

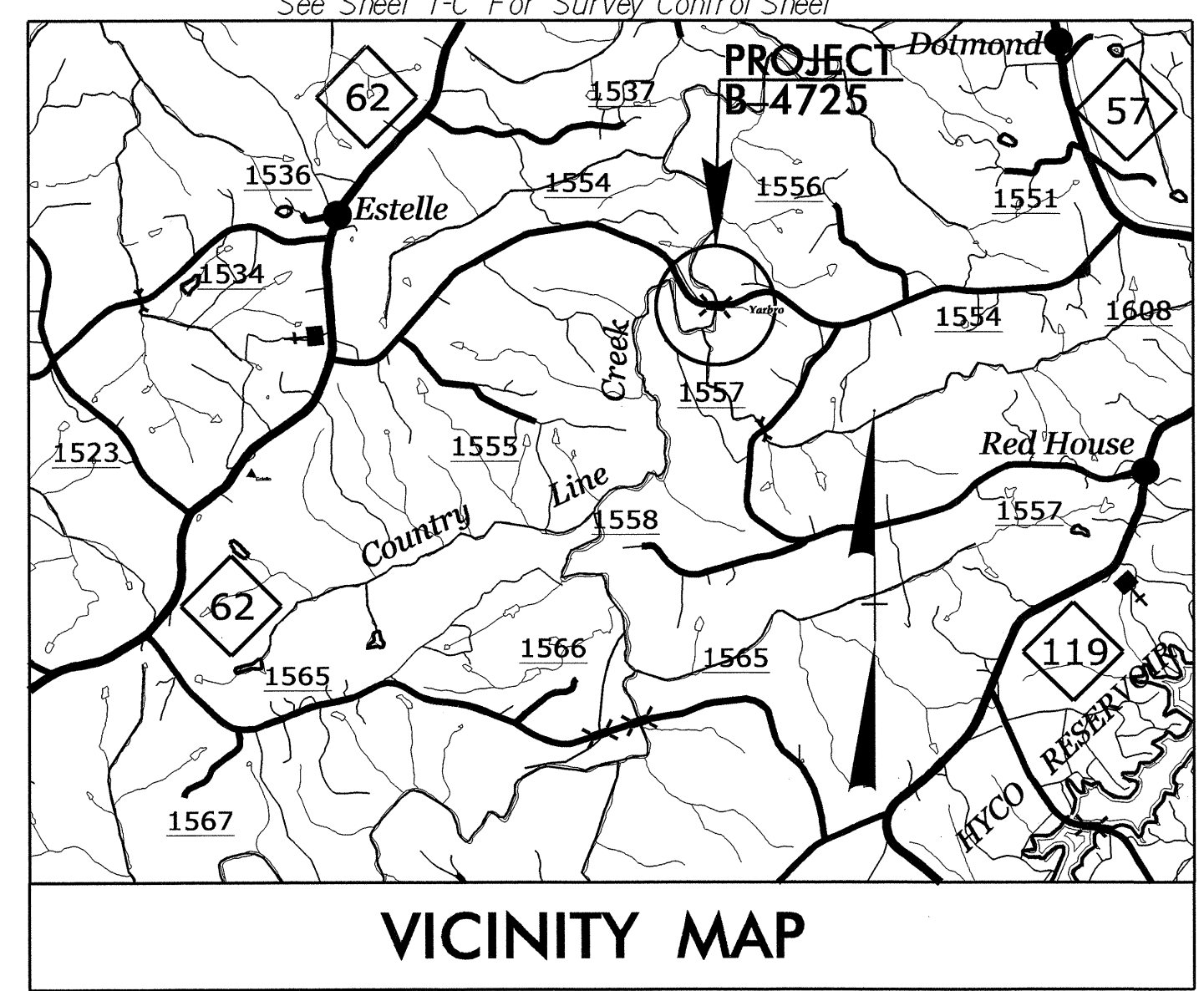
09, 08, 09

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4725	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38499.1.1	BRZ-1554(4)	PE	
38499.2.1	BRZ-1554(4)	R/W & UTILITIES	
38499.3.1	BRZ-1554(4)	CONST.	

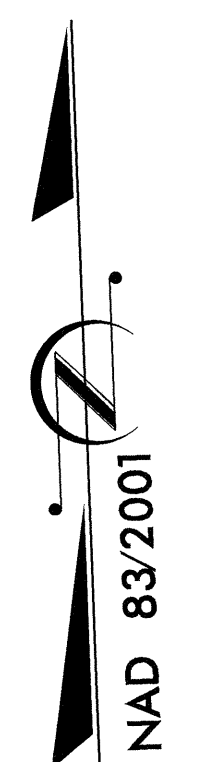
TIP PROJECT: B-4725



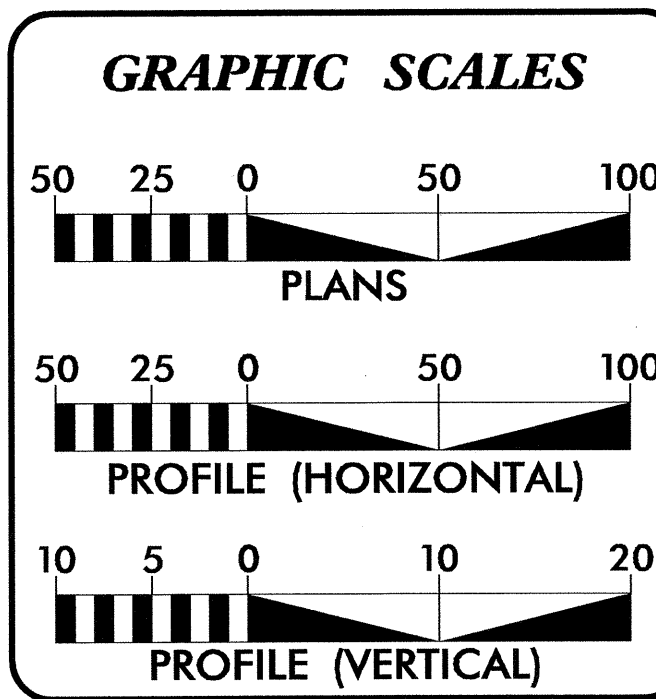
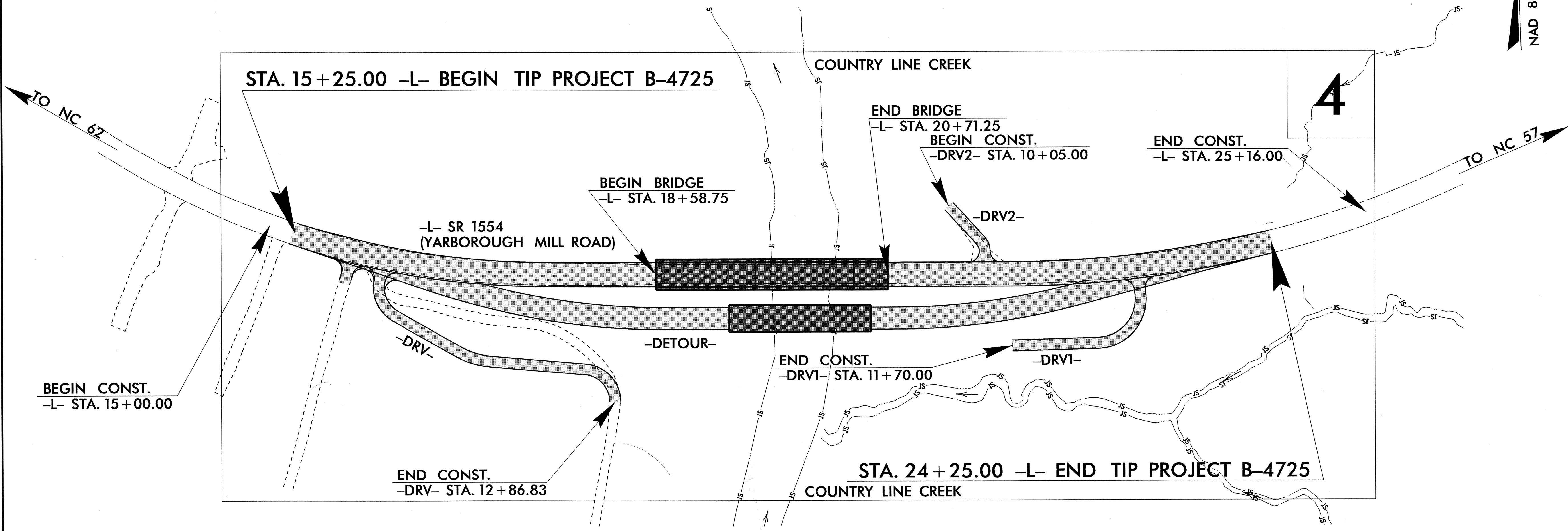
CASWELL COUNTY

**LOCATION: BRIDGE NO. 12 OVER COUNTRY LINE CREEK
ON SR 1554 (YARBOROUGH MILL ROAD)**

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE



CONTRACT: C203079



DESIGN DATA

ADT 2013 =	995
ADT 2035 =	1500
DHV =	10 %
D =	55 %
T =	3 % *
V =	55 MPH
* TTST =	1% DUAL = 2%
FUNC. CLASS. =	RURAL COLLECTOR
"SUB-REGIONAL TIER"	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4725 =	0.130 MILES
LENGTH STRUCTURE TIP PROJECT B-4725 =	0.040 MILES
TOTAL LENGTH OF TIP PROJECT B-4725 =	0.170 MILES

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JULY 13, 2012

LETTING DATE:
JANUARY 15, 2013

JAMES A. SPEER, PE
PROJECT ENGINEER

DANIEL W. GARDNER, JR., PE
PROJECT DESIGN ENGINEER

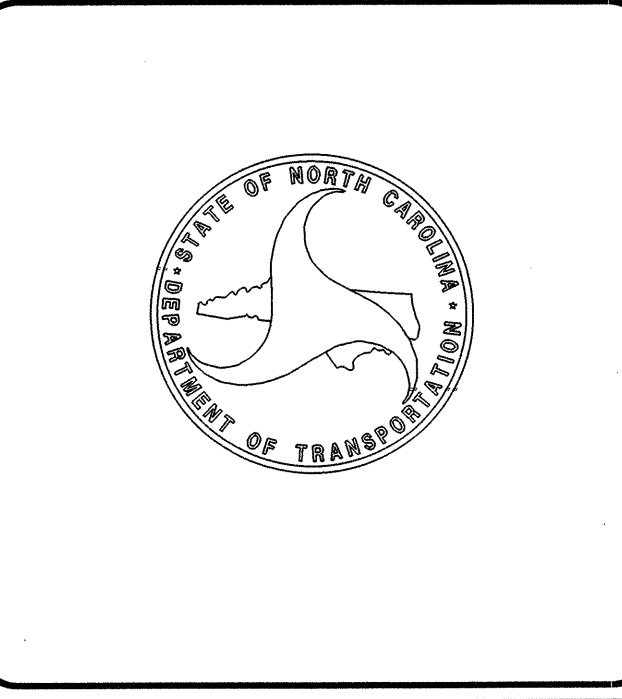
HYDRAULICS ENGINEER

[Signature]
SIGNATURE:

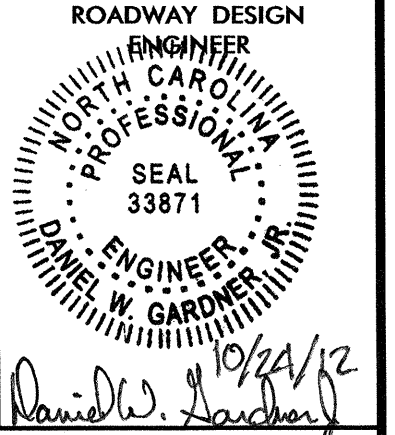
ROADWAY DESIGN ENGINEER

[Signature]
SIGNATURE:

Professional Engineer Seals for James A. Speer, PE (Seal 31988) and Daniel W. Gardner, Jr., PE (Seal 33871).



