TIP PROJECT: B-5010

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5010	EC-1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION

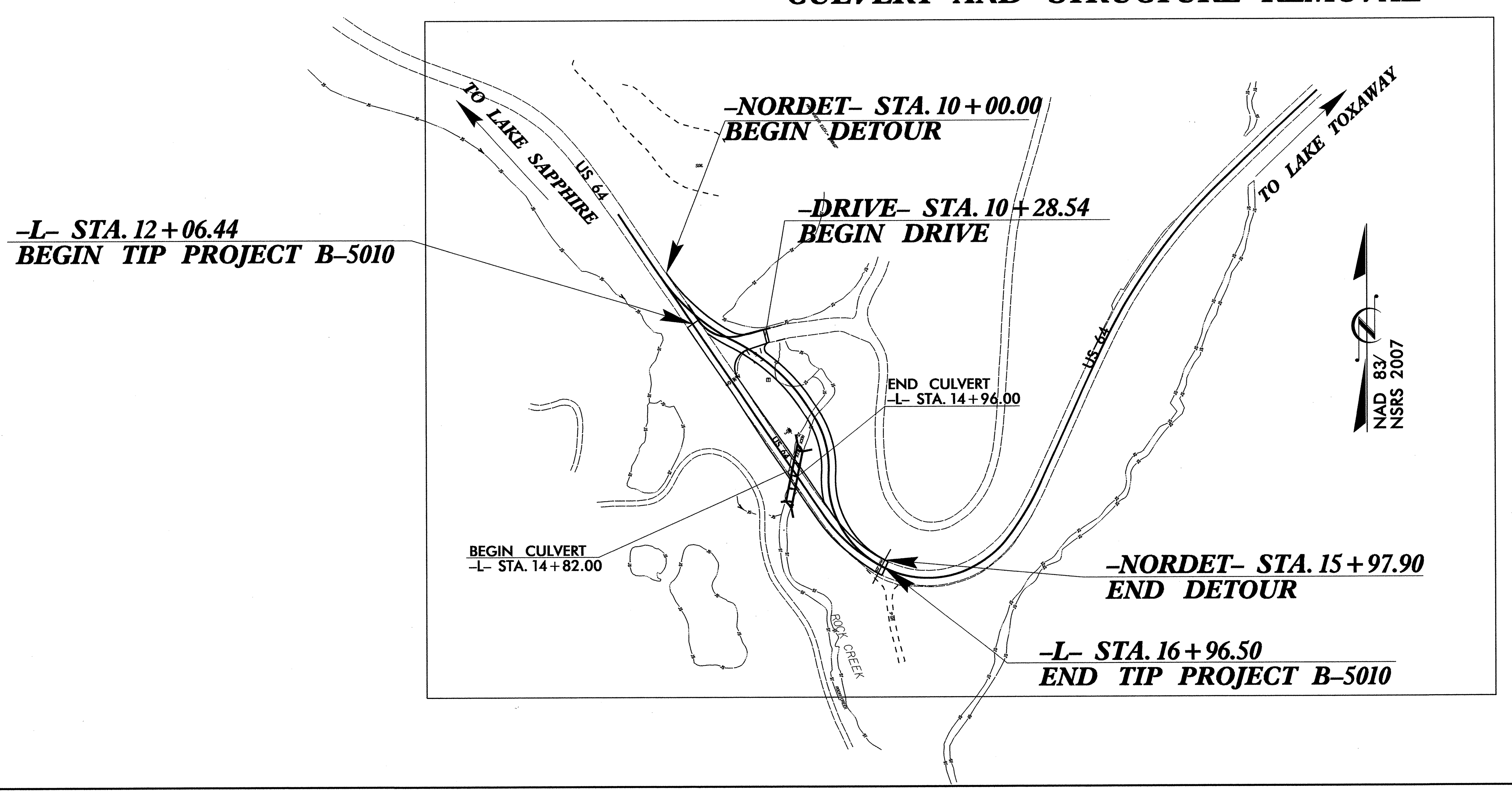
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

TRANSYLVANIA COUNTY

LOCATION: BRIDGE NO. 27 ON US 64 OVER ROCK CREEK

TYPE OF WORK: GRADING, PAVING, DRAINAGE, GUARDRAIL, CULVERT AND STRUCTURE REMOVAL



EROSION AND SEDIMENT CONTROL MEASURES

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

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

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT

Refer To E. C. Special Provisions for Special Considerations.

GRAPHIC SCALE

0

PLANS

0

PROFILE (HORIZONTAL)

0

PROFILE (VERTICAL)

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

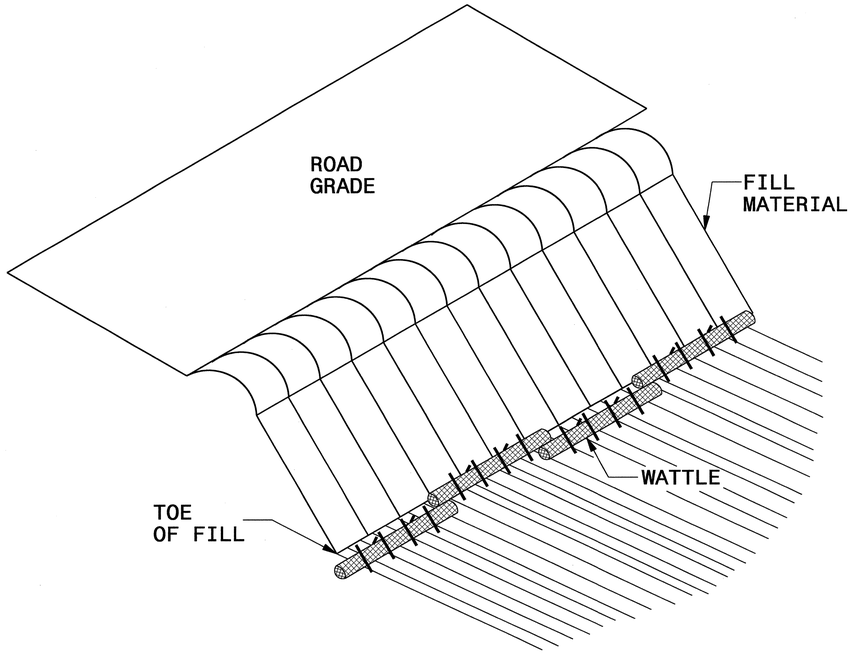
Roadway Standard Drawings

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 revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01 Railroad Erosion Control Detail
1605.01 Temporary Silt Fence
1606.01 Special Sediment Control Fence
1607.01 Gravel Construction Entrance
1622.01 Temporary Berms and Slope Drains
1630.01 Riser Basin
1630.02 Silt Basin Type B
1630.03 Temporary Silt Ditch
1630.04 Stilling Basin
1630.05 Temporary Diversion
1630.06 Special Stilling Basin
1631.01 Matting Installation
1632.01 Rock Inlet Sediment Trap Type A
1632.02 Rock Inlet Sediment Trap Type B
1632.03 Rock Inlet Sediment Trap Type C
1633.01 Temporary Rock Silt Check Type A
1633.02 Temporary Rock Silt Check Type B
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
1640.01 Coir Fiber Baffle
1645.01 Temporary Stream Crossing

PROJECT REFERENCE NO.	SHEET NO.
B-5010	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE BARRIER DETAIL



ISOMETRIC VIEW

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.

