

See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ASHE COUNTY

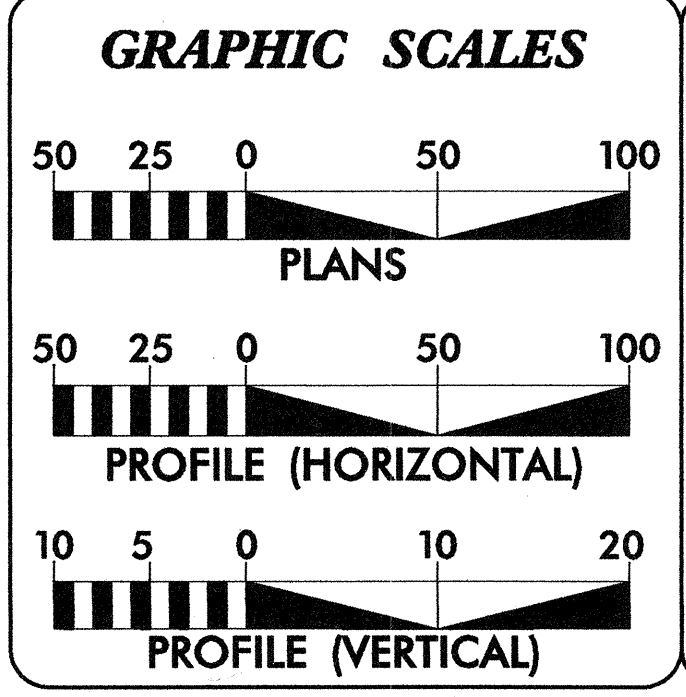
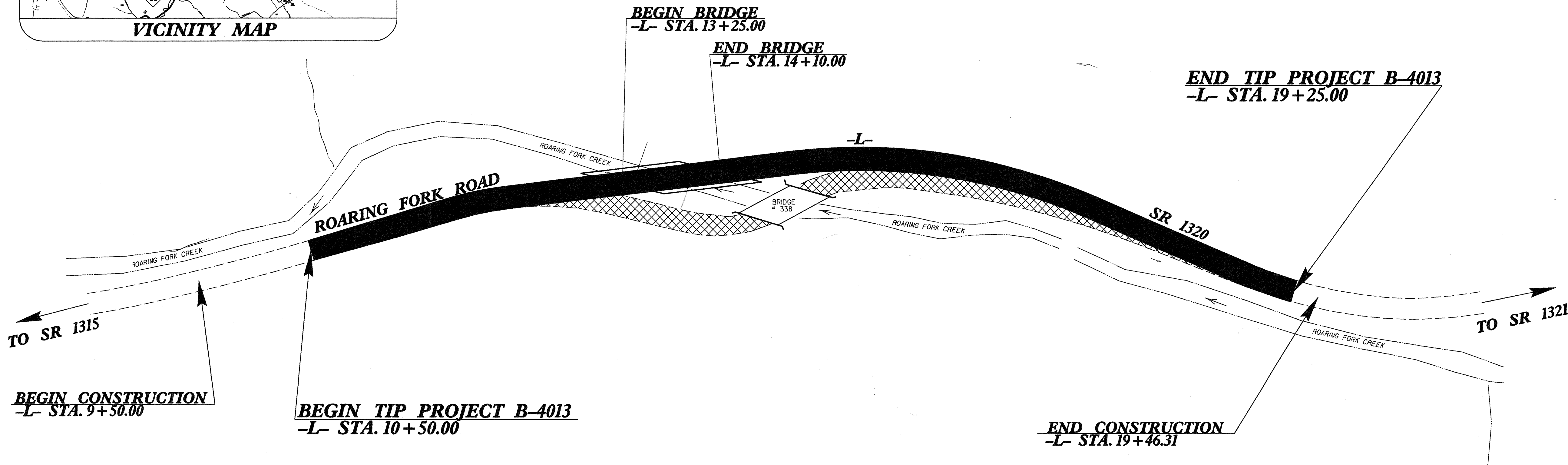
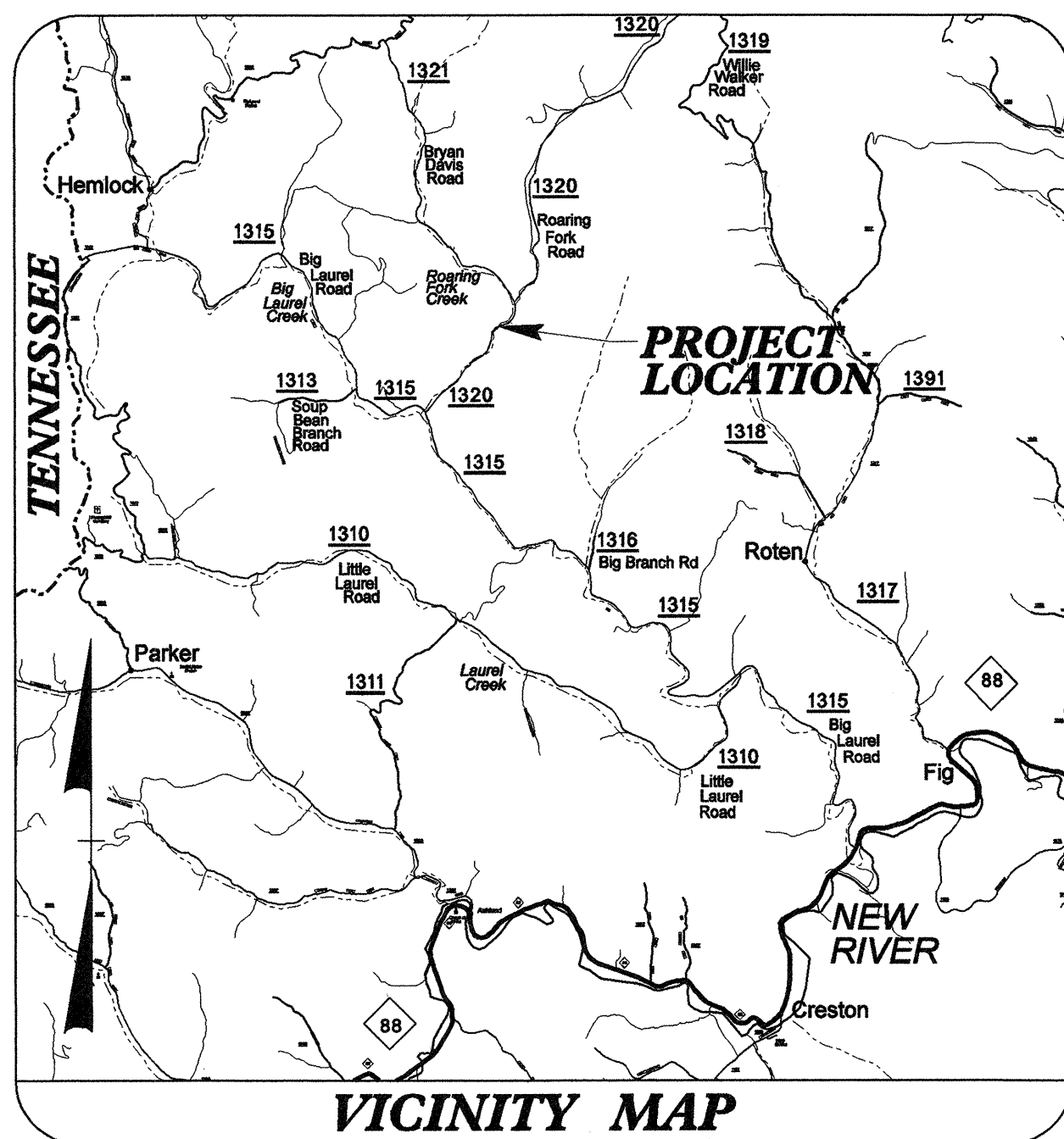
**LOCATION: BRIDGE NO. 338 OVER ROARING FORK CREEK
ON SR 1320 (ROARING FORK RD.)**

TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4013	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33381.1.1	BRZ-1320(4)	PE	
33381.2.1	BRZ-1320(4)	UTIL, RW	
33381.3.1	BRZ-1320(4)	CONST	

