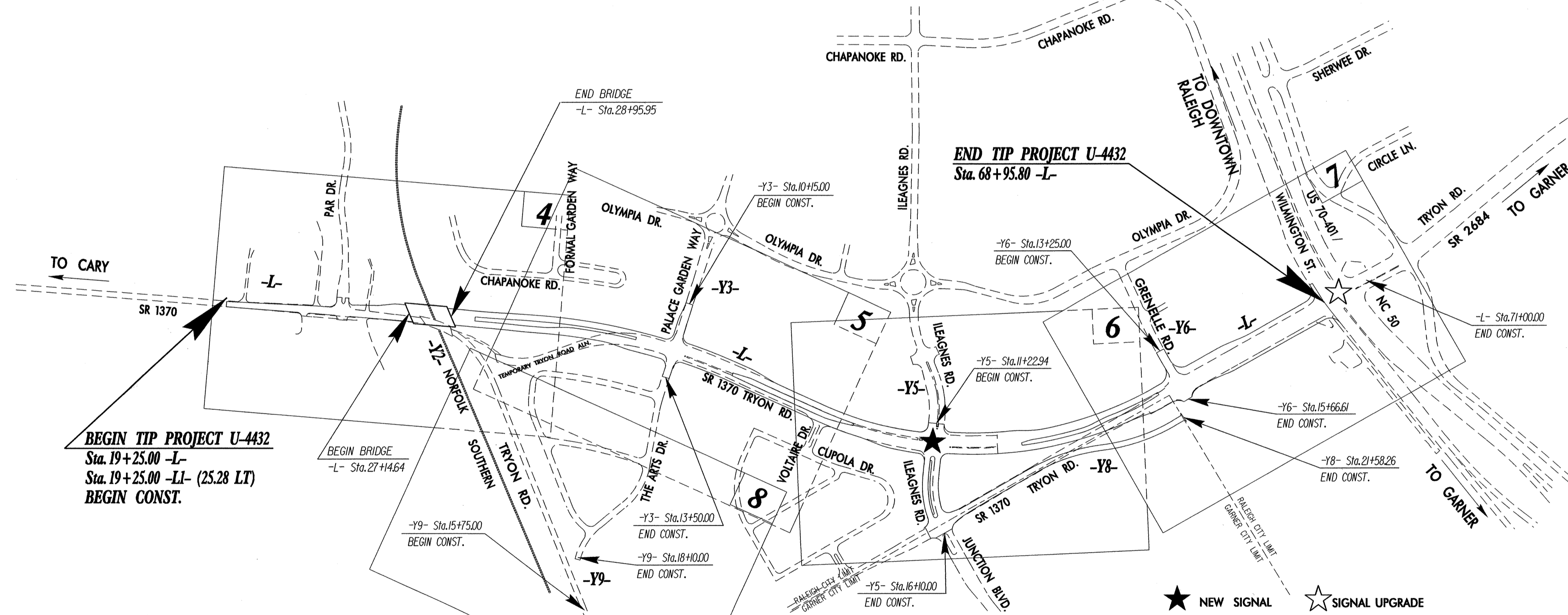
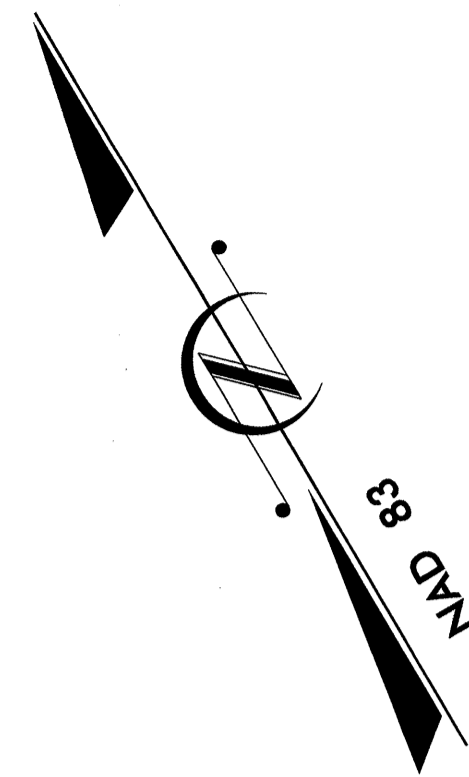


**TIP PROJECT: U-4432**

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

**LOCATION: RALEIGH - SR 1370 (TRYON ROAD) FROM WEST OF  
BRIDGE No. 259 TO US 70-401 / NC 50 (WILMINGTON STREET)**

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



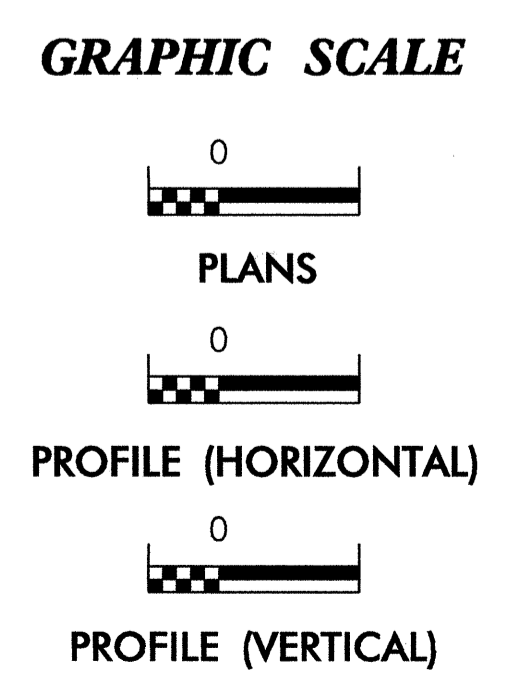
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4432	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

**EROSION AND SEDIMENT CONTROL MEASURES**

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	III III III
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.**

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



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**

Roadway Standard Drawings

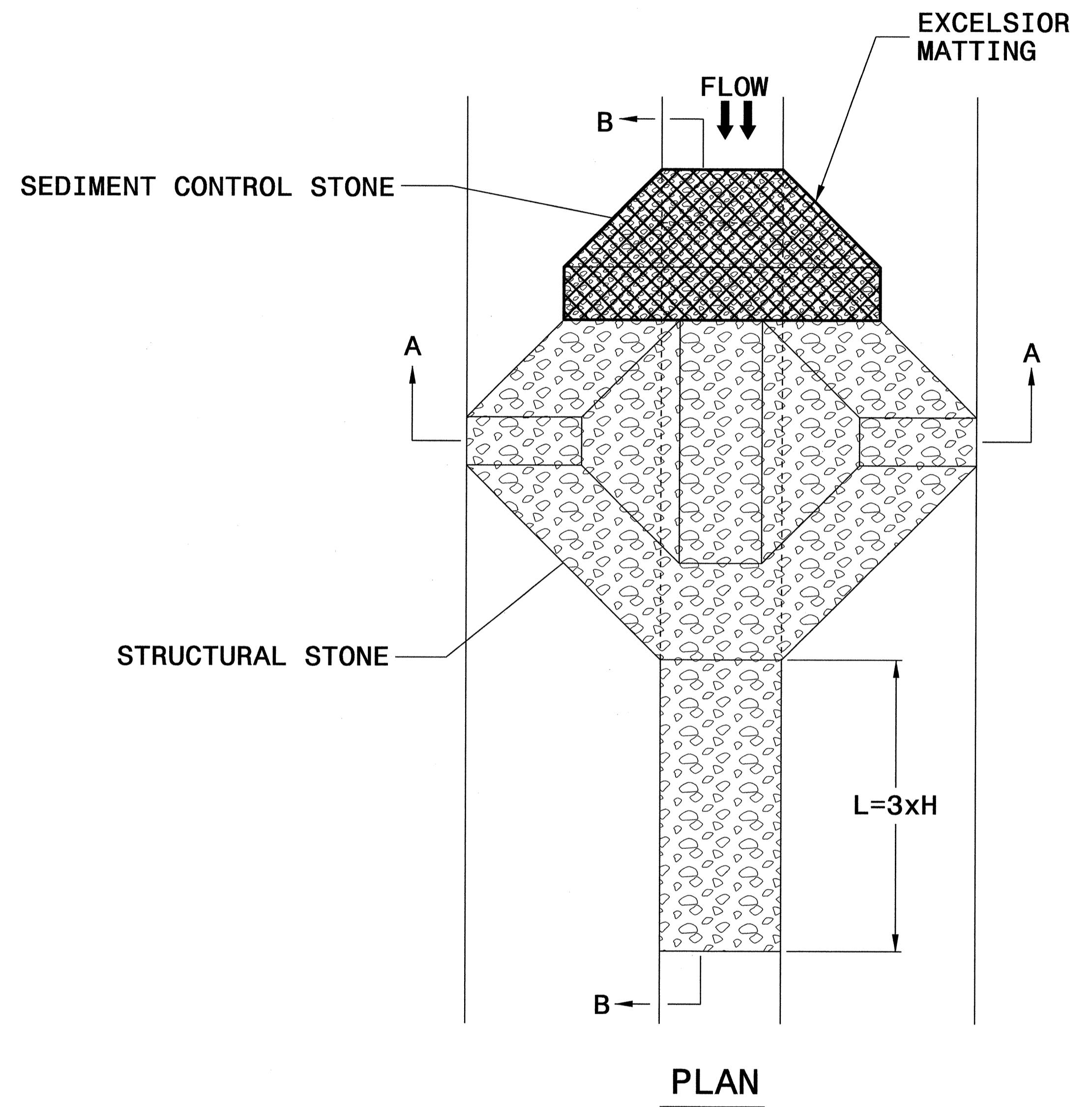
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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	

REVISED: NOV-2013, 08/10/14  
DATE: 11/15/13  
PROJECT: TIP PROJECT U-4432, EC, 1st sheet

PROJECT REFERENCE NO. U-4432	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

