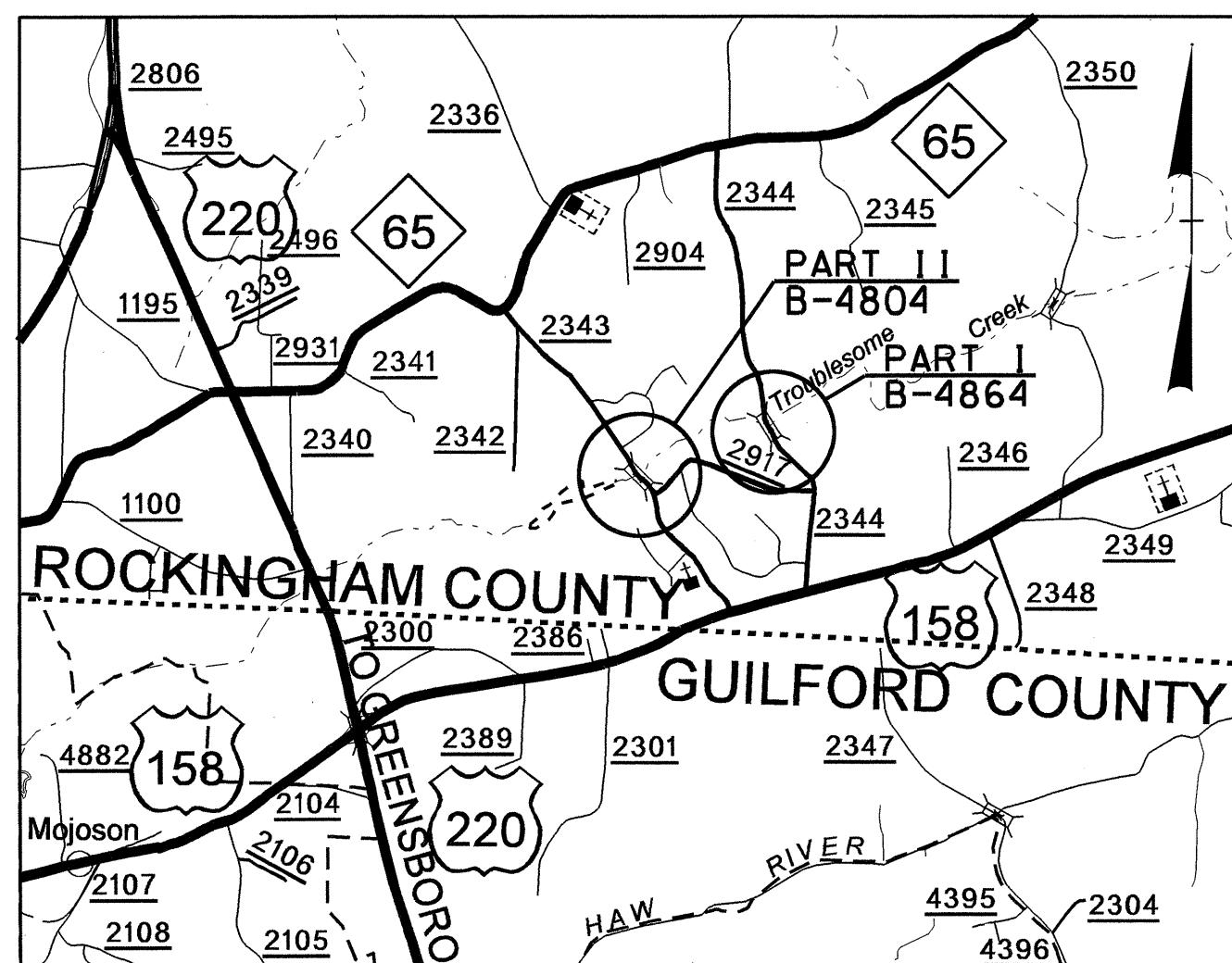


See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4864 /B-4804	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
41553.1.1	BRZ-2344(1)	B-4864 P.E.	
38574.1.1	BRZ-2343(2)	B-4804 P.E.	
41553.2.1	BRZ-2344(1)	B-4864 R/W,UTIL.	
38574.2.1	BRZ-2343(2)	B-4804 R/W,UTIL.	
38574.3.1	BRZ-2343(2)	B-4864 CONST.	
38574.3.1	BRZ-2343(2)	B-4804 CONST.	

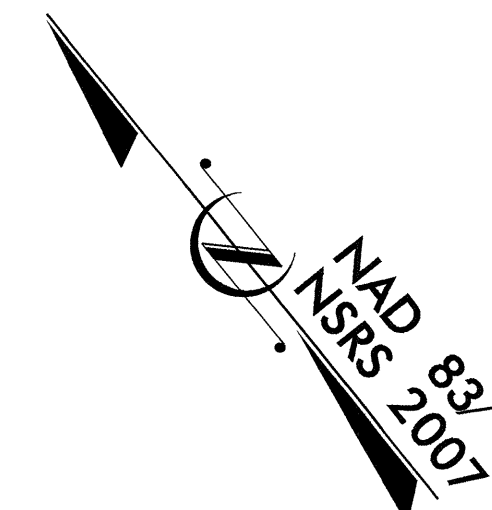
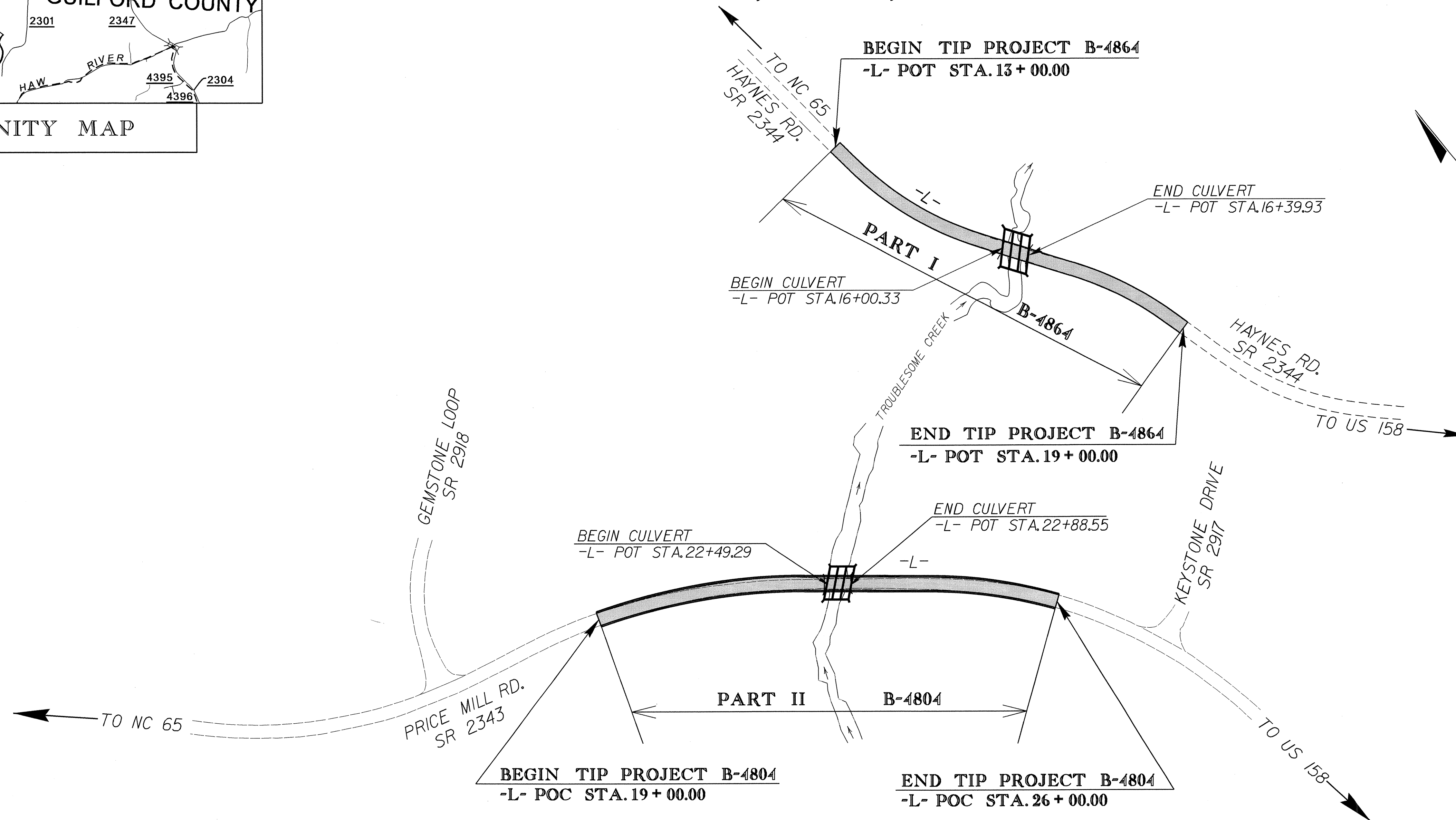
TIP PROJECTS: B-4864 /B-4804



