

DocuSign 04/03/2024
Han Nguyen

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GENERAL NOTES: 2024 SPECIFICATIONS
EFFECTIVE: 01-16-2024
REVISED:

GRADE LINE:

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.

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

CHARTER SPECTRUM - CABLE TV

MCNC - BROADBAND/TELEPHONE

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

EFF. 01-16-2024

REV.

2024 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Contracts Standards and Development Unit - N. C. Department of Transportation - Raleigh, N. C., Dated January 16, 2024 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
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 4 - MAJOR STRUCTURES	
423.01	Bridge Approach Fills - Type 1 Approach Fill for Bridge Abutment
423.02	Bridge Approach Fills - Type 1A Alternate Approach Fill for Integral Bridge Abutment
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	
815.02	Subsurface Drain
838.01	Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.11	Brick Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
840.00	Concrete Base Pad for Drainage Structures
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.22	Frames and Wide 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
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
862.04	Anchoring End of Guardrail - for B-77 and B-83 Anchor Units
876.01	Rip Rap in Channels and Ditches
876.02	Guide for Rip Rap at Pipe Outlets

Note: Not to Scale

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

BR-0093
IB

BOUNDARIES AND PROPERTY:

Table listing symbols for boundaries and property features: 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 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:

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:

Table listing symbols for vegetation: Single Tree, Single Shrub, Hedge.

Table listing symbols for existing structures: 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:

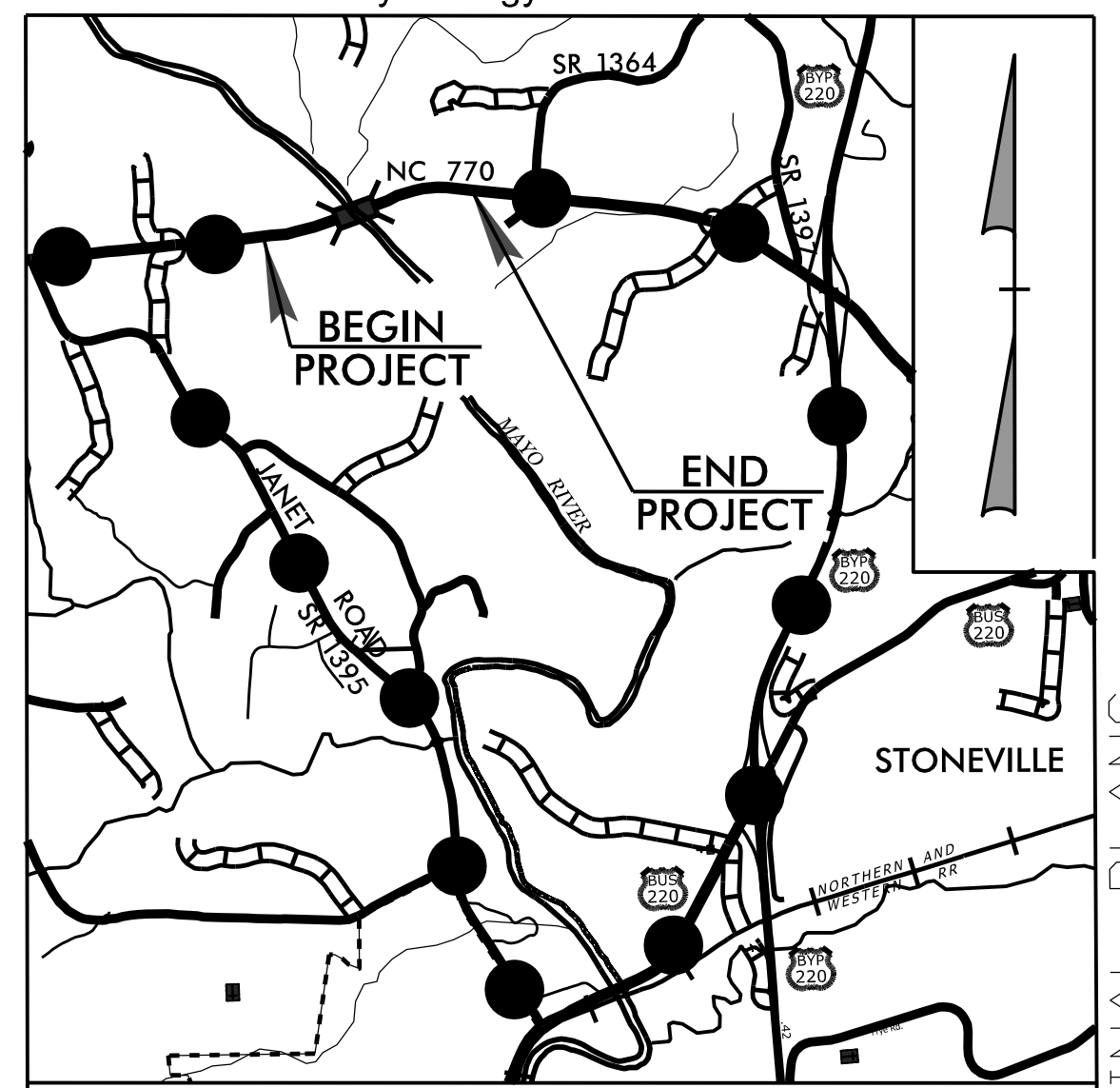
Table listing symbols for miscellaneous: Utility Pole, Utility Pole with Base, Utility Located Object, Utility Traffic Signal Box, Utility Unknown U/G Line (SUE - LOS B)*, U/G Tank; Water, Gas, Oil, Underground Storage Tank, Approx. Loc., A/G Tank; Water, Gas, Oil, Geoenvironmental Boring, Abandoned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

09/08/09

TIP PROJECT: BR-0093

CONTRACT: C204929

See Sheet 1A For Index of Sheets
See Sheet 1B For Symbology Sheet



VICINITY MAP

DETOUR ROUTE ●—●—●—●

FINAL PLANS

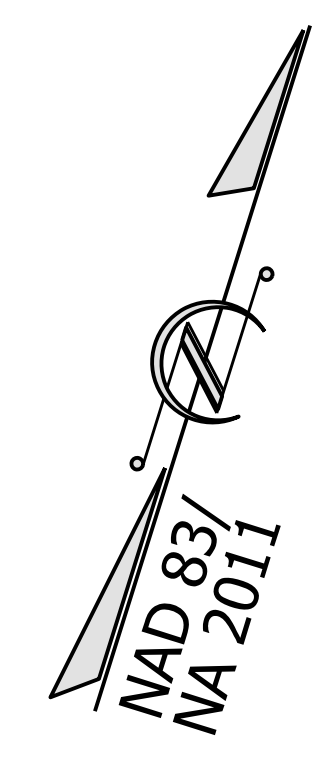
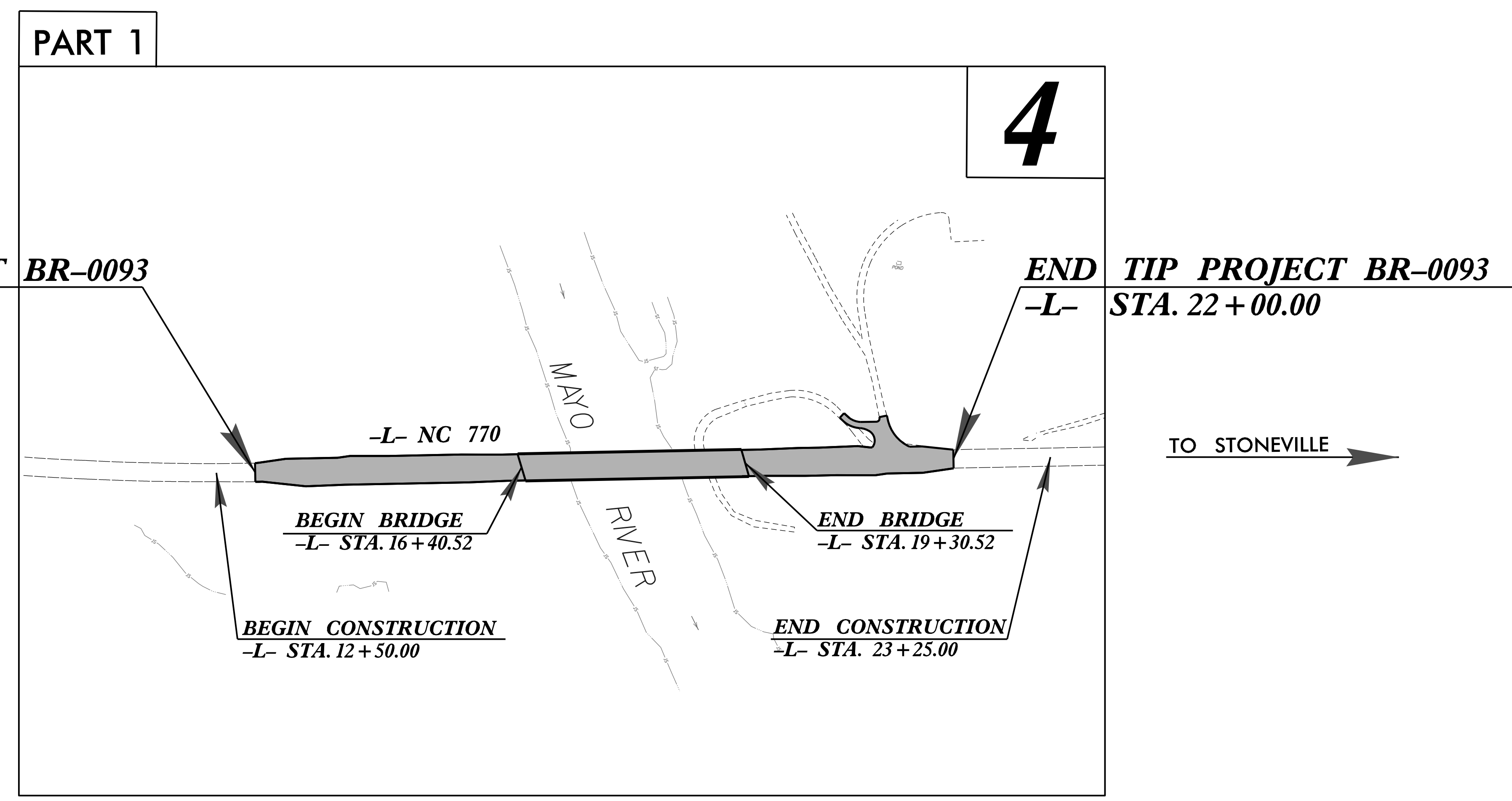
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

