

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2246B	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

TIP PROJECT: R-2246B

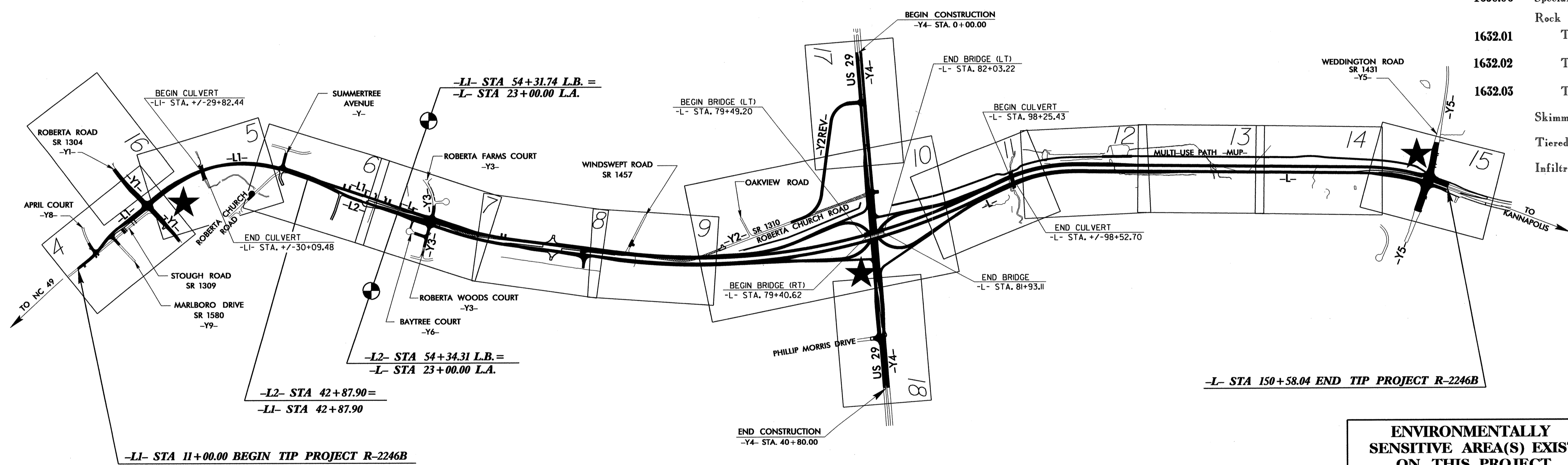
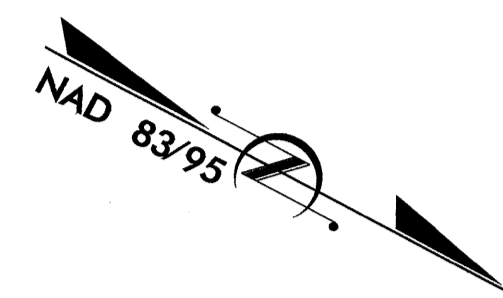
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

CABARRUS COUNTY

LOCATION: GEORGE LILES PARKWAY FROM SOUTH OF SR 1304
(ROBERTA ROAD) TO SR 1431 (WEDDINGTON ROAD)

TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURES, AND SIGNALS



EROSION AND SEDIMENT CONTROL MEASURES

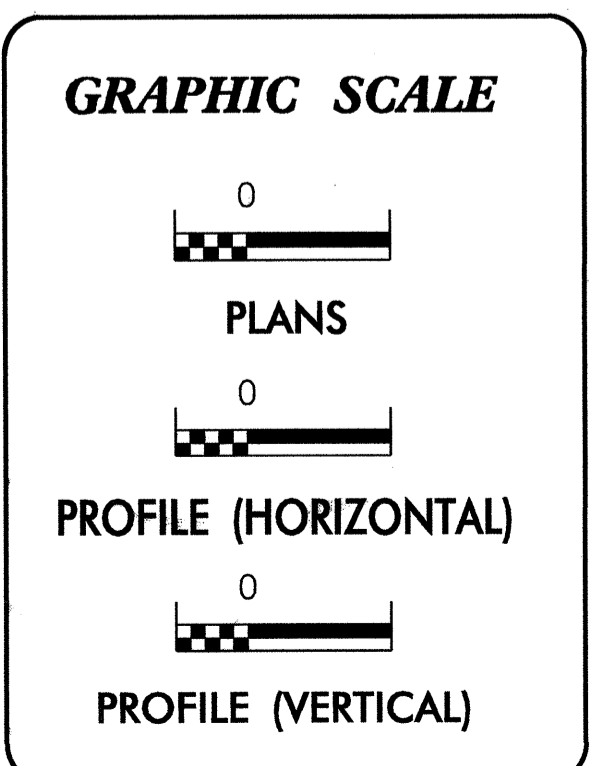
Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	---
1630.05	Temporary Diversion	---
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	---X---
1622.01	Temporary Berms and Slope Drains	---X---
1630.02	Silt Basin Type B	---X---
1633.01	Temporary Rock Silt Check Type-A	---X---
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	---X---
1633.02	Temporary Rock Silt Check Type-B	---X---
	Wattle / Coir Fiber Wattle	---X---
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	---X---
1634.01	Temporary Rock Sediment Dam Type-A	---X---
1634.02	Temporary Rock Sediment Dam Type-B	---X---
1635.01	Rock Pipe Inlet Sediment Trap Type-A	---X---
1635.02	Rock Pipe Inlet Sediment Trap Type-B	---X---
1630.04	Stilling Basin	---X---
1630.06	Special Stilling Basin	---X---
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	---X---
	Tiered Skimmer Basin	---X---
	Infiltration Basin	---X---

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.

303(d) IMPAIRED WATER(S) EXIST ON THIS PROJECT
303(d) Impaired Water Zone(s) Exist From Sta. _____ Begin to Sta. _____ End
Refer To E. C. Special Provisions for Special Considerations.



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

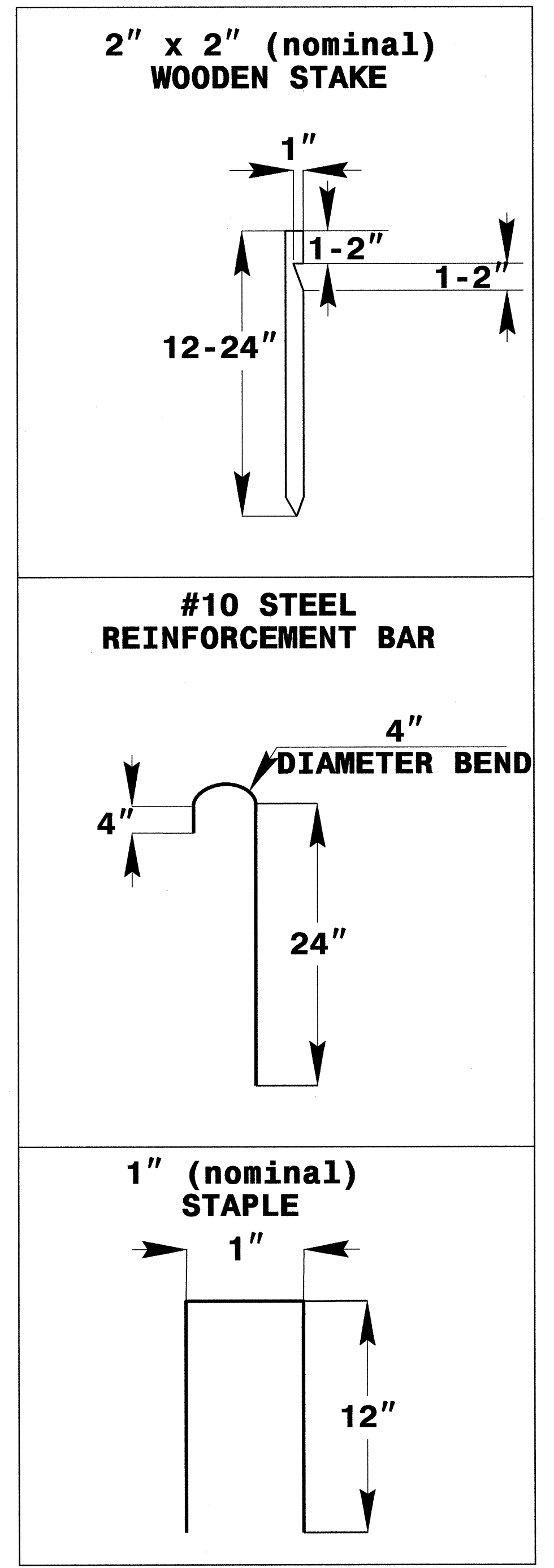
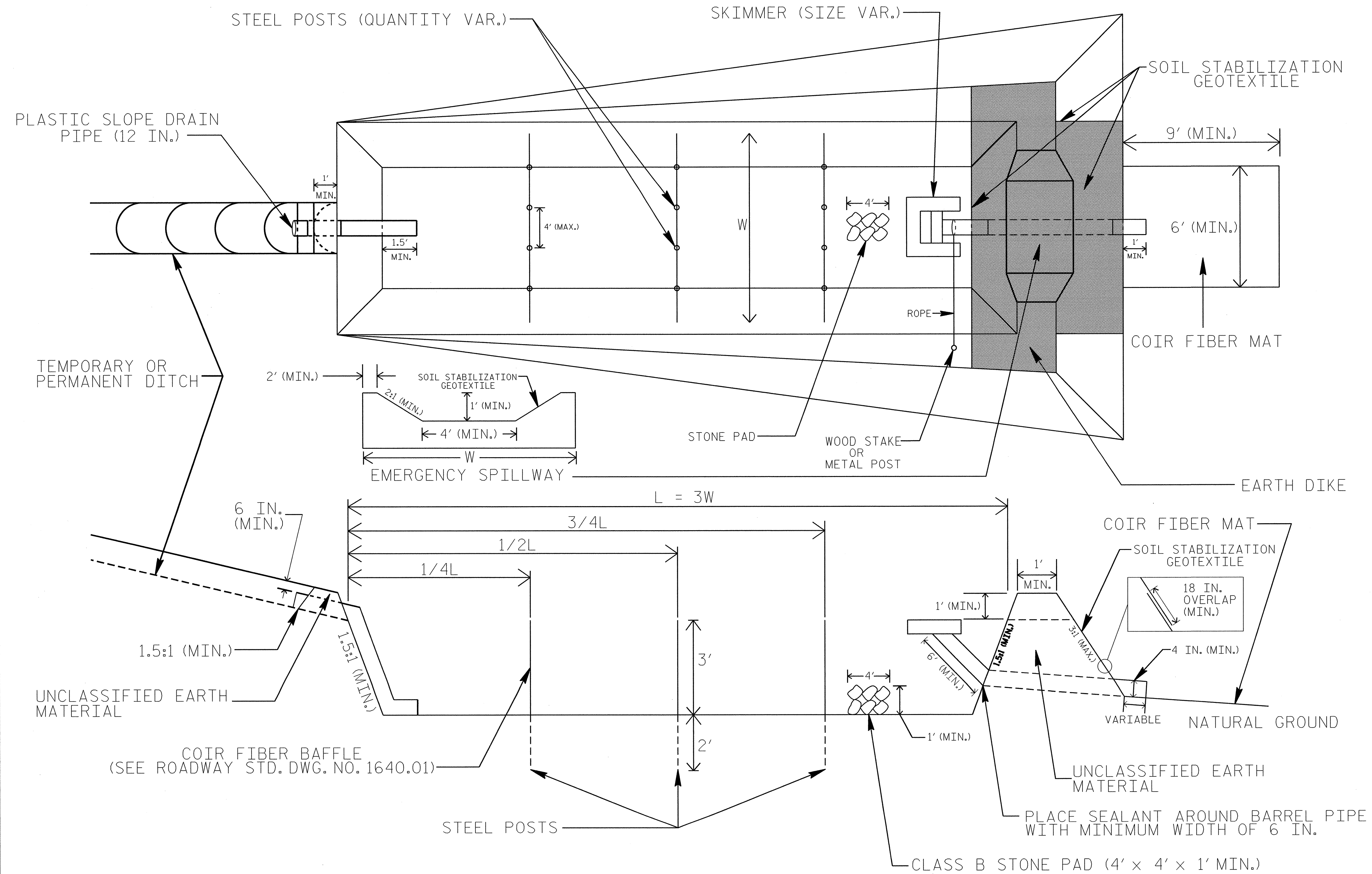
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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		

28-DEC-2012 09:47
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Jennif...
41

PROJECT REFERENCE NO. R-2246B	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL



COIR FIBER MAT ANCHOR OPTIONS

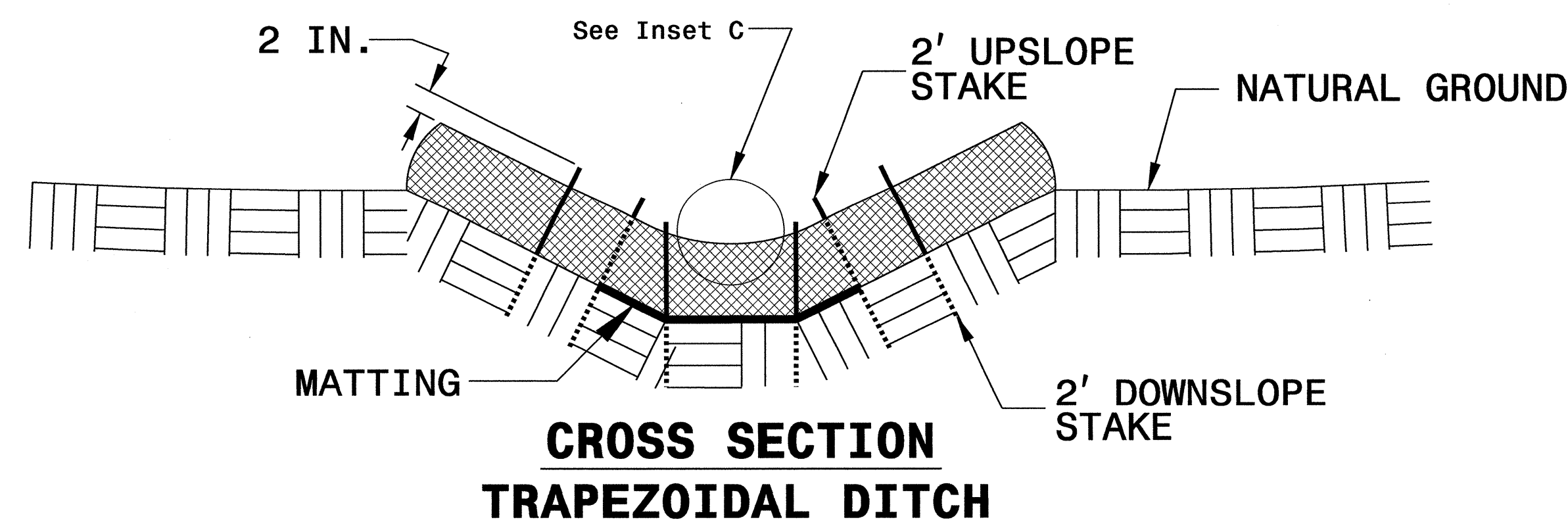
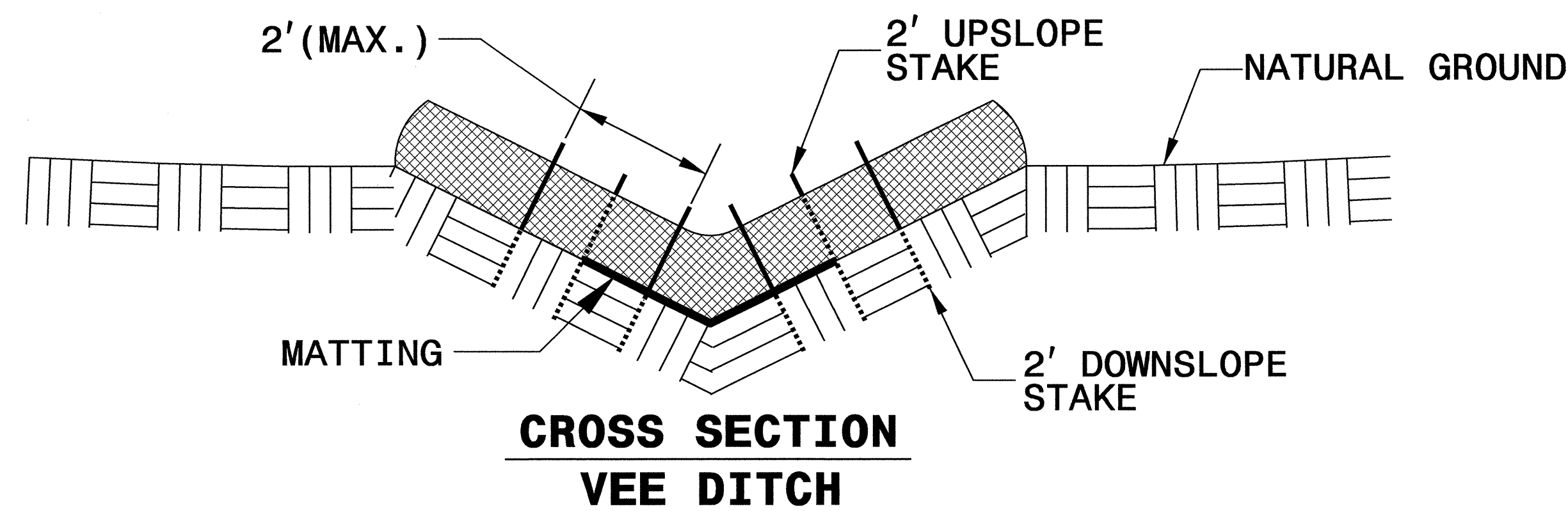
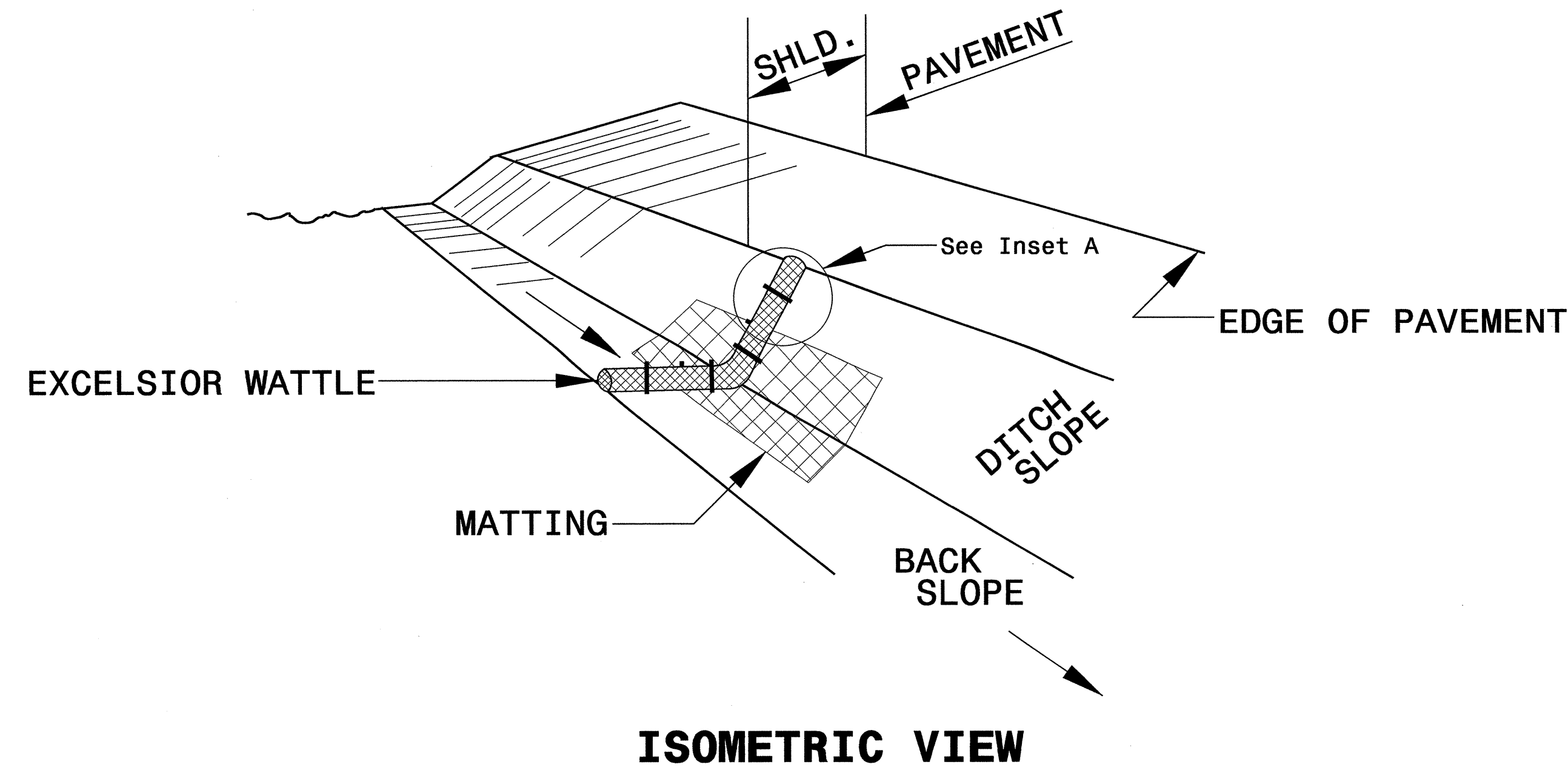
NOTES

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 WEIR 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 OR TARP 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. R-2246B	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

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

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

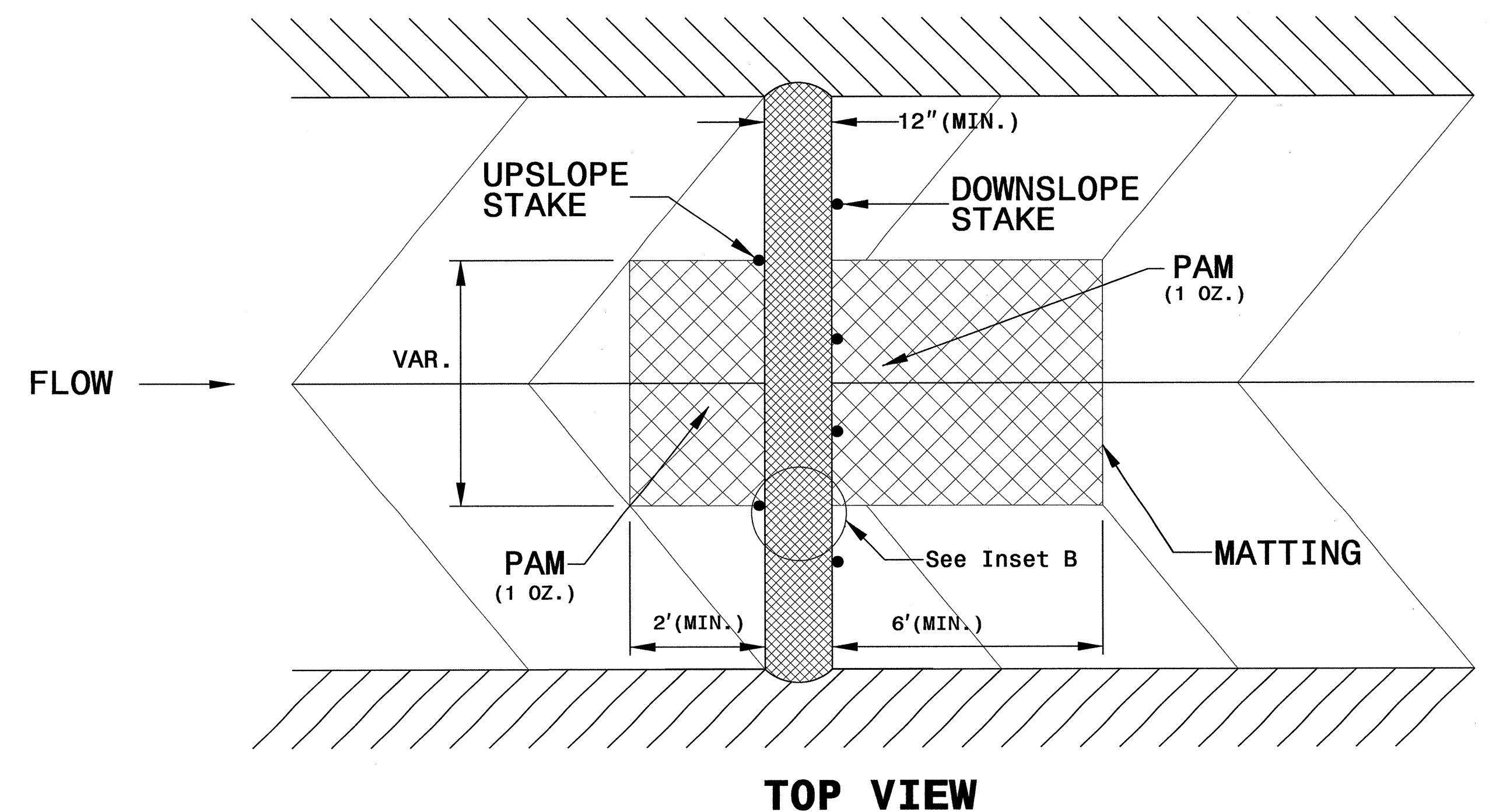
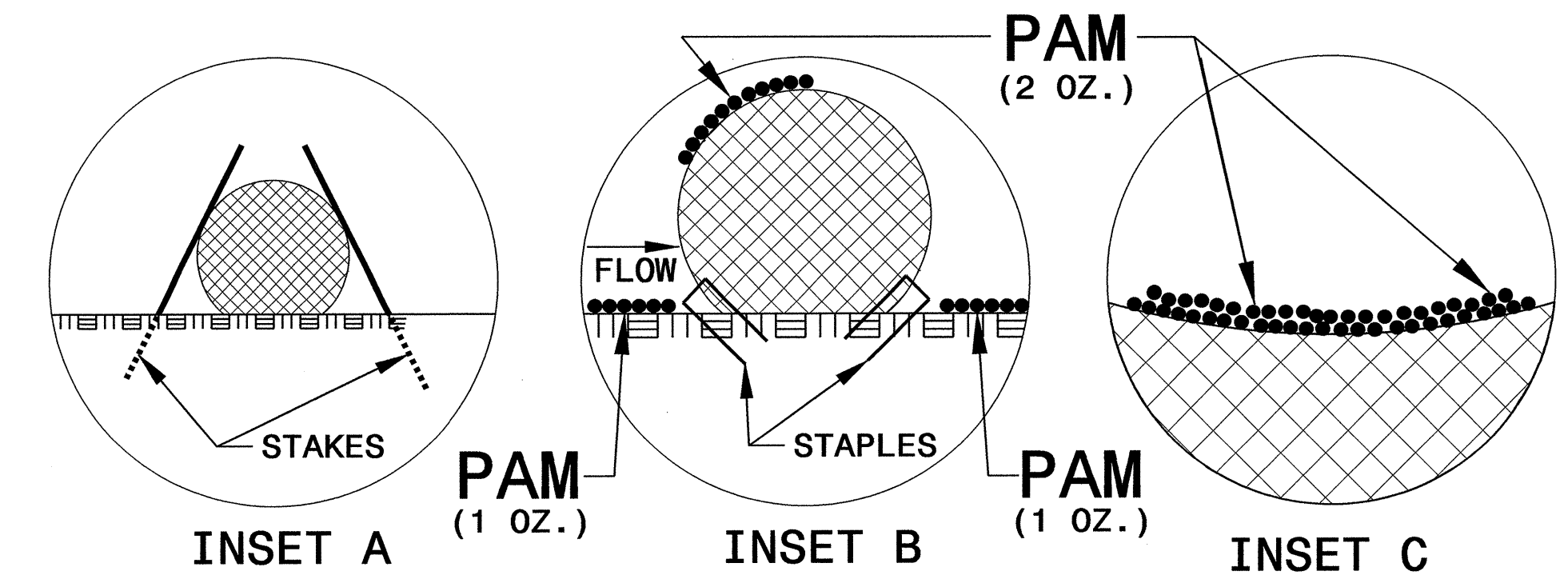
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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

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

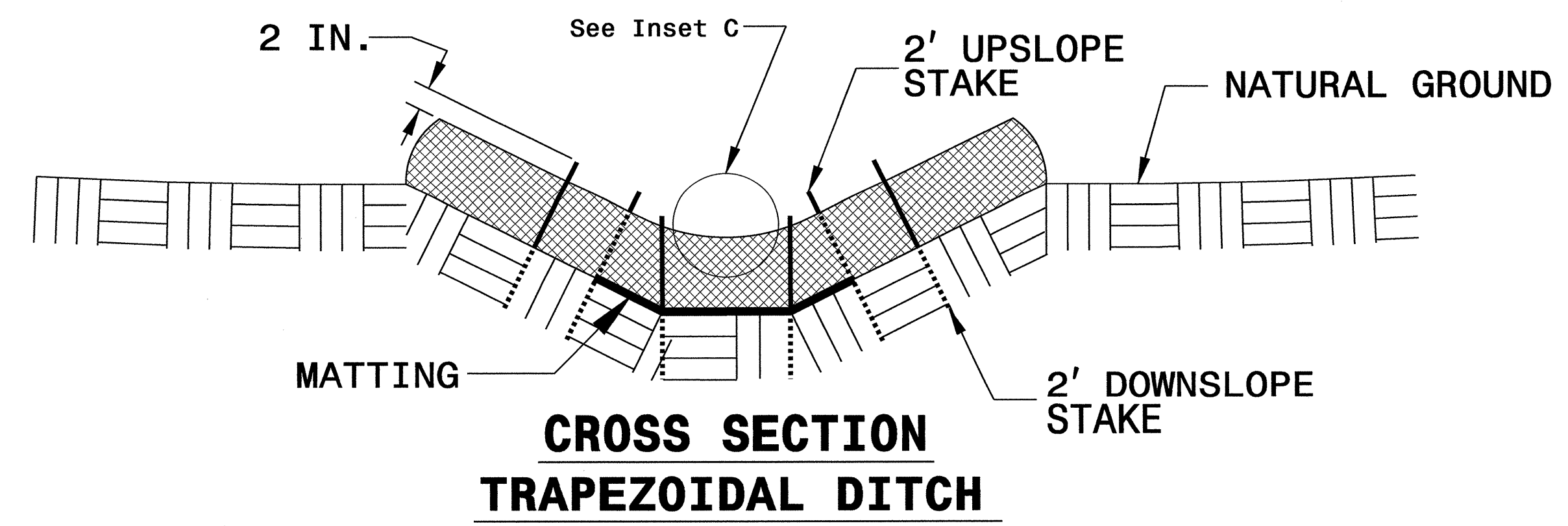
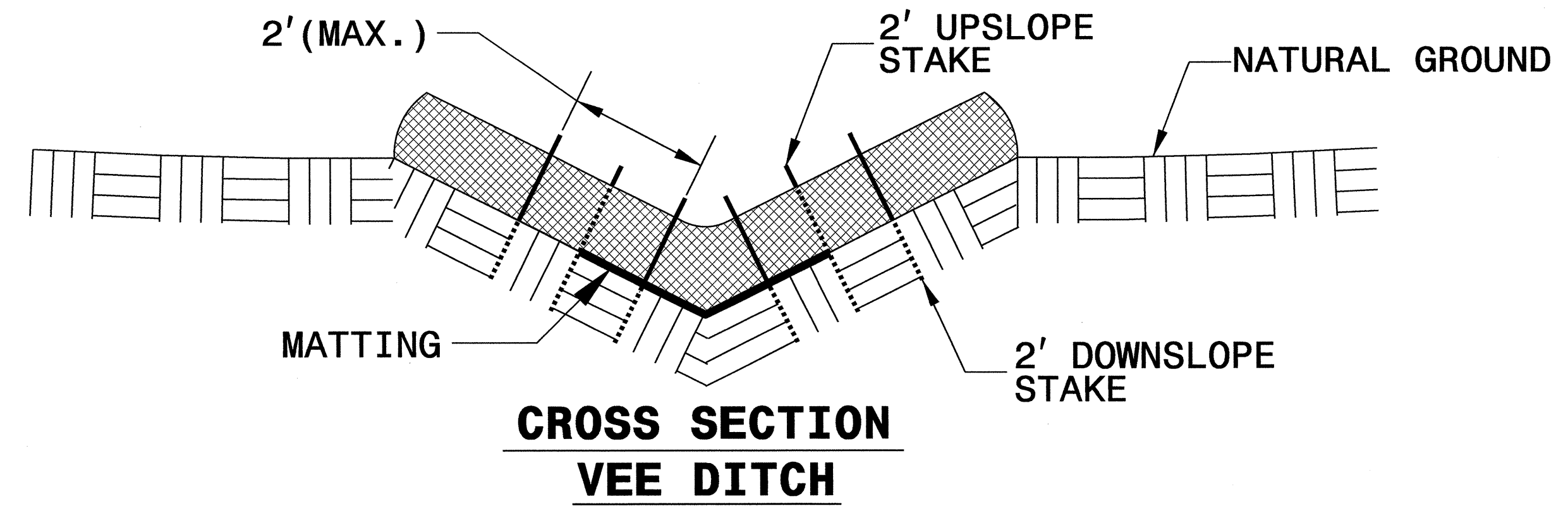
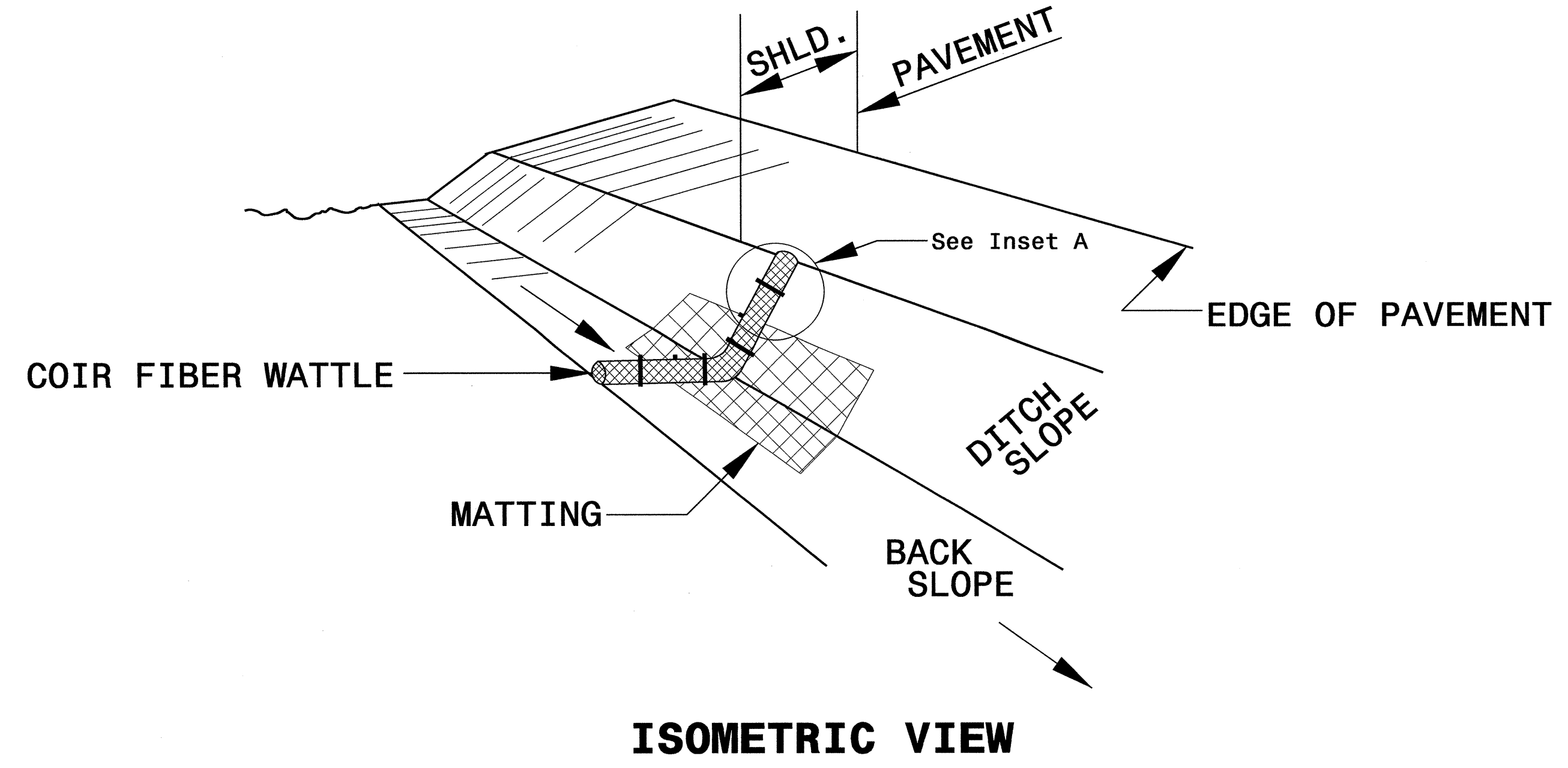
PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

