

09_08/2019

See Sheet 1A For Index of Sheets
 See Sheet 1B For Conventional Plan Sheet Symbols
 See Sheet RW01 Through RW05 For Survey Control and Right-of-Way Sheets

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

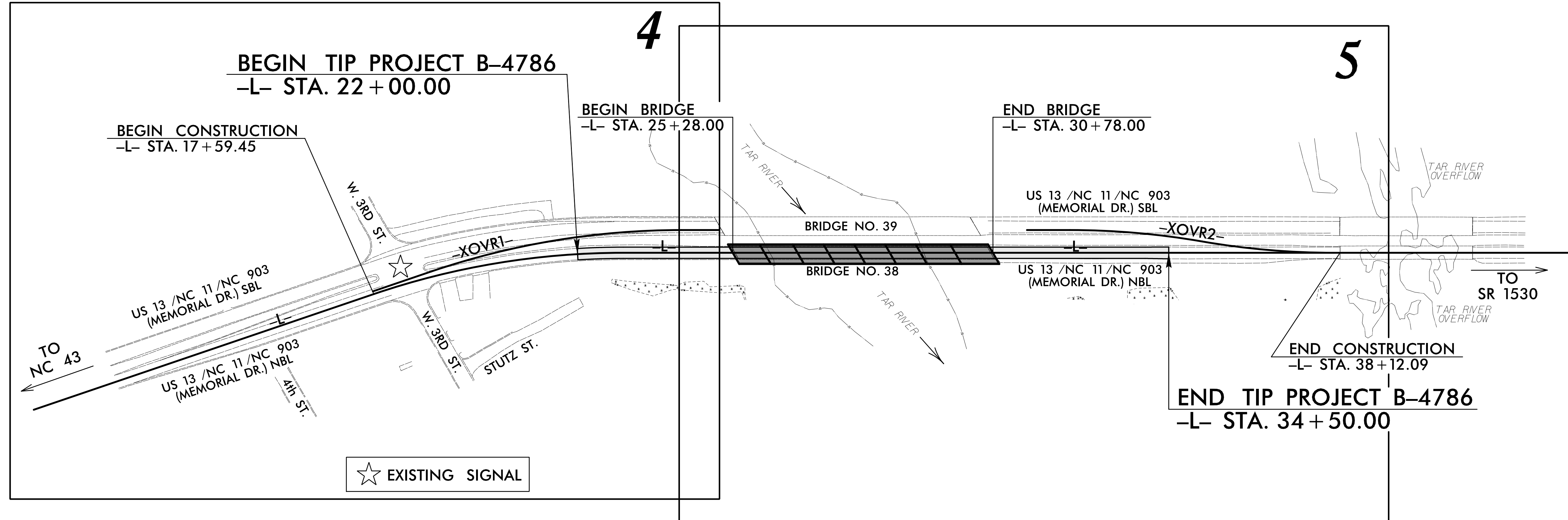
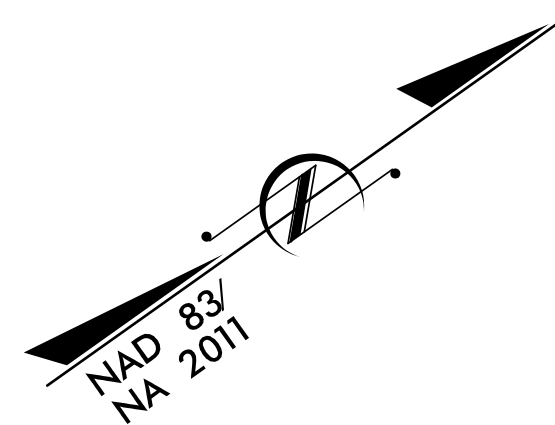
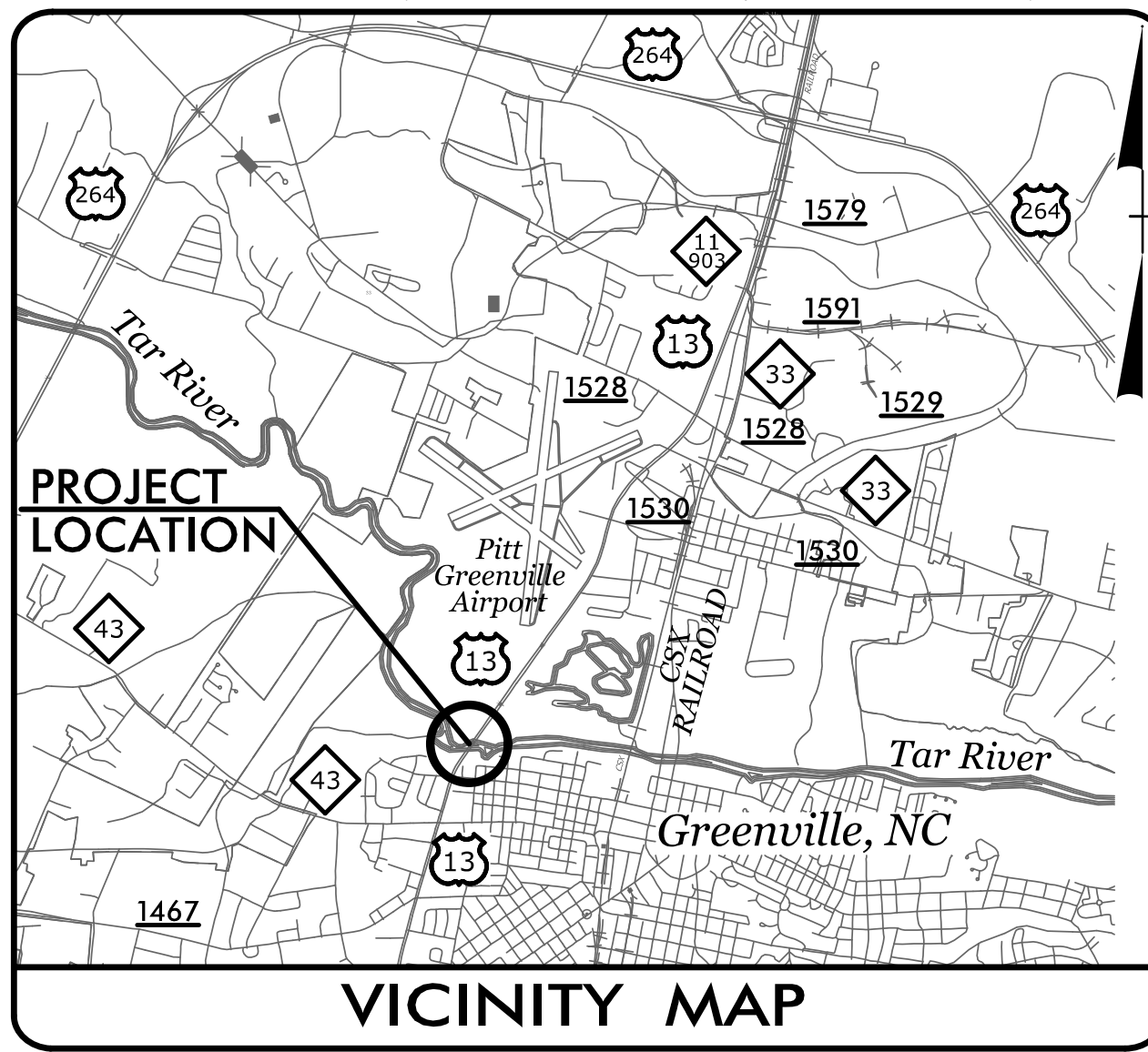
PITT COUNTY

**LOCATION: REPLACE BRIDGE NO. 38 OVER THE TAR RIVER
 ON US 13 IN GREENVILLE**

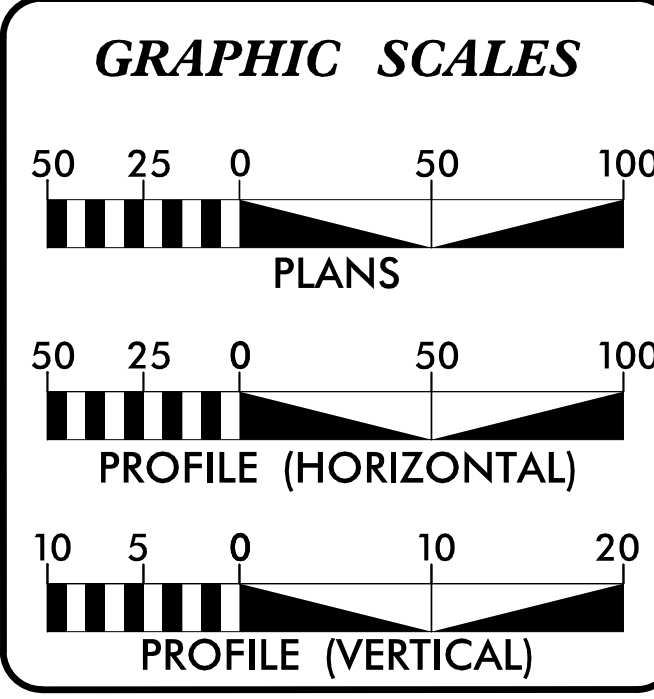
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4786	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38222.1.FR2	BRSTP-0013(041)	PE	
38222.2.2	BRSTP-0013(041)	R/W, UTIL	
38222.3.3	0013069	CONST.	

TIP PROJECT: B-4786



CONTRACT: C204376



DESIGN DATA

ADT 2022 =	14300 NBL
	15300 SBL
ADT 2042 =	17750 NBL
K =	8 %
D =	55 %
T =	6 % *
V =	50 MPH
* TTST =	3% DUAL 3%
FUNC CLASS =	PRINCIPAL ARTERIAL
	REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4786	=	0.133 mile
LENGTH STRUCTURES TIP PROJECT B-4786	=	0.104 mile
TOTAL LENGTH TIP PROJECT B-4786	=	0.237 mile

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

By:
 TGS ENGINEERS
 706 HILLSBOROUGH ST
 SUITE 200
 RALEIGH, NC 27603

PH (919) 773-8887
 CORP. LICENSE NO.: C-0275

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
 APRIL 16, 2020

LETTING DATE:
 JUNE 21, 2022

V. MARCUS LOWERY, PE
 PROJECT ENGINEER

DAVID STUTTS, PE
 NCDOT CONTACT

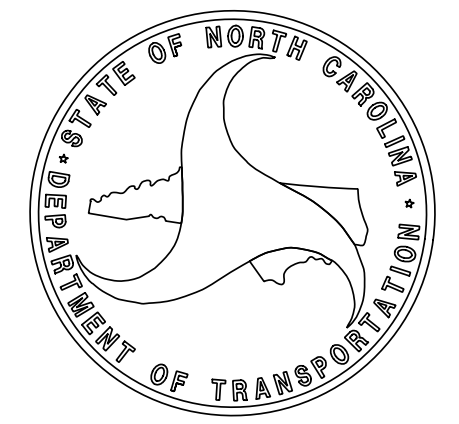
HYDRAULICS ENGINEER

DocuSigned by:
 David B. Petty
 5/3/2022 10:37 AM EDT

ROADWAY DESIGN ENGINEER

DocuSigned by:
 Marcus Lowery
 5/3/2022 10:37 AM EDT

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED



INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A-1 THRU 2A-2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, DETAIL SHOWING METHOD OF WEDGING, AND MILLING DETAIL
2B-1 THRU 2B-2	TEMPORARY CROSS-OVER PLANS (-XOVR1- & -XOVR2-)
2C-1 THRU 2C-2	SPECIAL DETAILS FROM CONTRACTS
3B-1	SUMMARY OF EARTHWORK, PAVEMENT REMOVAL SUMMARY, SHOULDER BERM GUTTER SUMMARY, & GUARDRAIL SUMMARY
3D-1	DRAINAGE SUMMARY
3G-1	GEOTECHNICAL SUMMARY
04 THRU 05	PLAN SHEETS
06	PROFILE SHEETS
RW01 THRU RW05	SURVEY CONTROL AND RIGHT-OF-WAY SHEETS
TMP-1 THRU TMP-SUP3	TRANSPORTATION MANAGEMENT PLANS
PMP-1 THRU PMP-3	PAVEMENT MARKING PLANS
EC-01 THRU EC-09	EROSION CONTROL PLANS
RF-1	REFORESTATION DETAIL SHEET
SIGN-1 THRU SIGN-4	SIGNING PLANS
UC-1 THRU UC-8	UTILITY CONSTRUCTION PLANS
UO-1 THRU UO-3	UTILITIES BY OTHERS PLANS
X-A	CROSS SECTION INDEX
X-B	CROSS SECTION EARTHWORK VOLUME SUMMARY SHEET
X-1 THRU X-22	CROSS SECTIONS
S-1 THRU S-57	STRUCTURE PLANS - BRIDGE
SU-1 THRU SU-23	STRUCTURE UTILITY PLANS

GENERAL NOTES

GENERAL NOTES: 2018 SPECIFICATIONS

EFFECTIVE: 01-16-2018
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

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

SUPERELEVATION:

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

SHOULDER CONSTRUCTION:

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

SIDE ROADS:

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

SUBSURFACE DRAINS:

SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 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:

STRUCTURE SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT.

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:

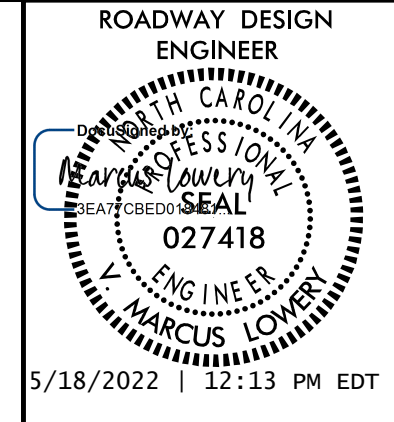
UTILITY OWNERS ON THIS PROJECT ARE

Water, Sanitary Sewer, & Gas — Greenville Utilities Commission

Telecommunications — CenturyLink and Greenville Utilities Commission

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

PROJECT REFERENCE NO.	SHEET NO.
B-4786	1A
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



STANDARD DRAWINGS

2018 ROADWAY ENGLISH STANDARD DRAWINGS

EFF. 01-16-2018
REV.

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.01	Guide for Grading Subgrade - Interstate and Freeway
225.04	Method of Obtaining Superelevation - Two Lane Pavement
275.01	Rock Plating
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 4 - MAJOR STRUCTURES	
422.01	Bridge Approach Fills - Type I Standard Approach Fill
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
815.02	Subsurface Drain
840.00	Concrete Base Pad for Drainage Structures
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.20	Frames and Wide Slot Flat Grates
840.22	Frames and Wide Slot Sag Grates
840.24	Frames and Narrow Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
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
840.66	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

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STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS
CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

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 (EIP), Computed Property Corner, Existing Concrete Monument (ECM), Parcel/Sequence Number, Existing Fence Line, Proposed Woven Wire Fence, Proposed Chain Link Fence, Proposed Barbed Wire Fence, Existing Wetland Boundary, Proposed Wetland Boundary, Existing Endangered Animal Boundary, Existing Endangered Plant Boundary, Existing Historic Property Boundary, Known Contamination Area: Soil, Potential Contamination Area: Soil, Known Contamination Area: Water, Potential Contamination Area: Water, Contaminated Site: Known or Potential.

