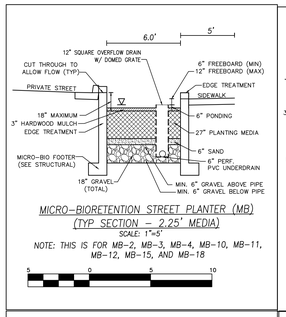
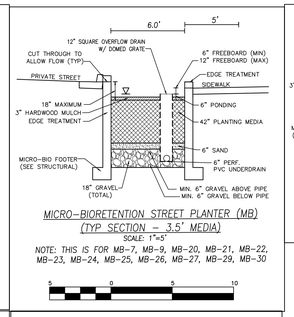


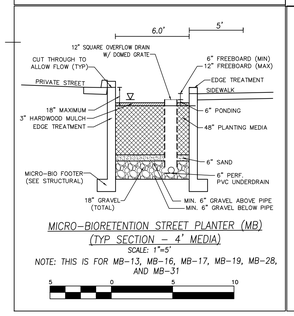
MICRO-BIORETENTION STREET PLANTER (MB)
(TYP SECTION - 2.25' MEDIA)
SCALE: 1"=5'

NOTE: THIS IS FOR MB-2, MB-3, MB-4, MB-10, MB-11, MB-12, MB-15, AND MB-18



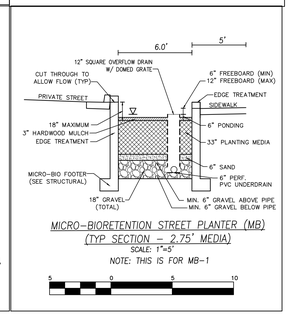
MICRO-BIORETENTION STREET PLANTER (MB)
(TYP SECTION - 3.5' MEDIA)
SCALE: 1"=5'

NOTE: THIS IS FOR MB-7, MB-9, MB-20, MB-21, MB-22, MB-23, MB-24, MB-25, MB-26, MB-27, MB-29, MB-30



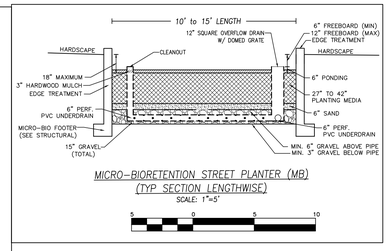
MICRO-BIORETENTION STREET PLANTER (MB)
(TYP SECTION - 4' MEDIA)
SCALE: 1"=5'

NOTE: THIS IS FOR MB-13, MB-16, MB-17, MB-19, MB-28, AND MB-31

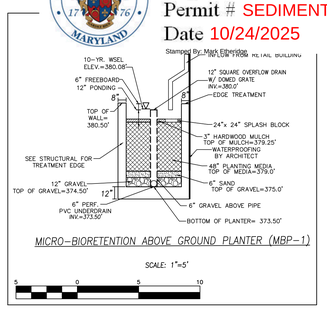


MICRO-BIORETENTION STREET PLANTER (MB)
(TYP SECTION - 2.75' MEDIA)
SCALE: 1"=5'

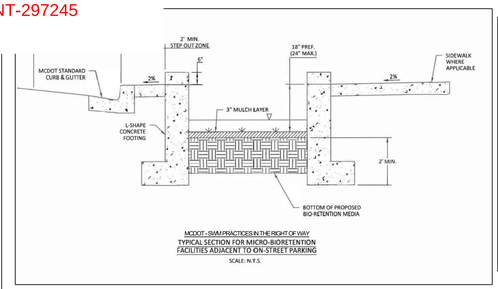
NOTE: THIS IS FOR MB-1



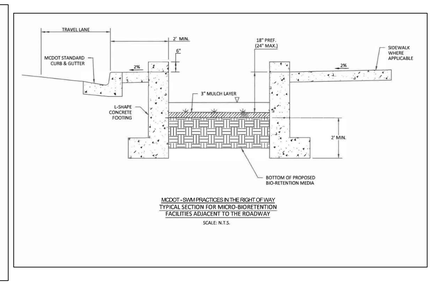
MICRO-BIORETENTION STREET PLANTER (MB)
(TYP SECTION LENGTHWISE)
SCALE: 1"=5'



MICRO-BIORETENTION ABOVE GROUND PLANTER (MBP-1)
SCALE: 1"=5'

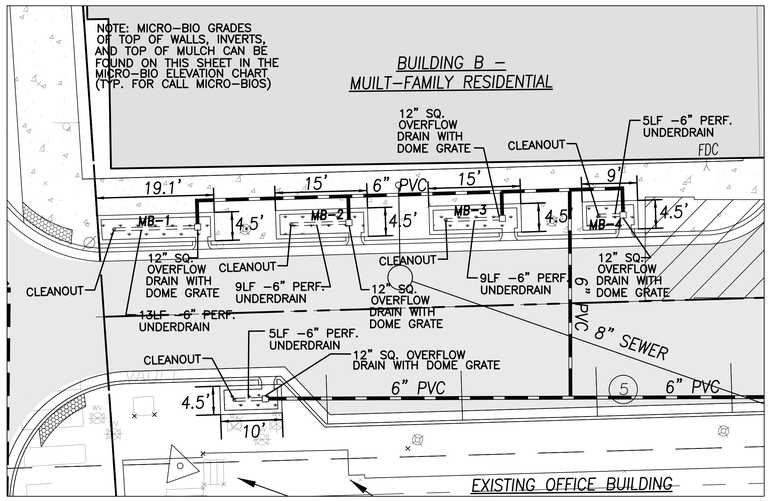


MCDOT - SWM PRACTICES IN THE RIGHT OF WAY
TYPICAL SECTION FOR MICRO-BIORETENTION FACILITIES ADJACENT TO ON-STREET PARKING
SCALE: N.T.S.

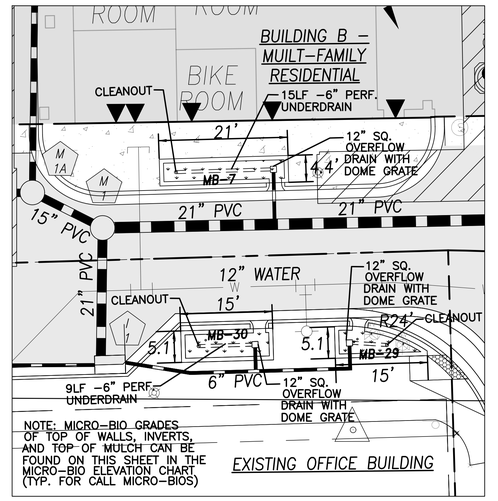


MCDOT - SWM PRACTICES IN THE RIGHT OF WAY
TYPICAL SECTION FOR MICRO-BIORETENTION FACILITIES ADJACENT TO THE ROADWAY
SCALE: N.T.S.

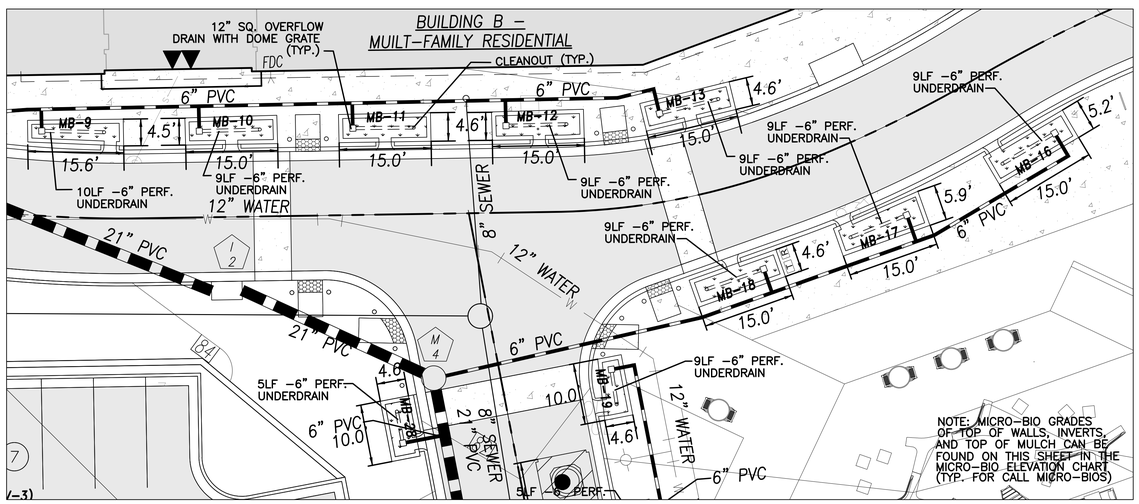
Micro-Bio Elevation Chart									
MB#	Inflow Elevation (Gutter)	Adjacent Road Slope (%)	Surface Elevation	Top of Cleanout (cap)	Overflow Structure/ Ponding Elevation	Underdrain Invert	Top of Wall Elevation (Low)	Top of Wall Elevation (High)	10 Year WSEL
MB-1	91.64 ft	4.8%	90.64 ft	91.14 ft	91.14 ft	86.14 ft	92.14 ft	93.05 ft	91.00 ft
MB-2	90.48 ft	4.8%	89.48 ft	89.98 ft	89.98 ft	85.48 ft	90.98 ft	91.70 ft	90.03 ft
MB-3	89.32 ft	4.8%	88.32 ft	88.82 ft	88.82 ft	84.32 ft	89.82 ft	90.54 ft	88.87 ft
MB-4	88.40 ft	4.8%	87.40 ft	87.90 ft	87.90 ft	83.40 ft	88.90 ft	89.33 ft	87.95 ft
MB-7	84.75 ft	4.8%	83.75 ft	84.25 ft	84.25 ft	78.50 ft	85.25 ft	86.26 ft	84.36 ft
MB-9	83.65 ft	2.0%	82.65 ft	83.15 ft	83.15 ft	77.40 ft	84.15 ft	84.45 ft	83.23 ft
MB-10	83.25 ft	0.0%	82.25 ft	82.75 ft	82.75 ft	78.25 ft	83.75 ft	83.75 ft	82.80 ft
MB-11	83.75 ft	0.0%	82.75 ft	83.25 ft	83.25 ft	78.75 ft	84.25 ft	84.25 ft	83.32 ft
MB-12	83.78 ft	0.0%	82.78 ft	83.28 ft	83.28 ft	78.78 ft	84.28 ft	84.28 ft	83.34 ft
MB-13	83.30 ft	0.0%	82.30 ft	82.80 ft	82.80 ft	76.55 ft	83.80 ft	83.80 ft	82.89 ft
MB-16	83.84 ft	1.5%	82.84 ft	83.84 ft	83.84 ft	77.09 ft	84.34 ft	84.57 ft	83.96 ft
MB-17	83.50 ft	1.5%	82.50 ft	83.50 ft	83.50 ft	76.75 ft	84.00 ft	84.23 ft	83.62 ft
MB-18	83.20 ft	0.0%	82.20 ft	82.70 ft	82.70 ft	78.20 ft	83.70 ft	83.70 ft	82.76 ft
MB-19	81.84 ft	4.1%	80.84 ft	81.34 ft	81.34 ft	75.09 ft	82.34 ft	82.75 ft	81.41 ft
MB-20	80.84 ft	4.1%	79.84 ft	80.34 ft	80.34 ft	74.59 ft	81.34 ft	81.75 ft	80.40 ft
MB-21	79.84 ft	4.1%	78.84 ft	79.34 ft	79.34 ft	73.59 ft	80.34 ft	80.75 ft	79.40 ft
MB-22	78.84 ft	4.1%	77.84 ft	78.34 ft	78.34 ft	72.59 ft	79.34 ft	79.75 ft	78.40 ft
MB-23	77.84 ft	4.1%	76.84 ft	77.34 ft	77.34 ft	71.59 ft	78.34 ft	78.75 ft	77.40 ft
MB-24	77.84 ft	4.1%	76.84 ft	77.34 ft	77.34 ft	71.59 ft	78.34 ft	78.75 ft	77.40 ft
MB-25	78.84 ft	4.1%	77.84 ft	78.34 ft	78.34 ft	72.59 ft	79.34 ft	79.75 ft	78.40 ft
MB-26	79.84 ft	4.1%	78.84 ft	79.34 ft	79.34 ft	73.59 ft	80.34 ft	80.75 ft	79.40 ft
MB-27	80.84 ft	4.1%	79.84 ft	80.34 ft	80.34 ft	74.59 ft	81.34 ft	81.75 ft	80.40 ft
MB-28	81.84 ft	4.1%	80.84 ft	81.34 ft	81.34 ft	75.09 ft	82.34 ft	82.75 ft	81.42 ft
MB-29	83.90 ft	4.8%	82.90 ft	83.40 ft	83.40 ft	77.65 ft	84.40 ft	85.12 ft	83.46 ft
MB-30	84.80 ft	4.8%	83.80 ft	84.30 ft	84.30 ft	78.55 ft	85.30 ft	86.02 ft	84.37 ft
MB-31	91.80 ft	4.8%	90.80 ft	91.30 ft	91.30 ft	85.05 ft	92.30 ft	92.78 ft	91.37 ft



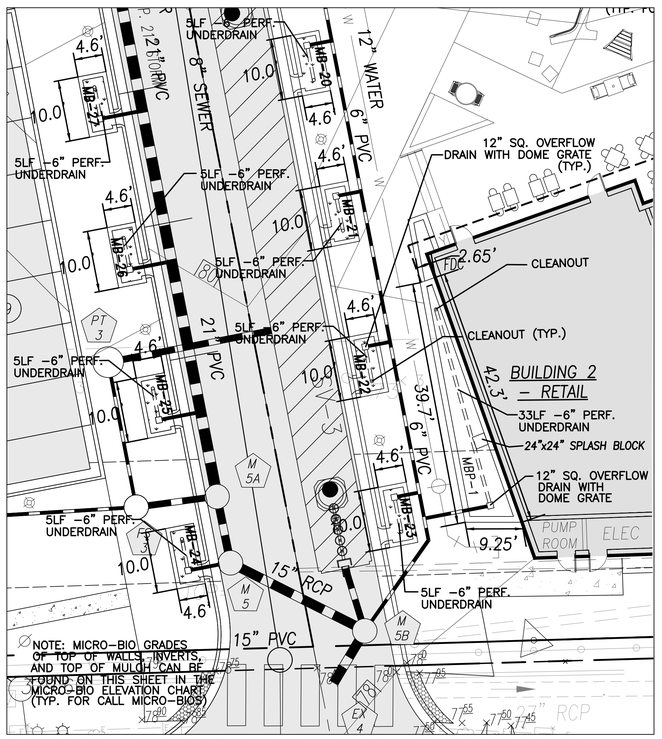
PLAN VIEW OF MB-1, MB-2, MB-3, MB-4 AND MB-31
SCALE: 1"=10'



PLAN VIEW OF MB-7, MB-30 AND MB-29
SCALE: 1"=10'



PLAN VIEW OF MB-9, MB-10, MB-11, MB-12, MB-13, MB-16, MB-17, MB-18, MB-19, AND MB-28
SCALE: 1"=10'



PLAN VIEW OF MB-20, MB-21, MB-22, MB-23, MB-24, MB-25, MB-26, MB-27, and MBP-1
SCALE: 1"=10'

NOTE:
1.)ALL MICRO-BIO MATERIAL SPECIFICATION INFORMATION CAN BE FOUND ON SHEET C4.06.

2.)ALL INVERTS FOR MICRO-BIO OVERFLOWS CAN BE FOUND ON SHEET C4.07.

3)ALL MICRO-BIO PLANTING INFORMATION CAN BE FOUND ON SHEET L104.

4)ALL STRUCTURAL INFORMATION FOR THE MICRO-BIO RETENATION PLANTERS CAN BE FOUND ON SHEETS S110 TO S111.

APPROVED
Department of Permitting Services
Permit # SEDIMENT-297245
Date 10/24/2025

MONTGOMERY COUNTY MARYLAND 1776

mv+a

OWNER
Wooglen Master Owner, LLC
Wooglen Master Owner II, LLC
4800 Hampton Ln, Suite 800
Bethesda, MD 20814
Tel: 301.657.7325

APPLICANT
SCG Development Partners, LLC
8245 Boone Blvd., Suite 640
Tysons Corner, VA 22182
Tel: 703.520.0828

ARCHITECT
MV+A | Mushinky Voelzke Associates, CHTD
1200 G Street, Suite 250
Washington, DC
Tel: 202.682.2822

CIVIL ENGINEER
Johnson Bernat Associates, Inc.
205 N Frederick Suite 100
Gaithersburg, MD 20877
Tel: 301.963.1133

LANDSCAPE ARCHITECT
LandDesign, Inc.
200 S Peyton St
Alexandria, VA 22314
Tel: 703.549.7784

STRUCTURAL ENGINEER
Structura, Inc.
12358 Parklawn Dr Suite 140
North Bethesda, MD 20852
Tel: 301.987.9234

MEP ENGINEER
Scot Engineering, Inc.
509 Germantown Pike Bldg 2
Lafayette Hill, PA 19444
Tel: 215.774.1429

North Bethesda Market II

NORTH BETHESDA, MARYLAND

STORMWATER MANAGEMENT DETAILS - MICRO-BIORETENTIONS

PROJECT NUMBER
22002.00

REV.	ISSUE:	DATE
	Permit Set	10-22-24

KEY PLAN

DRAWING STAMP

Professional Certification
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
Licence No.: 35287
Expiration Date.: 01-07-26

STATE OF MARYLAND · STEPHEN M BRADSHAW · No. 35287 · REGISTERED PROFESSIONAL ENGINEER

SHEET NUMBER
C-4.04

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MBP–1	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–1	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–2	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–4	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–7	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–9	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–10	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–11	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–12	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–13	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–16	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–17	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–18	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–19	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–20	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–21	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–22	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–23	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–24	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–25	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–26	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–27	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans.		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–28	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans.		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–29	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans.		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–30	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans.		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF MICRO BIORETENTION FACILITIES INSTALLED PER THIS PERMIT :
APPROVED 27 CONSTRUCTED _____

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE MB–31	COUNTY 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 and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans.

APPROVED
Department of Permitting Services
Permit # SEDIMENT-297245
Date 10/24/2025
Stamped By: Mark Etheridge

MICRO–BIORETENTION NOTES:
1. MULCH TO CONSIST OF STANDARD DOUBLE SHREDDED AGED HARDWOOD. THE MULCH SHOULD BE APPLIED UNIFORMLY T A DEPTH OF 3 INCHES. YEARLY REPLENISHING MAY BE NECESSARY. PINE BARK IN NOT ACCEPTABLE.
2. PLANTING MEDIA TO BE 1/3 PERLITE OR SOLITE, 1/3 COMPOST AND 1/3 SOIL. (SEE SPECIFICATION BELOW)
3. SAND BED TO BE FINE AGGREGATE CONCRETE SAND PER ASTM C33 OR AASHTO M6. (SEE SPECIFICATION BELOW)
4. THE GRAVEL LAYER SURROUNDING THE UNDERDRAIN PIPE MUST MEET MSHA SIZE #7 AND WELL DRAINING.
5. PERFORATIONS FOR UNDERDRAIN TO BE 3/8" DIAMETER HOLES SPACES 4" O.C., EVERY 90° AROUND PIPE.
6. GRATE DRAIN BASINS TO BE DOMED (TOP ELEVATIONS PROVIDED IS AT BASIN TOP, NOT TOP OF DOME).

