

COVE LANDING ROAD CULVERT REHABILITATION

THIRD TAX DISTRICT, BISHOPVILLE, WORCESTER COUNTY, MARYLAND

GENERAL NOTES :

1. ALL WORK PREPARED BY THESE DOCUMENTS (DRAWINGS AND SPECIFICATIONS) SHALL BE NEW, UNLESS OTHERWISE NOTED BY THE WORD "PROPOSED" IS USED, IT IS CONSIDERED INTERCHANGEABLE WITH THE WORD "NEW" AND IS INCLUDED IN THE WORD "NEW" WORK.

2. ALL EXISTING CONDITIONS AND ALIGNMENTS SHOWN ARE BASED ON THE TOPOGRAPHIC SURVEY PERFORMED BY CORNERSTONE SURVEYING, INC. DATED FEBRUARY 6, 2024. ELEVATIONS SHOWN ARE IN THE NAVD83 DATUM. THE SAID SURVEY AND HORIZONTAL DATUM IS THE VIRGINIA SOUTH GRID. THE CONTRACTOR SHALL EXAMINE A COPY OF THE SAID SURVEY AND VISIT THE SITE IN ORDER TO DETERMINE TO HIS SATISFACTION THE QUANTITIES OF WORK TO BE PERFORMED.

3. UNLESS OTHERWISE NOTED, ALL ELEVATIONS FOR GRAVITY, STORM AND SANITARY SEWER PIPES ARE INVERTS AND ALL ELEVATIONS FOR PRESSURE WATER OR FORCE MAINS ARE TOP OF PIPE ELEVATIONS.

4. THESE DRAWINGS SHOW INFORMATION REGARDING UNDERGROUND UTILITIES WHICH EXIST OR MAY EXIST ALONG THE LINES OF WORK. THE LOCATION OF UTILITIES SHOWN HAS BEEN PROVIDED FROM THE BEST AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO HIS SATISFACTION PRIOR TO CONSTRUCTION. THE OWNER SHALL BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION. IF THE CONTRACTOR RELIES ON SAID INFORMATION, HE DOES SO AT HIS OWN RISK. THE GIVING OF THE INFORMATION ON THESE DRAWINGS DOES NOT CONSTITUTE A WARRANTY OF THE ACCURACY OF HIS DECLARATIONS TO SUPPORT AND PROTECT ALL EXISTING UTILITIES AND APPURTENANCES. SHOULD ANY EXISTING UTILITIES BE DAMAGED BY THE CONTRACTOR, THE CONTRACTOR SHALL REPAIR THE DAMAGE CAUSED, TO THE UTILITY OWNER'S SATISFACTION. AT THE CONTRACTOR'S EXPENSE, THE CONTRACTOR SHALL SPECIFICALLY ADDRESS ANY CONFLICTS WITH A&N ELECTRIC POWER LINES AND VERIZON AND OTHER CARRIERS' TELECOMMUNICATION LINES AS PART OF THE WORK BID.

5. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THESE DRAWINGS AND SPECIFICATIONS, AND TO ALL APPLICABLE REQUIREMENTS OF THE TOWN OF BERLIN, WORCESTER COUNTY, MARYLAND STATE HIGHWAY DEPARTMENT, MARYLAND DEPARTMENT OF THE ENVIRONMENT AND ANY OTHER REGULATORY BODY THAT JURISDICTION.

6. ALL DISTURBED AREAS SHALL BE SMOOTHLY GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM PROPOSED PIPES AND/OR STRUCTURES AND SHALL BE STABILIZED WITH TOPSOIL, SEED AND MULCH, EXCEPT IN AREAS CALLING FOR PAVING. IF SETTLEMENT OCCURS, THE AREA OF SETTLEMENT SHALL BE RESTORED TO GRADE, RESEEDED AND REMULCHED TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST. THE CONTRACTOR SHALL PROVIDE SEED TYPE AS SPECIFIED.

7. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY DEVIATIONS FROM THESE DRAWINGS AND SPECIFICATIONS.

8. THE CONTRACTOR SHALL PROVIDE NECESSARY STAKEOUT OF LINE AND GRADE FOR CONSTRUCTION.

9. THE OWNER RESERVES THE RIGHT TO AWARD OTHER CONTRACTS OR PERFORM OTHER WORK IN THE VICINITY OF WORK DESIGNATED ON THESE DRAWINGS. THE CONTRACTOR SHALL COOPERATE WITH AND COORDINATE HIS OPERATIONS WITH OTHER CONTRACTORS OR WORKMEN EMPLOYED BY THE COUNTY, ANPCD AND VDOT.

10. NO INFORMATION REGARDING DEPTH TO ANY TEMPORARY OR PERMANENT GROUND WATER TABLE IS PROVIDED ON THESE DRAWINGS AS IT RELATES TO EXCAVATION OR INSTALLATION OF UTILITIES IN TRENCHES. THE CONTRACTOR SHALL INVESTIGATE TO HIS SATISFACTION THE SITE CONDITIONS REGARDING THE DEPTH TO GROUND WATER. THE DESIGN OF FOUNDATION AND STRUCTURE CONSTRUCTION SHALL BE PROSECUTED IN DEWATERED STATE CONSISTENT WITH GOOD CONSTRUCTION PRACTICES. ALL EXCAVATIONS FOR JUNCTION BOXES AND OTHER CHAMBERS SHALL BE CONTINUALLY DEWATERED UNTIL THE BACKFILL OPERATION HAS BEEN COMPLETED. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR TEST PITTING.

11. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.

12. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING, TWO (2) DAYS PRIOR TO BEGINNING ANY WORK SHOWN ON THESE DRAWINGS:

 A) WORCESTER COUNTY DPW ROADS DIVISION (410) 632-2244

 B) MISS UTILITY (800) 257-7777

 C) J. W. SALM ENGINEERING, INC. (410) 641-0126

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS RESULTING FROM ANY EARTH MOVING AND/OR TEMPORARY STOCKPILING OF EARTH OR OTHER MATERIALS ON SITE.

14. THESE DRAWINGS, THE DESIGN AND CONSTRUCTION FEATURES DISCLOSED ARE PROPRIETARY TO J.W. SALM ENGINEERING, INC. AND SHALL NOT BE ALTERED OR REUSED WITHOUT WRITTEN PERMISSION. COPYRIGHT, LATEST DATE HEREON, ANY DRAWING, REPRODUCTION, PLOT, ETC., WITHOUT A WET INK SIGNATURE AND SEAL IS NOT CERTIFIED AS TO ACCURACY AND AUTHENTICITY.

15. COMPACTION FOR ALL AREAS WITHIN THE PROJECT LIMITS SHALL BE: 98% OF MODIFIED PROCTOR DENSITY AT +/ 2.5% OF OPTIMUM MOISTURE CONTENT.