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

Table listing symbols for hydrology: Stream or Body of Water, Hydro, Pool or Reservoir, Jurisdictional Stream, Buffer Zone 1, Buffer Zone 2, Flow Arrow, Disappearing Stream, Spring, Wetland, Proposed Lateral, Tail, Head Ditch, False Sump.

RAILROADS:

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

RIGHT OF WAY & PROJECT CONTROL:

Table listing symbols for right of way and project control: Primary Horiz Control Point, Primary Horiz and Vert Control Point, Secondary Horiz and Vert Control Point, Vertical Benchmark, Existing Right of Way Monument, Proposed Right of Way Monument (Rebar and Cap), Proposed Right of Way Monument (Concrete), Existing Permanent Easement Monument, Proposed Permanent Easement Monument (Rebar and Cap), Existing CA Monument, Proposed CA Monument (Rebar and Cap), Proposed CA Monument (Concrete), Existing Right of Way Line, Proposed Right of Way Line, Existing Control of Access Line, Proposed Control of Access Line, Proposed ROW and CA Line, Existing Easement Line, Proposed Temporary Construction Easement, Proposed Temporary Drainage Easement, Proposed Permanent Drainage Easement, Proposed Permanent Drainage/Utility Easement, Proposed Permanent Utility Easement, Proposed Temporary Utility Easement, Proposed Aerial 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 Curb Ramp, Existing Metal Guardrail, Proposed Guardrail, Existing Cable Guiderail, Proposed Cable Guiderail, Equality Symbol, Pavement Removal, VEGETATION: Single Tree, Single Shrub, Hedge.

Table listing symbols for woods and vineyard: 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:

* SUE - Subsurface Utility Engineering
LOS - Level of Service - A,B,C or D (Accuracy)

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, U/G Power Line Test Hole (SUE - LOS A)*, U/G Power Line (SUE - LOS B)*, U/G Power Line (SUE - LOS C)*, U/G Power Line (SUE - LOS D)*.

TELEPHONE:

Table listing symbols for telephone: Existing Telephone Pole, Proposed Telephone Pole, Telephone Manhole, Telephone Pedestal, Telephone Cell Tower, U/G Telephone Cable Hand Hole, U/G Telephone Test Hole (SUE - LOS A)*, U/G Telephone Cable (SUE - LOS B)*, U/G Telephone Cable (SUE - LOS C)*, U/G Telephone Cable (SUE - LOS D)*, U/G Telephone Conduit (SUE - LOS B)*, U/G Telephone Conduit (SUE - LOS C)*, U/G Telephone Conduit (SUE - LOS D)*, U/G Fiber Optics Cable (SUE - LOS B)*, U/G Fiber Optics Cable (SUE - LOS C)*, U/G Fiber Optics Cable (SUE - LOS D)*.

WATER:

Table listing symbols for water: Water Manhole, Water Meter, Water Valve, Water Hydrant, U/G Water Line Test Hole (SUE - LOS A)*, U/G Water Line (SUE - LOS B)*, U/G Water Line (SUE - LOS C)*, U/G Water Line (SUE - LOS D)*, Above Ground Water Line.

TV:

Table listing symbols for TV: TV Pedestal, TV Tower, U/G TV Cable Hand Hole, U/G TV Test Hole (SUE - LOS A)*, U/G TV Cable (SUE - LOS B)*, U/G TV Cable (SUE - LOS C)*, U/G TV Cable (SUE - LOS D)*, U/G Fiber Optic Cable (SUE - LOS B)*, U/G Fiber Optic Cable (SUE - LOS C)*, U/G Fiber Optic Cable (SUE - LOS D)*.

GAS:

Table listing symbols for gas: Gas Valve, Gas Meter, U/G Gas Line Test Hole (SUE - LOS A)*, U/G Gas Line (SUE - LOS B)*, U/G Gas Line (SUE - LOS C)*, U/G Gas Line (SUE - LOS D)*, 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, SS Force Main Line Test Hole (SUE - LOS A)*, SS Force Main Line (SUE - LOS B)*, SS Force Main Line (SUE - LOS C)*, SS Force Main Line (SUE - LOS D)*.

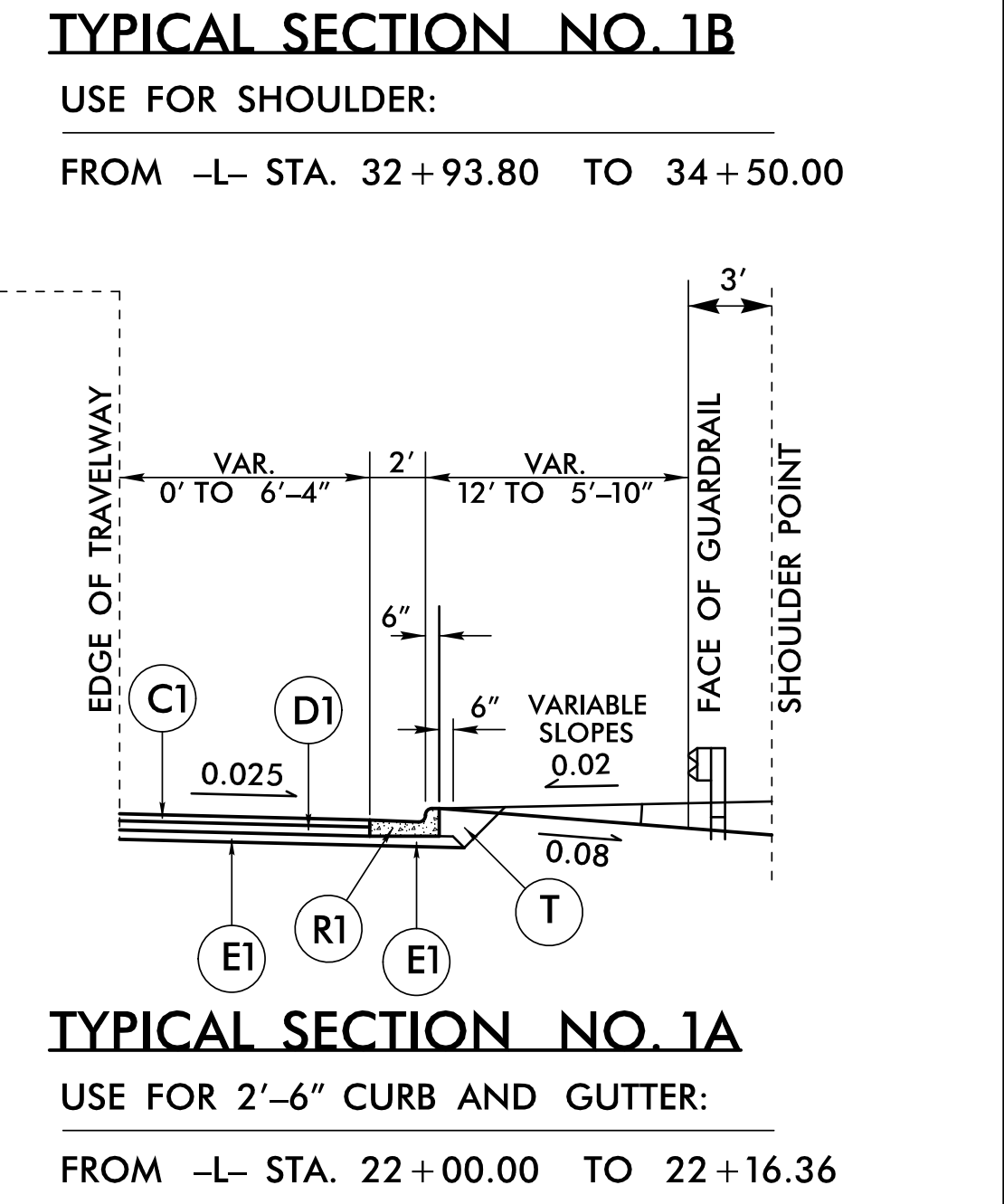
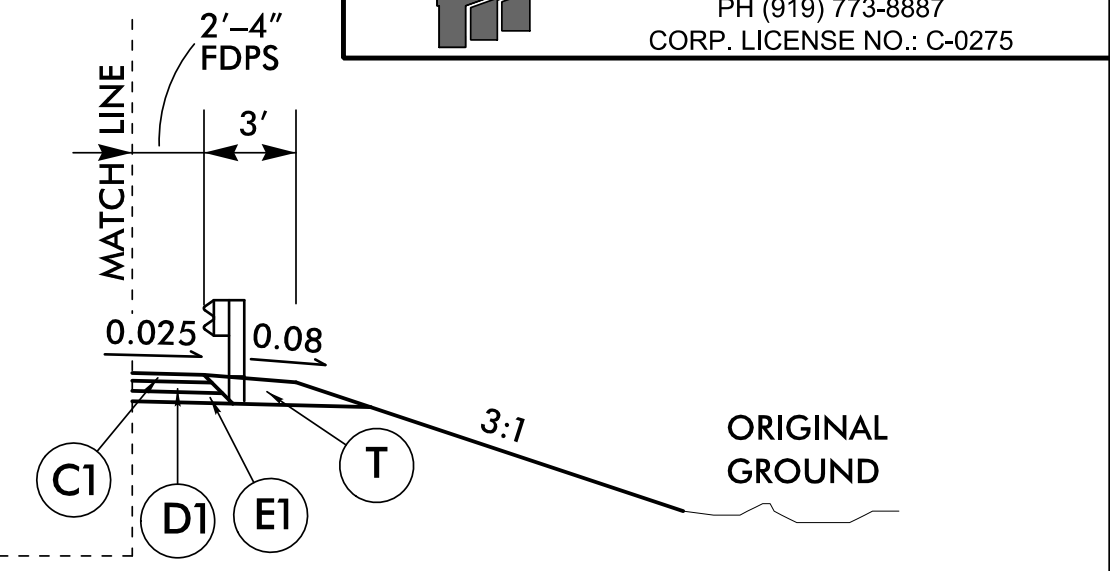
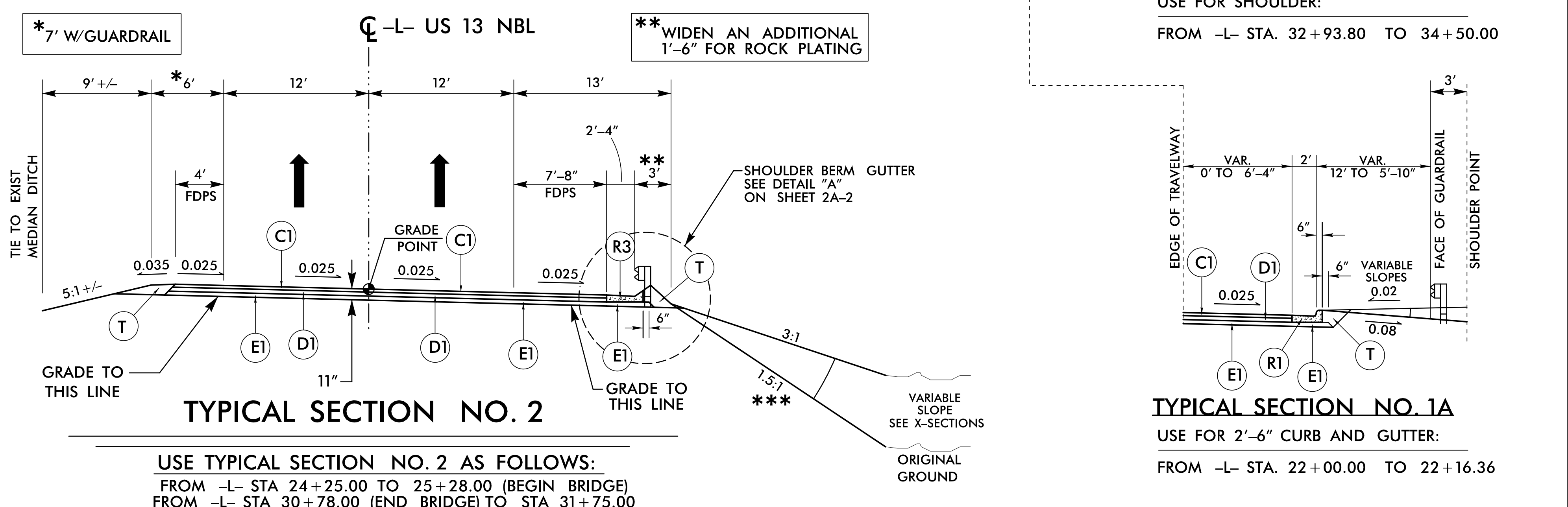
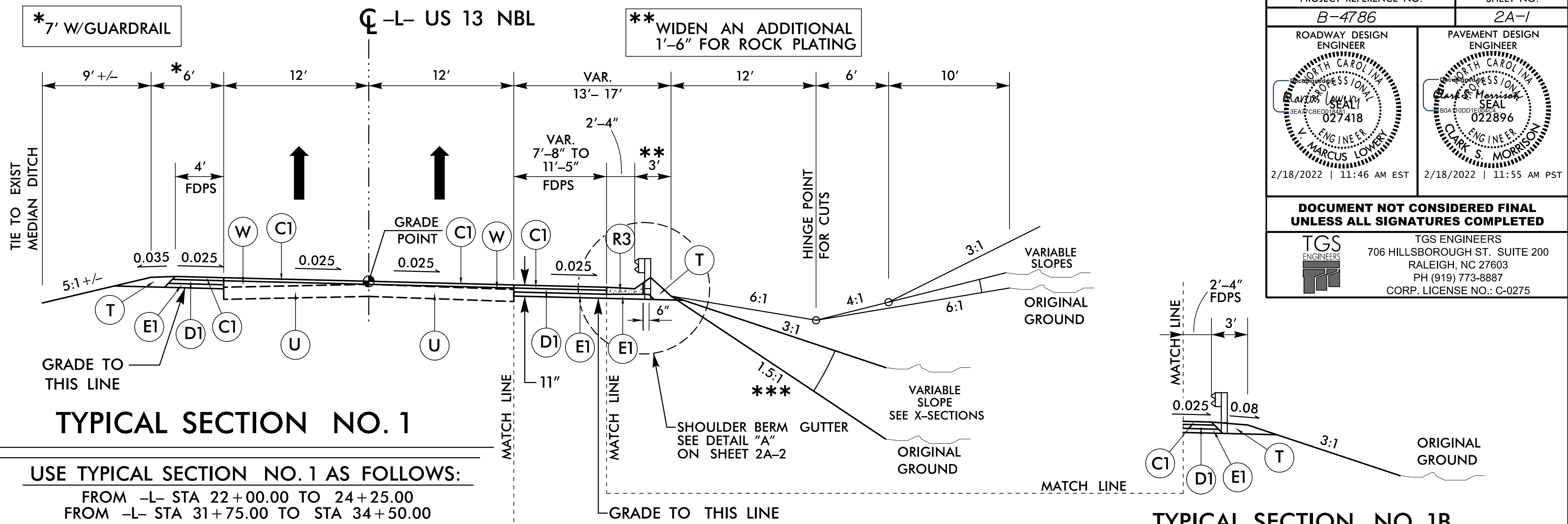
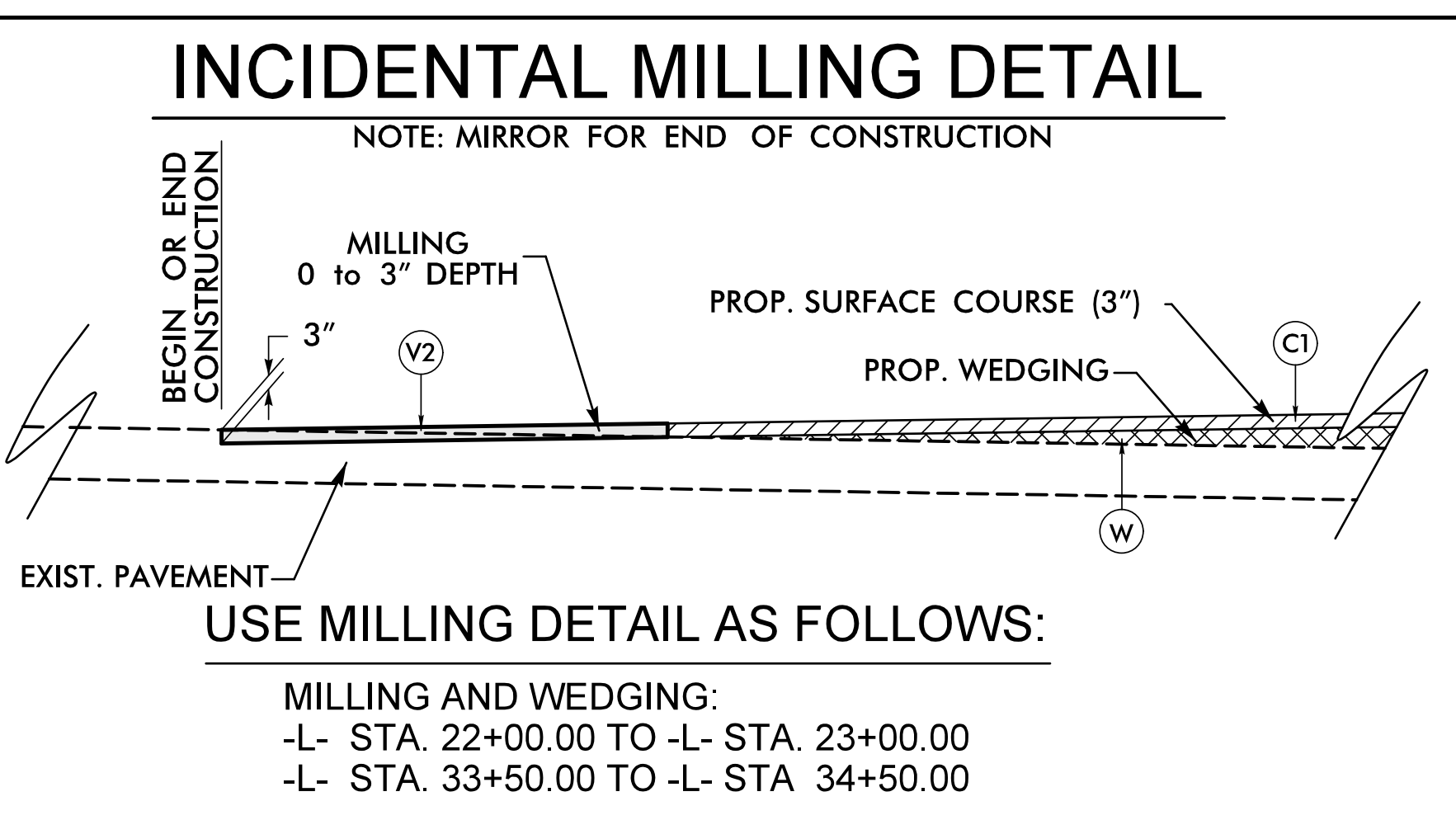
MISCELLANEOUS:

