

MEMORANDUM OF UNDERSTANDING
BY AND BETWEEN
NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
AND
NEW YORK CITY DEPARTMENT OF TRANSPORTATION
AND
NEW YORK CITY DEPARTMENT OF PARKS AND RECREATION

Agreement dated and effective as of November 9, 2011, between the New York City Department of Environmental Protection ("DEP"), with its main office at 59-17 Junction Boulevard, Flushing, NY 11373 and the New York City Department of Transportation ("DOT"), with its main office at 55 Water Street, New York, NY 10041, and the New York City Department of Parks and Recreation ("DPR" or "Parks") with its main office at The Arsenal, Central Park, New York, NY 10065, together (the "Parties").

WHEREAS, DOT has jurisdiction over the right-of-way at multiple locations throughout the City; and

WHEREAS, DPR has jurisdiction over planting and maintaining trees and vegetation in City Parks and in other areas under DPR's jurisdiction. In addition, as identified in Exhibit A, DPR has also been assigned maintenance responsibilities for certain squares and public places within the City of New York; and

WHEREAS, DEP has jurisdiction over all matters relating to the public sewers, drainage; and

WHEREAS, the City of New York is obligated under a Consent Order ("Order") with the New York State Department of Environmental Conservation to meet water quality and stormwater control goals; and

WHEREAS, pursuant to the NYC Green Infrastructure Plan and PlaNYC, DEP intends to create Vegetated Stormwater Source Control Systems ("GREEN INFRASTRUCTURE SYSTEMS") at multiple locations throughout the City in the Right-of-Way, detailed in the attached Exhibit A, which may be updated by DEP as approved by DOT and DPR as necessary; and

WHEREAS, the City is committed to reduce combined sewer overflows ("CSOs") through the use of green infrastructure systems.

NOW, THEREFORE, the Parties hereby set forth their understandings as follows:

1. Term. This Agreement shall commence as of the date of the latest signature below and shall continue through the end of June 2015 unless terminated in accordance with the provisions set forth herein, and can be extended and/or modified by mutual written agreement by the parties hereto.

2. Responsibilities of DEP:

- a. DEP will submit specifications/designs of the GREEN INFRASTRUCTURE SYSTEMS and the proposed physical placement of the same to DOT for review, comment, and approval prior to installation at the intended sites. DEP will consider all comments provided by DOT and shall make best efforts to adjust plans to address the same. All plans shall be signed by DEP's Assistant Commissioner of Green Infrastructure.
- b. DEP will submit preliminary specifications/designs of the GREEN INFRASTRUCTURE SYSTEMS, including maintenance specific details and the proposed physical placement of the same to DPR for review, comment, and approval. DPR will provide DEP with comments regarding maintenance specific concerns, such as frequency of maintenance, cost of maintenance and plant selection at the earliest stage possible. DEP shall consider all comments provided by DPR and shall make best efforts to adjust plans to address the same.
- c. All costs associated with GREEN INFRASTRUCTURE SYSTEMS shall be the responsibility of DEP, unless otherwise stated herein. Maintenance includes removal of litter and debris, invasive plant control (weeding), repair and upkeep of tree guards, replacing dead plantings, and replenishing mulch and soils and removing sediments in the GREEN INFRASTRUCTURE SYSTEMS. DEP will also provide all necessary training for the maintenance of the GREEN INFRASTRUCTURE SYSTEMS to DPR staff that are maintaining such GREEN INFRASTRUCTURE SYSTEMS on DEP's behalf pursuant to this MOU.
- d. DOT shall have a right-of-way under or above any part of the GREEN INFRASTRUCTURE SYSTEMS and shall have the right to remove or alter all or any portion of any GREEN INFRASTRUCTURE SYSTEM within its jurisdiction. DOT shall make every effort to avoid disruption of the GREEN INFRASTRUCTURE SYSTEM and shall exercise its right of removal only as a last resort and in consultation with DEP. DOT will provide a sixty (60) day notice of its intent to DEP and DPR to remove or alter any GREEN INFRASTRUCTURE SYSTEM, but reserves the right to require action sooner in cases of emergency. In those instances where the GREEN INFRASTRUCTURE SYSTEM must be permanently removed, DOT shall review any proposed alternative locations for reinstallation with DEP so as to maintain the realized benefits of the installation to be removed.
- e. All GREEN INFRASTRUCTURE SYSTEMS shall be open at all times to the inspection of all authorities having jurisdiction.
- f. Existing parking regulations must be maintained adjacent to all GREEN INFRASTRUCTURE SYSTEMS unless modified by DOT.

