

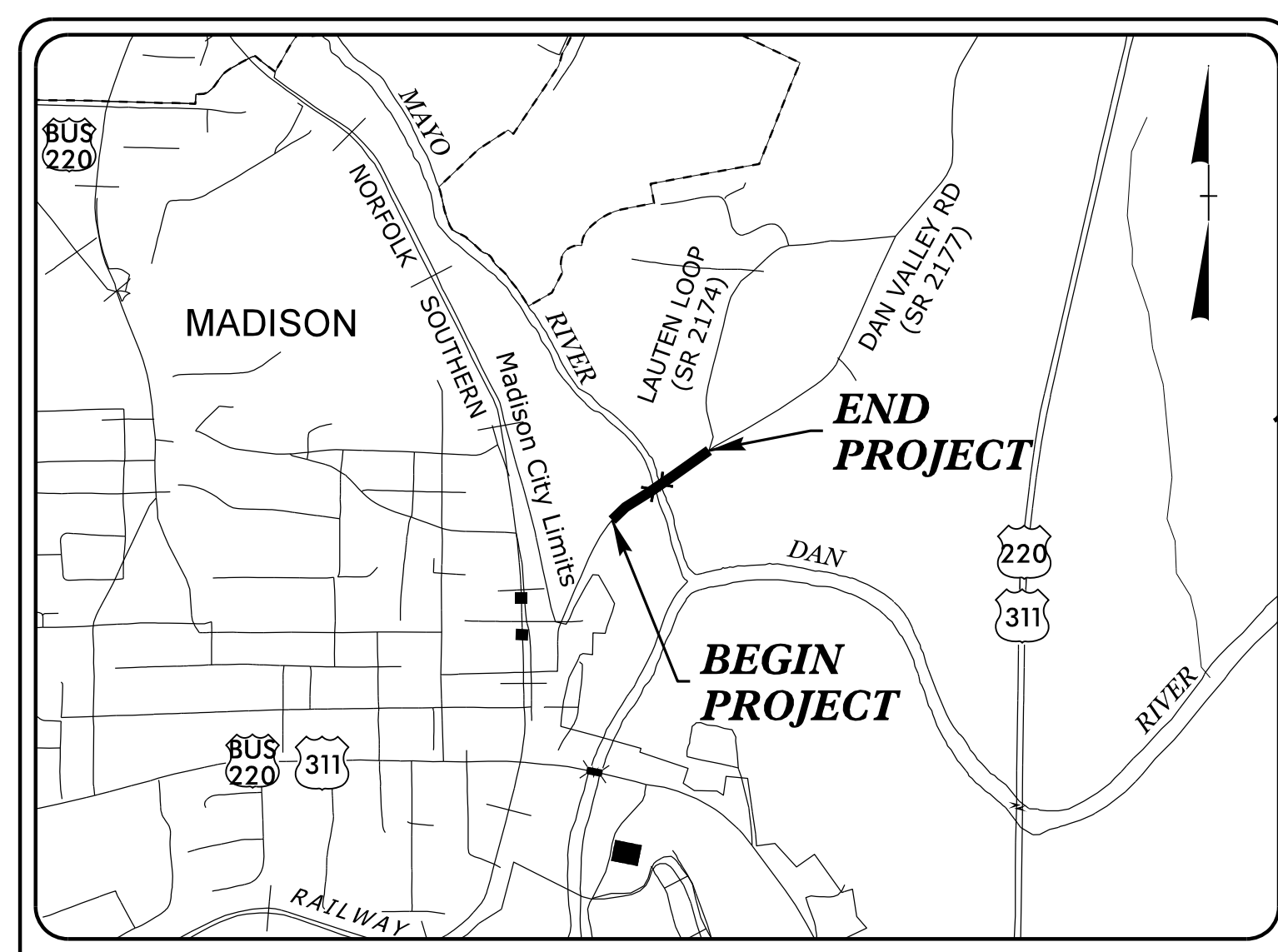
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5721	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45677.1.1	BRZ-2177 (001)	PE	
45677.2.1	BRZ-2177 (001)	RW & UTILITIES	
45677.3.1	BRZ-2177 (001)	CONSTRUCTION	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROCKINGHAM COUNTY

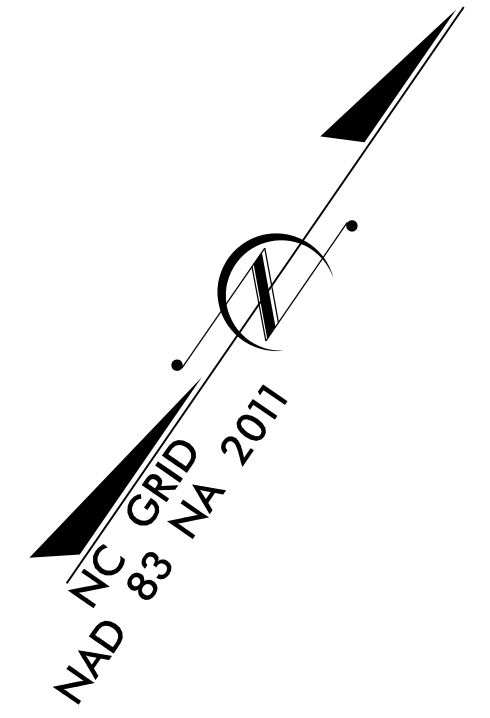
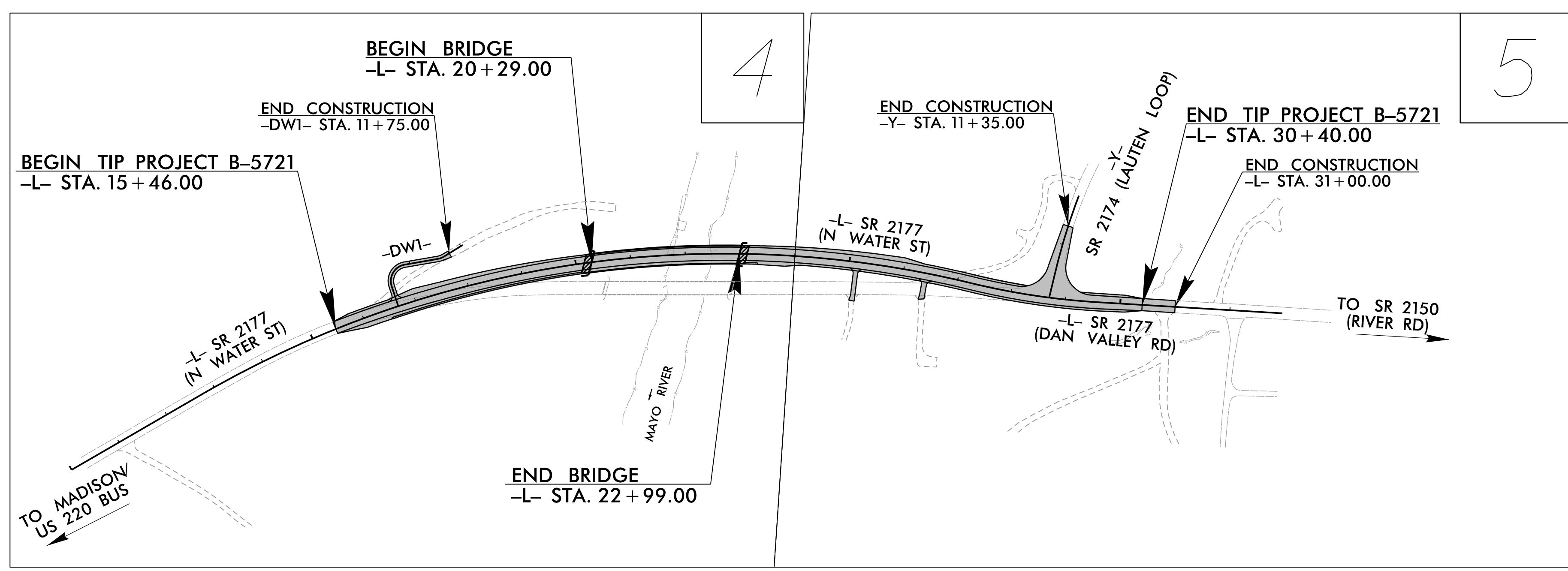
LOCATION: BRIDGE 780124 ON SR 2177 (DAN VALLEY RD) OVER THE MAYO RIVER

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



VICINITY MAP
NOT TO SCALE

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

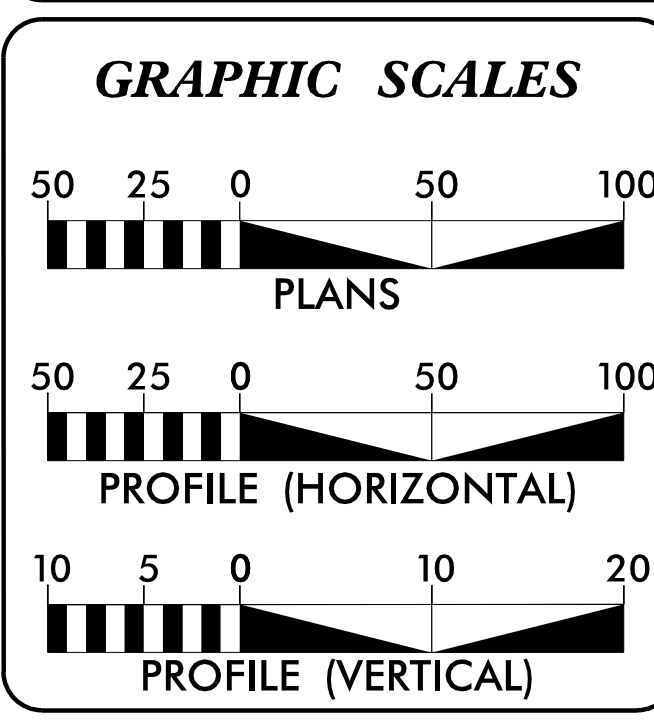


TIP PROJECT: B-5721

CONTRACT: C204763

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



DESIGN DATA

ADT 2022 =	4,277
ADT 2041 =	6,096
K =	10 %
D =	55 %
T =	8% % *
V =	50 MPH
* TTST =	1% DUAL 7%
FUNC CLASS =	LOCAL
SUB-REGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5721 =	0.232 MI
LENGTH STRUCTURE TIP PROJECT B-5721 =	0.051 MI
TOTAL LENGTH TIP PROJECT B-5721 =	0.283 MI

Prepared in the Office of:

AECOM
2018 STANDARD SPECIFICATIONS

NC FIRM LICENSE No: F-0342
5438 Wade Park Boulevard, Suite 200
Raleigh, NC 27607
(919) 461-1100

