichlorobenzene	ND		ug/kg	6.1	0.96	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.1	0.17	1
1,2,4-Trimethylbenzene	ND		ug/kg	6.1	0.70	1
1,4-Dioxane	ND		ug/kg	120	21.	1
1,4-Diethylbenzene	ND		ug/kg	4.9	0.19	1
4-Ethyltoluene	ND		ug/kg	4.9	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.9	0.16	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-06
Client ID: SB-6 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:40
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Ethyl ether	ND		ug/kg	6.1	0.32	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.1	0.54	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	105		70-130

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Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-07
Client ID: SB-7 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/10/13 14:06
Analyst: BN
Percent Solids: 78%

Date Collected: 06/07/13 11:55
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	13	2.6	1
1,1-Dichloroethane	ND		ug/kg	1.9	0.23	1
Chloroform	ND		ug/kg	1.9	0.48	1
Carbon tetrachloride	ND		ug/kg	1.3	0.27	1
1,2-Dichloropropane	ND		ug/kg	4.5	0.29	1
Dibromochloromethane	ND		ug/kg	1.3	0.40	1
1,1,2-Trichloroethane	ND		ug/kg	1.9	0.39	1
Tetrachloroethene	1.4		ug/kg	1.3	0.18	1
Chlorobenzene	ND		ug/kg	1.3	0.45	1
Trichlorofluoromethane	ND		ug/kg	6.4	0.16	1
1,2-Dichloroethane	ND		ug/kg	1.3	0.19	1
1,1,1-Trichloroethane	ND		ug/kg	1.3	0.14	1
Bromodichloromethane	ND		ug/kg	1.3	0.29	1
trans-1,3-Dichloropropene	ND		ug/kg	1.3	0.16	1
cis-1,3-Dichloropropene	ND		ug/kg	1.3	0.16	1
1,1-Dichloropropene	ND		ug/kg	6.4	0.58	1
Bromoform	ND		ug/kg	5.1	0.53	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.3	0.22	1
Benzene	ND		ug/kg	1.3	0.15	1
Toluene	ND		ug/kg	1.9	0.14	1
Ethylbenzene	ND		ug/kg	1.3	0.19	1
Chloromethane	ND		ug/kg	6.4	1.0	1
Bromomethane	ND		ug/kg	2.6	0.43	1
Vinyl chloride	ND		ug/kg	2.6	0.18	1
Chloroethane	ND		ug/kg	2.6	0.41	1
1,1-Dichloroethene	ND		ug/kg	1.3	0.26	1
trans-1,2-Dichloroethene	ND		ug/kg	1.9	0.27	1
Trichloroethene	2.4		ug/kg	1.3	0.20	1
1,2-Dichlorobenzene	ND		ug/kg	6.4	0.24	1
1,3-Dichlorobenzene	ND		ug/kg	6.4	0.24	1
1,4-Dichlorobenzene	ND		ug/kg	6.4	0.31	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-07
Client ID: SB-7 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:55
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.6	0.13	1
p/m-Xylene	ND		ug/kg	2.6	0.41	1
o-Xylene	ND		ug/kg	2.6	0.35	1
cis-1,2-Dichloroethene	ND		ug/kg	1.3	0.19	1
Dibromomethane	ND		ug/kg	13	0.21	1
Styrene	ND		ug/kg	2.6	0.40	1
Dichlorodifluoromethane	ND		ug/kg	13	0.28	1
Acetone	ND		ug/kg	13	4.0	1
Carbon disulfide	ND		ug/kg	13	2.6	1
2-Butanone	ND		ug/kg	13	0.46	1
Vinyl acetate	ND		ug/kg	13	0.62	1
4-Methyl-2-pentanone	ND		ug/kg	13	0.31	1
1,2,3-Trichloropropane	ND		ug/kg	13	0.29	1
2-Hexanone	ND		ug/kg	13	0.24	1
Bromochloromethane	ND		ug/kg	6.4	0.25	1
2,2-Dichloropropane	ND		ug/kg	6.4	0.29	1
1,2-Dibromoethane	ND		ug/kg	5.1	0.23	1
1,3-Dichloropropane	ND		ug/kg	6.4	0.22	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.3	0.41	1
Bromobenzene	ND		ug/kg	6.4	0.27	1
n-Butylbenzene	ND		ug/kg	1.3	0.25	1
sec-Butylbenzene	ND		ug/kg	1.3	0.26	1
tert-Butylbenzene	ND		ug/kg	6.4	0.72	1
o-Chlorotoluene	ND		ug/kg	6.4	0.20	1
p-Chlorotoluene	ND		ug/kg	6.4	0.20	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.4	1.0	1
Hexachlorobutadiene	ND		ug/kg	6.4	0.54	1
Isopropylbenzene	ND		ug/kg	1.3	0.22	1
p-Isopropyltoluene	ND		ug/kg	1.3	0.24	1
Acrylonitrile	ND		ug/kg	13	0.30	1
n-Propylbenzene	ND		ug/kg	1.3	0.16	1
1,2,3-Trichlorobenzene	ND		ug/kg	6.4	0.22	1
1,2,4-Trichlorobenzene	ND		ug/kg	6.4	1.0	1
1,3,5-Trimethylbenzene	0.84	J	ug/kg	6.4	0.18	1
1,2,4-Trimethylbenzene	1.3	J	ug/kg	6.4	0.74	1
1,4-Dioxane	ND		ug/kg	130	22.	1
1,4-Diethylbenzene	ND		ug/kg	5.1	0.20	1
4-Ethyltoluene	ND		ug/kg	5.1	0.15	1
1,2,4,5-Tetramethylbenzene	0.91	J	ug/kg	5.1	0.17	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-07
Client ID: SB-7 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:55
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Ethyl ether	ND		ug/kg	6.4	0.34	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.4	0.58	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	107		70-130

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-08
Client ID: SB-8 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/10/13 14:40
Analyst: BN
Percent Solids: 83%

Date Collected: 06/07/13 12:30
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	12	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.8	0.22	1
Chloroform	ND		ug/kg	1.8	0.45	1
Carbon tetrachloride	ND		ug/kg	1.2	0.25	1
1,2-Dichloropropane	ND		ug/kg	4.2	0.28	1
Dibromochloromethane	ND		ug/kg	1.2	0.37	1
1,1,2-Trichloroethane	ND		ug/kg	1.8	0.37	1
Tetrachloroethene	ND		ug/kg	1.2	0.17	1
Chlorobenzene	ND		ug/kg	1.2	0.42	1
Trichlorofluoromethane	ND		ug/kg	6.0	0.15	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.18	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Bromodichloromethane	ND		ug/kg	1.2	0.28	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
1,1-Dichloropropene	ND		ug/kg	6.0	0.55	1
Bromoform	ND		ug/kg	4.8	0.50	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.21	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	ND		ug/kg	1.8	0.14	1
Ethylbenzene	ND		ug/kg	1.2	0.18	1
Chloromethane	ND		ug/kg	6.0	0.95	1
Bromomethane	ND		ug/kg	2.4	0.41	1
Vinyl chloride	ND		ug/kg	2.4	0.17	1
Chloroethane	ND		ug/kg	2.4	0.38	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.26	1
Trichloroethene	1.0	J	ug/kg	1.2	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	6.0	0.22	1
1,3-Dichlorobenzene	ND		ug/kg	6.0	0.22	1
1,4-Dichlorobenzene	ND		ug/kg	6.0	0.29	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-08
Client ID: SB-8 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 12:30
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.4	0.13	1
p/m-Xylene	ND		ug/kg	2.4	0.39	1
o-Xylene	ND		ug/kg	2.4	0.33	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.18	1
Dibromomethane	ND		ug/kg	12	0.20	1
Styrene	ND		ug/kg	2.4	0.37	1
Dichlorodifluoromethane	ND		ug/kg	12	0.26	1
Acetone	ND		ug/kg	12	3.8	1
Carbon disulfide	ND		ug/kg	12	2.4	1
2-Butanone	ND		ug/kg	12	0.43	1
Vinyl acetate	ND		ug/kg	12	0.58	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.30	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.27	1
2-Hexanone	ND		ug/kg	12	0.23	1
Bromochloromethane	ND		ug/kg	6.0	0.24	1
2,2-Dichloropropane	ND		ug/kg	6.0	0.27	1
1,2-Dibromoethane	ND		ug/kg	4.8	0.22	1
1,3-Dichloropropane	ND		ug/kg	6.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.38	1
Bromobenzene	ND		ug/kg	6.0	0.25	1
n-Butylbenzene	ND		ug/kg	1.2	0.24	1
sec-Butylbenzene	ND		ug/kg	1.2	0.25	1
tert-Butylbenzene	ND		ug/kg	6.0	0.68	1
o-Chlorotoluene	ND		ug/kg	6.0	0.19	1
p-Chlorotoluene	ND		ug/kg	6.0	0.19	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.0	0.96	1
Hexachlorobutadiene	ND		ug/kg	6.0	0.51	1
Isopropylbenzene	ND		ug/kg	1.2	0.20	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.23	1
Acrylonitrile	ND		ug/kg	12	0.29	1
n-Propylbenzene	ND		ug/kg	1.2	0.15	1
1,2,3-Trichlorobenzene	ND		ug/kg	6.0	0.20	1
1,2,4-Trichlorobenzene	ND		ug/kg	6.0	0.96	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.0	0.17	1
1,2,4-Trimethylbenzene	ND		ug/kg	6.0	0.69	1
1,4-Dioxane	ND		ug/kg	120	21.	1
1,4-Diethylbenzene	ND		ug/kg	4.8	0.19	1
4-Ethyltoluene	ND		ug/kg	4.8	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.8	0.16	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-08
Client ID: SB-8 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 12:30
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Ethyl ether	ND		ug/kg	6.0	0.32	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.0	0.54	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	119		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	103		70-130

Serial_No:06141317:00

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-09
Client ID: SB-9 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/10/13 15:14
Analyst: BN
Percent Solids: 85%

Date Collected: 06/07/13 12:55
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	12	2.3	1
1,1-Dichloroethane	ND		ug/kg	1.8	0.21	1
Chloroform	ND		ug/kg	1.8	0.43	1
Carbon tetrachloride	ND		ug/kg	1.2	0.25	1
1,2-Dichloropropane	ND		ug/kg	4.1	0.27	1
Dibromochloromethane	ND		ug/kg	1.2	0.36	1
1,1,2-Trichloroethane	ND		ug/kg	1.8	0.36	1
Tetrachloroethene	ND		ug/kg	1.2	0.16	1
Chlorobenzene	ND		ug/kg	1.2	0.41	1
Trichlorofluoromethane	ND		ug/kg	5.9	0.14	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.17	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Bromodichloromethane	ND		ug/kg	1.2	0.27	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.14	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
1,1-Dichloropropene	ND		ug/kg	5.9	0.53	1
Bromoform	ND		ug/kg	4.7	0.49	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.20	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	ND		ug/kg	1.8	0.13	1
Ethylbenzene	ND		ug/kg	1.2	0.17	1
Chloromethane	ND		ug/kg	5.9	0.92	1
Bromomethane	ND		ug/kg	2.3	0.40	1
Vinyl chloride	ND		ug/kg	2.3	0.16	1
Chloroethane	ND		ug/kg	2.3	0.37	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.25	1
Trichloroethene	1.8		ug/kg	1.2	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	5.9	0.21	1
1,3-Dichlorobenzene	ND		ug/kg	5.9	0.21	1
1,4-Dichlorobenzene	ND		ug/kg	5.9	0.28	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-09
Client ID: SB-9 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 12:55
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.3	0.12	1
p/m-Xylene	ND		ug/kg	2.3	0.38	1
o-Xylene	ND		ug/kg	2.3	0.32	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.18	1
Dibromomethane	ND		ug/kg	12	0.19	1
Styrene	ND		ug/kg	2.3	0.36	1
Dichlorodifluoromethane	ND		ug/kg	12	0.26	1
Acetone	ND		ug/kg	12	3.6	1
Carbon disulfide	ND		ug/kg	12	2.3	1
2-Butanone	ND		ug/kg	12	0.42	1
Vinyl acetate	ND		ug/kg	12	0.56	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.29	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.26	1
2-Hexanone	ND		ug/kg	12	0.22	1
Bromochloromethane	ND		ug/kg	5.9	0.23	1
2,2-Dichloropropane	ND		ug/kg	5.9	0.26	1
1,2-Dibromoethane	ND		ug/kg	4.7	0.21	1
1,3-Dichloropropane	ND		ug/kg	5.9	0.20	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.37	1
Bromobenzene	ND		ug/kg	5.9	0.24	1
n-Butylbenzene	ND		ug/kg	1.2	0.23	1
sec-Butylbenzene	ND		ug/kg	1.2	0.24	1
tert-Butylbenzene	ND		ug/kg	5.9	0.66	1
o-Chlorotoluene	ND		ug/kg	5.9	0.19	1
p-Chlorotoluene	ND		ug/kg	5.9	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.9	0.92	1
Hexachlorobutadiene	ND		ug/kg	5.9	0.50	1
Isopropylbenzene	ND		ug/kg	1.2	0.20	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.22	1
Acrylonitrile	ND		ug/kg	12	0.28	1
n-Propylbenzene	ND		ug/kg	1.2	0.15	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.9	0.20	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.9	0.92	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.9	0.17	1
1,2,4-Trimethylbenzene	ND		ug/kg	5.9	0.67	1
1,4-Dioxane	ND		ug/kg	120	20.	1
1,4-Diethylbenzene	ND		ug/kg	4.7	0.19	1
4-Ethyltoluene	ND		ug/kg	4.7	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.7	0.15	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-09
Client ID: SB-9 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 12:55
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Ethyl ether	ND		ug/kg	5.9	0.31	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.9	0.52	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	103		70-130

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-10
Client ID: SB-10 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/11/13 13:29
Analyst: BN
Percent Solids: 83%

Date Collected: 06/07/13 13:05
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	12	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.8	0.21	1
Chloroform	ND		ug/kg	1.8	0.44	1
Carbon tetrachloride	ND		ug/kg	1.2	0.25	1
1,2-Dichloropropane	ND		ug/kg	4.2	0.27	1
Dibromochloromethane	ND		ug/kg	1.2	0.37	1
1,1,2-Trichloroethane	ND		ug/kg	1.8	0.36	1
Tetrachloroethene	ND		ug/kg	1.2	0.17	1
Chlorobenzene	ND		ug/kg	1.2	0.42	1
Trichlorofluoromethane	ND		ug/kg	6.0	0.14	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.18	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Bromodichloromethane	ND		ug/kg	1.2	0.27	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.14	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
1,1-Dichloropropene	ND		ug/kg	6.0	0.55	1
Bromoform	ND		ug/kg	4.8	0.50	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.20	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	ND		ug/kg	1.8	0.13	1
Ethylbenzene	ND		ug/kg	1.2	0.18	1
Chloromethane	ND		ug/kg	6.0	0.94	1
Bromomethane	ND		ug/kg	2.4	0.40	1
Vinyl chloride	ND		ug/kg	2.4	0.17	1
Chloroethane	ND		ug/kg	2.4	0.38	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.25	1
Trichloroethene	ND		ug/kg	1.2	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	6.0	0.22	1
1,3-Dichlorobenzene	ND		ug/kg	6.0	0.22	1
1,4-Dichlorobenzene	ND		ug/kg	6.0	0.29	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-10
Client ID: SB-10 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 13:05
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.4	0.12	1
p/m-Xylene	ND		ug/kg	2.4	0.39	1
o-Xylene	ND		ug/kg	2.4	0.32	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.18	1
Dibromomethane	ND		ug/kg	12	0.20	1
Styrene	ND		ug/kg	2.4	0.37	1
Dichlorodifluoromethane	ND		ug/kg	12	0.26	1
Acetone	ND		ug/kg	12	3.7	1
Carbon disulfide	ND		ug/kg	12	2.4	1
2-Butanone	ND		ug/kg	12	0.43	1
Vinyl acetate	ND		ug/kg	12	0.58	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.29	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.27	1
2-Hexanone	ND		ug/kg	12	0.22	1
Bromochloromethane	ND		ug/kg	6.0	0.24	1
2,2-Dichloropropane	ND		ug/kg	6.0	0.27	1
1,2-Dibromoethane	ND		ug/kg	4.8	0.21	1
1,3-Dichloropropane	ND		ug/kg	6.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.38	1
Bromobenzene	ND		ug/kg	6.0	0.25	1
n-Butylbenzene	ND		ug/kg	1.2	0.24	1
sec-Butylbenzene	ND		ug/kg	1.2	0.25	1
tert-Butylbenzene	ND		ug/kg	6.0	0.67	1
o-Chlorotoluene	ND		ug/kg	6.0	0.19	1
p-Chlorotoluene	ND		ug/kg	6.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.0	0.95	1
Hexachlorobutadiene	ND		ug/kg	6.0	0.51	1
Isopropylbenzene	ND		ug/kg	1.2	0.20	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.23	1
Acrylonitrile	ND		ug/kg	12	0.28	1
n-Propylbenzene	ND		ug/kg	1.2	0.15	1
1,2,3-Trichlorobenzene	ND		ug/kg	6.0	0.20	1
1,2,4-Trichlorobenzene	ND		ug/kg	6.0	0.95	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.0	0.17	1
1,2,4-Trimethylbenzene	ND		ug/kg	6.0	0.69	1
1,4-Dioxane	ND		ug/kg	120	21.	1
1,4-Diethylbenzene	ND		ug/kg	4.8	0.19	1
4-Ethyltoluene	ND		ug/kg	4.8	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.8	0.16	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-10
Client ID: SB-10 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 13:05
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Ethyl ether	ND		ug/kg	6.0	0.32	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.0	0.54	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	108		70-130

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-11
Client ID:	SB-11 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8260C
Analytical Date:	06/10/13 16:21
Analyst:	BN
Percent Solids:	83%

Date Collected:	06/07/13 13:20
Date Received:	06/07/13
Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	12	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.8	0.22	1
Chloroform	ND		ug/kg	1.8	0.45	1
Carbon tetrachloride	ND		ug/kg	1.2	0.25	1
1,2-Dichloropropane	ND		ug/kg	4.2	0.28	1
Dibromochloromethane	ND		ug/kg	1.2	0.37	1
1,1,2-Trichloroethane	ND		ug/kg	1.8	0.37	1
Tetrachloroethene	ND		ug/kg	1.2	0.17	1
Chlorobenzene	ND		ug/kg	1.2	0.42	1
Trichlorofluoromethane	ND		ug/kg	6.0	0.15	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.18	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Bromodichloromethane	ND		ug/kg	1.2	0.28	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
1,1-Dichloropropene	ND		ug/kg	6.0	0.55	1
Bromoform	ND		ug/kg	4.8	0.50	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.21	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	ND		ug/kg	1.8	0.14	1
Ethylbenzene	ND		ug/kg	1.2	0.18	1
Chloromethane	ND		ug/kg	6.0	0.95	1
Bromomethane	ND		ug/kg	2.4	0.41	1
Vinyl chloride	ND		ug/kg	2.4	0.17	1
Chloroethane	ND		ug/kg	2.4	0.38	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.26	1
Trichloroethene	0.74	J	ug/kg	1.2	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	6.0	0.22	1
1,3-Dichlorobenzene	ND		ug/kg	6.0	0.22	1
1,4-Dichlorobenzene	ND		ug/kg	6.0	0.29	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-11
Client ID: SB-11 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 13:20
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.4	0.13	1
p/m-Xylene	ND		ug/kg	2.4	0.39	1
o-Xylene	ND		ug/kg	2.4	0.33	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.18	1
Dibromomethane	ND		ug/kg	12	0.20	1
Styrene	ND		ug/kg	2.4	0.37	1
Dichlorodifluoromethane	ND		ug/kg	12	0.26	1
Acetone	ND		ug/kg	12	3.8	1
Carbon disulfide	ND		ug/kg	12	2.4	1
2-Butanone	ND		ug/kg	12	0.43	1
Vinyl acetate	ND		ug/kg	12	0.58	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.30	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.27	1
2-Hexanone	ND		ug/kg	12	0.23	1
Bromochloromethane	ND		ug/kg	6.0	0.24	1
2,2-Dichloropropane	ND		ug/kg	6.0	0.27	1
1,2-Dibromoethane	ND		ug/kg	4.8	0.22	1
1,3-Dichloropropane	ND		ug/kg	6.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.38	1
Bromobenzene	ND		ug/kg	6.0	0.25	1
n-Butylbenzene	ND		ug/kg	1.2	0.24	1
sec-Butylbenzene	ND		ug/kg	1.2	0.25	1
tert-Butylbenzene	ND		ug/kg	6.0	0.68	1
o-Chlorotoluene	ND		ug/kg	6.0	0.19	1
p-Chlorotoluene	ND		ug/kg	6.0	0.19	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.0	0.96	1
Hexachlorobutadiene	ND		ug/kg	6.0	0.51	1
Isopropylbenzene	ND		ug/kg	1.2	0.20	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.23	1
Acrylonitrile	ND		ug/kg	12	0.29	1
n-Propylbenzene	ND		ug/kg	1.2	0.15	1
1,2,3-Trichlorobenzene	ND		ug/kg	6.0	0.20	1
1,2,4-Trichlorobenzene	ND		ug/kg	6.0	0.96	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.0	0.17	1
1,2,4-Trimethylbenzene	ND		ug/kg	6.0	0.69	1
1,4-Dioxane	ND		ug/kg	120	21.	1
1,4-Diethylbenzene	ND		ug/kg	4.8	0.19	1
4-Ethyltoluene	ND		ug/kg	4.8	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.8	0.16	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-11
Client ID: SB-11 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 13:20
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Ethyl ether	ND		ug/kg	6.0	0.32	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.0	0.54	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	123		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	108		70-130

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-12
Client ID: SB-12 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/10/13 16:55
Analyst: BN
Percent Solids: 85%

Date Collected: 06/07/13 11:25
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	12	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.8	0.21	1
Chloroform	ND		ug/kg	1.8	0.44	1
Carbon tetrachloride	ND		ug/kg	1.2	0.25	1
1,2-Dichloropropane	ND		ug/kg	4.1	0.27	1
Dibromochloromethane	ND		ug/kg	1.2	0.36	1
1,1,2-Trichloroethane	ND		ug/kg	1.8	0.36	1
Tetrachloroethene	ND		ug/kg	1.2	0.16	1
Chlorobenzene	ND		ug/kg	1.2	0.41	1
Trichlorofluoromethane	ND		ug/kg	5.9	0.14	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.17	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Bromodichloromethane	ND		ug/kg	1.2	0.27	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.14	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
1,1-Dichloropropene	ND		ug/kg	5.9	0.54	1
Bromoform	ND		ug/kg	4.7	0.49	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.20	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	ND		ug/kg	1.8	0.13	1
Ethylbenzene	ND		ug/kg	1.2	0.17	1
Chloromethane	ND		ug/kg	5.9	0.92	1
Bromomethane	ND		ug/kg	2.4	0.40	1
Vinyl chloride	ND		ug/kg	2.4	0.17	1
Chloroethane	ND		ug/kg	2.4	0.37	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.25	1
Trichloroethene	0.62	J	ug/kg	1.2	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	5.9	0.22	1
1,3-Dichlorobenzene	ND		ug/kg	5.9	0.22	1
1,4-Dichlorobenzene	ND		ug/kg	5.9	0.28	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-12
Client ID: SB-12 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:25
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.4	0.12	1
p/m-Xylene	ND		ug/kg	2.4	0.38	1
o-Xylene	ND		ug/kg	2.4	0.32	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.18	1
Dibromomethane	ND		ug/kg	12	0.19	1
Styrene	ND		ug/kg	2.4	0.36	1
Dichlorodifluoromethane	ND		ug/kg	12	0.26	1
Acetone	ND		ug/kg	12	3.6	1
Carbon disulfide	ND		ug/kg	12	2.4	1
2-Butanone	ND		ug/kg	12	0.42	1
Vinyl acetate	ND		ug/kg	12	0.56	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.29	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.26	1
2-Hexanone	ND		ug/kg	12	0.22	1
Bromochloromethane	ND		ug/kg	5.9	0.23	1
2,2-Dichloropropane	ND		ug/kg	5.9	0.27	1
1,2-Dibromoethane	ND		ug/kg	4.7	0.21	1
1,3-Dichloropropane	ND		ug/kg	5.9	0.20	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.38	1
Bromobenzene	ND		ug/kg	5.9	0.24	1
n-Butylbenzene	ND		ug/kg	1.2	0.23	1
sec-Butylbenzene	ND		ug/kg	1.2	0.24	1
tert-Butylbenzene	ND		ug/kg	5.9	0.66	1
o-Chlorotoluene	ND		ug/kg	5.9	0.19	1
p-Chlorotoluene	ND		ug/kg	5.9	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.9	0.93	1
Hexachlorobutadiene	ND		ug/kg	5.9	0.50	1
Isopropylbenzene	ND		ug/kg	1.2	0.20	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.22	1
Acrylonitrile	ND		ug/kg	12	0.28	1
n-Propylbenzene	ND		ug/kg	1.2	0.15	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.9	0.20	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.9	0.93	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.9	0.17	1
1,2,4-Trimethylbenzene	ND		ug/kg	5.9	0.68	1
1,4-Dioxane	ND		ug/kg	120	20.	1
1,4-Diethylbenzene	ND		ug/kg	4.7	0.19	1
4-Ethyltoluene	ND		ug/kg	4.7	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.7	0.15	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-12
Client ID: SB-12 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:25
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Ethyl ether	ND		ug/kg	5.9	0.31	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.9	0.53	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	104		70-130

Serial_No:06141317:00

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-13
Client ID: TRIP BLANK
Sample Location: BRONX, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/14/13 09:54
Analyst: MM

Date Collected: 06/07/13 00:00
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.16	1
1,2-Dichloropropane	ND		ug/l	1.0	0.30	1
Dibromochloromethane	ND		ug/l	0.50	0.19	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.16	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.19	1
Benzene	ND		ug/l	0.50	0.19	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.18	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.17	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-13
Client ID: TRIP BLANK
Sample Location: BRONX, NY

Date Collected: 06/07/13 00:00
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.0	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.0	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	76.	1
1,4-Diethylbenzene	ND		ug/l	2.0	0.70	1
4-Ethyltoluene	ND		ug/l	2.0	0.70	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-13
Client ID: TRIP BLANK
Sample Location: BRONX, NY

Date Collected: 06/07/13 00:00
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	107		70-130

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/10/13 10:10
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-09,11-12 Batch: WG614065-3					
Methylene chloride	ND		ug/kg	10	2.0
1,1-Dichloroethane	ND		ug/kg	1.5	0.18
Chloroform	ND		ug/kg	1.5	0.37
Carbon tetrachloride	ND		ug/kg	1.0	0.21
1,2-Dichloropropane	ND		ug/kg	3.5	0.23
Dibromochloromethane	ND		ug/kg	1.0	0.31
2-Chloroethylvinyl ether	ND		ug/kg	20	0.62
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
Trichlorofluoromethane	ND		ug/kg	5.0	0.12
1,2-Dichloroethane	ND		ug/kg	1.0	0.15
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Bromodichloromethane	ND		ug/kg	1.0	0.23
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.13
1,1-Dichloropropene	ND		ug/kg	5.0	0.46
Bromoform	ND		ug/kg	4.0	0.41
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.17
Benzene	ND		ug/kg	1.0	0.12
Toluene	ND		ug/kg	1.5	0.11
Ethylbenzene	ND		ug/kg	1.0	0.15
Chloromethane	ND		ug/kg	5.0	0.78
Bromomethane	1.1	J	ug/kg	2.0	0.34
Vinyl chloride	ND		ug/kg	2.0	0.14
Chloroethane	ND		ug/kg	2.0	0.32
1,1-Dichloroethene	ND		ug/kg	1.0	0.20
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21
Trichloroethene	ND		ug/kg	1.0	0.15
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.18
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.18

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/10/13 10:10
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-09,11-12 Batch: WG614065-3					
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.24
Methyl tert butyl ether	ND		ug/kg	2.0	0.10
p/m-Xylene	ND		ug/kg	2.0	0.32
o-Xylene	ND		ug/kg	2.0	0.27
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.15
Dibromomethane	ND		ug/kg	10	0.16
Styrene	ND		ug/kg	2.0	0.31
Dichlorodifluoromethane	ND		ug/kg	10	0.22
Acetone	ND		ug/kg	10	3.1
Carbon disulfide	ND		ug/kg	10	2.0
2-Butanone	ND		ug/kg	10	0.36
Vinyl acetate	ND		ug/kg	10	0.48
4-Methyl-2-pentanone	ND		ug/kg	10	0.24
1,2,3-Trichloropropane	ND		ug/kg	10	0.22
2-Hexanone	ND		ug/kg	10	0.19
Bromochloromethane	ND		ug/kg	5.0	0.20
2,2-Dichloropropane	ND		ug/kg	5.0	0.22
1,2-Dibromoethane	ND		ug/kg	4.0	0.18
1,3-Dichloropropane	ND		ug/kg	5.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32
Bromobenzene	ND		ug/kg	5.0	0.21
n-Butylbenzene	ND		ug/kg	1.0	0.20
sec-Butylbenzene	ND		ug/kg	1.0	0.20
tert-Butylbenzene	ND		ug/kg	5.0	0.56
o-Chlorotoluene	ND		ug/kg	5.0	0.16
p-Chlorotoluene	ND		ug/kg	5.0	0.15
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.0	0.79
Hexachlorobutadiene	ND		ug/kg	5.0	0.42
Isopropylbenzene	ND		ug/kg	1.0	0.17
p-Isopropyltoluene	ND		ug/kg	1.0	0.19
Naphthalene	ND		ug/kg	5.0	0.77