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

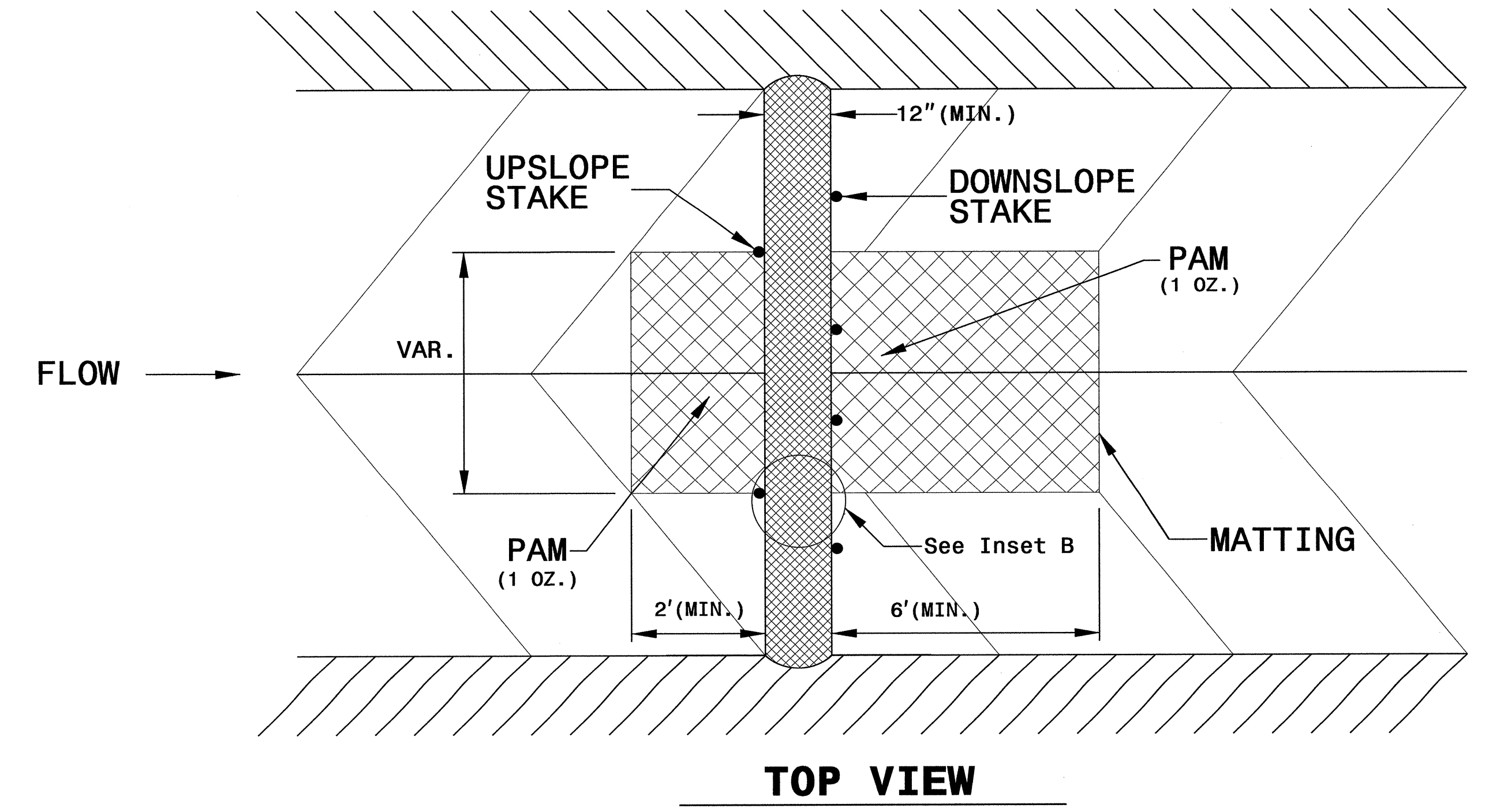
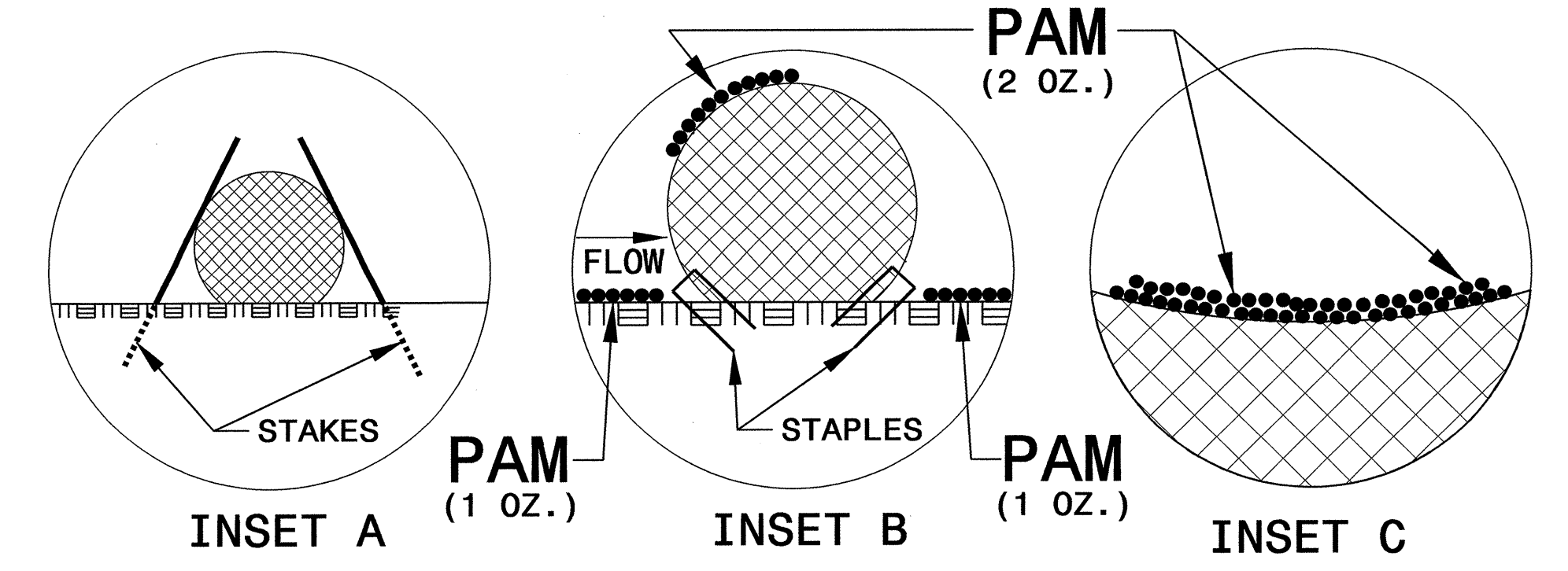


PROJECT REFERENCE NO. R-2246B	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

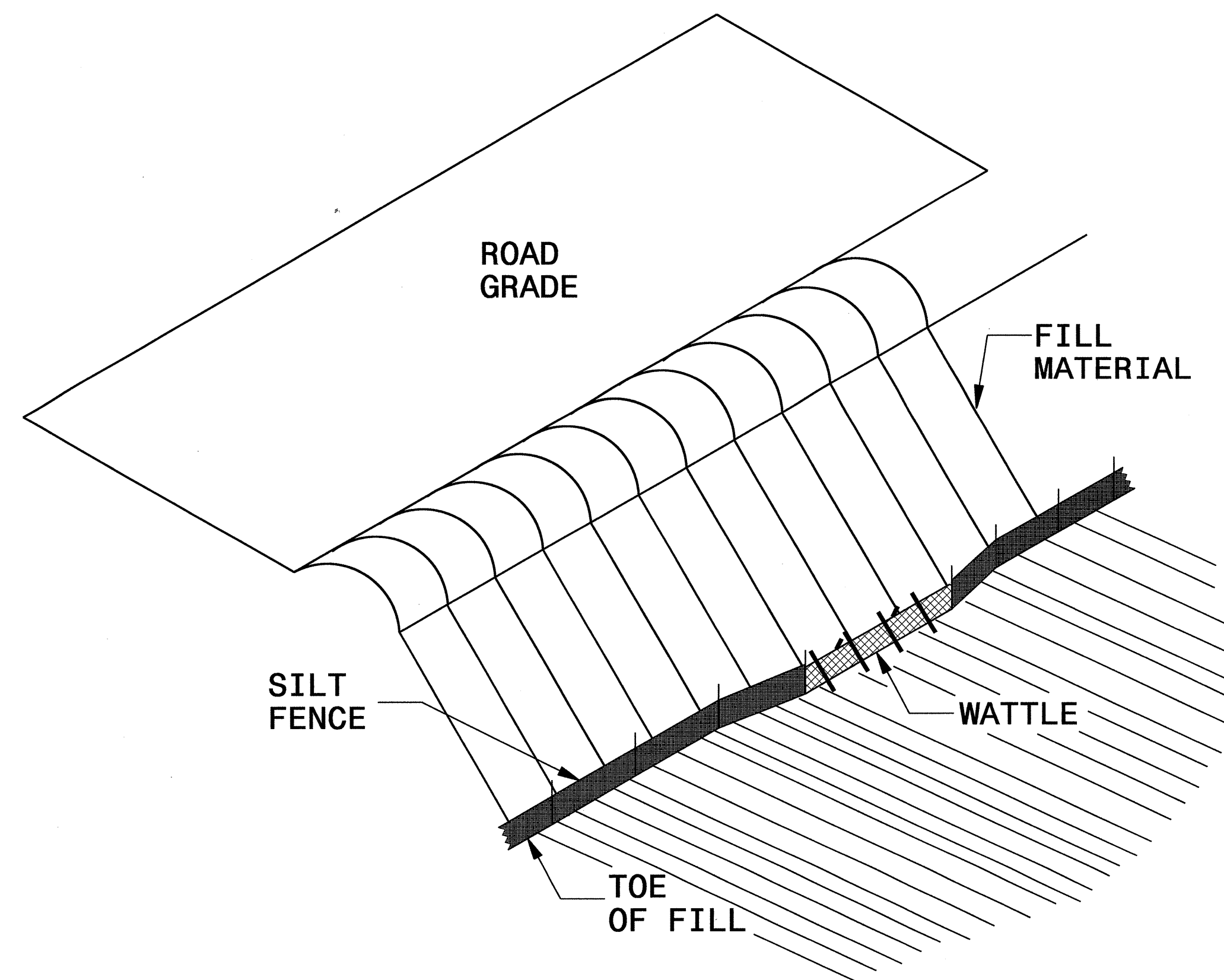


- NOTES:
- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
 - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
 - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
 - PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
 - INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
 - INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.
 - PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.
 - INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

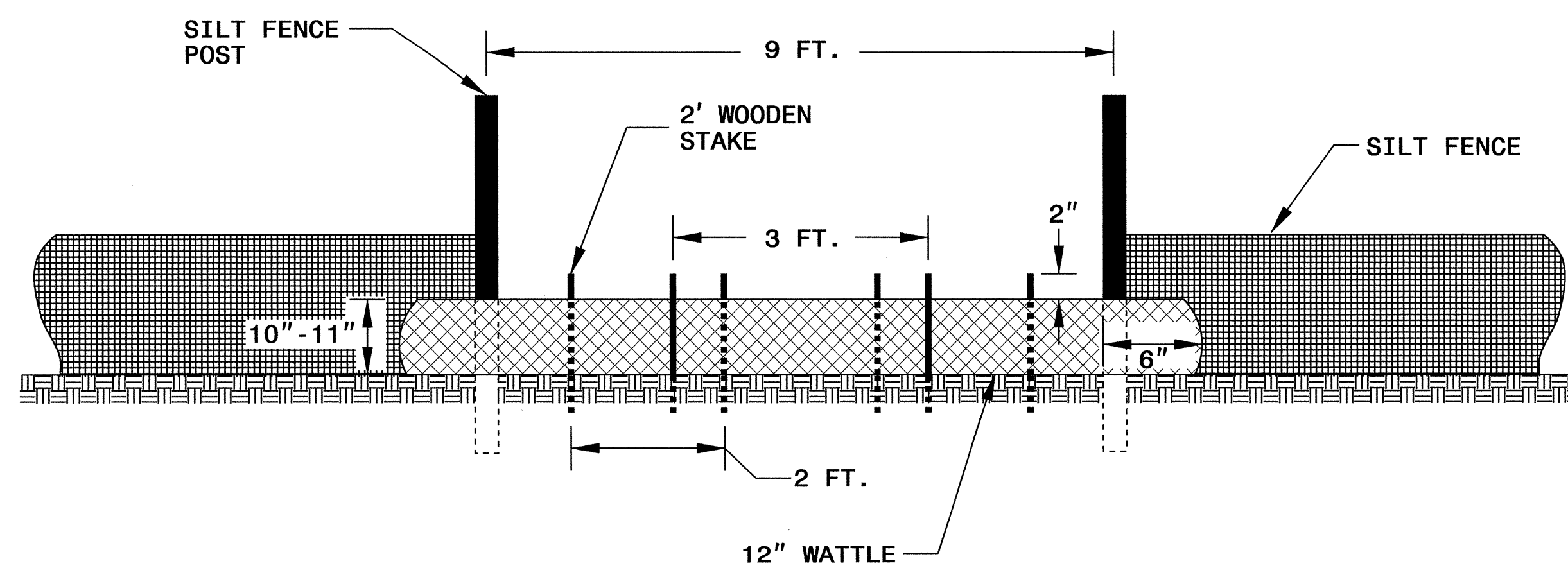


SILT FENCE COIR FIBER WATTLE BREAK DETAIL

PROJECT REFERENCE NO. R-2246B	SHEET NO. EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ISOMETRIC VIEW

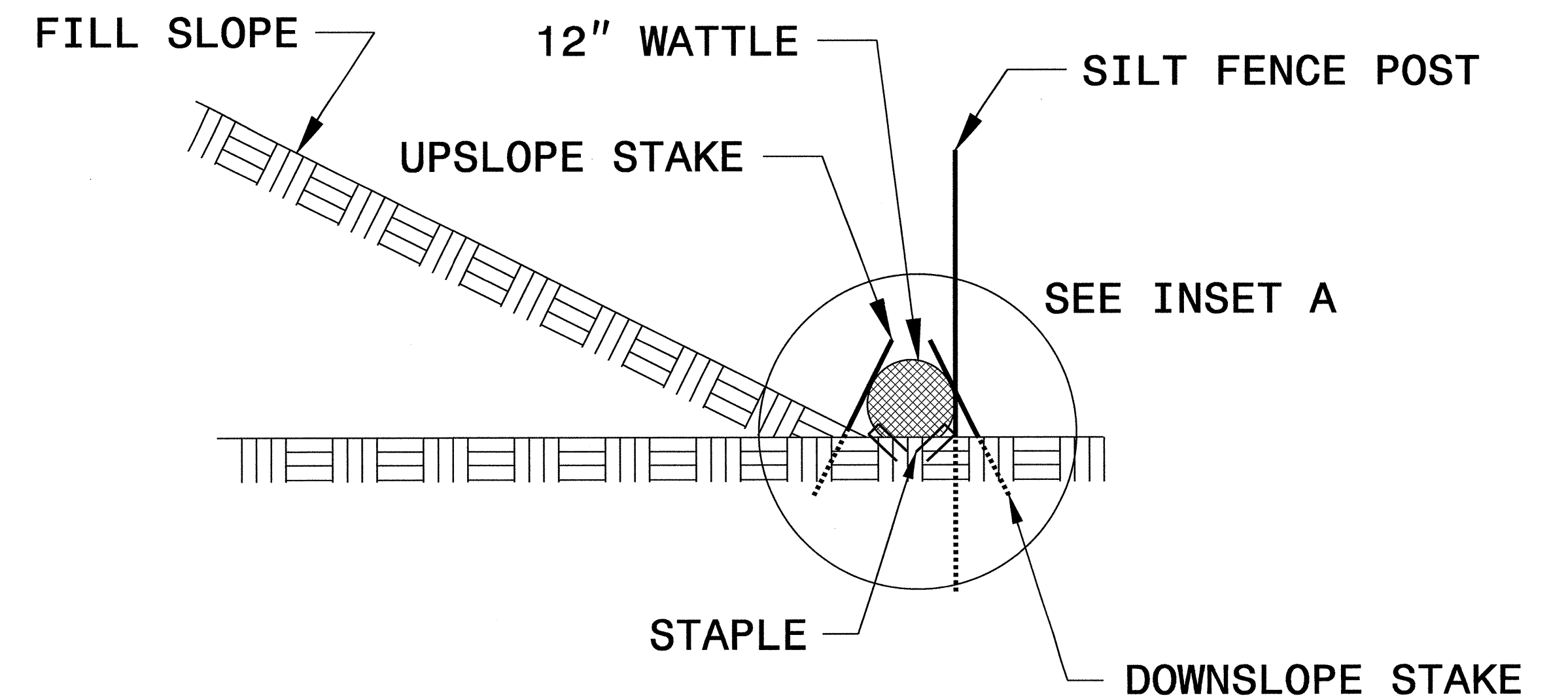
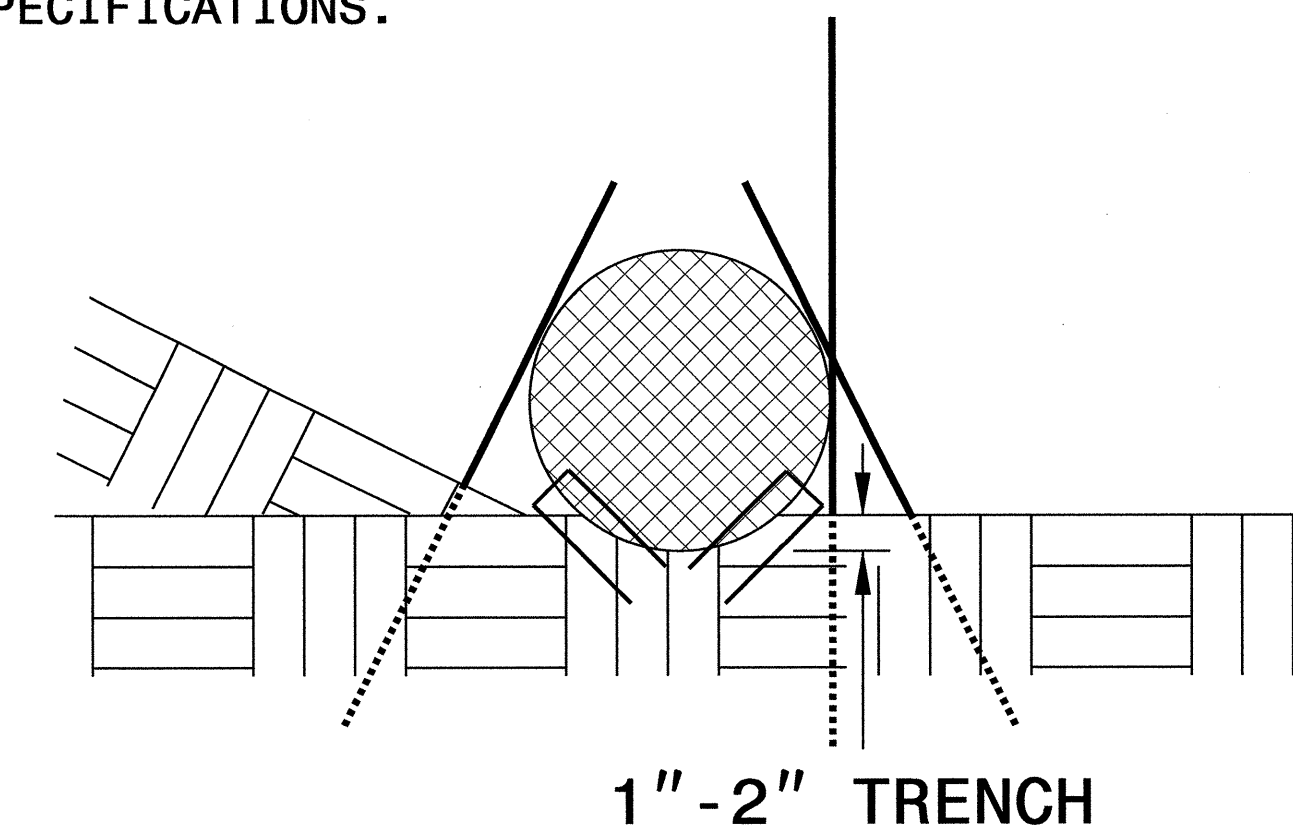


VIEW FROM SLOPE

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.

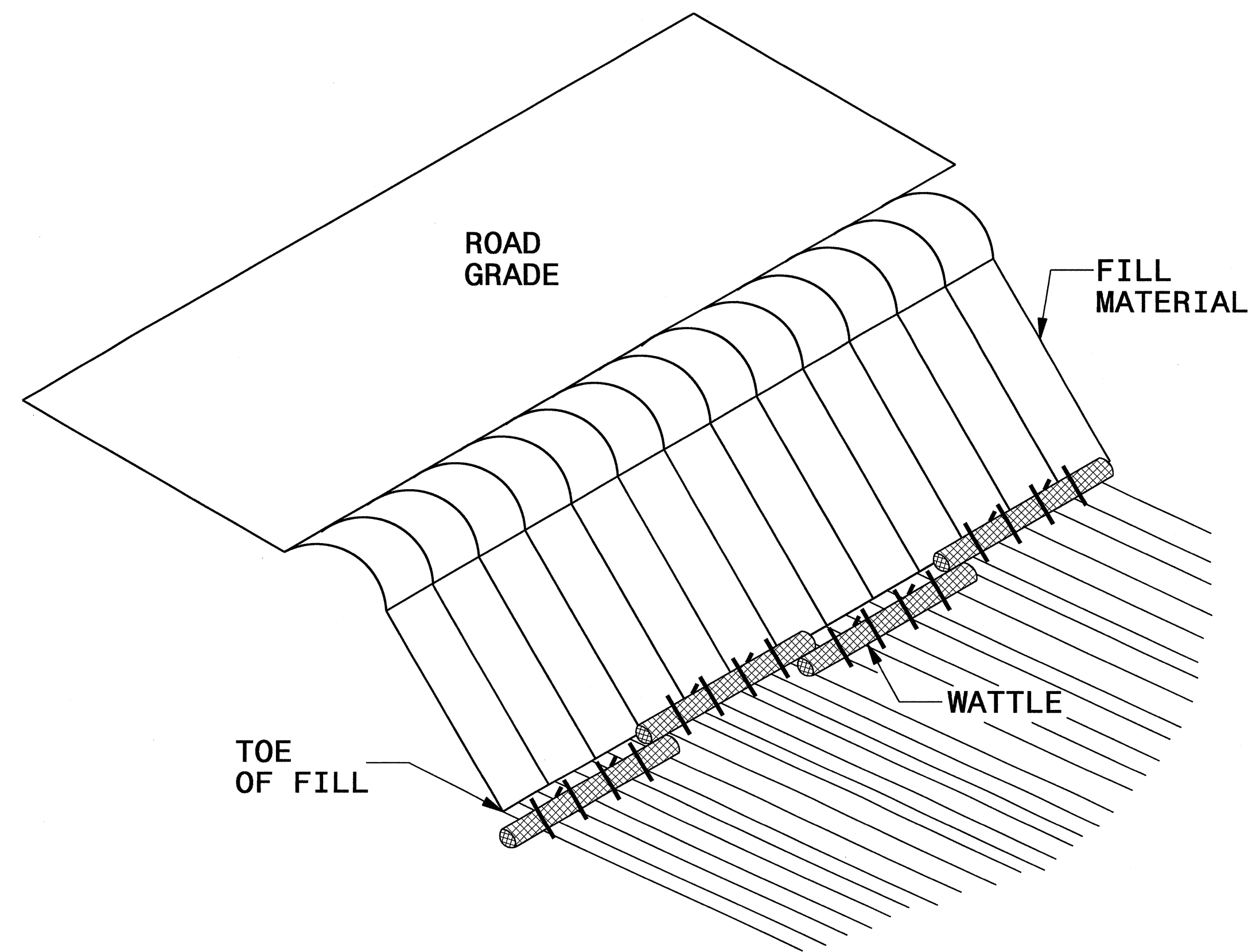
INSET A



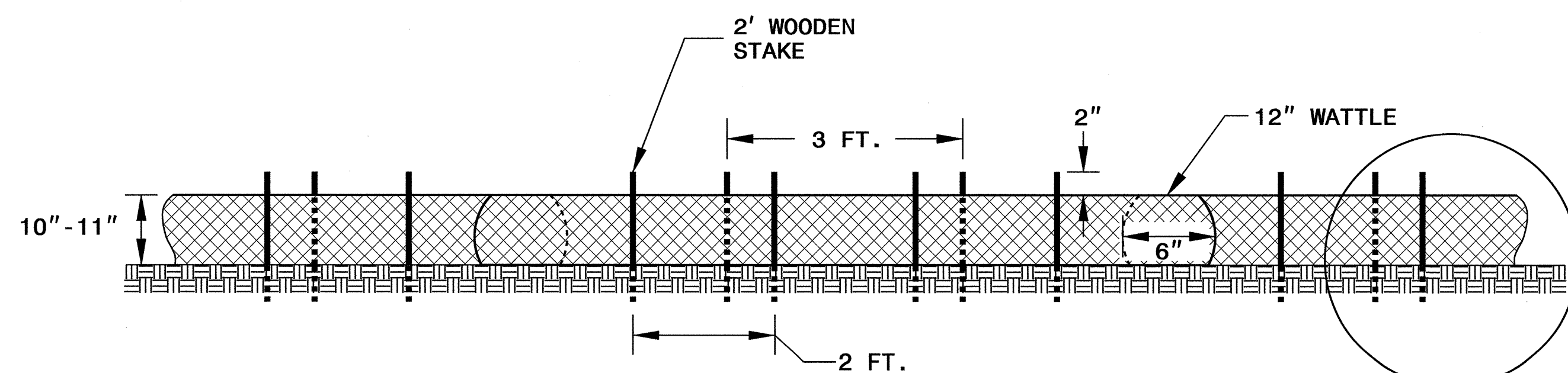
SIDE VIEW

PROJECT REFERENCE NO. <i>R-2246B</i>	SHEET NO. <i>EC-2D</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE BARRIER DETAIL



ISOMETRIC VIEW



FRONT VIEW

SEE INSET A

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLES ON TOE OF SLOPE.

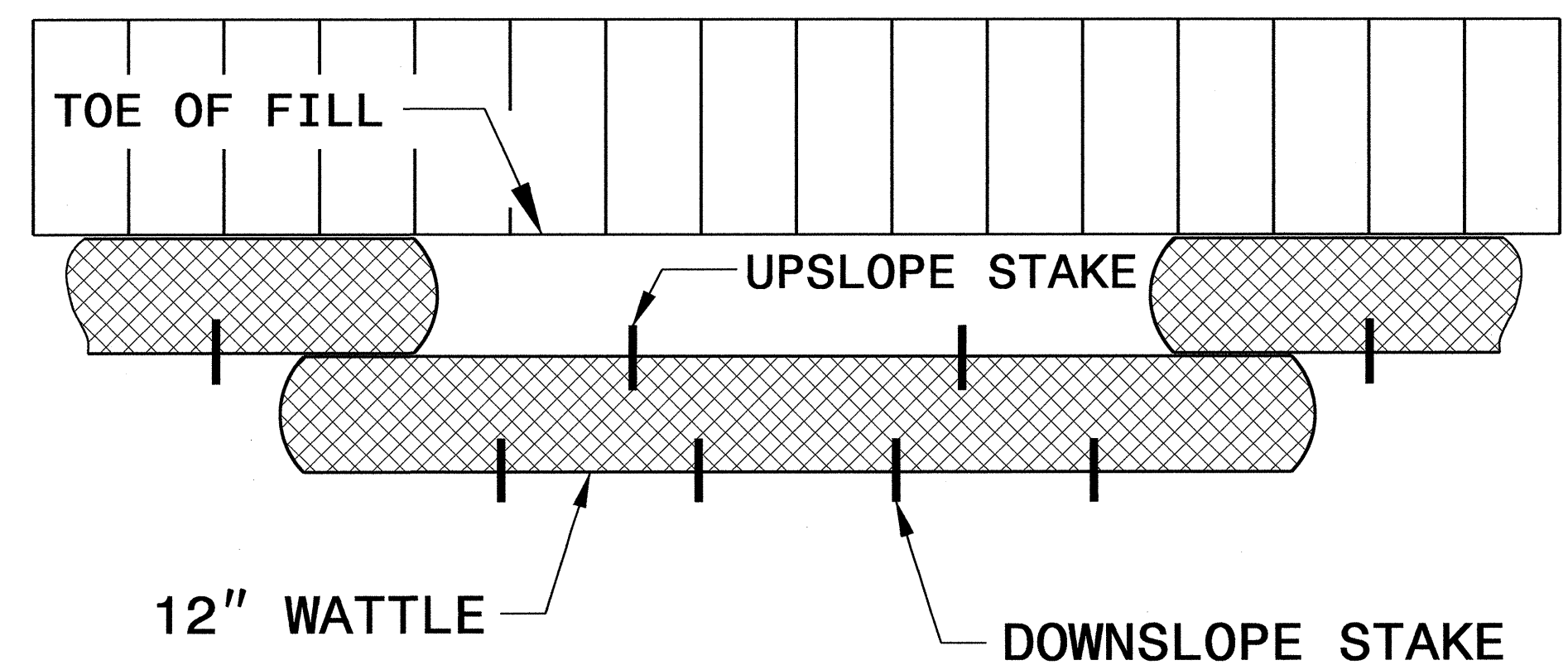
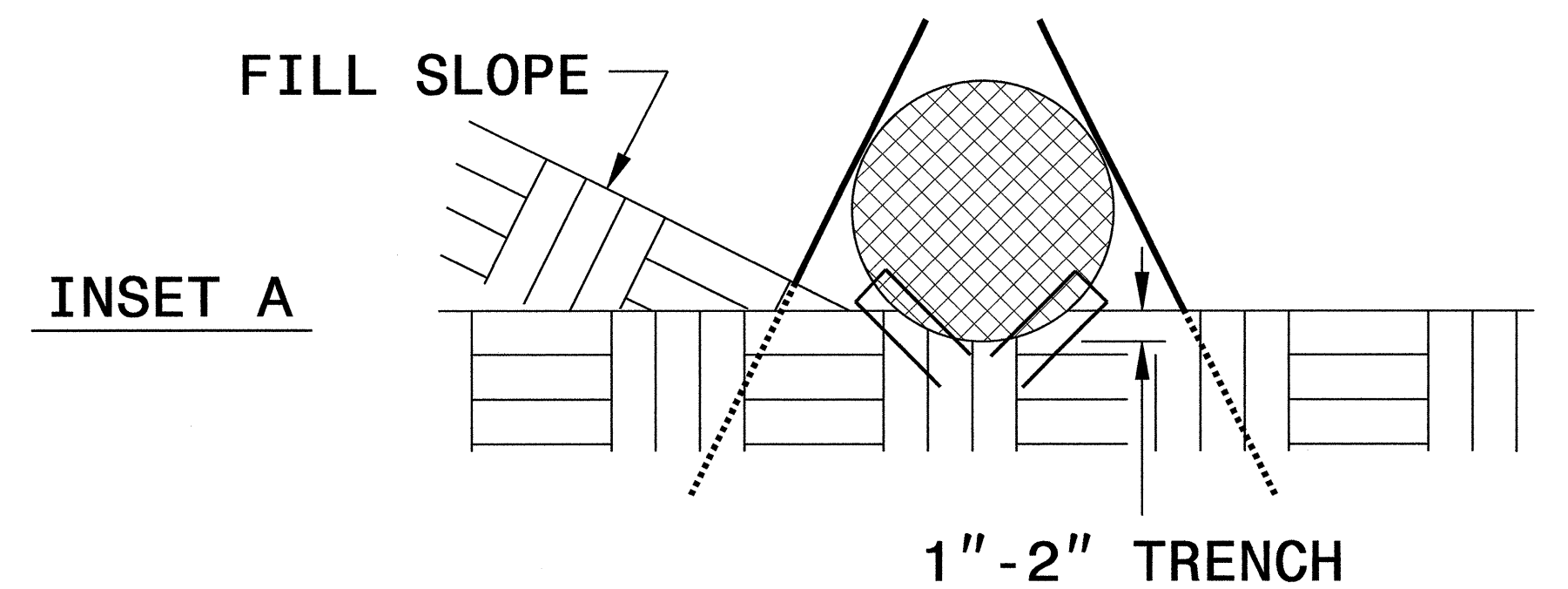
USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

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.

