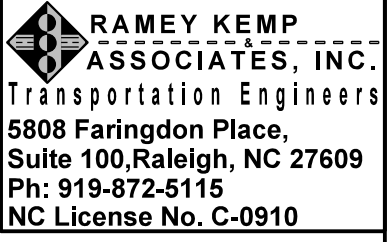
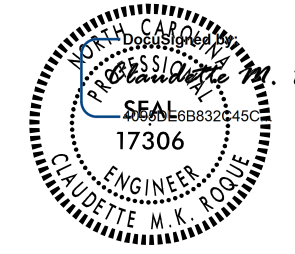


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
**INDEX OF SHEETS, LIST OF STANDARD
DRAWINGS & GENERAL NOTES**

PROJECT REFERENCE NO. <i>17BP.9.R.5</i>	SHEET NO. <i>1-A</i>
	
RAMEY KEMP ASSOCIATES, INC. Transportation Engineers 5808 Faringdon Place, Suite 100, Raleigh, NC 27609 Ph: 919-872-5115 NC License No. C-0910	
	
6/10/2015	

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
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1-B	CONVENTIONAL SYMBOLS
1-C THRU 1-D	SURVEY CONTROL SHEETS AND ROW/PDE MARKERS
1-E	CENTERLINE COORDINATE LIST
2	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
3-A	SUMMARY OF EARTHWORK, SUMMARY OF PAVEMENT REMOVAL, GUARDRAIL SUMMARY AND PARCEL INDEX
4	PLAN AND PROFILE SHEET
TMP-1 THRU TMP-2	TRANSPORTATION MANAGEMENT PLANS
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EC-1 THRU EC-6	EROSION CONTROL PLANS
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C-1 THRU C-6	CULVERT PLANS
SN	CULVERT PLANS - STANDARD NOTES SHEET

2012 ROADWAY ENGLISH STANDARD DRAWINGS

STD.NO.	TITLE	EFF. 01-17-2012 REV. 10-30-2012
The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:		
DIVISION 2 - EARTHWORK		
200.03	Method of Clearing - Method III	
225.02	Guide for Grading Subgrade - Secondary and Local	
225.04	Method of Obtaining Superelevation - Two Lane Pavement	
DIVISION 3 - PIPE CULVERTS		
300.01	Method of Pipe Installation	
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS		
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I	
DIVISION 8 - INCIDENTALS		
806.01	Concrete Right-of-Way Marker	
806.02	Granite Right-of-Way Marker	
862.01	Guardrail Placement	
862.02	Guardrail Installation	
862.03	Structure Anchor Units	
876.01	Rip Rap in Channels	
876.04	Drainage Ditches with Class 'B' Rip Rap	

GENERAL NOTES:

2012 SPECIFICATIONS

<p>EFFECTIVE: 01-17-2012 REVISED: 10-31-2014</p>	<p>GRADE LINE: GRADING AND SURFACING: THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.</p> <p>CLEARING: CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.</p> <p>SUPERELEVATION: ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.</p> <p>SHOULDER CONSTRUCTION: ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01</p> <p>GUARDRAIL: THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.</p> <p>TEMPORARY SHORING: SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.</p> <p>UTILITIES: UTILITY OWNERS ON THIS PROJECT ARE CENTURYLINK, PIEDMONT NATURAL GAS, DUKE ENERGY ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.</p> <p>RIGHT-OF-WAY MARKERS: ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY CONTRACT.</p>
--	---

02/03/15

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Property Corner	-----x
Property Monument	□ ECM
Parcel/Sequence Number	②③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-----WLB
Proposed Wetland Boundary	-----WLB
Existing Endangered Animal Boundary	-----EAB
Existing Endangered Plant Boundary	-----EPB
Existing Historic Property Boundary	-----HPB
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	?? ??

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
Well	○
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	□
Building	□
School	□
Church	□
Dam	□

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
Jurisdictional Stream	-----JS
Buffer Zone 1	-----BZ 1
Buffer Zone 2	-----BZ 2
Flow Arrow	←
Disappearing Stream	-----
Spring	○
Wetland	-----
Proposed Lateral, Tail, Head Ditch	-----
False Sump	-----

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	-----
Switch	-----
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	-----
Proposed Right of Way Line with Concrete or Granite R/W Marker	-----
Proposed Control of Access Line with Concrete C/A Marker	-----
Existing Control of Access	-----
Proposed Control of Access	-----
Existing Easement Line	-----
Proposed Temporary Construction Easement	-----
Proposed Temporary Drainage Easement	-----
Proposed Permanent Drainage Easement	-----
Proposed Permanent Drainage / Utility Easement	-----
Proposed Permanent Utility Easement	-----
Proposed Temporary Utility Easement	-----
Proposed Aerial Utility Easement	-----
Proposed Permanent Easement with Iron Pin and Cap Marker	-----

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-----
Proposed Slope Stakes Fill	-----
Proposed Curb Ramp	-----
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	-----
Pavement Removal	-----
Single Tree	-----
Single Shrub	-----
Hedge	-----
Woods Line	-----

VEGETATION:

Orchard	-----
Vineyard	-----

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	-----
Bridge Wing Wall, Head Wall and End Wall	-----
MINOR:	
Head and End Wall	-----
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	-----
Paved Ditch Gutter	-----
Storm Sewer Manhole	-----
Storm Sewer	-----

UTILITIES:

POWER:	
Existing Power Pole	-----
Proposed Power Pole	-----
Existing Joint Use Pole	-----
Proposed Joint Use Pole	-----
Power Manhole	-----
Power Line Tower	-----
Power Transformer	-----
U/G Power Cable Hand Hole	-----
H-Frame Pole	-----
Recorded U/G Power Line	-----
Designated U/G Power Line (S.U.E.*)	-----

TELEPHONE:

Existing Telephone Pole	-----
Proposed Telephone Pole	-----
Telephone Manhole	-----
Telephone Booth	-----
Telephone Pedestal	-----
Telephone Cell Tower	-----
U/G Telephone Cable Hand Hole	-----
Recorded U/G Telephone Cable	-----
Designated U/G Telephone Cable (S.U.E.*)	-----
Recorded U/G Telephone Conduit	-----
Designated U/G Telephone Conduit (S.U.E.*)	-----
Recorded U/G Fiber Optics Cable	-----
Designated U/G Fiber Optics Cable (S.U.E.*)	-----

WATER:

Water Manhole	-----
Water Meter	-----
Water Valve	-----
Water Hydrant	-----
Recorded U/G Water Line	-----
Designated U/G Water Line (S.U.E.*)	-----
Above Ground Water Line	-----

TV:

TV Satellite Dish	-----
TV Pedestal	-----
TV Tower	-----
U/G TV Cable Hand Hole	-----
Recorded U/G TV Cable	-----
Designated U/G TV Cable (S.U.E.*)	-----
Recorded U/G Fiber Optic Cable	-----
Designated U/G Fiber Optic Cable (S.U.E.*)	-----

GAS:

Gas Valve	-----
Gas Meter	-----
Recorded U/G Gas Line	-----
Designated U/G Gas Line (S.U.E.*)	-----
Above Ground Gas Line	-----

SANITARY SEWER:

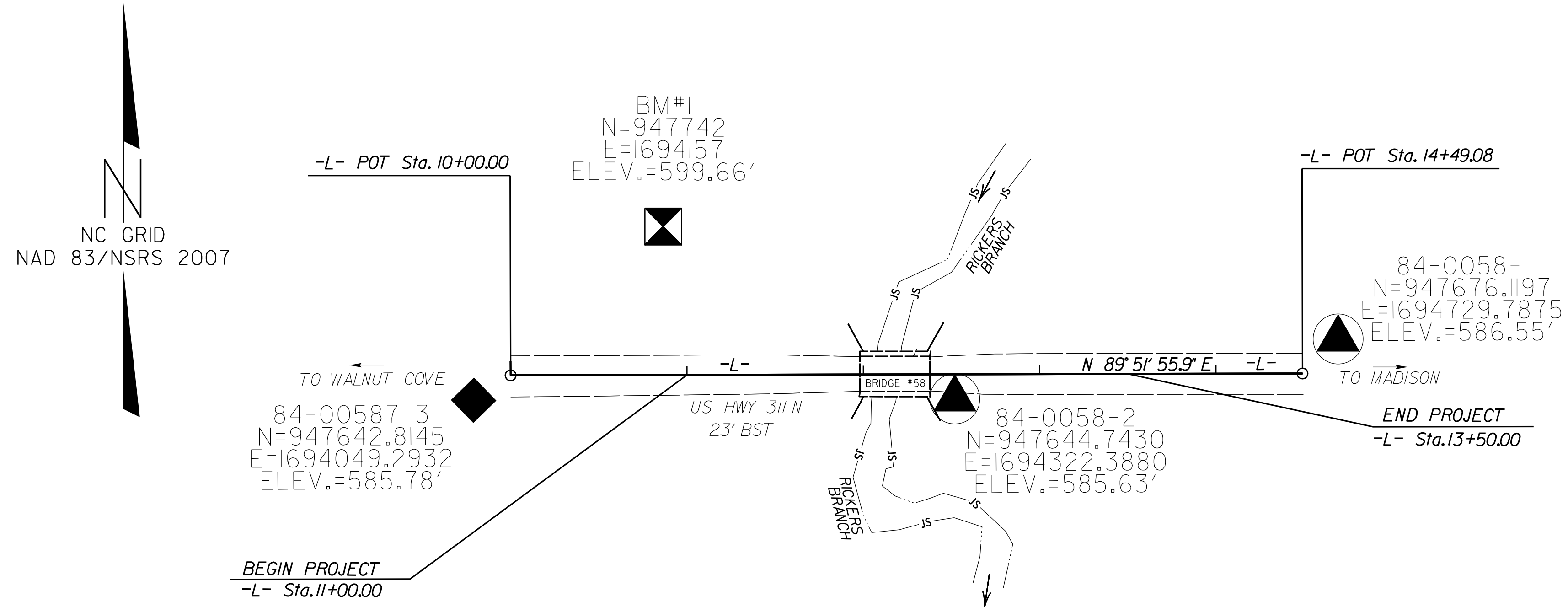
Sanitary Sewer Manhole	-----
Sanitary Sewer Cleanout	-----
U/G Sanitary Sewer Line	-----
Above Ground Sanitary Sewer	-----
Recorded SS Forced Main Line	-----
Designated SS Forced Main Line (S.U.E.*)	-----

MISCELLANEOUS:

Utility Pole	-----
Utility Pole with Base	-----
Utility Located Object	-----
Utility Traffic Signal Box	-----
Utility Unknown U/G Line	-----
U/G Tank; Water, Gas, Oil	-----
Underground Storage Tank, Approx. Loc.	-----
A/G Tank; Water, Gas, Oil	-----
Geoenvironmental Boring	-----
U/G Test Hole (S.U.E.*)	-----
Abandoned According to Utility Records	-----
End of Information	-----

SURVEY CONTROL SHEET 84-0058

PROJECT REFERENCE NO.	SHEET NO.
17BP.9.R.5	1-C
Location and Surveys	



BL	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
3	84-0058-3		947642.8145	1694049.2932	585.78	OUTSIDE PROJECT LIMITS	
2	84-0058-2		947644.7430	1694322.3880	585.63	12+51.87	13.92 RT
1	84-0058-1		947676.1197	1694729.7875	586.55	OUTSIDE PROJECT LIMITS	

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "84-0058-2" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 947644.743(ft) EASTING: 1694322.388(ft) ELEVATION: 585.63(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.0000332835

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "84-0058-2" TO -L- STATION 10+00.00 IS
 N 86°58'14.8" W 252.25'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NAVD 88

BENCHMARKS (NAVD 88)

BM#1 ELEVATION = 599.66'
 N 947742 E 1694157
 L STATION 10+87 84' LEFT
 RR SPIKE IN WEST ROOT OF A 24" TWIN BIRCH

BM#2 ELEVATION = 585.78'
 N 947642.8145 E 1694049.2932
 L STATION 10+00 TO BM#2
 S 54°14'42" W DIST 26'
 REBAR WITH ALUMINUM CAP STAMPED "84-0058-3" (SET FLUSH WITH GROUND)
 POINT LIES 3.0' SOUTH OF EDGE OF HIGHWAY 311

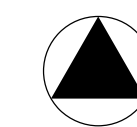
NOTE: DRAWING NOT TO SCALE

NOTES:

1. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/](https://connect.ncdot.gov/resources/location/)

THE FILES TO BE FOUND ARE AS FOLLOWS:
 84-0058_LS_CONTROL.TXT

SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.



INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.

PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

SURVEY CONTROL SHEET 84-0058

PROJECT REFERENCE NO.	SHEET NO.
17BP.9.R.5	1-D
Division 9 - DDC	

L			
TYPE	STATION	NORTH	EAST
POT	10+00.00	947658.0734	1694070.4852
POT	14+49.08	947659.1274	1694519.5664

ROW MARKER PERMANENT EASEMENT-E				
ALIGN	STATION	OFFSET	NORTH	EAST
L	11+41.29	50.00	947608.4052	1694211.8968
L	12+25.00	125.00	947533.6019	1694295.7780

ROW MARKER CONCRETE OR GRANITE-E				
ALIGN	STATION	OFFSET	NORTH	EAST
L	13+57.53	50.00	947608.9127	1694428.1312
L	12+93.82	125.00	947533.7634	1694364.6018
L	12+00.00	-50.00	947708.5427	1694270.3673
L	12+25.00	-115.00	947773.6012	1694295.2147
L	13+00.00	-115.00	947773.7772	1694370.2145
L	13+31.86	-50.00	947708.8522	1694402.2297
L	12+06.58	50.00	947608.5584	1694277.1864
L	12+10.55	77.96	947580.6045	1694281.2223
L	12+54.67	76.20	947582.4760	1694325.3316
L	12+73.34	87.67	947571.0466	1694344.0290
L	12+70.08	125.00	947533.7077	1694340.8602

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "84-0058-2"
 WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF
 NORTHING: 947644.743(±) EASTING: 1694322.388(±)
 ELEVATION: 585.63(±)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.0000332835
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "84-0058-2" TO -L- STATION 10+00.00 IS
 N 86°58'14.8" W 252.25'
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NAVD 88

NOTES:

1. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/](https://connect.ncdot.gov/resources/location/)

THE FILES TO BE FOUND ARE AS FOLLOWS:
 84-0058_LS_CONTROL.TXT

SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

NOTE: DRAWING NOT TO SCALE

8/17/99

6/9/2015
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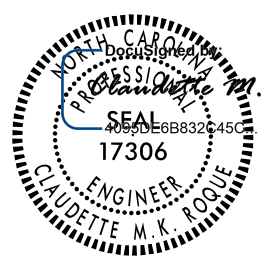
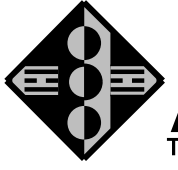
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