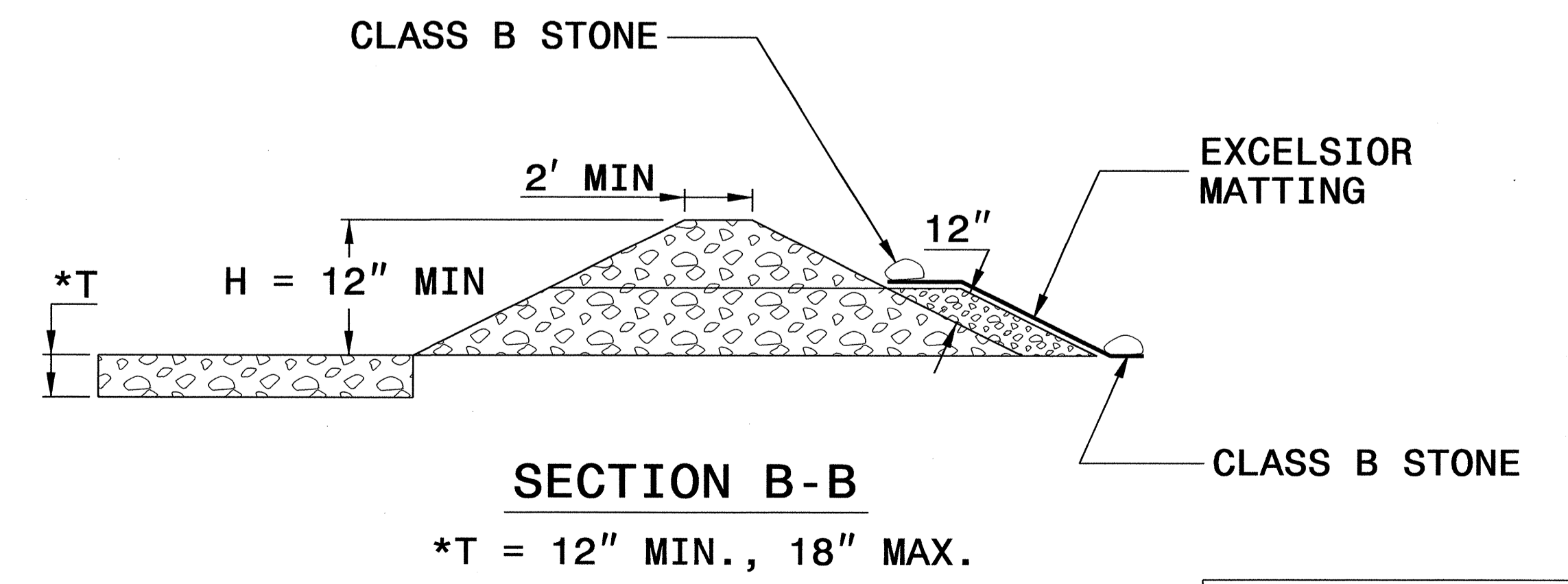
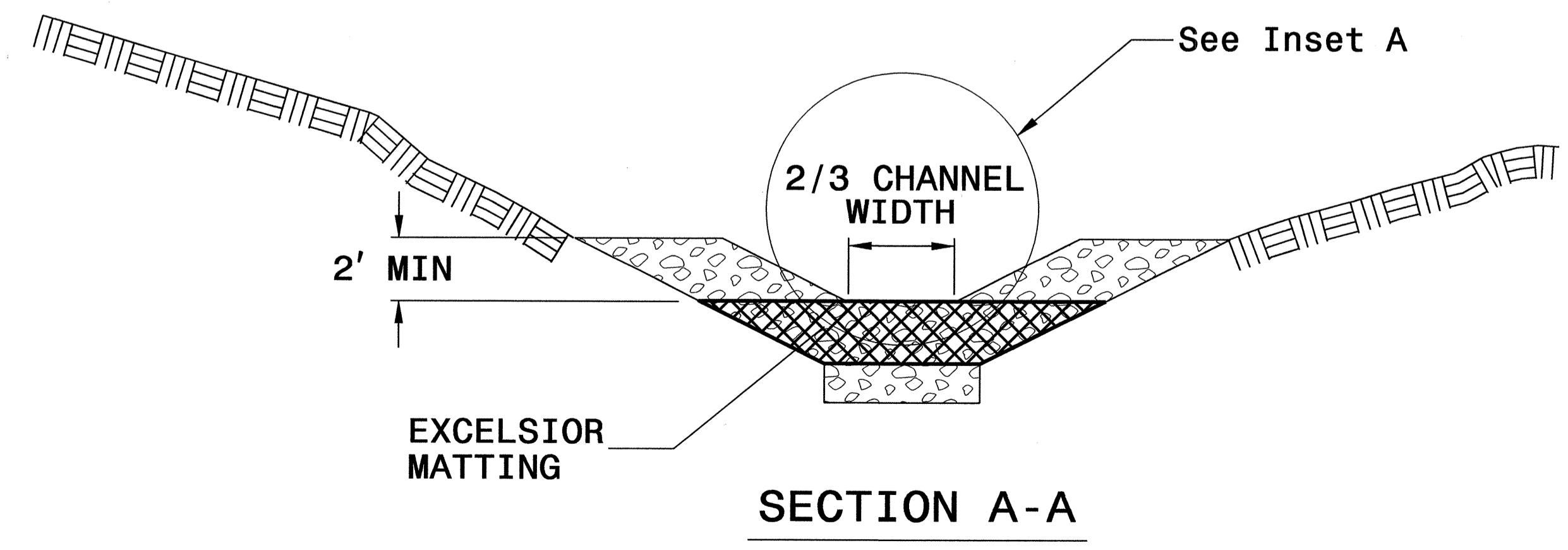
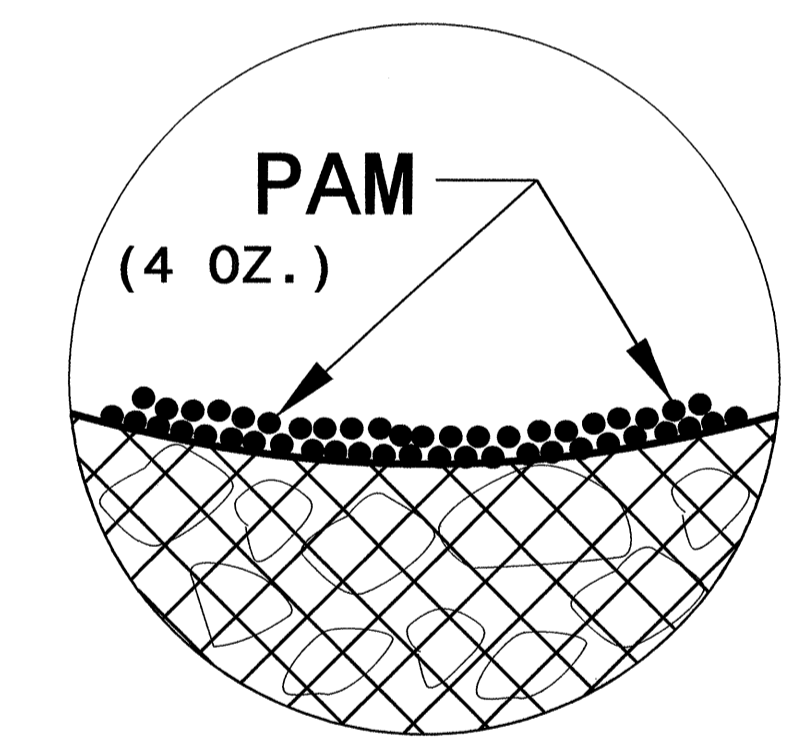


## NOTES

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.



NOT TO SCALE

PROJECT REFERENCE NO. U-4432	SHEET NO. EC-2A
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.

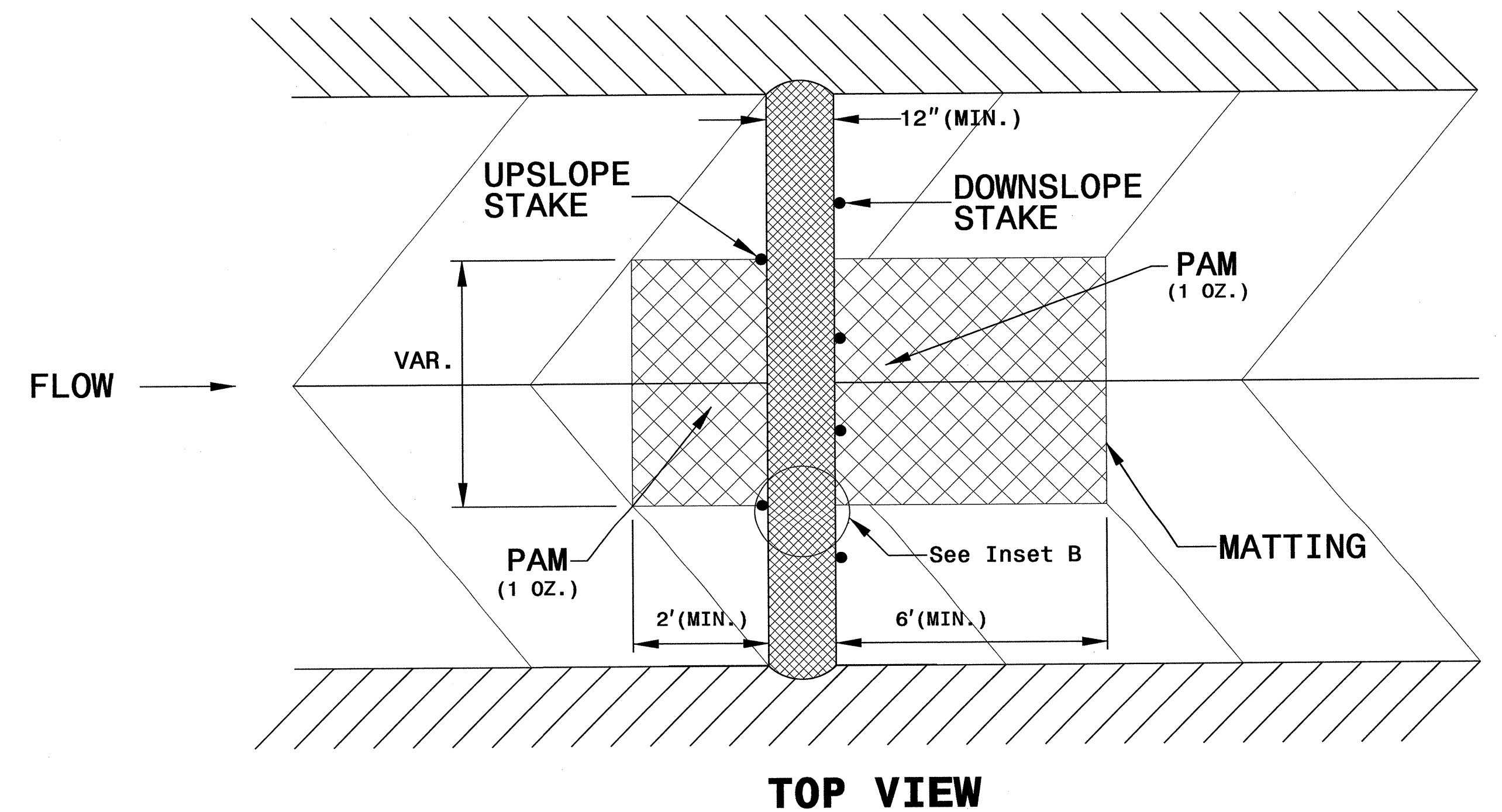
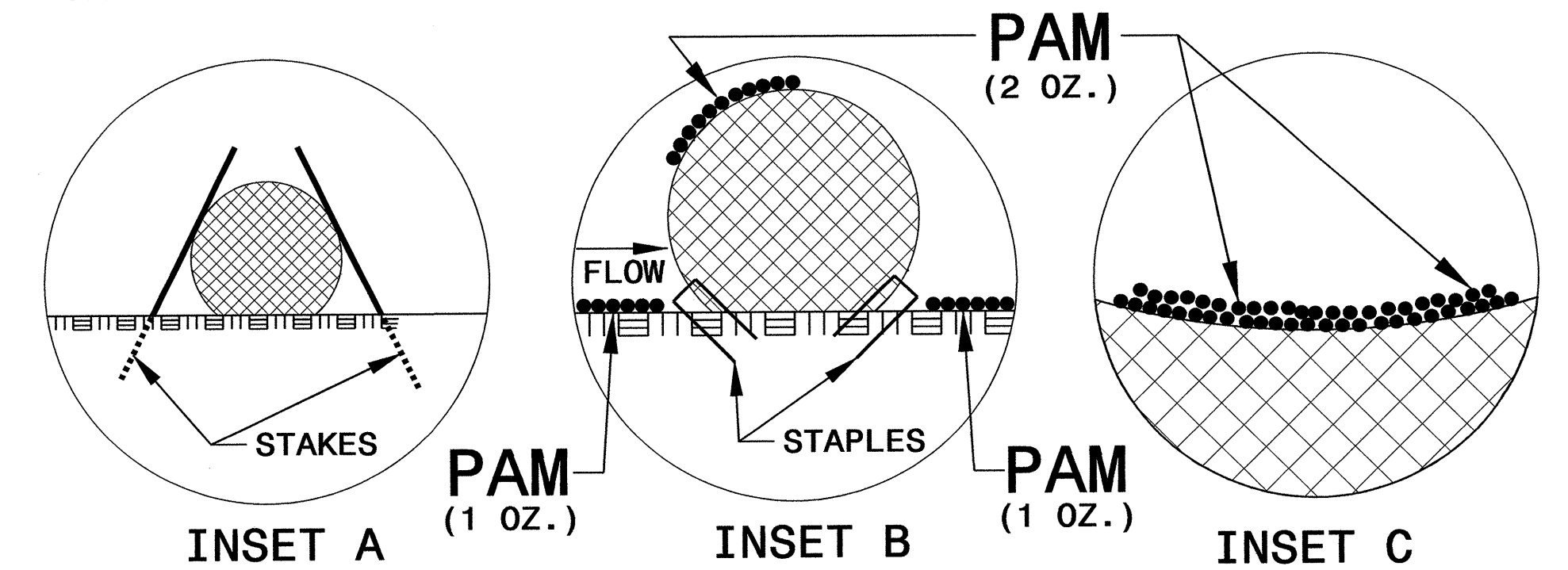
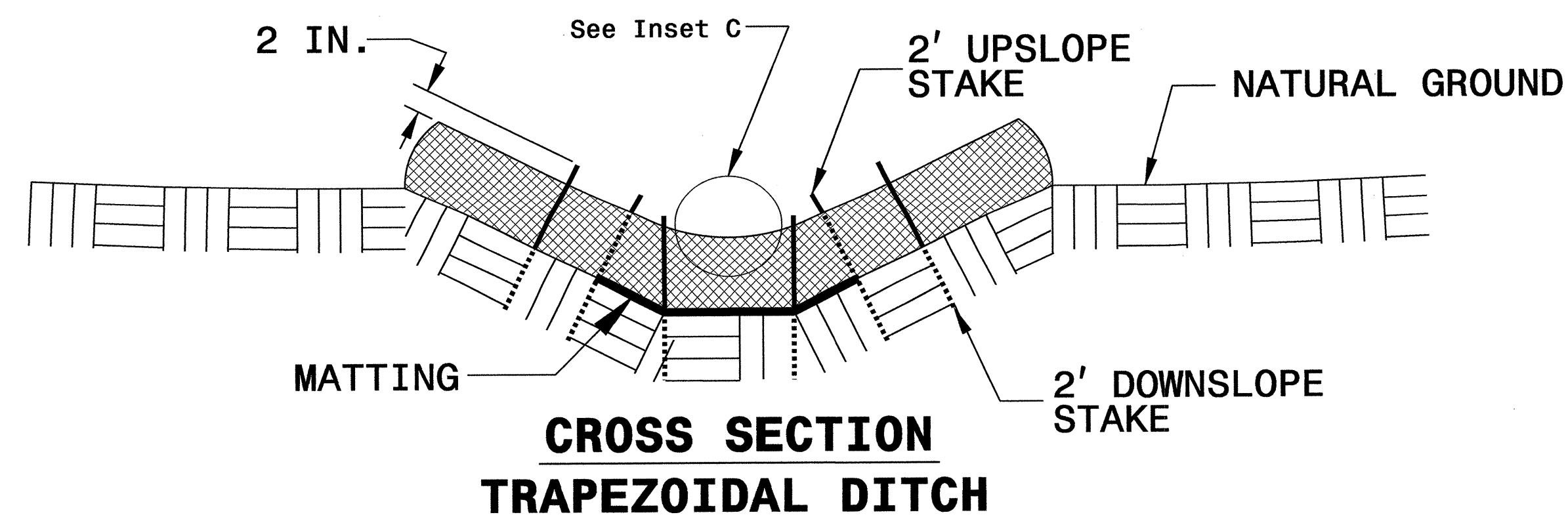
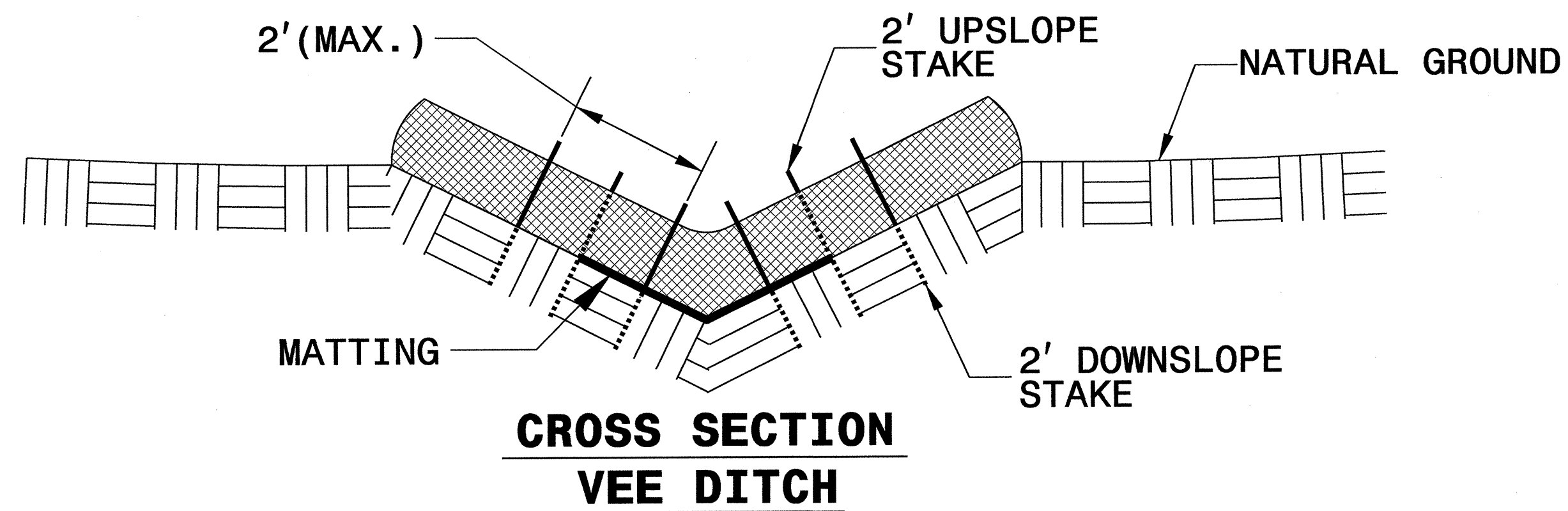
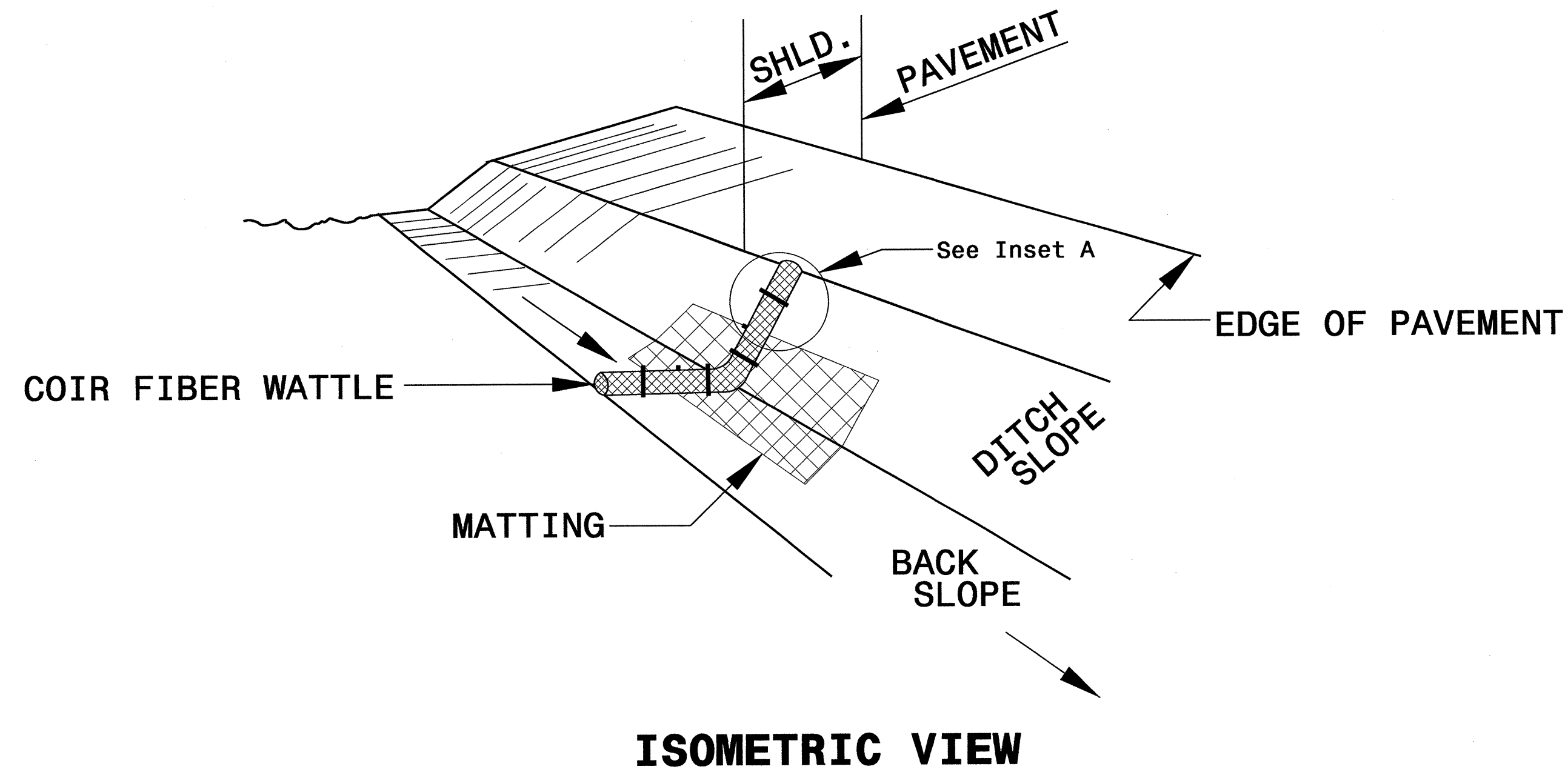
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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.

