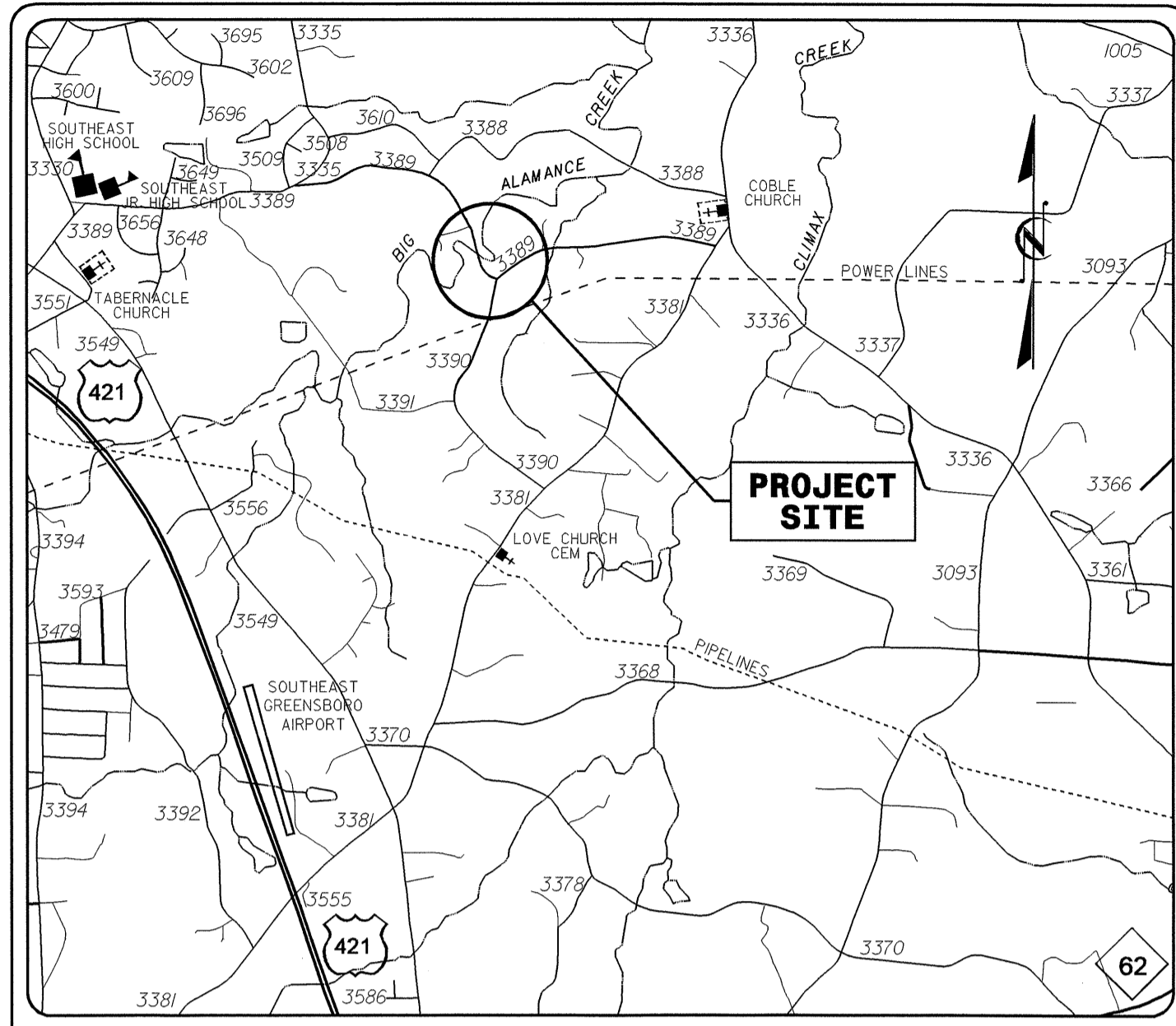
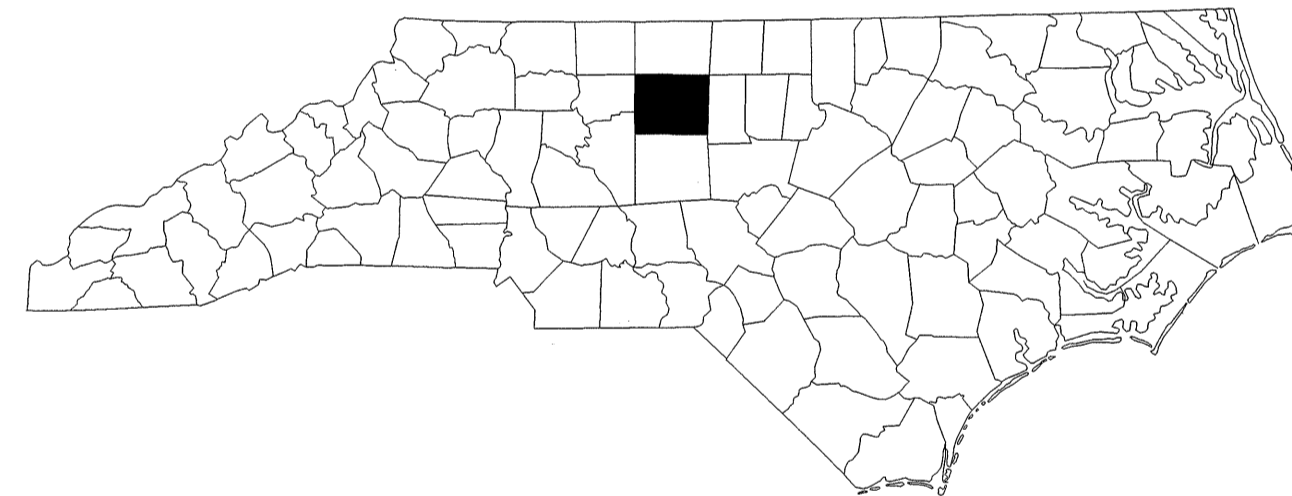


09/08/09

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



VICINITY MAP



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

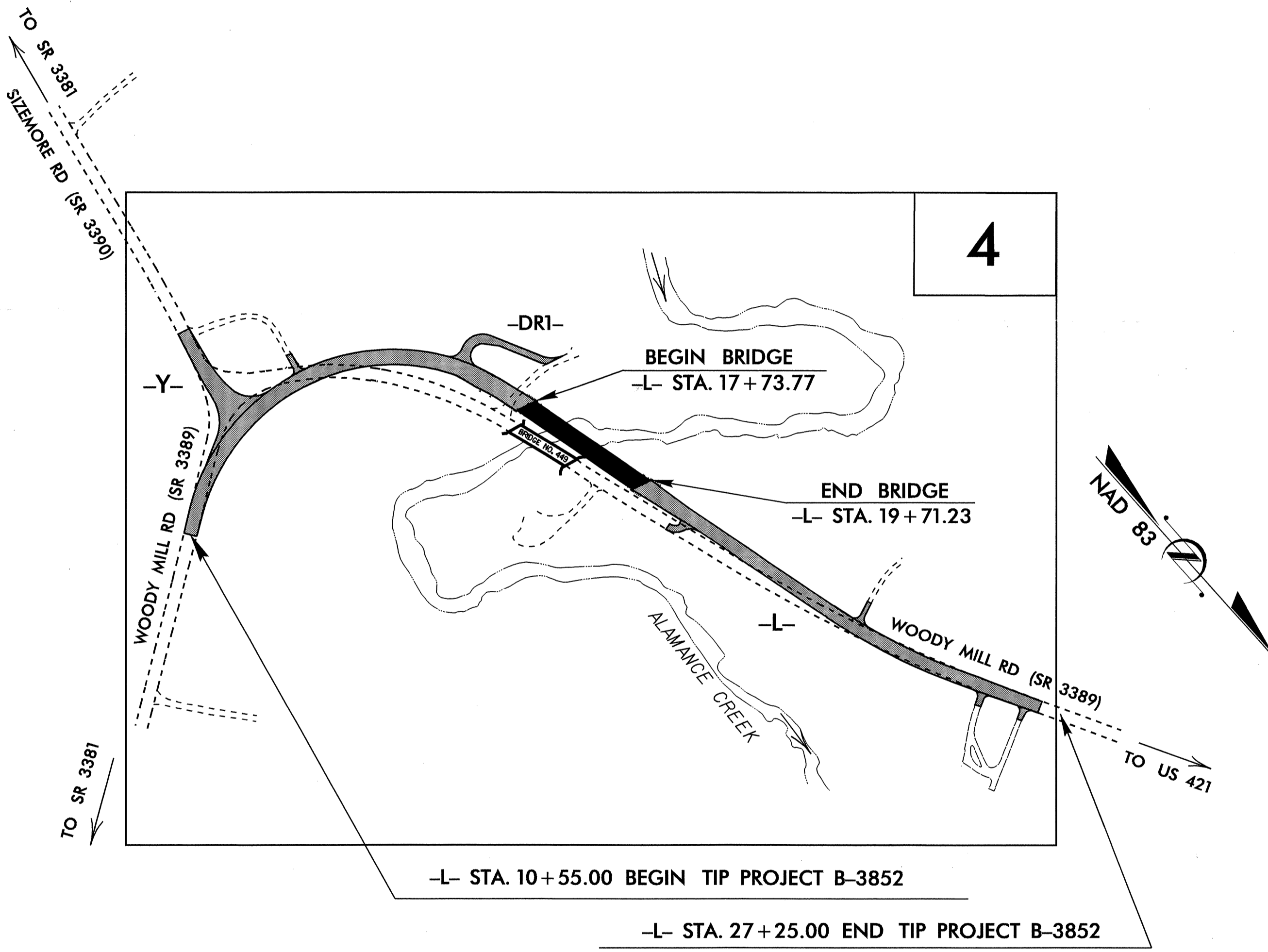
GUILFORD COUNTY

**LOCATION: BRIDGE NO. 449 OVER ALAMANCE CREEK AND
APPROACHES ON SR 3389 (WOODY MILL ROAD)
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE**

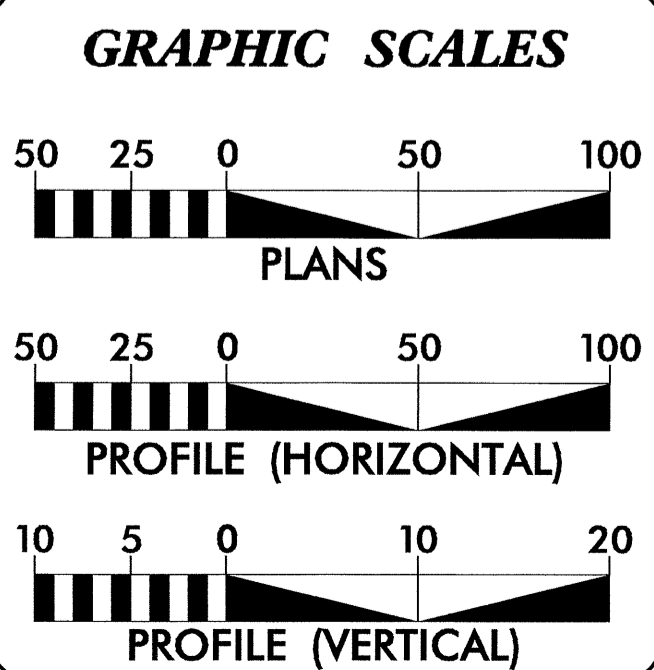
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3852	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33299.1.1	BRZ-3389(1)	P.E.	
33299.2.2	BRZ-3389(1)	RW & UTIL.	
33299.3.1	BRZ-3389(1)	CONST.	