04-OCT-2012 07:51
R:\Roadway\Proj\154725_rdy_tsh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$



SHEET NUMBER	INDEX OF SHEETS SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL PLAN SHEET SYMBOLS
1-C	SURVEY CONTROL SHEET
2 THRU 2-A	PAVEMENT SCHEDULE, WEDGING DETAIL, AND TYPICAL SECTIONS
3	SUMMARY OF QUANTITIES
3-A	DRAINAGE QUANTITIES SUMMARY, GUARDRAIL SUMMARY, ASPHALT PAVEMENT REMOVAL SUMMARY, AND SHOULDER BERM GUTTER SUMMARY
3-B	EARTHWORK SUMMARY
4	PLAN SHEET
5	DETOUR PLAN SHEET
6 THRU 7	PROFILE SHEETS
TMP-1 THRU TMP-8	TRANSPORTATION MANAGEMENT PLANS
SD-1	SIGN DESIGN DETAIL SHEET
EC-1 THRU EC-7	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-2	SIGNING PLANS
PMP-1	PAVEMENT MARKING PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS
X-1	CROSS SECTION SUMMARY
X-2 THRU X-24	CROSS-SECTIONS
S-1 THRU S-24	STRUCTURE PLANS

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-12
REVISED: 07/30/12

**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 II.

SUPERELEVATION:
ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

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

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

GUARDRAIL:
THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

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

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
PROGRESS ENERGY - POWER DISTRIBUTION
CHARTER COMMUNICATIONS - CABLE TV
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

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

2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superlevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 4 - MAJOR STRUCTURES	
422.11	Reinforced Bridge Approach Fills - Sub Regional Tier
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
840.00	Concrete Base Pad for Drainage Structures
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.29	Frames and Narrow Slot Flap Grates
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

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	⑩23
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---
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	?? ??

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
Well	○ 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	---FLM---
False Sump	◻

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ CSX TRANSPORTATION 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 RW Marker	○
Proposed Control of Access Line with Concrete C/A Marker	○
Existing Control of Access	○
Proposed Control of Access	○
Existing Easement Line	---E---
Proposed Temporary Construction Easement	---E---
Proposed Temporary Drainage Easement	---TDE---
Proposed Permanent Drainage Easement	---PDE---
Proposed Permanent Drainage / Utility Easement	---DUE---
Proposed Permanent Utility Easement	---PUE---
Proposed Temporary Utility Easement	---TUE---
Proposed Aerial Utility Easement	---AUE---
Proposed Permanent Easement with Iron Pin and Cap Marker	◇

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	---C---
Proposed Slope Stakes Fill	---F---
Proposed Curb Ramp	○ CR
Existing Metal Guardrail	---T---
Proposed Guardrail	---T---
Existing Cable Guiderail	---T---
Proposed Cable Guiderail	---T---
Equality Symbol	⊕
Pavement Removal	▨

VEGETATION:

Single Tree	○
Single Shrub	○
Hedge	-----
Woods Line	-----

Orchard	○
Vineyard	◻ Vineyard

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	◻ CONC
Bridge Wing Wall, Head Wall and End Wall	◻ CONC WW ◻
MINOR:	
Head and End Wall	◻ CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	◻ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	○ S
Storm Sewer	---S---

UTILITIES:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

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

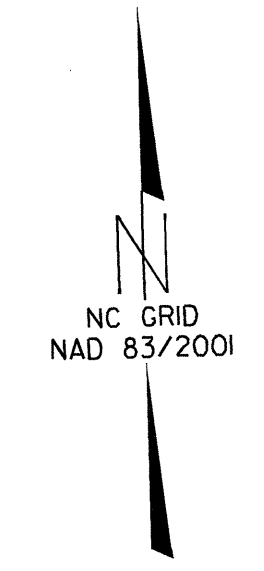
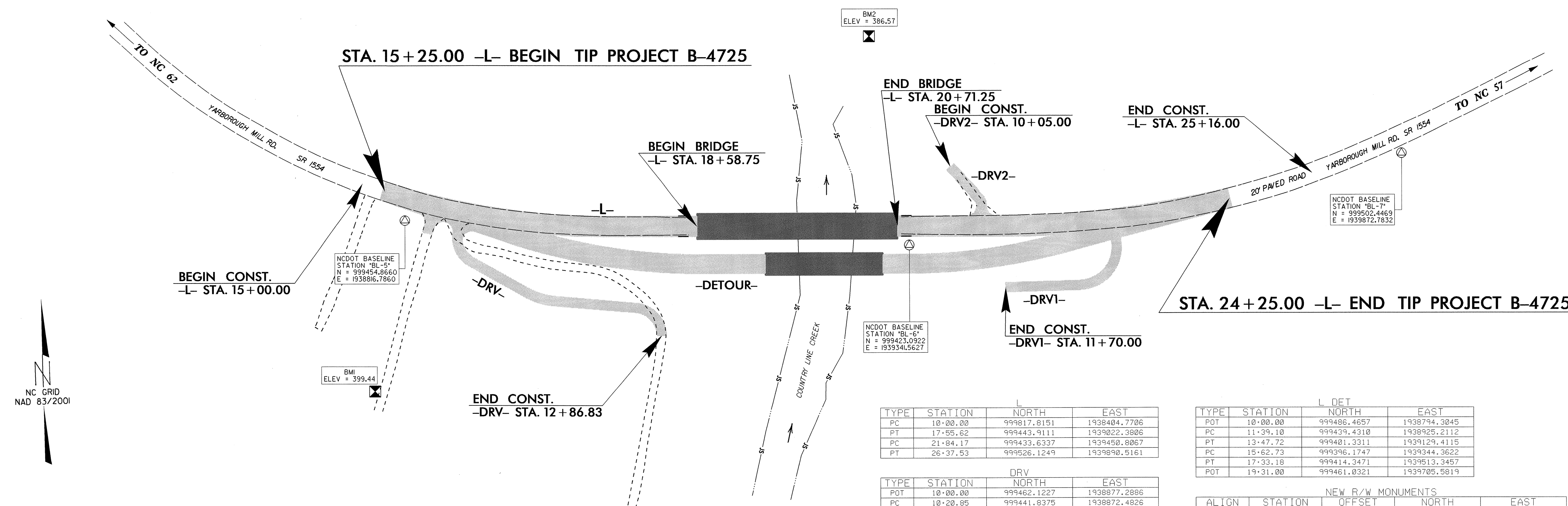
MISCELLANEOUS:

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

12/01/2005

B-4725 SURVEY CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
B-4725	1-C
Location and Surveys	



L			
TYPE	STATION	NORTH	EAST
PC	10+00.00	999817.8151	1938404.7706
PT	17+55.62	999443.9111	1939022.3806
PC	21+84.17	999433.6337	1939450.8067
PT	26+37.53	999526.1249	1939890.5161

DRV			
TYPE	STATION	NORTH	EAST
POT	10+00.00	999462.1227	1938877.2886
PC	10+20.85	999441.8375	1938872.4826
PT	10+58.98	999409.0709	1938886.4508
PC	11+25.89	999375.1171	1938944.1060
PT	11+55.82	999365.8184	1938972.3074
PC	12+42.56	999356.7469	1939058.5769
PT	12+86.83	999326.6195	1939085.4382

DRV1			
TYPE	STATION	NORTH	EAST
POT	10+00.00	999437.6976	1939566.4977
PC	10+25.00	999412.8084	1939568.8495
PT	10+91.43	999369.0460	1939529.1927
EOB	11+70.00	999368.7203	1939450.6278
EGA	1+54.40	999368.7203	1939450.6278

DRV2			
TYPE	STATION	NORTH	EAST
POT	10+00.00	999500.7904	1939391.9891
PC	10+48.63	999464.3277	1939424.1691
PT	10+57.60	999456.8995	1939427.1685
POT	10+79.49	999434.2133	1939426.6434

L DET			
TYPE	STATION	NORTH	EAST
POT	10+00.00	999486.4657	1938794.3045
PC	11+39.10	999439.4310	1938925.2112
PT	13+47.72	999401.3311	1939129.4115
PC	15+62.73	999396.1747	1939344.3622
PT	17+33.18	999414.3471	1939513.3457
POT	19+31.00	999461.0321	1939705.5819

NEW R/W MONUMENTS				
ALIGN	STATION	OFFSET	NORTH	EAST
L	17+55.62	-60.00	999503.8938	1939023.8195
L	17+55.62	-30.00	999473.9024	1939023.1000
L	21+84.17	-60.00	999493.6164	1939452.2457
L	21+84.17	-30.00	999463.6250	1939451.5262

PERMANENT EASEMENT-E				
ALIGN	STATION	OFFSET	NORTH	EAST
L	24+30.00	30.00	999429.2312	1939701.4797
L	24+30.00	60.00	999399.9999	1939708.2274
L	24+55.00	60.00	999406.2962	1939733.9993
L	24+55.00	30.00	999435.3459	1939726.5082
L	18+03.00	-30.00	999532.7489	1939071.9045
L	17+81.00	-30.00	999533.2785	1939049.9108
L	17+81.00	-65.00	999508.2837	1939049.3113
L	18+03.00	-65.00	999507.7561	1939071.3049
L	17+00.00	-55.00	999502.0946	1938972.4047
L	15+50.00	-30.00	999506.2800	1938829.3217
L	25+16.00	-30.00	999509.9828	1939768.2892

BASELINE DATA

BL	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
	1	B4725-1	1001190.9150	1938859.6980	458.24		OUTSIDE PROJECT LIMITS
	2	B4725-2	1000934.7990	1937508.4220	449.76		OUTSIDE PROJECT LIMITS
	3	BL-3	1000549.1795	1938029.4131	433.40		OUTSIDE PROJECT LIMITS
	4	BL-4	999789.6497	1938457.3257	409.36	11+17.98	16.24 RT
	5	BL-5	999454.8660	1938816.7860	396.28	15+53.49	22.81 RT
	6	BL-6	999423.0922	1939341.5627	386.05	20+75.21	13.16 RT
	7	BL-7	999502.4469	1939872.7832	415.15	26+11.79	14.25 RT

BENCHMARK DATA

BM1	ELEVATION = 399.44
N 999275	E 1938781
L STATION 15+68.00 208 RIGHT	
RR SPIKE IN BASE OF 18' CEDAR	
BM2	ELEVATION = 386.57
N 999637	E 1939313
L STATION 20+41.00 208 LEFT	
RR SPIKE IN BASE OF 20' DOUBLE MAPLE	

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:
B4725_LS_CONTROL.TXT

SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.

PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM FROM EXISTING NCGS MONUMENTATION.

DATUM DESCRIPTION
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4725-2"
 WITH NAD 83/2001 STATE PLANE GRID COORDINATES OF
 NORTHING: 1,000,934.799(ft) EASTING: 1,937,508.422(ft)
 ELEVATION: 449.76'(ft)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.0000934918
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4725-2" TO -L- STATION 15+22.61 IS
 S 41° 35' 59" E 1,936.79'
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NAVD 88

NOTE: DRAWING NOT TO SCALE

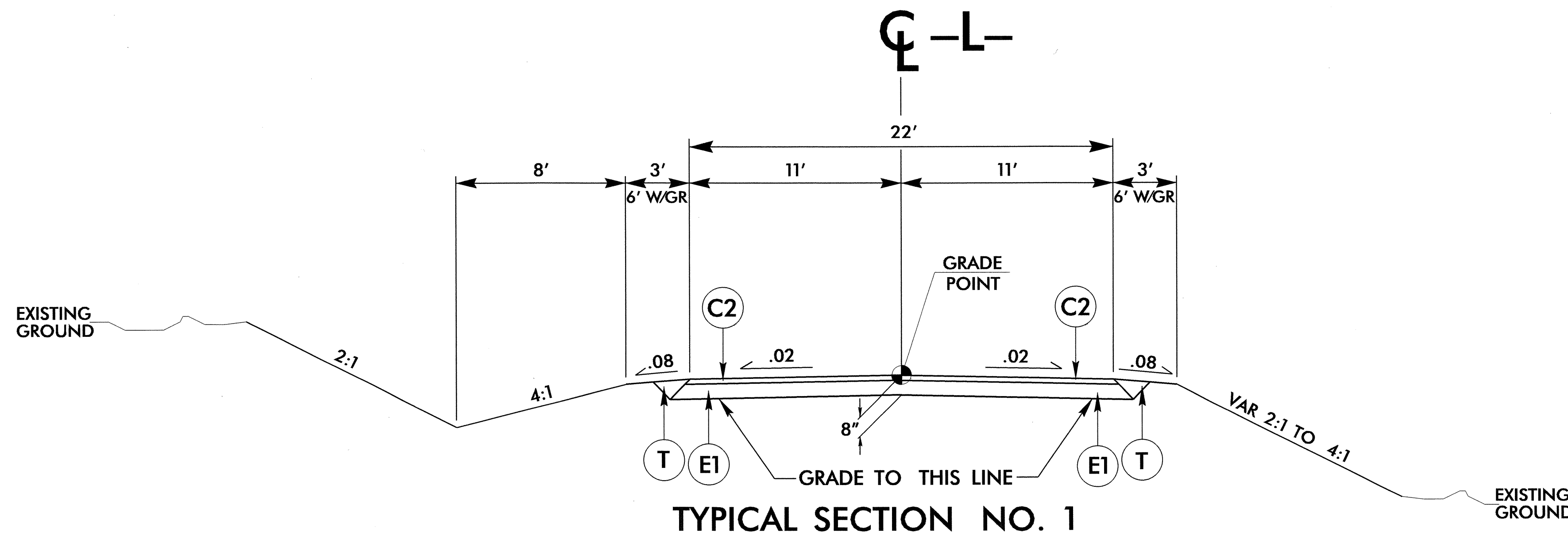
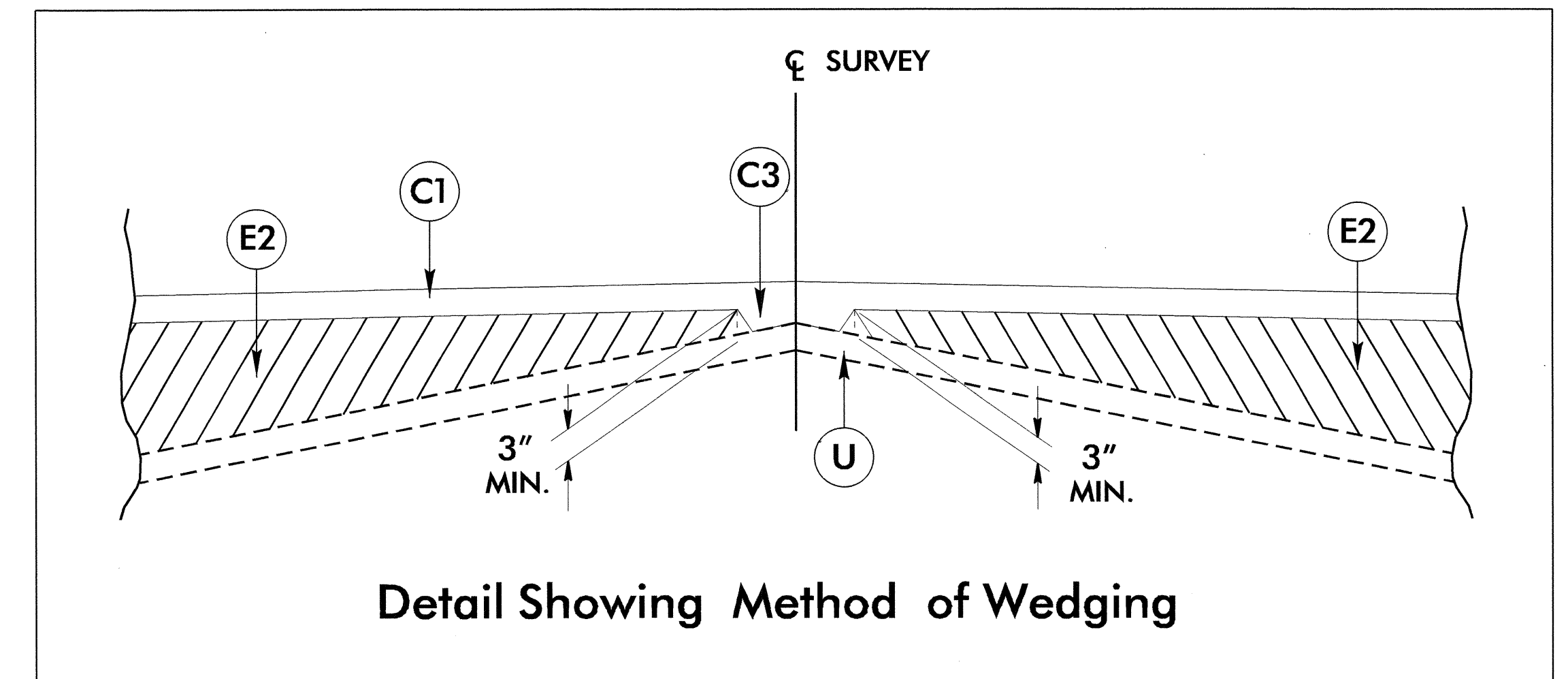
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6/2/99

PROJECT REFERENCE NO. B-4725	SHEET NO. 2
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 33871 DANIEL W. GARDNER	PAVEMENT DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 22898 CLARK S. MORRISON

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 2½" 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 1½" IN DEPTH.
E1	PROP. APPROX. 5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1' DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
J	PROP. 6" AGGREGATE BASE COURSE.
P	PRIME COAT AT THE RATE OF .35 GAL. PER SQ. YD.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL).

