

09/28/05

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

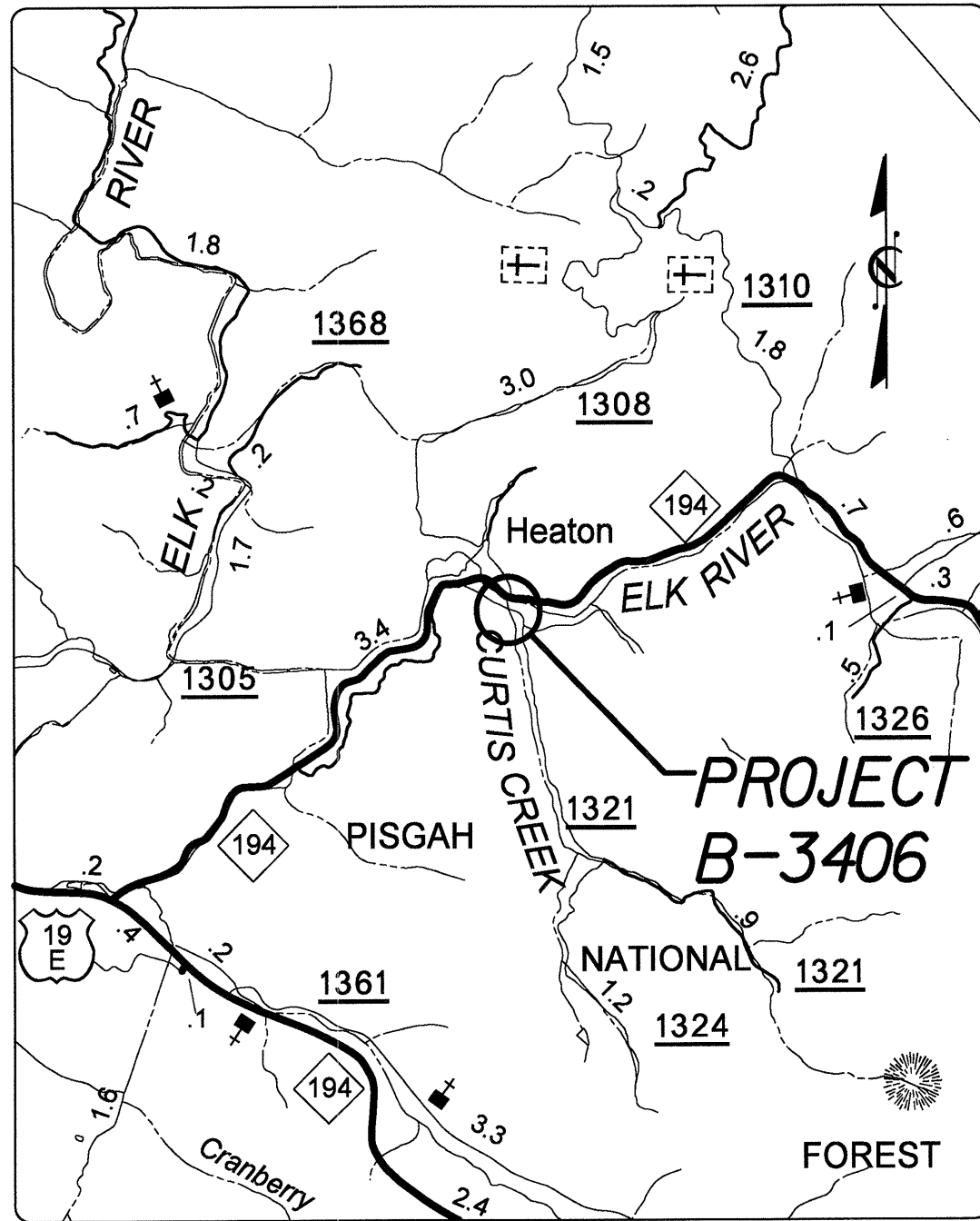
AVERY COUNTY

**LOCATION: BRIDGE NO. 28 OVER CURTIS CREEK
ON SR 1321**

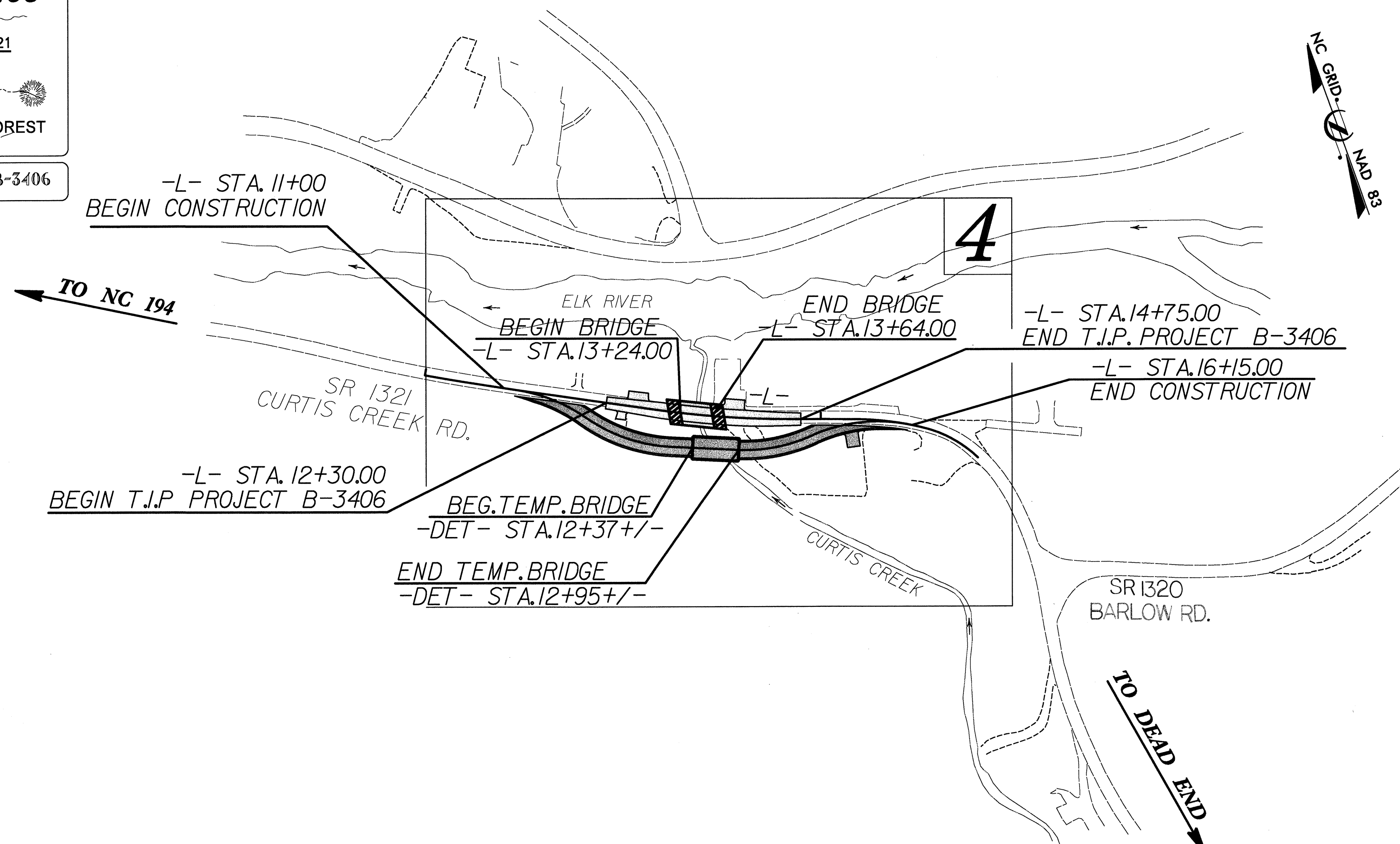
**TYPE OF WORK: GRADING, DRAINAGE, PAVING,
STRUCTURE, AND GUARDRAIL**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3406	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33037.1.1	BRZ-1321(1)	PE	
33037.2.2	BRZ-1321(1)	RW/UTIL	
33037.3.2	BRZ-1321(1)	CONSTRUCTION	

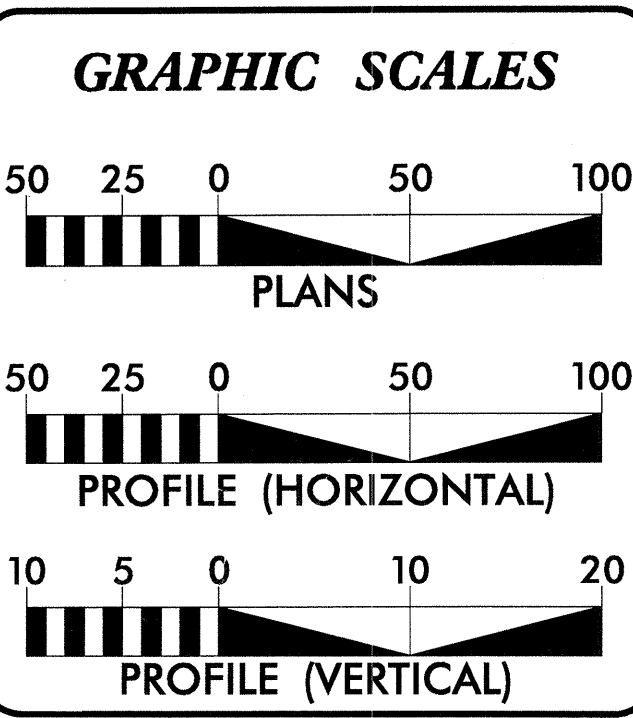
TIP PROJECT: B-3406



VICINITY MAP FOR PROJECT B-3406



DESIGN EXCEPTION REQUIRED FOR VERTICAL SAG 'K' FACTOR AND SUPERELEVATION.



DESIGN DATA

ADT 2006 =	967
ADT 2026 =	1,411
DHV =	10 %
D =	60 %
T =	3 % *
V =	60 MPH
* TTST 1%	DUAL 2%

PROJECT LENGTH

LENGTH ROADWAY T.I.P. PROJECT B-3406	=	0.038 MILES
LENGTH STRUCTURES T.I.P. PROJECT B-3406	=	0.008 MILES
TOTAL LENGTH OF T.I.P. PROJECT B-3406	=	0.046 MILES

EarthTech
A Tyco International Ltd. Company
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607
(919) 854-6200 - (919) 854-6259(FAX)

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
OCTOBER 21, 2005

LETTING DATE:
DECEMBER 19, 2006

NEIL J. DEAN, P.E.
EARTH TECH PROJECT MANAGER

CATHY S. HOUSER, P.E.
NCDOT PROJECT ENGINEER

ROBERT J. STROUP, P.E.
NCDOT PROJECT DESIGN ENGINEER

HYDRAULIC ENGINEER

SIGNATURE: JOHN D.R. NICHOLS, P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: NEIL J. DEAN, P.E.

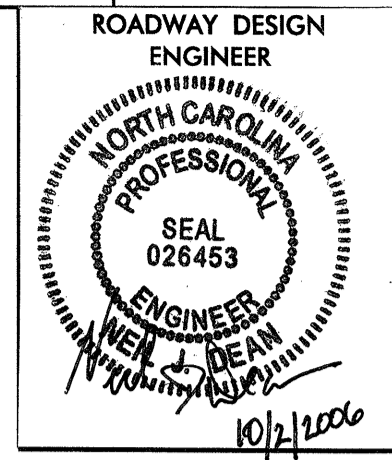
**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

Art McMillan

ART McMILLAN, P.E.
STATE HIGHWAY DESIGN ENGINEER

10:38:42 AM
C:\Roadway\proj\B3406_rdy_tsh.dgn
brl\p\pe

CONTRACT: C201582



SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
2 THRU 2-A	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
2-B	DETOUR PLAN
2-C	TEMPORARY FABRIC WALL - WIRE MESH FORM OPTION
2-D	TEMPORARY FABRIC WALL - FALSEWORK FORM OPTION
3	SUMMARY OF QUANTITIES
3A	SUMMARY OF DRAINAGE QUANTITIES
3B	SUMMARY OF GUARDRAIL, EARTHWORK SUMMARY, AND ASPHALT PAVEMENT REMOVAL SUMMARY
4	PLAN SHEET
5	PROFILE SHEET
TCP-1 THRU TCP-7	TRAFFIC CONTROL PLANS
PM-1 THRU PM-2	PAVEMENT MARKING PLANS
EC-1 THRU EC-5	EROSION CONTROL PLANS
RF-1	REFORESTATION DETAIL SHEET
SIGN-1	SIGNING PLANS
UC-1 THRU UC-2	UTILITY CONSTRUCTION PLANS
UD-1 THRU UD-2	UTILITIES BY OTHERS PLANS
X-1 THRU X-5	CROSS-SECTIONS
S-1 THRU S-18	STRUCTURE PLANS

GENERAL NOTES:

2006 SPECIFICATIONS
EFFECTIVE: 07-18-06
REVISED:

EFF. 07-18-06

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'
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 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
815.03	Pipe Underdrain and Blind Drain
840.29	Frames and Narrow Slot Flat Grates
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
846.01	Concrete Curb, Gutter and Curb & Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.02	Guide for Rip Rap at Pipe Outlets

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 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.

SUBSURFACE PLANS:

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

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.

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:

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

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

Table listing symbols for boundaries and property: State Line, County Line, Township Line, City Line, Reservation Line, Property Line, Existing Iron Pin, Property Corner, Property Monument, Parcel/Sequence Number, Existing Fence Line, Proposed Woven Wire Fence, Proposed Chain Link Fence, Proposed Barbed Wire Fence, Existing Wetland Boundary, Proposed Wetland Boundary, Existing High Quality Wetland Boundary, Existing Endangered Animal Boundary, Existing Endangered Plant Boundary.

BUILDINGS AND OTHER CULTURE:

Table listing symbols for buildings and other culture: Gas Pump Vent or U/G Tank Cap, Sign, Well, Small Mine, Foundation, Area Outline, Cemetery, Building, School, Church, Dam.

HYDROLOGY:

Table listing symbols for hydrology: Stream or Body of Water, Hydro, Pool or Reservoir, River Basin Buffer, Flow Arrow, Disappearing Stream, Spring, Swamp Marsh, Proposed Lateral, Tail, Head Ditch, False Sump.

RAILROADS:

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

RIGHT OF WAY:

Table listing symbols for right of way: Baseline Control Point, Existing Right of Way Marker, Existing Right of Way Line, Proposed Right of Way Line, Proposed Right of Way Line with Iron Pin and Cap Marker, Proposed Right of Way Line with Concrete or Granite Marker, Existing Control of Access, Proposed Control of Access, Existing Easement Line, Proposed Temporary Construction Easement, Proposed Temporary Drainage Easement, Proposed Permanent Drainage Easement, Proposed Permanent Utility Easement.

