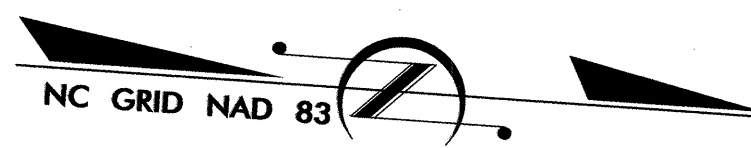


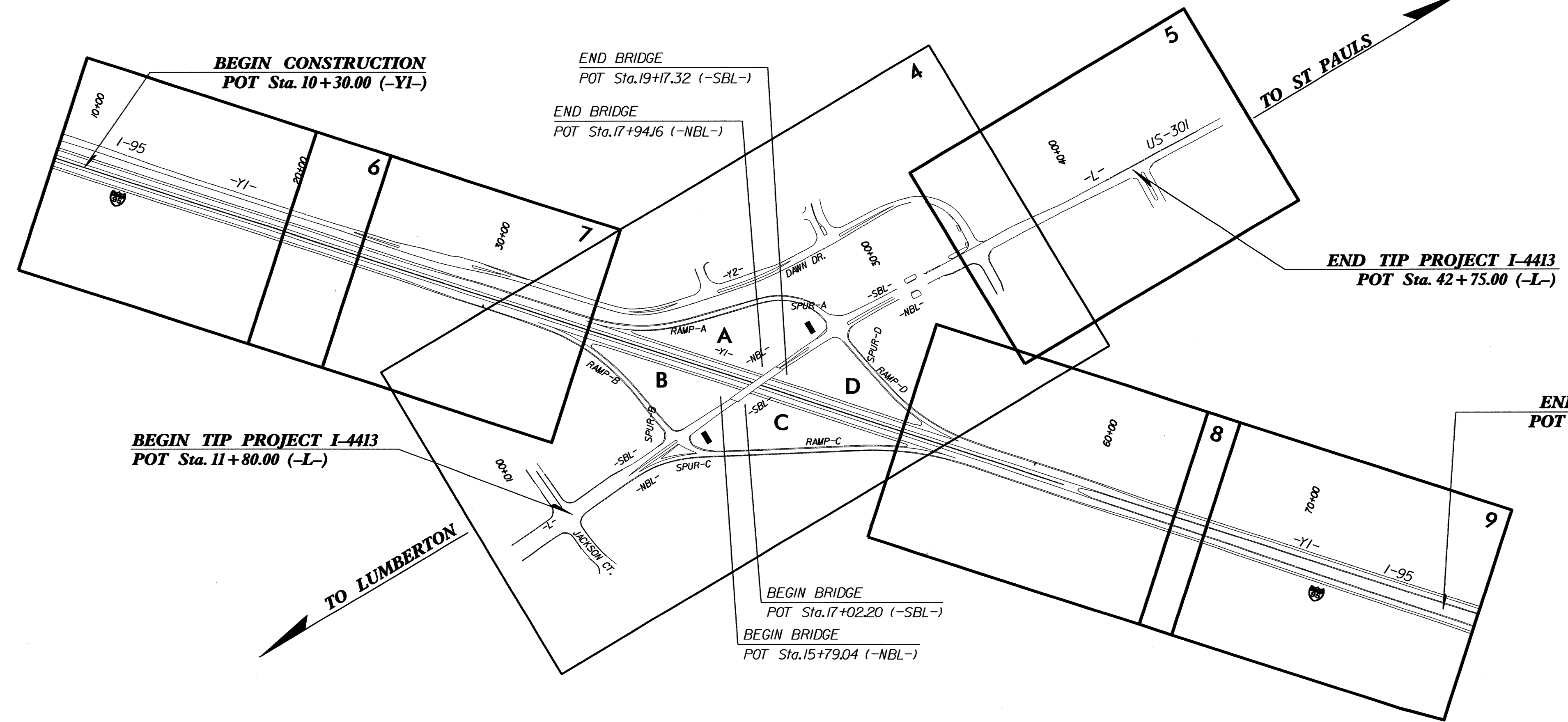
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-4413	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

**TIP PROJECT: I-4413**

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



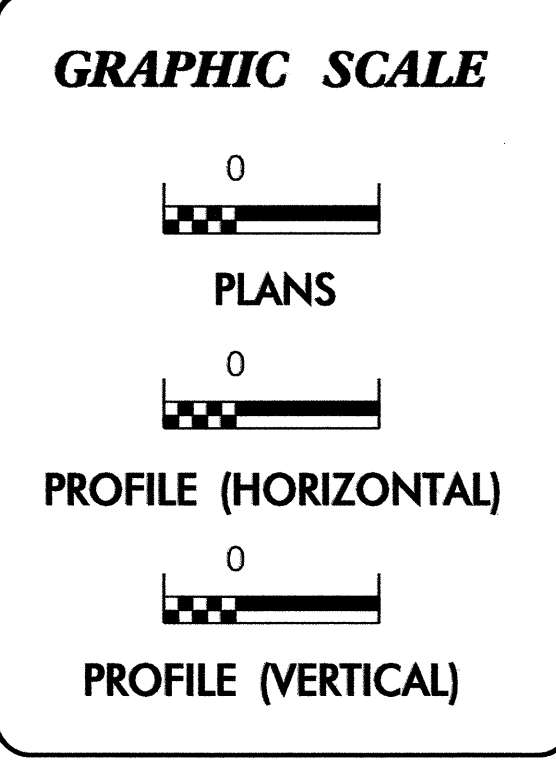
**LOCATION: BRIDGE NO. 36 ON US 301 (FAYETTEVILLE ROAD) OVER I-95 (EXIT 22)**  
**TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURES, SIGNALS, AND SIGNING**



**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	ZZZZZZ
1622.01	Temporary Berms and Slope Drains	TBD
1630.02	Silt Basin Type B	Silt Basin Symbol
1633.01	Temporary Rock Silt Check Type-A	Rock Silt Check Symbol
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	Rock Silt Check with PAM Symbol
1633.02	Temporary Rock Silt Check Type-B	Rock Silt Check Type-B Symbol
	Wattle / Coir Fiber Wattle	Wattle Symbol
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	Wattle with PAM Symbol
1634.01	Temporary Rock Sediment Dam Type-A	Rock Sediment Dam Type-A Symbol
1634.02	Temporary Rock Sediment Dam Type-B	Rock Sediment Dam Type-B Symbol
1635.01	Rock Pipe Inlet Sediment Trap Type-A	Rock Pipe Inlet Sediment Trap Type-A Symbol
1635.02	Rock Pipe Inlet Sediment Trap Type-B	Rock Pipe Inlet Sediment Trap Type-B Symbol
1630.04	Stilling Basin	Stilling Basin Symbol
1630.06	Special Stilling Basin	Special Stilling Basin Symbol
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	Skimmer Basin Symbol
	Tiered Skimmer Basin	Tiered Skimmer Basin Symbol
	Infiltration Basin	Infiltration Basin Symbol

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



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

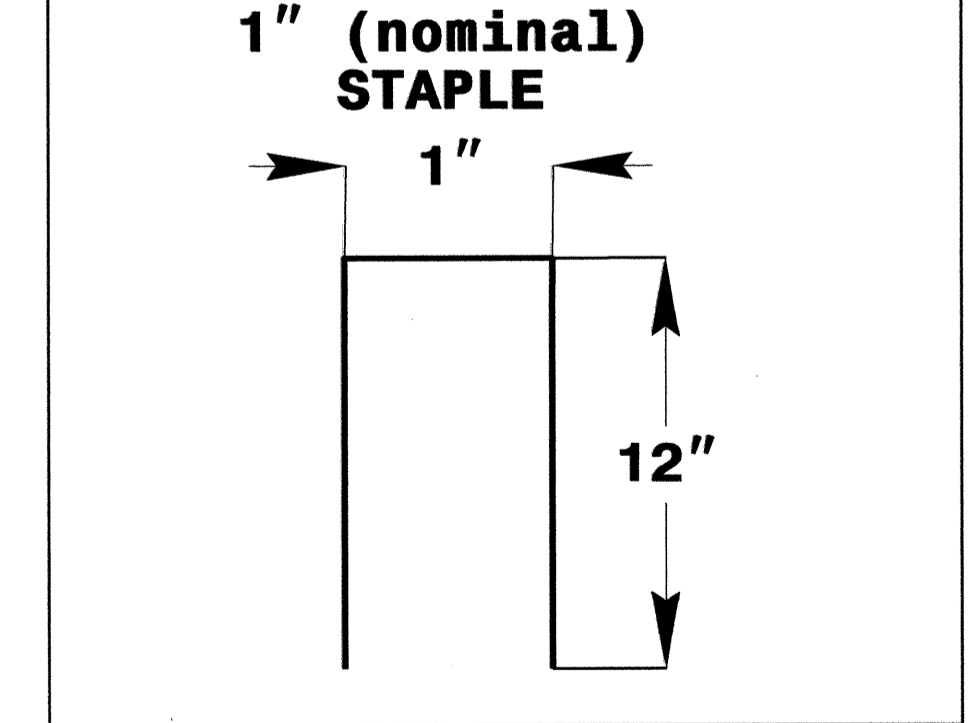
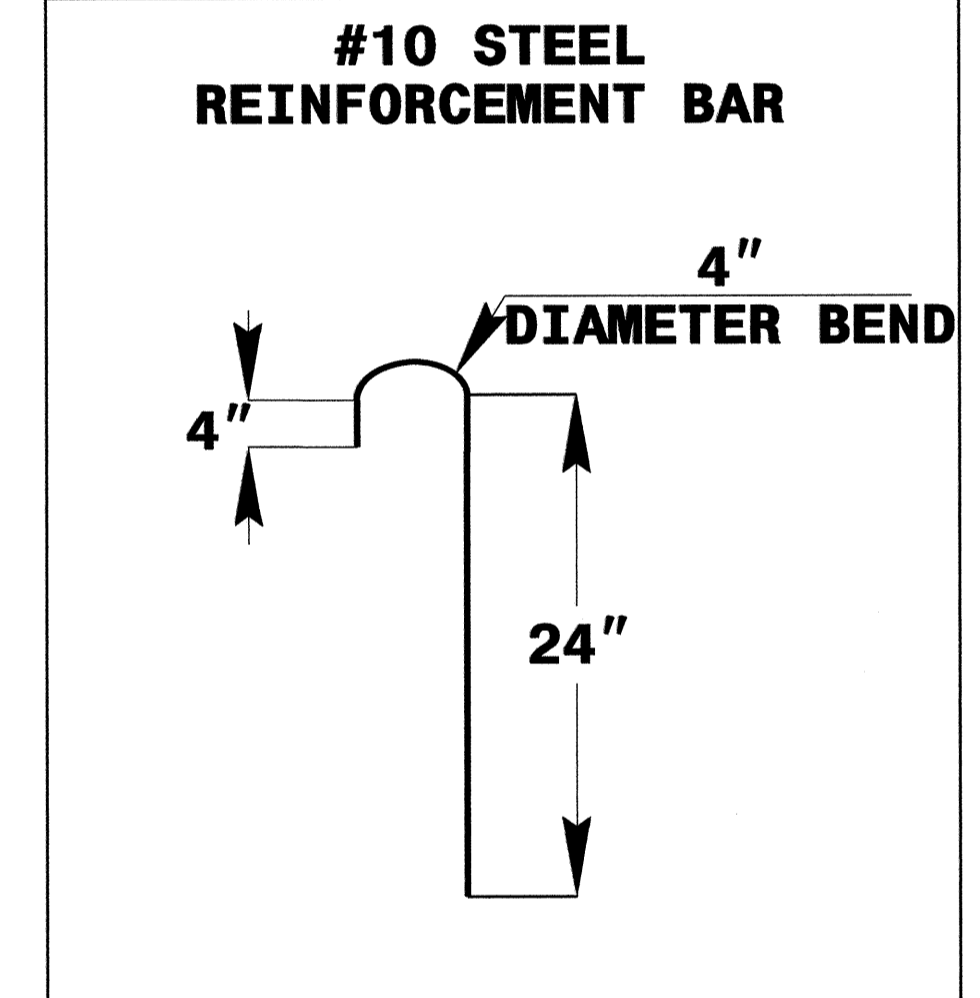
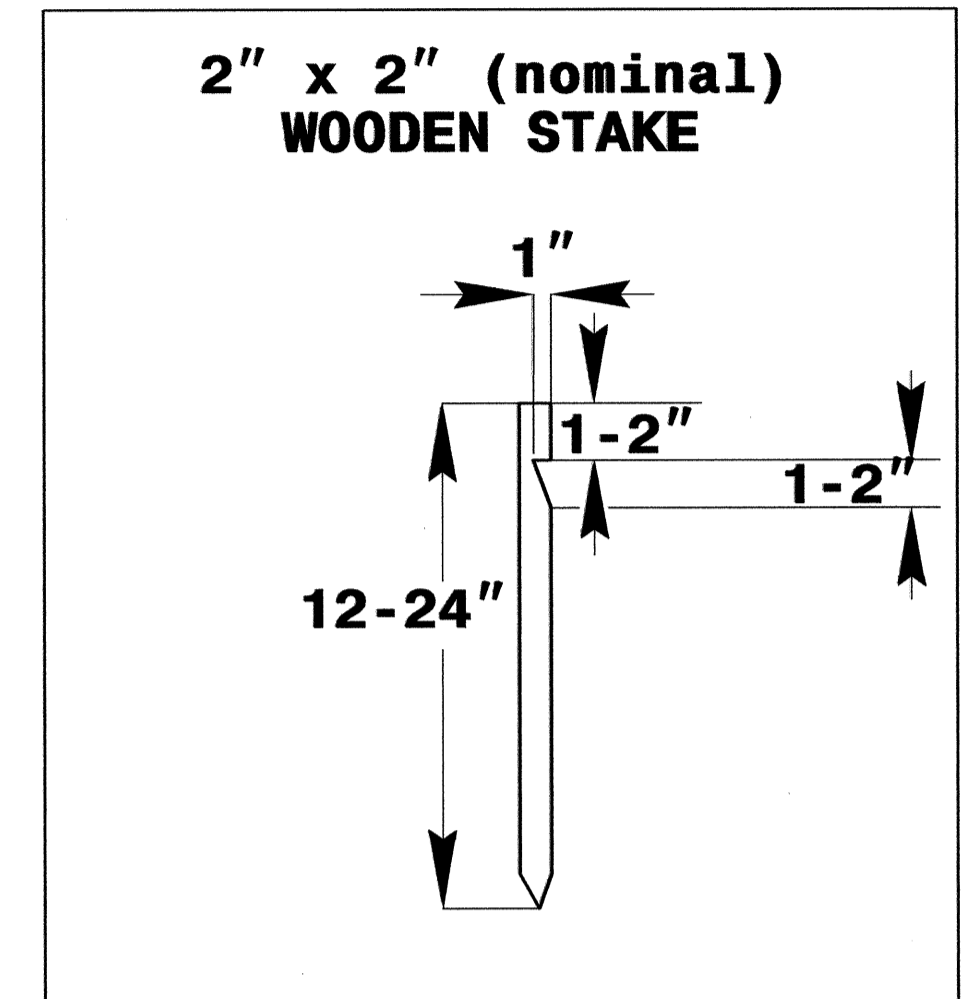
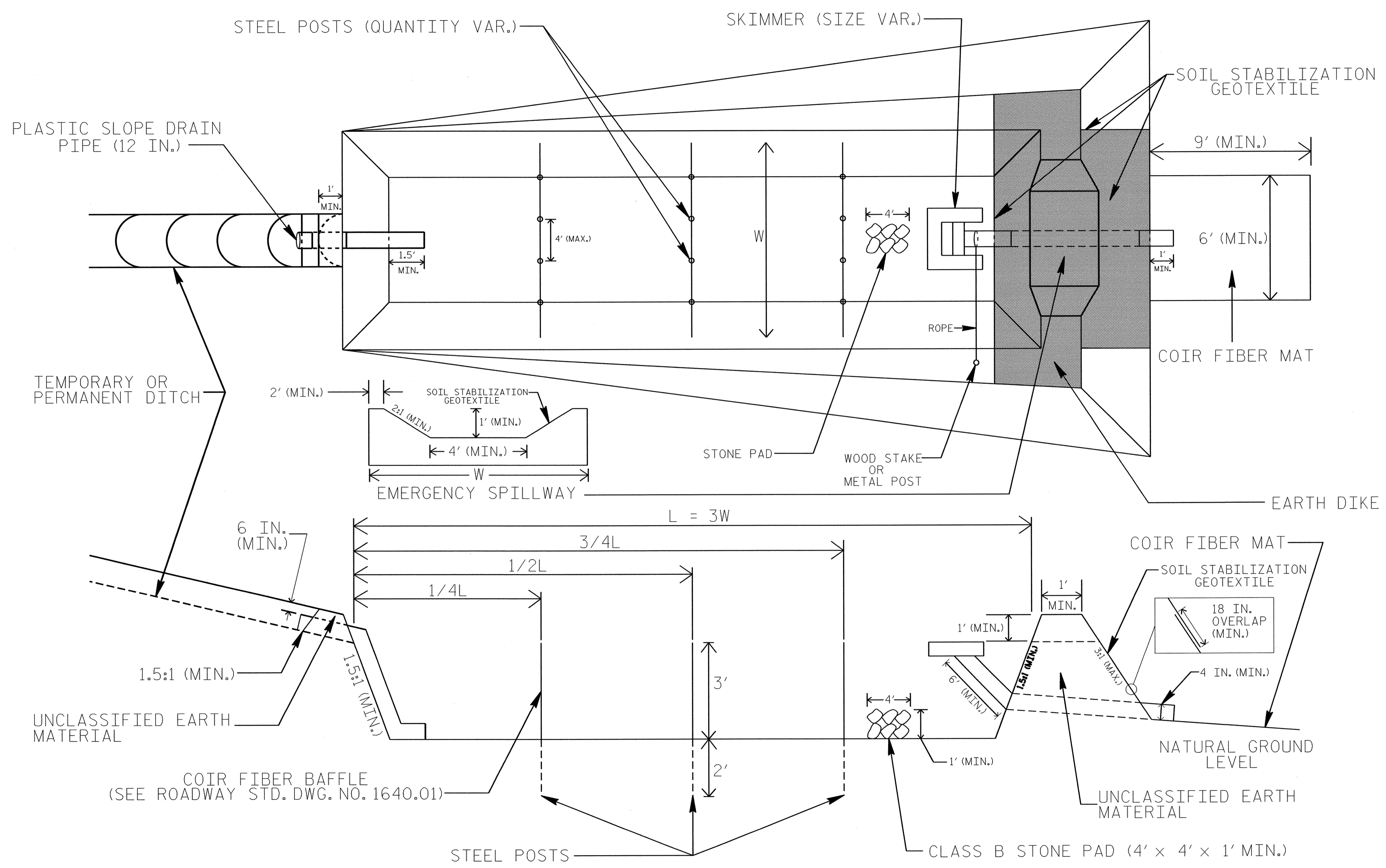
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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	

