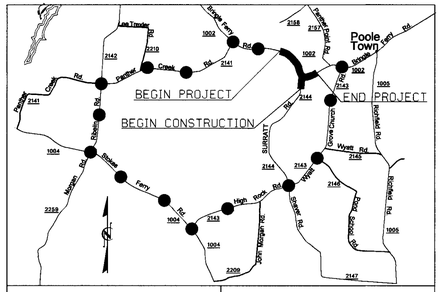
03/08/99

TIP PROJECT: W-5209E

CONTRACT: DI00029

See Sheet 1-A For Index of Sheets



VICINITY MAP — OFFSITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

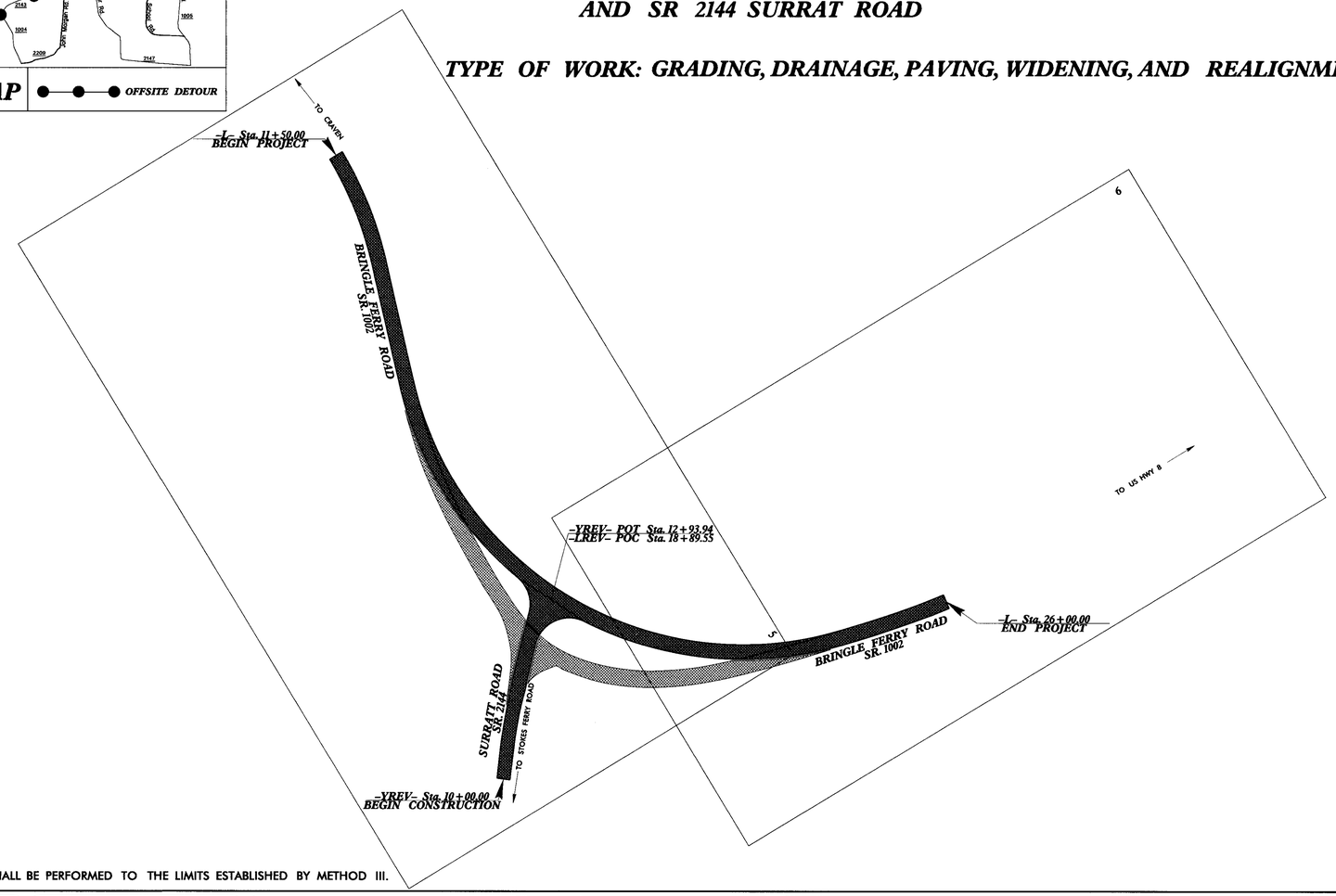
ROWAN COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5209E	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
45339.1.5	STP-1002(38)	PE
45339.2.5	STP-1002(38)	R.W./UTIL
45339.3.5	STP-1002(38)	CONST.

LOCATION: INTERSECTION OF SR 1002 BRINGLE FERRY ROAD AND SR 2144 SURRAT ROAD

TYPE OF WORK: GRADING, DRAINAGE, PAVING, WIDENING, AND REALIGNMENT



NAD 83/
NSRS 2007

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

GRAPHIC SCALES

50 25 0 50 100
PLANS

100 50 0 100 200
PROFILE (HORIZONTAL)

2.5 1.25 0 2.5 5
PROFILE (VERTICAL)

DESIGN DATA

ADT 2012 = 1330
ADT 2025 = 1503
DHV = %
D = %
T = % *
V = 40 MPH
* TTST = DUAL
FUNC CLASS = MAJOR COLLECTOR

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT W-5209 = 0.275 MILE

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JUNE 28, 2012

LETTING DATE:
APRIL 16, 2013

J. Brett Abernathy, P.E., P.L.S.
PROJECT ENGINEER

William A. Blanton, P.E.,P.L.S
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 025499 ENGINEER WILLIAM A. BLANTON
SIGNATURE: 3/14/13

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 025499 ENGINEER WILLIAM A. BLANTON
William A. Blanton, P.E.,
SIGNATURE: 3/14/13 P.E.

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION

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wablanton AT DGCAD268308

PROJECT REFERENCE NO.	SHEET NO.
W-5209E	1-A

DDC ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 025499 ENGINEER WILLIAM A. BLANTON

3/14/13

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C THRU 1-D	SURVEY CONTROL
2 THRU 2A	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
3	SUMMARY OF QUANTITIES
3A THRU 3B	SUMMARY OF DRAINAGE QUANTITIES, EARTHWORK SUMMARY, ASPHALT PAVEMENT REMOVAL GUARDRAIL SUMMARY SUMMARY, PARCEL INDEX
4 THRU 5	PLAN SHEETS
6 THRU 7	PROFILE SHEETS
TMP-1 THRU TMP-5	TRAFFIC CONTROL PLANS
PM-1	PAVEMENT MARKING PLANS
EC-1 THRU EC-6	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-	SIGNING PLANS
X-0	CROSS-SECTION SUMMARY SHEET
X-1 THRU X-13	CROSS-SECTIONS

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-2012
REVISED: 07-30-2012

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04
SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

UNDERDRAINS:

UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 AT LOCATIONS DIRECTED BY THE ENGINEER.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.03 AT LOCATIONS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

STREET TURNOUT:

STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

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.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY CONTRACT.

ROCK

ROCK IS ANTICIPATED BETWEEN 14+75-15+25 -LREV-. BLASTING MAY BE REQUIRED FOR EXCAVATION ON THE PROJECT. SEE SECTION 220 OF THE STANDARD SPECIFICATIONS AND IF APPLICABLE, ROCK BLASTING PROVISION.

EFF. 01-17-2012
REV. 10-30-2012

2012 ROADWAY ENGLISH STANDARD DRAWINGS

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:

STD.NO.	TITLE
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
225.06	Method of Grading Sight Distance at Intersections
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
815.02	Subsurface Drain
840.00	Concrete Base Pad for Drainage Structures
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.45	Precast Drainage Structure
840.72	Pipe Collar
848.04	Street Turnout
862.01	Guardrail Placement
862.02	Guardrail Installation
876.02	Guide for Rip Rap at Pipe Outlets

04/15/11

PROJECT REFERENCE NO.	SHEET NO.
W-5209E	1B

Note: Not to Scale

S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- 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
- 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 — S
- Well — W
- 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 — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — 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 — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite Marker — RW
- Existing Control of Access — CA
- Proposed Control of Access — CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage / Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Curb Cut Future Ramp — CCFR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

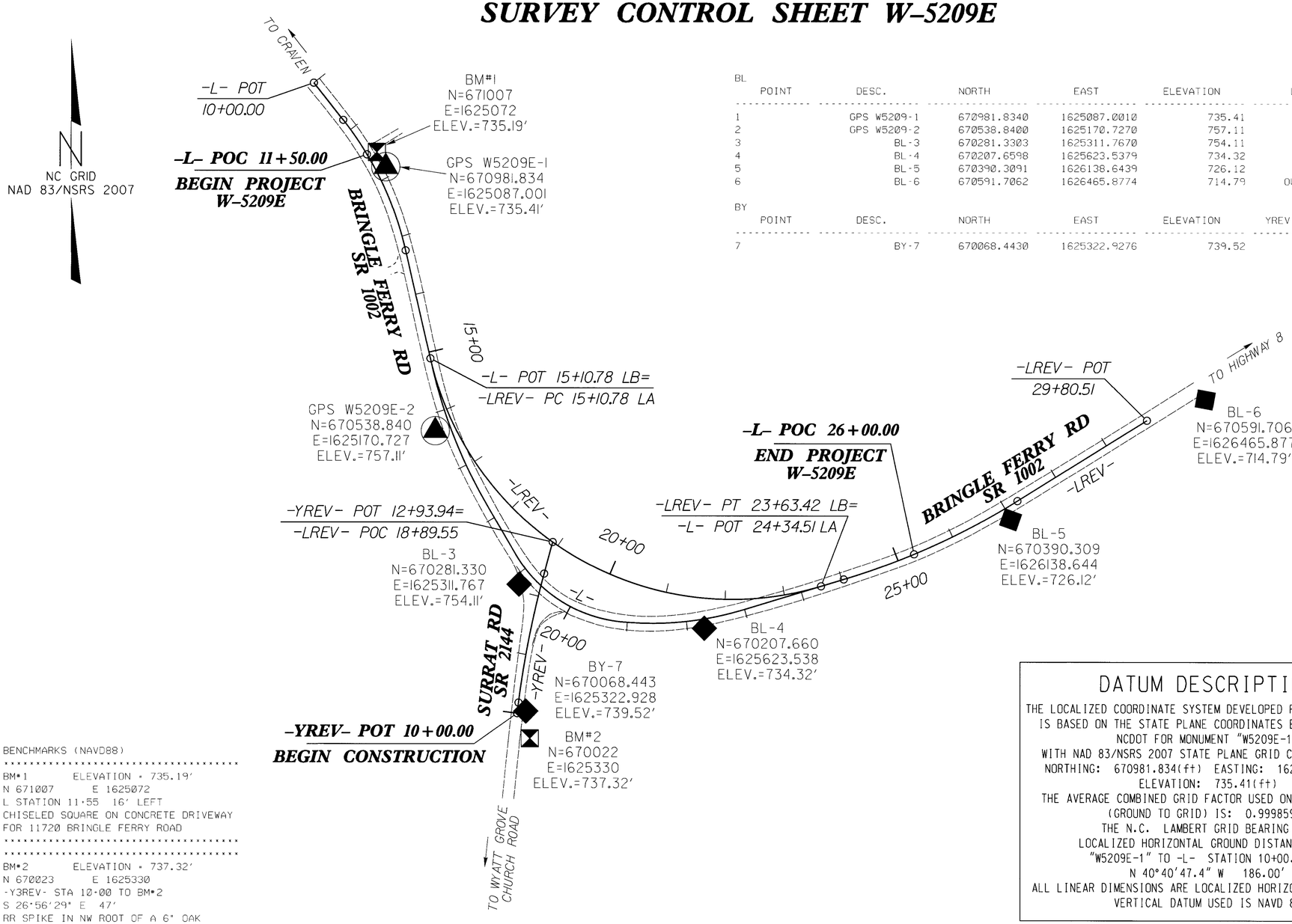
- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

MISCELLANEOUS:

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

PROJECT REFERENCE NO.	SHEET NO.
W-5209E	1C
Location and Surveys	

SURVEY CONTROL SHEET W-5209E



BL

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	GPS W5209-1	670981.8340	1625087.0010	735.41	11+83.21	17.44 LT
2	GPS W5209-2	670538.8400	1625170.7270	757.11	16+27.88	25.68 RT
3	BL-3	670281.3303	1625311.7670	754.11	19+13.27	24.97 RT
4	BL-4	670207.6598	1625623.5379	734.32	22+27.60	15.48 RT
5	BL-5	670390.3091	1626138.6439	726.12	27+69.56	20.91 RT
6	BL-6	670591.7062	1626465.8774	714.79	OUTSIDE PROJECT LIMITS	

BY

POINT	DESC.	NORTH	EAST	ELEVATION	YREV STATION	OFFSET
7	BY-7	670068.4430	1625322.9276	739.52	10+05.34	13.84 RT

BENCHMARKS (NAVD88)

BM#1 ELEVATION = 735.19'
N 671007 E 1625072
L STATION 11+55 16' LEFT
CHISELED SQUARE ON CONCRETE DRIVEWAY
FOR 11720 BRINGLE FERRY ROAD

BM#2 ELEVATION = 737.32'
N 670023 E 1625330
-Y3REV- STA 10+00 TO BM#2
S 26°56'29" E 47'
RR SPIKE IN NW ROOT OF A 6" OAK

BM#3 ELEVATION = 710.29'
N 670728 E 1626709
LREV STATION 29+80.51 TO BM#3
N 63°22'01" E DIST 382'
CHISELED SQUARE ON NW CORNER SLAB FOR
POWER TRANSFORMERS

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "W5209E-1"
WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF
NORTHING: 670981.834(ft) EASTING: 1625087.001(ft)
ELEVATION: 735.41(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99985934
THE N.C. LAMBERT GRID BEARING AND
LOCALIZED HORIZONTAL GROUND DISTANCE FROM
"W5209E-1" TO -L- STATION 10+00.00 IS
N 40°40'47.4" W 186.00'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

NOTES:

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

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PROJECT REFERENCE NO.	SHEET NO.
W-5209E	1D
Location and Surveys	

SURVEY CONTROL SHEET W-5209E

ROW MARKER CONCRETE OR GRANITE

ALIGN	STATION	OFFSET	NORTH	EAST
L	11+50.00	30.00	670987.1908	1625029.5751
L	11+50.00	-40.00	671023.3337	1625089.5221
L	11+50.00	-30.00	671018.1709	1625080.9582
L	13+24.63	-40.00	670850.4639	1625159.4908
L	13+24.63	30.00	670834.7387	1625091.2810
L	15+10.78	-40.00	670669.0717	1625201.3155
L	15+10.78	30.00	670653.3440	1625133.1052
L	24+34.51	-40.00	670316.7026	1625808.6645
L	24+34.51	30.00	670249.6811	1625828.8665
L	24+74.35	-40.00	670328.1995	1625846.8061
L	24+74.35	30.00	670261.1781	1625867.0083
L	26+00.00	30.00	670304.6079	1625988.1407
L	26+00.00	-40.00	670369.1976	1625961.1559
L	26+00.00	-30.00	670359.9718	1625965.0103

ROW MARKER CONCRETE OR GRANITE

ALIGN	STATION	OFFSET	NORTH	EAST
LREV	18+93.16	97.99	670269.8881	1625315.3260
LREV	19+48.50	106.74	670227.4921	1625366.8932

ROW MARKER CONCRETE OR GRANITE

ALIGN	STATION	OFFSET	NORTH	EAST
YREV	10+00.00	-30.00	670068.6746	1625278.7597
YREV	10+00.00	30.00	670061.1054	1625338.2803
YREV	10+17.93	-30.00	670086.4642	1625281.0219
YREV	10+17.93	30.00	670078.8951	1625340.5426

ROW MARKER PERMANENT EASEMENT

ALIGN	STATION	OFFSET	NORTH	EAST
L	12+62.00	38.84	670888.6308	1625066.3975
L	12+62.00	30.00	670891.5778	1625074.7335
L	13+00.00	37.00	670855.4377	1625078.7981
L	24+58.34	57.63	670230.1034	1625859.6574
L	24+62.87	30.00	670257.8662	1625856.0212
L	24+77.80	61.55	670232.0190	1625879.5827
L	24+82.93	30.00	670263.7447	1625875.4162