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:
1. SAND MUST MEET GRADATION REQUIREMENTS FOR ASTM C–33 FINE AGGREGATE CONCRETE SAND.
2. AASHTO M–6 GRADATION IS ALSO ACCEPTABLE.
3. 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.
4. NATURAL, UNWASHED SAND DEPOSITS MAY NOT BE USED. LIKEWISE, SAND THAT HAS BECOME CONTAMINATED BY IMPROPER STORAGE OR INSTALLATION PRACTICES WILL BE REJECTED.
5. MANUFACTURED SAND OR STONE DUST IS NOT ACCEPTABLE UNDER ANY CIRCUMSTANCES

SOIL MEDIA SPECIFICATIONS:
1. THE PLANTING MEDIUM SHALL BE 24"–48" THICK AND SHALL CONSIST OF 1/3 PERLITE OR SOLITE, 1/3 COMPOST AND 1/3 TOPSOIL.
2. THE PERLITE SHALL BE COARSE GRADE HORTICULTURAL PERLITE.
3. THE COMPOST SHALL BE HIGH GRADE COMPOST FREE OF STONES AND PARTIALLY COMPOSTED WOODY MATERIAL.
4. THE TOPSOIL COMPONENT SHALL MEET THE FOLLOWING CRITERIA:
   - CONTAIN NO MORE THAN 10% CLAY
   - CONTAIN NO MORE THAN 10% TO 25% SILT
   - CONTAIN NO MORE THAN 60% TO 75% SAND
   - BE FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN 2 INCHES.
5. THE FIRST LAYER OF THE PLANTING MEDIA SHALL BE LIGHTLY TILLED TO MIX IT INTO THE SAND 6" LAYER, SO AS NOT TO CREATE A DEFINITIVE BOUNDARY.
6. THE PLANTING BED SHALL BE FLOODED AFTER PLACEMENT.
7. ANY SETTLEMENT THAT OCCURS SHALL BE FILLED BACK TO THE DESIGN ELEVATION.

GRAVEL BED SPECIFICATIONS:
1. THE GRAVEL LAYER SURROUNDING THE UNDERDRAIN PIPE(S) MUST MEET MSHA SIZE #7 (TABLE 901A), AND MUST PROVIDE A MINIMUM OF 6 INCHES COVER OVER THE PIPE(S), AND A MINIMUM 3 INCHES UNDER THE PIPE(2).
2. NO GEOTEXTILE OR FILTER FABRIC IS ALLOWED TO BE PLACED HORIZONTALLY ANYWHERE WITHIN THE FILTER MEDIA.
3. THE GRAVEL MIST 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 PIPE SPECIFICATIONS:
1. THE UNDERDRAIN PIPE CONSISTS OF 6–INCH DIAMETER SCHEDULE 40 OR STRONGER PERFORATED PVC PIPE AT 0.00% SLOPE.
2. THE UNDERDRAIN PIPE WILL BE PLACED WITHIN THE GRAVEL LAYER. A MINIMUM OF THREE (3) INCHES OF GRAVEL MUST BE PLACES UNDER THE PIPE, WITH A MINIMUM OF SIX (6) INCHES OF GRAVEL OVER THE PIPE.
3. PERFORATIONS MUST BE 3/8 INCH IN DIAMETER AND MUST BE LOCATED 4 INCHES ON CENTER, EVERY 90 DEGREES AROUND THE PIPE.
4. PERFORATED PIPE MUST BEGIN AT LEAST 12" INSIDE THE FILTER MEDIA
5. FILTER FABRIC MUST NOT BE WRAPPED AROUND THE UNDERDRAIN PIPE.

NOTES:
1. Shop drawings for the CDS structures must be prepared, approved by the project engineer, and submitted to DPS plan reviewer for acceptance, utilizing standard precast checklist, prior to fabrication.
2. Annular space between pipe and hole to be filled with an approved non-shrink grout or concrete (as specified). For Stormceptor and Stormfilter, a rubber boot connection is required. Adapters are available for HDPE pipe.
3. Butyl rubber to be used in all joints. All joints to be grouted with non-shrink grout, inside and out
4. Concrete shall meet the requirements of ACI 350, Environmental Engineering Concrete Structures, with freezing and thawing exposures. Concrete shall be a Type 1L Cement conforming to ASTM C-595, with a 28-day Compressive strength of 5000 psi. Concrete shall also be in conformance with the latest edition and addenda of the MSHA Standards and Specifications for Construction and Materials

NDS
851 N. Harvard Avenue P. O. Box 339 Lindsay, CA 93247
559.562.9888 phone 800.992.9949 toll free www.ndspro.com

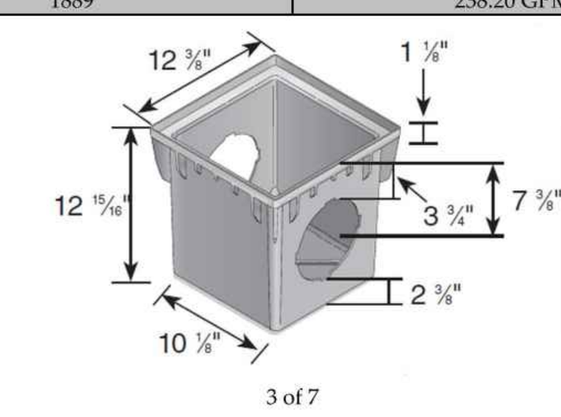
12" CATCH BASIN
Part #: 1200, 1203, 1207

GRATE CAPACITIES

Grate Number(s)	Description	Flow Rate with ½" Head
1210, 1211, 1212, 1212S	12" x 12" Square Grate	155.28 GPM
1211*	12" x 12" Square Grate	157.79 GPM
1213	12" x 12" Square Cast Iron Grate	113.80 GPM
1215	12" x 12" Square Galvanized Steel Grate	348.07 GPM
1280, 1290	12' x 12" Atrium Grate	154.79 GPM
1218, 1218S, 1218GR, 1218GY	12" Botanical Plastic	74.77 GPM
1218CI	12" Botanical Cast Iron	76.60 GPM
1224, 1224S, 1224GR, 1224GY	12" Wave Plastic	78.53 GPM
1224CI	12" Wave Cast Iron	78.31 GPM

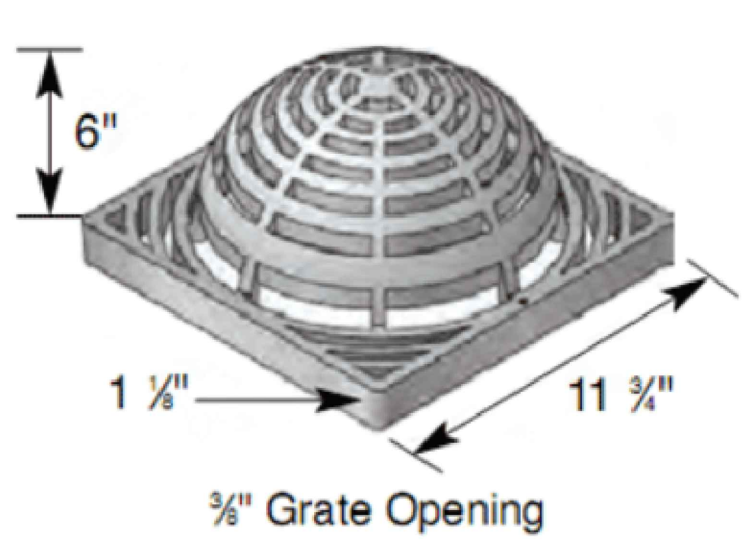
OUTLET FLOW CAPACITIES

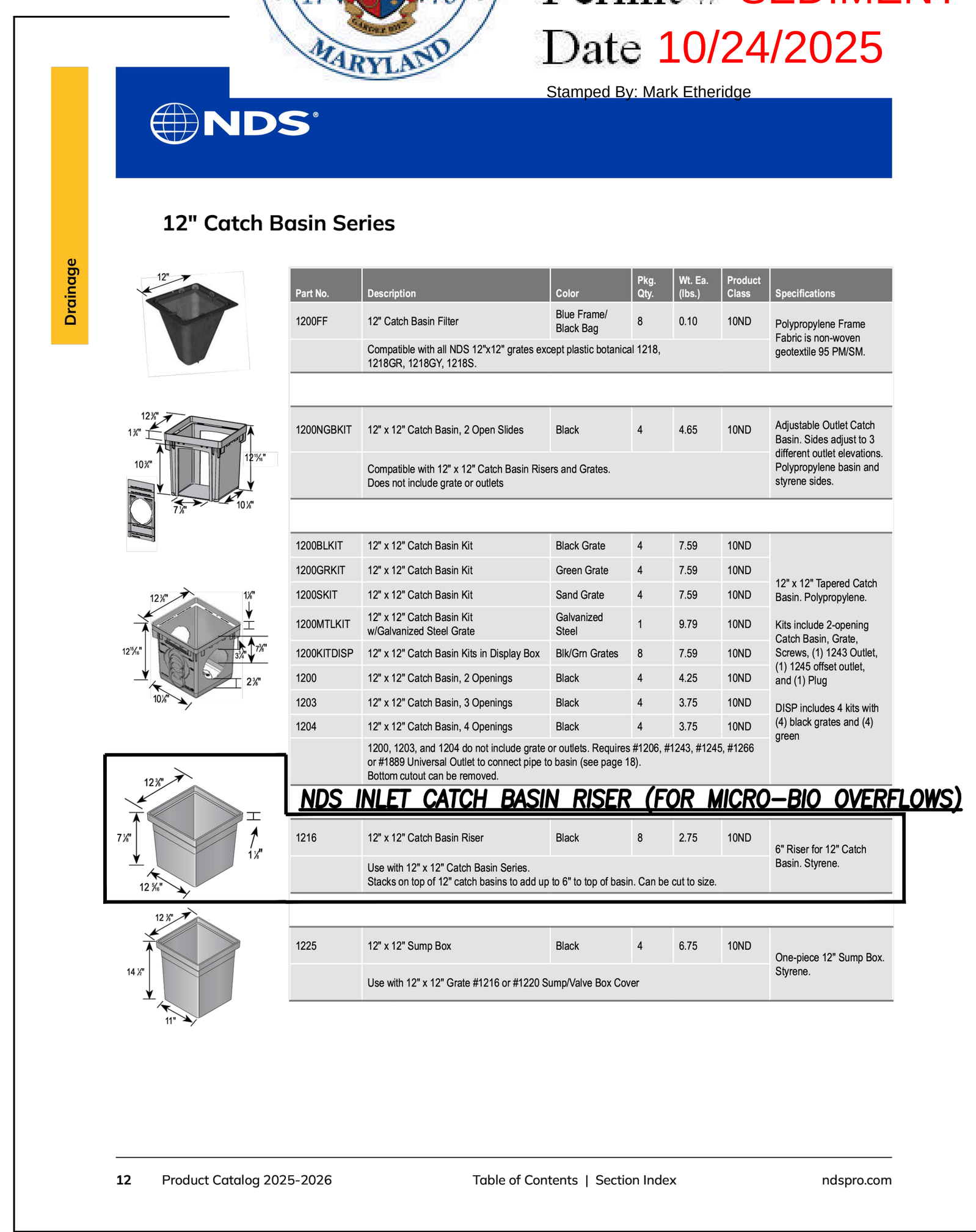
Part #	Flow Rate per Outlet
1242, 1243	78.10
1245	Top: 70.49 GPM Middle: 76.30 GPM Bottom: 83.41 GPM
1266	247.12 GPM
1889	238.20 GPM

