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TIP PROJECT: B-4833

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4833	EC-1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
38603.1.FD1	BRZ-2761	PE
17BP.5.R.96	N/A	R/W, UTIL., CONST.

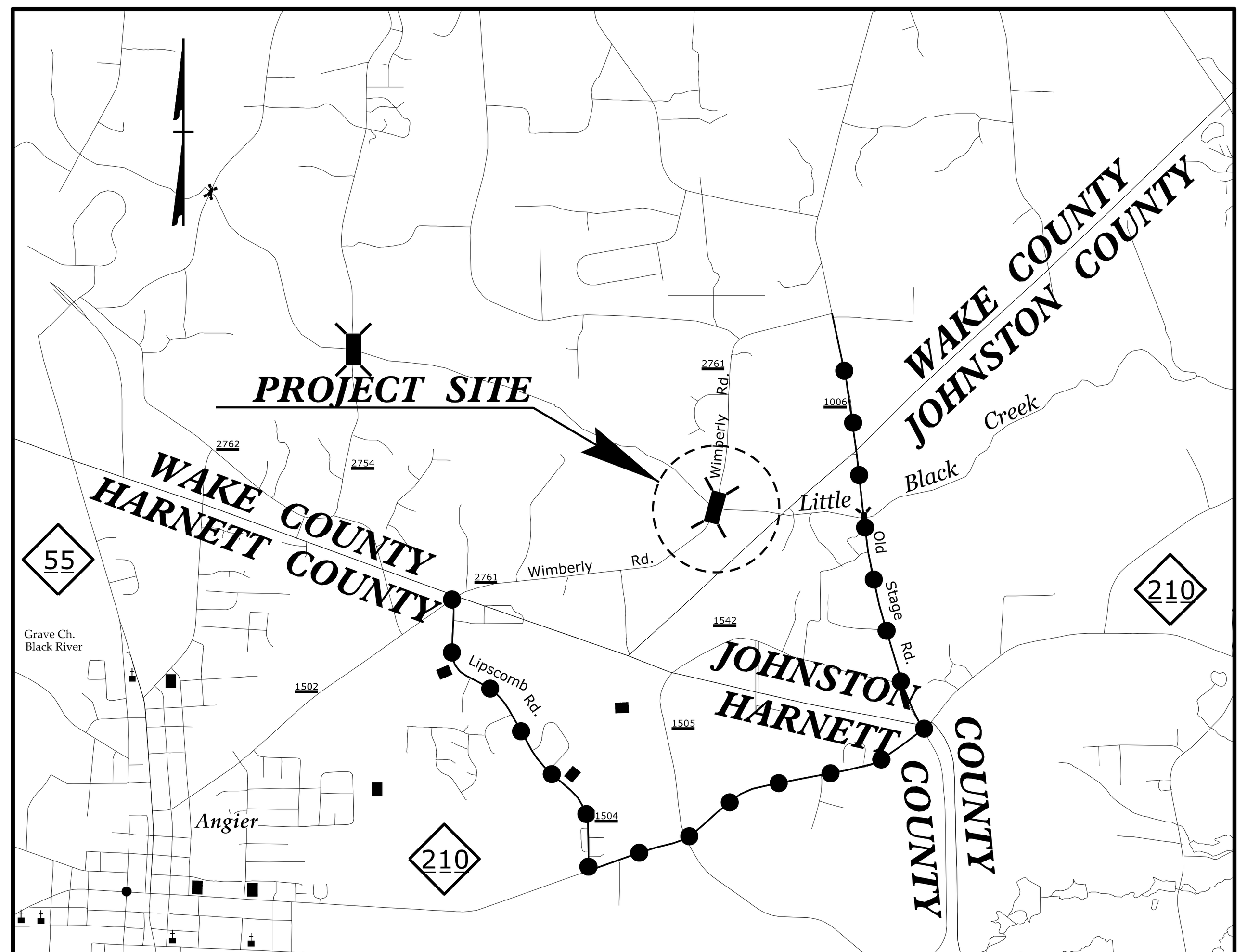
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

WAKE COUNTY

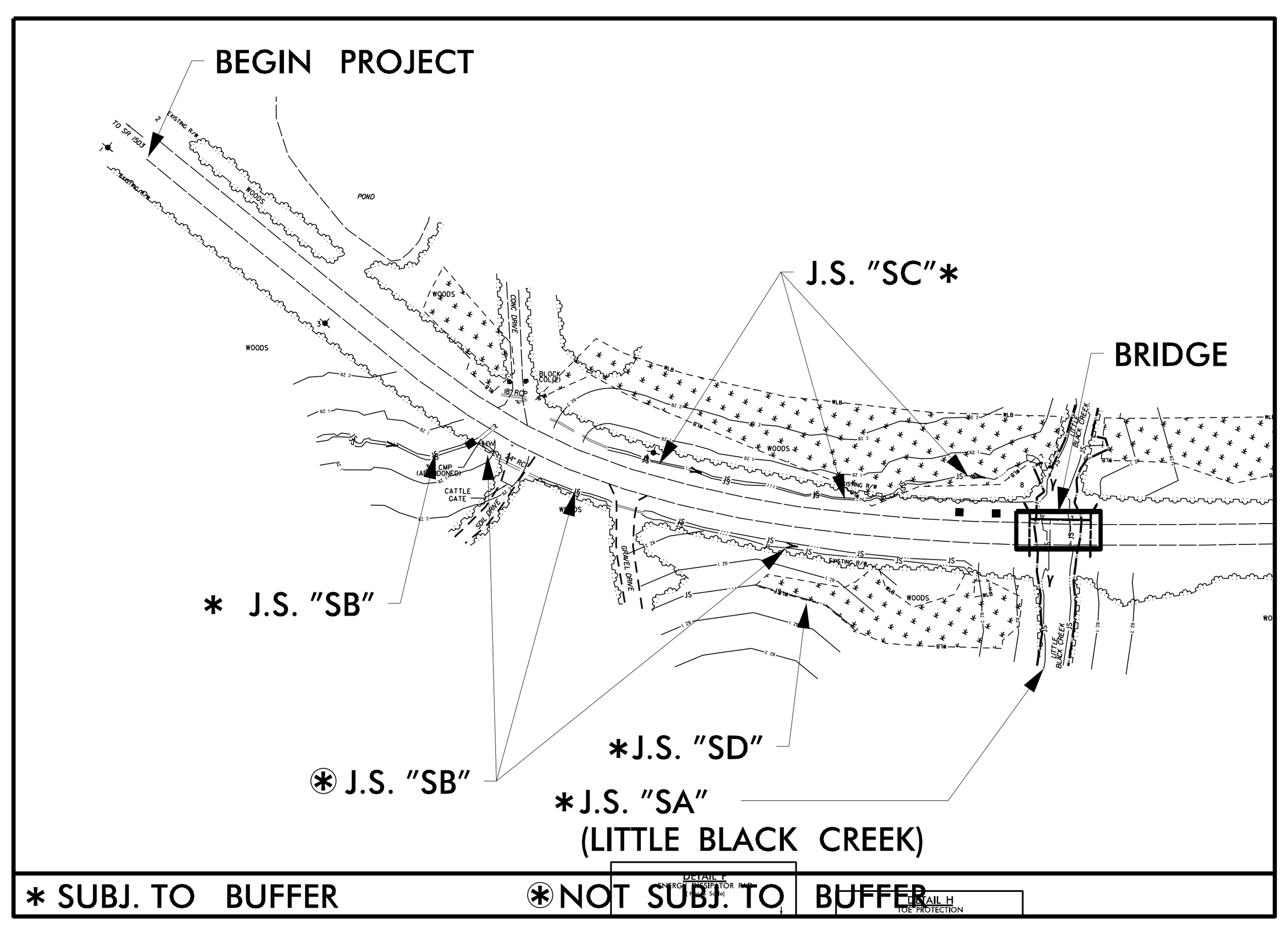
LOCATION: BRIDGE NO. 376 OVER LITTLE BLACK CREEK ON SR 2761 (WIMBERLY ROAD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, & STRUCTURE