- g. DEP will be responsible for all clean-up and proper disposal of all waste products and debris resulting from DEP's activities at all GREEN INFRASTRUCTURE SYSTEM locations.
- h. Upon the completion of the work, DEP shall furnish to DOT and DPR plans, showing the location, materials, planting plan, size and type of construction, and complete dimensions of the GREEN INFRASTRUCTURE SYSTEMS erected or installed pursuant to this MOU, as well as the location and dimensions of all substructures encountered during the progress of the work ("as built drawings").
- j. DEP will replace all parking signs, parking meters and/or muni-meters, and other posted regulations in kind that are removed or altered in order to accommodate construction and installation of any structure.
- i. DEP will be responsible for funding the design, review and approval, construction, monitoring, and maintenance for all GREEN INFRASTRUCTURE SYSTEMS, , including all components of the infrastructure, unless the maintenance responsibility is explicitly undertaken DPR or another agency.
- j. DEP will be responsible for cleaning and maintaining all connected sewers and catch basins of GREEN INFRASTRUCTURE SYSTEMS listed on Exhibit A, including "Bioswale Stormwater Inlets" used to direct flow into those systems (Examples in Exhibit B).
- k. DEP will be responsible for maintaining all monitoring equipment within the boundary of the GREEN INFRASTRUCTURE SYSTEMS including equipment installed by another agency under the direction of DEP, unless explicitly undertaken by another agency.
- l. Positions and Personal Services Funding. All positions and their associated funding will remain in DEP's budget. The individuals occupying the DPR-DEP positions will be selected by DPR, be employees of DPR, and report to DPR and shall be utilized to support the GREEN INFRASTRUCTURE SYSTEMS pursuant to this MOU.
- m. On or about July 1st, DEP agrees to transfer money to DPR sufficient to fund operating expenses (OTPS) at DPR as described in the budget provided in Exhibit C. In order to transfer the money for operating expenses, DEP will implement an intra-city budget modification to DPR from DEP in a manner consistent with the guidelines issued by the New York City Office of Management and Budget (OMB). Such transfer of funds shall be provided to DPR prior to the performance of the scope of work, and shall fully reimburse DPR for all anticipated costs associated with the operation and maintenance of those aspects of the GREEN INFRASTRUCTURE SYSTEMS which it has assumed by virtue of this Memorandum of Understanding, including cost of salary and fringe benefits of any employees covered by this MOU and materials, vehicles, and equipment, described for the fiscal year, commencing with the date of the transfer of funds. Unforeseen additional costs arising from complications such as weather will be reimbursed

retroactively. DPR will provide an annual report outlining expenses no later than sixty (60) days after the end of the fiscal year. Discrepancies between the projected and actual cost of maintenance will be reasonably negotiated between DEP and DPR prior to the close of the fiscal year.

