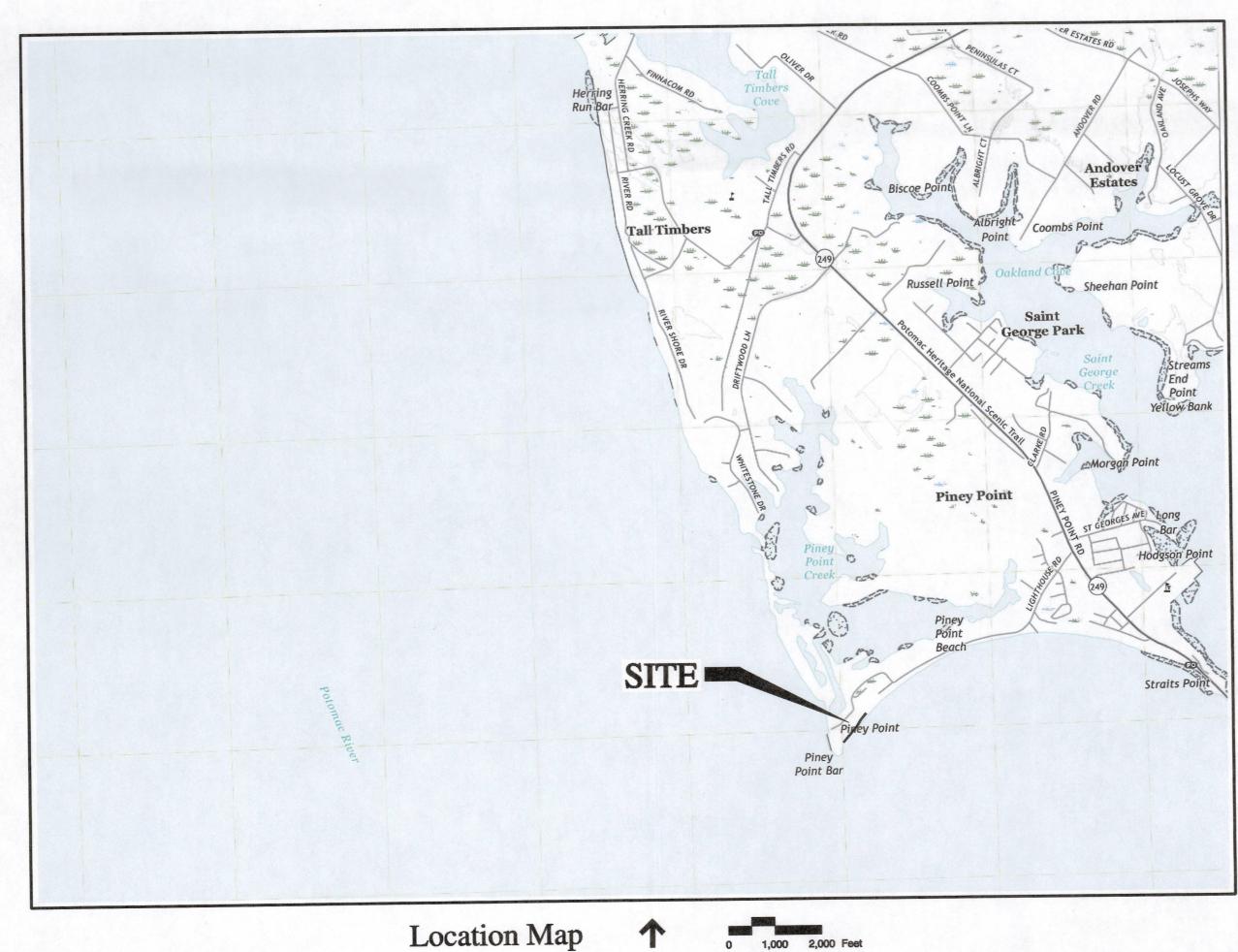
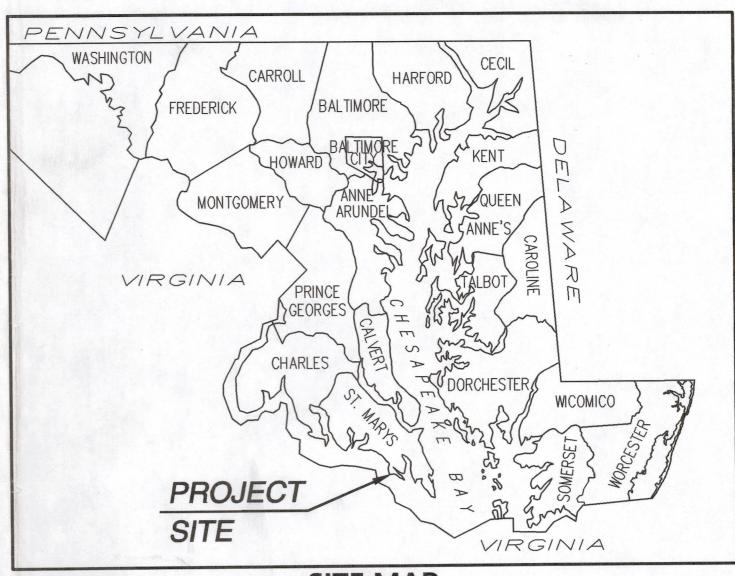
Piney Point Lighthouse Living Shoreline Project

St.Marys County, Maryland Final

Index	
No.	Drawing Title
C-1	Cover Sheet
C-2	Existing Conditions
C-3	Shoreline Layout Plan & Typical Sections
C-4	Sections
C-5	Sections
C-6	Erosion & Sediment Control Notes & Details





