

ARCHITECT



1355 PICCADILLY DRIVE SUITE 200
ROCKVILLE, MD 20859
301-770-9177(P) 301-330-3224(F)

CIVIL / STRUCTURAL

ADTEK ENGINEERS
97 MONOCACY BOULEVARD, UNIT H
FREDERICK, MARYLAND 21701
301-662-4408(P) 301-662-7484(F)

MECH/ELECTRICAL/PLUMBING

JAMES POSEY ASSOCIATES
3112 LORD BALTIMORE DRIVE
BALTIMORE, MARYLAND 21244
301-676-6100(P) 301-298-9820(F)

CONSTRUCTION MANAGER

HESS CONSTRUCTION
804 WEST DIAMOND AVENUE, SUITE 300
GATHERSBURG, MD 20678
301-470-9000(P) 301-470-9000(F)

LEGEND

- PROPERTY LINE
- CONTOUR
- BENCHMARK
- MANHOLE
- SANITARY SEWER
- STORM DRAIN
- UTILITY POLE
- OVERHEAD UTILITY LINE
- ELECTRIC LINE
- GAS LINE
- GAS VALVE
- WATER LINE
- WATER VALVE
- FIRE HYDRANT
- WATER METER
- TELEPHONE LINE
- RIPRAP
- LIGHT
- SIGN
- CHAIN LINK FENCE
- TREELINE
- EXIST ASPHALT TO BE REMOVED
- TREE TO BE REMOVED
- EXISTING FEATURE TO BE REMOVED
- EXISTING ASPHALT TO BE MILLED (2" DEPTH)
- EXISTING TREE WITH CRITICAL ROOT ZONES AND STRUCTURAL ROOT ZONES

GENERAL DEMOLITION NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WORK WITH REPRESENTATIVE UTILITY COMPANIES AND IMPLEMENTING REQUIRED UTILITY-RELATED WORK ACCORDINGLY.
2. THE CONTRACTOR SHALL NOTIFY THE OWNER AND/OR OWNERS REPRESENTATIVE IMMEDIATELY UPON ENCOUNTERING ANY HAZARDOUS MATERIALS. THE CONTRACTOR SHALL DOCUMENT SAME TO THE OWNER TO OBTAIN DIRECTION AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.
3. CONTRACTOR'S SHALL SHEET/SHORE AND BRACE ANY AND ALL STRUCTURES EXPOSED BY EXCAVATION/CONSTRUCTION.
4. IN THE EVENT THAT, DURING DEMOLITION OR CONSTRUCTION ACTIVITIES THE CONTRACTOR ENCOUNTERS ANY EXISTING UTILITIES/STRUCTURES NOT SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE OWNER FOR DIRECTIONS PRIOR TO PROCEEDING WITH ANY WORK.
5. ALL SAWCUTS ARE TO BE STRAIGHT AND EVEN, JAGGED EDGES WILL NOT BE ACCEPTED.
6. REPLACE DEMOLISHED MATERIALS WITH STRUCTURAL FILL, COMPACTED TO MINIMUM 95% OF MAX DRY DENSITY BASED UPON ASTM D1557. DO NOT REPLACE MATERIAL IF ABOVE SUBGRADE OF NEW CONSTRUCTION.
7. EXISTING CURB AND GUTTER ALONG ADJACENT STREETS AND ENTRANCE WAYS TO REMAIN, UNLESS NOTED OTHERWISE.
8. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING PAVING/FEATURES THAT ARE NOT SHOWN FOR DEMOLITION/REMOVAL.
9. WHERE CONCRETE TO BE DEMOLISHED IS SHOWN ADJACENT TO CURB OR CURB AND GUTTER, CONTRACTOR SHALL SAWCUT ALONG BACK OF CURB IF EXISTING CURB AND CONCRETE ARE MONOLITHIC.

PROFESSIONAL SEAL:

PRINTS ISSUED

NO.	DESCRIPTION:	DATE:
1	RFP-040	03/01/18

8001 LYNNBROOK DRIVE
BETHESDA, MD 20814
L. 850 F. 1462
PARCEL N719
ZONED: R60
LAND USE: EC
ACCT NO.
07-00417763

LYNNBROOK CENTER
STORMWATER IMPROVEMENTS
MONTGOMERY COUNTY PUBLIC SCHOOLS

EXISTING CONDITIONS & DEMOLITION PLAN

PROJECT NO:
177702

DATE:
03/02/2018

SCALE:

SHEET NO:

C-1

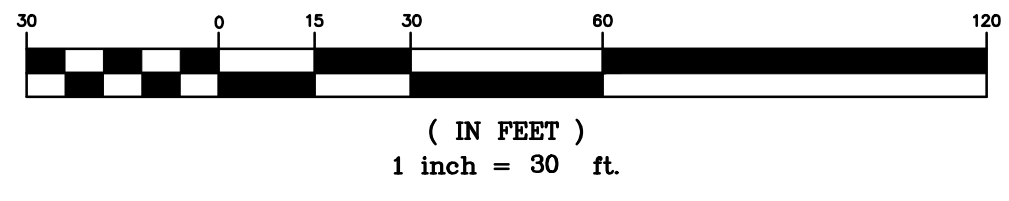
MISS UTILITY

CALL "MISS UTILITY AT 8-1-1 OR 1-800-257-7777 OR LOG ON TO www.call811.com OR www.missutility.net 48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY. THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. BEFORE EXCAVATION THE CONTRACTOR IS RESPONSIBLE FOR CALLING TICKET CHECK AT 1-866-821-4226 TO VERIFY THAT ALL UTILITIES HAVE BEEN MARKED, 48 HOURS AFTER CALLING MISS UTILITY.

NOTE:

THE CONTRACTOR IS ALSO RESPONSIBLE FOR LOCATING ALL PRIVATE UTILITIES (NOT LOCATED BY MISS UTILITY) WITHIN MCP'S PROPERTY AT THEIR EXPENSE. ALL UTILITIES SHOWN ON THE PLANS ARE PROVIDED FOR INFORMATION ONLY AND SHALL BE CONSIDERED APPROXIMATE. MCP'S SHALL NOT BE RESPONSIBLE FOR LOCATING UNDERGROUND UTILITIES. ANY UTILITIES OR OTHER UNDERGROUND FACILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S SOLE EXPENSE.

CAUTION: IF THIS DRAWING IS A REDUCTION, GRAPHIC SCALE MUST BE USED (ORIGINAL SIZE = 30" x 42")



OWNER/APPLICANT
MONTGOMERY COUNTY PUBLIC SCHOOLS
45 WEST GUDE DRIVE, SUITE 4300
ROCKVILLE, MARYLAND 20850-4038
ATTN: ROBBIE S. BADSTIBNER
robby_s_badstibner@cpmsmd.org
TEL: 240.314.1018 FAX: 240.279.3003

EXISTING & PROPOSED LEGEND

EXISTING BOUNDARY LINE	---	EXISTING CURB & GUTTER	=====
EXISTING PUE/PRE LINE	---	EXISTING LIGHT	○
EXISTING CONTOUR	-96-	EXISTING SIGN	+
EXISTING BENCHMARK	①	EXISTING BOLLARD	⊕
EXISTING SEWER MANHOLE	⊙	EXISTING RIPRAP	⊖
EXISTING WATER MANHOLE	⊙	EXISTING CHAIN LINK FENCE	⊖
EXISTING STORM MANHOLE	⊙	EXISTING WOOD FENCE	⊖
EXISTING TELEPHONE MANHOLE	⊙	EXISTING BARBED WIRE FENCE	⊖
EXISTING ELECTRIC MANHOLE	⊙	EXISTING TREE LINE	⊖
EXISTING GAS MANHOLE	⊙	EXISTING TREE LINE	⊖
EXISTING SANITARY SEWER	X'S	EXISTING BORING LOCATION	⊖
EXISTING WATER LINE	X"W	PROPOSED STORM DRAIN	⊖
EXISTING STORM DRAIN	X"RCP	PROPOSED SWM UNDERDRAIN	⊖
EXISTING UTILITY POLE	⊖	W/ CLEANOUT	⊖
EXISTING OVDH UTILITY LINE	OHU	PROPOSED MANHOLE	⊖
EXISTING U/G ELECTRIC LINE	E	PROPOSED CONTOUR	-96-
EXISTING U/G GAS LINE	G	PROPOSED CHAIN-LINK FENCE	⊖
EXISTING U/G TELE LINE	T	PROPOSED DEPRESSED CONCRETE CURB	⊖
EXISTING U/G CABLE LINE	C	PROPOSED BIOFILTER/SAND FILTER	⊖
EXISTING U/G FIBER OPTIC	F/O	SEE STORMWATER DETAILS, SHEETS C-4C & C-4D	
EXISTING GAS VALVE	⊖		
EXISTING WATER VALVE	⊖		
EXISTING FIRE HYDRANT	⊖		
EXISTING WATER METER	⊖		

SEDIMENT CONTROL LEGEND

LIMITS OF DISTURBANCE	LOD
SUPER SILT FENCE	SSP / SSP
CONTRACTOR STAGING AREA	⊖
TEMP CONSTRUCTION FENCE (6' HIGH)	⊖
INLET PROTECTION DEVICE	CIP, SIP
CONCRETE WASHOUT STATION	CWS
EXISTING TREE WITH CRITICAL ROOT ZONES AND STRUCTURAL ROOT ZONES	⊖
SOIL TYPE	2UC

TREE PROTECTION:

ANY TREE WITHIN THE LIMITS OF DISTURBANCE, NOT SHOWN TO BE PROTECTED SHALL BE REMOVED, U.N.O.

FLOODPLAIN CERTIFICATION

THIS SITE DOES NOT FALL WITHIN ANY 100-YEAR FLOODPLAIN AS MAPPED BY THE FEDERAL EMERGENCY MANAGEMENT ADMINISTRATION, DATED SEPTEMBER 09, 2006, COMMUNITY PANEL NO. 240049-0200C.

PROPOSED SLOPES:

THERE ARE NO PROPOSED FINISH GRADES EXCEEDING 3:1.

OFF-SITE DRAINAGE

THERE IS NO OFF-SITE DRAINAGE ENTERING THE SITE.

MISS UTILITY

CALL "MISS UTILITY AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF WORK. THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. BEFORE EXCAVATION THE CONTRACTOR IS RESPONSIBLE FOR CALLING TICKET CHECK AT 1-866-821-4226 TO VERIFY THAT ALL UTILITIES HAVE BEEN MARKED, 48 HOURS AFTER CALLING MISS UTILITY. THE EXCAVATOR IS RESPONSIBLE FOR COMPLIANCE WITH REQUIREMENTS OF CHAPTER 36A OF THE MONTGOMERY COUNTY CODE.

TOTAL PROPERTY AREA		TOTAL DISTURBED AREA	
183,528 SQUARE FEET		23,453 SQUARE FEET	
SHADE TREES REQUIRED		*SHADE TREES PROPOSED TO BE PLANTED	
15		0	
FEE IN LIEU		FEE	
(TREES REQUIRED - TREES PROPOSED) X \$250		\$ 3,750	
REQUIRED NUMBER OF SHADE TREES			
AREA (SQ. FT.) OF THE LIMITS OF DISTURBANCE	FROM	TO	NUMBER OF SHADE TREES REQUIRED
1 to 6,001	1	6,000	3
6,001 to 8,001	6,001	8,000	6
8,001 to 12,001	8,001	12,000	9
12,001 to 14,001	12,001	14,000	12
14,001 to 40,000	14,001	40,000	15

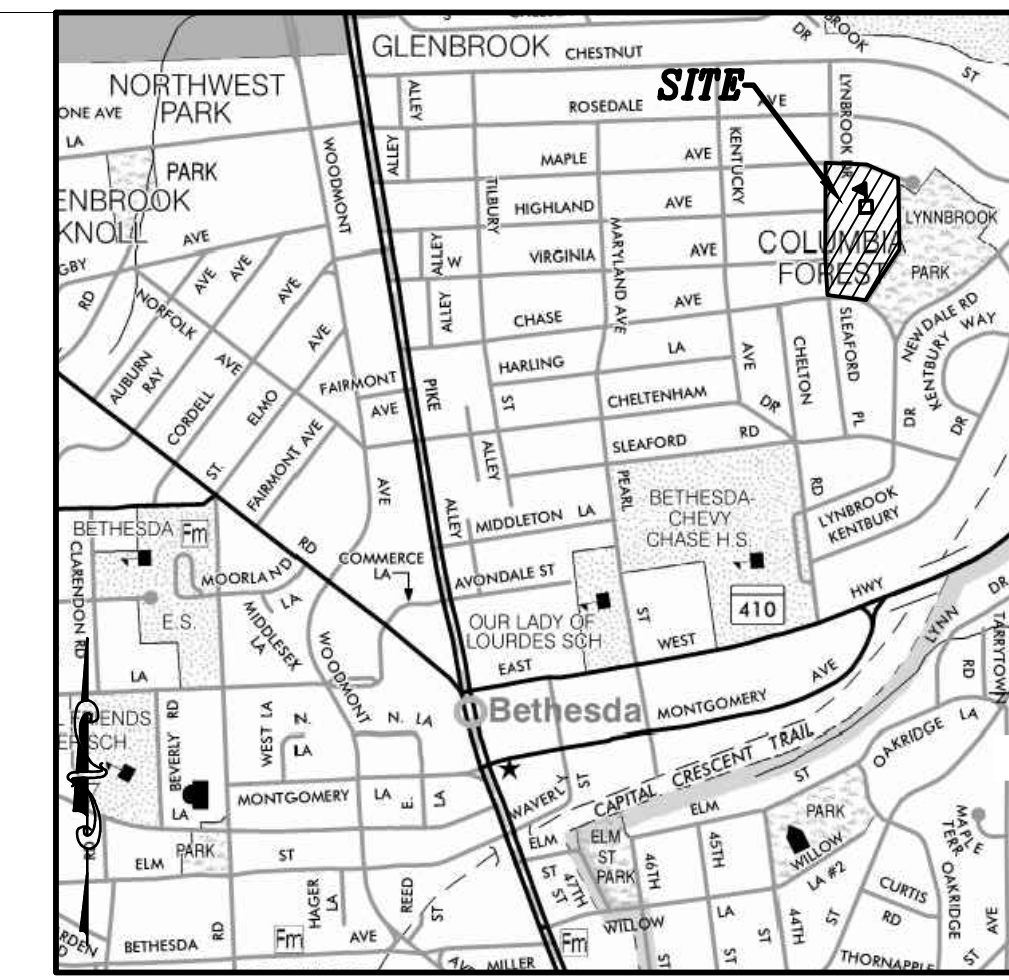
IF THE SQUARE FOOTAGE OF THE LIMITS OF DISTURBANCE IS MORE THAN 40,000, THEN THE NUMBER OF SHADE TREES REQUIRED MUST BE CALCULATED USING THE FOLLOWING FORMULA:
(NUMBER OF SQUARE FEET IN LIMITS OF DISTURBANCE / 40,000) X 15

EXEMPTION CATEGORIES:	
<input type="checkbox"/> 55-5(g) ANY ACTIVITY THAT IS SUBJECT TO ARTICLE II OF CHAPTER 22A*	<input type="checkbox"/> 55-5(h) ANY STREAM RESTORATION PROJECT IF THE PERSON PERFORMING THE WORK HAS OBTAINED ALL NECESSARY PERMITS;
<input type="checkbox"/> 55-5(i) ANY COMMERCIAL LOGGING OR TIMBER HARVESTING OPERATION WITH AN APPROVED EXEMPTION FROM ARTICLE II OF CHAPTER 22A;	<input type="checkbox"/> 55-5(j) CUTTING OR CLEARING ANY TREE TO COMPLY WITH APPLICABLE PROVISIONS OF ANY FEDERAL, STATE, OR LOCAL LAW GOVERNING SAFETY OF DAMS;
<input type="checkbox"/> 55-5(k) ANY ACTIVITY CONDUCTED BY THE COUNTY PARKS DEPARTMENT;	<input type="checkbox"/> OTHER: SPECIFY PER SECTION 55-5 OF THE CODE.
<input type="checkbox"/> 55-5(l) ROUTINE OR EMERGENCY MAINTENANCE OF AN EXISTING STORMWATER MANAGEMENT FACILITY, INCLUDING AN EXISTING ACCESS ROAD, IF THE PERSON PERFORMING THE MAINTENANCE HAS OBTAINED ALL REQUIRED PERMITS.	

SEQUENCE OF CONSTRUCTION:

- PRIOR TO CLEARING TREES, INSTALLING SEDIMENT CONTROL MEASURES, OR GRADING, A PRE-CONSTRUCTION MEETING MUST BE CONDUCTED ON-SITE WITH THE MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES (MCPPS) SEDIMENT CONTROL INSPECTOR 240.777.6311 (48 HOURS NOTICE), THE MNCPPC, PLANNING DEPARTMENT, PLANS ENFORCEMENT INSPECTOR 301.496.4550 (48 HOURS NOTICE), THE OWNER'S REPRESENTATIVE 240.314.1008 AND THE SITE ENGINEER 301.662.4408 (48 HOURS NOTICE). IN ORDER FOR THE MEETING TO OCCUR, THE CONTRACTOR MUST PROVIDE ONE PAPER SET OF APPROVED SEDIMENT CONTROL PLANS TO THE MCPPS SEDIMENT CONTROL INSPECTOR AT THE PRE-CONSTRUCTION MEETING. IF NO PLANS ARE PROVIDED, THE MEETING SHALL NOT OCCUR AND WILL NEED TO BE RESCHEDULED PRIOR TO COMMENCING ANY WORK.
- THE LIMITS OF DISTURBANCE MUST BE FIELD MARKED PRIOR TO CLEARING OF TREES, INSTALLATION OF SEDIMENT CONTROL MEASURES, CONSTRUCTION, OR OTHER LAND DISTURBING ACTIVITIES.
- THE PERMITEE MUST OBTAIN WRITTEN APPROVAL FROM THE MNCPPC INSPECTOR, CERTIFYING THAT THE LIMITS OF DISTURBANCE AND TREE PROTECTION MEASURES ARE CORRECTLY MARKED AND INSTALLED PRIOR TO COMMENCING CLEARING.
- THE NEED FOR AND LOCATIONS OF A STABILIZED CONSTRUCTION ENTRANCE SHALL BE AT THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR. THE CONTRACTOR SHALL ASSUME THE COST IF REQUIRED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE SEDIMENT IS NOT TRACKED ONTO PAVEMENT OR LEAVES THE SITE FROM CONSTRUCTION TRAFFIC.
- CLEAR AND GRADE FOR INSTALLATION OF SEDIMENT CONTROL DEVICES.
- INSTALL PERIMETER SEDIMENT CONTROL DEVICES, INCLUDING SUPER SILT FENCE, TEMPORARY CONSTRUCTION FENCE AND WASH STATION.
- BEGIN DEMOLITION OF EX-TREES, ASPHALT, SAWCUT ASPHALT, PARTIAL CONCRETE FLUME/CHANNEL, REMOVE ALL FEATURES ASSOCIATED WITH BASKETBALL COURT AND PARK BENCH, BASKETBALL POLES AND BENCH TO BE RELOCATED. CONTRACTOR TO COORDINATE WITH MPCS FOR RELOCATION OF BASKETBALL COURTS AND BENCH.
- BEGIN CONSTRUCTION OF EW-4, MH-3, MH-2 & MH-1, ABANDON EXISTING 15"ROP OUT AT EX INLET, EX-A, AND CONNECT PROPOSED 15"HOPE TO INLET.
- CONSTRUCT CONCRETE DEPRESSED CURB.
- CONSTRUCT SWM-21 & I-5, PLUG I-5, PER PLAN. HAUL OFF TO BE DISPOSED OF OFF SITE AT A DPS APPROVED LOCATION.
- CONSTRUCT SWM-22 & I-6, PLUG I-6, PER PLAN. HAUL OFF TO BE DISPOSED OF OFF SITE AT A DPS APPROVED LOCATION.
- CONSTRUCT SWM-23 & I-7, PLUG I-7, PER PLAN. HAUL OFF TO BE DISPOSED OF OFF SITE AT A DPS APPROVED LOCATION.
- CONSTRUCT SWM-24 & I-8, PLUG I-8, PER PLAN. HAUL OFF TO BE DISPOSED OF OFF SITE AT A DPS APPROVED LOCATION.
- CONTACT MCPPS INSPECTOR PRIOR TO INSTALLING MEDIA, WITH WRITTEN PERMISSION OF MCPPS INSPECTOR, REMOVE PLUGS, ADD PIPING AND MEDIA TO SWM-21, SWM-22, SWM-23 AND SWM-24. REMOVE INLET PROTECTION ONCE MEDIA IS SET AND WITH PERMISSION FROM DPS INSPECTOR. PRIOR TO COMPLETING EACH FACILITY ADD SOD, DO NOT ADD MULCH OR PLANTINGS AT THIS TIME.
- AT THIS TIME, THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH AN AS-BUILT SURVEY OF EACH FACILITY TO ENSURE VOLUMES ARE ACCEPTABLE.
- REMOVE TEMPORARY FENCE AND INSTALL PERMANENT FENCE.
- INSTALL BASKETBALL COURT AND PLAY STRIPING PER PLAN.
- ONCE ENGINEER HAS CONFIRMED AND APPROVED AS-BUILT SURVEY, INSTALL MULCH AND PLANTINGS.
- REMOVE ALL REMAINING SEDIMENT CONTROLS ANY AREAS DISTURBED SHALL BE IMMEDIATELY STABILIZED.
- OBTAIN A MCPPS APPROVED RECORD DRAWING OF ALL STORMWATER MANAGEMENT FACILITIES, RECORD DRAWINGS SHALL BE IN ACCORDANCE WITH MPCS REQUIREMENTS OUTLINED ON THE DRAWINGS.
- PRIOR TO FINAL CLOSEOUT, AND AFTER THE AS-BUILTS ARE APPROVED, THE CONTRACTOR SHALL ENSURE THAT ALL STORMWATER MANAGEMENT AREAS ARE FREE OF DEBRIS AND SEDIMENT. SHOULD A FACILITY NEED TO BE CLEANED OUT, THE CONTRACTOR SHALL DO SO AT THIS TIME. ANY MATERIAL REMOVED FROM THESE FACILITIES SHALL NOT BE FLUSHED DOWN THE STORM DRAIN SYSTEM. IT SHALL BE DISPOSED OF OFF-SITE. ANY FACILITY THAT IS COMPROMISED BY SEDIMENT SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER. NOTE THAT MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL THE AS-BUILTS ARE APPROVED, THIS INCLUDES WEEDING AND INSURING THAT MULCH ON TOP OF FACILITIES ARE MAINTAINED.
- ARRANGE FOR AND OBTAIN ANY REQUIRED FINAL SITE INSPECTIONS AND CERTIFICATIONS.