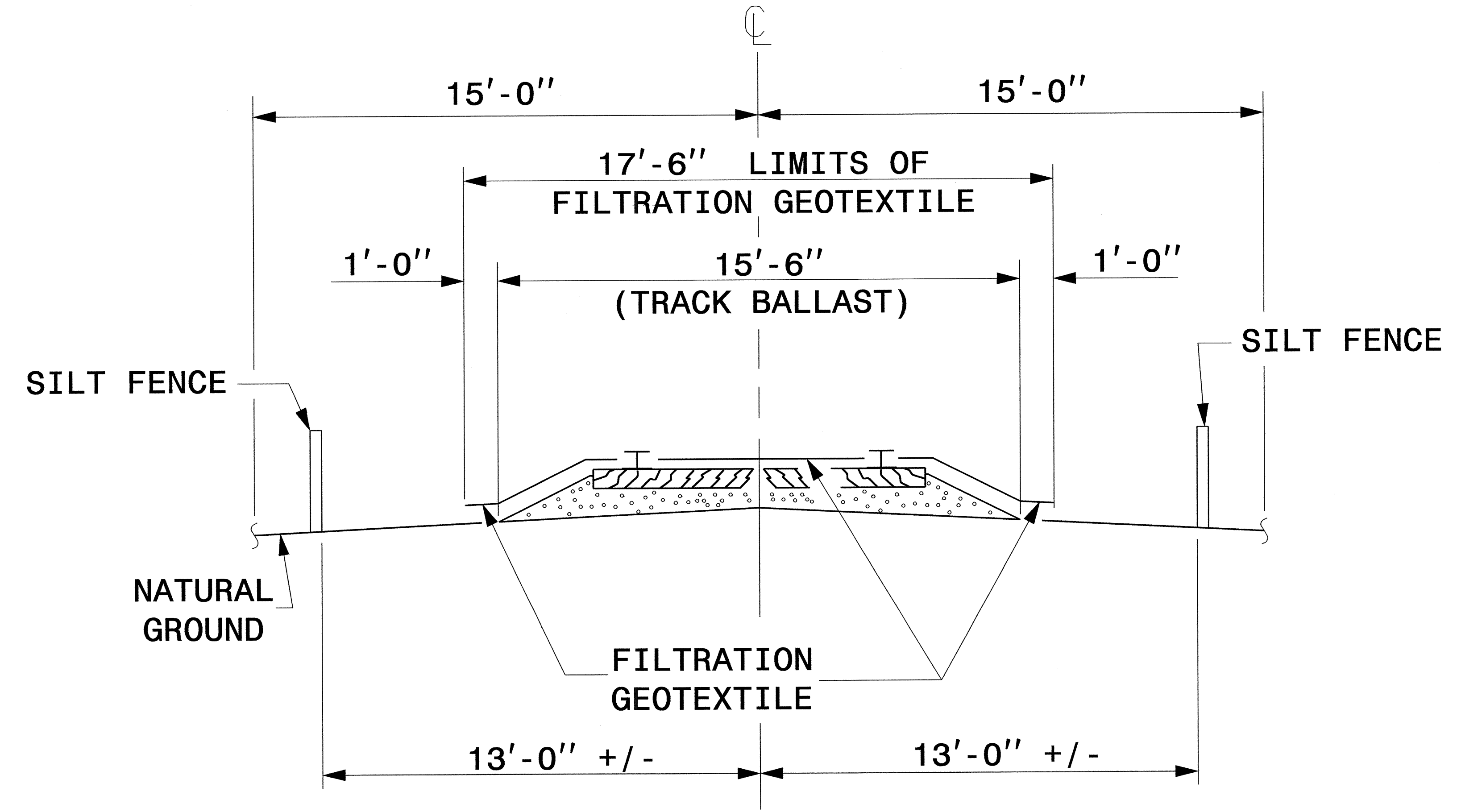
PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



PROJECT REFERENCE NO. U-4432	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# RAILROAD EROSION CONTROL DETAIL



## NOTES

INSTALL RAILROAD EROSION CONTROL MEASURES PRIOR TO PERFORMING ANY WORK IN THE RAILROAD RIGHT-OF-WAY.

ADDITIONAL EROSION CONTROL MEASURES FOR PROTECTION OF RAILROAD DITCHES MAY BE REQUIRED AS DIRECTED.

NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR RAILROAD EROSION CONTROL MEASURES.

EXTEND LIMITS OF SILT FENCE AND FILTRATION GEOTEXTILE PARALLEL TO RAILROAD A MINIMUM OF 10'-0" OUTSIDE EDGE OF SUPERSTRUCTURE OR TOE OF SLOPE ON CONSTRUCTION. A GREATER LENGTH OF SILT FENCE OR FILTRATION GEOTEXTILE MAY BE REQUIRED AS DIRECTED.

NAIL FILTRATION GEOTEXTILE TO TIMBER RAIL TIES WITH PRIME SOURCE "GRIP CAP" OR EQUIVALENT. SECURE FILTRATION GEOTEXTILE ON SHOULDER AS DIRECTED BY THE RAILROAD AND NCDOT.

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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PROJECT REFERENCE NO. <i>U-4432</i>	SHEET NO. <i>EC-3</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.