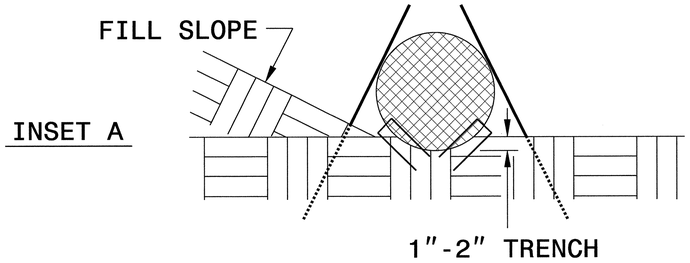
USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

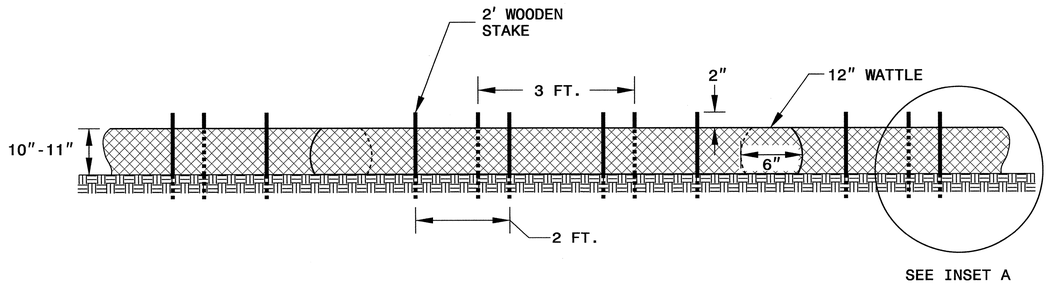
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

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

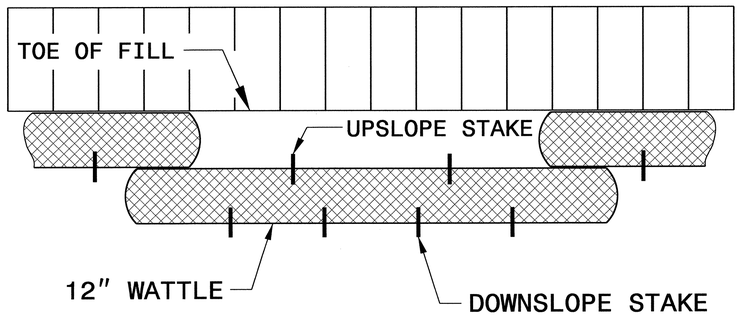
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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





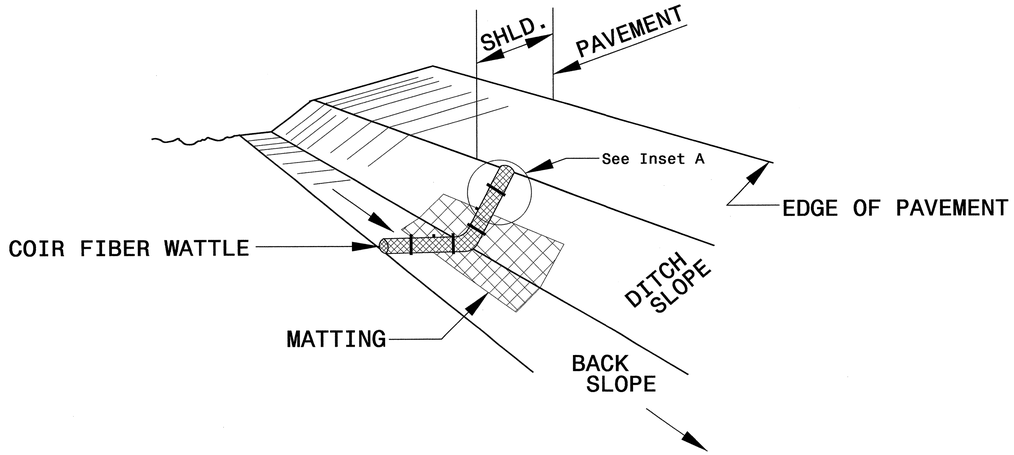
FRONT VIEW



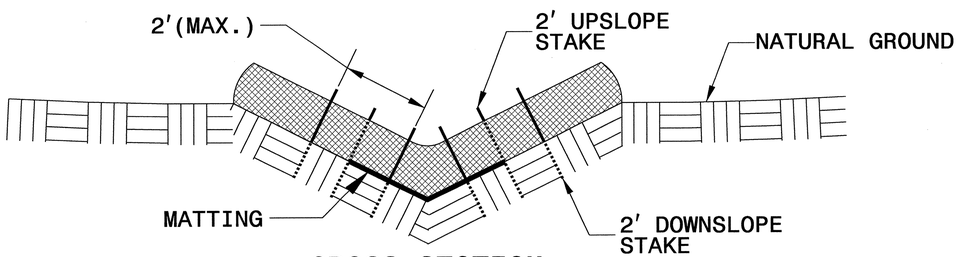
TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-5010	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

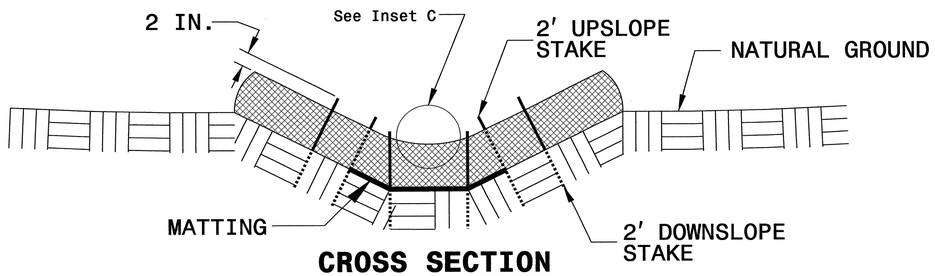
COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

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.

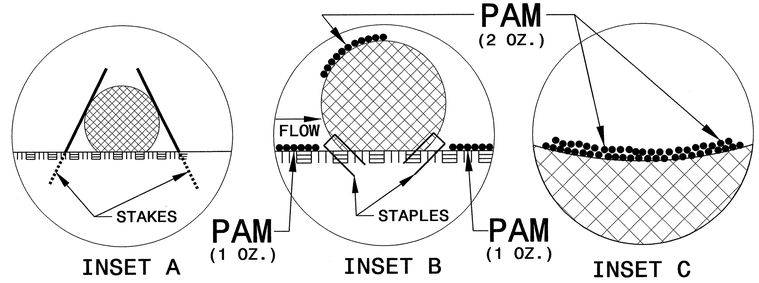
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

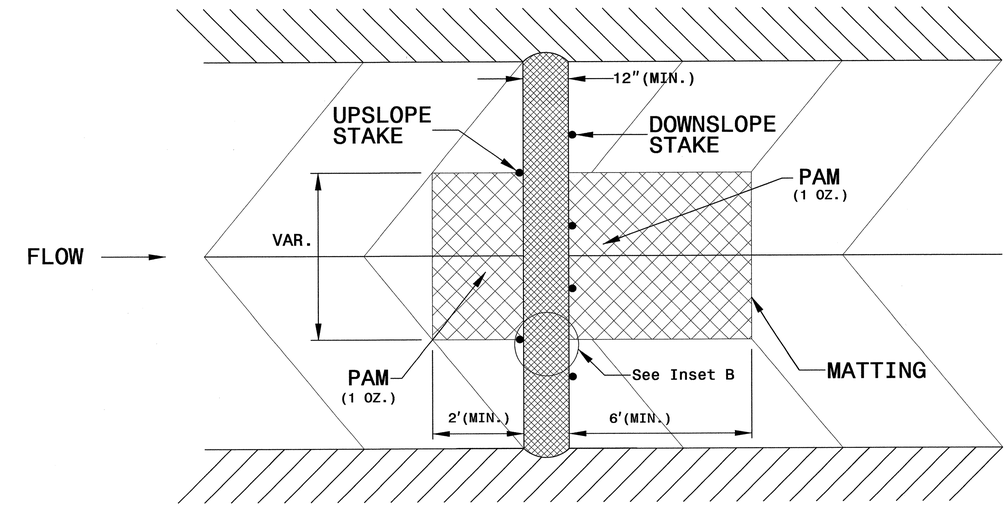
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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.

