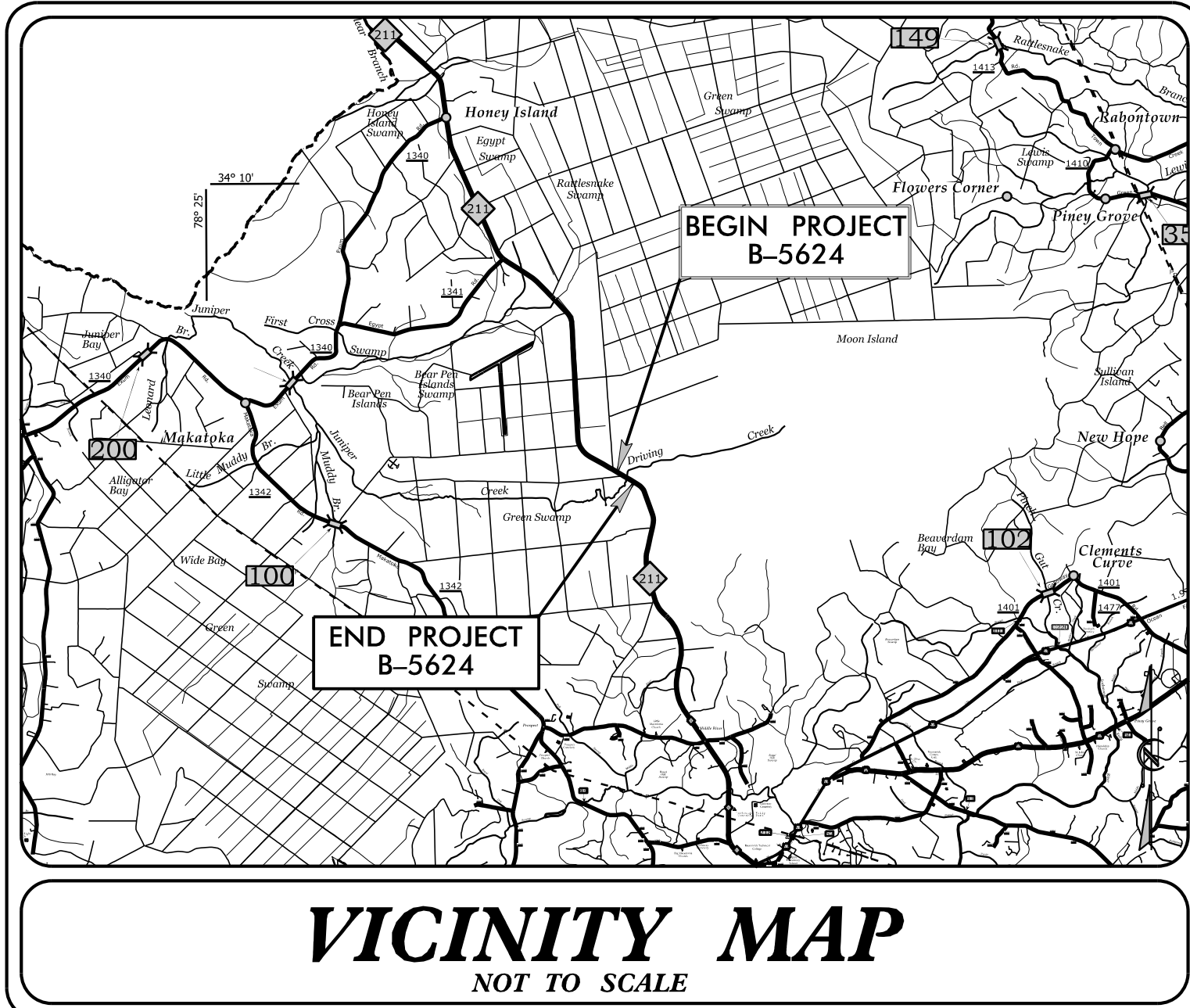


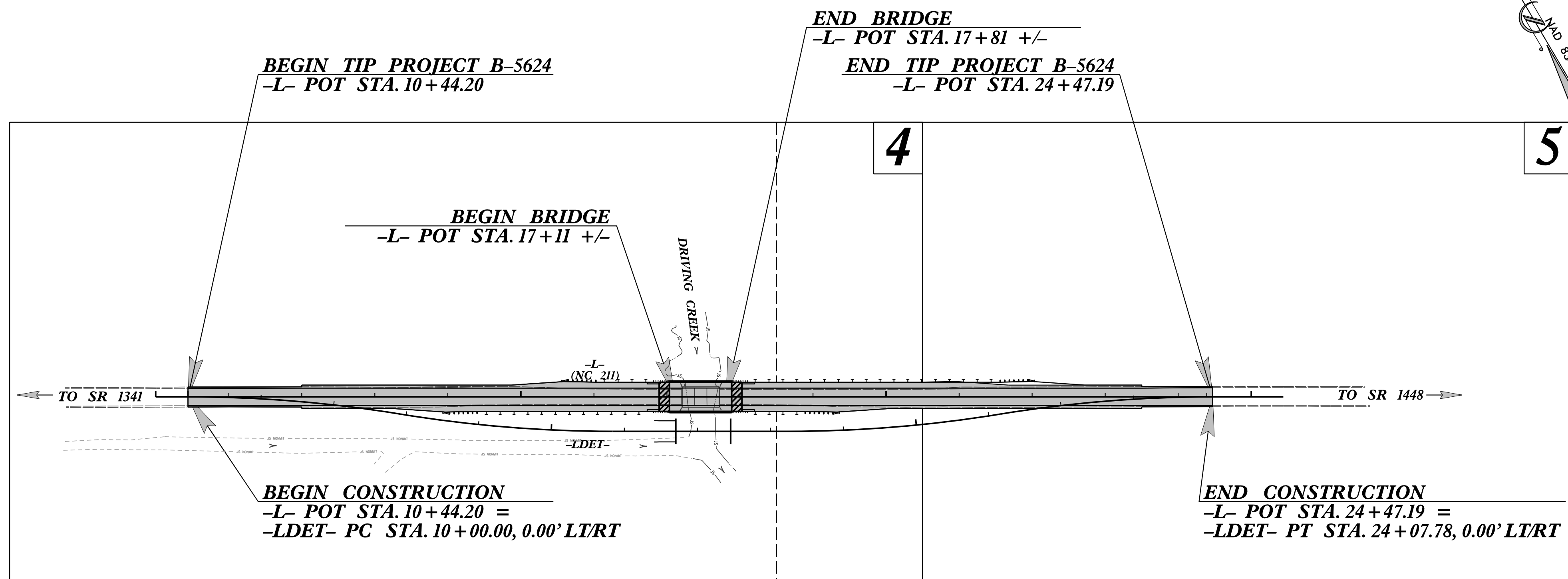
TIP PROJECT: B-5624



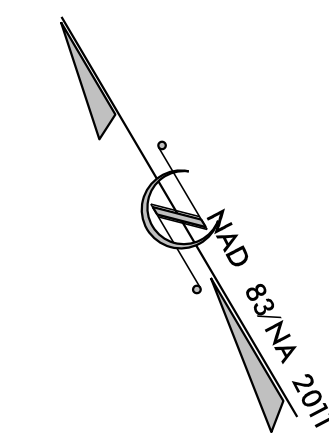
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL
BRUNSWICK COUNTY

LOCATION: REPLACE BRIDGE NO. 57 OVER DRIVING CREEK
ON NC 211 (GREEN SWAMP ROAD NW)

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE



NOTE:
THE OUTSIDE BUFFER, WETLAND, OR WATER BOUNDARY SHALL BE CLEARLY MARKED BY HIGHLY VISIBLE FENCING (ORANGE SAFETY FENCE).



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5624	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45579.1.1	NA	PE	

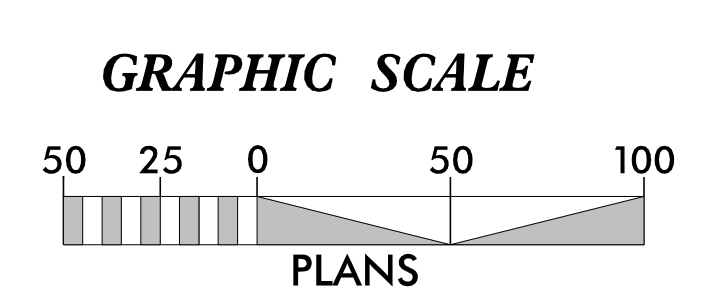
EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	▲▲▲
1622.01	Temporary Berms and Slope Drains	▲▲▲
1630.02	Silt Basin Type B	▨
1633.01	Temporary Rock Silt Check Type-A	▨
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	▨
1633.02	Temporary Rock Silt Check Type-B	▶
	Wattle / Coir Fiber Wattle	◀
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	◀
1634.01	Temporary Rock Sediment Dam Type-A	▨
1634.02	Temporary Rock Sediment Dam Type-B	▨
1635.01	Rock Pipe Inlet Sediment Trap Type-A	⊓
1635.02	Rock Pipe Inlet Sediment Trap Type-B	⊓
1630.04	Stilling Basin	▭
1630.06	Special Stilling Basin	▭
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	▭
	Tiered Skimmer Basin	▭
	Infiltration Basin	▭

THIS PROJECT CONTAINS
EROSION CONTROL PLANS
FOR CLEARING AND
GRUBBING PHASE OF
CONSTRUCTION.

ENVIRONMENTALLY
SENSITIVE AREA(S) EXIST
ON THIS PROJECT

Refer To E. C. Special Provisions
for Special Considerations.



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH
THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000
GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019
AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF
ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.

Prepared in the Office of:
SUNGATE DESIGN GROUP, P.A.

905 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 859-2243
ENG FIRM LICENSE NO. C-890

Designed by:
MATTHEW C. EDWARDS, PE 3992
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2018 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

