

WASHINGTON COUNTY, MARYLAND

DIVISION OF ENGINEERING



GARIS SHOP ROAD

WATER TRAIL PARK

PROJECT NO. 22-073
CONTRACT NO. PK-GS-073-22

INDEX OF SHEET(S)

| | |
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| SHEET 1 | COVER SHEET |
| SHEET 2 | PLAN AND DETAILS |
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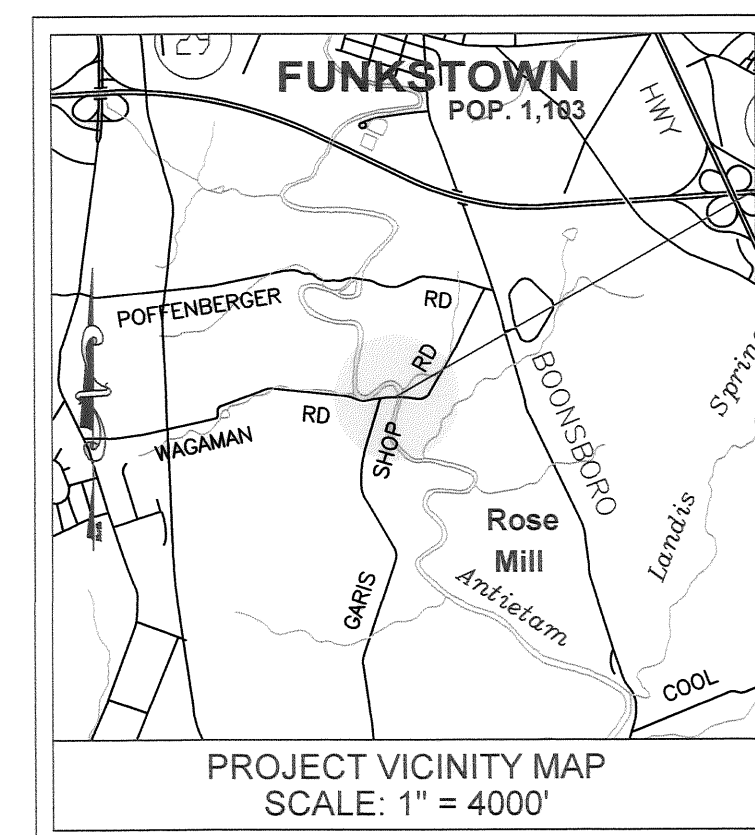
WASHINGTON COUNTY SOIL CONSERVATION DISTRICT
 SOIL EROSION AND SEDIMENT CONTROL PLAN APPROVAL

BY: *[Signature]*
 DATE: 6/19/19

(PLAN IS VALID FOR TWO YEARS FROM DATE OF APPROVAL)

THE STORMWATER MANAGEMENT PLAN SHOWN HEREON IS APPROVED.

[Signature] 6/10/19
 SCOTT HOBBS, P.E.
 DIRECTOR OF ENGINEERING
 FOR WASHINGTON COUNTY, MD



PROJECT SITE

ENGINEER / ARCHITECT DESIGN CERTIFICATION

I HEREBY CERTIFY THIS PLAN FOR SOIL EROSION AND SEDIMENT CONTROL HAS BEEN DESIGNED IN ACCORDANCE WITH LOCAL ORDINANCES, COMAR 26.17.01.07, AND MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

[Signature] 6-7-19
 SIGNATURE REGISTRATION NUMBER DATE

APPROVED FOR CONSTRUCTION

[Signature] 6/10/19
 SCOTT HOBBS, P.E.
 DIRECTOR OF ENGINEERING
 FOR WASHINGTON COUNTY, MD

DISTURBED AREA QUANTITY

THE TOTAL AREA TO BE DISTURBED SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE APPROXIMATELY 0.25 ACRES AND THE TOTAL AMOUNT OF EXCAVATION AND FILL SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE APPROXIMATELY 30 CU. YDS. OF EXCAVATION AND APPROXIMATELY 70 CU. YDS. OF FILL.

SEAL

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.

LICENSE No. 44924 EXPIRATION DATE, 12-26-19

OWNER / DEVELOPER CERTIFICATION

WE CERTIFY ALL / ANY PARTIES RESPONSIBLE FOR CLEARING, GRADING, CONSTRUCTION, AND / OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SOIL EROSION AND SEDIMENT.

[Signature] 6/10/19
 SCOTT HOBBS, P.E.
 DIRECTOR OF ENGINEERING
 FOR WASHINGTON COUNTY, MD

BOARD OF COUNTY COMMISSIONERS:

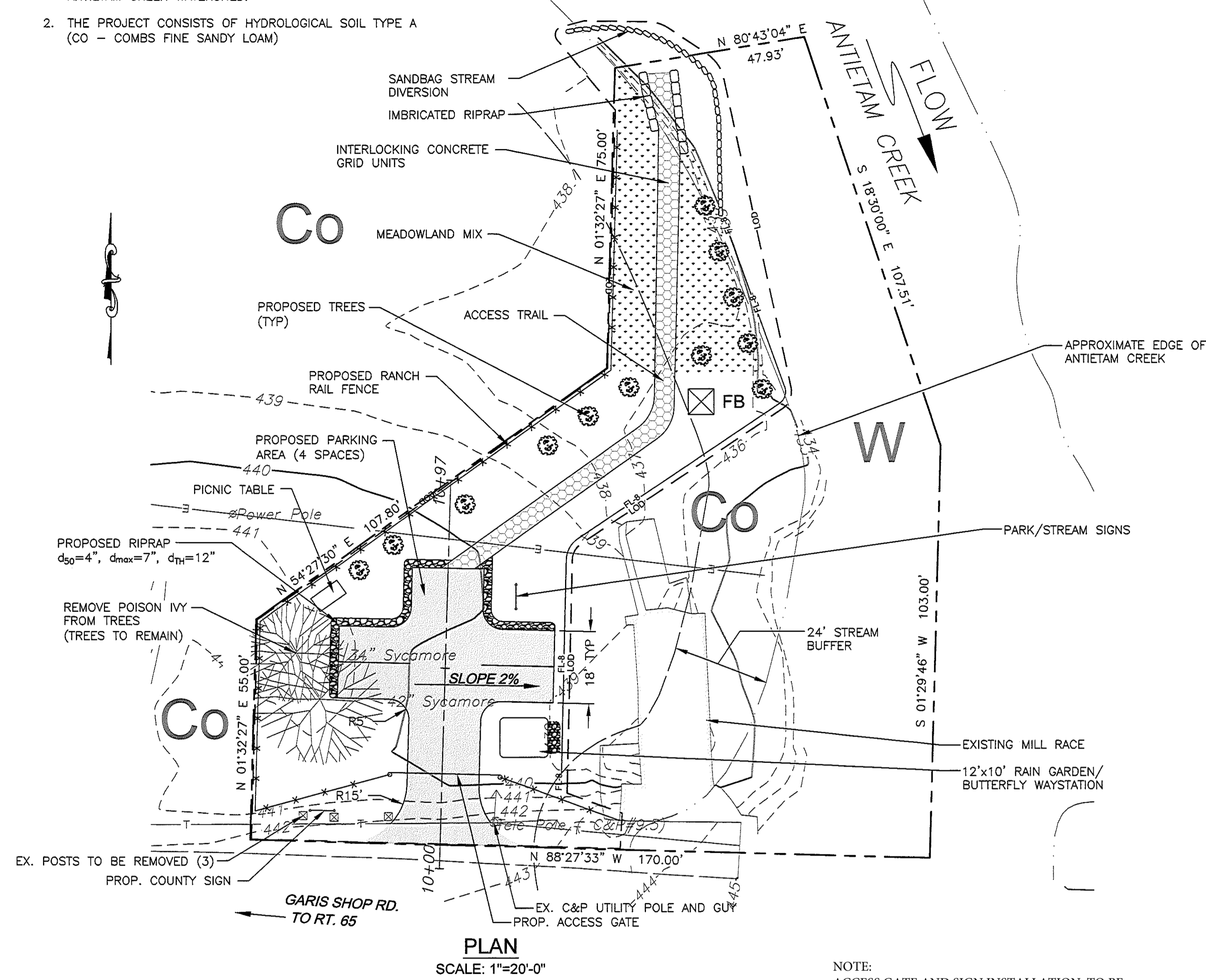
JEFFREY A. CLINE, PRESIDENT
 TERRY L. BAKER, VICE PRESIDENT
 WAYNE K. KEEFER
 CORT F. MEINELSCHMIDT
 RANDALL E. WAGNER

OWNER/DEVELOPER:
 BOARD OF COUNTY COMMISSIONERS
 FOR WASHINGTON COUNTY, MD
 AGENT: SCOTT HOBBS, P.E., DIRECTOR OF ENGINEERING
 80 WEST BALTIMORE STREET
 HAGERSTOWN, MARYLAND 21740
 PHONE: 240-313-2460
 FAX: 240-313-2401

ROBERT SLOCUM, P.E., COUNTY ADMINISTRATOR
 SCOTT HOBBS, P.E., DIRECTOR OF ENGINEERING

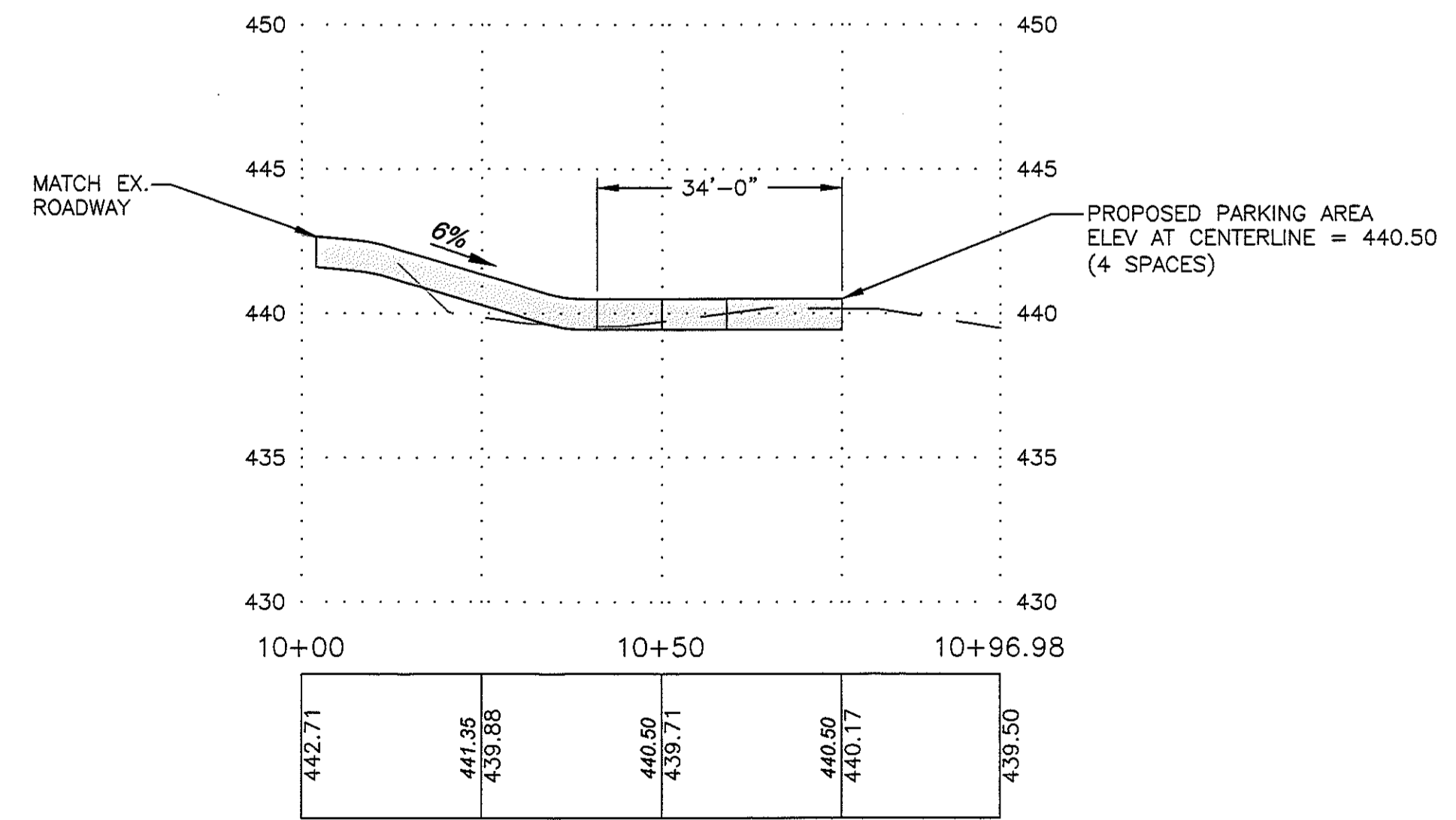
NOTES:

1. THIS PROJECT IS LOCATED ENTIRELY IN THE FEMA FLOODPLAIN FOR THE ANTIETAM CREEK WATERSHED.
2. THE PROJECT CONSISTS OF HYDROLOGICAL SOIL TYPE A (CO - COMBS FINE SANDY LOAM)

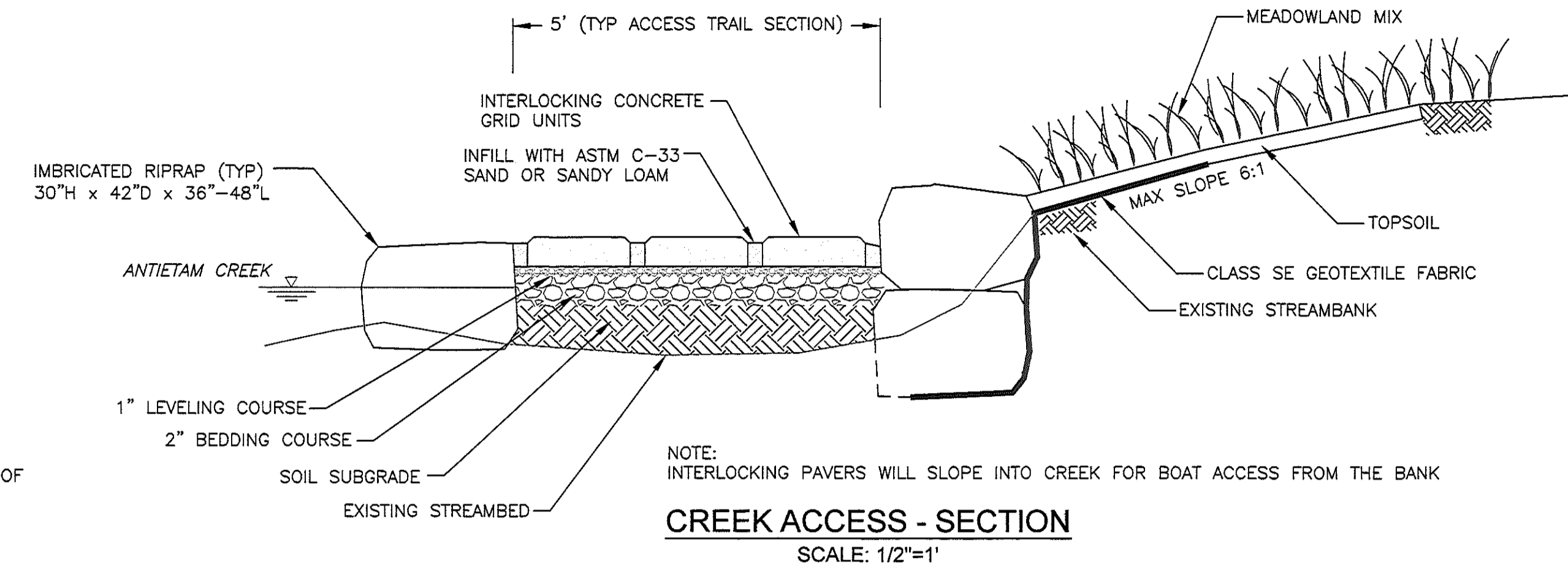


PLAN
SCALE: 1"=20'-0"

NOTE:
ACCESS GATE AND SIGN INSTALLATION TO BE COMPLETED SEPARATELY BY WASHINGTON COUNTY.



PROFILE
SCALE: 1"=20'-0"