SITE MAP NOT TO SCALE

GENERAL NOTES

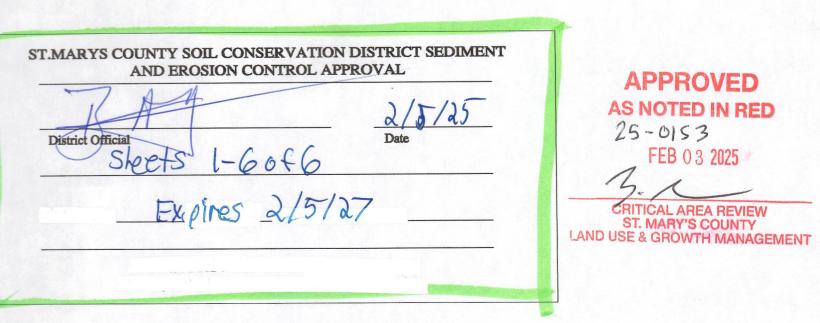
- 1. Mean tidal range is 1.4 feet.
- 2. Horizontal control was established by a closed loop traverse.
- 3. Vertical control is 0.0 feet = MLW.
- 4. Topographic and hydrographic data obtained MAY 26, 2021. Coordinate systems is MD state plane.
- 5. Bench mark shown on plans
- 6. All dimensions and coordinates given in feet.
- 7. Existing topography has contour intervals every 1 ft above 0.0 MLW and every 1 ft below MLW.

CONSTRUCTION SCHEDULE FOR SEDIMENT AND EROSION CONTROL

- 1. Contractor/Developer is to notify the Maryland Department of the Environment (410-974-2641) of the date construction is to begin at least five (7) days prior to the date.(Time Frame=1 day)
- 2. Clear for and install stabilized construction entrances. (1 day)
- 3. Install silt fence and other erosion and sediment control practices. (1 day)
- 4. Remove all debris interfering with shoreline construction as construction proceeds. (continuous)
- Clear trees and underbrush within designated areas as construction proceeds. (continuous)
- 6. Install breakwaters and sand nourishment . (90 days)
- 7. Stabilize and seed all upland disturbed areas as specified.(2 days)
- After establishment of vegetative cover on site, remove silt fence and other erosion and sediment control devices after approval by Maryland Department of the Environment inspector (410-974-2641).

BORING NOTE:

SOIL BORINGS WERE OBTAINED FOR DESIGN PURPOSES
ONLY. BORING DATA IS PROVIDED FOR THE CONTRACTORS
CONVENIENCE AND IS APPLICABLE ONLY AT THE SPECIFIED
POINTS WHERE THE BORINGS WERE PERFORMED. NEITHER
ENGINEER OR THE GOVERNMENT WARRANT THE CONTINUITY
OF SUBSURFACE CONDITIONS. ALL ELEVATIONS REFER TO MLW DATUM.



COASTLINE DESIGN, P.C.



OWNER'S/DEVELOPERS CERTIFICATION:

DESIGN CERTIFICATION

Specifications for Soil Erosion and Sediment Control, the 2000 Maryland Stormwater Design Manual, Volumes I & II including supplements, the Environment Article Sections 4-101 through 116 and Sections 4-201 and 215, and the Code of Maryland Regulations (COMAR) 26.17.01 and COMAR 26.17.02 for erosion and sediment control and stormwater management, respectively.

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. 14544, Expiration Date: 16 August 2025."

STANDARD STABILIZATION NOTE:

Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within:

a.) three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and

b.) seven (7) calendar days as to all other disturbed or graded areas on the project site

I hereby certify that this plan has been designed in accordance with the 2011 Maryland Standards and

pursuant to this plan and that any responsible personnel involved in the construction project will have a certificate of attendance at a Maryland Department of the Environment approved training program for the control of erosion and sediment before beginning the project. I/We hereby authorize the right

Owner/Developer Signature

Print Name and Title

Designer's Signature

Glenn G. Gass

10/10/23

I / We hereby certify that all clearing, grading, construction, and/or development will be done

State of Maryland, Department of the Environment.

14544

MDE Training Card No.

