

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4703	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

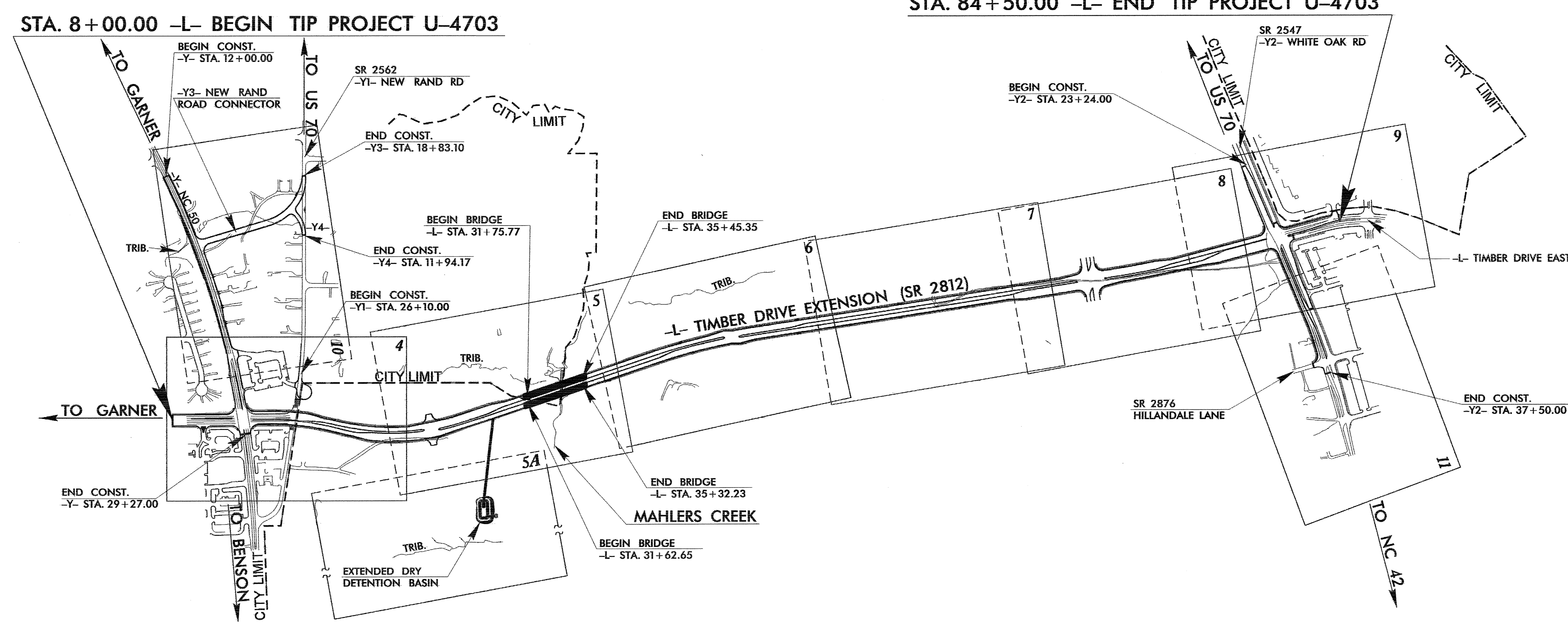
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 PLAN FOR PROPOSED
 HIGHWAY EROSION CONTROL
WAKE COUNTY

**LOCATION: TIMBER DRIVE EAST EXTENSION (SR 2812)
 FROM NC 50 TO WHITE OAK ROAD (SR 2547) IN GARNER**
**TYPE OF WORK: GRADING, DRAINAGE, WIDENING, PAVING, CURB & GUTTER,
 STRUCTURES, AND SIGNALS**

EROSION AND SEDIMENT CONTROL MEASURES

Sta. #	Description	Symbol
1630.03	Temporary Silt Ditch	---
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	--->
	Silt Basin Type B	▨
1633.01	Temporary Rock Silt Check Type-A	▩
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	▩
	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	▭

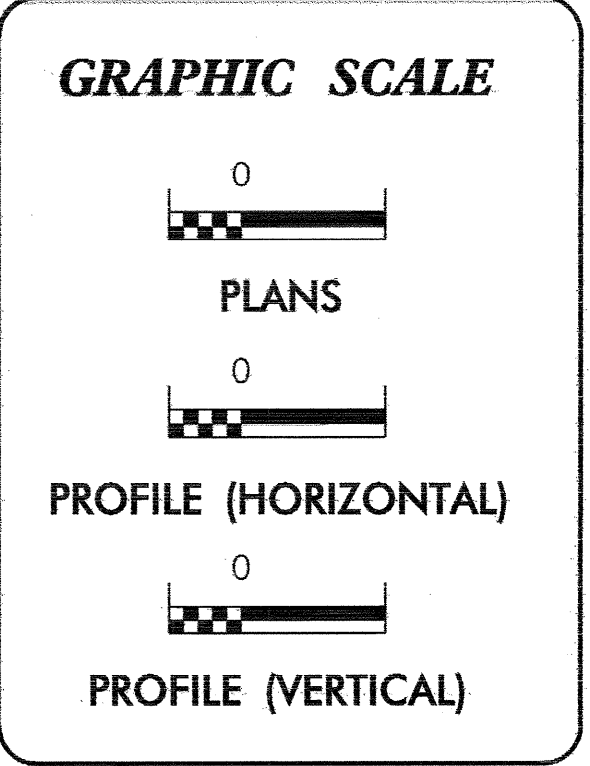
TIP PROJECT: U-4703



**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.*



ROADSIDE ENVIRONMENTAL UNIT
 DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

Prepared in the Office of:
ROADSIDE ENVIRONMENTAL UNIT
 1 South Wilmington St.
 Raleigh, NC 27611
2006 STANDARD SPECIFICATIONS

Roadway Standard Drawings

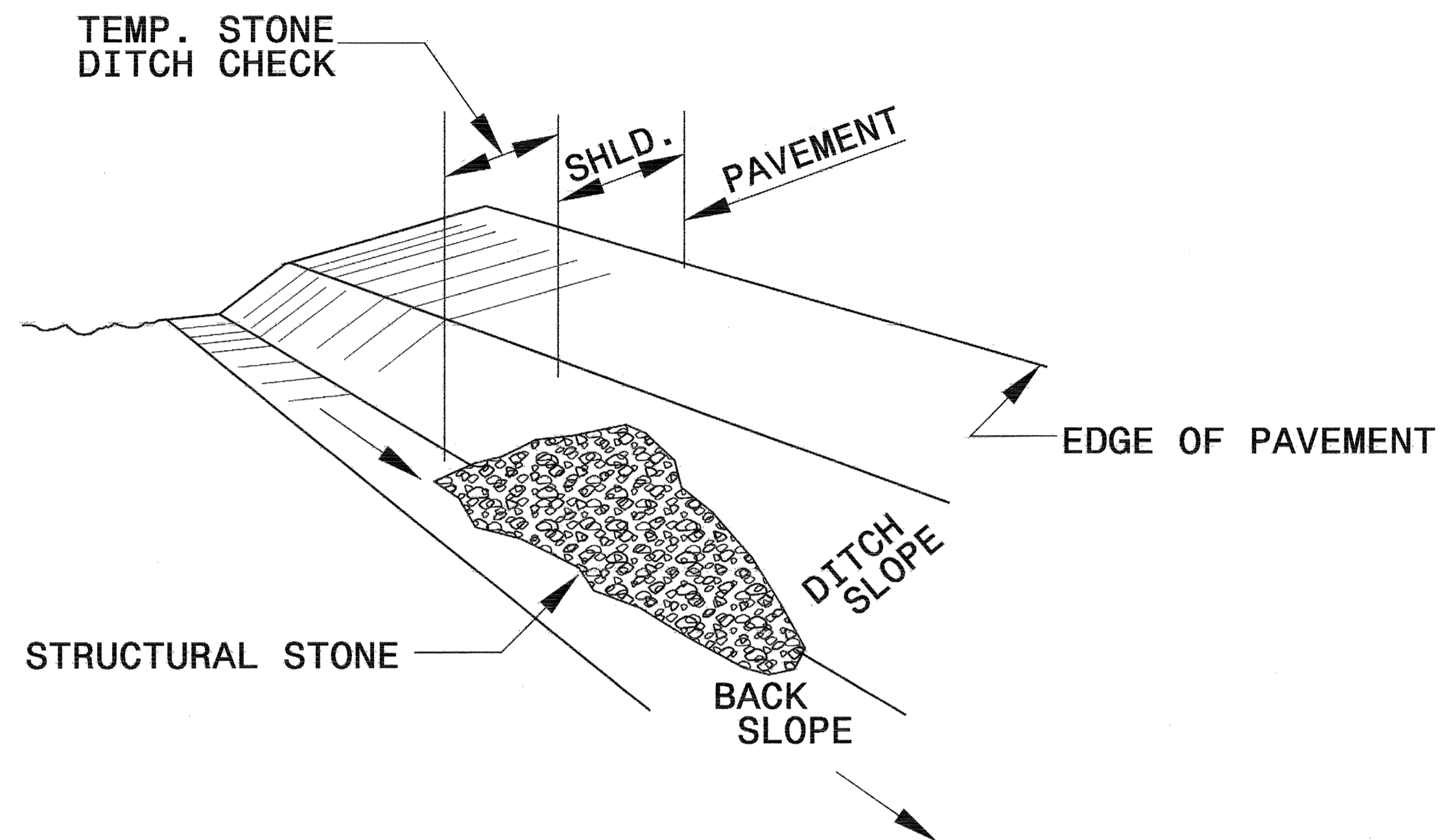
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01 Temporary Silt Fence	1632.01 Rock Inlet Sediment Trap Type A
1606.01 Special Sediment Control Fence	1632.02 Rock Inlet Sediment Trap Type B
1607.01 Gravel Construction Entrance	1632.03 Rock Inlet Sediment Trap Type C
1622.01 Temporary Berms and Slope Drains	1633.01 Temporary Rock Silt Check Type A
1630.03 Temporary Silt Ditch	1634.02 Temporary Rock Sediment Dam Type B
1630.05 Temporary Diversion	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.06 Special Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B

P:\27-JAN-2006\0441\mtd\enviro\06mtd\ER\272930\U-4703_EC_tsh.dgn

PROJECT REFERENCE NO. U-4703	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

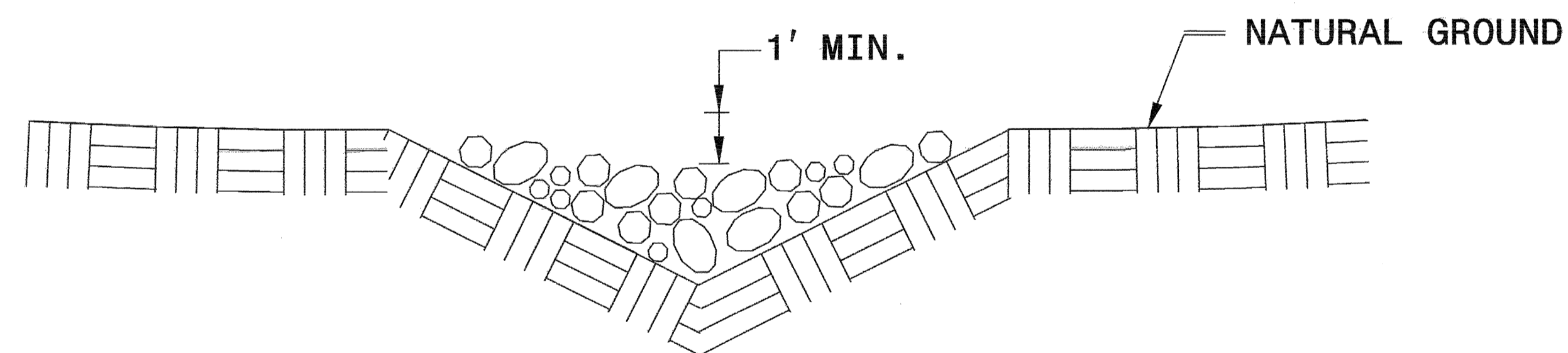


ISOMETRIC VIEW

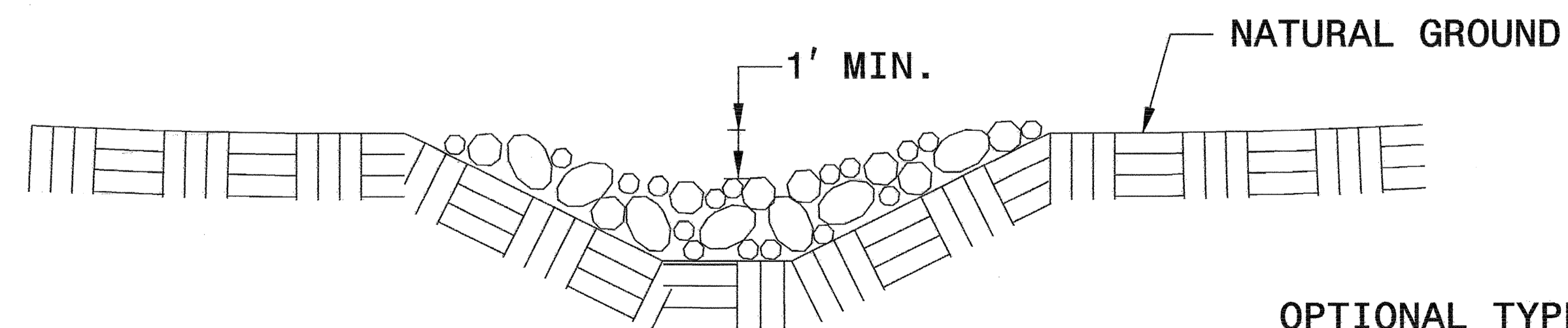
NOTES:

USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

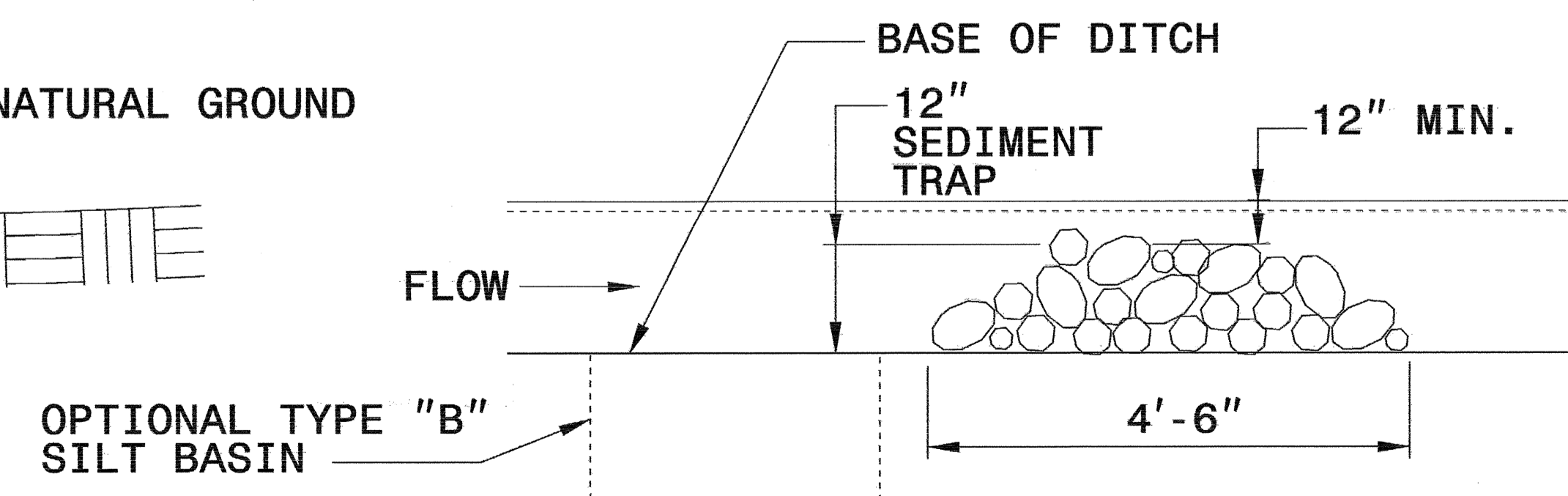
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



CROSS SECTION VEE DITCH



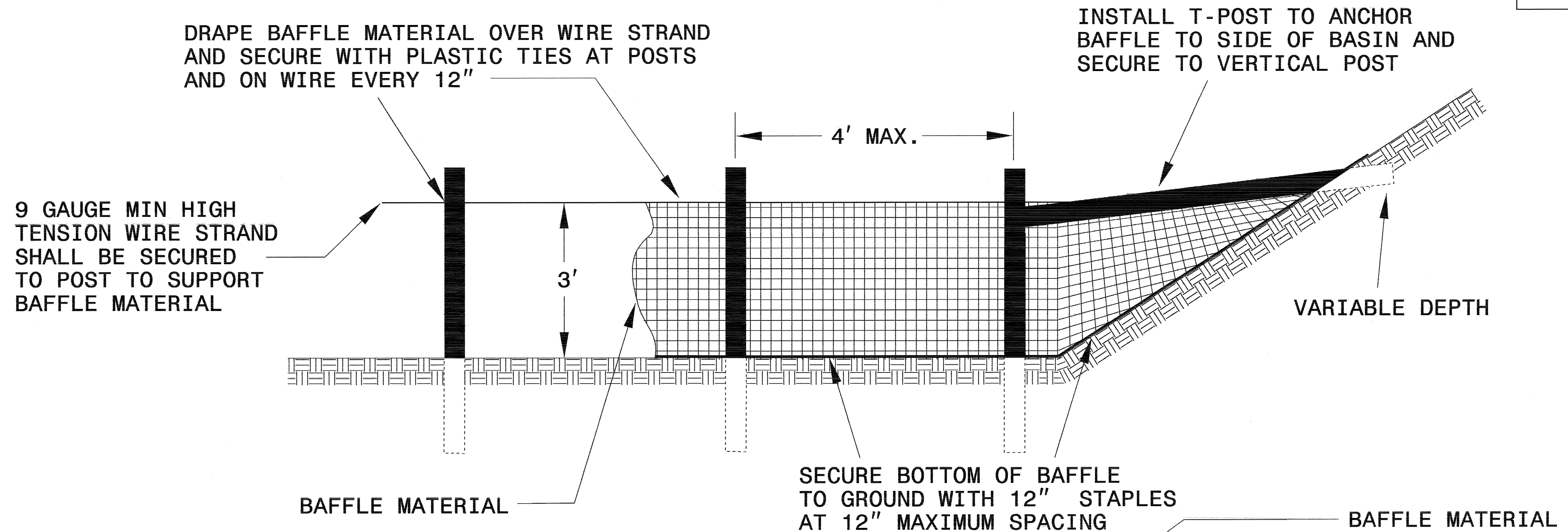
CROSS SECTION TRAPEZOIDAL DITCH



ELEVATION VIEW

PROJECT REFERENCE NO. U-4703	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL

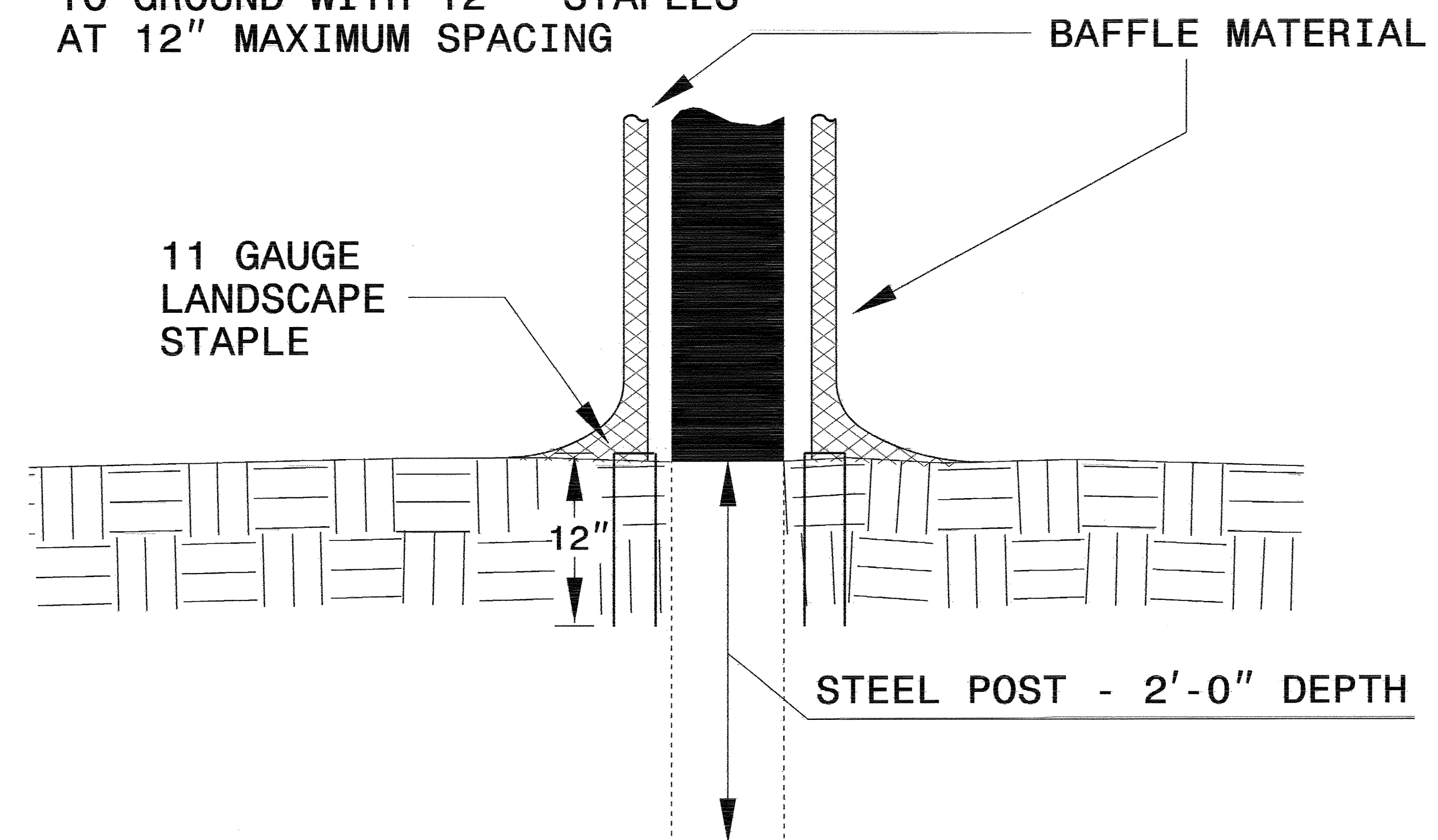


NOTES:

1. INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF $\frac{1}{4}$ THE BASIN LENGTH.

2. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF $\frac{1}{3}$ THE BASIN LENGTH.

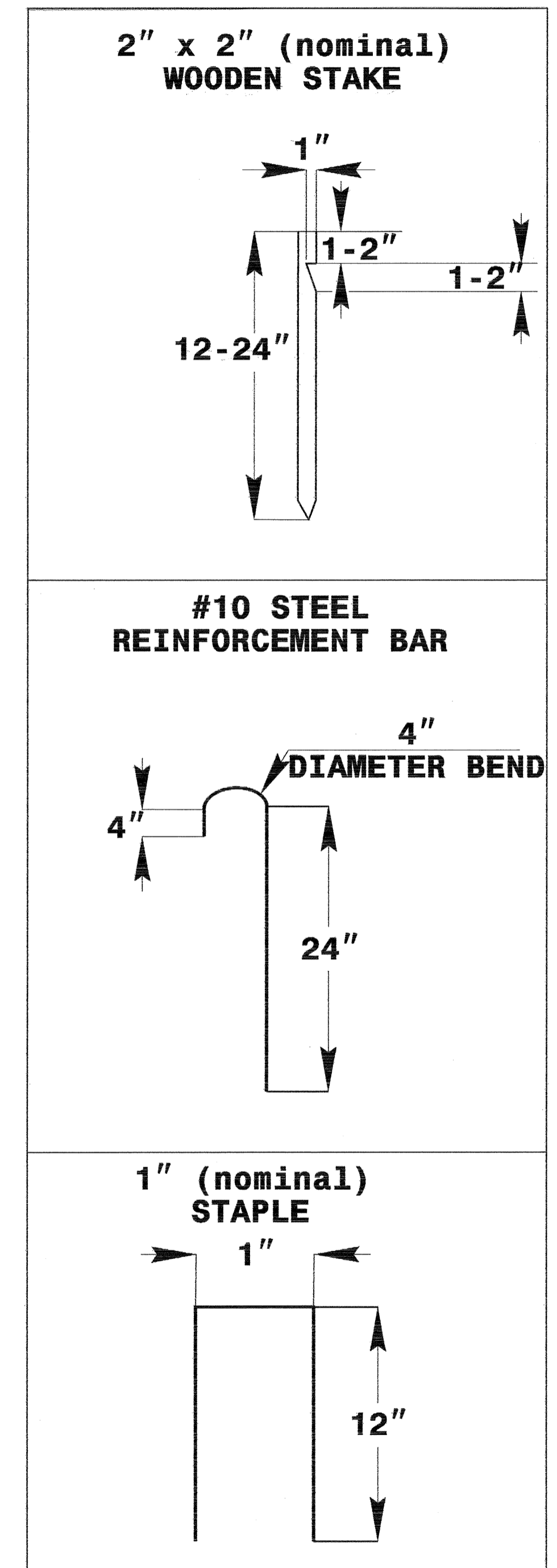
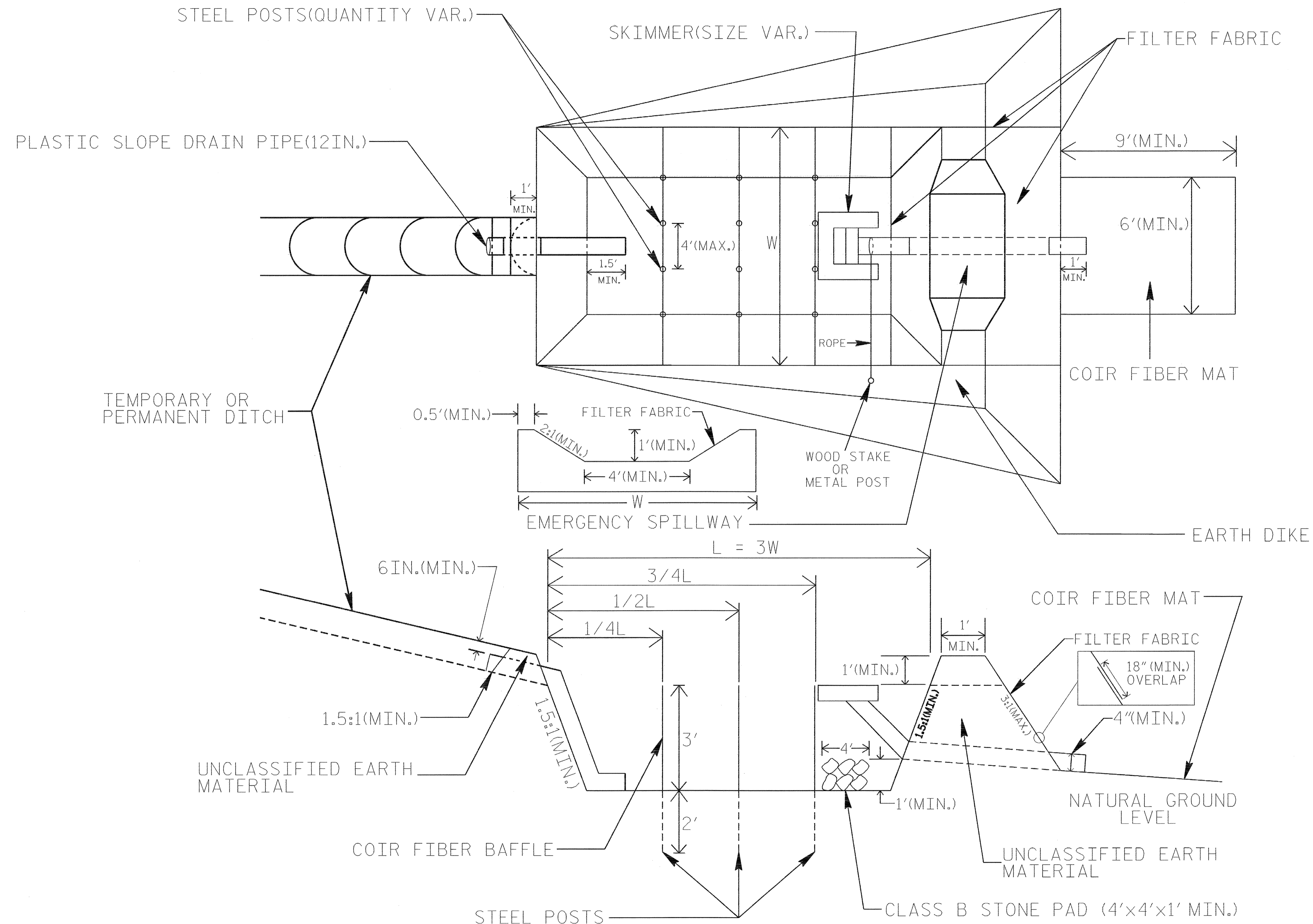
3. TOP HEIGHT OF COIR FIBER BAFFLES SHALL NOT BE BELOW BASE OF EMERGENCY SPILLWAY ELEVATION.



BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12" LANDSCAPE STAPLES

SKIMMER BASIN WITH BAFFLES DETAIL

PROJECT REFERENCE NO. U-4703	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



COIR FIBER MAT ANCHOR OPTIONS

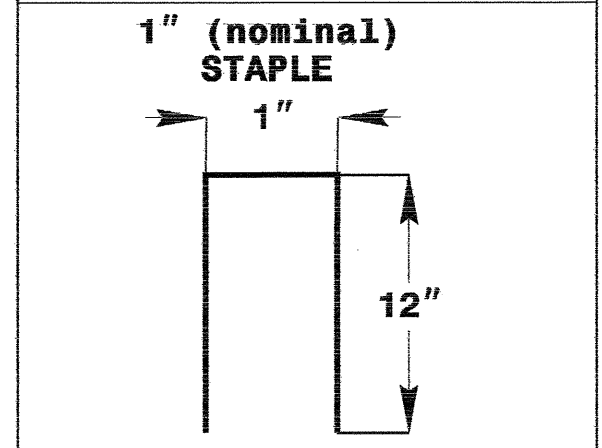
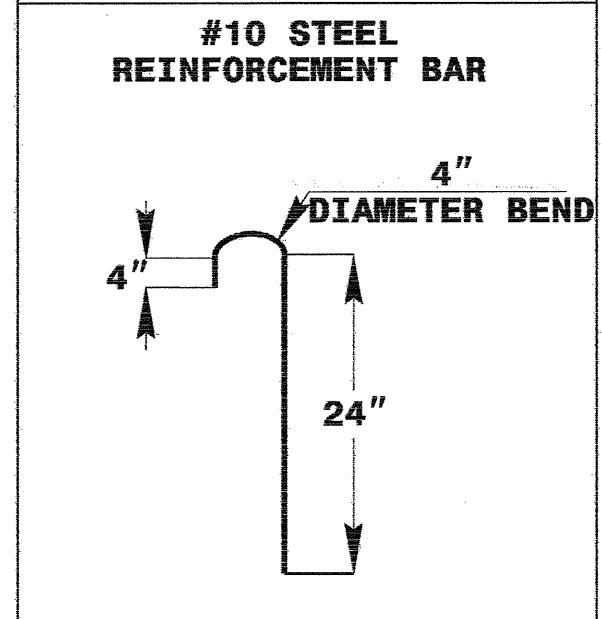
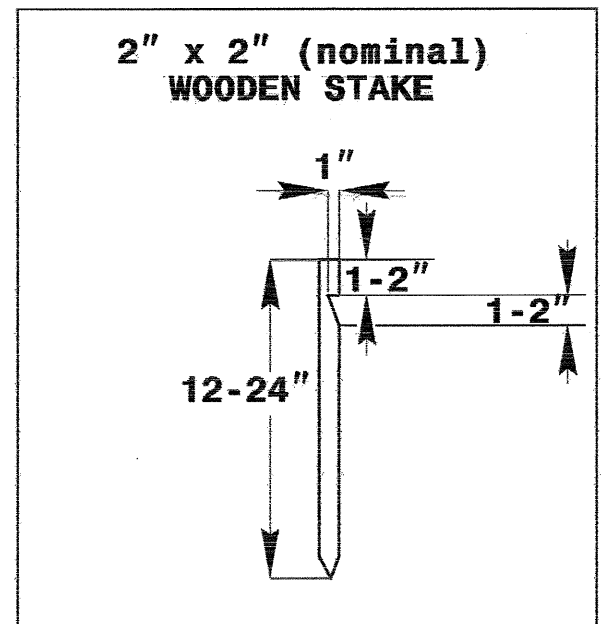
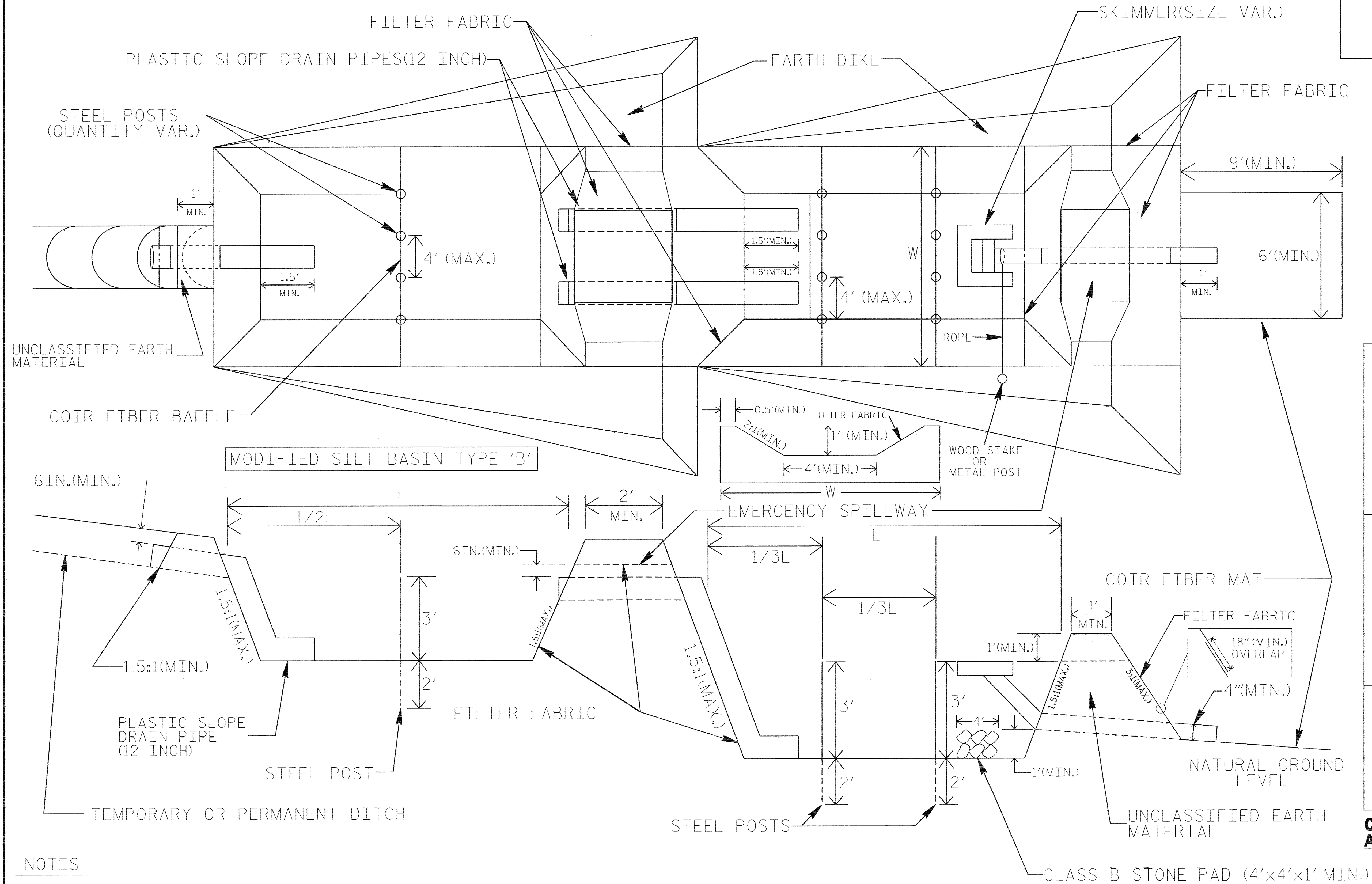
NOTES

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 FILTER FABRIC AS DIRECTED.
6. FILTER FABRIC FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18" (MIN.) AS SHOWN.

NOT TO SCALE

TIERED SKIMMER BASIN DETAIL

PROJECT REFERENCE NO. U-4703	SHEET NO. EC-2C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



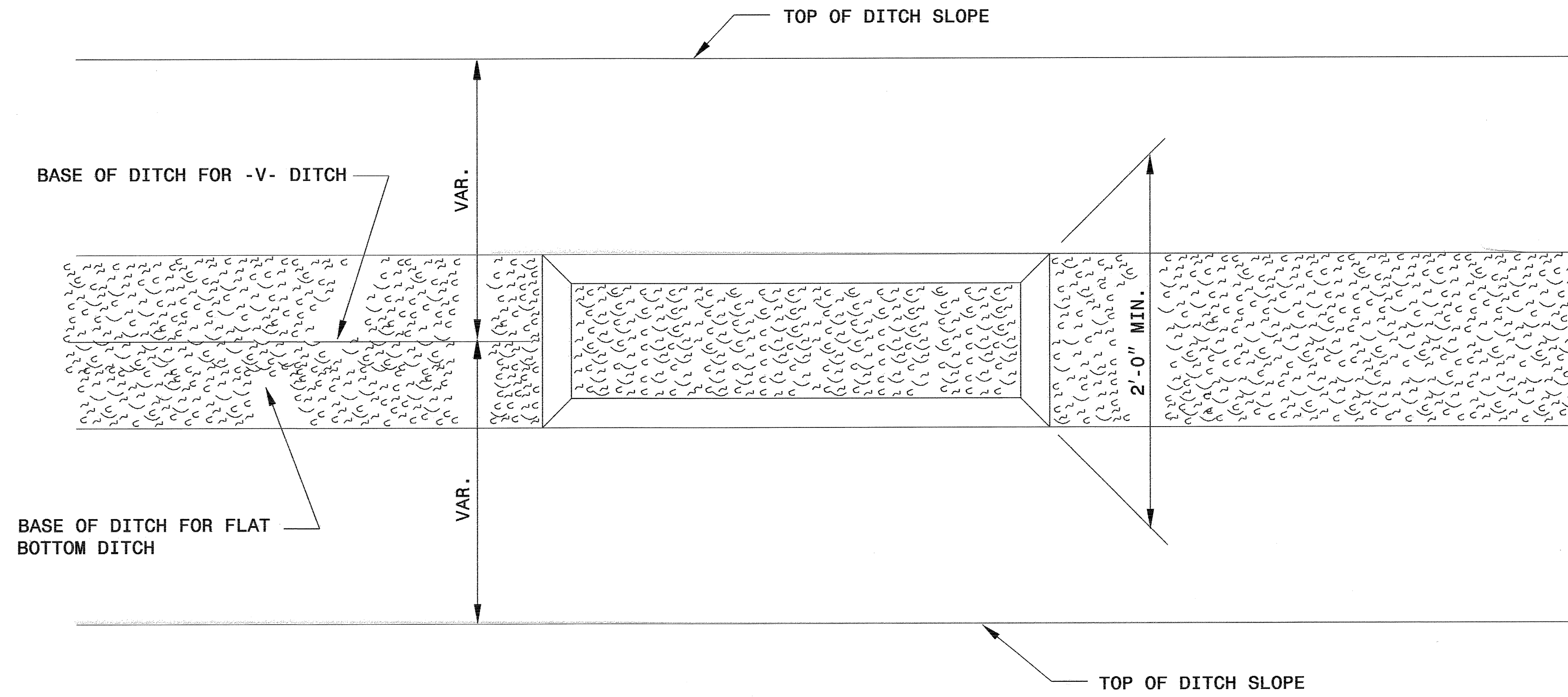
COIR FIBER MAT ANCHOR OPTIONS

- NOTES**
1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES OF BASINS.
 2. LIMIT HEIGHT OF EARTH DIKES TO 5 FT.
 3. ADDITIONAL MODIFIED SILT BASINS TYPE 'B' MAY BE NEEDED DEPENDING ON SLOPE.
 4. FOR BASIN DEPTHS OF 3FT., THE MINIMUM BASIN WIDTHS SHALL BE 9 FT.
 5. DETERMINE EMERGENCY SPILLWAY LENGTHS (FT.) USING $Q/0.8$, WHERE Q IS FLOW RATE (CFS) INTO UPPER BASIN.
 6. FILTER FABRIC FOR EMERGENCY SPILLWAYS SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18" (MIN.) AS SHOWN.

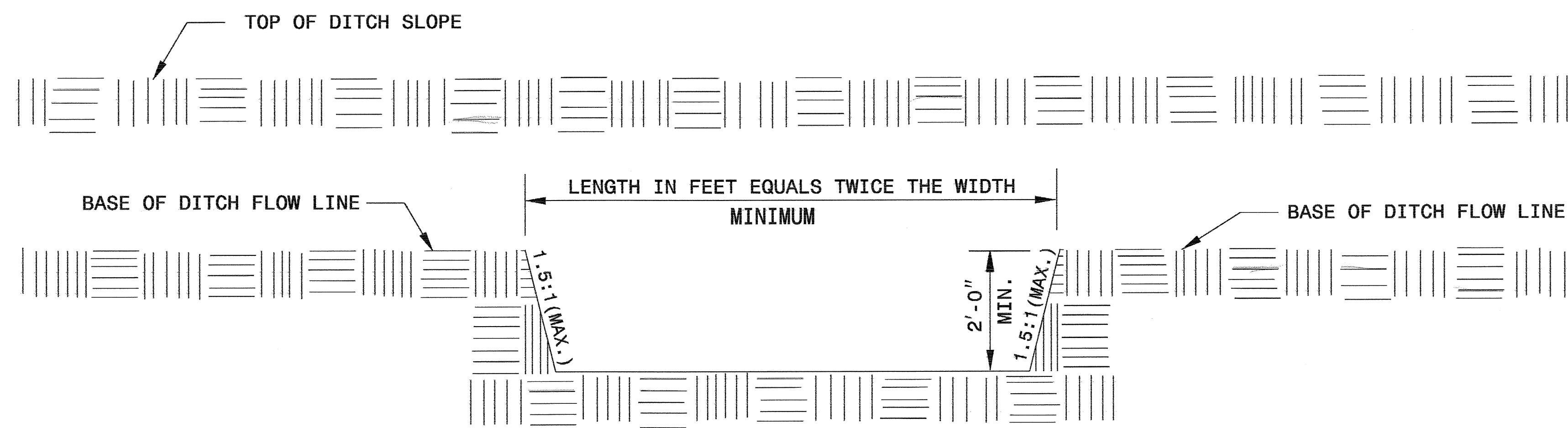
NOT TO SCALE

PROJECT REFERENCE NO. U-4703	SHEET NO. EC-2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT BASIN 'B' DETAIL



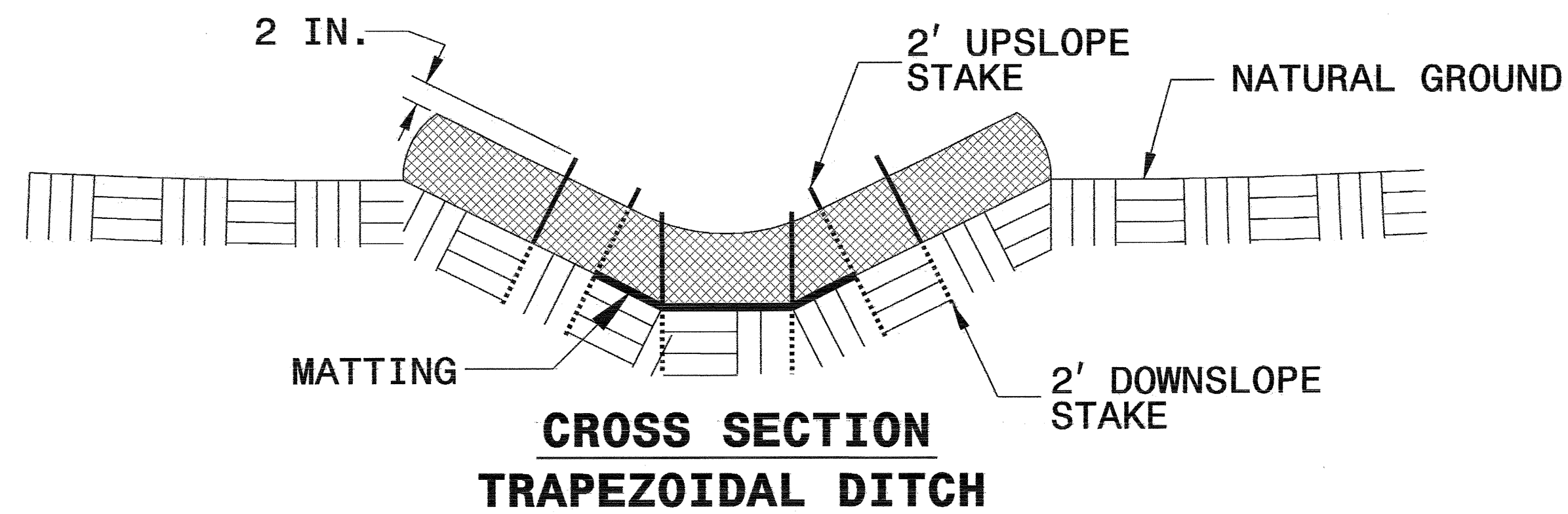
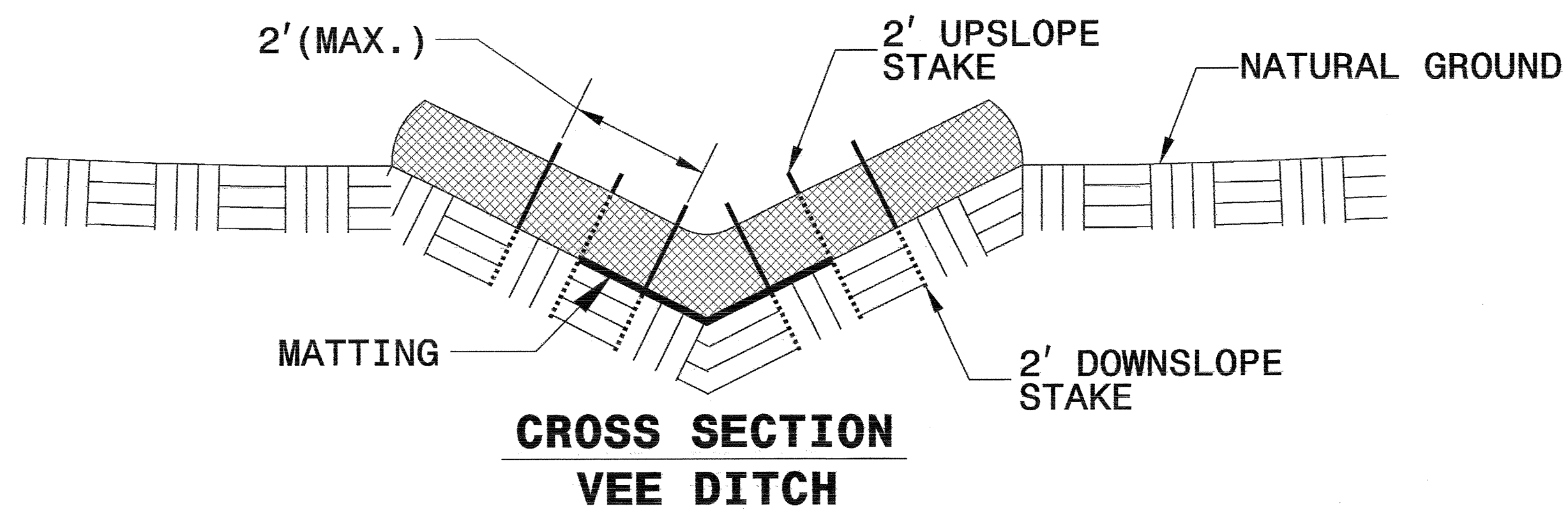
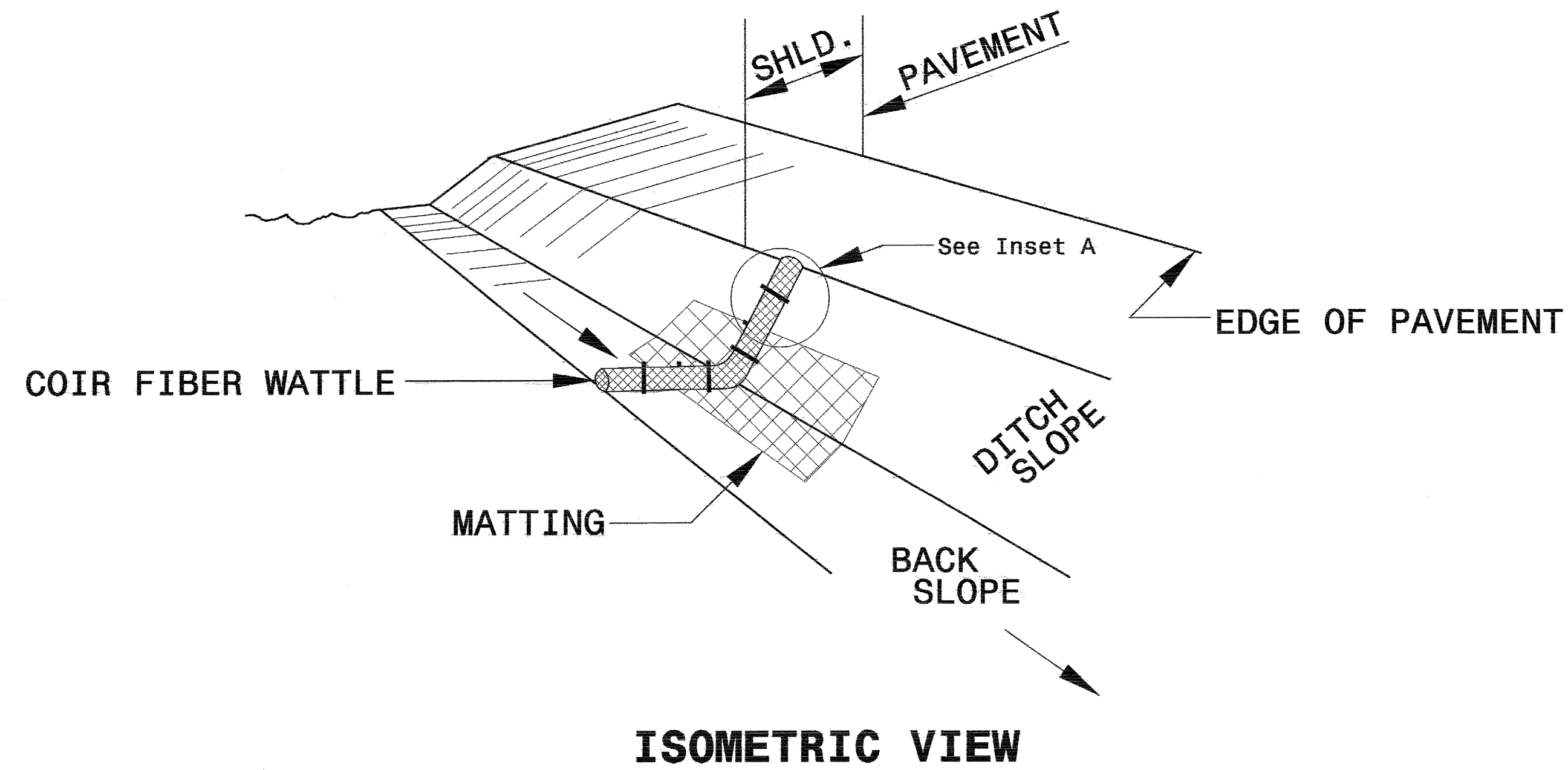
PLAN



ELEVATION

PROJECT REFERENCE NO. U-4703	SHEET NO. EC-2E
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE 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.

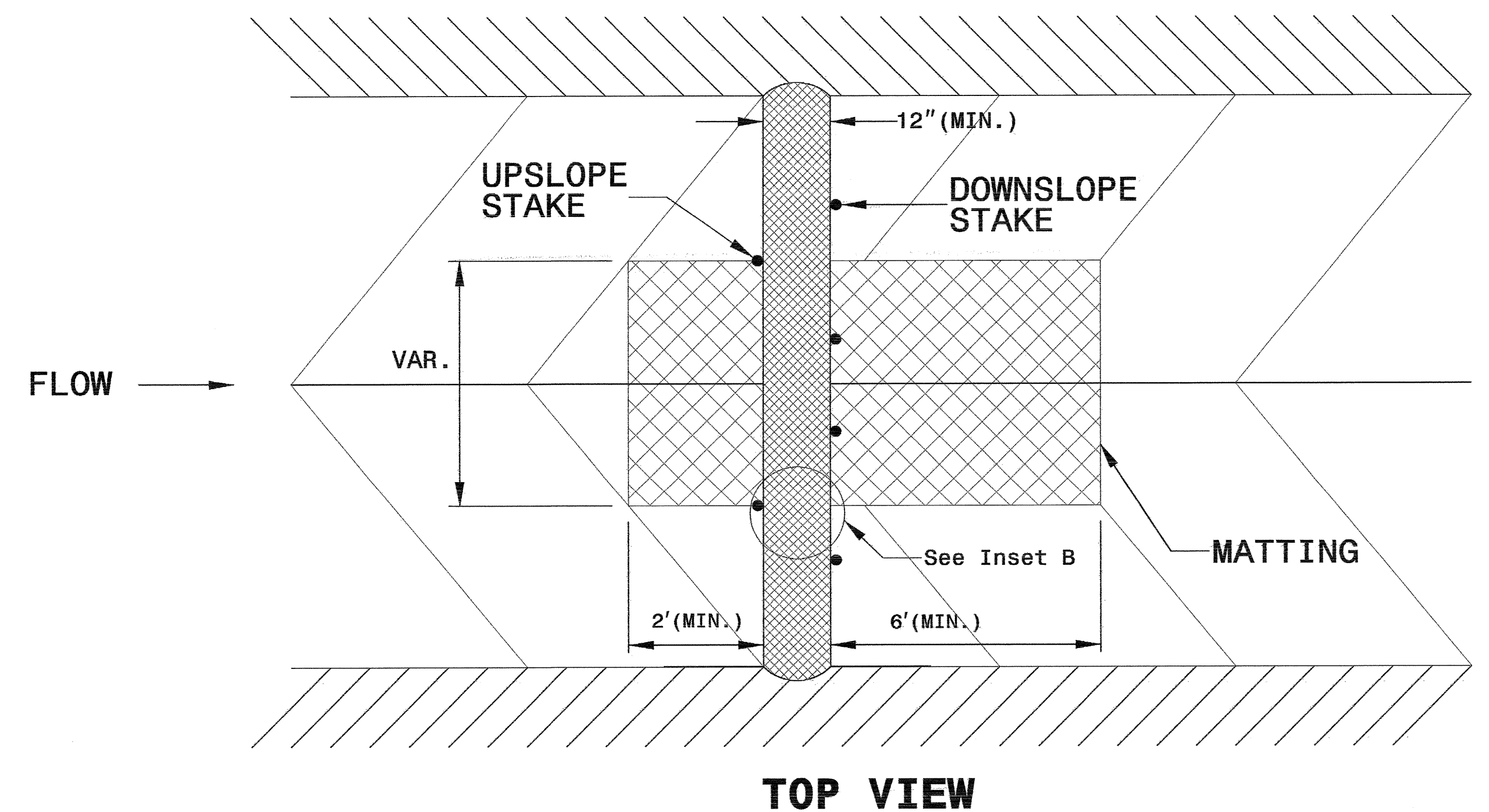
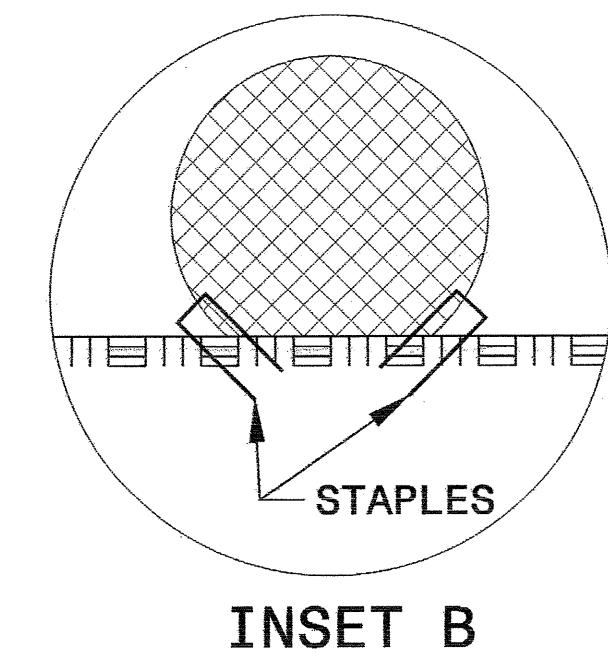
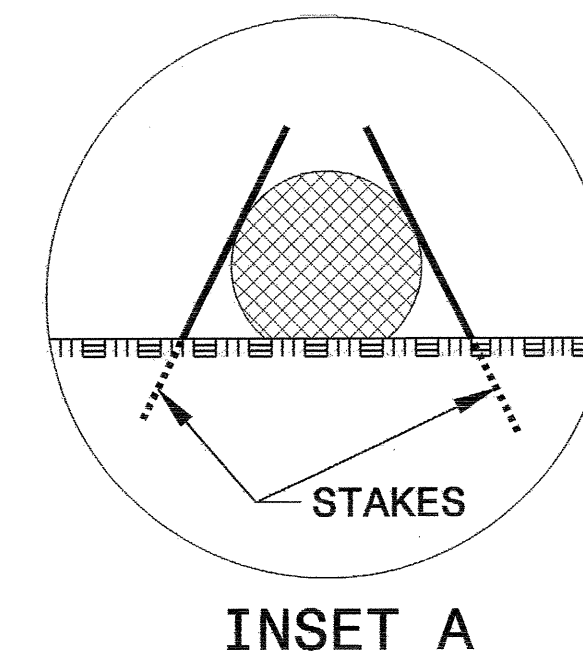
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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.