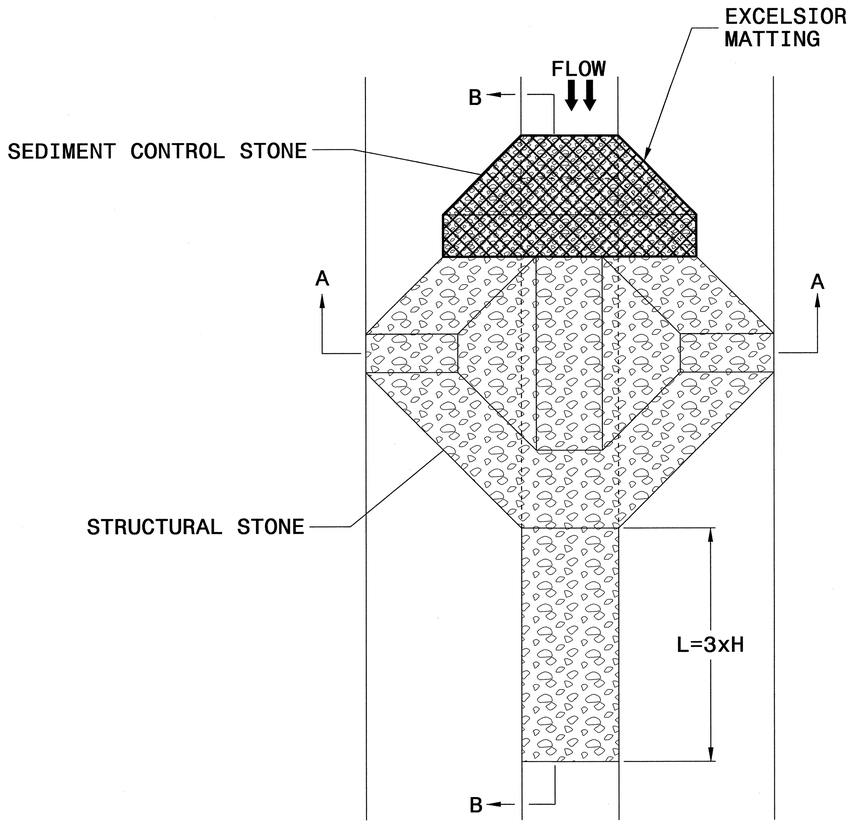




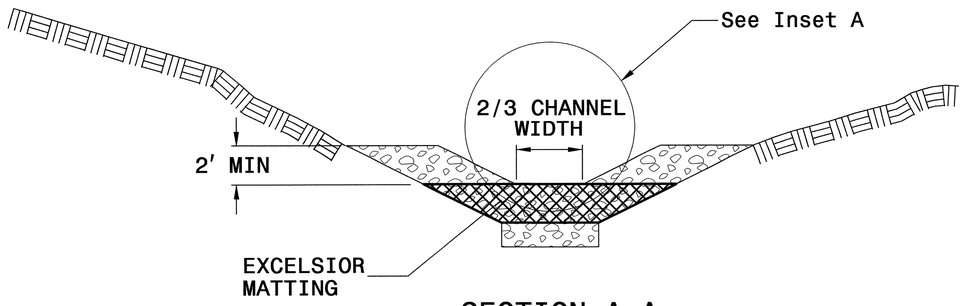
TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-5010	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



PLAN



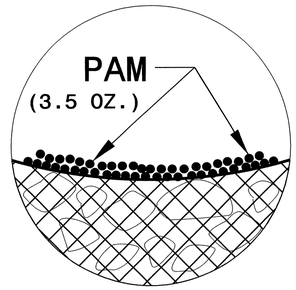
SECTION A-A

NOTES

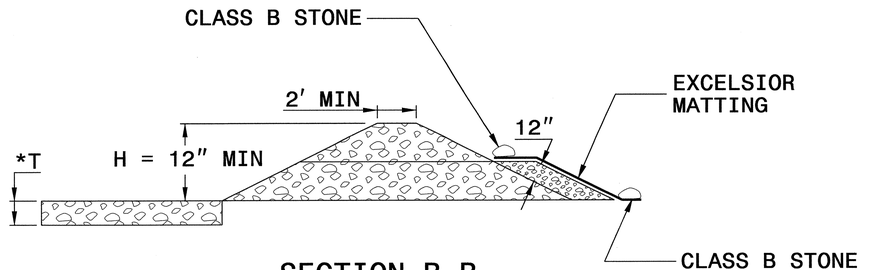
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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



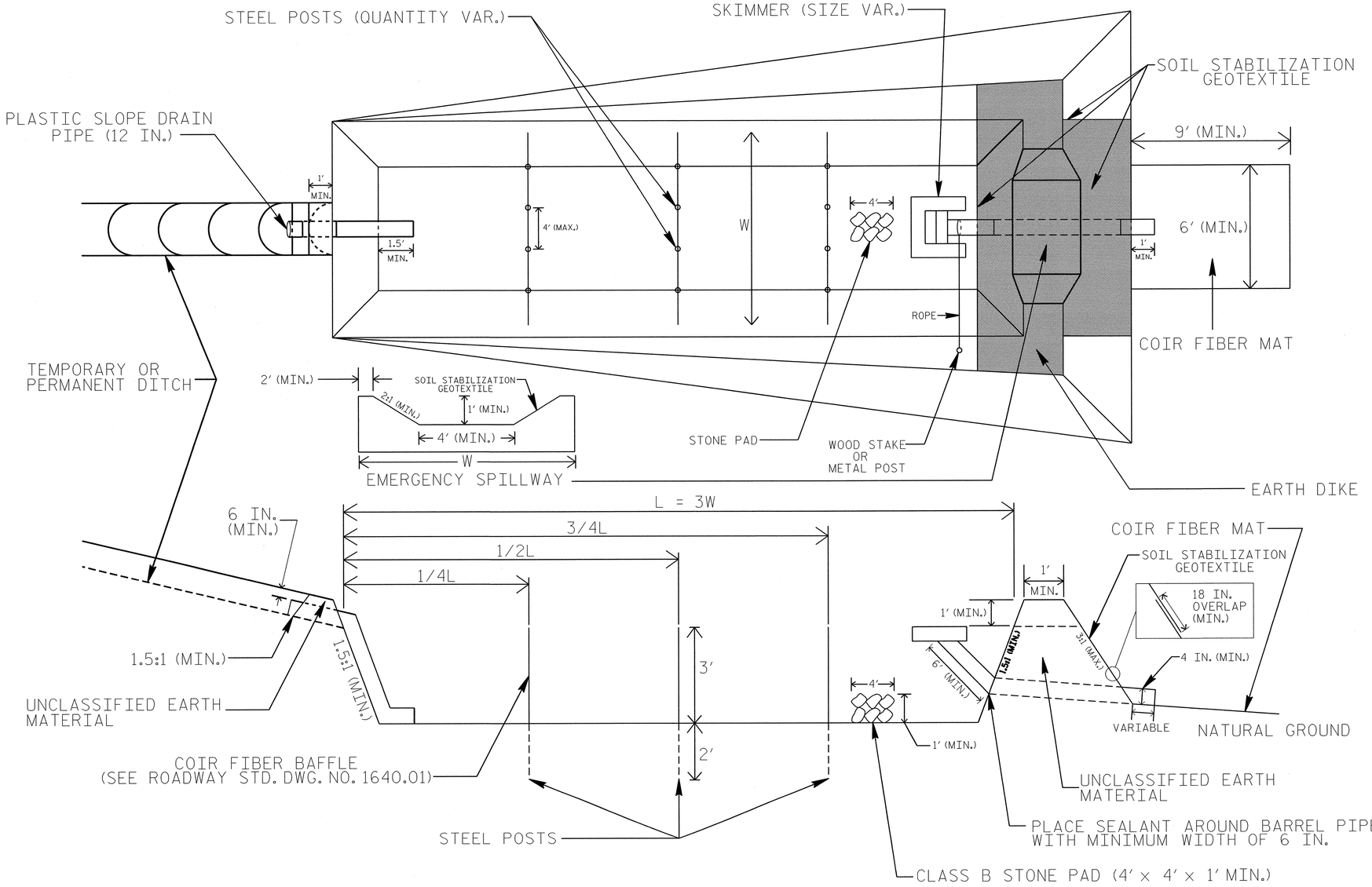
SECTION B-B

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

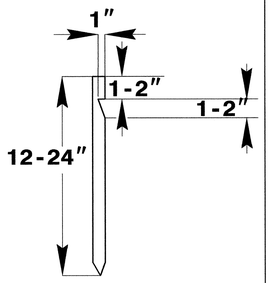
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
B-5010	EC-2C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

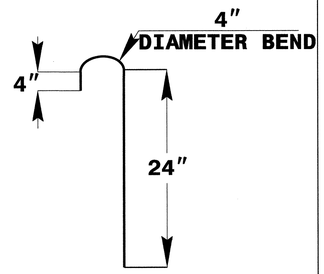
SKIMMER BASIN WITH BAFFLES DETAIL



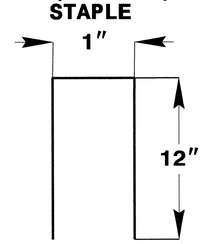
2" x 2" (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1" (nominal) STAPLE



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.	SHEET NO.
B-5010	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	11+40	11+80	LT	30
4	-L-	12+20	13+00	LT	140
4	-L-	15+00	16+60	LT	65
				SUBTOTAL	235
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					3200
				TOTAL	3435
				SAY	3500