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

<small>PROJECT REFERENCE NO.</small> U-4432	<small>SHEET NO.</small> EC-3A
<small>ROADWAY DESIGN ENGINEER</small>	<small>HYDRAULICS ENGINEER</small>

**SOIL STABILIZATION SUMMARY SHEET**

**MATTING FOR EROSION CONTROL**

**PERMANENT SOIL REINFORCEMENT MAT**

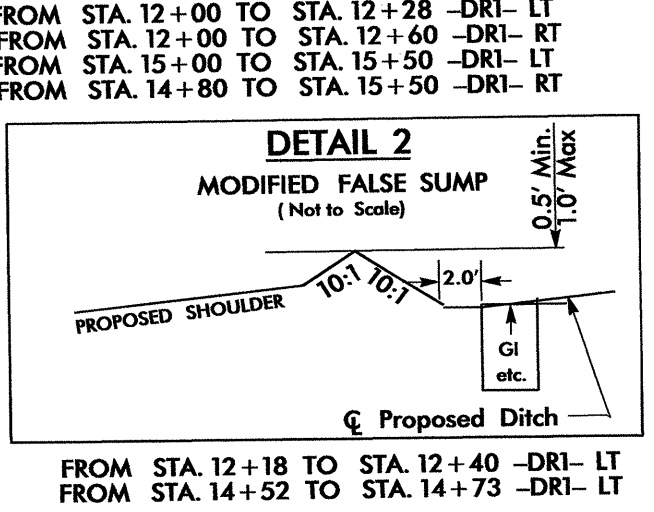
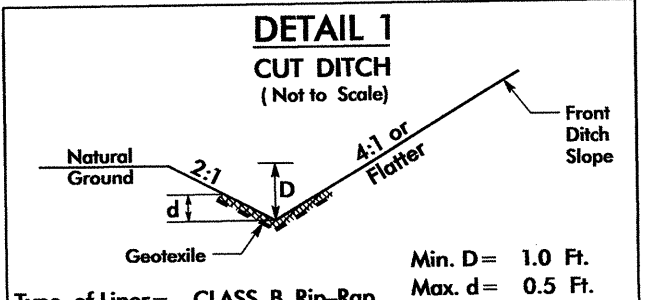
CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	21+75	22+00	RT	15
4	-DRI-	14+25	14+50	RT	20
6	-Y8-	14+00	15+00	RT	70
<i>SUBTOTAL</i>					105
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					24,850
<i>TOTAL</i>					24,955
<i>SAY</i>					25,000

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	22+00	22+25	RT	15
4	-DRI-	15+50	15+83	RT	25
6	-Y8-	15+75	18+25	LT	175
<i>SUBTOTAL</i>					215
ADDITIONAL PSRM TO BE INSTALLED					150
<i>TOTAL</i>					365
<i>SAY</i>					370

PROJECT REFERENCE NO. U-4432	SHEET NO. EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

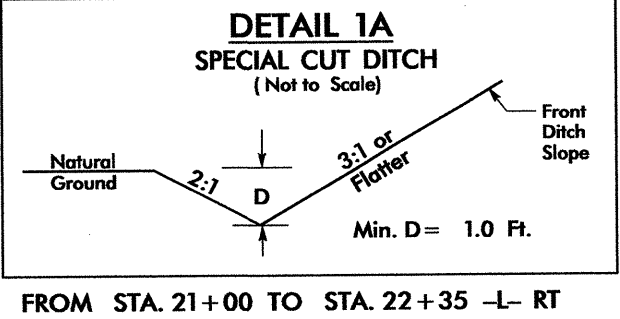
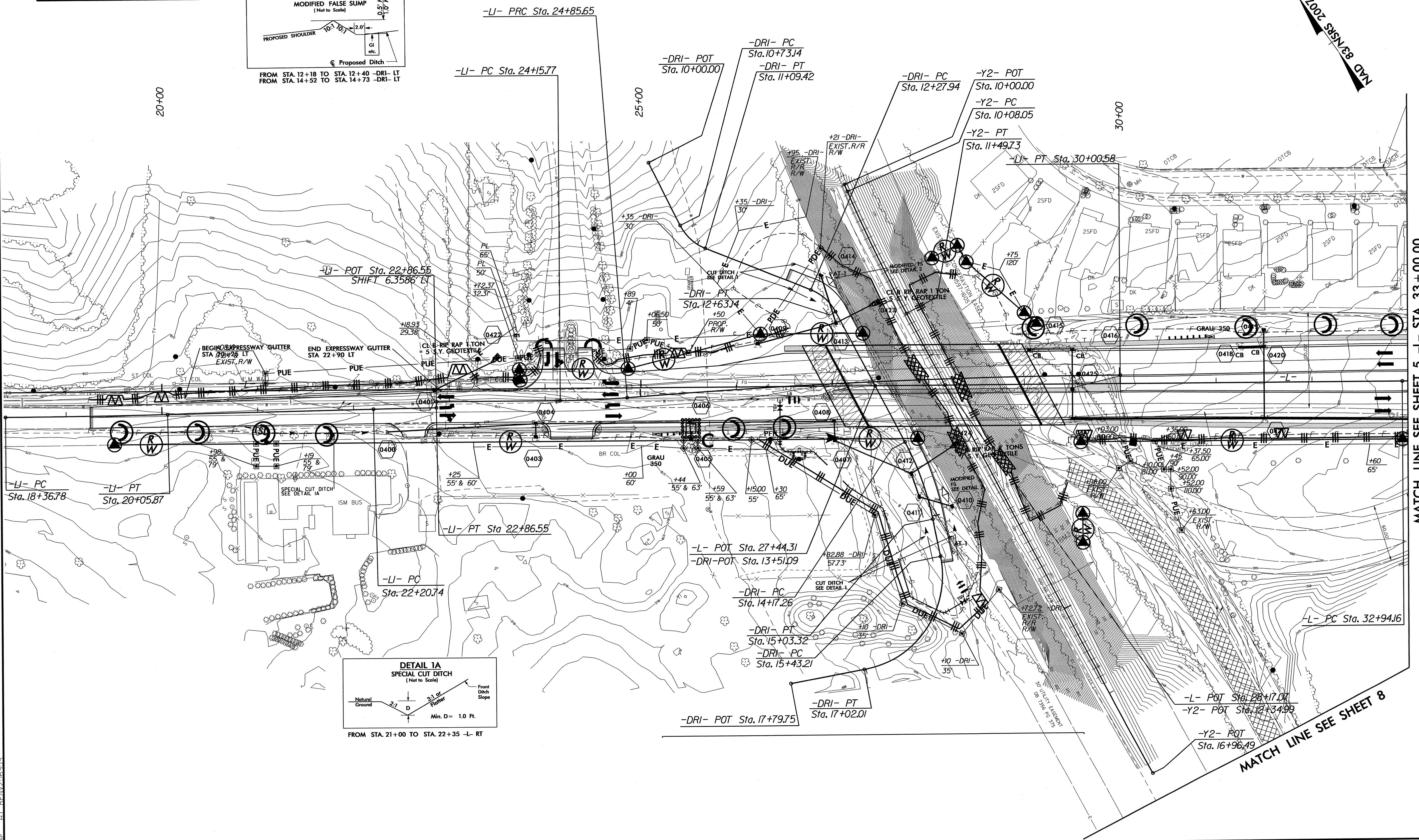
CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 4

INSTEAD OF ROCK INLET SEDIMENT  
TRAPS, ALTERNATIVE DEVICES MAY  
BE USED, AS DIRECTED.



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

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Author: AT RENY26595



MATCH LINE SEE SHEET 8

MATCH LINE SEE SHEET 5 -L- STA. 33+00.00

100' S&N 88' CW

5/14/99

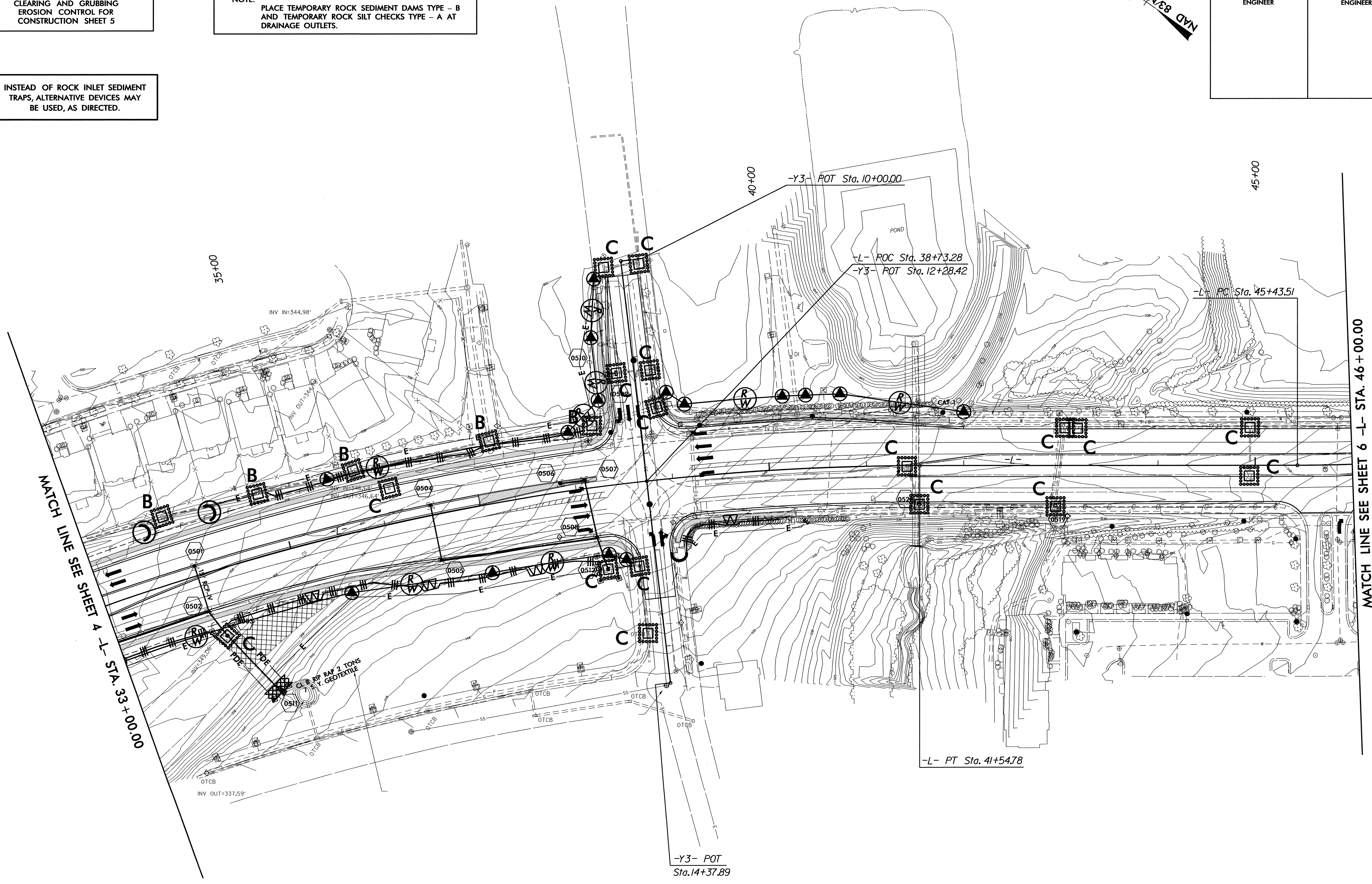
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RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 5

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

INSTEAD OF ROCK INLET SEDIMENT  
TRAPS, ALTERNATIVE DEVICES MAY  
BE USED, AS DIRECTED.