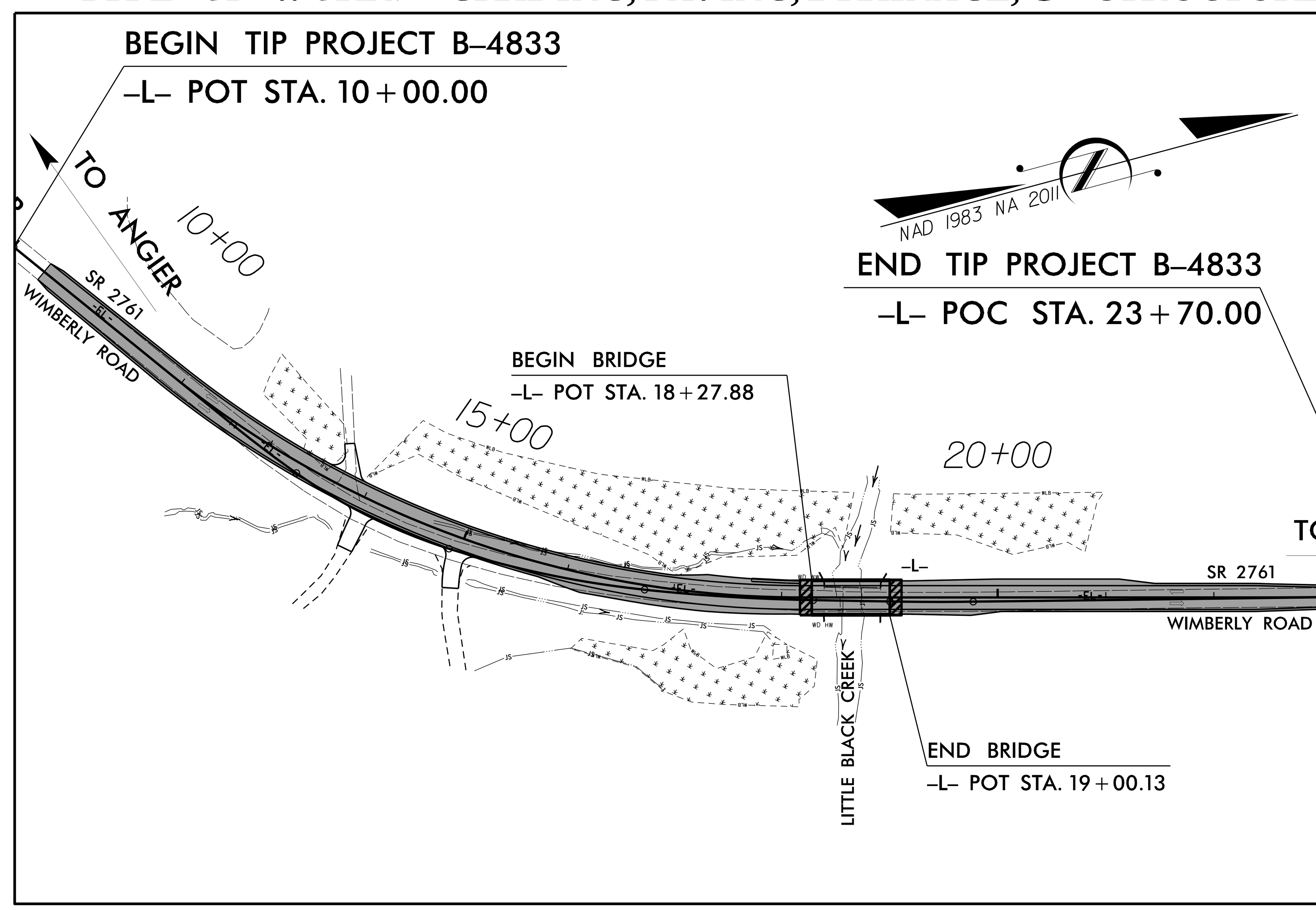


VICINITY MAP

DETOUR ROUTE



SCHEMATIC OF JURISDICTIONAL STREAMS AND BUFFERS NEAR PROJECT (NOT TO SCALE)



4

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 HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT

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

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

GRAPHIC SCALE

25 0 50

PLANS

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

Prepared In the Office of:

MI ENGINEERING, PLLC

1011 SCHAUB DR SUITE 100
RALEIGH, NC 27606

Designed by:

GREGORY COLS 3187

NAME — LEVEL III CERTIFICATION NO.

Reviewed In the Office of:

ROADSIDE ENVIRONMENTAL UNIT

1 South Wilmington St.
Raleigh, NC 27611

2018 STANDARD SPECIFICATIONS

Reviewed by:

DONALD PEARSON, EI, CPESC

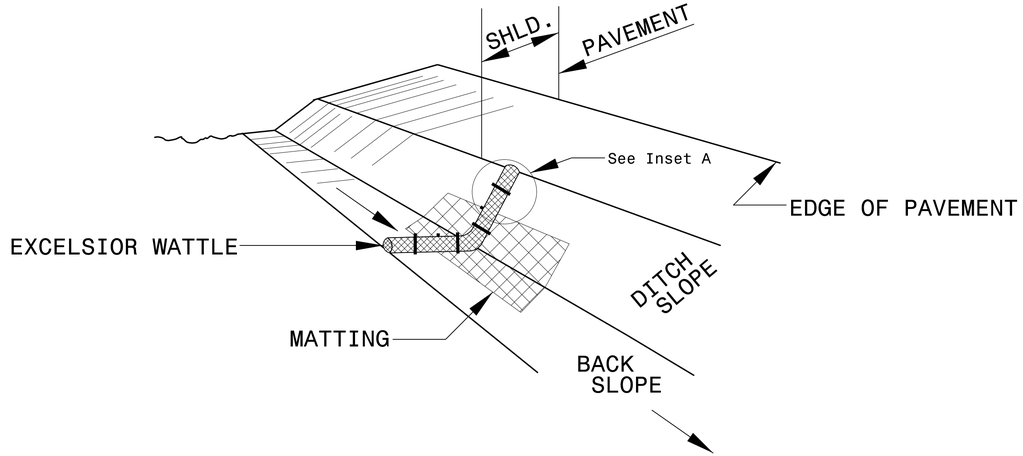
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated January 2018 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