ROCKINGHAM COUNTY

LOCATION: *REPLACE BRIDGE 780035 ON NC 770 OVER MAYO RIVER*

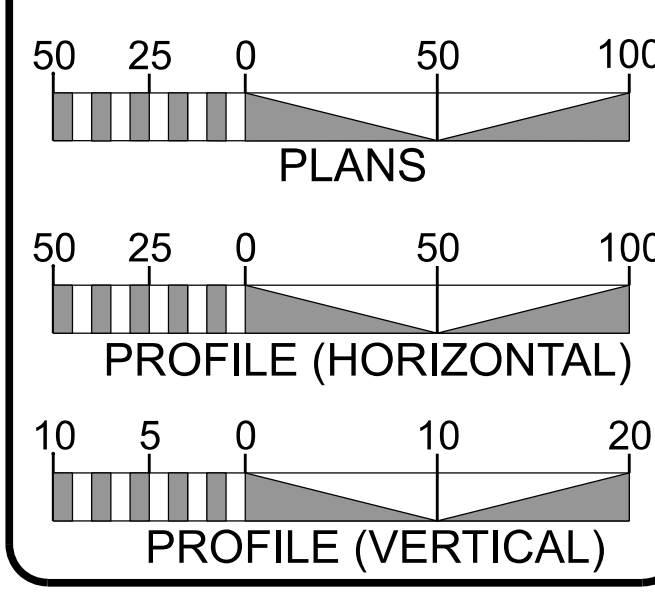
TYPE OF WORK: *GRADING, PAVING, DRAINAGE AND STRUCTURE*

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0093	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
67093.1.1	N/A	PE	
67093.2.1	N/A	UTIL/RW	
67093.3.1	N/A	CONST.	



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GRAPHIC SCALES



DESIGN DATA

ADT 2024 = 2,315
ADT 2045 = 2,800

K = 9 %
D = 65 %
T = 10 % *
V = 60 MPH

* TTST 4% DUAL 6%

FUNC CLASS =
MAJOR COLLECTOR
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT BR-0093 = 0.115 Mi.
LENGTH STRUCTURE TIP PROJECT BR-0093 = 0.055 Mi.
TOTAL LENGTH TIP PROJECT BR-0093 = 0.170 Mi.

Plans Prepared by:

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

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

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JULY 14, 2023

LETTING DATE:
JUNE 18, 2024

SARA SHERMAN, PE
PROJECT MANAGER

JORDAN WOODARD, PE
ROADWAY GROUP LEAD

HAN NGUYEN, PE
ROADWAY TEAM LEAD

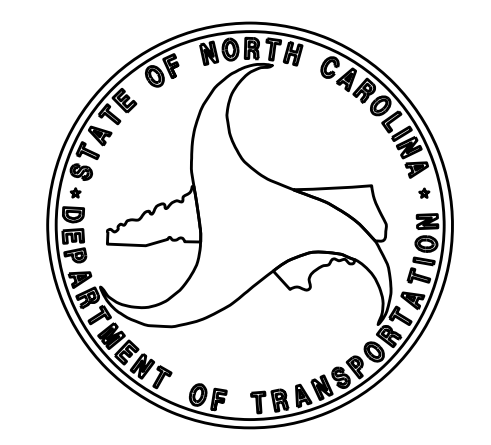
HYDRAULICS ENGINEER

DocuSigned by:
Benjamin J. Henegar
SIGNATURE: [Signature]

ROADWAY DESIGN ENGINEER

DocuSigned by:
Han Nguyen
SIGNATURE: [Signature]

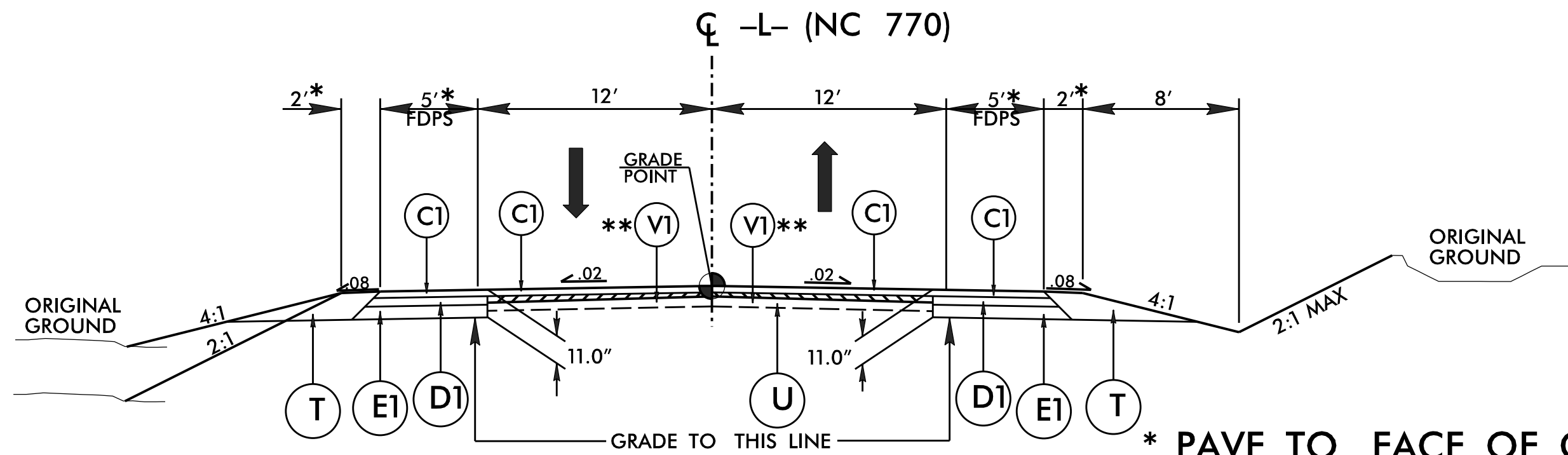
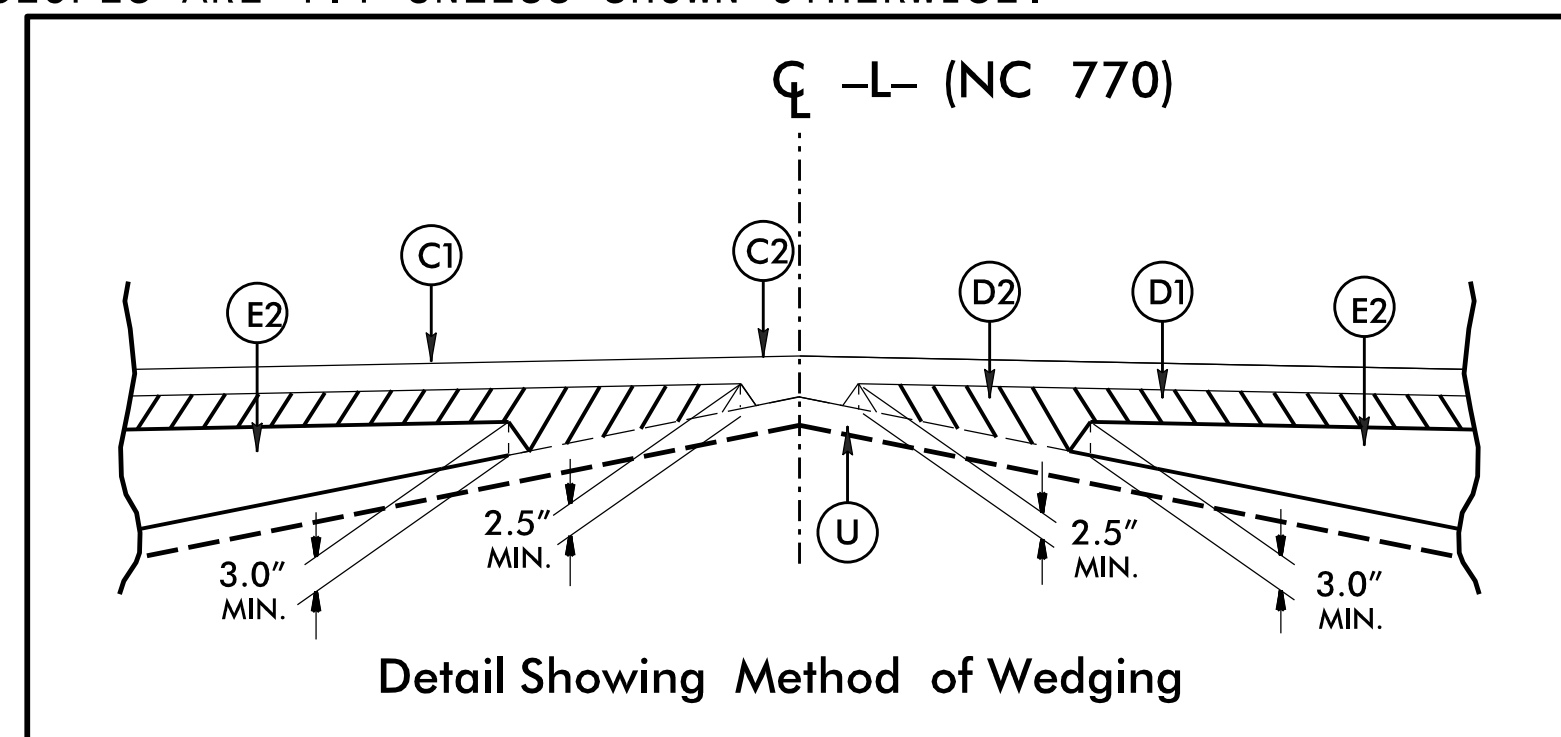
Professional Engineer Seals for Benjamin J. Henegar and Han Nguyen.