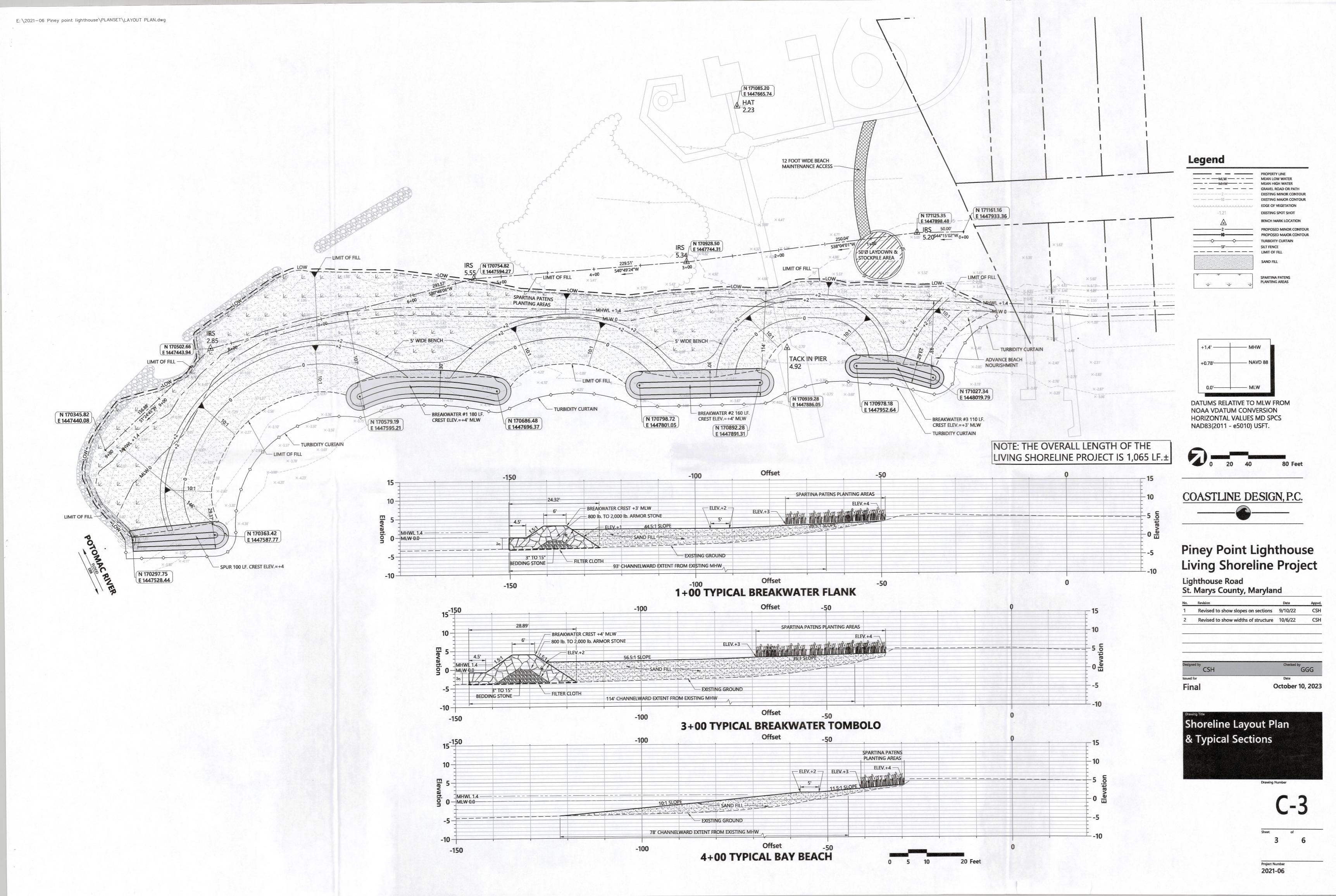
10/10/23

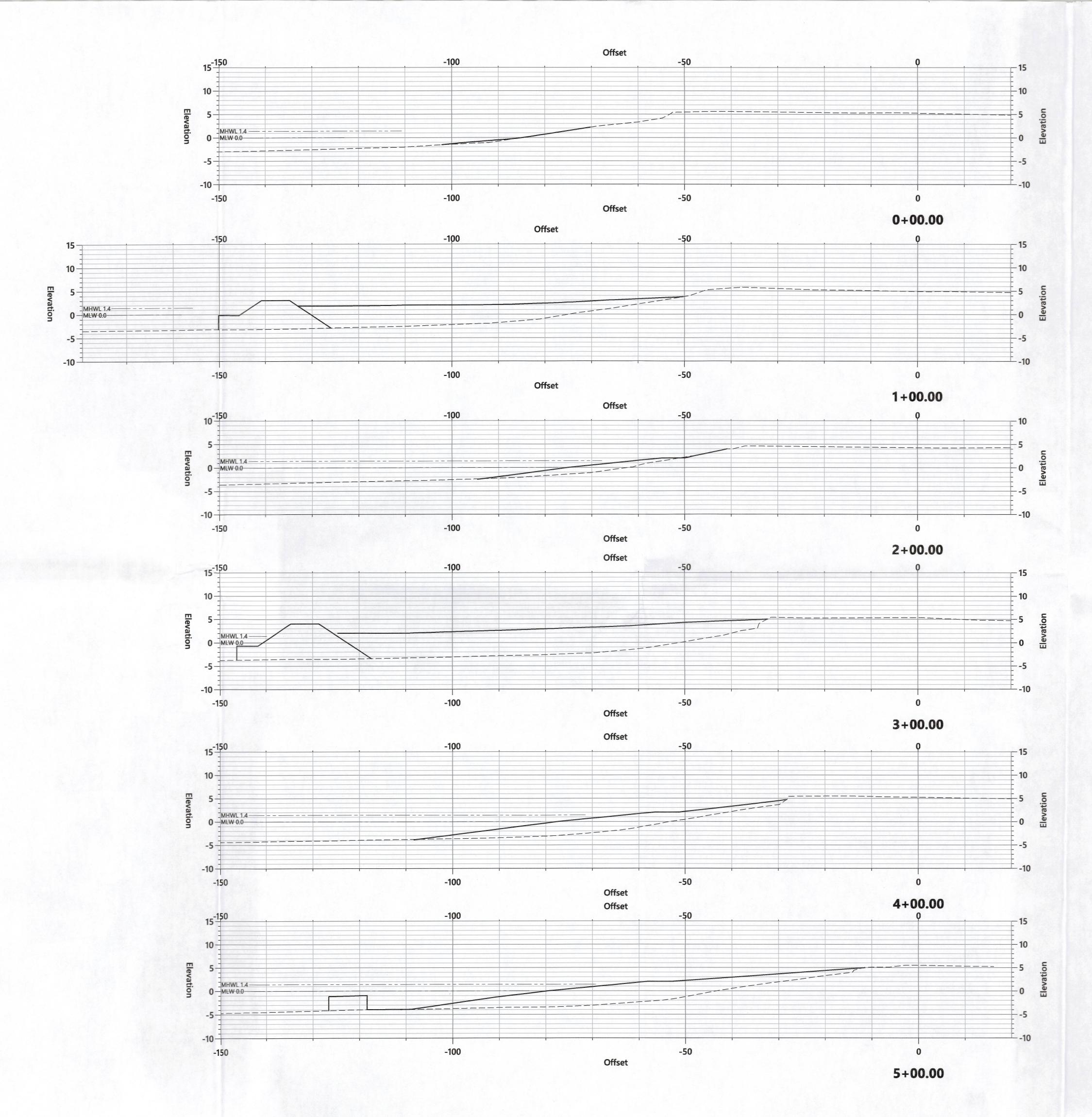
not under active grading

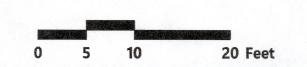
(P.E., R.L.S., RLA, or R.A. (circle one)

Md. Registration No









COASTLINE DESIGN, P.C.