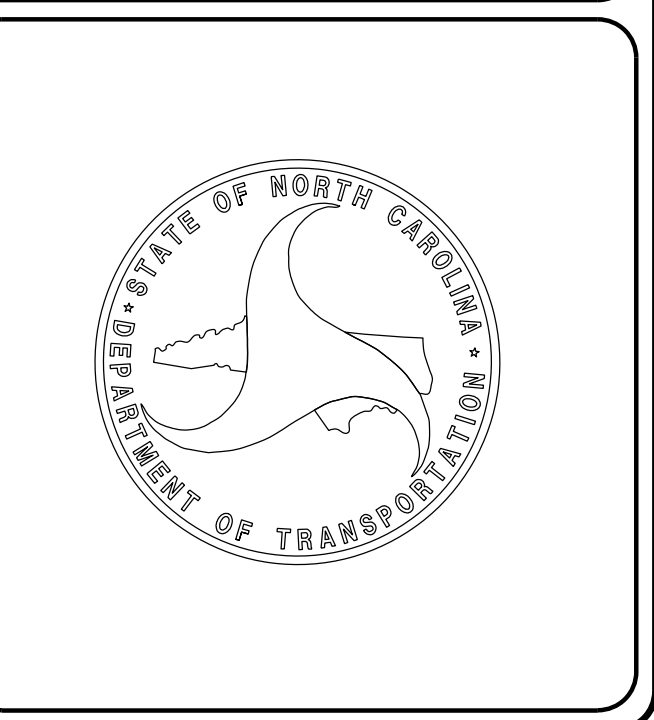
RIGHT OF WAY DATE: JANUARY 14, 2022	GREGORY R. COLS, P.E. PROJECT ENGINEER
LETTING DATE: MAY 16, 2023	EDWARD GLENN EDENS JR., P.E. PROJECT DESIGN ENGINEER
	DAVID STUTTS, P.E. NCDOT PROJECT MANAGER

HYDRAULICS ENGINEER

DocuSigned by:
Ed Edens
3/16/2023

ROADWAY DESIGN ENGINEER

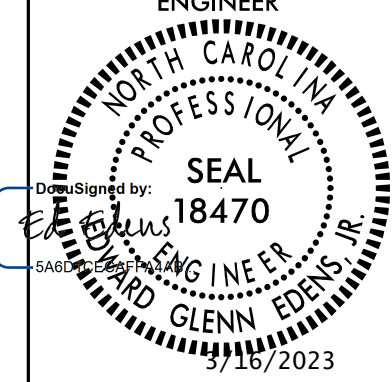
DocuSigned by:
Ed Edens
3/16/2023



2/14/2023 P:\aecom-na-pw-bentley.com\AECOM_DS2_LNA_2020\Document s\60606265-NCDDT_SMU B-5721\900-CAD_GIS\910-CAD\70-NCDDT_TIP\Roadway\Proj\B5721_rdy_tsh.dgn Mw@bzdc

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

INDEX OF SHEETS, GENERAL NOTES AND 2018 ROADWAY ENGLISH STANDARD DRAWINGS

PROJECT REFERENCE NO. <i>B-5721</i>	SHEET NO. <i>1A</i>
ROADWAY DESIGN ENGINEER 	
Prepared in the Office of: AECOM	NC ERM LICENSE No. F-0342 5438 Wade Park, Raleigh, NC 27607 Raleigh, NC 27607 919.461.4000
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES,
1B	CONVENTIONAL SYMBOLS
2A-1 THRU 2A-2	TYPICAL SECTIONS
2C-1	GUARDRAIL INSTALLATION DETAILS
3B-1	ROADWAY SUMMARIES
3D-1 THRU 3D-2	DRAINAGE SUMMARIES
3G-1	GEOTECHNICAL SUMMARIES
3P-1	PARCEL INDEX
4 THRU 5	PLAN SHEETS
6 THRU 7	PROFILE SHEETS
RW01 THRU RW05	RIGHT OF WAY / SURVEY PLANS
TMP-1 THRU TMP-9	TRANSPORTATION MANAGEMENT PLANS
PMP-1 THRU PMP-3	PAVEMENT MARKING PLANS
EC-01 THRU EC-07	EROSION CONTROL PLANS
SIGN-01 THRU SIGN-05	SIGNING PLANS
UO-1 THRU UO-3	UTILITIES BY OTHER PLANS
X-0	CROSS SECTION INDEX
X-1A	CROSS SECTION SUMMARY SHEET
X-1 THRU X-11	CROSS SECTIONS
S-1 THRU S-31	STRUCTURE PLANS

2018 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 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
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
225.06	Method of Grading Sight Distance at Intersections
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 4 - MAJOR STRUCTURES	
422.02	Bridge Approach Fills - Type II Modified Approach Fill
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
815.02	Subsurface Drain
838.21	Reinforced Concrete Endwall - for Single 54" Pipe 90 Skew
838.45	Notes for Reinforced Concrete Endwall - Std. Dwg 838.21 thru 838.40
838.51	Reinforced Brick Endwall - for Single 54" Pipe 90 Skew
838.75	Notes for Reinforced Brick Endwall - Std. Dwg 838.51 thru 838.70
838.80	Precast Endwalls - 12" thru 72" Pipe 90 Skew
840.00	Concrete Base Pad for Drainage Structures
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
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
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
848.04	Street Turnout
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

EFF. 01-16-2018
REV.

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.

SHOULDER DRAINS:

SHOULDER DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 816.03 AND DETAILS IN PLANS 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" WILL BE PAID FOR AT THE CONTRACT PRICE FOR "TEMPORARY SHORING".

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 ENERGY, CenturyLink,
PNG
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.

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

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	(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 Endangered Animal Boundary	EAB
Existing Endangered Plant Boundary	EPB
Existing Historic Property Boundary	HPB
Known Contamination Area: Soil	☒-s-☒-s-
Potential Contamination Area: Soil	☒-s-☒-s-
Known Contamination Area: Water	☒-w-☒-w-
Potential Contamination Area: Water	☒-w-☒-w-
Contaminated Site: Known or Potential	☠ ?

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:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	-----
Jurisdictional Stream	JS
Buffer Zone 1	BZ 1
Buffer Zone 2	BZ 2
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	WLB
Proposed Lateral, Tail, Head Ditch	-----
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○
Switch	□
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY & 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 C/A Monument	△
Proposed C/A Monument (Rebar and Cap)	▲
Proposed C/A 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:

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	-----

Woods Line	-----
Orchard	-----
Vineyard	-----

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)

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:

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:

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	A/G Water

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:

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	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
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)*	-----

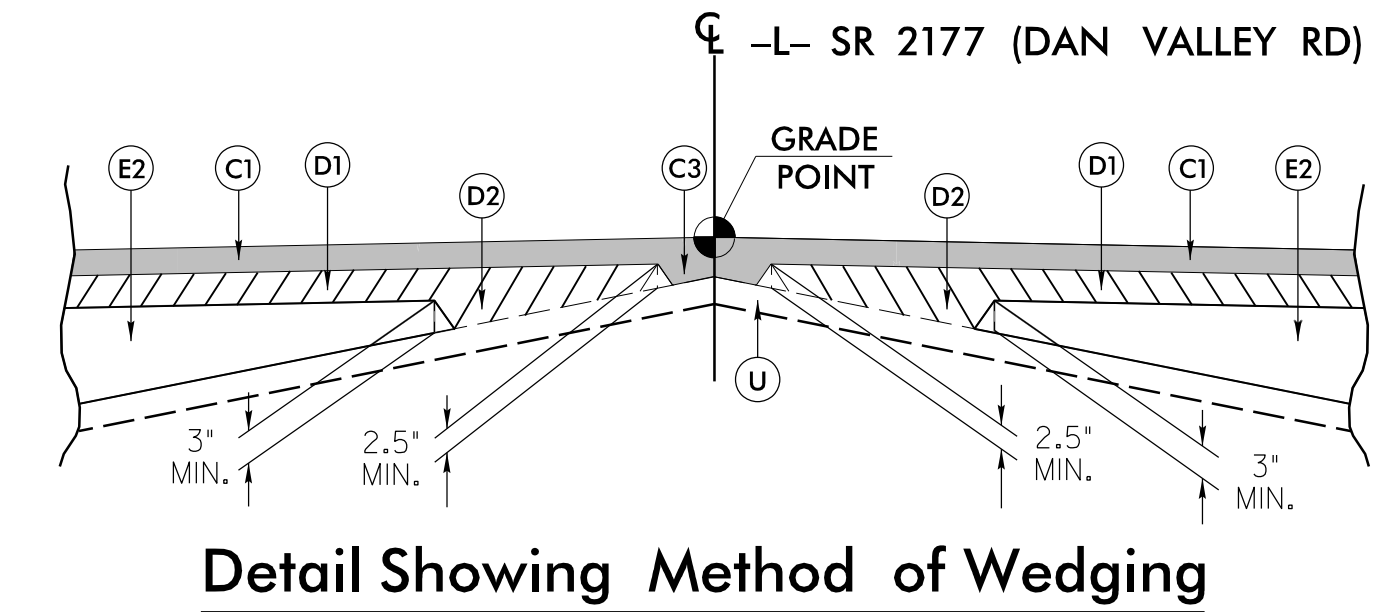
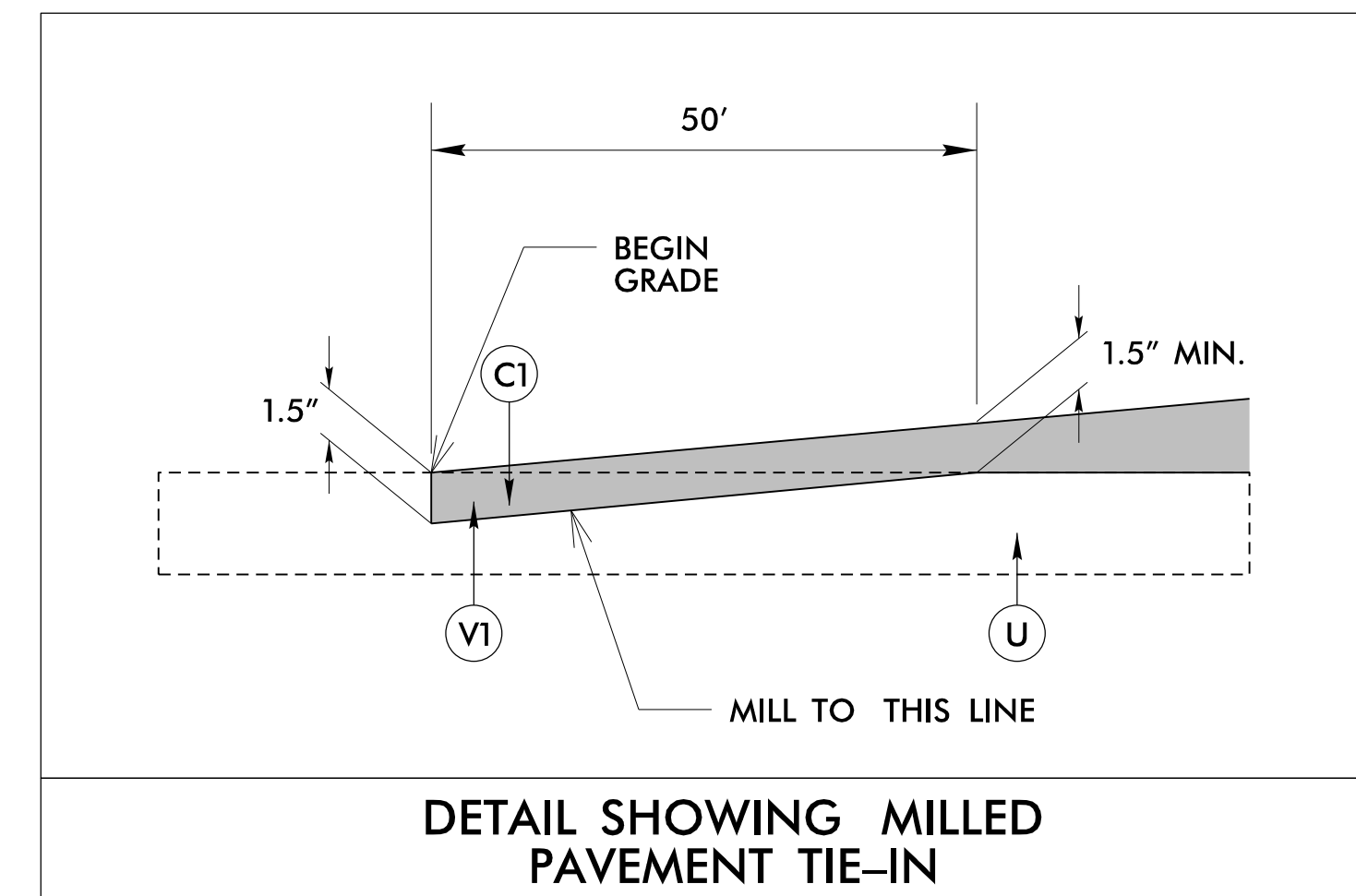
MISCELLANEOUS:

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.	(UST)
A/G Tank; Water, Gas, Oil	-----
Geoenvironmental Boring	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

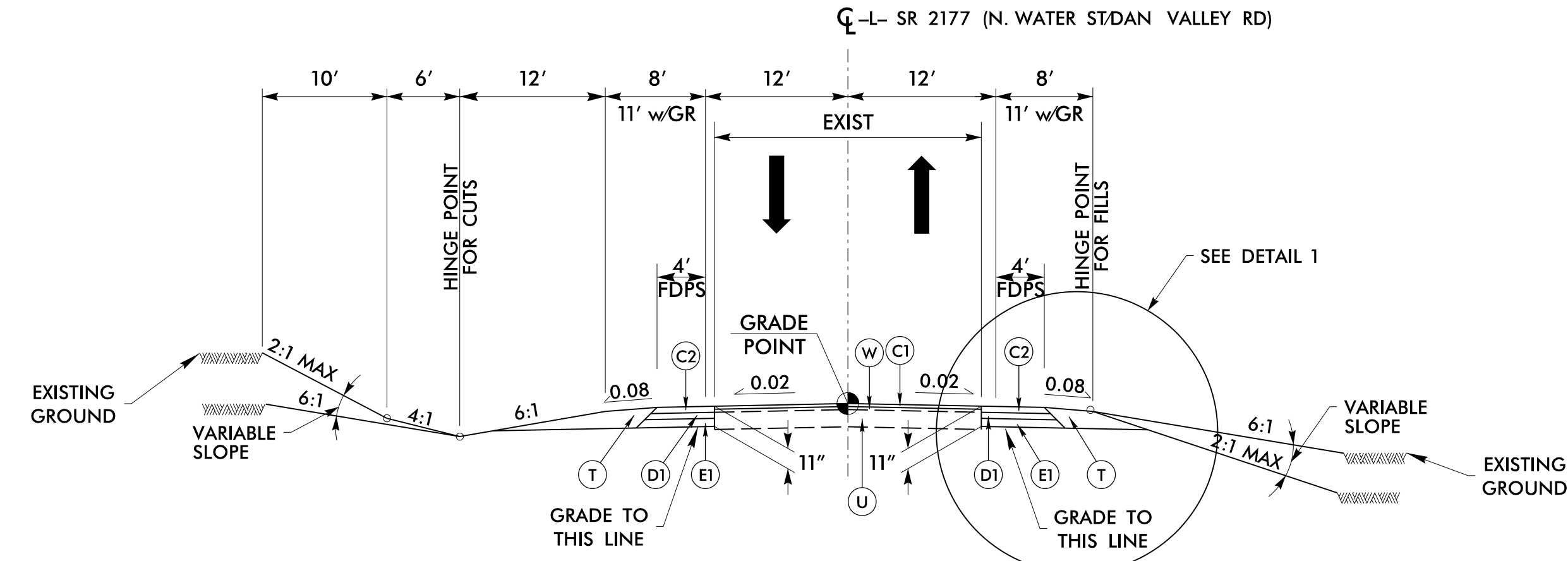
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PAVEMENT SCHEDULE (FINAL DESIGN)	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1" IN DEPTH OR GREATER THAN 1.5" IN DEPTH.
C4	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
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 2.5" 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 5.5" IN DEPTH.
J1	PROP. 8" AGGREGATE BASE COURSE.
R1	SHOULDER BERM GUTTER.
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	VARIABLE DEPTH MILLING
V2	2" MILLING
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING)

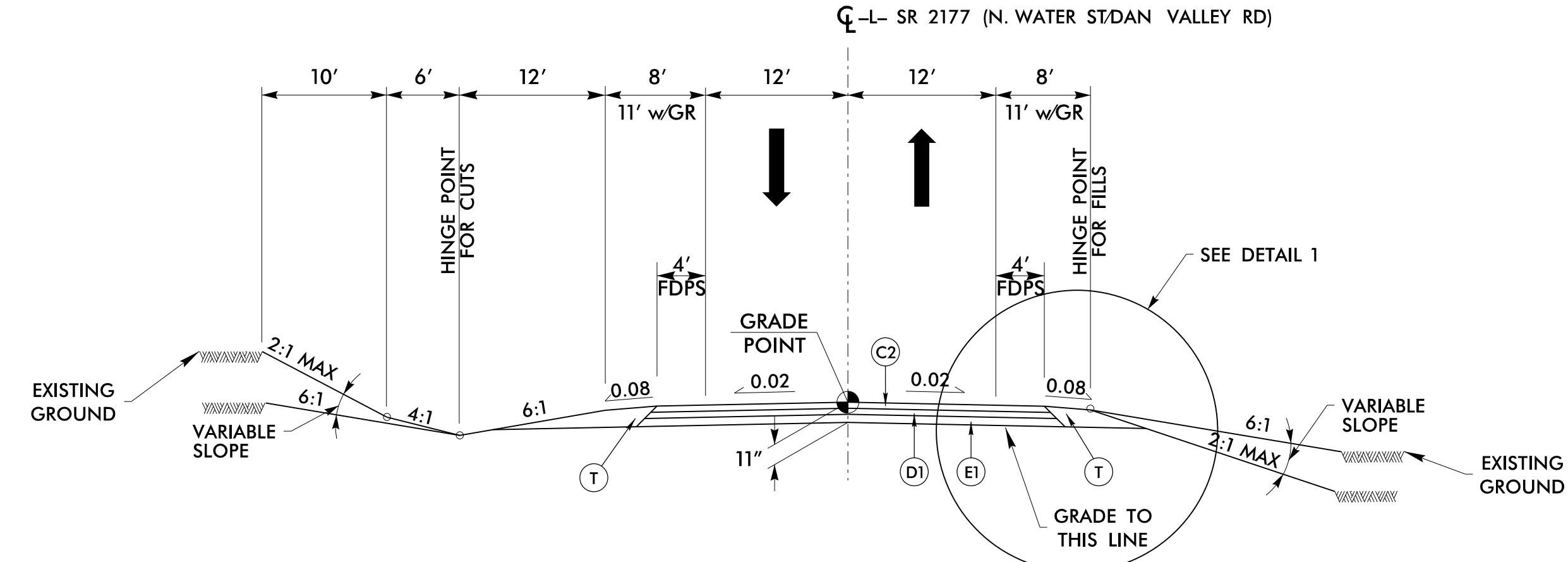
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE



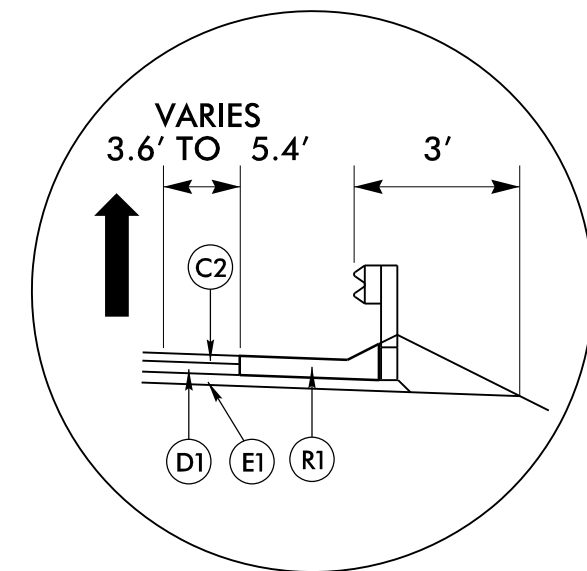
USE THIS DETAIL IN CONJUNCTION WITH TYPICAL SECTION NO. 1



TYPICAL SECTION NO. 1
 -L- STA. 15+46.00 TO STA. 17+00.00
 -L- STA. 28+00.00 TO STA. 30+40.00



TYPICAL SECTION NO. 2
 -L- STA. 17+00.00 TO STA. 20+29.00 (BEGIN BRIDGE)
 -L- STA. 22+99.00 (END BRIDGE) TO STA. 28+00.00