- n. DPR Expenditures and Return of Funds. By March 15th of each FY, DPR will report to DEP on its actual and projected expenditures for said FY. If DPR and DEP agree that there will be excess funding after taking account of DPR's expenditure projection, then DPR will initiate via intra-city budget modification to return the excess funds to DEP. By doing this, DEP will negotiate with OMB to have the funds available in the next FY or to use them for another purpose the DEP deems necessary.
- o. Permits and licenses will be obtained for all construction and maintenance work, where required by law.
- p. DEP shall submit to the DOT working plans, which shall include and show in detail the method of construction of the GREEN INFRASTRUCTURE SYSTEMS and the mode of protection or changes in all GREEN INFRASTRUCTURE SYSTEMS required by the construction, installation, alteration, deactivation or removal of the same.

All proposed tree-guards and/or fences for the GREEN INFRASTRUCTURE SYSTEMS shall adhere to all applicable regulations and standards.

All proposed signage, including but not limited to, plaque plates and temporary notices, shall be submitted to DOT for review and approval by DOT prior to installation within the right of way.

- q. DEP or its agent(s) will notify all affected Community Boards and the owners of all property abutting the proposed GREEN INFRASTRUCTURE SYSTEMS, at least thirty (30) days prior to the construction, alteration or removal of any GREEN INFRASTRUCTURE SYSTEMS. If there are any public meeting(s) and/or hearing(s) on any proposed installation, DEP shall inform and invite DOT to participate in any such proposed meeting(s) and/or hearing(s). Such notification shall occur a minimum of two (2) weeks prior to such meeting(s) and/or hearing(s).
- r. DEP will advise DOT about proper grading, milling or regulating practices to avoid adverse changes in the street stormwater flow pattern to catch basins or Bioswale Stormwater Inlet and sewer manholes.
- s. DEP shall verify the City's ownership and jurisdiction prior to the initiation of any GREEN INFRASTRUCTURE SYSTEM.

3. Responsibilities of DOT:

- a. DOT supports DEP's efforts to meet the City's goals by providing review and coordination of the GREEN INFRASTRUCTURE SYSTEMS in accordance with the terms and conditions of this MOU.

- b. DOT will review and provide comments concerning the design and placement of the GREEN INFRASTRUCTURE SYSTEMS in a timely manner.
- c. DOT will prepare and submit to DEP for review draft specifications and/or draft designs for GREEN INFRASTRUCTURE SYSTEMS and stormwater management systems.
- d. DOT will maintain, to the extent practicable, existing grades during milling and resurfacing operations when working around GREEN INFRASTRUCTURE SYSTEMS.

4. Responsibilities of DPR:

- a. DPR will operate and maintain the GREEN INFRASTRUCTURE SYSTEMS listed in Exhibit A of this document as follows based on a maintenance protocol to be jointly developed between DEP and DPR specific to each GREEN INFRASTRUCTURE SYSTEM location:
 - i. Landscaping. DPR shall use and enhance the existing Greenstreets maintenance routes and teams composed of, but not limited to, Gardener, Assistant Gardener, Associate Park Service Worker and City Parks Workers, to perform the following services according to Parks' standard as needed:
 - A. Removing litter and foreign objects (including but not limited to sediment) from curb inlets and in the interior of the installations;
 - B. Removing undesired plants, dead plants, and broken tree limbs;
 - C. Pruning of trees, shrubs, and miscellaneous vegetation;
 - D. Furnishing and installing mulch, compost, and topsoil;
 - E. Removing and disposing of debris generated as the result of the work;
 - F. Deterring rodents and repairing damage caused by rodents.
 - G. Replacement planting of dead or missing trees, shrubs and other plants
 - ii. DPR will be responsible for maintaining all devices used to direct stormwater into, out of, and within GREEN INFRASTRUCTURE SYSTEMS including the gravel reservoir within the boundaries of the GREEN INFRASTRUCTURE SYSTEMS.
 - iii. DPR will maintain these structures, with the exception of the Bioswale Stormwater Inlets detailed in Exhibit A, which will be maintained by DEP.
 - iv. DPR will maintain all under-drain devices within the GREEN INFRASTRUCTURE SYSTEMS. DPR will regularly inspect the grade

and elevation of the gravel strip adjacent to the curb (installed remains as depicted in such approved plans and drawings in the GREEN INFRASTRUCTURE SYSTEMS).