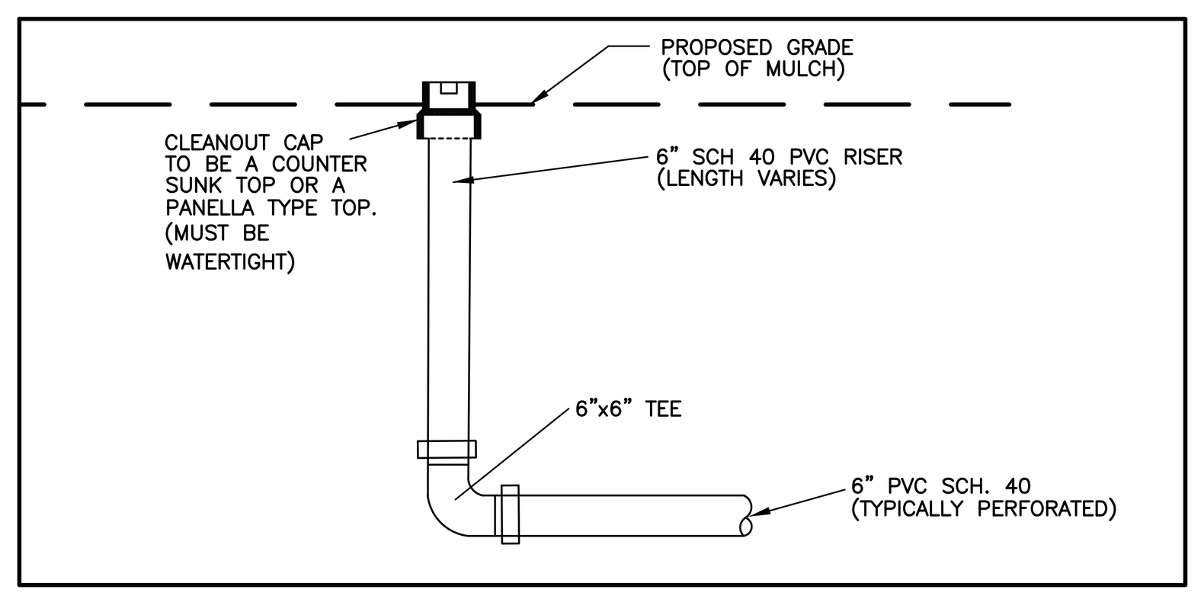


3 of 7

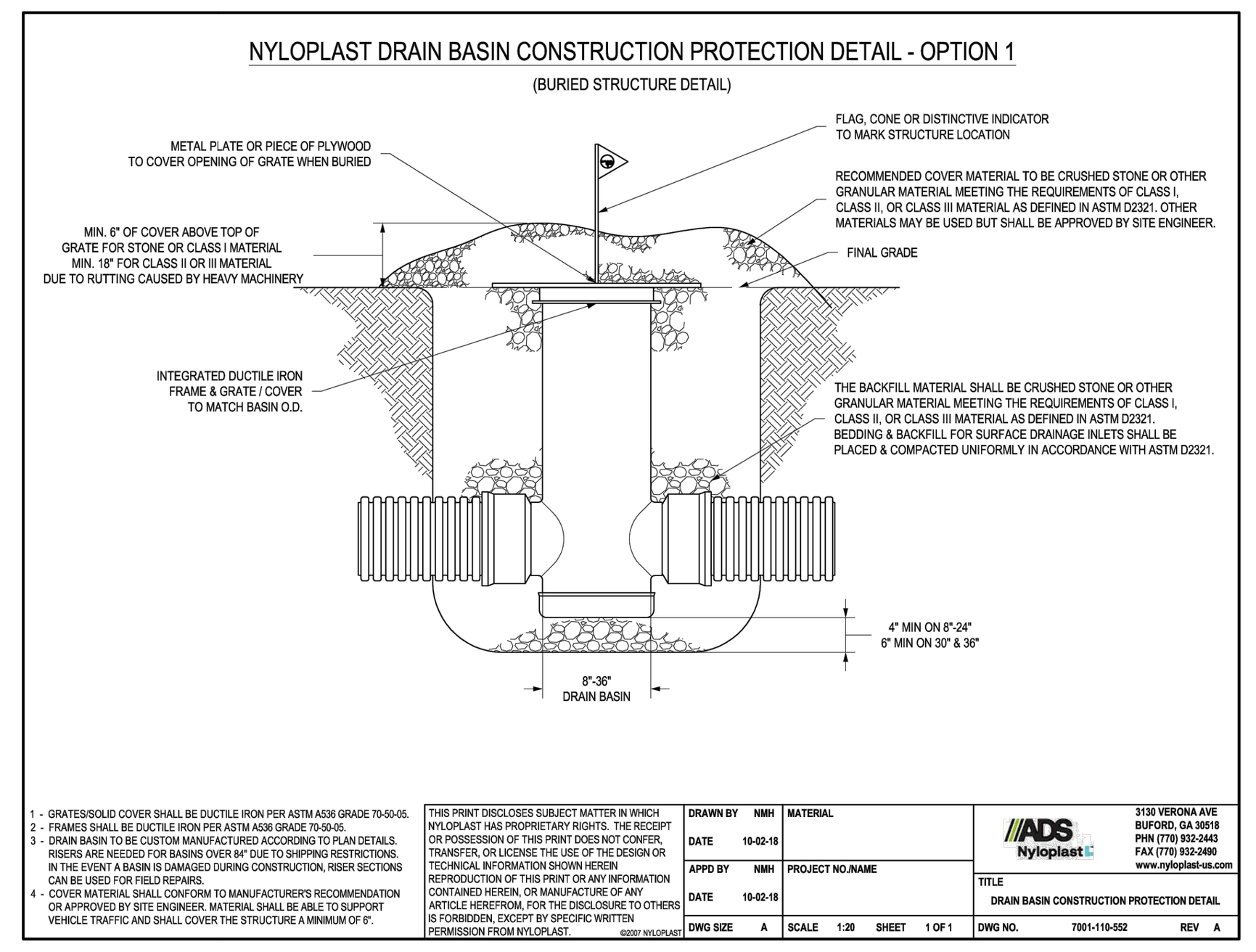
12" Atrium Grate

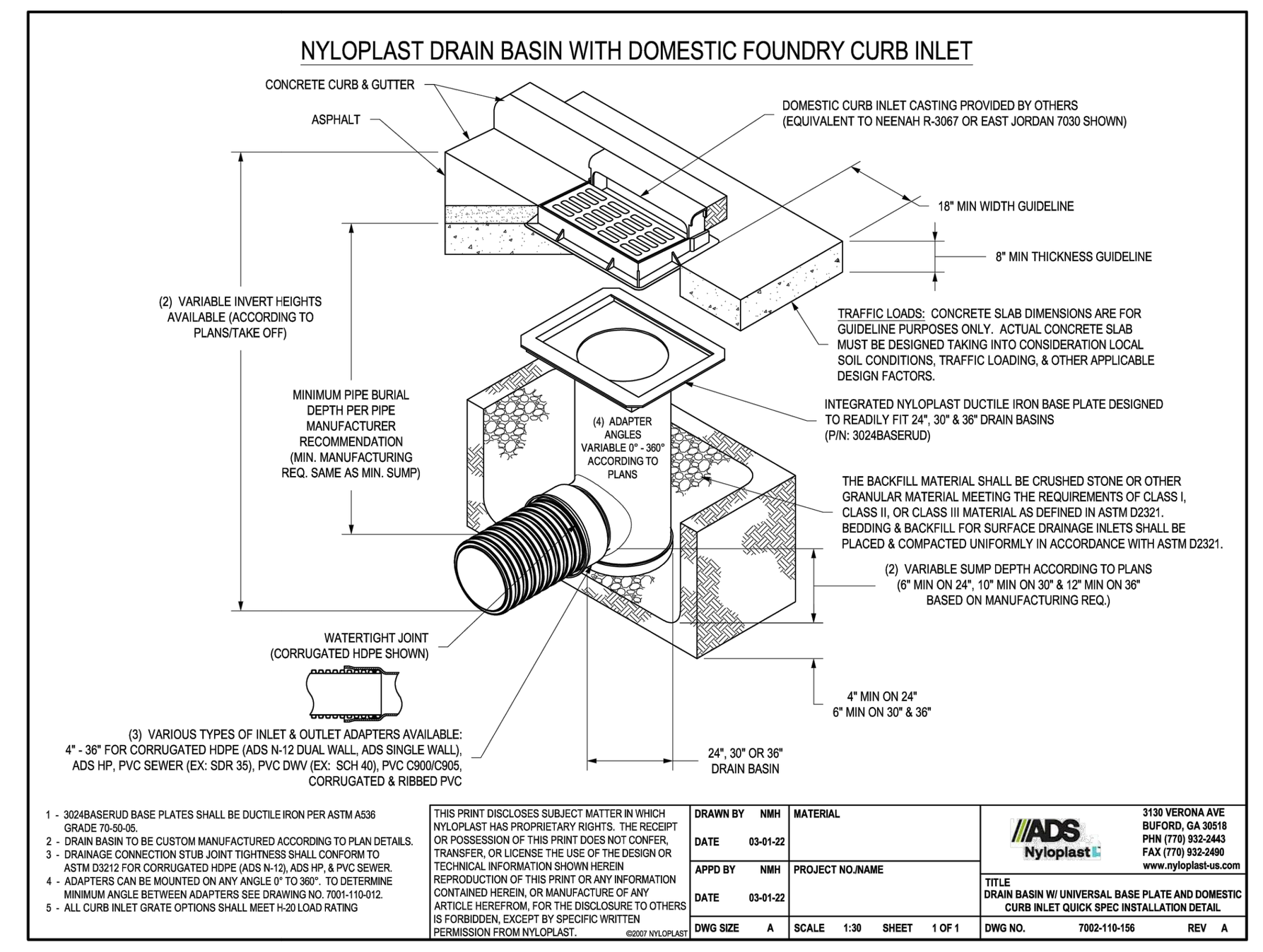


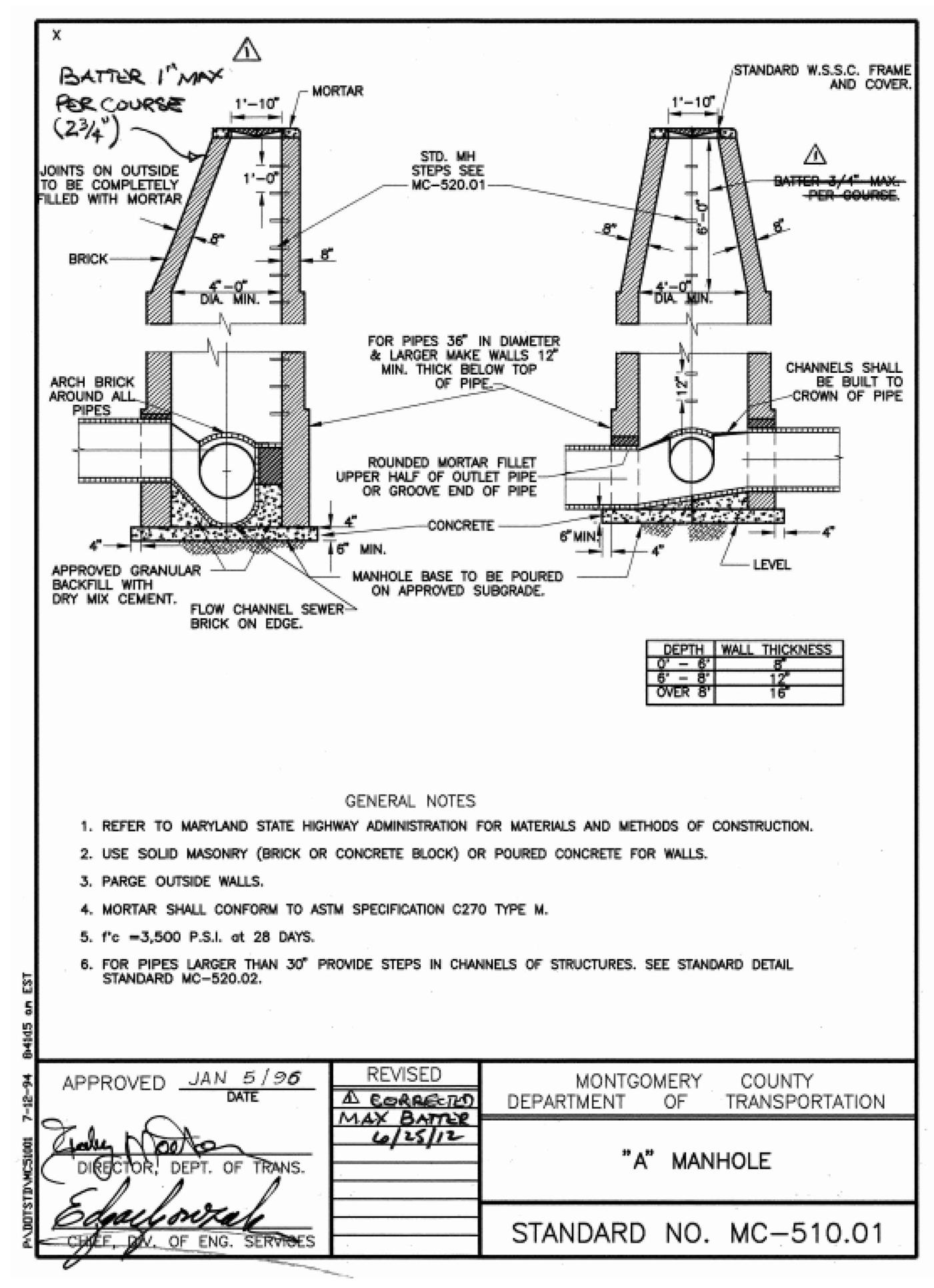




STANDARD CLEANOUT DETAIL (FOR MICRO–BIOS)
SCALE: NOT TO SCALE








DEPARTMENT OF PERMITTING SERVICES

Marc Elrich, County Executive — Mitra Pedoeem, Director

March 15, 2022

Mr. John Rotondo
Rotondo Environmental Solutions LLC
2000 Huntington Avenue, Suite 302
Alexandria, VA 22303

Re: Stormpod

Dear Mr. Rotondo:

Please be advised that the above referenced product is hereby re-approved for use in Montgomery County. This re-approval is based on the following conditions:

1. This approval is valid for a period not to exceed five years. The manufacturer must re-apply for approval to continue use of this product prior to the end of the five-year period or the product may no longer be acceptable for use in Montgomery County.
2. This product is approved for CPv storage and for storage of structural water quality volume.
3. For CPv storage, joints must be silt tight. For water quality storage, joints must be watertight and the structure must be leak tested prior to backfill.
4. Shop drawings for each unit must be reviewed and approved by the design engineer for dimensions, structural integrity, and overall conformance to the approved stormwater management plans and Montgomery County standards (including ACI-350 for concrete). Shop drawings must be submitted to the design engineer for review and approval prior to submittal for acceptance by DPS.
5. All structures must adhere to current DPS access guidelines.
6. Structures proposed within the public right of way must be approved by the Montgomery County Department of Transportation and the Department of Permitting Services, Right of Way Section.
7. Any changes or modifications to the design or construction of this device must be submitted to and approved by the Department prior to use. Failure to do so may result in revocation of this approval.

If you have any questions, please feel free to contact me at 240-777-6338.

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

cc: Mary Fertig-DPS

DPS
2425 Reedie Drive, 7th Floor, Wheaton, MD 20902 | 240-777-0311
www.montgomerycountymd.gov/permittingservices

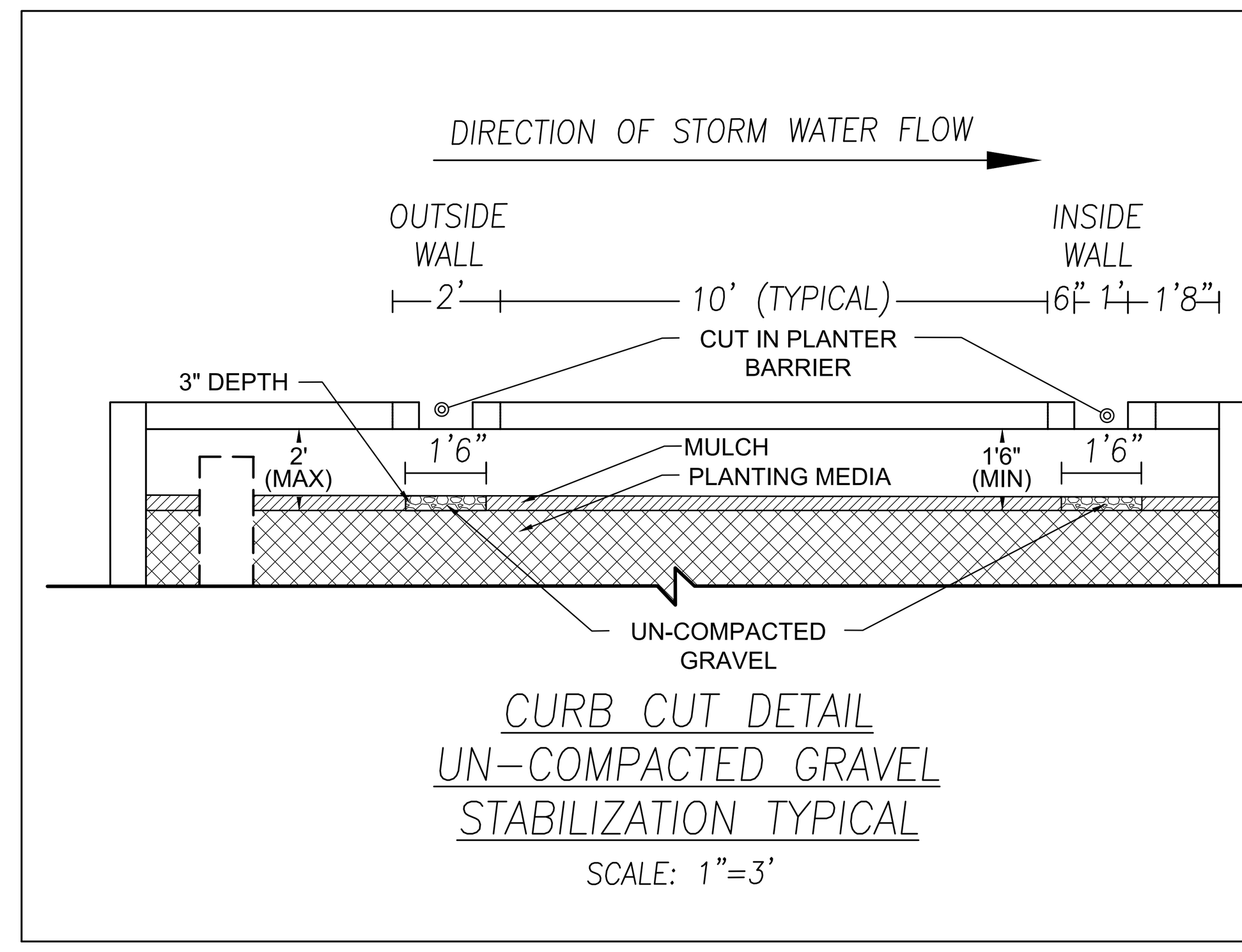
PRIVATE STORM STRUCTURE SCHEDULE

STR. NO.	DETAIL	TOP ELEV.	INV. IN	INV. IN	INV. IN	INV. OUT	REMARKS
M-1A	MC-510.01	386.40	373.50	373.83	-----	373.40	TYPE 'A' 48" DIA. MH
M-1	MC-510.01	386.10	373.30	375.47	-----	373.20	TYPE 'A' 48" DIA. MH
I-1	MD-374.14	385.85	380.13	376.25	-----	376.15	Standard NR Inlet
M-2A	MC-510.01	383.77	378.85	370.95	-----	370.70	TYPE 'A' 48" DIA. MH
M-2	MC-510.01	384.33	371.80	370.50	-----	369.50	TYPE 'A' 48" DIA. MH
M-3	MC-510.01	383.87	369.45	-----	-----	369.35	TYPE 'A' 48" DIA. MH
I-2	MD-374.14	383.30	369.10	-----	-----	368.95	Standard NR Inlet
M-4	MC-510.01	382.50	368.55	-----	-----	368.45	TYPE 'A' 48" DIA. MH
M-5A	MC-510.01	379.10	368.00	372.10	-----	367.90	TYPE 'A' 48" DIA. MH
M-5	MC-510.01	378.80	367.85	374.50	-----	367.75	TYPE 'A' 48" DIA. MH
M-5B	MC-510.01	378.30	367.40	367.45	-----	367.30	TYPE 'J' INLET
I-3	NDS Drain Basin	375.70	-----	-----	-----	373.70	NDS - Curb Inlet

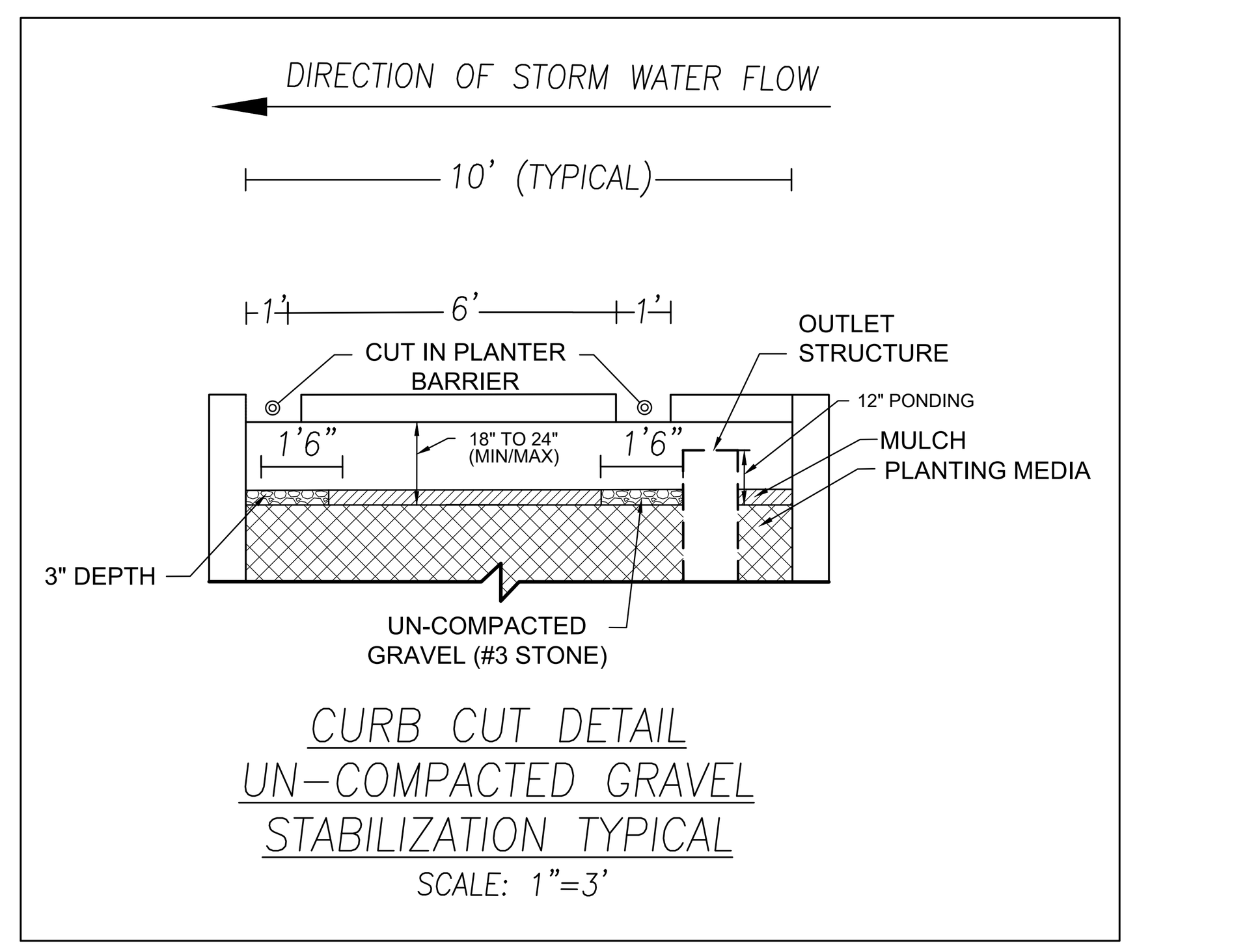
STR. NO.	DETAIL	TOP ELEV.	INV. IN	INV. IN	INV. OUT ALT	INV. OUT	REMARKS
FS1	County Detail - Diversion Structure	387.33	383.10	-----	381.17_{BYPASS}	382.50	Diversion Structure Manhole (48")
FS2	County Detail - Diversion Structure	384.33	380.25	-----	378.00_{BYPASS}	379.00	Diversion Structure Manhole (48")
FS3	County Detail - Diversion Structure	379.60	373.20	-----	371.17_{BYPASS}	372.17	Diversion Structure Manhole (48")
PT3	Inline CDS Standard Detail	379.80	371.07	-----	-----	371.07	Pre-Treatment Structure