Table listing symbols for miscellaneous: Utility Pole, Utility Pole with Base, Utility Located Object, Utility Traffic Signal Box, Utility Unknown U/G Line (SUE - LOS B)*, U/G Tank; Water, Gas, Oil, Underground Storage Tank, Approx. Loc., A/G Tank; Water, Gas, Oil, Geoenvironmental Boring, Abandoned According to Utility Records, End of Information.

6/2/2022

PAVEMENT SCHEDULE	
FINAL PAVEMENT DESIGN: DECEMBER 4, 2017	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 1 1/2" IN DEPTH.
C3	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C4	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, 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 B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, 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.
R1	2'-6" CONCRETE CURB AND GUTTER
R2	EXISTING CONCRETE CURB AND GUTTER
R3	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	1.5" MILLING EXISTING PAVEMENT
V2	INCIDENTAL MILLING EXISTING PAVEMENT (0" TO 3" - SEE MILLING DETAIL THIS SHEET)
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

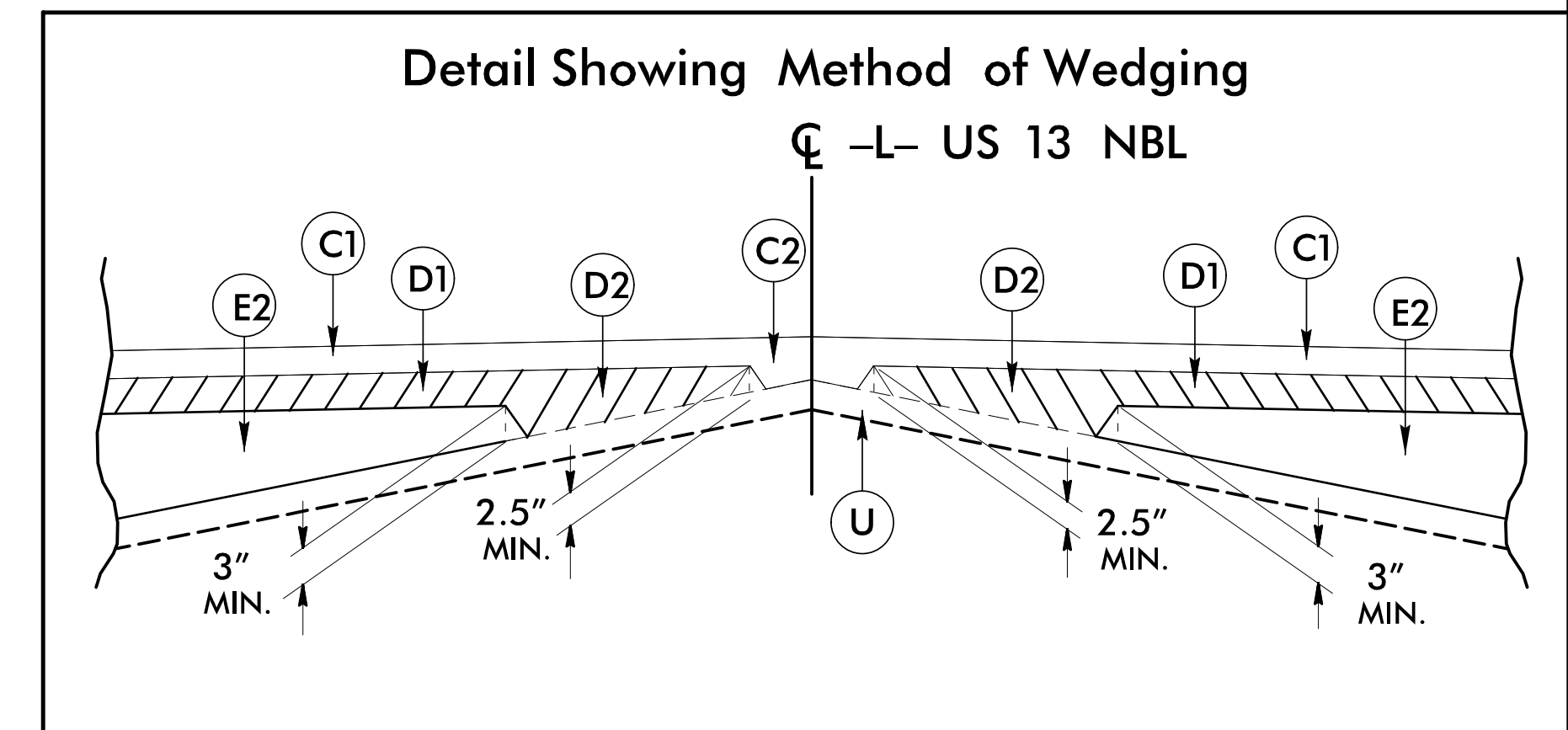
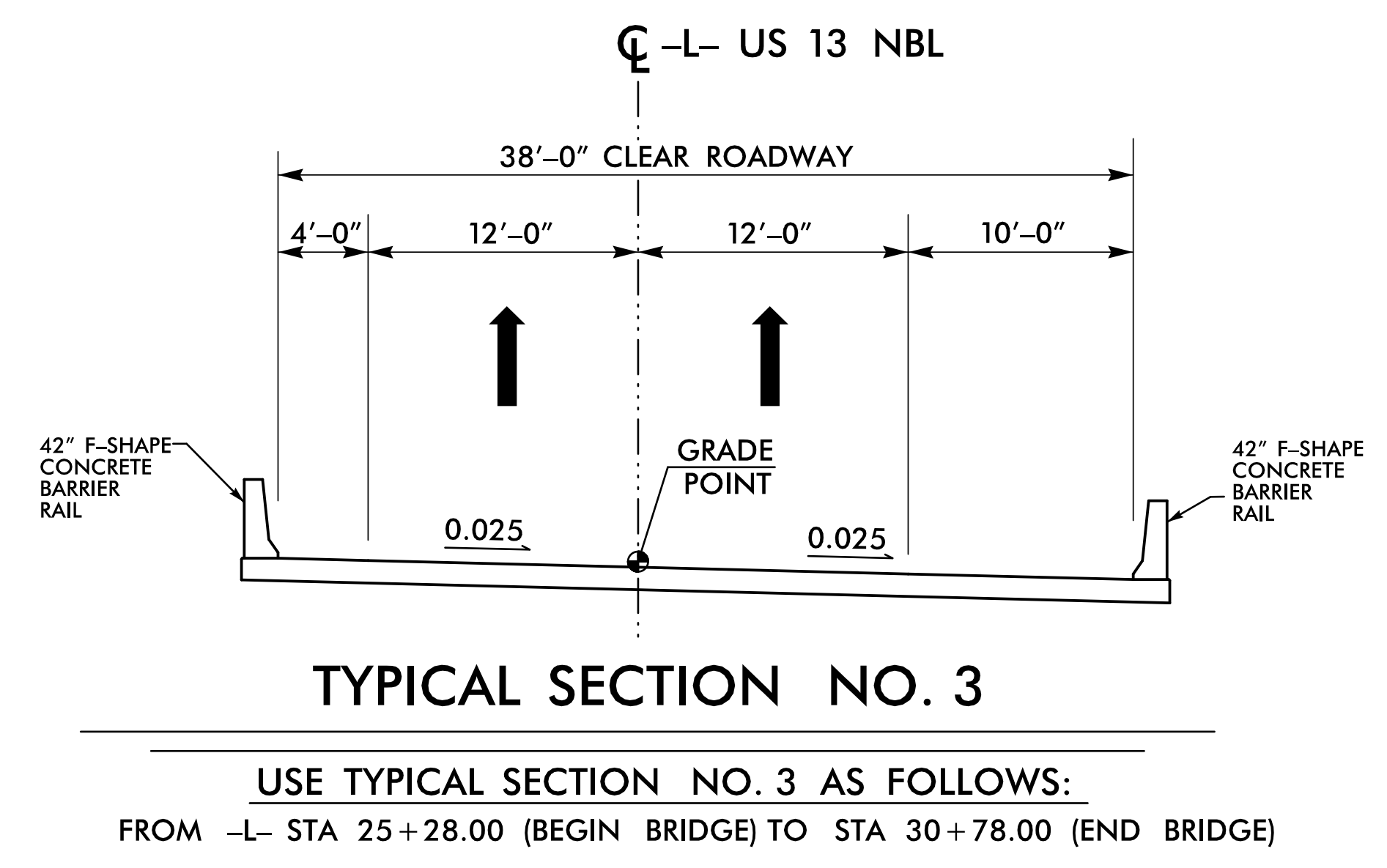
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



*** TYPICAL MAXIMUM SLOPE = 3:1 WITH THE FOLLOWING STEEPER SLOPE EXCEPTIONS:

USE ROCK PLATING:
 FROM -L- STA. 23+75 TO 25+49
 FROM -L- STA. 30+87 TO 31+75

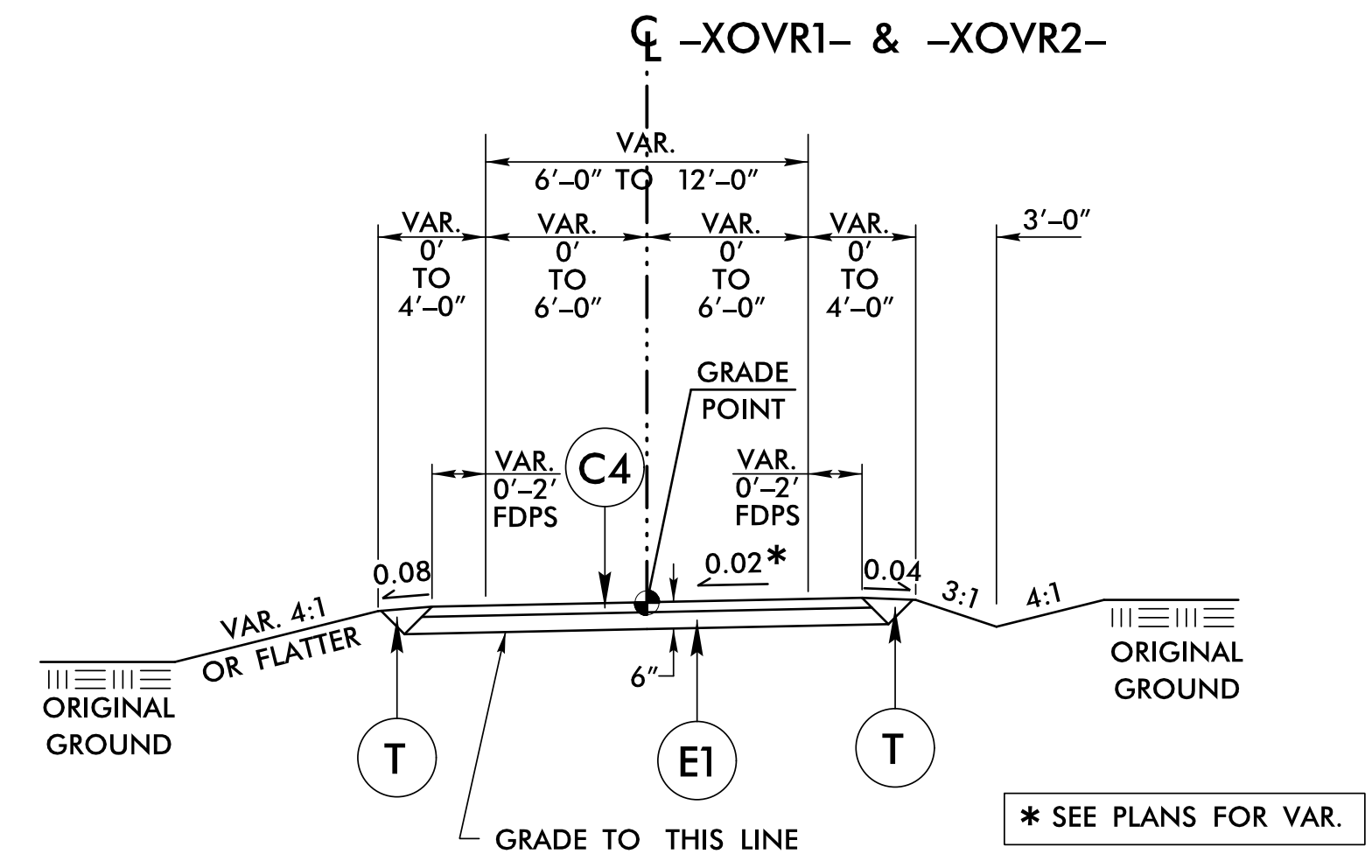
USE STANDARD APPROVED EMBANKMENT MATERIAL:
 FROM -L- STA 31+75 TO 33+00



PROJECT REFERENCE NO. B-4786	SHEET NO. 2A-1
ROADWAY DESIGN ENGINEER MARCUS LOWERY 027418	PAVEMENT DESIGN ENGINEER CLAYTON S. MORRISON 022896
2/18/2022 11:46 AM EST	2/18/2022 11:55 AM PST
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