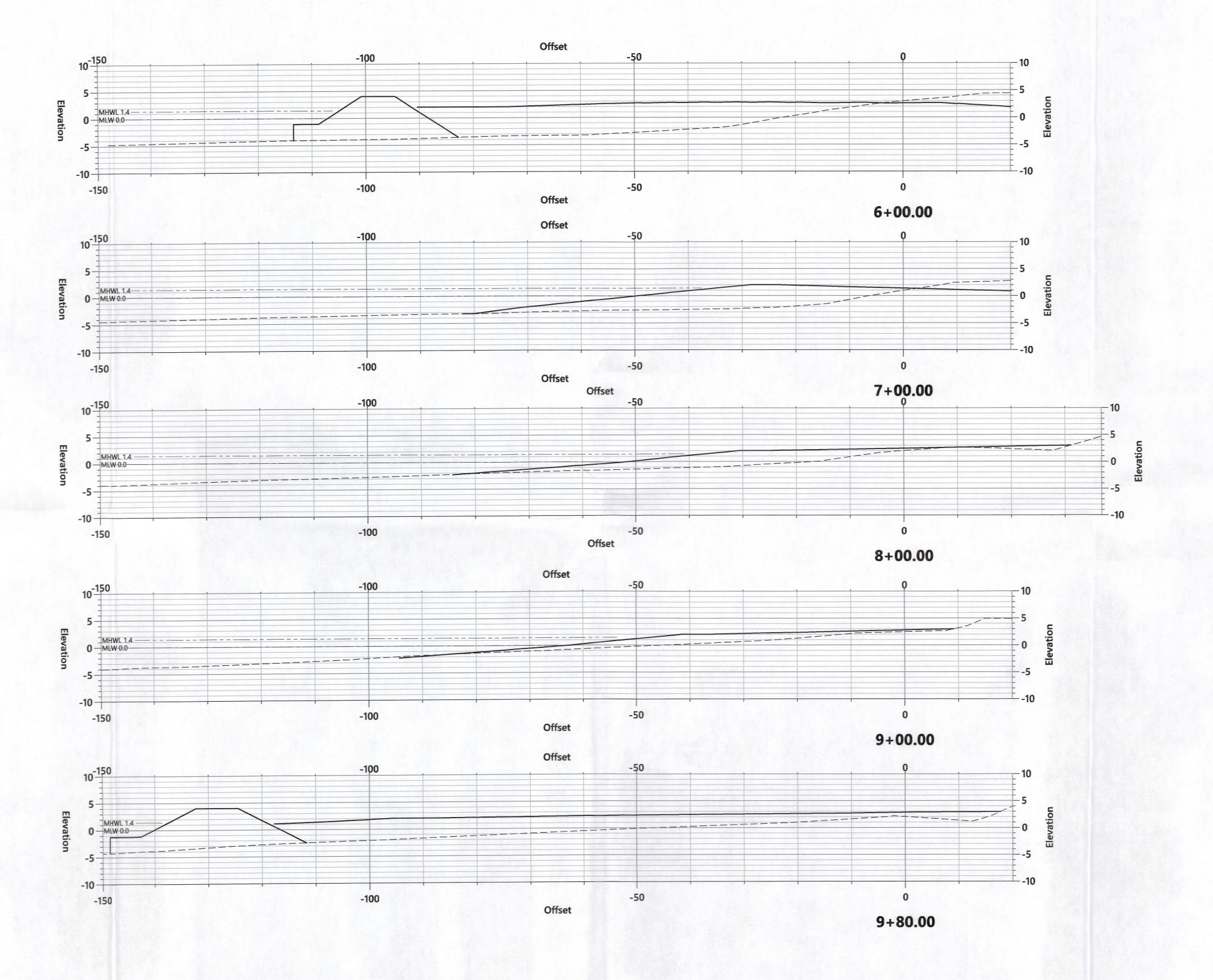
Piney Point Lighthouse Living Shoreline Project

Lighthouse Road St. Marys County, Maryland

esigned by CSH Final October 10, 2023

Sections & Typical Sections

2021-06





COASTLINE DESIGN, P.C.

Piney Point Lighthouse Living Shoreline Project

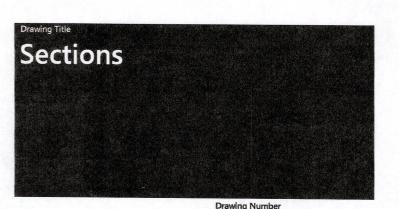
Lighthouse Road St. Marys County, Maryland

Designed by Checked by

Checked by GGG

Issued for Date

Final October 10, 2023



C-5

Project Number 2021-06

A. EROSION AND SEDIMENT CONTROL GENERAL NOTES JUNE 10, 2016

E: \2021-06 Piney point lighthouse\PLANSET\ES-DT.dwg

MDE REQUIRES THAT THESE NOTES, IN THEIR ENTIRETY, BE INCLUDED ON THE EROSION AND SEDIMENT CONTROL PLAN. IT IS RECOGNIZED THAT NOT EVERY NOTE MAY APPLY TO ALL PROJECTS. THE REQUIREMENT OF ANY INDIVIDUAL NOTE NOT APPLICABLE TO THE SUBJECT PROJECT IS NOT BINDING UPON THE APPLICANT OR THE APPLICANT'S CONTRACTOR.

EROSION AND SEDIMENT CONTROL GENERAL NOTES

- 1. THE CONTRACTOR SHALL NOTIFY MDE AT (410) 537-3510 SEVEN (7) DAYS BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY AND, UNLESS WAIVED BY MDE, SHALL BE REQUIRED TO HOLD A PRE- CONSTRUCTION MEETING BETWEEN PROJECT REPRESENTATIVES AND A REPRESENTATIVE OF MDE.
- 2. THE CONTRACTOR SHALL NOTIFY MDE IN WRITING AND BY TELEPHONE AT THE FOLLOWING
- A. THE REQUIRED PRE-CONSTRUCTION MEETING.
- B. FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES. C. DURING THE INSTALLATION OF SEDIMENT BASINS (TO BE CONVERTED INTO PERMANENT STORMWATER MANAGEMENT STRUCTURES) AT THE REQUIRED INSPECTION POINTS (SEE INSPECTION CHECKLIST ON PLAN). NOTIFICATION PRIOR TO COMMENCING CONSTRUCTION OF EACH STEP IS MANDATORY.
- D. PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL STRUCTURE(S).
- PRIOR TO REMOVAL OF ALL SEDIMENT CONTROL DEVICES.
- F. PRIOR TO FINAL ACCEPTANCE.