FINAL PAVEMENT SCHEDULE

C1	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	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 TO EXCEED 1 1/2" IN DEPTH.
D1	PROP. APPROX. 4.0" ASPHALT CONCRETE SURFACE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE 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. 4.0" 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.
J	6" ABC.
R	SHOULDER BERM GUTTER.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V1	MILLING BITUMINOUS PAVEMENT (1.5' DEPTH).
V2	INCIDENTAL MILLING.
W	VARIABLE DEPTH ASPHALT PAVEMENT.

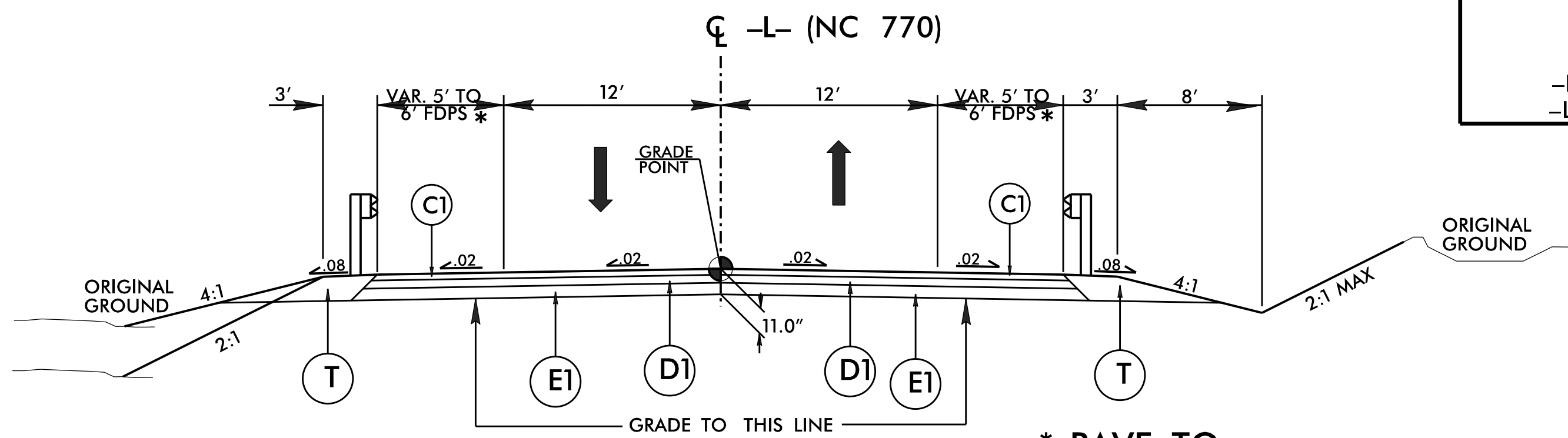
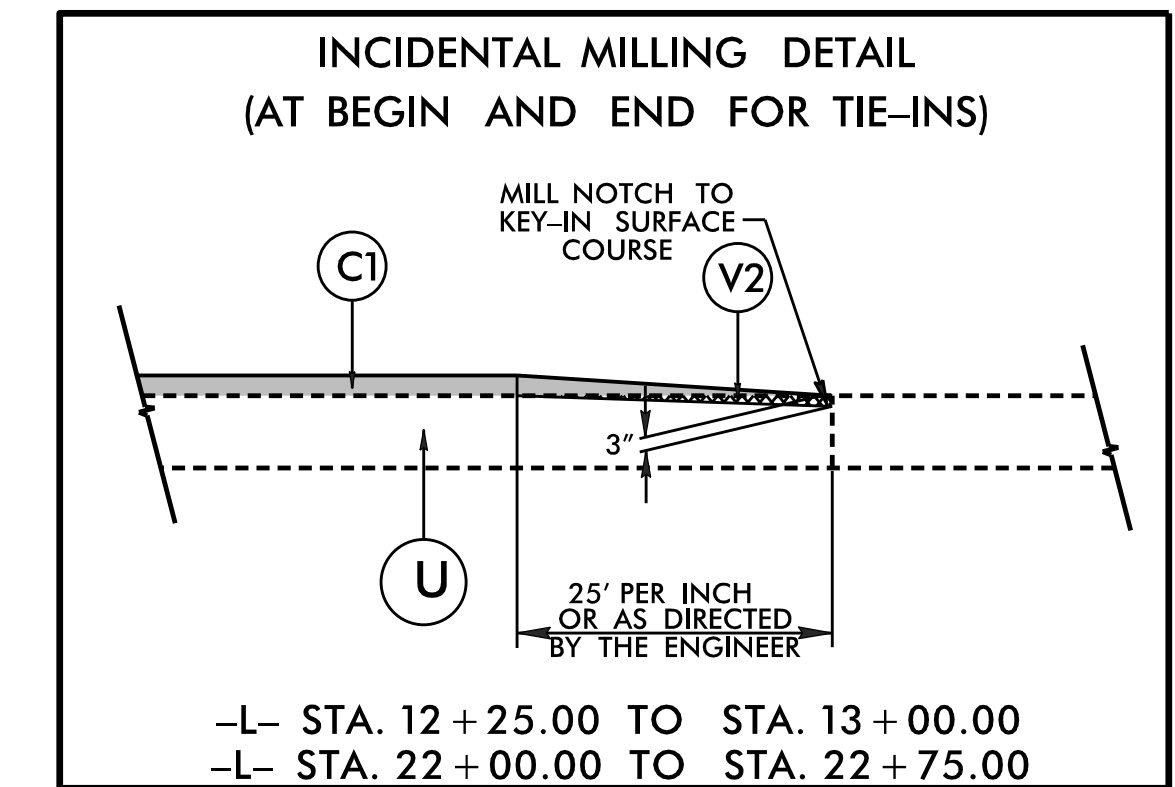
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



TYPICAL SECTION NO. 1

- L- STA. 13+00 TO 16+00
- ** -L- STA. 13+00 TO 15+25
- L- STA. 19+90 TO 22+00
- ** -L- STA. 21+50 TO 22+00

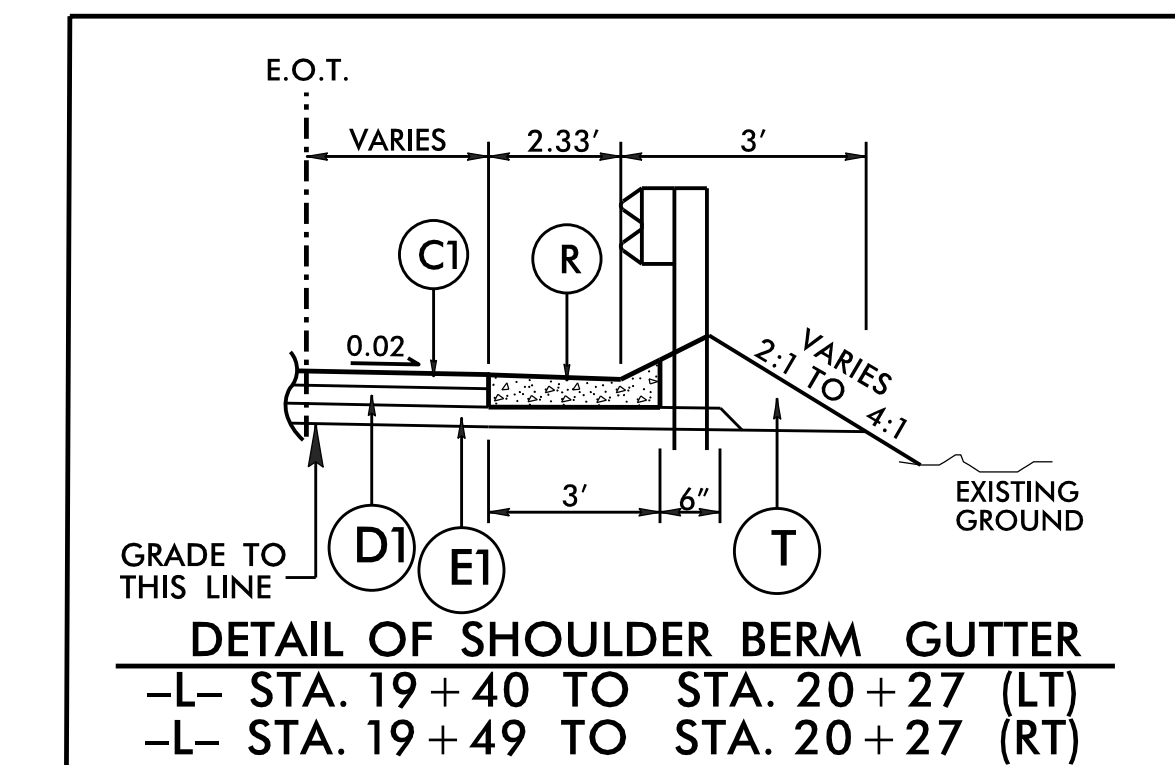
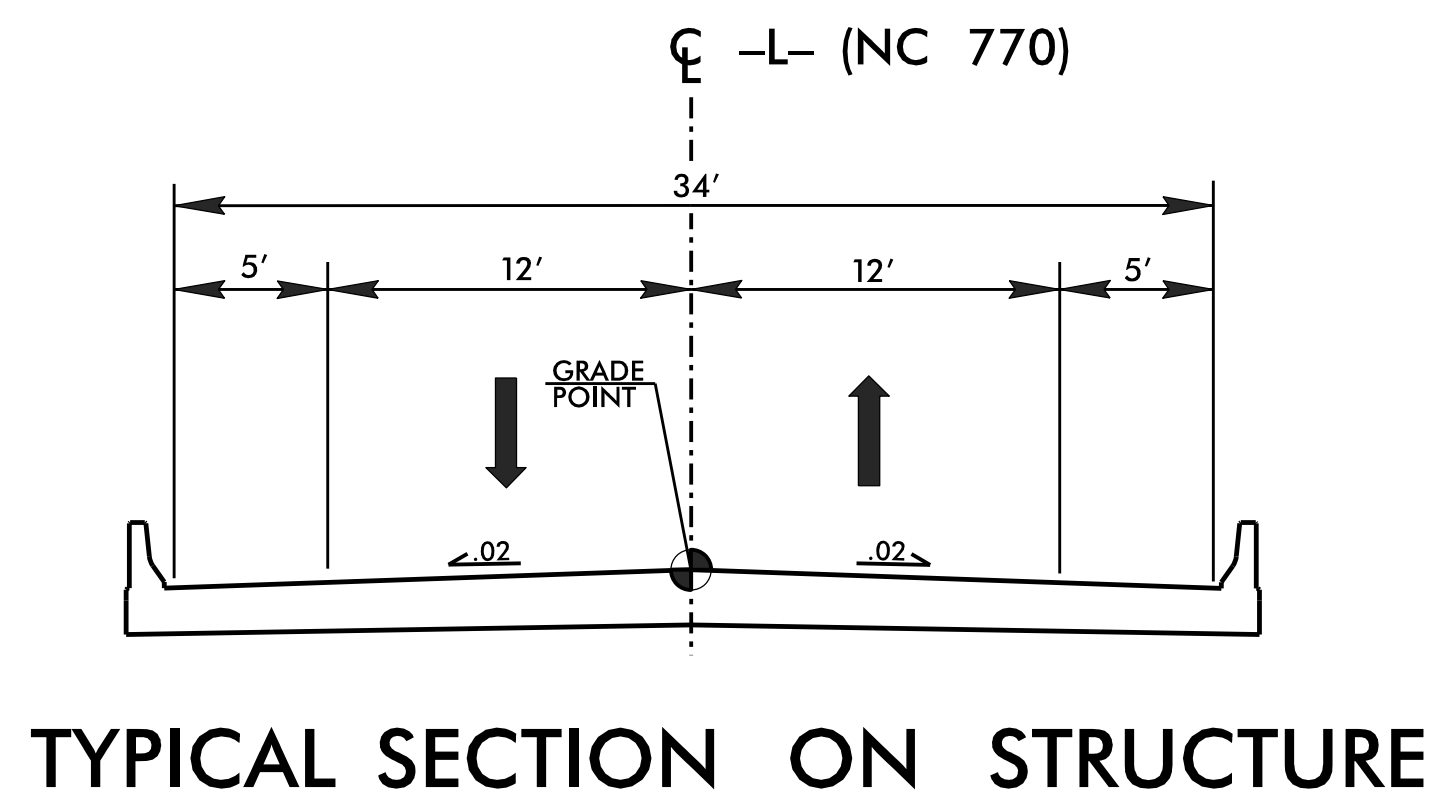
* PAVE TO FACE OF GUARDRAIL
* 3' SHOULDER BEHIND GUARDRAIL



