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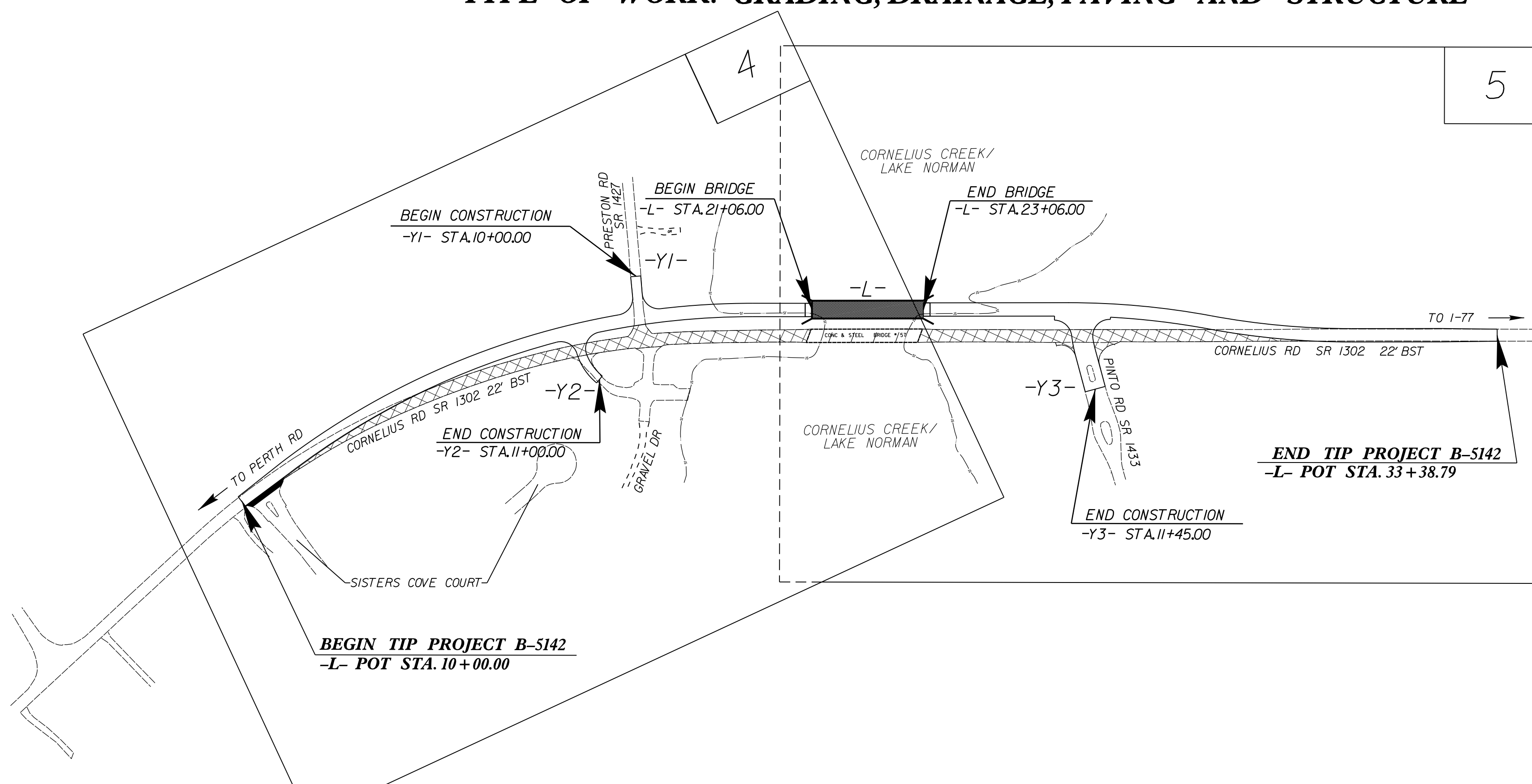
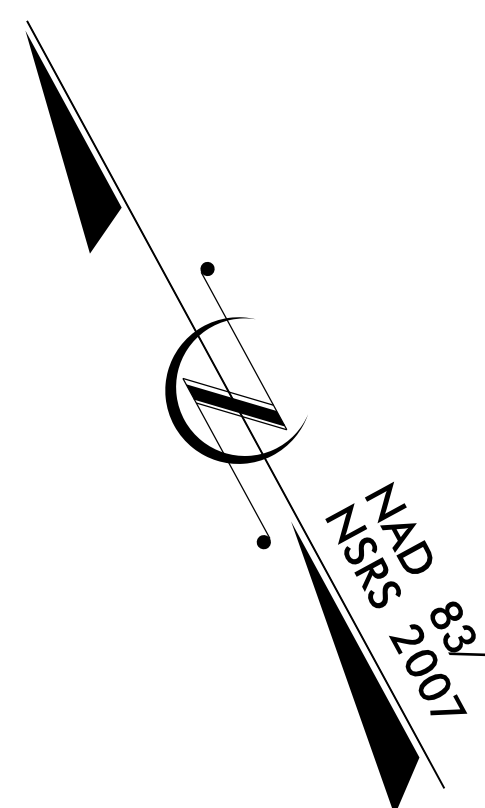
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**TIP PROJECT: B-5142**

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

**LOCATION: BRIDGE 57 OVER CORNELIUS CREEK  
ON SR 1302**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE**



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5142	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

**EROSION AND SEDIMENT CONTROL MEASURES**

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch.....	
1630.05	Temporary Diversion.....	
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.....	
1632.02	Type B.....	
1632.03	Type C.....	
	Skimmer Basin.....	
	Tiered Skimmer Basin.....	
	Infiltration Basin.....	

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

**THIS PROJECT HAS  
BEEN DESIGNED TO  
SENSITIVE WATERSHED  
STANDARDS.**

**ENVIRONMENTALLY  
SENSITIVE AREA(S) EXIST  
ON THIS PROJECT**

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

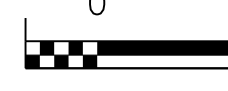
**GRAPHIC SCALE**



PLANS



PROFILE (HORIZONTAL)



PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT  
DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

**THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY  
WITH THE REGULATIONS SET FORTH BY THE  
NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011  
ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND  
NATURAL RESOURCES DIVISION OF WATER QUALITY.**

*Prepared in the Office of:*

**ROADSIDE ENVIRONMENTAL UNIT**

1 South Wilmington St.  
Raleigh, NC 27611

**2012 STANDARD SPECIFICATIONS**

*Designed by:*

**Jeremy Goodwin**  
NAME

**0373**

LEVEL III CERTIFICATION NO.