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/10/13 10:10
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-09,11-12 Batch: WG614065-3					
Acrylonitrile	ND		ug/kg	10	0.24
Isopropyl Ether	ND		ug/kg	4.0	0.14
tert-Butyl Alcohol	ND		ug/kg	60	0.91
n-Propylbenzene	ND		ug/kg	1.0	0.12
1,2,3-Trichlorobenzene	ND		ug/kg	5.0	0.17
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.79
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.57
Methyl Acetate	ND		ug/kg	20	0.76
Ethyl Acetate	ND		ug/kg	20	0.82
Acrolein	ND		ug/kg	25	9.2
Cyclohexane	ND		ug/kg	20	1.1
1,4-Dioxane	ND		ug/kg	100	17.
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	20	0.27
1,4-Diethylbenzene	ND		ug/kg	4.0	0.16
4-Ethyltoluene	ND		ug/kg	4.0	0.12
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.0	0.13
Tetrahydrofuran	ND		ug/kg	20	0.38
Ethyl ether	ND		ug/kg	5.0	0.26
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	0.45
Methyl cyclohexane	ND		ug/kg	4.0	1.3
Ethyl-Tert-Butyl-Ether	ND		ug/kg	4.0	0.42
Tertiary-Amyl Methyl Ether	ND		ug/kg	4.0	0.58

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/10/13 10:10
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-09,11-12 Batch: WG614065-3					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	119		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	109		70-130

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/11/13 08:51
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 10 Batch: WG614248-3					
Methylene chloride	ND		ug/kg	10	2.0
1,1-Dichloroethane	ND		ug/kg	1.5	0.18
Chloroform	ND		ug/kg	1.5	0.37
Carbon tetrachloride	ND		ug/kg	1.0	0.21
1,2-Dichloropropane	ND		ug/kg	3.5	0.23
Dibromochloromethane	ND		ug/kg	1.0	0.31
2-Chloroethylvinyl ether	ND		ug/kg	20	0.62
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
Trichlorofluoromethane	ND		ug/kg	5.0	0.12
1,2-Dichloroethane	ND		ug/kg	1.0	0.15
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Bromodichloromethane	ND		ug/kg	1.0	0.23
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.13
1,1-Dichloropropene	ND		ug/kg	5.0	0.46
Bromoform	ND		ug/kg	4.0	0.41
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.17
Benzene	ND		ug/kg	1.0	0.12
Toluene	ND		ug/kg	1.5	0.11
Ethylbenzene	ND		ug/kg	1.0	0.15
Chloromethane	ND		ug/kg	5.0	0.78
Bromomethane	ND		ug/kg	2.0	0.34
Vinyl chloride	ND		ug/kg	2.0	0.14
Chloroethane	ND		ug/kg	2.0	0.32
1,1-Dichloroethene	ND		ug/kg	1.0	0.20
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21
Trichloroethene	ND		ug/kg	1.0	0.15
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.18
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.18

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/11/13 08:51
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 10 Batch: WG614248-3					
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.24
Methyl tert butyl ether	ND		ug/kg	2.0	0.10
p/m-Xylene	ND		ug/kg	2.0	0.32
o-Xylene	ND		ug/kg	2.0	0.27
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.15
Dibromomethane	ND		ug/kg	10	0.16
Styrene	ND		ug/kg	2.0	0.31
Dichlorodifluoromethane	ND		ug/kg	10	0.22
Acetone	ND		ug/kg	10	3.1
Carbon disulfide	ND		ug/kg	10	2.0
2-Butanone	ND		ug/kg	10	0.36
Vinyl acetate	ND		ug/kg	10	0.48
4-Methyl-2-pentanone	ND		ug/kg	10	0.24
1,2,3-Trichloropropane	ND		ug/kg	10	0.22
2-Hexanone	ND		ug/kg	10	0.19
Bromochloromethane	ND		ug/kg	5.0	0.20
2,2-Dichloropropane	ND		ug/kg	5.0	0.22
1,2-Dibromoethane	ND		ug/kg	4.0	0.18
1,3-Dichloropropane	ND		ug/kg	5.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32
Bromobenzene	ND		ug/kg	5.0	0.21
n-Butylbenzene	ND		ug/kg	1.0	0.20
sec-Butylbenzene	ND		ug/kg	1.0	0.20
tert-Butylbenzene	ND		ug/kg	5.0	0.56
o-Chlorotoluene	ND		ug/kg	5.0	0.16
p-Chlorotoluene	ND		ug/kg	5.0	0.15
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.0	0.79
Hexachlorobutadiene	ND		ug/kg	5.0	0.42
Isopropylbenzene	ND		ug/kg	1.0	0.17
p-Isopropyltoluene	ND		ug/kg	1.0	0.19
Naphthalene	ND		ug/kg	5.0	0.77

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/11/13 08:51
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 10 Batch: WG614248-3					
Acrylonitrile	ND		ug/kg	10	0.24
Isopropyl Ether	ND		ug/kg	4.0	0.14
tert-Butyl Alcohol	ND		ug/kg	60	0.91
n-Propylbenzene	ND		ug/kg	1.0	0.12
1,2,3-Trichlorobenzene	ND		ug/kg	5.0	0.17
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.79
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.57
Methyl Acetate	ND		ug/kg	20	0.76
Ethyl Acetate	ND		ug/kg	20	0.82
Acrolein	ND		ug/kg	25	9.2
Cyclohexane	ND		ug/kg	20	1.1
1,4-Dioxane	ND		ug/kg	100	17.
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	20	0.27
1,4-Diethylbenzene	ND		ug/kg	4.0	0.16
4-Ethyltoluene	ND		ug/kg	4.0	0.12
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.0	0.13
Tetrahydrofuran	ND		ug/kg	20	0.38
Ethyl ether	ND		ug/kg	5.0	0.26
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	0.45
Methyl cyclohexane	ND		ug/kg	4.0	1.3
Ethyl-Tert-Butyl-Ether	ND		ug/kg	4.0	0.42
Tertiary-Amyl Methyl Ether	ND		ug/kg	4.0	0.58

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/11/13 08:51
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 10 Batch: WG614248-3					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	104		70-130

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/14/13 06:08
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 13 Batch: WG615083-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.16
1,2-Dichloropropane	ND		ug/l	1.0	0.30
Dibromochloromethane	ND		ug/l	0.50	0.19
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.16
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.19
Benzene	ND		ug/l	0.50	0.19
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.33
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.18
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.17
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/14/13 06:08
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 13 Batch: WG615083-3					
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.0
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.0
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/14/13 06:08
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 13 Batch: WG615083-3					
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
Cyclohexane	ND		ug/l	10	0.54
1,4-Dioxane	120	J	ug/l	250	76.
1,4-Diethylbenzene	ND		ug/l	2.0	0.70
4-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70
Methyl cyclohexane	ND		ug/l	10	0.63

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	110		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-09,11-12 . Batch: WG614065-1 WG614065-2								
Methylene chloride	92		88		70-130	4		30
1,1-Dichloroethane	98		91		70-130	7		30
Chloroform	97		90		70-130	7		30
Carbon tetrachloride	100		88		70-130	13		30
1,2-Dichloropropane	96		91		70-130	5		30
Dibromochloromethane	93		91		70-130	2		30
2-Chloroethylvinyl ether	25		24			4		30
1,1,2-Trichloroethane	98		95		70-130	3		30
Tetrachloroethene	92		81		70-130	13		30
Chlorobenzene	94		87		70-130	8		30
Trichlorofluoromethane	99		85		70-139	15		30
1,2-Dichloroethane	102		99		70-130	3		30
1,1,1-Trichloroethane	92		82		70-130	11		30
Bromodichloromethane	95		90		70-130	5		30
trans-1,3-Dichloropropene	80		78		70-130	3		30
cis-1,3-Dichloropropene	91		86		70-130	6		30
1,1-Dichloropropene	99		88		70-130	12		30
Bromoform	89		87		70-130	2		30
1,1,2,2-Tetrachloroethane	96		95		70-130	1		30
Benzene	96		88		70-130	9		30
Toluene	96		87		70-130	10		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-09,11-12 Batch: WG614065-1 WG614065-2								
Ethylbenzene	100		90		70-130	11		30
Chloromethane	117		106		52-130	10		30
Bromomethane	101		93		57-147	8		30
Vinyl chloride	118		104		67-130	13		30
Chloroethane	121		109		50-151	10		30
1,1-Dichloroethene	92		81		65-135	13		30
trans-1,2-Dichloroethene	92		83		70-130	10		30
Trichloroethene	93		84		70-130	10		30
1,2-Dichlorobenzene	92		88		70-130	4		30
1,3-Dichlorobenzene	93		87		70-130	7		30
1,4-Dichlorobenzene	92		86		70-130	7		30
Methyl tert butyl ether	77		76		66-130	1		30
p/m-Xylene	98		89		70-130	10		30
o-Xylene	99		91		70-130	8		30
cis-1,2-Dichloroethene	92		86		70-130	7		30
Dibromomethane	95		91		70-130	4		30
Styrene	98		91		70-130	7		30
Dichlorodifluoromethane	100		88		30-146	13		30
Acetone	110		95		54-140	15		30
Carbon disulfide	95		83		59-130	13		30
2-Butanone	95		90		70-130	5		30

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Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-09,11-12 Batch: WG614065-1 WG614065-2								
Vinyl acetate	92		91		70-130	1		30
4-Methyl-2-pentanone	90		89		70-130	1		30
1,2,3-Trichloropropane	97		96		68-130	1		30
2-Hexanone	94		93		70-130	1		30
Bromochloromethane	89		84		70-130	6		30
2,2-Dichloropropane	75		66	Q	70-130	13		30
1,2-Dibromoethane	94		92		70-130	2		30
1,3-Dichloropropane	99		96		69-130	3		30
1,1,1,2-Tetrachloroethane	94		88		70-130	7		30
Bromobenzene	92		88		70-130	4		30
n-Butylbenzene	101		90		70-130	12		30
sec-Butylbenzene	98		88		70-130	11		30
tert-Butylbenzene	96		87		70-130	10		30
o-Chlorotoluene	98		90		70-130	9		30
p-Chlorotoluene	98		90		70-130	9		30
1,2-Dibromo-3-chloropropane	90		90		68-130	0		30
Hexachlorobutadiene	91		80		67-130	13		30
Isopropylbenzene	97		88		70-130	10		30
p-Isopropyltoluene	96		87		70-130	10		30
Naphthalene	87		85		70-130	2		30
Acrylonitrile	102		101		70-130	1		30

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Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-09,11-12 Batch: WG614065-1 WG614065-2								
Isopropyl Ether	103		98		66-130	5		30
tert-Butyl Alcohol	99		96		70-130	3		30
n-Propylbenzene	98		90		70-130	9		30
1,2,3-Trichlorobenzene	94		88		70-130	7		30
1,2,4-Trichlorobenzene	94		88		70-130	7		30
1,3,5-Trimethylbenzene	98		89		70-130	10		30
1,2,4-Trimethylbenzene	98		90		70-130	9		30
Methyl Acetate	98		100		51-146	2		30
Ethyl Acetate	104		104		70-130	0		30
Acrolein	92		93		70-130	1		30
Cyclohexane	103		90		59-142	13		30
1,4-Dioxane	94		91		65-136	3		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	94		82		50-139	14		30
1,4-Diethylbenzene	96		86		70-130	11		30
4-Ethyltoluene	97		88		70-130	10		30
1,2,4,5-Tetramethylbenzene	98		90		70-130	9		30
Tetrahydrofuran	99		100		66-130	1		30
Ethyl ether	96		92		67-130	4		30
trans-1,4-Dichloro-2-butene	101		99		70-130	2		30
Methyl cyclohexane	99		86		70-130	14		30
Ethyl-Tert-Butyl-Ether	80		79		70-130	1		30

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Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-09,11-12 Batch: WG614065-1 WG614065-2								
Tertiary-Amyl Methyl Ether	71		70		70-130	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	115		111		70-130
Toluene-d8	104		102		70-130
4-Bromofluorobenzene	102		99		70-130
Dibromofluoromethane	106		102		70-130

Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 10 Batch: WG614248-1 WG614248-2								
Methylene chloride	98		95		70-130	3		30
1,1-Dichloroethane	103		99		70-130	4		30
Chloroform	104		100		70-130	4		30
Carbon tetrachloride	105		93		70-130	12		30
1,2-Dichloropropane	102		100		70-130	2		30
Dibromochloromethane	96		96		70-130	0		30
2-Chloroethylvinyl ether	102		100			2		30
1,1,2-Trichloroethane	92		92		70-130	0		30
Tetrachloroethene	99		90		70-130	10		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 10 Batch: WG614248-1 WG614248-2								
Chlorobenzene	99		96		70-130	3		30
Trichlorofluoromethane	84		74		70-139	13		30
1,2-Dichloroethane	103		101		70-130	2		30
1,1,1-Trichloroethane	104		94		70-130	10		30
Bromodichloromethane	104		103		70-130	1		30
trans-1,3-Dichloropropene	98		98		70-130	0		30
cis-1,3-Dichloropropene	100		98		70-130	2		30
1,1-Dichloropropene	102		92		70-130	10		30
Bromoform	83		85		70-130	2		30
1,1,2,2-Tetrachloroethane	83		83		70-130	0		30
Benzene	100		95		70-130	5		30
Toluene	95		91		70-130	4		30
Ethylbenzene	98		94		70-130	4		30
Chloromethane	102		93		52-130	9		30
Bromomethane	85		81		57-147	5		30
Vinyl chloride	91		80		67-130	13		30
Chloroethane	76		69		50-151	10		30
1,1-Dichloroethene	104		92		65-135	12		30
trans-1,2-Dichloroethene	104		96		70-130	8		30
Trichloroethene	99		92		70-130	7		30
1,2-Dichlorobenzene	99		100		70-130	1		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 10 Batch: WG614248-1 WG614248-2								
1,3-Dichlorobenzene	100		99		70-130	1		30
1,4-Dichlorobenzene	100		99		70-130	1		30
Methyl tert butyl ether	94		94		66-130	0		30
p/m-Xylene	101		96		70-130	5		30
o-Xylene	99		96		70-130	3		30
cis-1,2-Dichloroethene	102		98		70-130	4		30
Dibromomethane	99		98		70-130	1		30
Styrene	98		96		70-130	2		30
Dichlorodifluoromethane	123		106		30-146	15		30
Acetone	75		71		54-140	5		30
Carbon disulfide	98		88		59-130	11		30
2-Butanone	74		69	Q	70-130	7		30
Vinyl acetate	87		86		70-130	1		30
4-Methyl-2-pentanone	75		70		70-130	7		30
1,2,3-Trichloropropane	80		80		68-130	0		30
2-Hexanone	68	Q	65	Q	70-130	5		30
Bromochloromethane	105		103		70-130	2		30
2,2-Dichloropropane	105		96		70-130	9		30
1,2-Dibromoethane	94		94		70-130	0		30
1,3-Dichloropropane	94		94		69-130	0		30
1,1,1,2-Tetrachloroethane	98		97		70-130	1		30

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Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 10 Batch: WG614248-1 WG614248-2								
Bromobenzene	97		97		70-130	0		30
n-Butylbenzene	102		94		70-130	8		30
sec-Butylbenzene	101		93		70-130	8		30
tert-Butylbenzene	103		97		70-130	6		30
o-Chlorotoluene	105		103		70-130	2		30
p-Chlorotoluene	101		99		70-130	2		30
1,2-Dibromo-3-chloropropane	85		84		68-130	1		30
Hexachlorobutadiene	107		99		67-130	8		30
Isopropylbenzene	97		92		70-130	5		30
p-Isopropyltoluene	102		96		70-130	6		30
Naphthalene	80		80		70-130	0		30
Acrylonitrile	84		81		70-130	4		30
Isopropyl Ether	102		100		66-130	2		30
tert-Butyl Alcohol	67	Q	62	Q	70-130	8		30
n-Propylbenzene	98		93		70-130	5		30
1,2,3-Trichlorobenzene	91		92		70-130	1		30
1,2,4-Trichlorobenzene	98		98		70-130	0		30
1,3,5-Trimethylbenzene	102		98		70-130	4		30
1,2,4-Trimethylbenzene	104		101		70-130	3		30
Methyl Acetate	86		84		51-146	2		30
Ethyl Acetate	82		78		70-130	5		30

A4-141

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 10 Batch: WG614248-1 WG614248-2								
Acrolein	76		73		70-130	4		30
Cyclohexane	99		85		59-142	15		30
1,4-Dioxane	79		78		65-136	1		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	102		89		50-139	14		30
1,4-Diethylbenzene	102		96		70-130	6		30
4-Ethyltoluene	100		96		70-130	4		30
1,2,4,5-Tetramethylbenzene	103		100		70-130	3		30
Tetrahydrofuran	98		95		66-130	3		30
Ethyl ether	81		81		67-130	0		30
trans-1,4-Dichloro-2-butene	80		79		70-130	1		30
Methyl cyclohexane	101		87		70-130	15		30
Ethyl-Tert-Butyl-Ether	100		99		70-130	1		30
Tertiary-Amyl Methyl Ether	97		95		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		93		70-130
Toluene-d8	101		102		70-130
4-Bromofluorobenzene	104		105		70-130
Dibromofluoromethane	104		103		70-130

A4-142

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 13 Batch: WG615083-1 WG615083-2								
Methylene chloride	90		91		70-130	1		20
1,1-Dichloroethane	107		102		70-130	5		20
Chloroform	108		109		70-130	1		20
Carbon tetrachloride	104		104		63-132	0		20
1,2-Dichloropropane	96		98		70-130	2		20
Dibromochloromethane	89		89		63-130	0		20
1,1,2-Trichloroethane	88		90		70-130	2		20
Tetrachloroethene	106		105		70-130	1		20
Chlorobenzene	100		102		75-130	2		20
Trichlorofluoromethane	104		106		62-150	2		20
1,2-Dichloroethane	108		109		70-130	1		20
1,1,1-Trichloroethane	108		109		67-130	1		20
Bromodichloromethane	95		96		67-130	1		20
trans-1,3-Dichloropropene	81		83		70-130	2		20
cis-1,3-Dichloropropene	91		89		70-130	2		20
1,1-Dichloropropene	104		108		70-130	4		20
Bromoform	85		84		54-136	1		20
1,1,2,2-Tetrachloroethane	90		89		67-130	1		20
Benzene	102		103		70-130	1		20
Toluene	101		100		70-130	1		20
Ethylbenzene	102		102		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 13 Batch: WG615083-1 WG615083-2								
Chloromethane	104		96		64-130	8		20
Bromomethane	61		62		39-139	2		20
Vinyl chloride	95		101		55-140	6		20
Chloroethane	83		90		55-138	8		20
1,1-Dichloroethene	97		97		61-145	0		20
trans-1,2-Dichloroethene	103		105		70-130	2		20
Trichloroethene	104		102		70-130	2		20
1,2-Dichlorobenzene	99		99		70-130	0		20
1,3-Dichlorobenzene	99		101		70-130	2		20
1,4-Dichlorobenzene	97		99		70-130	2		20
Methyl tert butyl ether	94		91		63-130	3		20
p/m-Xylene	102		102		70-130	0		20
o-Xylene	101		102		70-130	1		20
cis-1,2-Dichloroethene	105		106		70-130	1		20
Dibromomethane	103		105		70-130	2		20
1,2,3-Trichloropropane	94		95		64-130	1		20
Acrylonitrile	93		92		70-130	1		20
Styrene	101		102		70-130	1		20
Dichlorodifluoromethane	104		105		36-147	1		20
Acetone	75		70		58-148	7		20
Carbon disulfide	90		90		51-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 13 Batch: WG615083-1 WG615083-2								
2-Butanone	58	Q	60	Q	63-138	3		20
Vinyl acetate	81		79		70-130	3		20
4-Methyl-2-pentanone	91		88		59-130	3		20
2-Hexanone	73		68		57-130	7		20
Bromochloromethane	105		104		70-130	1		20
2,2-Dichloropropane	101		98		63-133	3		20
1,2-Dibromoethane	96		95		70-130	1		20
1,3-Dichloropropane	95		97		70-130	2		20
1,1,1,2-Tetrachloroethane	90		92		64-130	2		20
Bromobenzene	97		99		70-130	2		20
n-Butylbenzene	100		101		53-136	1		20
sec-Butylbenzene	99		102		70-130	3		20
tert-Butylbenzene	99		101		70-130	2		20
o-Chlorotoluene	101		103		70-130	2		20
p-Chlorotoluene	101		104		70-130	3		20
1,2-Dibromo-3-chloropropane	76		76		41-144	3		20
Hexachlorobutadiene	123		125		63-130	2		20
Isopropylbenzene	99		102		70-130	3		20
p-Isopropyltoluene	101		100		70-130	1		20
Naphthalene	72		72		70-130	0		20
n-Propylbenzene	98		99		69-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 13 Batch: WG615083-1 WG615083-2								
1,2,3-Trichlorobenzene	83		80		70-130	4		20
1,2,4-Trichlorobenzene	86		84		70-130	2		20
1,3,5-Trimethylbenzene	102		103		64-130	1		20
1,2,4-Trimethylbenzene	100		102		70-130	2		20
Cyclohexane	100		100		70-130	0		20
1,4-Dioxane	119		122		56-162	2		20
1,4-Diethylbenzene	99		103		70-130	4		20
4-Ethyltoluene	100		101		70-130	1		20
1,2,4,5-Tetramethylbenzene	98		100		70-130	2		20
Ethyl ether	84		84		59-134	0		20
trans-1,4-Dichloro-2-butene	74		79		70-130	7		20
Methyl cyclohexane	108		106		70-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	106		103		70-130
Toluene-d8	97		98		70-130
4-Bromofluorobenzene	98		100		70-130
Dibromofluoromethane	103		101		70-130

SEMIVOLATILES

Serial_No:06141317:00

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-01 D
Client ID: SB-1 (1-2')
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 06/13/13 18:53
Analyst: RC
Percent Solids: 86%

Date Collected: 06/07/13 09:20
Date Received: 06/07/13
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 06/09/13 09:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	300	77.	2
1,2,4-Trichlorobenzene	ND		ug/kg	370	120	2
Hexachlorobenzene	ND		ug/kg	220	70.	2
Bis(2-chloroethyl)ether	ND		ug/kg	340	100	2
2-Chloronaphthalene	ND		ug/kg	370	120	2
1,2-Dichlorobenzene	ND		ug/kg	370	120	2
1,3-Dichlorobenzene	ND		ug/kg	370	120	2
1,4-Dichlorobenzene	ND		ug/kg	370	110	2
3,3'-Dichlorobenzidine	ND		ug/kg	370	100	2
2,4-Dinitrotoluene	ND		ug/kg	370	81.	2
2,6-Dinitrotoluene	ND		ug/kg	370	96.	2
Fluoranthene	1000		ug/kg	220	69.	2
4-Chlorophenyl phenyl ether	ND		ug/kg	370	110	2
4-Bromophenyl phenyl ether	ND		ug/kg	370	86.	2
Bis(2-chloroisopropyl)ether	ND		ug/kg	450	130	2
Bis(2-chloroethoxy)methane	ND		ug/kg	400	110	2
Hexachlorobutadiene	ND		ug/kg	370	100	2
Hexachlorocyclopentadiene	ND		ug/kg	1100	240	2
Hexachloroethane	ND		ug/kg	300	68.	2
Isophorone	ND		ug/kg	340	100	2
Naphthalene	ND		ug/kg	370	120	2
Nitrobenzene	ND		ug/kg	340	89.	2
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	300	79.	2
n-Nitrosodi-n-propylamine	ND		ug/kg	370	110	2
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	370	98.	2
Butyl benzyl phthalate	ND		ug/kg	370	73.	2
Di-n-butylphthalate	ND		ug/kg	370	72.	2
Di-n-octylphthalate	ND		ug/kg	370	92.	2
Diethyl phthalate	ND		ug/kg	370	79.	2
Dimethyl phthalate	ND		ug/kg	370	95.	2
Benzo(a)anthracene	570		ug/kg	220	73.	2

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-01 D
Client ID: SB-1 (1-2')
Sample Location: BRONX, NY

Date Collected: 06/07/13 09:20
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	490		ug/kg	300	92.	2
Benzo(b)fluoranthene	630		ug/kg	220	76.	2
Benzo(k)fluoranthene	300		ug/kg	220	71.	2
Chrysene	570		ug/kg	220	74.	2
Acenaphthylene	ND		ug/kg	300	70.	2
Anthracene	140	J	ug/kg	220	62.	2
Benzo(ghi)perylene	300		ug/kg	300	78.	2
Fluorene	ND		ug/kg	370	110	2
Phenanthrene	410		ug/kg	220	73.	2
Dibenzo(a,h)anthracene	ND		ug/kg	220	72.	2
Indeno(1,2,3-cd)Pyrene	310		ug/kg	300	83.	2
Pyrene	900		ug/kg	220	73.	2
Biphenyl	ND		ug/kg	850	120	2
4-Chloroaniline	ND		ug/kg	370	99.	2
2-Nitroaniline	ND		ug/kg	370	100	2
3-Nitroaniline	ND		ug/kg	370	100	2
4-Nitroaniline	ND		ug/kg	370	100	2
Dibenzofuran	ND		ug/kg	370	120	2
2-Methylnaphthalene	ND		ug/kg	450	120	2
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	370	120	2
Acetophenone	ND		ug/kg	370	120	2
2,4,6-Trichlorophenol	ND		ug/kg	220	71.	2
P-Chloro-M-Cresol	ND		ug/kg	370	110	2
2-Chlorophenol	ND		ug/kg	370	110	2
2,4-Dichlorophenol	ND		ug/kg	340	120	2
2,4-Dimethylphenol	ND		ug/kg	370	110	2
2-Nitrophenol	ND		ug/kg	810	120	2
4-Nitrophenol	ND		ug/kg	520	120	2
2,4-Dinitrophenol	ND		ug/kg	1800	510	2
4,6-Dinitro-o-cresol	ND		ug/kg	970	140	2
Pentachlorophenol	ND		ug/kg	300	80.	2
Phenol	ND		ug/kg	370	110	2
2-Methylphenol	ND		ug/kg	370	120	2
3-Methylphenol/4-Methylphenol	ND		ug/kg	540	120	2
2,4,5-Trichlorophenol	ND		ug/kg	370	120	2
Benzoic Acid	ND		ug/kg	1200	380	2
Benzyl Alcohol	ND		ug/kg	370	120	2
Carbazole	ND		ug/kg	370	80.	2

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-01 D
Client ID: SB-1 (1-2')
Sample Location: BRONX, NY

Date Collected: 06/07/13 09:20
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		25-120
Phenol-d6	80		10-120
Nitrobenzene-d5	75		23-120
2-Fluorobiphenyl	85		30-120
2,4,6-Tribromophenol	85		0-136
4-Terphenyl-d14	85		18-120

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-02
Client ID: SB-2 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 06/13/13 19:20
Analyst: RC
Percent Solids: 83%

Date Collected: 06/07/13 10:00
Date Received: 06/07/13
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 06/09/13 09:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	160	41.	1
1,2,4-Trichlorobenzene	ND		ug/kg	200	65.	1
Hexachlorobenzene	ND		ug/kg	120	37.	1
Bis(2-chloroethyl)ether	ND		ug/kg	180	56.	1
2-Chloronaphthalene	ND		ug/kg	200	65.	1
1,2-Dichlorobenzene	ND		ug/kg	200	66.	1
1,3-Dichlorobenzene	ND		ug/kg	200	63.	1
1,4-Dichlorobenzene	ND		ug/kg	200	61.	1
3,3'-Dichlorobenzidine	ND		ug/kg	200	53.	1
2,4-Dinitrotoluene	ND		ug/kg	200	43.	1
2,6-Dinitrotoluene	ND		ug/kg	200	51.	1
Fluoranthene	500		ug/kg	120	37.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	200	61.	1
4-Bromophenyl phenyl ether	ND		ug/kg	200	46.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	240	70.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	220	60.	1
Hexachlorobutadiene	ND		ug/kg	200	56.	1
Hexachlorocyclopentadiene	ND		ug/kg	570	130	1
Hexachloroethane	ND		ug/kg	160	36.	1
Isophorone	ND		ug/kg	180	53.	1
Naphthalene	ND		ug/kg	200	66.	1
Nitrobenzene	ND		ug/kg	180	48.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	160	42.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	200	59.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	200	52.	1
Butyl benzyl phthalate	ND		ug/kg	200	39.	1
Di-n-butylphthalate	ND		ug/kg	200	38.	1
Di-n-octylphthalate	ND		ug/kg	200	49.	1
Diethyl phthalate	ND		ug/kg	200	42.	1
Dimethyl phthalate	ND		ug/kg	200	51.	1
Benzo(a)anthracene	230		ug/kg	120	39.	1