TIP PROJECT: B-4013

CONTRACT: C201635



DESIGN DATA

ADT 2007 =	475
ADT 2027 =	725
DHV =	12 %
D =	60 %
T =	3 % *
V =	30 MPH
* TTST 1%	DUAL 2%

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4013 =	0.150 MILES
LENGTH STRUCTURE TIP PROJECT B-4013 =	0.016 MILES
TOTAL LENGTH TIP PROJECT B-4013 =	0.166 MILES

Prepared for the North Carolina Department of Transportation in the Office of:

WETHERILL ENGINEERING
559 JONES FRANKLIN ROAD
SUITE 104
RALEIGH, N.C. 27606
Tel: 919 851 8077
Fax: 919 851 8107

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: **AUGUST 30, 2005**

LETTING DATE: **FEBRUARY 20, 2007**

NCDOT CONTACT

EDWARD G. WETHERILL, PE
PROJECT ENGINEER

BOB A. MAY, PE
PROJECT DESIGN ENGINEER

DOUG TAYLOR, PE
ROADWAY DESIGN
ENGINEERING COORDINATION
SECTION ENGINEER

HYDRAULICS ENGINEER

[Signature]

SIGNATURE: *[Signature]* 12-7-06

ROADWAY DESIGN ENGINEER

[Signature]

SIGNATURE: *[Signature]* 12-7-06

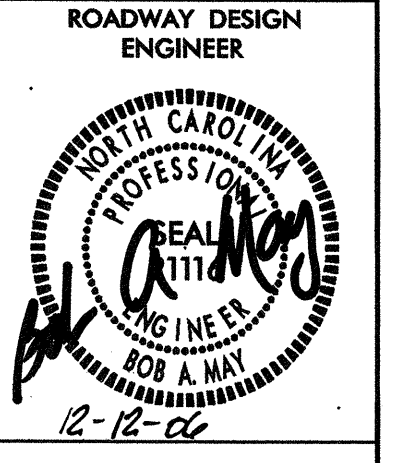
**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

[Seal of State of North Carolina]

cut 5m mil

STATE HIGHWAY DESK

10:32:38 AM
P:\B-4013\Roadway\Proj\B4013_RDY_Tsh.dgn
9/28/2006



DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

EFF. 07-18-06

2006 ROADWAY STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated July 18, 2006 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
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation - Method 'A'
DIVISION 4 - MAJOR STRUCTURES	
422.10	Reinforced Bridge Approach Fills
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
806.02	Granite Right-of-Way Marker
815.03	Pipe Underdrain and Blind Drain
816.01	Concrete Pads - for Shoulder Drain Installation
816.04	Markers for Drainage Structure and Concrete Pad
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.24	Frames and Narrow Slot Sag Grates
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.33	Angled Vane Grates and Frames
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.02	Guide for Rip Rap at Pipe Outlets

GENERAL NOTES: 2006 SPECIFICATIONS EFFECTIVE: 07-18-06
REVISED:

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.

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

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.

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

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 NOT SHOWN ON THE PLANS WILL BE PAID FOR AT THE CONTRACT PRICE FOR "TEMPORARY SHORING" OR "TEMPORARY SHORING-BARRIER SUPPORTED" DEPENDING UPON THE LOCATION OF THE SHORING.

SUBSURFACE PLANS:
NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

END BENTS:
THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE
Blue Ridge EMC (Power)
Skyline Telephone
Charter Communications

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

INDEX OF SHEETS

SHEET NUMBER	CONTENTS
1	TITLE SHEET
1-A	INDEX OF SHEETS, LIST OF STANDARDS AND GENERAL NOTES
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
1-D	CENTERLINE COORDINATE LIST
2	PAVEMENT SCHEDULE, WEDGING DETAIL, DETAIL SHOWING LIMITS OF PAVEMENT DESIGN, TYPICAL SECTION NOS. 1 THRU 3
3	SUMMARY OF QUANTITIES
3-A	SUMMARY OF EARTHWORK, GUARDRAIL, DRAINAGE AND PAVEMENT REMOVAL
4	PLAN SHEET
5	PROFILE SHEET
TCP-1 THRU TCP-8	TRAFFIC CONTROL PLANS
EC-1 THRU EC-5	EROSION CONTROL PLANS
SIG-1 THRU SIG-7	SIGNAL PLANS
RF-1	REFORESTATION PLAN
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
X-1A	CROSS - SECTION SUMMARY SHEET
X-1 THRU X-8	CROSS - SECTIONS
S-1 THRU S-35	STRUCTURE PLANS

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	(123)
Existing Fence Line	-----
Proposed Woven Wire Fence	-----
Proposed Chain Link Fence	-----
Proposed Barbed Wire Fence	-----
Existing Wetland Boundary	-----
Proposed Wetland Boundary	-----
Existing High Quality Wetland Boundary	-----
Existing Endangered Animal Boundary	-----
Existing Endangered Plant Boundary	-----

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or UG Tank Cap	○
Sign	○
Well	○
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	+
Building	□
School	□
Church	+
Dam	—

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	-----
River Basin Buffer	-----
Flow Arrow	←
Disappearing Stream	-----
Spring	○
Swamp Marsh	-----
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 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 Utility Easement	-----

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-----
Proposed Slope Stakes Fill	-----
Proposed Wheel Chair Ramp	-----
Curb Cut for Future Wheel Chair 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	⊗
UG Power Cable Hand Hole	□
H-Frame Pole	●
Recorded UG Power Line	-----
Designated UG Power Line (S.U.E.*)	-----

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	○
Telephone Booth	□
Telephone Pedestal	□
Telephone Cell Tower	⊗
UG Telephone Cable Hand Hole	□
Recorded UG Telephone Cable	-----
Designated UG Telephone Cable (S.U.E.*)	-----
Recorded UG Telephone Conduit	-----
Designated UG Telephone Conduit (S.U.E.*)	-----
Recorded UG Fiber Optics Cable	-----
Designated UG Fiber Optics Cable (S.U.E.*)	-----

WATER:

Water Manhole	○
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
Recorded UG Water Line	-----
Designated UG Water Line (S.U.E.*)	-----
Above Ground Water Line	-----

TV:

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

GAS:

Gas Valve	◇
Gas Meter	⊕
Recorded UG Gas Line	-----
Designated UG Gas Line (S.U.E.*)	-----
Above Ground Gas Line	-----