BY: 02-APR-2012 11:26 AM  
 C:\p01\proj\ec\1-4413.ec\tsd.dgn  
 jacobson

PROJECT REFERENCE NO. 1-4413	SHEET NO. EC-02
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# SKIMMER BASIN WITH BAFFLES DETAIL



## COIR FIBER MAT ANCHOR OPTIONS

### NOTES

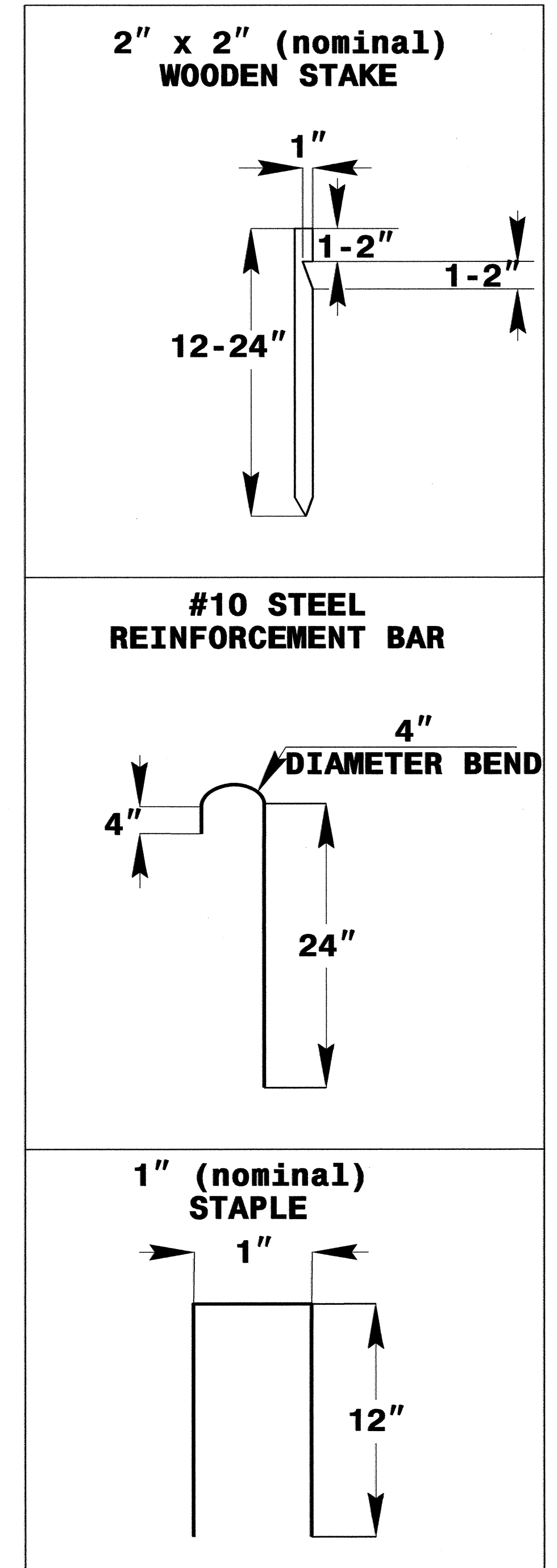
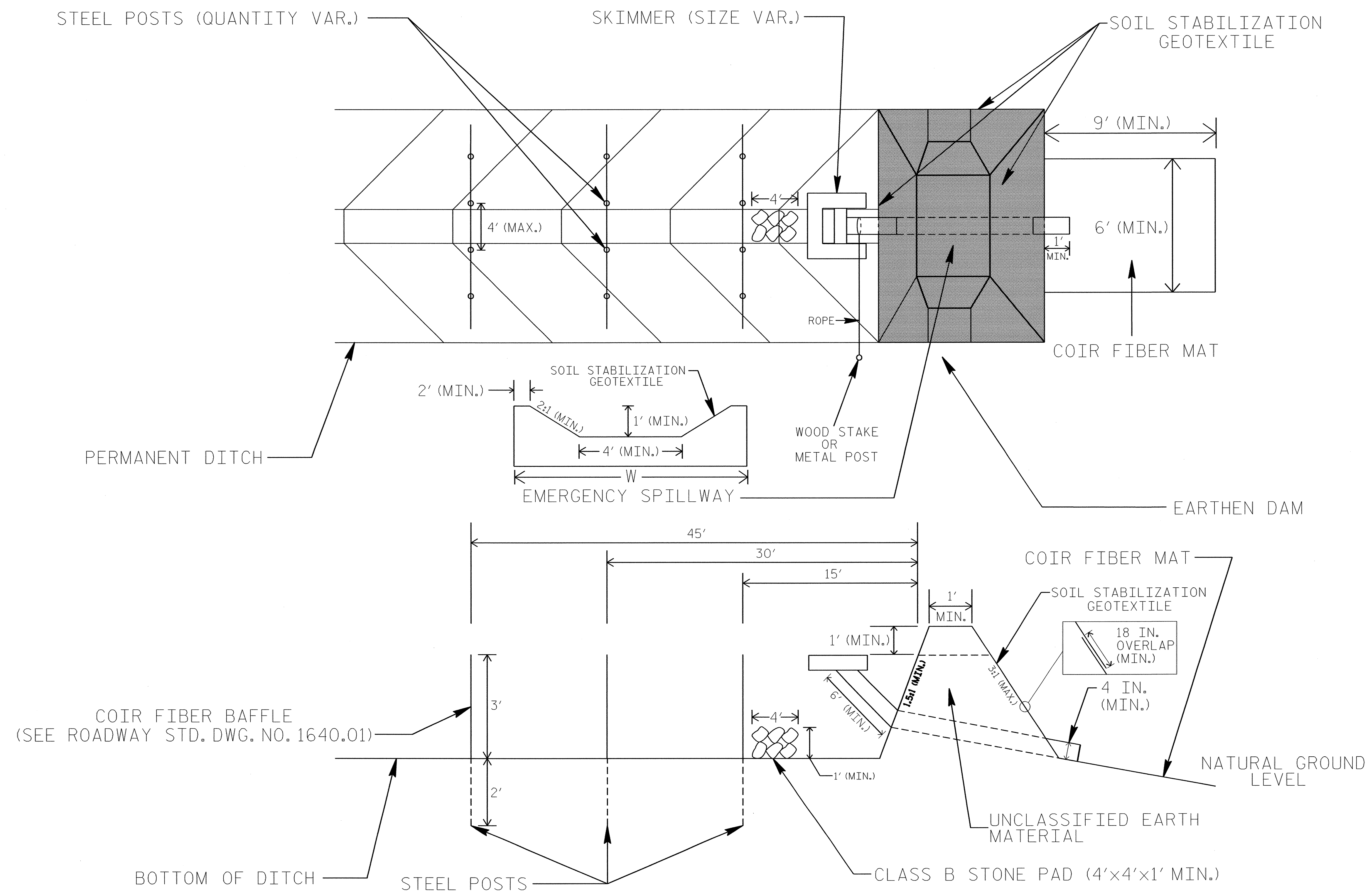
1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE EMERGENCY SPILLWAY LENGTH (FT.) USING  $Q/0.8$ , WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE AS DIRECTED.
6. SOIL STABILIZATION GEOTEXTILE FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE



PROJECT REFERENCE NO. 1-4413	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# EARTHEN DAM WITH SKIMMER



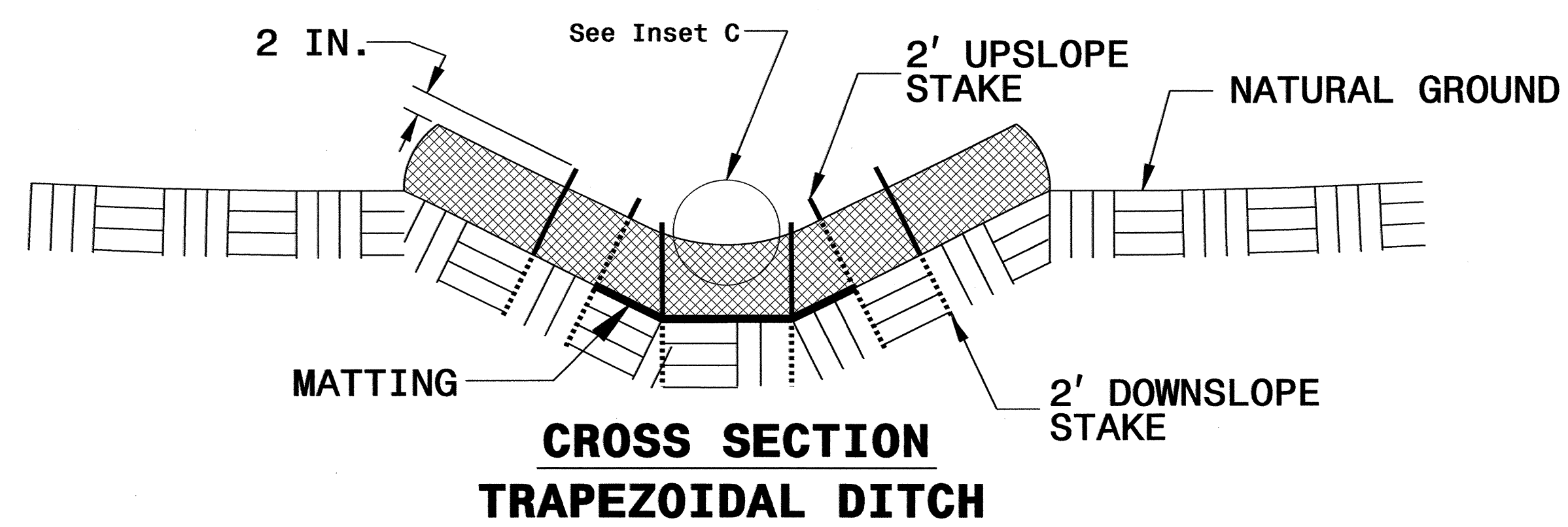
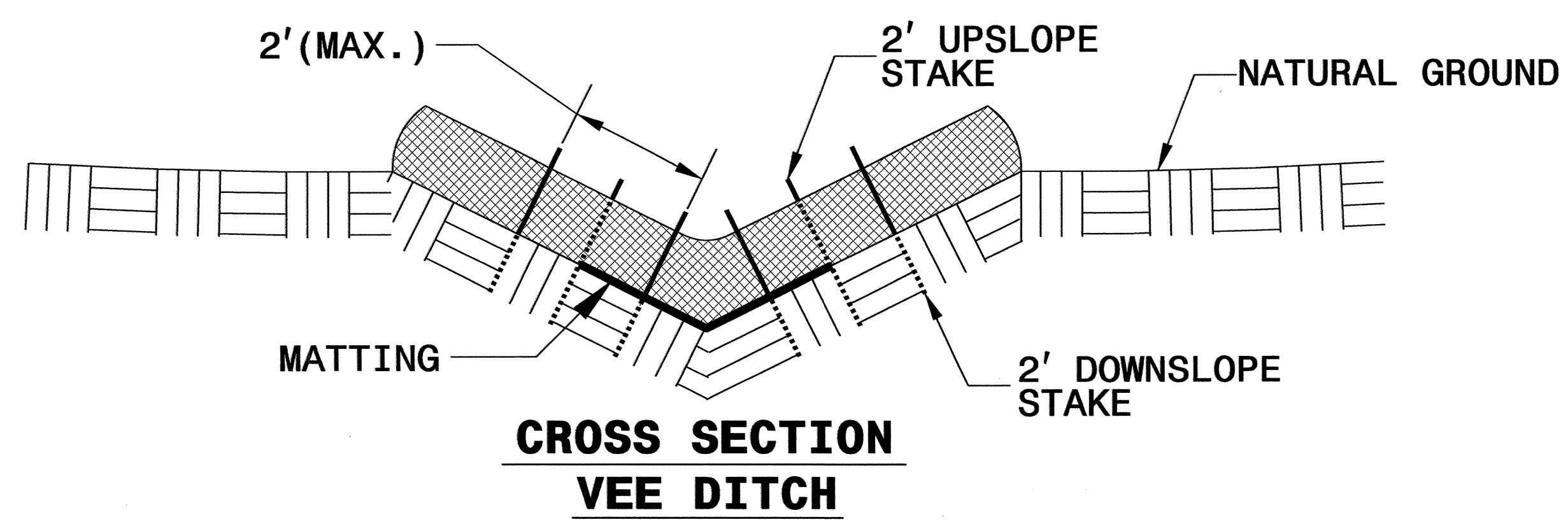
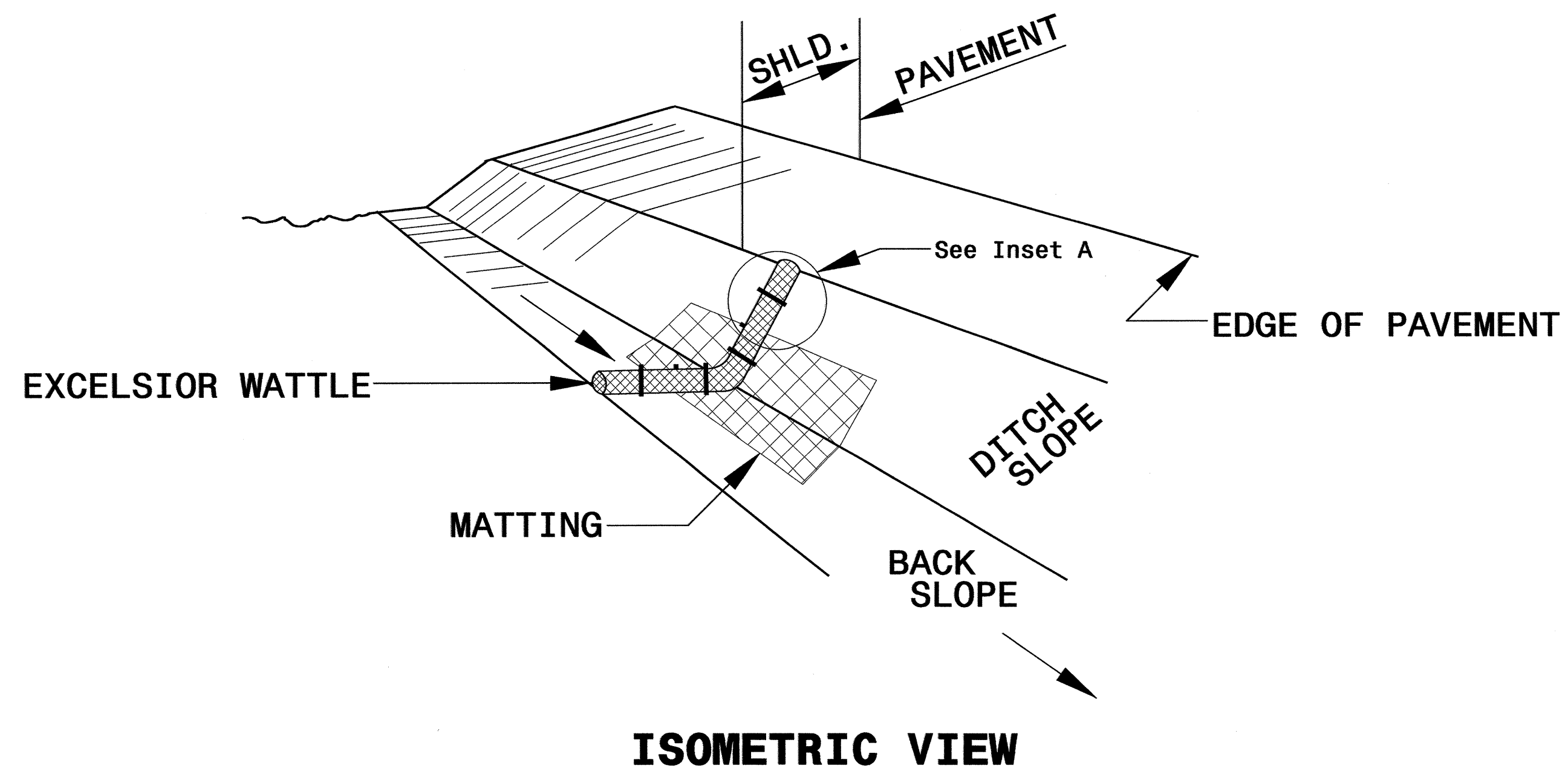
## COIR FIBER MAT ANCHOR OPTIONS

- NOTES**
1. LIMIT EARTHEN DAM HEIGHT TO 5 FT.
  2. DETERMINE EMERGENCY SPILLWAY LENGTH (FT.) USING  $Q/0.8$ , WHERE Q IS FLOW RATE (CFS) INTO BASIN.
  3. SOIL STABILIZATION GEOTEXTILE FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

PROJECT REFERENCE NO. 1-4413	SHEET NO. EC-2B
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.