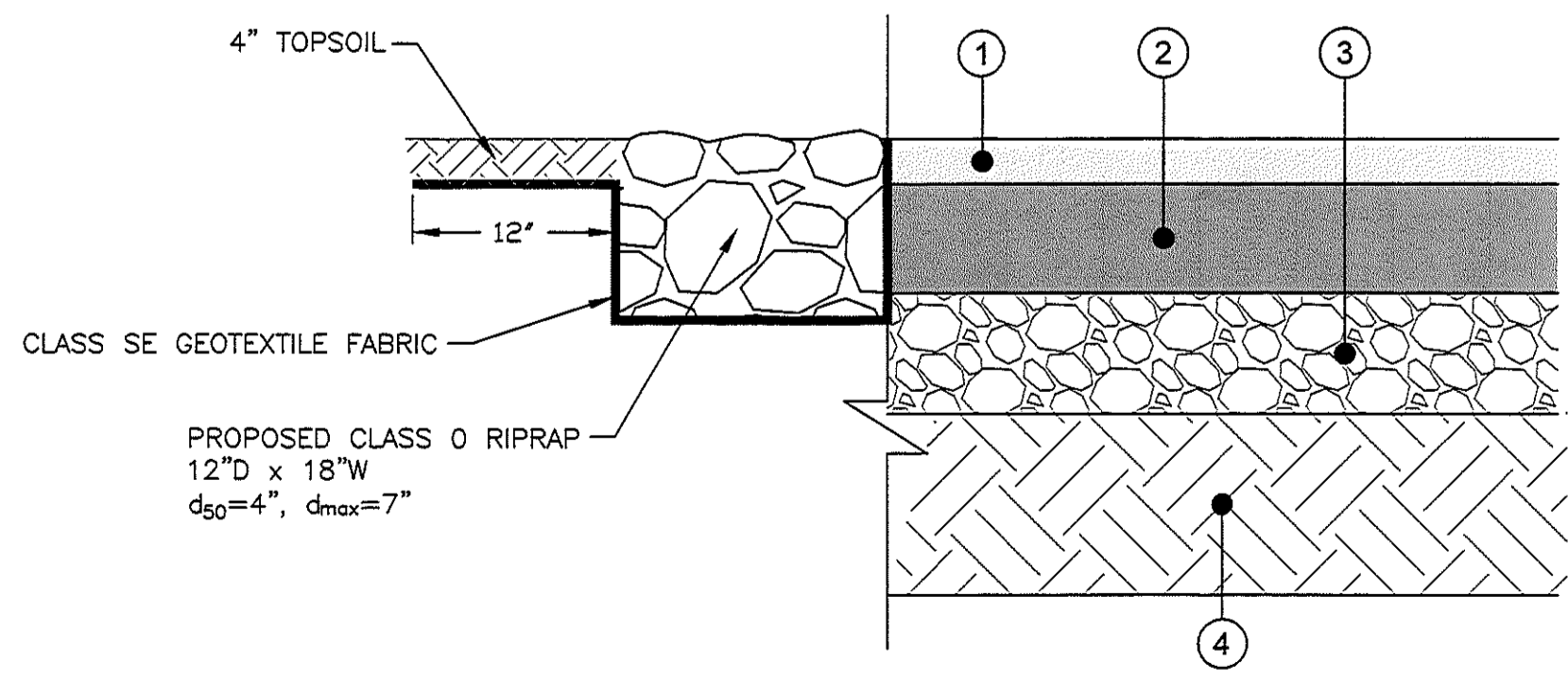
CREEK ACCESS - SECTION
SCALE: 1/2"=1'

SEQUENCE OF CONSTRUCTION:

1. THE ANTIETAM CREEK IS A CLASS IV STREAM WITH INSTREAM WORK PROHIBITED DURING THE CLOSURE PERIOD OF MARCH 1 THROUGH MAY 31.
2. NOTIFY THE MARYLAND DEPARTMENT OF ENVIRONMENT (MDE INSPECTOR) AT 301-689-1483, AND THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT AT 301-797-6821 EXT 3 AT LEAST 5 DAYS PRIOR TO BEGINNING CONSTRUCTION.
3. INSTALL PERIMETER EROSION AND SEDIMENT CONTROL DETAILS
4. INSTALL STREAM DIVERSION AND DEWATERING PRACTICES
5. CONSTRUCT BOAT/CREEK ACCESS RAMP
6. GRADE AND CONSTRUCT PARKING LOT AGGREGATE BASE AND ACCESS TRAIL
7. CONSTRUCT RAIN GARDEN
8. INSTALL PERIMETER FENCE AND PARK SIGNS
9. CONSTRUCT ASPHALT PARKING LOT AND ACCESS GATE.
10. PROVIDE TURFGRASS ESTABLISHMENT AND TREE PLANTINGS
11. ONCE ALL AREAS ARE STABILIZED, CONTACT MDE AND WSCD FOR A FINAL CONSTRUCTION INSPECTION
12. REMOVE PERIMETER EROSION AND SEDIMENT CONTROLS

LEGEND

- EX. CONTOURS ---100---
- APPROX. EDGE OF STREAM - - - - -
- EX. EDGE OF PAVEMENT - - - - -
- PROPOSED SPLIT RAIL FENCE x x x
- LIMITS OF DISTURBANCE - - - - -
- EXISTING MILL RACE - - - - -
- 12'x10' RAIN GARDEN/BUTTERFLY WAYSTATION
- PROPOSED IMBRICATED RIPRAP [Symbol]
- PROPOSED PAVEMENT SECTION [Symbol]
- ACCESS TRAIL PATH [Symbol]
- MEADOWLAND MIX [Symbol]
- PROPOSED RIPRAP [Symbol]
- SUMP PIT [Symbol]



PARKING LOT PAVING DETAIL
SCALE: NONE

LEGEND

- 1 2" SURFACE COURSE (9.5mm HOT MIX ASPHALT, 1-2" MAX. LIFTS)
- 2 4" BASE COURSE (19.0mm HOT MIX ASPHALT, 2- 2" MAX. LIFTS)
- 3 6" GRADED AGGREGATE BASE COURSE (2-3" MAX. LIFTS)
- 4 PREPARED SUBGRADE

| | |
|----------------------|------|
| DATE | |
| BY | |
| REVISION DESCRIPTION | |
| NO. | |
| DESIGNED BY: | AE |
| DRAWN BY: | BM |
| CHECKED BY: | |
| DATE: | 2016 |

WASHINGTON COUNTY, MARYLAND
DIVISION OF ENGINEERING

Washington County Administrative Annex, Building
80 W. Baltimore St., Hagerstown, MD 21740
Phone: 240-313-2460 Fax: 240-313-2401

