

08/08/99

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

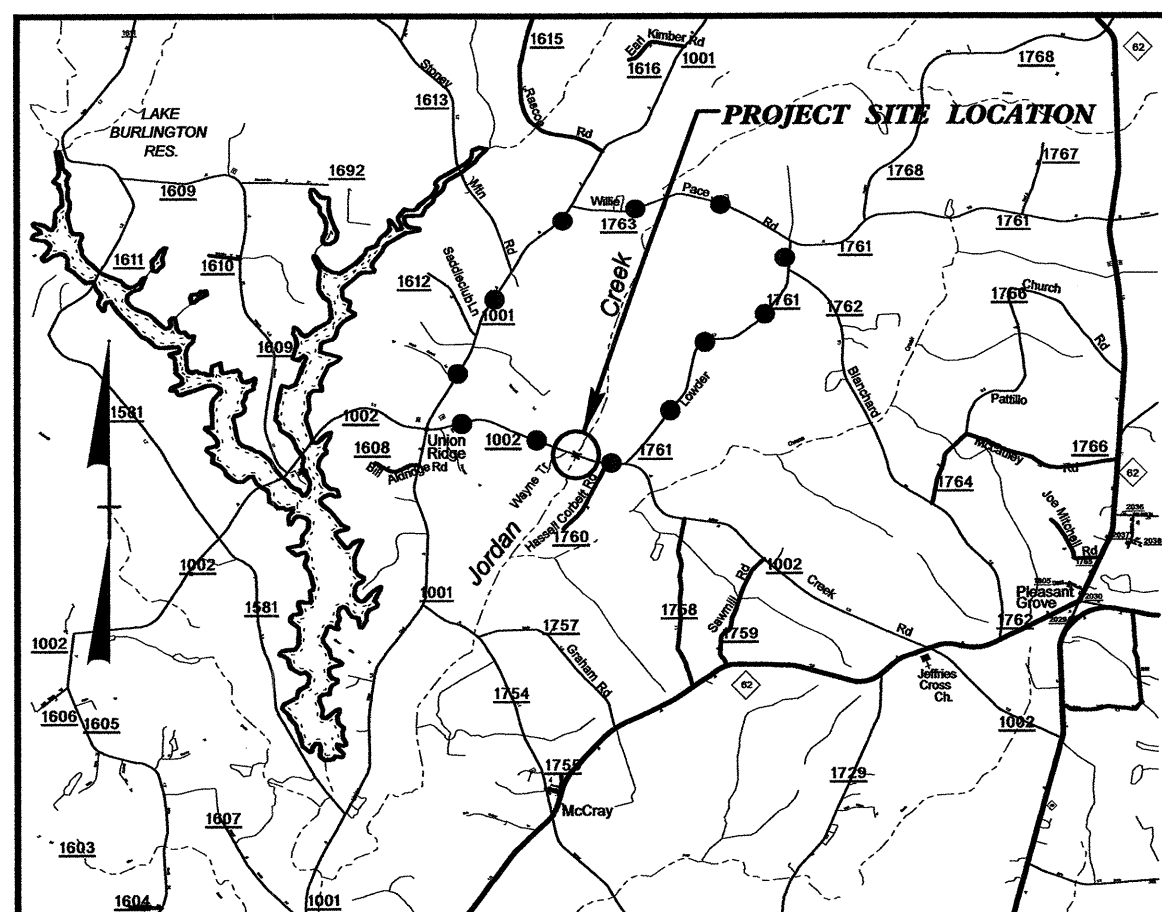
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ALAMANCE COUNTY

LOCATION: BRIDGE NO. 45 OVER JORDAN CREEK ON SR 1002 (JEFFRIES CROSS ROAD)

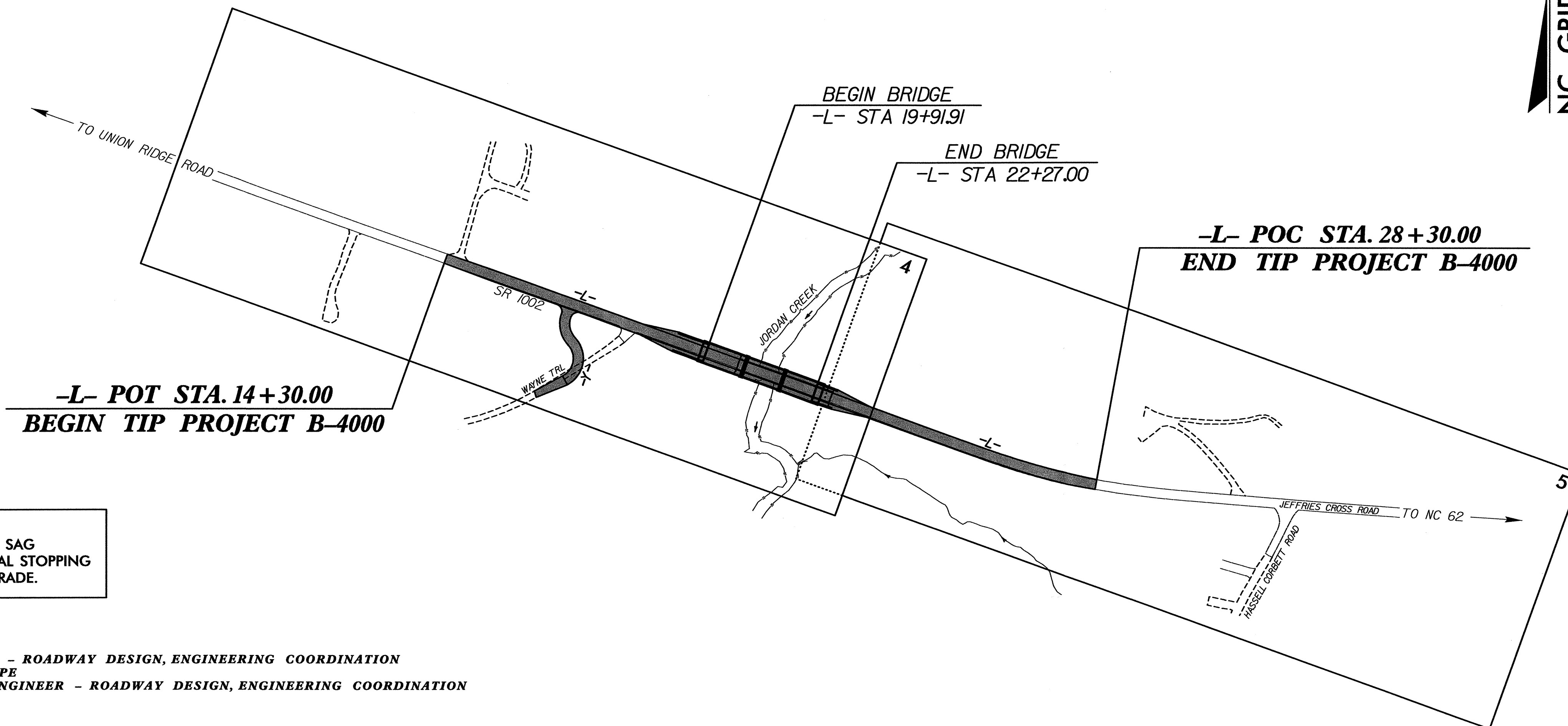
TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4000	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33368.1.1	BRZ-1002(11)	P.E.	
33368.2.1	BRZ-1002(11)	RW & UTIL	
33368.3.1	BRZ-1002(11)	CONST.	



VICINITY MAP
DETOUR ROUTE

NC GRID
NAD 83

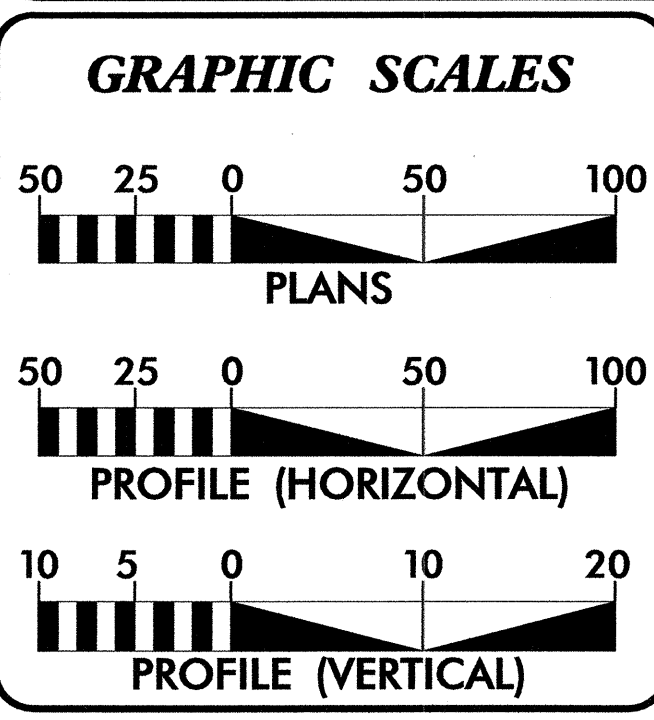


NOTE:
DESIGN EXCEPTION REQUIRED FOR SAG
VERTICAL CURVE "K" FACTOR, VERTICAL STOPPING
SIGHT DISTANCE AND MAXIMUM GRADE.