MBP STRUCTURE SCHEDULE - PRIVATE

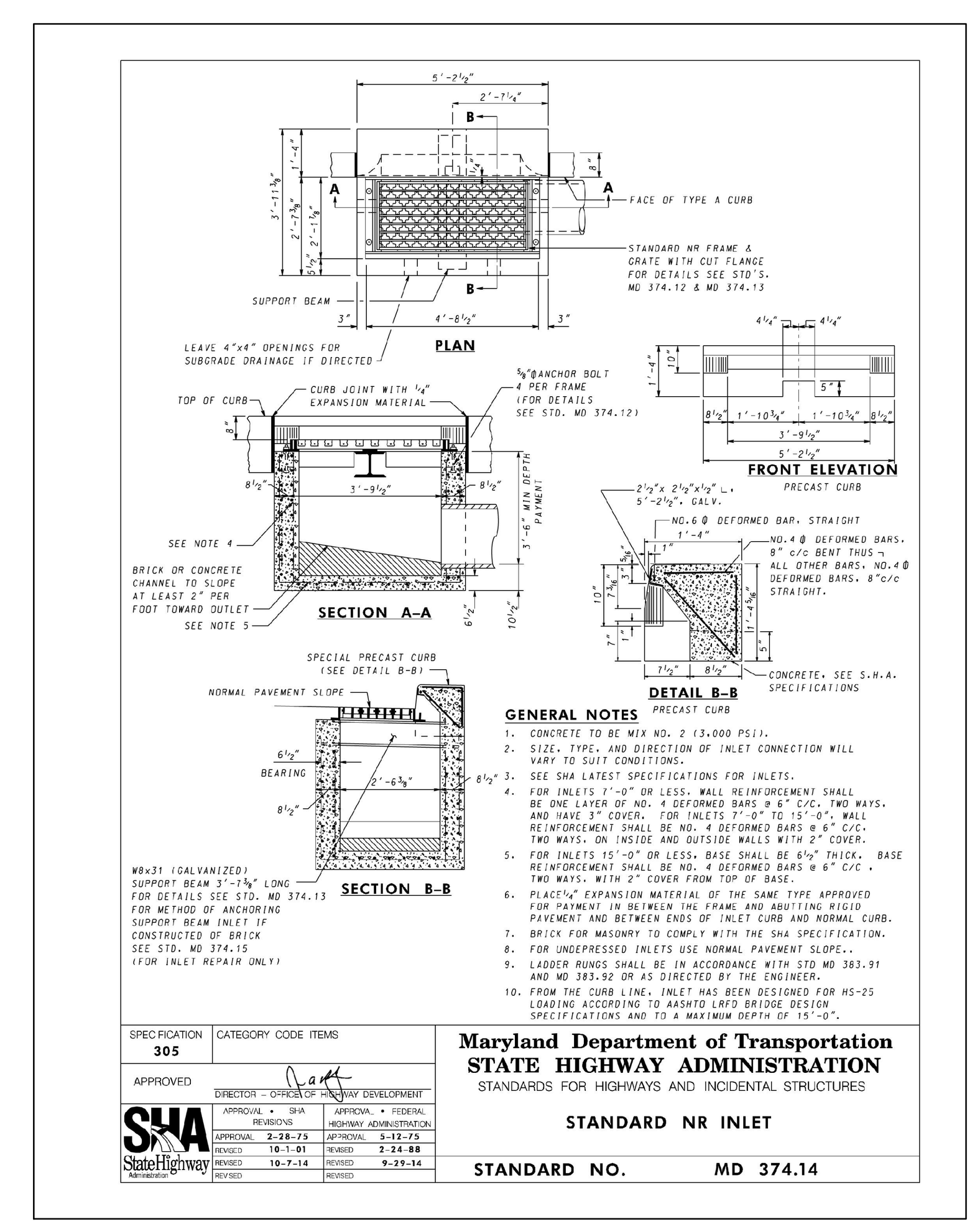
STR. NO.	DETAIL	TOP ELEV.	INV. IN - Underdrain	INV. IN	INV. IN	INV. OUT	REMARKS
MB-1	NDS Basin 12"	391.14	386.14	--	--	386.04	
MB-2	NDS Basin 12"	389.98	385.48	--	--	385.38	
MB-3	NDS Basin 12"	388.82	384.32	--	--	384.22	
MB-4	NDS Basin 12"	387.90	383.40	--	--	383.30	
MB-7	NDS Basin 12"	384.25	378.50	--	--	378.40	
MB-9	NDS Basin 12"	383.15	377.40	--	--	377.30	
MB-10	NDS Basin 12"	382.75	378.25	--	--	378.15	
MB-11	NDS Basin 12"	383.25	378.75	--	--	378.65	
MB-12	NDS Basin 12"	383.28	378.78	--	--	378.68	
MB-13	NDS Basin 12"	382.80	376.55	--	--	376.45	
MB-16	NDS Basin 12"	383.84	377.09	--	--	376.99	
MB-17	NDS Basin 12"	383.50	376.75	--	--	376.65	
MB-18	NDS Basin 12"	382.70	378.20	--	--	378.10	
MB-19	NDS Basin 12"	381.34	375.09	--	--	374.99	
MB-20	NDS Basin 12"	380.34	374.59	--	--	374.49	
MB-21	NDS Basin 12"	379.34	373.59	--	--	373.49	
MB-22	NDS Basin 12"	378.34	372.59	--	--	372.49	
MB-23	NDS Basin 12"	377.34	371.59	--	--	371.49	
MB-24	NDS Basin 12"	377.34	371.59	--	--	371.49	
MB-25	NDS Basin 12"	378.34	372.59	--	--	372.49	
MB-26	NDS Basin 12"	379.34	373.59	--	--	373.49	
MB-27	NDS Basin 12"	380.34	374.59	--	--	374.49	
MB-28	NDS Basin 12"	381.34	375.09	--	--	374.99	
MB-29	NDS Basin 12"	383.40	377.65	--	--	377.55	
MB-30	NDS Basin 12"	384.30	378.55	--	--	378.45	
MB-31	NDS Basin 12"	391.30	385.05	--	--	384.95	
MBP-1	NDS Basin 12"	381.00	373.50	--	--	373.40	



CURB CUT DETAIL
UN–COMPACTED GRAVEL
STABILIZATION TYPICAL
SCALE: 1"=3'



CURB CUT DETAIL
UN–COMPACTED GRAVEL
STABILIZATION TYPICAL
SCALE: 1"=3'



mv+a

OWNER
Woodglen Master Owner, LLC
Woodglen Master Owner II, LLC
4800 Hampton Ln, Suite 800
Bethesda, MD 20814
Tel: 301.657.7325

APPLICANT
NoBE Owner, LLC
c/o SCG Development
8245 Boone Blvd., Suite 640
Tysons Corner, VA 22182
Tel: 703.520.0828

ARCHITECT
MV+A | Mushinky Voelzke Associates, CHTD
1200 G Street, Suite 250
Washington, DC
Tel: 202.682.2822

CIVIL ENGINEER
Johnson Bernat Associates, Inc.
205 N Frederick Suite 100
Gaithersburg, MD 20877
Tel: 301.963.1133

LANDSCAPE ARCHITECT
LandDesign, Inc.
200 S Peyton St
Alexandria, VA 22314
Tel: 703.549.7784

STRUCTURAL ENGINEER
Structura, Inc.
12358 Parklawn Dr Suite 140
North Bethesda, MD 20852
Tel: 301.987.9234

MEP ENGINEER
Scot Engineering, Inc.
509 Germantown Pike Bldg 2
Lafayette Hill, PA 19444
Tel: 215.774.1429

North Bethesda Market II

NORTH BETHESDA, MARYLAND

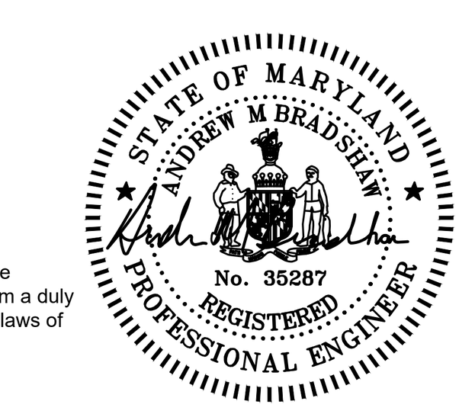
STORMWATER MANAGEMENT DETAILS

PROJECT NUMBER
22002.00

REV.	ISSUE:	DATE
	Permit Set	10-22-24

KEY PLAN

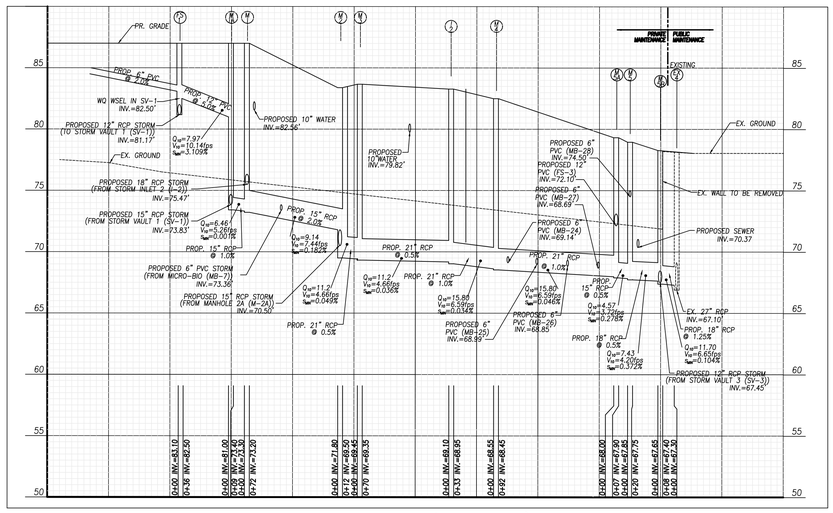
DRAWING STAMP



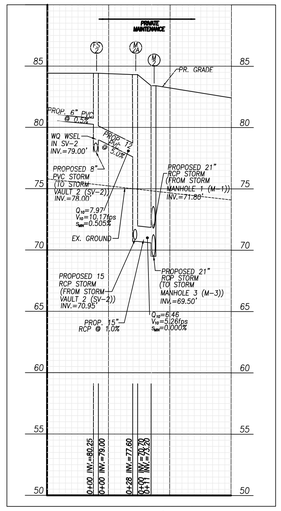
Professional Certification
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
Licence No.: 35287
Expiration Date.: 01-07-26

SHEET NUMBER
C-4.06

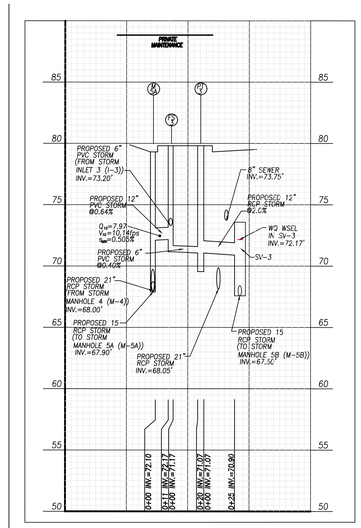
APPROVED
Department of Permitting Services
Permit # SEDIMENT-297245
Date 10/24/2025
Stamped By: Mark Etheridge



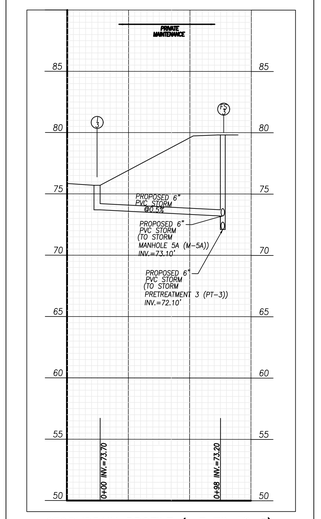
STORMDRAIN PROFILE (SV-1 TO EX.4)
SCALE: 1"=50' H
1"=5' V



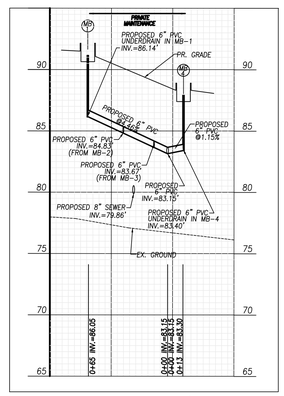
STORMDRAIN PROFILE (FS-2 TO M-2)
SCALE: 1"=50' H
1"=5' V



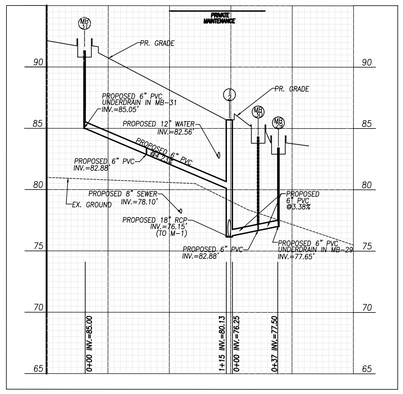
STORMDRAIN PROFILE (FS-2 TO M-2)
SCALE: 1"=50' H
1"=5' V



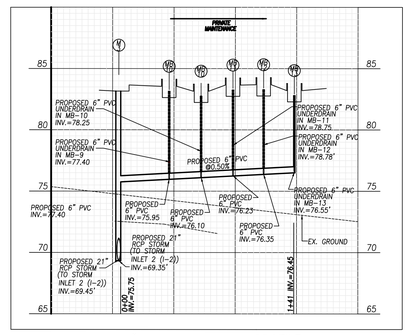
STORMDRAIN PROFILE (I-3 TO FS-3)
SCALE: 1"=50' H
1"=5' V



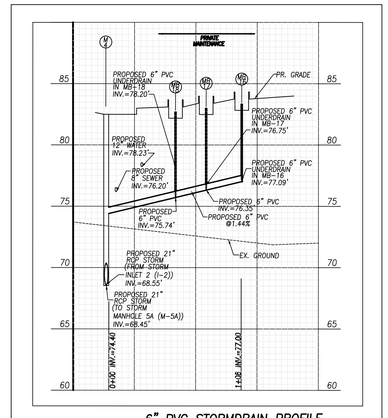
6" PVC STORMDRAIN PROFILE (MB-1 TO MB-4)
SCALE: 1"=50' H
1"=5' V



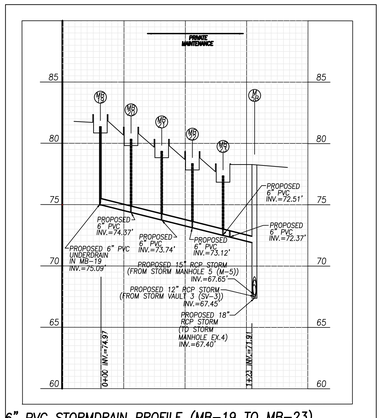
6" PVC STORMDRAIN PROFILE
(MB-31 TO I-2 AND I-2 TO MB-29)
SCALE: 1"=50' H
1"=5' V



6" PVC STORMDRAIN PROFILE
(M-3 TO MB-13)
SCALE: 1"=50' H
1"=5' V



6" PVC STORMDRAIN PROFILE
(M-4 TO MB-16)
SCALE: 1"=50' H
1"=5' V



6" PVC STORMDRAIN PROFILE (MB-19 TO MB-23)
SCALE: 1"=50' H
1"=5' V

0 30 60 90

OWNER
Woodglen Master Owner, LLC
Woodglen Master Owner II, LLC
4800 Hampton Ln, Suite 800
Bethesda, MD 20814
Tel: 301.657.7325

APPLICANT
NoBE Owner, LLC
c/o SCG Development
8245 Boone Blvd., Suite 640
Tysons Corner, VA 22182
Tel: 703.520.0828

ARCHITECT
MV+A | Mushinky Voelzke Associates, CHTD
1200 G Street, Suite 250
Washington, DC
Tel: 202.682.2822

CIVIL ENGINEER
Johnson Bernat Associates, Inc.
205 N Frederick Suite 100
Gaithersburg, MD 20877
Tel: 301.963.1133

LANDSCAPE ARCHITECT
LandDesign, Inc.
200 S Peyton St
Alexandria, VA 22314
Tel: 703.549.7784

STRUCTURAL ENGINEER
Structura, Inc.
12358 Parklawn Dr Suite 140
North Bethesda, MD 20852
Tel: 301.987.9234

MEP ENGINEER
Scot Engineering, Inc.
509 Germantown Pike Bldg 2
Lafayette Hill, PA 19444
Tel: 215.774.1429

North Bethesda Market II

NORTH BETHESDA, MARYLAND

STORMWATER MANAGEMENT PROFILES

PROJECT NUMBER
22002.00

REV.	ISSUE:	DATE
	Permit Set	10-22-24

KEY PLAN

DRAWING STAMP

Professional Certification
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
Licence No.: 35287
Expiration Date.: 01-07-26

STATE OF MARYLAND · ANDREW W. BRADSHAW · No. 35287 · REGISTERED PROFESSIONAL ENGINEER

SHEET NUMBER
C-4.07

APPROVED
Department of Permitting Services
Permit # SEDIMENT-297245
Date 10/24/2025
Stamped By: Mark Etheridge

NICHOLSON LN

WOODGLEN DR

ROCKVILLE PIKE

PRIVATE RD

PASEO DR

EXECUTIVE BLVD

(4) HAVE
(1) QUPH
(16) PAVI

(8) ILGL
(1) QUPH
(3) RULA

(4) HAVE
(1) QUPH
(12) PAVI

(4) ILGL
(1) QUPH
(2) RULA

(1) QUPH
(2) RULA
(4) ILGL

(12) PAVI
(1) QUPH
(4) HAVE

(12) ILGL
(1) QUPH
(3) RULA

(5) ILGL
(1) QUPH
(3) RULA

(7) ILGL
(1) QUPH
(3) RULA

(4) HAVE
(1) QUPH
(12) PAVI

(8) ILGL
(1) QUPH
(3) RULA

(4) HAVE
(1) QUPH
(11) PAVI

(1) QUPH
(33) PEAL

(8) ILGL
(1) QUPH
(3) RULA

(14) PAVI
(1) QUPH
(4) HAVE

(1) QUPH
(4) RULA

(8) ILGL

(11) PAVI
(1) QUPH
(4) HAVE

(7) PAVI
(1) NYSS
(2) KALA
(2) EUPU
(1) NYSS
(4) ILGL

(2) EUPU
(1) NYSS
(4) ILGL

(9) PAVI
(1) NYSS
(2) KALA

(1) NYSS
(9) PAVI
(2) KALA

(2) EUPU
(4) ILGL
(1) NYSS

(2) EUPU
(1) NYSS
(4) ILGL

(9) PAVI
(1) NYSS
(2) KALA

(9) PAVI
(1) NYSS
(2) KALA

(2) EUPU
(1) NYSS
(4) ILGL

(15) LOCA
(6) ILGL
(5) KALA

(4) HAVE
(12) PAVI
(3) EUPU
(5) KALA

PUMP ROOM

ELEC

18" RCP

PLANT LEGEND

SYMBOL	CODE	BOTANICAL / COMMON NAME
DECIDUOUS TREES		
	NYSS	NYSSA SYLVATICA / TUPELO
	QUPH	QUERCUS PHELLOS / WILLOW OAK
DECIDUOUS SHRUBS		
	HAVE	HAMAMELIS VERNALIS 'QUASIMODO' / QUASIMODO OZARK WITCHHAZEL
EVERGREEN SHRUBS		
	ILGL	ILEX X GLABRA 'SHAMROCK' / SHAMROCK INKBERRY
	KALA	KALMIA LATIFOLIA / MOUNTAIN LAUREL
GROUND COVERS		
	EUPU	EUPATORIUM PURPUREUM / JOE PYE WEED
	LOCA	LOBELIA CARDINALIS / CARDINAL FLOWER
	PAVI	PANICUM VIRGATUM / SWITCH GRASS
	RULA	RUDBECKIA LACINIATA / CUTLEAF CONEFLOWER

1 L104 PLANTING PLAN - BIO-RETENTION
PLAN

SC/SWM - 13 of 16
#########

Autodesk Docs://24040 - NOBE II Multifamily/24040_NOBE II Multifamily_ARCH_MVA_R22.rvt 1/9/2025 8:19:54 AM

mv+a

OWNER
SCG DEVELOPMENT
4824S BOONE BLVD, SUITE 640
VIENNA, VA 22182
Tel: 703.942.6610

ARCHITECT
MV+A | Mushinky Voelzke Associates, CHTD
1200 G Street, Suite 250
Washington, DC
Tel: 202.682.2822

CIVIL ENGINEER
Johnson Bernat Associates, Inc.
205 N Frederick Suite 100
Gaithersburg, MD 20877
Tel: 301.963.1133

LANDSCAPE ARCHITECT
LandDesign, Inc.
200 S Peyton St
Alexandria, VA 22314
Tel: 703.549.7784

STRUCTURAL ENGINEER
Structura, Inc.
12358 Parklawn Dr Suite 140
North Bethesda, MD 20852
Tel: 301.987.9234

INTERIOR DESIGN
Carlyn and Company Interiors
746 Walker Road
Great Falls, VA 22066
Tel: 202.669.1435

MEP ENGINEER
Scot Engineering, Inc.
509 Germantown Pike Bldg 2
Lafayette Hill, PA 19444
Tel: 215.774.1429

NOBE II MULTIFAMILY

7055 GASTRO LANE, ROCKVILLE, MD

PLANTING PLAN - BIO-RETENTION

PROJECT NUMBER
2024158

REV.	ISSUE:	DATE
	Permit Set	10-22-24

DESIGNED BY: KG, TB, ML
DRAWN BY: KG, TB, ML, JC
CHECKED BY: KG

SCALE NORTH

VERT: N/A
HORZ: 1"=20'
0 10' 20' 40'

KEY PLAN

DRAWING STAMP

LANDSCAPE ARCHITECT 4273 CHRISTINE F. GIANGRANDE STATE OF MARYLAND

I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland.