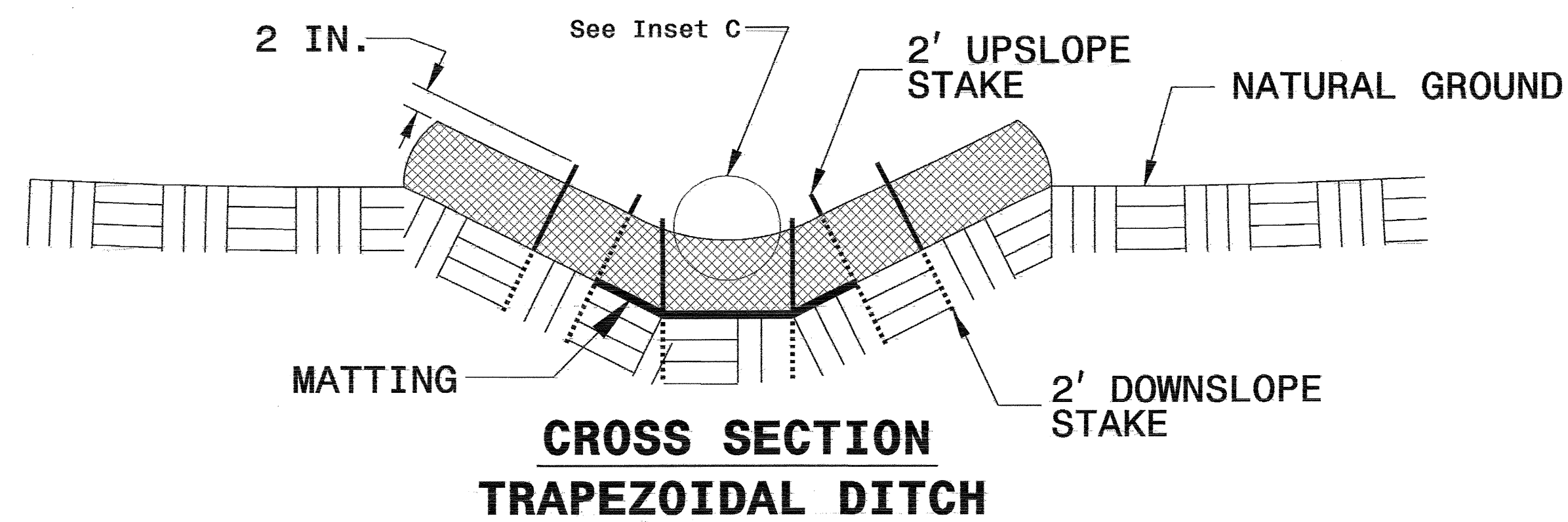
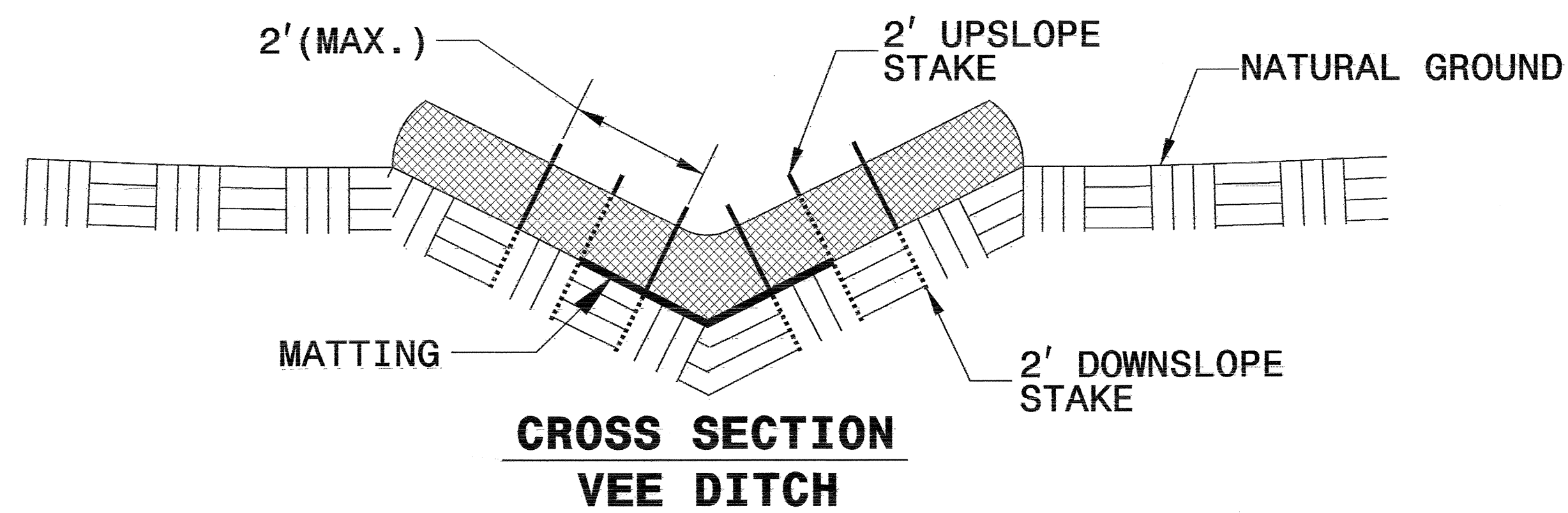
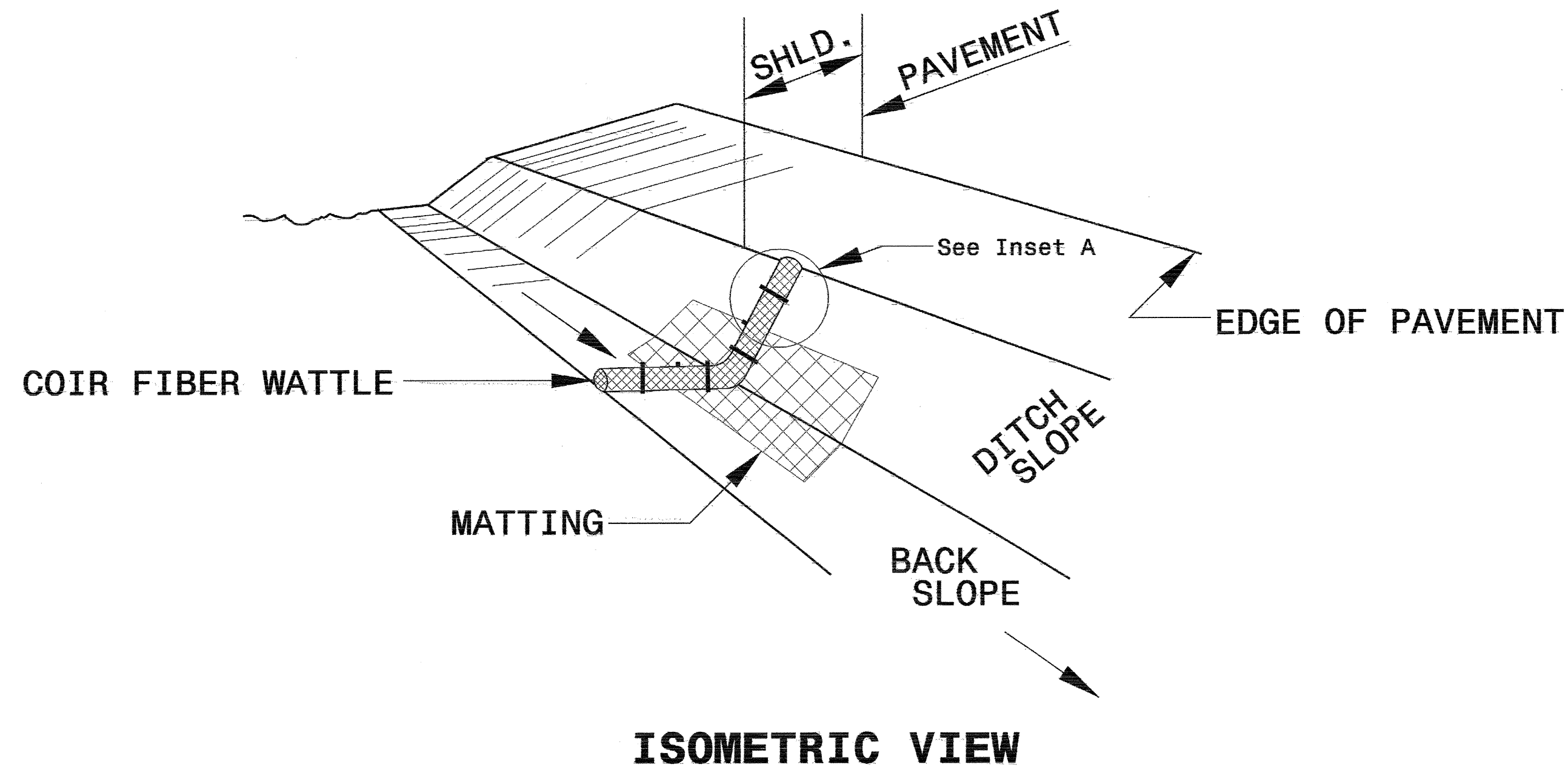
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

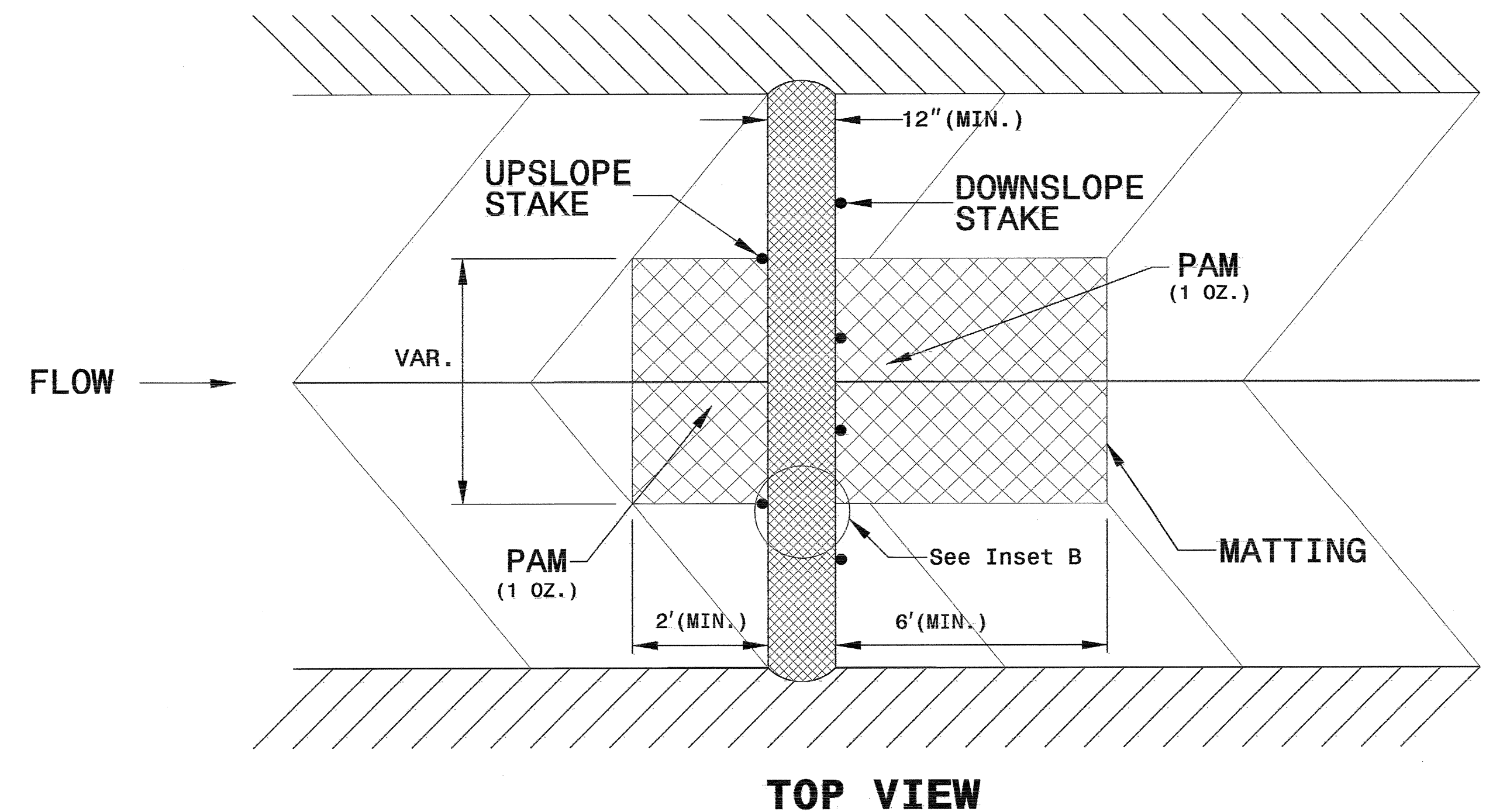
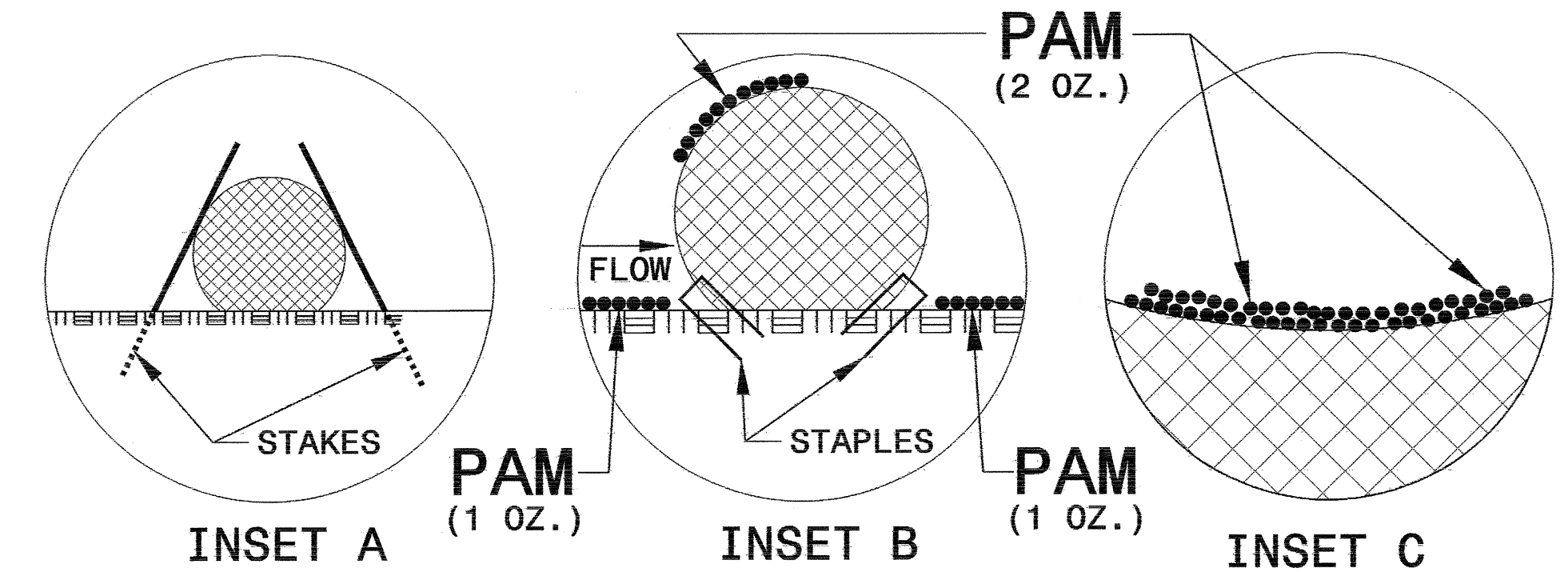


PROJECT REFERENCE NO. U-4703	SHEET NO. EC-2F
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

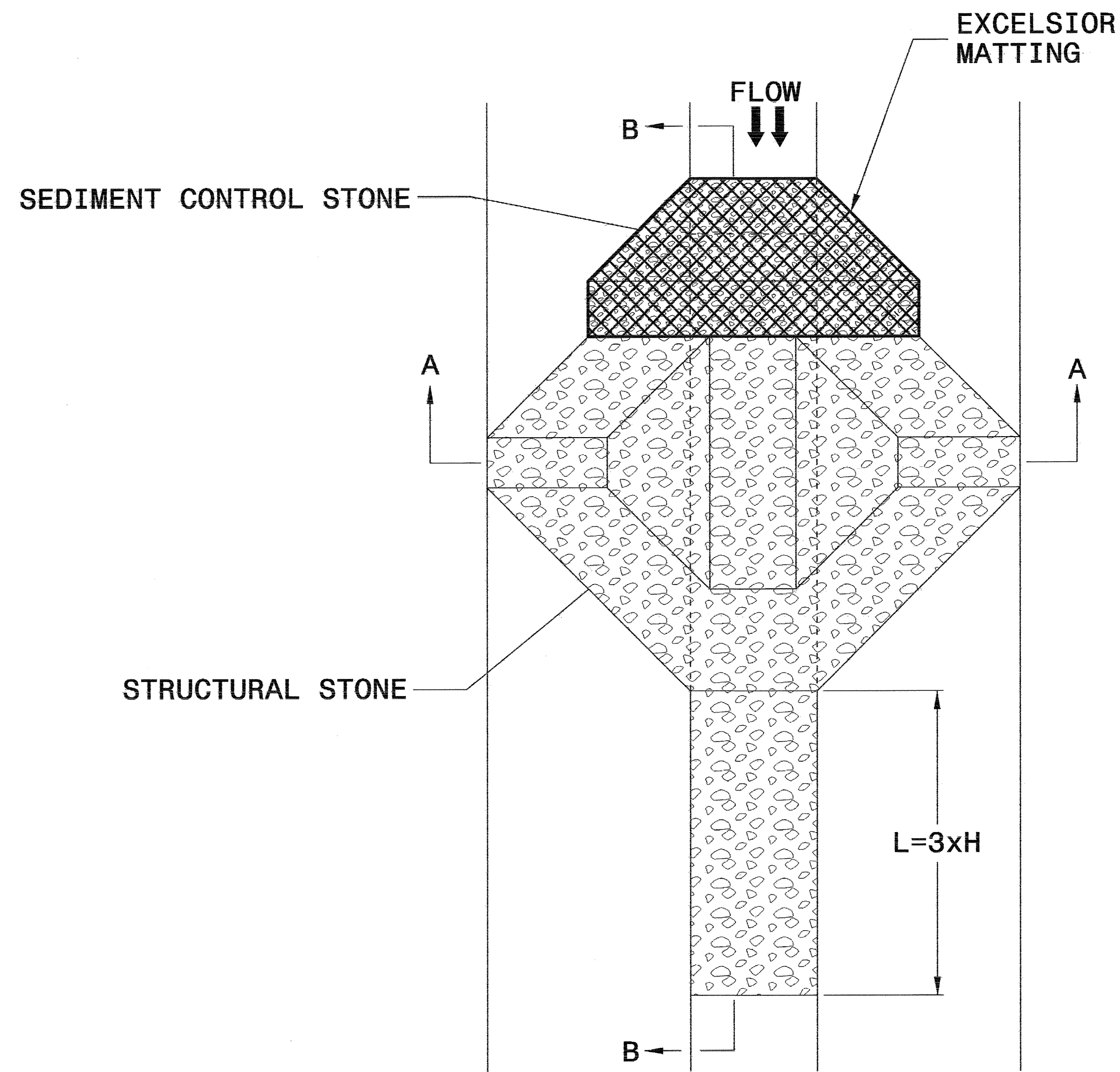


- NOTES:
- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
 - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
 - INSTALL A MINIMUM OF 2 UPSLOPE 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.



PROJECT REFERENCE NO. U-4703	SHEET NO. EC-20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



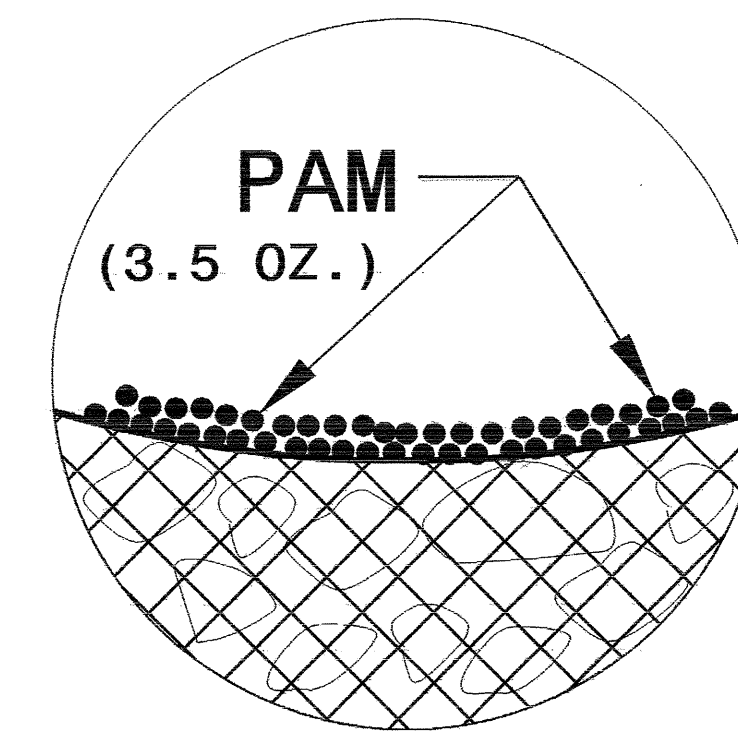
PLAN

NOTES

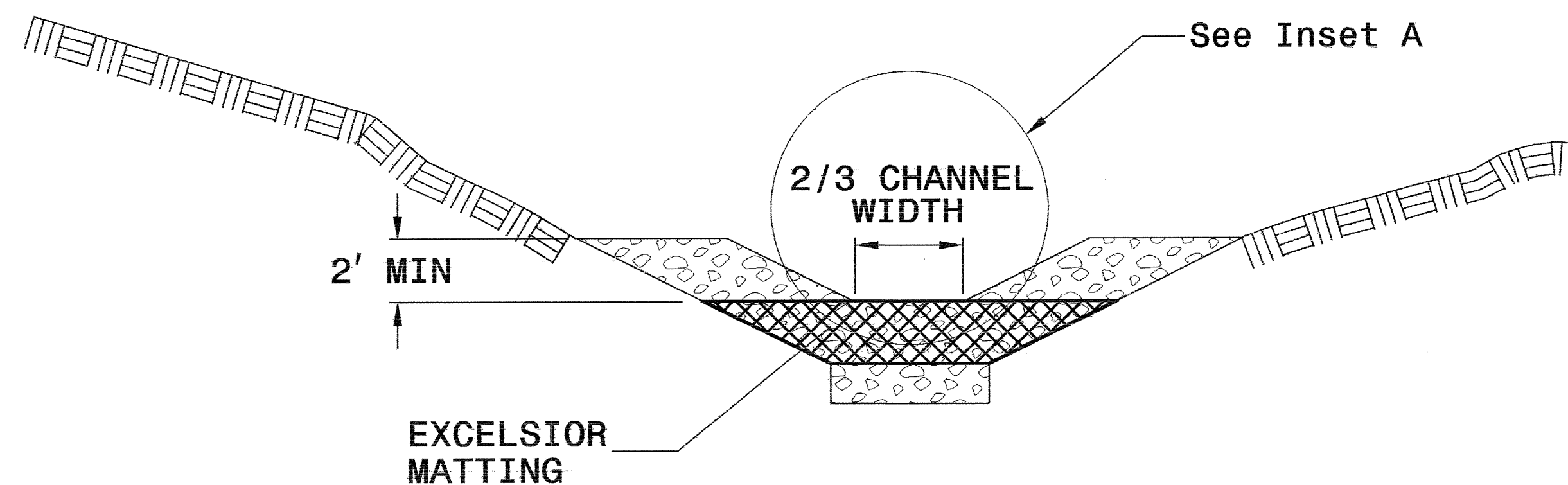
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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.

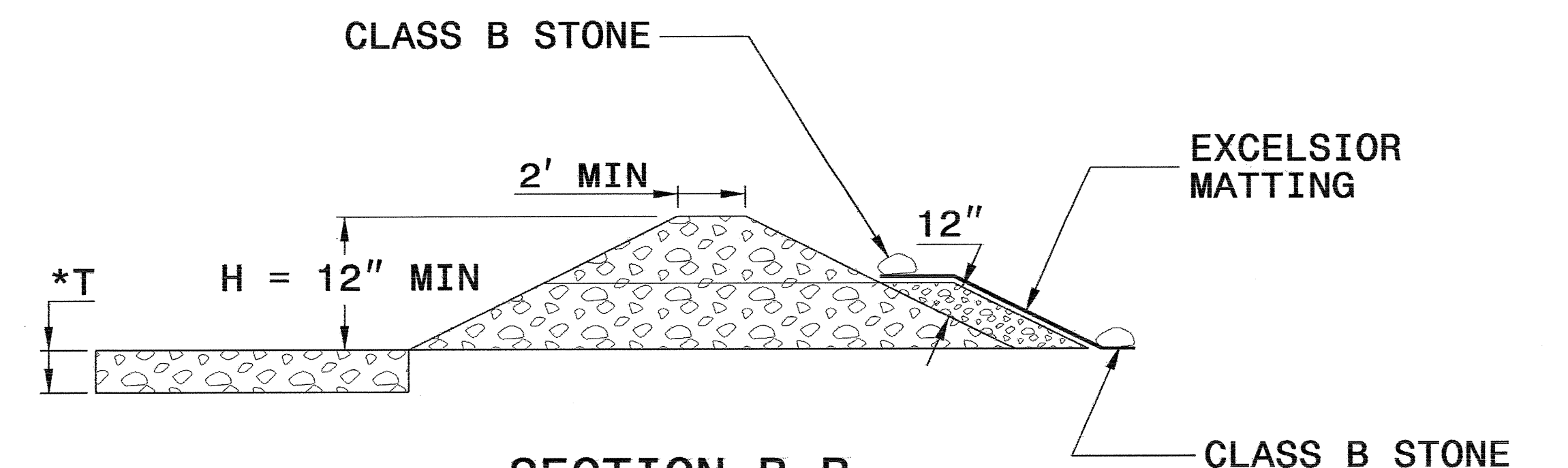
INITIALLY APPLY 3.5 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



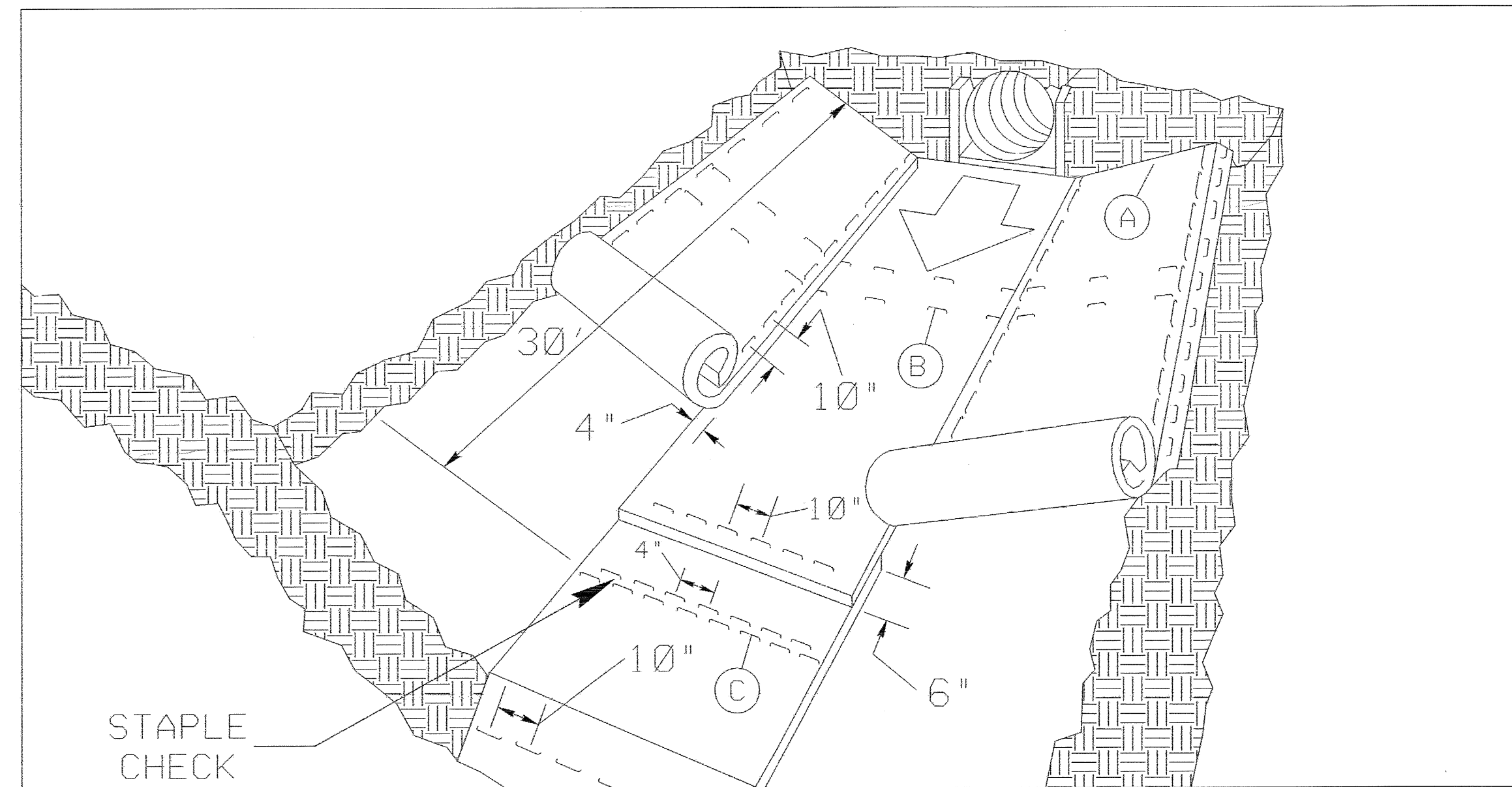
SECTION B-B

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

NOT TO SCALE

PROJECT REFERENCE NO. U-4703	SHEET NO. EC-2H
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