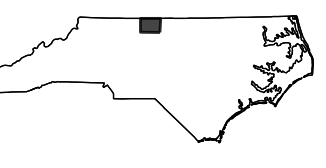
TYPICAL SECTION NO. 2

- L- STA. 16+00 TO 16+40.52 (BEGIN BRIDGE)
- L- STA. 19+30.52 (END BRIDGE) TO 19+90

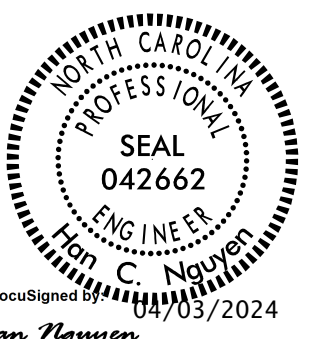
* PAVE TO FACE OF GUARDRAIL



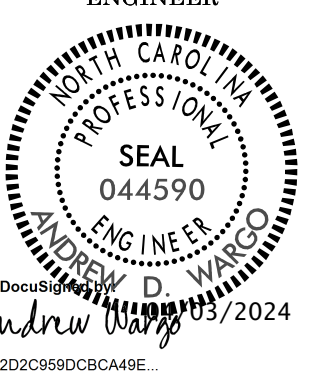
- L- STA. 19+40 TO STA. 20+27 (LT)
- L- STA. 19+49 TO STA. 20+27 (RT)



ROADWAY DESIGN UNIT
ROADWAY DESIGN ENGINEER



PAVEMENT DESIGN ENGINEER



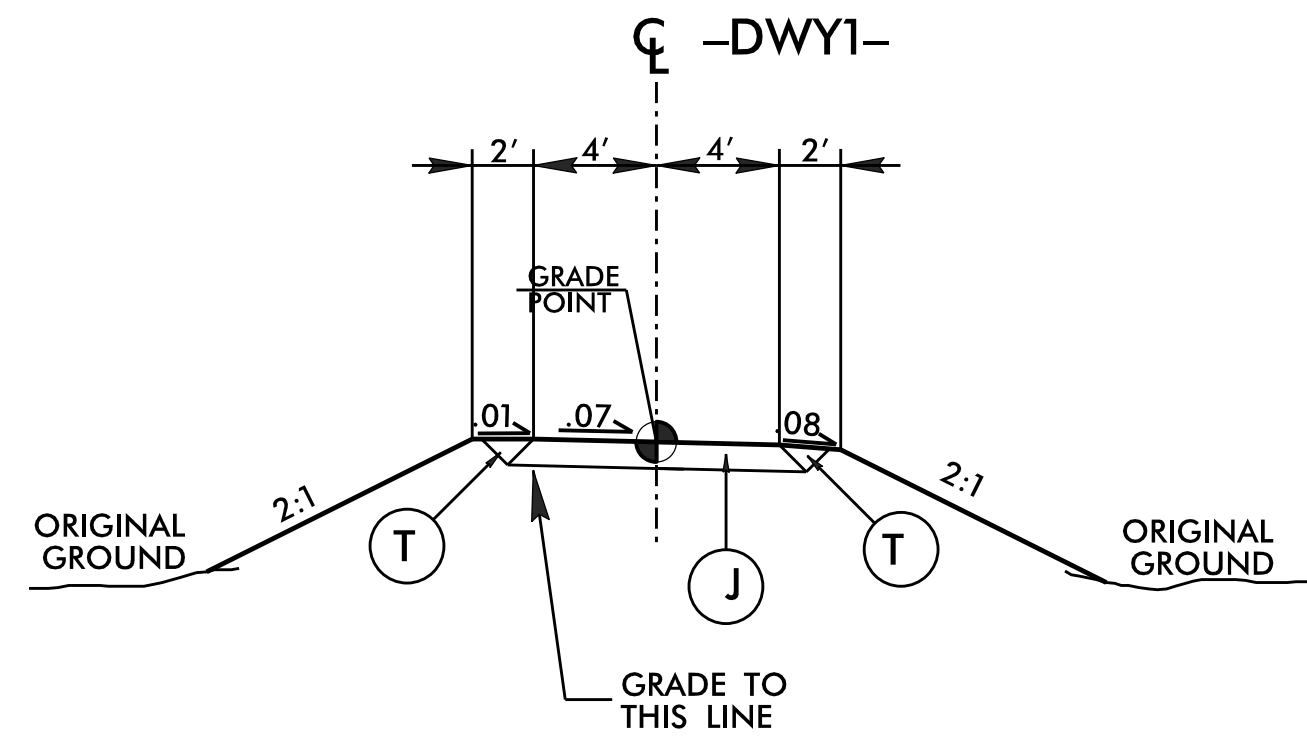
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REVISIONS

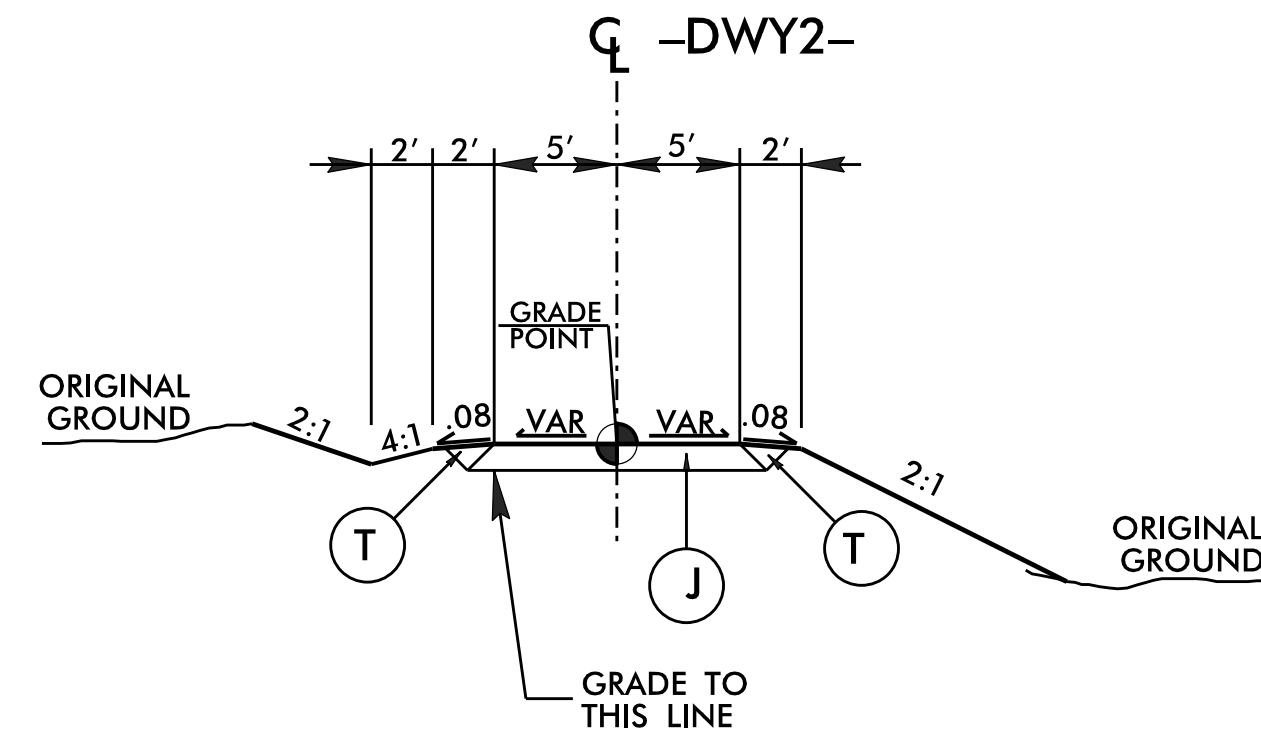
FINAL PAVEMENT SCHEDULE

C1	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	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 TO EXCEED 1½" IN DEPTH.
D1	PROP. APPROX. 4.0" ASPHALT CONCRETE SURFACE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE 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 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4.0" 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 5½" IN DEPTH.
J	6" ABC.
R	SHOULDER BERM GUTTER.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING BITUMINOUS PAVEMENT (1.5' DEPTH).
W	VARIABLE DEPTH ASPHALT PAVEMENT.