LICENSE NUMBER 4273 EXPIRATION DATE 07.26.2026

SHEET NUMBER L104

APPROVED
Department of Permitting Services
Permit # SEDIMENT-297245
Date 10/24/2025
Stamped By: Mark Etheridge

NOTE: PRODUCTION WILL NOT COMMENCE UNTIL RECEIPT OF SIGNED APPROVED SHOP DRAWINGS.

PRECAST CONCRETE DESIGN SPECIFICATIONS:

- CONCRETE MINIMUM (28–DAY) COMPRESSIVE STRENGTH: 6,000 PSI
- REINFORCING DEFORMED BAR CONFORMING TO ASTM A615 (FY=60 KSI)
- REINFORCING WELDED WIRE CONFORMING TO ASTM A1064 (FY=80 KSI)
- STRUCTURAL REINFORCING FIBERS CONFORMING TO ASTM C1116
- DESIGN FILL RANGE: 1'–0" MIN – 10'–0" MAX
- DESIGN LIVE LOAD: AASHTO HS–20
- SOIL UNIT WEIGHT: 120 PCF
- GROUNDWATER TABLE ASSUMED TO BE AT OR BELOW INVERT OF STRUCTURE
- DESIGN CRITERIA IN ACCORDANCE TO ACI–350

WATERTIGHT JOINT NOTES:

- THE JOINT SYSTEM BETWEEN SECTIONS AND CHAMBERS MUST BE WATERTIGHT TO 17.25 PSI HYDROSTATIC PRESSURE AS DEMONSTRATED BY THE COMPLETION OF A LABORATORY WATERTIGHT HYDROSTATIC JOINT SEAL TEST WITNESSED BY AN INDEPENDENT THIRD PARTY. THE TEST SHALL EXPOSE THE JOINT TO A CONTINUOUS HYDROSTATIC PRESSURE OF 15 PSI FOR 48–HOURS AND THEN 17.25 PSI FOR AN ADDITIONAL 15–MINUTES WITH ZERO LEAKAGE. THE HYDROSTATIC TEST REPORT SHALL BE SUBMITTED AND APPROVED PRIOR TO BID.
- AN EXTERIOR LINER IS NOT CONSIDERED AN ACCEPTABLE MEANS OF MAKING THE SYSTEM WATERTIGHT SINCE IT CANNOT MAKE INDIVIDUAL CHAMBERS WATERTIGHT BETWEEN EACH OTHER, ALLOWING SHORT CIRCUITING OF THE FILTER OR CONTROL STRUCTURE TO OCCUR, THUS A LINER IS NOT ALLOWED.
- WATERTIGHTNESS OF THE BETWEEN PRECAST SECTIONS IS THE RESPONSIBILITY OF THE SYSTEM MANUFACTURER.
- A 2–YR MANUFACTURER'S JOINT WATERPROOFING WARRANTY SHALL BE PROVIDED FOR ALL WATERTIGHT SYSTEMS BY THE SYSTEM MANUFACTURER. THE WARRANTY BEGINS ONCE THE WATERTIGHT WORK IS PERFORMED.

CONSTRUCTION NOTES:

- LATERAL PIPE OPENINGS TO BE CAST INTO THE STRUCTURE AT THE PRECAST FACILITY.
- LATERAL PIPES TO EXTEND BEYOND THE INSIDE WALL AND SEALED WITH GROUT
- ANNULAR SPACE BETWEEN THE PIPE AND WALL OPENING TO BE SEALED WITH AN EXPANDABLE WATER–STOP AND AN APPROVED NON–SHRINK GROUT.
- MANHOLE ACCESS RISERS AND MANHOLE FRAMES & COVERS TO BE PROVIDED BY THE MANUFACTURER, BUT INSTALLED ON SITE BY THE CONTRACTOR.
- ACCESS RISERS AND MANHOLE COVERS TO BE INSTALLED AND GROUTED ON SITE TO MEET FINISH GRADE BY THE CONTRACTOR.
- LADDERS TO BE PROVIDED AND INSTALLED BY THE MANUFACTURER.
- FABRICATION TO BE IN CONFORMANCE WITH THE LATEST EDITION AND ADDENDA OF THE MSHA STANDARDS AND SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS.
- CONCRETE DESIGN CRITERIA TO MEET ACI 350, ENVIRONMENTAL ENGINEERING STRUCTURES, WITH FREEZING AND THAWING EXPOSURE. CONCRETE SHALL BE A TYPE 1L CEMENT WITH A (28–DAY) COMPRESSIVE STRENGTH OF 5,000 PSI.

STORAGE VOLUME PROVIDED:

SV-1 STORAGE VOLUME PROVIDED:

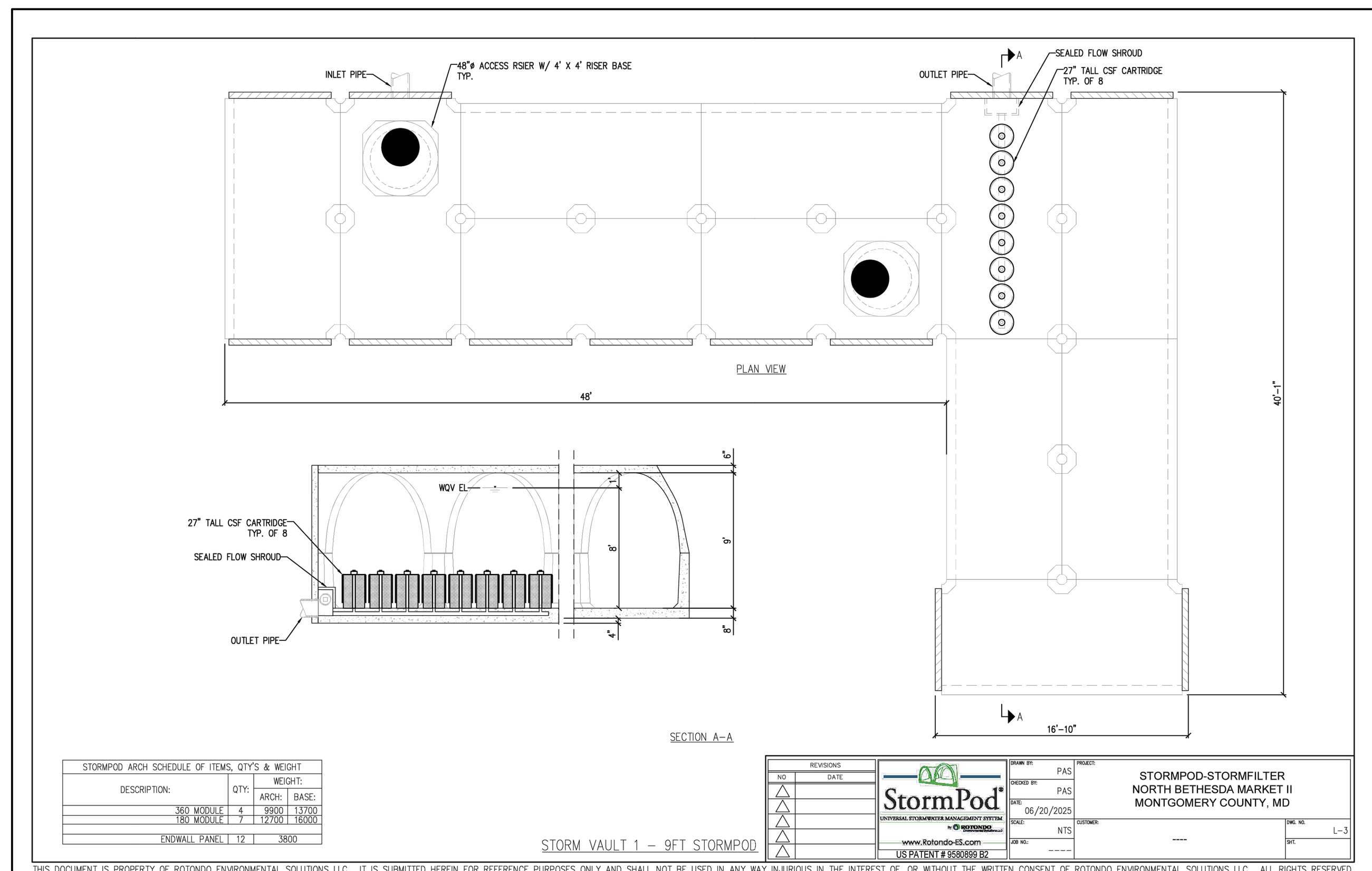
9,561 ft^3 = Total Storage Volume Provided = $V_{FMV} + V_{TF} + V_{BPT} + V_{TPT} \geq WQ_{Vadj}$

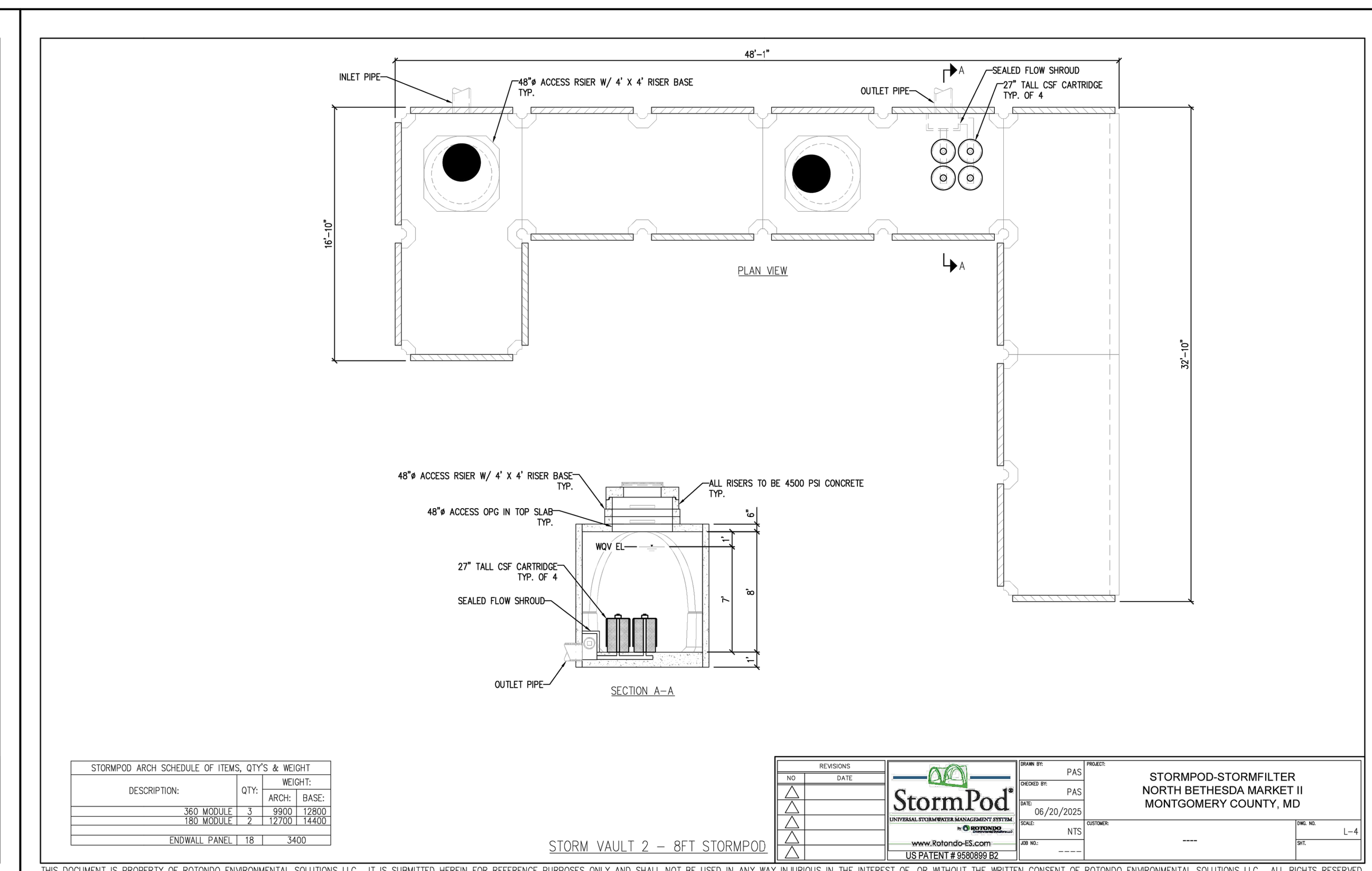
SV-2 STORAGE VOLUME PROVIDED:

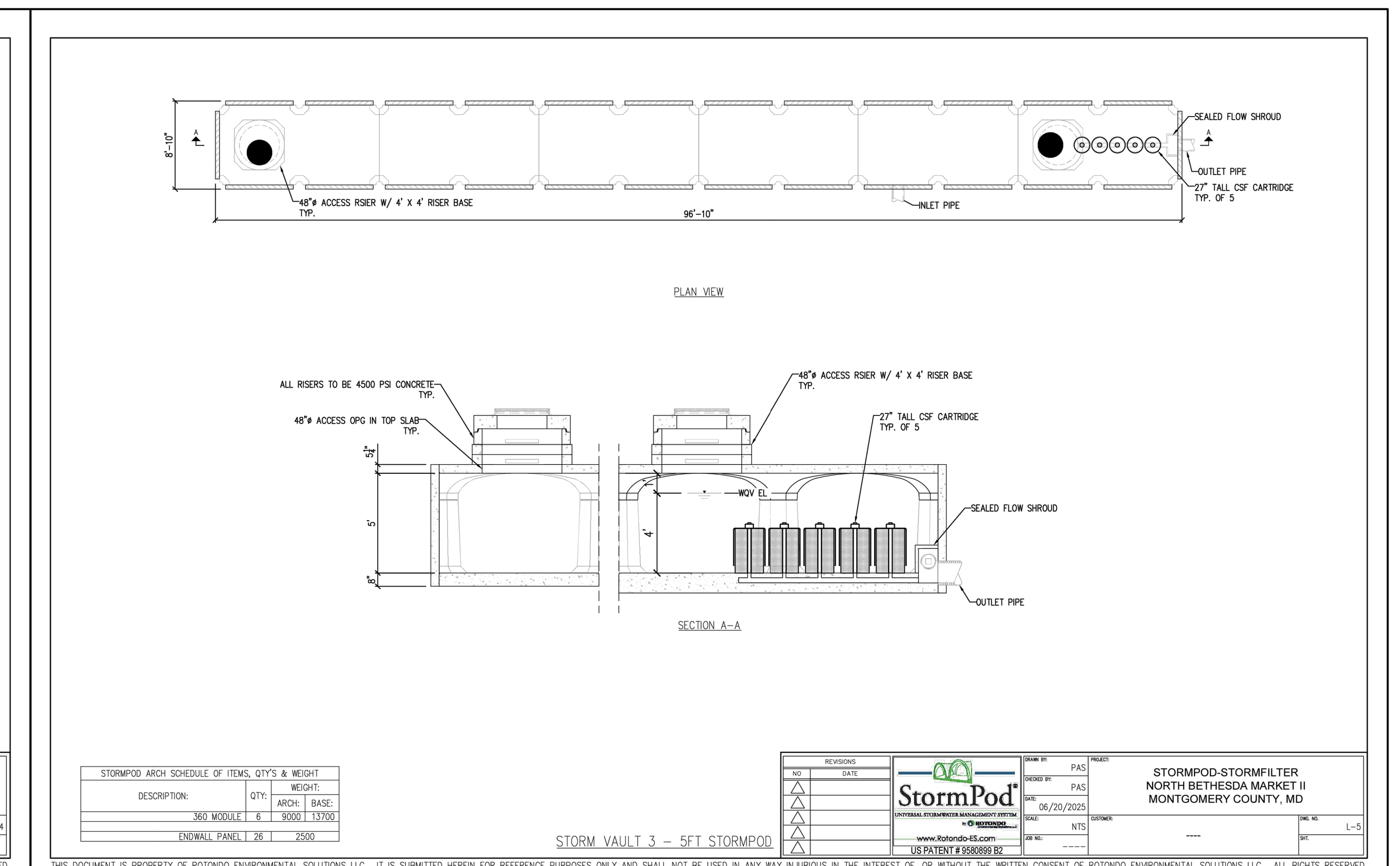
3,883 ft^3 = Total Storage Volume Provided = $V_{FMV} + V_{TF} + V_{BPT} + V_{TPT} \geq WQ_{Vadj}$

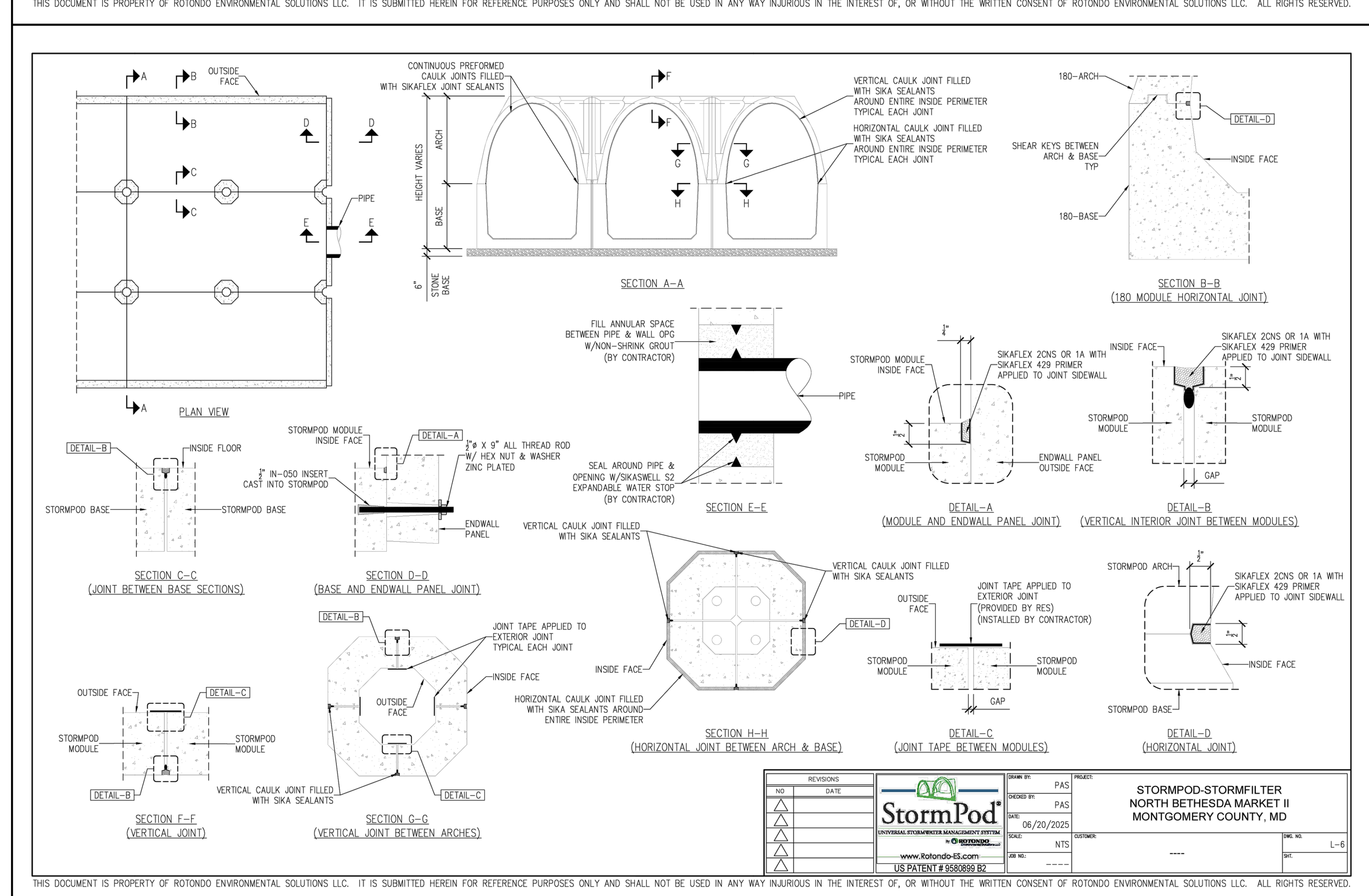
SV-3 STORAGE VOLUME PROVIDED:

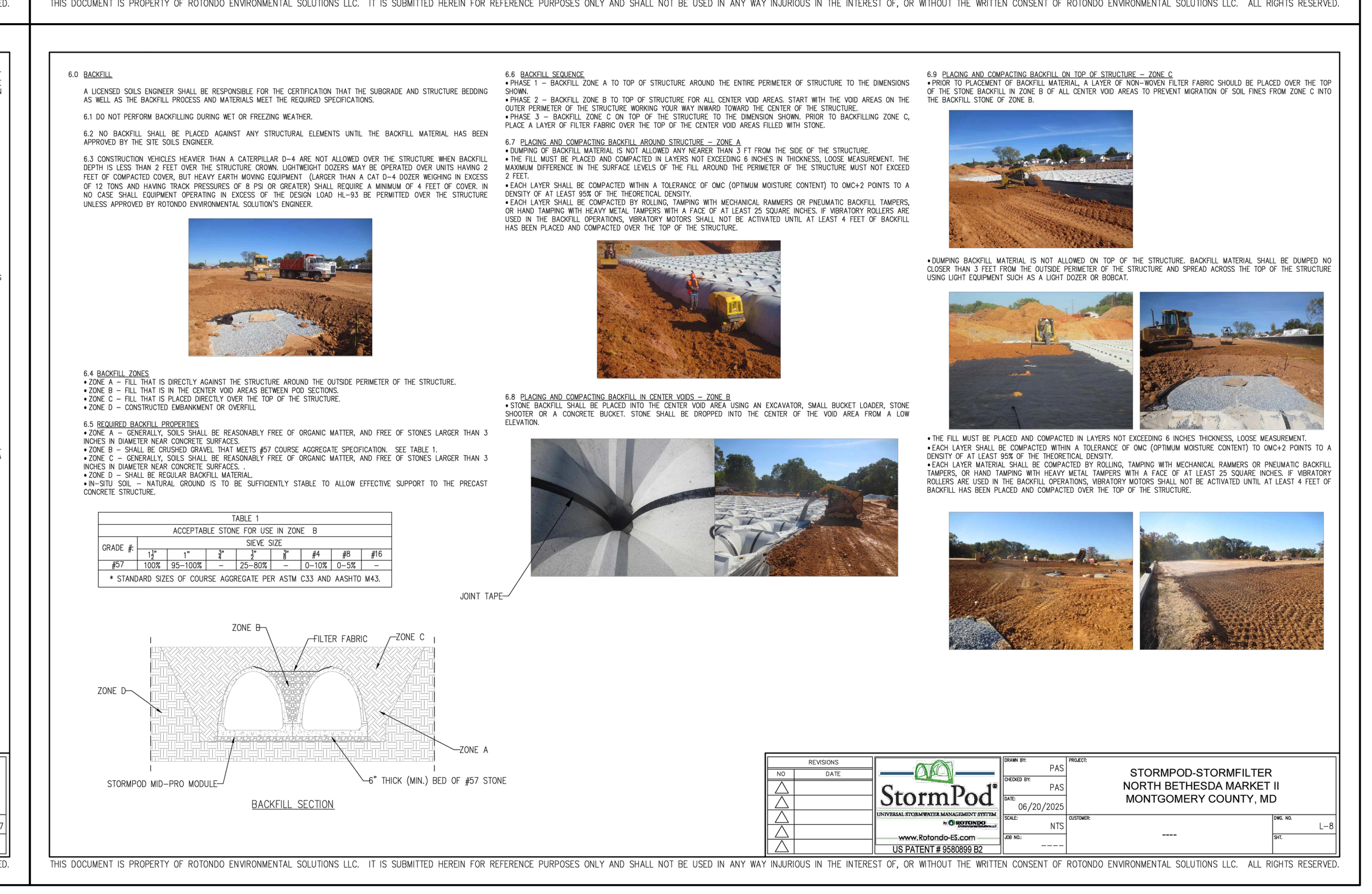
3,416 ft^3 = Total Storage Volume Provided = $V_{FMV} + V_{TF} + V_{BPT} + V_{TPT} \geq WQ_{Vadj}$











NOTES:

1. Shop drawings for SV–1, SV–2, and SV–3 must be prepared, approved by the project engineer, and submitted to DPS plan reviewer for acceptance, utilizing standard precast checklist, prior to fabrication.
2. Structures must be watertight. Leakage test is required prior to backfill. Results of Leakage tests to be provided with the as–built.

OWNER
Woodglen Master Owner, LLC
Woodglen Master Owner II, LLC
4800 Hampton Ln, Suite 800
Bethesda, MD 20814
Tel: 301.657.7325

APPLICANT
SCG Development Partners, LLC
8245 Boone Blvd., Suite 640
Tysons Corner, VA 22182
Tel: 703.520.0828

ARCHITECT
MV+A | Mushinky Voelzke Associates, CHTD
1200 G Street, Suite 250
Washington, DC
Tel: 202.682.2822

CIVIL ENGINEER
Johnson Bernat Associates, Inc.
205 N Frederick Suite 100
Gaithersburg, MD 20877
Tel: 301.963.1133

LANDSCAPE ARCHITECT
LandDesign, Inc.
200 S Peyton St
Alexandria, VA 22314
Tel: 703.549.7784

STRUCTURAL ENGINEER
Structura, Inc.
12358 Parklawn Dr Suite 140
North Bethesda, MD 20852
Tel: 301.987.9234

MEP ENGINEER
Scot Engineering, Inc.
509 Germantown Pike Bldg 2
Lafayette Hill, PA 19444
Tel: 215.774.1429

North Bethesda Market II

NORTH BETHESDA, MARYLAND

STORMWATER MANAGEMENT STRUCTURAL PLANS, NOTE AND DETAILS

PROJECT NUMBER

22002.00

REV.	ISSUE:	DATE
	Permit Set	10-22-24

KEY PLAN

DRAWING STAMP

STATE OF MARYLAND KEVIN J. JOHNSON No. 16148 REGISTERED PROFESSIONAL ENGINEER

Professional Certification

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

Licence No.: 16148
Expiration Date.: 08-22-26

SHEET NUMBER

S109

BUILDING CODE AND DESIGN LOADS

1. INTERNATIONAL BUILDING CODE (IBC): 2018
2. LOCAL CODE AMENDMENTS: MONTGOMERY COUNTY, MD AMENDMENTS
3. LIVE LOADS
   A. SIDEWALKS, VEHICULAR DRIVEWAYS AND YARDS SUBJECT TO TRUCKING: 250 PSF OR 8000 LBS. CONCENTRATED
   B. HL-93 LOADING
4. SEISMIC LOAD CRITERIA:
   A. RISK CATEGORY: II
   B. IMPORTANCE FACTOR I_e: 1.0
   C. S_s: 0.135
   D. S_1: 0.043
   E. S_{ds}: 0.144
   F. S_{d1}: 0.069
   G. SITE CLASS: D
   H. SEISMIC DESIGN CATEGORY: B

GENERAL

1. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCES TO ENSURE STABILITY AND SAFETY DURING CONSTRUCTION. THIS INCLUDES BUT IS NOT LIMITED TO, THE ADDITION OF SHEETING, SHORING, TEMPORARY BRACING, GUYS, AND TIEDOWNS. THE CONTRACTOR SHALL PROVIDE SHORING AND BRACING NECESSARY TO PROTECT EXISTING AND ADJACENT STRUCTURES. .
2. STRUCTURAL DOCUMENTS SHALL BE USED WITH OTHER CONSTRUCTION DOCUMENTS, INCLUDING ARCHITECTURAL, DEMOLITION, M/E/P/FP, AND CIVIL DRAWINGS, AND THE GEOTECHNICAL REPORT. INFORMATION REQUIRED TO COORDINATE THE STRUCTURAL PORTIONS OF THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   A. CIVIL DRAWINGS:
      I. PROJECT DATUM AND SITING OF THE BUILDING
      II. EXISTING SITE CONDITIONS AND EXISTING UTILITIES
      III. SITE PREPARATION AND GRADING
      IV. BACK FILL MATERIALS AND BACKFILL REQUIREMENTS
      V. NEW UTILITIES
      VI. PAVING AND SITE ELEMENTS OUTSIDE OF THE BUILDING ENVELOPE (ALSO REFER TO THE LANDSCAPE DRAWINGS)
      VII. DEMOLITION DRAWINGS
   B. GEOTECHNICAL REPORT:
      I. SUBGRADE PREPARATION REQUIREMENTS
      II. MINIMUM FOUNDATION SIZES AND BEARING ELEVATIONS
      III. SUBGRADE AND PERIMETER DRAINAGE SYSTEM REQUIREMENTS
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LIMITING CONSTRUCTION LOADS SUCH THAT THESE LOADS DO NOT EXCEED THE DESIGN LIVE LOADS NOTED ABOVE. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AS REQUIRED DURING CONSTRUCTION TO SUPPORT CONSTRUCTION LOADS UNTIL SUCH TIME THAT THE STRUCTURE IS ABLE TO SUPPORT THE DESIGN LIVE LOADS NOTED.
5. SECTIONS AND DETAILS SHOWN ON THE STRUCTURAL DOCUMENTS SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS THAT DO NOT HAVE A SPECIFIC SECTION INDICATED.
6. TYPICAL DETAILS APPLY AT ALL APPROPRIATE LOCATIONS AND ARE NOT GENERALLY CUT ON PLANS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TYPICAL DETAIL APPLICATIONS.
7. FOR INCONSISTENCIES BETWEEN THE GENERAL NOTES, SPECIFICATIONS, AND CONSTRUCTION DOCUMENTS, THE MOST STRICT REQUIREMENT SHALL APPLY. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
8. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND MISCELLANEOUS ITEMS INCLUDING BUT NOT LIMITED TO CLIPS, INSERTS, TIES, ANCHOR STRAPS, HANGERS, BOLTS, AND OTHER FASTENERS REQUIRED TO COMPLETE THE WORK.

EXISTING CONDITIONS, TEMPORARY SHORING, UNDERPINNING, AND DEMOLITION

1. THE DRAWINGS MAY REFLECT INFORMATION PROVIDED BY OTHERS AND/OR EXISTING CONDITIONS THAT HAVE BEEN SURVEYED AND/OR DOCUMENTED TO THE GREATEST POSSIBLE EXTENT BUT NOT VERIFIED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FULLY COORDINATE THE WORK, INCLUDING, BUT NOT LIMITED TO, THE VERIFICATION OF ALL EXISTING CONDITIONS SHOWN IN THE DRAWINGS AND COORDINATION OF ALL NECESSARY BUILDING TRADES WITH EXISTING CONDITIONS. ANY AND ALL CONDITIONS THAT ARE MIS-REPRESENTED IN THESE DOCUMENTS OR ANY CONDITIONS THAT ARE NOT SHOWN BUT WARRANT THE ATTENTION OF THE ARCHITECT AND/OR ENGINEER SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT AND/OR ENGINEER.
2. MEANS AND METHODS OF CONSTRUCTION AND TEMPORARY SHORING AND BRACING OF THE EXISTING STRUCTURE(S) AND ADAJACENT STRUCTURES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER MAY INCLUDE PHASING, SEQUENCING, SHORING REQUIREMENTS, ETC. IN THE CONSTRUCTION DOCUMENTS TO ALERT, ASSIST, OR OTHERWISE DICTATE PROCEDURAL REQUIREMENTS THAT MAY BE NECESSARY TO PROPERLY IMPLEMENT THE STRUCTURAL PORTION OF THE WORK OR THAT MAY BE REQUIRED TO ENSURE BUILDING STABILITY; HOWEVER, THE CONTRACTOR SHALL COORDINATE THESE REQUIREMENTS AND SHALL REMAIN COMPLETELY AND SOLELY RESPONSIBLE FOR COMPLETING THE WORK IN A SAFE AND TIMELY MANNER.
3. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF DEMOLITION AND THE STABILITY OF THE EXISITNG STRUCTURE AND ADJACENT STRUCTURES DURING DEMOLITION OPERATIONS UNTIL THE WORK IS COMPLETE. ALL TEMPORARY SHORING SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER IN THE JURISDICTION OF THE PROJECT AND DEMOLITION WORK SHALL BE COMPLETED BY QUALIFIED AND EXPERIENCED PERSONNEL.
4. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR REPAIRS TO EXISTING STRUCTURAL ELEMENTS THAT MAY BE DAMAGED DURING DEMOLITION OPERATIONS. ANY NECESSARY REPAIR WORK SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER IN THE JURISDICTION OF THE PROJECT AND REPAIRS SHALL BE IMPLEMENTED BY QUALIFIED AND EXPERIENCED PERSONNEL.
5. UNLESS NOTED OTHERWISE, IT HAS BEEN ASSUMED THAT THE EXISTING STRUCTURE(S) ARE IN SERVICEABLE CONDITION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY AND ALL AREAS OF STRUCTURAL DISTRESS (INCLUDING, BUT NOT LIMITED TO, CRACKS, SPALLING, ETC.) NOT INDICATED IN THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL NOT PROCEED WITH WORK IN SUCH AREAS WITHOUT DIRECTION FROM THE ENGINEER.

FOUNDATIONS

1. FOUNDATION DESIGN IS BASED ON THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT PREPARED BY UNIVERSAL ENGINEERING SCIENCES, DATED APRIL 4, 2022 AND THE ADDENDUM LETTER DATED DECEMBER 27, 2024. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR SUBSURFACE CONDITIONS ENCOUNTERED IN THE FIELD DIFFERENT TO THOSE ASSUMED FOR THE DESIGN.
2. ASSUMED ALLOWABLE SOIL BEARING VALUE OF 2,000 PSF AND SHALL BE VERIFIED BY A GEOTECHNICAL ENGINEER OR QUALIFIED SOILS TECHNICIAN. REFER TO THE GEOTECHNICAL REPORT FOR EARTHWORK PROCEDURES, COMPACTION, AND ADDITIONAL INFORMATION.
4. ALL FOOTINGS SHALL PROJECT AT LEAST 1'-0" INTO UNDISTURBED NATURAL SOIL OR COMPACTED CONTROLLED FILL HAVING A BEARING VALUE AT LEAST EQUAL TO THAT SPECIFIED ABOVE.
5. BOTTOMS OF ALL EXTERIOR FOOTINGS SHALL BE AT LEAST 2'-6" BELOW FINISHED GRADE OR AS REQUIRED BY LOCAL CODE REQUIREMENTS. FOOTING ELEVATIONS INDICATED ON DRAWINGS HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION PROVIDED BY OTHERS AND MAY NOT VIOLATE THE FOREGOING CRITERIA. FOOTING ELEVATIONS SHALL BE LOWERED AS SITE CONDITIONS WARRANT FOR POOR SOIL CONDITIONS OR AS REQUIRED TO FACILITATE SITE UTILITIES OR EXISTING CONDITIONS.
6. UNLESS NOTED OTHERWISE ON THE DRAWINGS, WALL FOOTINGS SHALL BE 12" DEEP AND PROJECT 6" BEYOND EACH FACE OF THE WALL. WALL FOOTINGS SUPPORTING MASONRY WALLS SHALL BE REINFORCED WITH (3)#5 CONTINUOUS LONGITUDINAL BOTTOM BARS.
7. ALL DISTURBED EARTH UNDER FOOTINGS SHALL BE REPLACED WITH LEAN CONCRETE.
8. ALL BEARING STRATA SHALL BE ADEQUATELY DRAINED BEFORE FOUNDATION CONCRETE IS PLACED.
9. NO EXCAVATION SHALL BE CLOSER THAN AT A SLOPE OF 2:1 (TWO HORIZONTAL TO ONE VERTICAL) TO AN EXISTING FOOTING OR STRUCTURE UNLESS NOTED OTHERWISE.
10. DO NOT PLACE CONCRETE OVER FROZEN SOIL.
11. UNLESS NOTED OTHERWISE, CENTERLINES OF FOOTINGS SHALL MATCH CENTERLINES OF COLUMNS, PEDESTALS, AND/OR PIERS.
12. MUD MATS SHALL BE PROVIDED TO PROTECT FOUNDATION EXCAVATIONS WHEN NECESSARY.
13. UNLESS NOTED OTHERWISE, THE BUILDING IS NOT DESIGNED FOR HYDROSTATIC PRESSURE. PERMANENT UNDERSLAB AND PERIMETER DRAINAGE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT, ARCHITECTURAL DRAWINGS, AND PLUMBING DRAWINGS. IN THE ABSENCE OF SPECIFIC REQUIREMENTS, REFER TO IBC SECTION 1805.4. THE CONTRACTOR SHALL COORDINATE THE DRAINAGE SYSTEM(S) WITH THE BUILDING STRUCTURE. DRAINAGE SYSTEMS MAY BE SHOWN ON THE STRUCTURAL DRAWINGS FOR INFORMATIONAL PURPOSES ONLY.
14. FOUNDATION / RETAINING WALLS HAVE BEEN DESIGNED USING THE PROPERTIES LISTED BELOW AS INDICATED IN THE GEOTECHNICAL REPORT. ALL FOUNDATION WALLS ARE TO BE BACKFILLED WITH SLECT FILL AS INDICATED IN THE GEOTECHNCIAL REPORT.
    A. SOIL DENSITY, SATURATED UNIT WEIGHT: 135 PCF
    B. COEFFICIENT OF FRICTION (CONCRETE TO SOIL): 0.35
    C. AT-REST HORIZONTAL COEFFICIENT (K_O): 0.5
    D. AT-REST PRESSURE: 67.5 PSF/FT
    E. ACTIVE PRESSURE HORIZONTAL COEFFICIENT (K_A): 0.33
    F. ACTIVE PRESSURE: 45 PSF/FT
    G. PASSIVE PRESSURE HORIZONTAL COEFFICIENT (K_p): 3.0
    H. PASSIVE PRESSURE: 405 PSF/FT

TEMPORARY SUPPORT OF EXCAVATION

1. EXCAVATION SUPPORT SYSTEMS (SHEETING AND SHORING OR OTHER MEANS) SHALL BE DESIGNED AND INSTALLED BY A SPECIALTY CONTRACTOR WITH A MINIMUM OF 5 YEARS OF EXPERIENCE IN THE DESIGN AND INSTALLATION OF EARTH RETENTION SYSTEMS. THE DESIGN OF EARTH RETENTION SYSTEMS SHALL BE PROVIDED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND.
2. SIGNED AND SEALED SHOP DRAWINGS AND STRUCTURAL CALCULATIONS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR REVIEW.
3. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFICATION ALL EXISTING CONDITIONS (INCLUDING UTILITIES AND BUILDING SYSTEMS) AND COORDINATION OF EXCAVATION SUPPORT SYSTEMS WITH THESE CONDITIONS.
4. SHEETING AND SHORING OR OTHER EARTH RETENTION SYSTEMS MAY BE SHOWN IN THE STRUCTURAL DRAWINGS FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COORDINATION OF THESE SYSTEMS WITH THE PERMANENT STRUCTURE AS SHOWN IN THE STRUCTURAL DRAWINGS.
5. A STANDARD PENETRATION TEST SHALL BE MADE AT THE BOTTOM OF EVERY CAISSON BY A SOILS CONSULTANT TO VERIFY THE SOIL BEARING CAPACITY.

