

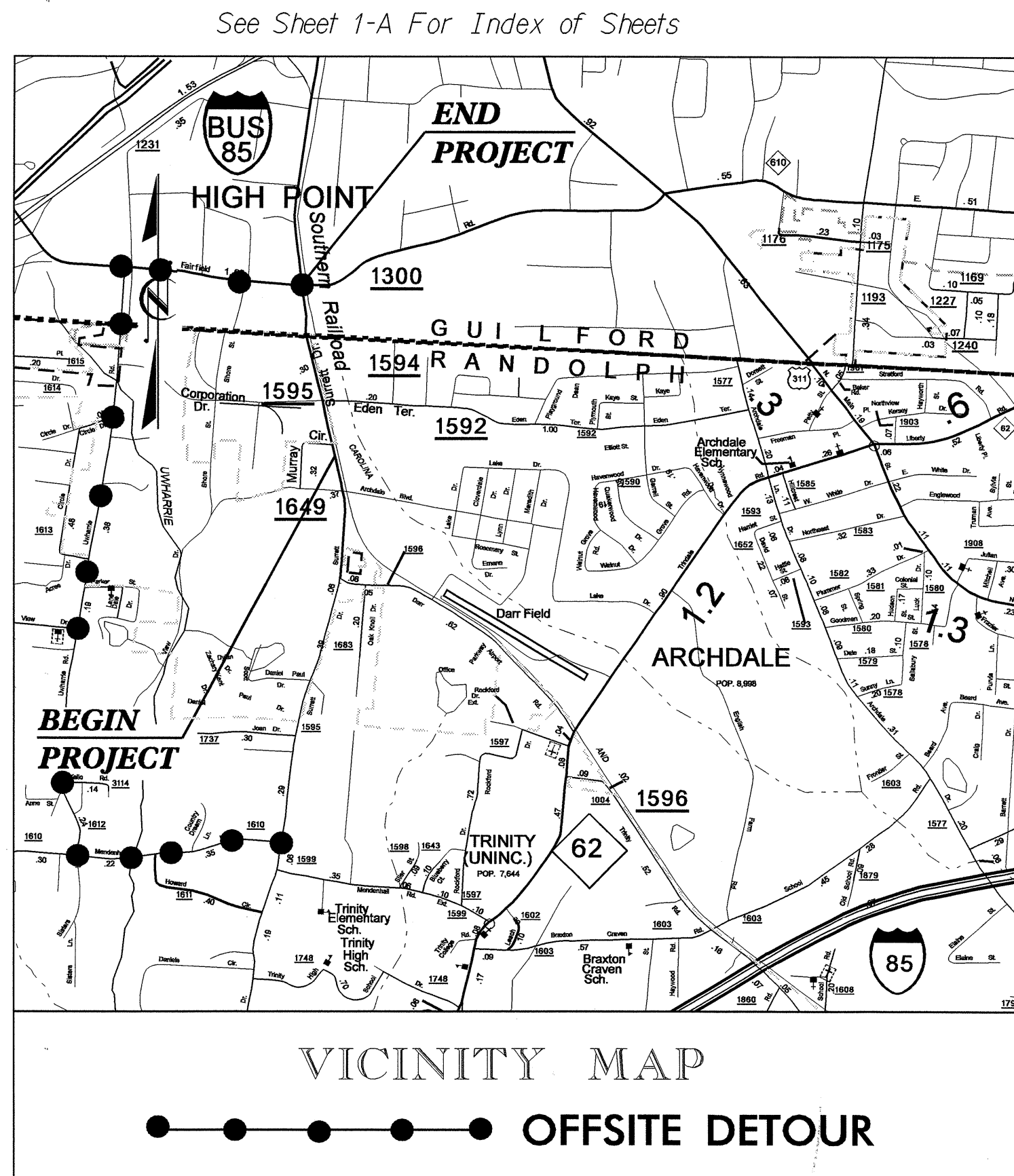
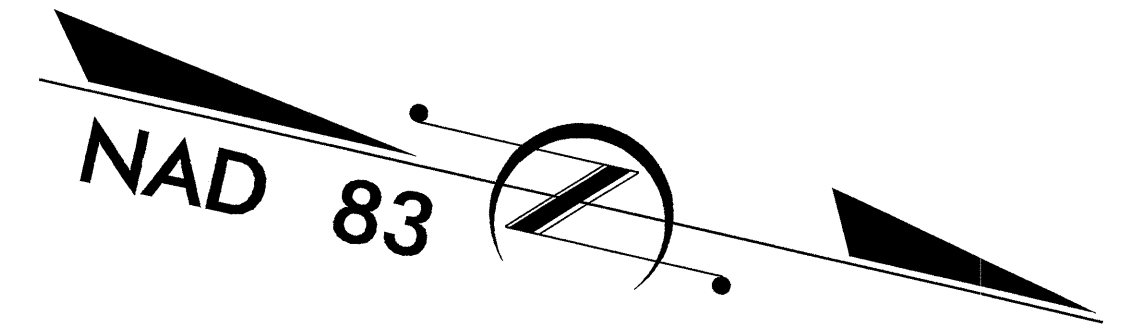
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2702	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34843.1.1	STP-CMS-1595(1)	P.E.	
34843.2.2	STP-CMS-1595(1)	ROW, UTIL	
34843.3.1	STP-CMS-1595(1)	CONST.	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

RANDOLPH/GUILFORD COUNTIES

LOCATION: ARCHDALE-HIGH POINT INTERSECTION OF SR 1592 (EDEN TERRACE) AND SR 1595 (SURRETT DR.)

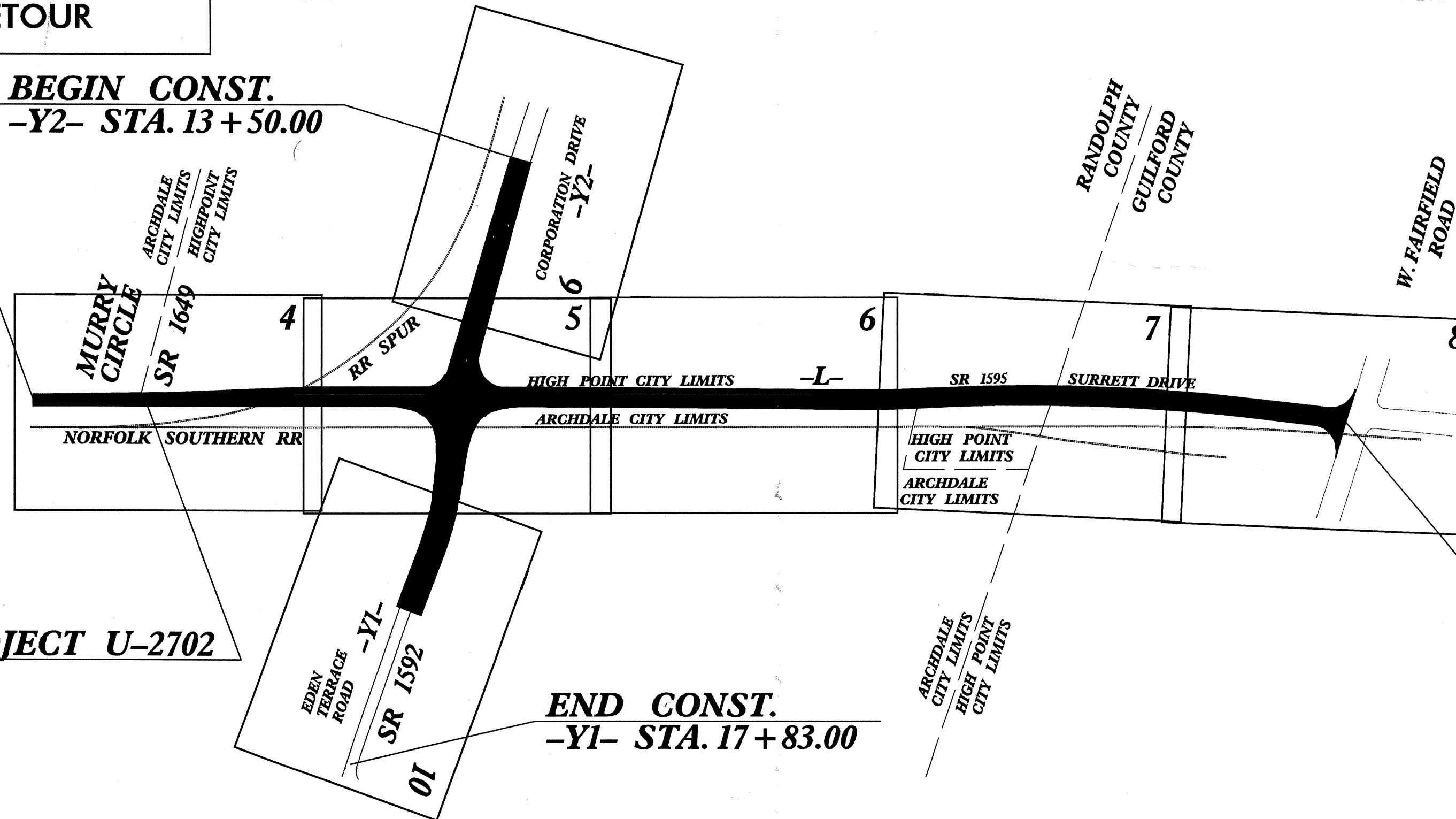
TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNALS AND RETAINING WALL



BEGIN CONST.
-L- STA. 14+45.00

BEGIN CONST.
-Y2- STA. 13+50.00

ARCHDALE SURRETT DRIVE



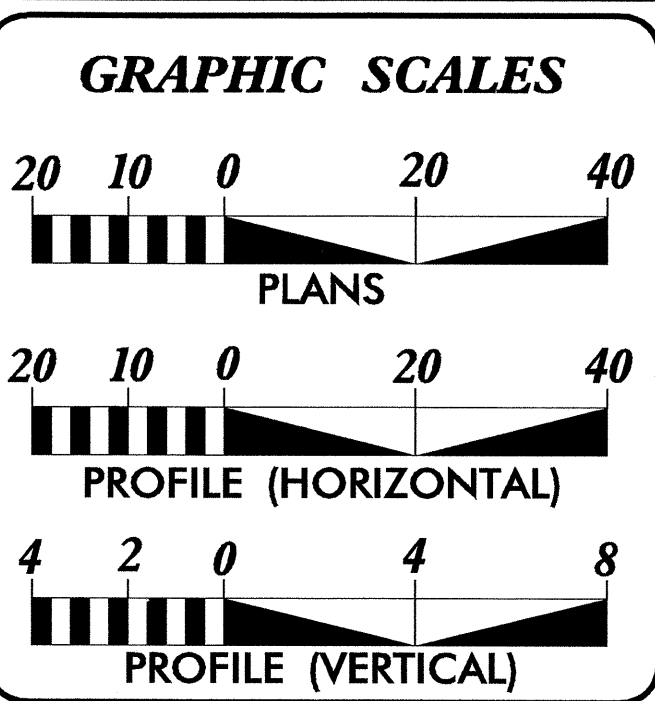
STA. 40+09.89 -L- END TIP PROJECT U-2702

STA. 16+61.16 -L- BEGIN TIP PROJECT U-2702

END CONST.
-Y1- STA. 17+83.00

TIP PROJECT: U-2702

CONTRACT: C201244



DESIGN DATA

ADT 2007 =	16600
ADT 2030 =	25800
DHV =	11%
D =	65%
*T =	7%
V =	40 MPH % *
*TTST =	4% +
DUALS =	3%

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-2702 =	0.445 MI
TOTAL LENGTH OF TIP PROJECT U-2702 =	0.445 MI

Prepared In the Office of:

DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: OCTOBER 17, 2003	TED S. WALLS PROJECT ENGINEER
LETTING DATE: May 20, 2008	ALLISON K. WHITE PROJECT DESIGN ENGINEER

HWY DESIGN ENGINEER

SIGNATURE: *William E. Williams* 3/11/08

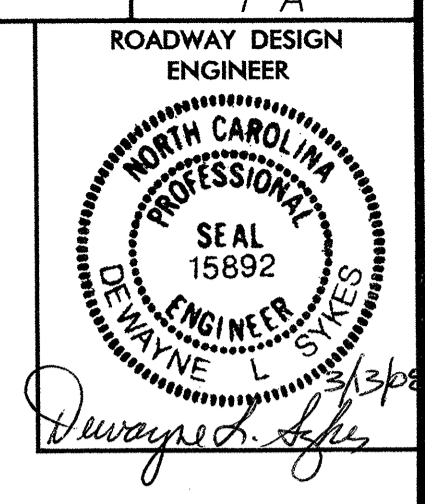
ROADWAY DESIGN ENGINEER

SIGNATURE: *Duane L. Ayres* 3/11/08

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

at miller P.E.
STATE HIGHWAY DESIGN ENGINEER

I:\MAR-2008\1242\F:\CGW\DW\PROJECTS\U2702_rdy_tsh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$



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

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	SURVEY CONTROL SHEET
2 THRU 2-C	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
2-D	DETAIL OF PROPOSED OFFSITE DETOUR
2-E	ANCHORAGE FOR FRAMES DETAIL
2-F	DETAIL OF 6" NON-MOUNTABLE CONCRETE ISLANDS
2-G	TYPICAL SECTION FOR SPUR TRACK
3 (2 sheets)	SUMMARY OF QUANTITIES
3A THRU 3B	SUMMARY OF DRAINAGE QUANTITIES
3C	EARTHWORK SUMMARY, AND ASPHALT AND CONCRETE PAVEMENT REMOVAL, SUMMARY OF ASPHALT PAVEMENT BREAKING
3D	PARCEL INDEX SHEET
4 THRU 10	PLAN SHEET
11 THRU 17	PROFILE SHEET
TCP-1 THRU TCP-5	TRAFFIC CONTROL PLANS
PM-1 THRU PM-3	PAVEMENT MARKING PLANS
SD-1	SPECIAL SIGN DESIGN PLANS
EC-1 THRU EC-15	EROSION CONTROL PLANS
SIG-1 THRU SIG-29	SIGNAL PLANS
UO-1 THRU UO-6	UTILITIES BY OTHERS PLANS
UC-1 THRU UC-12	UTILITY CONSTRUCTION PLANS
W-1 THRU W-2	GRAVITY WALL PLANS
X-0	CROSS-SECTION VOLUME SHEET
X-1 THRU X-21	CROSS-SECTIONS

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.

BERM DITCHES:
BERM DITCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 240.01 AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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. 848.02 USING 3' RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE 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.

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

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

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE DUKE ENERGY,
NORTH CAROLINA COMMUNICATIONS, TIME WARNER CABLE, PIEDMONT NATURAL GAS,
CITY OF HIGH POINT, CITY OF ARCDALE, DAVIDSON WATER
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.
FROM -L- STA 23+30+/- TO -L- STA 32+10+/- AND -Y2- STA 15+55+/- TO -Y2- STA - STA 17+42+/-,
PROPOSED FILL SHALL BE PLACED ALONG THE ROUTE OF THE PROPOSED 16" WATER MAIN PRIOR TO INSTALLATION OF THE NEW 16" WATER LINE (SEE UTILITY PLANS)
PROPOSED FILL SHALL NOT BE PLACED OVER THE EXISTING 16" C.I.
LEAD-JOINT WATER MAIN UNTIL AFTER THE NEW 16" WATER MAIN IS PUT IN SERVICE AND THE EXISTING 16" WATER MAIN IS ABANDONED (SEE UTILITY PLANS)

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

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 Superlevation - Two Lane Pavement
240.01	Guide for Berm Ditch Construction
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation - Method 'A'
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	
815.03	Pipe Underdrain and Blind Drain
838.01	Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.11	Brick Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.80	Precast Endwalls - 12" thru 72" Pipe 90 Skew
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.04	Concrete Open Throat Catch Basin - 12" thru 48" Pipe
840.05	Brick Open Throat Catch Basin - 12" thru 48" Pipe
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
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.22	Frames and Wide Slot Sag Grates
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.34	Traffic Bearing Junction Box - for Use with Pipes 42" and Under
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
840.71	Concrete and Brick Pipe Plug
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
848.02	Driveway Turnout - Radius Type
848.04	Street Turnout
852.01	Concrete Islands
857.01	Precast Reinforced Concrete Barrier - 41" Single Faced
866.01	Chain Link Fence - 4', 5' and 6' High Fence
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

8/17/09
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DUWAYNE L. STOKES

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

Table listing symbols for 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, Existing Fence Line, 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.

BUILDINGS AND OTHER CULTURE:

Table listing symbols for 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:

Table listing symbols for 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:

Table listing symbols for railroads: Standard Gauge, RR Signal Milepost, Switch, RR Abandoned, RR Dismantled.

RIGHT OF WAY:

Table listing symbols for 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:

Table listing symbols for roads and related features: Existing Edge of Pavement, Existing Curb, Proposed Slope Stakes Cut, Proposed Slope Stakes Fill, Proposed Wheel Chair Ramp, Proposed Wheel Chair Ramp Curb Cut, Curb Cut for Future Wheel Chair Ramp, Existing Metal Guardrail, Proposed Guardrail, Existing Cable Guiderail, Proposed Cable Guiderail, Equality Symbol, Pavement Removal.

VEGETATION:

Table listing symbols for vegetation: Single Tree, Single Shrub, Hedge, Woods Line, Orchard, Vineyard.

EXISTING STRUCTURES:

Table listing symbols for 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:

Table listing symbols for 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:

Table listing symbols for 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:

Table listing symbols for 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:

Table listing symbols for 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:

Table listing symbols for gas: Gas Valve, Gas Meter, Recorded U/G Gas Line, Designated U/G Gas Line (S.U.E.*), Above Ground Gas Line.

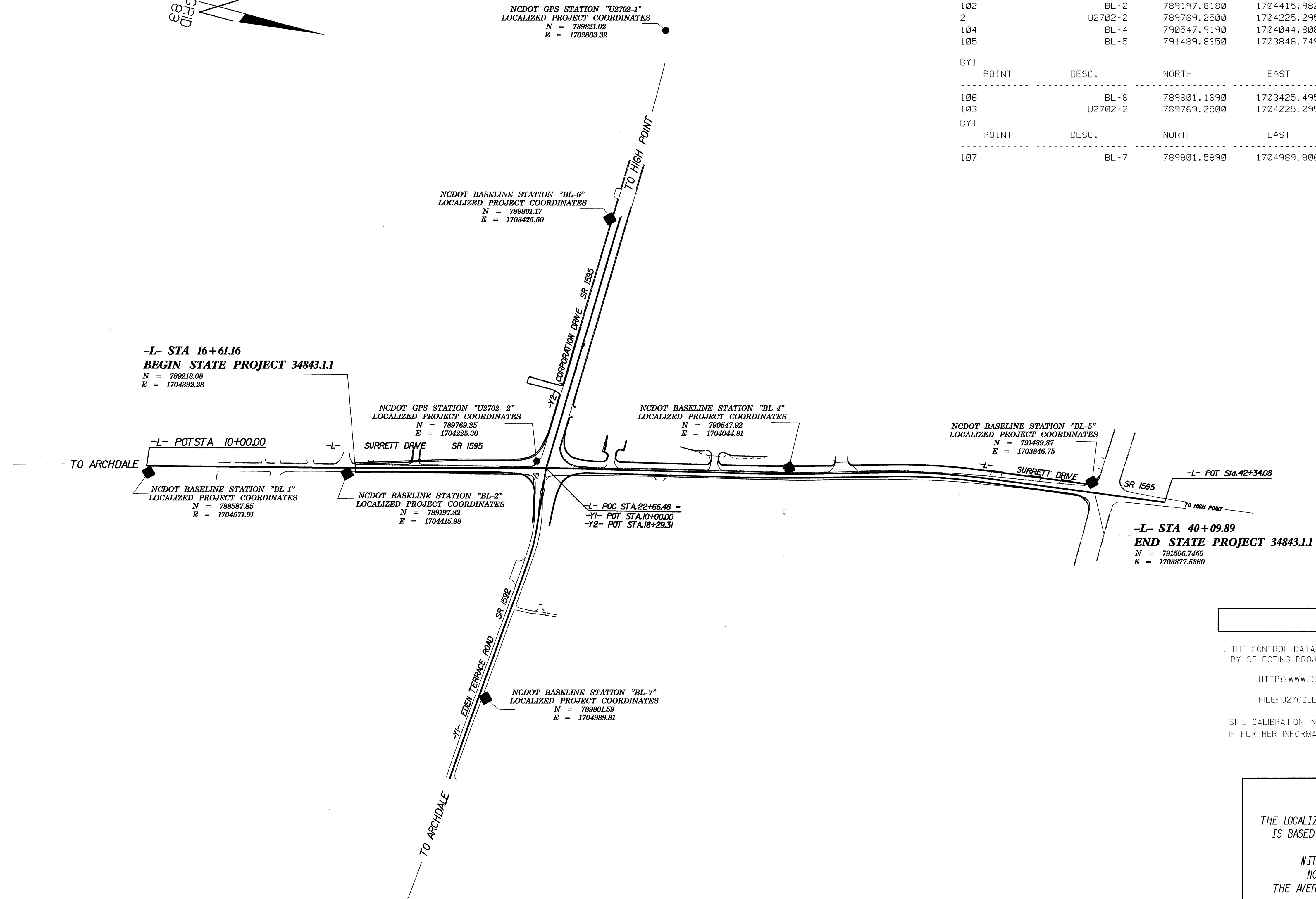
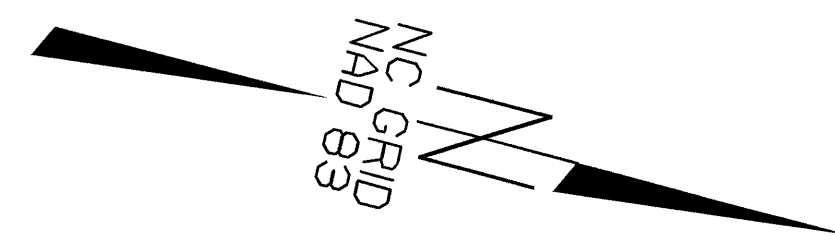
SANITARY SEWER:

Table listing symbols for 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:

Table listing symbols for 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, End of Information.

