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STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5352	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

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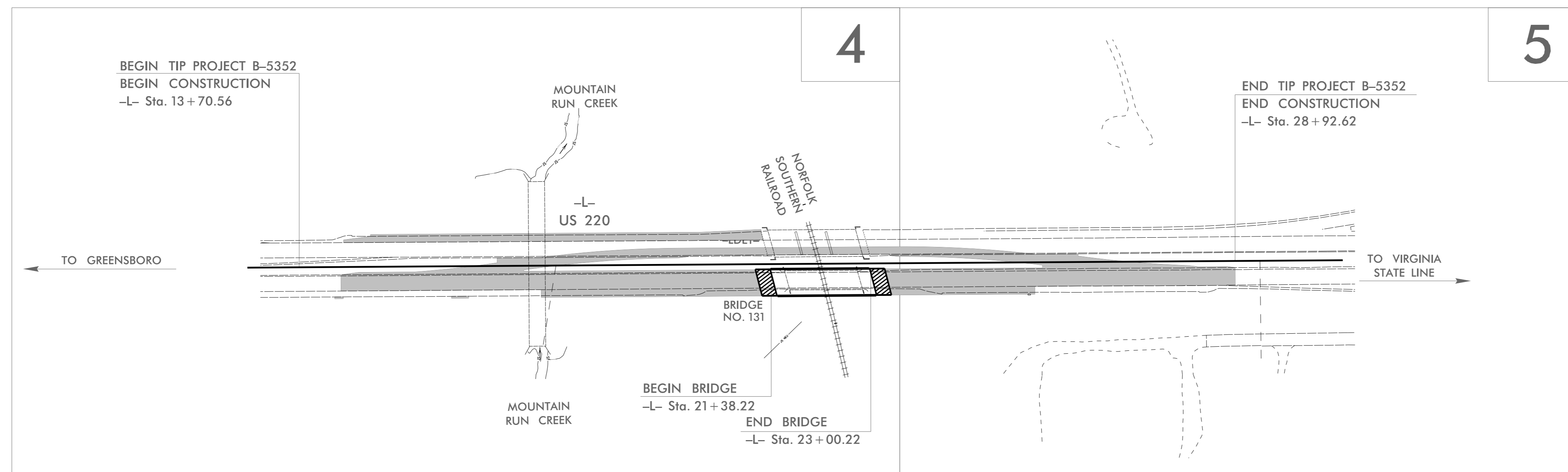
PLAN FOR PROPOSED  
HIGHWAY EROSION CONTROL

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ROCKINGHAM COUNTY

**LOCATION: BRIDGE NO. 131 ON US 220 NBL OVER NORFOLK SOUTHERN RAILROAD**

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



**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	— T —
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	— W —
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	— W —
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	▭

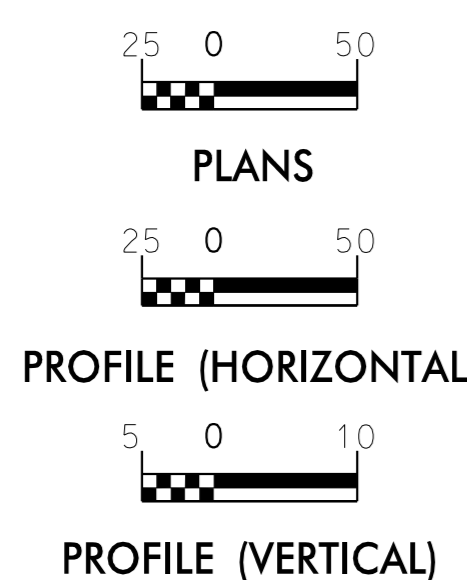
**THIS PROJECT CONTAINS  
EROSION CONTROL PLANS  
FOR CLEARING AND  
GRUBBING PHASE OF  
CONSTRUCTION.**

DISTURBED AREA  
2.7 AC

**TIP PROJECT: B-5352**

**CONTRACT:**

**GRAPHIC SCALE**



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 1, 2016 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER RESOURCES.

Prepared in the Office of:

Kimley»Horn

NC LICENSE #F-0102  
P.O. BOX 33068  
RALEIGH, NORTH CAROLINA 27636  
PHONE: (919) 677-2000

Designed by:

**VANCE BLANTON**  
NAME

**3708**  
LEVEL III CERTIFICATION NO.

Reviewed in the Office of:

ROADSIDE ENVIRONMENTAL UNIT

1 South Wilmington St.  
Raleigh, NC 27611

2018 STANDARD SPECIFICATIONS

Reviewed by:

JENNIFER PARISH, EI

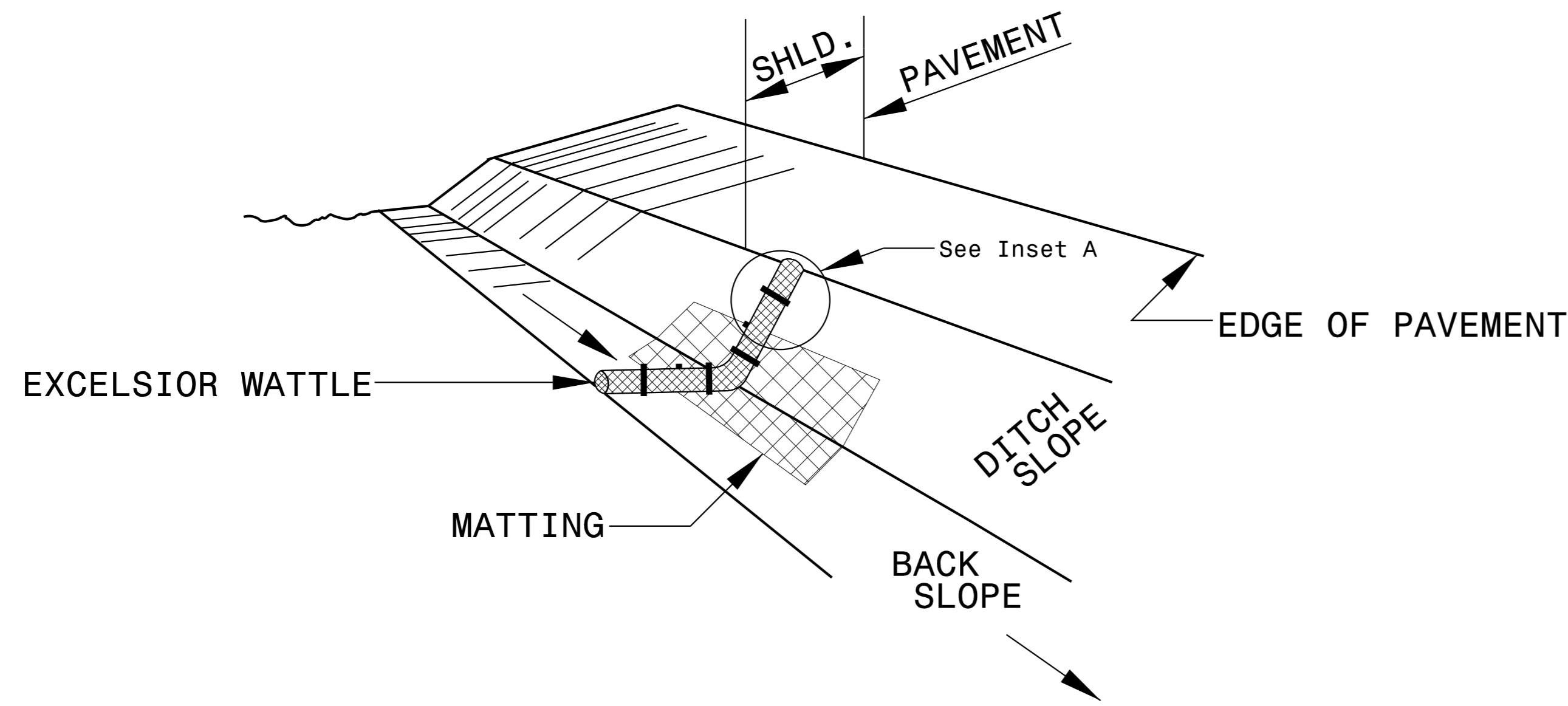
**Roadway Standard Drawings**

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.