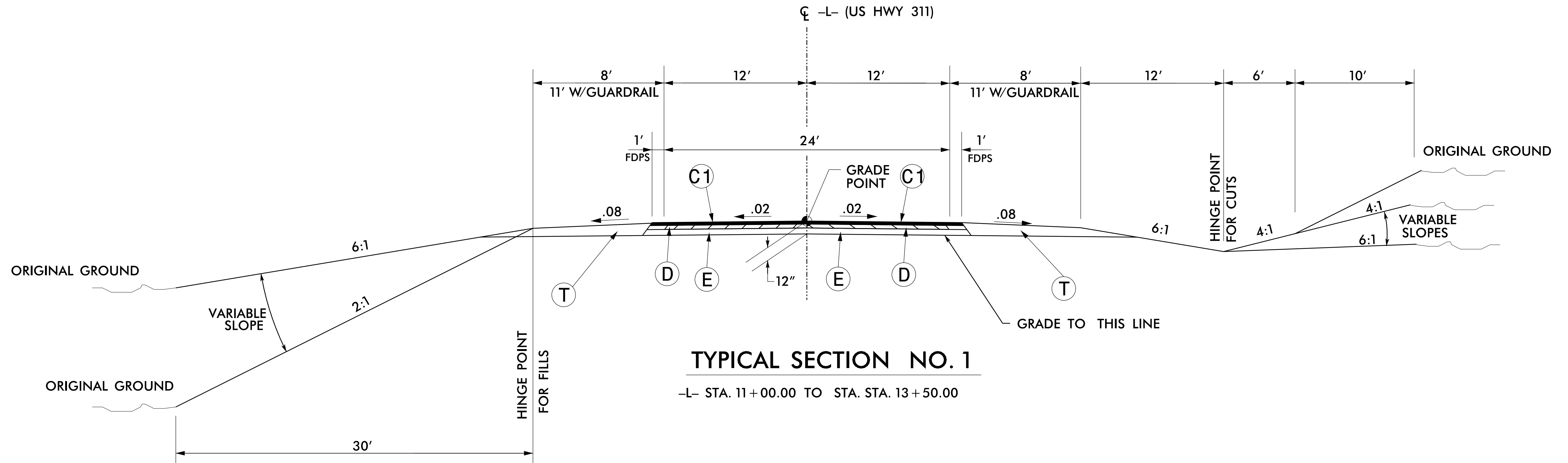
CENTERLINE COORDINATE LIST

Point #	Chain	Station	Northing (Y)	Easting (X)
1	-L-	9+00.00	947657.8387	1693970.4855
2	-L-	9+50.00	947657.9561	1694020.4854
3	-L-	10+00.00	947658.0734	1694070.4852
4	-L-	10+50.00	947658.1908	1694120.4851
5	-L-	11+00.00	947658.3081	1694170.4850
6	-L-	11+50.00	947658.4255	1694220.4848
7	-L-	12+00.00	947658.5428	1694270.4847
8	-L-	12+50.00	947658.6602	1694320.4846
9	-L-	13+00.00	947658.7775	1694370.4844
10	-L-	13+50.00	947658.8949	1694420.4843
11	-L-	14+00.00	947659.0122	1694470.4841
12	-L-	14+50.00	947659.1243	1694520.4840
13	-L-	15+00.00	947658.9548	1694570.4837
14	-L-	15+50.00	947658.7853	1694620.4834
15	-L-	16+00.00	947658.6157	1694670.4831
16	-L-	16+50.00	947658.4462	1694720.4828
17	-L-	16+55.11	947658.4289	1694725.5953

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
D	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
T	COMPACTED EARTH MATERIAL

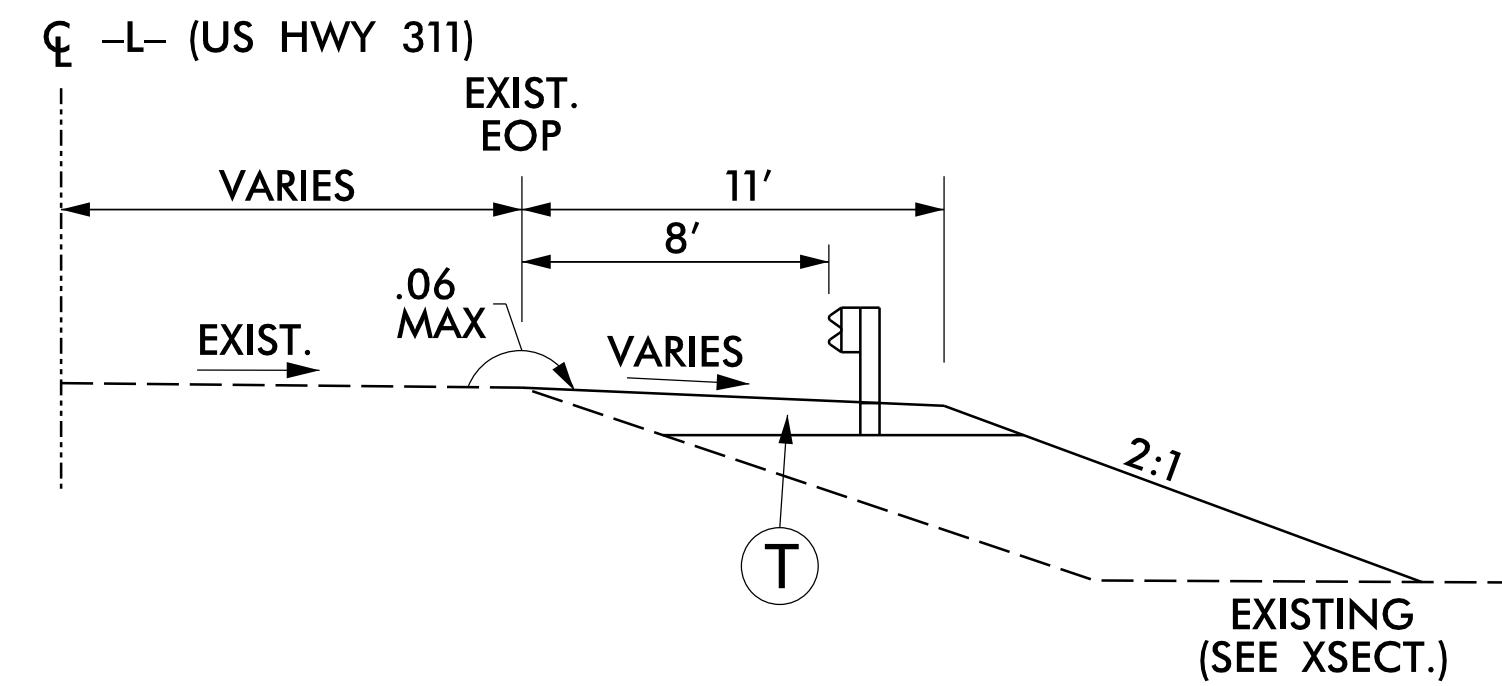
NOTE: ALL PAVEMENT SLOPES ARE 1:1 UNLESS OTHERWISE SPECIFIED.

PROJECT REFERENCE NO. 17BP-9.R.5	SHEET NO. 2
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER
6/10/2015	
 RAMEY KEMP & ASSOCIATES, INC. Transportation Engineers 5808 Faringdon Place, Suite 100 Raleigh, North Carolina 27609 919-872-5115 Tel. 919-878-5416 Fax. www.rameykemp.com NC License No. C-0910	



TYPICAL SECTION NO. 1

-L- STA. 11+00.00 TO STA. STA. 13+50.00

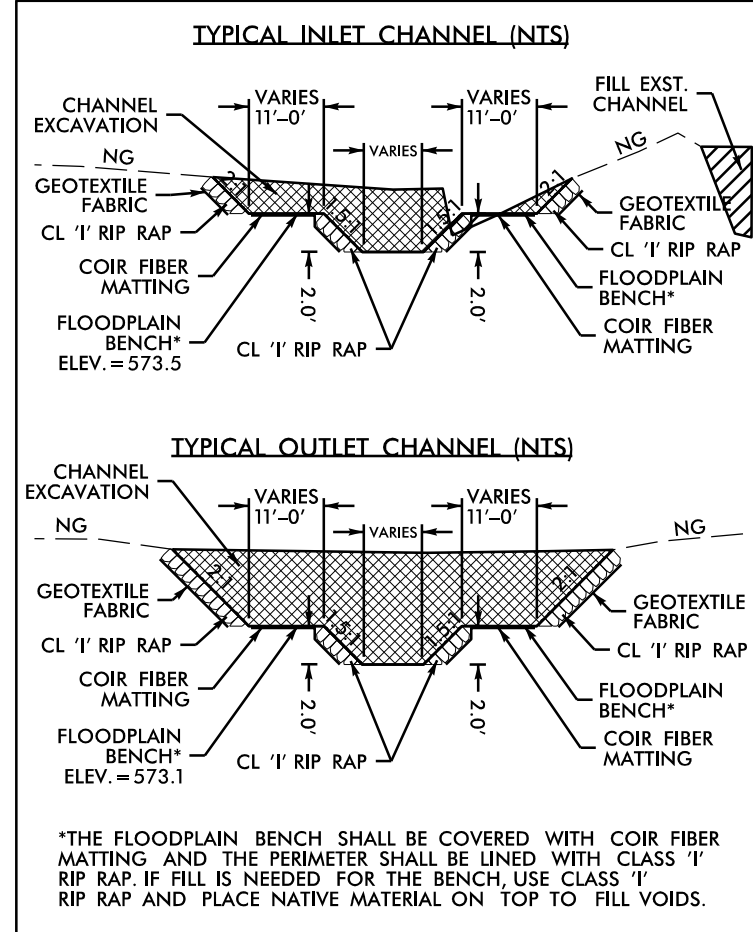
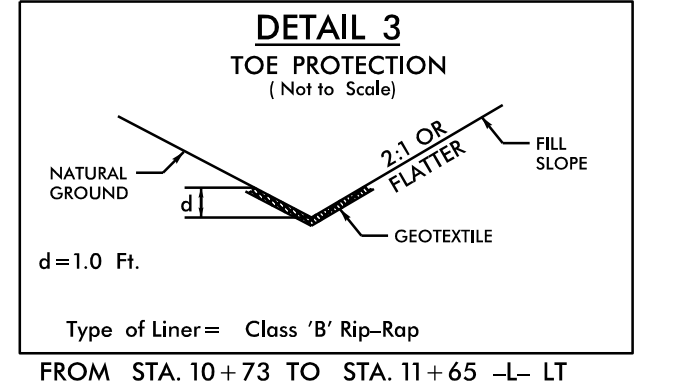
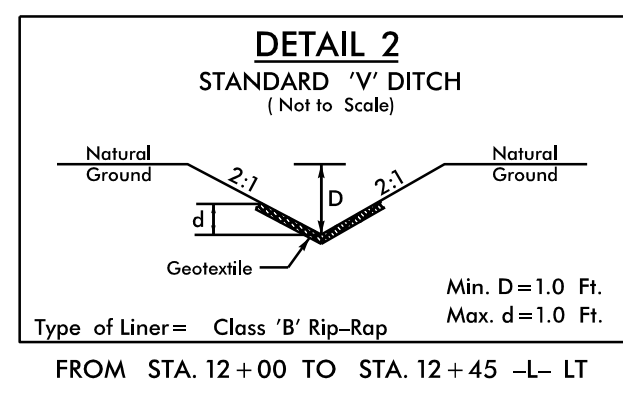
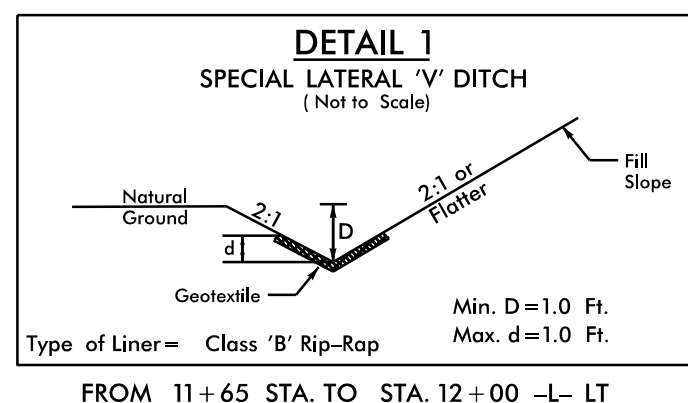


PARTIAL TYPICAL SECTION NO. 2

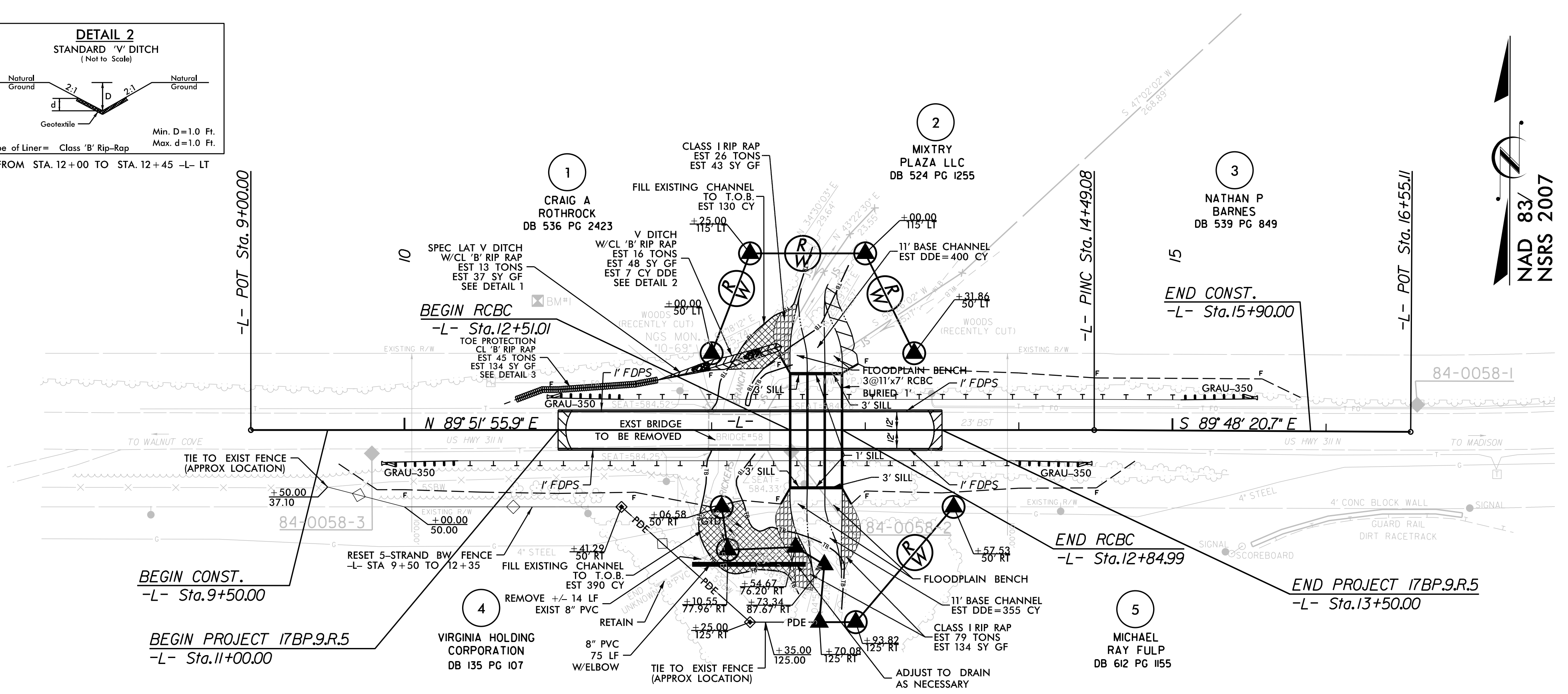
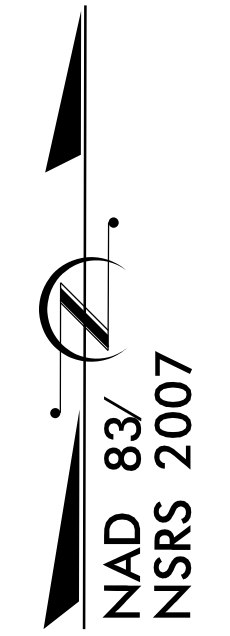
NOTE: SHOULDER / SLOPE WORK REQUIRED

