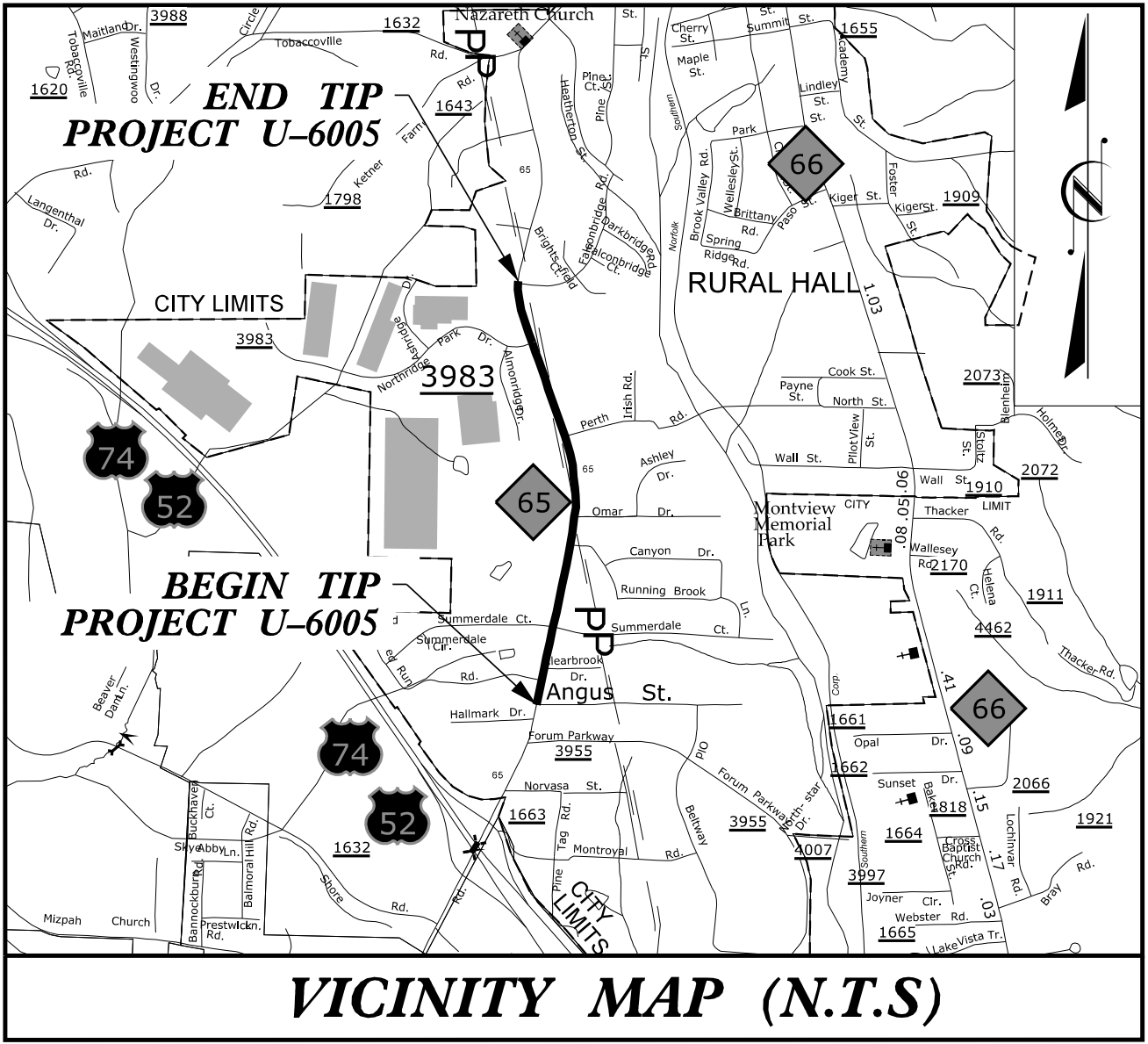


09.08/2025

TIP PROJECT: U-6005

CONTRACT: C205074

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



VICINITY MAP (N.T.S)

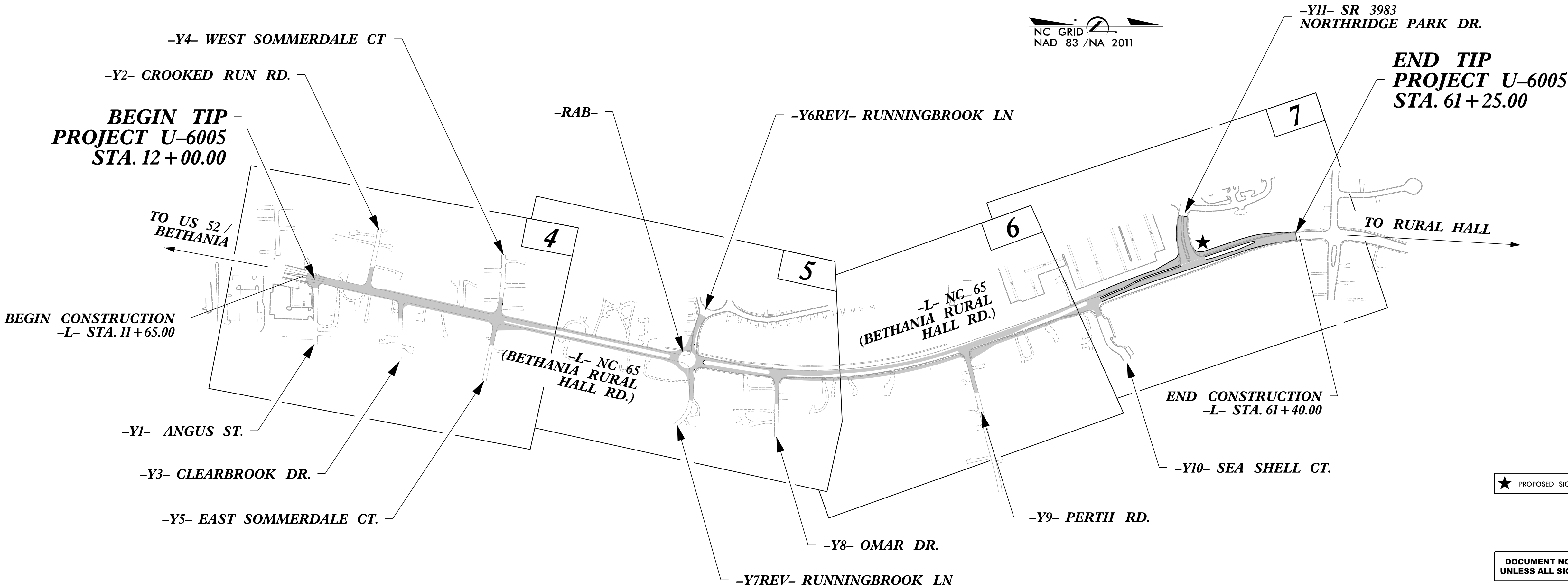
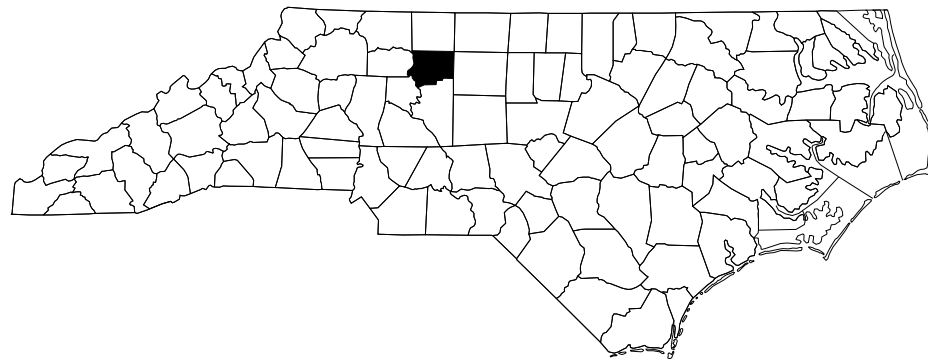
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

FORSYTH COUNTY

LOCATION: NC 65 (BETHANIA RURAL HALL RD.) FROM US 52
TO SR 3983 (NORTHBRIDGE PARK DRIVE) IN RURAL HALL

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-6005	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
47140.1.1	N/A	P.E.	
47140.2.1		R/W	
47140.2.2		UTILITIES	
47140.3.1		CONST.	



★ PROPOSED SIGNAL

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



PLANS



PROFILE (HORIZONTAL)



PROFILE (VERTICAL)

DESIGN DATA

ADT 2024 = 13,250
ADT 2040 = 15,600
K = 10 %
D = 60 %
T = 6 % *
V = 50 MPH
* TTST = 3% DUAL 3%
FUNC CLASS =
MINOR ARTERIAL

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-6005 = 0.933 MILES

TOTAL LENGTH OF TIP PROJECT U-6005 = 0.933 MILES

Prepared In the Office of:
JOHNSON, MIRMIRAN & THOMPSON
4700 FALLS OF NEUSE ROAD, RALEIGH NC 27609
License No. : C-3097

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
SEPTEMBER 2, 2022

LETTING DATE:
JULY 15, 2025

RYAN C. NEWCOMB, PE
NCDOT DIVISION PROJECT MANAGER

BRETT ABERNATHY, PE, PLS
PROJECT ENGINEER

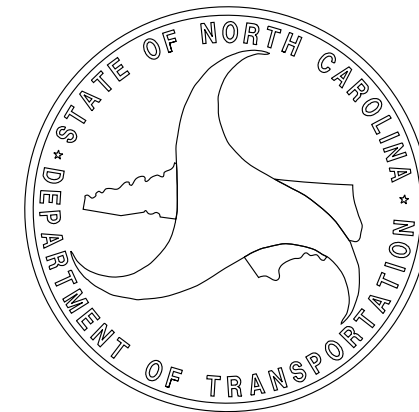
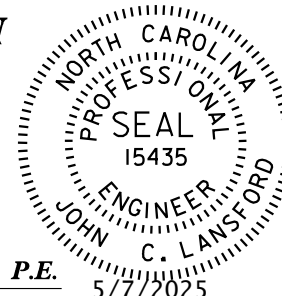
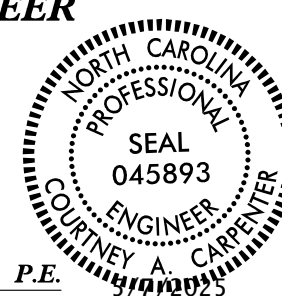
JOHN LANSFORD, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

Signed by:
Courtney Carpenter
SEAL
045893
ENGINEER
5/16/2025
SIGNATURE:

ROADWAY DESIGN
ENGINEER

Signed by:
John C. Lansford
SEAL
15435
ENGINEER
5/7/2025
SIGNATURE:



Professional Engineer Seal for John C. Lansford, State of North Carolina, License No. FSB707278455100.

5/7/2025

2024 SPECIFICATIONS
EFFECTIVE: 01-16-2024
REVISED:

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 ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD 111.

2024 ROADWAY ENGLISH STANDARD DRAWINGS

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.

The following Roadway Standards 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:

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

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 SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 815.02 IN LOCATIONS AS DIRECTED BY THE ENGINEER

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02
USING 3 FOOT RADIUS OR RADIUS AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES
WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

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.

SHORING FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

UTILITY OWNERS ON THIS PROJECT ARE ATT, DUKE ENERGY,
CHARTER/SPECTRUM, WINDSTREAM, PIEDMONT NATURAL GAS, WINSTON SALEM AND FORSYTH CO. UTILITIES
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT
AS SHOWN ON THE PLANS.