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	12+80	14+20	MED	150
				SUBTOTAL	150
		ADDITIONAL PSRM TO BE INSTALLED			0
				TOTAL	150
				SAY	150

PROJECT REFERENCE NO.	SHEET NO.
B-5010	EC-3A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

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

PROJECT REFERENCE NO.	SHEET NO.
B-5010	EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

-NORDET-

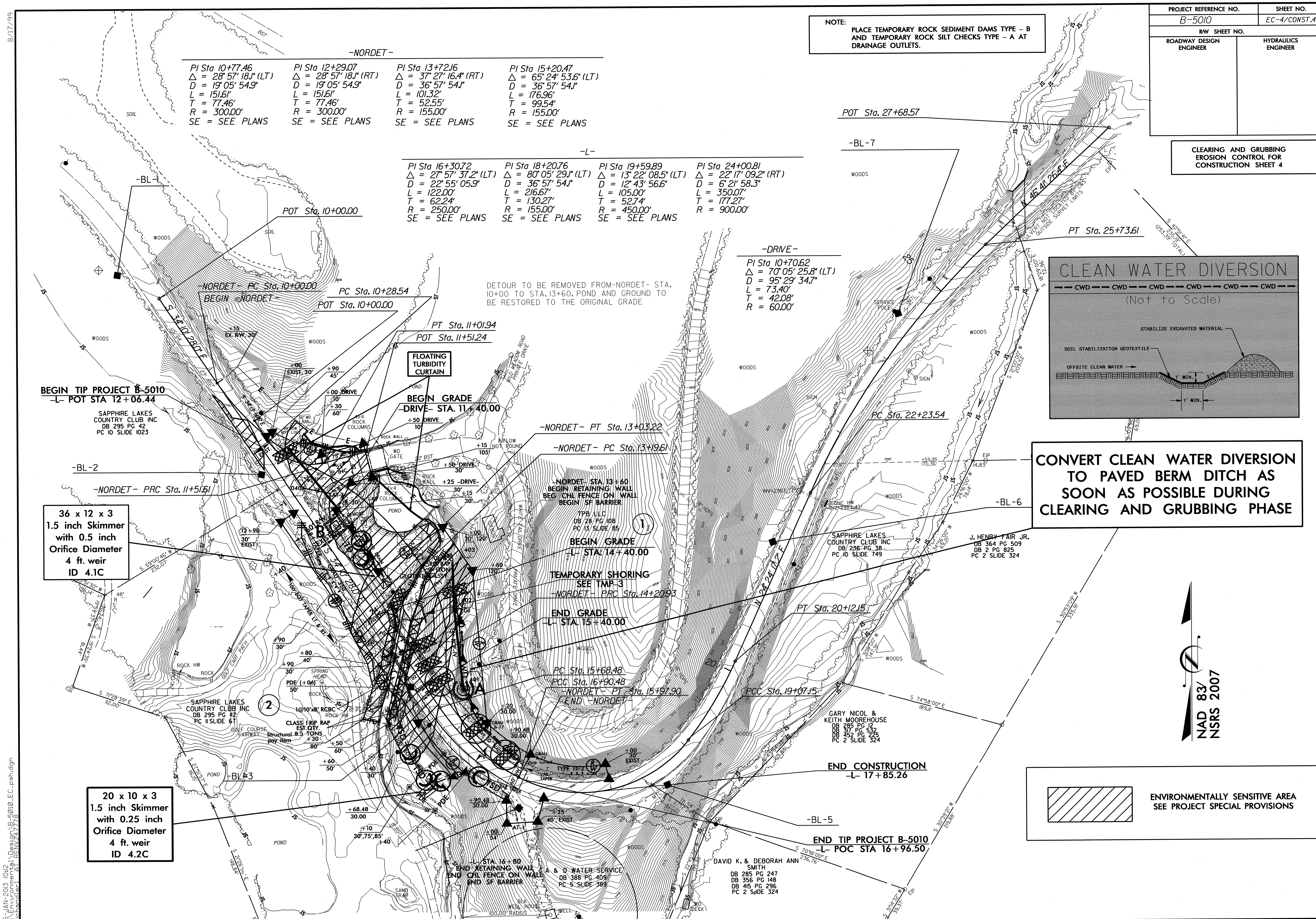
PI Sta 10+77.46	PI Sta 12+29.07	PI Sta 13+72.16	PI Sta 15+20.47
△ = 28° 57′ 18.1″ (LT)	△ = 28° 57′ 18.1″ (RT)	△ = 37° 27′ 16.4″ (RT)	△ = 65° 24′ 53.6″ (LT)
D = 19° 05′ 54.9″	D = 19° 05′ 54.9″	D = 36° 57′ 54.1″	D = 36° 57′ 54.1″
L = 151.61′	L = 151.61′	L = 101.32′	L = 176.96′
T = 77.46′	T = 77.46′	T = 52.55′	T = 99.54′
R = 300.00′	R = 300.00′	R = 155.00′	R = 155.00′
SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS

-L-

PI Sta 16+30.72	PI Sta 18+20.76	PI Sta 19+59.89	PI Sta 24+00.81
△ = 27° 57′ 37.2″ (LT)	△ = 80° 05′ 29.1″ (LT)	△ = 13° 22′ 08.5″ (LT)	△ = 22° 17′ 09.2″ (RT)
D = 22° 55′ 05.9″	D = 36° 57′ 54.1″	D = 12° 43′ 56.6″	D = 6° 21′ 58.3″
L = 122.00′	L = 216.67′	L = 105.00′	L = 350.07′
T = 62.24′	T = 130.27′	T = 52.74′	T = 177.27′
R = 250.00′	R = 155.00′	R = 450.00′	R = 900.00′
SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS	