ROADS AND RELATED FEATURES:

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

VEGETATION:

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

EXISTING STRUCTURES:

Table listing symbols for existing structures: MAJOR: Bridge, Tunnel or Box Culvert, Bridge Wing Wall, Head Wall and End Wall; MINOR: Head and End Wall, Pipe Culvert, Footbridge, Drainage Box: Catch Basin, DI or JB, Paved Ditch Gutter, Storm Sewer Manhole, Storm Sewer.

UTILITIES:

Table listing symbols for utilities: POWER: Existing Power Pole, Proposed Power Pole, Existing Joint Use Pole, Proposed Joint Use Pole, Power Manhole, Power Line Tower, Power Transformer, U/G Power Cable Hand Hole, H-Frame Pole, Recorded U/G Power Line, Designated U/G Power Line (S.U.E.*).

TELEPHONE:

Table listing symbols for telephone: Existing Telephone Pole, Proposed Telephone Pole, Telephone Manhole, Telephone Booth, Telephone Pedestal, Telephone Cell Tower, U/G Telephone Cable Hand Hole, Recorded U/G Telephone Cable, Designated U/G Telephone Cable (S.U.E.*), Recorded U/G Telephone Conduit, Designated U/G Telephone Conduit (S.U.E.*), Recorded U/G Fiber Optics Cable, Designated U/G Fiber Optics Cable (S.U.E.*).

WATER:

Table listing symbols for water: Water Manhole, Water Meter, Water Valve, Water Hydrant, Recorded U/G Water Line, Designated U/G Water Line (S.U.E.*), Above Ground Water Line.

TV:

Table listing symbols for TV: TV Satellite Dish, TV Pedestal, TV Tower, U/G TV Cable Hand Hole, Recorded U/G TV Cable, Designated U/G TV Cable (S.U.E.*), Recorded U/G Fiber Optic Cable, Designated U/G Fiber Optic Cable (S.U.E.*).

GAS:

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

SANITARY SEWER:

Table listing symbols for sanitary sewer: Sanitary Sewer Manhole, Sanitary Sewer Cleanout, U/G Sanitary Sewer Line, Above Ground Sanitary Sewer, Recorded SS Forced Main Line, Designated SS Forced Main Line (S.U.E.*).

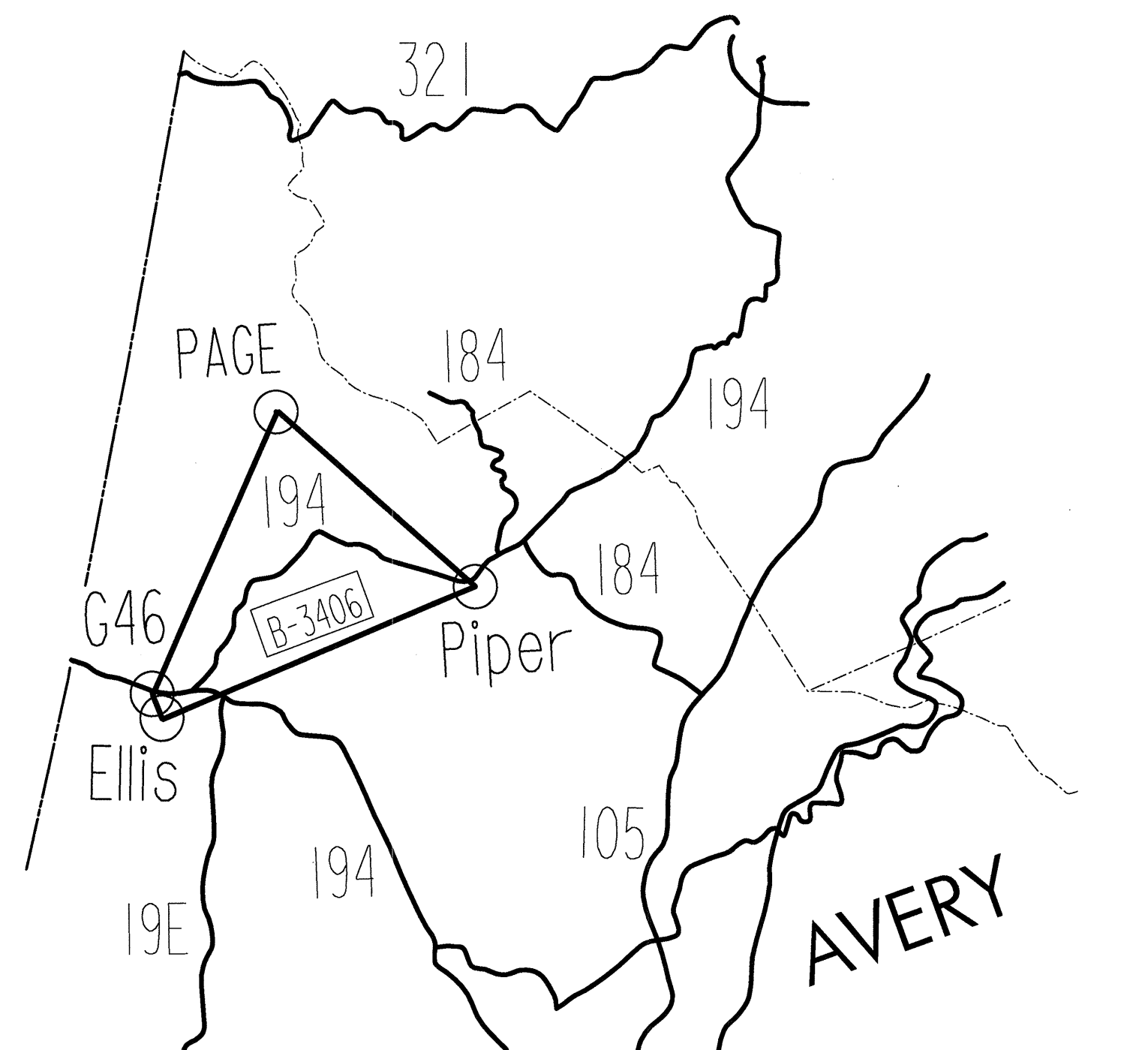
MISCELLANEOUS:

Table listing symbols for miscellaneous: Utility Pole, Utility Pole with Base, Utility Located Object, Utility Traffic Signal Box, Utility Unknown U/G Line, U/G Tank; Water, Gas, Oil, A/G Tank; Water, Gas, Oil, U/G Test Hole (S.U.E.*), Abandoned According to Utility Records, End of Information.

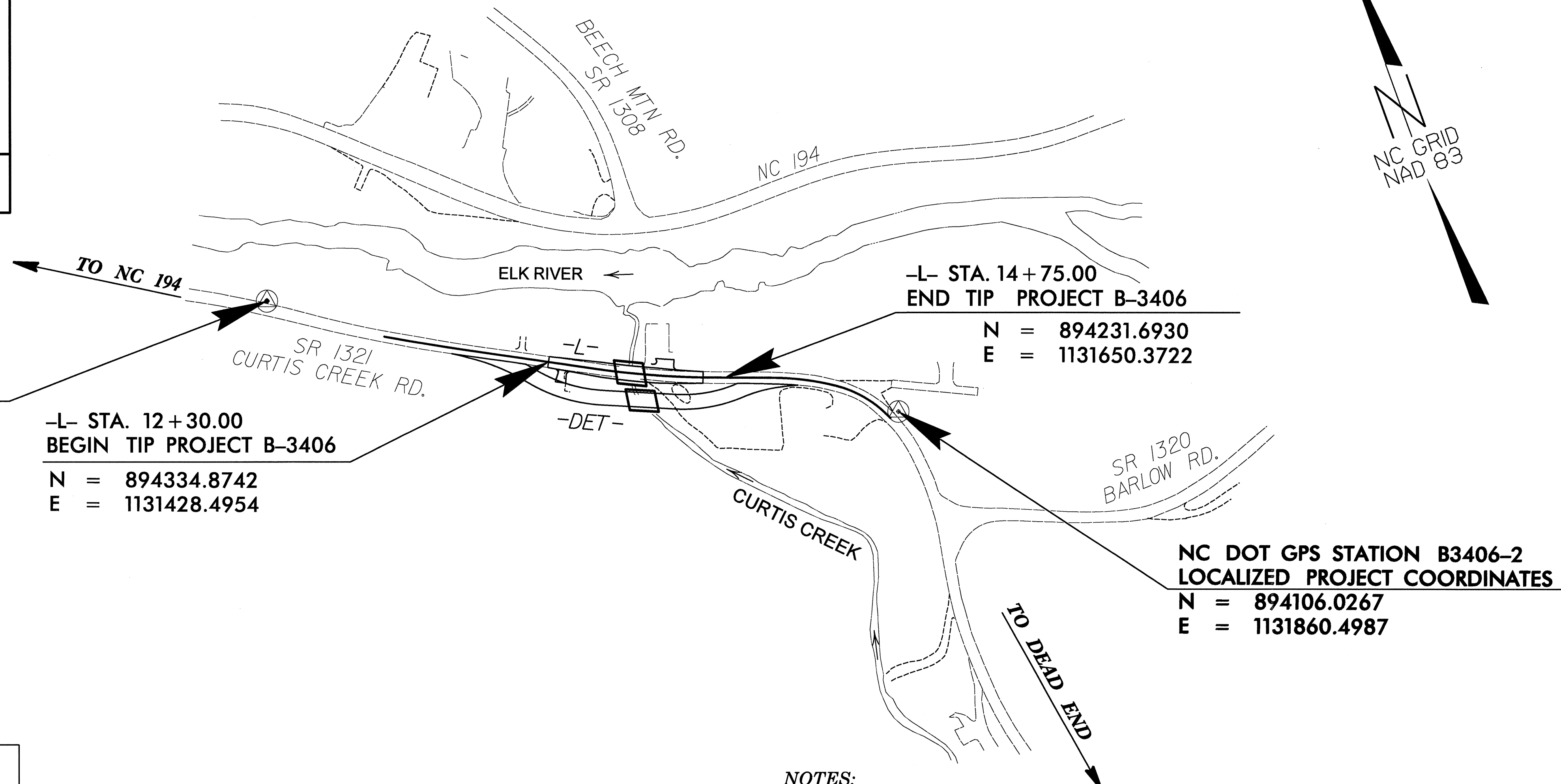
SURVEY CONTROL SHEET B-3406

BL	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
BL1	GPS B3406-1		894546.1407	1131090.5364	3037.97	OUTSIDE PROJECT LIMITS	
BL2	BL-2		894243.9811	1131554.9099	3036.30	13+82.64	23.89 RT
BL3	GPS B3406-2		894106.0267	1131860.4987	3047.08	OUTSIDE PROJECT LIMITS	

*****	*****	*****
BM1 ELEVATION = 3037.97'	BM2 ELEVATION = 3038.08'	BM3 ELEVATION = 3047.08'
N 894546. E 1131090.	N 894328. E 1131598.	N 894106. E 1131860.
GPS CAP STAMPED B3406-1	L STATION 13+88 70' LEFT	GPS CAP STAMPED B3406-2
OUTSIDE PROJECT LIMITS	P.K. NAIL IN CONC. WALK	OUTSIDE PROJECT LIMITS
*****	*****	*****



GPS CONTROL NETWORK



**NC DOT GPS STATION B3406-1
LOCALIZED PROJECT COORDINATES**
 N = 894546.1407
 E = 1131090.5364

**-L- STA. 12+30.00
BEGIN TIP PROJECT B-3406**
 N = 894334.8742
 E = 1131428.4954

**-L- STA. 14+75.00
END TIP PROJECT B-3406**
 N = 894231.6930
 E = 1131650.3722

**NC DOT GPS STATION B3406-2
LOCALIZED PROJECT COORDINATES**
 N = 894106.0267
 E = 1131860.4987

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B3406-1" WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 894546.1407(ft) EASTING: 1131090.5364(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99986077 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B3406-1" TO -L- STATION 12+30.00 IS S 57°59'22" E 398.56 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NGVD 29

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/LOCATIONPROJECT/](http://www.doh.dot.state.nc.us/preconstruct/highway/locationproject/)

THE FILES TO BE FOUND ARE AS FOLLOWS:
 TIP B3406_LS_CONTROL_050708.TXT

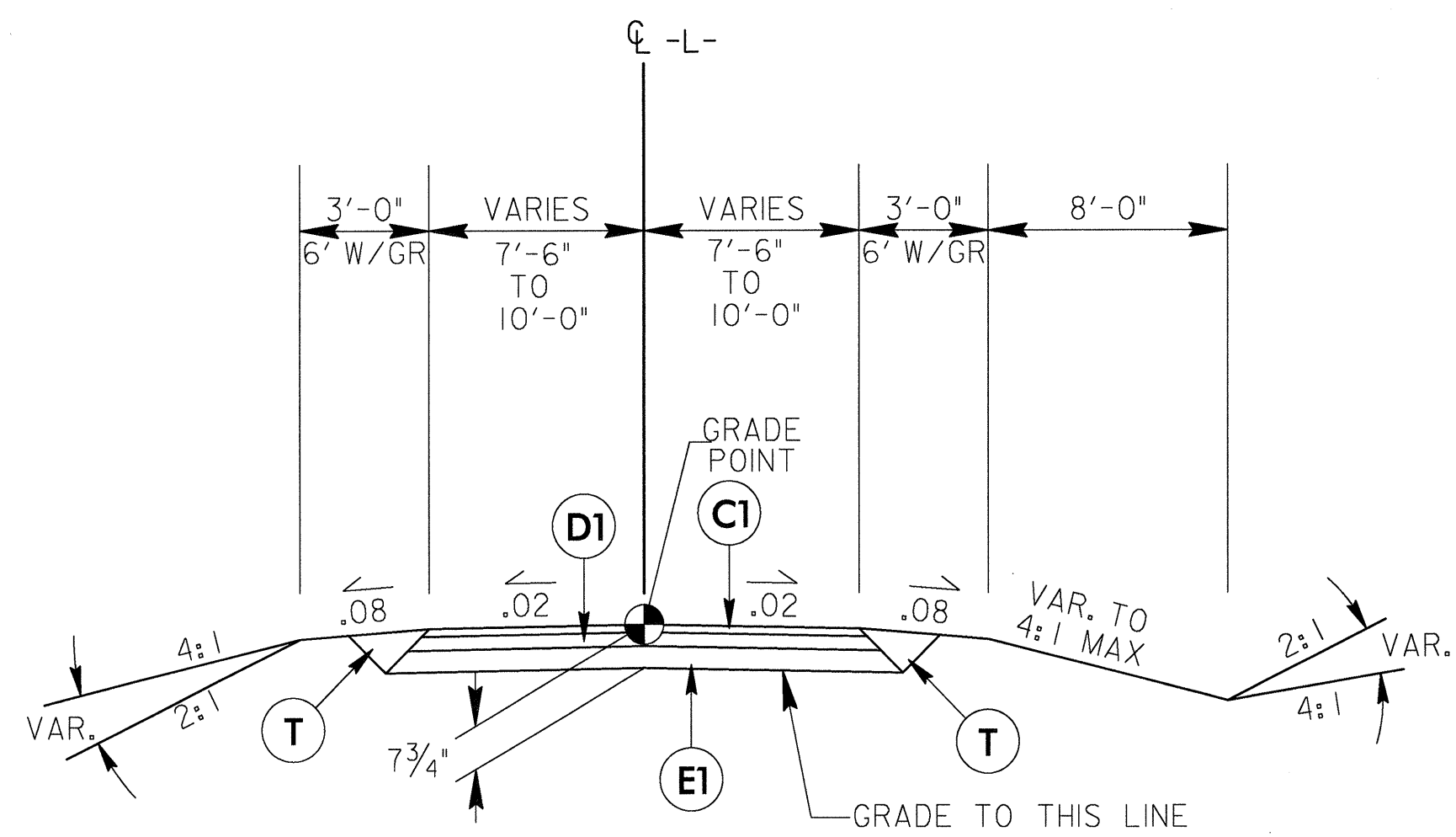
SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

⊙ 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.