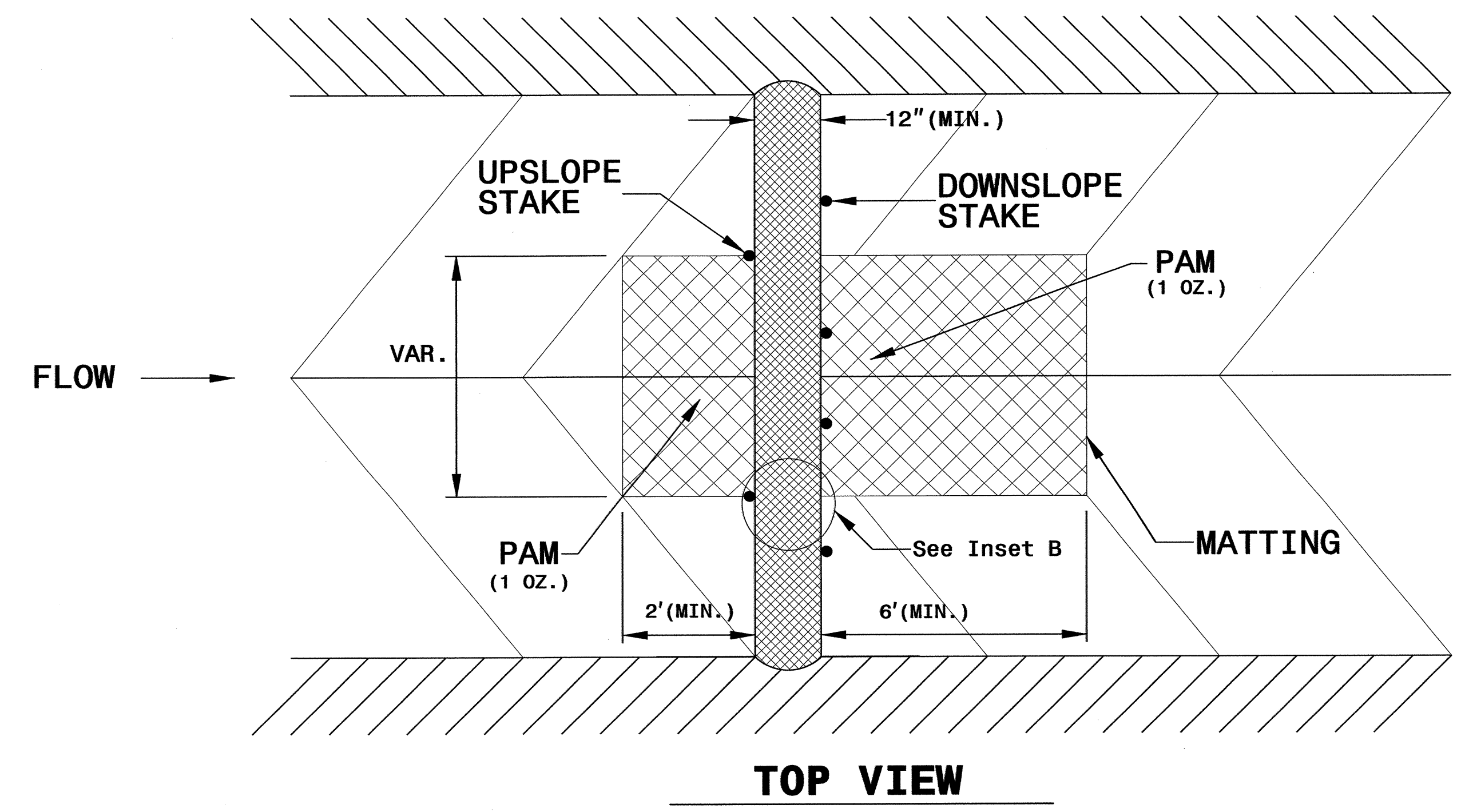
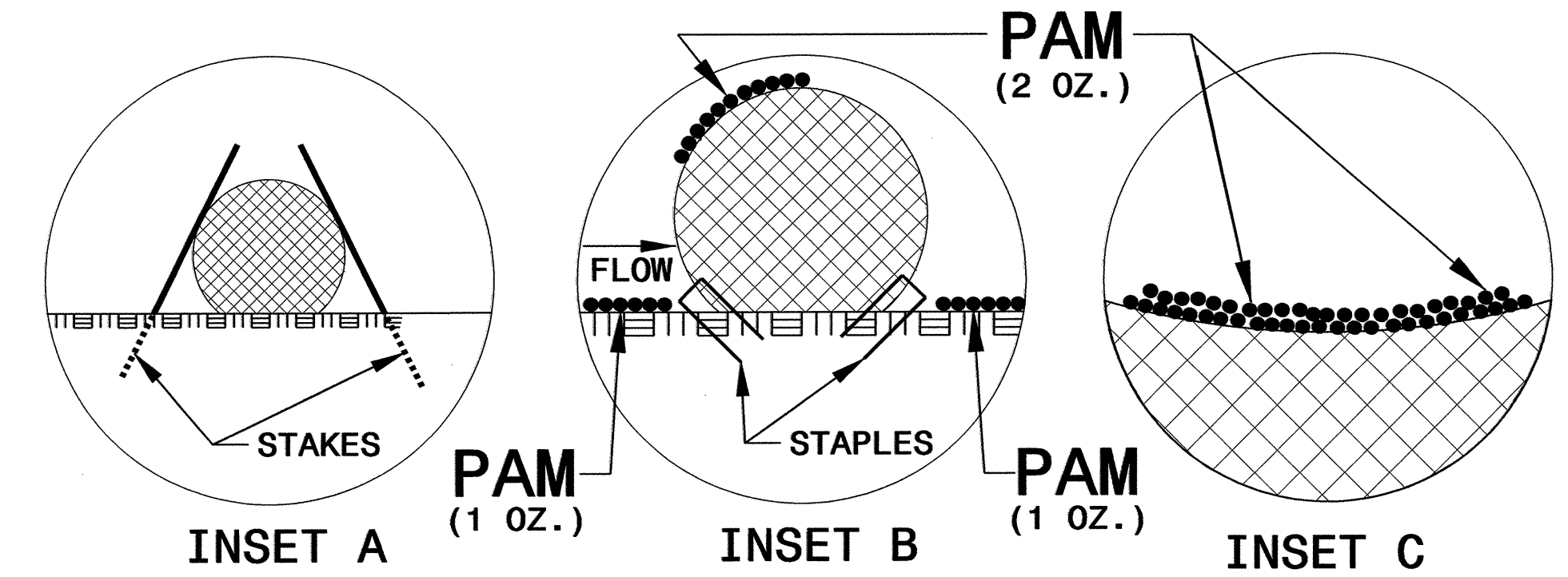
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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.

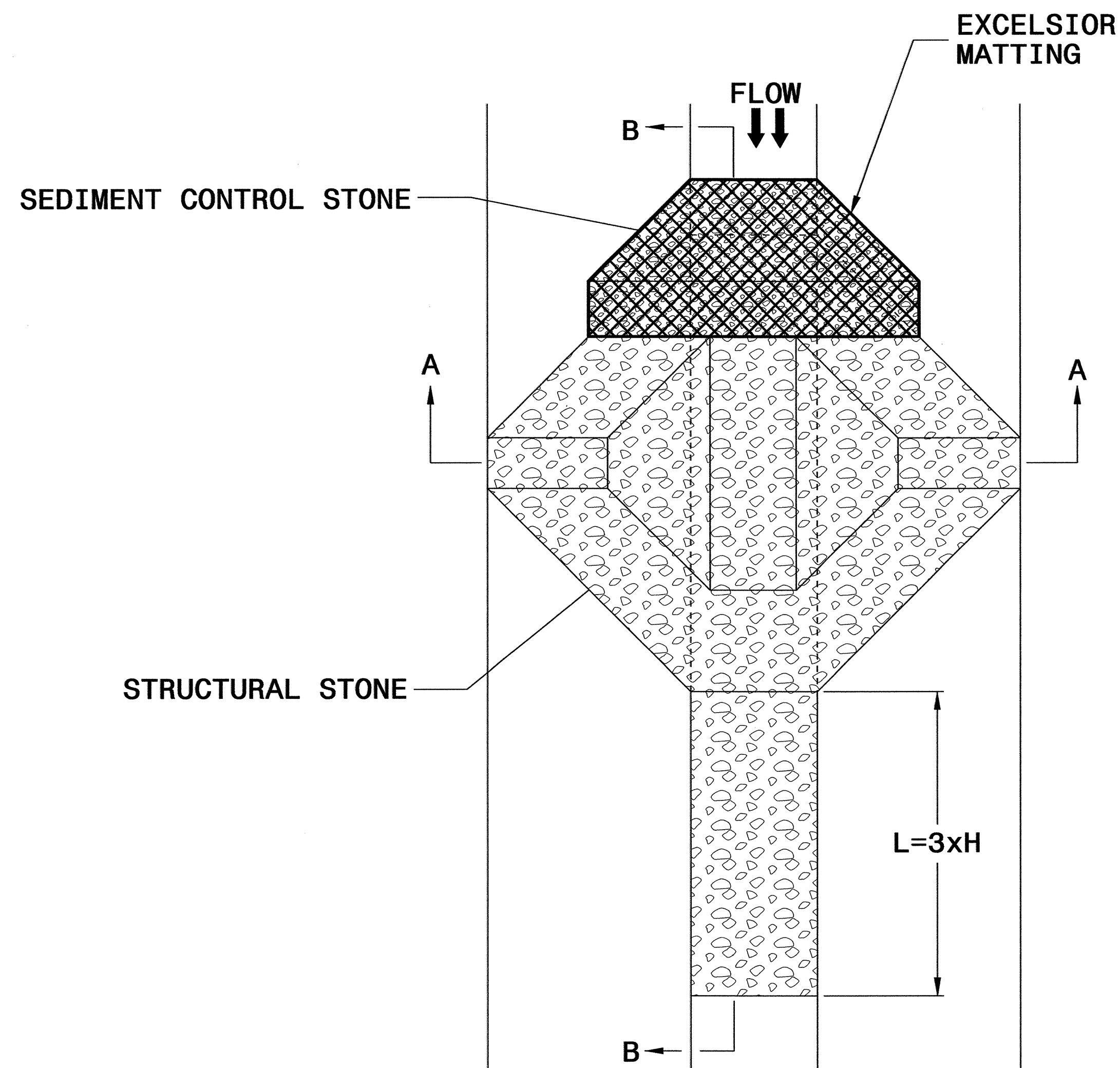
INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.





PROJECT REFERENCE NO. 1-4413	SHEET NO. EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



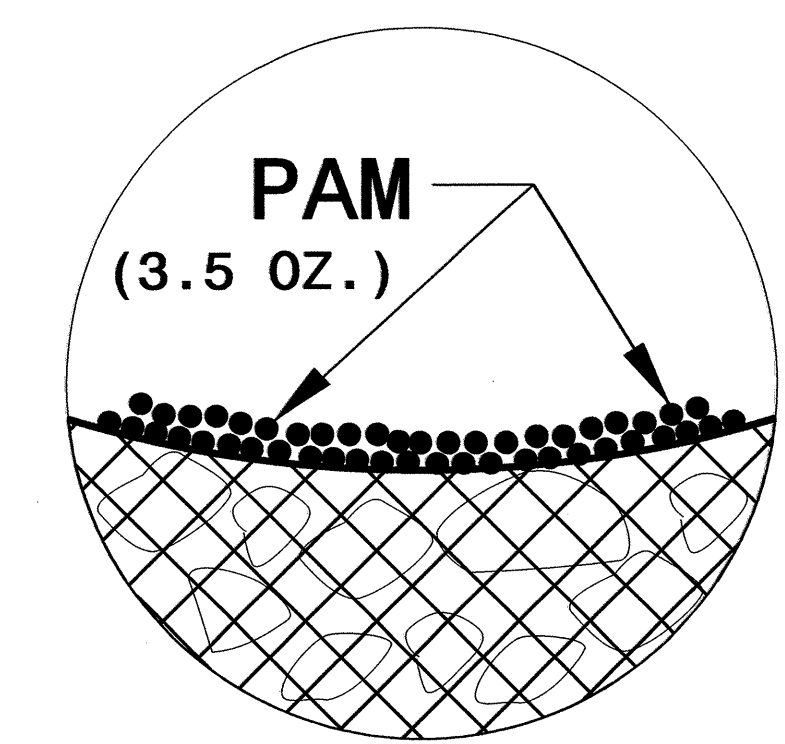
PLAN

### NOTES

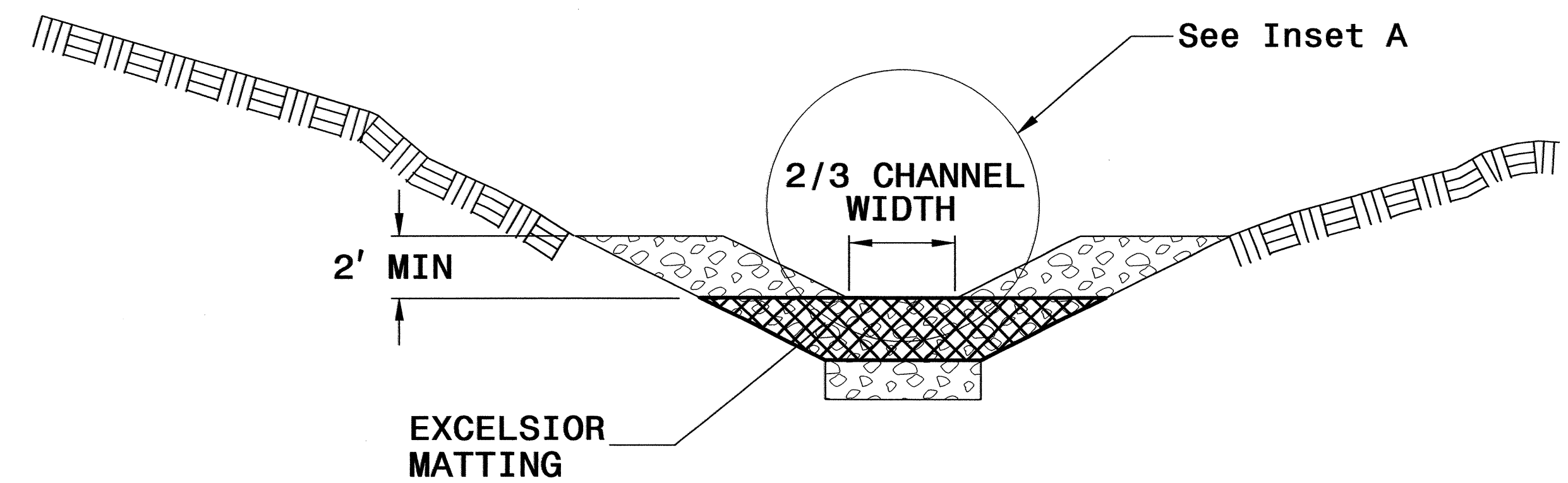
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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.

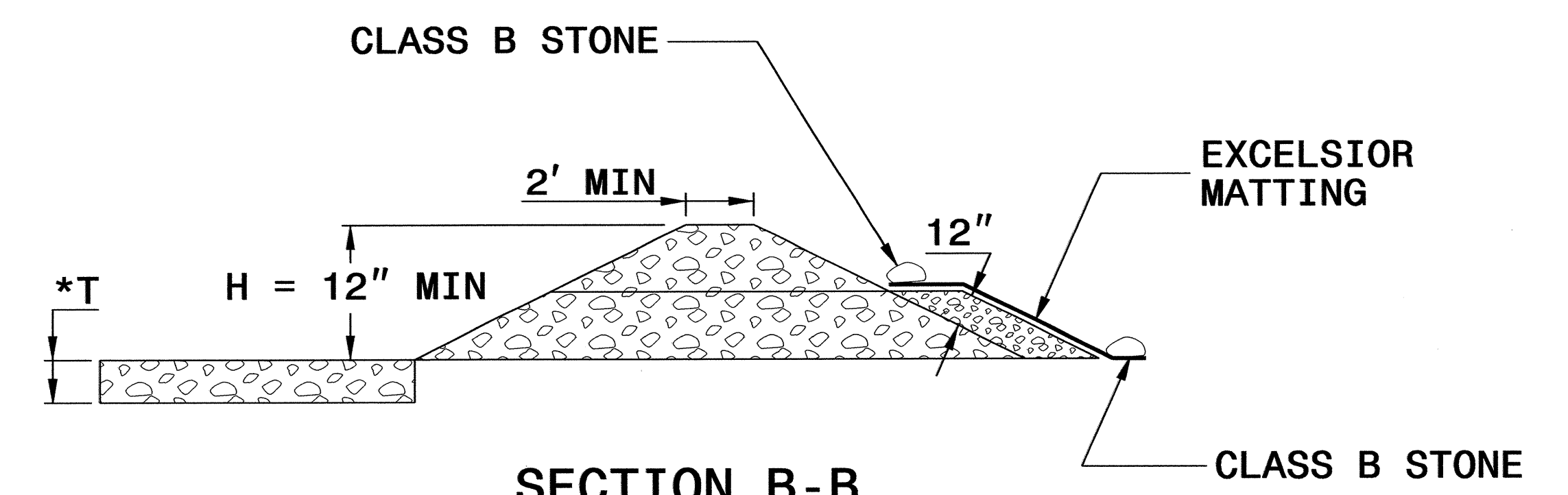
INITIALLY APPLY 3.5 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



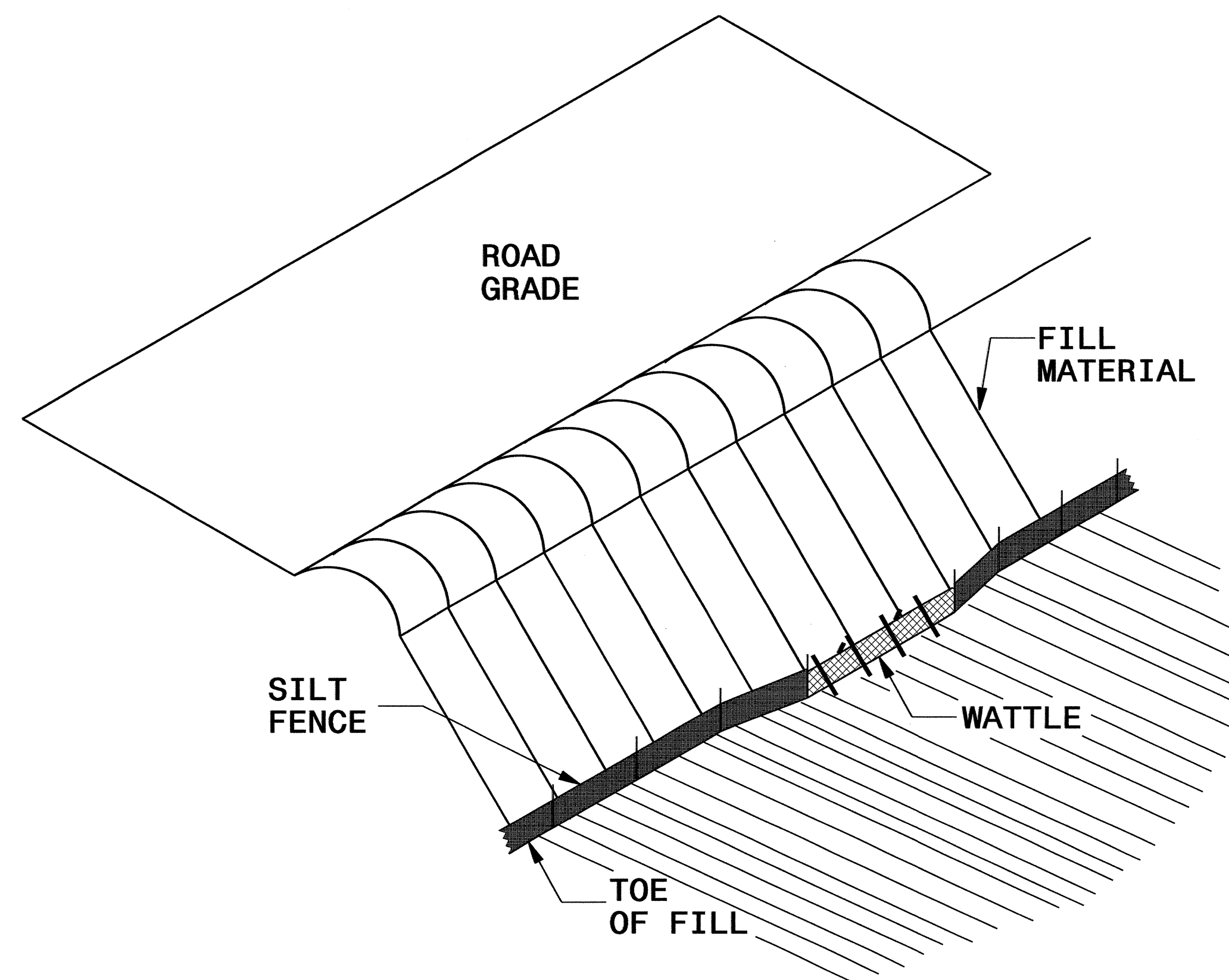
SECTION B-B

\*T = 12" MIN., 18" MAX.