GARIS SHOP ROAD
WATER TRAIL PARK

PLAN AND DETAILS

SCALE AS SHOWN

SHEET NO. 2

PROJECT NO. 22-073

SEDIMENT AND EROSION CONTROL NOTES

- ALL SOIL EROSION/SEDIMENT CONTROL MEASURES SHALL COMPLY WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" AND THE PROVISIONS OF THE APPROVED PLAN.
- ALL GRADING AND STABILIZATION SHALL COMPLY WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", SECTION B - GRADING AND STABILIZATION" AND THE PROVISIONS OF THE APPROVED PLAN.
- ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES (BMP'S) ARE TO BE CONSTRUCTED AND/OR INSTALLED PRIOR TO OR AT THE INITIATION OF GRADING IN ACCORDANCE WITH "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", AND THE APPROVED PLAN.
- A GRADING UNIT IS THE MAXIMUM CONTIGUOUS AREA ALLOWED TO BE GRADED AT A GIVEN TIME AND IS LIMITED TO 20 ACRES. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY AND/OR THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT (APPROVAL AUTHORITY). UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
- FOR INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, TEMPORARY OR PERMANENT STABILIZATION MUST BE COMPLETED WITHIN:
 - THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
 - SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
- STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITHIN THE 7 DAY STABILIZATION REQUIREMENT, AS WELL AS, STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION (AS APPLICABLE).
- ALL CONSTRUCTED CHANNELS AND SWALES SHALL HAVE SPECIFIED TREATMENT INSTALLED TO THE DESIGN FLOW DEPTH COMPLETED DOWNSTREAM TO UPSTREAM AS CONSTRUCTION PROGRESSES. AN INSTALLATION DETAIL SHALL BE SHOWN ON THE PLANS.
- ALL STORM DRAIN AND SANITARY SEWER LINES NOT IN PAVED AREAS ARE TO BE MULCHED AND SEEDED WITHIN 3 DAYS OF INITIAL BACKFILL UNLESS OTHERWISE SPECIFIED ON PLANS.
- ELECTRIC POWER, TELEPHONE, AND GAS LINES ARE TO BE COMPACTED, SEEDED, AND MULCHED WITHIN 3 DAYS AFTER INITIAL BACKFILL UNLESS OTHERWISE SPECIFIED ON PLANS.
- NO SLOPE SHALL BE GREATER THAN 2:1.
- AS REQUIRED BY SECTION B, OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, "ADEQUATE VEGETATIVE STABILIZATION", IS DEFINED AS 95 PERCENT GROUND COVER. THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT REQUIRES THE PROJECT ADHERE TO THIS FOR SCHEDULING OF THE FINAL SITE CLOSEOUT REVIEW, AND/OR RELEASE OF THE SITE FOR SOIL EROSION AND SEDIMENT CONTROL.

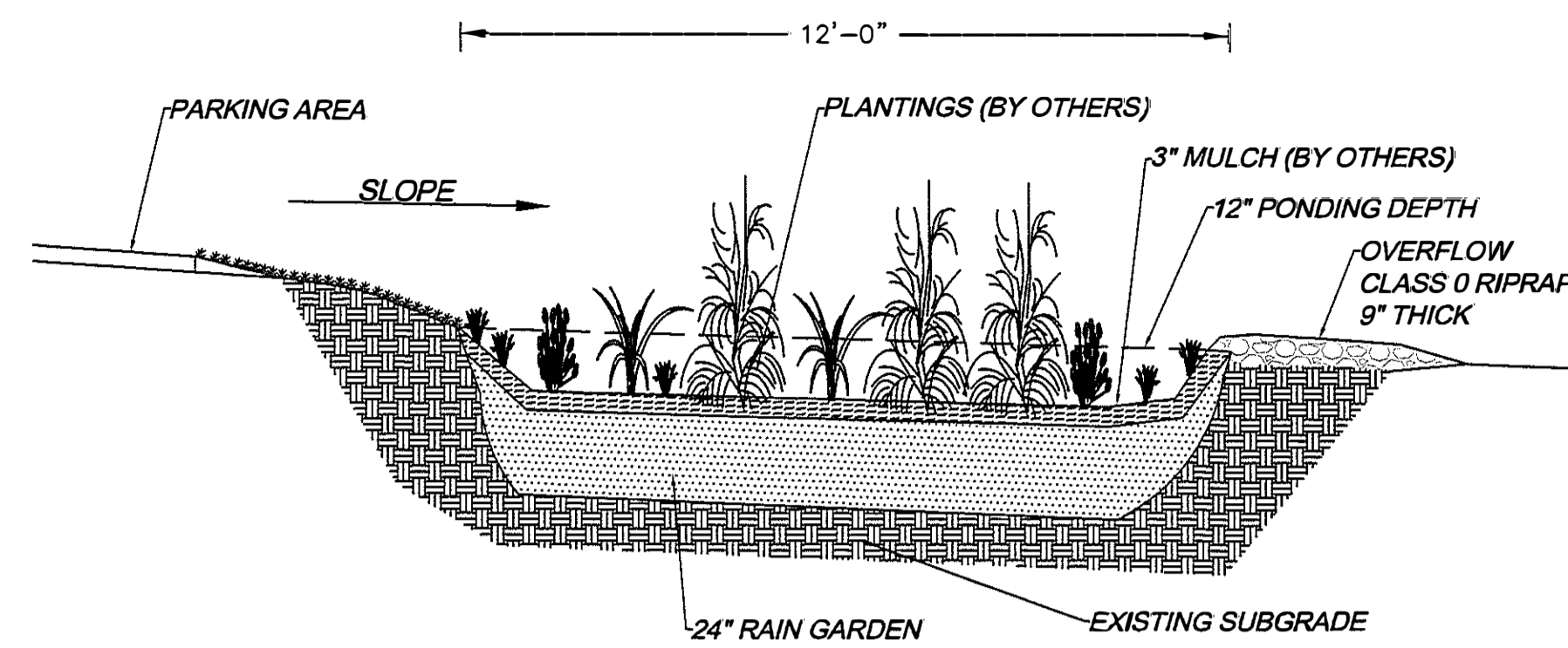
TURFGRASS ESTABLISHMENT SEEDING SUMMARY

| Species | Seed Mixtures (Hardiness Zone 6a) From Figure B.3 (2011 MDE Standards) | | | Fertilizer Rate (10-20-20) | | | Lime Rate |
|--------------------------|--|------------------------|----------------|-------------------------------|---------------|---------------|----------------|
| | Application Rate (lb/1000 sf) | Seeding Dates | Seeding Depths | N | P205 | K20 | |
| Tall Fescue (55%) | 125 | 3/1-5/15 8/15-10/15 | 1/4" to 1/2" | 45 lb/1000 sf | 90 lb/1000 sf | 90 lb/1000 sf | 2 tons/1000 sf |
| Perennial Ryegrass (10%) | 15 | | | | | | |
| Kentucky Bluegrass (5%) | 10 | | | | | | |