Serial_No:06141317:00

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-02
Client ID: SB-2 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 10:00
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	190		ug/kg	160	49.	1
Benzo(b)fluoranthene	290		ug/kg	120	40.	1
Benzo(k)fluoranthene	120		ug/kg	120	38.	1
Chrysene	250		ug/kg	120	39.	1
Acenaphthylene	ND		ug/kg	160	37.	1
Anthracene	50	J	ug/kg	120	33.	1
Benzo(ghi)perylene	130	J	ug/kg	160	42.	1
Fluorene	ND		ug/kg	200	57.	1
Phenanthrene	240		ug/kg	120	39.	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	39.	1
Indeno(1,2,3-cd)Pyrene	150	J	ug/kg	160	44.	1
Pyrene	450		ug/kg	120	39.	1
Biphenyl	ND		ug/kg	460	66.	1
4-Chloroaniline	ND		ug/kg	200	53.	1
2-Nitroaniline	ND		ug/kg	200	56.	1
3-Nitroaniline	ND		ug/kg	200	55.	1
4-Nitroaniline	ND		ug/kg	200	54.	1
Dibenzofuran	ND		ug/kg	200	67.	1
2-Methylnaphthalene	ND		ug/kg	240	64.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	200	62.	1
Acetophenone	ND		ug/kg	200	62.	1
2,4,6-Trichlorophenol	ND		ug/kg	120	38.	1
P-Chloro-M-Cresol	ND		ug/kg	200	58.	1
2-Chlorophenol	ND		ug/kg	200	60.	1
2,4-Dichlorophenol	ND		ug/kg	180	65.	1
2,4-Dimethylphenol	ND		ug/kg	200	59.	1
2-Nitrophenol	ND		ug/kg	430	62.	1
4-Nitrophenol	ND		ug/kg	280	65.	1
2,4-Dinitrophenol	ND		ug/kg	960	270	1
4,6-Dinitro-o-cresol	ND		ug/kg	520	73.	1
Pentachlorophenol	ND		ug/kg	160	43.	1
Phenol	ND		ug/kg	200	59.	1
2-Methylphenol	ND		ug/kg	200	64.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	290	65.	1
2,4,5-Trichlorophenol	ND		ug/kg	200	65.	1
Benzoic Acid	ND		ug/kg	650	200	1
Benzyl Alcohol	ND		ug/kg	200	61.	1
Carbazole	ND		ug/kg	200	43.	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-02
Client ID: SB-2 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 10:00
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	64		25-120
Phenol-d6	73		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	72		30-120
2,4,6-Tribromophenol	67		0-136
4-Terphenyl-d14	80		18-120

Serial_No:06141317:00

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-03 D
Client ID: SB-3 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 06/13/13 19:47
Analyst: RC
Percent Solids: 88%

Date Collected: 06/07/13 10:15
Date Received: 06/07/13
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 06/09/13 09:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	890	230	6
1,2,4-Trichlorobenzene	ND		ug/kg	1100	360	6
Hexachlorobenzene	ND		ug/kg	670	210	6
Bis(2-chloroethyl)ether	ND		ug/kg	1000	310	6
2-Chloronaphthalene	ND		ug/kg	1100	360	6
1,2-Dichlorobenzene	ND		ug/kg	1100	360	6
1,3-Dichlorobenzene	ND		ug/kg	1100	350	6
1,4-Dichlorobenzene	ND		ug/kg	1100	340	6
3,3'-Dichlorobenzidine	ND		ug/kg	1100	300	6
2,4-Dinitrotoluene	ND		ug/kg	1100	240	6
2,6-Dinitrotoluene	ND		ug/kg	1100	280	6
Fluoranthene	980		ug/kg	670	200	6
4-Chlorophenyl phenyl ether	ND		ug/kg	1100	340	6
4-Bromophenyl phenyl ether	ND		ug/kg	1100	260	6
Bis(2-chloroisopropyl)ether	ND		ug/kg	1300	390	6
Bis(2-chloroethoxy)methane	ND		ug/kg	1200	340	6
Hexachlorobutadiene	ND		ug/kg	1100	310	6
Hexachlorocyclopentadiene	ND		ug/kg	3200	710	6
Hexachloroethane	ND		ug/kg	890	200	6
Isophorone	ND		ug/kg	1000	300	6
Naphthalene	ND		ug/kg	1100	370	6
Nitrobenzene	ND		ug/kg	1000	260	6
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	890	230	6
n-Nitrosodi-n-propylamine	ND		ug/kg	1100	330	6
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	1100	290	6
Butyl benzyl phthalate	ND		ug/kg	1100	220	6
Di-n-butylphthalate	ND		ug/kg	1100	210	6
Di-n-octylphthalate	ND		ug/kg	1100	270	6
Diethyl phthalate	ND		ug/kg	1100	240	6
Dimethyl phthalate	ND		ug/kg	1100	280	6
Benzo(a)anthracene	500	J	ug/kg	670	220	6

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-03 D
Client ID: SB-3 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 10:15
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	470	J	ug/kg	890	270	6
Benzo(b)fluoranthene	580	J	ug/kg	670	220	6
Benzo(k)fluoranthene	300	J	ug/kg	670	210	6
Chrysene	520	J	ug/kg	670	220	6
Acenaphthylene	ND		ug/kg	890	210	6
Anthracene	ND		ug/kg	670	180	6
Benzo(ghi)perylene	330	J	ug/kg	890	230	6
Fluorene	ND		ug/kg	1100	320	6
Phenanthrene	610	J	ug/kg	670	220	6
Dibenzo(a,h)anthracene	ND		ug/kg	670	220	6
Indeno(1,2,3-cd)Pyrene	320	J	ug/kg	890	250	6
Pyrene	810		ug/kg	670	220	6
Biphenyl	ND		ug/kg	2500	370	6
4-Chloroaniline	ND		ug/kg	1100	290	6
2-Nitroaniline	ND		ug/kg	1100	310	6
3-Nitroaniline	ND		ug/kg	1100	310	6
4-Nitroaniline	ND		ug/kg	1100	300	6
Dibenzofuran	ND		ug/kg	1100	370	6
2-Methylnaphthalene	ND		ug/kg	1300	360	6
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	1100	340	6
Acetophenone	ND		ug/kg	1100	340	6
2,4,6-Trichlorophenol	ND		ug/kg	670	210	6
P-Chloro-M-Cresol	ND		ug/kg	1100	320	6
2-Chlorophenol	ND		ug/kg	1100	340	6
2,4-Dichlorophenol	ND		ug/kg	1000	360	6
2,4-Dimethylphenol	ND		ug/kg	1100	330	6
2-Nitrophenol	ND		ug/kg	2400	350	6
4-Nitrophenol	ND		ug/kg	1600	360	6
2,4-Dinitrophenol	ND		ug/kg	5300	1500	6
4,6-Dinitro-o-cresol	ND		ug/kg	2900	410	6
Pentachlorophenol	ND		ug/kg	890	240	6
Phenol	ND		ug/kg	1100	330	6
2-Methylphenol	ND		ug/kg	1100	360	6
3-Methylphenol/4-Methylphenol	ND		ug/kg	1600	360	6
2,4,5-Trichlorophenol	ND		ug/kg	1100	360	6
Benzoic Acid	ND		ug/kg	3600	1100	6
Benzyl Alcohol	ND		ug/kg	1100	340	6
Carbazole	ND		ug/kg	1100	240	6

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-03 D
Client ID: SB-3 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 10:15
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		25-120
Phenol-d6	79		10-120
Nitrobenzene-d5	79		23-120
2-Fluorobiphenyl	81		30-120
2,4,6-Tribromophenol	82		0-136
4-Terphenyl-d14	74		18-120

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-04
Client ID: SB-4 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 06/13/13 20:14
Analyst: RC
Percent Solids: 84%

Date Collected: 06/07/13 10:40
Date Received: 06/07/13
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 06/09/13 09:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	550		ug/kg	160	40.	1
1,2,4-Trichlorobenzene	ND		ug/kg	200	64.	1
Hexachlorobenzene	ND		ug/kg	120	36.	1
Bis(2-chloroethyl)ether	ND		ug/kg	180	55.	1
2-Chloronaphthalene	ND		ug/kg	200	64.	1
1,2-Dichlorobenzene	ND		ug/kg	200	64.	1
1,3-Dichlorobenzene	ND		ug/kg	200	62.	1
1,4-Dichlorobenzene	ND		ug/kg	200	60.	1
3,3'-Dichlorobenzidine	ND		ug/kg	200	52.	1
2,4-Dinitrotoluene	ND		ug/kg	200	42.	1
2,6-Dinitrotoluene	ND		ug/kg	200	50.	1
Fluoranthene	4100		ug/kg	120	36.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	200	60.	1
4-Bromophenyl phenyl ether	ND		ug/kg	200	45.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	240	69.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	210	59.	1
Hexachlorobutadiene	ND		ug/kg	200	55.	1
Hexachlorocyclopentadiene	ND		ug/kg	560	120	1
Hexachloroethane	ND		ug/kg	160	36.	1
Isophorone	ND		ug/kg	180	52.	1
Naphthalene	1200		ug/kg	200	65.	1
Nitrobenzene	ND		ug/kg	180	47.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	160	41.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	200	58.	1
Bis(2-Ethylhexyl)phthalate	150	J	ug/kg	200	51.	1
Butyl benzyl phthalate	ND		ug/kg	200	38.	1
Di-n-butylphthalate	ND		ug/kg	200	38.	1
Di-n-octylphthalate	ND		ug/kg	200	48.	1
Diethyl phthalate	ND		ug/kg	200	41.	1
Dimethyl phthalate	ND		ug/kg	200	50.	1
Benzo(a)anthracene	1400		ug/kg	120	38.	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-04
Client ID: SB-4 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 10:40
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	1400		ug/kg	160	48.	1
Benzo(b)fluoranthene	1800		ug/kg	120	40.	1
Benzo(k)fluoranthene	580		ug/kg	120	37.	1
Chrysene	1600		ug/kg	120	38.	1
Acenaphthylene	200		ug/kg	160	37.	1
Anthracene	700		ug/kg	120	33.	1
Benzo(ghi)perylene	790		ug/kg	160	41.	1
Fluorene	470		ug/kg	200	56.	1
Phenanthrene	5100		ug/kg	120	38.	1
Dibenzo(a,h)anthracene	180		ug/kg	120	38.	1
Indeno(1,2,3-cd)Pyrene	810		ug/kg	160	44.	1
Pyrene	3600		ug/kg	120	38.	1
Biphenyl	110	J	ug/kg	450	65.	1
4-Chloroaniline	ND		ug/kg	200	52.	1
2-Nitroaniline	ND		ug/kg	200	55.	1
3-Nitroaniline	ND		ug/kg	200	54.	1
4-Nitroaniline	ND		ug/kg	200	53.	1
Dibenzofuran	560		ug/kg	200	65.	1
2-Methylnaphthalene	380		ug/kg	240	63.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	200	61.	1
Acetophenone	ND		ug/kg	200	61.	1
2,4,6-Trichlorophenol	ND		ug/kg	120	37.	1
P-Chloro-M-Cresol	ND		ug/kg	200	57.	1
2-Chlorophenol	ND		ug/kg	200	59.	1
2,4-Dichlorophenol	ND		ug/kg	180	64.	1
2,4-Dimethylphenol	ND		ug/kg	200	58.	1
2-Nitrophenol	ND		ug/kg	420	61.	1
4-Nitrophenol	ND		ug/kg	270	64.	1
2,4-Dinitrophenol	ND		ug/kg	940	270	1
4,6-Dinitro-o-cresol	ND		ug/kg	510	72.	1
Pentachlorophenol	ND		ug/kg	160	42.	1
Phenol	ND		ug/kg	200	58.	1
2-Methylphenol	ND		ug/kg	200	63.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	64.	1
2,4,5-Trichlorophenol	ND		ug/kg	200	64.	1
Benzoic Acid	ND		ug/kg	640	200	1
Benzyl Alcohol	ND		ug/kg	200	60.	1
Carbazole	470		ug/kg	200	42.	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-04
Client ID: SB-4 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 10:40
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		25-120
Phenol-d6	70		10-120
Nitrobenzene-d5	64		23-120
2-Fluorobiphenyl	71		30-120
2,4,6-Tribromophenol	92		0-136
4-Terphenyl-d14	85		18-120

Serial_No:06141317:00

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-05
Client ID:	SB-5 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8270D
Analytical Date:	06/13/13 20:41
Analyst:	RC
Percent Solids:	86%

Date Collected:	06/07/13 11:25
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 09:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	150	39.	1
1,2,4-Trichlorobenzene	ND		ug/kg	190	62.	1
Hexachlorobenzene	ND		ug/kg	110	35.	1
Bis(2-chloroethyl)ether	ND		ug/kg	170	53.	1
2-Chloronaphthalene	ND		ug/kg	190	62.	1
1,2-Dichlorobenzene	ND		ug/kg	190	62.	1
1,3-Dichlorobenzene	ND		ug/kg	190	60.	1
1,4-Dichlorobenzene	ND		ug/kg	190	58.	1
3,3'-Dichlorobenzidine	ND		ug/kg	190	50.	1
2,4-Dinitrotoluene	ND		ug/kg	190	41.	1
2,6-Dinitrotoluene	ND		ug/kg	190	48.	1
Fluoranthene	1900		ug/kg	110	35.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	190	58.	1
4-Bromophenyl phenyl ether	ND		ug/kg	190	44.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	230	67.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	57.	1
Hexachlorobutadiene	ND		ug/kg	190	54.	1
Hexachlorocyclopentadiene	ND		ug/kg	540	120	1
Hexachloroethane	ND		ug/kg	150	34.	1
Isophorone	ND		ug/kg	170	50.	1
Naphthalene	ND		ug/kg	190	63.	1
Nitrobenzene	ND		ug/kg	170	45.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	150	40.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	190	56.	1
Bis(2-Ethylhexyl)phthalate	110	J	ug/kg	190	50.	1
Butyl benzyl phthalate	ND		ug/kg	190	37.	1
Di-n-butylphthalate	ND		ug/kg	190	37.	1
Di-n-octylphthalate	ND		ug/kg	190	47.	1
Diethyl phthalate	ND		ug/kg	190	40.	1
Dimethyl phthalate	ND		ug/kg	190	48.	1
Benzo(a)anthracene	1200		ug/kg	110	37.	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-05
Client ID: SB-5 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:25
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	1400		ug/kg	150	46.	1
Benzo(b)fluoranthene	1900		ug/kg	110	38.	1
Benzo(k)fluoranthene	640		ug/kg	110	36.	1
Chrysene	1400		ug/kg	110	37.	1
Acenaphthylene	510		ug/kg	150	35.	1
Anthracene	300		ug/kg	110	32.	1
Benzo(ghi)perylene	890		ug/kg	150	39.	1
Fluorene	ND		ug/kg	190	54.	1
Phenanthrene	690		ug/kg	110	37.	1
Dibenzo(a,h)anthracene	170		ug/kg	110	37.	1
Indeno(1,2,3-cd)Pyrene	1100		ug/kg	150	42.	1
Pyrene	1800		ug/kg	110	37.	1
Biphenyl	ND		ug/kg	430	62.	1
4-Chloroaniline	ND		ug/kg	190	50.	1
2-Nitroaniline	ND		ug/kg	190	54.	1
3-Nitroaniline	ND		ug/kg	190	52.	1
4-Nitroaniline	ND		ug/kg	190	51.	1
Dibenzofuran	ND		ug/kg	190	63.	1
2-Methylnaphthalene	ND		ug/kg	230	61.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	190	59.	1
Acetophenone	ND		ug/kg	190	59.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	36.	1
P-Chloro-M-Cresol	ND		ug/kg	190	55.	1
2-Chlorophenol	ND		ug/kg	190	57.	1
2,4-Dichlorophenol	ND		ug/kg	170	61.	1
2,4-Dimethylphenol	ND		ug/kg	190	56.	1
2-Nitrophenol	ND		ug/kg	410	59.	1
4-Nitrophenol	ND		ug/kg	260	61.	1
2,4-Dinitrophenol	ND		ug/kg	910	260	1
4,6-Dinitro-o-cresol	ND		ug/kg	490	69.	1
Pentachlorophenol	ND		ug/kg	150	41.	1
Phenol	ND		ug/kg	190	56.	1
2-Methylphenol	ND		ug/kg	190	61.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	270	62.	1
2,4,5-Trichlorophenol	ND		ug/kg	190	61.	1
Benzoic Acid	ND		ug/kg	610	190	1
Benzyl Alcohol	ND		ug/kg	190	58.	1
Carbazole	52	J	ug/kg	190	41.	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-05
Client ID: SB-5 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:25
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	74		25-120
Phenol-d6	76		10-120
Nitrobenzene-d5	72		23-120
2-Fluorobiphenyl	78		30-120
2,4,6-Tribromophenol	88		0-136
4-Terphenyl-d14	87		18-120

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-06
Client ID: SB-6 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 06/13/13 21:08
Analyst: RC
Percent Solids: 82%

Date Collected: 06/07/13 11:40
Date Received: 06/07/13
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 06/09/13 09:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	160	41.	1
1,2,4-Trichlorobenzene	ND		ug/kg	200	66.	1
Hexachlorobenzene	ND		ug/kg	120	37.	1
Bis(2-chloroethyl)ether	ND		ug/kg	180	56.	1
2-Chloronaphthalene	ND		ug/kg	200	65.	1
1,2-Dichlorobenzene	ND		ug/kg	200	66.	1
1,3-Dichlorobenzene	ND		ug/kg	200	63.	1
1,4-Dichlorobenzene	ND		ug/kg	200	61.	1
3,3'-Dichlorobenzidine	ND		ug/kg	200	53.	1
2,4-Dinitrotoluene	ND		ug/kg	200	43.	1
2,6-Dinitrotoluene	ND		ug/kg	200	51.	1
Fluoranthene	ND		ug/kg	120	37.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	200	61.	1
4-Bromophenyl phenyl ether	ND		ug/kg	200	46.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	240	71.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	220	61.	1
Hexachlorobutadiene	ND		ug/kg	200	57.	1
Hexachlorocyclopentadiene	ND		ug/kg	580	130	1
Hexachloroethane	ND		ug/kg	160	36.	1
Isophorone	ND		ug/kg	180	53.	1
Naphthalene	ND		ug/kg	200	67.	1
Nitrobenzene	ND		ug/kg	180	48.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	160	42.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	200	60.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	200	53.	1
Butyl benzyl phthalate	ND		ug/kg	200	39.	1
Di-n-butylphthalate	ND		ug/kg	200	39.	1
Di-n-octylphthalate	ND		ug/kg	200	49.	1
Diethyl phthalate	ND		ug/kg	200	42.	1
Dimethyl phthalate	ND		ug/kg	200	51.	1
Benzo(a)anthracene	ND		ug/kg	120	39.	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-06
Client ID: SB-6 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:40
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	ND		ug/kg	160	49.	1
Benzo(b)fluoranthene	ND		ug/kg	120	40.	1
Benzo(k)fluoranthene	ND		ug/kg	120	38.	1
Chrysene	ND		ug/kg	120	39.	1
Acenaphthylene	ND		ug/kg	160	38.	1
Anthracene	ND		ug/kg	120	33.	1
Benzo(ghi)perylene	ND		ug/kg	160	42.	1
Fluorene	ND		ug/kg	200	58.	1
Phenanthrene	ND		ug/kg	120	39.	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	39.	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	160	44.	1
Pyrene	ND		ug/kg	120	39.	1
Biphenyl	ND		ug/kg	460	66.	1
4-Chloroaniline	ND		ug/kg	200	53.	1
2-Nitroaniline	ND		ug/kg	200	57.	1
3-Nitroaniline	ND		ug/kg	200	55.	1
4-Nitroaniline	ND		ug/kg	200	54.	1
Dibenzofuran	ND		ug/kg	200	67.	1
2-Methylnaphthalene	ND		ug/kg	240	64.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	200	62.	1
Acetophenone	ND		ug/kg	200	62.	1
2,4,6-Trichlorophenol	ND		ug/kg	120	38.	1
P-Chloro-M-Cresol	ND		ug/kg	200	58.	1
2-Chlorophenol	ND		ug/kg	200	61.	1
2,4-Dichlorophenol	ND		ug/kg	180	65.	1
2,4-Dimethylphenol	ND		ug/kg	200	60.	1
2-Nitrophenol	ND		ug/kg	430	63.	1
4-Nitrophenol	ND		ug/kg	280	65.	1
2,4-Dinitrophenol	ND		ug/kg	960	270	1
4,6-Dinitro-o-cresol	ND		ug/kg	520	74.	1
Pentachlorophenol	ND		ug/kg	160	43.	1
Phenol	ND		ug/kg	200	59.	1
2-Methylphenol	ND		ug/kg	200	65.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	290	66.	1
2,4,5-Trichlorophenol	ND		ug/kg	200	65.	1
Benzoic Acid	ND		ug/kg	650	200	1
Benzyl Alcohol	ND		ug/kg	200	62.	1
Carbazole	ND		ug/kg	200	43.	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-06
Client ID: SB-6 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:40
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	72		25-120
Phenol-d6	71		10-120
Nitrobenzene-d5	66		23-120
2-Fluorobiphenyl	71		30-120
2,4,6-Tribromophenol	72		0-136
4-Terphenyl-d14	66		18-120

Serial_No:06141317:00

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-07	D2	Date Collected:	06/07/13 11:55
Client ID:	SB-7 (2-3')		Date Received:	06/07/13
Sample Location:	BRONX, NY		Field Prep:	Not Specified
Matrix:	Soil		Extraction Method:	EPA 3546
Analytical Method:	1,8270D		Extraction Date:	06/09/13 09:15
Analytical Date:	06/14/13 10:37			
Analyst:	RC			
Percent Solids:	78%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Fluoranthene	43000		ug/kg	1200	380	10
Benzo(a)anthracene	20000		ug/kg	1200	410	10
Benzo(a)pyrene	17000		ug/kg	1700	510	10
Benzo(b)fluoranthene	22000		ug/kg	1200	420	10
Chrysene	22000		ug/kg	1200	410	10
Phenanthrene	25000		ug/kg	1200	410	10
Pyrene	37000		ug/kg	1200	400	10

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-07 D
Client ID: SB-7 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 06/13/13 21:35
Analyst: RC
Percent Solids: 78%

Date Collected: 06/07/13 11:55
Date Received: 06/07/13
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 06/09/13 09:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	920		ug/kg	330	86.	2
1,2,4-Trichlorobenzene	ND		ug/kg	420	140	2
Hexachlorobenzene	ND		ug/kg	250	78.	2
Bis(2-chloroethyl)ether	ND		ug/kg	380	120	2
2-Chloronaphthalene	ND		ug/kg	420	140	2
1,2-Dichlorobenzene	ND		ug/kg	420	140	2
1,3-Dichlorobenzene	ND		ug/kg	420	130	2
1,4-Dichlorobenzene	ND		ug/kg	420	130	2
3,3'-Dichlorobenzidine	ND		ug/kg	420	110	2
2,4-Dinitrotoluene	ND		ug/kg	420	90.	2
2,6-Dinitrotoluene	ND		ug/kg	420	110	2
Fluoranthene	39000	E	ug/kg	250	76.	2
4-Chlorophenyl phenyl ether	ND		ug/kg	420	130	2
4-Bromophenyl phenyl ether	ND		ug/kg	420	96.	2
Bis(2-chloroisopropyl)ether	ND		ug/kg	500	150	2
Bis(2-chloroethoxy)methane	ND		ug/kg	450	130	2
Hexachlorobutadiene	ND		ug/kg	420	120	2
Hexachlorocyclopentadiene	ND		ug/kg	1200	270	2
Hexachloroethane	ND		ug/kg	330	76.	2
Isophorone	ND		ug/kg	380	110	2
Naphthalene	1300		ug/kg	420	140	2
Nitrobenzene	ND		ug/kg	380	99.	2
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	330	88.	2
n-Nitrosodi-n-propylamine	ND		ug/kg	420	120	2
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	420	110	2
Butyl benzyl phthalate	ND		ug/kg	420	81.	2
Di-n-butylphthalate	ND		ug/kg	420	80.	2
Di-n-octylphthalate	ND		ug/kg	420	100	2
Diethyl phthalate	ND		ug/kg	420	88.	2
Dimethyl phthalate	ND		ug/kg	420	100	2
Benzo(a)anthracene	24000	E	ug/kg	250	82.	2

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-07 D
Client ID: SB-7 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:55
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	19000	E	ug/kg	330	100	2
Benzo(b)fluoranthene	22000	E	ug/kg	250	84.	2
Benzo(k)fluoranthene	13000		ug/kg	250	80.	2
Chrysene	23000	E	ug/kg	250	82.	2
Acenaphthylene	10000		ug/kg	330	78.	2
Anthracene	9100		ug/kg	250	69.	2
Benzo(ghi)perylene	11000		ug/kg	330	87.	2
Fluorene	5800		ug/kg	420	120	2
Phenanthrene	27000	E	ug/kg	250	82.	2
Dibenzo(a,h)anthracene	9400		ug/kg	250	81.	2
Indeno(1,2,3-cd)Pyrene	12000		ug/kg	330	92.	2
Pyrene	35000	E	ug/kg	250	81.	2
Biphenyl	260	J	ug/kg	950	140	2
4-Chloroaniline	ND		ug/kg	420	110	2
2-Nitroaniline	ND		ug/kg	420	120	2
3-Nitroaniline	ND		ug/kg	420	120	2
4-Nitroaniline	ND		ug/kg	420	110	2
Dibenzofuran	2300		ug/kg	420	140	2
2-Methylnaphthalene	1800		ug/kg	500	130	2
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	420	130	2
Acetophenone	ND		ug/kg	420	130	2
2,4,6-Trichlorophenol	ND		ug/kg	250	79.	2
P-Chloro-M-Cresol	ND		ug/kg	420	120	2
2-Chlorophenol	ND		ug/kg	420	120	2
2,4-Dichlorophenol	ND		ug/kg	380	140	2
2,4-Dimethylphenol	ND		ug/kg	420	120	2
2-Nitrophenol	ND		ug/kg	900	130	2
4-Nitrophenol	ND		ug/kg	580	140	2
2,4-Dinitrophenol	ND		ug/kg	2000	570	2
4,6-Dinitro-o-cresol	ND		ug/kg	1100	150	2
Pentachlorophenol	ND		ug/kg	330	89.	2
Phenol	ND		ug/kg	420	120	2
2-Methylphenol	ND		ug/kg	420	130	2
3-Methylphenol/4-Methylphenol	ND		ug/kg	600	140	2
2,4,5-Trichlorophenol	ND		ug/kg	420	140	2
Benzoic Acid	ND		ug/kg	1400	420	2
Benzyl Alcohol	ND		ug/kg	420	130	2
Carbazole	1500		ug/kg	420	90.	2

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-07 D
Client ID: SB-7 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:55
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		25-120
Phenol-d6	74		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	74		30-120
2,4,6-Tribromophenol	85		0-136
4-Terphenyl-d14	73		18-120