LEGEND

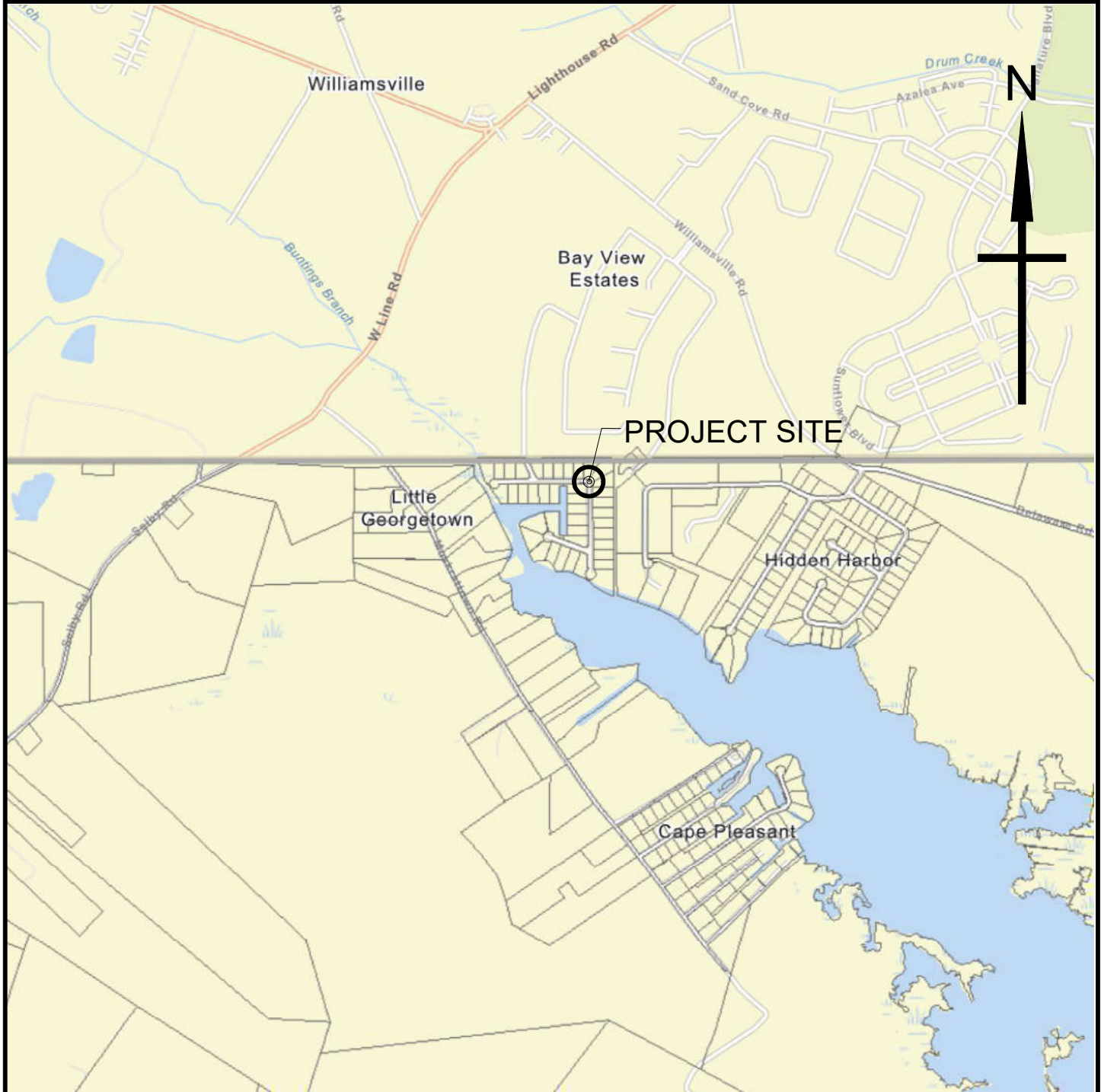
EXISTING FEATURES

RIGHT-OF-WAY LINE	
TREE LINE	
ADJACENT PARCEL LINE	
TOP OF BANK	
CONTOUR LINE	
EDGE OF GRAVEL	
STORMDRAIN	
EDGE OF PAVEMENT	
MEAN HIGH WATER LINE	
MEAN LOW WATER LINE	
SPOT ELEVATION	
RIP RAP	

PROPOSED FEATURES

SHEET PILES

LIMIT OF PAVEMENT REPAIR




VICINITY MAP
SCALE: 1 IN. = 1,600 FT.

INDEX OF DRAWINGS:



<u>DRAWING NO.:</u>	<u>SHEET NO.</u>	<u>TITLE:</u>
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542-01-002	2 OF 5	EXISTING CONDITIONS PLAN
542-01-003	3 OF 5	SITE PLAN
542-01-004	4 OF 5	SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN
542-01-005	5 OF 5	DETAILS AND NOTES

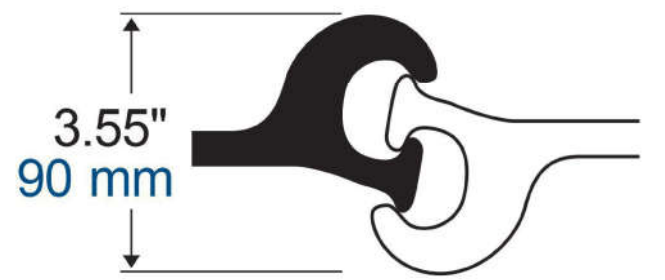
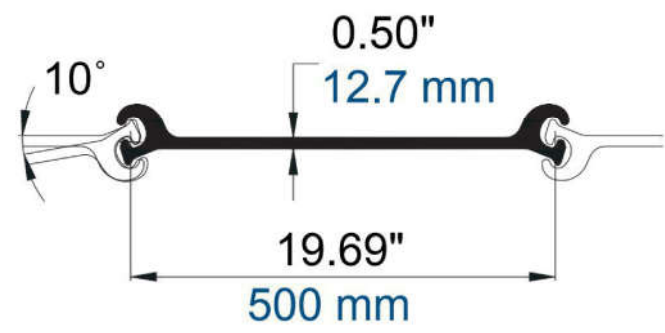
<p><u>OWNER/APPLICANT/DEVELOPER:</u></p> <p>WORCESTER COUNTY DPW ROADS DIVISION</p> <p>5764 WORCESTER HIGHWAY SNOW HILL, MD 21863 PHONE : 410.632.2244</p>	<p><u>ENGINEER:</u></p> <p>J. W. SALM ENGINEERING, INC.</p> <p>P.O. BOX 397, 9842 MAIN STREET, SUITE 3 BERLIN, MD 21811 PHONE : 410.641.0126</p>	<p><u>SURVEYOR:</u></p> <p>CORNERSTONE SURVEYING, INC.</p> <p>38843 WISTERIA LANE SELBYVILLE, DE 19975 PHONE : 302.236.7807</p>
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<div>I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF THEY COMPLY WITH ALL THE REQUIREMENTS OF THE PROFESSIONAL ENGINEERING ACT AND THE LAWS OF THE STATE OF MARYLAND. MY EXPIRATION DATE: 06/03/2026</div>	<div>JOHN W. SALMI, III</div> <div></div> <div>6/4/25</div> <div>MARYLAND PROFESSIONAL ENGINEERING LICENSE NO. 19731</div>	<div>DESIGNED BY:</div> <div>JJR</div>	<div>REVISIONS</div> <div><div>⚠</div>6/4/25</div>	<div>COVER SHEET, SITE DATA, INDEX & VICINITY MAP</div>			
		<div>DRAWN BY:</div> <div>LFG</div>	<div>WORCESTER COUNTY DPW COVE LANDING ROAD CULVERT REHABILITATION</div>				
			<div>THIRD TAX DISTRICT BISHOPVILLE WORCESTER COUNTY MARYLAND</div> <div>J. W. SALM ENGINEERING, INC.</div> <div>P.O. BOX 397, 9842 MAIN STREET, SUITE 3 BERLIN, MD 21811</div>				
		<div>CHECKED BY:</div> <div>JWS3</div>	<div>SCALE:</div> <div>N.T.S.</div>	<div>DATE:</div> <div>MAR 2025</div>	<div>DRAWING NO.:</div> <div>542-01-001</div>	<div>SHEET NO.:</div> <div>1 of 5</div>	