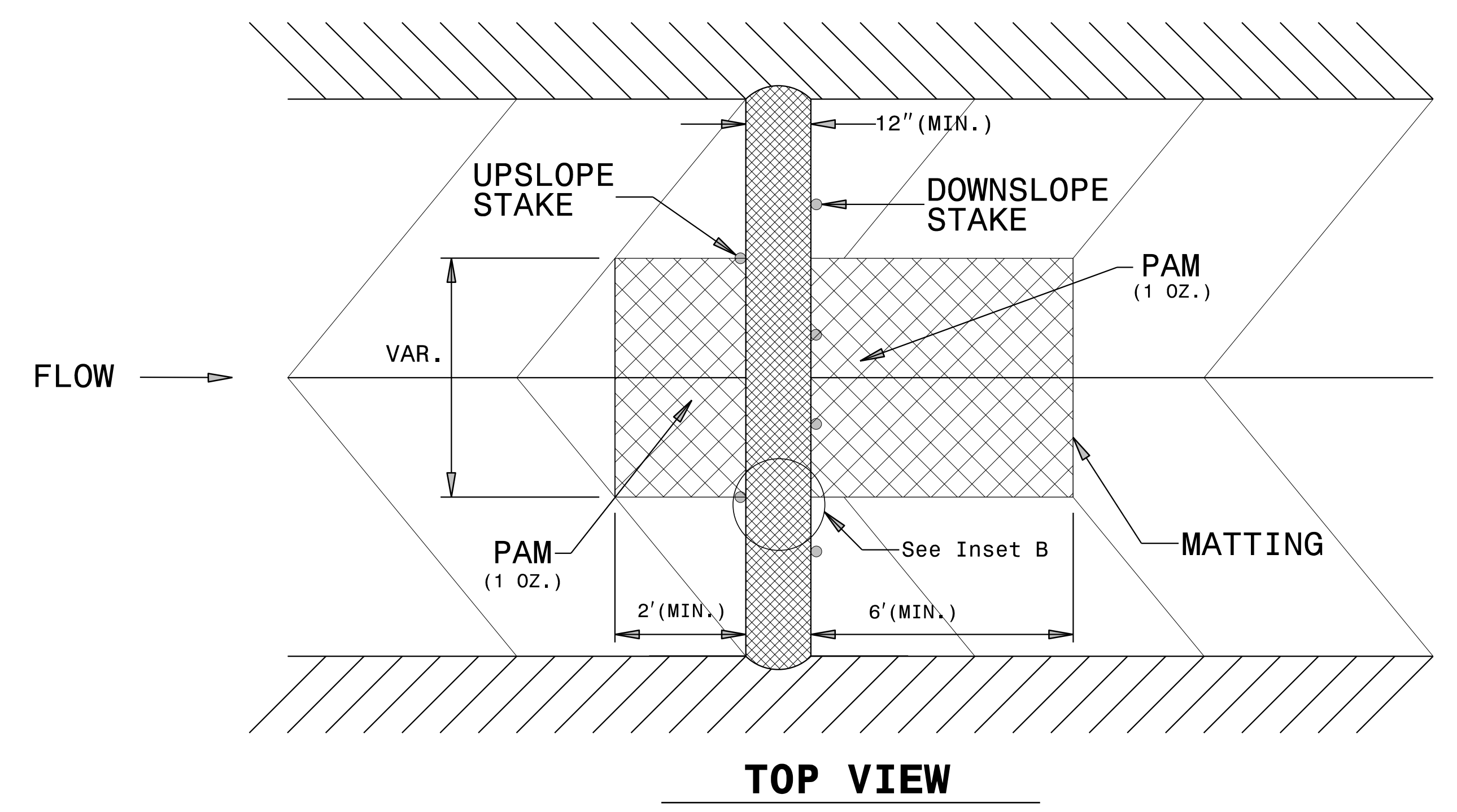
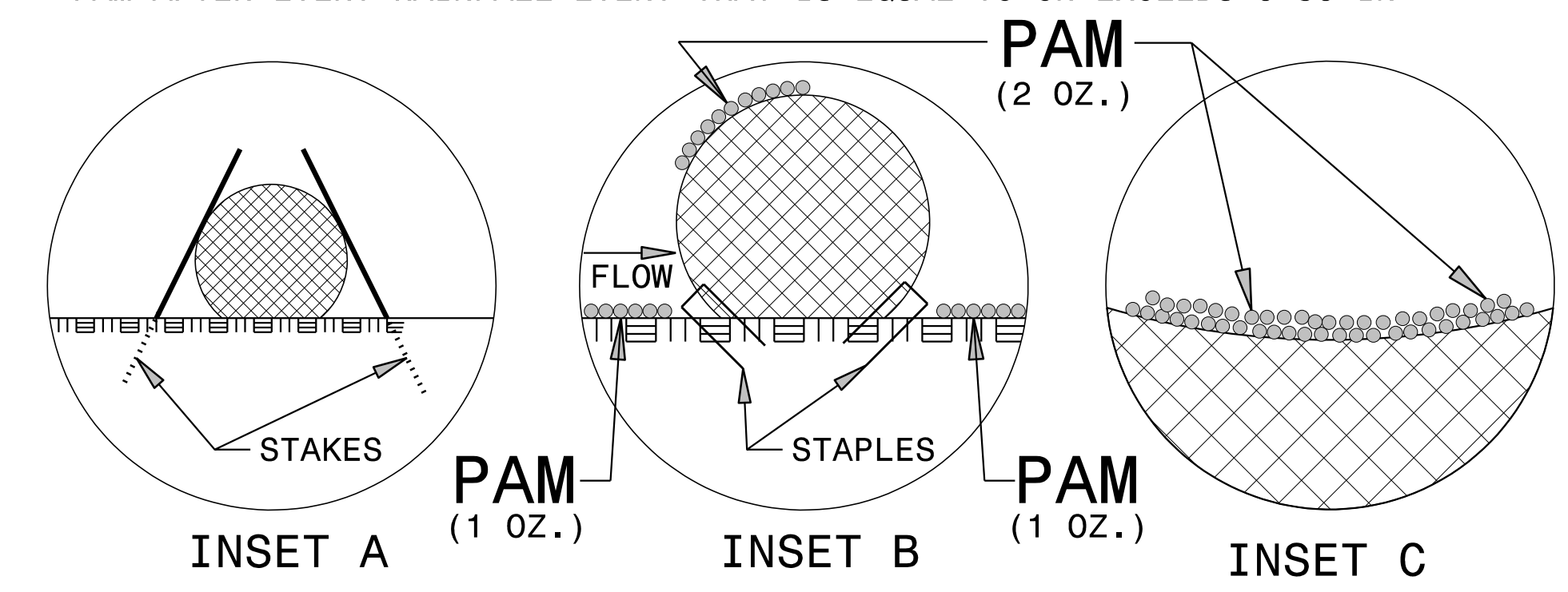
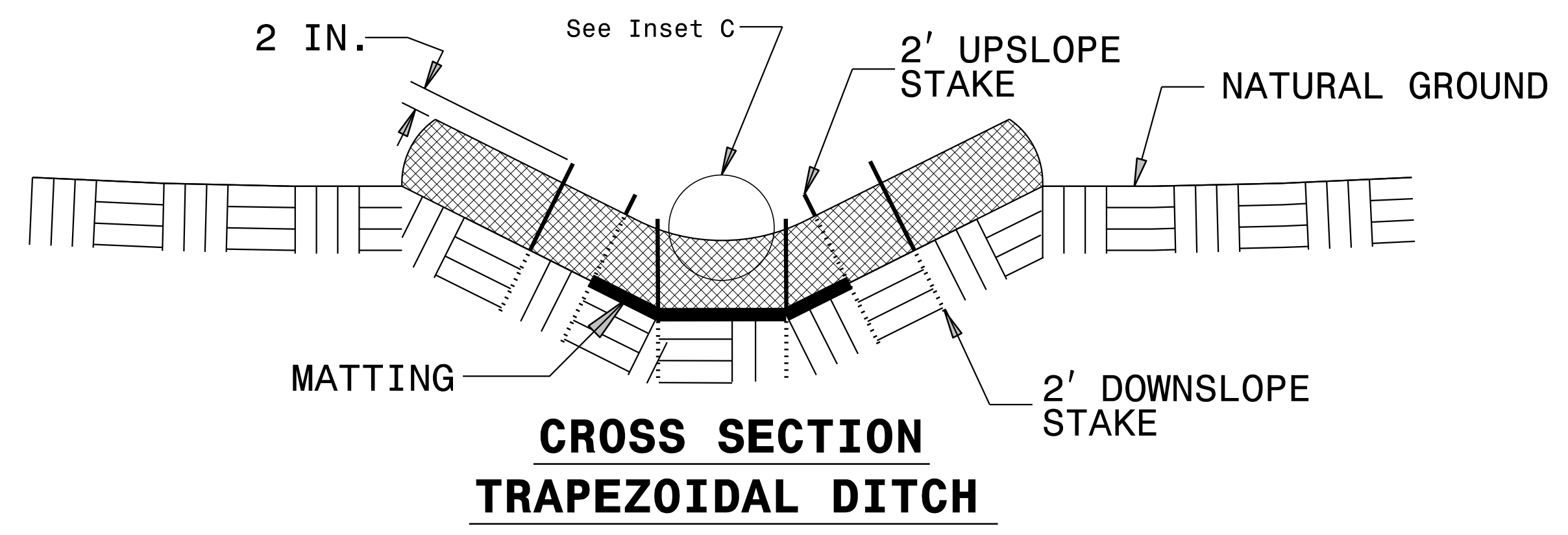
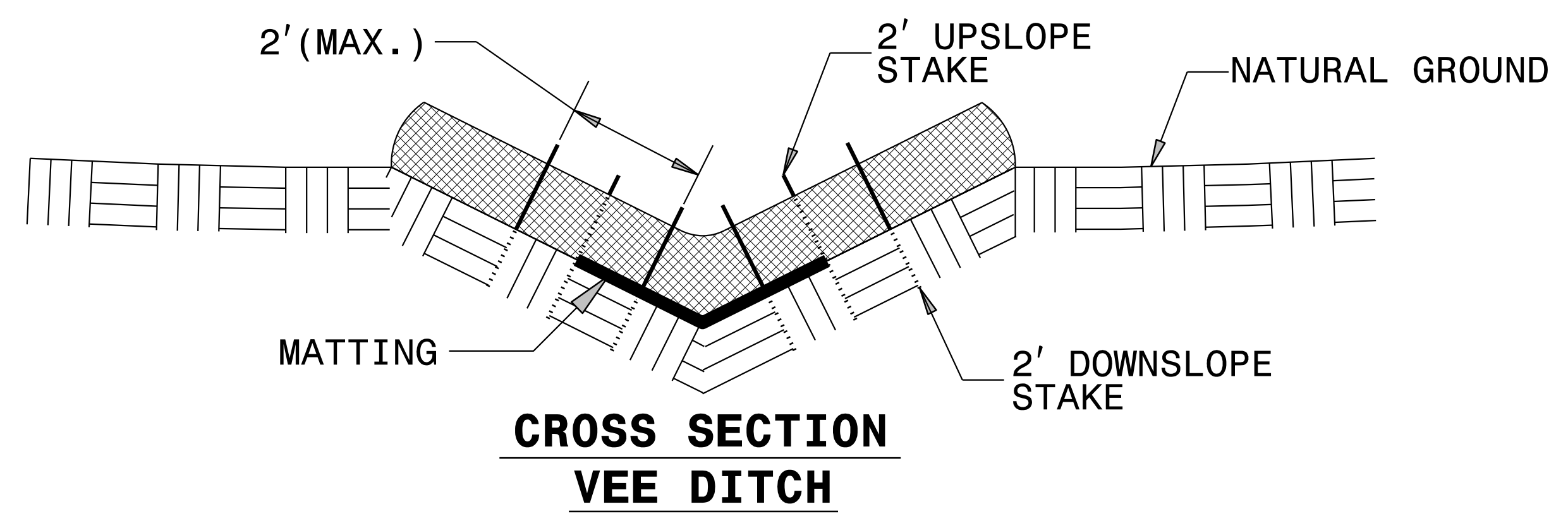
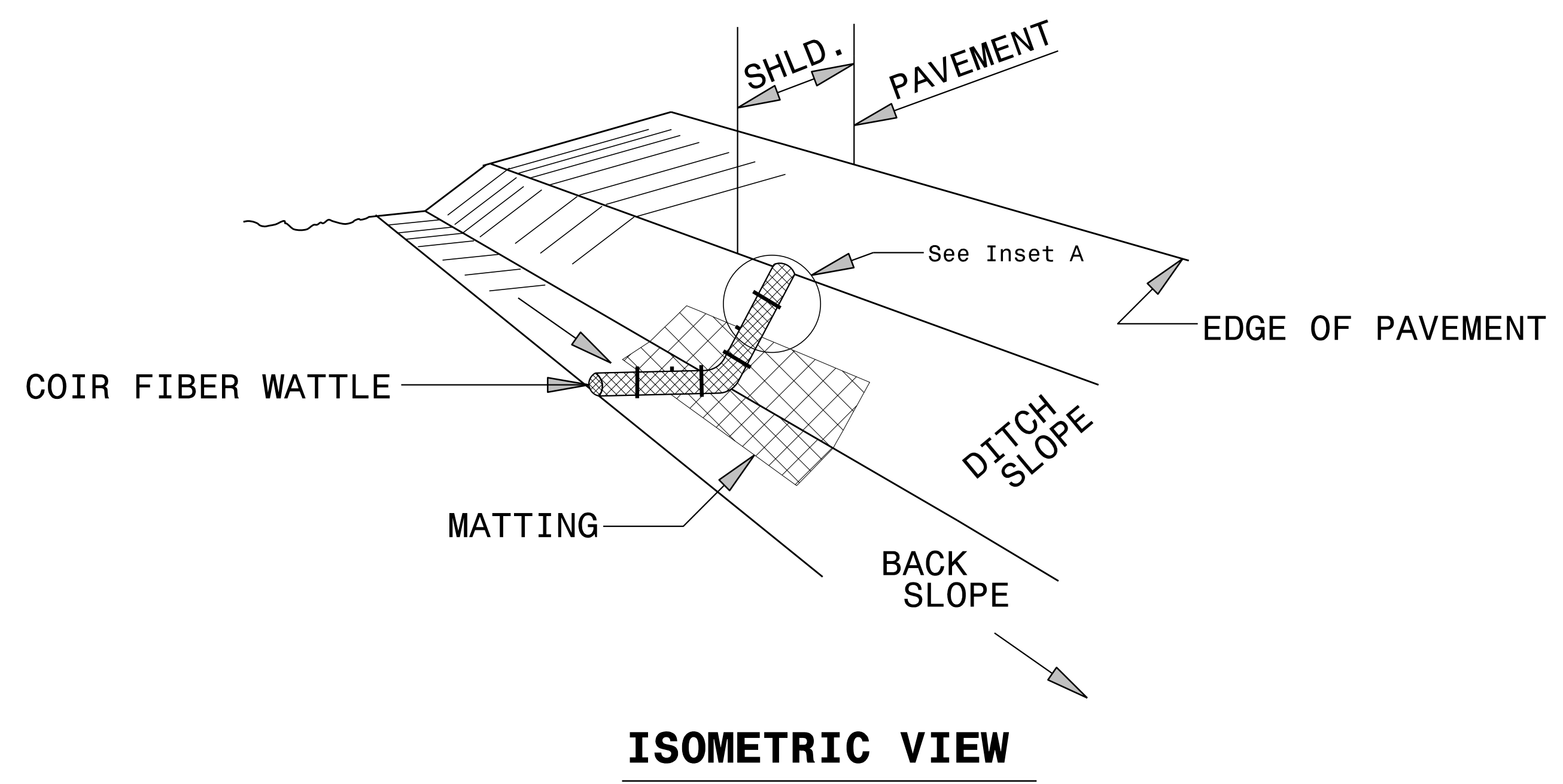
1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type A
1622.01 Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 Riser Basin	1634.01 Temporary Rock Sediment Dam Type A
1630.02 Silt Basin Type B	1634.02 Temporary Rock Sediment Dam Type B
1630.03 Temporary Silt Ditch	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.04 Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	1640.01 Coir Fiber Baffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

