Main Pumping Station Diversions
Project Booklet

dc water is life

dc clean RIVERS PROJECT
RESTORING OUR RIVERS
PROTECTING OUR DISTRICT

October 2013

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I. PROJECT NARRATIVE

District of Columbia Water and Sewer Authority (DC Water)
DC Clean Rivers Project

Main Pumping Station Diversions

1) Site Description and Project Contacts

The proposed Main Pumping Station Diversions are proposed to be located in the front yard of the existing Main Pumping Station in the District of Columbia. The project site is bounded by the Main Pumping Station to the south, the Yards development parcels to the east and west and the future Tingey Square to the north. The above ground structures are fully within the existing and future DC Water fence line. A vicinity map is provided in this booklet. The following is the project contact information for DC Water.

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2) Background

DC Water is implementing the Long Term Control Plan (LTCP) through the DC Clean Rivers Project (DCCR) to control combined sewer overflows (CSOs) to the District's waterways. This project was initiated in 1998 and after completing an extensive public participation program, DC Water submitted a final LTCP to EPA in 2002. DC Water, the District of Columbia and the United States entered into a Consent Decree that was entered by the Federal Court on March 23, 2005. As required by the Consent Decree, DC Water submitted a Summary Report and detailed implementation schedule along with a Facility Plan to EPA on September 18, 2008. The Facility Plan for the Anacostia River Projects included alignment, hydraulic, operational, geotechnical and other evaluations to advance the definition of the tunnels system included in the LTCP so that final designs and contracts for construction could be prepared.

3) Project Summary

As required by the consent decree, DC Water is implementing a LTCP to control CSOs to the District's waterways. The LTCP comprises multiple projects designed to meet the CSO control objectives of DC Water and to meet water quality standards in the District. The DCCR includes the construction of the following components near the Main Pumping Station site.

- Construct the Tiber Creek Trunk Sewer Diversion Chamber (CSO 012) below grade and within proposed future DC Water fence line.
- Construct the B Street New Jersey Trunk Sewer and Canal Street Trunk Sewer Diversion Chamber (CSO 009/011A) below grade and within proposed future DC Water fence line.
- Construct the Ventilation Vault below grade and located within the current and proposed future DC Water fence lines.
- Construct the Tide Gate Structure and the below grade tide gate chamber within the current and proposed future DC Water fence lines.
- Construct the Shaft Structure above grade within the current and proposed future DC Water fence lines.

The subject of this Project Booklet is the Shaft Structure and the Tide Gate Structure which are the two structures which extend above grade. All other proposed sewer structures are below grade.

4) Project Location

The location of the proposed structures is dependent on the location of the existing sewer infrastructure which was constructed in the early 1900's. The existing Tiber Creek Trunk Sewer and the B Street New Jersey Trunk Sewer are both approximately 24 feet wide and 10 feet high. The Tiber Creek Trunk Sewer passes through the underground garage of the existing DOT building. These large sewers must be diverted into the Blue Plains Tunnel prior to overflowing to the Anacostia River in order to meet the Consent Decree requirements. The area between the DOT building and the Main Pumping Station building is a limited area for the capture of these flows through diversions.

The Blue Plains Tunnel project is the result of years of study and planning. This tunnel contract, in excess of $330 million dollars, was awarded in May 2011 and is currently under construction. The 23 foot diameter tunnel will extend from the Blue Plains Advanced Wastewater Treatment Plant to the Main Pumping Station area. The tunnel will terminate at a 55 foot diameter shaft below the Shaft Structure presented in this project booklet.

The hydraulic modeling of the entire interconnected tunnel system during final design has required that a surge control weir be placed at Elevation 10.0 within the 55 foot diameter shaft at the Main Pumping Station. This serves to control overflows and to contain the

movement of water from the Northeast sections of the District down to the Wastewater Treatment Plant. The current ground elevation at this project site varies from 9.0 to 12.0. The above ground portion of the proposed Shaft Structure and Tide Gate Structure encloses the air handling, venting, tide gate, and control weir functions. The structures are not accessible for personnel entry except for occasional maintenance through manhole covers in the roof.

Based on a joint meeting with CFA and DC SHPO on September 9, 2011, the internal configuration of the structures was designed to achieve 40 foot separation of the structures, to limit the Tide Gate Structure to the height of the fence, and to limit the Shaft Structure to the height of 13 feet. The resulting design minimizes the impacts to the views of the Main Pumping Station while achieving the mandated flow diversion rates from the existing trunk sewers.

5) Project Coordination

During the preliminary design phase of the project, DC Water coordinated with the Commission of Fine Arts (CFA), National Capital Planning Commission (NCPC) and the DC Historic Preservation Office (DC SHPO) to evaluate various design alternatives. At a September 9, 2011 meeting, DC Water was in communication with CFA and DC SHPO and received concurrence from staff to proceed with conceptual design. Conceptual approval and delegation of final permit review to the SHPO staff were received from HPRB on January 26, 2012. Concept approval was received from CFA on November 17, 2011 and from NCPC on February 2, 2012.

On August 13, 2013, DC Water met with Frederick J. Lindstrom, CFA Assistant Secretary, to select the brick color and texture from several brick samples that were obtained from a local brick supplier. A brick preference was decided and will be specified in the construction documents with the requirement that after contract award the contractor will be required to submit a brick and mortar mockup in the shop drawing phase before final approval for contractor procurement and installation.

One additional area of coordination which has been ongoing is coordination with Forest City Washington and The Yards project. DC Water met multiple times with Forest City and shared files and information. The future fence line, the future Tingey Square, the future 2nd Street SE and a portion of Canal Street SE have all been coordinated with Forest City and incorporated into the DC Clean Rivers Project design. The Tiber Creek Trunk Sewer Diversion and the B Street New Jersey Trunk Sewer Diversion will extend beneath a portion of Tingey Square and the covers and manholes have been coordinated with the future Tingey Square layout. In October, 2011, conceptual design was shared with Forest City for concurrences.

6) Existing Conditions

The Main Pumping Station serves a key role in the District of Columbia's sewer collection system. A sewer drainage area of 7,000 acres converges on this small site through the existing underground sewers. Up to 240 million gallons per day are pumped under the Anacostia River to the Main Outfall Sewers where flows are directed by gravity to the Blue Plains Advanced Wastewater Treatment Plant.

With current conditions, during rain events the capacity of the pumps is exceeded and the

combined flows overflow into the Anacostia River. This project proposes to divert the majority of these overflows into the Blue Plains Tunnel, 100 feet below grade, where it will be stored and conveyed to the Blue Plains Advanced Wastewater Treatment Plant, instead of flowing to the river.

7) Final Design

In coordination with CFA, DC SHPO, NCPC, and Forest City, DC Water presents the final renderings for the consideration and approval by the board.

All elements from the concept plan have been incorporated into the final design with the exception of a personnel safety element which resulted in the shaft structure one foot taller than originally proposed. This change will not be perceptible to pedestrians or motorists.

8) Submission for Final Review

The following items are included in this submission.

i) Letter Requesting Review and Project Narrative.

ii) Vicinity Map – Boundaries of the proposed site, structure outlines, streets, and other physical features within the site are depicted in Drawing G-050.

iii) Site Plans – Four drawings represent the proposed topography, structural configuration, and other physical features of the proposed and future improvements.

(1) Future Adjacent Condition Plan: The future improvements and developments as proposed by Forest City are depicted in Drawing C-300.

(2) Overall Site Plan: The site and roadway improvements of the Main Pumping Station tax lot as proposed by this project are shown in Drawing C-310.

(3) Site Grading Plan: The proposed contours and grades of the site are shown in Drawing C-320.

(4) Future Grading Plan: The future grades for the surrounding area as proposed by Forest City are depicted to demonstrate coordination with this project in Drawing C-330.

iv) Photographs of Existing Site – Site photographs of the Main Pumping Station tax lot are included in this booklet.

v) Floor and Roof Plans – These components of the proposed Shaft Structure and Tide Gate Structure are shown in Drawings A-020, 021, and 040.

vi) Elevations – Two elevation views of each proposed structure are shown in Drawings A-025 and 045.

vii) Landscape Plan – A landscape plan (Drawing L-010) is provided depicting native plant materials. Note that the final landscaping and fence will not be installed until Tingey Square is constructed.

viii) Contract Drawings – A complete set of construction drawings is attached to this booklet.

ix) Renderings – The design selected, identified as Alternative D in the concept approval, is illustrated in the Renderings section of this booklet. A brief description of the major design elements of each rendering follows.

(1) View 1- View from sidewalk south of Tingey Square. The two proposed structures are 40 feet apart and will not obstruct the view of the pumping station for pedestrians.

(2) View 2- View of the Shaft Structure brick detail illustrating the simple design. The structure extends to a height of 13 feet. The wall is integrated into the fence line of the proposed 8 foot high fence.

(3) View 3- View of the Tide Gate Structure with the Shaft Structure in the background to show the relative size. The Tide Gate Structure is 8 feet tall corresponding to the fence height.

(4) View 4- View of the South elevation of the proposed structures along with a view of the East elevation of each structure. Except for the emergency overflow scuppers on the shaft structure, the wall treatment will be uniform on all four sides of both structures.

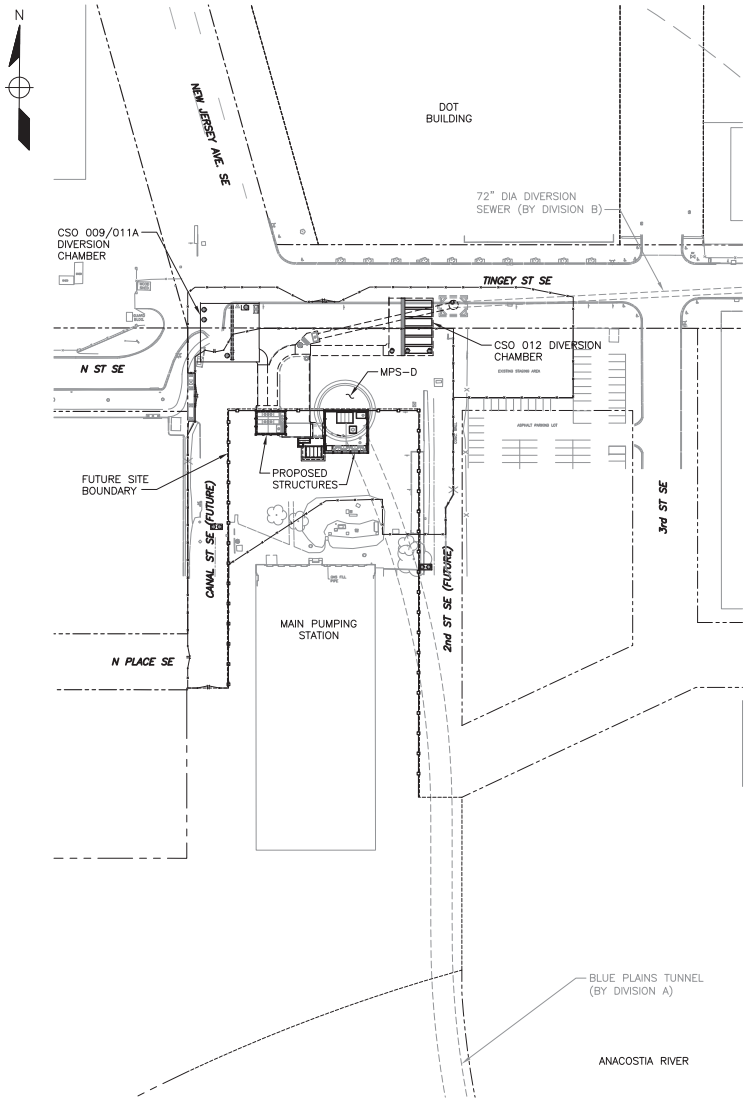
(5) View 5- View from the future Canal Street looking East. This view illustrates the relationship vertically and horizontally between the proposed structures and the existing Main Pumping Station. There is a 121 foot separation between the proposed Shaft Structure and the existing pumping station.

x) Scale Models – Not applicable to this construction.

xi) Exterior Material Samples – Brick samples were provided previous to this submission.

xii) Storm Water Management and Sediment and Erosion Control Plans – Storm water management plan is not required due to the on-site storm runoff will be discharged to the Main Pumping Station and eventually to Blue Plains Wastewater Treatment Plant. This exemption was established at the DDOE meeting with Massoud Massoumi on January 8, 2013. Sediment and Erosion Control Plans are included in Drawings C-500 through C-534.

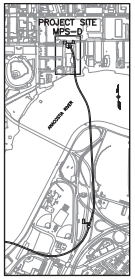
II. VICINITY MAP



PROJECT SITE MPS-D

MAIN PUMPING STATION DIVERSIONS

SCALE: 1" = 60'-0"



KEY PLAN

JOB		SHEET 5 OF 174
CONSTRUCTION	IN-HOUSE ☐ CONTRACT NO. ☐	
DESIGN	DETS FILE NO. ☐ DCFA NO. ☒ 446	
DESIGN MGR.	IN-HOUSE ☐ E.P.M.C. NO. ☐	
INDEX NO.	FOREMAN-INSPECTOR	

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

RFP DOCUMENTS

NO.	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

DC CLEAN RIVERS PROJECT – ANACOSTIA RIVER PROJECTS
DIVISION I – MAIN PUMPING STATION DIVERSIONS

PROJECT LOCATION PLAN

GENERAL

SCALE	AS SHOWN	DRAWN	FCC
INTERCEPTOR		CHECKED	JGH
SYSTEM		SUBMITTED	N PRIMA
SURVEYED			
DATE	09/06/2013	RECOMMENDED	
CADD FILE	LTCPI-G050		

G-050

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60 0 60 120 FT
SCALE: 1"=60'

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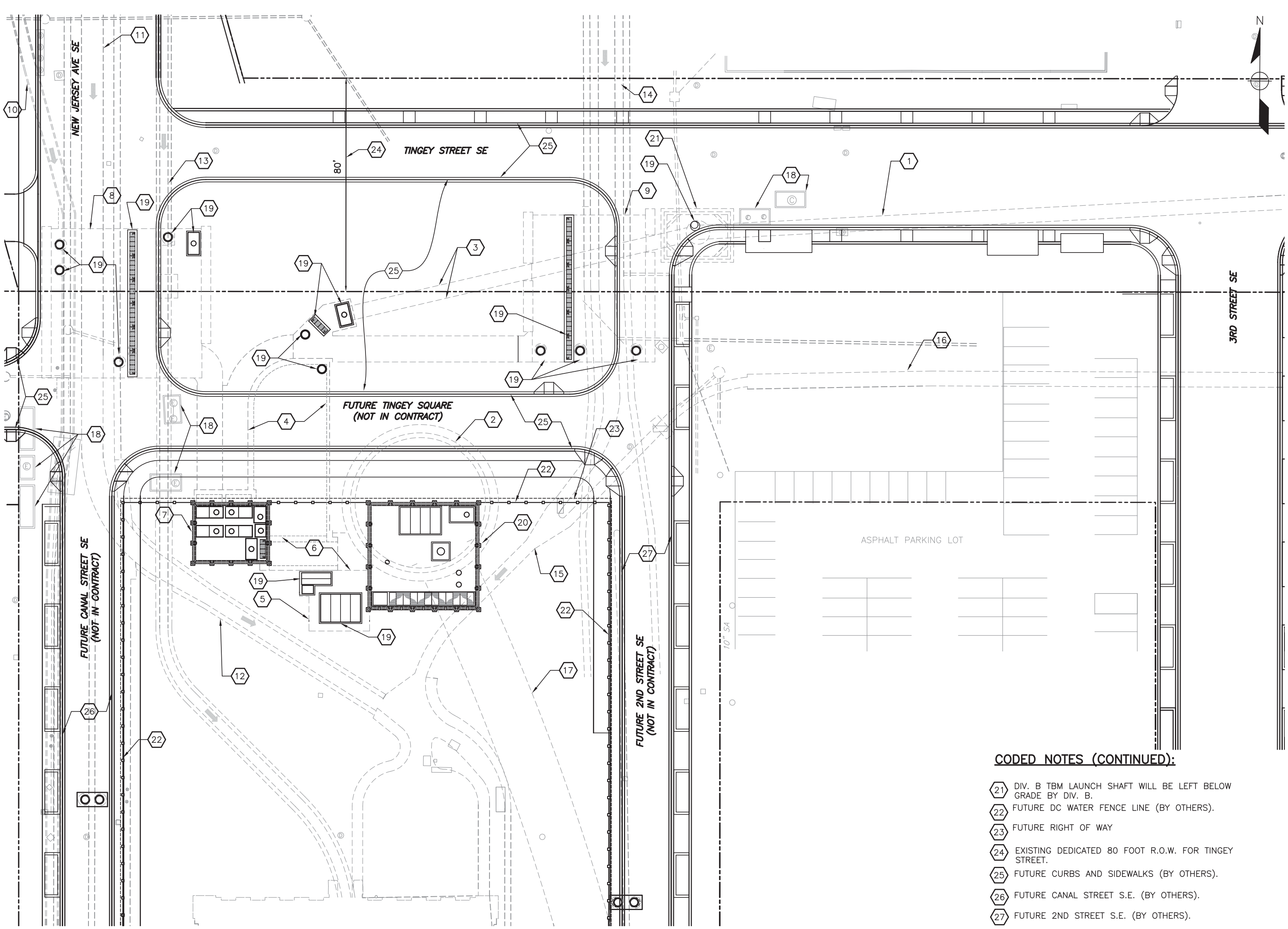
III. SITE PLANS



FUTURE ADJACENT CONDITIONS PLAN

SCALE: 1" = 20'

20 0 20 40 FT
SCALE: 1"=20'

CODED NOTES (CONTINUED):

21. DIV. B TBM LAUNCH SHAFT WILL BE LEFT BELOW GRADE BY DIV. B.
22. FUTURE DC WATER FENCE LINE (BY OTHERS).
23. FUTURE RIGHT OF WAY
24. EXISTING DEDICATED 80 FOOT R.O.W. FOR TINGEY STREET.
25. FUTURE CURBS AND SIDEWALKS (BY OTHERS).
26. FUTURE CANAL STREET S.E. (BY OTHERS).
27. FUTURE 2ND STREET S.E. (BY OTHERS).

THIS DRAWING IS FOR INFORMATION ONLY.
NOT IN CONTRACT.

JOB	SHEET 14 OF 174
CONSTRUCTION	IN-HOUSE ☐ CONTRACT NO. ☐
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DESIGN MGR.	IN-HOUSE ☐ E.P.M.C. NO. ☐
INDEX NO.	FOREMAN-INSPECTOR

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NO.	DESCRIPTION	BY	DATE

GENERAL NOTES:

1. THIS PLAN IS FOR GENERAL INFORMATION ONLY.
2. FUTURE ROAD OUTLINES ARE BASED ON DRAWING FROM FOREST CITY ENTERPRISES OBTAINED IN 2011.
3. PROPOSED STRUCTURES WITH DESIGNATION (UG) IN THE CODED NOTES ARE UNDERGROUND STRUCTURES.
4. ALL PROPOSED UNDERGROUND STRUCTURES ARE SHOWN BY LIGHT HIDDEN LINES. MANHOLE COVERS, STOP LOG COVERS, OR SLABS AT GRADE ARE SHOWN BY SOLID DARK LINES.