SURVEY CONTROL SHEET U-2702



BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
101	BL-1	788587.8480	1704571.9100	864.77	10+06.17	20.33 RT
102	BL-2	789197.8180	1704415.9820	874.34	16+35.56	17.80 RT
2	U2702-2	789769.2500	1704225.2950	873.75	22+36.54	22.15 LT
104	BL-4	790547.9190	1704044.8080	877.29	30+35.87	19.14 LT
105	BL-5	791489.8650	1703846.7490	885.39	39+96.90	32.62 LT

BY1 POINT	DESC.	NORTH	EAST	ELEVATION	Y2 STATION	OFFSET
106	BL-6	789801.1690	1703425.4950	871.12	10+15.99	30.22 RT
103	U2702-2	789769.2500	1704225.2950	873.75	18+16.42	34.98 RT

BY1 POINT	DESC.	NORTH	EAST	ELEVATION	Y1 STATION	OFFSET
107	BL-7	789801.5890	1704989.8060	870.77	17+51.57	22.18 LT

.....
 BM1 ELEVATION = 862.73
 N 788630 E 1704710
 Y2 STATION 18+29
 S 21° 50' 52.4" E DIST 1264.99
 RR-SPIKE IN BASE OF 18' APPLE TREE
 161.2' RT OF CL OF SURRET DR

BM2 ELEVATION = 879.15
 N 789909 E 1704309
 Y2 STATION 18+29
 N 33° 30' 59.2" E DIST 125.78
 RR-SPIKE IN BASE OF 28' RED OAK 83.5' T
 OF CL OF SURRET DR

BM3 ELEVATION = 884.47
 N 791472 E 1704019
 Y2 STATION 15+52 1660 LEFT
 RR-SPIKE IN BASE OF POWER POLE 138' RT
 OF CL OF SURRET DR

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/)
 FILE: U2702.LS_CONTROL_040212.TXT

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

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "PRECISION" WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 794085722(ft) EASTING: 1707566650(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999901790 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "PRECISION" TO -L- STATION 10+00.00 IS S 28°40'33.2" W 6,278.91 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NGVD 29

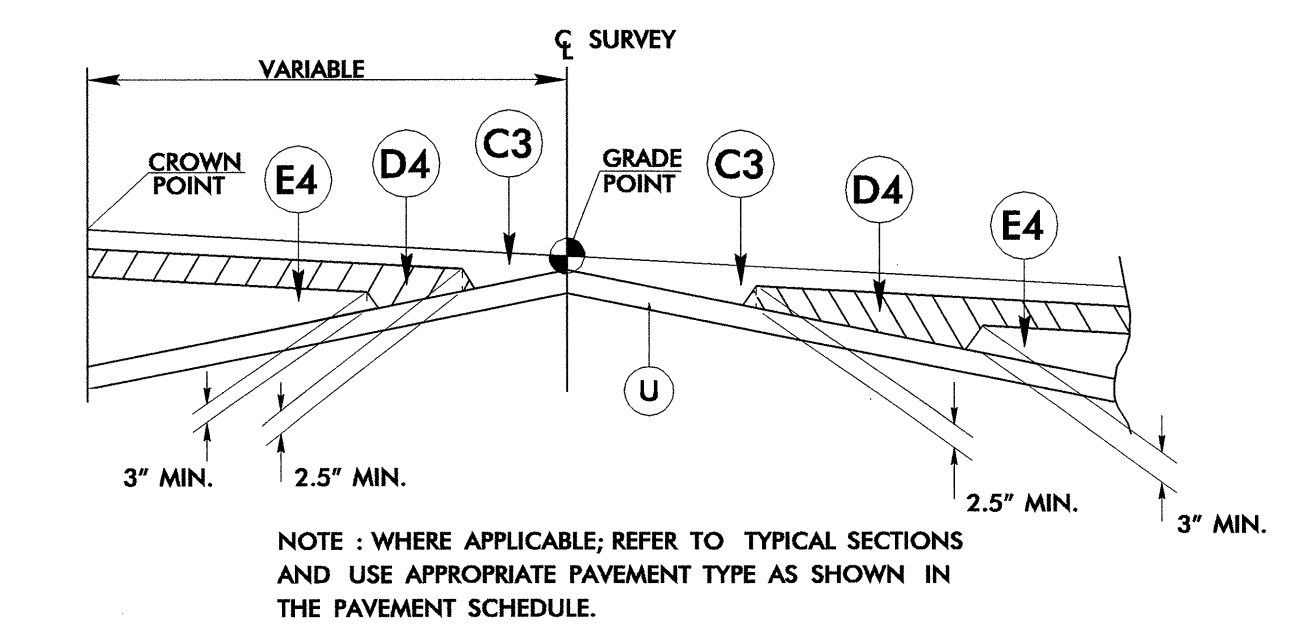
● INDICATES CONTROL MONUMENTS SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
 NETWORK ESTABLISHED FROM NCGS EXISTING NAD83 MONUMENTATION

NOTE: DRAWING NOT TO SCALE

PAVEMENT SCHEDULE

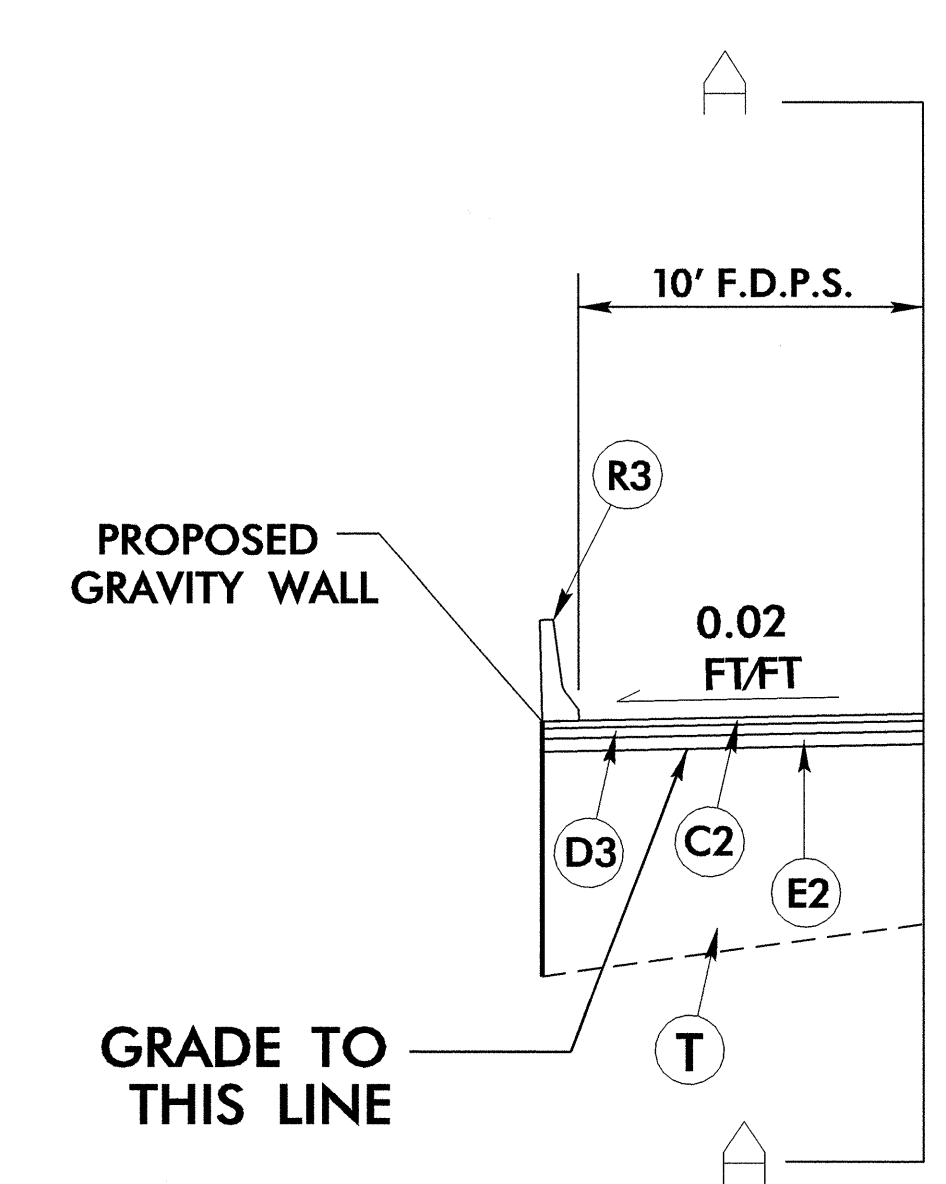
PROJECT REFERENCE NO. U-2702	SHEET NO. 2
ROADWAY DESIGN ENGINEER DEWAYNE L. SYDES NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 15892 3/7/08	PAVEMENT DESIGN ENGINEER CLARK S. MORRISON NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22896 3/1/08

C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	E3	PROP. APPROX. 5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
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.	E4	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.
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 TO EXCEED 1½" IN DEPTH.	J	PROP. 8" AGGREGATE BASE COURSE.
D1	PROP. APPROX. 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.	R1	2' - 6" CONCRETE CURB AND GUTTER.
D2	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.	R2	6" NONMOUNTABLE MONOLITHIC CONCRETE ISLAND (KEYED IN)
D3	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R3	CONCRETE BARRIER
D4	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 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.	T	EARTH MATERIAL.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	U	EXISTING PAVEMENT.
E2	PROP. APPROX. 4½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD.	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL No. 1)

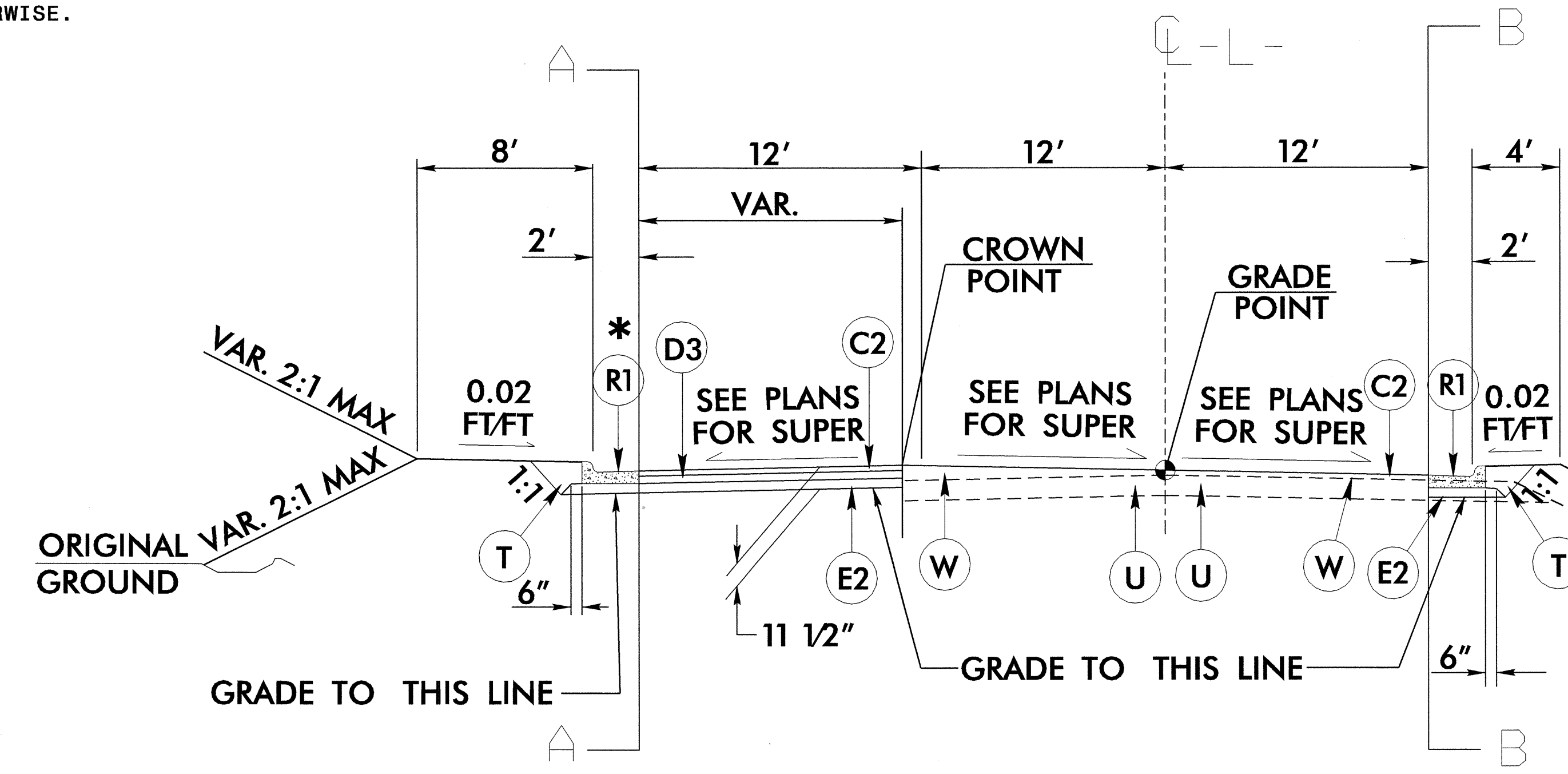


Detail No. 1 Showing Method Of Wedging

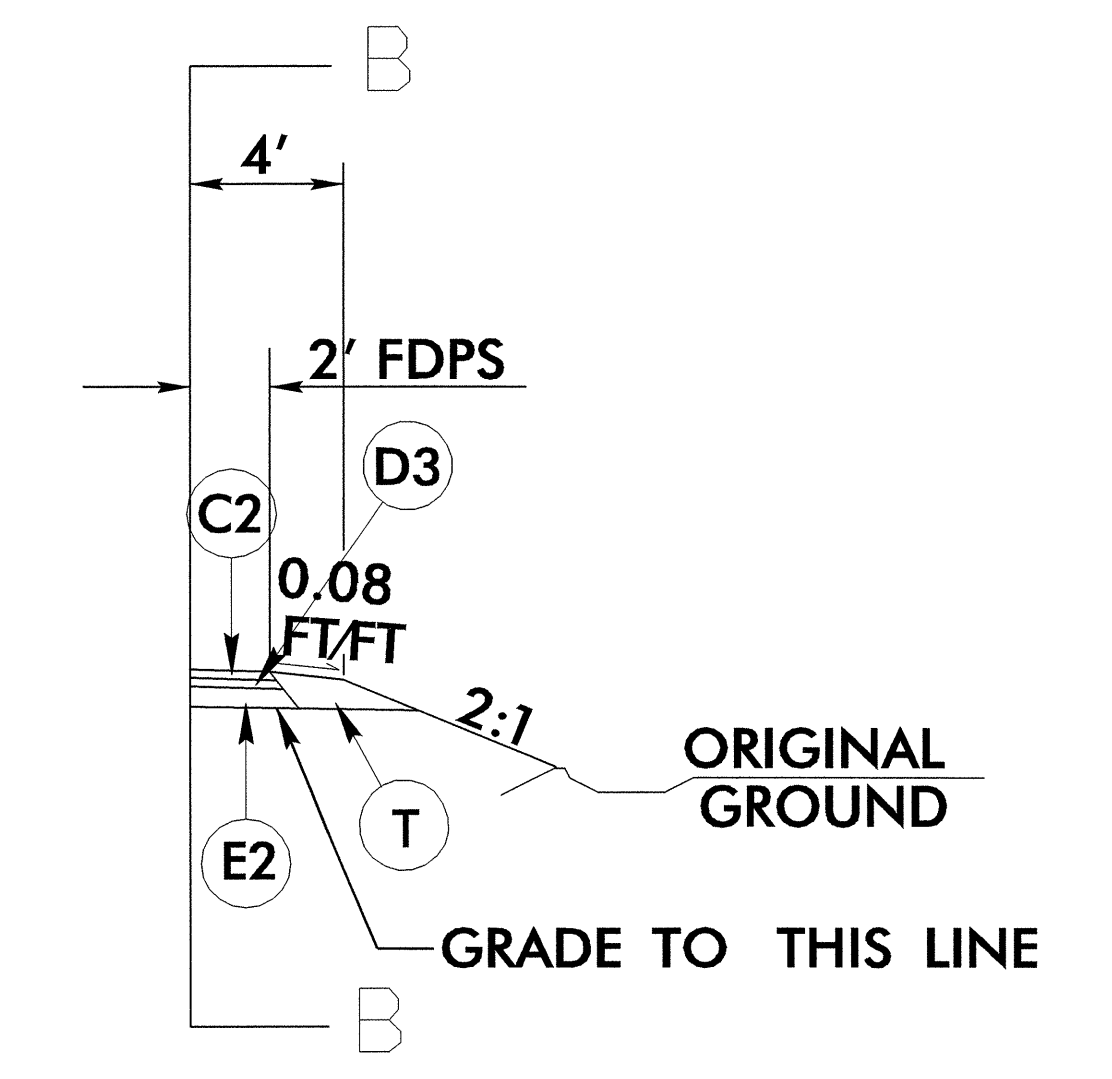
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



INSET 'A'
-L- STA. 19+49.77 TO STA. 21+24.63 LT.



TYPICAL SECTION NO. 1



INSET 'B'
-L- STA. 14+45.00 TO STA. 16+00.00 RT.

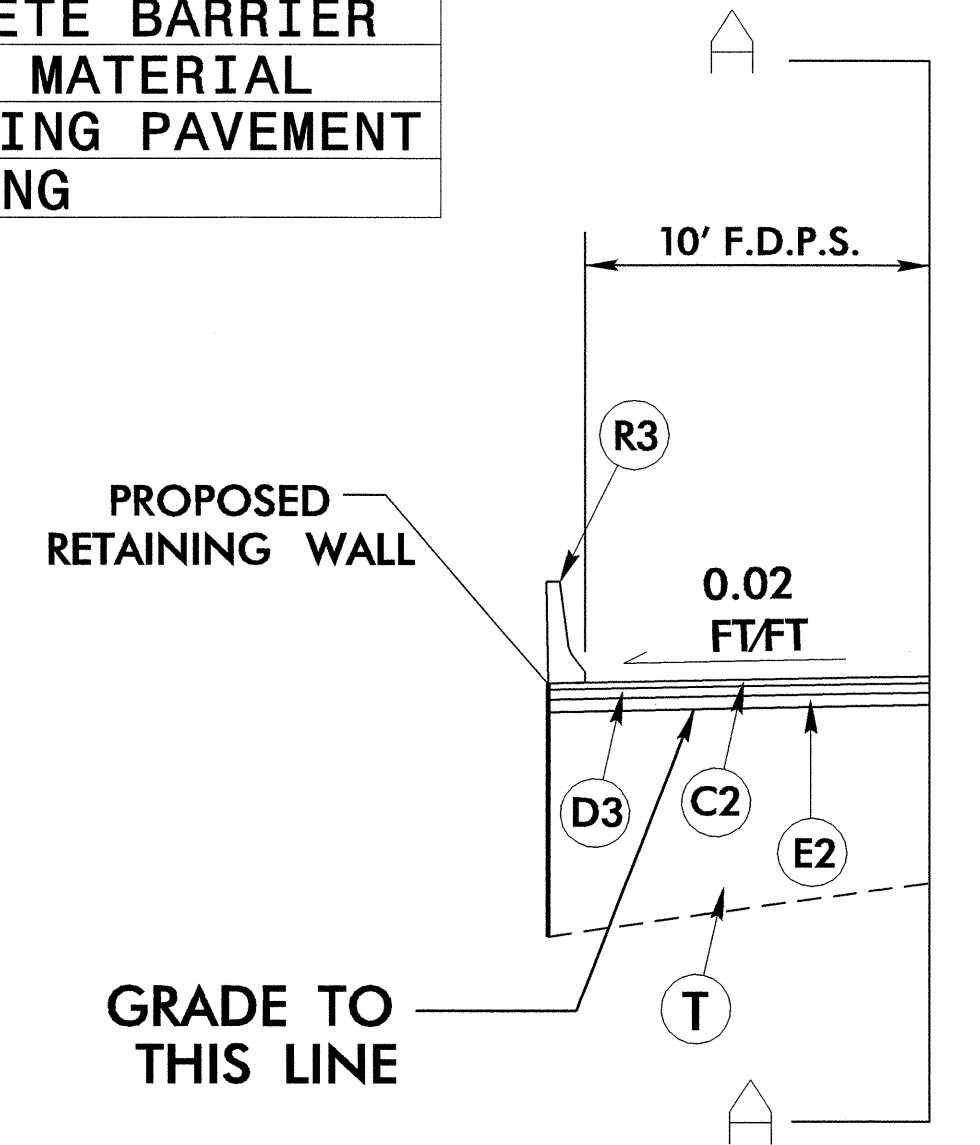
USE TYPICAL SECTION NO. 1 AS FOLLOWS:

- L- STA. 14+45.00 TO STA. 19+49.77
- L- STA. 37+00.00 TO STA. 40+09.89
- * NOTE: TIE PROPOSED 2'6" C&G TO PROPOSED RETAINING WALL
- L- STA. 19+49.77 LT.