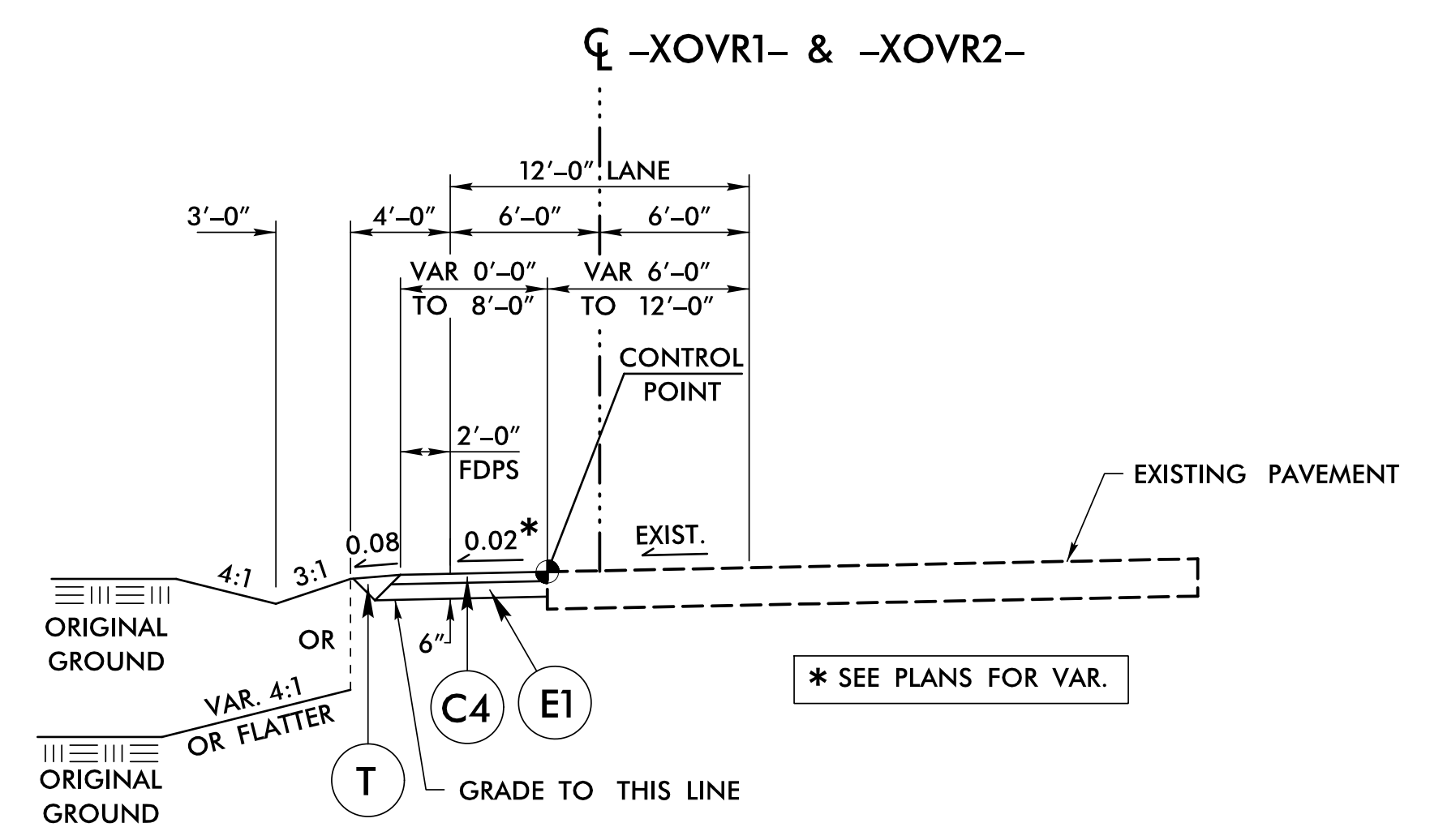
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6/2/2022



TYPICAL SECTION NO. 4

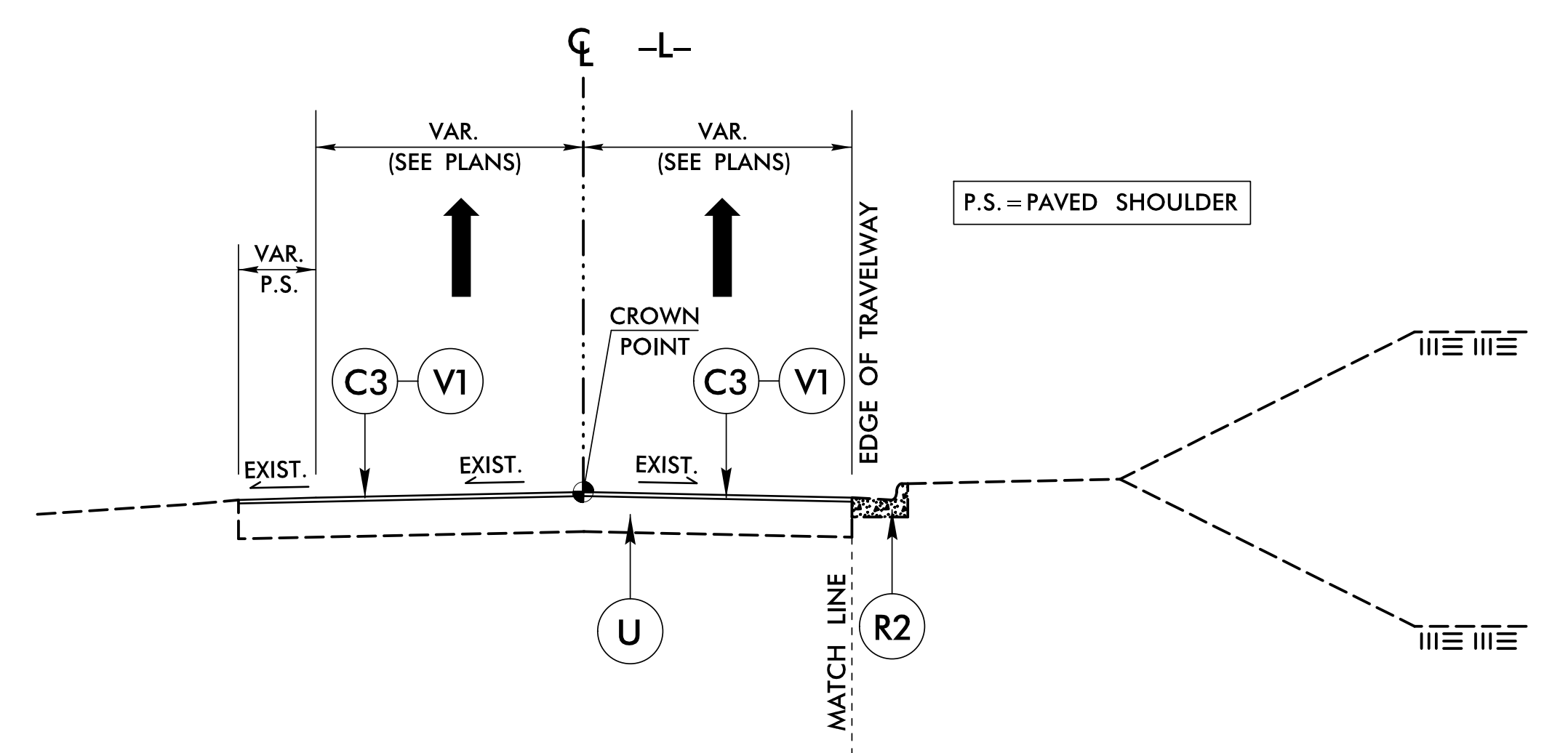
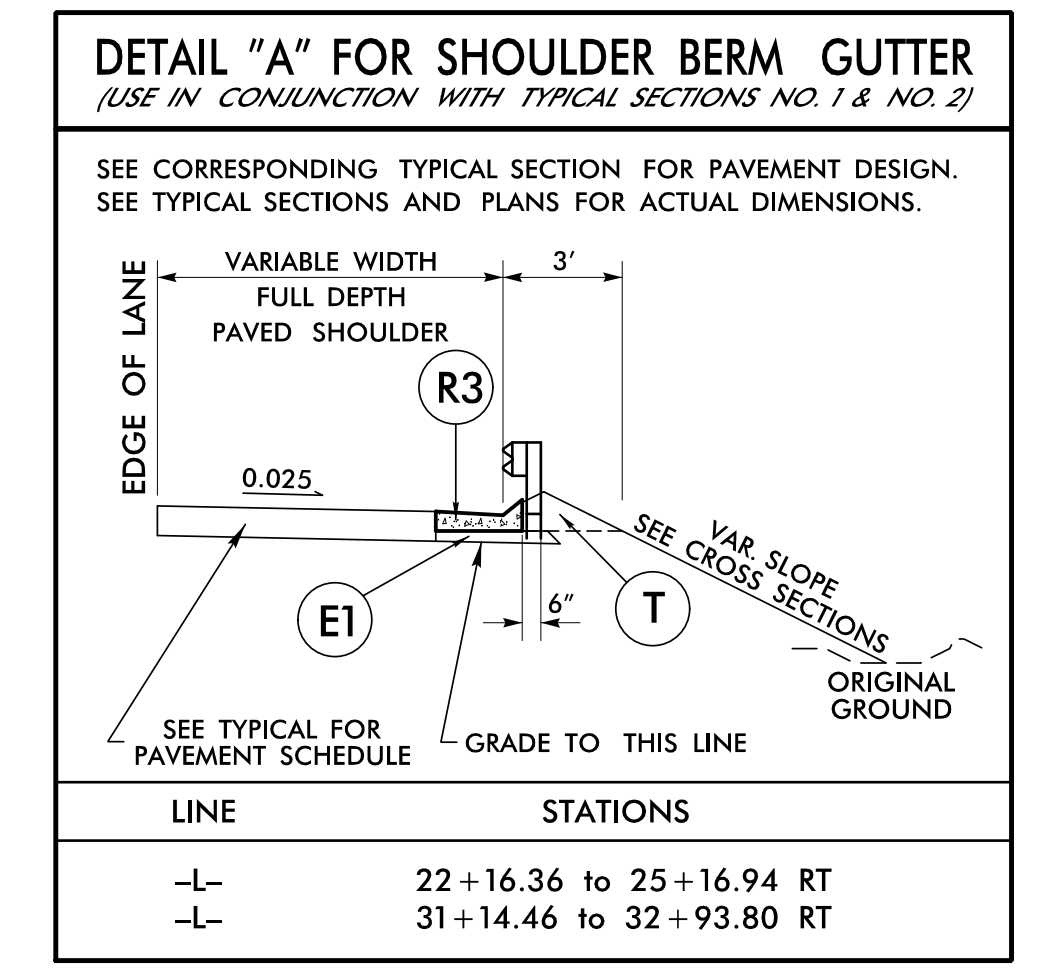
USE TYPICAL SECTION NO. 4 AS FOLLOWS:
 FROM -XOVR1- STA. 11+85.23 TO 13+34.23
 FROM -XOVR2- STA. 12+70.85 TO 14+26.05



TYPICAL SECTION NO. 5

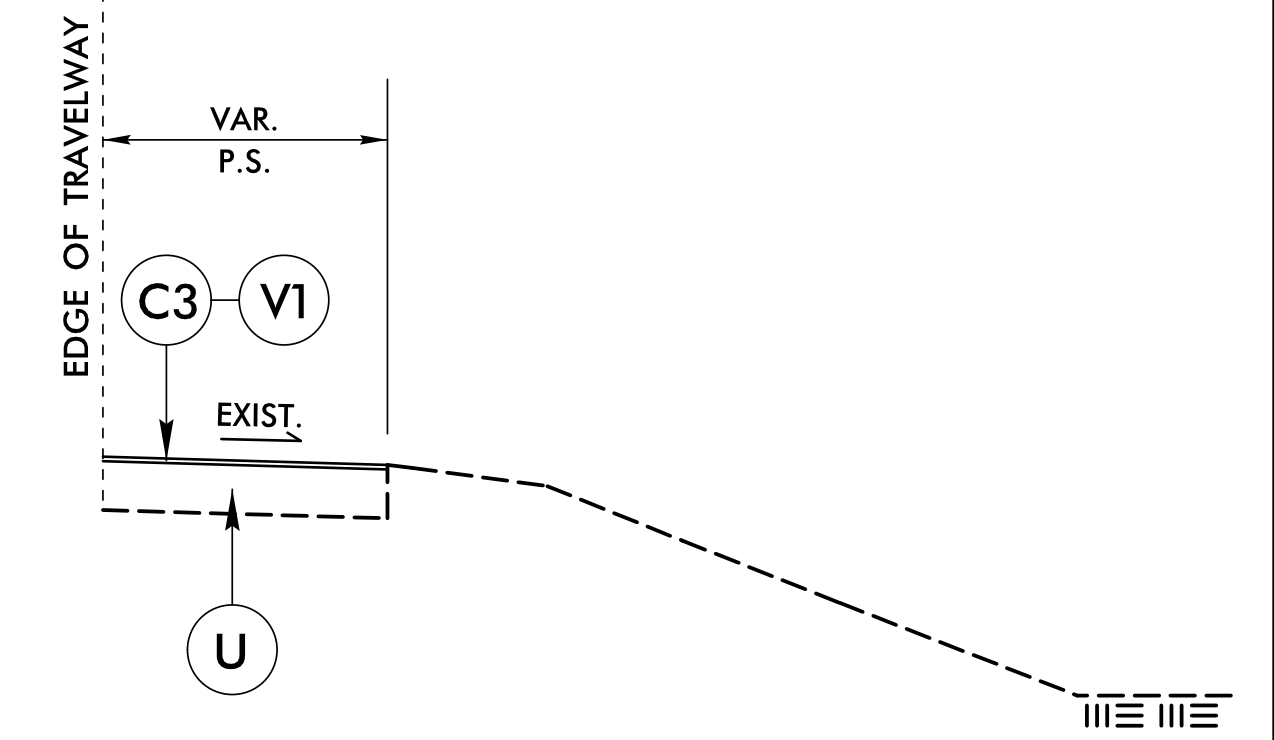
USE TYPICAL SECTION NO. 5 AS FOLLOWS:
 WIDEN USING EXISTING RIGHT MEDIAN EDGE OF PAVEMENT AND -XOVR1- OR -XOVR2- SUPERELEVATION AS CONTROL:
 FROM -XOVR1- STA. 11+20.39 TO 11+85.23
 FROM -XOVR2- STA. 14+26.05 TO 14+90.89
 WIDEN USING EXISTING LEFT MEDIAN EDGE OF PAVEMENT AND -XOVR1- OR -XOVR2- SUPERELEVATION AS CONTROL:

FROM -XOVR1- STA. 13+34.23 TO 15+44.44 (MIRROR TYPICAL; EXIST. PVMT. ON LEFT, WIDEN ON RIGHT)
 FROM -XOVR2- STA. 11+71.85 TO 12+70.85 (MIRROR TYPICAL; EXIST. PVMT. ON LEFT, WIDEN ON RIGHT)



TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 6 AS FOLLOWS:
 FROM -L- STA. 17+59.45 TO 22+00.00
 FROM -L- STA. 34+50.00 TO 38+12.09

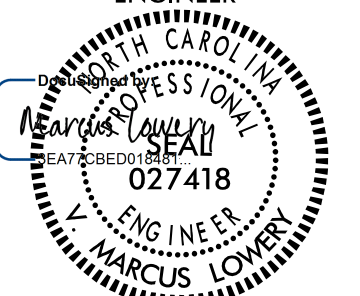
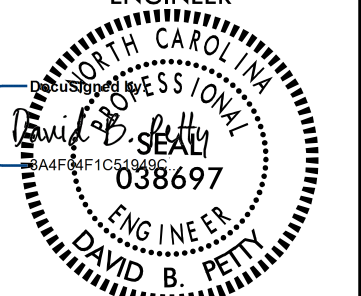
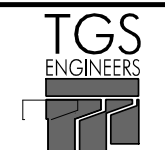


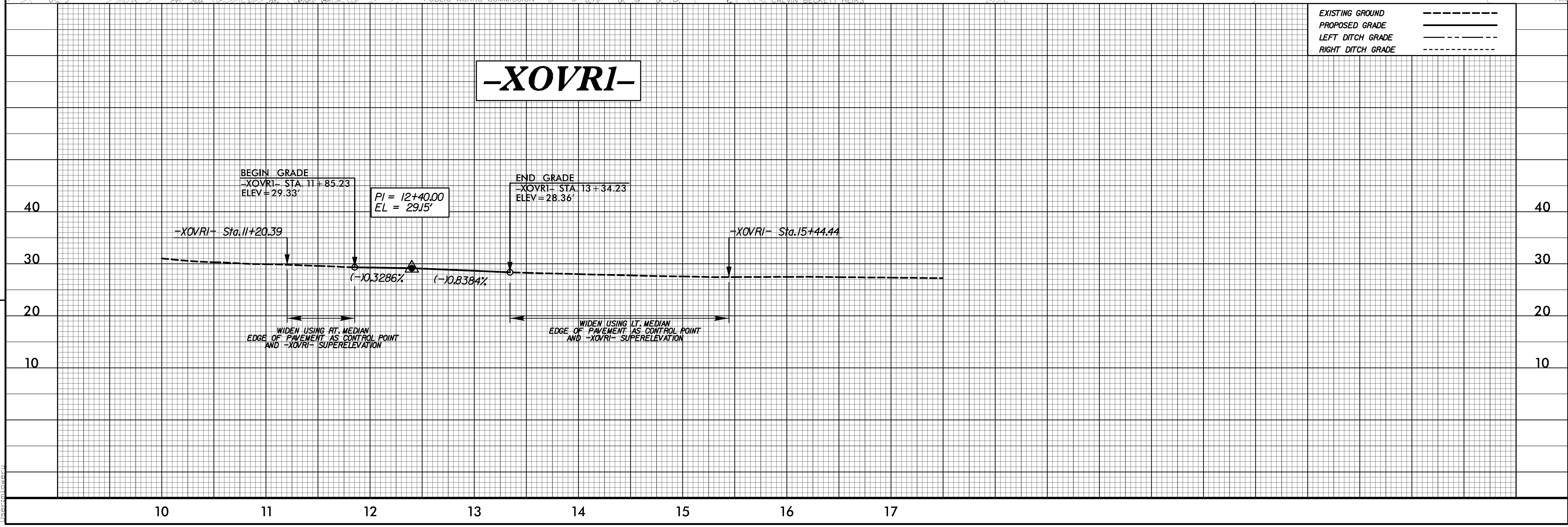
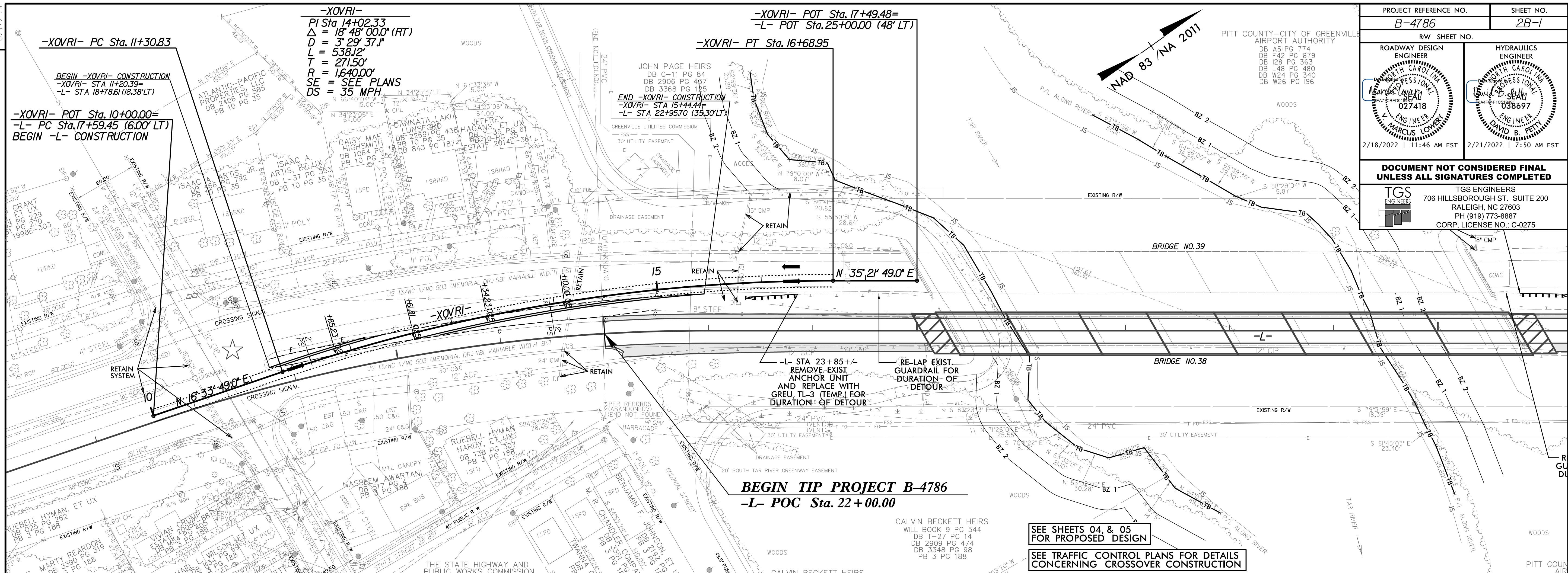
TYPICAL SECTION NO. 6A

USE FOR SHOULDER SECTION:
 FROM -L- STA. 34+50.00 TO 38+12.09

PROJECT REFERENCE NO. B-4786	SHEET NO. 2A-2
ROADWAY DESIGN ENGINEER MARCUS LOWERY 027418	PAVEMENT DESIGN ENGINEER MARCUS LOWERY 022896
2/18/2022 11:46 AM EST	2/18/2022 11:55 AM PST
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	
C1	3" S9.5C
C2	VAR. S9.5C
C3	1½" S9.5C
C4	2" S9.5C
D1	3" I19.5C
D2	VAR. I19.0C
E1	4" B25.0C
E2	VAR. B25.0C
R1	2'-6" C & G
R2	EXIST. C & G
R3	SBG
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	1½" MILLING
V2	0" to 3" MILLING
W	WEDGING

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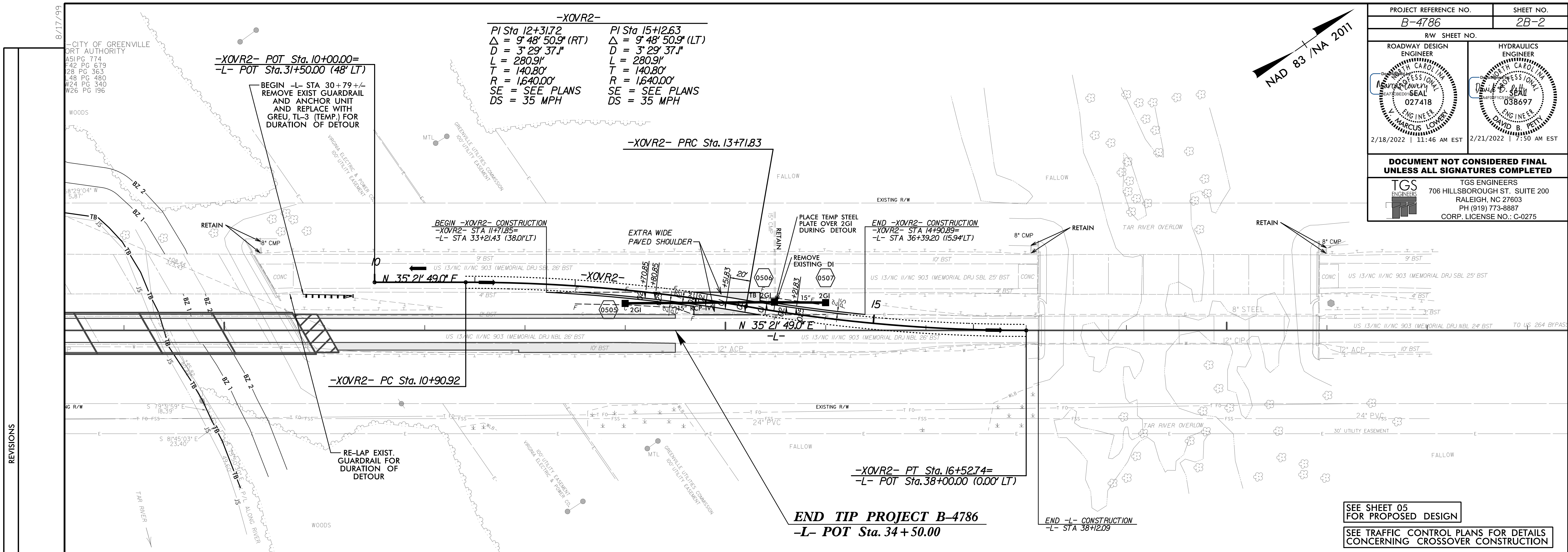
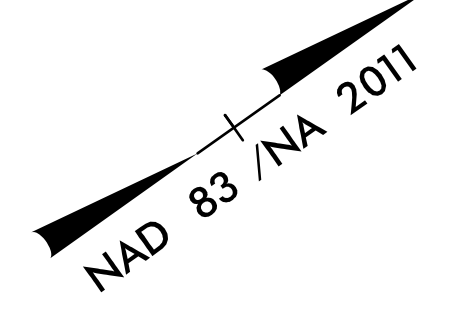
PROJECT REFERENCE NO. B-4786	SHEET NO. 2B-1
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
2/18/2022 11:46 AM EST	2/21/2022 7:50 AM EST
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



REVISIONS

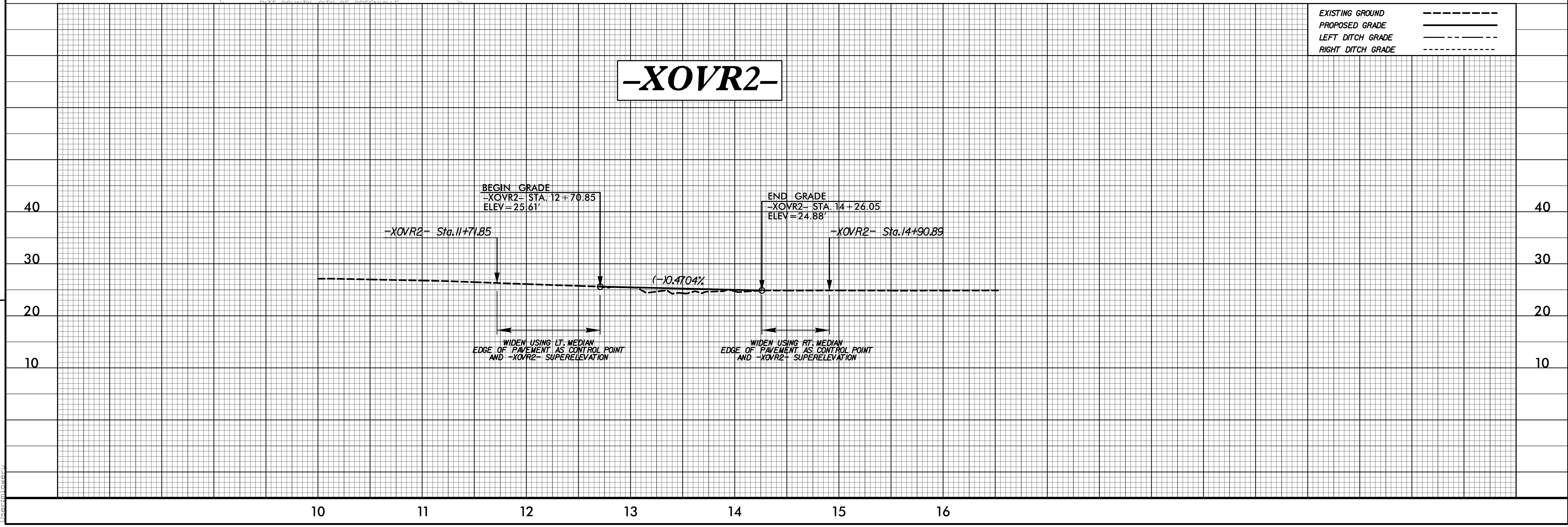
2/18/2022
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PROJECT REFERENCE NO. B-4786	SHEET NO. 2B-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER MARCUS LOWERY 027418	HYDRAULICS ENGINEER DAVID B. PETT 038697
2/18/2022 11:46 AM EST	2/21/2022 7:50 AM EST
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