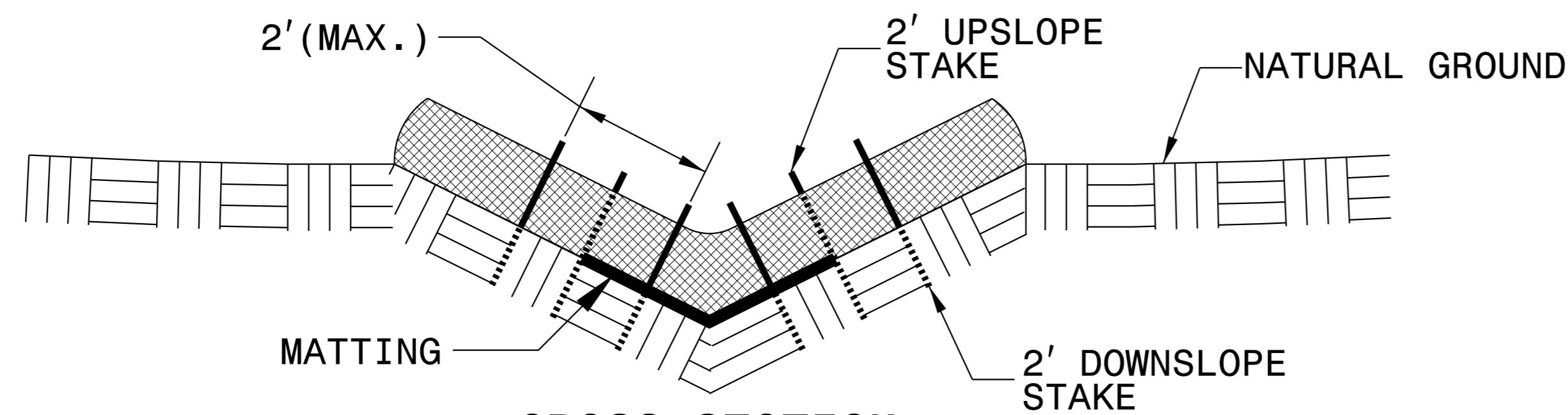
1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type 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	

PROJECT REFERENCE NO. B-5352	SHEET NO. EC-2
R/W SHEET NO.	
ROADWAY ENGINEER	HYDRAULICS ENGINEER

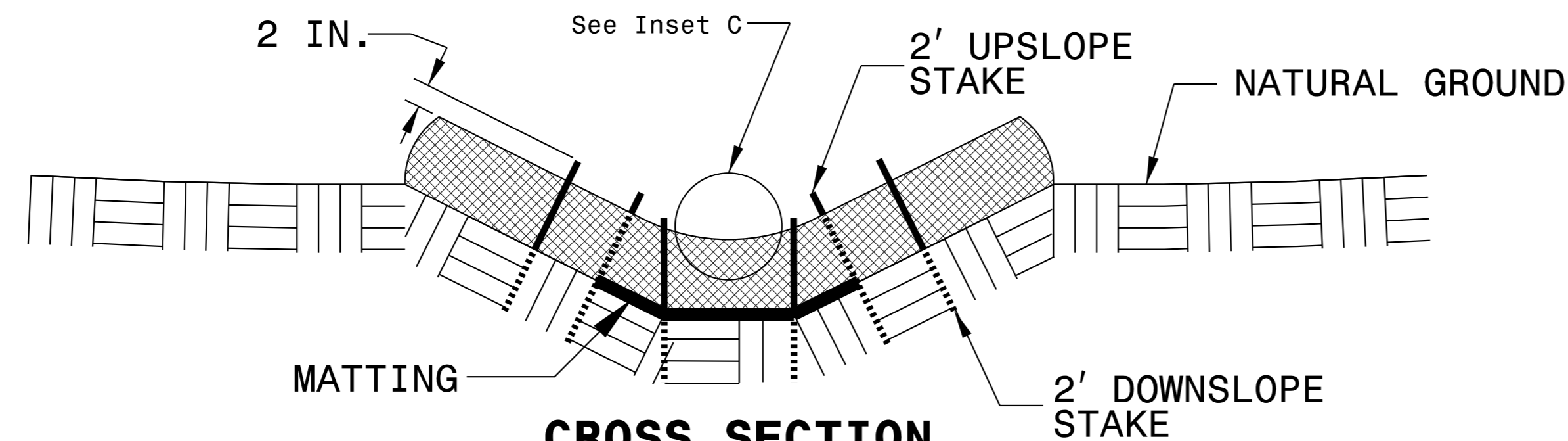
# WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