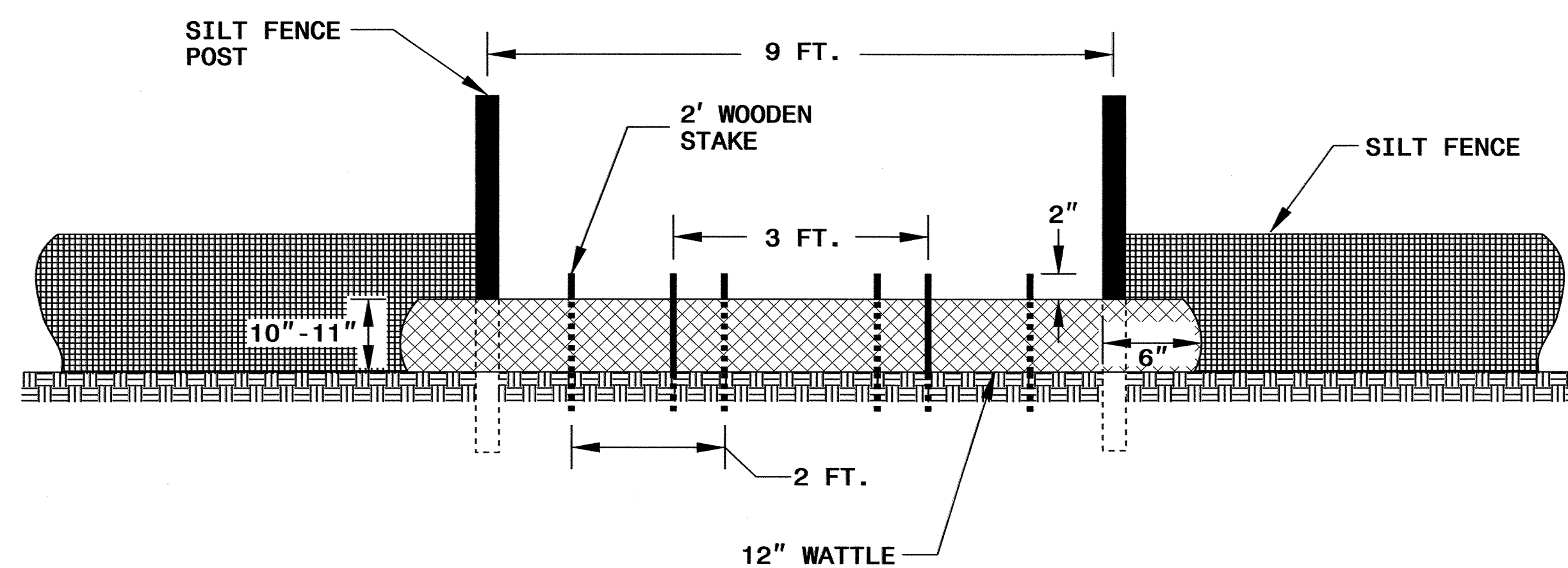
NOT TO SCALE

# SILT FENCE COIR FIBER WATTLE BREAK DETAIL

PROJECT REFERENCE NO. 1-4413		SHEET NO. EC-2D	
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.

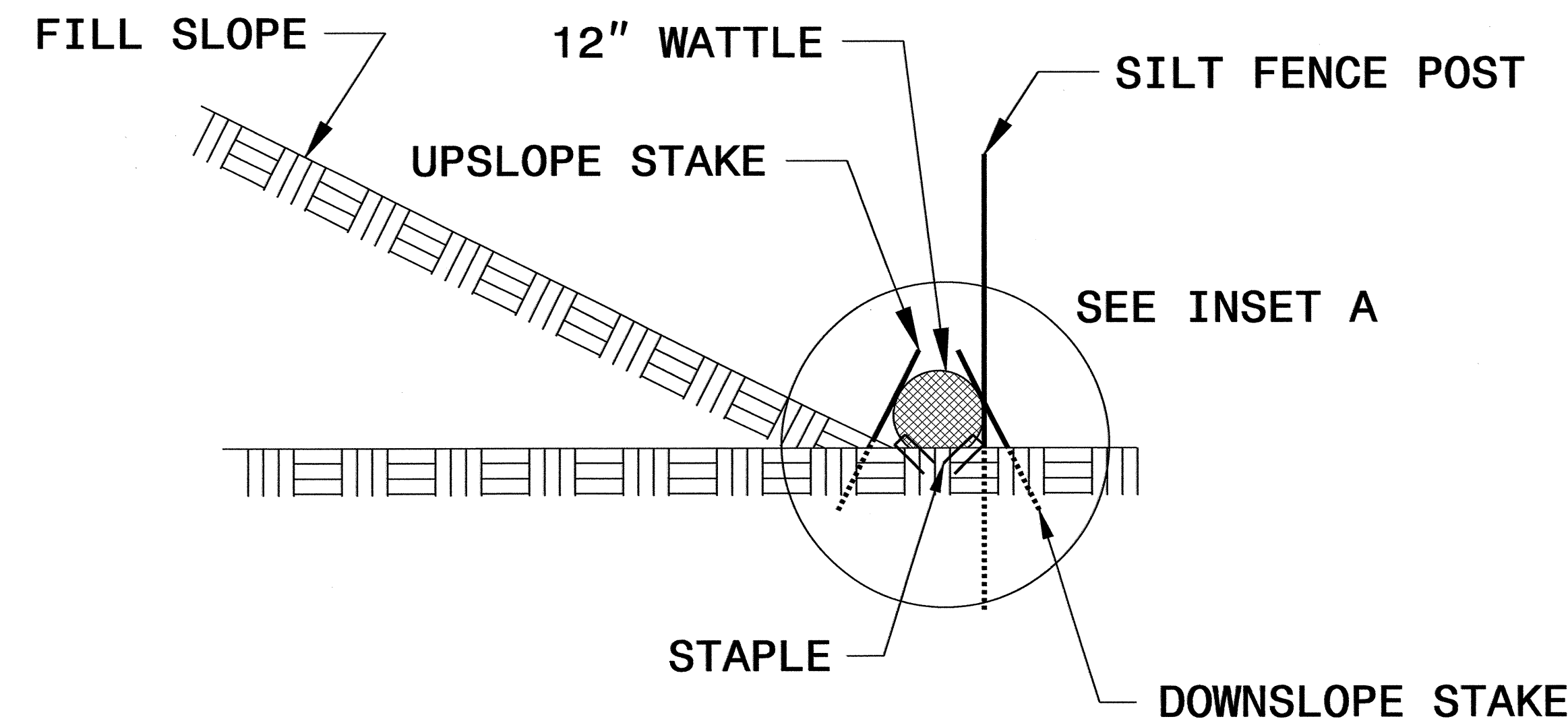
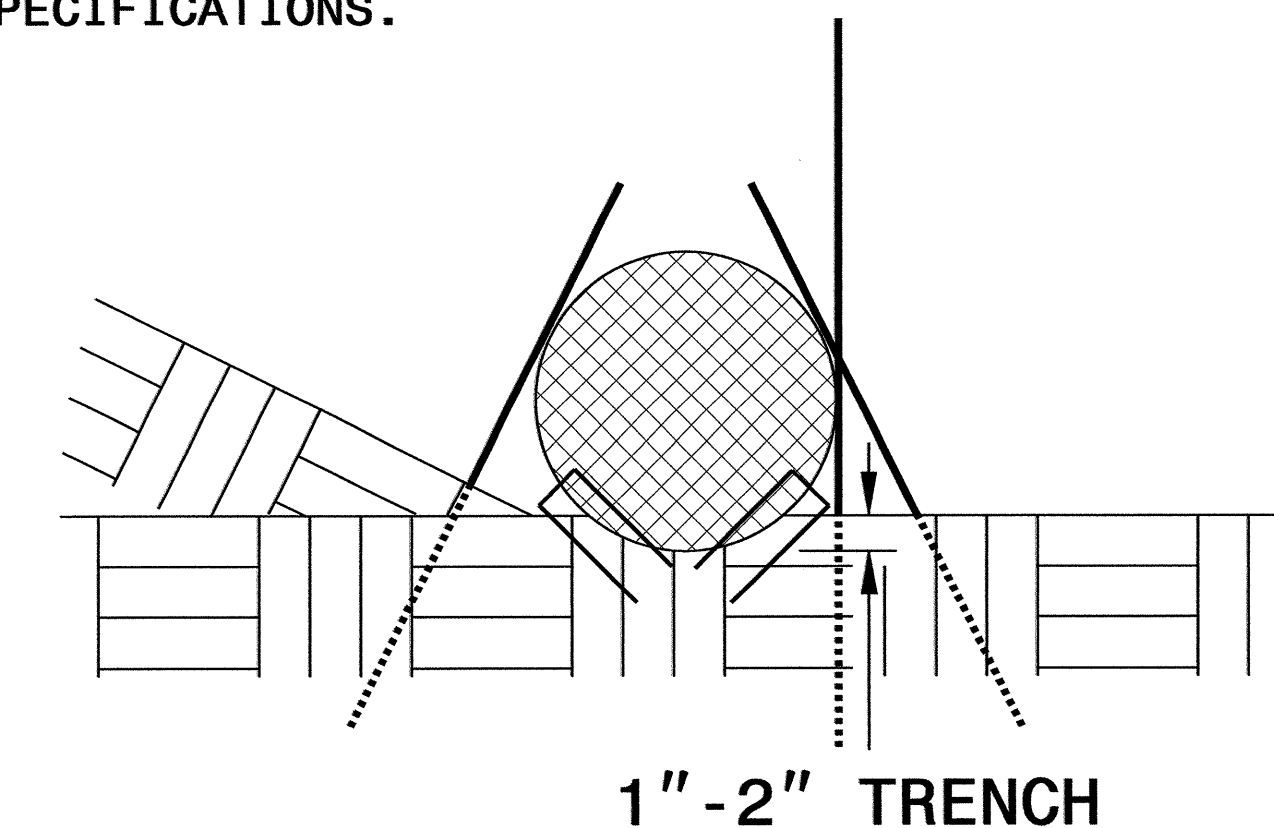
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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**



# BORROW PIT DEWATERING BASIN DETAIL

PROJECT REFERENCE NO. 1-4413	SHEET NO. EC-2E
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

## GENERAL NOTES:

DETERMINE BORROW PIT DEWATERING BASIN SIZE USING  $V = 8.0203 * Q * T$ , WHERE V IS VOLUME (FT<sup>3</sup>), Q IS PUMP FLOW RATE (GPM), AND T IS DEWATERING TIME (HR). USE MAXIMUM FLOW RATE OF 1000 GPM AND A MINIMUM DEWATERING TIME OF 2 HOURS.

RISER SHALL BE A NON-PERFORATED, SMOOTH OR CORRUGATED MATERIAL WITH A FLASHBOARD OPTION.

CONSTRUCT THE COIR FIBER BAFFLE IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 1640.01 AND WITH MATERIAL THAT MEETS THE SPECIFICATIONS OF ROADWAY STANDARD 1060-14.

PROVIDE 5' STEEL POSTS OF THE SELF-FASTENER ANGLE STEEL TYPE. INSTALL STEEL POSTS WITH NO MORE THAN 3' OF THE POST APPEARING ABOVE THE GROUND.

ATTACH THE COIR FIBER MAT TO THE STEEL POSTS WITH WIRE OR OTHER ACCEPTABLE MEANS AND STAPLED INTO THE BOTTOM AND SIDE SLOPES OF THE BASIN WITH 12" STAPLES.

INSTALL TYPE 2 GEOTEXTILE ON SIDESLOPES AND BOTTOM OF BASIN AT INLET AS SHOWN IN THE DETAIL.

USE THE TYPICAL SECTION SHOWN FOR THE BORROW PIT DEWATERING BASIN AS A GUIDE. THE BASIN MAY HAVE ANY TYPE CONFIGURATION AS LONG AS SUFFICIENT VOLUME IS PROVIDED AND PROVISIONS ARE MADE FOR A NON-PERFORATED RISER.

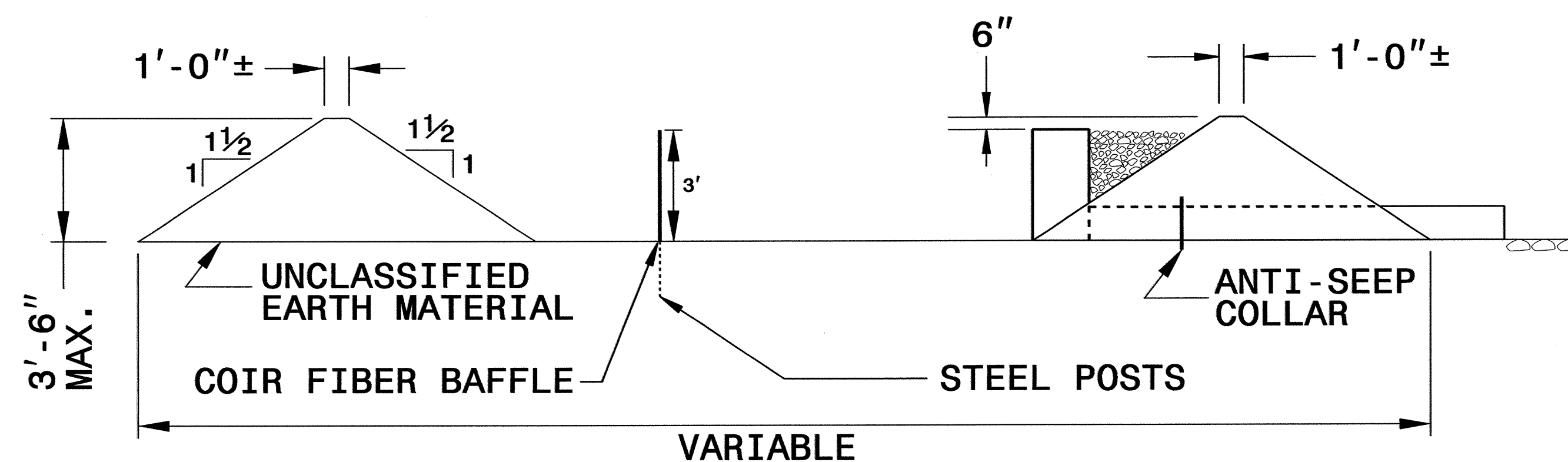
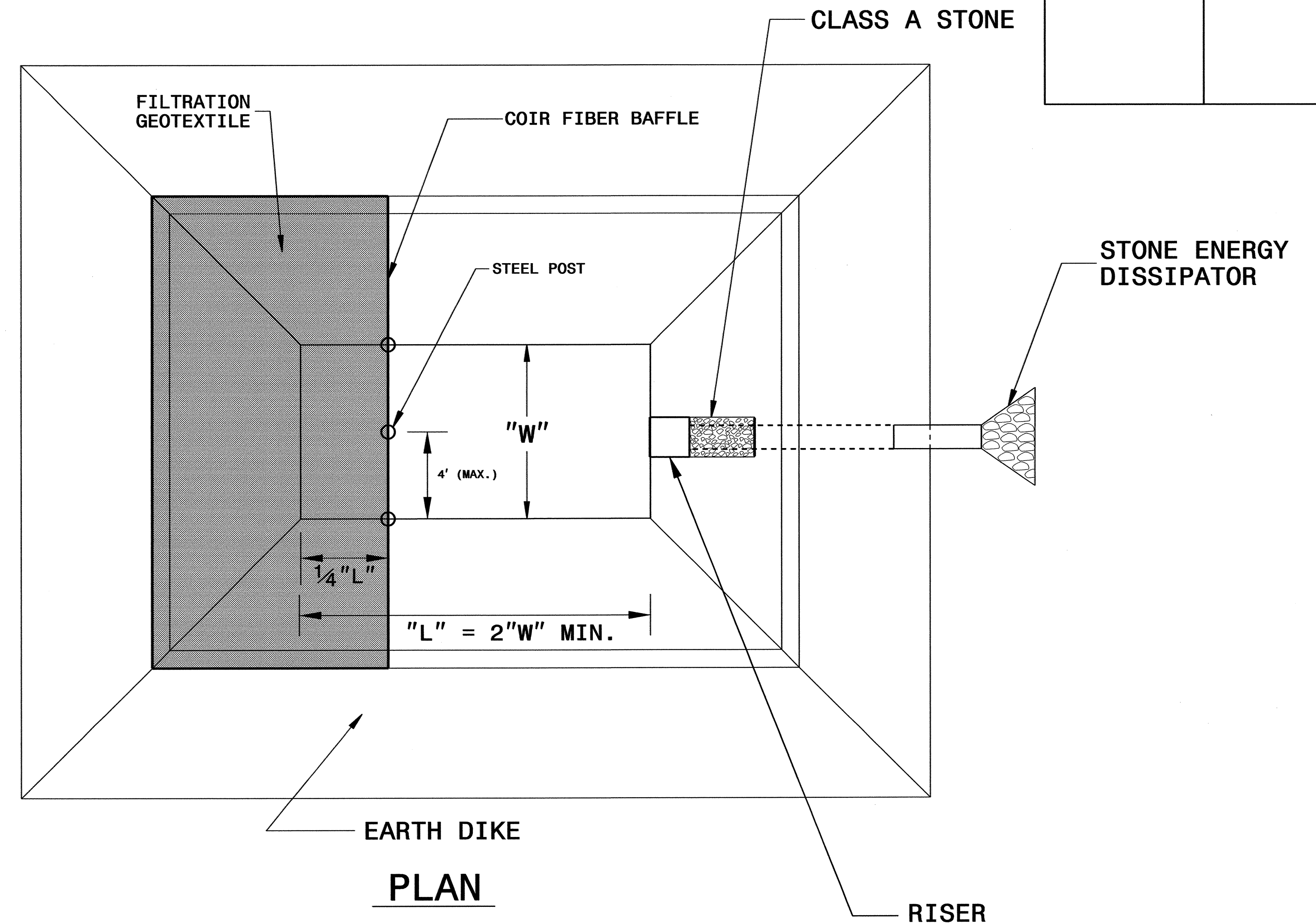
DO NOT EXCEED 3½ FT. IN HEIGHT FOR THE EARTH DIKES REQUIRED FOR BORROW PIT DEWATERING BASIN.