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-08	Date Collected:	06/07/13 12:30
Client ID:	SB-8 (2-3')	Date Received:	06/07/13
Sample Location:	BRONX, NY	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8270D	Extraction Date:	06/09/13 09:15
Analytical Date:	06/13/13 22:02		
Analyst:	RC		
Percent Solids:	83%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	160	41.	1
1,2,4-Trichlorobenzene	ND		ug/kg	200	66.	1
Hexachlorobenzene	ND		ug/kg	120	37.	1
Bis(2-chloroethyl)ether	ND		ug/kg	180	56.	1
2-Chloronaphthalene	ND		ug/kg	200	65.	1
1,2-Dichlorobenzene	ND		ug/kg	200	66.	1
1,3-Dichlorobenzene	ND		ug/kg	200	63.	1
1,4-Dichlorobenzene	ND		ug/kg	200	61.	1
3,3'-Dichlorobenzidine	ND		ug/kg	200	53.	1
2,4-Dinitrotoluene	ND		ug/kg	200	43.	1
2,6-Dinitrotoluene	ND		ug/kg	200	51.	1
Fluoranthene	1300		ug/kg	120	37.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	200	61.	1
4-Bromophenyl phenyl ether	ND		ug/kg	200	46.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	240	71.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	220	61.	1
Hexachlorobutadiene	ND		ug/kg	200	56.	1
Hexachlorocyclopentadiene	ND		ug/kg	580	130	1
Hexachloroethane	ND		ug/kg	160	36.	1
Isophorone	ND		ug/kg	180	53.	1
Naphthalene	ND		ug/kg	200	67.	1
Nitrobenzene	ND		ug/kg	180	48.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	160	42.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	200	60.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	200	52.	1
Butyl benzyl phthalate	ND		ug/kg	200	39.	1
Di-n-butylphthalate	ND		ug/kg	200	39.	1
Di-n-octylphthalate	ND		ug/kg	200	49.	1
Diethyl phthalate	ND		ug/kg	200	42.	1
Dimethyl phthalate	ND		ug/kg	200	51.	1
Benzo(a)anthracene	1000		ug/kg	120	39.	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-08
Client ID: SB-8 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 12:30
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	1200		ug/kg	160	49.	1
Benzo(b)fluoranthene	1300		ug/kg	120	40.	1
Benzo(k)fluoranthene	940		ug/kg	120	38.	1
Chrysene	1200		ug/kg	120	39.	1
Acenaphthylene	430		ug/kg	160	38.	1
Anthracene	230		ug/kg	120	33.	1
Benzo(ghi)perylene	770		ug/kg	160	42.	1
Fluorene	ND		ug/kg	200	58.	1
Phenanthrene	400		ug/kg	120	39.	1
Dibenzo(a,h)anthracene	190		ug/kg	120	39.	1
Indeno(1,2,3-cd)Pyrene	820		ug/kg	160	44.	1
Pyrene	1300		ug/kg	120	39.	1
Biphenyl	ND		ug/kg	460	66.	1
4-Chloroaniline	ND		ug/kg	200	53.	1
2-Nitroaniline	ND		ug/kg	200	56.	1
3-Nitroaniline	ND		ug/kg	200	55.	1
4-Nitroaniline	ND		ug/kg	200	54.	1
Dibenzofuran	ND		ug/kg	200	67.	1
2-Methylnaphthalene	ND		ug/kg	240	64.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	200	62.	1
Acetophenone	ND		ug/kg	200	62.	1
2,4,6-Trichlorophenol	ND		ug/kg	120	38.	1
P-Chloro-M-Cresol	ND		ug/kg	200	58.	1
2-Chlorophenol	ND		ug/kg	200	60.	1
2,4-Dichlorophenol	ND		ug/kg	180	65.	1
2,4-Dimethylphenol	ND		ug/kg	200	60.	1
2-Nitrophenol	ND		ug/kg	430	62.	1
4-Nitrophenol	ND		ug/kg	280	65.	1
2,4-Dinitrophenol	ND		ug/kg	960	270	1
4,6-Dinitro-o-cresol	ND		ug/kg	520	73.	1
Pentachlorophenol	ND		ug/kg	160	43.	1
Phenol	ND		ug/kg	200	59.	1
2-Methylphenol	ND		ug/kg	200	65.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	290	66.	1
2,4,5-Trichlorophenol	ND		ug/kg	200	65.	1
Benzoic Acid	ND		ug/kg	650	200	1
Benzyl Alcohol	ND		ug/kg	200	62.	1
Carbazole	64	J	ug/kg	200	43.	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-08
Client ID: SB-8 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 12:30
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	74		25-120
Phenol-d6	77		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	75		30-120
2,4,6-Tribromophenol	89		0-136
4-Terphenyl-d14	72		18-120

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-09	Date Collected:	06/07/13 12:55
Client ID:	SB-9 (2-3')	Date Received:	06/07/13
Sample Location:	BRONX, NY	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8270D	Extraction Date:	06/09/13 09:15
Analytical Date:	06/13/13 22:30		
Analyst:	RC		
Percent Solids:	85%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	130	J	ug/kg	150	40.	1
1,2,4-Trichlorobenzene	ND		ug/kg	190	63.	1
Hexachlorobenzene	ND		ug/kg	120	36.	1
Bis(2-chloroethyl)ether	ND		ug/kg	170	54.	1
2-Chloronaphthalene	ND		ug/kg	190	62.	1
1,2-Dichlorobenzene	ND		ug/kg	190	63.	1
1,3-Dichlorobenzene	ND		ug/kg	190	60.	1
1,4-Dichlorobenzene	ND		ug/kg	190	58.	1
3,3'-Dichlorobenzidine	ND		ug/kg	190	51.	1
2,4-Dinitrotoluene	ND		ug/kg	190	41.	1
2,6-Dinitrotoluene	ND		ug/kg	190	49.	1
Fluoranthene	6400		ug/kg	120	35.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	190	58.	1
4-Bromophenyl phenyl ether	ND		ug/kg	190	44.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	230	68.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	210	58.	1
Hexachlorobutadiene	ND		ug/kg	190	54.	1
Hexachlorocyclopentadiene	ND		ug/kg	550	120	1
Hexachloroethane	ND		ug/kg	150	35.	1
Isophorone	ND		ug/kg	170	51.	1
Naphthalene	1600		ug/kg	190	64.	1
Nitrobenzene	ND		ug/kg	170	46.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	150	40.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	190	57.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	190	50.	1
Butyl benzyl phthalate	ND		ug/kg	190	38.	1
Di-n-butylphthalate	ND		ug/kg	190	37.	1
Di-n-octylphthalate	ND		ug/kg	190	47.	1
Diethyl phthalate	ND		ug/kg	190	40.	1
Dimethyl phthalate	ND		ug/kg	190	49.	1
Benzo(a)anthracene	3300		ug/kg	120	38.	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-09
Client ID: SB-9 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 12:55
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	3600		ug/kg	150	47.	1
Benzo(b)fluoranthene	3400		ug/kg	120	39.	1
Benzo(k)fluoranthene	2500		ug/kg	120	37.	1
Chrysene	3500		ug/kg	120	38.	1
Acenaphthylene	1600		ug/kg	150	36.	1
Anthracene	1400		ug/kg	120	32.	1
Benzo(ghi)perylene	1600		ug/kg	150	40.	1
Fluorene	770		ug/kg	190	55.	1
Phenanthrene	4600		ug/kg	120	38.	1
Dibenzo(a,h)anthracene	610		ug/kg	120	37.	1
Indeno(1,2,3-cd)Pyrene	2000		ug/kg	150	43.	1
Pyrene	5600		ug/kg	120	37.	1
Biphenyl	75	J	ug/kg	440	63.	1
4-Chloroaniline	ND		ug/kg	190	51.	1
2-Nitroaniline	ND		ug/kg	190	54.	1
3-Nitroaniline	ND		ug/kg	190	53.	1
4-Nitroaniline	ND		ug/kg	190	52.	1
Dibenzofuran	420		ug/kg	190	64.	1
2-Methylnaphthalene	590		ug/kg	230	61.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	190	59.	1
Acetophenone	ND		ug/kg	190	59.	1
2,4,6-Trichlorophenol	ND		ug/kg	120	36.	1
P-Chloro-M-Cresol	ND		ug/kg	190	56.	1
2-Chlorophenol	ND		ug/kg	190	58.	1
2,4-Dichlorophenol	ND		ug/kg	170	62.	1
2,4-Dimethylphenol	ND		ug/kg	190	57.	1
2-Nitrophenol	ND		ug/kg	410	60.	1
4-Nitrophenol	ND		ug/kg	270	62.	1
2,4-Dinitrophenol	ND		ug/kg	920	260	1
4,6-Dinitro-o-cresol	ND		ug/kg	500	70.	1
Pentachlorophenol	ND		ug/kg	150	41.	1
Phenol	ND		ug/kg	190	57.	1
2-Methylphenol	ND		ug/kg	190	62.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	63.	1
2,4,5-Trichlorophenol	ND		ug/kg	190	62.	1
Benzoic Acid	ND		ug/kg	620	190	1
Benzyl Alcohol	ND		ug/kg	190	59.	1
Carbazole	390		ug/kg	190	41.	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503
Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-09
Client ID: SB-9 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 12:55
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		25-120
Phenol-d6	76		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	77		30-120
2,4,6-Tribromophenol	95		0-136
4-Terphenyl-d14	89		18-120

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-10	D	Date Collected:	06/07/13 13:05
Client ID:	SB-10 (2-3')		Date Received:	06/07/13
Sample Location:	BRONX, NY		Field Prep:	Not Specified
Matrix:	Soil		Extraction Method:	EPA 3546
Analytical Method:	1,8270D		Extraction Date:	06/09/13 09:15
Analytical Date:	06/14/13 11:01			
Analyst:	RC			
Percent Solids:	83%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	1600	400	10
1,2,4-Trichlorobenzene	ND		ug/kg	2000	640	10
Hexachlorobenzene	ND		ug/kg	1200	360	10
Bis(2-chloroethyl)ether	ND		ug/kg	1800	550	10
2-Chloronaphthalene	ND		ug/kg	2000	640	10
1,2-Dichlorobenzene	ND		ug/kg	2000	640	10
1,3-Dichlorobenzene	ND		ug/kg	2000	620	10
1,4-Dichlorobenzene	ND		ug/kg	2000	600	10
3,3'-Dichlorobenzidine	ND		ug/kg	2000	520	10
2,4-Dinitrotoluene	ND		ug/kg	2000	420	10
2,6-Dinitrotoluene	ND		ug/kg	2000	500	10
Fluoranthene	24000		ug/kg	1200	360	10
4-Chlorophenyl phenyl ether	ND		ug/kg	2000	600	10
4-Bromophenyl phenyl ether	ND		ug/kg	2000	450	10
Bis(2-chloroisopropyl)ether	ND		ug/kg	2400	690	10
Bis(2-chloroethoxy)methane	ND		ug/kg	2100	590	10
Hexachlorobutadiene	ND		ug/kg	2000	550	10
Hexachlorocyclopentadiene	ND		ug/kg	5600	1200	10
Hexachloroethane	ND		ug/kg	1600	360	10
Isophorone	ND		ug/kg	1800	520	10
Naphthalene	ND		ug/kg	2000	650	10
Nitrobenzene	ND		ug/kg	1800	470	10
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	1600	410	10
n-Nitrosodi-n-propylamine	ND		ug/kg	2000	580	10
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	2000	510	10
Butyl benzyl phthalate	ND		ug/kg	2000	380	10
Di-n-butylphthalate	ND		ug/kg	2000	380	10
Di-n-octylphthalate	ND		ug/kg	2000	480	10
Diethyl phthalate	ND		ug/kg	2000	410	10
Dimethyl phthalate	ND		ug/kg	2000	500	10
Benzo(a)anthracene	18000		ug/kg	1200	380	10

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-10 D
Client ID: SB-10 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 13:05
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	22000		ug/kg	1600	480	10
Benzo(b)fluoranthene	26000		ug/kg	1200	400	10
Benzo(k)fluoranthene	13000		ug/kg	1200	370	10
Chrysene	22000		ug/kg	1200	380	10
Acenaphthylene	11000		ug/kg	1600	370	10
Anthracene	4100		ug/kg	1200	330	10
Benzo(ghi)perylene	13000		ug/kg	1600	410	10
Fluorene	950	J	ug/kg	2000	560	10
Phenanthrene	6600		ug/kg	1200	380	10
Dibenzo(a,h)anthracene	3800		ug/kg	1200	380	10
Indeno(1,2,3-cd)Pyrene	12000		ug/kg	1600	440	10
Pyrene	26000		ug/kg	1200	380	10
Biphenyl	ND		ug/kg	4500	650	10
4-Chloroaniline	ND		ug/kg	2000	520	10
2-Nitroaniline	ND		ug/kg	2000	550	10
3-Nitroaniline	ND		ug/kg	2000	540	10
4-Nitroaniline	ND		ug/kg	2000	530	10
Dibenzofuran	ND		ug/kg	2000	650	10
2-Methylnaphthalene	ND		ug/kg	2400	630	10
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	2000	610	10
Acetophenone	ND		ug/kg	2000	610	10
2,4,6-Trichlorophenol	ND		ug/kg	1200	370	10
P-Chloro-M-Cresol	ND		ug/kg	2000	570	10
2-Chlorophenol	ND		ug/kg	2000	590	10
2,4-Dichlorophenol	ND		ug/kg	1800	640	10
2,4-Dimethylphenol	ND		ug/kg	2000	580	10
2-Nitrophenol	ND		ug/kg	4200	610	10
4-Nitrophenol	ND		ug/kg	2700	640	10
2,4-Dinitrophenol	ND		ug/kg	9400	2700	10
4,6-Dinitro-o-cresol	ND		ug/kg	5100	720	10
Pentachlorophenol	ND		ug/kg	1600	420	10
Phenol	ND		ug/kg	2000	580	10
2-Methylphenol	ND		ug/kg	2000	630	10
3-Methylphenol/4-Methylphenol	ND		ug/kg	2800	640	10
2,4,5-Trichlorophenol	ND		ug/kg	2000	640	10
Benzoic Acid	ND		ug/kg	6400	2000	10
Benzyl Alcohol	ND		ug/kg	2000	600	10
Carbazole	600	J	ug/kg	2000	420	10

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-10 D
Client ID: SB-10 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 13:05
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		25-120
Phenol-d6	53		10-120
Nitrobenzene-d5	54		23-120
2-Fluorobiphenyl	74		30-120
2,4,6-Tribromophenol	87		0-136
4-Terphenyl-d14	75		18-120

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-11
Client ID: SB-11 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 06/13/13 23:24
Analyst: RC
Percent Solids: 83%

Date Collected: 06/07/13 13:20
Date Received: 06/07/13
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 06/09/13 09:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	160	41.	1
1,2,4-Trichlorobenzene	ND		ug/kg	200	66.	1
Hexachlorobenzene	ND		ug/kg	120	37.	1
Bis(2-chloroethyl)ether	ND		ug/kg	180	56.	1
2-Chloronaphthalene	ND		ug/kg	200	65.	1
1,2-Dichlorobenzene	ND		ug/kg	200	66.	1
1,3-Dichlorobenzene	ND		ug/kg	200	63.	1
1,4-Dichlorobenzene	ND		ug/kg	200	61.	1
3,3'-Dichlorobenzidine	ND		ug/kg	200	53.	1
2,4-Dinitrotoluene	ND		ug/kg	200	43.	1
2,6-Dinitrotoluene	ND		ug/kg	200	51.	1
Fluoranthene	550		ug/kg	120	37.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	200	61.	1
4-Bromophenyl phenyl ether	ND		ug/kg	200	46.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	240	70.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	220	61.	1
Hexachlorobutadiene	ND		ug/kg	200	56.	1
Hexachlorocyclopentadiene	ND		ug/kg	570	130	1
Hexachloroethane	ND		ug/kg	160	36.	1
Isophorone	ND		ug/kg	180	53.	1
Naphthalene	ND		ug/kg	200	66.	1
Nitrobenzene	ND		ug/kg	180	48.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	160	42.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	200	60.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	200	52.	1
Butyl benzyl phthalate	ND		ug/kg	200	39.	1
Di-n-butylphthalate	ND		ug/kg	200	39.	1
Di-n-octylphthalate	ND		ug/kg	200	49.	1
Diethyl phthalate	ND		ug/kg	200	42.	1
Dimethyl phthalate	ND		ug/kg	200	51.	1
Benzo(a)anthracene	310		ug/kg	120	39.	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-11
Client ID: SB-11 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 13:20
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	280		ug/kg	160	49.	1
Benzo(b)fluoranthene	390		ug/kg	120	40.	1
Benzo(k)fluoranthene	320		ug/kg	120	38.	1
Chrysene	350		ug/kg	120	39.	1
Acenaphthylene	110	J	ug/kg	160	37.	1
Anthracene	80	J	ug/kg	120	33.	1
Benzo(ghi)perylene	140	J	ug/kg	160	42.	1
Fluorene	ND		ug/kg	200	57.	1
Phenanthrene	230		ug/kg	120	39.	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	39.	1
Indeno(1,2,3-cd)Pyrene	180		ug/kg	160	44.	1
Pyrene	510		ug/kg	120	39.	1
Biphenyl	ND		ug/kg	460	66.	1
4-Chloroaniline	ND		ug/kg	200	53.	1
2-Nitroaniline	ND		ug/kg	200	56.	1
3-Nitroaniline	ND		ug/kg	200	55.	1
4-Nitroaniline	ND		ug/kg	200	54.	1
Dibenzofuran	ND		ug/kg	200	67.	1
2-Methylnaphthalene	ND		ug/kg	240	64.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	200	62.	1
Acetophenone	ND		ug/kg	200	62.	1
2,4,6-Trichlorophenol	ND		ug/kg	120	38.	1
P-Chloro-M-Cresol	ND		ug/kg	200	58.	1
2-Chlorophenol	ND		ug/kg	200	60.	1
2,4-Dichlorophenol	ND		ug/kg	180	65.	1
2,4-Dimethylphenol	ND		ug/kg	200	60.	1
2-Nitrophenol	ND		ug/kg	430	62.	1
4-Nitrophenol	ND		ug/kg	280	65.	1
2,4-Dinitrophenol	ND		ug/kg	960	270	1
4,6-Dinitro-o-cresol	ND		ug/kg	520	73.	1
Pentachlorophenol	ND		ug/kg	160	43.	1
Phenol	ND		ug/kg	200	59.	1
2-Methylphenol	ND		ug/kg	200	64.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	290	66.	1
2,4,5-Trichlorophenol	ND		ug/kg	200	65.	1
Benzoic Acid	ND		ug/kg	650	200	1
Benzyl Alcohol	ND		ug/kg	200	62.	1
Carbazole	ND		ug/kg	200	43.	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-11
Client ID: SB-11 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 13:20
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		25-120
Phenol-d6	80		10-120
Nitrobenzene-d5	75		23-120
2-Fluorobiphenyl	82		30-120
2,4,6-Tribromophenol	87		0-136
4-Terphenyl-d14	80		18-120

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-12
Client ID:	SB-12 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8270D
Analytical Date:	06/13/13 23:51
Analyst:	RC
Percent Solids:	85%

Date Collected:	06/07/13 11:25
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 09:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	76	J	ug/kg	160	40.	1
1,2,4-Trichlorobenzene	ND		ug/kg	200	64.	1
Hexachlorobenzene	ND		ug/kg	120	36.	1
Bis(2-chloroethyl)ether	ND		ug/kg	180	55.	1
2-Chloronaphthalene	ND		ug/kg	200	64.	1
1,2-Dichlorobenzene	ND		ug/kg	200	64.	1
1,3-Dichlorobenzene	ND		ug/kg	200	62.	1
1,4-Dichlorobenzene	ND		ug/kg	200	59.	1
3,3'-Dichlorobenzidine	ND		ug/kg	200	52.	1
2,4-Dinitrotoluene	ND		ug/kg	200	42.	1
2,6-Dinitrotoluene	ND		ug/kg	200	50.	1
Fluoranthene	4600		ug/kg	120	36.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	200	59.	1
4-Bromophenyl phenyl ether	ND		ug/kg	200	45.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	230	69.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	210	59.	1
Hexachlorobutadiene	ND		ug/kg	200	55.	1
Hexachlorocyclopentadiene	ND		ug/kg	560	120	1
Hexachloroethane	ND		ug/kg	160	35.	1
Isophorone	ND		ug/kg	180	52.	1
Naphthalene	ND		ug/kg	200	65.	1
Nitrobenzene	ND		ug/kg	180	46.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	160	41.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	200	58.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	200	51.	1
Butyl benzyl phthalate	ND		ug/kg	200	38.	1
Di-n-butylphthalate	ND		ug/kg	200	38.	1
Di-n-octylphthalate	ND		ug/kg	200	48.	1
Diethyl phthalate	ND		ug/kg	200	41.	1
Dimethyl phthalate	ND		ug/kg	200	50.	1
Benzo(a)anthracene	3900		ug/kg	120	38.	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-12
Client ID: SB-12 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:25
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	4600		ug/kg	160	48.	1
Benzo(b)fluoranthene	5400		ug/kg	120	39.	1
Benzo(k)fluoranthene	3300		ug/kg	120	37.	1
Chrysene	4000		ug/kg	120	38.	1
Acenaphthylene	1800		ug/kg	160	36.	1
Anthracene	960		ug/kg	120	32.	1
Benzo(ghi)perylene	4500		ug/kg	160	40.	1
Fluorene	ND		ug/kg	200	56.	1
Phenanthrene	1700		ug/kg	120	38.	1
Dibenzo(a,h)anthracene	2000		ug/kg	120	38.	1
Indeno(1,2,3-cd)Pyrene	3100		ug/kg	160	43.	1
Pyrene	4800		ug/kg	120	38.	1
Biphenyl	ND		ug/kg	440	64.	1
4-Chloroaniline	ND		ug/kg	200	52.	1
2-Nitroaniline	ND		ug/kg	200	55.	1
3-Nitroaniline	ND		ug/kg	200	54.	1
4-Nitroaniline	ND		ug/kg	200	53.	1
Dibenzofuran	ND		ug/kg	200	65.	1
2-Methylnaphthalene	84	J	ug/kg	230	62.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	200	60.	1
Acetophenone	ND		ug/kg	200	60.	1
2,4,6-Trichlorophenol	ND		ug/kg	120	37.	1
P-Chloro-M-Cresol	ND		ug/kg	200	57.	1
2-Chlorophenol	ND		ug/kg	200	59.	1
2,4-Dichlorophenol	ND		ug/kg	180	63.	1
2,4-Dimethylphenol	ND		ug/kg	200	58.	1
2-Nitrophenol	ND		ug/kg	420	61.	1
4-Nitrophenol	ND		ug/kg	270	63.	1
2,4-Dinitrophenol	ND		ug/kg	940	270	1
4,6-Dinitro-o-cresol	ND		ug/kg	510	71.	1
Pentachlorophenol	ND		ug/kg	160	42.	1
Phenol	ND		ug/kg	200	58.	1
2-Methylphenol	ND		ug/kg	200	63.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	64.	1
2,4,5-Trichlorophenol	ND		ug/kg	200	63.	1
Benzoic Acid	ND		ug/kg	630	200	1
Benzyl Alcohol	ND		ug/kg	200	60.	1
Carbazole	110	J	ug/kg	200	42.	1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-12
Client ID: SB-12 (2-3')
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:25
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	78		25-120
Phenol-d6	80		10-120
Nitrobenzene-d5	75		23-120
2-Fluorobiphenyl	86		30-120
2,4,6-Tribromophenol	93		0-136
4-Terphenyl-d14	84		18-120

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 06/13/13 13:09
Analyst: RC

Extraction Method: EPA 3546
Extraction Date: 06/09/13 09:15

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-12 Batch: WG613717-1					
Acenaphthene	ND		ug/kg	130	34.
1,2,4-Trichlorobenzene	ND		ug/kg	160	54.
Hexachlorobenzene	ND		ug/kg	99	31.
Bis(2-chloroethyl)ether	ND		ug/kg	150	46.
2-Chloronaphthalene	ND		ug/kg	160	54.
1,2-Dichlorobenzene	ND		ug/kg	160	54.
1,3-Dichlorobenzene	ND		ug/kg	160	52.
1,4-Dichlorobenzene	ND		ug/kg	160	50.
3,3'-Dichlorobenzidine	ND		ug/kg	160	44.
2,4-Dinitrotoluene	ND		ug/kg	160	36.
2,6-Dinitrotoluene	ND		ug/kg	160	42.
Fluoranthene	ND		ug/kg	99	30.
4-Chlorophenyl phenyl ether	ND		ug/kg	160	50.
4-Bromophenyl phenyl ether	ND		ug/kg	160	38.
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	58.
Bis(2-chloroethoxy)methane	ND		ug/kg	180	50.
Hexachlorobutadiene	ND		ug/kg	160	47.
Hexachlorocyclopentadiene	ND		ug/kg	470	110
Hexachloroethane	ND		ug/kg	130	30.
Isophorone	ND		ug/kg	150	44.
Naphthalene	ND		ug/kg	160	55.
Nitrobenzene	ND		ug/kg	150	39.
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	130	35.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	49.
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	160	43.
Butyl benzyl phthalate	ND		ug/kg	160	32.
Di-n-butylphthalate	ND		ug/kg	160	32.
Di-n-octylphthalate	ND		ug/kg	160	41.
Diethyl phthalate	ND		ug/kg	160	35.
Dimethyl phthalate	ND		ug/kg	160	42.
Benzo(a)anthracene	ND		ug/kg	99	32.

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 06/13/13 13:09
Analyst: RC

Extraction Method: EPA 3546
Extraction Date: 06/09/13 09:15

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-12 Batch: WG613717-1					
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	99	33.
Benzo(k)fluoranthene	ND		ug/kg	99	32.
Chrysene	ND		ug/kg	99	32.
Acenaphthylene	ND		ug/kg	130	31.
Anthracene	ND		ug/kg	99	28.
Benzo(ghi)perylene	ND		ug/kg	130	34.
Fluorene	ND		ug/kg	160	47.
Phenanthrene	ND		ug/kg	99	32.
Dibenzo(a,h)anthracene	ND		ug/kg	99	32.
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	130	37.
Pyrene	ND		ug/kg	99	32.
Biphenyl	ND		ug/kg	380	54.
4-Chloroaniline	ND		ug/kg	160	44.
2-Nitroaniline	ND		ug/kg	160	47.
3-Nitroaniline	ND		ug/kg	160	46.
4-Nitroaniline	ND		ug/kg	160	45.
Dibenzofuran	ND		ug/kg	160	55.
2-Methylnaphthalene	ND		ug/kg	200	53.
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	160	51.
Acetophenone	ND		ug/kg	160	51.
2,4,6-Trichlorophenol	ND		ug/kg	99	31.
P-Chloro-M-Cresol	ND		ug/kg	160	48.
2-Chlorophenol	ND		ug/kg	160	50.
2,4-Dichlorophenol	ND		ug/kg	150	54.
2,4-Dimethylphenol	ND		ug/kg	160	49.
2-Nitrophenol	ND		ug/kg	360	52.
4-Nitrophenol	ND		ug/kg	230	54.
2,4-Dinitrophenol	ND		ug/kg	790	230
4,6-Dinitro-o-cresol	ND		ug/kg	430	60.
Pentachlorophenol	ND		ug/kg	130	35.