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

CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS.
CONSTRUCT ALL CURB RAMPS IN ACCORDANCE WITH STD 848.06

CD. 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 Super-elevation - Two Lane Pavement
225.05	Method of Obtaining Super-elevation - Divided Highways
DIVISION 3 - PIPE CULVERTS	
310.10	Driveway Pipe Construction
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Super-elevated 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
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.17	Concrete Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.24	Frames and Narrow Slot Sag Grates
840.25	Anchorage for Frames, Brick or Concrete or Precast
840.26	Brick Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
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
840.45	Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
848.02	Driveway Turnout - Radius Type
848.04	Street Turnout
848.06	Curb Ramp (Use Details in Lieu of Standards for Sheets 9 and 10 of 13)
852.01	Concrete Islands
852.06	Method for Placement of Drop Inlets in Concrete Islands
852.10	Median Construction - with Curb and Gutter
862.01	Guardrail Placement (Use Details in Lieu of Standards for Sheets 4, 6, 12 and 14 of 15)
862.02	Guardrail Installation (Use Detail in Lieu of Standards for Sheet 5 of 9)
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches With Class B Riprap

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	
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:

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	
Buffer Zone 1	
Buffer Zone 2	
Flow Arrow	
Disappearing Stream	
Spring	
Wetland	
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	

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	

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)*	

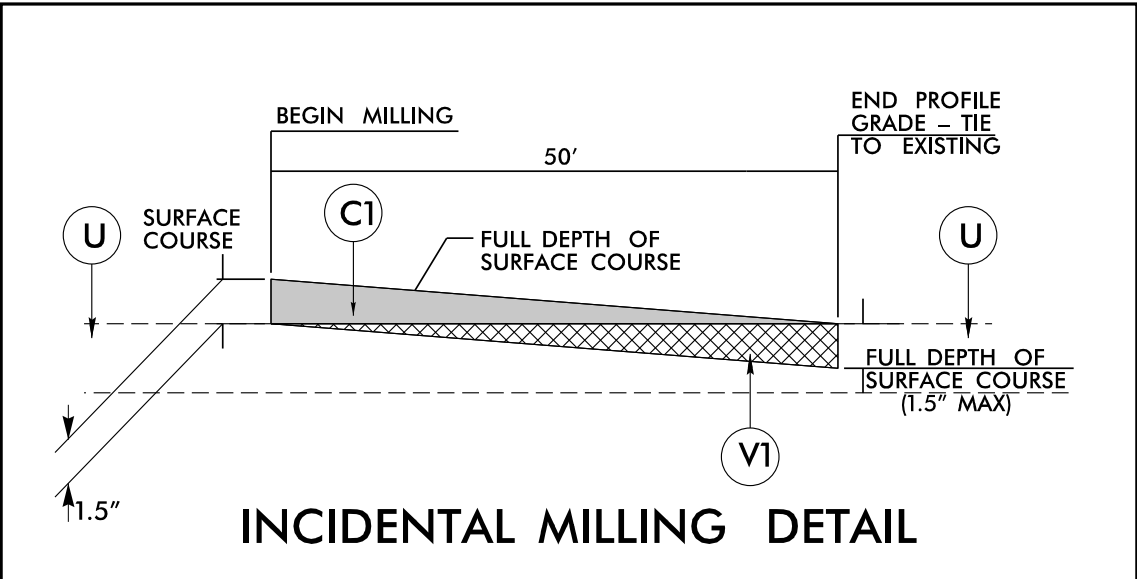
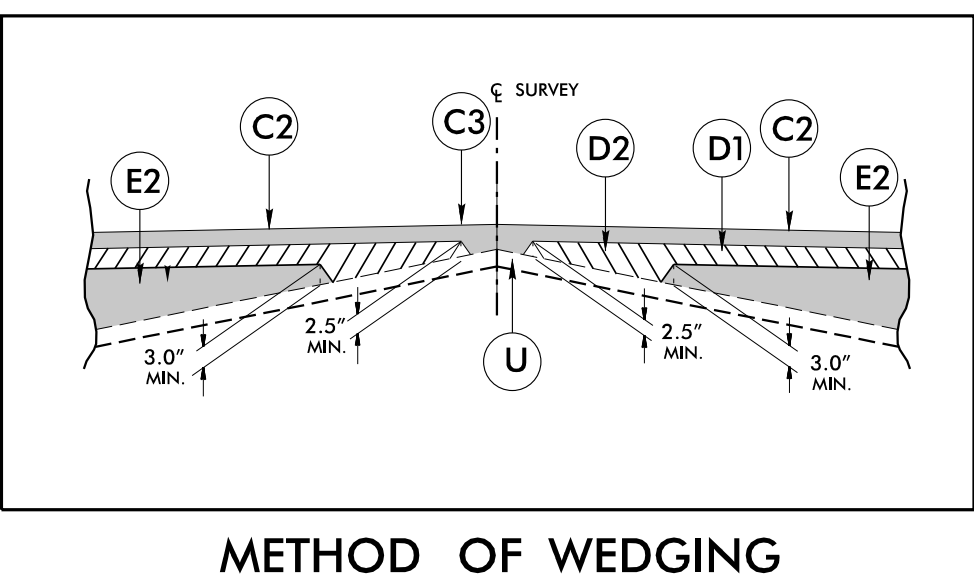
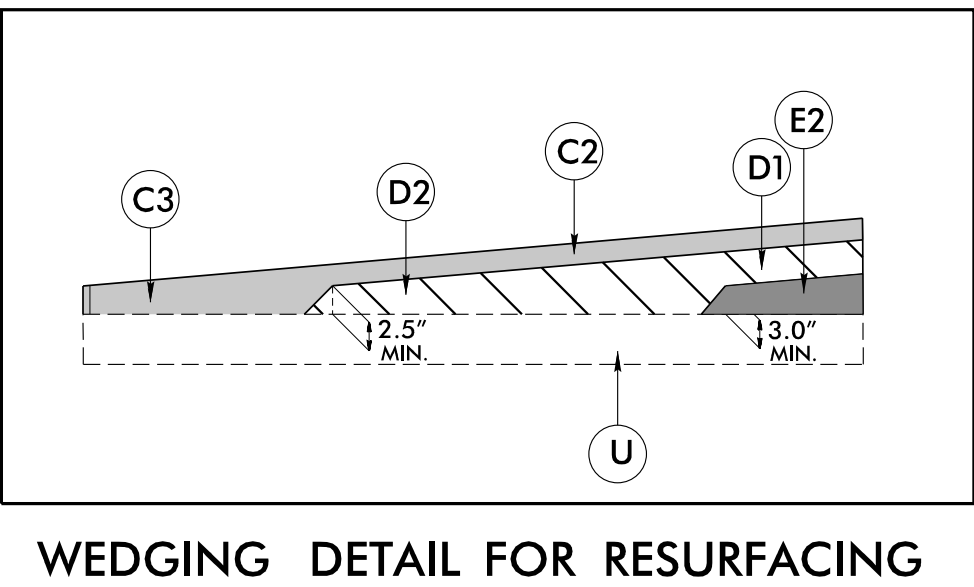
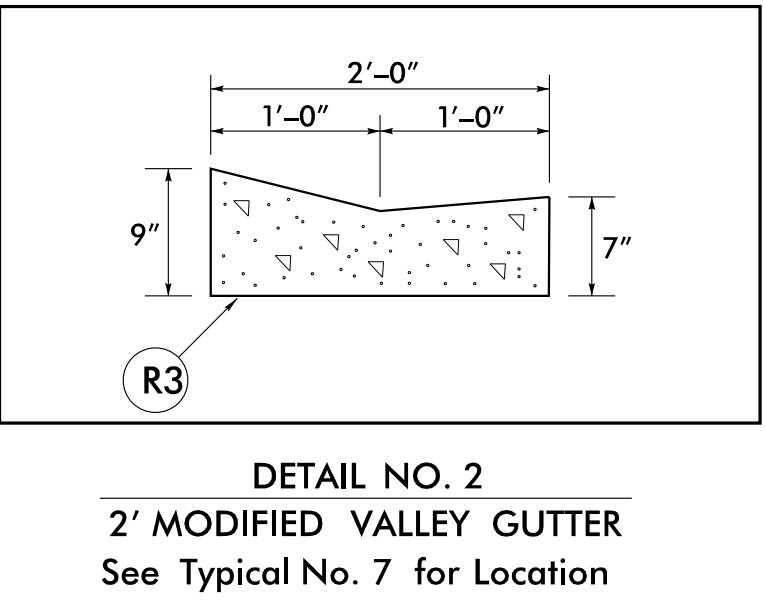
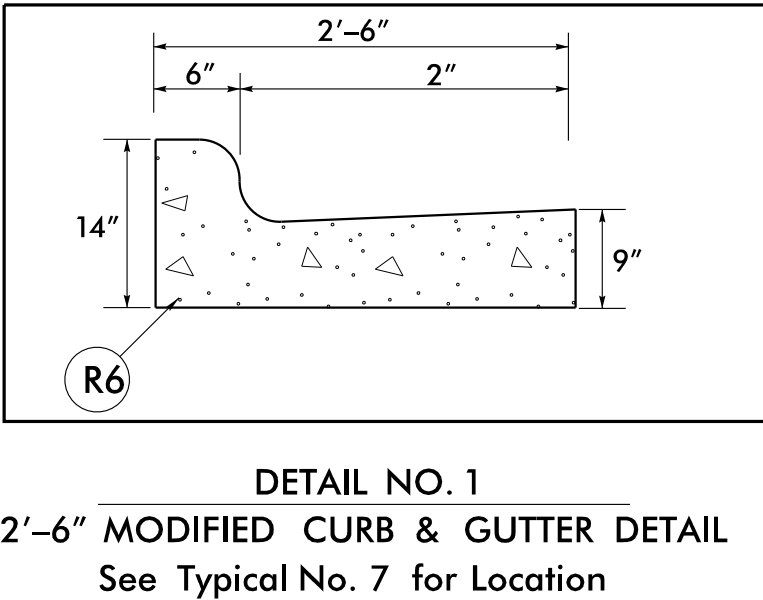
MISCELLANEOUS:

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	

FINAL PAVEMENT SCHEDULE			
A1	9" CONCRETE TRUCK APRON WITH WIRE MESH 4x4-W3.5 OR 6x6-W5 x W5 15' MINIMUM RADIAL JOINT SPACING	R3	2' MODIFIED VALLEY GUTTER (SEE DETAIL NO.2)
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	R4	5" MONOLITHIC CONCRETE ISLAND, KEYED IN
C2	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.	R5	2' VALLEY GUTTER
C3	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 2" IN DEPTH.	R6	2'-6" MODIFIED CURB AND GUTTER (SEE DETAIL NO. 1)
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	S	4" CONCRETE SIDEWALK
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 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.	T	EARTH MATERIAL
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	U	EXISTING PAVEMENT
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.	V1	INCIDENTAL MILLING (VARIABLE DEPTH 0" TO 1.5" DEPTH)
R1	2'-6" CONCRETE CURB AND GUTTER.	V2	1.5" MILLING OF EXISTING ASPHALT PAVEMENT
R2	2'-9" CONCRETE CURB AND GUTTER.	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL).

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

2.SAWCUT EXISTING PAVEMENT AS NEEDED SUCH THAT PAVEMENT
WIDENING IS 2' MINIMUM



- Y2- STA. 11+40.00 to 11+90.00
- Y3- STA. 10+50.00 to 11+00.00
- Y4- STA. 12+40.00 to 12+90.00
- Y5- STA. 10+80.00 to 11+30.00
- Y8- STA. 11+00.00 to 11+50.00
- Y9- STA. 11+65.00 TO 12+15.00
- Y6Rev1- STA. 10+30.00 TO 10+80.00
- Y7Rev- STA. 11+50.00 to 12+00.00
- Y10- STA. 10+50.00 to 11+00.00

PROJECT REFERENCE NO.
U-6005

SHEET NO.
2A-1

ROADWAY DESIGN
ENGINEER
NORTH CAROLINA
PROFESSIONAL
SEAL
JAMES L. LANSFORD
ENGINEER
5/7/2025

PAVEMENT DESIGN
ENGINEER
NORTH CAROLINA
PROFESSIONAL
SEAL
RYAN C. NEWCOMB
ENGINEER
5/7/2025

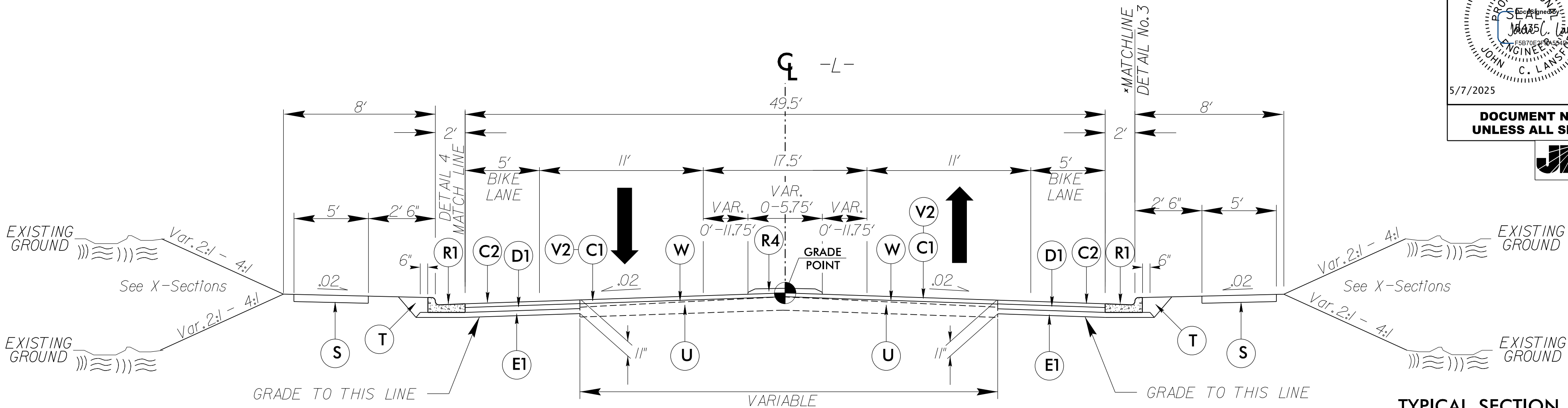
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Raleigh, NC 27609
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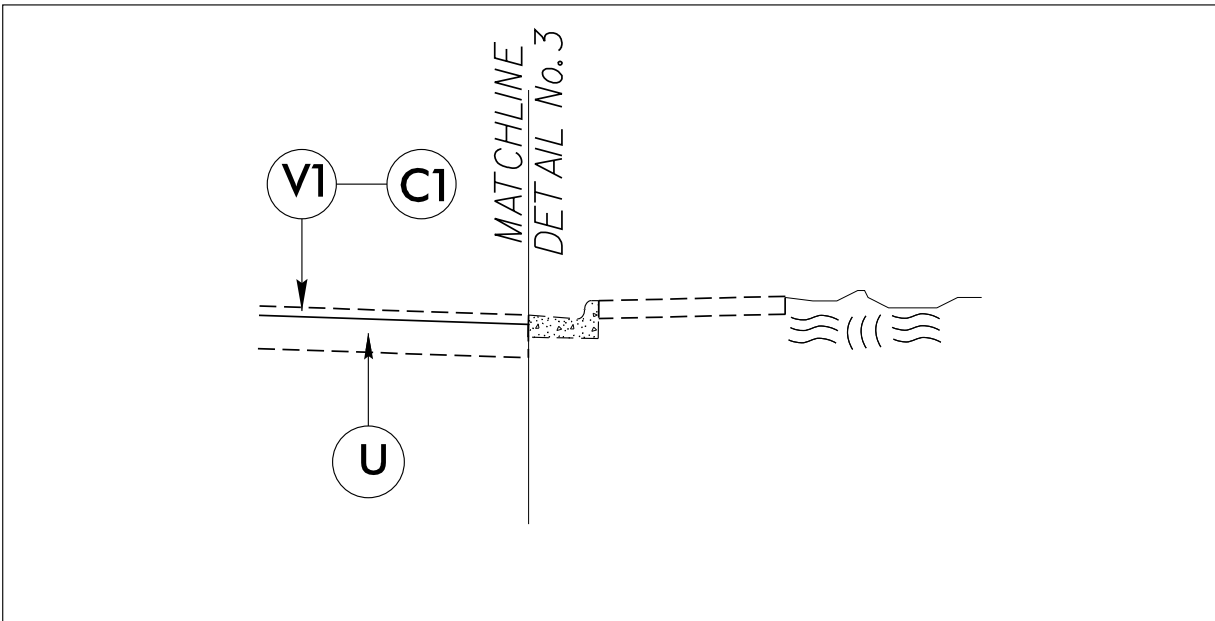
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\\fsk\shareholders
\\fsk\shareholders