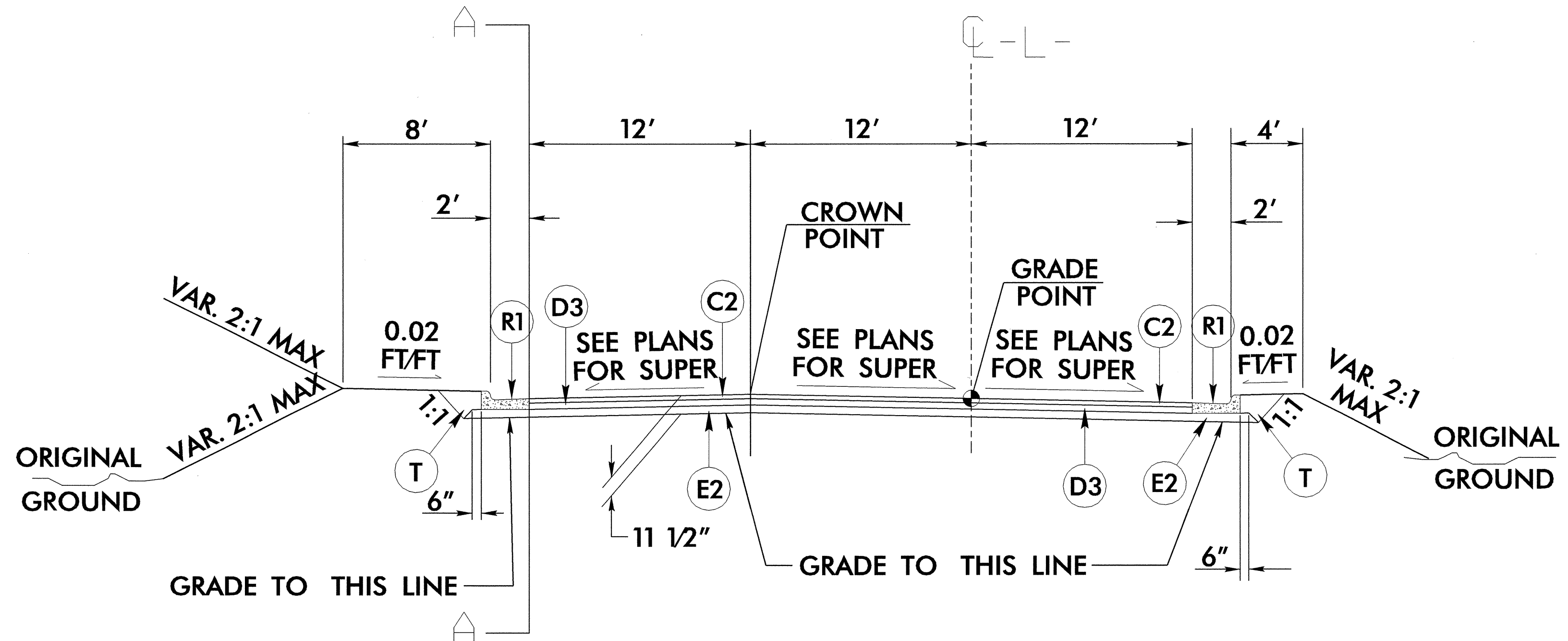
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07-MAR-2008 08:38
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skwhite

C1	1 1/2" S9.5B
C2	3" S9.5B
C3	VAR. S9.5B
D1	2 1/2" I19.0B
D2	3" I19.0B
D3	4" I19.0B
D4	VAR. DEPTH I19.0B
E1	4" B25.0B
E2	4 1/2" B25.0B
E3	5 1/2" B25.0B
E4	VAR. DEPTH B25.0B
J	8" ABC
R1	2'-6" CONC C & G
R2	6" NONMOUNT MONO CONCRETE ISLAND
R3	CONCRETE BARRIER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	WEDGING

PROJECT REFERENCE NO.	SHEET NO.
U-2702	2-A
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
DEWAYNE L. STILES	CLARK S. MORRISON
SEAL 15892	SEAL 22896
3/7/08	3/11/08

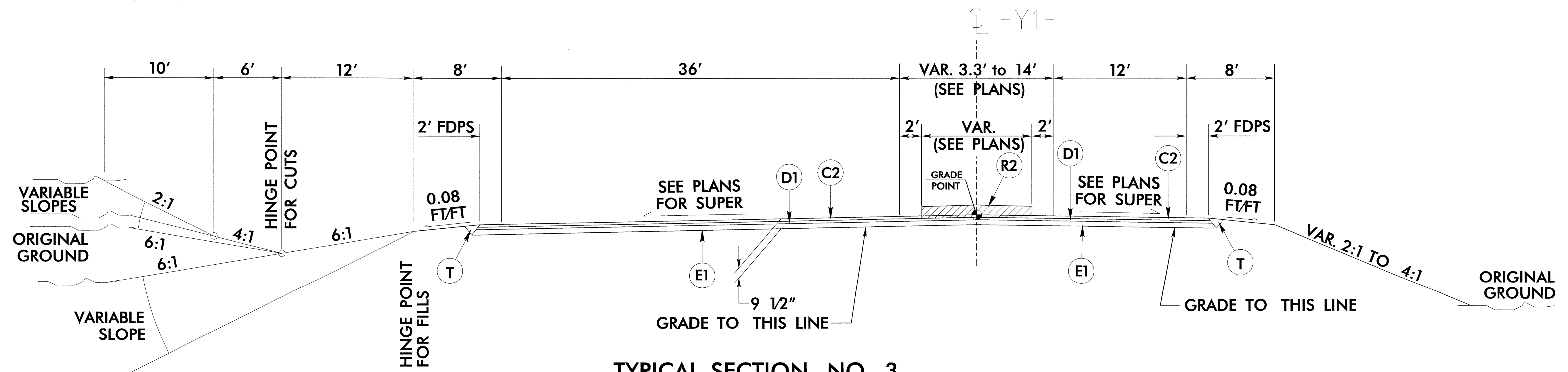


INSET 'A'
-L- STA. 19+49.77 TO STA. 21+24.63 LT.



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2 AS FOLLOWS:
-L- STA. 19+49.77 TO STA. 37+00.00

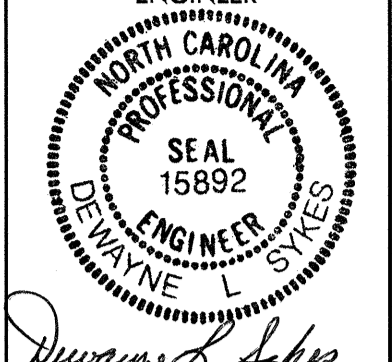
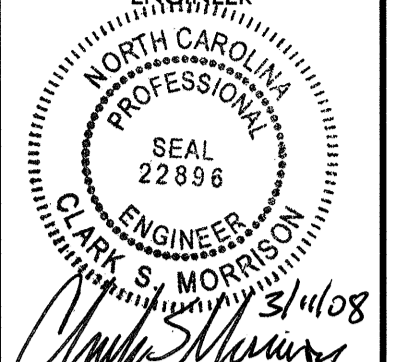


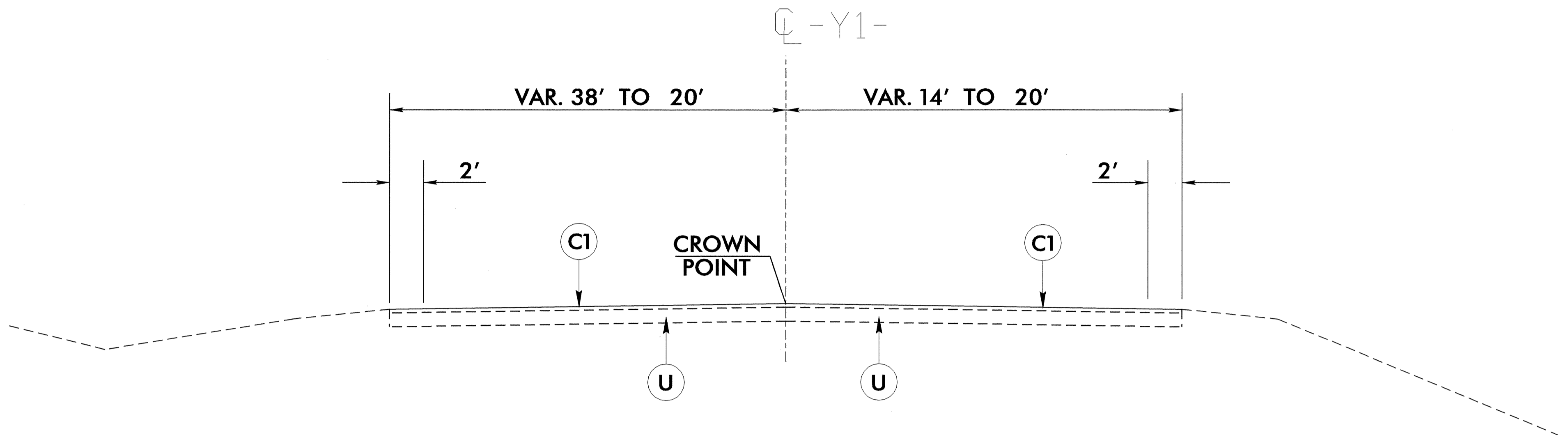
TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3 AS FOLLOWS:
-Y1- STA. 10+12.11 TO STA. 11+78.45

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 akwbte

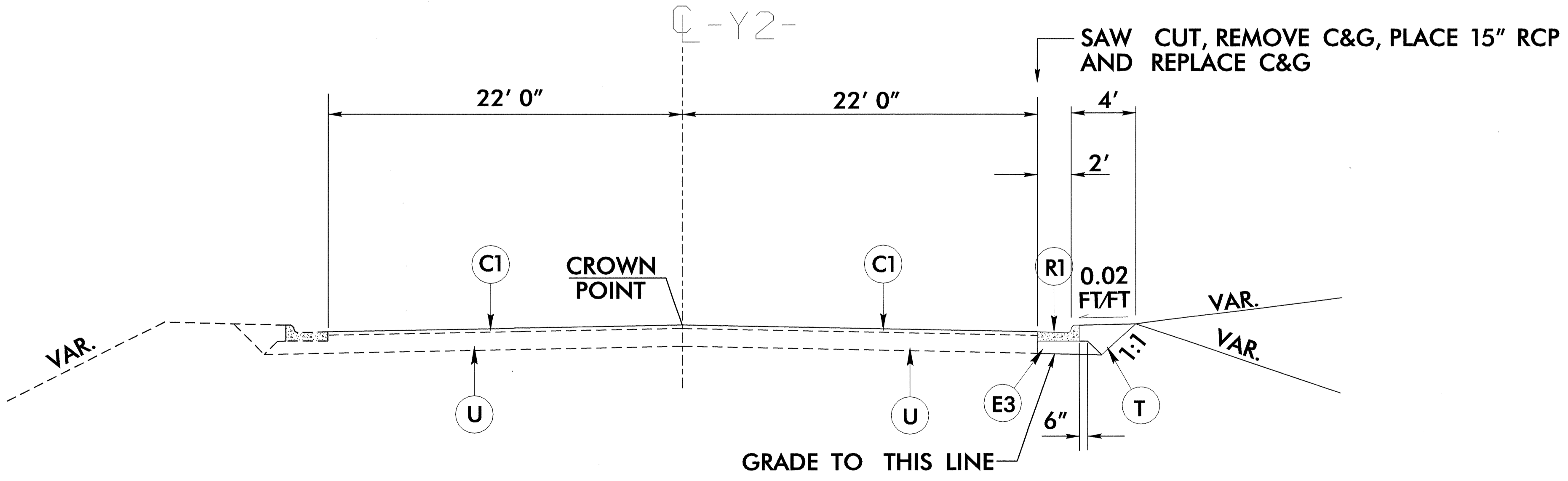
C1	1 1/2" S9.5B
C2	3" S9.5B
C3	VAR. S9.5B
D1	2 1/2" I19.0B
D2	3" I19.0B
D3	4" I19.0B
D4	VAR. DEPTH I19.0B
E1	4" B25.0B
E2	4 1/2" B25.0B
E3	5 1/2" B25.0B
E4	VAR. DEPTH B25.0B
J	8" ABC
R1	2'-6" CONC C & G
R2	6" NONMOUNT MONO CONCRETE ISLAND
R3	CONCRETE BARRIER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	WEDGING

PROJECT REFERENCE NO.	SHEET NO.
U-2702	2-B
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
	
<i>Deweyne L. Hayes</i> 3/7/08	<i>Clark S. Morrison</i> 3/11/08



TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4 AS FOLLOWS:
-Y1- STA. 11+78.45 TO STA. 17+83.00



TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 5 AS FOLLOWS:
-Y2- STA. 13+50.00 TO 15+55.08

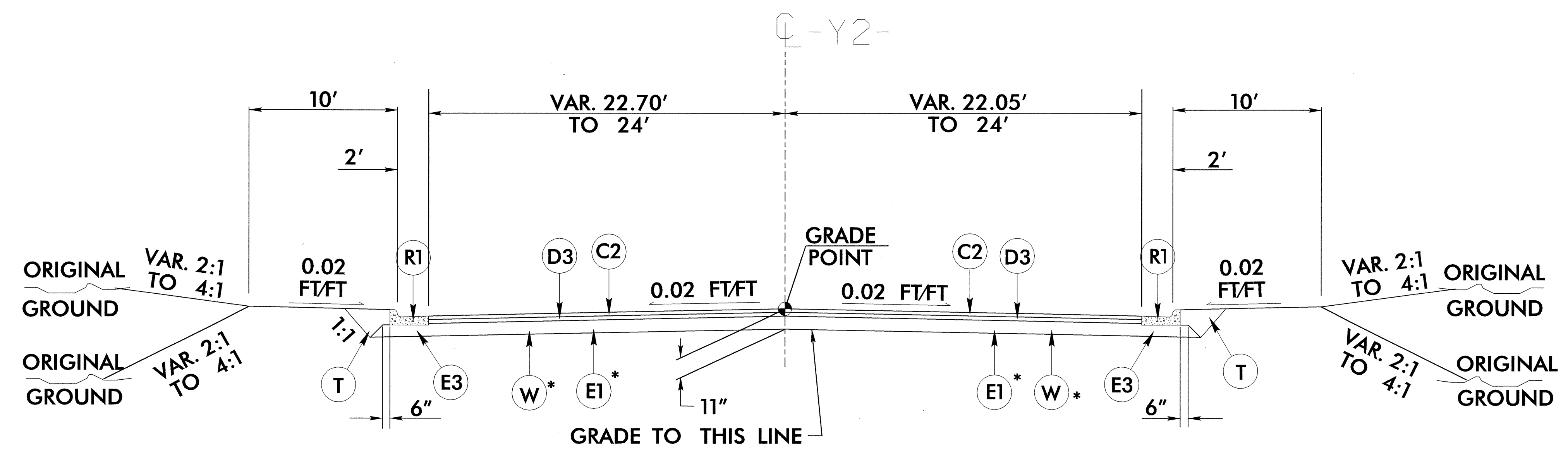
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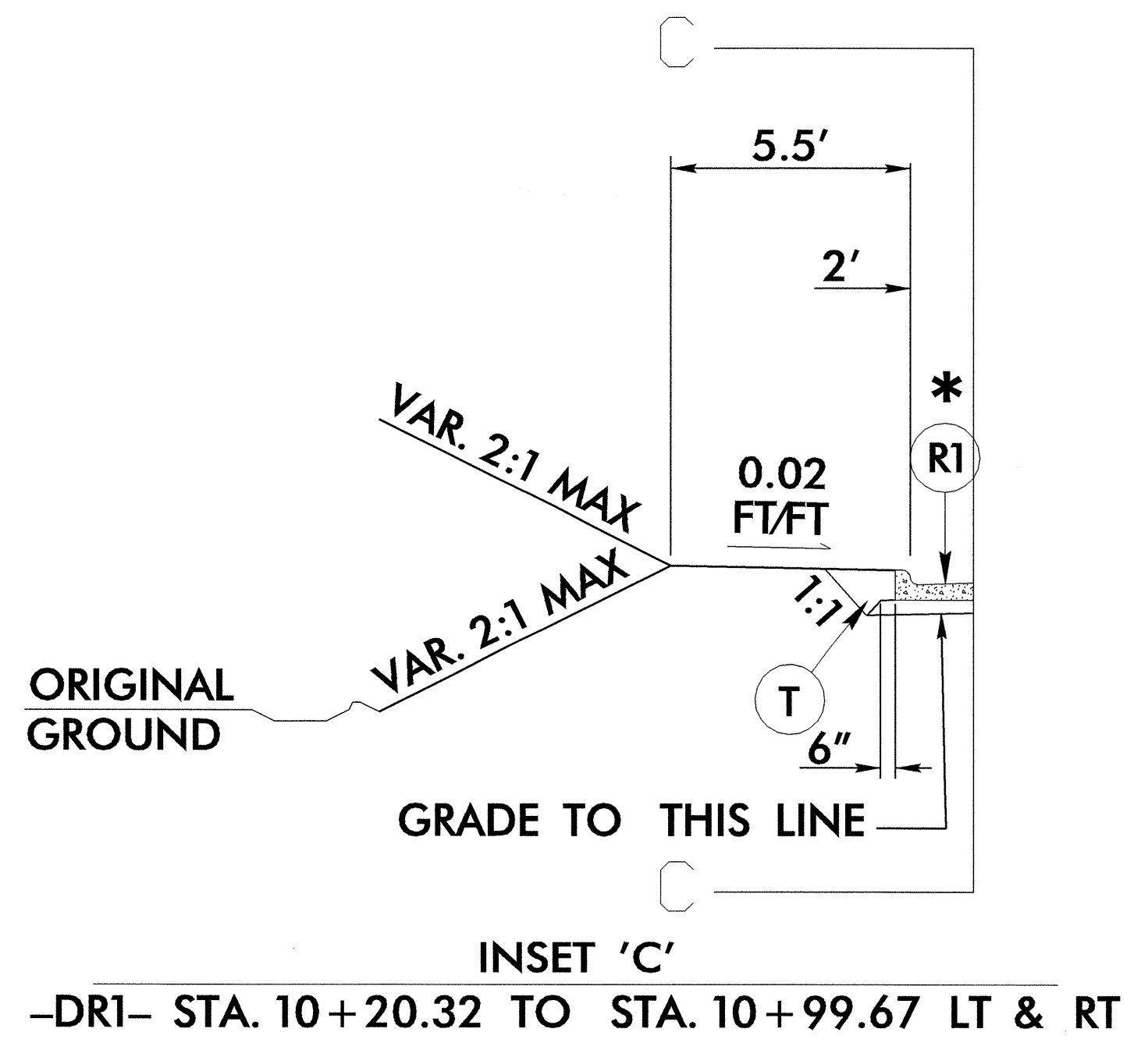
C1	1 1/2" S9.5B
C2	3" S9.5B
C3	VAR. S9.5B
D1	2 1/2" I19.0B
D2	3" I19.0B
D3	4" I19.0B
D4	VAR. DEPTH I19.0B
E1	4" B25.0B
E2	4 1/2" B25.0B
E3	5 1/2" B25.0B
E4	VAR. DEPTH B25.0B
J	8" ABC
R1	2'-6" CONC C & G
R2	6" NONMOUNT MONO CONCRETE ISLAND
R3	CONCRETE BARRIER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	WEDGING

PROJECT REFERENCE NO.	SHEET NO.
U-2702	2-C
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
<i>DeWayne L. Sykes</i> 3/7/08	<i>Clark S. Morrison</i> 3/14/08