TEMPORARY SEEDING SUMMARY

| Species | Seed Mixtures (Hardiness Zone 6a) From Figure B.3 (2011 MDE Standards) | | | Fertilizer Rate (10-20-20) | | | Lime Rate |
|-----------------------------|--|------------------------|----------------|-------------------------------|---------------|----------------|---------------|
| | Application Rate (lb/1000 sf) | Seeding Dates | Seeding Depths | N | P205 | K20 | |
| Barnyard (Hardness Vulgare) | (96 lbs.) | 3/1-5/15 8/15-10/15 | 1 in. | 438 lb/1000 sf | 10 lb/1000 sf | 2 tons/1000 sf | 90 lb/1000 sf |

| QTY | TREES | | SIZE |
|-----|----------------------------|-------------------|---------------|
| | SCIENTIFIC | COMMON | |
| 2 | PLATANUS OCCIDENTALIS | AMERICAN SYCAMORE | 1.5" caliper |
| 2 | NYSSA SYLVATICA | BLACK GUM | 1.5" caliper |
| 2 | CERCIS CANADENSIS | EASTERN REDBUD | 3' min Height |
| 3 | CORNUS SERICEA STOLONIFERA | RED OSIER DOGWOOD | 3' min Height |
| 2 | ALNUS CERRULATA | SMOOTH ALDER | 3' min Height |
| 1 | TAXODIUM DISTICHUM | BALD CYPRUS | 1.5" caliper |

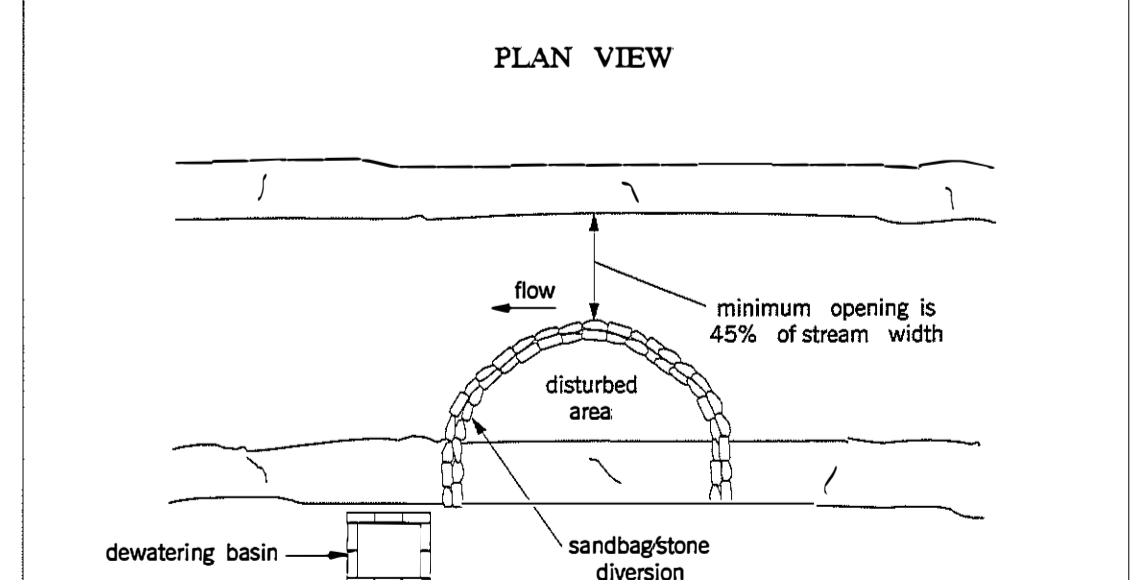
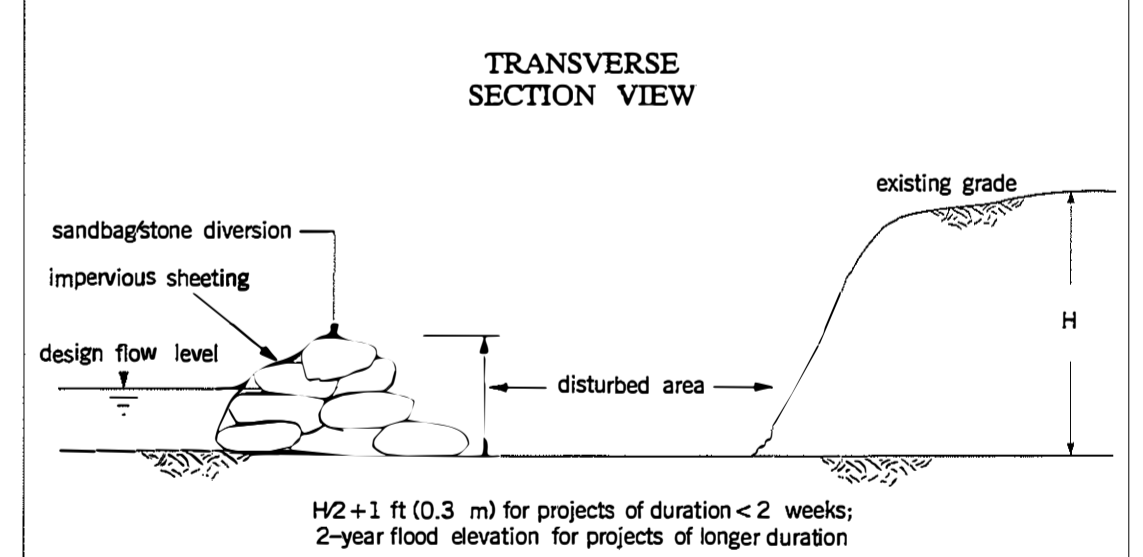