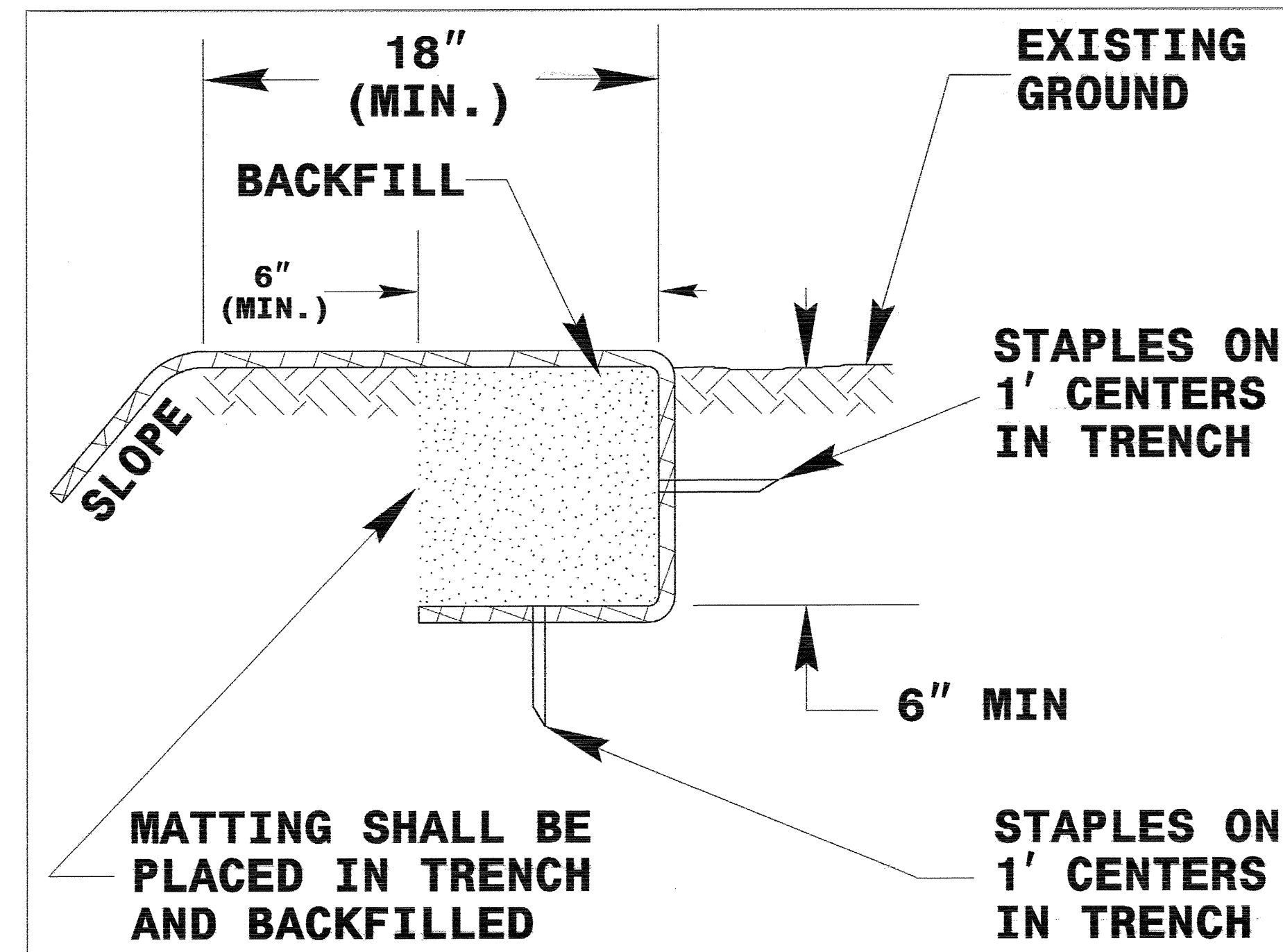
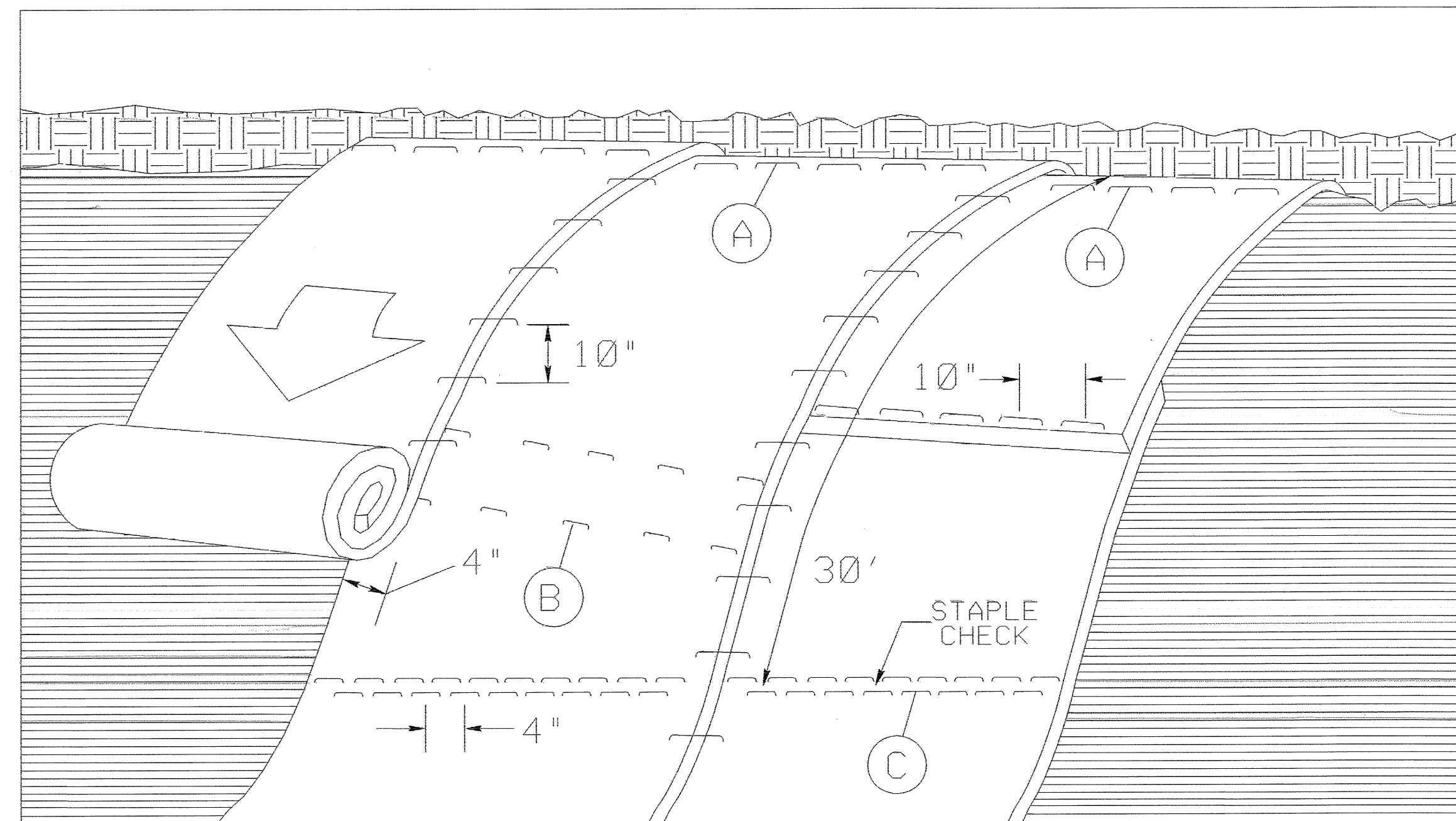


DIAGRAM (A)



MATTING ON SLOPES

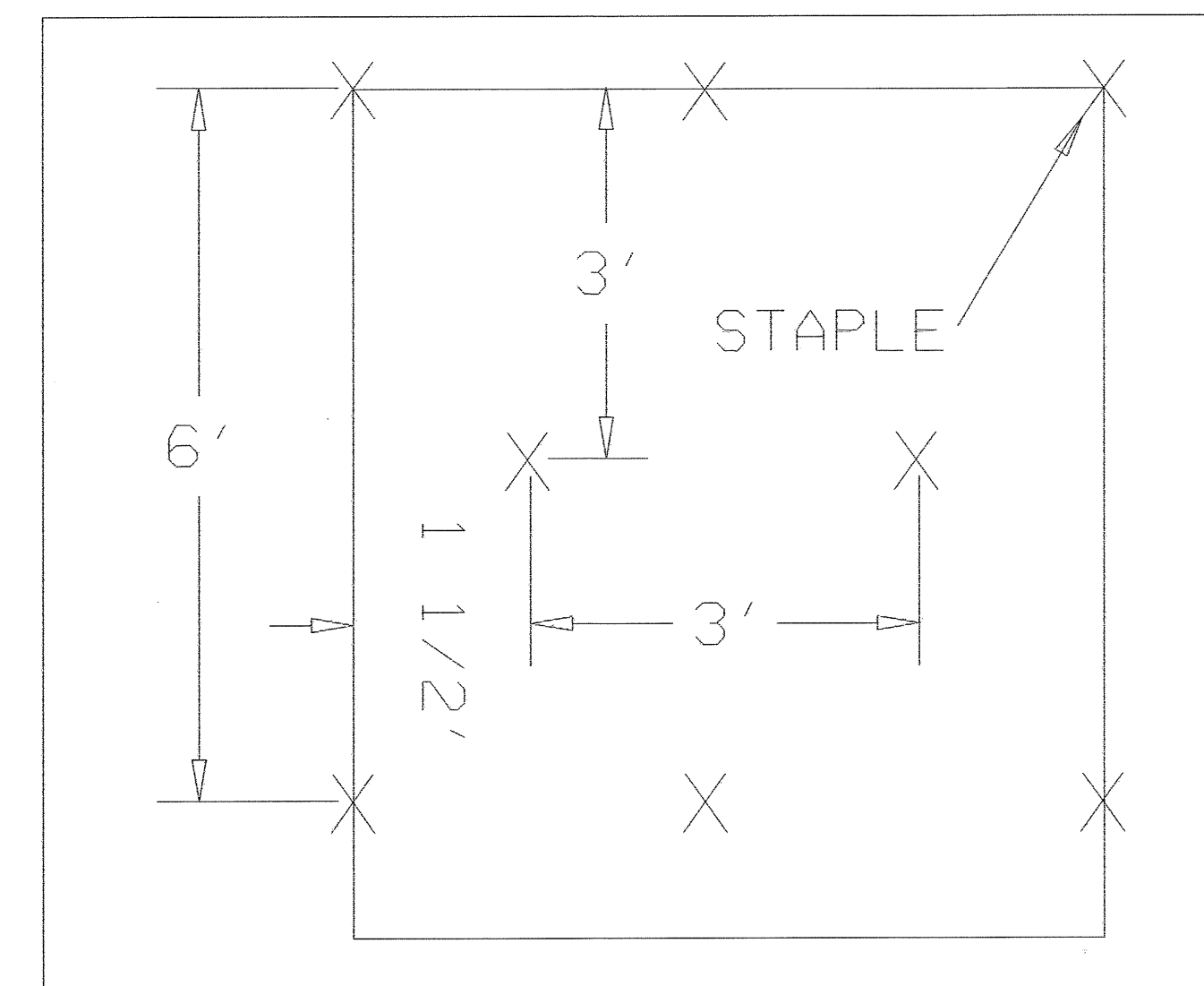


DIAGRAM (B)

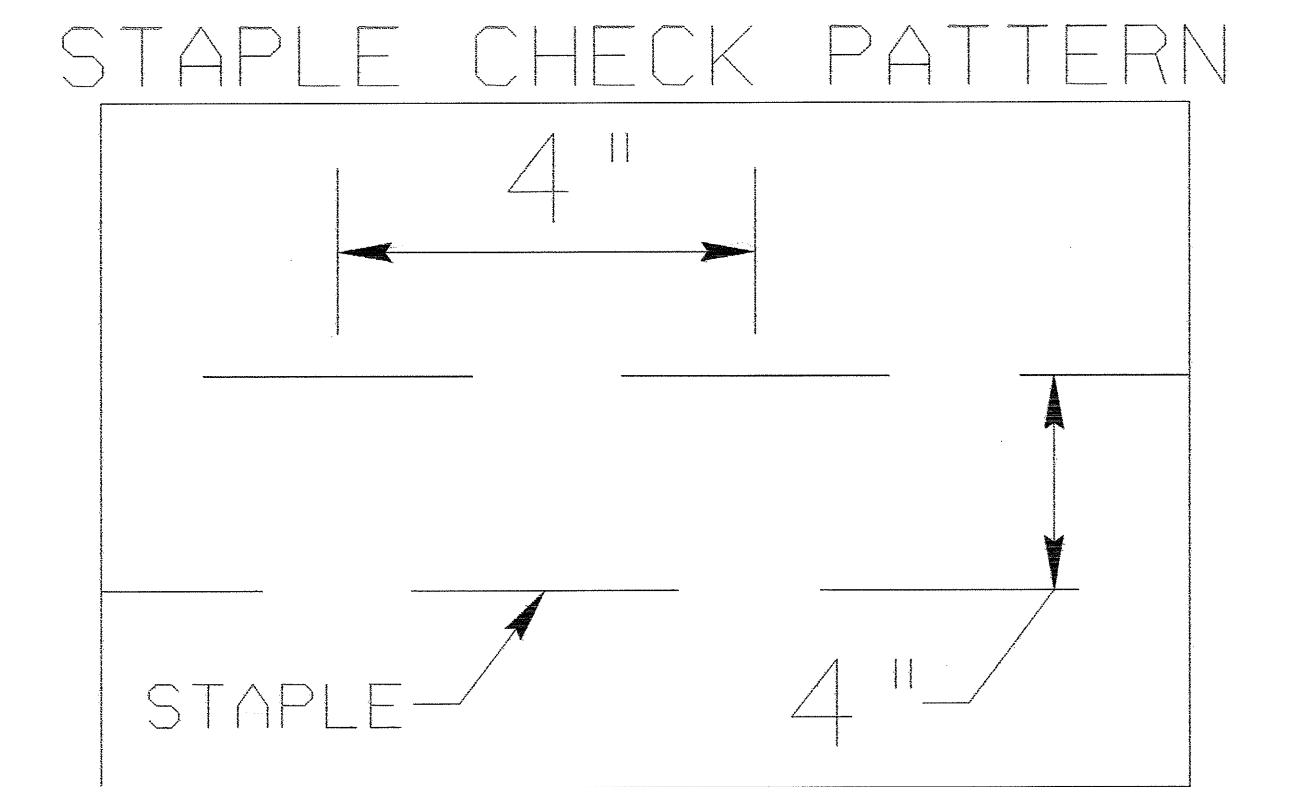


DIAGRAM (C)

NOTES:

THIS DETAIL APPLIES TO STRAW, EXCELSIOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION.

STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. U-4703	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	-Y-	20+50	24+00	RT	285
4	-Y1-	26+50	28+25	LT	90
8	-L-	74+00	76+00	LT	100
9	-L-	76+00	78+00	LT	100
10	-Y3-	17+00	17+50	RT	35
10	-Y3-	18+00	18+83.1	RT	60
10	-Y3-	18+00	18+50	LT	35
SUBTOTAL					705
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					22935
TOTAL					23640
SAY					25000

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	13+75	14+25	LT	25
10	-Y-	13+00	14+50	LT	105
10	-Y4-	10+50	11+00	LT	55
SUBTOTAL					185
ADDITIONAL PSRM TO BE INSTALLED					260
TOTAL					445
SAY					500

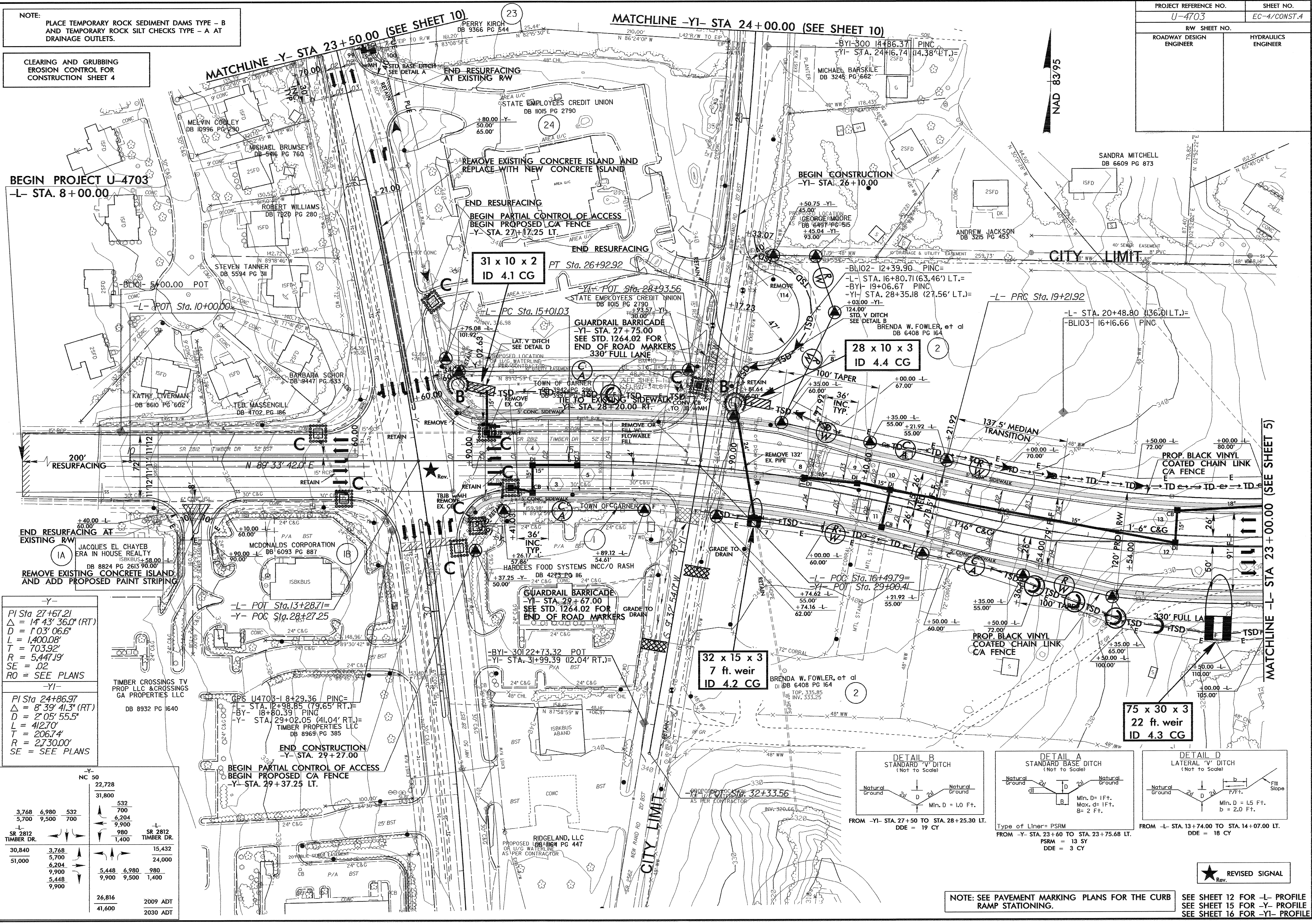
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

BEGIN PROJECT U-4703
-L- STA. 8+00.00

MATCHLINE -YI- STA 24+00.00 (SEE SHEET 10)

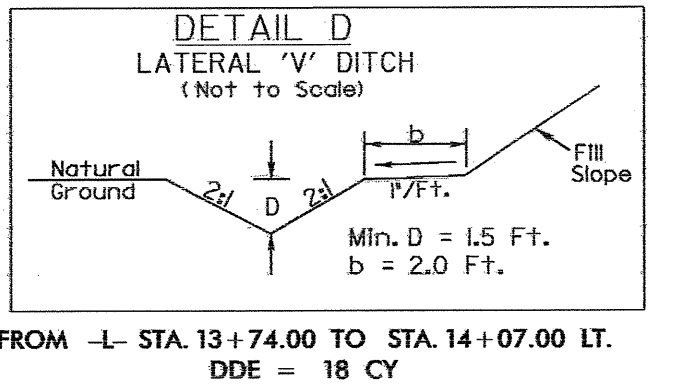
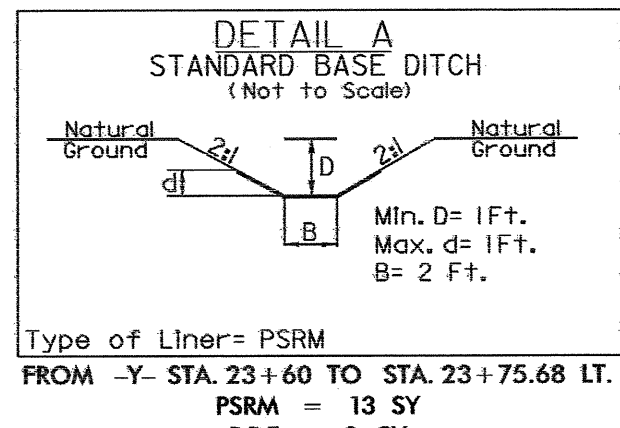
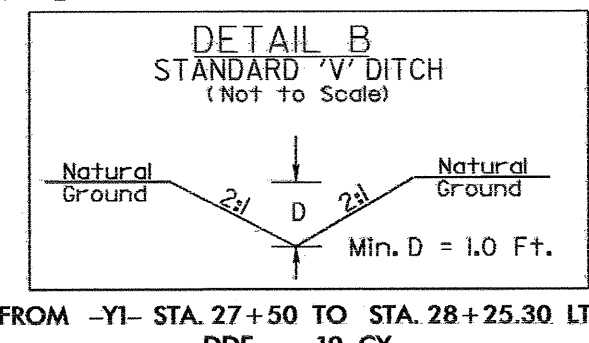
MATCHLINE -Y- STA 23+50.00 (SEE SHEET 10)



-Y-
 $PI\ Sta\ 27+67.21$
 $\Delta = 14' 43" 36.0\ (RT)$
 $D = 1' 03" 06.6'$
 $L = 1,400.08'$
 $T = 703.92'$
 $R = 5,447.19'$
 $SE = .02$
 $RO = SEE\ PLANS$

-YI-
 $PI\ Sta\ 24+86.97$
 $\Delta = 8' 39" 41.3\ (RT)$
 $D = 2' 05" 55.5'$
 $L = 412.70'$
 $T = 206.74'$
 $R = 2,730.00'$
 $SE = SEE\ PLANS$

NC 50	22,728	532	
	31,800	700	
		6,204	
		9,900	
		980	
		1,400	
SR 2812 TIMBER DR.	3,768	15,432	
	5,700	24,000	
	6,204	980	
	9,900	1,400	
	5,448	6,980	
	9,900	9,500	
	26,816		
	41,600		
		2009 ADT	
		2030 ADT	

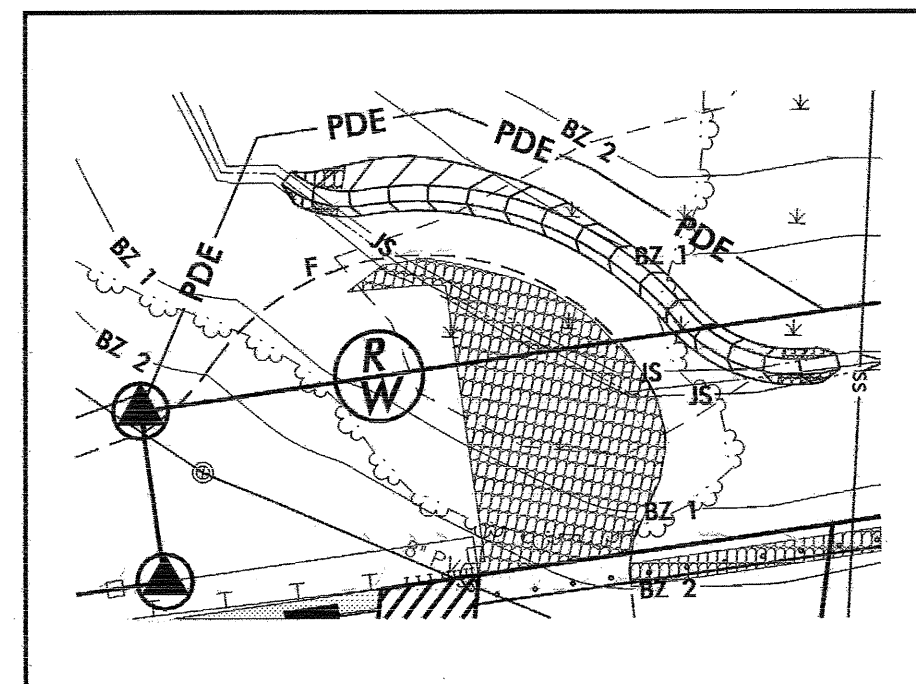


★ REVISED SIGNAL

NOTE: SEE PAVEMENT MARKING PLANS FOR THE CURB RAMP STATIONING. SEE SHEET 12 FOR -L- PROFILE SEE SHEET 15 FOR -Y- PROFILE SEE SHEET 16 FOR -YI- PROFILE