VICINITY MAP

ROCKINGHAM COUNTY

**LOCATION: BRIDGE NO.13 OVER TROUBLESOME CREEK ON SR 2344
BRIDGE NO.12 OVER TROUBLESOME CREEK ON SR 2343**
TYPE OF WORK: GRADING, DRAINAGE, PAVING AND CULVERTS



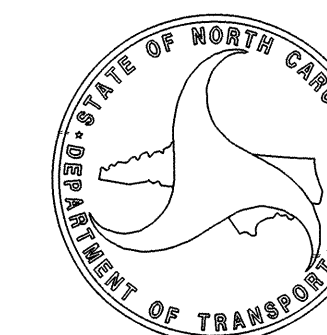
CONTRACT: C203040

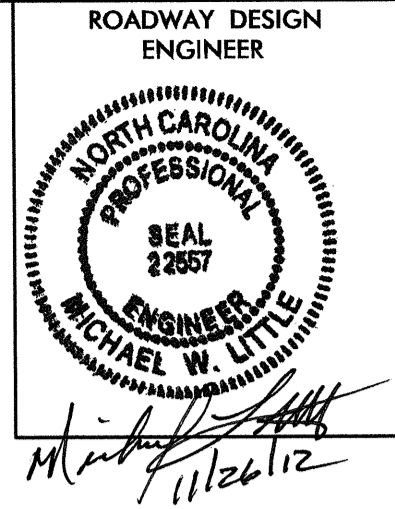
PROJECT LENGTH

LENGTH ROADWAY TIP PROJECTS B-4864 /B-4804 = 0.232 MI.
LENGTH STRUCTURE TIP PROJECTS B-4864 /B-4804 = 0.015 MI.
TOTAL LENGTH OF TIP PROJECTS B-4864 /B-4804 = 0.247 MI.

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr.
Raleigh, NC 27610
2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: B-4864: JANUARY 4, 2012
RIGHT OF WAY DATE: B-4804: JANUARY 4, 2012
LETTING DATE: FEBRUARY 19, 2013





SHEET NUMBER	SHEET
1	TITLE SHEET (B-4864 / B-4804)
1-A	INDEX OF SHEETS, GENERAL NOTES AND LIST OF STANDARD DRAWINGS (B-4864 / B-4804)
2	CONVENTIONAL SYMBOLS
3	SUMMARY OF QUANTITIES (B-4864 / B-4804)
PART I	
1	TITLE SHEET (B-4864)
1-A	SURVEY CONTROL SHEET
2	TYPICAL SECTIONS
3-A	SUMMARIES OF DRAINAGE, GUARDRAIL AND PAVEMENT REMOVAL
3-B	SUMMARY OF EARTHWORK
4	PLAN AND PROFILE SHEET
TMP-1 THRU TMP-3	TRANSPORTATION MANAGEMENT PLANS
SD-1	SPECIAL SIGN DESIGN
PMP-1	PAVEMENT MARKING PLAN
EC-1 THRU EC-6	EROSION CONTROL PLANS
RF-1	REFORESTATION SHEET
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
X-1A	CROSS-SECTION SUMMARY SHEET
X-1 THRU X-3	CROSS-SECTIONS
C-1 THRU C-7	CULVERT PLANS
PART II	
1	TITLE SHEET (B-4804)
1-A	SURVEY CONTROL SHEET
2	TYPICAL SECTIONS
3-A	SUMMARIES OF GUARDRAIL AND PAVEMENT REMOVAL
3-B	SUMMARY OF EARTHWORK
4	PLAN SHEET
5	PROFILE SHEET
PMP-1	PAVEMENT MARKING PLAN
EC-1 THRU EC-6	EROSION CONTROL PLANS
RF-1	REFORESTATION SHEET
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
X-1A	CROSS-SECTION SUMMARY SHEET
X-1 THRU X-5	CROSS-SECTIONS
C-8 THRU C-15	CULVERT PLANS

GENERAL NOTES: 2012 SPECIFICATIONS
EFFECTIVE: 01-17-12
REVISED: 07-30-12

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 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.

SHOULDER CONSTRUCTION:
ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01.

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.

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.

TEMPORARY SHORING:
SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE:
DUKE ENERGY - POWER
TIME WARNER CABLE - TELEVISION
WILLIAMS TRANSCO - GAS (TRANSMISSION)
LEVEL 3 - TELEPHONE
AT&T - TELEPHONE
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

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

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	
200.02	Method of Clearing - Method II
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
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 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

04/16/11

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	○
Property Corner	✕
Property Monument	□
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	-----
Proposed Wetland Boundary	-----
Existing Endangered Animal Boundary	-----
Existing Endangered Plant Boundary	-----
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	-----
Buffer Zone 1	-----
Buffer Zone 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	-----
VEGETATION:	
Single Tree	○
Single Shrub	○
Hedge	-----
Woods Line	-----

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	AATUR
End of Information	E.O.I.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203040