-DRIVE-

PI Sta 10+70.62
△ = 70° 05′ 25.8″ (LT)
D = 95° 29′ 34.7″
L = 73.40′
T = 42.08′
R = 60.00′



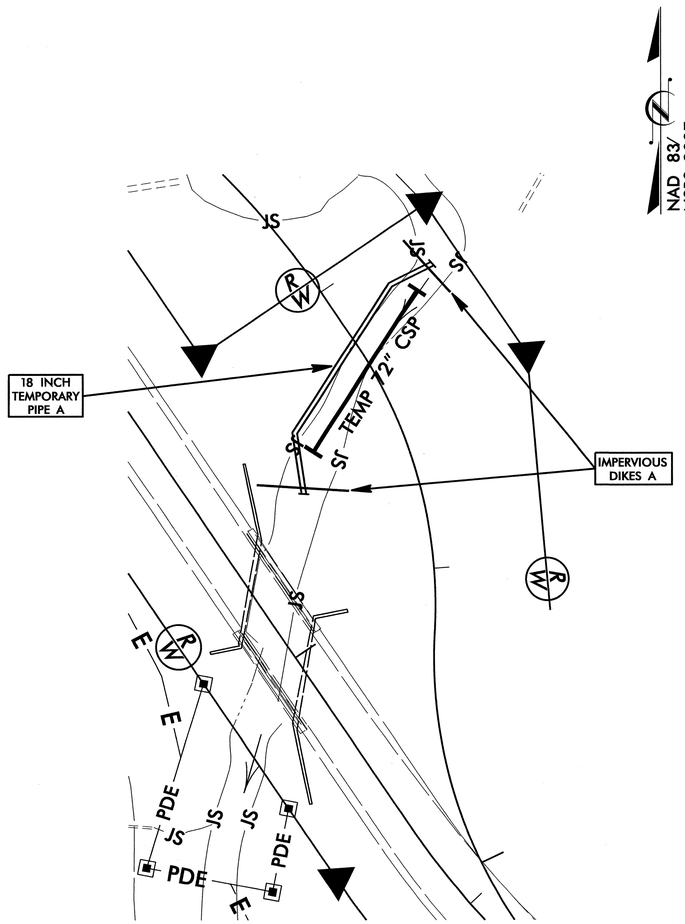
8/17/99
POT Sta. 10+00.00
-BL-1
-NORDET- PC Sta. 10+00.00
BEGIN -NORDET-
PC Sta. 10+28.54
POT Sta. 10+00.00
PT Sta. 11+01.94
POT Sta. 11+51.24
DETOUR TO BE REMOVED FROM -NORDET- STA. 10+00 TO STA. 13+60. POND AND GROUND TO BE RESTORED TO THE ORIGINAL GRADE
FLOATING TURBIDITY CURTAIN
BEGIN TIP PROJECT B-5010
-L- POT STA 12+06.44
SAPPHIRE LAKES COUNTRY CLUB INC DB 295 PG 42 PC 10 SLIDE 1023
BEGIN GRADE
-DRIVE- STA. 11+40.00
-NORDET- PT Sta. 13+03.22
-NORDET- PC Sta. 13+19.61
-BL-2
-NORDET- PRC Sta. 11+51.61
NORDET- STA. 13+60 BEGIN RETAINING WALL BEG CHL FENCE ON WALL BEGIN SF BARRIER
TPB LLC DB 28 PG 108 PC 13 SLIDE 85
BEGIN GRADE
-L- STA. 14+40.00
TEMPORARY SHORING SEE TMP-3
-NORDET- PRC Sta. 14+20.93
END GRADE
-L- STA. 15+40.00
36 x 12 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
4 ft. weir
ID 4.1C
PC Sta. 15+68.48
PCC Sta. 16+90.48
-NORDET- PT Sta. 15+97.90
END -NORDET-
SAPPHIRE LAKES COUNTRY CLUB INC DB 295 PG 42 PC 11 SLIDE 67
CLASS I RIP RAP EST. QTY. 8.5 TONS Structural pay item
-BL-3
20 x 10 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 4.2C
-L- STA 16+80 END RETAINING WALL END CHL FENCE ON WALL END SF BARRIER
A & D WATER SERVICE DB 388 PG 409 PC 5 SLIDE 389
POT Sta. 27+68.57
-BL-7
PT Sta. 25+73.61
CLEAN WATER DIVERSION
CWD CWD CWD CWD CWD CWD
(Not to Scale)
STABILIZE EXCAVATED MATERIAL
SOIL STABILIZATION GEOTEXTILE
OFFSITE CLEAN WATER
1′ MIN.
2:1
1′ MIN.
PC Sta. 22+23.54
CONVERT CLEAN WATER DIVERSION TO PAVED BERM DITCH AS SOON AS POSSIBLE DURING CLEARING AND GRUBBING PHASE
-BL-6
SAPPHIRE LAKES COUNTRY CLUB INC DB 236 PG 38 PC 10 SLIDE 749
J. HENRY FAIR JR. DB 364 PG 509 DB 2 PG 825 PC 2 SLIDE 324
PT Sta. 20+12.15
PCC Sta. 19+07.15
GARY NICOL & KEITH MOOREHOUSE DB 285 PG 12 DB 317 PG 532 DB 452 PG 225 PC 2 SLIDE 324
END CONSTRUCTION
-L- 17+85.26
-BL-5
END TIP PROJECT B-5010
-L- POC STA 16+96.50
DAVID K. & DEBORAH ANN SMITH DB 285 PG 247 DB 356 PG 148 DB 415 PG 296 PC 2 SLIDE 324
NAD 83/ NSRS 2007
ENVIRONMENTALLY SENSITIVE AREA SEE PROJECT SPECIAL PROVISIONS
WOODS
25-JAN-2013 10:12
R:\Environmental\Design\B-5010_EC_psh.dgn

CULVERT CONSTRUCTION SEQUENCE STA. 14+89 –L–

PROJECT REFERENCE NO.	SHEET NO.
B-5010	EC-5/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

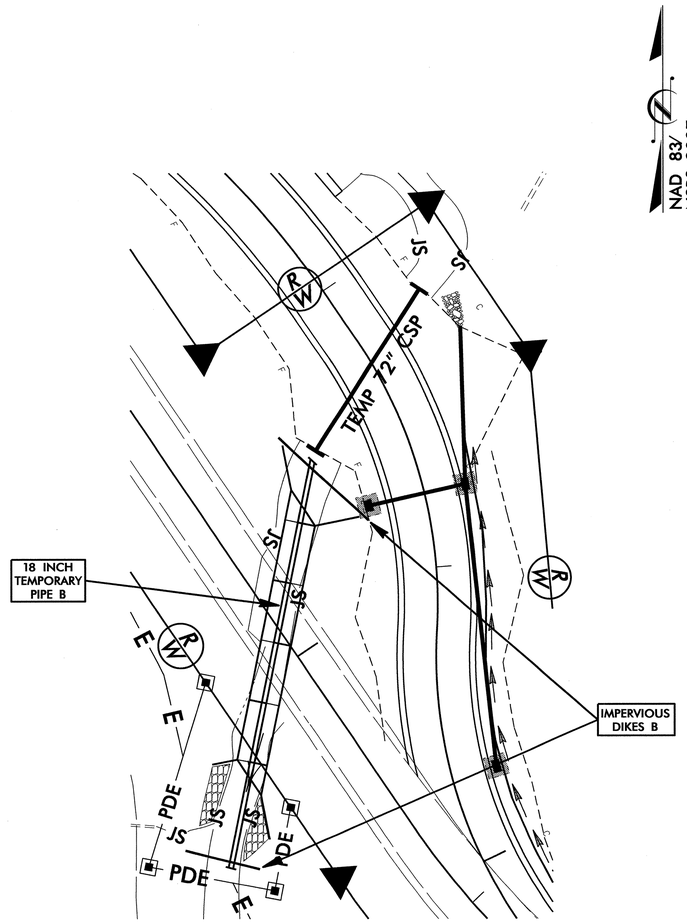
PHASE I

1. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT CULVERT CONSTRUCTION.
2. CONSTRUCT IMPERVIOUS DIKES A AND INSTALL 18 INCH TEMPORARY PIPE A, DIVERTING FLOW.
3. INSTALL 72 INCH TEMPORARY CSP.
4. REMOVE IMPERVIOUS DIKES A AND 18 INCH TEMPORARY PIPE A.



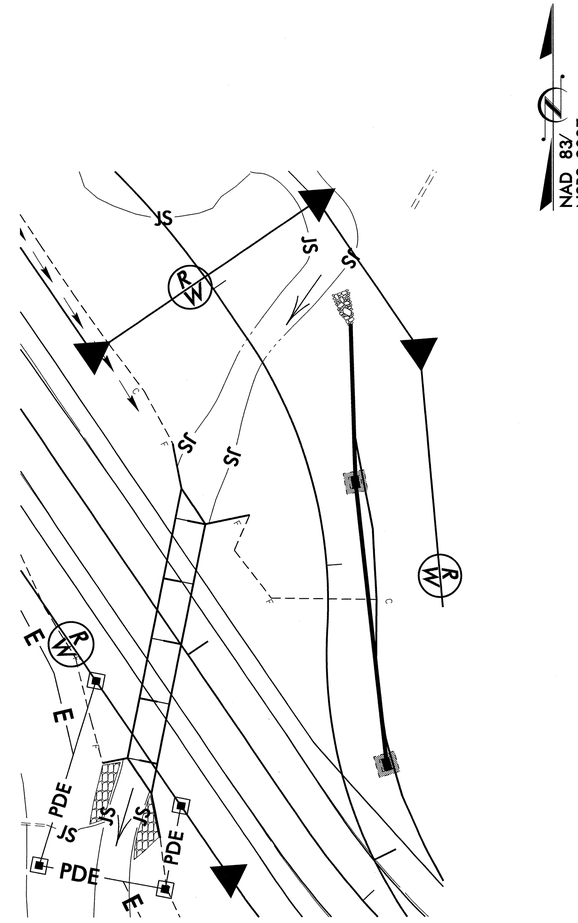
PHASE II

5. CONSTRUCT DETOUR ALIGNMENT AND SHIFT TRAFFIC.
6. REMOVE EXISTING BRIDGE.
7. CONSTRUCT IMPERVIOUS DIKES B AND INSTALL 18 INCH TEMPORARY PIPE B, DIVERTING FLOW.
8. CONSTRUCT PROPOSED CULVERT AND ANY NECESSARY INLET/OUTLET CHANNEL IMPROVEMENTS.



PHASE III

9. REMOVE IMPERVIOUS DIKES B AND 18 INCH TEMPORARY PIPE B, ALLOWING NORMAL FLOW THROUGH PROPOSED CULVERT.
10. CONSTRUCT PROPOSED ROADWAY AND SHIFT TRAFFIC.
11. REMOVE DETOUR ALIGNMENT AND 72 INCH TEMPORARY CSP.
12. REMOVE ANY REMAINING SPECIAL STILLING BASIN(S).
13. COMPLETE ROADWAY.