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

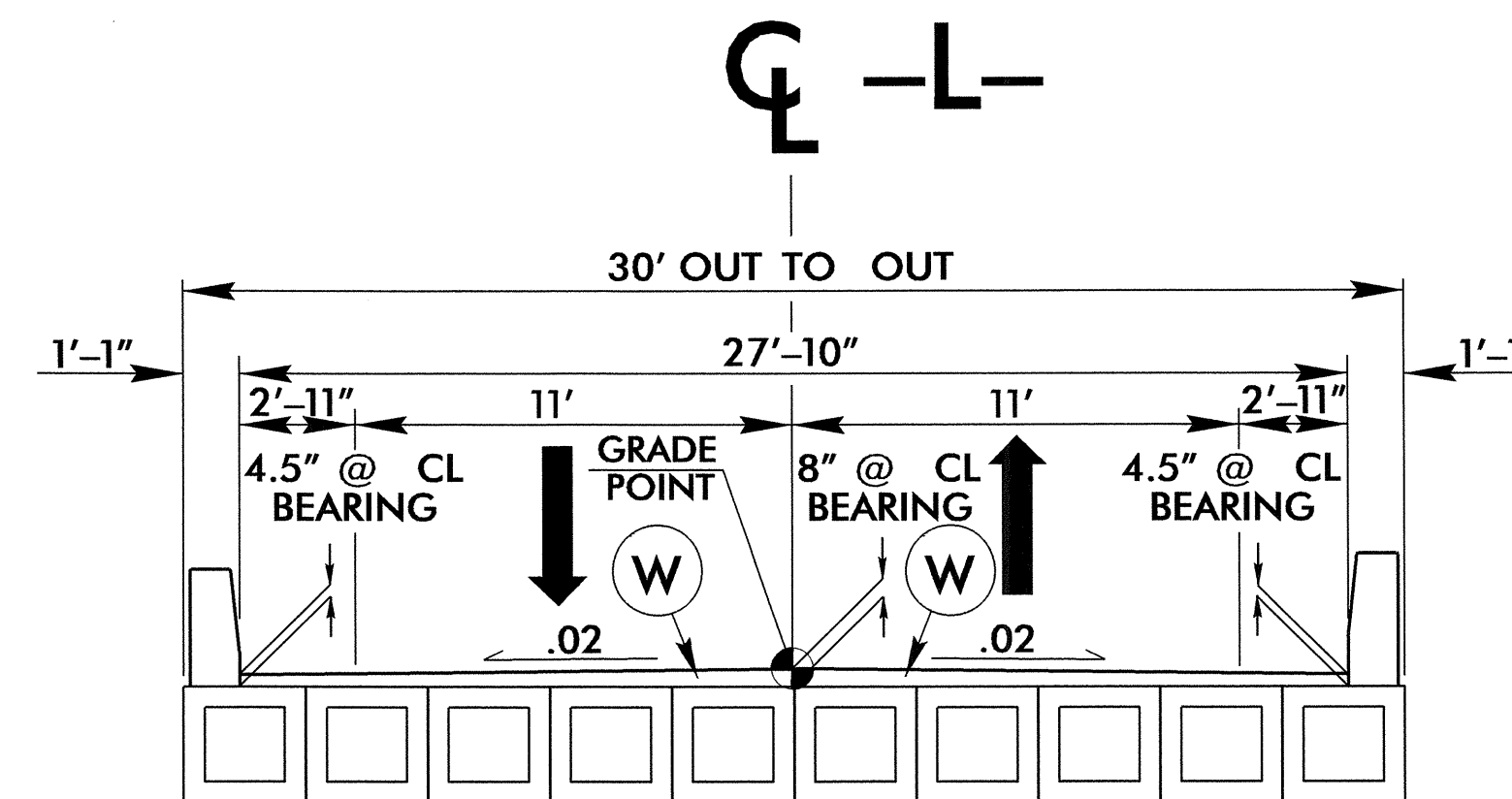


NOTE: TRANSITION FROM EXISTING TO TYPICAL SECTION NO. 1
-L- STA. 15+25.00 TO STA. 15+75.00

USE TYPICAL SECTION NO. 1

-L- STA. 15+75.00 TO STA. 18+58.75 (BEGIN BRIDGE)
-L- STA. 20+71.25 (END BRIDGE) TO STA. 23+75.00

NOTE: TRANSITION FROM TYPICAL SECTION NO. 1 TO EXISTING
-L- STA. 23+75.00 TO STA. 24+25.00



USE TYPICAL SECTION NO. 2

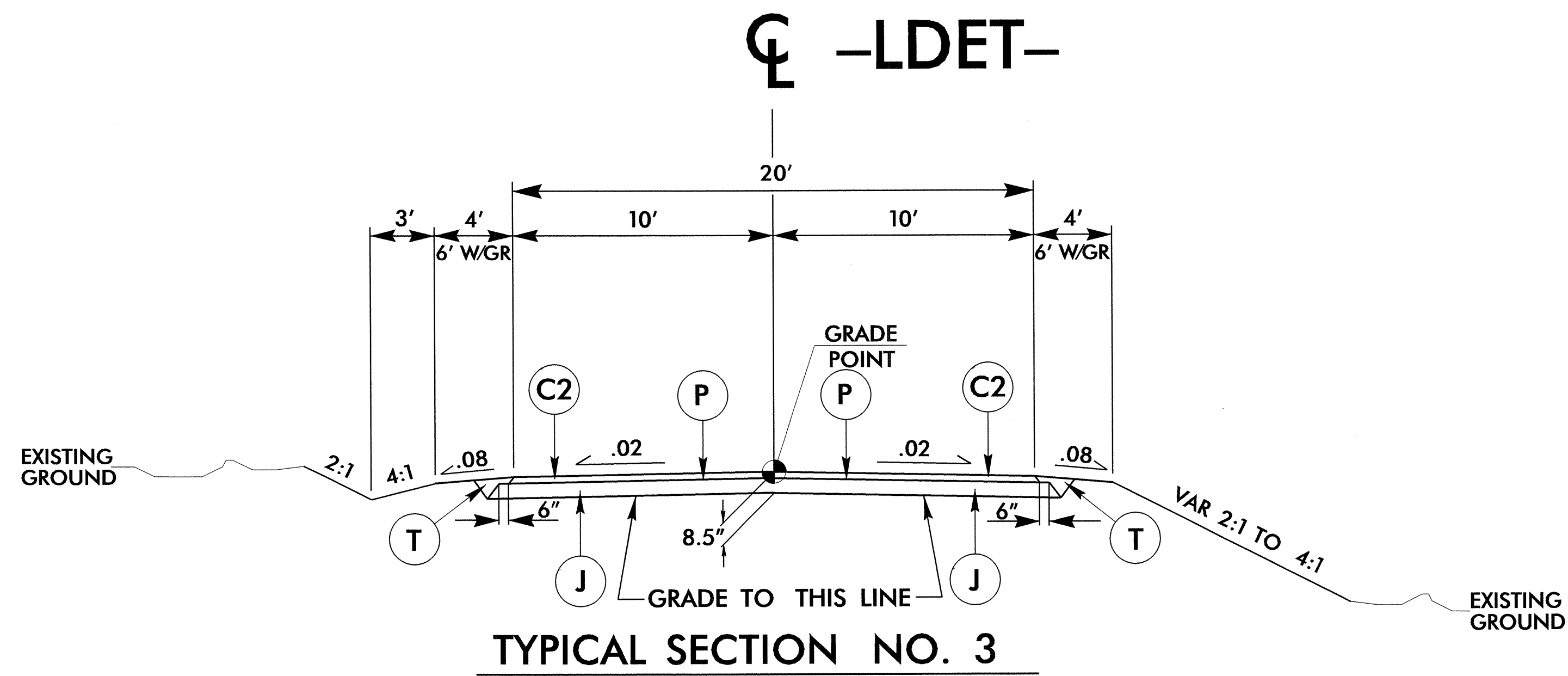
-L- STA. 18+58.75 (BEGIN BRIDGE) TO STA. 20+71.25 (END BRIDGE)

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PROJECT REFERENCE NO. B-4725	SHEET NO. 2-A
ROADWAY DESIGN ENGINEER SEAL 33871 DANIEL W. GARDNER	PAVEMENT DESIGN ENGINEER SEAL 22888 CLARK S. MORRISON

Daniel W. Gardner 10/24/12
Clark S. Morrison 10/24/12

PAVEMENT SCHEDULE	
C1	1 1/4" TYPE SF9.5A
C2	2 1/2" TYPE SF9.5A
C3	VAR. DEPTH TYPE SF9.5A
E1	5 1/2" TYPE B25.0B
E2	VAR. DEPTH TYPE B25.0B
J	6" AGGREGATE BASE COURSE
P	PRIME COAT
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VAR. DEPTH ASPHALT PAVEMENT

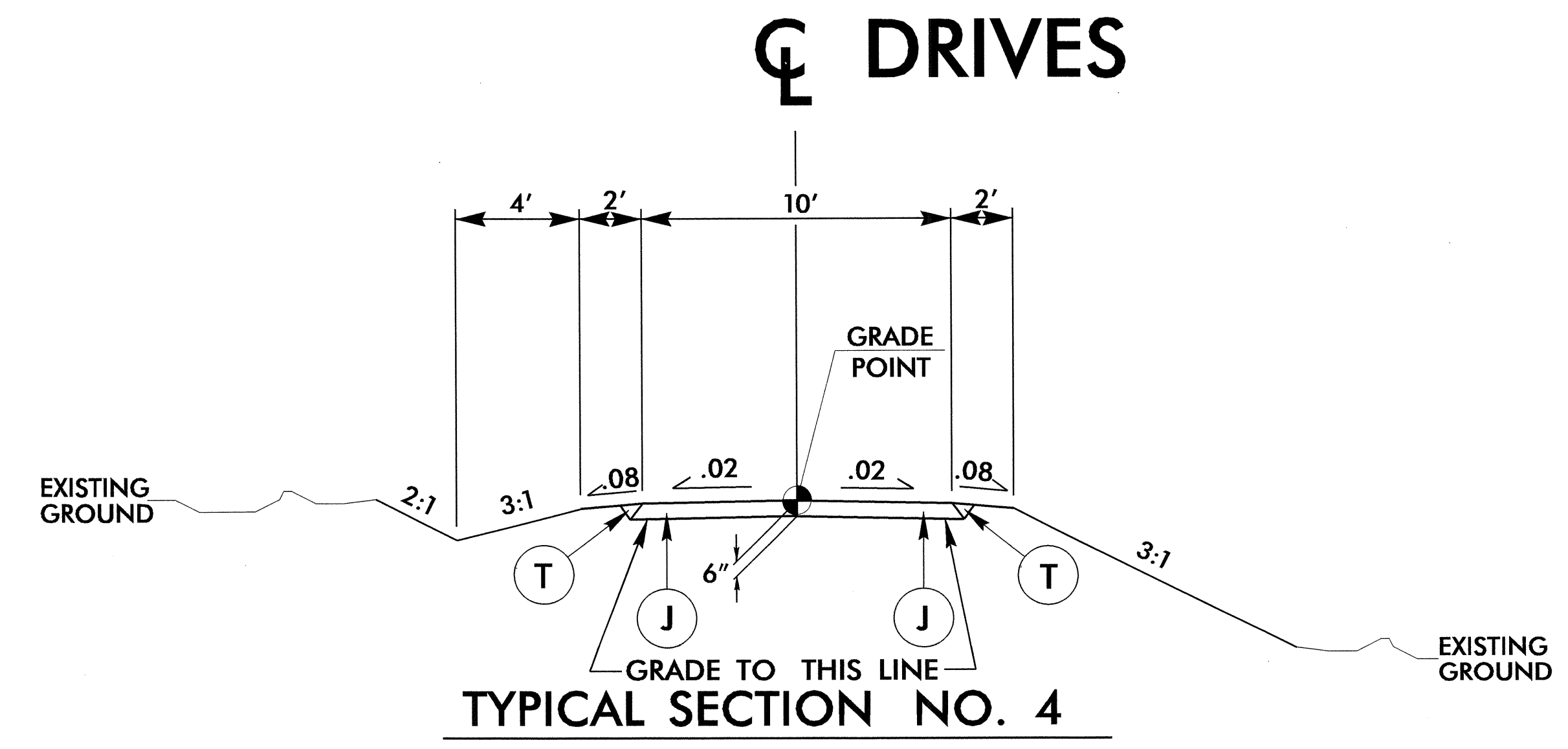


TYPICAL SECTION NO. 3

NOTE: TRANSITION FROM EXISTING TO TYPICAL SECTION NO. 3
-LDET- STA. 10+00.00 TO STA. 11+73.30

USE TYPICAL SECTION NO. 3
-LDET- STA. 11+73.30 TO STA. 14+10.00 +/- (BEGIN BRIDGE)
-LDET- STA. 15+40.00 +/- (END BRIDGE) TO STA. 17+39.83

NOTE: TRANSITION FROM TYPICAL SECTION NO. 3 TO EXISTING
-LDET- STA. 17+39.83 TO STA. 19+31.00



TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4
-DRV- STA. 10+20.85 TO STA. 12+86.83
-DRV1- STA. 10+20.89 TO STA. 11+70.00
-DRV2- STA. 10+05.00 TO STA. 10+58.49

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203079

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0030000000-N	SP	Lump Sum		BRIDGE APPROACH FILL - SUB REGIONAL TIER, STATION ***** (19+65.00-L-)
0043000000-N	226	Lump Sum		GRADING
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING
0057000000-E	226	300	CY	UNDERCUT EXCAVATION
0195000000-E	265	300	CY	SELECT GRANULAR MATERIAL
0196000000-E	270	400	SY	GEOTEXTILE FOR SOIL STABILIZA-TION
0318000000-E	300	20	TON	FOUNDATION CONDITIONING MATE-RIAL, MINOR STRUCTURES
0320000000-E	300	60	SY	FOUNDATION CONDITIONING GEO-TEXTILE
0344000000-E	310	72	LF	18" SIDE DRAIN PIPE
0372000000-E	310	28	LF	18" RC PIPE CULVERTS, CLASS III
0378000000-E	310	12	LF	24" RC PIPE CULVERTS, CLASS III
0448200000-E	310	28	LF	15" RC PIPE CULVERTS, CLASS IV
0588000000-E	310	28	LF	18" CS PIPE CULVERTS, 0.064" THICK
0995000000-E	340	88	LF	PIPE REMOVAL
1121000000-E	520	760	TON	AGGREGATE BASE COURSE
1220000000-E	545	500	TON	INCIDENTAL STONE BASE
1275000000-E	600	515	GAL	PRIME COAT
1489000000-E	610	800	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1525000000-E	610	550	TON	ASPHALT CONC SURFACE COURSE, TYPE SP9.5A
1575000000-E	620	75	TON	ASPHALT BINDER FOR PLANT MIX
1693000000-E	654	500	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR
2000000000-N	806	4	EA	RIGHT OF WAY MARKERS
2286000000-N	840	3	EA	MASONRY DRAINAGE STRUCTURES