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0043000000-N	226	Lump Sum		GRADING
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING
0057000000-E	226	600	CY	UNDERCUT EXCAVATION
0134000000-E	240	80	CY	DRAINAGE DITCH EXCAVATION
0195000000-E	265	600	CY	SELECT GRANULAR MATERIAL
0196000000-E	270	800	SY	GEOTEXTILE FOR SOIL STABILIZATION
0318000000-E	300	20	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES
0320000000-E	300	50	SY	FOUNDATION CONDITIONING GEOTEXTILE
0344000000-E	310	136	LF	18" SIDE DRAIN PIPE
0995000000-E	340	61	LF	PIPE REMOVAL
1220000000-E	545	100	TON	INCIDENTAL STONE BASE
1330000000-E	607	460	SY	INCIDENTAL MILLING
1489000000-E	610	1,100	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1519000000-E	610	350	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B
1525000000-E	610	400	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A
1575000000-E	620	97	TON	ASPHALT BINDER FOR PLANT MIX
2000000000-N	806	32	EA	RIGHT OF WAY MARKERS
3030000000-E	862	775	LF	STEEL BM GUARDRAIL
3150000000-N	862	10	EA	ADDITIONAL GUARDRAIL POSTS
3165000000-N	SP	8	EA	GUARDRAIL ANCHOR UNITS, TYPE ***** (350 TL-2)
3628000000-E	876	260	TON	RIP RAP, CLASS 1
3649000000-E	876	90	TON	RIP RAP, CLASS B
3656000000-E	876	1,170	SY	GEOTEXTILE FOR DRAINAGE
4400000000-E	1110	537	SF	WORK ZONE SIGNS (STATIONARY)

SUMMARY OF QUANTITIES - B-4864/B-4804

ItemNumber	Sec #	Quantity	Unit	Description
4410000000-E	1110	188	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4445000000-E	1145	160	LF	BARRICADES (TYPE III)
4810000000-E	1205	7,800	LF	PAINT PAVEMENT MARKING LINES (4")
6000000000-E	1605	2,100	LF	TEMPORARY SILT FENCE
6006000000-E	1610	450	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	220	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	275	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	5	ACR	TEMPORARY MULCHING
6018000000-E	1620	200	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	2.75	TON	FERTILIZER FOR TEMPORARY SEEDING
6024000000-E	1622	600	LF	TEMPORARY SLOPE DRAINS
6029000000-E	SP	1,000	LF	SAFETY FENCE
6030000000-E	1630	700	CY	SILT EXCAVATION
6036000000-E	1631	11,600	SY	MATTING FOR EROSION CONTROL
6037000000-E	SP	590	SY	COIR FIBER MAT
6038000000-E	SP	175	SY	PERMANENT SOIL REINFORCEMENT MAT
6042000000-E	1632	560	LF	1/4" HARDWARE CLOTH
6069000000-E	1638	50	CY	STILLING BASINS
6070000000-N	1639	5	EA	SPECIAL STILLING BASINS
6071010000-E	SP	225	LF	WATTLE
6071012000-E	SP	90	LF	COIR FIBER WATTLE
6071020000-E	SP	85	LB	POLYACRYLAMIDE (PAM)
6071030000-E	1640	485	LF	COIR FIBER BAFFLE
6071050000-E	SP	6	EA	*** SKIMMER (1-1/2")
6084000000-E	1660	5	ACR	SEEDING & MULCHING
6087000000-E	1660	2.5	ACR	MOWING

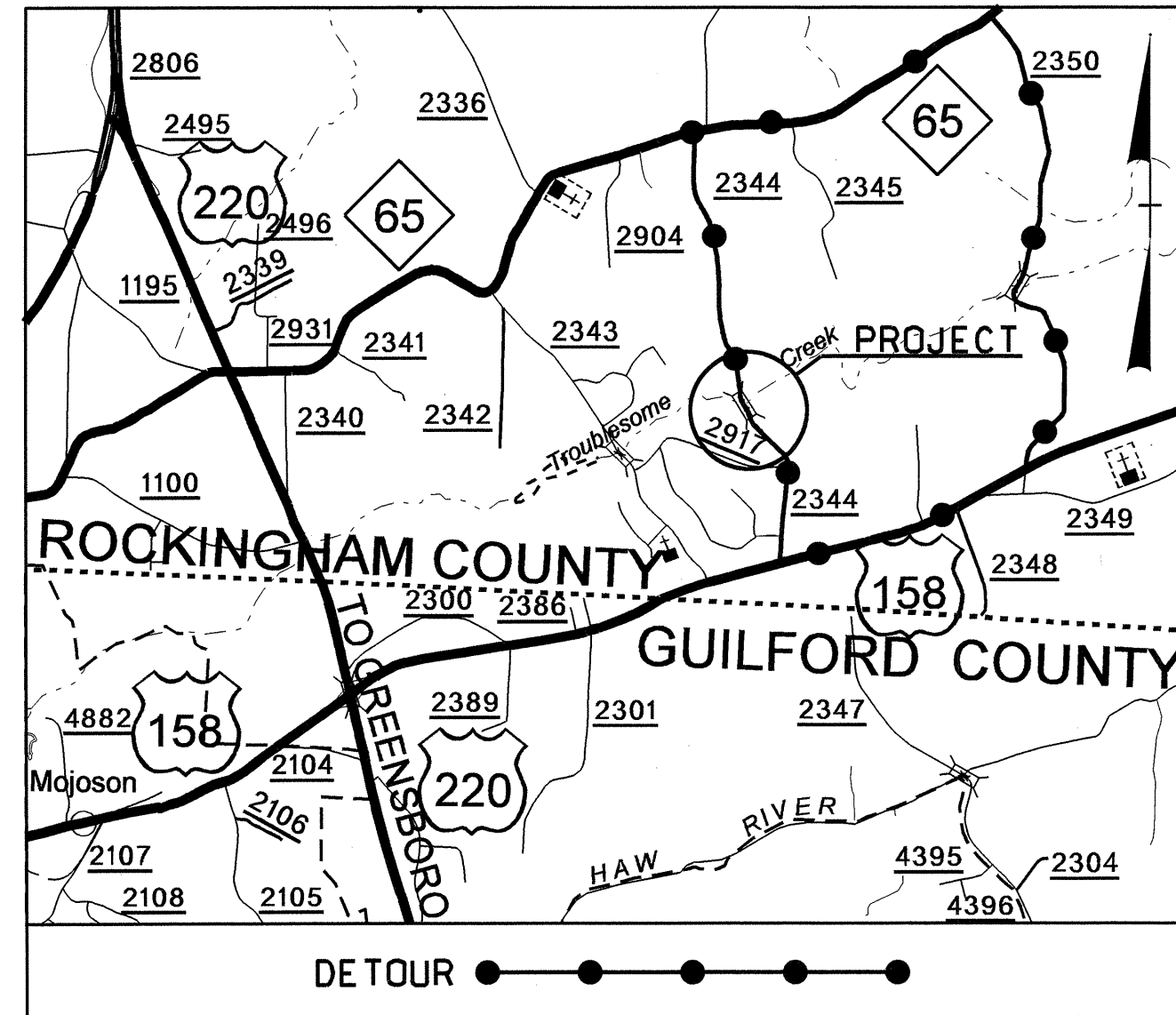
ItemNumber	Sec #	Quantity	Unit	Description
6090000000-E	1661	100	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	0.5	TON	FERTILIZER FOR REPAIR SEEDING
6096000000-E	1662	125	LB	SEED FOR SUPPLEMENTAL SEEDING
6108000000-E	1665	3.25	TON	FERTILIZER TOPDRESSING
6111000000-E	SP	570	LF	IMPERVIOUS DIKE
6114500000-N	1667	20	MHR	SPECIALIZED HAND MOWING
6117000000-N	SP	36	EA	RESPONSE FOR EROSION CONTROL
6123000000-E	1670	0.2	ACR	REFORESTATION

See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4864	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
41553.1.1	BRZ-2344(1)	PE	
41553.2.1	BRZ-2344(1)	ROW & UTIL.	
38574.3.1	BRZ-2343(2)	CONST.	