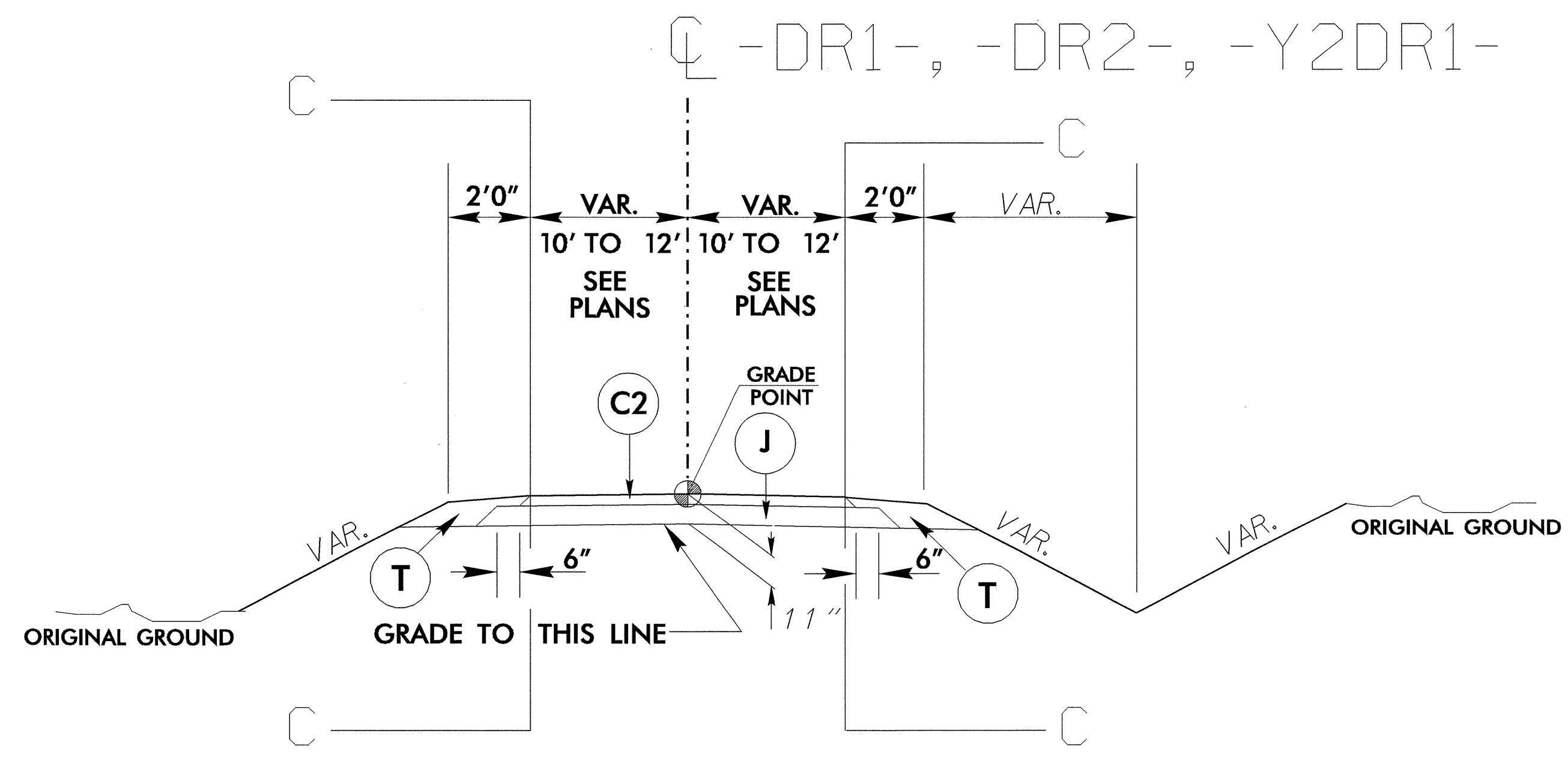


TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 6 AS FOLLOWS:
 -Y2- STA. 15+55.08 TO STA. 18+03.88
 * REFER TO WEDGING DETAIL ON SHEET 2 AND WEDGE AS NEEDED



INSET 'C'
 -DR1- STA. 10+20.32 TO STA. 10+99.67 LT & RT

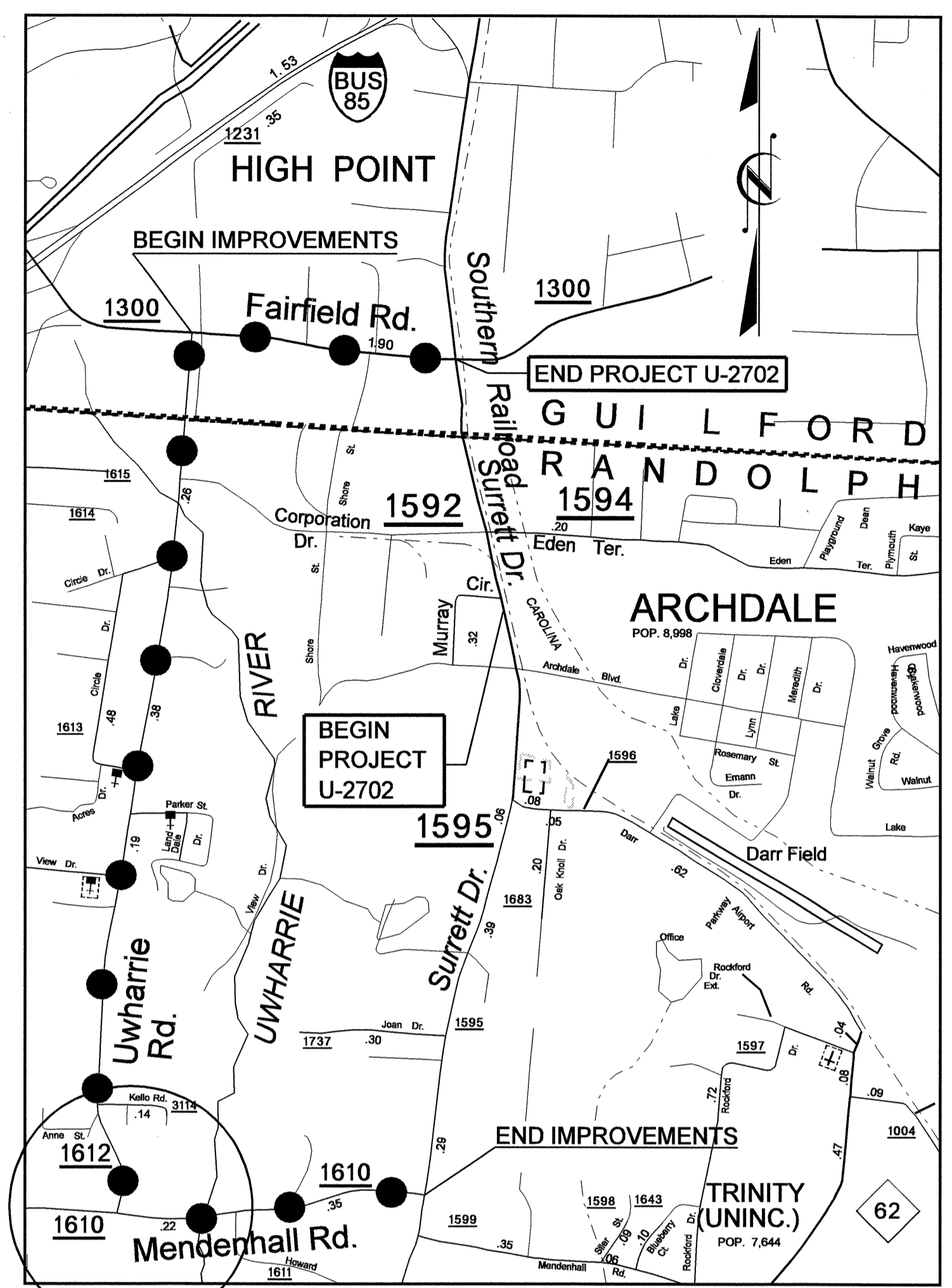


TYPICAL SECTION NO. 7

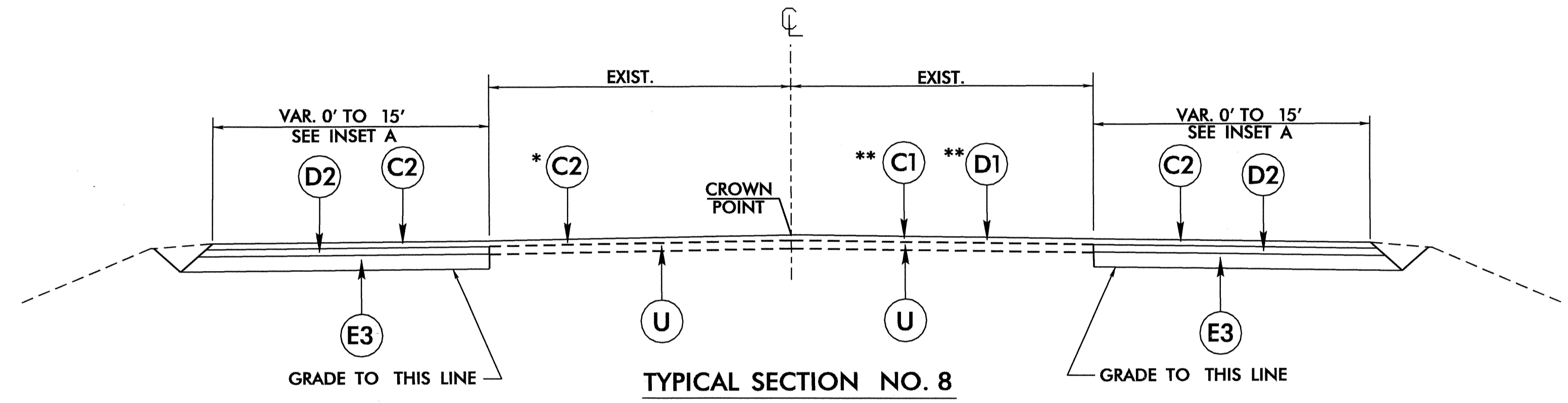
USE TYPICAL SECTION NO. 6 AS FOLLOWS:
 -DR1- STA. 10+20.32 TO STA. 10+99.67
 -DR2- STA 10+00.00 TO STA 10+48.62
 -Y2DR1- STA 10+22.92 TO STA 11+35.00

07-MAR-2008 08:38
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 akwhite AT 11/25/07

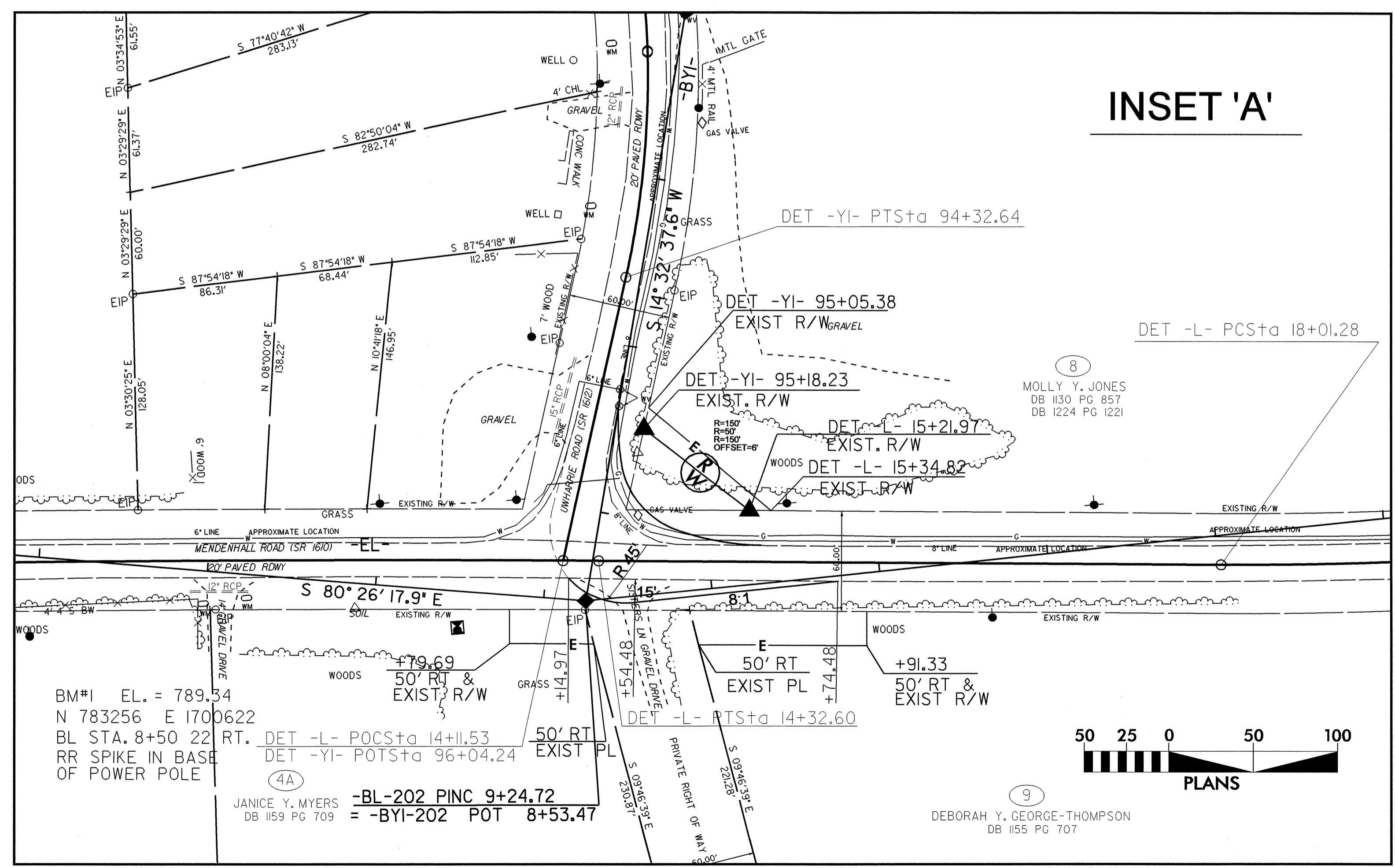
DETAIL SHOWING OFFSITE DETOUR ROUTE IMPROVEMENTS



PAVEMENT SCHEDULE	
C1	1 1/2" S9.5B
C2	3" S9.5B
D1	2 1/2" I19.0B
D2	3" I19.0B
E3	5 1/2" B25.0B
U	EXIST. PAVEMENT



USE TYPICAL SECTION NO 8
 * SR 1610 - 0.57 Miles (3009.60')
 ** SR 1612 - 1.49 Miles (7867.20')



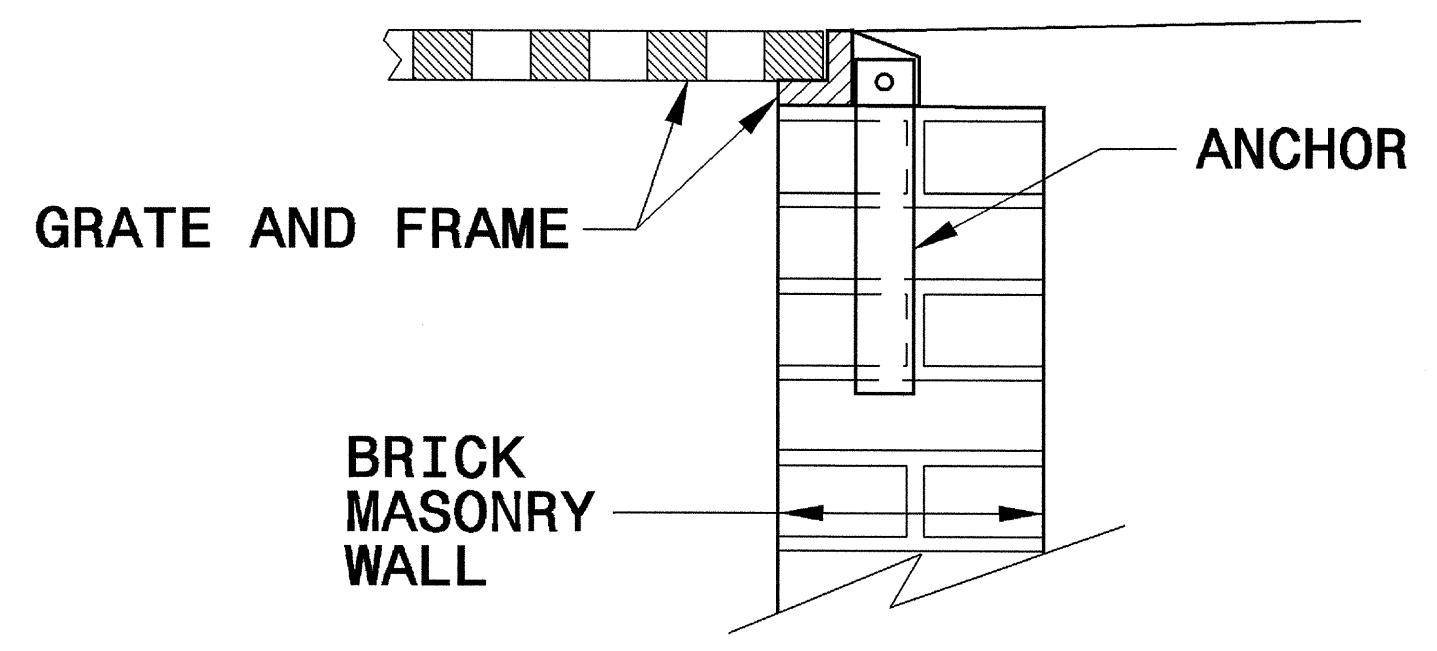
REVISIONS

06-MAR-2008 14:40
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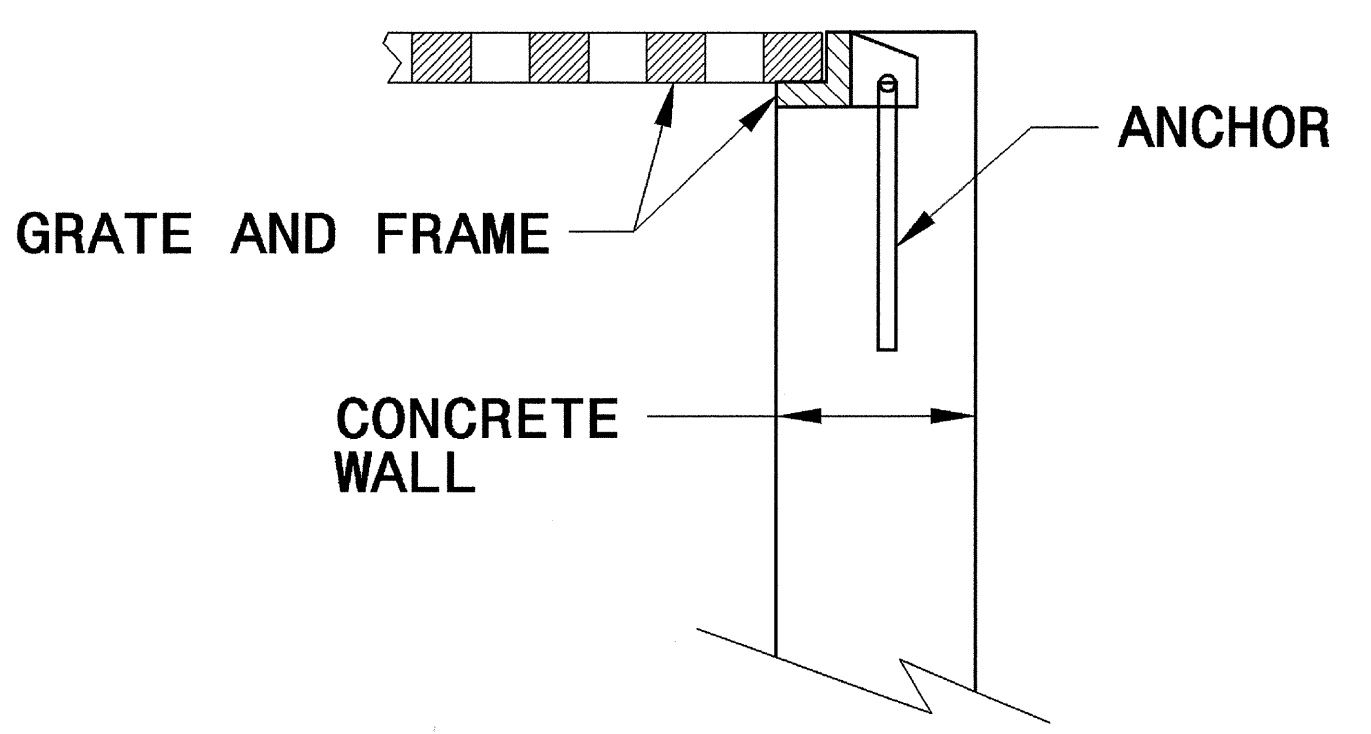
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