SUMMARY OF QUANTITIES - B-4725

ItemNumber	Sec #	Quantity	Unit	Description
2367000000-N	840	2	EA	FRAME WITH TWO GRATES, STD 840.29
2396000000-N	840	1	EA	FRAME WITH COVER, STD 840.54
2556000000-E	846	40	LF	SHOULDER BERM GUTTER
3030000000-E	862	175	LF	STEEL BM GUARDRAIL
3150000000-N	862	15	EA	ADDITIONAL GUARDRAIL POSTS
3215000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE III
3270000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
3380000000-E	862	500	LF	TEMPORARY STEEL BM GUARDRAIL
3387000000-N	862	4	EA	TEMPORARY GUARDRAIL ANCHOR UNITS, TYPE ***** (III)
3389100000-N	SP	4	EA	TEMPORARY GUARDRAIL ANCHOR UNITS, TYPE 350
3635000000-E	876	12	TON	RIP RAP, CLASS II
3649000000-E	876	207	TON	RIP RAP, CLASS B
3656000000-E	876	2,191	SY	GEOTEXTILE FOR DRAINAGE
3659000000-N	SP	1	EA	PREFORMED SCOUR HOLES WITH LEVEL SPREADER APRON
4072000000-E	903	101	LF	SUPPORTS, 3-LB STEEL U-CHANNEL
4096000000-N	904	2	EA	SIGN ERECTION, TYPE D
4102000000-N	904	2	EA	SIGN ERECTION, TYPE E
4155000000-N	907	4	EA	DISPOSAL OF SIGN SYSTEM, U-CHANNEL
4400000000-E	1110	403	SF	WORK ZONE SIGNS (STATIONARY)
4405000000-E	1110	192	SF	WORK ZONE SIGNS (PORTABLE)
4410000000-E	1110	57	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4430000000-N	1130	40	EA	DRUMS
4445000000-E	1145	96	LF	BARRICADES (TYPE III)
4450000000-N	1150	480	HR	FLAGGER
4650000000-N	1251	30	EA	TEMPORARY RAISED PAVEMENT MARKERS

ItemNumber	Sec #	Quantity	Unit	Description
4685000000-E	1205	1,800	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)
4686000000-E	1205	1,800	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)
4810000000-E	1205	5,640	LF	PAINT PAVEMENT MARKING LINES (4")
4900000000-N	1251	11	EA	PERMANENT RAISED PAVEMENT MARKERS
6000000000-E	1605	2,025	LF	TEMPORARY SILT FENCE
6006000000-E	1610	385	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	400	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	650	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	4	ACR	TEMPORARY MULCHING
6018000000-E	1620	150	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	1.5	TON	FERTILIZER FOR TEMPORARY SEED-ING
6024000000-E	1622	550	LF	TEMPORARY SLOPE DRAINS
6029000000-E	SP	300	LF	SAFETY FENCE
6030000000-E	1630	880	CY	SILT EXCAVATION
6036000000-E	1631	8,100	SY	MATTING FOR EROSION CONTROL
6037000000-E	SP	500	SY	COIR FIBER MAT
6038000000-E	SP	325	SY	PERMANENT SOIL REINFORCEMENT MAT
6042000000-E	1632	1,150	LF	1/4" HARDWARE CLOTH
6070000000-N	1639	12	EA	SPECIAL STILLING BASINS
6071010000-E	SP	500	LF	WATTLE
6071020000-E	SP	200	LB	POLYACRYLAMIDE (PAM)
6071030000-E	1640	275	LF	COIR FIBER BAFFLE
6071050000-E	SP	3	EA	*** SKIMMER (1-1/2")
6084000000-E	1660	4	ACR	SEEDING & MULCHING
6087000000-E	1660	2	ACR	MOWING

ItemNumber	Sec #	Quantity	Unit	Description
6090000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
6096000000-E	1662	100	LB	SEED FOR SUPPLEMENTAL SEEDING
6108000000-E	1665	3	TON	FERTILIZER TOPDRESSING
6114500000-N	1667	10	MHR	SPECIALIZED HAND MOWING
6117000000-N	SP	18	EA	RESPONSE FOR EROSION CONTROL

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

**SUMMARY OF EARTHWORK
 IN CUBIC YARDS**

LOCATION	UNCL. EXCAV.	EMBANK (+)%	BORROW	WASTE
PHASE NO. I (DETOUR)				
-LDET- STA. 10+00.00 TO STA. 14+10.00	51	4827	4776	
-LDET- STA. 15+40.00 TO STA. 19+31.00	6	3712	3706	
-DRV- STA. 10+15.25 TO STA. 10+83.43		80	80	
-DRV- STA. 12+48.78 TO STA. 12+86.83	21			21
PHASE NO. I TOTALS	78	8619	8562	21
PHASE NO. II (-L-/DRV2-)				
-L- STA. 16+50.00 TO STA. 18+58.75	2	831	829	
-L- STA. 20+71.25 TO STA. 22+75.00	47	534	487	
-DRV2- STA. 10+05.00 TO STA. 10+68.49	11	29	18	
PHASE NO. II TOTALS	60	1394	1334	
PHASE NO. III (DETOUR REMOVAL-DRV1-)				
-LDET- STA. 10+00.00 TO STA. 14+10.00	2331	172		2159
-LDET- STA. 15+40.00 TO STA. 19+31.00	2738	605		2133
-DRV1- STA. 10+11.00 TO STA. 10+74.17		1004	1004	
PHASE NO. III TOTALS	5069	1781	1004	4292
SUMMARY TOTALS	5207	11794	10900	4313
WASTE IN LIEU OF BORROW			-21	-21
PROJECT TOTALS	5207	11794	10879	4292
5% TO REPLACE TOPSOIL ON BORROW PIT			544	
PROJECT GRAND TOTALS	5207	11794	11423	4292
SAY	5300		11500	
EST. UNDERCUT CONTINGENCY = 300 CY				
GEOTEXTILE FOR SOIL STABILIZATION = 300 SY				
SELECT GRANULAR MATERIAL = 300 CY				

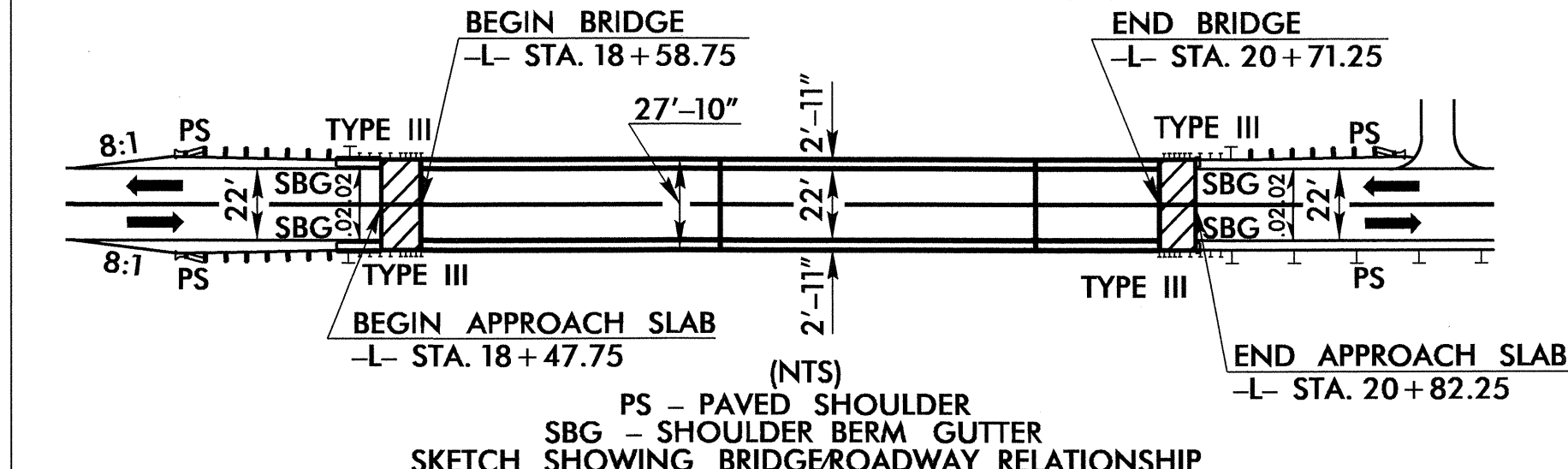
Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

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

6/21/08

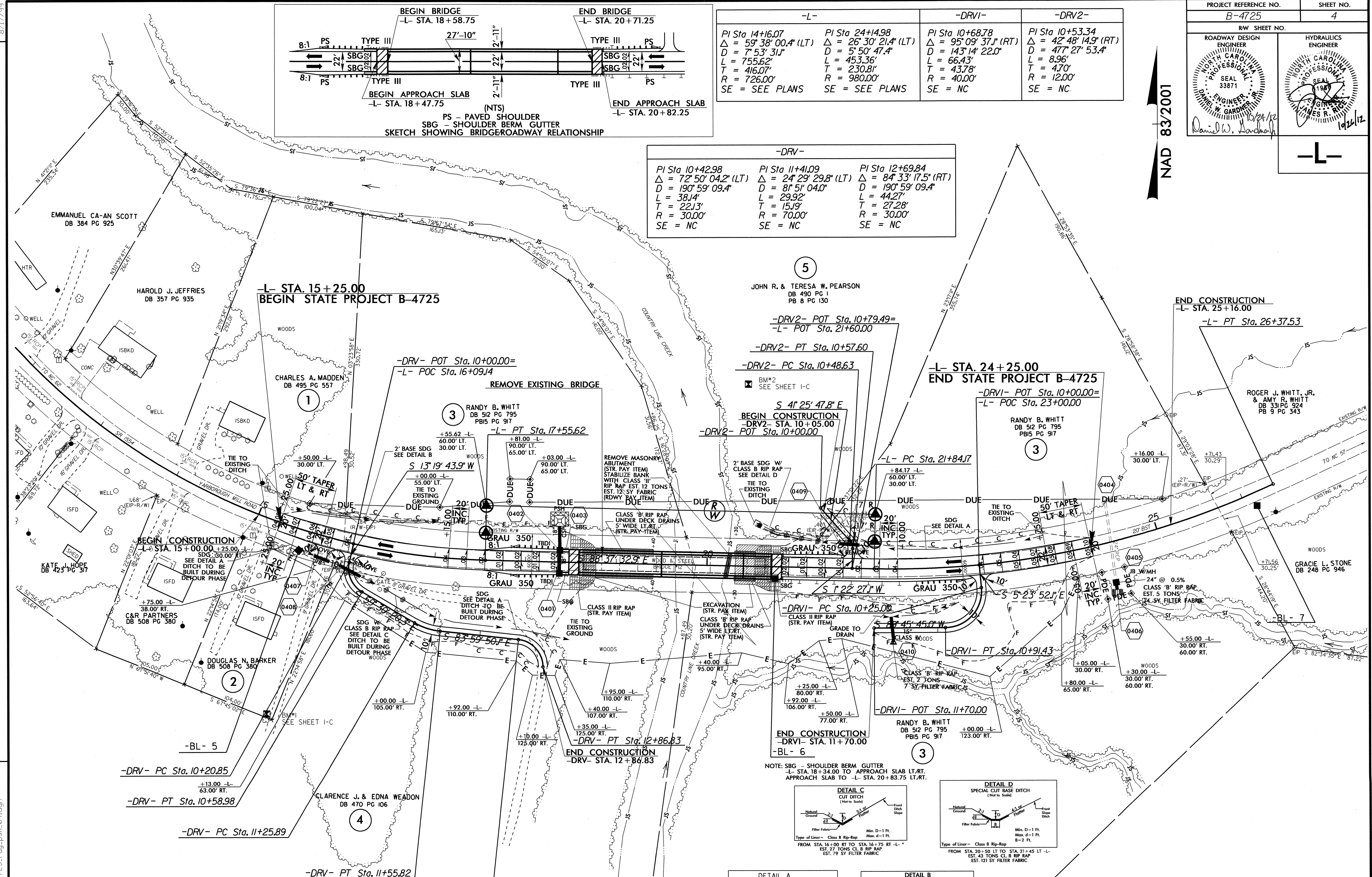
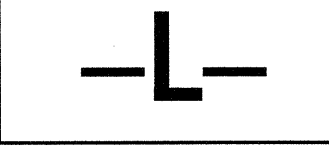
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-L-	-DRV1-	-DRV2-
PI Sta 14+16.07 Δ = 59° 38' 00.4" (LT) D = 7' 53' 31" L = 755.62' T = 416.07' R = 726.00' SE = SEE PLANS	PI Sta 24+14.98 Δ = 26° 30' 21.4" (LT) D = 5' 50' 47.4" L = 453.36' T = 230.81' R = 980.00' SE = SEE PLANS	PI Sta 10+68.78 Δ = 95° 09' 37.1" (RT) D = 14' 14' 22.0" L = 66.43' T = 43.78' R = 40.00' SE = NC
PI Sta 10+53.34 Δ = 42° 48' 14.9" (RT) D = 47' 27' 53.4" L = 8.96' T = 4.70' R = 12.00' SE = NC		