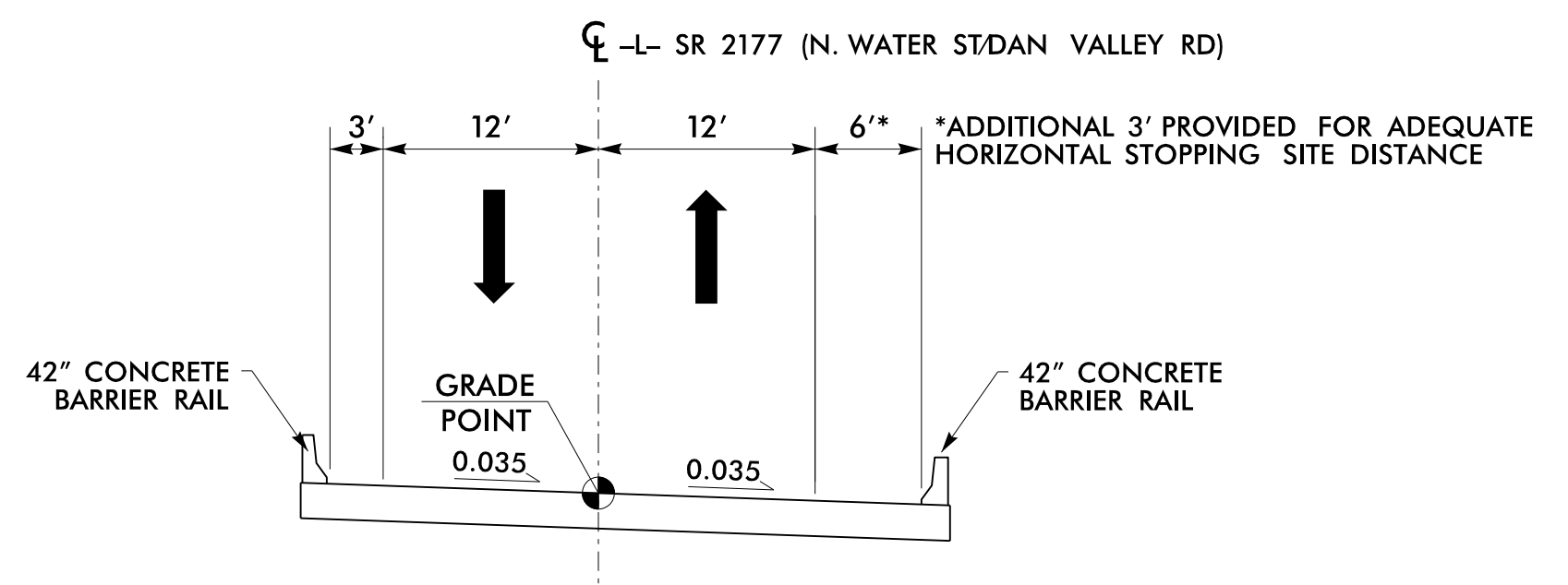
DETAIL NO. 1
 -L- STA. 16+49.44 TO STA. 20+08.76
 -L- STA. 23+09.25 TO STA. 23+32.43

PROJECT REFERENCE NO. B-5721	SHEET NO. 2A-1
ROADWAY DESIGN ENGINEER SEAL 18470 EDWARD GLENN EDEY JR.	PAVEMENT DESIGN ENGINEER SEAL 022896 DANIEL MORRISON
Prepared in the Office of: AECOM NC FIRM LICENSE No. F-0342 5438 Wade Park Boulevard, Suite 200 Raleigh, NC 27607 (919) 461-1000	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

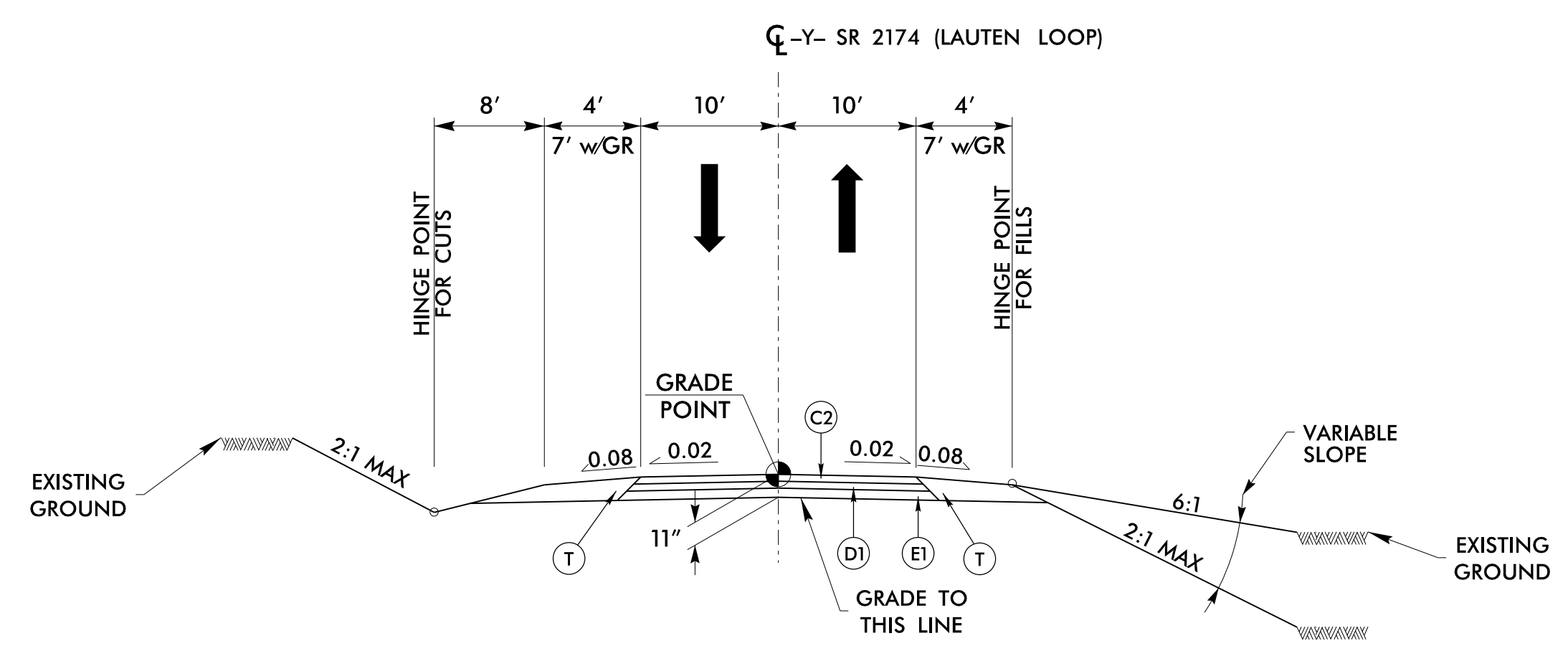
6/2/2023

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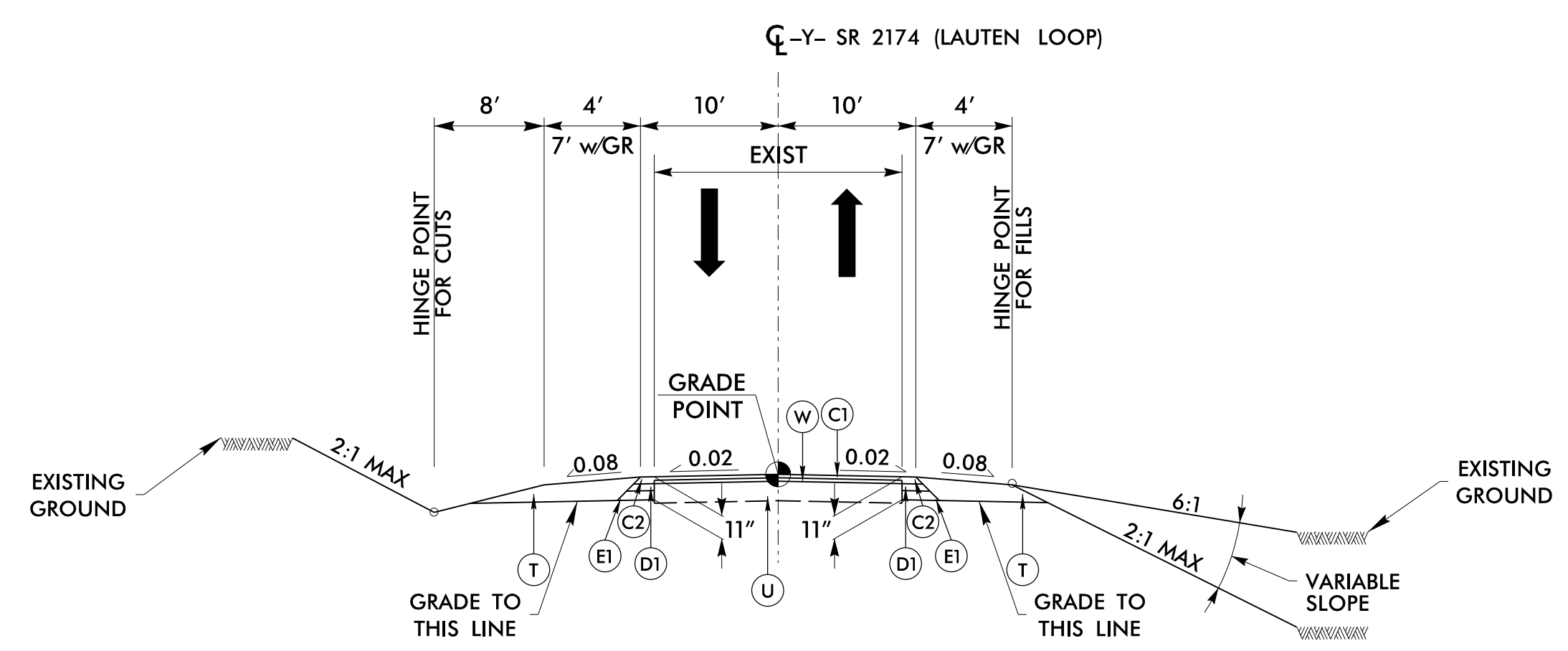
PROJECT REFERENCE NO. B-5721	SHEET NO. 2A-2
ROADWAY DESIGN ENGINEER SEAL 18470 C. W. GLENN, JR. 16/2023	PAVEMENT DESIGN ENGINEER SEAL 022896 S. MORRISON 3/17/2023
Prepared in the Office of: AECOM	
NC FIRM LICENSE No. F-0342 5436 Wade Park Boulevard, Suite 200 Raleigh, NC 27607 (919) 461-1000	
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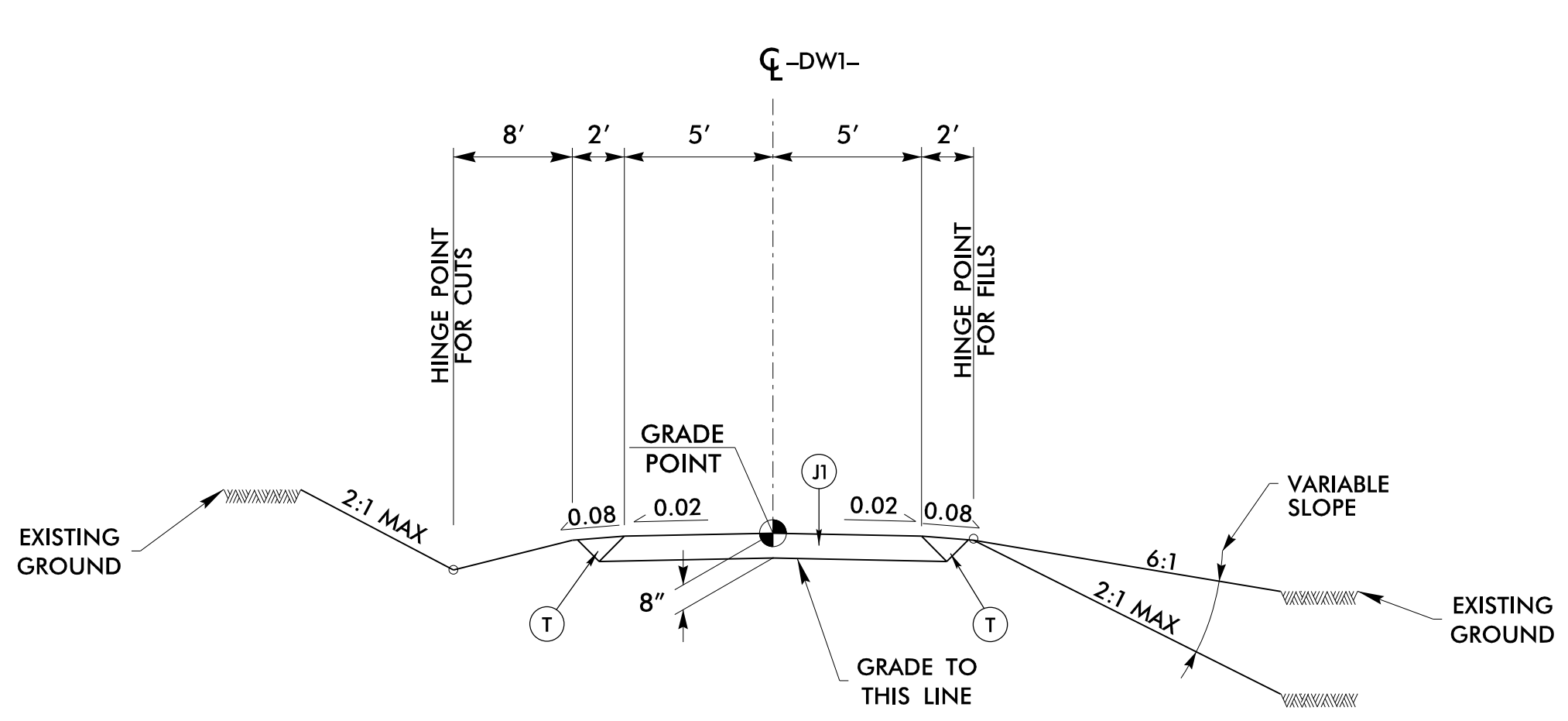
TYPICAL SECTION NO. 3
-L- STA. 20+29.00 TO STA. 22+99.00