CODED NOTES:

1. TINGEY STREET 72" DIVERSION SEWER (BY DIV.B). (UG)
2. 55'-0" ID DROP SHAFT (BY DIV. A). (UG)
3. 72" SEWER EXTENSION (UG)
4. MPS-D SURGE TANK. (UG)
5. ODOR CONTROL VAULT. (UG)
6. APPROACH CHANNEL. (UG)
7. JUNCTION CHAMBER WITH DOUBLE TIDE GATES AND ABOVE GROUND STRUCTURE.
8. CSO 009/011A DIVERSION CHAMBER. (UG)
9. CSO 012 DIVERSION CHAMBER. (UG)
10. CANAL STREET SEWER (CSO 009). (UG)
11. B ST./NEW JERSEY AVE. TRUNK SEWER (CSO 011A). (UG)
12. CUNETTE AND CONDUIT FROM B ST./NEW JERSEY AVE. TRUNK SEWER TO M.P.S. (UG)
13. LOW AREA TRUNK SEWER. (UG)
14. TIBER CREEK TRUNK SEWER (CSO 012). (UG)
15. CONDUIT FROM TIBER CREEK CUNETTE AND EAST SIDE INTERCEPTOR. (UG)
16. EAST SIDE INTERCEPTOR. (UG)
17. BLUE PLAINS TUNNEL (BPT) (BY OTHERS – DIV. A).
18. ELECTRIC/TELE VAULTS (UG)
19. AT-GRADE ACCESS MHS, SLABS AND STOP LOG COVERS
20. AIR INTAKE CHAMBER ABOVE GROUND FOR SURGE AND AIR HANDLING (DROP SHAFT INTERNALS BELOW GROUND).

RFP DOCUMENTS

NO.	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

DC CLEAN RIVERS PROJECT – ANACOSTIA RIVER PROJECTS
DIVISION I – MAIN PUMPING STATION DIVERSIONS

FUTURE ADJACENT CONDITIONS PLAN
(NOT IN CONTRACT)
CIVIL

SCALE	AS SHOWN	DRAWN	RM
INTERCEPTOR		CHECKED	EUA
SYSTEM		SUBMITTED	J. RODRIGUEZ
SURVEYED			
DATE	09/06/2013	RECOMMENDED	
CADD FILE	LTCPI-C300		

C-300

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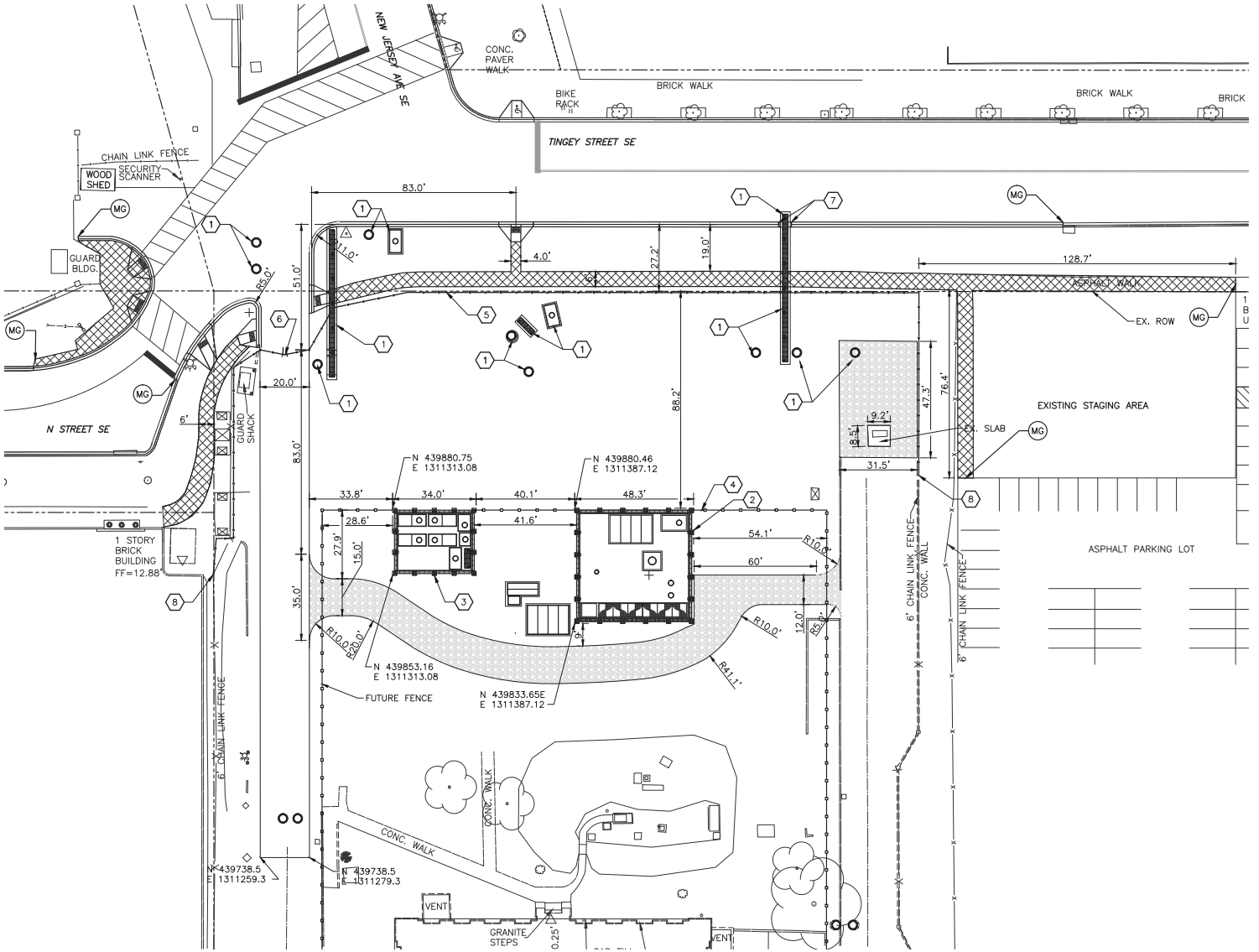

SITE PLAN GEOMETRY

SCALE: 1" = 20'

20 0 20 40 FT

SCALE: 1"=20'

REDUCTION VERIFICATION SCALE 0 10 INCHES

JOB	SHEET 16 OF 174
CONSTRUCTION	IN-HOUSE ☐ CONTRACT NO. ☐
DESIGN	DETS FILE NO. ☐ DCFA NO. ☒ 446
DESIGN MGR.	IN-HOUSE ☐ E.P.M.C. NO. ☐
INDEX NO.	FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

GENERAL NOTES:

1. COORDINATES FOR THE LOCATION OF BUILDING CORNERS ARE FOR BRICK FACING ON EXTERIOR WALLS.
2. SEE ARCHITECTURAL PLANS FOR BUILDING EXTERIOR FINISHES.

CODED NOTES:

1. COVERS AND FRAMES TO BE SET AT ELEVATIONS SHOWN ON SHEET C-320. SOME COVERS WILL BE ADJUSTED TO FUTURE ROAD ELEVATIONS BY YARDS.
2. PROPOSED AIR INTAKE CHAMBER, DROP SHAFT INTERNALS BELOW.
3. PROPOSED CSO 11A/012 JUNCTION CHAMBER AND TIDE GATE STRUCTURE.
4. FUTURE FENCE LOCATION. (NOT IN CONTRACT)
5. MPS FENCE RECONSTRUCTION TO BE INSTALLED BY DIV. I. NEW FENCE SHALL BE 6' CHAIN LINK FENCE PER SPEC. SECTION 32 31 13.
6. 24' SWING GATE
7. FLUSH CURB
8. TIE RELOCATED FENCE TO EXISTING MPS FENCE

LEGEND:

- PROPOSED ASPHALT WALKWAY
- PROPOSED GRAVEL PAVEMENT

PERMITTING SET 09/13/2013

NO.	DESCRIPTION	BY	DATE

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DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

DC CLEAN RIVERS PROJECT – ANACOSTIA RIVER PROJECTS
DIVISION I – MAIN PUMPING STATION DIVERSIONS

SITE PLAN GEOMETRY

CIVIL

SCALE	AS SHOWN	DRAWN	RM
INTERCEPTOR		CHECKED	EUA
SYSTEM		SUBMITTED	J. RODRIGUEZ
SURVEYED			
DATE	09/06/2013	RECOMMENDED	
CADD FILE	LTCPI-C310		

C-310

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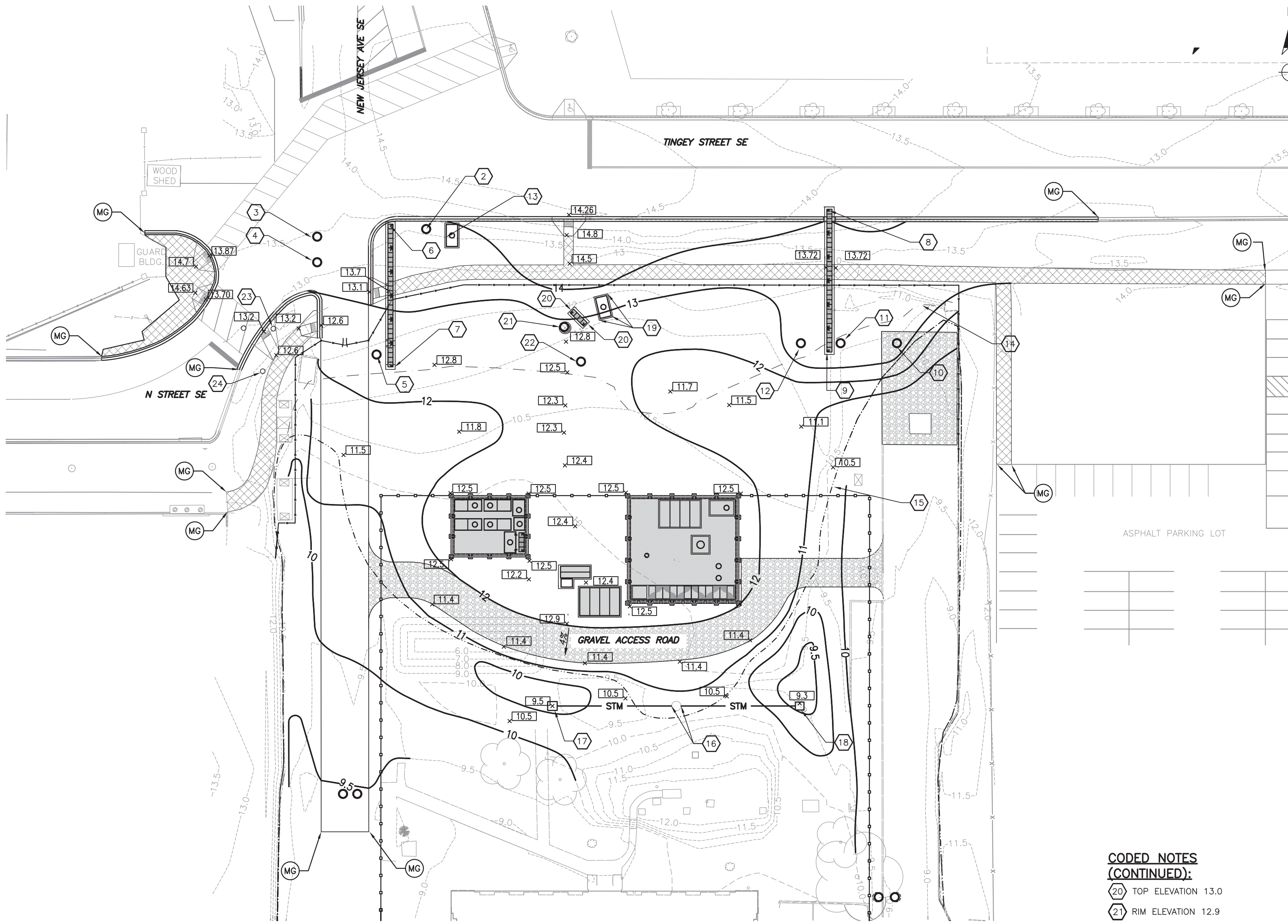

SITE GRADING PLAN

SCALE: 1" = 20'

SCALE: 1"=20'

GENERAL NOTES:

1. ADJUST TOP ELEVATIONS OF ALL STRUCTURES IN FIELD TO MATCH ADJACENT FINISHED GRADES.
2. COVER ELEVATIONS WILL BE ADJUSTED TO FUTURE CONDITIONS BY OTHERS. USING ADGUSTMENT RINGS AS NEEDED.
3. FLOOD PLAIN ELEVATION FOR MPS-D SITE IS ESTABLISHED AT EL. 10.6.
4. AT THE COMPLETION OF DIVISION I CONSTRUCTION THE SITE SHALL BE GRADED TO CONTOURS AND ELEVATIONS SHOWN ON THIS SHEET.
5. ALL EXCAVATED OR OTHERWISE DISRUPTED MATERIAL ASSOCIATED WITH SITE MPS-D IS CLASSIFIED AS RESTRICTED-USE MATERIAL. REFER TO SPECIFICATION SECTION 01590 FOR PROPER HANDLING, TESTING, TRANSPORTATION, AND DISPOSAL REQUIREMENTS.

CODED NOTES:

- (2) RIM ELEVATION 13.65
- (3) RIM ELEVATION 13.40*
- (4) RIM ELEVATION 13.15*
- (5) RIM ELEVATION 12.30
- (6) TOP ELEVATION 13.50 (SEE PLAN-SHEET S-290)
- (7) TOP ELEVATION 12.30 (SEE PLAN-SHEET S-290)
- (8) TOP ELEVATION 13.87* (SEE PLAN-SHEET S-380)
- (9) TOP ELEVATION 13.60
- (10) TOP ELEVATION 13.60
- (11) TOP ELEVATION 13.60
- (12) TOP ELEVATION 13.60
- (13) TOP ELEVATION 13.80
- (14) FLOOD PLAIN LIMITS BASED ON EXISTING CONTOURS.
- (15) FLOOD PLAIN LIMITS BASED ON PROPOSED CONTOURS.
- (16) CONNECT 15" STORM SEWER TO EXISTING SANITARY MANHOLE.
- (17) PROPOSED YARD INLET, TOP=9.5
- (18) PROPOSED YARD INLET, TOP=9.3
- (19) TOP ELEVATION 13.0

CODED NOTES (CONTINUED):

- (20) TOP ELEVATION 13.0
- (21) RIM ELEVATION 12.9
- (22) RIM ELEVATION 12.7
- (23) RIM ELEVATION 13.4
- (24) RIM ELEVATION 11.5

* FUTURE ELEVATIONS WILL BE ADJUSTED TO A HIGHER ELEVATION

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CONSTRUCTION (IN-HOUSE ☐ / CONTRACT NO. ☐)	
DESIGN (DETS FILE NO. ☐ / DCFA NO. ☒)	446
DESIGN MGR. (IN-HOUSE ☐ / E.P.M.C. NO. ☐)	
INDEX NO.	FOREMAN-INSPECTOR

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PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

DC CLEAN RIVERS PROJECT – ANACOSTIA RIVER PROJECTS
DIVISION I – MAIN PUMPING STATION DIVERSIONS

SITE GRADING PLAN

CIVIL

SCALE	AS SHOWN	DRAWN	RM
INTERCEPTOR		CHECKED	EUA
SYSTEM		SUBMITTED	J. RODRIGUEZ
SURVEYED			
DATE	09/06/2013	RECOMMENDED	
CADD FILE	LTCPI-C320		

C-320

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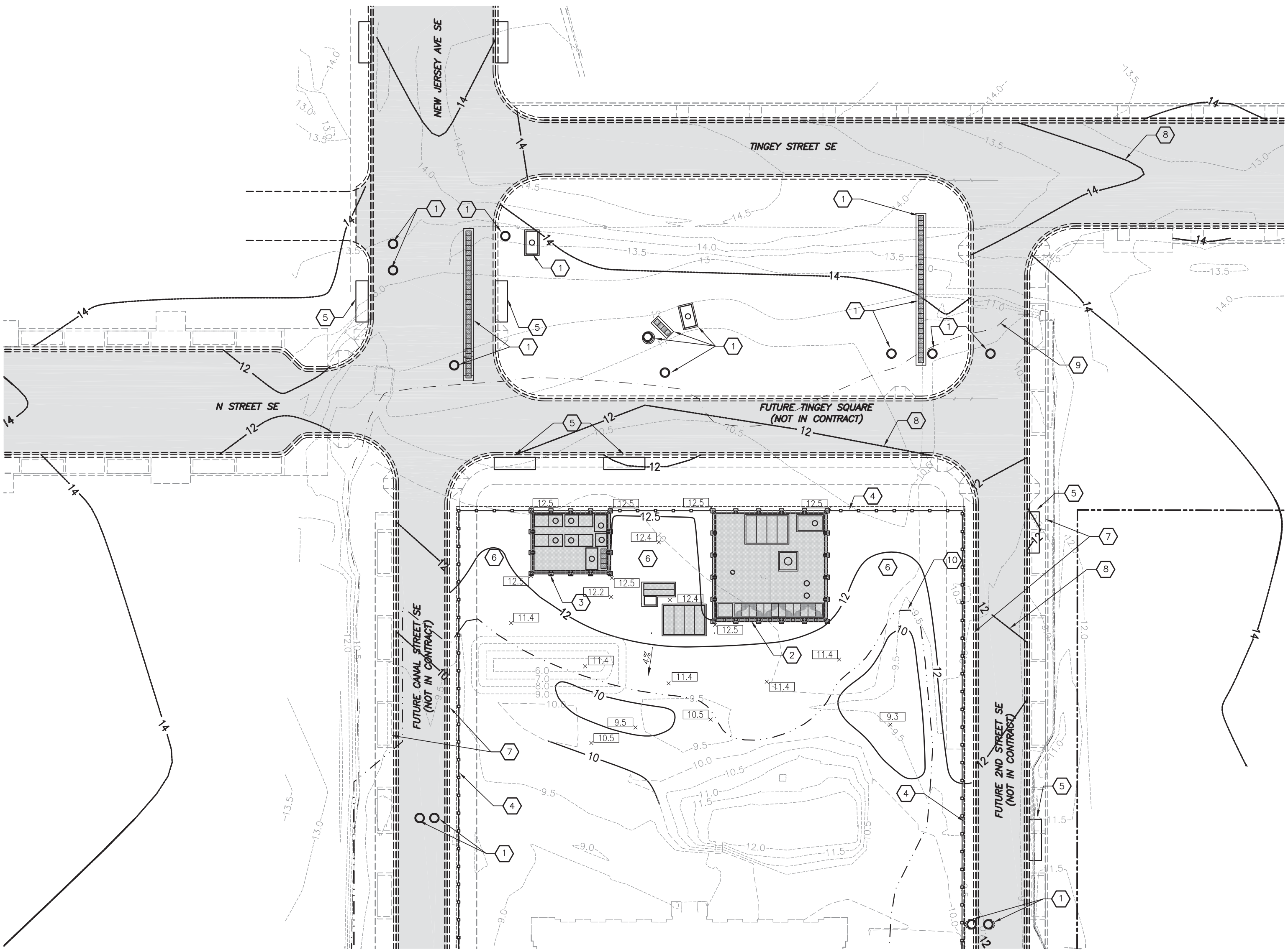

FUTURE GRADING PLAN
SCALE: 1" = 20'

SCALE: 1"=20'

JOB	SHEET 18 OF 174
CONSTRUCTION	IN-HOUSE ☐ CONTRACT NO. ☐
DESIGN	DETS FILE NO. ☐ DCFA NO. ☒ 446
DESIGN MGR.	IN-HOUSE ☐ E.P.M.C. NO. ☐
INDEX NO.	FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

GENERAL NOTES:

1. FLOOD PLAIN ELEVATION FOR MPS-D SITE IS ESTABLISHED AT EL. 10.6.
2. ALL EXCAVATED OR OTHERWISE DISRUPTED MATERIAL ASSOCIATED WITH SITE MPS-D IS CLASSIFIED AS RESTRICTED-USE MATERIAL. REFER TO SPECIFICATION SECTION 01590 FOR PROPER HANDLING, TESTING, TRANSPORTATION, AND DISPOSAL REQUIREMENTS.