SHEET LIST TABLE		
Sheet Number	MCPPS ePlan file name	Sheet Title
C-2	SC0001	EROSION & SEDIMENT CONTROL AND SWM COVER SHEET
C-2A	SC0002	EROSION & SEDIMENT CONTROL PLAN
C-2B	SC0003	EROSION & SEDIMENT CONTROL DETAILS & CERTIFICATIONS
C-2C	SC0004	EROSION & SEDIMENT CONTROL NOTES
C-4A	SC0005	OVERALL GRADING & SWM PLAN
C-4B	SC0006	STORMDRAIN PROFILES, DETAILS & NOTES
C-4C	SC0007	MICROBIORETENTION SWM-21 AND SWM-22 DETAILS
C-4D	SC0008	MICROBIORETENTION SWM-23 AND SWM-24 DETAILS
C-0A	SC0009	DRAINAGE AREA MAP
L-2.1	SC0010	STORMWATER MANAGEMENT PLANTING PLAN



VICINITY MAP
SCALE: 1" = 1,000'±
(WSSC GRID: 209 NW 04)
MONTGOMERY COUNTY
ADC MAP PAGE: 5407
GRID: F-3
(2008/39TH EDITION)

ARCHITECT
SEI SHOLEN + ENR + ILKOVICH ARCHITECTS
1355 PICCARD DRIVE SUITE 200
ROCKVILLE, MD 20850
301-770-0177(P) 301-330-3234(F)

CIVIL / STRUCTURAL ADTEK ENGINEERS
97 MONOCACY BOULEVARD, UNIT H
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MECH/ELECTRICAL/PLUMBING JAMES POSEY ASSOCIATES
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CONSTRUCTION MANAGER
HESS CONSTRUCTION
804 WEST DIAMOND AVENUE, SUITE 300
GATHERSBURG, MD 20878
301-670-9000(P) 301-670-9009(F)

PROFESSIONAL SEAL:

PRINTS ISSUED		
NO.	DESCRIPTION:	DATE:
1	RFP-040	03/01/18

8001 LYNNBROOK DRIVE
BETHESDA, MD 20814
L. 850 F. 1462
PARCEL N719
ZONED: R60
LAND USE: EC
ACCT NO. 07-00417763

LYNNBROOK CENTER STORMWATER IMPROVEMENTS
MONTGOMERY COUNTY PUBLIC SCHOOLS

SHEET TITLE:
EROSION & SEDIMENT CONTROL AND SWM COVER SHEET

PROJECT NO: 177702
DATE: 03/02/2018
SCALE:
SHEET NO:
WORKING NORTH
C-2

Mr. James Barto
November 17, 2017
Page 2 of 2

4. Please contact DPS staff prior to preparing the revision to the approved plan for BBCHS to discuss the methodology to be used to illustrate the modifications to the plan.

This list may not be all-inclusive and may change based on available information at the time.

Payment of a stormwater management contribution in accordance with Section 2 of the Stormwater Management Regulation 4-90 is not required.

This letter and the October 2015 mail appear on the sediment control/stormwater management plan at its initial submittal. The concept approval is based on all stormwater management structures being located outside of the Public Utility Easement, the Public Improvement Easement, and the Public Right of Way unless specifically approved on the concept plan. Any divergence from the information provided to this office, or additional information received during the development process, or a change in an applicable Executive Regulation may constitute grounds to rescind or amend any approval actions taken, and to reevaluate the site for additional or amended stormwater management requirements. If there are subsequent additions or modifications to the development, a separate concept request shall be required.

If you have any questions regarding these actions, please feel free to contact Mary Fertig at 240-777-6202 or at mary.fertig@montgomerycountymd.gov.

Sincerely,
Mark C. Elmeridge, Manager
Water Resources Section
Division of Land Development Services

MCE:mpf
cc: SSM File # 276775

ESD: Required 38,539 cu ft.
ESD: Provided (BCCPS) 38,539 cu ft. (total 16,291 cu ft. / 9501 cu ft. @ 25% 792 cu ft.)
PE: Target/Provided: 1.0/1.0
STRUCTURAL: 8500 cu ft.
WVED: n/a

Re: Revision to COMBINED STORMWATER MANAGEMENT CONCEPT/SITE DEVELOPMENT STORMWATER MANAGEMENT PLAN for Addition to Bethesda Chevy Chase High School (BCHHS) 4301 East-West Highway, Bethesda SM File #: 276775
Tract Size/Zone: 16.36 ac/R-60
Total Concept Area: 5.78 on-site acres
Parcel(s): 153
Watershed: Lower Rock Creek

Dear Mr. Barto:

Based on an overview by the Department of Permitting Services Review Staff, the revised combined stormwater management concept for the above-mentioned site is acceptable. The stormwater management concept proposes to meet required stormwater management goals via ESD to the MEP with six micro-bioretenion facilities and one underground sand filter on the BCCHS site and four micro-bioretenion facilities at the Lynnbrook Center. No new development is proposed at Lynnbrook and both properties are within the Lower Rock Creek watershed so the facilities at the Lynnbrook site will be constructed to offset a portion of BCCHS's requirement. In addition, 10-year control will be provided due to inadequate capacity of the existing 54" storm drain to adequately convey the developed flow from the BCCHS site.

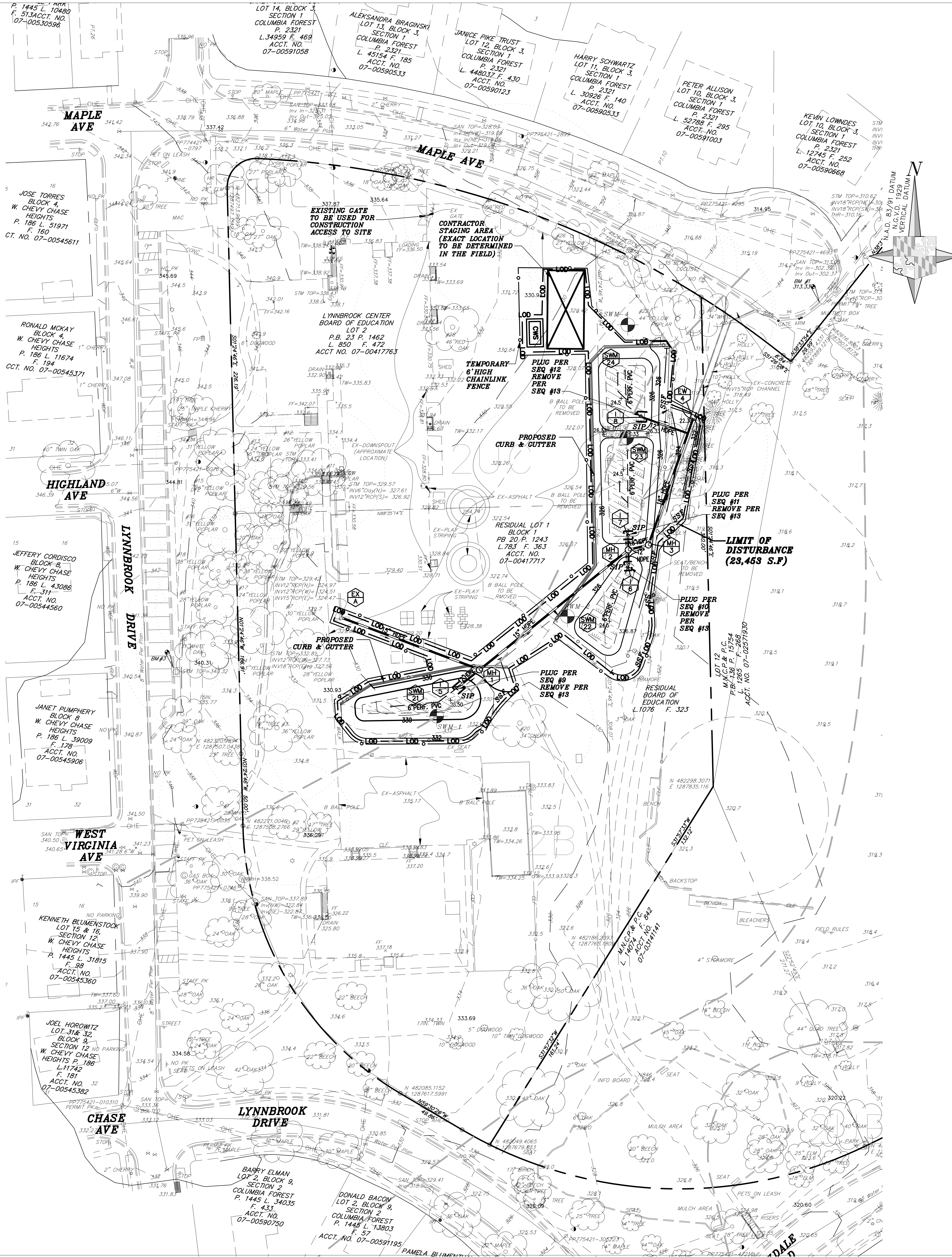
The following items will need to be addressed during the detailed sediment control/stormwater management plan stage:

- All conditions of the October 28, 2016 approval letter are to remain in place and must be met.
- A detailed review of the stormwater management computations will occur at the time of detailed plan review but the computations for Target ESD must be done in conformance with MCE and DPS guidance including the methodology for prorating when more than one hydrologic soil group is present to correctly calculate the Composite Target PE.
- The submission for SC Permit for the construction on the Lynnbrook Center property should be made utilizing separate application however both plans should include a note that the permit for BBCHS (BCCPS#281584) will not be released until such time as the as-built for Lynnbrook is approved and the permit is released by the DPS inspector.

255 Rockville Pike, 2nd Floor, Rockville, Maryland 20850 | 240-777-0311
www.montgomerycountymd.gov/permitservices

THIS PLAN IS FOR EROSION AND SEDIMENT CONTROL ONLY.
NOTE TO CONTRACTOR: EROSION AND SEDIMENT CONTROL WILL BE STRICTLY ENFORCED! PRIOR TO VEGETATIVE STABILIZATION, ALL DISTURBED AREAS MUST BE TOPSOILED PER MONTGOMERY COUNTY STANDARD.

OWNER/APPLICANT
MONTGOMERY COUNTY PUBLIC SCHOOLS
45 WEST GUDE DRIVE, SUITE 4300
ROCKVILLE, MARYLAND 20850-4038
ATTN: ROBBIE S. BADSTIBNER
robbie_s_badstibner@mcpmsmd.org
TEL: 240.314.1018 FAX: 240.279.3003



EXISTING & PROPOSED LEGEND

- EXISTING BOUNDARY LINE
- EXISTING PUE/PIE LINE
- EXISTING CONTOUR
- EXISTING BENCHMARK
- EXISTING SEWER MANHOLE
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- EXISTING TREE LINE
- EXISTING BORING LOCATION
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- PROPOSED SWM UNDERDRAIN W/ CLEANOUT
- PROPOSED MANHOLE
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- PROPOSED CHAIN-LINK FENCE
- PROPOSED DEPRESSED CONCRETE CURB
- PROPOSED BIOFILTER/SAND FILTER SEE STORMWATER DETAILS, SHEETS C-4C & C-4D

SEDIMENT CONTROL LEGEND

- LIMITS OF DISTURBANCE
- SUPER SILT FENCE
- CONTRACTOR STAGING AREA
- TEMP CONSTRUCTION FENCE (6' HIGH)
- INLET PROTECTION DEVICE
- CONCRETE WASHOUT STATION

EXISTING TREE WITH CRITICAL ROOT ZONES AND STRUCTURAL ROOT ZONES

ARCHITECT

SEI SHOLEN + EHR ILKOVITCH ARCHITECTS
 1355 PICCARD DRIVE SUITE 200
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HESS CONSTRUCTION**

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NO.	DESCRIPTION:	DATE:
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**8001 LYNNBROOK DRIVE
 BETHESDA, MD 20814
 L. 850 F. 1462
 PARCEL N719
 ZONED: R60
 LAND USE: EC
 ACCT NO.
 07-00417763**

**LYNNBROOK CENTER
 STORMWATER IMPROVEMENTS
 MONTGOMERY COUNTY PUBLIC SCHOOLS**

SHEET TITLE:
EROSION & SEDIMENT CONTROL PLAN

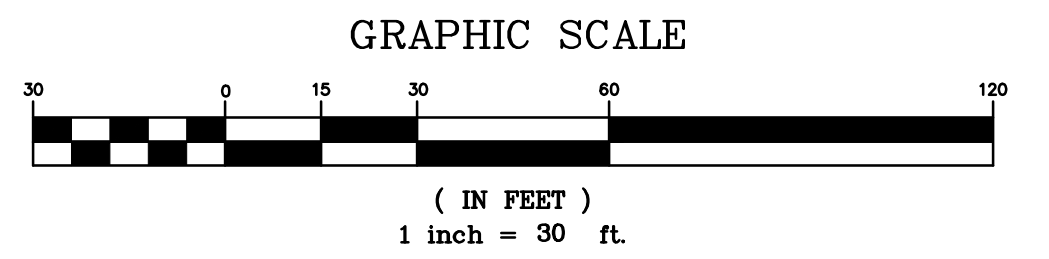
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SCALE: WORKING NORTH

SHEET NO: C-2A

SC/SWM SHEET NO. 2 of 10
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STANDARD EROSION AND SEDIMENT CONTROL NOTES

- THE PERMITTEE SHALL NOTIFY THE DEPARTMENT OF PERMITTING SERVICES (DPS) FORTY-EIGHT (48) HOURS BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY AND, UNLESS WAIVED BY THE DEPARTMENT, SHALL BE REQUIRED TO HOLD A PRE-CONSTRUCTION MEETING BETWEEN THEM OR THEIR REPRESENTATIVE, THEIR ENGINEER AND AN AUTHORIZED REPRESENTATIVE OF THE DEPARTMENT.
- THE PERMITTEE MUST OBTAIN INSPECTION AND APPROVAL BY DPS AT THE FOLLOWING POINTS:
 - AT THE REQUIRED PRE-CONSTRUCTION MEETING.
 - FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES AND PRIOR TO ANY OTHER LAND DISTURBING ACTIVITY.
 - DURING THE INSTALLATION OF A SEDIMENT BASIN OR STORMWATER MANAGEMENT STRUCTURE AT THE REQUIRED INSPECTION POINTS (SEE INSPECTION CHECKLIST ON PLAN). NOTIFICATION PRIOR TO COMMENCING CONSTRUCTION IS MANDATORY.
 - PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL STRUCTURE(S).
 - PRIOR TO FINAL ACCEPTANCE.
- THE PERMITTEE SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE APPROVED PLAN AND CONSTRUCTION SEQUENCE, SHALL HAVE THEM INSPECTED AND APPROVED BY THE DEPARTMENT 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.
- THE PERMITTEE SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DEPOSITION OF MATERIALS UNTO TRAVERSED PUBLIC THOROUGHFARE(S). ALL MATERIALS DEPOSITED UNTO PUBLIC THOROUGHFARE(S) SHALL BE REMOVED IMMEDIATELY.
- THE PERMITTEE SHALL INSPECT PERIODICALLY 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 PERMITTEE IS RESPONSIBLE FOR IMMEDIATELY REPAIRING OR REPLACING ANY SEDIMENT CONTROL MEASURES WHICH HAVE BEEN DAMAGED OR REMOVED BY THE PERMITTEE OR ANY OTHER PERSON.
- FOLLOW INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN THE FOLLOWING TIME FRAME:
 - A. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND
 - B. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
- 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.
- THE PERMITTEE SHALL APPLY SOD, SEED, AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES TO ALL DISTURBED AREAS WITHIN SEVEN (7) 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 UNDER CONSTRUCTION MAY BE EXEMPT FROM THESE REQUIREMENTS PROVIDED THAT EROSION AND SEDIMENT CONTROL MEASURES ARE INSTALLED AND MAINTAINED TO PROTECT THOSE AREAS.
- PRIOR TO REMOVAL OF SEDIMENT CONTROL MEASURES, THE PERMITTEE 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 UNDER THESE CONDITIONS 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 SEVEN (7) CALENDAR DAYS OF ESTABLISHMENT. WHEN PROPERTY IS BROUGHT TO FINISHED GRADE IN 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.
- THE SITE PERMIT, WORK MATERIALS, APPROVED SC/SW PLANS, AND TEST REPORTS SHALL BE AVAILABLE AT THE SITE FOR INSPECTION BY DULLES AUTHORIZED OFFICIALS OF MONTGOMERY COUNTY.
- SURFACE DRAINAGE FLOWS OVER UNSTABILIZED CUT AND FILL SLOPES SHALL BE CONTROLLED BY OTHER PREVENTING DRAINAGE FLOWS FROM TRAVERSING THE SLOPES OR BY INSTALLING MECHANICAL 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. MECHANICAL DEVICES MUST BE PROVIDED AT POINTS OF CONCENTRATED FLOW WHERE EROSION IS LIKELY TO OCCUR.
- PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITHIN 3 CALENDAR DAYS OF ESTABLISHMENT WITH SOD OR SEED WITH AN APPROVED EROSION CONTROL MATTING OR BY OTHER APPROVED STABILIZATION METHODS.
- SEEDING CONTROL DEVICES SHALL BE REMOVED, WITH PERMISSION OF THE DEPARTMENT, 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.
- 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.
- THE PERMITTEE SHALL INSTALL A SPLASHBLOCK AT THE BOTTOM OF EACH DOWNSPOUT UNLESS THE DOWNSPOUT IS CONNECTED BY A DRAIN LINE TO AN ACCEPTABLE OUTLET.
- FOR FINISHED GRADING, THE PERMITTEE 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.
- 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.
- ALL INLETS IN NON-SUMP AREAS SHALL HAVE ASPHALT BERMS INSTALLED AT THE TIME OF BASE PAVING ESTABLISHMENT.
- THE SEDIMENT CONTROL INSPECTOR HAS THE OPTION OF REQUIRING ADDITIONAL SEDIMENT CONTROL MEASURES, AS DEEMED NECESSARY.
- ALL TRAP ELEVATIONS ARE RELATIVE TO THE OUTLET ELEVATION, WHICH MUST BE ON EXISTING UNDISTURBED GROUND.
- VEGETATIVE STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- SEDIMENT TRAP(S)/BASIN(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 STORAGE DEPTH OF THE TRAP/BASIN (1/4 THE WET STORAGE DEPTH FOR 5T-11) OR WHEN REQUIRED BY THE SEDIMENT CONTROL INSPECTOR.
- SEDIMENT REMOVED FROM TRAPS SHALL BE PLACED AND STABILIZED IN APPROVED AREAS, BUT NOT WITHIN A FLOODPLAIN.
- ALL SEDIMENT BASINS AND TRAPS MUST BE SURROUNDED WITH A WELDED WIRE SAFETY FENCE. THE FENCE MUST BE AT LEAST 42 INCHES HIGH, HAVE POSTS SPACED NO FARTHER APART THAN 8 FEET, HAVE MESH OPENINGS NO GREATER THAN TWO INCHES IN WIDTH AND FOUR INCHES IN HEIGHT, WITH A MINIMUM OF 14 GAUGE WIRE. SAFETY FENCE MUST BE MAINTAINED IN GOOD CONDITION AT ALL TIMES.
- 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.
- OFF-SITE SPOIL OR BORROW AREAS MUST HAVE PRIOR APPROVAL BY DPS.
- SEDIMENT TRAP/BASIN DRAINING FOR CLEANOUT OR REPAIR MAY ONLY BE DONE WITH THE DPS INSPECTOR'S PERMISSION. THE INSPECTOR MUST APPROVE THE DETERMINING METHOD FOR EACH APPLICATION. THE FOLLOWING METHODS MAY BE CONSIDERED:
 - A. PUMP DISCHARGE MAY BE DIRECTED TO ANOTHER ON-SITE SEDIMENT TRAP OR BASIN, PROVIDED IT IS OF SUFFICIENT VOLUME AND THE PUMP INTAKE IS FLOATED TO PREVENT AGITATION OR SUCTION OF DEPOSITED SEDIMENTS; OR
 - B. THE PUMP INTAKE MAY UTILIZE A REMOVABLE PUMPING STATION AND MUST DISCHARGE INTO AN UNDISTURBED AREA THROUGH A NON-EROSIVE OUTLET; OR
 - C. THE PUMP INTAKE MAY BE FLOATED AND DISCHARGE INTO A DIRT BAG (12 OZ. NON-WOVEN FABRIC), OR APPROVED EQUIVALENT, LOCATED IN AN UNDISTURBED BUFFER AREA.
- REMEMBER: DEWATERING OPERATION AND METHOD MUST HAVE PRIOR APPROVAL BY THE DPS INSPECTOR.
- THE PERMITTEE MUST NOTIFY THE DEPARTMENT OF ALL UTILITY CONSTRUCTION ACTIVITIES WITHIN THE PERMITTED LIMITS OF DISTURBANCE PRIOR TO THE COMMENCEMENT OF THOSE ACTIVITIES.
- TOPSOIL MUST BE APPLIED TO ALL PERVIOUS AREAS WITHIN THE LIMITS OF DISTURBANCE PRIOR TO PERMANENT STABILIZATION IN ACCORDANCE WITH MDE "STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS"