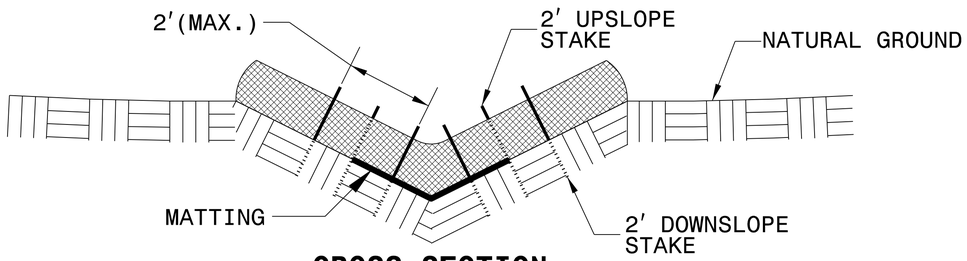
1604.01	Railroad Erosion Control Detail
1605.01	Temporary Silt Fence
1606.01	Special Sediment Control Fence
1607.01	Gravel Construction Entrance
1622.01	Temporary Berms and Slope Drains
1630.01	Riser Basin
1630.02	Silt Basin Type B
1630.03	Temporary Silt Ditch
1630.04	Stilling Basin
1630.05	Temporary 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-4833		EC-2
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
38603.1.FD1	BRZ-2761 (1)	PE, UTIL.
17BP.5.R.96	N/A	R /W, CONST.
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

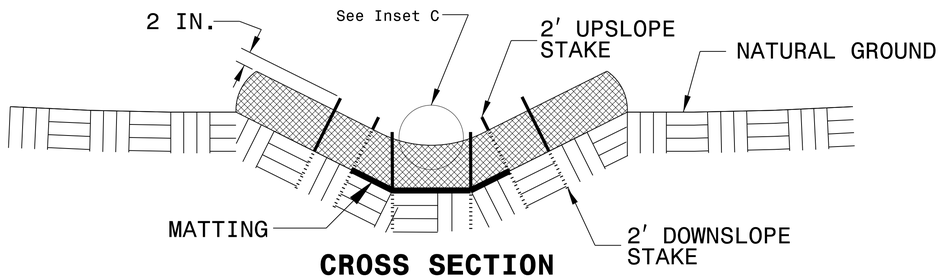
WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

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

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

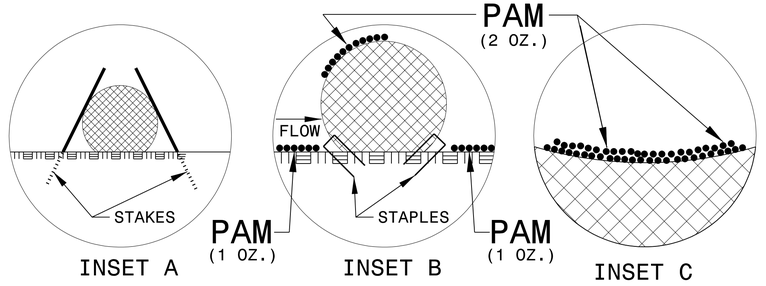
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

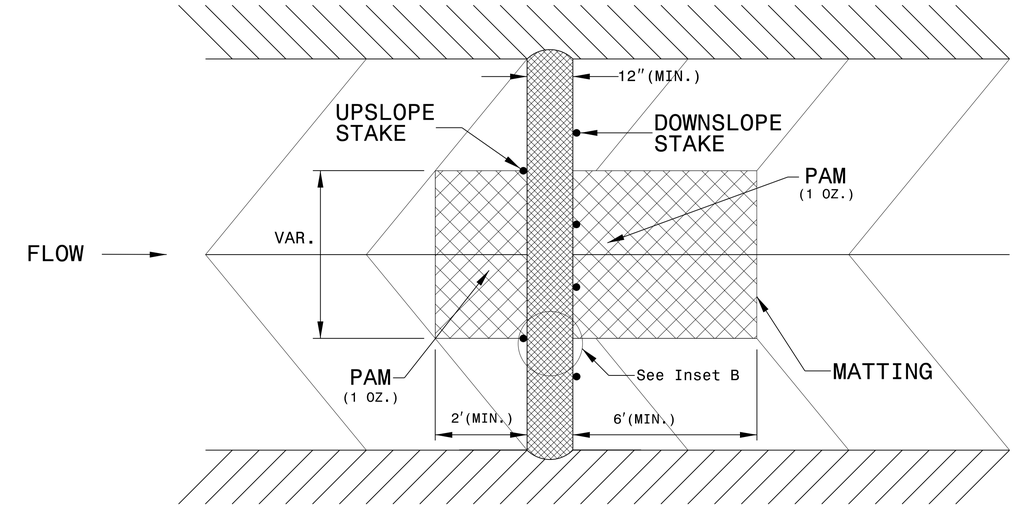
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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

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

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

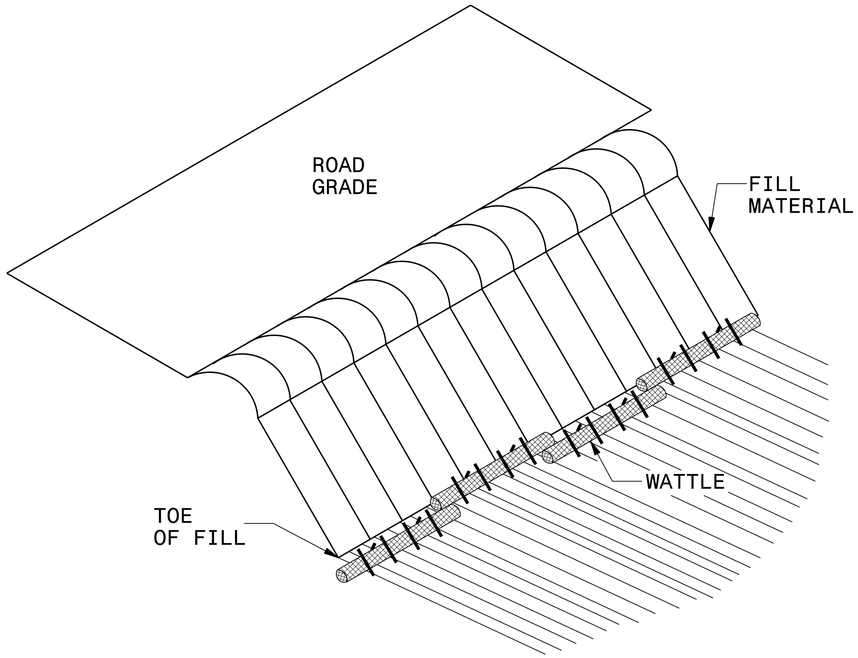




TOP VIEW

PROJECT REFERENCE NO.		SHEET NO.
B-4833		EC-2A
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
38603.1.FD1	BRZ-2761 (1)	PE, UTIL.
17BP.5.R.96	N/A	R /W, CONST.
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

WATTLE BARRIER DETAIL



ISOMETRIC VIEW

NOTES:

USE MINIMUM 18 IN. NOMINAL DIAMETER EXCELSIOR WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 2 TO 3 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLES ON TOE OF SLOPE.