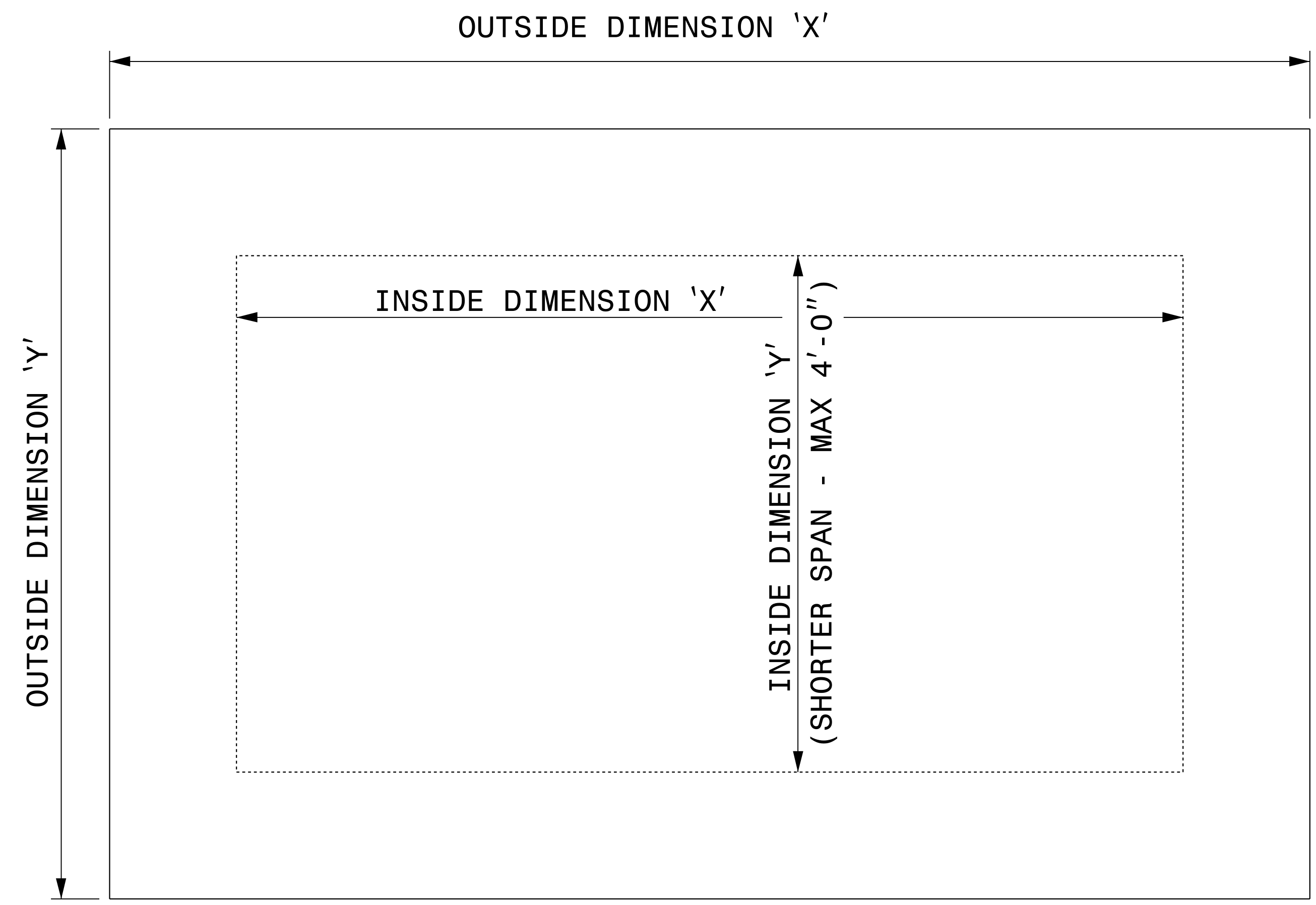


REVISIONS

SEE SHEET 05 FOR PROPOSED DESIGN
SEE TRAFFIC CONTROL PLANS FOR DETAILS CONCERNING CROSSOVER CONSTRUCTION

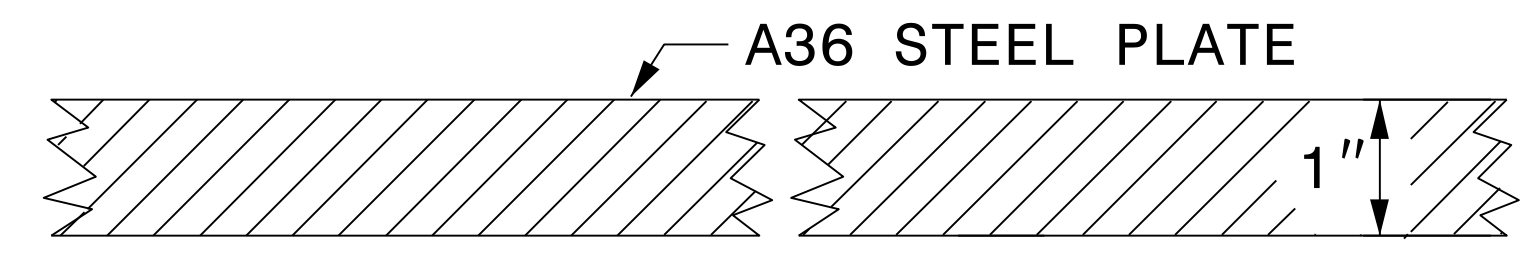


2/18/2022
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User: lowery



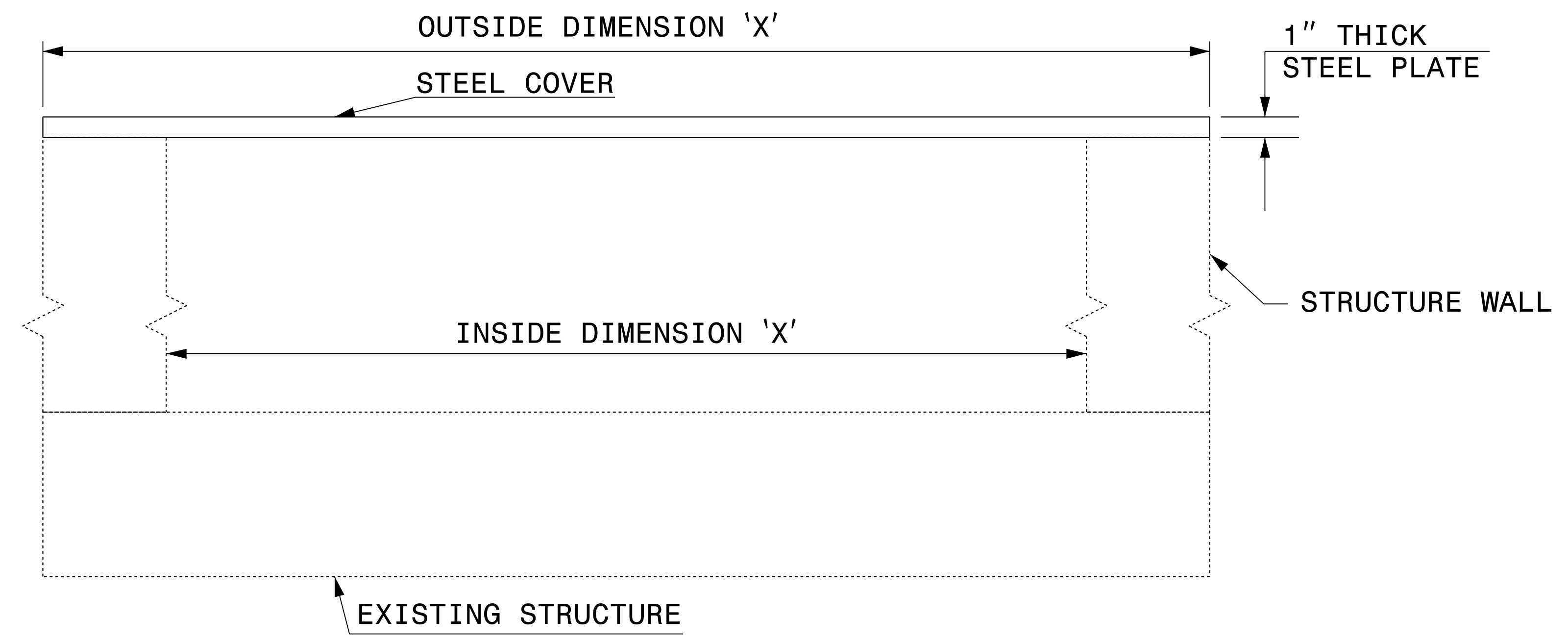
GENERAL NOTES:

- USE GRADE A36 STEEL
- STEEL COVERS ARE FOR TEMPORARY USE DURING PHASE CONSTRUCTION.
- FILL SHALL BE PLACED DIRECTLY OVER THE STEEL PLATES.
- SEE ROADWAY PLANS AND PROVISIONS FOR LOCATIONS
- QUANTITIES TO BE PAID FOR AT THE UNIT PRICE BID PER EACH.



SECTION VIEW OF STEEL TOP PLATE

PLAN VIEWS



ELEVATION VIEWS



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
 Office 919-707-6950 FAX 919-250-4119

DETAIL OF TEMPORARY 1" STEEL COVER

ORIGINAL BY: E.E. WARD DATE: 2-2-98
 MODIFIED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: eric:/usr/details/metric/stand/stlcvr2.dgn

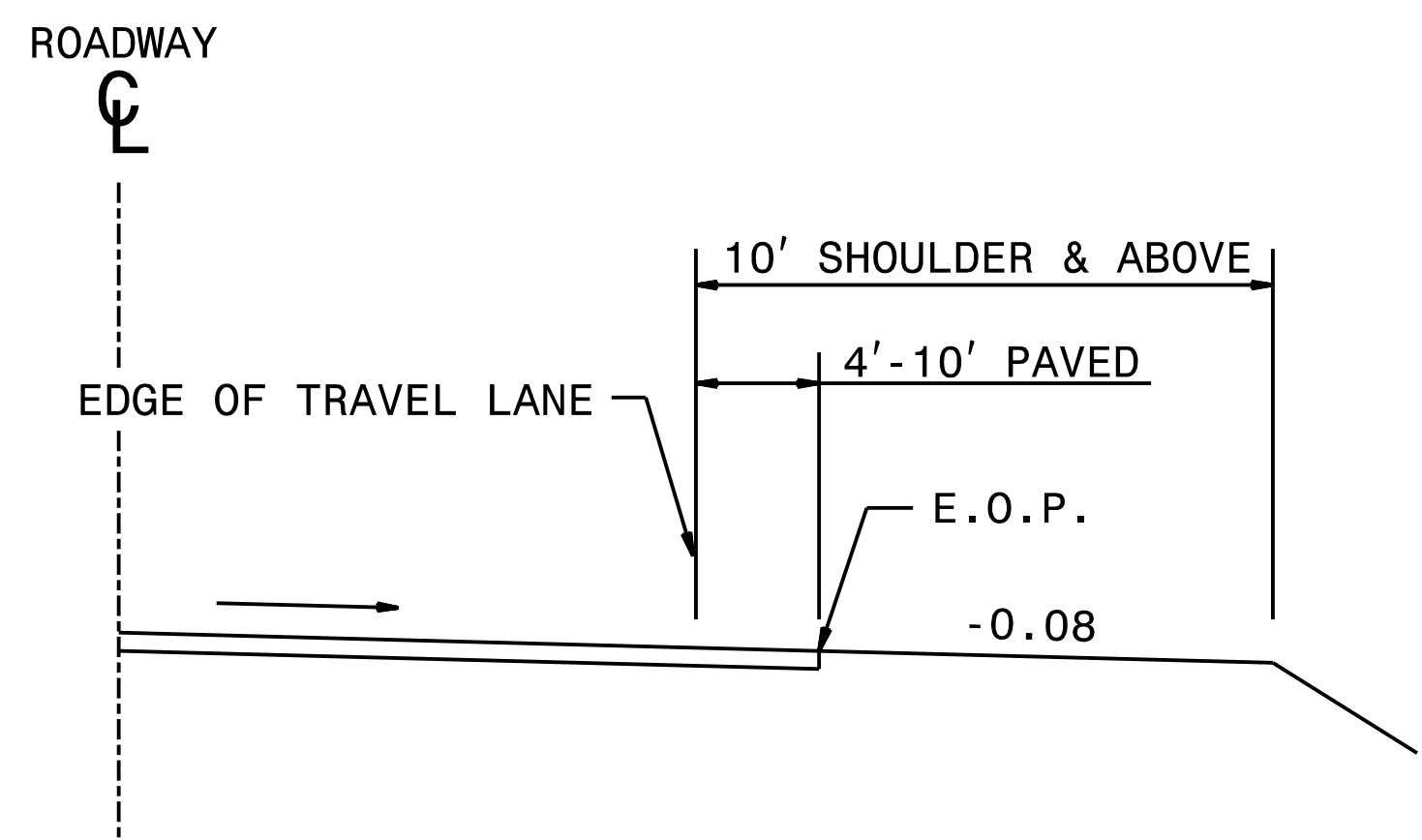
07-DEC-2018 09:57
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 Jhoverton AT USD-292595

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

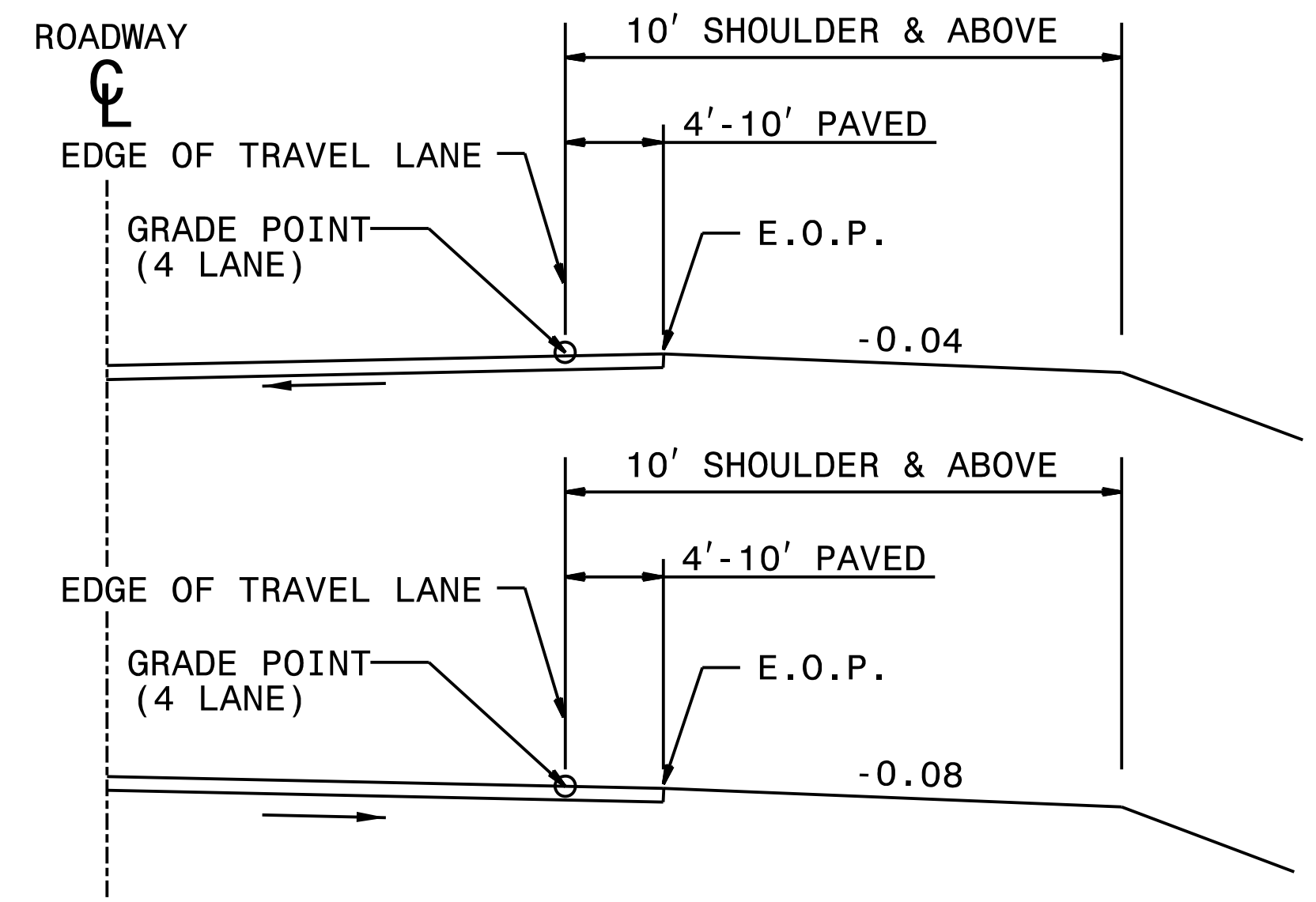
ROADWAY DETAIL DRAWING FOR
METHOD OF SHOULDER CONSTRUCTION
HIGH SIDE OF SUPERELEVATED CURVE
METHOD II (SHOULDERS 10' AND ABOVE)