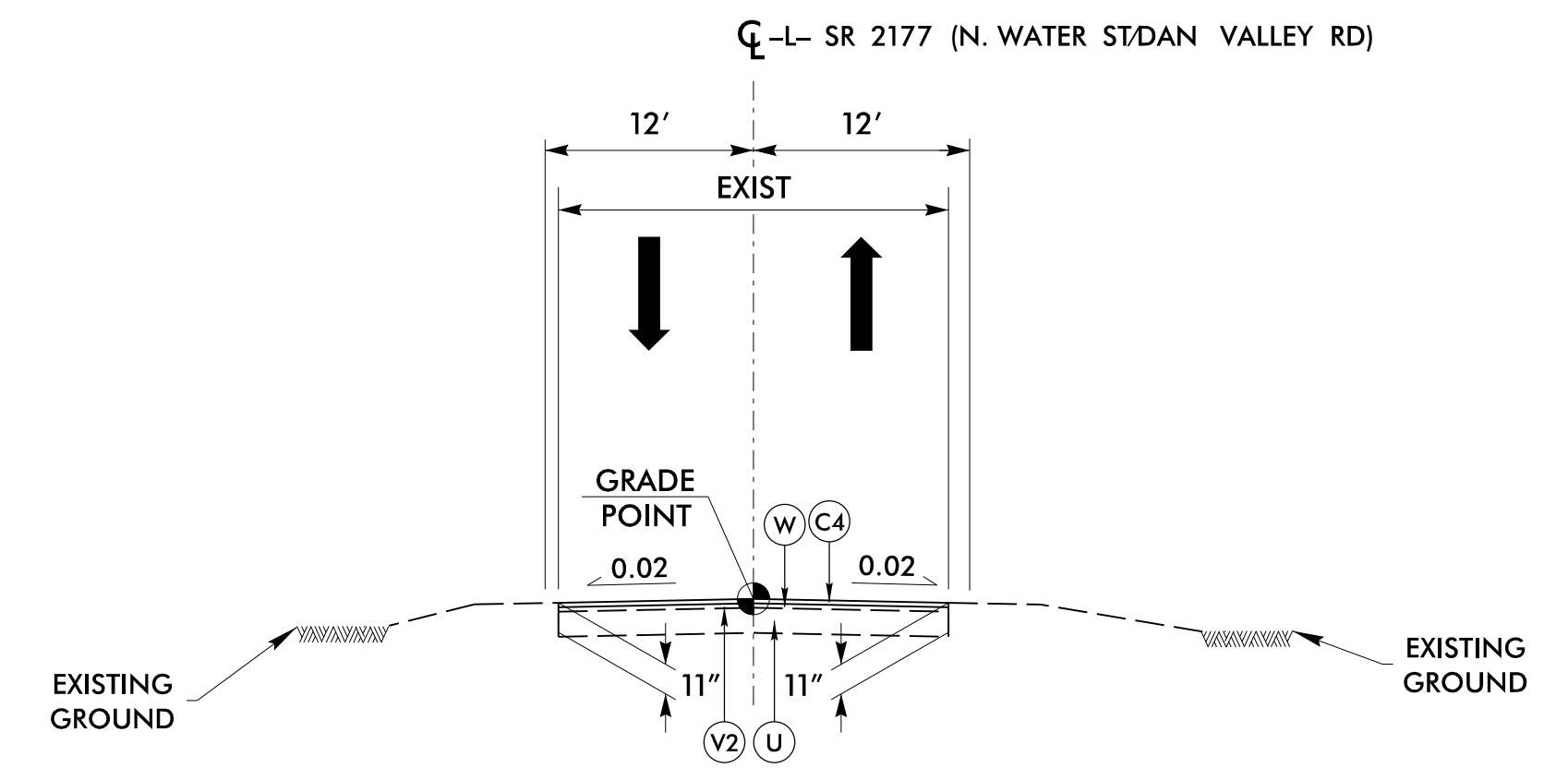
TYPICAL SECTION NO. 4
-Y- STA. 10+12.07 TO STA. 11+15.00



TYPICAL SECTION NO. 5
-Y- STA. 11+15.00 TO STA. 11+35.00



TYPICAL SECTION NO. 6
-DWI- STA. 10+12.75 TO STA. 11+75.00



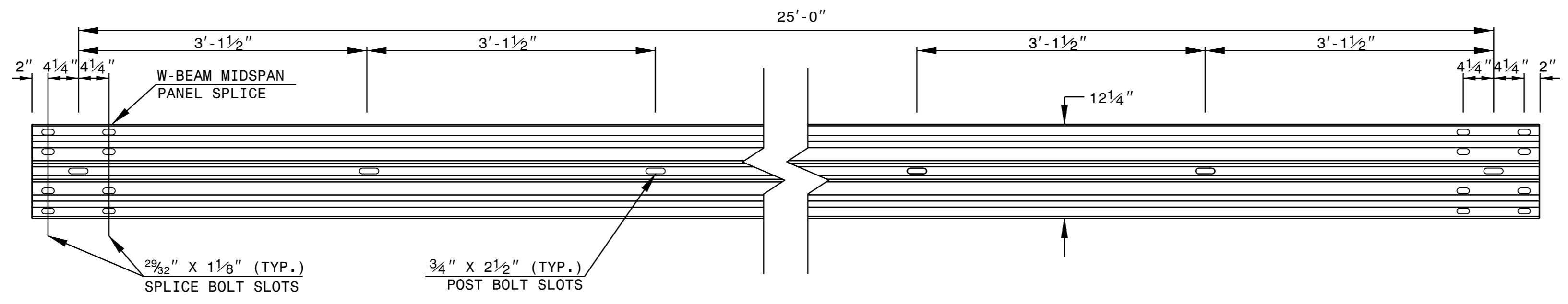
TYPICAL SECTION NO. 7
-L- STA. 30+40.00 TO STA. 31+00.00

C1	1.5" S9.5B
C2	3" S9.5B
C3	VAR. S9.5B
C4	2" S9.5B
D1	4" I19.0C
D2	VAR. I19.0C
E1	4" B25.0C
E2	VAR. B25.0C
J1	8" ABC
T	EARTH MATERIAL
U	EXIST PAVEMENT
V1	VAR. MILLING
V2	2" MILLING
W	WEDGING DET.

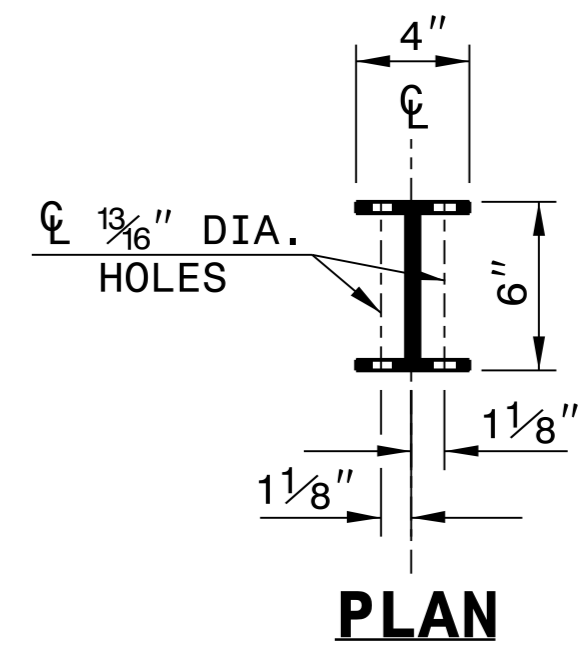
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