7/24/2021 EC_den_psh_01.dgn
MEB/02/21

PROJECT REFERENCE NO. B-5624	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

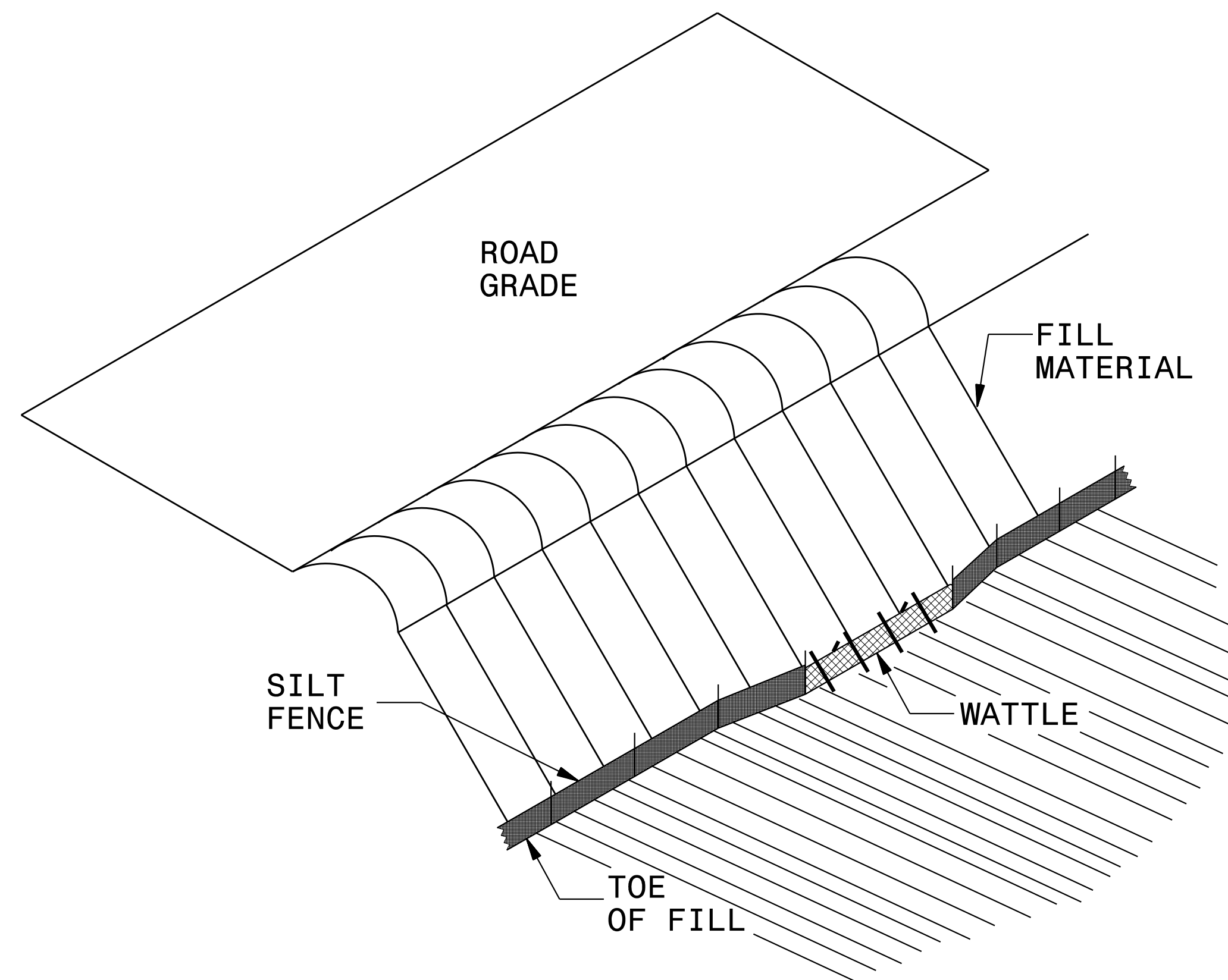
COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

- NOTES:
- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
 - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
 - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
 - PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
 - INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
 - INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.
 - PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.
 - INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

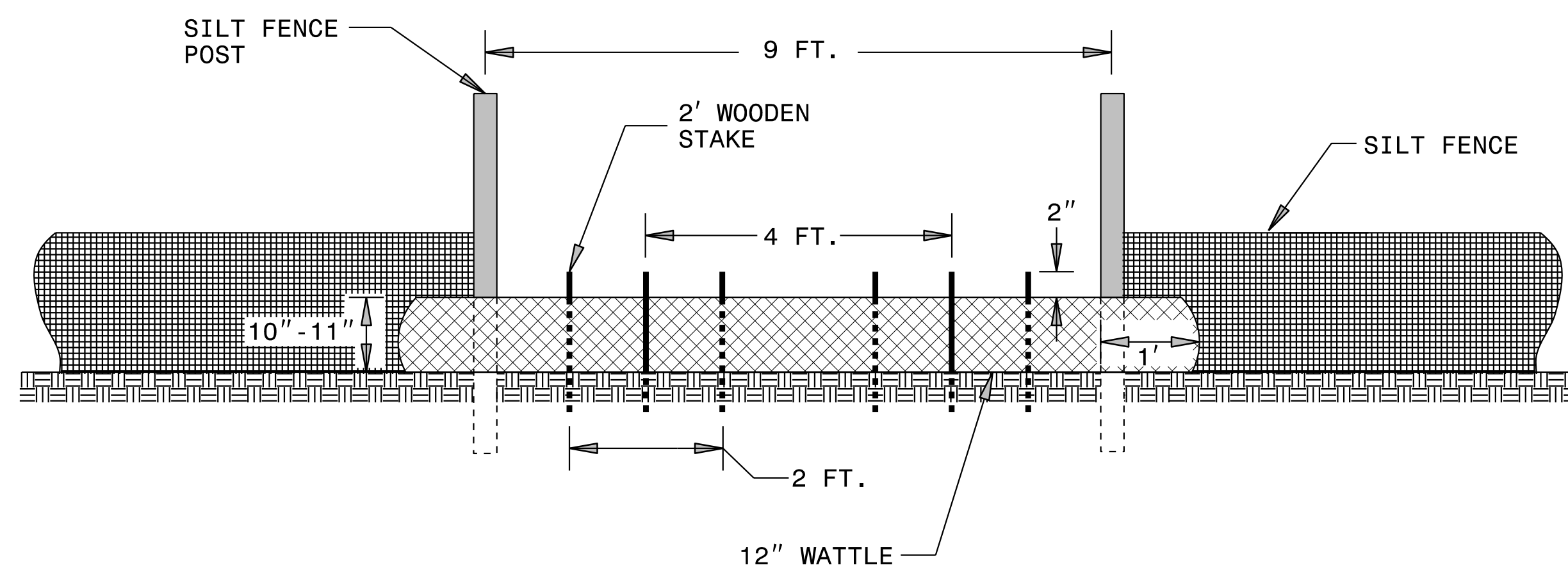


SILT FENCE COIR FIBER WATTLE BREAK DETAIL

PROJECT REFERENCE NO. B-5624	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ISOMETRIC VIEW