THE BORROW PIT DEWATERING BASIN SIZE IS VARIABLE AND DEPENDENT ON SPECIFIC SITE REQUIREMENTS AS WELL AS PROPOSED CONSTRUCTION OPERATIONS.

SUBMIT THE SIZE, LOCATION AND RISER PIPE MATERIAL FOR APPROVAL PRIOR TO CONSTRUCTION.

PUMP THE EFFLUENT INTO THE BORROW PIT DEWATERING BASIN TO A MAXIMUM DEPTH OF 6 IN. BELOW TOP OF EARTH DIKE.

PROVIDE A STONE ENERGY DISSIPATOR PAD AT THE OUTLET OF THE PUMP DISCHARGE HOSE AND OUTLET OF THE RISER BARREL IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 876.02 FOR OUTLET W/O DITCH.



TYPICAL SECTION VIEW

NOT TO SCALE

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. I-4413	SHEET NO. EC-3
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	-RAMP-Ø-	16+00	19+50	RT	1070
4	-Y2-	20+50	21+50	RT	565
4	-Y2-	30+50	31+50	RT	210
4	-Y2-	26+50	29+75	LT	610
4	-Y2-	33+00	33+50	LT	105
5	-L-	36+50	38+00	RT	460
8	-Y1-	52+00	57+50	RT	1455
9	-Y1-	59+00	76+00	RT	3460
			SUBTOTAL		7935
	MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER				21185
			TOTAL		29120
			SAY		30000

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-Y2-	20+00	20+50	RT	250
			SUBTOTAL		250
			ADDITIONAL PERM TO BE INSTALLED		2350
			TOTAL		2600
			SAY		2600



DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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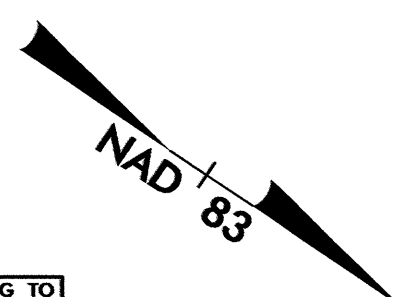
PROJECT REFERENCE NO.	SHEET NO.
I-4413	EC-3A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# ***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.



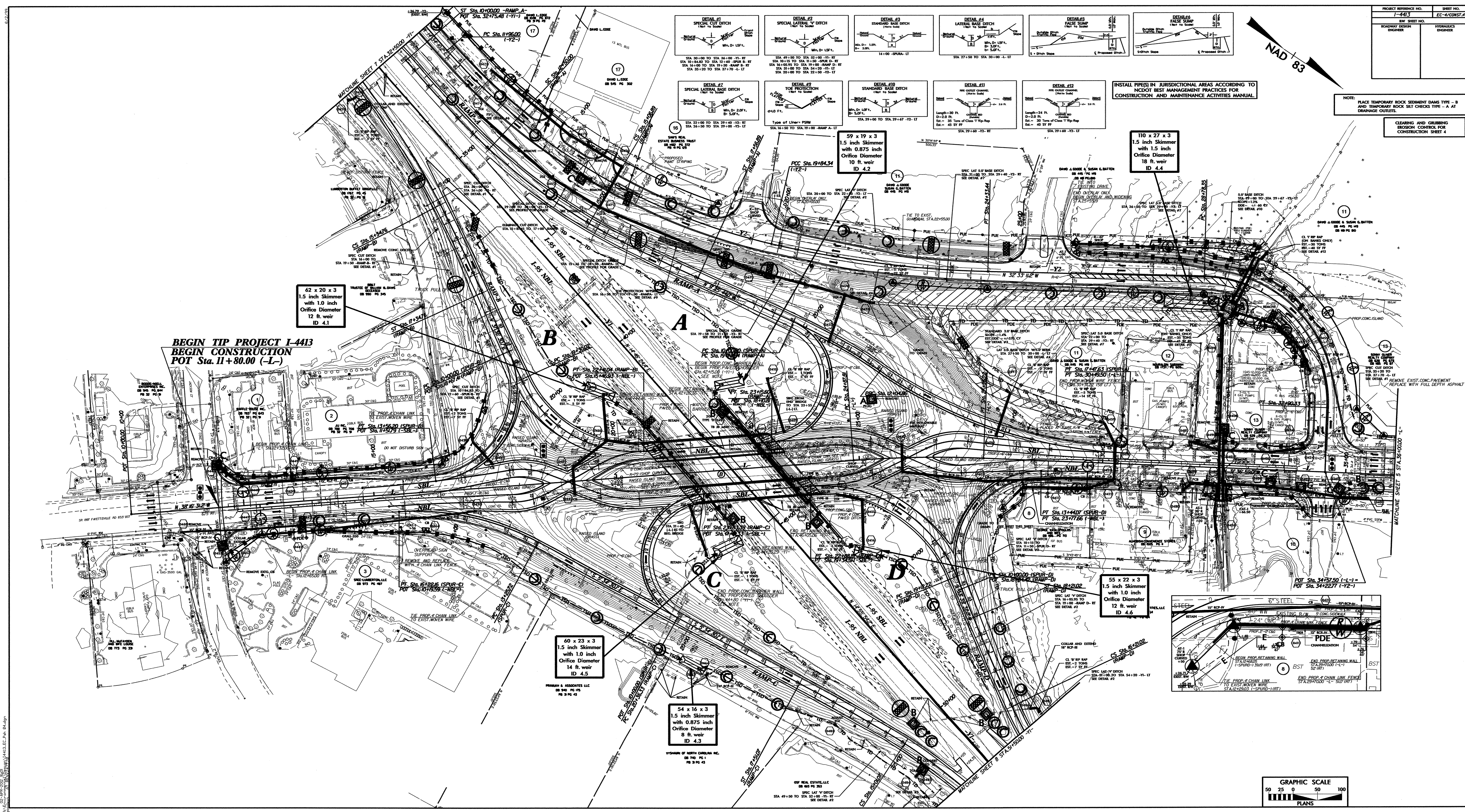
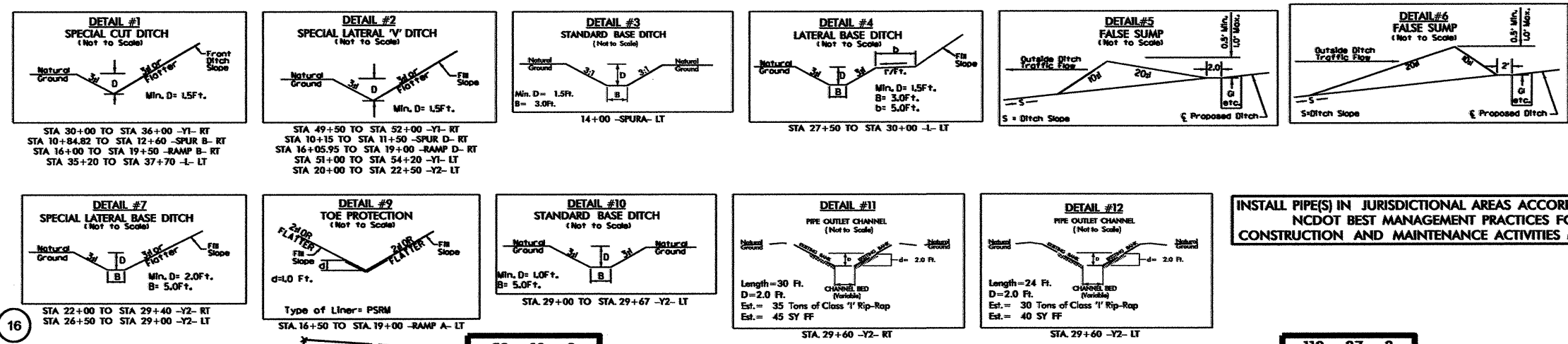
PROJECT REFERENCE NO.	SHEET NO.
1-443	EC-CONST 4
BW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



INSTALL PIPES IN JURISDICTIONAL AREAS ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

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

CLEARING AND GRUBBING BIDDING CONTROL FOR CONSTRUCTION SHEET 4



**BEGIN TIP PROJECT I-4413  
BEGIN CONSTRUCTION  
POT Sta. 11+80.00 (-L-)**

62 x 20 x 3  
1.5 inch Skimmer  
with 1.0 inch  
Orifice Diameter  
12 ft. weir  
ID 4.1

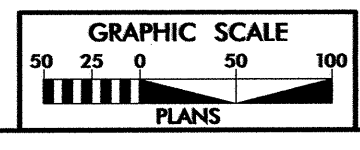
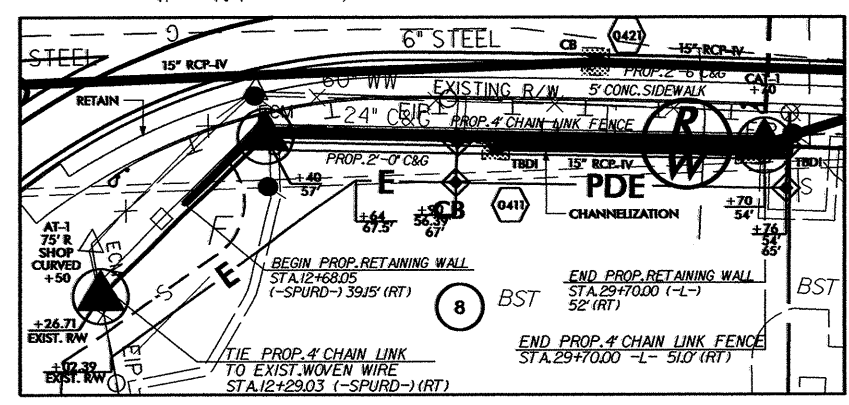
59 x 19 x 3  
1.5 inch Skimmer  
with 0.875 inch  
Orifice Diameter  
10 ft. weir  
ID 4.2

110 x 27 x 3  
1.5 inch Skimmer  
with 1.5 inch  
Orifice Diameter  
18 ft. weir  
ID 4.4

60 x 23 x 3  
1.5 inch Skimmer  
with 1.0 inch  
Orifice Diameter  
14 ft. weir  
ID 4.5

54 x 16 x 3  
1.5 inch Skimmer  
with 0.875 inch  
Orifice Diameter  
8 ft. weir  
ID 4.3

55 x 22 x 3  
1.5 inch Skimmer  
with 1.0 inch  
Orifice Diameter  
12 ft. weir  
ID 4.6



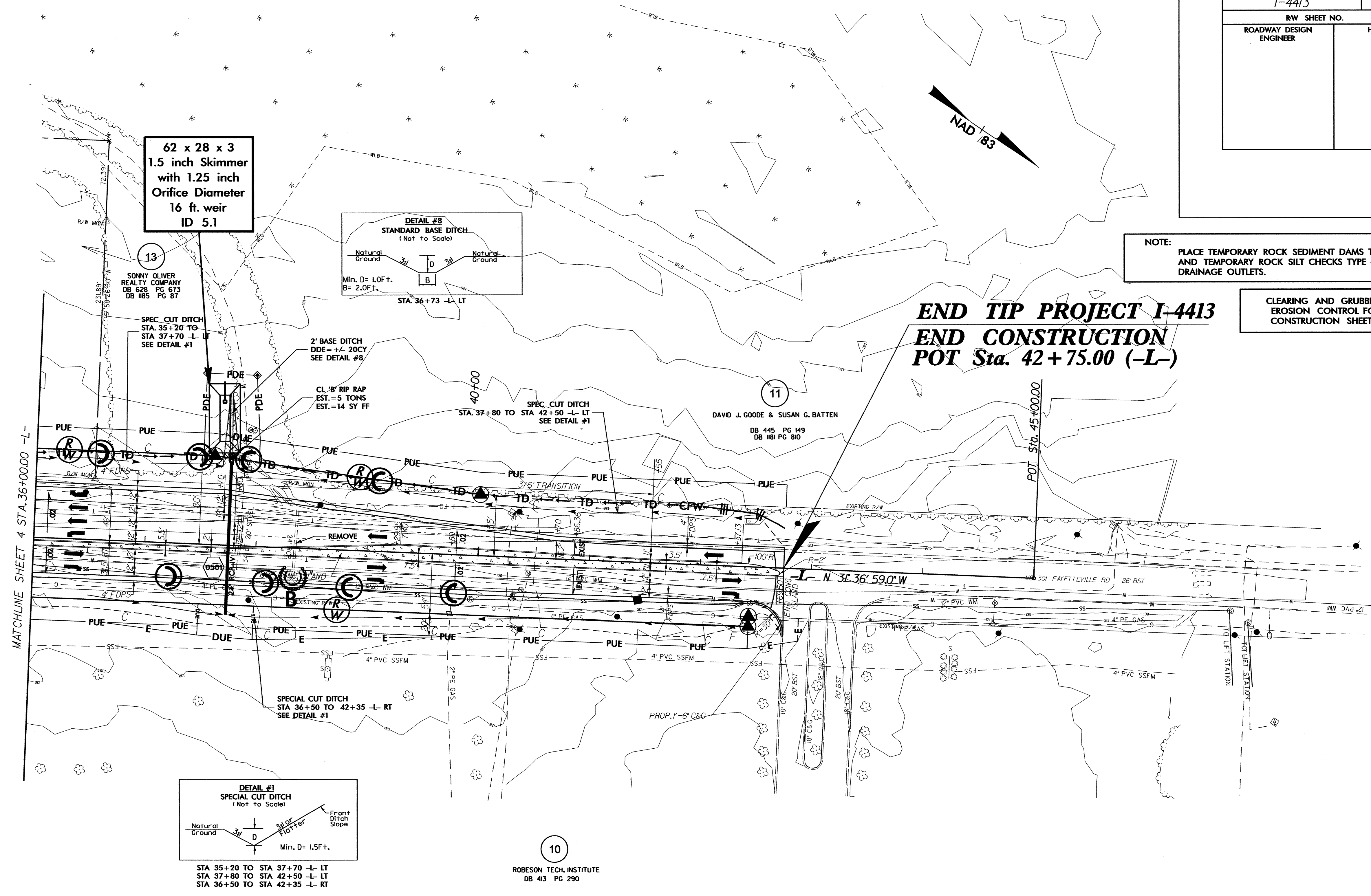


PROJECT REFERENCE NO.	SHEET NO.
I-4413	EC-5/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

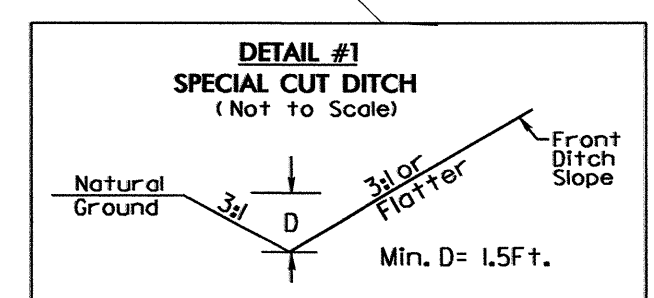
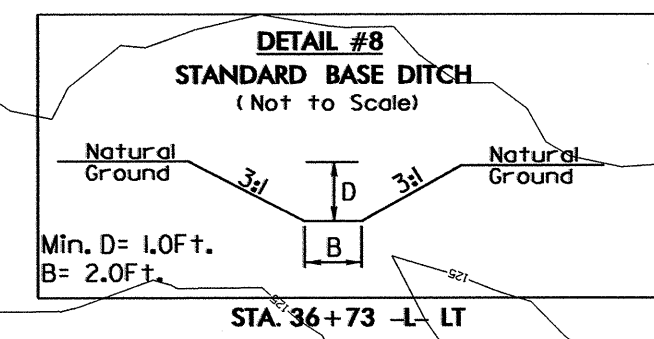
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 5

**END TIP PROJECT I-4413**  
**END CONSTRUCTION**  
**POT Sta. 42+75.00 (-L-)**



MATCHLINE SHEET 4 STA. 36+00.00 -L-

**62 x 28 x 3**  
**1.5 inch Skimmer**  
**with 1.25 inch**  
**Orifice Diameter**  
**16 ft. weir**  
**ID 5.1**

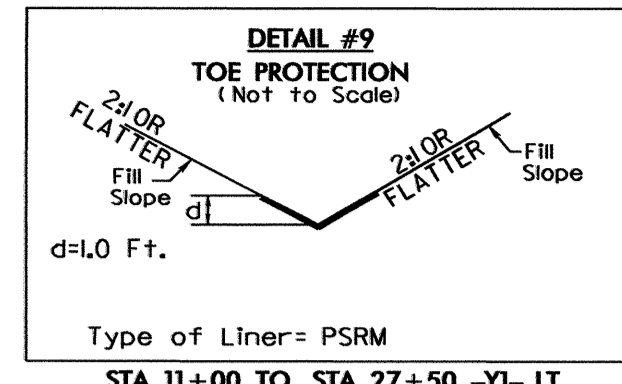


STA 35+20 TO STA 37+70 -L- LT  
 STA 37+80 TO STA 42+50 -L- LT  
 STA 36+50 TO STA 42+35 -L- RT

10  
 ROBESON TECH. INSTITUTE  
 DB 413 PG 290

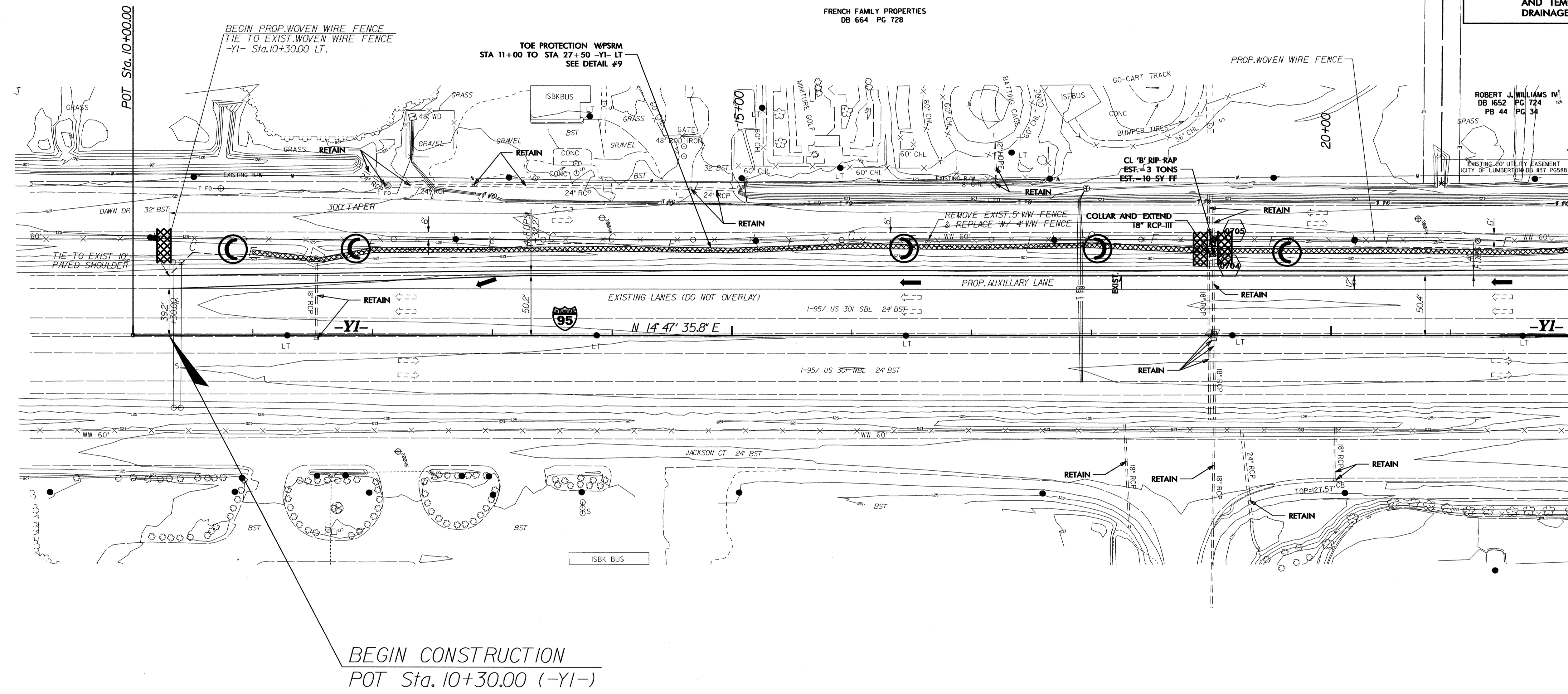
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PROJECT REFERENCE NO.	SHEET NO.
1-4413	EC-6/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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

**CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 6**



BEGIN CONSTRUCTION  
POT Sta. 10+30.00 (-YI-)

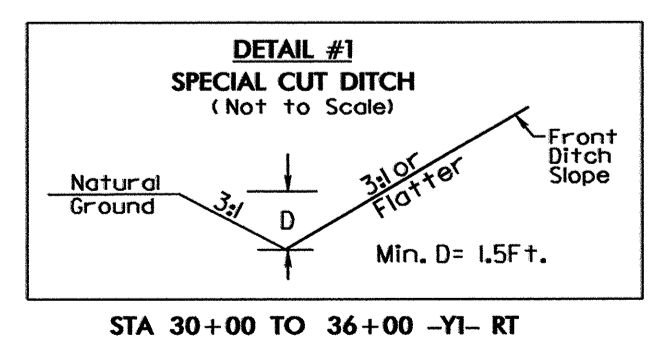
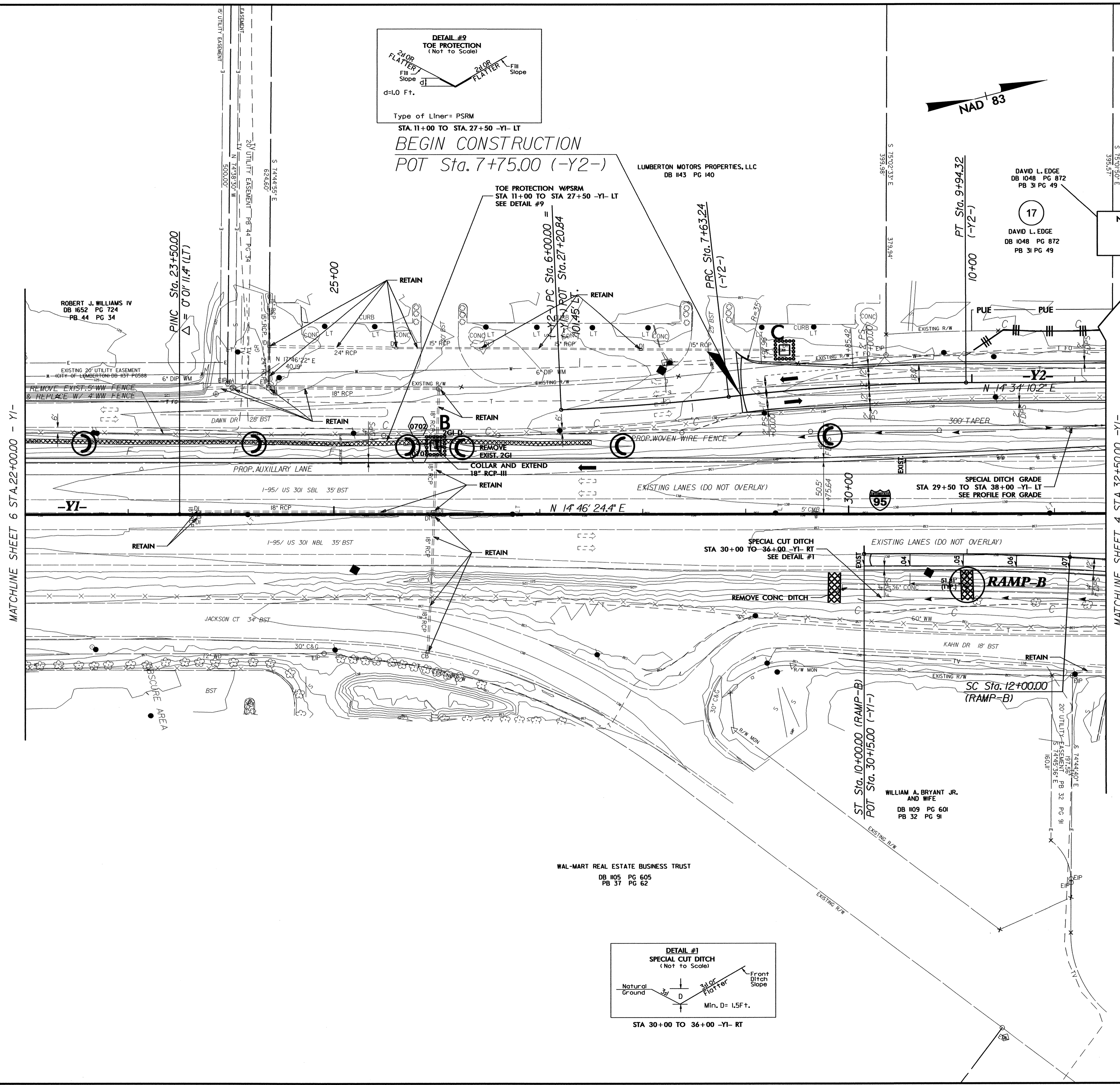
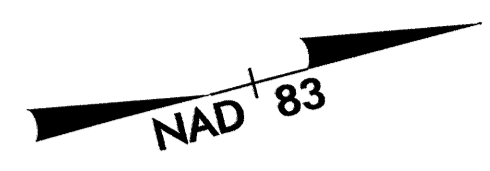
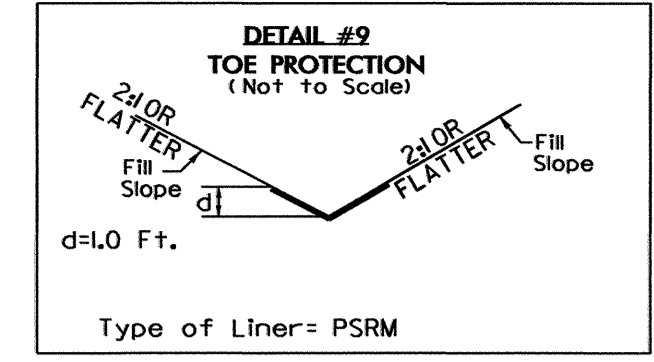


8/17/99

PROJECT REFERENCE NO.	SHEET NO.
1-4413	EC-7/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

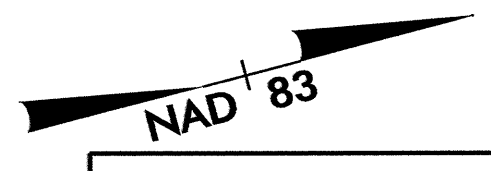
CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 7

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



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lucodan AT BNN23770

PROJECT REFERENCE NO.	SHEET NO.
1-4413	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.

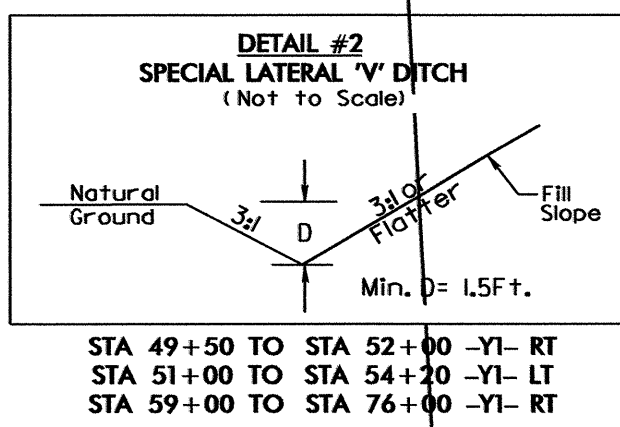
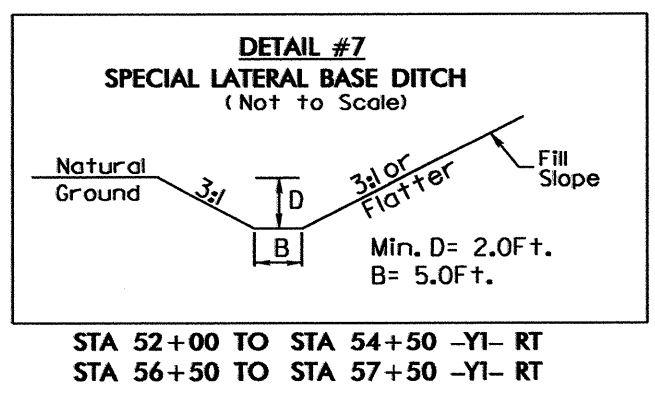
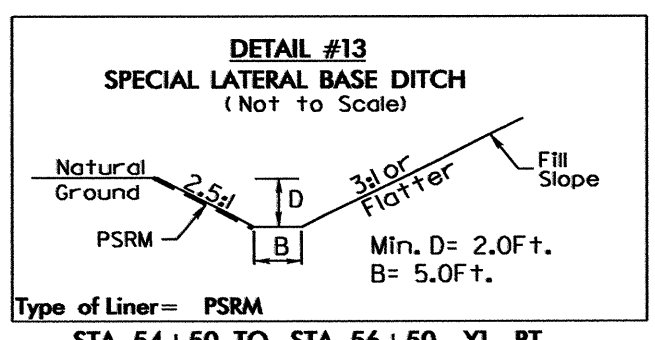
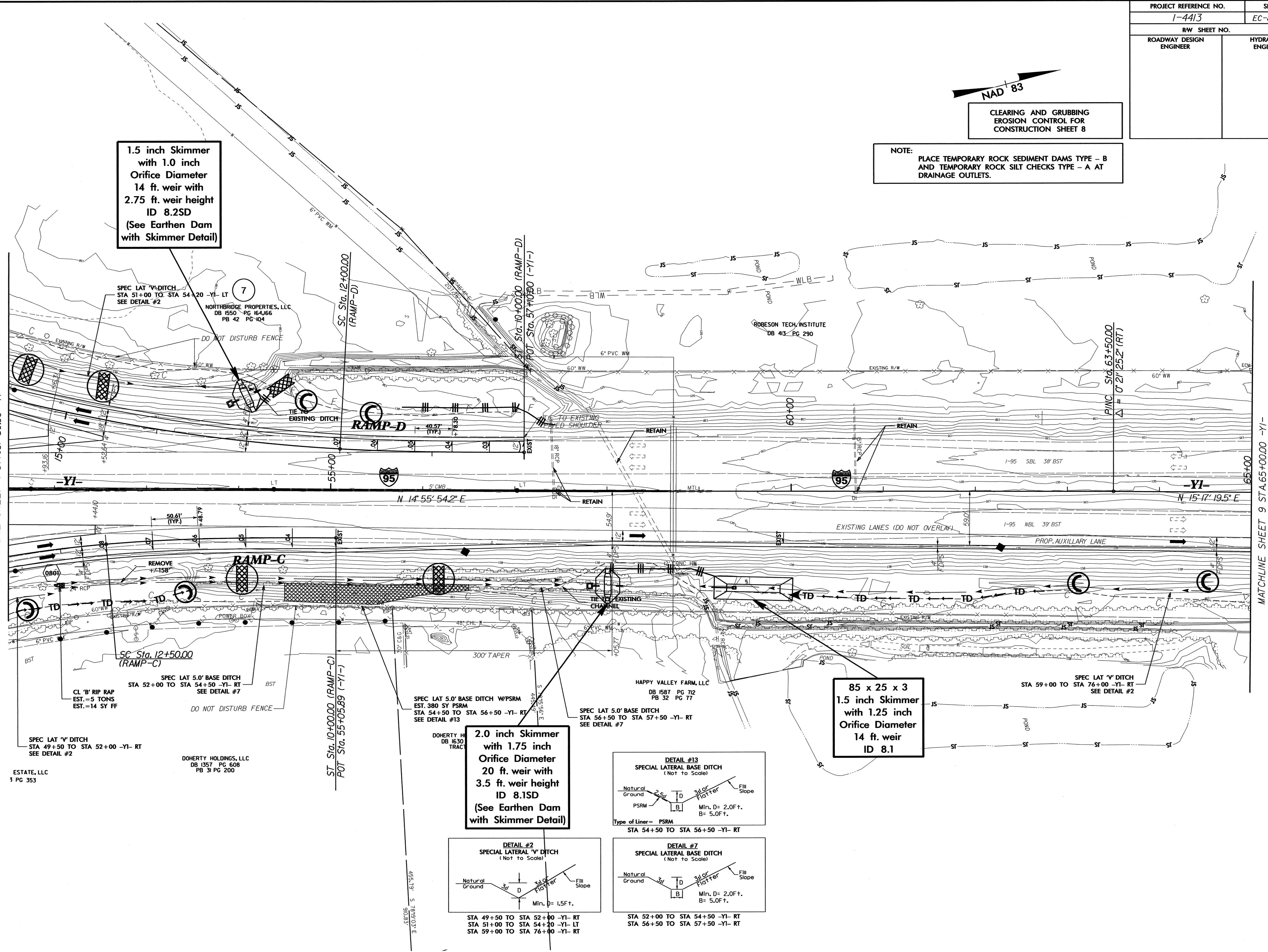
1.5 inch Skimmer  
with 1.0 inch  
Orifice Diameter  
14 ft. weir with  
2.75 ft. weir height  
ID 8.2SD  
(See Earthen Dam  
with Skimmer Detail)

85 x 25 x 3  
1.5 inch Skimmer  
with 1.25 inch  
Orifice Diameter  
14 ft. weir  
ID 8.1

2.0 inch Skimmer  
with 1.75 inch  
Orifice Diameter  
20 ft. weir with  
3.5 ft. weir height  
ID 8.1SD  
(See Earthen Dam  
with Skimmer Detail)

MATCHLINE SHEET 4 STA. 51+50.00 -Y1-

MATCHLINE SHEET 9 STA. 65+00.00 -Y1-



ESTATE, LLC  
3 PG 353

DOHERTY HOLDINGS, LLC  
DB 1357 PG 608  
PB 31 PG 200

DOHERTY HOLDINGS, LLC  
DB 1630 TRACT

HAPPY VALLEY FARM, LLC  
DB 1587 PG 712  
PB 32 PG 77

NORTHBRIDGE PROPERTIES, LLC  
DB 1550 PG 164,166  
PB 42 PG 104

ROBESON TECH. INSTITUTE  
DB 413 PG 290

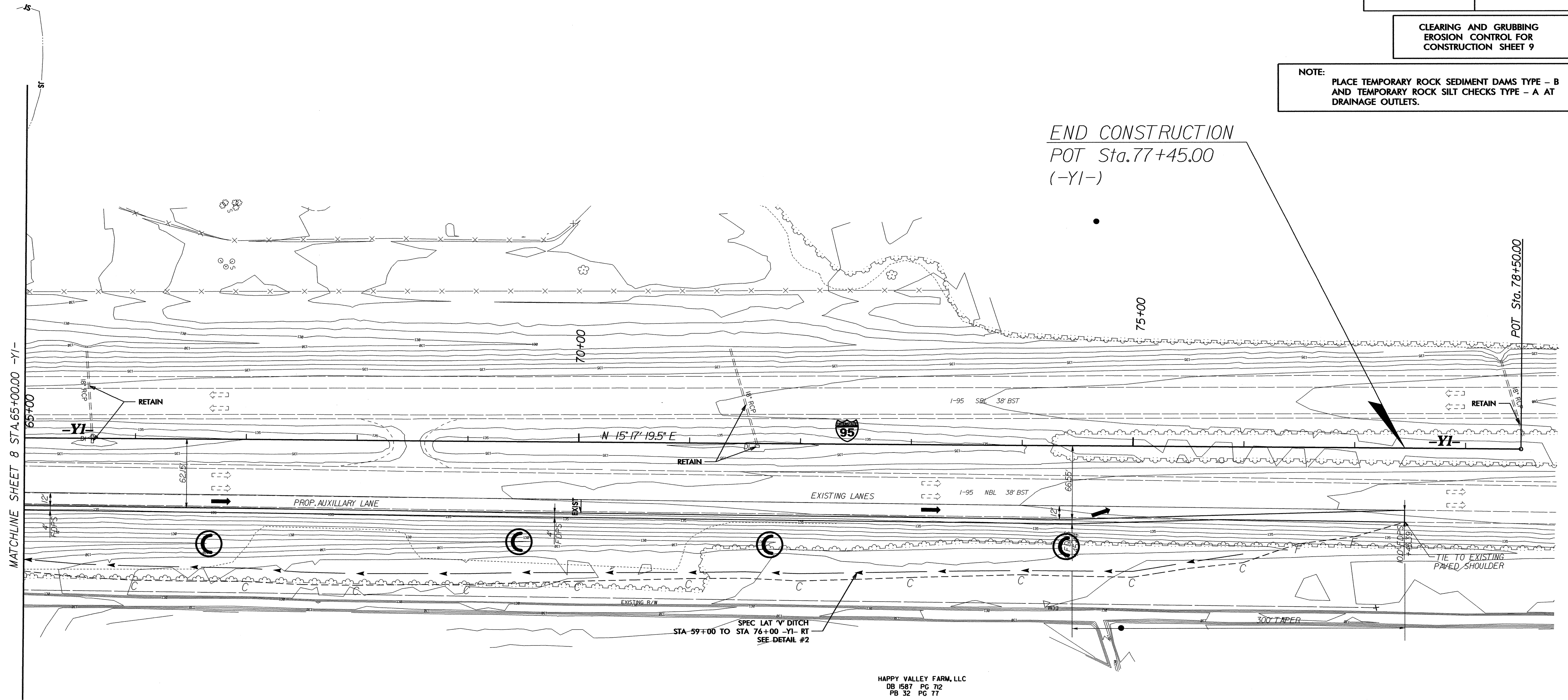
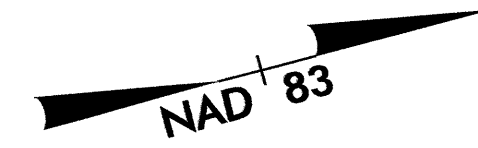
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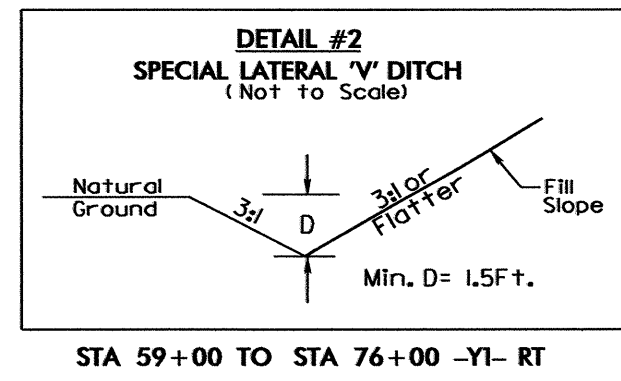
PROJECT REFERENCE NO. 1-4413	SHEET NO. EC-9/CONST.9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 9