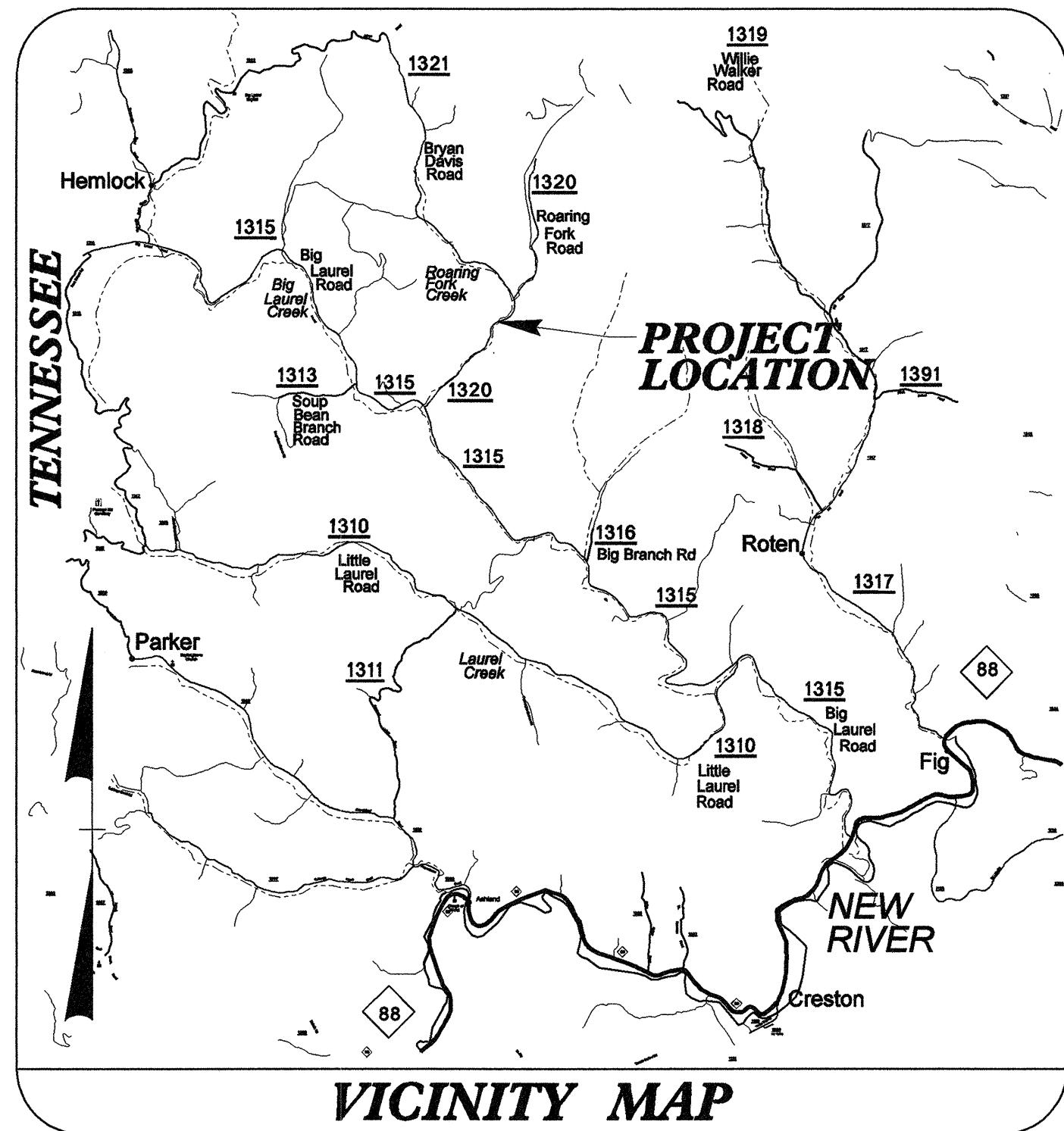
SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
UG 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 UG Line	-----
UG Tank; Water, Gas, Oil	□
AG Tank; Water, Gas, Oil	□
UG Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

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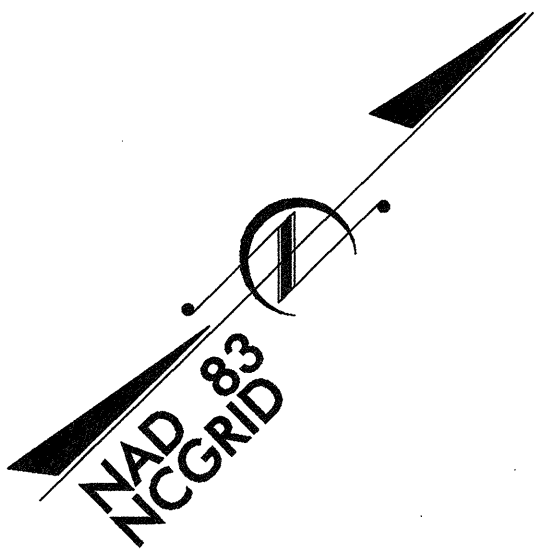


SURVEY CONTROL SHEET B-4013

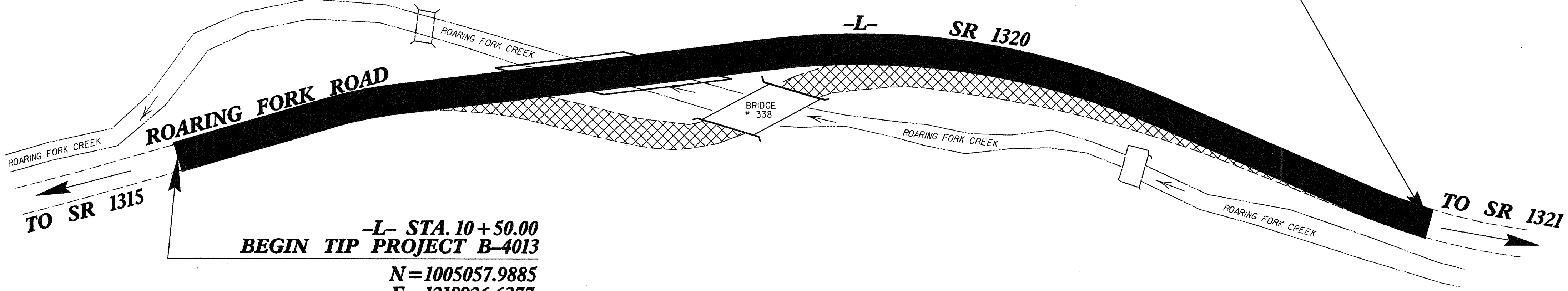
PROJECT REFERENCE NO.	SHEET NO.
B-4013	1C
Location and Surveys	

BL	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
B40131		(GPS B4013-1)	1004719.0640	1218493.4590	2936.13'	OUTSIDE PROJECT LIMITS	
B40132		(GPS B4013-2)	1005118.7250	1219004.2950	2952.04'	OUTSIDE PROJECT LIMITS	
BL3		(BL-3)	1005579.9929	1219360.6872	2968.94'	13+95.41	31.22' RT
BL4		(BL-4)	1005806.7291	1219567.5735	2976.25'	17+09.53	2.12' LT
BL5		(BL-5)	1005972.8155	1219892.3738	2993.60'	OUTSIDE PROJECT LIMITS	
BL6		(BL-6)	1006409.9820	1220082.8172	3009.07'	OUTSIDE PROJECT LIMITS	

.....
 BM*1 ELEVATION = 2958.96' BM*2 ELEVATION = 3011.36'
 N 1005443 E 1219120 N 1006511 E 1220094
 L STATION 11+52 83' LEFT OUTSIDE PROJECT LIMITS
 8" SPIKE IN ROOT OF 16" WILD CHERRY 8" SPIKE IN ROOT OF 36" MAPLE



-L- STA. 19+25.00
END TIP PROJECT B-4013
N=1005887.5002
E=1219767.2919



-L- STA. 10+50.00
BEGIN TIP PROJECT B-4013
N=1005057.9885
E=1218926.6377

NC DOT GPS STATION B4013-2
LOCALIZED PROJECT COORDINATES
N=1005118.7250
E=1219004.2950

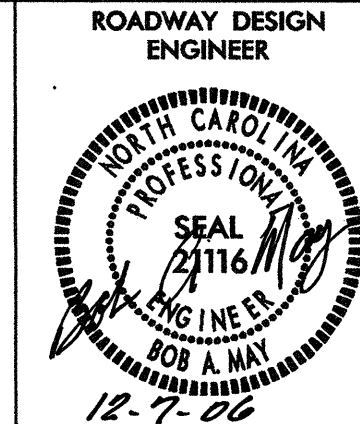
NC DOT GPS STATION B4013-1
LOCALIZED PROJECT COORDINATES
N=1004719.0640
E=1218493.4590

DATUM DESCRIPTION
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4013-2"
 WITH NAD 83 STATE PLANE GRID COORDINATES OF
 NORTHING: 1005118.725(±ft) EASTING: 1219004.295(±ft)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99996769
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4013-2" TO -L- STATION 10+50 IS
 N 35°34'44" E 239.64'
 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:
[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:
 TIP B4013_LS_CONTROL_050914.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

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5/28/2006
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CENTERLINE COORDINATE LIST

Disclaimer: This coordinate list is provided for the convenience of interested contractors and is intended for use during the project bidding process only. Coordinates are localized to this particular project and any conversion to state grid coordinates or other formats will be the responsibility of the recipient. While every effort has been made to provide up-to-date, accurate information, NCDOT makes no express guarantee as to the validity or potential for revision of this information prior to project letting.

