

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

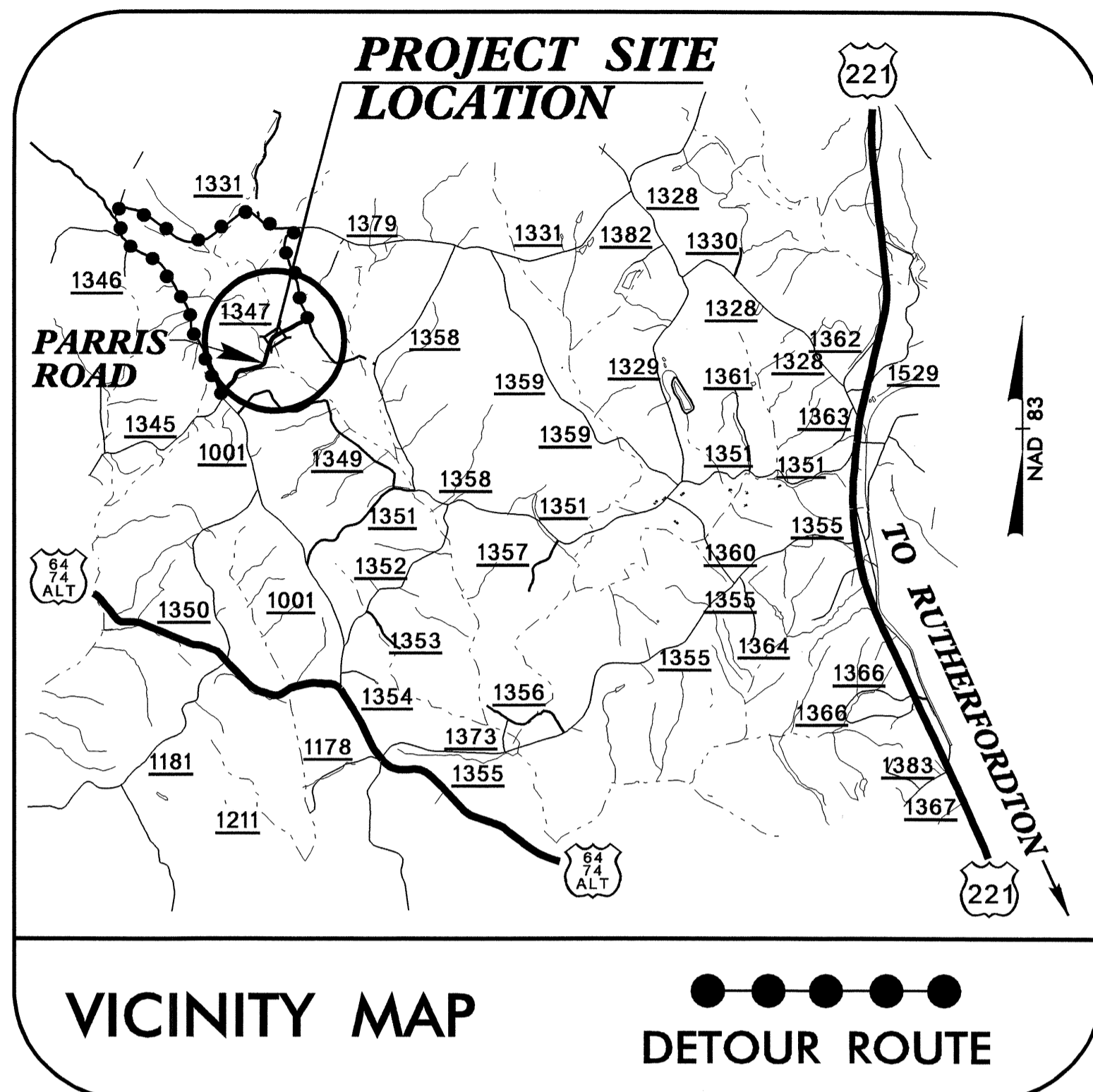
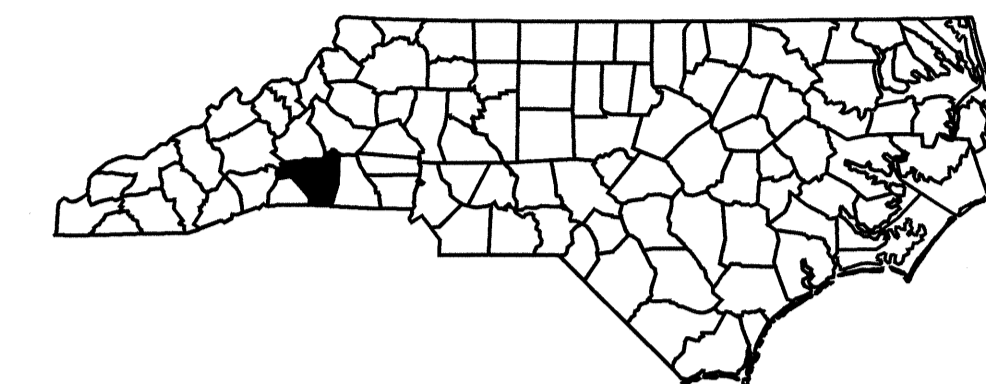
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**RUTHERFORD COUNTY**

**LOCATION: REPLACE BRIDGE NO. 526 ON SR 1347 (PARRIS ROAD)  
OVER WEST BRANCH MOUNTAIN CREEK.**

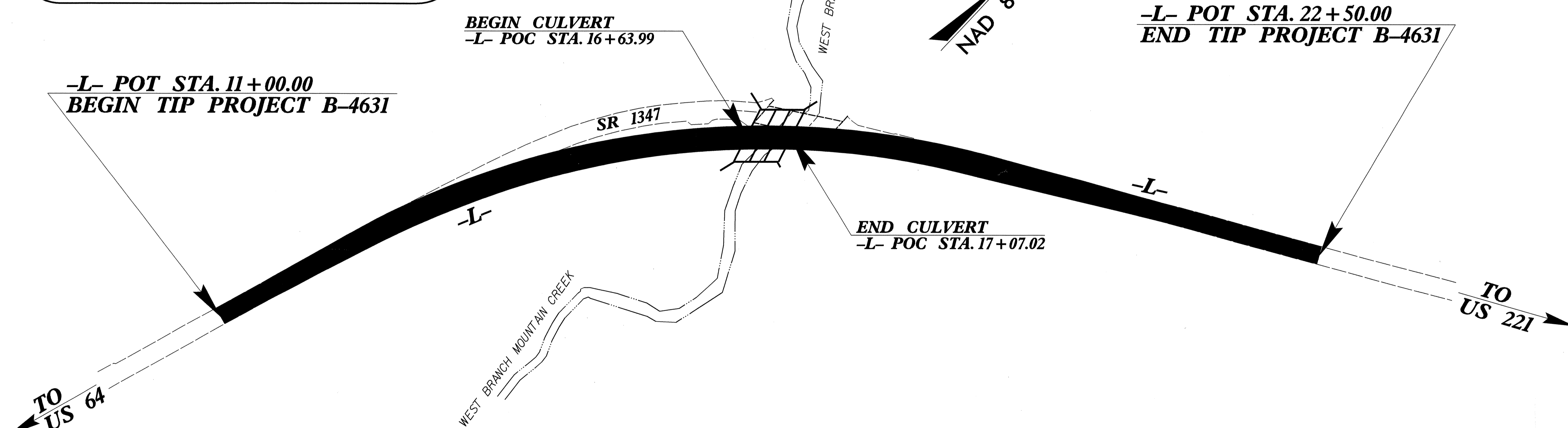
**TYPE OF WORK: GRADING, DRAINAGE, PAVEMENT, AND  
CULVERT**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4631	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33805.1.1	BRZ-1347(3)	P.E.	
33805.2.1	BRZ-1347(3)	ROW	
33805.3.1	BRZ-1347(3)	CONST.	