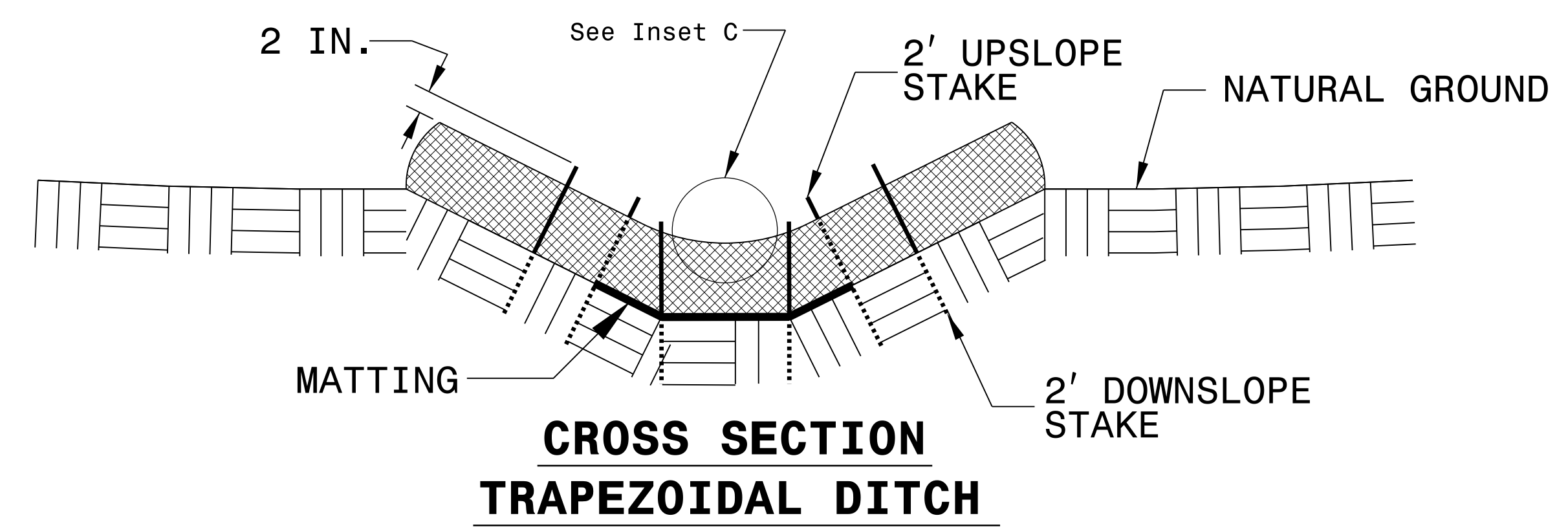
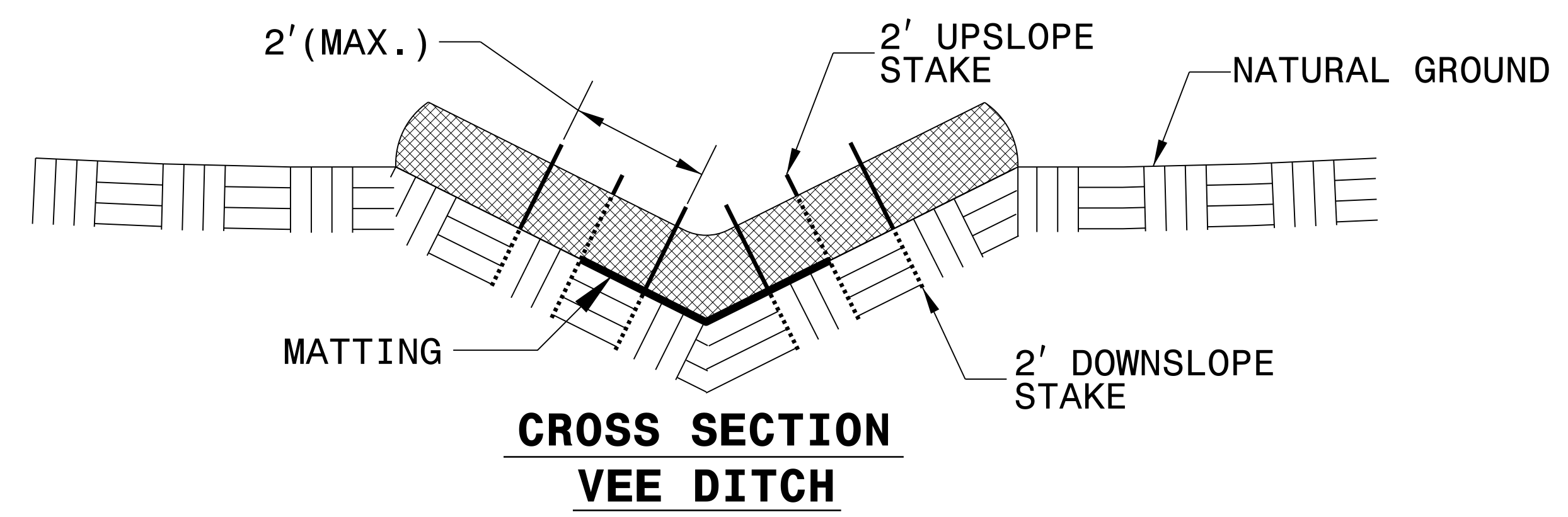
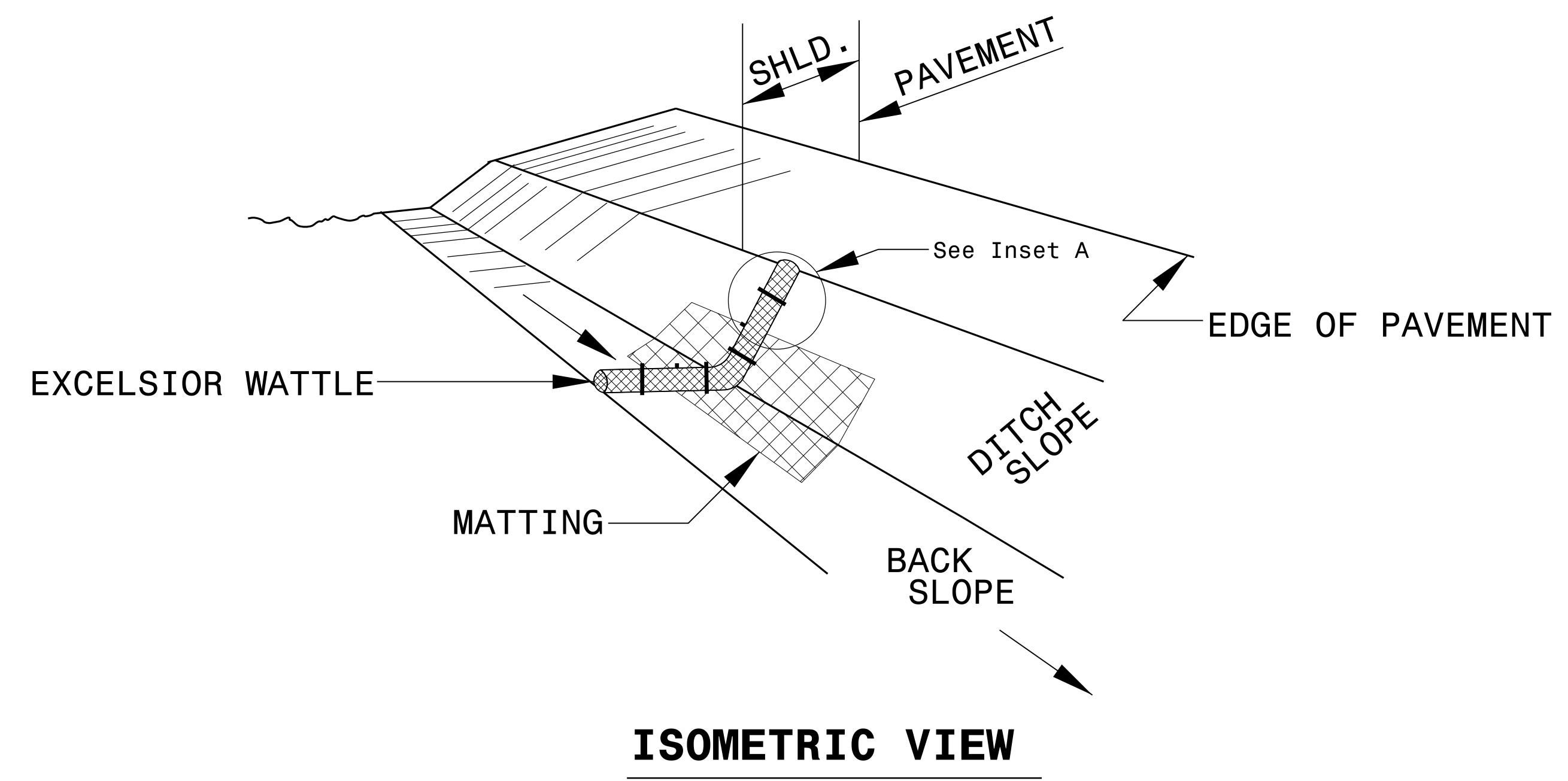
**Roadway Standard Drawings**