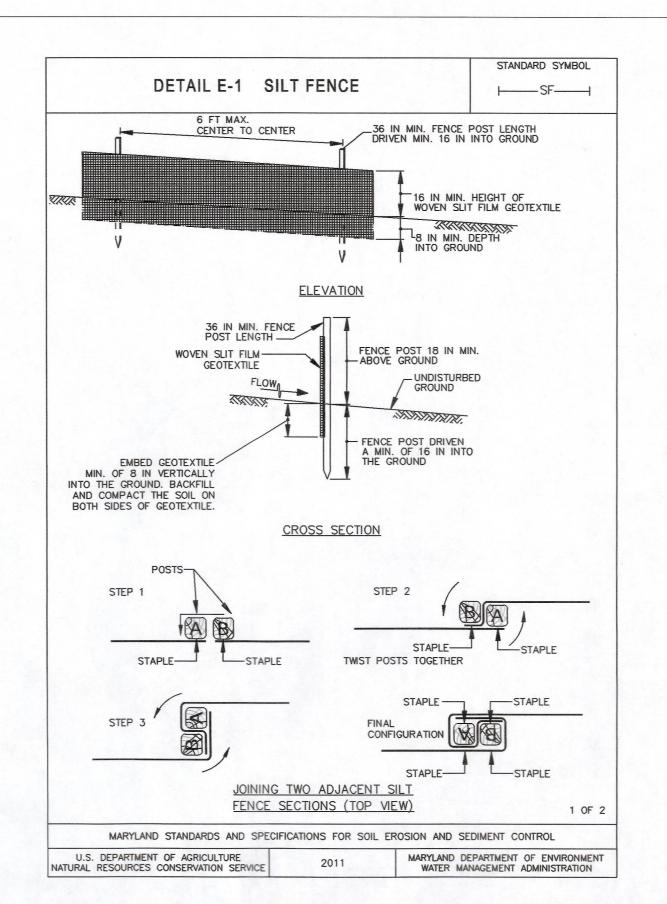
COMPLETED THE SAME DAY.