ROW MARKER PERMANENT EASEMENT

ALIGN	STATION	OFFSET	NORTH	EAST
LREV	15+00.00	45.00	670660.4830	1625116.0655
LREV	15+50.00	46.00	670608.5582	1625128.6600
LREV	16+00.00	47.00	670557.0708	1625146.3859
LREV	16+50.00	48.00	670507.4386	1625169.0033
LREV	17+30.00	51.18	670432.0574	1625213.6239

DESIGN ALIGNMENTS

L

TYPE	STATION	NORTH	EAST
POT	10+00.00	671122.8900	1624965.7600
PC	10+79.63	671060.4685	1625015.2019
PT	13+24.63	670841.4767	1625120.5135
PC	15+25.24	670645.9990	1625165.5860
PT	17+73.46	670416.1635	1625256.8078
PC	18+70.38	670332.4949	1625305.7237
PT	20+98.73	670217.7092	1625492.5718
PC	21+11.34	670216.9527	1625505.1553
PT	22+95.13	670238.1794	1625686.7589
PC	24+74.35	670289.9024	1625858.3533
PT	27+95.55	670421.7784	1626150.2102
POT	30+51.61	670556.9300	1626367.7000

LREV

TYPE	STATION	NORTH	EAST
POT	10+00.00	671122.8900	1624965.7600
PC	10+79.63	671060.4685	1625015.2019
PT	13+24.63	670841.4767	1625120.5135
PC	15+10.78	670660.0893	1625162.3371
PT	23+63.42	670278.4066	1625820.2149
PC	24+03.25	670289.9024	1625858.3531
PT	27+24.45	670421.7785	1626150.2105
POT	29+80.51	670556.9299	1626367.6998

YREV

TYPE	STATION	NORTH	EAST
POT	10+00.00	670064.8900	1625308.5200
PC	10+17.93	670082.6768	1625310.7819
PT	12+38.90	670299.2000	1625353.9797
POT	12+93.94	670352.2845	1625368.5202

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT
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ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

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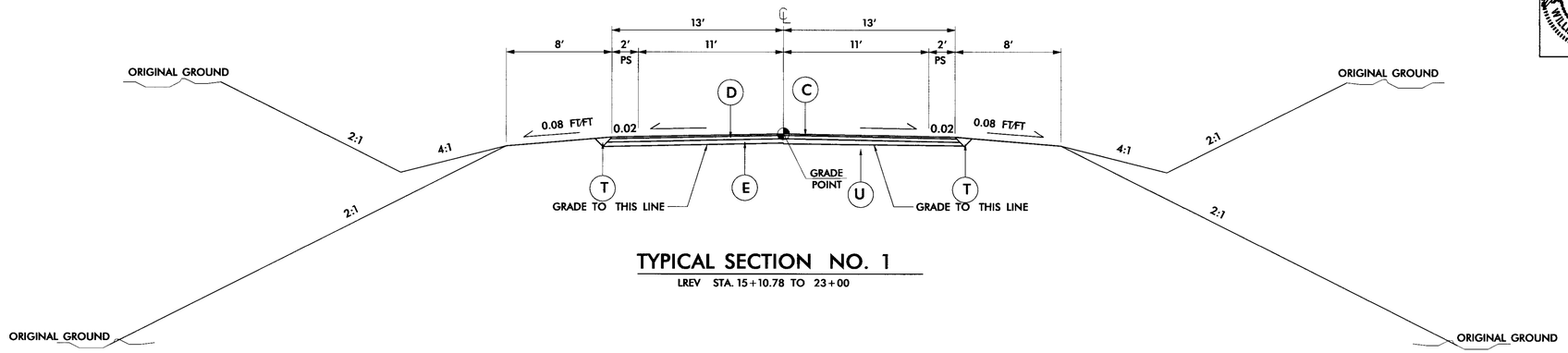
PROJECT REFERENCE NO.	SHEET NO.
W-5209E	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

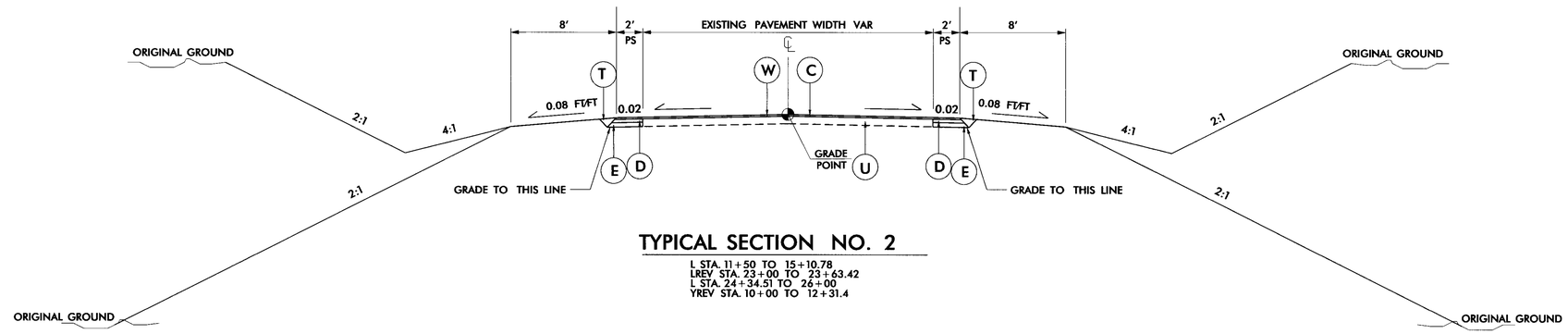
NORTH CAROLINA PROFESSIONAL SEAL 025499 ENGINEER WILLIAM A. BLANTON 5/14/13

NORTH CAROLINA PROFESSIONAL SEAL 025499 ENGINEER WILLIAM A. BLANTON 5/14/15



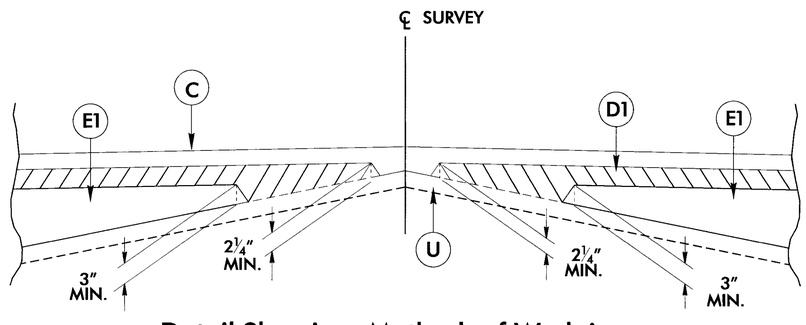
TYPICAL SECTION NO. 1

LREV STA. 15+10.78 TO 23+00



TYPICAL SECTION NO. 2

L STA. 11+50 TO 15+10.78
LREV STA. 23+00 TO 23+63.42
L STA. 24+34.51 TO 26+00
YREV STA. 10+00 TO 12+31.4



Detail Showing Method of Wedging

NOTE:
ALL PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE

C	PROP. APPROX. 1½″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	PROP. APPROX. 3″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
D1	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1″ DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2¼″ IN DEPTH OR GREATER THAN 4″ IN DEPTH.
E	PROP. APPROX. 4″ ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E1	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1″ DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3″ IN DEPTH OR GREATER THAN 5½″ IN DEPTH.
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

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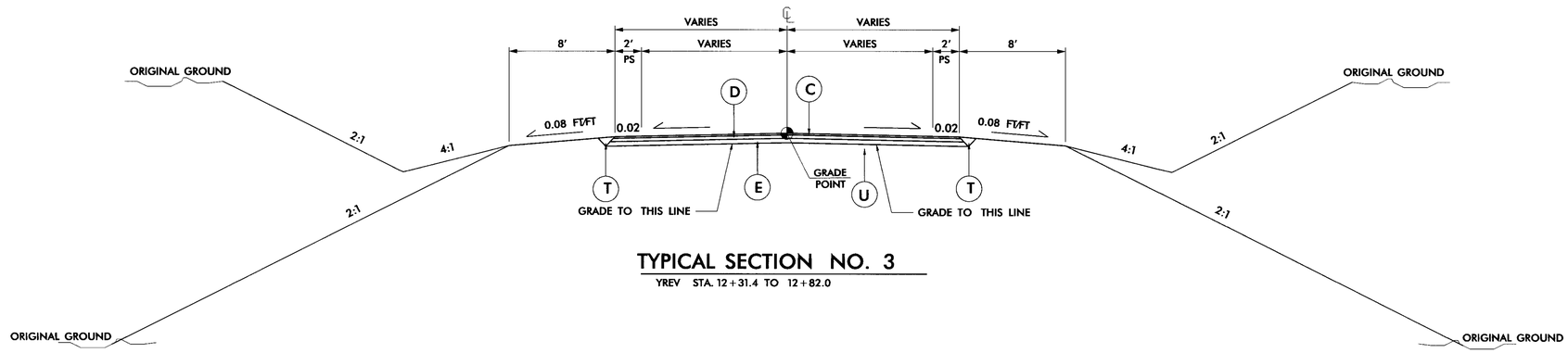
PROJECT REFERENCE NO.	SHEET NO.
W-5209E	2A
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 025499 ENGINEER WILLIAM A. BLANTON 3/14/13

NORTH CAROLINA PROFESSIONAL SEAL 025499 ENGINEER WILLIAM A. BLANTON 3/14/13



TYPICAL SECTION NO. 3

YREV STA. 12+31.4 TO 12+82.0

NOTE:
ALL PAVEMENT EDGE SLOPES ARE 1:1
UNLESS SHOWN OTHERWISE

C	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
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E	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
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T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

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PROJECT REFERENCE NO.	SHEET NO.
W-5209E	3

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF QUANTITIES

Item #	Section #	Quantity	Units	Item Description
000100000-N	800	1.00	LS	MOBILIZATION
008000000-E	200	1.00	ACR	SUPPLEMENTARY CLEARING & GRUB-BING
057000000-E	226	500.00	CY	UNDERCUT EXCAVATION
063000000-N	226	1.00	LS	GRADING
195000000-E	265	250.00	CY	SELECT GRANULAR MATERIAL
196000000-E	270	1,800.00	SY	GEOTEXTILE FOR SOIL STABILIZA-TION
318000000-E	300	25.00	TON	FOUNDATION CONDITIONING MATE- RIAL, MINOR STRS
320000000-E	300	70.00	SY	FOUNDATION CONDITIONING GEO- TEXTILE
343000000-E	310	24.00	LF	15" SIDE DRAIN PIPE
366000000-E	310	6.00	LF	15" RC PIPE CULVERTS, CLASS III
372000000-E	310	156.00	LF	18" RC PIPE CULVERTS, CLASS III
384000000-E	310	8.00	LF	30" RC PIPE CULVERTS, CLASS III
995000000-E	340	216.00	LF	PIPE REMOVAL
099700000-E	505	500.00	TON	CLASS IV SUBGRADE STABILIZA- TION
220000000-E	545	100.00	TONS	INCIDENTAL STONE BASE
330000000-E	607	1,000.00	SY	INCIDENTAL MILLING
489000000-E	610	2,401.00	TONS	BASE COURSE, B25.0B
498000000-E	610	891.00	TONS	INTERMEDIATE COURSE, I19.0B
525000000-E	610	480.00	TONS	SURFACE COURSE, SF9.5A
575000000-E	620	181.00	TONS	ASPHALT BINDER FOR PLANT MIX
000000000-N	806	20.00	EA	RIGHT OF WAY MARKERS
044000000-E	815	500.00	LF	6" PERFORATED SUBDRAIN PIPE
070000000-N	815	1.00	EA	SUBDRAIN PIPE OUTLET
077000000-E	815	6.00	LF	6" OUTLET PIPE
253000000-E	840	3.00	CY	PIPE COLLARS
286000000-N	840	3.00	EA	MASONRY DRAINAGE STRUCTURES
364000000-N	840	2.00	EA	FRAME WITH TWO GRATES, STD 840.16
472000000-N	840	1.00	EA	JUNCTION BOX 840.31
030000000-E	862	366.00	LF	STEEL BM GUARDRAIL
270000000-N	SP	2.00	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
656000000-E	876	420.00	SY	GEOTEXTILE FOR DRAINAGE
072000000-E	903	44.00	LF	SUPPORTS, 3-LB STEEL U-CHANNEL

Item #	Section #	Quantity	Units	Item Description
4155000000-N	907	15.00	EA	DISPOSAL OF SIGN SYSTEM, U- CHANNEL
4400000000-E	1110	536.00	SF	WORK ZONE SIGNS (STATIONARY)
4410000000-E	1110	154.00	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4430000000-N	1130	50.00	EA	DRUMS
4445000000-E	1145	112.00	LF	BARRICADES (TYPE III)
4685000000-E	1205	6,464.00	LF	THERMOPLASTIC PAVEMENT MARKINGLINES (4", 90 MILS)
4710000000-E	1205	53.00	LF	THERMOPLASTIC PAVEMENT MARKINGLINES (24", 120 MILS)
4900000000-N	1251	50.00	EA	PERMANENT RAISED PAVEMENT MARKERS
6000000000-E	1605	3,095.00	LF	TEMPORARY SILT FENCE
6006000000-E	1610	285.00	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	320.00	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	170.00	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	3.00	ACR	TEMPORARY MULCHING
6018000000-E	1620	200.00	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	2.00	TON	FERTILIZER FOR TEMPORARY SEED-ING
6024000000-E	1622	200.00	LF	TEMPORARY SLOPE DRAINS
6030000000-E	1630	720.00	CY	SILT EXCAVATION
6036000000-E	1631	3,500.00	SY	MATTING FOR EROSION CONTROL
6037000000-E	SP	45.00	SY	COIR FIBER MAT
6038000000-E	SP	430.00	SY	PERMANENT SOIL REINFORCEMENT MAT
6042000000-E	1632	250.00	LF	1/4" HARDWARE CLOTH
6071020000-E	SP	40.00	LB	POLYACRYLAMIDE (PAM)
6071030000-E	1640	285.00	LF	COIR FIBER BAFFLES
6071050000-E	SP	5.00	EA	1.5" SKIMMER
6084000000-E	1660	7.00	ACR	SEEDING & MULCHING
6090000000-E	1661	50.00	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
6096000000-E	1662	125.00	LB	SEED FOR SUPPLEMENTAL SEEDING
6108000000-E	1665	3.00	TON	FERTILIZER TOPDRESSING
6117000000-N	SP	18.00	EA	RESPONSE FOR EROSION CONTROL
8594000000-E	876	6.00	TON	RIP RAP, CLASS B

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ksbarton AT DS-AP2E8420B

COMPUTED BY: _____ DATE: _____

CHECKED BY: _____ DATE: _____

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
W-5209E	3A

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

STATION	LOCATION (LT, RT, OR CL)[1]	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	SIDE DRAIN PIPE (RCP, CSP, CAAP, HDPE, or PVC) SIZE 12"	15"	18"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	C.S. PIPE SIZE 12" THICKNESS OR GAUGE .064	15" .064	18" .064	24" .064	30" .079	36" .079	42" .109	48" .109	R.C. PIPE CLASS III SIZE 12"	15"	18"	24"	30"	36"	42"	48"	R.C. PIPE CLASS IV SIZE 12"	15"	18"	24"	30"	36"	42"	48"
SHEET 4																																											
L 12+00	LT	IN	1		732.23	732.41																										8											
L 12+00	RT	2		735.35	731.10																																						
L 12+00	RT	3		733.60																																							
		3	2		731.35	731.29																						6.0															
L 12+50	RT	4		735.50																																							
		4	2		733.00	731.50																							48.0														
LREV 13+42	RT	IN	OUT		741.00	739.50																																					
YREV 12+65	CL	5			751.50	749.00																							80.0														
LREV 21+00	RT																																										
SHEET 5																																											
L 24+75	LT	IN	6		725.54	725.04																							12.0														
	RT	7	OUT		723.33	722.66																							16.0														
																												6.0	156.0		8.0													

STATION	** " R.C. PIPE (CLASS V)	*** " RC PIPE CULVERTS, CONTRACTOR DESIGN	**** " RC PIPE CULVERTS, CONTRACTOR DESIGN	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES *TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL. 'B') PER EACH (0' THRU 5.0')	LIN. FT. A 5.0' THRU 10.0'	LIN. FT. B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	CONCRETE TRANSITIONAL SECTION DROP INLET	CATCH BASIN	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATE STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR 840.26	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. TYPE "D" STD. 840.19 OR 840.28	G.D.I. FRAME WITH GRATE STD. 840.20	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	DRAINAGE PIPE ELBOWS NO. & SIZE	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	CONC. COLLARS CL. "B" C.Y. STD. 840.72	PIPE REMOVAL LIN. FT.	REMARKS
SHEET 4																																		
L 12+00																																1		
L 12+00								1																	1								176	REMOVE EXISTING STRUCTURE AND REPLACE WITH JB W/ SLAB LID
L 12+00								1												1	1													
L 12+50								1												1	1													
LREV 13+42				24																														DRIVEWAY PIPE
YREV 12+65																																		
LREV 21+00																																	40	
SHEET 5																																		
L 24+75																																1		
																																1		
				24.0				3.0											2.0	2.0						1.0					3.0	216.0	

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I.(N.S.)	(NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

COMPUTED BY: RJN DATE: 8/29/2012
CHECKED BY: WAB DATE: 02/14/13

PROJECT NO.	SHEET NO.
W-5209E	3-B

RD248621

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

Station	Station	Uncl. Excav.	Embank. +%	Borrow	Waste
L-REV 12+00	25+00	7997	2763		5309
Y-REV 10+00	12+50	119	191	72	
SUBTOTALS:		8116	2954	72	5309
Loss Due to Clearing and Grubbing		-700			-700
Waste to Replace Borrow				-72	-72
SUBTOTALS:		7416			4537
PROJECT TOTALS:					
PROJECT TOTALS:		7416	2954	0	4537
GRAND TOTALS:					
SAY:		7500	3000		4600

Note: Approximate quatities only. Unclassified excavation, fine grading, removal of asphalt pavement, clearing and grubbing, shoulder borrow, and rock excavation will be paid for at the lump sum price for "Grading". Earthwork quantities are calculated by the DDC unit.