NCDOT CONTACT: CATHY HOUSER, PE
PROJECT ENGINEER - ROADWAY DESIGN, ENGINEERING COORDINATION
ROBERT J. STROUP, PE
PROJECT DESIGN ENGINEER - ROADWAY DESIGN, ENGINEERING COORDINATION

TIP PROJECT: B-4000

CONTRACT: C201644



DESIGN DATA

ADT 2006	=	767
ADT 2026	=	1434
DHV	=	10 %
D	=	55 %
T	=	7 % *
V	=	55 MPH
* (TTST 1% + DUAL 6%)		

FUNCTIONAL CLASSIFICATION:
RURAL MINOR COLLECTOR

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4000	=	0.220 mi
LENGTH STRUCTURE TIP PROJECT B-4000	=	0.045 mi
TOTAL LENGTH OF TIP PROJECT B-4000	=	0.265 mi

PLANS PREPARED BY:
CH ENGINEERING
PO BOX 3028 RALEIGH, NC 27622 TELE 919.788.0224 FAX 919.788.0232
2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 30, 2006

LETTING DATE:
JULY 17, 2007

PLANS PREPARED FOR:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr.
Raleigh, NC 27610

THOMAS R. HEPLER, PE PLS
PROJECT ENGINEER

RHONDA B. EARLY, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

PROFESSIONAL SEAL
31977

THOMAS R. HEPLER, PE
4-19-07 P.E.
SIGNATURE: *Thomas R. Hepler*

PROFESSIONAL SEAL
10359

RHONDA B. EARLY, PE
SIGNATURE: *Rhonda B. Early*

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

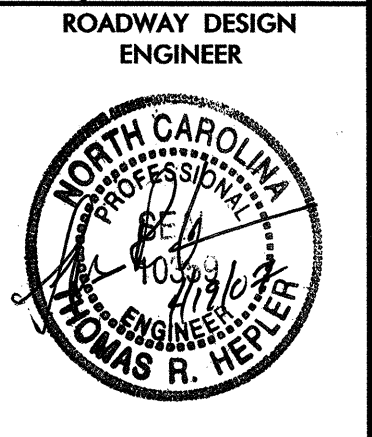
Aut millan P.E.
STATE DESIGN ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR

DATE

4/19/2007 12:51:30 PM Y:\NCDOT\BFOOD\Procwsky\FPO\181000.DWG.DWG



INDEX OF SHEETS

1	Title Sheet
1a	Index of Sheets, Roadway Standards, General Notes
1b	Conventional Symbols
1c	Survey Control Sheet
2	Typical Sections
2a	ANCHORAGE OF FRAMES
3	Summary of Quantities
3a	Summary of Earthwork, Summary of Breaking Up Existing Asphalt Pavement and Parcel Index
3b	List of Pipes, Endwalls, etc., (for pipes 48" & Under) and Guardrail Summary
4 - 5	Plan and Profile Sheets
TCP-1 thru TCP-5	Traffic Control Plans
EC-1 thru EC-7	Erosion Control Plans
UO-1 thru UO-3	Utilities by Others Plans
X-0	Cross-section Index
X-0a	Volume Summary
X-1 thru X-12	-L- Line Cross Sections
X-13	-Y- Line Cross Sections
S-1 thru S-24	Structure Plans

GENERAL NOTES:

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

GRADING AND SURFACING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

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

SUPERELEVATION:

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

SHOULDER CONSTRUCTION:

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

SIDE ROADS:

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

UNDERDRAINS:

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

STREET TURNOUT:

STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

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 and BellSouth
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

RIGHT-OF-WAY MARKERS:

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

2006 ROADWAY 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	
300.02	Method of Pipe Installation - Method 'B'
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
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
840.45	Precast Drainage Structure
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
848.04	Street Turnout
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

EFF. 07-18-06

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	□ EDM
Parcel/Sequence Number	①23
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○-----
Proposed Chain Link Fence	□-----
Proposed Barbed Wire Fence	◇-----
Existing Wetland Boundary	----- WLB
Proposed Wetland Boundary	----- WLB
Existing High Quality Wetland Boundary	----- HQ 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	-----
River Basin Buffer	----- RBB
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
Curb Cut for Future Wheel Chair Ramp	CCFR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equaility 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:

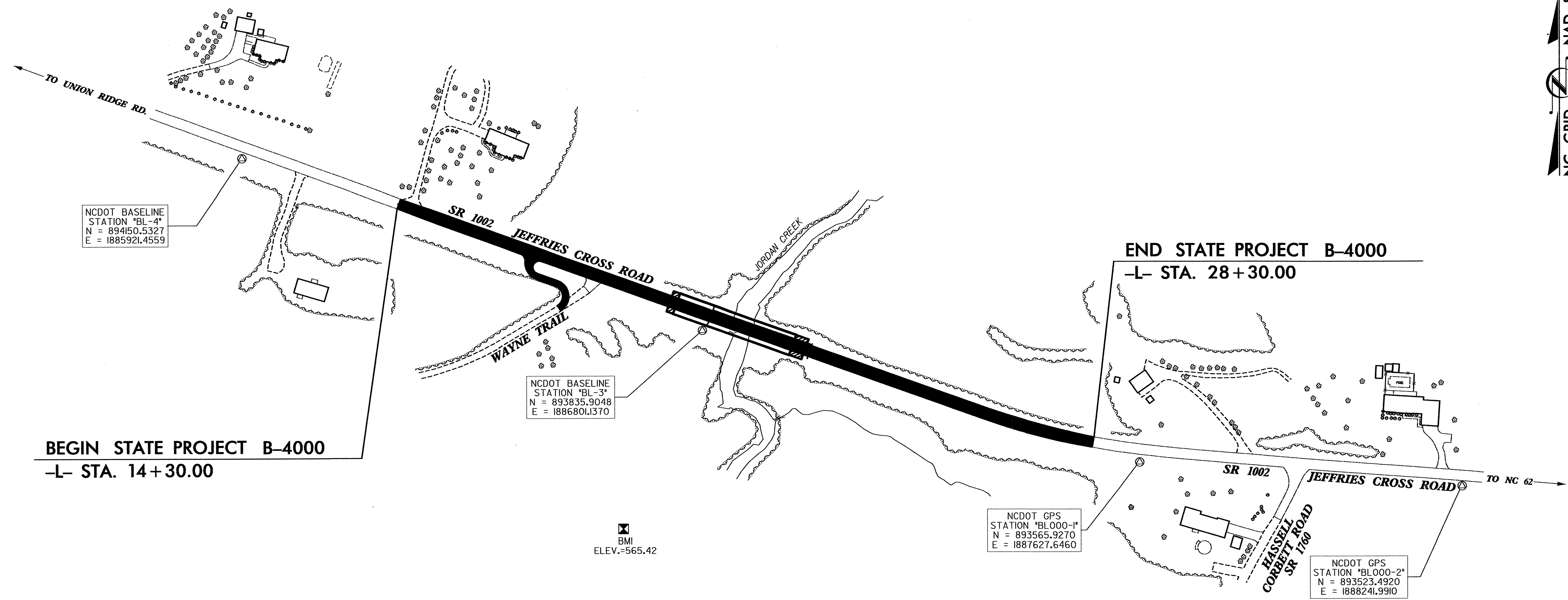
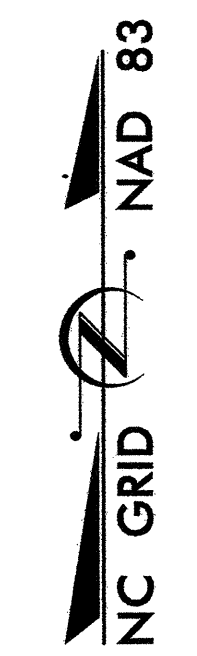
Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line	----- UTL
U/G Tank; Water, Gas, Oil	□
AG Tank; Water, Gas, Oil	□
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

9/22/2007 10:24:46 AM S:\INVENTORY\PROJECTS\B0000000\B0000000\B0000000.dwg

12/01/2005

B-4000 SURVEY CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
B-4000	1C
Location and Surveys	



BEGIN STATE PROJECT B-4000
-L- STA. 14+30.00

END STATE PROJECT B-4000
-L- STA. 28+30.00

BASELINE DATA

BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
4	BL-4	894150.5327	1885921.4559	605.99	11+21.56	13.59 RT
3	BL-3	893835.9048	1886801.1370	568.46	20+55.81	11.24 RT
1	B4000-1	893565.9270	1887627.6460	623.48	29+22.70	22.24 RT
2	B4000-2	893523.4920	1888241.9910	629.66	OUTSIDE PROJECT LIMITS	