- v. DPR will maintain plant material so that it does not infringe upon the street or sidewalk beyond the GREEN INFRASTRUCTURE SYSTEMS and not unreasonably affect the visibility of intersections and crosswalks, with the exception of tree canopy, typical of a tree pit.
 - vi. DPR will maintain pathways within and through the GREEN INFRASTRUCTURE SYSTEMS.
 - vii. DPR will maintain and/or remove (to the extent necessary) tree-guards associated with these properties
 - viii. DPR will review and approve designs in regards to maintenance-specific concerns such as frequency of maintenance, cost of maintenance, plant selection, general design, and worker safety.
 - ix. DPR will submit any requests for funding GREEN INFRASTRUCTURE SYSTEMS as part of DPR projects with sufficient time for review by DEP.
5. Local maintenance: In instances where DEP has reached agreements with local property owners and stakeholders, GREEN INFRASTRUCTURE SYSTEMS may be cleaned and maintained by those groups. In these instances, responsibility for the maintenance and cleaning of those GREEN INFRASTRUCTURE SYSTEMS will remain with DEP. Agencies may also adjust these assignments through mutual agreements to be memorialized in writing.
 6. Oversight and Auditing. DEP will work with DPR to develop a system that allows DEP to oversee and audit the performance of DPR crews that maintain GREEN INFRASTRUCTURE SYSTEMS.
 7. Notice required before work commences. DEP shall give notice, in writing, to any City agency having jurisdiction of its intention to begin the work to construct any GREEN INFRASTRUCTURE SYSTEM hereby authorized at least two (2) weeks before such work commences. This does not include notice to perform routine maintenance.
 8. Renewal. This Agreement may be renewed for one or more additional term(s) of ten (10) years upon mutual written consent of the parties. In order to effectuate any renewal, DEP shall provide DOT and DPR with one hundred twenty (120) days advance written notice of its intent to renew this Agreement.
 9. Termination. This Agreement shall be terminable by any party upon one hundred twenty (120) days advance written notice.
 10. No Third Party Beneficiaries. This Agreement shall be binding upon and for the benefit of the parties hereto and each of their respective successors and permitted assigns. The

provisions of this Agreement shall be for the sole benefit of the parties hereto and no other person or entity shall be a third party beneficiary hereof.

11. Counterparts. This MOU may be executed in two (2) or more counterparts, each of which shall be deemed to be an original, but all of which shall constitute one and the same MOU.

If to DOT:

Lori Ardito
First Deputy Commissioner
New York City Department of Transportation
55 Water Street, 9th Floor
New York, NY10041

With a copy to:

Franklin Mark
Assistant Commissioner, Finance Contracts and Program Management
New York City Department of Transportation
55 Water Street, 6th Floor
New York, NY 10041
fmark@dot.nyc.gov

If to DPR:

Liam Kavanagh
First Deputy Commissioner
New York City Department of Parks and Recreation
830 Fifth Avenue
New York, New York10065

With a copy to:

New York City Department of Parks and Recreation
830 Fifth Avenue, Room 313
New York, New York10065
Attn: General Counsel

If to DEP:

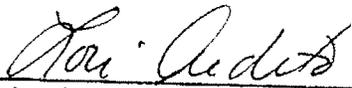
Kathryn Garcia
Deputy Commissioner for Operations
New York City Department of Environmental Protection
59-17 Junction Boulevard, 19th Floor
Flushing, NY11373
Attn: Deputy Commissioner for Sustainability

With a copy to:

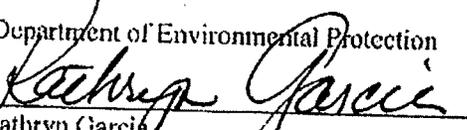
New York City Department of Environmental Protection
Bureau of Legal Affairs
59-17 Junction Boulevard, 19th Floor
Flushing, NY11373
Attn: General Counsel

or to such other address as may be specified by written notice sent in accordance herewith.
IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be signed on the day
and year first above written.