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 06/13/13 13:09
Analyst: RC

Extraction Method: EPA 3546
Extraction Date: 06/09/13 09:15

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-12 Batch: WG613717-1					
Phenol	ND		ug/kg	160	49.
2-Methylphenol	ND		ug/kg	160	53.
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	54.
2,4,5-Trichlorophenol	ND		ug/kg	160	54.
Benzoic Acid	ND		ug/kg	540	170
Benzyl Alcohol	ND		ug/kg	160	51.
Carbazole	ND		ug/kg	160	36.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	73		25-120
Phenol-d6	74		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	70		30-120
2,4,6-Tribromophenol	73		0-136
4-Terphenyl-d14	98		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-12 Batch: WG613717-2 WG613717-3								
Acenaphthene	95		100		31-137	5		50
1,2,4-Trichlorobenzene	78		88		38-107	12		50
Hexachlorobenzene	106		106		40-140	0		50
Bis(2-chloroethyl)ether	79		87		40-140	10		50
2-Chloronaphthalene	89		92		40-140	3		50
1,2-Dichlorobenzene	77		86		40-140	11		50
1,3-Dichlorobenzene	75		85		40-140	13		50
1,4-Dichlorobenzene	74		81		28-104	9		50
3,3'-Dichlorobenzidine	81		78		40-140	4		50
2,4-Dinitrotoluene	106	Q	116	Q	28-89	9		50
2,6-Dinitrotoluene	109		108		40-140	1		50
Fluoranthene	107		104		40-140	3		50
4-Chlorophenyl phenyl ether	102		108		40-140	6		50
4-Bromophenyl phenyl ether	106		111		40-140	5		50
Bis(2-chloroisopropyl)ether	76		84		40-140	10		50
Bis(2-chloroethoxy)methane	87		88		40-117	1		50
Hexachlorobutadiene	79		84		40-140	6		50
Hexachlorocyclopentadiene	63		69		40-140	9		50
Hexachloroethane	76		87		40-140	13		50
Isophorone	84		90		40-140	7		50
Naphthalene	78		84		40-140	7		50

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Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-12 Batch: WG613717-2 WG613717-3								
Nitrobenzene	80		83		40-140	4		50
NitrosoDiPhenylAmine(NDPA)/DPA	106		108			2		50
n-Nitrosodi-n-propylamine	81		88		32-121	8		50
Bis(2-Ethylhexyl)phthalate	104		107		40-140	3		50
Butyl benzyl phthalate	105		104		40-140	1		50
Di-n-butylphthalate	101		107		40-140	6		50
Di-n-octylphthalate	102		109		40-140	7		50
Diethyl phthalate	103		110		40-140	7		50
Dimethyl phthalate	102		106		40-140	4		50
Benzo(a)anthracene	101		108		40-140	7		50
Benzo(a)pyrene	100		107		40-140	7		50
Benzo(b)fluoranthene	102		109		40-140	7		50
Benzo(k)fluoranthene	105		106		40-140	1		50
Chrysene	103		105		40-140	2		50
Acenaphthylene	95		98		40-140	3		50
Anthracene	104		104		40-140	0		50
Benzo(ghi)perylene	102		103		40-140	1		50
Fluorene	100		108		40-140	8		50
Phenanthrene	105		102		40-140	3		50
Dibenzo(a,h)anthracene	101		104		40-140	3		50
Indeno(1,2,3-cd)Pyrene	101		103		40-140	2		50

A4-189

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-12 Batch: WG613717-2 WG613717-3								
Pyrene	107		104		35-142	3		50
Biphenyl	88		94			7		50
4-Chloroaniline	79		79		40-140	0		50
2-Nitroaniline	106		105		47-134	1		50
3-Nitroaniline	85		84		26-129	1		50
4-Nitroaniline	108		112		41-125	4		50
Dibenzofuran	98		107		40-140	9		50
2-Methylnaphthalene	84		92		40-140	9		50
1,2,4,5-Tetrachlorobenzene	85		90		40-117	6		50
Acetophenone	87		96		14-144	10		50
2,4,6-Trichlorophenol	105		106		30-130	1		50
P-Chloro-M-Cresol	**105**	Q	**110**	Q	26-103	5		50
2-Chlorophenol	86		97		25-102	12		50
2,4-Dichlorophenol	98		102		30-130	4		50
2,4-Dimethylphenol	88		99		30-130	12		50
2-Nitrophenol	84		94		30-130	11		50
4-Nitrophenol	110		112		11-114	2		50
2,4-Dinitrophenol	84		86		4-130	2		50
4,6-Dinitro-o-cresol	111		113		10-130	2		50
Pentachlorophenol	100		**112**	Q	17-109	11		50
Phenol	87		**94**	Q	26-90	8		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-12 Batch: WG613717-2 WG613717-3								
2-Methylphenol	84		97		30-130.	14		50
3-Methylphenol/4-Methylphenol	93		100		30-130	7		50
2,4,5-Trichlorophenol	107		110		30-130	3		50
Benzoic Acid	45		49			9		50
Benzyl Alcohol	85		90		40-140	6		50
Carbazole	107		108		54-128	1		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	82		90		25-120
Phenol-d6	87		91		10-120
Nitrobenzene-d5	82		84		23-120
2-Fluorobiphenyl	86		87		30-120
2,4,6-Tribromophenol	98		96		0-136
4-Terphenyl-d14	103		95		18-120

PCBS

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-01
Client ID:	SB-1 (1-2')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8082A
Analytical Date:	06/11/13 09:10
Analyst:	KB
Percent Solids:	86%

Date Collected:	06/07/13 09:20
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 12:56
Cleanup Method1:	EPA 3665A
Cleanup Date1:	06/10/13
Cleanup Method2:	EPA 3660B
Cleanup Date2:	06/10/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	36.8	7.26	1
Aroclor 1221	ND		ug/kg	36.8	11.1	1
Aroclor 1232	ND		ug/kg	36.8	7.81	1
Aroclor 1242	ND		ug/kg	36.8	6.98	1
Aroclor 1248	ND		ug/kg	36.8	4.45	1
Aroclor 1254	ND		ug/kg	36.8	5.80	1
Aroclor 1260	ND		ug/kg	36.8	6.38	1
Aroclor 1262	ND		ug/kg	36.8	2.72	1
Aroclor 1268	ND		ug/kg	36.8	5.34	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	55		30-150
Decachlorobiphenyl	48		30-150
2,4,5,6-Tetrachloro-m-xylene	56		30-150
Decachlorobiphenyl	66		30-150

Serial_No:06141317:00

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-02
Client ID:	SB-2 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8082A
Analytical Date:	06/11/13 09:23
Analyst:	KB
Percent Solids:	83%

Date Collected:	06/07/13 10:00
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 12:56
Cleanup Method1:	EPA 3665A
Cleanup Date1:	06/10/13
Cleanup Method2:	EPA 3660B
Cleanup Date2:	06/10/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	38.6	7.62	1
Aroclor 1221	ND		ug/kg	38.6	11.6	1
Aroclor 1232	ND		ug/kg	38.6	8.20	1
Aroclor 1242	ND		ug/kg	38.6	7.32	1
Aroclor 1248	ND		ug/kg	38.6	4.67	1
Aroclor 1254	ND		ug/kg	38.6	6.08	1
Aroclor 1260	ND		ug/kg	38.6	6.70	1
Aroclor 1262	ND		ug/kg	38.6	2.85	1
Aroclor 1268	ND		ug/kg	38.6	5.60	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	70		30-150
Decachlorobiphenyl	63		30-150
2,4,5,6-Tetrachloro-m-xylene	70		30-150
Decachlorobiphenyl	91		30-150

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-03
Client ID:	SB-3 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8082A
Analytical Date:	06/11/13 09:37
Analyst:	KB
Percent Solids:	88%

Date Collected:	06/07/13 10:15
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 12:56
Cleanup Method1:	EPA 3665A
Cleanup Date1:	06/10/13
Cleanup Method2:	EPA 3660B
Cleanup Date2:	06/10/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	35.6	7.04	1
Aroclor 1221	ND		ug/kg	35.6	10.8	1
Aroclor 1232	ND		ug/kg	35.6	7.57	1
Aroclor 1242	ND		ug/kg	35.6	6.76	1
Aroclor 1248	ND		ug/kg	35.6	4.31	1
Aroclor 1254	ND		ug/kg	35.6	5.62	1
Aroclor 1260	ND		ug/kg	35.6	6.18	1
Aroclor 1262	ND		ug/kg	35.6	2.64	1
Aroclor 1268	ND		ug/kg	35.6	5.17	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	53		30-150
Decachlorobiphenyl	50		30-150
2,4,5,6-Tetrachloro-m-xylene	54		30-150
Decachlorobiphenyl	62		30-150

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-04
Client ID:	SB-4 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8082A
Analytical Date:	06/11/13 09:50
Analyst:	KB
Percent Solids:	84%

Date Collected:	06/07/13 10:40
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 12:56
Cleanup Method1:	EPA 3665A
Cleanup Date1:	06/10/13
Cleanup Method2:	EPA 3660B
Cleanup Date2:	06/10/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	39.2	7.75	1
Aroclor 1221	ND		ug/kg	39.2	11.8	1
Aroclor 1232	ND		ug/kg	39.2	8.34	1
Aroclor 1242	ND		ug/kg	39.2	7.45	1
Aroclor 1248	ND		ug/kg	39.2	4.75	1
Aroclor 1254	ND		ug/kg	39.2	6.19	1
Aroclor 1260	ND		ug/kg	39.2	6.81	1
Aroclor 1262	ND		ug/kg	39.2	2.90	1
Aroclor 1268	ND		ug/kg	39.2	5.69	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	46		30-150
Decachlorobiphenyl	41		30-150
2,4,5,6-Tetrachloro-m-xylene	48		30-150
Decachlorobiphenyl	55		30-150

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-05
Client ID:	SB-5 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8082A
Analytical Date:	06/11/13 10:03
Analyst:	KB
Percent Solids:	86%

Date Collected:	06/07/13 11:25
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 12:56
Cleanup Method1:	EPA 3665A
Cleanup Date1:	06/10/13
Cleanup Method2:	EPA 3660B
Cleanup Date2:	06/10/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	38.1	7.52	1
Aroclor 1221	ND		ug/kg	38.1	11.5	1
Aroclor 1232	ND		ug/kg	38.1	8.09	1
Aroclor 1242	ND		ug/kg	38.1	7.22	1
Aroclor 1248	ND		ug/kg	38.1	4.61	1
Aroclor 1254	ND		ug/kg	38.1	6.00	1
Aroclor 1260	ND		ug/kg	38.1	6.61	1
Aroclor 1262	ND		ug/kg	38.1	2.82	1
Aroclor 1268	ND		ug/kg	38.1	5.52	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	57		30-150
Decachlorobiphenyl	50		30-150
2,4,5,6-Tetrachloro-m-xylene	59		30-150
Decachlorobiphenyl	66		30-150

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-06
Client ID:	SB-6 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8082A
Analytical Date:	06/11/13 10:16
Analyst:	KB
Percent Solids:	82%

Date Collected:	06/07/13 11:40
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 12:56
Cleanup Method1:	EPA 3665A
Cleanup Date1:	06/10/13
Cleanup Method2:	EPA 3660B
Cleanup Date2:	06/10/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	38.9	7.68	1
Aroclor 1221	ND		ug/kg	38.9	11.7	1
Aroclor 1232	ND		ug/kg	38.9	8.26	1
Aroclor 1242	ND		ug/kg	38.9	7.38	1
Aroclor 1248	ND		ug/kg	38.9	4.70	1
Aroclor 1254	ND		ug/kg	38.9	6.13	1
Aroclor 1260	ND		ug/kg	38.9	6.75	1
Aroclor 1262	ND		ug/kg	38.9	2.88	1
Aroclor 1268	ND		ug/kg	38.9	5.64	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	67		30-150
Decachlorobiphenyl	56		30-150
2,4,5,6-Tetrachloro-m-xylene	69		30-150
Decachlorobiphenyl	75		30-150

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-07
Client ID:	SB-7 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8082A
Analytical Date:	06/11/13 10:29
Analyst:	KB
Percent Solids:	78%

Date Collected:	06/07/13 11:55
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 12:56
Cleanup Method1:	EPA 3665A
Cleanup Date1:	06/10/13
Cleanup Method2:	EPA 3660B
Cleanup Date2:	06/10/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	41.2	8.15	1
Aroclor 1221	ND		ug/kg	41.2	12.4	1
Aroclor 1232	ND		ug/kg	41.2	8.76	1
Aroclor 1242	ND		ug/kg	41.2	7.83	1
Aroclor 1248	ND		ug/kg	41.2	4.99	1
Aroclor 1254	ND		ug/kg	41.2	6.50	1
Aroclor 1260	ND		ug/kg	41.2	7.16	1
Aroclor 1262	ND		ug/kg	41.2	3.05	1
Aroclor 1268	ND		ug/kg	41.2	5.98	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	44		30-150
Decachlorobiphenyl	47		30-150
2,4,5,6-Tetrachloro-m-xylene	44		30-150
Decachlorobiphenyl	64		30-150

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Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-08
Client ID:	SB-8 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8082A
Analytical Date:	06/11/13 10:43
Analyst:	KB
Percent Solids:	83%

Date Collected:	06/07/13 12:30
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 12:56
Cleanup Method1:	EPA 3665A
Cleanup Date1:	06/10/13
Cleanup Method2:	EPA 3660B
Cleanup Date2:	06/10/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	39.2	7.74	1
Aroclor 1221	ND		ug/kg	39.2	11.8	1
Aroclor 1232	ND		ug/kg	39.2	8.33	1
Aroclor 1242	ND		ug/kg	39.2	7.44	1
Aroclor 1248	ND		ug/kg	39.2	4.74	1
Aroclor 1254	ND		ug/kg	39.2	6.18	1
Aroclor 1260	ND		ug/kg	39.2	6.80	1
Aroclor 1262	ND		ug/kg	39.2	2.90	1
Aroclor 1268	ND		ug/kg	39.2	5.69	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	65		30-150
Decachlorobiphenyl	63		30-150
2,4,5,6-Tetrachloro-m-xylene	65		30-150
Decachlorobiphenyl	85		30-150

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-09
Client ID:	SB-9 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8082A
Analytical Date:	06/11/13 10:56
Analyst:	KB
Percent Solids:	85%

Date Collected:	06/07/13 12:55
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 12:56
Cleanup Method1:	EPA 3665A
Cleanup Date1:	06/10/13
Cleanup Method2:	EPA 3660B
Cleanup Date2:	06/10/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	37.0	7.32	1
Aroclor 1221	ND		ug/kg	37.0	11.2	1
Aroclor 1232	ND		ug/kg	37.0	7.87	1
Aroclor 1242	ND		ug/kg	37.0	7.03	1
Aroclor 1248	ND		ug/kg	37.0	4.48	1
Aroclor 1254	ND		ug/kg	37.0	5.84	1
Aroclor 1260	ND		ug/kg	37.0	6.43	1
Aroclor 1262	ND		ug/kg	37.0	2.74	1
Aroclor 1268	ND		ug/kg	37.0	5.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	61		30-150
Decachlorobiphenyl	68		30-150
2,4,5,6-Tetrachloro-m-xylene	62		30-150
Decachlorobiphenyl	87		30-150

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Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-10
Client ID:	SB-10 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8082A
Analytical Date:	06/11/13 11:09
Analyst:	KB
Percent Solids:	83%

Date Collected:	06/07/13 13:05
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 12:56
Cleanup Method1:	EPA 3665A
Cleanup Date1:	06/10/13
Cleanup Method2:	EPA 3660B
Cleanup Date2:	06/10/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	38.2	7.54	1
Aroclor 1221	ND		ug/kg	38.2	11.5	1
Aroclor 1232	ND		ug/kg	38.2	8.11	1
Aroclor 1242	ND		ug/kg	38.2	7.25	1
Aroclor 1248	ND		ug/kg	38.2	4.62	1
Aroclor 1254	ND		ug/kg	38.2	6.02	1
Aroclor 1260	ND		ug/kg	38.2	6.63	1
Aroclor 1262	ND		ug/kg	38.2	2.82	1
Aroclor 1268	ND		ug/kg	38.2	5.54	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	48		30-150
Decachlorobiphenyl	48		30-150
2,4,5,6-Tetrachloro-m-xylene	48		30-150
Decachlorobiphenyl	66		30-150

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-11
Client ID:	SB-11 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8082A
Analytical Date:	06/11/13 11:22
Analyst:	KB
Percent Solids:	83%

Date Collected:	06/07/13 13:20
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 12:56
Cleanup Method1:	EPA 3665A
Cleanup Date1:	06/10/13
Cleanup Method2:	EPA 3660B
Cleanup Date2:	06/10/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	38.5	7.61	1
Aroclor 1221	ND		ug/kg	38.5	11.6	1
Aroclor 1232	ND		ug/kg	38.5	8.18	1
Aroclor 1242	ND		ug/kg	38.5	7.31	1
Aroclor 1248	ND		ug/kg	38.5	4.66	1
Aroclor 1254	ND		ug/kg	38.5	6.07	1
Aroclor 1260	ND		ug/kg	38.5	6.69	1
Aroclor 1262	ND		ug/kg	38.5	2.85	1
Aroclor 1268	ND		ug/kg	38.5	5.59	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	55		30-150
Decachlorobiphenyl	51		30-150
2,4,5,6-Tetrachloro-m-xylene	56		30-150
Decachlorobiphenyl	70		30-150

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Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-12
Client ID:	SB-12 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8082A
Analytical Date:	06/11/13 11:35
Analyst:	KB
Percent Solids:	85%

Date Collected:	06/07/13 11:25
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 12:56
Cleanup Method1:	EPA 3665A
Cleanup Date1:	06/10/13
Cleanup Method2:	EPA 3660B
Cleanup Date2:	06/10/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	38.5	7.60	1
Aroclor 1221	ND		ug/kg	38.5	11.6	1
Aroclor 1232	ND		ug/kg	38.5	8.18	1
Aroclor 1242	ND		ug/kg	38.5	7.30	1
Aroclor 1248	ND		ug/kg	38.5	4.66	1
Aroclor 1254	ND		ug/kg	38.5	6.07	1
Aroclor 1260	ND		ug/kg	38.5	6.68	1
Aroclor 1262	ND		ug/kg	38.5	2.85	1
Aroclor 1268	ND		ug/kg	38.5	5.58	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	57		30-150
Decachlorobiphenyl	50		30-150
2,4,5,6-Tetrachloro-m-xylene	57		30-150
Decachlorobiphenyl	66		30-150

Project Name: BRONX ZOO PHASE II

Project Number: 10956-2503

Lab Number: L1310472

Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 06/11/13 11:49
Analyst: KB

Extraction Method: EPA 3546
Extraction Date: 06/09/13 12:56
Cleanup Method1: EPA 3665A
Cleanup Date1: 06/10/13
Cleanup Method2: EPA 3660B
Cleanup Date2: 06/10/13

Parameter	Result	Qualifier	Units	RL	MDL
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-12 Batch: WG613737-1					
Aroclor 1016	ND		ug/kg	32.8	6.47
Aroclor 1221	ND		ug/kg	32.8	9.88
Aroclor 1232	ND		ug/kg	32.8	6.96
Aroclor 1242	ND		ug/kg	32.8	6.22
Aroclor 1248	ND		ug/kg	32.8	3.96
Aroclor 1254	ND		ug/kg	32.8	5.16
Aroclor 1260	ND		ug/kg	32.8	5.69
Aroclor 1262	ND		ug/kg	32.8	2.42
Aroclor 1268	ND		ug/kg	32.8	4.75

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	84		30-150
Decachlorobiphenyl	80		30-150
2,4,5,6-Tetrachloro-m-xylene	86		30-150
Decachlorobiphenyl	103		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-12 Batch: WG613737-2 WG613737-3								
Aroclor 1016	80		87		40-140	8		50
Aroclor 1260	86		94		40-140	9		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	76		81		30-150
Decachlorobiphenyl	74		81		30-150
2,4,5,6-Tetrachloro-m-xylene	79		83		30-150
Decachlorobiphenyl	94		100		30-150

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PESTICIDES

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-01	D	Date Collected:	06/07/13 09:20
Client ID:	SB-1 (1-2')		Date Received:	06/07/13
Sample Location:	BRONX, NY		Field Prep:	Not Specified
Matrix:	Soil		Extraction Method:	EPA 3546
Analytical Method:	1,8081B		Extraction Date:	06/09/13 14:06
Analytical Date:	06/13/13 07:42		Cleanup Method1:	EPA 3620B
Analyst:	JC		Cleanup Date1:	06/11/13
Percent Solids:	86%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	35.9	7.02	20
Lindane	ND		ug/kg	14.9	6.68	20
Alpha-BHC	ND		ug/kg	14.9	4.24	20
Beta-BHC	ND		ug/kg	35.9	13.6	20
Heptachlor	ND		ug/kg	17.9	8.04	20
Aldrin	ND		ug/kg	35.9	12.6	20
Heptachlor epoxide	ND		ug/kg	67.2	20.2	20
Endrin	ND		ug/kg	14.9	6.13	20
Endrin ketone	ND		ug/kg	35.9	9.24	20
Dieldrin	ND		ug/kg	22.4	11.2	20
4,4'-DDE	ND		ug/kg	35.9	8.29	20
4,4'-DDD	ND		ug/kg	35.9	12.8	20
4,4'-DDT	ND		ug/kg	67.2	28.8	20
Endosulfan I	ND		ug/kg	35.9	8.47	20
Endosulfan II	ND		ug/kg	35.9	12.0	20
Endosulfan sulfate	ND		ug/kg	14.9	6.83	20
Methoxychlor	ND		ug/kg	67.2	20.9	20
Toxaphene	ND		ug/kg	672	188.	20
cis-Chlordane	ND		ug/kg	44.8	12.5	20
trans-Chlordane	ND		ug/kg	44.8	11.8	20
Chlordane	ND		ug/kg	291	119.	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	A
Decachlorobiphenyl	0	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	B
Decachlorobiphenyl	0	Q	30-150	B

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-02	D	Date Collected:	06/07/13 10:00
Client ID:	SB-2 (2-3')		Date Received:	06/07/13
Sample Location:	BRONX, NY		Field Prep:	Not Specified
Matrix:	Soil		Extraction Method:	EPA 3546
Analytical Method:	1,8081B		Extraction Date:	06/09/13 14:06
Analytical Date:	06/13/13 07:55		Cleanup Method1:	EPA 3620B
Analyst:	JC		Cleanup Date1:	06/11/13
Percent Solids:	83%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
4,4'-DDD	9.56	J	ug/kg	19.0	6.76	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	88		30-150	A
Decachlorobiphenyl	46		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	46		30-150	B

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-02	D	Date Collected:	06/07/13 10:00
Client ID:	SB-2 (2-3')		Date Received:	06/07/13
Sample Location:	BRONX, NY		Field Prep:	Not Specified
Matrix:	Soil		Extraction Method:	EPA 3546
Analytical Method:	1,8081B		Extraction Date:	06/09/13 14:06
Analytical Date:	06/13/13 07:55		Cleanup Method1:	EPA 3620B
Analyst:	JC		Cleanup Date1:	06/11/13
Percent Solids:	83%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	19.0	3.71	10
Lindane	ND		ug/kg	7.90	3.53	10
Alpha-BHC	ND		ug/kg	7.90	2.24	10
Beta-BHC	ND		ug/kg	19.0	7.19	10
Heptachlor	ND		ug/kg	9.48	4.25	10
Aldrin	ND		ug/kg	19.0	6.67	10
Heptachlor epoxide	ND		ug/kg	35.5	10.7	10
Endrin	ND		ug/kg	7.90	3.24	10
Endrin ketone	ND		ug/kg	19.0	4.88	10
Dieldrin	ND		ug/kg	11.8	5.92	10
4,4'-DDE	16.4	J	ug/kg	19.0	4.38	10
4,4'-DDT	ND		ug/kg	35.5	15.2	10
Endosulfan I	ND		ug/kg	19.0	4.48	10
Endosulfan II	ND		ug/kg	19.0	6.33	10
Endosulfan sulfate	ND		ug/kg	7.90	3.61	10
Methoxychlor	ND		ug/kg	35.5	11.0	10
Toxaphene	ND		ug/kg	355	99.5	10
cis-Chlordane	ND		ug/kg	23.7	6.60	10
trans-Chlordane	ND		ug/kg	23.7	6.26	10
Chlordane	ND		ug/kg	154	62.8	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	88		30-150	A
Decachlorobiphenyl	46		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	46		30-150	B

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-03	D	Date Collected:	06/07/13 10:15
Client ID:	SB-3 (2-3')		Date Received:	06/07/13
Sample Location:	BRONX, NY		Field Prep:	Not Specified
Matrix:	Soil		Extraction Method:	EPA 3546
Analytical Method:	1,8081B		Extraction Date:	06/09/13 14:06
Analytical Date:	06/13/13 08:08		Cleanup Method1:	EPA 3620B
Analyst:	JC		Cleanup Date1:	06/11/13
Percent Solids:	88%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	35.6	6.97	20
Lindane	ND		ug/kg	14.8	6.63	20
Alpha-BHC	ND		ug/kg	14.8	4.21	20
Beta-BHC	ND		ug/kg	35.6	13.5	20
Heptachlor	ND		ug/kg	17.8	7.98	20
Aldrin	ND		ug/kg	35.6	12.5	20
Heptachlor epoxide	ND		ug/kg	66.7	20.0	20
Endrin	ND		ug/kg	14.8	6.08	20
Endrin ketone	ND		ug/kg	35.6	9.16	20
Dieldrin	ND		ug/kg	22.2	11.1	20
4,4'-DDE	ND		ug/kg	35.6	8.23	20
4,4'-DDD	ND		ug/kg	35.6	12.7	20
4,4'-DDT	ND		ug/kg	66.7	28.6	20
Endosulfan I	ND		ug/kg	35.6	8.41	20
Endosulfan II	ND		ug/kg	35.6	11.9	20
Endosulfan sulfate	ND		ug/kg	14.8	6.78	20
Methoxychlor	ND		ug/kg	66.7	20.8	20
Toxaphene	ND		ug/kg	667	187.	20
cis-Chlordane	ND		ug/kg	44.5	12.4	20
trans-Chlordane	ND		ug/kg	44.5	11.7	20
Chlordane	ND		ug/kg	289	118.	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	A
Decachlorobiphenyl	0	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	B
Decachlorobiphenyl	0	Q	30-150	B

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Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-04	D	Date Collected:	06/07/13 10:40
Client ID:	SB-4 (2-3')		Date Received:	06/07/13
Sample Location:	BRONX, NY		Field Prep:	Not Specified
Matrix:	Soil		Extraction Method:	EPA 3546
Analytical Method:	1,8081B		Extraction Date:	06/09/13 14:06
Analytical Date:	06/14/13 11:05		Cleanup Method1:	EPA 3620B
Analyst:	JC		Cleanup Date1:	06/11/13
Percent Solids:	84%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
4,4'-DDT	108		ug/kg	7.08	3.04	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	109		30-150	A
Decachlorobiphenyl	41		30-150	A
2,4,5,6-Tetrachloro-m-xylene	75		30-150	B
Decachlorobiphenyl	124		30-150	B

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-04	D	Date Collected:	06/07/13 10:40
Client ID:	SB-4 (2-3')		Date Received:	06/07/13
Sample Location:	BRONX, NY		Field Prep:	Not Specified
Matrix:	Soil		Extraction Method:	EPA 3546
Analytical Method:	1,8081B		Extraction Date:	06/09/13 14:06
Analytical Date:	06/14/13 11:05		Cleanup Method1:	EPA 3620B
Analyst:	JC		Cleanup Date1:	06/11/13
Percent Solids:	84%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	3.78	0.740	2
Lindane	ND		ug/kg	1.57	0.704	2
Alpha-BHC	ND		ug/kg	1.57	0.447	2
Beta-BHC	ND		ug/kg	3.78	1.43	2
Heptachlor	ND		ug/kg	1.89	0.847	2
Aldrin	ND		ug/kg	3.78	1.33	2
Heptachlor epoxide	ND		ug/kg	7.08	2.12	2
Endrin	ND		ug/kg	1.57	0.645	2
Endrin ketone	ND		ug/kg	3.78	0.973	2
Dieldrin	ND		ug/kg	2.36	1.18	2
4,4'-DDE	210		ug/kg	3.78	0.874	2
4,4'-DDD	2.03	JP	ug/kg	3.78	1.35	2
Endosulfan I	ND		ug/kg	3.78	0.892	2
Endosulfan II	ND		ug/kg	3.78	1.26	2
Endosulfan sulfate	ND		ug/kg	1.57	0.719	2
Methoxychlor	ND		ug/kg	7.08	2.20	2
Toxaphene	ND		ug/kg	70.8	19.8	2
cis-Chlordane	ND		ug/kg	4.72	1.32	2
trans-Chlordane	ND		ug/kg	4.72	1.25	2
Chlordane	ND		ug/kg	30.7	12.5	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	109		30-150	A
Decachlorobiphenyl	41		30-150	A
2,4,5,6-Tetrachloro-m-xylene	75		30-150	B
Decachlorobiphenyl	124		30-150	B

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-05
Client ID:	SB-5 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8081B
Analytical Date:	06/13/13 11:45
Analyst:	JC
Percent Solids:	86%

Date Collected:	06/07/13 11:25
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 14:06
Cleanup Method1:	EPA 3620B
Cleanup Date1:	06/11/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	1.83	0.358	1
Lindane	ND		ug/kg	0.762	0.341	1
Alpha-BHC	ND		ug/kg	0.762	0.216	1
Beta-BHC	ND		ug/kg	1.83	0.694	1
Heptachlor	ND		ug/kg	0.915	0.410	1
Aldrin	ND		ug/kg	1.83	0.644	1
Heptachlor epoxide	ND		ug/kg	3.43	1.03	1
Endrin	ND		ug/kg	0.762	0.313	1
Endrin ketone	ND		ug/kg	1.83	0.471	1
Dieldrin	ND		ug/kg	1.14	0.572	1
4,4'-DDE	ND		ug/kg	1.83	0.423	1
4,4'-DDD	ND		ug/kg	1.83	0.653	1
4,4'-DDT	ND		ug/kg	3.43	1.47	1
Endosulfan I	ND		ug/kg	1.83	0.432	1
Endosulfan sulfate	ND		ug/kg	0.762	0.348	1
Methoxychlor	ND		ug/kg	3.43	1.07	1
Toxaphene	ND		ug/kg	34.3	9.61	1
cis-Chlordane	ND		ug/kg	2.29	0.637	1
trans-Chlordane	ND		ug/kg	2.29	0.604	1
Chlordane	ND		ug/kg	14.9	6.06	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	90		30-150	A
Decachlorobiphenyl	31		30-150	A
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	83		30-150	B

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-05	Date Collected:	06/07/13 11:25
Client ID:	SB-5 (2-3')	Date Received:	06/07/13
Sample Location:	BRONX, NY	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8081B	Extraction Date:	06/09/13 14:06
Analytical Date:	06/13/13 11:45	Cleanup Method1:	EPA 3620B
Analyst:	JC	Cleanup Date1:	06/11/13
Percent Solids:	86%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Endosulfan II	2.04	P	ug/kg	1.83	0.611	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	90		30-150	A
Decachlorobiphenyl	31		30-150	A
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	83		30-150	B