ESTIMATED UNDERCUT = 250 CY
ESTIMATED SHALLOW UNDERCUT = 250 CY
ESTIMATED CLASS IV SUBGRAGE STABILIZATION = 500 TONS
ESTIMATED ROCK EXCAVATION = 75 CY

SUMMARY OF EXISTING ASPHALT PAVEMENT REMOVAL

LINE	Station	Station	LOC LT/RT/CL	YD^2
LREV	15+65	23+25		1895
			TOTAL:	1895.00
			SAY:	1900

SUMMARY OF BREAKING EXISTING ASPHALT PAVEMENT

LINE	Station	Station	LOC LT/RT/CL	YD^2
			TOTAL:	
			SAY:	

SUMMARY OF EXISTING CONCRETE PAVEMENT REMOVAL

LINE	Station	Station	LOC LT/RT/CL	YD^2
			TOTAL:	
			SAY:	

PARCEL INDEX

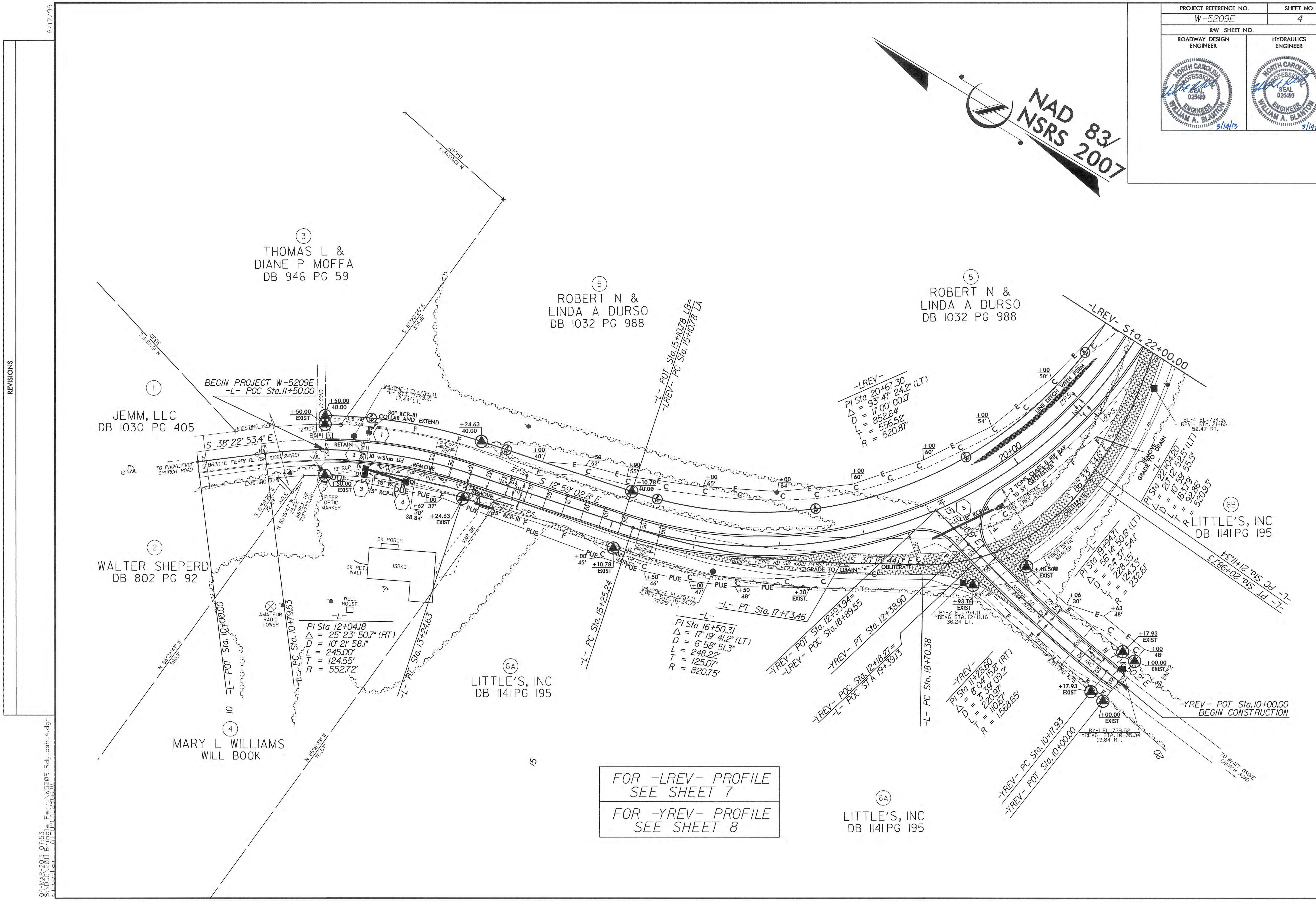
PARCEL NO	SHEET NO	PROPERTY OWNER NAME
1	4	JEMM,LLC
2	4	WALTER SHEPPERD
3	4	THOMAS L & DIANE P MOFFA
4	4	MARY L WILLIAMS
5	4,5	ROBERT N & LINDA A DURSO
6 A	4	LITTLES , INC
6 B	4,5	LITTLES , INC
7	5	ONFIDA E WYATT
8	5	LINDA H EMBLER TRUSTEE

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

LINE	BEG. STA.	END STA.	LOC.	LENGTH STRAIGHT	LENGTH SHOP CURVED	LENGTH DOUBLE FACED	WARRANT POINT APPR. END	WARRANT POINT TRAIL. END	"N" DIST FROM E.O.L.	TOTAL SHLDR WIDTH	FLAIR LENGTH APPR. END	FLAIR LENGTH TRAIL. END	W APPR. END	W TRAIL. END	ANCHORS XI MOD	ANCHORS XI	ANCHORS GRAU 350	ANCHORS M-350	ANCHORS XII	ANCHORS CAT-1	ANCHORS VI MOD	IMP. ATTEN. TYPE 350 EA	IMP. ATTEN. TYPE 350 G	IMP. ATTEN. TYPE 350 NG	REMOVE EXISTING GRDRAIL		REMARKS
LREV	20+00	24+50	RT	366			21+00	23+50	8	11	50	50	1	1			2										

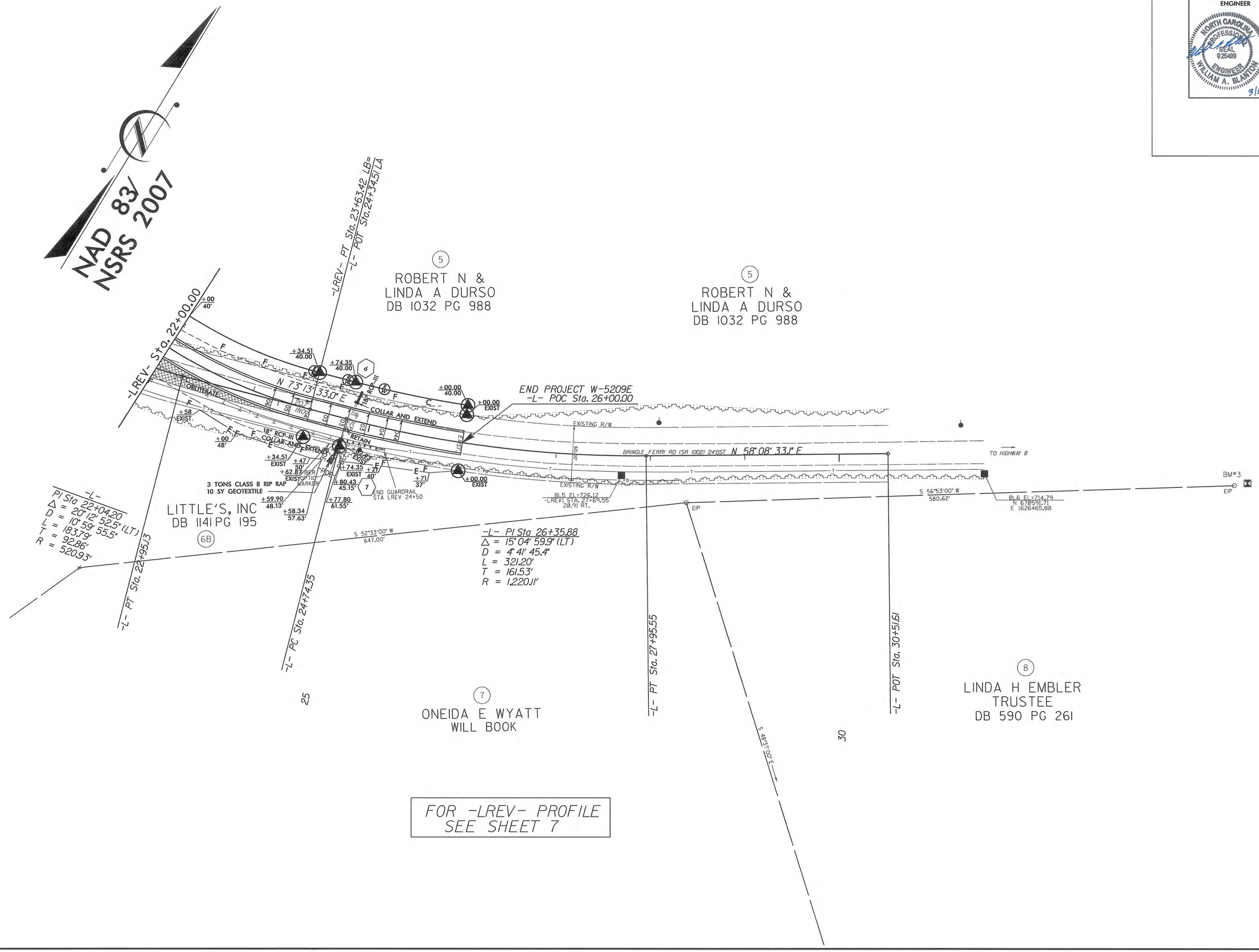
PROJECT REFERENCE NO.	SHEET NO.
W-5209E	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



PROJECT REFERENCE NO.	SHEET NO.
W-5209E	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 025499 ENGINEER WILLIAM A. BLANTON 3/14/13	NORTH CAROLINA PROFESSIONAL SEAL 025499 ENGINEER WILLIAM A. BLANTON 3/14/13

REVISIONS

8/17/99



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PROJECT REFERENCE NO.	SHEET NO.
W-5209E	6

ROADWAY DESIGN ENGINEER

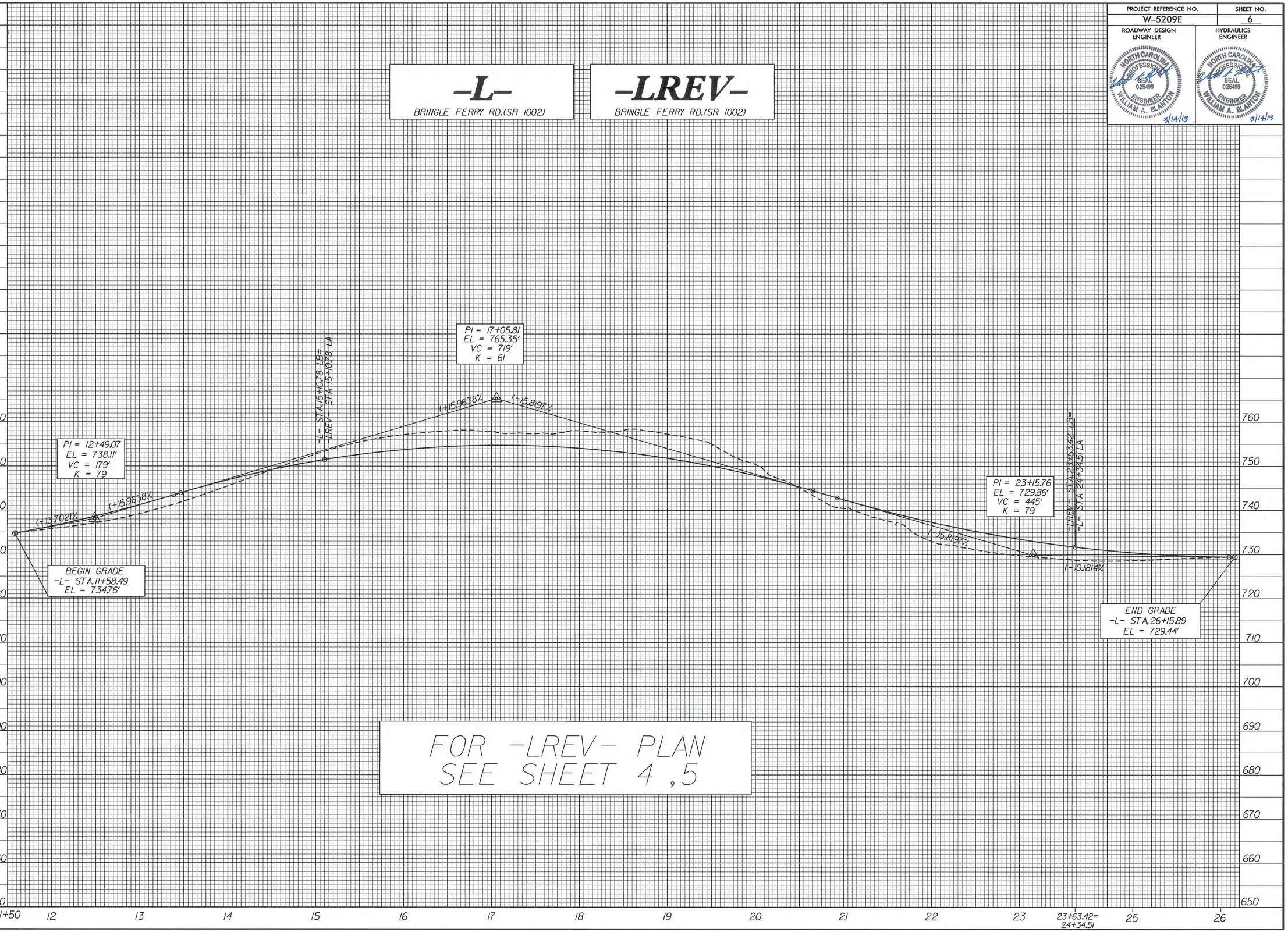
NORTH CAROLINA PROFESSIONAL SEAL 025499 ENGINEER WILLIAM A. BLANTON

3/14/13

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 025499 ENGINEER WILLIAM A. BLANTON