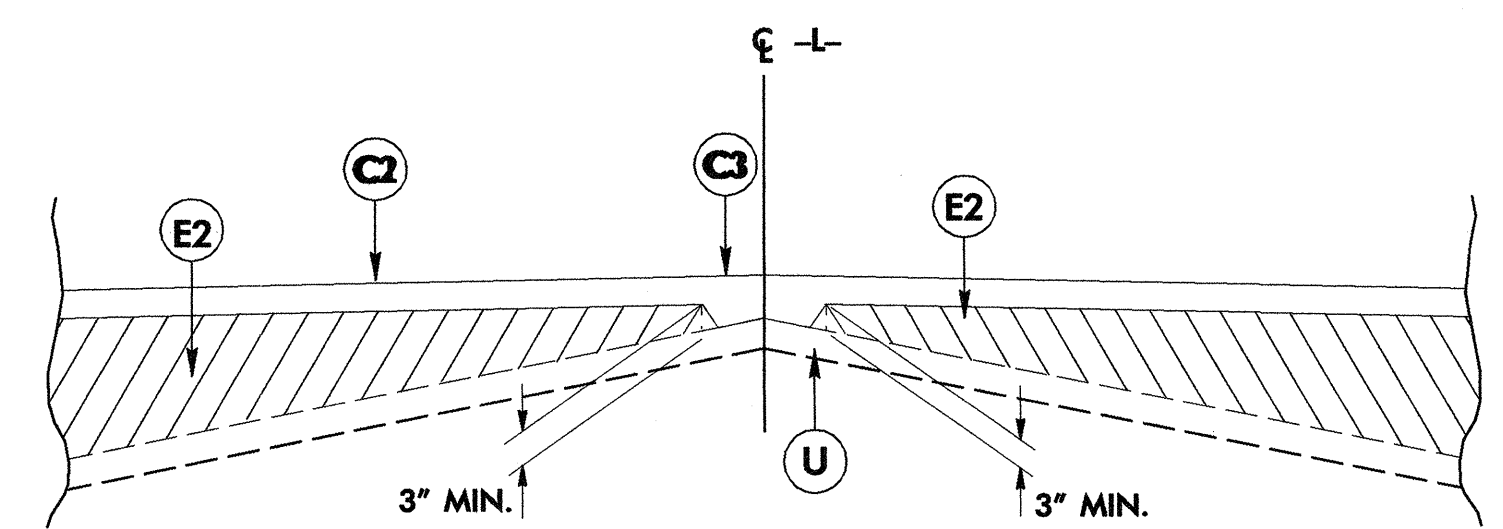
Point #	Chain	Station	Northing(Y)	Easting(X)
1	L	10+00.00	1005269.7723	1219119.7075
2	L	10+50.00	1005313.6275	1219143.7226
3	L	11+00.00	1005357.4826	1219167.7377
4	L	11+50.00	1005401.3378	1219191.7528
5	L	12+00.00	1005444.7939	1219216.4547
6	L	12+50.00	1005484.7794	1219246.4413
7	L	13+00.00	1005524.1403	1219277.2751
8	L	13+50.00	1005563.5012	1219308.1088
9	L	14+00.00	1005602.8621	1219338.9425
10	L	14+50.00	1005642.2230	1219369.7763
11	L	15+00.00	1005681.0263	1219401.2935
12	L	15+50.00	1005716.7704	1219436.2260
13	L	16+00.00	1005748.8485	1219474.5524
14	L	16+50.00	1005776.9401	1219515.8898
15	L	17+00.00	1005800.7645	1219559.8252
16	L	17+50.00	1005820.2964	1219605.8377
17	L	18+00.00	1005838.7069	1219652.3248
18	L	18+50.00	1005857.1174	1219698.8120
19	L	19+00.00	1005876.0092	1219745.0974
20	L	19+46.31	1005898.7267	1219785.4019
21	L	19+46.31	1005898.7267	1219785.4019

6/2/99

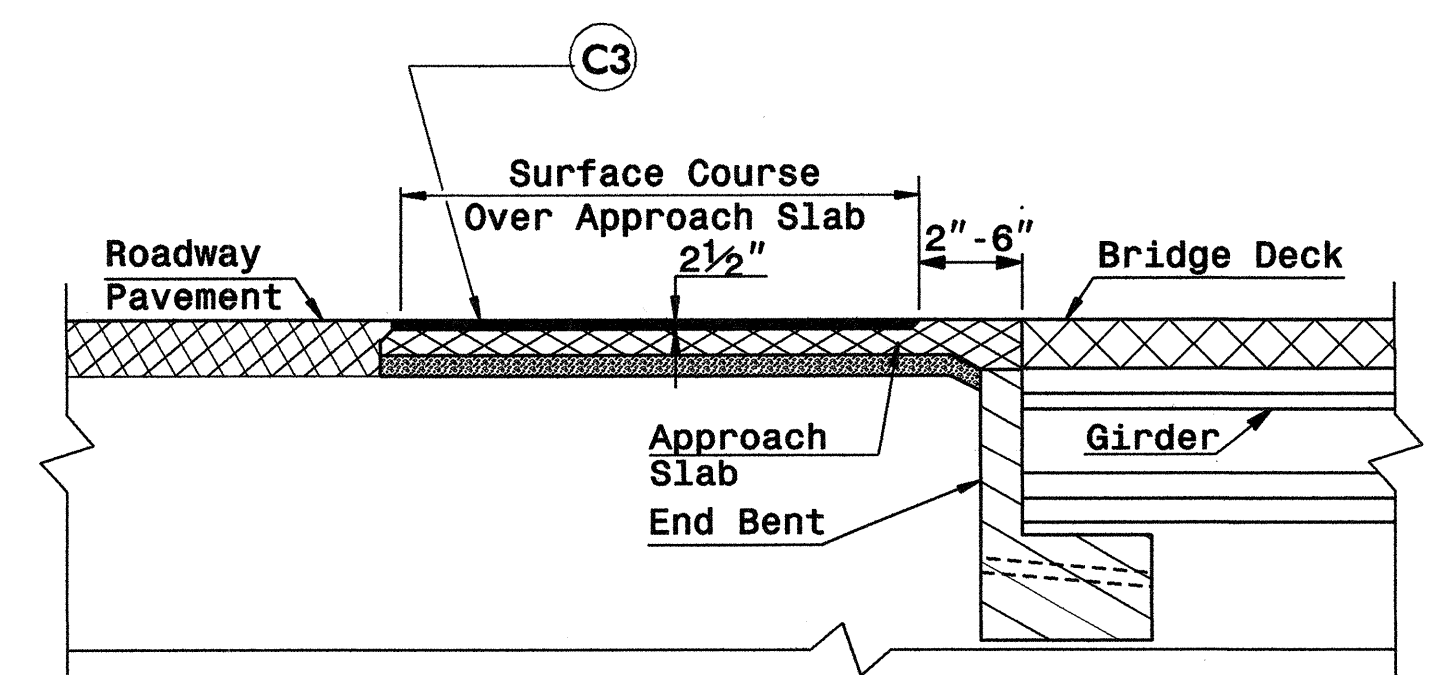
6:54:42 AM
12/7/2006
C:\proj\64013.RDY_tjup.dgn

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 2 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1 1/2" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 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 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT