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 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		

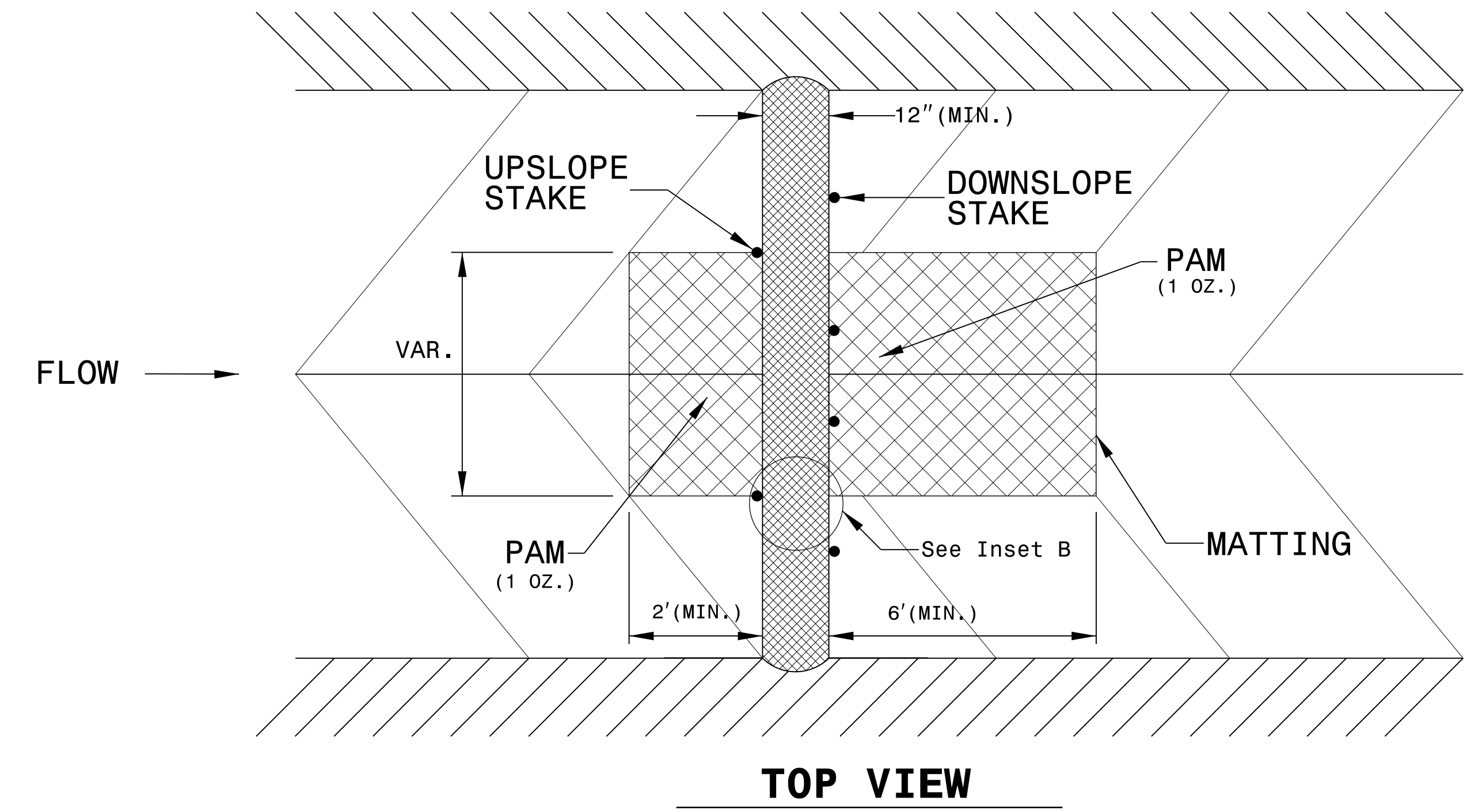
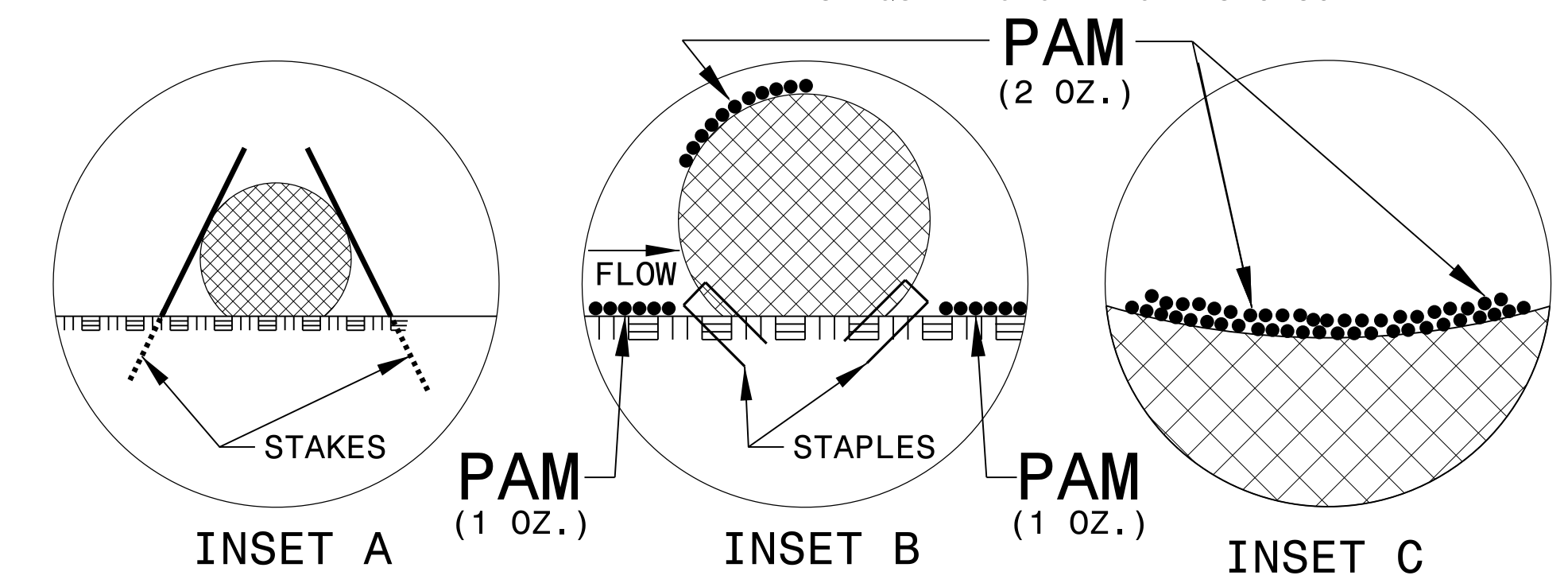
PROJECT REFERENCE NO. B-5142	SHEET NO. EC-02
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