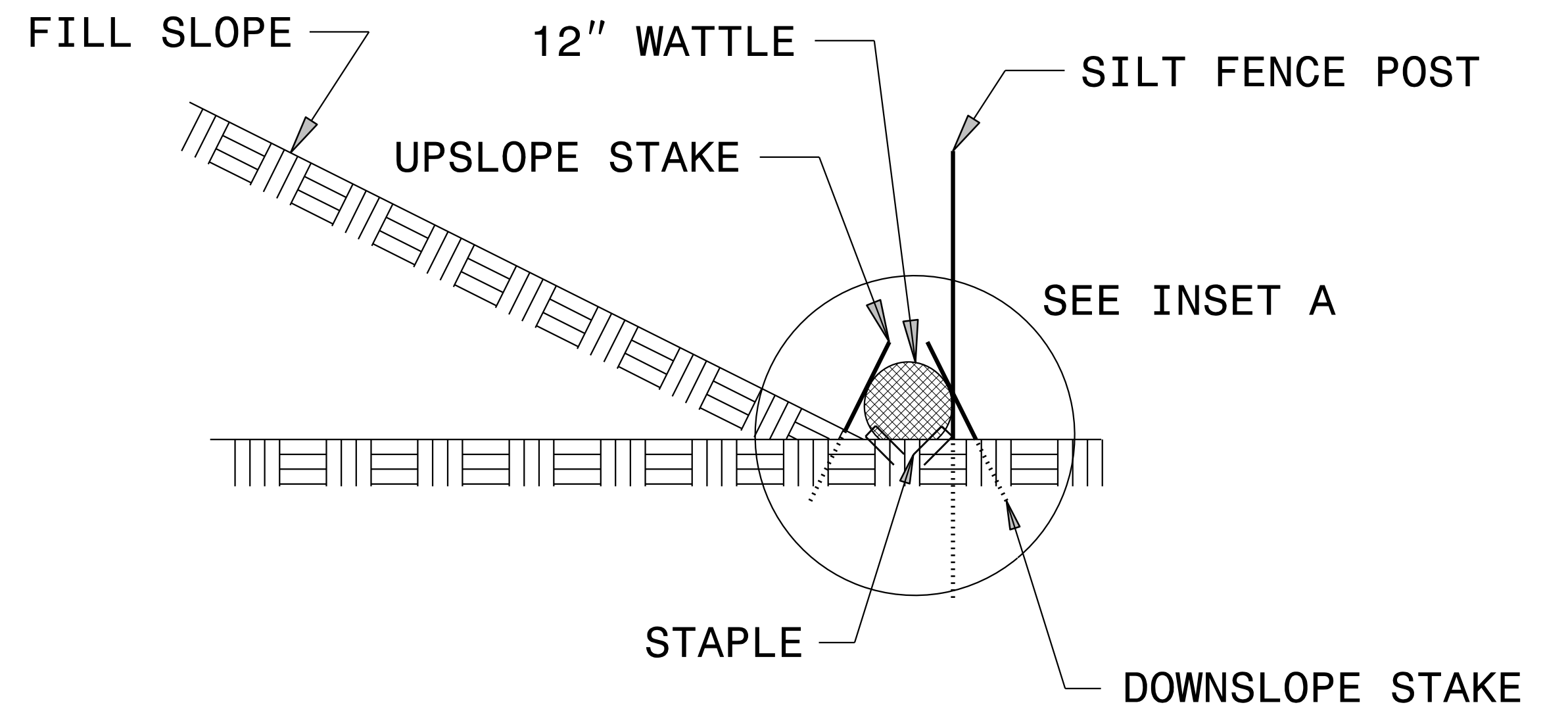
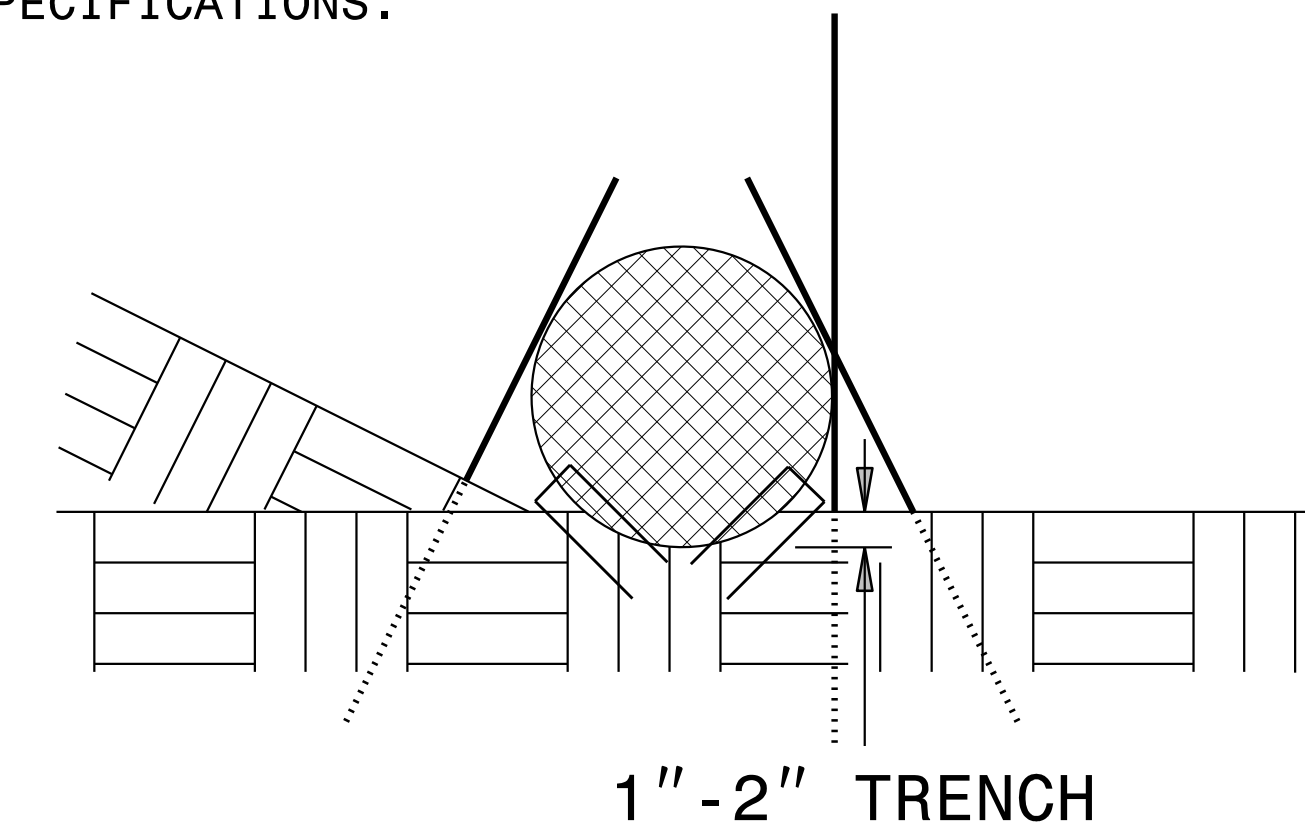


VIEW FROM SLOPE

NOTES:

- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLE ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.
- INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

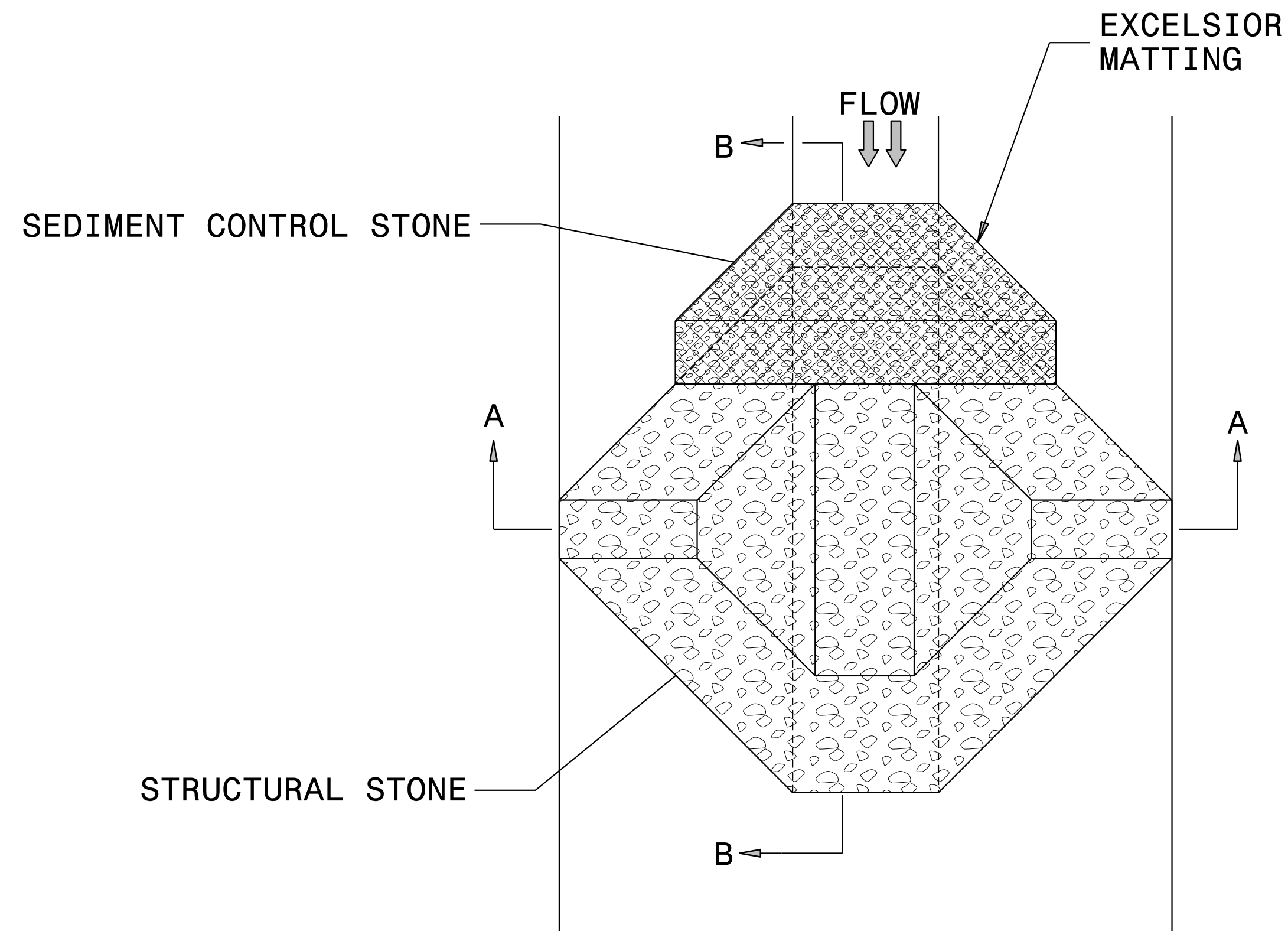
INSET A



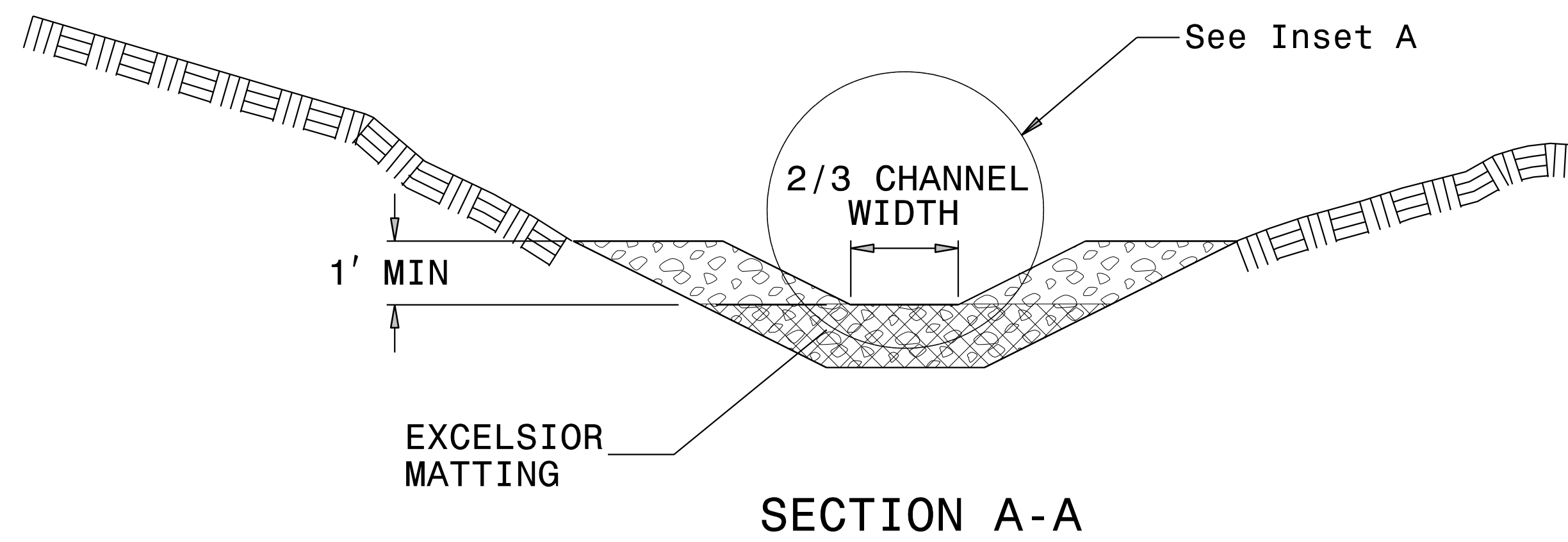
SIDE VIEW

PROJECT REFERENCE NO. B-5624	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