New York City Department of Transportation

By: 
Lori Ardito
First Deputy Commissioner

New York City Department of Environmental Protection

By: 
Kathryn Garcia
Deputy Commissioner for Operations

New York City Department of Parks and Recreation

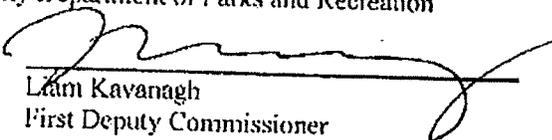
By: 
Liam Kavanagh
First Deputy Commissioner

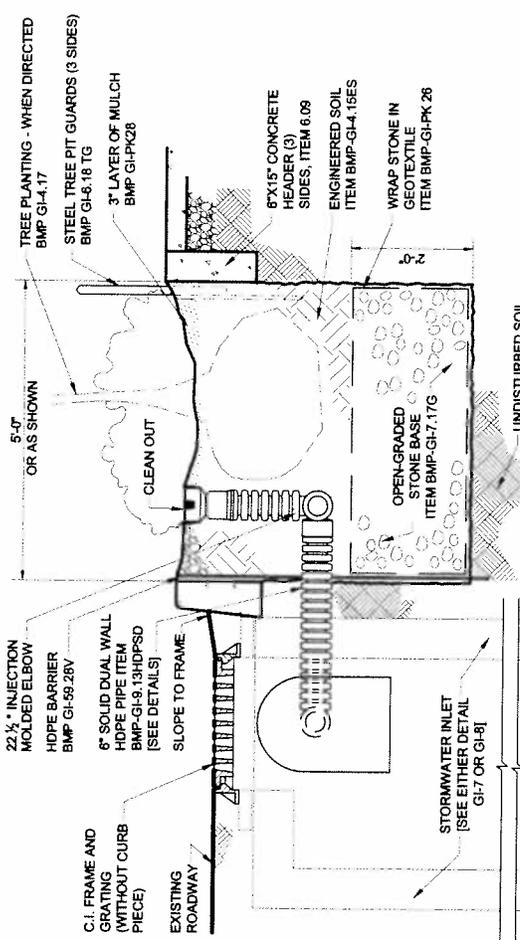
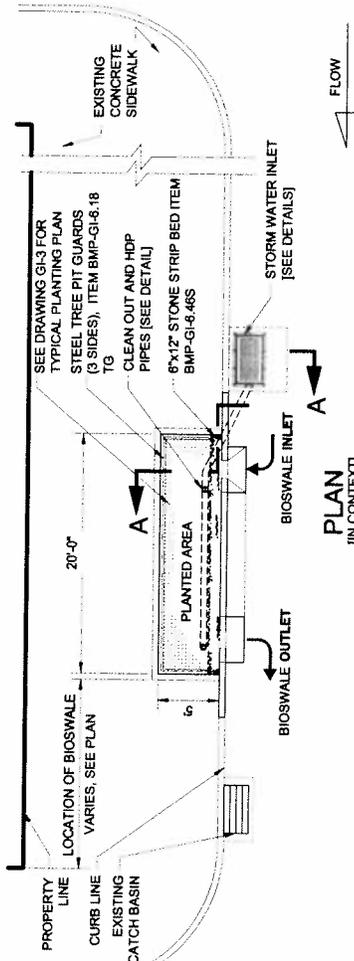
Exhibit A
(List of Sites to be Maintained)