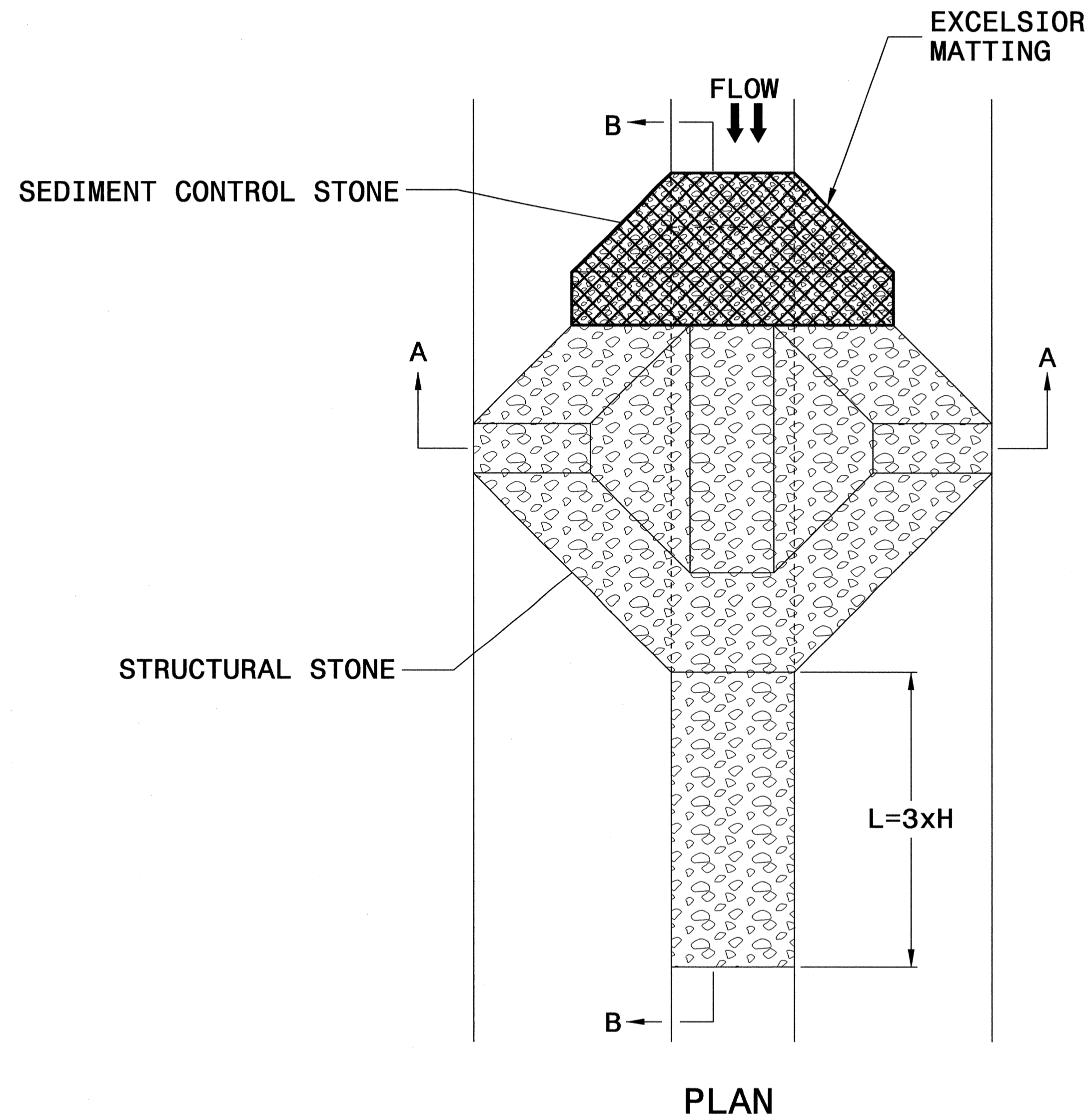
FOR BREAKS ALONG LARGE SLOPES, USE MAXIMUM SPACING OF 20 FT.



TOP VIEW

PROJECT REFERENCE NO. R-2246B	SHEET NO. EC-2E
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

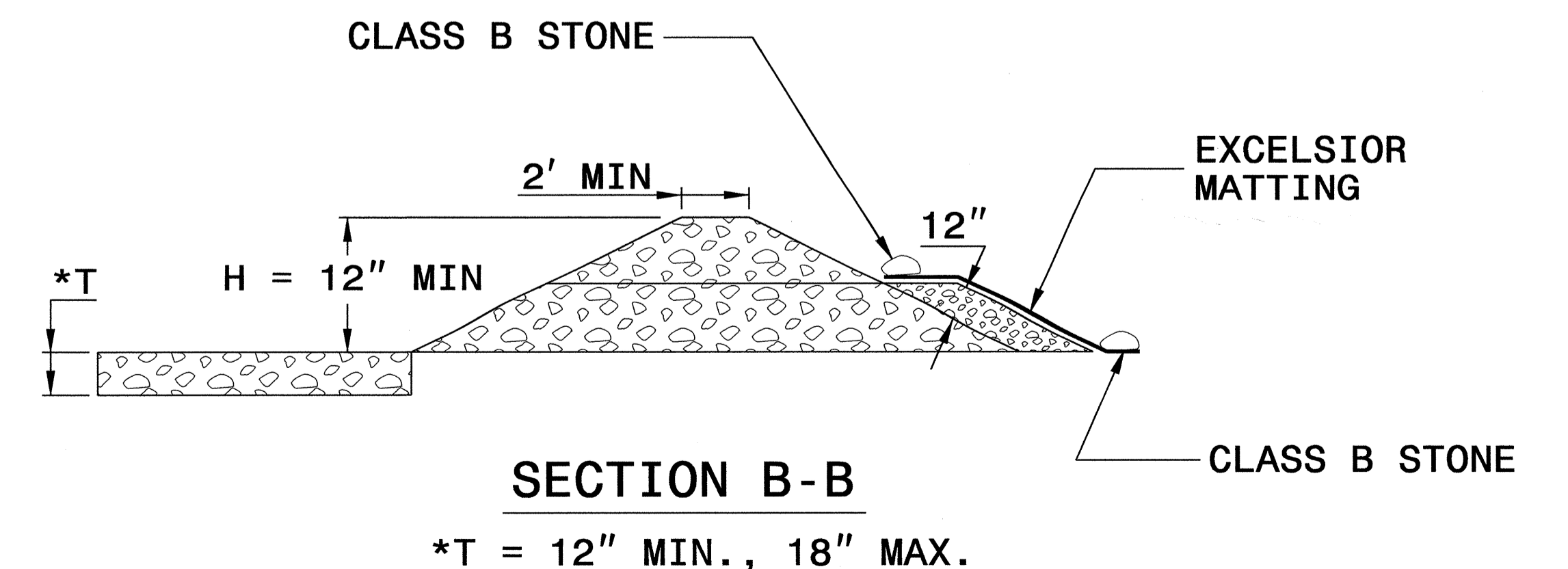
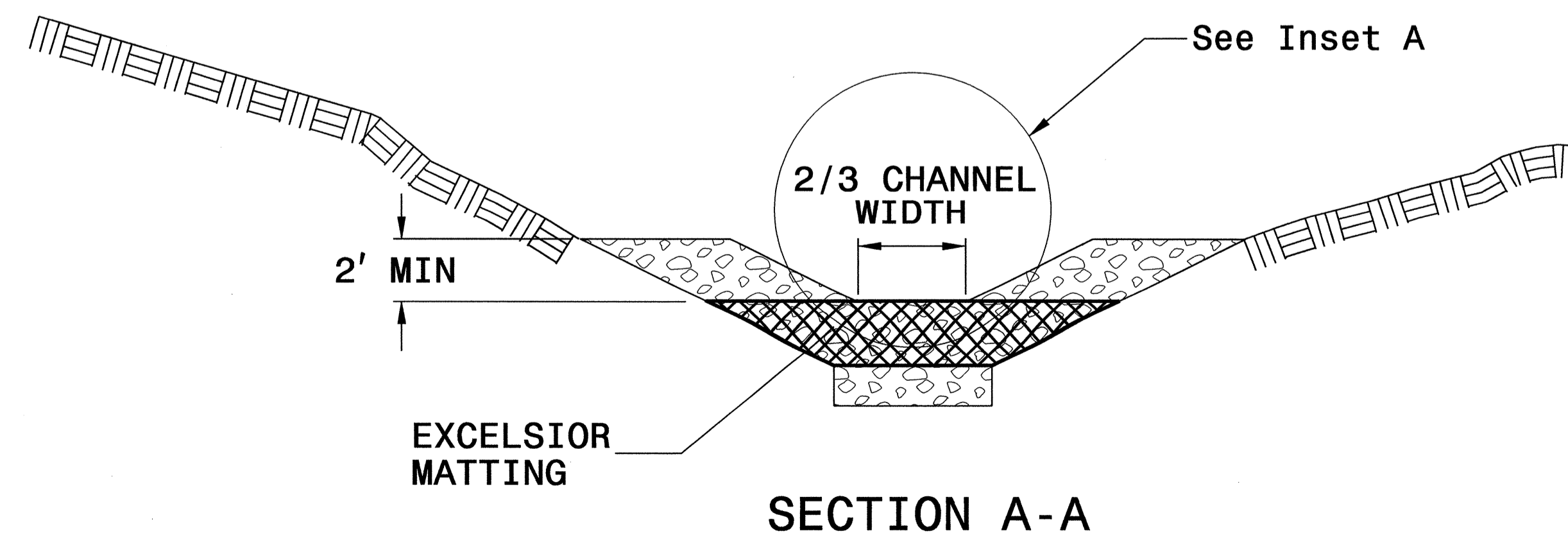
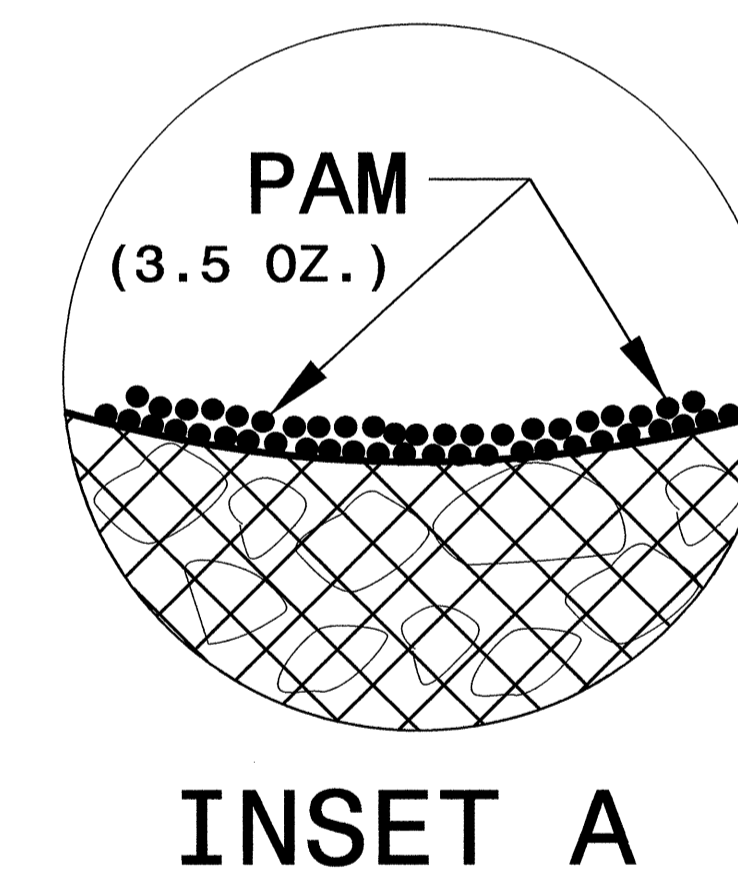


NOTES

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

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

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



NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>R-2246B</i>	SHEET NO. <i>EC-3</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L1-	11+00	13+50	LT	670
4	-L1-	17+00	21+50	RT	1015
4	-L1-	22+50	26+50	LT	1465
4	-L1-	22+50	25+50	RT	825
4	-Y1-	18+00	20+50	LT	605
4	-Y1-	17+50	20+50	RT	725
4	-Y9-	10+75	11+25	RT	60
4	-Y9-	10+75	11+25	LT	85
5	-L1-	25+50	27+50	RT	660
6	-L1-	37+50	42+50	RT	2345
6	-L1-	40+50	47+50	LT	1270
6	-L1-	48+00	49+50	LT	405
6	-L1-	49+50	50+50	LT	270
6	-L2-	43+20	46+00	RT	1875
6	-L2-	46+50	51+50	RT	805
7	-L-	27+50	31+50	LT	900
7	-L-	29+50	31+50	RT	485
7	-L-	31+50	41+00	RT	2610
7	-L-	32+00	41+00	LT	2890
8	-L-	35+50	40+50	MED	670
8	-L-	45+00	46+50	LT	140
8	-L-	43+00	48+00	RT	1340
8	-L-	43+50	47+50	MED	985
10	-L-	66+00	79+00	MED	3055
10	-L-	82+00	85+50	MED	700
10	-L-	92+50	100+50	MED	1970
10	-L-	70+00	71+50	LT	170
10	-L-	66+50	68+50	RT	250
10	-L-	86+00	90+00	RT	2380
10	-MUP-	12+40.09	13+38.83	RT	140

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
10	-RPA-	22+80.08	24+30.29	LT	605
10	-RPA-	16+66.3	20+67.24	RT	565
10	-RPA-	21+20	22+24.04	RT	70
10	-RPB-	23+50	24+50	LT	405
10	-RPB-	22+00	25+50	RT	965
10	-RPC-	17+04.48	21+08.28	LT	1040
10	-RPC-	21+58.28	25+56.79	LT	1345
10	-RPC-	24+94.93	25+56.79	RT	230
10	-Y4-	17+00	17+50	LT	155
10	-Y4-	23+00	23+50	LT	205
10	-Y4-	25+00	25+50	LT	105
10	-Y4-	12+00	16+00	MED	540
10	-Y4-	13+00	17+50	RT	1890
10	-Y2REV-	14+00	20+00	RT	1040
10	-Y2REV-	15+00	20+00	LT	805
10	-SPURC-	10+69.56	11+84.52	RT	155
11	-L-	91+50	96+50	LT	920
11	-L-	90+00	91+50	RT	205
11	-L-	96+00	97+00	RT	390
11	-L-	98+00	110+50	RT	2020
12	-L-	100+50	138+00	MED	9780
12	-L-	111+00	111+50	RT	175
12	-MUP-	26+34.08	28+99.48	RT	455
12	-MUP-	29+52.57	33+20.72	RT	670
13	-L-	122+00	127+50	LT	1010
13	-L-	120+50	122+00	RT	420
13	-L-	123+22.25	123+50	RT	95
14	-L-	129+00	133+00	LT	1350
14	-L-	134+50	140+50	RT	995
			SUBTOTAL		60,370

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>R-2246B</i>	SHEET NO. <i>EC-3B</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

8/17/19

PROJECT REFERENCE NO. R-2246B		SHEET NO. EC-4/CONST.4	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			

★ TRAFFIC SIGNAL

NOTE: -LI- PROPOSED RW HAS BEEN SET TO ACCOMMODATE FUTURE FOUR LANE DIVIDED SECTION

NOTE: -YI- PROPOSED RW HAS BEEN SET TO ACCOMMODATE FUTURE WIDENING

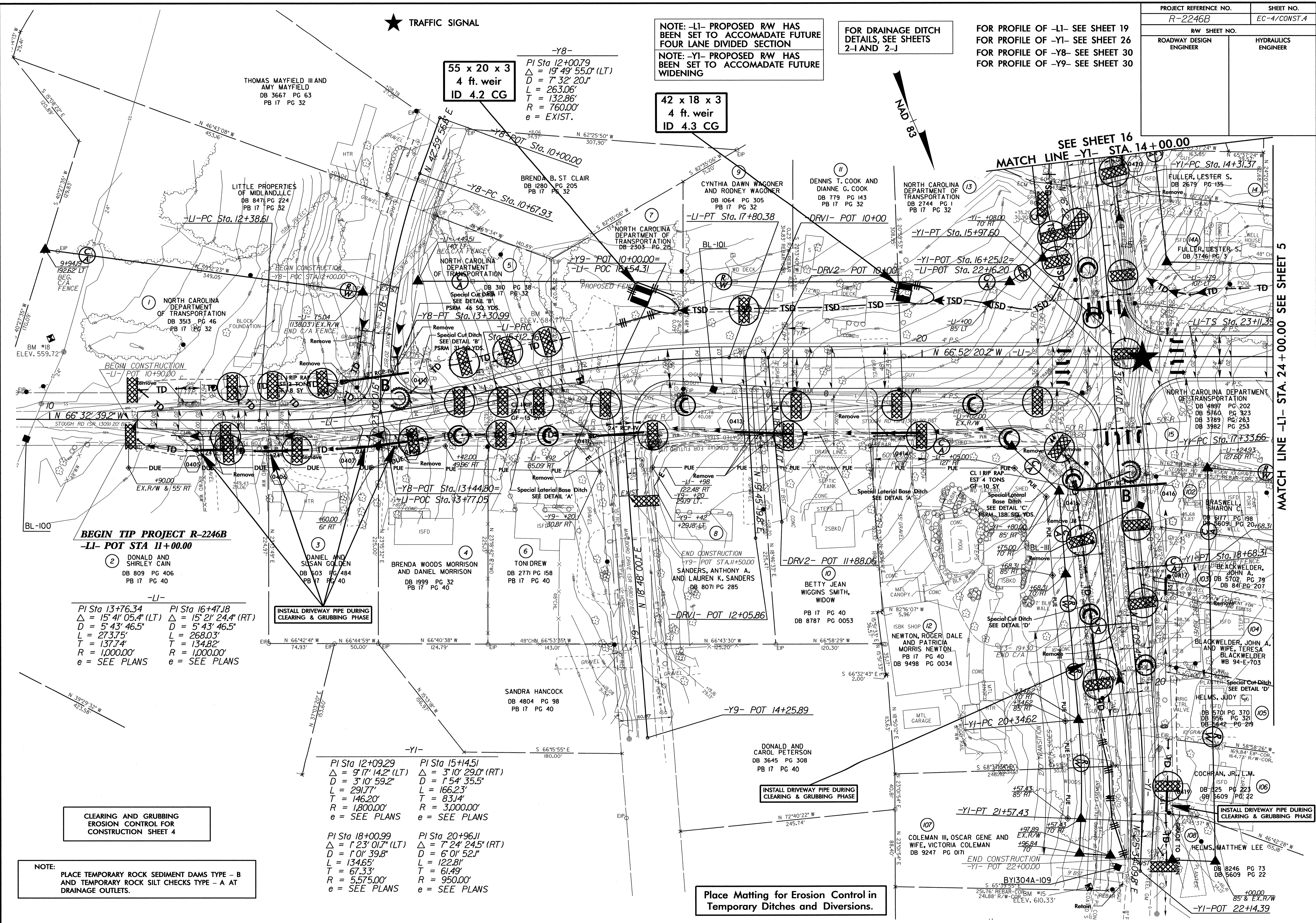
FOR DRAINAGE DITCH DETAILS, SEE SHEETS 2-I AND 2-J

FOR PROFILE OF -LI- SEE SHEET 19

FOR PROFILE OF -YI- SEE SHEET 26

FOR PROFILE OF -Y8- SEE SHEET 30

FOR PROFILE OF -Y9- SEE SHEET 30



55 x 20 x 3
4 ft. weir
ID 4.2 CG

42 x 18 x 3
4 ft. weir
ID 4.3 CG

BEGIN TIP PROJECT R-2246B
-LI- POT STA 11+00.00

-LI-
PI Sta 13+76.34 Δ = 15° 41' 05.4" (LT)
D = 5' 43' 46.5"
L = 273.75'
T = 137.74'
R = 1,000.00'
e = SEE PLANS

PI Sta 16+47.18 Δ = 15° 21' 24.4" (RT)
D = 5' 43' 46.5"
L = 268.03'
T = 134.82'
R = 1,000.00'
e = SEE PLANS

INSTALL DRIVEWAY PIPE DURING CLEARING & GRUBBING PHASE

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

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

PI Sta 12+09.29 Δ = 9° 17' 14.2" (LT)
D = 3' 10' 59.2"
L = 291.77'
T = 146.20'
R = 1,800.00'
e = SEE PLANS

PI Sta 15+14.51 Δ = 3° 10' 29.0" (RT)
D = 1' 54' 35.5"
L = 166.23'
T = 83.14'
R = 3,000.00'
e = SEE PLANS

PI Sta 18+00.99 Δ = 1° 23' 01.7" (LT)
D = 1' 01' 39.8"
L = 134.65'
T = 67.33'
R = 5,575.00'
e = SEE PLANS

PI Sta 20+96.11 Δ = 7° 24' 24.5" (RT)
D = 6' 01' 52.1"
L = 122.81'
T = 61.49'
R = 950.00'
e = SEE PLANS

Place Matting for Erosion Control in Temporary Ditches and Diversions.

MATCH LINE -LI- STA. 24 + 00.00 SEE SHEET 5

SEE SHEET 16
MATCH LINE -YI- STA. 14 + 00.00

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8/17/99

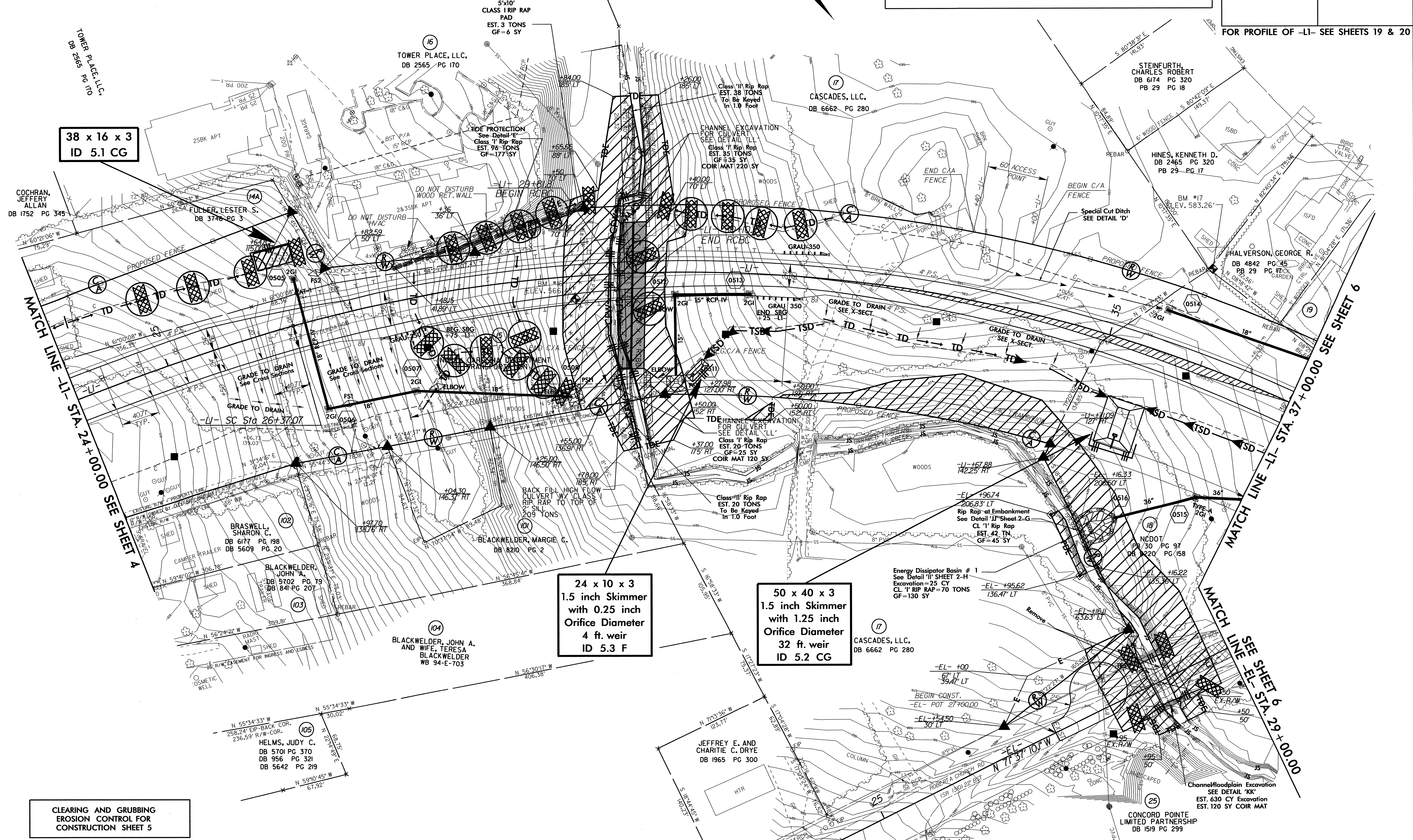
PROJECT REFERENCE NO. R-2246B		SHEET NO. EC-5/CONST.5
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	

NOTE: -L1- PROPOSED RW HAS BEEN SET TO ACCOMADATE FUTURE FOUR LANE DIVIDED SECTION

Place Matting for Erosion Control in Temporary Ditches and Diversions.

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

FOR PROFILE OF -L1- SEE SHEETS 19 & 20



38 x 16 x 3
ID 5.1 CG

24 x 10 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 5.3 F

50 x 40 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
32 ft. weir
ID 5.2 CG

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

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

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santaparrish

PROJECT REFERENCE NO. <i>R-2246B</i>	SHEET NO. <i>EC-6/CONST.5</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

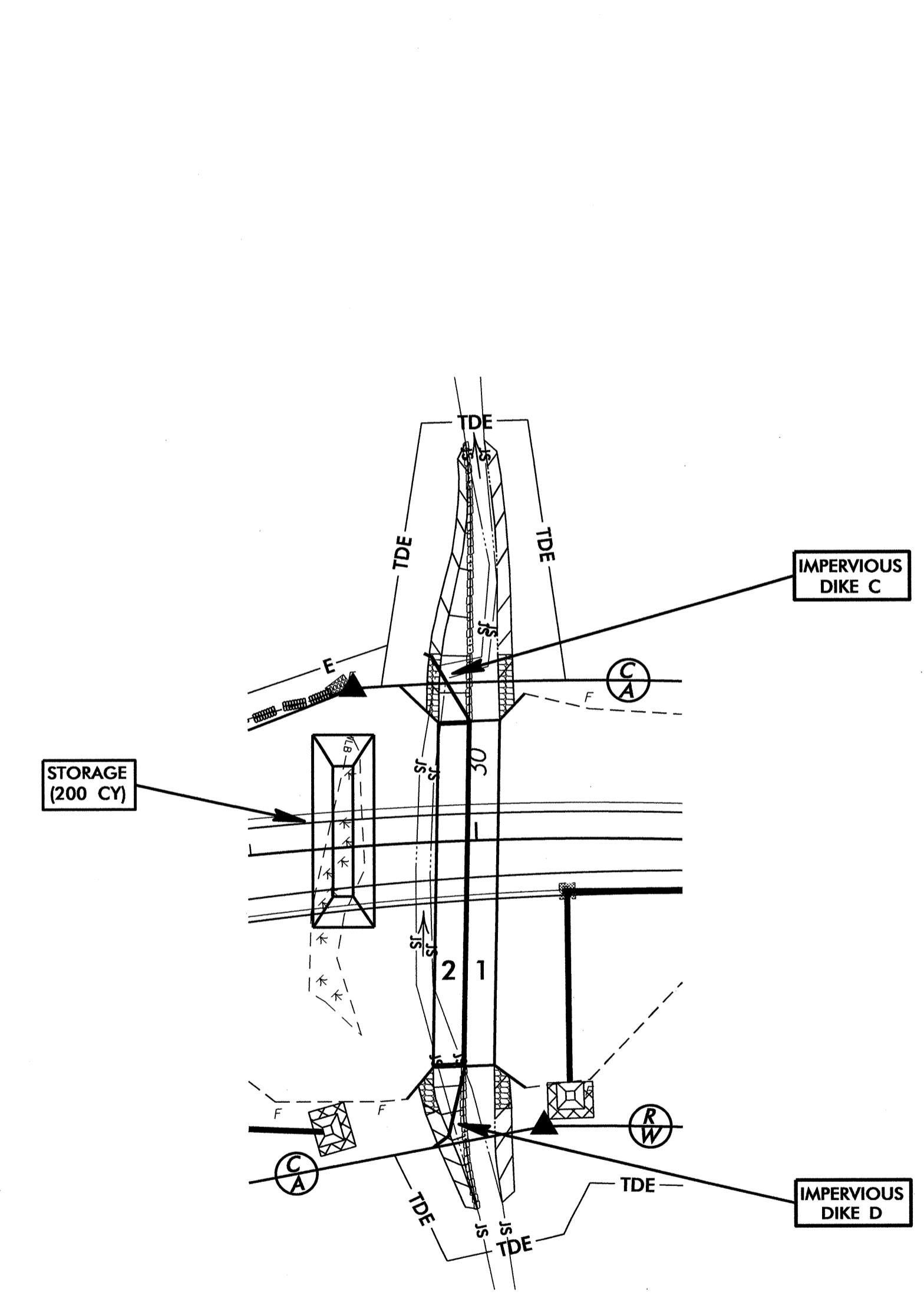
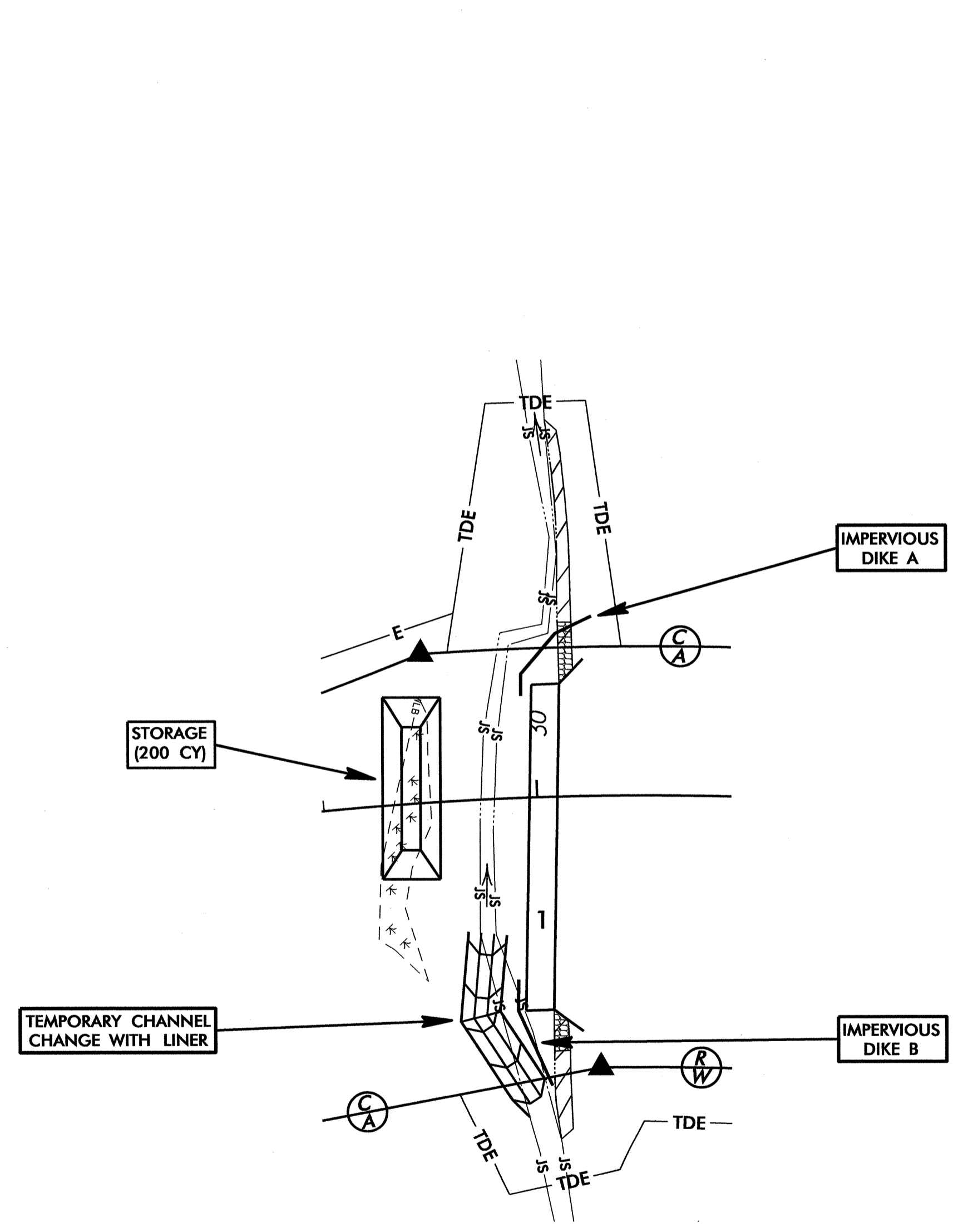
CULVERT CONSTRUCTION SEQUENCE STA. 29+96 -L-

PHASE I

1. CONSTRUCT STILLING BASIN (200 CY).
2. CONSTRUCT IMPERVIOUS DIKS A AND B, AND TEMPORARY CHANNEL CHANGE WITH LINER (6 FT. BASE, 3 FT. DEEP, 2:1 SIDE SLOPES), DIVERTING FLOW.
3. CONSTRUCT BARREL 1 OF PROPOSED CULVERT.
4. CONSTRUCT PORTION OF THE INLET/OUTLET CHANNEL IMPROVEMENTS.