NOTE: DRAWING NOT TO SCALE

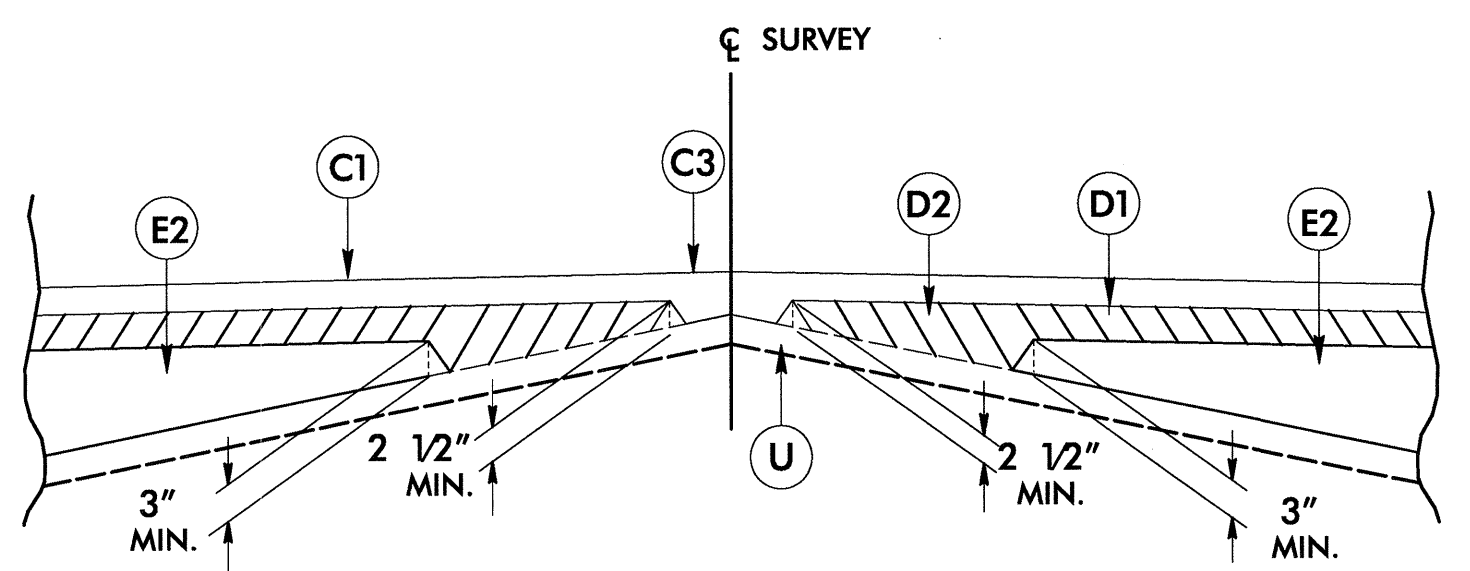
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 2.5" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C3	PROP. VAR. DEPTH ASPHALT CONCRETE 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 1/2" IN DEPTH.
D1	PROP. APPROX. 2.5" 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. 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 1/2" IN DEPTH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL SHEET No. 2)

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

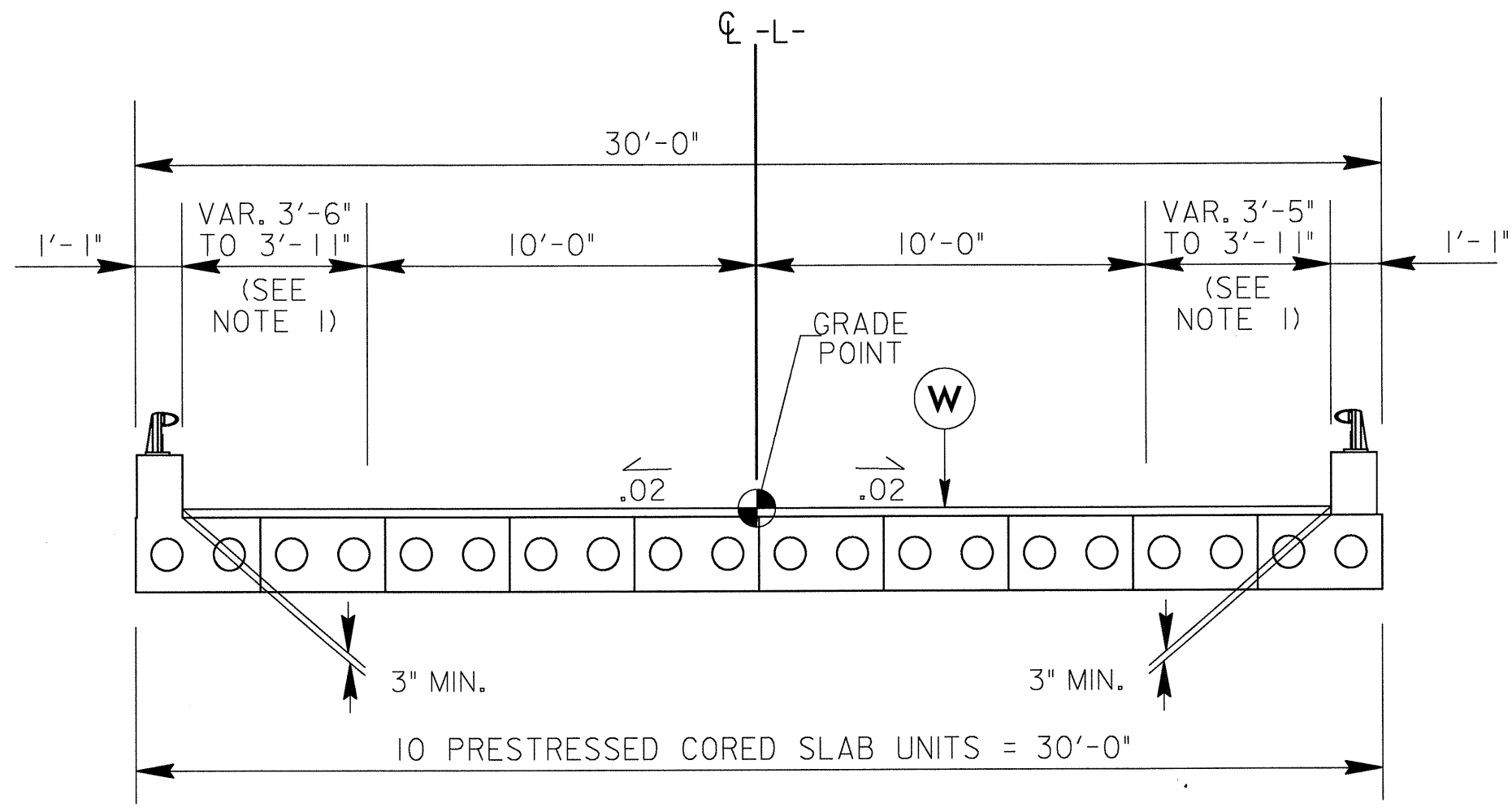


TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1:
FROM -L- STA. 12+30.00 TO -L- STA. 13+24.00 (BEGIN BRIDGE)
FROM -L- STA. 13+64.00 (END BRIDGE) TO -L- STA. 14+75.00



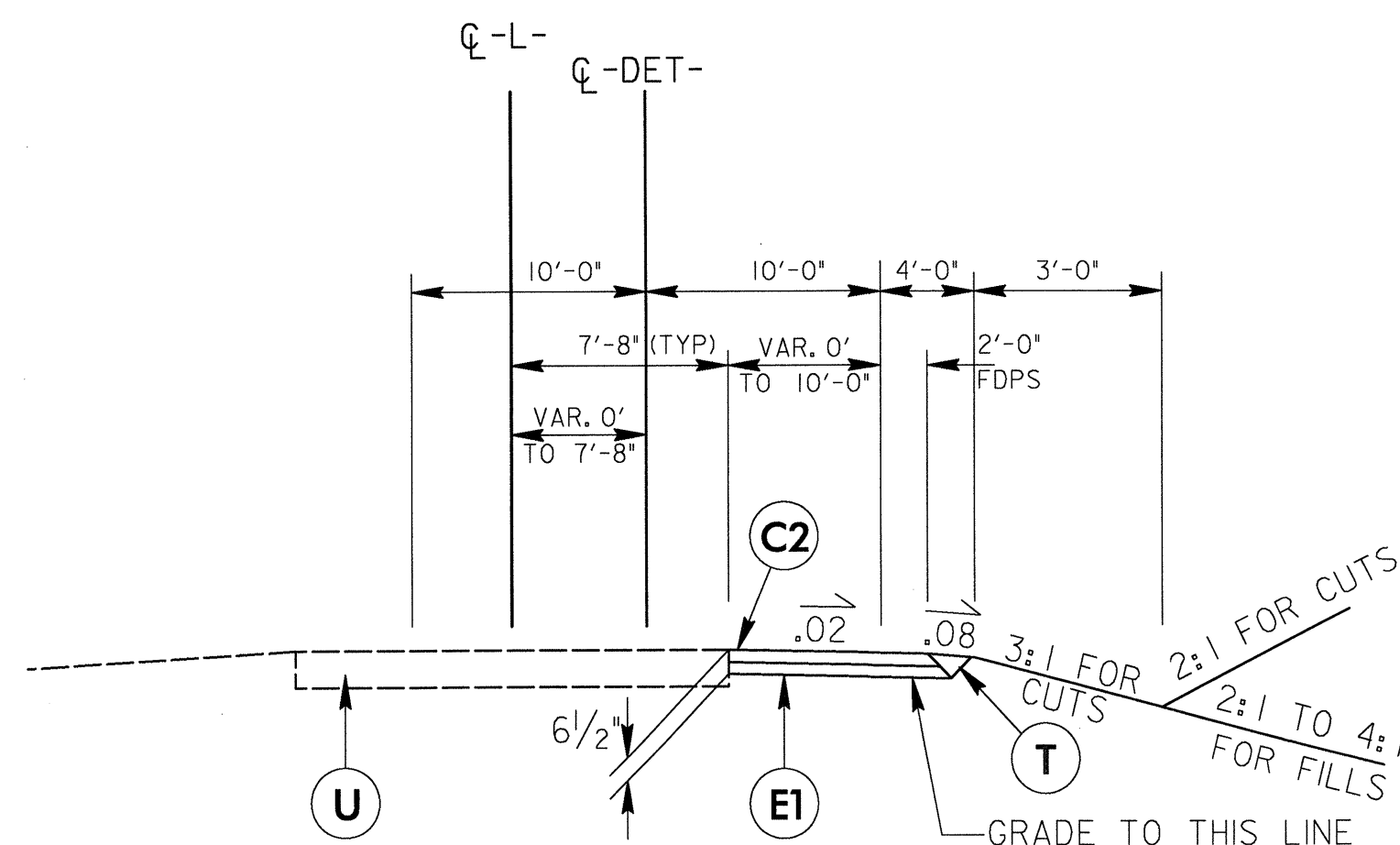
Detail Showing Method of Wedging



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2:
FROM -L- STA. 13+24.00 (BEGIN BRIDGE) TO -L- STA. 13+64.00 (END BRIDGE)
* NOTE 1: BRIDGE IS TANGENT, TRAVEL LANES ARE IN HORIZONTAL CURVE (SEE PLANS)

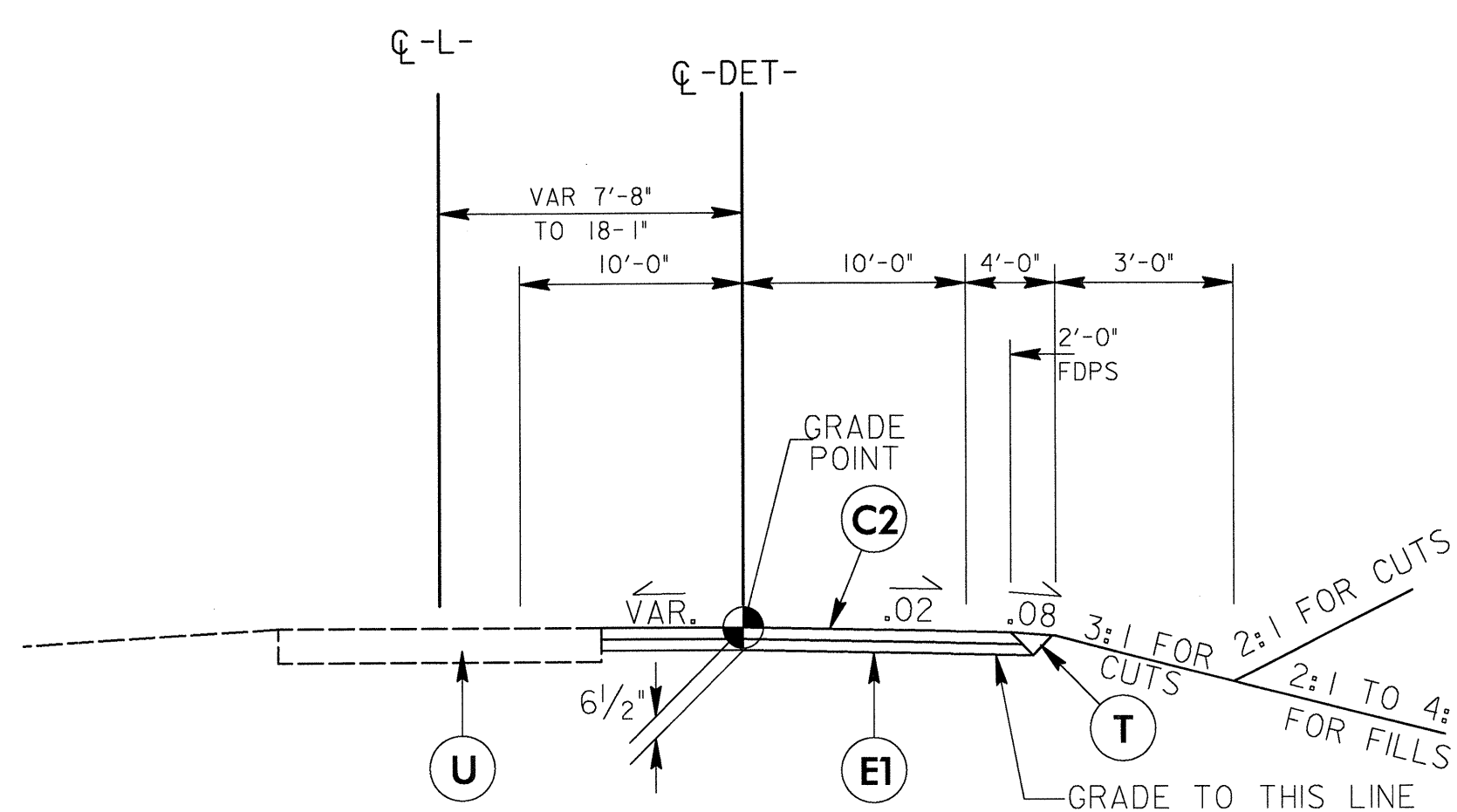
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TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3:

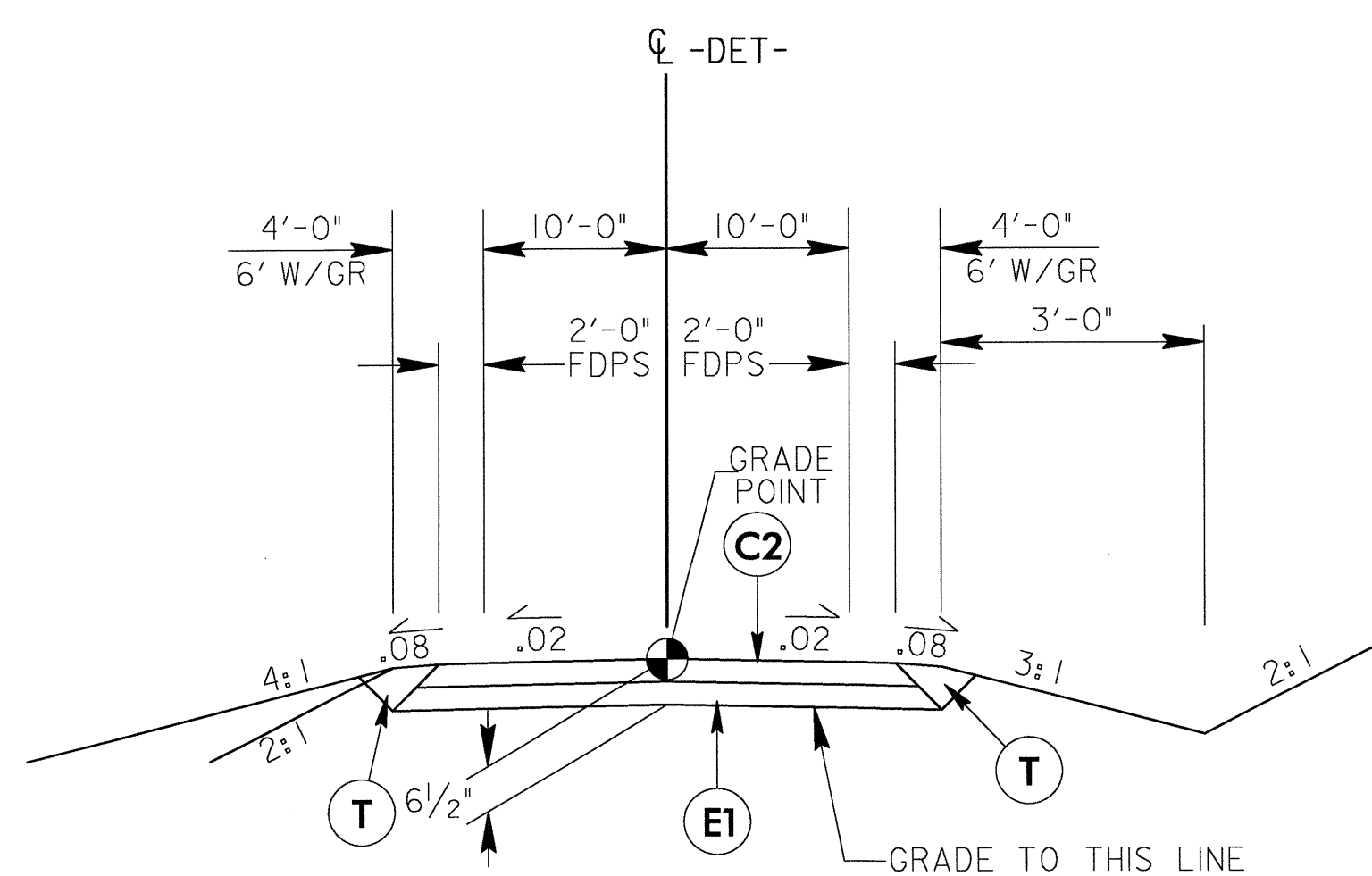
FROM -DET- STA. 10+00.00 TO -DET- STA. 10+54.67
FROM -DET- STA. 14+29.43 TO -DET- STA. 15+12.57



TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4:

FROM -DET- STA. 10+54.67 TO -DET- STA. 10+86.41
FROM -DET- STA. 13+93.72 TO -DET- STA. 14+29.43



TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 5:

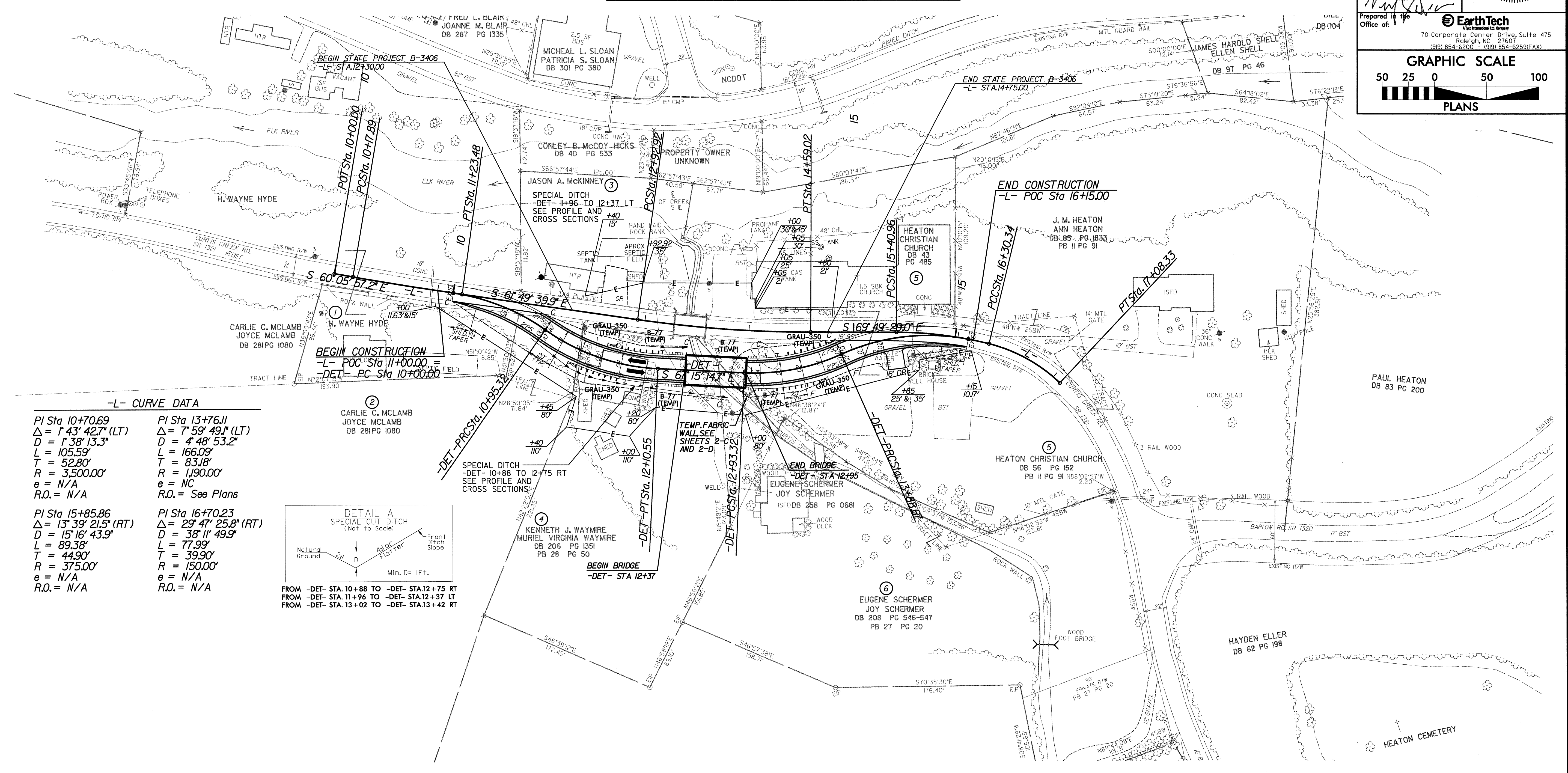
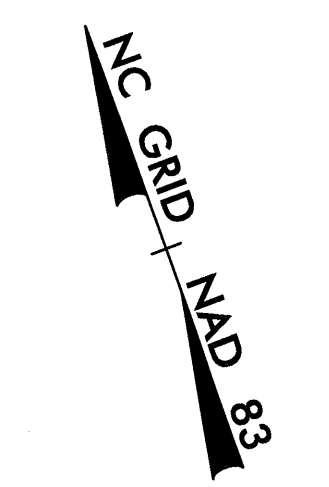
FROM -DET- STA. 10+86.41 TO -DET- STA. 12+37 +/- (BEGIN TEMP. BRIDGE)
FROM -DET- STA. 12+95 +/- (END TEMP. BRIDGE) TO -DET- STA. 13+93.72

PAVEMENT SCHEDULE	
C1	1.25" SF9.5A
C2	2.5" SF9.5A
C3	VAR. S9.5A
D1	2.5" I19.0B
E1	4" B25.0B
T	EARTH
U	EXISTING PAVEMENT

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

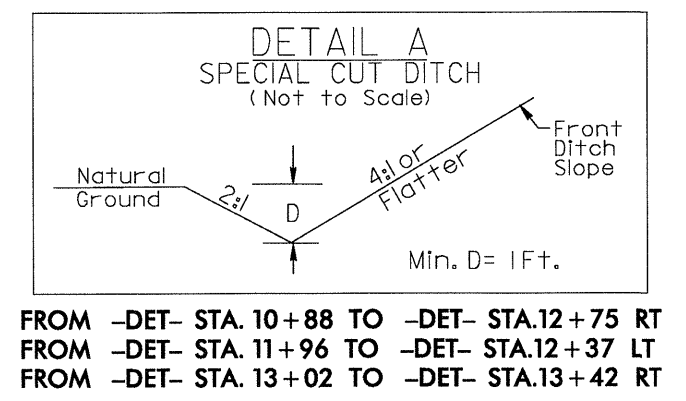
NOTE: SEE SHEET 2 FOR DETAILED DESCRIPTION OF PAVEMENT SCHEDULE

DETOUR PLAN



-L- CURVE DATA

PI Sta 10+70.69 Δ = 1° 43' 42.7" (LT) D = 1° 38' 13.3" L = 105.59' T = 52.80' R = 3,500.00' e = N/A R.O. = N/A	PI Sta 13+76.11 Δ = 7° 59' 49.1" (LT) D = 4° 48' 53.2" L = 166.09' T = 83.18' R = 1,190.00' e = NC R.O. = See Plans
PI Sta 15+85.86 Δ = 13° 39' 21.5" (RT) D = 15° 16' 43.9" L = 89.38' T = 44.90' R = 375.00' e = N/A R.O. = N/A	PI Sta 16+70.23 Δ = 29° 47' 25.8" (RT) D = 38° 11' 49.9" L = 77.99' T = 39.90' R = 150.00' e = N/A R.O. = N/A