- FROM -L- STA. 9+50.00 TO STA. 11+00.00 RT
- FROM -L- STA. 10+60.00 TO STA. 11+00.00 LT
- FROM -L- STA. 13+50.00 TO STA. 14+80.00 RT
- FROM -L- STA. 13+50.00 TO STA. 15+90.00 LT

8/17/99

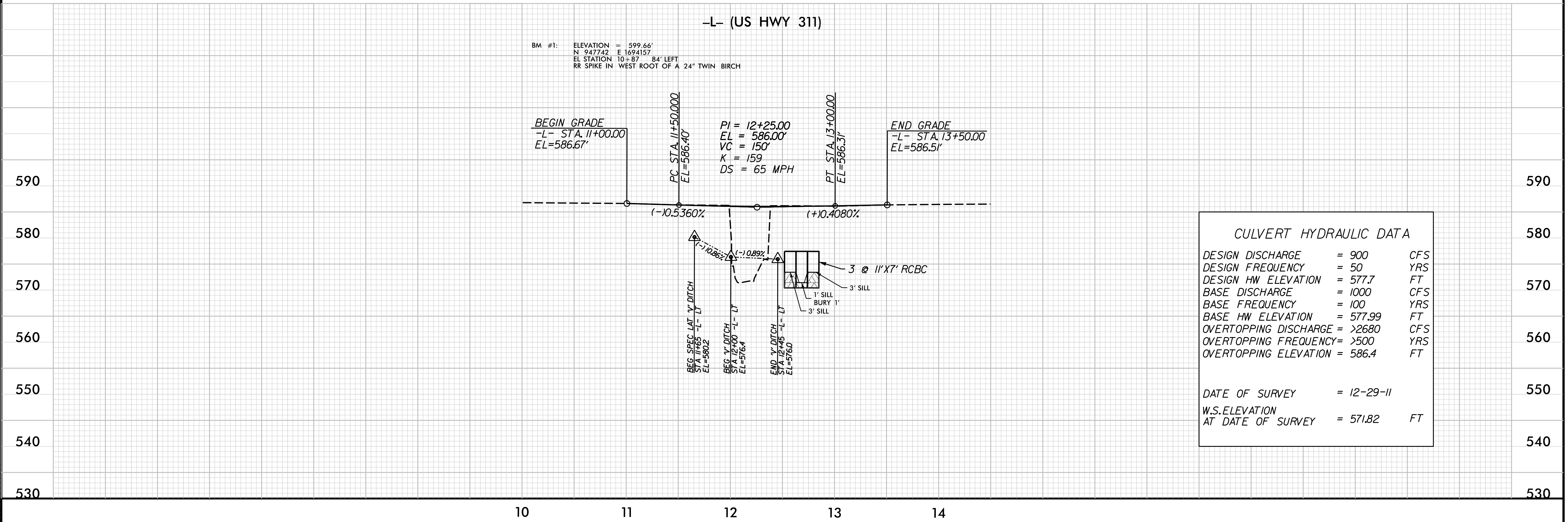


PROJECT REFERENCE NO. 17BP.9.R.5	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
6/10/2015	6/10/2015
RAMEY KEMP & ASSOCIATES, INC. Transportation Engineers 5808 Faringdon Place, Suite 100 Raleigh, North Carolina 27609 919-872-5115 Tel. 919-878-5416 Fax. www.rameykemp.com NC License No. C-0910	



REVISIONS

FOR CULVERT PLANS, SEE SHEET C-1 THRU C-6



CULVERT HYDRAULIC DATA	
DESIGN DISCHARGE	= 900 CFS
DESIGN FREQUENCY	= 50 YRS
DESIGN HW ELEVATION	= 577.7 FT
BASE DISCHARGE	= 1000 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 577.99 FT
OVERTOPPING DISCHARGE	= >2680 CFS
OVERTOPPING FREQUENCY	= >500 YRS
OVERTOPPING ELEVATION	= 586.4 FT
DATE OF SURVEY	= 12-29-11
W.S. ELEVATION AT DATE OF SURVEY	= 571.82 FT

6/9/2015
17BP.9.R.5-0058_Rdy_psh.dgn
11:28:00

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN
STOKES COUNTY

TIP PROJECT: 17BP.9.R.5

CONTRACT: DI00106

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.03	TEMPORARY ROAD CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1253.01	RAISED PAVEMENT MARKERS - SNOWPLOWABLE

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND AND INDEX OF SHEETS
TMP-2	GENERAL NOTES, PHASING AND DETOUR SIGNING

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.

- WORK AREA
- REMOVAL
- USER DEFINED (IF NEEDED)
- USER DEFINED (IF NEEDED)

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW PANEL (TYPE C)
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- CHANGEABLE MESSAGE SIGN (CMS)

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

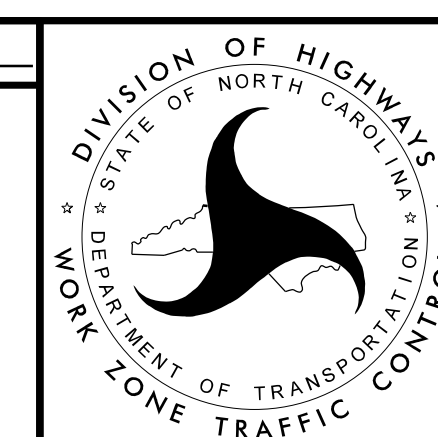
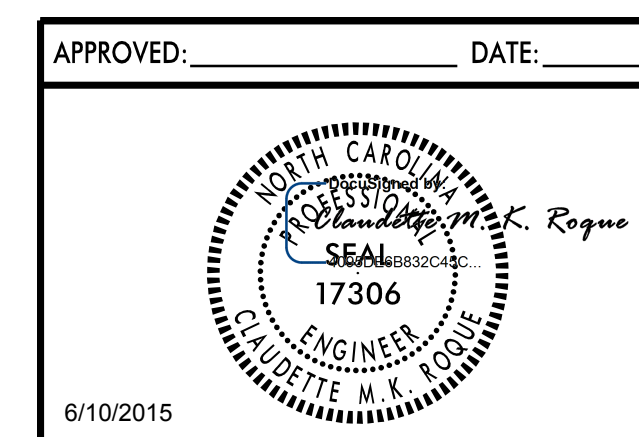
- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

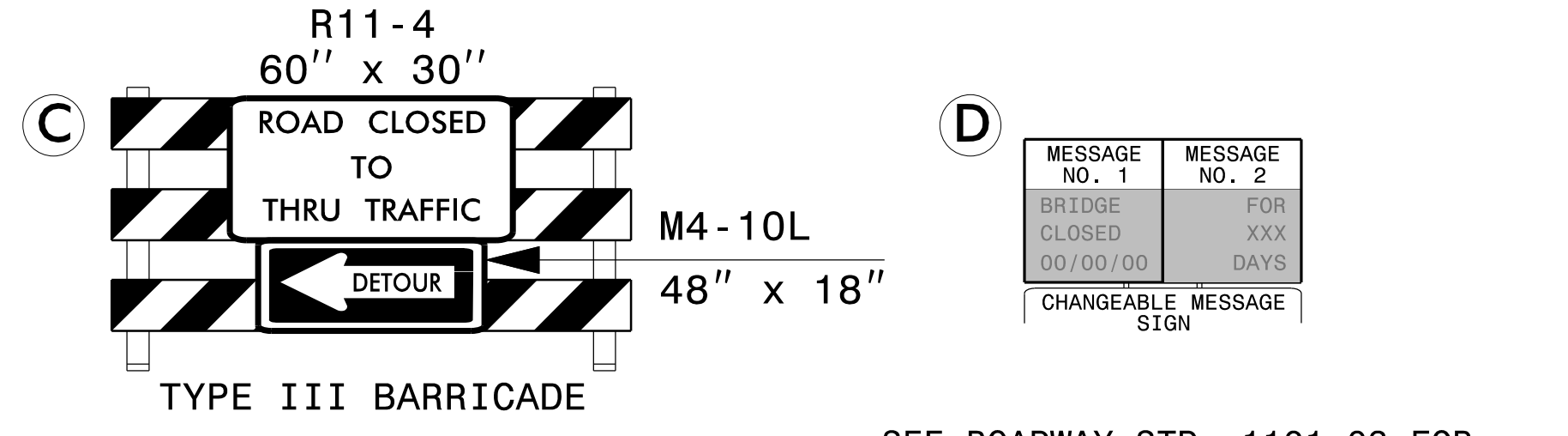
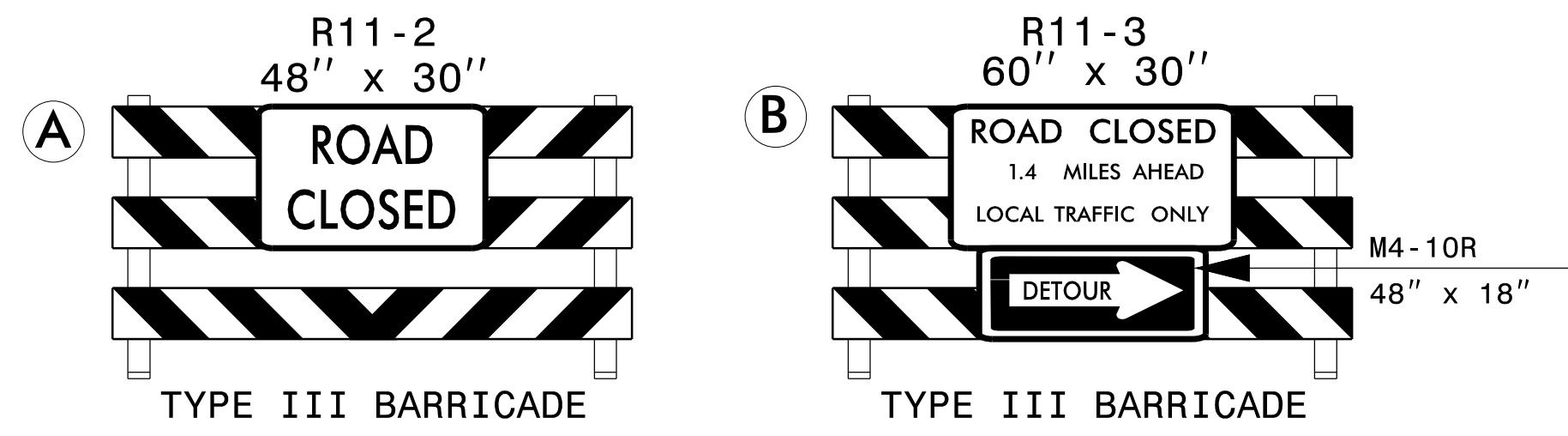
- PAVEMENT MARKING SYMBOLS

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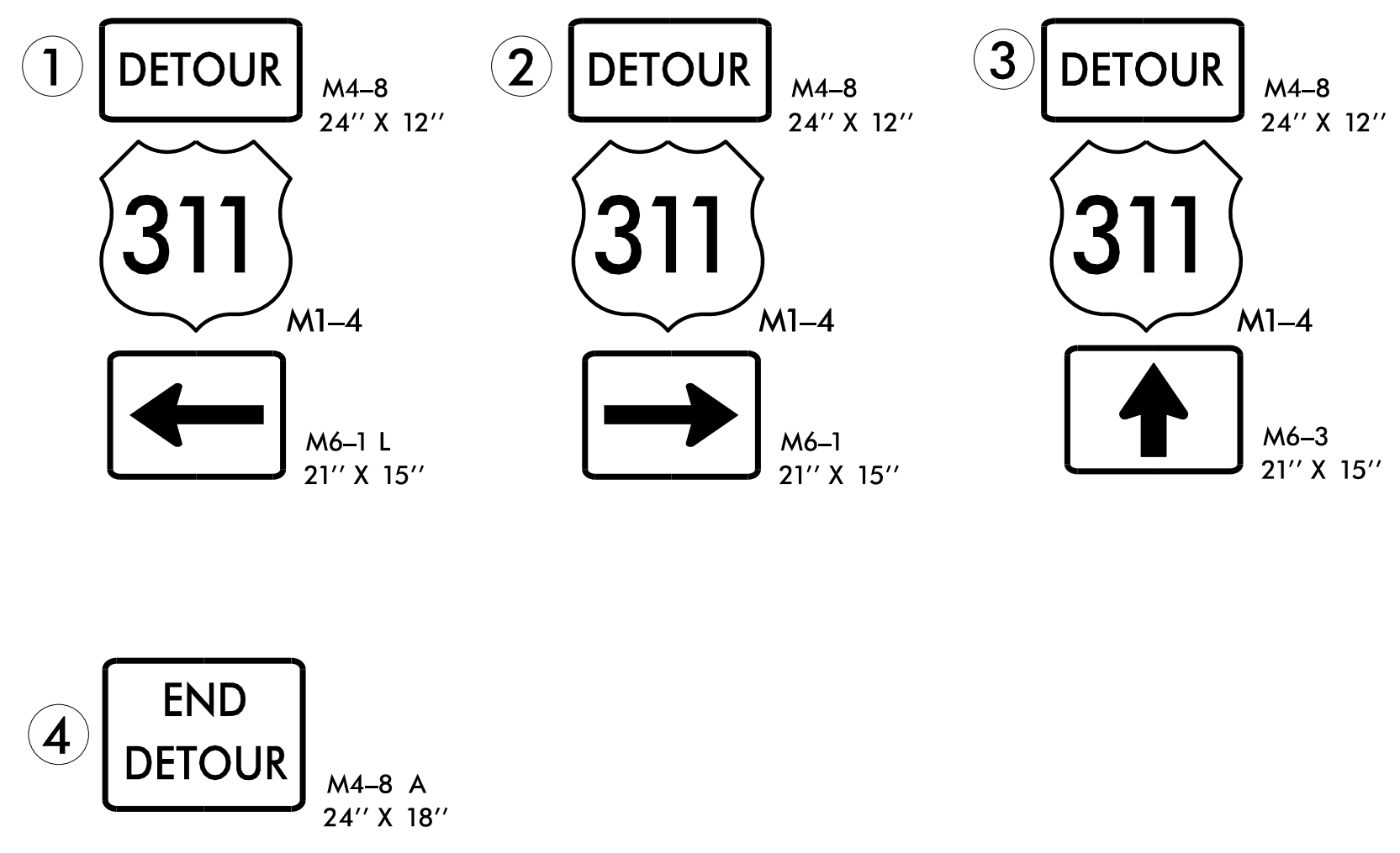
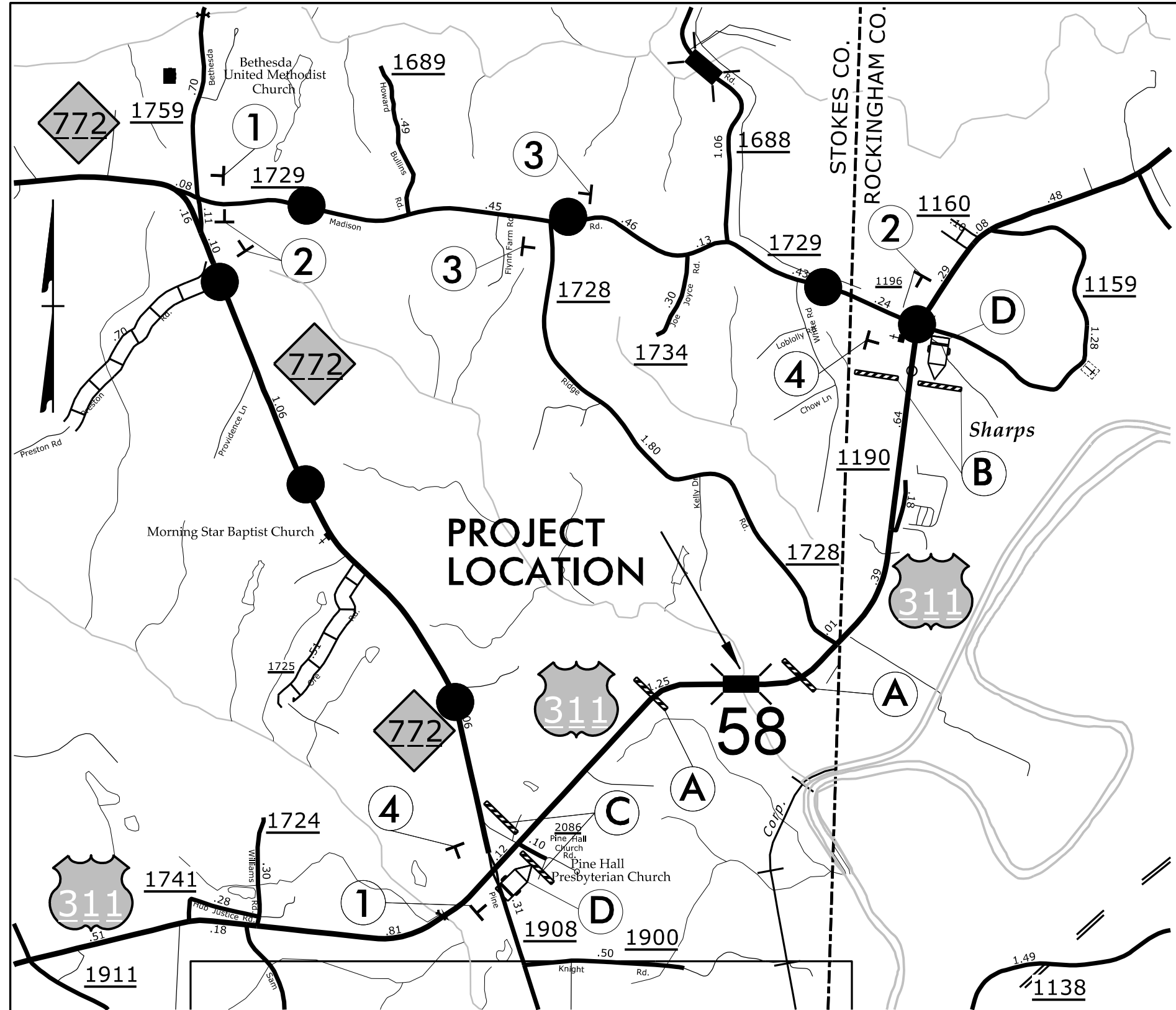
MERRICK "TRE" DUGAL, III, P.E.
PROJECT ENGINEER
CLAUDETTE M.K. ROQUE, P.E.
PROJECT DESIGN ENGINEER