SECTION I – VEGETATIVE STABILIZATION METHODS AND MATERIALS

- SITE PREPARATION**
- INSTALL EROSION AND SEDIMENT CONTROL STRUCTURES (EITHER TEMPORARY OR PERMANENT) SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, WATERWAYS, OR SEDIMENT CONTROL BASINS.
 - PERFORM ALL GRADING OPERATIONS AT RIGHT ANGLES TO THE SLOPE. FINAL GRADING AND SHAPING IS NOT USUALLY NECESSARY FOR TEMPORARY SEEDING.
 - SCHEDULE REQUIRED SOIL TESTS TO DETERMINE SOIL AMENDMENT COMPOSITION AND APPLICATION RATES FOR SITES HAVING DISTURBED AREA OVER 5 ACRES.
- SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)**
- 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 MAY BE PERFORMED BY THE UNIVERSITY OF MARYLAND OR A RECOGNIZED COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES. 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.
 - 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.
 - INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 – 5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

SEEDING PREPARATION

- TEMPORARY SEEDING
 - 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.
 - APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
 - INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 – 5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
- PERMANENT SEEDING
 - MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT:
 - a. SOIL PH SHALL BE BETWEEN 6.0 AND 7.0
 - b. SOLUBLE SALTS SHALL BE LESS THAN 500 PARTS PER MILLION (PPM).
 - c. 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 LOEVGRASS OR SERECIA LESPEZEA IS TO BE PLANTED. THEN A SANDY SOIL (< 30% SILT PLUS CLAY) WOULD BE ACCEPTABLE.
 - d. SOIL SHALL CONTAIN 1.5% MINIMUM ORGANIC MATTER BY WEIGHT.
 - e. SOIL MUST CONTAIN SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
 - f. IF THESE CONDITIONS CANNOT BE MET BY SOILS ON SITE, ADDING TOPSOIL IS REQUIRED IN ACCORDANCE WITH SECTION 21 STANDARD AND SPECIFICATION FOR TOPSOIL.
 - AREAS PREVIOUSLY GRADED IN CONFORMANCE WITH THE DRAWINGS SHALL BE MAINTAINED IN A TRUE AND EVEN GRADE, THEN SCRAPPED 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.
 - APPLY SOIL AMENDMENTS AS PER SOIL TEST OR AS INCLUDED ON THE PLANS.
 - 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 FRAGILE. SEEDBED LOOSENING MAY NOT BE NECESSARY ON NEWLY DISTURBED AREAS.
 - SEED SPECIFICATIONS:
 - ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. 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.
 - SEED TAGS SHALL BE MADE AVAILABLE TO THE INSPECTOR TO VERIFY TYPE AND RATE OF SEED USED.
 - 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.

TOPSOIL IS REQUIRED IN ACCORDANCE WITH SECTION 21 STANDARD AND SPECIFICATION FOR TOPSOIL.

- AREAS PREVIOUSLY GRADED IN CONFORMANCE WITH THE DRAWINGS SHALL BE MAINTAINED IN A TRUE AND EVEN GRADE, THEN SCRAPPED 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.
- APPLY SOIL AMENDMENTS AS PER SOIL TEST OR AS INCLUDED ON THE PLANS.
- 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 FRAGILE. SEEDBED LOOSENING MAY NOT BE NECESSARY ON NEWLY DISTURBED AREAS.
- SEED SPECIFICATIONS:
 - ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. 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.
 - SEED TAGS SHALL BE MADE AVAILABLE TO THE INSPECTOR TO VERIFY TYPE AND RATE OF SEED USED.
- 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.

METHODS OF SEEDING

- HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER), BROADCAST OR DROP SEEDER, OR A CULTIPACKER SEEDER.
 - 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. 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 ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
 - SEED AND FERTILIZER SHALL BE MIXED ON SITE AND SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.
- DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
 - SEED SPREAD DRY SHALL BE INCORPORATED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON THE TEMPORARY OR PERMANENT SEEDING SUMMARIES OR TABLES 25 OR 26. THE SEEDED AREA SHALL THEN BE ROLLED WITH
 - A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT. WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
- DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
 - 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.
 - WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

MULCH SPECIFICATIONS (IN ORDER OF PREFERENCE)

- STRAW SHALL CONSIST OF THOROUGHLY THRESHED WHEAT, RYE OR OAT STRAW, REASONABLY FREE IN COLOR, AND SHALL NOT BE MUSTY, CAKED, DECAYED, OR EXCESSIVELY DUSTY AND SHALL BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW.
- WOOD CELLULOSE FIBER MULCH (WCFM)
 - WCFM SHALL CONSIST OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
 - 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.
 - WCFM, INCLUDING DYE, SHALL CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
 - 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.
 - WCFM MATERIAL SHALL CONTAIN NO ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
 - 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.

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

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

- 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.
 - 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 BANKS. 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.
 - 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.
- 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:
 - 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.
 - 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. APPLICATION OF LIQUID BINDERS SHOULD BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND OR GULLS BANKS. THE REMAINDER OF AREA SHOULD BE APPLIED UNIFORM AFTER BINDER APPLICATION. SYNTHETIC BINDERS – SUCH AS ACRYLIC UR (AGRO-TACK), DCA-70, PETROSEET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH.
 - 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.

INCREMENTAL STABILIZATION OF EMBANKMENTS – CUT SLOPES

- ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDING AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 15'.
 - CONSTRUCTION SEQUENCE (REFER TO FIGURE 3 BELOW):
 - EXCAVATE AND STABILIZE ALL TEMPORARY SWALES, SIDE DITCHES, OR BERMS THAT WILL BE USED TO CONVEY RUNOFF FROM THE EXCAVATION.
 - PERFORM PHASE 1 EXCAVATION, DRESS, AND STABILIZE.
 - PERFORM PHASE 2 EXCAVATION, DRESS, AND STABILIZE. OVERSEED PHASE 1 AREAS AS NECESSARY.
 - PERFORM FINAL PHASE EXCAVATION, DRESS, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.
- ONCE EXCAVATION HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.
- INCREMENTAL STABILIZATION OF EMBANKMENTS – FILL SLOPES
 - EMBANKMENTS SHALL BE CONSTRUCTED IN LIFTS AS PRESCRIBED ON THE PLANS.
 - SLOPES SHALL BE STABILIZED IMMEDIATELY WHEN THE VERTICAL HEIGHT OF THE MULTIPLE LIFTS REACHES 15', OR WHEN THE GRADING OPERATION CEASES AS PRESCRIBED IN THE PLANS.
 - AT THE END OF EACH DAY, TEMPORARY BERMS AND PIPE SLOPE DRAINS SHOULD BE CONSTRUCTED ALONG THE TOP EDGE OF THE EMBANKMENT TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER TO A SEDIMENT TRAPPING DEVICE.
 - CONSTRUCTION SEQUENCE : REFER TO FIGURE 4 (BELOW).
 - EXCAVATE AND STABILIZE ALL TEMPORARY SWALES, SIDE DITCHES, OR BERMS THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL. CONSTRUCT SLOPE SILT FENCE ON LOW SIDE OF FILL AS SHOWN IN FIGURE 5, UNLESS OTHER METHODS SHOWN ON THE PLANS ADDRESS THIS AREA.
 - PLACE PHASE 1 EMBANKMENT, DRESS AND STABILIZE.
 - PLACE PHASE 2 EMBANKMENT, DRESS AND STABILIZE.
 - PLACE FINAL PHASE EMBANKMENT, DRESS AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

- TEMPORARY SEEDING
 - SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE 26 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE 5) AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW, ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLANS AND COMPLETED, THEN TABLE 26 MUST BE PUT ON THE PLANS.
 - 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.

TEMPORARY SEEDING SUMMARY

NO.	SPECIES	SEED MIXTURE (HARDNESS ZONE 6b)		SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-10-10)	LIME RATE
		APPLICATION RATE (lb/ac)	(FROM TABLE 26)				
1	BARLEY OR RYE PLUS FOXTAIL MILLET	150		3/1-10/15	1"		
2	ANNUAL RYEGRASS	50		3/1-4/30 8/15-11/1	1/4"-1/2"	600 lb/ac (15 lb/1000 sq ft)	2 tons/ac (100 lb/1000 sq ft)
3	WEEPING LOVEGRASS	4		5/1-8/14	1/4"-1/2"		

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.
- SEED MIXTURES – PERMANENT SEEDING
 - SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE 25 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE 5) AND ENTER THEM IN THE PERMANENT SEEDING SUMMARY BELOW, ALONG WITH APPLICATION RATES AND SEEDING DATES. SEEDING DEPTHS CAN BE ESTIMATED USING TABLE 26. IF THIS SUMMARY IS NOT PUT ON THE CONSTRUCTION PLANS AND COMPLETED, THEN TABLE 25 MUST BE PUT ON THE PLANS. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAMBANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-SCS TECHNICAL, FIELD OFFICE GUIDE, SECTION 342 – CRITICAL AREA PLANTING. FOR SPECIAL LAWN MAINTENANCE AREAS, SEE SECTIONS IV 500 AND V TURFGRASS.
 - 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.
 - FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREAFORM FERTILIZER (46-0-0) AT 3 1/2 LBS/1000 SQ.FT. (150 LBS/AC), IN ADDITION TO THE ABOVE SOIL AMENDMENTS SHOWN IN THE TABLE BELOW, TO BE PERFORMED AT THE TIME OF 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.

PERMANENT SEEDING SUMMARY

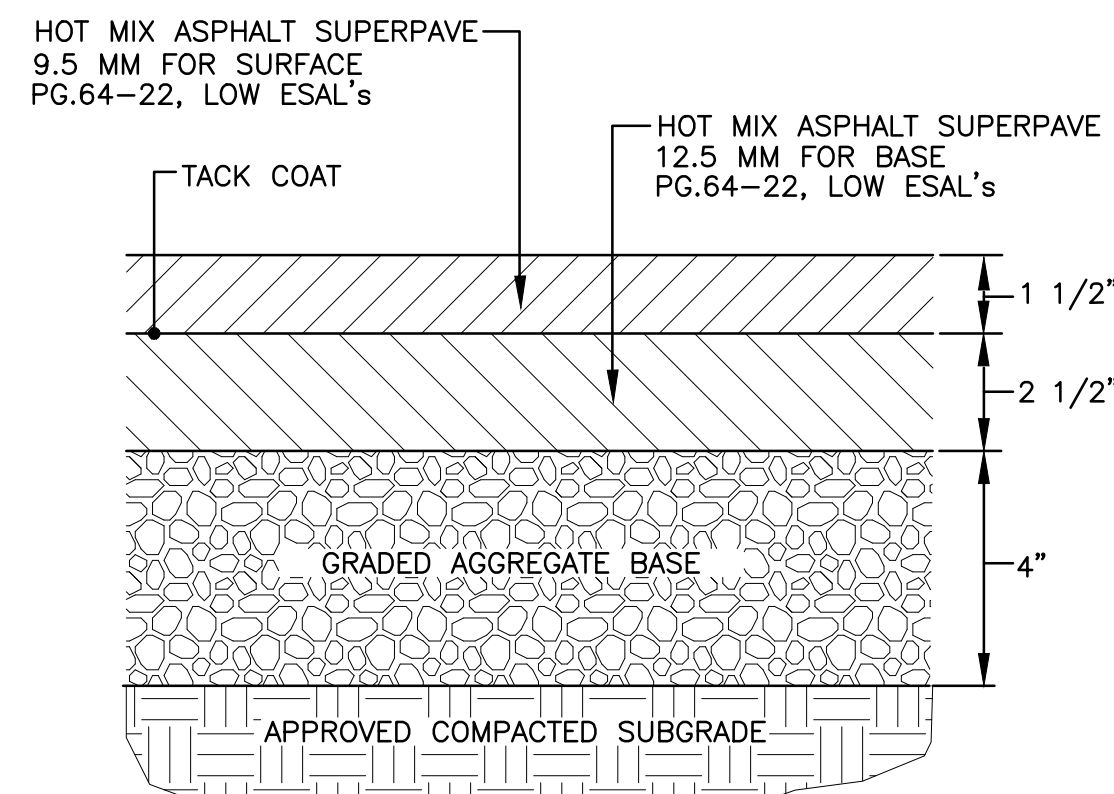
MIX NO.	SPECIES	SEED MIXTURE (HARDNESS ZONE 6b)		SEEDING DATES	N	P205	K20	LIME RATE
		APPLICATION RATE (lb/ac)	(FROM TABLE 25)					
3	TALL FESCUE(85%) PERENNIAL RYEGRASS(10%) KENTUCKY BLUEGRASS(5%)	125 15 10		3/1-5/15 8/15-10/15	90 lb/ac (2.0	175 lb/ac (4 lb)	175 lb/ac (4 lb)	2 tons/ac (100 lb)
10	TALL FESCUE(80%) HARD FESCUE(20%)	120 30		3/1-5/15 8/15-10/15	1000 wt	1000 wt	1000 wt	1000 wt

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

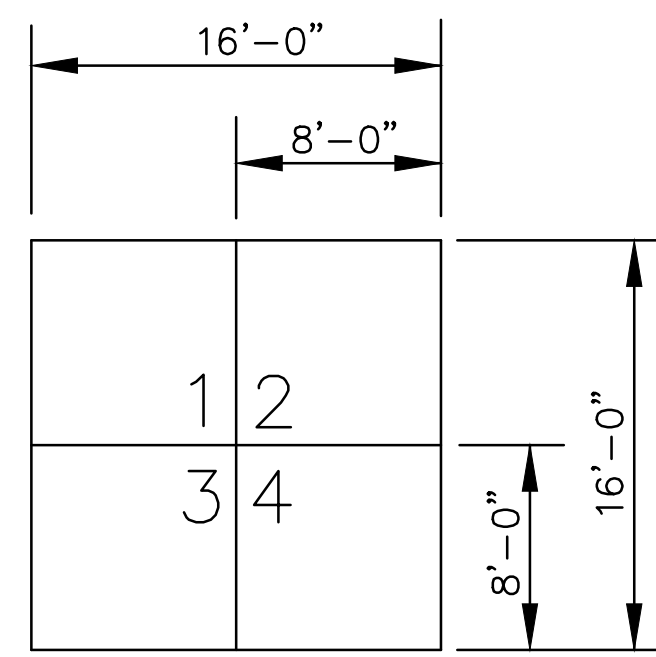
- GENERAL SPECIFICATIONS
 - CLASS OF TURFGRASS SOD SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED OR APPROVED. SOD LABELS SHALL BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
 - SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4", PLUS OR MINUS 1/4", AT THE TIME OF CUTTING. MEASUREMENT FOR 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 UNVEN ENDS WILL NOT BE ACCEPTABLE.
 - 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.
 - SOD SHALL NOT BE HARVESTED OR TRANSPORTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
 - SOD SHALL BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPORTED WITHIN THIS PERIOD SHALL BE BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.
- SOD INSTALLATION
 - DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, THE SUBSOIL SHALL BE LIGHTLY IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD.
 - THE FIRST ROW OF SOD SHALL BE LAID IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL. TO AND TIGHTLY NESTED 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.
 - 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.
 - 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.
- SOD MAINTENANCE
 - 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.
 - AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
 - THE FIRST MOWING OF SOD SHOULD NOT BE ATTEMPTED UNTIL THE SOD IS FIRMLY 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

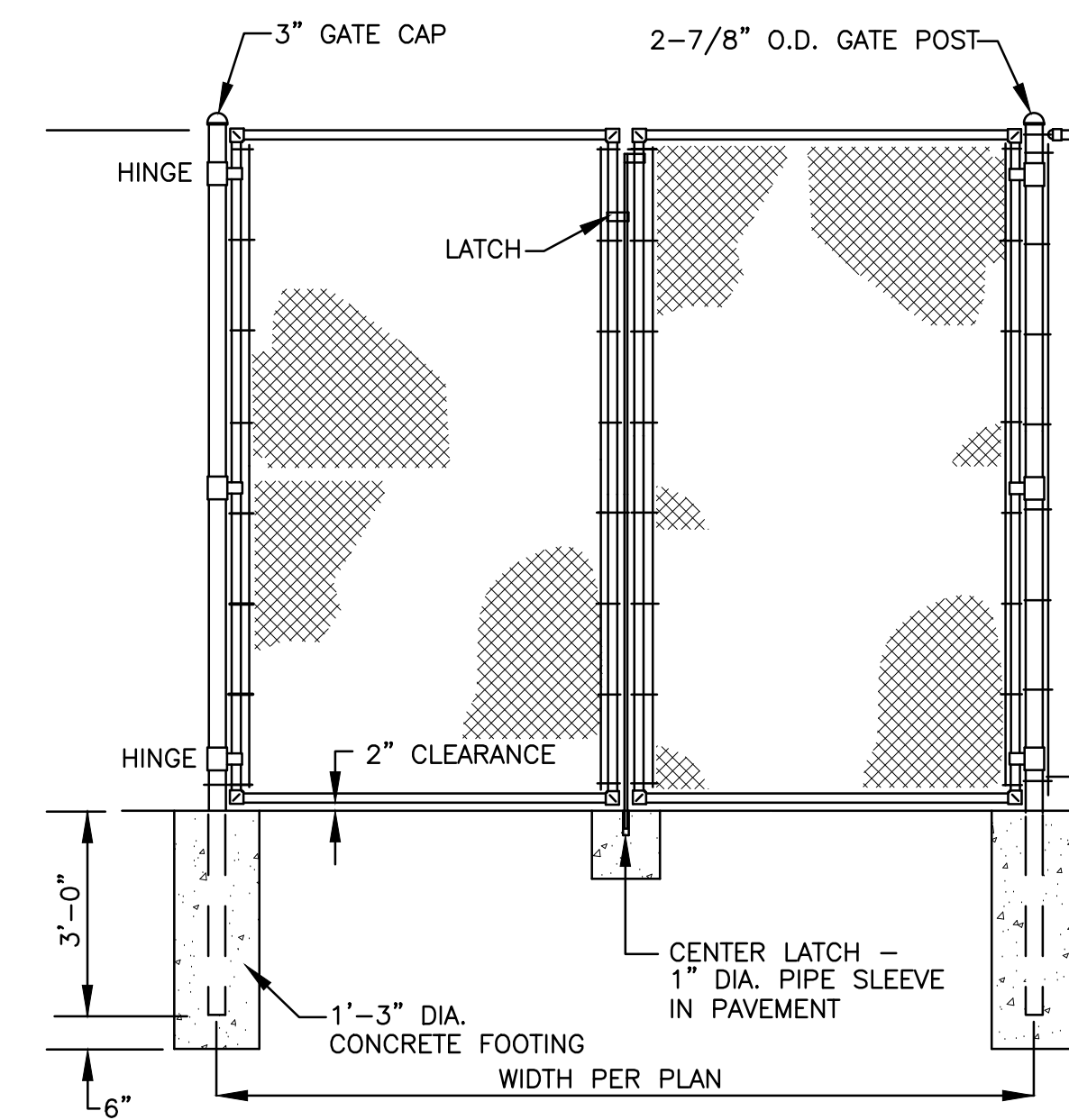
- AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE. AREAS TO RECEIVE SEED SHALL BE TILLED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVELLED AND RAKED TO PREPARE A PROPER SEEDBED. STONES AND DEBRIS OVER 1 1/2 INCHES IN DIAMETER SHALL BE REMOVED. THE RESULTING SEEDBED SHOULD BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
- NOTE: CHOICE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE.
- TURFGRASS MIXTURES
 - KENTUCKY BLUEGRASS – FULL SUN MIXTURE – FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. 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.
 - 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 BLUE