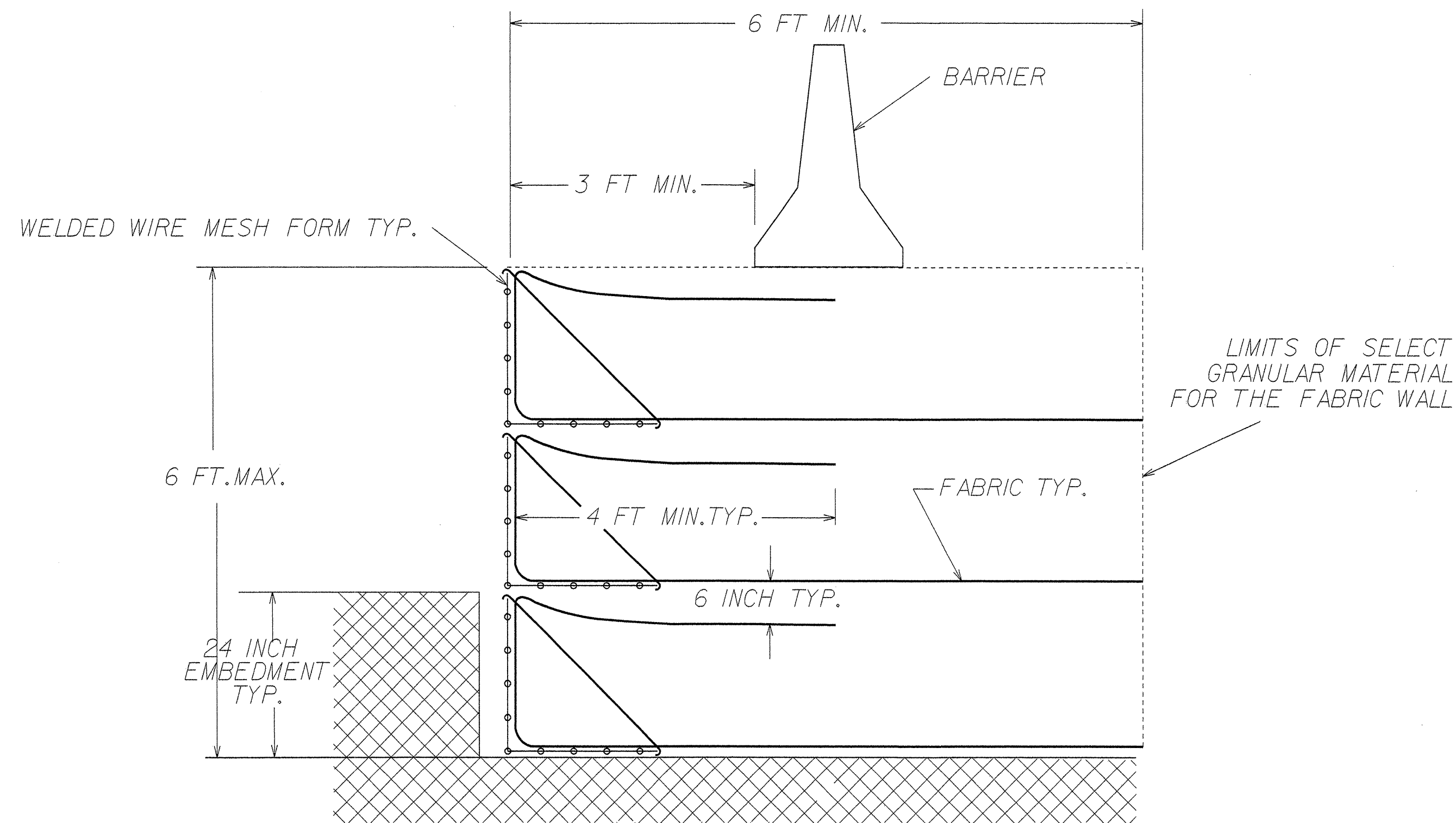
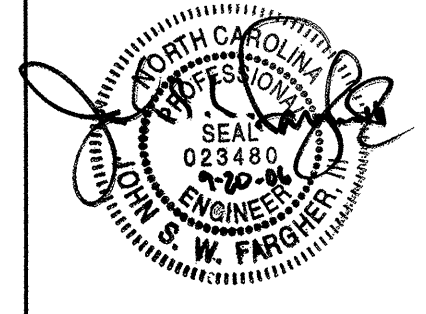
-DETOUR- CURVE DATA

PI Sta 10+48.54 Δ = 26° 38' 28.2" (RT) D = 27° 56' 57.0" L = 95.32' T = 48.54' R = 205.00' e = SEE PLANS R.O. = SEE PLANS	PI Sta 11+54.50 Δ = 32° 12' 23.0" (LT) D = 27° 56' 57.0" L = 115.23' T = 59.18' R = 205.00' e = 0.04 FT/FT R.O. = SEE PLANS	PI Sta 13+41.88 Δ = 26° 38' 57.4" (LT) D = 27° 56' 57.0" L = 95.35' T = 48.55' R = 205.00' e = 0.04 FT/FT R.O. = SEE PLANS	PI Sta 14+52.58 Δ = 34° 37' 39.3" (RT) D = 27° 56' 57.0" L = 123.89' T = 63.90' R = 205.00' e = SEE PLANS R.O. = SEE PLANS
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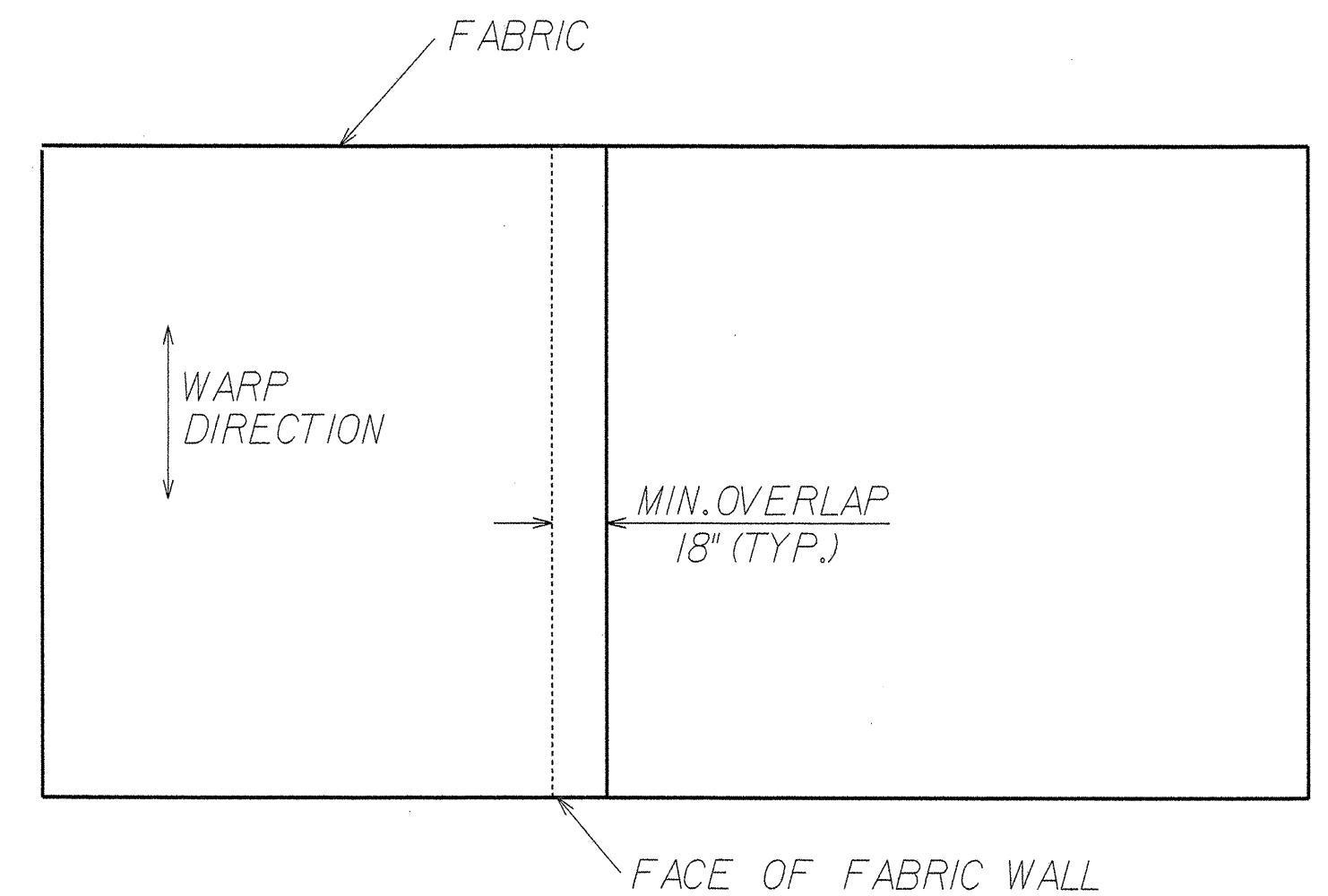
FOR -DET- PROFILE, SEE SHEET 5
FOR STRUCTURE PLANS SEE SHEET S-1 TO S-18

REVISIONS

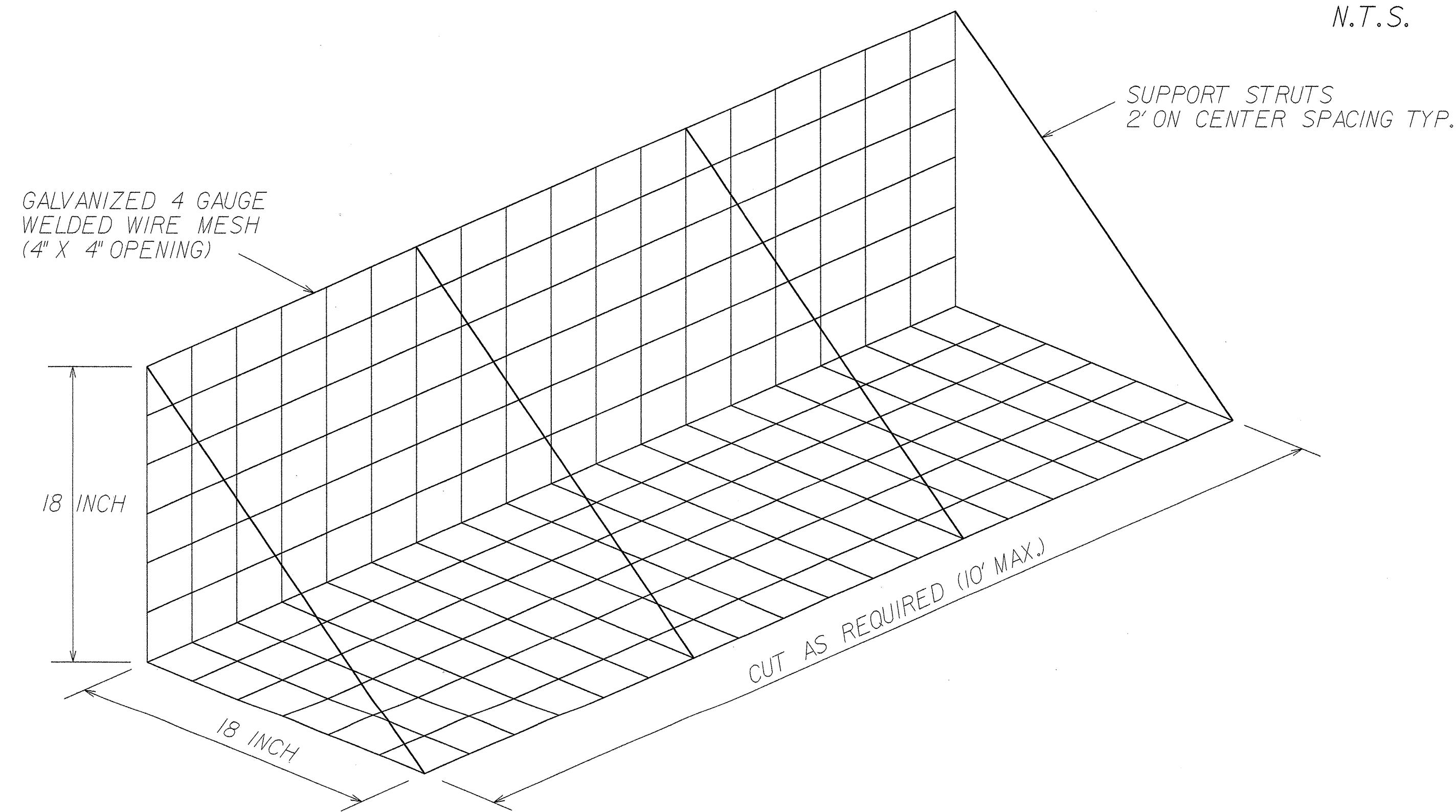
DATE: 9/29/2005
TIME: 10:58 AM
USER: p:\projects\10\B-3406_10\detour.dgn



TYPICAL FABRIC WALL CROSS SECTION WHEN USING WIRE MESH FORM OPTION
N.T.S.



PLAN VIEW OF FABRIC OVERLAP
N.T.S.



WELDED WIRE MESH FORM
N.T.S.

NOTES:

- FABRIC FOR THE TEMPORARY FABRIC WALL SHALL HAVE A MINIMUM WIDE WIDTH TENSILE STRENGTH OF 120 LB/INCHES IN THE WARP AND FILL DIRECTION (BASED ON ASTM-D4595) AT 5% ELONGATION AND A MINIMUM ULTIMATE WIDE WIDTH TENSILE STRENGTH OF 360 LB/IN IN THE WARP DIRECTION.
- LOCATIONS AND QUANTITIES PROVIDED ARE ONLY APPROXIMATE. EXACT LOCATIONS AND QUANTITIES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- PROPER DRAINAGE AT THE TOP OF THE WALL SHALL BE AS DIRECTED BY THE ENGINEER.
- SELECT GRANULAR MATERIAL SHALL BE CLASS II IN ACCORDANCE WITH SECTION 1016 OF THE STANDARD SPECIFICATIONS. CLASS II SHALL ALSO BE USED FOR THE FILL AREAS BEHIND THE TEMPORARY FABRIC WALL.
- THE CONTRACTOR MAY ELECT TO USE A FORMING SYSTEM TO CONSTRUCT THE TEMPORARY FABRIC WALL OTHER THAN THE FALSEWORK OR WIRE MESH FORM OPTIONS SHOWN IN THESE PLANS. HOWEVER, THE ALTERNATE METHOD MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- SEE ROADWAY PLANS FOR APPROXIMATE FABRIC WALL LOCATION AND OVERALL TYPICAL CROSS SECTION.