Project Type	Borough	Project Name	On Street	Cross Street(s)	Corner	Address (after built)	X,Y Coordinate
1	Bioswale	BEPA GI Pilot	99th Avenue	205th Street/ 205th Place	-		
2	Bioswale	BEPA GI Pilot	Union Street	Blake Avenue/ East 98th Street	-		
3	Bioswale	BEPA GI Pilot	Ridgewood Avenue	Warwick Street/ Ashford Street	-		
4	Bioswale	BEPA GI Pilot	Eastern Parkway Extension	Mark's Avenue/ Eastern Parkway Extension	-		
5	Bioswale	BEPA GI Pilot	Howard Avenue	St. John's/Sterling Place	-		
6	Bioswale	BEPA GI Pilot	Autumn Avenue	Stanley Avenue/ Wortman Avenue	-		
7	Bioswale	BEPA GI Pilot	Sutter Avenue	Crystal Street/ Chestnut Street	-		
8	Bioswale	BEPA GI Pilot	Blake Avenue	Union Street/ East 98th Street	-		
9	Bioswale	BEPA GI Pilot	Union Street	Blake Avenue/ East 98th Street	-		
10	Bioswale	BEPA GI Pilot	Ridgewood Avenue	Grant Avenue/ Eldert Lane	-		
11	Bioswale	Downtown BK Traffic Calming	Dean St	4th Av	NE	371 Dean Street	
12	Bioswale	Downtown BK Traffic Calming	Dean St	4th Av	NE	371 Dean Street	
13	Bioswale	Downtown BK Traffic Calming	Dean St	4th Av	SE	376 Dean Street	
14	Bioswale	Downtown BK Traffic Calming	Dean St	4th Av	SE	376 Dean Street	

	Status	Installed By	Installation Date	Guarantee	Guarantee Term
1	Constructed & Operating	DEP-BEPA		NA	
2	Constructed & Operating	DEP-BEPA		NA	
3	Constructed & Operating	DEP-BEPA		NA	
4	Constructed & Operating	DEP-BEPA		NA	
5	Constructed & Operating	DEP-BEPA		NA	
6	Constructed & Operating	DEP-BEPA		NA	
7	Constructed & Operating	DEP-BEPA		NA	
8	Constructed & Operating	DEP-BEPA		NA	
9	Constructed & Operating	DEP-BEPA		NA	
10	Constructed & Operating	DEP-BEPA		NA	
11	Constructed & Operating	DDC-OGI	Nov-11	On Call Guarantee via DDC for plant and tree replacement	18 months
12	Constructed & Operating	DDC-OGI	Nov-11	On Call Guarantee via DDC for plant and tree replacement	18 months
13	Constructed & Operating	DDC-OGI	Nov-11	On Call Guarantee via DDC for plant and tree replacement	18 months
14	Constructed & Operating	DDC-OGI	Nov-11	On Call Guarantee via DDC for plant and tree replacement	18 months

Exhibit B
(Examples of BioswaleStormwater Inlets)