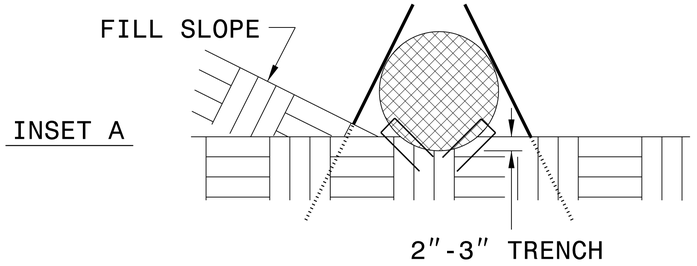
USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

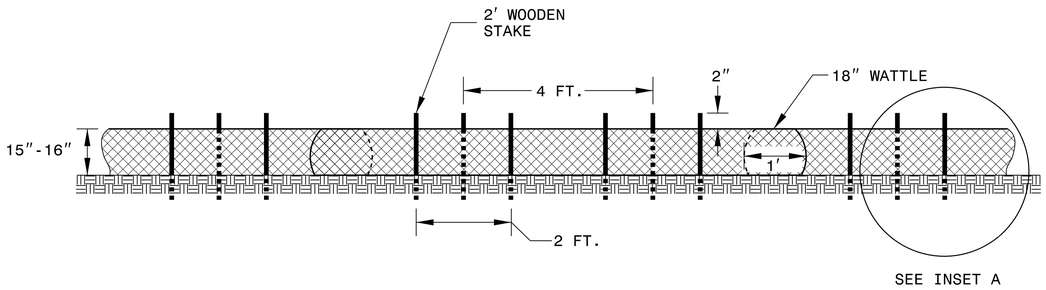
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

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

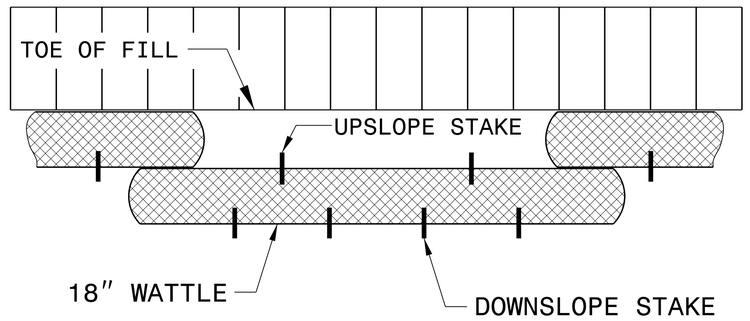
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

FOR BREAKS ALONG LARGE SLOPES, USE MAXIMUM SPACING OF 25 FT.





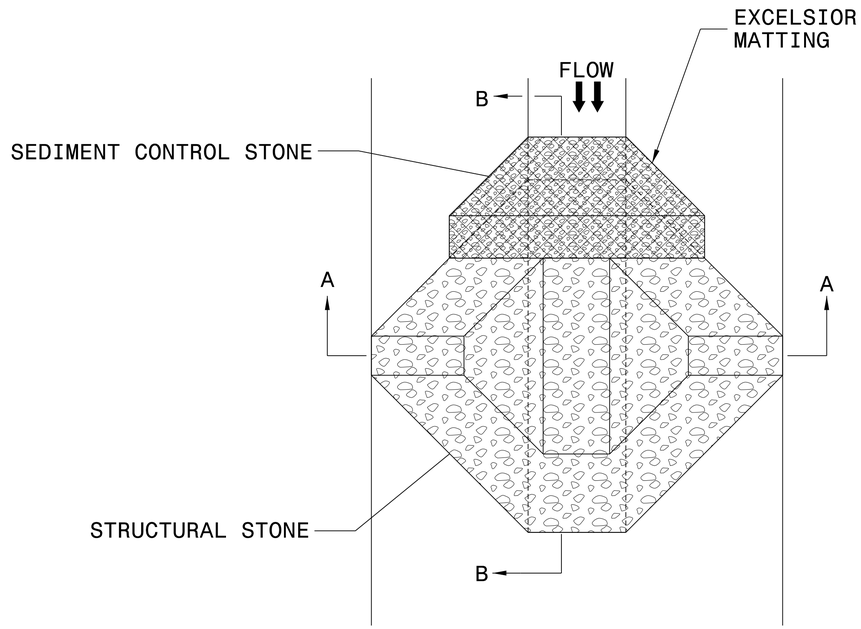
FRONT VIEW



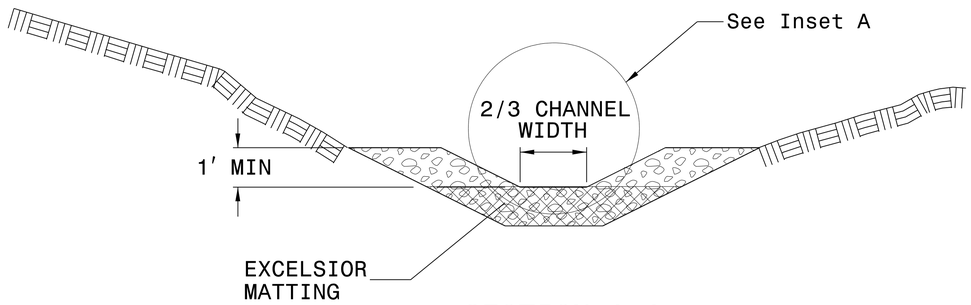
TOP VIEW

PROJECT REFERENCE NO.		SHEET NO.
B-4833		EC-2B
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
38603.1.FD1	BRZ-2761 (1)	PE, UTIL.
17BP.5.R.96	N/A	R /W, CONST.
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

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



PLAN



SECTION A-A

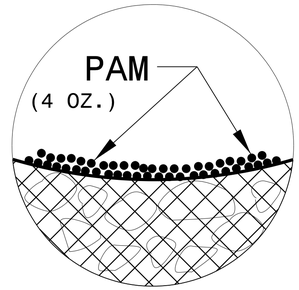
NOTES:

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

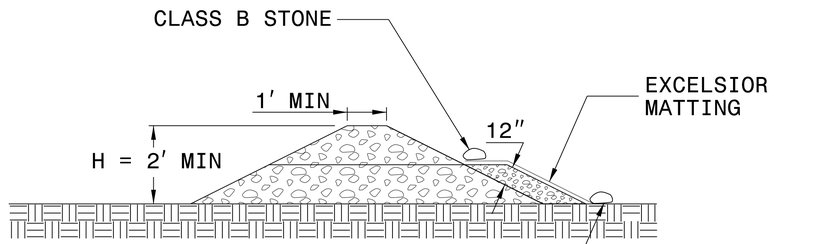
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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

INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION B-B

NOT TO SCALE

PROJECT REFERENCE NO.		SHEET NO.
B-4833		EC-3
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
38603.1.FD1	BRZ-2761 (1)	PE, UTIL.
17BP.5.R.96	N/A	R /W, CONST.
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-	21+00	23+00	LT.	270
4	-L-	21+00	23+00	RT.	180
				SUBTOTAL	450
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					8500
				TOTAL	8950
				SAY	8950

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)

PROJECT REFERENCE NO.		SHEET NO.
B-4833		EC-3A
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
38603.1.FD1	BRZ-2761 (1)	PE, UTIL.
17BP.5.R.96	N/A	R /W, CONST.
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.

CLEARING AND GRUBBING PLAN

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

PROJECT REFERENCE NO.		SHEET NO.
B-4833		EC-04/CONST.04
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
38603.1.FD1	BRZ-2761 (1)	PE, UTIL.
17BP.5.R.96	N/A	R /W, CONST.
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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NC License No. C-0910

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(919) 851-6606
FIRM PE NUMBER : P-0671

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

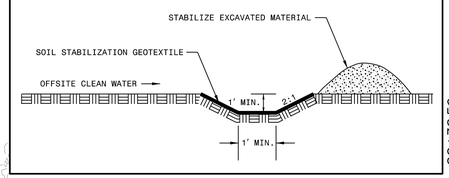
REVISIONS

NAD 1983 NA 2011

CLEAN WATER DIVERSION

CWD — CWD — CWD — CWD — CWD — CWD

(Not to Scale)



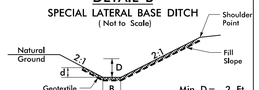
PI Sta 15+14.73
Δ = 39° 06' 12.0" (LT)
D = 6° 09' 39.0"
L = 634.71'
T = 330.27'
R = 930.00'
*DS = 50 MPH
e = 0.04
Runoff = 96'

PI Sta 24+34.75
Δ = 3° 39' 24.6" (LT)
D = 0° 55' 55.2"
L = 392.36'
T = 196.25'
R = 6,147.65'
e = Exist.

DETAIL A
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Min. D = 1.5 Ft.
Max. d = 1.0 Ft.
B = 2 Ft.
Type of Liner = CL B Rip-Rap
FROM STA. 10+36 TO STA. 13+50 -L- LT.
270 SY GEOTEXTILE
122 TONS CL B RIP RAP

DETAIL B
SPECIAL LATERAL BASE DITCH
(Not to Scale)



Min. D = 2 Ft.
Max. d = 2 Ft.
B = 3 Ft.
Type of Liner = CL I Rip-Rap (SLOPES)
Type of Liner = CL B Rip-Rap COUNTERSUNK (BASE)
FROM STA. 14+00 TO STA. 18+40 -L- LT.
(CLASS I RIP RAP ON BANK ENDS AT 18+09)
832 SY GEOTEXTILE 383 TONS CL I RIP-RAP
126 TONS CL B RIP-RAP

DETAIL C
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Min. D = 1.5 Ft.
Max. d = 1.0 Ft.
Type of Liner = CL B Rip-Rap
FROM STA. 10+36 TO STA. 13+50 -L- RT.
235 SY GEOTEXTILE
106 TONS CL B RIP RAP

DETAIL D
RIP RAP AT EMBANKMENT
(Not to Scale)

Type of Liner = 19 TONS,CL II Rip-Rap
Geotextile = 20sy
FROM STA. 18+40 TO STA. 18+50 -L- LT

DETAIL E
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Min. D = 1.4 Ft.
B = 4 Ft.
FROM STA. 21+00 TO 23+00 -L- LT.

DETAIL F
ENERGY DISSIPATOR PAD
(Not to Scale)

L= 20'
Type of Liner = CL I Rip-Rap
FROM STA. 20+80 TO STA. 21+00 -L- LT.
FROM STA. 20+80 TO STA. 21+00 -L- RT.

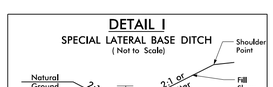
DETAIL G
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Min. D = 1.3 Ft.
FROM STA. 21+00 TO STA. 23+00 -L- RT.

DETAIL H
TOE PROTECTION
(Not to Scale)

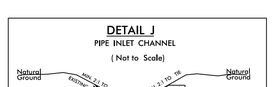
d = 2 Ft.
b = 3 Ft.
Type of Liner = CL I Rip-Rap
FROM STA. 17+89 TO STA. 18+19 -L- RT.
11 TONS CL I RIP RAP
25 SY GEOTEXTILE

DETAIL I
SPECIAL LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.5 Ft.
Max. d = 1 Ft.
B = 3 Ft.
Type of Liner = CL I Rip-Rap (SLOPES)
Type of Liner = CL B Rip-Rap COUNTERSUNK (BASE)
FROM STA. 13+62 TO STA. 13+84 -L- RT.
FROM STA. 14+30 TO STA. 14+75 -L- RT.
FROM STA. 15+20 TO STA. 17+89 -L- RT.

DETAIL J
PIPE INLET CHANNEL
(Not to Scale)



Length = 16 Ft.
d = 3 Ft.
Est. = 12 Tons CL I RIP RAP EST DDE = 10 CY
AT STA. 13+61 -L- RT.