TIP PROJECT: B-4864

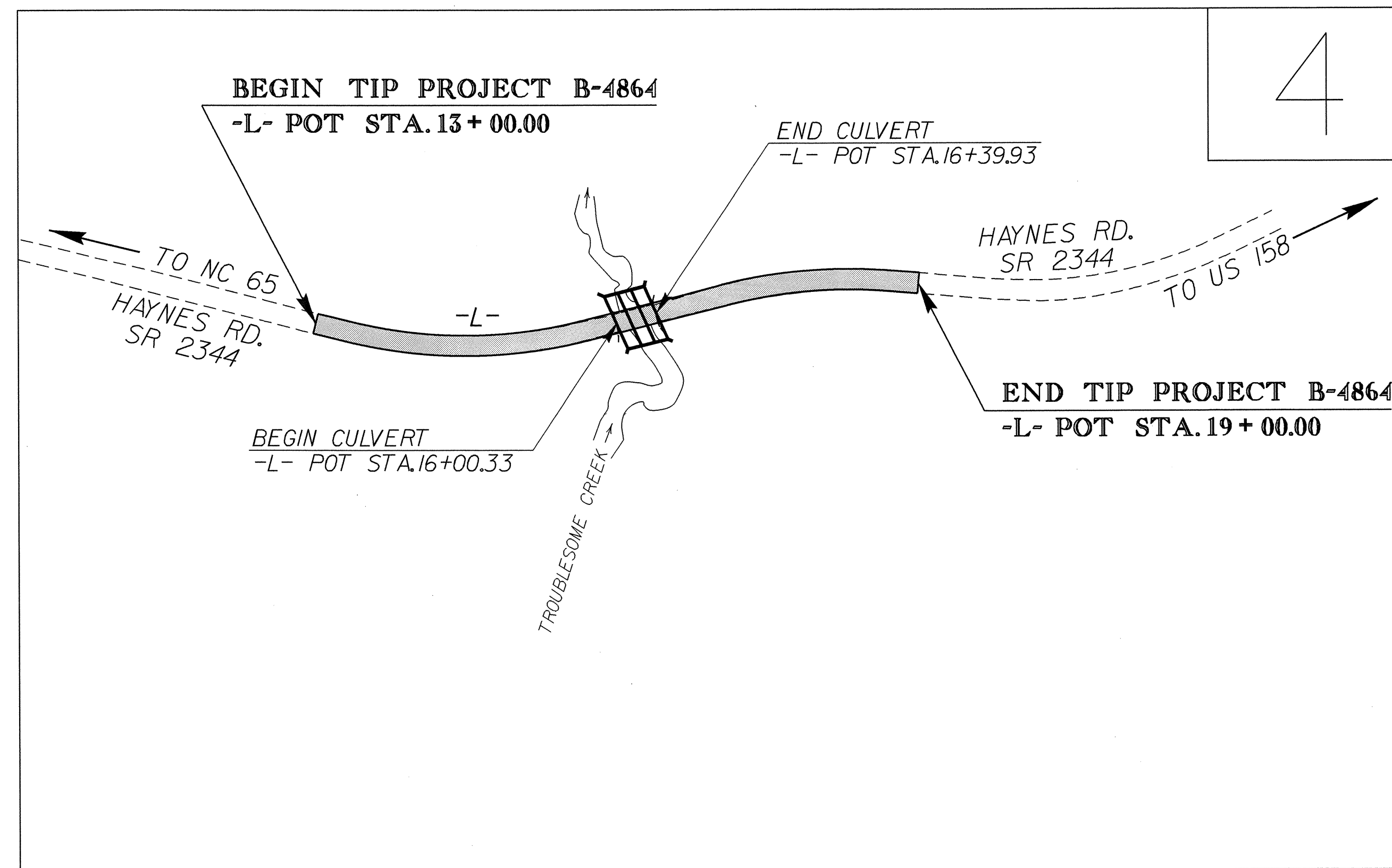
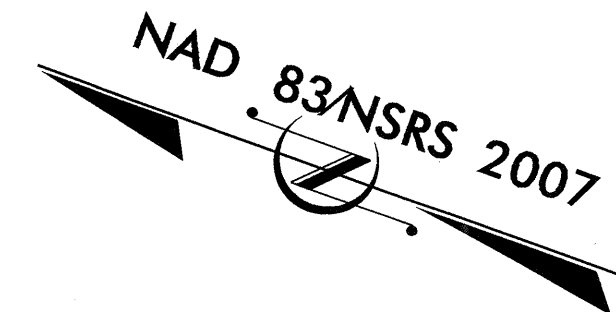


VICINITY MAP

ROCKINGHAM COUNTY

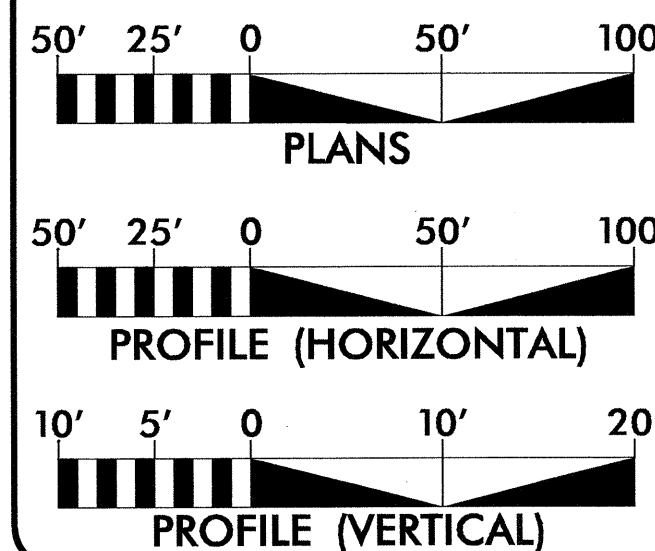
LOCATION: BRIDGE NO.13 OVER TROUBLESOME CREEK ON SR 2344

TYPE OF WORK: GRADING, PAVING, DRAINAGE AND CULVERT



CONTRACT:

GRAPHIC SCALES



DESIGN DATA

ADT 2013 = 1,540
ADT 2035 = 2,800
DHV = 10%
D = 60%
T = 3% *
V = 35 MPH
FUNC. CLASS. = LOCAL
* TTST 1% DUAL 2%
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4864 = 0.106 MI.
LENGTH STRUCTURE TIP PROJECT B-4864 = 0.008 MI.
TOTAL LENGTH OF TIP PROJECT B-4864 = 0.114 MI.