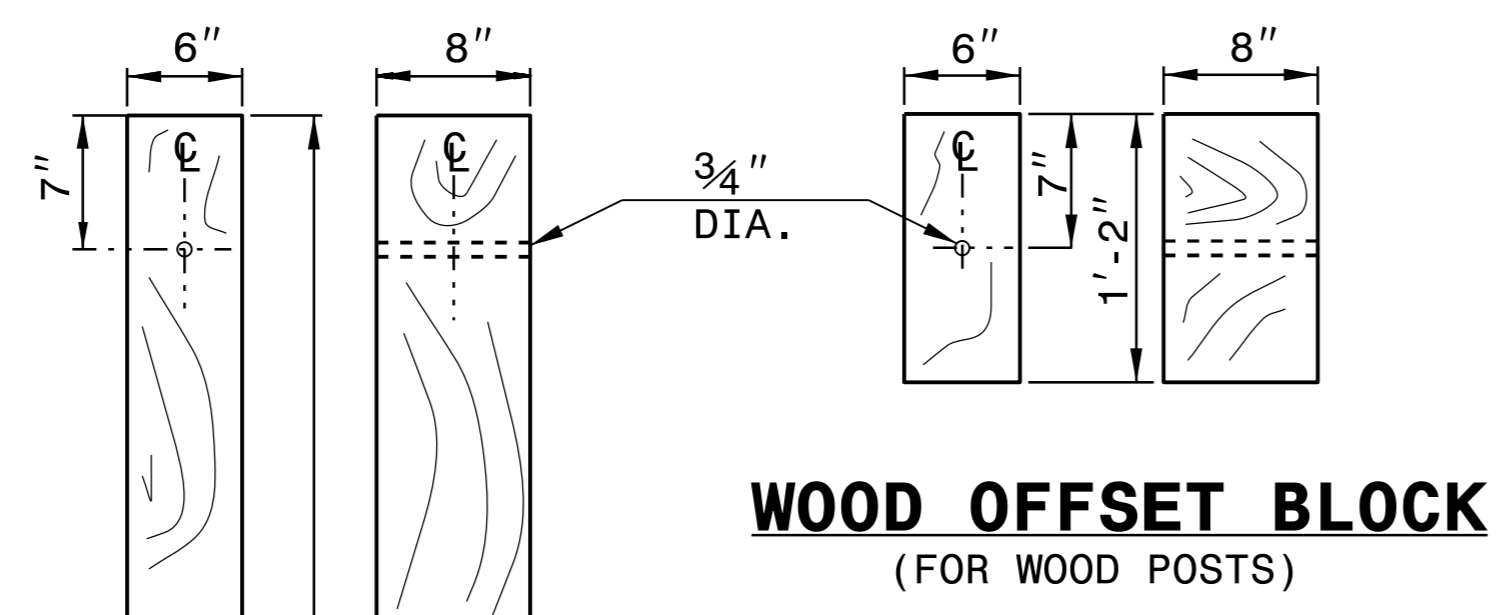
SHEET 6 OF 8
862D02



STANDARD W-BEAM GUARDRAIL



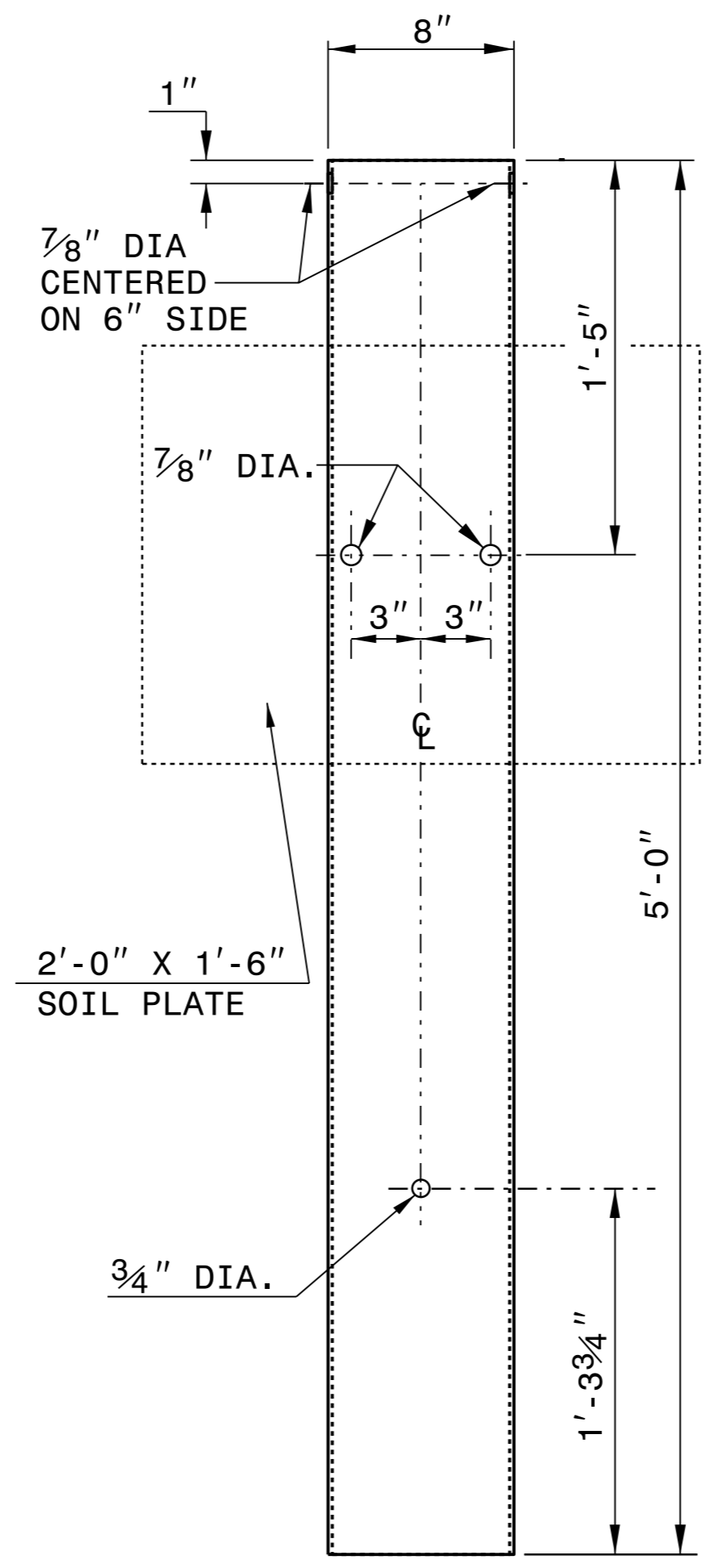
PLAN



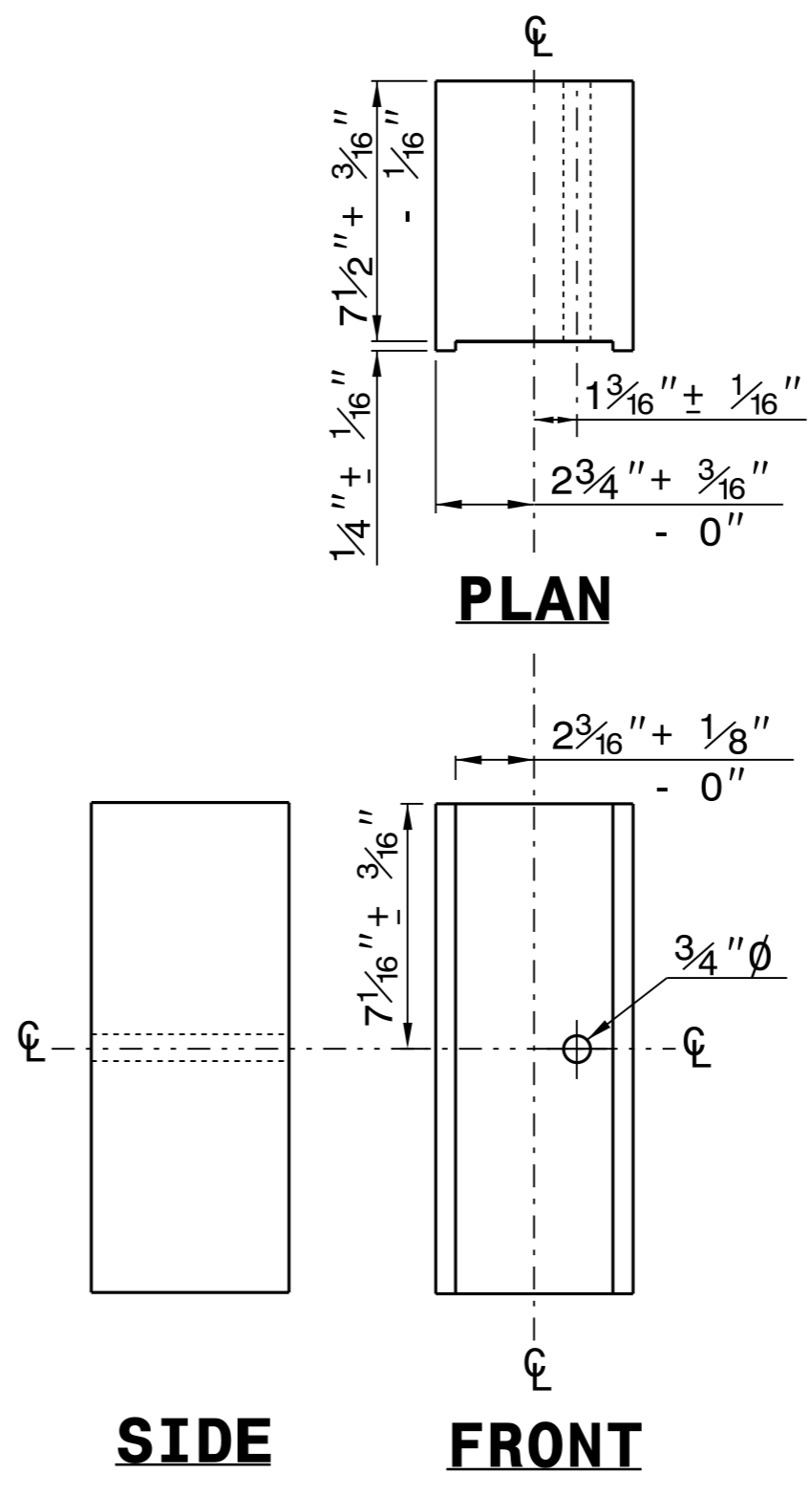
**WOOD OFFSET BLOCK
(FOR WOOD POSTS)**

**STANDARD
LINE POST**

**SHORT WOOD
BREAKAWAY POST**



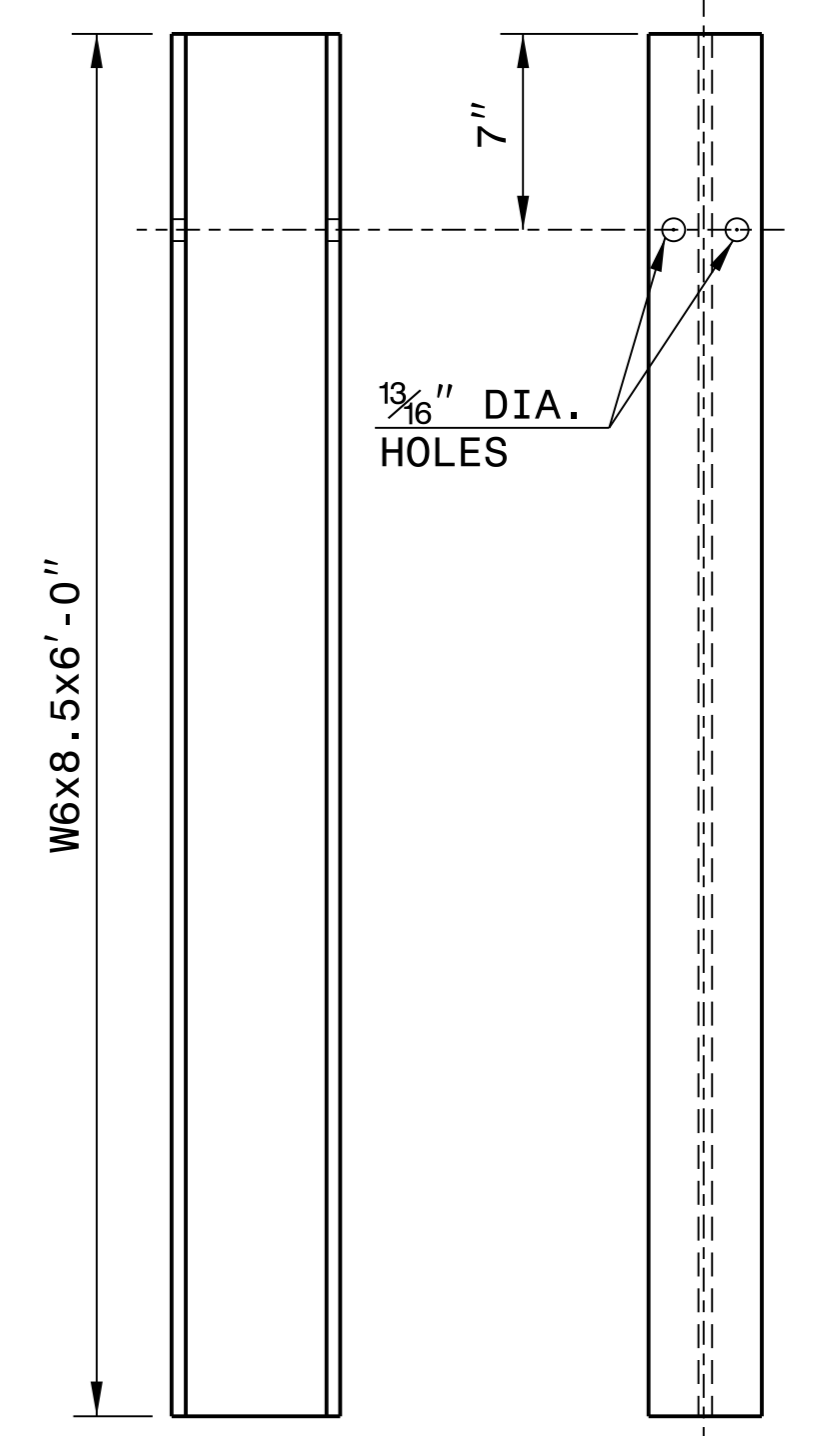
**STEEL TUBE
TS 6"x8"x0.1875"**



SIDE

FRONT

**ROUTED
OFFSET BLOCK**



SIDE

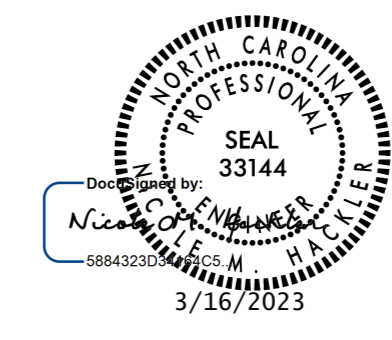
FRONT

"W6" STEEL POST

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 6 OF 8
862D02



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

SEE TITLE BLOCK

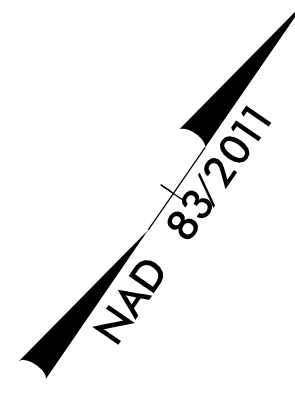