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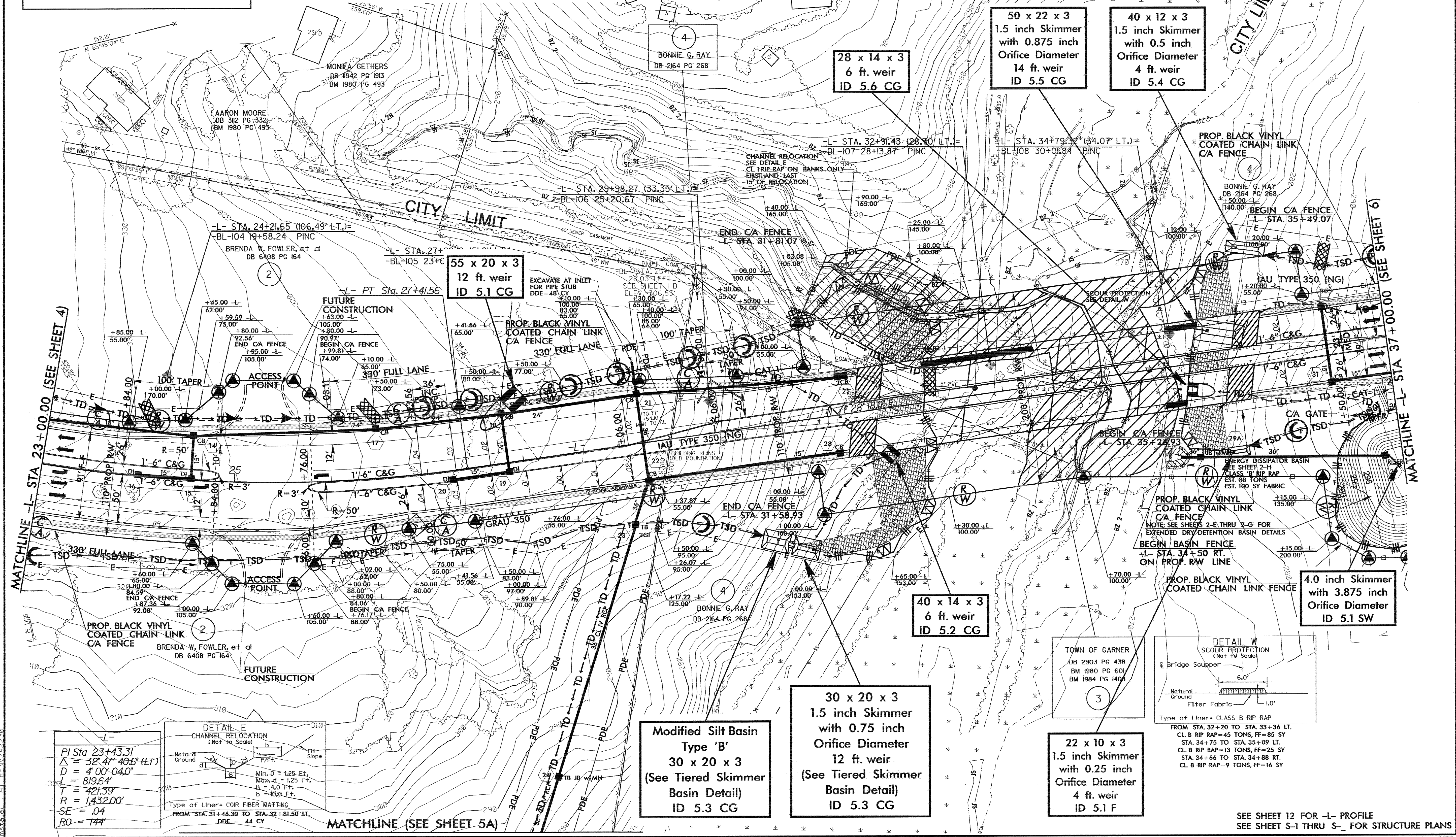
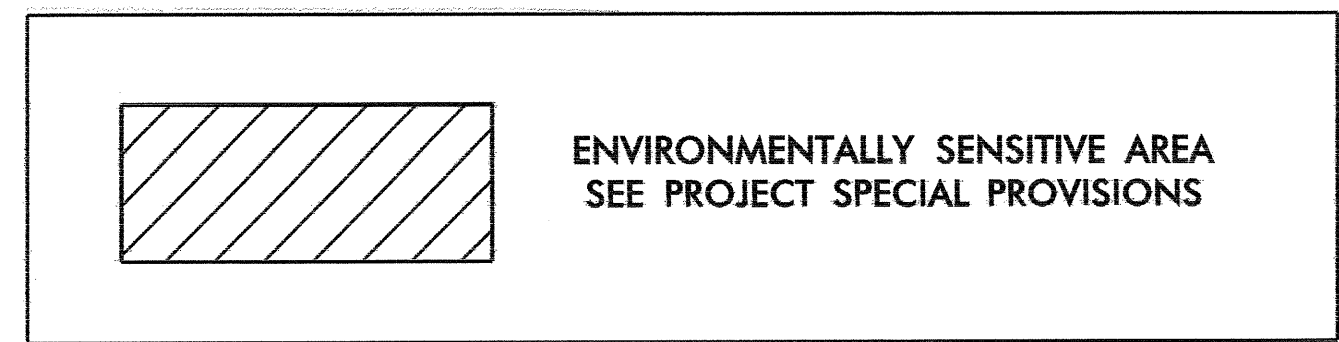
PROJECT REFERENCE NO.	SHEET NO.
U-4703	EC-5/CONST.5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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

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

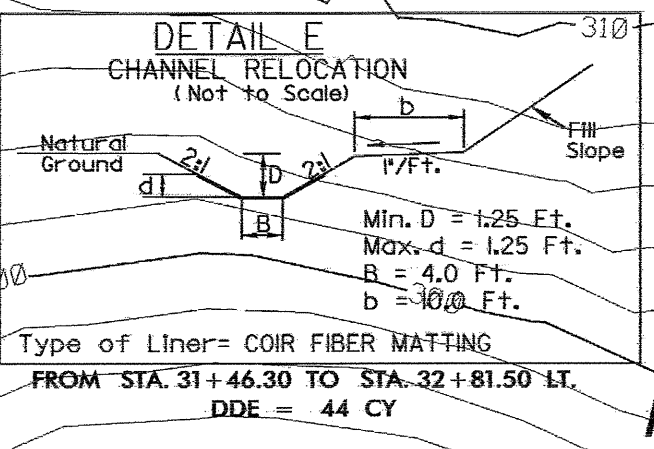
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 5



MATCHLINE -L- STA 23+00.00 (SEE SHEET 4)

MATCHLINE -L- STA 37+00.00 (SEE SHEET 6)

PI Sta 23+43.31
 $\Delta = 32^{\circ} 41' 40.6''$ (LT)
 $D = 4' 00.040''$
 $L = 819.64'$
 $T = 421.39'$
 $R = 1,432.00'$
 $SE = .04$
 $RO = 144'$



MATCHLINE (SEE SHEET 5A)

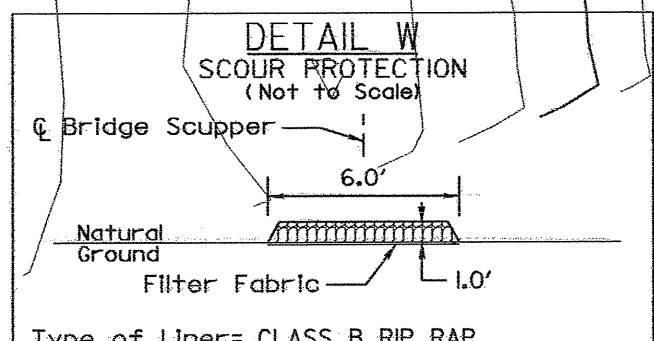
Modified Silt Basin
 Type 'B'
 30 x 20 x 3
 (See Tiered Skimmer Basin Detail)
 ID 5.3 CG

30 x 20 x 3
 1.5 inch Skimmer with 0.75 inch Orifice Diameter
 12 ft. weir
 (See Tiered Skimmer Basin Detail)
 ID 5.3 CG

40 x 14 x 3
 6 ft. weir
 ID 5.2 CG

22 x 10 x 3
 1.5 inch Skimmer with 0.25 inch Orifice Diameter
 4 ft. weir
 ID 5.1 F

TOWN OF GARNER
 DB 2903 PG 438
 BM 1980 PG 601
 BM 1984 PG 1404



4.0 inch Skimmer with 3.875 inch Orifice Diameter
 ID 5.1 SW

27-JAN-2010 10:54
 R:\Environment\Design\U-4703_EC_psh05.dgn
 A:\BEN\22220

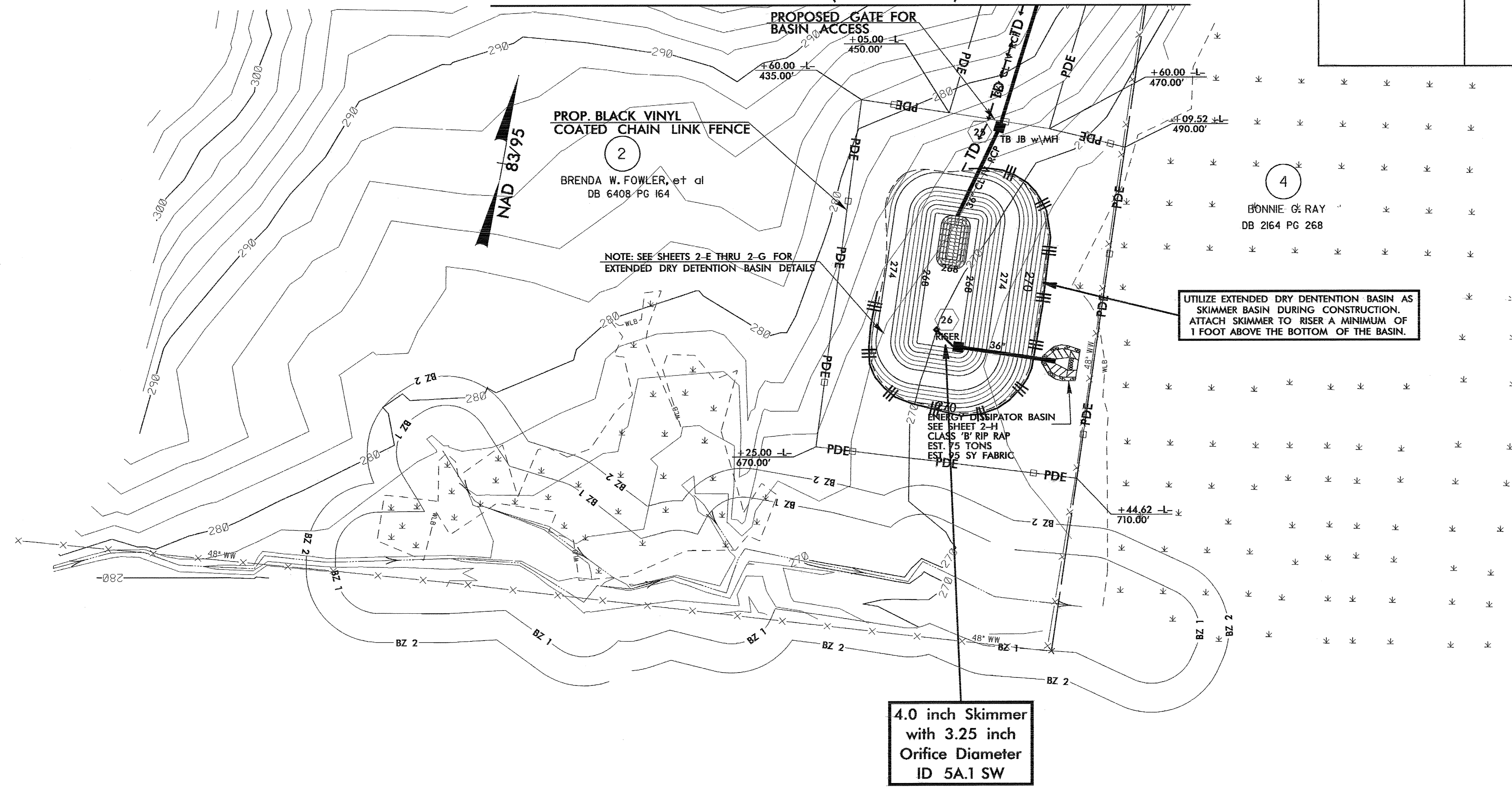
SEE SHEET 12 FOR -L- PROFILE
 SEE SHEET S-1 THRU S- FOR STRUCTURE PLANS

PROJECT REFERENCE NO.	SHEET NO.
U-4703	EC-6/CONST.5A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

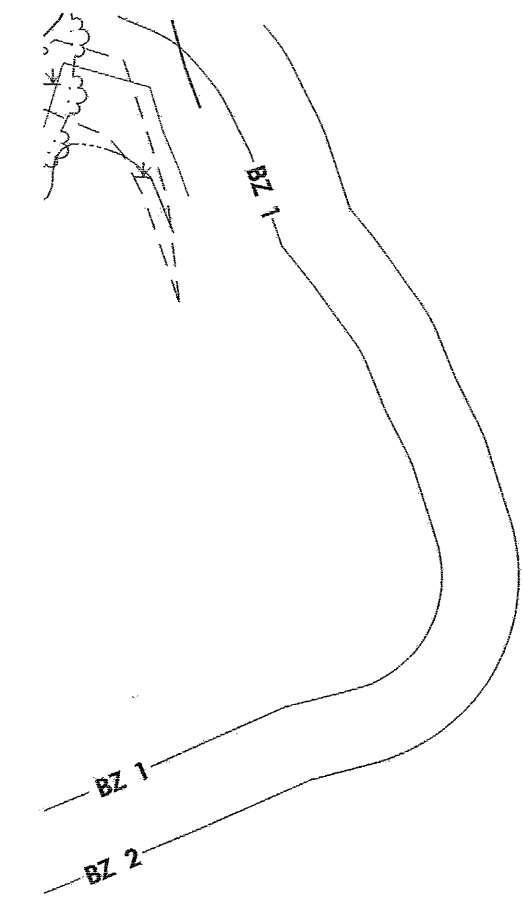
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5A

MATCHLINE (SEE SHEET 5)



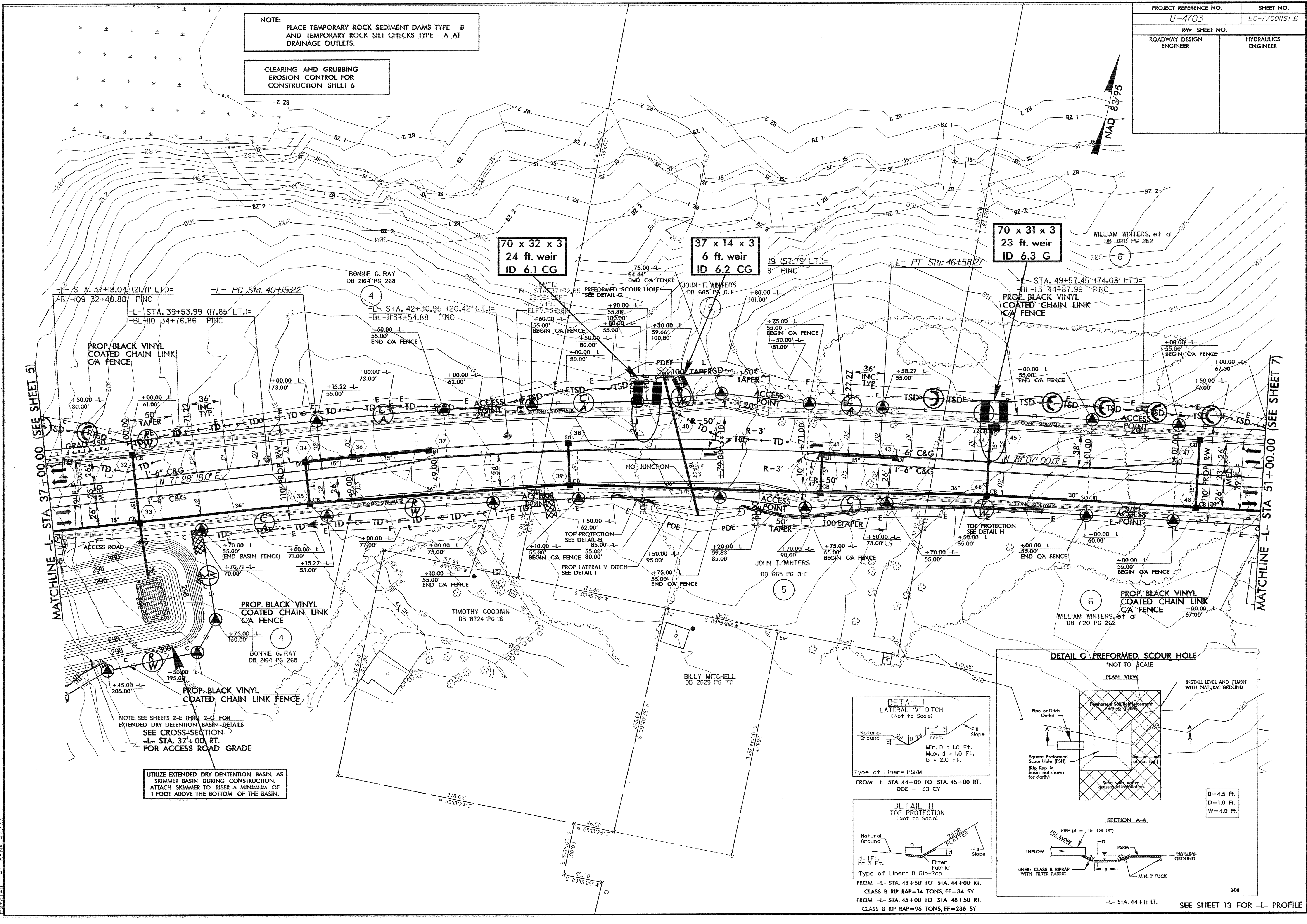
4.0 inch Skimmer
with 3.25 inch
Orifice Diameter
ID 5A.1 SW



PROJECT REFERENCE NO. U-4703	SHEET NO. EC-7/CONST.6
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN 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

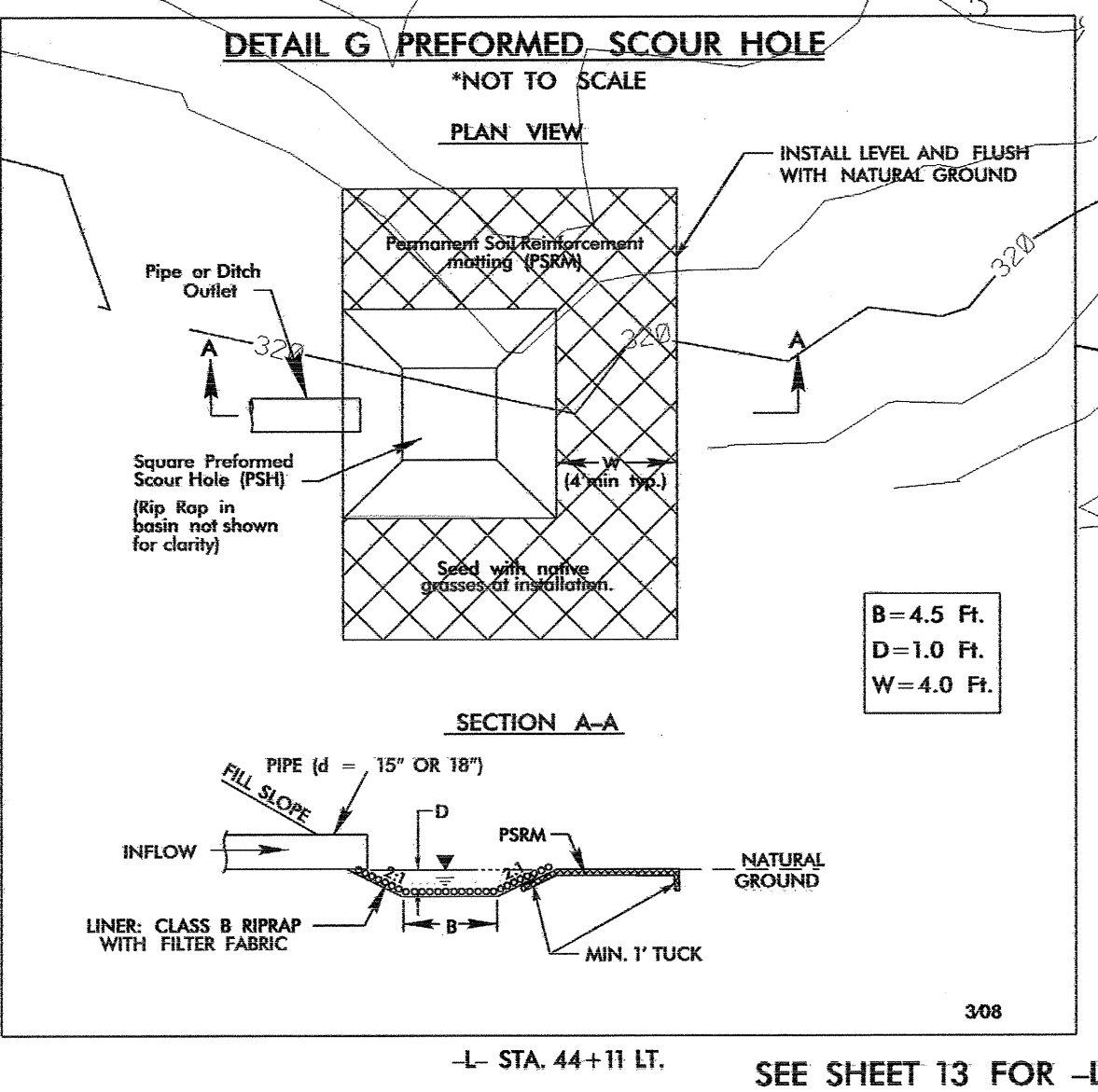
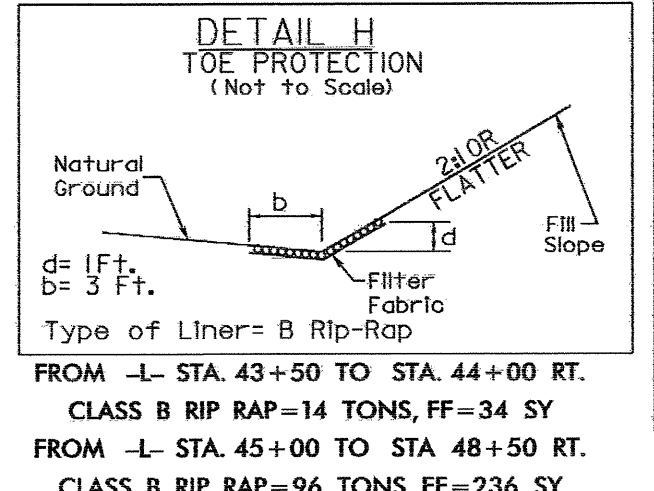
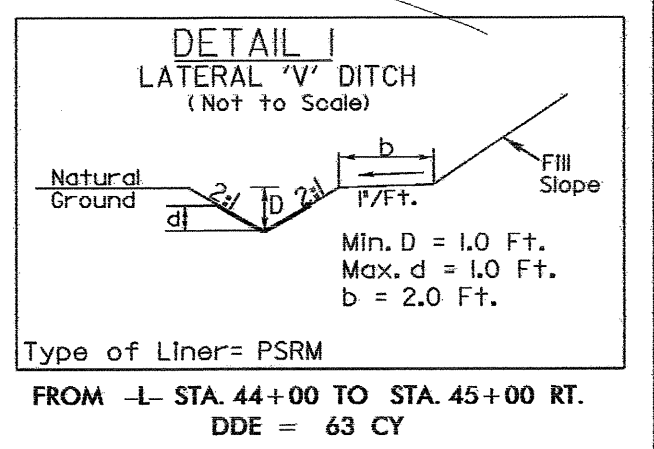


MATCHLINE -L- STA 37+00.00 (SEE SHEET 5)

MATCHLINE -L- STA 51+00.00 (SEE SHEET 7)

NOTE: SEE SHEETS 2-E THRU 2-G FOR EXTENDED DRY DETENTION BASIN DETAILS SEE CROSS-SECTION -L- STA. 37+00 RT. FOR ACCESS ROAD GRADE

UTILIZE EXTENDED DRY DETENTION BASIN AS SKIMMER BASIN DURING CONSTRUCTION. ATTACH SKIMMER TO RISE A MINIMUM OF 1 FOOT ABOVE THE BOTTOM OF THE BASIN.

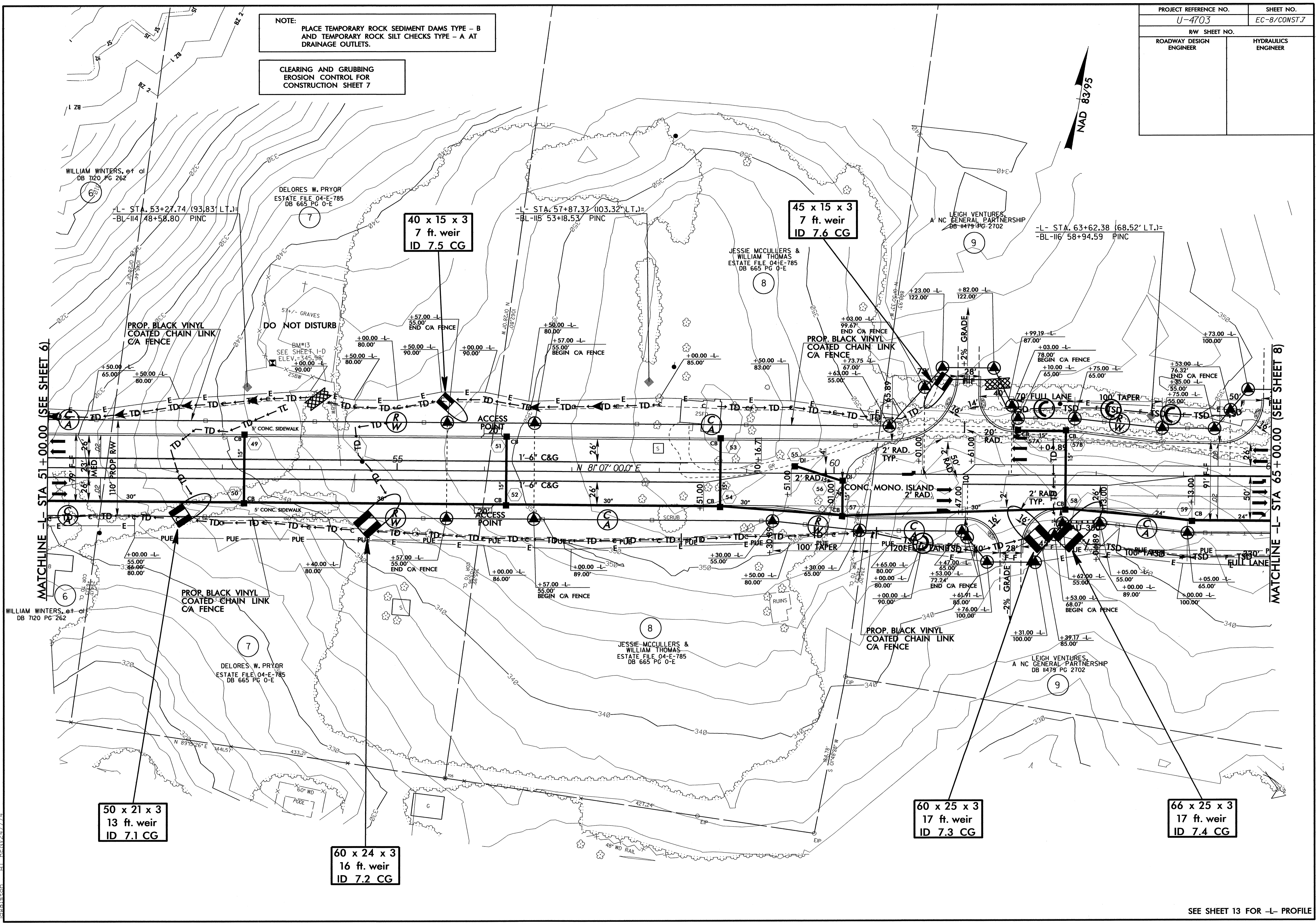
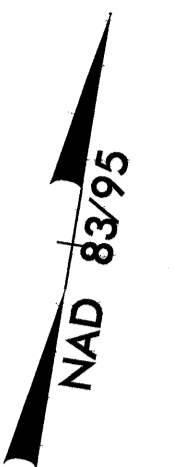


27-JAN-2010 11:03 R:\Environment\ec\Design\U-4703-EC_psh06.dgn

PROJECT REFERENCE NO. U-4703	SHEET NO. EC-8/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.