B-3852

CONTRACT: C201398



****DESIGN SPEED DESIGN EXCEPTION REQUIRED.
ALL DESIGN ELEMENTS MEET OR EXCEED A 30 MPH
DESIGN SPEED.**



DESIGN DATA

ADT 2007 =	1200
ADT 2030 =	1800
DHV =	11 %
D =	63 %
* T =	3 %
** V =	50 MPH
* (TTST 1% + DUAL 2%)	
FUNC. CLASS =	RURAL LOCAL

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-3852 =	0.279 MI
LENGTH STRUCTURE TIP PROJECT B-3852 =	0.037 MI
TOTAL LENGTH TIP PROJECT B-3852 =	0.316 MI

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: FEBRUARY 28, 2005

LETTING DATE: DECEMBER 18, 2007

GLENN W. MUMFORD, PE
PROJECT ENGINEER

SUSAN C. LANCASTER, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

ROADWAY DESIGN ENGINEER

Professional seals and signatures for Glenn W. Mumford, PE and Susan C. Lancaster, PE, dated 9/26/07.

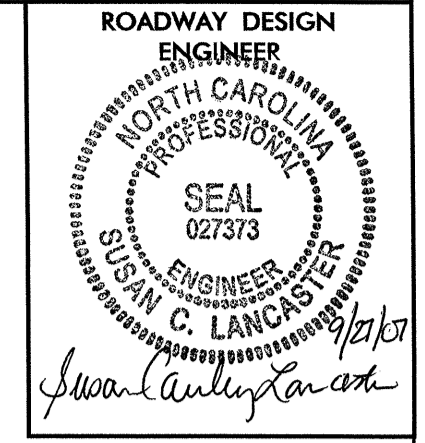
**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

Seal of the State of North Carolina Department of Transportation.

ant m. millan
STATE HIGHWAY DESIGN ENGINEER

13-SEP-2007 16:21
C:\p09\work\p09\c201398\2-rdy-tsh.dgn

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS



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

EFFECTIVE: 07-18-06
REVISED: 07-18-06

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET - B-3852
1-A	INDEX OF SHEETS, GENERAL NOTES & LIST OF STANDARDS (2006 SPECIFICATIONS)
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
2	PAYEMENT SCHEDULE AND TYPICAL SECTIONS
2-A	DETAIL OF ANCHORAGE FOR FRAMES
3	SUMMARY OF QUANTITIES
3-A	SUMMARY OF DRAINAGE QUANTITIES, GUARDRAIL SUMMARY, EARTHWORK SUMMARY, AND REMOVAL OF EXISTING ASPHALT PAVEMENT
4	PLAN SHEET
5	PROFILE SHEET
TCP-1 THROUGH TCP-7	TRAFFIC CONTROL PLANS
PM-1	PAVEMENT MARKING PLANS
EC-1 THROUGH EC-5	EROSION CONTROL PLANS
RF-1	REFORESTATION DETAIL SHEET
SIGN-1 THROUGH SIGN-3	SIGNING PLANS
U0-1 THROUGH U0-2	UTILITIES BY OTHERS PLANS
X-A	CROSS-SECTION SUMMARY SHEET
X-1 THROUGH X-10	CROSS-SECTIONS
S-1 THROUGH S-27	STRUCTURE PLANS

2006 ROADWAY STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated July 18, 2006 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
DIVISION 2	- EARTHWORK
200.03	Method of Clearing - Method III
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3	- PIPE CULVERTS
300.01	Method of Pipe Installation - Method 'A'
310.10	Driveway Pipe Construction
DIVISION 4	- MAJOR STRUCTURES
422.10	Reinforced Bridge Approach Fills
DIVISION 5	- SUBGRADE, BASES AND SHOULDERS
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6	- ASPHALT BASES AND PAVEMENTS
654.01	Pavement Repairs
DIVISION 8	- INCIDENTALS
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
815.03	Pipe Underdrain and Blind Drain
840.00	Concrete Base Pad for Drainage Structures
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.24	Frames and Narrow Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete (Beg. January 2007 Let Use Detail in Lieu of Standard)
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
840.34	Traffic Bearing Junction Box - for Use with Pipes 42" and Under
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
862.04	Anchoring End of Guardrail - B-77 and B-83 Anchor Units
876.02	Guide for Rip Rap at Pipe Outlets

GENERAL NOTES: 2006 SPECIFICATIONS

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 III.

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

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

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

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

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

TEMPORARY SHORING:
SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC 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 DUKE POWER, BELLSOUTH, TIMEWARNER
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.

5/28/99

28-SEP-2007 12:20
F:\p00d\work\p001\B3852_r.dwg - tsh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

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	○ EP
Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	⑫③
Existing Fence Line	-----
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	○
Swamp Marsh	-----
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	----- E
Proposed Temporary Construction Easement	----- E
Proposed Temporary Drainage Easement	----- TDE
Proposed Permanent Drainage Easement	----- PDE
Proposed Permanent Utility Easement	----- PUE

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	----- 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	----- S

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	----- P
Designated U/G Power Line (S.U.E.*)	----- P

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	----- 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	○
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	□
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:

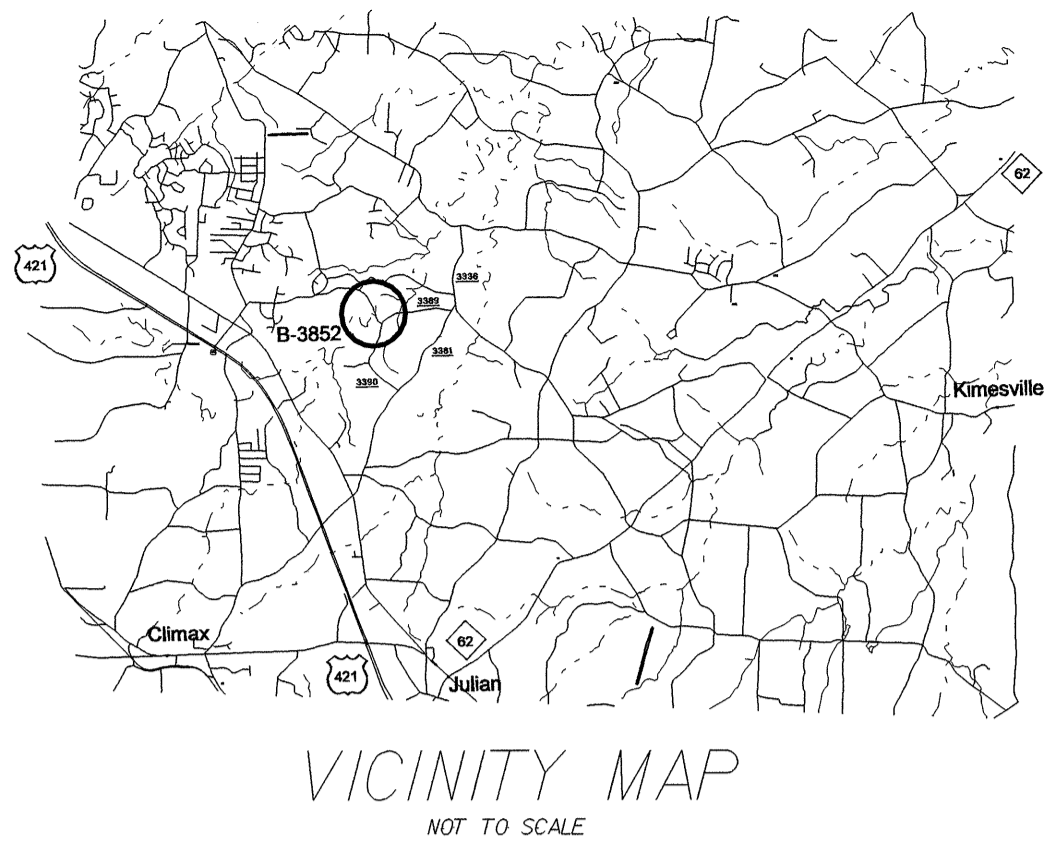
Sanitary Sewer Manhole	○
Sanitary Sewer Cleanout	○
U/G Sanitary Sewer Line	----- SS
Above Ground Sanitary Sewer	----- A/G Sanitary Sewer
Recorded SS Forced Main Line	----- FSS
Designated SS Forced Main Line (S.U.E.*)	----- FSS

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	□
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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3852	1C	
LOCATION AND SURVEYS			



BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
101	BL-101	807873.4760	1801794.4180	663.26	10+05.95	13.74 RT
2	B3852-2	807682.4200	1801533.6670	653.09	12+98.99	73.75 LT
102	BL-102	808034.5120	1801240.2250	628.02	17+49.65	19.02 RT
107	BL-107	808180.9410	1801208.6020	628.02	18+99.35	24.61 RT
103	BL-103	808476.9710	1801145.0470	642.29	22+01.90	36.27 RT
104	BL-104	808918.3630	1800957.7000	676.12	26+77.43	14.39 RT

BY POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
105	BY-105	807505.9140	1801551.7090	664.47	12+85.68	250.09 LT
2	B3852-2	807682.4200	1801533.6670	653.09	12+98.99	73.75 LT