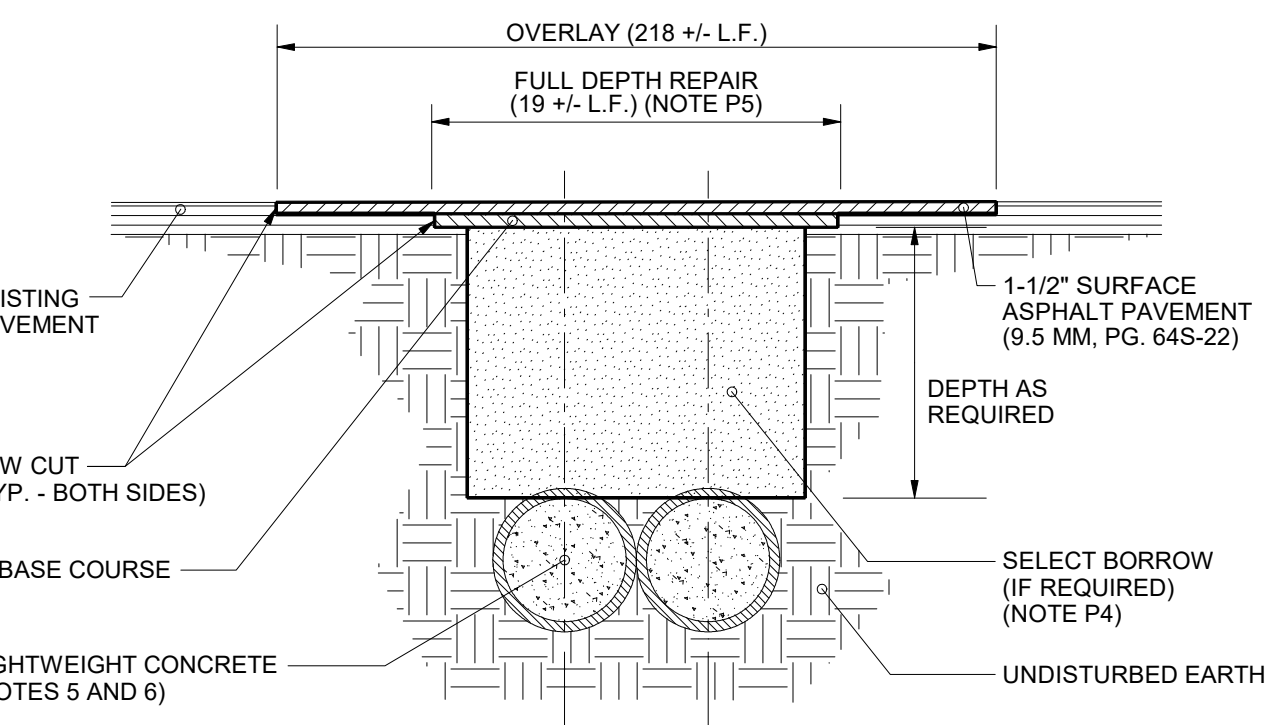


2) ALL EXISTING CONDITIONS AND ALIGNMENTS SHOWN ARE BASED ON THE TOPOGRAPHIC SURVEY PERFORMED BY CORNERSTONE SURVEYING, INC. DATED FEBRUARY 6, 2024. THE SURVEYOR ADDED THE PRESUMED EQUALIZING CULVERT LOCATIONS BASED ON THE FINDINGS OF THE TEST PIT EXCAVATED ON APRIL 8, 2024. ELEVATIONS SHOWN ARE IN THE MARYLAND DATUMS OF THE MARYLAND GRID NAD '83. THE CONTRACTOR SHALL EXAMINE A COPY OF THE SAID SURVEY AND VISIT THE SITE IN ORDER TO DETERMINE TO HIS SATISFACTION THE QUANTITIES OF WORK REQUIRED TO BE PERFORMED.

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND TO THE BEST OF MY KNOWLEDGE THEY COMPLY WITH ALL REQUIREMENTS OF THE PROFESSIONAL ENGINEERING ACT. A MARYLAND LICENSED PROFESSIONAL ENGINEER LICENSE NO. 97031 - EXPIRATION DATE 08/2026		DESIGNED BY: JJR DRAWN BY: LFG CHECKED BY: JWS3	REVISIONS <div>  6/4/25 </div>	<h2>EXISTING CONDITIONS PLAN</h2>			
				WORCESTER COUNTY DPW			
				COVE LANDING ROAD CULVERT REHABILITATION			
				THIRD TAX DISTRICT BISHOPVILLE WORCESTER COUNTY MARYLAND			
				J. W. SALM ENGINEERING, INC.			
				P.O. BOX 397, 9842 MAIN STREET, SUITE 3 BERLIN, MD 21811			
	6/4/25 <small>MARYLAND PROFESSIONAL ENGINEER LICENSE NO. 19731</small>			SCALE: 1" = 20'	DATE: MAR. 2025	DRAWING No.: 542-01-002	SHEET No.: 2 of 5