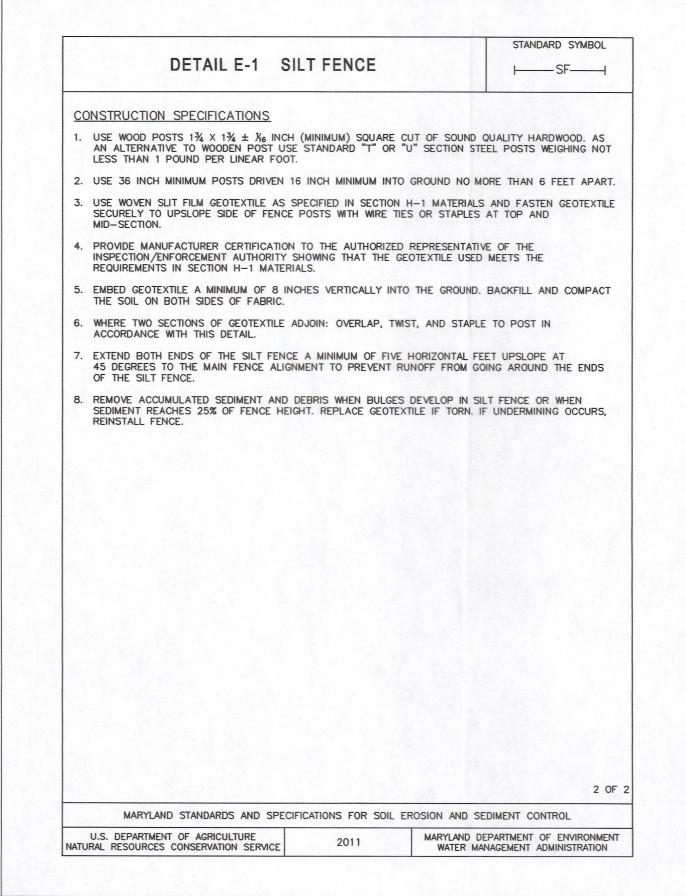
- THE PLAN APPROVAL LETTER, APPROVED EROSION AND SEDIMENT CONTROL PLANS, DAILY LOG BOOKS, AND TEST REPORTS SHALL BE AVAILABLE AT THE SITE FOR INSPECTION BY DULY AUTHORIZED OFFICIALS OF MDE AND THE AGENCY RESPONSIBLE FOR THE PROJECT.
- 4. THE CONTRACTOR SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE APPROVED PLAN AND CONSTRUCTION SEQUENCE AND SHALL HAVE THEM INSPECTED AND APPROVED BY THE MDE INSPECTOR PRIOR TO BEGINNING ANY OTHER LAND DISTURBANCES. MINOR SEDIMENT CONTROL DEVICE LOCATION ADJUSTMENTS MAY BE MADE IN THE FIELD WITH THE APPROVAL OF THE MDE INSPECTOR. THE CONTRACTOR SHALL ENSURE THAT ALL RUNOFF FROM DISTURBED AREAS IS DIRECTED TO THE SEDIMENT CONTROL DEVICES AND SHALL NOT REMOVE ANY EROSION OR SEDIMENT CONTROL MEASURE WITHOUT PRIOR PERMISSION FROM MDE INSPECTOR. THE CONTRACTOR SHALL OBTAIN PRIOR AGENCY AND MDE APPROVAL FOR MODIFICATIONS TO THE EROSION AND SEDIMENT CONTROL PLAN AND/OR SEQUENCE OF CONSTRUCTION.
- 5. THE MDE INSPECTOR HAS THE OPTION OF REQUIRING ADDITIONAL SAFETY OR SEDIMENT CONTROL MEASURES, IF DEEMED NECESSARY.
- 6. THE CONTRACTOR SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO 26. SITE INFORMATION: PREVENT THE DEPOSITION OF MATERIALS ONTO PUBLIC ROADS. ALL MATERIALS DEPOSITED A. AREA DISTURBED: XX 216.7 ONTO PUBLIC ROADS SHALL BE REMOVED IMMEDIATELY.
- 7. THE CONTRACTOR SHALL INSPECT DAILY AND MAINTAIN CONTINUOUSLY IN AN EFFECTIVE D. OFF-SITE WASTE / BORROW AREA LOCATION WILL BE THE RESPONSIBILITY OF THE OPERATING CONDITION ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL SUCH TIME AS THEY ARE REMOVED WITH PRIOR PERMISSION FROM THE MDE INSPECTOR.
- 8. EROSION AND SEDIMENT CONTROL FOR UTILITY CONSTRUCTION SHALL BE PROVIDED IN ACCORDANCE WITH APPROVED PLANS. UTILITY CONSTRUCTION SHALL ONLY BE FOR AREAS WITHIN THE DELINEATED LIMIT OF DISTURBANCE. CALL "MISS UTILITY" AT 1-800-257-7777 48
- HOURS PRIOR TO THE START OF WORK. WHEN SAME DAY STABILIZATION IS APPROVED: EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF THE TRENCH. TRENCHES FOR UTILITY INSTALLATION SHALL BE BACKFILLED, COMPACTED, AND STABILIZED AT THE END OF EACH WORKING DAY. NO MORE TRENCH SHALL BE OPENED THAN CAN BE
- ALL WATER REMOVED FROM EXCAVATED AREAS SHALL BE PASSED THROUGH AN MDE APPROVED DEWATERING PRACTICE OR PUMPED TO A SEDIMENT TRAP OR BASIN PRIOR TO DISCHARGE TO A FUNCTIONAL STORM DRAIN SYSTEM OR TO STABLE GROUND SURFACE.
- 10. CONCRETE WASHOUT STRUCTURES SHALL BE USED WHEN CONCRETE TRUCKS, DRUMS, PUMPS, CHUTES, OR OTHER EQUIPMENT IS RINSED OR CLEANED ON-SITE.
- 11. CONSTRUCTION ACTIVITIES PRODUCING DUST SHALL IMPLEMENT CONTROL MEASURES TO AVOID THE SUSPENSION OF DUST PARTICLES AND/OR PREVENT DUST FROM BLOWING OFF-SITE OR TO AREAS WITHOUT TREATMENT
- 12. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
- A. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1
- B. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
- 13. VEGETATIVE STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. REFER TO APPROPRIATE SPECIFICATIONS FOR TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, SODDING, AND GROUND COVERS.
- 14. WHEN SEEDING, ALL DISTURBED AREAS WITH SLOPES FLATTER THAN 2:1 SHALL BE STABILIZED WITH 4 INCHES OF TOPSOIL, SEED, AND MULCH. ALL DISTURBED AREAS WITH SLOPES 2:1 OR STEEPER SHALL BE STABILIZED WITH MATTING OVER 2 INCHES OF TOPSOIL AND SEED.
- 15. ALL SEDIMENT BASINS, TRAP EMBANKMENTS AND SLOPES, PERIMETER DIKES, SWALES AND ALL DISTURBED SLOPES STEEPER OR EQUAL TO 3:1 SHALL BE STABILIZED WITH SEED AND ANCHORED STRAW MULCH, SOD, OR OTHER APPROVED STABILIZATION MEASURES, AS SOON AS POSSIBLE BUT NO LATER THAN THREE (3) CALENDAR DAYS AFTER ESTABLISHMENT. ALL AREAS DISTURBED OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM SHALL BE MINIMIZED, MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION.
- 16. PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITH SEED AND AN APPROVED EROSION CONTROL MATTING, SOD, RIP-RAP, OR OTHER APPROVED STABILIZATION MEASURES.
- 17. FOR STOCKPILE SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1), THE CONTRACTOR SHALL APPLY SEED AND ANCHORED STRAW MULCH, SOD, OR OTHER APPROVED STABILIZATION MEASURES TO THE FACE OF THE STOCKPILE WITHIN THREE (3) CALENDAR DAYS OF ACTIVITY HAVING CEASED ON THE RESPECTIVE FACE. FOR SLOPES 3:1 OR FLATTER. THE CONTRACTOR SHALL APPLY STABILIZATION MEASURES TO THE FACE OF THE STOCKPILE WITHIN SEVEN (7) CALENDAR DAYS OF ACTIVITY HAVING CEASED ON THE RESPECTIVE FACE. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION.
- 18. FOR FINISHED GRADING, THE CONTRACTOR SHALL PROVIDE ADEQUATE GRADIENTS TO PREVENT WATER FROM PONDING FOR MORE THAN TWENTY-FOUR (24) HOURS AFTER THE END OF A RAINFALL EVENT. DRAINAGE COURSES AND SWALE FLOW AREAS MAY TAKE AS LONG AS FORTY-EIGHT (48) HOURS AFTER THE END OF A RAINFALL EVENT TO DRAIN. AREAS DESIGNED TO HAVE STANDING WATER SHALL NOT BE REQUIRED TO MEET THIS REQUIREMENT.
- 19. WHERE DEEMED APPROPRIATE BY THE ENGINEER OR INSPECTOR, SEDIMENT BASINS AND TRAPS MAY NEED TO BE SURROUNDED WITH AN APPROVED SAFETY FENCE. THE FENCE MUST CONFORM TO LOCAL ORDINANCES AND REGULATIONS. THE DEVELOPER OR OWNER SHALL CHECK WITH LOCAL BUILDING OFFICIALS ON APPLICABLE SAFETY REQUIREMENTS. WHERE SAFETY FENCE IS DEEMED APPROPRIATE AND LOCAL ORDINANCES DO NOT SPECIFY FENCING SIZES AND TYPES, THE FOLLOWING SHALL BE USED AS A MINIMUM STANDARD: THE SAFETY FENCE SHALL BE MADE OF WELDED WIRE AND AT LEAST 42 INCHES HIGH, HAVE POSTS SPACED NO FARTHER APART THAN 8 FEET, HAVE MESH OPENINGS NO GREATER THAN 2 INCHES IN WIDTH AND 4 INCHES IN HEIGHT WITH A MINIMUM OF 14 GAUGE WIRE. SAFETY FENCE SHALL BE MAINTAINED AND IN GOOD CONDITION AT ALL TIMES.
- 20. ALL SEDIMENT TRAP DEPTH DIMENSIONS ARE RELATIVE TO THE OUTLET ELEVATION. ALL TRAPS SHALL HAVE A STABLE OUTFALL. ALL TRAPS AND BASINS SHALL HAVE STABLE INFLOW POINTS.