BENCHMARK DATA

BMI	ELEVATION - 565.42
N 893438	E 1886648
L STATION 20+47 430 RIGHT	
RR SPIKE SET IN 20 IN. PINE	

DATUM DESCRIPTION

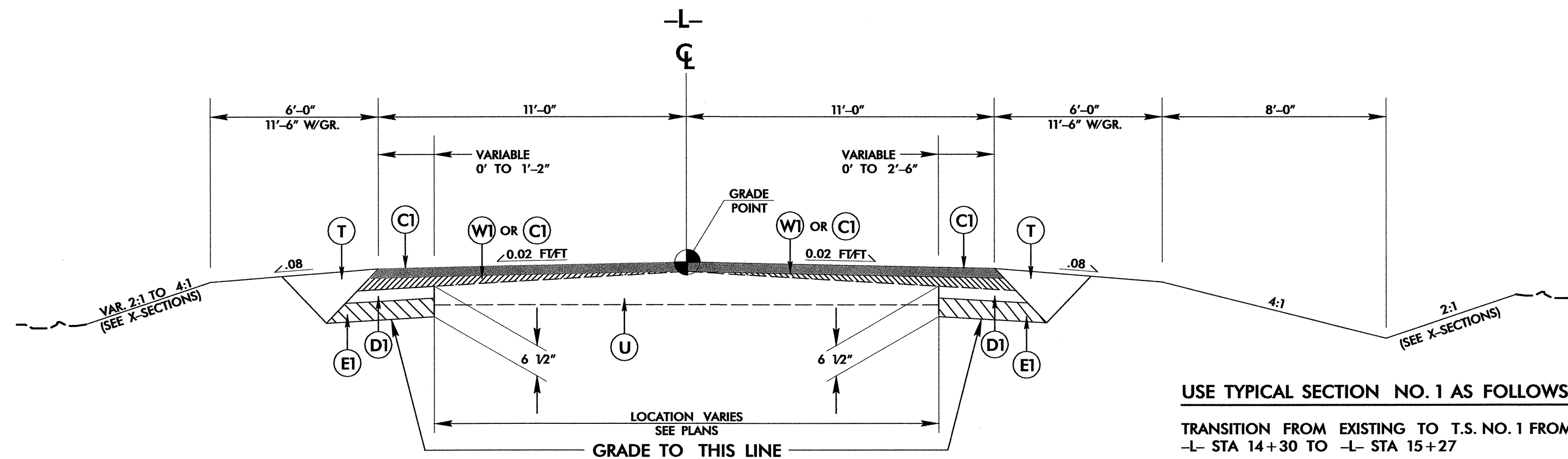
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4000-1" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 893565.927(f1) EASTING: 1887627.646(f1) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99998579 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4000-1" TO L- STATION 14+30.00 IS N 70° 45' 13" W 1494.98 ft

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

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:
b4000_ls_control_060310.txt
- SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)

NOTE: DRAWING NOT TO SCALE



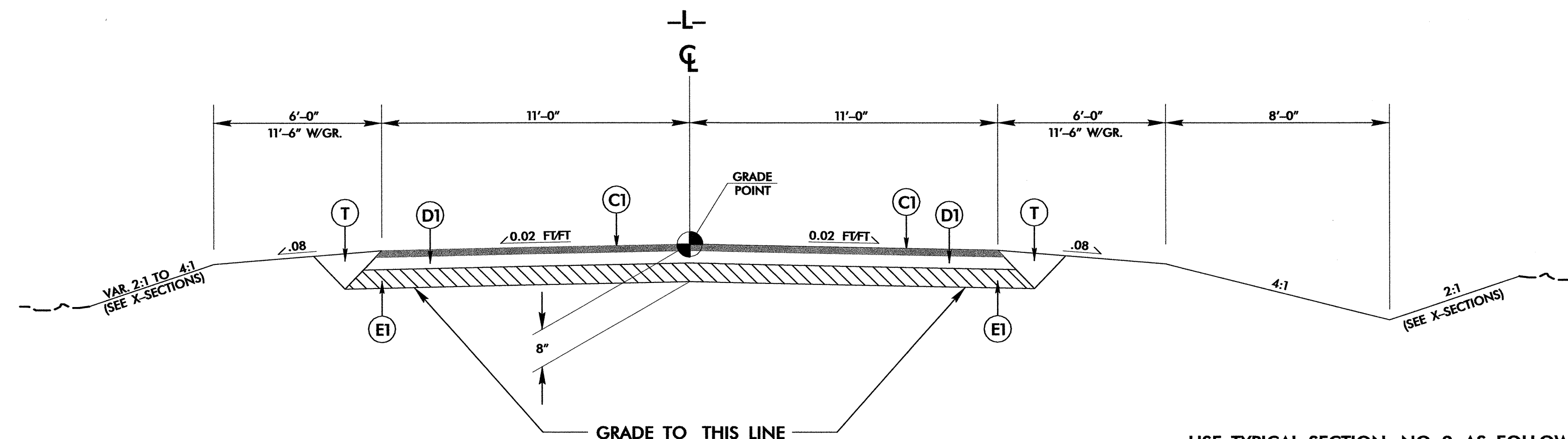
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1 AS FOLLOWS:

TRANSITION FROM EXISTING TO T.S. NO. 1 FROM
-L- STA 14+30 TO -L- STA 15+27

-L- STA 15+27 TO -L- STA 18+00
-L- STA 26+50 TO -L- STA 27+58

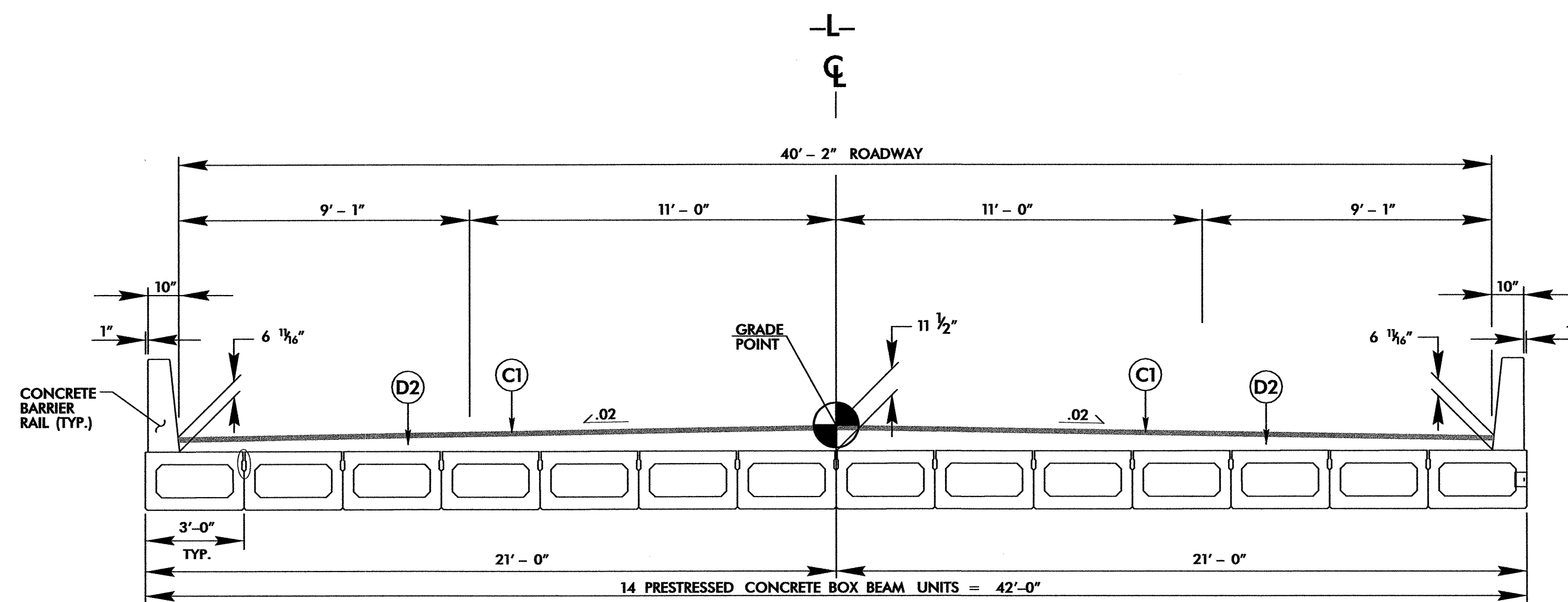
TRANSITION FROM T.S. NO. 1 TO EXISTING FROM
-L- STA 27+58 TO -L- STA 28+30



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2 AS FOLLOWS:

-L- STA 18+00 TO -L- STA 19+91.91 (BEG BRIDGE)
-L- STA 22+27.00 (END BRIDGE) TO -L- 26+50



TYPICAL SECTION NO. 3

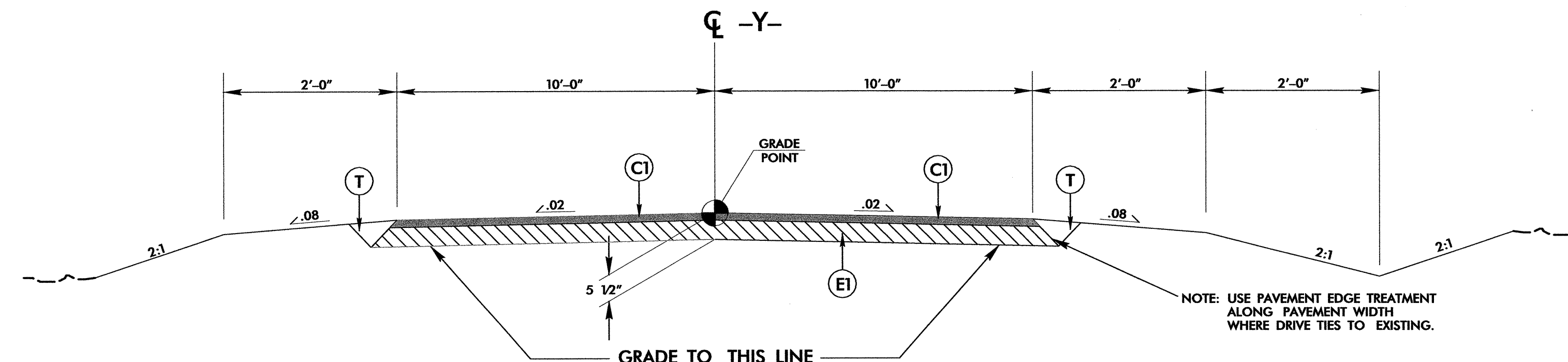
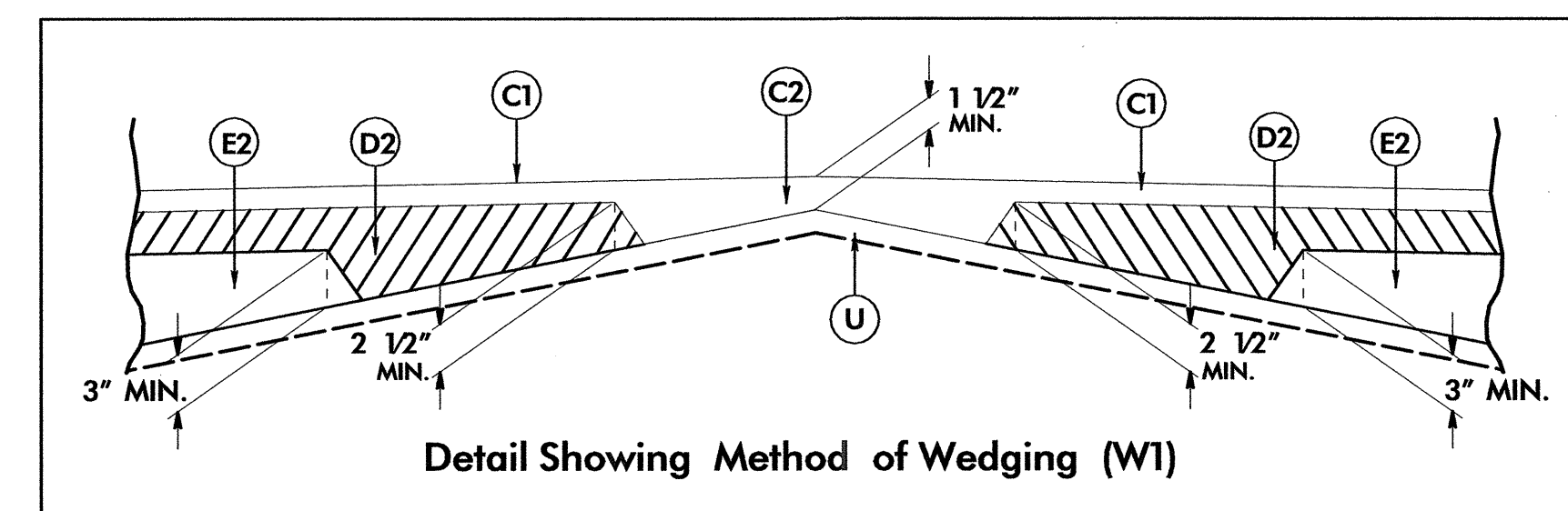
USE TYPICAL SECTION NO. 3 AS FOLLOWS:

-L- STA 19+91.91 (BEG BRIDGE) TO -L- STA 22+27.00 (END BRIDGE)

* MINIMUM OF 5'-11" ADDED TO BRIDGE OFFSET (ON EACH SIDE) FOR HYDRAULIC SPREAD

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. VARIABLE 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" OR GREATER THAN 1 1/2" IN DEPTH.
D1	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	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 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VARIABLE 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" OR GREATER THAN 5 1/2" IN DEPTH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W1	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL)

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



TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4 AS FOLLOWS:

-Y- STA 10+22 TO -Y- STA 11+74.50

TRANSITION FROM T.S. NO. 4 TO EXISTING W/INCIDENTAL STONE

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

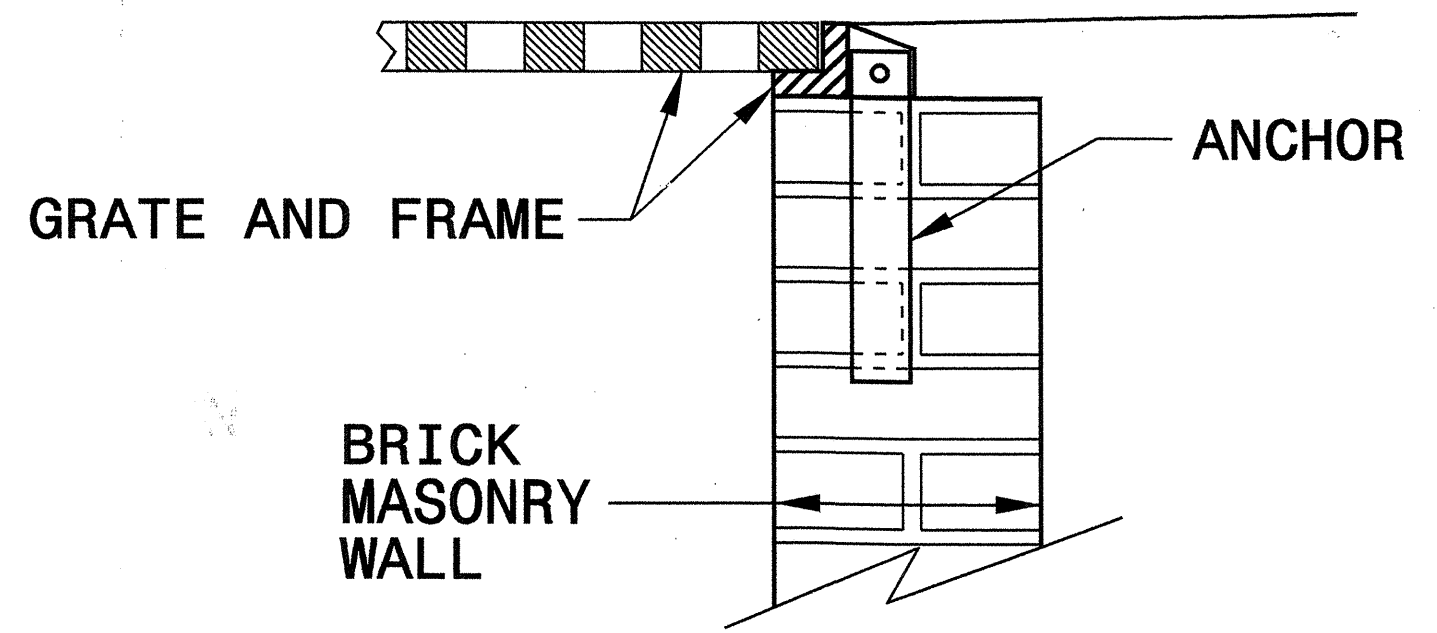
ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

SHEET 1 OF 1
840D25

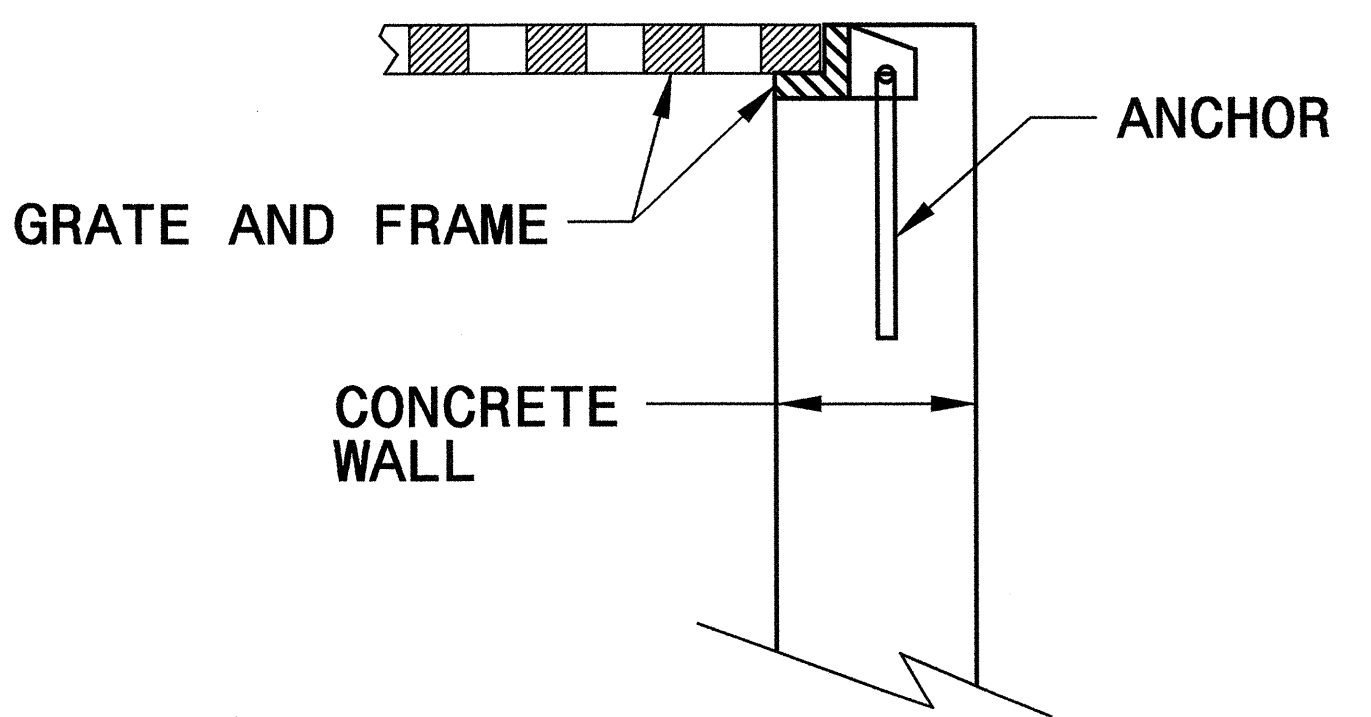
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