RAIN GARDEN - SECTION
SCALE: 3/8"=1'

PROJECT NOTES:

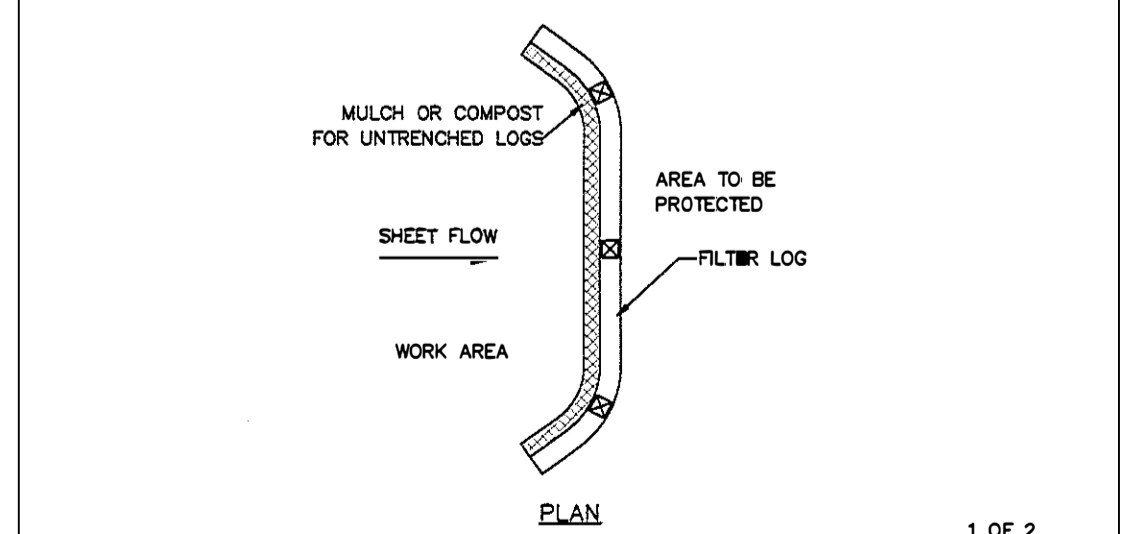
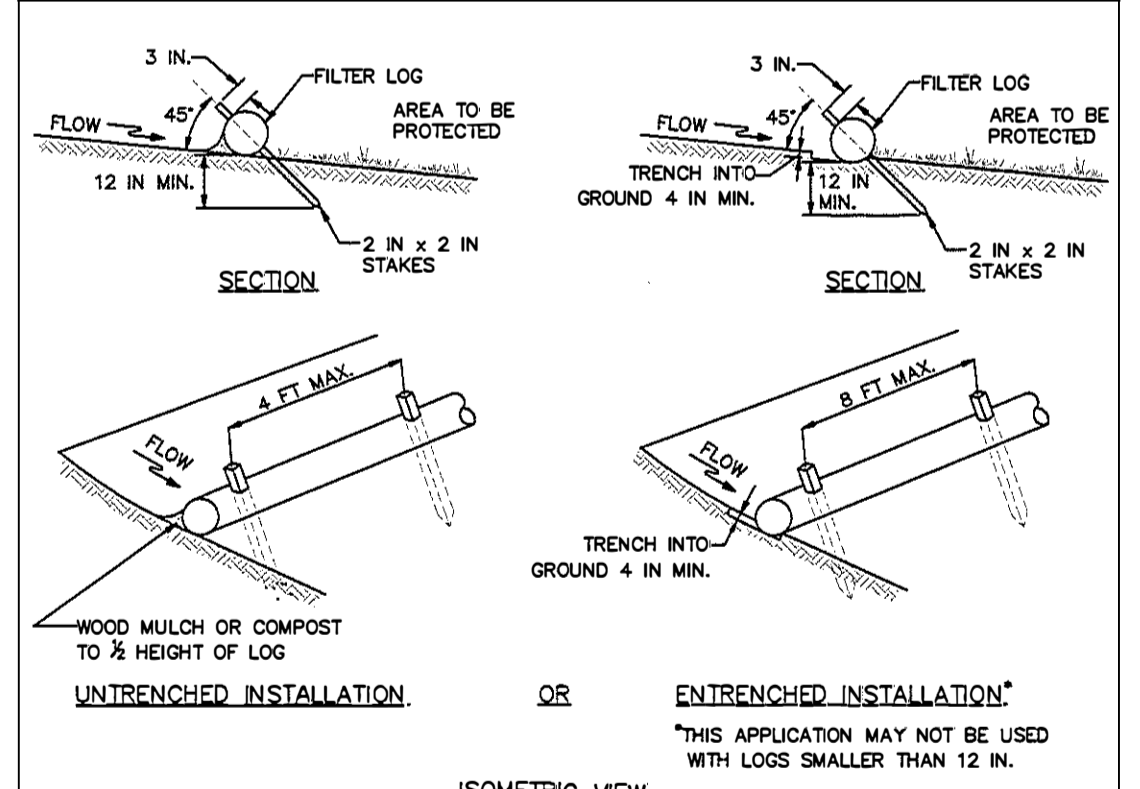
- THE STREAM DIVERSION SHALL BE INSTALLED IN ACCORDANCE WITH THE "MARYLAND GUIDELINES TO WATERWAY CONSTRUCTION DETAIL 1.5: SANDBAG/STONE DIVERSION". THE LOCATION OF THE STREAM DIVERSIONS SHOWN ARE A GENERAL REPRESENTATION ONLY AND SHOULD BE INSTALLED WHERE NEEDED WITHIN THE LIMITS OF WORK. ALL SEDIMENT LADEN WATER SHOULD BE PUMPED AND FILTERED THROUGH AN APPROVED DEWATERING DEVICE PRIOR TO REENTRY INTO THE STREAM.
- FOR DIVERSIONS IN PLACE LESS THAN TWO WEEKS THE DIVERSION MAY BE SIZED TO HANDLE STREAM BASEFLOW. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE SIZE REQUIRED FOR THE DIVERSION.
- IN THE EVENT OF A STORM THAT OVERTOPS A STREAM DIVERSION THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ANY EQUIPMENT, TOOLS, MATERIALS, OR OTHER ITEMS NEEDED TO COMPLETE THE WORK THAT COULD BE AFFECTED BY THE STORM FLOWS.
- NO PERMANENT STRUCTURES (FENCES, SHEDS, PLAY EQUIPMENT, RETAINING WALLS, ETC.) SHALL BE PERMITTED WITHIN ANY STORM DRAINAGE EASEMENT OR DRAINAGE EASEMENT EITHER SHOWN OR DESCRIBED ON A FINAL PLAT OR EASEMENT PLAT.
- ALL GRADING ON LOT/PARCEL, EITHER BEFORE OR AFTER THE CONSTRUCTION OF APPURTENANCES, SHALL BE THE FULL RESPONSIBILITY OF THE LOT/PARCEL OWNER.