Prepared in the Office of:
DIVISION OF HIGHWAYS

1000 Birch Ridge Dr.
Raleigh, NC 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JANUARY 4, 2012

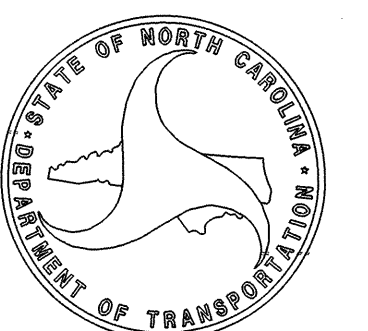
LETTING DATE:
FEBRUARY 19, 2013

REKHA PATEL, P.E.
PROJECT ENGINEER

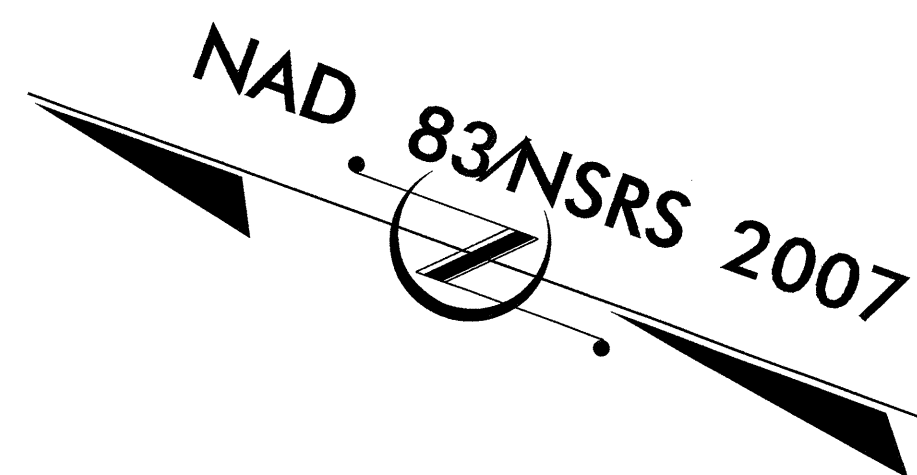
MICHAEL W. LITTLE, P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

Professional Engineer seals and signatures for:
1. KAREN H. GULLICKSON, P.E. (Seal 31025)
2. ROADWAY DESIGN ENGINEER (Seal 22557)
3. MICHAEL W. LITTLE, P.E. (Seal 22557)



B-4864 SURVEY CONTROL SHEET



BEGIN STATE PROJECT B-4864

-L- STA. 13 + 00.00

BM3
ELEV = 833.54

NCDOT BASELINE
STATION "BL-3"
N = 917443.9380
E = 1737618.4410

BM2
ELEV = 783.36

NCDOT BASELINE
STATION "BL-5"
N = 916404.8200
E = 1737935.1950

NCDOT BASELINE
STATION "BL-6"
N = 916515.7600
E = 1738047.2910

TO NC 65

SR 2344 (HAYNES RD.)

TO US 158

NCDOT BASELINE
STATION "BL-4"
N = 916856.8330
E = 1737675.2110

TROUBLESOME CREEK

END STATE PROJECT B-4864

-L- STA. 19 + 00.00

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4864-2" WITH NAD 83 / NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 917872.4310(++) EASTING: 1737521.6870(++) ELEVATION: 852.57' (++)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99999441

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4864-2" TO -L- STATION 13+00.00 IS S 8°28'59" 843.48 ft

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NGVD 29

BASILINE DATA

BL	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
3			917443.9380	1737618.4410	824.85	OUTSIDE PROJECT LIMITS	
4			916856.8330	1737675.2110	793.63	14+81.56	13.79 RT
5			916404.8200	1737935.1950	811.98	20+02.96	23.83 LT
6			916151.5760	1738047.2910	826.84	OUTSIDE PROJECT LIMITS	

BENCHMARK DATA

 BM1 ELEVATION = 852.57
 N 917872 E 1737522
 L STATION 22+64.00
 N 17°46'57.95" W DIST 1770.28

 BM2 ELEVATION = 783.36
 N 916856 E 1737858
 L STATION 15+83.00 144 LEFT

 BM3 ELEVATION = 833.54
 N 915978 E 1738255
 L STATION 22+64.00
 S 42°45'14.97" E DIST 283.74

R/W MONUMENTS

ALIGN	STATION	OFFSET	NORTH	EAST
L	13+50.00	30.00	916984.2777	1737621.9630
L	14+00.00	40.00	916929.6994	1737622.4775
L	14+40.00	-30.00	916910.8321	1737701.0157
L	15+65.82	-75.00	916830.8901	1737790.7405
L	15+65.82	-60.00	916822.4806	1737778.3196
L	17+08.40	-75.00	916712.8224	1737870.6773
L	17+08.40	-45.00	916696.0057	1737845.8338
L	17+08.40	45.00	916645.5464	1737771.3096
L	17+08.40	80.00	916625.9242	1737742.3274
L	15+65.82	80.00	916743.9918	1737662.3906
L	15+65.82	60.00	916755.2045	1737678.9519
L	18+00.00	-45.00	916608.6776	1737893.9454
L	18+00.00	-30.00	916602.6716	1737880.2003
L	18+00.00	30.00	916578.6474	1737825.2200
L	18+00.00	45.00	916572.6413	1737811.4749

L			
TYPE	STATION	NORTH	EAST
POT	10+00.00	917336.5189	1737614.6290
PC	13+33.07	917005.2855	1737649.5899
PT	15+65.82	916788.8425	1737728.6357
PC	17+08.40	916670.7749	1737808.5725
PT	18+70.40	916524.3841	1737876.2706
PC	19+73.41	916425.1328	1737903.8636
PT	22+19.42	916217.3129	1738029.7130
POT	22+64.14	916186.7310	1738062.3467

NOTES

- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTP://WWW.DOH.DOT.STATE.NC.US/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/](http://www.doh.dot.state.nc.us/preconstruct/highway/location/project/)
 THE FILES TO BE FOUND ARE AS FOLLOWS:
 b4864_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.
 NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)