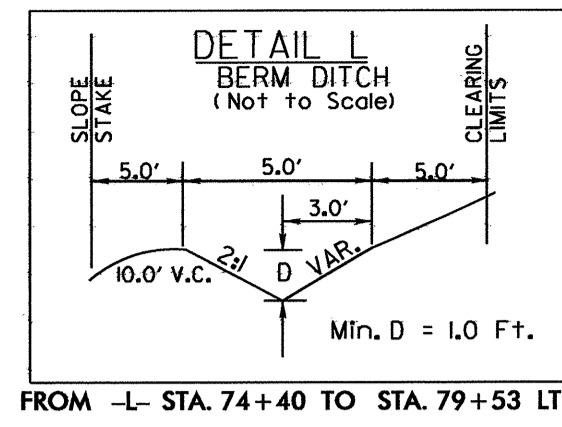
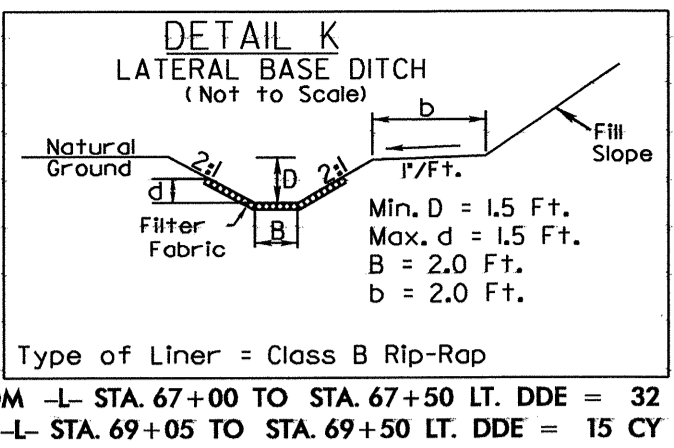
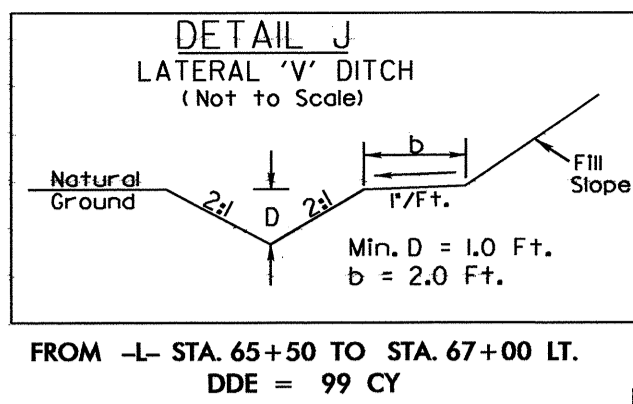
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 7



06-APR-2010 14:28
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 kdelston AT BENV27774

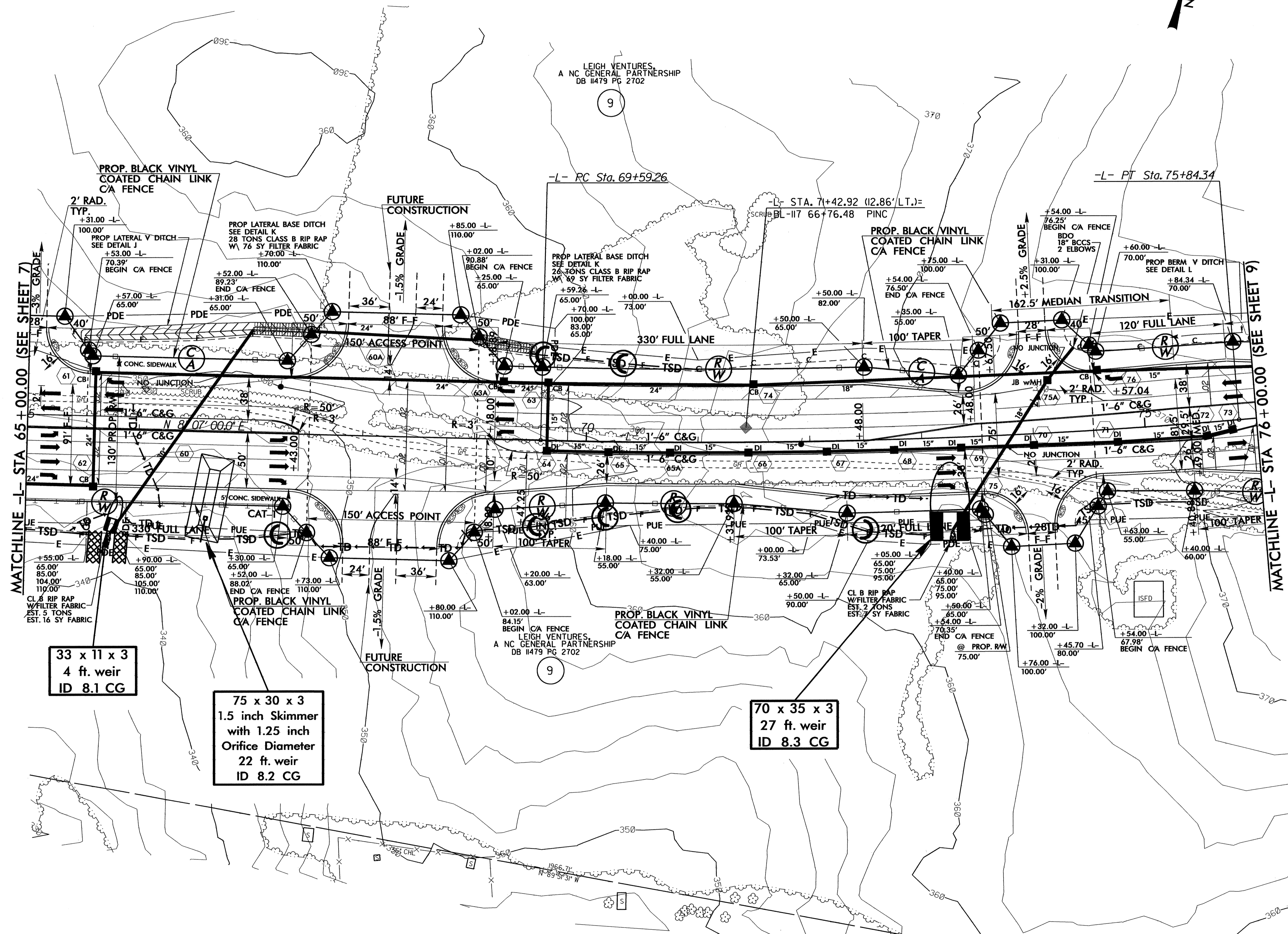
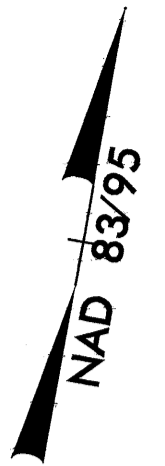
SEE SHEET 13 FOR -L- PROFILE

**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.

PROJECT REFERENCE NO. U-4703	SHEET NO. EC-9/CONST.B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



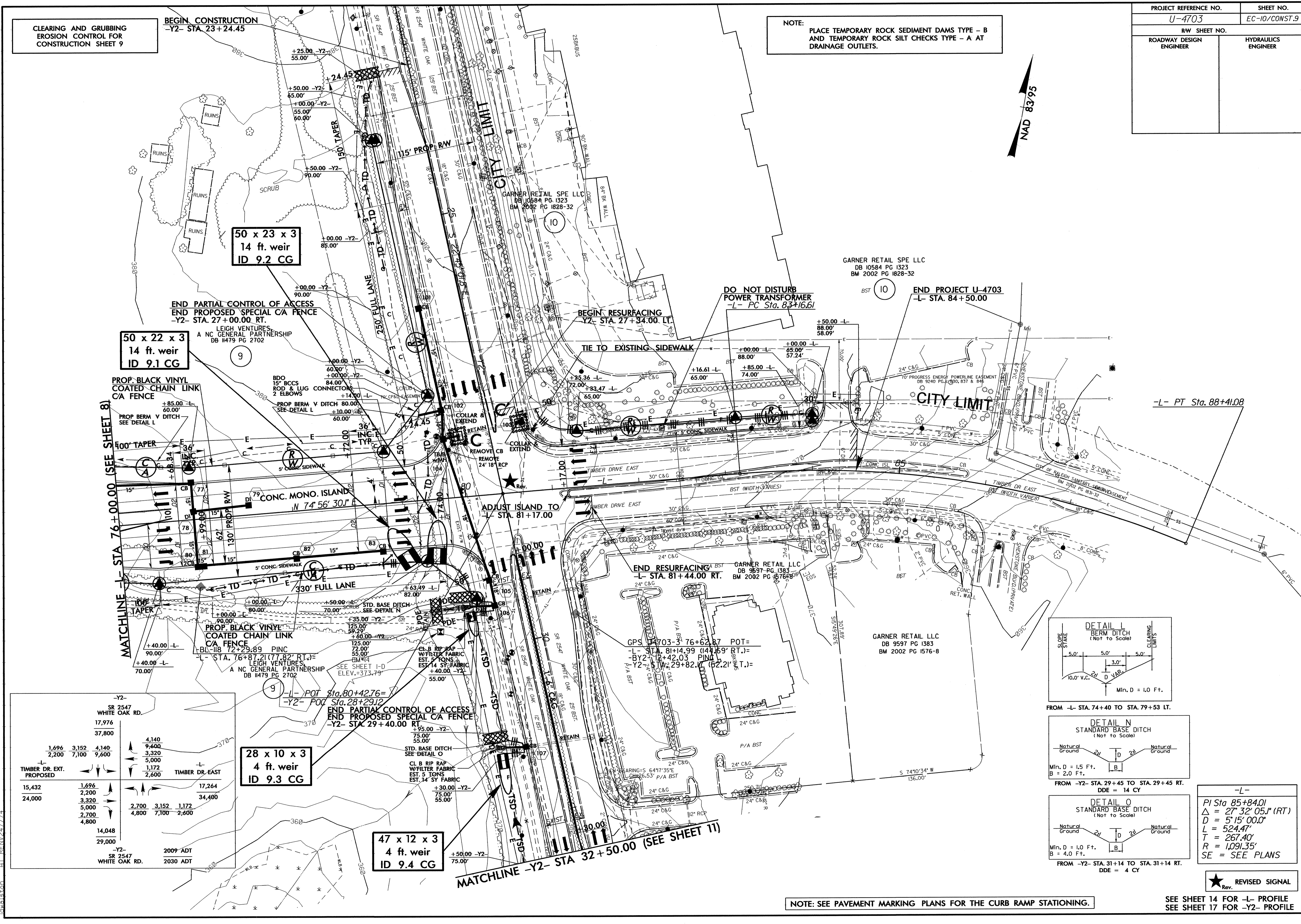
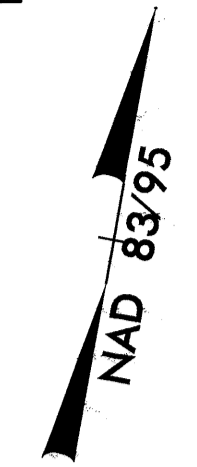
06-APR-2010 14:25
 RS:Environmental
 C:\Users\rs\Desktop\4703_EC_psh08.dgn
 At: R:\NW27774

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 9

BEGIN CONSTRUCTION
-Y2- STA. 23+24.45

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

PROJECT REFERENCE NO.	SHEET NO.
U-4703	EC-10/CONST.9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



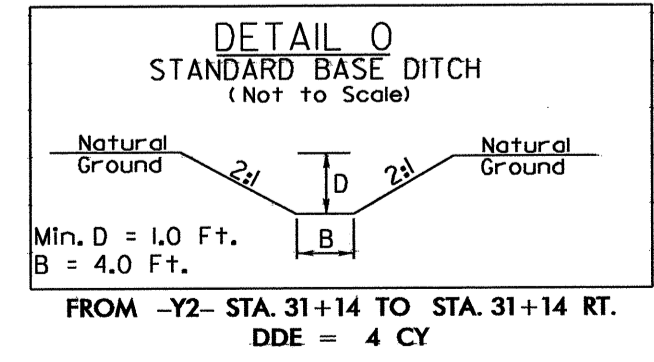
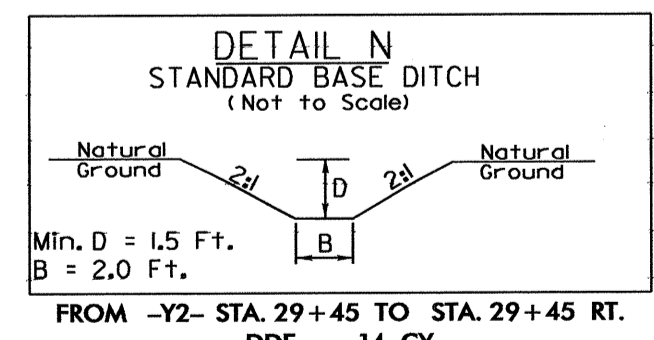
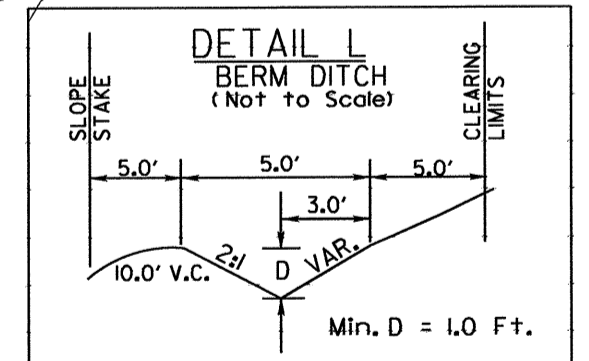
50 x 23 x 3
14 ft. weir
ID 9.2 CG

50 x 22 x 3
14 ft. weir
ID 9.1 CG

28 x 10 x 3
4 ft. weir
ID 9.3 CG

47 x 12 x 3
4 ft. weir
ID 9.4 CG

-Y2- SR 2547 WHITE OAK RD. 17,976 37,800		4,140 9,600 3,320 5,000	
1,696 2,200	3,152 7,100	4,140 9,600	3,320 5,000
TIMBER DR. EXT. PROPOSED		TIMBER DR. EAST	
15,432 24,000	1,696 2,200 3,320 5,000 2,700 4,800	17,264 34,400	
-Y2- SR 2547 WHITE OAK RD.		2009 ADT 2030 ADT	
14,048 29,000			



-L-
PI Sta 85+84.01
Δ = 27° 32' 05" (RT.)
D = 5' 15" 00.0"
L = 524.47'
T = 267.40'
R = 1,091.35'
SE = SEE PLANS

★ REVISED SIGNAL

NOTE: SEE PAVEMENT MARKING PLANS FOR THE CURB RAMP STATIONING.

SEE SHEET 14 FOR -L- PROFILE
SEE SHEET 17 FOR -Y2- PROFILE

05-APR-2010 14:31
 R:\Environmental\4703_EC_psh09.dgn
 11/11/2009 11:11:11 AM
 11/11/2009 11:11:11 AM

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 10

MATCHLINE -Y1- STA 24+00.00 (SEE SHEET 4)

AUE AUE
AERIAL UTILITY EASEMENT

-Y-	-Y-
PI Sta 15+92.67 Δ = 9' 25" 55.4" (RT) D = 0' 59" 59.4" L = 943.36' T = 472.75' R = 5,730.53' SE = .02 RO = SEE PLANS	PI Sta 27+67.21 Δ = 14' 43" 36.0" (RT) D = 1' 03" 06.6" L = 1,400.08' T = 703.92' R = 5,447.19' SE = .02 RO = SEE PLANS

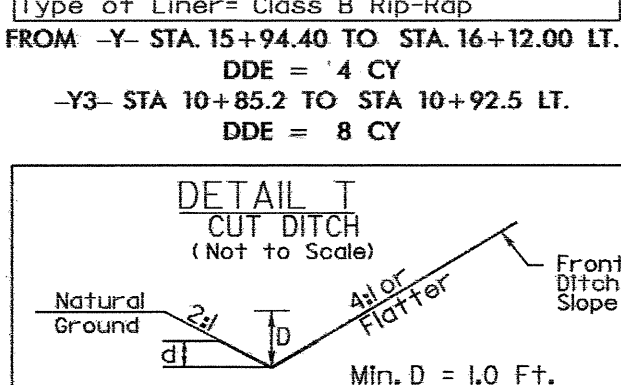
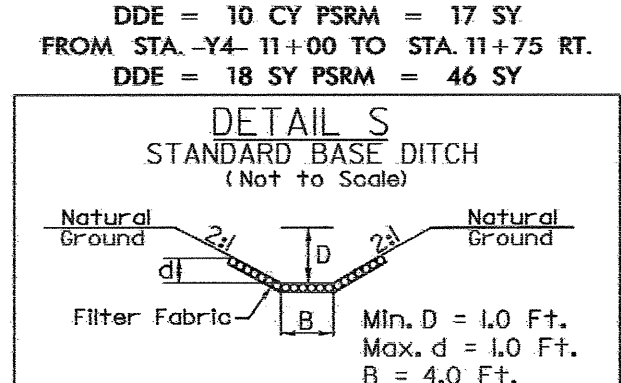
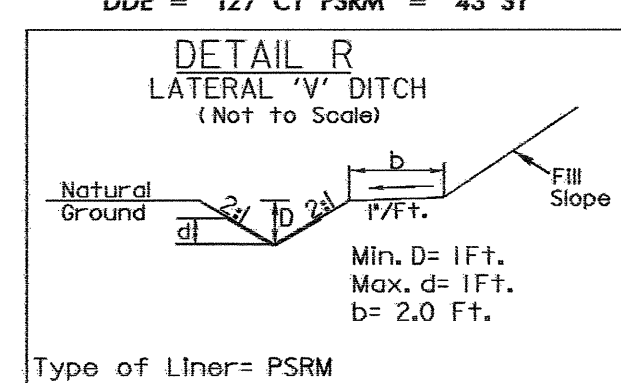
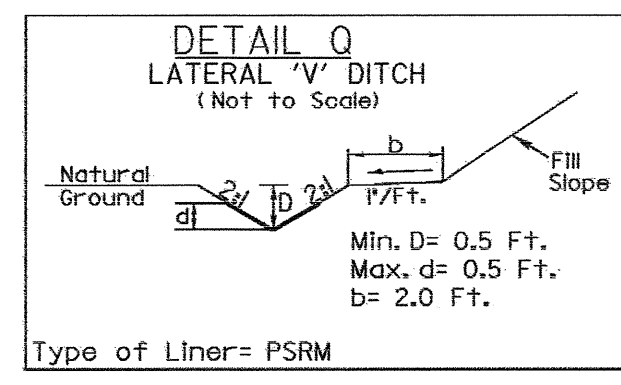
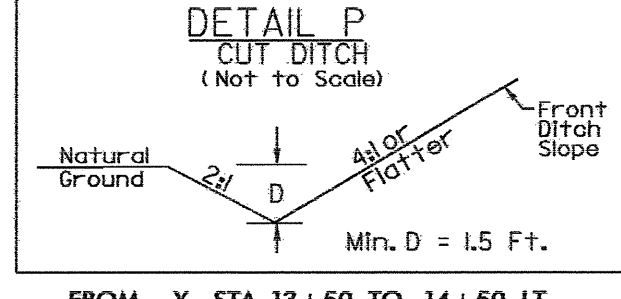
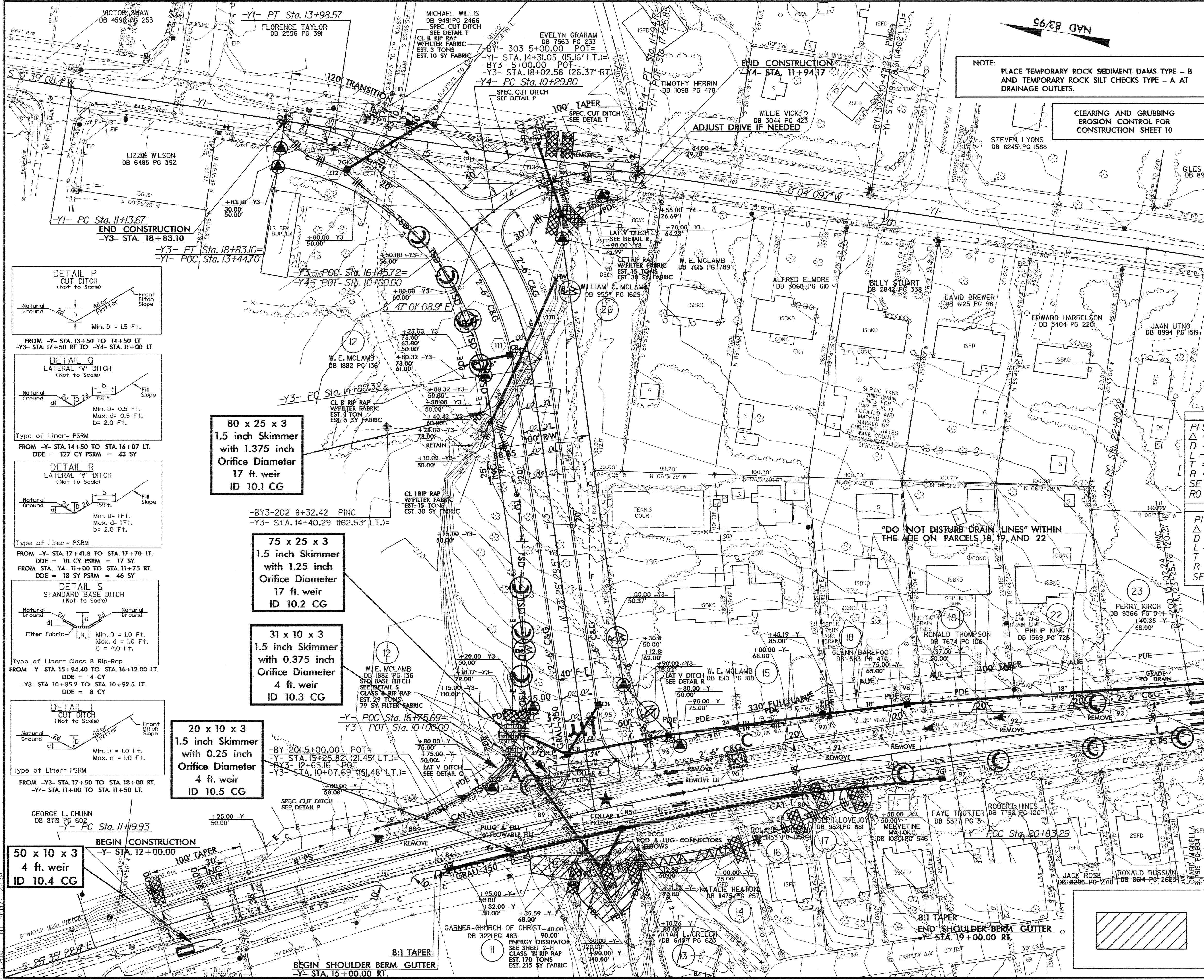
-Y1-	-Y1-
PI Sta 12+56.13 Δ = 0' 34" 58.7" (LT) D = 0' 12" 16.7" L = 284.90' T = 142.45' R = 28,000.00' SE = SEE PLANS	PI Sta 24+86.97 Δ = 8' 39" 41.3" (RT) D = 2' 05" 55.5" L = 412.70' T = 206.74' R = 2,730.00' SE = SEE PLANS

7,144 10,000	-Y3- SR 2562 NEW RAND RD. CONNECTOR	2009 ADT 2030 ADT
15,416 21,800	100- 100- 3,572 5,000	3,572 5,000 7,708 10,900
-Y- NC 50	100- 100- 7,708 10,900	22,560 31,800

-Y3-
PI Sta 17+14.52 Δ = 73' 15" 43.0" (LT) D = 18' 11" 20.9" L = 402.78' T = 234.20' R = 315.00' SE = .04 RO = SEE PLANS

-Y4-
PI Sta 11+6.95 Δ = 47' 05" 18.6" (RT) D = 28' 38" 52.4" L = 164.37' T = 87.15'

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS



80 x 25 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
17 ft. weir
ID 10.1 CG

75 x 25 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
17 ft. weir
ID 10.2 CG

31 x 10 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 10.3 CG

20 x 10 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 10.5 CG

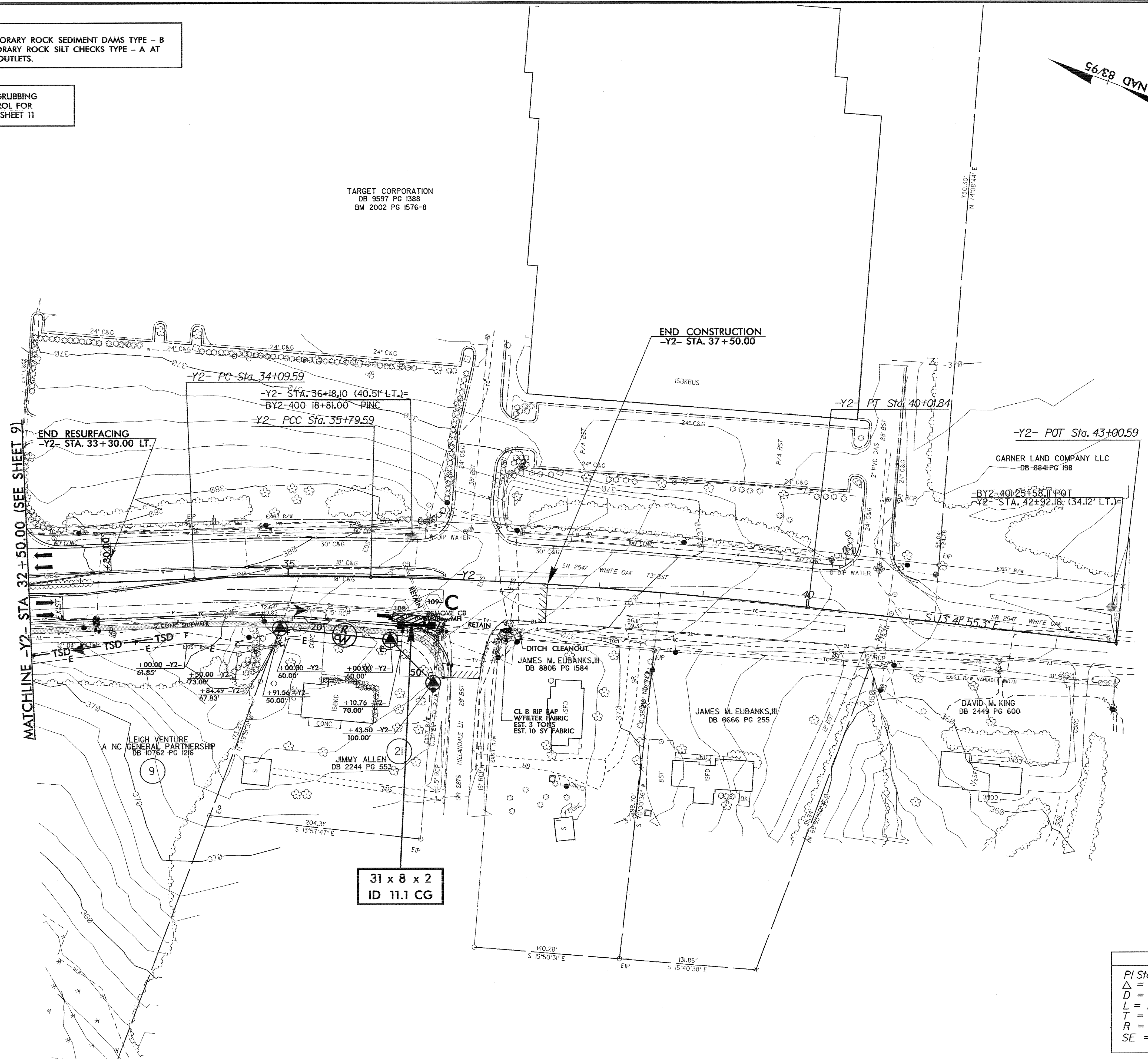
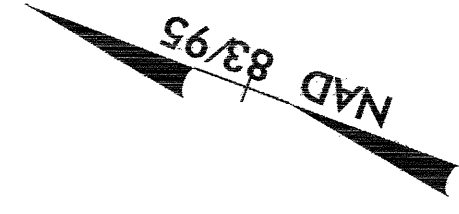
50 x 10 x 3
4 ft. weir
ID 10.4 CG

27-JAN-2010 11:43 R:\Environmental\Design\U-4703-EC_psh10.dgn

PROJECT REFERENCE NO. U-4703		SHEET NO. EC-12/CONST.11	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN 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 11



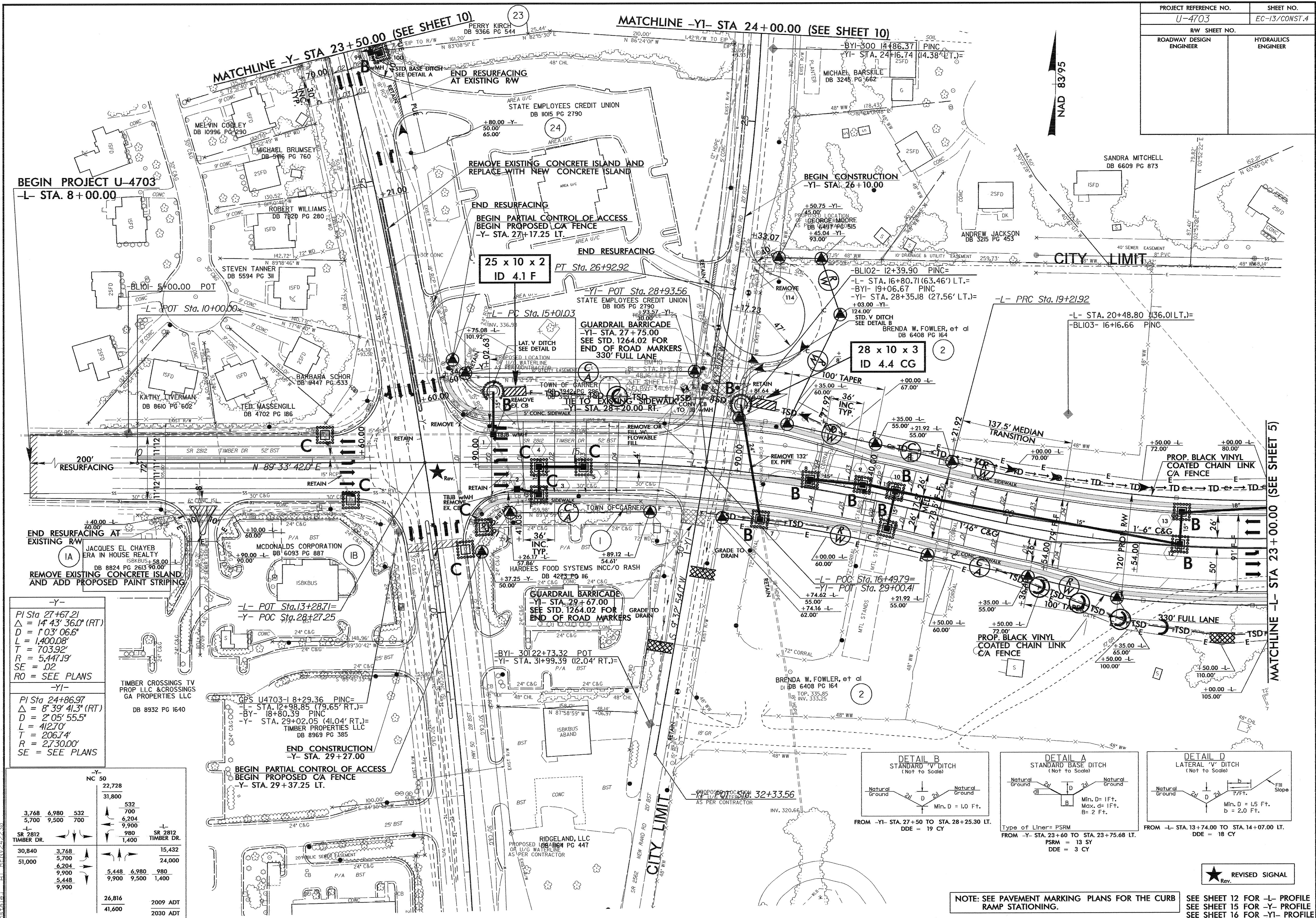
31 x 8 x 2
ID 11.1 CG

-Y2-	
PI Sta 34+94.62	PI Sta 37+90.87
$\Delta = 3^{\circ} 40' 32''$ (RT)	$\Delta = 5^{\circ} 22' 34''$ (RT)
D = 2' 09' 43.6"	D = 1' 16' 23.7"
L = 170.00'	L = 422.25'
T = 85.03'	T = 211.28'
R = 2,650.00'	R = 4,500.00'
SE = SEE PLANS	SE = SEE PLANS

NOTE: SEE PAVEMENT MARKING PLANS FOR THE CURB RAMP STATIONING.