ORIGINAL BY: J. HOWERTON DATE: 3-7-2018
MODIFIED BY: DATE: _____
CHECKED BY: DATE: _____
FILE SPEC.: _____

5/14/99

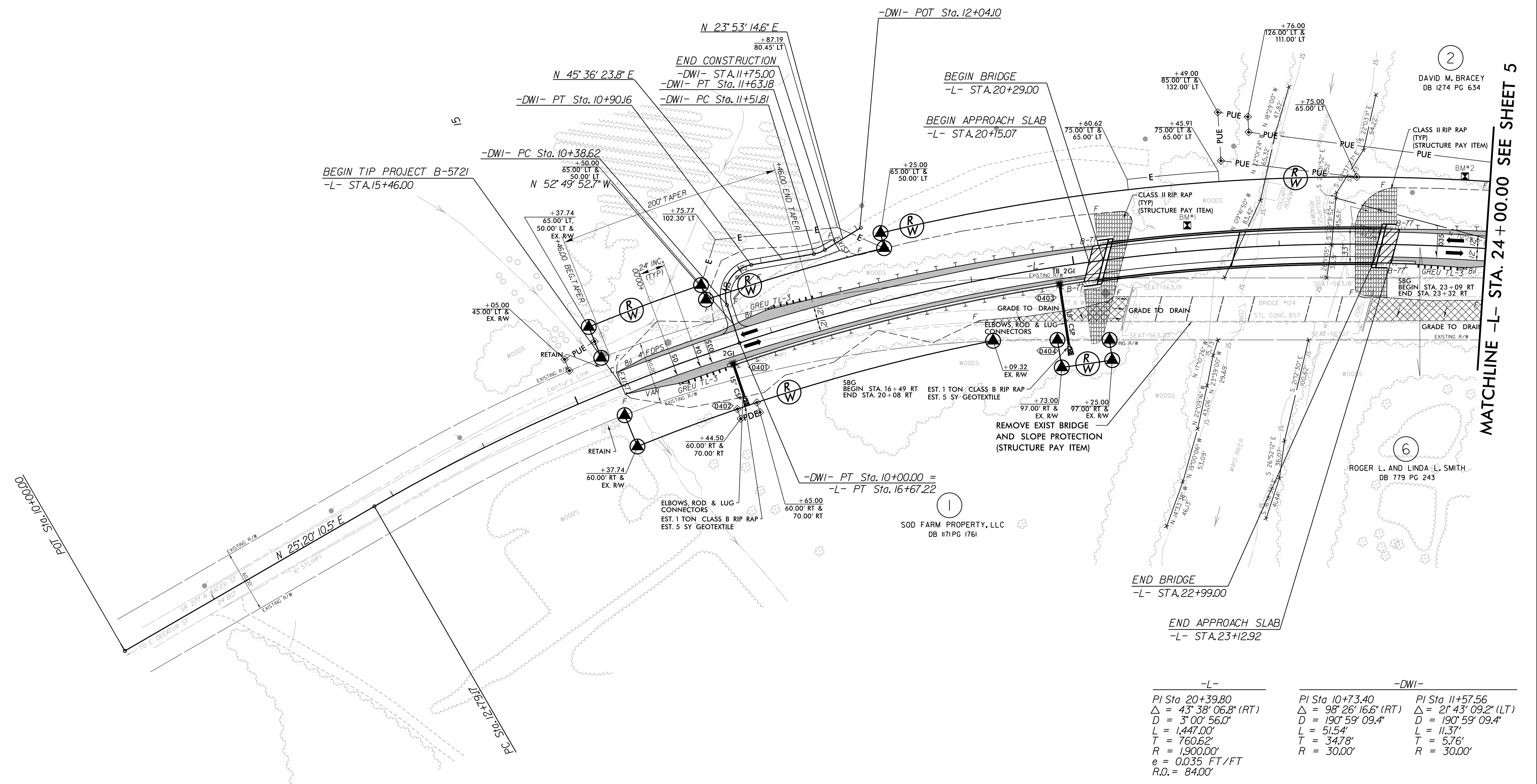
REVISIONS

2/14/2023
bluebazab

1
SOD FARM PROPERTY, LLC
DB 1171PG 1761



PROJECT REFERENCE NO. B-5721		SHEET NO. 4	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
Prepared in the Office of: AECOM			
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			



2
DAVID M. BRACEY
DB 1274 PG 634

6
ROGER L. AND LINDA L. SMITH
DB 779 PG 243

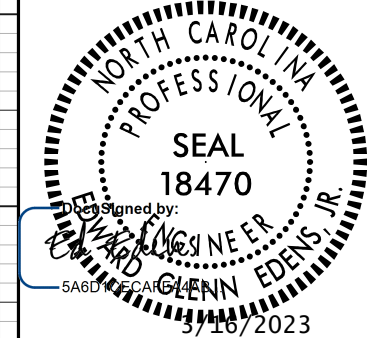
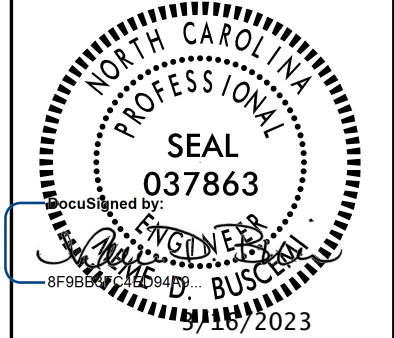
MATCHLINE -L- STA. 24 + 00.00 SEE SHEET 5