**ISOMETRIC VIEW**



**CROSS SECTION VEE DITCH**



**CROSS SECTION TRAPEZOIDAL DITCH**

**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.

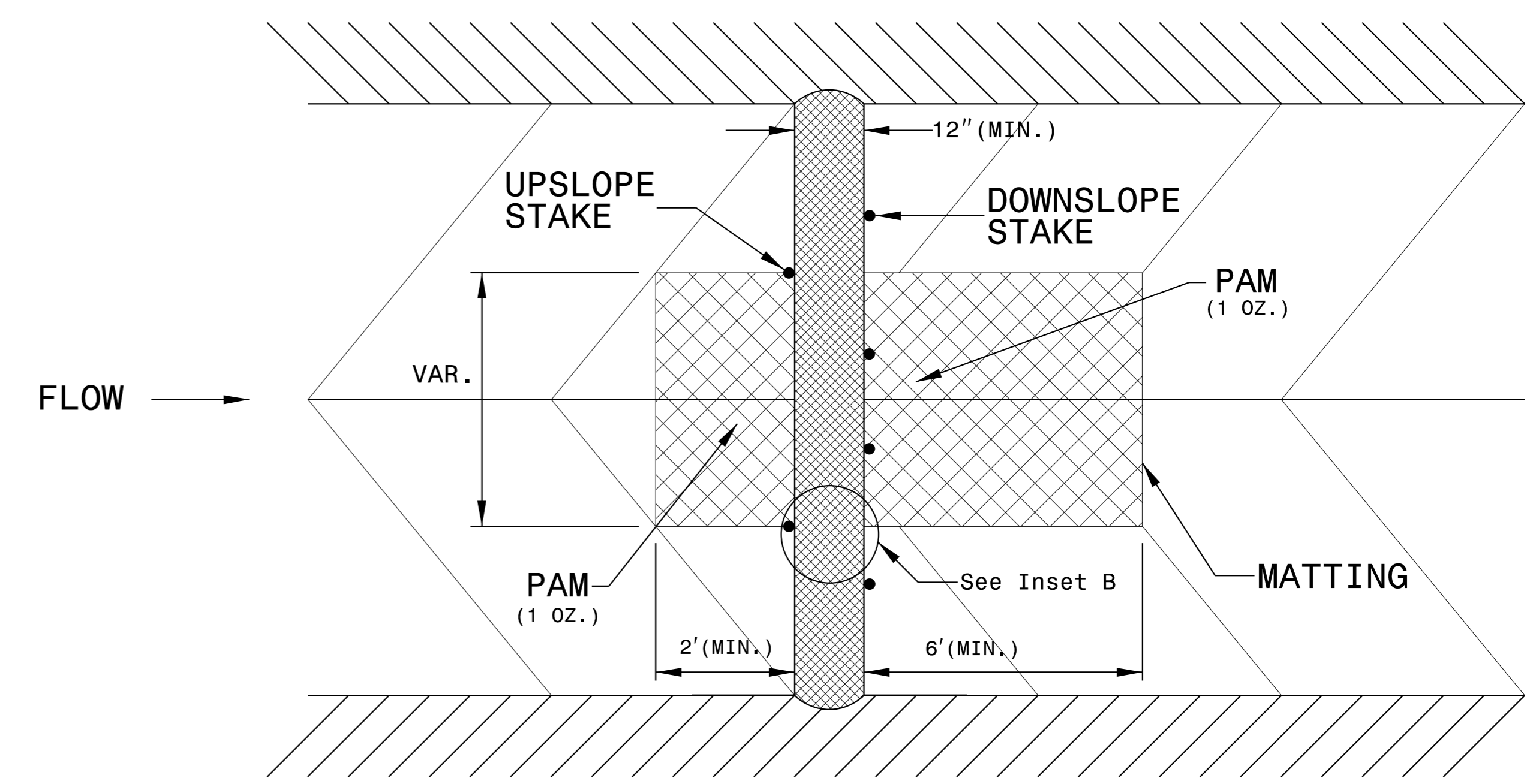
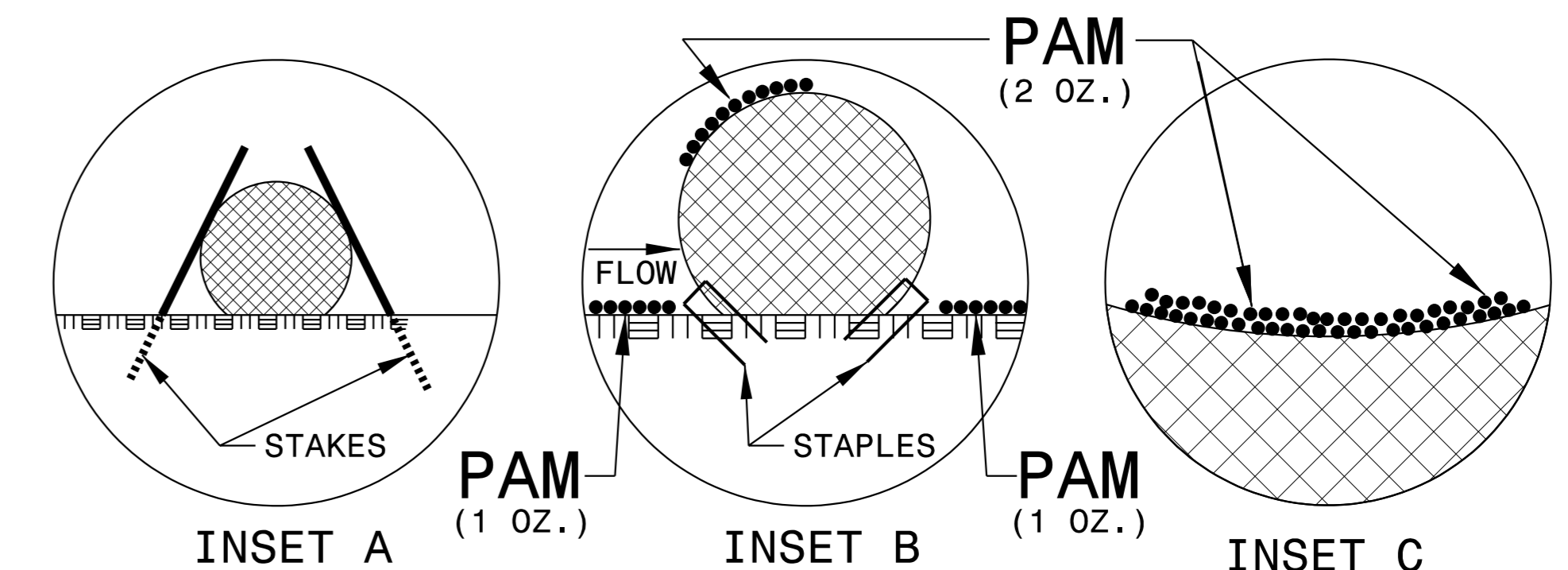
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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.



**TOP VIEW**

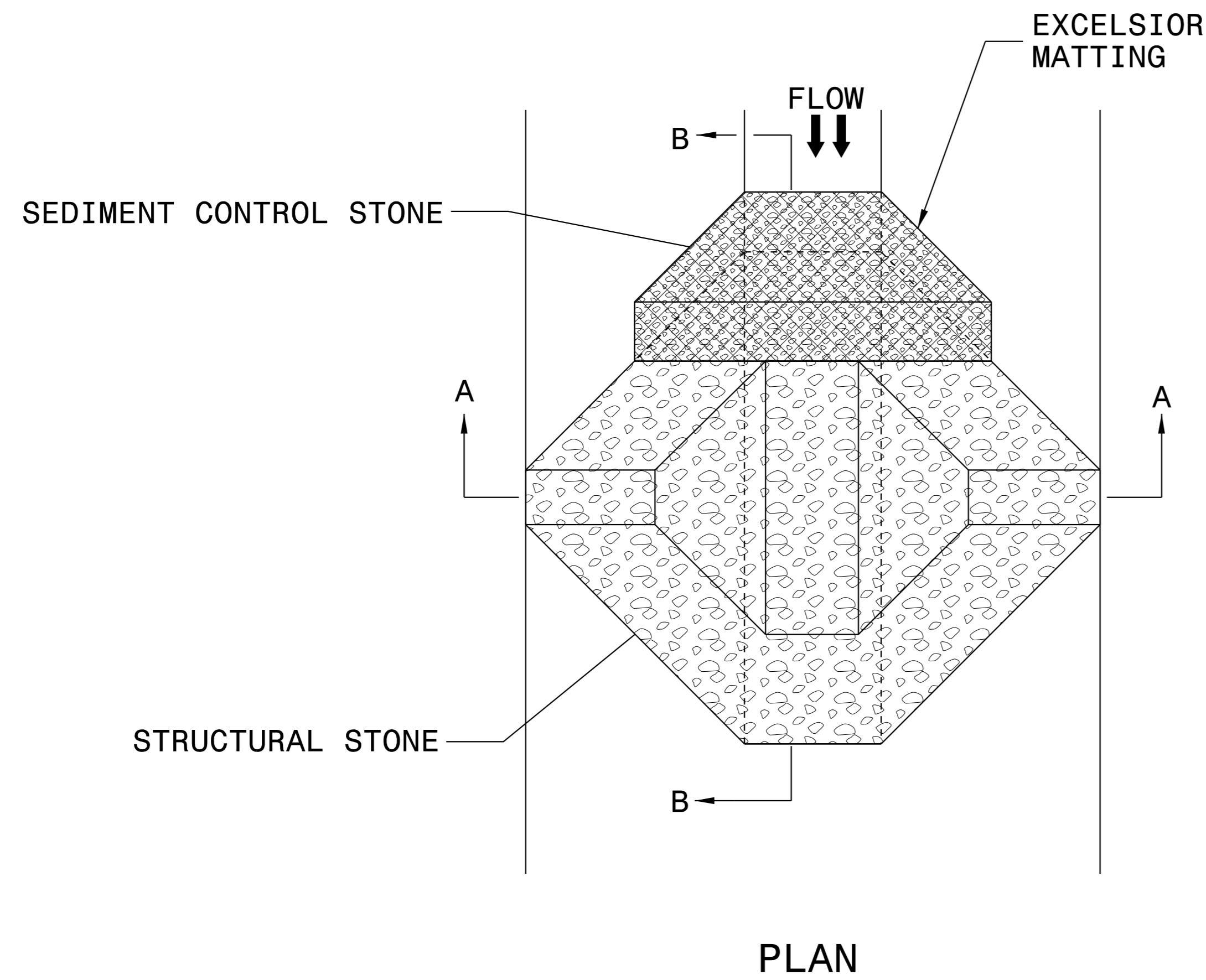
9/12/2017 K:\PAL\_Roadway\01036275 - B-5352\Erosion Control\B-5352\_ero\_psh\_details.dgn