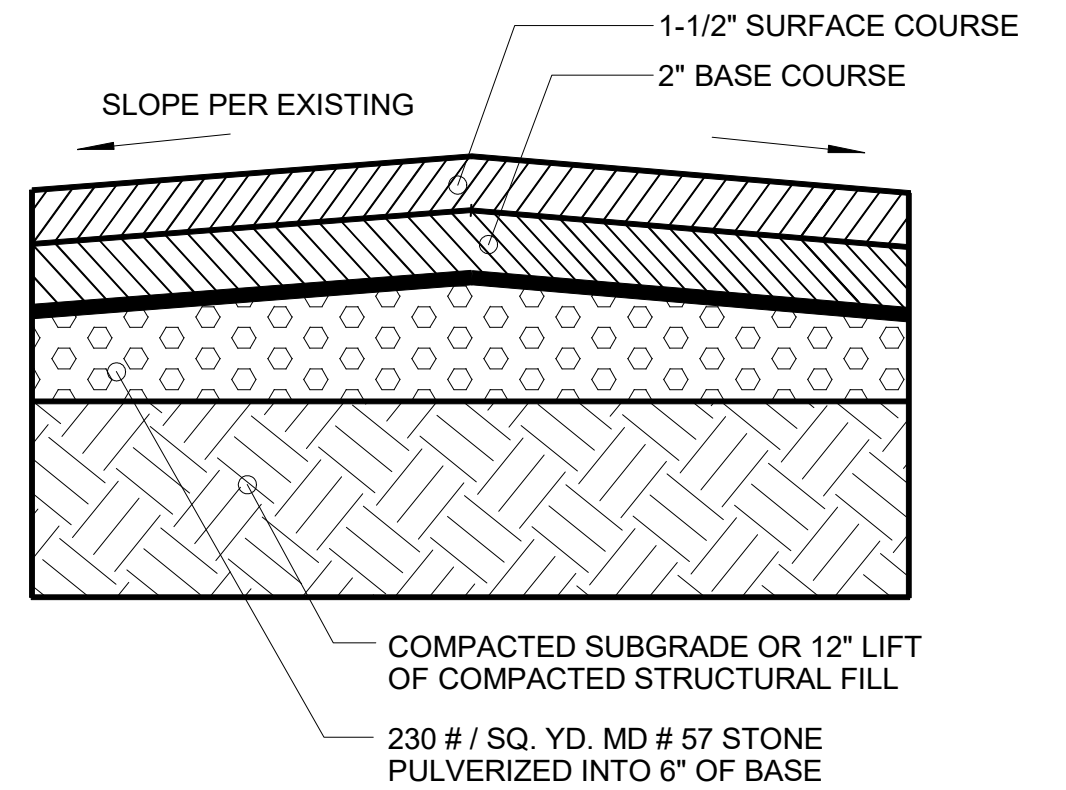
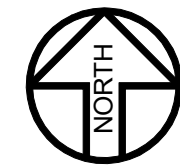
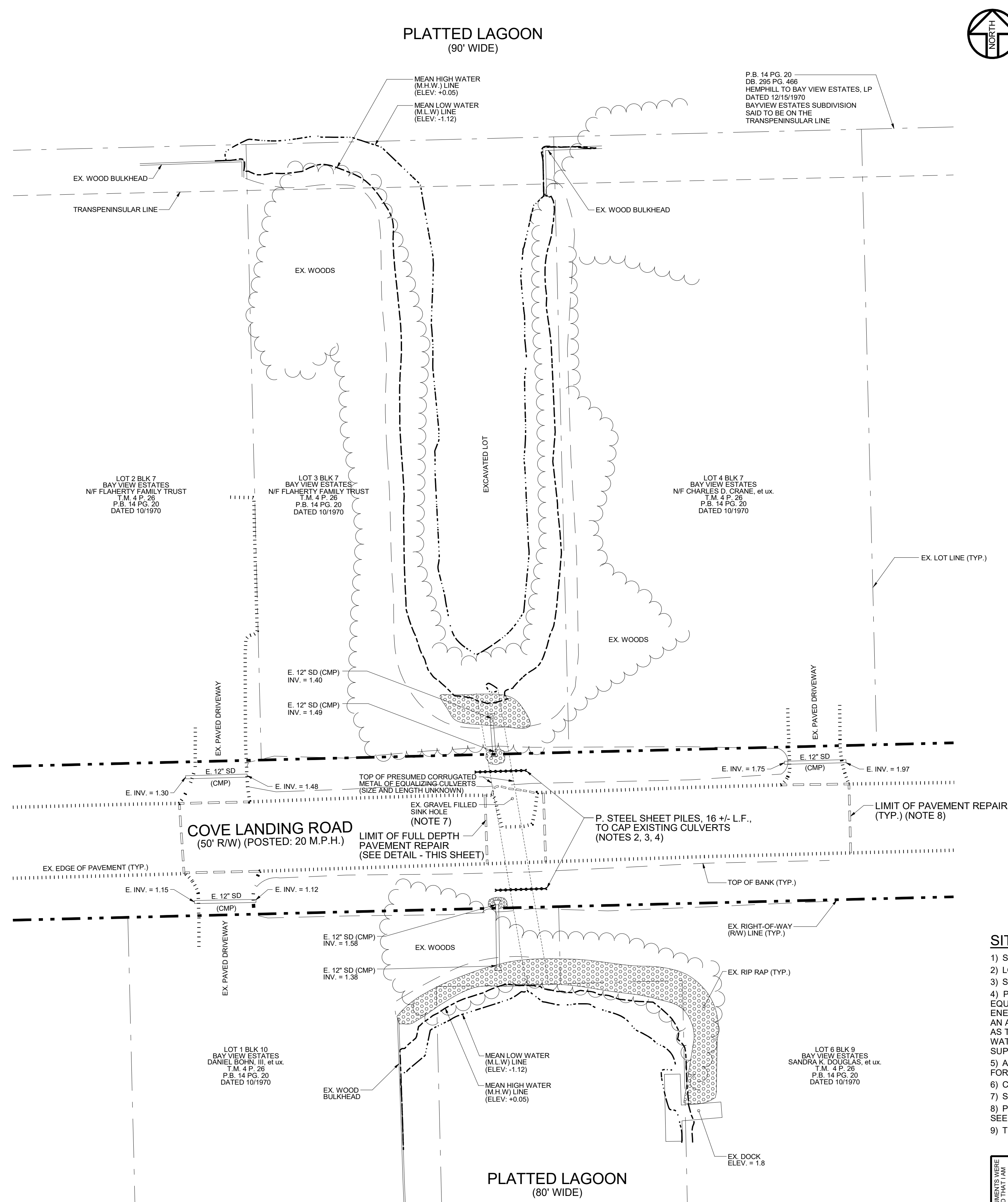


SHEET PILE SPECIFICATION
NOT-TO-SCALE



- NOTES:**
- P1) PAVEMENT REPAIR SHALL BE PERFORMED TO THE SATISFACTION OF WORCESTER COUNTY AND THE ENGINEER.
- P2) CONTRACTOR SHALL MEET ON-SITE WITH WORCESTER COUNTY DEPARTMENT OF PUBLIC WORKS, ROADS DIVISION AND THE ENGINEER PRIOR TO PERFORMING ANY WORK ON COUNTY ROADS.
- P3) ALL BACKFILL AND COMPACTION SHALL BE PERFORMED ONLY IN THE PRESENCE OF THE ENGINEER OR A REPRESENTATIVE OF THE WORCESTER COUNTY DEPARTMENT OF PUBLIC WORKS, ROADS DIVISION.
- P4) COMPACT EXISTING SUITABLE MATERIAL OR SELECT FILL IN 6" LIFTS TO 98% OF MODIFIED PROCTOR DENSITY AT +/-2% OF OPTIMUM MOISTURE CONTENT.
- P5) FULL DEPTH PAVEMENT REPAIR SHALL EXTEND 2-FEET ON EITHER SIDE OF THE EXCAVATION WIDTH, AND SHALL BE CONSTRUCTED FOR THE FULL ROADWAY WIDTH.