PHASE II

5. REMOVE IMPERVIOUS DIKS A AND B AND TEMPORARY CHANNEL CHANGE.
6. CONSTRUCT IMPERVIOUS DIKS C AND D, DIVERTING FLOW THROUGH COMPLETED BARREL 1 OF PROPOSED CULVERT.
7. CONSTRUCT BARREL 2 OF PROPOSED CULVERT.
8. CONSTRUCT REMAINDER OF INLET/OUTLET CHANNEL IMPROVEMENTS.
9. REMOVE IMPERVIOUS DIKS C AND D, AND STILLING BASIN.
10. COMPLETE ROADWAY.



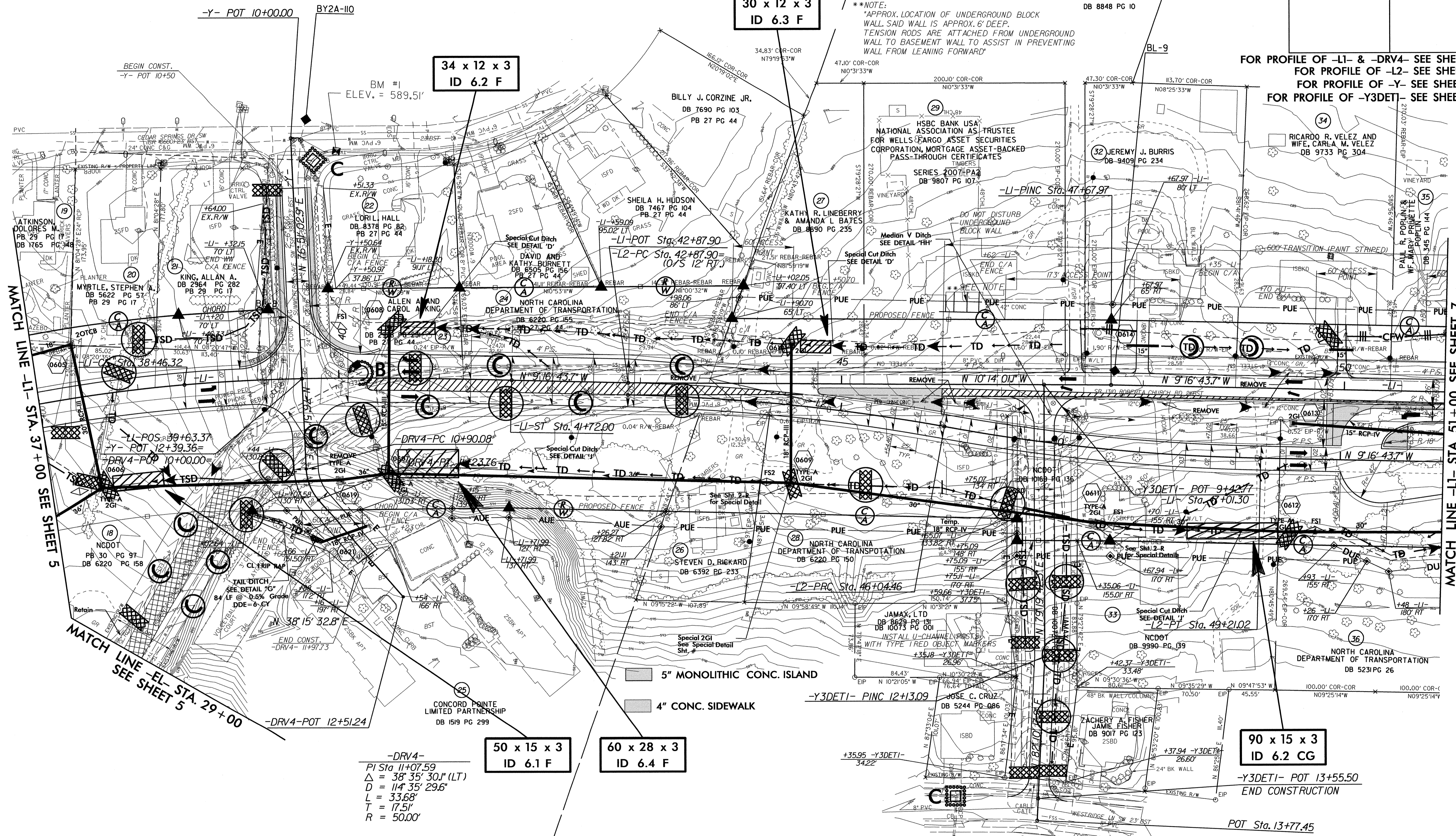
PROJECT REFERENCE NO. R-2246B		SHEET NO. EC-7/CONST.6	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			

NOTE: -Y3DETI- ALIGNMENT IS FOR PROVIDING TEMPORARY ACCESS TO THE SUBDIVISION WHILE -Y3- IS BEING CONSTRUCTED. ELIMINATE THE ACCESS AFTER THE CONSTRUCTION HAS BEEN COMPLETED.

NOTE: -L1- PROPOSED RW HAS BEEN SET TO ACCOMADATE FUTURE FOUR LANE DIVIDED SECTION

FOR DRAINAGE DITCH DETAILS, SEE SHEETS 2-1 AND 2-J

FOR PROFILE OF -L1- & -DRV4- SEE SHEET 20
FOR PROFILE OF -L2- SEE SHEET 21
FOR PROFILE OF -Y- SEE SHEET 27
FOR PROFILE OF -Y3DETI- SEE SHEET 29



30 x 12 x 3
ID 6.3 F

34 x 12 x 3
ID 6.2 F

50 x 15 x 3
ID 6.1 F

60 x 28 x 3
ID 6.4 F

90 x 15 x 3
ID 6.2 CG

-DRV4-
PI Sta 11+07.59
Δ = 38° 35' 30.1" (LT)
D = 114' 35" 29.6"
L = 33.68'
T = 17.51'
R = 50.00'

-L1-
PIs Sta 25+28.64 PIs Sta 32+75.41 PIs Sta 39+55.00
Os = 6' 06" 36.2" Δ = 45° 22' 24.1" (RT) Os = 6' 06" 36.2"
Ls = 325.68' D = 3' 45" 07.8" Ls = 325.68'
LT = 217.25' T = 1,209.25' LT = 217.25'
ST = 108.68' R = 638.34' T = 1,527.00' ST = 108.68'
e = SEE PLANS

-L2-
PI Sta 44+46.51 PIs Sta 47+63.07
Δ = 9° 04' 07.4" (RT) Δ = 9° 04' 07.4" (LT)
D = 2' 51" 53.2" D = 2' 51" 53.2"
L = 316.56' L = 316.56'
T = 158.61' T = 158.61'
R = 2,000.00' R = 2,000.00'
e = SEE PLANS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 6

Place Matting for Erosion Control in
Temporary Ditches and Diversions.

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

MATCH LINE -L1- STA 51+00 SEE SHEET 7

MATCH LINE -L1- STA 37+00 SEE SHEET 5

MATCH LINE -L1- STA 29+00
SEE SHEET 5

8/17/99

PROJECT REFERENCE NO. R-2246B		SHEET NO. EC-8/CONST.7	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

5" MONOLITHIC CONC. ISLAND

4" CONC. SIDEWALK

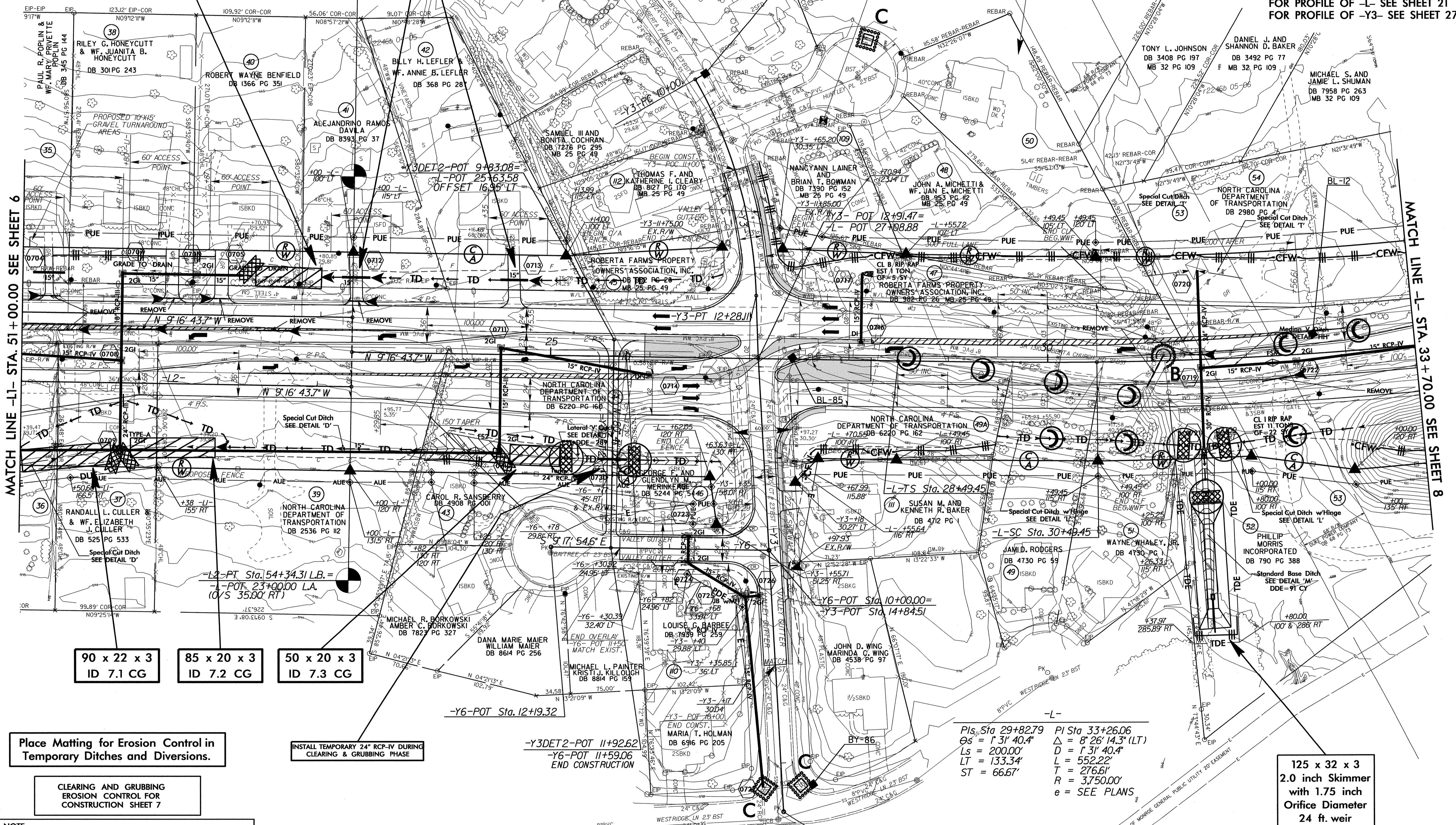
NOTE: -Y3DET2A- ALIGNMENT IS FOR PROVIDING TEMPORARY ACCESS TO THE SUBDIVISION WHILE -Y3- IS BEING CONSTRUCTED. ELIMINATE THE ACCESS AFTER THE CONSTRUCTION HAS BEEN COMPLETED.

-Y3-
PI Sta 11+16.35
 $\Delta = 27' 48" 28.3" (RT)$
 $D = 12' 11" 26.1"$
 $L = 228.11'$
 $T = 116.35'$
 $R = 47000'$
 $e = SEE PLANS$

66 x 20 x 3
ID 7.1 F

INSTALL DRIVEWAY PIPE DURING CLEARING & GRUBBING PHASE

-LI-POT Sta. 54+31.74 LB.=
-L-POT 23+00.00 L.A.
(O/S 35.00' LT)



MATCH LINE -L1- STA. 51+00.00 SEE SHEET 6

MATCH LINE -L- STA. 33+70.00 SEE SHEET 8

Place Matting for Erosion Control in Temporary Ditches and Diversions.

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.

FOR PROFILE OF -L1- SEE SHEET 20
FOR PROFILE OF -L2- SEE SHEET 21
FOR PROFILE OF -L- SEE SHEET 21
FOR PROFILE OF -Y3- SEE SHEET 27

PI Sta 29+82.79
 $\Delta = 1' 31" 40.4"$
 $Ls = 200.00'$
 $LT = 133.34'$
 $ST = 66.67'$

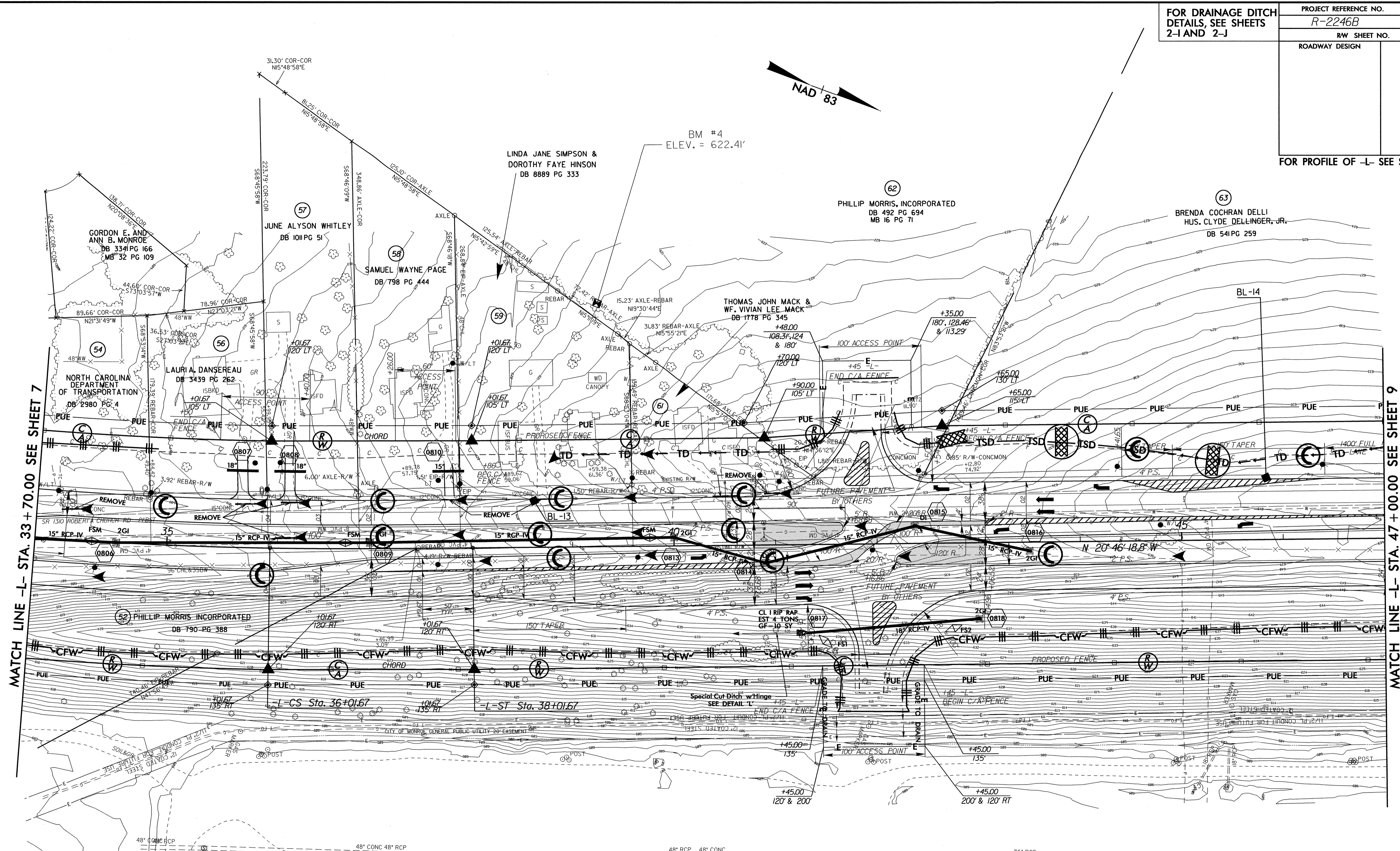
PI Sta 33+26.06
 $\Delta = 8' 26" 14.3" (LT)$
 $D = 1' 31" 40.4"$
 $L = 552.22'$
 $T = 276.61'$
 $R = 3750.00'$
 $e = SEE PLANS$

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FOR DRAINAGE DITCH DETAILS, SEE SHEETS 2-1 AND 2-J		PROJECT REFERENCE NO. R-2246B	SHEET NO. EC-9/CONST.B
ROADWAY DESIGN		RW SHEET NO.	
		HYDRAULICS ENGINEER	

FOR PROFILE OF -L- SEE SHEETS 21 & 22



MATCH LINE -L- STA. 33+70.00 SEE SHEET 7

MATCH LINE -L- STA. 47+00.00 SEE SHEET 9

-L-
 Pl Sta 33+26.06 Pls Sta 36+68.34
 $\Delta = 8' 26" 14.3" (LT)$ $\Theta_s = 1' 31" 40.4"$
 $D = 1' 31" 40.4"$ $L_s = 200.00'$
 $L = 552.22'$ $LT = 133.34'$
 $T = 276.61'$ $ST = 66.67'$
 $R = 3,750.00'$
 e = SEE PLANS

(60)
 PHILLIP MORRIS USA, INC
 DB 493 PG 26
 DB 538 PG 91
 DB 538 PG 79
 MB 16 PG 71

Place Matting for Erosion Control in Temporary Ditches and Diversions.

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.

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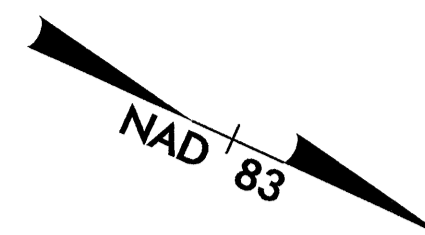
FOR DRAINAGE DITCH
DETAILS, SEE SHEETS
2-I AND 2-J

PROJECT REFERENCE NO. R-2246B	SHEET NO. EC-10/CONST-9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

FOR PROFILE OF -L- SEE SHEET 22

-L-
 PI Sta 71+90.40
 $\Delta = 32^\circ 43' 41.7" (LT)$
 $D = 0' 44' 56.3"$
 $L = 4,369.80'$
 $T = 2,246.31'$
 $R = 7,650.00'$
 $e = \text{SEE PLANS}$

BM #5
ELEV. = 619.30'



45 x 20 x 3
 1.5 inch Skimmer
 with 0.75 inch
 Orifice Diameter
 12 ft. weir
 ID 9.1 F

74 x 20 x 3
 1.5 inch Skimmer
 with 1.125 inch
 Orifice Diameter
 12 ft. weir
 ID 9.2 F

80 x 16 x 3
 1.5 inch Skimmer
 with 1.0 inch
 Orifice Diameter
 8 ft. weir
 ID 9.1 CG

FOR PREFORMED SCOUR
HOLE DETAIL, SEE SHEET 2-H

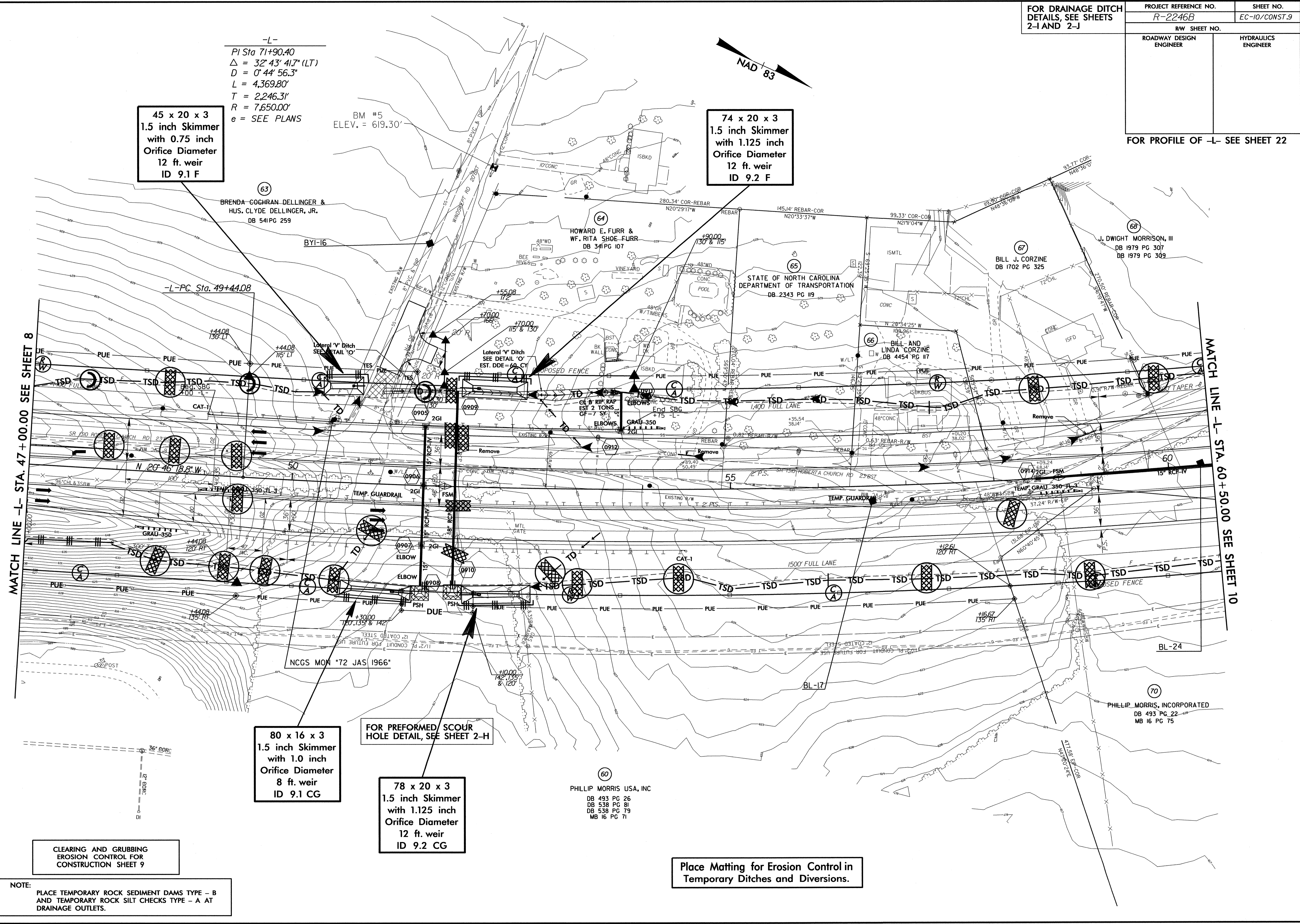
78 x 20 x 3
 1.5 inch Skimmer
 with 1.125 inch
 Orifice Diameter
 12 ft. weir
 ID 9.2 CG

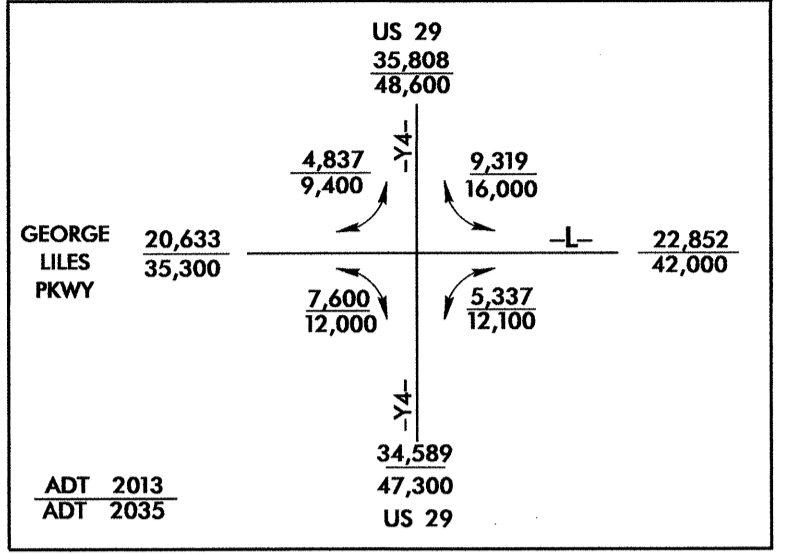
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 9

Place Matting for Erosion Control in
Temporary Ditches and Diversions.

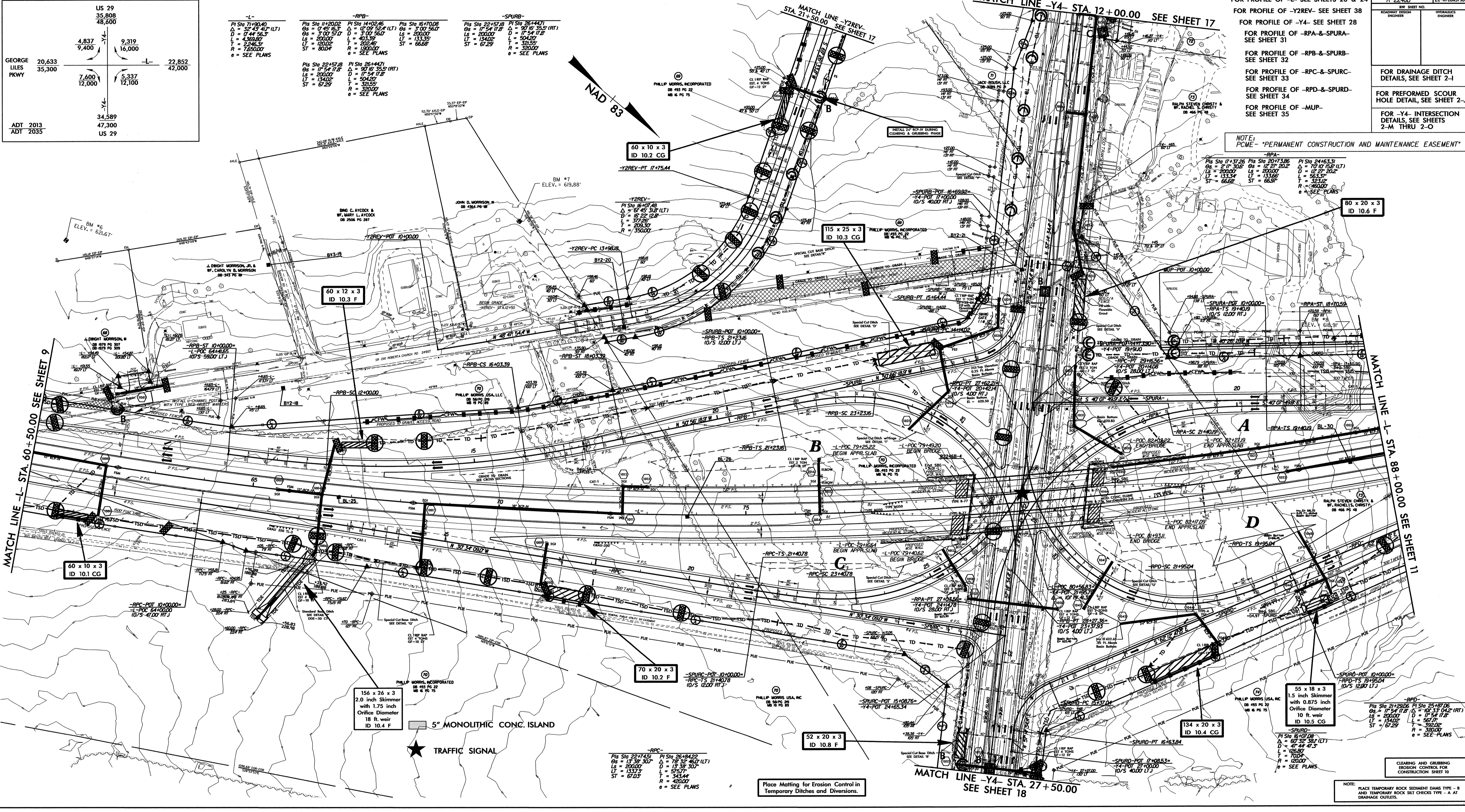
NOTE:
 PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
 AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
 DRAINAGE OUTLETS.

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 2/24/03





-L-	-RFB-	-SPURB-
Pts Sta 71+90.40 $\Delta = 32' 43" \text{ LT}$ $D = 17' 44" \text{ LS}$ $L = 4,369.87$ $T = 2,246.31$ $R = 782,000$ $ST = 80.04$ $e = \text{SEE PLANS}$	Pts Sta 11+20.02 $\Delta = 12' 09" \text{ LT}$ $D = 3' 07" \text{ LS}$ $L = 200.00$ $T = 134.02$ $R = 320.00$ $ST = 66.58$ $e = \text{SEE PLANS}$	Pts Sta 22+57.18 $\Delta = 17' 54" \text{ LT}$ $D = 17' 54" \text{ LS}$ $L = 200.00$ $T = 134.02$ $R = 320.00$ $ST = 66.58$ $e = \text{SEE PLANS}$



- FOR PROFILE OF -L- SEE SHEETS 23 & 24
- FOR PROFILE OF -Y2REV- SEE SHEET 38
- FOR PROFILE OF -Y4- SEE SHEET 28
- FOR PROFILE OF -RPA-&-SPURA- SEE SHEET 31
- FOR PROFILE OF -RFB-&-SPURB- SEE SHEET 32
- FOR PROFILE OF -RPC-&-SPURC- SEE SHEET 33
- FOR PROFILE OF -RPD-&-SPURD- SEE SHEET 34
- FOR PROFILE OF -MUP- SEE SHEET 35
- FOR DRAINAGE DITCH DETAILS, SEE SHEET 2-1
- FOR PREFORMED SCOUR HOLE DETAIL, SEE SHEET 2-J
- FOR -Y4- INTERSECTION DETAILS, SEE SHEETS 2-M THRU 2-O

NOTE: PCME - "PERMANENT CONSTRUCTION AND MAINTENANCE EASEMENT"

IN THE CITY OF...
 COUNTY OF...
 STATE OF...

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

Place Matting for Erosion Control in Temporary Ditches and Diversions.

Pts Sta 21+20.02
 $\Delta = 12' 09" \text{ LT}$
 $D = 3' 07" \text{ LS}$
 $L = 200.00$
 $T = 134.02$
 $R = 320.00$
 $ST = 66.58$
 $e = \text{SEE PLANS}$

156 x 26 x 3
 2.0 inch Skimmer
 with 1.75 inch
 Orifice Diameter
 18 ft weir
 ID 10.4 F

Pts Sta 22+74.51
 $\Delta = 13' 39" \text{ LT}$
 $D = 13' 39" \text{ LS}$
 $L = 200.00$
 $T = 133.73$
 $R = 320.00$
 $ST = 67.53$
 $e = \text{SEE PLANS}$

134 x 20 x 3
 ID 10.4 CG

70 x 20 x 3
 ID 10.2 F

52 x 20 x 3
 ID 10.8 F

80 x 20 x 3
 ID 10.6 F

115 x 25 x 3
 ID 10.3 CG

60 x 10 x 3
 ID 10.2 CG

60 x 12 x 3
 ID 10.3 F

60 x 10 x 3
 ID 10.1 CG

★ TRAFFIC SIGNAL

5" MONOLITHIC CONC. ISLAND

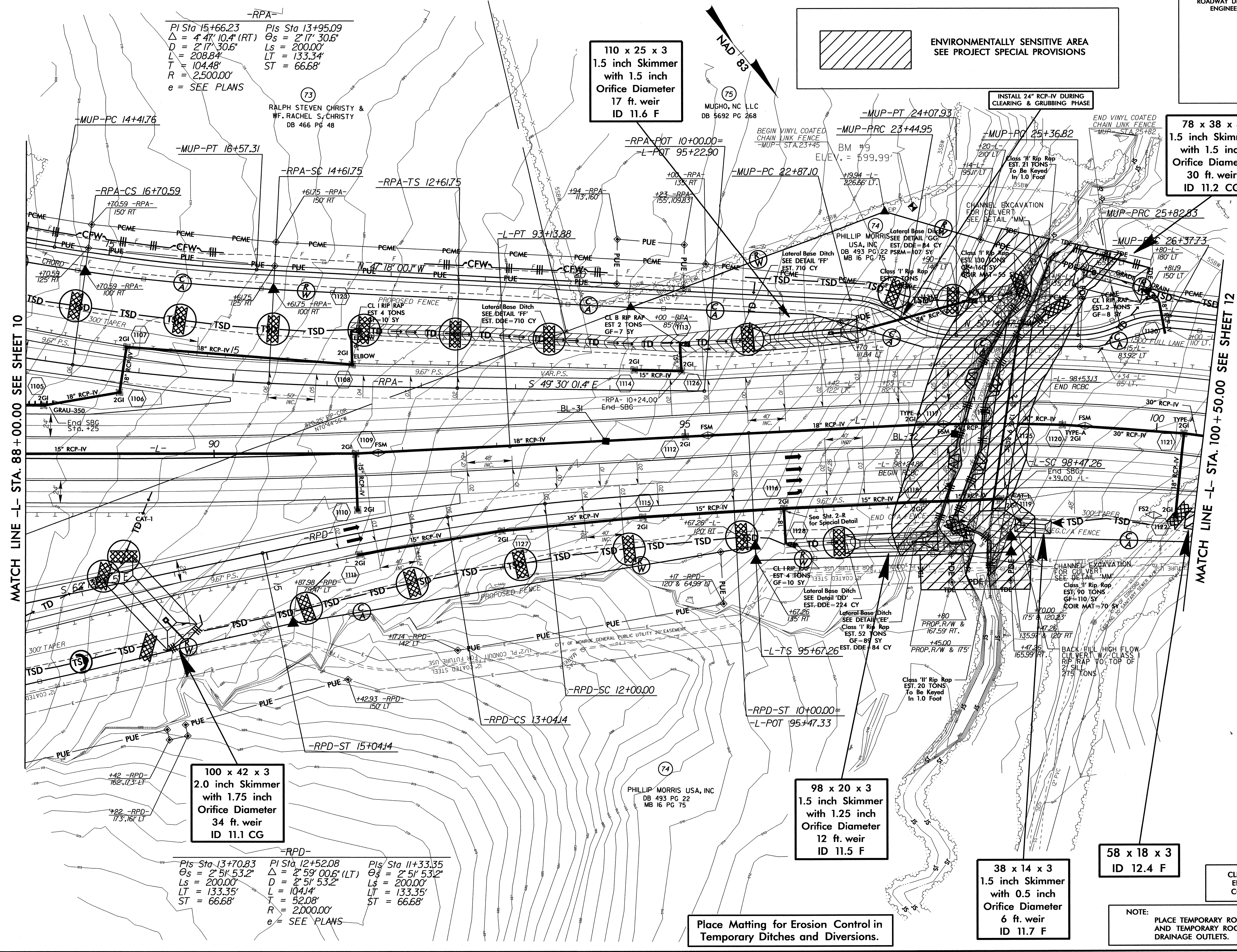
NOTE:
PCME - "PERMANENT CONSTRUCTION AND MAINTENANCE EASEMENT"

FOR CHANNEL EXCAVATION FOR CULVERT DETAIL, SEE SHEET 2-J
FOR DRAINAGE DITCH DETAILS, SEE SHEET 2-I

PROJECT REFERENCE NO.
R-2246B
SHEET NO.
EC-12/CONST-11

R/W SHEET NO.

ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER



-RPA-
PI Sta 15+66.23
 $\Delta = 4' 47'' 10.4''$ (RT)
D = 2' 17'' 30.6"
L = 208.84'
T = 104.48'
R = 2,500.00'
e = SEE PLANS
Pis Sta 13+95.09
 $\Theta_s = 2' 17'' 30.6''$
Ls = 200.00'
LT = 133.34'
ST = 66.68'

110 x 25 x 3
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
17 ft. weir
ID 11.6 F

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

78 x 38 x 3
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
30 ft. weir
ID 11.2 CG

100 x 42 x 3
2.0 inch Skimmer
with 1.75 inch
Orifice Diameter
34 ft. weir
ID 11.1 CG

98 x 20 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
12 ft. weir
ID 11.5 F

38 x 14 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
6 ft. weir
ID 11.7 F

58 x 18 x 3
ID 12.4 F

Place Matting for Erosion Control in
Temporary Ditches and Diversions.

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

MATCH LINE -L- STA. 88 + 00.00 SEE SHEET 10

MATCH LINE -L- STA. 100 + 50.00 SEE SHEET 12

PROJECT REFERENCE NO. <i>R-2246B</i>	SHEET NO. <i>EC-13/CONST.II</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

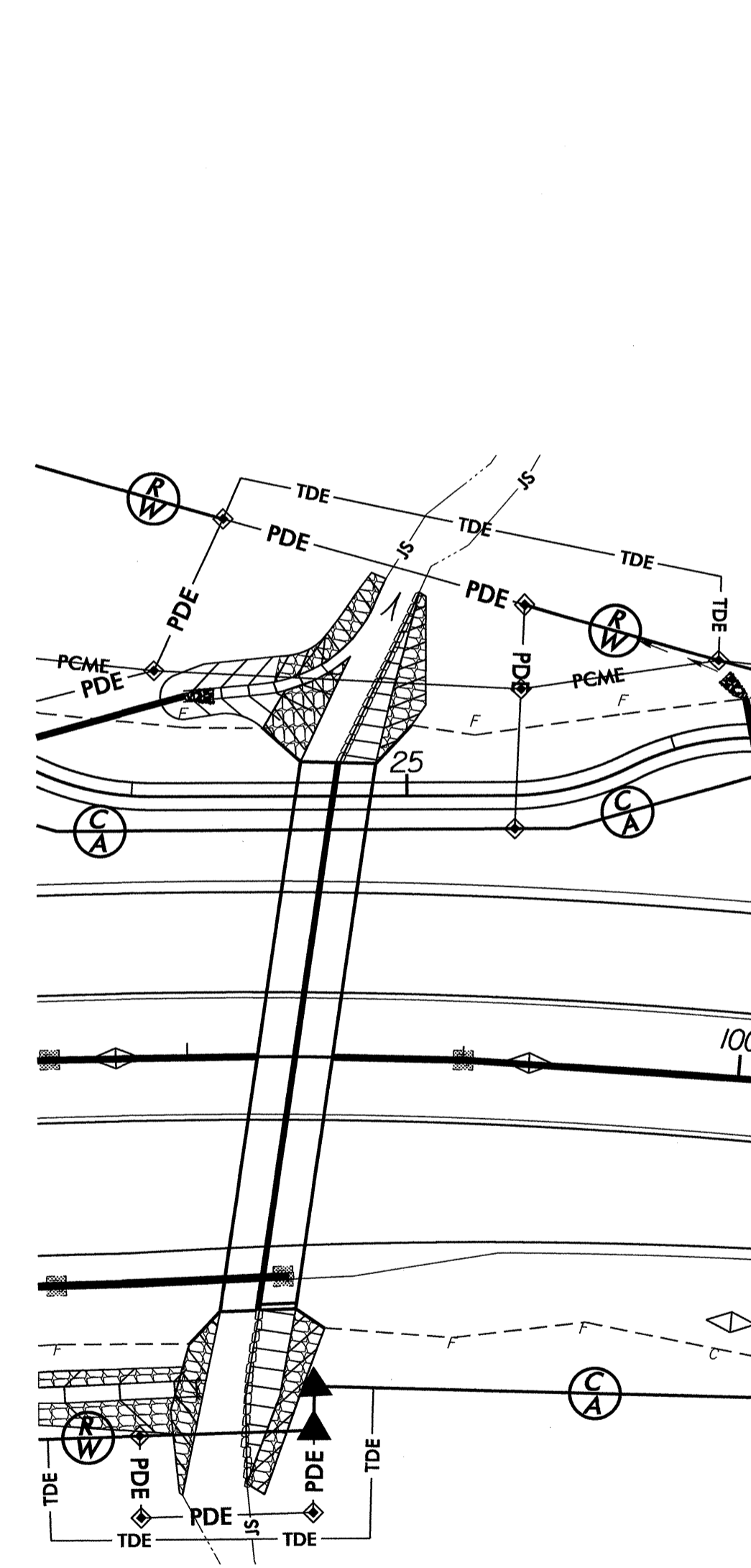
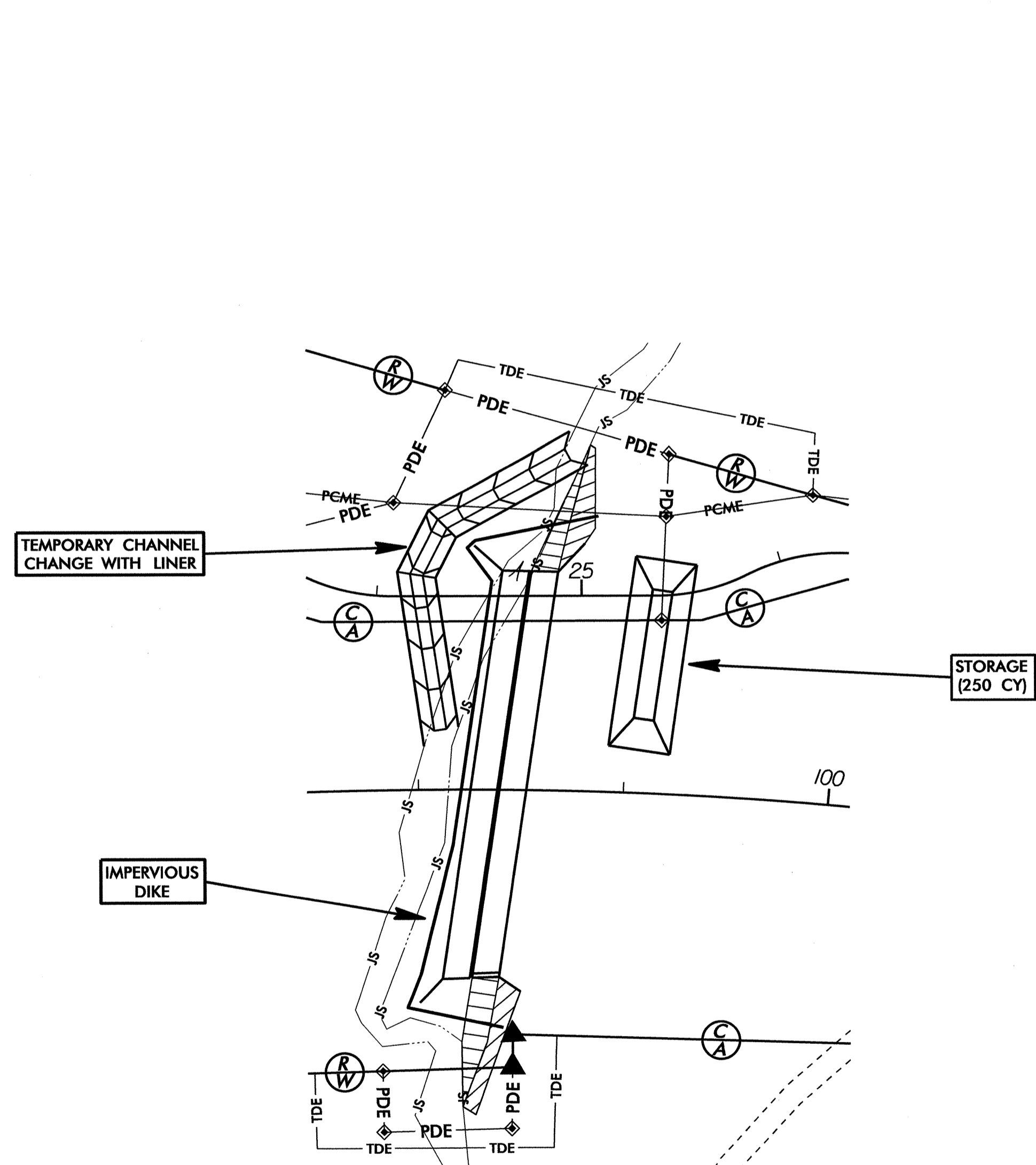
CULVERT CONSTRUCTION SEQUENCE STA. 98+39 -L-

PHASE I

1. CONSTRUCT STILLING BASIN (250 CY).
2. CONSTRUCT IMPERVIOUS DIKE AND TEMPORARY CHANNEL CHANGE WITH LINER (6 FT. BASE, 3 FT. DEEP, 2:1 SIDE SLOPES), DIVERTING FLOW.
3. CONSTRUCT PROPOSED CULVERT.
4. CONSTRUCT PORTION OF INLET/OUTLET CHANNEL IMPROVEMENTS.

PHASE II

5. REMOVE IMPERVIOUS DIKE AND TEMPORARY CHANNEL CHANGE, ALLOWING FLOW THROUGH PROPOSED CULVERT.
6. CONSTRUCT REMAINDER OF INLET/OUTLET CHANNEL IMPROVEMENTS.
7. REMOVE STILLING BASIN.
8. COMPLETE ROADWAY.



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jennifer.parish

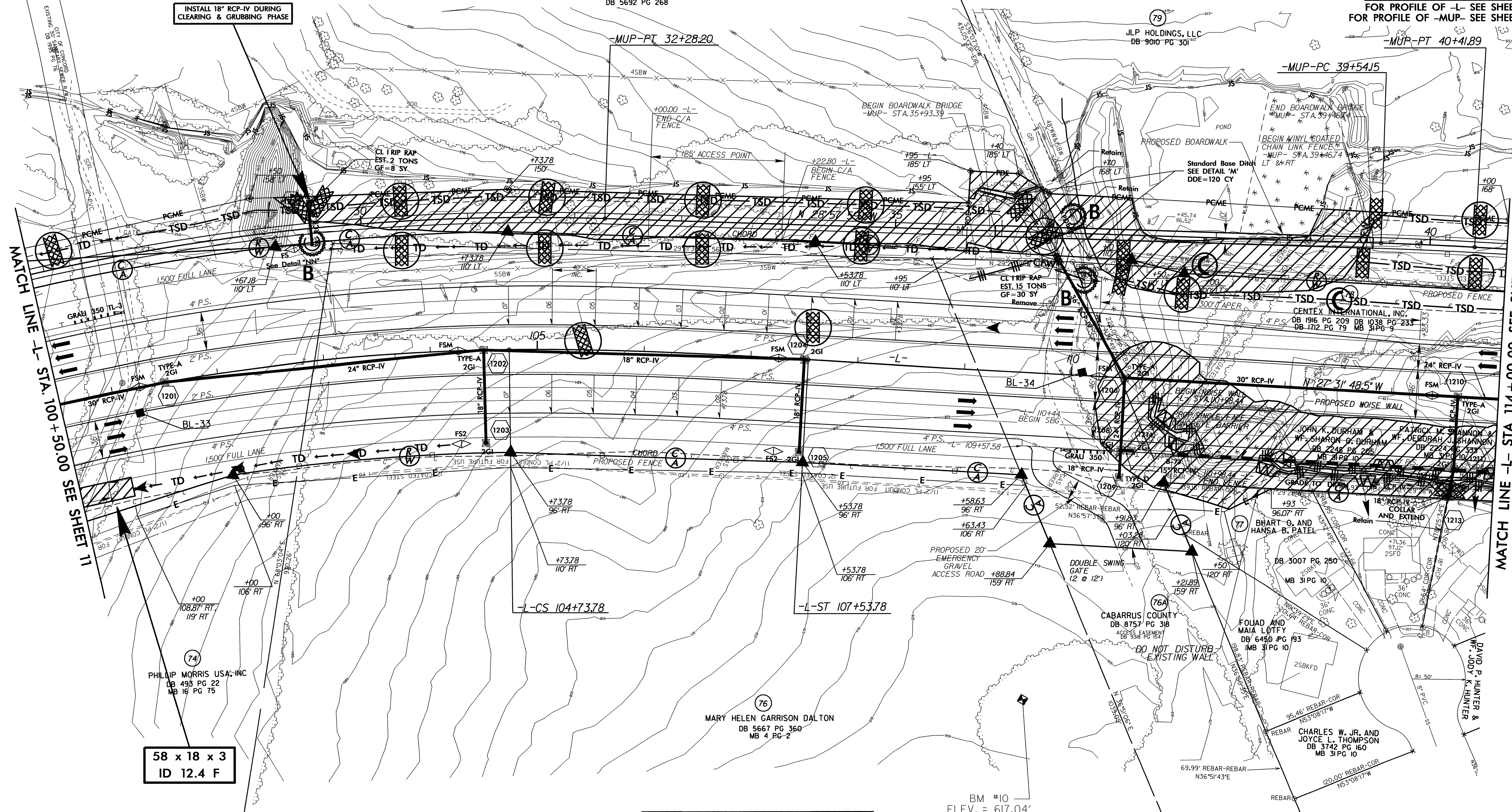
NOTE:
PCME - "PERMANENT CONSTRUCTION AND MAINTENANCE EASEMENT"

FOR DRAINAGE DITCH DETAILS, SEE SHEETS 2-I AND 2-J		PROJECT REFERENCE NO. R-2246B	SHEET NO. EC-14/CONST.12
ROADWAY DESIGN ENGINEER		RW SHEET NO.	
HYDRAULICS ENGINEER			

-L-
 PI Sta 101+63.11 PIs Sta 105+67.16
 $\Delta = 17' 56" 54.9" (RT)$ $\Theta_s = 4' 00" 38.5"$
 $D = 2' 51" 53.2"$ $L_s = 280.00'$
 $L = 626.52'$ $LT = 186.71'$
 $T = 315.85'$ $ST = 93.38'$
 $R = 2,000.00'$
 $e = \text{SEE PLANS}$

-MUP-
 PI Sta 29+34.95 PI Sta 39+98.03
 $\Delta = 16' 11" 16.3" (RT)$ $\Delta = 1' 26" 10.6" (RT)$
 $D = 2' 44" 29.6"$ $D = 1' 38" 13.3"$
 $L = 590.46'$ $L = 87.74'$
 $T = 297.21'$ $T = 43.87'$
 $R = 2,089.91'$ $R = 3,500.00'$
 $e = 02$ $e = 02$

FOR PROFILE OF -L- SEE SHEETS 24 & 25
 FOR PROFILE OF -MUP- SEE SHEETS 35 & 36

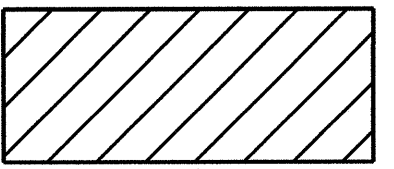


58 x 18 x 3
ID 12.4 F

Place Matting for Erosion Control in Temporary Ditches and Diversions.

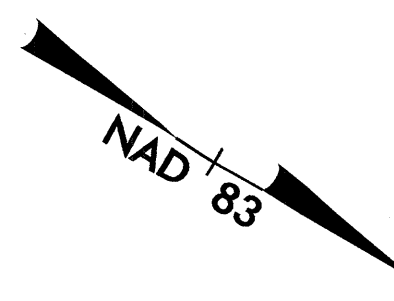
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 12

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

 ENVIRONMENTALLY SENSITIVE AREA SEE PROJECT SPECIAL PROVISIONS

MATCH LINE -L- STA. 100+50.00 SEE SHEET 11

MATCH LINE -L- STA. 114+00.00 SEE SHEET 13



BM #10
ELEV. = 617.04'

8/17/99

NOTE: PCME - "PERMANENT CONSTRUCTION AND MAINTENANCE EASEMENT"

FOR DRAINAGE DITCH DETAILS, SEE SHEETS 2-I AND 2-J

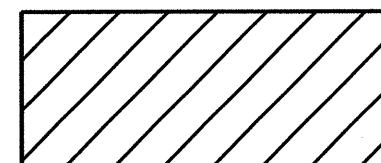
PROJECT REFERENCE NO. R-2246B

SHEET NO. EC-15/CONST.13

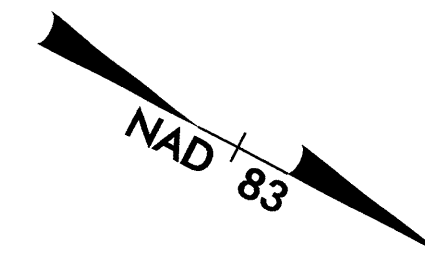
RW SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

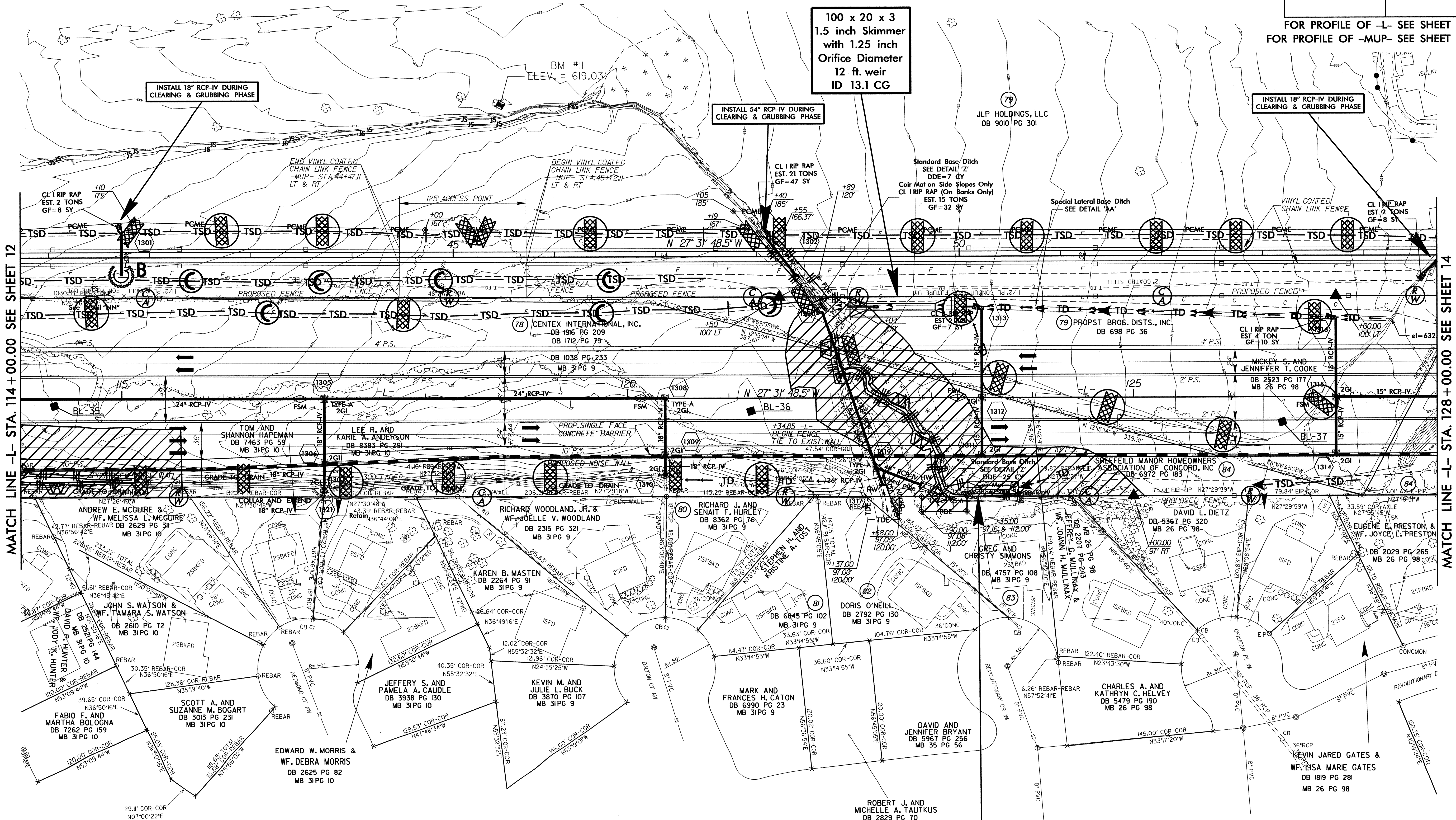


ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS



100 x 20 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
12 ft. weir
ID 13.1 CG

FOR PROFILE OF -L- SEE SHEET 25
FOR PROFILE OF -MUP- SEE SHEET 36



MATCH LINE -L- STA. 114 + 00.00 SEE SHEET 12

MATCH LINE -L- STA. 128 + 00.00 SEE SHEET 14

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 13

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

Place Matting for Erosion Control in
Temporary Ditches and Diversions.

50 x 12 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
4 ft. weir
ID 13.6 F

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HYDRO-COORDINATOR
R2246B EC_psh_s13.dgn
11/26/2013 11:03:10

8/17/99

PROJECT REFERENCE NO. R-2246B	SHEET NO. EC-16/CONST.14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

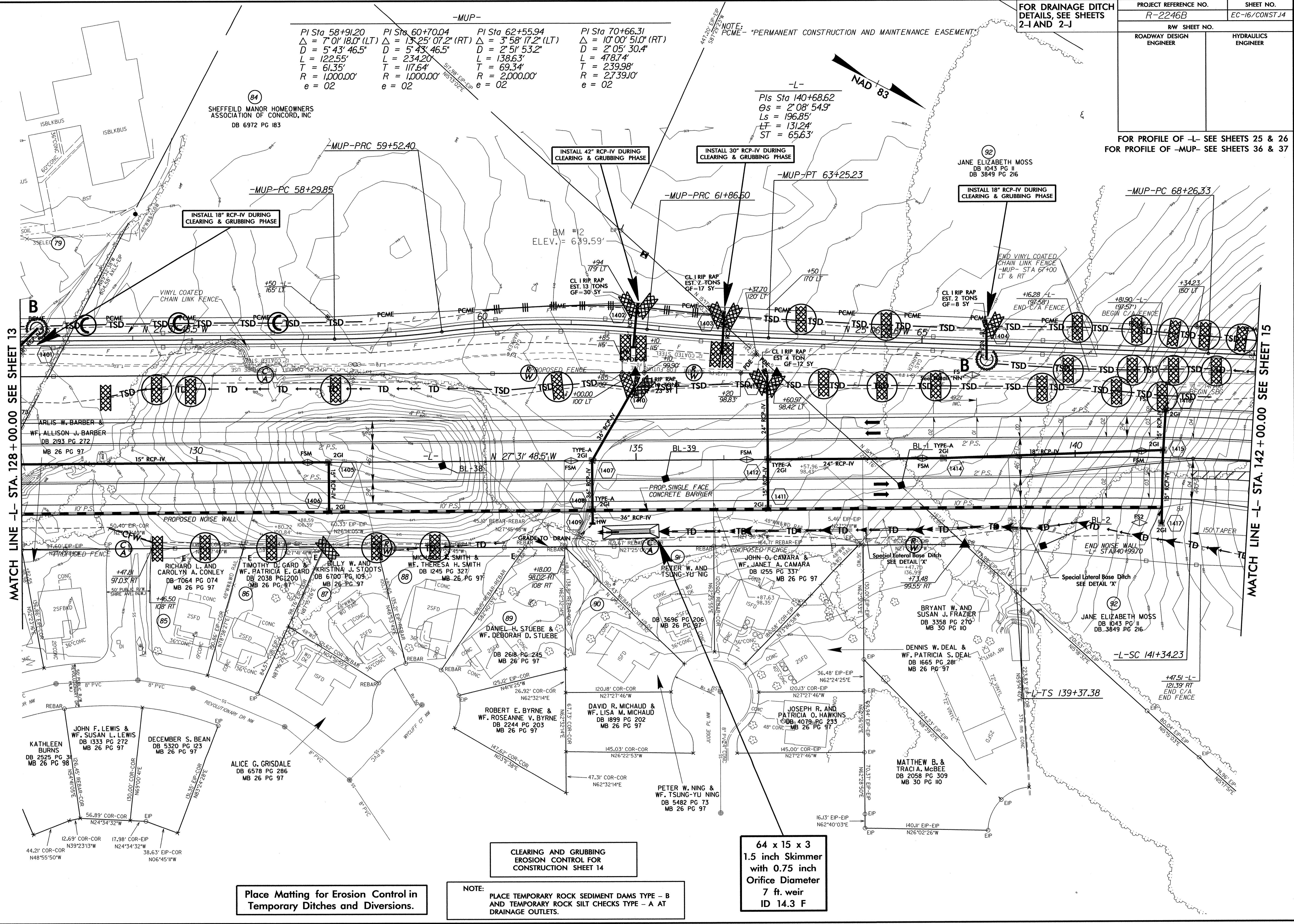
FOR PROFILE OF -L- SEE SHEETS 25 & 26
FOR PROFILE OF -MUP- SEE SHEETS 36 & 37

-MUP-

PI Sta 58+91.20 Δ = 7° 01' 18.0" (LT) D = 5' 43' 46.5" L = 122.55' T = 61.35' R = 1,000.00' e = 02	PI Sta 60+70.04 Δ = 13° 25' 07.2" (RT) D = 5' 43' 46.5" L = 234.20' T = 117.64' R = 1,000.00' e = 02	PI Sta 62+55.94 Δ = 3° 58' 17.2" (LT) D = 2' 51' 53.2" L = 138.63' T = 69.34' R = 2,000.00' e = 02	PI Sta 70+66.31 Δ = 10° 00' 51.0" (RT) D = 2' 05' 30.4" L = 478.74' T = 239.98' R = 2,739.10' e = 02
--	--	--	--

-L-
PIs Sta 140+68.62
Os = 2° 08' 54.9"
Ls = 196.85'
LT = 131.24'
ST = 65.63'

NAD 83



MATCH LINE -L- STA. 128 + 00.00 SEE SHEET 13

MATCH LINE -L- STA. 142 + 00.00 SEE SHEET 15

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 14

Place Matting for Erosion Control in
Temporary Ditches and Diversions.

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

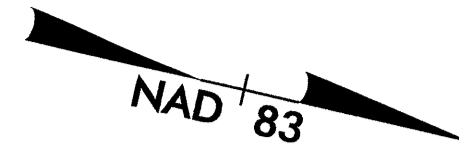
64 x 15 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
7 ft. weir
ID 14.3 F

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5" MONOLITHIC CONC. ISLAND

★ TRAFFIC SIGNAL



-L-
 Pls Sta 140+68.62 PI Sta 145+00.05 Pls Sta 149+26.82
 $\Delta s = 2' 08" 54.9"$ $\Delta = 15' 52" 10.2" (RT)$ $\theta s = 2' 08" 54.9"$
 $Ls = 196.85'$ $D = 2' 10" 58.7"$ $Ls = 196.85'$
 $LT = 131.24'$ $L = 726.97'$ $LT = 131.24'$
 $ST = 65.63'$ $T = 365.83'$ $ST = 65.63'$
 $R = 2,624.67'$ $e = SEE PLANS$

-MUP-
 PI Sta 70+66.31 PI Sta 73+38.05
 $\Delta = 10' 00" 51.0" (RT)$ $\Delta = 18' 43" 30.4" (RT)$
 $D = 2' 05" 30.4"$ $D = 28' 38" 52.4"$
 $L = 478.74'$ $L = 65.36'$
 $T = 239.98'$ $T = 32.98'$
 $R = 2,739.10'$ $R = 200.00'$
 $e = 02$

-Y5-
 PI Sta 17+05.99
 $\Delta = 10' 11" 23.2" (RT)$
 $D = 4' 03" 48.7"$
 $L = 250.76'$
 $T = 125.71'$
 $R = 1,410.00'$
 $e = SEE PLANS$

PROJECT REFERENCE NO. R-2246B		SHEET NO. EC-17/CONST.15
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	

FOR -Y5- INTERSECTION DETAIL, SEE SHEET 2-P

FOR PROFILE OF -L- SEE SHEET 26
FOR PROFILE OF -Y5- SEE SHEET 29
FOR PROFILE OF -MUP- SEE SHEET 37

-L-
 Pls Sta 153+62.09 PI Sta 157+01.70
 $\theta s = 2' 08" 54.9"$ $\Delta = 11' 55" 11.2" (LT)$
 $Ls = 196.85'$ $D = 2' 10" 58.7"$
 $LT = 131.24'$ $L = 546.03'$
 $ST = 65.63'$ $T = 274.01'$
 $R = 2,624.67'$

COBLE FAMILY FARM LTD
DB 1777 PG 273

END TIP PROJECT R-2246B
-L- STA. 150+58.04

JOWAC, LLC
DB 3964 PG 19

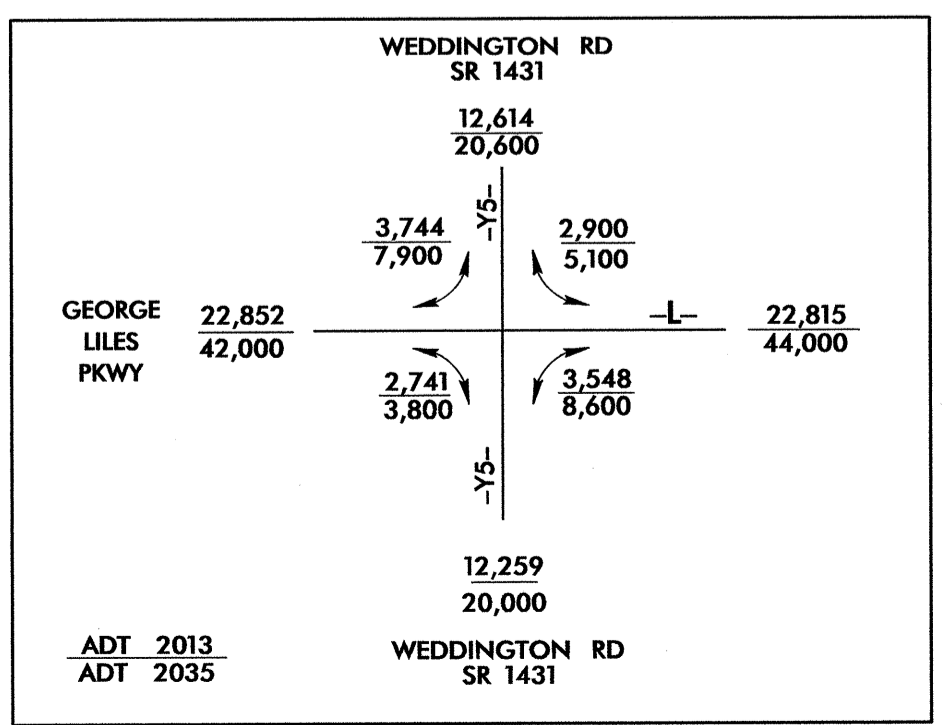
JOWAC
DB 396

MATCH LINE -L- STA. 142+00.00 SEE SHEET 14

Place Matting for Erosion Control in Temporary Ditches and Diversions.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 15

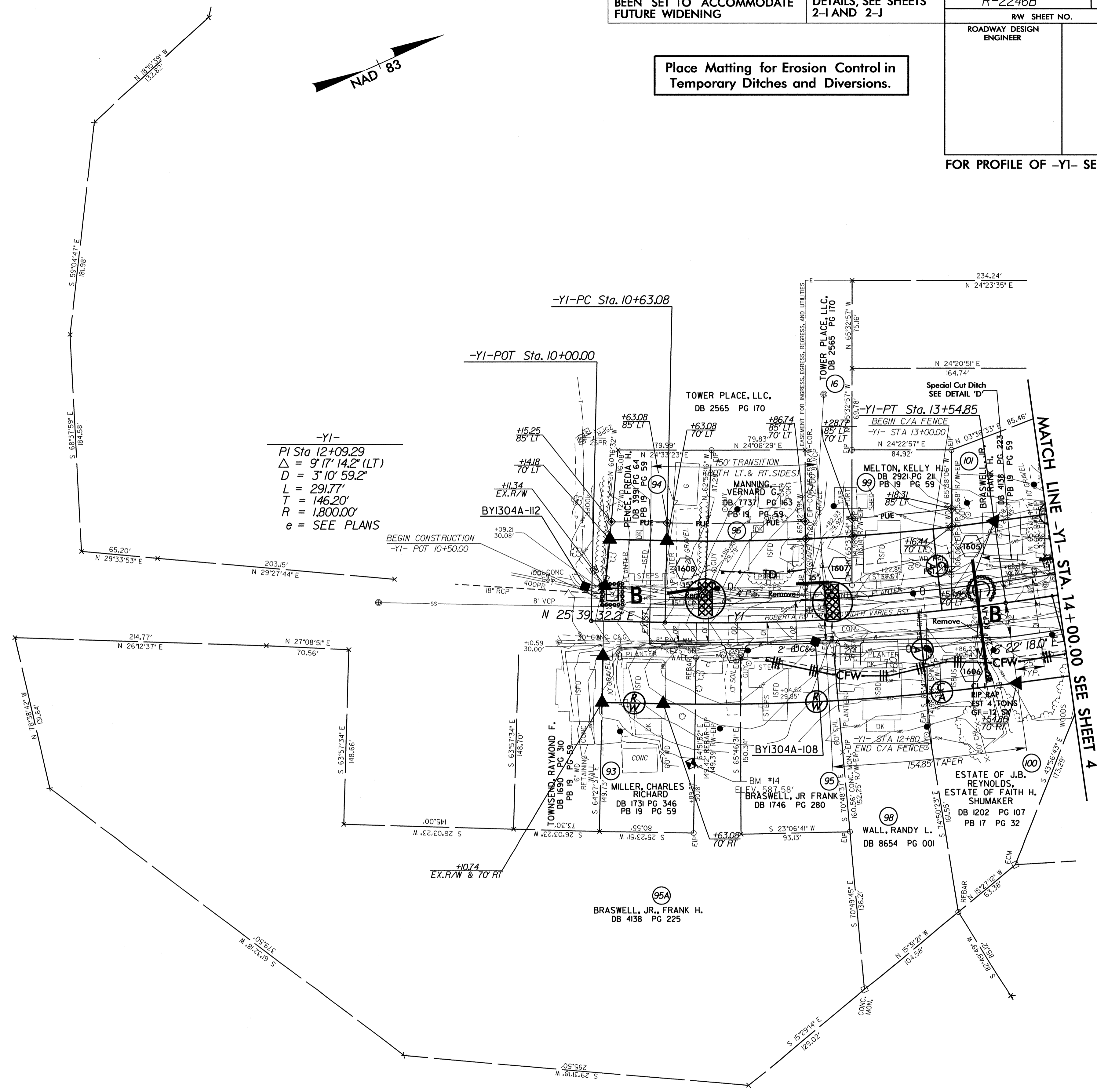
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.