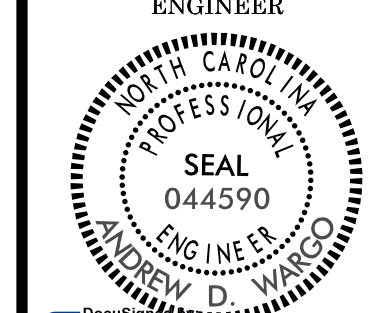
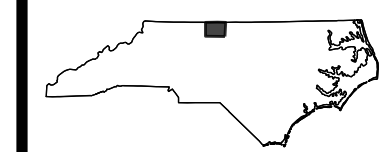
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

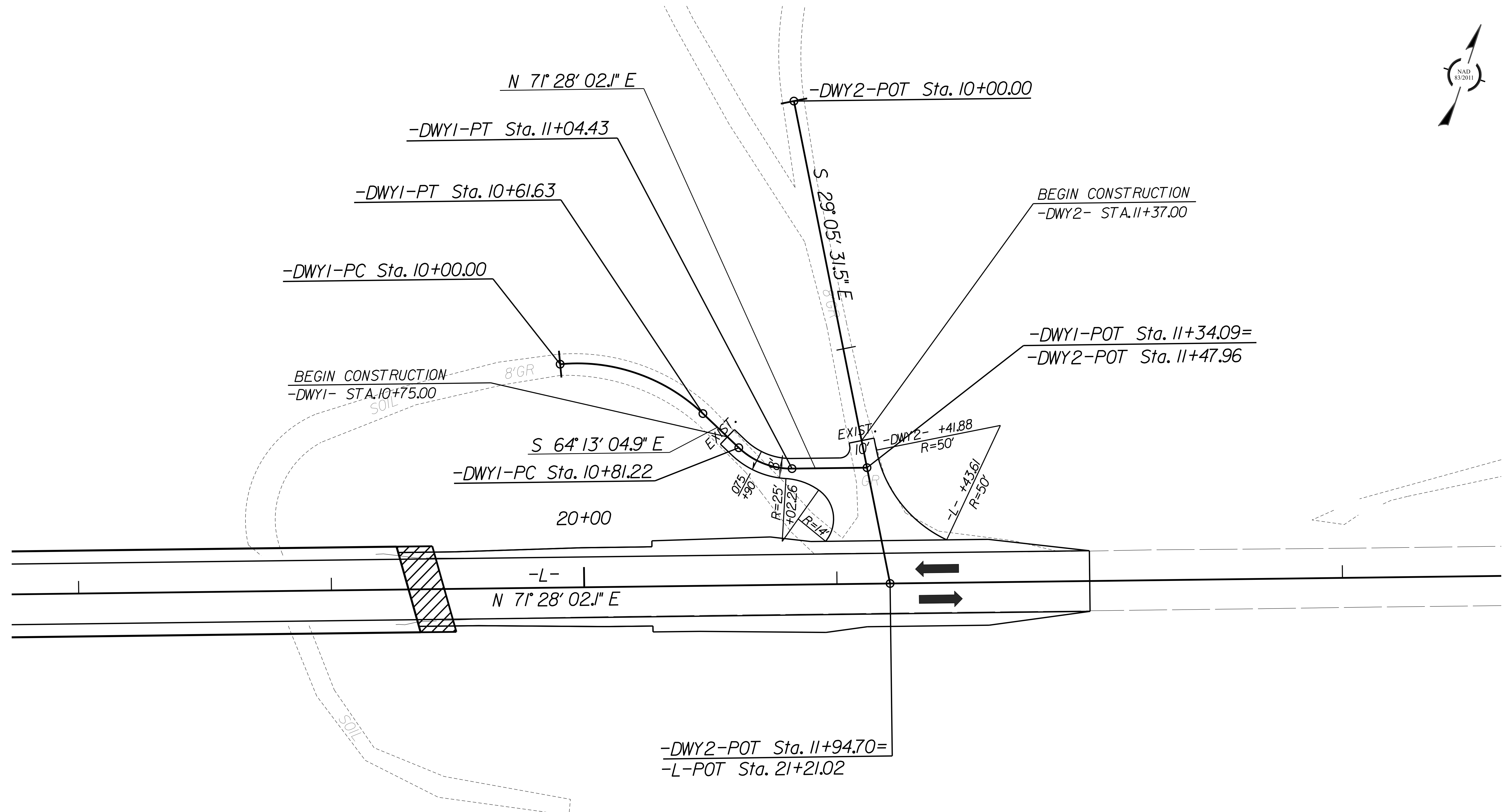
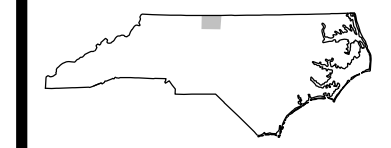


TYPICAL SECTION NO. 3
 -DWY1- STA. 10+75.00 TO 11+25.68

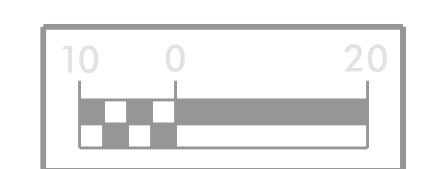


TYPICAL SECTION NO. 4
 -DWY2- STA. 11+37.00 TO 11+82.49

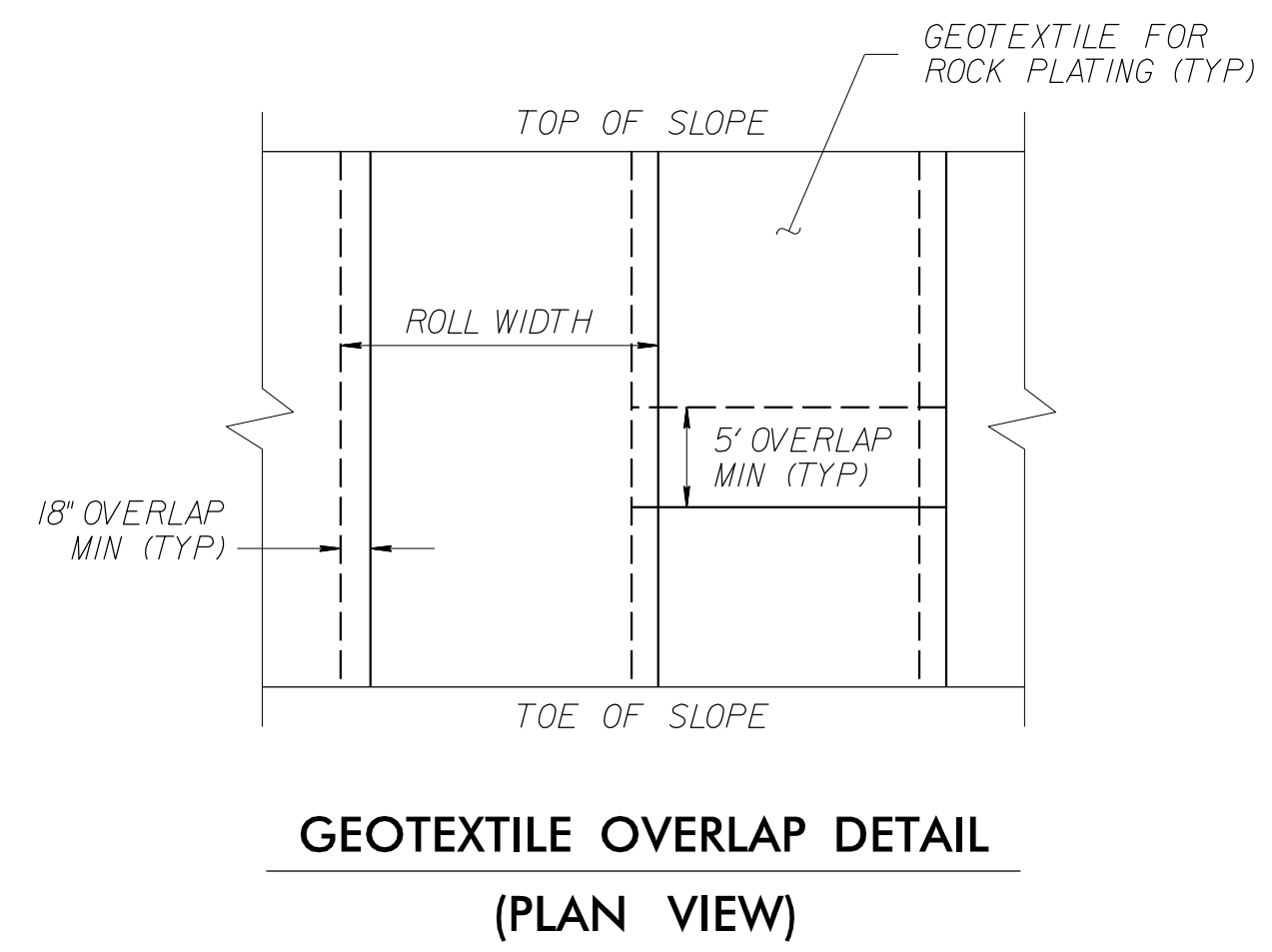




-DWY1-	
PI Sta 10+32.84	PI Sta 10+93.44
$\Delta = 49^\circ 02' 29.3''$ (RT)	$\Delta = 44^\circ 18' 53.0''$ (LT)
$D = 79^\circ 34' 38.9''$	$D = 190^\circ 59' 09.4''$
$L = 61.63'$	$L = 23.20'$
$T = 32.84'$	$T = 12.22'$
$R = 72.00'$	$R = 30.00'$