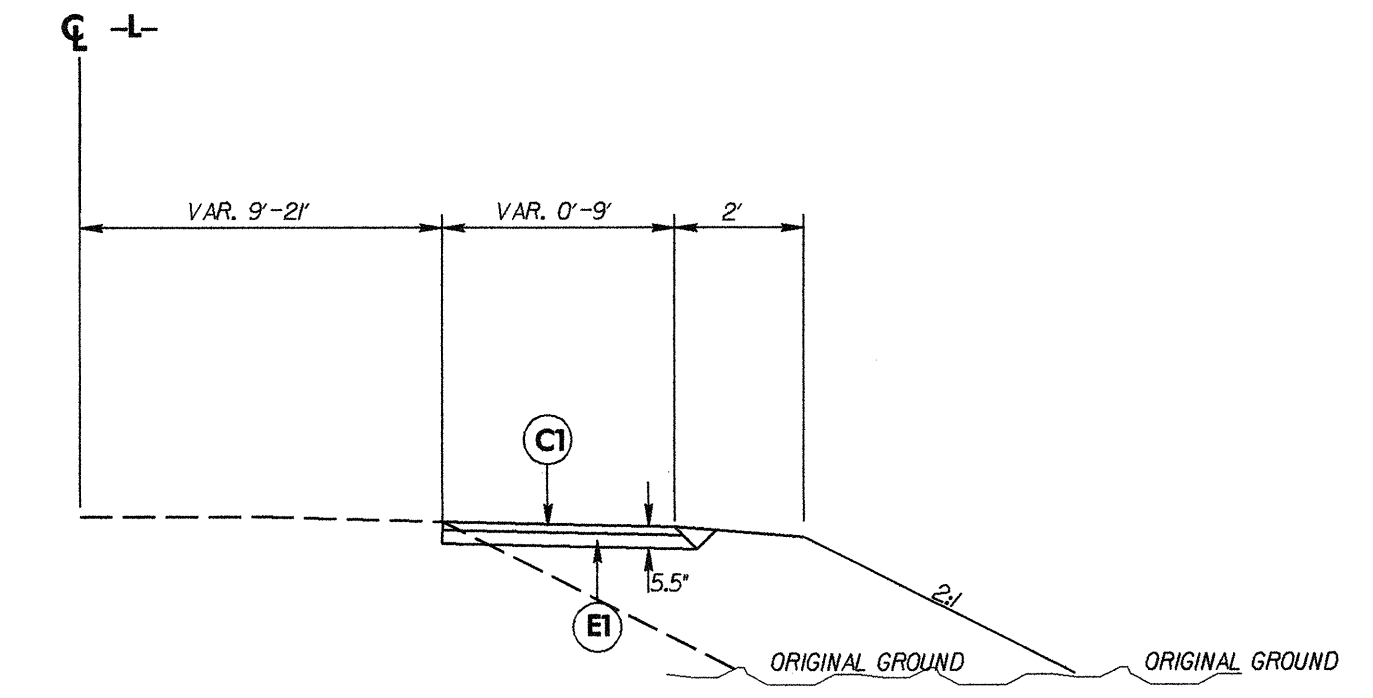
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



Detail Showing Method of Wedging



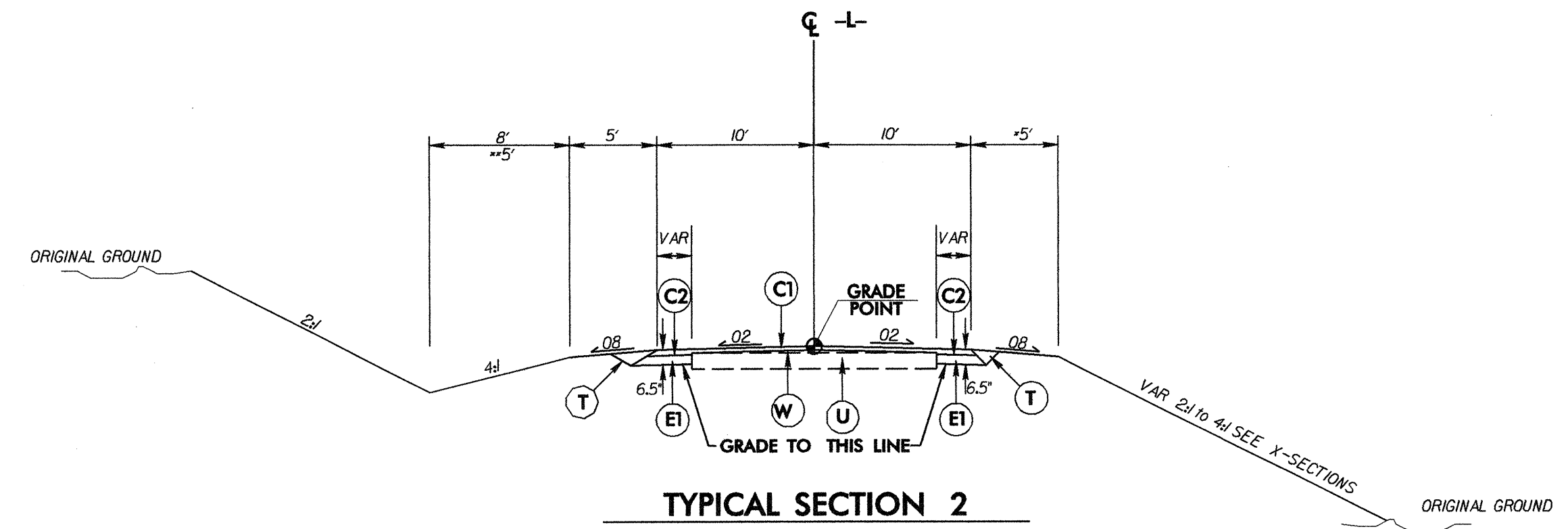
Detail of Asphalt Wearing Surface on Approach Slab



TYPICAL SECTION 1

-L- STA.9+50.00 TO -L- STA.13+90.00

NOTE: USE TYPICAL NO.1 FOR TEMPORARY WIDENING TO BE USED FOR THE MAINTENANCE OF TRAFFIC DURING CONSTRUCTION.



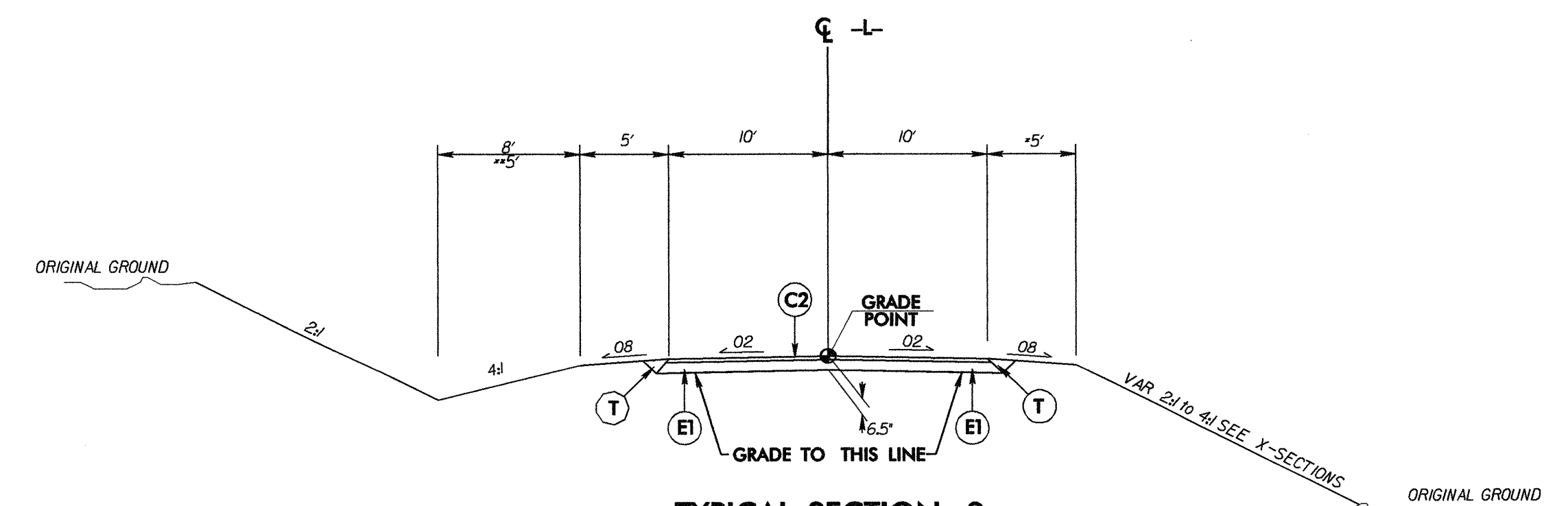
TYPICAL SECTION 2

-L- STA.10+75.00 TO -L- STA.11+67.62
-L- STA.16+62.93 TO -L- STA.19+00.00

*8' w/ GUARDRAIL
** USE 5' DITCH -L- STA.16+00.00 TO -L- STA.19+00.00 LEFT

TRANSITION FROM EXISTING TO TYPICAL SECTION NO.2
-L- STA.10+50.00 TO -L- STA.10+75.00

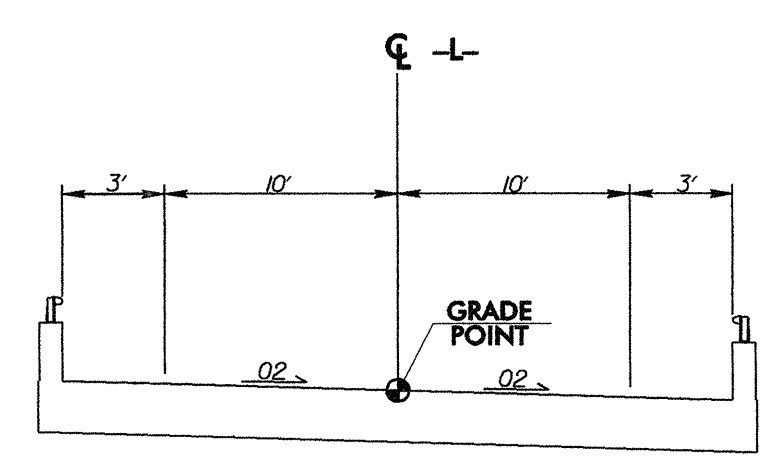
TRANSITION FROM TYPICAL SECTION NO.2 TO EXISTING
-L- STA.19+00.00 TO -L- STA.19+25.00