TIP PROJECT: B-4631

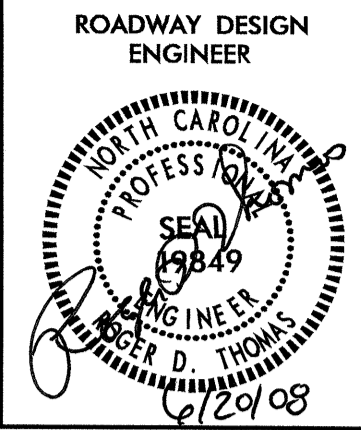
CONTRACT: C201929



**\*\*DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED**

<p><b>GRAPHIC SCALES</b></p> <p>50 25 0 50 100 PLANS</p> <p>50 25 0 50 100 PROFILE (HORIZONTAL)</p> <p>10 5 0 10 20 PROFILE (VERTICAL)</p>	<p><b>DESIGN DATA</b></p> <p>ADT 2007 = 330 ADT 2030 = 500 DHV = 10 % D = 60 % T = 3 % * ** V = 50 MPH FUNC. CLASS = LOCAL * TTST 1% DUAL 2%</p>	<p><b>PROJECT LENGTH</b></p> <p>LENGTH ROADWAY TIP PROJECT B-4631 = 0.210 MI LENGTH STRUCTURE TIP PROJECT B-4631 = 0.008 MI TOTAL LENGTH TIP PROJECT B-4631 = 0.218 MI</p>	<p>Prepared In the Office of: <b>DIVISION OF HIGHWAYS</b> 1000 Birch Ridge Dr., Raleigh NC, 27610</p> <p>2006 STANDARD SPECIFICATIONS</p> <p><b>RIGHT OF WAY DATE:</b> SEPTEMBER 12, 2007</p> <p><b>LETTING DATE:</b> SEPTEMBER 16, 2008</p> <p>ROGER D. THOMAS, PE PROJECT ENGINEER</p> <p>BRIAN P. ROBINSON PROJECT DESIGN ENGINEER</p>	<p>HYDRAULICS ENGINEER</p> <p><i>Stephen R. Morgan</i> 6/20/08 SIGNATURE: STEPHEN R. MORGAN, P.E.</p> <p>ROADWAY DESIGN ENGINEER</p> <p><i>Roger D. Thomas</i> 6/20/08 SIGNATURE: ROGER D. THOMAS, P.E.</p>	<p>DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA</p> <p>STATE HIGHWAY DESIGN ENGINEER</p> <p><i>out millen</i> P.E.</p>
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STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# INDEX OF SHEETS

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARDS
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
2	TYPICAL SECTIONS, PAVEMENT SCHEDULE, DETAIL SHOWING METHOD OF WEDGING
3	SUMMARY OF QUANTITIES
3-A & 3-B	SUMMARY OF PIPE 48" & UNDER, EARTHWORK, ASPHALT PAVEMENT REMOVAL AND GUARDRAIL
4	PLAN SHEET
5	PROFILE SHEET
TCP-1 THRU TCP-3	TRAFFIC CONTROL PLANS
SD-1	PAVEMENT SPECIAL SIGN DESIGN
EC-1 THRU EC-6	EROSION CONTROL PLANS
RF-1	REFORESTATION PLANS
UO-1 THRU U-2	UTILITIES BY OTHERS
X-1A	CROSS SECTION SUMMARY
X-1 THRU X-9	CROSS-SECTIONS
C-1 THRU C-5	CULVERT PLANS

GENERAL NOTES:

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

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.

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 WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE : Rutherford EMC-POWER Distribution  
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.

2006 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 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	
200.02	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 - Method 'A'
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
806.02	Granite Right-of-Way Marker
815.03	Pipe Underdrain and Blind Drain
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.01	Rip Rap in Channels

EFF. 07-18-06  
REV. 01-02-07

8/17/99

REVISIONS

IG- JUN-2008 17421  
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3/15/06

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	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	--- WLB
Proposed Wetland Boundary	--- WLB
Existing Endangered Animal Boundary	--- EAB
Existing Endangered Plant Boundary	--- EPB

### 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	-----
False Sump	▽

### RAILROADS:

Standard Gauge	-----
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	-----
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	--- C
Proposed Slope Stakes Fill	--- F
Proposed Wheel Chair Ramp	WCR
Proposed Wheel Chair Ramp Curb Cut	WCC
Curb Cut for Future Wheel Chair 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	-----

### 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	⊕
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	PH
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	PH
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	A/G Water

### TV:

TV Satellite Dish	⊕
TV Pedestal	□
TV Tower	⊗
U/G TV Cable Hand Hole	PH
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	A/G Gas

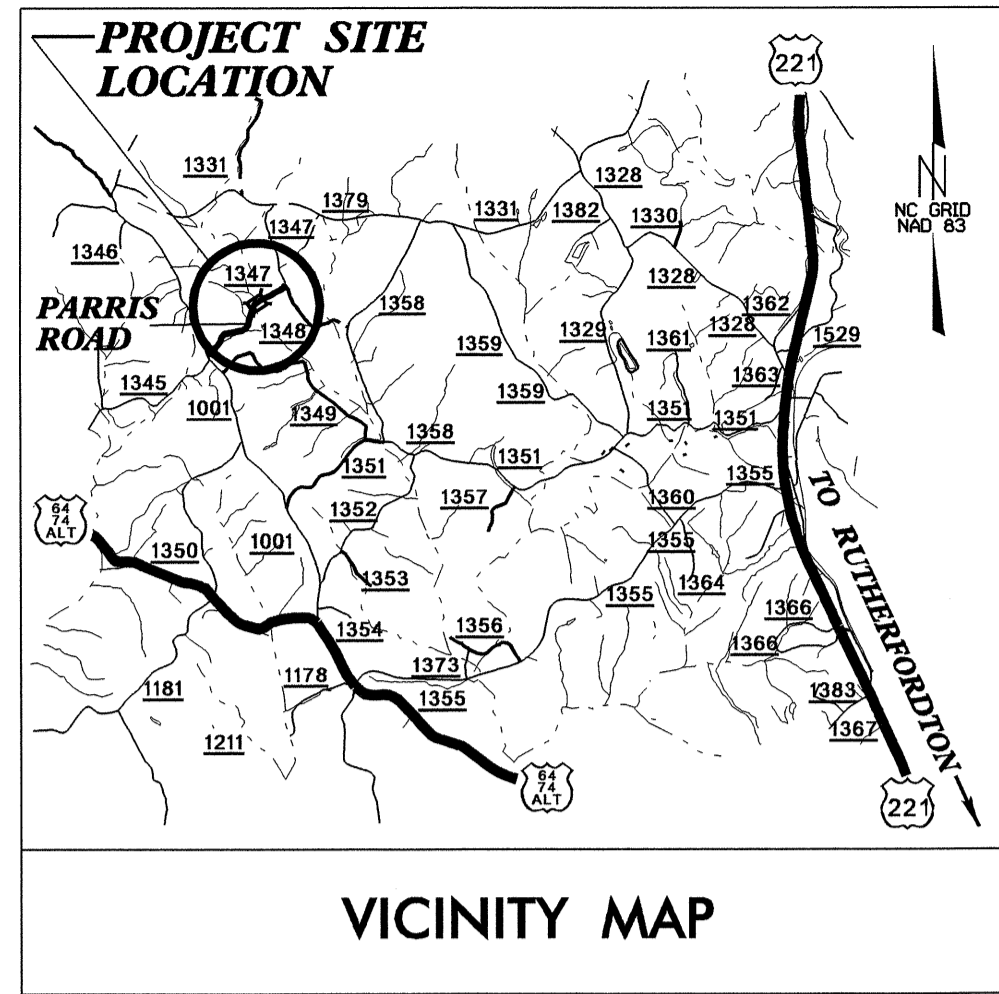
### SANITARY SEWER:

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

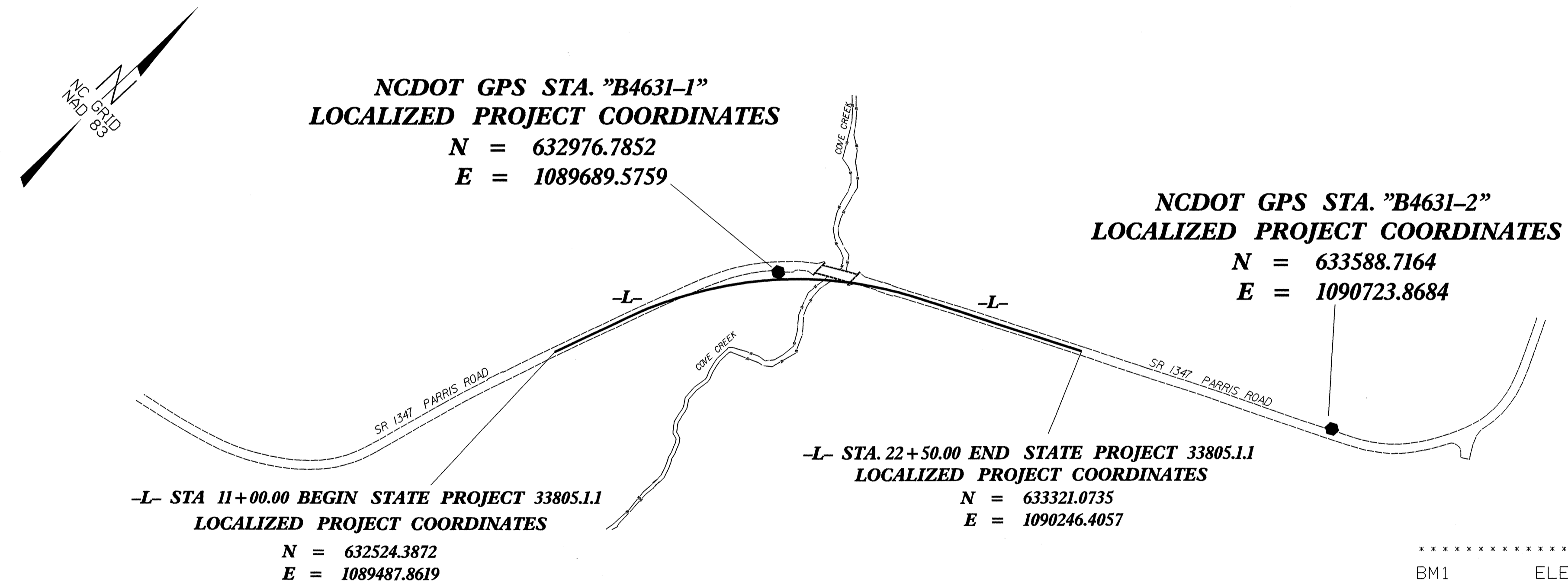
# SURVEY CONTROL SHEET B-4631



BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	BL-1	631757.4050	1088761.2780	956.88	OUTSIDE PROJECT LIMITS	
2	BL-2	631958.4050	1089289.1820	948.76	OUTSIDE PROJECT LIMITS	
3	BL-3	632379.6610	1089455.2640	938.44	OUTSIDE PROJECT LIMITS	
4	BL-4	632720.1250	1089538.9350	934.19	13+01.32	13.26 LT
GPS1	B4631-1	632976.7852	1089689.5759	931.31	15+95.40	15.48 LT
5	BL-5	633255.5100	1090219.3040	965.18	21+95.14	44.99 RT
GPS2	B4631-2	633588.7164	1090723.8684	992.62	OUTSIDE PROJECT LIMITS	
6	BL-6	633807.7160	1090944.2910	1017.53	OUTSIDE PROJECT LIMITS	

**DATUM DESCRIPTION**

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4631-1" WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 632976.7852(ft) EASTING: 1089689.5759(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99983773 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4631-1" TO -L- STATION 11+00.00 IS S 24°01'52" W 495.33' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88



\*\*\*\*\*  
 BM1 ELEVATION = 961.62  
 N 631731 E 1088692  
 L STATION 11+00  
 S 45° 05' 59.9" W DIST 1123.93  
 RR SPIKE IN POWER POLE  
 \*\*\*\*\*  
 BM2 ELEVATION = 945.90  
 N 632594 E 1089291  
 L STATION 11+05 209 LEFT  
 RR SPIKE IN POWER POLE  
 \*\*\*\*\*  
 BM3 ELEVATION = 1019.97  
 N 633756 E 1090987  
 L STATION 22+50  
 N 59° 35' 25.7" E DIST 858.55  
 RR SPIKE IN POWER POLE  
 \*\*\*\*\*

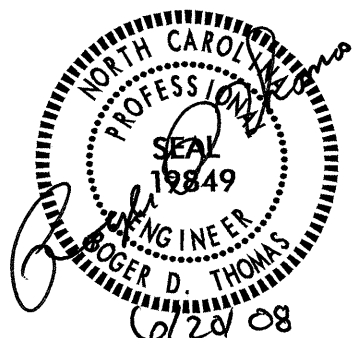
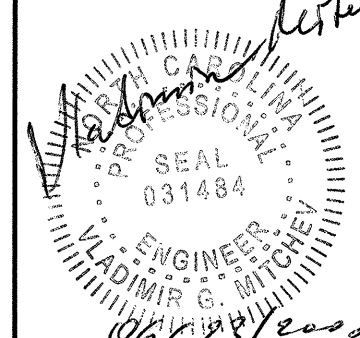
**NOTES:**

- 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:  
 B4631\_LS\_CONTROL\_061108.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

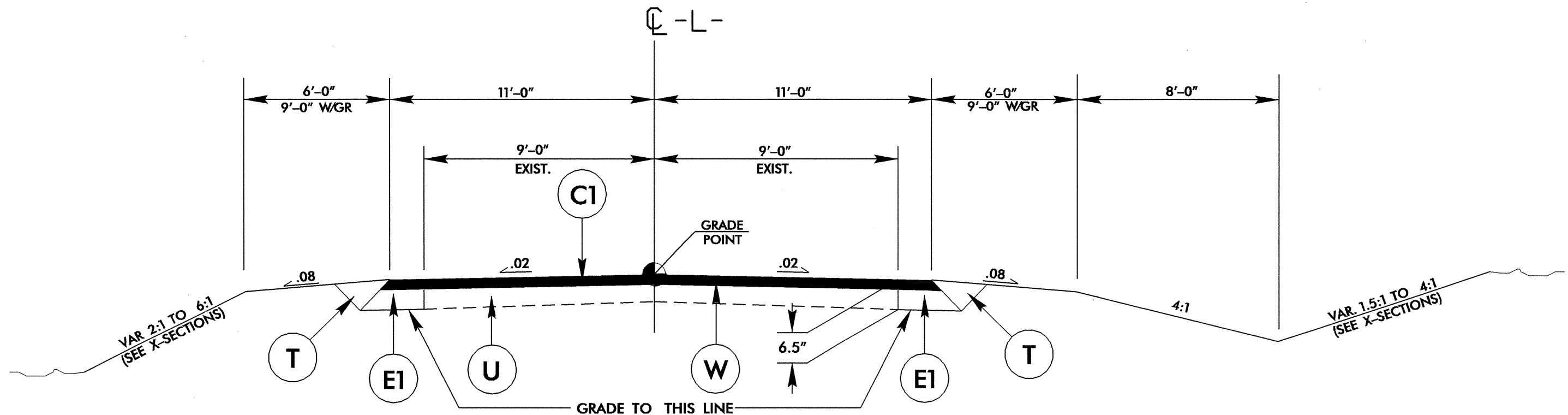
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6/27/99

PROJECT REFERENCE NO. B-4631	SHEET NO. 2
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 

PAVEMENT SCHEDULE	
C	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C1	PROP. APPROX. 2.5" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	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 1.5" IN DEPTH.
E1	PROP. APPROX. 4.0" 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 5.5" IN DEPTH.
J1	PROPOSED 8" AGGREGATE BASE COURSE.
P	PRIME COAT AT THE RATE OF 0.35 GALLONS PER SQUARE YARD.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