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Place Matting for Erosion Control in Temporary Ditches and Diversions.

FOR PROFILE OF -Y1- SEE SHEET 26



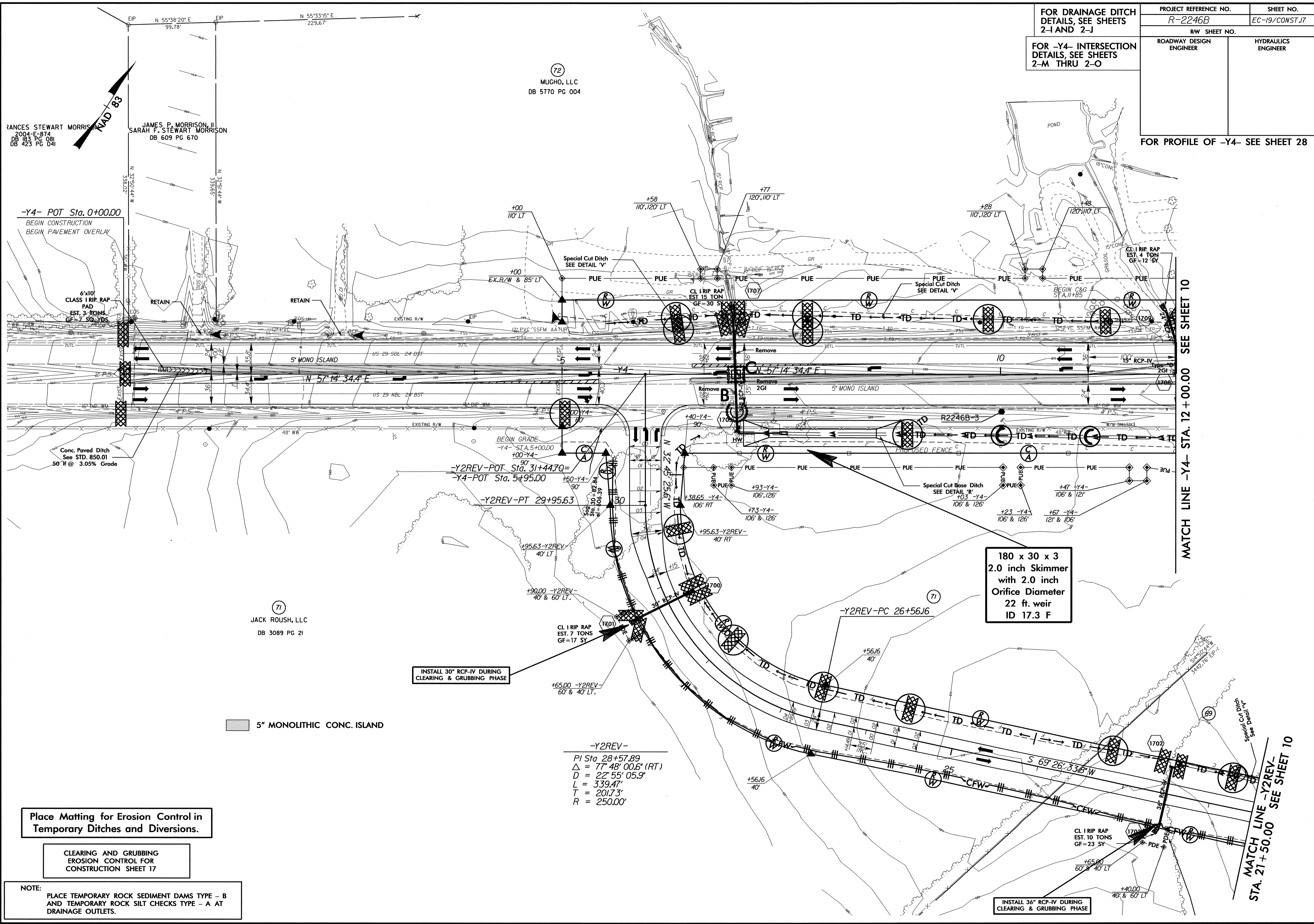
-Y1-
 PI Sta 12+09.29
 $\Delta = 9^{\circ}17'14.2''$ (LT)
 $D = 3^{\circ}10'59.2''$
 $L = 291.77'$
 $T = 146.20'$
 $R = 1,800.00'$
 $e = \text{SEE PLANS}$

CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 16

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

8/17/99

FOR DRAINAGE DITCH DETAILS, SEE SHEETS 2-I AND 2-J		PROJECT REFERENCE NO. R-2246B	SHEET NO. EC-19/CONST.17
FOR -Y4- INTERSECTION DETAILS, SEE SHEETS 2-M THRU 2-O		RW SHEET NO.	
		ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



RANCES STEWART MORRISON
2004-E-874
DB 183 PG 081
DB 423 PG 041

JAMES P. MORRISON, II
SARAH F. STEWART MORRISON
DB 609 PG 670

72
MUGHO, LLC
DB 5770 PG 004

71
JACK ROUSH, LLC
DB 3089 PG 21

5" MONOLITHIC CONC. ISLAND

-Y2REV-
PI Sta. 28+57.89
Δ = 77° 48' 00.6" (RT)
D = 22° 55' 05.9"
L = 339.47'
T = 201.73'
R = 250.00'

180 x 30 x 3
2.0 inch Skimmer
with 2.0 inch
Orifice Diameter
22 ft. weir
ID 17.3 F

Place Matting for Erosion Control in
Temporary Ditches and Diversions.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 17

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

INSTALL 30" RCP-IV DURING
CLEARING & GRUBBING PHASE

INSTALL 36" RCP-IV DURING
CLEARING & GRUBBING PHASE

MATCH LINE -Y4- STA. 12+00.00 SEE SHEET 10

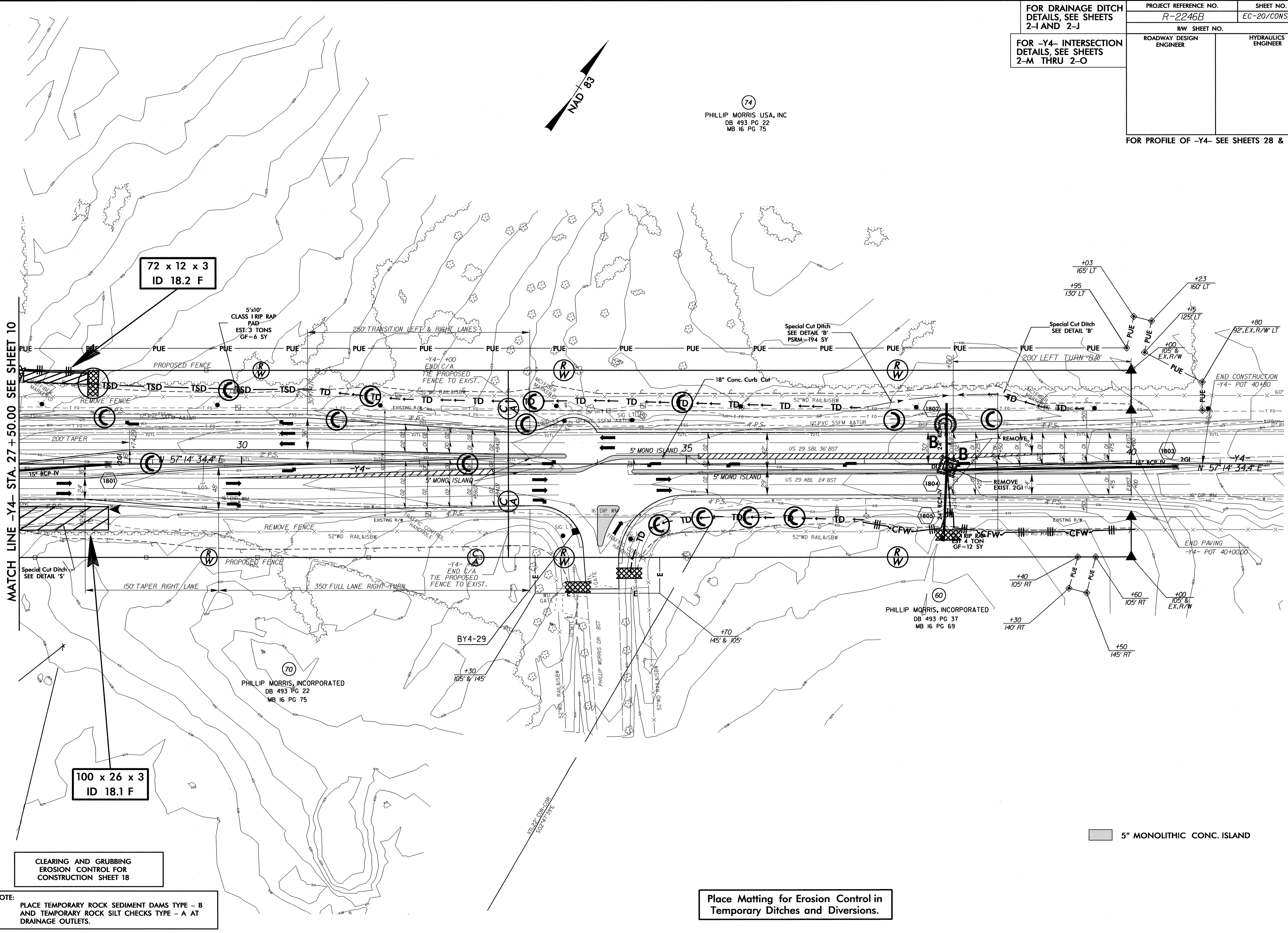
MATCH LINE -Y2REV-
STA. 21+50.00 SEE SHEET 10

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s17.dgn

8/17/99

FOR DRAINAGE DITCH DETAILS, SEE SHEETS 2-I AND 2-J		PROJECT REFERENCE NO. R-2246B	SHEET NO. EC-20/CONST.18
FOR -Y4- INTERSECTION DETAILS, SEE SHEETS 2-M THRU 2-O		RW SHEET NO.	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

FOR PROFILE OF -Y4- SEE SHEETS 28 & 29



MATCH LINE -Y4- STA. 27 + 50.00 SEE SHEET 10

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

Place Matting for Erosion Control in Temporary Ditches and Diversions.

5" MONOLITHIC CONC. ISLAND

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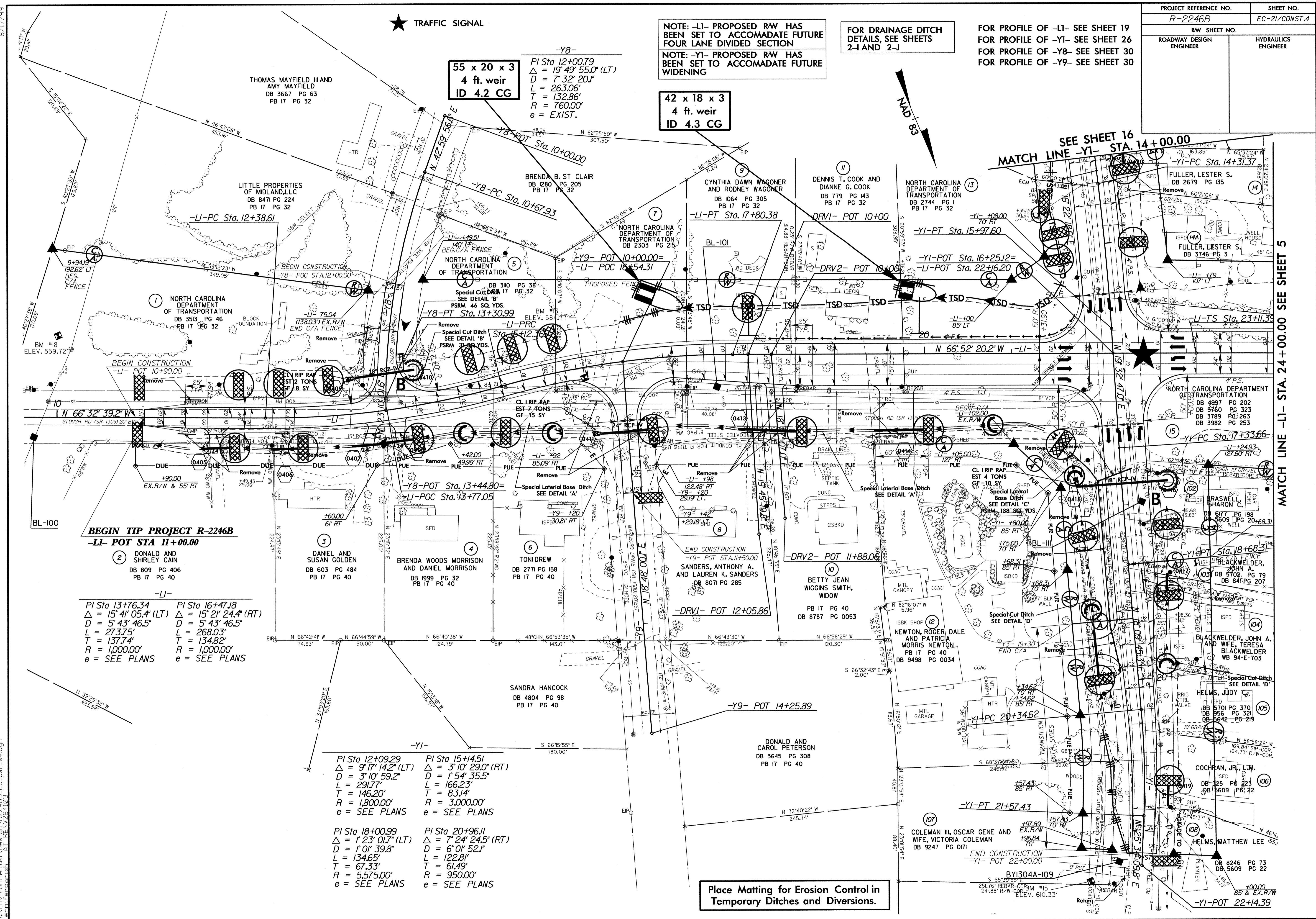
PROJECT REFERENCE NO. R-2246B		SHEET NO. EC-21/CONST.4	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			

★ TRAFFIC SIGNAL

NOTE: -LI- PROPOSED RW HAS BEEN SET TO ACCOMMODATE FUTURE FOUR LANE DIVIDED SECTION
NOTE: -Y1- PROPOSED RW HAS BEEN SET TO ACCOMMODATE FUTURE WIDENING

FOR DRAINAGE DITCH DETAILS, SEE SHEETS 2-1 AND 2-2

FOR PROFILE OF -LI- SEE SHEET 19
FOR PROFILE OF -Y1- SEE SHEET 20
FOR PROFILE OF -Y8- SEE SHEET 30
FOR PROFILE OF -Y9- SEE SHEET 30



55 x 20 x 3
4 ft. weir
ID 4.2 CG

42 x 18 x 3
4 ft. weir
ID 4.3 CG

BEGIN TIP PROJECT R-2246B
-LI- POT STA 11+00.00

-LI-
PI Sta 13+76.34
 $\Delta = 15' 4" 05.4" (LT)$
 $D = 5' 43' 46.5"$
 $L = 273.75'$
 $T = 137.74'$
 $R = 1,000.00'$
 $e = SEE PLANS$

PI Sta 16+47.18
 $\Delta = 15' 2" 24.4" (RT)$
 $D = 5' 43' 46.5"$
 $L = 268.03'$
 $T = 134.82'$
 $R = 1,000.00'$
 $e = SEE PLANS$

-Y1-
PI Sta 12+09.29
 $\Delta = 9' 17' 14.2" (LT)$
 $D = 3' 10' 59.2"$
 $L = 291.77'$
 $T = 146.20'$
 $R = 1,800.00'$
 $e = SEE PLANS$

PI Sta 15+14.51
 $\Delta = 3' 10' 29.0" (RT)$
 $D = 1' 54' 35.5"$
 $L = 166.23'$
 $T = 83.14'$
 $R = 3,000.00'$
 $e = SEE PLANS$

PI Sta 18+00.99
 $\Delta = 1' 23' 01.7" (LT)$
 $D = 1' 01' 39.8"$
 $L = 134.65'$
 $T = 67.33'$
 $R = 5,575.00'$
 $e = SEE PLANS$

PI Sta 20+96.11
 $\Delta = 7' 24' 24.5" (RT)$
 $D = 6' 01' 52.1"$
 $L = 122.81'$
 $T = 61.49'$
 $R = 950.00'$
 $e = SEE PLANS$

Place Matting for Erosion Control in Temporary Ditches and Diversions.

MATCH LINE -LI- STA. 24 + 00.00 SEE SHEET 5

SEE SHEET 16
MATCH LINE -Y1- STA. 14 + 00.00

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NOTE: -L1- PROPOSED RW HAS BEEN SET TO ACCOMMODATE FUTURE FOUR LANE DIVIDED SECTION

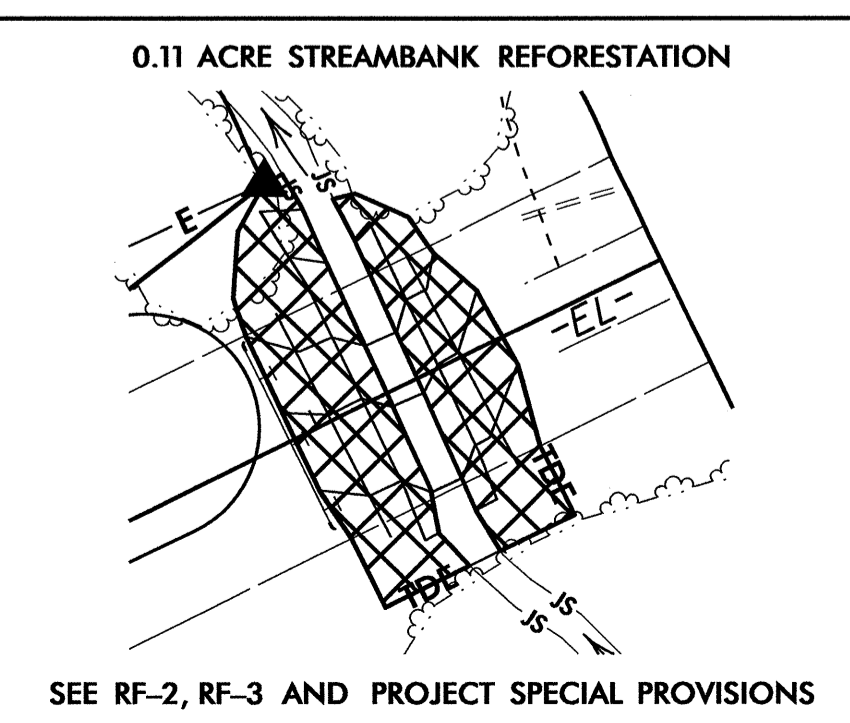
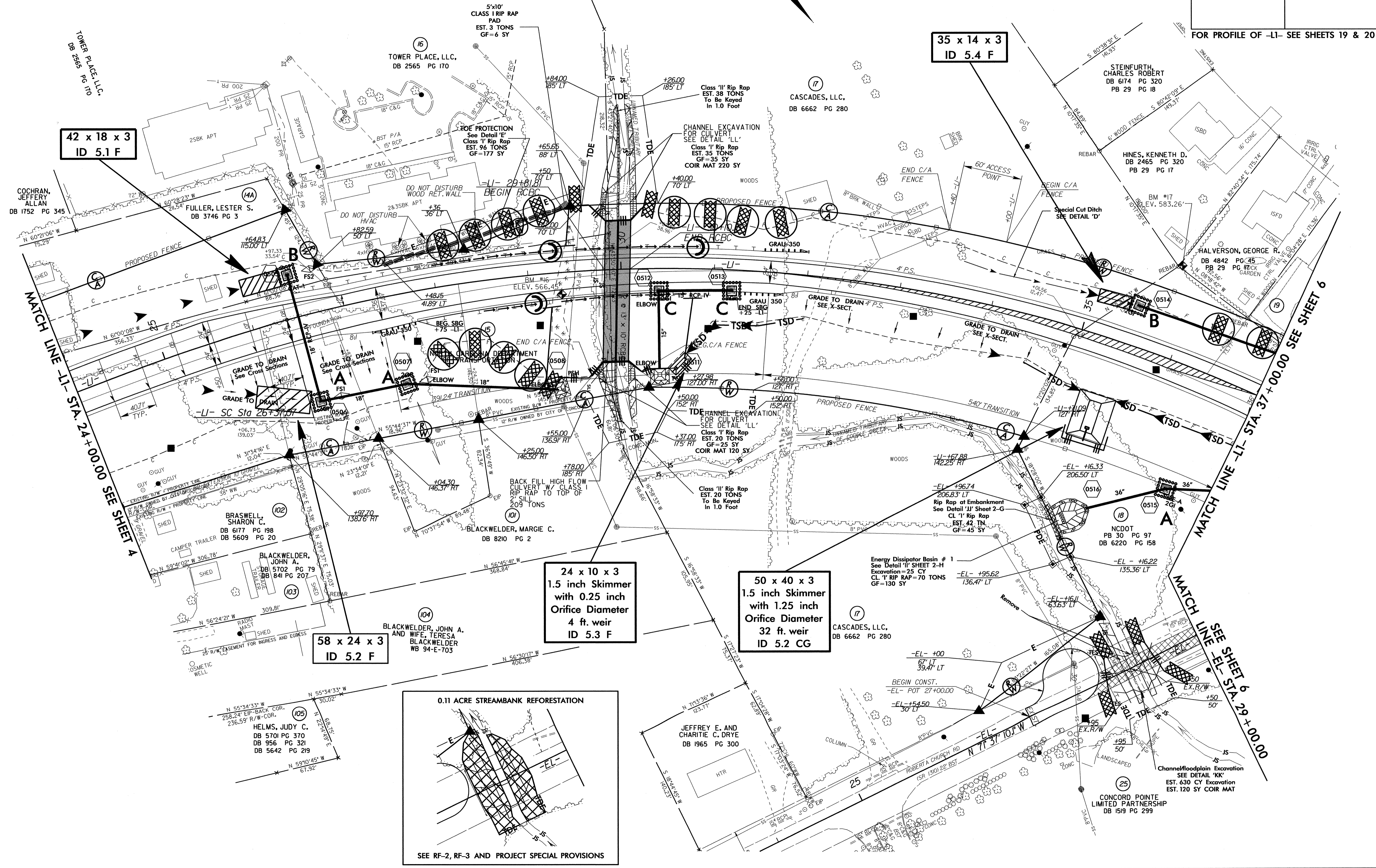
Place Matting for Erosion Control in Temporary Ditches and Diversions.

PROJECT REFERENCE NO. R-2246B SHEET NO. EC-22/CONST.5

Use Excelsior Wattle with Polyacrylamide (PAM) at Temporary Slope Drains Where Shown

RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

FOR PROFILE OF -L1- SEE SHEETS 19 & 20



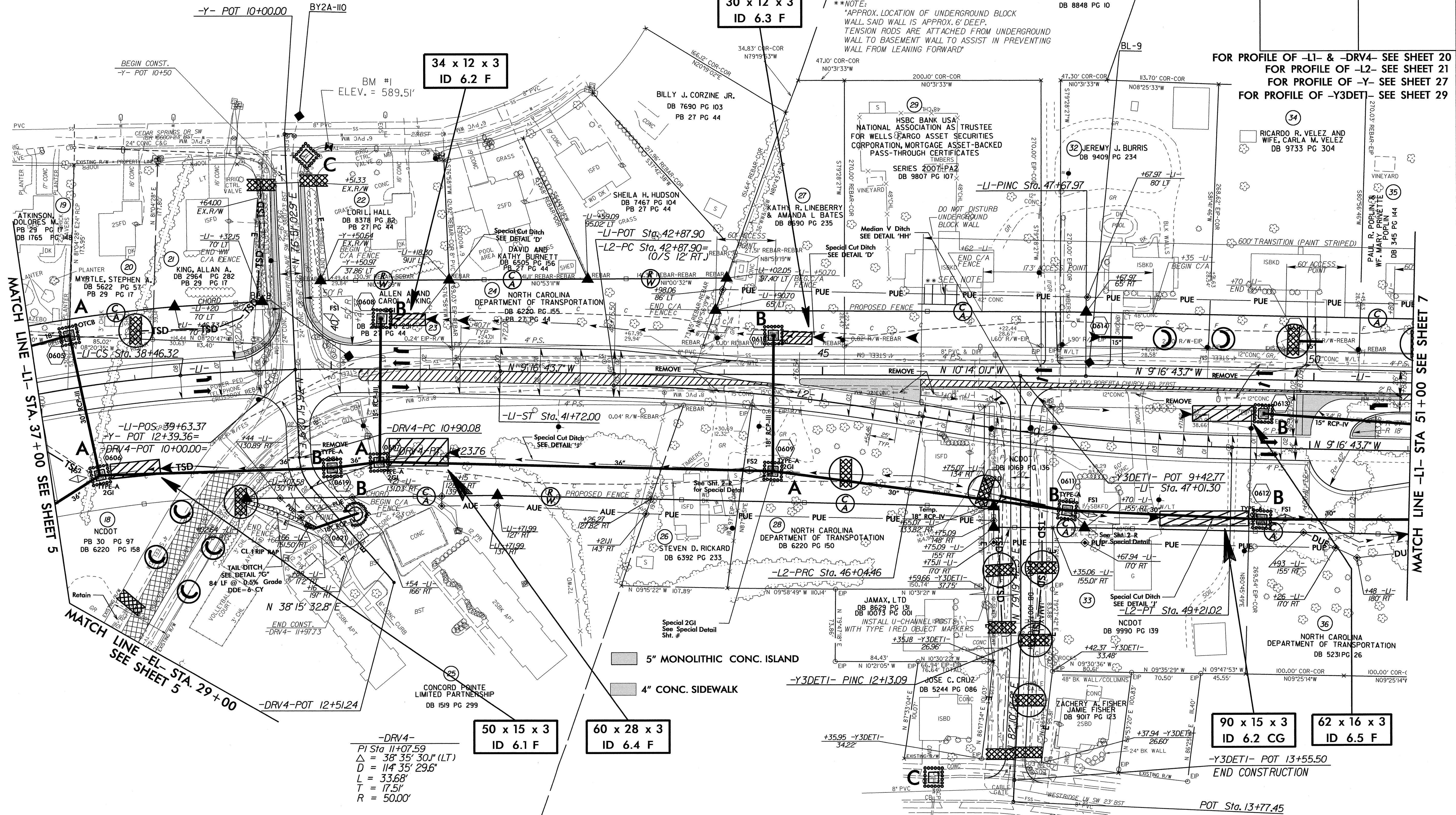
10-JAN-2013 12:52 R:\Environmental\122246B_EC-psd-s5.dgn

PROJECT REFERENCE NO. R-2246B		SHEET NO. EC-23/CONSTR.6	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			

NOTE: -Y3DETI- ALIGNMENT IS FOR PROVIDING TEMPORARY ACCESS TO THE SUBDIVISION WHILE -Y3- IS BEING CONSTRUCTED. ELIMINATE THE ACCESS AFTER THE CONSTRUCTION HAS BEEN COMPLETED.

NOTE: -L1- PROPOSED RW HAS BEEN SET TO ACCOMADTE FUTURE FOUR LANE DIVIDED SECTION

**NOTE:
*APPROX. LOCATION OF UNDERGROUND BLOCK WALL SAID WALL IS APPROX. 6' DEEP. TENSION RODS ARE ATTACHED FROM UNDERGROUND WALL TO BASEMENT WALL TO ASSIST IN PREVENTING WALL FROM LEANING FORWARD



FOR PROFILE OF -L1- & -DRV4- SEE SHEET 20
FOR PROFILE OF -L2- SEE SHEET 21
FOR PROFILE OF -Y- SEE SHEET 27
FOR PROFILE OF -Y3DETI- SEE SHEET 29

MATCH LINE -L1- STA. 37+00 SEE SHEET 5

MATCH LINE -L1- STA. 51+00 SEE SHEET 7

MATCH LINE -EL- STA. 29+00
SEE SHEET 5

-DRV4-
PI Sta 11+07.59
Δ = 38° 35' 30.1" (LT)
D = 114' 35" 29.6"
L = 33.68'
T = 17.51'
R = 50.00'

Place Matting for Erosion Control in Temporary Ditches and Diversions.