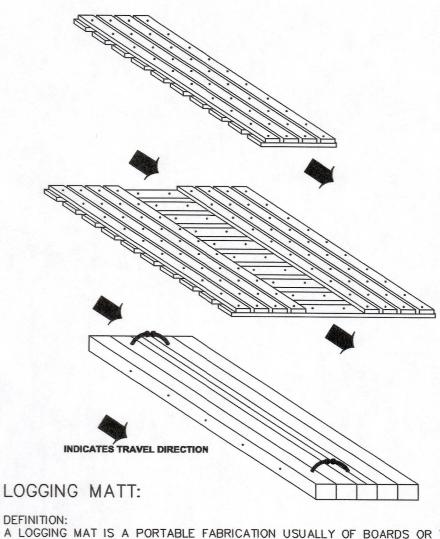
- 21. SEDIMENT SHALL BE REMOVED AND THE TRAP OR BASIN RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE QUARTER OF THE TOTAL DEPTH OF THE TRAP OR BASIN. TOTAL DEPTH SHALL BE MEASURED FROM THE TRAP OR BASIN BOTTOM TO THE CREST OF THE OUTLET.
- 22. SEDIMENT REMOVED FROM TRAPS (AND BASINS) SHALL BE PLACED AND STABILIZED IN APPROVED AREAS, BUT NOT WITHIN A FLOODPLAIN, WETLAND OR TREE-SAVE AREA. WHEN PUMPING SEDIMENT LADEN WATER, THE DISCHARGE SHALL BE DIRECTED TO AN MDE APPROVED SEDIMENT TRAPPING DEVICE PRIOR TO RELEASE FROM THE SITE. A SUMP PIT MAY BE USED IF SEDIMENT TRAPS THEMSELVES ARE BEING PUMPED OUT.
- 23. PRIOR TO REMOVAL OF SEDIMENT CONTROL MEASURES, THE CONTRACTOR SHALL STABILIZE AND HAVE ESTABLISHED PERMANENT STABILIZATION FOR ALL CONTRIBUTORY DISTURBED AREAS USING SOD OR AN APPROVED PERMANENT SEED MIXTURE WITH REQUIRED SOIL AMENDMENTS AND AN APPROVED ANCHORED MULCH. WOOD FIBER MULCH MAY ONLY BE USED IN SEEDING SEASON WHERE THE SLOPE DOES NOT EXCEED 10% AND GRADING HAS BEEN DONE TO PROMOTE SHEET FLOW DRAINAGE. AREAS BROUGHT TO FINISHED GRADE DURING THE SEEDING SEASON SHALL BE PERMANENTLY STABILIZED AS SOON AS POSSIBLE, BUT NOT LATER THAN THREE (3) CALENDAR DAYS AFTER ESTABLISHMENT FOR SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND SEVEN (7) CALENDAR DAYS FOR FLATTER SLOPES. WHEN PROPERTY IS BROUGHT TO FINISHED GRADE DURING THE MONTHS OF NOVEMBER THROUGH FEBRUARY, AND PERMANENT

STABILIZATION IS FOUND TO BE IMPRACTICAL, TEMPORARY SEED AND ANCHORED STRAW MULCH SHALL BE APPLIED TO DISTURBED AREAS. THE FINAL PERMANENT STABILIZATION OF SUCH PROPERTY SHALL BE APPLIED BY MARCH 15 OR EARLIER IF GROUND AND WEATHER

- 24. TEMPORARY SEDIMENT CONTROL DEVICES SHALL BE REMOVED WITH PERMISSION OF THE MDE INSPECTOR WITHIN THIRTY (30) CALENDAR DAYS FOLLOWING ESTABLISHMENT OF PERMANENT STABILIZATION IN ALL CONTRIBUTORY DRAINAGE AREAS. UPON REMOVAL OF SEDIMENT CONTROL DEVICES, THE AREA DISTURBED BY REMOVAL SHALL BE STABILIZED WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED, WITHIN 24 HOURS OF SAID REMOVAL. STORMWATER MANAGEMENT STRUCTURES USED TEMPORARILY FOR SEDIMENT CONTROL SHALL BE CONVERTED TO THE PERMANENT CONFIGURATION WITHIN THIS TIME PERIOD AS
- 25. OFF-SITE SPOIL OR BORROW AREAS ON STATE OR FEDERAL PROPERTY SHALL HAVE PRIOR APPROVAL BY MDE AND OTHER APPLICABLE STATE, FEDERAL, AND LOCAL AGENCIES; OTHERWISE APPROVAL SHALL BE GRANTED BY THE LOCAL AUTHORITIES. ALL WASTE AND BORROW AREAS OFF-SITE SHALL BE PROTECTED BY SEDIMENT CONTROL MEASURES AND
- B. TOTAL CUT 0 CUBIC YARDS
- C. .TOTAL FILL 0 CUBIC YARDS







A LOGGING MAT IS A PORTABLE FABRICATION USUALLY OF BOARDS OR TIMBERS HELD TOGETHER BY BOLTS OR CABLE TO PROVIDE TEMPORARY PROTECTION OF A FOREST HARVEST ENTRANCE OR HAUL ROAD.

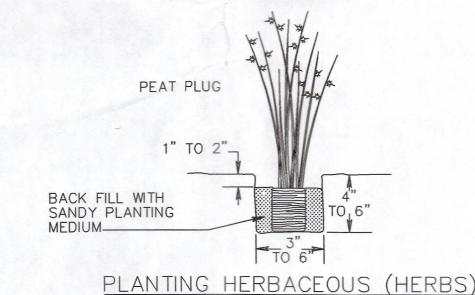
THIS PRACTICE PROTECTS THE SURFACE SOIL STRUCTURE FROM EXCESSIVE COMPACTION AND RUTTING.