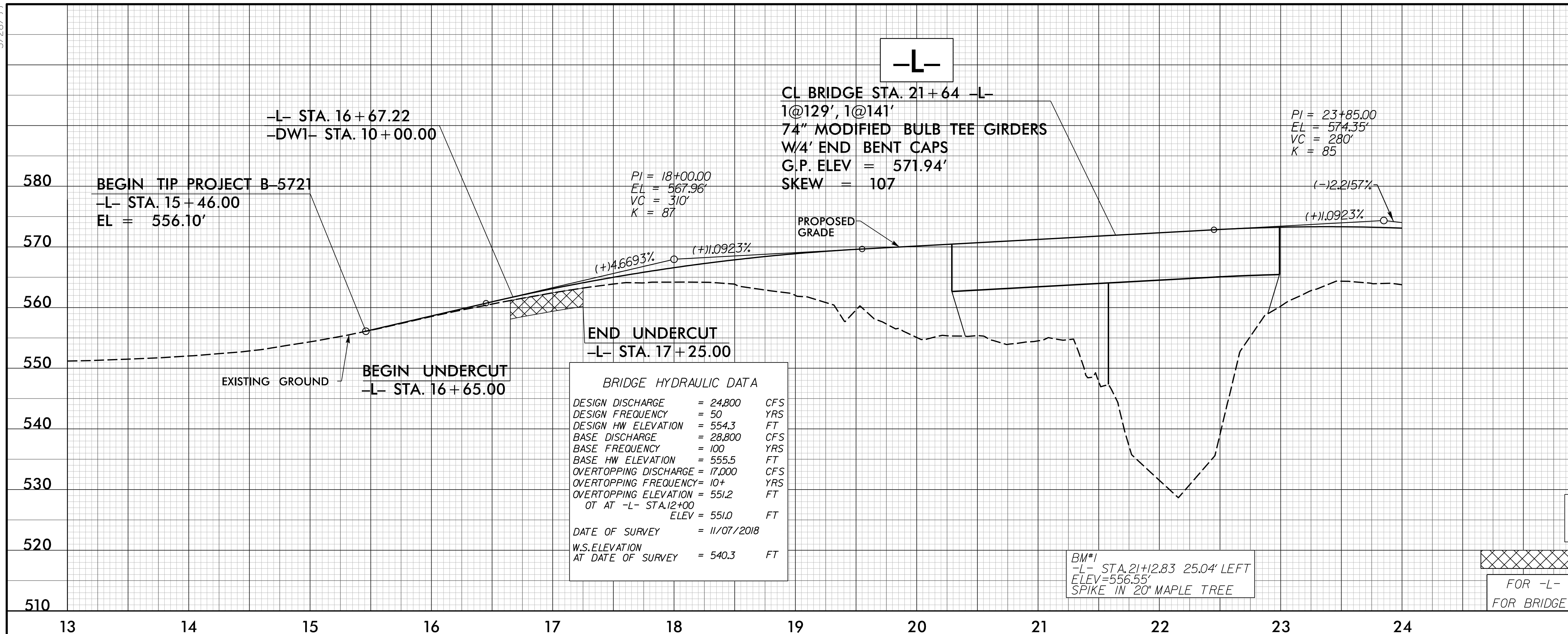
-L-	-DWI-	-DWI-
PI Sta 20+39.80	PI Sta 10+73.40	PI Sta 11+57.56
$\Delta = 43^{\circ} 38' 06.8''$ (RT)	$\Delta = 98^{\circ} 26' 16.6''$ (RT)	$\Delta = 2^{\circ} 43' 09.2''$ (LT)
D = 3' 00' 56.0"	D = 190' 59' 09.4"	D = 190' 59' 09.4"
L = 1,447.00'	L = 51.54'	L = 11.37'
T = 760.62'	T = 34.78'	T = 5.76'
R = 1,900.00'	R = 30.00'	R = 30.00'
e = 0.035 FT/FT		
R.O. = 84.00'		

PAVEMENT REMOVAL

FOR -L- PROFILE SEE SHEET 6
FOR -DWI- PROFILE SEE SHEET 7
FOR BRIDGE SEE SHEETS S-01 TO S-31

5/28/2023

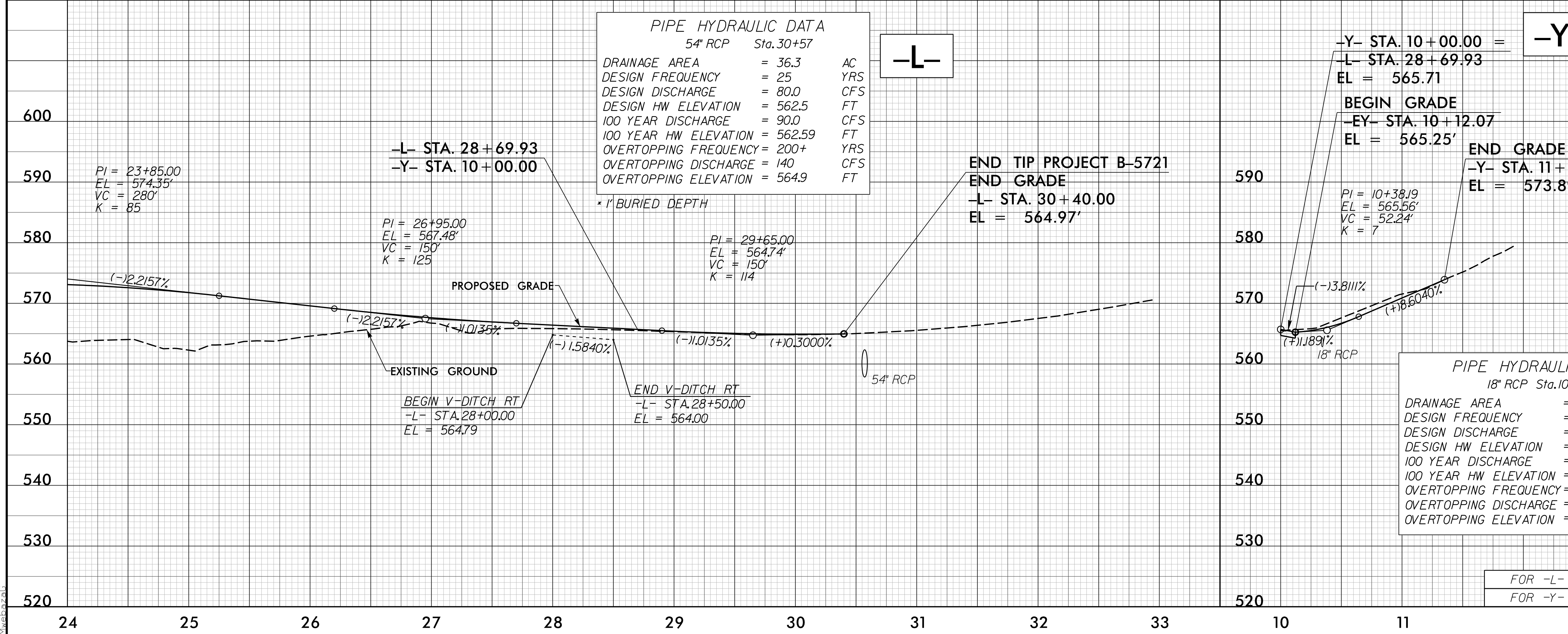
PROJECT REFERENCE NO. B-5721	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
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<small>NC FIRM LICENSE No. F-0342 5436 Wade Park Boulevard, Suite 200 Raleigh, NC 27607 (919) 461-1000</small>	
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DESIGN DISCHARGE	= 24,800	CFS
DESIGN FREQUENCY	= 50	YRS
DESIGN HW ELEVATION	= 554.3	FT
BASE DISCHARGE	= 28,800	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 555.5	FT
OVERTOPPING DISCHARGE	= 17,000	CFS
OVERTOPPING FREQUENCY	= 10+	YRS
OVERTOPPING ELEVATION	= 551.2	FT
OT AT -L- STA. 12+00	ELEV = 551.0	FT
DATE OF SURVEY	= 11/07/2018	
W.S. ELEVATION AT DATE OF SURVEY	= 540.3	FT

BM*2
-L- STA. 23+76.21 68.48' LEFT
ELEV = 556.33'
SPIKE IN 20' SYCAMORE

UNDERCUT EXCAVATION
FOR -L- PLAN VIEW SEE SHEET 4
FOR BRIDGE SEE SHEETS S-01 TO S-31



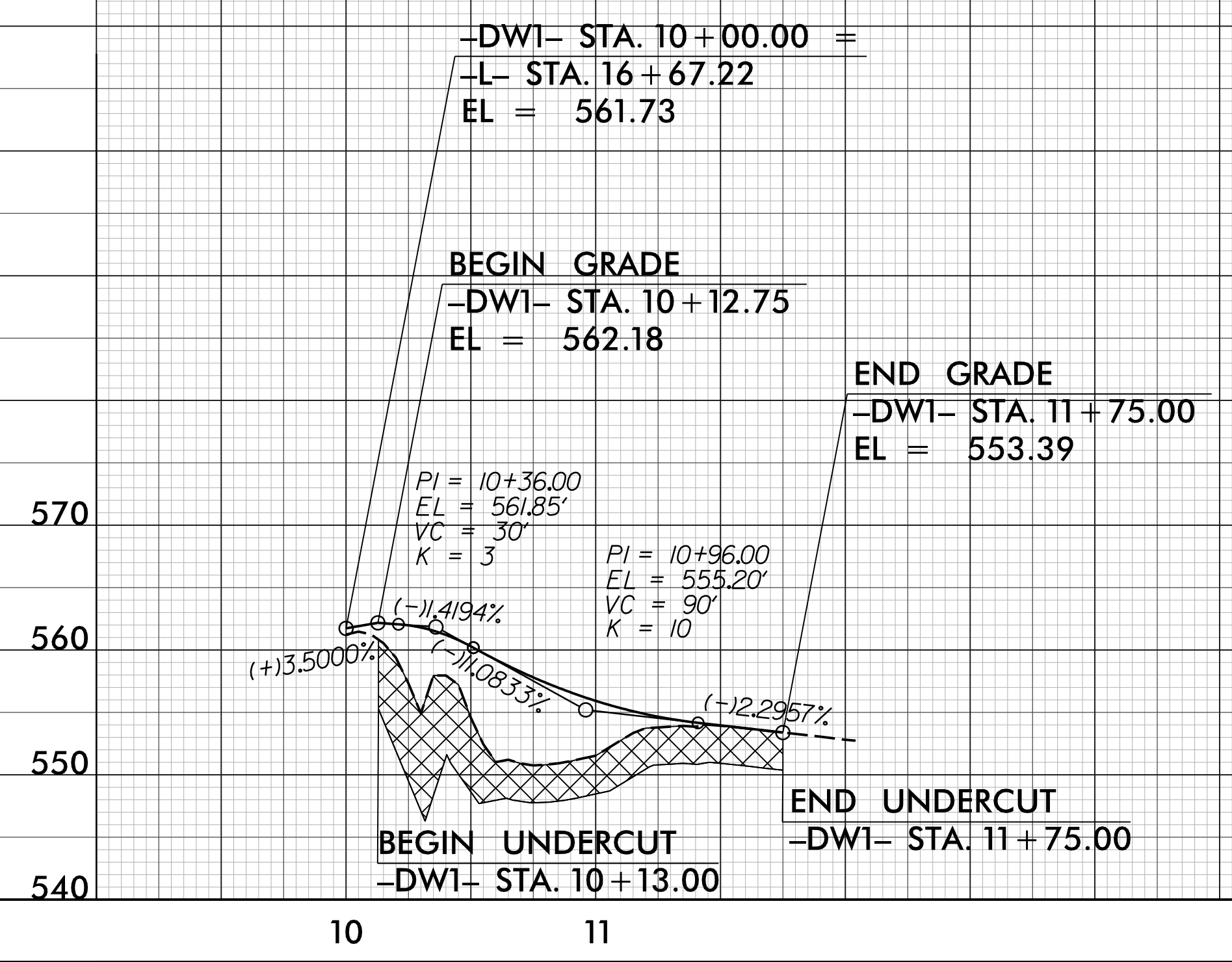
FOR -L- PLAN VIEW SEE SHEET 5
FOR -Y- PLAN VIEW SEE SHEET 5

2/14/2023
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5/28/99

2/14/2003
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-DWI-



PROJECT REFERENCE NO. B-5721	SHEET NO. 7
ROADWAY DESIGN ENGINEER SEAL 18470	HYDRAULICS ENGINEER SEAL 03786
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 UNDERCUT EXCAVATION
 FOR -DWI- PLAN VIEW SEE SHEET 4