MAD 83ANSRS 2007



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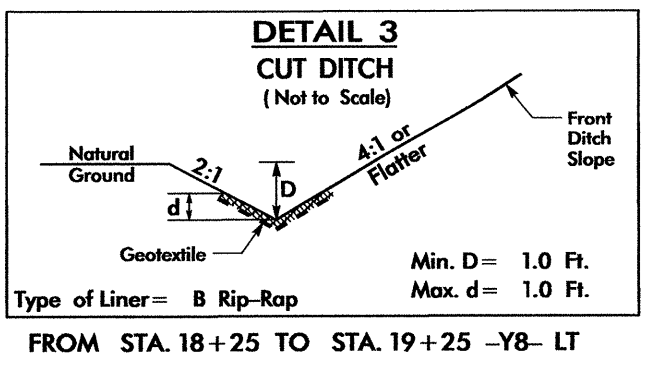
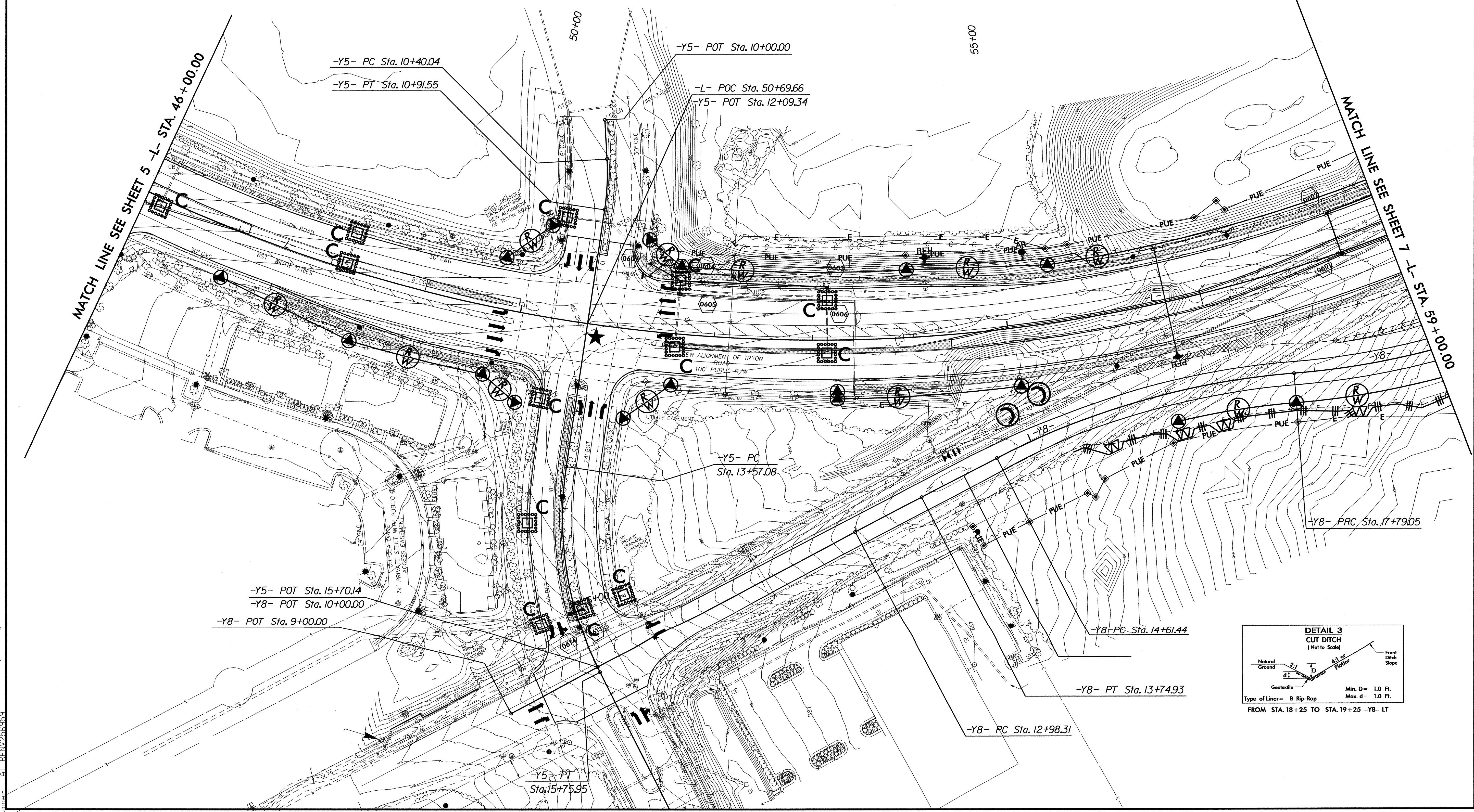
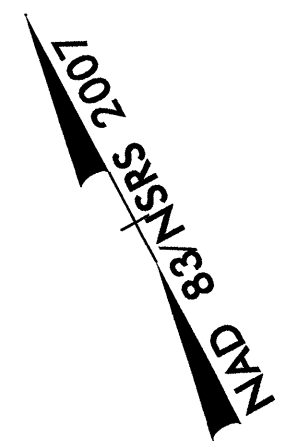
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PROJECT REFERENCE NO. U-4432		SHEET NO. EC-6/CONST.6	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 6

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

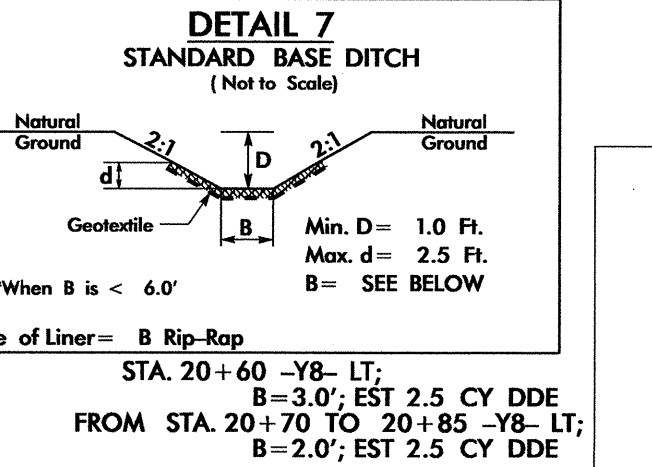
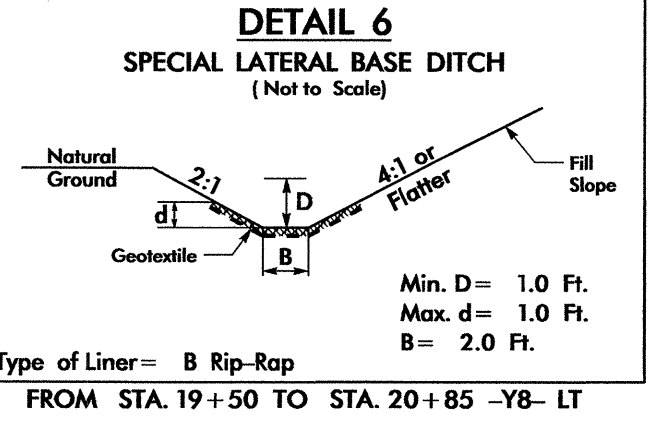
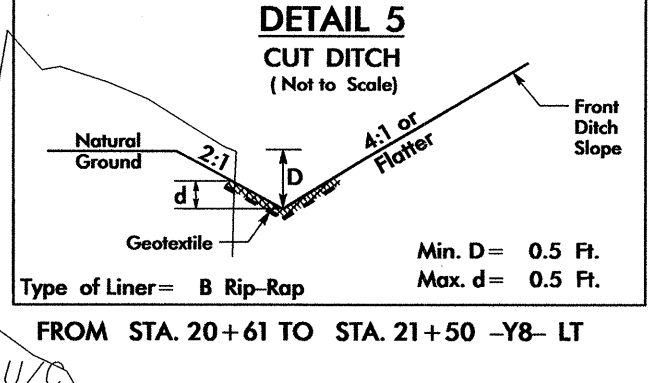
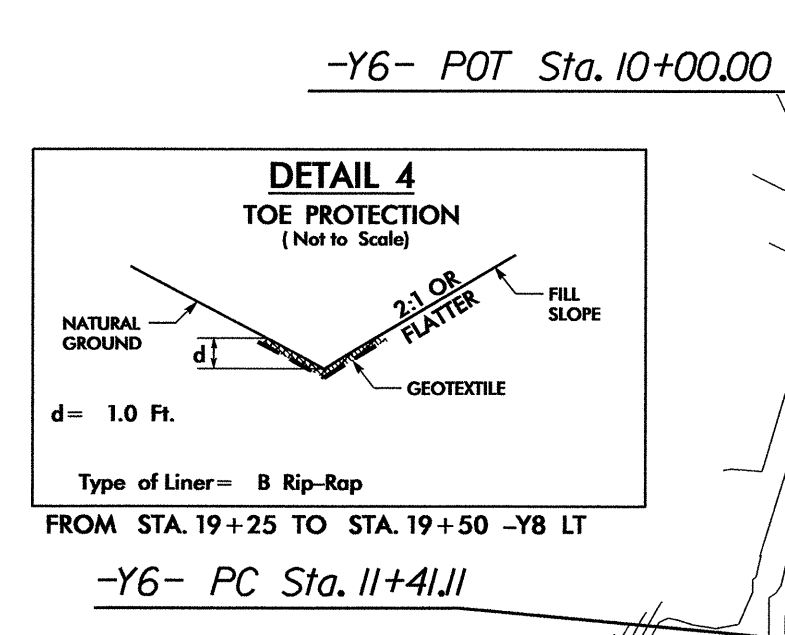
INSTEAD OF ROCK INLET SEDIMENT  
TRAPS, ALTERNATIVE DEVICES MAY  
BE USED, AS DIRECTED.



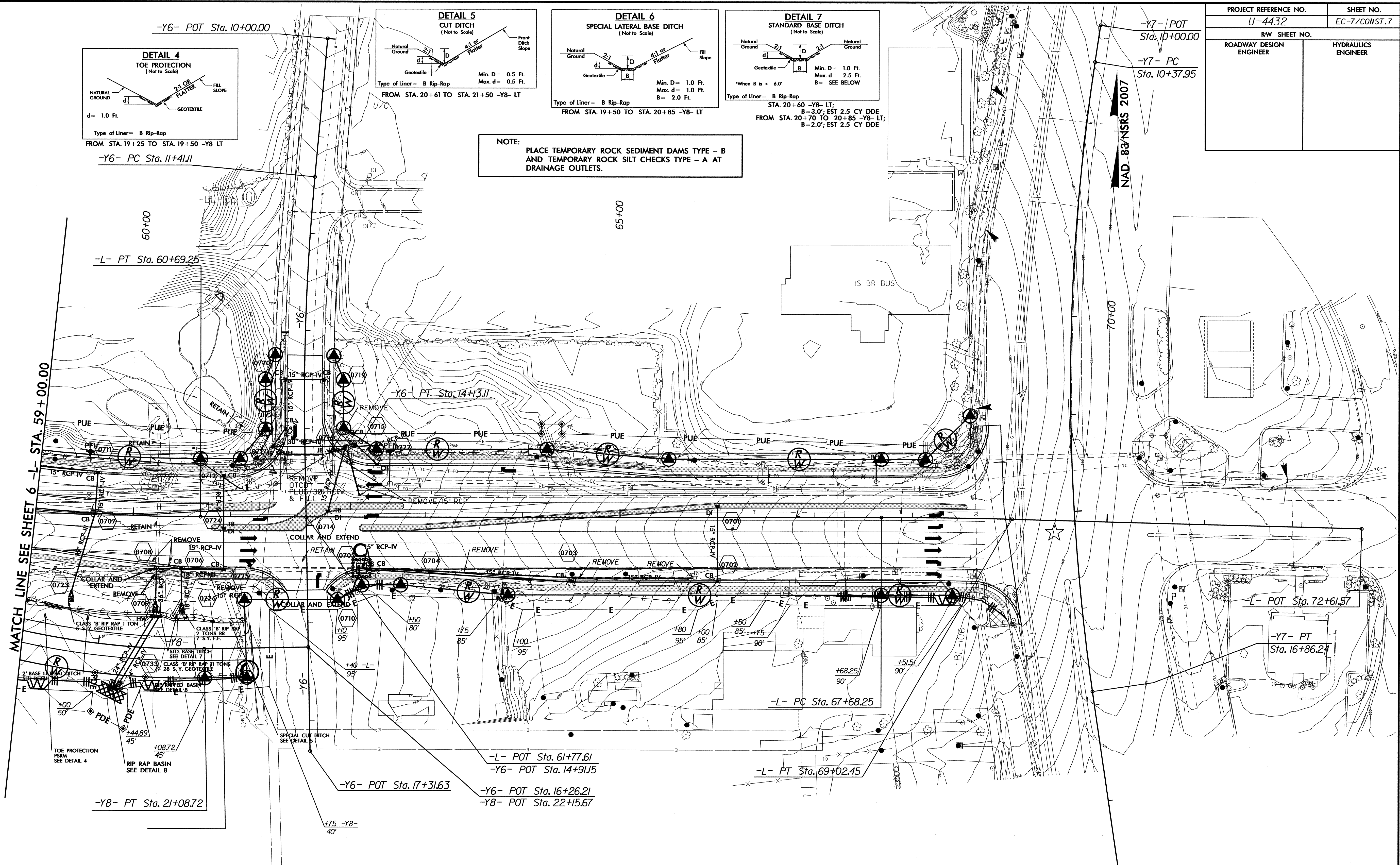
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5/14/99

PROJECT REFERENCE NO. U-4432	SHEET NO. EC-7/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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