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

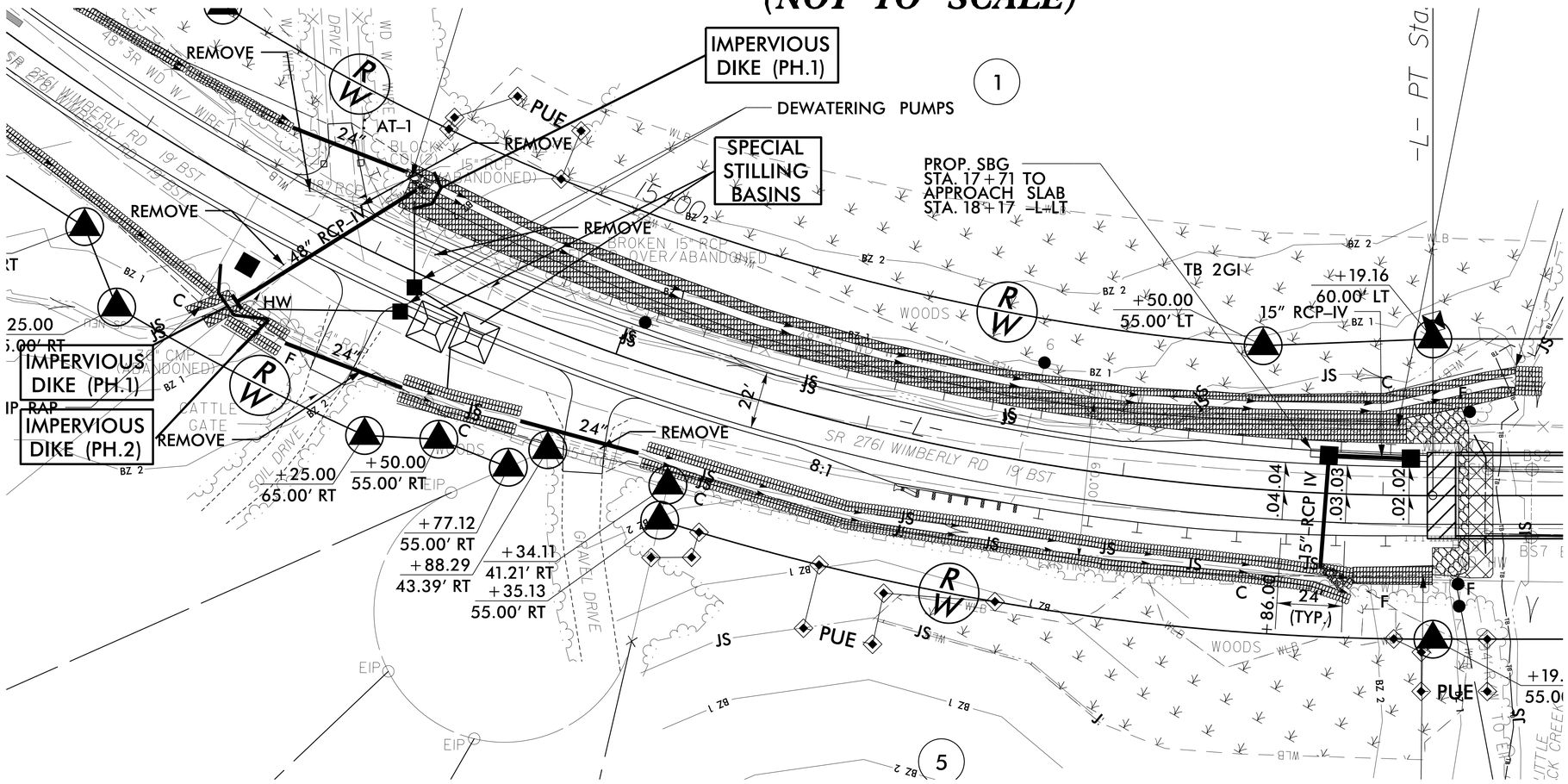
NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

$$$$SYSTIME$$$$
$$$$USERNAME$$$$

STREAM RELOCATION & PIPE CONSTRUCTION SEQUENCE

(NOT TO SCALE)



NOTES:

1. CULVERT CONSTRUCTION SHALL BE PERFORMED IN ONLY DRY OR ISOLATED SECTIONS OF CHANNEL.
2. IMPERVIOUS DIKES ARE TO BE USED TO ISOLATE WORK FROM STREAM FLOW AS NECESSARY.
3. MAINTENANCE OF STREAM FLOW OPERATIONS SHALL BE INCIDENTAL TO THE WORK. THIS INCLUDES DIVERSION PIPES, PUMPS AND HOSES.
4. PUMPS AND HOSES SHALL BE SUFFICIENT SIZE TO DEWATER THE WORK AREA.
5. THE CONTRACTOR SHALL NOT PUMP SEDIMENT–LADEN WATER DIRECTLY INTO STREAM. FOR DEWATERING OF CULVERT SITES, THE CONTRACTOR SHALL FILTER SEDIMENT–LADEN WATER THROUGH STILLING BASIN AND/OR SPECIAL STILLING BASIN.
6. UTILIZE A STABILIZED OUTLET INSTEAD OF A SPECIAL STILLING BASIN IF PUMPING CLEAN WATER.

SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA

1. INSTALL SPECIAL STILLING BASINS AND OTHER C&G EROSION CONTROL MEASURES.
2. INSTALL IMPERVIOUS DIKE (PH.1) AT UPSTREAM END OF EXIST. 36" CMP TO DIVERT ALL FLOW TO STREAM CHANNEL ON RIGHT SIDE. INSTALL IMPERVIOUS DIKE (PH.1) ABOVE DOWNSTREAM END FO 36" CMP.
3. INSTALL DEWATERING PUMP AND TEMPORARY FLEXIBLE HOSES.
4. DEWATER EXISTING 36IN CMP AND EXISTING CHANNEL ON LEFT SIDE OF –L–.
5. REPLACE EXIST. 36IN CMP WITH PROPOSED 48IN RCP. MAINTAIN ACCESS TO DRIVEWAYS.
6. REMOVE EXIST. 15IN RCP AND CONSTRUCT BASE DITCH FROM 14+00 TO 18+45 –L– LT. IN DRY CONDITIONS AND PERMANENTLY STABLIZE.
7. INSTALL FINAL EROSION CONTROL MEASURES ADJACENT TO NEW BASE DITCH.
8. AFTER DITCH IS STABILIZED, REMOVE PUMP, REMOVE TRSC–A IN CHANNEL, SPECIAL STILLING BASINS, TEMPORARY PIPES, AND IMPERVIOUS DIKES TO PERMIT STREAMFLOW THROUGH NEW 48IN RCP.
9. INSTALL IMPERVIOUS DIKE (PH.2) TO DIRECT ALL STREAMFLOW THROUGH 48IN RCP.
10. INSTALL DEWATERING PUMP AND TEMPORARY FLEXIBLE HOSES.
11. DEWATER EXISTING CHANNEL ALONG RIGHT SIDE.
12. CONSTRUCT BASE DITCH AND DRIVE PIPESFROM 13+65 TO 17+75 –L– RT IN DRY CONDITIONS AND PERMANENTLY STABILIZE.
13. INSTALL FINAL EROSION CONTROL MEASURES ADJACENT TO NEW BASE DITCH.
14. AFTER DITCH IS STABILIZED, REMOVE PUMP, SPECIAL STILLING BASIN, TEMP. PIPES, AND IMP. DIKE.
15. PERMANENTLY STABILIZE AREA.