STANDARD FOR R.O.W. BIOSWALE TYPE 2 WITH STORMWATER INLET - NO CONNECTION TO SEWERS



1. INCLUDED IN THE COST OF THE FURNISHING AND INSTALLING THE CONCRETE HEADER ADJACENT TO THE BIOSWALE, THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND REPLACE THE ADJACENT EXISTING SIDEWALK FLAG TO NEAREST SIDEWALK JOINT BEYOND THE LIMITS OF THE BIOSWALE. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE COST OF SAWCUTTING THE EXISTING SIDEWALK AT THE JOINT. REPLACING THAT SIDEWALK IN KIND IN FULL COMPLIANCE WITH THE APPLICABLE SECTIONS OF STANDARD HIGHWAY SPECIFICATIONS SHALL BE DEEMED TO BE INCLUDED IN THE UNIT PRICES BID FOR THE CURB AND CONCRETE APRONS.
2. WHEN RESTORING A TYPICAL CURB, THE COST OF REMOVAL OF [7] FOOT WIDTH OF THE WEARING COURSE AND ONE (1) FOOT WIDTH OF ROADWAY CONCRETE PAVEMENT BASE ALONG THE CURB LINE AND ADJACENT TO THE CONCRETE APRONS AND CONCRETE BAND, MAY BE REQUIRED. THE RESTORATION OF ALL REMOVED PAVEMENT IN KIND AND IN FULL COMPLIANCE WITH THE APPLICABLE SECTIONS OF THE STANDARD HIGHWAY SPECIFICATIONS SHALL BE DEEMED TO BE INCLUDED IN THE UNIT PRICES BID FOR THE CURB AND CONCRETE APRONS.
3. THE CONTRACTOR SHALL OBTAIN THE NECESSARY TREE PLANTING PERMIT FROM THE NYC DEPARTMENT OF PARKS AND RECREATION (DPR) PRIOR TO THE START OF WORK. ALL NECESSARY TREE PLANTING SHALL BE PERFORMED BY QUALIFIED ARBORISTS.
4. NO EXISTING TREE SHALL BE REMOVED BY THE CONTRACTOR UNTIL HE IS SPECIFICALLY ORDERED IN WRITING TO DO SO BY THE ENGINEER.
5. TREES SHALL BE STAKED AS PER STANDARD DETAIL H-1046. TREE STAKES ARE TO BE REMOVED BY THE CONTRACTOR NOT LESS THAN ONE YEAR AFTER PLANTING.
6. THE CONTRACTOR SHALL NOT BE PERMITTED TO OPERATE AUXILIARY EQUIPMENT WHICH GENERATES EXHAUST OR OTHER HEAT UPWARD (E.G., GENERATORS AND COMPRESSORS), UNDER THE BRANCHES OF TREES WHERE THE BRANCHES ARE LESS THAN 25' ABOVE THE GROUND, UNLESS APPROVED BY THE ENGINEER IN CONSULTATION WITH THE TREE CONSULTANT.
7. THE CONTRACTOR SHALL NOT BE PERMITTED TO STORE, STOCKPILE, OR LAY DOWN, ANY CONSTRUCTION MATERIAL INCLUDING, BUT NOT LIMITED TO, LUMBER, FUEL, AND OIL CONTAINERS, PIPES, AND/OR PIPE FITTINGS, BARRICADES, HAND TOOLS, HOSES, RECEPTACLES, AND ASPHALT WITHIN ANY EXISTING TREE PIT.
8. REPLACEMENT TREES SHALL BE PLANTED WITHIN THE PROJECT AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH SECTION 4.16 OF STANDARD HIGHWAY SPECIFICATIONS.

CLEAN OUT DETAIL

SECTION A-A

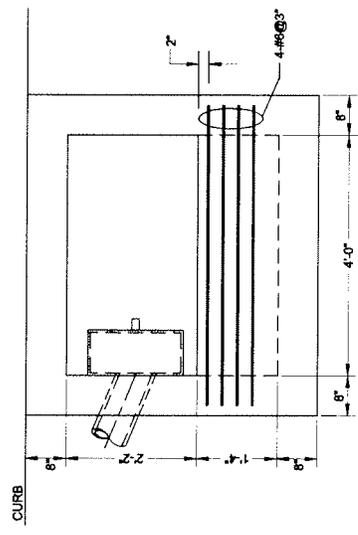
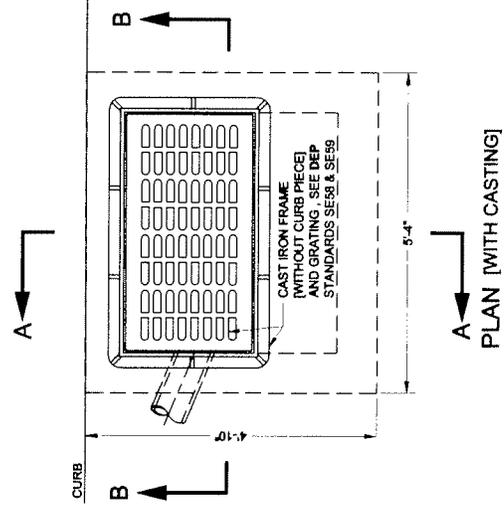
ASSISTANT COMMISSIONER, DESIGN AND CONSTRUCTION
DEPARTMENT OF ENVIRONMENTAL PROTECTION