5" MONOLITHIC CONC. ISLAND
4" CONC. SIDEWALK

50 x 15 x 3 ID 6.1 F
60 x 28 x 3 ID 6.4 F

30 x 12 x 3 ID 6.3 F

34 x 12 x 3 ID 6.2 F

90 x 15 x 3 ID 6.2 CG

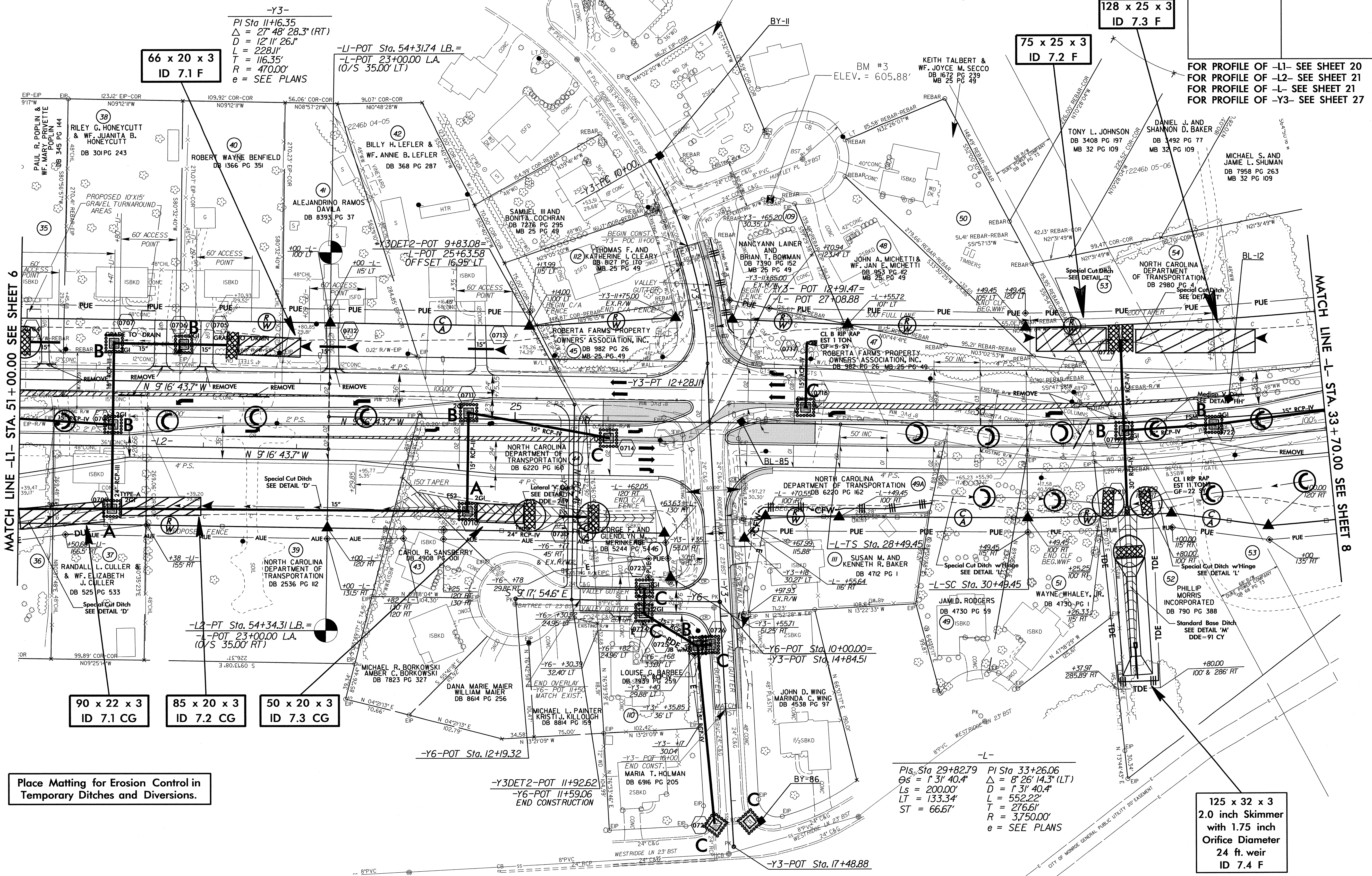
62 x 16 x 3 ID 6.5 F

<p>-L1- PIs Sta 25+28.64 Os = 6' 06" 36.2" Ls = 325.68' LT = 217.25' ST = 108.68'</p>	<p>-L1- PIs Sta 32+75.41 Δ = 45° 22' 24.1" (RT) D = 3' 45' 07.8" L = 1,209.25' T = 638.34' R = 1,527.00' e = SEE PLANS</p>	<p>-L1- PIs Sta 39+55.00 Os = 6' 06" 36.2" Ls = 325.68' LT = 217.25' ST = 108.68'</p>	<p>-L2- PI Sta 44+46.51 Δ = 9° 04' 07.4" (RT) D = 2' 51' 53.2" L = 316.56' T = 158.61' R = 2,000.00' e = SEE PLANS</p>	<p>-L2- PI Sta 47+63.07 Δ = 9° 04' 07.4" (LT) D = 2' 51' 53.2" L = 316.56' T = 158.61' R = 2,000.00' e = SEE PLANS</p>
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PROJECT REFERENCE NO. R-2246B		SHEET NO. EC-24/CONST.7	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

5" MONOLITHIC CONC. ISLAND
4" CONC. SIDEWALK

NOTE: -Y3DET2A- ALIGNMENT IS FOR PROVIDING TEMPORARY ACCESS TO THE SUBDIVISION WHILE -Y3- IS BEING CONSTRUCTED. ELIMINATE THE ACCESS AFTER THE CONSTRUCTION HAS BEEN COMPLETED.



-Y3-
PI Sta. 11+16.35
 $\Delta = 27' 48" 28.3" (RT)$
 $D = 12' 11" 26.1"$
 $L = 228.11'$
 $T = 116.35'$
 $R = 470.00'$
 $e = \text{SEE PLANS}$

-LI-POT Sta. 54+31.74 LB.=
-L-POT 23+00.00 L.A.
(O/S 35.00' LT)

66 x 20 x 3
ID 7.1 F

75 x 25 x 3
ID 7.2 F

128 x 25 x 3
ID 7.3 F

FOR PROFILE OF -L1- SEE SHEET 20
FOR PROFILE OF -L2- SEE SHEET 21
FOR PROFILE OF -L- SEE SHEET 21
FOR PROFILE OF -Y3- SEE SHEET 27

MATCH LINE -L1- STA. 51+00.00 SEE SHEET 6

MATCH LINE -L- STA. 33+70.00 SEE SHEET 8

Place Matting for Erosion Control in Temporary Ditches and Diversions.

90 x 22 x 3
ID 7.1 CG

85 x 20 x 3
ID 7.2 CG

50 x 20 x 3
ID 7.3 CG

-Y3DET2-POT 11+92.62
-Y6-POT 11+59.06
END CONSTRUCTION

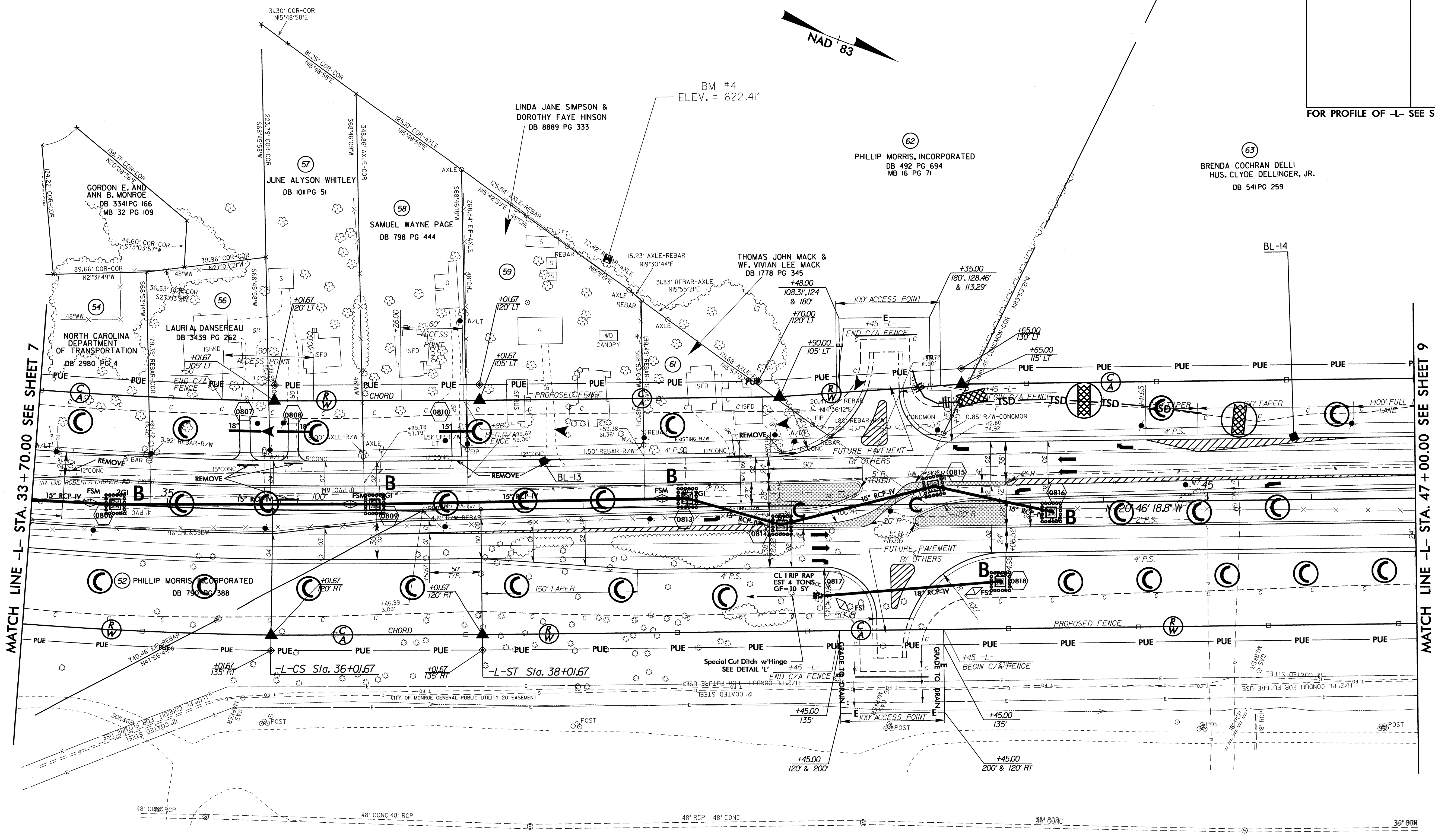
-L-
PIs, Sta 29+82.79
 $\Theta_s = 1' 31" 40.4"$
 $L_s = 200.00'$
 $LT = 133.34'$
 $ST = 66.67'$

PI Sta 33+26.06
 $\Delta = 8' 26" 14.3" (LT)$
 $D = 1' 31" 40.4"$
 $L = 552.22'$
 $T = 276.61'$
 $R = 3,750.00'$
 $e = \text{SEE PLANS}$

125 x 32 x 3
2.0 inch Skimmer
with 1.75 inch
Orifice Diameter
24 ft. weir
ID 7.4 F

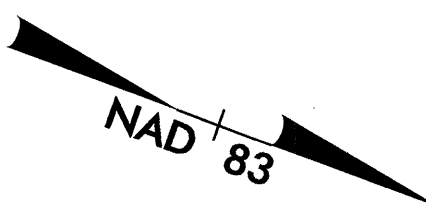
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PROJECT REFERENCE NO. R-2246B		SHEET NO. EC-25/CONST.8	
RW SHEET NO.			
ROADWAY DESIGN		HYDRAULICS ENGINEER	
FOR PROFILE OF -L- SEE SHEETS 21 & 22			



MATCH LINE -L- STA. 33 + 70.00 SEE SHEET 7

MATCH LINE -L- STA. 47 + 00.00 SEE SHEET 9



-L-
 PI Sta 33+26.06 Pls Sta 36+68.34
 $\Delta = 8^{\circ} 26' 14.3''$ (LT) $\Theta_s = 1^{\circ} 31' 40.4''$
 $D = 1^{\circ} 31' 40.4''$ $L_s = 200.00'$
 $L = 552.22'$ $LT = 133.34'$
 $T = 276.61'$ $ST = 66.67'$
 $R = 3,750.00'$
 $e = \text{SEE PLANS}$

60
 PHILLIP MORRIS USA, INC
 DB 493 PG 26
 DB 538 PG 81
 DB 538 PG 79
 MB 16 PG 71

Place Matting for Erosion Control in Temporary Ditches and Diversions.

5" MONOLITHIC CONC. ISLAND

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 psh

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FOR DRAINAGE DITCH
DETAILS, SEE SHEETS
2-I AND 2-J

PROJECT REFERENCE NO.
R-2246B

SHEET NO.
EC-26/CONST.9

R/W SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

FOR PROFILE OF -L- SEE SHEET 22

Use Excelsior Wattle with Polyacrylamide (PAM)
at Temporary Slope Drains Where Shown

-L-
PI Sta 71+90.40
 $\Delta = 32^{\circ} 43' 41.7''$ (LT)
 $D = 0^{\circ} 44' 56.3''$
 $L = 4,369.80'$
 $T = 2,246.31'$
 $R = 7,650.00'$
 $e = \text{SEE PLANS}$

BM #5
ELEV. = 619.30'

74 x 20 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
12 ft. weir
ID 9.2 F

45 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
12 ft. weir
ID 9.1 F

63
BRENDA COCHRAN DELLINGER &
HUS. CLYDE DELLINGER, JR.
DB 541 PG 259

64
HOWARD E. FURR &
WF. RITA SHOE FURR
DB 341 PG 107

65
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DB 2343 PG II9

67
BILL J. CORZINE
DB 1702 PG 325

68
J. DWIGHT MORRISON, III
DB 1979 PG 307
DB 1979 PG 309

66
BILL AND
LINDA CORZINE
DB 4454 PG II7

70
PHILLIP MORRIS, INCORPORATED
DB 493 PG 22
MB 16 PG 75

60
PHILLIP MORRIS USA, INC
DB 493 PG 26
DB 538 PG 81
DB 538 PG 79
MB 16 PG 71

FOR PREFORMED SCOUR
HOLE DETAIL, SEE SHEET 2-H

80 x 16 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
8 ft. weir
ID 9.1 CG

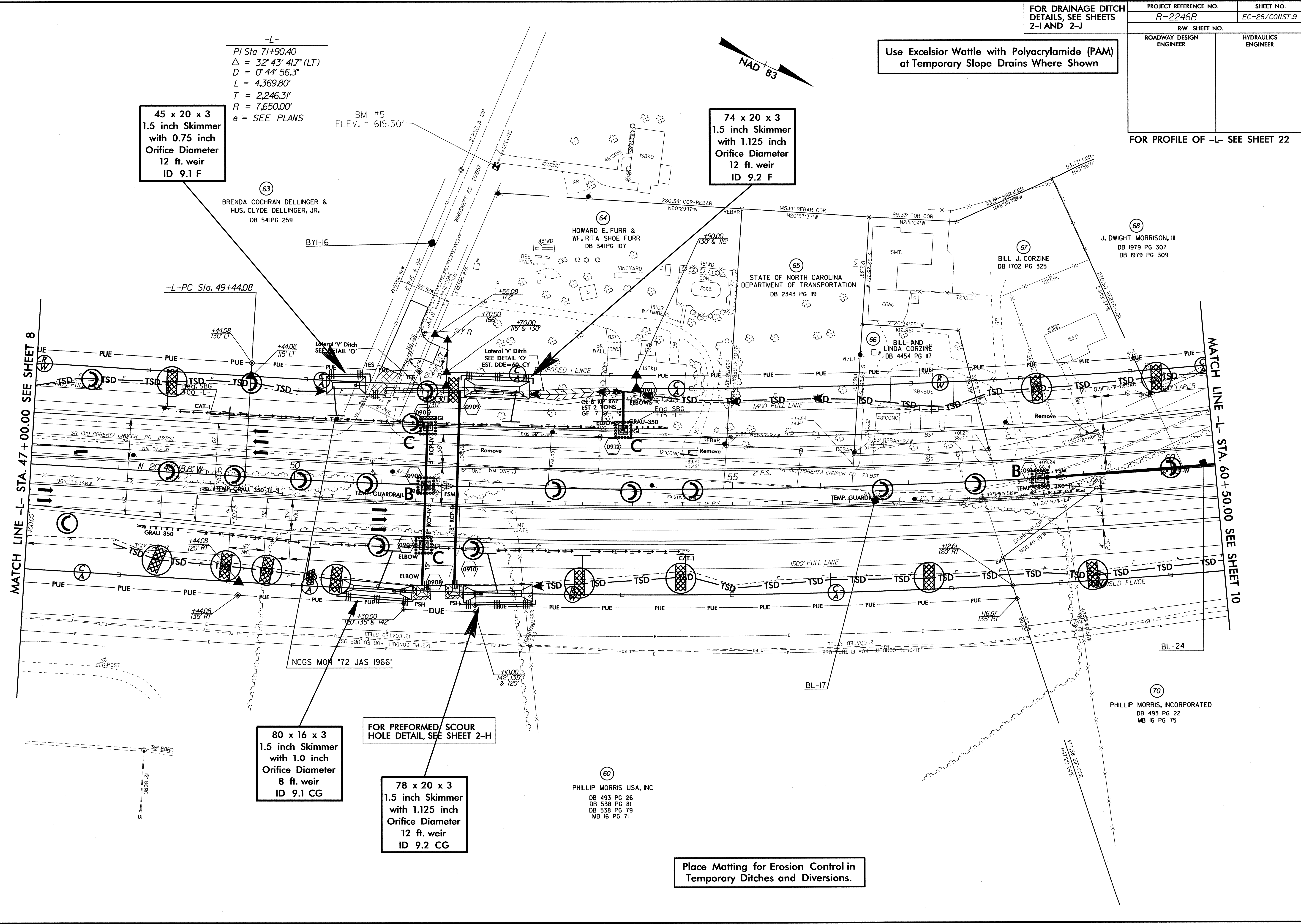
78 x 20 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
12 ft. weir
ID 9.2 CG

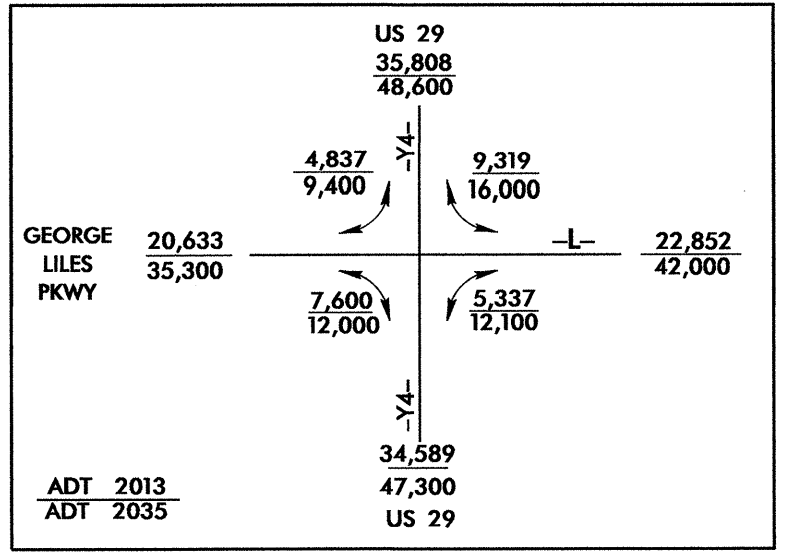
Place Matting for Erosion Control in
Temporary Ditches and Diversions.

MATCH LINE -L- STA. 47+00.00 SEE SHEET 8

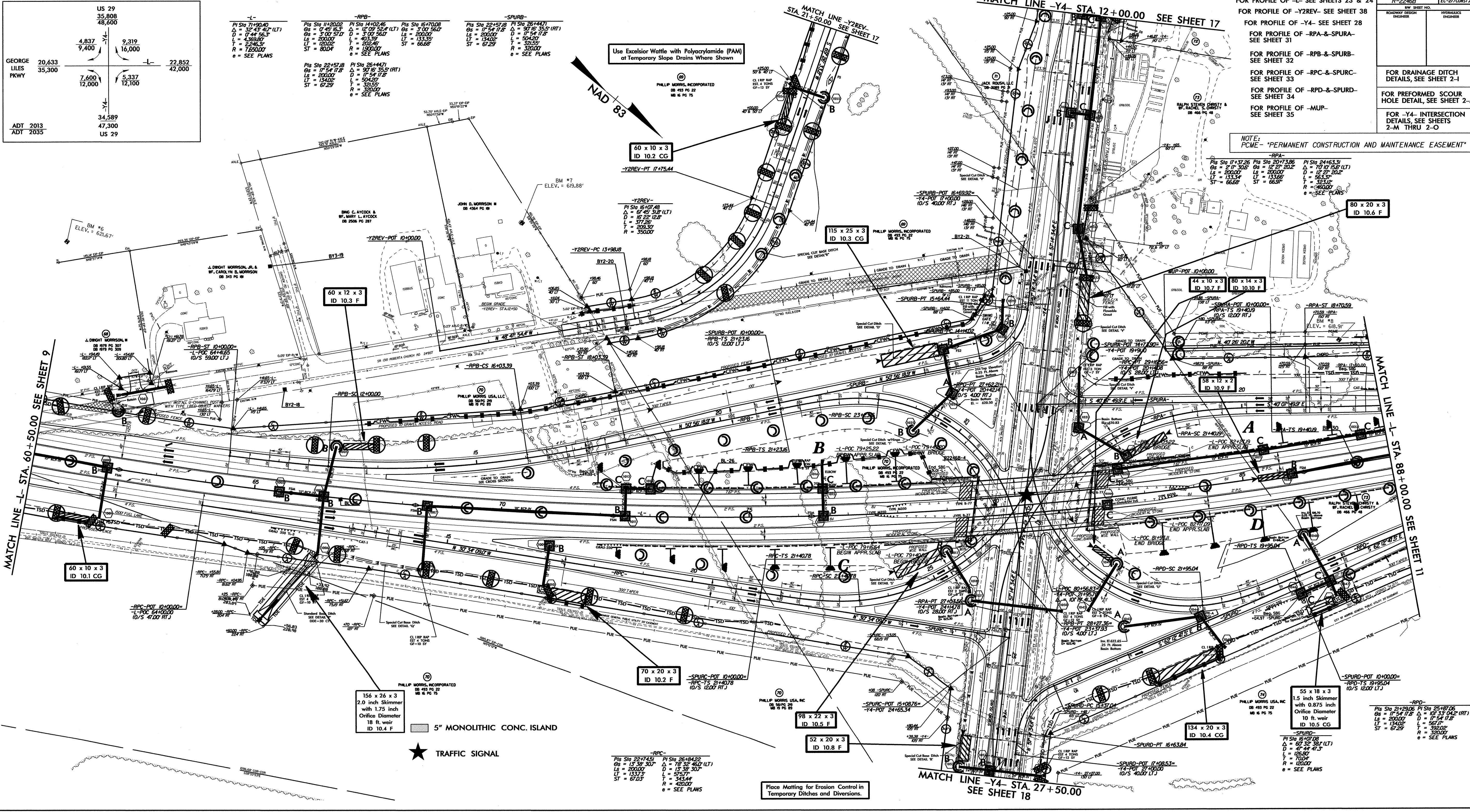
MATCH LINE -L- STA. 60+50.00 SEE SHEET 10

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REN2246B-EC





Station	Curve Data	Station	Curve Data	Station	Curve Data
PI Sta 71+90.40	$\Delta = 32.43$ (LT) $D = 17.44$ (56.3) $L = 4.363$ (7) $T = 2.246$ (5) $R = 1.620$ (0)	PI Sta 11+20.02	$\Delta = 17.54$ (7) $D = 20.00$ $L = 13.40$ $T = 6.70$ $R = 80.04$	PI Sta 14+02.46	$\Delta = 12.09$ (52.4) (LT) $D = 5.01$ (54.0) $L = 4.03$ (9) $T = 2.01$ (5) $R = 130.00$
PI Sta 22+57.18	$\Delta = 17.54$ (7) $D = 20.00$ $L = 13.40$ $T = 6.70$ $R = 80.04$	PI Sta 26+44.71	$\Delta = 50.16$ (35.0) (RT) $D = 7.54$ (7) $L = 5.42$ (7) $T = 2.71$ (3) $R = 320.00$	PI Sta 22+57.18	$\Delta = 17.54$ (7) $D = 20.00$ $L = 13.40$ $T = 6.70$ $R = 80.04$
PI Sta 26+44.71	$\Delta = 50.16$ (35.0) (RT) $D = 7.54$ (7) $L = 5.42$ (7) $T = 2.71$ (3) $R = 320.00$	PI Sta 28+14.71	$\Delta = 12.09$ (52.4) (LT) $D = 5.01$ (54.0) $L = 4.03$ (9) $T = 2.01$ (5) $R = 130.00$	PI Sta 28+14.71	$\Delta = 12.09$ (52.4) (LT) $D = 5.01$ (54.0) $L = 4.03$ (9) $T = 2.01$ (5) $R = 130.00$



FOR PROFILE OF -L- SEE SHEETS 23 & 24
 FOR PROFILE OF -Y2REV- SEE SHEET 38
 FOR PROFILE OF -Y4- SEE SHEET 38
 FOR PROFILE OF -RPA- & -SPURA- SEE SHEET 31
 FOR PROFILE OF -RPB- & -SPURB- SEE SHEET 32
 FOR PROFILE OF -RPC- & -SPURC- SEE SHEET 33
 FOR PROFILE OF -RPD- & -SPURD- SEE SHEET 34
 FOR PROFILE OF -MUP- SEE SHEET 35

NOTE: PCME - "PERMANENT CONSTRUCTION AND MAINTENANCE EASEMENT"

PROJECT REFERENCE NO.	SHEET NO.
7-22-268	EC-27/CONST-20
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
FOR DRAINAGE DITCH DETAILS, SEE SHEET 2-1	
FOR PREFORMED SCOUR HOLE DETAIL, SEE SHEET 2-J	
FOR -Y4- INTERSECTION DETAILS, SEE SHEETS 2-M THRU 2-O	

PHILLIP MORRIS USA, INC. 1000 PHILLIP MORRIS BLVD. WASHINGTON, DC 20007
 PHILLIP MORRIS USA, INC. 1000 PHILLIP MORRIS BLVD. WASHINGTON, DC 20007
 PHILLIP MORRIS USA, INC. 1000 PHILLIP MORRIS BLVD. WASHINGTON, DC 20007

8/17/09

NOTE:
PCME - "PERMANENT CONSTRUCTION AND MAINTENANCE EASEMENT"

FOR CHANNEL EXCAVATION FOR
CULVERT DETAIL, SEE SHEET 2-J

FOR DRAINAGE DITCH
DETAILS, SEE SHEET 2-I

PROJECT REFERENCE NO.
R-2246B

SHEET NO.
EC-28/CONST. II

R/W SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

-RPA-
PI Sta 15+66.23 PIs Sta 13+95.09
 $\Delta = 4' 47'' 10.4''$ (RT) $\Theta_s = 2' 17'' 30.6''$
 $D = 2' 17'' 30.6''$ $L_s = 200.00'$
 $L = 208.84'$ $LT = 133.34'$
 $T = 104.48'$ $ST = 66.68'$
 $R = 2,500.00'$
e = SEE PLANS

(73)
RALPH STEVEN CHRISTY &
WF. RACHEL S. CHRISTY
DB 466 PG 48

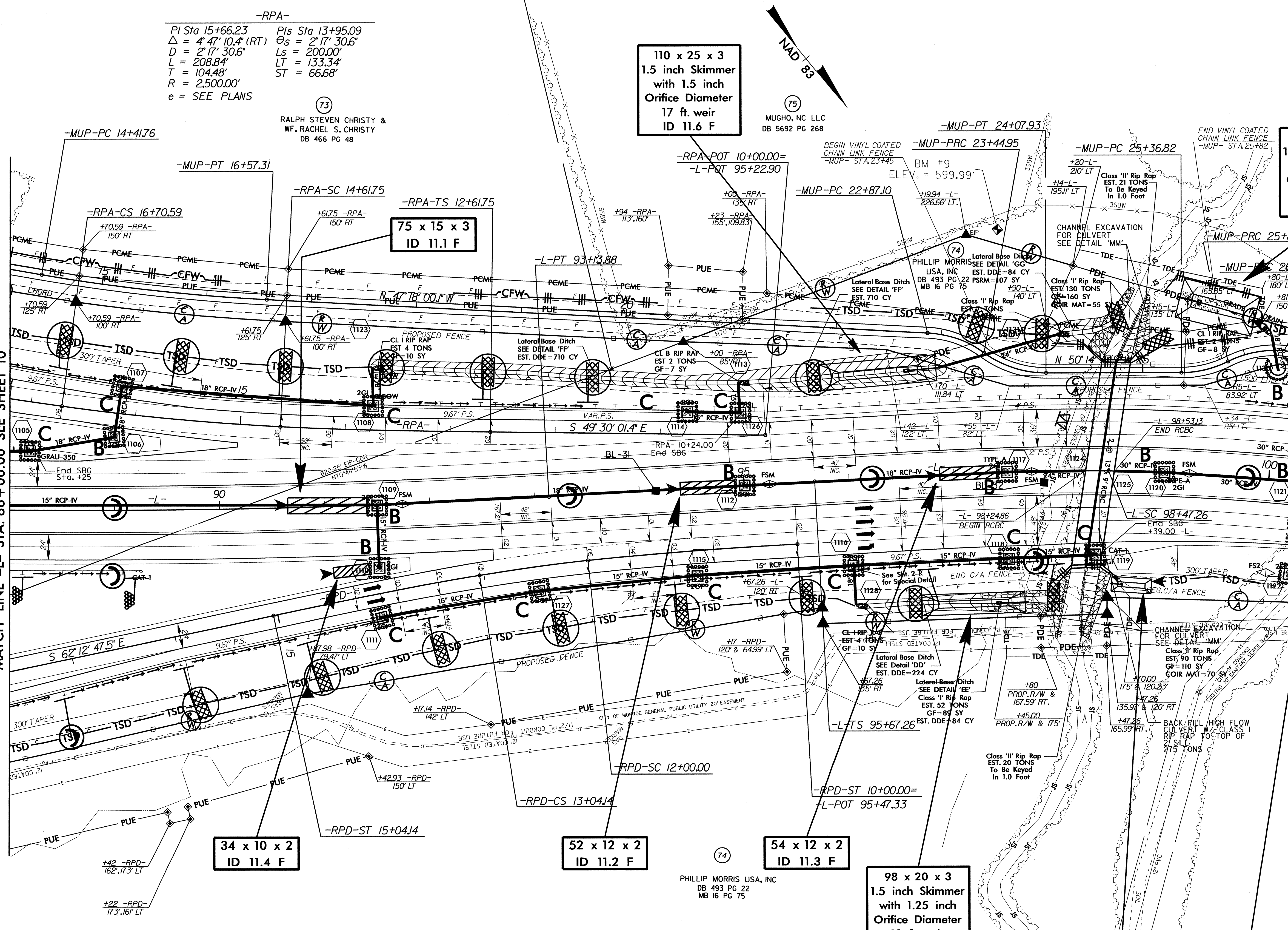
110 x 25 x 3
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
17 ft. weir
ID 11.6 F

(75)
MUGHO, NC LLC
DB 5692 PG 268

78 x 38 x 3
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
30 ft. weir
ID 11.2 CG

MATCH LINE -L- STA. 88 + 00.00 SEE SHEET 10

MATCH LINE -L- STA. 100 + 50.00 SEE SHEET 12



34 x 10 x 2
ID 11.4 F

52 x 12 x 2
ID 11.2 F

54 x 12 x 2
ID 11.3 F

98 x 20 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
12 ft. weir
ID 11.5 F

38 x 14 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
6 ft. weir
ID 11.7 F

58 x 18 x 3
ID 12.4 F

-RPD-
PIs Sta 13+70.83 PI Sta 12+52.08 PIs Sta 11+33.35
 $\Theta_s = 2' 51'' 53.2''$ $\Delta = 2' 59'' 00.6''$ (LT) $\Theta_s = 2' 51'' 53.2''$
 $L_s = 200.00'$ $D = 2' 51'' 53.2''$ $L_s = 200.00'$
 $LT = 133.35'$ $L = 104.14'$ $LT = 133.35'$
 $T = 52.08'$ $R = 2,000.00'$ $ST = 66.68'$
e = SEE PLANS

Place Matting for Erosion Control in
Temporary Ditches and Diversions.

Use Excelsior Wattle with Polyacrylamide (PAM)
at Temporary Slope Drains Where Shown

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santler@parish

8/17/99

NOTE: PCME - "PERMANENT CONSTRUCTION AND MAINTENANCE EASEMENT"

FOR DRAINAGE DITCH DETAILS, SEE SHEETS 2-I AND 2-J

PROJECT REFERENCE NO.	SHEET NO.
R-2246B	EC-29/CONST.12

RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

-L-
 PI Sta 101+63.11 PIs Sta 105+67.16
 $\Delta = 17^{\circ} 56' 54.9" (RT)$ $\Delta s = 4' 00' 38.5"$
 $D = 2' 51' 53.2"$ $Ls = 280.00'$
 $L = 626.52'$ $LT = 186.71'$
 $T = 315.85'$ $ST = 93.38'$
 $R = 2,000.00'$
 $e = \text{SEE PLANS}$

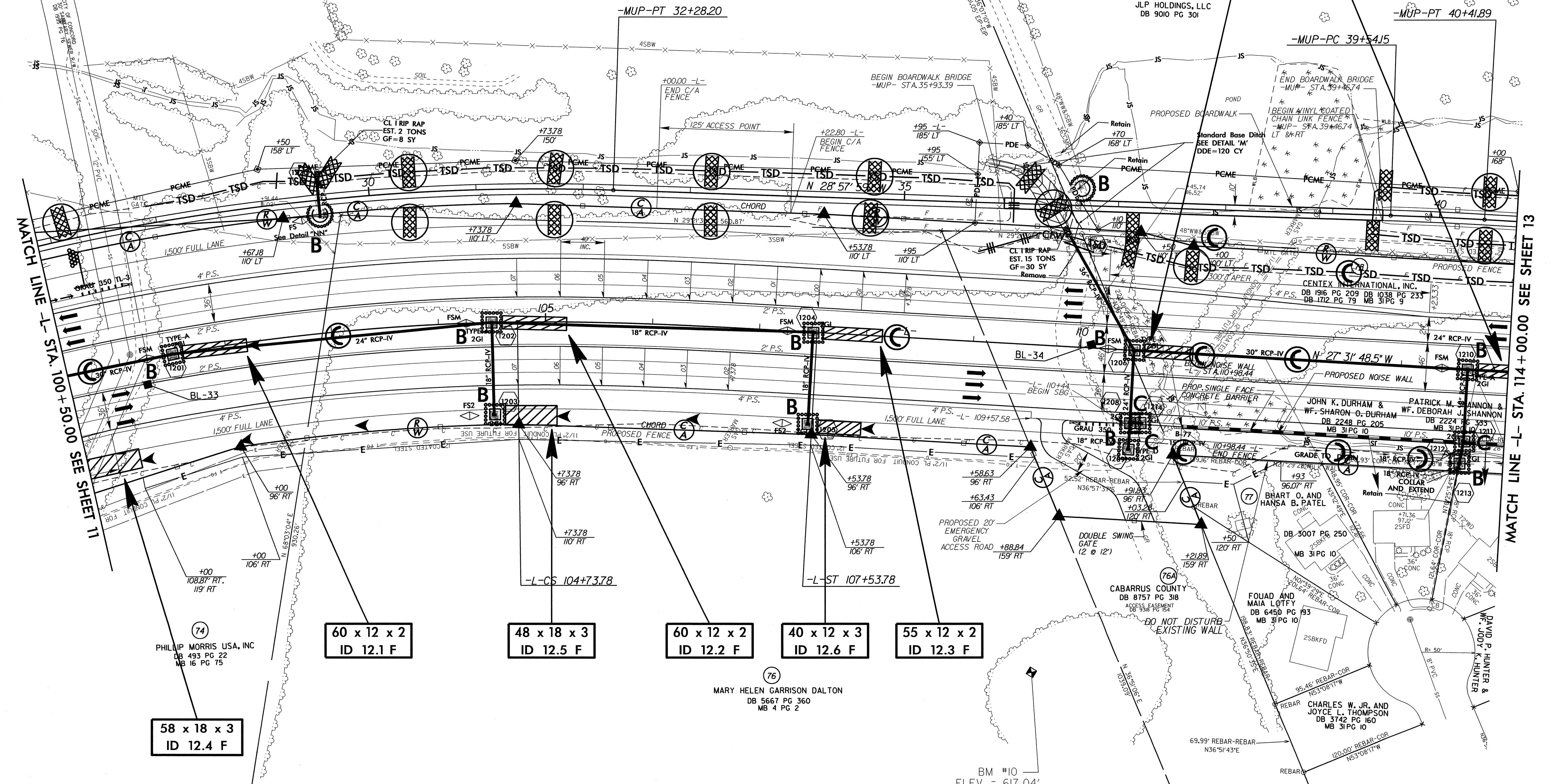
(75)
 MUGHO, NC LLC
 DB 5692 PG 268

-MUP-
 PI Sta 29+34.95 PI Sta 39+98.03
 $\Delta = 16^{\circ} 11' 16.3" (RT)$ $\Delta = 1^{\circ} 26' 10.6" (RT)$
 $D = 2' 44' 29.6"$ $D = 1^{\circ} 38' 13.3"$
 $L = 590.46'$ $L = 87.74'$
 $T = 297.21'$ $T = 43.87'$
 $R = 2,089.91'$ $R = 3,500.00'$
 $e = 02$ $e = 02$

45 x 12 x 2
 ID 12.7 F

50 x 12 x 2
 ID 13.1 F

FOR PROFILE OF -L- SEE SHEETS 24 & 25
 FOR PROFILE OF -MUP- SEE SHEETS 35 & 36



Place Matting for Erosion Control in Temporary Ditches and Diversions.