PROJECT REFERENCE NO.		SHEET NO.
B–4833		EC–04A/CONSTR.4
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
38603.1.FD1	BRZ–2761 (1)	PE, UTIL.
17BP.5.R.96	N/A	R /W, CONST.
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

RAMEY KEMP & ASSOCIATES, INC.
Transportation Engineers
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Phone: 919-872-5115
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NC License No. C-0910

MI ENGINEERING
1011 SCHAUB DRIVE, SUITE 100
RALEIGH, NC 27606
(919) 851-6606
FIRM PE NUMBER : P-0671

REVISIONS

$$$$SYSTIME$$$$
$$$$USERNAME$$$$DGN$$$$$$$$$$$$$$$$$$$$

FINAL GRADE PLAN

PROJECT REFERENCE NO.		SHEET NO.
B-4833		EC-5/CONST.04
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
38603.1.FD1	BRZ-2761 (1)	PE, UTIL.
17BP.5.R.96	N/A	R /W, CONST.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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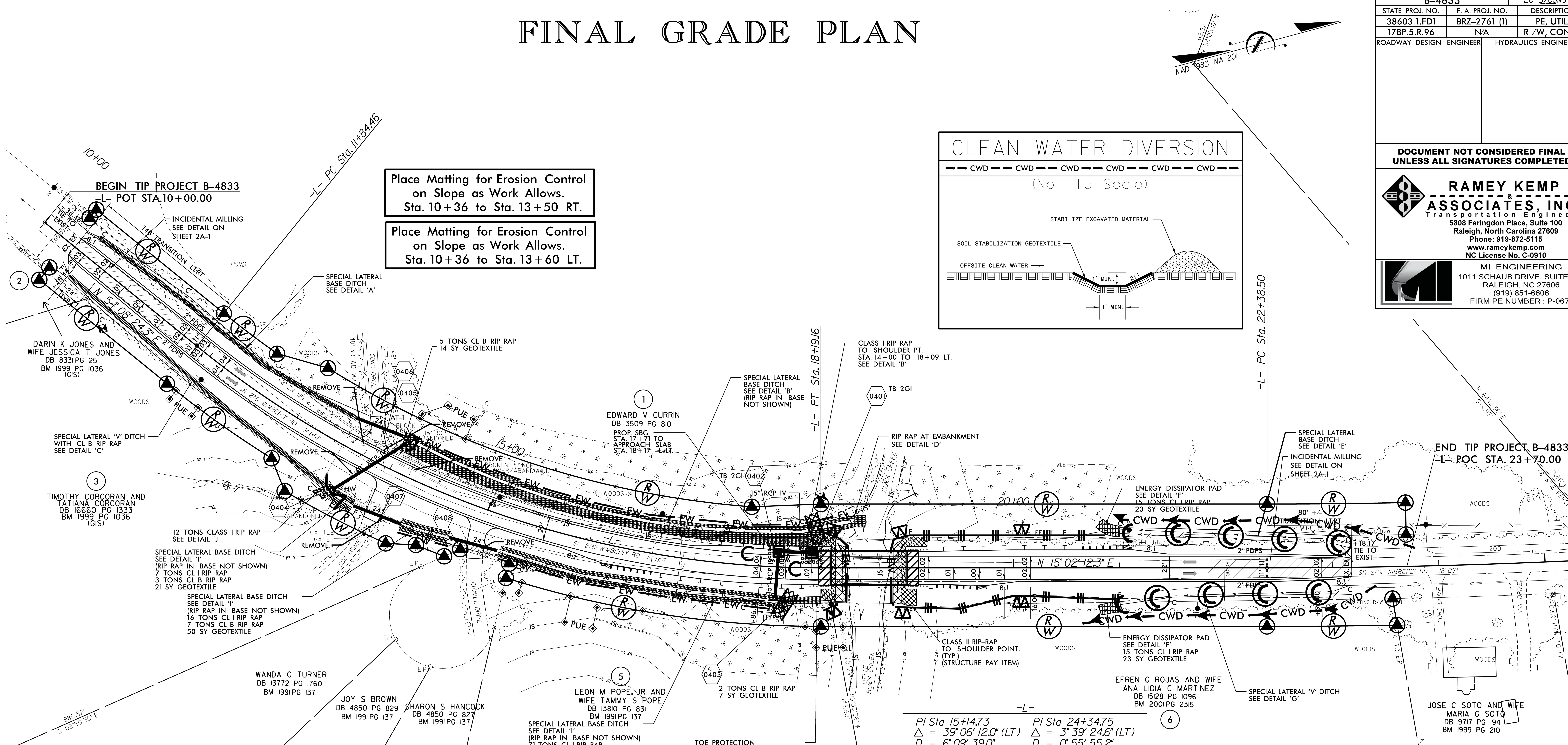
REVISIONS