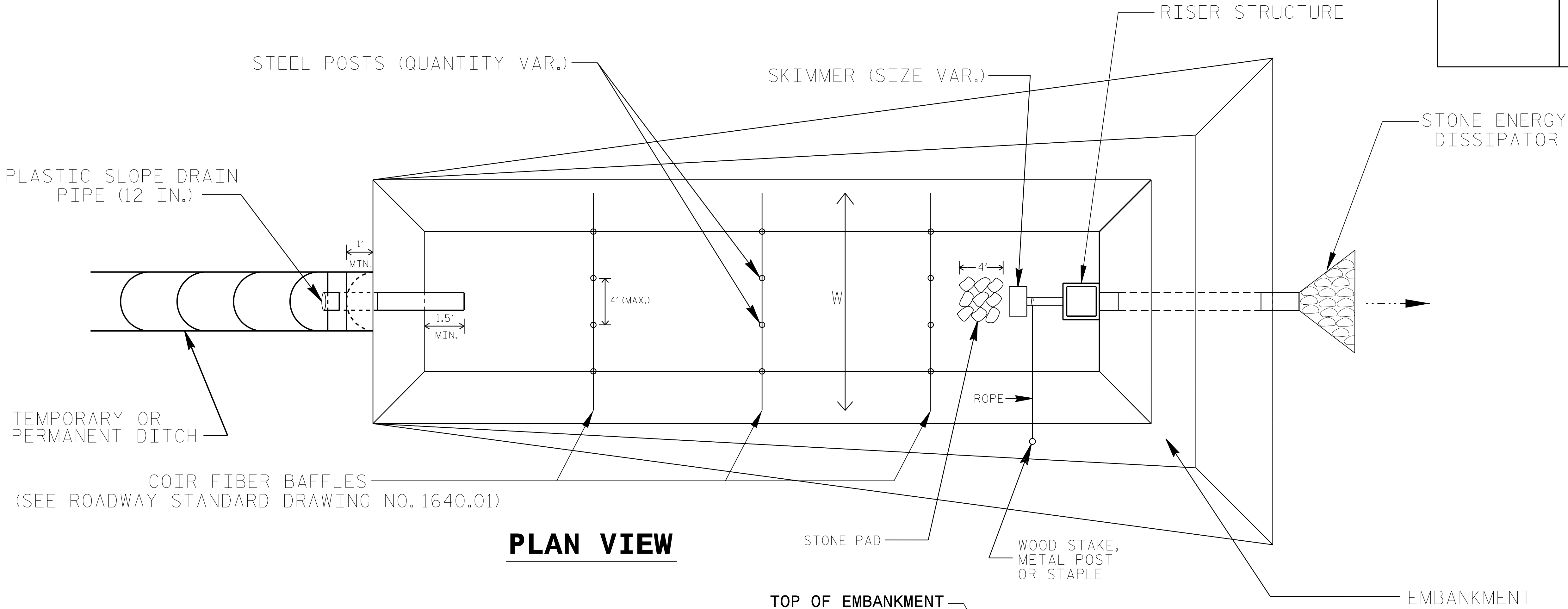
**NOTES:**

- USE MINIMUM 12 IN. DIAMETER EXCELSIOR 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 MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

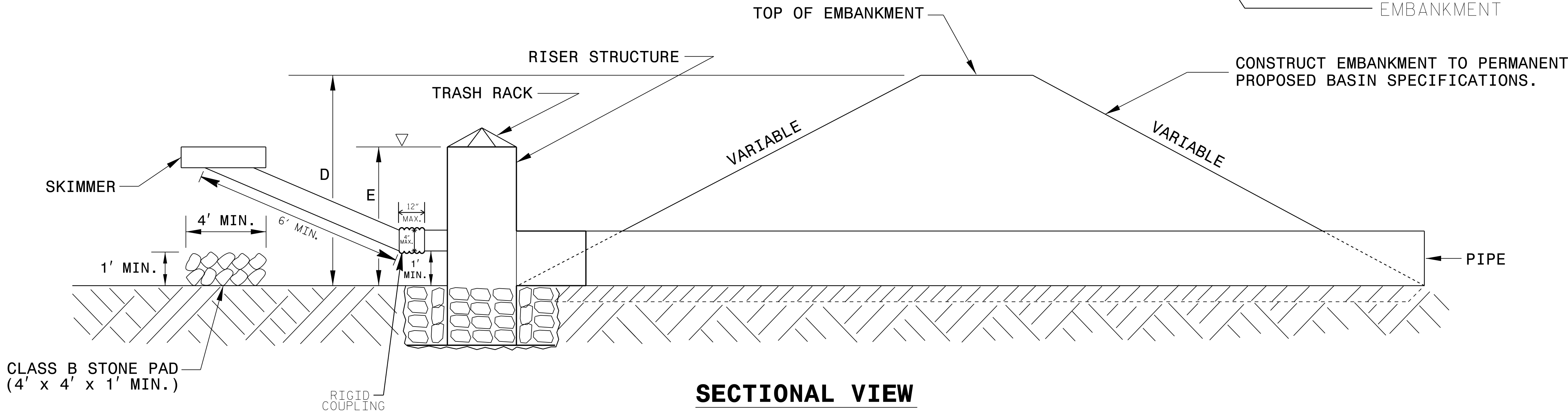


PROJECT REFERENCE NO. B-5142	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# STORMWATER BASIN WITH SKIMMER



**PLAN VIEW**



**SECTIONAL VIEW**

**NOTES**

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. INSTALL A MINIMUM OF 3 COIR FIBER BAFFLES IN ACCORDANCE WITH ROADWAY STD. DRAWING 1640.01.
3. INSTALL SKIMMER AND COUPLING TO RISER STRUCTURE OR DIRECTLY INTO EMBANKMENT 1 FT. FROM BOTTOM OF BASIN.
4. THE ARM PIPE SHALL HAVE A MINIMUM LENGTH OF 6 FT. BETWEEN THE SKIMMER AND COUPLING.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE AS DIRECTED.
6. THE DIFFERENCE BETWEEN LENGTHS "D" AND "E" REPRESENT THE FREEBOARD AND SHOULD BE 1 FT. MINIMUM.