CODED NOTES:

1. COVERS AND FRAMES TO BE SET AT ELEVATIONS SHOWN ON C-320. SOME COVERS WILL BE ADJUSTED TO FUTURE HIGHER ROAD ELEVATIONS BY "YARDS" DEVELOPMENT.
2. PROPOSED MPS-DS AIR INTAKE CHAMBER. TOP OF PARAPET WALL EL 25.5, ROOF EL 22.0.
3. PROPOSED MPS-D TIDE GATE CHAMBER. TOP OF PARAPET WALL EL 20.5, ROOF EL 17.0.
4. FUTURE FENCE LOCATION (BY OTHERS).
5. FUTURE WATER QUALITY INLETS/LID TREE PITS BY YARDS OR OTHERS (NOT IN CONTRACT).
6. LANDSCAPE AREAS.
7. FUTURE STREETSCAPE BY YARDS OR OTHERS (NOT IN CONTRACT).
8. FUTURE GRADING BY YARDS OR OTHERS (NOT IN CONTRACT).
9. FLOOD PLAIN LIMITS BASED ON EXISTING CONTOURS.
10. FLOOD PLAIN LIMITS BASED ON FUTURE CONTOURS.

RFP DOCUMENTS

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DC CLEAN RIVERS PROJECT – ANACOSTIA RIVER PROJECTS
DIVISION I – MAIN PUMPING STATION DIVERSIONS

FUTURE GRADING PLAN
(NOT IN CONTRACT)
CIVIL

SCALE	AS SHOWN	DRAWN	RM
INTERCEPTOR		CHECKED	EUA
SYSTEM		SUBMITTED	J. RODRIGUEZ
SURVEYED			
DATE	09/06/2013	RECOMMENDED	
CADD FILE	LTCPI-C330		

C-330

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CHESTER ENGINEERS
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TEL: 301.840.1030 FAX: 301.948.9258

REDUCTION VERIFICATION SCALE 0 10 INCHES

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DRAWING ID: D:_STORAGE\DC WATER ARCHIVE\2013-04XX – SSM\MPS DRAWINGS _\\LTCPI-C330.DWG

IV. PHOTOGRAPHS OF EXISTING SITE

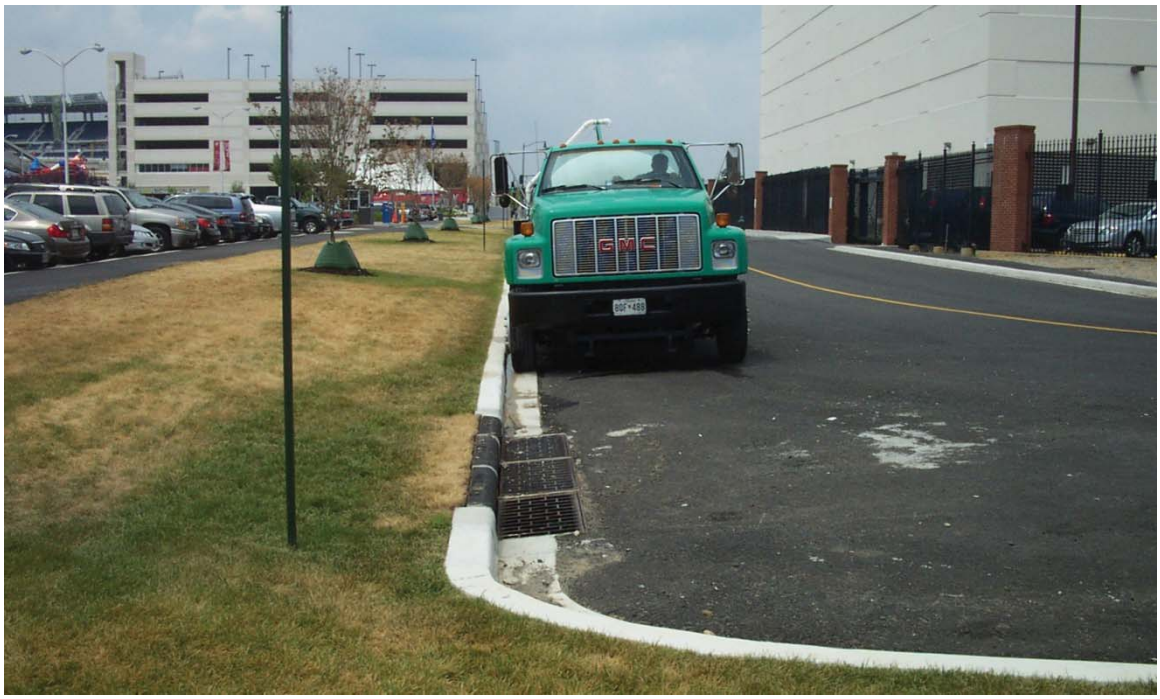
Looking South towards Main Pumping Station from NJ Avenue

Looking South inside DC Water Fence

Looking Southwest Inside DC Water Fence

Looking East Along DC Water Fence (South Edge of Future Tingey Square)

Looking East Down Tingey Street (North Edge of Future Tingey Square)

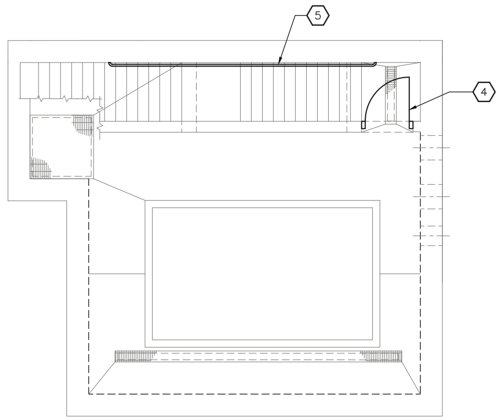


Looking West Down N Street toward National Stadium

Looking North Down NJ Avenue

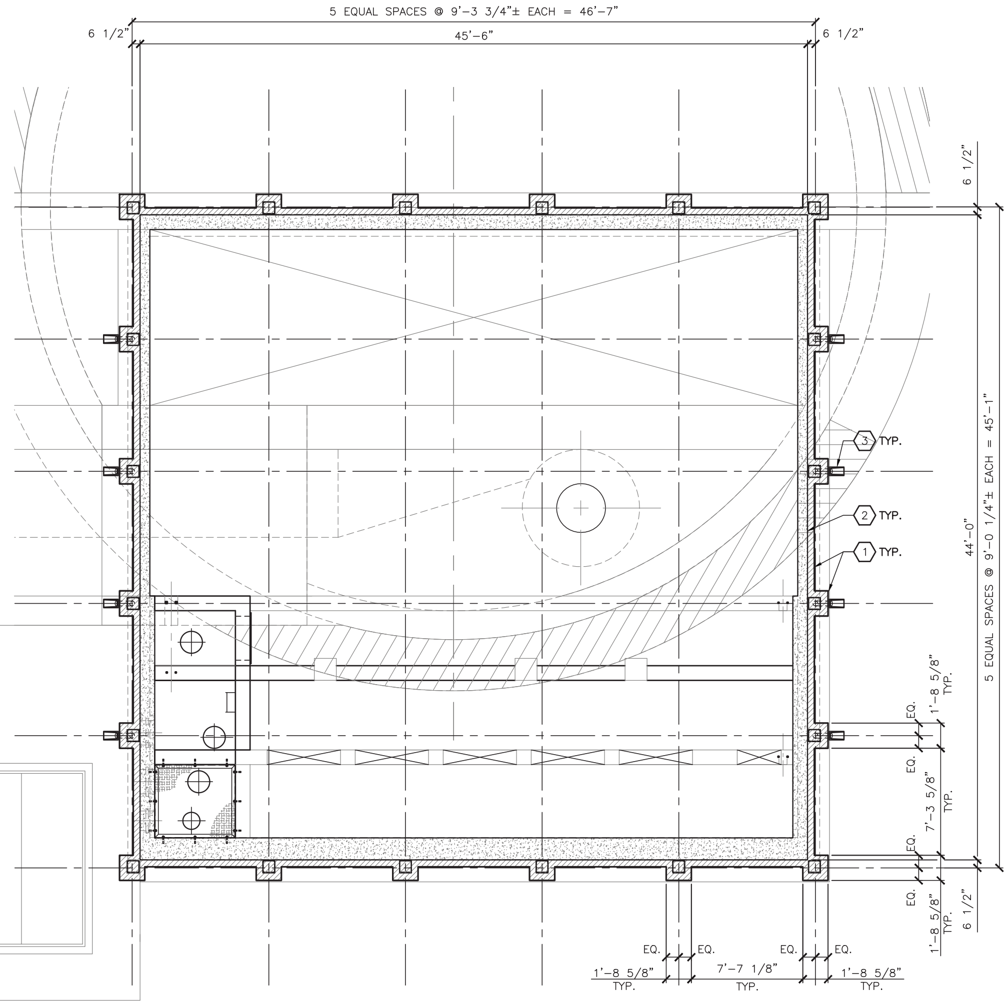
Looking Northeast Toward DOT Building

V. FLOOR AND ROOF PLANS



ODOR CONTROL CHAMBER FLOOR PLAN

SCALE: 1/4"=1'-0"



MPS-DS AIR INTAKE CHAMBER BRICK FAÇADE FLOOR PLAN

SCALE: 1/4"=1'-0"

CODED NOTES:

1. BRICK FAÇADE WALL & PILASTER
2. CONCRETE BUILDING WALL PER STRUCT. DRAWINGS
3. ROOF DRAIN ASSEMBLY & SPLASH BLOCK, SEE ROOF PLAN
4. 3'x7' STAINLESS STEEL DOOR AND FRAME ASSEMBLY
5. 1 1/2"ø STAINLESS STEEL PIPE HANDRAIL, CONTRACTOR SHALL PROVIDE DETAIL.

JOB	SHEET 60 OF 174
CONSTRUCTION	IN-HOUSE ☐ CONTRACT NO. ☐
DESIGN	DETS FILE NO. ☐ DCFA NO. ☒ 446
DESIGN MGR.	IN-HOUSE ☐ E.P.M.C. NO. ☐
INDEX NO.	FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

PERMITTING SET 09/13/2013

NO.	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

DC CLEAN RIVERS PROJECT – ANACOSTIA RIVER PROJECTS
DIVISION I – MAIN PUMPING STATION DIVERSIONS

MPS-DS AIR INTAKE CHAMBER
BRICK FAÇADE FLOOR PLAN
ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	HT
INTERCEPTOR		CHECKED	DD
SYSTEM		SUBMITTED	J. MYERS
SURVEYED			
DATE	09/06/2013	RECOMMENDED	
CADD FILE	LTCPI-A020		

A-020

LIS
N

SCALE:1/4"=1'

DISTRICT OF COLUMBIA
JOSEPH D. MYERS
ARC6252
REGISTERED ARCHITECT

dc clean RIVERS PROJECT

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
5000 OVERLOOK AVENUE, SW
WASHINGTON, DC 20032
PHONE: 202-787-4460
FAX: 202-787-4478

PARSONS
100 M STREET SE, WASHINGTON, DC 20003
TEL: 202.775.3300 FAX: 202.775.3422

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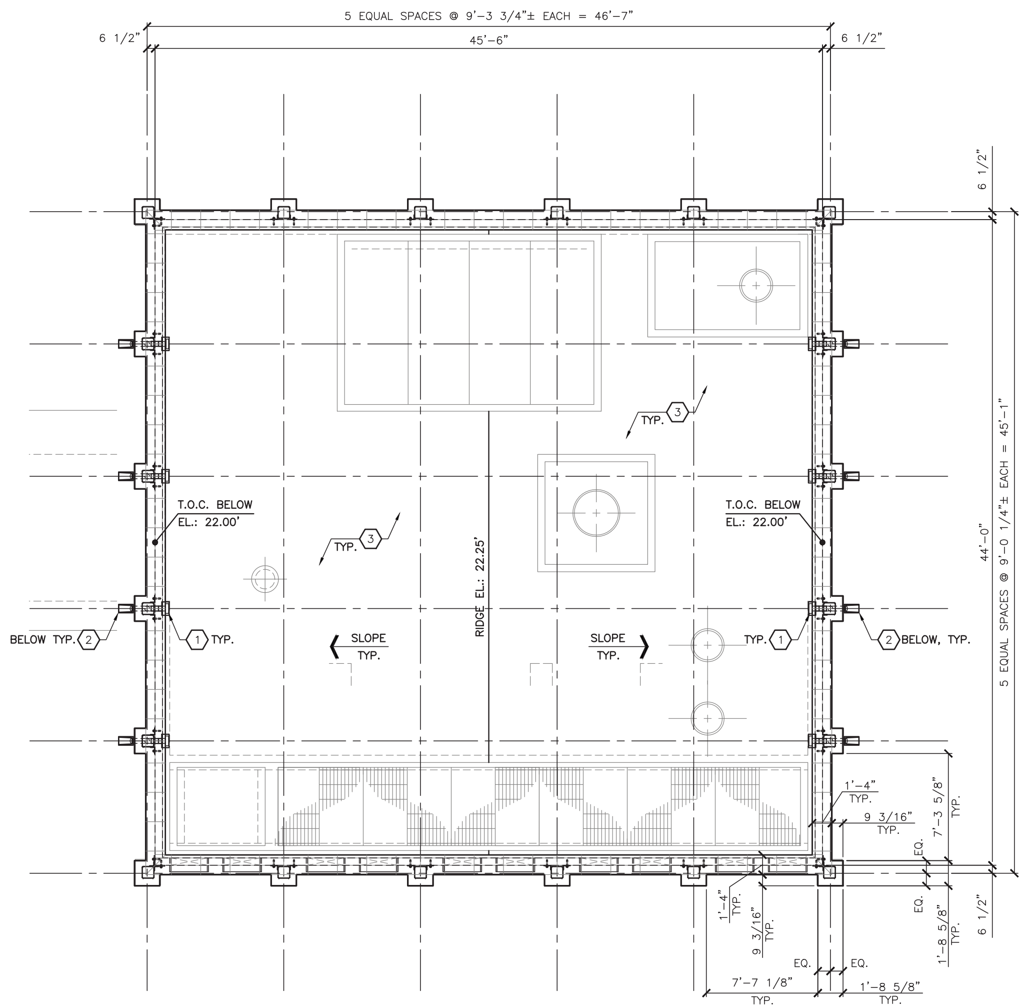
JOB	SHEET 61 OF 174
CONSTRUCTION	IN-HOUSE ☐ CONTRACT NO. ☐
DESIGN	DETS FILE NO. ☐ DCFA NO. ☒ 446
DESIGN MGR.	IN-HOUSE ☐ E.P.M.C. NO. ☐
INDEX NO.	FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

CODED NOTES:

1. SCUPPER, DRAIN PIPE & DOWN SPOUT NOZZLE ASSEMBLY
2. PRE-CAST CONCRETE SPLASH BLOCK
3. ROOF DECK COATING



PERMITTING SET 09/13/2013

NO.	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

DC CLEAN RIVERS PROJECT – ANACOSTIA RIVER PROJECTS
DIVISION I – MAIN PUMPING STATION DIVERSIONS

MPS–DS AIR INTAKE CHAMBER
BRICK FAÇADE ROOF PLAN
ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	HT
INTERCEPTOR		CHECKED	DD
SYSTEM		SUBMITTED	J. MYERS
SURVEYED			
DATE	09/06/2013	RECOMMENDED	
CADD FILE	LTCPI-A021		

A–021

LIS
N

MPS–DS AIR INTAKE CHAMBER
BRICK FAÇADE ROOF PLAN

SCALE: 1/4"=1'-0"

0 2' 4' 8'
SCALE:1/4"=1'

REDUCTION VERIFICATION SCALE 0 10 INCHES

DISTRICT OF COLUMBIA · JOSEPH D. MYERS · ARC6252 · REGISTERED ARCHITECT

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
5000 OVERLOOK AVENUE, SW
WASHINGTON, DC 20032
PHONE: 202-787-4460
FAX: 202-787-4478

PARSONS
100 M STREET SE, WASHINGTON, DC 20003
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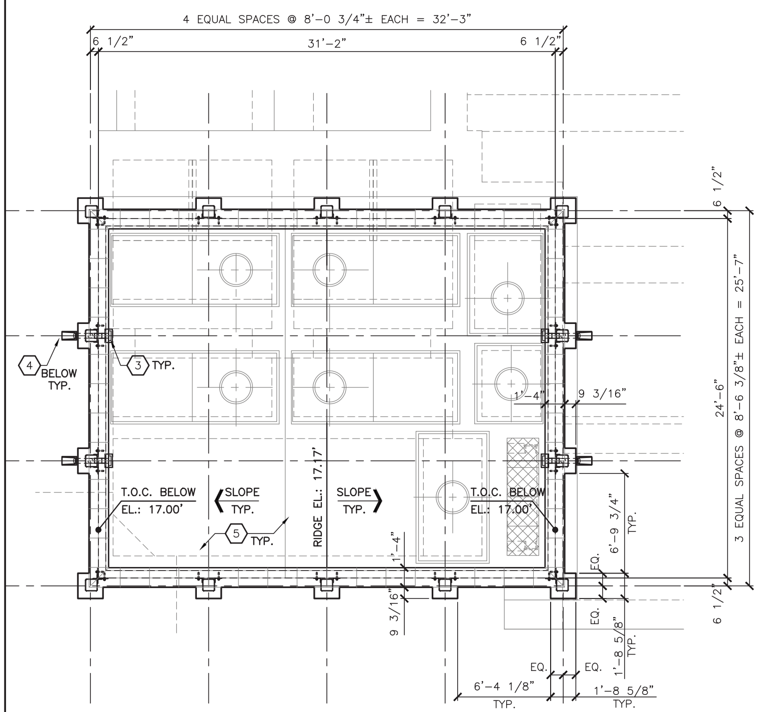
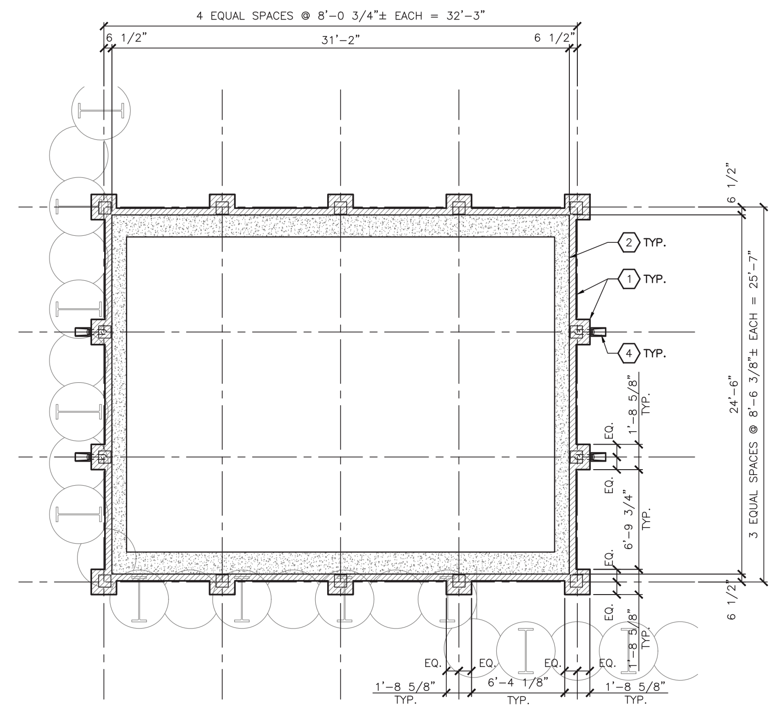


MPS – TIDE GATE CHAMBER BRICK FAÇADE ROOF PLAN

SCALE: 1/4"=1'-0"



MPS – TIDE GATE CHAMBER BRICK FAÇADE FLOOR PLAN

SCALE: 1/4"=1'-0"

JOB	SHEET 67 OF 174
CONSTRUCTION	IN-HOUSE ☐ CONTRACT NO. ☐
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DESIGN MGR.	IN-HOUSE ☐ E.P.M.C. NO. ☐
INDEX NO.	FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

CODED NOTES:

1. BRICK FAÇADE WALL & PILASTER
2. CONCRETE BUILDING WALL PER STRUCT. DRAWINGS
3. SCUPPER, DRAIN PIPE & DOWN SPOUT NOZZLE ASSEMBLY
4. PRECAST CONCRETE SPLASH BLOCK
5. ROOF DECK COATING