.....
 BM*1 ELEVATION = 674.74
 N 807427 E 1801567
 L STATION 12+79 329 LEFT
 RR SPIKE IN BASE OF POWER POLE

 BM*2 ELEVATION = 631.60
 N 808082 E 1801130
 L STATION 18+23 76 LEFT
 RR SPIKE IN BASE OF 18' POPLAR TREE

NCDOT BASELINE STATION "BY-105"
LOCALIZED COORDINATES
 N = 807505.9140
 E = 1801551.7090

NCDOT BASELINE STATION "B3852-2"
LOCALIZED COORDINATES
 N = 807682.4200
 E = 1801533.6670

NCDOT BASELINE STATION "BL-102"
LOCALIZED COORDINATES
 N = 808034.5120
 E = 1801240.2250

NCDOT BASELINE STATION "BL-107"
LOCALIZED COORDINATES
 N = 808180.9410
 E = 1801208.6020

-L- STA 10+55.00
BEGIN STATE PROJECT 33299.1.1
LOCALIZED PROJECT COORDINATES
 N = 807834.3780
 E = 1801761.7760

NCDOT BASELINE STATION "BL-101"
LOCALIZED COORDINATES
 N = 807873.4760
 E = 1801794.4180

NCDOT BASELINE STATION "BL-103"
LOCALIZED COORDINATES
 N = 808476.9710
 E = 1801145.0470

-L- STA 27+25.00
END STATE PROJECT 33299.1.1
LOCALIZED PROJECT COORDINATES
 N = 808953.6030
 E = 1800922.6490

NCDOT BASELINE STATION "BL-104"
LOCALIZED COORDINATES
 N = 808918.3630
 E = 1800957.7000

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B3852-2" WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 807682.4200(ft) EASTING: 1801533.6670(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999924040 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B3852-2" TO -L- STATION 10+00.00 N 56°11'36.0" E 329.085'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NAVD 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 EXISTING NCGS NAD83 MONUMENTATION.

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/)

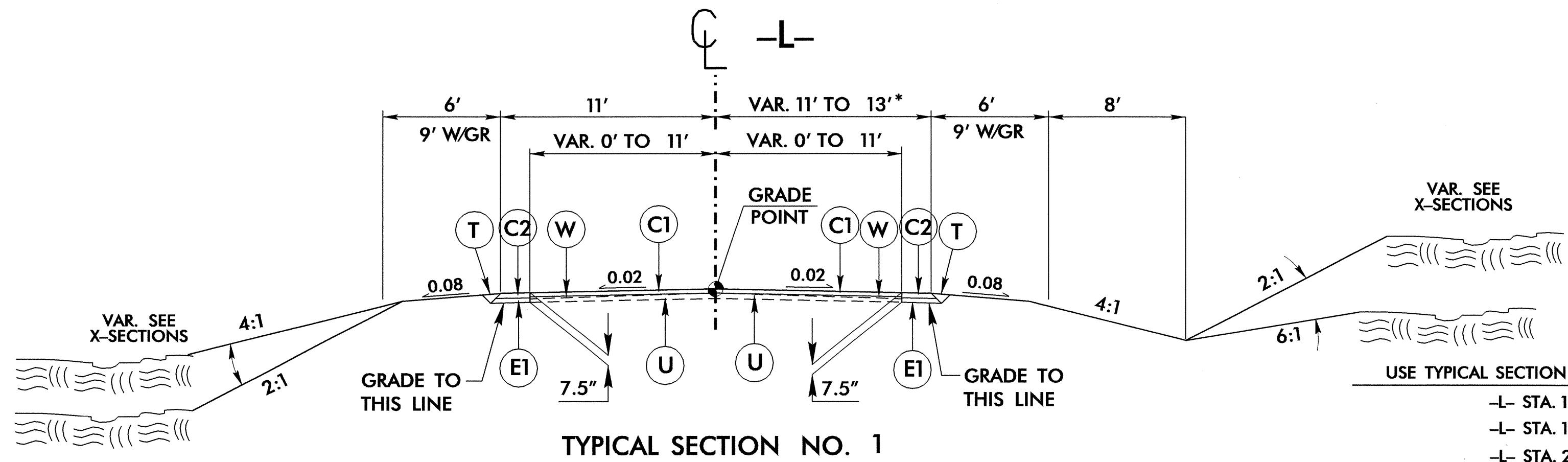
FILE: B3852_LS_CONTROL_04103.TXT

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

NOTE: DRAWING NOT TO SCALE

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 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 LESS THAN 1" IN DEPTH OR GREATER THAN 1.5" IN DEPTH.
E1	PROP. APPROX. 4.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 513 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.
J	PROP. 6" AGGREGATE BASE COURSE.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING).

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



TYPICAL SECTION NO. 1

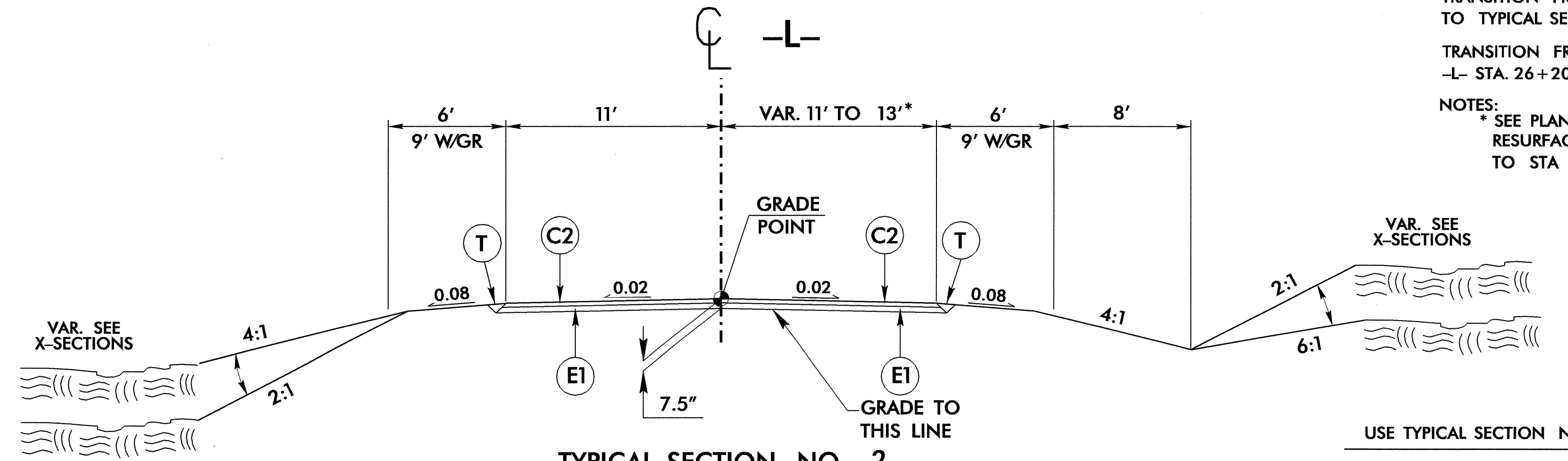
USE TYPICAL SECTION NO. 1 AT THE FOLLOWING LOCATIONS:

- L- STA. 11+05.00 TO STA. 11+74.79
- L- STA. 13+66.41 TO STA. 14+31.75
- L- STA. 23+25.24 TO STA. 26+20.00

TRANSITION FROM EXISTING @ -L- STA. 10+55.00 TO TYPICAL SECTION NO. 1 @ STA. 11+05.00

TRANSITION FROM TYPICAL SECTION NO. 1 @ -L- STA. 26+20.00 TO EXISTING @ STA. 26+70.00

NOTES:
* SEE PLANS FOR CURVE WIDENING.
RESURFACE EXISTING FROM STA 26+70.00 TO STA 27+25.00

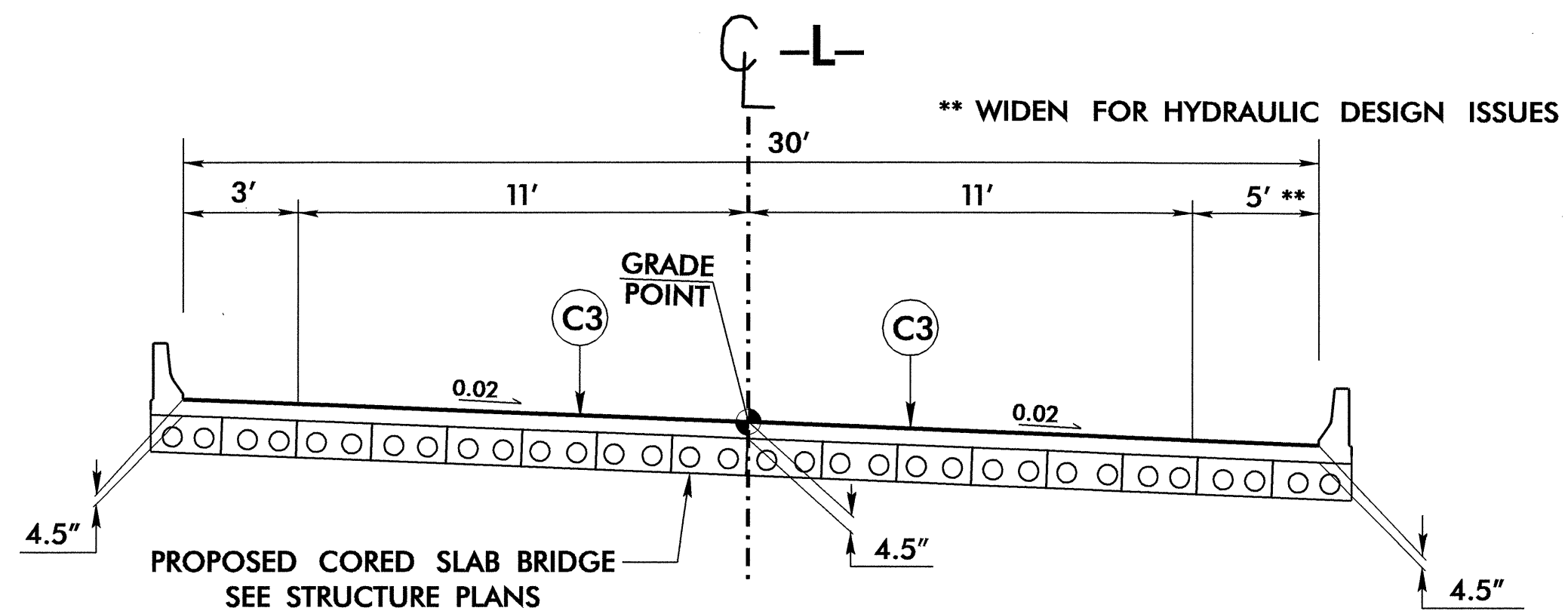


TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2 AT THE FOLLOWING LOCATIONS:

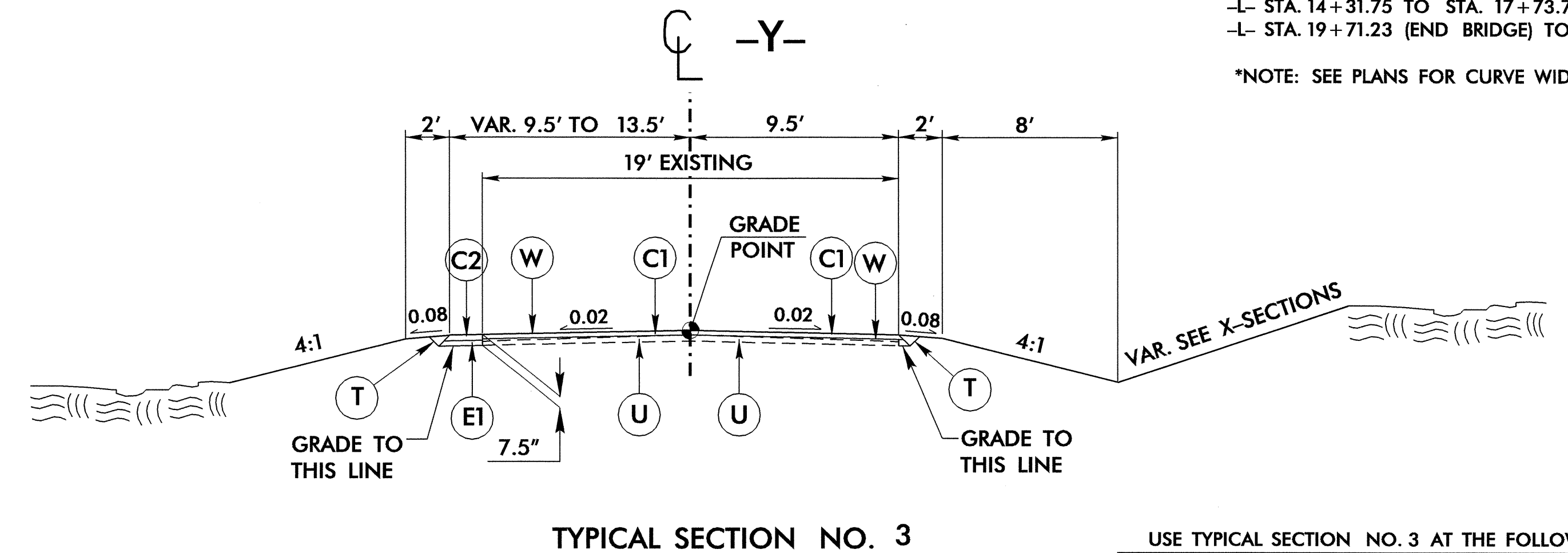
- L- STA. 11+74.79 TO STA. 13+66.41
- L- STA. 14+31.75 TO STA. 17+73.77 (BEGIN BRIDGE)
- L- STA. 19+71.23 (END BRIDGE) TO STA. 23+25.24

*NOTE: SEE PLANS FOR CURVE WIDENING



TYPICAL SECTION NO. 5

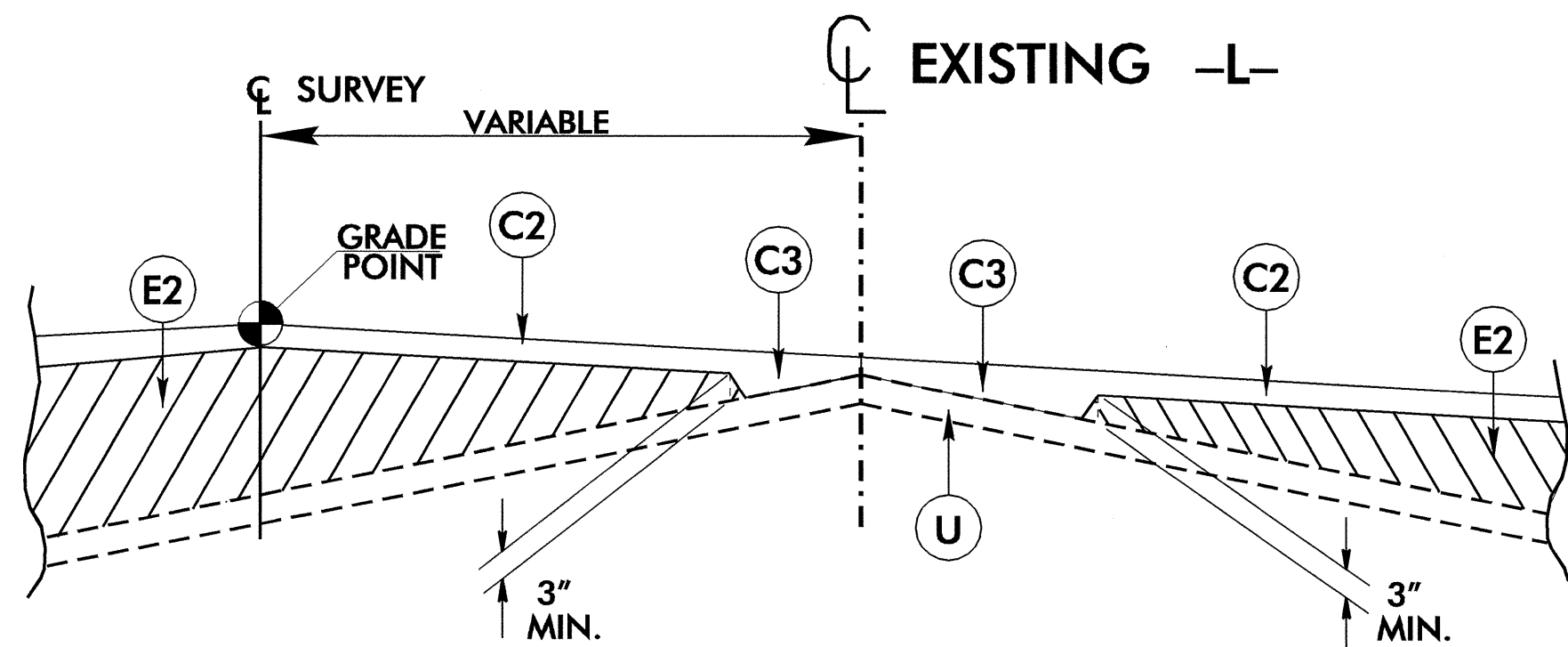
USE TYPICAL SECTION NO. 5 AT THE FOLLOWING LOCATION:
-L- STA. 17+73.77 (BEGIN BRIDGE) TO STA. 19+71.23 (END BRIDGE)



TYPICAL SECTION NO. 3

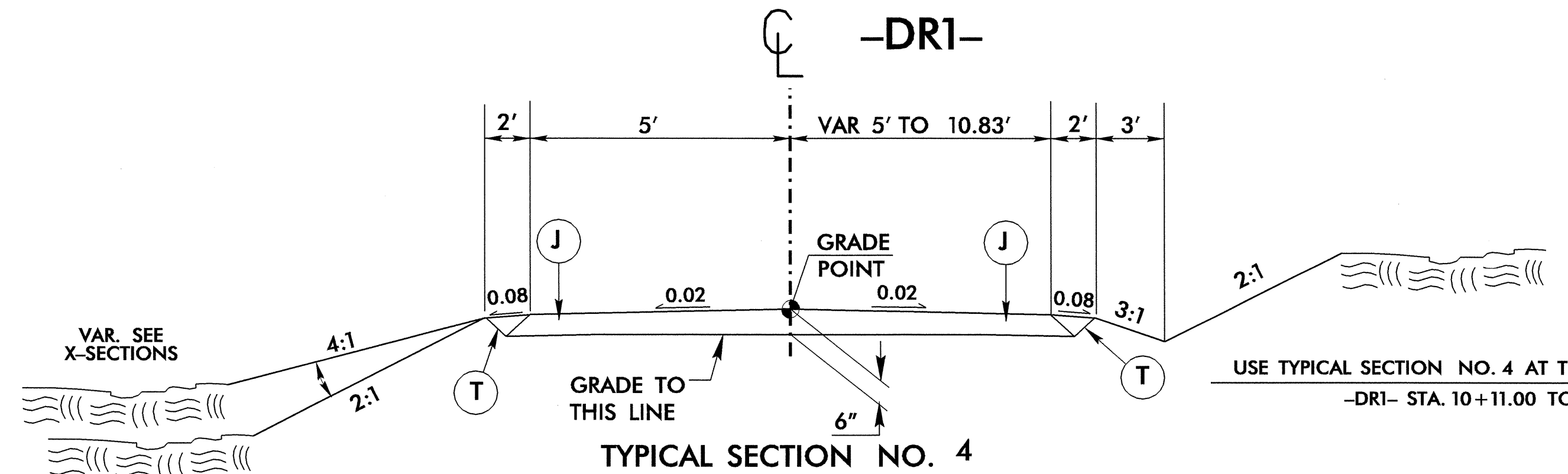
USE TYPICAL SECTION NO. 3 AT THE FOLLOWING LOCATION:

- Y- STA. 10+23.80 TO STA. 11+91.12



DETAIL SHOWING METHOD OF WEDGING

USE IN CONJUNCTION WITH TYPICAL SECTIONS NO. 1 & 3



TYPICAL SECTION NO. 4

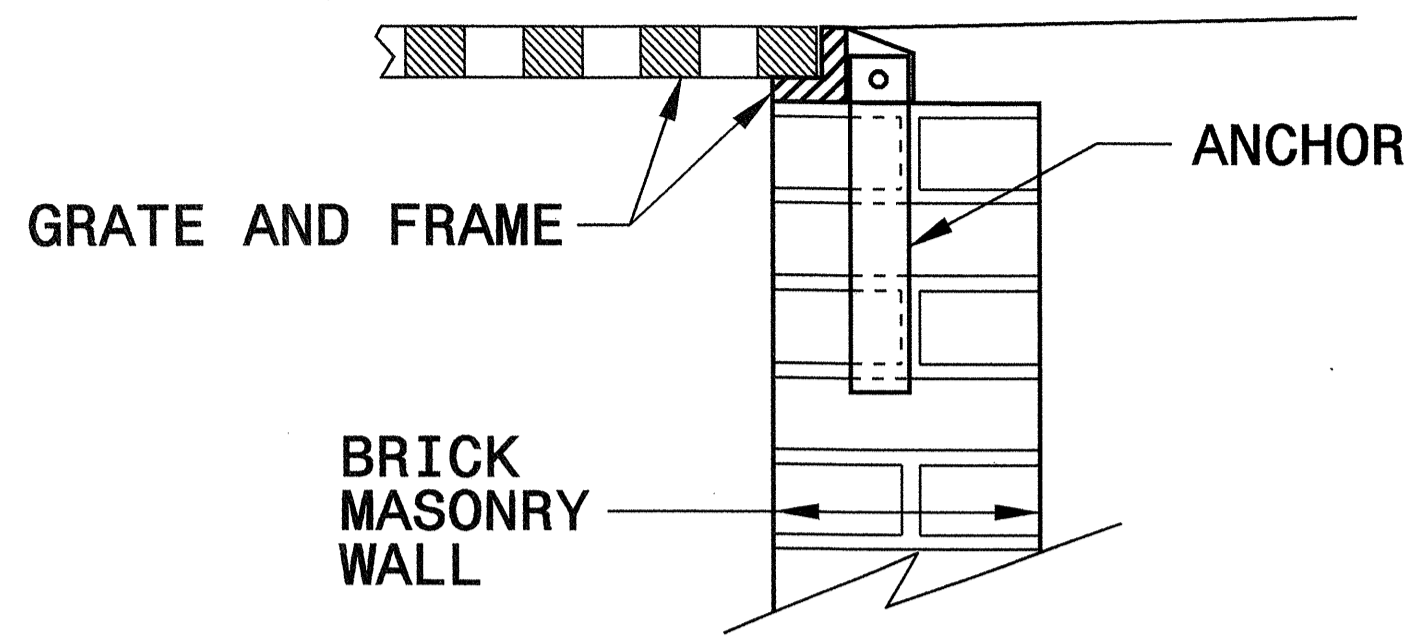
USE TYPICAL SECTION NO. 4 AT THE FOLLOWING LOCATIONS:

- DRI- STA. 10+11.00 TO STA. 11+85.00

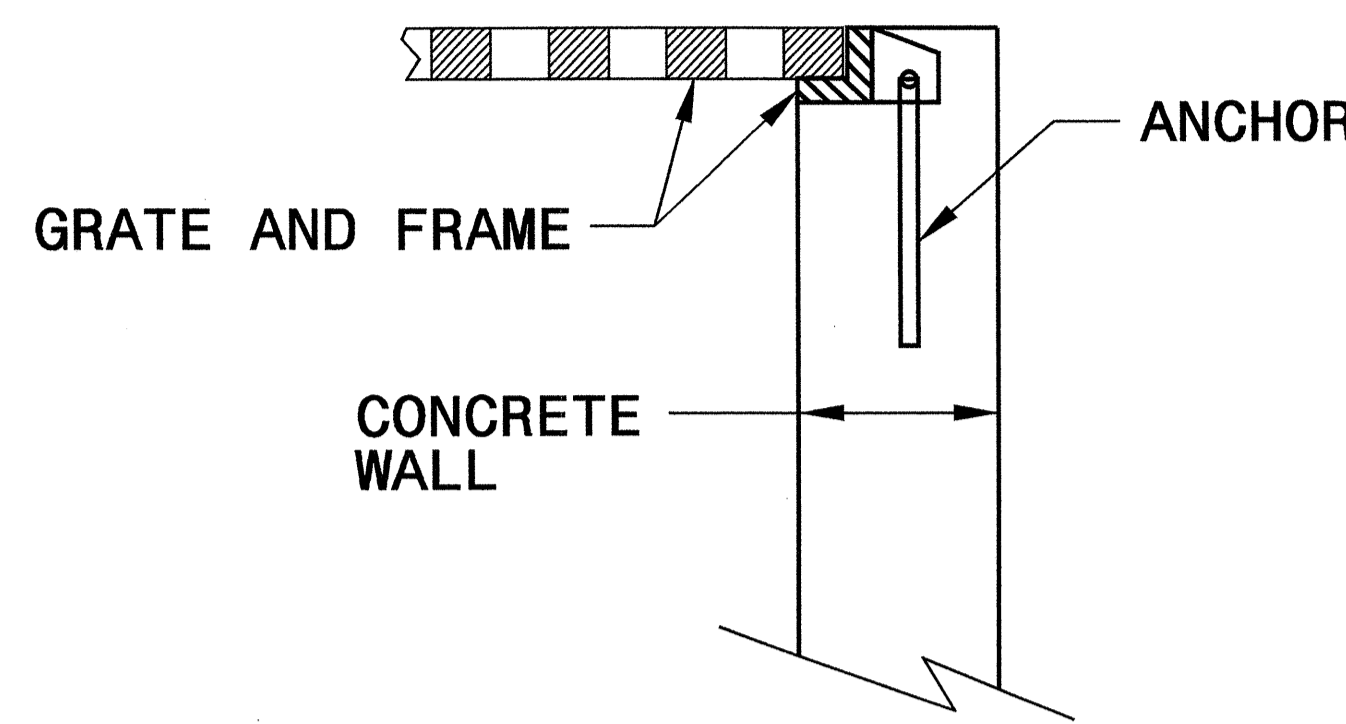
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