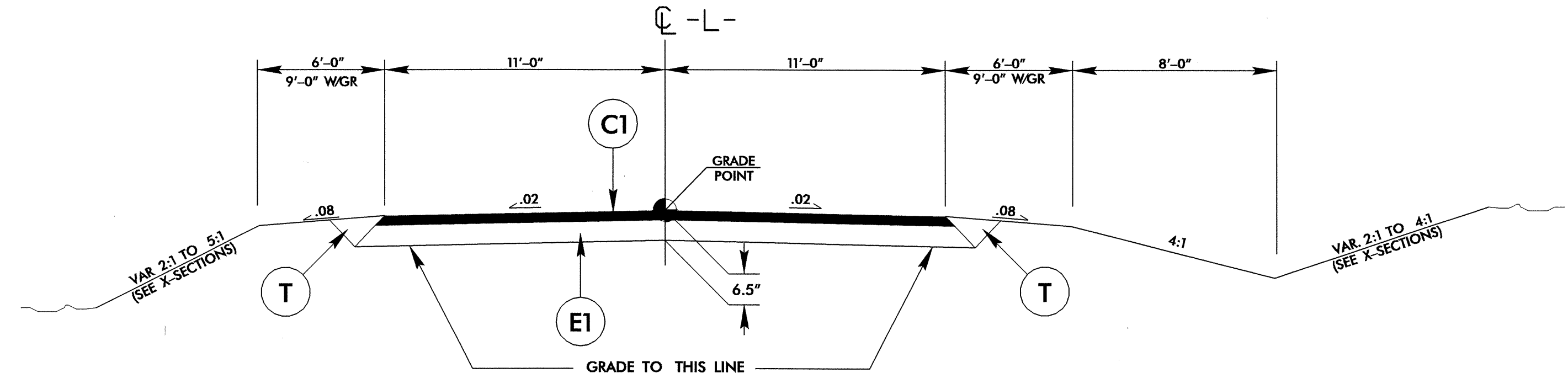
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



**TYPICAL SECTION NO. 1**

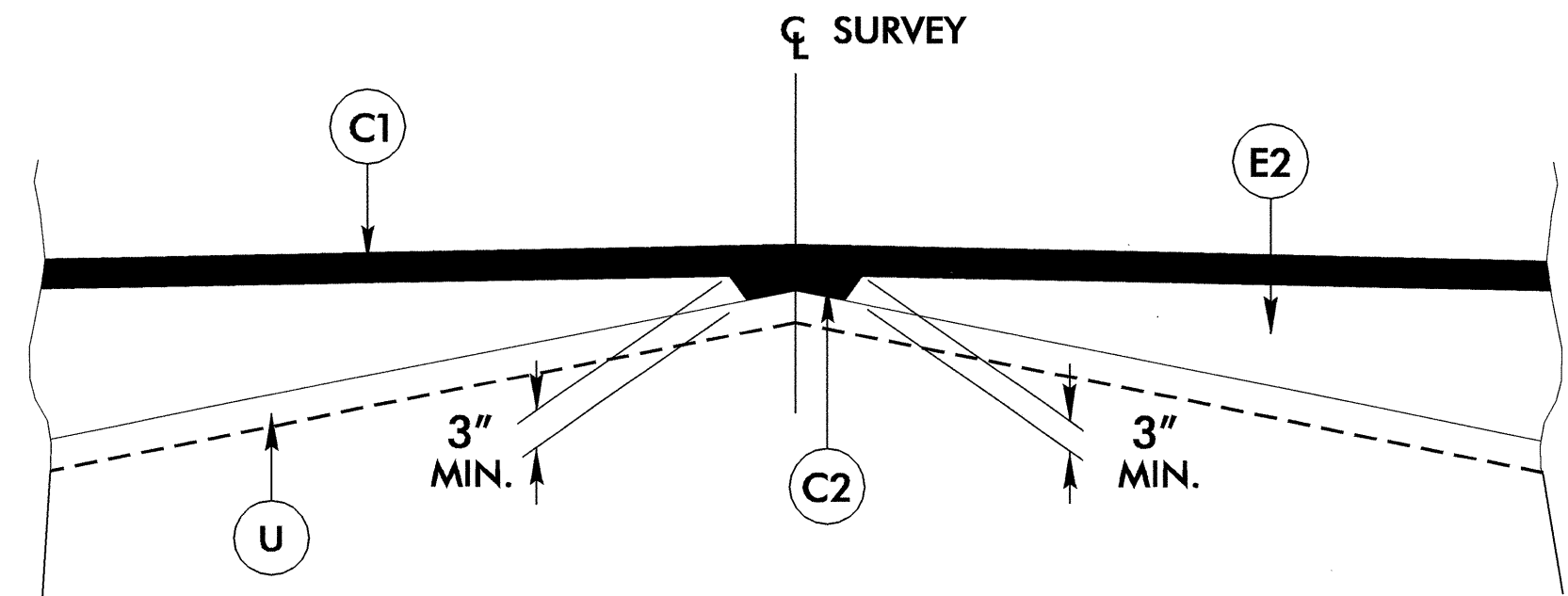
USE TYPICAL SECTION NO. 1  
 -L- STATION 11+50.00 TO 12+50.00  
 -L- STATION 21+50.00 TO 22+00.00