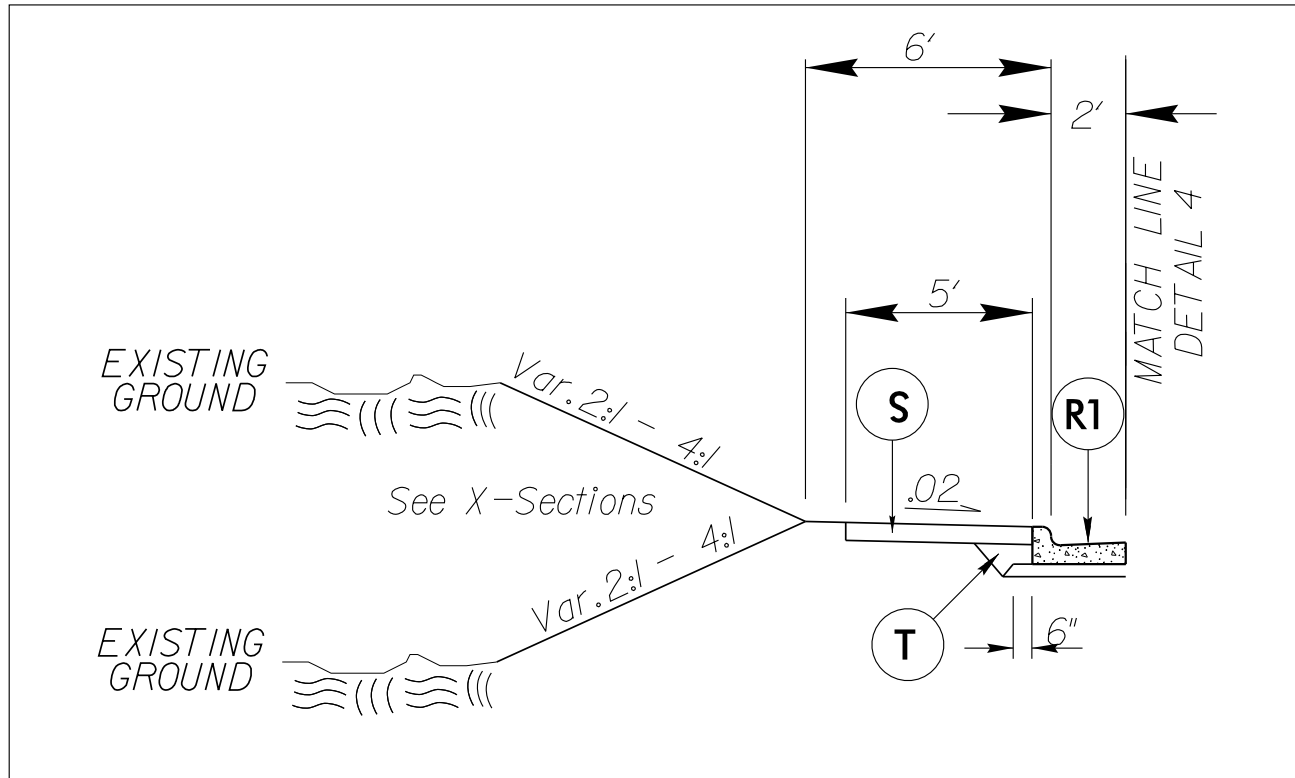
PAVEMENT SCHEDULE	
A1	9" PORTLAND CEMENT CONC.
C1	1.5" S9.5C
C2	3" S9.5C
C3	VAR. DEPTH S9.5C
D1	4" I19.0C
D2	VAR. DEPTH I19.0C
E1	4" B25.0C
E2	VAR. DEPTH B25.0C
R1	2'-6" CONC. CURB AND GUTTER
R2	2'-9" CONC. CURB AND GUTTER
R3	2' MOD. VALLEY GUTTER
R4	5" MONOLITHIC CONC. ISLAND KEYED-IN
R5	2' VALLEY GUTTER
R6	2'-6" MODIFIED CURB AND GUTTER
S	4" CONC. SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING, 1.5" DEPTH
W	WEDGING



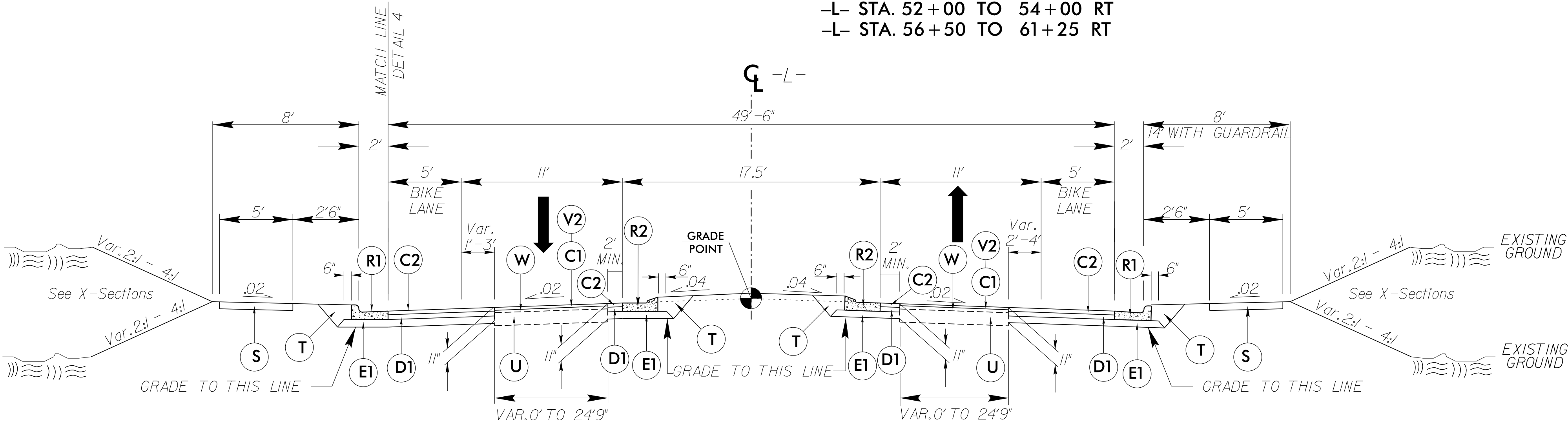
TYPICAL SECTION NO. 1



DETAIL NO. 3
MILL AND FILL
USE FOR -L- STA.
60+50.00 TO 61+25.00



DETAIL NO. 4
-L- STA. 38+00 TO 40+00 LT
-L- STA. 44+50 TO 49+00 LT
-L- STA. 52+00 TO 54+00 RT
-L- STA. 56+50 TO 61+25 RT



TYPICAL SECTION NO. 2

TYPICAL SECTION NO. 1

STA. 12+00.00 TO 23+43.99
STA. 34+55.05 TO 37+20.03
STA. 43+87.14 TO 46+91.36
STA. 50+57.00 TO 56+55.00
STA. 59+01.13 TO 61+25.00

TYPICAL SECTION NO. 2

STA. 23+43.99 TO 29+92.00
STA. 31+12.05 TO 34+55.05
STA. 37+20.03 TO 43+87.14
STA. 46+91.36 TO 50+57.00
STA. 56+55.00 TO 59+01.13

PROJECT REFERENCE NO.
U-6005

SHEET NO.
2A-2

ROADWAY DESIGN
ENGINEER
NORTH CAROLINA
PROFESSIONAL
SEAL
JAMES L. JAMES
00384481
5/7/2025

PAVEMENT DESIGN
ENGINEER
NORTH CAROLINA
PROFESSIONAL
SEAL
RYAN C. NEWCOMB
00384481
5/7/2025

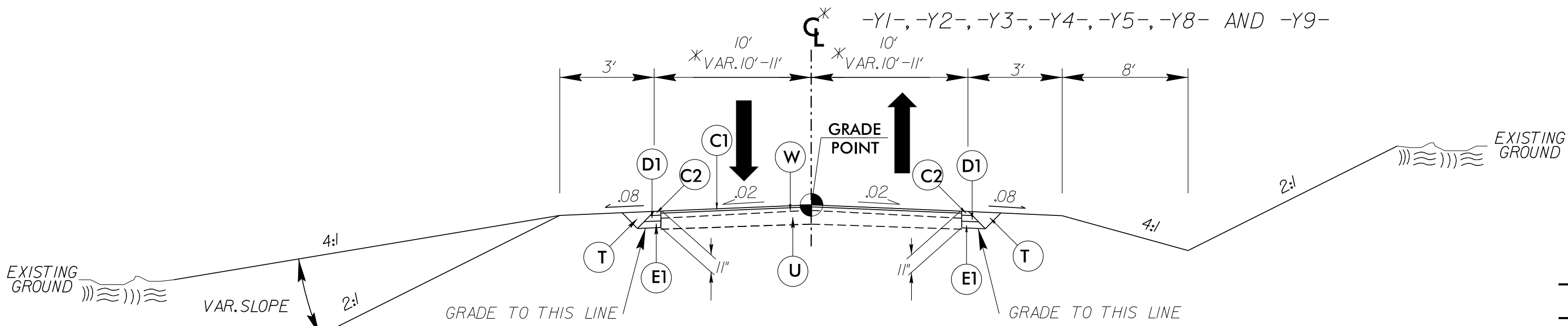
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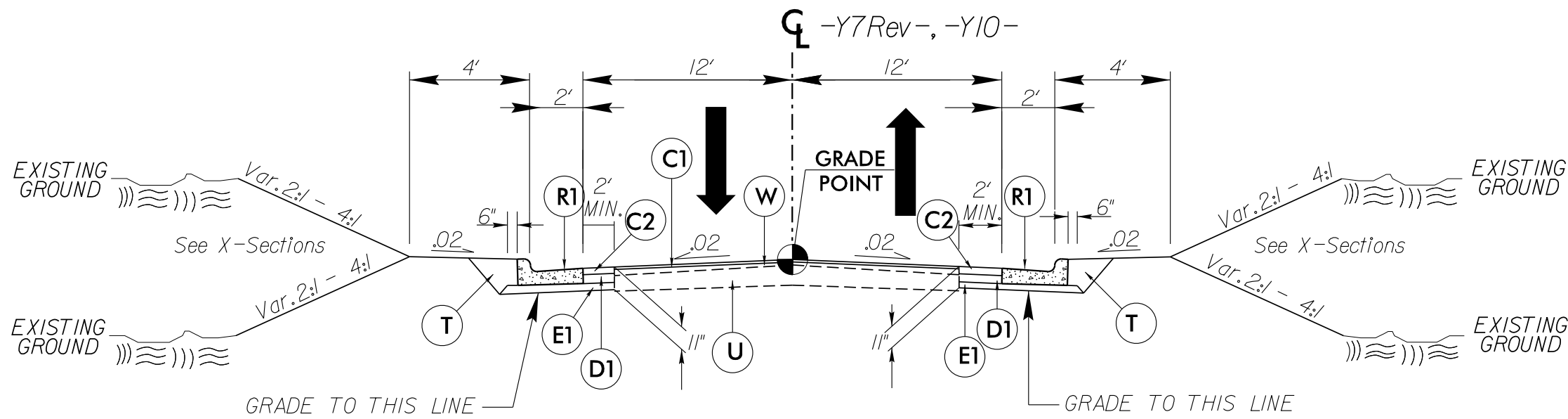
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Jesse Thompson