3/14/13



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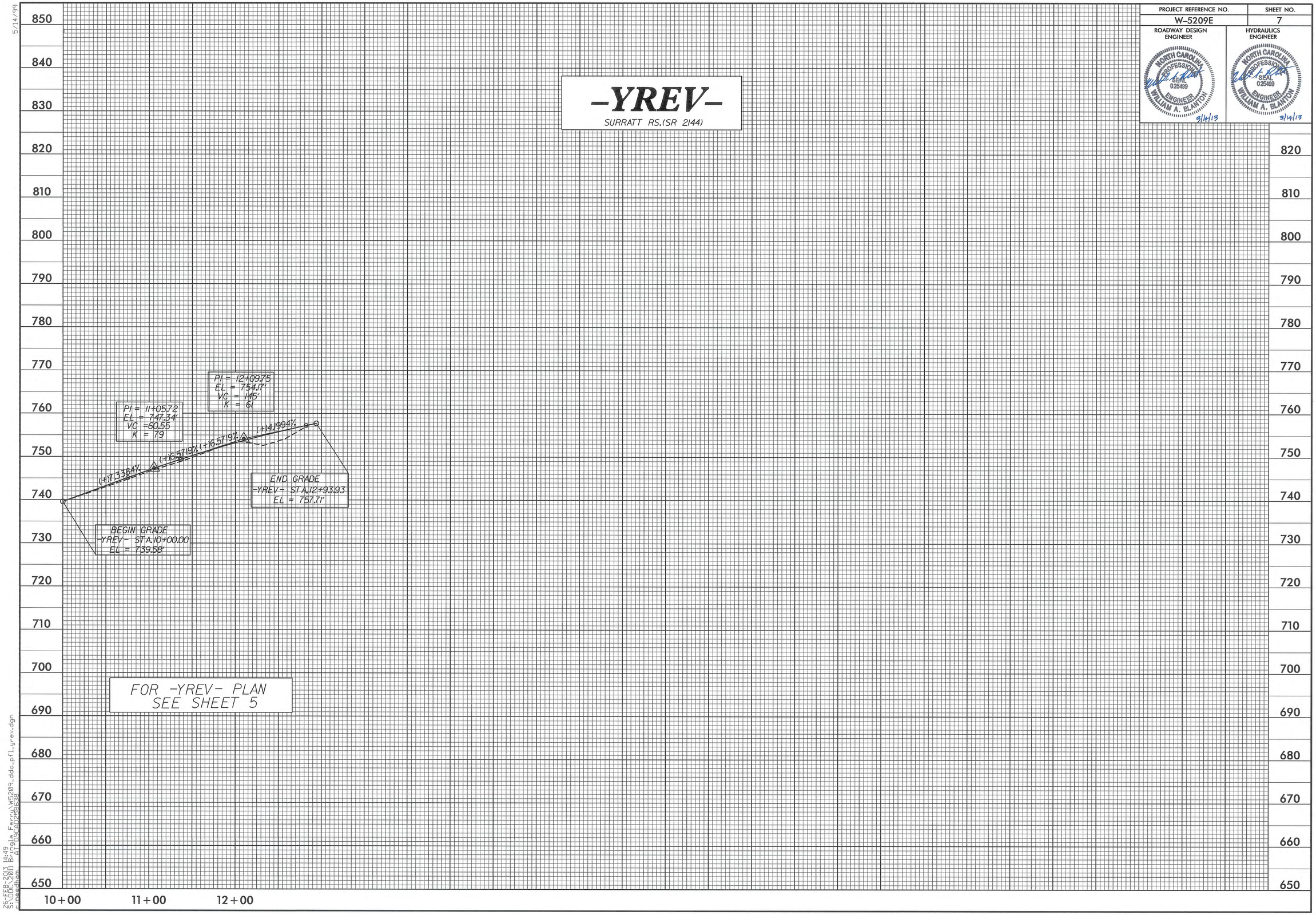
PROJECT REFERENCE NO.	SHEET NO.
W-5209E	7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 025499 ENGINEER WILLIAM A. BLANTON 3/14/13

NORTH CAROLINA PROFESSIONAL SEAL 025499 ENGINEER WILLIAM A. BLANTON 3/14/13

-YREV-

SURRATT RS.(SR 2144)



FOR -YREV- PLAN
SEE SHEET 5

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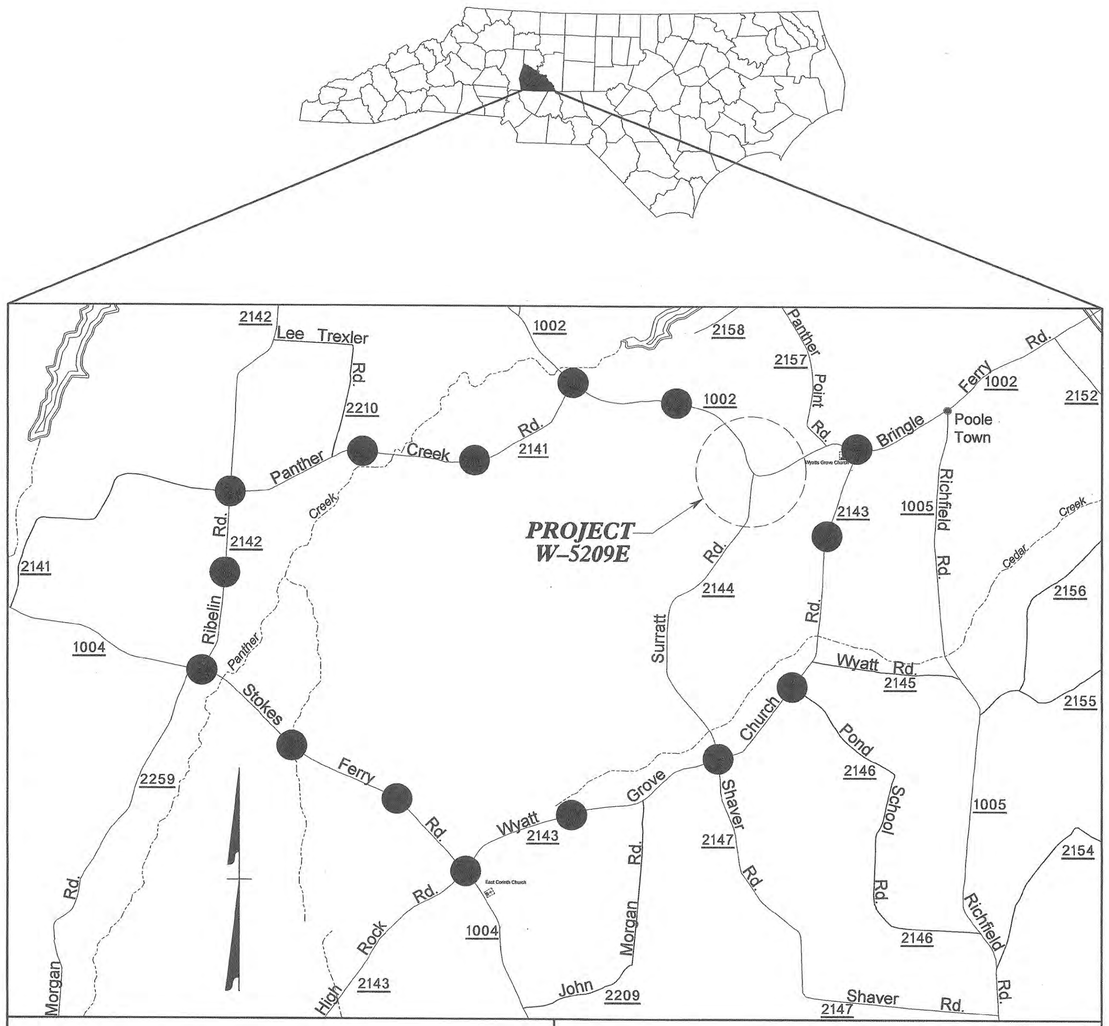
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

ROWAN COUNTY



VICINITY MAP

OFFSITE DETOUR

WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER
J. ISHAK, P.E. TRAFFIC CONTROL PROJECT ENGINEER
B. SCHOENBAUER, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER
D. KENNEDY, P.E. TRAFFIC CONTROL DESIGN ENGINEER

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES AND GENERAL NOTES)
TMP-1C	TRANSPORTATION OPERATIONS PLAN: (PHASING)
TMP-2	PHASE I DETAIL
TMP-3	PHASE II DETAIL
TMP-4	OFF-SITE DETOUR ROUTE AND BARRICADE PLACEMENT
TMP-5	SPECIAL SIGN DESIGN

APPROVED: B. Schoenbauer
DATE: February 12, 2013

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 35496 ENGINEER BENJAMIN PAUL SCHOENBAUER

SHEET NO.
TMP-1

TIP PROJECT:
W-5209E

PROJ. REFERENCE NO.	SHEET NO.
W-5209E	TMP-1A

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
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)
- WORK AREA
- REMOVAL
- USER DEFINED (IF NEEDED)
- USER DEFINED (IF NEEDED)

SIGNALS

EXISTING PROPOSED TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

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

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

APPROVED: Ben Schonbauer DATE: 2/12/13

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 35496 ENGINEER BENJAMIN PAUL SCHONBAUER

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

ROADWAY STANDARD DRAWINGS & LEGEND

2/4/2013
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User:dirkennedyii

PROJ. REFERENCE NO.	SHEET NO.
W-5209E	TMP-1B

MANAGEMENT STRATEGIES

- DURING REALIGNMENT OF SR-1002 (BRINGLE FERRY ROAD), SR-1002 WILL BE OPEN TO ALL TRAFFIC DURING PHASES I AND III.

- DURING PHASE II, SR-1002 WILL BE CLOSED TO THROUGH TRAFFIC FROM -L- STA.11+50 +/- TO -L- STA.26+00 +/-. BRINGLE FERRY ROAD TRAFFIC WILL BE DETOURED OFF-SITE VIA SR-1002 TO SR-2143 (WYATT GROVE CHURCH ROAD) TO SR-1004 (STOKES FERRY ROAD) TO SR-2412 (RIBELIN ROAD) TO SR-2141 (PANTHER CREEK ROAD) BACK TO SR-1002.

- ACCESS FOR LOCAL TRAFFIC MUST BE PROVIDED AT ALL TIMES WITHIN THE PROJECT LIMITS.

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 UNDESIRED 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.

TIME RESTRICTIONS

A) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

B) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

F) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

G) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON SR-1002 (BRINGLE FERRY ROAD).

PAVEMENT EDGE DROP OFF REQUIREMENTS

H) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

I) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

K) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRANSPORTATION MANAGEMENT PLAN.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRANSPORTATION MANAGEMENT PLAN.

L) 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.

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

TRAFFIC CONTROL DEVICES

N) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.

O) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

PAVEMENT MARKINGS AND MARKERS

P) IF TRAFFIC IS TO BE PLACED ON INTERIM LAYERS OF PAVEMENT, INSTALL TWO APPLICATIONS OF TEMPORARY PAVEMENT MARKINGS ALONG -LREV- AND -YREV- PRIOR TO REMOVAL OF ROAD CLOSURE.

U) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

O) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

APPROVED: Ben Schronheim DATE: 2/12/13

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 35496 ENGINEER BENJAMIN PAUL SCHORNHEIMER

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TRANSPORTATION OPERATION PLAN

2/4/2013
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User:dr-kennedyl

PHASING

NOTE:
UNLESS OTHERWISE STATED IN THE PHASING, PERFORM ALL CONSTRUCTION UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE.

PHASE I

STEP 1:
USING RSD 1101.01, SHEET 3 OF 3, INSTALL WORK ZONE ADVANCE WARNING SIGNS.

STEP 2:
USING RSD 1101.02 AND 1101.04, AS NECESSARY, BEGIN CONSTRUCTION OF PROPOSED ROADWAY FROM STA.16+50 +/- TO STA.23+50 +/-. IN ADDITION, BEGIN CONSTRUCTION OF PROPOSED -YREV- TURNING RADII UP TO THE EDGE AND ELEVATION OF -LREV-, AS DIRECTED BY THE ENGINEER.

STEP 3:
USING RSD 1101.03, SHEET 1 OF 9, SHEETS TMP-4 AND TMP-5, INSTALL AND COVER ROAD CLOSURE AND DETOUR SIGNS.

PHASE II

WORK IN A CONTINUOUS MANNER TO COMPLETE PHASE II, STEPS #1 THRU #3 IN THIRTY-FIVE (35) CONSECUTIVE CALENDAR DAYS. SEE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 1:
UNCOVER ROAD CLOSURE AND DETOUR SIGNS INSTALLED IN PHASE I. PLACE TYPE III BARRICADES IN ACCORDANCE WITH RSD 1101.03, SHEET 1 OF 9, TO CLOSE SR-1002 TO THROUGH TRAFFIC, AND DETOUR TRAFFIC OFF-SITE. REFER TO INSET "A" ON SHEET TMP-4 FOR PLACEMENT OF TYPE III BARRICADES TO ALLOW ACCESS TO THE DRIVEWAYS.

STEP 2:
AWAY FROM TRAFFIC, COMPLETE THE FOLLOWING:
(SEE ROADWAY PLANS.)

- CONSTRUCT PROPOSED ROADWAY UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE FROM -L- STA.11+50 +/- TO -L- STA.26+00 +/-. COORDINATE WITH PROPERTY OWNERS OF PARCELS #3 AND #4 DURING CONSTRUCTION OF ROADWAY FROM STA.11+50+/- TO STA.14+00 +/- TO ENSURE ACCESS IS MAINTAINED TO THEIR DRIVEWAYS.

- CONSTRUCT PROPOSED ROADWAY UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE FROM -YREV- STA.10+00 +/- TO THE TIE-IN WITH -LREV-.

- BEGIN ASPHALT REMOVAL ALONG -L- FROM STA.15+48+/- TO STA.24+32+/-.

- BEGIN FINAL GRADING OF ROADWAY SECTION ALONG -L- AND -YREV-.

STEP 3:
USING FINAL PAVEMENT MARKING PLAN, PLACE TEMPORARY PAVEMENT MARKINGS ALONG -L- AND -YREV-, AND TIE INTO EXISTING PAVEMENT MARKINGS.

ICT

PHASE III

STEP 1:
REMOVE ALL ROAD CLOSURE SIGNING/DEVICES AND DETOUR SIGNING. OPEN SR-1002 TO THE PROPOSED TRAFFIC PATTERN.

STEP 2:
USING RSD 1101.02, SHEET 1 OF 15, AS NECESSARY, COMPLETE WORK THAT WAS STARTED IN PHASE II.

STEP 3:
USING RSD 1101.02, SHEET 1 OF 15, PLACE FINAL LAYER OF SURFACE COURSE THROUGHOUT THE PROJECT. USING FINAL PAVEMENT MARKING PLAN, PLACE FINAL PAVEMENT MARKINGS AND MARKERS ALONG -LREV- AND -YREV-, AND TIE INTO EXISTING PAVEMENT MARKINGS.

STEP 4:
REMOVE ALL TRAFFIC CONTROL SIGNING/DEVICES.