PROJECT REFERENCE NO. B-5352		SHEET NO. EC-2A	
R/W SHEET NO.			
ROADWAY ENGINEER		HYDRAULICS ENGINEER	
RIGHT-OF-WAY REV.			
CONST. REV.			

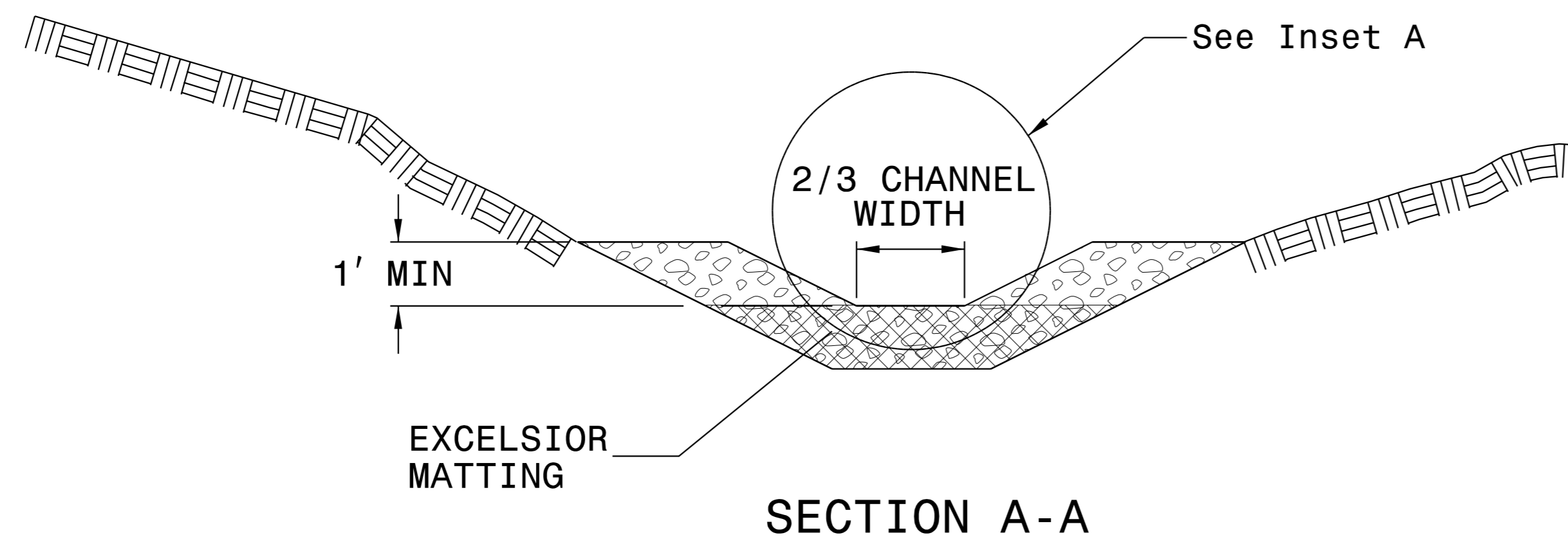
**Kimley»Horn**  
©2011

421 FAYETTEVILLE STREET, SUITE 600  
RALEIGH, NC 27601

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



PLAN



SECTION A-A

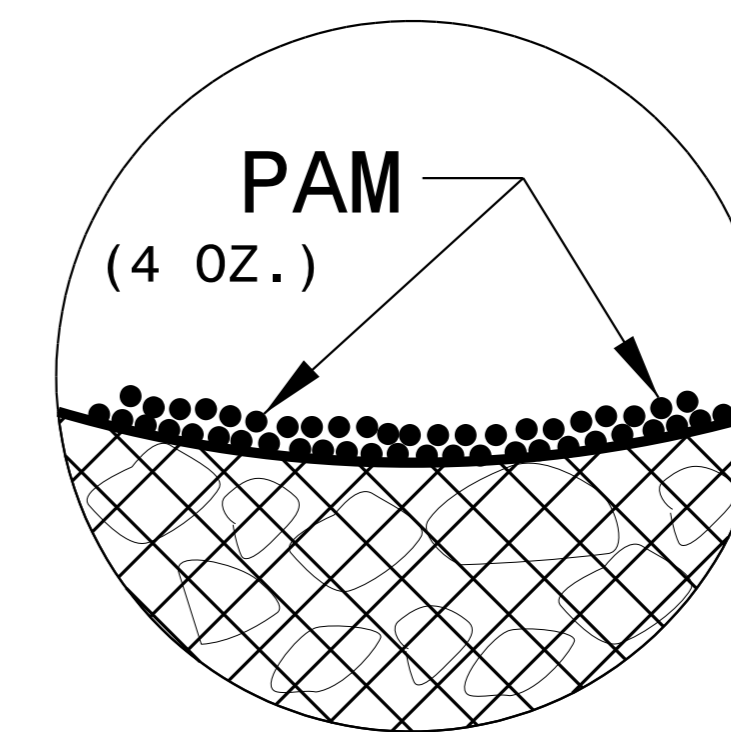
**NOTES:**

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

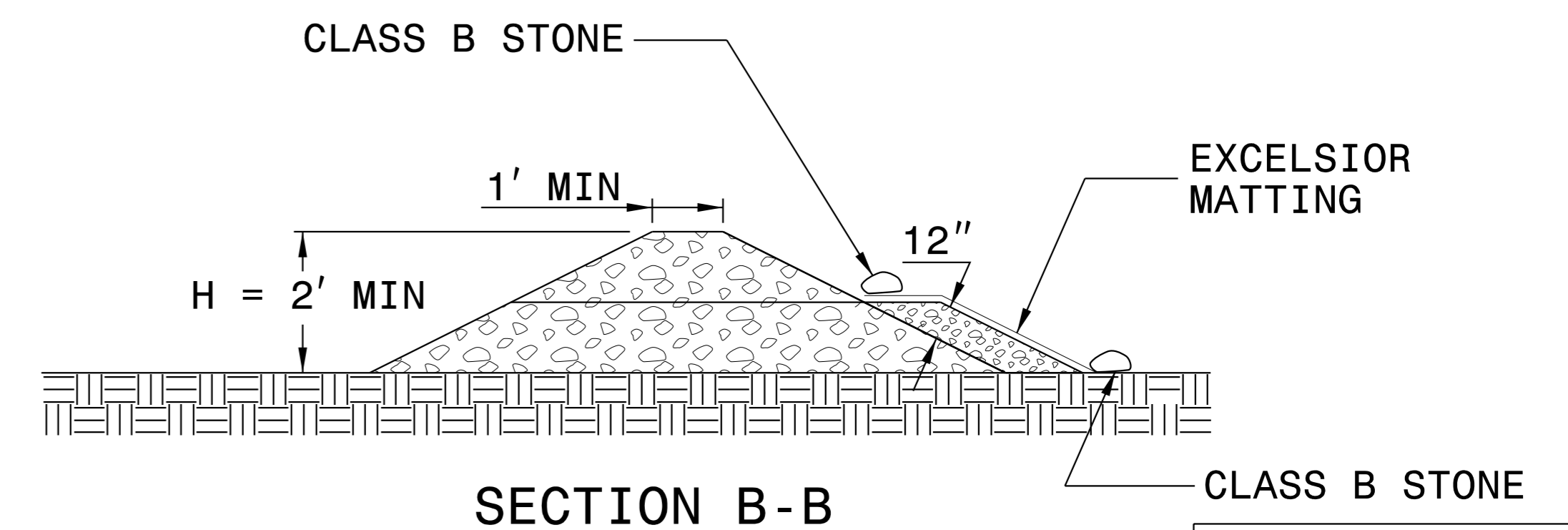
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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