PERMITTING SET 09/13/2013

NO.	DESCRIPTION	BY	DATE
	PRE-BID REVISION		

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

DC CLEAN RIVERS PROJECT – ANACOSTIA RIVER PROJECTS
DIVISION I – MAIN PUMPING STATION DIVERSIONS

MPS – TIDE GATE CHAMBER
BRICK FAÇADE FLOOR & ROOF PLAN
ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	HT
INTERCEPTOR		CHECKED	DD
SYSTEM		SUBMITTED	J. MYERS
SURVEYED			
DATE	09/06/2013	RECOMMENDED	
CADD FILE	LTCPI-A040		

A-040

LIS N

0 2' 4' 8'
SCALE:1/4"=1'

DISTRICT OF COLUMBIA JOSEPH D. MYERS ARC6252 REGISTERED ARCHITECT

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
5000 OVERLOOK AVENUE, SW
WASHINGTON, DC 20032
PHONE: 202-787-4460
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100 M STREET SE, WASHINGTON, DC 20003
TEL: 202.775.3300 FAX: 202.775.3422

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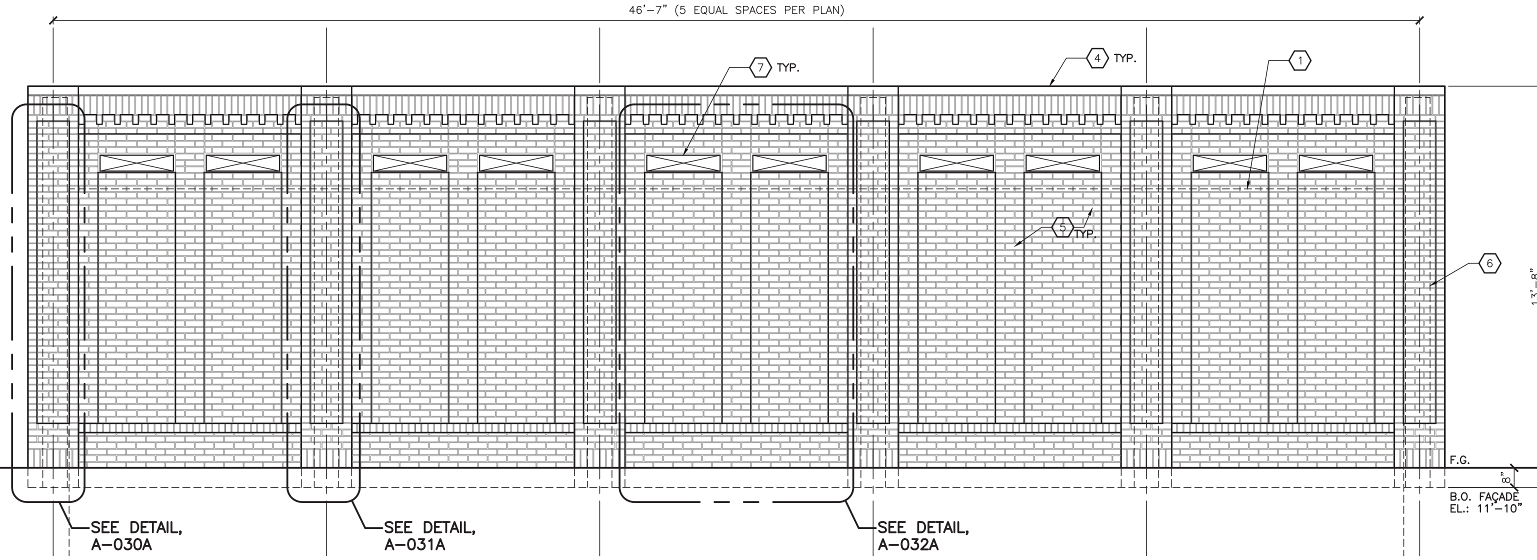
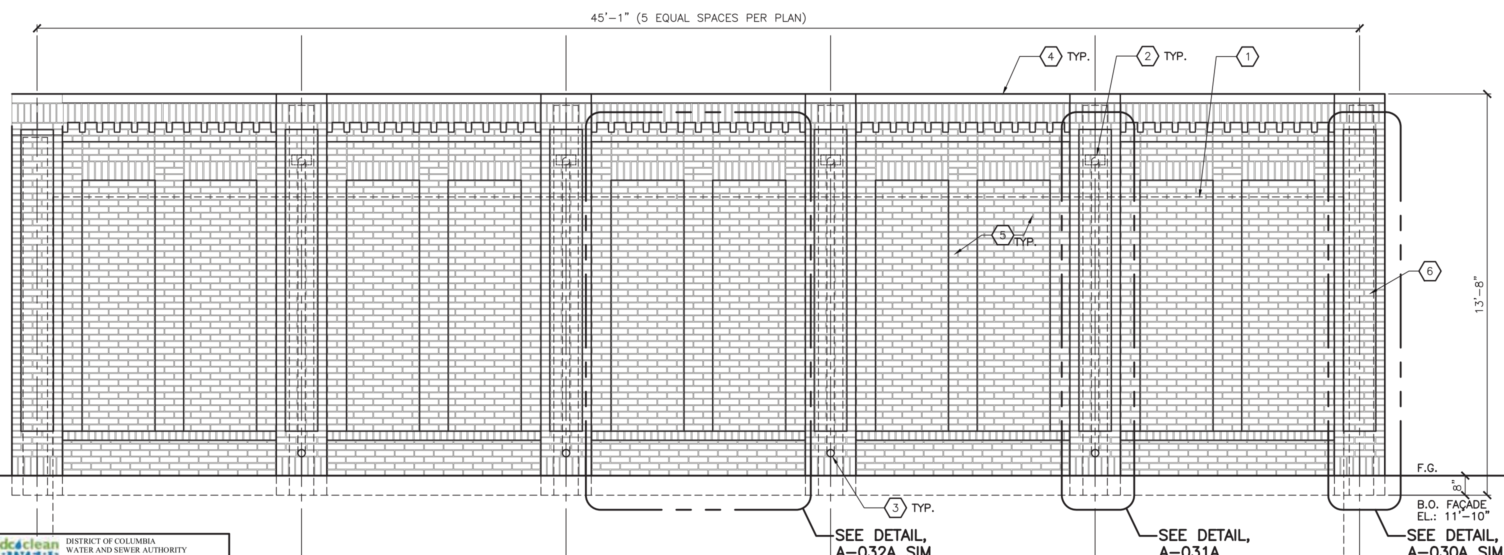
VI. ELEVATIONS



SOUTH ELEVATION (NORTH SIMILAR EXCEPT SCUPPER)

SCALE: 1/2"=1'-0"



WEST ELEVATION (EAST SIMILAR)

SCALE: 1/2"=1'-0"

JOB	SHEET 62 OF 174
CONSTRUCTION	IN-HOUSE ☐ CONTRACT NO. ☐
DESIGN	DETS FILE NO. ☐ DCFA NO. ☒ 446
DESIGN MGR.	IN-HOUSE ☐ E.P.M.C. NO. ☐
INDEX NO.	FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

CODED NOTES:

1. PROFILE OF BUILDING BEYOND
2. SCUPPER BEYOND & DRAIN PIPE ASSEMBLY PER PLAN
3. DOWN SPOUT NOZZLE ASSEMBLY
4. PRE-CAST COLORED CONCRETE COPING
5. BRICK VENEER PER SPECS.
6. STRUCTURAL SUPPORT COLUMN PER STRUCTURAL DRAWINGS
7. 30"W x 6 1/2"D x 11 5/8"L ALUMINUM OVERFLOW SCUPPER WITH FLASHING. CONTRACTOR SHALL PROVIDE DETAIL AND COORDINATE LOCATION WITH BRICK WORK.

PERMITTING SET 09/13/2013

NO.	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

DC CLEAN RIVERS PROJECT – ANACOSTIA RIVER PROJECTS
DIVISION I – MAIN PUMPING STATION DIVERSIONS

MPS-DS AIR INTAKE CHAMBER BRICK FAÇADE ELEVATIONS

ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	HT
INTERCEPTOR		CHECKED	DD
SYSTEM		SUBMITTED	J. MYERS
SURVEYED			
DATE	09/06/2013	RECOMMENDED	
CADD FILE	LTCPI-A025		

A-025

SCALE:1/2"=1'-0" (0 1' 2' 4')

DISTRICT OF COLUMBIA
JOSEPH D. MYERS
ARC6252
REGISTERED ARCHITECT

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WASHINGTON, DC 20032
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FAX: 202-787-4478

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100 M STREET SE, WASHINGTON, DC 20003
TEL: 202.775.3300 FAX: 202.775.3422

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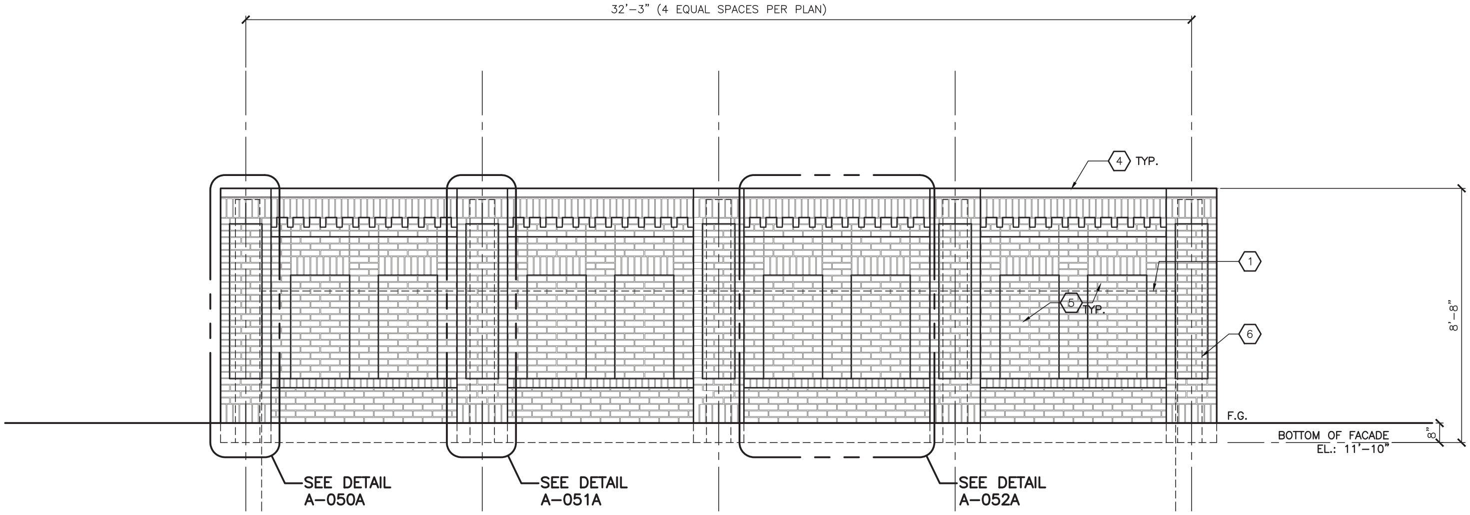
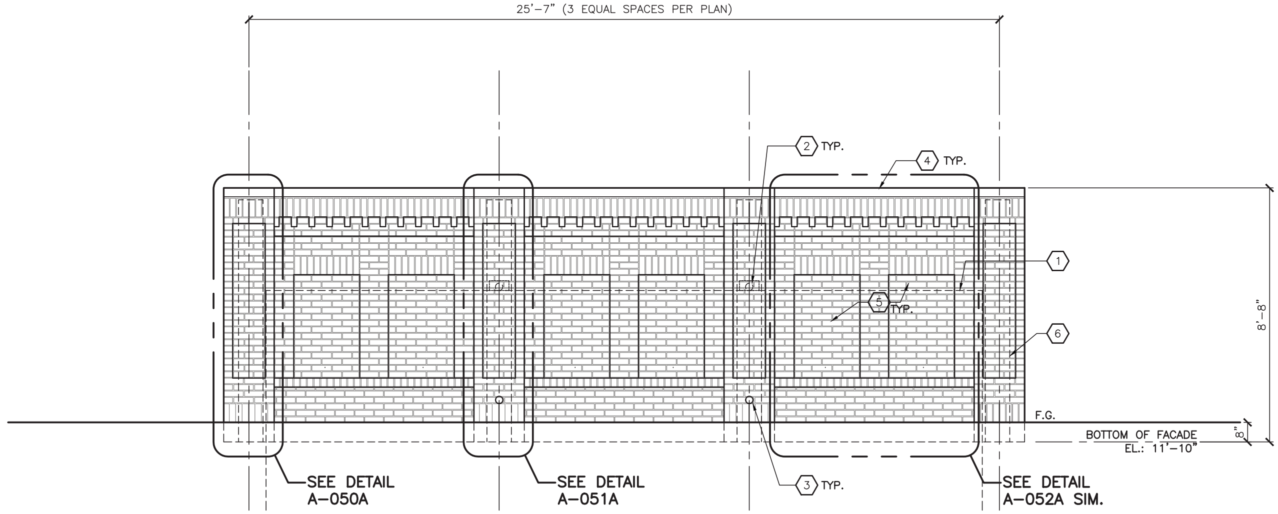


SOUTH ELEVATION (NORTH SIMILAR)

SCALE: 1/2"=1'-0"



WEST ELEVATION (EAST SIMILAR)

SCALE: 1/2"=1'-0"

JOB	SHEET 68 OF 174
CONSTRUCTION	IN-HOUSE ☐ CONTRACT NO. ☐
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DESIGN MGR.	IN-HOUSE ☐ E.P.M.C. NO. ☐
INDEX NO.	FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

CODED NOTES:

1. PROFILE OF BUILDING BEYOND
2. SCUPPER ASSEMBLY BEYOND WHERE OCCURS PER PLAN, SEE STRUCTURAL DRAWINGS FOR DETAILS
3. STEEL SPOUT NOZZLE ASSEMBLY WHERE OCCURS PER PLAN CONNECTS TO PIPE STUB SEE STRUCTURAL DRAWINGS
4. PRE-CAST COLORED CONCRETE COPING
5. BRICK VENEER PER SPECS.
6. STRUCTURAL SUPPORT COLUMN PER STRUCTURAL DRAWINGS

PERMITTING SET 09/13/2013

NO.	DESCRIPTION	BY	DATE
	PRE-BID REVISION		

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

DC CLEAN RIVERS PROJECT – ANACOSTIA RIVER PROJECTS
DIVISION I – MAIN PUMPING STATION DIVERSIONS

MPS – APPROACH CHANNEL
BRICK FAÇADE ELEVATIONS
ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	HT
INTERCEPTOR		CHECKED	DD
SYSTEM		SUBMITTED	J. MYERS
SURVEYED			
DATE	09/06/2013	RECOMMENDED	
CADD FILE	LTCPI-A045		

0 1' 2' 4'
SCALE:1/2"=1'-0"

A-045

DISTRICT OF COLUMBIA ★ JOSEPH D. MYERS ★ ARC6252 REGISTERED ARCHITECT

dc clean RIVERS PROJECT

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
5000 OVERLOOK AVENUE, SW
WASHINGTON, DC 20032
PHONE: 202-787-4460
FAX: 202-787-4478

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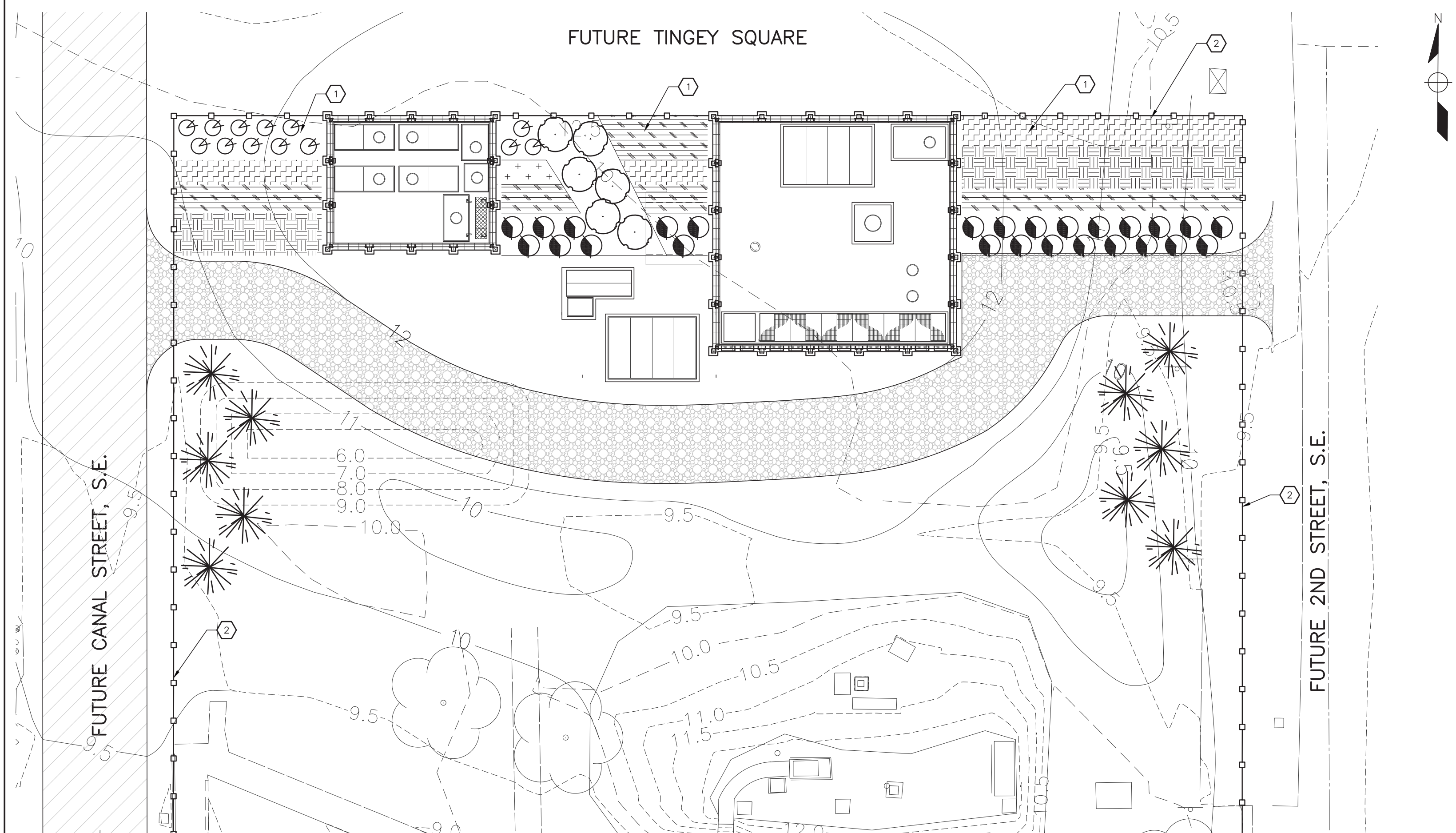
100 M STREET SE, WASHINGTON, DC 20003
TEL: 202.775.3300 FAX: 202.775.3422

REDUCTION VERIFICATION SCALE 0 10 INCHES

VII. LANDSCAPE PLANS



FUTURE LANDSCAPING PLAN

SCALE: 1" = 10'

CODED NOTES:

1. FUTURE LANDSCAPING: LONG RECTANGULAR BANDS PLANTED WITH NATIVE, ORNAMENTAL GRASSES AND SHRUBS (~3' HIGH OR LESS, TO KEEP VIEWS OF BUILDING OPEN) PROVIDE SEASONAL INTEREST (BY OTHERS).
2. FUTURE FENCE (BY OTHERS).