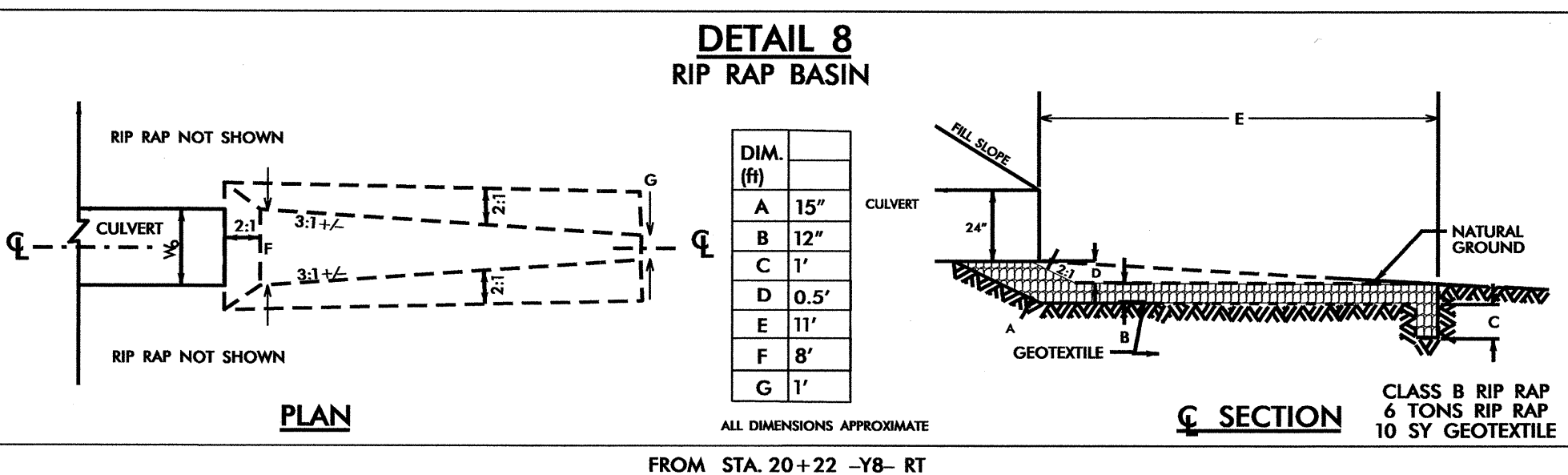


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INSTEAD OF ROCK INLET SEDIMENT TRAPS, ALTERNATIVE DEVICES MAY BE USED, AS DIRECTED.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 7



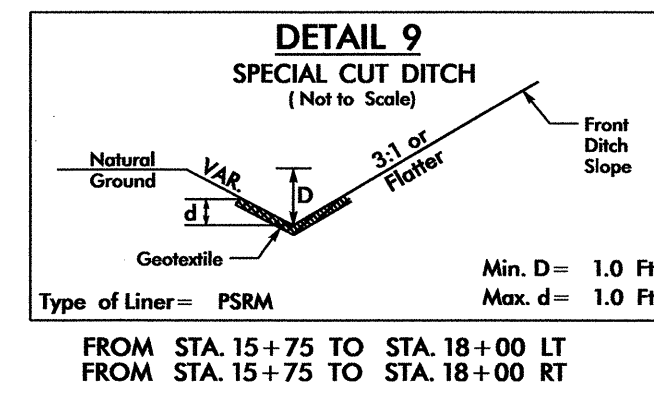
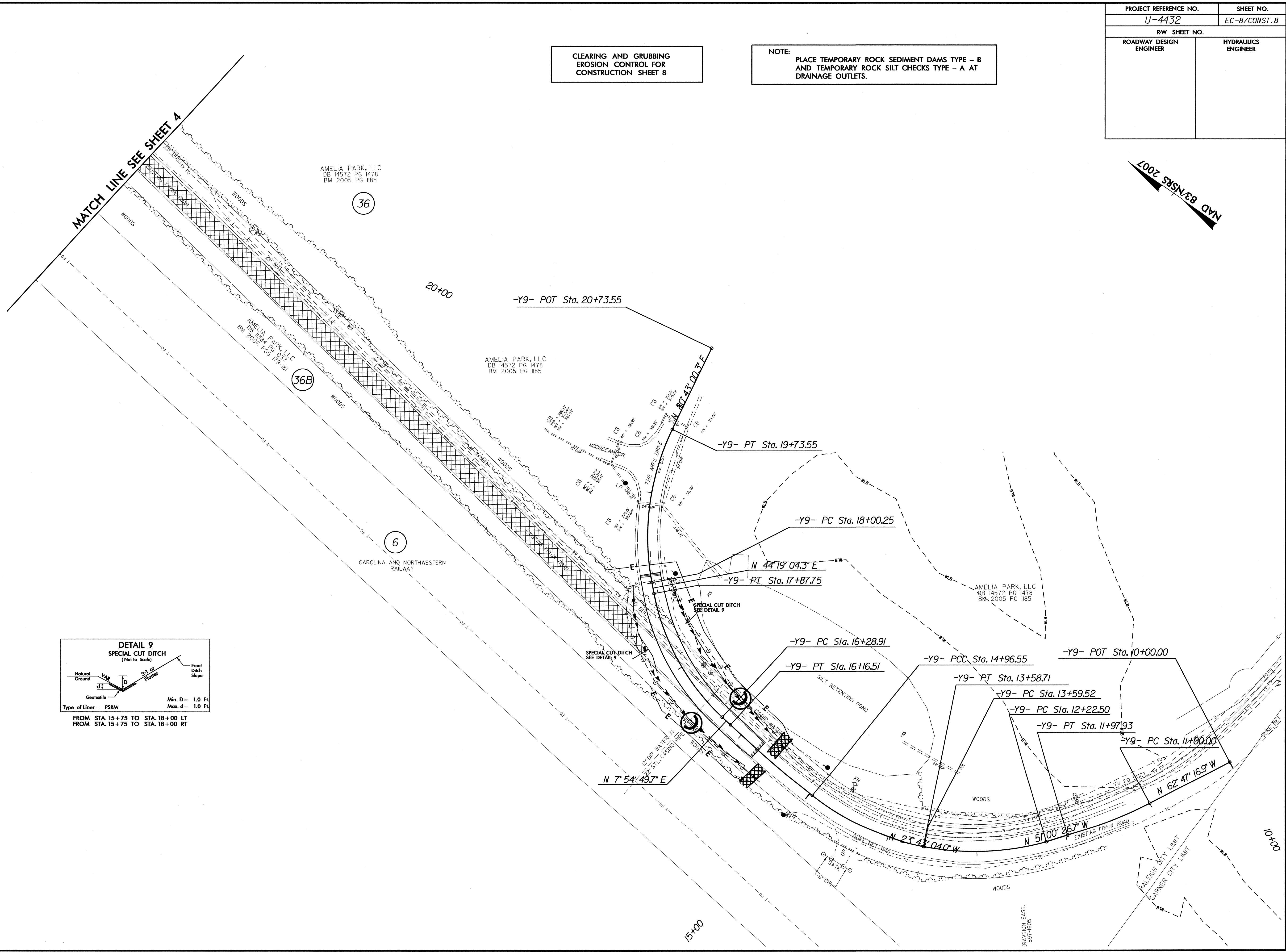
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at REVISED

PROJECT REFERENCE NO. U-4432	SHEET NO. EC-8/CONST.8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 8

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

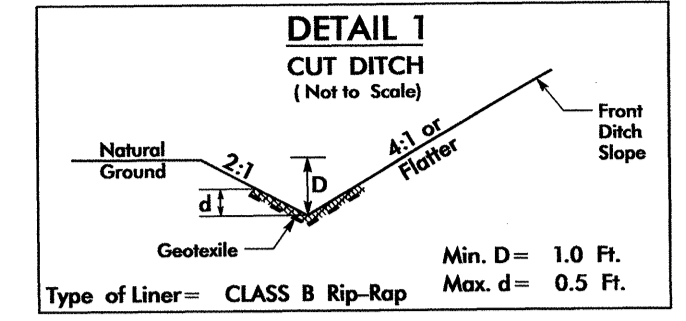
MAD 8/31/2007



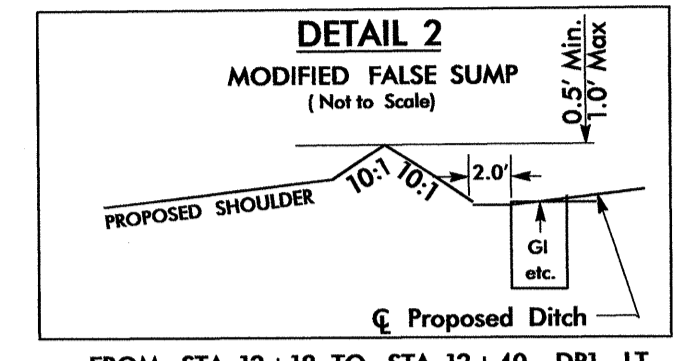
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RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

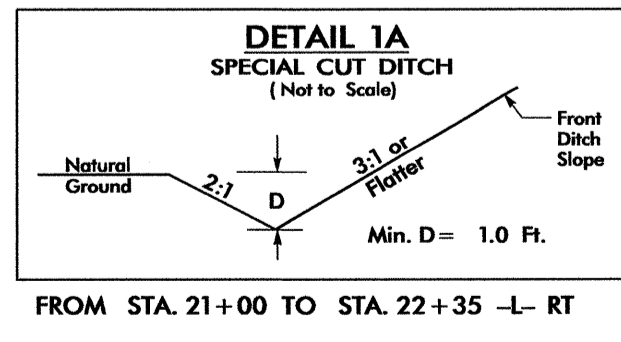
INSTEAD OF ROCK INLET SEDIMENT TRAPS, ALTERNATIVE DEVICES MAY BE USED, AS DIRECTED.



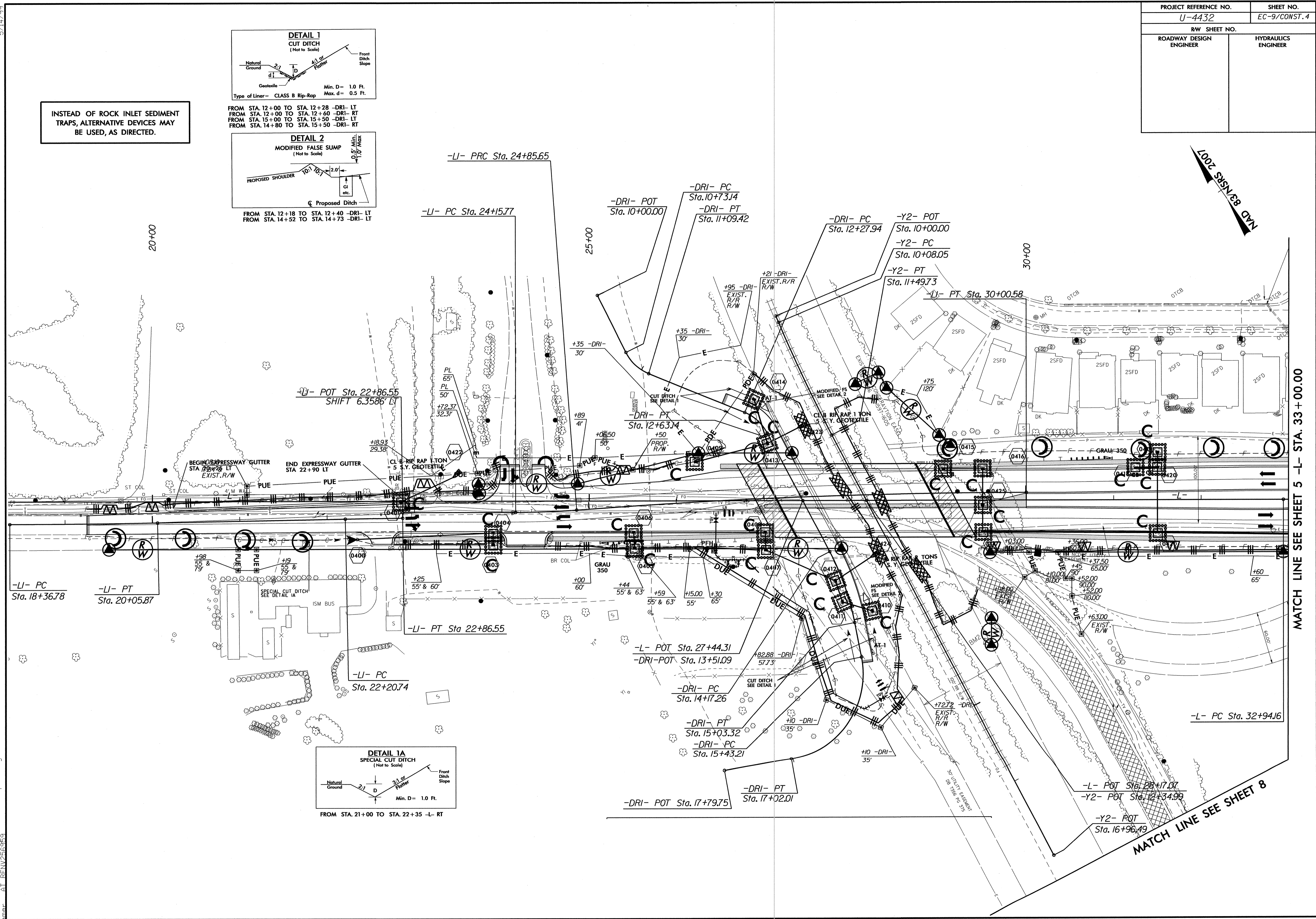
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FROM STA. 12+00 TO STA. 12+60 -DRI- RT  
FROM STA. 15+00 TO STA. 15+50 -DRI- LT  
FROM STA. 14+80 TO STA. 15+50 -DRI- RT