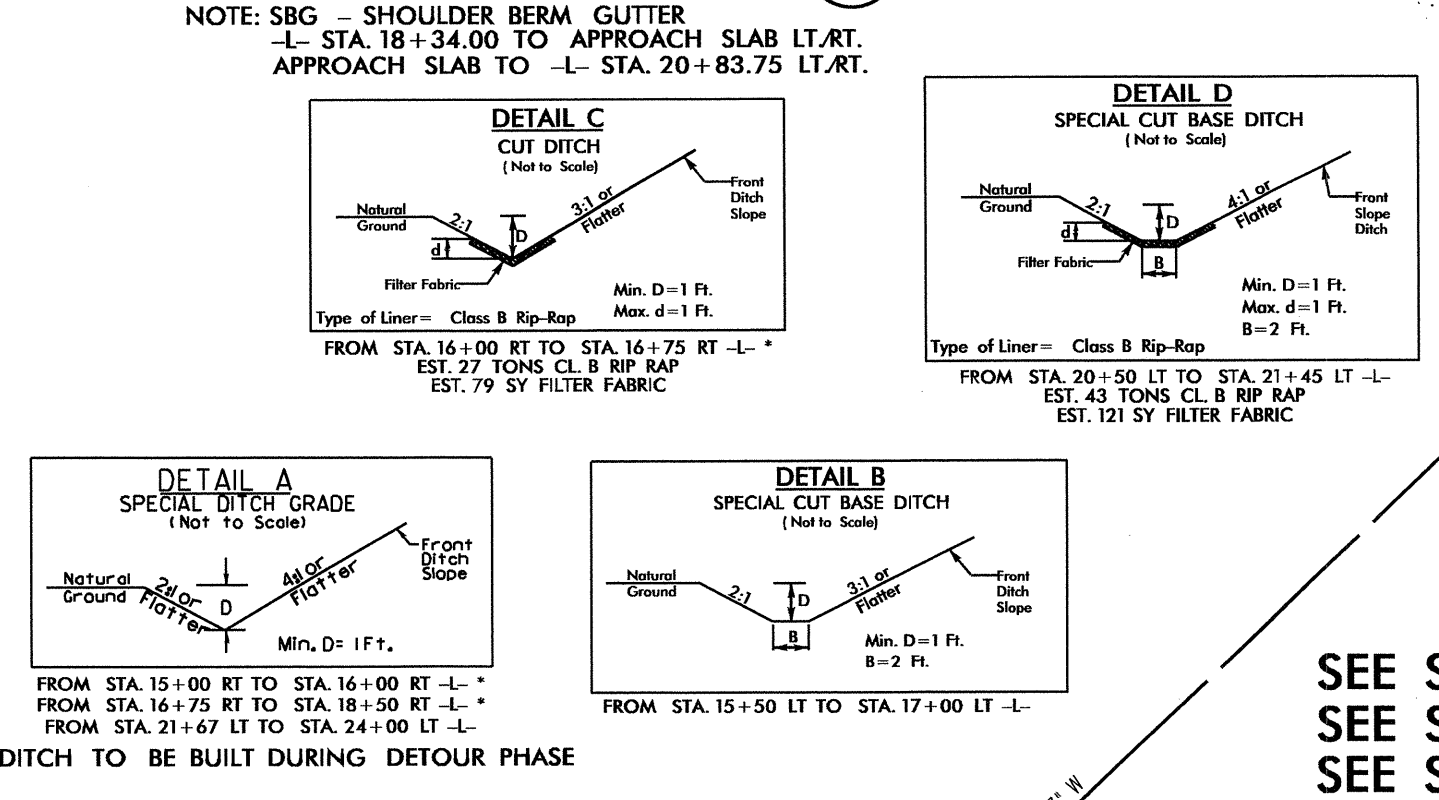
-DRV-	-DRV1-	-DRV2-
PI Sta 10+42.98 Δ = 72° 50' 04.2" (LT) D = 190° 59' 09.4" L = 38.14' T = 22.13' R = 30.00' SE = NC	PI Sta 11+41.09 Δ = 24° 29' 29.8" (LT) D = 81° 51' 04.0" L = 29.92' T = 15.19' R = 70.00' SE = NC	PI Sta 12+69.84 Δ = 84° 33' 17.5" (RT) D = 190° 59' 09.4" L = 44.27' T = 27.28' R = 30.00' SE = NC

NAD 83/2001



NOTE 1: SDG DENOTES "SPECIAL DITCH GRADE" - SEE DITCH DETAILS AND PROFILE FOR DITCH GRADES.

NOTE 2: PAVE ALL DRIVES TO BACK OF TURNOUT RADIUS.



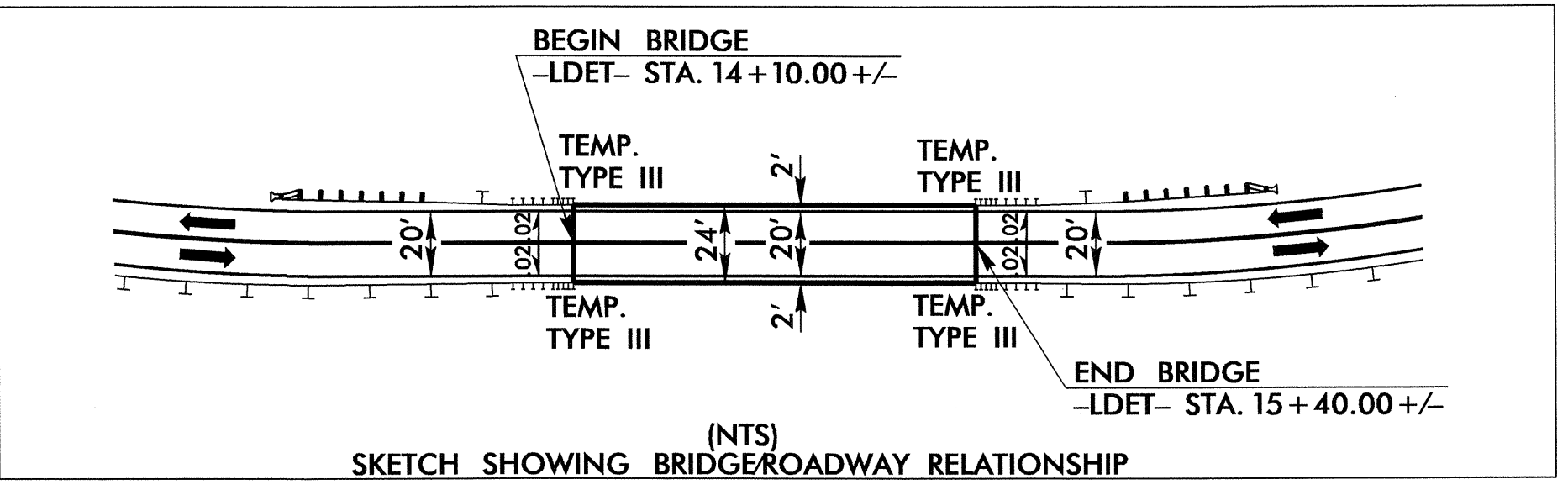
SEE SHEET 6 FOR -L- PROFILE
 SEE SHEET 7 FOR -DRV-, -DRV1-, AND -DRV2- PROFILES
 SEE SHEETS S-1 THRU S-24 FOR STRUCTURE PLANS