SEE SHEET 17 FOR -Y2- PROFILE

27-JAN-2010 11:45
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 mstole AT REN242230



BEGIN PROJECT U-4703
-L- STA. 8+00.00

MATCHLINE -Y- STA 23+50.00 (SEE SHEET 10) **MATCHLINE -YI- STA 24+00.00 (SEE SHEET 10)**

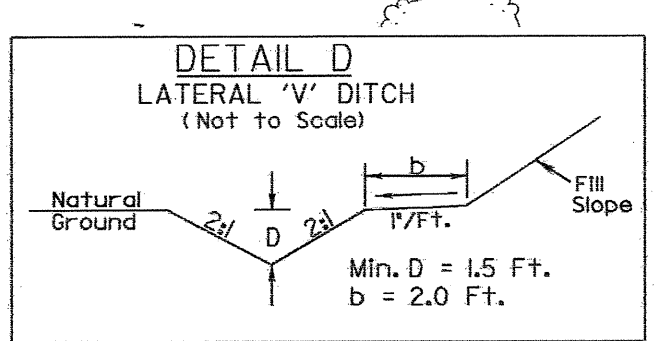
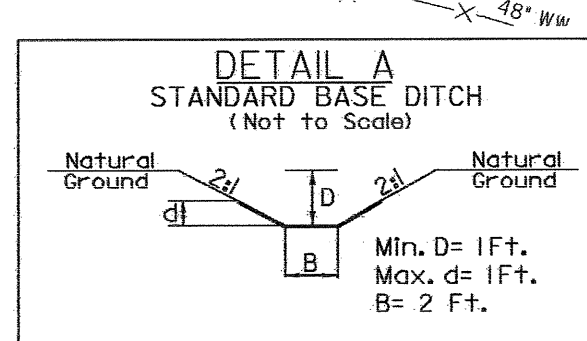
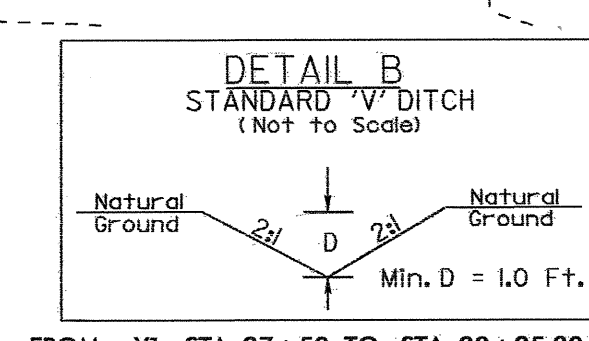
-Y-
PI Sta 27+67.21
Δ = 14° 43' 36.0" (RT)
D = 1° 03' 06.6"
L = 1,400.08'
T = 703.92'
R = 5,447.19'
SE = .02
RO = SEE PLANS

-YI-
PI Sta 24+86.97
Δ = 8° 39' 41.3" (RT)
D = 2° 05' 55.5"
L = 412.70'
T = 206.74'
R = 2,730.00'
SE = SEE PLANS

-Y- NC 50		-L-	
3,768	6,980	532	700
5,700	9,500	6,204	9,900
SR 2812	1,400	980	SR 2812
30,840	3,768	15,432	
51,000	5,700	24,000	
	6,204		
	9,900		
	5,448	6,980	980
	9,900	9,500	1,400
	26,816		2009 ADT
	41,600		2030 ADT

28 x 10 x 3
ID 4.4 CG

25 x 10 x 2
ID 4.1 F

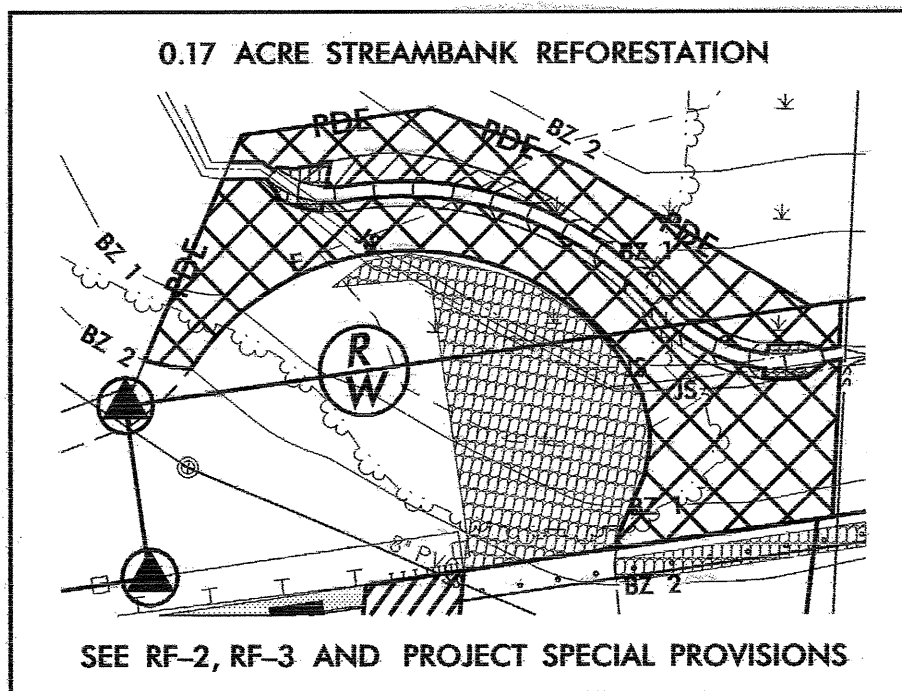


★ **REVISED SIGNAL**

NOTE: SEE PAVEMENT MARKING PLANS FOR THE CURB RAMP STATIONING.
SEE SHEET 12 FOR -L- PROFILE
SEE SHEET 15 FOR -Y- PROFILE
SEE SHEET 16 FOR -YI- PROFILE

27-JAN-2010 10:52
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REVISED AT 2/2/2010

PROJECT REFERENCE NO.	SHEET NO.
U-4703	EC-14/CONST.5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



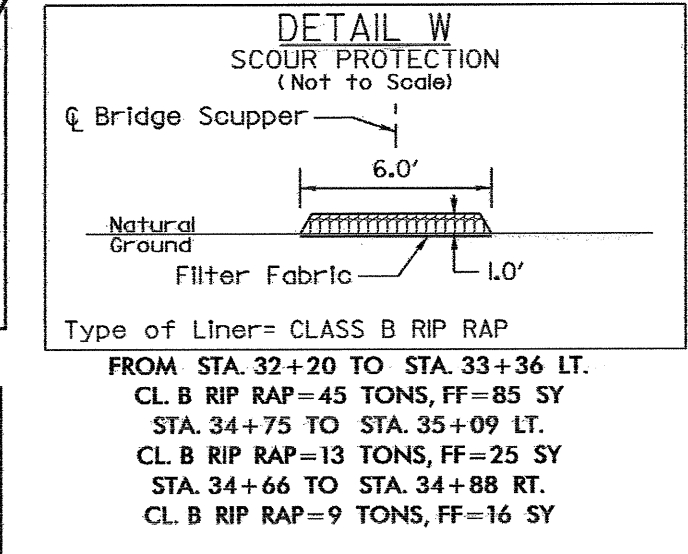
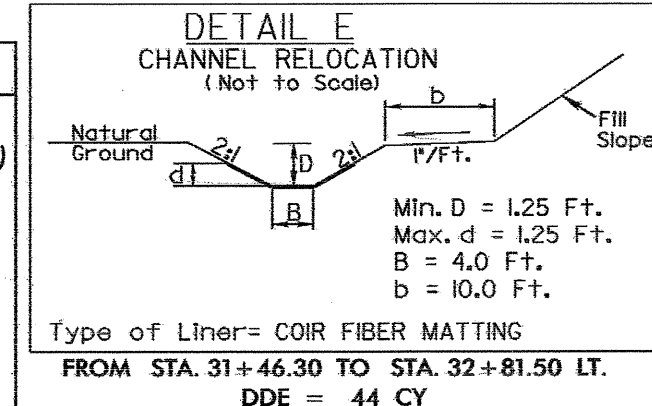
NOTE: UTILIZE SPECIAL STILLING BASIN(S) WHERE APPLICABLE.

40 x 12 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
4 ft. weir
ID 5.4 CG

4.0 inch Skimmer
with 3.875 inch
Orifice Diameter
ID 5.1 SW

22 x 10 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 5.1 F

-L-
PI Sta 23+43.31
 $\Delta = 32' 47" 40.6" (LT)$
D = 4' 00" 04.0"
L = 819.64'
R = 421.39'
SE = 1,432.00'
RO = 144'

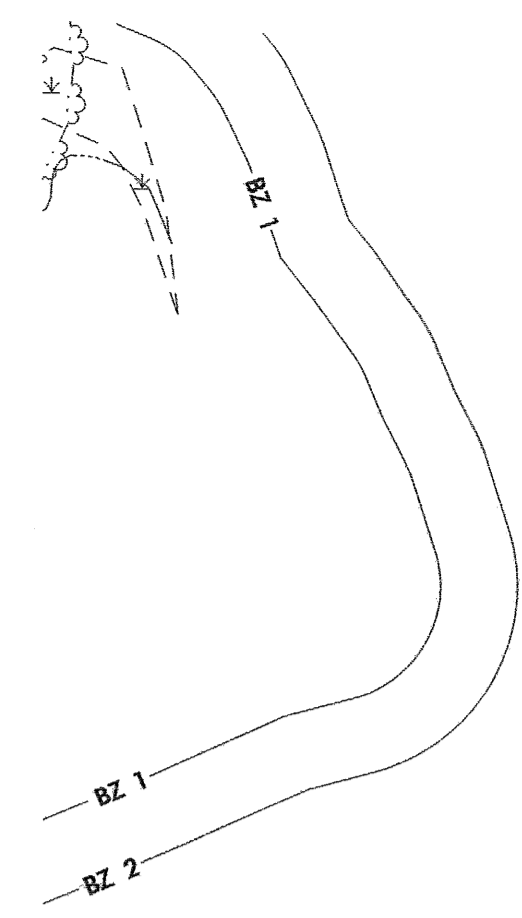


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REVISED AT: REV 1/2/2010

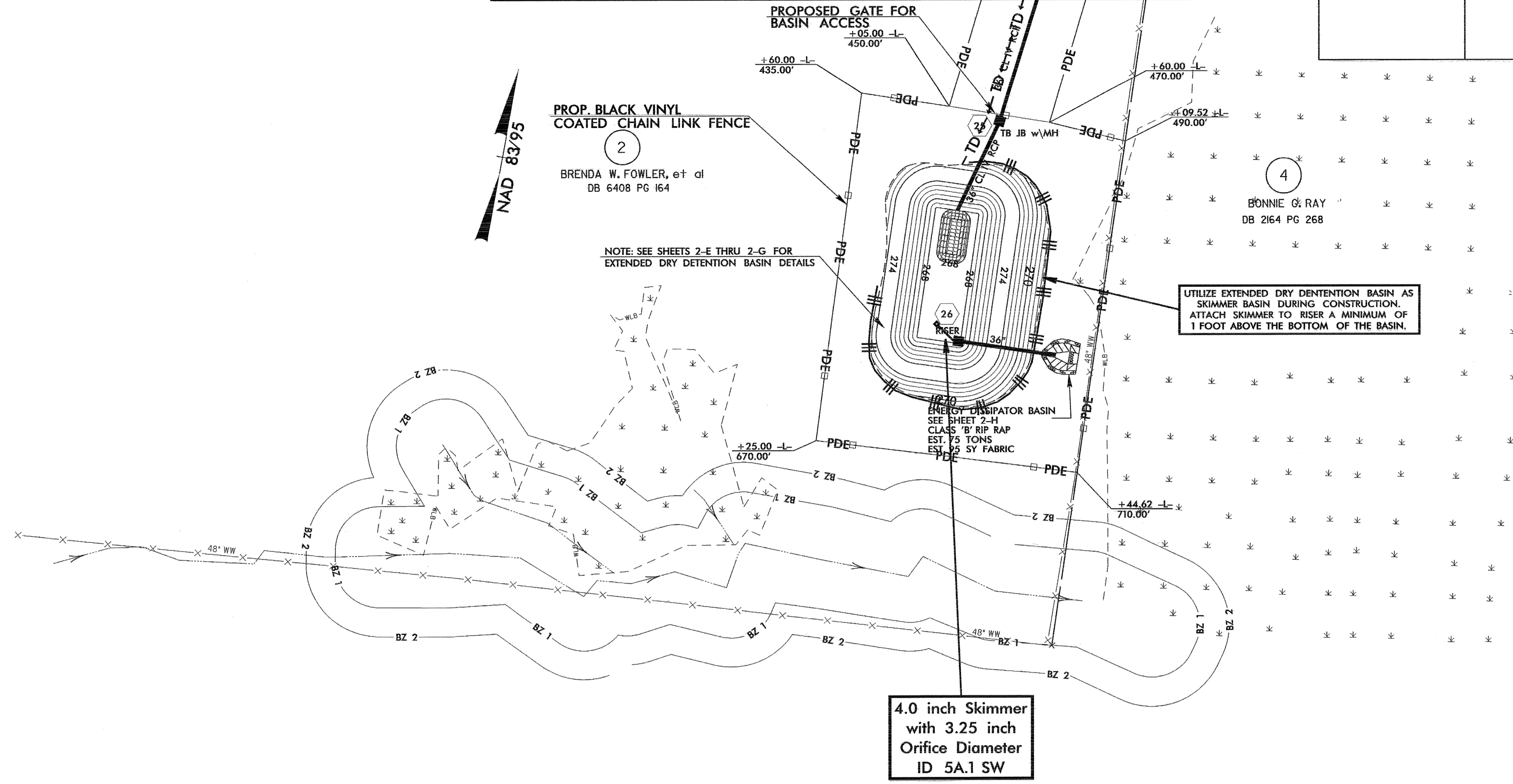
MATCHLINE (SEE SHEET 5A)

SEE SHEET 12 FOR -L- PROFILE
SEE SHEET S-1 THRU S- FOR STRUCTURE PLANS

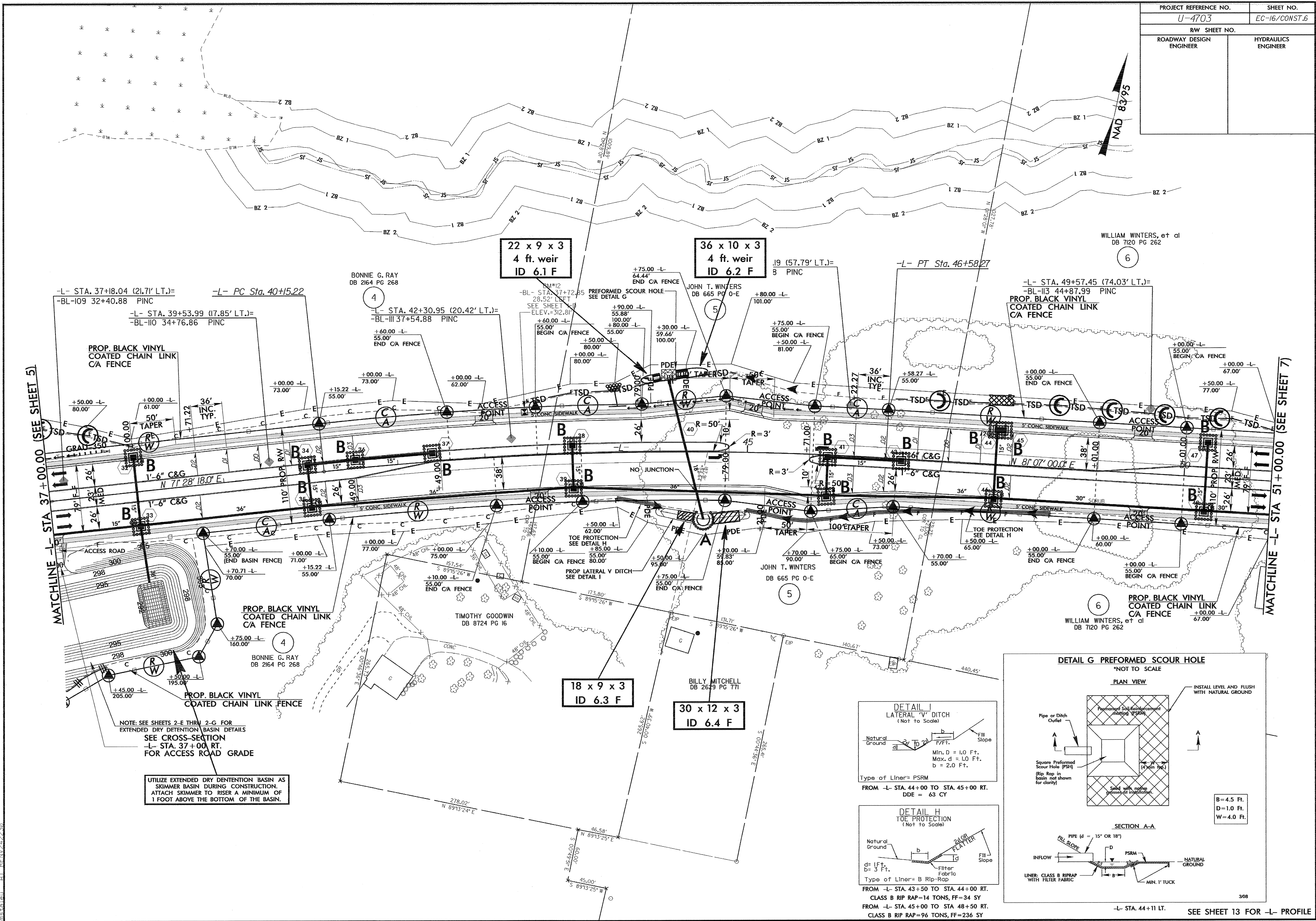
PROJECT REFERENCE NO.	SHEET NO.
U-4703	EC-15/CONST.5A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCHLINE (SEE SHEET 5)



PROJECT REFERENCE NO. U-4703	SHEET NO. EC-16/CONST.6
RW SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCHLINE -L- STA 37+00.00 (SEE SHEET 5)

MATCHLINE -L- STA 51+00.00 (SEE SHEET 7)

-L- STA. 37+18.04 (21.71' LT.)=
-BL-109 32+40.88 PINC

-L- STA. 39+53.99 (17.85' LT.)=
-BL-110 34+76.86 PINC

-L- PC Sta. 40+15.22

BONNIE G. RAY
DB 2164 PG 268

4

-L- STA. 42+30.95 (20.42' LT.)=
-BL-111 37+54.88 PINC

22 x 9 x 3
4 ft. weir
ID 6.1 F

36 x 10 x 3
4 ft. weir
ID 6.2 F

-L- STA. 49+57.45 (74.03' LT.)=
-BL-113 44+87.99 PINC

PROP. BLACK VINYL
COATED CHAIN LINK
C/A FENCE

WILLIAM WINTERS, et al
DB 7120 PG 262

6

ACCESS ROAD

298

295

298

295

PROP. BLACK VINYL
COATED CHAIN LINK
C/A FENCE

4

BONNIE G. RAY
DB 2164 PG 268

TIMOTHY GOODWIN
DB 8724 PG 16

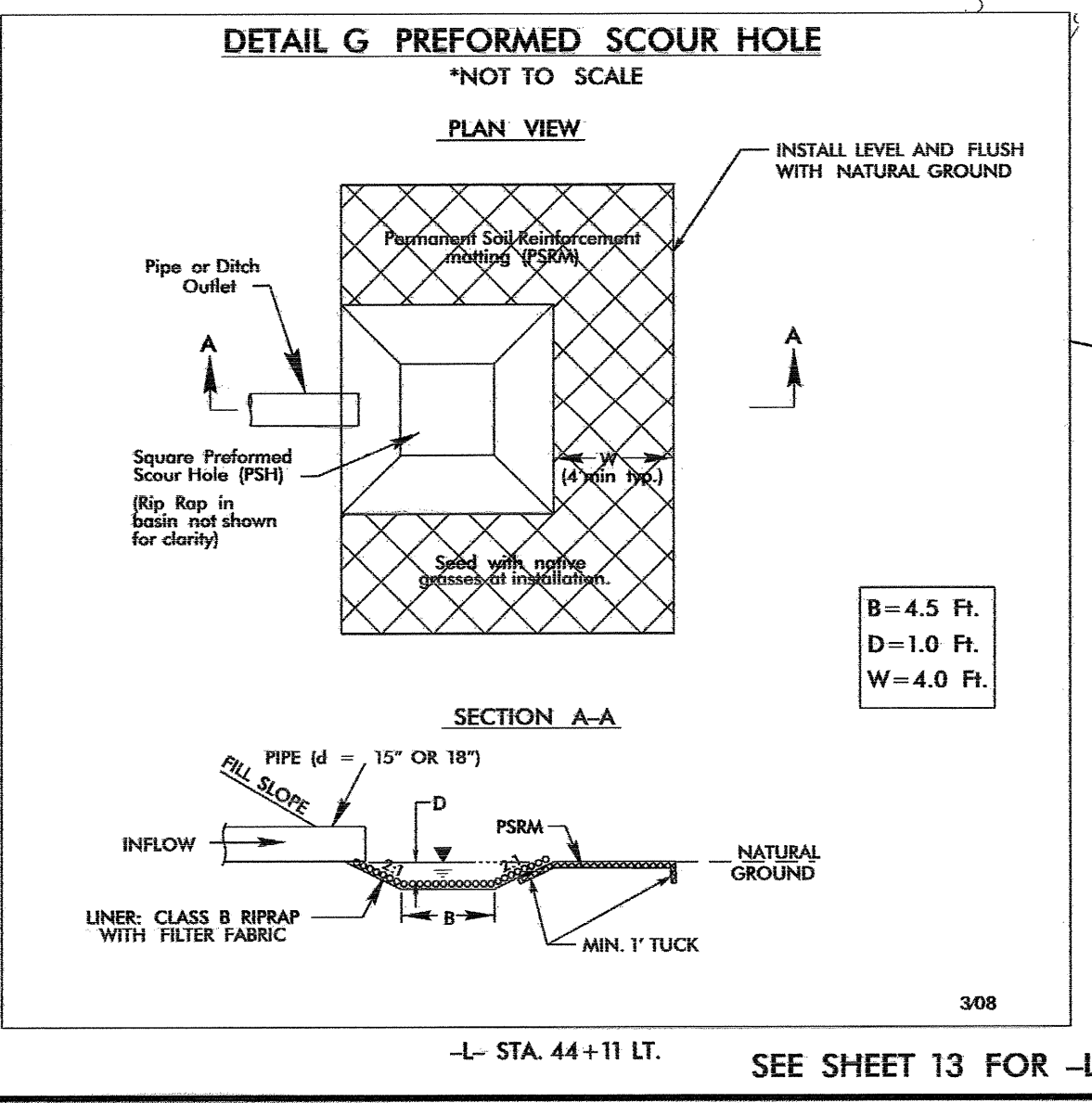
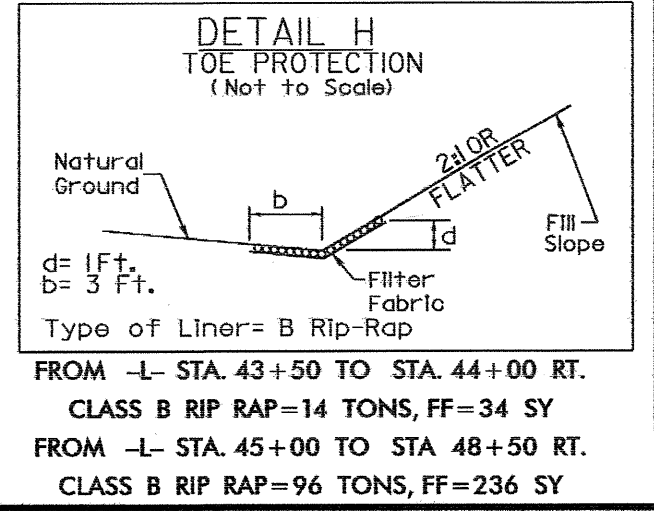
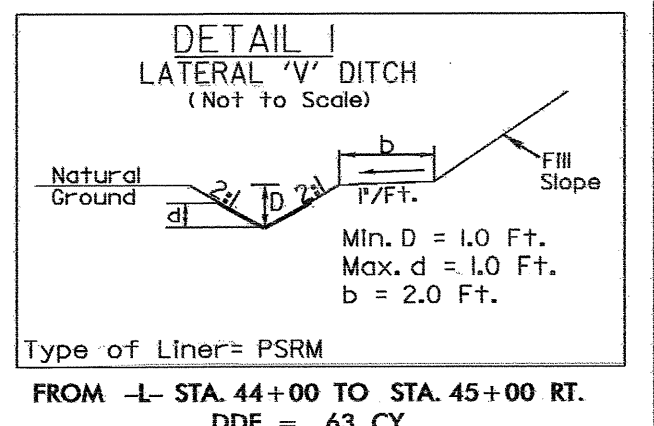
BILLY MITCHELL
DB 2629 PG 771

WILLIAM WINTERS, et al
DB 7120 PG 262

6

NOTE: SEE SHEETS 2-E THRU 2-G FOR
EXTENDED DRY DETENTION BASIN DETAILS
SEE CROSS-SECTION
-L- STA. 37+00 RT.
FOR ACCESS ROAD GRADE

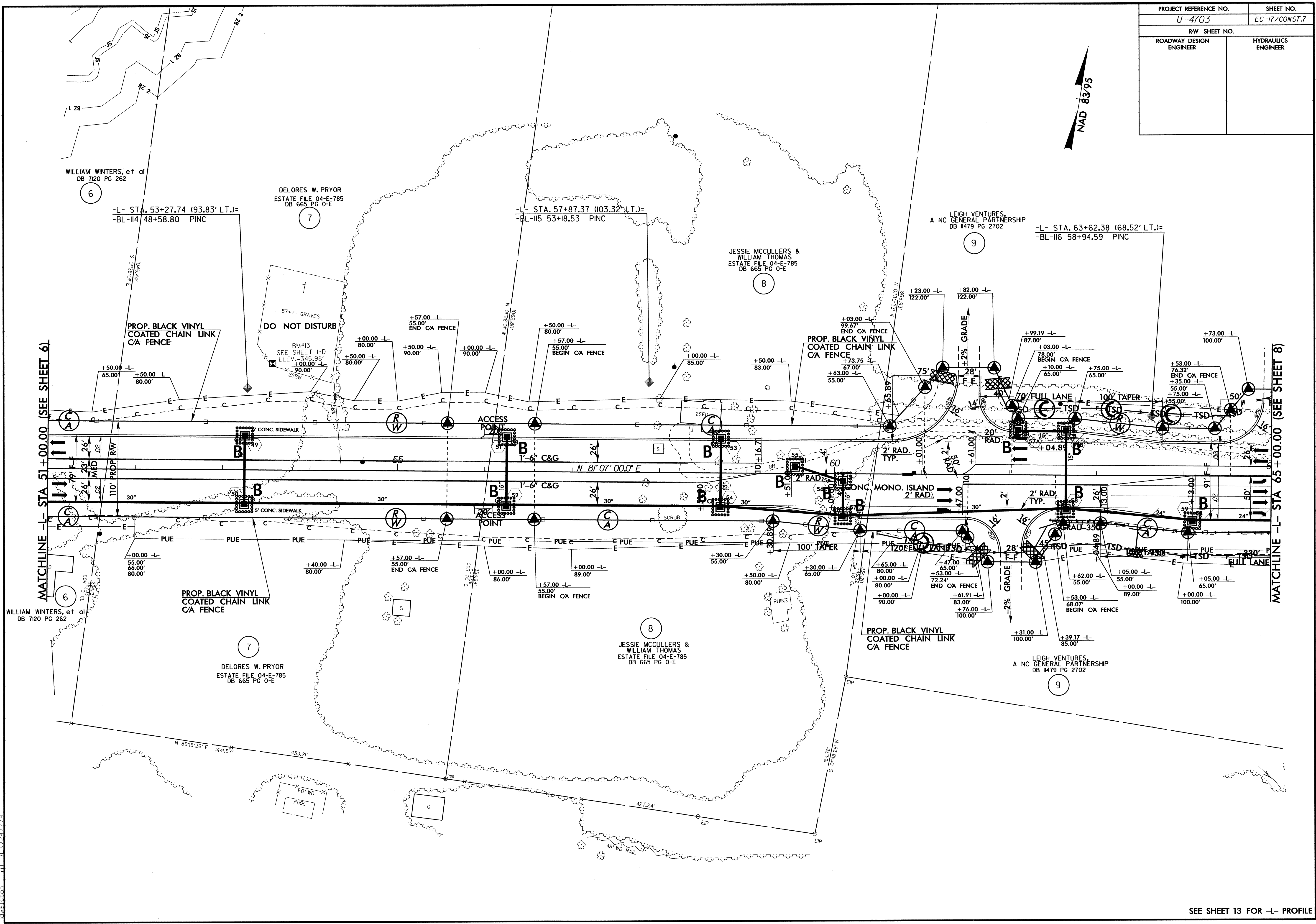
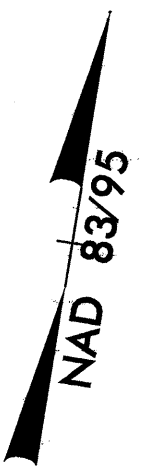
UTILIZE EXTENDED DRY DETENTION BASIN AS
SKIMMER BASIN DURING CONSTRUCTION.
ATTACH SKIMMER TO RISE A MINIMUM OF
1 FOOT ABOVE THE BOTTOM OF THE BASIN.