NOT TO SCALE

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. B-5142		SHEET NO. EC-03
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

**SOIL STABILIZATION SUMMARY SHEET**

**MATTING FOR EROSION CONTROL**

**PERMANENT SOIL REINFORCEMENT MAT**

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	11+00	13+00	LT	140
4	-L-	13+00	17+50	LT	475
4	-L-	14+00	16+00	RT	280
SUBTOTAL					895
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					7,050
TOTAL					7,945
SAY					8,000

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
5	-L-	31+20	32+50	LT	140
SUBTOTAL					140
ADDITIONAL PGRM TO BE INSTALLED					625
TOTAL					765
SAY					770

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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PROJECT REFERENCE NO. <i>B-5142</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.

PROJECT REFERENCE NO. <i>B-5142</i>	SHEET NO. <i>EC-4/CONST.4</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

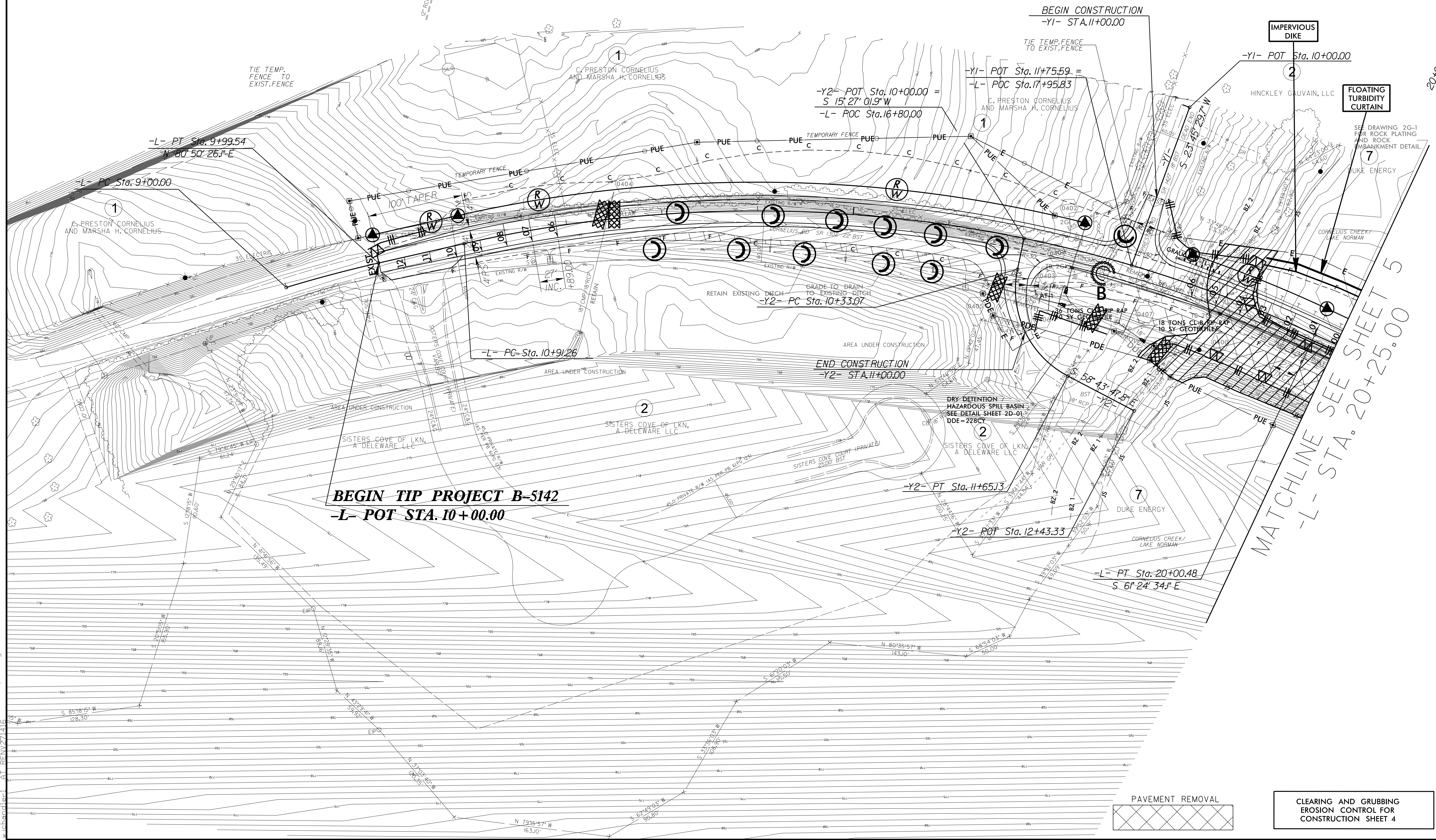
NOTE:  
MAINTAIN IMPERVIOUS DIKES FOR SEDIMENT CONTAINMENT AS PRACTICABLE DURING CONSTRUCTION. DEWATER WORK SITE UTILIZING SPECIAL STILLING BASINS.

NOTE:  
INSTALL AND MAINTAIN TURBIDITY CURTAIN IN AREAS WHERE RUNOFF IS NOT CONTAINED BY IMPERVIOUS DIKE.



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

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CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 4

PROJECT REFERENCE NO.	SHEET NO.
B-5142	EC-5/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: MAINTAIN IMPERVIOUS DIKES FOR SEDIMENT CONTAINMENT AS PRACTICABLE DURING CONSTRUCTION. DEWATER WORK SITE UTILIZING SPECIAL STILLING BASINS.