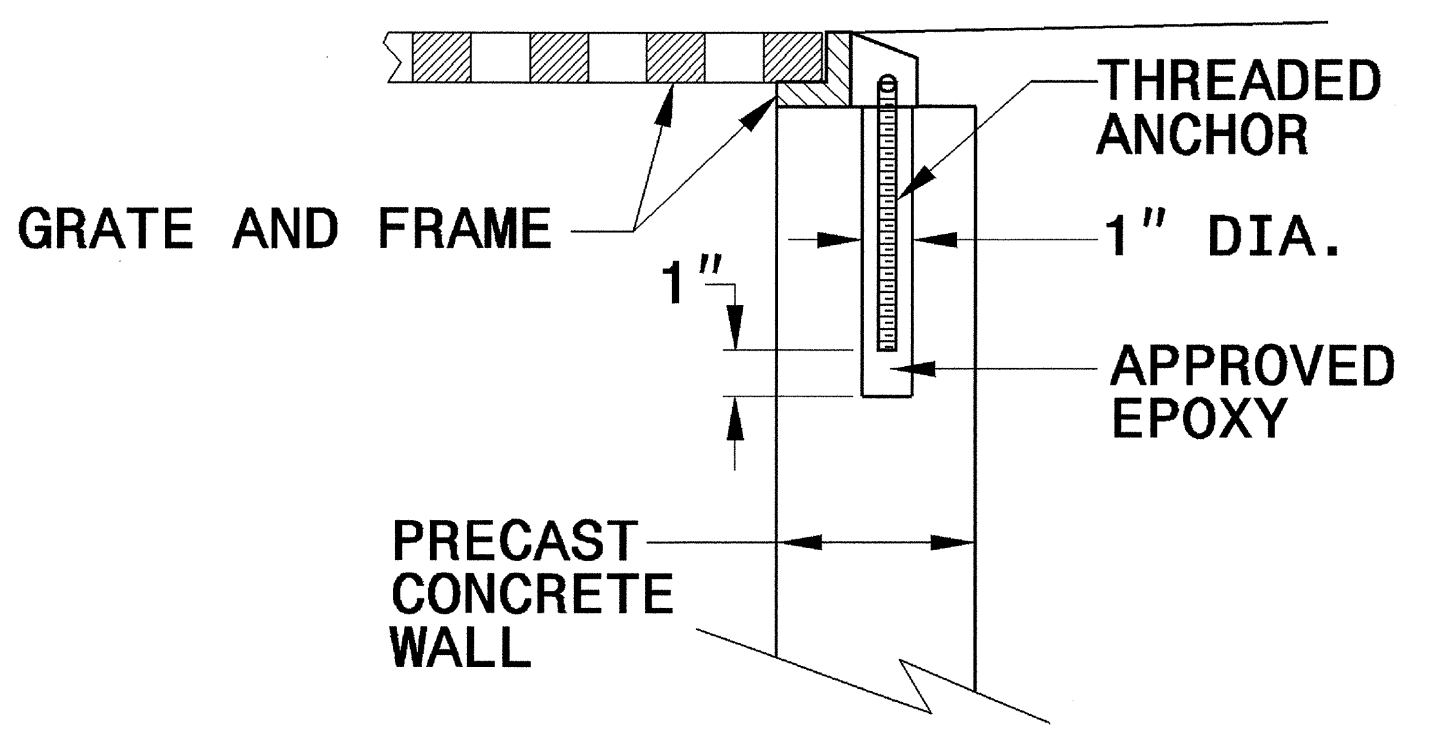
SHEET 1 OF 1
840D25



BRICK MASONRY CONSTRUCTION



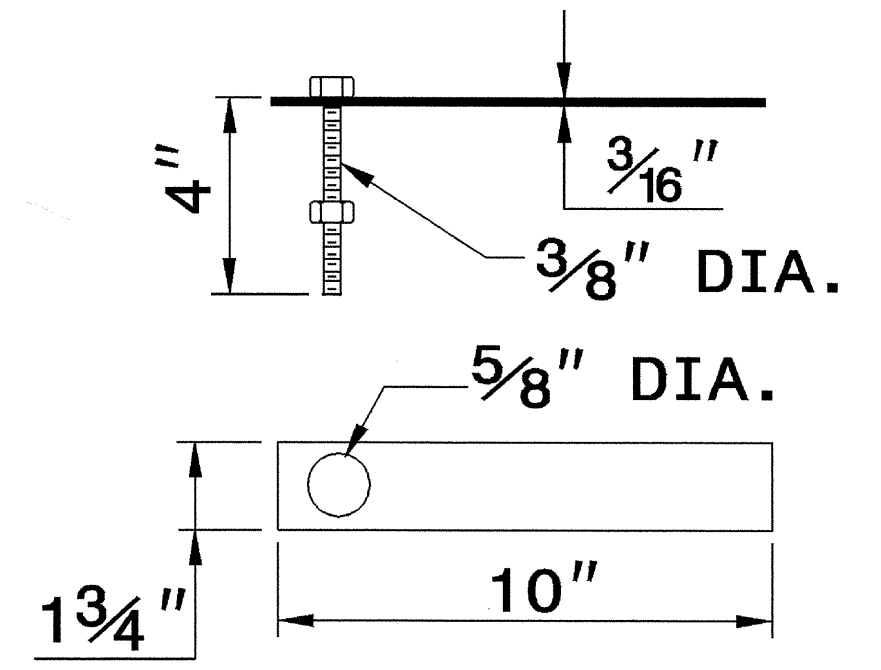
CONCRETE CONSTRUCTION



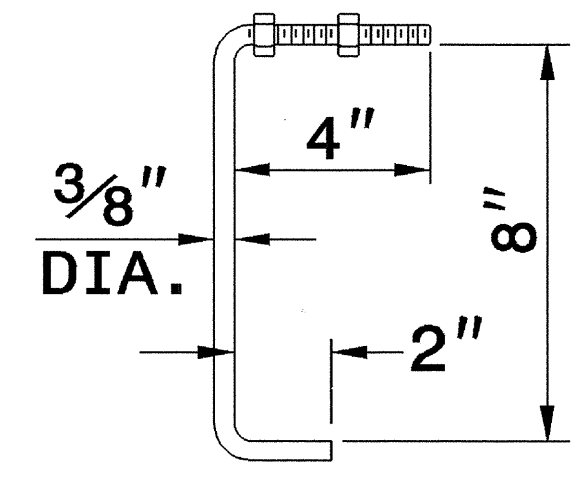
PRECAST CONCRETE CONSTRUCTION

DETAIL SHOWING ANCHORAGE OF FRAME FOR GRATED DROP INLET

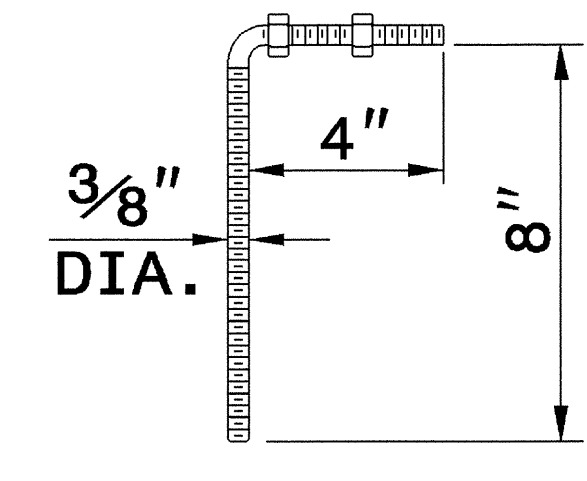
NOTE:
CONSTRUCT GRATED DROP INLET TO COINCIDE WITH NORMAL OR SUPERELEVATED SHOULDER OR PAVEMENT SLOPE.



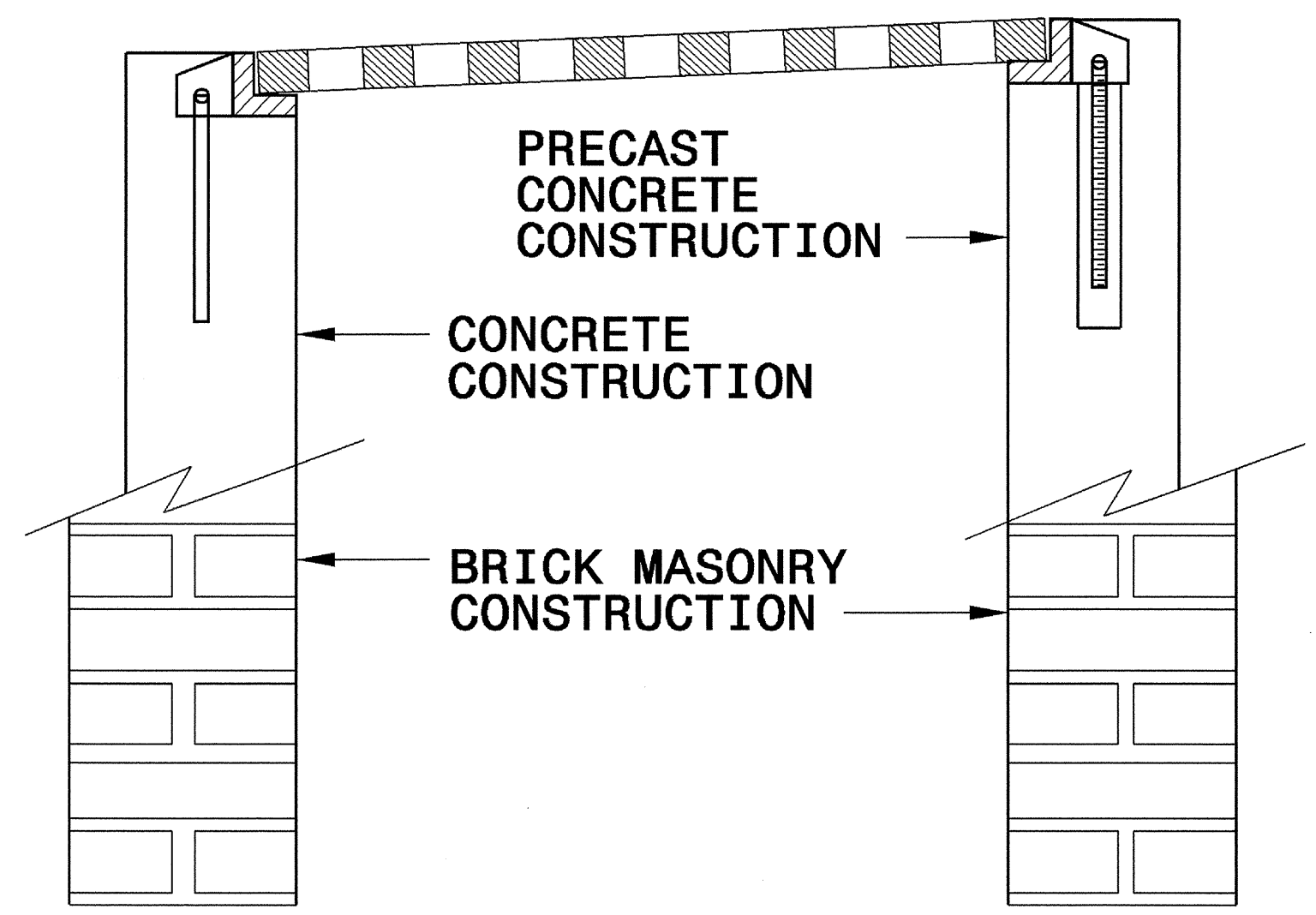
MASONRY ANCHOR
3/8" DIA. BOLT WITH PLATE



CONCRETE ANCHOR
3/8" DIA. BENT BAR



PRECAST CONCRETE ANCHOR
3/8" DIA. BENT BAR



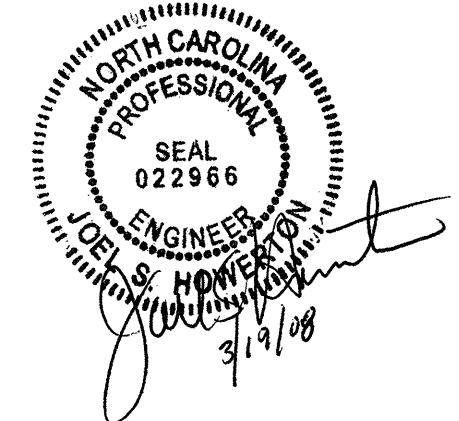
FRAME AND GRATE INSTALLATION FOR NORMAL CROWN AND SUPERELEVATED SECTIONS

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

SHEET 1 OF 1
840D25

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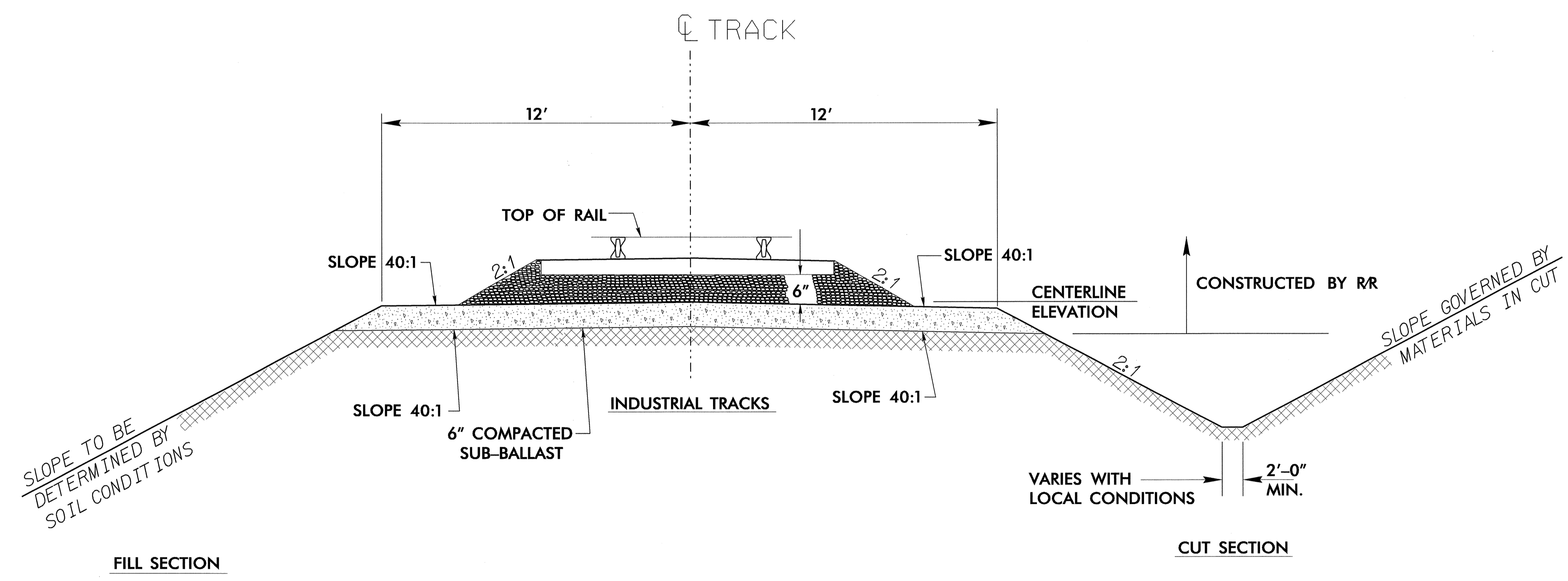


**PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN**
Office 919-250-4128 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: 2006 STD 840.25 DATE: 07/18/06
MODIFIED BY: E.E. WARD DATE: 9/25/06
CHECKED BY: DATE:
FILE SPEC.:

6/2/99



**DETAIL OF TYPICAL SECTION FOR
RAISED AND RECONSTRUCTED
SPUR TRACK**

03-APR-2008 10:31
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STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201244														
ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description
000100000-N	800	Lump Sum		MOBILIZATION	1489000000-E	610	2,500	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B	2549000000-E	846	4,920	LF	2'-6" CONCRETE CURB & GUTTER
000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING	1498000000-E	610	4,280	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B	2612000000-E	848	120	SY	6" CONCRETE DRIVEWAY
0043000000-N	226	Lump Sum		GRADING	1519000000-E	610	5,200	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	2724000000-E	857	200	LF	PRECAST REINFORCED CONCRETE BARRIER, SINGLE FACED
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUBBING	1560000000-E	620	625	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22	2739000000-E	852	90	SY	GENERIC PAVING ITEM (NONMOUNTABLE KEYED IN) CONCRETE ISLAND (KEYED IN)
0057000000-E	226	500	CY	UNDERCUT EXCAVATION	1693000000-E	654	105	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR	3536000000-E	866	239	LF	CHAIN LINK FENCE, 48" FABRIC
0080000000-E	SP	500	TON	CLASS IV SUBGRADE STABILIZATION	1704000000-E	SP	920	TON	PATCHING EXISTING PAVEMENT	3542000000-E	866	20	EA	METAL LINE POSTS FOR 48" CHAIN LINK FENCE
0134000000-E	240	60	CY	DRAINAGE DITCH EXCAVATION	2022000000-E	815	56	CY	SUBDRAIN EXCAVATION	3548000000-E	866	2	EA	METAL TERMINAL POSTS FOR 48" CHAIN LINK FENCE
0141000000-E	240	100	LF	BERM DITCH CONSTRUCTION	2033000000-E	815	42	CY	SUBDRAIN FINE AGGREGATE	3628000000-E	876	25	TON	RIP RAP, CLASS 1
0195000000-E	265	500	CY	SELECT GRANULAR MATERIAL	2044000000-E	815	250	LF	6" PERFORATED SUBDRAIN PIPE	3649000000-E	876	15	TON	RIP RAP, CLASS B
0196000000-E	270	500	SY	FABRIC FOR SOIL STABILIZATION	2055000000-E	815	8	EA	6" SUBDRAIN PIPE WYES, TEES, & ELBOWS	3656000000-E	876	735	SY	FILTER FABRIC FOR DRAINAGE
0318000000-E	300	1,270	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS	2066000000-N	815	1	EA	CONCRETE PAD FOR SUBDRAIN PIPE OUTLET	3804000000-E	SP	900	TON	AGGREGATE BASE COURSE (SUB-BALLAST)
0366000000-E	310	976	LF	15" RC PIPE CULVERTS, CLASS III	2077000000-E	815	6	LF	6" OUTLET PIPE (SUBDRAINS)	4400000000-E	1110	774	SF	WORK ZONE SIGNS (STATIONARY)
0372000000-E	310	632	LF	18" RC PIPE CULVERTS, CLASS III	2209000000-E	838	3.4	CY	ENDWALLS	4405000000-E	1110	384	SF	WORK ZONE SIGNS (PORTABLE)
0384000000-E	310	196	LF	30" RC PIPE CULVERTS, CLASS III	2253000000-E	840	1.2	CY	PIPE COLLARS	4410000000-E	1110	183	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
0390000000-E	310	1,052	LF	36" RC PIPE CULVERTS, CLASS III	2264000000-E	840	0.4	CY	PIPE PLUGS	4415000000-N	1115	1	EA	FLASHING ARROW PANELS, TYPE C
0450000000-E	310	60	LF	**** RC PIPE CULVERTS, CLASS ** (UNDER RR) (36", V)	2286000000-N	840	35	EA	MASONRY DRAINAGE STRUCTURES	4420000000-N	1120	2	EA	CHANGEABLE MESSAGE SIGN
0708000000-E	310	100	LF	15" BIT COAT CS PIPE CULVERTS, TYPE B 0.064" THICK	2308000000-E	840	13.78	LF	MASONRY DRAINAGE STRUCTURES	4430000000-N	1130	62	EA	DRUMS
0806000000-E	310	10	EA	15" BIT COAT CS PIPE ELBOWS, TYPE B 0.064" THICK	2364000000-N	840	9	EA	FRAME WITH TWO GRATES, STD 840.16	4435000000-N	1135	63	EA	CONES
0974000000-E	SP	60	LF	*** WELDED STEEL PIPE, ***** THICK, GRADE B, (UNDER RR) (36", 0.500")	2365000000-N	840	3	EA	FRAME WITH TWO GRATES, STD 840.22	4445000000-N	1145	208	LF	BARRICADES (TYPE III)
0995000000-E	340	701	LF	PIPE REMOVAL	2374000000-N	840	6	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)	4450000000-N	1150	230	HR	FLAGGER
1110000000-E	510	200	TON	STABILIZER AGGREGATE	2374000000-N	840	11	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)	4480000000-N	1165	1	EA	TMIA
1121000000-E	520	385	TON	AGGREGATE BASE COURSE	2396000000-N	840	1	EA	FRAME WITH COVER, STD 840.54	4685000000-E	1205	28,023	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)
1220000000-E	545	100	TON	INCIDENTAL STONE BASE						4686000000-E	1205	44,548	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)
										4695000000-E	1205	391	LF	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)
										4705000000-E	1205	473	LF	THERMOPLASTIC PAVEMENT MARKING LINES (16", 120 MILS)

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STATE OF NORTH CAROLINA SUMMARY OF QUANTITIES

ItemNumber	Sec #	Quantity	Unit	Description
471000000-E	1205	658	LF	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)
472100000-E	1205	26	EA	THERMOPLASTIC PAVEMENT MARKING CHARACTER (120 MILS)
472500000-E	1205	63	EA	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)
490000000-N	1251	251	EA	PERMANENT RAISED PAVEMENT MARKERS
490500000-N	1253	197	EA	SNOWPLOWABLE PAVEMENT MARKERS
532530000-E	1510	15	LF	3" WATER LINE
532560000-E	1510	396	LF	6" WATER LINE
532580000-E	1510	290	LF	8" WATER LINE
532600000-E	1510	17	LF	10" WATER LINE
532660000-E	1510	2,150	LF	16" WATER LINE
553800000-E	1515	1	EA	4" VALVE
554000000-E	1515	2	EA	6" VALVE
554600000-E	1515	1	EA	8" VALVE
555200000-E	1515	1	EA	10" VALVE
555860000-E	1515	4	EA	16" VALVE
564320000-E	1515	1	EA	2" WATER METER
564800000-N	1515	6	EA	RELOCATE WATER METER
5656310000-E	1515	1	EA	RELOCATE 3" RPZ BACK-FLOW PREVENTOR
566600000-E	1515	6	EA	FIRE HYDRANT
567200000-N	1515	2	EA	RELOCATE FIRE HYDRANT
580100000-E	1530	304	LF	ABANDON 8" UTILITY PIPE
580200000-E	1530	1,545	LF	ABANDON 10" UTILITY PIPE
581000000-E	1530	2,283	LF	ABANDON 16" UTILITY PIPE
581550000-N	1530	6	EA	REMOVE FIRE HYDRANT
581600000-N	1530	8	EA	ABANDON UTILITY MANHOLE
583580000-E	1540	50	LF	18" ENCASEMENT PIPE
587200000-E	1550	25	LF	TRENCHLESS INSTALLATION OF 18" IN SOIL
5872010000-E	1550	25	LF	TRENCHLESS INSTALLATION OF 18" NOT IN SOIL
600000000-E	1605	1,650	LF	TEMPORARY SILT FENCE
600600000-E	1610	640	TON	STONE FOR EROSION CONTROL, CLASS A
600900000-E	1610	230	TON	STONE FOR EROSION CONTROL, CLASS B
601200000-E	1610	570	TON	SEDIMENT CONTROL STONE
601500000-E	1615	3	ACR	TEMPORARY MULCHING
601800000-E	1620	100	LB	SEED FOR TEMPORARY SEEDING
602100000-E	1620	0.5	TON	FERTILIZER FOR TEMPORARY SEEDING
603000000-E	1630	700	CY	SILT EXCAVATION
603600000-E	1631	1,750	SY	MATting FOR EROSION CONTROL
604200000-E	1632	720	LF	1/4" HARDWARE CLOTH
6071030000-E	SP	25	LF	COIR FIBER BAFFLES
608400000-E	1660	3.5	ACR	SEEDING & MULCHING
608700000-E	1660	2.5	ACR	MOWING
609000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
609300000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
609600000-E	1662	100	LB	SEED FOR SUPPLEMENTAL SEEDING
610800000-E	1665	2.5	TON	FERTILIZER TOPDRESSING
611400000-N	SP	2	HR	SPECIALIZED HAND MOWING
611700000-N	SP	36	EA	RESPONSE FOR EROSION CONTROL
706000000-E	1705	1,640	LF	SIGNAL CABLE
712000000-E	1705	8	EA	VEHICLE SIGNAL HEAD (12", 3 SECTION)
713200000-E	1705	1	EA	VEHICLE SIGNAL HEAD (12", 4 SECTION)
714400000-E	1705	7	EA	VEHICLE SIGNAL HEAD (12", 5 SECTION)
725200000-E	1710	5,225	LF	MESSENGER CABLE (1/4")