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-06	Date Collected:	06/07/13 11:40
Client ID:	SB-6 (2-3')	Date Received:	06/07/13
Sample Location:	BRONX, NY	Field Prep:	Not Specified
Matrix:	Soil	Extraction Method:	EPA 3546
Analytical Method:	1,8081B	Extraction Date:	06/09/13 14:06
Analytical Date:	06/13/13 11:58	Cleanup Method1:	EPA 3620B
Analyst:	JC	Cleanup Date1:	06/11/13
Percent Solids:	82%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	1.87	0.366	1
Lindane	ND		ug/kg	0.778	0.348	1
Alpha-BHC	ND		ug/kg	0.778	0.221	1
Beta-BHC	ND		ug/kg	1.87	0.708	1
Heptachlor	ND		ug/kg	0.933	0.418	1
Aldrin	ND		ug/kg	1.87	0.657	1
Heptachlor epoxide	ND		ug/kg	3.50	1.05	1
Endrin	ND		ug/kg	0.778	0.319	1
Endrin ketone	ND		ug/kg	1.87	0.481	1
Dieldrin	ND		ug/kg	1.17	0.583	1
4,4'-DDE	ND		ug/kg	1.87	0.432	1
4,4'-DDD	ND		ug/kg	1.87	0.666	1
4,4'-DDT	ND		ug/kg	3.50	1.50	1
Endosulfan I	ND		ug/kg	1.87	0.441	1
Endosulfan II	ND		ug/kg	1.87	0.624	1
Endosulfan sulfate	ND		ug/kg	0.778	0.355	1
Methoxychlor	ND		ug/kg	3.50	1.09	1
Toxaphene	ND		ug/kg	35.0	9.80	1
cis-Chlordane	ND		ug/kg	2.33	0.650	1
trans-Chlordane	ND		ug/kg	2.33	0.616	1
Chlordane	ND		ug/kg	15.2	6.18	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	89		30-150	A
Decachlorobiphenyl	35		30-150	A
2,4,5,6-Tetrachloro-m-xylene	64		30-150	B
Decachlorobiphenyl	82		30-150	B

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-07	D	Date Collected:	06/07/13 11:55
Client ID:	SB-7 (2-3')		Date Received:	06/07/13
Sample Location:	BRONX, NY		Field Prep:	Not Specified
Matrix:	Soil		Extraction Method:	EPA 3546
Analytical Method:	1,8081B		Extraction Date:	06/09/13 14:06
Analytical Date:	06/13/13 08:21		Cleanup Method1:	EPA 3620B
Analyst:	JC		Cleanup Date1:	06/11/13
Percent Solids:	78%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	39.4	7.71	20
Lindane	ND		ug/kg	16.4	7.33	20
Alpha-BHC	ND		ug/kg	16.4	4.66	20
Beta-BHC	ND		ug/kg	39.4	14.9	20
Heptachlor	ND		ug/kg	19.7	8.82	20
Aldrin	ND		ug/kg	39.4	13.9	20
Heptachlor epoxide	ND		ug/kg	73.8	22.1	20
Endrin	ND		ug/kg	16.4	6.73	20
Endrin ketone	ND		ug/kg	39.4	10.1	20
Dieldrin	ND		ug/kg	24.6	12.3	20
4,4'-DDE	ND		ug/kg	39.4	9.10	20
4,4'-DDD	ND		ug/kg	39.4	14.0	20
4,4'-DDT	ND		ug/kg	73.8	31.7	20
Endosulfan I	ND		ug/kg	39.4	9.30	20
Endosulfan II	ND		ug/kg	39.4	13.2	20
Endosulfan sulfate	ND		ug/kg	16.4	7.50	20
Methoxychlor	ND		ug/kg	73.8	23.0	20
Toxaphene	ND		ug/kg	738	207.	20
cis-Chlordane	ND		ug/kg	49.2	13.7	20
trans-Chlordane	ND		ug/kg	49.2	13.0	20
Chlordane	ND		ug/kg	320	130.	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	A
Decachlorobiphenyl	0	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	B
Decachlorobiphenyl	0	Q	30-150	B

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Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-08	D	Date Collected:	06/07/13 12:30
Client ID:	SB-8 (2-3')		Date Received:	06/07/13
Sample Location:	BRONX, NY		Field Prep:	Not Specified
Matrix:	Soil		Extraction Method:	EPA 3546
Analytical Method:	1,8081B		Extraction Date:	06/09/13 14:06
Analytical Date:	06/13/13 12:36		Cleanup Method1:	EPA 3620B
Analyst:	JC		Cleanup Date1:	06/11/13
Percent Solids:	83%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	38.0	7.45	20
Lindane	ND		ug/kg	15.8	7.09	20
Alpha-BHC	ND		ug/kg	15.8	4.50	20
Beta-BHC	ND		ug/kg	38.0	14.4	20
Heptachlor	ND		ug/kg	19.0	8.53	20
Aldrin	ND		ug/kg	38.0	13.4	20
Heptachlor epoxide	ND		ug/kg	71.4	21.4	20
Endrin	ND		ug/kg	15.8	6.50	20
Endrin ketone	ND		ug/kg	38.0	9.80	20
Dieldrin	ND		ug/kg	23.8	11.9	20
4,4'-DDE	ND		ug/kg	38.0	8.80	20
4,4'-DDD	ND		ug/kg	38.0	13.6	20
4,4'-DDT	ND		ug/kg	71.4	30.6	20
Endosulfan I	ND		ug/kg	38.0	8.99	20
Endosulfan II	ND		ug/kg	38.0	12.7	20
Endosulfan sulfate	ND		ug/kg	15.8	7.25	20
Methoxychlor	ND		ug/kg	71.4	22.2	20
Toxaphene	ND		ug/kg	714	200.	20
cis-Chlordane	ND		ug/kg	47.6	13.2	20
trans-Chlordane	ND		ug/kg	47.6	12.6	20
Chlordane	ND		ug/kg	309	126.	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	A
Decachlorobiphenyl	0	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	B
Decachlorobiphenyl	0	Q	30-150	B

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-09	D
Client ID:	SB-9 (2-3')	
Sample Location:	BRONX, NY	
Matrix:	Soil	
Analytical Method:	1,8081B	
Analytical Date:	06/13/13 12:49	
Analyst:	JC	
Percent Solids:	85%	

Date Collected:	06/07/13 12:55
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 14:06
Cleanup Method1:	EPA 3620B
Cleanup Date1:	06/11/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
4,4'-DDT	52.6	J	ug/kg	66.1	28.4	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	A
Decachlorobiphenyl	0	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	B
Decachlorobiphenyl	0	Q	30-150	B

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Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-09	D	Date Collected:	06/07/13 12:55
Client ID:	SB-9 (2-3')		Date Received:	06/07/13
Sample Location:	BRONX, NY		Field Prep:	Not Specified
Matrix:	Soil		Extraction Method:	EPA 3546
Analytical Method:	1,8081B		Extraction Date:	06/09/13 14:06
Analytical Date:	06/13/13 12:49		Cleanup Method1:	EPA 3620B
Analyst:	JC		Cleanup Date1:	06/11/13
Percent Solids:	85%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	35.2	6.90	20
Lindane	ND		ug/kg	14.7	6.57	20
Alpha-BHC	ND		ug/kg	14.7	4.17	20
Beta-BHC	ND		ug/kg	35.2	13.4	20
Heptachlor	ND		ug/kg	17.6	7.90	20
Aldrin	ND		ug/kg	35.2	12.4	20
Heptachlor epoxide	ND		ug/kg	66.1	19.8	20
Endrin	ND		ug/kg	14.7	6.02	20
Endrin ketone	ND		ug/kg	35.2	9.08	20
Dieldrin	ND		ug/kg	22.0	11.0	20
4,4'-DDE	ND		ug/kg	35.2	8.15	20
4,4'-DDD	ND		ug/kg	35.2	12.6	20
Endosulfan I	ND		ug/kg	35.2	8.33	20
Endosulfan II	ND		ug/kg	35.2	11.8	20
Endosulfan sulfate	ND		ug/kg	14.7	6.71	20
Methoxychlor	ND		ug/kg	66.1	20.6	20
Toxaphene	ND		ug/kg	661	185.	20
cis-Chlordane	ND		ug/kg	44.1	12.3	20
trans-Chlordane	ND		ug/kg	44.1	11.6	20
Chlordane	ND		ug/kg	286	117.	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	A
Decachlorobiphenyl	0	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	B
Decachlorobiphenyl	0	Q	30-150	B

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-10	D	Date Collected:	06/07/13 13:05
Client ID:	SB-10 (2-3')		Date Received:	06/07/13
Sample Location:	BRONX, NY		Field Prep:	Not Specified
Matrix:	Soil		Extraction Method:	EPA 3546
Analytical Method:	1,8081B		Extraction Date:	06/09/13 14:06
Analytical Date:	06/13/13 13:02		Cleanup Method1:	EPA 3620B
Analyst:	JC		Cleanup Date1:	06/11/13
Percent Solids:	83%			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	37.0	7.24	20
Lindane	ND		ug/kg	15.4	6.88	20
Alpha-BHC	ND		ug/kg	15.4	4.37	20
Beta-BHC	ND		ug/kg	37.0	14.0	20
Heptachlor	ND		ug/kg	18.5	8.28	20
Aldrin	ND		ug/kg	37.0	13.0	20
Heptachlor epoxide	ND		ug/kg	69.3	20.8	20
Endrin	ND		ug/kg	15.4	6.31	20
Endrin ketone	ND		ug/kg	37.0	9.52	20
Dieldrin	ND		ug/kg	23.1	11.6	20
4,4'-DDE	ND		ug/kg	37.0	8.55	20
4,4'-DDD	ND		ug/kg	37.0	13.2	20
Endosulfan I	ND		ug/kg	37.0	8.73	20
Endosulfan II	ND		ug/kg	37.0	12.4	20
Endosulfan sulfate	ND		ug/kg	15.4	7.04	20
Methoxychlor	ND		ug/kg	69.3	21.6	20
Toxaphene	ND		ug/kg	693	194.	20
cis-Chlordane	ND		ug/kg	46.2	12.9	20
trans-Chlordane	ND		ug/kg	46.2	12.2	20
Chlordane	ND		ug/kg	300	122.	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	A
Decachlorobiphenyl	0	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	B
Decachlorobiphenyl	0	Q	30-150	B

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-10	D
Client ID:	SB-10 (2-3')	
Sample Location:	BRONX, NY	
Matrix:	Soil	
Analytical Method:	1,8081B	
Analytical Date:	06/13/13 13:02	
Analyst:	JC	
Percent Solids:	83%	

Date Collected:	06/07/13 13:05
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 14:06
Cleanup Method1:	EPA 3620B
Cleanup Date1:	06/11/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
4,4'-DDT	126		ug/kg	69.3	29.7	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	A
Decachlorobiphenyl	0	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	B
Decachlorobiphenyl	0	Q	30-150	B

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-11
Client ID:	SB-11 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8081B
Analytical Date:	06/13/13 12:11
Analyst:	JC
Percent Solids:	83%

Date Collected:	06/07/13 13:20
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 14:06
Cleanup Method1:	EPA 3620B
Cleanup Date1:	06/11/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	1.92	0.376	1
Lindane	ND		ug/kg	0.800	0.358	1
Alpha-BHC	ND		ug/kg	0.800	0.227	1
Beta-BHC	ND		ug/kg	1.92	0.728	1
Heptachlor	ND		ug/kg	0.960	0.430	1
Aldrin	ND		ug/kg	1.92	0.676	1
Heptachlor epoxide	ND		ug/kg	3.60	1.08	1
Endrin	ND		ug/kg	0.800	0.328	1
Endrin ketone	ND		ug/kg	1.92	0.494	1
Dieldrin	ND		ug/kg	1.20	0.600	1
4,4'-DDE	50.2		ug/kg	1.92	0.444	1
Endosulfan I	ND		ug/kg	1.92	0.454	1
Endosulfan II	ND		ug/kg	1.92	0.642	1
Endosulfan sulfate	ND		ug/kg	0.800	0.366	1
Methoxychlor	ND		ug/kg	3.60	1.12	1
Toxaphene	ND		ug/kg	36.0	10.1	1
cis-Chlordane	ND		ug/kg	2.40	0.669	1
trans-Chlordane	ND		ug/kg	2.40	0.634	1
Chlordane	ND		ug/kg	15.6	6.36	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	90		30-150	A
Decachlorobiphenyl	30		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	85		30-150	B

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Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-11
Client ID:	SB-11 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8081B
Analytical Date:	06/13/13 12:11
Analyst:	JC
Percent Solids:	83%

Date Collected:	06/07/13 13:20
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 14:06
Cleanup Method1:	EPA 3620B
Cleanup Date1:	06/11/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
4,4'-DDD	3.14	P	ug/kg	1.92	0.685	1
4,4'-DDT	81.5		ug/kg	3.60	1.54	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	90		30-150	A
Decachlorobiphenyl	30		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	85		30-150	B

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID:	L1310472-12
Client ID:	SB-12 (2-3')
Sample Location:	BRONX, NY
Matrix:	Soil
Analytical Method:	1,8081B
Analytical Date:	06/13/13 12:23
Analyst:	JC
Percent Solids:	85%

Date Collected:	06/07/13 11:25
Date Received:	06/07/13
Field Prep:	Not Specified
Extraction Method:	EPA 3546
Extraction Date:	06/09/13 14:06
Cleanup Method1:	EPA 3620B
Cleanup Date1:	06/11/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	1.80	0.352	1
Lindane	ND		ug/kg	0.749	0.335	1
Alpha-BHC	ND		ug/kg	0.749	0.213	1
Beta-BHC	ND		ug/kg	1.80	0.681	1
Heptachlor	ND		ug/kg	0.898	0.403	1
Aldrin	ND		ug/kg	1.80	0.633	1
Heptachlor epoxide	ND		ug/kg	3.37	1.01	1
Endrin	ND		ug/kg	0.749	0.307	1
Endrin ketone	ND		ug/kg	1.80	0.463	1
Dieldrin	ND		ug/kg	1.12	0.562	1
4,4'-DDE	ND		ug/kg	1.80	0.416	1
4,4'-DDD	ND		ug/kg	1.80	0.641	1
4,4'-DDT	ND		ug/kg	3.37	1.44	1
Endosulfan I	ND		ug/kg	1.80	0.424	1
Endosulfan II	ND		ug/kg	1.80	0.600	1
Endosulfan sulfate	ND		ug/kg	0.749	0.342	1
Methoxychlor	ND		ug/kg	3.37	1.05	1
Toxaphene	ND		ug/kg	33.7	9.43	1
cis-Chlordane	ND		ug/kg	2.25	0.626	1
trans-Chlordane	ND		ug/kg	2.25	0.593	1
Chlordane	ND		ug/kg	14.6	5.95	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	84		30-150	A
Decachlorobiphenyl	36		30-150	A
2,4,5,6-Tetrachloro-m-xylene	57		30-150	B
Decachlorobiphenyl	78		30-150	B

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 06/13/13 11:07
Analyst: JC

Extraction Method: EPA 3546
Extraction Date: 06/09/13 14:06
Cleanup Method1: EPA 3620B
Cleanup Date1: 06/11/13

Parameter	Result	Qualifier	Units	RL	MDL
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-12 Batch: WG613744-1					
Delta-BHC	ND		ug/kg	1.57	0.308
Lindane	ND		ug/kg	0.655	0.293
Alpha-BHC	ND		ug/kg	0.655	0.186
Beta-BHC	ND		ug/kg	1.57	0.596
Heptachlor	ND		ug/kg	0.786	0.352
Aldrin	ND		ug/kg	1.57	0.554
Heptachlor epoxide	ND		ug/kg	2.95	0.885
Endrin	ND		ug/kg	0.655	0.269
Endrin ketone	ND		ug/kg	1.57	0.405
Dieldrin	ND		ug/kg	0.983	0.491
4,4'-DDE	ND		ug/kg	1.57	0.364
4,4'-DDD	ND		ug/kg	1.57	0.561
4,4'-DDT	ND		ug/kg	2.95	1.26
Endosulfan I	ND		ug/kg	1.57	0.372
Endosulfan II	ND		ug/kg	1.57	0.526
Endosulfan sulfate	ND		ug/kg	0.655	0.299
Methoxychlor	ND		ug/kg	2.95	0.917
Toxaphene	ND		ug/kg	29.5	8.26
cis-Chlordane	ND		ug/kg	1.96	0.548
trans-Chlordane	ND		ug/kg	1.96	0.519
Chlordane	ND		ug/kg	12.8	5.21

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	80		30-150	A
Decachlorobiphenyl	38		30-150	A
2,4,5,6-Tetrachloro-m-xylene	56		30-150	B
Decachlorobiphenyl	88		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-12 Batch: WG613744-2 WG613744-3								
Delta-BHC	93		80		30-150	15		30
Lindane	88		84		30-150	5		30
Alpha-BHC	95		84		30-150	12		30
Beta-BHC	97		88		30-150	10		30
Heptachlor	90		80		30-150	12		30
Aldrin	94		86		30-150	9		30
Heptachlor epoxide	90		81		30-150	11		30
Endrin	94		86		30-150	9		30
Endrin ketone	78		74		30-150	5		30
Dieldrin	86		80		30-150	7		30
4,4'-DDE	88		78		30-150	12		30
4,4'-DDD	80		71		30-150	12		30
4,4'-DDT	75		70		30-150	7		30
Endosulfan I	85		78		30-150	9		30
Endosulfan II	76		69		30-150	10		30
Endosulfan sulfate	77		71		30-150	8		30
Methoxychlor	83		79		30-150	5		30
cis-Chlordane	88		80		30-150	10		30
trans-Chlordane	87		79		30-150	10		30

A4-227

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-12 Batch: WG613744-2 WG613744-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	99		94		30-150	A
Decachlorobiphenyl	46		37		30-150	A
2,4,5,6-Tetrachloro-m-xylene	73		67		30-150	B
Decachlorobiphenyl	129		108		30-150	B

METALS

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-01
Client ID: SB-1 (1-2')
Sample Location: BRONX, NY
Matrix: Soil
Percent Solids: 86%

Date Collected: 06/07/13 09:20
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	7300		mg/kg	8.8	1.8	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Antimony, Total	ND		mg/kg	4.4	0.71	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Arsenic, Total	3.4		mg/kg	0.88	0.18	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Barium, Total	70		mg/kg	0.88	0.26	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Beryllium, Total	0.64		mg/kg	0.44	0.09	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Cadmium, Total	0.37	J	mg/kg	0.88	0.06	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Calcium, Total	66000		mg/kg	8.8	2.6	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Chromium, Total	15		mg/kg	0.88	0.18	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Cobalt, Total	8.2		mg/kg	1.8	0.44	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Copper, Total	30		mg/kg	0.88	0.18	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Iron, Total	14000		mg/kg	4.4	1.8	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Lead, Total	68		mg/kg	4.4	0.18	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Magnesium, Total	38000		mg/kg	8.8	0.88	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Manganese, Total	360		mg/kg	0.88	0.18	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Mercury, Total	0.08	J	mg/kg	0.09	0.02	1	06/14/13 08:36	06/14/13 10:58	EPA 7471B	1,7471B	MC
Nickel, Total	13		mg/kg	2.2	0.35	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Potassium, Total	1600		mg/kg	220	35.	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Selenium, Total	ND		mg/kg	1.8	0.26	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Silver, Total	ND		mg/kg	0.88	0.18	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Sodium, Total	150	J	mg/kg	180	26.	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Thallium, Total	ND		mg/kg	1.8	0.35	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Vanadium, Total	27		mg/kg	0.88	0.09	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL
Zinc, Total	70		mg/kg	4.4	0.62	2	06/12/13 12:05	06/14/13 11:31	EPA 3050B	1,6010C	KL

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-02
Client ID: SB-2 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Percent Solids: 83%

Date Collected: 06/07/13 10:00
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	11000		mg/kg	9.1	1.8	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Antimony, Total	ND		mg/kg	4.6	0.73	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Arsenic, Total	3.4		mg/kg	0.91	0.18	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Barium, Total	68		mg/kg	0.91	0.27	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Beryllium, Total	0.29	J	mg/kg	0.46	0.09	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Cadmium, Total	0.43	J	mg/kg	0.91	0.06	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Calcium, Total	1700		mg/kg	9.1	2.7	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Chromium, Total	26		mg/kg	0.91	0.18	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Cobalt, Total	6.9		mg/kg	1.8	0.46	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Copper, Total	23		mg/kg	0.91	0.18	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Iron, Total	16000		mg/kg	4.6	1.8	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Lead, Total	79		mg/kg	4.6	0.18	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Magnesium, Total	3900		mg/kg	9.1	0.91	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Manganese, Total	330		mg/kg	0.91	0.18	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Mercury, Total	0.14		mg/kg	0.08	0.02	1	06/14/13 08:36	06/14/13 11:00	EPA 7471B	1,7471B	MC
Nickel, Total	16		mg/kg	2.3	0.36	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Potassium, Total	1600		mg/kg	230	36.	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Selenium, Total	ND		mg/kg	1.8	0.27	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Silver, Total	ND		mg/kg	0.91	0.18	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Sodium, Total	170	J	mg/kg	180	27.	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Thallium, Total	ND		mg/kg	1.8	0.36	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Vanadium, Total	44		mg/kg	0.91	0.09	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL
Zinc, Total	74		mg/kg	4.6	0.64	2	06/12/13 12:05	06/14/13 12:18	EPA 3050B	1,6010C	KL

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-03
Client ID: SB-3 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Percent Solids: 88%

Date Collected: 06/07/13 10:15
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	8600		mg/kg	8.6	1.7	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Antimony, Total	ND		mg/kg	4.3	0.69	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Arsenic, Total	3.7		mg/kg	0.86	0.17	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Barium, Total	99		mg/kg	0.86	0.26	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Beryllium, Total	0.34	J	mg/kg	0.43	0.09	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Cadmium, Total	0.33	J	mg/kg	0.86	0.06	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Calcium, Total	64000		mg/kg	8.6	2.6	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Chromium, Total	16		mg/kg	0.86	0.17	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Cobalt, Total	5.2		mg/kg	1.7	0.43	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Copper, Total	21		mg/kg	0.86	0.17	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Iron, Total	13000		mg/kg	4.3	1.7	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Lead, Total	100		mg/kg	4.3	0.17	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Magnesium, Total	33000		mg/kg	8.6	0.86	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Manganese, Total	230		mg/kg	0.86	0.17	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Mercury, Total	0.06	J	mg/kg	0.09	0.02	1	06/14/13 08:36	06/14/13 11:02	EPA 7471B	1,7471B	MC
Nickel, Total	10		mg/kg	2.2	0.35	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Potassium, Total	1100		mg/kg	220	35.	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Selenium, Total	ND		mg/kg	1.7	0.26	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Silver, Total	ND		mg/kg	0.86	0.17	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Sodium, Total	240		mg/kg	170	26.	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Thallium, Total	ND		mg/kg	1.7	0.35	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Vanadium, Total	24		mg/kg	0.86	0.09	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL
Zinc, Total	88		mg/kg	4.3	0.60	2	06/12/13 12:05	06/14/13 12:22	EPA 3050B	1,6010C	KL

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-04
Client ID: SB-4 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Percent Solids: 84%

Date Collected: 06/07/13 10:40
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	15000		mg/kg	9.2	1.8	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Antimony, Total	ND		mg/kg	4.6	0.74	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Arsenic, Total	5.6		mg/kg	0.92	0.18	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Barium, Total	100		mg/kg	0.92	0.28	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Beryllium, Total	0.50		mg/kg	0.46	0.09	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Cadmium, Total	0.39	J	mg/kg	0.92	0.07	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Calcium, Total	1400		mg/kg	9.2	2.8	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Chromium, Total	27		mg/kg	0.92	0.18	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Cobalt, Total	8.0		mg/kg	1.8	0.46	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Copper, Total	35		mg/kg	0.92	0.18	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Iron, Total	19000		mg/kg	4.6	1.8	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Lead, Total	68		mg/kg	4.6	0.18	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Magnesium, Total	3400		mg/kg	9.2	0.92	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Manganese, Total	360		mg/kg	0.92	0.18	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Mercury, Total	0.17		mg/kg	0.10	0.02	1	06/14/13 08:36	06/14/13 11:04	EPA 7471B	1,7471B	MC
Nickel, Total	16		mg/kg	2.3	0.37	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Potassium, Total	2100		mg/kg	230	37.	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Selenium, Total	ND		mg/kg	1.8	0.28	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Silver, Total	ND		mg/kg	0.92	0.18	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Sodium, Total	80	J	mg/kg	180	28.	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Thallium, Total	ND		mg/kg	1.8	0.37	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Vanadium, Total	38		mg/kg	0.92	0.09	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL
Zinc, Total	77		mg/kg	4.6	0.65	2	06/12/13 12:05	06/14/13 12:26	EPA 3050B	1,6010C	KL

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-05
Client ID: SB-5 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Percent Solids: 86%

Date Collected: 06/07/13 11:25
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	16000		mg/kg	9.0	1.8	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Antimony, Total	ND		mg/kg	4.5	0.72	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Arsenic, Total	5.5		mg/kg	0.90	0.18	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Barium, Total	120		mg/kg	0.90	0.27	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Beryllium, Total	0.35	J	mg/kg	0.45	0.09	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Cadmium, Total	0.42	J	mg/kg	0.90	0.06	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Calcium, Total	2100		mg/kg	9.0	2.7	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Chromium, Total	24		mg/kg	0.90	0.18	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Cobalt, Total	8.2		mg/kg	1.8	0.45	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Copper, Total	43		mg/kg	0.90	0.18	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Iron, Total	22000		mg/kg	4.5	1.8	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Lead, Total	250		mg/kg	4.5	0.18	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Magnesium, Total	3900		mg/kg	9.0	0.90	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Manganese, Total	310		mg/kg	0.90	0.18	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Mercury, Total	0.07	J	mg/kg	0.07	0.02	1	06/14/13 08:36	06/14/13 11:05	EPA 7471B	1,7471B	MC
Nickel, Total	14		mg/kg	2.2	0.36	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Potassium, Total	1300		mg/kg	220	36.	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Selenium, Total	ND		mg/kg	1.8	0.27	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Silver, Total	ND		mg/kg	0.90	0.18	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Sodium, Total	220		mg/kg	180	27.	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Thallium, Total	ND		mg/kg	1.8	0.36	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Vanadium, Total	39		mg/kg	0.90	0.09	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL
Zinc, Total	99		mg/kg	4.5	0.63	2	06/12/13 12:05	06/14/13 12:29	EPA 3050B	1,6010C	KL

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-06
Client ID: SB-6 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Percent Solids: 82%

Date Collected: 06/07/13 11:40
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	12000		mg/kg	9.1	1.8	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Antimony, Total	ND		mg/kg	4.6	0.73	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Arsenic, Total	2.8		mg/kg	0.91	0.18	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Barium, Total	54		mg/kg	0.91	0.27	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Beryllium, Total	0.32	J	mg/kg	0.46	0.09	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Cadmium, Total	0.28	J	mg/kg	0.91	0.06	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Calcium, Total	1300		mg/kg	9.1	2.7	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Chromium, Total	25		mg/kg	0.91	0.18	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Cobalt, Total	6.7		mg/kg	1.8	0.46	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Copper, Total	31		mg/kg	0.91	0.18	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Iron, Total	16000		mg/kg	4.6	1.8	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Lead, Total	21		mg/kg	4.6	0.18	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Magnesium, Total	3800		mg/kg	9.1	0.91	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Manganese, Total	140		mg/kg	0.91	0.18	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Mercury, Total	0.18		mg/kg	0.10	0.02	1	06/14/13 08:36	06/14/13 11:07	EPA 7471B	1,7471B	MC
Nickel, Total	15		mg/kg	2.3	0.36	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Potassium, Total	1300		mg/kg	230	36.	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Selenium, Total	ND		mg/kg	1.8	0.27	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Silver, Total	ND		mg/kg	0.91	0.18	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Sodium, Total	200		mg/kg	180	27.	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Thallium, Total	ND		mg/kg	1.8	0.36	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Vanadium, Total	33		mg/kg	0.91	0.09	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL
Zinc, Total	53		mg/kg	4.6	0.64	2	06/12/13 12:05	06/14/13 12:33	EPA 3050B	1,6010C	KL

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-07
Client ID: SB-7 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Percent Solids: 78%

Date Collected: 06/07/13 11:55
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	5000		mg/kg	9.8	2.0	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Antimony, Total	ND		mg/kg	4.9	0.78	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Arsenic, Total	2.2		mg/kg	0.98	0.20	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Barium, Total	57		mg/kg	0.98	0.29	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Beryllium, Total	ND		mg/kg	0.49	0.10	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Cadmium, Total	0.62	J	mg/kg	0.98	0.07	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Calcium, Total	11000		mg/kg	9.8	2.9	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Chromium, Total	22		mg/kg	0.98	0.20	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Cobalt, Total	4.9		mg/kg	2.0	0.49	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Copper, Total	46		mg/kg	0.98	0.20	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Iron, Total	11000		mg/kg	4.9	2.0	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Lead, Total	78		mg/kg	4.9	0.20	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Magnesium, Total	6600		mg/kg	9.8	0.98	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Manganese, Total	260		mg/kg	0.98	0.20	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Mercury, Total	0.57		mg/kg	0.09	0.02	1	06/14/13 08:36	06/14/13 11:09	EPA 7471B	1,7471B	MC
Nickel, Total	12		mg/kg	2.4	0.39	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Potassium, Total	1600		mg/kg	240	39.	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Selenium, Total	ND		mg/kg	2.0	0.29	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Silver, Total	ND		mg/kg	0.98	0.20	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Sodium, Total	220		mg/kg	200	29.	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Thallium, Total	ND		mg/kg	2.0	0.39	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Vanadium, Total	33		mg/kg	0.98	0.10	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL
Zinc, Total	160		mg/kg	4.9	0.68	2	06/12/13 12:05	06/14/13 12:37	EPA 3050B	1,6010C	KL