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



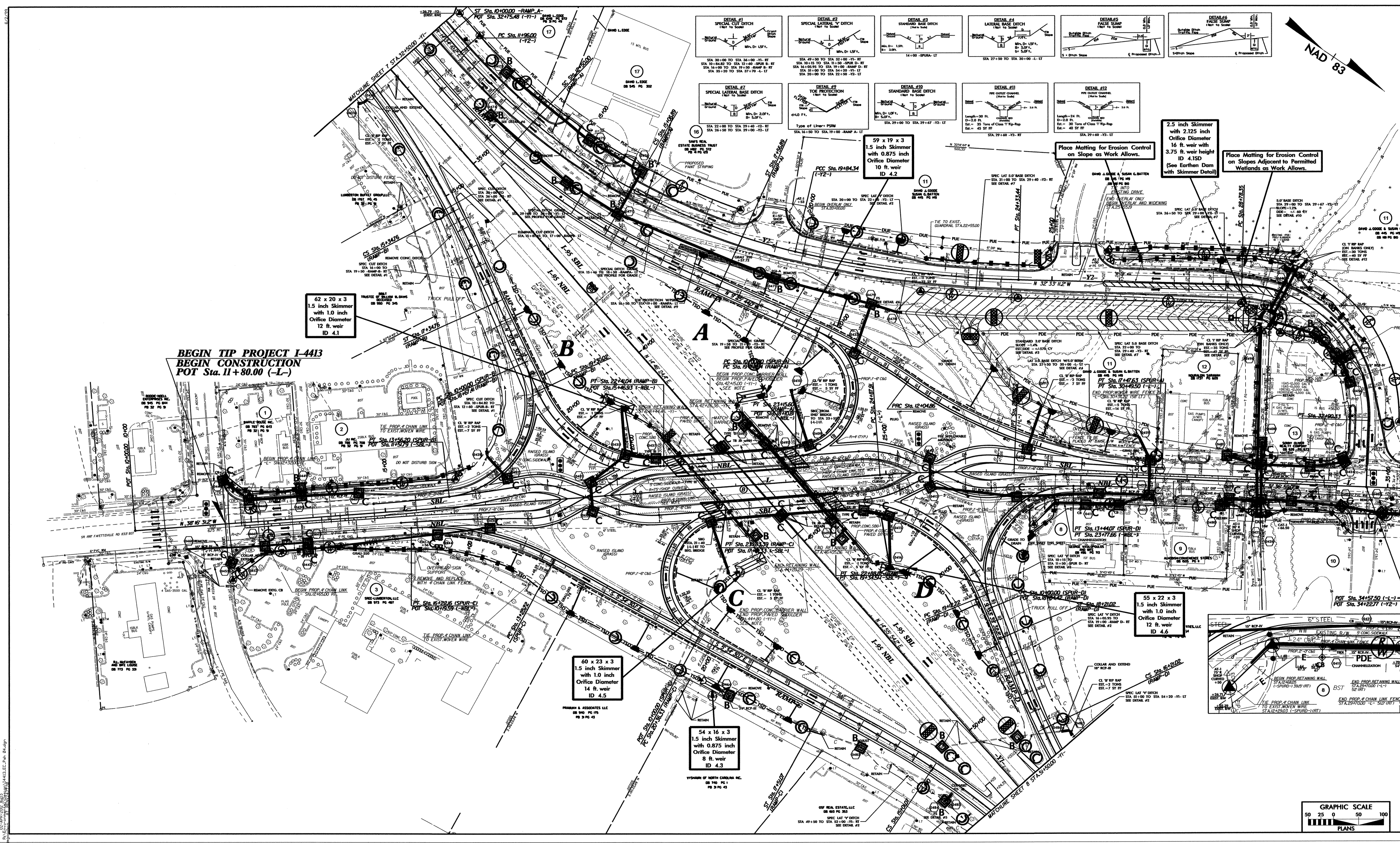
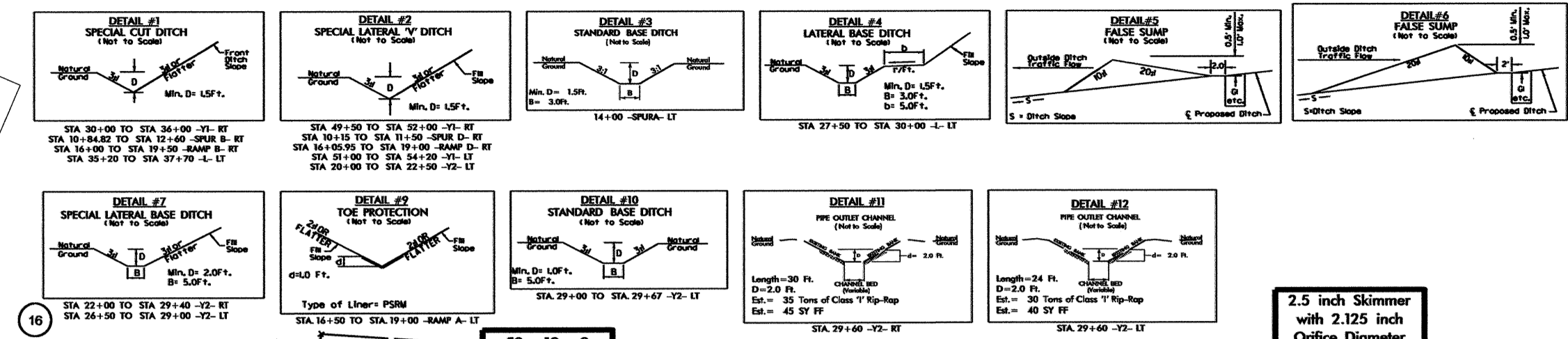
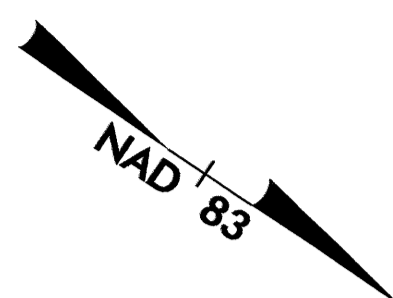
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POT Sta. 77+45.00  
(-YI-)



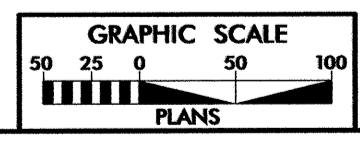
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DB 1587 PG 712  
PB 32 PG 77



PROJECT REFERENCE NO.	DIST. NO.
1-4413	EC-02/CONST.1
REV. SHEET NO.	
REGISTERED ENGINEER	HYDRAULICS ENGINEER

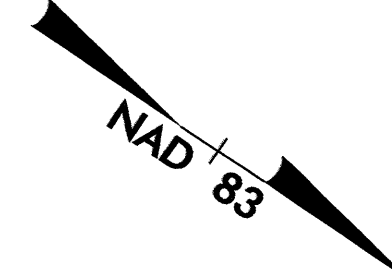


**BEGIN TIP PROJECT I-4413**  
**BEGIN CONSTRUCTION**  
**POT Sta. 11+80.00 (-L-)**

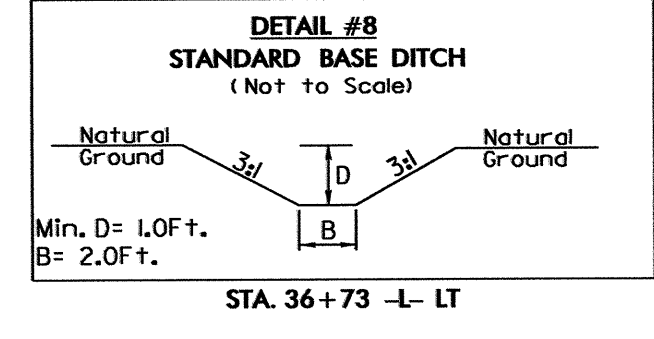




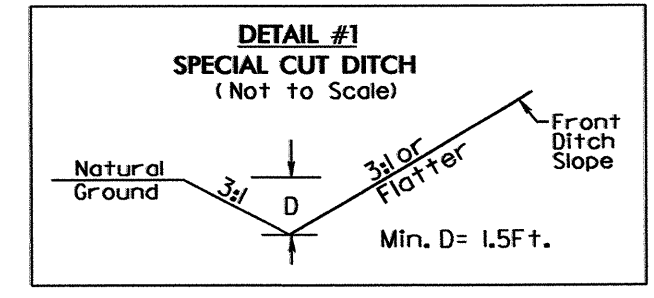
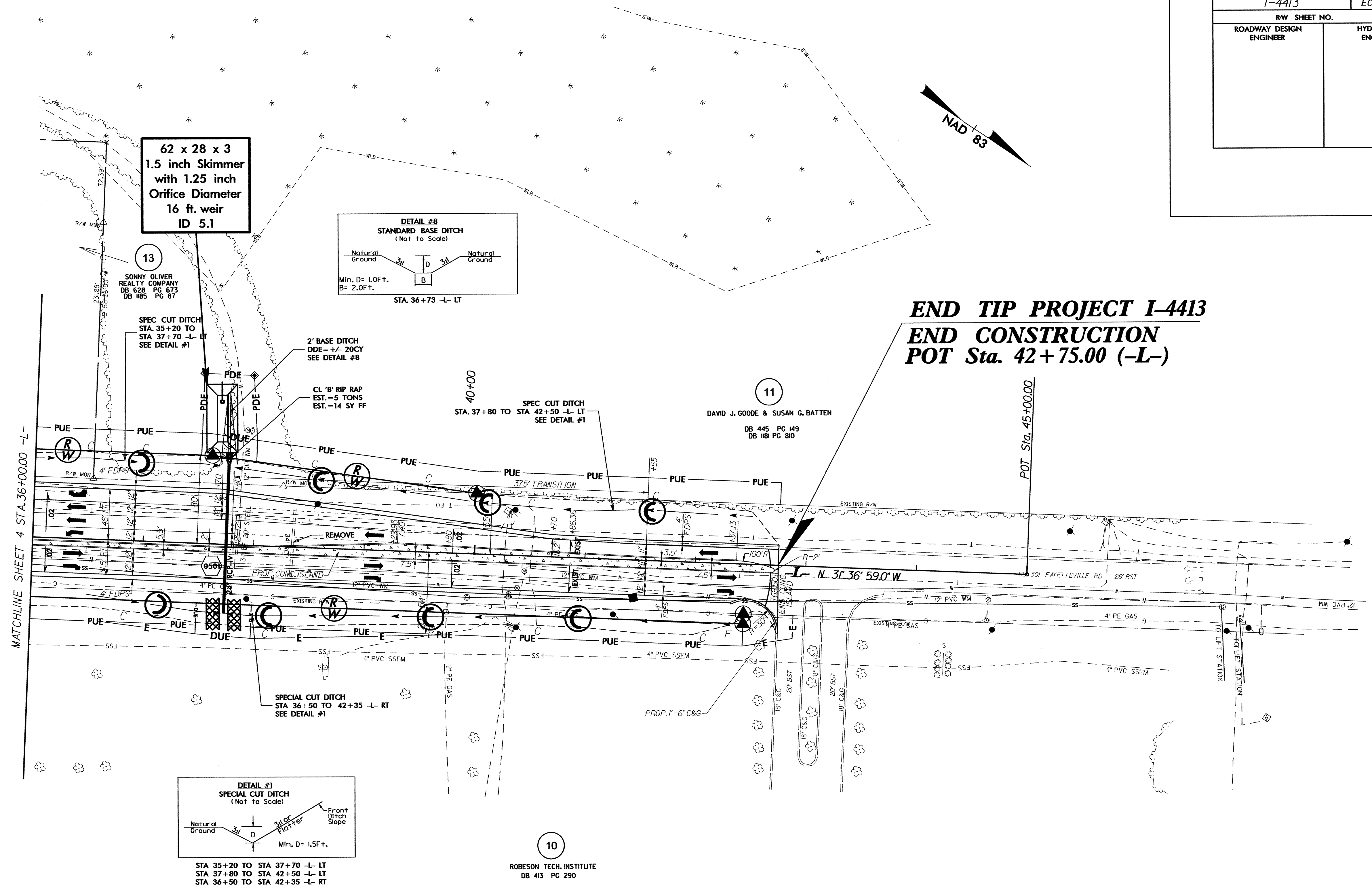
PROJECT REFERENCE NO.	SHEET NO.
1-4413	EC-II/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**62 x 28 x 3  
1.5 inch Skimmer  
with 1.25 inch  
Orifice Diameter  
16 ft. weir  
ID 5.1**



**END TIP PROJECT I-4413  
END CONSTRUCTION  
POT Sta. 42+75.00 (-L-)**



STA 35+20 TO STA 37+70 -L- LT  
STA 37+80 TO STA 42+50 -L- LT  
STA 36+50 TO STA 42+35 -L- RT

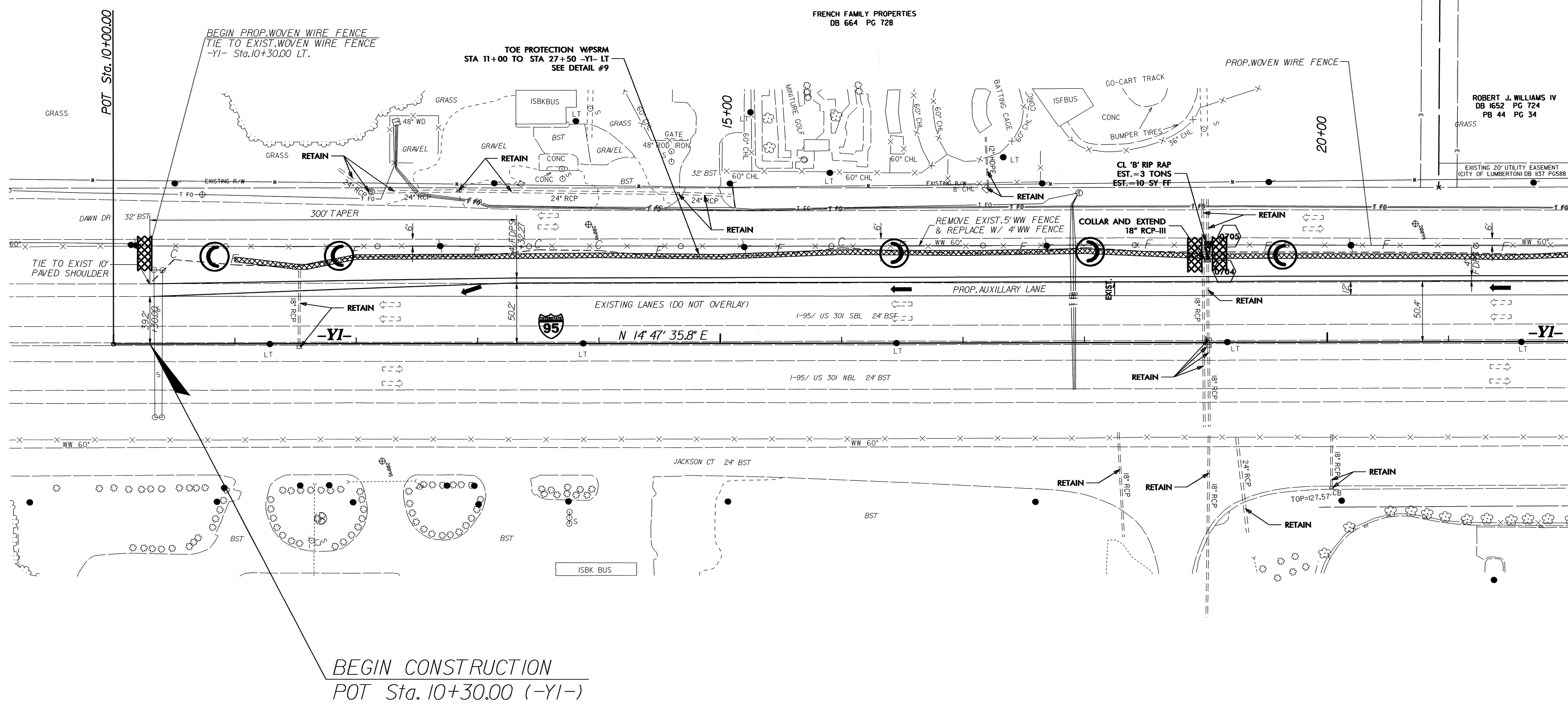
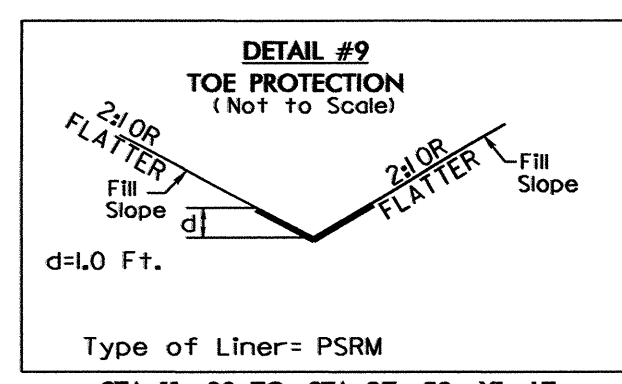
ROBESON TECH. INSTITUTE  
DB 413 PG 290