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

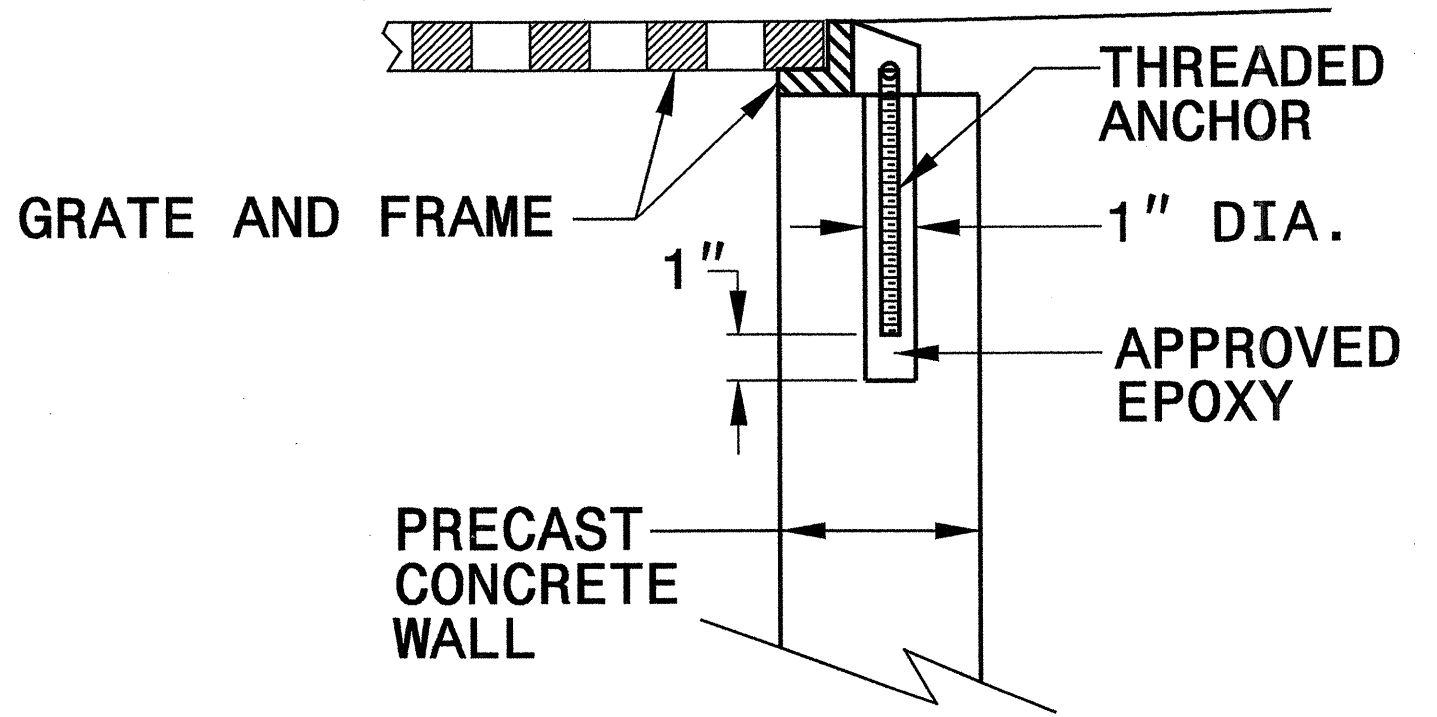
SHEET 1 OF 1
840D25



BRICK MASONRY CONSTRUCTION



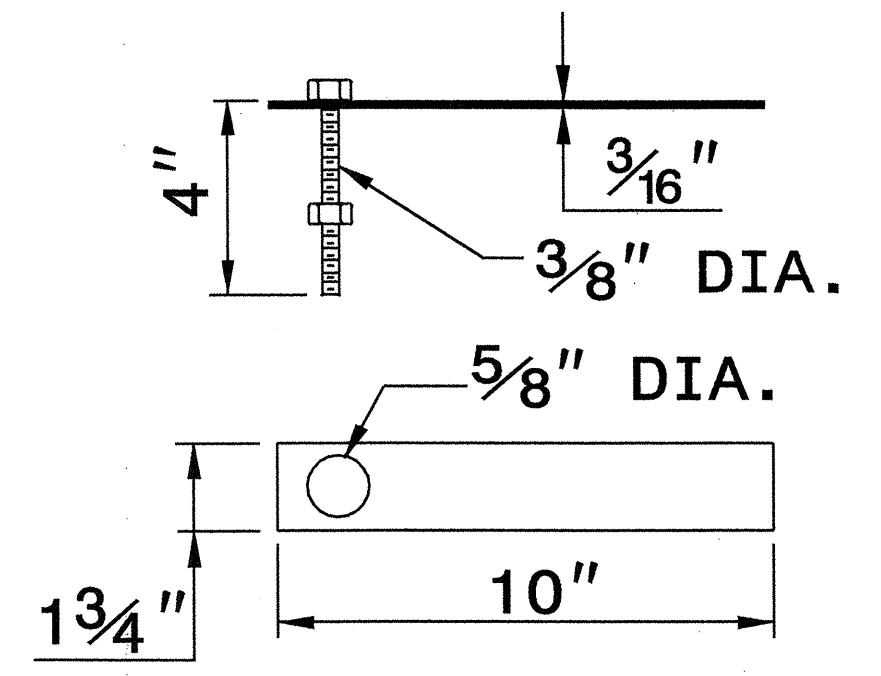
CONCRETE CONSTRUCTION



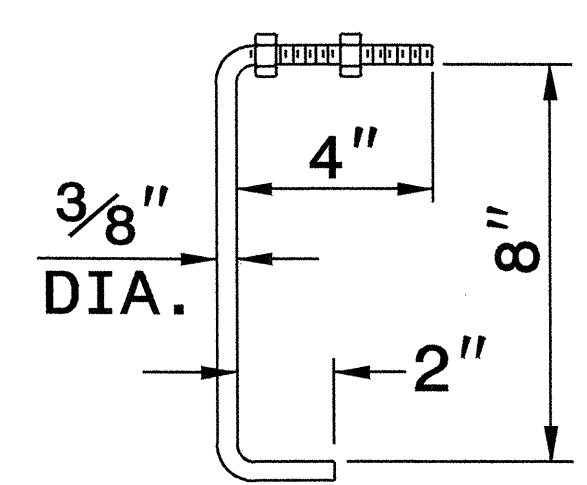
PRECAST CONCRETE CONSTRUCTION

DETAIL SHOWING ANCHORAGE OF FRAME FOR GRATED DROP INLET

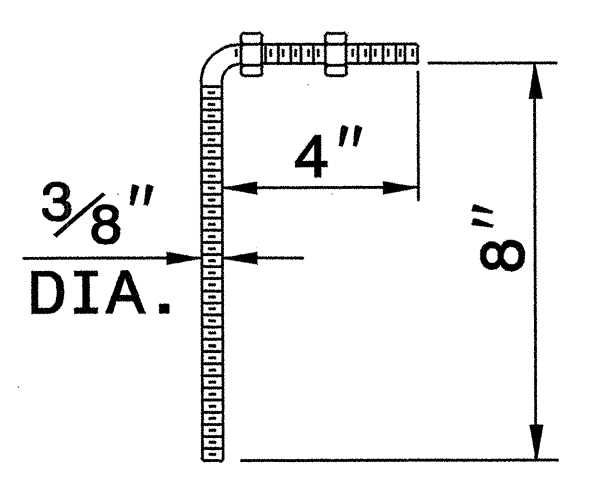
NOTE:
CONSTRUCT GRATED DROP INLET TO COINCIDE WITH NORMAL OR SUPERELEVATED SHOULDER OR PAVEMENT SLOPE.