CONCRETE

1. ALL CONCRETE CONSTRUCTION INCLUDING DETAILING, FABRICATION, PLACEMENT OF REINFORCING, MIXING, HANDLING, PLACING, FINISHING, AND CURING SHALL CONFORM TO ACI-301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE", ACI-315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", AND ACI-318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY".
2. ALL CONCRETE SHALL CONFORM TO ASTM C94. DO NOT PROVIDE AIR ENTRAINMENT FOR CONCRETE THAT WILL RECEIVE A SMOOTH, DENSE, HARD-TROWELED FINISH. PROVIDE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS AND WATER/CEMENT RATIOS:

APPROVED
Department of Permitting Services
Permit # SEDIMENT-297245
Date 10/24/2025
Stamped By: Mark Etheridge

APPLICATION	ACI CLASSIFICATION* (ACI-318 CHAPTER 19)	F'C	MAXIMUM W/C	TARGET AIR CONTENT
FOOTINGS	F0, S0, W0, C0	3,000 PSI	N/A	N/A
MICRO-BIORETENTION STRUCTURES (WALLS AND SLABS)	F3, S0, W1, C2	4,500 PSI	0.40	6% +/- 1.5%

***REFER TO ACI-318 TABLE 19.3.2.1 FOR ADDITIONAL REQUIREMENTS AND INFORMATION**

3. THE CONTRACTOR SHALL PROVIDE CONCRETE MIX DESIGN DATA CONFORMING TO CHAPTER 19 OF ACI 318 AND ACI 350, ENVIRONMENTAL ENGINEERING CONCERTE STRUCTURES FOR EACH TYPE AND STRENGTH OF CONCRETE SPECIFIED. MIX DESIGN DATA SHALL INCLUDE CONCRETE STRENGTH, SLUMP, AIR ENTRAINMENT, PROPOSED AGGREGATES, ADMIXTURES, POZZOLANS, AND LABORATORY TEST DATA. ALL CONCRETE SHALL ALSO BE IN CONFORMANCE WITH THE LATEST MSHA STANDARDS AND SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS.
4. MATERIALS USED IN CONCRETE MIXES SHALL CONFORM TO THE FOLLOWING STANDARDS:
   A. CEMENT TYPE IL CONFMRING TO ASTM C-595 OR TYPE IIA. CEMENT.
   B. FLY ASH CLASS C & F CONFORMING TO ASTM C618. FLY ASH SHALL BE LIMITED TO A MAXIMUM OF 20% OF TOTAL CEMENTITIOUS MATERIALS BY WEIGHT AND SHALL NOT BE USED IN COLD WEATHER AND EXTERIOR APPLICATIONS.
   C. GROUND GRANULATED BLAST-FURNACE SLAG GRADE 100 & 120 CONFORMING TO ASTM C989. SLAG SHALL BE LIMITED TO A MAXIMUM OF 50% OF TOTAL CEMENTITIOUS MATERIALS BY WEIGHT IN TYPICAL APPLICATIONS AND 25% IN COLD WEATHER AND EXTERIOR APPLICATIONS.
   D. AIR-ENTRAINED ADMIXTURES CONFORMING TO ASTM C260
   E. ADDITIONAL ADMIXTURES SHALL CONFORM TO ASTM C494 AND ASTM C1017
5. CONCRETE AGGREGATES SHALL CONFORM TO THE FOLLOWING STANDARDS:
   A. NORMAL WEIGHT AGGREGATES SHALL CONFORM TO ASTM C33
   B. MAXIMUM AGGREGATE SIZE FOR CONCRETE: 1 IN.
   C. MAXIMUM AGGREGATE SIZE FOR PEA-GRAVEL CONCRETE: 3/8 IN.
6. PROPORTION AND DESIGN MIXES TO RESULT IN A CONCRETE SLUMP OF 3½ IN. ± 1 IN. AT THE POINT OF PLACEMENT. CONCRETE CONTAINING HIGH-RANGE WATER REDUCING ADMIXTURES (HRWR) SHALL HAVE A SLUMP OF 4 IN. TO 8 IN.
7. PROVIDE VERTICAL CONTROL JOINTS AT 25 FT. O.C. AT ALL EXPOSED CIP WALLS. LOCATE JOINTS BESIDE PIERS INTEGRAL WITH WALLS, NEAR CORNERS, AND IN CONCEALED LOCATIONS WHERE POSSIBLE. COORDINATE JOINT LOCATIONS WITH ARCHITECTURAL DRAWINGS.
8. THE OWNER SHALL RETAIN THE SERVICES OF A QUALIFIED TESTING AGENCY TO PROVIDE TESTING OF CONCRETE TO INCLUDE COMPRESSIVE STRENGTH, TEMPERATURE, SLUMP, AND AIR ENTRAINMENT. SAMPLES FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 150 CUBIC YARDS OF CONCRETE PLACED, NOR LESS THAN ONCE FOR EACH 5,000 SQ. FT. OF SURFACE AREA OF SLABS OR WALLS. EACH SAMPLE SHALL INCLUDE THE FOLLOWING:
   A. SAMPLES FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN AS FOLLOWS:
      I. WALLS: UNLESS OTHERWISE INDICATED OBTAIN AT LEAST ONE COMPOSITE SAMPLE FOR EACH 150 CUYD OR 5000 SQ. FT OF SURFACE AREA.
      II. FOUNDATIONS: OBTAIN AT LEAST ONE COMPOSITE SAMPLE FOR EACH 150 CUYD.
      III. FRAMED SLABS: OBTAIN AT LEAST ONE COMPOSITE SAMPLE FOR EACH 100 CUYD OR 5000 SQ. FT OF SURFACE AREA.
      IV. WHEN FREQUENCY OF TESTING WILL PROVIDE FEWER THAN FIVE COMPRESSIVE-STRENGTH TESTS FOR EACH CONCRETE MIXTURE, TESTING SHALL BE CONDUCTED FROM AT LEAST FIVE RANDOMLY SELECTED BATCHES OR FROM EACH BATCH IF FEWER THAN FIVE ARE USED.
   B. COMPRESSION TEST SPECIMENS PER ASTM C 31/C 31M SHALL BE AS FOLLOWS:
      I. WALLS: UNLESS OTHERWISE INDICATED CAST AND LABORATORY CURE THREE SETS OF THREE STANDARD 4"X8" CYLINDER SPECIMENS FOR EACH COMPOSITE SAMPLE.
      II. FRAMED SLABS: CAST AND LABORATORY CURE THREE SETS OF THREE STANDARD 4'X8" CYLINDER SPECIMENS FOR EACH COMPOSITE SAMPLE. CAST AND FIELD CURE ONE SET OF TWO STANDARD CYLINDER SPECIMENS FOR EACH COMPOSITE SAMPLE.
      III. (3) 4"X8" CYLINDERS MAY BE USED IN LIEU OF (2) 6"X12" CYLINDERS WITH APPROVAL OF THE ENGINEER OF RECORD.
   C. COMPRESSION STRENGTH TESTS PER ASTM C 39/C 39M SHALL BE AS FOLLOWS:
      I. WALLS: UNLESS OTHERWISE INDICATED] TEST ONE SET OF LABORATORY-CURED SPECIMENS AT 7 DAYS AND ONE SET OF LABORATORY-CURED SPECIMENS AT 28 DAYS. HOLD ONE SET OF LABORATORY-CURED SPECIMENS IN RESERVE.
      II. FRAMED SLABS: TEST ONE SET OF LABORATORY-CURED SPECIMENS AT 7 DAYS, ONE SET OF LABORATORY-CURED SPECIMENS AT 28 DAYS, AND ONE SET OF FIELD-CURED SPECIMENS AT 28 DAYS. HOLD ONE SET OF LABORATORY-CURED SPECIMENS IN RESERVE.
9. PROVIDE CONSTRUCTION JOINTS IN ACCORDANCE WITH ACI 318 AS REQUIRED, SUBJECT TO THE FOLLOWING:
   A. PROVIDE A SHOP DRAWING INDICATING LOCATIONS OF PROPOSED CONSTRUCTION JOINTS. LOCATIONS OF CONSTRUCTION JOINTS ARE SUBJECT TO APPROVAL OF THE ARCHITECT. CONSTRUCTION JOINT LOCATIONS SHALL BE INDICATED ON THE REINFORCING STEEL SHOP DRAWINGS.
   B. CONSTRUCT JOINTS TRUE TO LINE WITH FACES PERPENDICULAR TO THE SURFACE PLANE OF CONCRETE, AND INSTALL JOINTS SO THE STRENGTH AND APPEARANCE OF CONCRETE ARE NOT IMPAIRED. PLACE JOINTS PERPENDICULAR TO THE MAIN REINFORCEMENT, AND CONTINUE REINFORCEMENT ACROSS CONSTRUCTION JOINTS UNLESS OTHERWISE INDICATED.
   C. FORM KEYED JOINTS AS INDICATED. EMBED KEYS AT LEAST 1-1/2 INCHES (38 MM) INTO CONCRETE.
   D. LOCATE JOINTS FOR BEAMS, SLABS, JOISTS, AND GIRDERS IN THE MIDDLE THIRD OF SPANS. OFFSET JOINTS IN GIRDERS A MINIMUM DISTANCE OF TWICE THE BEAM WIDTH FROM A BEAM -GIRDER INTERSECTION.
   E. LOCATE HORIZONTAL JOINTS IN WALLS AND COLUMNS AT UNDERSIDE OF FLOORS, SLABS, BEAMS, AND GIRDERS AND AT THE TOP OF FOOTINGS OR FLOOR SLABS.
   F. PROVIDE CONTINUOUS WATERSTOPS AT ALL CONSTRUCTION JOINTS EXPOSED TO SOIL OR WATER. REFER TO THE ARCHITECTURAL DRAWINGS AND/OR SPECFIICATIONS FOR ADDITIONAL INFORMATION

REINFORCEMENT STEEL

1. CONCRETE REINFORCING SHALL CONFORM TO THE FOLLOWING STANDARDS:
   A. DEFORMED BARS: ASTM A615, GRADE 60
   B. DEFORMED BARS (EPOXY-COATED): ASTM A775 & A615, GRADE 60
   C. PLAIN STEEL WELDED WIRE REINFORCEMENT: ASTM A1064
   D. EPOXY-COATED WELDED WIRE REINFORCEMENT: ASTM A884
2. FABRICATE AND PROVIDE STANDARD SUPPORTING ACCESSORIES IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES, ACI 315, AND CRSI's MANUAL OF STANDARD PRACTICE. PROVIDE EITHER CRSI CLASS 1 BAR SUPPORTS OR PRECAST CONCRETE BAR SUPPORTS FOR REINFORCING IN FOUNDATIONS AND SLABS ON GRADE.
3. UNLESS NOTED OTHERWISE, REINFORCING SHALL BE CONTINUOUS WITH CLASS B LAP SPLICES, HOOKS SHALL BE STANDARD HOOKS, AND WALL INTERSECTIONS SHALL HAVE CORNER/L-BARS. LAP WELDED WIRE MESH SUCH THAT THE OVERLAP OF THE OUTERMOST CROSS-WIRES OF EACH ADJOINING SHEET IS NOT LESS THAN THE SPACING OF THE CROSS-WIRES PLUS 2 IN. REFER TO THE TYPICAL DETAILS FOR ADDITIONAL DETAILING REQUIREMENTS.
4. ALL REINFROCING FOR STORM WATER MANAGEMENT STRUCTURES AND MICRO-BIORETENTION STRUCTURES SHALL BE EPOXY COATED.
5. CONCRETE PROTECTION FOR REINFORCEMENT:
   A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3 IN.
   B. CONCRETE EXPOSED TO EARTH OR WEATHER NO. 6 AND LARGER: 2 IN.
   C. CONCRETE EXPOSED TO EARTH OR WEATHER NO. 5 AND SMALLER: 1-1/2 IN.

SHOP DRAWING SUBMITTALS AND DELEGATED DESIGN ITEMS

1. THE CONTRACTOR SHALL RETAIN THE NECESSARY DESIGN PROFESSIONALS LICENSED IN THE JURISDICTION OF THE PROJECT TO FULLY DESIGN AND DETAIL THE FOLLOWING DELEGATED DESIGN ITEMS. DELEGATED DESIGN SUBMITTALS SHALL INCLUDE SIGNED AND SEALED DRAWINGS AND CALCULATIONS:
   A. TEMPORARY EXCAVATION SUPPORT SYSTEMS
   B. TEMPORARY SHORING AND BRACING SYSTEMS
   C. CONCRETE MIX DESIGNS
2. THE CONTRACTOR SHALL REVIEW EACH SUBMITTAL PRIOR TO FORWARDING TO THE DESIGN TEAM. THE CONTRACTOR SHALL STAMP EACH SUBMITTAL VERIFYING THAT THE FOLLOWING HAVE BEEN ADDRESSED. SUBMITTALS THAT DO NOT MEET THESE REQUIREMENTS WILL BE REJECTED.
   A. THE SUBMITTAL IS EXPLICITLY REQUIRED PER THE STRUCTURAL DRAWINGS. ENGINEER WILL NOT REVIEW ITEMS THAT ARE NOT LISTED BELOW.
   B. THE SHOP DRAWING IS BASED ON THE MOST CURRENT DRAWINGS, INCLUDING ALL ADDENDA AND SKETCHES
   C. REVIEW COMMENTS FROM ANY PRIOR REVIEWS HAVE BEEN ADDRESSED.
   D. ALL REVISIONS FROM ANY PREVIOUS SUBMISSIONS HAVE BEEN CLOUDED.
   E. THE SUBMITTAL IS COMPLATE AND THE WORK HAS BEEN COORDINATED WITH ALL OTHER CONSTRUCTION TRADES.
   F. THE SUBMITTAL DOES NOT INCLUDE ANY SUBSTITUTION REQUESTS.
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO STARTING CONSTRUCTION. THE LIST OF REQUIRED SHOP DRAWING SUBMITTALS IS AS FOLLOWS:
   A. CONCRETE MIX DESIGNS FOR EACH APPLICATION
   B. CONCRETE REINFORCEMENT STEEL
4. THE ENGINEER'S RESPONSIBILITIES RELATIVE TO SHOP DRAWING REVIEW ARE LIMITED TO REVIEW FOR DESIGN CONCEPT OF THE PROJECT AND INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS, SPECIFICALLY THE STRUCTURAL DRAWINGS AND THE STRUCTURAL PORTIONS OF THE PROJECT SPECIFICATIONS. THE ENGINEER WILL NOT REVIEW FOR DIMENSIONS, QUANTITIES, ETC. ADDITIONALLY, THE ENGINEER WILL NOT REVIEW SHOP DRAWINGS THAT ARE NOT EXPLICITLY LISTED ABOVE, OR ANY SUBMITTALS THAT ARE NOT RELATED TO THE MAIN BUILDING STRUCTURE.
5. SHOP DRAWING REVIEW NOTATIONS ARE DEFINED AS FOLLOWS:
   A. "NO EXCEPTION": INDICATES THAT FABRICATION, MANUFACTURE, OR CONSTRUCTION MAY PROCEED.
   B. "EXCEPTIONS AS NOTED": INDICATES THAT FABRICATION, MANUFACTURE, OR CONSTRUCTION MAY PROCEED PROVIDED THAT SUBMITTAL COMPLIES WITH ENGINEER'S NOTATIONS. IF, FOR ANY REASON, THE CONTRACTOR CANNOT COMPLY WITH THE ENGINEER'S NOTATIONS, THE SUBMITTAL SHALL BECOME "REJECTED" OR "DISAPPROVED" (REFER TO DEFINITION BELOW) AND THE CONTRACTOR SHALL IMMEDIATELY NOTIFY BOTH THE ARCHITECT AND ENGINEER.
   C. "EXCEPTIONS AS NOTED RESUBMIT FILE COPY": INDICATES THAT FABRICATION, MANUFACTURE, OR CONSTRUCTION MAY PROCEED PROVIDED THAT SUBMITTAL COMPLIES WITH ENGINEER'S NOTATIONS. THE CONTRACTOR SHALL RETURN REVISED VERSIONS OF THE SUBMITTAL TO THE ARCHITECT AND ENGINEER FOR RECORD. IF, FOR ANY REASON, THE CONTRACTOR CANNOT COMPLY WITH THE ENGINEER'S NOTATIONS, THE SUBMITTAL SHALL BECOME "REJECTED" OR "DISAPPROVED" (REFER TO DEFINITION BELOW) AND THE CONTRACTOR SHALL IMMEDIATELY NOTIFY BOTH THE ARCHITECT AND ENGINEER.
   D. "REJECTED": INDICATES THAT THE SUBMITTAL DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS AND THAT FABRICATION, MANUFACTURE, OR CONSTRUCTION SHALL NOT PROCEED. THE CONTRACTOR SHALL MAKE THE NECESSARY REVISIONS TO THE SUBMITTAL AND RESUBMIT IN A TIMELY FASHION SO AS TO NOT DELAY THE CONSTRUCTION SCHEDULE.
   E. "REVIEWED FOR INFORMATION": INDICATES THAT THE SUBMITTAL HAS BEEN RECEIVED BY THE ENGINEER FOR FILE ONLY; NO ADDITIONAL ACTION WILL BE TAKEN BY THE ENGINEER.
   F. "PRE-ENGINEERED SYSTEMS SUBMITTAL": INDICATES THAT THE SUBMITTAL HAS BEEN REVIEWED FOR GENERAL CONFORMITY WITH THE DESIGN INTENT AND GENERAL COMPLIANCE WITH THE INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS. COMMENTS AND/OR NOTATIONS MADE ON THE SUBMITTAL BY THE ENGINEER OF RECORD ARE INTENDED TO NOTIFY THE CONTRACTOR AND/OR THE RESPONSIBLE DESIGNER OF CONFLICTS BETWEEN THE SUBMITTAL AND THE DESIGN INTENT OR THE CONSTRUCTION DOCUMENTS. THESE COMMENTS AND/OR NOTATIONS DO NOT RELIEVE THE CONTRACTOR AND THE DESIGN ENGINEER OF SOLE RESPONSIBILITY FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS AND ALL APPLICABLE CODES AND LAWS. SOLE RESPONSIBILITY FOR CORRECT DESIGN, DETAILS, AND DIMENSIONS SHALL REMAIN WITH THE CONTRACTOR AND THE DESIGN ENGINEER.