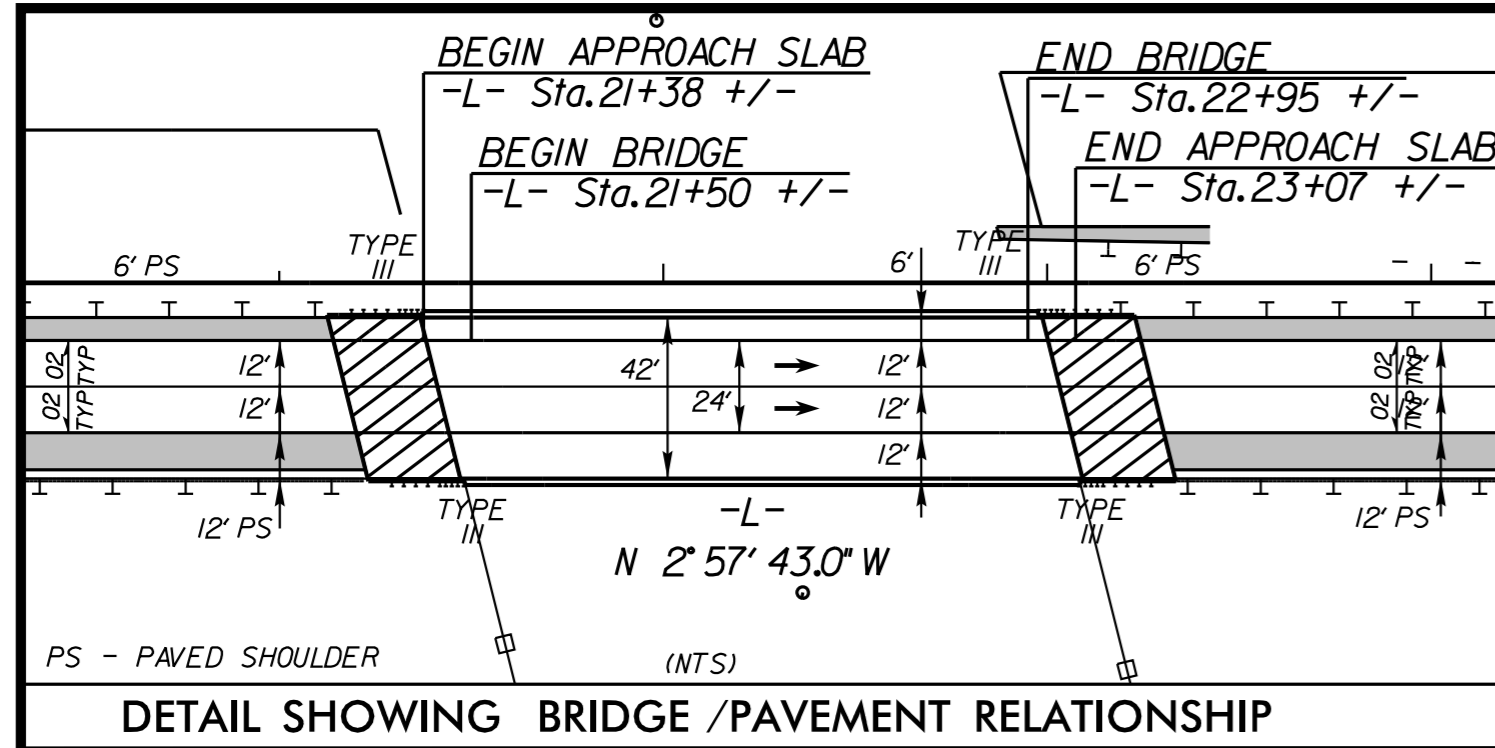


DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

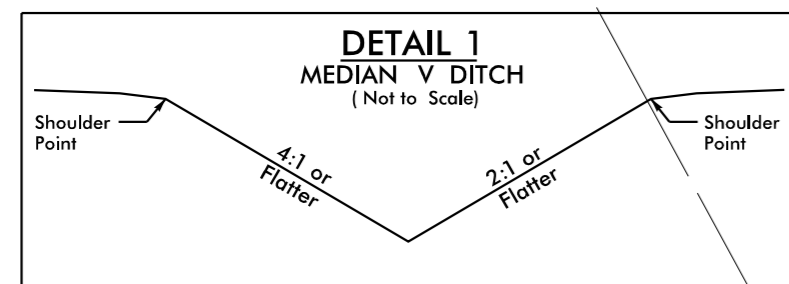
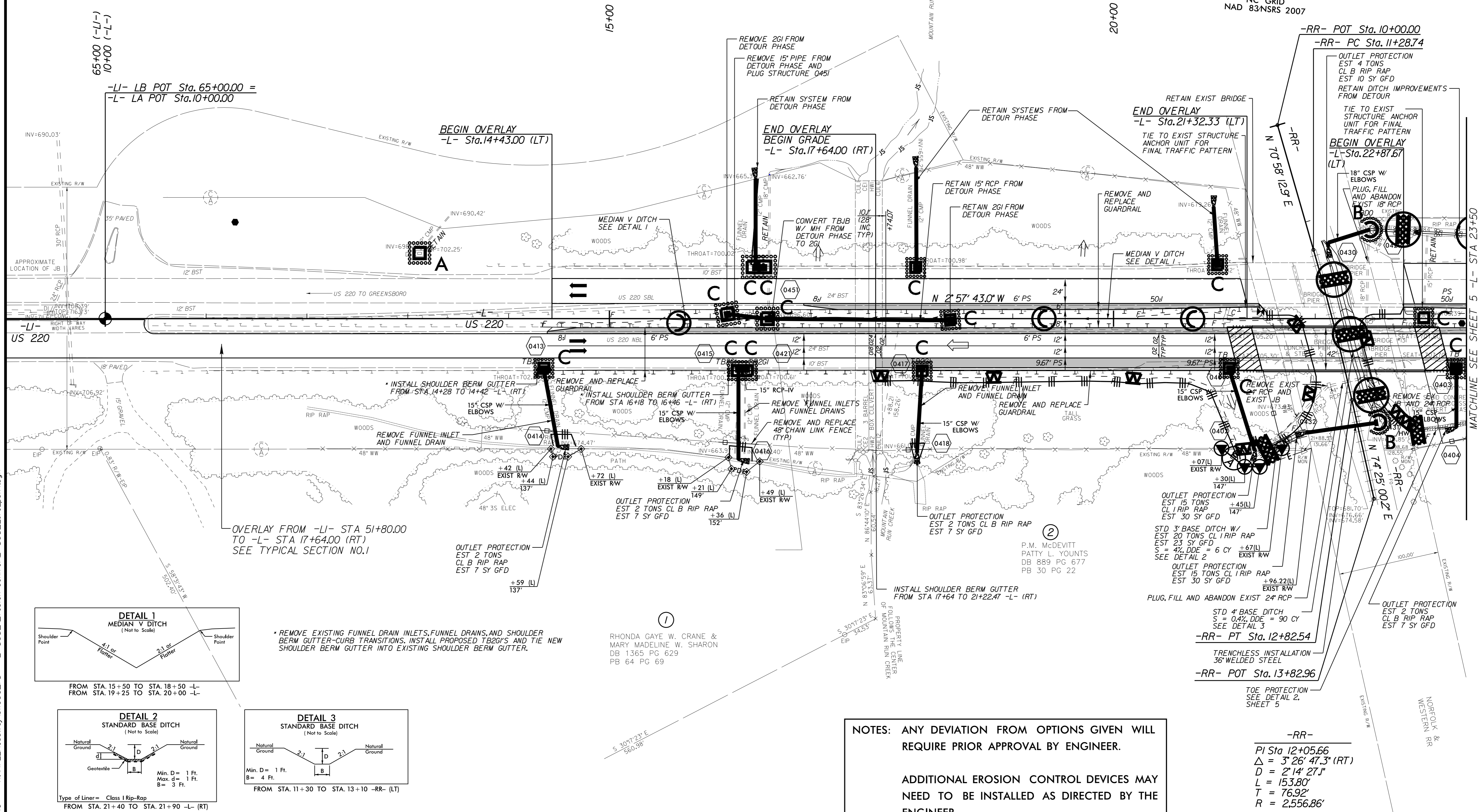
***SOIL STABILIZATION TIMEFRAMES***

<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.

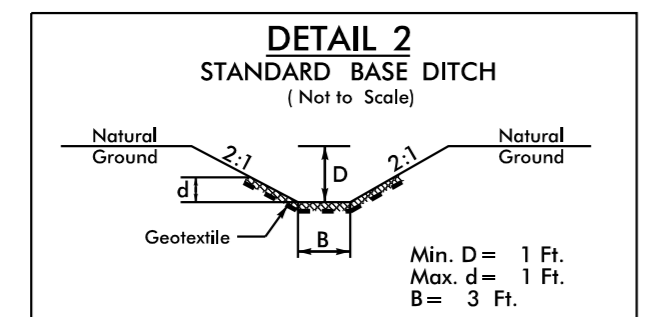
PROJECT REFERENCE NO. B-5352	SHEET NO. EC-4/CONST.4
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY ENGINEER	



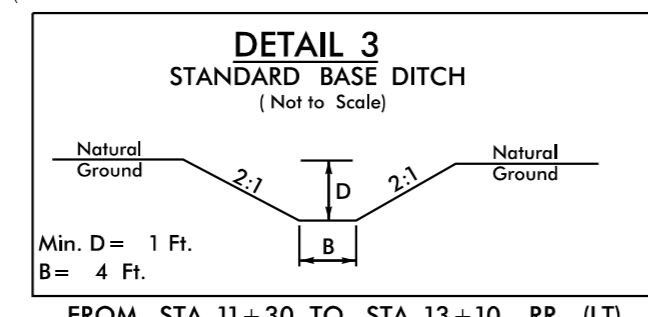
FINAL GRADE  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 4



FROM STA. 15+50 TO STA. 18+50 -L-  
FROM STA. 19+25 TO STA. 20+00 -L-



Type of Liner = Class I Rip-Rap  
FROM STA. 21+40 TO STA. 21+90 -L- (RT)



FROM STA. 11+30 TO STA. 13+10 -RR- (LT)

\* REMOVE EXISTING FUNNEL DRAIN INLETS, FUNNEL DRAINS, AND SHOULDER BERM GUTTER-CURB TRANSITIONS. INSTALL PROPOSED TB2G'S AND TIE NEW SHOULDER BERM GUTTER INTO EXISTING SHOULDER BERM GUTTER.

①  
RHONDA GAYE W. CRANE &  
MARY MADELINE W. SHARON  
DB 1365 PG. 629  
PB 64 PG. 69

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

-RR-  
PI Sta 12+05.66  
Δ = 3' 26' 47.3" (RT)  
D = 2' 14' 27.1"  
L = 153.80'  
T = 76.92'  
R = 2,556.86'