FUTURE NATIVE PLANTS AND GRASSES PLANT SCHEDULE

Key	Scientific/Common Name	Qty.	Root	Size	Spacing	Remarks
	Panicum virgatum "Shenandoah" Shenandoah Switchgrass	260	cont.	1 qt.	24" OC	
	Baptisia "Carolina Moonlight" Carolina Moonlight False Indigo	330	cont.	1 qt.	24" OC	
	Tiarella corditolia "Brandywine" Brandywine Foamflower	230	cont.	1 qt.	24" OC	
+ + +	Celthra alnifolia "Ruby Spice" Ruby Spice Summersweet	33	cont.	1 qt.	18" OC	
	Mulch Shredded hardwood	3350 sq. ft.	2" deep			

FUTURE TREE AND SHRUB PLANT SCHEDULE

Key	Scientific/Common Name	Qty.	Root	Size	Spacing	Remarks
	Cornus sericea alba Dwarf Redtwig Dogwood	6	cont.	5 gal.	AS SHOWN	
	Ilex glabra "Shamrock" Shamrock Inkberry	13	cont.	2 gal.	5' OC	
	Ilex verticillata "Nana" Dwarf American Winterberry	26	cont.	2 gal.	6' OC	
	Ilex opaca American Holly	10	B&B	6'	12' OC	

10 0 10 20 FT
SCALE: 1"=10'

THIS DRAWING IS FOR INFORMATION ONLY.
NOT IN CONTRACT.

PERMITTING SET 09/13/2013

JOB		SHEET 49 OF 174
CONSTRUCTION	IN-HOUSE ☐ CONTRACT NO. ☐	
DESIGN	DETS FILE NO. ☐ DCFA NO. ☒	446
DESIGN MGR.	IN-HOUSE ☐ E.P.M.C. NO. ☐	
INDEX NO.	FOREMAN-INSPECTOR	

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

PRE-BID REVISION

NO.	DESCRIPTION	BY	DATE

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

DC CLEAN RIVERS PROJECT – ANACOSTIA RIVER PROJECTS
DIVISION I – MAIN PUMPING STATION DIVERSIONS

LANDSCAPING PLAN (NOT IN CONTRACT)
CIVIL

SCALE	AS SHOWN	DRAWN	RM
INTERCEPTOR		CHECKED	EUA
SYSTEM		SUBMITTED	J. RODRIGUEZ
SURVEYED			
DATE	09/06/2013	RECOMMENDED	
CADD FILE	LTCPI-L010		

L-010

DISTRICT OF COLUMBIA
JOSUE RODRIGUEZ MUNIZ
PE 906607
CIVIL
PROFESSIONAL ENGINEER

dc clean RIVERS PROJECT
DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
5000 OVERLOOK AVENUE, SW
WASHINGTON, DC 20032
PHONE: 202-787-4460
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CHESTER ENGINEERS
704 QUINCE ORCHARD RD., SUITE 310, GAITHERSBURG, MD 20878
TEL: 301.840.1030 FAX: 301.948.9258

REDUCTION VERIFICATION SCALE 0 10 INCHES

VIII. CONTRACT DRAWINGS

(See Attached Half Size Drawings)

IX. RENDERINGS

View Looking South

View 1

Note:
1. Future building on The Yard "Parcel L" is shown for illustration purposes only and is not a representation of future architecture
2. All dimensions are from the Final Design Construction Documents.

Shaft Structure Brick Detail

Simple Brick Wall with Open Fences

View 2

Note: Future building on The Yard “Parcel L” is shown for illustration purposes only and is not a representation of future architecture

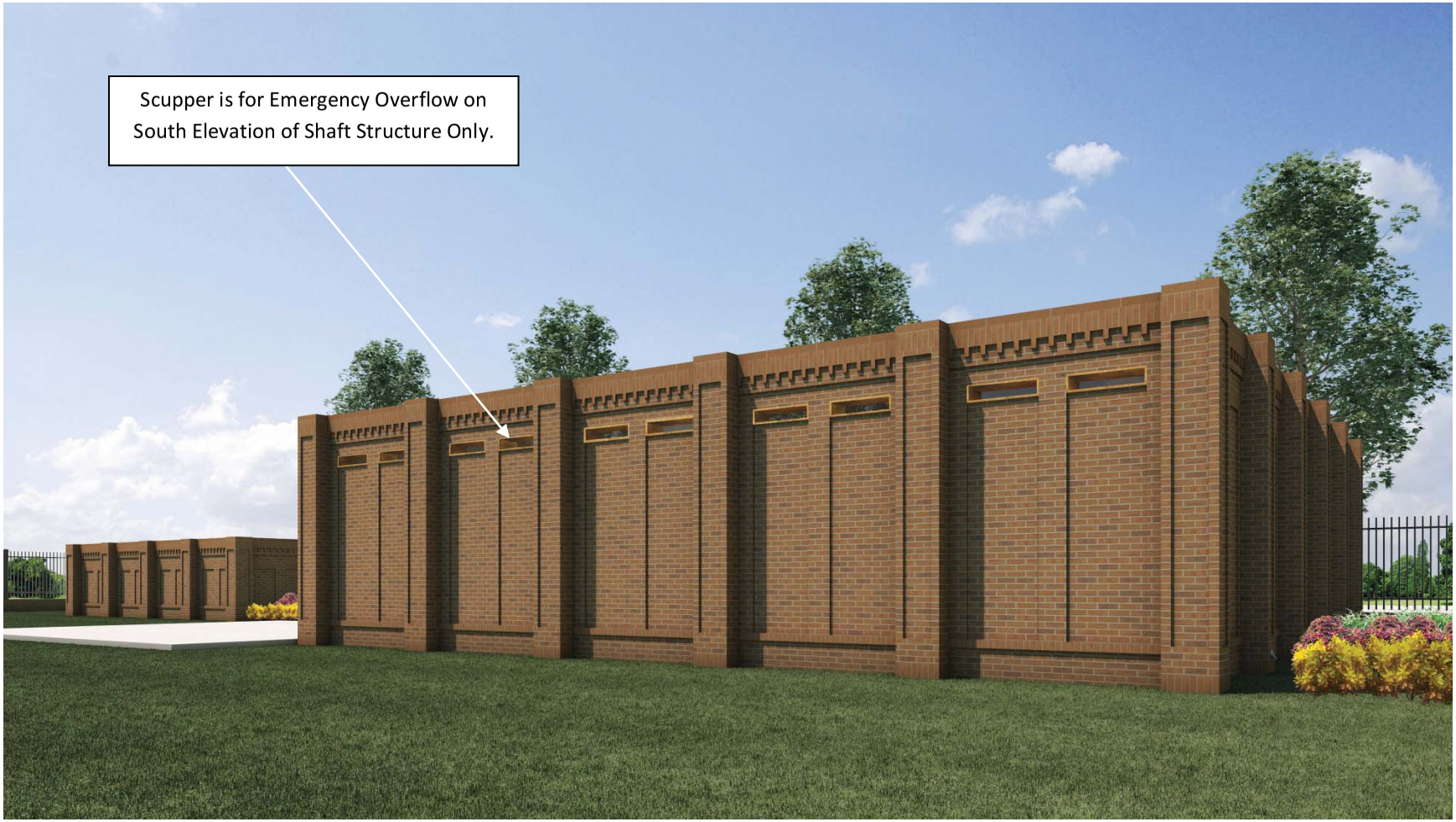
Tide Gate Structure and Shaft Structure

Contrast of 8 Foot Tide Gate Structure with 13 Foot Shaft Structure

View 3

Note: Future building on The Yard "Parcel L" is shown for illustration purposes only and is not a representation of future architecture

View Looking North



Rear View of Structure with no Windows or Doors Uniform Treatment on All Sides View 4

Note: Future building on The Yard "Parcel L" is shown for illustration purposes only and is not a representation of future architecture

View from Future Canal Street

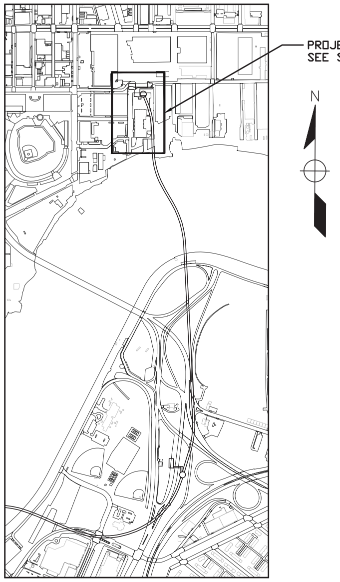
Looking East and Representing the 121 Foot Distance from the Main Pumping Station View 5

Note: Future building on The Yard “Parcel L” is shown for illustration purposes only and is not a representation of future architecture

X. SCALE MODEL
(Not Applicable)

XI. EXTERIOR MATERIAL SAMPLES
(Provided Separately)

XII. STORM WATER MANAGEMENT AND SEDIMENT AND EROSION CONTROL PLANS



KEY PLAN

SCALE: NTS

AS-BUILT CERTIFICATION BY PROFESSIONAL ENGINEER

WITHIN 21 DAYS AFTER COMPLETION OF CONSTRUCTION OF THE STORMWATER DISCHARGE FACILITY, PLEASE SEND THIS PAGE TO THE WATERSHED PROTECTION DIVISION- DEPARTMENT OF HEALTH.

1. STORMWATER DISCHARGE FACILITY INFORMATION:

SOURCE NAME: ____

SOURCE LOCATION: STREET: ____

CITY: ____

DCRA PERMIT NO.: ____

DATE ISSUED: ____

2. AS-BUILT CERTIFICATION:

I HEREBY CERTIFY THAT STORMWATER DISCHARGE FACILITY HAS BEEN BUILT SUBSTANTIALLY IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND THAT SUBSTANTIAL DEVIATIONS (NOTED BELOW) WILL NOT PREVENT THE SYSTEM FROM FUNCTIONING IN COMPLIANCE WITH THE REQUIREMENTS OF SECTION 526 THROUGH 535 OF DCMR-21, CHAPTER 5 WHEN PROPERLY MAINTAINED AND OPERATED. THESE DETERMINATIONS HAVE BEEN BASED UPON ON-SITE OBSERVATION OF CONSTRUCTION, SCHEDULED AND CONDUCTED BY ME OR BY A PROJECT REPRESENTATIVE UNDER MY DIRECT SUPERVISION. I HAVE ENCLOSED ONE SET OF AS-BUILT ENGINEERING DRAWINGS.

SIGNATURE OF ENGINEER ____ NAME (PLEASE TYPE) D.C. REG. NO. ____

AFFIX SEAL:

COMPANY NAME: ____

COMPANY ADDRESS: ____

DATE: ____ TELEPHONE: ____

SUBSTANTIAL DEVIATIONS FROM THE APPROVED PLANS AND SPECIFICATIONS (ATTACH ADDITIONAL SHEETS IF REQUIRED).

STATEMENT BY PERSON RESPONSIBLE FOR MAINTENENCE

THE UNDERSIGNED AGREES TO MAINTAIN AND OPERATE THE DISCHARGE FACILITIES IN SUCH A MANNER AS TO COMPLY WITH THE PROVISIONS OF SECTION 526 THROUGH 535 OF DCMR-21, CHAPTER 5. RESPONSIBILITY FOR MAINTENANCE AND OPERATION MAY BE TRANSFERRED TO ANOTHER ENTITY UPON WRITTEN NOTICE TO THE WATERSHED PROTECTION DIVISION OF THE DEPARTMENT OF HEALTH FROM THE UNDERSIGNED AND THE ENTITY ASSUMING RESPONSIBILITY, CERTIFYING THAT THE TRANSFER OF RESPONSIBILITY FOR MAINTENANCE AND OPERATION IN COMPLIANCE WITH SECTION 526 THROUGH 535 OF DCMR-21, CHAPTER 5 HAS BEEN ACCEPTED. FOR MAINTENANCE AND OPERATION IN COMPLIANCE WITH SECTION 509 THROUGH 518 HAS BEEN ACCEPTED.

SIGNATURE OF PERSON RESPONSIBLE FOR MAINTENANCE
(IT MAY BE THE APPLICANT)

CARLTON RAY, DC WATER AND SEWER AUTHORITY
NAME AND TITLE (PLEASE TYPE):

5000 OVERLOOK AVE, SW
ADDRESS:
WASHINGTON, DC 20032

DATE: ____ PHONE NO. 202 787 4469

STATEMENT BY PROFESSIONAL ENGINEER
REGISTERED IN THE DISTRICT OF COLUMBIA

THIS IS TO CERTIFY THAT THE ELEVATION INFORMATION DATA, HYDROLOGIC AND HYDRAULIC ANALYSES, AND ANY OTHER SUPPORTING DATA OF THIS FLOODPLAIN MANAGEMENT PLAN AND REPORT HAVE BEEN EXAMINED AND PERFORMED BY ME AND FOUND TO BE IN CONFORMITY WITH MODERN ENGINEERING PRINCIPLES. I FURTHER CERTIFY THAT ALL PROJECT WORKS ARE DESIGNED IN ACCORDANCE WITH SOUND ENGINEERING PRACTICES TO PROVIDE PROTECTION FROM THE BASE FLOOD (ALSO REFERRED TO AS THE "ONE HUNDRED YEAR FLOOD") AND ARE NOT IMPACTING OTHER STRUCTURES AND PROPERTIES, IN ACCORDANCE WITH THE SPECIFICATIONS REQUIRED UNDER TITLE 20 DCMR, CHAPTER 31. I UNDERSTAND THAT ANY FALSE STATEMENT MAY BE PUNISHABLE BY FINE OR IMPRISONMENT PURSUANT TO D.C. OFFICIAL CODE § 22-2405.A

AFFIX SEAL: DISTRICT OF COLUMBIA — JOSUE RODRIGUEZ MUNIZ — PE 906607 — CIVIL — PROFESSIONAL ENGINEER

JOSUE RODRIGUEZ, Project Manager Chester Engineers
NAME AND TITLE (PLEASE TYPE):

SIGNATURE OF THE ENGINEER

704 Quince Orchard Road, Suite 310, Gaithersburg, MD 20878
ADDRESS:

07/12/2013

STATEMENT BY PROFESSIONAL ENGINEER
REGISTERED IN THE DISTRICT OF COLUMBIA

THIS IS TO CERTIFY THAT THE ENGINEERING FEATURES OF THIS STORMWATER DISCHARGE FACILITY HAVE BEEN DESIGNED/EXAMINED BY ME AND FOUND TO BE IN CONFORMITY WITH MODERN ENGINEERING PRINCIPLES APPLICABLE TO THE TREATMENT AND DISPOSAL OF STORMWATER POLLUTANTS. I FURTHER CERTIFY THAT THE FACILITY HAS BEEN DESIGNED IN ACCORDANCE WITH THE SPECIFICATION REQUIRED UNDER SECTION 526 THROUGH 535 OF DCMR-21, CHAPTER 5. IT IS ALSO STATED THAT THE UNDERSIGNED HAS FURNISHED THE APPLICANT WITH A SET OF INSTRUCTIONS FOR MAINTENANCE AND OPERATION OF THE STORMWATER DISCHARGE FACILITY.

SIGNATURE OF THE ENGINEER

AFFIX SEAL: DISTRICT OF COLUMBIA — JOSUE RODRIGUEZ MUNIZ — PE 906607 — CIVIL — PROFESSIONAL ENGINEER

Chester Engineers
JOSUE RODRIGUEZ, Project Manager
NAME AND TITLE (PLEASE TYPE):

704 Quince Orchard Road, Suite 310
ADDRESS:
Gaithersburg, MD 20878

07/12/2013 (301) 840-1030

JOB		SHEET 34 OF 174
CONSTRUCTION	IN-HOUSE ☐ CONTRACT NO. ☐	
DESIGN	DETS FILE NO. ☐ DCFA NO. ☒	446
DESIGN MGR.	IN-HOUSE ☐ E.P.M.C. NO. ☐	
INDEX NO.		FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

PERMITTING SET 09/13/2013

NO.	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

DC CLEAN RIVERS PROJECT – ANACOSTIA RIVER PROJECTS
DIVISION I – MAIN PUMPING STATION DIVERSIONS

ESC PLAN

KEY PLAN AND CERTIFICATIONS

CIVIL

SCALE	AS SHOWN	DRAWN	CN
INTERCEPTOR		CHECKED	EUA
SYSTEM		SUBMITTED	
SURVEYED			J. RODRIGUEZ
DATE	09/06/2013	RECOMMENDED	
CADD FILE	LTCPI-C500.DWG		

C-500

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
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dc clean RIVERS PROJECT

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EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR SHALL NOTIFY THE DISTRICT DEPARTMENT OF ENVIRONMENT (DDOE) AT (202) 535-2977 AT LEAST 72 HOURS BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY AND, UNLESS WAIVED BY THE DEPARTMENT, SHALL BE REQUIRED TO HOLD A PRE-CONSTRUCTION MEETING BETWEEN PROJECT REPRESENTATIVES AND AN AUTHORIZED REPRESENTATIVE OF DDOE.

2. THE CONTRACTOR MUST NOTIFY DDOE IN WRITING AND BY TELEPHONE AT THE FOLLOWING POINTS:
   A. THE REQUIRED PRE-CONSTRUCTION MEETING.
   B. FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES.
   C. PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL STRUCTURE(S).
   D. PRIOR TO REMOVAL OF ALL SEDIMENT CONTROL DEVICES.
   E. PRIOR TO FINAL ACCEPTANCE.

3. CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE APPROVED PLAN AND CONSTRUCTION SEQUENCE, SHALL HAVE THEM INSPECTED AND APPROVED BY DDOE PRIOR TO BEGINNING ANY OTHER LAND DISTURBANCES, SHALL ENSURE THAT ALL RUNOFF FROM DISTURBED AREAS IS DIRECTED TO THE SEDIMENT CONTROL DEVICES, AND SHALL NOT REMOVE ANY EROSION OR SEDIMENT CONTROL MEASURE WITHOUT PRIOR PERMISSION FROM THE DEPARTMENT.

4. PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DEPOSITION OF MATERIALS ONTO TRAVERSED PUBLIC THOROUGHFARE(S). ALL MATERIALS DEPOSITED ONTO PUBLIC THOROUGHFARE(S) SHALL BE REMOVED IMMEDIATELY.

5. INSPECT DAILY AND MAINTAIN CONTINUOUSLY IN EFFECTIVE OPERATING CONDITION, ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL SUCH TIMES AS THEY ARE REMOVED WITH PRIOR PERMISSION FROM THE DEPARTMENT. THE CONTRACTOR IS RESPONSIBLE FOR IMMEDIATELY REPAIRING OR REPLACING ANY SEDIMENT CONTROL MEASURES WHICH HAVE BEEN DAMAGED OR REMOVED BY THE CONTRACTOR OR ANY OTHER PARTY.

6. REMOVE ALL DEBRIS FROM THE SITE AND SWEEP CLEAN ALLEYS AND/OR STREETS/SIDEWALKS AT ALL TIMES DURING DEMOLITION, EXCAVATION AND CONSTRUCTION.

7. STRIP AND STOCKPILE EXISTING TOPSOIL FROM SITE AREAS. PROTECT STOCKPILE WITH ESC MEASURES.

8. PROTECT ALL CATCH BASINS AND DRAIN AREAS DURING EXCAVATION AND CONSTRUCTION. IF ANY CATCH BASINS OR DRAINS BECOME CLOGGED AS A RESULT OF DEMOLITION, EXCAVATION OR CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR CLEANING INCLUDING DOWNSTREAM STORM DRAINS. MEASURES SHALL BE IMPLEMENTED TO PREVENT THE DISCHARGE OF WASTE MATERIALS, INCLUDING BUILDING MATERIALS, TO STORM DRAINS, STORM SEWERS OR THE RECEIVING WATERS.

9. ALL SEDIMENT BASINS, TRAP EMBANKMENTS, PERIMETER DIKES, AND ALL DISTURBED SLOPES STEEPER OR EQUAL TO 3:1 SHALL BE STABILIZED WITH SOD, SEED, AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES, WITHIN SEVEN (7) CALENDAR DAYS OF ESTABLISHMENT. ALL AREAS DISTURBED OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM MUST BE MINIMIZED AND STABILIZED IMMEDIATELY. MAINTENANCE MUST BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION.