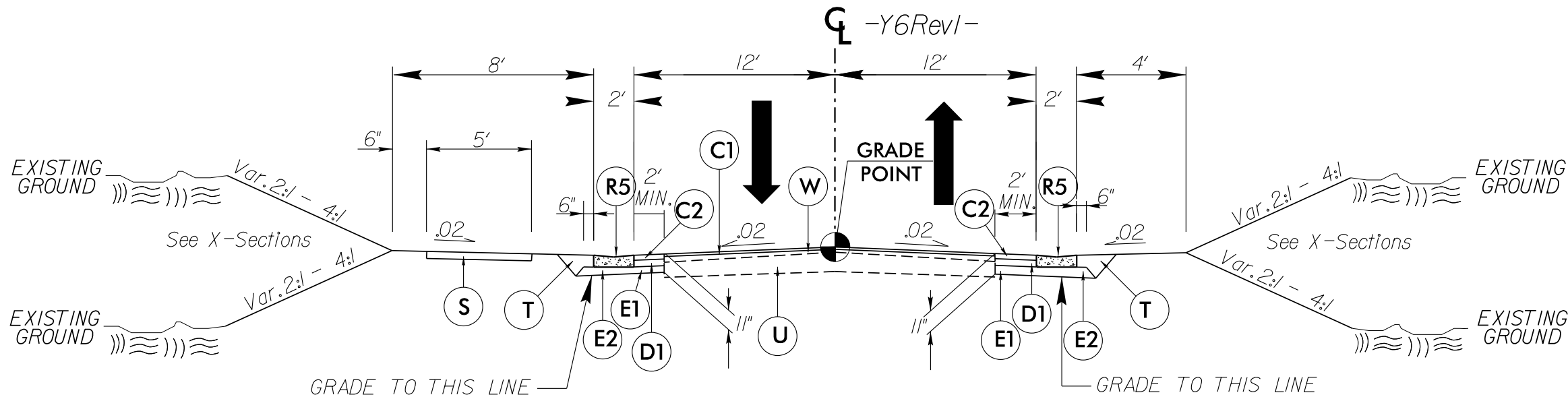
PAVEMENT SCHEDULE	
A1	9" PORTLAND CEMENT CONC.
C1	1.5" S9.5C
C2	3" S9.5C
C3	VAR. DEPTH S9.5C
D1	4" I19.0C
D2	VAR. DEPTH I19.0C
E1	4" B25.0C
E2	VAR. DEPTH B25.0C
R1	2'-6" CONC. CURB AND GUTTER
R2	2'-9" CONC. CURB AND GUTTER
R3	2' MOD. VALLEY GUTTER
R4	5" MONOLITHIC CONC. ISLAND KEYED-IN
R5	2' VALLEY GUTTER
R6	2'-6" MODIFIED CURB AND GUTTER
S	4" CONC. SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING, 1.5" DEPTH
W	WEDGING



TYPICAL SECTION NO. 3



TYPICAL SECTION NO. 4



TYPICAL SECTION NO. 5

-Y- LINES

- Y1- STA. 10+17.12 TO 10+40.00
- Y2- STA. 11+40.00 TO 12+36.91
- Y3- STA. 10+25.23 TO 11+00.00
- Y4- STA. 12+40.00 TO 13+21.61
- Y5- STA. 10+24.75 TO 11+30.00
- Y8- STA. 10+24.87 TO 11+50.00
- Y9- STA. 10+24.87 TO 12+15.00

-Y- LINES

- Y7Rev- STA. 10+60.00 TO 12+00.00
- Y10- STA. 10+38.63 TO 10+84.26

-Y- LINES

- Y6Rev1- STA. 10+30.00 TO 11+95.24

Transition to Exist. Valley Gutter -Y6Rev1-
Sta. 10+30.00 to 10+55.00 Lt & Rt.

PROJECT REFERENCE NO.
U-6005

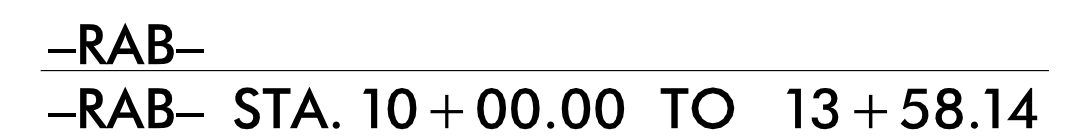
SHEET NO.
2A-3

ROADWAY DESIGN
ENGINEER
NORTH CAROLINA
PROFESSIONAL
SEAL
Jesse Thompson
5/7/2025

PAVEMENT DESIGN
ENGINEER
NORTH CAROLINA
PROFESSIONAL
SEAL
Ryan C. Newcome
5/7/2025

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License No. C-3097

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Raleigh, NC, 27609
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5/14/2025

4/7/2025 2:22:20 PM Detail_2B-1.dgn
User: jlm



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4700 Falls of Neuse Rd, Suite 100,

Raleigh, NC 27609

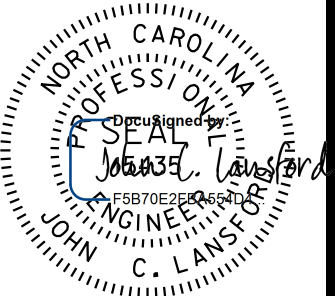
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PROJECT REFERENCE NO.
U-6005

SHEET NO.
2B-1

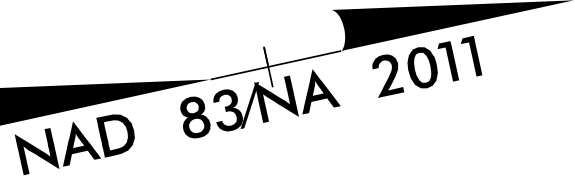
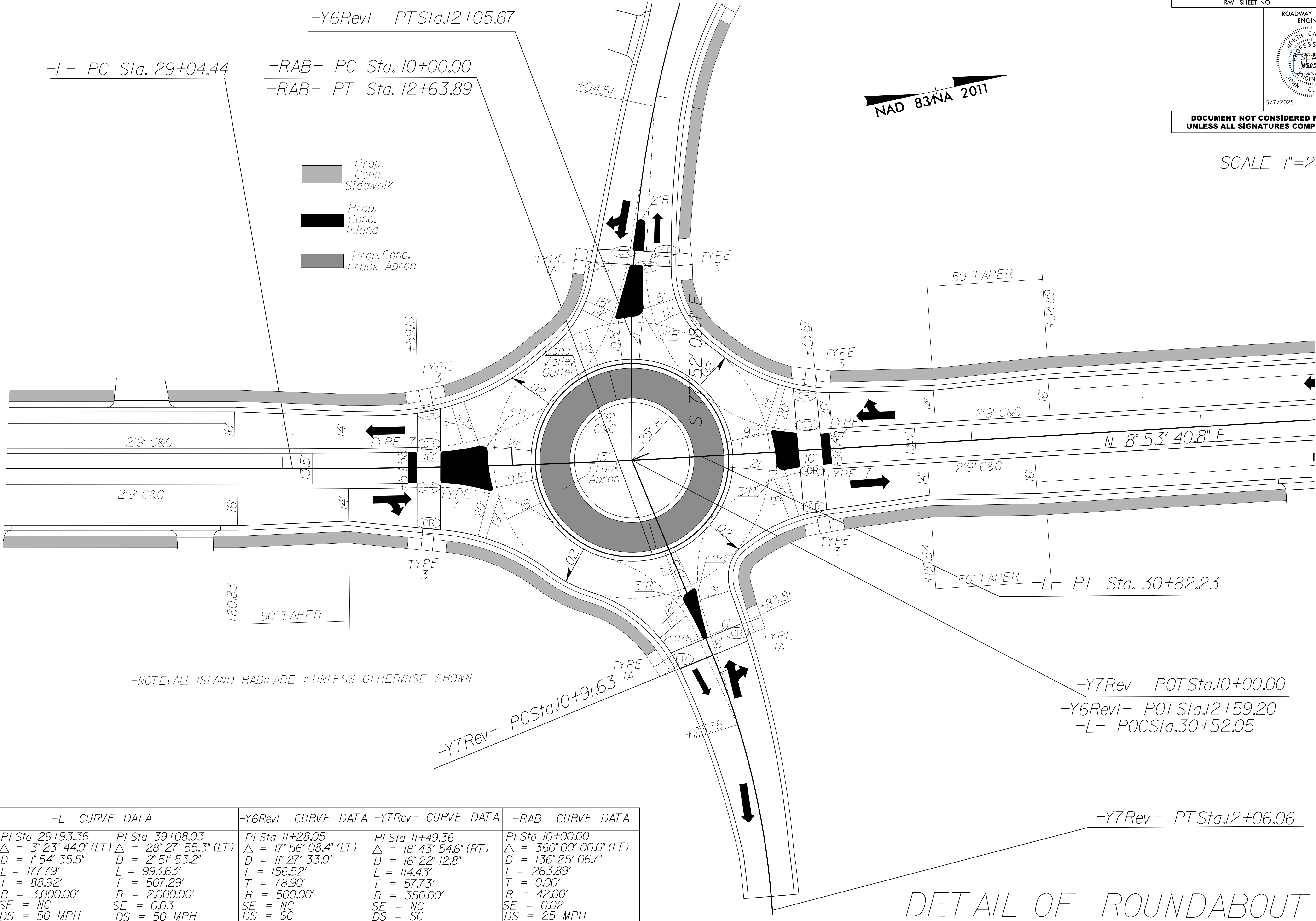
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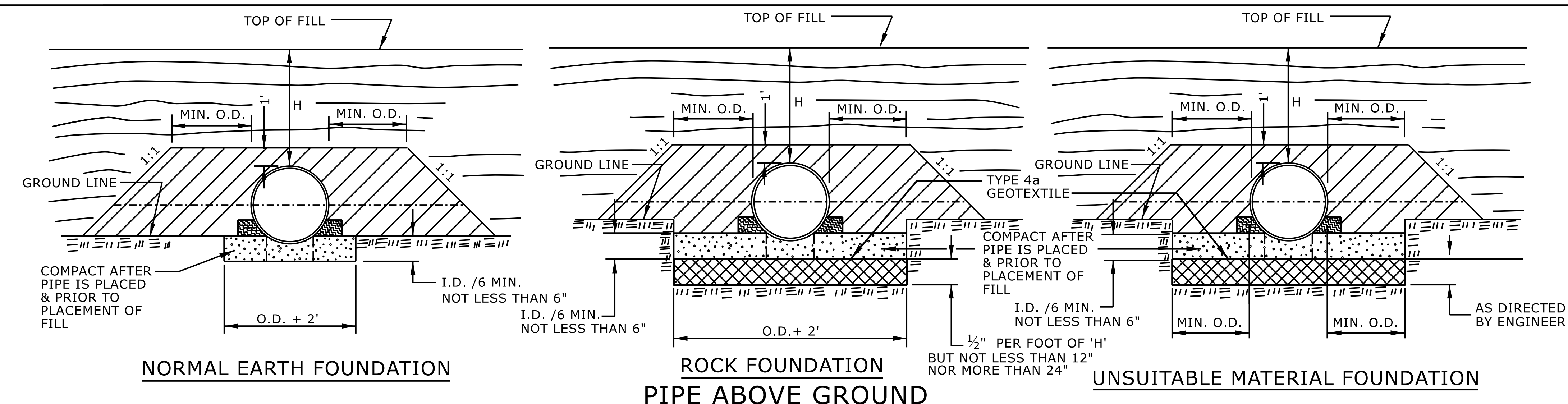
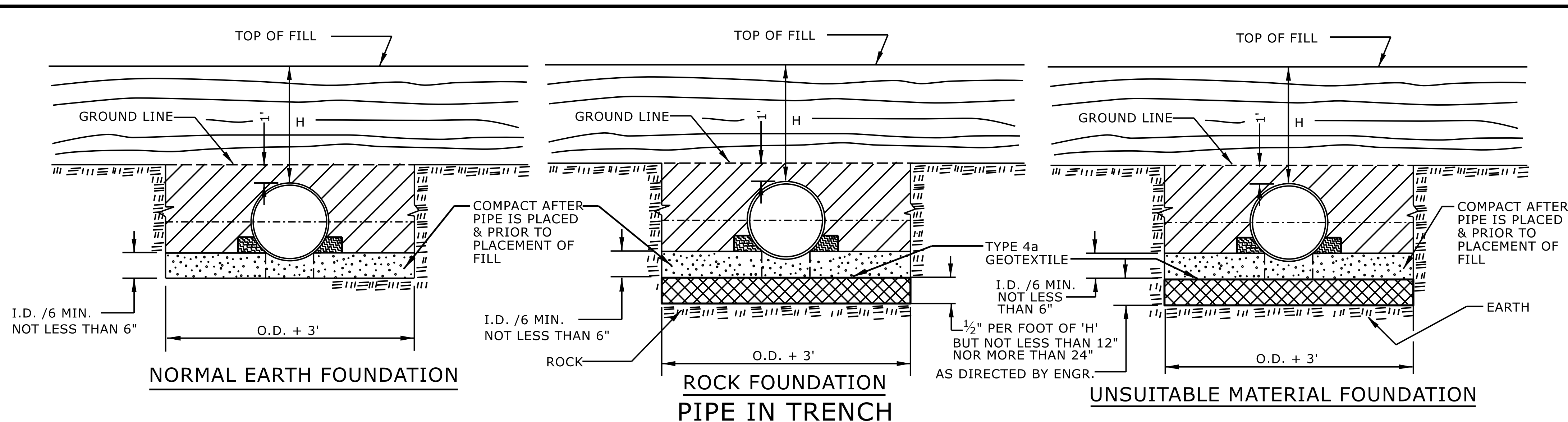
ROADWAY DESIGN
ENGINEER


5/7/2025

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SCALE 1"=20'





GENERAL NOTES:
 I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
 O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
 H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT
 ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP
 OF THE EMBANKMENT AT THAT POINT.