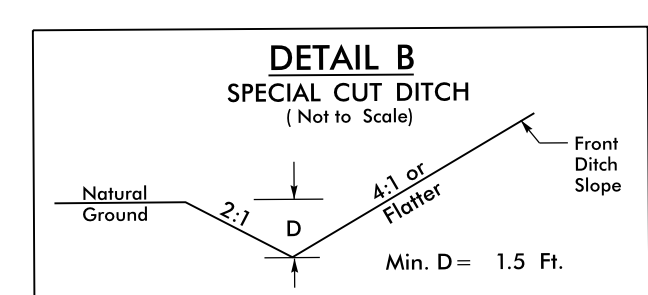
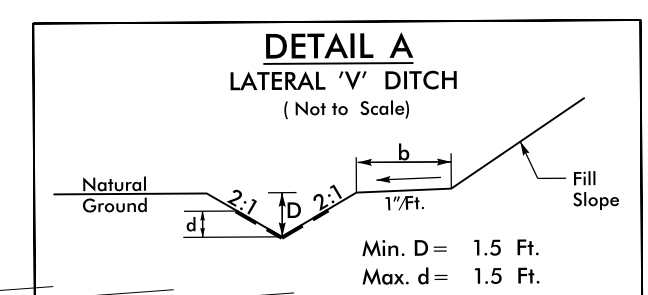
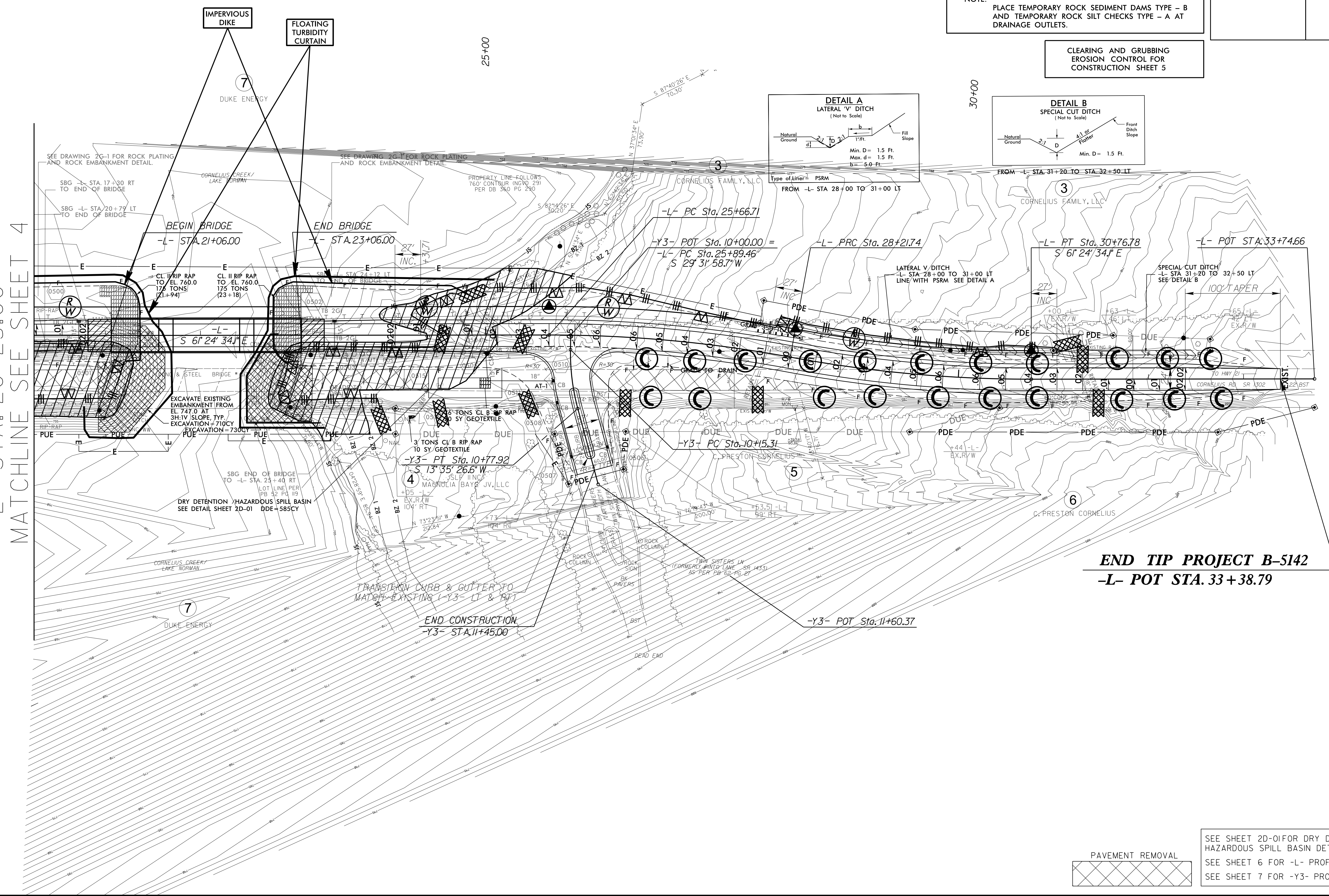
NOTE: INSTALL AND MAINTAIN TURBIDITY CURTAIN IN AREAS WHERE RUNOFF IS NOT CONTAINED BY IMPERVIOUS DIKE.

 ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS

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

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 5

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-L- STA. 20+25.00  
MATCHLINE SEE SHEET 4  
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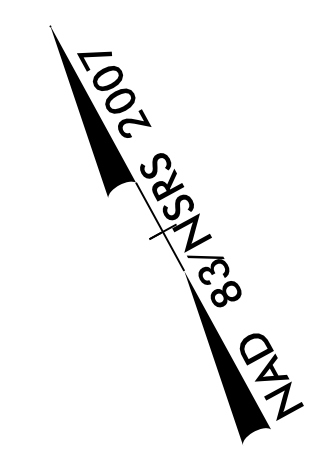
**END TIP PROJECT B-5142**  
**-L- POT STA. 33+38.79**