NOTE: DRAWING NOT TO SCALE

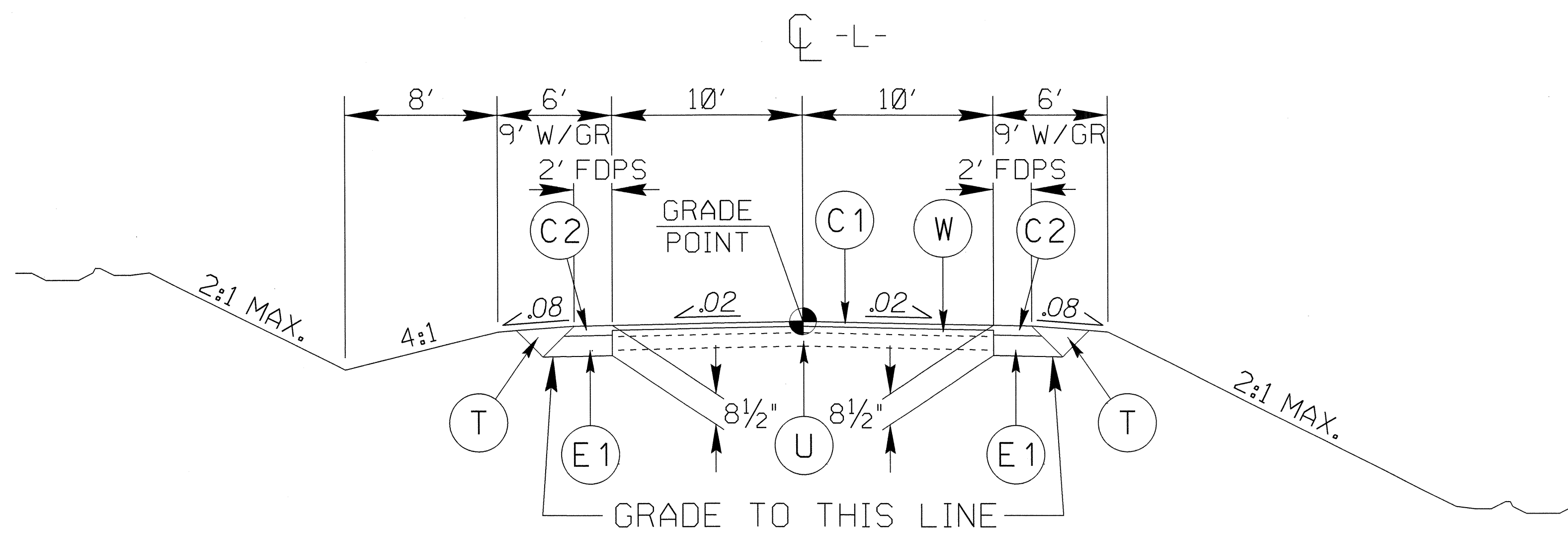
6/2/99

PAVEMENT SCHEDULE

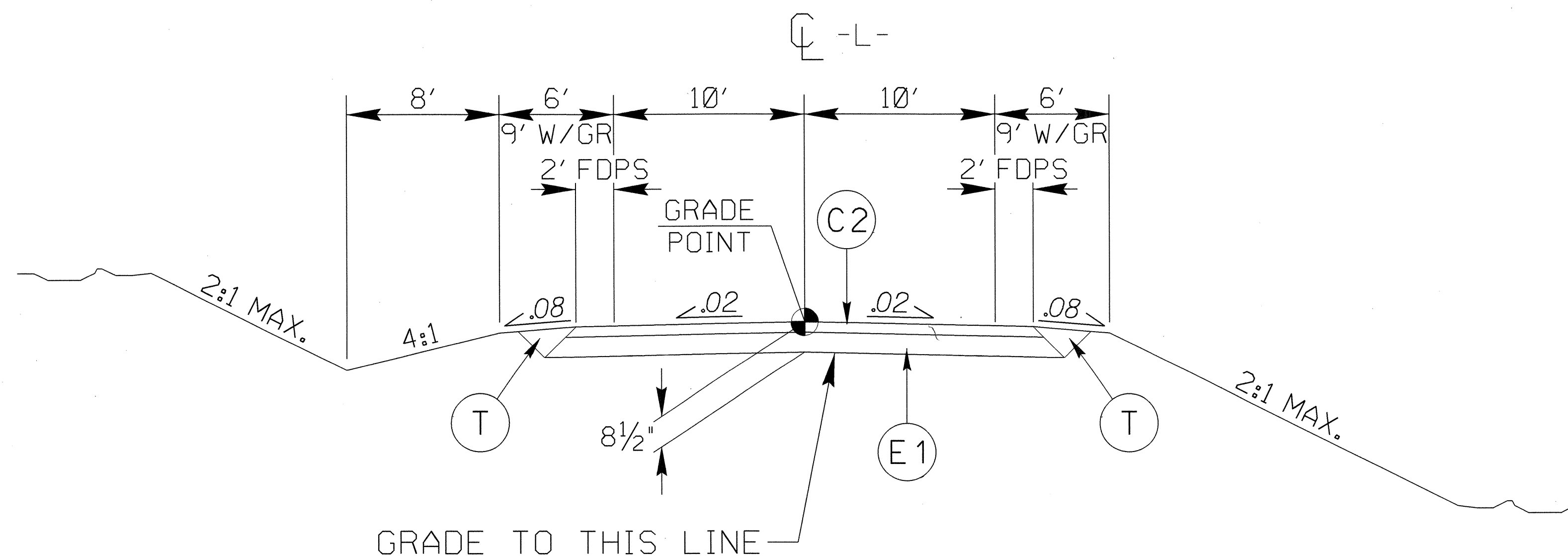
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	T	EARTH MATERIAL
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	U	EXISTING PAVEMENT
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)
E1	PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.		
E2	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 4" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH		

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

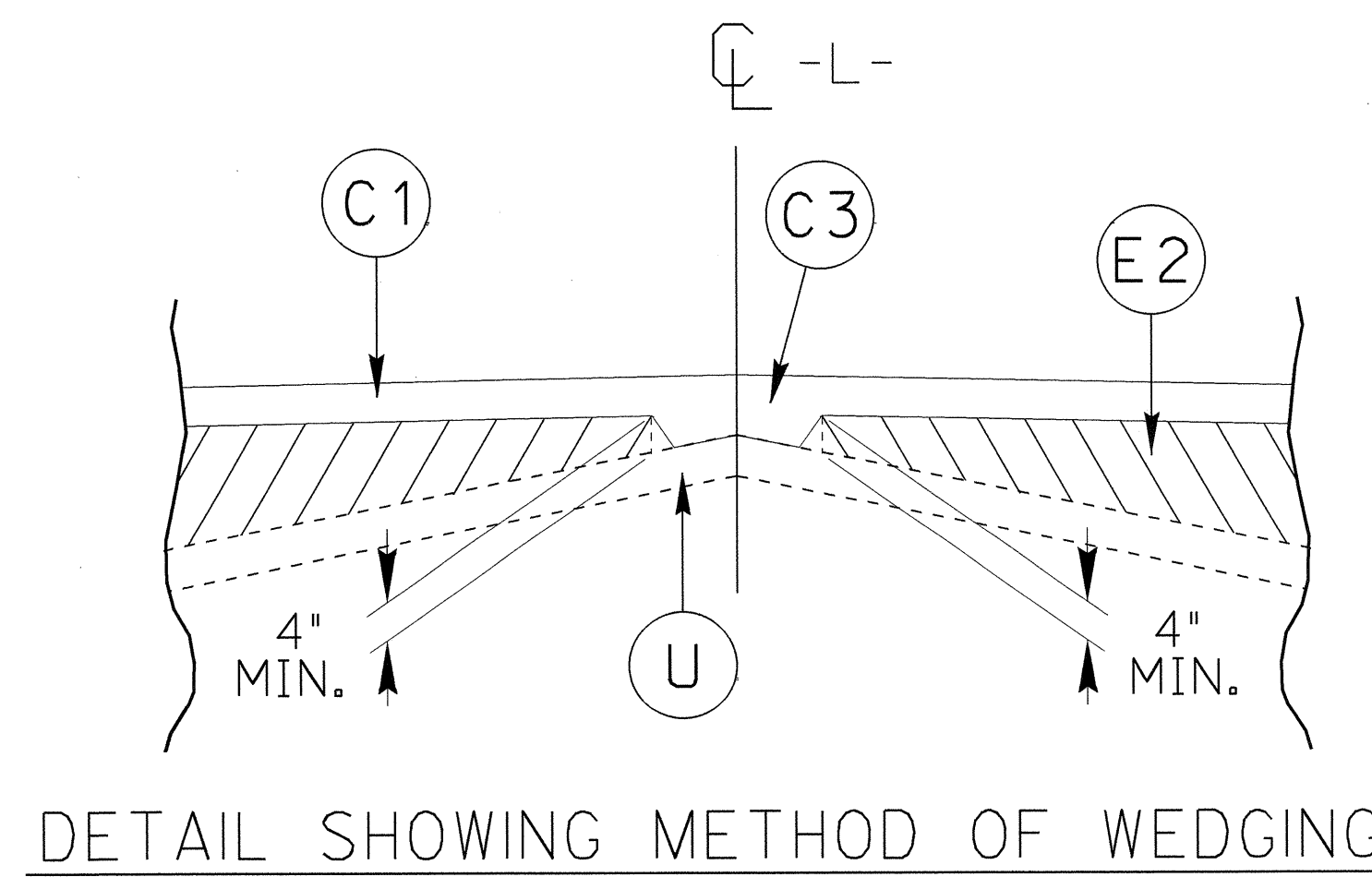
PROJECT REFERENCE NO. B-4864	SHEET NO. 2
ROADWAY DESIGN ENGINEER MICHAEL W. LITTLE NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22551 11/26/12	PAVEMENT DESIGN ENGINEER CLARK S. MORRISON NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22898 11/24/12