APPROVED: Ben Schoenhauer DATE: 2/12/13

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 35496 ENGINEER BENJAMIN PAUL SCHOENHAUER

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TRANSPORTATION OPERATION PLAN (CONTINUED)

2/4/2013
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User:drkennedy

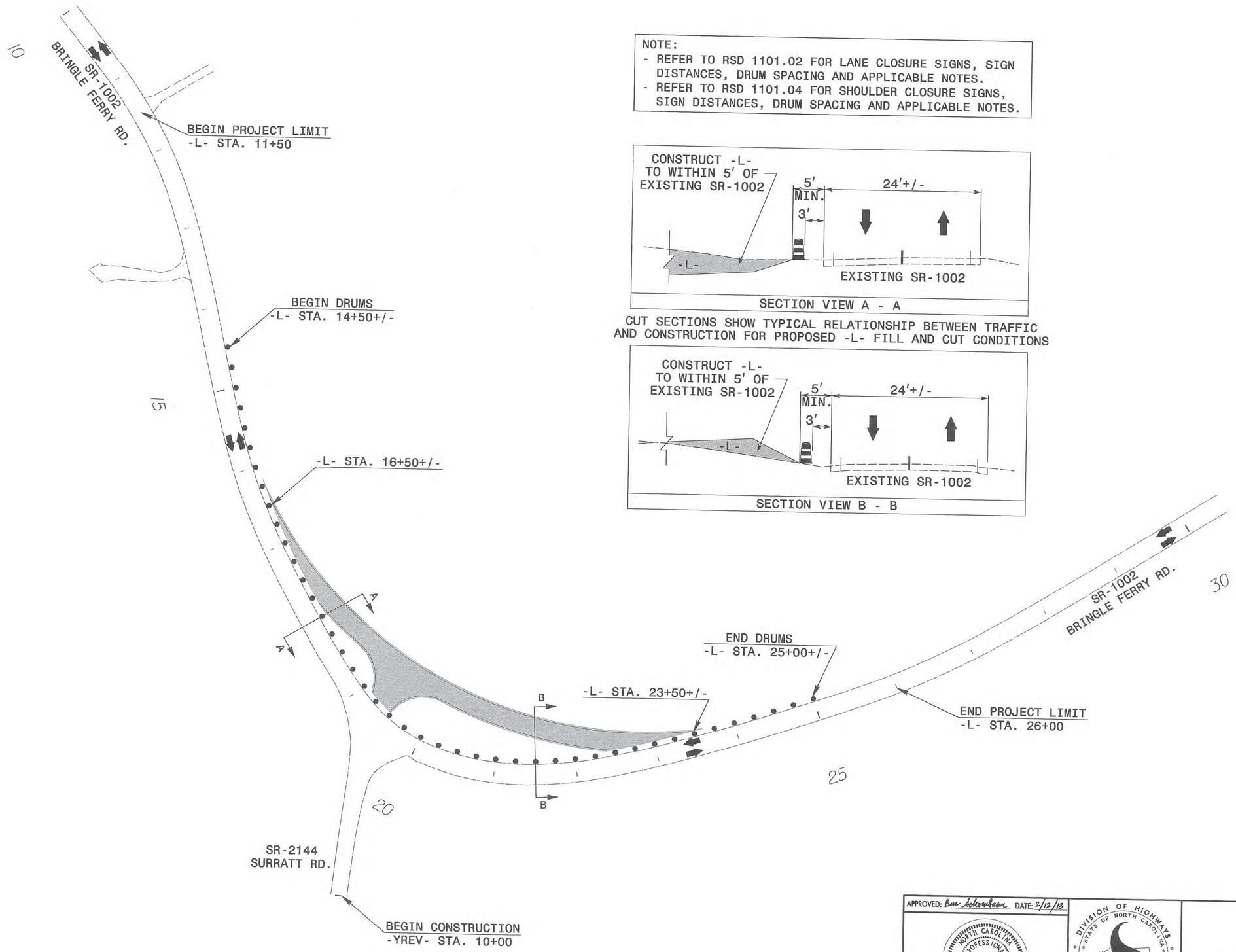
PROJ. REFERENCE NO.	SHEET NO.
W-5209E	TMP-2

NOTE:
- REFER TO RSD 1101.02 FOR LANE CLOSURE SIGNS, SIGN DISTANCES, DRUM SPACING AND APPLICABLE NOTES.
- REFER TO RSD 1101.04 FOR SHOULDER CLOSURE SIGNS, SIGN DISTANCES, DRUM SPACING AND APPLICABLE NOTES.

SECTION VIEW A - A

CUT SECTIONS SHOW TYPICAL RELATIONSHIP BETWEEN TRAFFIC AND CONSTRUCTION FOR PROPOSED -L- FILL AND CUT CONDITIONS

SECTION VIEW B - B



APPROVED: Eric Schrockhaus DATE: 2/12/13

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 35496 ENGINEER BENJAMIN PAUL SCHONBURGER

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

PHASE I DETAIL

2/4/2013
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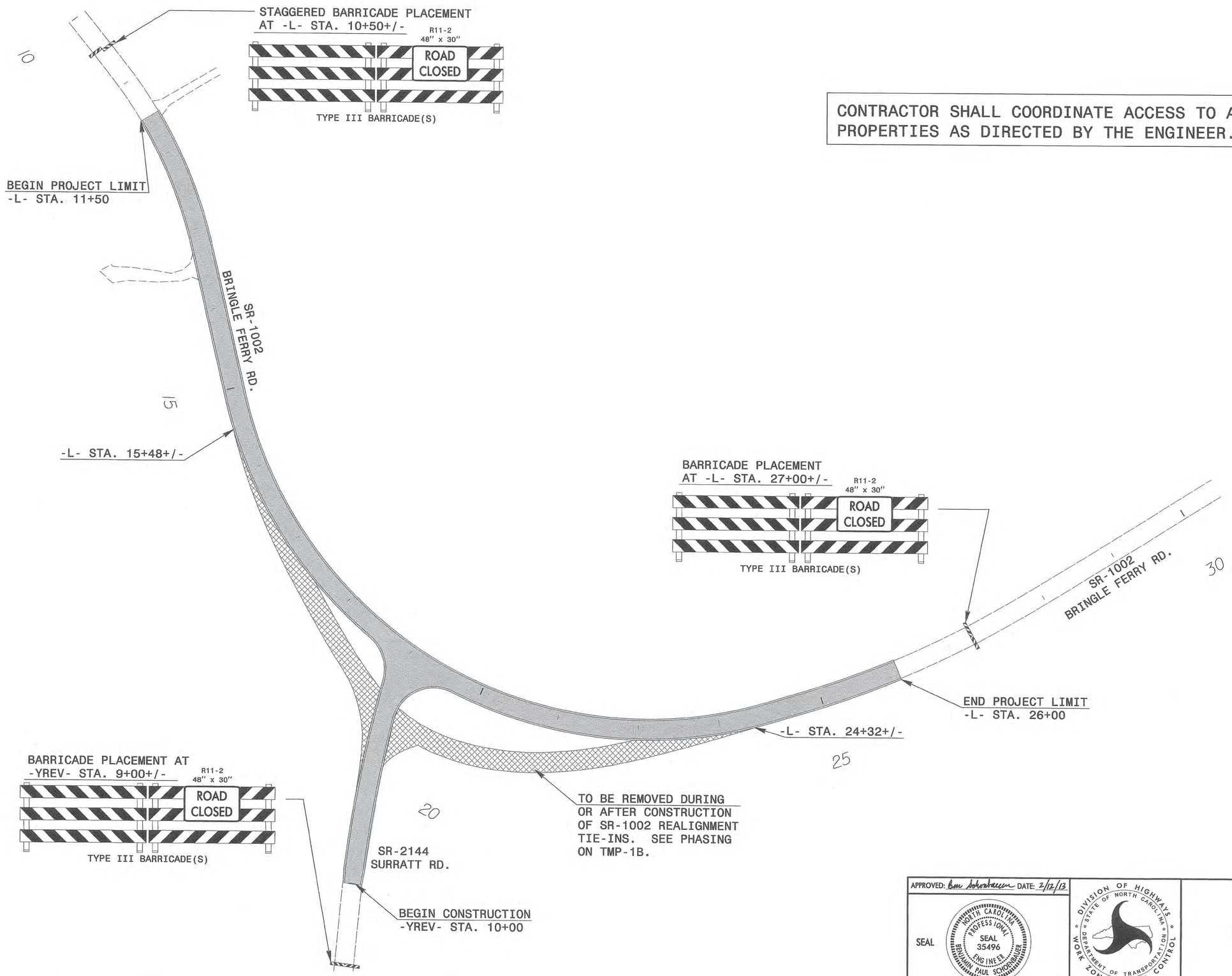
User:drkennedyl

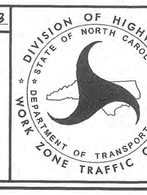
PROJ. REFERENCE NO.	SHEET NO.
W-5209E	TMP-3

CONTRACTOR SHALL COORDINATE ACCESS TO ALL PROPERTIES AS DIRECTED BY THE ENGINEER.



APPROVED: Ben Johnstreen DATE: 2/12/13

SEAL



PHASE II DETAIL

2/4/2013
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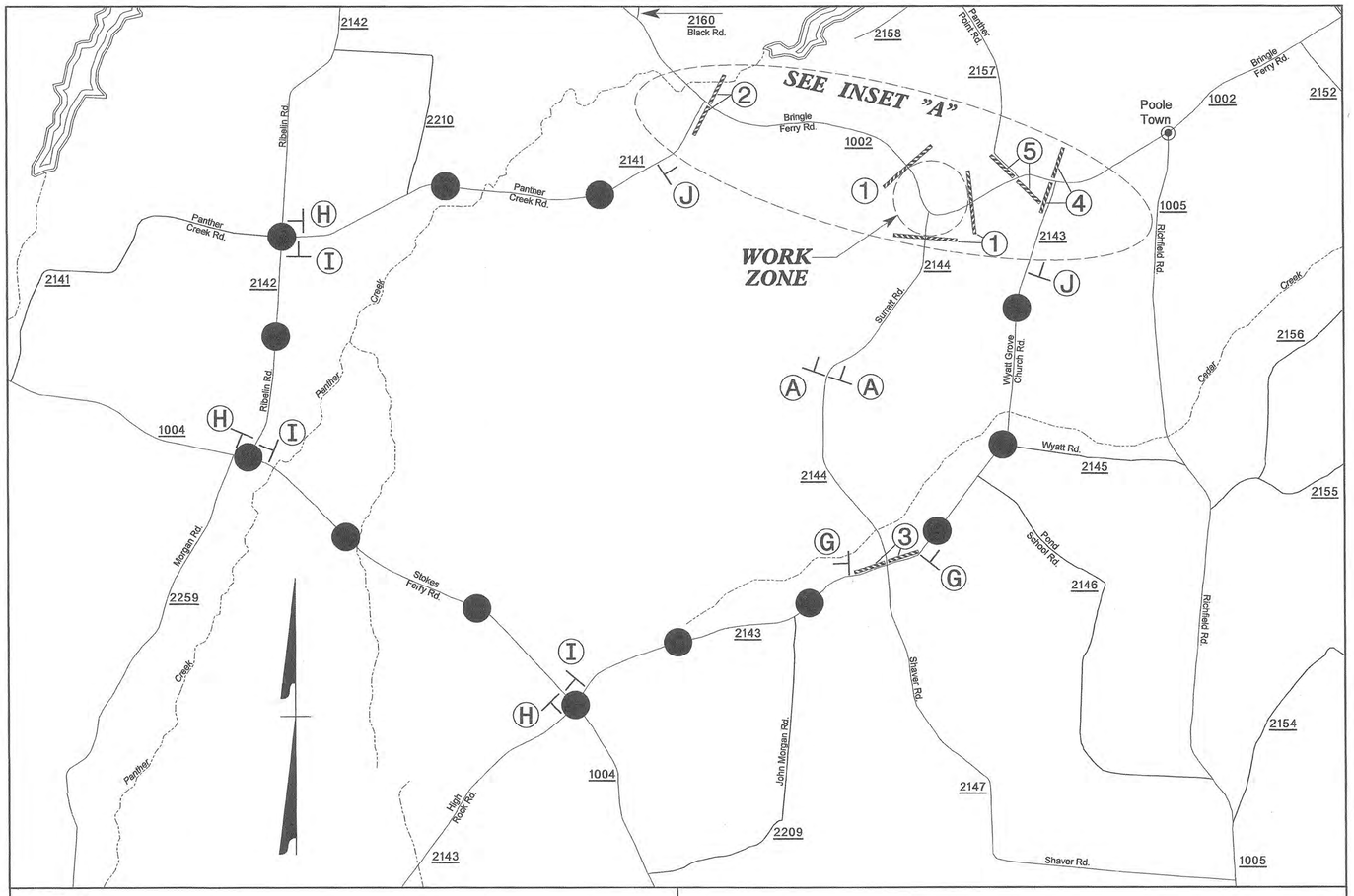
User:drkennedy

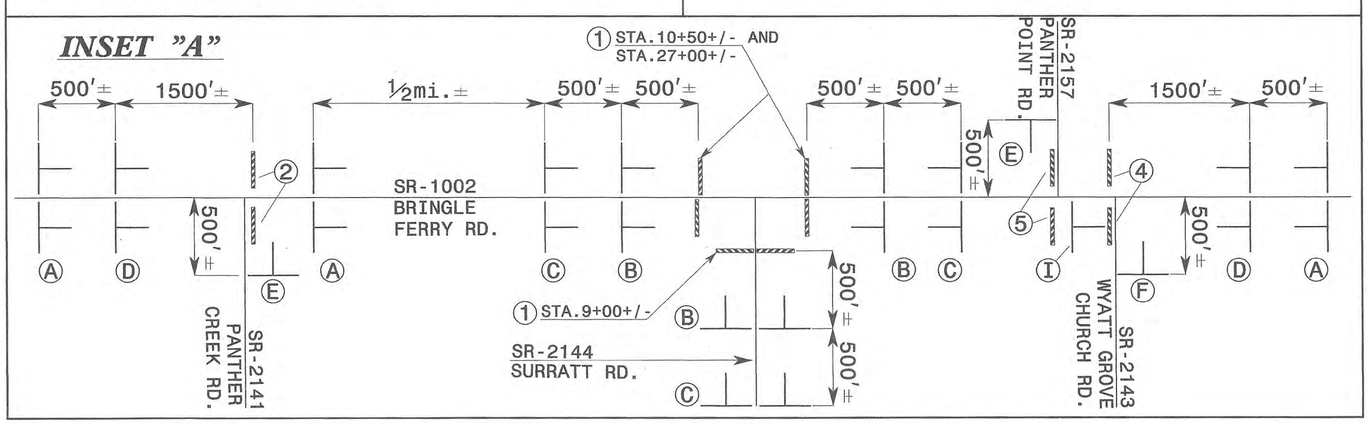
PROJ. REFERENCE NO.	SHEET NO.
W-5209E	TMP-4

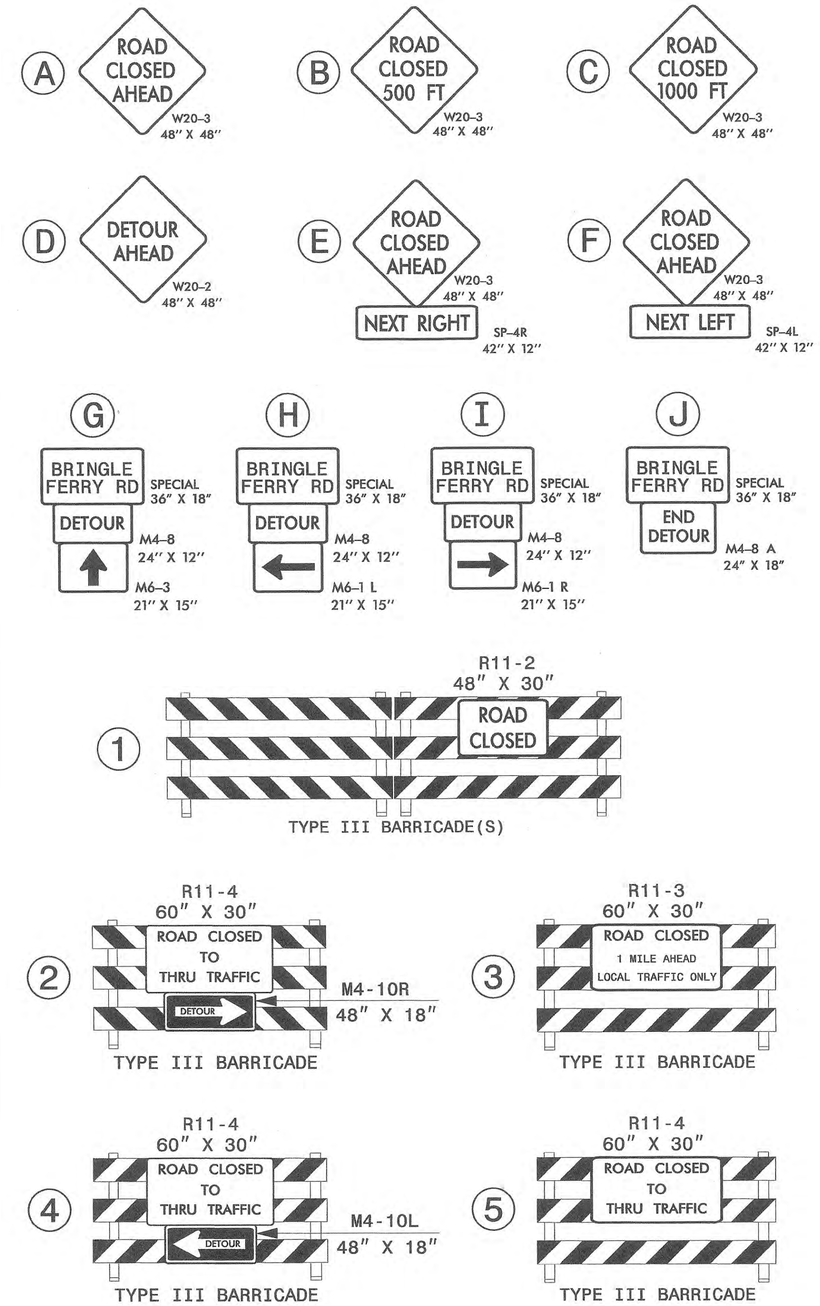


NOTES:
1. REFER TO SHEET TMP-5 FOR SIGN DESIGN.
2. REFER TO RSD 1101.03, SHEET 1 OF 9, FOR ROAD CLOSURE SIGN DISTANCES AND APPLICABLE NOTES.
3. DETOUR SIGN LOCATIONS ARE APPROX.; PLACE PER ENGINEER'S DIRECTION.