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-08
Client ID: SB-8 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Percent Solids: 83%

Date Collected: 06/07/13 12:30
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	15000		mg/kg	9.5	1.9	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Antimony, Total	ND		mg/kg	4.7	0.76	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Arsenic, Total	4.6		mg/kg	0.95	0.19	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Barium, Total	91		mg/kg	0.95	0.28	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Beryllium, Total	0.34	J	mg/kg	0.47	0.10	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Cadmium, Total	0.46	J	mg/kg	0.95	0.07	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Calcium, Total	4000		mg/kg	9.5	2.8	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Chromium, Total	26		mg/kg	0.95	0.19	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Cobalt, Total	9.1		mg/kg	1.9	0.47	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Copper, Total	64		mg/kg	0.95	0.19	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Iron, Total	19000		mg/kg	4.7	1.9	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Lead, Total	57		mg/kg	4.7	0.19	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Magnesium, Total	4800		mg/kg	9.5	0.95	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Manganese, Total	240		mg/kg	0.95	0.19	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Mercury, Total	0.17		mg/kg	0.08	0.02	1	06/14/13 08:36	06/14/13 11:11	EPA 7471B	1,7471B	MC
Nickel, Total	21		mg/kg	2.4	0.38	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Potassium, Total	3000		mg/kg	240	38.	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Selenium, Total	ND		mg/kg	1.9	0.28	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Silver, Total	ND		mg/kg	0.95	0.19	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Sodium, Total	540		mg/kg	190	28.	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Thallium, Total	ND		mg/kg	1.9	0.38	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Vanadium, Total	41		mg/kg	0.95	0.10	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL
Zinc, Total	89		mg/kg	4.7	0.66	2	06/12/13 12:05	06/14/13 12:41	EPA 3050B	1,6010C	KL

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-09
Client ID: SB-9 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Percent Solids: 85%

Date Collected: 06/07/13 12:55
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	11000		mg/kg	9.0	1.8	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Antimony, Total	ND		mg/kg	4.5	0.72	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Arsenic, Total	3.9		mg/kg	0.90	0.18	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Barium, Total	72		mg/kg	0.90	0.27	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Beryllium, Total	0.25	J	mg/kg	0.45	0.09	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Cadmium, Total	0.40	J	mg/kg	0.90	0.06	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Calcium, Total	3000		mg/kg	9.0	2.7	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Chromium, Total	21		mg/kg	0.90	0.18	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Cobalt, Total	9.0		mg/kg	1.8	0.45	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Copper, Total	55		mg/kg	0.90	0.18	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Iron, Total	18000		mg/kg	4.5	1.8	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Lead, Total	100		mg/kg	4.5	0.18	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Magnesium, Total	4100		mg/kg	9.0	0.90	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Manganese, Total	260		mg/kg	0.90	0.18	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Mercury, Total	0.28		mg/kg	0.08	0.02	1	06/14/13 08:36	06/14/13 11:12	EPA 7471B	1,7471B	MC
Nickel, Total	16		mg/kg	2.3	0.36	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Potassium, Total	2000		mg/kg	230	36.	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Selenium, Total	ND		mg/kg	1.8	0.27	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Silver, Total	ND		mg/kg	0.90	0.18	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Sodium, Total	280		mg/kg	180	27.	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Thallium, Total	ND		mg/kg	1.8	0.36	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Vanadium, Total	53		mg/kg	0.90	0.09	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL
Zinc, Total	91		mg/kg	4.5	0.63	2	06/12/13 12:05	06/14/13 12:45	EPA 3050B	1,6010C	KL

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-10
Client ID: SB-10 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Percent Solids: 83%

Date Collected: 06/07/13 13:05
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	12000		mg/kg	9.1	1.8	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Antimony, Total	ND		mg/kg	4.5	0.73	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Arsenic, Total	5.1		mg/kg	0.91	0.18	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Barium, Total	86		mg/kg	0.91	0.27	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Beryllium, Total	0.14	J	mg/kg	0.45	0.09	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Cadmium, Total	0.68	J	mg/kg	0.91	0.06	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Calcium, Total	6400		mg/kg	9.1	2.7	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Chromium, Total	32		mg/kg	0.91	0.18	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Cobalt, Total	10		mg/kg	1.8	0.45	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Copper, Total	79		mg/kg	0.91	0.18	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Iron, Total	18000		mg/kg	4.5	1.8	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Lead, Total	120		mg/kg	4.5	0.18	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Magnesium, Total	5400		mg/kg	9.1	0.91	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Manganese, Total	260		mg/kg	0.91	0.18	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Mercury, Total	0.30		mg/kg	0.08	0.02	1	06/14/13 08:36	06/14/13 11:14	EPA 7471B	1,7471B	MC
Nickel, Total	25		mg/kg	2.3	0.36	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Potassium, Total	2600		mg/kg	230	36.	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Selenium, Total	ND		mg/kg	1.8	0.27	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Silver, Total	ND		mg/kg	0.91	0.18	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Sodium, Total	660		mg/kg	180	27.	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Thallium, Total	ND		mg/kg	1.8	0.36	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Vanadium, Total	53		mg/kg	0.91	0.09	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL
Zinc, Total	140		mg/kg	4.5	0.64	2	06/12/13 12:05	06/14/13 13:04	EPA 3050B	1,6010C	KL

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-11
Client ID: SB-11 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Percent Solids: 83%

Date Collected: 06/07/13 13:20
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	13000		mg/kg	9.4	1.9	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Antimony, Total	ND		mg/kg	4.7	0.75	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Arsenic, Total	3.6		mg/kg	0.94	0.19	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Barium, Total	100		mg/kg	0.94	0.28	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Beryllium, Total	0.37	J	mg/kg	0.47	0.09	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Cadmium, Total	0.42	J	mg/kg	0.94	0.07	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Calcium, Total	1600		mg/kg	9.4	2.8	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Chromium, Total	27		mg/kg	0.94	0.19	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Cobalt, Total	14		mg/kg	1.9	0.47	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Copper, Total	54		mg/kg	0.94	0.19	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Iron, Total	18000		mg/kg	4.7	1.9	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Lead, Total	79		mg/kg	4.7	0.19	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Magnesium, Total	4100		mg/kg	9.4	0.94	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Manganese, Total	450		mg/kg	0.94	0.19	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Mercury, Total	0.16		mg/kg	0.09	0.02	1	06/14/13 08:36	06/14/13 11:19	EPA 7471B	1,7471B	MC
Nickel, Total	28		mg/kg	2.3	0.38	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Potassium, Total	2600		mg/kg	230	38.	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Selenium, Total	ND		mg/kg	1.9	0.28	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Silver, Total	ND		mg/kg	0.94	0.19	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Sodium, Total	220		mg/kg	190	28.	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Thallium, Total	ND		mg/kg	1.9	0.38	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Vanadium, Total	39		mg/kg	0.94	0.09	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL
Zinc, Total	90		mg/kg	4.7	0.66	2	06/12/13 12:05	06/14/13 13:08	EPA 3050B	1,6010C	KL

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503
Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-12
Client ID: SB-12 (2-3')
Sample Location: BRONX, NY
Matrix: Soil
Percent Solids: 85%

Date Collected: 06/07/13 11:25
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	18000		mg/kg	9.0	1.8	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Antimony, Total	ND		mg/kg	4.5	0.72	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Arsenic, Total	5.0		mg/kg	0.90	0.18	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Barium, Total	85		mg/kg	0.90	0.27	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Beryllium, Total	0.44	J	mg/kg	0.45	0.09	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Cadmium, Total	0.35	J	mg/kg	0.90	0.06	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Calcium, Total	2300		mg/kg	9.0	2.7	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Chromium, Total	24		mg/kg	0.90	0.18	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Cobalt, Total	8.1		mg/kg	1.8	0.45	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Copper, Total	28		mg/kg	0.90	0.18	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Iron, Total	22000		mg/kg	4.5	1.8	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Lead, Total	81		mg/kg	4.5	0.18	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Magnesium, Total	4400		mg/kg	9.0	0.90	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Manganese, Total	360		mg/kg	0.90	0.18	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Mercury, Total	0.07	J	mg/kg	0.08	0.02	1	06/14/13 08:36	06/14/13 11:21	EPA 7471B	1,7471B	MC
Nickel, Total	14		mg/kg	2.3	0.36	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Potassium, Total	950		mg/kg	230	36.	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Selenium, Total	ND		mg/kg	1.8	0.27	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Silver, Total	ND		mg/kg	0.90	0.18	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Sodium, Total	160	J	mg/kg	180	27.	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Thallium, Total	ND		mg/kg	1.8	0.36	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Vanadium, Total	36		mg/kg	0.90	0.09	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL
Zinc, Total	64		mg/kg	4.5	0.63	2	06/12/13 12:05	06/14/13 13:12	EPA 3050B	1,6010C	KL

Project Name: BRONX ZOO PHASE II **Lab Number:** L1310472

Project Number: 10956-2503 **Report Date:** 06/14/13

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-12 Batch: WG614493-1										
Aluminum, Total	ND		mg/kg	4.0	0.80	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Antimony, Total	ND		mg/kg	2.0	0.40	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Arsenic, Total	ND		mg/kg	0.40	0.12	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Barium, Total	ND		mg/kg	0.40	0.12	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Beryllium, Total	ND		mg/kg	0.20	0.02	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Cadmium, Total	ND		mg/kg	0.40	0.02	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Calcium, Total	ND		mg/kg	4.0	0.80	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Chromium, Total	ND		mg/kg	0.40	0.08	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Cobalt, Total	ND		mg/kg	0.80	0.20	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Copper, Total	ND		mg/kg	0.40	0.20	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Iron, Total	ND		mg/kg	2.0	0.80	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Lead, Total	ND		mg/kg	2.0	0.12	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Magnesium, Total	ND		mg/kg	4.0	1.6	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Manganese, Total	ND		mg/kg	0.40	0.08	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Nickel, Total	ND		mg/kg	1.0	0.16	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Potassium, Total	ND		mg/kg	100	32.	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Selenium, Total	ND		mg/kg	0.80	0.12	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Silver, Total	ND		mg/kg	0.40	0.08	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Sodium, Total	ND		mg/kg	80	32.	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Thallium, Total	ND		mg/kg	0.80	0.24	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Vanadium, Total	ND		mg/kg	0.40	0.08	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG
Zinc, Total	ND		mg/kg	2.0	0.20	1	06/12/13 12:05	06/13/13 10:06	1,6010C	MG

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-12 Batch: WG614559-1										
Mercury, Total	ND		mg/kg	0.08	0.02	1	06/14/13 08:36	06/14/13 10:37	1,7471B	MC

Project Name: BRONX ZOO PHASE II

Project Number: 10956-2503

Lab Number: L1310472

Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-12 Batch: WG614493-2 SRM Lot Number: 0518-10-02								
Aluminum, Total	85		-		29-171	-		
Antimony, Total	122		-		4-196	-		
Arsenic, Total	104		-		81-119	-		
Barium, Total	100		-		83-118	-		
Beryllium, Total	104		-		83-117	-		
Cadmium, Total	94		-		82-117	-		
Calcium, Total	92		-		83-117	-		
Chromium, Total	101		-		80-119	-		
Cobalt, Total	104		-		83-117	-		
Copper, Total	109		-		83-117	-		
Iron, Total	108		-		51-150	-		
Lead, Total	101		-		80-120	-		
Magnesium, Total	92		-		74-126	-		
Manganese, Total	97		-		83-117	-		
Nickel, Total	104		-		82-117	-		
Potassium, Total	99		-		74-126	-		
Selenium, Total	106		-		80-120	-		
Silver, Total	102		-		66-134	-		
Sodium, Total	100		-		74-127	-		
Thallium, Total	106		-		79-120	-		
Vanadium, Total	98		-		79-121	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-12 Batch: WG614493-2 SRM Lot Number: 0518-10-02					
Zinc, Total	97	-	82-119	-	
Total Metals - Westborough Lab Associated sample(s): 01-12 Batch: WG614559-2 SRM Lot Number: 0518-10-02					
Mercury, Total	124	-	67-133	-	

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Matrix Spike Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-12 QC Batch ID: WG614493-4 QC Sample: L1310570-01 Client ID: MS Sample												
Aluminum, Total	12000	210	11000	0	Q	-	-		75-125	-		35
Antimony, Total	0.70J	52.5	49	93		-	-		75-125	-		35
Arsenic, Total	2.2	12.6	15	102		-	-		75-125	-		35
Barium, Total	67.	210	250	87		-	-		75-125	-		35
Beryllium, Total	0.62	5.25	5.2	87		-	-		75-125	-		35
Cadmium, Total	0.44J	5.36	4.9	91		-	-		75-125	-		35
Calcium, Total	34000	1050	40000	571	Q	-	-		75-125	-		35
Chromium, Total	13.	21	29	76		-	-		75-125	-		35
Cobalt, Total	11.	52.5	60	93		-	-		75-125	-		35
Copper, Total	31.	26.2	57	99		-	-		75-125	-		35
Iron, Total	14000	105	12000	0	Q	-	-		75-125	-		35
Lead, Total	36.	53.6	82	86		-	-		75-125	-		35
Magnesium, Total	15000	1050	18000	286	Q	-	-		75-125	-		35
Manganese, Total	260	52.5	260	0	Q	-	-		75-125	-		35
Nickel, Total	24.	52.5	71	90		-	-		75-125	-		35
Potassium, Total	2300	1050	2900	57	Q	-	-		75-125	-		35
Selenium, Total	0.18J	12.6	12	95		-	-		75-125	-		35
Silver, Total	ND	31.5	31	98		-	-		75-125	-		35
Sodium, Total	120	1050	1100	93		-	-		75-125	-		35
Thallium, Total	ND	12.6	11	87		-	-		75-125	-		35
Vanadium, Total	20.	52.5	66	88		-	-		75-125	-		35

A4-246

Matrix Spike Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-12 QC Batch ID: WG614493-4 QC Sample: L1310570-01 Client ID: MS Sample										
Zinc, Total	43.	52.5	80	70	Q	-	-	75-125	-	35
Total Metals - Westborough Lab Associated sample(s): 01-12 QC Batch ID: WG614559-4 QC Sample: L1309885-01 Client ID: MS Sample										
Mercury, Total	ND	0.209	0.25	120		-	-	70-130	-	35

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Lab Duplicate Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-12 QC Batch ID: WG614493-3 QC Sample: L1310570-01 Client ID: DUP Sample						
Arsenic, Total	2.2	2.1	mg/kg	5		35
Barium, Total	67.	58	mg/kg	14		35
Cadmium, Total	0.44J	0.35J	mg/kg	NC		35
Chromium, Total	13.	10	mg/kg	26		35
Lead, Total	36.	30	mg/kg	18		35
Selenium, Total	0.18J	ND	mg/kg	NC		35
Silver, Total	ND	ND	mg/kg	NC		35
Total Metals - Westborough Lab Associated sample(s): 01-12 QC Batch ID: WG614559-3 QC Sample: L1309885-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/kg	NC		35

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INORGANICS
&
MISCELLANEOUS

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-01
Client ID: SB-1 (1-2')
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 06/07/13 09:20
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.4		%	0.100	NA	1	-	06/10/13 13:12	30,2540G	MO

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-02
Client ID: SB-2 (2-3')
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 06/07/13 10:00
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.8		%	0.100	NA	1	-	06/10/13 13:12	30,2540G	MO

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-03
Client ID: SB-3 (2-3')
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 06/07/13 10:15
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	88.4		%	0.100	NA	1	-	06/10/13 13:12	30,2540G	MO

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-04
Client ID: SB-4 (2-3')
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 06/07/13 10:40
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.6		%	0.100	NA	1	-	06/10/13 13:12	30,2540G	MO

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-05
Client ID: SB-5 (2-3')
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 06/07/13 11:25
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.5		%	0.100	NA	1	-	06/10/13 13:12	30,2540G	MO

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-06
Client ID: SB-6 (2-3')
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 06/07/13 11:40
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.2		%	0.100	NA	1	-	06/10/13 13:12	30,2540G	MO

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-07
Client ID: SB-7 (2-3')
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 06/07/13 11:55
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	77.8		%	0.100	NA	1	-	06/10/13 13:12	30,2540G	MO

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-08
Client ID: SB-8 (2-3')
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 06/07/13 12:30
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.6		%	0.100	NA	1	-	06/10/13 13:12	30,2540G	MO

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-09
Client ID: SB-9 (2-3')
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 06/07/13 12:55
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.3		%	0.100	NA	1	-	06/10/13 13:12	30,2540G	MO

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-10
Client ID: SB-10 (2-3')
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 06/07/13 13:05
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.3		%	0.100	NA	1	-	06/10/13 13:12	30,2540G	MO

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-11
Client ID: SB-11 (2-3')
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 06/07/13 13:20
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.6		%	0.100	NA	1	-	06/10/13 13:12	30,2540G	MO

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310472-12
Client ID: SB-12 (2-3')
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 06/07/13 11:25
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.8		%	0.100	NA	1	-	06/10/13 13:12	30,2540G	MO

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L1310472
Report Date: 06/14/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-12 QC Batch ID: WG613900-1 QC Sample: L1310472-01 Client ID: SB-1 (1-2')						
Solids, Total	86.4	85.6	%	1		20

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Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1310472-01A	Vial Large unpreserved	A	N/A	1.8	Y	Absent	NYTCL-8260(14)
L1310472-01B	Amber 500ml unpreserved	A	N/A	1.8	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1310472-02A	Vial Large unpreserved	A	N/A	1.8	Y	Absent	NYTCL-8260(14)
L1310472-02B	Amber 500ml unpreserved	A	N/A	1.8	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1310472-03A	Vial Large unpreserved	A	N/A	1.8	Y	Absent	NYTCL-8260(14)
L1310472-03B	Amber 500ml unpreserved	A	N/A	1.8	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1310472-04A	Vial Large unpreserved	A	N/A	1.8	Y	Absent	NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1310472-04B	Amber 500ml unpreserved	A	N/A	1.8	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1310472-05A	Vial Large unpreserved	A	N/A	1.8	Y	Absent	NYTCL-8260(14)
L1310472-05B	Amber 500ml unpreserved	A	N/A	1.8	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1310472-06A	Vial Large unpreserved	A	N/A	1.8	Y	Absent	NYTCL-8260(14)
L1310472-06B	Amber 500ml unpreserved	A	N/A	1.8	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1310472-07A	Vial Large unpreserved	A	N/A	1.8	Y	Absent	NYTCL-8260(14)
L1310472-07B	Amber 500ml unpreserved	A	N/A	1.8	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1310472-08A	Vial Large unpreserved	A	N/A	1.8	Y	Absent	NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1310472-08B	Amber 500ml unpreserved	A	N/A	1.8	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1310472-09A	Vial Large unpreserved	A	N/A	1.8	Y	Absent	NYTCL-8260(14)
L1310472-09B	Amber 500ml unpreserved	A	N/A	1.8	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1310472-10A	Vial Large unpreserved	A	N/A	1.8	Y	Absent	NYTCL-8260(14)
L1310472-10B	Amber 500ml unpreserved	A	N/A	1.8	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1310472-11A	Vial Large unpreserved	A	N/A	1.8	Y	Absent	NYTCL-8260(14)
L1310472-11B	Amber 500ml unpreserved	A	N/A	1.8	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1310472-12A	Vial Large unpreserved	A	N/A	1.8	Y	Absent	NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1310472-12B	Amber 500ml unpreserved	A	N/A	1.8	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1310472-13A	Vial HCl preserved	A	N/A	1.8	Y	Absent	NYTCL-8260(14)
L1310472-13B	Vial HCl preserved	A	N/A	1.8	Y	Absent	NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: BRONX ZOO PHASE II **Lab Number:** L1310472
Project Number: 10956-2503 **Report Date:** 06/14/13

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported

Report Format: DU Report with "J" Qualifiers

Project Name: BRONX ZOO PHASE II **Lab Number:** L1310472

Project Number: 10956-2503 **Report Date:** 06/14/13

Data Qualifiers

due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with "J" Qualifiers

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310472
Report Date: 06/14/13

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised December 19, 2012 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. ***NELAP Accredited Solid Waste/Soil.***

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Selenium, Silver, Sodium, Thallium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223, Enumeration and P/A), E. Coli. – Colilert (SM9223, Enumeration and P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform-EC Medium (SM 9221E).

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), E. Coli – Colilert (SM9223 Enumeration), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E), Enterococcus - Enterolert.

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Dalapon, Volatile Organics (SW 8260), Acid Extractables (Phenols) (SW 8270), Benzidines (SW 8270), Phthalates (SW 8270), Nitrosamines (SW 8270), Nitroaromatics & Cyclic Ketones (SW 8270), PAHs (SW 8270), Haloethers (SW 8270), Chlorinated Hydrocarbons (SW 8270).)

Maine Department of Human Services Certificate/Lab ID: 2009024.
Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010B, 6010C, 200.8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223B, 9222D. Organic Parameters: 608, 624, 625, 8081A, 8081B, 8082, 8082A, 8330, 8151A, 8260B, 8260C, 8270C, 8270D, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014, 9030B, 9040B, 9045C, 6010B, 6010C, 6020, 6020A, 7471A, 7471B, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8270D, 8330, 8151A, 8081A, 8081B, 8082, 8082A, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.
Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

Non-Potable Water (Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7 for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn); 245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.
Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT,Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, SW-846 6010C, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 426C, 1664A, SW-846 9010B, 9010C, 9030, 9040B, 9040C, SM2120B, 2310B, 2320B, 2340B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 4500SO3-B, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D, 3060A. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260C, 8270D, 8330, EPA 624, 625, 608, SW-846 8082A, 8081B, 8015C, 8151A, 8330, 8270D-SIM.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010C, 6020A, 7196A, 7471B, 1010, 1010A, 1030, 9010C, 9012B, 9014, 9030B, 9040C, 9045C, 9045D, 9050, 9065, 9251, 1311, 1312, 3005A, 3050B, 3060A. Organic Parameters: SW-846 3540C, 3546, 3050B, 3580A, 3620D, 3630C, 5030B, 5035, 8260C, 8270D, 8270D-SIM, 8330, 8151A, 8015B, 8015C, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.1, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM2520B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO3-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, SW-846 9040B, 9040C, 3005A, 3015, EPA 6010B, 6010C, 6020, 6020A, 7196A, 3060A, SW-846 9010C, 9030B. Organic Parameters: SW-846 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8011, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C, 6020, 6020A, 7196A, 3060A, 9030B, 1010, 1010A, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9010C, 9012B, 9014, 9038, 9040B, 9040C, 9045C, 9045D, 9050A, 9065, 9251. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3620C, 3630C, 5030B, 5035L, 5035H, NJ EPH.)

New York Department of Health Certificate/Lab ID: 11148. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500NO3-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6010C, 6020, 6020A, EPA 7196A, SM3500Cr-D, EPA 245.1, 7470A, SM2120B, LACHAT 10-204-00-1-A, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015, 9010C, 9030B. Organic Parameters: EPA 624, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 625, 608, 8081A, 8081B, 8151A, 8330, 8082, 8082A, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, EPA 6010B, 6010C, 7196A, 7471A, 7471B, 9012B, 9014, 9065, 9050A, EPA 1311, 1312, 3005A, 3050B, 9010C, 9030B, 9040C, 9045D. Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8015B, 8015C, 8081A, 8081B, 8151A, 8330, 8082 8082A, 3540C,

3546, 3580A, 5030B, 5035A-H, 5035A-L.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. (Inorganic Parameters: SM2310B, 2320B, 4500Cl-E, 4500Cn-E, 9014, Lachat 10-204-00-1-X, 1010A, 1030, 4500NO3-F, 353.2, 4500P-E, 4500SO4-E, 300.0, 4500S-D, 5310B, 5310C, 6010C, 6020A, 200.7, 200.8, 3500Cr-B, 7196A, 245.1, 7470A, 7471B, 1311,1312. Organic Parameters: 608, 8081B, 8082A, 624, 8260B, 625, 8270D, 8151A, 8015C, 504.1, MA-EPH, MA-VPH.)

Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters: 524.2)

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: 200.7, 200.8, 300.0, 332.0, 2120B, 2320B, 2510B, 2540C, 4500-CN-CE, 4500F-C, 4500H+-B, 4500NO3-F, 5310C. Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1312, 3005A,3015, 3060A, 200.7, 200.8, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P,BE, 245.1, 300.0, 350.1, 350.2, 351.1, 353.2, 420.1, 6010C, 6020A, 7196A, 7470A, 9030B, 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500CN-CE, 4500Cl-E, 4500F-B, 4500F-C, 4500H+-B, 4500NH3-H, 4500NO2-B, 4500NO3-F, 4500S-D, 4500SO3-B, 5310BCD, 5540C, 9010C, 9040C. Organic Parameters: EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, 8015C, NJ-EPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3005A, 3050B, 3060A, 6010C, 6020A, 7196A, 7471B, 9010C, 9012B, 9014, 9040B, 9045D, 9050A, 9065, SM 4500NH3-BH, 9030B, 9038, 9251. Organic Parameters: 3540C, 3546, 3580A, 3620C, 3630C, 5035, 8015C, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, NJ-EPH.)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. ***NELAP Accredited via NJ-DEP.***
Refer to MA-DEP Certificate for Potable and Non-Potable Water.
Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality Certificate/Lab ID: T104704476. ***NELAP Accredited.***
Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S2¯D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID: 460195. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: EPA 200.7, 200.8, 300.0, 2510B, 2120B, 2540C, 4500CN-CE, 245.2, 2320B, 4500F-C, 4500NO3-F, 5310C. Organic Parameters: EPA 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 200.7, 200.8, 245.1, 300.0, 3005A, 3015, 1312, 6010B, 6010C, 3060A, 353.2, 420.1, 6020, 6020A, SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X, 7196A, 7470A, 9010B, 9040B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500Cl-E, 4500F-B, 4500F-C, 4500PE, 510AC, 5210B, 5310B 5310C, 5540C. Organic Parameters: EPA 3510C, 3630C, 5030B, 8260B, 608, 624, 625, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330,)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, 3060A, 3050B, 1311, 1312, 6010B, 6010C, 6020, , 7196A, 7471A, 7471B, 6020A, 9030B, 9010B, 9012A, 9014 9040B, 9045C, 9050A, 9065. Organic Parameters: EPA 5030B, 5035, 3540C, 3546, 355B0, 3580A, 3630C, 6020A, 8260B, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330.)

Department of Defense, L-A-B Certificate/Lab ID: L2217.
Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6010C, 6020, 6020A, 245.1, 245.2, 7470A, 9040B, 9010B, 180.1. 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 4500CL-D, 5220D, 5310C, 2130B, 2320B, 2540C, 3005A, 3015, 9010B, 9056, 7196A, 3500-Cr-D. Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A, 8082, 8082A, 8081A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 6010C, 7471A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 9012A, 9040B, 9045C, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8260C, 8270C,

8270D, 8270C-SIM, 8270D-SIM, 8330A/B-prep, 8082, 8082A, 8081A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

The following analytes are not included in our current NELAP/TNI Scope of Accreditation:
EPA 8260B: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnapthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO2 in a soil matrix, NO3 in a soil matrix. **EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.