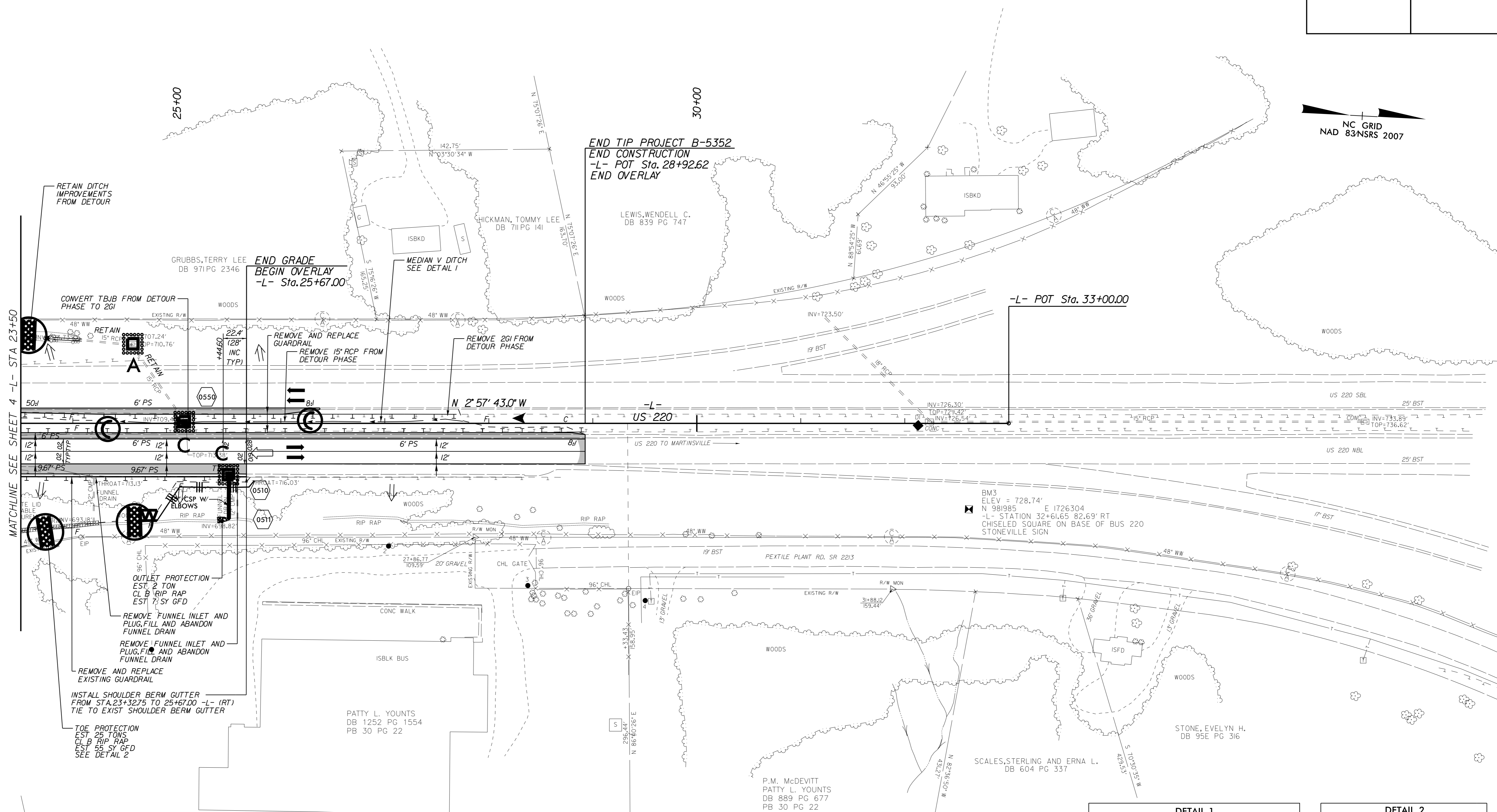
SEE SHEET 8 FOR -L- PROFILE  
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

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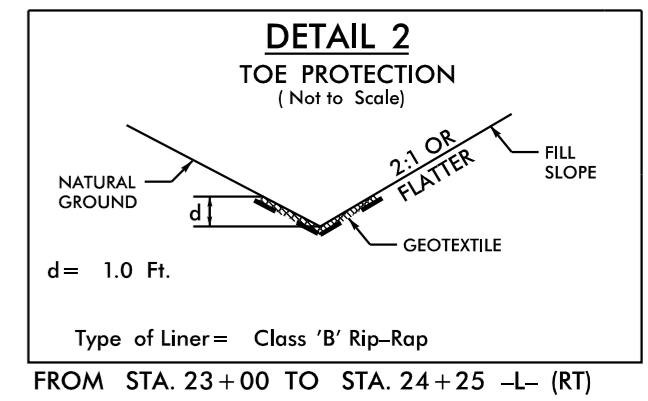
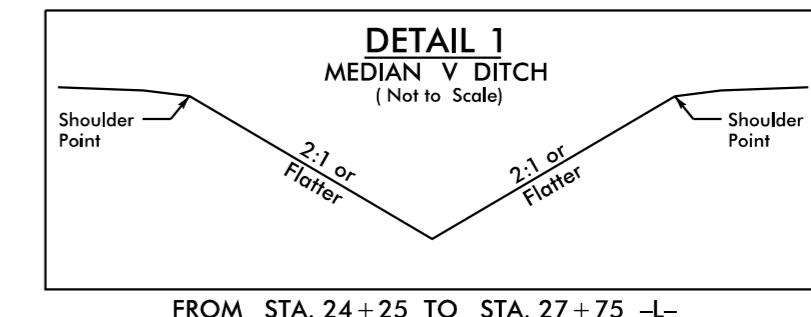
PROJECT REFERENCE NO. B-5352	SHEET NO. EC-5/CONST. 5
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY ENGINEER	