TYPICAL SECTION NO. 1



TYPICAL SECTION NO. 2



DETAIL SHOWING METHOD OF WEDGING

USE TYPICAL SECTION NO. 1

-L- STA. 13+50.00 TO -L- STA. 14+00.00
-L- STA. 18+00.00 TO -L- STA. 18+50.00

NOTES: (1) TRANSITION FROM EXISTING TO T.S. NO. 1
-L- STA. 13+00.00 TO -L- STA. 13+50.00
(2) TRANSITION FROM T.S. NO. 1 TO EXISTING
-L- STA. 18+50.00 TO -L- STA. 19+00.00

USE TYPICAL SECTION NO. 2

-L- STA. 14+00.00 TO -L- STA. 18+00.00

15 NOV 2012 08:51 \\s4864-rdy-tup.dgn

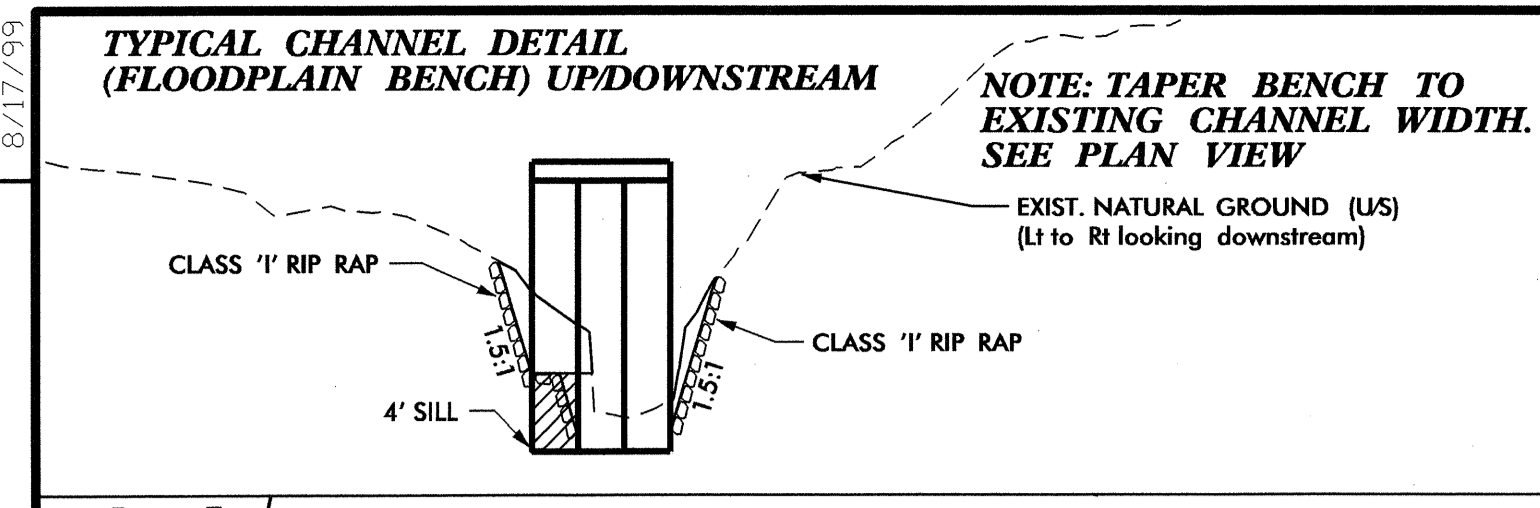
SUMMARY OF EARTHWORK
 IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
-L- STA. 13+00.00 TO -L- STA. 19+00.00	209		1,519	1,310	0
PROJECT B-4864 SUBTOTAL	209		1,519	1,310	0
-L- STA. 19+00.00 TO -L- STA. 26+00.00	276		2,560	2,284	0
PROJECT B-4804 SUBTOTAL	276		2,560	2,284	0
COMBINED PROJECTS B-4864 / B-4804 SUBTOTALS	485		4,079	3,594	0
COMBINED PROJECTS B-4864 / B-4804 TOTALS	485		4,079	3,594	0
EST. 5% TO REPLACE TOPSOIL ON BORROW PIT				180	
GRAND TOTAL	485			3,774	0
SAY	550 CY			3,900 CY	

PER GEOTECH RECOMMENDATION (B-4864), ESTIMATED 300 CUBIC YARDS OF UNDERCUT TO BE USED AT THE DISCRETION OF THE RESIDENT ENGINEER
 PER GEOTECH RECOMMENDATION (B-4804), ESTIMATED 300 CUBIC YARDS OF UNDERCUT TO BE USED AT THE DISCRETION OF THE RESIDENT ENGINEER
 EST. DDE = 80 CY

NOTE: Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

NOTE: Approximate quantities only. Unclassified excavation, fine grading, borrow, clearing and grubbing, and removal of existing pavement will be paid for at the lump sum price for "Grading".