PAVEMENT REPAIR AND OVERLAY DETAIL
NOT-TO-SCALE

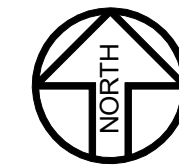
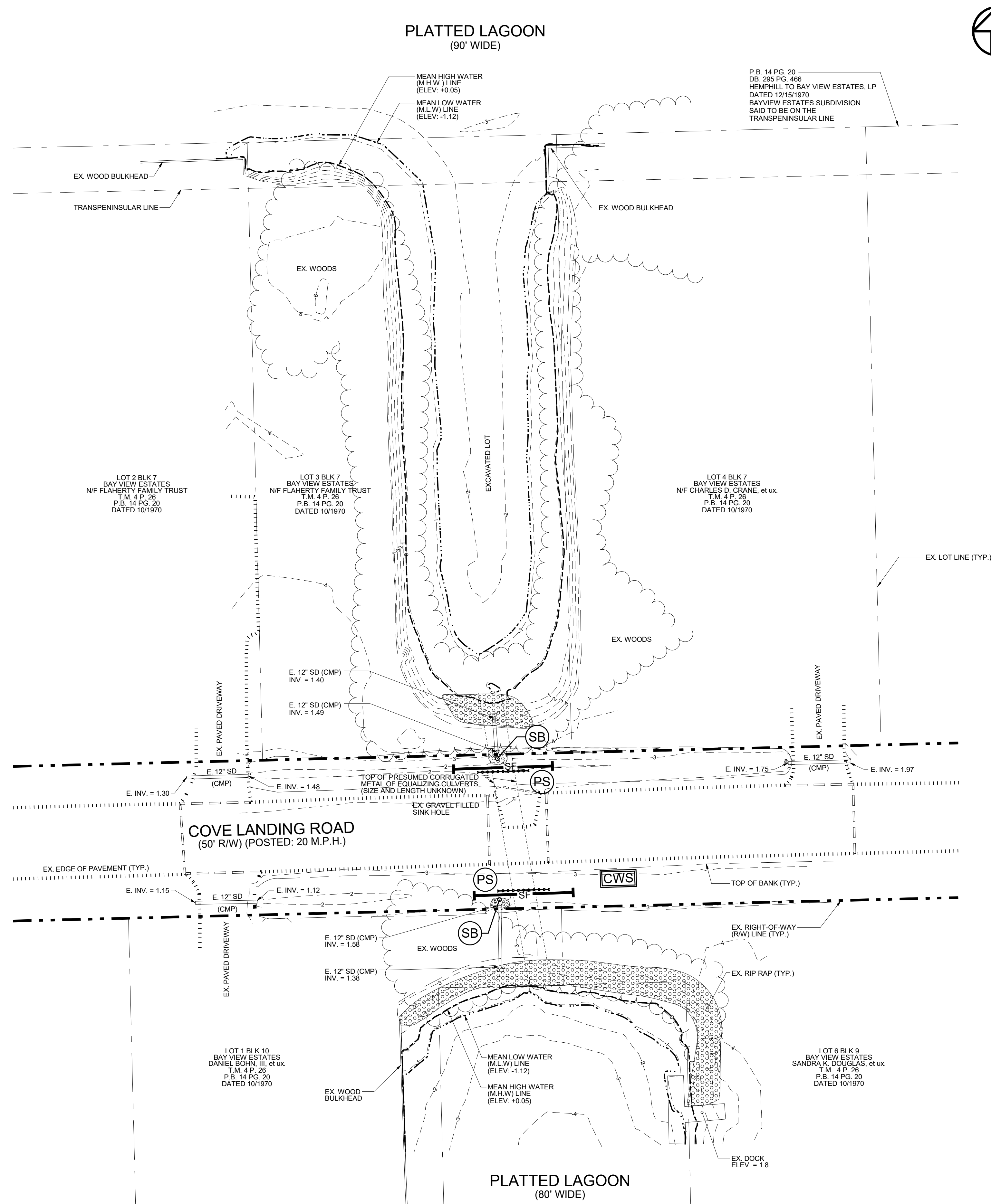


**WORCESTER COUNTY
PAVEMENT SECTION DETAIL**
NOT-TO-SCALE

SITE PLAN NOTES:

- 1) SEE COMPLETE LEGEND ON SHEET 1.
- 2) LOCATION OF PROPOSED DRIVEN STEEL SHEET PILES.
- 3) STEEL SHEET PILES SHALL BEAR AT A MINIMUM DEPTH OF 16 FEET BELOW THE GROUND SURFACE.
- 4) PILES SHALL BE DRIVEN BY STEAM, AIR OR DIESEL HAMMERS. NO DROP HAMMERS WILL BE ALLOWED. DRIVING EQUIPMENT SHALL BE SINGLE OR DOUBLE ACTING STEAM, PNEUMATIC, OR DIESEL HAMMER WITH A RATED STRIKE ENERGY OF NOT LESS THAN 7,000 OR MORE THAN 20,000 FOOT-POUNDS PER BLOW. HAMMER SHALL BE EQUIPPED WITH AN ANVIL TO FIT THE TYPE OF PILE DRIVEN. HAMMER AND PILE SHALL BE SUPPORTED IN FIXED LEADS ARRANGED SO AS TO HOLD THE PILE FIRMLY IN POSITION AND REMAIN CONCENTRIC WITH THE ANVIL WHILE BEING DRIVEN. USE OF WATER JETTING WILL NOT BE PERMITTED. DRIVING OF PILES SHALL BE UNDER THE DIRECTION OF QUALIFIED COMPETENT SUPERVISION WITH ALL NECESSARY RECORDS AND DATA COMPILED FOR SUBMISSION TO THE ENGINEER OF RECORD.
- 5) AFTER DRIVING SHEET PILES, USE EXISTING GRAVEL FILLED SINKHOLE, LOCATED WITHIN THE PAVED RIGHT-OF-WAY, FOR PUMPING LIGHTWEIGHT CONCRETE INTO THE ABANDONED EQUALIZING CULVERTS.
- 6) CONCRETE SHALL BE A LIGHTWEIGHT CONCRETE WITH A 28-DAY MINIMUM COMPRESSIVE STRENGTH OF 1,500 PSI.
- 7) SEE PAVEMENT REPAIR AND OVERLAY DETAIL ON THIS SHEET.
- 8) PAVEMENT REPAIR LIMITS EXTEND 100 FT. TO EACH SIDE OF THE CENTERLINE OF EXISTING LOCATION OF CULVERTS. SEE WORCESTER COUNTY PAVEMENT SECTION DETAIL ON THIS SHEET.
- 9) THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL, SEE DETAIL ON SHEET 4.