NOTE: OVERLAY EXISTING PAVEMENT (C1)  
 -L- STATION 11+00.00 TO 11+50.00  
 -L- STATION 22+00.00 TO 22+50.00

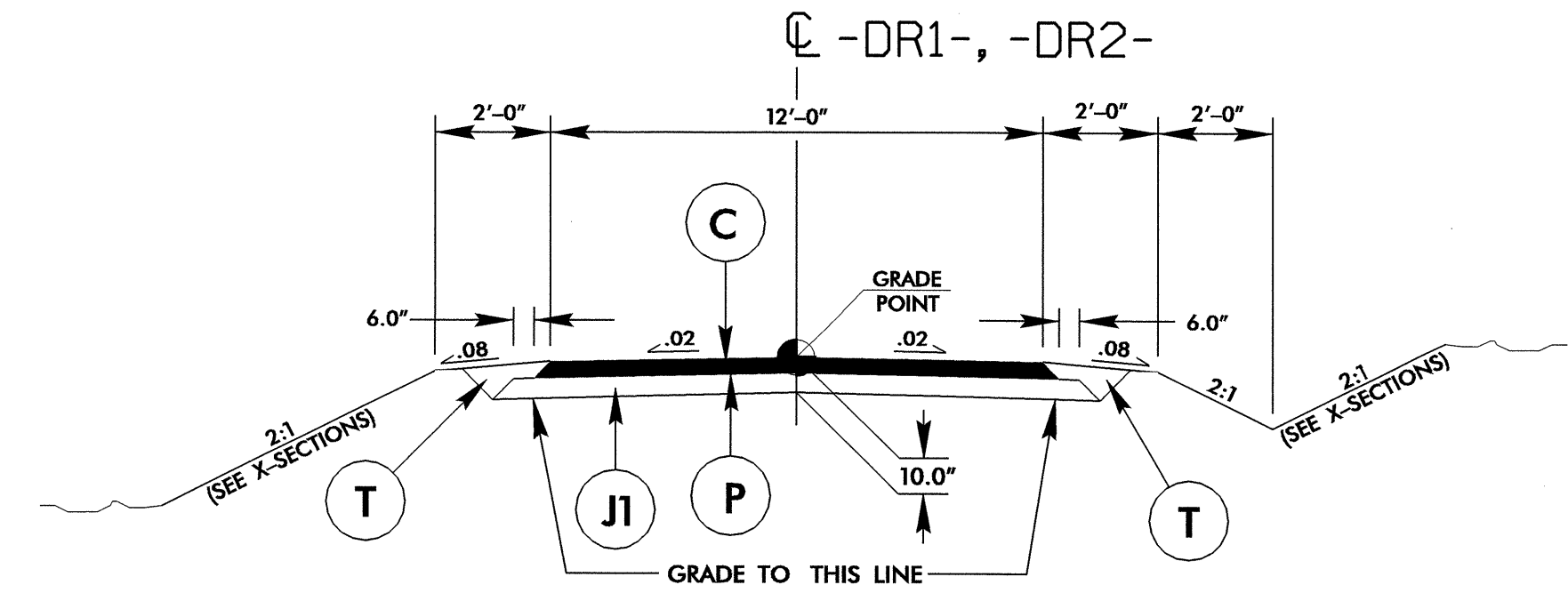


**TYPICAL SECTION NO. 2**

USE TYPICAL SECTION NO. 2  
 -L- STATION 12+50.00 TO 21+50.00

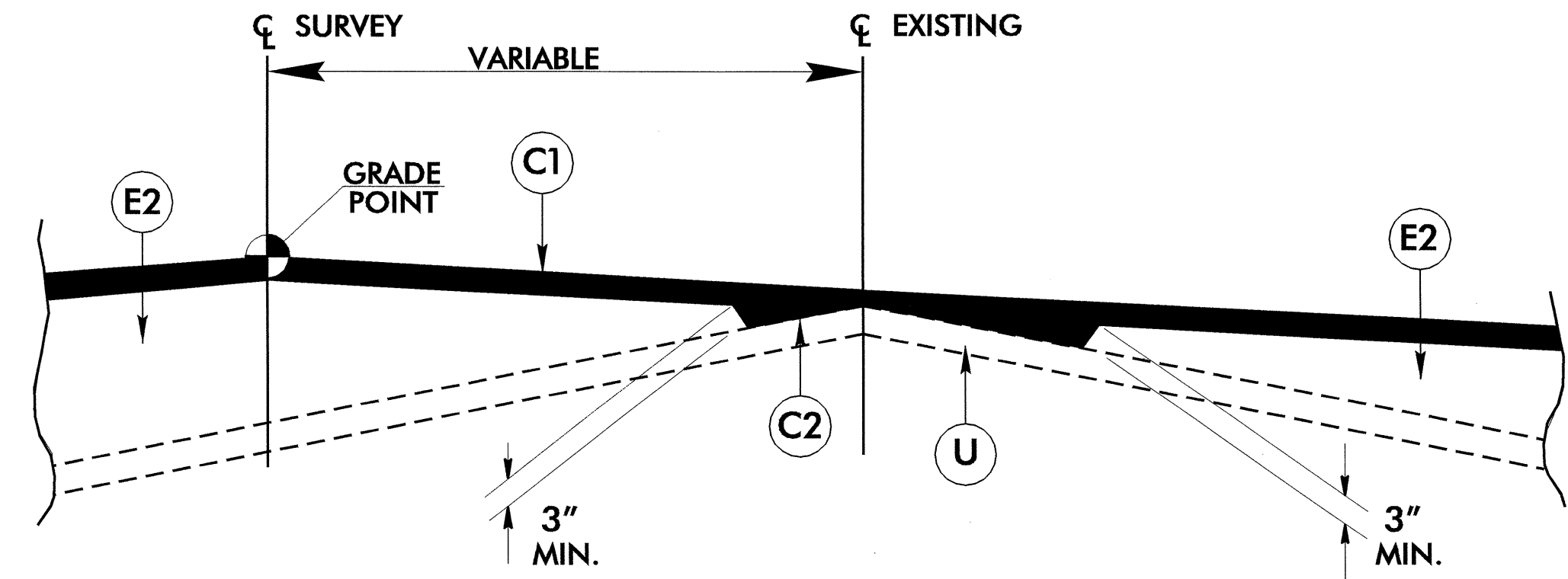


DETAILS SHOWING METHOD OF WEDGING



**TYPICAL SECTION NO. 3**

USE TYPICAL SECTION NO. 3  
 -DR1- STATION 10+00.00 TO 11+00.75  
 -DR2- STATION 10+13.00 TO 11+05.00



DETAILS SHOWING METHOD OF WEDGING

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# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS  
 ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201929

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING
0057000000-E	226	25	CY	UNDERCUT EXCAVATION
0063000000-N	SP	Lump Sum		GRADING
0080000000-E	SP	100	TON	CLASS IV SUBGRADE STABILIZATION
0106000000-E	230	8,200	CY	BORROW EXCAVATION
0134000000-E	240	520	CY	DRAINAGE DITCH EXCAVATION
0195000000-E	265	500	CY	SELECT GRANULAR MATERIAL
0196000000-E	270	500	SY	FABRIC FOR SOIL STABILIZATION
0318000000-E	300	20	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS
0343000000-E	310	88	LF	15" SIDE DRAIN PIPE
0344000000-E	310	20	LF	18" SIDE DRAIN PIPE
0372000000-E	310	64	LF	18" RC PIPE CULVERTS, CLASS III
0995000000-E	340	83	LF	PIPE REMOVAL
1121000000-E	520	160	TON	AGGREGATE BASE COURSE
1220000000-E	545	25	TON	INCIDENTAL STONE BASE
1275000000-E	600	105	GAL	PRIME COAT
1489000000-E	610	570	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1525000000-E	610	420	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A
1560000000-E	620	55	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22
1693000000-E	654	25	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR
2000000000-N	806	19	EA	RIGHT OF WAY MARKERS
2022000000-E	815	5.6	CY	SUBDRAIN EXCAVATION
2033000000-E	815	4.2	CY	SUBDRAIN FINE AGGREGATE
2044000000-E	815	25	LF	6" PERFORATED SUBDRAIN PIPE

ItemNumber	Sec #	Quantity	Unit	Description
2055000000-E	815	1	EA	6" SUBDRAIN PIPE WYES, TEES, & ELBOWS
2066000000-N	815	1	EA	CONCRETE PAD FOR SUBDRAIN PIPE OUTLET
2077000000-E	815	6	LF	6" OUTLET PIPE (SUBDRAINS)
3030000000-E	862	350	LF	STEEL BM GUARDRAIL
3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS
3270000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
3628000000-E	876	125	TON	RIP RAP, CLASS I
3649000000-E	876	255	TON	RIP RAP, CLASS B
3656000000-E	876	6,990	SY	FILTER FABRIC FOR DRAINAGE
4400000000-E	1110	223	SF	WORK ZONE SIGNS (STATIONARY)
4410000000-E	1110	57	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4430000000-N	1130	10	EA	DRUMS
4445000000-E	1145	96	LF	BARRICADES (TYPE III)
4810000000-E	1205	10,400	LF	PAINT PAVEMENT MARKING LINES (4")
6000000000-E	1605	1,875	LF	TEMPORARY SILT FENCE
6006000000-E	1610	540	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	310	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	100	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	3	ACR	TEMPORARY MULCHING
6018000000-E	1620	100	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	0.25	TON	FERTILIZER FOR TEMPORARY SEEDING
6024000000-E	1622	375	LF	TEMPORARY SLOPE DRAINS
6027000000-N	1622	4	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS
6029000000-E	SP	500	LF	SAFETY FENCE
6030000000-E	1630	680	CY	SILT EXCAVATION

ItemNumber	Sec #	Quantity	Unit	Description
6036000000-E	1631	10,000	SY	MATting FOR EROSION CONTROL
6038000000-E	SP	150	SY	PERMANENT SOIL REINFORCEMENT MAT
6069000000-E	1638	40	CY	STILLING BASINS
6071030000-E	SP	200	LF	COIR FIBER BAFFLES
6084000000-E	1660	5.5	ACR	SEEDING & MULCHING
6087000000-E	1660	1.5	ACR	MOWING
6090000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
6096000000-E	1662	75	LB	SEED FOR SUPPLEMENTAL SEEDING
6108000000-E	1665	1.75	TON	FERTILIZER TOPDRESSING
6111000000-E	SP	375	LF	IMPERVIOUS DIKE
6114000000-N	SP	5	HR	SPECIALIZED HAND MOWING
6117000000-N	SP	12	EA	RESPONSE FOR EROSION CONTROL
6120000000-E	SP	350	CY	CULVERT DIVERSION CHANNEL
6123000000-E	1670	0.1	ACR	REFORESTATION



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**SUMMARY OF EARTHWORK**  
IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBANKMENT +%	BORROW	WASTE
-L-					
11+50.00 to 16+63.99 (BEG. CULVERT)	163		2609	2446	
-L-					
17+07.02 (END CULVERT) to 22+00.00	241		5036	4795	
-DR1-					
10+00.00 to 11+00.75	9		330	321	
-DR2-					
10+13.00 to 11+05.00	9		209	200	
PROJECT TOTAL	422		8184	7762	
LOSS DUE TO C&G	- 20			20	
EST. 5% TO REPLACE TOPSOIL AT BORROW PIT				390	
GRAND TOTAL	402			8172	
SAY	450			8200	

DDE = 520 CY

EST. UNDERCUT EXCAVATION = 25 CY  
(FURNISHED BY DIVISION)

**REMOVAL OF EXISTING ASPHALT PAVEMENT**

LINE	STATION TO STATION	LOCATION	SQ. YD.
-L-	12+50.00 to 13+51.13	CL	64
-L-	13+22.25 to 16+89.65	LT	583
-L-	17+52.08 to 18+30.55	LT	34
-L-	20+90.12 to 21+50.00	CL	33
		TOTAL	714
		SAY	720

**BREAKING OF EXISTING ASPHALT PAVEMENT**

LINE	STATION TO STATION	LOCATION	SQ. YD.
-L-	13+51.13 to 14+78.96	CL	122
-L-	17+40.21 to 20+90.12	CL	674
		TOTAL	796
		SAY	800

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.