FINAL GRADE  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 5



**NOTES:** ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.



SEE SHEET 8 FOR -L- PROFILE

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# DETOUR

**Kimley»Horn**

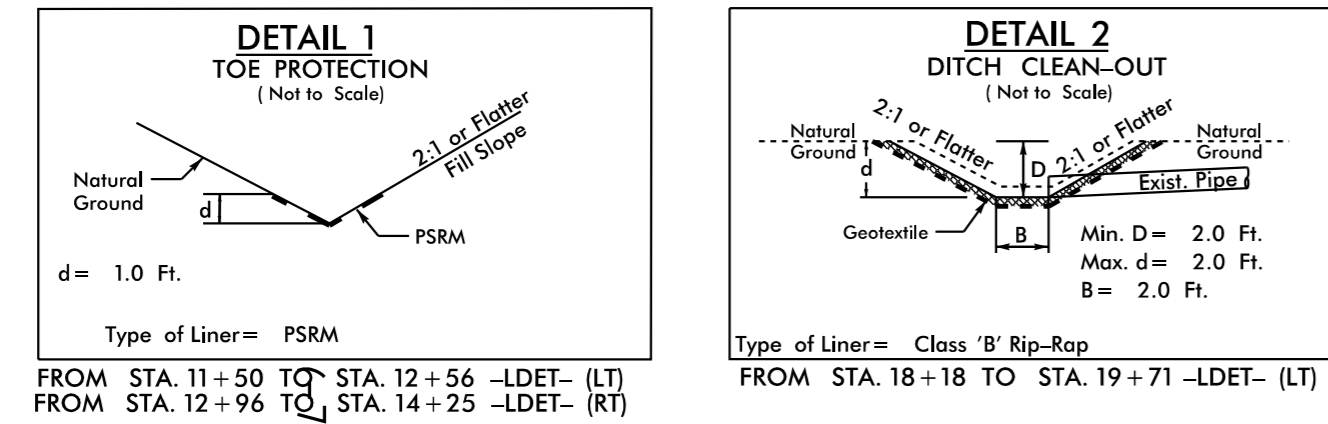
421 FAYETTEVILLE STREET, SUITE 600  
RALEIGH, NC 27601

PROJECT REFERENCE NO. B-5352	SHEET NO. EC-6/CONST.6
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY ENGINEER	

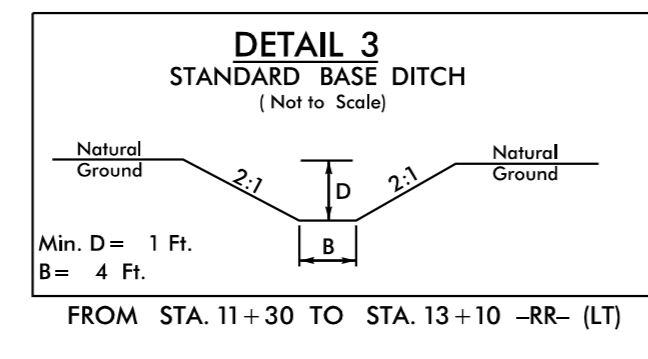
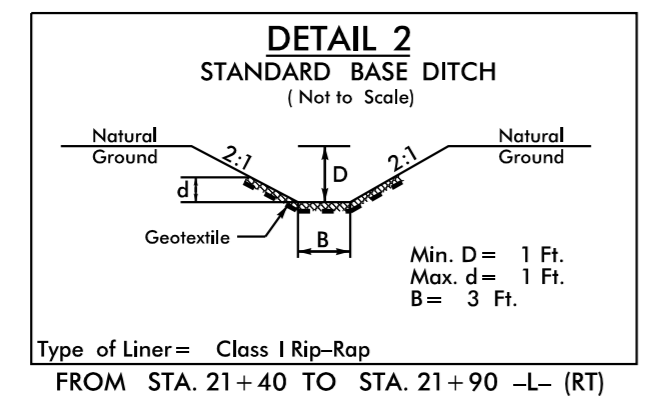
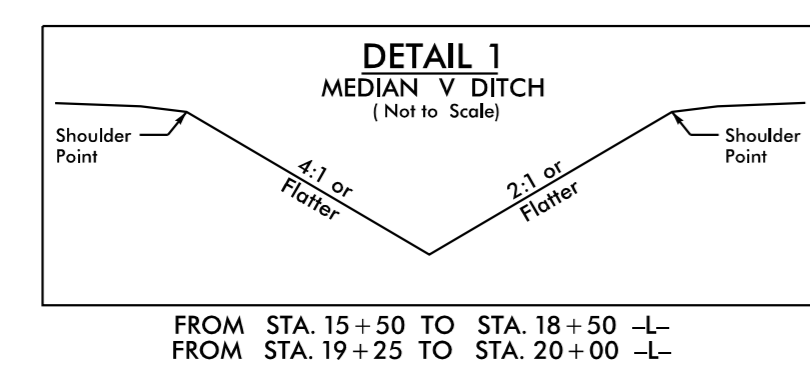
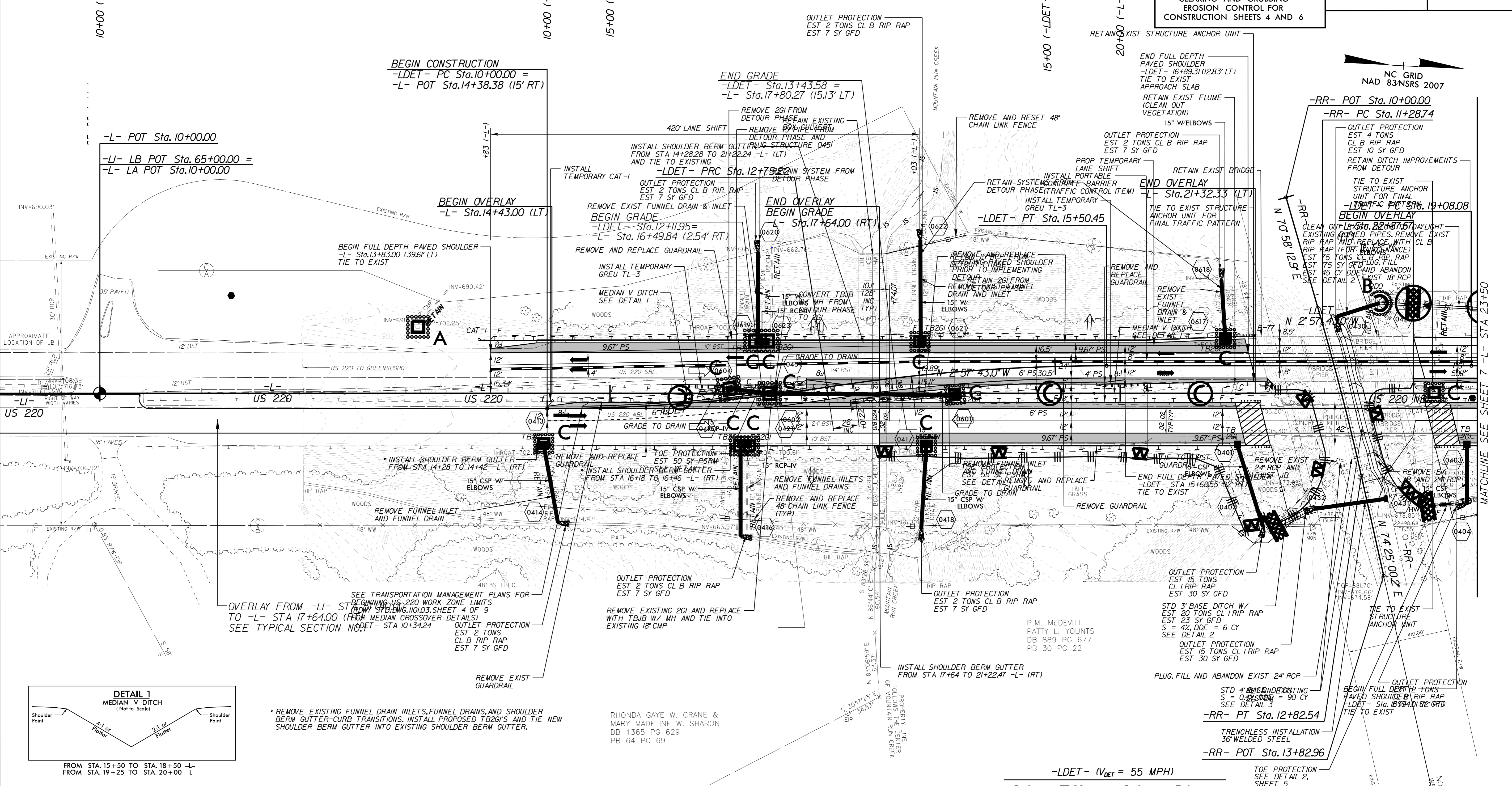
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEETS 4 AND 6



FUNNEL DRAINS ON SOUTHBOUND LANE OF TRAVEL TO BE REPLACED PRIOR TO IMPLEMENTING DETOUR



NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

-LDET- (V<sub>DET</sub> = 55 MPH)

PI Sta 11+37.88 Δ = 8' 45" 38.2" (LT) D = 3' 10" 59.2" L = 275.22' T = 137.88' R = 1,800.00'	PI Sta 14+13.10 Δ = 8' 45" 38.2" (RT) D = 3' 10" 59.2" L = 275.22' T = 137.88' R = 1,800.00'
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SE = SEE PLANS  
RO = SEE PLANS

-RR-  
PI Sta 12+05.66  
Δ = 3' 26" 47.3" (RT)  
D = 2' 14" 27.1"  
L = 153.80'  
T = 76.92'  
R = 2,556.86'

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MATCHLINE SEE SHEET 7 -L- STA 23+50

SEE SHEET 8 FOR -LDET- PROFILE