SHEET 1 OF 2
560d02

NORMAL OUTSIDE SHOULDER SLOPES

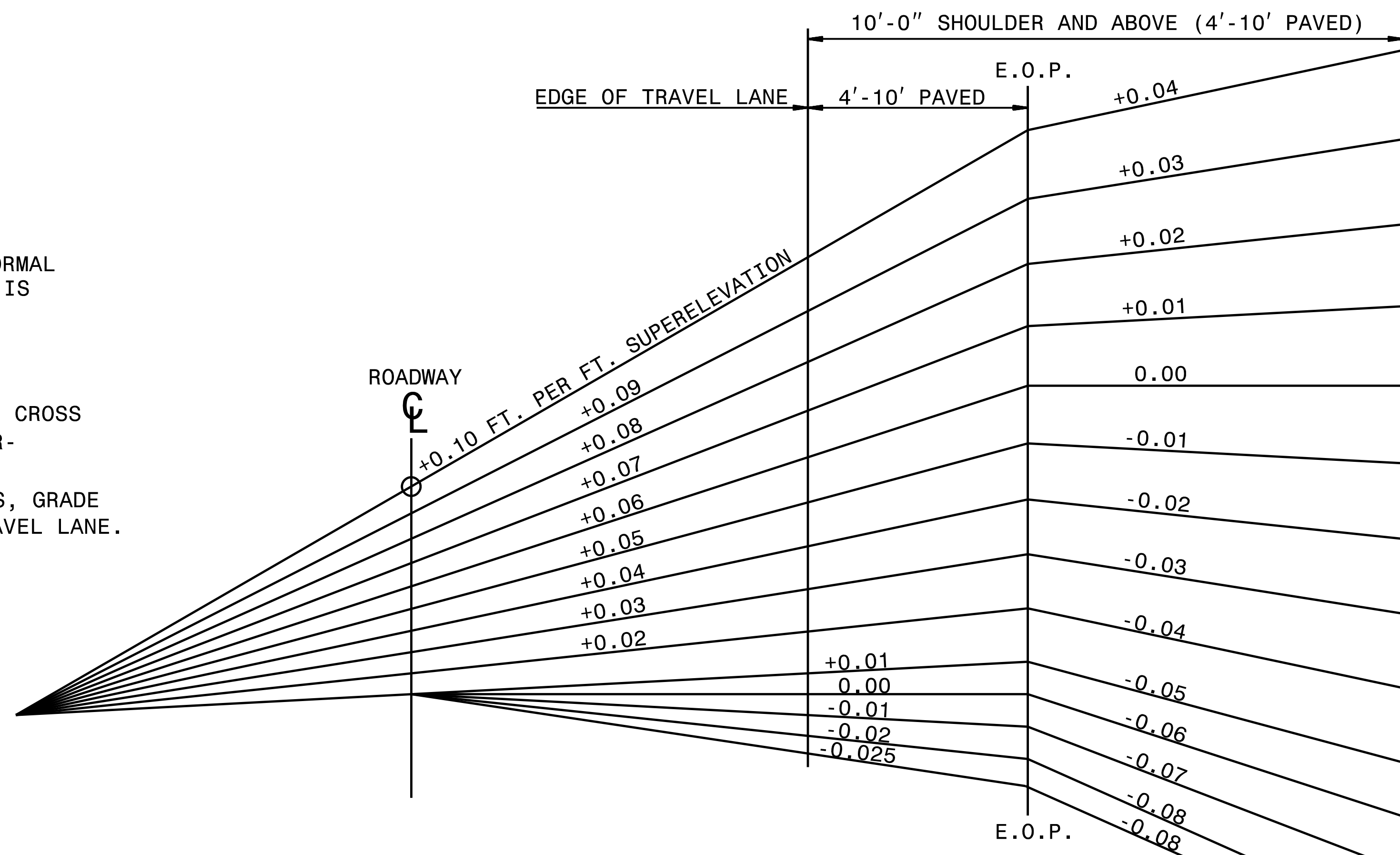


NORMAL MEDIAN SHOULDER SLOPES



NOTE: ON LOW SIDE OF SUPERELEVATED PAVEMENT USE NORMAL SHOULDER SLOPE UNLESS NORMAL SHOULDER SLOPE IS FLATTER THAN SUPERELEVATION, THEN USE SUPER-ELEVATION RATE ON SHOULDER.

NOTE: "ROLL-OVER" ALGEBRAIC DIFFERENCE IN RATES OF CROSS SLOPE NOT TO EXCEED 0.06 AS SHOWN. IF SUPER-ELEVATION IS REVOLVED ABOUT CENTER LINE OF PAVEMENT, SAME APPLIES. ON DIVIDED ROADWAYS, GRADE POINT TO BE AT THE MEDIAN EDGE OF INSIDE TRAVEL LANE.

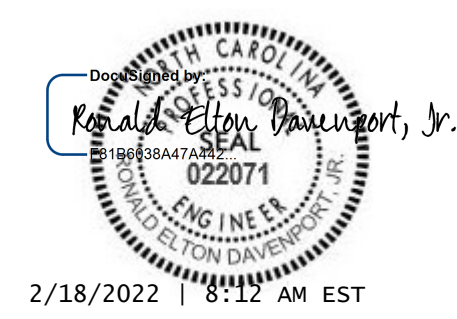


STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
METHOD OF SHOULDER CONSTRUCTION
HIGH SIDE OF SUPERELEVATED CURVE
METHOD II (SHOULDERS 10' AND ABOVE)

SHEET 1 OF 2
560d02

5/14/22
SYTIME
L/MS
DU
SHERNAME



2/18/2022 8:12 AM EST

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CONTRACT STANDARDS
AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: KKempf DATE: 5-15-09
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC: /ericward/stds/stdstodetails/30001/0300d01.dgn

COMPUTED BY: J. PARK DATE: 10/20/17
 CHECKED BY: J. BATTS DATE: 10/20/17

(1-16-18)

PROJECT NO.
B-4786

SHEET NO.
3G-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
				SD	500
				TOTAL LF:	500

*UD = Underdrain
 *BD = Blind Drain
 *SD = Subsurface Drain

SUMMARY OF ROCK PLATING

LINE	Beginning Slope (H:V)	Approx. Station	Ending Slope (H:V)	Approx. Station	Location LT/RT	Rock Plating Detail No. 1/2/3/4	Riprap Class* 1/2/B	Rock Plating SY
-L-	2.5:1	23+75	1.5:1	25+49	RT	2		645
-L-	1.5:1	30+87	2.5:1	31+75	RT	2		505
							TOTAL SY:	1150

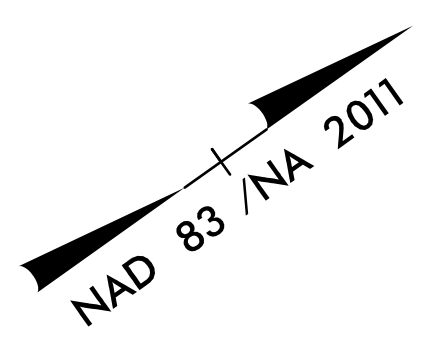
*Use Class 1, 2 or B riprap if riprap class is not shown for rock plating location.

8/17/2011

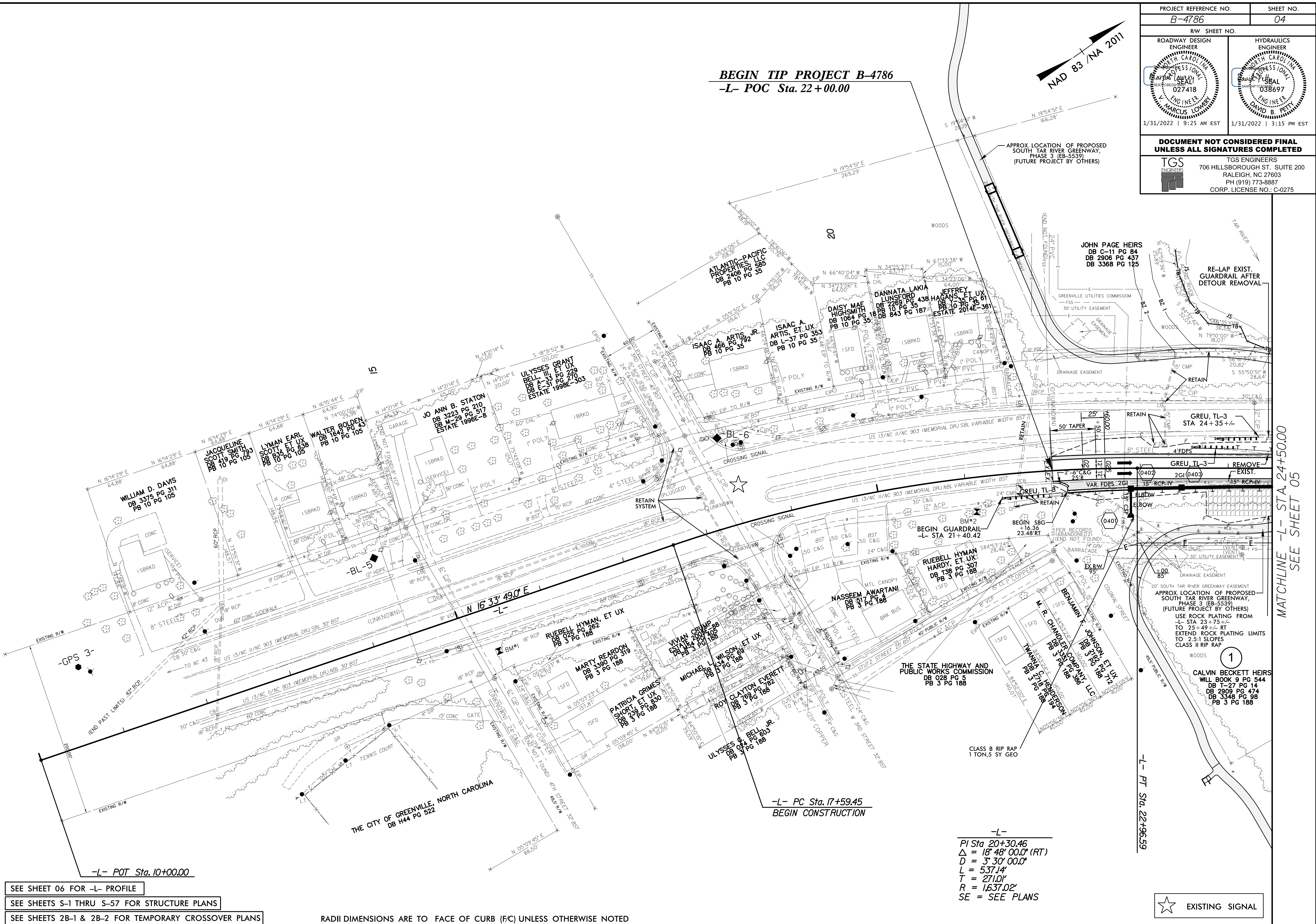
REVISIONS

12/10/2021
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User: jmc

BEGIN TIP PROJECT B-4786 -L- POC Sta. 22+00.00



PROJECT REFERENCE NO. B-4786		SHEET NO. 04	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER 		HYDRAULICS ENGINEER 	
1/31/2022 9:25 AM EST		1/31/2022 3:15 PM EST	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



SEE SHEET 06 FOR -L- PROFILE
 SEE SHEETS S-1 THRU S-57 FOR STRUCTURE PLANS
 SEE SHEETS 2B-1 & 2B-2 FOR TEMPORARY CROSSOVER PLANS

RADI DIMENSIONS ARE TO FACE OF CURB (FC) UNLESS OTHERWISE NOTED

-L-
 PI Sta 20+30.46
 Δ = 18' 48' 00.0" (RT)
 D = 3' 30' 00.0"
 L = 537.14'
 T = 271.01'
 R = 1,637.02'
 SE = SEE PLANS

EXISTING SIGNAL

MATCHLINE -L- STA. 24+50.00
SEE SHEET 05

-L- PT Sta. 22+96.59

-L- PC Sta. 17+59.45
BEGIN CONSTRUCTION

-L- POT Sta. 10+00.00

APPROX. LOCATION OF PROPOSED SOUTH TAR RIVER GREENWAY, PHASE 3 (EB-5539) (FUTURE PROJECT BY OTHERS)
 USE ROCK PLATING FROM -L- STA 23+75 +/- TO 25+49 +/- RT
 EXTEND ROCK PLATING LIMITS TO 2.5:1 SLOPES
 CLASS II RIP RAP

JOHN PAGE HEIRS
DB C-11 PG 84
DB 2906 PG 437
DB 3368 PG 125

RE-LAP EXIST. GUARDRAIL AFTER DETOUR REMOVAL

GREU TL-3 STA 24+35 +/-

BEGIN GUARDRAIL -L- STA 21+40.42

RUEBELL HYMAN, ET UX
DB 136 PG 307
DB 3 PG 188

NASSEEM AWARTANI
DB 517 PG 188

THE STATE HIGHWAY AND PUBLIC WORKS COMMISSION
DB 028 PG 5
DB 3 PG 188

THE STATE HIGHWAY AND PUBLIC WORKS COMMISSION
DB 028 PG 5
DB 3 PG 188

THE STATE HIGHWAY AND PUBLIC WORKS COMMISSION
DB 028 PG 5
DB 3 PG 188

THE STATE HIGHWAY AND PUBLIC WORKS COMMISSION
DB 028 PG 5
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DB 3 PG 188