ItemNumber	Sec #	Quantity	Unit	Description
727900000-E	1715	100	LF	TRACER WIRE
730000000-E	1715	280	LF	UNPAVED TRENCHING (***** (1, 2"))
730100000-E	1715	325	LF	DIRECTIONAL DRILL (***** (2, 2"))
732400000-N	1716	10	EA	JUNCTION BOX (STANDARD SIZE)
734800000-N	1716	2	EA	JUNCTION BOX (OVER-SIZED, HEAVY DUTY)
737200000-N	1721	2	EA	GUY ASSEMBLY
743200000-E	1722	3	EA	2" RISER WITH HEAT SHRINK TUBING
744400000-E	1725	1,310	LF	INDUCTIVE LOOP SAWCUT
745600000-E	1726	1,520	LF	LEAD-IN CABLE (***** (14-2))
751600000-E	1730	6,325	LF	COMMUNICATIONS CABLE (**FIBER) (12)
755200000-N	1731	3	EA	INTERCONNECT CENTER
756400000-N	1732	3	EA	FIBER-OPTIC TRANSCEIVER, DROP & REPEAT
756600000-N	1733	2	EA	DELINEATOR MARKER
756800000-N	SP	1	EA	FURNISH FIBER-OPTIC RESTORATION KIT
757400000-N	SP	1	EA	FURNISH FIBER-OPTIC TRANSCEIVER
758800000-N	SP	1	EA	METAL POLE WITH SINGLE MAST ARM
759000000-N	SP	1	EA	METAL POLE WITH DUAL MAST ARM
761300000-N	SP	2	EA	SOIL TEST
761410000-E	SP	16	CY	DRILLED PIER FOUNDATION
763100000-N	SP	2	EA	MAST ARM WITH METAL POLE DESIGN
763600000-N	1745	4	EA	SIGN FOR SIGNALS
767500000-N	SP	4	EA	LED BLANKOUT SIGN
768400000-N	1750	2	EA	SIGNAL CABINET FOUNDATION
782800000-N	1751	2	EA	CONTROLLER WITH CABINET (NEMA TS-2, TYPE 2 CONTROLLER, TYPE 1 CABINET, BASE MOUNTED)
785200000-N	1751	8	EA	DETECTOR CARD (NEMA TS-2)
798000000-N	SP	1	EA	GENERIC SIGNAL ITEM CONTROLLER ONLY (NEMA TS-2, TYPE 2)
843600000-E	453	2,228.3	SF	GRAVITY RETAINING WALLS

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.

APPROXIMATELY QUANTITIES ONLY, UNCLASSIFY EXCAVATION, BORROW EXCAVATION, FINE GRADING, CLEARING AND GRUBBING, BREAKING OF EXISTING PAVING AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE LUMP SUM PRICE FOR "GRADING".

SUMMARY OF EARTHWORK IN CUBIC YARDS

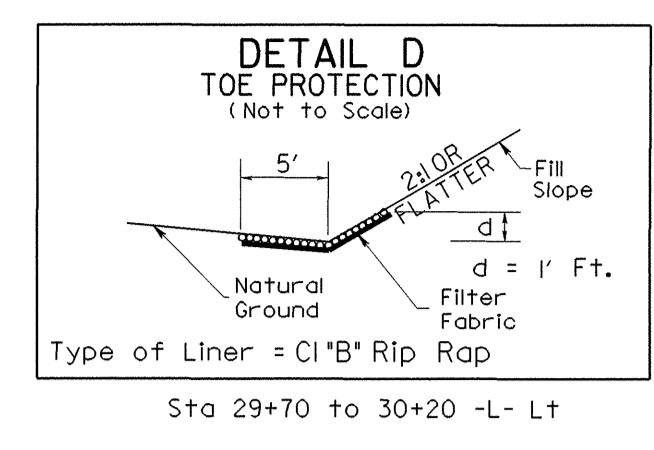
LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT+%	BORROW	WASTE
-L- 14+45.00 TO 40+09.89	753		6995	6242	
SUBTOTAL	753		6995	6242	
-Y1- 10+50.00 TO 11+78.45	318		141		177
SUBTOTAL	318		141		177
-Y2- 13+50.00 TO 17+50	118		294	176	
SUBTOTAL	118		294	176	
-DRI- 10+30.00 TO 10+90.00	21		132	111	
SUBTOTAL	21		132	111	
-DR2- 10+10.00 TO 10+40.00	4		16	12	
SUBTOTAL	4		16	12	
-Y2DRI-10+25.00 TO 11+35.00	20		139	119	
SUBTOTAL	20		139	119	
-SPUR- 10+00.00 TO 17+00.00	89		1089	1000	
SUBTOTAL	89		1089	1000	
PROJECT SUBTOTAL	1323		8808	7660	177
LOSS DUE TO C & G	-500			500	
WASTE IN LIEU OF BORROW				-177	
MAT.FOR SHLD CONSTR.			472	472	
GRAND TOTAL	823			8455	
EST.5% TO REP.BORROW				423	
PROJECT TOTAL	823			8878	
SAY	900			9000	
DDE = 60 CY					
SELECT GRAN.MTL = 500 CY					
CL.M SUBGRADE STABILIZATION = 500 TONS					
UNDERCUT EXCAV.= 500 CY					

REMOVAL OF EXISTING ASPHALT PAVEMENT SUMMARY

STATION TO STATION	SQ. YARDS
-L- 19+00 TO 20+00 Lt & Rt	288.89
-L- 24+00 TO 32+50 Lt & Rt	2455.56
-L- 35+50 TO 37+50 Lt & Rt	577.78
-Y1- 10+12.11 TO 11+78.45 Lt & Rt	406.61
-Y2- 17+00 TO 18+05 Lt & Rt	281.15
-Y2DRI- 10+75 TO 11+25 Lt & Rt	111.11
-DRI- 10+50 TO 10+70 Lt & Rt	66.67
-DR2- 10+20 TO 10+40 Lt & Rt	66.67
TOTAL	4254.42
SAY	4260

BREAKING OF EXISTING ASPHALT PAVEMENT SUMMARY

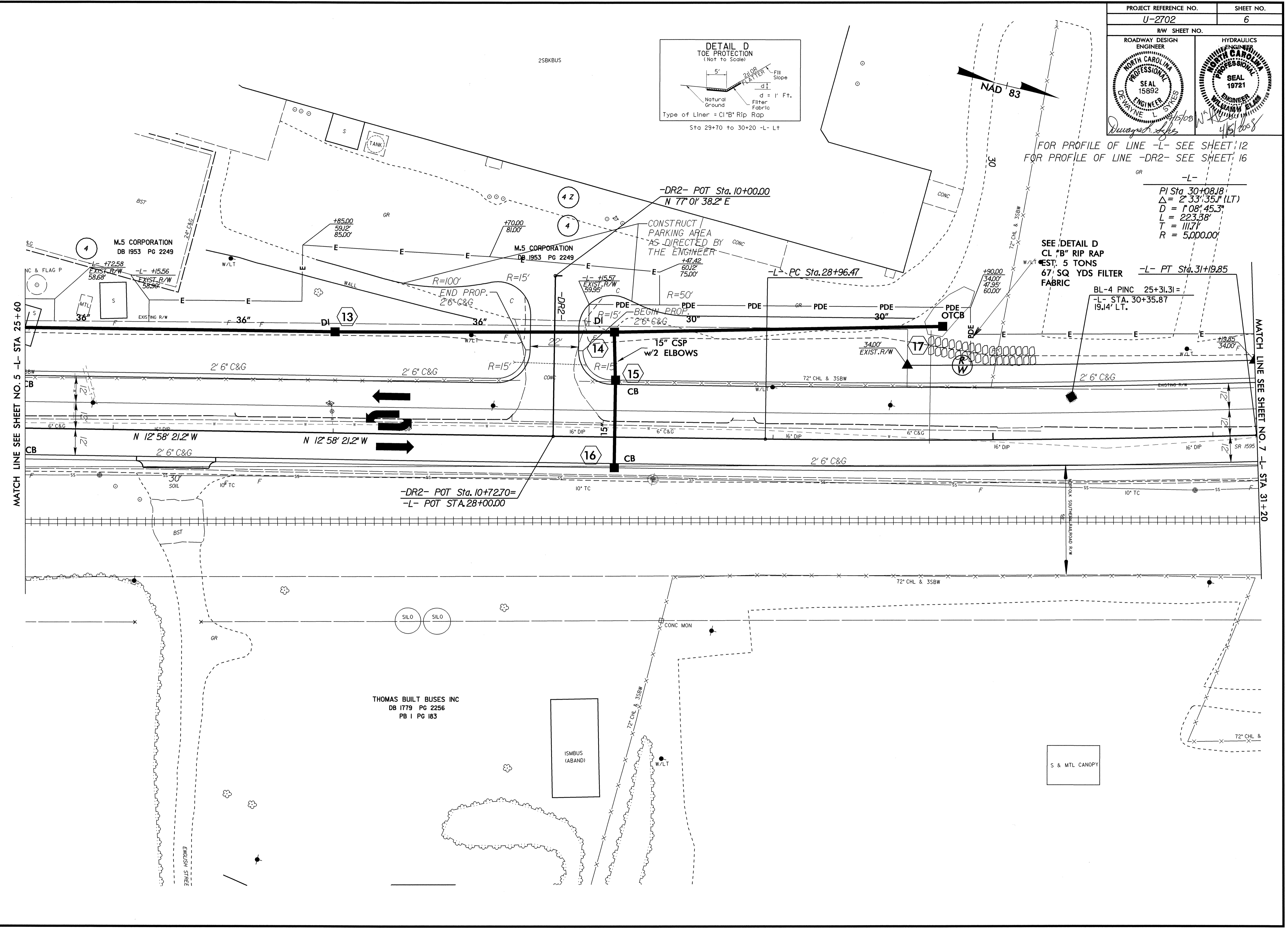
STATION TO STATION	SQ. YARDS
-L- 20+00 TO 24+00 Lt & Rt	1066.67
-L- 32+50 TO 35+50 Lt & Rt	800.00
-Y2DRI- 10+25 TO 10+75 Lt & Rt	111.11
-DRI- 10+70 TO 10+90 Lt & Rt	66.67
TOTAL	2044.44
SAY	2050



FOR PROFILE OF LINE -L- SEE SHEET 12
FOR PROFILE OF LINE -DR2- SEE SHEET 16

GR -L-
PI Sta 30+08.18
 $\Delta = 2' 33' 35"$ (LT)
D = 1' 08' 45.3"
L = 223.58'
T = 111.7'
R = 5,000.00'

SEE DETAIL D
CL "B" RIP RAP
EST. 5 TONS
67' SQ YDS FILTER FABRIC
-L- PT Sta. 31+19.85
BL-4 PINC 25+31.31=
-L- STA. 30+35.87
19.14' LT.



MATCH LINE SEE SHEET NO. 5 -L- STA 25+60

MATCH LINE SEE SHEET NO. 7 -L- STA 31+20

REVISIONS

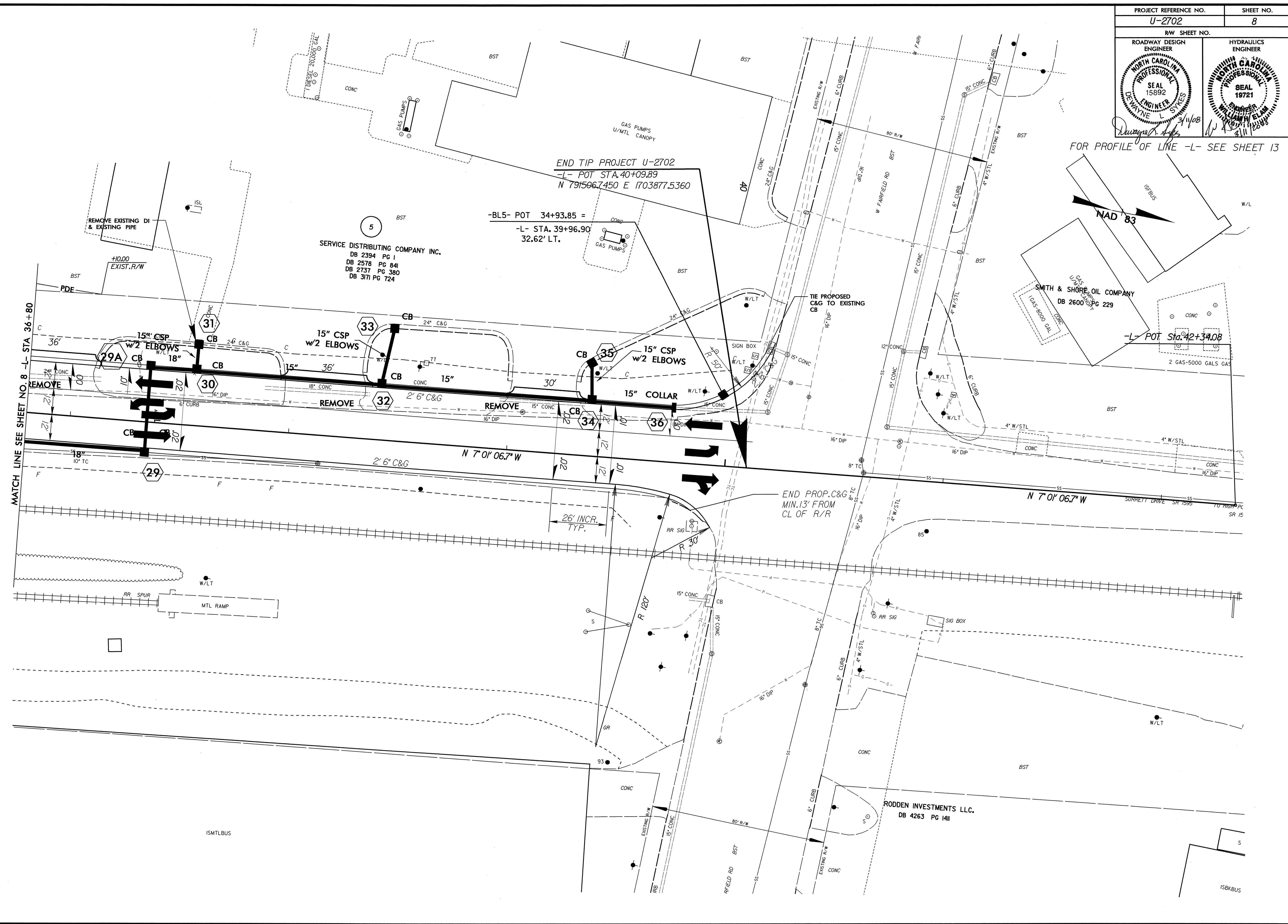
8/17/99

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RD2702

PROJECT REFERENCE NO. U-2702	SHEET NO. 8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 15892 DEWAYNE L. STILES	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 19721 WILLIAM W. ELAM

FOR PROFILE OF LINE -L- SEE SHEET 13

NAD 83



END TIP PROJECT U-2702
-L- POT STA. 40+09.89
N 791506.7450 E 1703877.5360

-BL5- POT 34+93.85 =
-L- STA. 39+96.90
32.62' LT.

END PROP. C&G
MIN. 13' FROM
CL OF R/R

MATCH LINE SEE SHEET NO. 8 -L- STA. 36+80

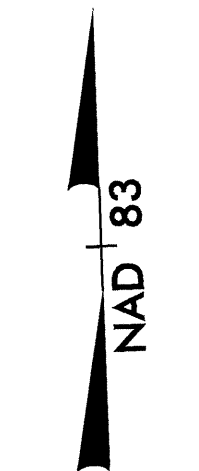
REVISIONS

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8/17/99

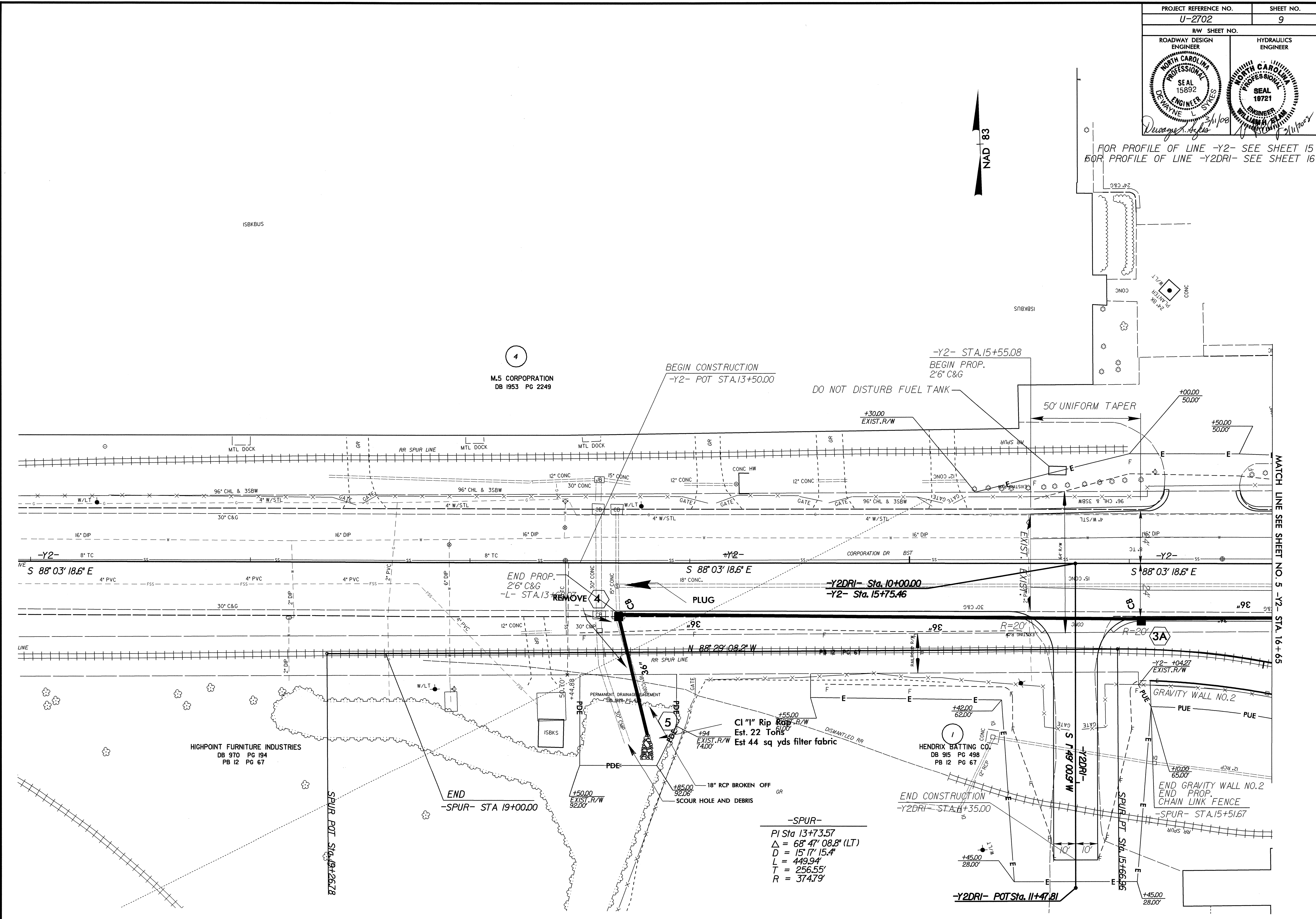
PROJECT REFERENCE NO. U-2702	SHEET NO. 9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

FOR PROFILE OF LINE -Y2- SEE SHEET 15
FOR PROFILE OF LINE -Y2DRI- SEE SHEET 16



REVISIONS

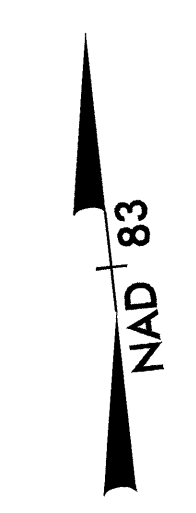
8/17/99



MATCH LINE SEE SHEET NO. 5 -Y2- STA. 16+65

11-MAR-2008 14:47
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11/11/08

PROJECT REFERENCE NO. U-2702	SHEET NO. 10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 15892 DWAYNE STOKES	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 19721 WILLIAM H. ELAM