	APPROVED SUITABLE LOCAL MATERIAL.
	TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.
	LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS
FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

	SPRINGLINE OF PIPE
	SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.
	UNDISTURBED EARTH MATERIAL
	SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

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ROADWAY DETAIL DRAWING FOR METHOD OF PIPE INSTALLATION FLEXIBLE PIPE

SHEET 1 OF 2
300.01



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**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**
919-707-6950 FAX 919-250-4

SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
 MODIFIED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: _____

ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
 MODIFIED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: _____

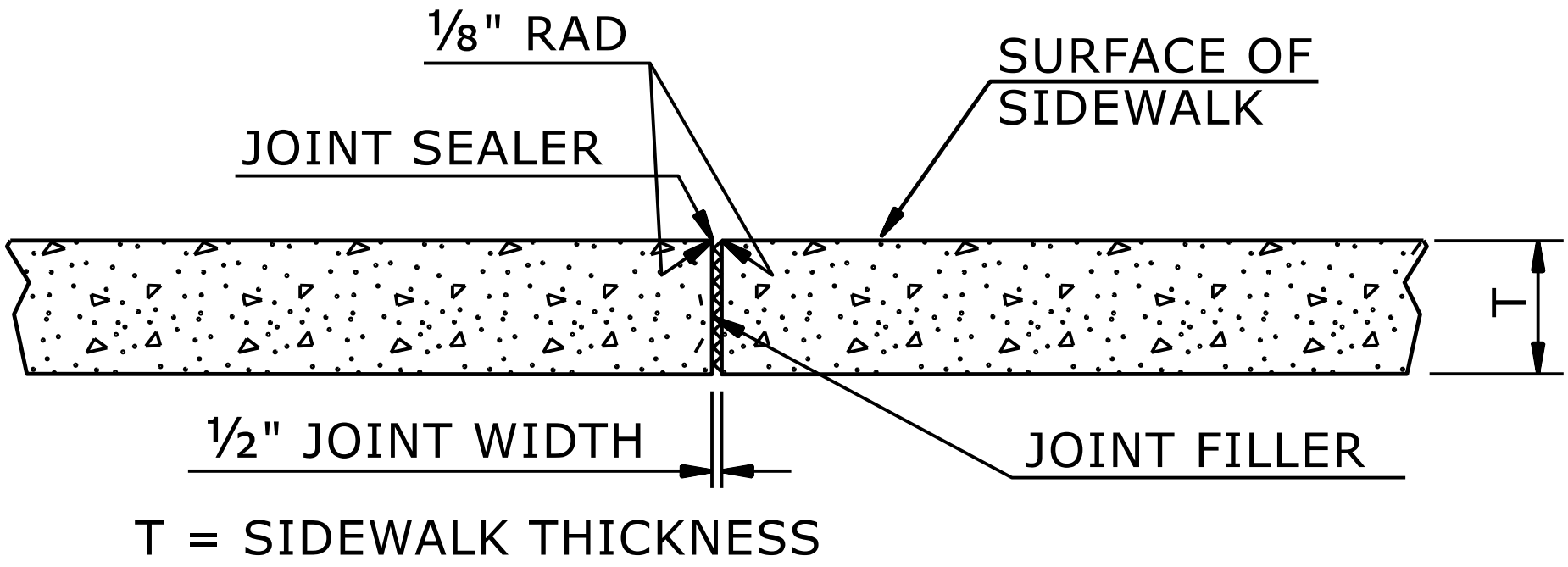
PROJECT REFERENCE NO.	SHEET NO.
U-6005	2C-3

NOTES:

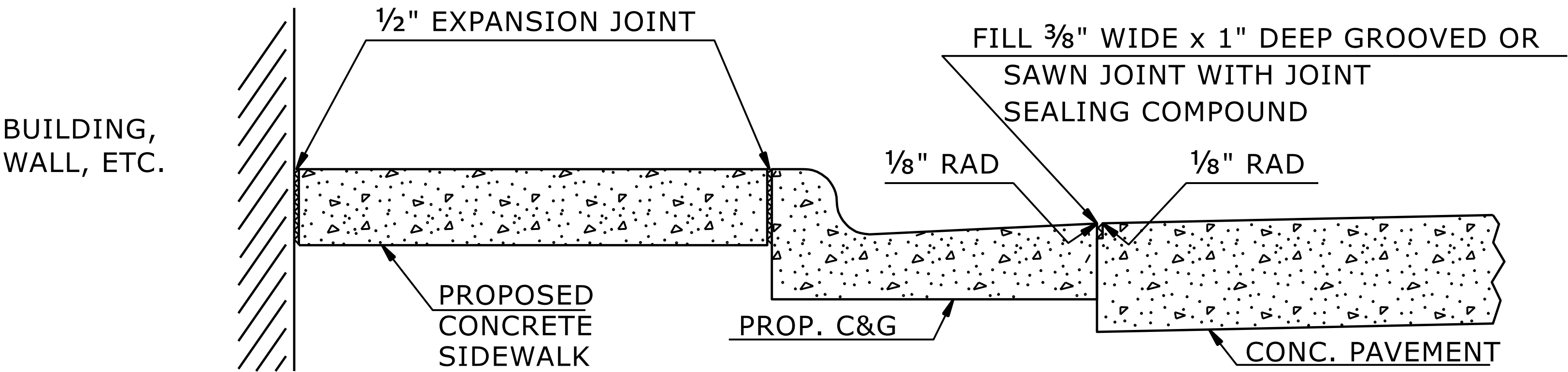
CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

PLACE A GROOVE JOINT 1" DEEP WITH 1/8" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

SEE STD. DWG. 848.06 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



TRANSVERSE EXPANSION JOINT
IN SIDEWALK



DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

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ROADWAY DETAIL DRAWING FOR
CONCRETE SIDEWALK



SHEET 1 OF 1

848D01

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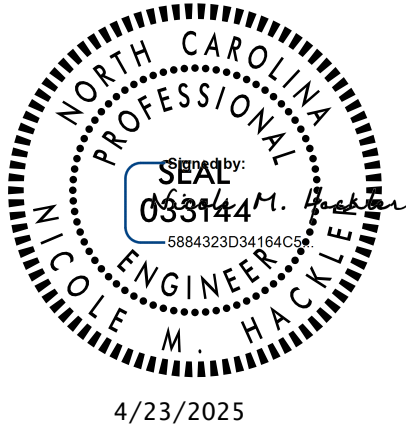
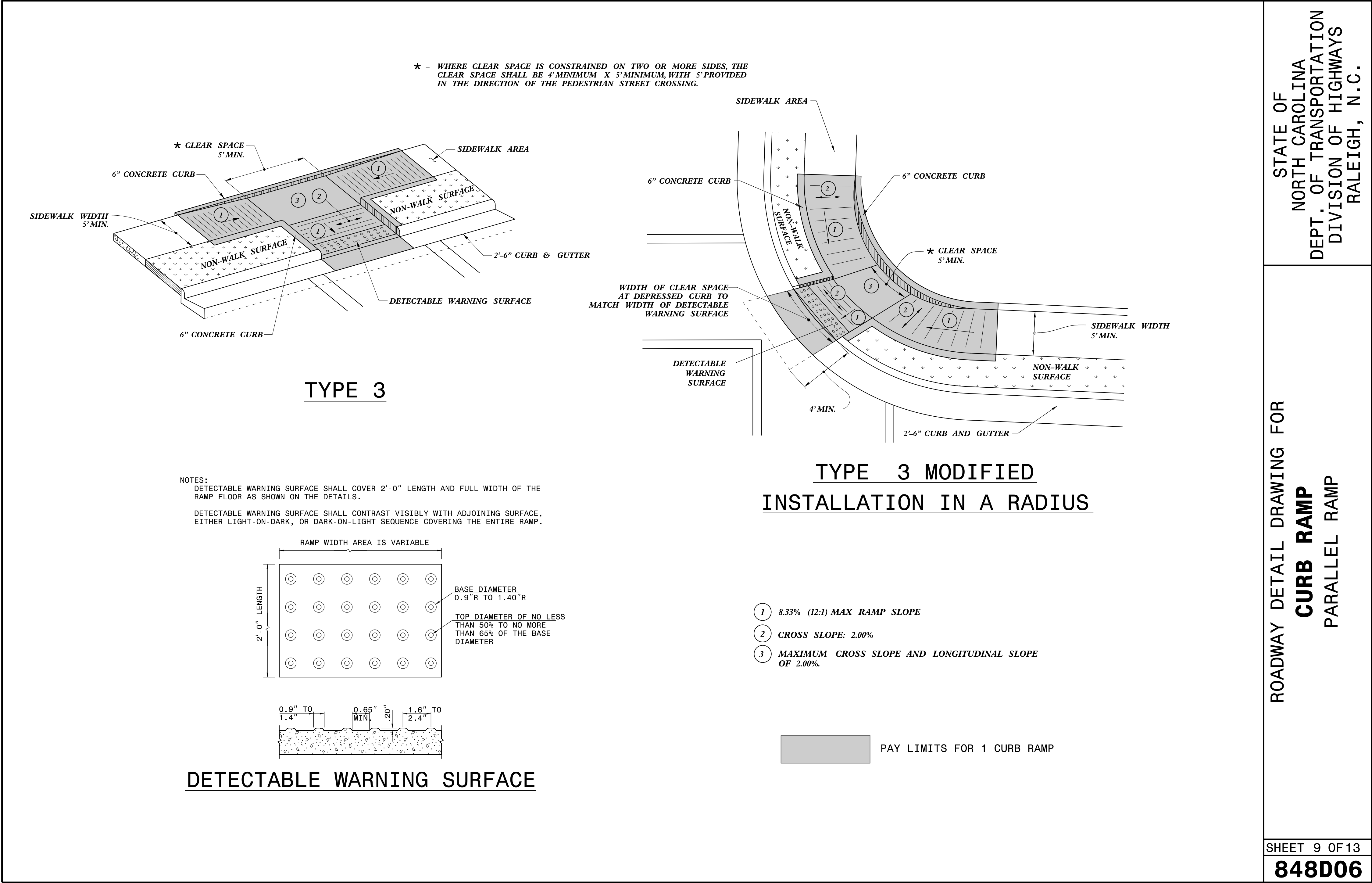
**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**

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FILE SPEC.: DATE:

PROJECT REFERENCE NO.	SHEET NO.
U-6005	2C-4

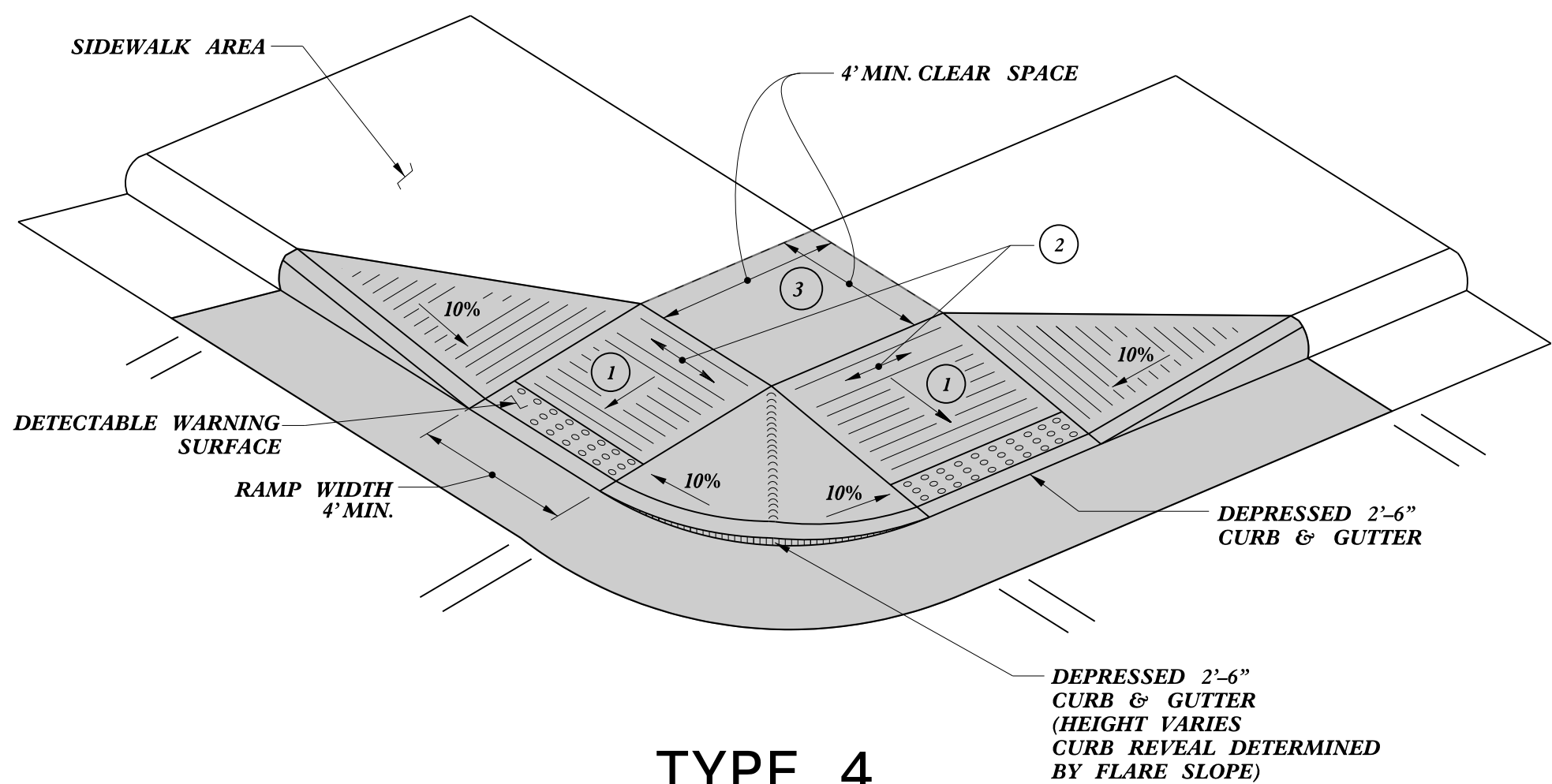


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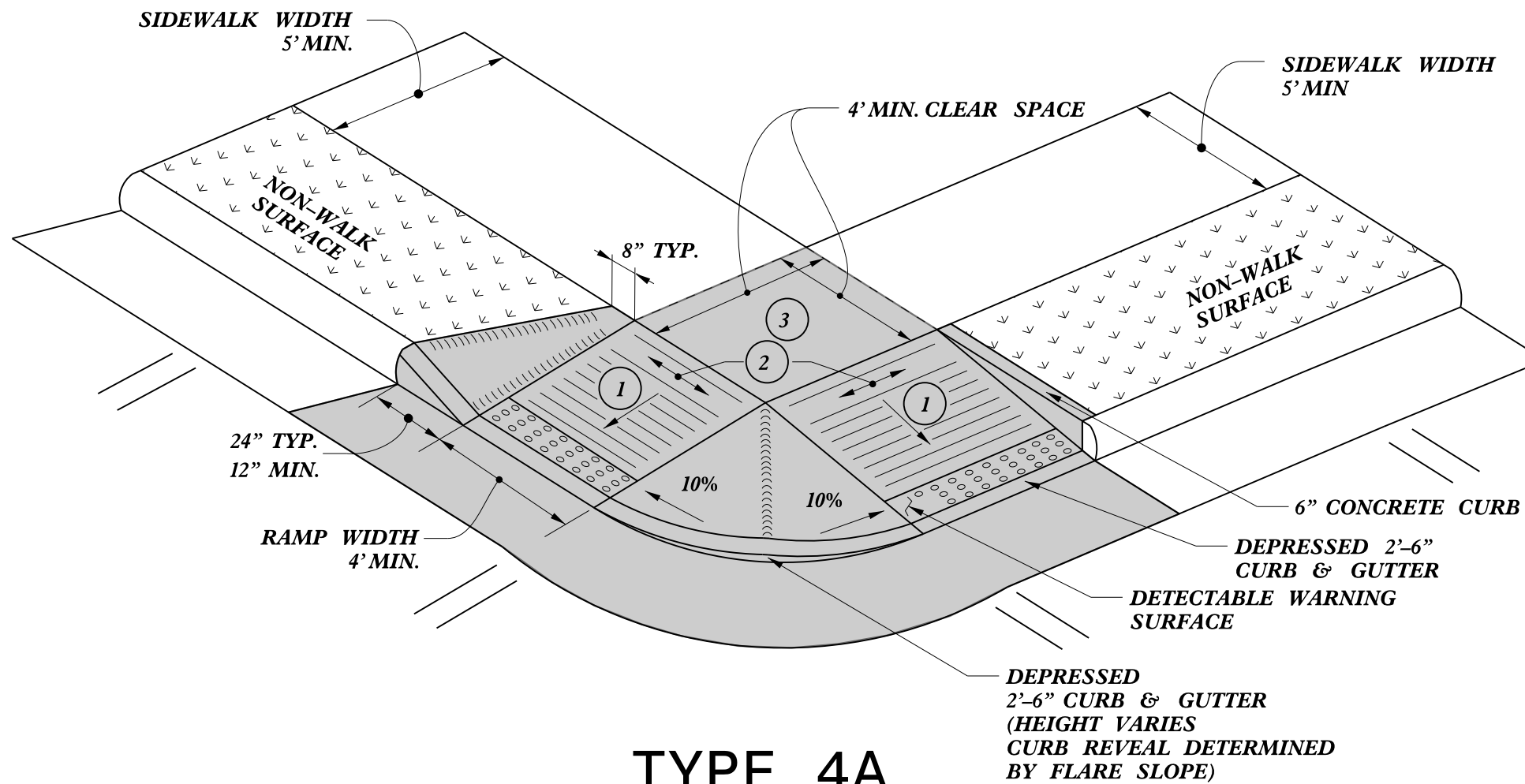
CONTRACTS STANDARDS
AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

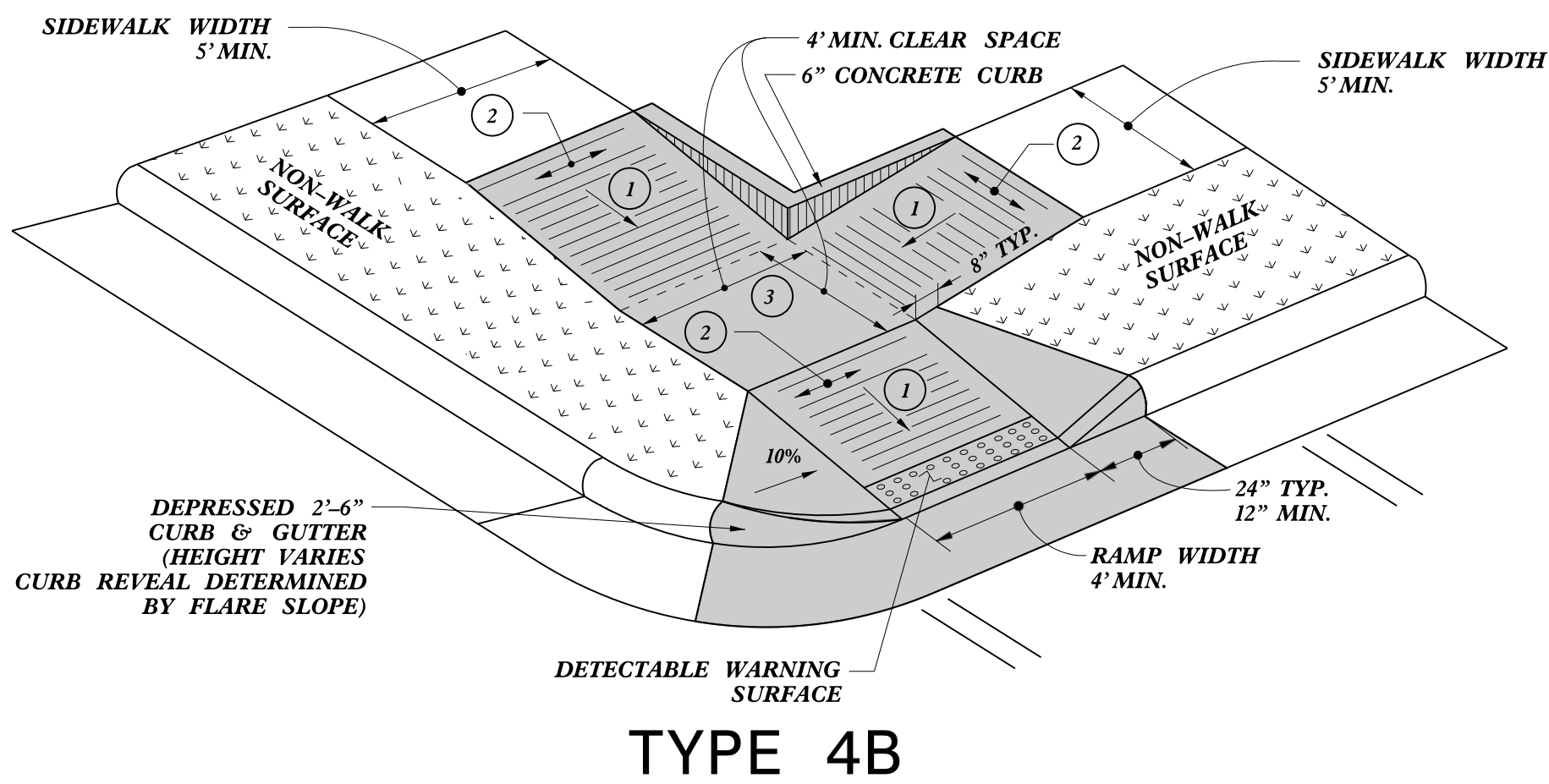
ORIGINAL BY: S.CALHOUN DATE: 12-22-2023
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: special_details\nmhackler\DO609.dgn