Prepared in the Office of:
RAMEY KEMP & ASSOCIATES, INC.
Transportation Engineers
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www.rameykemp.com
NC License No. C-0910



SEE ROADWAY STD. 1101.03 FOR ADDITIONAL ADVANCE WARNING SIGNS.



GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRABLE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TRAFFIC PATTERN ALTERATIONS

A) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- B) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- C) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

D) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

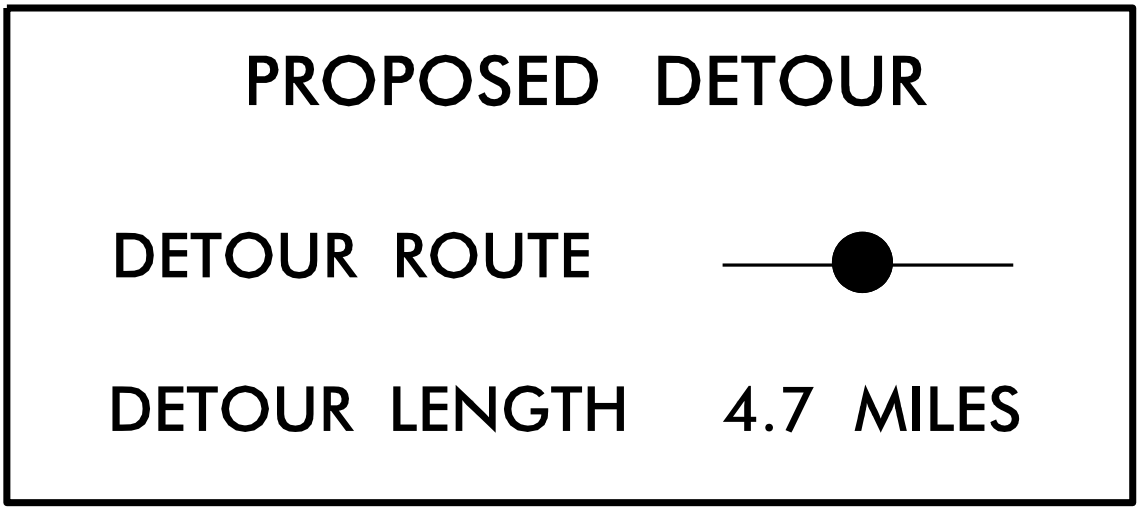
E) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

- F) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- G) INSTALL PERMANENT PAVEMENT MARKINGS AND MARKERS ON THE FINAL SURFACE AS FOLLOWS: SEE SHEET PMP-1.

ROAD NAME	MARKING	MARKER
US 311	THERMOPLASTIC	SNOWFLOWABLE

- H) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- I) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
- J) PASSING ZONE WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.



PHASING

PHASE I

PRIOR TO ANY CONSTRUCTION OPERATIONS, PLACE AND COVER OFF-SITE DETOUR SIGNING AS SHOWN ON TMP-2 AND IN ACCORDANCE WITH RSD 1101.03 (SHEET 1 OF 9). PLACE CMS AND ACTIVATE AT LEAST TWO WEEKS PRIOR TO CLOSING -L- (US 311).

PHASE II

USING OFF-SITE DETOUR, UNCOVER DETOUR SIGNS, CLOSE -L- (US 311) TO TRAFFIC AND CONSTRUCT CULVERT AND ROADWAY UP TO AND INCLUDING FINAL LAYER OF SURFACE COURSE.

PHASE III

UPON COMPLETION OF CULVERT AND ROADWAY, PLACE FINAL PAVEMENT MARKINGS IN ACCORDANCE WITH RSD 1205.01 AND PAVEMENT MARKERS IN ACCORDANCE WITH RSD 1250.01. REMOVE CMS, BARRICADES AND DETOUR SIGNS AND OPEN -L- (US 311) TO TRAFFIC.

APPROVED: _____ DATE: _____		<h2>TRANSPORTATION OPERATIONS PLAN</h2>

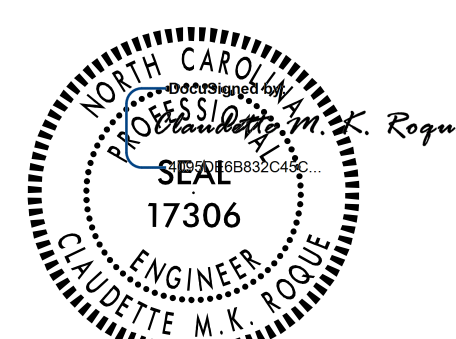
PROJECT: 17BP.9.R.5

CONTRACT: DI00106

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
STOKES COUNTY**

LOCATION: REPLACE EXISTING BRIDGE NO. 58 OVER RICKERS BRANCH ON US 311

TIP NO. 17BP.9.R.5	SHEET NO. PMP-1
APPROVED: _____	
DATE: _____	
SEAL	
	

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1253.01	RAISED PAVEMENT MARKERS - SNOWPLOWABLE
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

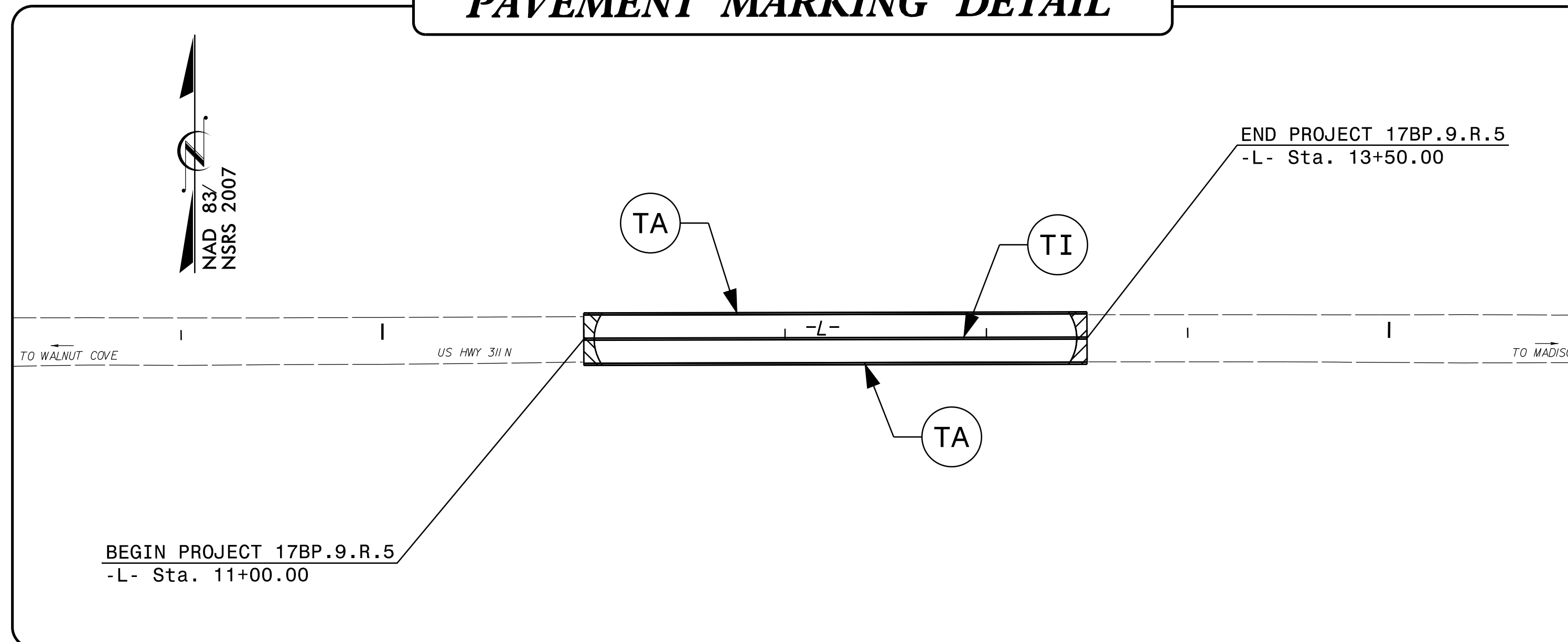
GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

- A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
US 311	THERMOPLASTIC	SNOWPLOWABLE
- B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
- D) REMOVE ALL EXISITNG BRIDGE MARKER SIGNS AND DISPOSE OF IN A LEGAL MANNER.
- E) PLACE GUARDRAIL DELINEATORS PER NCDOT STANDARDS.

PAVEMENT MARKING DETAIL



PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
TA	THERMOPLASTIC (4", 90 MIL) WHITE EDGELINE
TI	THERMOPLASTIC (4", 120 MIL) YELLOW DOUBLE CENTER

INDEX

SHEET NO.	DESCRIPTION
PMP-1	PAVEMENT MARKING PLAN TITLE SHEET AND PAVEMENT MARKING SCHEDULE AND PAVEMENT MARKING DETAILS

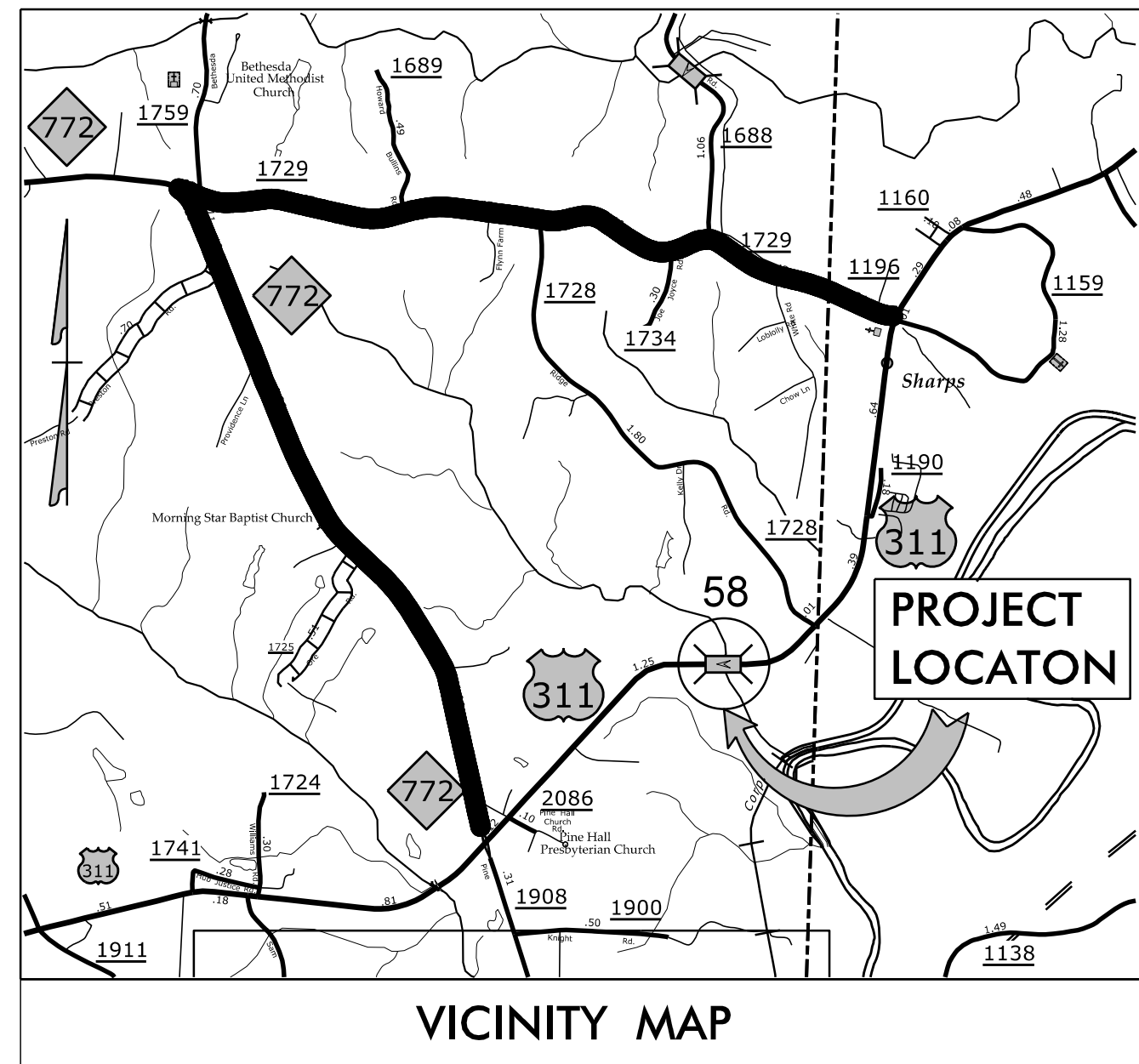
PLAN PREPARED BY: Ramey Kemp & Associates

CLAUDETTE M.K. ROQUE, P.E.	PROJECT ENGINEER
KAYLA WISE	PROJECT DESIGNER



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.9.R.5	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.9.R.27		PE, R /W, CONST.	