P.E. _____ DATE _____

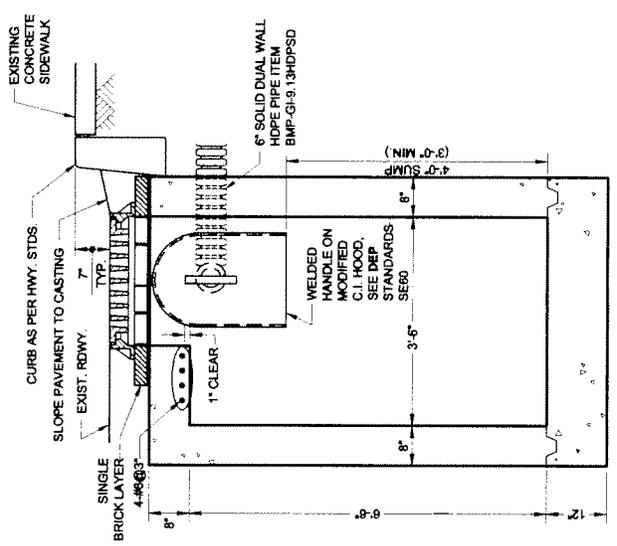
ASSISTANT COMMISSIONER, GREEN INFRASTRUCTURE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

P.E. _____ DATE _____

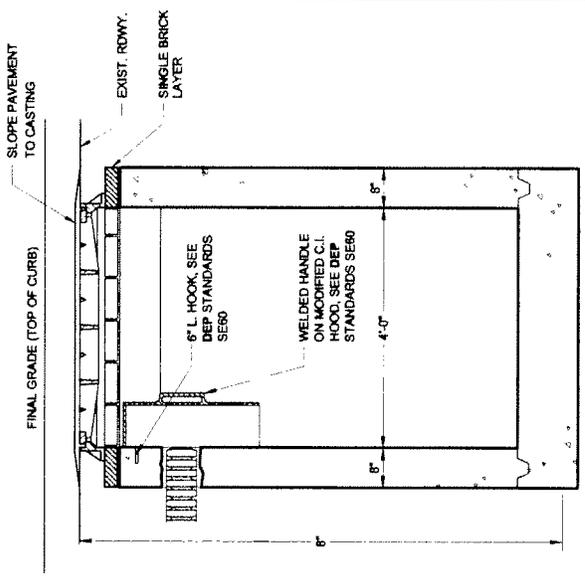
CITY OF NEW YORK
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
STANDARD FOR STORMWATER INLET
 FOR R.O.W. BIOSWALE TYPE 2 - NO CONNECTION TO SEWERS



PLAN [WITH REINFORCEMENTS]



SECTION A-A



SECTION B-B

NOTES:

- (1) LOCATION OF CURB SHALL BE AS SHOWN UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- (2) LOCATION AND ANGLE OF 6" PVC OUTLET PIPE MAY BE VARIED TO SUIT FIELD CONDITIONS.
- (3) KEYPED CONSTRUCTION JOINTS ARE REQUIRED BETWEEN ANY SUCCESSIVE POURS.
- (4) CONCRETE IS TO BE CLASS 40, REBARS-GRADE 60.

ASSISTANT COMMISSIONER, DESIGN DEPARTMENT OF DESIGN AND CONSTRUCTION
 P.E. _____ DATE _____

ASSISTANT COMMISSIONER, GREEN INFRASTRUCTURE DEPARTMENT OF ENVIRONMENTAL PROTECTION
 P.E. _____ DATE _____

Exhibit C
(Projected Budget)