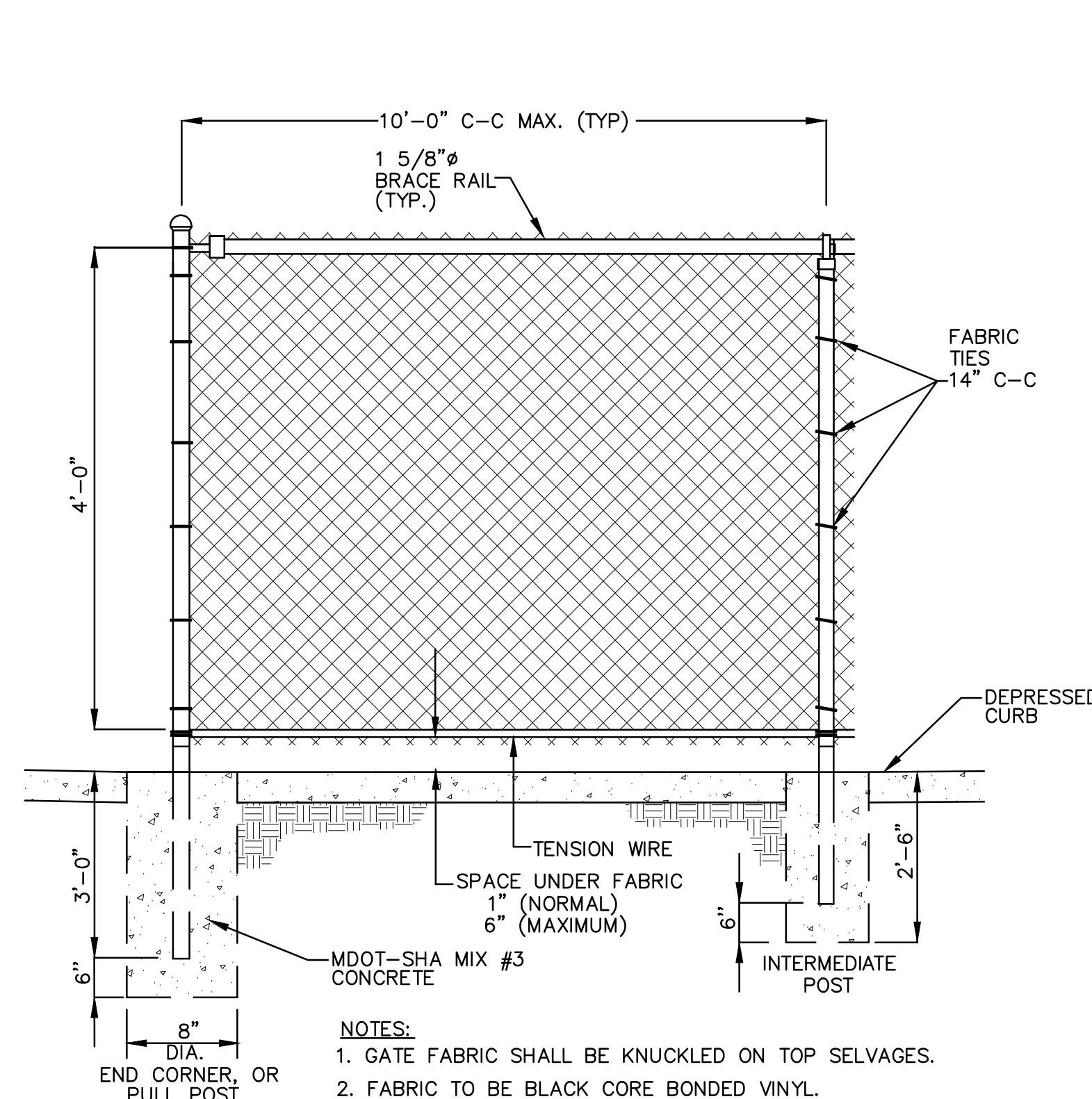
1 LIGHT DUTY ASPHALT
C-3B NOT TO SCALE



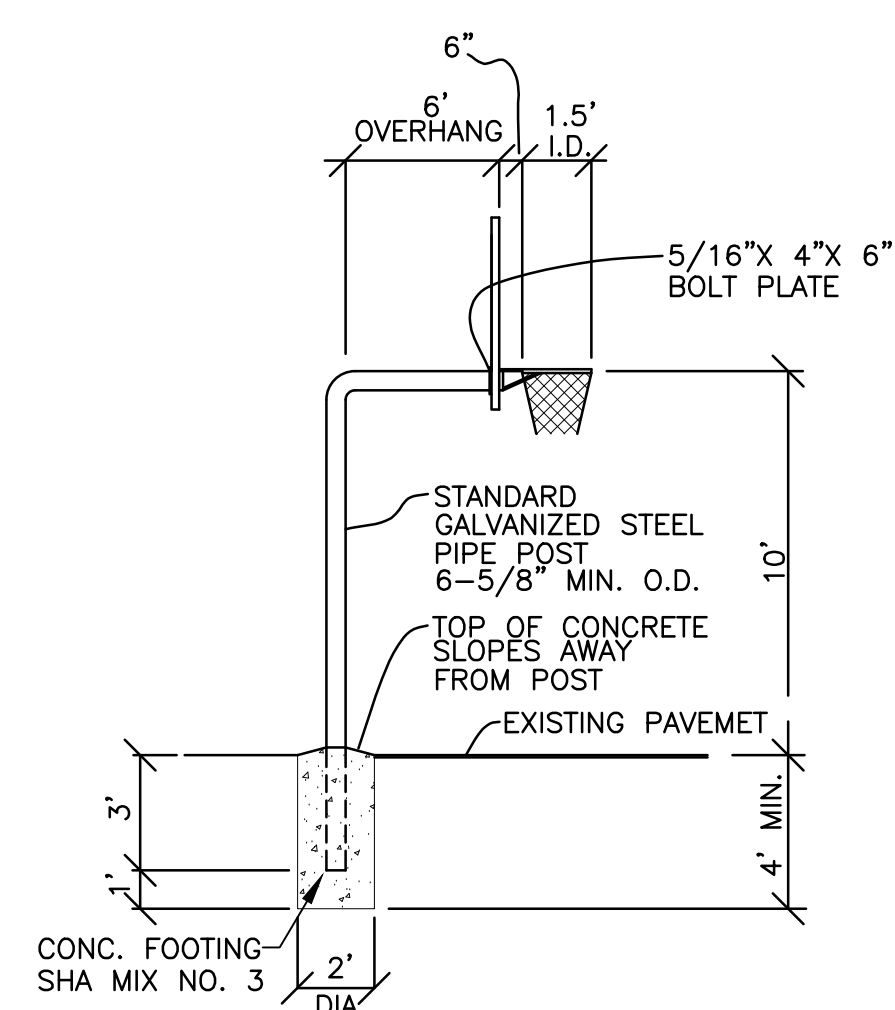
2 PRIMARY STRIPING
C-3B NOT TO SCALE



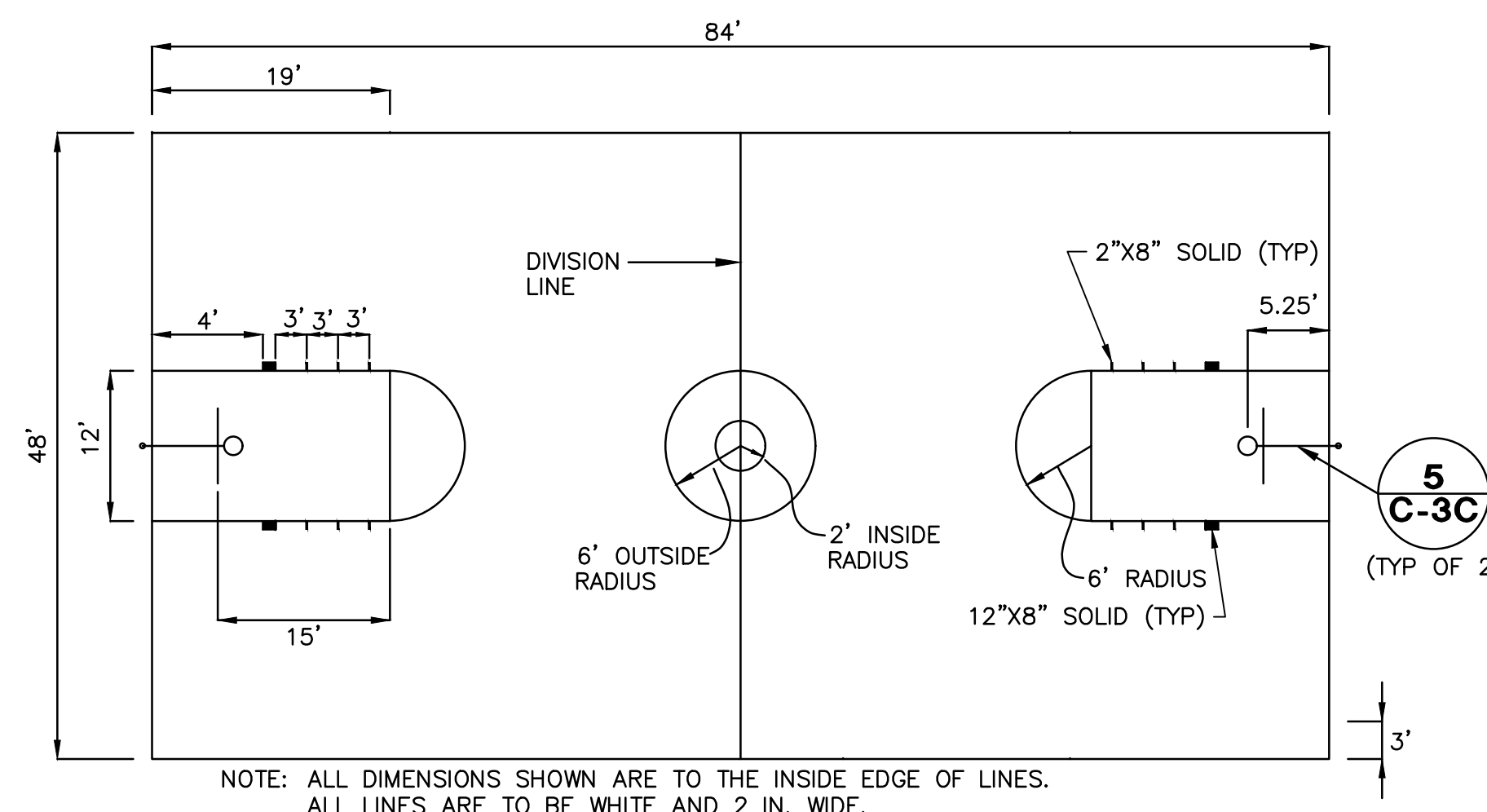
3 MAINTENANCE VEHICLE ACCESS GATE DETAILS
C-3B NOT TO SCALE



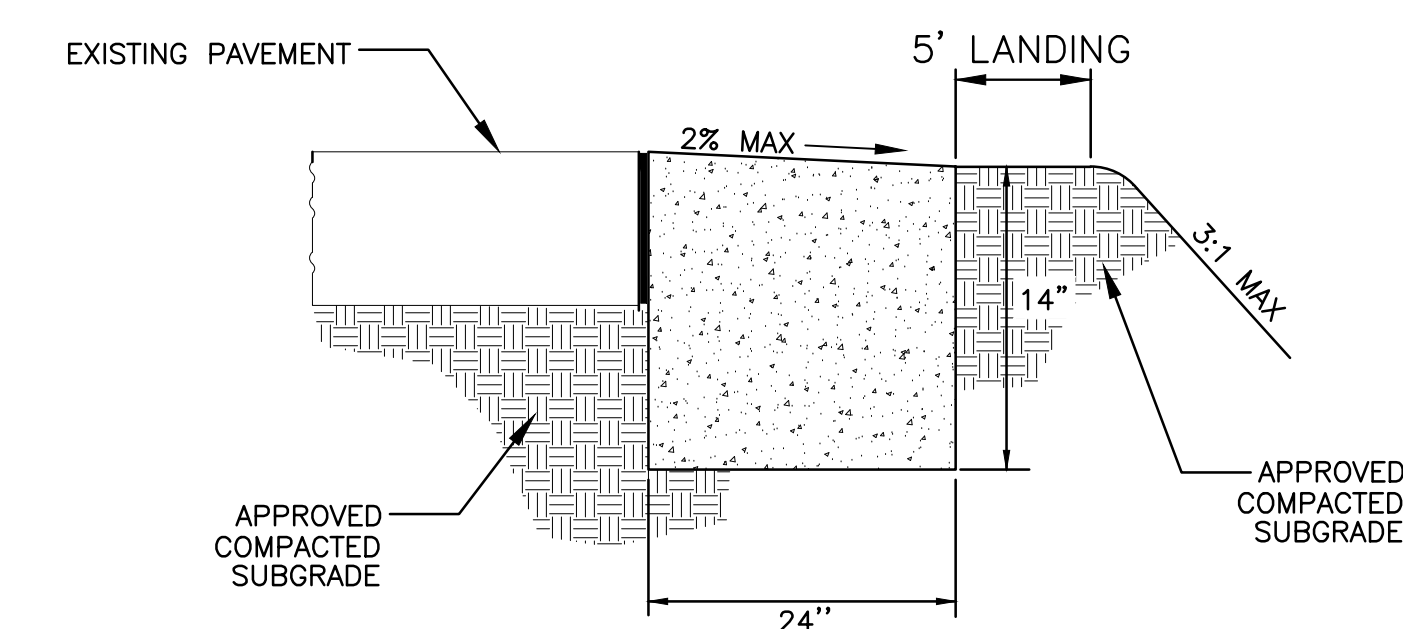
4 48\"/>



5 BASKETBALL GOAL
C-3B NOT TO SCALE



7 BASKETBALL COURT
C-3B NOT TO SCALE



6 DEPRESSED CURB DETAIL
C-3B NOT TO SCALE

- NOTES:**
- GATE FABRIC SHALL BE KNUCKLED ON TOP SELVAGES.
 - FABRIC TO BE BLACK CORE BONDED VINYL.
 - ALL FENCE, GATE POSTS & FRAMES TO BE GROUNDED.
 - ATTACH FENCE FABRIC TO LINE POSTS, TOP AND BOTTOM TENSION WIRES WITH TIE WIRES.
 - ALL TYPE V-1 & V-2 GATES SHALL ALLOW 180° OPENING SWING.
 - POSTS, RAILS AND RODS TO BE INSTALLED INSIDE OF FENCE FABRIC.
 - MATERIALS TO MEET REQUIREMENTS OF AASHTO M181.

NOTE:
BASKETBALL BACKSTOPS SHALL BE MANUFACTURED BY AALCO, MODEL G66-601. ALL BACKSTOPS SHALL HAVE SAFETY PIN IN POST TO PREVENT BACKSTOP SLIPPAGE.

NOTE: ALL DIMENSIONS SHOWN ARE TO THE INSIDE EDGE OF LINES. ALL LINES ARE TO BE WHITE AND 2 IN. WIDE.

ARCHITECT



1355 PICCARD DRIVE SUITE 200
ROCKVILLE, MD 20850
301-770-0177(P) 301-330-3224(F)

**CIVIL / STRUCTURAL
ADTEK ENGINEERS**

97 MONOCACY BOULEVARD, UNIT H
FREDERICK, MARYLAND 21701
301-662-4408(P) 301-662-7484(F)

**MECH./ELECTRICAL/PLUMBING
JAMES POSEY ASSOCIATES**

3112 LORD BALTIMORE DRIVE
BALTIMORE, MARYLAND 21244
301-265-6100(P) 301-298-9820(F)

**CONSTRUCTION MANAGER
HESS CONSTRUCTION**

804 WEST DIAMOND AVENUE, SUITE 300
GATHERSBURG, MD 20878
301-670-9000(P) 301-670-9009(F)

PROFESSIONAL SEAL:

PRINTS ISSUED

NO.	DESCRIPTION:	DATE:
1	RFP-040	03/01/18

**8001 LYNNBROOK DRIVE
BETHESDA, MD 20814
L. 850 F. 1462
PARCEL N719
ZONED: R60
LAND USE: EC
ACCT NO.
07-00417763**

**LYNNBROOK CENTER
STORMWATER IMPROVEMENTS
MONTGOMERY COUNTY PUBLIC SCHOOLS**

SHEET TITLE:

SITE DETAILS

PROJECT NO:

177702

DATE:

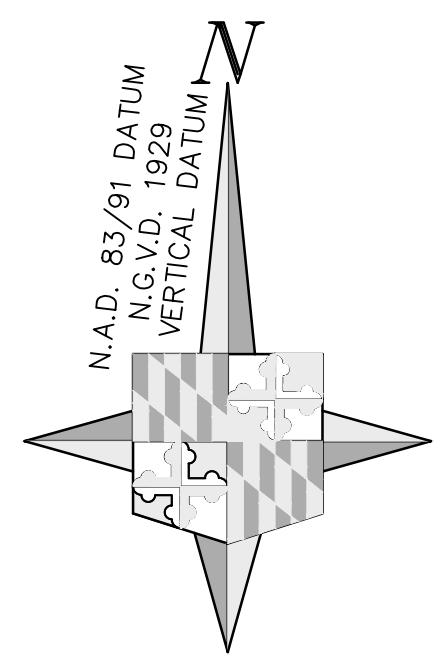
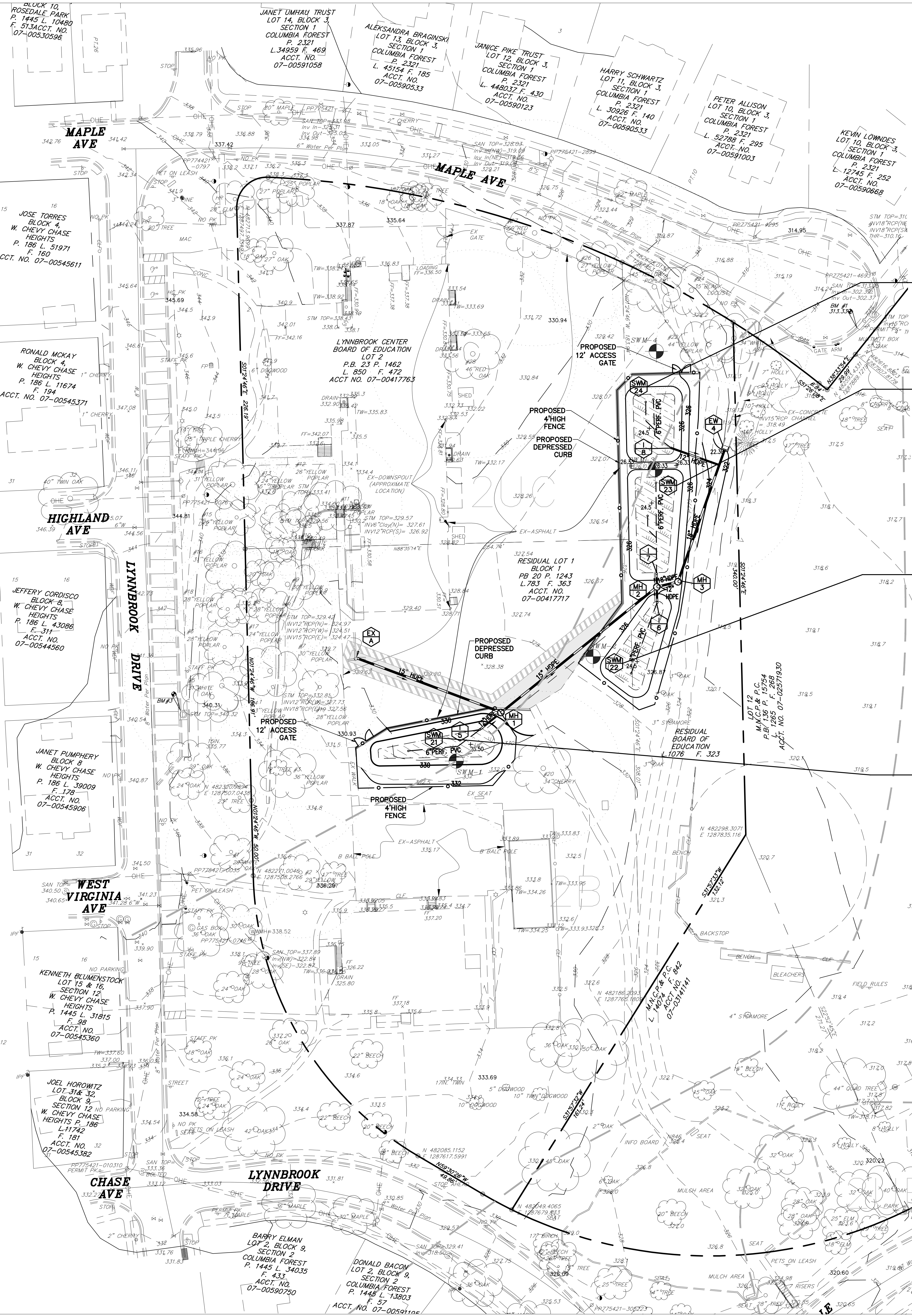
03/02/2018

SCALE:

WORKING NORTH

SHEET NO:

C-3B



SEE SHEET C-4D (SWM) FOR DETAILS 24

SEE SHEET C-4D (SWM) FOR DETAILS 23

SEE SHEET C-4C (SWM) FOR DETAILS 22

SEE SHEET C-4C (SWM) FOR DETAILS 21

EXISTING LEGEND

- PROPERTY LINE
- CONTOUR
- BENCHMARK
- MANHOLE
- SANITARY SEWER
- STORM DRAIN
- UTILITY POLE
- OVERHEAD UTILITY LINE
- ELECTRIC LINE
- GAS LINE
- GAS VALVE
- WATER VALVE
- FIRE HYDRANT
- WATER METER
- TELEPHONE LINE
- RIPRAP
- LIGHT
- SIGN
- CHAIN LINK FENCE
- EXISTING TREE WITH CRITICAL ROOT ZONES AND STRUCTURAL ROOT ZONES
- SOIL TYPE