PROJECT: 17BP.9.R.5



●—●—●—● DETOUR ROUTE

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

STOKES COUNTY

**LOCATION: REPLACE EXISTING BRIDGE NO. 58 OVER DAN RIVER
TRIBUTARY #50 (RICKERS BRANCH) ON US 311 N.**

**TYPE OF WORK: GRADING, DRAINAGE, WIDENING, CONCRETE BOX
CULVERT AND PAVEMENT MARKINGS**

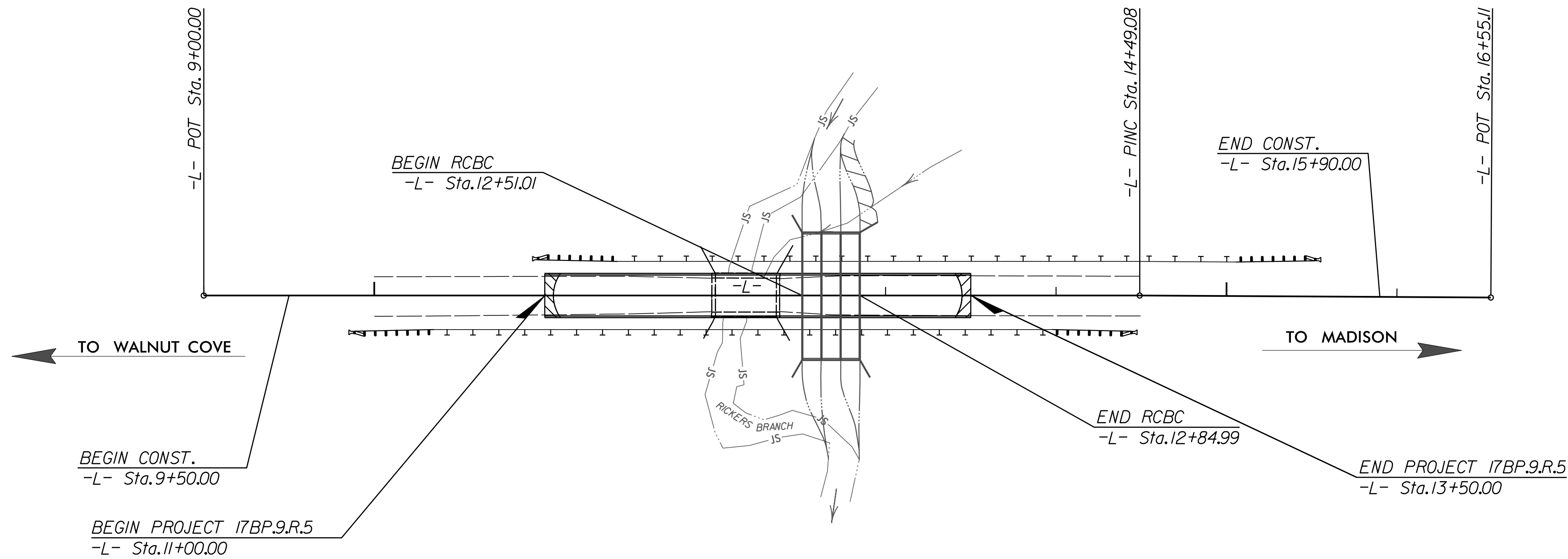
EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	TSF
1606.01	Special Sediment Control Fence	SSCF
1622.01	Temporary Berms and Slope Drains	TBSD
1630.02	Silt Basin Type B	SB
1633.01	Temporary Rock Silt Check Type-A	TRSCA
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	TRSCA-PAM
1633.02	Temporary Rock Silt Check Type-B	TRSCB
	Wattle/Coir Fiber Wattle	WCFW
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	WCFW-PAM
1634.01	Temporary Rock Sediment Dam Type-A	TRSDA
1634.02	Temporary Rock Sediment Dam Type-B	TRSDB
1635.01	Rock Pipe Inlet Sediment Trap Type-A	RPISTRA
1635.02	Rock Pipe Inlet Sediment Trap Type-B	RPISTRB
1630.04	Stilling Basin	SB
1630.06	Special Stilling Basin	SSB
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	SKB
	Tiered Skimmer Basin	TSKB
	Infiltration Basin	IB

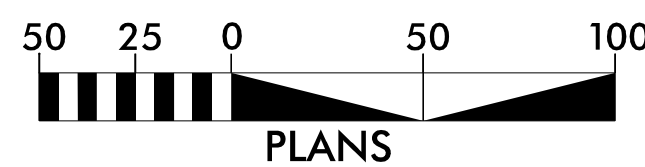
**THIS PROJECT CONTAINS
EROSION CONTROL PLANS
FOR CLEARING AND
GRUBBING PHASE OF
CONSTRUCTION.**

BRAD T. SMITH, EI
LEVEL III NAME

3520
LEVEL III CERTIFICATION NO.



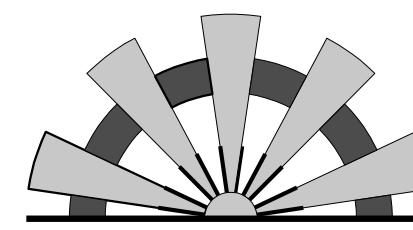
GRAPHIC SCALES



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:

SUNGATE DESIGN GROUP, P.A.



915 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 859-2243 FAX (919) 859-6258
ENG FIRM LICENSE NO. C-890

2012 STANDARD SPECIFICATIONS

Roadway Standard Drawings

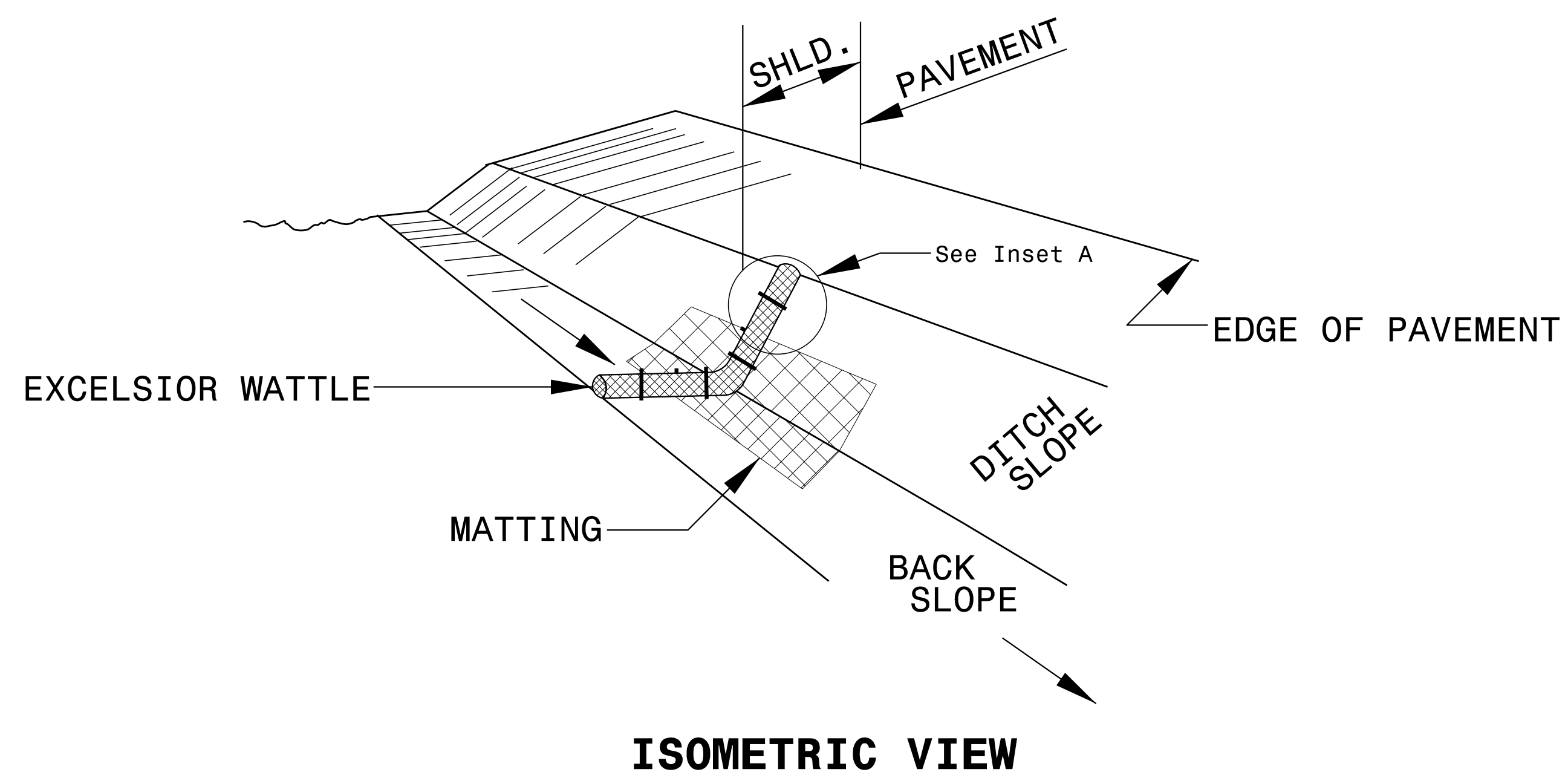
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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	

CONTRACT:

PROJECT REFERENCE NO. 17BP.9.R.5	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