DETOUR

PROJECT REFERENCE NO.	SHEET NO.
B-5010	EC-5A/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETOUR CONSTRUCTION SEQUENCE

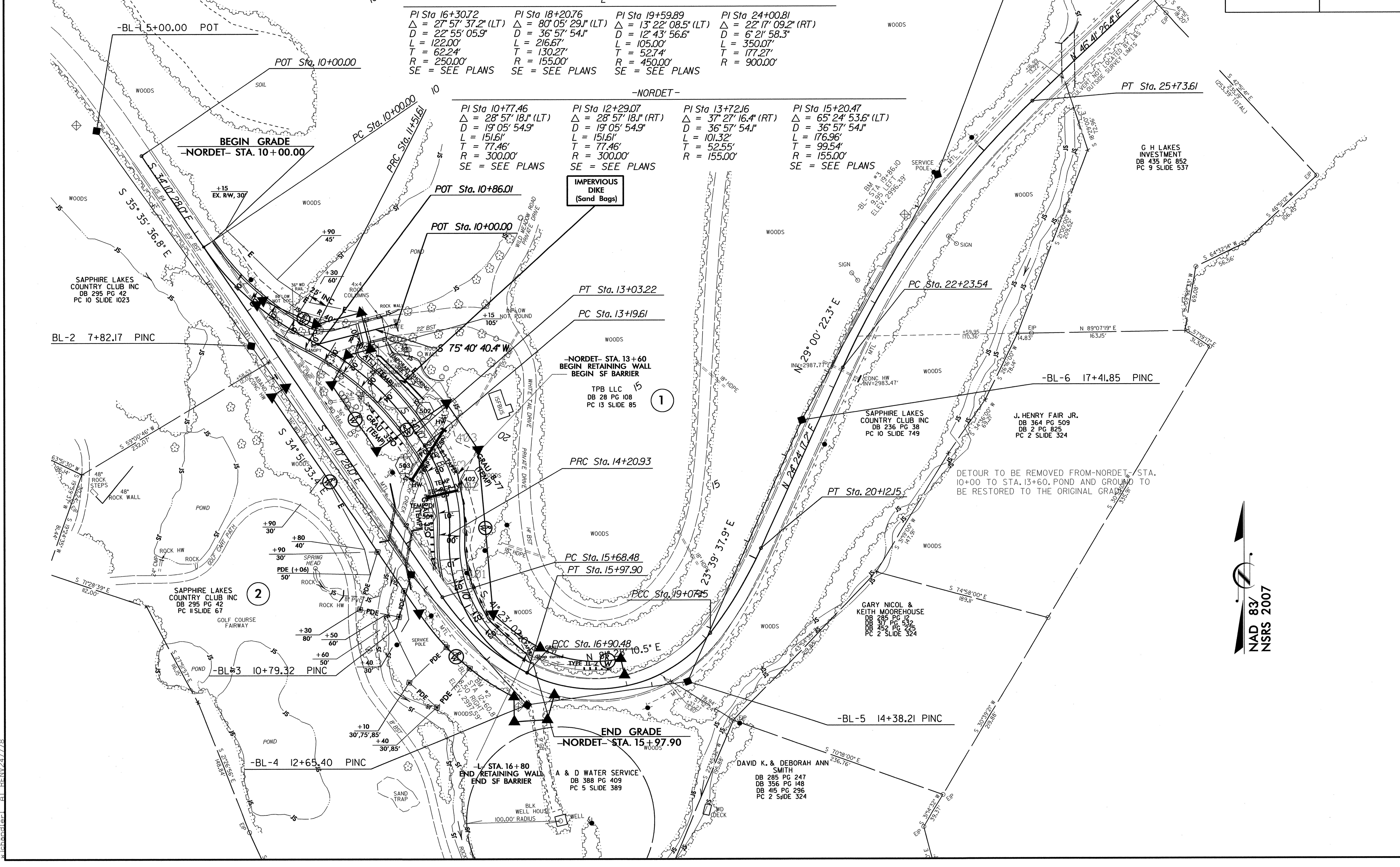
1. INSTALL IMPERVIOUS DIKE (SAND BAGS) AS SHOWN.
2. DEWATER POND ON SOUTHWEST SIDE OF IMPERVIOUS DIKE UTILIZING SPECIAL STILLING BASINS.
3. CONSTRUCT TEMPORARY SHORING WALL AND DETOUR FILL.
4. SHIFT TRAFFIC TO DETOUR.
5. COMPLETE INSTALLATION OF FINAL DRAINAGE STRUCTURES AND CONSTRUCT PERMANENT ROADWAY.
6. SHIFT TRAFFIC TO NEW ROADWAY.
7. REMOVE TEMPORARY DETOUR FILL AND SHORING WALL.
8. REMOVE IMPERVIOUS DIKE (SAND BAGS).
9. REFOREST AREA OF TEMPORARY DETOUR REMOVAL.

-L-

PI Sta 16+30.72	PI Sta 18+20.76	PI Sta 19+59.89	PI Sta 24+00.81
Δ = 27° 57' 37.2" (LT)	Δ = 80° 05' 29.1" (LT)	Δ = 13° 22' 08.5" (LT)	Δ = 22° 17' 09.2" (RT)
D = 22° 55' 05.9"	D = 36° 57' 54.1"	D = 12° 43' 56.6"	D = 6° 21' 58.3"
L = 122.00'	L = 216.67'	L = 105.00'	L = 350.07'
T = 62.24'	T = 130.27'	T = 52.74'	T = 177.27'
R = 250.00'	R = 155.00'	R = 450.00'	R = 900.00'
SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS	

-NORDET-

PI Sta 10+77.46	PI Sta 12+29.07	PI Sta 13+72.16	PI Sta 15+20.47
Δ = 28° 57' 18.1" (LT)	Δ = 28° 57' 18.1" (RT)	Δ = 37° 27' 16.4" (RT)	Δ = 65° 24' 53.6" (LT)
D = 19° 05' 54.9"	D = 19° 05' 54.9"	D = 36° 57' 54.1"	D = 36° 57' 54.1"
L = 151.61'	L = 151.61'	L = 101.32'	L = 176.96'
T = 77.46'	T = 77.46'	T = 52.55'	T = 99.54'
R = 300.00'	R = 300.00'	R = 155.00'	R = 155.00'
SE = SEE PLANS	SE = SEE PLANS		SE = SEE PLANS



-BL-1 5+00.00 POT
POT Sta. 10+00.00
BEGIN GRADE
-NORDET- STA. 10+00.00
PC Sta. 10+00.00
PRC Sta. 11+51.61
POT Sta. 10+86.01
POT Sta. 10+00.00
IMPERVIOUS DIKE (Sand Bags)
S 34° 10' 28.0" E
S 35° 35' 36.8" E
S 34° 51' 33.4" E
S 75° 40' 40.4" W
SAPPHIRE LAKES COUNTRY CLUB INC
DB 295 PG 42
PC 10 SLIDE 1023
BL-2 7+82.17 PINC
PT Sta. 13+03.22
PC Sta. 13+19.61
-NORDET- STA. 13+60
BEGIN RETAINING WALL
BEGIN SF BARRIER
TPB LLC
DB 28 PG 108
PC 13 SLIDE 85
PRC Sta. 14+20.93
PC Sta. 15+68.48
PT Sta. 15+97.90
PCC Sta. 19+07.15
PCC Sta. 16+90.48
N 82° 28' 10.5" E
S 41° 23' 02.0" E
23° 39' 37.9" E
SAPPHIRE LAKES COUNTRY CLUB INC
DB 295 PG 42
PC 11 SLIDE 67
GOLF COURSE FAIRWAY
-BL-3 10+79.32 PINC
-BL-4 12+65.40 PINC
END GRADE
-NORDET- STA. 15+97.90
-L- STA. 16+80
END RETAINING WALL
END SF BARRIER
A & D WATER SERVICE
DB 388 PG 409
PC 5 SLIDE 389
BLK WELL HOUSE
100.00' RADIUS
-BL-7 20+40.45 POT
PT Sta. 25+73.61
N 46° 41' 26.4" E
G H LAKES INVESTMENT
DB 435 PG 852
PC 9 SLIDE 537
PC Sta. 22+23.54
N 29° 00' 22.3" E
-BL-6 17+41.85 PINC
SAPPHIRE LAKES COUNTRY CLUB INC
DB 236 PG 38
PC 10 SLIDE 749
J. HENRY FAIR JR.
DB 364 PG 509
DB 2 PG 825
PC 2 SLIDE 324
N 24° 24' 17.2" E
DETOUR TO BE REMOVED FROM -NORDET- STA. 10+00 TO STA. 13+60. POND AND GROUND TO BE RESTORED TO THE ORIGINAL GRADE.
PT Sta. 20+12.15
GARY NICOL & KEITH MOOREHOUSE
DB 285 PG 12
DB 317 PG 532
DB 452 PG 225
PC 2 SLIDE 324
-BL-5 14+38.21 PINC
DAVID K. & DEBORAH ANN SMITH
DB 285 PG 247
DB 356 PG 148
DB 415 PG 296
PC 2 SLIDE 324
WOODS
POND
NAD 83/ NSRS 2007