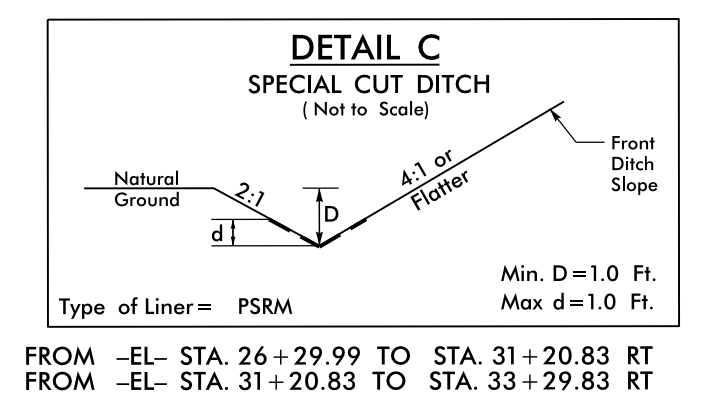
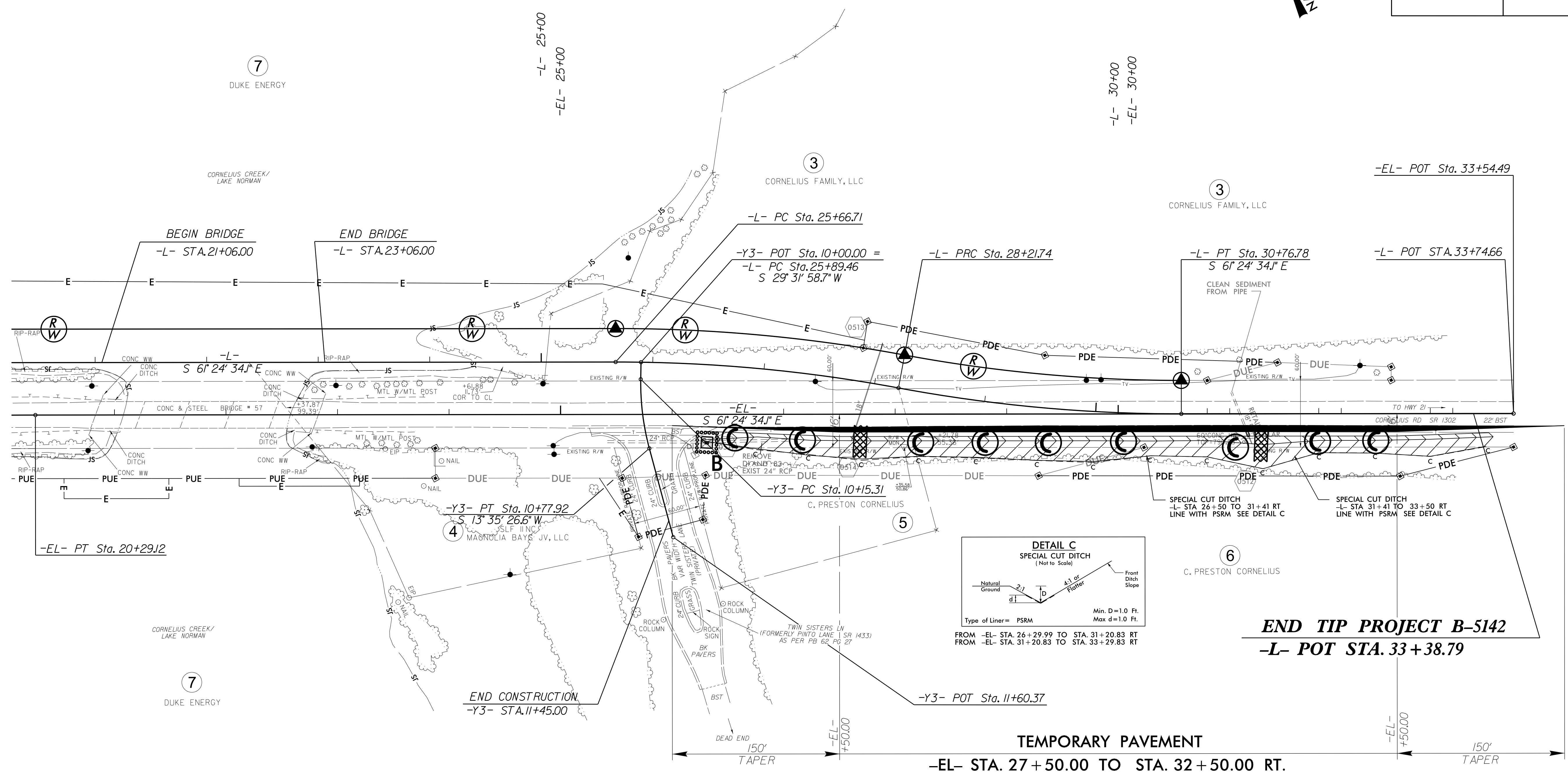
SEE SHEET 2D-01 FOR DRY DETENTION/  
HAZARDOUS SPILL BASIN DETAIL  
SEE SHEET 6 FOR -L- PROFILE  
SEE SHEET 7 FOR -Y3- PROFILE



# DETOUR



PROJECT REFERENCE NO. B-5142	SHEET NO. EC-6/CONST.2B-02
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**END TIP PROJECT B-5142**  
**-L- POT STA. 33+38.79**



SEE SHEET TMP-? FOR TRAFFIC CONTROL PLANS  
 SEE SHEET 5 FOR -L- PLAN SHEET  
 SEE SHEET 6 FOR -L- PROFILE  
 SEE SHEET 7 FOR -EL- PROFILE

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PROJECT REFERENCE NO. B-5142	SHEET NO. EC-7/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:  
MAINTAIN IMPERVIOUS DIKES FOR SEDIMENT CONTAINMENT AS PRACTICABLE DURING CONSTRUCTION. DEWATER WORK SITE UTILIZING SPECIAL STILLING BASINS.

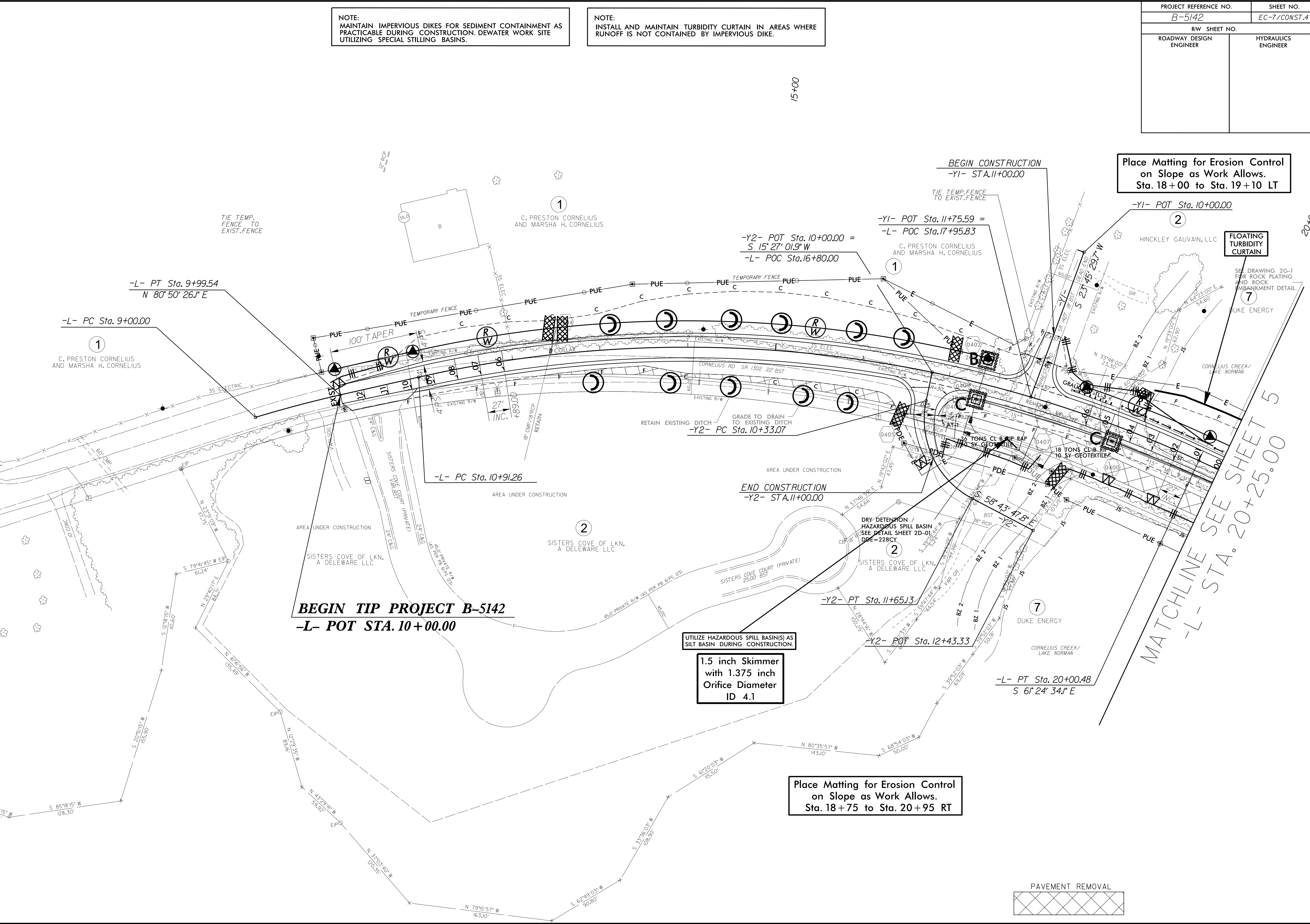
NOTE:  
INSTALL AND MAINTAIN TURBIDITY CURTAIN IN AREAS WHERE RUNOFF IS NOT CONTAINED BY IMPERVIOUS DIKE.