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 19731, EXPIRATION DATE: 08/03/2026		DESIGNED BY:	REVISIONS	SITE PLAN			
		JJR	<div>△ 5/29/25</div> <div>△ 6/4/25</div>				
		DRAWN BY:		WORCESTER COUNTY DPW COVE LANDING ROAD CULVERT REHABILITATION THIRD TAX DISTRICT BISHOPVILLE WORCESTER COUNTY MARYLAND J. W. SALM ENGINEERING, INC. P.O. BOX 397, 9842 MAIN STREET, SUITE 3 BERLIN, MD 21811			
		LFG					
CHECKED BY:		SCALE:	DATE:	DRAWING No.:	SHEET No.:		
JWS3		1" = 20'	MAR. 2025	542-01-003	3 of 5		



SESC SYMBOLS / LEGEND

SILT FENCE	SF
PERMANENT SEEDING	PS
STRAW BALE	SB
CONCRETE WASHOUT	CWS

PLAN



SCALE: 1" = 20'

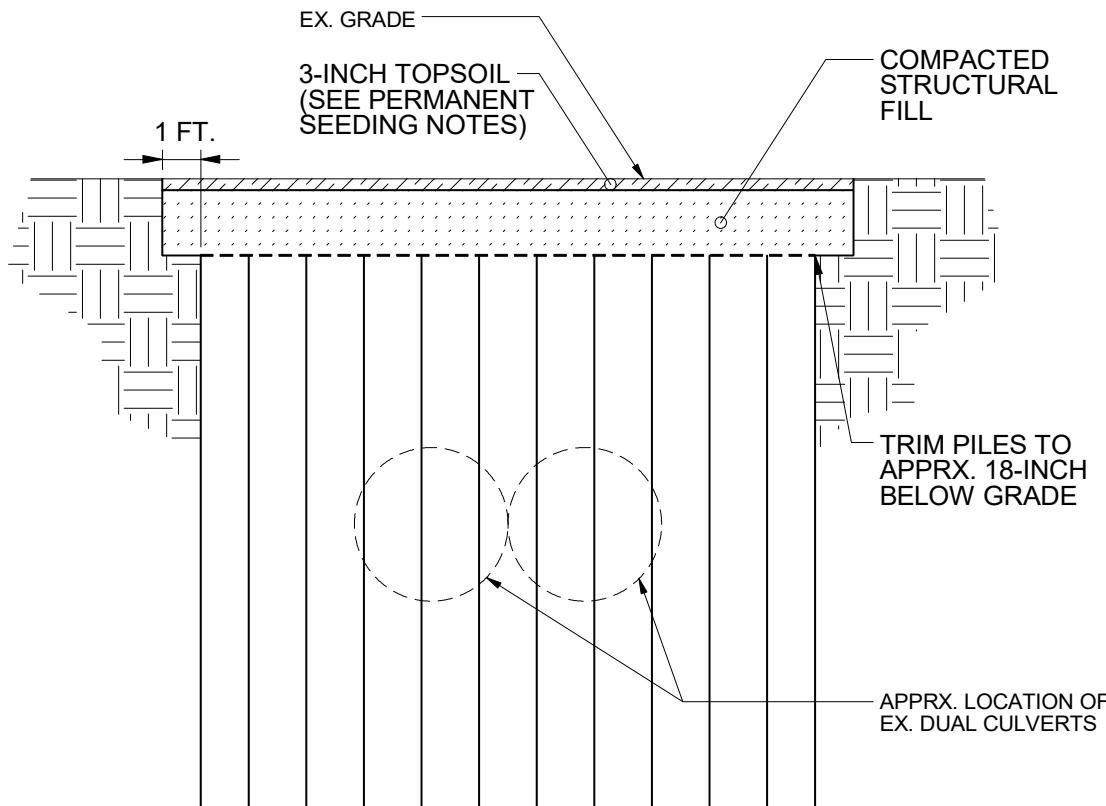
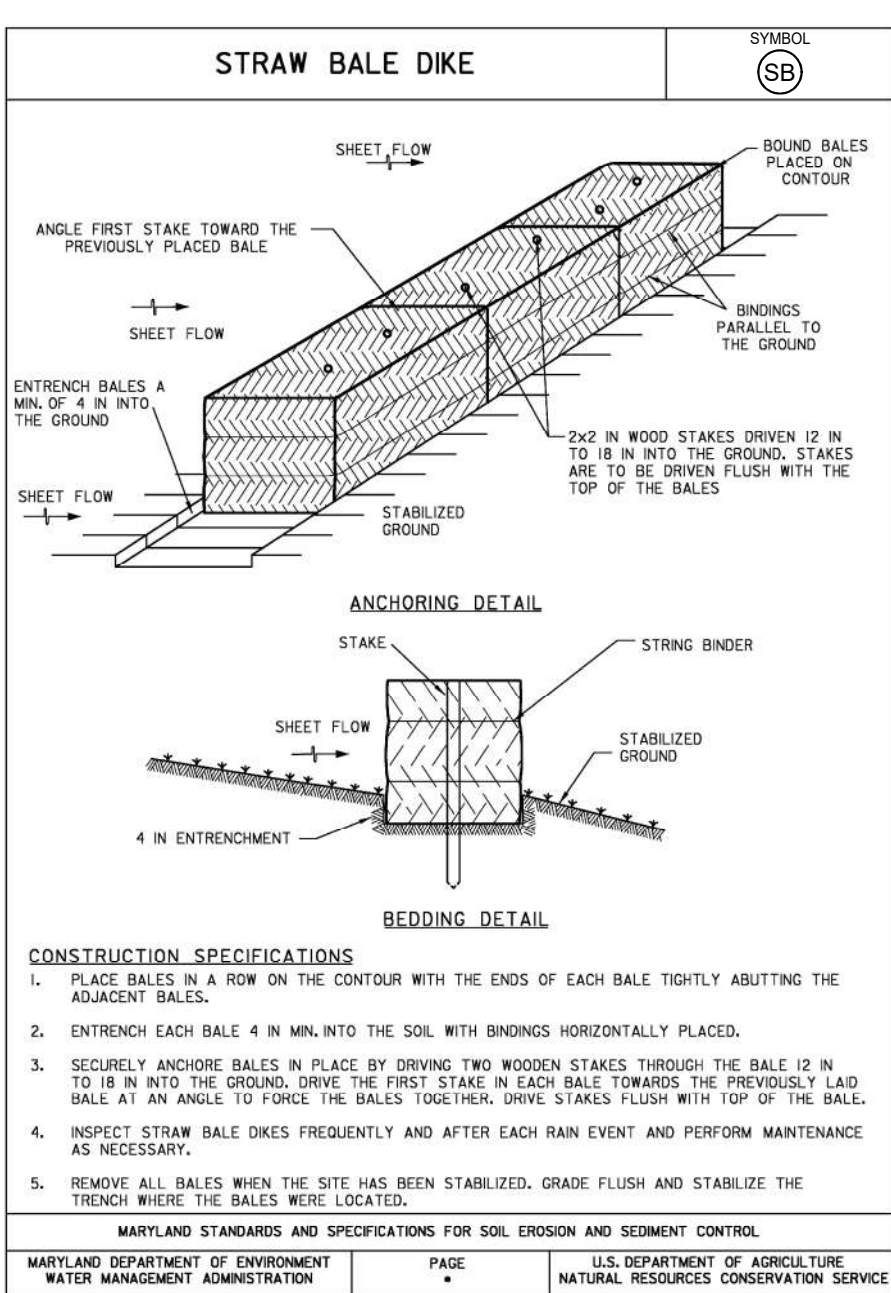
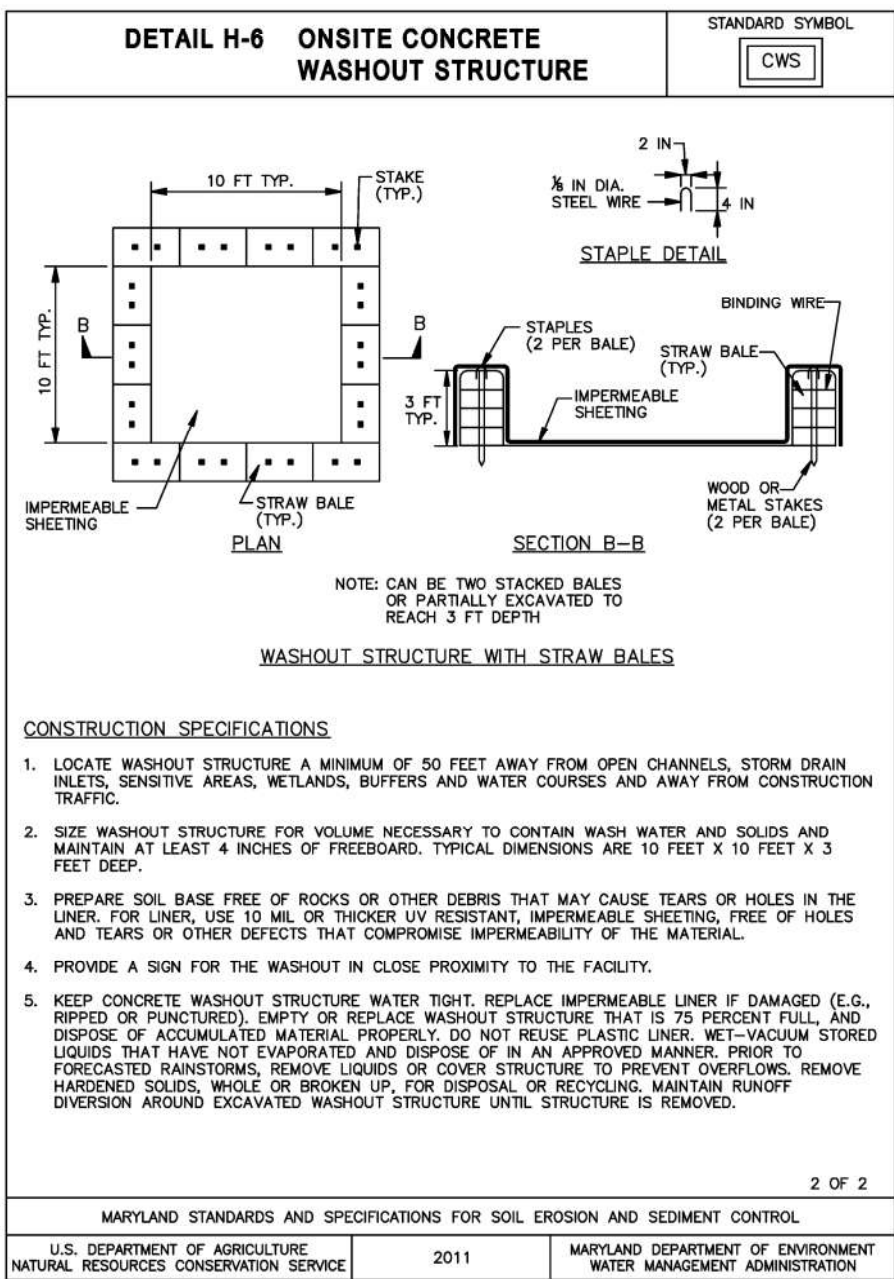


LIMIT OF DISTURBANCE (LOD): 1,316 +/- S.F.
(0.03 +/- AC.)

SOIL EROSION AND SEDIMENT CONTROL NOTES:

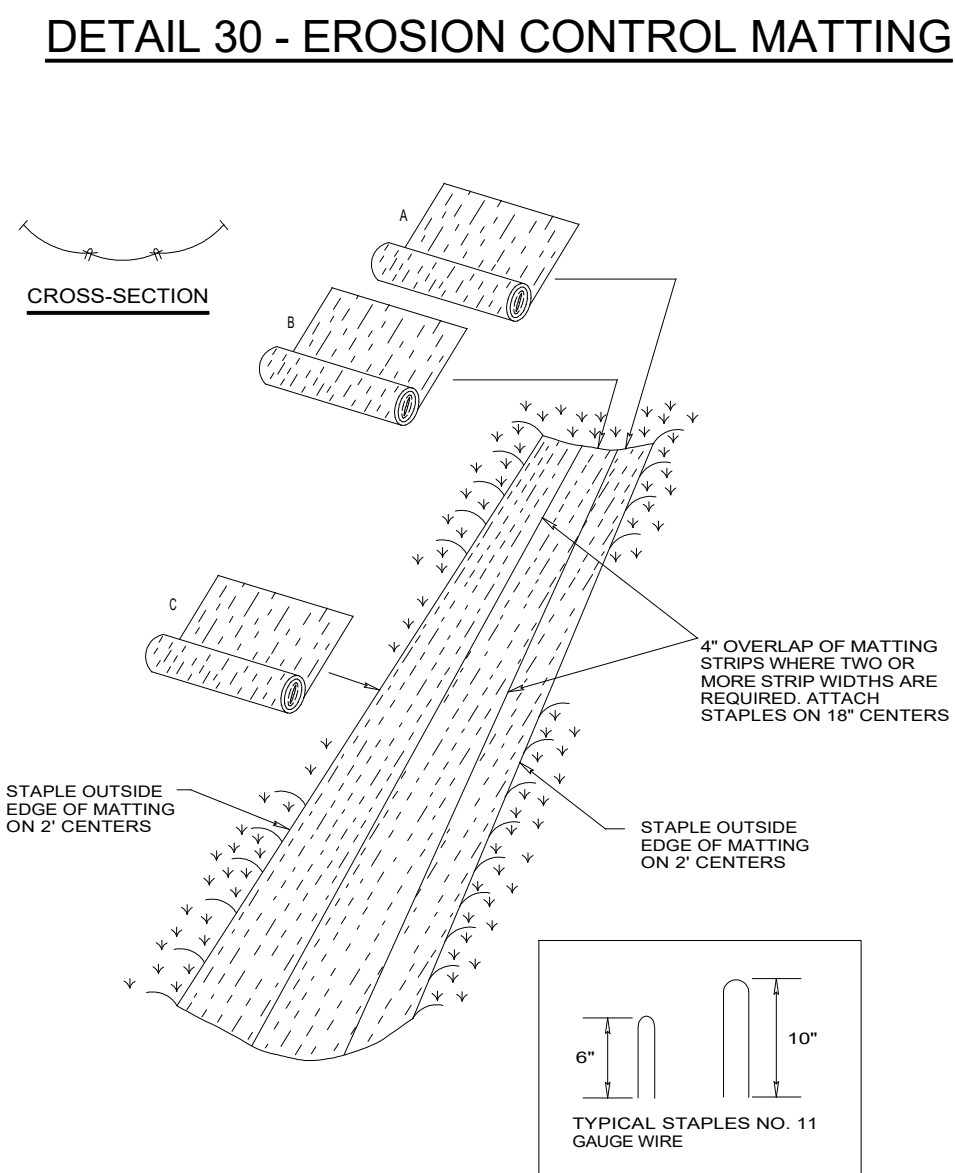
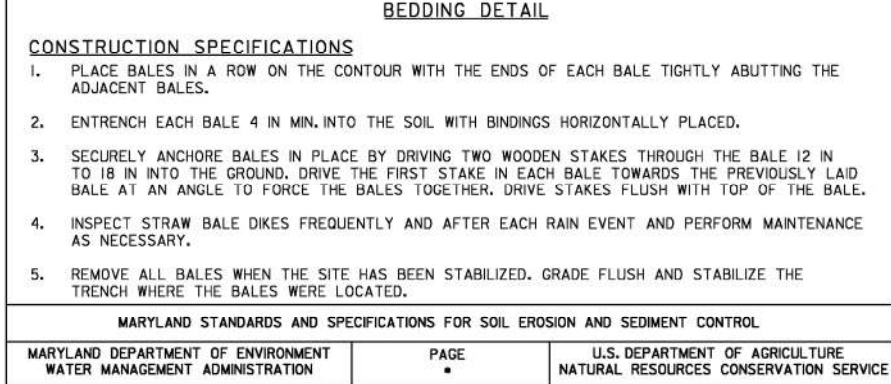
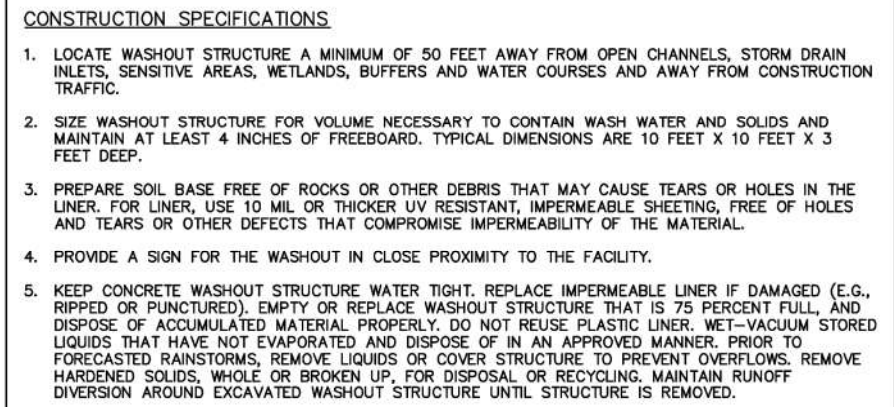
1) THE PROJECT SHALL BE IN COMPLIANCE WITH ALL SECTIONS OF THE ANNOTATED CODE OF MARYLAND, ENVIRONMENTAL ARTICLE, SUBTITLE 1. SEDIMENT CONTROL 4-101 THROUGH 4-116, COMAR 26.17.01.11 AND THE 2012 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

<div>THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 19731. EXPIRATION DATE: 08/03/2026</div> <div><div>6/4/25</div><div>MARYLAND PROFESSIONAL ENGINEER (LICENSE NO. 19731)</div></div>	JOHN W. SALM, III	DESIGNED BY:	REVISIONS	SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN			
	JJR	<div> 6/4/25</div>	WORCESTER COUNTY DPW				
	DRAWN BY:		COVE LANDING ROAD CULVERT REHABILITATION				
	LFG		THIRD TAX DISTRICT BISHOPVILLE WORCESTER COUNTY MARYLAND				
	CHECKED BY:		J. W. SALM ENGINEERING, INC.				
JWS3		P.O. BOX 397, 9842 MAIN STREET, SUITE 3 BERLIN, MD 21811					
		SCALE:	DATE:	DRAWING No.:	SHEET No.:		
		1" = 20'	JUNE 2025	542-01-004	4 of 5		



SHEET PILE DETAIL
NOT-TO-SCALE

Seed Mixture (For Hardness Zone 7b) (From Table 25)					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P205	K20	
10.	Tall Fescue Hard Fescue	120 30	3/1 - 5/15 8/15 - 11/15	1"-2"	90 lb/ac (2.0 lb/ 1000 sf)	175 lb/ac (4 lb/ 1000 sf)	175 lb/ac (4 lb/ 1000 sf)	2 tons/ac (100 lb/ 1000 sf)
11.								
12.								



1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum cut), or 1 3/4" diameter (minimum) round. Posts shall be spaced at a maximum of 10 feet and meet standard T or U section weighting not less than 100 pound per linear foot.
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and comply with the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/(in. min.)	Test: MSMT 509
Tensile Modulus	20 lb/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal / ft / minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322
3. Where ends of geotextile fabric connect together, they shall be overlapped, folded and stapled to the fence post every 10 feet.
4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric height.