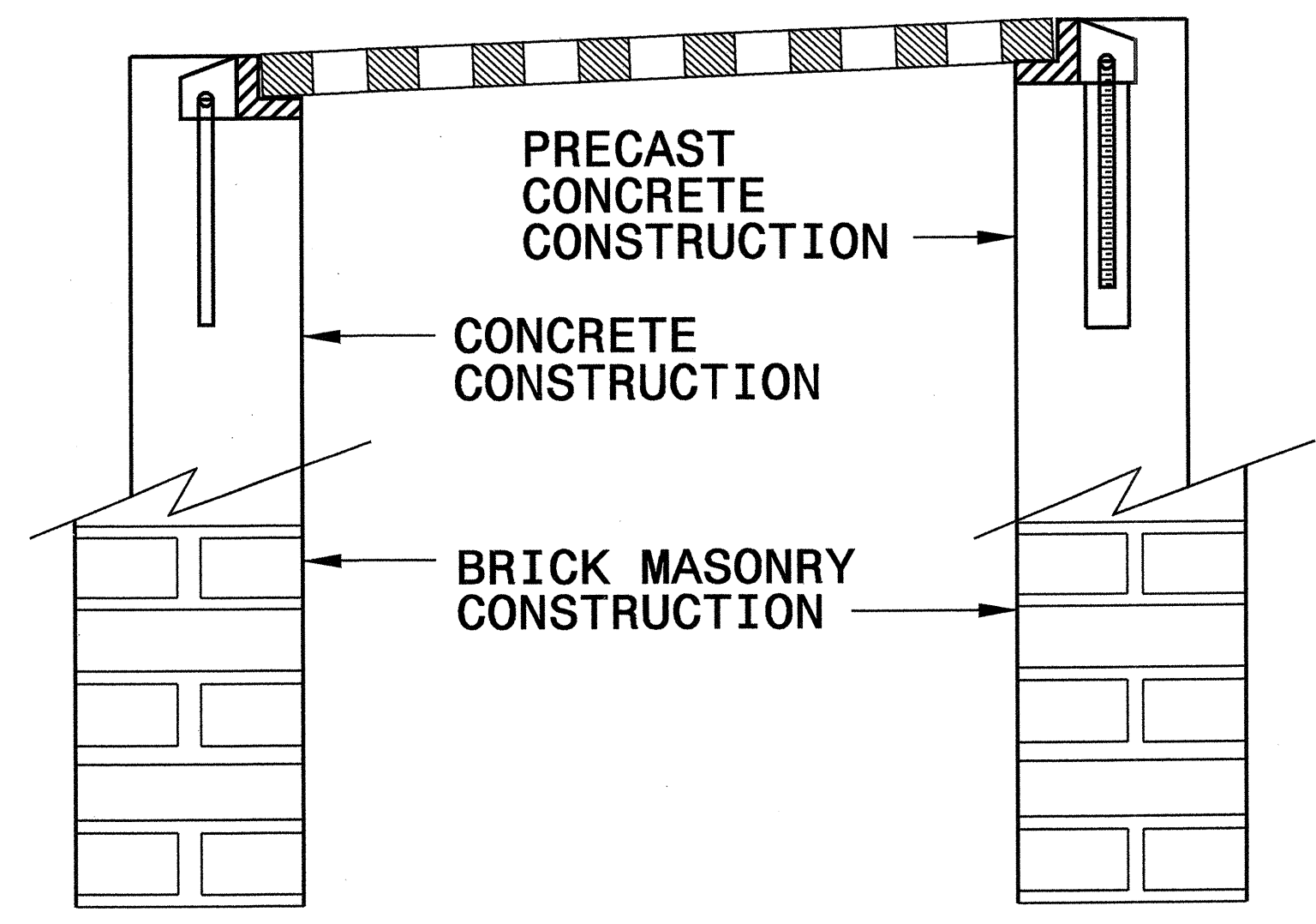
MASONRY ANCHOR
3/8" DIA. BOLT WITH PLATE



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

01-MAR-2007 09:04 s:\contracts\stds\stds\06\stds to special details\encard\stds\06\stds to special details\840D25 anchorage for frames\0840d25.dgn J.Howerton RI P5212560



**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.: _____

COMPUTED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____

PROJECT NO. B-4000 SHEET NO. 3

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

SUMMARY OF QUANTITIES

ItemNumber	Sec #	Quantity	Unit	Description
000100000-N	800	Lump Sum		MOBILIZATION
002900000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL, STATION ***** (21+09.46)
005000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING
005700000-E	226	600	CY	UNDERCUT EXCAVATION
006300000-N	SP	Lump Sum		GRADING
008000000-E	SP	100	TON	CLASS IV SUBGRADE STABILIZATION
010600000-E	230	5,550	CY	BORROW EXCAVATION
013400000-E	240	490	CY	DRAINAGE DITCH EXCAVATION
019500000-E	265	500	CY	SELECT GRANULAR MATERIAL
019600000-E	270	500	SY	FABRIC FOR SOIL STABILIZATION
031800000-E	300	30	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS
037200000-E	310	136	LF	18" RC PIPE CULVERTS, CLASS III
070800000-E	310	48	LF	15" BIT COAT CS PIPE CULVERTS, TYPE B 0.064" THICK
080600000-E	310	4	EA	15" BIT COAT CS PIPE ELBOWS, TYPE B 0.064" THICK
099500000-E	340	100	LF	PIPE REMOVAL
122000000-E	545	300	TON	INCIDENTAL STONE BASE
133000000-E	607	120	SY	INCIDENTAL MILLING
148900000-E	610	630	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
149800000-E	610	1,050	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE 119.0B
152500000-E	610	420	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A
156000000-E	620	103	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22
169300000-E	654	12	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR
200000000-N	806	19	EA	RIGHT OF WAY MARKERS
202200000-E	815	112	CY	SUBDRAIN EXCAVATION
203300000-E	815	84	CY	SUBDRAIN FINE AGGREGATE
204400000-E	815	500	LF	6" PERFORATED SUBDRAIN PIPE
205500000-E	815	15	EA	6" SUBDRAIN PIPE WYES, TEES, & ELBOWS
206600000-N	815	1	EA	CONCRETE PAD FOR SUBDRAIN PIPE OUTLET
207700000-E	815	6	LF	6" OUTLET PIPE (SUBDRAINS)
228600000-N	840	6	EA	MASONRY DRAINAGE STRUCTURES
236700000-N	840	6	EA	FRAME WITH TWO GRATES, STD 840.29
255600000-E	846	230	LF	SHOULDER BERM GUTTER
303000000-E	862	900	LF	STEEL BM GUARDRAIL
315000000-N	862	10	EA	ADDITIONAL GUARDRAIL POSTS
321500000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE III
327000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
364200000-E	876	330	TON	RIP RAP, CLASS A
364900000-E	876	210	TON	RIP RAP, CLASS B
365600000-E	876	1,680	SY	FILTER FABRIC FOR DRAINAGE
440000000-E	1110	384	SF	WORK ZONE SIGNS (STATIONARY)
440500000-E	1110	96	SF	WORK ZONE SIGNS (PORTABLE)
441000000-E	1110	119	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
443500000-N	1135	30	EA	CONES
445000000-N	1150	272	HR	FLAGGER
468500000-E	1205	2,800	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)
468600000-E	1205	2,800	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)
490000000-N	1251	19	EA	PERMANENT RAISED PAVEMENT MARKERS
600000000-E	1605	175	LF	TEMPORARY SILT FENCE
600600000-E	1610	210	TON	STONE FOR EROSION CONTROL, CLASS A

ItemNumber	Sec #	Quantity	Unit	Description
600900000-E	1610	235	TON	STONE FOR EROSION CONTROL, CLASS B
601200000-E	1610	185	TON	SEDIMENT CONTROL STONE
601500000-E	1615	4.5	ACR	TEMPORARY MULCHING
601800000-E	1620	150	LB	SEED FOR TEMPORARY SEEDING
602100000-E	1620	0.75	TON	FERTILIZER FOR TEMPORARY SEEDING
602400000-E	1622	60	LF	TEMPORARY SLOPE DRAINS
602700000-N	1622	2	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS
602900000-E	SP	300	LF	SAFETY FENCE
603000000-E	1630	1,435	CY	SILT EXCAVATION
603600000-E	1631	900	SY	MATTING FOR EROSION CONTROL
603700000-E	SP	15	SY	COIR FIBER MAT
603800000-E	SP	900	SY	PERMANENT SOIL REINFORCEMENT MAT
604200000-E	1632	150	LF	1/4" HARDWARE CLOTH
604800000-E	SP	30	SY	FLOATING TURBIDITY CURTAIN
6071030000-E	SP	310	LF	COIR FIBER BAFFLES
6071050000-E	SP	2	EA	*** SKIMMER (2")
608400000-E	1660	7.5	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	3.5	TON	FERTILIZER TOPDRESSING
611400000-N	SP	2.5	HR	SPECIALIZED HAND MOWING
611700000-N	SP	8	EA	RESPONSE FOR EROSION CONTROL
***** BEGIN SCHEDULE AA ***** ***** (3 ALTERNATES) *****				
036600000-E AA1	310	80	LF	15" RC PIPE CULVERTS, CLASS III
*** OR ***				
036600000-E AA2	310	64	LF	15" RC PIPE CULVERTS, CLASS III
053600000-E AA2	SP	16	LF	**** HDPE PIPE CULVERTS (15")
*** OR ***				
036600000-E AA5	310	64	LF	15" RC PIPE CULVERTS, CLASS III
054000000-E AA3	SP	16	LF	**** ALUMINIZED CORRUGATED STEEL PIPE CULVERTS, **** THICK (15", 0.064")
***** END SCHEDULE AA *****				

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

SUMMARY OF EXISTING ASPHALT PAVEMENT REMOVAL

PARCEL INDEX

Station	Station	Uncl. Excav.	Embank. +%	Borrow	Waste
PHASE I					
-L- 14+30	19+92	659	986	856	529
-L- 22+27	28+30	1025	5712	4687	0
-Y- 10+00	11+75	42	131	89	0
PHASE I SUBTOTALS:		1726	6829	5632	529
PROJECT SUBTOTAL:					
		1726	6829	5632	529
LOSS DUE TO CLEARING & GRUBBING		-200		200	
UNCLASSIFIED STRUCTURE EXCAVATION IN LIEU OF BORROW		0		-575	0
SUITABLE WASTE IN LIEU OF BORROW				5257	5257
REPLACE TOPSOIL ON BORROW PIT				263	
PROJECT TOTALS:		1526	6829	10777	5786
SAY		1610		5550	560

DRAINAGE DITCH EXCAVATION: 490 CY
 PAVEMENT STRUCTURE VOLUME: 6100 CY

SELECT GRANULAR MATERIAL (CLASS II OR III): 500 CY*
 CLASS IV SUBGRADE STABILIZATION MATERIAL: 100 TONS*
 #REF!
 FABRIC FOR SOIL STABILIZATION: 500 SY*
 UNDERCUT FOR EMBANKMENT STABILITY: 500 CY*
 SUBGRADE UNDERCUT: 100 CY*

* PER GEOTECHNICAL REPORT DATED 7/26/05

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.