10. APPLY SOD, SEED, AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES TO ALL DISTURBED AREAS WITHIN FOURTEEN (14) CALENDAR DAYS AFTER STRIPPING AND GRADING ACTIVITIES HAVE CEASED ON THAT AREA. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION. ACTIVE CONSTRUCTION AREAS, SUCH AS BORROW OR STOCKPILE AREAS, ROADWAY IMPROVEMENTS, AND AREAS WITHIN FIFTY (50) FEET OF A BUILDING/STRUCTURE UNDER CONSTRUCTION MAY BE EXEMPT FROM THIS REQUIREMENT, PROVIDED THAT EROSION AND SEDIMENT CONTROL MEASURES ARE INSTALLED AND MAINTAINED TO PROTECT THOSE AREAS.

11. ALL STREETS AND PARKING AREAS SHALL BE STABILIZED WITHIN FOURTEEN (14) CALENDAR DAYS OF FINAL GRADING WITH BASE COURSE CRUSHED STONE. STREETS AND PARKING AREAS WHERE UNDERGROUND UTILITIES WILL BE INSTALLED MAY BE EXPOSED FOR A PERIOD GREATER THAN FOURTEEN (14) DAYS BEFORE PERMANENT STABILIZATION CAN BE ACHIEVED.

12. THE MAXIMUM AREA THAT MAY BE EXPOSED AT ANY ONE TIME DURING GRADING SHALL BE LIMITED TO TWO HUNDRED AND TWENTY THOUSAND SQUARE FEET (220,000 FT²).

13. PRIOR TO REMOVAL OF SEDIMENT CONTROL MEASURES, THE CONTRACTOR SHALL STABILIZE ALL CONTRIBUTORY DISTURBED AREAS WITH REQUIRED SOIL AMENDMENTS AND TOPSOIL, USING SOD OR AN APPROVED PERMANENT SEED MIXTURE AND AN APPROVED ANCHORED MULCH. WOOD FIBER MULCH MAY ONLY BE USED IN SEEDING SEASON WHEN THE SLOPE DOES NOT EXCEED 10% AND GRADING HAS BEEN DONE TO PROMOTE SHEET FLOW DRAINAGE. AREAS BROUGHT TO FINISHED GRADE DURING THE SEEDING SEASON SHALL BE PERMANENTLY STABILIZED WITHIN FOURTEEN (14) CALENDAR DAYS OF ESTABLISHMENT. WHEN PROPERTY IS BROUGHT TO FINISHED GRADE DURING THE MONTHS OF NOVEMBER THROUGH FEBRUARY, AND PERMANENT STABILIZATION IS FOUND TO BE IMPRACTICAL, AN APPROVED TEMPORARY SEED AND STRAW ANCHORED MULCH SHALL BE APPLIED TO DISTURBED AREAS. THE FINAL PERMANENT STABILIZATION OF SUCH PROPERTY SHALL BE COMPLETED PRIOR TO THE FOLLOWING APRIL 15.

14. THE SITE PERMIT, WORK, MATERIALS, APPROVED ESC & SWM PLANS, DAILY LOG BOOKS AND TEST REPORTS SHALL BE AVAILABLE AT THE SITE FOR INSPECTION BY DULY AUTHORIZED OFFICIALS OF DDOE AND THE AGENCY RESPONSIBLE FOR PROJECT.

15. SURFACE DRAINAGE FLOWS OVER UNSTABILIZED CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER PREVENTING DRAINAGE FLOWS FROM TRAVERSING THE SLOPES OR BY INSTALLING PROTECTIVE DEVICES TO LOWER THE WATER DOWN SLOPE WITHOUT CAUSING EROSION. DIKES SHALL BE INSTALLED AND MAINTAINED AT THE TOP OF CUT OR FILL SLOPES UNTIL THE SLOPE AND DRAINAGE AREA TO IT ARE FULLY STABILIZED, AT WHICH TIME THEY MUST BE REMOVED AND FINAL GRADING DONE TO PROMOTE SHEET FLOW DRAINAGE. PROTECTIVE DEVICES MUST BE PROVIDED AT POINTS OF CONCENTRATED FLOW WHERE EROSION IS LIKELY TO OCCUR.

16. PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITHIN 7 CALENDAR DAYS OF ESTABLISHMENT WITH SOD OR SEED WITH AN APPROVED EROSION CONTROL MATTING OR BY OTHER APPROVED STABILIZATION MEASURES.

17. TEMPORARY SEDIMENT CONTROL DEVICES SHALL BE REMOVED, WITH PERMISSION OF DDOE INSPECTOR, WITHIN THIRTY (30) CALENDAR DAYS FOLLOWING ESTABLISHMENT OF PERMANENT STABILIZATION IN ALL CONTRIBUTORY DRAINAGE AREAS. STORMWATER MANAGEMENT STRUCTURES USED TEMPORARILY FOR SEDIMENT CONTROL SHALL BE CONVERTED TO THE PERMANENT CONFIGURATION WITHIN THIS TIME PERIOD AS WELL.

18. NO PERMANENT CUT OR FILL SLOPE WITH A GRADIENT STEEPER THAN 3:1 WILL BE PERMITTED IN LAWN MAINTENANCE AREAS OR ON RESIDENTIAL LOTS. A SLOPE GRADIENT OF UP TO 2:1 WILL BE PERMITTED IN NON-MAINTENANCE AREAS PROVIDED THAT THOSE AREAS ARE INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN WITH A LOW-MAINTENANCE GROUND COVER SPECIFIED FOR PERMANENT STABILIZATION. SLOPE GRADIENT STEEPER THAN 2:1 WILL NOT BE PERMITTED WITH VEGETATIVE STABILIZATION.

19. FOR FINISHED GRADING, THE CONTRACTOR SHALL PROVIDE ADEQUATE GRADIENTS SO AS TO PREVENT WATER FROM STANDING ON THE SURFACE OF LAWNS MORE THAN TWENTY-FOUR (24) HOURS AFTER THE END OF A RAINFALL, EXCEPT IN DESIGNATED DRAINAGE COURSES AND SWALE FLOW AREAS, WHICH MAY DRAIN AS LONG AS FORTY-EIGHT (48) HOURS AFTER THE END OF A RAINFALL.

20. SEDIMENT TRAPS OR BASINS ARE NOT PERMITTED WITHIN 20 FEET OF A BUILDING WHICH IS EXISTING OR UNDER CONSTRUCTION. NO BUILDING MAY BE CONSTRUCTED WITHIN 20 FEET OF A SEDIMENT TRAP OR BASIN.

21. THE DDOE INSPECTOR HAS THE OPTION OF REQUIRING ADDITIONAL SEDIMENT CONTROL MEASURES, AS DEEMED NECESSARY.

22. ALL TRAP ELEVATIONS ARE RELATIVE TO THE OUTLET ELEVATION, WHICH MUST BE ON EXISTING UNDISTURBED GROUND. ALL TRAPS MUST HAVE A STABLE OUTFALL. ALL TRAPS AND BASINS SHALL HAVE STABLE INFLOW POINTS.

23. VEGETATIVE STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH THE DISTRICT OF COLUMBIA 2003 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. REFER TO APPROPRIATE SPECIFICATIONS FOR TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, SODDING AND GROUND COVERS.

24. ANY STOCKPILING, REGARDLESS OF LOCATION, SHALL BE STABILIZED AND COVERED WITH MULCH, TEMPORARY VEGETATION, OR PLASTIC, AFTER ITS ESTABLISHMENT AND FOR THE DURATION OF THE PROJECT, EXCEPT FOR AREAS ON A STEEP SLOPE, WHICH SHALL BE PROTECTED IMMEDIATELY.

25. TEMPORARY SEDIMENT TRAP(S) SHALL BE CLEANED OUT AND RESTORED TO THE ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO THE POINT OF ONE-HALF (1/2) THE WET VOLUME OF THE TRAP OR WHEN REQUIRED BY THE DDOE INSPECTOR.

26. SEDIMENT REMOVED FROM TRAPS SHALL BE PLACED AND STABILIZED IN APPROVED AREAS, BUT NOT WITHIN A FLOODPLAIN. WETLAND OR TREE-SAVE AREA. WHEN PUMPING SEDIMENT LADEN WATER, THE DISCHARGE MUST BE DIRECTED TO A SEDIMENT TRAPPING DEVICE PRIOR TO RELEASE FROM THE SITE. A SUMP PIT MAY BE USED IF SEDIMENT TRAPS THEMSELVES ARE BEING PUMPED OUT.

27. ALL WATER REMOVED FROM EXCAVATED AREAS SHALL BE PASSED THROUGH A DDOE APPROVED DEWATERING PRACTICE OR PUMPED TO A SEDIMENT TRAP OR BASIN PRIOR TO DISCHARGE TO A FUNCTIONAL STORM DRAIN SYSTEM OR TO STABLE GROUND SURFACE.

28. CONSTRUCTION AREA, STAGING AREA, AND LIMITS OF DISTURBANCE SHALL BE SURROUNDED WITH AN APPROVED SAFETY FENCE. THE FENCE SHALL CONFORM TO LOCAL ORDINANCES AND REGULATIONS. THE CONTRACTOR SHALL CHECK WITH LOCAL BUILDING OFFICIALS ON APPLICABLE SAFETY REQUIREMENTS. WHERE SAFETY FENCE IS DEEMED APPROPRIATE AND LOCAL ORDINANCES DO NOT SPECIFY FENCING SIZES AND TYPES, THE FOLLOWING SHALL BE USED AS A MINIMUM STANDARD: THE SAFETY FENCE SHALL BE 8 FOOT HIGH CHAIN LINK FENCE (9 GAUGE) WITH 2X2 INCHES OPENINGS AND HAVE POSTS SPACED NO FARTHER APART THAN 8 FEET. SAFETY FENCE SHALL BE MAINTAINED AND IN GOOD CONDITION AT ALL TIMES. EXCAVATION IN TRAFFIC AREAS SHALL BE PROTECTED BY TEMPORARY CONCRETE BARRIERS PER DDOT STANDARD DETAILS 614.03 TO 614.08 WITH A 6-FOOT CHAIN LINK FENCE MOUNTED ON TOP OF THE BARRIER (TOTAL FENCE AND BARRIER HEIGHT SHALL NOT BE LESS THAN 8 FEET).

29. NO EXCAVATION IN THE AREAS OF EXISTING UTILITIES IS PERMITTED UNLESS THEIR LOCATION HAS BEEN DETERMINED. CALL "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF WORK.

30. SEDIMENT CONTROL FOR UTILITY CONSTRUCTION FOR AREAS OUTSIDE OF DESIGNED CONTROLS OR AS DIRECTED BY THE ENGINEER OR DDOE INSPECTOR:
   A. CALL "MISS UTILITY" AT 1-800-257-7777 48 HOURS PRIOR TO THE START OF WORK.
   B. TEMPORARY SILT FENCE SHALL BE PLACED IMMEDIATELY DOWNSTREAM OF TRENCH PRIOR ANY DISTURBANCE.
   C. EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF THE TRENCH.
   D. TRENCHES FOR UTILITY INSTALLATION SHALL BE BACKFILLED, COMPACTED, AND STABILIZED AT THE END OF EACH WORKING DAY. NO MORE TRENCH SHALL BE OPENED THAN CAN BE COMPLETED THE SAME DAY.

31. OFF-SITE SPOIL, WASTE, OR BORROW AREAS IN THE DISTRICT OF COLUMBIA OR ON FEDERAL PROPERTY SHALL HAVE PRIOR APPROVAL BY DDOE. ALL WASTE AND BORROW AREAS OFF-SITE SHALL BE PROTECTED BY SEDIMENT CONTROL MEASURES AND STABILIZED IN ACCORDANCE WITH THE ORDINANCES AND REGULATIONS OF THE JURISDICTION WHERE THE SPOIL, WASTE, OR BORROW AREA IS LOCATED.

32. ON SITES WHERE INFILTRATION DEVICES ARE USED FOR THE CONTROL OF STORMWATER, EXTREME CARE MUST BE TAKEN TO PREVENT RUNOFF FROM UNSTABILIZED AREAS FROM ENTERING THE STRUCTURE DURING CONSTRUCTION. SEDIMENT CONTROL DEVICES PLACED IN INFILTRATION AREAS MUST HAVE BOTTOM ELEVATIONS AT LEAST TWO (2) FEET HIGHER THAN THE FINISH GRADE BOTTOM ELEVATION OF THE INFILTRATION PRACTICE. WHEN CONVERTING A SEDIMENT TRAP TO AN INFILTRATION DEVICE, ALL ACCUMULATED SEDIMENT MUST BE REMOVED AND DISPOSED OF PRIOR TO FINAL GRADING OF INFILTRATION DEVICE.

33. WHEN A STORM DRAIN SYSTEM OUTFALL IS DIRECTED TO A SEDIMENT TRAP OR SEDIMENT BASIN AND THE SYSTEM IS TO BE USED FOR TEMPORARILY CONVEYING SEDIMENT LADEN WATER, ALL STORM DRAIN INLETS IN NON-SUMP AREAS SHALL HAVE TEMPORARY ASPHALT BERMS CONSTRUCTED AT THE TIME OF BASE PAVING TO DIRECT GUTTER FLOW INTO THE INLETS TO AVOID SURCHARGING AND OVERFLOW OF INLETS IN SUMP AREAS.

34. THE CONTRACTOR MUST NOTIFY DDOE OF ALL UTILITY CONSTRUCTION ACTIVITIES WITHIN THE PERMITTED LIMITS OF DISTURBANCE PRIOR TO THE COMMENCEMENT OF THOSE ACTIVITIES.

35. TOPSOIL MUST BE APPLIED TO ALL PERVIOUS AREAS WITHIN THE LIMITS OF DISTURBANCE PRIOR TO PERMANENT STABILIZATION IN ACCORDANCE WITH DISTRICT OF COLUMBIA 2003 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, I.38 "TOPSOIL".

36. CONTRACTOR SHALL USE "CLEAN FILL" AS SPECIFIED IN CONTRACT DOCUMENTS.

37. THE CONTRACTOR SHALL CALL THE INSPECTION/ENFORCEMENT BRANCH, WATERSHED PROTECTION DIVISION, DISTRICT DEPARTMENT OF THE ENVIRONMENT AT (202) 535-2977 FOR A PRE-CONSTRUCTION MEETING 72 HOURS PRIOR TO THE START OF ANY LAND DISTURBING ACTIVITY.

38. ADDITIONAL LOCATIONS AND TYPES OF ESC MEASURES WILL BE DETERMINED AS DEEMED NECESSARY BY INSPECTORS FROM THE INSPECTION/ENFORCEMENT BRANCH, WATERSHED PROTECTION DIVISION, DISTRICT DEPARTMENT OF THE ENVIRONMENT DURING LAND DISTURBING ACTIVITY.

SITE INFORMATION

TOTAL AREA OF SITE:	5.12	ACRES
TOTAL AREA DISTURBED (INCL. TEMP):	2.40	ACRES
TEMP. AREA DISTURBED:	0.22	ACRES
PERVIOUS AREA:	0.40	ACRES
IMPERVIOUS AREA:	2.00	ACRES
TOTAL CUT:	27,095	CU.YD (INCL. BORES)
TOTAL FILL:	6,650	CU.YD (IMPORTED FILL & BACKFILL)
NET:	27,095	CU.YD (SPOIL TO OFFSITE)

OFFSITE WASTE/BORROW AREA LOCATION — TO BE SUBMITTED BY CONTRACTOR FOR APPROVAL

LEGEND:

SSF — SSF	SUPER SILT FENCE
SF — SF	SILT FENCE
SCE	STABILIZED CONSTRUCTION ENTRANCE
— — — —	CONSTRUCTION / STAGING AREA
TP — TP	TREE PROTECTION FENCE
CIP	CURB INLET PROTECTION
— LOD —	LIMITS OF DISTURBANCE
FB	FILTER BAG
SP	SUMP PIT

NARRATIVE

THE PROJECT IS LOCATED IN THE DISTRICT OF COLUMBIA, AT THE INTERSECTION OF TINGEY ST. SE AND NEW JERSEY AVE. TO 2ND STREET.

THE PROPOSED IMPROVEMENTS AND ADDITIONAL STAGING AREA WILL DISTURB 2.40 AC OF THE 5.12 AC SITE INCLUDING DISTURBANCE WITHIN THE ROAD RIGHT-OF-WAY.

THE PROPOSED IMPROVEMENTS INCLUDE:
1. COMBINED SEWER DIVERSION CONCRETE STRUCTURES;
2. DRY AND WET UTILITY RELOCATIONS;
3. PAVEMENT AND SIDEWALK RESTORATION; AND,
4. LANDSCAPING RESTORATION.

SEDIMENT & EROSION CONTROL SHALL CONSIST OF SILT FENCE, SUPER SILT FENCE, CURB INLET PROTECTION, SUMP PUMP, SEDIMENT BAG, PORTABLE SEDIMENT TANK, AND TREE PROTECTION FENCES TO MINIMIZE IMPACT OF CONSTRUCTION.

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DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

DC CLEAN RIVERS PROJECT – ANACOSTIA RIVER PROJECTS DIVISION I – MAIN PUMPING STATION DIVERSIONS

ESC PLAN GENERAL NOTES

CIVIL

SCALE	AS SHOWN	DRAWN	CN
INTERCEPTOR		CHECKED	EUA
SYSTEM		SUBMITTED	J. RODRIGUEZ
SURVEYED			
DATE	09/06/2013	RECOMMENDED	
CADD FILE	LTCPI-C501		

C-501

DISTRICT OF COLUMBIA · JOSUE RODRIGUEZ MUNIZ · PE 906607 · CIVIL · PROFESSIONAL ENGINEER

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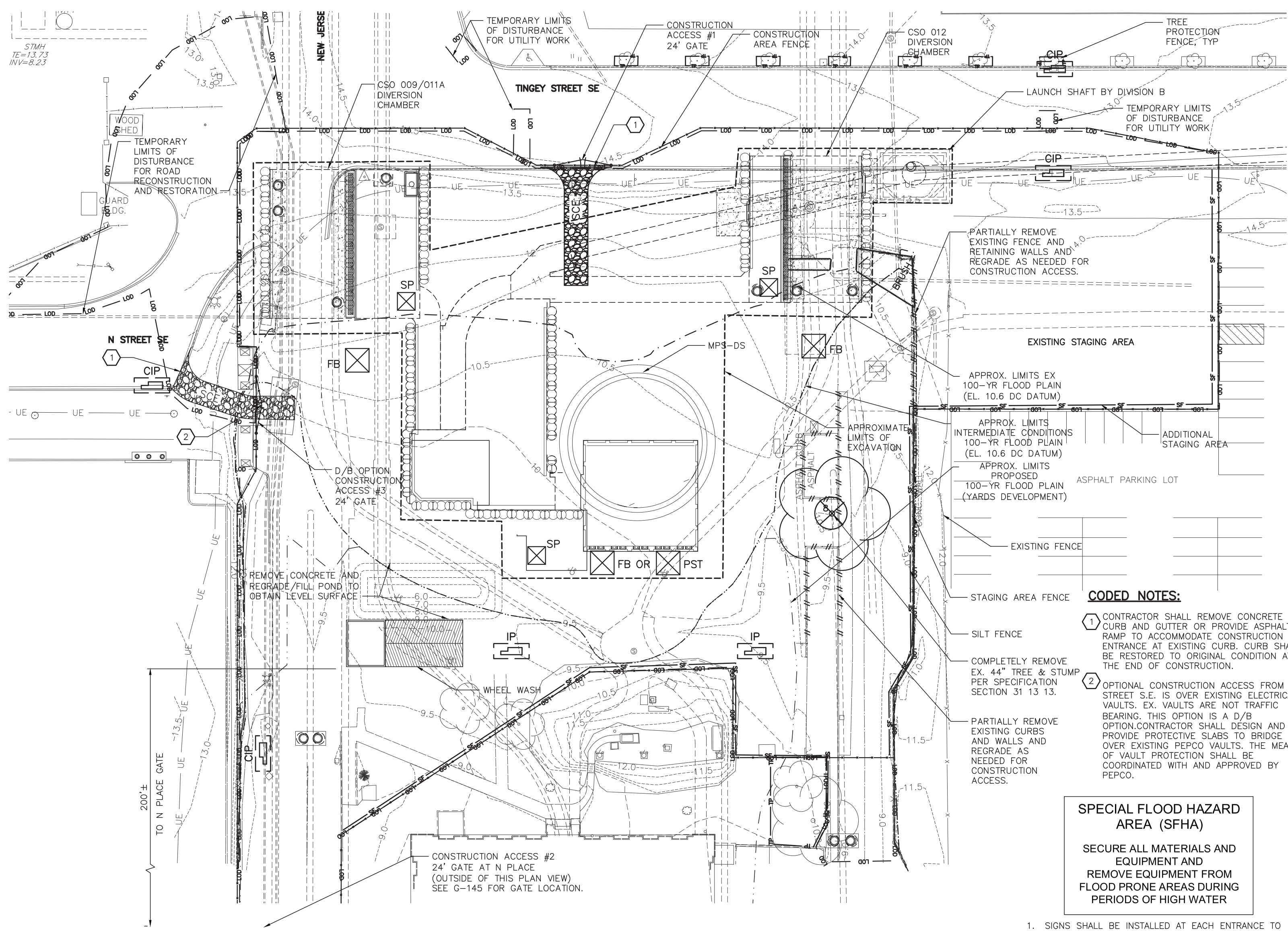

ESC PLAN

SCALE: 1" = 20'

SCALE: 1"=20'

GENERAL NOTES:

1. SEE SHEET C-530 TO C-534 FOR ESC STANDARD DETAILS.
2. SEE SHEET C-501 FOR ESC GENERAL NOTES AND SYMBOLS.
3. PROVIDE SAFETY FENCE AROUND CONSTRUCTION AREA AND STAGING AREA. SEE FENCE NOTES ON SHEET C-501.
4. FOR MINOR UTILITY CONSTRUCTION, SEE SHEET C-501 ESC GENERAL NOTES.
5. A PORTION OF THE STAGING AREA IS WITHIN THE 100-YEAR FLOODPLAIN AND IS AT RISK OF FLOODING. SECURE ALL MATERIALS AND EQUIPMENT AND REMOVE ALL MATERIALS AND EQUIPMENT FROM FLOOD PRONE AREAS DURING PERIODS OF HIGH WATER.
6. INSTALL INLET PROTECTION AS NEW INLET BECOMES OPERATIONAL.