WATTLE DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

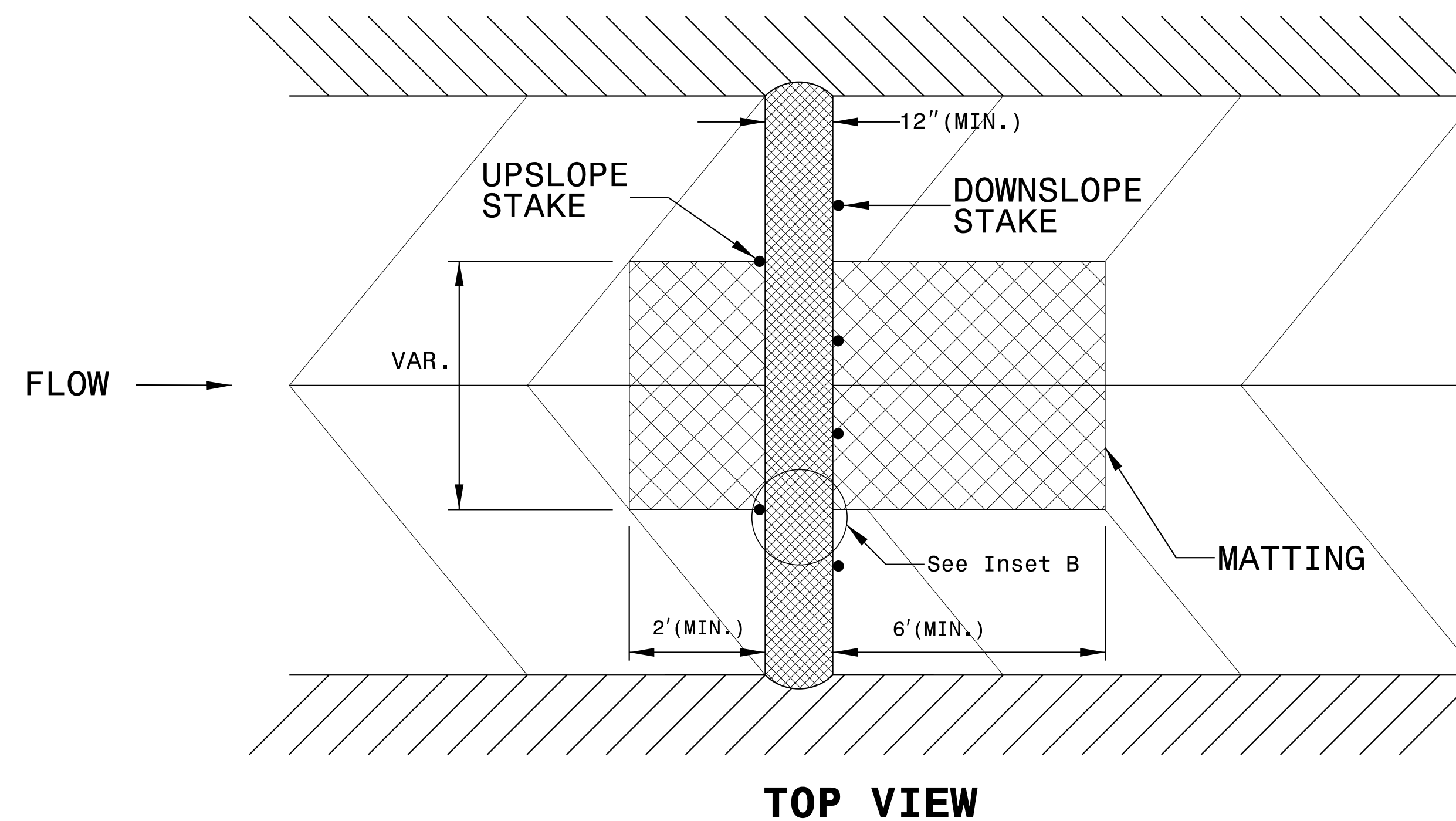
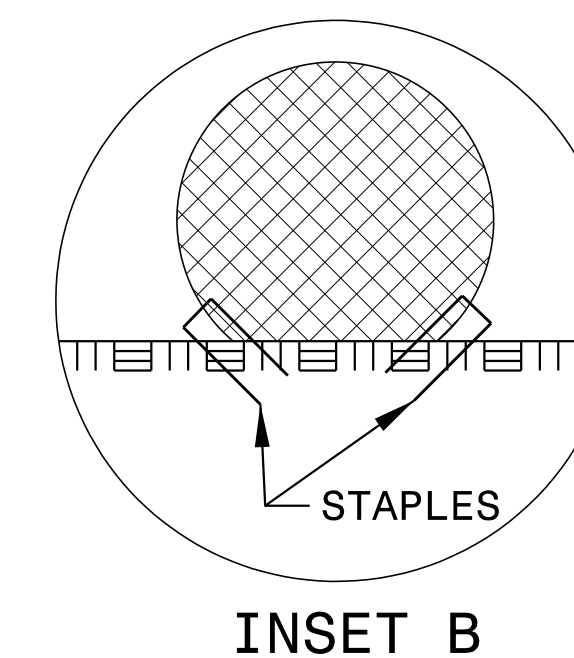
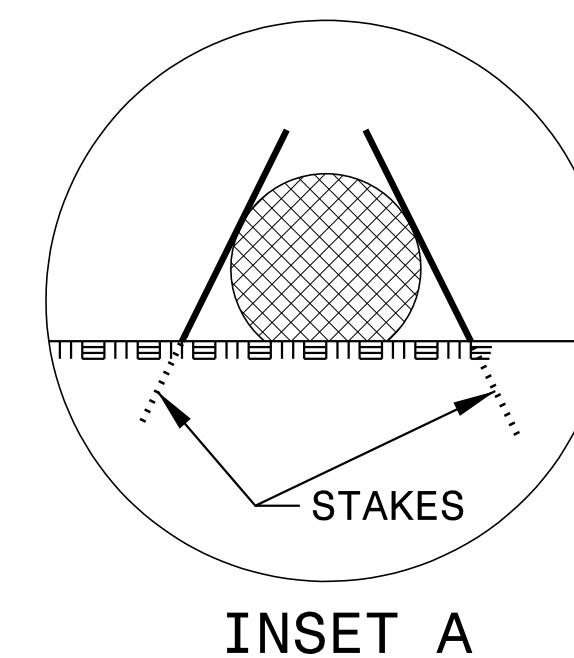
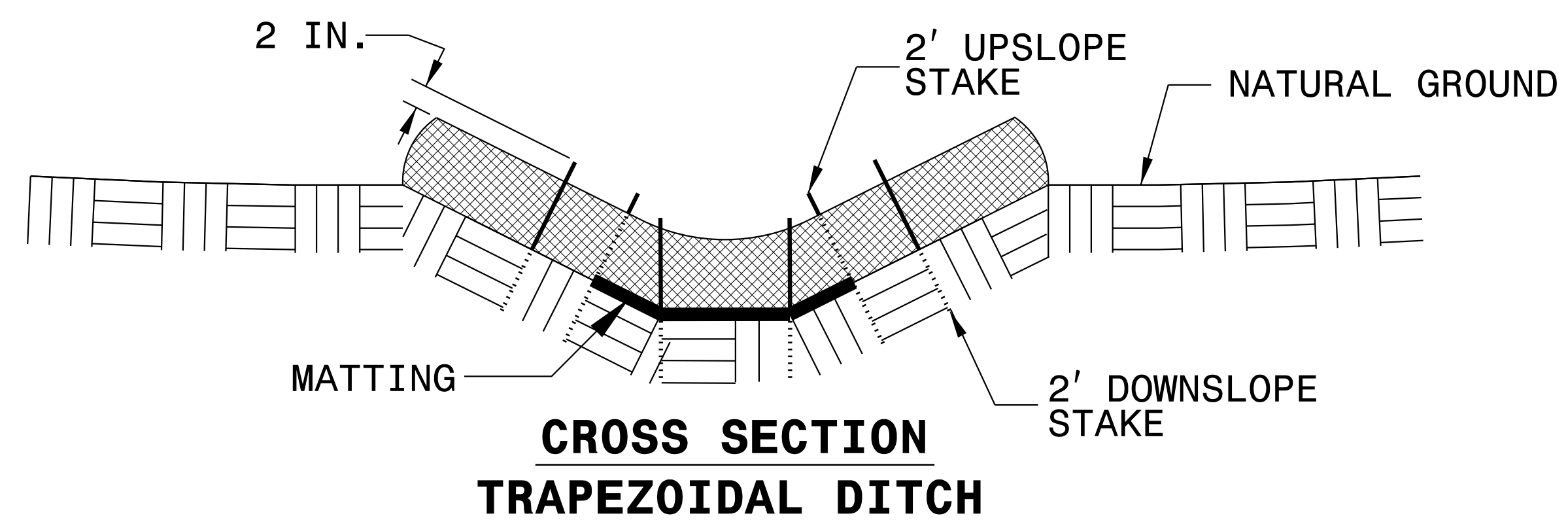
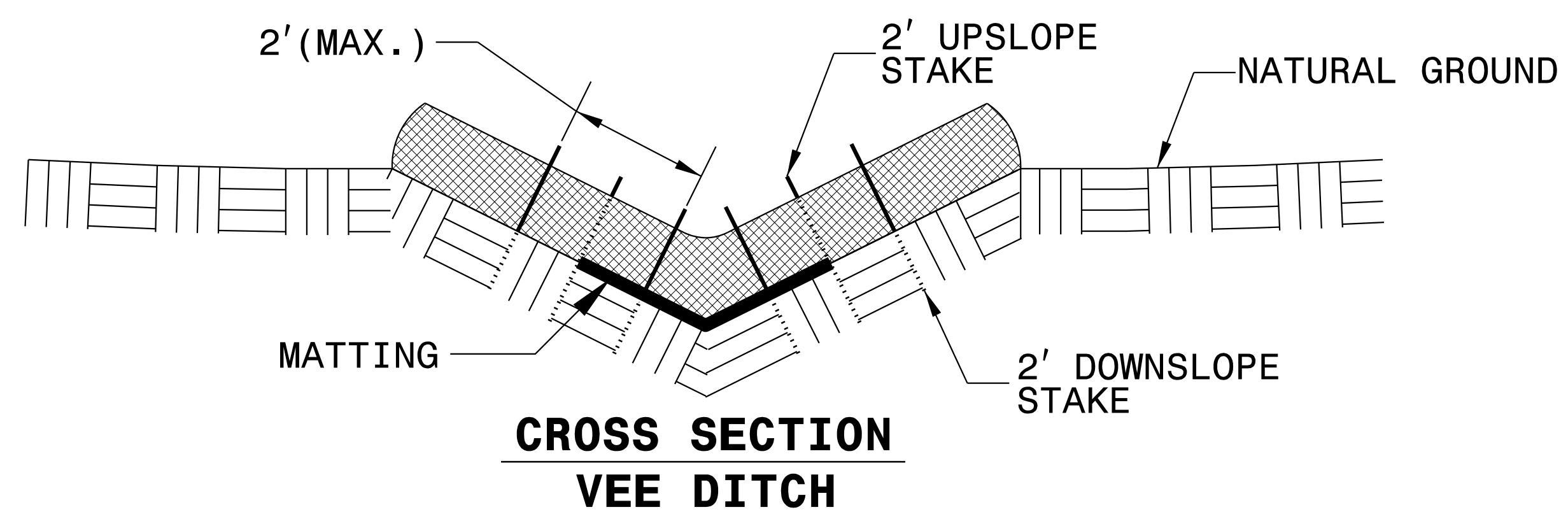
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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.



DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>17BP.9.R.5</i>	SHEET NO. <i>EC-3</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.

EROSION CONTROL PLAN

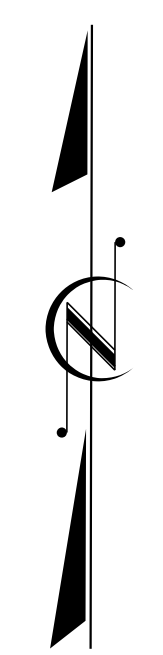
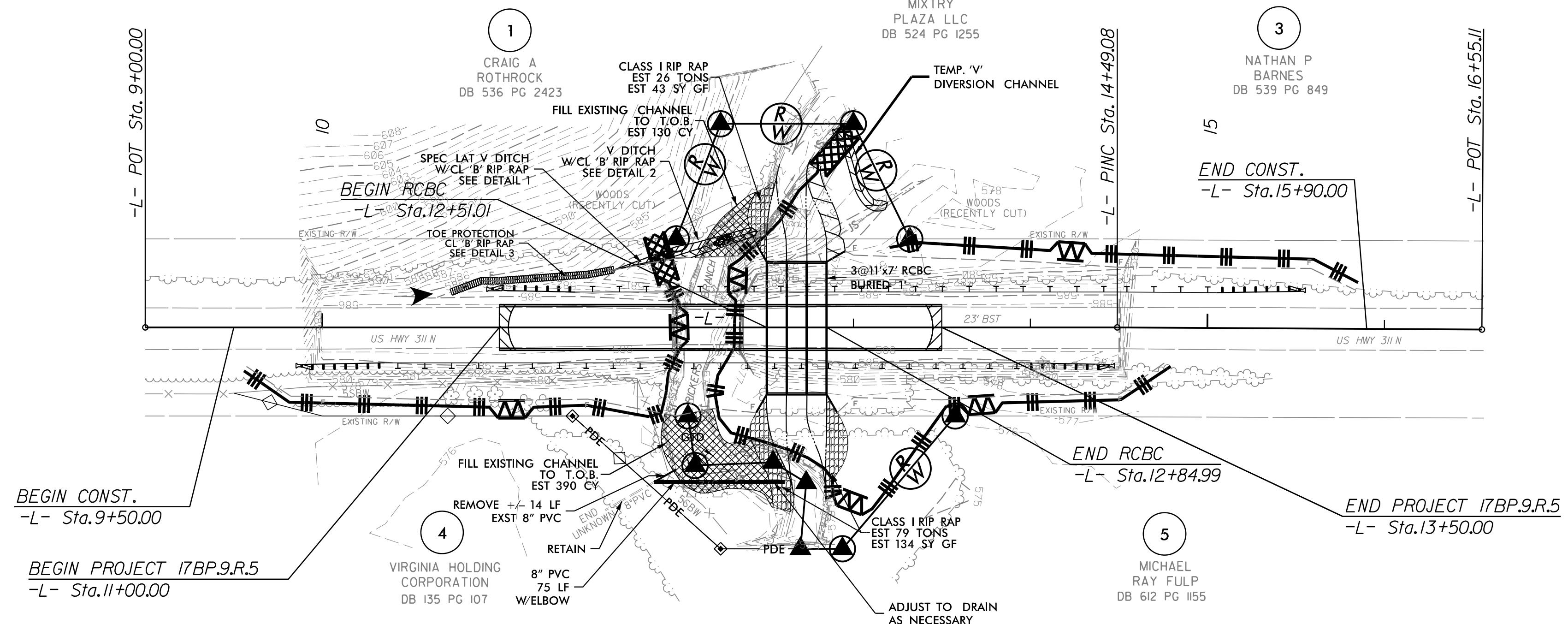
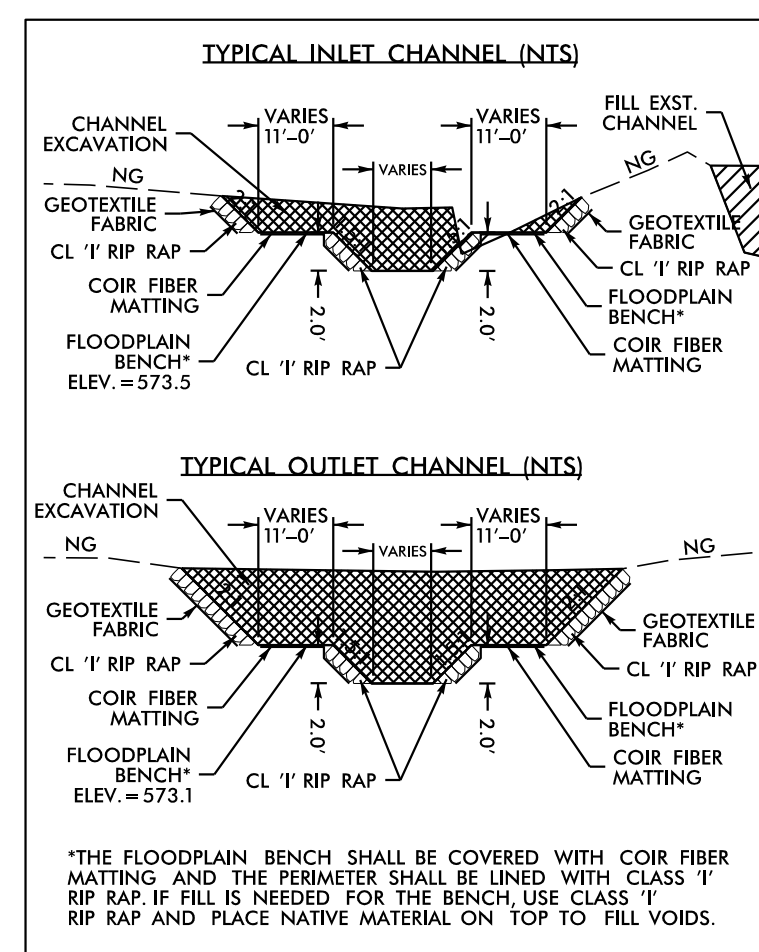
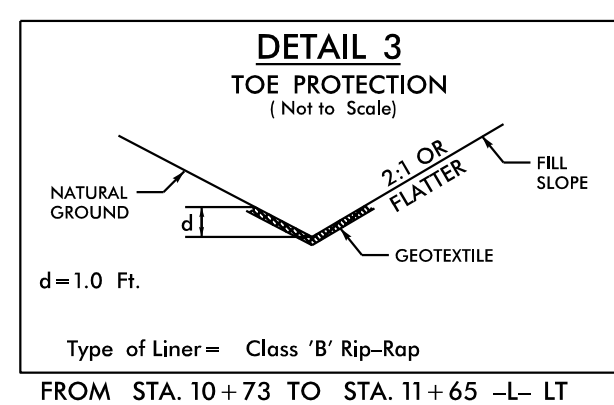
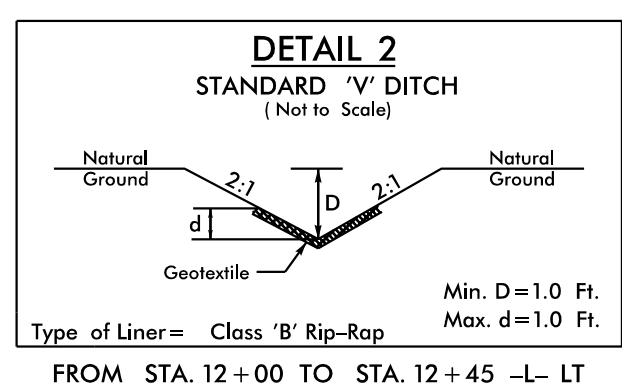
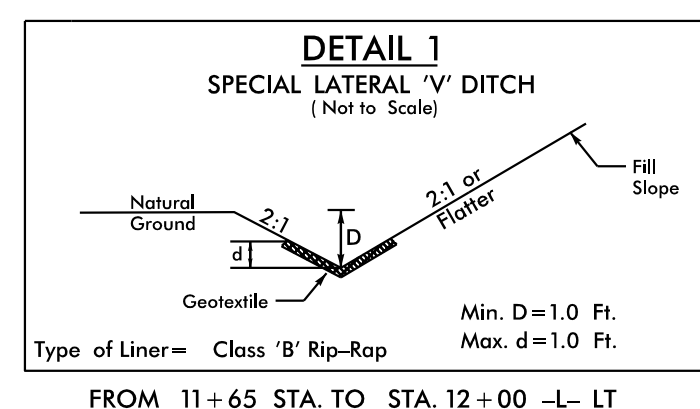
NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

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

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 04

PROJECT REFERENCE NO. <i>17BP.9.R.5</i>	SHEET NO. <i>EC-04/CONST.04</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