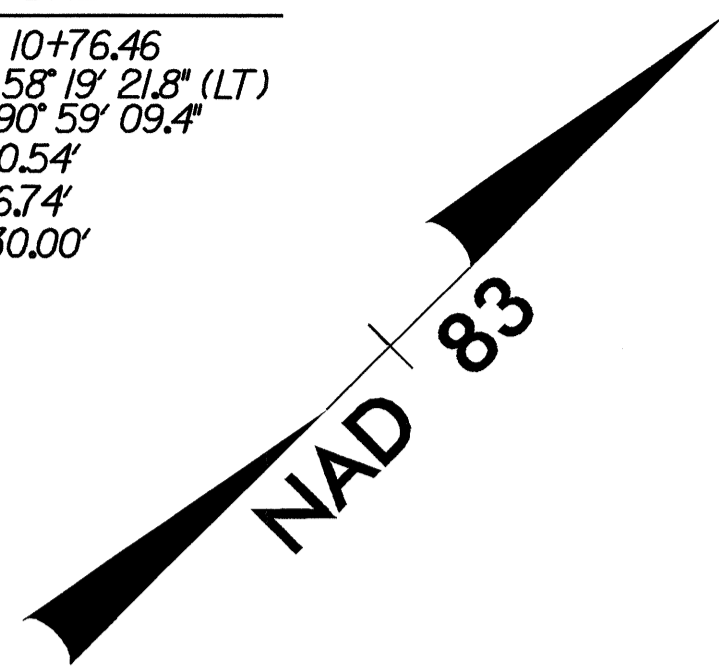
NOTE: Approximate quantities only. Unclassified Excavation, Fine Grading, Clearing and Grubbing, Breaking of Existing Pavement, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

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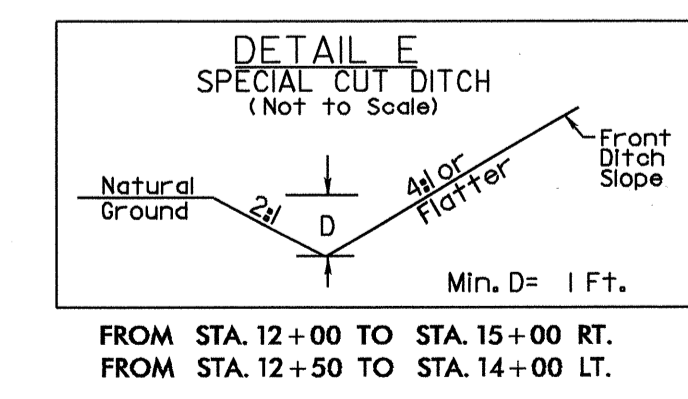
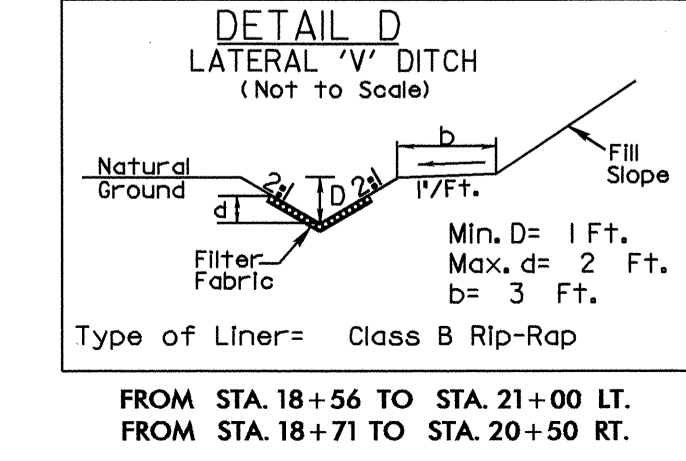
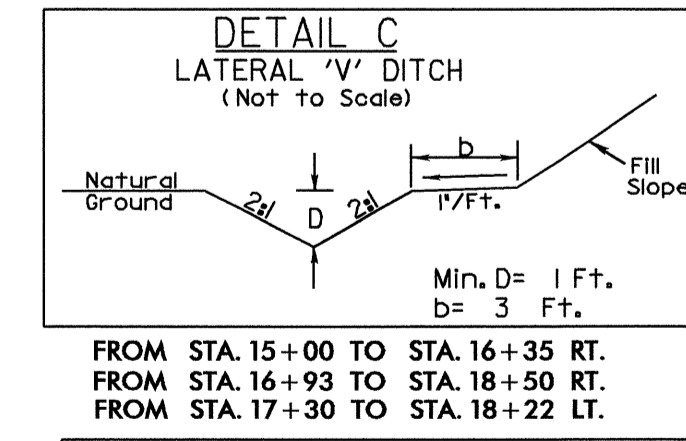
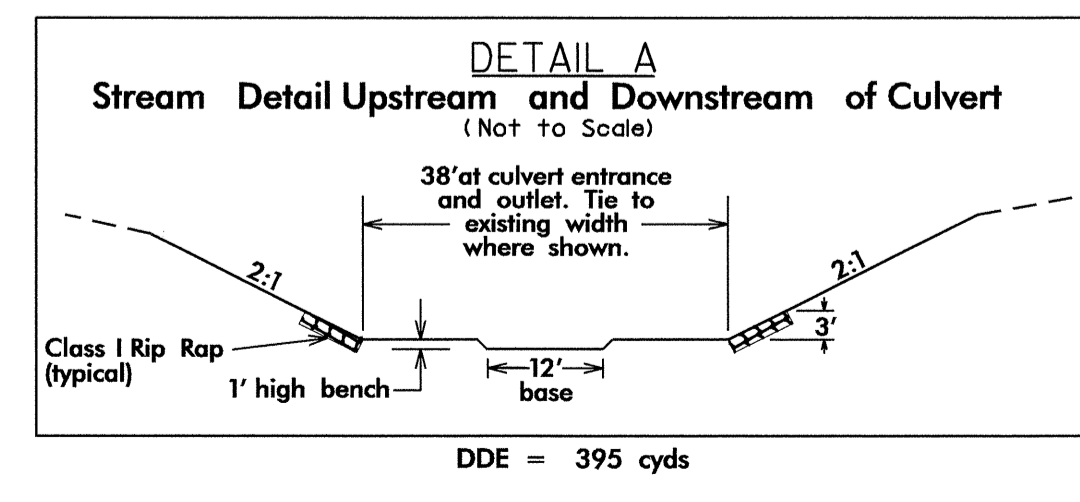
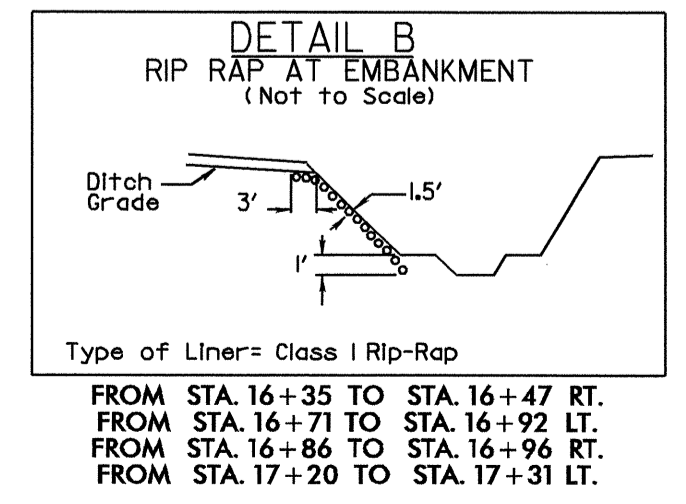
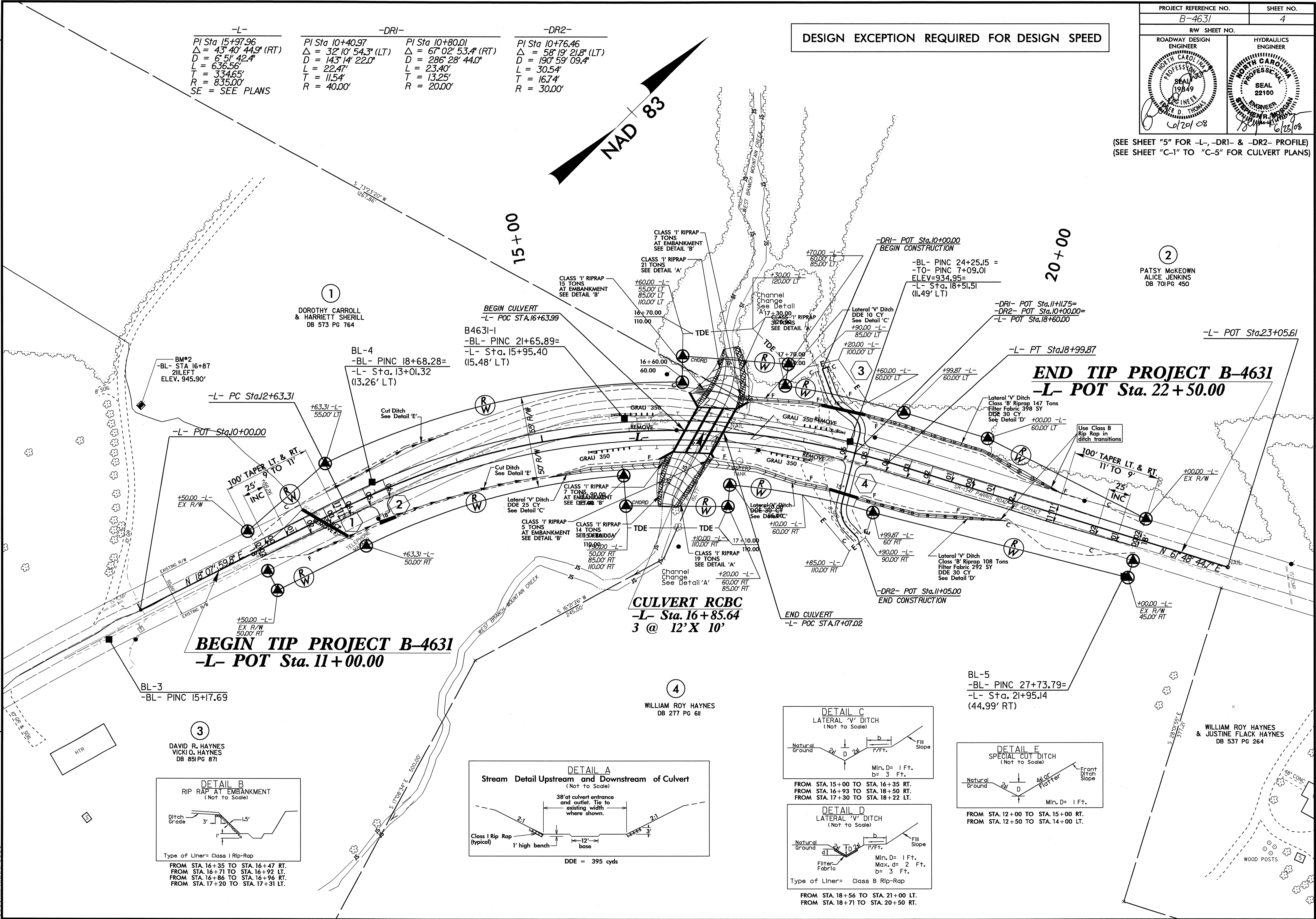


DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED

-L-	-DRI-	-DR2-
PI Sta 15+97.96 Δ = 43° 40' 44.9" (RT) D = 6' 51' 42.4" L = 636.56' T = 334.65' R = 835.00' SE = SEE PLANS	PI Sta 10+40.97 Δ = 32° 10' 54.3" (LT) D = 143' 14' 22.0" L = 22.47' T = 11.54' R = 40.00'	PI Sta 10+80.01 Δ = 67° 02' 53.4" (RT) D = 286' 28' 44.0" L = 23.40' T = 13.25' R = 20.00'
		PI Sta 10+76.46 Δ = 58° 19' 21.8" (LT) D = 190' 59' 09.4" L = 30.54' T = 16.74' R = 30.00'



(SEE SHEET "5" FOR -L-, -DRI- & -DR2- PROFILE)  
(SEE SHEET "C-1" TO "C-5" FOR CULVERT PLANS)



2  
PATSY MCKEOWN  
ALICE JENKINS  
DB 701 PG 450

WILLIAM ROY HAYNES & JUSTINE FLACK HAYNES  
DB 537 PG 264

REVISIONS

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5/28/99

DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED

PROJECT REFERENCE NO. B-4631	SHEET NO. 5
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 

**CULVERT HYDRAULIC DATA**

DESIGN DISCHARGE	= 1150 CFS
DESIGN FREQUENCY	= 25 YRS
DESIGN HW ELEVATION	= 933.0 FT
BASE DISCHARGE	= 1700 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 933.9 FT
OVERTOPPING DISCHARGE	= 2600 CFS
OVERTOPPING FREQUENCY	= 500 YRS
OVERTOPPING ELEVATION	= 935.2 FT

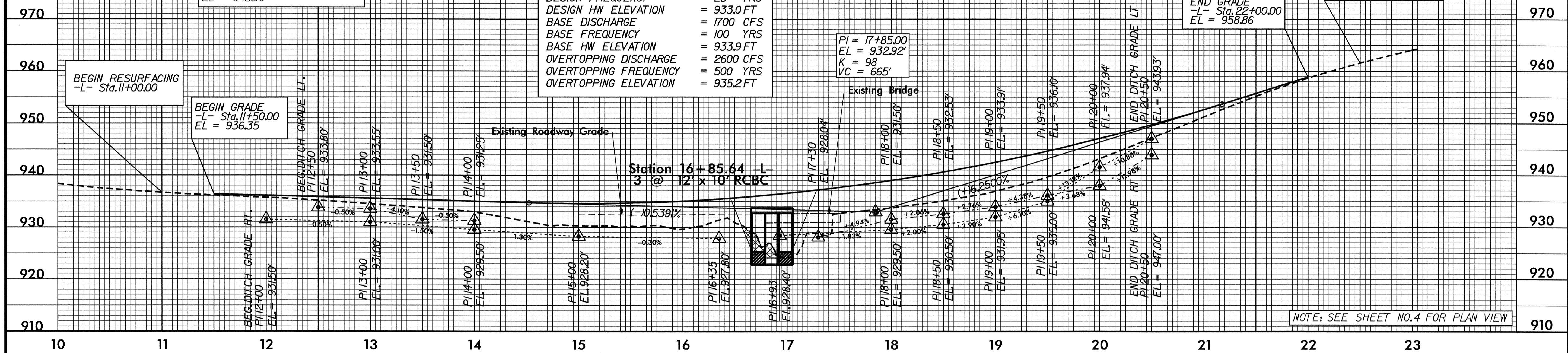
BM #2  
R/R SPIKE IN POWER POLE  
-L- STA. 11+04.77 208.85' LT  
-BL- STA. 16+86.53 210.78' LT  
EL = 945.90'