FROM STA. 12+18 TO STA. 12+40 -DRI- LT  
FROM STA. 14+52 TO STA. 14+73 -DRI- LT



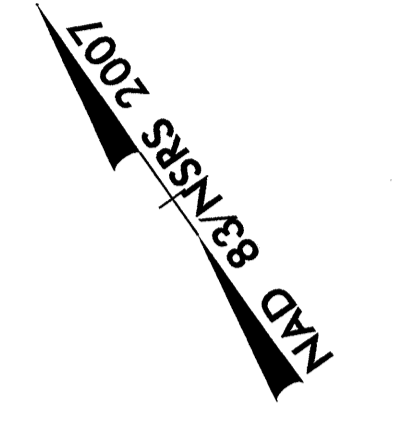
FROM STA. 21+00 TO STA. 22+35 -L- RT



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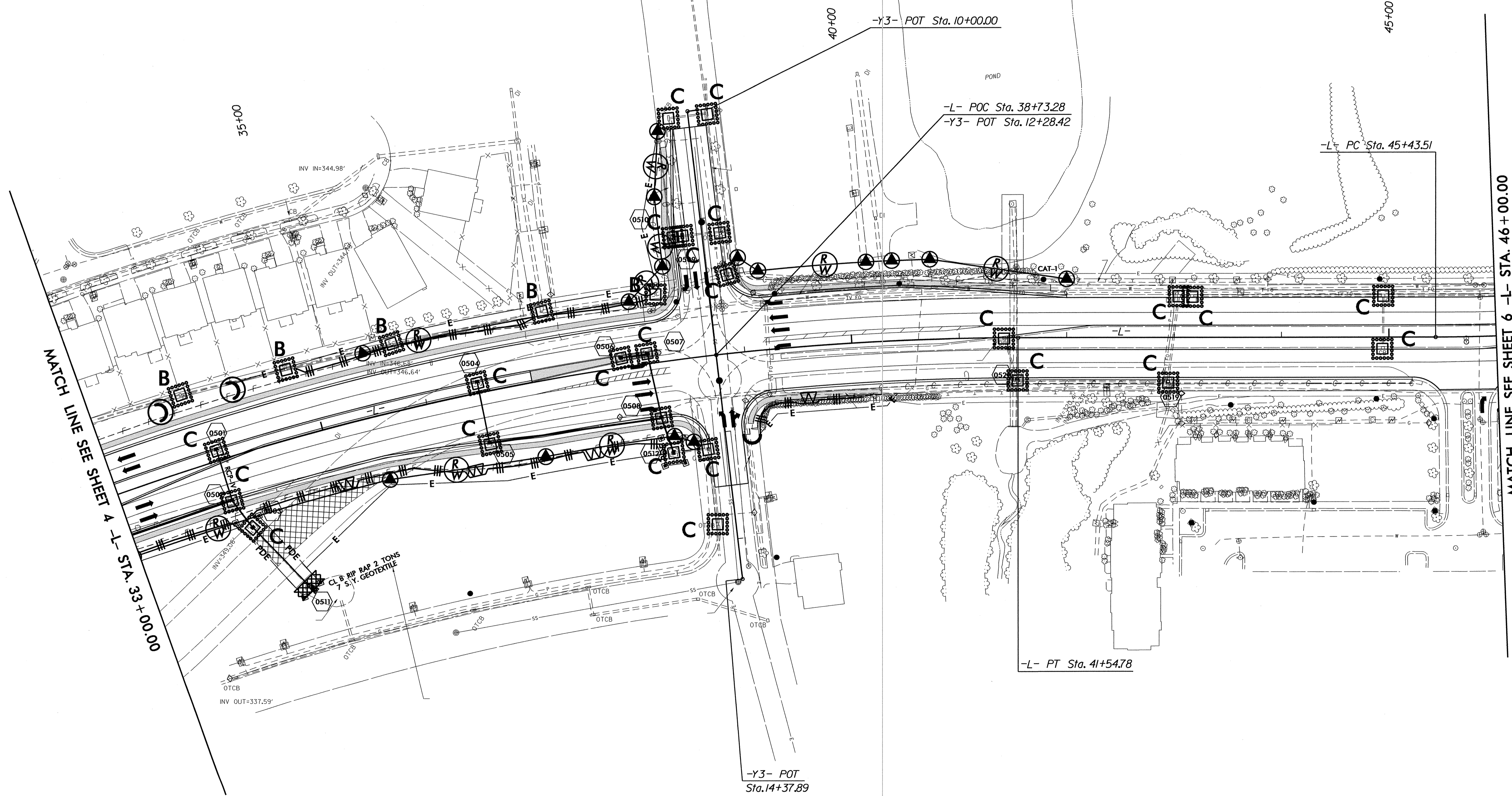
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5/14/99

PROJECT REFERENCE NO. U-4432	SHEET NO. EC-10/CONST.5
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTEAD OF ROCK INLET SEDIMENT TRAPS, ALTERNATIVE DEVICES MAY BE USED, AS DIRECTED.



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MATCH LINE SEE SHEET 6 -L- STA. 46 + 00.00

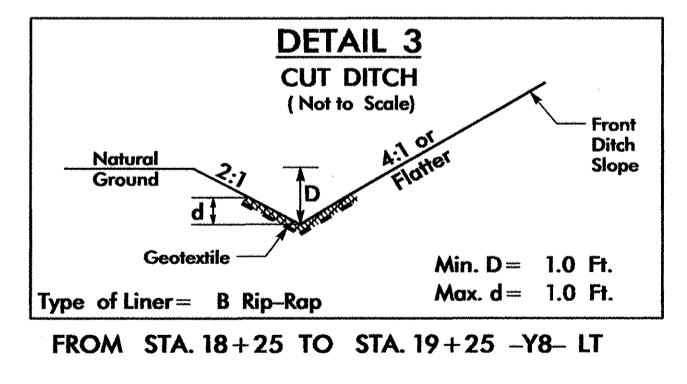
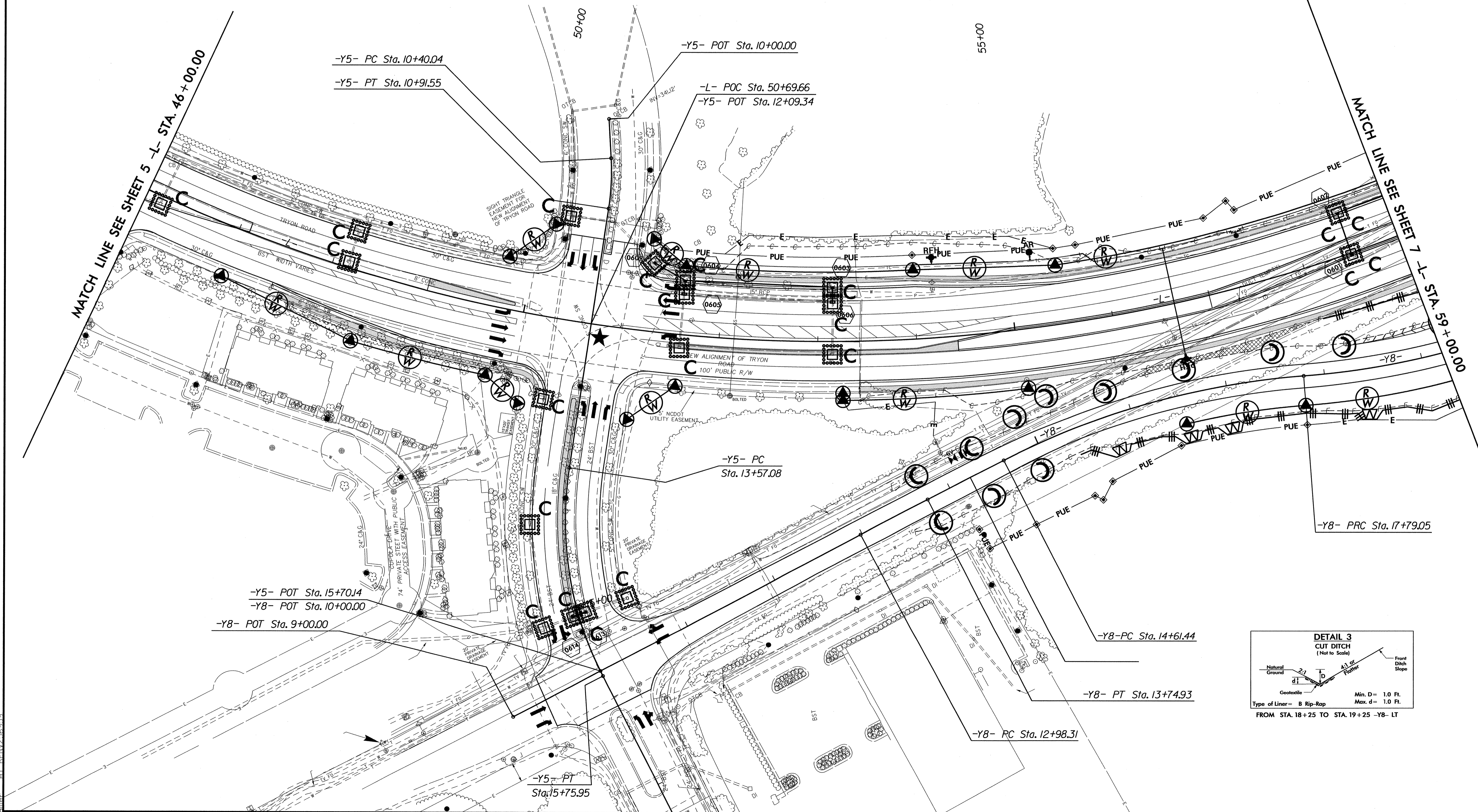
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5/14/99

PROJECT REFERENCE NO. U-4432	SHEET NO. EC-II/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NSRS 2007