PLAN



SECTION A-A

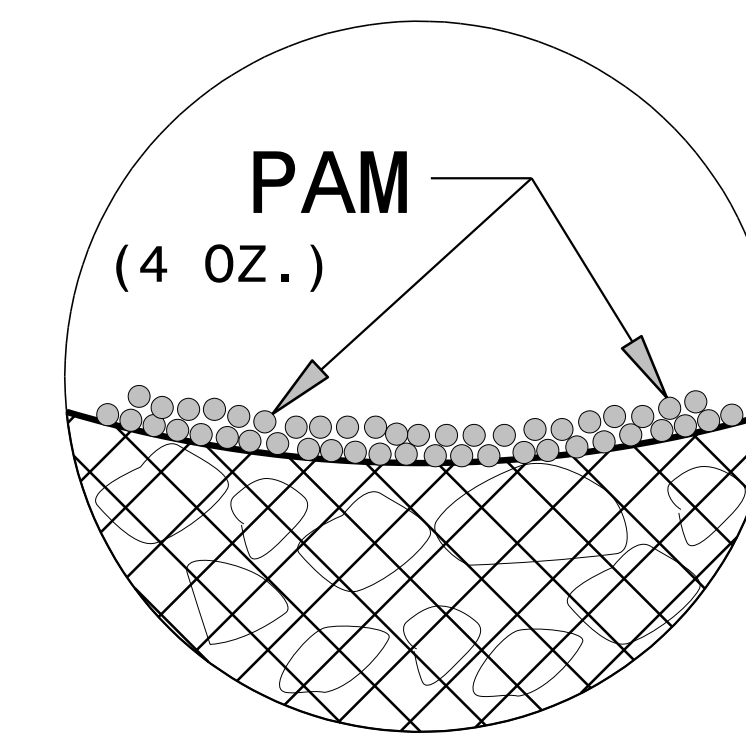
NOTES:

INSTALL TEMPORARY ROCK SILT CHECK TYPE A IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1633.01.

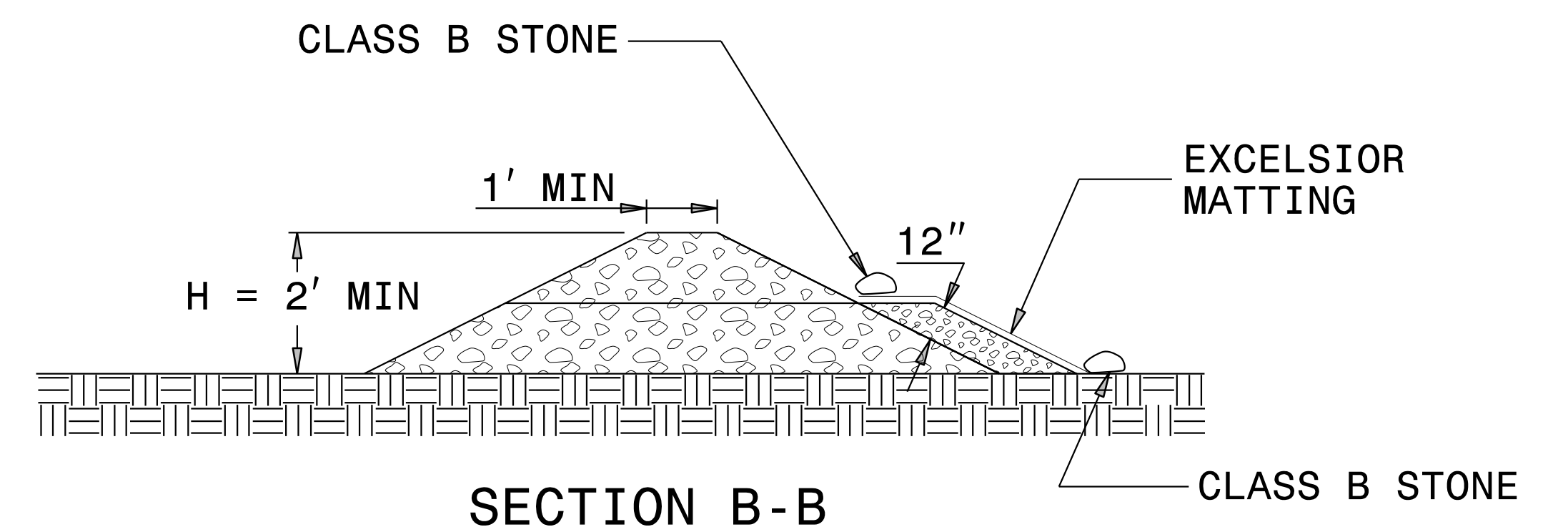
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION B-B

NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>B-5624</i>	SHEET NO. <i>EC-3A</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

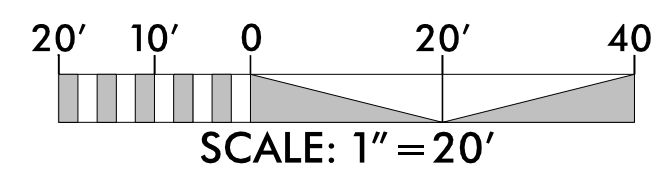
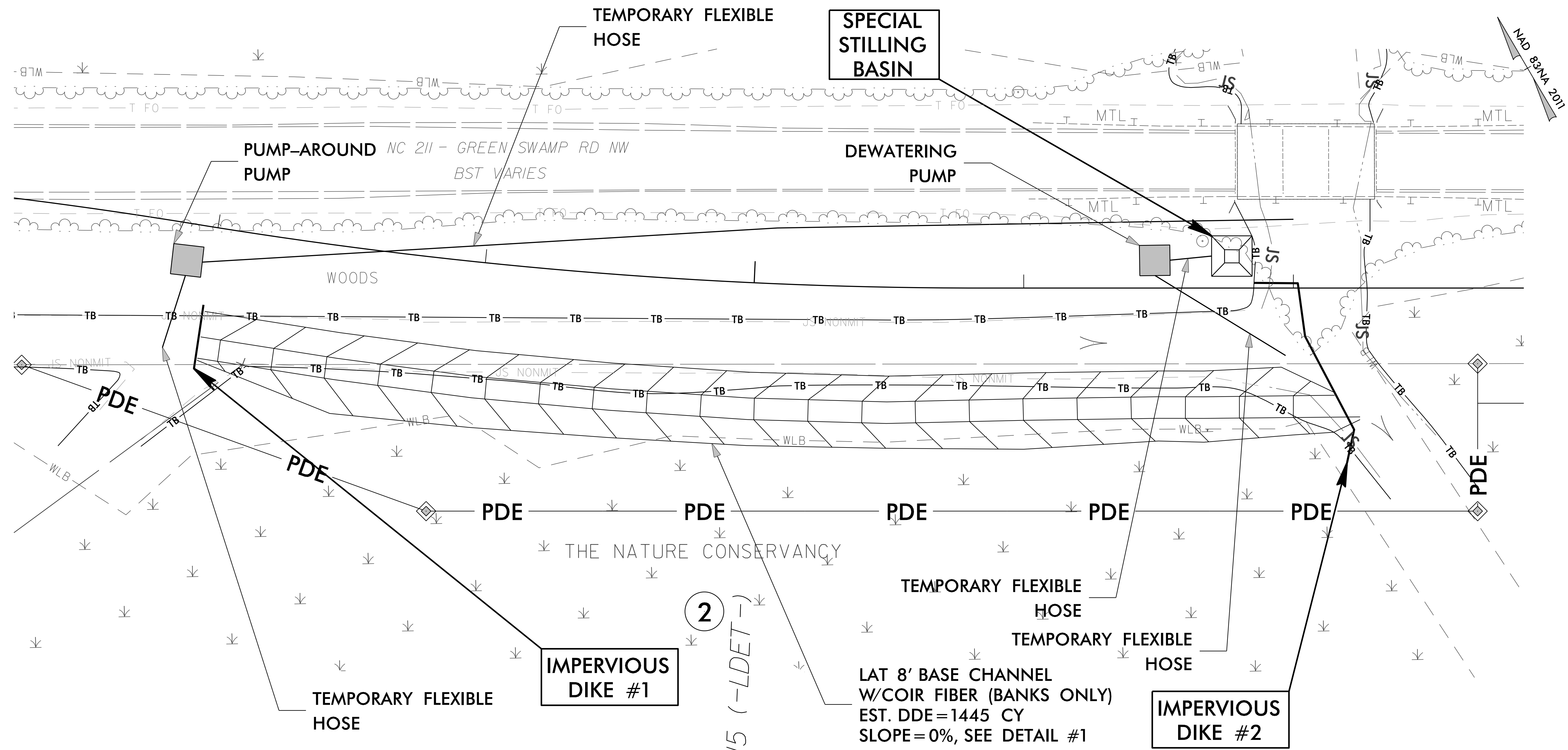
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

LAT. 8' BASE CHANNEL LOCATION SEQUENCE STA. 13+00 TO STA. 17+20 -LDET- RT UT TO DRIVING CREEK

PROJECT REFERENCE NO. B-5624	SHEET NO. EC-04A/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PHASE I

- 1.) UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT CHANNEL RELOCATION.
- 2.) INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
- 3.) INSTALL IMPERVIOUS DIKES #1 AND #2 AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
- 4.) DEWATER CONSTRUCTION AREA, UTILIZING SPECIAL STILLING BASIN(S) FOR PUMPED EFFLUENT.
- 5.) CONSTRUCT LATERAL 8' BASE CHANNEL W/COIR FIBER (BANKS ONLY).
- 6.) EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES.
- 7.) REMOVE IMPERVIOUS DIKES, PUMP, AND TEMPORARY FLEXIBLE HOSE.
- 8.) COMPLETE ROADWAY.