LINE	Station	Station	LOC LT/RT/CL	CY	
-L-	18+00	20+62	CL	553	
-L-	22+60	26+50	CL	823	
				TOTAL:	1376
				SAY:	1400

NOTE:

APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, FINE GRADING, CLEARING AND GRUBBING AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE LUMP SUM PRICE FOR "GRADING."

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
1	4	WILLIAM BOYCE DAVIS
2	4	TIMOTHY NEAL BRISTOW
3	4	CLYDE J. O'FERRELL, JR.
4	4	DALE E. TRUITT
5	5	HASSELL A. CORBETT, JR.
5A	4 & 5	HENRY F. HILLARD, JR.
6	4 & 5	BOBBY PERRY CORBETT

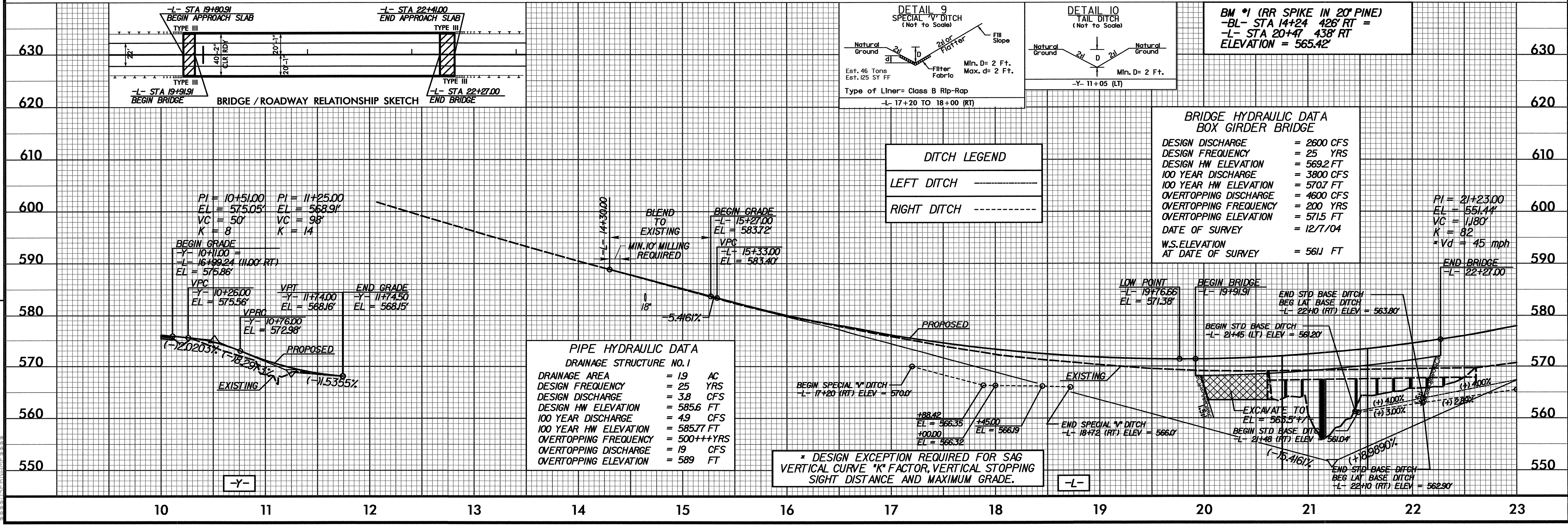
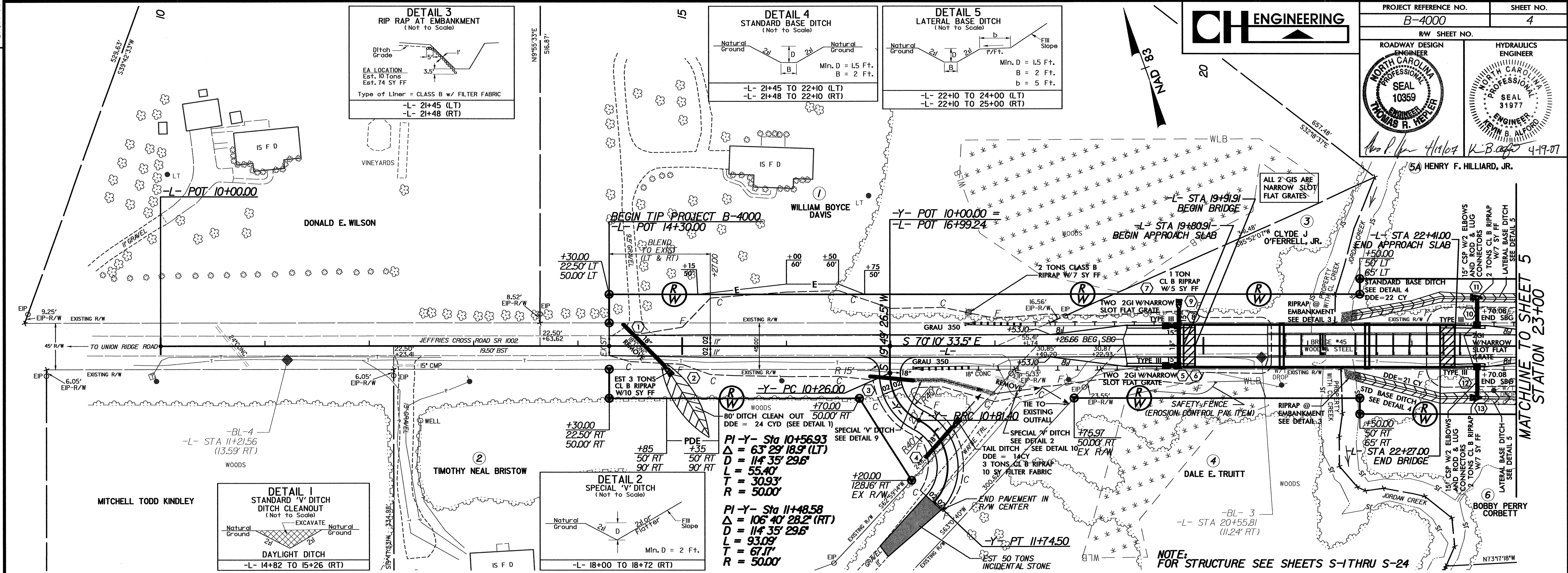
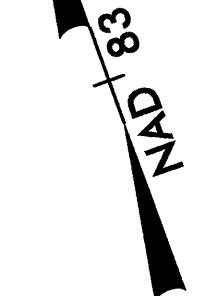
8/17/09