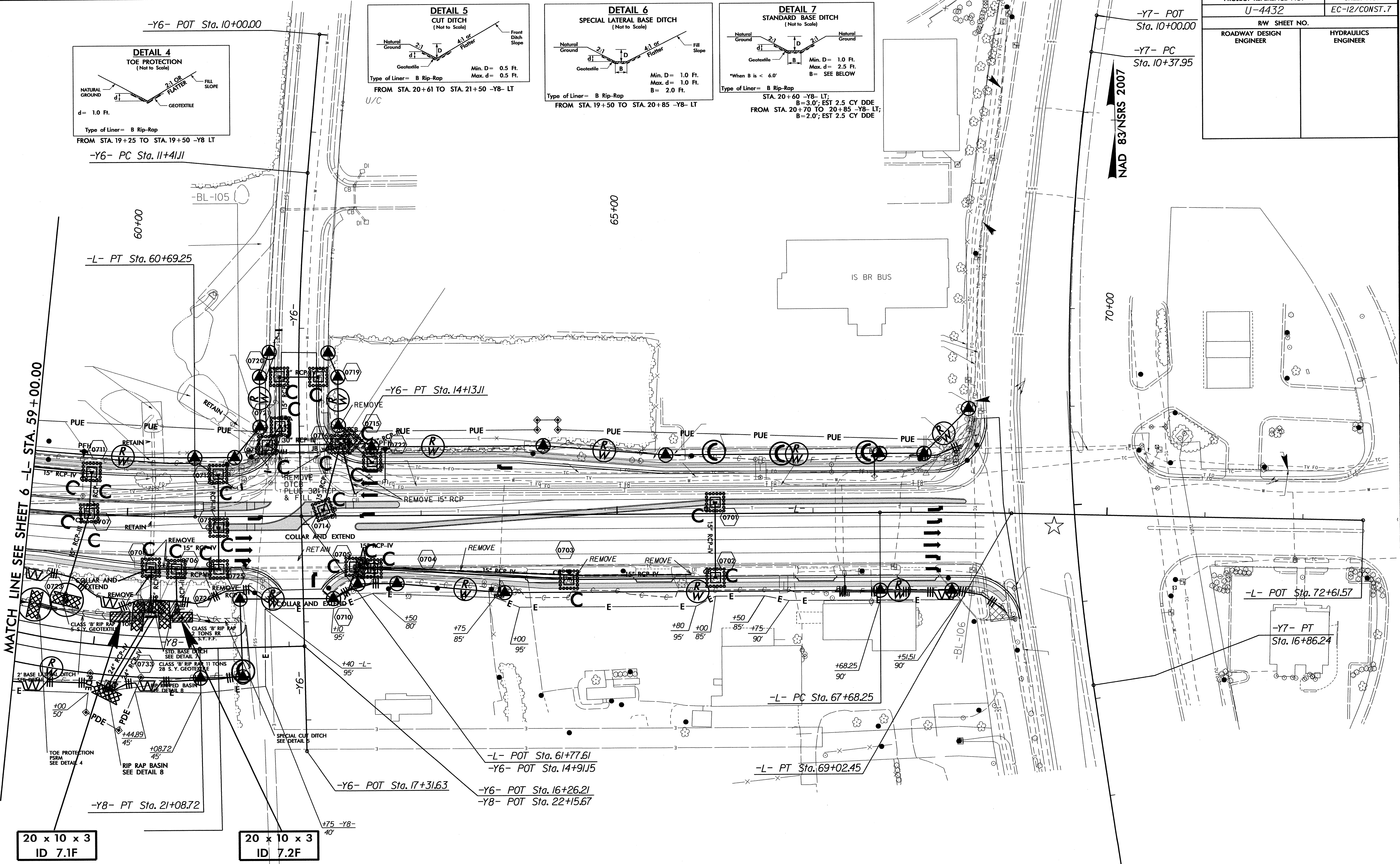
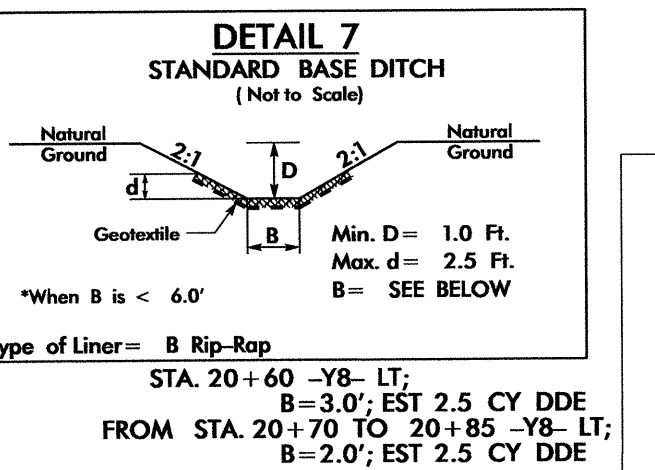
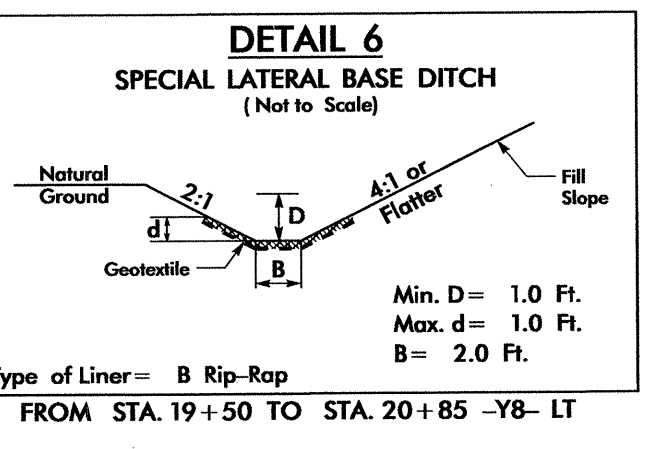
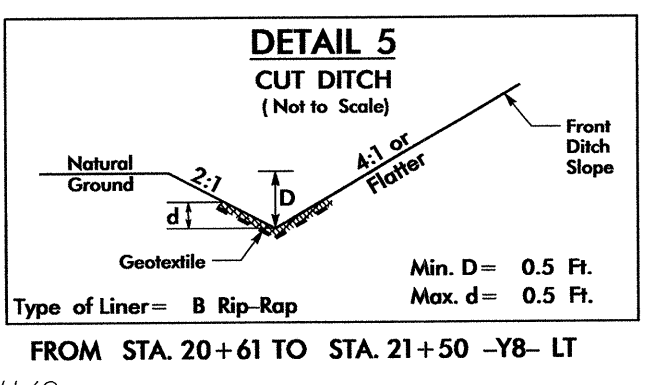
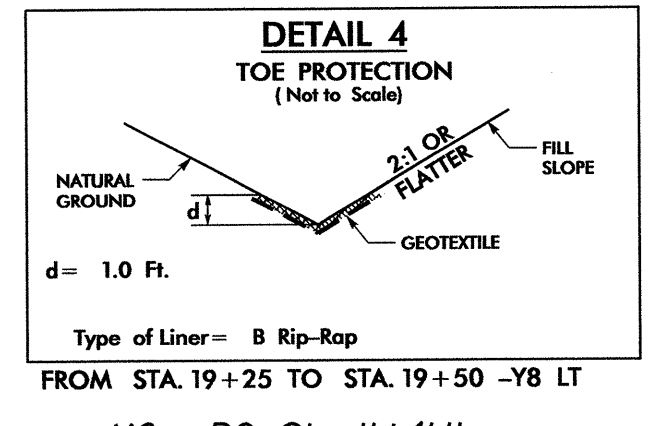
INSTEAD OF ROCK INLET SEDIMENT TRAPS, ALTERNATIVE DEVICES MAY BE USED, AS DIRECTED.



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Author: AT

PROJECT REFERENCE NO.		SHEET NO.	
U-4432		EC-12/CONST.7	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

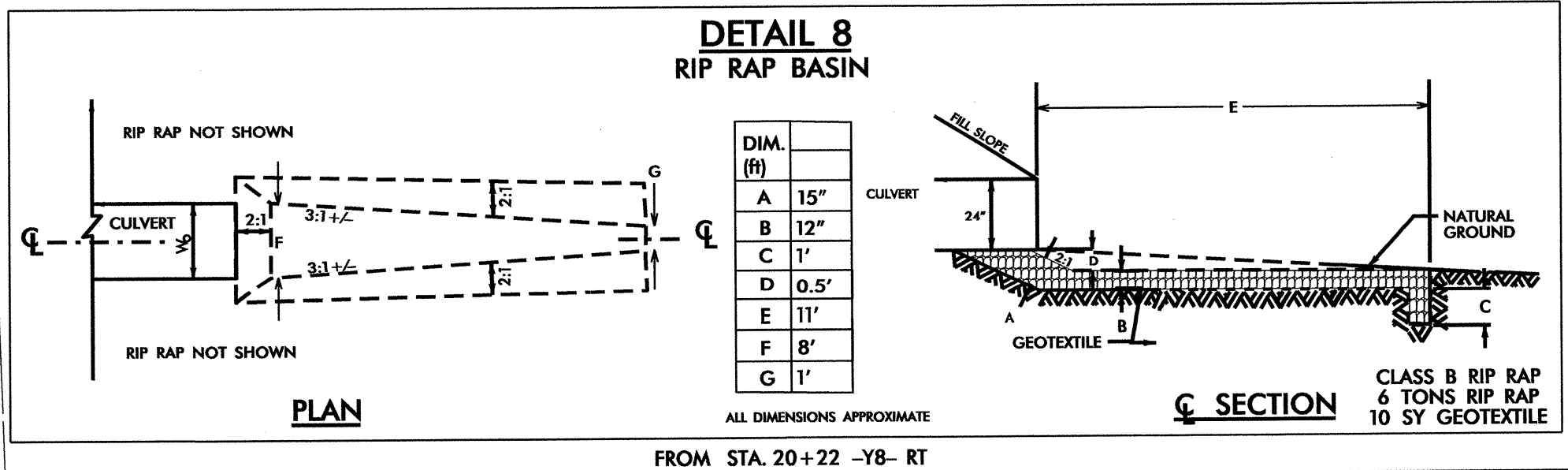
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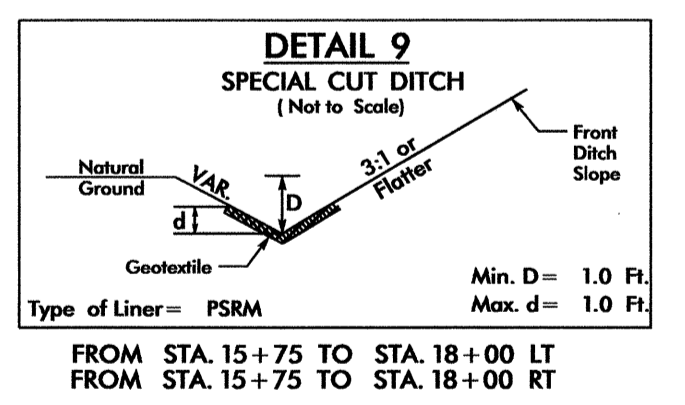
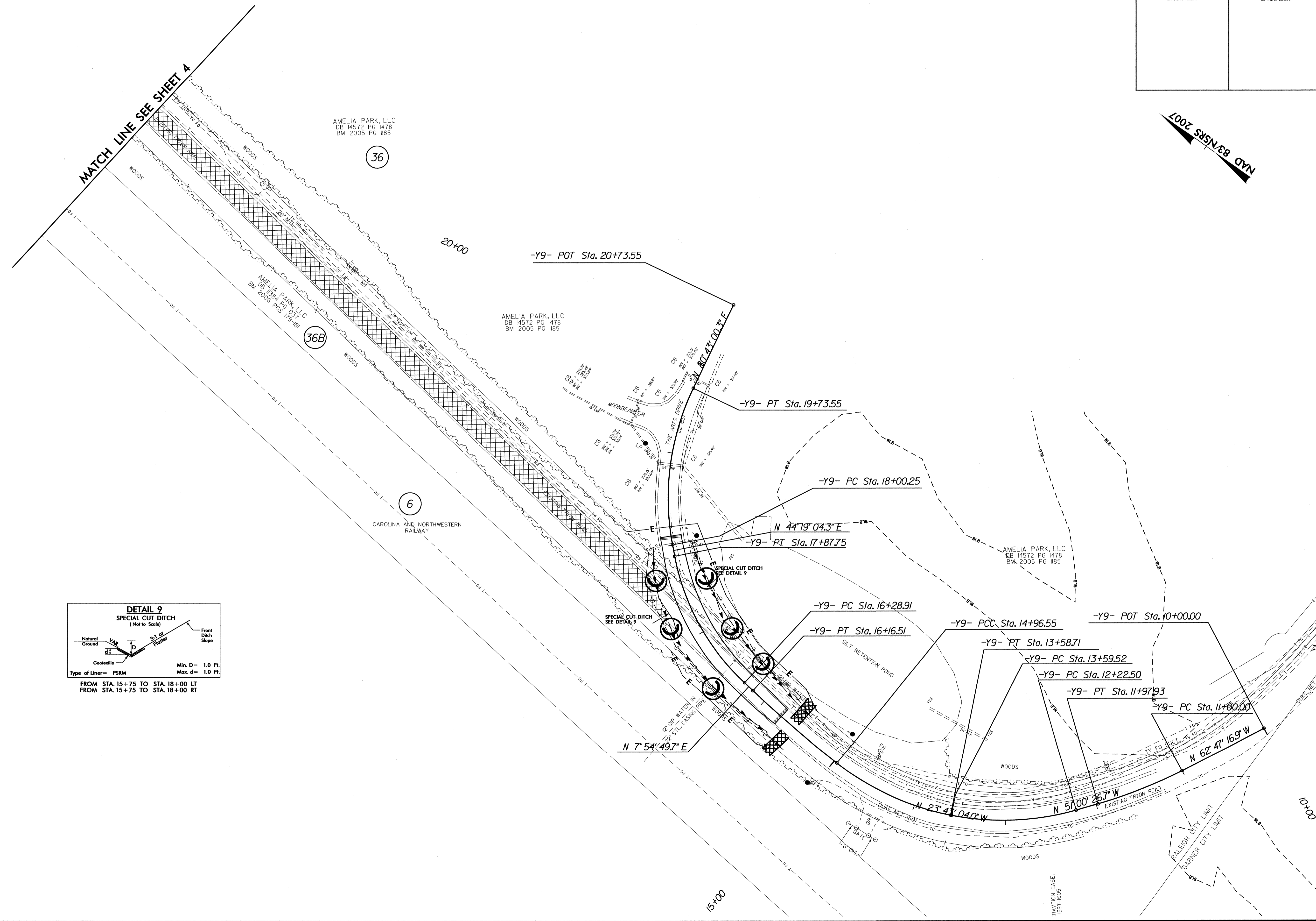
INSTEAD OF ROCK INLET SEDIMENT TRAPS, ALTERNATIVE DEVICES MAY BE USED, AS DIRECTED.



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