SCALE: 1" = 20'

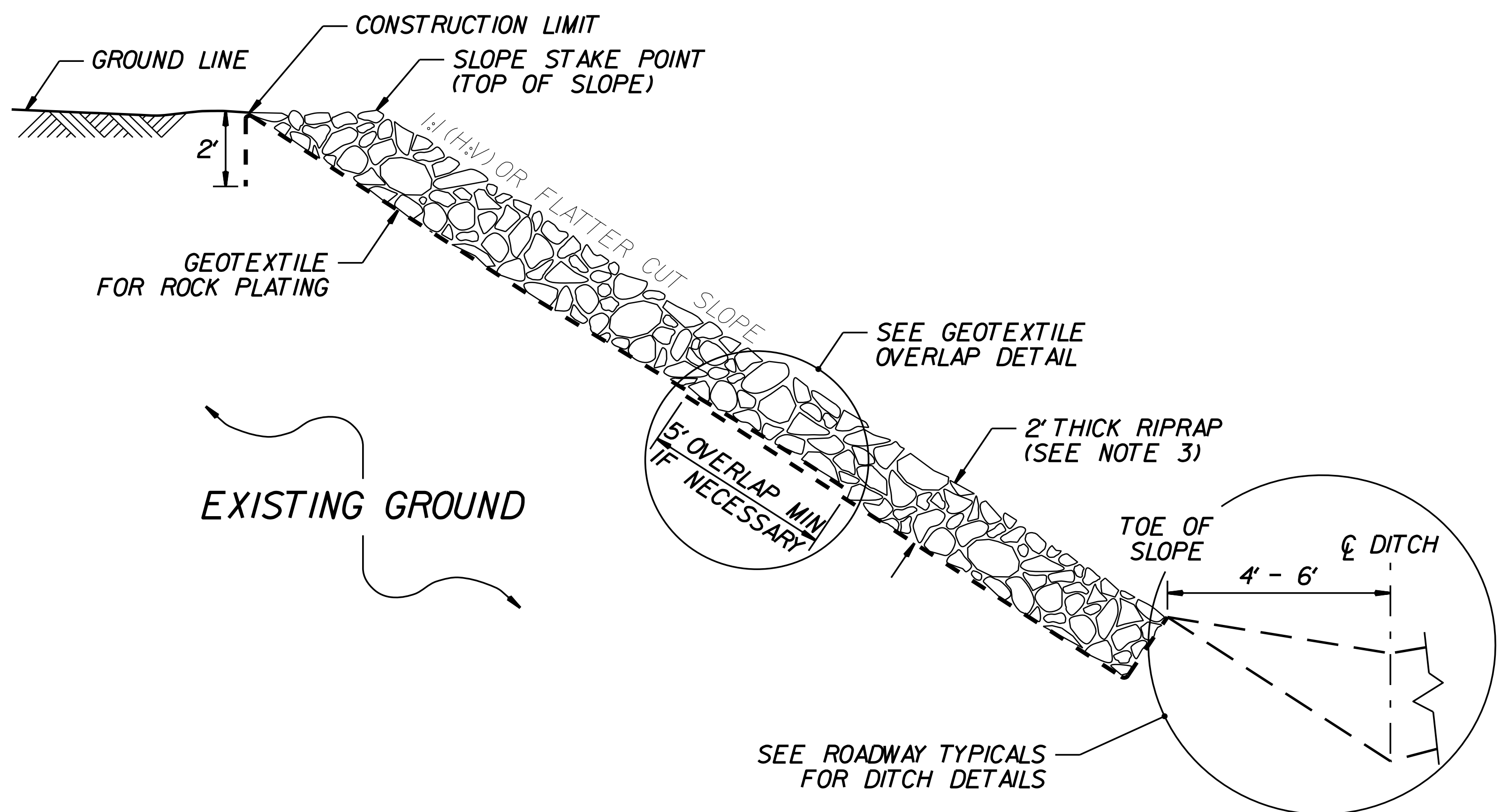


NOTES:
 FOR ROCK PLATING, SEE SECTION 275 OF THE STANDARD SPECIFICATIONS.
 USE ROCK PLATING AT FOLLOWING LOCATIONS:

LINES	BEGINNING SLOPE	APPROX. STATION	ENDING SLOPE	APPROX. STATION	LOCATION LT/RT	ROCK PLATING DETAIL NO.	RIPRAP CLASS* I/2/B	SY
-L-	1:1	12+50	2:1	13+50	LEFT	2G-1 SHEET	*	170

* USE CLASS I, 2 OR B RIPRAP FOR ROCK PLATING LOCATIONS.

ESTIMATED TOTAL QUANTITY OF ROCK PLATING = **170 SY**



TGSLVW1014

COMPUTED BY: BJH DATE: 07/06/23
CHECKED BY: REL DATE: 07/06/23

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO. BR-0093 SHEET NO. 3D-1

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

Table with columns for Line & Station, Offset, Structure Number, Drainage Pipe, C.S. Pipe, R.C. Pipe Class III, R.C. Pipe Class IV, Quantities for Drainage Structures, Frame, Grates, and Hood, Concrete Transitional Section, and Remarks. Includes sub-totals for SHEET TOTALS and PROJECT TOTALS.

ABBREVIATIONS table listing materials like C.A.A., C.B., C.S., D.I., G.D.I., H.D.P.E., J.B., M.H., N.S., P.V.C., R.C., T.B.D.I., T.B.J.B., W.S. with their corresponding descriptions.

SHEET TOTALS and PROJECT TOTALS summary rows showing counts for various pipe sizes and materials.

COMPUTED BY: CMS DATE: 06/19/2023
 CHECKED BY: JCW DATE: 06/19/2023

(2-3-23)

PROJECT NO.
BR-0093

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
-L-	12+50	13+50	LT	SD	100
CONTINGENCY				SD	200
TOTAL LF:					300

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

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

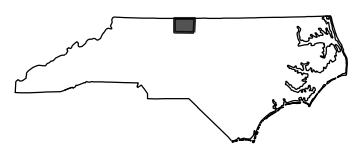
LINE	Station	Station	Aggregate Type* ASU(1/2)/ AST	Aggregate Thickness INCHES [8" for ASU(2)]	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Subgrade Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
CONTINGENCY			ASU(1)	12	100	200	300		
TOTAL CY/TONS/SY:						100	200**	300**	0

*ASU(1/2) = Aggregate Subgrade (Type 1 or 2)
 *AST = Aggregate Stabilization
 **Total tons of "Class IV Subgrade Stabilization" and total square yards of "Geotextile for Subgrade Stabilization" are only the estimated quantities for ASU(1/2)/AST and may only represent a portion of the subgrade stabilization and geotextile quantities shown in the Item Sheets of the Proposal.

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-	1:1	12+50	2:1	13+50	LT	2G-1 Sheet	*	170
TOTAL SY:								170

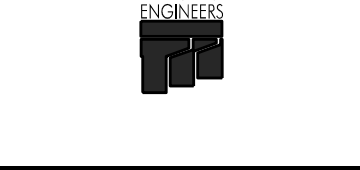
*Use Class 1, 2 or B riprap if riprap class is not shown for rock plating location.