GEOTECHNICAL ENGINEERING UNIT
 EASTERN REGIONAL OFFICE
 WESTERN REGIONAL OFFICE

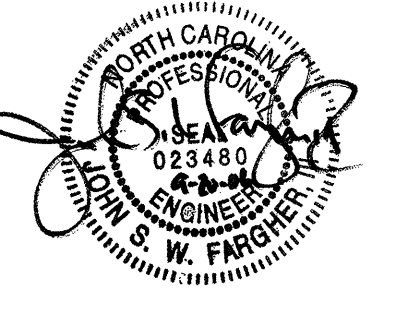
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

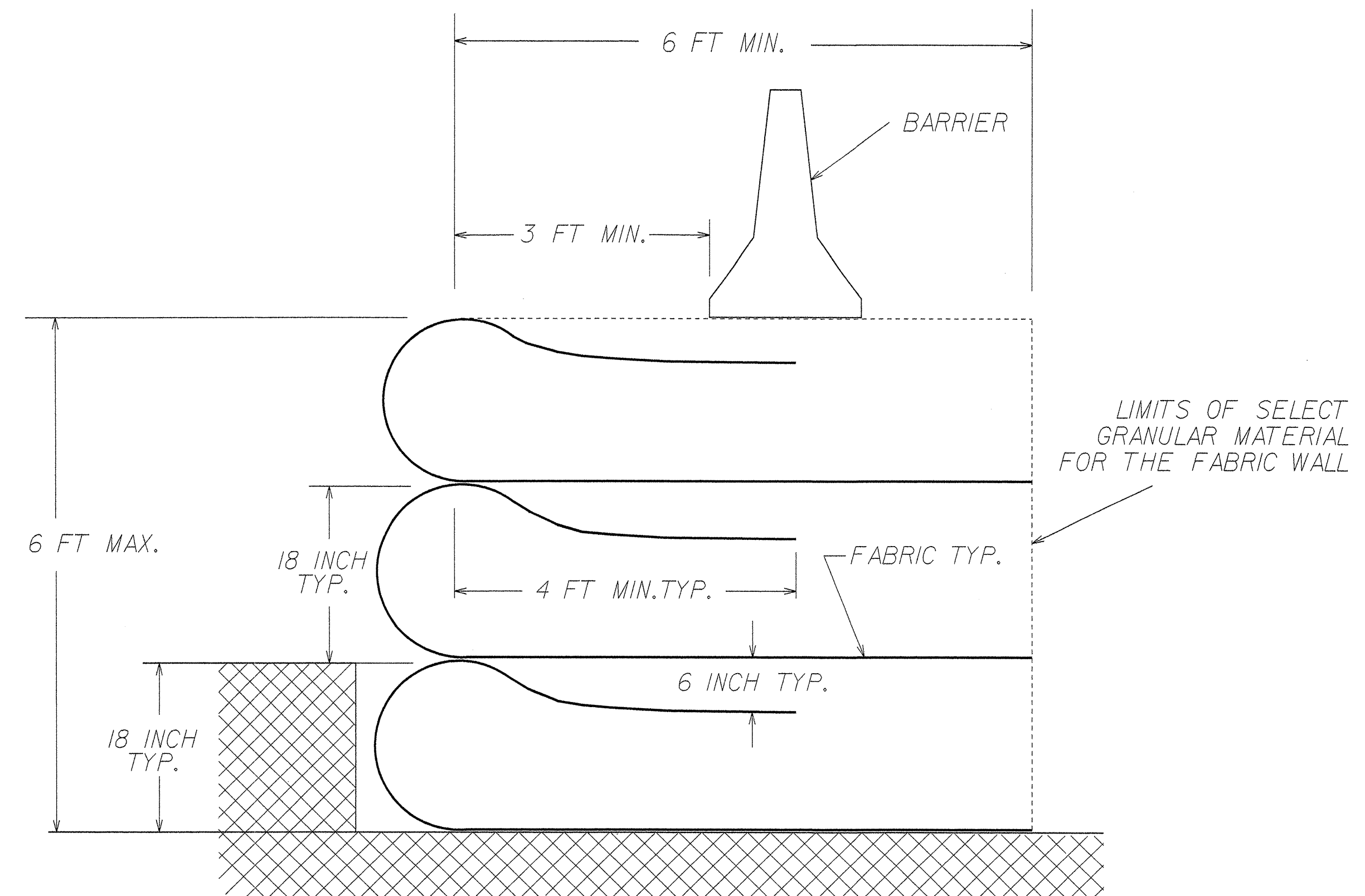
TEMPORARY FABRIC WALL - WIRE MESH FORM OPTION

DURHAM COUNTY

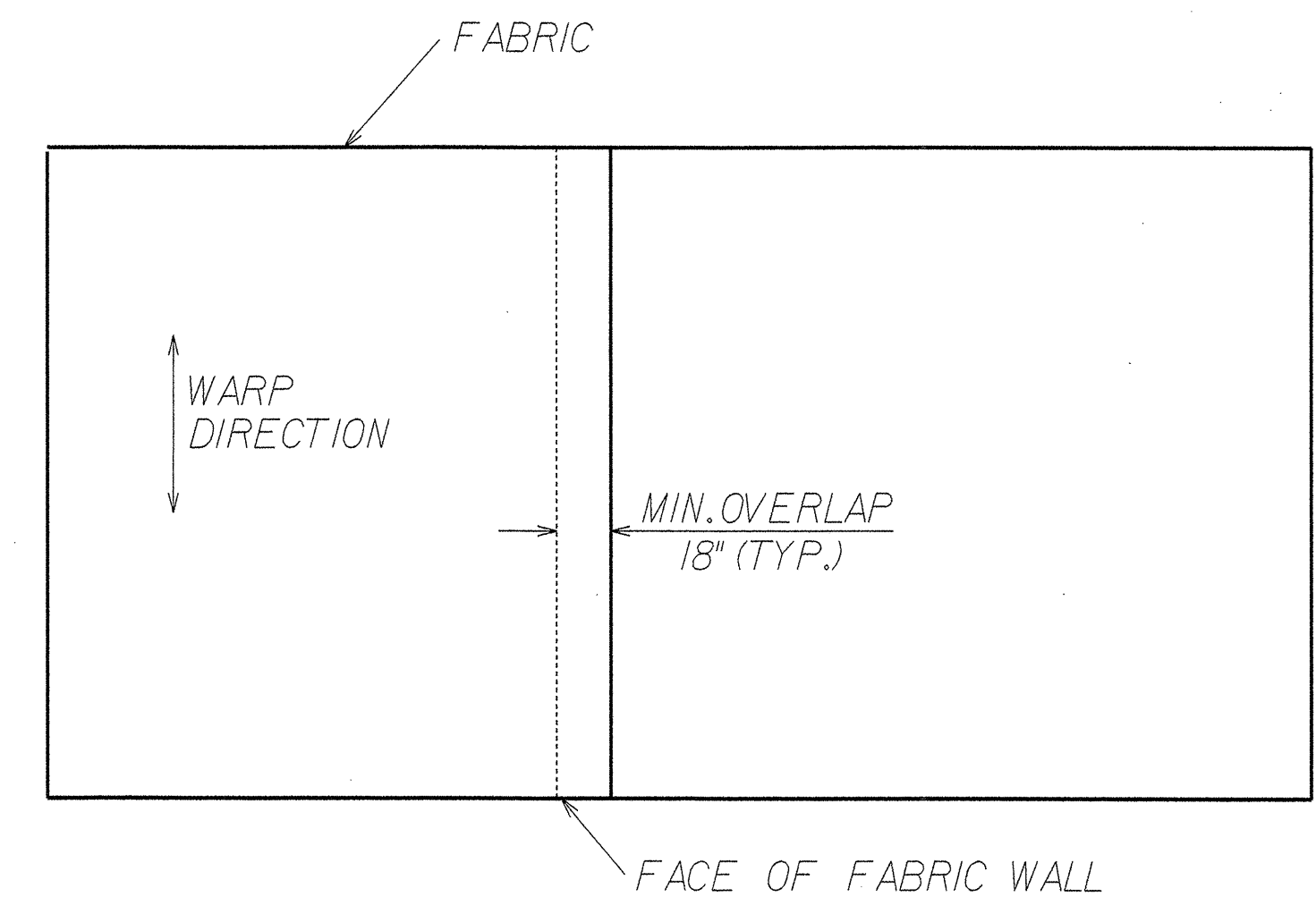
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

PREPARED BY: EJS	DATE: 08/06
REVIEWED BY: JSF	DATE: 08/06

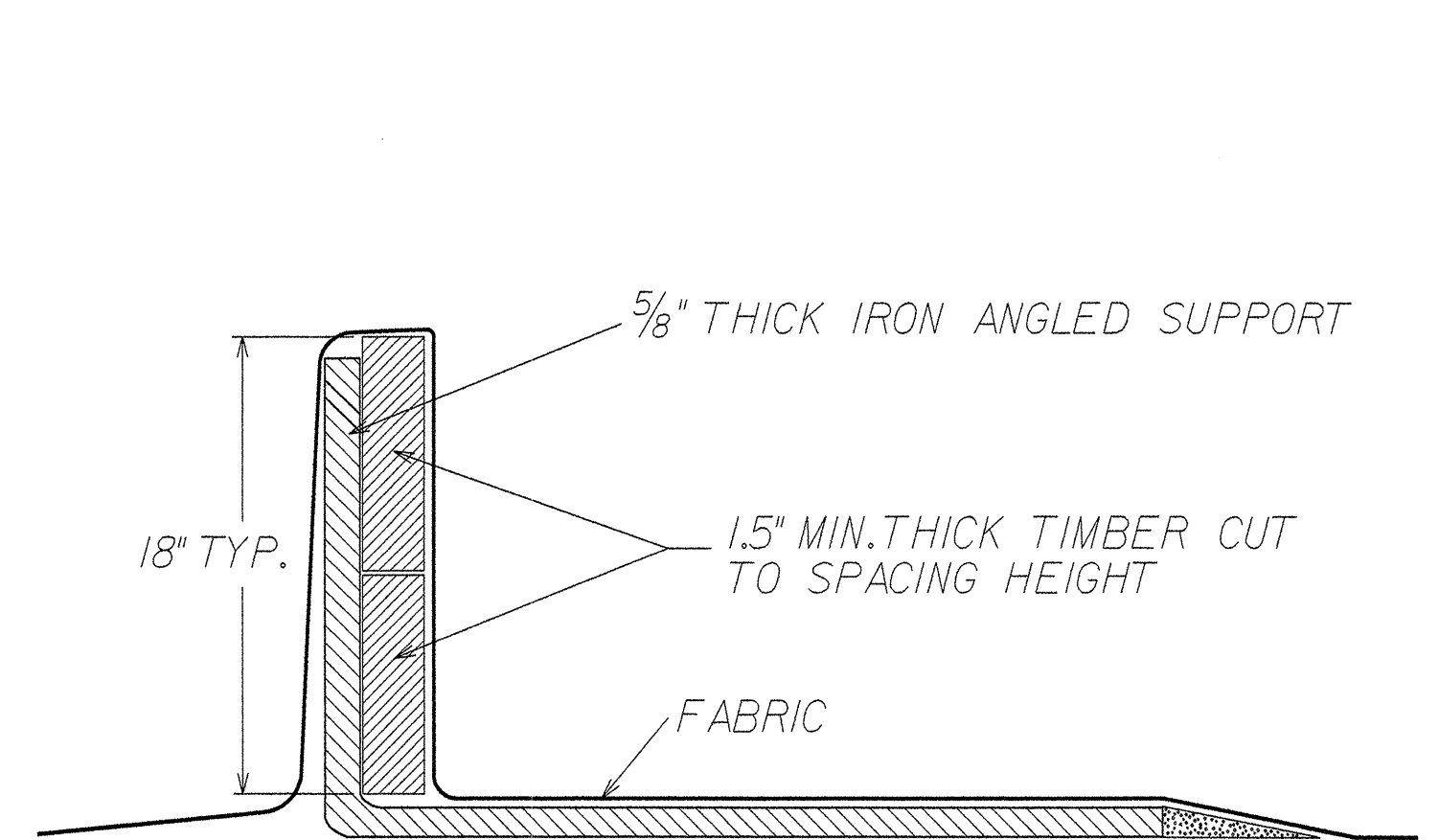
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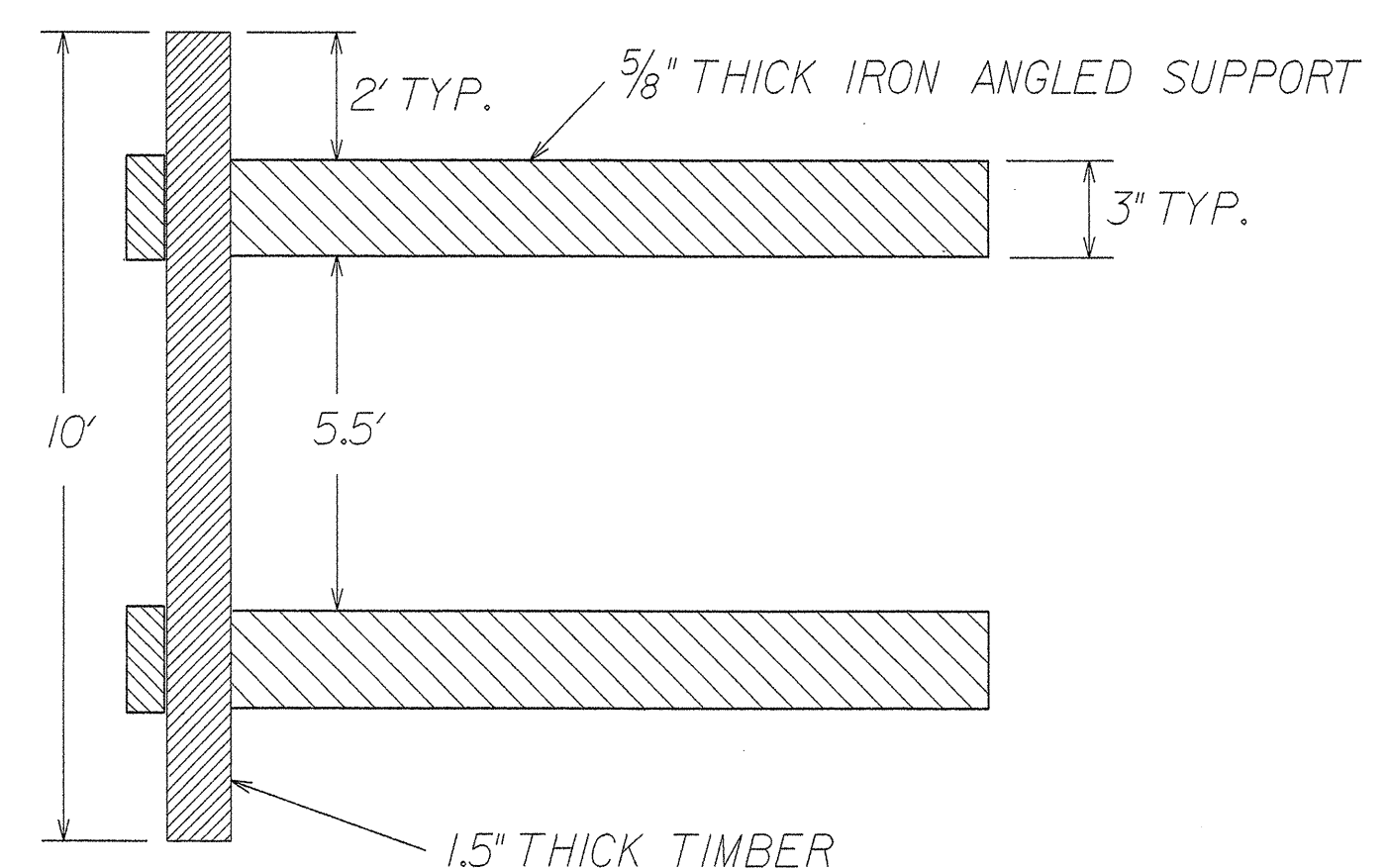
TYPICAL FABRIC WALL CROSS SECTION WHEN USING FALSEWORK OPTION



PLAN VIEW OF FABRIC OVERLAP
N.T.S.



ELEVATION VIEW OF WALL FACE FALSEWORK
N.T.S.



PLAN VIEW OF WALL FACE FALSEWORK
N.T.S.