OFFSITE DETOUR ROUTE

SR–1002 TO SR–2143 TO SR–1004 TO SR–2142 TO SR–2141 BACK TO SR–1002





APPROVED: Ben Schonhauer DATE: 2/12/13

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 35496 ENGINEER BENJAMIN PAUL SCHONHAUER

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

OFF-SITE DETOUR ROUTE AND BARRICADE PLACEMENT

2/12/2013
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User:drkennedy1

PROJ. REFERENCE NO.	SHEET NO.
W-5209E	TMP-5

SIGN NUMBER: SP13102
TYPE: STATIONARY
QUANTITY: SEE PLANS

SIGN WIDTH: 3'-0"
HEIGHT: 1'-6"
TOTAL AREA: 4.5 Sq.Ft.

BORDER TYPE: INSET
RECESS: 0.5"
WIDTH: 0.5"
RADII: 1.5"

NO. Z BARS:
LENGTH:

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT'L: 0.080" (2.0 mm) ALUMINUM

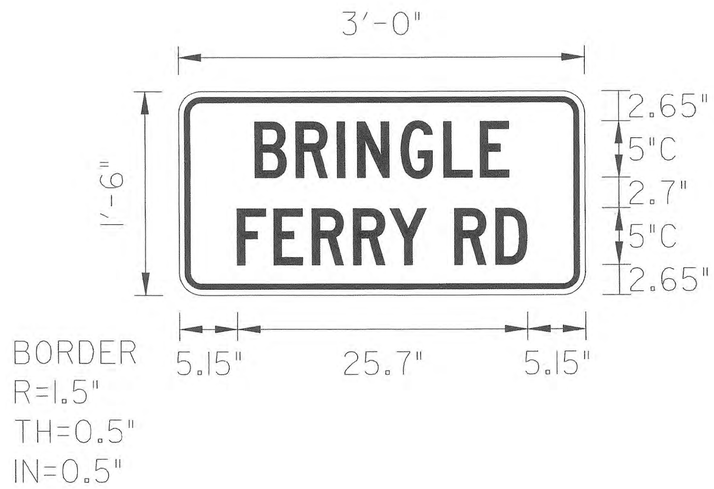
DESIGN BY: A. GRADY
PROJECT ID: W-5209E

CHECKED BY: S. KUNZ
DIV: 9

DATE: Jan 31, 2013

USE NOTES: 1,2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be NC GRADE B fluoresent orange retroreflective sheeting.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

											Series/Size Text Length
	B	R	I	N	G	L	E				C 2000
6.8	3.7	3.6	1.8	3.8	3.8	3.3	2.6	6.8			22.5
	F	E	R	R	Y		R	D			C 2000
5.2	3.3	3.4	3.7	3.3	3.2	2.5	3.7	2.8	5.2		25.7

FILENAME: W-5209E_Sgn_SGN_TC

NORTH CAROLINA D.O.T. SIGN DETAIL

APPROVED: DATE: 4/31/13

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022959 ENGINEER RONALD W. KING

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

SPECIAL SIGN DESIGN

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User:drKennedyl

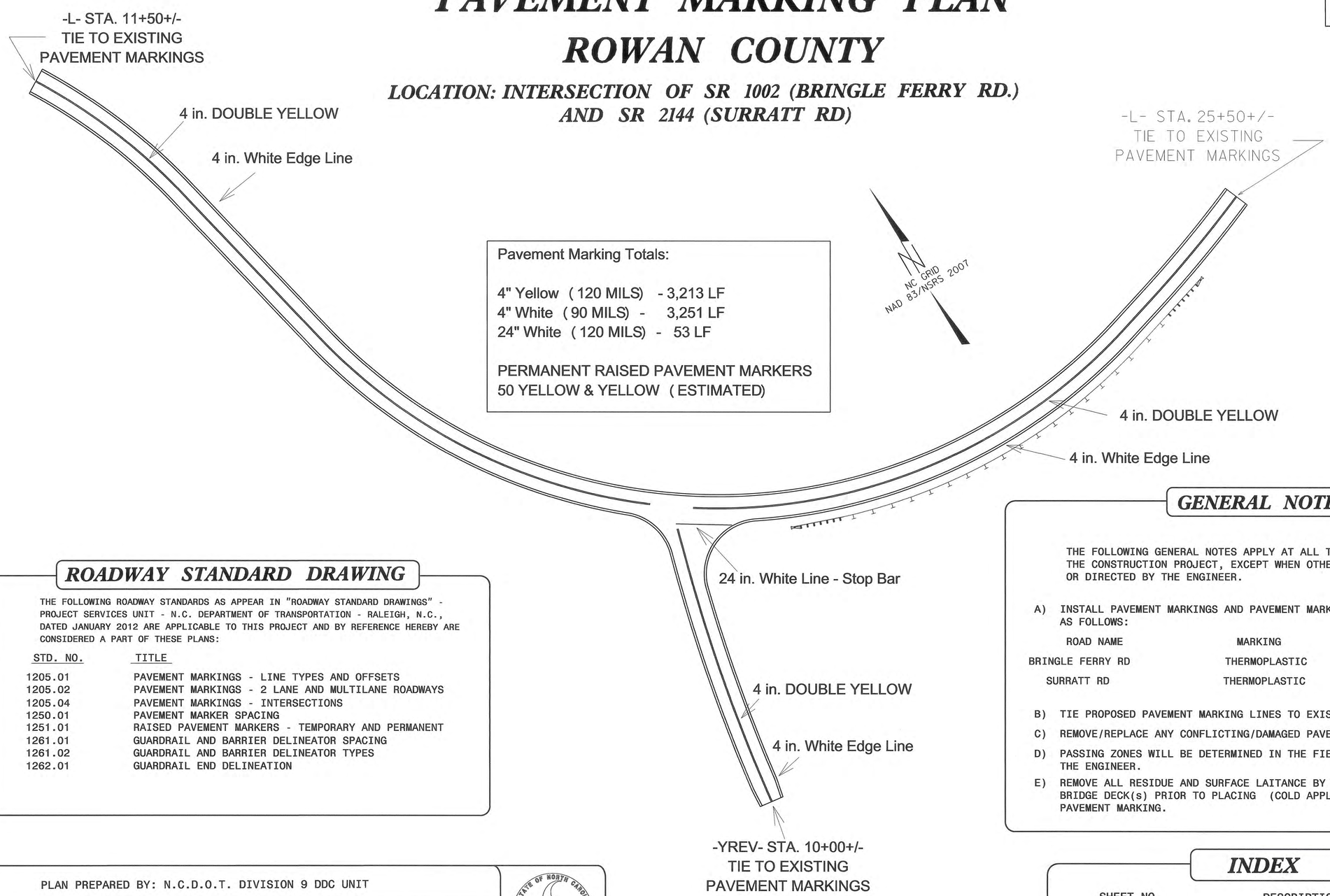
PROJECT REFERENCE NO.	SHEET NO.
W-5209E	PMP-1
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 025499 ENGINEER WILLIAM A. BLANTON 3/14/13

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN
ROWAN COUNTY

LOCATION: INTERSECTION OF SR 1002 (BRINGLE FERRY RD.) AND SR 2144 (SURRATT RD)



Pavement Marking Totals:

4" Yellow (120 MILS) - 3,213 LF
4" White (90 MILS) - 3,251 LF
24" White (120 MILS) - 53 LF

PERMANENT RAISED PAVEMENT MARKERS
50 YELLOW & YELLOW (ESTIMATED)

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 - 2 LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - TEMPORARY AND PERMANENT
1261.01	GUARDRAIL AND BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

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
BRINGLE FERRY RD	THERMOPLASTIC	RAISED MARKERS
SURRATT RD	THERMOPLASTIC	RAISED MARKERS

B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.

D) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.

E) REMOVE ALL RESIDUE AND SURFACE LAITANCE BY ACCEPTABLE METHODS ON THE BRIDGE DECK(s) PRIOR TO PLACING (COLD APPLIED PLASTIC) PAVEMENT MARKING.

PLAN PREPARED BY: N.C.D.O.T. DIVISION 9 DDC UNIT

WILLIAM A. BLANTON DIVISION 9 DDC ENGINEER

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

INDEX

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

REVISIONS

8/17/99

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solomon ATTUS-APPS03

TIP PROJECT: W-5209

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5209	EC-1	

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

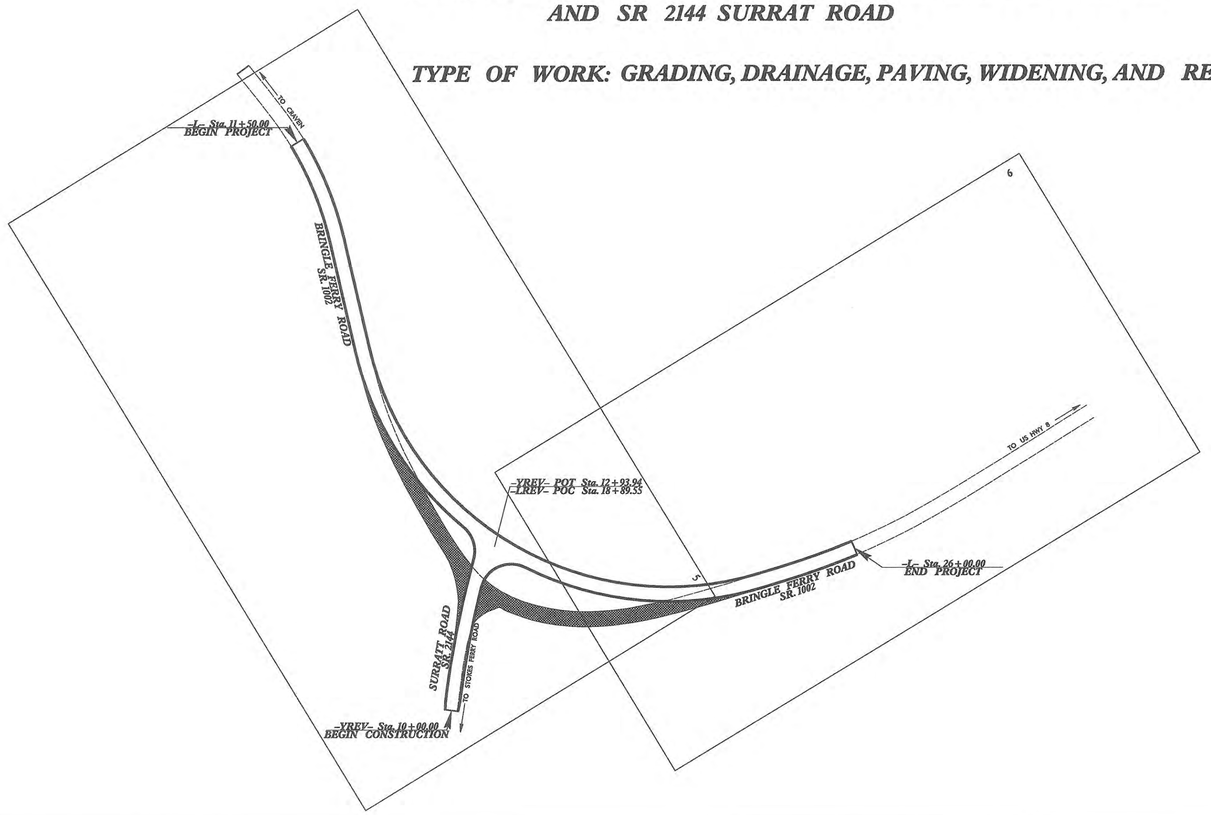
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

ROWAN COUNTY

LOCATION: INTERSECTION OF SR 1002 BRINGLE FERRY ROAD AND SR 2144 SURRAT ROAD

TYPE OF WORK: GRADING, DRAINAGE, PAVING, WIDENING, AND REALIGNMENT



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	SW 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.

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	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		

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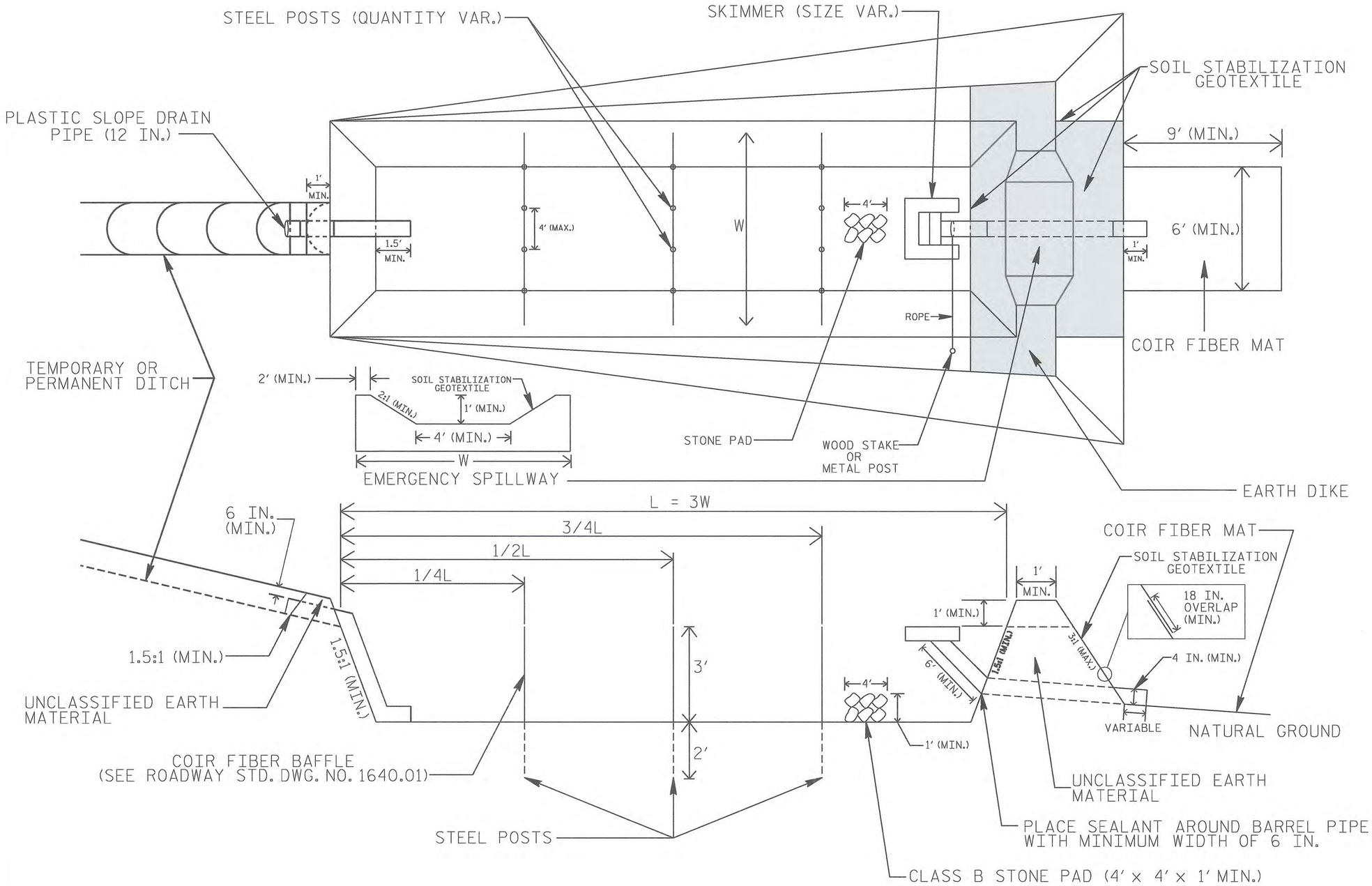
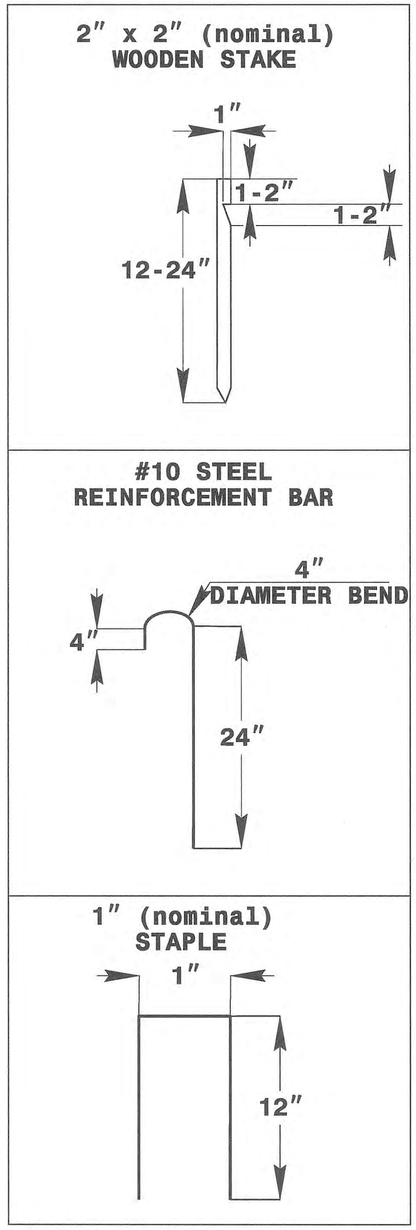
mjohnson1 at REN247778