Documents: Han Nguyen 04/03/2024

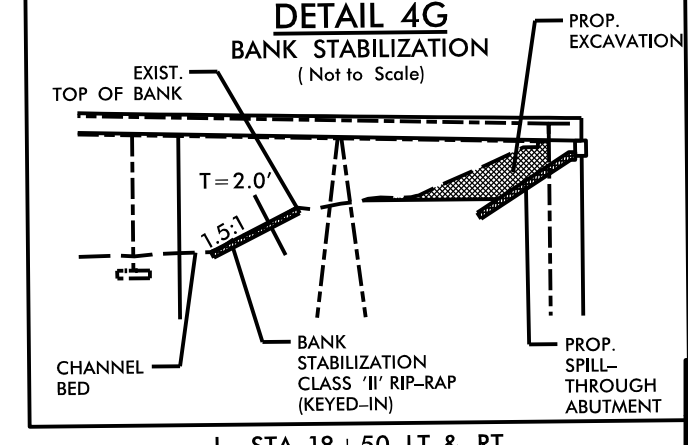
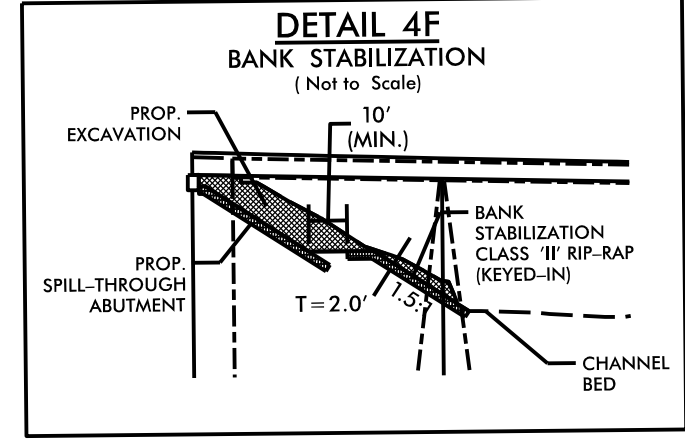
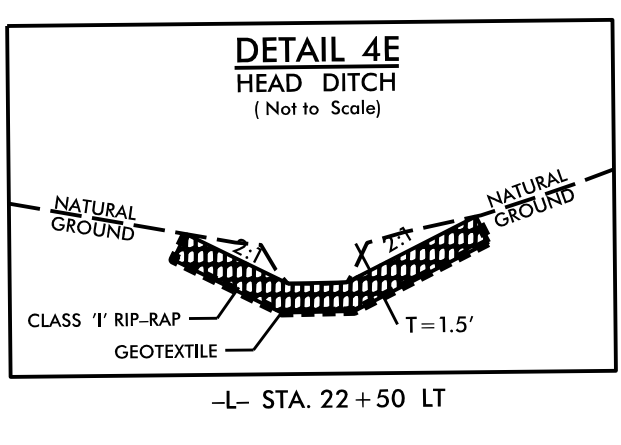
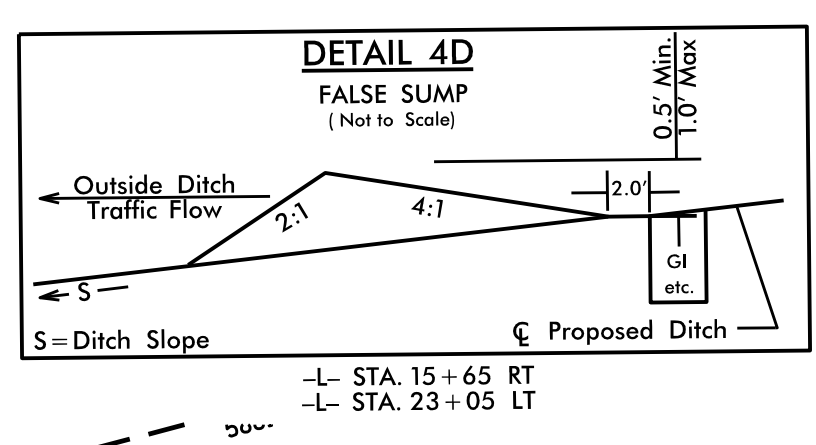
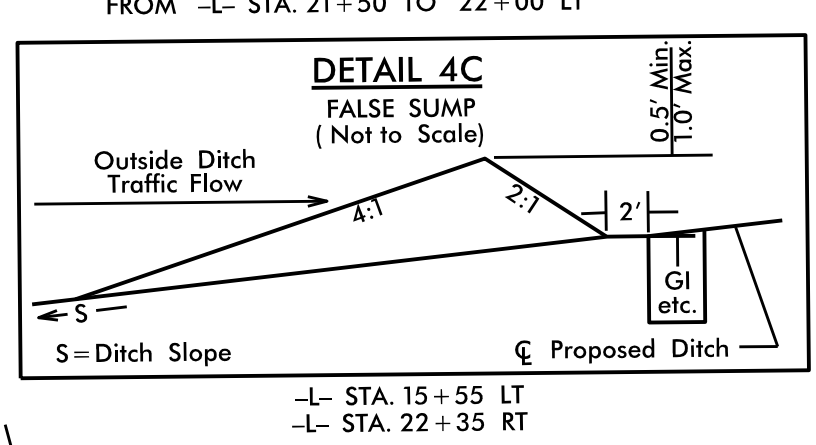
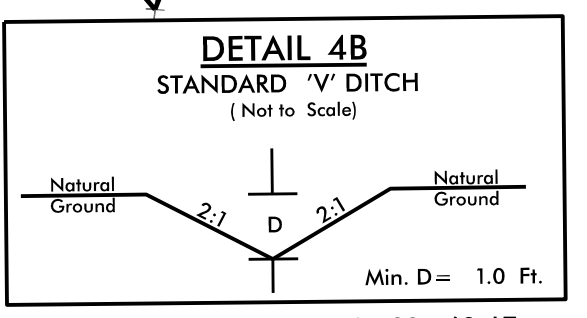
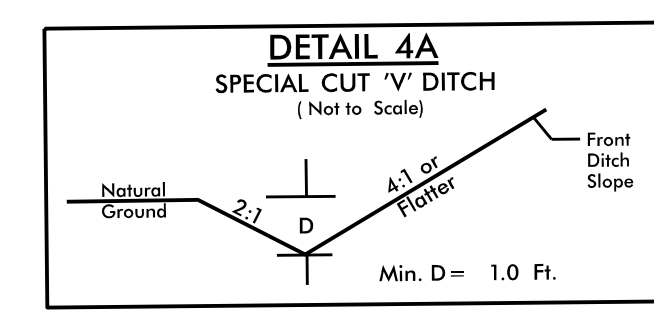
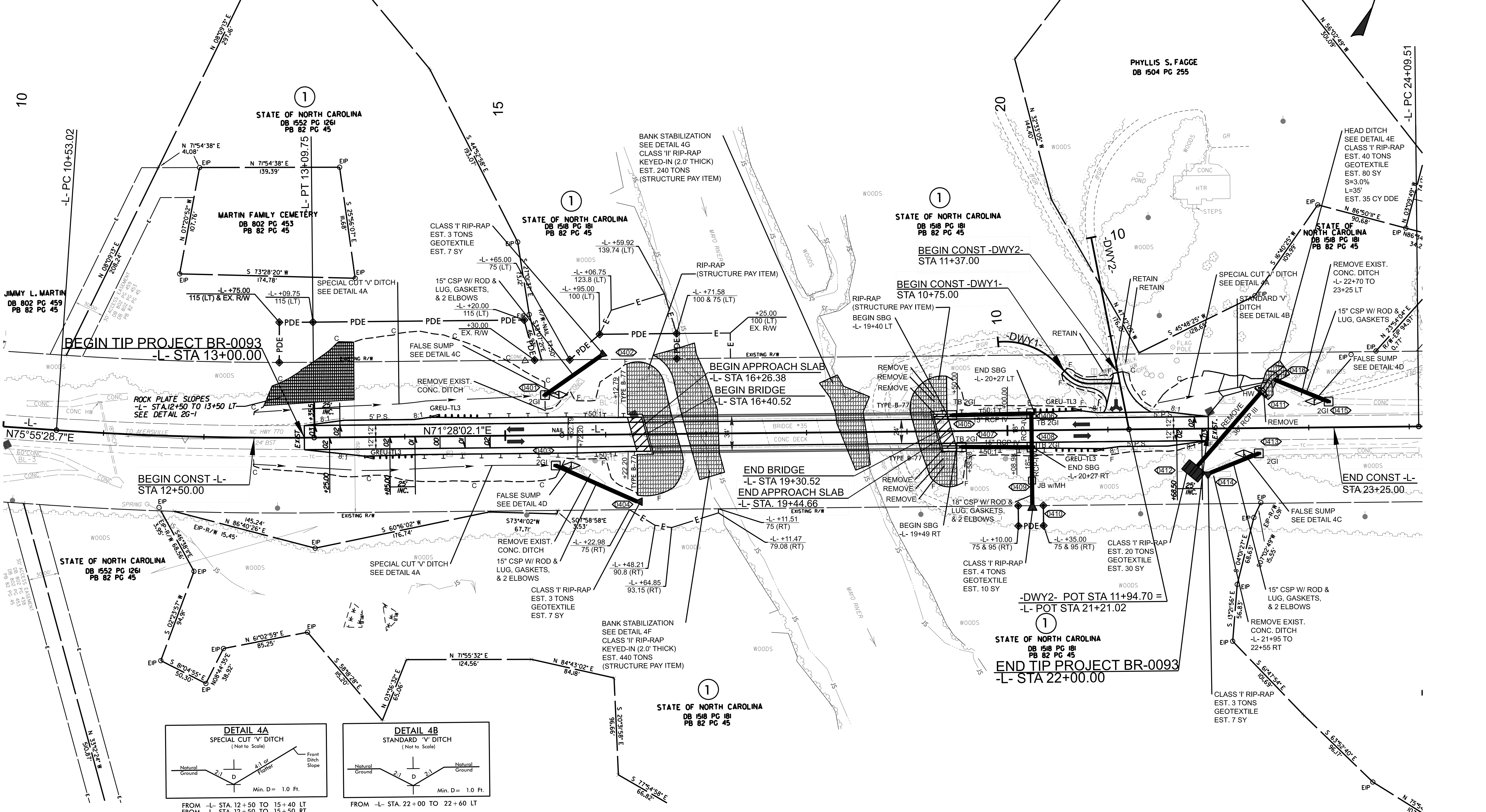


Documents: Benjamin J. Herring 04/03/2024



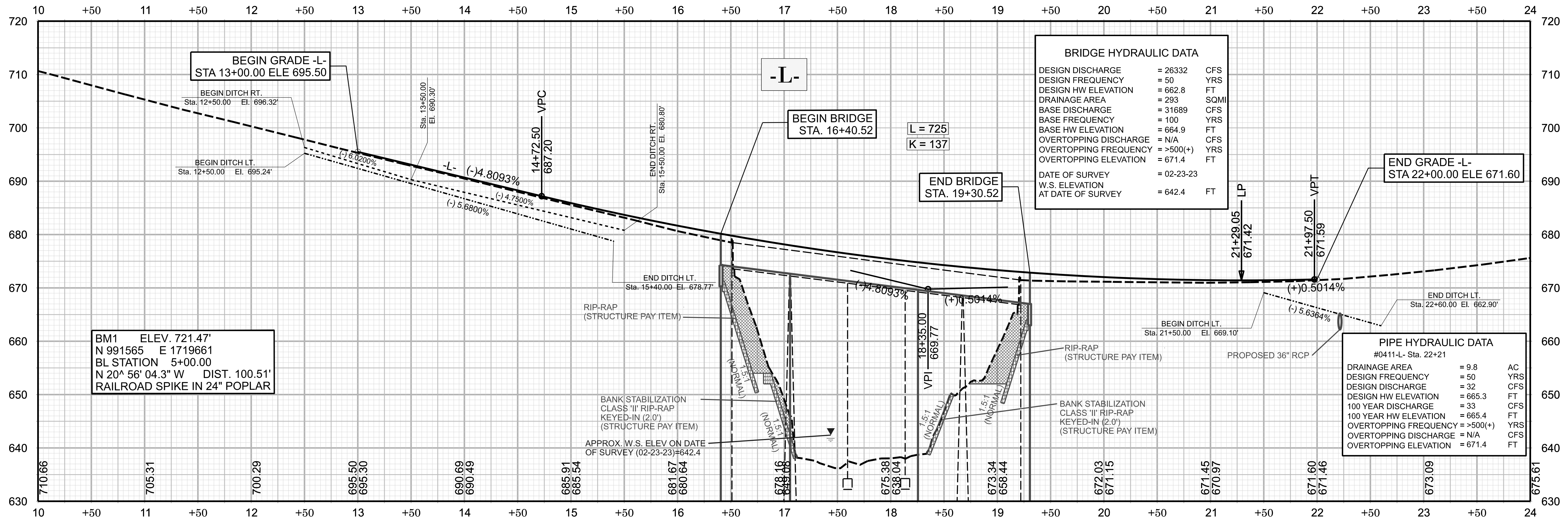
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CUR DATA -L-	CUR DATA -L-	CUR DATA -DWY1-	CUR DATA -DWY1-
Pic 11+81.45	Pic 25+24.26	Pic 10+32.84	Pic 10+93.44
$\Delta c = 04^{\circ}27'26.6''$ (LT)	$\Delta c = 03^{\circ}58'58.9''$ (RT)	$\Delta c = 49^{\circ}02'29.3''$ (RT)	$\Delta c = 44^{\circ}18'53.0''$ (LT)
D = 01°44'10.4"	D = 01°44'10.4"	D = 79°34'38.9"	D = 190°59'09.4"
Lc = 256.73	Lc = 229.41	Lc = 61.63	Lc = 23.20
Tc = 128.43	Tc = 114.75	Tc = 32.84	Tc = 12.22
R = 3,300	R = 3,300	R = 72	R = 30