EROSION AND SEDIMENT CONTROL SEQUENCE OF CONSTRUCTION:

1. NOTIFY THE DISTRICT DEPARTMENT OF ENVIRONMENT (DDOE) TO HOLD A PRE CONSTRUCTION MEETING AT (202) 536-2977. NOTIFY DDOE AT LEAST 72 HOURS BEFORE COMMENCING ANY DISTURBING ACTIVITY.
2. INSTALL TREE PROTECTION FENCING WITH SIGNAGE.
3. INSTALL JERSEY BARRIERS AND SAFETY FENCE AROUND CONSTRUCTION AND STAGING AREAS. SEE FENCE NOTES ON SHEET C-501. ALL DEBRIS SHALL BE REMOVED FROM JOB SITE BY THE END OF EACH DAY.
4. INSTALL SCE, SILT FENCES, AND CURB INLET PROTECTIONS. NOTIFY DDOE SEDIMENT CONTROL INSPECTOR AND OBTAIN APPROVAL BEFORE PROCEEDING FURTHER.
5. REMOVE EX. TREE AND DEMOLISH ON-SITE CURBS AND RETAINING WALLS AS NEEDED. SAW CUT AND REMOVE EX. CONCRETE ON-SITE PAVEMENT AS NEEDED FOR NEW CONSTRUCTION. SEE C-100 FOR LIMITS OF PAVEMENT REMOVAL.
6. INSTALL MAINTENANCE OF TRAFFIC CONTROL. REFER TO "MAINTENANCE OF TRAFFIC" (MOT) PLANS.
7. BEGIN INSTALLATION OF EXCAVATION SUPPORT SYSTEM. PROVIDE FILTER BAG OR PORTABLE SEDIMENT TANKS AND SUMP PIT FOR EXCAVATION DEWATERING. SWEEP ROADS ADJACENT TO CONSTRUCTION AREA BY THE END OF EACH DAY.
8. CONTINUE CONSTRUCTION OF DIVERSION STRUCTURES, CHANNEL, UTILITIES AND ABOVE GROUND STRUCTURES.
9. ONCE CONSTRUCTION IS COMPLETED, REMOVE GRAVEL AND TEMPORARY PAVEMENT, GRADE ON SITE AREA TO FINAL (INTERIM) CONTOURS. RESTORE ASPHALT PAVEMENT AND ALL OTHER DISTURBED AREAS TO ORIGINAL CONDITION. REMOVE ESC MEASURES.

PERMITTING SET 09/13/2013

CODED NOTES:

(1) CONTRACTOR SHALL REMOVE CONCRETE CURB AND GUTTER OR PROVIDE ASPHALT RAMP TO ACCOMMODATE CONSTRUCTION ENTRANCE AT EXISTING CURB. CURB SHALL BE RESTORED TO ORIGINAL CONDITION AT THE END OF CONSTRUCTION.

(2) OPTIONAL CONSTRUCTION ACCESS FROM N STREET S.E. IS OVER EXISTING ELECTRICAL VAULTS. EX. VAULTS ARE NOT TRAFFIC BEARING. THIS OPTION IS A D/B OPTION.CONTRACTOR SHALL DESIGN AND PROVIDE PROTECTIVE SLABS TO BRIDGE OVER EXISTING PEPCO VAULTS. THE MEANS OF VAULT PROTECTION SHALL BE COORDINATED WITH AND APPROVED BY PEPCO.

SPECIAL FLOOD HAZARD AREA (SFHA)

SECURE ALL MATERIALS AND EQUIPMENT AND REMOVE EQUIPMENT FROM FLOOD PRONE AREAS DURING PERIODS OF HIGH WATER

1. SIGNS SHALL BE INSTALLED AT EACH ENTRANCE TO THE STAGING AREA.
2. SIGN SHALL BE 30"X48" INSTALLED ON TWO SIGN SUPPORTS WITH BOTTOM OF SIGN AT LEAST 4 FEET ABOVE GROUND.
3. LETTERING SHALL BE 2" AND 1.6" TALL - BLACK ON WHITE REFLECTIVE BACKGROUND.

SPECIAL FLOOD HAZARD AREA SIGN DETAIL

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C-510

DISTRICT OF COLUMBIA JOSUE RODRIGUEZ MUNIZ PE 906607 CIVIL PROFESSIONAL ENGINEER

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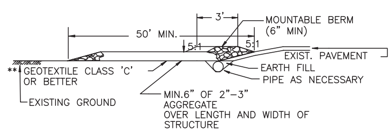
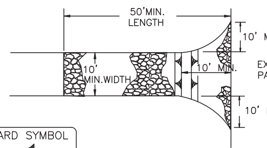
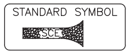
DETAIL 1 – STABILIZED CONSTRUCTION ENTRANCE



PROFILE



STANDARD SYMBOL

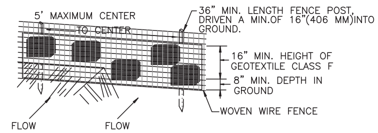


PLAN VIEW

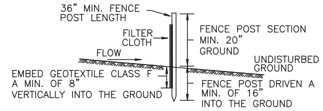
CONSTRUCTION SPECIFICATION

1. LENGTH – MIN. OF 50' RAMP x 30' RAMP FOR SINGLE RESIDENCE LOT.
2. WIDTH – 10' MINIMUM, SHALL BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
3. GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE.
4. STONE – CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
5. SURFACE WATER – ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND MIN. OF 6" OF STONE OVER THE PIPE. PIPE SHALL BE SIZED ACCORDING TO THE DRAINAGE AREA. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE WILL NOT BE NECESSARY. PIPE SHALL BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6" MIN. SHALL BE REQUIRED.
6. LOCATION – A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

DETAIL 4 – SILT FENCE

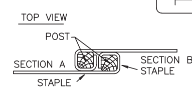


PERSPECTIVE VIEW



CROSS SECTION

STANDARD SYMBOL
——SF——



JOINING TWO ADJACENT SILT FENCE SECTIONS

CONSTRUCTION SPECIFICATIONS

1. FENCE POST SHALL BE A MINIMUM OF 36' LONG DRIVEN 16" MINIMUM INTO THE GROUND. WOOD POST SHALL BE 1 1/2" SQUARE (MINIMUM) CUT, OR 1 3/4" DIAMETER (MINIMUM) ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POST SHALL BE STANDARD T OR U SECTION WEIGHING NOT LESS THAN 1.00 POUND PER LINEAR FOOT.
2. GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

TENSILE STRENGTH	50 LBS/IN. (MIN)	TEST: ASTM D-4595
TENSILE MODULUS	20 LBS/IN (MIN.)	TEST: ASTM D-4595
FLOW RATE	0.3 GAL FT/MIN.(MAX)	TEST: ASTM D-5141
FILTERING EFFICIENCY	75% (MIN.)	TEST: ASTM D-5141

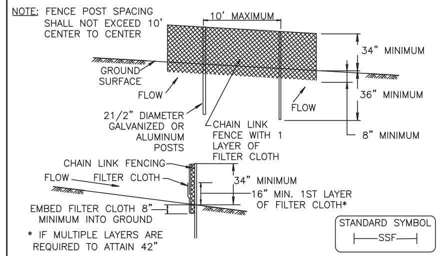
3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEDIMENT BYPASS.
4. SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHES 50% OF THE FABRIC HEIGHT.

SILT FENCE DESIGN CRITERIA

SLOPE STEEPNESS	(MAXIMUM) SLOPE LENGTH	(MAXIMUM) SILT FENCE LENGTH
FLATTER THAN 50:1	UNLIMITED	UNLIMITED
50:1 TO 10:1	125 FT.	1,000 FT.
10:1 TO 5:1	100 FT.	750 FT.
5:1 TO 3:1	60 FT.	500 FT.
3:1 TO 2:1	40 FT.	250 FT.
2:1 AND STEEPER	20 FT.	125 FT.

NOTE: IN AREAS OF LESS THAN 2% SLOPE AND SANDY SOILS (USDA GENERAL CLASSIFICATION SYSTEM, SOIL CLASS A) MAXIMUM SLOPE LENGTH AND SILT FENCE LENGTH WILL BE UNLIMITED. IN THESE AREAS SILT FENCE MAY BE THE ONLY PERIMETER CONTROL REQUIRED.

DETAIL 5 – SUPER SILT FENCE



STANDARD SYMBOL
——SSF——

CONSTRUCTION SPECIFICATIONS

1. FENCING SHALL BE 42" IN HEIGHT AND CONSTRUCTED IN ACCORDANCEWITH THE LATEST MARYLAND STATE HIGHWAY DETAILS FOR CHAIN LINKFENCING. THE SPECIFICATION FOR A 6' FENCE SHALL BE USED, SUBSTITUTING 42" FABRIC AND 6' LENGTH POSTS.
2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE.
3. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.
4. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE GROUND.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT.
7. FILTER CLOTH SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

TENSILE STRENGTH	0 LBS/IN(MIN.)	TEST: ASTM D-4595
TENSILE MODULUS	20 LBS/IN(MIN.)	TEST: ASTM D-4595
FLOW RATE	0.3 GAL/FT/MINUTE(MAX.)	TEST: ASTM D-5141
FILTERING EFFICIENCY	75(MIN.)	TEST: ASTM D-5141

DESIGN CRITERIA

SLOPE	SLOPE STEEPNESS	SLOPE LENGTH (MAXIMUM)	SILT FENCE LENGTH (MAXIMUM)
0 – 10%	0 – 10:1	UNLIMITED	UNLIMITED
10 – 20%	10:1 – 5:1	200 FT.	1,500 FT.
20 – 33%	5:1 – 3:1	100 FT.	1,000 FT.
33 – 50%	3:1 – 2:1	100 FT.	500 FT.
50% +	2:1 +	50 FT.	250 FT.

GENERAL NOTES:

1. FOR MATERIAL SPECIFICATIONS, SEE DISTRICT OF COLUMBIA 2003 STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

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INDEX NO.	FOREMAN-INSPECTOR

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DIVISION I – MAIN PUMPING STATION DIVERSIONS

ESC PLAN
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SYSTEM		SUBMITTED	J. RODRIGUEZ
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DATE	09/06/2013	RECOMMENDED	
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C-530

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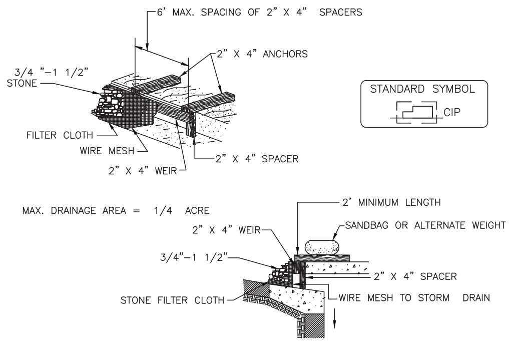
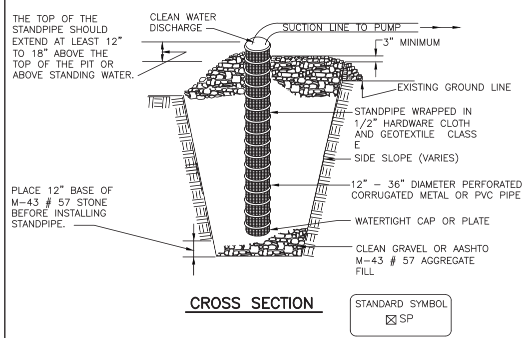
DETAIL 6C – CURB INLET PROTECTION (COG OR COS INLETS)



CONSTRUCTION SPECIFICATIONS

1. ATTACH A CONTINUOUS PIECE OF WIRE MESH 30" MIN. WIDTH BY THROAT LENGTH PLUS 4" TO THE 2"x4" WEIR (MEASURING THROAT LENGTH) PLUS 2' AS SHOWN ON THE STANDARD DRAWING.
2. PLACE A CONTINUOUS PIECE OF GEOTEXTILE CLASS E THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH IT TO THE 2"x4" WEIR.
3. SECURELY NAIL THE 2"x4" WEIR TO A 9" LONG VERTICAL SPACER TO BE LOCATED BETWEEN THE WEIR AND THE INLET FACE (MAX. 4' APART).
4. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL (MIN. 2' LENGTHS OF 2"x4" TO THE TOP OF THE WEIR AT SPACER LOCATIONS). THE 2"x4" ANCHORS SHALL EXTEND ACROSS THE INLET TOP AND BE HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHT.
5. THE ASSEMBLY SHALL BE PLACED SO THAT THE END SPACERS ARE A MIN. 1' (0.31 m) BEYOND BOTH ENDS OF THE THROAT OPENING.
6. FORM THE 1/2"x1/2" WIRE MESH AND THE GEOTEXTILE FABRIC TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN 3/4"x1/2" STONE OVER THE WIRE MESH AND GEOTEXTILE IN SUCH A MANNER TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.
7. THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.
8. ASSURE THAT STORM FLOW DOES NOT BYPASS THE INLET BY INSTALLING A TEMPORARY EARTH OR ASPHALT DIKE TO DIRECT FLOW TO THE INLET.

DETAIL 32B – SUMP PIT DETAIL



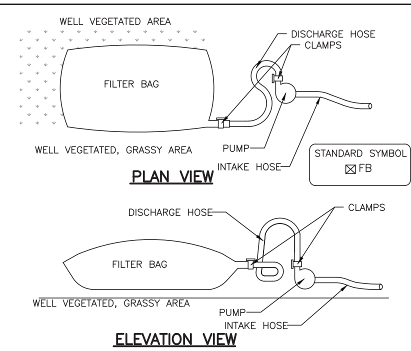
CROSS SECTION

STANDARD SYMBOL ☒SP

CONSTRUCTION SPECIFICATIONS

1. PIT DIMENSIONS ARE VARIABLE, WITH THE MINIMUM DIAMETER BEING 2 TIMES THE STANDPIPE DIAMETER.
2. THE STANDPIPE SHOULD BE CONSTRUCTED BY PERFORATING A 12" TO 24" DIAMETER CORRUGATED OR PVC PIPE. THEN WRAPPING WITH 1/2" HARDWARE CLOTH AND GEOTEXTILE CLASS E. THE PERFORATIONS SHALL BE 1/2" X 6" SLITS OR 1" DIAMETER HOLES.
3. A BASE OF FILTER MATERIAL CONSISTING OF CLEAN GRAVEL OR #57 STONE SHOULD BE PLACED IN THE PIT TO A DEPTH OF 12". AFTER INSTALLING THE STANDPIPE, THE PIT SURROUNDING THE STANDPIPE SHOULD THEN BE BACKFILLED WITH THE SAME FILTER MATERIAL.
4. THE STANDPIPE SHOULD EXTEND 12" TO 18" ABOVE THE LIP OF THE PIT OR THE RISER CREST ELEVATION (BASIN DEWATERING ONLY) AND THE FILTER MATERIAL SHOULD EXTEND 3" MINIMUM ABOVE THE ANTICIPATED STANDING WATER ELEVATION.

DETAIL 33 – PUMPED WATER FILTER BAG



NOTES :

1. FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.
2. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.
3. BAGS SHALL BE LOCATED IN WELL VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE FLOW PATH SHALL BE PROVIDED. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%.
4. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.
5. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.
6. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

GENERAL NOTES:

1. FOR MATERIAL SPECIFICATIONS, SEE DISTRICT OF COLUMBIA 2003 STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

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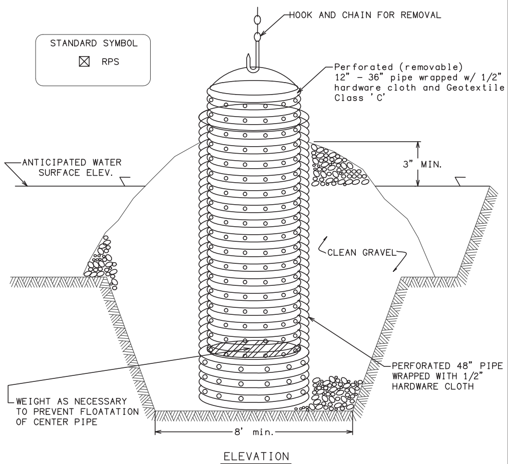
DETAIL 32A – PORTABLE SEDIMENT TANK



ELEVATION

Construction Specifications

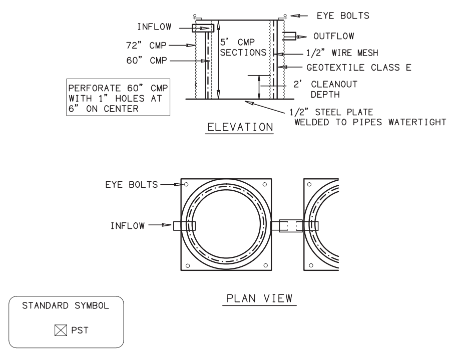
1. The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.

2. After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.

3. The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" X 6" slits or 1" diameter holes 6" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class C.

4. The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

DETAIL 35 – PORTABLE SEDIMENT TANK (VERTICAL)



Construction Specifications

1. The following formula should be used in determining the storage volume of the sediment tank: 1 cubic foot of storage for each gallon per minute of pump discharge capacity.

2. An example of a typical sediment tank is shown above. Other container designs can be used if the storage volume is adequate and approval is obtained from the local approving agency.