TYPICAL SECTION 3

-L- STA.11+67.62 TO -L- STA.13+25.00 (BEGIN BRIDGE)
-L- STA.14+10.00 (END BRIDGE) TO -L- STA.16+62.93

*8' w/ GUARDRAIL
** USE 5' DITCH -L- STA.16+00.00 TO -L- STA.19+00.00 LEFT



TYPICAL SECTION 4

-L- STA.13+25.00 TO -L- STA.14+10.00

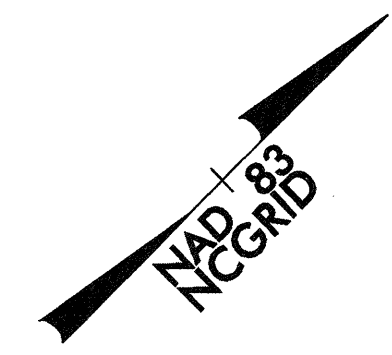
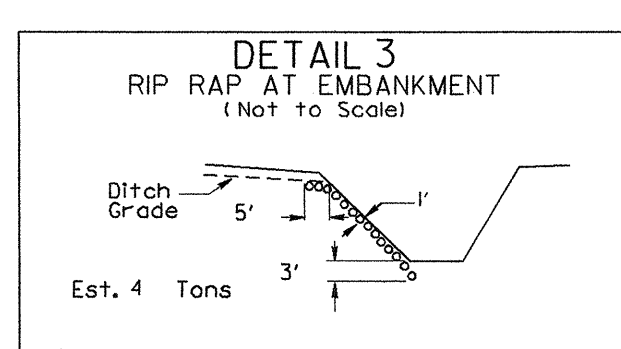
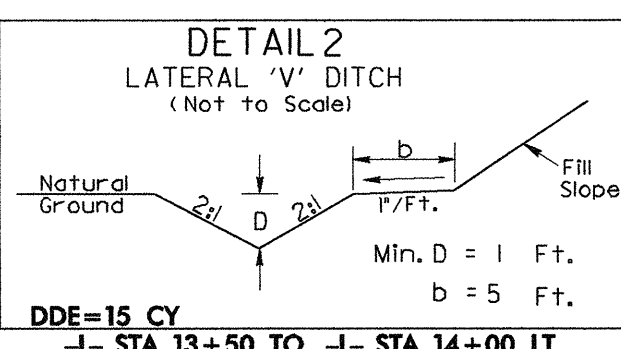
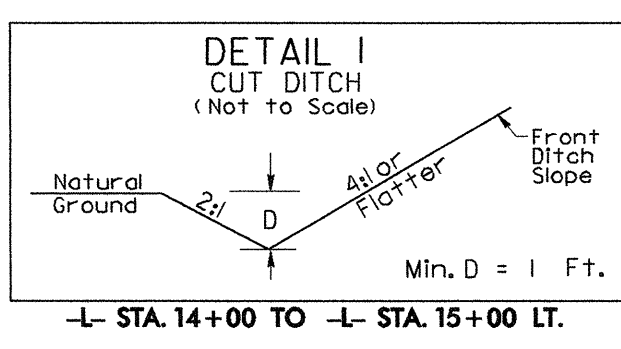
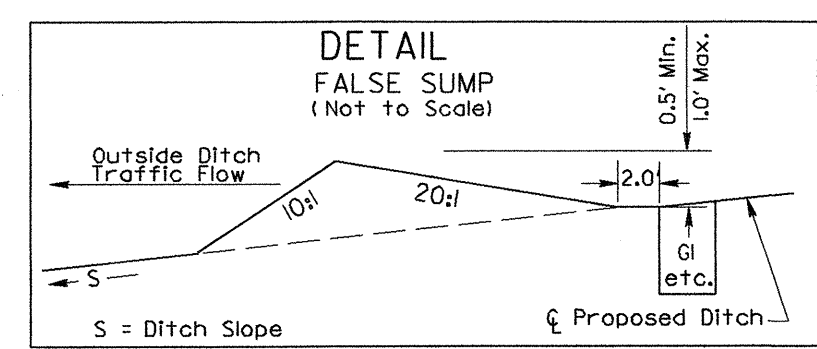
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DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201635

ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description				
0000100000-N	800	Lump Sum		MOBILIZATION	2066000000-N	815	1	EA	CONCRETE PAD FOR SUBDRAIN PIPE OUTLET				
0000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING	2077000000-E	815	6	LF	6" OUTLET PIPE (SUBDRAINS)				
0029000000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL, STATION ***** (13+67.50-L-)	2286000000-N	840	2	EA	MASONRY DRAINAGE STRUCTURES				
0043000000-N	226	Lump Sum		GRADING	2363000000-N	840	1	EA	FRAME WITH TWO GRATES, STD 840.***** (840.33)				
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING	2366000000-N	840	1	EA	FRAME WITH TWO GRATES, STD 840.24				
0057000000-E	226	200	CY	UNDERCUT EXCAVATION	2556000000-E	846	70	LF	SHOULDER BERM GUTTER				
0080000000-E	SP	350	TON	CLASS IV SUBGRADE STABILIZATION	3000000000-N	SP	2	EA	IMPACT ATTENUATOR UNIT, TYPE 350				
0134000000-E	240	15	CY	DRAINAGE DITCH EXCAVATION	3030000000-E	862	150	LF	STEEL BM GUARDRAIL				
0195000000-E	265	300	CY	SELECT GRANULAR MATERIAL	3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS				
0196000000-E	270	300	SY	FABRIC FOR SOIL STABILIZATION	3270000000-N	SP	2	EA	GUARDRAIL ANCHOR UNITS, TYPE 350				
0199000000-E	SP	100	SF	TEMPORARY SHORING	3317000000-N	862	2	EA	GUARDRAIL ANCHOR UNITS, TYPE B-77				
0318000000-E	300	20	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS	3614000000-E	876	2	SY	RIP RAP, CLASS I				
0366000000-E	310	124	LF	15" RC PIPE CULVERTS, CLASS III	3649000000-E	876	4	TON	RIP RAP, CLASS B				
0372000000-E	310	60	LF	18" RC PIPE CULVERTS, CLASS III	3656000000-E	876	178	SY	FILTER FABRIC FOR DRAINAGE				
1220000000-E	545	100	TON	INCIDENTAL STONE BASE	4400000000-E	1110	1,890	SF	WORK ZONE SIGNS (STATIONARY)				
1489000000-E	610	390	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B	4405000000-E	1110	160	SF	WORK ZONE SIGNS (PORTABLE)				
1525000000-E	610	280	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A	4410000000-E	1110	32	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)				
1560000000-E	620	35	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22	4430000000-N	1130	43	EA	DRUMS				
1693000000-E	654	20	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR	4435000000-N	1135	43	EA	CONES				
2000000000-N	806	17	EA	RIGHT OF WAY MARKERS	4445000000-E	1145	48	LF	BARRICADES (TYPE III)				
2022000000-E	815	45	CY	SUBDRAIN EXCAVATION	4450000000-N	1150	1,376	HR	FLAGGER				
2033000000-E	815	34	CY	SUBDRAIN FINE AGGREGATE	4507000000-E	SP	380	LF	WATER FILLED BARRIER				
2044000000-E	815	200	LF	6" PERFORATED SUBDRAIN PIPE	4508000000-E	SP	240	LF	RESET WATER FILLED BARRIER				
2055000000-E	815	6	EA	6" SUBDRAIN PIPE WYES, TEES, & ELBOWS	4770000000-E	1205	1,175	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") (*****)				
									6108000000-E	1665	1.75	TON	FERTILIZER TOPDRESSING
									6114000000-N	SP	2	HR	SPECIALIZED HAND MOWING
									6117000000-N	SP	8	EA	RESPONSE FOR EROSION CONTROL
									6123000000-E	1670	0.2	ACR	REFORESTATION
									7060000000-E	1705	3,140	LF	SIGNAL CABLE
									7120000000-E	1705	16	EA	VEHICLE SIGNAL HEAD (12", 3 SECTION)
									7264000000-E	1710	1,430	LF	MESSENGER CABLE (3/8")
									7300000000-E	1715	290	LF	UNPAVED TRENCHING (***** (1, 2"))
									7360000000-N	1720	13	EA	WOOD POLE
									7372000000-N	1721	22	EA	GUY ASSEMBLY
									7408000000-E	1722	1	EA	1" RISER WITH WEATHERHEAD
									7420000000-E	1722	6	EA	2" RISER WITH WEATHERHEAD
									7444000000-E	1725	575	LF	INDUCTIVE LOOP SAWCUT
									7456000000-E	1726	2,940	LF	LEAD-IN CABLE (***** (18-2))
									7484000000-N	SP	4	EA	MICROWAVE VEHICLE DETECTOR
									7636000000-N	1745	8	EA	SIGN FOR SIGNALS
									7768000000-N	1751	1	EA	CONTROLLER WITH CABINET (TYPE 2070L, POLE MOUNTED)
									7780000000-N	1751	3	EA	DETECTOR CARD (TYPE 2070L)