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REVISIONS

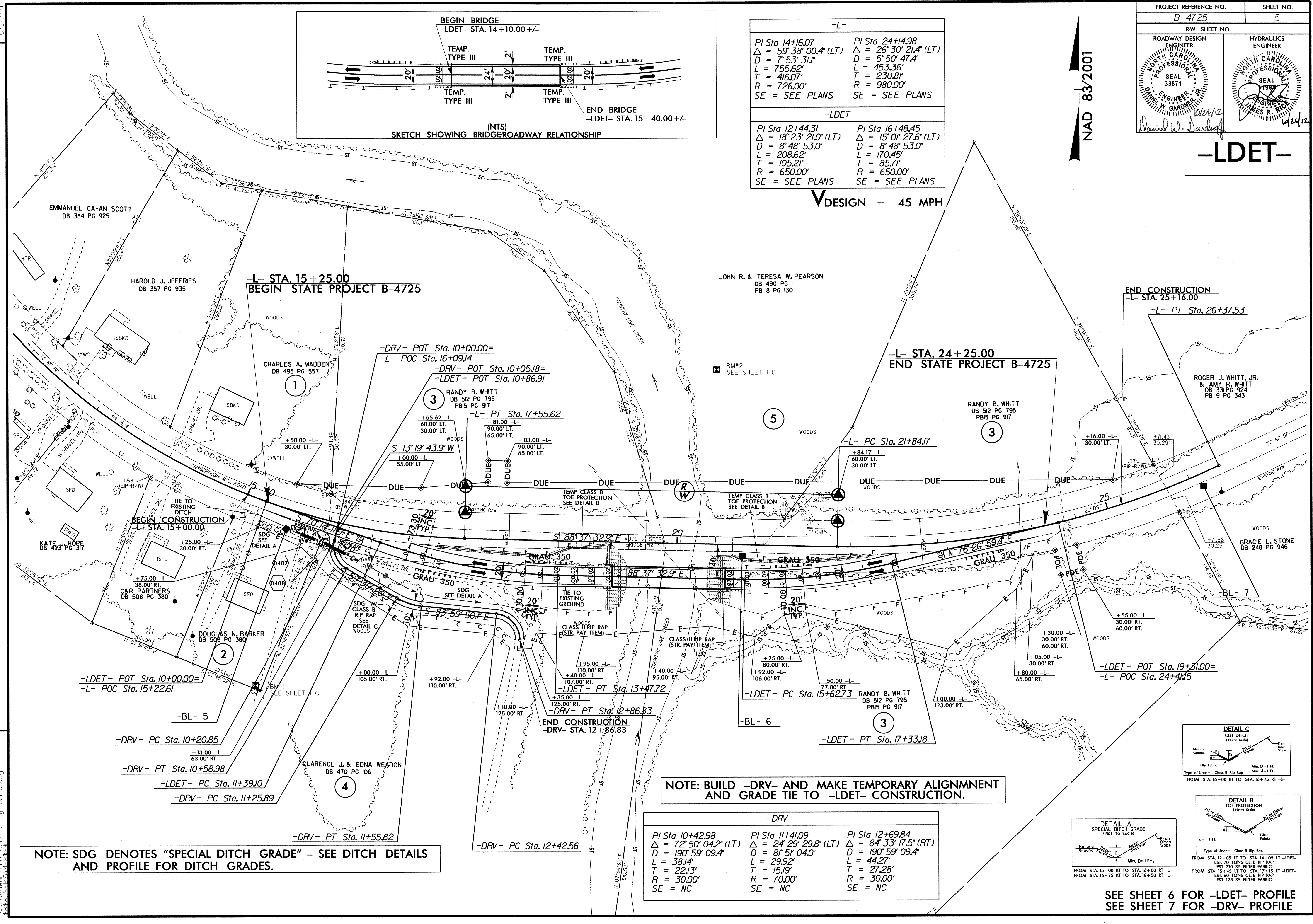
NAD 83/2001

-LDET-



-L-	
PI Sta 14+16.07 Δ = 59° 38' 00.4" (LT) D = 7° 53' 31.1" L = 755.62' T = 416.07' R = 726.00' SE = SEE PLANS	PI Sta 24+14.98 Δ = 26° 30' 21.4" (LT) D = 5° 50' 47.4" L = 453.36' T = 230.81' R = 980.00' SE = SEE PLANS
-LDET-	
PI Sta 12+44.31 Δ = 18° 23' 21.0" (LT) D = 8° 48' 53.0" L = 208.62' T = 105.21' R = 650.00' SE = SEE PLANS	PI Sta 16+48.45 Δ = 15° 01' 27.6" (LT) D = 8° 48' 53.0" L = 170.45' T = 85.71' R = 650.00' SE = SEE PLANS

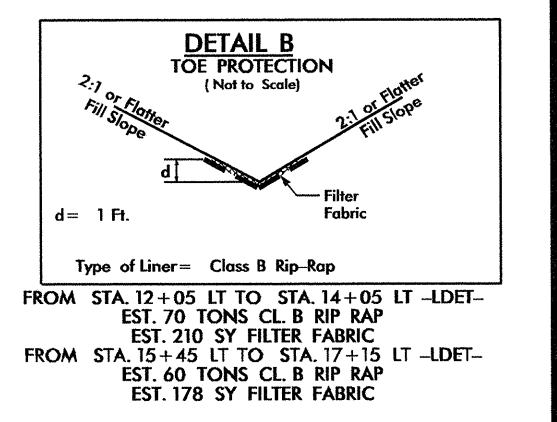
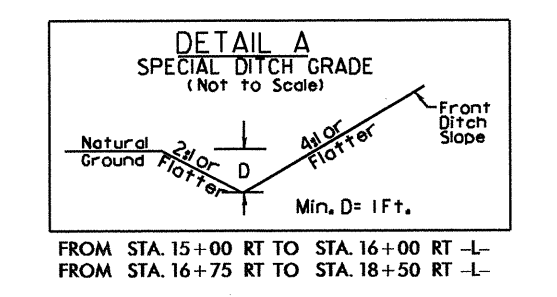
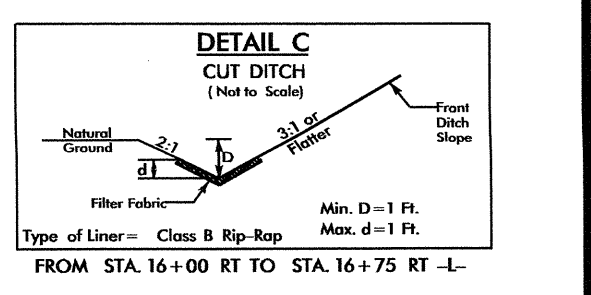
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NOTE: SDG DENOTES "SPECIAL DITCH GRADE" - SEE DITCH DETAILS AND PROFILE FOR DITCH GRADES.

NOTE: BUILD -DRV- AND MAKE TEMPORARY ALIGNMENT AND GRADE TIE TO -LDET- CONSTRUCTION.

-DRV-		
PI Sta 10+42.98 Δ = 72° 50' 04.2" (LT) D = 190° 59' 09.4" L = 38.14' T = 22.13' R = 30.00' SE = NC	PI Sta 11+41.09 Δ = 24° 29' 29.8" (LT) D = 81° 51' 04.0" L = 29.92' T = 15.19' R = 70.00' SE = NC	PI Sta 12+69.84 Δ = 84° 33' 17.5" (RT) D = 190° 59' 09.4" L = 44.27' T = 27.28' R = 30.00' SE = NC



**SEE SHEET 6 FOR -LDET- PROFILE
SEE SHEET 7 FOR -DRV- PROFILE**

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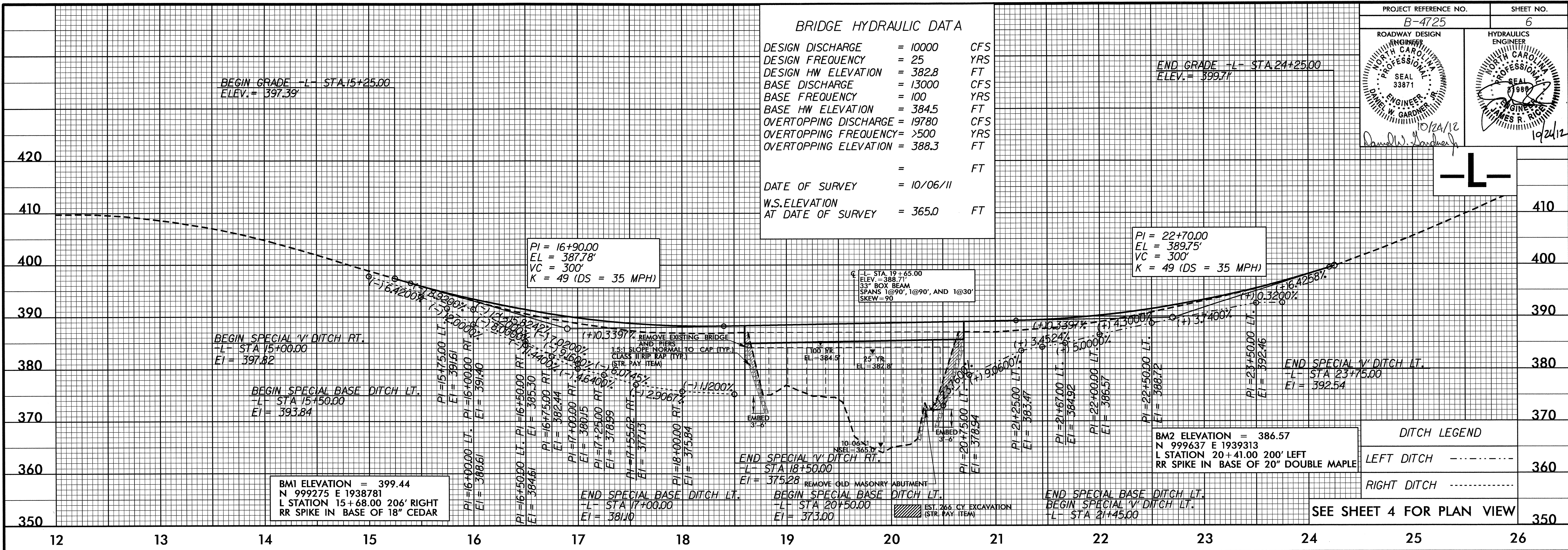
PROJECT REFERENCE NO. B-4725	SHEET NO. 6
ROADWAY DESIGN ENGINEER JAMES R. GARDNER SEAL 33871	HYDRAULICS ENGINEER JAMES R. GARDNER SEAL 33871

1924/12

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE = 10000 CFS
 DESIGN FREQUENCY = 25 YRS
 DESIGN HW ELEVATION = 382.8 FT
 BASE DISCHARGE = 13000 CFS
 BASE FREQUENCY = 100 YRS
 BASE HW ELEVATION = 384.5 FT
 OVERTOPPING DISCHARGE = 19780 CFS
 OVERTOPPING FREQUENCY = >500 YRS
 OVERTOPPING ELEVATION = 388.3 FT

DATE OF SURVEY = 10/06/11
 W.S.ELEVATION AT DATE OF SURVEY = 365.0 FT

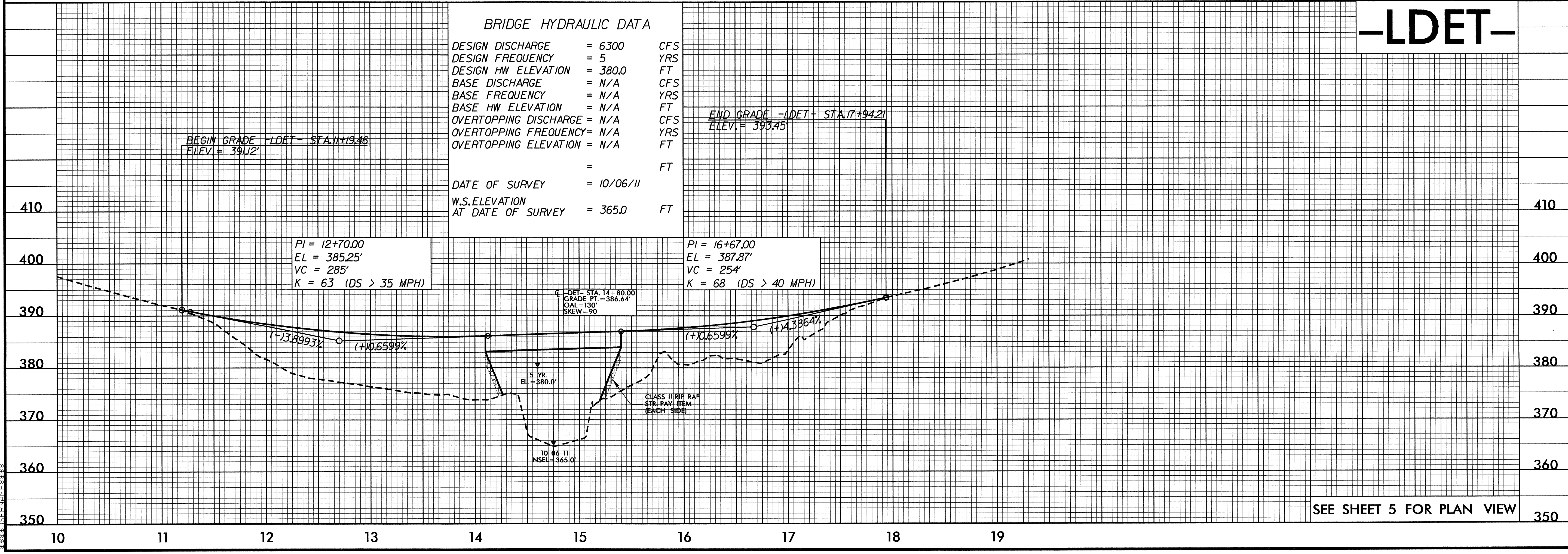


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BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE = 6300 CFS
 DESIGN FREQUENCY = 5 YRS
 DESIGN HW ELEVATION = 380.0 FT
 BASE DISCHARGE = N/A CFS
 BASE FREQUENCY = N/A YRS
 BASE HW ELEVATION = N/A FT
 OVERTOPPING DISCHARGE = N/A CFS
 OVERTOPPING FREQUENCY = N/A YRS
 OVERTOPPING ELEVATION = N/A FT