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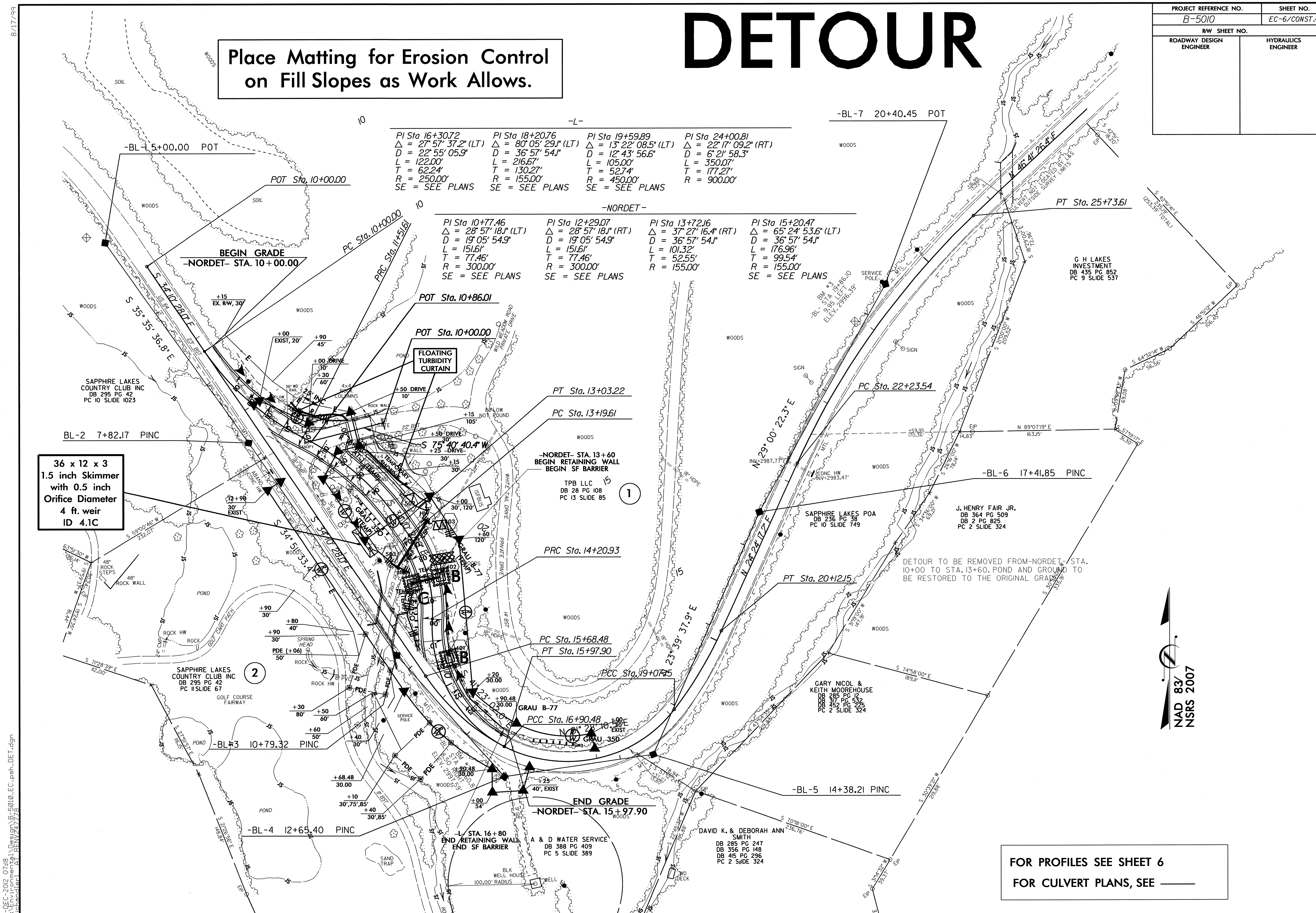

PROJECT REFERENCE NO. B-5010
SHEET NO. EC-6/CONST.4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DETOUR
Place Matting for Erosion Control on Fill Slopes as Work Allows.
-L-
PI Sta 16+30.72 △ = 27° 57' 37.2" (LT) D = 22° 55' 05.9" L = 122.00' T = 62.24' R = 250.00' SE = SEE PLANS
PI Sta 18+20.76 △ = 80° 05' 29.1" (LT) D = 36° 57' 54.1" L = 216.67' T = 130.27' R = 155.00' SE = SEE PLANS
PI Sta 19+59.89 △ = 13° 22' 08.5" (LT) D = 12° 43' 56.6" L = 105.00' T = 52.74' R = 450.00' SE = SEE PLANS
PI Sta 24+00.81 △ = 22° 17' 09.2" (RT) D = 6° 21' 58.3" L = 350.07' T = 177.27' R = 900.00'
-NORDET-
PI Sta 10+77.46 △ = 28° 57' 18.1" (LT) D = 19° 05' 54.9" L = 151.61' T = 77.46' R = 300.00' SE = SEE PLANS
PI Sta 12+29.07 △ = 28° 57' 18.1" (RT) D = 19° 05' 54.9" L = 151.61' T = 77.46' R = 300.00' SE = SEE PLANS
PI Sta 13+72.16 △ = 37° 27' 16.4" (RT) D = 36° 57' 54.1" L = 101.32' T = 52.55' R = 155.00'
PI Sta 15+20.47 △ = 65° 24' 53.6" (LT) D = 36° 57' 54.1" L = 176.96' T = 99.54' R = 155.00' SE = SEE PLANS
-BL-1 5+00.00 POT
POT Sta. 10+00.00
PC Sta. 10+00.00
PRC Sta. 11+51.61
BEGIN GRADE -NORDET- STA. 10+00.00
POT Sta. 10+86.01
POT Sta. 10+00.00
FLOATING TURBIDITY CURTAIN
PT Sta. 13+03.22
PC Sta. 13+19.61
-NORDET- STA. 13+60 BEGIN RETAINING WALL BEGIN SF BARRIER
TPB LLC DB 28 PG 108 PC 13 SLIDE 85
PRC Sta. 14+20.93
PC Sta. 15+68.48
PT Sta. 15+97.90
PCC Sta. 19+07.15
PCC Sta. 16+90.48
GRAU B-77
GRAU 350
END GRADE -NORDET- STA. 15+97.90
-L- STA. 16+80 END RETAINING WALL END SF BARRIER
A & D WATER SERVICE DB 388 PG 409 PC 5 SLIDE 389
BLK WELL HOUSE
100.00' RADIUS
SAPPHIRE LAKES COUNTRY CLUB INC DB 295 PG 42 PC 10 SLIDE 1023
BL-2 7+82.17 PINC
36 x 12 x 3 1.5 inch Skimmer with 0.5 inch Orifice Diameter 4 ft. weir ID 4.1C
SAPPHIRE LAKES COUNTRY CLUB INC DB 295 PG 42 PC 11 SLIDE 67
GOLF COURSE FAIRWAY
-BL-3 10+79.32 PINC
-BL-4 12+65.40 PINC
SAND TRAP
S 35° 35' 36.8" E
S 34° 10' 28.0" E
S 75° 40' 40.4" W
-BL-7 20+40.45 POT
PT Sta. 25+73.61
N 46° 41' 26.4" E
G H LAKES INVESTMENT DB 435 PG 852 PC 9 SLIDE 537
PC Sta. 22+23.54
N 29° 00' 22.3" E
-BL-6 17+41.85 PINC
SAPPHIRE LAKES POA DB 236 PG 38 PC 10 SLIDE 749
J. HENRY FAIR JR. DB 364 PG 509 DB 2 PG 825 PC 2 SLIDE 324
DETOUR TO BE REMOVED FROM -NORDET- STA. 10+00 TO STA. 13+60. POND AND GROUND TO BE RESTORED TO THE ORIGINAL GRADE.
PT Sta. 20+12.15
N 24° 24' 17.2" E
N 23° 39' 37.9" E
GARY NICOL & KEITH MOOREHOUSE DB 285 PG 12 DB 317 PG 532 DB 452 PG 225 PC 2 SLIDE 324
-BL-5 14+38.21 PINC
DAVID K. & DEBORAH ANN SMITH DB 285 PG 247 DB 356 PG 148 DB 415 PG 296 PC 2 SLIDE 324
NAD 83/ NSRS 2007
FOR PROFILES SEE SHEET 6
FOR CULVERT PLANS, SEE ——

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PROJECT REFERENCE NO.	SHEET NO.
B-5010	EC-7/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Place Matting for Erosion Control on Fill Slopes as Work Allows.