3. Tanks may be connected in series.

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VEGETATIVE STABILIZATION METHODS AND MATERIALS

SECTION I –VEGETATIVE STABILIZATION METHODS AND MATERIALS

A. SITE PREPARATION

I. INSTALL EROSION AND SEDIMENT CONTROL STRUCTURES (EITHER TEMPORARY OR PERMANENT) SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, WATERWAYS, OR SEDIMENT CONTROL BASINS.
II. PERFORM ALL GRADING OPERATIONS AT RIGHT ANGLES TO THE SLOPE. FINAL GRADING AND SHAPING IS NOT USUALLY NECESSARY FOR TEMPORARY SEEDING.
III. SCHEDULE REQUIRED SOIL TESTS TO DETERMINE SOIL AMENDMENT COMPOSITION AND APPLICATION RATES FOR SITES HAVING DISTURBED AREA OVER 5 ACRES.

B. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

I. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OVER 5 ACRES. SOIL ANALYSIS MAYBE PERFORMED BY THE UNIVERSITY OF THE DISTRICT OF COLUMBIA OR A CERTIFIED COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
II. FERTILIZERS SHALL BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROVED EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS SHALL ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE STATE FERTILIZER LAWS AND SHALL BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTEE OF THE PRODUCER.
III. LIME MATERIALS SHALL BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED) WHICH CONTAINS AT LEAST 50% TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE SHALL BE GROUND TO SUCH FINENESS THAT AT LEAST 50% WILL PASS THROUGH A #100 MESH SIEVE AND 98 –100% WILL PASS THROUGH A #20 MESH SIEVE.
IV. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 –5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

C. SEEDBED PREPARATION

I. TEMPORARY SEEDING
   a. SEEDBED PREPARATION SHALL CONSIST OF LOOSENING SOIL TO A DEPTH OF 3" TO 5" BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT SHOULD NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPED AREAS (GREATER THAN 3:1) SHOULD BE TRACKED LEAVING THE SURFACE IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
   b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
   c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 –5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

II. PERMANENT SEEDING
   a. MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT:
      1. SOIL PH SHALL BE BETWEEN 6.0 AND 7.0.
      2. SOLUBLE SALTS SHALL BE LESS THAN 500 PARTS PER MILLION (PPM).
      3. THE SOIL SHALL CONTAIN LESS THAN 40% CLAY BUT ENOUGH FINE GRAINED MATERIAL (> 30% SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION IS IF LOVEGRASS OR SERECIA LESPEDEZA IS TO BE PLANTED, THEN A SANDY SOIL (<30% SILT PLUS CLAY) WOULD BE ACCEPTABLE
      4. SOIL SHALL CONTAIN 1.5% MINIMUM ORGANIC MATTER BY WEIGHT.
      5. SOIL MUST CONTAIN SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
      6. IF THESE CONDITIONS CANNOT BE MET BY SOILS ON SITE, ADDING TOPSOIL IS REQUIRED IN ACCORDANCE WITH SECTION 38 STANDARD AND SPECIFICATION FOR TOPSOIL.
   b. AREAS PREVIOUSLY GRADED IN CONFORMANCE WITH THE DRAWINGS SHALL BE MAINTAINED IN A TRUE AND EVEN GRADE, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3–5" TO PERMIT BONDING OF THE TOPSOIL TO THE SURFACE AREA AND TO CREATE HORIZONTAL EROSION CHECK SLOTS TO PREVENT TOPSOIL FROM SLIDING DOWN A SLOPE.
   c. APPLY SOIL AMENDMENTS AS PER SOIL TEST OR AS INCLUDED ON THE PLANS.
   d. MIX SOIL AMENDMENTS INTO THE TOP 3–5" OF TOPSOIL BY DISKING OR OTHER SUITABLE MEANS. LAWN AREAS SHOULD BE RAKED TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION, LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE. STEEP SLOPES (STEEPER THAN 3:1) SHOULD BE TRACKED BY A DOZER LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. THE TOP 1–3" OF SOIL SHOULD BE LOOSE AND FRIABLE. SEEDBED LOOSENING MAY NOT BE NECESSARY ON NEWLY DISTURBED AREAS.

D. SEED SPECIFICATIONS

I. ALL SEED MUST MEET THE REQUIREMENTS OF THE DISTRICT OF COLUMBIA DPW STANDARD AND SPECIFICATIONS FOR HIGHWAYS AND STRUCTURES AND SPECIFICATION 42.0 VEGETATIVE STABILIZATION. ALL SEED SHALL BE SUBJECT TO RE–TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED SHALL HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON THIS JOB.

NOTE: SEED TAGS SHALL HE MADE AVAILABLE TO THE INSPECTOR TO VERIFY TYPE AND RATE OF SEED USED.

II. INOCULANT –THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES SHALL BE A PURE CULTURE OF NITROGEN–FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS SHALL NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANT AS DIRECTED ON PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75–80° F. CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.

E. METHODS OF SEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER), BROADCAST OR DROP SEEDER, OR A CULTIPACKER SEEDER.

I. HYDROSEEDING:
   a. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES AMOUNTS WILL NOT EXCEED THE FOLLOWING: NITROGEN; MAXIMUM OF 100 LBS. PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS): 200 LBS/AC; K20 (POTASSIUM): 200 LBS/AC.
   b. LIME –USE ONLY GROUND AGRICULTURAL LIMESTONE, (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANYONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
   c. SEED AND FERTILIZER SHALL BE MIXED ON SITE AND SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.

II. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
   a. SEED SPREAD DRY SHALL BE INCORPORATED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON THE TEMPORARY OR PERMANENT SEEDING SUMMARIES OR TABLES 42 OR 43. THE SEEDED AREA SHALL THEN BE ROLLED WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
   b. WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

III. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
   a. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.
   b. WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO IONDIRECTS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

F. MULCH SPECIFICATIONS (IN ORDER OF PREFERENCE)

I. STRAW SHALL CONSIST OF THOROUGHLY THRESHED WHEAT, RYE OR OAT STRAW, REASONABLY BRIGHT IN COLOR, AND SHALL NOT BE MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY AND SHALL BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED BY THE NRCS SEED LAW.

NOTE: ONLY STERILE STRAW MULCH SHOULD BE USED IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.

II. WOOD CELLULOSE FIBER MULCH (WCFM)
   a. WCFM SHALL CONSIST OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
   b. WCFM SHALL BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
   c. WCFM, INCLUDING DYE, SHALL CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
   d. WCFM MATERIALS SHALL BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL SHALL FORM A BLOTTER–LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND SHALL COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
   e. WCFM MATERIAL SHALL CONTAIN NO ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO–TOXIC.
   f. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH TO APPROXIMATELY 10 MM., DIAMETER APPROXIMATELY 1 MM., PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6% MAXIMUM AND WATER HOLDING CAPACITY OF 90% MINIMUM.

G. MULCHING SEEDED AREAS –MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.

I. IF GRADING IS COMPLETED OUTSIDE OF THE SEEDING SEASON, MULCH ALONE SHALL BE APPLIED AS PRESCRIBED IN THIS SECTION AND MAINTAINED UNTIL THE SEEDING SEASON RETURNS AND SEEDING CAN BE PERFORMED IN ACCORDANCE WITH THESE SPECIFICATIONS.
II. WHEN STRAW MULCH IS USED, IT SHALL BE SPREAD OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS/ACRE. MULCH SHALL BE APPLIED TO A UNIFORM LOOSE DEPTH OF BETWEEN 1" AND 2". MULCH APPLIED SHALL ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. IF A MULCH ANCHORING TOOL IS TO BE USED, THE RATE SHOULD BE INCREASED TO 2.5 TONS/ACRE.
III. WOOD CELLULOSE FIBER USED AS A MULCH SHALL BE APPLIED AT A NET DRY WEIGHT OF 1,500 LBS. PER ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER, AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LBS. OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

H. SECURING STRAW MULCH (MULCH ANCHORING): MULCH ANCHORING SHALL BE PERFORMED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON SIZE OF AREA AND EROSION HAZARD:

I. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF TWO (2) INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD BE USED ON THE CONTOUR IF POSSIBLE.
II. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. THE FIBER BINDER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 POUNDS/ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
III. APPLICATION OF LIQUID BINDERS SHOULD BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. THE REMAINDER OF AREA SHOULD APPEAR UNIFORM AFTER BINDER APPLICATION. SYNTHETIC BINDERS –SUCH AS ACRYLIC DLR (AGRO–TACK), DCA~70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH.
IV. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4' TO 15' FEET WIDE AND 300 TO 3,000 FEET LONG.

STANDARD AND SPECIFICATIONS FOR DUST CONTROL

1. THE CONTRACTOR SHALL CONDUCT OPERATIONS AND MAINTAIN THE PROJECT SITE SO AS TO MINIMIZE THE CREATION AND DISPERSION OF DUST. DUST CONTROL SHALL BE USED THROUGHOUT THE WORK AT THE SITE. REFER TO GENERAL REQUIREMENTS SECTION GR–42 AND TO DC STANDARD SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL STD. 44 FOR ADDITIONAL INFORMATION.
2. THE CONTRACTOR MUST PROVIDE CLEAN WATER, FREE FROM SALT, OIL AND OTHER DELETERIOUS MATERIAL TO BE USED FOR ON–SITE DUST CONTROL.
3. THE CONTRACTOR SHALL SUPPLY WATER SPRAYING EQUIPMENT CAPABLE OF ACCESSING ALL WORK AREAS.
4. THE CONTRACTOR SHALL IMPLEMENT STRICT DUST CONTROL MEASURES DURING ACTIVE CONSTRUCTION PERIODS ON–SITE. THESE CONTROL MEASURES SHALL GENERALLY CONSIST OF WATER APPLICATIONS THAT SHALL BE APPLIED A MINIMUM OF ONCE PER DAY DURING DRY WEATHER OR MORE OFTEN AS REQUIRED TO PREVENT DUST EMISSIONS.
5. FOR WATER APPLICATION TO UNDISTURBED SOIL SURFACES, THE CONTRACTOR SHALL:
   A. APPLY WATER WITH EQUIPMENT CONSISTING OF TANK, SPRAY BAR, PUMP WITH DISCHARGE PRESSURE GAUGE.
   B. ARRANGE SPRAY BAR HEIGHT, NOZZLE SPACING AND SPRAY PATTERN TO PROVIDE COMPLETE COVERAGE OF GROUND WITH WATER.
   C. DISPERSE WATER THROUGH NOZZLES ON SPRAY BAR AT 20 PSI, MINIMUM. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
6. FOR WATER APPLICATION TO SOIL SURFACES DURING DEMOLITION AND/OR EXCAVATION, THE CONTRACTOR SHALL:
   A. APPLY WATER WITH EQUIPMENT CONSISTING OF A TANK, PUMP WITH DISCHARGE GAUGE, HOSES AND MIST NOZZLES.
   B. LOCATE TANK AND SPRAYING EQUIPMENT SO THAT THE ENTIRE EXCAVATION AREA CAN BE MISTED WITHOUT INTERFERING WITH DEMOLITION AND/OR EXCAVATION EQUIPMENT OR OPERATIONS. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
   C. APPLY WATER SPRAY IN A MANNER TO PREVENT MOVEMENT OF SPRAY BEYOND THE SITE BOUNDARIES.

STREET SWEEPING

1. STREETS WITHIN ONE BLOCK SHALL BE INSPECTED DAILY, ANY DROPPED SOIL, DUST AND/OR DEBRIS SHALL BE REMOVED.
2. VACUUM TYPE STREET CLEANER SHALL BE USED TO EFFECTIVELY REMOVE TOTAL DUST AND DIRT ON PAVED SURFACES.
3. ROADS SHALL BE SWEPT ON A WEEKLY BASIS (MINIMUM) DURING ALL ON AND OFF SITE HAULING OPERATIONS FOR UP TO TWO BLOCKS ALONG HAUL ROUTES.

GENERAL NOTES:

1. FOR MATERIAL SPECIFICATIONS, SEE DISTRICT OF COLUMBIA 2003 STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

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ESC PLAN
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SCALE	AS SHOWN	DRAWN	CN
INTERCEPTOR		CHECKED	EUA
SYSTEM		SUBMITTED	J. RODRIGUEZ
SURVEYED			
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VEGETATIVE STABILIZATION METHODS AND MATERIALS

SECTION II –TEMPORARY SEEDING

VEGETATION –ANNUAL GRASS OR GRAIN USED TO PROVIDE COVER ON DISTURBED AREAS FOR UP TO 12 MONTHS. FOR LONGER DURATION OF VEGETATIVE COVER, PERMANENT SEEDING IS REQUIRED.

A. SEED MIXTURES –TEMPORARY SEEDING
SEE "TEMPORARY SEEDING SUMMARY" TABLE. FOR SITES HAVING SOIL TESTS PERFORMED, THE RATES SHOWN ON THIS TABLE SHALL BE DELETED AND THE RATES RECOMMENDED BY THE TESTING AGENCY SHALL BE WRITTEN IN. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.

SECTION III: PERMANENT SEEDING

SEEDING GRASS AND LEGUMES TO ESTABLISH GROUND COVER FOR A MINIMUM PERIOD OF ONE YEAR ON DISTURBED AREAS GENERALLY RECEIVING LOW MAINTENANCE.

A. SEED MIXTURES –PERMANENT SEEDING
1. SEE "PERMANENT SEEDING SUMMARY" TABLE. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, THE RATES SHOWN ON THIS TABLE SHALL BE DELETED AND THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY SHALL BE WRITTEN IN.
2. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREAFORM FERTILIZER (46–0–0) AT 3 ½ LBS/1000 SQ. FT. (150 LBS/AC) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING TABLE.

SECTION IV –SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).

A. GENERAL SPECIFICATIONS
I. CLASS OF TURF GRASS SOD SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED OR APPROVED. SOD LABELS SHALL BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
II. SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4", PLUS OR MINUS 114", AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH. INDIVIDUAL PIECES OF SOD SHALL BE CUT TO THE SUPPLIER'S WIDTH AND LENGTH. MAXIMUM ALLOWABLE DEVIATION FROM STANDARD WIDTHS AND LENGTHS SHALL BE 5 PERCENT. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
III. STANDARD SIZE SECTIONS OF SOD SHALL BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
IV. SOD SHALL NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
V. SOD SHALL BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD SHALL BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

B. SOD INSTALLATION
I. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, THE SUBSOIL SHALL BE LIGHTLY IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD.
II. THE FIRST ROW OF SOD SHALL BE LAID IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND TIGHTLY WEDGED AGAINST EACH OTHER. LATERAL JOINTS SHALL BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS, WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
III. WHEREVER POSSIBLE, SOD SHALL BE LAID WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. SOD SHALL BE ROLLED AND TAMPED, PEGGED OR OTHERWISE SECURED TO PREVENT SLIPPAGE ON SLOPES AND TO ENSURE SOLID CONTACT BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.
IV. SOD SHALL BE WATERED IMMEDIATELY FOLLOWING ROLLING OR TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD SHALL BE COMPLETED WITHIN EIGHT HOURS.

C. SOD MAINTENANCE
I. IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHALL BE PERFORMED DAILY OR AS OFTEN AS NECESSARY DURING THE FIRST WEEK AND IN SUFFICIENT QUANTITIES TO MAINTAIN MOIST SOIL TO A DEPTH OF 4". WATERING SHOULD BE DONE DURING THE HEAT OF THE DAY TO PREVENT WILTING.
II. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
III. THE FIRST MOWING OF SOD SHOULD NOT BE ATTEMPTED UNTIL THE SOD IS FULLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF SHALL BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2" AND 3" UNLESS OTHERWISE SPECIFIED.

SECTION V–TURFGRASS ESTABLISHMENT

AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROLLNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OFMAINTENANCE. AREAS TO RECEIVE SEED SHALL BE TILLED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVELED AND RAKED TO PREPARE A PROPER SEEDBED. STONES AND DEBRIS OVER I 1/2 INCHES IN DIAMETER SHALL BE REMOVED. THE RESULTING SEEDBED SHALL BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.

NOTE: CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY.

A. TURFGRASS MIXTURES
I. KENTUCKY BLUEGRASS – FULL SUN MIXTURE – FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS/1000 SQUARE FEET. A MINIMUM OF THREE BLUEGRASS CULTIVARS SHOULD BE CHOSEN RANGING FROM A MINIMUM OF 10% TO A MAXIMUM OF 35% OF THE MIXTURE BY WEIGHT.
II. KENTUCKY BLUEGRASS/PERENNIAL RYE – FULL SUN MIXTURE – FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE/1000 SQUARE FEET. A MINIMUM OF 3 KENTUCKY BLUEGRASS CULTIVARS MUST BE CHOSEN, WITH EACH CULTIVAR RANGING FROM 10% TO 35% OF THE MIXTURE BY WEIGHT.
III. TALL FESCUE/KENTUCKY BLUEGRASS – FULL SUN MIXTURE – FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS
SEEDING RATE: 5 TO 8 LB/1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.

TEMPORARY SEEDING SUMMARY

SEED MIXTURE (HARDINESS ZONE: 6b)					FERTILIZER RATE (10–10–10)	LIME RATE
No.	SPECIES*	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS (IN)		
--	BARLEY	122	3/1 – 4/30	1 – 2	600 LB/AC (15 LB/1000 SF)	2 TONS/AC (92 LB/1000 SF)
--	OATS	96	3/1 – 4/30	1 – 2		
--	BARLEY OR RYE PLUS FOXTAIL MILLET	150	3/1 – 8/14, 10/15 – 11/15	1		

*FOR MORE SPECIES, SEE DC 2003 STDS. & SPECS. FOR ESC, P. J–42–21, TABLE 43

PERMANENT SEEDING SUMMARY

SEED MIXTURE (HARDINESS ZONE: 6b)					FERTILIZER RATE (10–20–20)			LIME RATE
No.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS (IN)	N	P205	K20	
7	TALL FESCUE (83%), WEEPING LOVEGRASS (2%), SERECIA LESPEDEZA (15%)	110, 3, 20	3/1 – 10/15	2" MIN	90 LB/AC (2.0 LB/1000 SF)	175 LB/AC (4 LB/1000 SF)	175 LB/AC (4 LB/1000 SF)	2 TONS/AC (92 LB/1000 SF)

*FOR MORE SPECIES, SEE DC 2003 STDS. & SPECS. FOR ESC, P. J–42–19, TABLE 42

IV. KENTUCKY BLUEGRASS/FINE FESCUE –SHADE MIXTURE –FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30–40% AND CERTIFIED FINE FESCUE 60–70%. SEEDING RATE: 1 1/2–3 LBS/1000 SQUARE FEET. A MINIMUM OF 3 KENTUCKY BLUEGRASS CULTIVARS MUST BE CHOSEN, WITH EACH CULTIVAR RANGING FROM A MINIMUM OF 10% TO A MAXIMUM OF 35% OF THE MIXTURE BY WEIGHT.

NOTE: TURFGRASS VARIETIES SHOULD BE SELECTED FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MIMEO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND".

B. IDEAL TIMES OF SEEDING
MARCH I–APRIL 30, AUGUST 15–OCTOBER 31

C. IRRIGATION
IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (112" –1" EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FINALLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

D. REPAIRS AND MAINTENANCE
INSPECT ALL SEEDED AREAS FOR FAILURES AND MAKE NECESSARY REPAIRS, REPLACEMENTS, AND RESEEDINGS WITHIN THE PLANTING SEASON.
I. ONCE THE VEGETATION IS ESTABLISHED, THE SITE SHALL HAVE 95% GROUNDCOVER TO BE CONSIDERED ADEQUATELY STABILIZED.
II. IF THE STAND PROVIDES LESS THAN 40% GROUND COVERAGE, REESTABLISH FOLLOWING ORIGINA1LIME, FERTILIZER, SEEDBED PREPARATION AND SEEDING RECOMMENDATIONS.
III. IF THE STAND PROVIDES BETWEEN 40% AND 94% GROUND COVERAGE, OVERSEEDING AND FERTILIZING USING HALF OF THE RATES ORIGINALLY APPLIED MAY BE NECESSARY.
IV. MAINTENANCE FERTILIZER RATES FOR PERMANENT SEEDINGS ARE SHOWN IN TABLE 41.

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