LIST OF ABBREVIATIONS IN STRUCTURAL DRAWINGS

ABBREVIATION	DEFINITION	ABBREVIATION	DEFINITION	ABBREVIATION	DEFINITION
ADJ	ADJACENT	F.O.B.	FACE OF BEAM	PT	POST TENSIONED
ADD'L	ADDITIONAL	GALV	GALVANIZED	PT	PRESSURE TREATED
AFF	ABOVE FINISHED FLOOR	GC	GENERAL CONTRACTOR	QTY	QUANTITY
ALT	ALTERNATE	GT	GIRDER TRUSS	QLTY	QUALITY
APPROX	APPROXIMATELY	GYP	GYPSUM	R	REMAINING
ARCH	ARCHITECT	HDR	HEADER	RAD	RADIUS, RADII
B, BOT	BOTTOM	HK	HOOK	R.E.	RIGHT END
B.O.	BOTTOM OF	HORIZ	HORIZONTAL	REV	REVISE, REVISION
BLK, BLKG	BLOCKING	HP	HIGH POINT	RD	ROOF DRAIN
BLW, BLO	BELOW	HGT, HT	HEIGHT	REINF	REINFORCEMENT, REINFORCING
BM	BEAM	I.D.	INSIDE DIAMETER	REQ, REQD	REQUIRED, REQUIREMENT
B.P.	BASE PLATE, BEARING PLATE	I.F.	INSIDE FACE	SCH	SCHEDULE
BRG	BEARING	INCL	INCLUDED	SECT	SECTION
BRK	BREAK, BRICK	INFO	INFORMATION	SHT	SHEET
CANT	CANITILEVER	INSUL	INSULATION	SOG	SLAB ON GRADE
CG	CENTER OF GRAVITY	INT	INTERIOR	SIM	SIMILAR
CL	CENTER LINE	JST	JOIST	SPA, SPCS	SPACE, SPACES
CLR	CLEAR, CLEARANCE	JNT	JOINT	SPEC	SPECIFICATION(S)
CMU	CONCRETE MASONRY UNIT	K	KIP (1,000 POUNDS)	SQ	SQUARE
COL	COLUMN	KSF	KIPS PER SQUARE FOOT	SS	STAINLESS STEEL
COMP	COMPOSITE	KSI	KIPS PER SQUARE INCH	STD	STANDARD
CONC	CONCRETE	LBS	POUNDS	STL	STEEL
CONN	CONNECTION	L.E.	LEFT END	STR	STRUCTURE, STRUCTURAL
CONST	CONSTRUCTION	LF	LINEAR FEET	T	TOP
CONT	CONTINUOUS	LLH	LONG LEG HORIZONTAL	T.O.	TOP OF...
C.O.	CENTER OF	LLV	LONG LEG VERTICAL	TEMP	TEMPORARY
COORD	CORRDINATE	LL	LIVE LOAD	T&B	TOP AND BOTTOM
D, DIAM	DIAMETER	LG	LIGHT GAGE	T&S	TEMPERATURE AND SHRINKAGE
DBL	DOUBLE	LP	LOW POINT	THK	THICK, THICKNESS
DET	DETAIL	LTWT	LIGHT WEIGHT	TYP	TYPICAL
DIAG	DIAGONAL	LVL	LAMINATED VENEER LUMBER	UNO	UNLESS NOTED OTHERWISE
DIM	DIMENSION	MATL	MATERIAL	VIF	VERIFY IN FIELD
DL	DEAD LOAD	MAX	MAXIMUM	VERT	VERTICAL
DN	DOWN	MECH	MECHANICAL	W	WITH
DWG	DRAWING	MFR	MANUFACTURER	WO	WITHOUT
E.E.	EACH END	MIN	MINIMUM	WD	WOOD
E.F.	EACH FACE	MISC	MISCELLANEOUS	WP	WORKING POINT
E.J.	EXPANSION JOINT	MSY	MASONRY	WWF	WELDED WIRE FABRIC
EL, ELEV	ELEVATION	M.O.	MASONRY OPENING	WWM	WELDED WIRE MESH
ELEC	ELECTRICAL	MTL	METAL		
ENGR	ENGINEER	N.I.C.	NOT IN CONTRACT		
EQ, EQL	EQUAL	NS	NEAR SIDE		
EQUIP	EQUIPMENT	NTS	NOT TO SCALE		
EW	EACH WAY	OC	ON CENTER		
EXIST	EXISTING	OD	OUTSIDE DIAMETER		
EXP	EXPANSION	O.F.	OUTSIDE FACE		
EXT	EXTERIOR	OPP	OPPOSITE		
EOS	EACH OF SLAB	OPNG	OPENING		
FD	FOUNDATION OR FLOOR DRAIN	PCF	POUNDS PER CUBIC FOOT		
FF	FINISHED FLOOR	PERIM	PERIMETER		
F.L.	FULL LENGTH	PERP	PERPENDICULAR		
FND	FOUNDATION	PL	PLATE		
FIN	FINISH, FINISHED	PLF	POUNDS PER LINERAR FOOT		
FLR	FLOOR	PLYWD	PLYWOOD		
F.S.	FAR SIDE	PSF	POUNDS PER SQUARE FOOT		
FTG	FOOTING	PSI	POUNDS PER SQUARE INCH		
FOW	FACE OF WALL	PSL	PARALLEL STRAND LUMBER		
FOC	FACE OF COLUMN	PH	PENTHOUSE		

CONCRETE DESIGN SHALL MEET THE REQUIREMENTS OF ACI 350, ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES, WITH FREEZING AND THAWING EXPOSURES. CONCRETE SHALL BE EITHER A TYPE 1L CEMENT CONFORMING TO ASTM-C-595, OR TYPE II OR IIA CEMENT WITH A 28 DAY COMPRESSIVE STRENGTH OF 4500 PSI FOR CAST IN PLACE AND 5000 PSI FOR PRE-CAST STRUCTURES. CONCRETE SHALL ALSO MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 420, MIX NO.6.

STRUCTURAL CERTIFICATION

I hereby certify that the structural design of this stormwater management facility is in accordance with applicable codes and that the plan for this has been designed for specified loading(s) as indicated hereon.

Design Engineer Signature — Date: 6/23/25

Printed Name: Jason T. Dreher — Registration Number: 36484

Design Loading: ACTIVE EARTH PRESSURE: 45 PSF/FT; VERTICAL SURCHARGE LOADING: 250 PSF

mv+a

OWNER
SCG DEVELOPMENT
48245 BOONE BLVD, SUITE 640
VIENNA, VA 22182
Tel: 703.942.6610

ARCHITECT
MV+A | Mushinky Voelzke Associates, CHTD
1200 G Street, Suite 250
Washington, DC
Tel: 202.682.2822

CIVIL ENGINEER
Johnson Bernat Associates, Inc.
205 N Frederick Suite 100
Gaithersburg, MD 20877
Tel: 301.963.1133

LANDSCAPE ARCHITECT
LandDesign, Inc.
200 S Peyton St
Alexandria, VA 22314
Tel: 703.549.7784

STRUCTURAL ENGINEER
Structura, Inc.
12358 Parklawn Dr Suite 140
North Bethesda, MD 20852
Tel: 301.987.9234

INTERIOR DESIGN
Carlyn and Company Interiors
746 Walker Road
Great Falls,, VA 22066
Tel: 202.669.1435

MEP ENGINEER
Scot Engineering, Inc.
509 Germantown Pike Bldg 2
Lafayette Hill, PA 19444
Tel: 215.774.1429

NOBE II MULTIFAMILY

NORTH BETHESDA, MARYLAND

SWM STRUCTURAL NOTES

PROJECT NUMBER
22-062

REV.	ISSUE:	DATE
	Permit Set	10-22-24

KEY PLAN

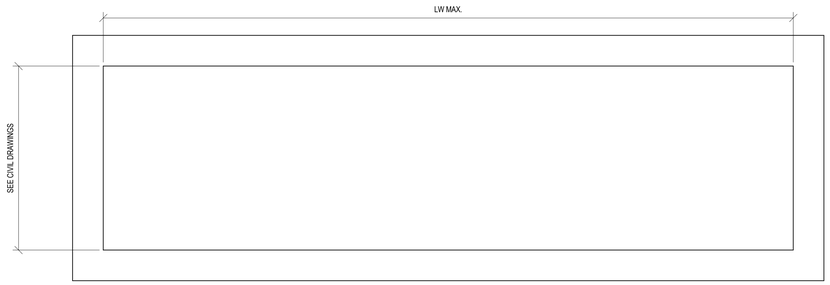
STATE OF MARYLAND
JASON DREHER
No. 36484
PROFESSIONAL ENGINEER
6/23/25

DRAWING STAMP

I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland,
LICENSE NUMBER 36484 EXPIRATION DATE 12-11-2026

SHEET NUMBER
S110

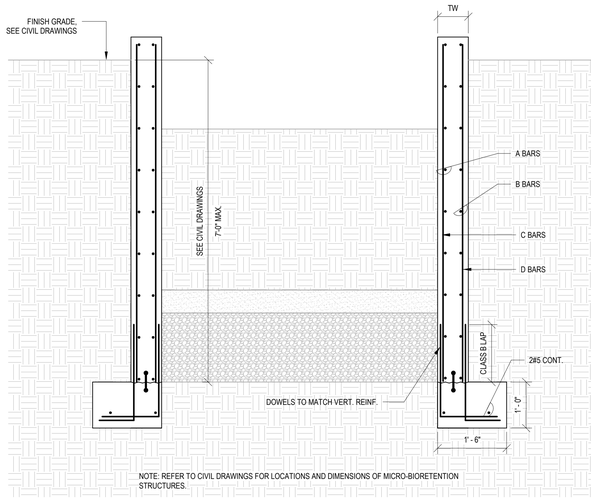
APPROVED
Department of Permitting Services
Permit # SEDIMENT-297245
Date 10/24/2025
Stamped By: Mark Etheridge



MICRO-BIORETENTION STRUCTURE PLAN

MICRO-BIORETENTION STRUCTURE SCHEDULE					
LW	TW	A	B	C	D
10'-0"	0'-8"	#4@8	#4@8	#4@12	#4@12
15'-0"	0'-10"	#5@8	#5@8	#4@12	#4@12
19'-6"	1'-0"	#6@8	#6@8	#5@12	#5@12
21'-0"	1'-0"	#6@6	#6@6	#5@12	#5@12

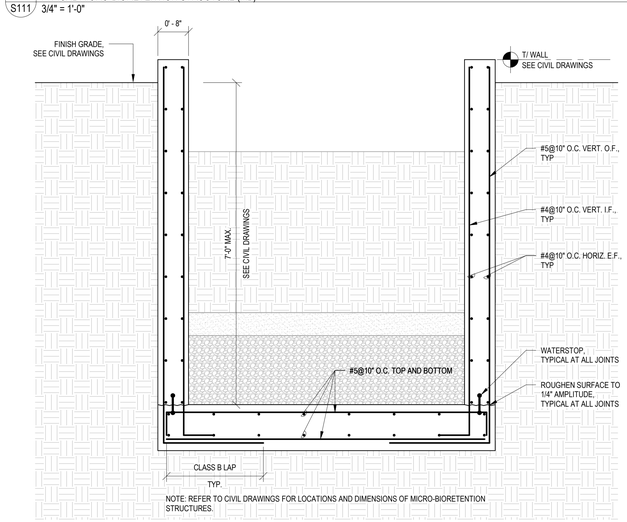
NOTE: WALLS FOR MICRO-BIORETENTION STRUCTURE MUST BE POURED WITH HORIZONTAL REBAR CONTINUOUS AND WITHOUT CONTROL JOINTS.



NOTE: REFER TO CIVIL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF MICRO-BIORETENTION STRUCTURES.

MICRO-BIORETENTION STRUCTURE SECTION

1 S111 TYPICAL MICRO-BIORETENTION STRUCTURE (MB)
3/4" = 1'-0"



NOTE: REFER TO CIVIL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF MICRO-BIORETENTION STRUCTURES.

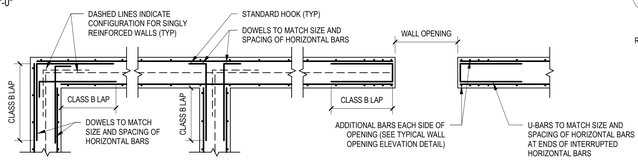
REBAR LAP SCHEDULE

		F'C = 3,000 PSI				F'C = 4,000 PSI				F'C = 5,000 PSI				F'C = 6,000 PSI				F'C = 8,000 PSI			
		TOP BARS		OTHER BARS		TOP BARS		OTHER BARS		TOP BARS		OTHER BARS		TOP BARS		OTHER BARS		TOP BARS		OTHER BARS	
BAR SIZE	LAP CLASS	CASE 1	CASE 1	CASE 1	CASE 2	CASE 1	CASE 1	CASE 1	CASE 2	CASE 1	CASE 1	CASE 1	CASE 2	CASE 1	CASE 1	CASE 1	CASE 2	CASE 1	CASE 1	CASE 1	CASE 2
#3	A	22	32	17	25	19	28	15	22	17	25	13	19	16	23	12	18	14	20	12	16
	B	28	42	22	32	24	36	19	28	22	33	17	25	20	30	16	23	18	26	16	20
#4	A	29	43	22	33	25	37	19	29	22	33	17	26	21	31	16	24	18	27	14	21
	B	37	56	29	43	32	48	25	37	29	43	22	33	27	40	21	31	23	35	18	27
#5	A	36	54	28	41	31	47	24	36	28	42	22	32	26	38	20	30	22	33	17	26
	B	47	70	36	54	40	60	31	47	36	54	28	42	33	50	26	38	29	43	22	33
#6	A	43	64	33	50	37	56	29	43	33	50	26	38	31	46	24	35	27	40	21	31
	B	56	84	43	64	48	72	37	56	43	65	33	50	40	59	31	46	35	52	27	40
#7	A	63	94	48	72	54	81	42	63	49	73	37	56	45	67	34	51	39	58	30	45
	B	81	122	63	94	70	106	54	81	63	94	49	73	58	86	45	67	50	75	39	58
#8	A	72	107	55	82	62	93	48	72	55	83	43	64	51	76	39	59	44	66	34	51
	B	93	139	72	107	80	121	62	93	72	108	55	83	66	99	51	76	57	86	44	66
#9	A	81	121	62	93	70	105	54	81	63	94	48	72	57	86	44	66	50	74	38	57
	B	105	157	81	121	91	136	70	105	81	122	63	94	74	111	57	86	64	96	50	74
#10	A	91	136	70	105	79	118	61	91	70	105	54	81	64	96	50	74	56	84	43	64
	B	118	177	91	136	102	153	79	118	91	137	70	105	84	125	64	96	72	108	56	84
#11	A	101	151	78	116	87	131	67	101	78	117	60	90	71	107	55	82	62	93	48	71
	B	131	196	101	151	113	170	87	131	101	152	78	117	93	139	71	107	80	120	62	93

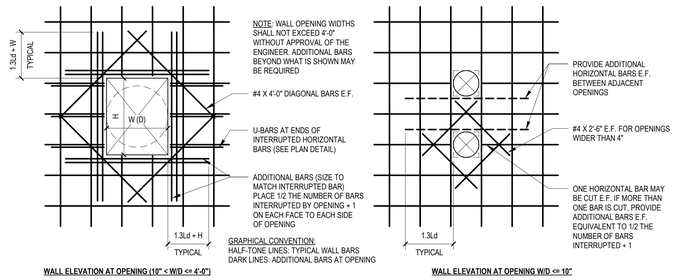
DETAIL NOTES:

1. TABULATED LAP SPLICE LENGTHS ARE IN INCHES AND ARE BASED ON GRADE 60 REINFORCING BARS AND NORMAL-WEIGHT CONCRETE.
   A. FOR LIGHTWEIGHT CONCRETE, MULTIPLY VALUES BY 1.30.
   B. FOR EPOXY-COATED REINFORCING BARS, MULTIPLY VALUES BY 1.50.
2. TABULATED VALUES FOR BEAMS OR COLUMNS ARE BASED ON TRANSVERSE REINFORCEMENT AND CONCRETE COVER MEETING MINIMUM CODE REQUIREMENTS.
3. CASES 1 AND 2, WHICH DEPEND ON THE TYPE OF STRUCTURAL ELEMENT, CONCRETE COVER, AND THE CENTER-TO-CENTER SPACING OF THE BARS, ARE DEFINED AS:
   A. BEAMS OR COLUMNS:
      a. CASE 1: COVER AT LEAST db AND CENTER-TO-CENTER BAR SPACING AT LEAST 2db
      b. CASE 2: COVER LESS THAN db OR CENTER-TO-CENTER BAR SPACING LESS THAN 2db
   B. ALL OTHER CONDITIONS:
      a. CASE 1: COVER AT LEAST db AND CENTER-TO-CENTER BAR SPACING AT LEAST 3db
      b. CASE 2: COVER LESS THAN db OR CENTER-TO-CENTER BAR SPACING LESS THAN 3db
4. LAP SPLICE LENGTHS ARE MULTIPLES OF TENSION DEVELOPMENT LENGTHS.
   A. CLASS A LAP SPLICE = 1.0 * Ld
   B. CLASS B LAP SPLICE = 1.3 * Ld
5. LAP SPLICES OF #14 AND #18 BARS ARE NOT PERMITTED.
6. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.

2 S111 TYPICAL MICRO-BIORETENTION STRUCTURE WITH BOTTOM SLAB (MBP-1)
3/4" = 1'-0"



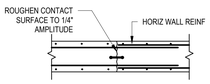
TYPICAL PLAN DETAIL AT WALL INTERSECTIONS AND WALL ENDS



WALL ELEVATION AT OPENING (10" < W/D <= 4'-0")

WALL ELEVATION AT OPENING W/D <= 10"

3 S111 REBAR LAP SPLICE SCHEDULE
1 1/2" = 1'-0"



CONSTRUCTION JOINT

4 S111 TYPICAL CONCRETE WALL DETAILS
1/2" = 1'-0"

mv+a

OWNER
SCG DEVELOPMENT
48245 BOONE BLVD, SUITE 640
VIENNA, VA 22182
Tel: 703.942.6610

ARCHITECT
MV+A | Mushinky Voelzke Associates, CHTD
1200 G Street, Suite 250
Washington, DC
Tel: 202.682.2822

CIVIL ENGINEER
Johnson Bernat Associates, Inc.
205 N Frederick Suite 100
Gaithersburg, MD 20877
Tel: 301.963.1133

LANDSCAPE ARCHITECT
LandDesign, Inc.
200 S Peyton St
Alexandria, VA 22314
Tel: 703.549.7784

STRUCTURAL ENGINEER
Structura, Inc.
12358 Parklawn Dr Suite 140
North Bethesda, MD 20852
Tel: 301.987.9234

INTERIOR DESIGN
Carlyn and Company Interiors
746 Walker Road
Great Falls, VA 22066
Tel: 202.669.1435

MEP ENGINEER
Scot Engineering, Inc.
509 Germantown Pike Bldg 2
Lafayette Hill, PA 19444
Tel: 215.774.1429

NOBE II MULTIFAMILY

NORTH BETHESDA, MARYLAND

SWM STRUCTURAL PLANS AND DETAILS

PROJECT NUMBER
22-062

REV.	ISSUE:	DATE
	Permit Set	10-22-24

KEY PLAN

STATE OF MARYLAND — JASON DIETRICH — No. 36484 — PROFESSIONAL ENGINEER
5/23/25

DRAWING STAMP

I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland,
LICENSE NUMBER 36484 EXPIRATION DATE 12-11-2026

SHEET NUMBER
S111