BRIDGE APPROACH SLAB
 FOR STRUCTURE PLANS, SEE SHEETS S-1 THRU S-36
 FOR -L-, -DWY1-, -DWY2- PROFILES, SEE SHEET NO. 5
 FOR -DWY1-, -DWY2- DETAILS, SEE SHEET 2B-1

REVISIONS



BR-0093
05

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
ROCKINGHAM COUNTY

ROADWAY DESIGN UNIT
ROADWAY DESIGN ENGINEER

PROFESSIONAL SEAL
042662
C. NORTON
HYDRAULICS ENGINEER

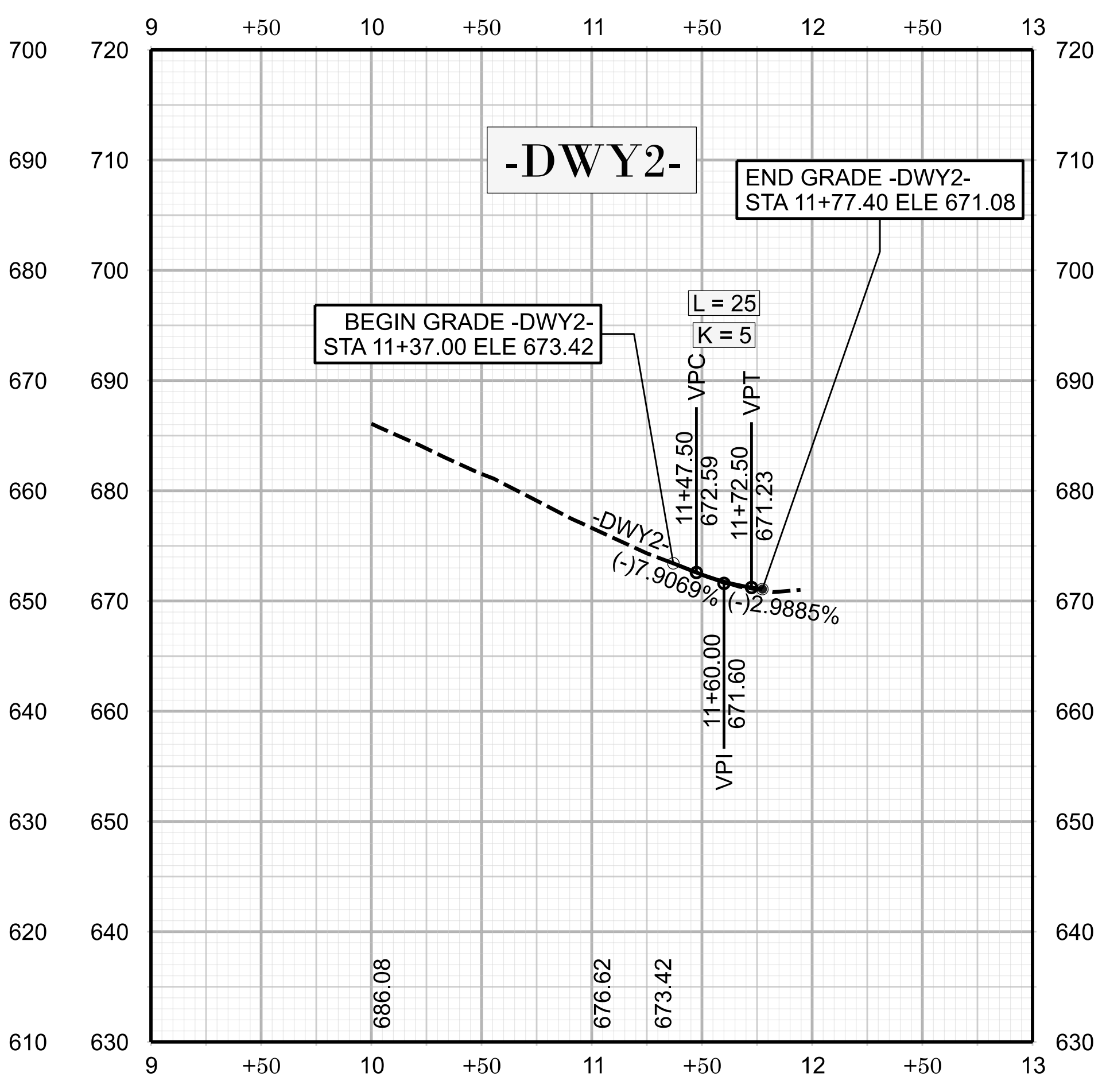
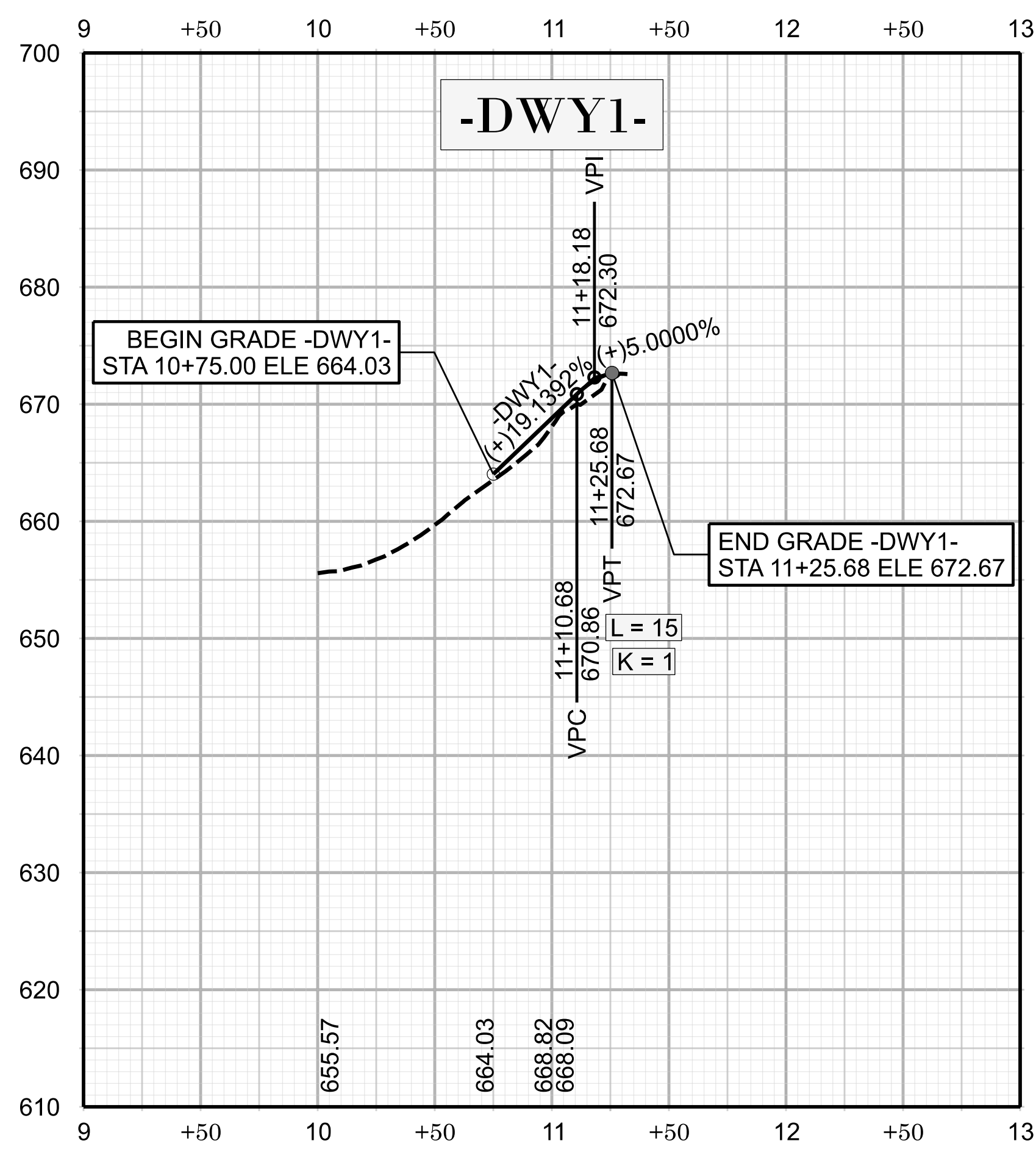
DocuSign
Han Nguyen 04/03/2024

PROFESSIONAL SEAL
044158
BENJAMIN J. HARRIS
HYDRAULICS ENGINEER

DocuSign
Benjamin J Harris 03/23/2024

HYDRAULICS ENGINEER

TGS
PREPARED BY



FOR -L-, -DWY1-, -DWY2- PLANS, SEE SHEET NO. 4

REVISIONS

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