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 psh

8/17/99

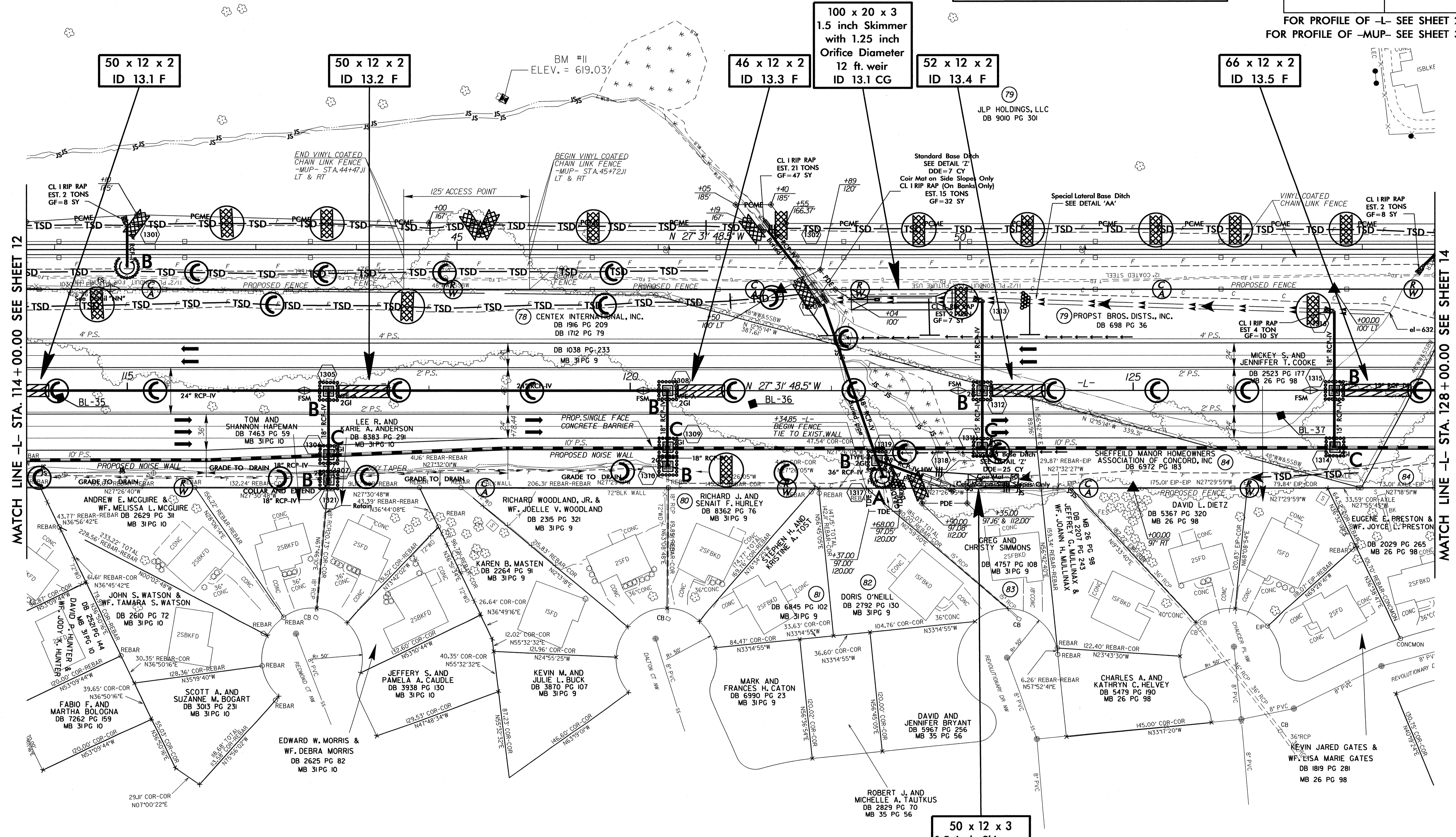
NOTE: PCME - "PERMANENT CONSTRUCTION AND MAINTENANCE EASEMENT"

FOR DRAINAGE DETAILS, SEE SHEETS 2-I AND 2-J

PROJECT REFERENCE NO. R-2246B	SHEET NO. EC-30/CONST J3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Use Excelsior Wattle with Polyacrylamide (PAM) at Temporary Slope Drains Where Shown

FOR PROFILE OF -L- SEE SHEET 25
FOR PROFILE OF -MUP- SEE SHEET 36



MATCH LINE -L- STA. 114 + 00.00 SEE SHEET 12

MATCH LINE -L- STA. 128 + 00.00 SEE SHEET 14

Place Matting for Erosion Control in Temporary Ditches and Diversions.

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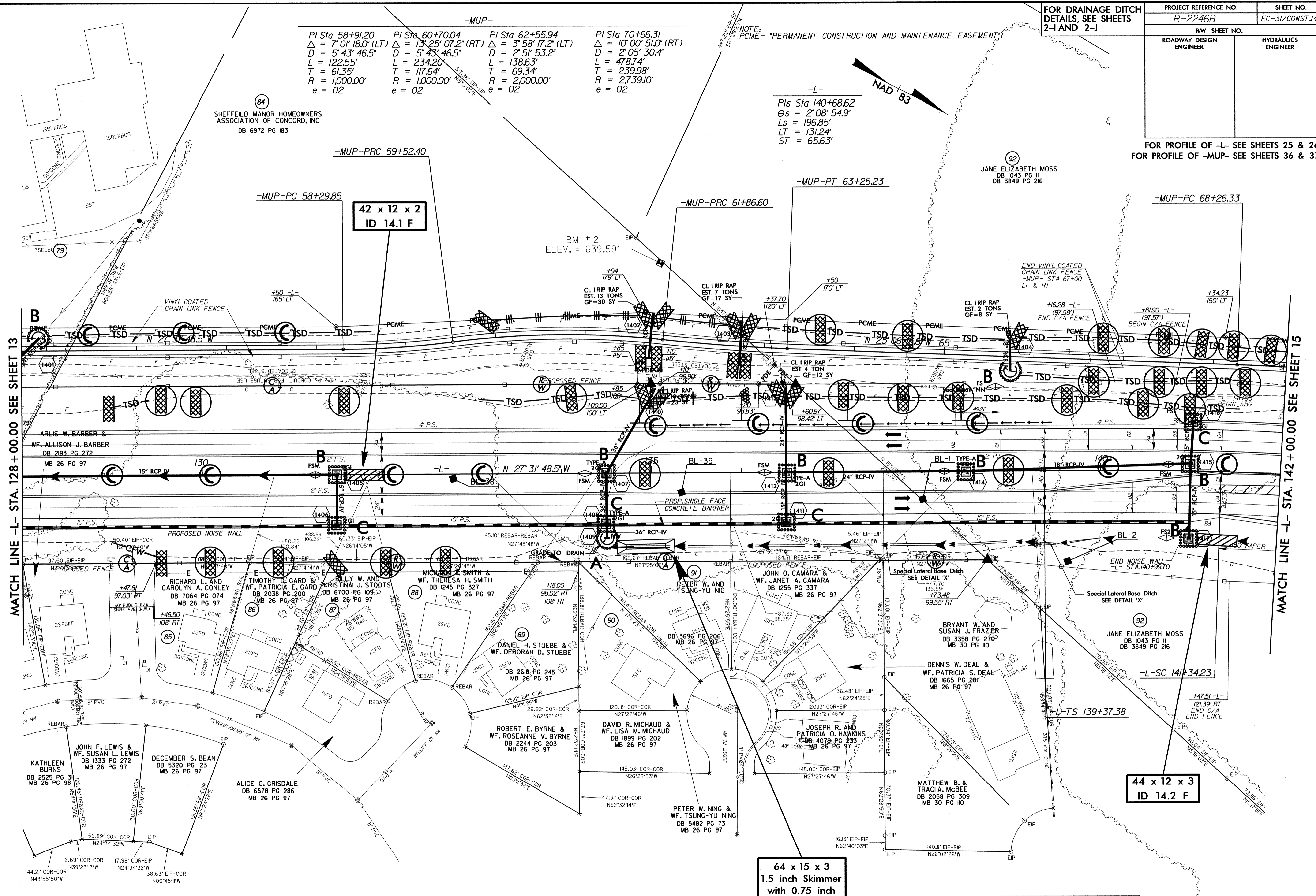
8/17/99

PROJECT REFERENCE NO.		SHEET NO.
R-2246B		EC-31/CONST.14
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	

-MUP-

PI Sta 58+91.20 Δ = 7°01'18.0" (LT) D = 5'43'46.5" L = 122.55' T = 61.35' R = 1,000.00' e = 02	PI Sta 60+70.04 Δ = 13°25'07.2" (RT) D = 5'43'46.5" L = 234.20' T = 117.64' R = 1,000.00' e = 02	PI Sta 62+55.94 Δ = 3°58'17.2" (LT) D = 2'51'53.2" L = 138.63' T = 69.34' R = 2,000.00' e = 02	PI Sta 70+66.31 Δ = 10°00'51.0" (RT) D = 2'05'30.4" L = 478.74' T = 239.98' R = 2,739.10' e = 02
--	--	--	--

-L-
Pls Sta 140+68.62
Os = 2°08'54.9"
Ls = 196.85'
LT = 131.24'
ST = 65.63'



MATCH LINE -L- STA. 128+00.00 SEE SHEET 13

MATCH LINE -L- STA. 142+00.00 SEE SHEET 15

Place Matting for Erosion Control in Temporary Ditches and Diversions.

64 x 15 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
7 ft. weir
ID 14.3 F

Use Excelsior Wattle with Polyacrylamide (PAM)
at Temporary Slope Drains Where Shown

44 x 12 x 3
ID 14.2 F

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8/17/09

5" MONOLITHIC CONC. ISLAND

★ TRAFFIC SIGNAL

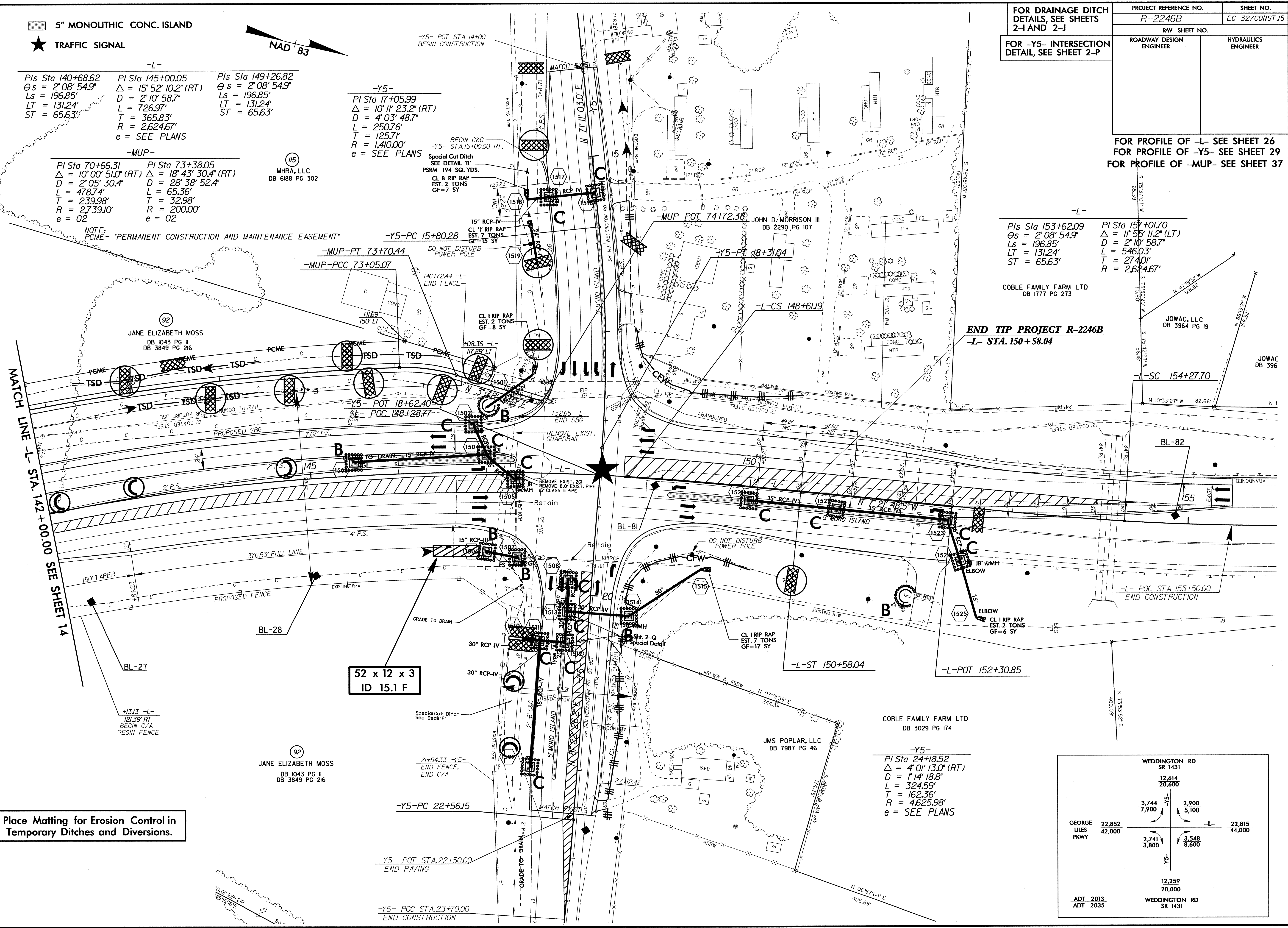


-L-
 Pls Sta 140+68.62 Pls Sta 145+00.05 Pls Sta 149+26.82
 $\Delta s = 2' 08" 54.9"$ $\Delta = 15' 52" 10.2" (RT)$ $\Delta s = 2' 08" 54.9"$
 $Ls = 196.85'$ $D = 2' 10" 58.7"$ $Ls = 196.85'$
 $LT = 131.24'$ $L = 726.97'$ $LT = 131.24'$
 $ST = 65.63'$ $T = 365.83'$ $ST = 65.63'$
 $R = 2624.67'$
 $e = \text{SEE PLANS}$

-MUP-
 Pls Sta 70+66.31 Pls Sta 73+38.05
 $\Delta = 10' 00" 51.0" (RT)$ $\Delta = 18' 43" 30.4" (RT)$
 $D = 2' 05" 30.4"$ $D = 28' 38" 52.4"$
 $L = 478.74'$ $L = 65.36'$
 $T = 239.98'$ $T = 32.98'$
 $R = 2739.10'$ $R = 200.00'$
 $e = 02$

-Y5-
 Pls Sta 17+05.99
 $\Delta = 10' 11" 23.2" (RT)$
 $D = 4' 03" 48.7"$
 $L = 250.76'$
 $T = 125.71'$
 $R = 1,410.00'$
 $e = \text{SEE PLANS}$

NOTE: PCME - "PERMANENT CONSTRUCTION AND MAINTENANCE EASEMENT"



FOR DRAINAGE DITCH DETAILS, SEE SHEETS 2-I AND 2-J	PROJECT REFERENCE NO. R-2246B	SHEET NO. EC-32/CONST.15
FOR -Y5- INTERSECTION DETAIL, SEE SHEET 2-P	RW SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

FOR PROFILE OF -L- SEE SHEET 26
 FOR PROFILE OF -Y5- SEE SHEET 29
 FOR PROFILE OF -MUP- SEE SHEET 37

-L-
 Pls Sta 153+62.09 Pls Sta 157+01.70
 $\Delta s = 2' 08" 54.9"$ $\Delta = 11' 55" 11.2" (LT)$
 $Ls = 196.85'$ $D = 2' 10" 58.7"$
 $LT = 131.24'$ $L = 546.03'$
 $ST = 65.63'$ $T = 274.01'$
 $R = 2,624.67'$

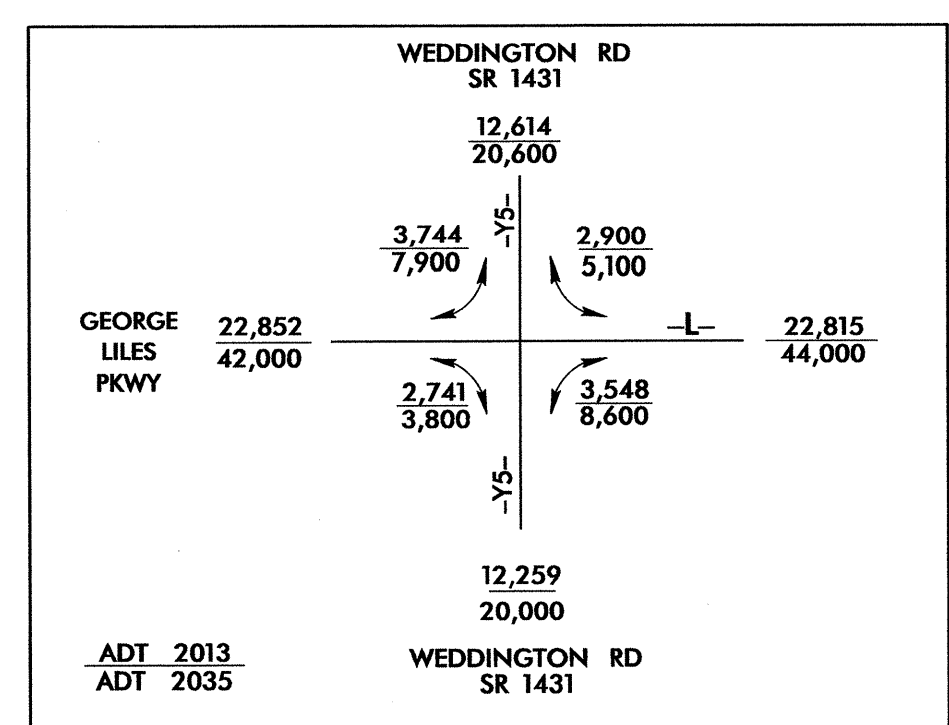
COBLE FAMILY FARM LTD DB 1777 PG 273

END TIP PROJECT R-2246B
-L- STA. 150+58.04

Place Matting for Erosion Control in Temporary Ditches and Diversions.

COBLE FAMILY FARM LTD DB 3029 PG 174

-Y5-
 Pls Sta 24+18.52
 $\Delta = 4' 01" 13.0" (RT)$
 $D = 1' 14" 18.8"$
 $L = 324.59'$
 $T = 162.36'$
 $R = 4,625.98'$
 $e = \text{SEE PLANS}$



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NOTE: -YI- PROPOSED RW HAS BEEN SET TO ACCOMMODATE FUTURE WIDENING

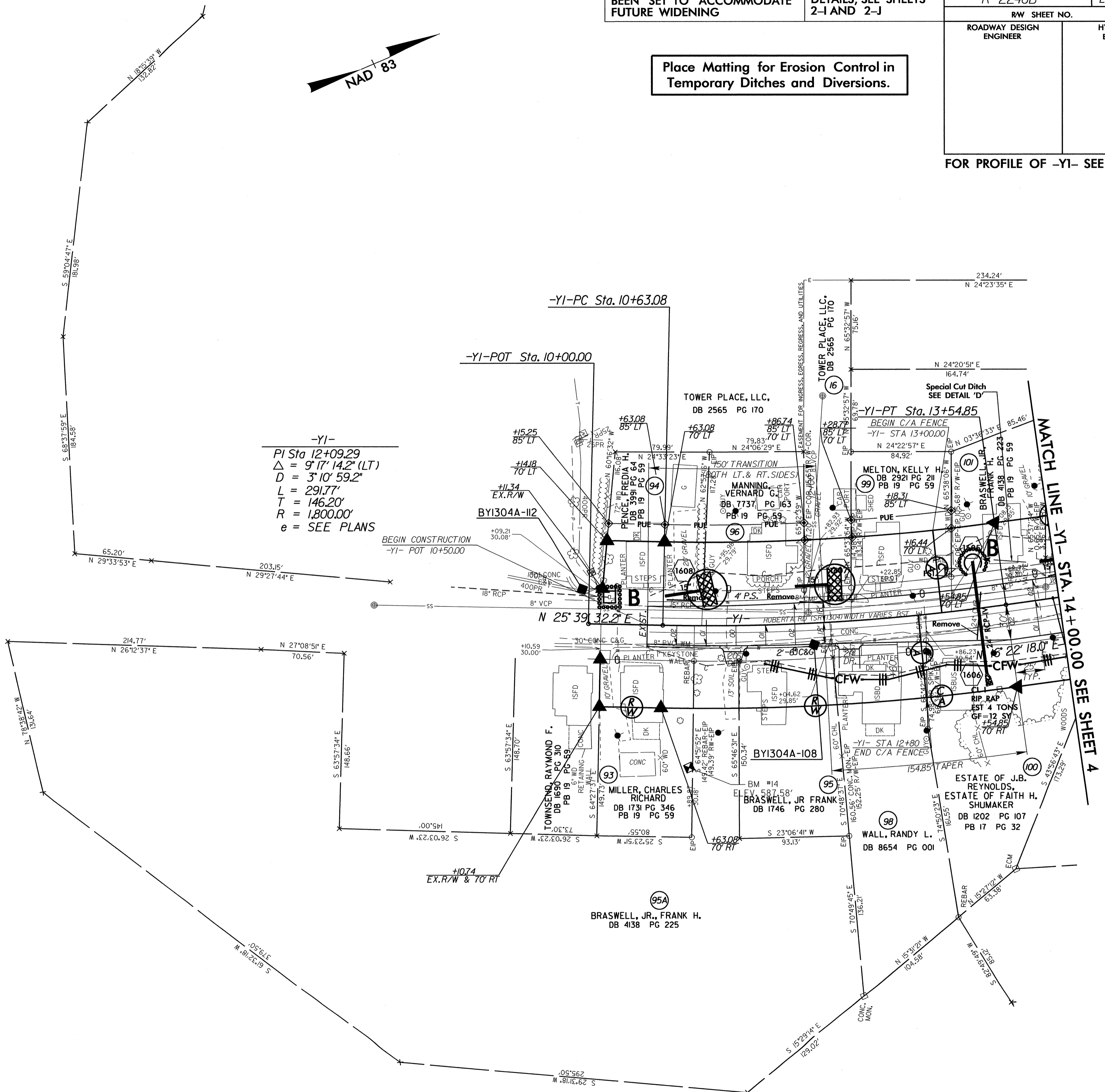
FOR DRAINAGE DITCH DETAILS, SEE SHEETS 2-I AND 2-J

PROJECT REFERENCE NO. R-2246B SHEET NO. EC-33/CONST.16

RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Place Matting for Erosion Control in Temporary Ditches and Diversions.

FOR PROFILE OF -YI- SEE SHEET 26

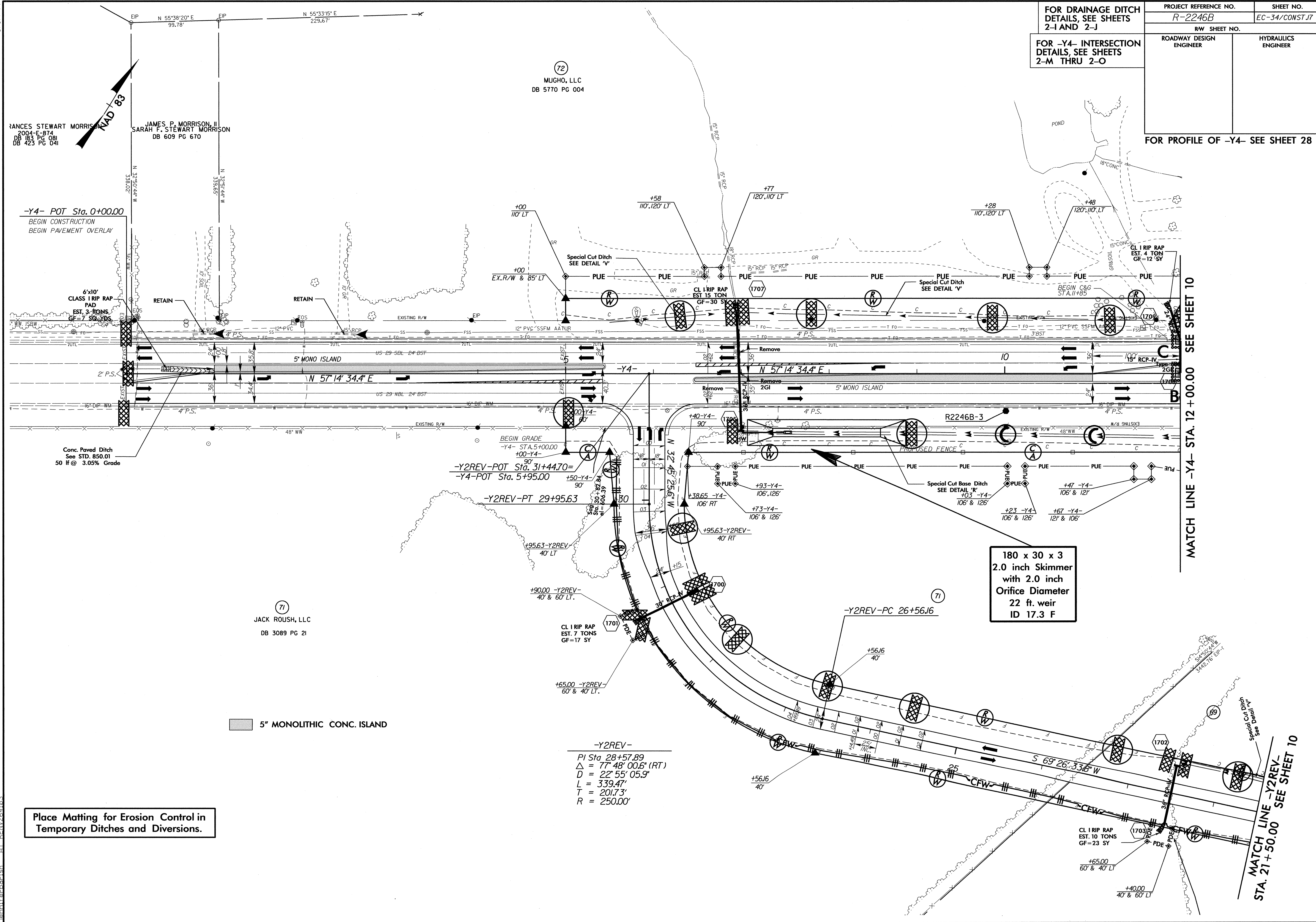


-YI-
 PI Sta 12+09.29
 $\Delta = 9' 17'' 14.2''$ (LT)
 $D = 3' 10'' 59.2''$
 $L = 291.77'$
 $T = 146.20'$
 $R = 1,800.00'$
 $e = \text{SEE PLANS}$



MATCH LINE -YI- STA. 14+00.00 SEE SHEET 4

8/17/99



FOR DRAINAGE DITCH DETAILS, SEE SHEETS 2-I AND 2-J	PROJECT REFERENCE NO.	SHEET NO.
	R-2246B	EC-34/CONST.17
FOR -Y4- INTERSECTION DETAILS, SEE SHEETS 2-M THRU 2-O	R/W SHEET NO.	HYDRAULICS ENGINEER
	ROADWAY DESIGN ENGINEER	

FOR PROFILE OF -Y4- SEE SHEET 28

RANCES STEWART MORRIS
2004-E-874
DB 183 PG 081
DB 423 PG 041

JAMES P. MORRISON, II
SARAH F. STEWART MORRISON
DB 609 PG 670

(72)
MUGHO, LLC
DB 5770 PG 004

(71)
JACK ROUSH, LLC
DB 3089 PG 21

5' MONOLITHIC CONC. ISLAND

-Y2REV-
PI Sta 28+57.89
Δ = 77° 48' 00.6" (RT)
D = 22° 55' 05.9"
L = 339.47'
T = 201.73'
R = 250.00'

180 x 30 x 3
2.0 inch Skimmer
with 2.0 inch
Orifice Diameter
22 ft. weir
ID 17.3 F

Place Matting for Erosion Control in
Temporary Ditches and Diversions.

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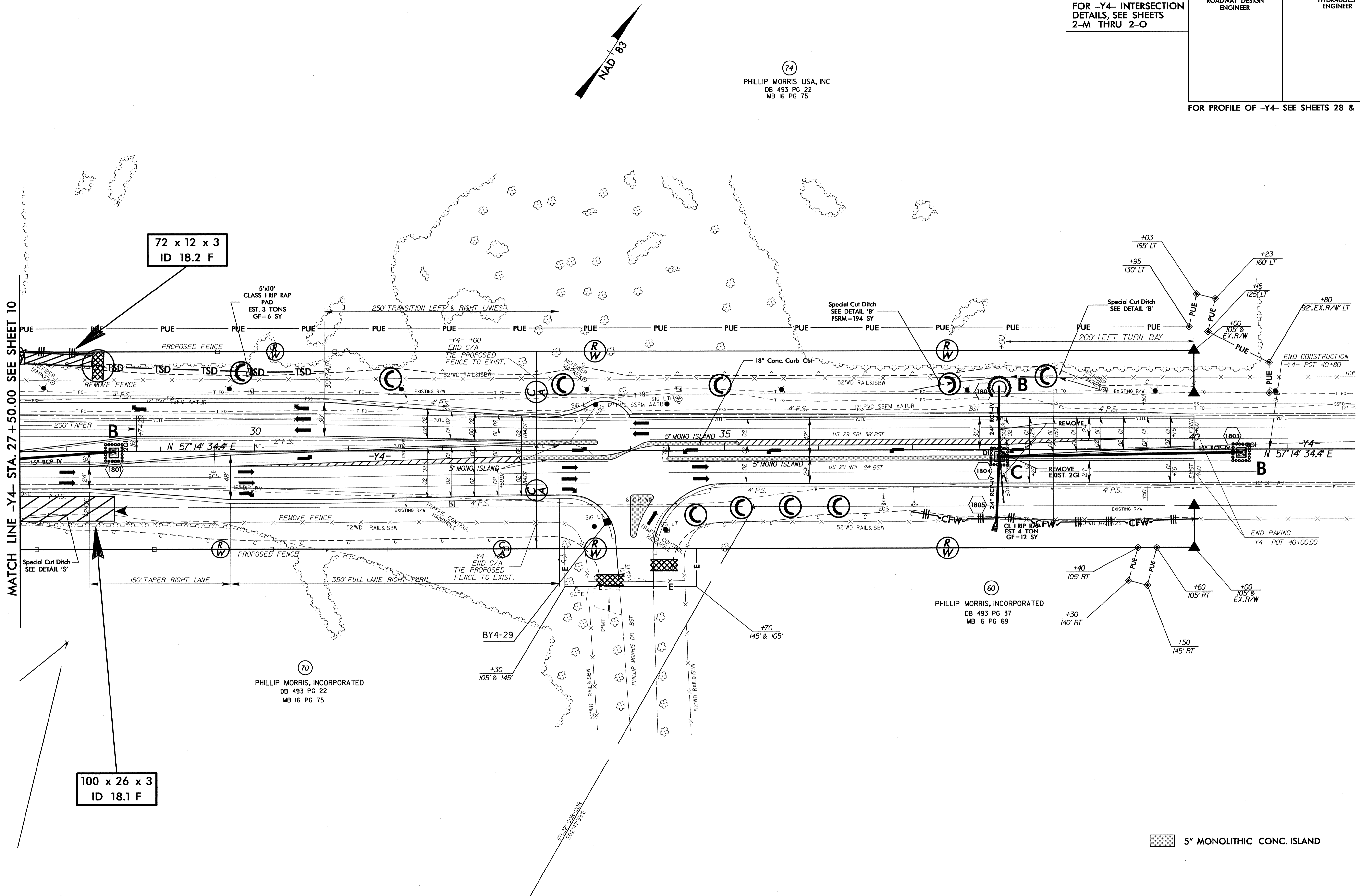
MATCH LINE -Y2REV-
STA. 21+50.00 SEE SHEET 10

MATCH LINE -Y4- STA. 12+00.00 SEE SHEET 10

8/17/99

FOR DRAINAGE DITCH DETAILS, SEE SHEETS 2-I AND 2-J	PROJECT REFERENCE NO. <i>R-2246B</i>	SHEET NO. EC-35/CONST.18
	RW SHEET NO.	
FOR -Y4- INTERSECTION DETAILS, SEE SHEETS 2-M THRU 2-O	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

FOR PROFILE OF -Y4- SEE SHEETS 28 & 29



72 x 12 x 3
ID 18.2 F

100 x 26 x 3
ID 18.1 F

Place Matting for Erosion Control in
Temporary Ditches and Diversions.

5" MONOLITHIC CONC. ISLAND

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smita@cmash