PROJECT REFERENCE NO.	SHEET NO.
W-5209	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL





COIR FIBER MAT ANCHOR OPTIONS

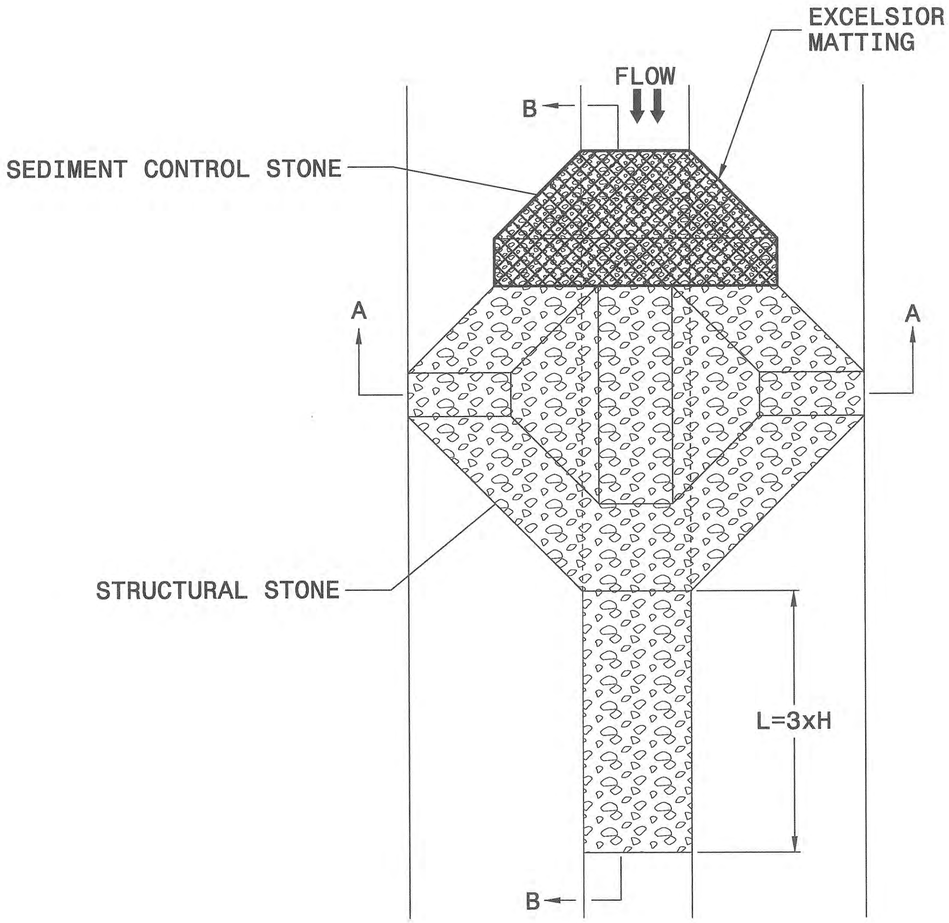
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE EMERGENCY SPILLWAY WEIR LENGTH (FT.) USING Q/0.8, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
6. SOIL STABILIZATION GEOTEXTILE FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
W-5209	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



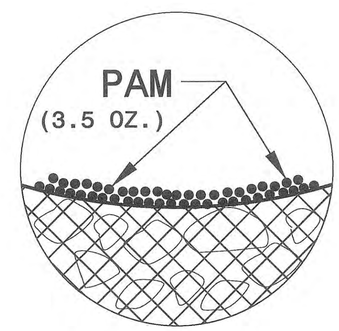
PLAN

NOTES

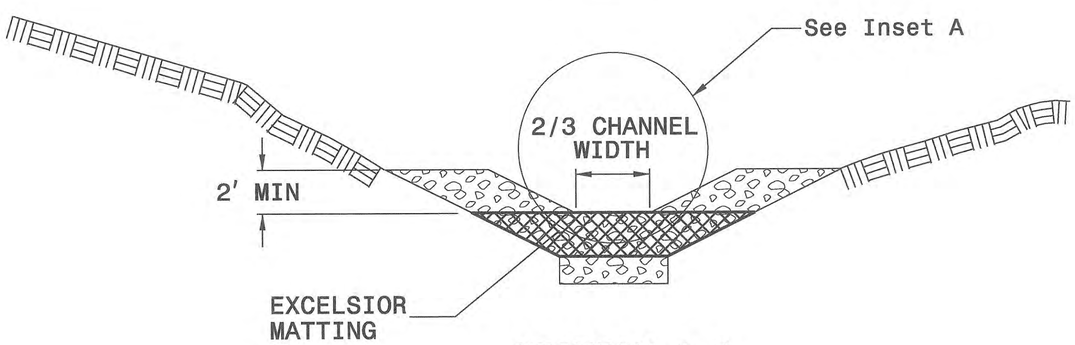
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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

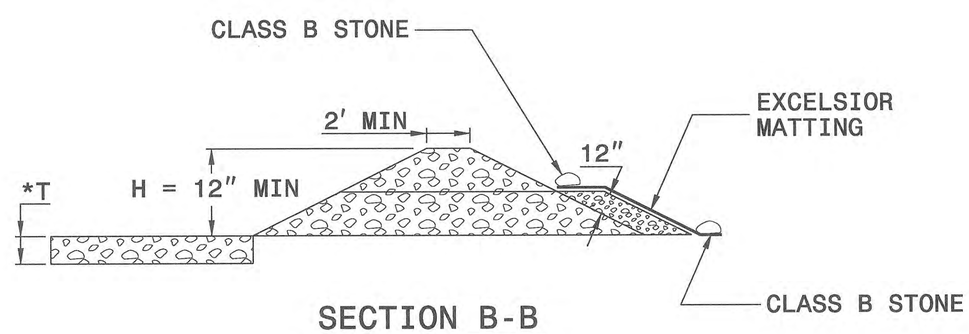
INITIALLY APPLY 3.5 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



SECTION B-B

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

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
W-5209	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-	14+50	17+00	LT	350
4	-L-	15+00	17+00	RT	280
4	-L-	17+00	21+50	LT	450
				SUBTOTAL	980
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					2420
				TOTAL	3500
				SAY	3500

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	19+50	20+00	RT	35
4	-Y-	10+00	10+50	RT	70
				SUBTOTAL	105
		ADDITIONAL PSRM TO BE INSTALLED			210
				TOTAL	315
				SAY	325

PROJECT REFERENCE NO.	SHEET NO.
W-5209	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.

8/17/99

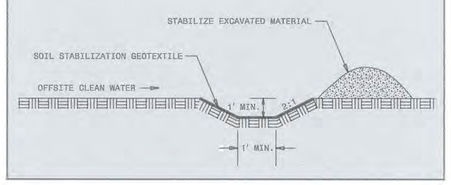
PROJECT REFERENCE NO.	SHEET NO.
W-5209	EC-4/CONST.5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 5

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

CLEAN WATER DIVERSION

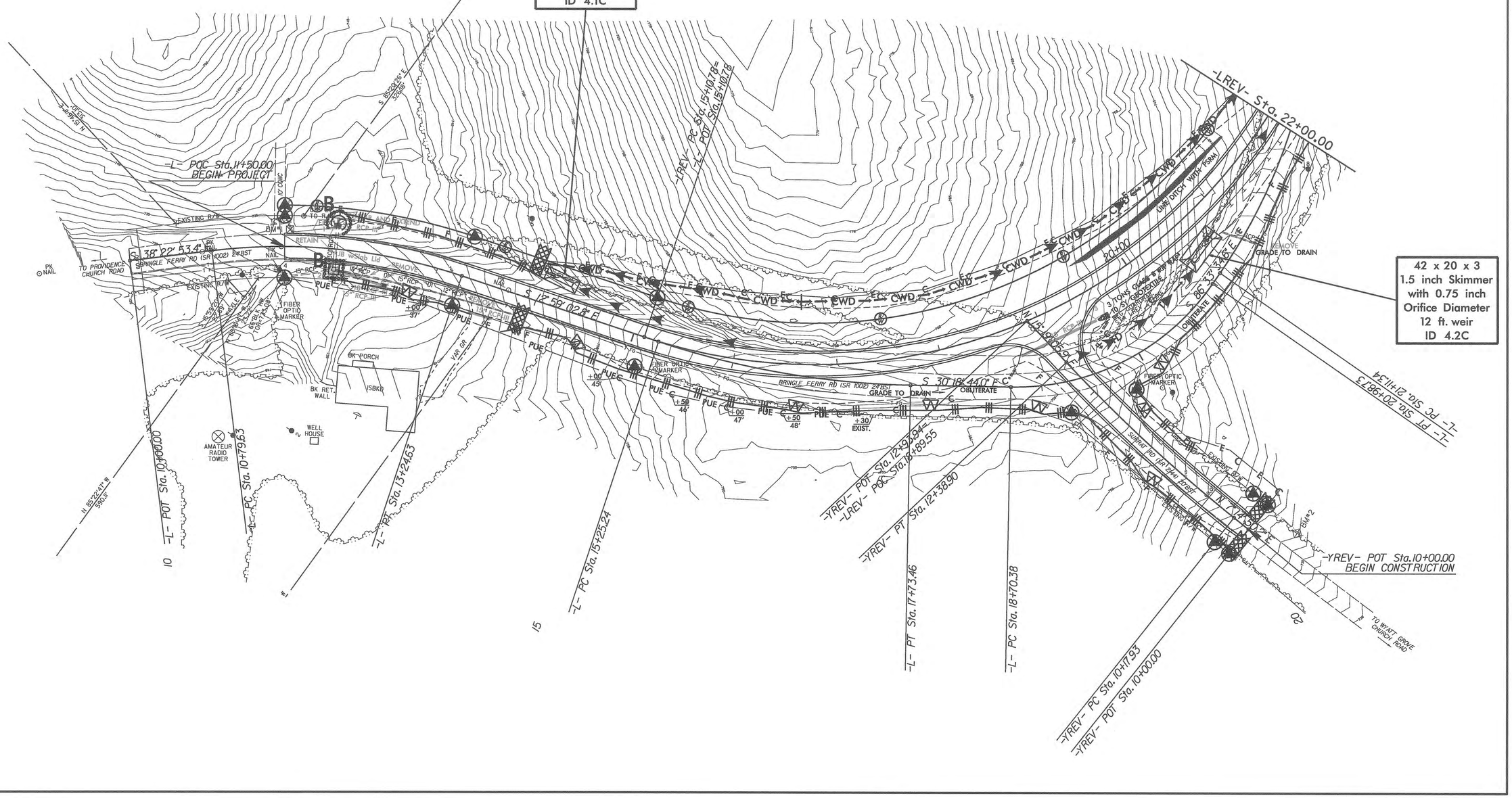
(Not to Scale)



NAD 83/ NSRS 2007

33 x 13 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
5 ft. weir
ID 4.1C

42 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
12 ft. weir
ID 4.2C



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C:\Users\johnd\Documents\Division Jobs\W-5209E\EC\Design\W5209_EC_psh_5.dgn
Updated: 11/14/18

8/17/99

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

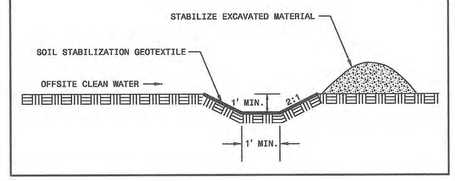
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 6

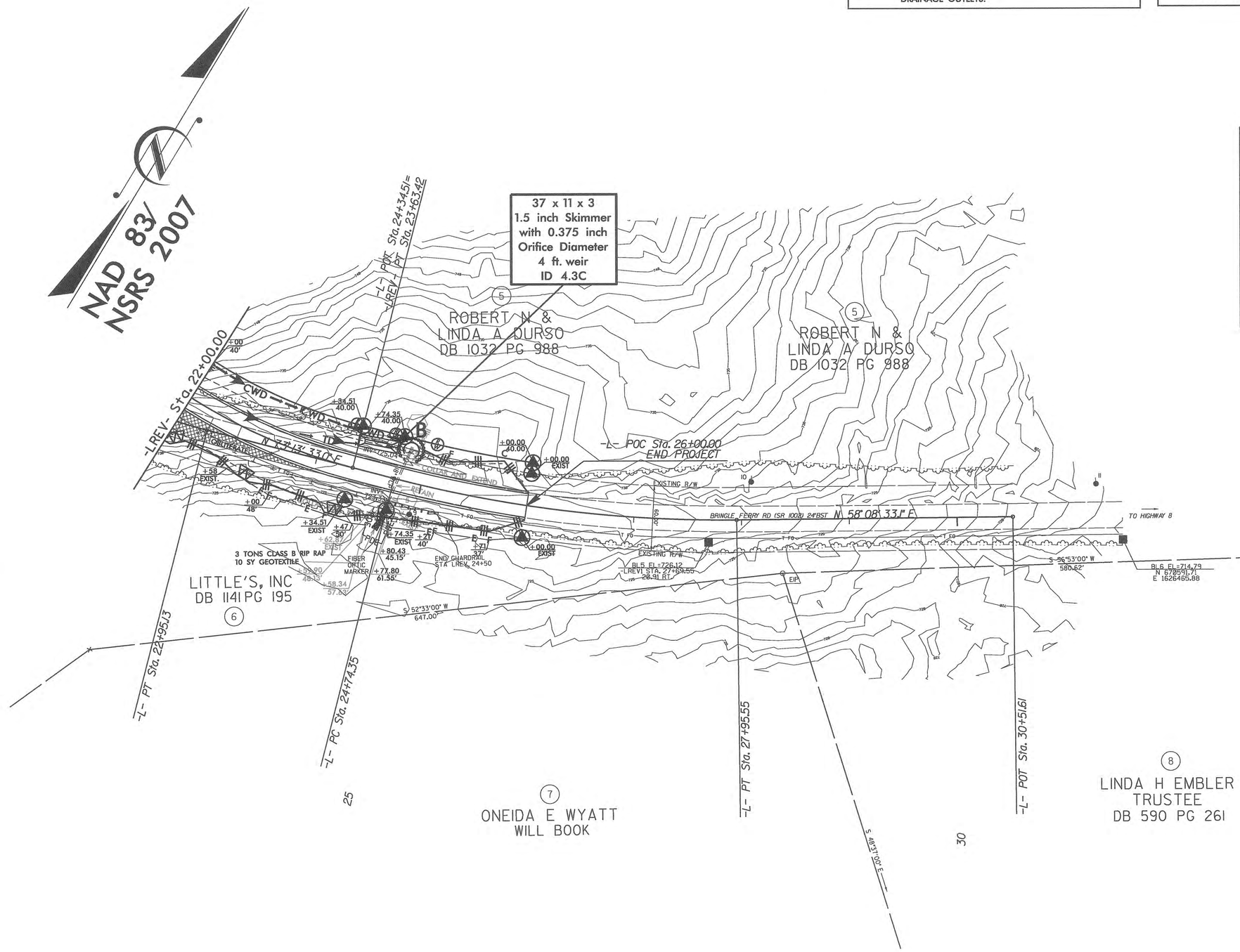
PROJECT REFERENCE NO.	SHEET NO.
W-5209	EC-5/CONST.6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEAN WATER DIVERSION