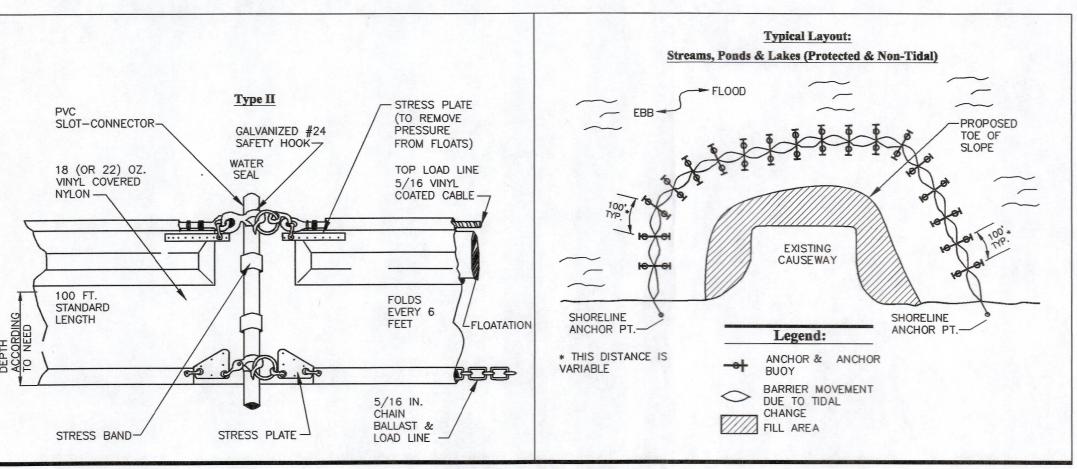
CONDITIONS WHERE PRACTICE APPLIES: THIS PRACTICE APPLIES TO ANY PART OF THE FOREST HARVEST ACCESS SYSTEM OR HUAL ROAD WHERE RUTTING COULD BECOME AN EROSION OR WATER HANDLING PROBLEM. IT IS OFTEN USED AS A SUBSTITUTE FOR STONE OR OTHER STABILIZATION MATERIALS AT THE ENTRANCE OF A FOREST HARVEST SITE AND ISOLATED WET AREAS ON HAUL ROADS OR SKID TRAILS. THEY ARE ALSO USED TO ACCESSES SHORELINE CONSTRUCTION SITES.

1. MATS SHALL BE PLACED END TO END TO FORM A CONTINUOUS SPAN FOR THE ENTIRE LENGTH OF THE AREA TO BE PROTECTED.

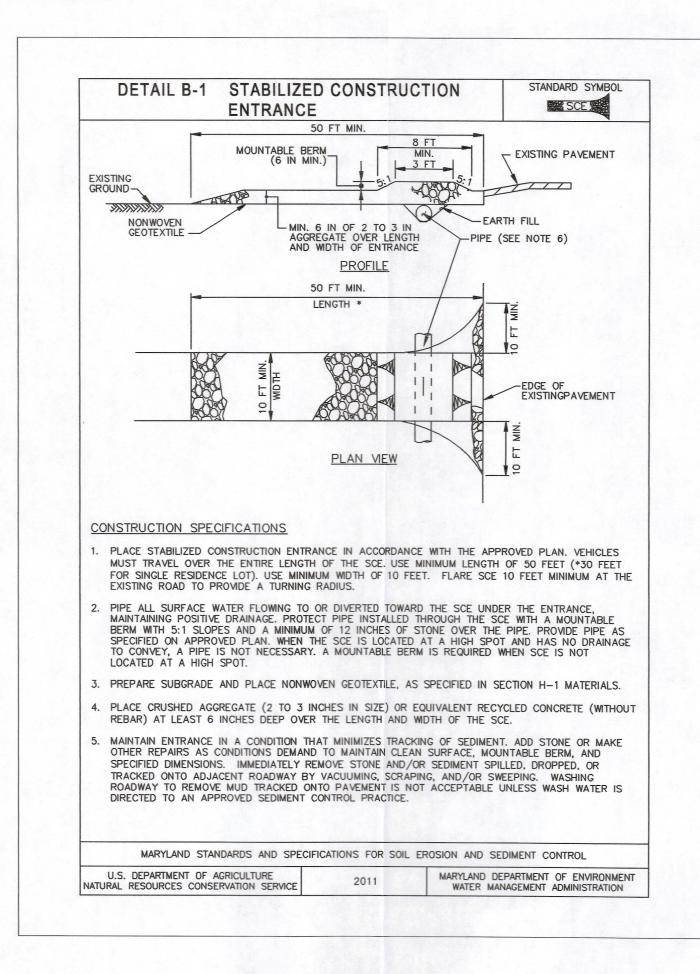
2. MATS CAN BE USED AS SUBSTITUTE FOR OR IN CONJUNCTION WITH STONE, GRAVEL, WOOD CHIPS, CULVERTS, AND OTHER STABILIZING MATERIAL AT THE ENTRANCE TO THE PROJECT SITE.

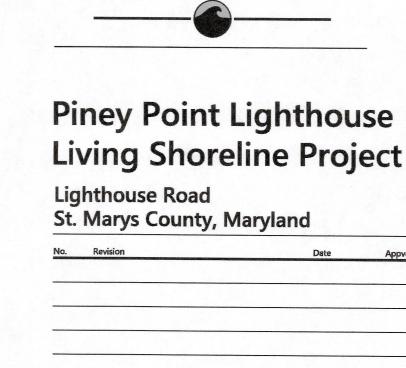
3. MATS SHALL BE INSPECTED FREQUENTLY AND MAINTAINED OR REPLACED AS NECESSARY TO ENSURE THEIR PROPER FUNCTION.





Turbidity Curtain





COASTLINE DESIGN, P.C.

Erosion & Sediment Control **Notes & Details**

Final

October 10, 2023

2021-06