Serial_No:06141317:00

CHAIN OF CUSTODY

PAGE 1 OF 2

ALPHA ANALYTICAL

WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193

MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 6/8/13

ALPHA Job #: L1310472

Client Information

Client: AKRF

Address: 440 Park Ave South, New York, NY

Phone: 646-388-9529

Fax:

Email: aschwendt@akrf.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Bronx Zoo Phase II

Project Location: Bronx, NY

Project #: 10956-2503

Project Manager: Axel Schwendt

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: 6/14/13 Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client Info PO #:

Regulatory Requirements/Report Limits

State /Fed Program	Criteria

Other Project Specific Requirements/Comments/Detection Limits:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC 8260	SVOC 8270	PCB 8082	Pest 8081	TAL Metals 6010/7470	Sample Specific Comments	Total # Bottles
10472.01	SB-1 (1-2')	6/7/13	0920	S	GG	X	X	X	X	X		
.02	SB-2 (2-3)		1000									
.03	SB-3 (2-3)		1015									
.04	SB-4 (2-3)		1040									
.05	SB-5 (2-3)		1125									
.06	SB-6 (2-3)		1140									
.07	SB-7 (2-3)		1155									
.08	SB-8 (2-3)		1230									
.09	SB-9 (2-3)		1255									
.10	SB-10 (2-3)		1305									

Container Type	A	A	A	A	A
Preservation	A	A	A	A	A

SAMPLE HANDLING

Filtration ☐ Done ☒ Not needed ☐ Lab to do

Preservation ☐ Lab to do (Please specify below)

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time
Greg Bond	6/7/13 1545	[illegible]	6/7/13 1545
[illegible]	6/7/13 2400	[illegible]	6/7/13 19:00
[illegible]	6/7/13 2322	[illegible]	6/7/13 23:20

FORM NO: 01-01 (rev. 14-OCT-07)

Serial_No:06141317

CHAIN OF CUSTODY

PAGE 2 OF 2

ALPHA ANALYTICAL

WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193

MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 6/8/13

ALPHA Job #: L1310172

Client Information

Client: AKRF

Address: 440 Park Ave South, New York, NY

Phone: 646-388-9529

Fax:

Email: a_schwendt@akrf.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Bronx Zoo Phase II

Project Location: Bronx, NY

Project #: 10956-2503

Project Manager: Axel Schwendt

ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: 6/14/13 Time:

Report Information - Data Deliverables

☐ FAX ☑ EMAIL

☑ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program	Criteria

Other Project Specific Requirements/Comments/Detection Limits:

SAMPLE HANDLING

Filtration ☐ Done ☑ Not needed ☐ Lab to do

Preservation ☐ Lab to do (Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL 8260	SVOC 8270	PCB 8082	Pests 8081	TAL Metals (Diss/Tot)	Sample Specific Comments	TOTAL # BOTTLES
10472.11	SB-11-(2-3)	6/7/13	1320	S	GB	X	X	X	X	X		
.12	SB-12-(2-3)	"	1125	"	"	X	X	X	X	X		
.13	Trip Blank					X						
Container Type						A	A	A	A	A		
Preservative						A	A	A	A	A		

Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	6/7/13 1545	[illegible]	6/7/13 1545
[illegible]	6/7/13 19:00	[illegible]	6/7/13 19:00
[illegible]	6/7/13 23:20	[illegible]	6/7/13 23:20

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 14-OCT-07)

ANALYTICAL REPORT

Lab Number:	L1310488
Client:	AKRF, Inc. 440 Park Avenue South 7th Floor New York, NY 10016
ATTN:	Axel Schwendt
Phone:	(646) 388-9529
Project Name:	BRONX ZOO PHASE II
Project Number:	10956-2503
Report Date:	06/14/13

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1310488-01	SV-1	BRONX, NY	06/07/13 11:55
L1310488-02	SV-2	BRONX, NY	06/07/13 13:25

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on June 5, 2013. The canister certification results are provided as an addendum.

Sample L1310488-01 has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

Sample L1310488-02 has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

Sample L1310488-01 The RPD of the pre- and post-flow controller calibration check (86% RPD) was outside of the control limit (20% RPD). The initial flow rate for the flow controller was 75 mL/minute; the final flow rate was 30 mL/minute. The final pressure recorded by the laboratory of the associated canister was 0.6 inches of mercury.

Sample L1310488-02 The RPD of the pre- and post-flow controller calibration check (196% RPD) was outside of the control limit (20% RPD). The initial flow rate for the flow controller was 80 mL/minute; the final flow rate was 0.9 mL/minute. The final pressure recorded by the laboratory of the associated canister was -2.1 inches of mercury.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative

Date: 06/14/13

AIR

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310488-01 D
Client ID: SV-1
Sample Location: BRONX, NY
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 06/12/13 04:02
Analyst: MB

Date Collected: 06/07/13 11:55
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Propylene	9.33	5.00	--	16.1	8.61	--		10
Dichlorodifluoromethane	ND	2.00	--	ND	9.89	--		10
Chloromethane	ND	2.00	--	ND	4.13	--		10
Freon-114	ND	2.00	--	ND	14.0	--		10
Vinyl chloride	ND	2.00	--	ND	5.11	--		10
1,3-Butadiene	ND	2.00	--	ND	4.42	--		10
Bromomethane	ND	2.00	--	ND	7.77	--		10
Chloroethane	ND	2.00	--	ND	5.28	--		10
Ethanol	152	25.0	--	286	47.1	--		10
Vinyl bromide	ND	2.00	--	ND	8.74	--		10
Acetone	1410	10.0	--	3350	23.8	--		10
Trichlorofluoromethane	ND	2.00	--	ND	11.2	--		10
Isopropanol	5.65	5.00	--	13.9	12.3	--		10
1,1-Dichloroethene	ND	2.00	--	ND	7.93	--		10
Methylene chloride	ND	10.0	--	ND	34.7	--		10
3-Chloropropene	ND	2.00	--	ND	6.26	--		10
Carbon disulfide	ND	2.00	--	ND	6.23	--		10
Freon-113	ND	2.00	--	ND	15.3	--		10
trans-1,2-Dichloroethene	ND	2.00	--	ND	7.93	--		10
1,1-Dichloroethane	ND	2.00	--	ND	8.09	--		10
Methyl tert butyl ether	ND	2.00	--	ND	7.21	--		10
Vinyl acetate	ND	2.00	--	ND	7.04	--		10
2-Butanone	ND	2.00	--	ND	5.90	--		10
cis-1,2-Dichloroethene	ND	2.00	--	ND	7.93	--		10

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310488-01 D
Client ID: SV-1
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:55
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	5.00	--	ND	18.0	--		10
Chloroform	ND	2.00	--	ND	9.77	--		10
Tetrahydrofuran	ND	2.00	--	ND	5.90	--		10
1,2-Dichloroethane	ND	2.00	--	ND	8.09	--		10
n-Hexane	ND	2.00	--	ND	7.05	--		10
1,1,1-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Benzene	ND	2.00	--	ND	6.39	--		10
Carbon tetrachloride	ND	2.00	--	ND	12.6	--		10
Cyclohexane	ND	2.00	--	ND	6.88	--		10
1,2-Dichloropropane	ND	2.00	--	ND	9.24	--		10
Bromodichloromethane	ND	2.00	--	ND	13.4	--		10
1,4-Dioxane	ND	2.00	--	ND	7.21	--		10
Trichloroethene	ND	2.00	--	ND	10.7	--		10
2,2,4-Trimethylpentane	ND	2.00	--	ND	9.34	--		10
Heptane	25.1	2.00	--	103	8.20	--		10
cis-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
4-Methyl-2-pentanone	ND	2.00	--	ND	8.20	--		10
trans-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
1,1,2-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Toluene	4.92	2.00	--	18.5	7.54	--		10
2-Hexanone	ND	2.00	--	ND	8.20	--		10
Dibromochloromethane	ND	2.00	--	ND	17.0	--		10
1,2-Dibromoethane	ND	2.00	--	ND	15.4	--		10
Tetrachloroethene	ND	2.00	--	ND	13.6	--		10
Chlorobenzene	ND	2.00	--	ND	9.21	--		10
Ethylbenzene	ND	2.00	--	ND	8.69	--		10
p/m-Xylene	4.65	4.00	--	20.2	17.4	--		10
Bromoform	ND	2.00	--	ND	20.7	--		10

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310488-01 D
Client ID: SV-1
Sample Location: BRONX, NY

Date Collected: 06/07/13 11:55
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Styrene	ND	2.00	--	ND	8.52	--		10
1,1,2,2-Tetrachloroethane	ND	2.00	--	ND	13.7	--		10
o-Xylene	2.10	2.00	--	9.12	8.69	--		10
4-Ethyltoluene	ND	2.00	--	ND	9.83	--		10
1,3,5-Trimethybenzene	ND	2.00	--	ND	9.83	--		10
1,2,4-Trimethylbenzene	3.83	2.00	--	18.8	9.83	--		10
Benzyl chloride	ND	2.00	--	ND	10.4	--		10
1,3-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,4-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2,4-Trichlorobenzene	ND	2.00	--	ND	14.8	--		10
Hexachlorobutadiene	ND	2.00	--	ND	21.3	--		10

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	94		60-140

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310488-02 D
Client ID: SV-2
Sample Location: BRONX, NY
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 06/12/13 04:34
Analyst: MB

Date Collected: 06/07/13 13:25
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Propylene	ND	5.00	--	ND	8.61	--		10
Dichlorodifluoromethane	192	2.00	--	949	9.89	--		10
Chloromethane	ND	2.00	--	ND	4.13	--		10
Freon-114	ND	2.00	--	ND	14.0	--		10
Vinyl chloride	ND	2.00	--	ND	5.11	--		10
1,3-Butadiene	ND	2.00	--	ND	4.42	--		10
Bromomethane	ND	2.00	--	ND	7.77	--		10
Chloroethane	ND	2.00	--	ND	5.28	--		10
Ethanol	48.8	25.0	--	92.0	47.1	--		10
Vinyl bromide	ND	2.00	--	ND	8.74	--		10
Acetone	483	10.0	--	1150	23.8	--		10
Trichlorofluoromethane	959	2.00	--	5390	11.2	--		10
Isopropanol	ND	5.00	--	ND	12.3	--		10
1,1-Dichloroethene	ND	2.00	--	ND	7.93	--		10
Methylene chloride	ND	10.0	--	ND	34.7	--		10
3-Chloropropene	ND	2.00	--	ND	6.26	--		10
Carbon disulfide	ND	2.00	--	ND	6.23	--		10
Freon-113	ND	2.00	--	ND	15.3	--		10
trans-1,2-Dichloroethene	ND	2.00	--	ND	7.93	--		10
1,1-Dichloroethane	ND	2.00	--	ND	8.09	--		10
Methyl tert butyl ether	ND	2.00	--	ND	7.21	--		10
Vinyl acetate	ND	2.00	--	ND	7.04	--		10
2-Butanone	2.47	2.00	--	7.28	5.90	--		10
cis-1,2-Dichloroethene	ND	2.00	--	ND	7.93	--		10

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310488-02 D
Client ID: SV-2
Sample Location: BRONX, NY

Date Collected: 06/07/13 13:25
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	5.00	--	ND	18.0	--		10
Chloroform	ND	2.00	--	ND	9.77	--		10
Tetrahydrofuran	ND	2.00	--	ND	5.90	--		10
1,2-Dichloroethane	ND	2.00	--	ND	8.09	--		10
n-Hexane	ND	2.00	--	ND	7.05	--		10
1,1,1-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Benzene	4.69	2.00	--	15.0	6.39	--		10
Carbon tetrachloride	ND	2.00	--	ND	12.6	--		10
Cyclohexane	ND	2.00	--	ND	6.88	--		10
1,2-Dichloropropane	ND	2.00	--	ND	9.24	--		10
Bromodichloromethane	ND	2.00	--	ND	13.4	--		10
1,4-Dioxane	ND	2.00	--	ND	7.21	--		10
Trichloroethene	ND	2.00	--	ND	10.7	--		10
2,2,4-Trimethylpentane	ND	2.00	--	ND	9.34	--		10
Heptane	19.0	2.00	--	77.9	8.20	--		10
cis-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
4-Methyl-2-pentanone	ND	2.00	--	ND	8.20	--		10
trans-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
1,1,2-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Toluene	29.6	2.00	--	112	7.54	--		10
2-Hexanone	ND	2.00	--	ND	8.20	--		10
Dibromochloromethane	ND	2.00	--	ND	17.0	--		10
1,2-Dibromoethane	ND	2.00	--	ND	15.4	--		10
Tetrachloroethene	ND	2.00	--	ND	13.6	--		10
Chlorobenzene	ND	2.00	--	ND	9.21	--		10
Ethylbenzene	5.03	2.00	--	21.8	8.69	--		10
p/m-Xylene	19.9	4.00	--	86.4	17.4	--		10
Bromoform	ND	2.00	--	ND	20.7	--		10

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

SAMPLE RESULTS

Lab ID: L1310488-02 D
Client ID: SV-2
Sample Location: BRONX, NY

Date Collected: 06/07/13 13:25
Date Received: 06/07/13
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Styrene	ND	2.00	--	ND	8.52	--		10
1,1,2,2-Tetrachloroethane	ND	2.00	--	ND	13.7	--		10
o-Xylene	5.77	2.00	--	25.1	8.69	--		10
4-Ethyltoluene	ND	2.00	--	ND	9.83	--		10
1,3,5-Trimethybenzene	2.52	2.00	--	12.4	9.83	--		10
1,2,4-Trimethylbenzene	6.46	2.00	--	31.8	9.83	--		10
Benzyl chloride	ND	2.00	--	ND	10.4	--		10
1,3-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,4-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2,4-Trichlorobenzene	ND	2.00	--	ND	14.8	--		10
Hexachlorobutadiene	ND	2.00	--	ND	21.3	--		10

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	92		60-140

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 06/11/13 14:16

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-02 Batch: WG614304-4								
Propylene	ND	0.500	--	ND	0.861	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	0.200	--	ND	0.704	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 06/11/13 14:16

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-02 Batch: WG614304-4								
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 06/11/13 14:16

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-02 Batch: WG614304-4								
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethybenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					
No Tentatively Identified Compounds					

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG614304-3								
Chlorodifluoromethane	88		-		70-130	-		
Propylene	100		-		70-130	-		
Propane	82		-		70-130	-		
Dichlorodifluoromethane	96		-		70-130	-		
Chloromethane	100		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	94		-		70-130	-		
Methanol	97		-		70-130	-		
Vinyl chloride	93		-		70-130	-		
1,3-Butadiene	95		-		70-130	-		
Butane	97		-		70-130	-		
Bromomethane	88		-		70-130	-		
Chloroethane	89		-		70-130	-		
Ethyl Alcohol	103		-		70-130	-		
Dichlorofluoromethane	87		-		70-130	-		
Vinyl bromide	87		-		70-130	-		
Acrolein	74		-		70-130	-		
Acetone	109		-		70-130	-		
Acetonitrile	96		-		70-130	-		
Trichlorofluoromethane	95		-		70-130	-		
iso-Propyl Alcohol	96		-		70-130	-		
Acrylonitrile	83		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG614304-3								
Pentane	94		-		70-130	-		
Ethyl ether	98		-		70-130	-		
1,1-Dichloroethene	95		-		70-130	-		
tert-Butyl Alcohol	82		-		70-130	-		
Methylene chloride	102		-		70-130	-		
3-Chloropropene	101		-		70-130	-		
Carbon disulfide	92		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	97		-		70-130	-		
trans-1,2-Dichloroethene	84		-		70-130	-		
1,1-Dichloroethane	92		-		70-130	-		
Methyl tert butyl ether	86		-		70-130	-		
Vinyl acetate	104		-		70-130	-		
2-Butanone	94		-		70-130	-		
cis-1,2-Dichloroethene	98		-		70-130	-		
Ethyl Acetate	84		-		70-130	-		
Chloroform	89		-		70-130	-		
Tetrahydrofuran	89		-		70-130	-		
2,2-Dichloropropane	80		-		70-130	-		
1,2-Dichloroethane	90		-		70-130	-		
n-Hexane	97		-		70-130	-		
Isopropyl Ether	90		-		70-130	-		

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Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG614304-3								
Ethyl-Tert-Butyl-Ether	91		-		70-130	-		
1,1,1-Trichloroethane	100		-		70-130	-		
1,1-Dichloropropene	99		-		70-130	-		
Benzene	98		-		70-130	-		
Carbon tetrachloride	102		-		70-130	-		
Cyclohexane	98		-		70-130	-		
Tertiary-Amyl Methyl Ether	89		-		70-130	-		
Dibromomethane	98		-		70-130	-		
1,2-Dichloropropane	104		-		70-130	-		
Bromodichloromethane	97		-		70-130	-		
1,4-Dioxane	94		-		70-130	-		
Trichloroethene	100		-		70-130	-		
2,2,4-Trimethylpentane	102		-		70-130	-		
Methyl methacrylate	136	Q	-		70-130	-		
Heptane	106		-		70-130	-		
cis-1,3-Dichloropropene	107		-		70-130	-		
4-Methyl-2-pentanone	108		-		70-130	-		
trans-1,3-Dichloropropene	90		-		70-130	-		
1,1,2-Trichloroethane	104		-		70-130	-		
Toluene	90		-		70-130	-		
1,3-Dichloropropane	89		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG614304-3								
2-Hexanone	96		-		70-130	-		
Dibromochloromethane	83		-		70-130	-		
1,2-Dibromoethane	92		-		70-130	-		
Butyl Acetate	83		-		70-130	-		
Octane	83		-		70-130	-		
Tetrachloroethene	86		-		70-130	-		
1,1,1,2-Tetrachloroethane	85		-		70-130	-		
Chlorobenzene	91		-		70-130	-		
Ethylbenzene	91		-		70-130	-		
p/m-Xylene	91		-		70-130	-		
Bromoform	76		-		70-130	-		
Styrene	88		-		70-130	-		
1,1,2,2-Tetrachloroethane	98		-		70-130	-		
o-Xylene	93		-		70-130	-		
1,2,3-Trichloropropane	91		-		70-130	-		
Nonane (C9)	98		-		70-130	-		
Isopropylbenzene	88		-		70-130	-		
Bromobenzene	87		-		70-130	-		
o-Chlorotoluene	85		-		70-130	-		
n-Propylbenzene	84		-		70-130	-		
p-Chlorotoluene	84		-		70-130	-		

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Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG614304-3								
4-Ethyltoluene	79		-		70-130	-		
1,3,5-Trimethylbenzene	89		-		70-130	-		
tert-Butylbenzene	87		-		70-130	-		
1,2,4-Trimethylbenzene	94		-		70-130	-		
Decane (C10)	92		-		70-130	-		
Benzyl chloride	72		-		70-130	-		
1,3-Dichlorobenzene	91		-		70-130	-		
1,4-Dichlorobenzene	89		-		70-130	-		
sec-Butylbenzene	88		-		70-130	-		
p-Isopropyltoluene	80		-		70-130	-		
1,2-Dichlorobenzene	91		-		70-130	-		
n-Butylbenzene	92		-		70-130	-		
1,2-Dibromo-3-chloropropane	92		-		70-130	-		
Undecane	98		-		70-130	-		
Dodecane (C12)	105		-		70-130	-		
1,2,4-Trichlorobenzene	94		-		70-130	-		
Naphthalene	88		-		70-130	-		
1,2,3-Trichlorobenzene	91		-		70-130	-		
Hexachlorobutadiene	89		-		70-130	-		

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Lab Duplicate Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG614304-5 QC Sample: L1310244-01 Client ID: DUP Sample						
Propylene	17.9	18.7	ppbV	4		25
Dichlorodifluoromethane	0.487	0.541	ppbV	11		25
Chloromethane	ND	ND	ppbV	NC		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ppbV	NC		25
Vinyl chloride	ND	ND	ppbV	NC		25
1,3-Butadiene	1.62	1.69	ppbV	4		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethyl Alcohol	16.6	16.3	ppbV	2		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	120	125	ppbV	4		25
Trichlorofluoromethane	0.229	0.232	ppbV	1		25
iso-Propyl Alcohol	1.96	1.96	ppbV	0		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
Methylene chloride	1.31	1.30	ppbV	1		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	0.967	1.02	ppbV	5		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25

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Lab Duplicate Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG614304-5 QC Sample: L1310244-01 Client ID: DUP Sample					
1,1-Dichloroethane	ND	ND	ppbV	NC	25
Methyl tert butyl ether	ND	ND	ppbV	NC	25
Vinyl acetate	ND	ND	ppbV	NC	25
2-Butanone	16.6	17.4	ppbV	5	25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC	25
Ethyl Acetate	0.627	0.696	ppbV	10	25
Chloroform	ND	ND	ppbV	NC	25
Tetrahydrofuran	1.59	1.69	ppbV	6	25
1,2-Dichloroethane	ND	ND	ppbV	NC	25
n-Hexane	0.518	0.570	ppbV	10	25
1,1,1-Trichloroethane	ND	ND	ppbV	NC	25
Benzene	0.821	0.886	ppbV	8	25
Carbon tetrachloride	ND	ND	ppbV	NC	25
Cyclohexane	ND	ND	ppbV	NC	25
1,2-Dichloropropane	ND	ND	ppbV	NC	25
Bromodichloromethane	ND	ND	ppbV	NC	25
1,4-Dioxane	ND	ND	ppbV	NC	25
Trichloroethene	ND	ND	ppbV	NC	25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC	25

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Lab Duplicate Analysis
Batch Quality Control

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG614304-5 QC Sample: L1310244-01 Client ID: DUP Sample					
Heptane	0.615	0.618	ppbV	0	25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25
4-Methyl-2-pentanone	2.24	2.40	ppbV	7	25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25
1,1,2-Trichloroethane	ND	ND	ppbV	NC	25
Toluene	1.63	1.61	ppbV	1	25
2-Hexanone	2.48	2.49	ppbV	0	25
Dibromochloromethane	ND	ND	ppbV	NC	25
1,2-Dibromoethane	ND	ND	ppbV	NC	25
Tetrachloroethene	ND	ND	ppbV	NC	25
Chlorobenzene	ND	ND	ppbV	NC	25
Ethylbenzene	0.424	0.435	ppbV	3	25
p/m-Xylene	1.58	1.56	ppbV	1	25
Bromoform	ND	ND	ppbV	NC	25
Styrene	ND	ND	ppbV	NC	25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC	25
o-Xylene	0.658	0.672	ppbV	2	25
4-Ethyltoluene	ND	ND	ppbV	NC	25
1,3,5-Trimethylbenzene	0.361	0.349	ppbV	3	25

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L1310488
Report Date: 06/14/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG614304-5 QC Sample: L1310244-01 Client ID: DUP Sample					
1,2,4-Trimethylbenzene	1.28	1.29	ppbV	1	25
Benzyl chloride	ND	ND	ppbV	NC	25
1,3-Dichlorobenzene	ND	ND	ppbV	NC	25
1,4-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC	25
Hexachlorobutadiene	ND	ND	ppbV	NC	25

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Project Name: BRONX ZOO PHASE II

Project Number: 10956-2503

Lab Number: L1310488

Report Date: 06/14/13

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1310488-01	SV-1	0426	#30 SV	06/06/13	89316		-	-	-	Pass	75	30	86
L1310488-01	SV-1	999	6.0L Can	06/06/13	89316	L1310084-02	Pass	-29.8	0.6	-	-	-	-
L1310488-02	SV-2	0271	#90 SV	06/06/13	89316		-	-	-	Pass	80	0.9	196
L1310488-02	SV-2	961	6.0L Can	06/06/13	89316	L1310084-02	Pass	-29.6	-2.1	-	-	-	-

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Serial_No:06141316:18

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1310084
Report Date: 06/14/13

Air Canister Certification Results

Lab ID: L1310084-02
Client ID: CAN 999 SHELF 51
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 06/04/13 19:16
Analyst: MB

Date Collected: 06/03/13 16:36
Date Received: 06/04/13
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.200	--	ND	0.361	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.200	--	ND	0.434	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1310084
Report Date: 06/14/13

Air Canister Certification Results

Lab ID: L1310084-02
Client ID: CAN 999 SHELF 51
Sample Location:

Date Collected: 06/03/13 16:36
Date Received: 06/04/13
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	0.200	--	ND	0.704	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1

Serial_No:06141316:18

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1310084
Report Date: 06/14/13

Air Canister Certification Results

Lab ID: L1310084-02
Client ID: CAN 999 SHELF 51
Sample Location:

Date Collected: 06/03/13 16:36
Date Received: 06/04/13
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1310084
Report Date: 06/14/13

Air Canister Certification Results

Lab ID: L1310084-02
Client ID: CAN 999 SHELF 51
Sample Location:

Date Collected: 06/03/13 16:36
Date Received: 06/04/13
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethybenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					
No Tentatively Identified Compounds					

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1310084
Report Date: 06/14/13

Air Canister Certification Results

Lab ID: L1310084-02
Client ID: CAN 999 SHELF 51
Sample Location:

Date Collected: 06/03/13 16:36
Date Received: 06/04/13
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	93		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	93		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1310084
Report Date: 06/14/13

Air Canister Certification Results

Lab ID: L1310084-02
Client ID: CAN 999 SHELF 51
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/04/13 19:16
Analyst: MB

Date Collected: 06/03/13 16:36
Date Received: 06/04/13
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.050	--	ND	0.247	--		1
Chloromethane	ND	0.500	--	ND	1.03	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Acetone	ND	2.00	--	ND	4.75	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
Halothane	ND	0.050	--	ND	0.404	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1310084
Report Date: 06/14/13

Air Canister Certification Results

Lab ID: L1310084-02
Client ID: CAN 999 SHELF 51
Sample Location:

Date Collected: 06/03/13 16:36
Date Received: 06/04/13
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.500	--	ND	2.46	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.500	--	ND	2.74	--		1
p-Isopropyltoluene	ND	0.500	--	ND	2.74	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.500	--	ND	2.74	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1310084
Report Date: 06/14/13

Air Canister Certification Results

Lab ID: L1310084-02
Client ID: CAN 999 SHELF 51
Sample Location:

Date Collected: 06/03/13 16:36
Date Received: 06/04/13
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	94		60-140
bromochloromethane	93		60-140
chlorobenzene-d5	92		60-140

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**

Cooler	
N/A	Present/Intact

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1310488-01A	Canister - 6 Liter	N/A	N/A		Y	Present/Intact	TO15-LL(30)
L1310488-02A	Canister - 6 Liter	N/A	N/A		Y	Present/Intact	TO15-LL(30)

*Values in parentheses indicate holding time in days

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported

Data Qualifiers

due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Project Name: BRONX ZOO PHASE II
Project Number: 10956-2503

Lab Number: L1310488
Report Date: 06/14/13

REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised August 3, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable). Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Titanium, Vanadium, Zinc, Total Organic Carbon, Corrosivity, TCLP 1311, SPLP 1312. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020A, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050B, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 180.1, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B, 3020A, . Organic Parameters: EPA 3510C, 3630C, 3640A, 3660B, 8081B, 8082A, 8270C, 8270D, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 3050B, 3051A, 6020A, 7471B, 9040B, 9045C. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3020A, SM2320B, SM2540D, 2540G, 4500H-B, EPA 180.1, 1631E, SW-846 7470A, 9040C, 6020A, 9050A. Organic Parameters: SW-846 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 6020A, 7471B, 7474, 9040B, 9040C, 9045C, 9045D, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8081B, 8082A, 8270C, 8270D, 8015D.)

Atmospheric Organic Parameters (EPA 3C, TO-15, TO-10A, TO-13A-SIM.)

Biological Tissue (Inorganic Parameters: SW-846 6020A. Organic Parameters: SW-846 8270C, 8270D, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, 6020A, 1631E, 7470A, 9050A, EPA 180.1, 3020A. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 3510C.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A, 7471B, 7474, 9040C, 9045D. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 1311, 3050B, 3580A, 3570, 3051A.)

Air & Emissions (EPA TO-15, TO-10A.)

Pennsylvania Certificate/Lab ID: 68-02089 ***NELAP Accredited***

Non-Potable Water (Inorganic Parameters: 1312, 1631E, 180.1, 3020A, 6020A, 7470A, 9040B, 9050A, 2320B, 2540D, 2540G, SM4500H+-B. Organic Parameters: 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D .)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 3051A, 6020A, 7471B, 7474 9040B, 9045C, 9060. Organic Parameters: EPA3050B, 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8270D, 8081B, 8015D, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via NJ-DEP.***

Refer to NJ-DEP Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. ***NELAP Accredited.***

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters:EPA 3020A, 6020A, 245.7, 9040B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051, 9060. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015, 8270.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH, 8082A, 8081B, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH 8082A, 8081B, 8015D-SHC, 8015D.

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl. **TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.

Serial_No:06141316

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

ALPHA ANALYTICAL
320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab:

ALPHA Job #: L1310488

Client Information

Client: AKRF
Address: 440 Park Ave South NY, NY
Phone: 646-388-9524
Fax:
Email: aschmidt@akrf.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Bronx Zoo Phase II
Project Location: Bronx NY
Project #: 10956-2503
Project Manager: Axel Schmidt
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☒ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

Other Project Specific Requirements/Comments:

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller	TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES	TO-13A	TO-4 / TO-10	Sample Comments (i.e. PID)
L1310488-1	SV-1	6/7/13	1105	1155	-30.01	-1.05	SV	GS	6L	999	0426		X						
-2	SV-2	↓	1230	1325	-29.61	-2.67	SV	GS	6L	961	0271		X						
Container Type													CS						

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Relinquished By:	Date/Time	Received By:	Date/Time:
[illegible]	6/7/13 1545	[illegible]	6/7/13 1545
[illegible]	6/7/13 19:00	Abdul Mozlubey	6/7/13 19:00
Abdul Mozlubey	6/7/13 23:20	[illegible]	6/7/13 23:20
[illegible]	6/8/13 04:00	Mansfield Lab	6/8/13 04:00

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Form No: 101-02 (rev. 40-09)

END OF ADDENDUM NO. 4

(This addendum consists of three hundred –eighteen (318) pages)

NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

INFRASTRUCTURE DIVISION
BUREAU OF DESIGN

VOLUME 3 OF 3

PROJECT ID: PV176ITF1

RECONSTRUCTION AND REHABILITATION OF
BRONX ZOO INTERMODAL TRANSPORTATION FACILITY

JUNGLE WORLD ROAD FROM ASIA PARKING LOT TO BOSTON ROAD
BRONX RIVER PARKING LOT AND OVERFLOW LOT
INTERSECTION OF JUNGLE WORLD ROAD
AND BRONX RIVER PARKWAY SOUTH BOUND ENTRANCE RAMP

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

Together With All Work Incidental Thereto
BOROUGH OF THE BRONX
CITY OF NEW YORK

_____
Contractor.

_____

Dated_____, **20**_____

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