PROPOSED LEGEND

- PROPOSED STORM DRAIN
- PROPOSED SWM UNDERDRAIN W/ CLEANOUT
- PROPOSED MANHOLE
- PROPOSED CONTOUR
- PROPOSED CHAIN-LINK FENCE
- PROPOSED DEPRESSED CONCRETE CURB
- PROPOSED BIOFILTER/SAND FILTER SEE STORMWATER DETAILS, SHEETS C-4C & C-4D
- PROPOSED LIGHT DUTY ASPHALT SEE DETAIL 1, SHEET C-3B
- PROPOSED 2" MILL & OVERLAY (MIN 5' OUTSIDE SAW CUT)

ARCHITECT

SEI SHOLEN + EHR ILKOVITCH ARCHITECTS
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ROCKVILLE, MD 20850
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**CIVIL / STRUCTURAL
ADTEK ENGINEERS**

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FREDERICK, MARYLAND 21701
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**MECH/ELECTRICAL/PLUMBING
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**CONSTRUCTION MANAGER
HESS CONSTRUCTION**

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GATHERSBURG, MD 20878
301-670-9000(P) 301-670-9009(F)

PROFESSIONAL SEAL:

PRINTS ISSUED

NO.	DESCRIPTION:	DATE:
1	RFP-040	03/01/18

**8001 LYNNBROOK DRIVE
BETHESDA, MD 20814
L. 850 F. 1462
PARCEL N719
ZONED: R60
LAND USE: EC
ACCT NO.
07-00417763**

**LYNNBROOK CENTER
STORMWATER IMPROVEMENTS
MONTGOMERY COUNTY PUBLIC SCHOOLS**

OVERALL GRADING & SWM PLAN

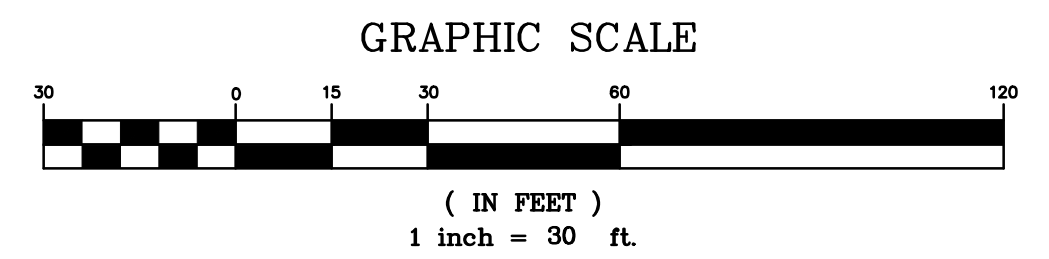
PROJECT NO: 177702

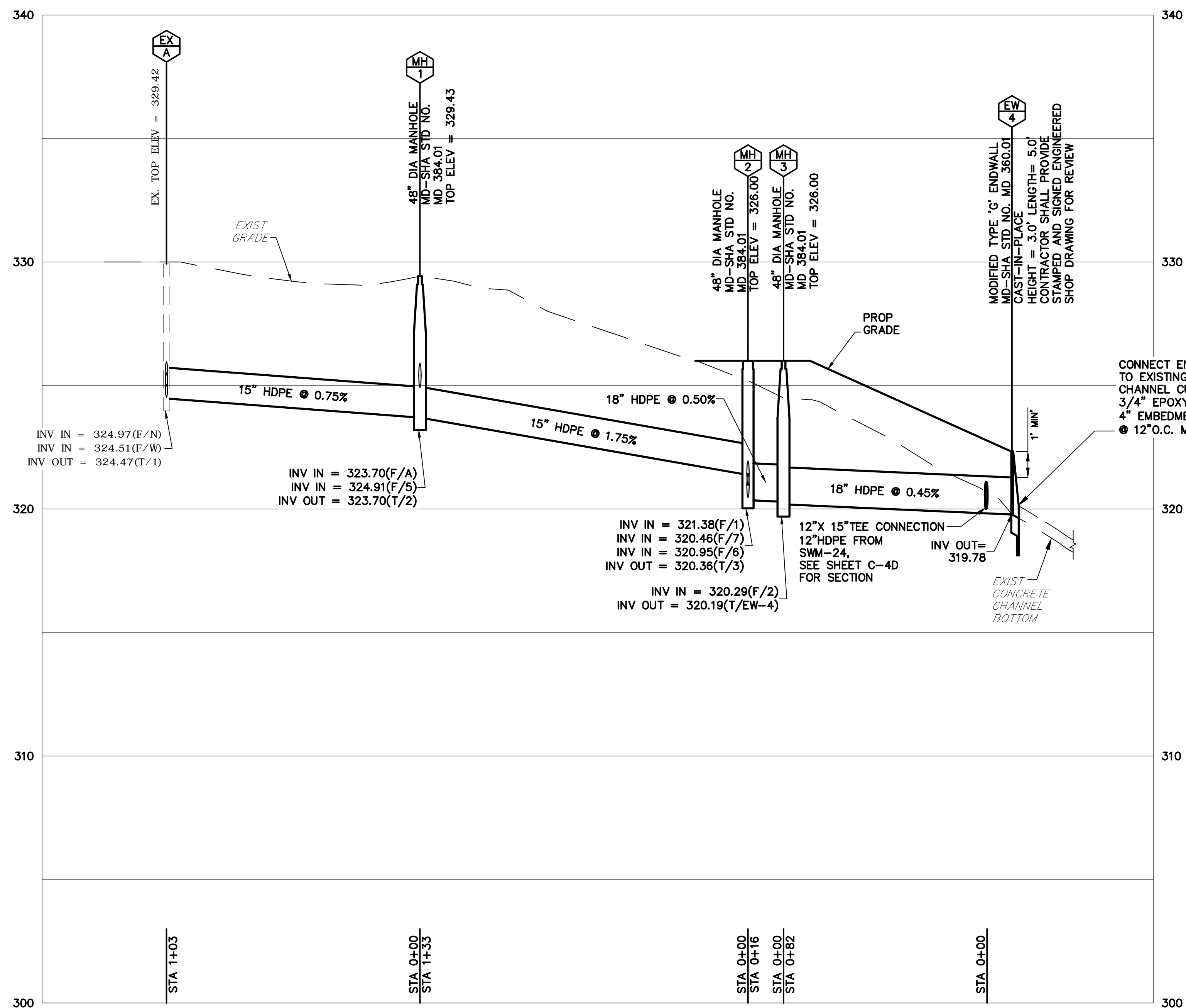
DATE: 03/02/2018

SCALE: WORKING NORTH

SHEET NO: C-4A

SC/SWM SHEET NO. 5 of 10
OWNER/APPLICANT
MONTGOMERY COUNTY PUBLIC SCHOOLS
45 WEST GUDE DRIVE, SUITE 4300
ROCKVILLE, MARYLAND 20850-4038
ATTN: ROBBIE S. BADSTIGNER
robbie_s_badstigner@mcpmsmd.org
TEL: 240.314.1018 FAX: 240.279.3003





SCALE: 1" = 30'(HORIZ) 1" = 3'(VERT)

MCPDS STORMWATER MANAGEMENT AS-BUILT INSPECTION AND CERTIFICATION REQUIREMENTS:

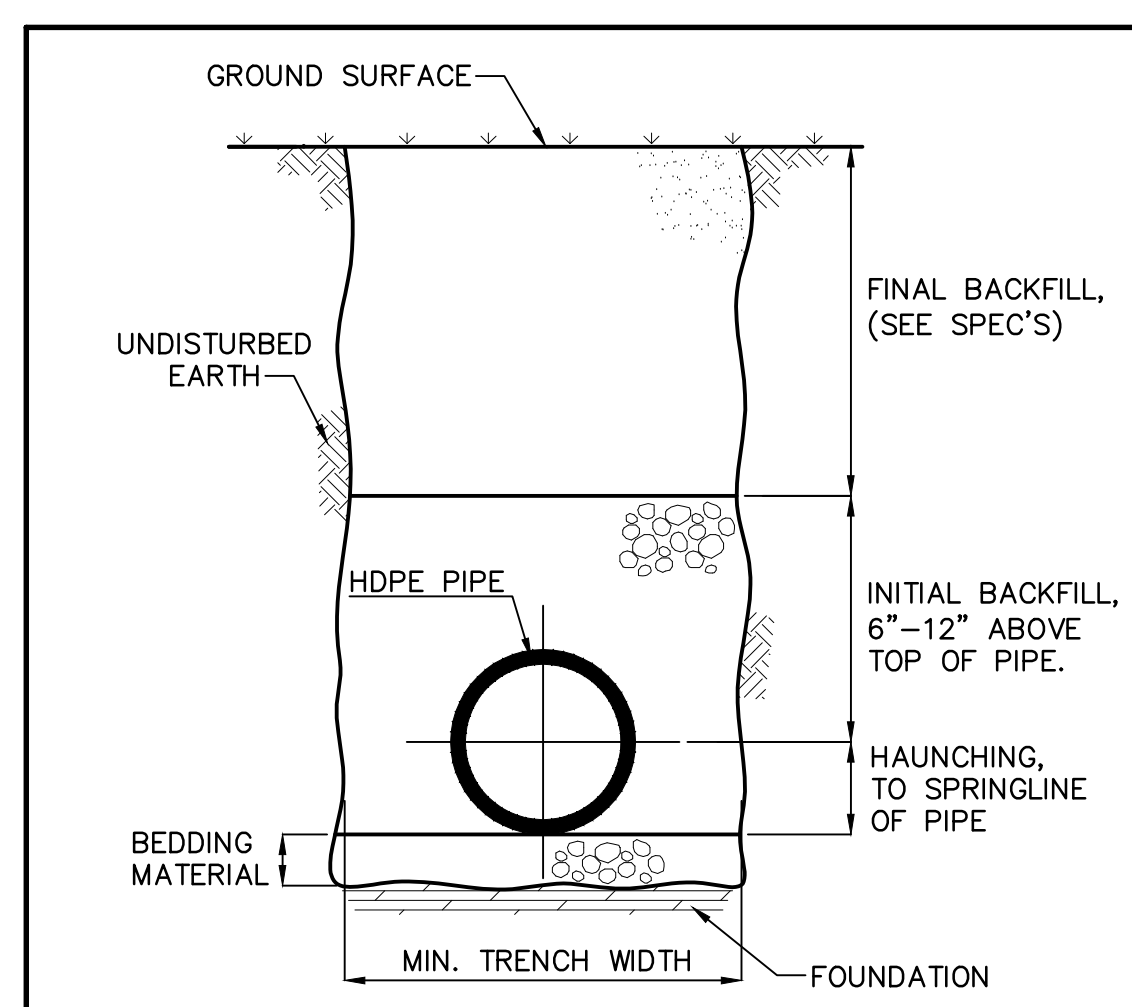
- IT WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND/OR THE CONSTRUCTION MANAGER (GC/CM) TO HIRE THE CIVIL ENGINEER OF RECORD (CER) AND THE GEOTECHNICAL ENGINEER OF RECORD (GER) TO PERFORM AND DOCUMENT ANY AND ALL INSPECTIONS, OBSERVATIONS, AS-BUILT SURVEYS AND MEASUREMENTS REQUIRED TO PREPARE COMPLETE AND ACCURATE AS-BUILT PLANS. PROVIDE REQUIRED CERTIFICATIONS AND OBTAIN APPROVAL THEREOF FROM MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES (MCDPS).
- REQUIRED SERVICES INCLUDE, BUT ARE NOT LIMITED TO, PROVIDING AND CERTIFYING THE ACCURACY AND CORRECTNESS OF ALL INFORMATION AND AS-BUILT PLANS IN STRICT CONFORMANCE WITH THE MOST CURRENT APPLICABLE MCDPS AS-BUILT RECORD DRAWING PLAN REVIEW CHECKLIST.
- THESE SERVICES MUST BE PERFORMED BY AND/OR UNDER THE DIRECT SUPERVISION OF THE CER/GER AND MUST BE BASED UPON DIRECT OBSERVATIONS AND INFORMATION OBTAINED IN THE FIELD BY AND/OR UNDER THEIR DIRECT SUPERVISION.
- THE GC/CM SHALL COLLECT AND PROVIDE ANY AND ALL SUPPORTING CERTIFICATIONS REQUIRED BY THE CER/GER TO SATISFY ALL MCDPS CHECKLIST REQUIREMENTS. THE GC/CM SHALL PROVIDE CERTIFICATIONS FROM SUPPLIERS FOR MATERIALS USED IN THE CONSTRUCTION OF THE FACILITY (PRINCIPAL SPILLWAY, CONTROL STRUCTURE, PVC PIPE, AGGREGATE, WETLAND PLANTINGS, ETC.)
- UNDER NO CIRCUMSTANCES SHALL ANY CONSTRUCTION OR MATERIALS DEVIATE FROM THE APPROVED STORMWATER MANAGEMENT/SEDIMENT CONTROL PLANS WITHOUT PRIOR APPROVAL OF THE CER, MCDPS.
- ANY CHANGES TO THE DESIGNS OR CONSTRUCTION SHOWN ON THE APPROVED STORMWATER MANAGEMENT PLANS MUST BE APPROPRIATELY PRE-APPROVED AND PERMITTED BY THE CER, MCDPS PRIOR TO BEING IMPLEMENTED IN THE FIELD AND/OR SUBMITTED FOR REVIEW AND APPROVAL AS AN AS-BUILT CONDITION.
- THE CER/GER SHALL CONFIRM AND DOCUMENT TO MCPDS, VIA PHYSICAL MEASUREMENT AND SURVEY, THAT ALL PIPES, STRUCTURES AND FACILITIES HAVE BEEN SET TO THE APPROVED FINAL DESIGN GRADE PRIOR TO BEING BACKFILLED. IN THE EVENT THAT THE STRUCTURES HAVE NOT BEEN SET TO THE APPROVED ELEVATIONS AND CONFIGURATION, THE GC/CM SHALL REMOVE AND RESET THE STRUCTURE AND/OR PIPES TO THE APPROVED ELEVATIONS AND PROVIDE THE APPROPRIATE DOCUMENTATION OF THAT WORK AT NO ADDITIONAL COST TO MCPDS.
- THE GC/CM SHALL BE RESPONSIBLE FOR ANY AND ALL COSTS, DAMAGES AND DELAYS ARISING FROM OR IN CONNECTION WITH CORRECTIVE MEASURES, RE-DESIGNS, RE-APPROVALS, RE-REVIEWS AND THE LIKE REQUIRED FOR AS-BUILT APPROVAL THEREOF BY THE MCDPS.
- PRIOR TO PREPARING AND/OR SUBMITTING ANY AS-BUILT DOCUMENTATION TO MCPDS, THE GC/CM SHALL ARRANGE AND ATTEND A SITE MEETING WITH THE CER/GER, THE COUNTY SEDIMENT CONTROL INSPECTOR AND REPRESENTATIVE(S) OF THE MCPDS DIVISION OF CONSTRUCTION TO OBSERVE THE STORMWATER MANAGEMENT FACILITIES AND SITE CONDITIONS/STABILIZATION AND TO OBTAIN MCPDS' INSPECTOR APPROVAL TO PREPARE AND SUBMIT AS-BUILT DOCUMENTS AND CERTIFICATIONS TO MCPDS FOR REVIEW. ALL REQUIRED DOCUMENTATION WILL BE SUBMITTED TO MCPDS FOR INITIAL REVIEW WITHIN FORTY-FIVE (45) DAYS OF THAT MEETING.
- ANY AND ALL CORRECTIONS, EITHER TO PLANS OR CONSTRUCTION, IDENTIFIED DURING REVIEW OF THE AS-BUILT DOCUMENTS SHALL BE MADE, RE-INSPECTED AND CORRECTED AS-BUILT DOCUMENTATION MUST BE RE-CERTIFIED BY THE CER AND RE-SUBMITTED TO MCPDS SUCH THAT FINAL AS-BUILT APPROVAL WILL BE OBTAINED WITHIN TWO (2) WEEKS OF THE CER'S RECEIPT OF MCPDS COMMENTS ON THE INITIAL SUBMITTAL AT NO ADDITIONAL COST TO THE OWNER.
- THE CER SHALL PROVIDE TO THE MCPDS DIVISION OF CONSTRUCTION (MCPDS-DOC) ELECTRONIC FILES, IN PDF FORMAT, FOR ALL SUBMITTALS AND OF ALL REVIEW COMMENTS RECEIVED FROM THE COUNTY.
- IN ADDITION TO THE MCDPS REQUIREMENTS, THE GC/CM SHALL PROVIDE THE FOLLOWING DOCUMENTATION TO THE MCPDS-DOC IN HARD COPY AND ELECTRONIC FORMAT. DATE/TIME-STAMPED DIGITAL (.JPG) PHOTOGRAPHS DOCUMENTING THE
- CHRONOLOGY OF THE CONSTRUCTION OF ALL STORMWATER MANAGEMENT FACILITIES FROM BEGINNING TO END. ELECTRONIC FILES, AUTOCAD AND/OR .PDF FORMAT, OF THE STORMWATER
- MANAGEMENT FACILITIES AS-BUILT CONSTRUCTION INCLUDING, BUT NOT LIMITED SIGNED/APPROVED AS-BUILT TO, MONTGOMERY COUNTY CERTIFICATIONS AND THE LIKE.

STORM STRUCTURE NOTES:

- CONTRACTOR SHALL SUBMIT CERTIFICATION THAT ALL STRUCTURES SUPPORT H-20 TYPE TRAFFIC LOADING. FOR REVIEW AND APPROVAL BY THE DESIGN ENGINEER.
- TOP OF CURB HEAD PIECE ON ALL INLETS MUST MATCH ON-LINE AND AT GRADE WITH ADJACENT CURB.
- INSTALL FLEXIBLE GASKET ADAPTER FOR ALL STRUCTURES WHERE PVC PIPE ENTERS/EXITS A CONCRETE STRUCTURE IN ACCORDANCE WITH WSSC STANDARDS AND SPECIFICATIONS.
- ALL EXPOSED METAL SURFACES (I.E. LINTELS, GRATES, MANHOLE COVERS, ETC.) SHALL BE PAINTED WITH TWO (2) COATS OF BATTLESHIP GRAY PAINT (ZINC RICH).
- TOP/GRADE ELEVATIONS ARE TO THE TOP CENTER OF STRUCTURE, NOT TO FLOW LINE.
- ALL INLET TOP SLAB FRONT FACES SHALL BE PAINTED WITH THE FOLLOWING STORM DRAIN SIGN "CHESAPEAKE BAY DRAINAGE" & "DO NOT DUMP".
- ALL MANHOLE FRAMES SHALL BE SECURELY ANCHORED TO THE TOP SLAB PER WSSC DETAIL 5/S4.3. (MAX. MANHOLE FRAME HEIGHT = 9')
- ALL INLET GRATES SHALL BE BOLTED TO FRAME.
- ALL STORM STRUCTURES INCLUDING MANHOLES, INLETS, END WALLS, AND PIPE SUPPORTS SHALL BE PRECAST. IT IS THE CONTRACTORS RESPONSIBILITY TO HAVE THE PRECAST MANUFACTURER DESIGN AND SUBMIT SIGNED AND SEALED SHOP DRAWINGS FOR REVIEW PRIOR TO PRECASTING BY A MARYLAND LICENSED P.E.
- CONTRACTOR SHALL PROVIDE GRADE ADJUSTMENT RINGS AS REQUIRED TO MEET FINISH GRADES; HOWEVER THE TOTAL HEIGHT OF ALL GRADE ADJUSTMENT RINGS SHALL NOT EXCEED 9'

STORM DRAIN NOTES:

- HDPE PIPE SHALL BE ADS TYPE N-12 OR APPROVED EQUAL. ALL JOINTS OF THE HDPE PIPE MUST MEET A MODIFIED ASTM 3212 AT 3.5 PSI HELD FOR 10 MINUTES. AS CERTIFIED BY AN INDEPENDENT TESTING LAB, AND HAVE DOUBLE GASKETS.
- ALL PVC PIPE MUST BE SCH-40 OR THICKER, U.N.O.



TYPICAL TRENCH CROSS SECTION
NOT TO SCALE

REFERENCE SECTION X-2, "RECOMMENDATIONS FOR INCORPORATION INTO CONTRACT DOCUMENTS" OF ASTM SPECIFICATION D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS".