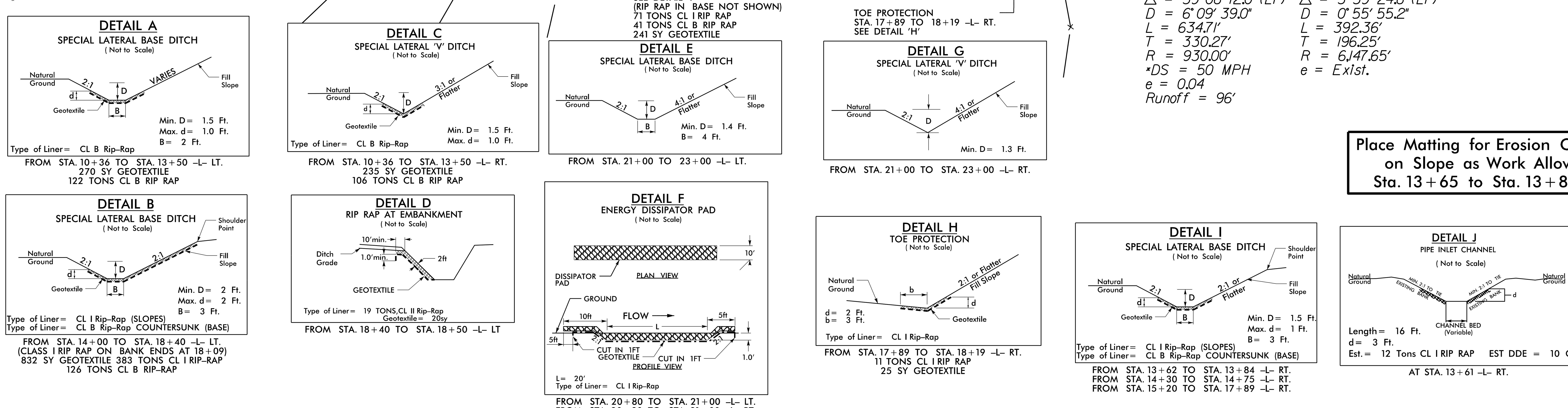


NAD 1983 NA 2011
10+00
BEGIN TIP PROJECT B-4833
-L- POT STA.10+00.00
INCIDENTAL MILLING
SEE DETAIL ON
SHEET 2A-1
-L- PC Sta. 11+84.46
Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 10+36 to Sta. 13+50 RT.
Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 10+36 to Sta. 13+60 LT.
SPECIAL LATERAL
BASE DITCH
SEE DETAIL 'A'
DARIN K JONES AND
WIFE JESSICA T JONES
DB 8331 PG 251
BM 1999 PG 1036
(GIS)
N 54° 08' 24.3" E
5 TONS CL B RIP RAP
14 SY GEOTEXTILE
SPECIAL LATERAL 'V' DITCH
WITH CL B RIP RAP
SEE DETAIL 'C'
TIMOTHY CORCORAN AND
TATIANA CORCORAN
DB 16660 PG 1333
BM 1999 PG 1036
(GIS)
12 TONS CLASS I RIP RAP
SEE DETAIL 'J'
SPECIAL LATERAL BASE DITCH
SEE DETAIL 'I'
(RIP RAP IN BASE NOT SHOWN)
7 TONS CL I RIP RAP
3 TONS CL B RIP RAP
21 SY GEOTEXTILE
SPECIAL LATERAL BASE DITCH
SEE DETAIL 'I'
(RIP RAP IN BASE NOT SHOWN)
16 TONS CL I RIP RAP
7 TONS CL B RIP RAP
50 SY GEOTEXTILE
WANDA G TURNER
DB 13772 PG 1760
BM 1991 PG 137
JOY S BROWN
DB 4850 PG 829
BM 1991 PG 137
SHARON S HANCOCK
DB 4850 PG 827
BM 1991 PG 137
EDWARD V CURRIN
DB 3509 PG 810
PROP. SBG
STA. 17+71 TO
APPROACH SLAB
STA. 18+17 -L- LT
SPECIAL LATERAL
BASE DITCH
SEE DETAIL 'B'
(RIP RAP IN BASE
NOT SHOWN)
-L- PT Sta. 18+19.16
CLASS I RIP RAP
TO SHOULDER PT.
STA. 14+00 TO 18+09 LT.
SEE DETAIL 'B'
TB 2GI
RIP RAP AT EMBANKMENT
SEE DETAIL 'D'
LEON M POPE, JR AND
WIFE TAMMY S POPE
DB 13810 PG 831
BM 1991 PG 137
SPECIAL LATERAL BASE DITCH
SEE DETAIL 'I'
(RIP RAP IN BASE NOT SHOWN)
71 TONS CL I RIP RAP
41 TONS CL B RIP RAP
241 SY GEOTEXTILE
2 TONS CL B RIP RAP
7 SY GEOTEXTILE
TOE PROTECTION
STA. 17+89 TO 18+19 -L- RT.
SEE DETAIL 'H'
CLASS II RIP-RAP
TO SHOULDER POINT.
(TYP.)
(STRUCTURE PAY ITEM)
N 15° 02' 12.3" E
SR 2761 WIMBERLY RD
-L- PC Sta. 22+38.50
SPECIAL LATERAL
BASE DITCH
SEE DETAIL 'E'
INCIDENTAL MILLING
SEE DETAIL ON
SHEET 2A-1
END TIP PROJECT B-4833
-L- POC STA. 23+70.00
ENERGY DISSIPATOR PAD
SEE DETAIL 'F'
15 TONS CL I RIP RAP
23 SY GEOTEXTILE
ENERGY DISSIPATOR PAD
SEE DETAIL 'F'
15 TONS CL I RIP RAP
23 SY GEOTEXTILE
EFREN G ROJAS AND WIFE
ANA LIDIA C MARTINEZ
DB 15128 PG 1096
BM 2001 PG 2315
SPECIAL LATERAL 'V' DITCH
SEE DETAIL 'G'
JOSE C SOTO AND WIFE
MARIA G SOTO
DB 9717 PG 194
BM 1999 PG 210

-L-

PI Sta 15+14.73	PI Sta 24+34.75
Δ = 39° 06' 12.0" (LT)	Δ = 3° 39' 24.6" (LT)
D = 6° 09' 39.0"	D = 0° 55' 55.2"
L = 634.71'	L = 392.36'
T = 330.27'	T = 196.25'
R = 930.00'	R = 6,147.65'
*DS = 50 MPH	e = Exist.
e = 0.04	
Runoff = 96'	

Place Matting for Erosion Control on Slope as Work Allows. Sta. 13+65 to Sta. 13+84 RT.



DETAIL A
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Min. D= 1.5 Ft.
Max. d= 1.0 Ft.
B= 2 Ft.
Type of Liner= CL B Rip-Rap
FROM STA. 10+36 TO STA. 13+50 -L- LT.
270 SY GEOTEXTILE
122 TONS CL B RIP RAP
DETAIL C
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Min. D= 1.5 Ft.
Max. d= 1.0 Ft.
Type of Liner= CL B Rip-Rap
FROM STA. 10+36 TO STA. 13+50 -L- RT.
235 SY GEOTEXTILE
106 TONS CL B RIP RAP
DETAIL E
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Min. D= 1.4 Ft.
B= 4 Ft.
FROM STA. 21+00 TO 23+00 -L- LT.
DETAIL G
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Min. D= 1.3 Ft.
FROM STA. 21+00 TO STA. 23+00 -L- RT.
DETAIL B
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Min. D= 2 Ft.
Max. d= 2 Ft.
B= 3 Ft.
Type of Liner= CL I Rip-Rap (SLOPES)
Type of Liner= CL B Rip-Rap COUNTERSUNK (BASE)
FROM STA. 14+00 TO STA. 18+40 -L- LT.
(CLASS I RIP RAP ON BANK ENDS AT 18+09)
832 SY GEOTEXTILE 383 TONS CL I RIP-RAP
126 TONS CL B RIP-RAP
DETAIL D
RIP RAP AT EMBANKMENT
(Not to Scale)
Type of Liner= 19 TONS,CL II Rip-Rap
Geotextile= 20sy
FROM STA. 18+40 TO STA. 18+50 -L- LT
DETAIL F
ENERGY DISSIPATOR PAD
(Not to Scale)
PLAN VIEW
PROFILE VIEW
L= 20'
Type of Liner= CL I Rip-Rap
FROM STA. 20+80 TO STA. 21+00 -L- LT.
FROM STA. 20+80 TO STA. 21+00 -L- RT.
DETAIL H
TOE PROTECTION
(Not to Scale)
d= 2 Ft.
b= 3 Ft.
Type of Liner= CL I Rip-Rap
FROM STA. 17+89 TO STA. 18+19 -L- RT.
11 TONS CL I RIP RAP
25 SY GEOTEXTILE
DETAIL I
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Min. D= 1.5 Ft.
Max. d= 1 Ft.
B= 3 Ft.
Type of Liner= CL I Rip-Rap (SLOPES)
Type of Liner= CL B Rip-Rap COUNTERSUNK (BASE)
FROM STA. 13+62 TO STA. 13+84 -L- RT.
FROM STA. 14+30 TO STA. 14+75 -L- RT.
FROM STA. 15+20 TO STA. 17+89 -L- RT.
DETAIL J
PIPE INLET CHANNEL
(Not to Scale)
Length= 16 Ft.
d= 3 Ft.
Est.= 12 Tons CL I RIP RAP EST DDE = 10 CY
AT STA. 13+61 -L- RT.