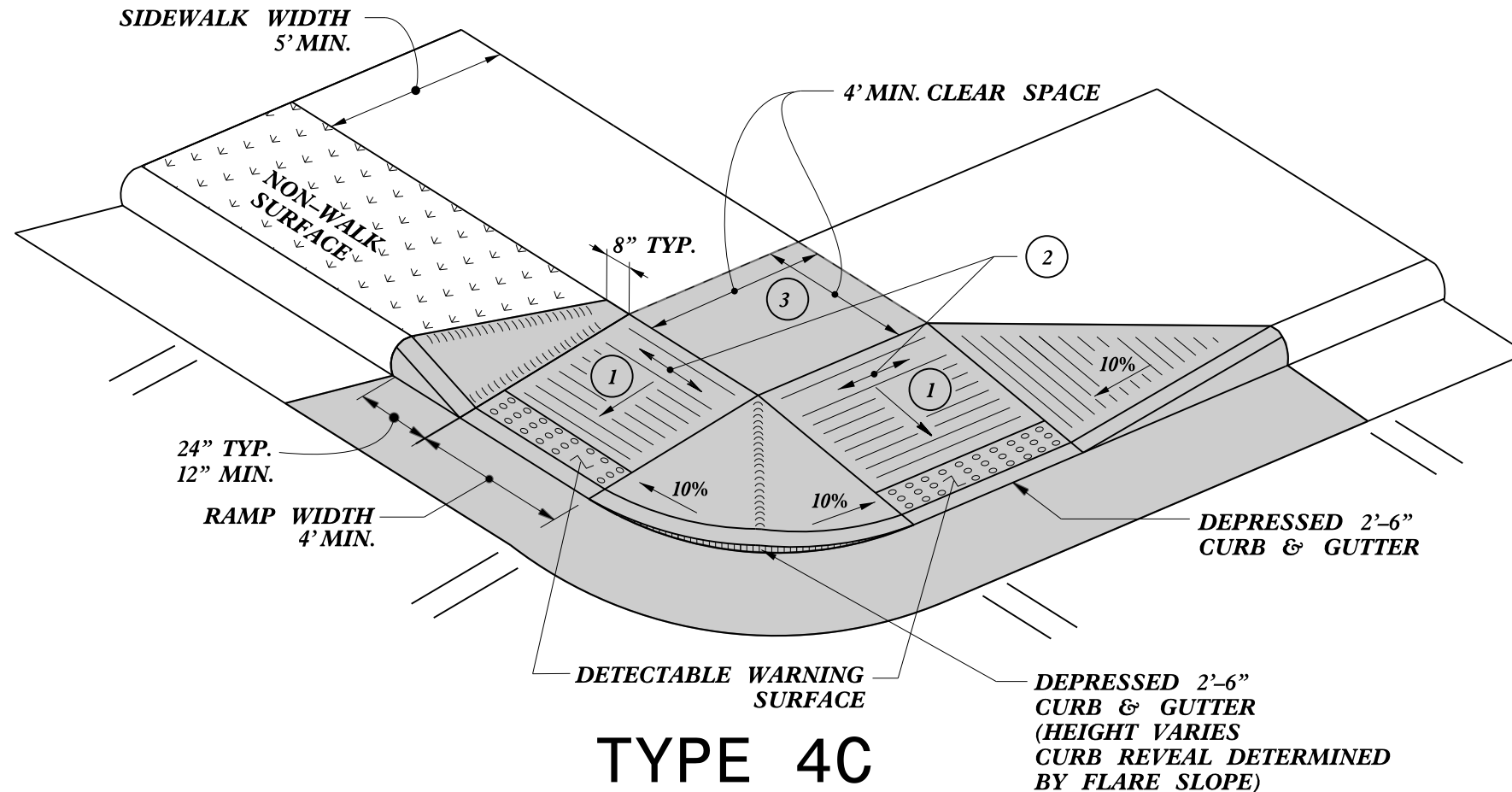
TYPE 4



TYPE 4A

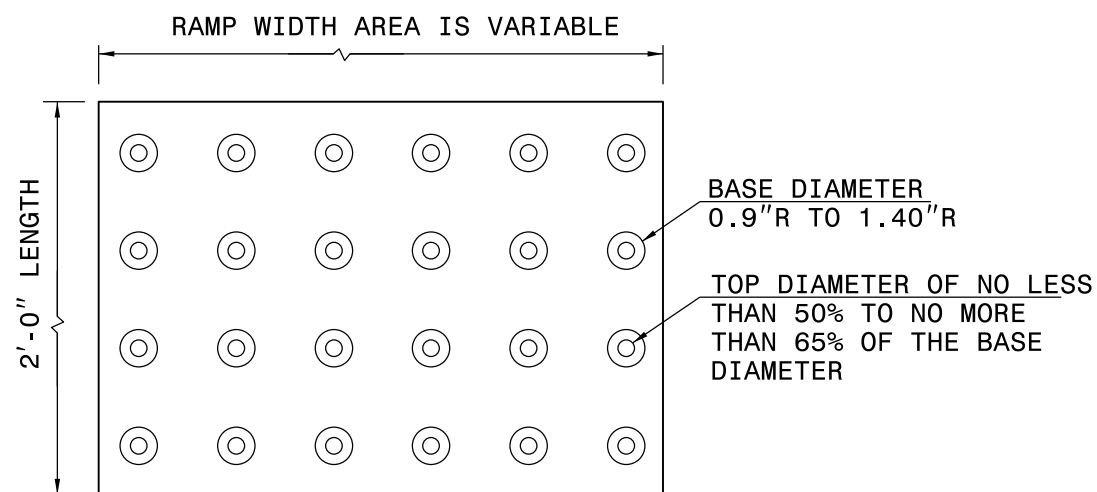


TYPE 4B



TYPE 4C

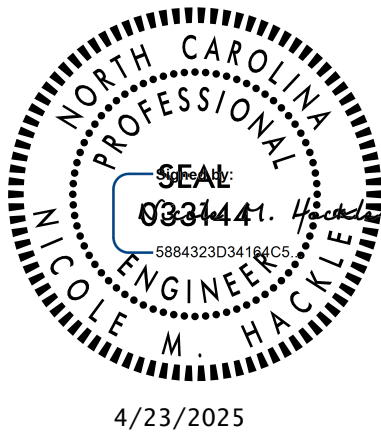
NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING SURFACE

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%

PAY LIMITS FOR 1 OR 2 CURB RAMPS
(CALCULATE BASED ON NUMBER OF SETS OF DETECTABLE WARNING SURFACES)



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ROADWAY DETAIL DRAWING FOR
CURB RAMP
SHARED LANDING

SHEET 10 OF 13
848D06

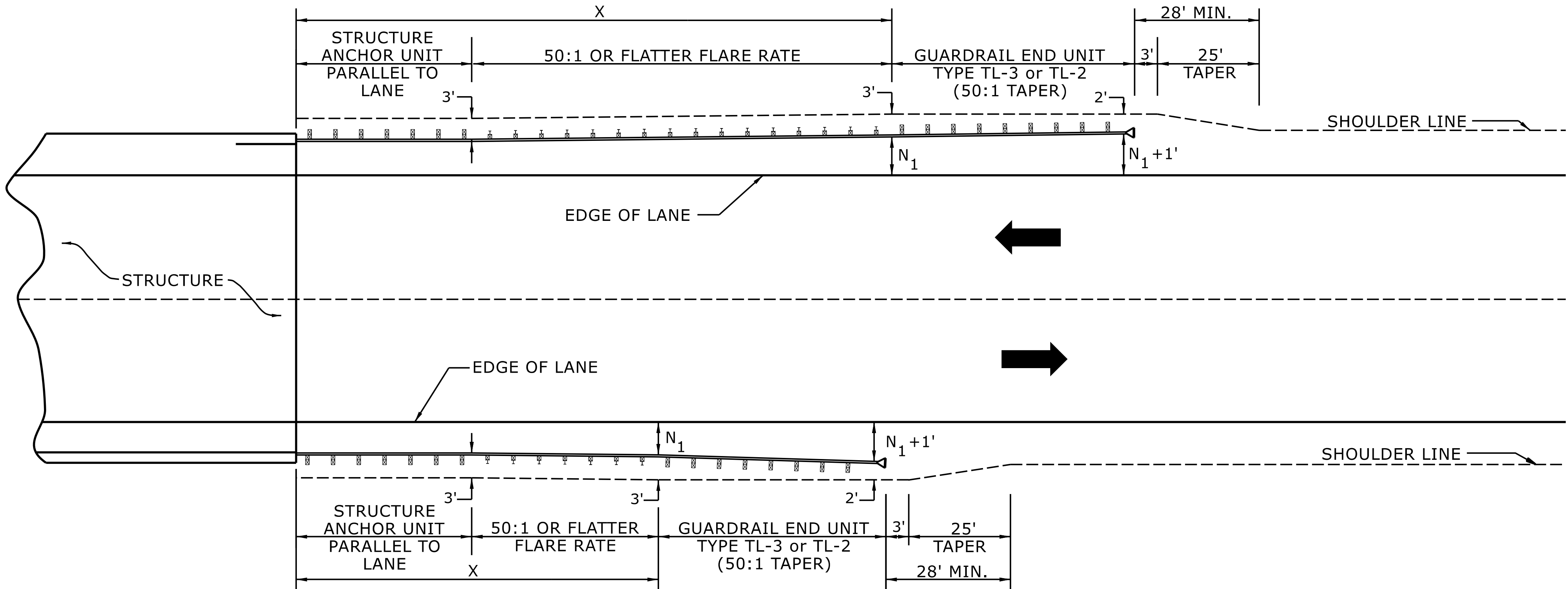
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CONTRACTS STANDARDS
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Office 919-707-6950 FAX 919-250-4119

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ORIGINAL BY: S.CALHOUN DATE: 12-22-2023
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FILE SPEC.: special_details\nmhackler\848D0610.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-6005	2C-6



USE FLARE RATE AS THE CONTROL IF THE "N₁" DISTANCE IS NOT OBTAINED.
("N₁" IS BASED ON SHOULDER WIDTHS IN THE ROADWAY DESIGN MANUAL)

SEE STD. 862.03 FOR STRUCTURE ANCHOR UNITS

FOR POSTED SPEEDS ≥ 45MPH USE GREU TYPE TL-3
FOR POSTED SPEEDS < 45MPH USE GREU TYPE TL-2

GUARDRAIL LENGTH OF NEED (X) IS CALCULATED BASED ON THE AASHTO ROADSIDE DESIGN GUIDE.

LENGTHS AND OFFSETS FOR PROPOSED GUARDRAIL AT TWO LANE - TWO WAY LOCATIONS

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ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT

SHEET 4 OF 15

862D01



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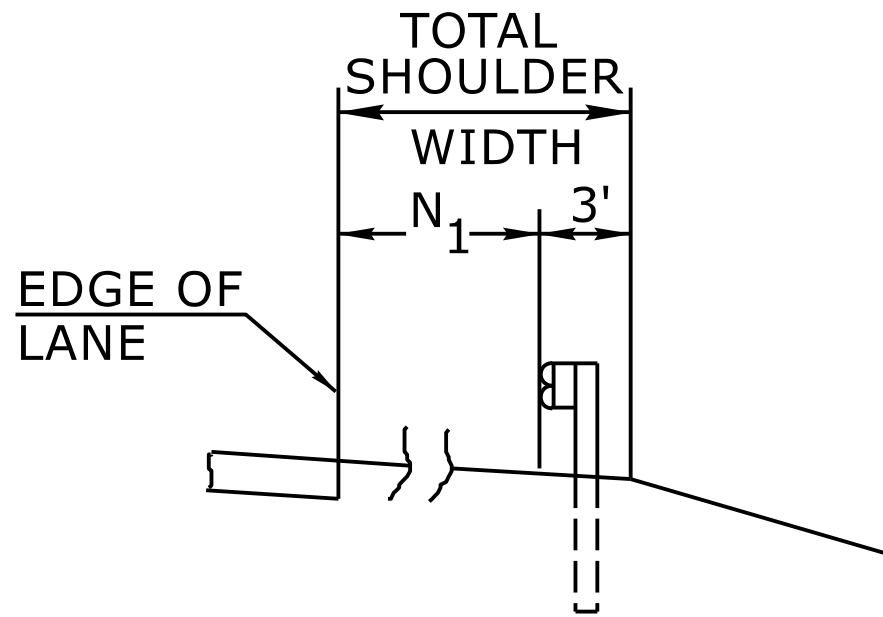
**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**

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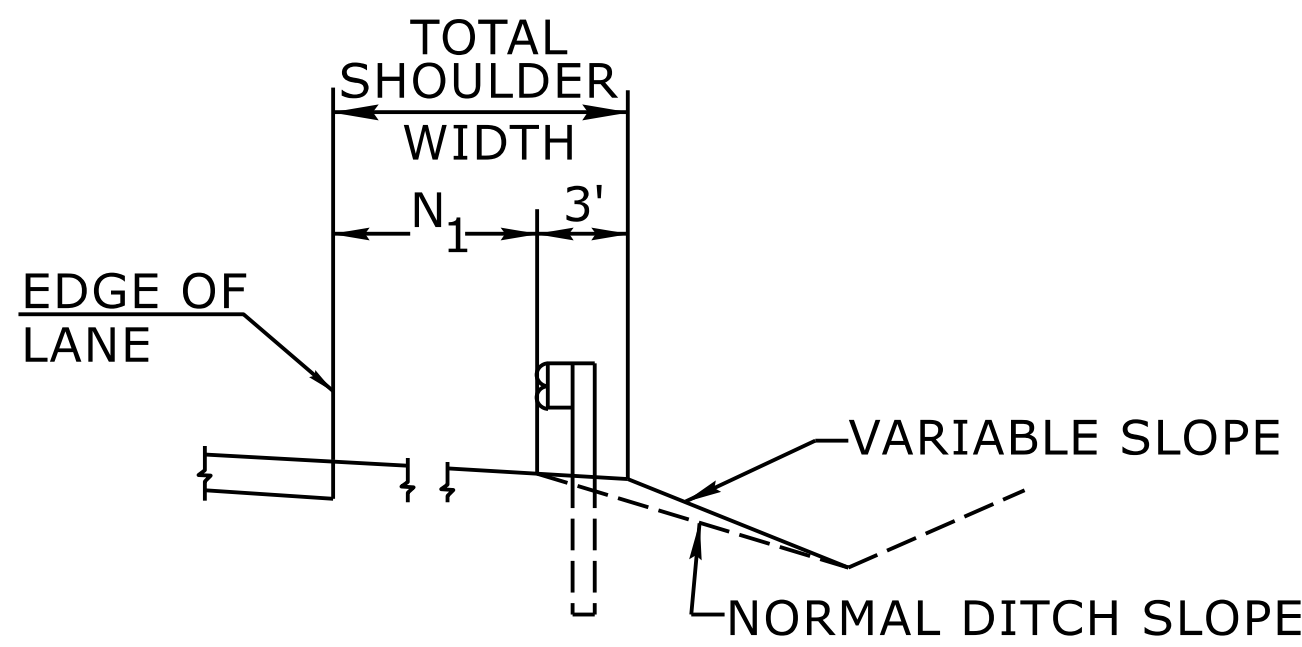
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MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.:

PROJECT REFERENCE NO.	SHEET NO.
U-6005	2C-7

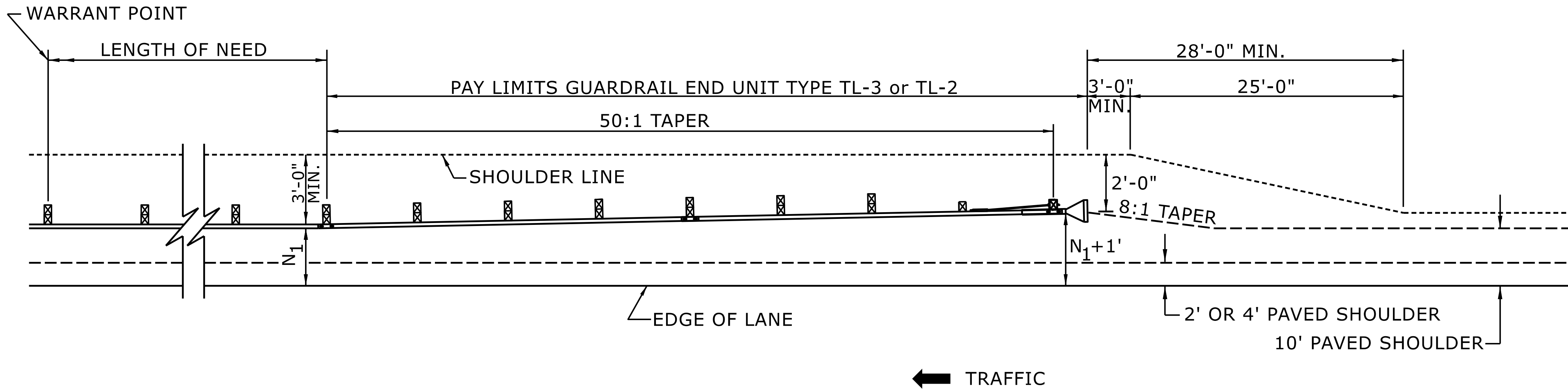


FILL SECTION



CUT SECTION

"N₁"= DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL WHERE GUARDRAIL IS PARALLEL TO LANE.