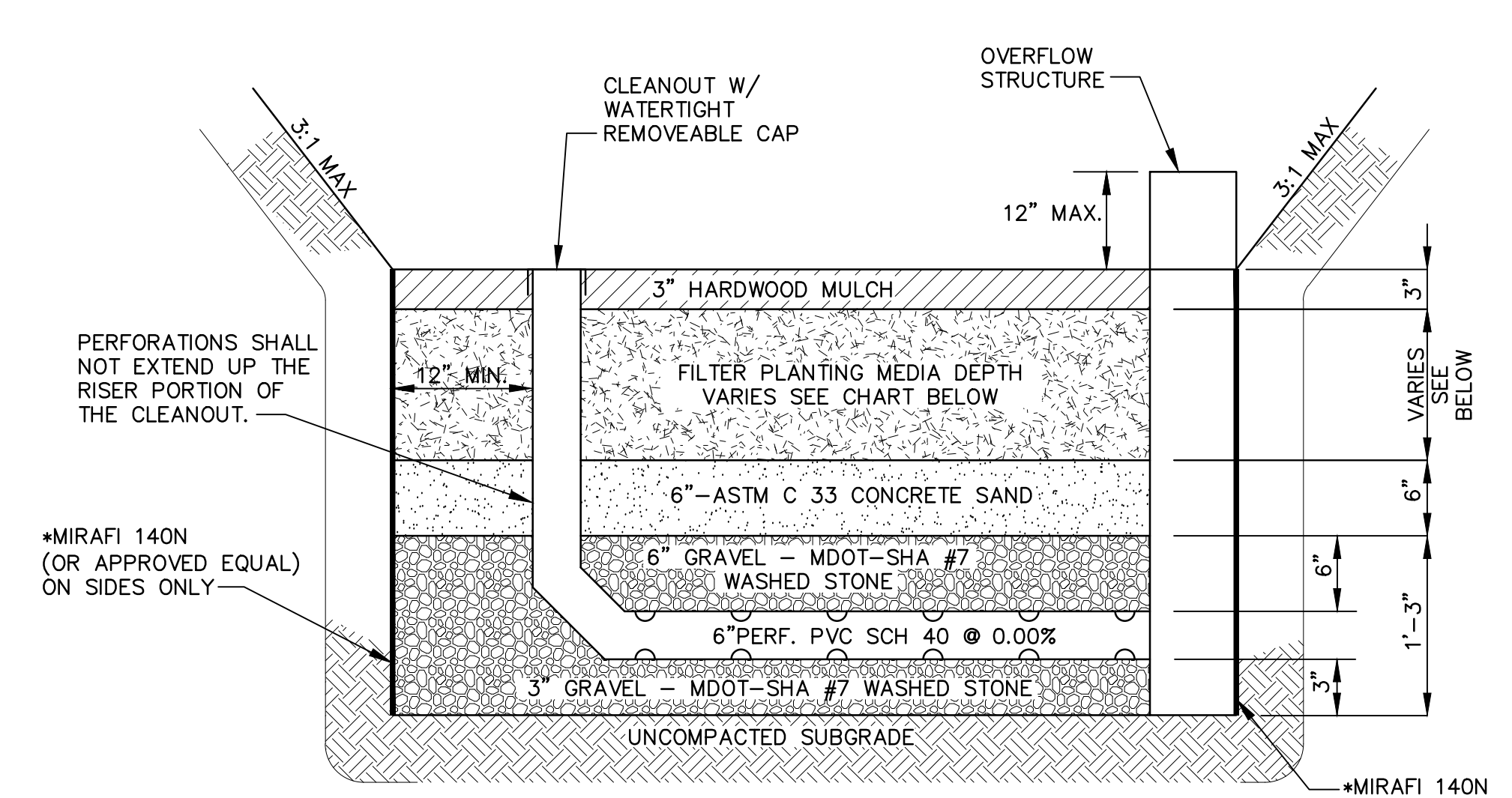
- NOTES:**
- FOUNDATION:** WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D2321, "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS," LATEST EDITION; AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.
 - BEDDING:** SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" FOR 4"-24" AND 42"-48" CORRUGATED POLYETHYLENE PIPE (CPEP); 6" FOR 30"-36" CPEP.
 - HAUNCHING AND INITIAL BACKFILL:** SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
 - UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS:

NOMINAL Ø in	MIN. RECOMMENDED TRENCH WIDTH, in
4	21
6	23
8	25
10	28
12	31
15	34
18	39
24	48
30	66
36	78
42	83
48	89
60	102

SURFACE LIVE LOADING CONDITION	MINIMUM RECOMMENDED COVER, in
H25 (FLEXIBLE PAVEMENT)	12"
H25 (RIGID PAVEMENT)	12"



ON-SITE STORM DRAIN TRENCH INSTALLATION DETAIL
NOT TO SCALE



SWM FACILITY	SOIL FILTER DEPTH	AS-BUILT
SWM-21	2.00'	
SWM-22	2.00'	
SWM-23	2.50'	
SWM-24	2.50'	

*NOTE: PROVIDE MIRAFI 140N (OR APPROVED EQUAL) ON ALL SIDES OF FACILITY. NO FILTER FABRIC SHALL BE PLACED ON THE BOTTOM OR HORIZONTALLY ACROSS THE BOTTOM.

MICROBIORETENATION FACILITY - TYPICAL SECTION
NOT TO SCALE

MULCH SPECIFICATIONS

THE MULCH LAYER IS AN IMPORTANT PART OF THE MICRO-BIORETENATION DEVICE. MUCH OF THE POLLUTANT REMOVAL CAPACITY OF THE MICRO-BIORETENATION SYSTEM IS WITHIN THE MULCH LAYER. THE SURFACE MULCH LAYER WILL CONSIST OF STANDARD DOUBLE SHREDDED AGED HARDWOOD MULCH. THE MULCH SHOULD BE APPLIED UNIFORMLY TO A DEPTH OF 3 INCHES. YEARLY REPLISHING MAY BE NECESSARY. PINE BARK IS NOT ACCEPTABLE.

SOIL FILTER/PLANTING MEDIA SPECIFICATIONS

PLANTING MEDIA SHALL BE 24"-48" THICK AND CONSIST OF 1/3 PERLITE OR SOLITE, 1/3 COMPOST AND 1/3 TOPSOIL. THE PERLITE SHALL BE COARSE GRADE HORTICULTURAL PERLITE. THE COMPOST SHALL BE HIGH GRADE COMPOST FREE OF STONES AND PARTIALLY COMPOSTED WOODY MATERIAL. THE TOPSOIL COMPONENT SHALL MEET THE FOLLOWING CRITERIA: CONTAIN NO MORE THAN 10% CLAY, 10%-25% SILT AND 60%-75% SAND AND SHALL BE FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN 2 INCHES. THE FIRST LAYER OF THE PLANTING MEDIA SHALL BE LIGHTLY TILLED TO MIX IT INTO THE SAND LAYER, SO NOT TO CREATE A DEFINITIVE BOUNDARY. THE PLANTING MATERIAL SHALL BE FLOODED AFTER PLACEMENT. ANY SETTLEMENT THAT OCCURS SHALL BE FILLED BACK TO THE DESIGN ELEVATION.

SAND SPECIFICATIONS

WASHED ASTM C33 FINE AGGREGATE CONCRETE SAND IS UTILIZED FOR STORMWATER MANAGEMENT APPLICATIONS IN MONTGOMERY COUNTY. IN ADDITION TO THE ASTM C33 SPECIFICATION, SAND MUST MEET ALL OF THE FOLLOWING CONDITIONS:

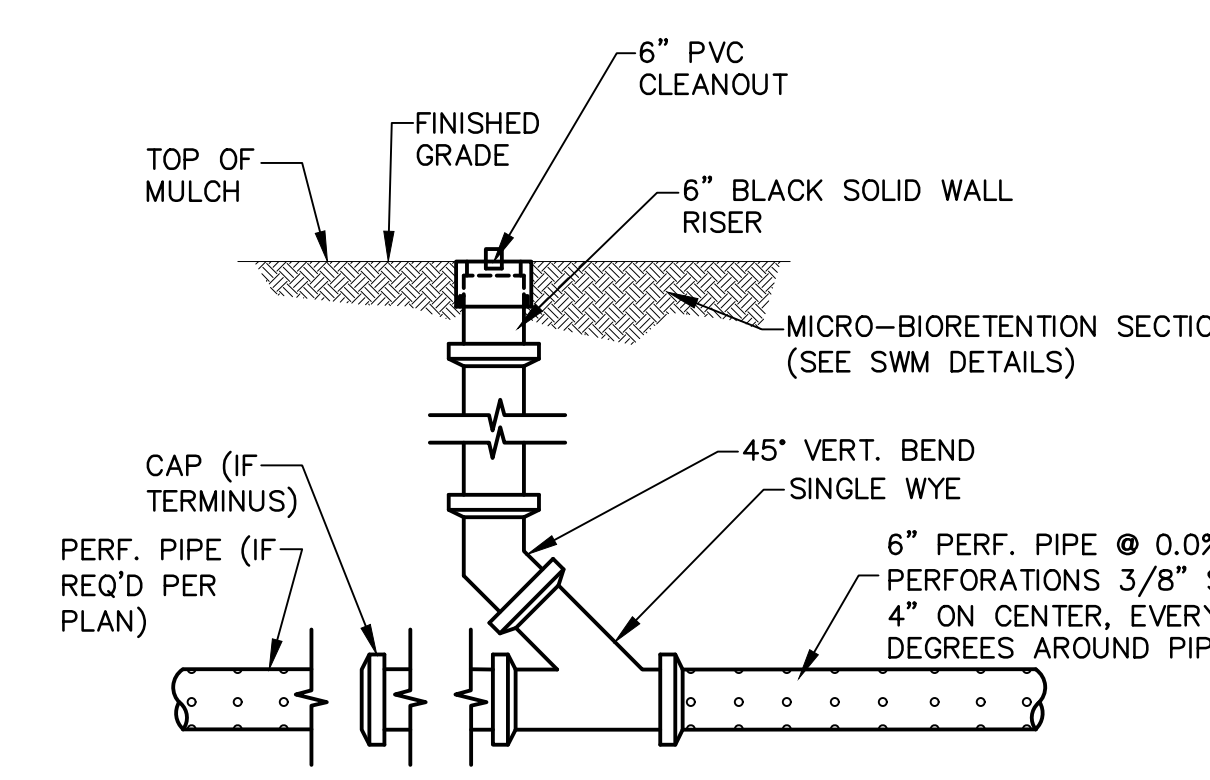
- SAND MUST MEET GRADATION REQUIREMENTS FOR ASTM C-33 FINE AGGREGATE CONCRETE SAND. AASHTO M-6 GRADATION IS ALSO ACCEPTABLE.
- SAND MUST BE SILICA BASED. NO LIMESTONE BASED PRODUCTS MAY BE USED. IF THE MATERIAL IS WHITE OR GRAY IN COLOR, IT IS PROBABLY NOT ACCEPTABLE.
- SAND MUST BE CLEAN, NATURAL, UNWASHED SAND DEPOSITS MAY NOT BE USED. LIKEWISE, SAND THAT HAS BECOME CONTAMINATED BY IMPROPER STORAGE OR INSTALLATION PRACTICES WILL BE REJECTED.
- MANUFACTURED SAND OR STONE DUST IS NOT ACCEPTABLE UNDER ANY CIRCUMSTANCE.

GRAVEL SPECIFICATIONS

THE GRAVEL LAYER SURROUNDING THE UNDERDRAIN PIPE(S) MUST MEET MSHA SIZE #7, AND MUST PROVIDE A MINIMUM OF 6 INCHES COVER OVER THE PIPE(S), AND MINIMUM 3 INCHES UNDER THE PIPE. NO GEOTEXTILE OR FILTER FABRIC IS ALLOWED TO BE PLACED HORIZONTALLY ANYWHERE WITHIN THE FILTER MEDIA. THE GRAVEL MUST BE CLEAN AND MUST BE STORED AND INSTALLED IN SUCH A MANNER THAT IT DOES NOT BECOME CONTAMINATED WITH SEDIMENT BEFORE OR AFTER INSTALLATION.

UNDERDRAIN SPECIFICATIONS

THE UNDERDRAIN PIPE CONSISTS OF 6-INCH DIAMETER SCHEDULE 40 OR STRONGER PERFORATED PVC PIPE AT 0.00% SLOPE. PERFORATIONS MUST BE 3/8 INCH IN DIAMETER AND MUST BE LOCATED 4 INCHES ON CENTER, EVERY 90 DEGREES AROUND THE PIPE. PERFORATED PIPE MUST BEGIN AT LEAST 12" INSIDE THE FILTER MEDIA. FILTER FABRIC MUST NOT BE WRAPPED AROUND THE UNDERDRAIN PIPE. WATER-TIGHT CLEAN-OUTS FOR EACH PIPE SHALL BE LEVEL WITH THE TOP OF THE MULCH. ALL CLEAN-OUTS SHALL HAVE A REMOVABLE WATERPROOF CAP. CLEAN-OUTS MUST BE CAPPED IMMEDIATELY AFTER THE FILTER MEDIUM IS IN PLACE.



- NOTE:**
- FOR CLEAN OUTS WITHIN MICRO-BIORETENATION AREA. SEE PLAN FOR EXACT LOCATION.
 - USE COMPRESSION GASKET IN CONJUNCTION WITH CLEANOUT.

1 MICRO-BIORETENATION CLEANOUT
NOT TO SCALE

SC/SWM SHEET NO. 6 of 10
OWNER/APPLICANT
MONTGOMERY COUNTY PUBLIC SCHOOLS
45 WEST GUDE DRIVE, SUITE 4300
ROCKVILLE, MARYLAND 20850-4038
ATTN: ROBBIE S. BADSTIBNER
robbie_s_badstibner@mcpmsmd.org
TEL: 240.314.1018 FAX: 240.279.3003

ARCHITECT
SEI SMOLEN + EHR ILKOVITCH ARCHITECTS
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CIVIL / STRUCTURAL
ADTEK ENGINEERS
97 MONOCACY BOULEVARD, UNIT H
FREDERICK, MARYLAND 21701
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MECH/ELECTRICAL/PLUMBING
JAMES POSEY ASSOCIATES
3112 LORD BALTIMORE DRIVE
BALTIMORE, MARYLAND 21204
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CONSTRUCTION MANAGER
HESS CONSTRUCTION
804 WEST DIAMOND AVENUE, SUITE 300
GATHERSBURG, MD 20878
301-670-9000(P) 301-670-9009(F)

PROFESSIONAL SEAL:

PRINTS ISSUED

NO.	DESCRIPTION:	DATE:
1	RFP-040	03/01/18

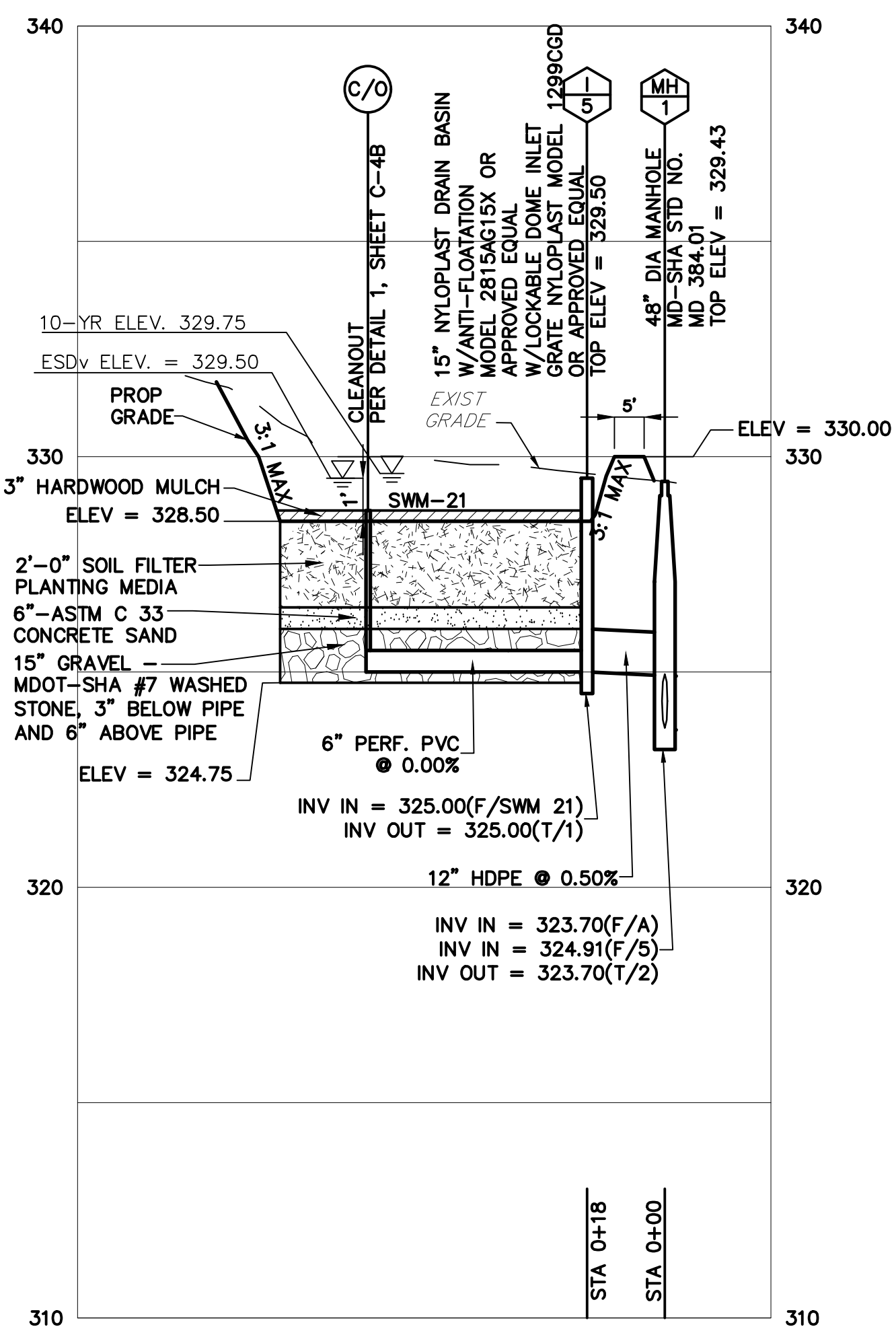
8001 LYNNBROOK DRIVE
BETHESDA, MD 20814
L. 850 F. 1462
PARCEL N719
ZONED: R60
LAND USE: EC
ACCT NO.
07-00417763