BEGIN RESURFACING  
-L- Sta. 11+00.00

BEGIN GRADE  
-L- Sta. 11+50.00  
EL = 936.35

END GRADE  
-L- Sta. 22+00.00  
EL = 958.86

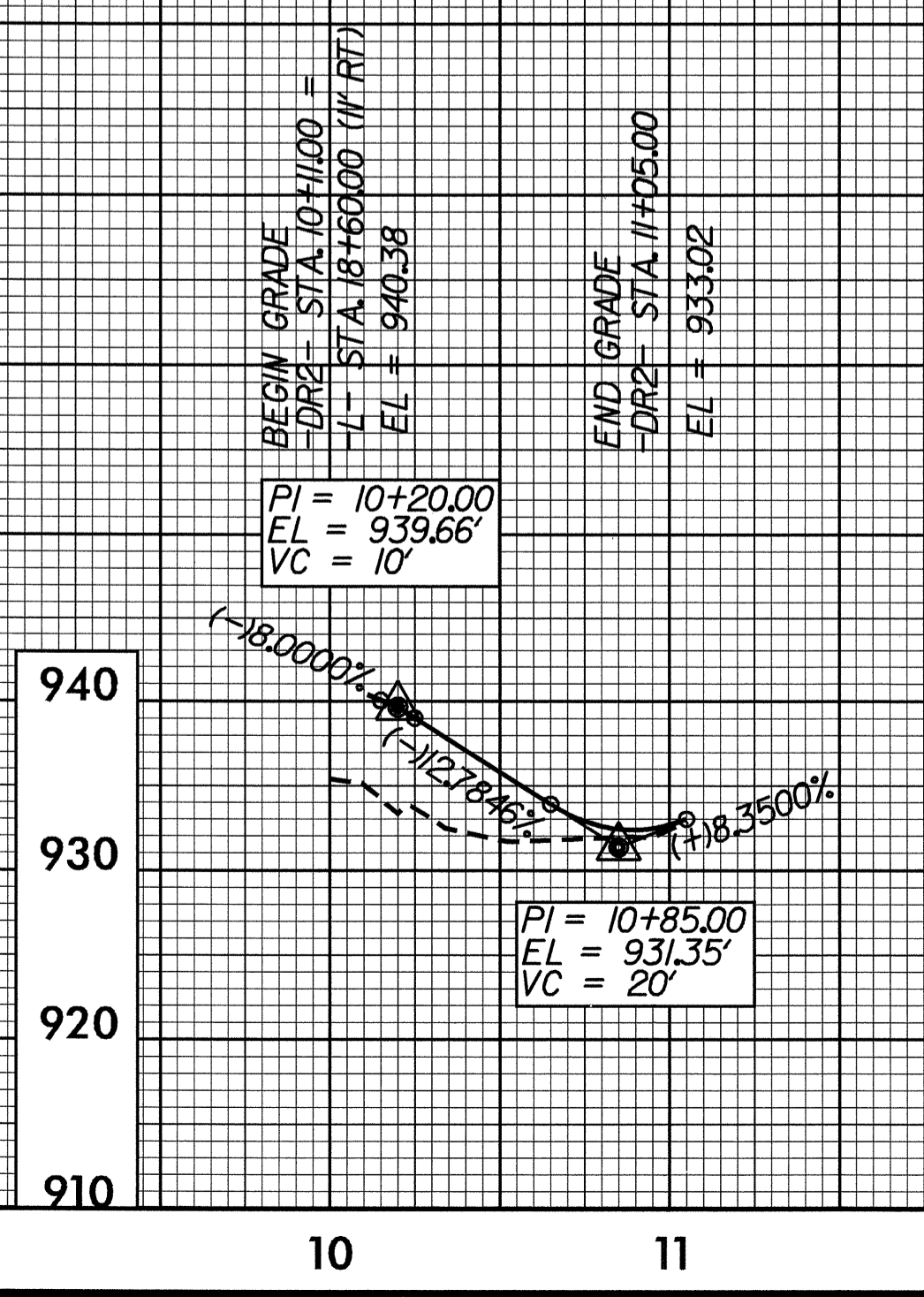
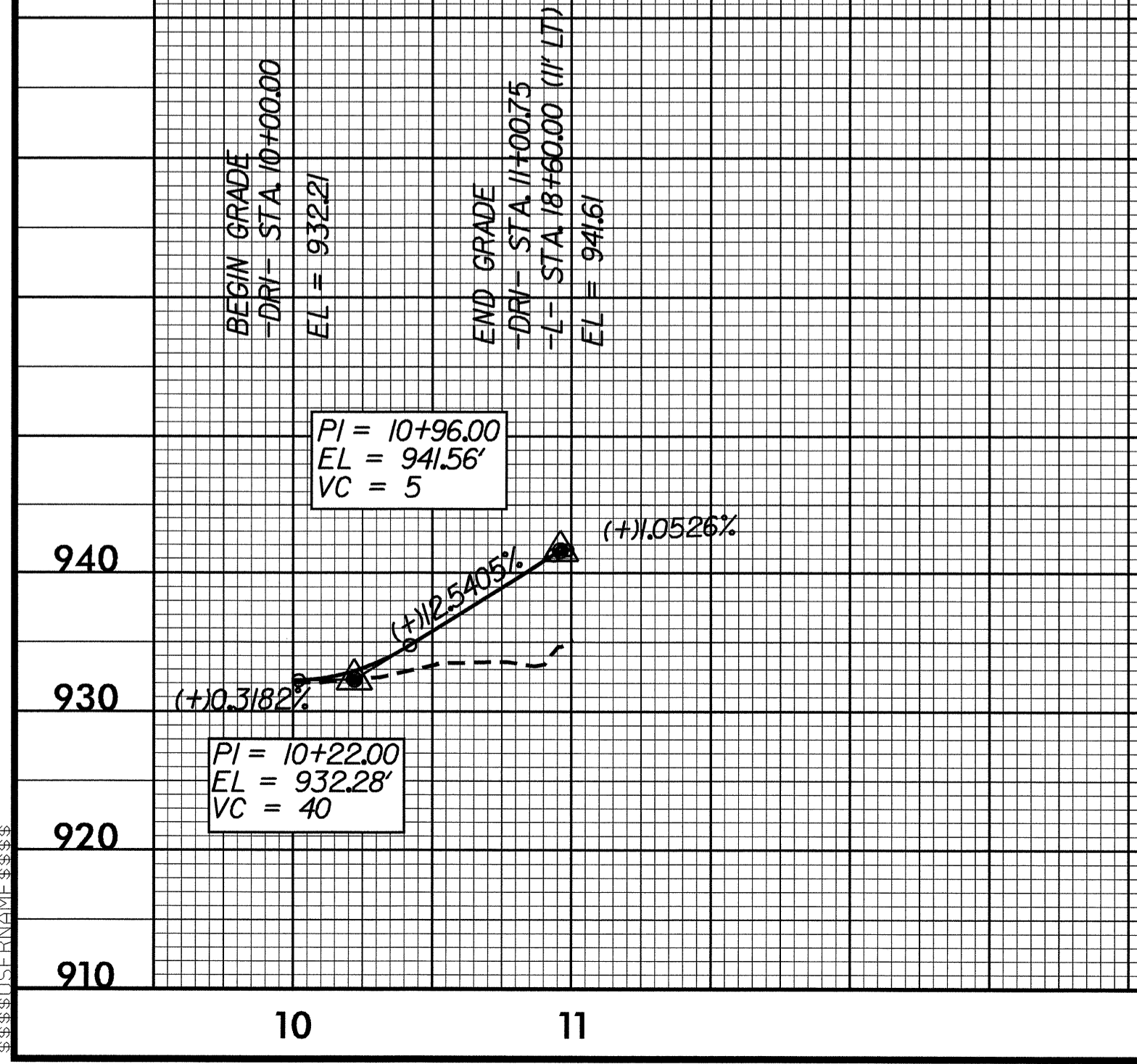
END RESURFACING  
-L- Sta. 22+50.00



NOTE: SEE SHEET NO. 4 FOR PLAN VIEW

**-DR1-**

**-DR2-**



LEFT DITCH - - - - -  
RIGHT DITCH - - - - -

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