27-JAN-2010 11:04
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msh06

-L- STA. 44+11 LT. SEE SHEET 13 FOR -L- PROFILE

PROJECT REFERENCE NO.		SHEET NO.	
U-4703		EC-17/CONST.7	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



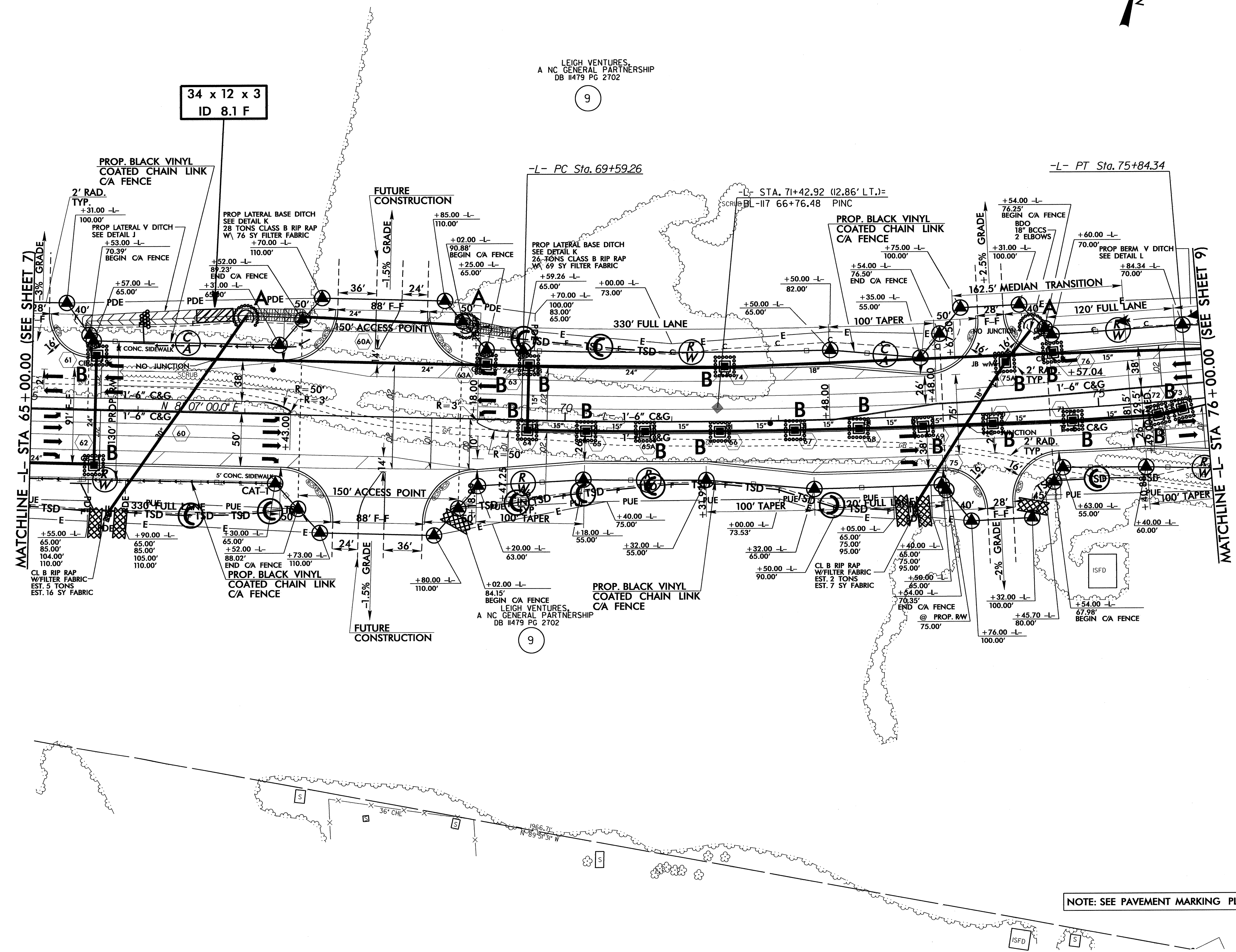
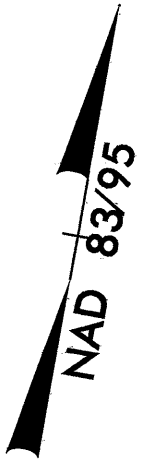
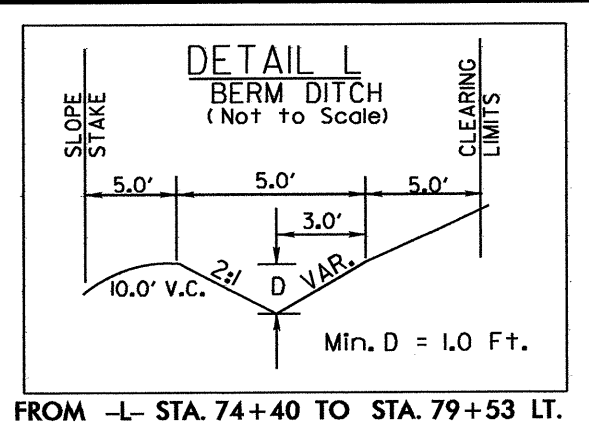
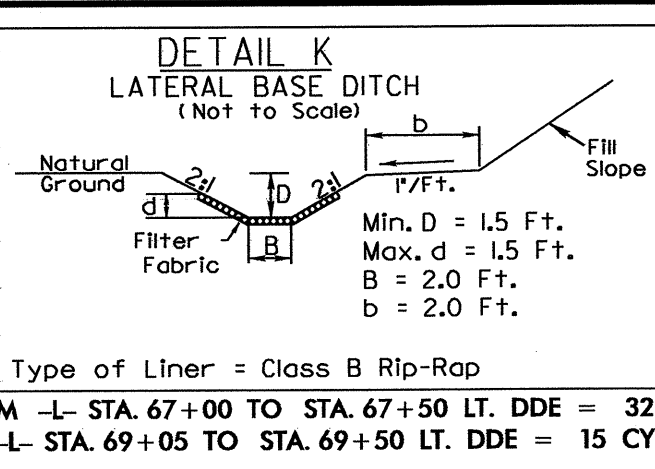
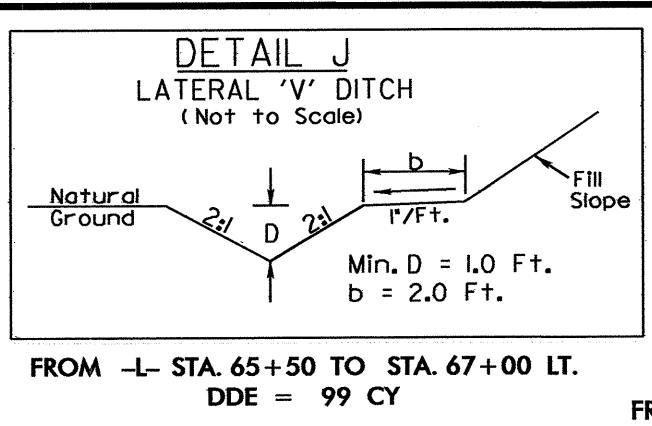
MATCHLINE -L- STA 51+00.00 (SEE SHEET 6)

MATCHLINE -L- STA 65+00.00 (SEE SHEET 8)

05-APR-2010 14:28
 RS-Environmentals
 Design: J-4703-EC-psh07.dgn
 Plot: AT-REV27774

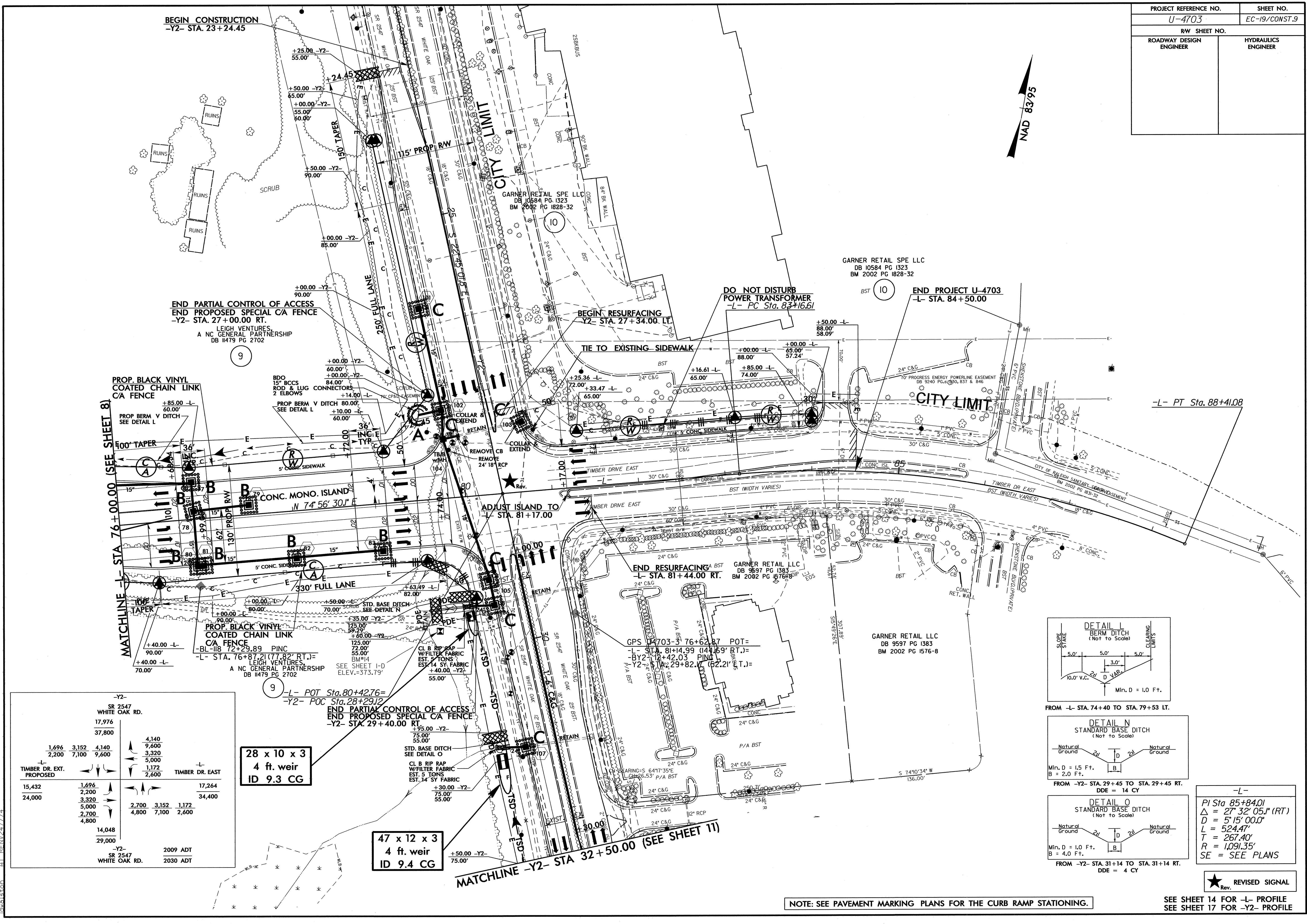
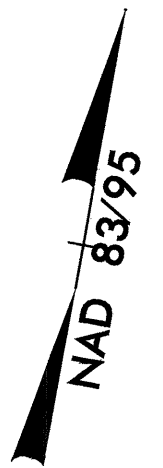
SEE SHEET 13 FOR -L- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-4703	EC-18/CONST.B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



05-APR-2010 14:26
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 At: R:\ENR\27774

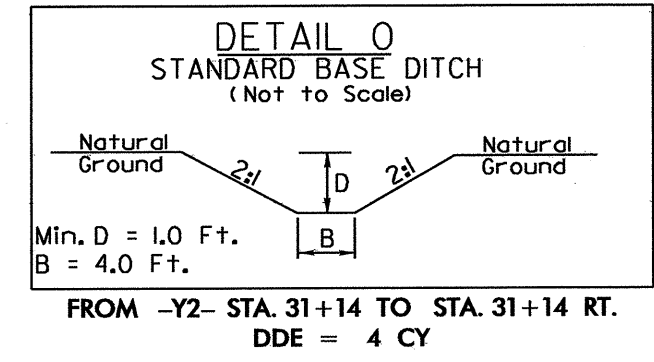
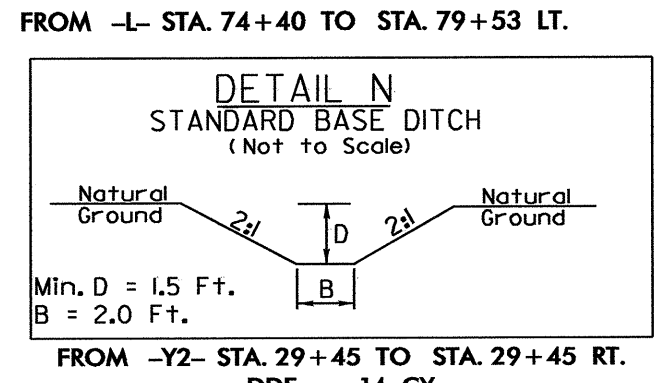
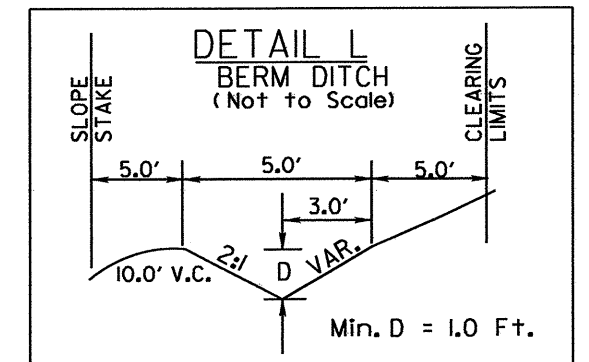
PROJECT REFERENCE NO.	SHEET NO.
U-4703	EC-19/CONST.9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-Y2-		2009 ADT	
SR 2547 WHITE OAK RD.		2030 ADT	
17,976	4,140	17,264	34,400
37,800	9,600		
	3,320		
	5,000		
	1,172		
	2,600		
	2,700		
	4,800		
	14,048		
	29,000		
-Y2-		2009 ADT	
SR 2547 WHITE OAK RD.		2030 ADT	
15,432	1,696	17,264	34,400
24,000	2,200		
	3,320		
	5,000		
	2,700		
	4,800		
	14,048		
	29,000		

28 x 10 x 3
4 ft. weir
ID 9.3 CG

47 x 12 x 3
4 ft. weir
ID 9.4 CG



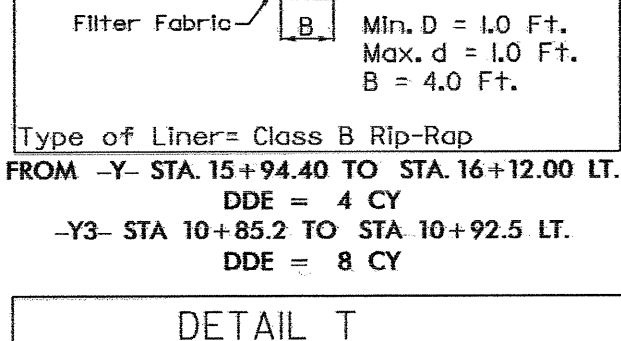
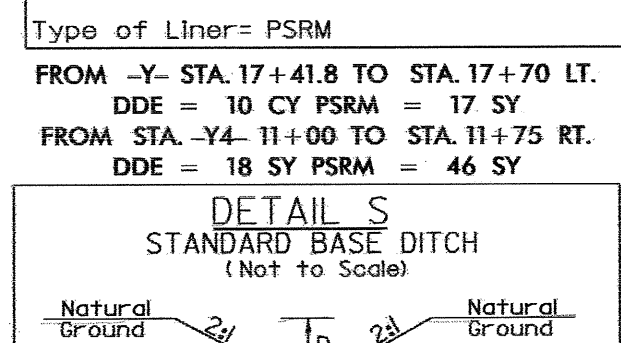
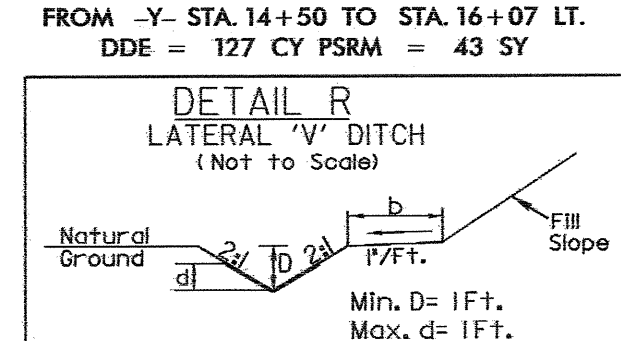
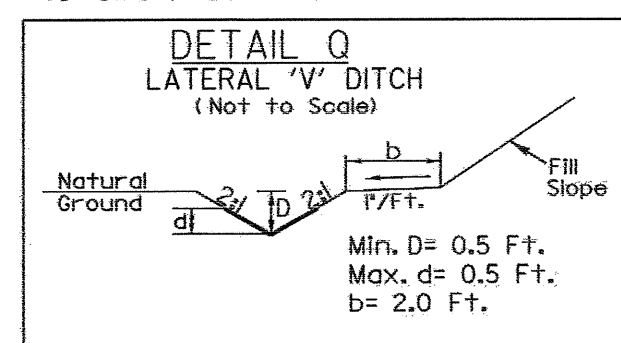
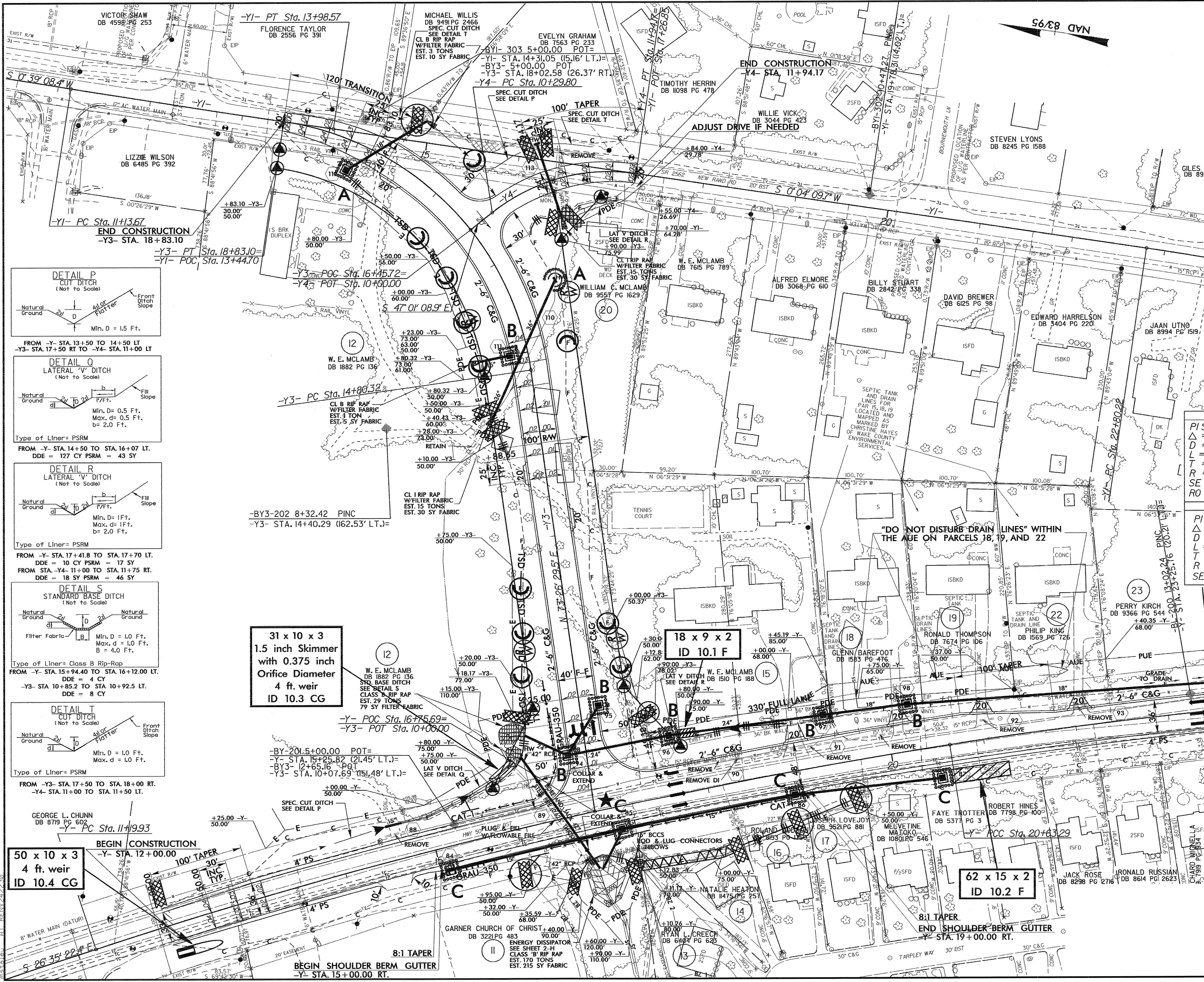
-L-
PI Sta 85+84.01
 $\Delta = 27^\circ 32' 05.1''$ (RT.)
D = 5' 15' 00.0"
L = 524.47'
T = 267.40'
R = 1,091.35'
SE = SEE PLANS

★ REVISED SIGNAL

NOTE: SEE PAVEMENT MARKING PLANS FOR THE CURB RAMP STATIONING.

SEE SHEET 14 FOR -L- PROFILE
SEE SHEET 17 FOR -Y2- PROFILE

05-APR-2010 14:32
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A:\BENTLEY\BENTLEY



31 x 10 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 10.3 CG

18 x 9 x 2
ID 10.1 F

50 x 10 x 3
4 ft. weir
ID 10.4 CG

62 x 15 x 2
ID 10.2 F

-Y-

PI Sta 15+92.67 Δ = 9' 25" 55.4" (RT) D = 0' 59" 59.4" L = 943.36' T = 472.75' R = 5730.53' SE = .02 RO = SEE PLANS	PI Sta 27+67.21 Δ = 14' 43" 36.0" (RT) D = 1' 03" 06.6" L = 1400.08' T = 703.92' R = 5447.19' SE = .02 RO = SEE PLANS
--	--

-Y1-

PI Sta 12+56.13 Δ = 0' 34" 58.7" (LT) D = 0' 12" 16.7" L = 284.90' T = 142.45' R = 28000.00' SE = SEE PLANS	PI Sta 24+86.97 Δ = 8' 39" 41.3" (RT) D = 2' 05" 55.5" L = 412.70' T = 206.74' R = 2730.00' SE = SEE PLANS
---	--

-Y3-

2009 ADT	2030 ADT
7,144	10,000
100- 3,572	100- 5,000
15,416	5,000
21,800	7,708
	10,900
-Y- 50	100- 7,708
	10,900

-Y3-

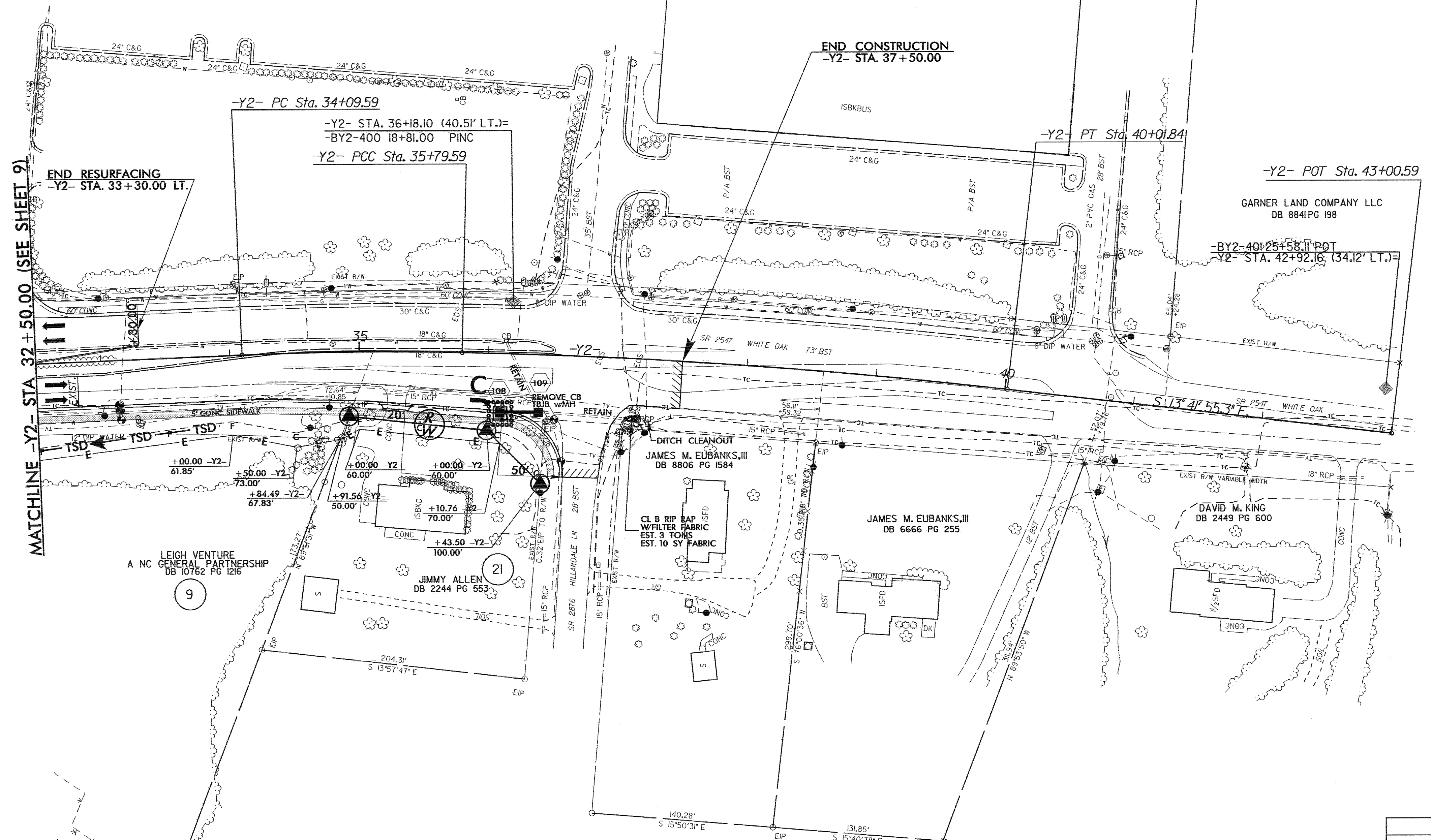
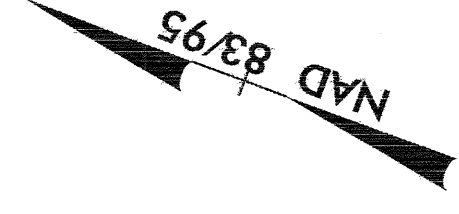
PI Sta 17+44.52 Δ = 7' 31" 45.0" (LT) D = 18' 11" 20.9" L = 402.78' T = 234.20' R = 315.00' SE = .04 RO = SEE PLANS
--

-Y4-

PI Sta 11+6.95 Δ = 47' 05" 18.6" (RT) D = 28' 38" 52.4" L = 164.37' T = 87.15'
--

27-MAR-2010 11:44
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 10:11:11 AM
 10:11:11 AM

PROJECT REFERENCE NO.	SHEET NO.
U-4703	EC-21/CONST.II
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-Y2-	
PI Sta 34+94.62	PI Sta 37+90.87
$\Delta = 3^{\circ} 40' 32.1''$ (RT)	$\Delta = 5^{\circ} 22' 34.4''$ (RT)
$D = 2^{\circ} 09' 43.6''$	$D = 1^{\circ} 16' 23.7''$
$L = 170.00'$	$L = 122.25'$
$T = 85.03'$	$T = 211.28'$
$R = 2,650.00'$	$R = 4,500.00'$
SE = SEE PLANS	SE = SEE PLANS

NOTE: SEE PAVEMENT MARKING PLANS FOR THE CURB RAMP STATIONING.

SEE SHEET 17 FOR -Y2- PROFILE

27-JAN-2010 11:46
 R:\Environment\Design\U-4703-EC_psh1.dgn
 psh1.dwg - AT:RENV242220