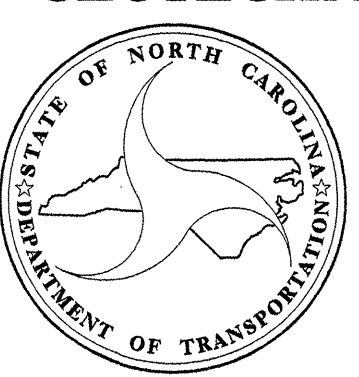
NOTES:

- FABRIC FOR THE TEMPORARY FABRIC WALL SHALL HAVE A MINIMUM WIDE WIDTH TENSILE STRENGTH OF 120 LB/INCHES IN THE WARP AND FILL DIRECTION (BASED ON ASTM-D4595) AT 5% ELONGATION AND A MINIMUM ULTIMATE WIDE WIDTH TENSILE STRENGTH OF 360 LB/IN IN THE WARP DIRECTION.
- LOCATIONS AND QUANTITIES PROVIDED ARE ONLY APPROXIMATE. EXACT LOCATIONS AND QUANTITIES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- PROPER DRAINAGE AT THE TOP OF THE WALL SHALL BE AS DIRECTED BY THE ENGINEER.
- SELECT GRANULAR MATERIAL SHALL BE CLASS II IN ACCORDANCE WITH SECTION 1016 OF THE STANDARD SPECIFICATIONS. CLASS II SHALL ALSO BE USED FOR THE FILL AREAS BEHIND THE TEMPORARY FABRIC WALL.
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- SEE ROADWAY PLANS FOR APPROXIMATE FABRIC WALL LOCATION AND OVERALL TYPICAL CROSS SECTION.

PREPARED BY: EJS	DATE: 08/06
REVIEWED BY: JSF	DATE: 08/06

GEOTECHNICAL ENGINEERING UNIT

EASTERN REGIONAL OFFICE
 WESTERN REGIONAL OFFICE


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TEMPORARY FABRIC WALL - FALSEWORK FORM OPTION

DURHAM COUNTY

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201582

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING
0029000000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL, STATION ***** (13+44.00)
0043000000-N	226	Lump Sum		GRADING
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING
0057000000-E	226	200	CY	UNDERCUT EXCAVATION
0080000000-E	SP	100	TON	CLASS IV SUBGRADE STABILIZATION
0195000000-E	265	100	CY	SELECT GRANULAR MATERIAL
0196000000-E	270	100	SY	FABRIC FOR SOIL STABILIZATION
0318000000-E	300	11	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS
1220000000-E	545	50	TON	INCIDENTAL STONE BASE
1489000000-E	610	390	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1498000000-E	610	65	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B
1525000000-E	610	220	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A
1560000000-E	620	35	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22
2000000000-N	806	14	EA	RIGHT OF WAY MARKERS
2022000000-E	815	22.4	CY	SUBDRAIN EXCAVATION
2033000000-E	815	16.8	CY	SUBDRAIN FINE AGGREGATE
2043000000-E	815	100	LF	4" PERFORATED SUBDRAIN PIPE
2054000000-E	815	3	EA	4" SUBDRAIN PIPE WYES, TEES, & ELBOWS
2066000000-N	815	1	EA	CONCRETE PAD FOR SUBDRAIN PIPE OUTLET
2076000000-E	815	6	LF	4" OUTLET PIPE (SUBDRAINS)
2286000000-N	840	4	EA	MASONRY DRAINAGE STRUCTURES
2366000000-N	840	1	EA	FRAME WITH TWO GRATES, STD 840.24


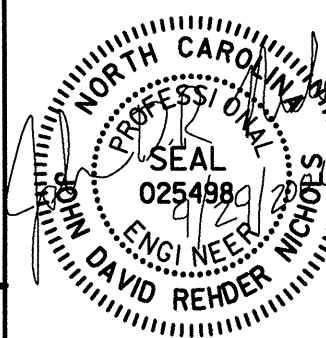


ItemNumber	Sec #	Quantity	Unit	Description
2367000000-N	840	3	EA	FRAME WITH TWO GRATES, STD 840.29
2529000000-E	SP	67.5	SF	GENERIC GRADING ITEM (SF) TEMPORARY FABRIC WALL
2556000000-E	846	10	LF	SHOULDER BERM GUTTER
3215000000-N	862	1	EA	GUARDRAIL ANCHOR UNITS, TYPE III
3270000000-N	SP	1	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
3380000000-E	862	87.5	LF	TEMPORARY STEEL BM GUARDRAIL
3387000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE ***** TEMPORARY (B-77)
3389100000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350 TEMPORARY
3435000000-N	SP	3	EA	GENERIC GUARDRAIL ITEM IMPACT ATTENUATOR, TYPE TL-2
3635000000-E	876	200	TON	RIP RAP, CLASS II
3649000000-E	876	5	TON	RIP RAP, CLASS B
3656000000-E	876	475	SY	FILTER FABRIC FOR DRAINAGE
4025000000-E	901	49.5	SF	CONTRACTOR FURNISHED, TYPE *** SIGN (E)
4072000000-E	903	90	LF	SUPPORTS, 3-LB STEEL U-CHANNEL
4102000000-N	904	12	EA	SIGN ERECTION, TYPE E
4400000000-E	1110	144	SF	WORK ZONE SIGNS (STATIONARY)
4405000000-E	1110	112	SF	WORK ZONE SIGNS (PORTABLE)
4410000000-E	1110	36	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4430000000-N	1130	35	EA	DRUMS
4445000000-E	1145	48	LF	BARRICADES (TYPE III)
4450000000-N	1150	240	HR	FLAGGER
4810000000-E	1205	8,000	LF	PAINT PAVEMENT MARKING LINES (4")
4835000000-E	1205	160	LF	PAINT PAVEMENT MARKING LINES (24")

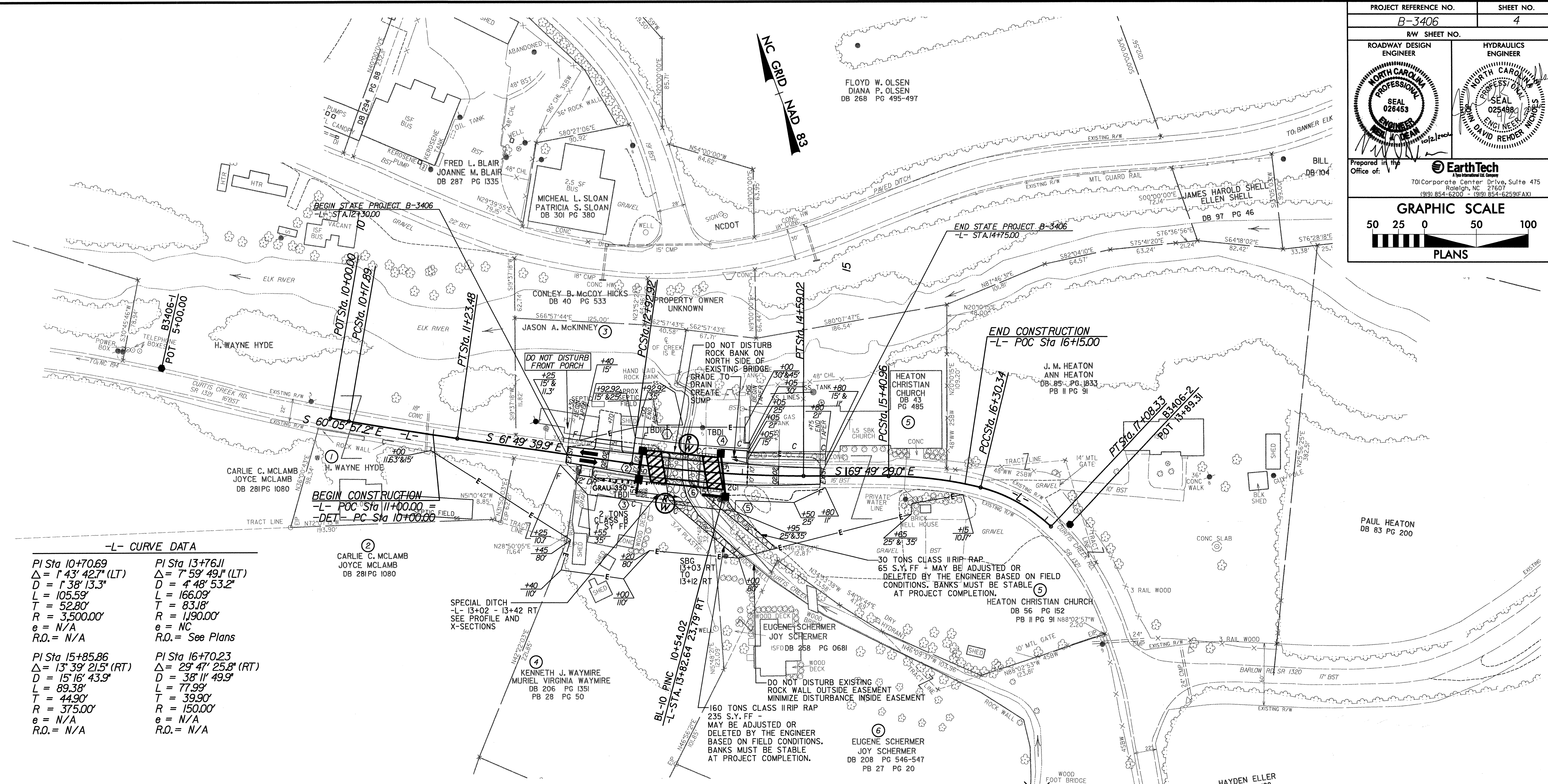
ItemNumber	Sec #	Quantity	Unit	Description
4850000000-E	1205	1,800	LF	REMOVAL OF PAVEMENT MARKING LINES (4")
5871200000-E	1550	11	LF	TRENCHLESS INSTALLATION OF 3" IN SOIL
5871210000-E	1550	11	LF	TRENCHLESS INSTALLATION OF 3" NOT IN SOIL
5888000000-E	SP	262	LF	GENERIC UTILITY ITEM 3/4" PE WATER TUBING, SDR 9, 200 PSI WP
6000000000-E	1605	750	LF	TEMPORARY SILT FENCE
6006000000-E	1610	75	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	225	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	90	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	1.5	ACR	TEMPORARY MULCHING
6018000000-E	1620	50	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	0.25	TON	FERTILIZER FOR TEMPORARY SEEDING
6029000000-E	SP	300	LF	SAFETY FENCE
6030000000-E	1630	430	CY	SILT EXCAVATION
6036000000-E	1631	140	SY	MATTING FOR EROSION CONTROL
6042000000-E	1632	80	LF	1/4" HARDWARE CLOTH
6084000000-E	1660	2.5	ACR	SEEDING & MULCHING
6087000000-E	1660	1	ACR	MOWING
6090000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
6096000000-E	1662	50	LB	SEED FOR SUPPLEMENTAL SEEDING
6108000000-E	1665	1	TON	FERTILIZER TOPDRESSING
6114000000-N	SP	2	HR	SPECIALIZED HAND MOWING
6117000000-N	SP	8	EA	RESPONSE FOR EROSION CONTROL

***** BEGIN SCHEDULE AA *****				
***** (3 ALTERNATIVES) *****				
0366000000-E	310	96	LF	15" RC PIPE CULVERTS, CLASS III
AA1				
*** OR ***				
0366000000-E	310	64	LF	15" RC PIPE CULVERTS, CLASS III
AA2				
0536000000-E	SP	32	LF	*** HDPE PIPE CULVERTS (15")
AA2				
*** OR ***				
0366000000-E	310	64	LF	15" RC PIPE CULVERTS, CLASS III
AA3				
0540000000-E	SP	32	LF	*** ALUMINIZED CORRUGATED STEEL PIPE CULVERTS, ***** THICK (15", 0.064")
AA3				
***** END SCHEDULE AA *****				