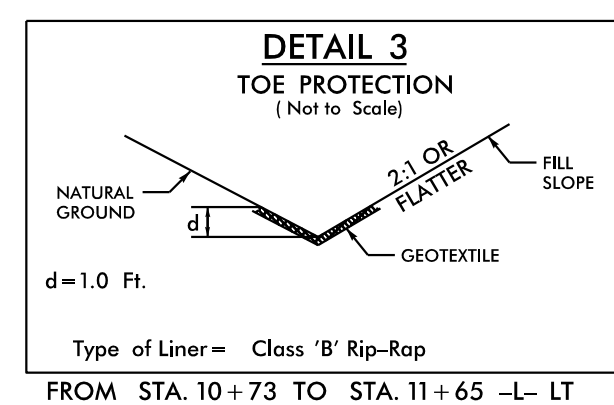
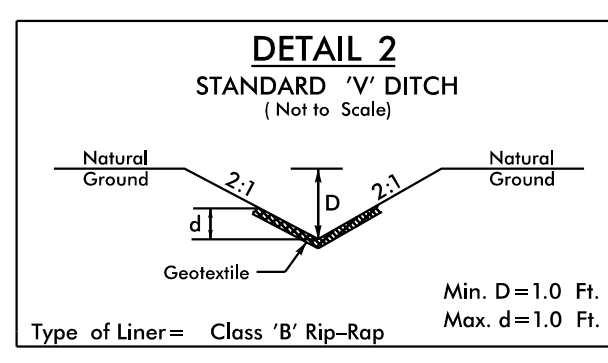
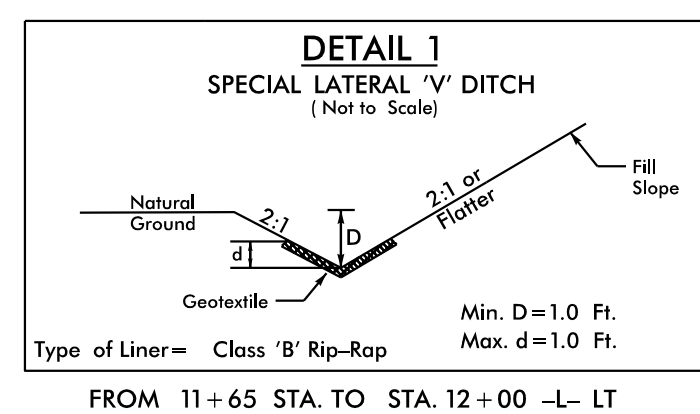
EROSION CONTROL PLAN

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

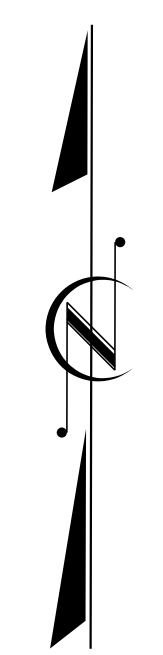
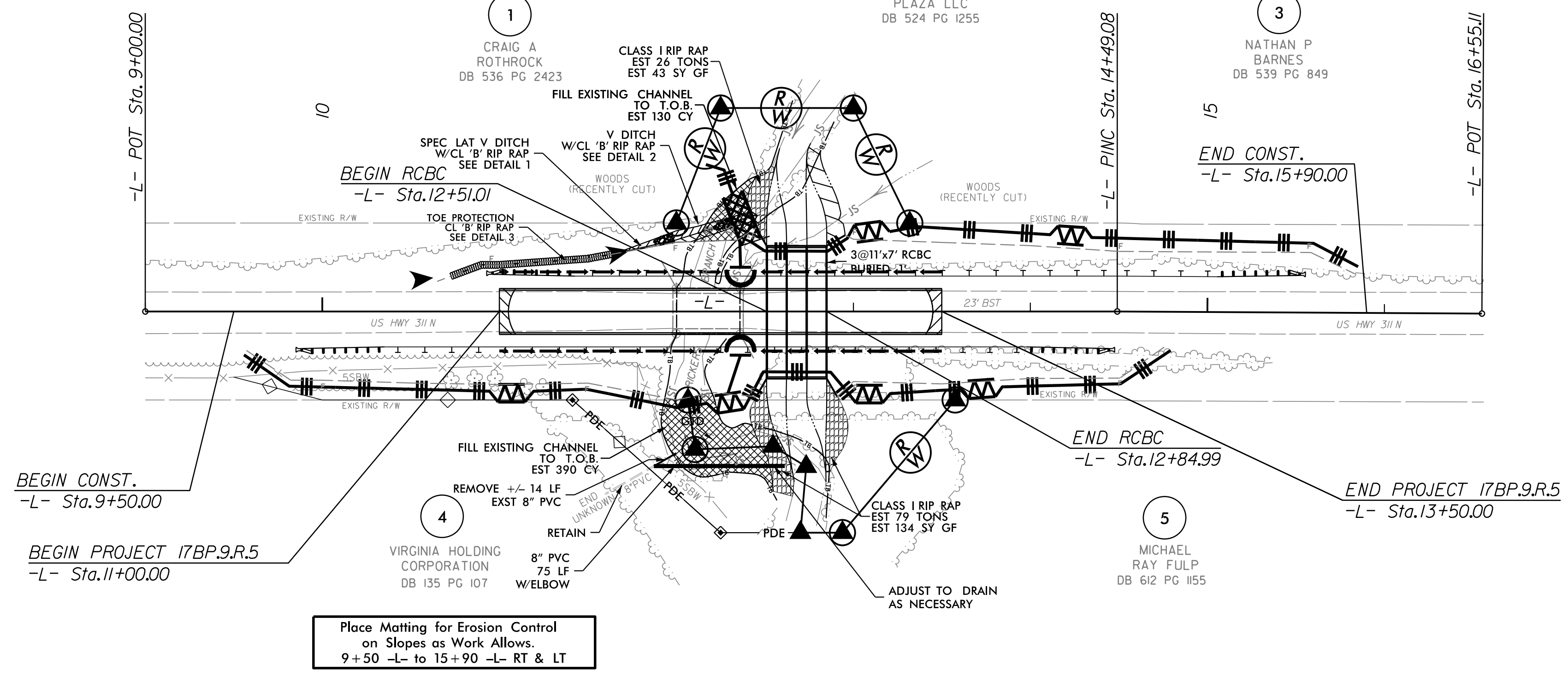
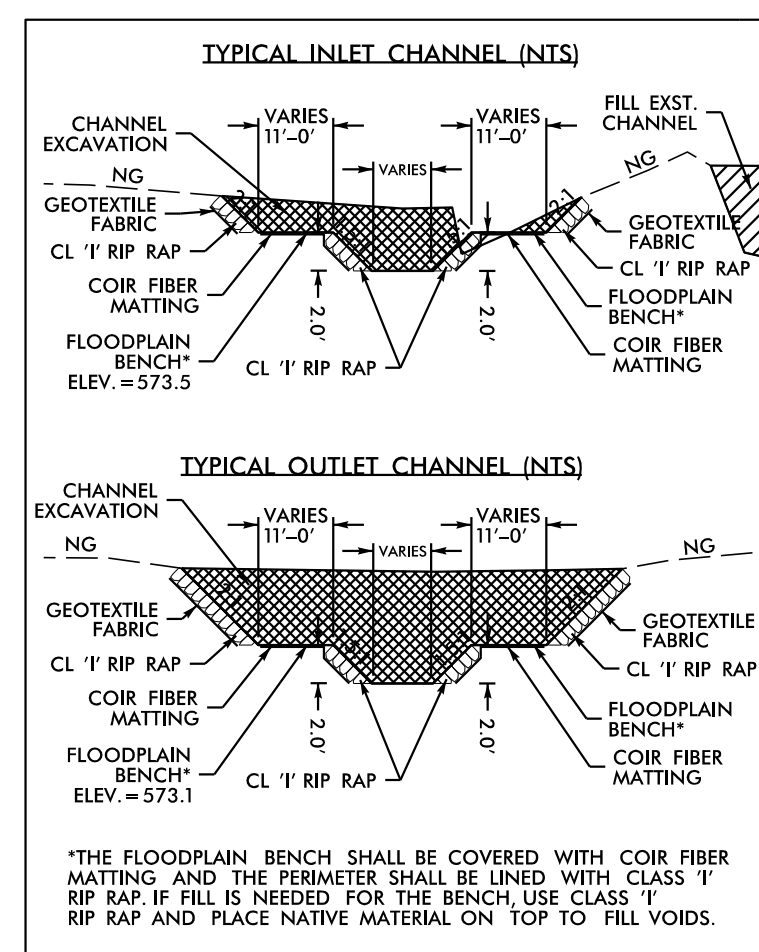
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

FINAL GRADE
EROSION CONTROL FOR
CONSTRUCTION SHEET 04

PROJECT REFERENCE NO. <i>17BP.9.R.5</i>	SHEET NO. <i>EC-05/CONST.04</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

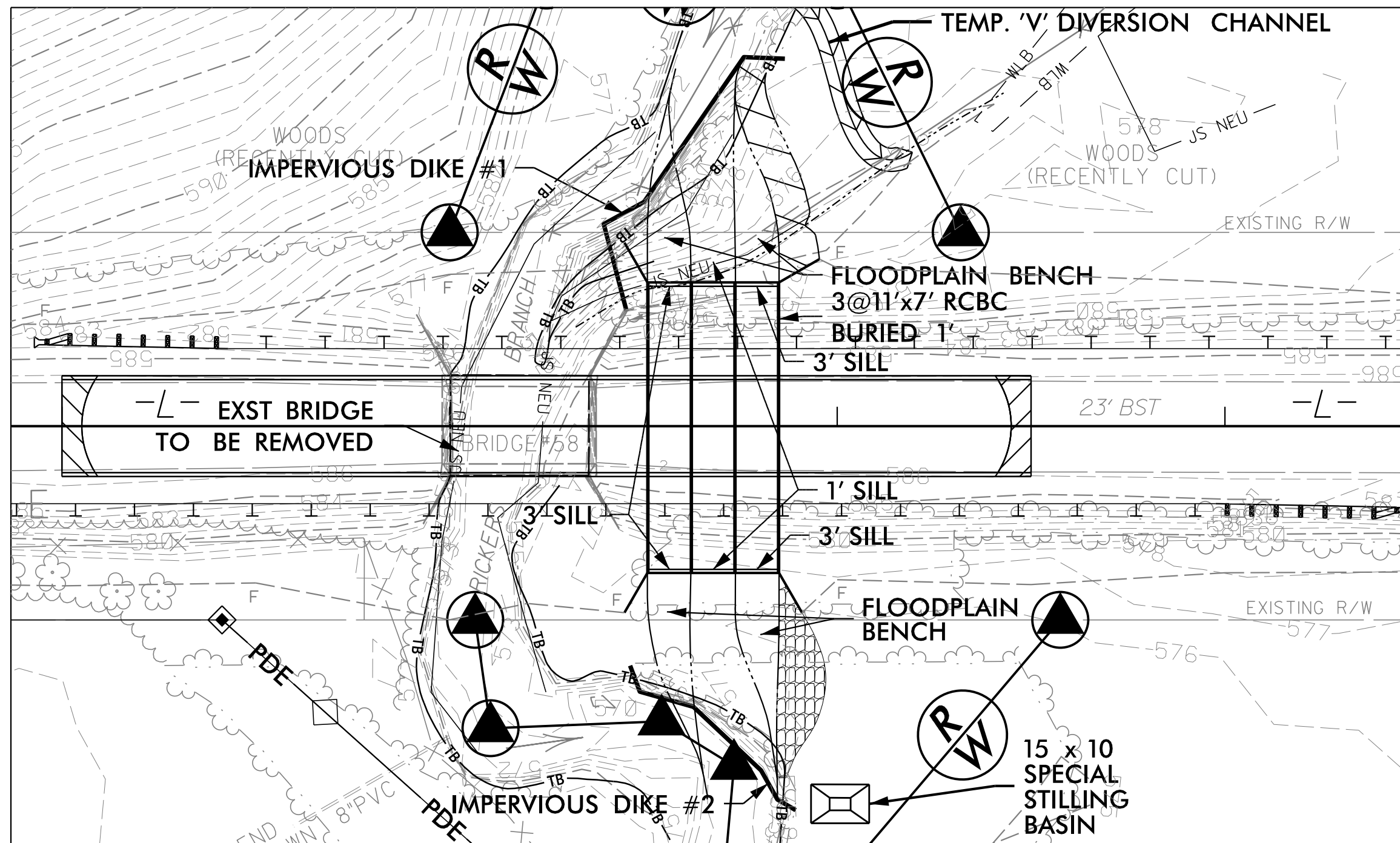
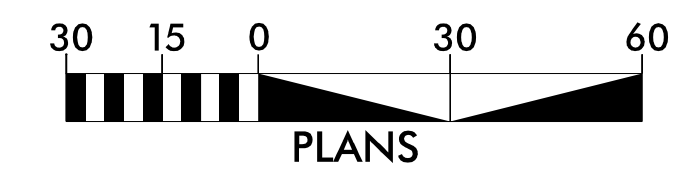


Place Matting for Erosion Control on Slopes as Work Allows.
9+50 -L- to 15+90 -L- RT & LT



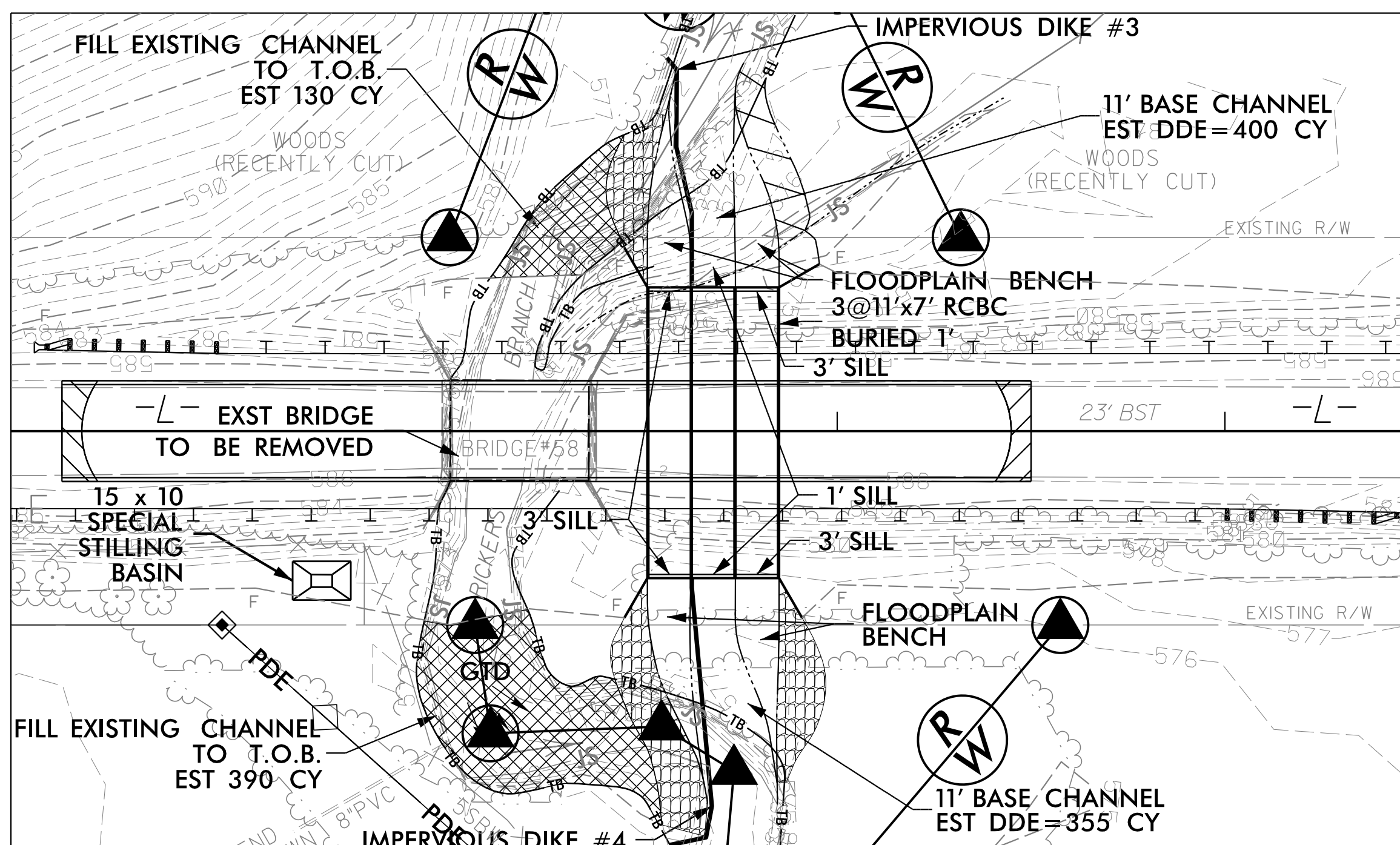
CULVERT CONSTRUCTION SEQUENCE STOKES CO. #58 DAN RIVER TRIBUTARY 50 (RICKERS BRANCH)