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DB 3 PG 188

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DB 028 PG 5
DB 3 PG 188

THE STATE HIGHWAY AND PUBLIC WORKS COMMISSION
DB 028 PG 5
DB 3 PG 188

THE STATE HIGHWAY AND PUBLIC WORKS COMMISSION
DB 028 PG 5
DB 3 PG 188

THE CITY OF GREENVILLE, NORTH CAROLINA
DB H44 PG 522

RUEBELL HYMAN, ET UX
DB 025 PG 262

MARTY REARDON
DB 3390 PG 315
DB 3 PG 188

PATROIA GRIMES
DB 3390 PG 315
DB 3 PG 188

ROY CLAYTON EVERETT
DB 709 PG 188

ULYSSES GRANT BELL, JR.
DB 3 PG 188

ULYSSES GRANT BELL, JR.
DB 3 PG 188

ULYSSES GRANT BELL, JR.
DB 3 PG 188

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DB 3 PG 188

ULYSSES GRANT BELL, JR.
DB 3 PG 188

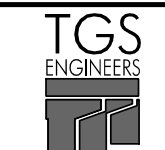
ULYSSES GRANT BELL, JR.
DB 3 PG 188

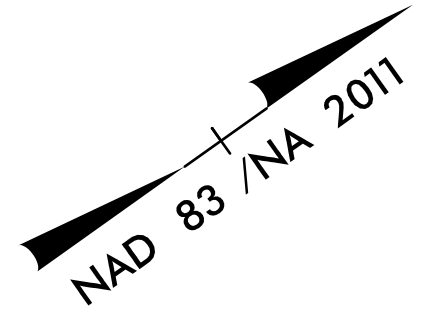
ULYSSES GRANT BELL, JR.
DB 3 PG 188

ULYSSES GRANT BELL, JR.
DB 3 PG 188

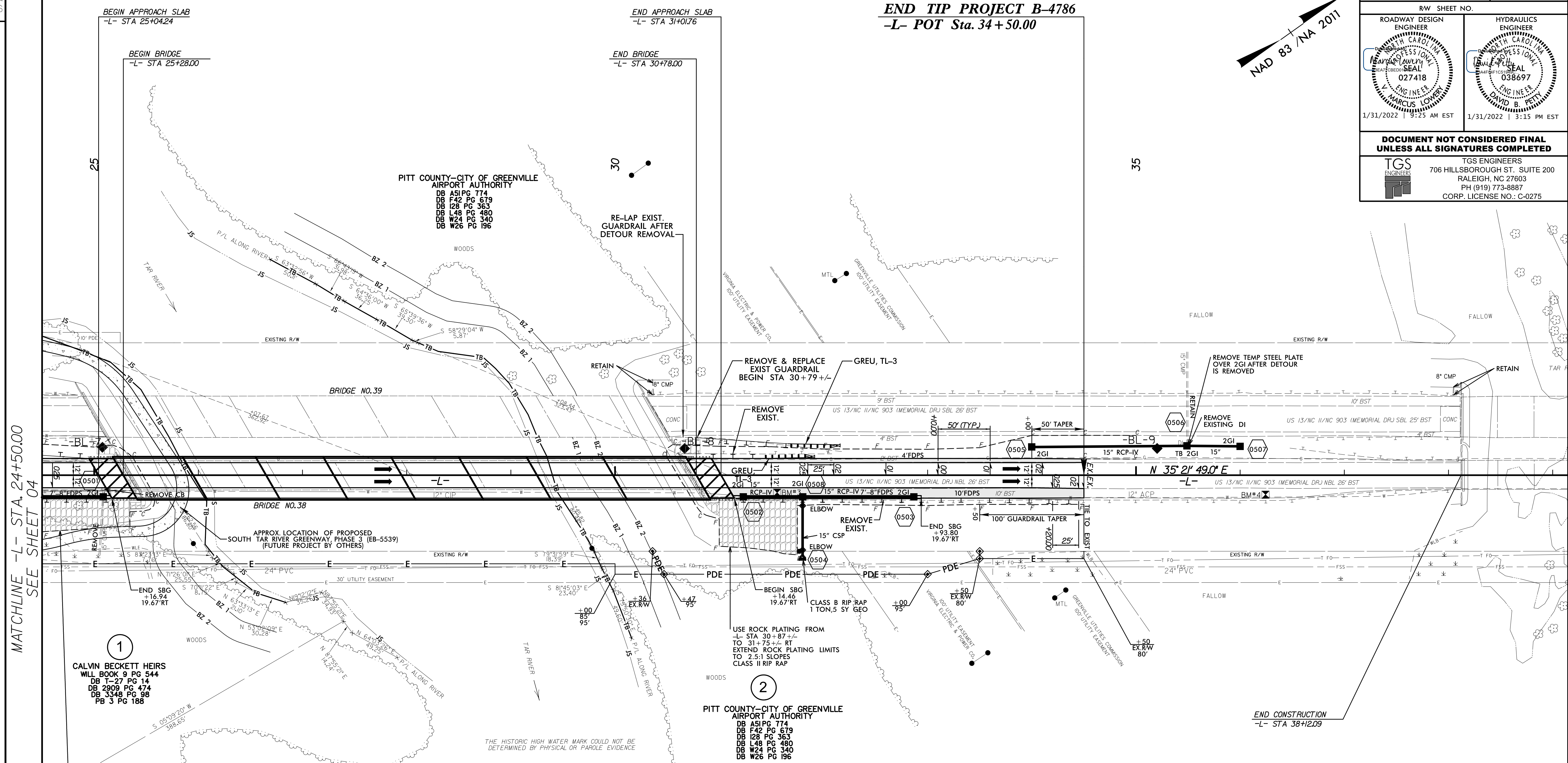
ULYSSES GRANT BELL, JR.
DB 3 PG 188

8/17/99

PROJECT REFERENCE NO. B-4786	SHEET NO. 05
RW SHEET NO.	
ROADWAY DESIGN ENGINEER MARCUS LOWERY PROFESSIONAL SEAL 027418 1/31/2022 9:25 AM EST	HYDRAULICS ENGINEER DAVID B. PETT PROFESSIONAL SEAL 038697 1/31/2022 3:15 PM EST
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



END TIP PROJECT B-4786
-L- POT Sta. 34+50.00

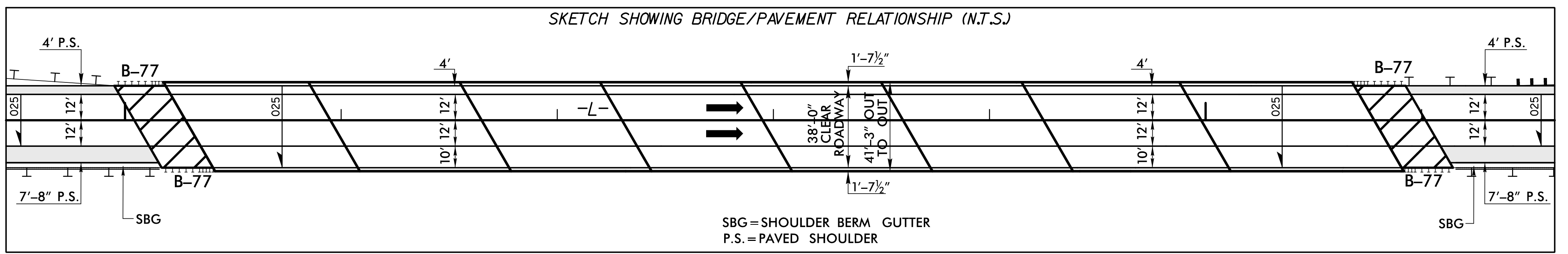


MATCHLINE -L- STA. 24+50.00
SEE SHEET 04

1
CALVIN BECKETT HEIRS
 WILL BOOK 9 PG 544
 DB T-27 PG 14
 DB 2909 PG 474
 DB 3348 PG 98
 PB 3 PG 188

2
**PITT COUNTY-CITY OF GREENVILLE
 AIRPORT AUTHORITY**
 DB A51 PG 774
 DB F42 PG 679
 DB I28 PG 363
 DB L48 PG 480
 DB W24 PG 340
 DB W26 PG 196

USE ROCK PLATING FROM
 -L- STA 23+75+/-
 TO 25+49+/- RT
 EXTEND ROCK PLATING LIMITS
 TO 2.5:1 SLOPES
 CLASS II RIP RAP



SEE SHEET 06 FOR -L- PROFILE
 SEE SHEETS S-1 THRU S-57 FOR STRUCTURE PLANS
 SEE SHEETS 2B-1 & 2B-2 FOR TEMPORARY CROSSOVER PLANS

SBG=SHOULDER BERM GUTTER
 P.S.=PAVED SHOULDER

REVISIONS

12/4/2021
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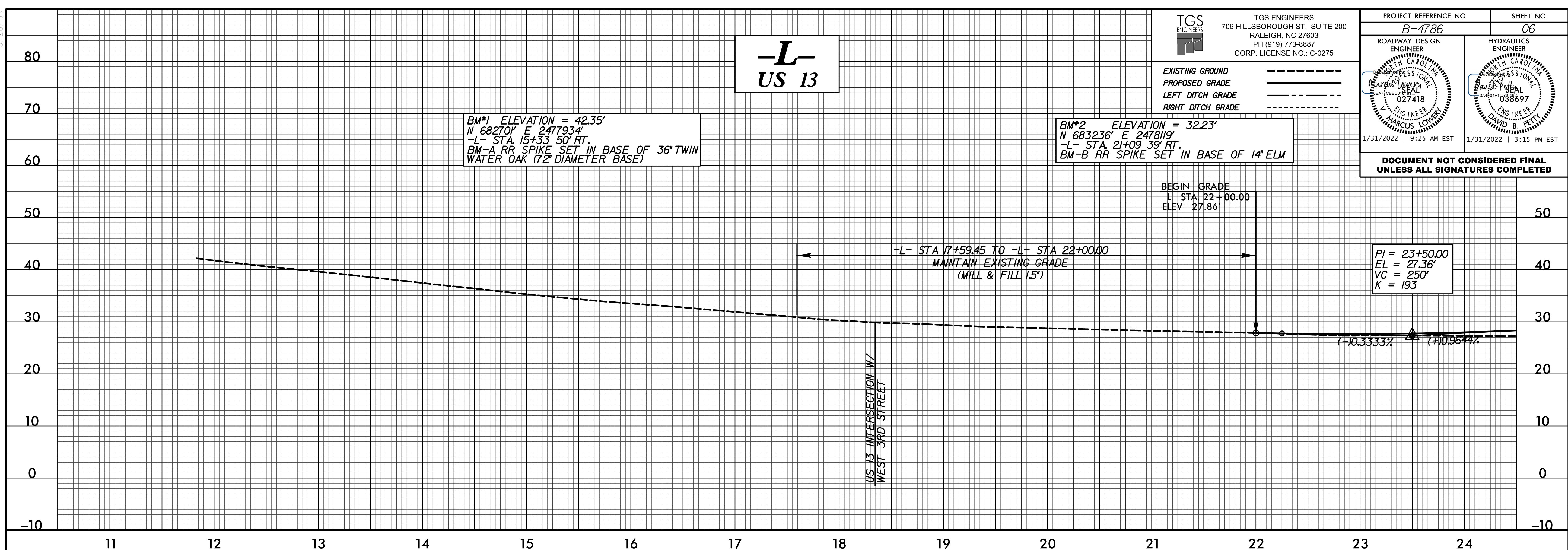
5/28/2021

TGS ENGINEERS
 706 HILLSBOROUGH ST. SUITE 200
 RALEIGH, NC 27603
 PH (919) 773-8887
 CORP. LICENSE NO.: C-0275

EXISTING GROUND _____
 PROPOSED GRADE _____
 LEFT DITCH GRADE _____
 RIGHT DITCH GRADE _____

PROJECT REFERENCE NO. B-4786	SHEET NO. 06
ROADWAY DESIGN ENGINEER L. MARCUS LOWERY 027418	HYDRAULICS ENGINEER DAVID B. PETTY 038697
1/31/2022 9:25 AM EST	1/31/2022 3:15 PM EST

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BM*1 ELEVATION = 42.35'
 N 68270' E 2477934'
 -L- STA 15+33 50' RT.
 BM-A RR SPIKE SET IN BASE OF 36" TWIN
 WATER OAK (72" DIAMETER BASE)

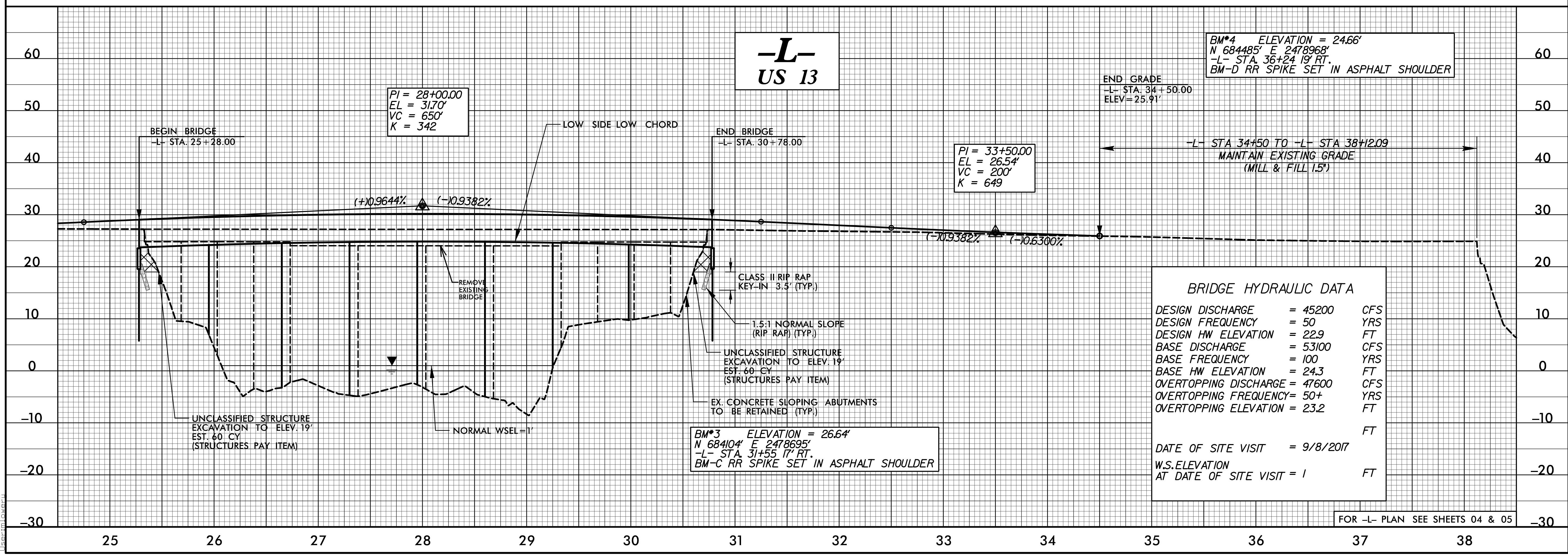
BM*2 ELEVATION = 32.23'
 N 683236' E 2478119'
 -L- STA 21+09 39' RT.
 BM-B RR SPIKE SET IN BASE OF 14" ELM

BEGIN GRADE
 -L- STA: 22 + 00.00
 ELEV = 27.86'

PI = 23+50.00
EL = 27.36'
VC = 250'
K = 193

**-L-
US 13**

US 13 INTERSECTION W/
WEST 3RD STREET



BM*4 ELEVATION = 24.66'
 N 684485' E 2478968'
 -L- STA 36+24 19' RT.
 BM-D RR SPIKE SET IN ASPHALT SHOULDER

END GRADE
 -L- STA: 34 + 50.00
 ELEV = 25.91'

PI = 28+00.00
EL = 31.70'
VC = 650'
K = 342

PI = 33+50.00
EL = 26.54'
VC = 200'
K = 649

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 45200	CFS
DESIGN FREQUENCY	= 50	YRS
DESIGN HW ELEVATION	= 22.9	FT
BASE DISCHARGE	= 53100	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 24.3	FT
OVERTOPPING DISCHARGE	= 47600	CFS
OVERTOPPING FREQUENCY	= 50+	YRS
OVERTOPPING ELEVATION	= 23.2	FT
DATE OF SITE VISIT	= 9/8/2017	
W.S. ELEVATION AT DATE OF SITE VISIT	= 1	FT

BM*3 ELEVATION = 26.64'
 N 684104' E 2478695'
 -L- STA 31+55 17' RT.
 BM-C RR SPIKE SET IN ASPHALT SHOULDER

FOR -L- PLAN SEE SHEETS 04 & 05

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