CWD → CWD → CWD → CWD → CWD → CWD →

(Not to Scale)





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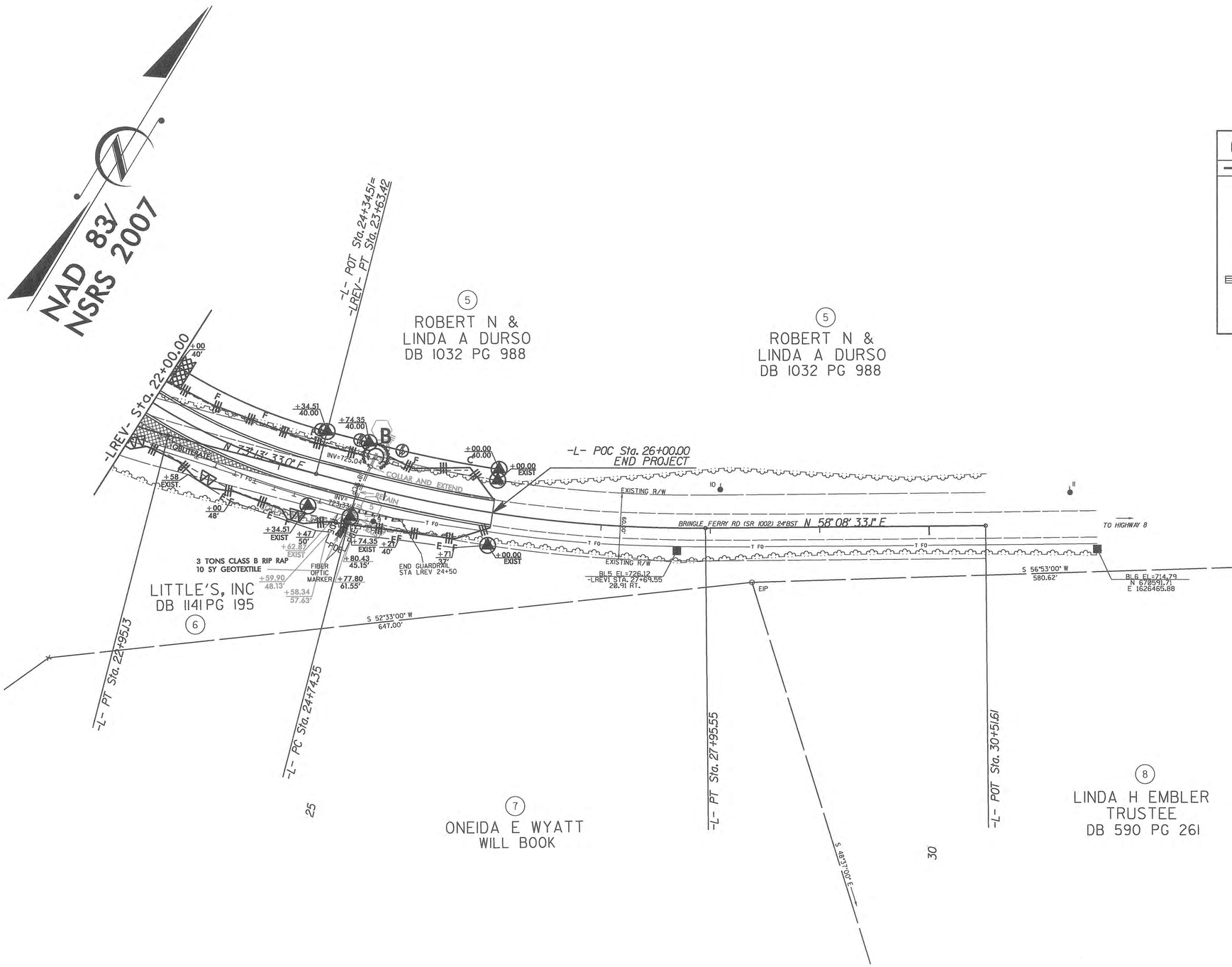
8/17/99

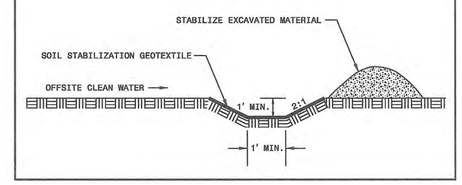
PROJECT REFERENCE NO.	SHEET NO.
W-5209	EC-7/CONST.6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



CLEAN WATER DIVERSION

CWD CWD CWD CWD CWD CWD CWD

(Not to Scale)



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w_chandler1 A1 R=NV2477/78

TIP NO.	SHEET NO.
W-5209E	SIGN-1

APPROVED: _____

DATE: _____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025499 ENGINEER WILLIAM A. BLANTON

3/14/13

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

SIGNING PLAN
ROWAN COUNTY

LOCATION: INTERSECTION OF SR 1002 (BRINGLE FERRY RD.) AND SR 2144 (SURRATT RD)

SUMMARY OF QUANTITIES

ITEM NO. DESC. NO.	ITEM NO. SECT. NO.	ITEM DESCRIPTION	QUANTITY	UNIT
4072000000	903	SUPPORTS, 3 LB STEEL U-CHANNEL	44	L.F.
4102000000	904	SIGN ERECTION, TYPE E	5	EA.
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	15	EA.

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
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS

GENERAL NOTES

- SIGNS FURNISHED BY STATE
- ALL TYPE 'D' SIGNS SHALL BE MOUNTED ON TWO U-CHANNEL POSTS UNLESS OTHERWISE INDICATED ON THE PLANS.
- ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
- WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.
- SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.
- IF REMOVAL OR RELOCATION OF SIGNS ON PRIVATE STREET (NON-STATE MAINTAINED) IS REQUIRED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL INFORM THE ENGINEER. THE WORK WILL BE COMPLETED BY OTHERS.
- THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.

(400) QUANTITY REQ'D _2_

35 M.P.H.

24" X 24"
W13-1E

SUPPLEMENTAL WARNING PLAQUE
(ATTACHED TO SAME POST AS 401 & 402)

(401) QUANTITY REQ'D _1_

36" X 36"
W1-2L

ONE "U" POST PER SIGN

(402) QUANTITY REQ'D _1_

STOP

36" X 36"
R1-1

ONE "U" POST PER SIGN

(403) QUANTITY REQ'D _1_

36" X 36"
W1-2R

ONE "U" POST PER SIGN

INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET AND SIGN DESIGN
SIGN-2	SIGN DETAIL SHEET
SIGN-3	SIGN DETAIL SHEET

PLAN PREPARED BY: N.C.D.O.T. DIVISION 9 DDC UNIT

WILLIAM A. BLANTON DIVISION 9 DDC ENGINEER

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P.: W-5209E

CONTRACT: DI00029

13-MAR-2013 16:40
S:\DDC\2011 Bringle Ferry\signing\w5209e_sgn_sht1.dgn
ashton
ATTB: ACD02883.cel

TIP NO.	SHEET NO.
W-52909E	SIGN-2

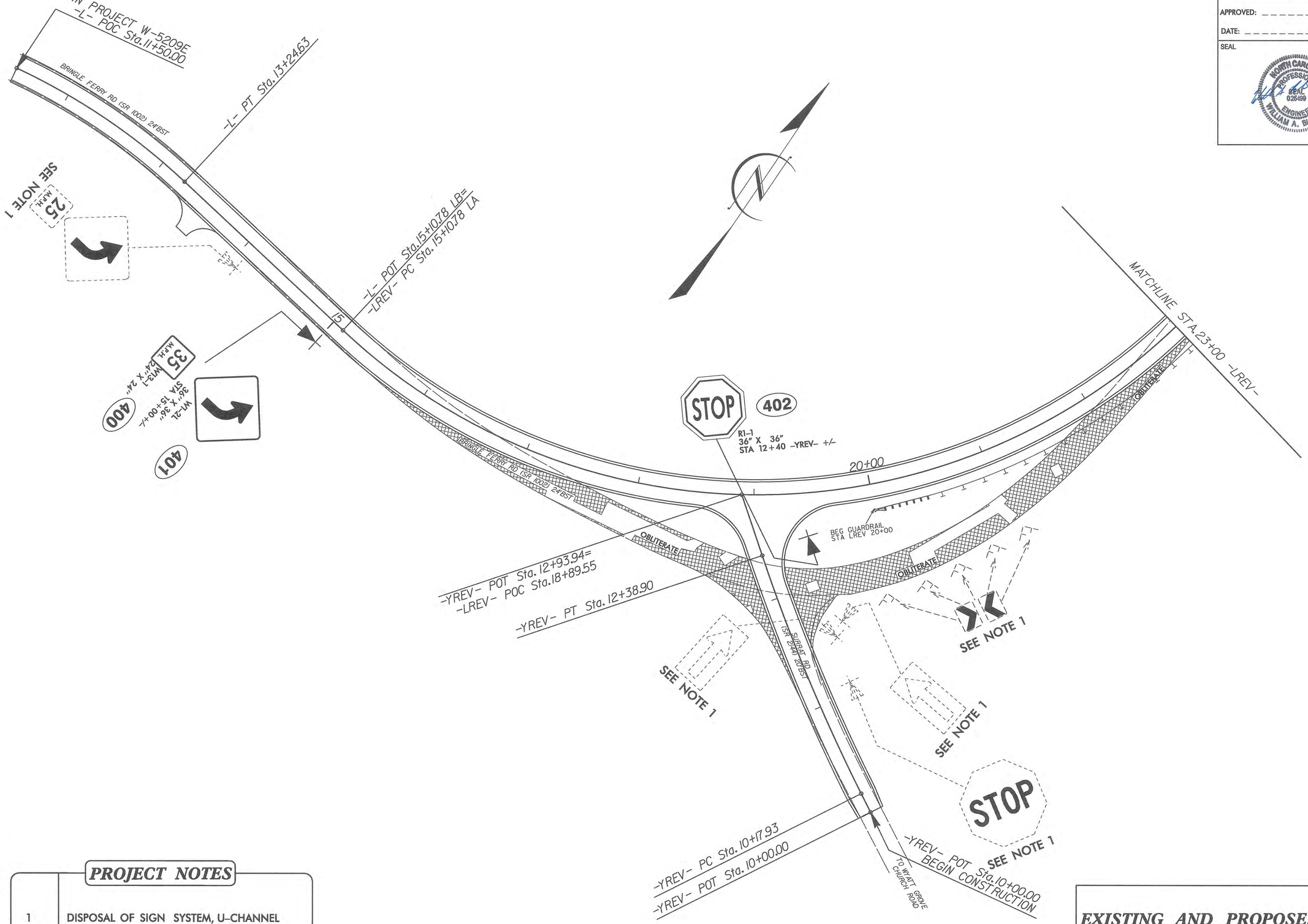
APPROVED: _____

DATE: _____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025499 ENGINEER WILLIAM A. BLANTON

3/14/13



PROJECT NOTES

1	DISPOSAL OF SIGN SYSTEM, U-CHANNEL

EXISTING AND PROPOSED SIGNS

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TIP NO.	SHEET NO.
W-52909E	SIGN-3

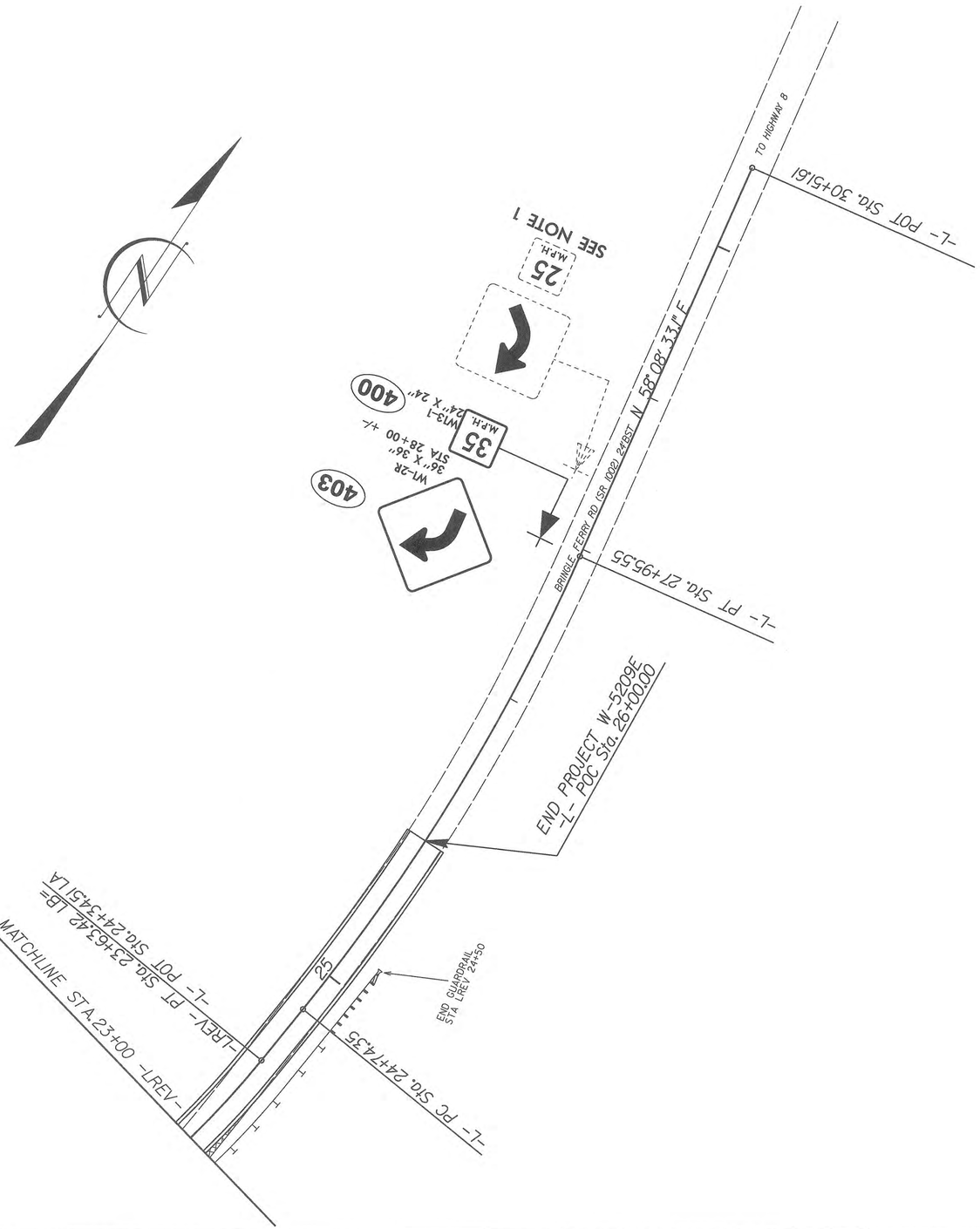
APPROVED: _____

DATE: _____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 025499 ENGINEER WILLIAM A. BLANTON

3/14/13



PROJECT NOTES

1	DISPOSAL OF SIGN SYSTEM, U-CHANNEL

EXISTING AND PROPOSED SIGNS

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