-NORDET-

PI Sta 10+77.46
△ = 28° 57' 18.1" (LT)
D = 19° 05' 54.9"
L = 151.61'
T = 77.46'
R = 300.00'
SE = SEE PLANS

PI Sta 12+29.07
△ = 28° 57' 18.1" (RT)
D = 19° 05' 54.9"
L = 151.61'
T = 77.46'
R = 300.00'
SE = SEE PLANS

PI Sta 13+72.16
△ = 37° 27' 16.4" (RT)
D = 36° 57' 54.1"
L = 101.32'
T = 52.55'
R = 155.00'
SE = SEE PLANS

PI Sta 15+20.47
△ = 65° 24' 53.6" (LT)
D = 36° 57' 54.1"
L = 176.96'
T = 99.54'
R = 155.00'
SE = SEE PLANS

-L-

PI Sta 16+30.72
△ = 27° 57' 37.2" (LT)
D = 22° 55' 05.9"
L = 122.00'
T = 62.24'
R = 250.00'
SE = SEE PLANS

PI Sta 18+20.76
△ = 80° 05' 29.1" (LT)
D = 36° 57' 54.1"
L = 216.67'
T = 130.27'
R = 155.00'
SE = SEE PLANS

PI Sta 19+59.89
△ = 13° 22' 08.5" (LT)
D = 12° 43' 56.6"
L = 105.00'
T = 52.74'
R = 450.00'
SE = SEE PLANS

PI Sta 24+00.81
△ = 22° 17' 09.2" (RT)
D = 6° 21' 58.3"
L = 350.07'
T = 177.27'
R = 900.00'

-DRIVE-

PI Sta 10+70.62
△ = 70° 05' 25.8" (LT)
D = 95° 29' 34.7"
L = 73.40'
T = 42.08'
R = 60.00'

DETOUR TO BE REMOVED FROM-NORDET- STA. 10+00 TO STA. 13+60. POND AND GROUND TO BE RESTORED TO THE ORIGINAL GRADE

BEGIN TIP PROJECT B-5010
-L- POT STA 12+06.44

SAPPHIRE LAKES COUNTRY CLUB INC
DB 295 PG 42
PC 10 SLIDE 1023

-BL-1
-BL-2
-BL-3
-BL-5
-BL-6
-BL-7

POT Sta. 10+00.00
-NORDET- PC Sta. 10+00.00
BEGIN -NORDET-
PC Sta. 10+28.54
POT Sta. 10+00.00
PT Sta. 11+01.94
POT Sta. 11+51.24
-NORDET- PRC Sta. 11+51.61
-NORDET- PT Sta. 13+03.22
-NORDET- PC Sta. 13+19.61
POT Sta. 27+68.57
PT Sta. 25+73.61
PC Sta. 22+23.54
PT Sta. 20+12.15
PCC Sta. 19+07.15
END CONSTRUCTION
-L- 17+85.26
END TIP PROJECT B-5010
-L- POC STA 16+96.50

FLOATING TURBIDITY CURTAIN

BEGIN GRADE
-DRIVE- STA. 11+40.00

-NORDET- STA. 13+60
BEGIN RETAINING WALL
BEG CHL FENCE ON WALL
BEGIN SF BARRIER

TPB LLC
DB 28 PG 108
PC 13 SLIDE 85

BEGIN GRADE
-L- STA. 14+40.00

TEMPORARY SHORING
SEE TMP-3
-NORDET- PRC Sta. 14+20.93

END GRADE
-L- STA. 15+40.00

PC Sta. 15+68.48
PCC Sta. 16+90.48
-NORDET- PT Sta. 15+97.90
-END -NORDET-

-L- STA. 16+80
END RETAINING WALL
END CHL FENCE ON WALL
END SF BARRIER

SAPPHIRE LAKES COUNTRY CLUB INC
DB 295 PG 42
PC 11 SLIDE 67

GOLF COURSE FAIRWAY

Structural pay item
CLASS I RIP RAP EST.QTY. 8.5 TONS

1@10'x8' RCBC
8' FILL

SAPPHIRE LAKES COUNTRY CLUB INC
DB 236 PG 38
PC 10 SLIDE 749

J. HENRY FAIR JR.
DB 364 PG 509
DB 2 PG 825
PC 2 SLIDE 324

GARY NICOL & KEITH MOOREHOUSE
DB 285 PG 12
DB 317 PG 532
DB 452 PG 225
PC 2 SLIDE 324

DAVID K. & DEBORAH ANN SMITH
DB 285 PG 247
DB 356 PG 148
DB 415 PG 296
PC 2 SIDE 324

A & D WATER SERVICE
DB 388 PG 409
PC 5 SLIDE 389

SAPPHIRE LAKES COUNTRY CLUB INC
DB 295 PG 42
PC 11 SLIDE 67

TPB LLC
DB 28 PG 108
PC 13 SLIDE 85

36 x 12 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
4 ft. weir
ID 4.1C

20 x 10 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 4.2C

NAD 83/
NSRS 2007

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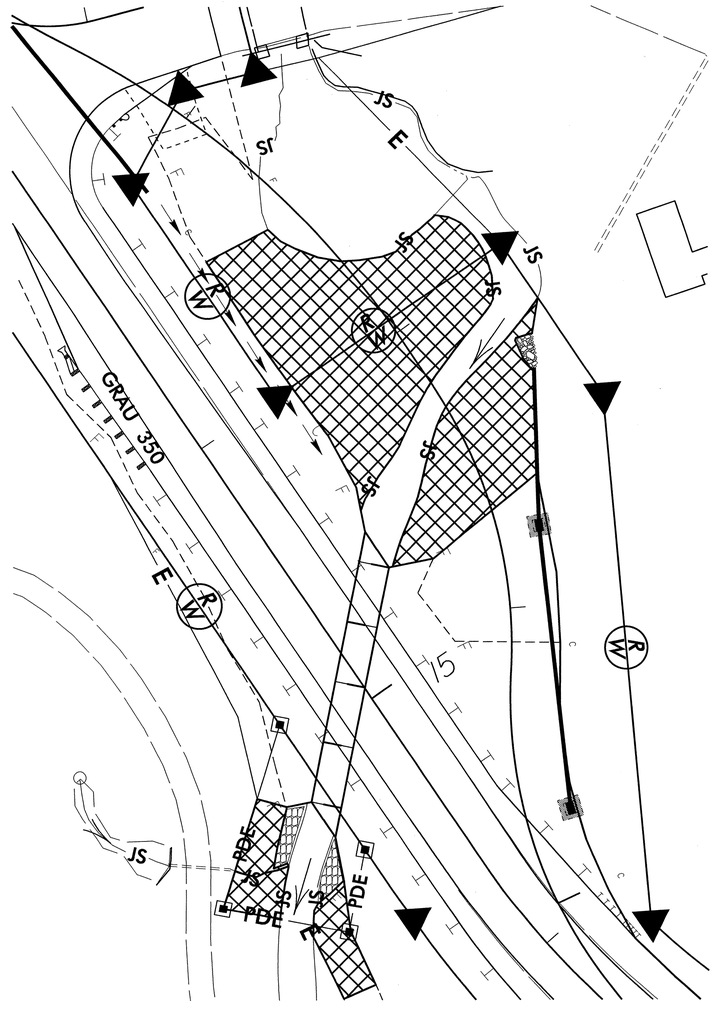
PROJECT REFERENCE NO.	SHEET NO.
B-5010	EC-8/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

0.17 ACRE STREAMBANK REFORESTATION



SEE RF–1, RF–2 AND PROJECT SPECIAL PROVISIONS