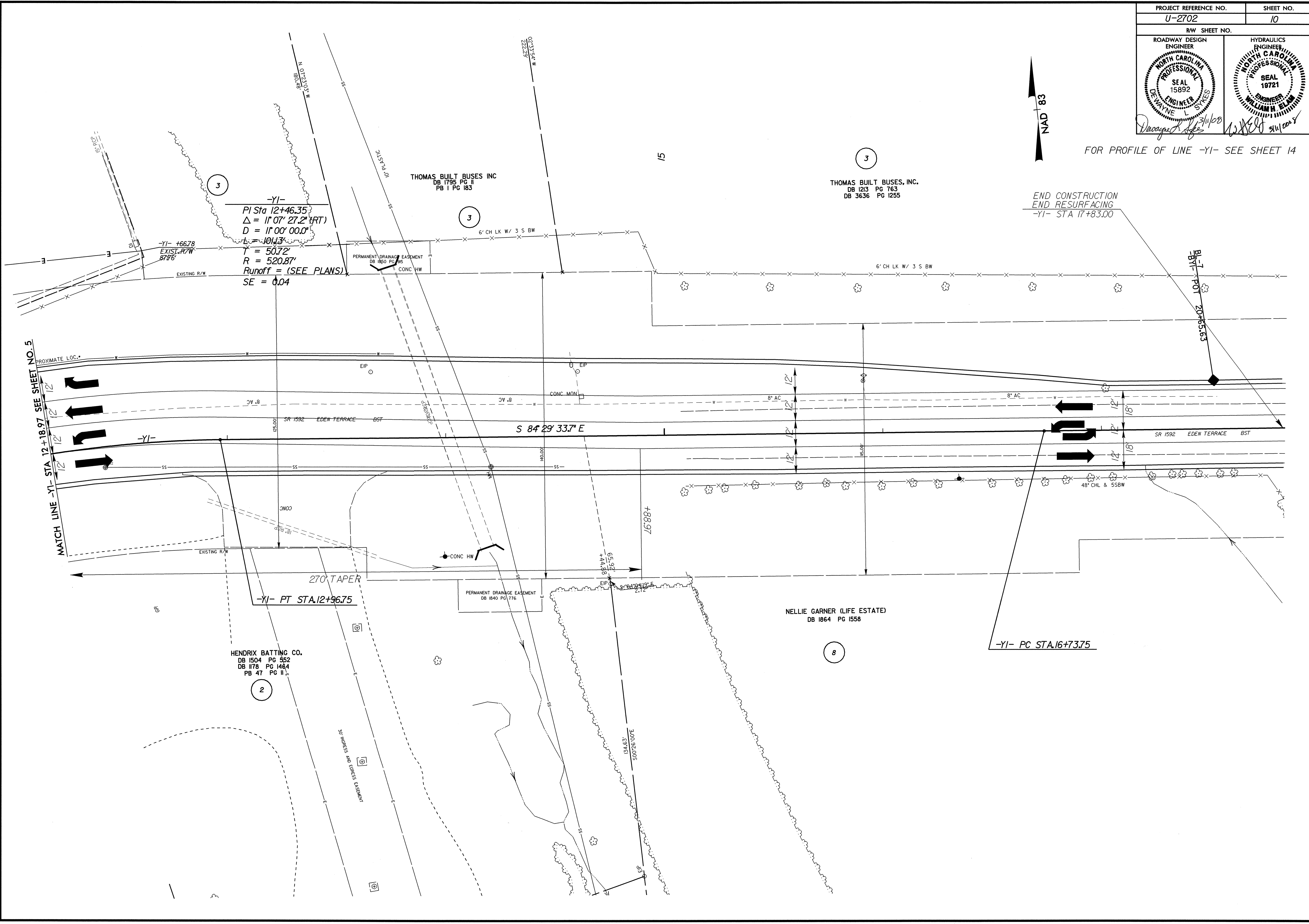


FOR PROFILE OF LINE -YI- SEE SHEET 14

8/17/99

REVISIONS

II-MAR-2008 14:47
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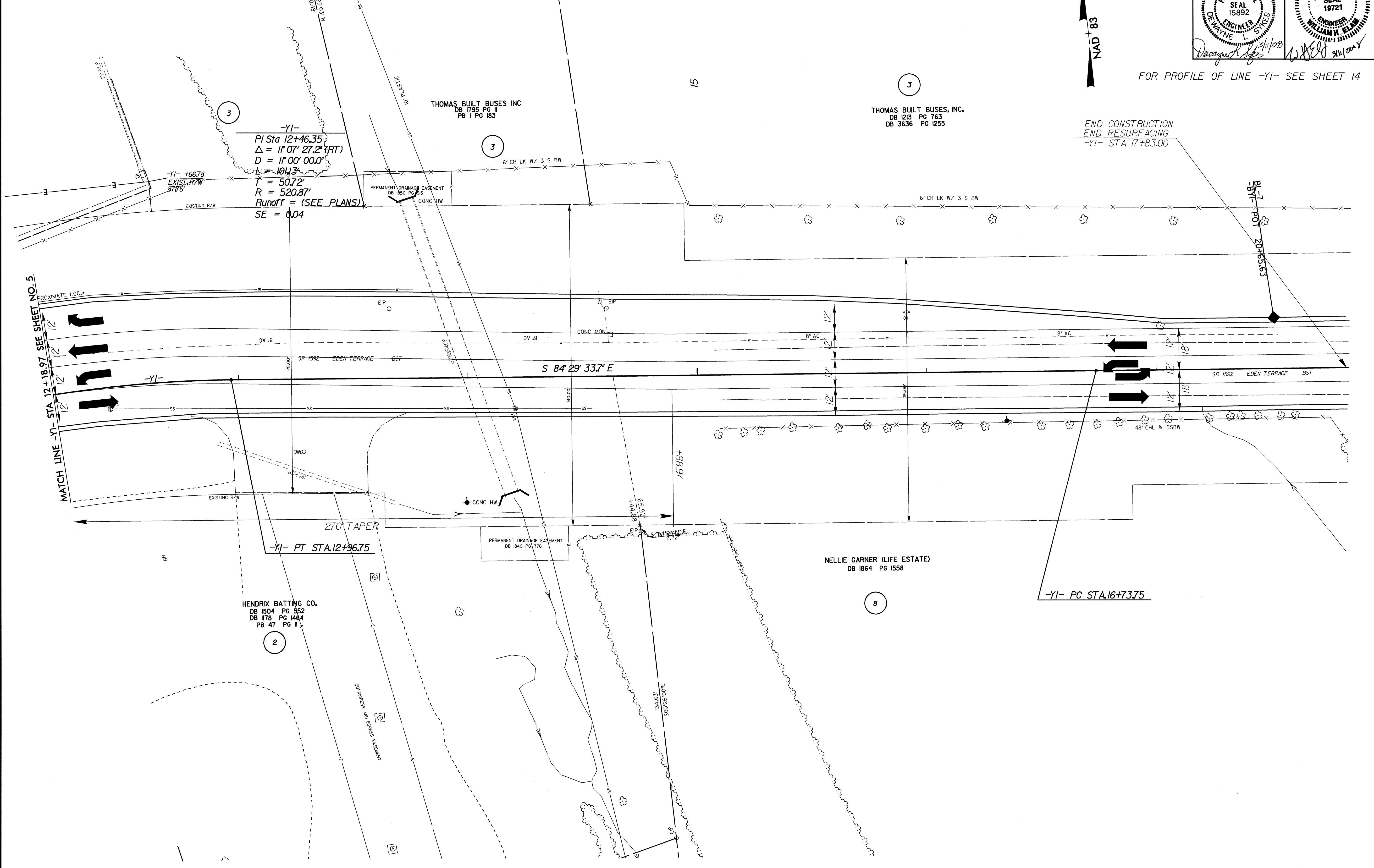


-YI-
PI Sta 12+46.35
 $\Delta = 11' 07'' 27.2'' (RT)$
 $D = 11' 00'' 00.0''$
 $L = 101.3'$
 $T = 50.72'$
 $R = 520.87'$
Runoff = (SEE PLANS)
SE = 0.04

MATCH LINE -YI- STA 12+18.97 SEE SHEET NO. 5

-YI- PC STA 16+73.75

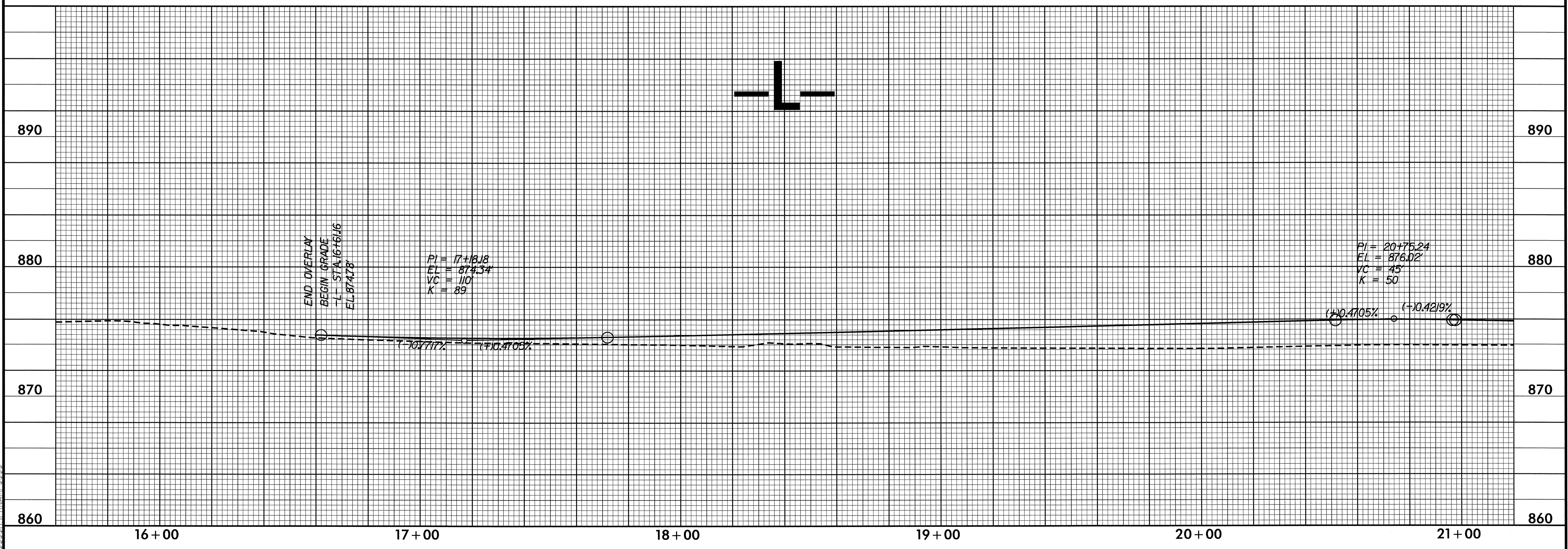
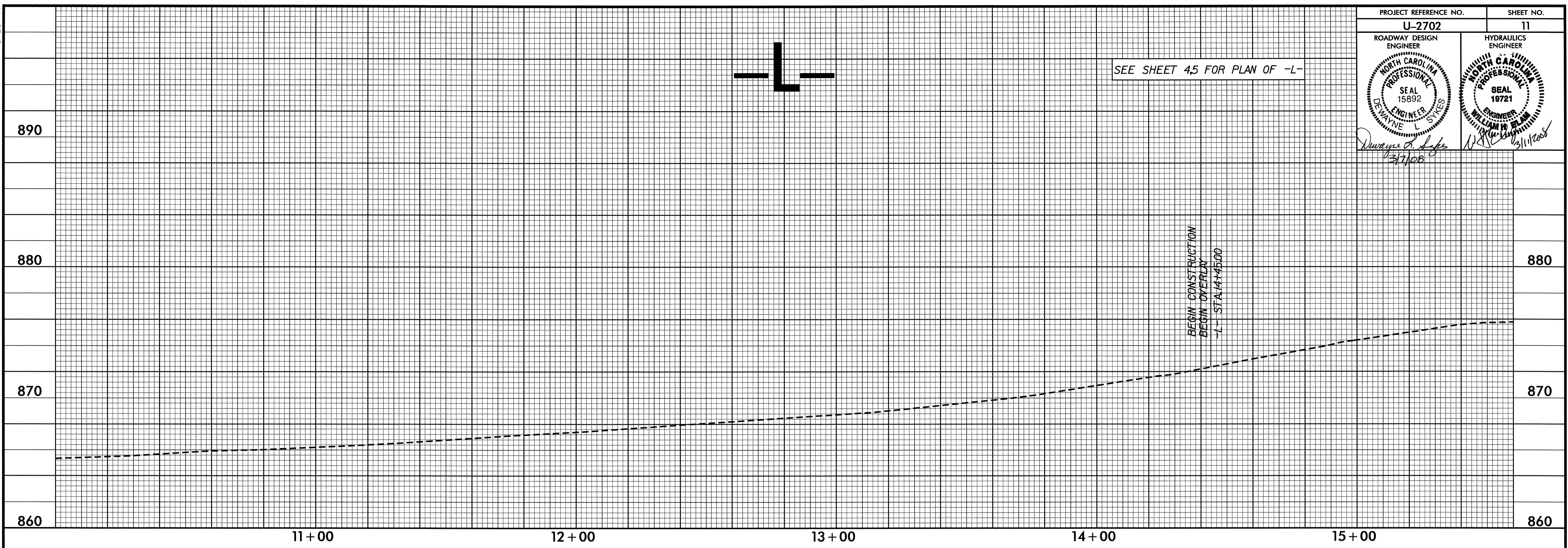
END CONSTRUCTION
END RESURFACING
-YI- STA 17+83.00



5/28/99

PROJECT REFERENCE NO. U-2702	SHEET NO. 11
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<i>Dwight D. Lofgren</i> 3/7/08	<i>William H. Blum</i> 3/11/08

SEE SHEET 45 FOR PLAN OF -L-



06-MAR-2008 14:10
C:\PROJECTS\U-2702-r.dwg-pl1.dgn

PIPE HYDRAULIC DATA	
DRAINAGE STRUCTURE NO. 1 TO 2	
DRAINAGE AREA	= 0.11 AC
DESIGN FREQUENCY	= 25 YRS
DESIGN DISCHARGE	= 0.5 CFS
DESIGN HW ELEVATION	= NA
100 YEAR DISCHARGE	= 0.6 CFS
100 YEAR HW ELEVATION	= NA
OVERTOPPING FREQUENCY	= NA
OVERTOPPING DISCHARGE	= NA
OVERTOPPING ELEVATION	= NA

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

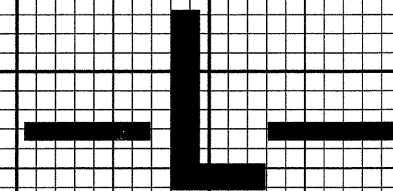


Wayne L. Stiles
02/11/00

William E. Elm
02/11/00

BM2 RR-SPIKE IN BASE OF 28" RED OAK TREE -L- STA 23+52.33, 92.46' RT. EL. 879.15'

SEE SHEET 5,6 FOR PLAN OF -L-



890

880

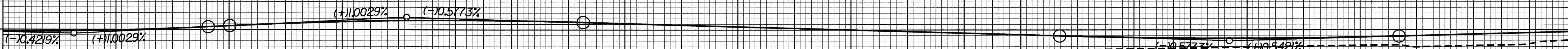
870

860

PI = 21+46.34
EL = 875.72'
VC = 95'
K = 67

PI = 22+64.00
EL = 876.90'
VC = 125'
K = 79

PI = 25+55.00
EL = 875.22'
VC = 120'
K = 107



22+00

23+00

24+00

25+00

26+00

890

880

870

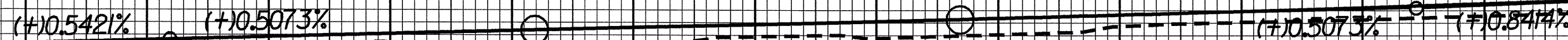
860

PI = 27+45.00
EL = 876.25'
VC = 120'
K = 3449

PI = 29+50.00
EL = 877.29'
VC = 150'
K = 449

PI = 30+95.00
EL = 878.51'
VC = 130'
K = 85

PI = 32+37.50
EL = 877.53'
VC = 135'
K = 87



27+00

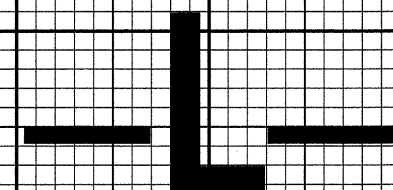
28+00

29+00

30+00

31+00

32+00



5/28/09



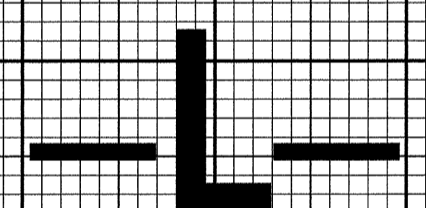
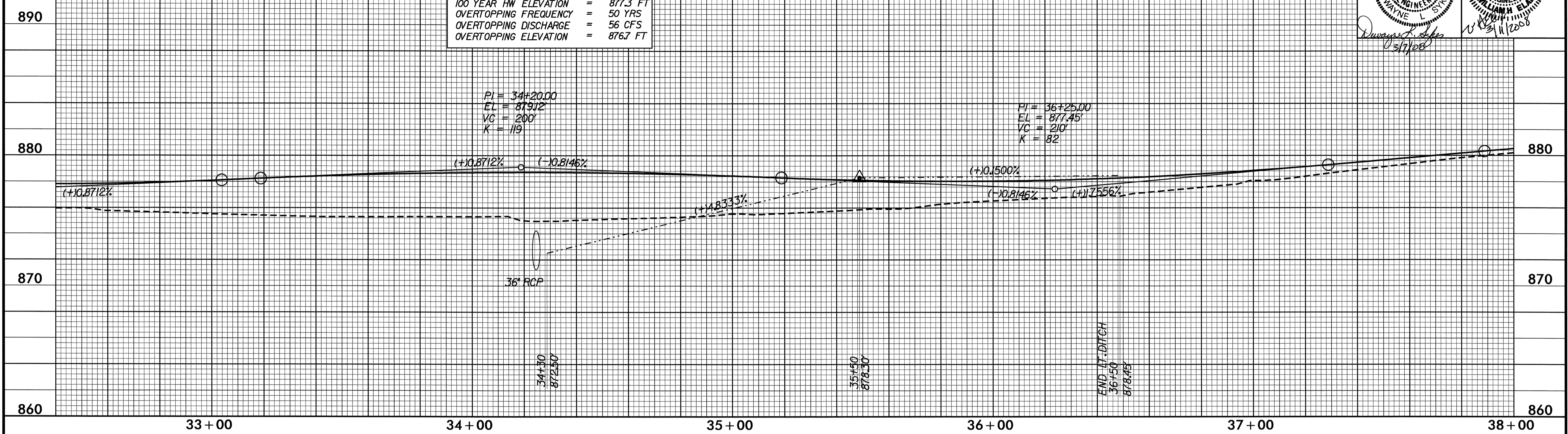
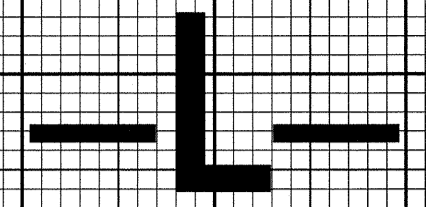
Dr. Wayne L. Stokes
05/27/08

William E. Ham
11/20/08

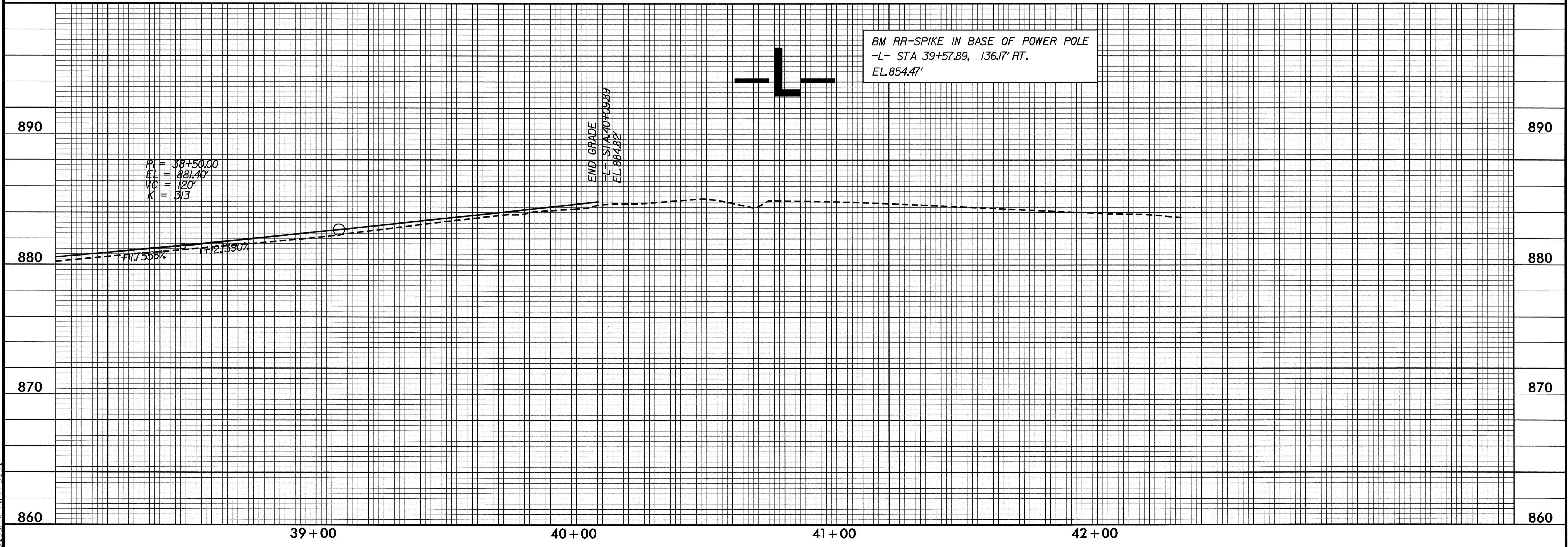
SEE SHEET 7,8 FOR PLAN OF -L-

PIPE HYDRAULIC DATA
DRAINAGE STRUCTURE NO.20 TO 21

DRAINAGE AREA	=	16.5 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	41 CFS
DESIGN HW ELEVATION	=	875.7 FT
100 YEAR DISCHARGE	=	64 CFS
100 YEAR HW ELEVATION	=	877.3 FT
OVERTOPPING FREQUENCY	=	50 YRS
OVERTOPPING DISCHARGE	=	56 CFS
OVERTOPPING ELEVATION	=	876.7 FT