PROJECT REFERENCE NO. <i>17BP.9.R.5</i>	SHEET NO. <i>EC-06</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



PHASE 1

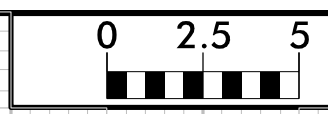
- 1) REMOVE EXISTING BRIDGE
- 2) INSTALL IMPERVIOUS DIKES #1 & #2
- 3) INSTALL SPECIAL STILLING BASIN. DEWATER EXCAVATION SITE FOR PROPOSED CULVERT AND TREAT USING SPECIAL STILLING BASIN.
- 4) INSTALL 3@11'x7' RCBC WITH SILLS AND WING WALLS
- 5) CONSTRUCT PROPOSED 11' BASE CHANNEL, LEFT FLOODPLAIN BENCH, AND LEFT BANK UPSTREAM AND DOWNSTREAM OF CULVERT
- 6) STABILIZE DOWNSTREAM LEFT BANK WITH CLASS I RIP RAP AND LEFT FLOODPLAIN BENCH WITH COIR FIBER MATTING



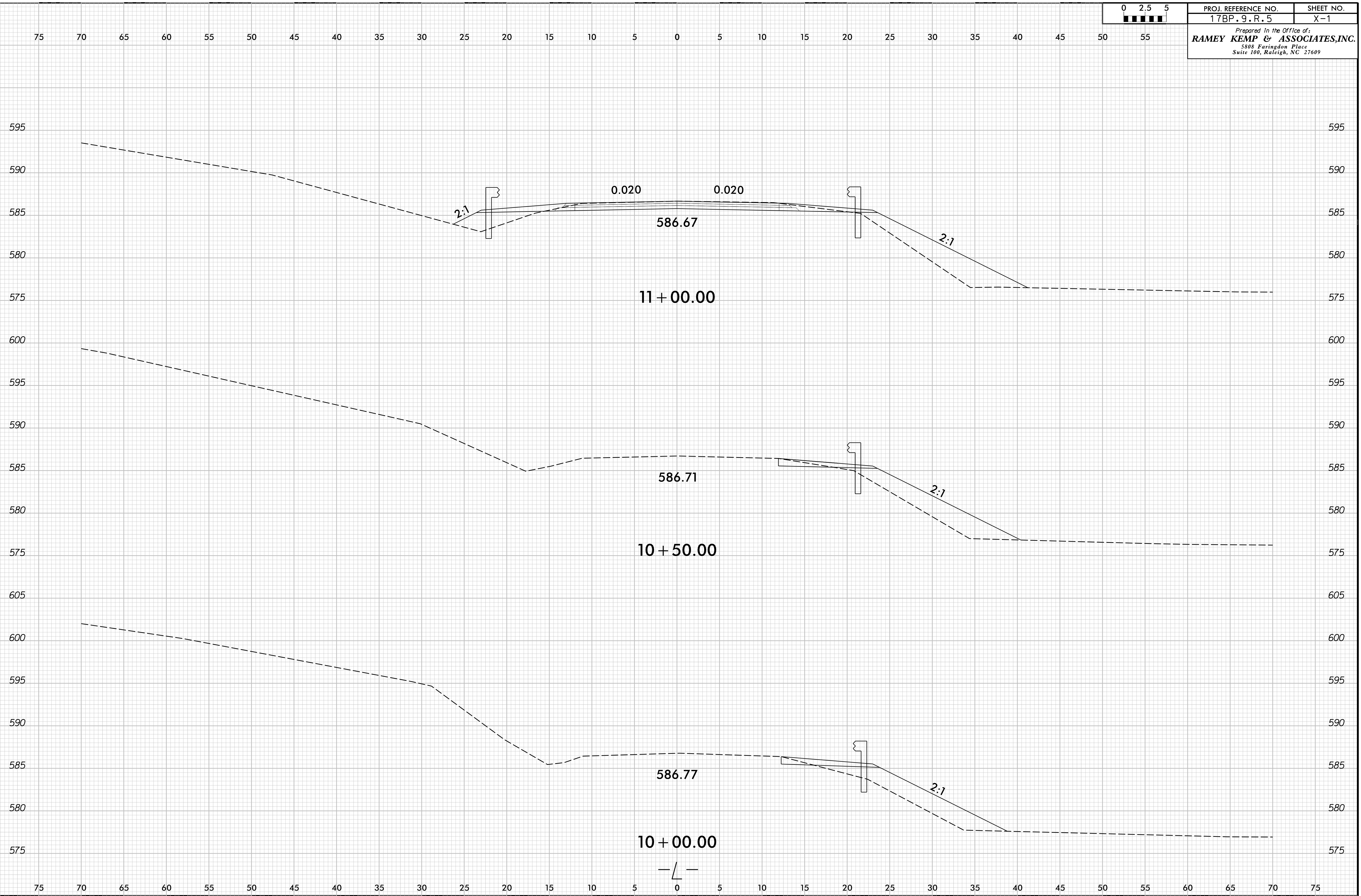
PHASE 2

- 1) REMOVE IMPERVIOUS DIKES #1 & #2 AND SPECIAL STILLING BASIN, INSTALL IMPERVIOUS DIKES #3 & #4 TO DIVERT STREAM FLOW THROUGH PROPOSED LOW FLOW BARREL.
- 2) INSTALL SPECIAL STILLING BASIN, DEWATER EXISTING CHANNEL AND TREAT USING SPECIAL STILLING BASIN
- 3) FILL EXISTING CHANNEL
- 4) CONSTRUCT UPSTREAM AND DOWNSTREAM RIGHT FLOODPLAIN BENCH AND RIGHT BANK. STABILIZE BANKS WITH CLASS I RIP RAP AND FLOODPLAIN BENCHES WITH COIR FIBER MATTING
- 5) REMOVE IMPERVIOUS DIKES #3 & #4 AND SPECIAL STILLING BASIN

8/23/99

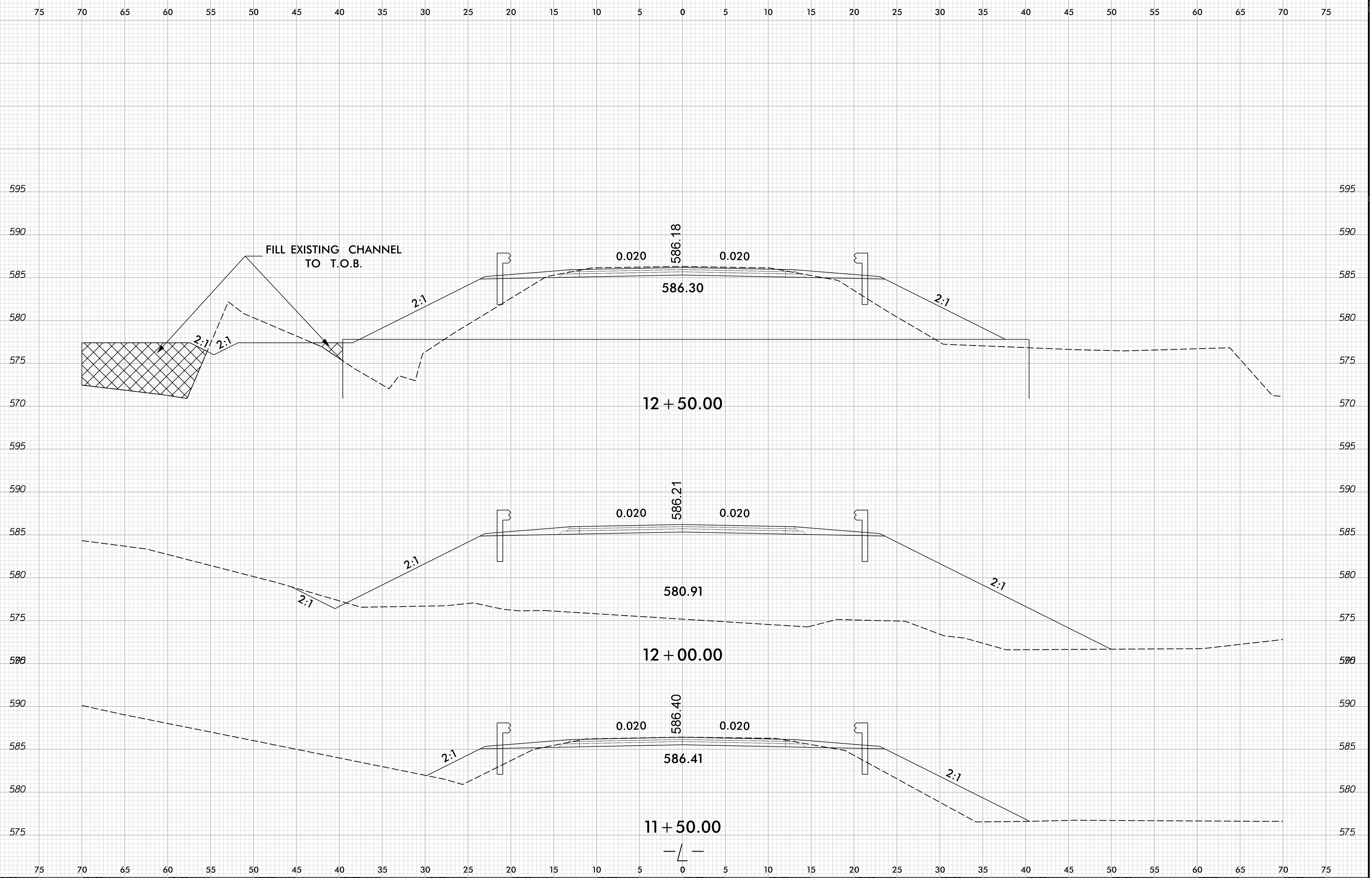


PROJ. REFERENCE NO. 17BP.9.R.5	SHEET NO. X-1
Prepared in the Office of: RAMEY KEMP & ASSOCIATES, INC. 5808 Faringdon Place Suite 100, Raleigh, NC 27609	



6/9/2015
User:localuser

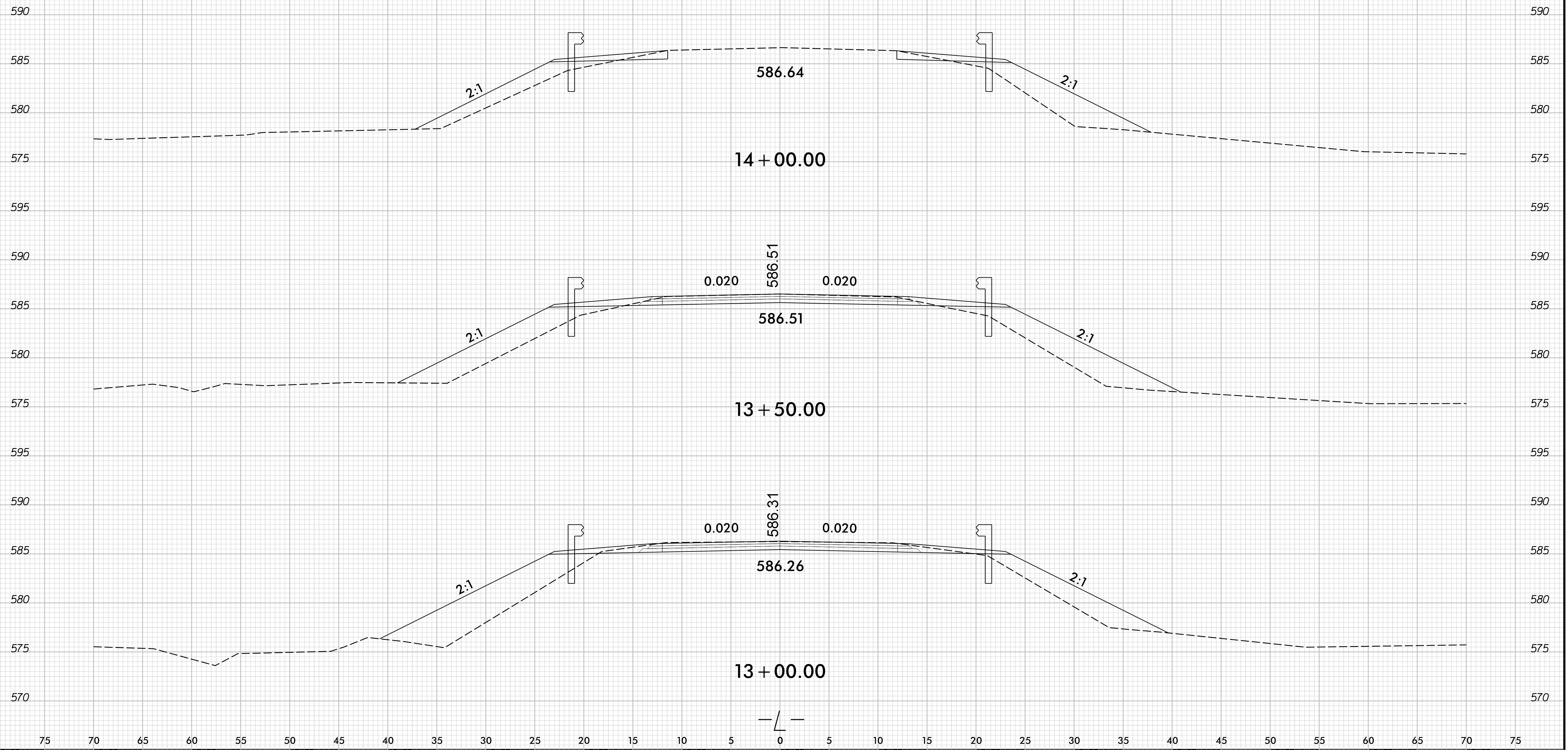
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