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

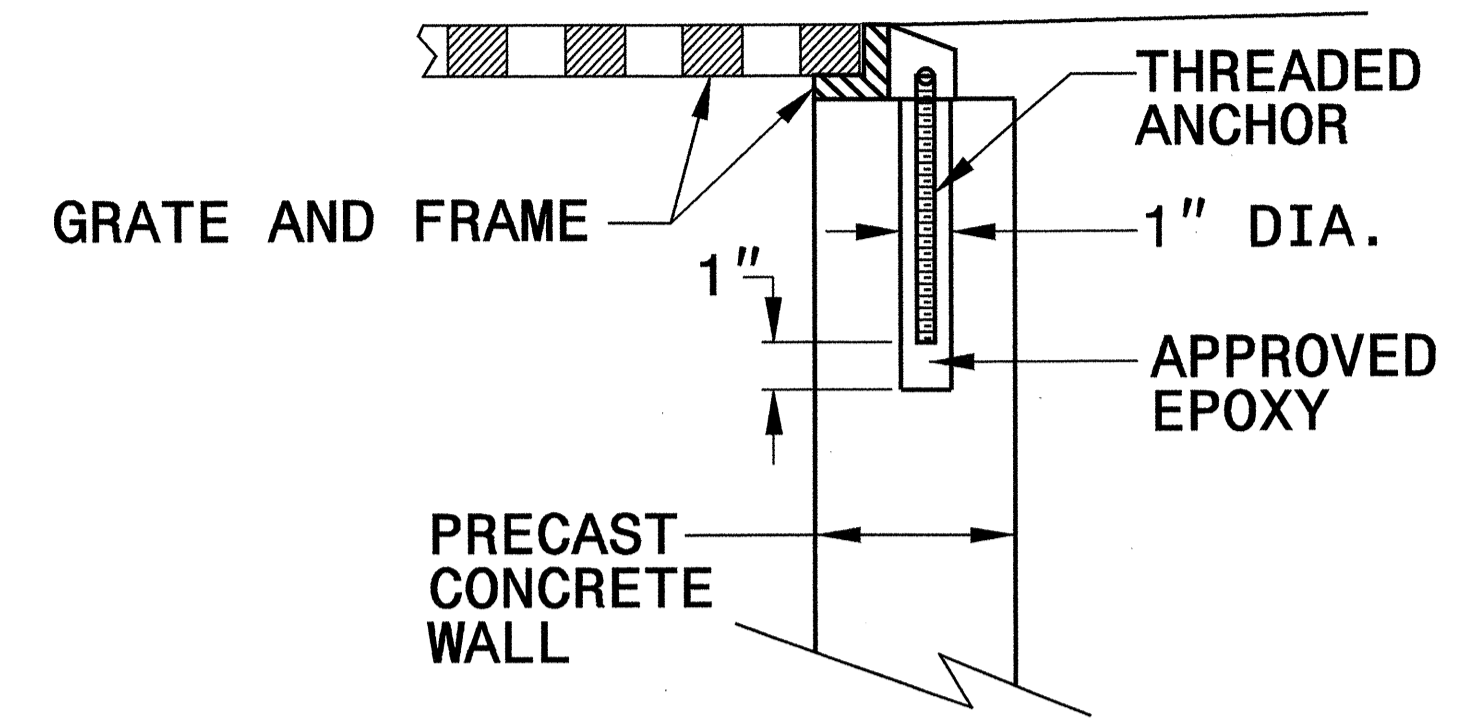
SHEET 1 OF 1
840D25



BRICK MASONRY CONSTRUCTION



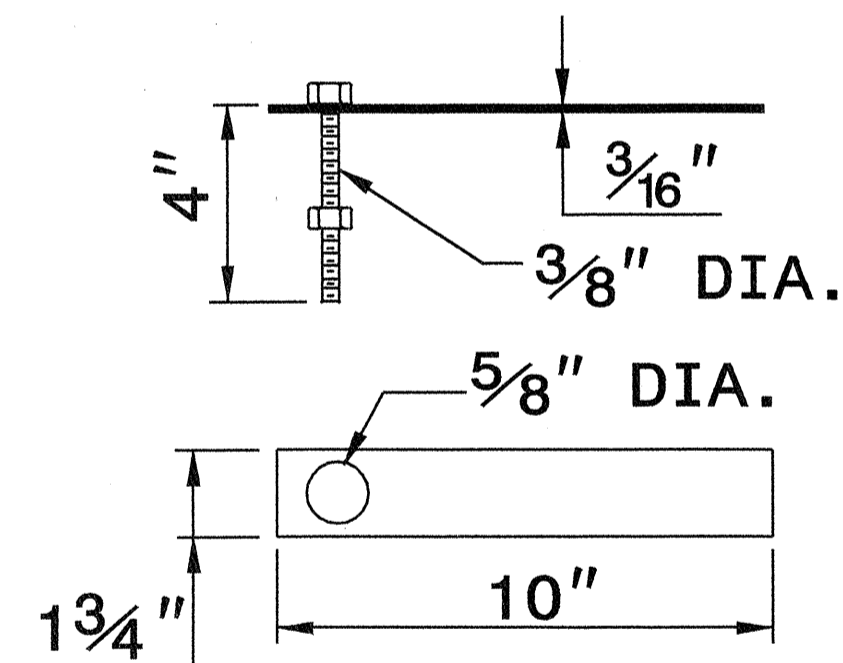
CONCRETE CONSTRUCTION



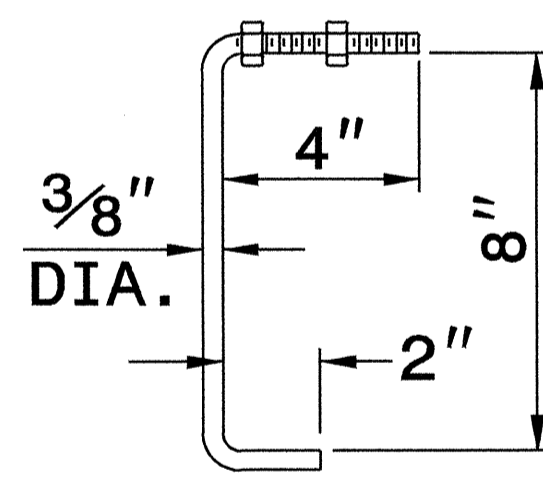
PRECAST CONCRETE CONSTRUCTION

DETAIL SHOWING ANCHORAGE OF FRAME FOR GRATED DROP INLET

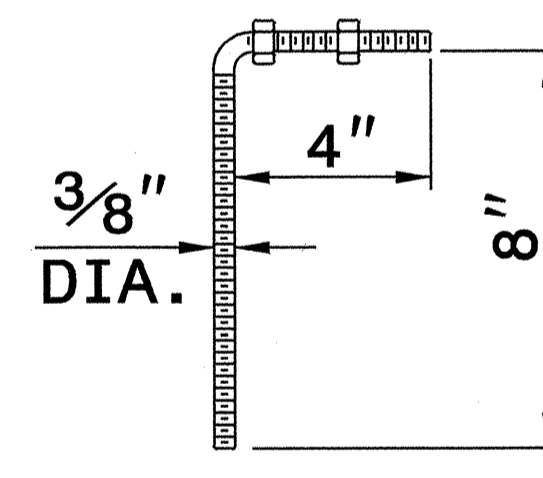
NOTE:
CONSTRUCT GRATED DROP INLET TO COINCIDE WITH NORMAL OR SUPERELEVATED SHOULDER OR PAVEMENT SLOPE.



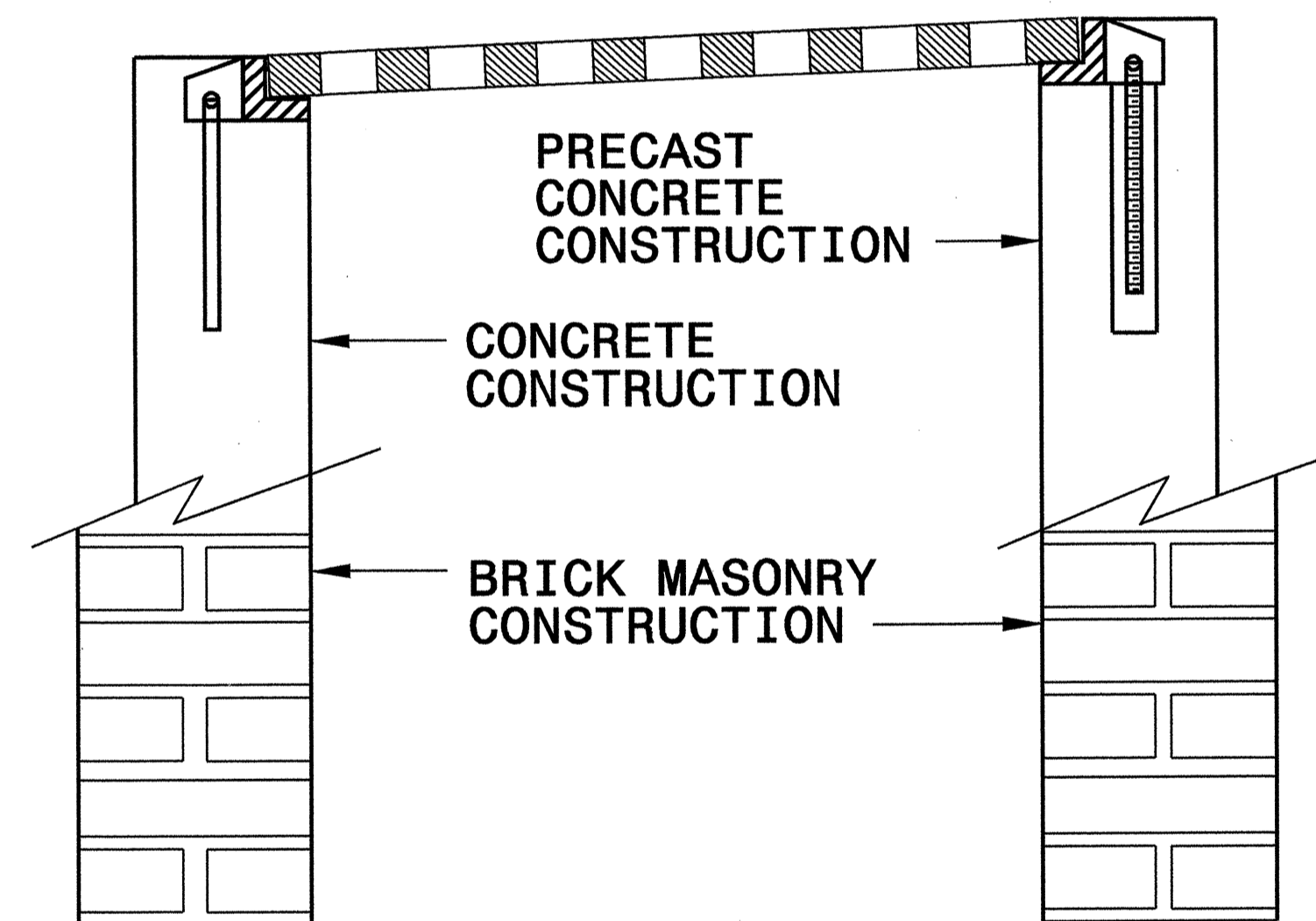
MASONRY ANCHOR
3/8" DIA. BOLT WITH PLATE



CONCRETE ANCHOR
3/8" DIA. BENT BAR



PRECAST CONCRETE ANCHOR
3/8" DIA. BENT BAR

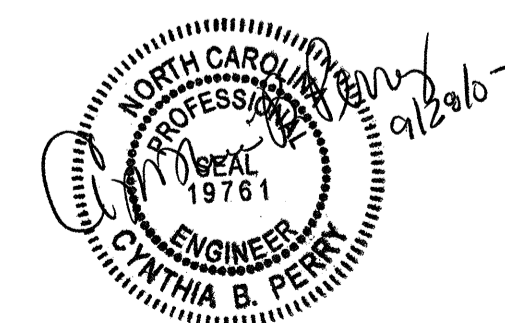


FRAME AND GRATE INSTALLATION FOR NORMAL CROWN AND SUPERELEVATED SECTIONS

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



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.:

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201398

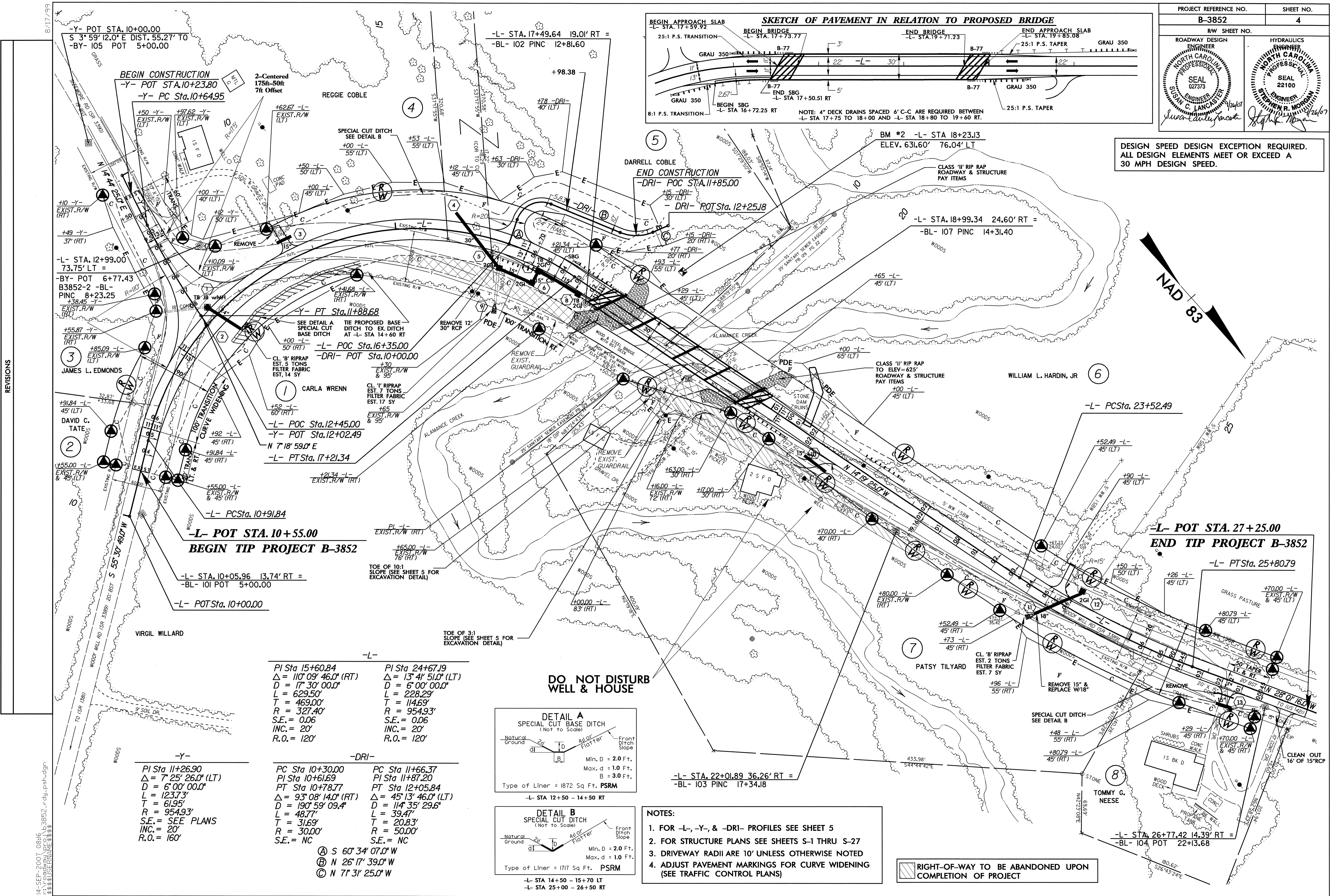
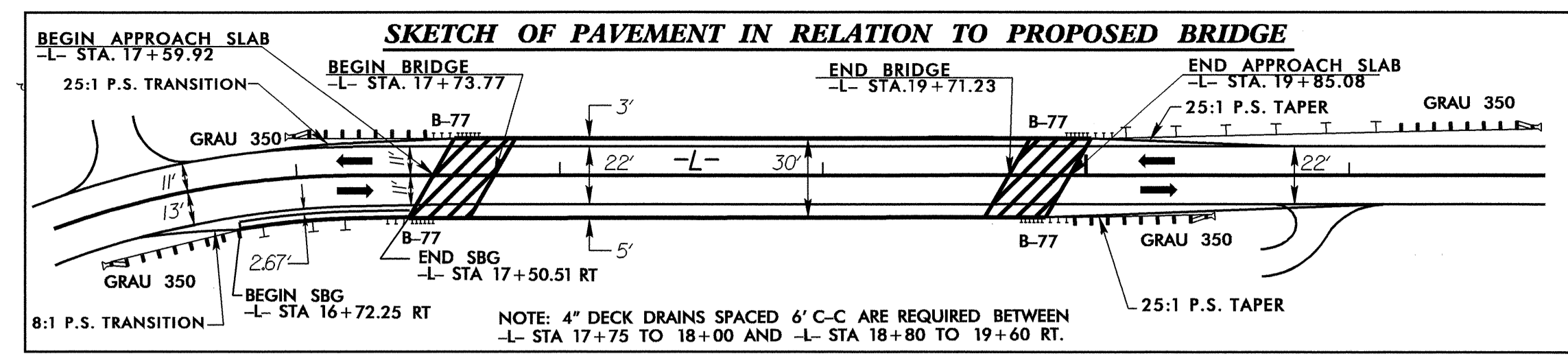
ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0029000000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL, STATION ***** (18+72.50-L-)
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING
0057000000-E	226	1,075	CY	UNDERCUT EXCAVATION
0063000000-N	SP	Lump Sum		GRADING
0080000000-E	SP	150	TON	CLASS IV SUBGRADE STABILIZATION
0106000000-E	230	3,700	CY	BORROW EXCAVATION
0195000000-E	265	250	CY	SELECT GRANULAR MATERIAL
0196000000-E	270	250	SY	FABRIC FOR SOIL STABILIZATION
0343000000-E	310	72	LF	15" SIDE DRAIN PIPE
0366000000-E	310	96	LF	15" RC PIPE CULVERTS, CLASS III
0372000000-E	310	64	LF	18" RC PIPE CULVERTS, CLASS III
0378000000-E	310	48	LF	24" RC PIPE CULVERTS, CLASS III
0384000000-E	310	84	LF	30" RC PIPE CULVERTS, CLASS III
0708000000-E	310	16	LF	15" BIT COAT CS PIPE CULVERTS, TYPE B 0.064" THICK
0995000000-E	340	53	LF	PIPE REMOVAL
0996000000-N	350	1	EA	PIPE CLEAN-OUT
1121000000-E	520	90	TON	AGGREGATE BASE COURSE
1220000000-E	545	500	TON	INCIDENTAL STONE BASE
1489000000-E	610	980	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1525000000-E	610	760	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A
1560000000-E	620	92	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22
1693000000-E	654	12	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR
2000000000-N	806	29	EA	RIGHT OF WAY MARKERS

ItemNumber	Sec #	Quantity	Unit	Description
2022000000-E	815	22.4	CY	SUBDRAIN EXCAVATION
2033000000-E	815	16.8	CY	SUBDRAIN FINE AGGREGATE
2044000000-E	815	100	LF	6" PERFORATED SUBDRAIN PIPE
2055000000-E	815	3	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)
2286000000-N	840	6	EA	MASONRY DRAINAGE STRUCTURES
2366000000-N	840	3	EA	FRAME WITH TWO GRATES, STD 840.24
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	79	LF	SHOULDER BERM GUTTER
3030000000-E	862	225	LF	STEEL BM GUARDRAIL
3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS
3387000000-N	862	1	EA	GUARDRAIL ANCHOR UNITS, TYPE ***** (W-BEAM TEMPORARY)
3270000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
3317000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE B-77
3360000000-E	863	322	LF	REMOVE EXISTING GUARDRAIL
3628000000-E	876	8	TON	RIP RAP, CLASS I
3635000000-E	876	190	TON	RIP RAP, CLASS II
3649000000-E	876	8	TON	RIP RAP, CLASS B
3656000000-E	876	890	SY	FILTER FABRIC FOR DRAINAGE
4025000000-E	901	43	SF	CONTRACTOR FURNISHED, TYPE *** SIGN (E)
4072000000-E	903	110	LF	SUPPORTS, 3-LB STEEL U-CHANNEL
4102000000-N	904	8	EA	SIGN ERECTION, TYPE E

ItemNumber	Sec #	Quantity	Unit	Description
4155000000-N	907	18	EA	DISPOSAL OF SIGN SYSTEM, U-CHANNEL
4400000000-E	1110	700	SF	WORK ZONE SIGNS (STATIONARY)
4405000000-E	1110	100	SF	WORK ZONE SIGNS (PORTABLE)
4410000000-E	1110	150	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4430000000-N	1130	70	EA	DRUMS
4435000000-N	1135	40	EA	CONES
4445000000-E	1145	75	LF	BARRICADES (TYPE III)
4455000000-N	1150	200	MD	FLAGGER
4465000000-N	1160	1	EA	TEMPORARY CRASH CUSHIONS
4485000000-E	1170	250	LF	PORTABLE CONCRETE BARRIER
4810000000-E	1205	22,700	LF	PAINT PAVEMENT MARKING LINES (4")
4835000000-E	1205	100	LF	PAINT PAVEMENT MARKING LINES (24")
6000000000-E	1605	1,200	LF	TEMPORARY SILT FENCE
6006000000-E	1610	220	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	305	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	420	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	3	ACR	TEMPORARY MULCHING
6018000000-E	1620	100	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	0.5	TON	FERTILIZER FOR TEMPORARY SEEDING
6024000000-E	1622	65	LF	TEMPORARY SLOPE DRAINS
6027000000-N	1622	1	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS
6029000000-E	SP	285	LF	SAFETY FENCE
6030000000-E	1630	2,315	CY	SILT EXCAVATION
6036000000-E	1631	1,460	SY	MATTING FOR EROSION CONTROL
6037000000-E	SP	40	SY	COIR FIBER MAT
6038000000-E	SP	2,750	SY	PERMANENT SOIL REINFORCEMENT MAT
6042000000-E	1632	50	LF	1/4" HARDWARE CLOTH
6070000000-N	SP	12	EA	SPECIAL STILLING BASINS
6071030000-E	SP	660	LF	COIR FIBER BAFFLES
6071050000-E	SP	2	EA	*** SKIMMER (1-1/2")
6071050000-E	SP	1	EA	*** SKIMMER (2")
6071050000-E	SP	1	EA	*** SKIMMER (2-1/2")
6084000000-E	1660	3	ACR	SEEDING & MULCHING
6087000000-E	1660	2	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	2.25	TON	FERTILIZER TOPDRESSING
6114000000-N	SP	2	HR	SPECIALIZED HAND MOWING
6117000000-N	SP	12	EA	RESPONSE FOR EROSION CONTROL
6123000000-E	1670	0.2	ACR	REFORESTATION

5/28/99
10-SEP-2007 10:08
R:\CONTRACTS\2007\B-3852-r.dwg-sum.dgn

DESIGN SPEED DESIGN EXCEPTION REQUIRED.
ALL DESIGN ELEMENTS MEET OR EXCEED A
30 MPH DESIGN SPEED.