LYNNBROOK CENTER
STORMWATER IMPROVEMENTS
MONTGOMERY COUNTY PUBLIC SCHOOLS

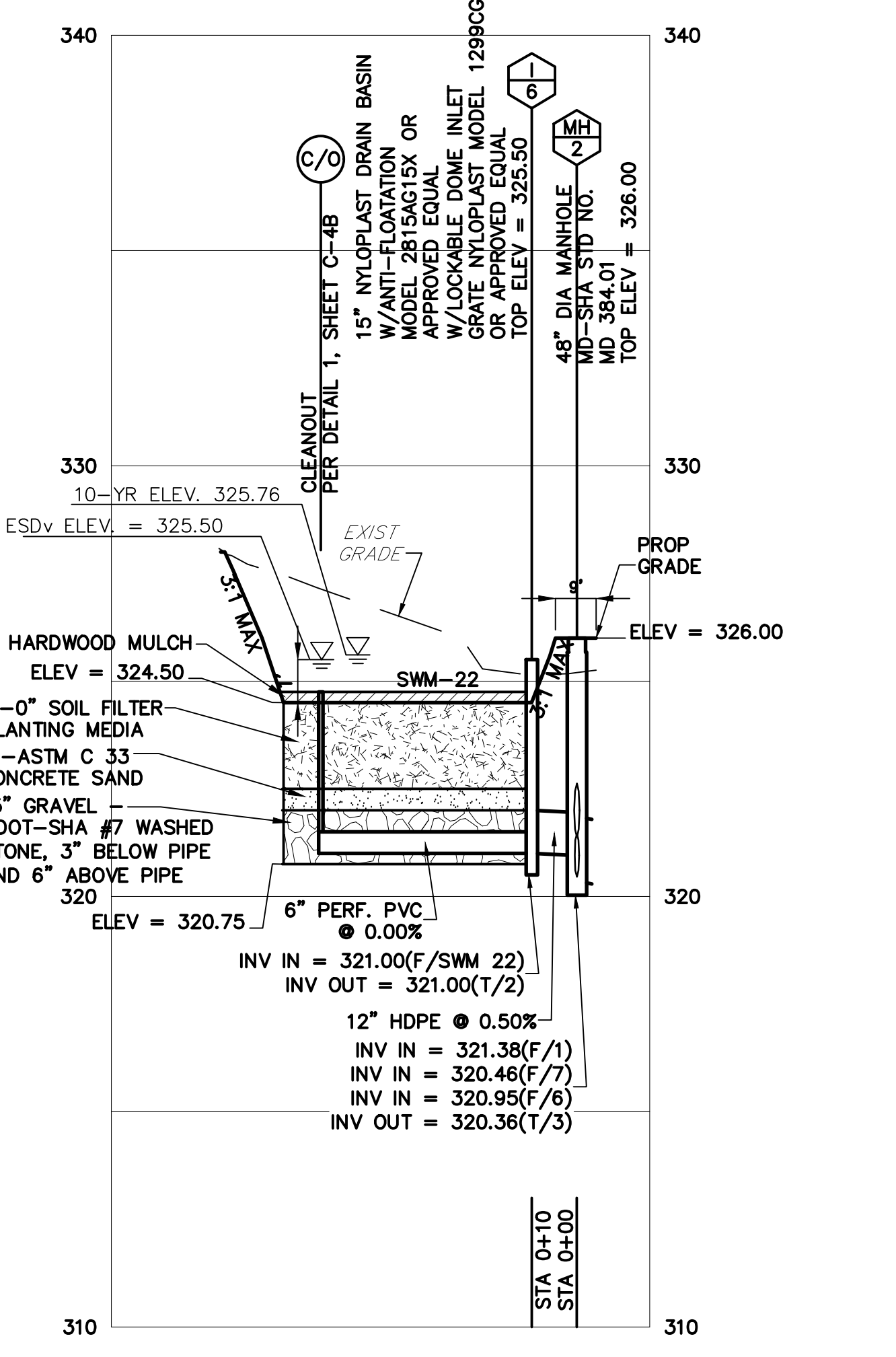
SHEET TITLE:
STORM DRAIN PROFILE, DETAILS & NOTES

PROJECT NO: 177702
DATE: 03/02/2018
SCALE: WORKING NORTH

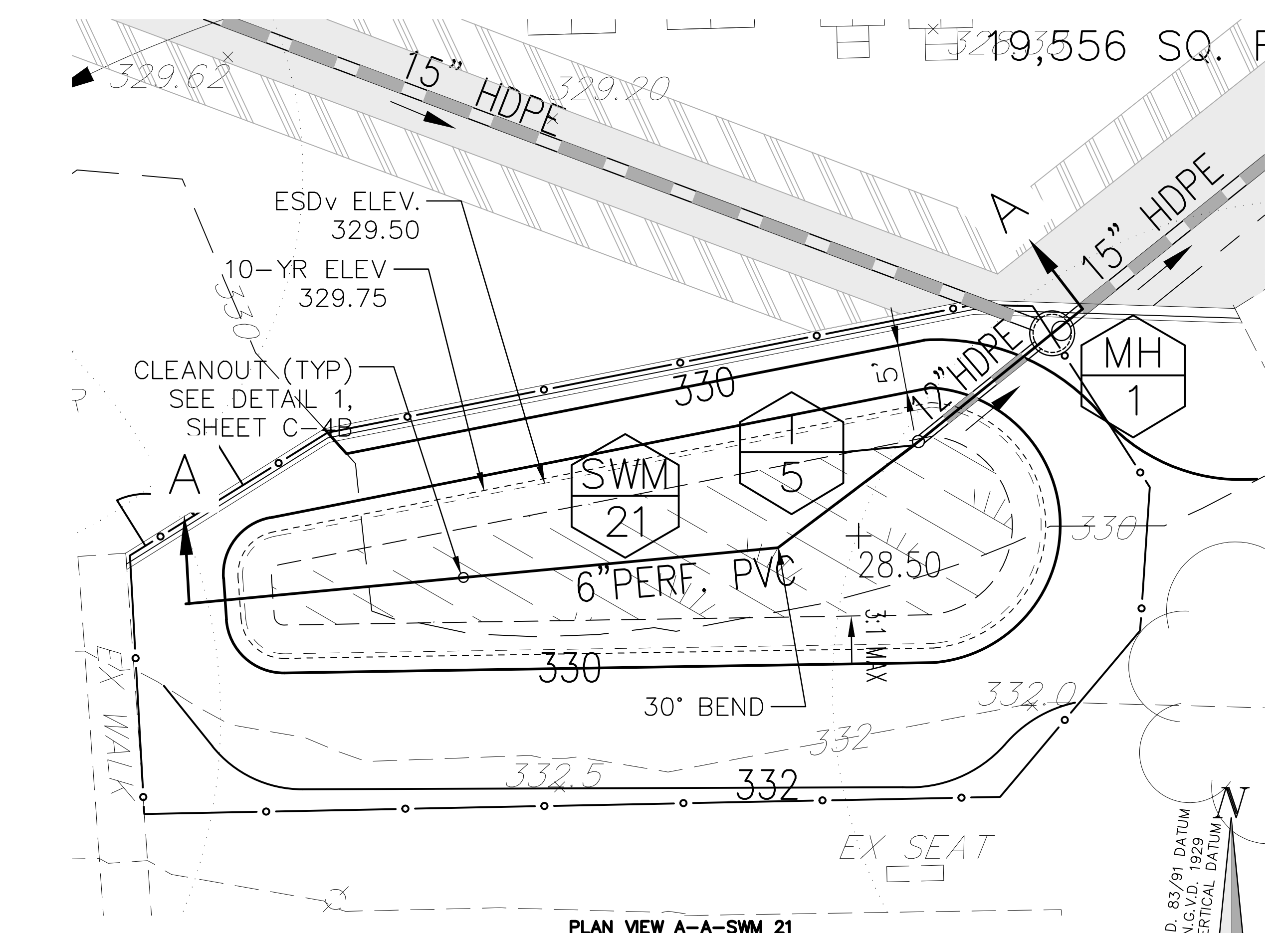
SHEET NO: **C-4B**



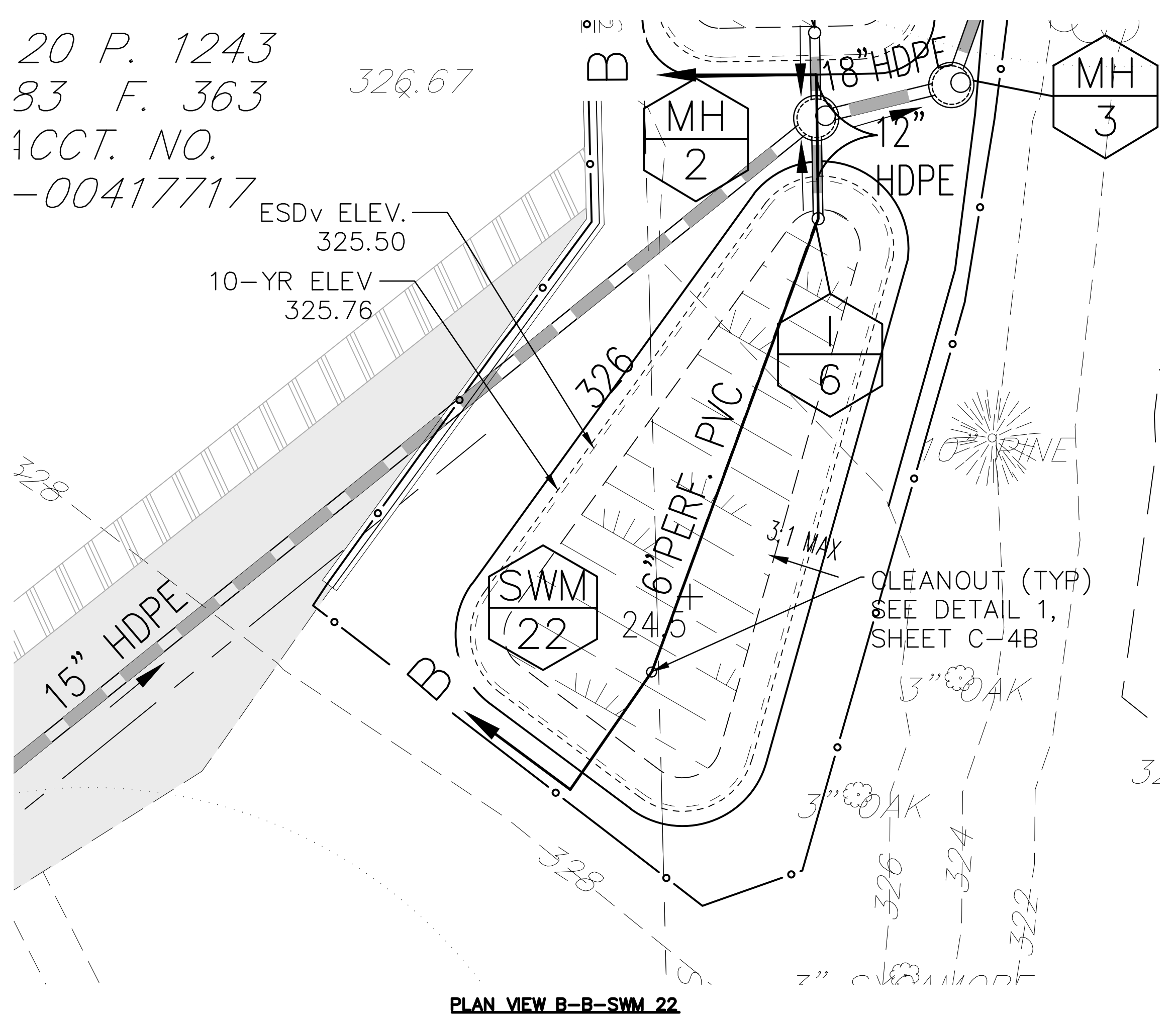
SECTION A-A-SWM 21
SCALE: 1" = 30'(HORIZ) 1" = 3'(VERT)



SECTION B-B-SWM 22
SCALE: 1" = 30'(HORIZ) 1" = 3'(VERT)

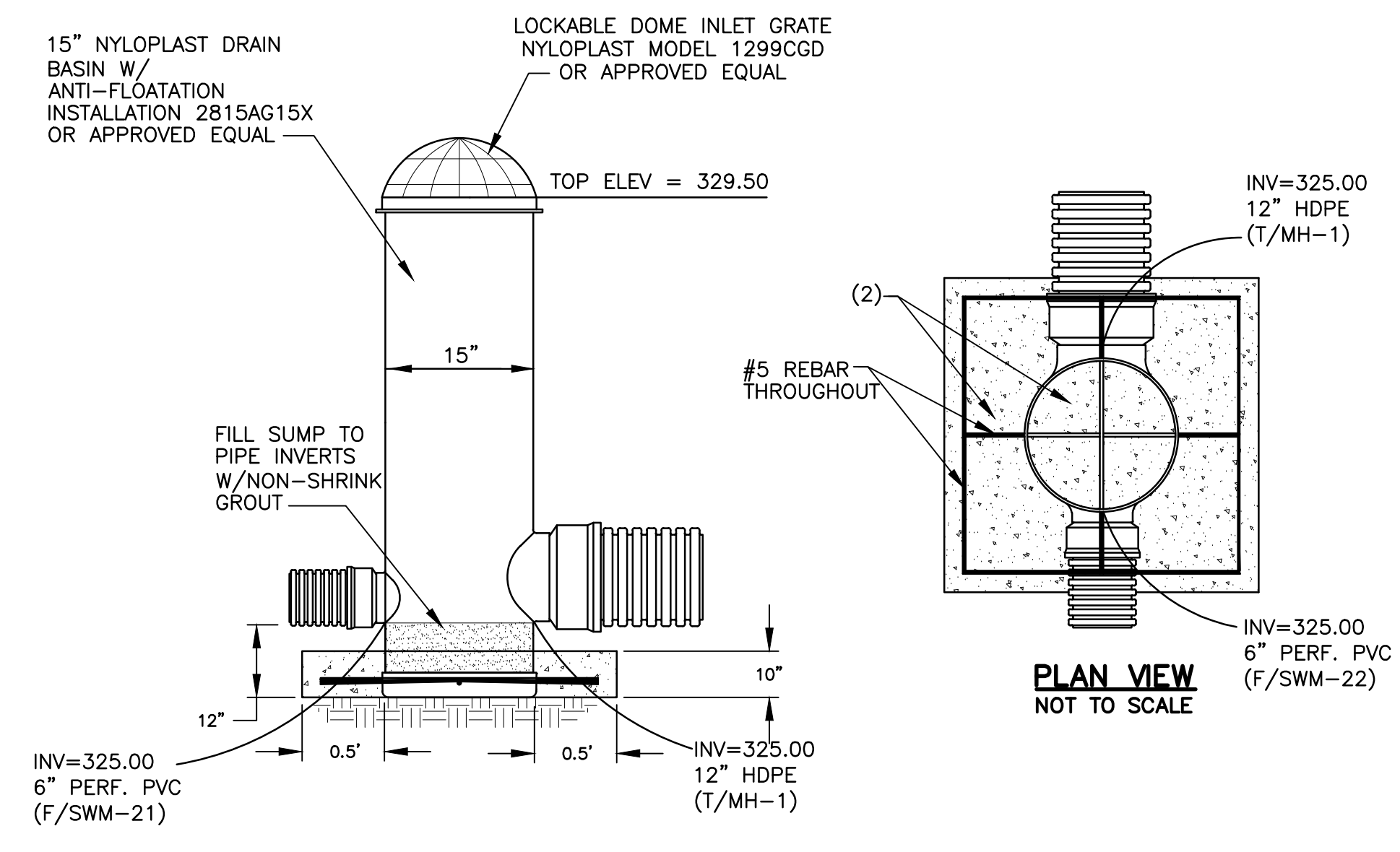


PLAN VIEW A-A-SWM 21
SCALE: 1"=10'



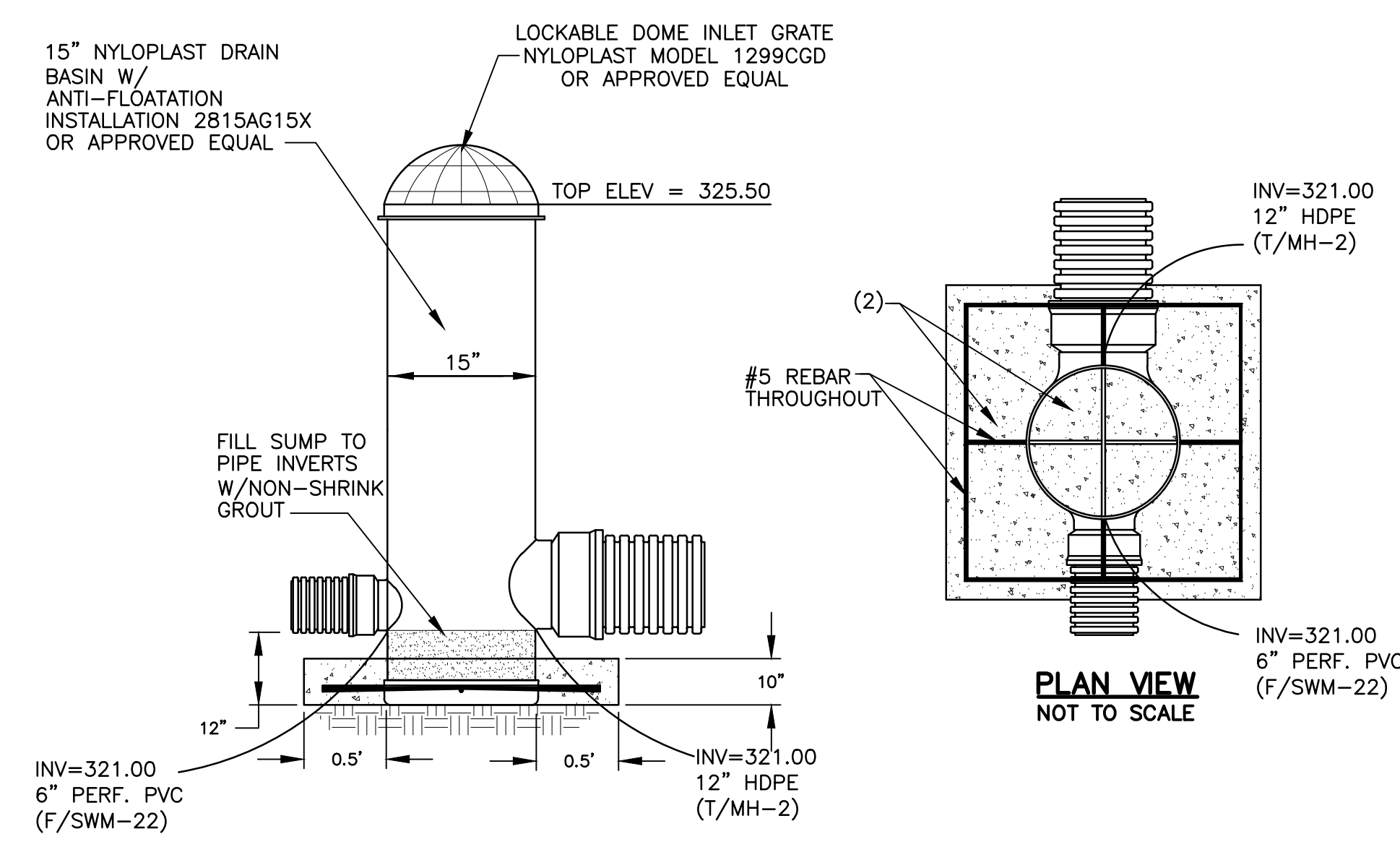
PLAN VIEW B-B-SWM 22
SCALE: 1"=10'

FACILITY	APPROXIMATE DIMENSIONS OF STORMWATER FACILITIES				ESD PROVIDED (cu. ft.)
	LENGTH OF MEDIA (FT)	WIDTH OF MEDIA (FT)	6" PERF. PVC	SURFACE AREA OF MEDIA (sq. ft.)	
SWM-21	77'	14'	49'	974	1,949
SWM-22	58.5'	25.5'	49'	977	1,907



- NOTES:
1. CONCRETE ANTI-FLOATATION FOOTING WITH REBAR REINFORCEMENT (APPROX. 3900 LBS PER CU YD).
 2. IF THE STRUCTURE IS ABOVE GRADE OR WILL HAVE PROLONGED EXPOSURE TO UV RAYS, THE EXPOSED SURFACES SHOULD BE COATED IN A LATEX BASED PAINT OR SIMILAR COATING THAT WILL NOT DEGRADE THE PVC MATERIAL.
 3. STRUCTURE MUST BE WATERTIGHT

DETAIL FOR INLET I-5
NOT TO SCALE



- NOTES:
1. CONCRETE ANTI-FLOATATION FOOTING WITH REBAR REINFORCEMENT (APPROX. 3900 LBS PER CU YD).
 2. IF THE STRUCTURE IS ABOVE GRADE OR WILL HAVE PROLONGED EXPOSURE TO UV RAYS, THE EXPOSED SURFACE SHOULD BE COATED IN A LATEX BASED PAINT OR SIMILAR COATING THAT WILL NOT DEGRADE THE PVC MATERIAL.
 3. STRUCTURE MUST BE WATERTIGHT

DETAIL FOR INLET I-6
NOT TO SCALE

CONSTRUCTION INSPECTION
CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY SWM-21

STAGE	MCDPS INSPECTOR	OWNER/DEVELOPER
MANDATORY NOTIFICATION: Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS Inspector twenty-four (24) hours notice (DPS telephone 240-777-0311). The DPS Inspector may waive an inspection, and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS Inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. Upon completion of the project, a formal Stormwater Management As-built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead. Each of the steps listed below must be verified by either the MCDPS Inspector OR the Owner/Developer.	INITIALS/DATE	INITIALS/DATE
1. Excavation for Micro Bioretention Facility conforms to approved plans		
2. Placement of stone backfill underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes, overflow structure, and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

CONSTRUCTION INSPECTION
CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY SWM-22

STAGE	MCDPS INSPECTOR	OWNER/DEVELOPER
MANDATORY NOTIFICATION: Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS Inspector twenty-four (24) hours notice (DPS telephone 240-777-0311). The DPS Inspector may waive an inspection, and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS Inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. Upon completion of the project, a formal Stormwater Management As-built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead. Each of the steps listed below must be verified by either the MCDPS Inspector OR the Owner/Developer.	INITIALS/DATE	INITIALS/DATE
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2. Placement of stone backfill underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes, overflow structure, and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

ARCHITECT
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SMOLEN + ENR
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ADTEK ENGINEERS**
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301-662-4408(P) 301-662-7484(F)

**MECH/ELECTRICAL/PLUMBING
JAMES POSEY ASSOCIATES**
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BALTIMORE, MARYLAND 21244
301-265-6100(P) 301-298-9820(F)

**CONSTRUCTION MANAGER
HESS CONSTRUCTION**
804 WEST DIAMOND AVENUE, SUITE 300
GATHERSBURG, MD 20878
301-670-9000(P) 301-670-9009(F)

PROFESSIONAL SEAL:

NO.	DESCRIPTION:	DATE:
1	RFI-040	03/01/18

**8001 LYNNBROOK
DRIVE
BETHESDA, MD 20814
L. 850 F. 1462
PARCEL N719
ZONED: R60
LAND USE: EC
ACCT NO.
07-00417763**

**LYNNBROOK
CENTER
STORMWATER
IMPROVEMENTS
MONTGOMERY
COUNTY PUBLIC
SCHOOLS**

SHEET TITLE:
**MICROBIORETENTION
SWM-21 AND
SWM-22 DETAILS**

PROJECT NO:
177702

DATE:
03/02/2018

SCALE:
WORKING
NORTH

SHEET NO:
C-4C

SC/SWM SHEET NO. 7 of 10
OWNER/APPLICANT
MONTGOMERY COUNTY PUBLIC SCHOOLS
45 WEST GUDE DRIVE, SUITE 4300
ROCKVILLE, MARYLAND 20850-4038
ATTN: ROBBIE S. BADSTIBNER
robbie_s_badstibner@mcpmsmd.org
TEL: 240.314.1018 FAX: 240.279.3003