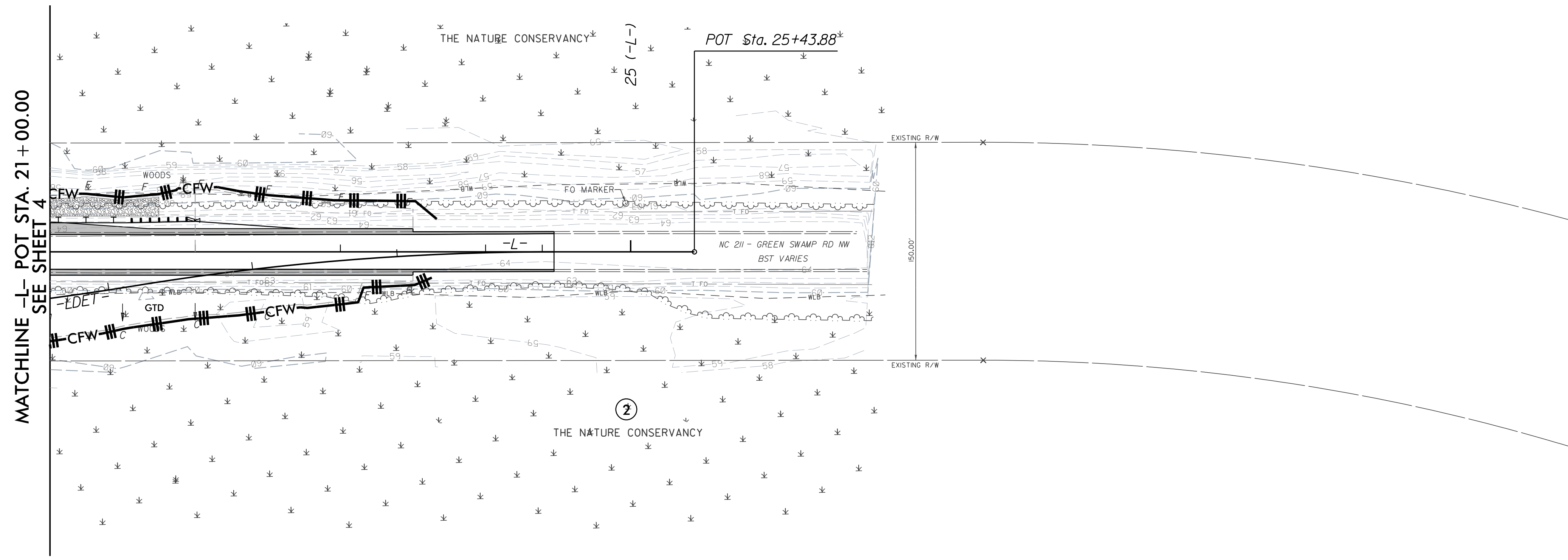
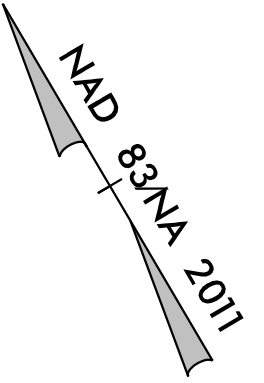
PROJECT REFERENCE NO.	SHEET NO.
B-5624	EC-05/CONST.05
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
UTILIZE SPECIAL STILLING BASIN(S)
AS STILLING BASIN WHERE APPLICABLE.

IMPERVIOUS DIKE MAY BE MODIFIED
AND/OR ELIMINATED AS DIRECTED.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 05

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.



NOTE:
UTILIZE SPECIAL STILLING BASIN(S)
AS STILLING BASIN WHERE APPLICABLE.

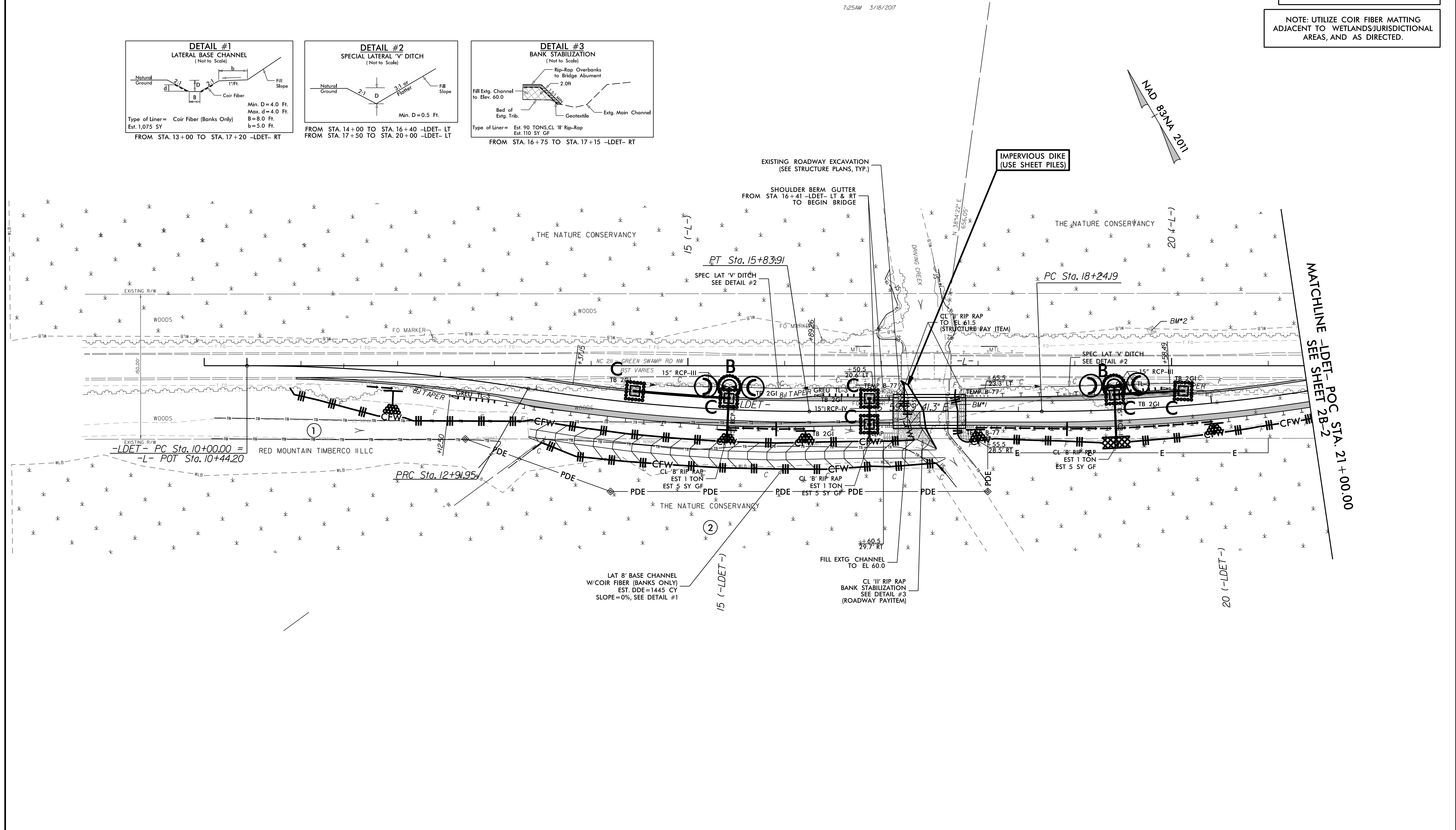
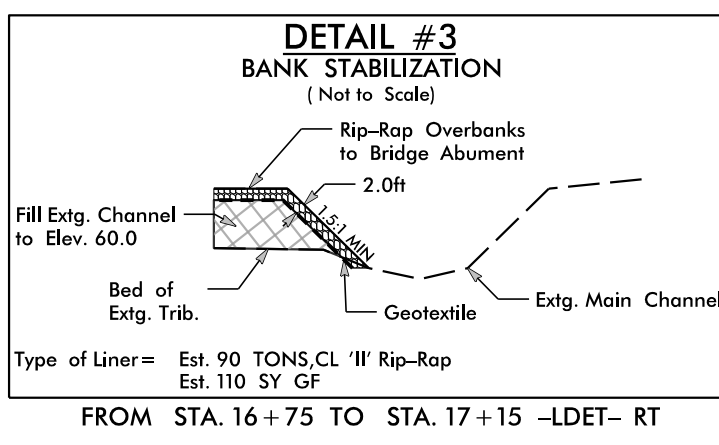
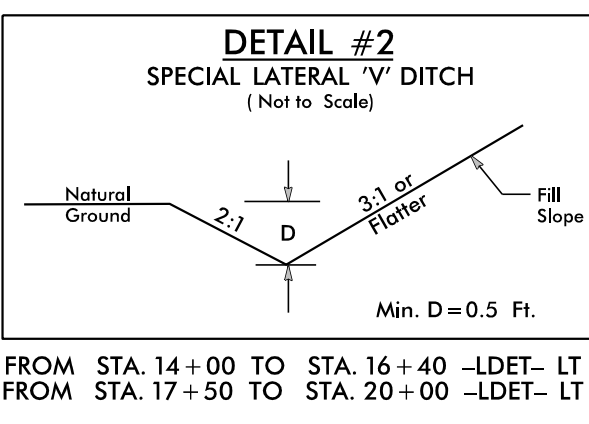
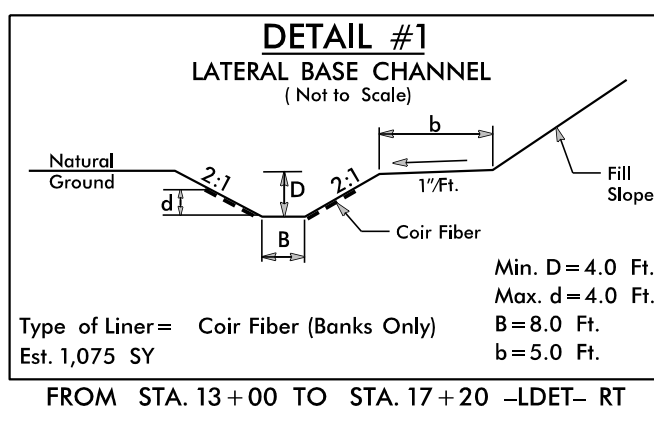
IMPERVIOUS DIKE MAY BE MODIFIED
AND/OR ELIMINATED AS DIRECTED.

Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 11+25 to Sta. 11+55 -LDET- RT
Sta. 15+00 to Sta. 15+80 -LDET- RT
Sta. 17+50 to Sta. 20+00 -LDET- RT

DETOUR
EROSION CONTROL FOR
CONSTRUCTION SHEET 2B-1

NOTE: UTILIZE COIR FIBER MATTING
ADJACENT TO WETLANDS/JURISDICTIONAL
AREAS, AND AS DIRECTED.