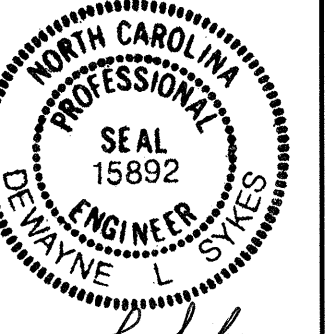



BM RR-SPIKE IN BASE OF POWER POLE
-L- STA 39+57.89, 136.17' RT.
EL. 854.47'



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\$\$\$\$\$13\$PRNAME\$\$\$\$\$

5/28/99

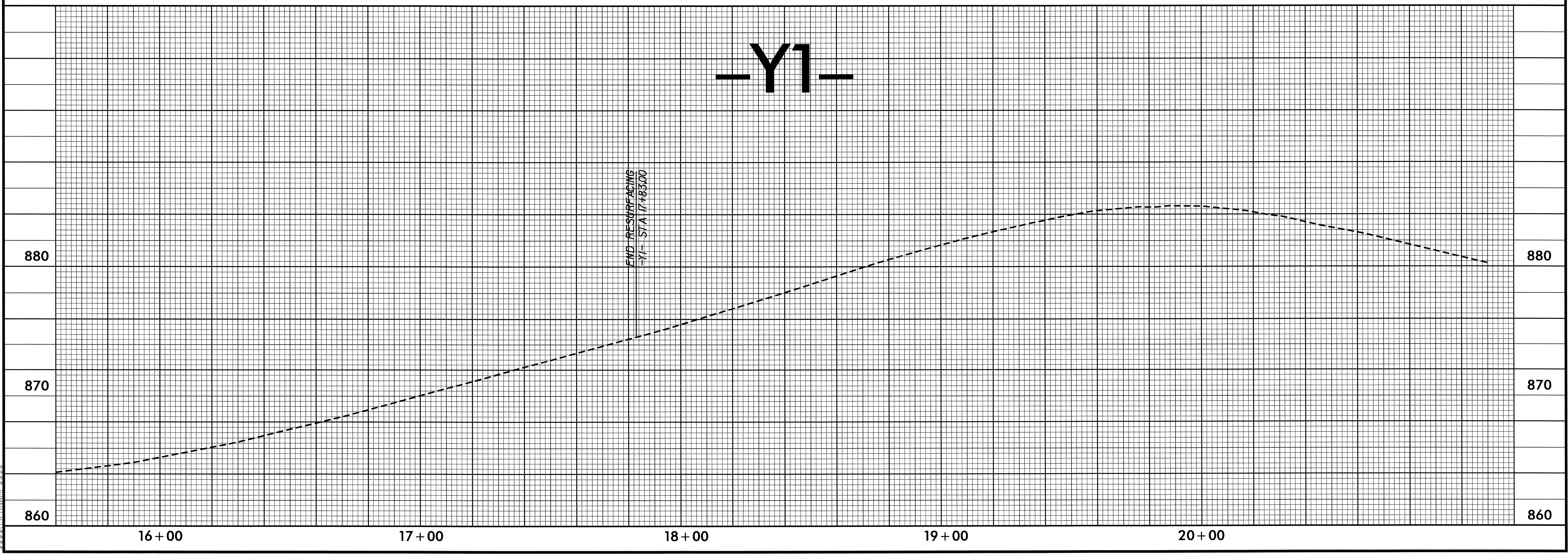
PROJECT REFERENCE NO. U-2702	SHEET NO. 14
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
<i>Duwayne L. Williams</i> 3/1/02	<i>William E. Williams</i> 3/11/02

SEE SHEET 10 FOR PLAN OF -Y1-

-Y1-



-Y1-



PC-MAR-2008 1410
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5/28/99

SEE SHEET 9 FOR PLAN OF -Y2-

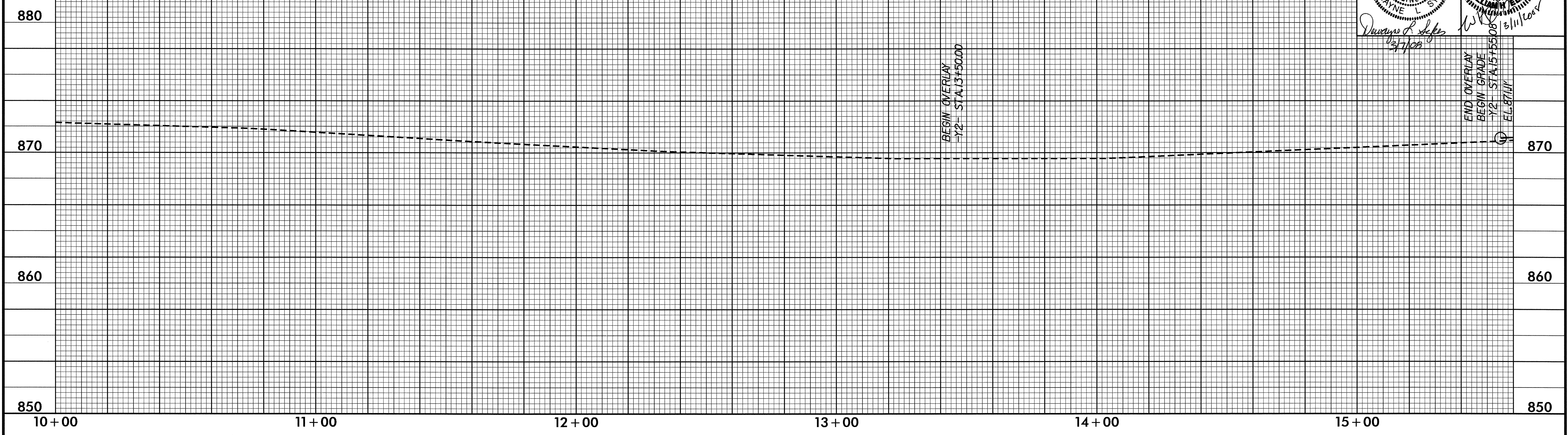
-Y2-

ROADWAY DESIGN ENGINEER
 NORTH CAROLINA PROFESSIONAL SEAL 15892
 DE WYANE

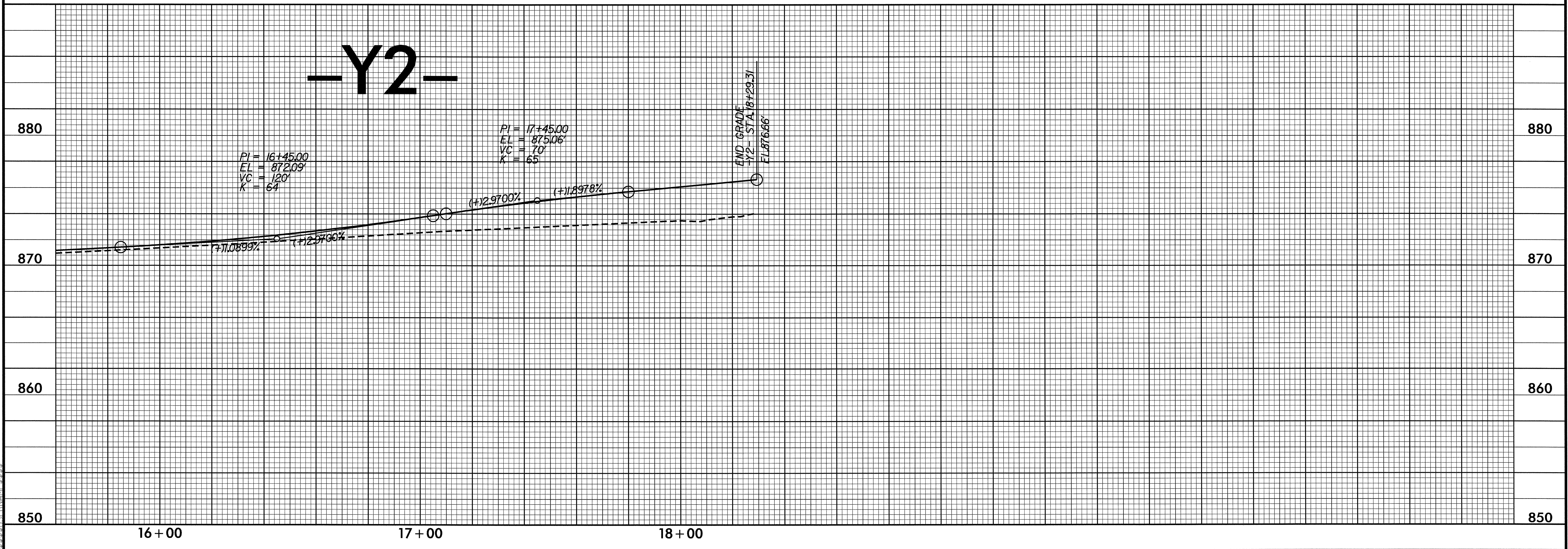
HYDRAULICS ENGINEER
 NORTH CAROLINA PROFESSIONAL SEAL 18721
 WILLIAM WELLMAN

DeWayne P. Stokes
3/27/08

William Wellman
3/11/08



-Y2-



05-MAR-2008 14:10
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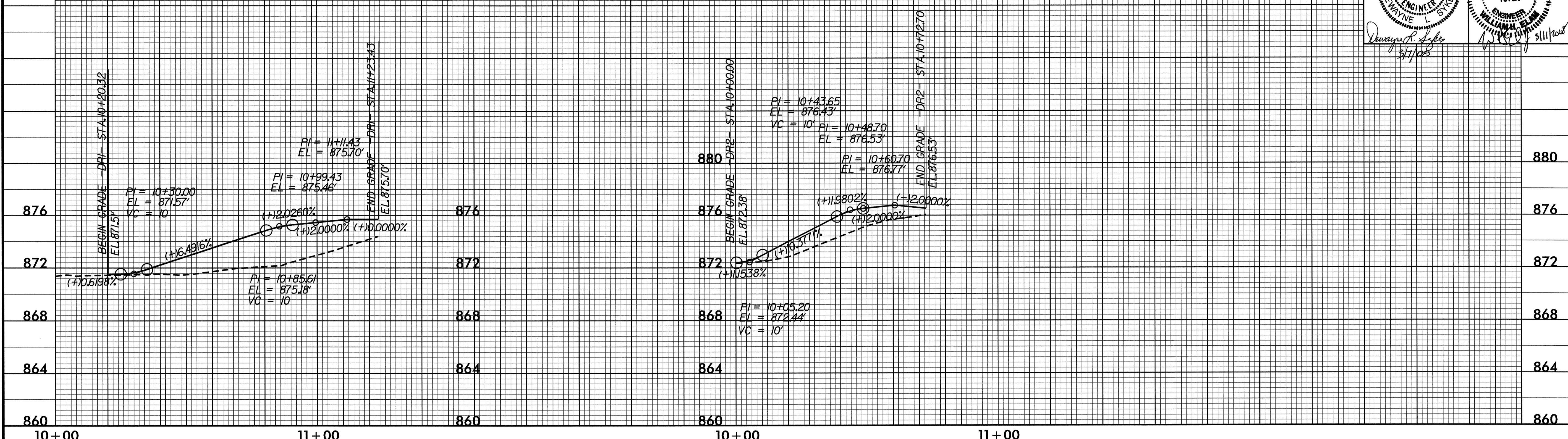
5/28/99

-DR1-

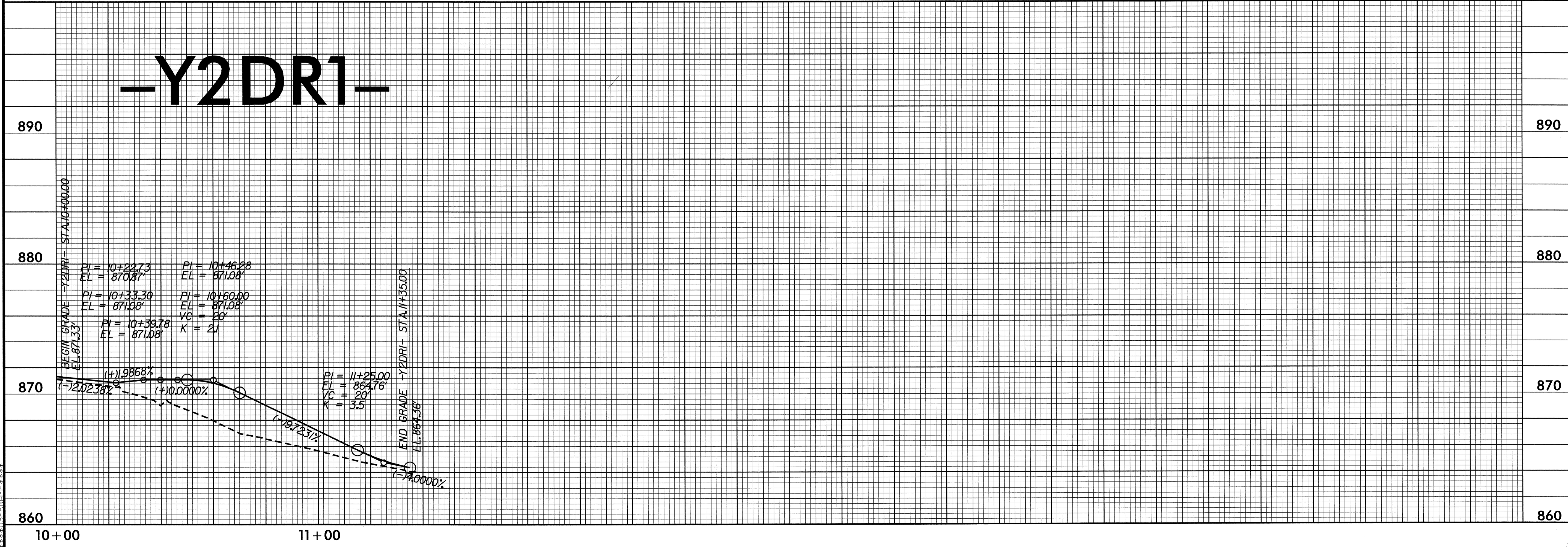
-DR2-

SEE SHEET 5 FOR PLAN OF -DRI-
SEE SHEET 6 FOR PLAN OF -DR2-
SEE SHEET 9 FOR PLAN OF -Y2DRI-

PROJECT REFERENCE NO. U-2702	SHEET NO. 16
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<i>Dewayne R. Sipes</i> 3/11/03	<i>William D. Sipes</i> 3/11/03



-Y2DRI-



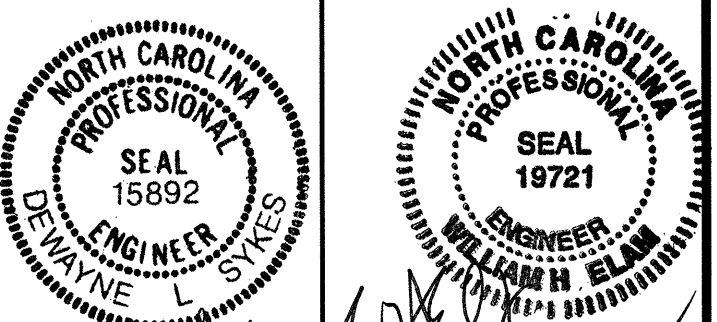
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5/28/09

PROJECT REFERENCE NO. SHEET NO.

U-2702 17

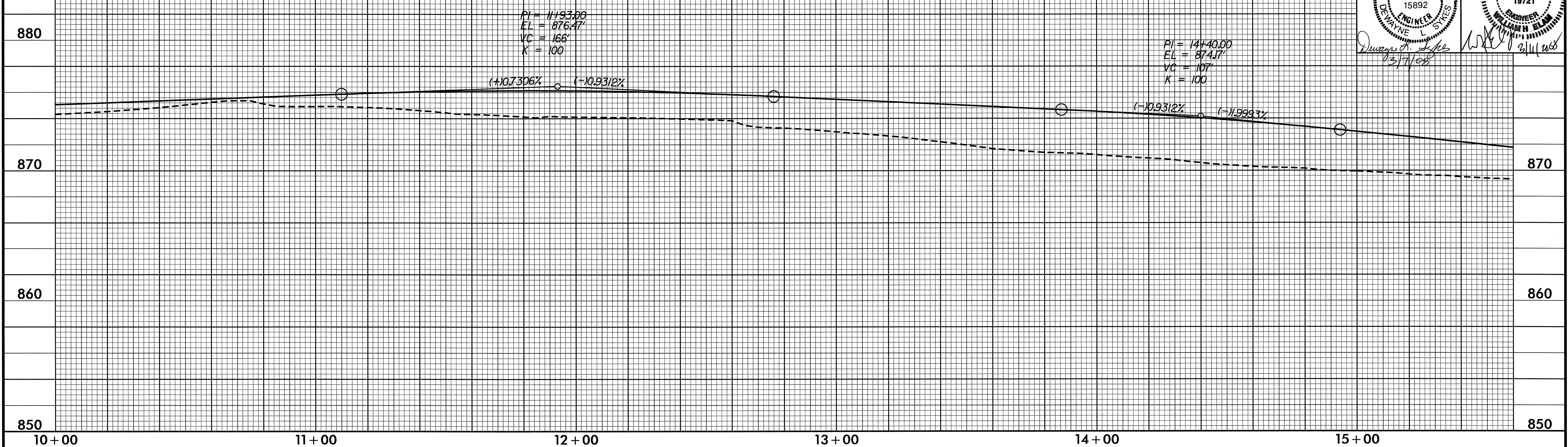
ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER



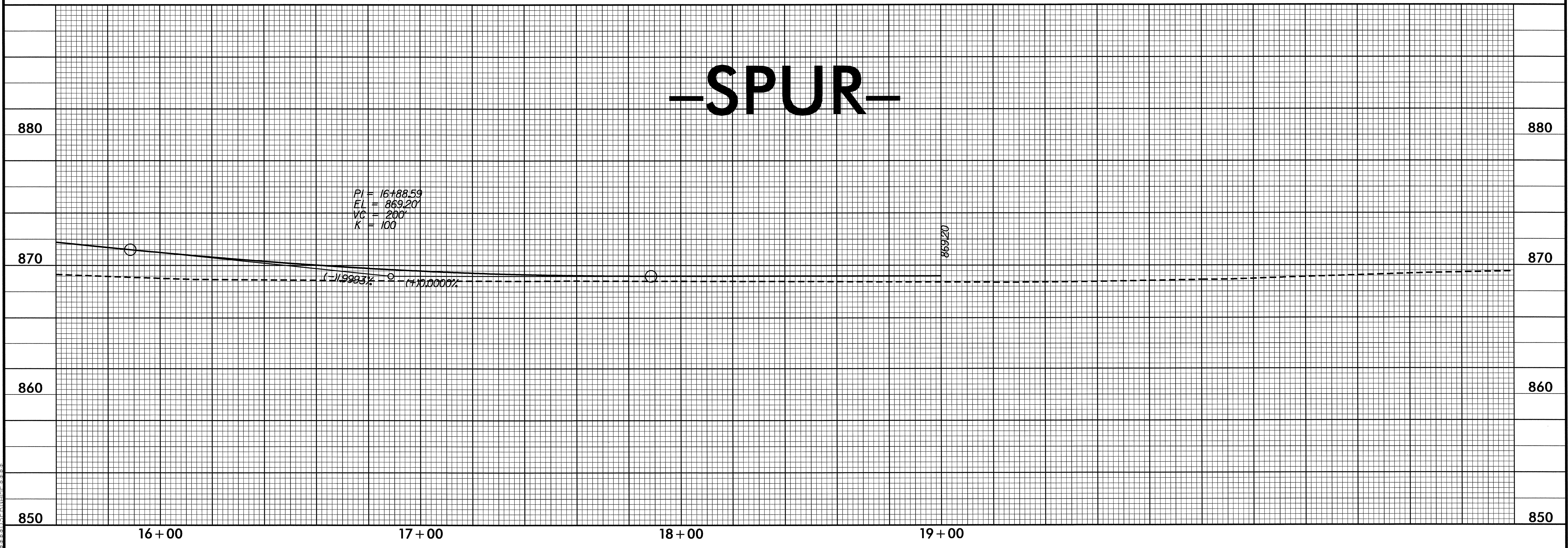
Signatures and dates: 03/11/08, 2/11/08

SEE SHEET 4,5 AND 9 FOR PLAN OF -SPUR-

-SPUR-



-SPUR-



06-MAR-2008 14:10
R:\PROJECTS\U-2702-2.rdy-pl.dgn