DATE OF SURVEY = 10/06/11
 W.S.ELEVATION AT DATE OF SURVEY = 365.0 FT



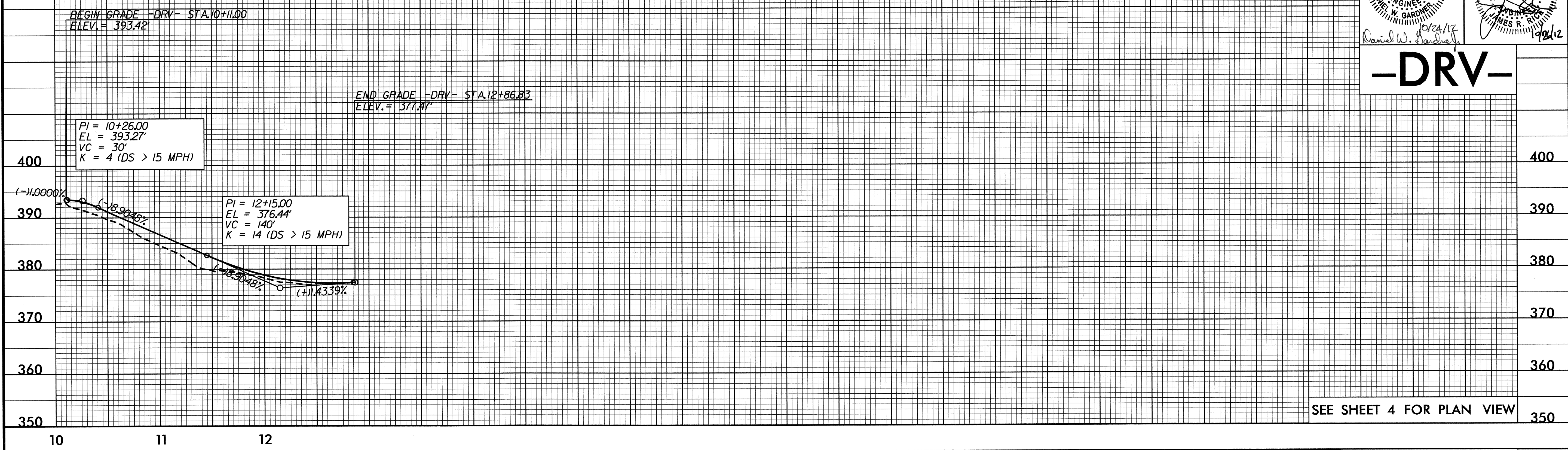
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5/28/09

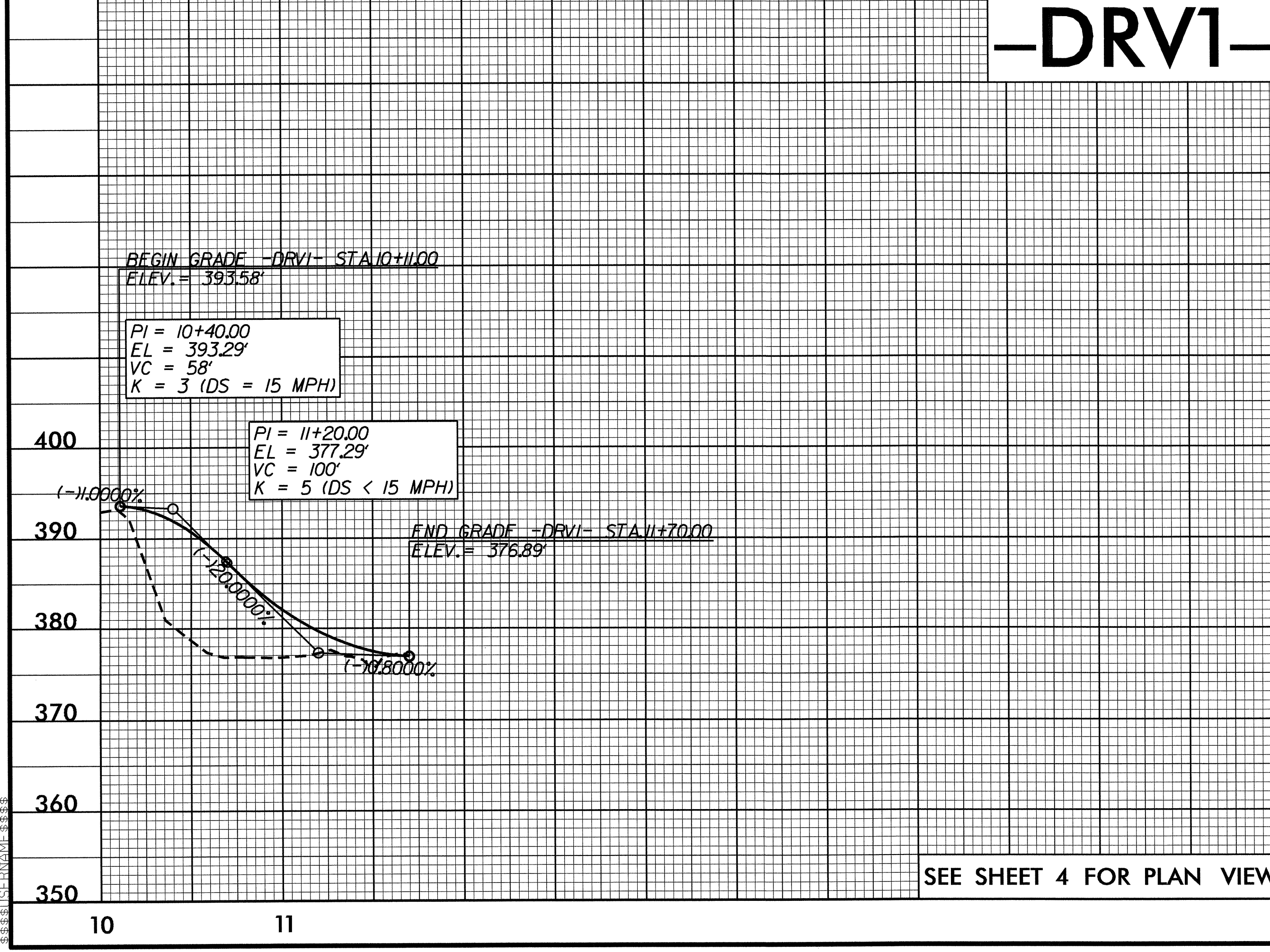
PROJECT REFERENCE NO. B-4725	SHEET NO. 7
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 33871 DANIEL W. GARDNER	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 1946 JAMES R. PETERSON

10/24/12
Daniel W. Gardner

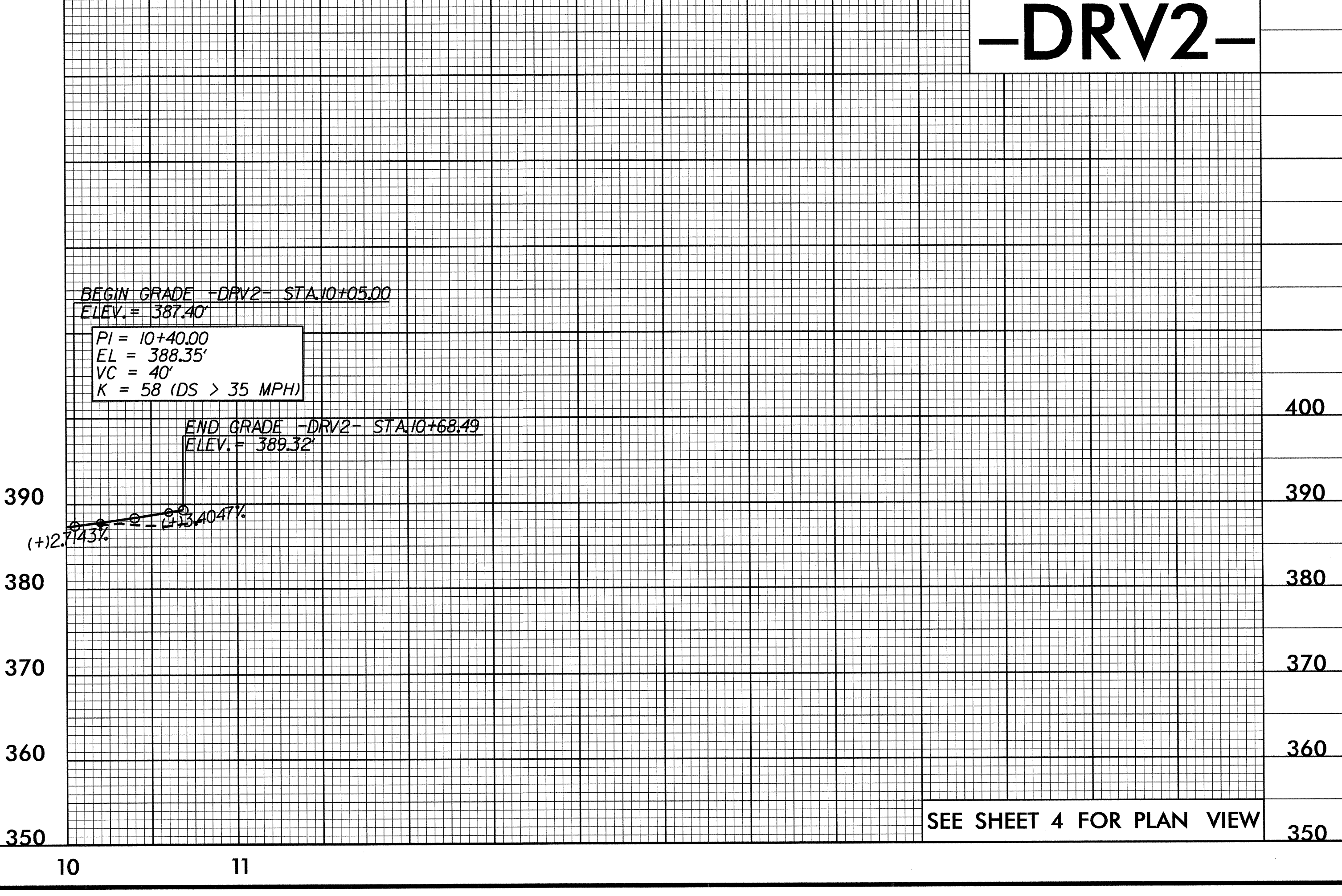
-DRV-



-DRV1-



-DRV2-



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