PI Sta 14+51.83 Δ = 28°04' 28.3" (LT) D = 12'03' 44.2" L = 232.75' T = 118.76' R = 475.00' S.E. = SEE PLANS

PI Sta 17+90.12 Δ = 18°33' 47.3" (RT) D = 11'27' 33.0" L = 161.99' T = 81.71' R = 500.00' S.E. = SEE PLANS

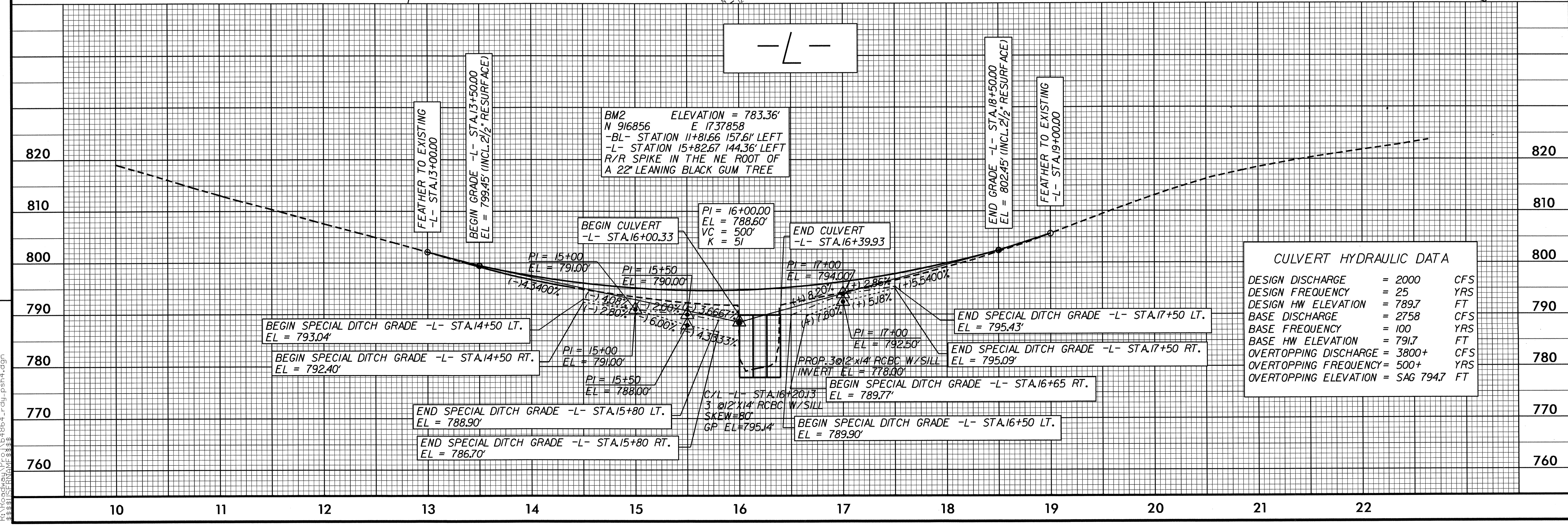
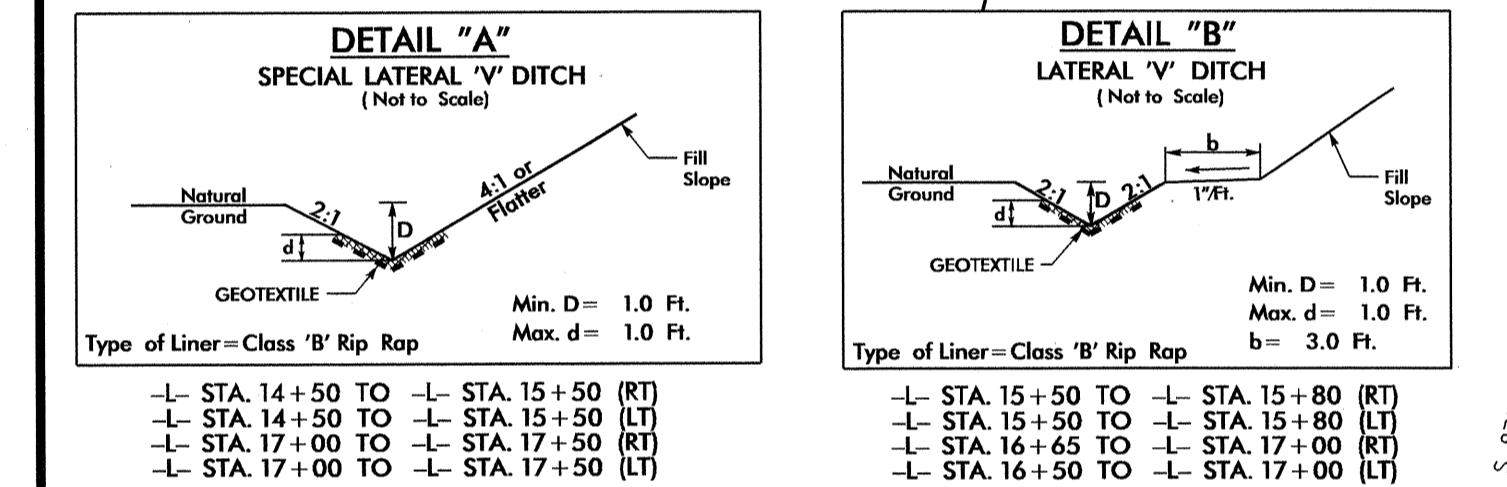
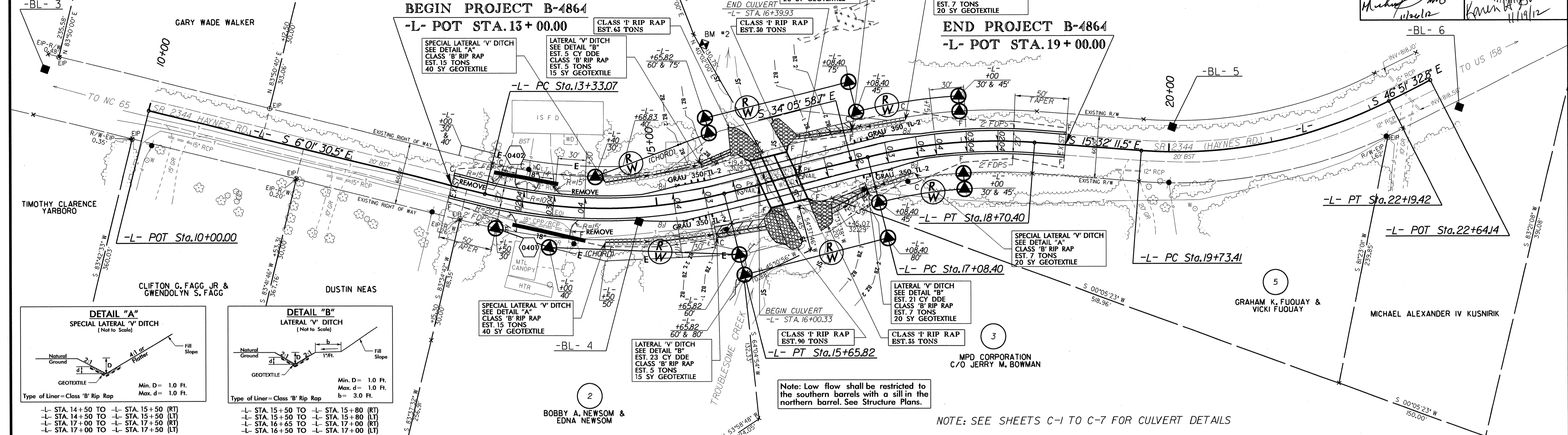
PI Sta 20+99.57 Δ = 31°19' 21.3" (LT) D = 12'43' 56.6" L = 246.01' T = 126.16' R = 450.00' S.E. = EXISTING

PROJECT REFERENCE NO. B-4864 SHEET NO. 4

R/W SHEET NO.

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 22657
MICHAEL W. LITTLE

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 31025
KAREN H. GUNDEL



8/17/99
REVISIONS
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