5/28/99

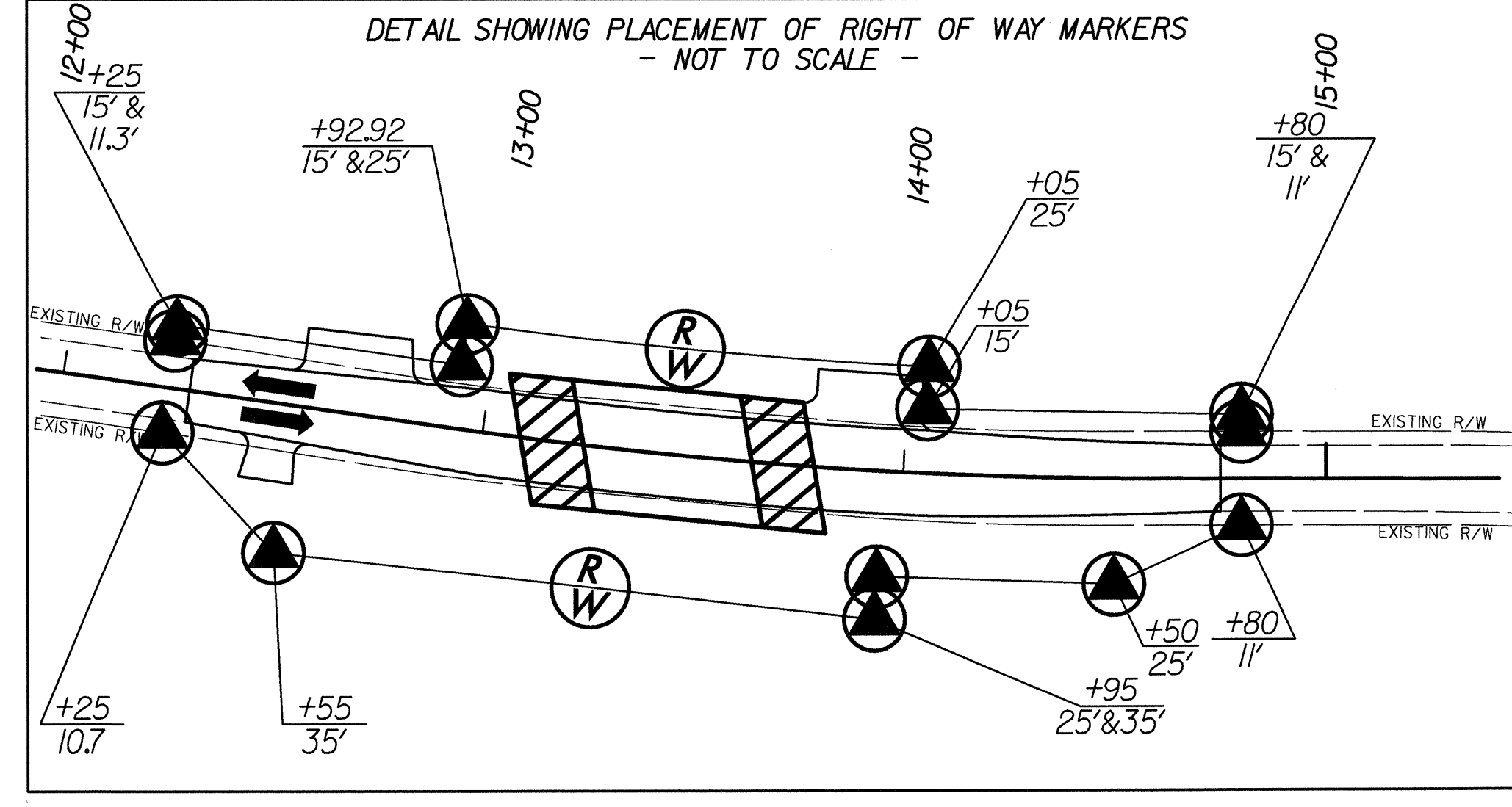
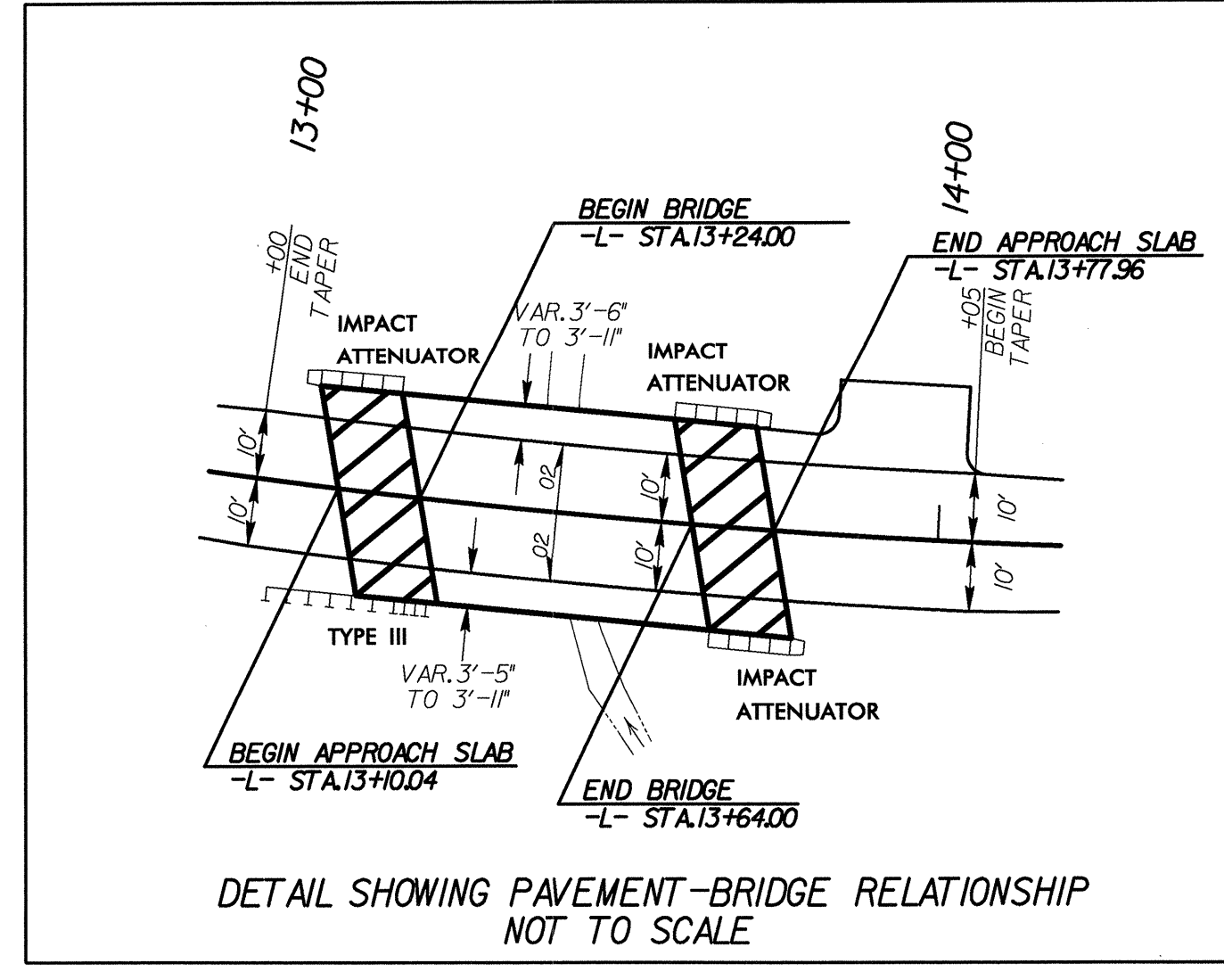
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PROJECT REFERENCE NO. B-3406		SHEET NO. 4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
			
Prepared in the Office of:  EarthTech 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)			
GRAPHIC SCALE 			



-L- CURVE DATA

PI Sta 10+70.69 $\Delta = 1^{\circ}43'42.7"$ (LT) $D = 1^{\circ}38'13.3"$ $L = 105.59'$ $T = 52.80'$ $R = 3,500.00'$ $e = N/A$ $R.O. = N/A$	PI Sta 13+76.11 $\Delta = 7^{\circ}59'49.1"$ (LT) $D = 4^{\circ}48'53.2"$ $L = 166.09'$ $T = 83.18'$ $R = 1,190.00'$ $e = NC$ $R.O. = \text{See Plans}$
PI Sta 15+85.86 $\Delta = 13^{\circ}39'21.5"$ (RT) $D = 15^{\circ}16'43.9"$ $L = 89.38'$ $T = 44.90'$ $R = 375.00'$ $e = N/A$ $R.O. = N/A$	PI Sta 16+70.23 $\Delta = 29^{\circ}47'25.8"$ (RT) $D = 38^{\circ}11'49.9"$ $L = 77.99'$ $T = 39.90'$ $R = 150.00'$ $e = N/A$ $R.O. = N/A$



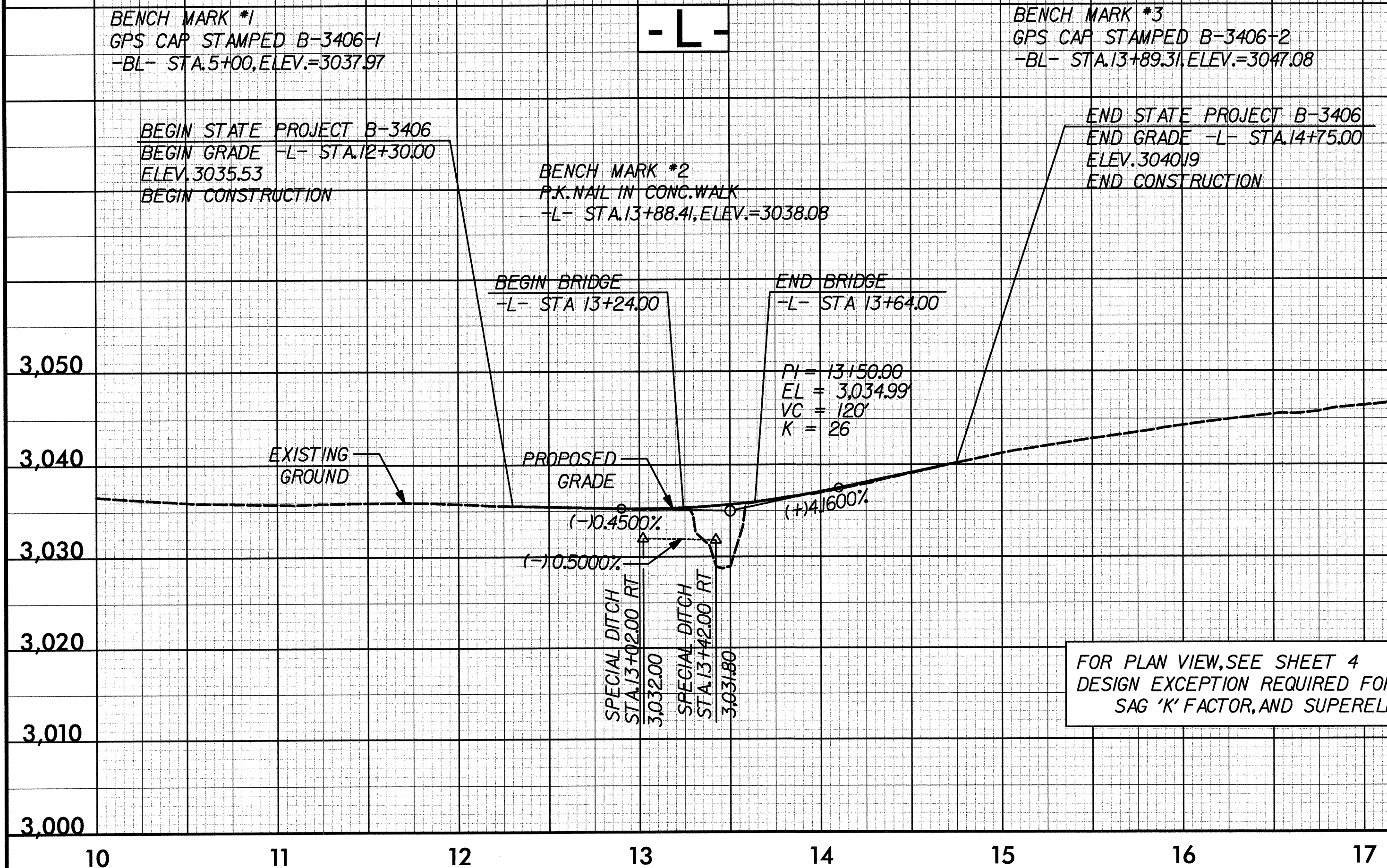
FOR -L- PROFILE, SEE SHEET 5
 FOR -DETOUR- PLAN VIEW, SEE SHEET 2-B
 FOR STRUCTURE PLANS SEE SHEET S-1 TO S-18
 DESIGN EXCEPTION REQUIRED FOR VERTICAL
 SAG 'K' FACTOR AND SUPERELEVATION

REVISIONS

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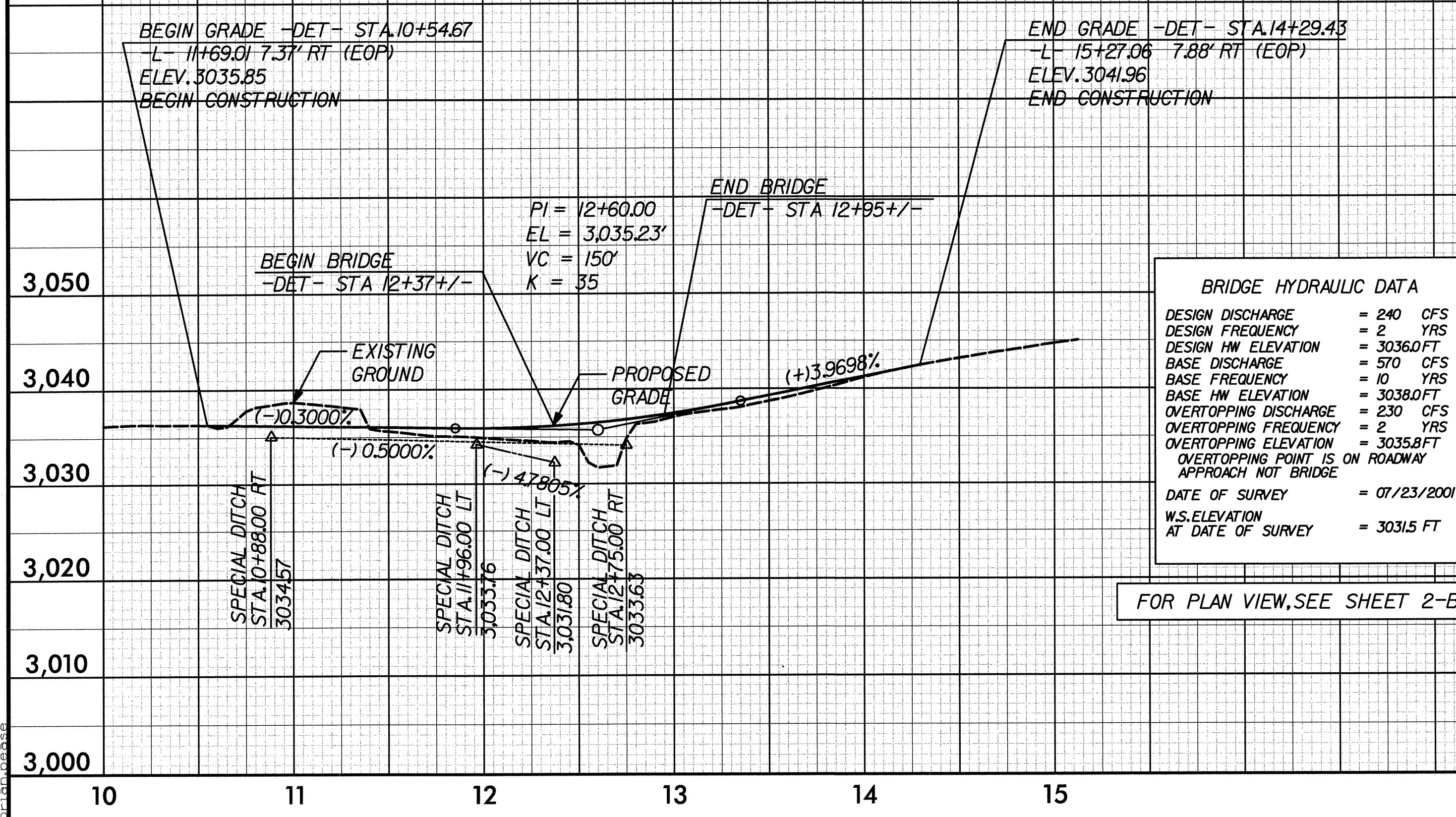
5/28/99

PROJECT REFERENCE NO. B-3406	SHEET NO. 5
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 026453 10/2/2001	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 025488 DAVID REHDER



FOR PLAN VIEW, SEE SHEET 4
DESIGN EXCEPTION REQUIRED FOR VERTICAL SAG 'K' FACTOR, AND SUPERELEVATION

- DETOUR -



BRIDGE HYDRAULIC DATA
 DESIGN DISCHARGE = 240 CFS
 DESIGN FREQUENCY = 2 YRS
 DESIGN HW ELEVATION = 3036.0 FT
 BASE DISCHARGE = 570 CFS
 BASE FREQUENCY = 10 YRS
 BASE HW ELEVATION = 3038.0 FT
 OVERTOPPING DISCHARGE = 230 CFS
 OVERTOPPING FREQUENCY = 2 YRS
 OVERTOPPING ELEVATION = 3035.8 FT
 OVERTOPPING POINT IS ON ROADWAY
 APPROACH NOT BRIDGE
 DATE OF SURVEY = 07/23/2001
 W.S. ELEVATION AT DATE OF SURVEY = 3031.5 FT

FOR PLAN VIEW, SEE SHEET 2-B

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please