Place Matting for Erosion Control on Slope as Work Allows. Sta. 18+00 to Sta. 19+10 LT

FLOATING TURBIDITY CURTAIN

MATCHLINE SEE SHEET 5  
-L- STA. 20+25.00

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-L- PT Sta. 9+99.54  
N 80° 50' 26.1" E  
-L- PC Sta. 9+00.00  
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C. PRESTON CORNELIUS  
AND MARSHA H. CORNELIUS

-Y1- POT Sta. 11+75.59 =  
-L- POC Sta. 17+95.83  
C. PRESTON CORNELIUS  
AND MARSHA H. CORNELIUS

-Y2- POT Sta. 10+00.00 =  
S 15° 27' 01.9" W  
-L- POC Sta. 16+80.00

-L- PC Sta. 10+91.26

**BEGIN TIP PROJECT B-5142**  
-L- POT STA. 10+00.00

UTILIZE HAZARDOUS SPILL BASIN(S) AS SILT BASIN DURING CONSTRUCTION.  
**1.5 inch Skimmer with 1.375 inch Orifice Diameter ID 4.1**

Place Matting for Erosion Control on Slope as Work Allows. Sta. 18+75 to Sta. 20+95 RT

-L- PT Sta. 20+00.48  
S 6° 24' 34.1" E



PROJECT REFERENCE NO.	SHEET NO.
B-5142	EC-8/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:  
 MAINTAIN IMPERVIOUS DIKES FOR SEDIMENT CONTAINMENT AS PRACTICABLE DURING CONSTRUCTION. DEWATER WORK SITE UTILIZING SPECIAL STILLING BASINS.

NOTE:  
 INSTALL AND MAINTAIN TURBIDITY CURTAIN IN AREAS WHERE RUNOFF IS NOT CONTAINED BY IMPERVIOUS DIKE.

Place Matting for Erosion Control on Slope as Work Allows.  
 Sta. 24+25 to Sta. 27+00 LT

Place Matting for Erosion Control on Slope as Work Allows.  
 Sta. 18+75 to Sta. 20+95 RT

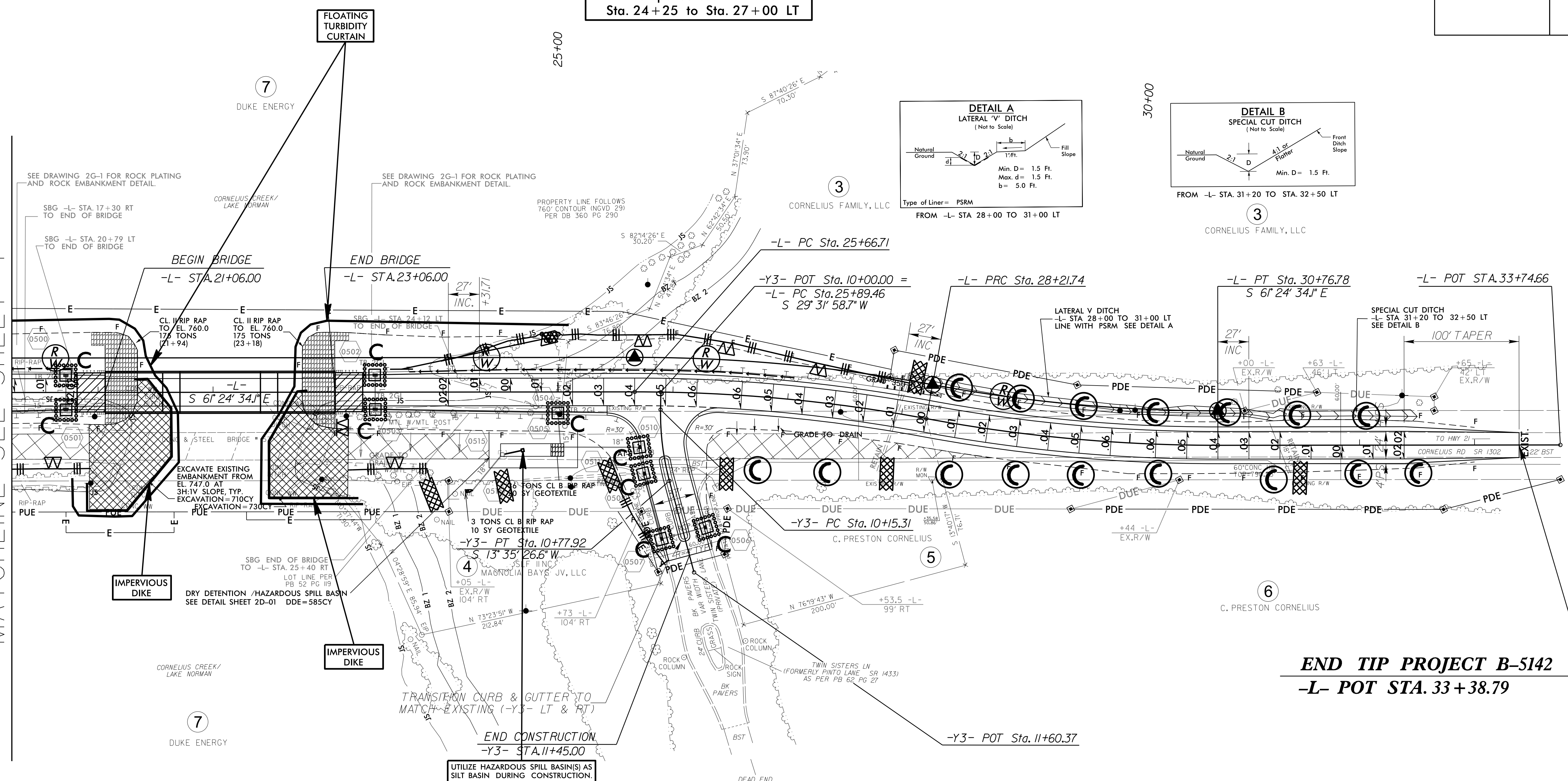
1.5 inch Skimmer with 1.375 inch Orifice Diameter ID 5.1

Place Matting for Erosion Control on Slope as Work Allows.  
 Sta. 23+00 to Sta. 26+00 RT

-L- STA. 20+25.00  
 MATCHLINE SEE SHEET 4

**END TIP PROJECT B-5142**  
**-L- POT STA. 33+38.79**

SEE SHEET 2D-01 FOR DRY DETENTION/HAZARDOUS SPILL BASIN DETAIL  
 SEE SHEET 6 FOR -L- PROFILE  
 SEE SHEET 7 FOR -Y3- PROFILE



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