7:25AM 3/18/2017



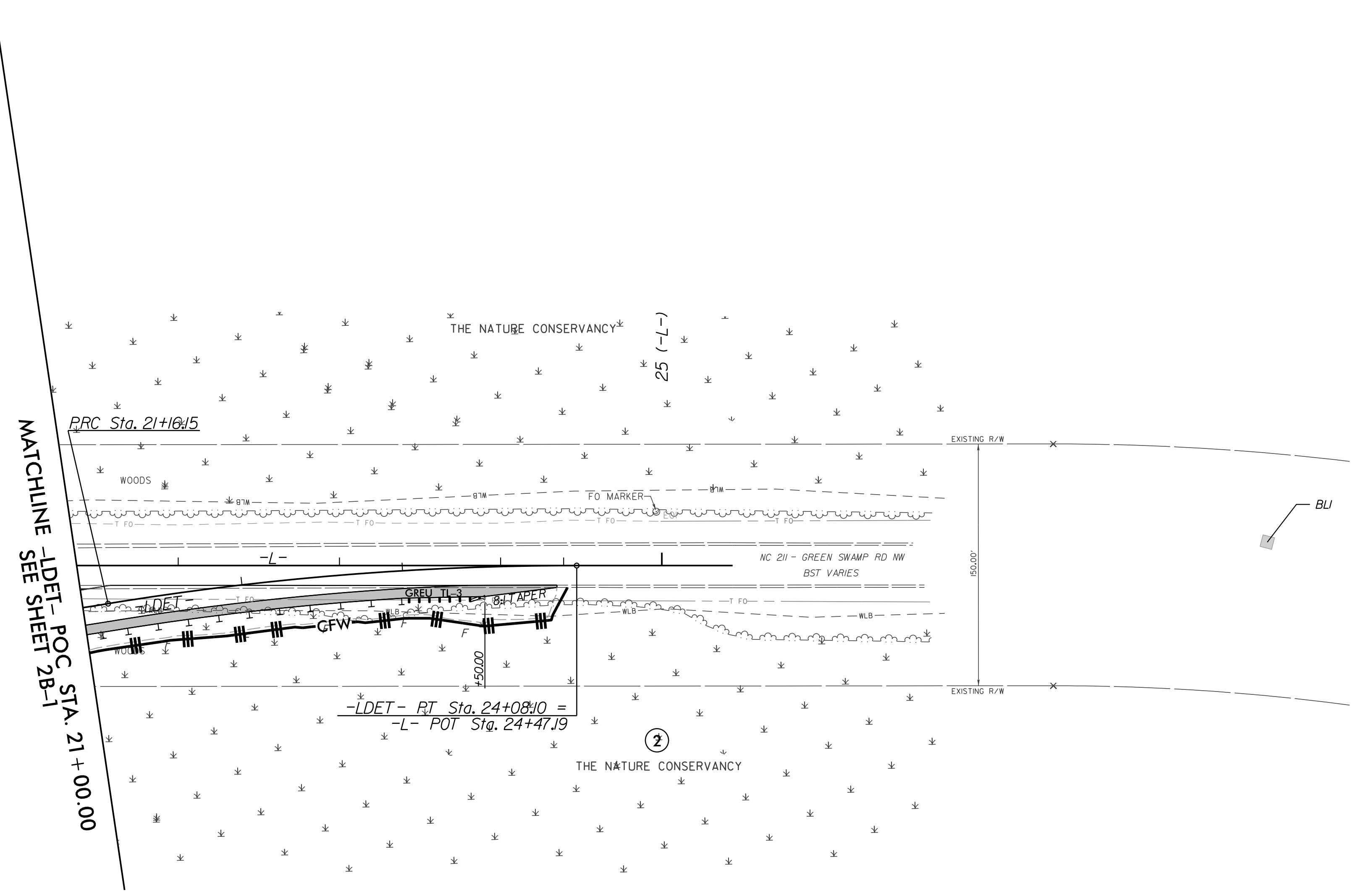
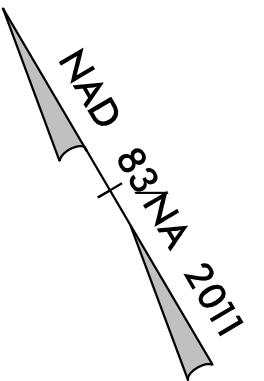
PROJECT REFERENCE NO.	SHEET NO.
B-5624	EC-07/CONST.2B-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: UTILIZE SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

IMPERVIOUS DIKE MAY BE MODIFIED AND/OR ELIMINATED AS DIRECTED.

DETOUR EROSION CONTROL FOR CONSTRUCTION SHEET 2B-2

NOTE: UTILIZE COIR FIBER MATTING ADJACENT TO WETLANDS/JURISDICTIONAL AREAS, AND AS DIRECTED.



PROJECT REFERENCE NO.	SHEET NO.
B-5624	EC-08/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

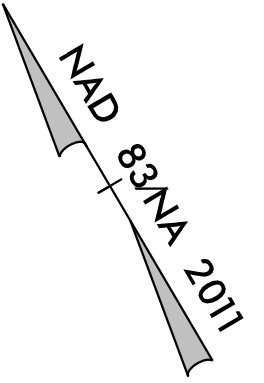
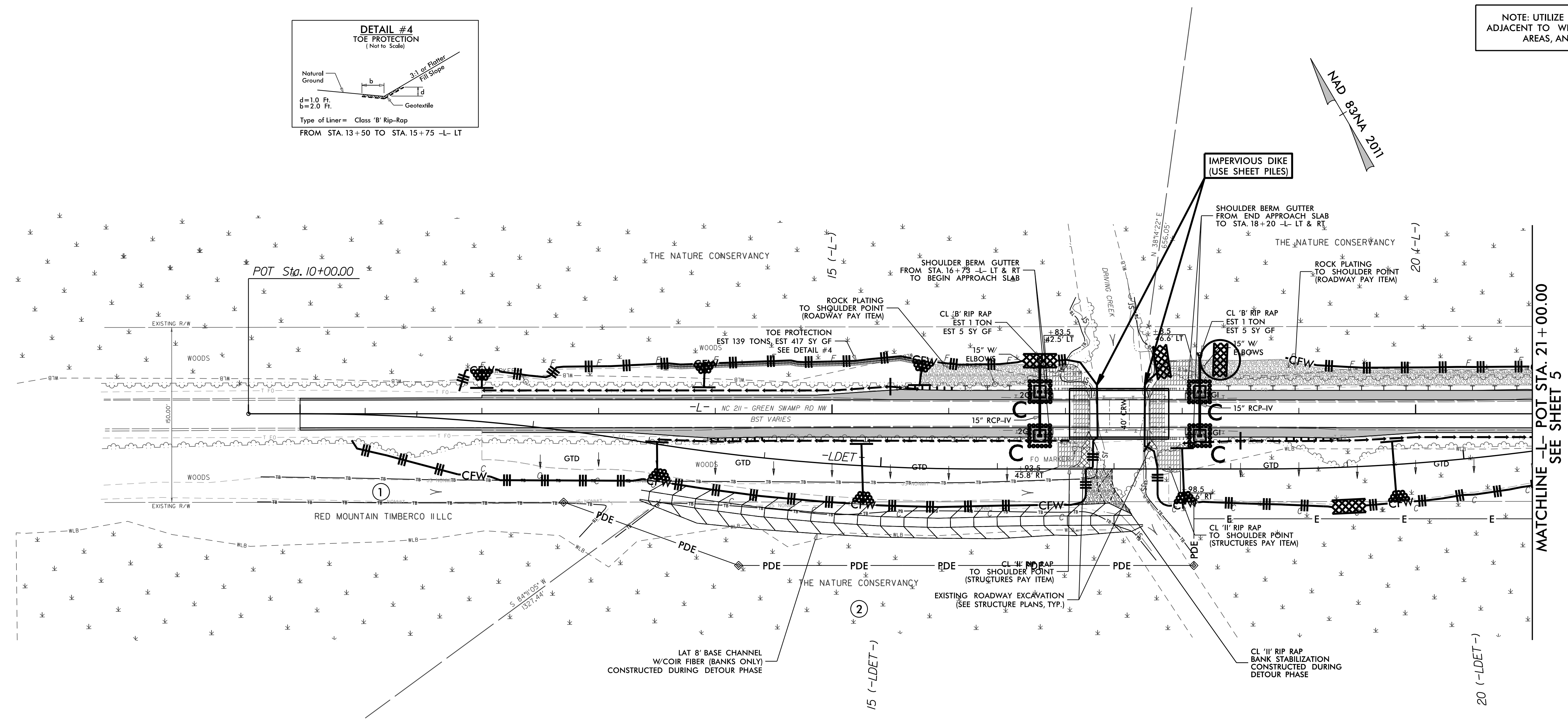
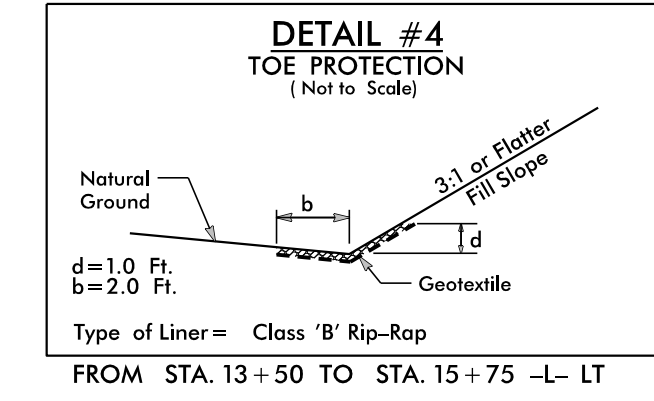
NOTE:
UTILIZE SPECIAL STILLING BASIN(S)
AS STILLING BASIN WHERE APPLICABLE.

IMPERVIOUS DIKE MAY BE MODIFIED
AND/OR ELIMINATED AS DIRECTED.

Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 12+00 to Sta. 15+75 -L- LT
Sta. 13+50 to Sta. 17+04 -L- RT
Sta. 18+00 to Sta. 21+00 -L- RT

FINAL GRADING
EROSION CONTROL FOR
CONSTRUCTION SHEET 04

NOTE: UTILIZE COIR FIBER MATTING
ADJACENT TO WETLANDS/JURISDICTIONAL
AREAS, AND AS DIRECTED.