**Maryland's Guidelines To Waterway Construction
DETAIL 1.5: SANDBAG/STONE DIVERSION**



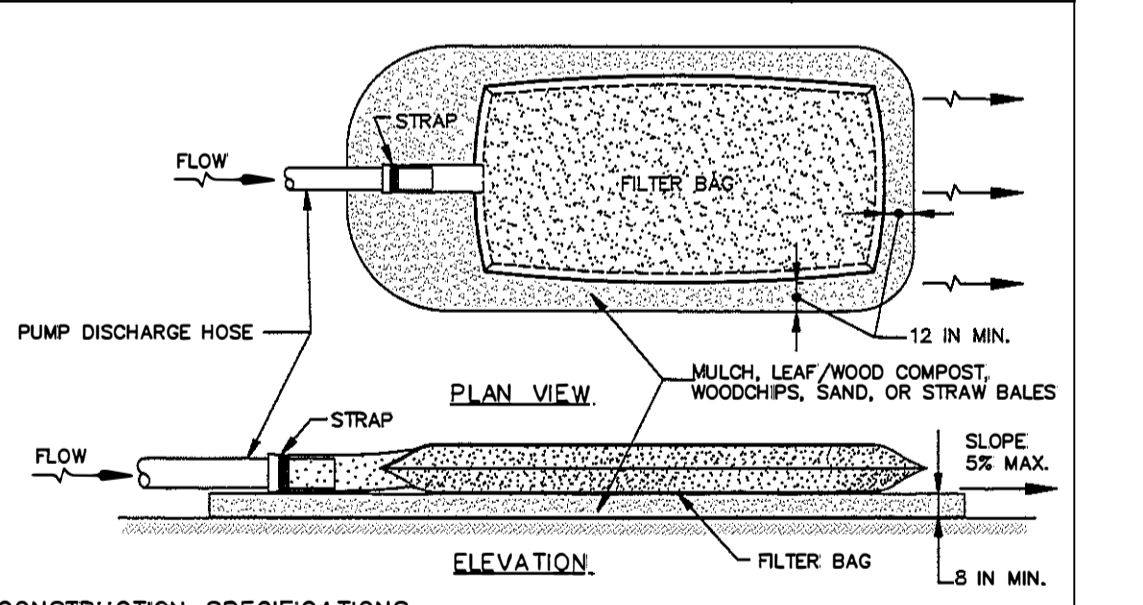
TEMPORARY DIVERSION CONSTRUCTION MEASURES
REVISED NOVEMBER 2009
PAGE 18 - 9
MARYLAND DEPARTMENT OF THE ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

DETAIL E-6 FILTER LOG



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
2011
E.15

DETAIL F-4 FILTER BAG



- CONSTRUCTION SPECIFICATIONS**
- TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
 - PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
 - CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
 - REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
 - USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MAWV) FOR THE FOLLOWING:

| | | |
|-----------------------------------|----------------------------|-------------|
| GRAB TENSILE | 250 LB | ASTM D-4632 |
| PUNCTURE | 150 LB | ASTM D-4633 |
| FLOW RATE | 70 GAL/MIN/FT ² | ASTM D-4491 |
| PERMEABILITY (SEC ⁻¹) | 1.2 SEC ⁻¹ | ASTM D-4491 |
| UV RESISTANCE | 70% STRENGTH @ 500 HOURS | ASTM D-4355 |
| APPARENT OPENING SIZE (AOS) | 0.15-0.18 MM | ASTM D-4751 |
| SEAM STRENGTH | 90% | ASTM D-4632 |
 - REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
2011
F.9

| NO. | REVISION DESCRIPTION | BY | DATE |
|--------------|----------------------|----|------|
| DESIGNED BY: | AE | | |
| DRAWN BY: | BM | | |
| CHECKED BY: | | | |
| DATE: | | | 2018 |

WASHINGTON COUNTY, MARYLAND
DIVISION OF ENGINEERING
Washington County Administrative Annex, Building
800 W. Main Street, P.O. Box 40
Petersburg, MD 21650
Phone: 240-318-2480 Fax: 240-313-2401

**GARIS SHOP ROAD
WATER TRAIL PARK**

LANDSCAPING AND DETAILS

STATE OF MARYLAND
DIVISION OF ENGINEERING
PROFESSIONAL ENGINEER
No. 45894
12-1-19

SCALE
AS SHOWN

SHEET NO.
3

PROJECT NO.
22-073