8/17/99

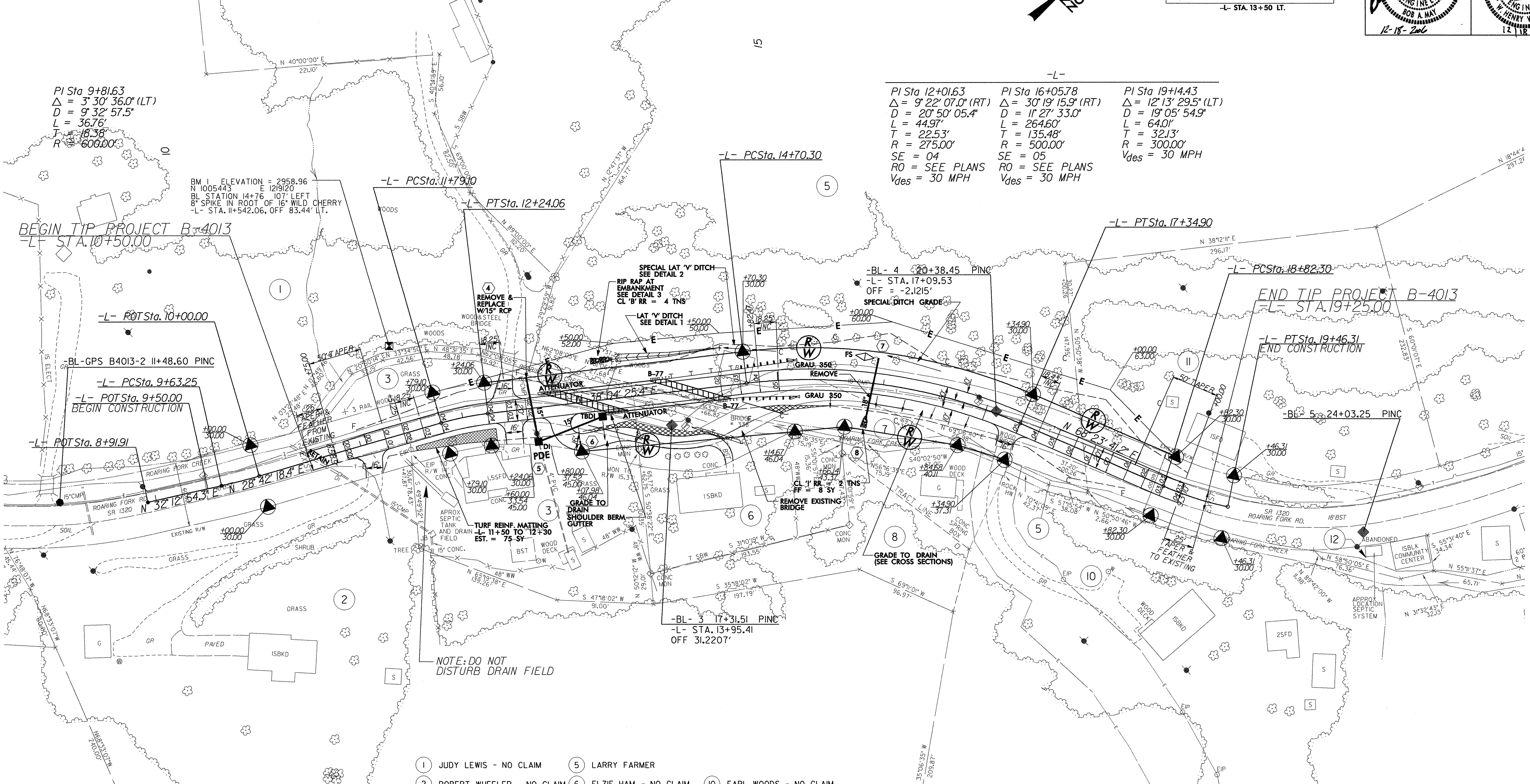


PI Sta 9+81.63
 $\Delta = 3' 30'' 36.0''$ (LT)
 $D = 9' 32'' 57.5''$
 $L = 36.76'$
 $T = 18.38'$
 $R = 600.00'$

PI Sta 12+01.63
 $\Delta = 9' 22'' 07.0''$ (RT)
 $D = 20' 50'' 05.4''$
 $L = 44.97'$
 $T = 22.53'$
 $R = 275.00'$
 $SE = 04$
 $RO = \text{SEE PLANS}$
 $V_{des} = 30 \text{ MPH}$

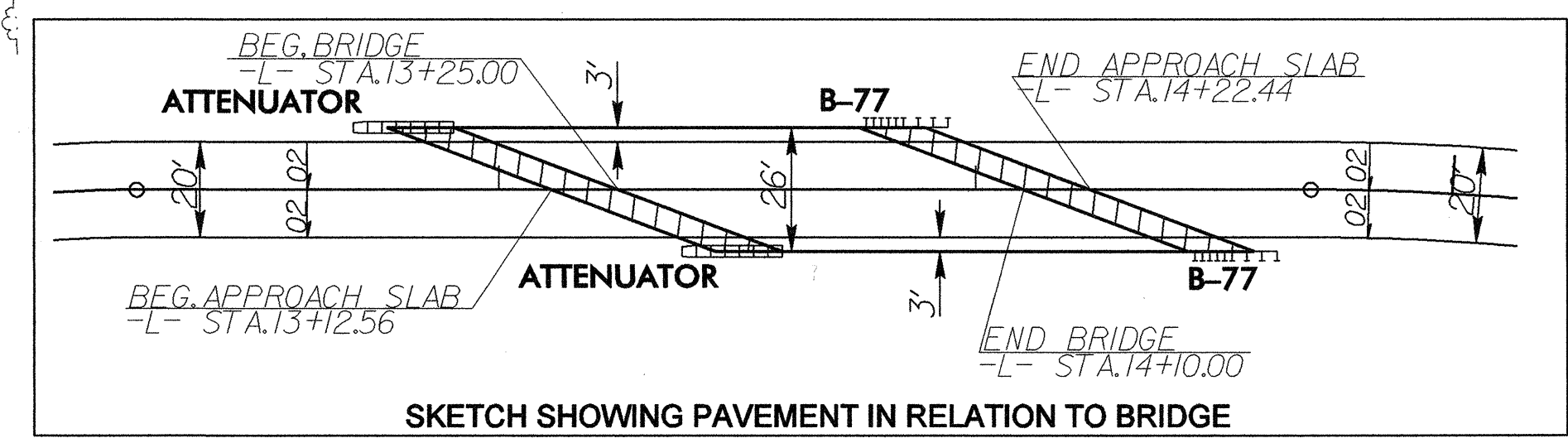
PI Sta 16+05.78
 $\Delta = 30' 19'' 15.9''$ (RT)
 $D = 11' 27'' 33.0''$
 $L = 264.60'$
 $T = 135.48'$
 $R = 500.00'$
 $SE = 05$
 $RO = \text{SEE PLANS}$
 $V_{des} = 30 \text{ MPH}$