PROJECT REFERENCE NO. **B-4000** SHEET NO. **4**

RW SHEET NO. ROADWAY DESIGN ENGINEER
 NORTH CAROLINA PROFESSIONAL SEAL
 10359
 THOMAS R. HILLIARD

HYDRAULICS ENGINEER
 NORTH CAROLINA PROFESSIONAL SEAL
 31977
 THOMAS B. ALFORD

5A HENRY F. HILLIARD, JR.
 4-19-07

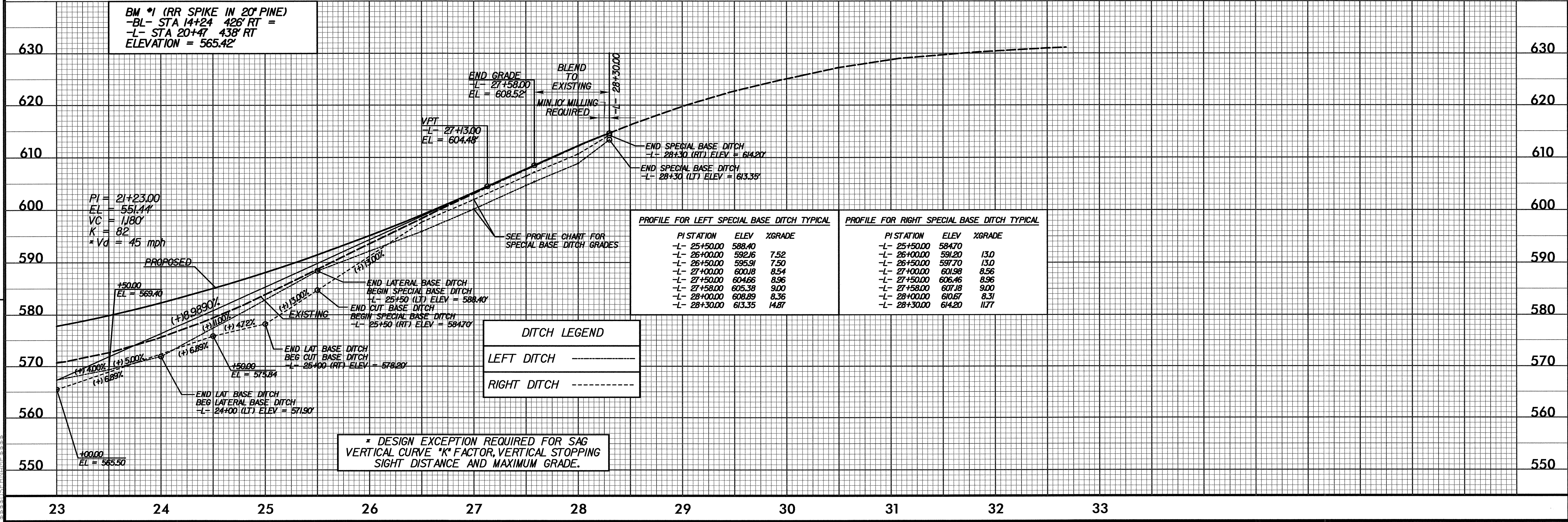
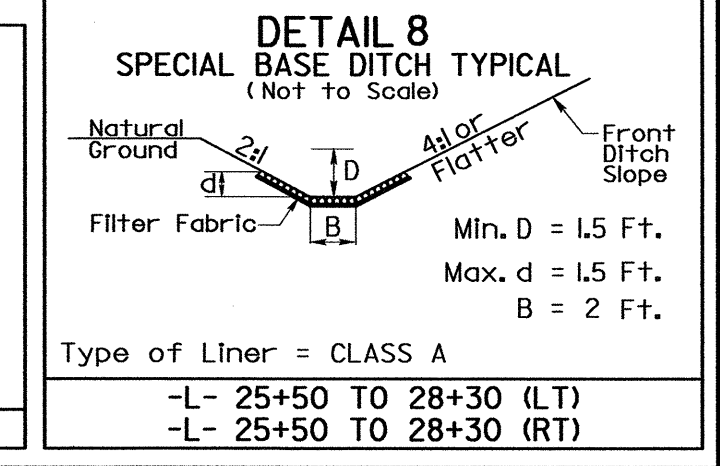
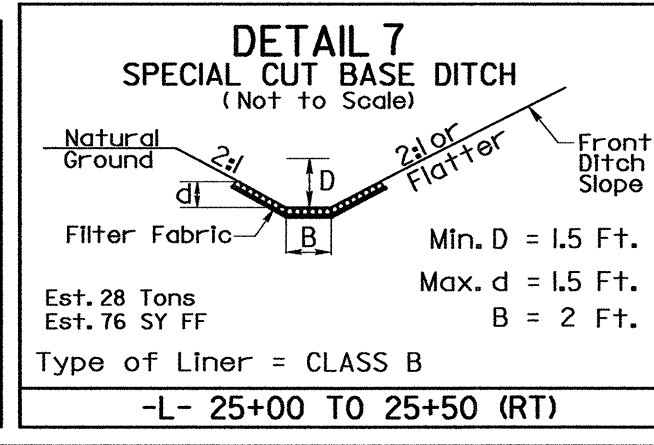
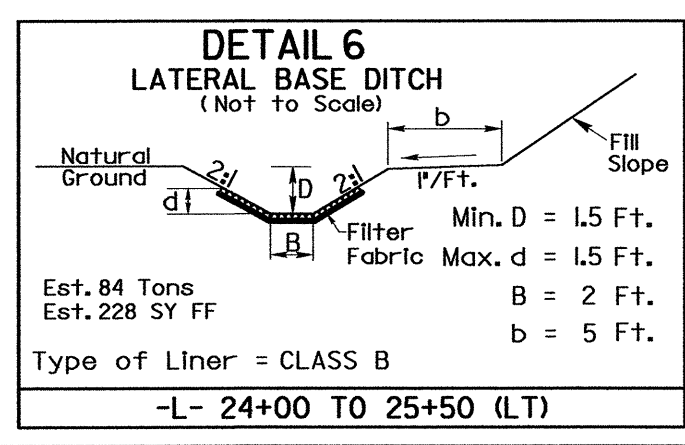
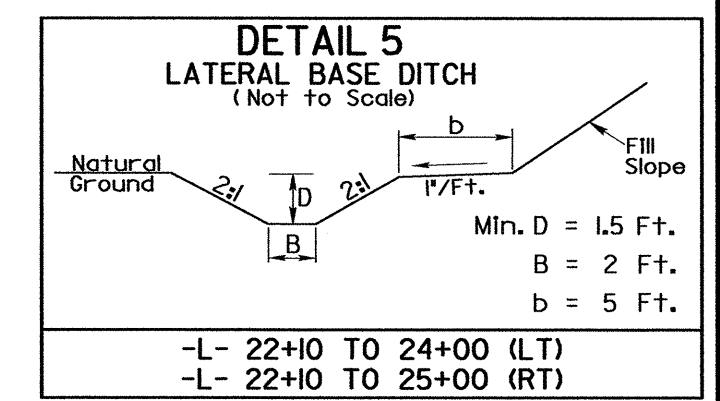
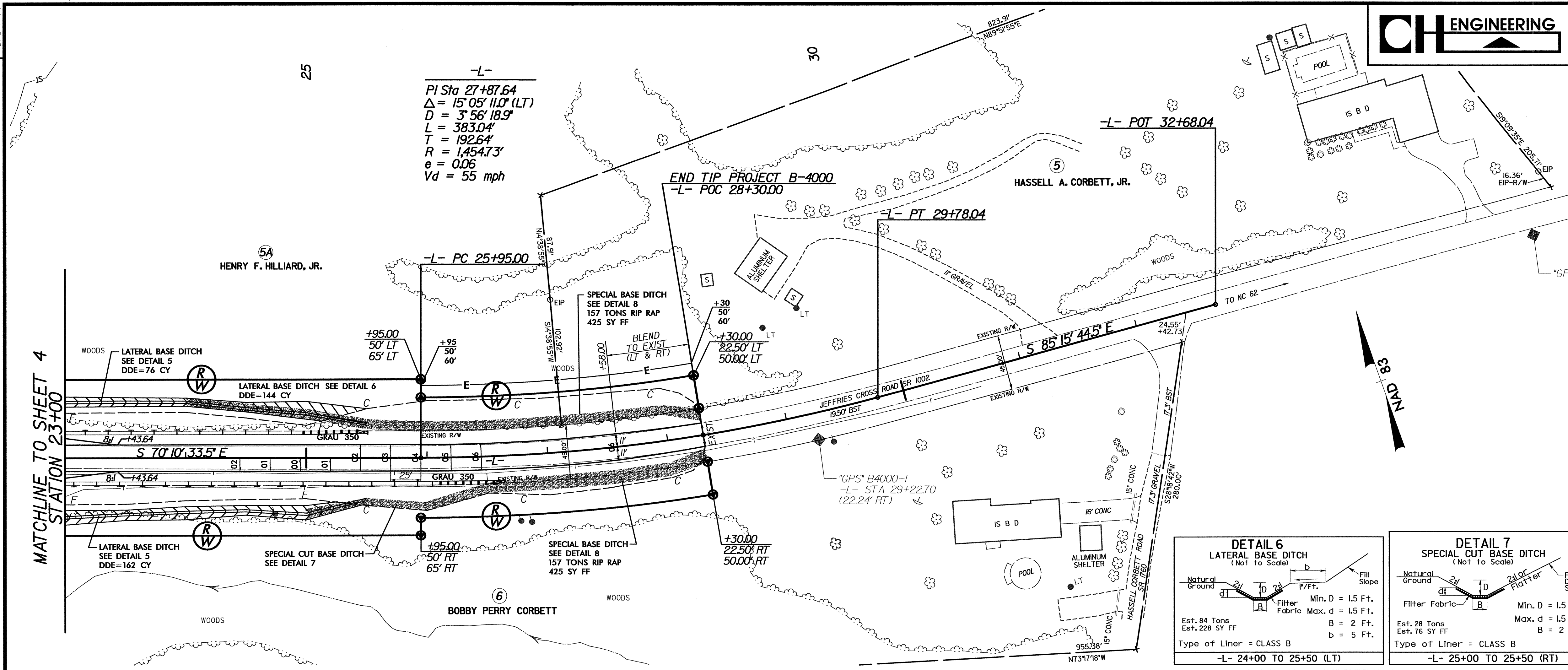


REVISIONS

MATCHLINE TO SHEET 5
STATION 23+00

NOTE: FOR STRUCTURE SEE SHEETS S-1 THRU S-24

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DITCH LEGEND

LEFT DITCH

RIGHT DITCH

* DESIGN EXCEPTION REQUIRED FOR SAG VERTICAL CURVE "K" FACTOR, VERTICAL STOPPING SIGHT DISTANCE AND MAXIMUM GRADE.

REVISIONS

8/17/09
MATCHLINE TO SHEET 4 STATION 23+00
MATCHLINE TO SHEET 3 STATION 33+00