NO.	DESCRIPTION	DATE
1	RFP-040	03/01/18

8001 LYNNBROOK DRIVE
BETHESDA, MD 20814
L. 850 F. 1462
PARCEL N719
ZONED: R60
LAND USE: EC
ACCT NO.
07-00417763

LYNNBROOK CENTER
STORMWATER IMPROVEMENTS
MONTGOMERY COUNTY PUBLIC SCHOOLS

SHEET TITLE:
MICROBIORETENTION SWM-23 AND SWM-24 DETAILS

PROJECT NO:
177702

DATE:
03/02/2018

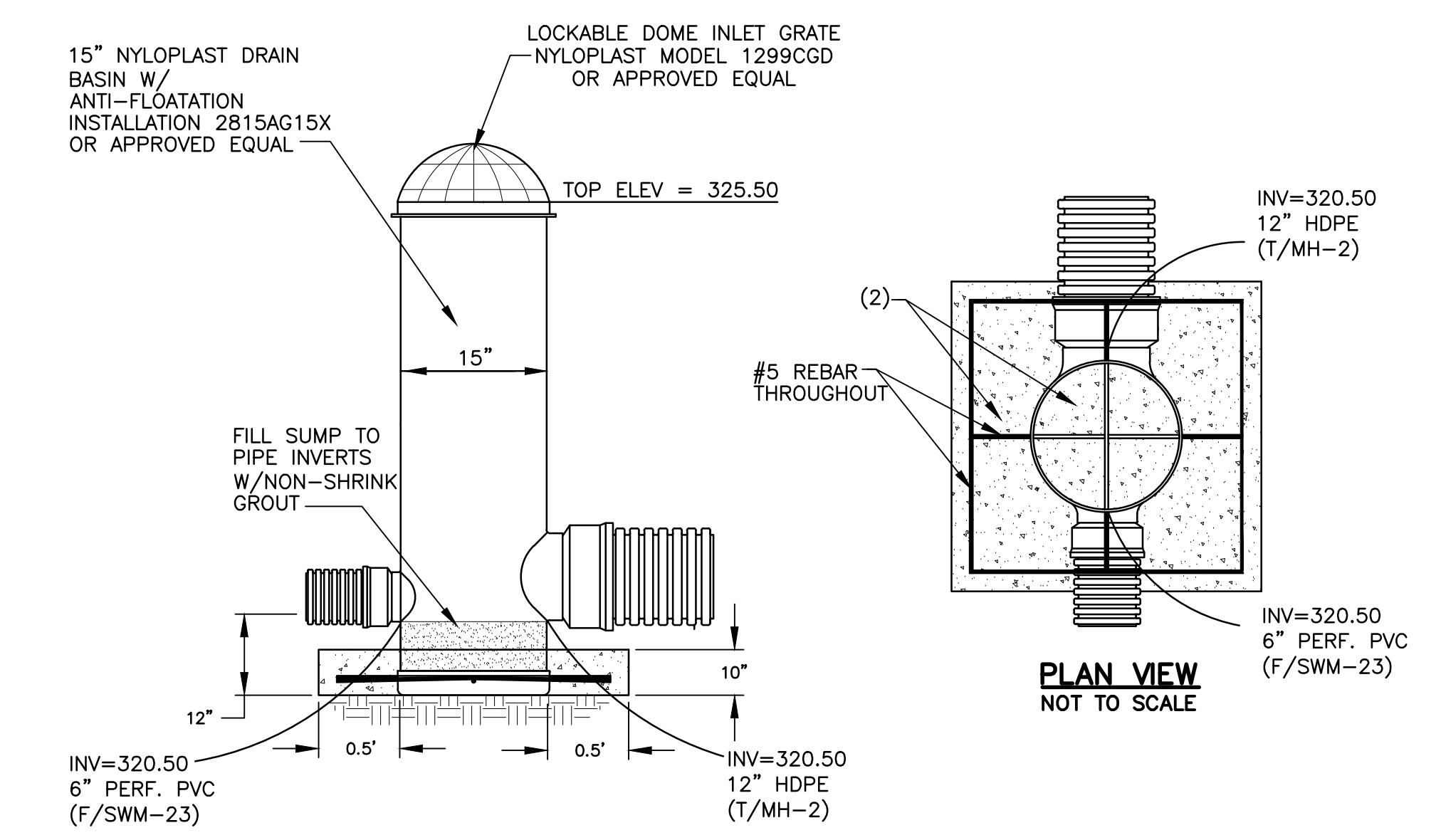
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SHEET NO:

C-4D

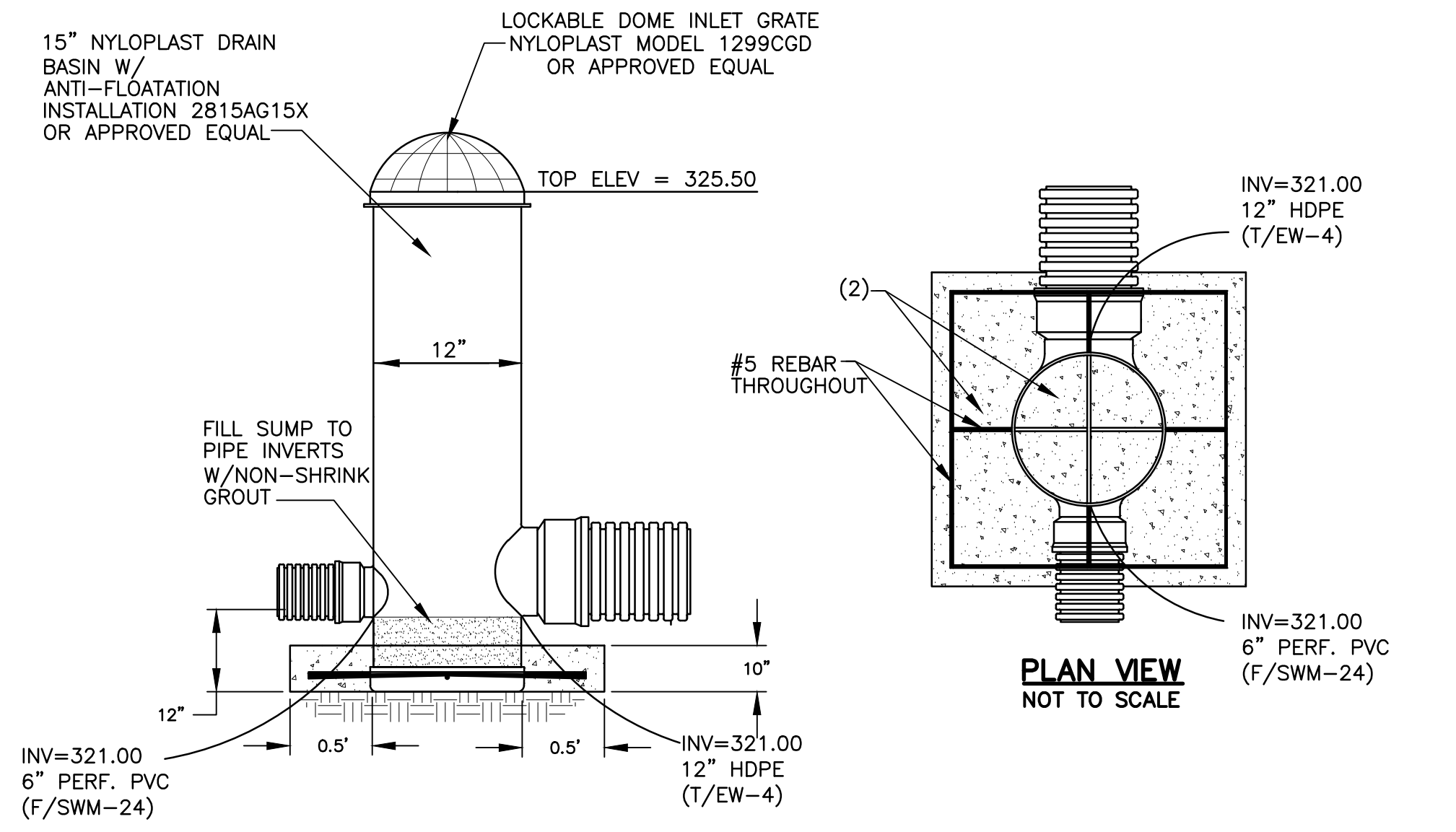


SC/SWM SHEET NO. 8 of 10
OWNER/APPLICANT
MONTGOMERY COUNTY PUBLIC SCHOOLS
45 WEST GUE DRIVE, SUITE 4300
ROCKVILLE, MARYLAND 20850-4038
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robbie_s_badstibner@mcpsmd.org
TEL: 240.314.1018 FAX: 240.279.3003



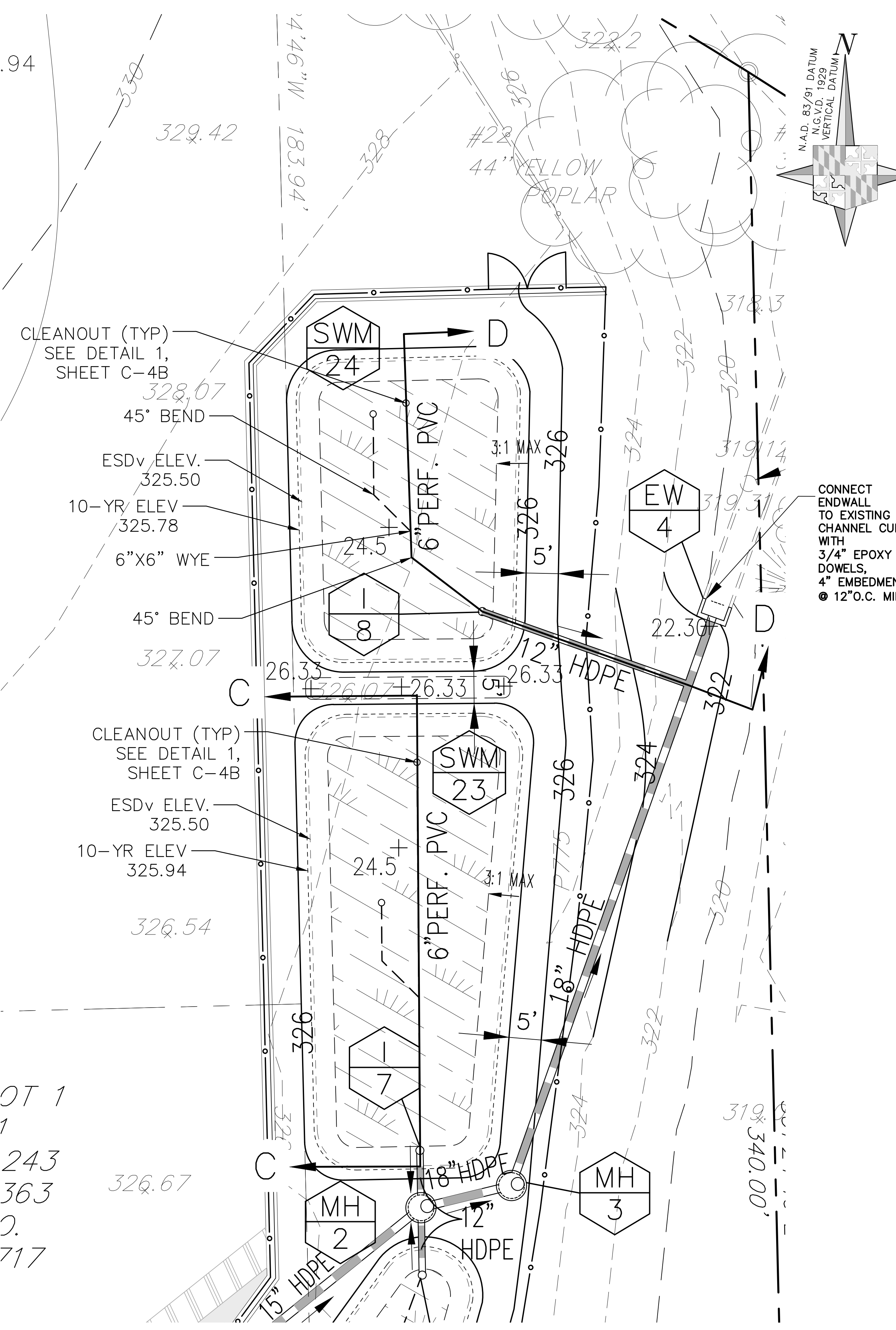
- NOTES:
- CONCRETE ANTI-FLOATATION FOOTING WITH REBAR REINFORCEMENT (APPROX. 3900 LBS PER CU YD).
 - IF THE STRUCTURE IS ABOVE GRADE OR WILL HAVE PROLONGED EXPOSURE TO UV RAYS, THE EXPOSED SURFACES SHOULD BE COATED IN A LATEX BASED PAINT OR SIMILAR COATING THAT WILL NOT DEGRADE THE PVC MATERIAL.
 - STRUCTURE MUST BE WATERTIGHT

DETAIL FOR INLET I-7
NOT TO SCALE



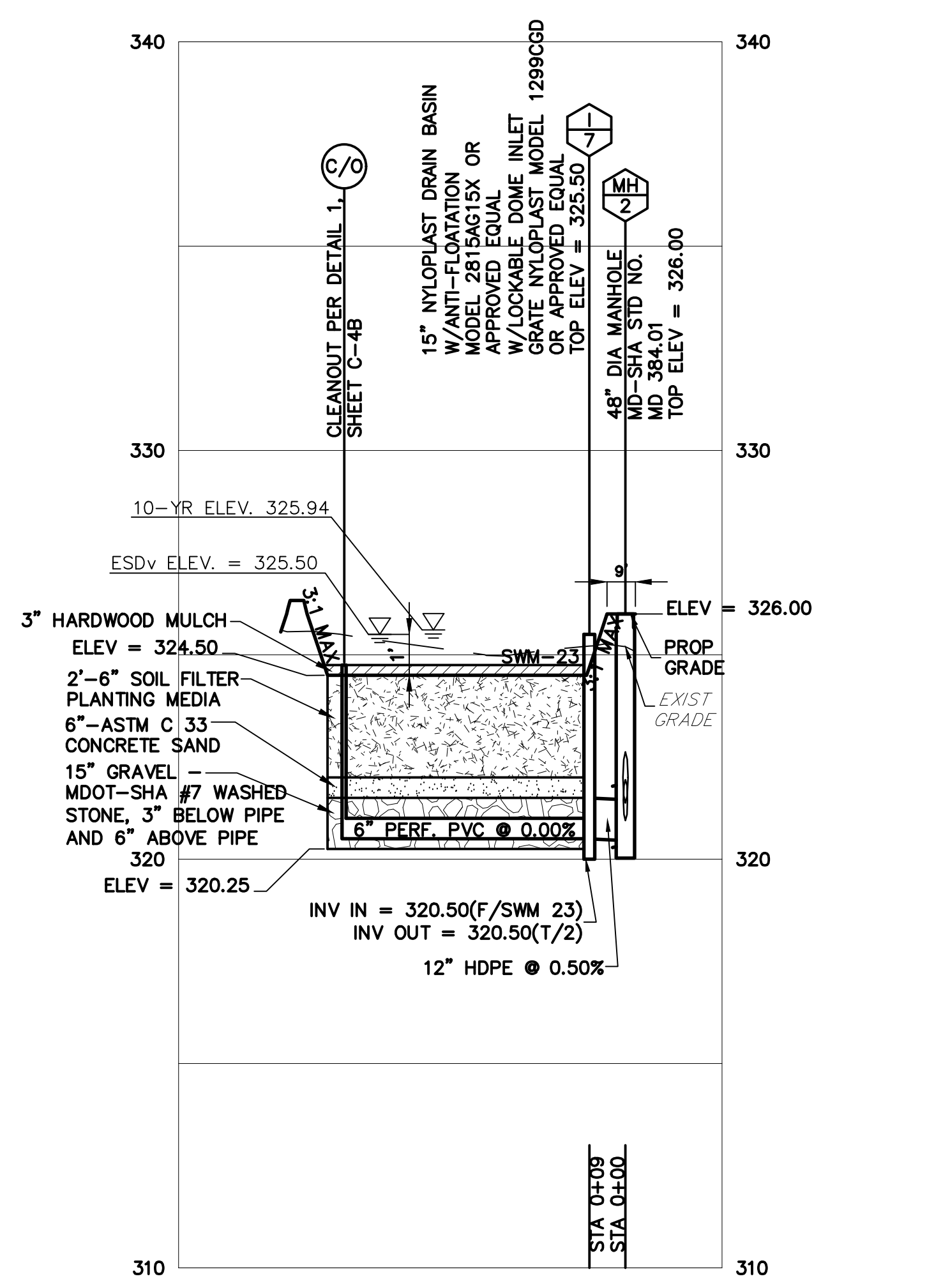
- NOTES:
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 - IF THE STRUCTURE IS ABOVE GRADE OR WILL HAVE PROLONGED EXPOSURE TO UV RAYS, THE EXPOSED SURFACES SHOULD BE COATED IN A LATEX BASED PAINT OR SIMILAR COATING THAT WILL NOT DEGRADE THE PVC MATERIAL.
 - STRUCTURE MUST BE WATERTIGHT

DETAIL FOR INLET I-8
NOT TO SCALE

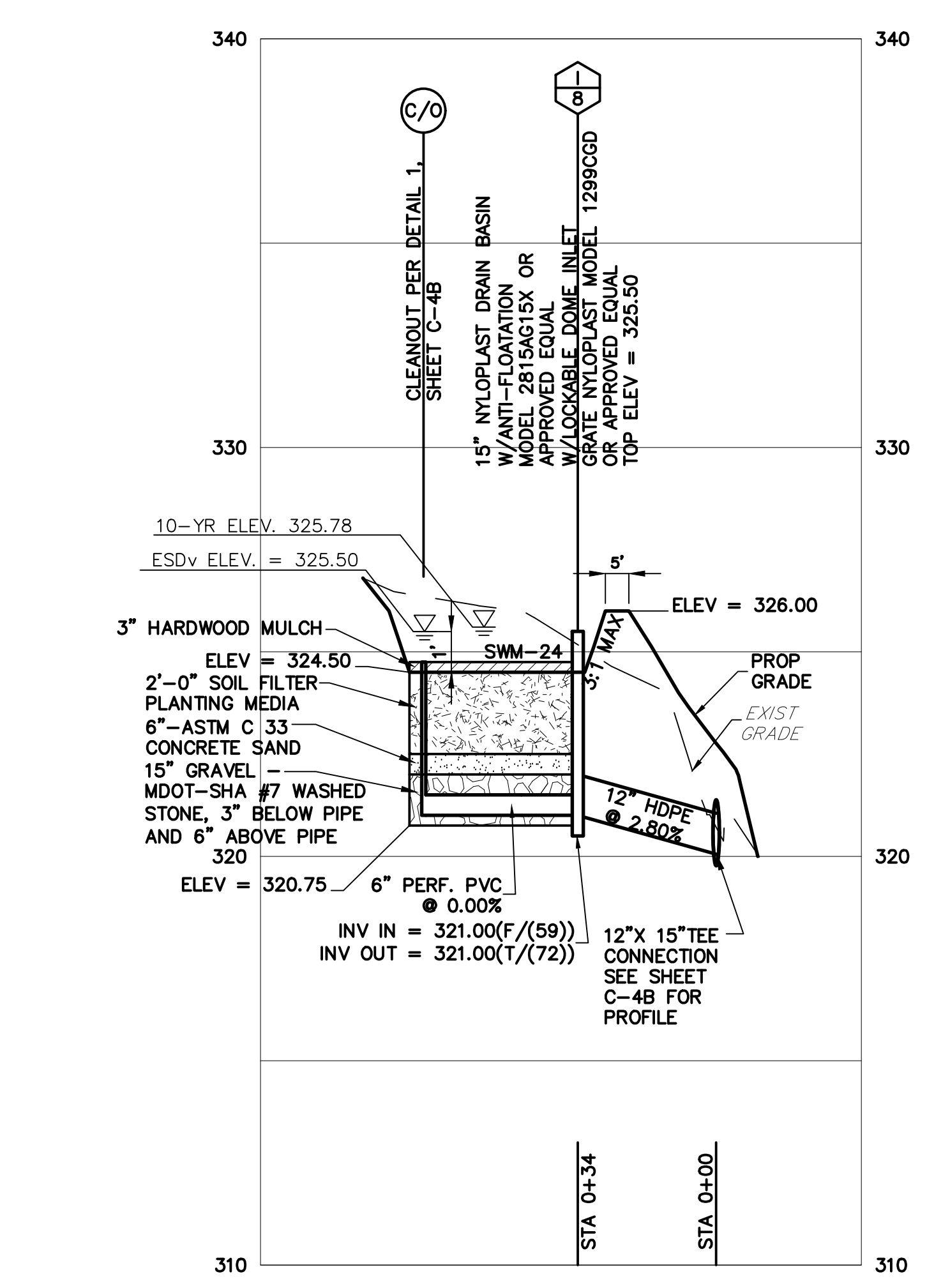


PLAN VIEW C-C-SWM 23 AND D-D-SWM 24
SCALE: 1"=10'

FACILITY	LENGTH OF MEDIA (FT)		WIDTH OF MEDIA (FT)		6" PERF. PVC SURFACE AREA OF MEDIA (sq.ft.)		ESD PROVIDED (cu. ft.)	
	DESIGN	AS-BUILT	DESIGN	AS-BUILT	DESIGN	AS-BUILT	DESIGN	AS-BUILT
SWM-23	6.3'		2.3'		75'		1,490	3,672
SWM-24	40'		27'		54'		1,068	2,577



SECTION C-C-SWM 23
SCALE: 1"=30'(HORIZ) 1"=3'(VERT)



SECTION D-D-SWM 24
SCALE: 1"=30'(HORIZ) 1"=3'(VERT)

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY SWM-23

STAGE	MCDPS INSPECTOR INITIALS/DATE	OWNER/DEVELOPER INITIALS/DATE
MANDATORY NOTIFICATION: Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS inspector twenty-four (24) hours notice (DPS telephone 240-777-0311). The DPS inspector may waive an inspection, and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. Upon completion of the project, a formal Stormwater Management As-built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead. Each of the steps listed below must be verified by either the MCDPS inspector OR the Owner/Developer.		
1. Excavation for Micro Bioretention Facility conforms to approved plans		
2. Placement of stone backfill underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes, overflow structure, and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY SWM-24

STAGE	MCDPS INSPECTOR INITIALS/DATE	OWNER/DEVELOPER INITIALS/DATE
MANDATORY NOTIFICATION: Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS inspector twenty-four (24) hours notice (DPS telephone 240-777-0311). The DPS inspector may waive an inspection, and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. Upon completion of the project, a formal Stormwater Management As-built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead. Each of the steps listed below must be verified by either the MCDPS inspector OR the Owner/Developer.		
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4. Connecting pipes, overflow structure, and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		