PI Sta 19+14.43
 $\Delta = 12' 13'' 29.5''$ (LT)
 $D = 19' 05'' 54.9''$
 $L = 64.01'$
 $T = 32.13'$
 $R = 300.00'$
 $V_{des} = 30 \text{ MPH}$



TEMPORARY SHORING NO.1
 FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.
 DO NOT USE STANDARD SHORING FROM STATION 14+65 -L- 20 FT. RIGHT TO STATION 14+75 -L- 20 FT. RIGHT. CONTRACTOR DESIGNED SHORING IS REQUIRED. SEE TEMPORARY SHORING SPECIAL PROVISION.
 WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 14+65 -L- 20 FT. RIGHT TO STATION 14+75 -L- 20 FT. RIGHT, USE THE FOLLOWING SOIL PARAMETERS:
 UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120 \text{ PCF}$
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma = 60 \text{ PCF}$
 FRICTION ANGLE, $\phi = 30 \text{ DEGREES}$
 COHESION, $c = 0 \text{ PSF}$
 DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 14+65 -L- 20 FT. RIGHT TO STATION 14+75 -L- 20 FT. RIGHT MAY NOT PENETRATE BELOW ELEVATION 225.8 FT. DUE TO THE PRESENCE OF AN OBSTRUCTION, VERY DENSE OR HARD SOIL WEATHERED OR HARD ROCK. SEE SUBSURFACE INFORMATION FOR ADDITIONAL DETAILS.
 FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.
 FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL T-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TEMPORARY SHORING SPECIAL PROVISION.

- | | |
|-----------------------------|---|
| 1 JUDY LEWIS - NO CLAIM | 5 LARRY FARMER |
| 2 ROBERT WHEELER - NO CLAIM | 6 ELZIE HAM - NO CLAIM |
| 3 JAMES MAHAFFEY | 7 CHESTER FARMER |
| | 8 EARL WOODS - NO CLAIM |
| | 10 EARL WOODS - NO CLAIM |
| | 11 EDDIE FARMER |
| | 12 LAUREL VOTING HOUSE - NO CLAIM ASHE COUNTY |



SEE STRUCTURE SHEETS S-1 THRU S-35 FOR STRUCTURE PLANS

TURF REINFORCED MATTING
 SEE SHEET 5 FOR -L- PROFILE

REVISIONS

3:53:37 PM
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 12/18/2006

5/14/99

BM #1 ELEVATION = 2958.96
 N 1005443.2186 E 1219119.5604
 BL STA 14+76 107' LEFT
 8" SPIKE IN ROOT OF 16" WILD CHERRY
 -L- STA. 11+52.06, OFF 83.44' LT.

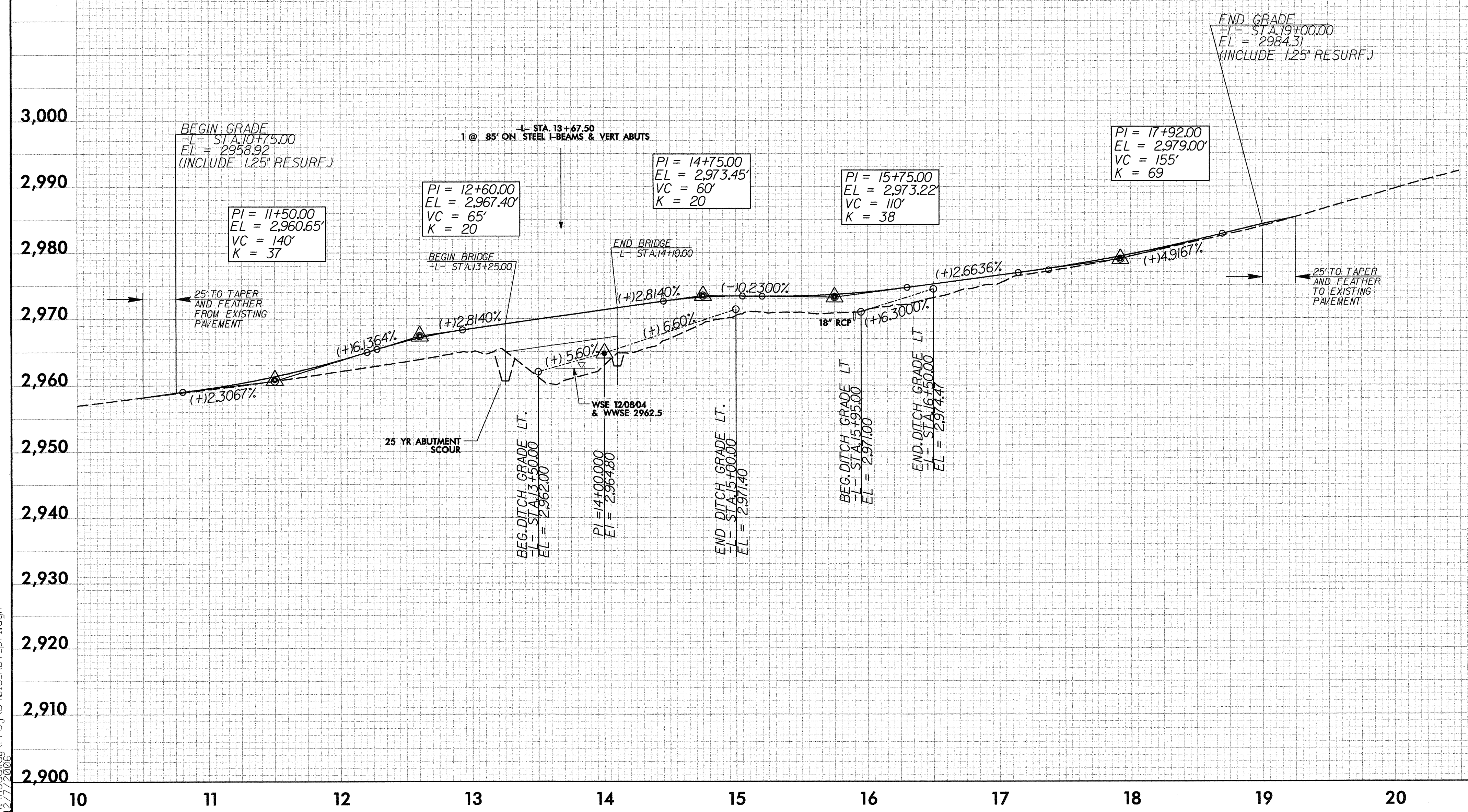
BM #2 ELEVATION = 3011.36
 N 1006510.9150 E 1220094.0870
 8" SPIKE IN ROOT OF 36" MAPLE

STRUCTURE HYDRAULIC DATA

DESIGN DISCHARGE = 1050 CFS
 DESIGN FREQUENCY = 25 YRS
 DESIGN HW ELEVATION = 2969.8 FT
 BASE DISCHARGE = 1600 CFS
 BASE FREQUENCY = 100 YRS
 BASE HW ELEVATION = 2971.2 FT
 OVERTOPPING DISCHARGE = 1050 CFS
 OVERTOPPING FREQUENCY = 25 YRS
 OVERTOPPING ELEVATION = 2965 FT

PIPE HYDRAULIC DATA
 DRAINAGE STRUCTURE NO.1

DRAINAGE AREA = 8.5 AC
 DESIGN FREQUENCY = 25 YRS
 DESIGN DISCHARGE = 8 CFS
 DESIGN HW ELEVATION = 2972.8 FT
 100 YEAR DISCHARGE = 12 CFS
 100 YEAR HW ELEVATION = 2973.8 FT
 OVERTOPPING FREQUENCY = 25 YRS
 OVERTOPPING DISCHARGE = 8 CFS
 OVERTOPPING ELEVATION = 2972.8 FT



SEE SHEET 4 FOR PLAN VIEW

7:03:45 AM
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 12/7/06