MATCHLINE -L- POT STA. 21+00.00
SEE SHEET 5

PROJECT REFERENCE NO.	SHEET NO.
B-5624	EC-09/CONST.05
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

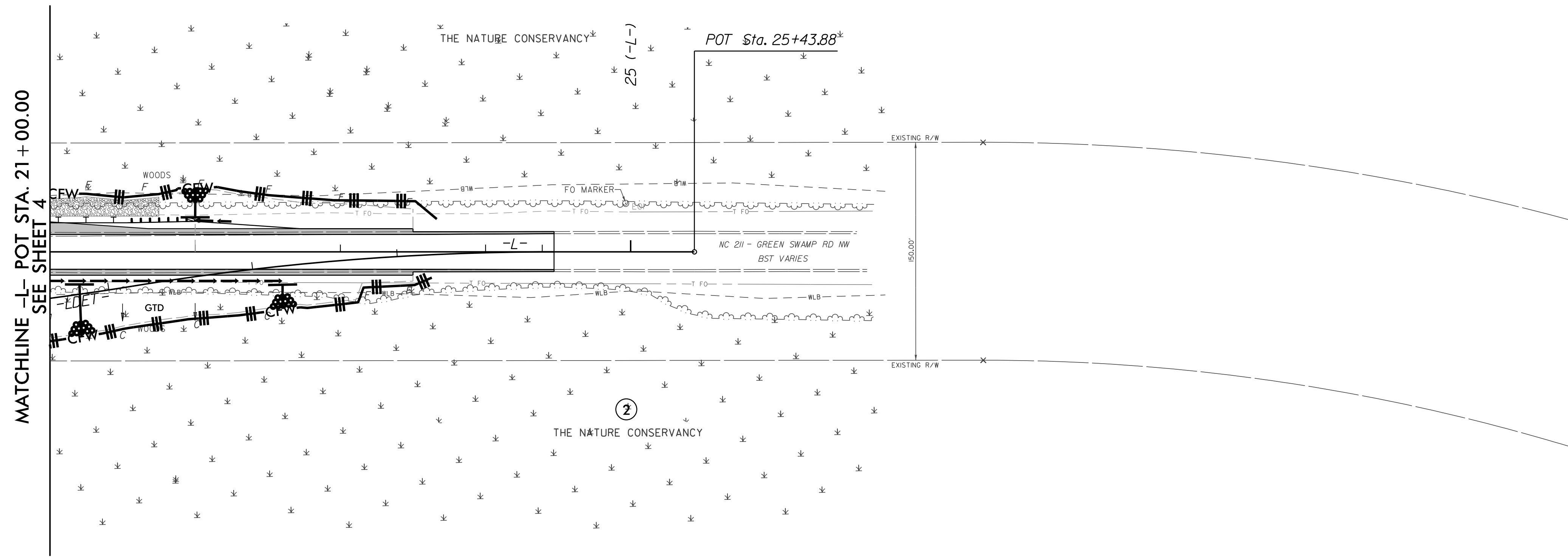
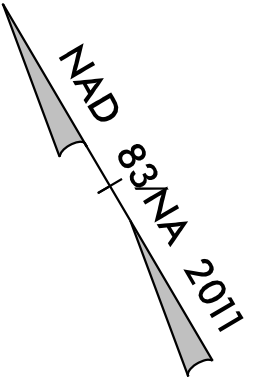
NOTE:
UTILIZE SPECIAL STILLING BASIN(S)
AS STILLING BASIN WHERE APPLICABLE.

IMPERVIOUS DIKE MAY BE MODIFIED
AND/OR ELIMINATED AS DIRECTED.

Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 21+00 to Sta. 22+10 -L- LT
Sta. 21+00 to Sta. 23+00 -L- RT

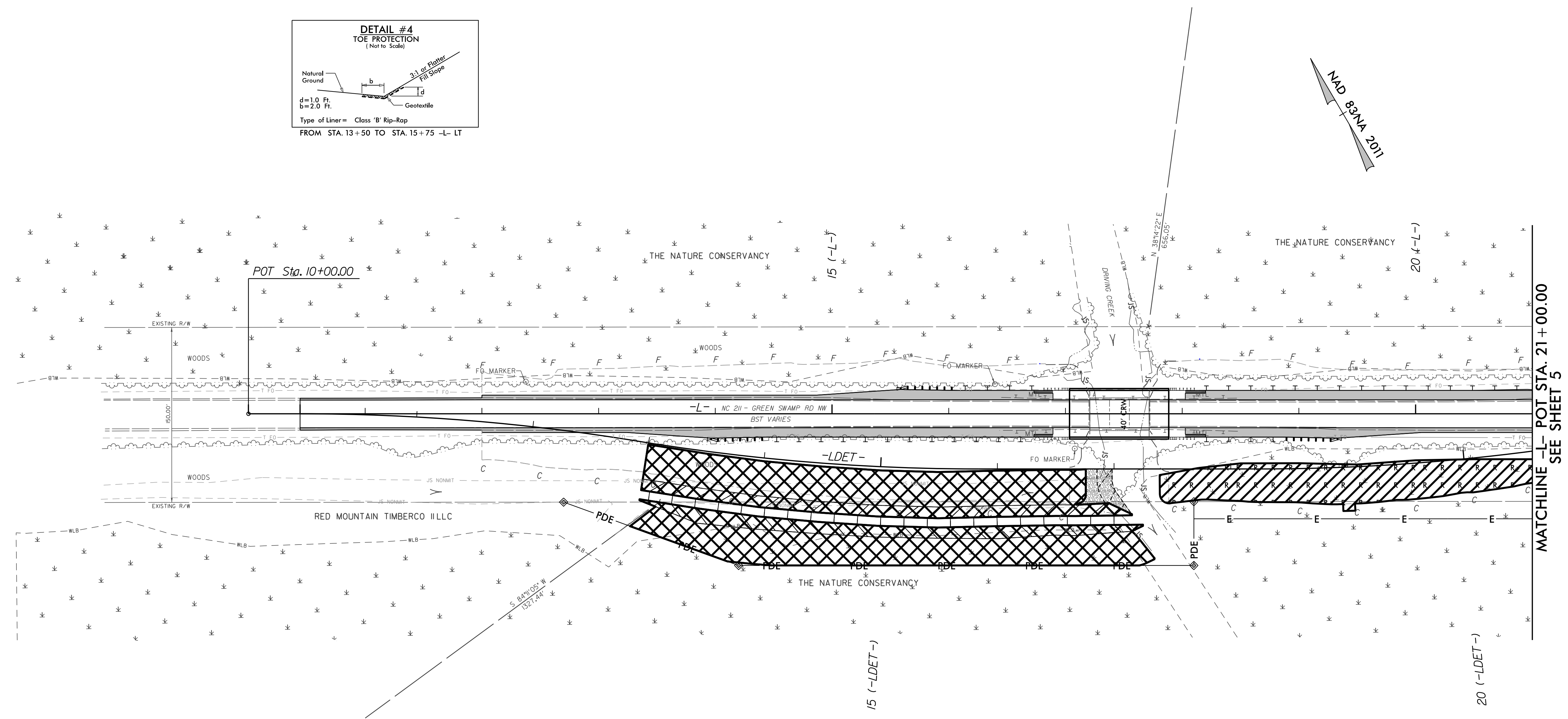
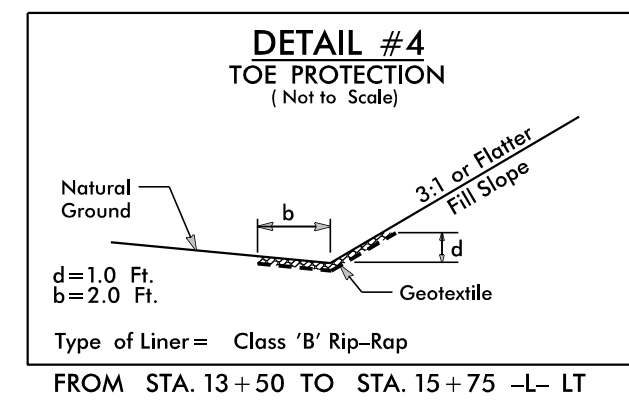
FINAL GRADING
EROSION CONTROL FOR
CONSTRUCTION SHEET 05

NOTE: UTILIZE COIR FIBER MATTING
ADJACENT TO WETLANDS/JURISDICTIONAL
AREAS, AND AS DIRECTED.

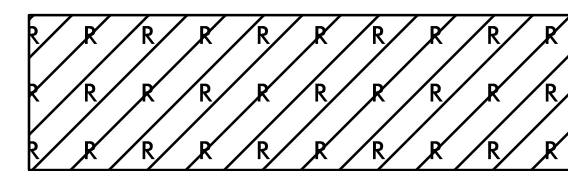


PROJECT REFERENCE NO.	SHEET NO.
B-5624	EC-10/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

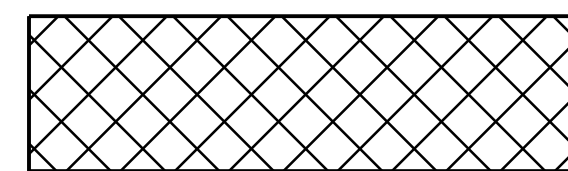
REFORESTATION FOR
CONSTRUCTION SHEET 04



0.27 ACRE WETLAND REFORESTATION
SEE RF-1 AND PROJECT SPECIAL PROVISIONS

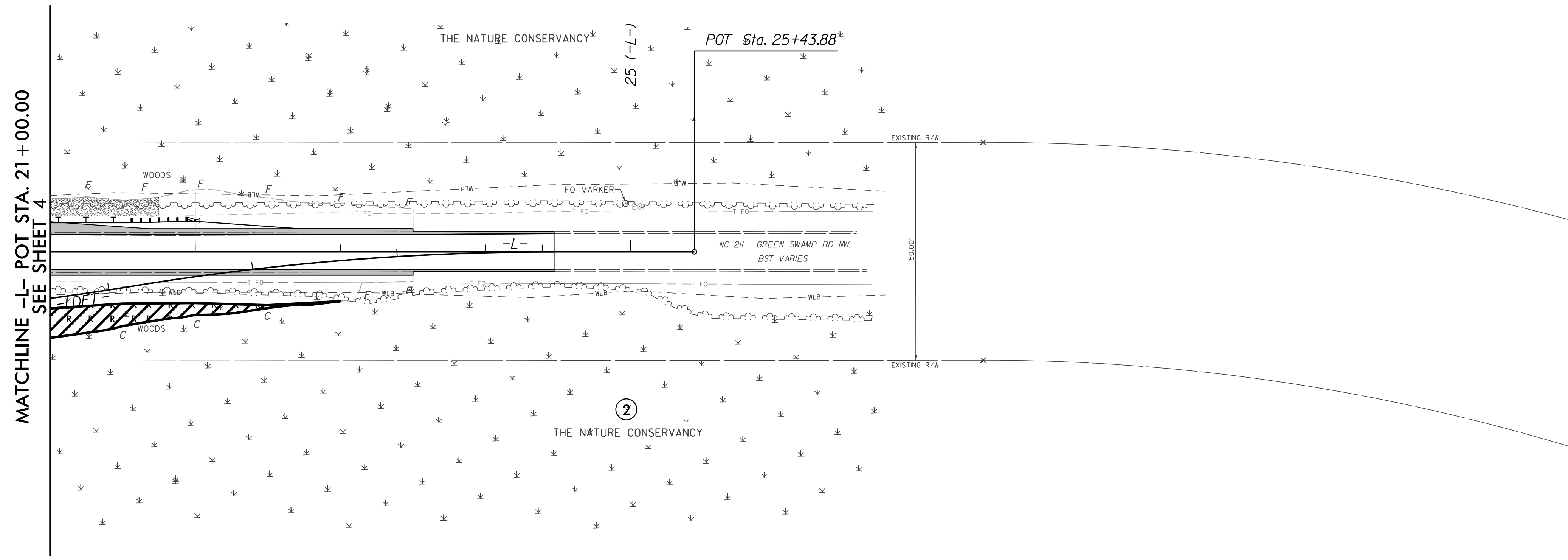
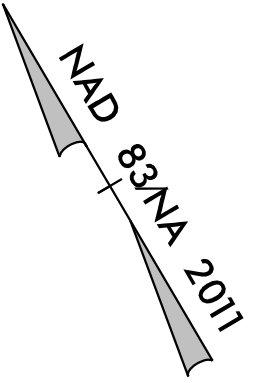


0.70 ACRE STREAMBANK REFORESTATION
SEE RF-2, RF-3 AND PROJECT SPECIAL PROVISIONS



PROJECT REFERENCE NO. <i>B-5624</i>	SHEET NO. <i>EC-11/CONST.05</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REFORESTATION FOR
CONSTRUCTION SHEET 05



0.27 ACRE WETLAND REFORESTATION
SEE RF-1 AND PROJECT SPECIAL PROVISIONS