-Y- POT STA. 10+00.00
S 3° 59' 12.0" E DIST. 55.27' TO
-BY- 105 POT 5+00.00

-L- STA. 17+49.64 19.0' RT =
-BL- 102 PINC 12+81.60

BEGIN CONSTRUCTION
-Y- POT STA. 10+23.80
-Y- PC Sta. 10+64.95

END CONSTRUCTION
-DRI- POC STA. 11+85.00
-DRI- ROT STA. 12+25.18

-L- STA. 12+99.00
73.75' LT =
-BY- POT 6+77.43
B3852-2 -BL-
PINC 8+23.25

BM #2 -L- STA 18+23.13
ELEV. 631.60' 76.04' LT

-L- STA. 18+99.34 24.60' RT =
-BL- 107 PINC 14+31.40

-Y- PT Sta. 11+88.68
SEE DETAIL A
SPECIAL CUT
BASE DITCH
AT -L- STA 14+60 RT

-L- POC Sta. 16+35.00
-DRI- POT Sta. 10+00.00

-L- POC Sta. 12+45.00
-Y- POT Sta. 12+02.49
N 7° 18' 59.0" E

-L- PT Sta. 17+21.34

-L- PC Sta. 10+91.84

-L- POT STA. 10+55.00
BEGIN TIP PROJECT B-3852

-L- STA. 10+05.96 13.74' RT =
-BL- 101 POT 5+00.00

-L- POT Sta. 10+00.00

-L- PC Sta. 23+52.49

-L- POT STA. 27+25.00
END TIP PROJECT B-3852

-L- PT Sta. 25+80.79

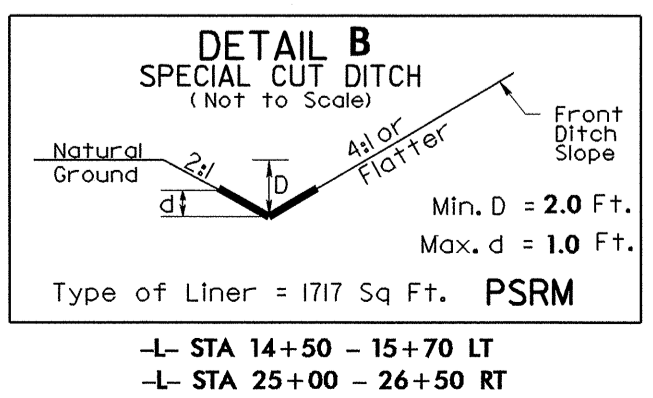
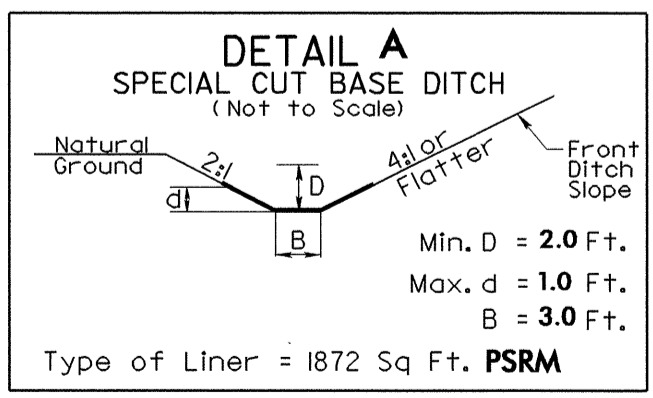
PI Sta 15+60.84 Δ = 110° 09' 46.0" (RT) D = 17' 30" 00.0" L = 629.50' T = 469.00' R = 327.40' S.E. = 0.06 INC. = 20' R.O. = 120'	PI Sta 24+67.19 Δ = 13° 41' 51.0" (LT) D = 6' 00" 00.0" L = 228.29' T = 114.69' R = 954.93' S.E. = 0.06 INC. = 20' R.O. = 120'
--	--

-Y-
PI Sta 11+26.90 Δ = 7° 25' 26.0" (LT) D = 6' 00" 00.0" L = 123.73' T = 61.95' R = 954.93' S.E. = SEE PLANS INC. = 20' R.O. = 160'

-DRI-	
PC Sta 10+30.00 PI Sta 10+61.69 PT Sta 10+78.77 Δ = 93° 08' 14.0" (RT) D = 190' 59" 09.4" L = 48.77' T = 31.69' R = 30.00' S.E. = NC	PC Sta 11+66.37 PI Sta 11+87.20 PT Sta 12+05.84 Δ = 45° 13' 46.0" (LT) D = 114' 35" 29.6" L = 39.47' T = 20.83' R = 50.00' S.E. = NC

- Ⓐ S 60° 34' 07.0" W
- Ⓑ N 26° 17' 39.0" W
- Ⓒ N 77° 31' 25.0" W

DO NOT DISTURB
WELL & HOUSE



- NOTES:
- FOR -L-, -Y-, & -DRI- PROFILES SEE SHEET 5
 - FOR STRUCTURE PLANS SEE SHEETS S-1 THRU S-27
 - DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED
 - ADJUST PAVEMENT MARKINGS FOR CURVE WIDENING (SEE TRAFFIC CONTROL PLANS)

RIGHT-OF-WAY TO BE ABANDONED UPON
COMPLETION OF PROJECT

REVISIONS

14-SEP-2007 08:46
r:\woodhew\proj\B3852\dly.psh.dgn
\$\$\$\$\$USER\$\$\$\$\$

5/28/99

PROJECT REFERENCE NO. B-3852 SHEET NO. 5

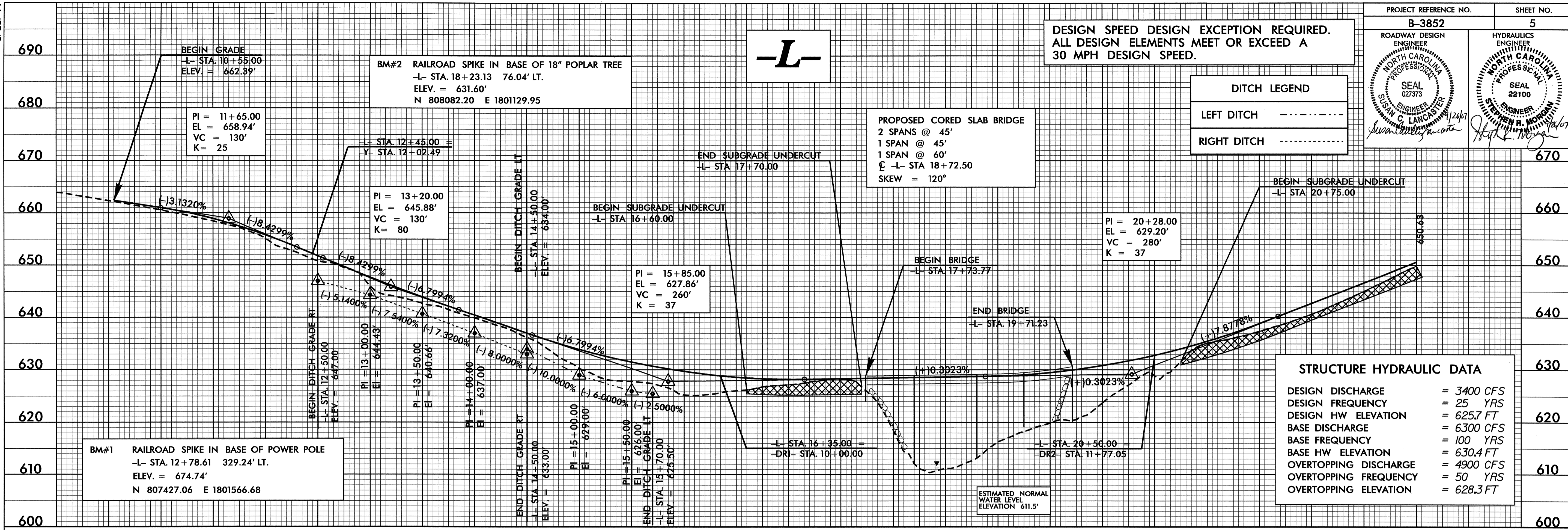
ROADWAY DESIGN ENGINEER SEAL 027373

HYDRAULICS ENGINEER SEAL 22100

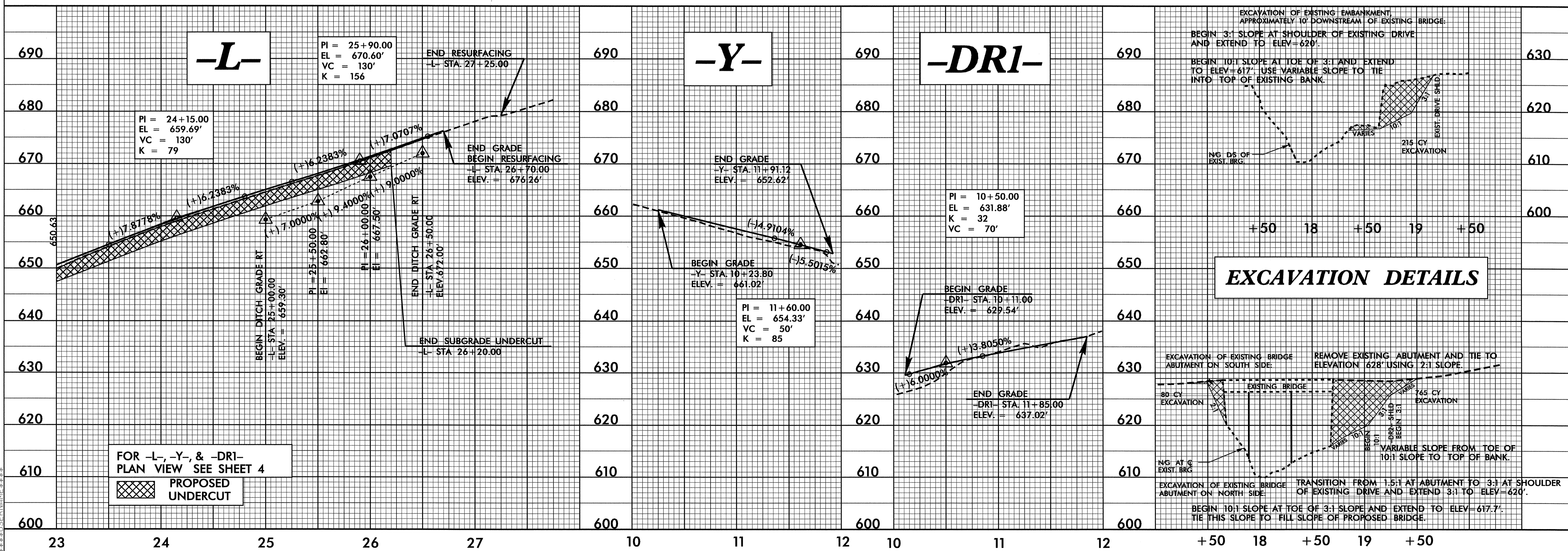
Professional Engineer seals for S. J. C. Lancaster and Stephen R. Morgan.

DESIGN SPEED DESIGN EXCEPTION REQUIRED. ALL DESIGN ELEMENTS MEET OR EXCEED A 30 MPH DESIGN SPEED.

DITCH LEGEND table with entries for LEFT DITCH and RIGHT DITCH.



STRUCTURE HYDRAULIC DATA table listing design discharge (3400 CFS), design frequency (25 YRS), design HW elevation (625.7 FT), base discharge (6300 CFS), base frequency (100 YRS), base HW elevation (630.4 FT), overtopping discharge (4900 CFS), overtopping frequency (50 YRS), and overtopping elevation (628.3 FT).



EXCAVATION DETAILS

FOR -L-, -Y-, & -DRI- PLAN VIEW SEE SHEET 4. Legend for PROPOSED UNDERCUT.

10-SEP-2007 12:41 \\s3852-rdu-pfl.dgn