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
1-4413	EC-12/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCHLINE SHEET 7 STA. 22+00.00 - Y1-

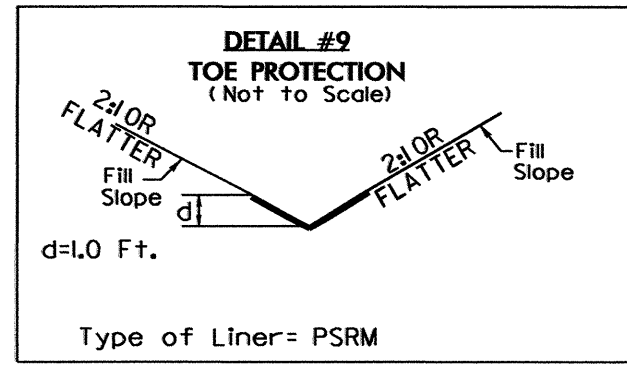
ROBERT J. WILLIAMS IV  
 DB 1652 PG 724  
 PB 44 PG 34

BEGIN CONSTRUCTION  
 POT Sta. 10+30.00 (-Y1-)

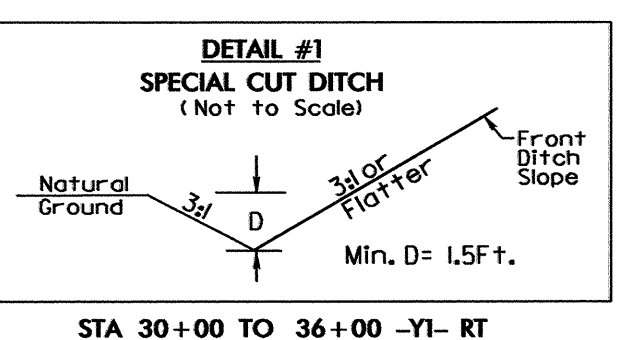
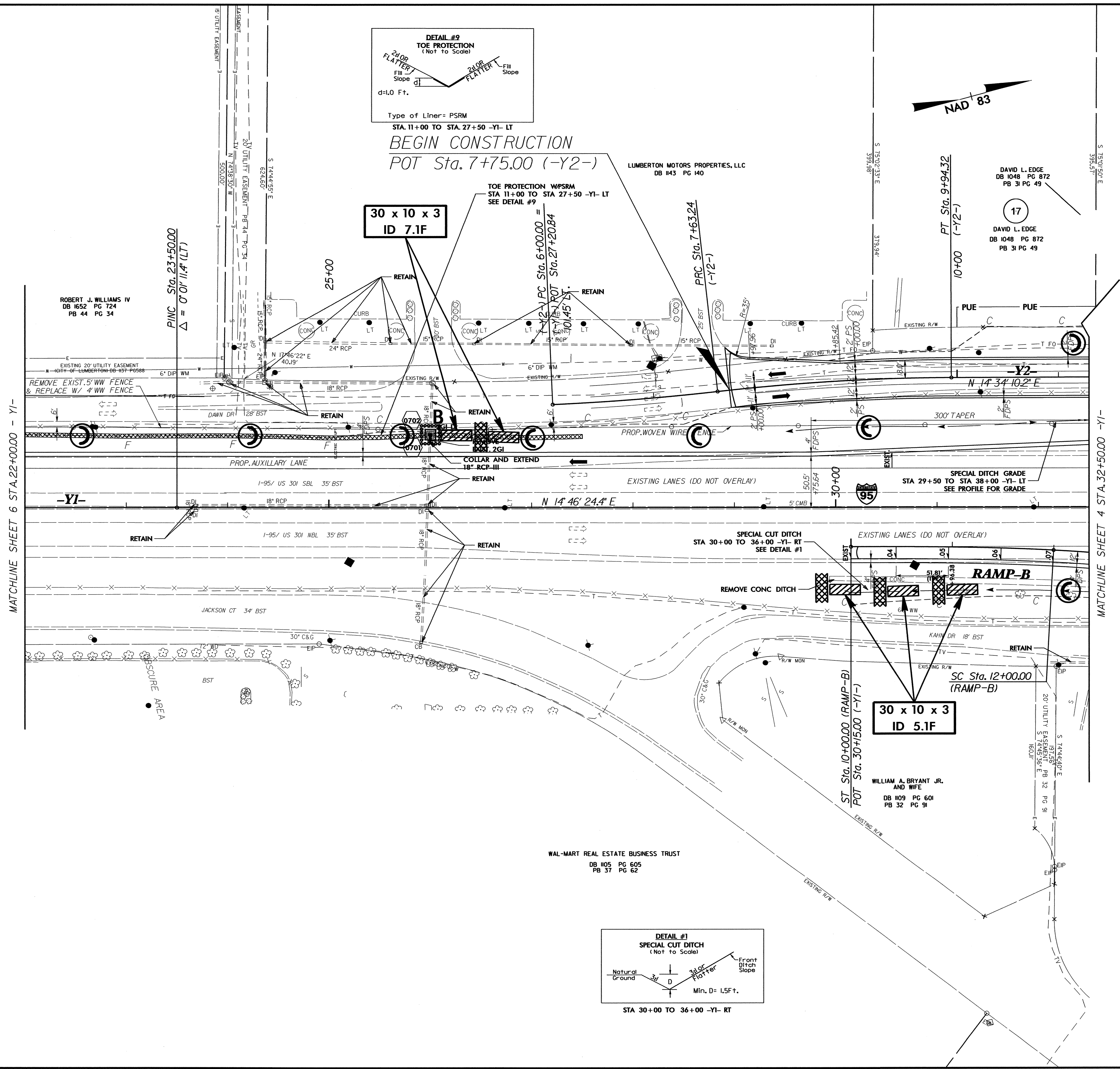
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PROJECT REFERENCE NO.		SHEET NO.	
1-4413		EC-13/CONST.7	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



STA. 11+00 TO STA. 27+50 -Y1- LT  
**BEGIN CONSTRUCTION**  
 POT Sta. 7+75.00 (-Y2-)



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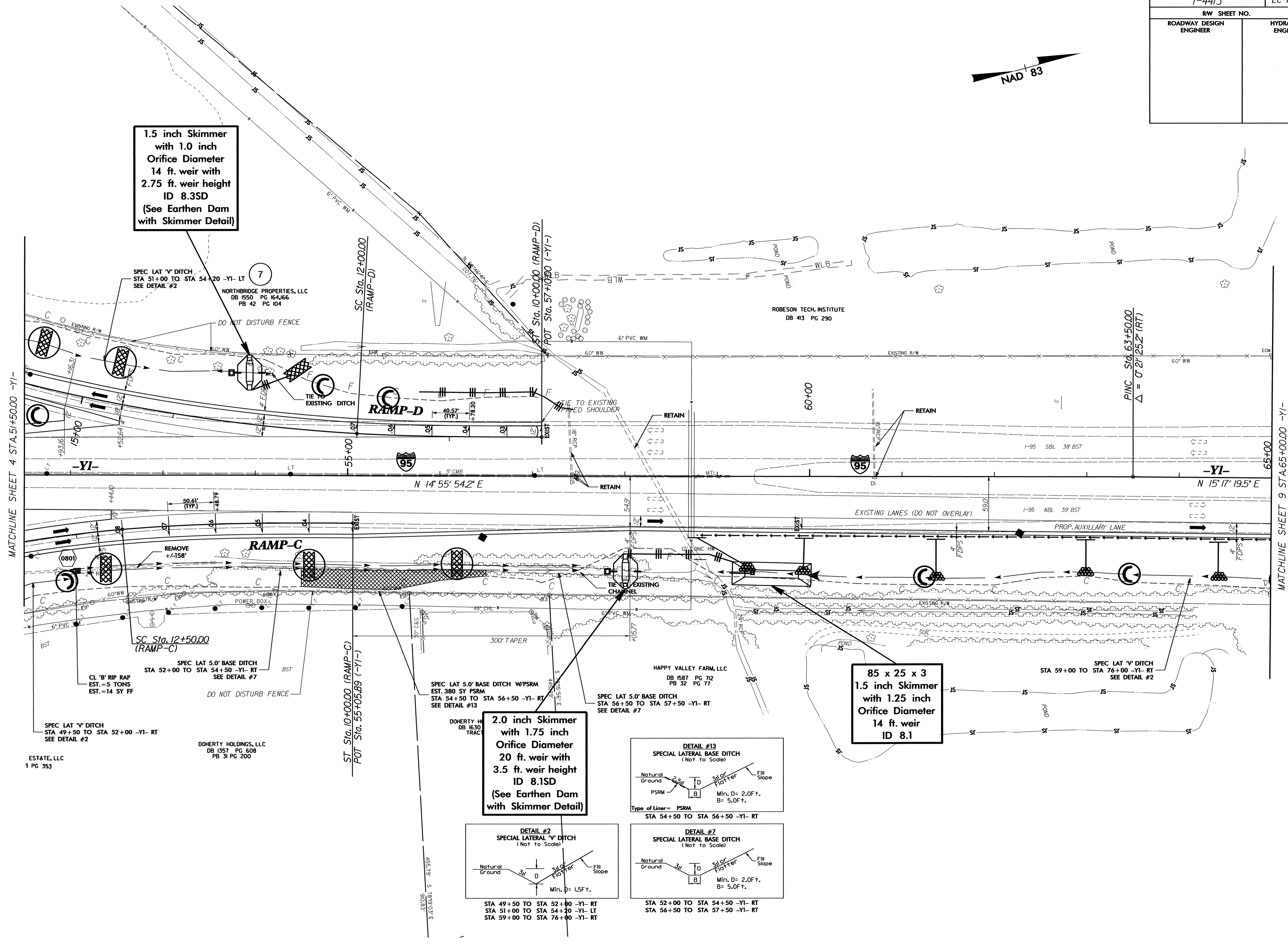
PROJECT REFERENCE NO. 1-4413	SHEET NO. EC-14/CONST.8
R/W SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**1.5 inch Skimmer  
with 1.0 inch  
Orifice Diameter  
14 ft. weir with  
2.75 ft. weir height  
ID 8.3SD  
(See Earthen Dam  
with Skimmer Detail)**

**85 x 25 x 3  
1.5 inch Skimmer  
with 1.25 inch  
Orifice Diameter  
14 ft. weir  
ID 8.1**

**2.0 inch Skimmer  
with 1.75 inch  
Orifice Diameter  
20 ft. weir with  
3.5 ft. weir height  
ID 8.1SD  
(See Earthen Dam  
with Skimmer Detail)**



MATCHLINE SHEET 4 STA. 51+50.00 -YI-

MATCHLINE SHEET 9 STA. 65+00.00 -YI-

ESTATE, LLC  
3 PG 353

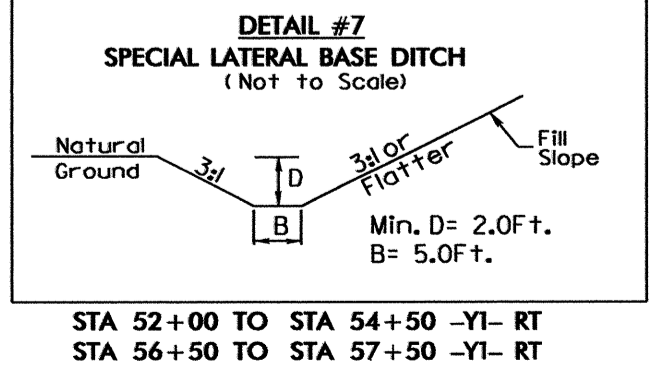
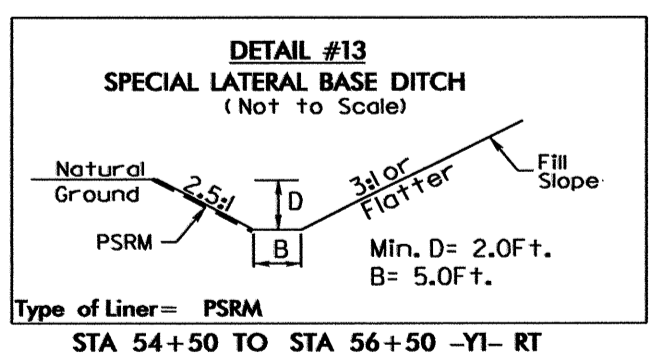
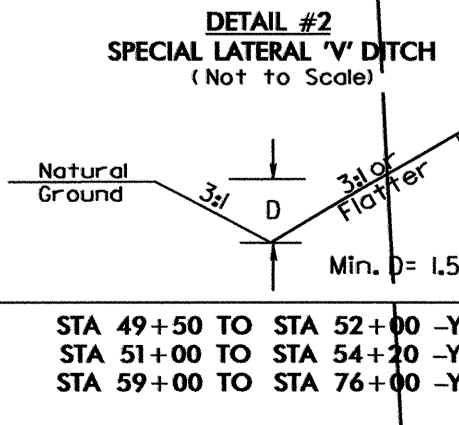
DOHERTY HOLDINGS, LLC  
DB 1357 PG 608  
PB 31 PG 200

DOHERTY H  
DB 1630  
TRAC

HAPPY VALLEY FARM, LLC  
DB 1587 PG 712  
PB 32 PG 77

NORTHBRIDGE PROPERTIES, LLC  
DB 1550 PG 164,166  
PB 42 PG 104

ROBESON TECH. INSTITUTE  
DB 413 PG 290

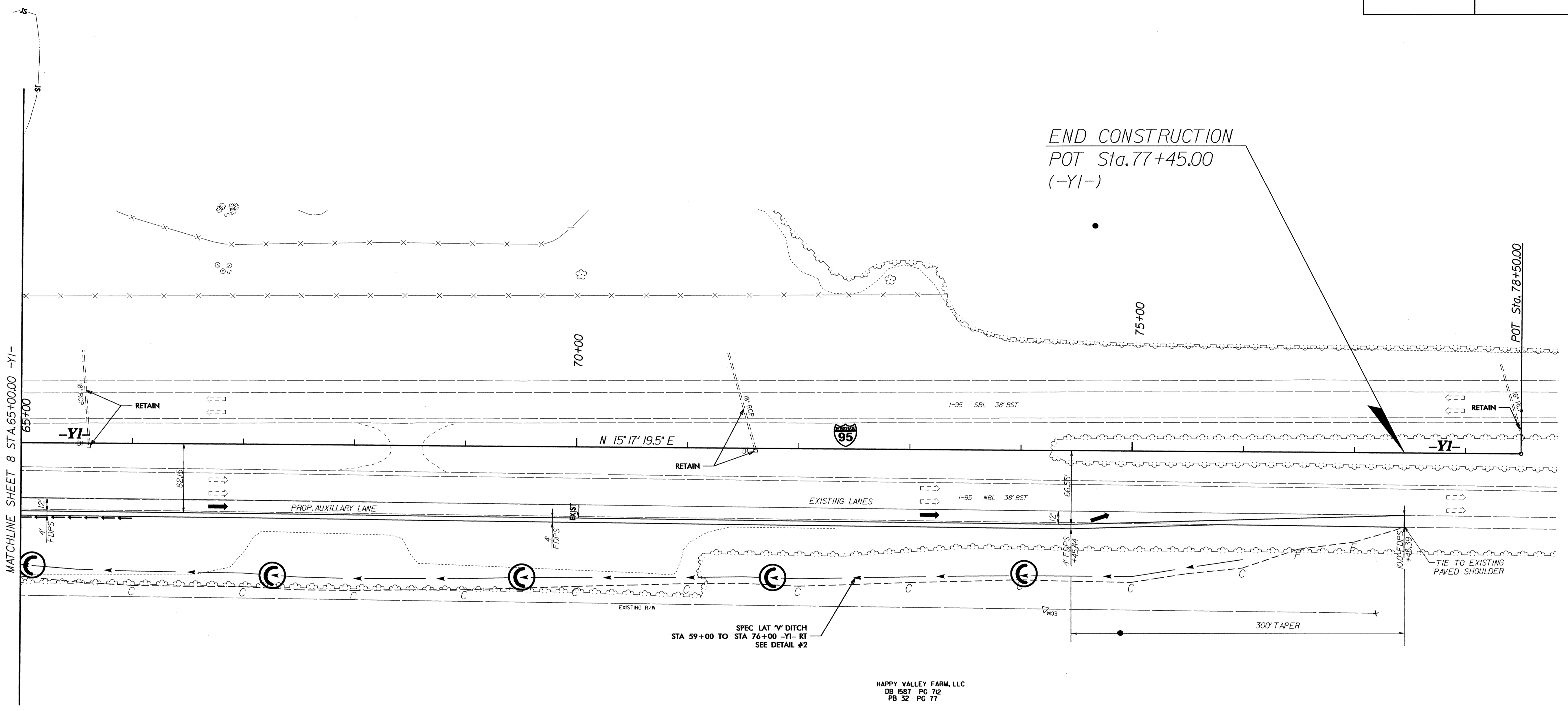


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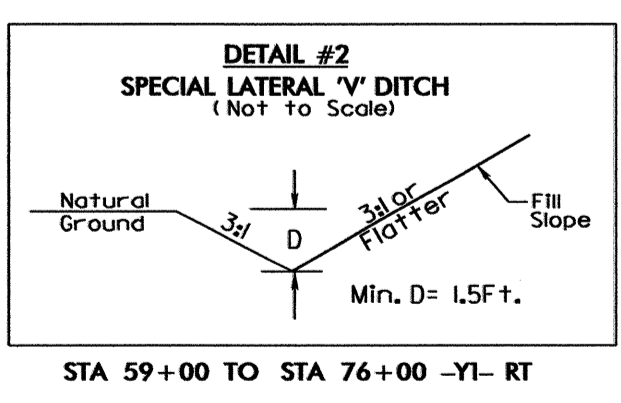


PROJECT REFERENCE NO.	SHEET NO.
1-4413	EC-15/CONST.9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99  
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HAPPY VALLEY FARM, LLC  
 DB 1587 PG 712  
 PB 32 PG 77



STA 59+00 TO STA 76+00 -Y1- RT