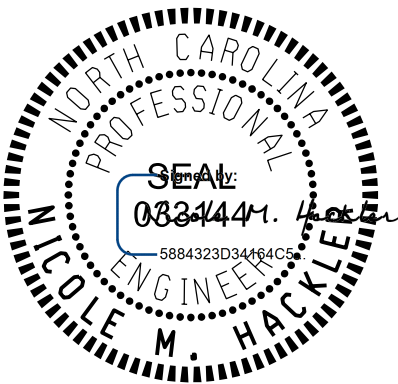


FOR POSTED SPEEDS ≥ 45mph USE GREU TYPE TL-3
FOR POSTED SPEEDS < 45mph USE GREU TYPE TL-2

DETAIL OF BEGINNING OF GUARDRAIL IN CUT OR FILL SECTION

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ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT



4/23/2025

SHEET 6 OF 15
862D01

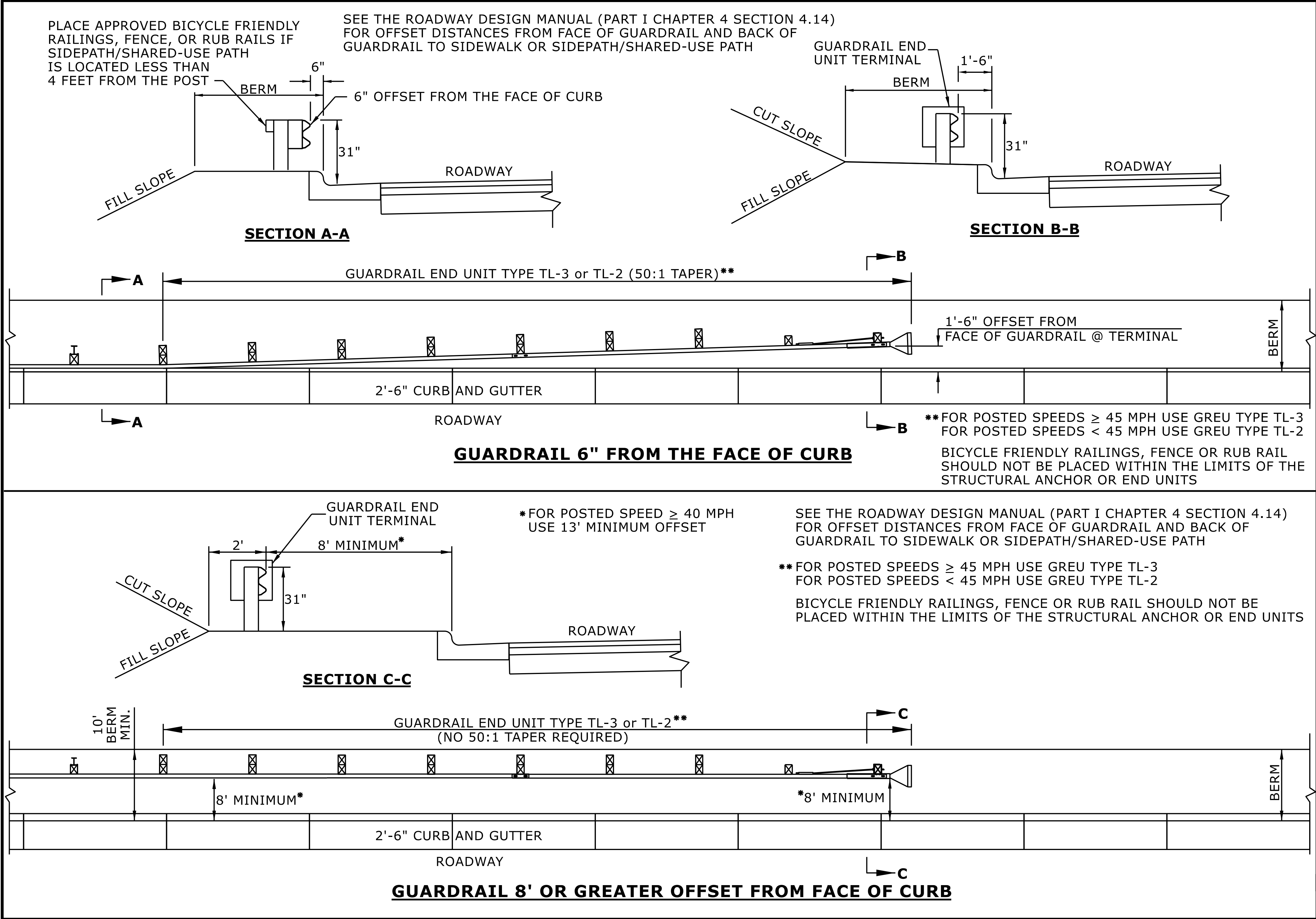
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FILE SPEC.: DATE:



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RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT
GUARDRAIL TREATMENT AT CURB AND GUTTER

SHEET 12 OF 15
862D01



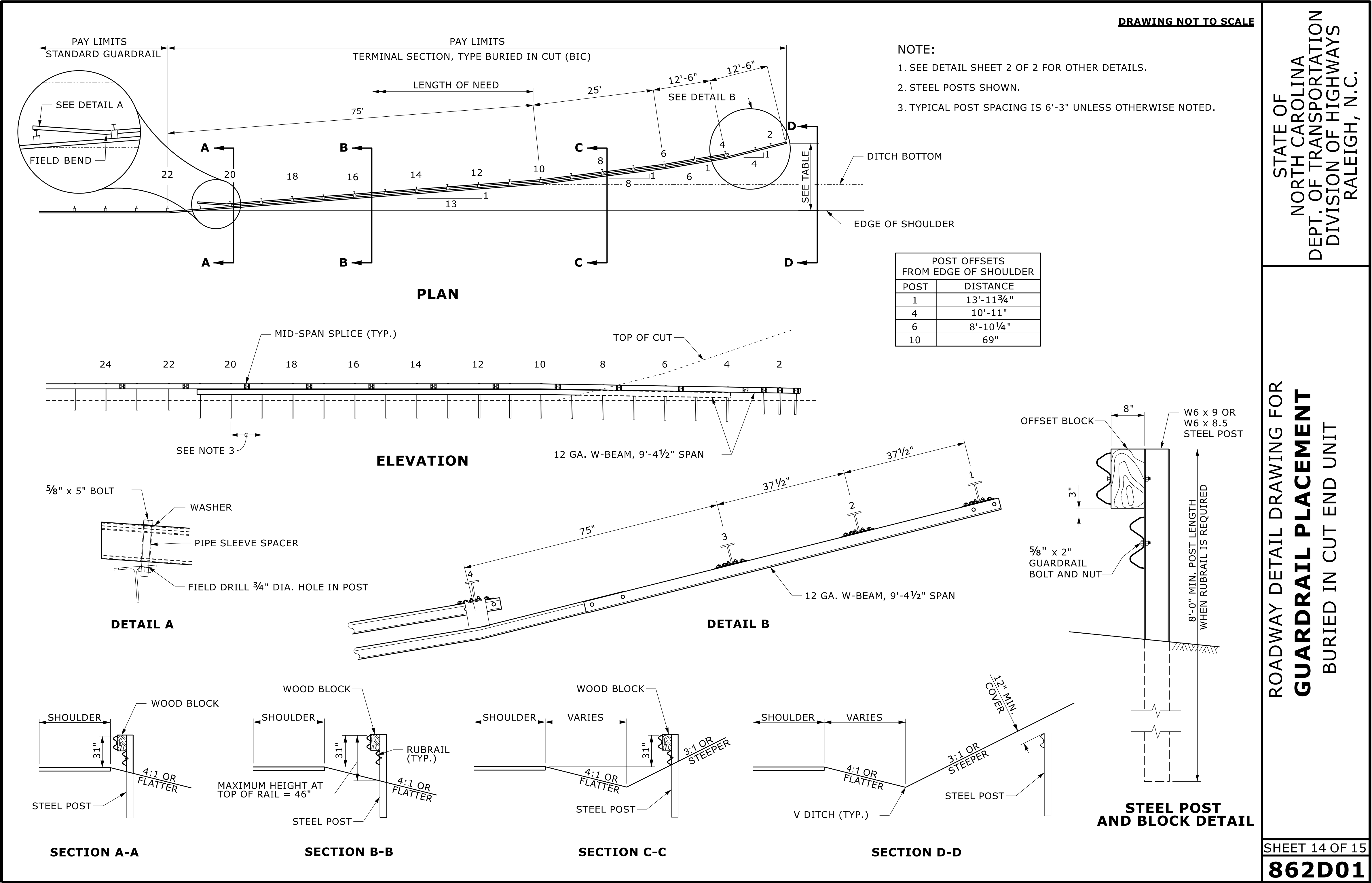
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CHECKED BY:	DATE:
FILE SPEC.:	

PROJECT REFERENCE NO.	SHEET NO.
U-6005	2C-9



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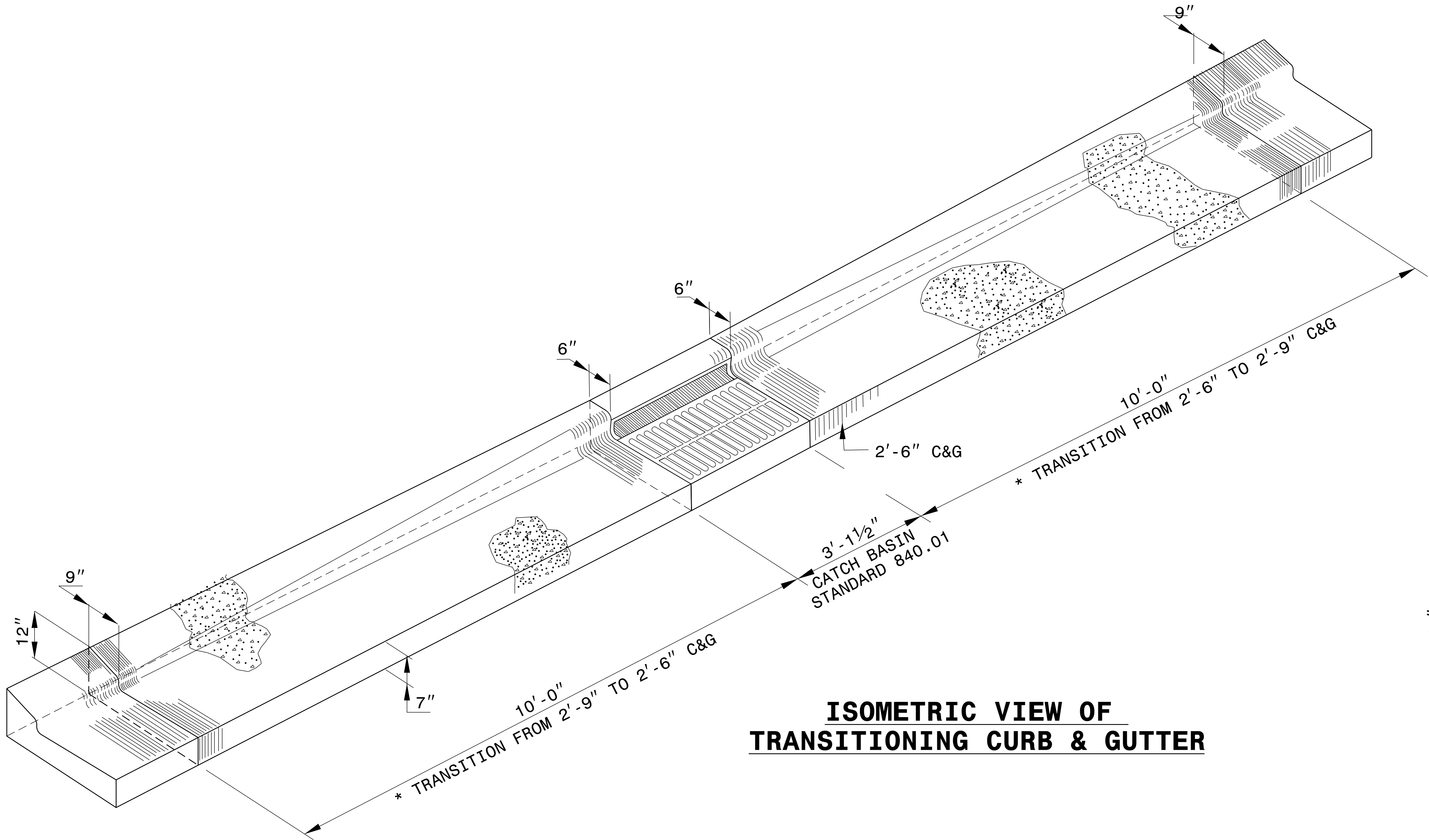
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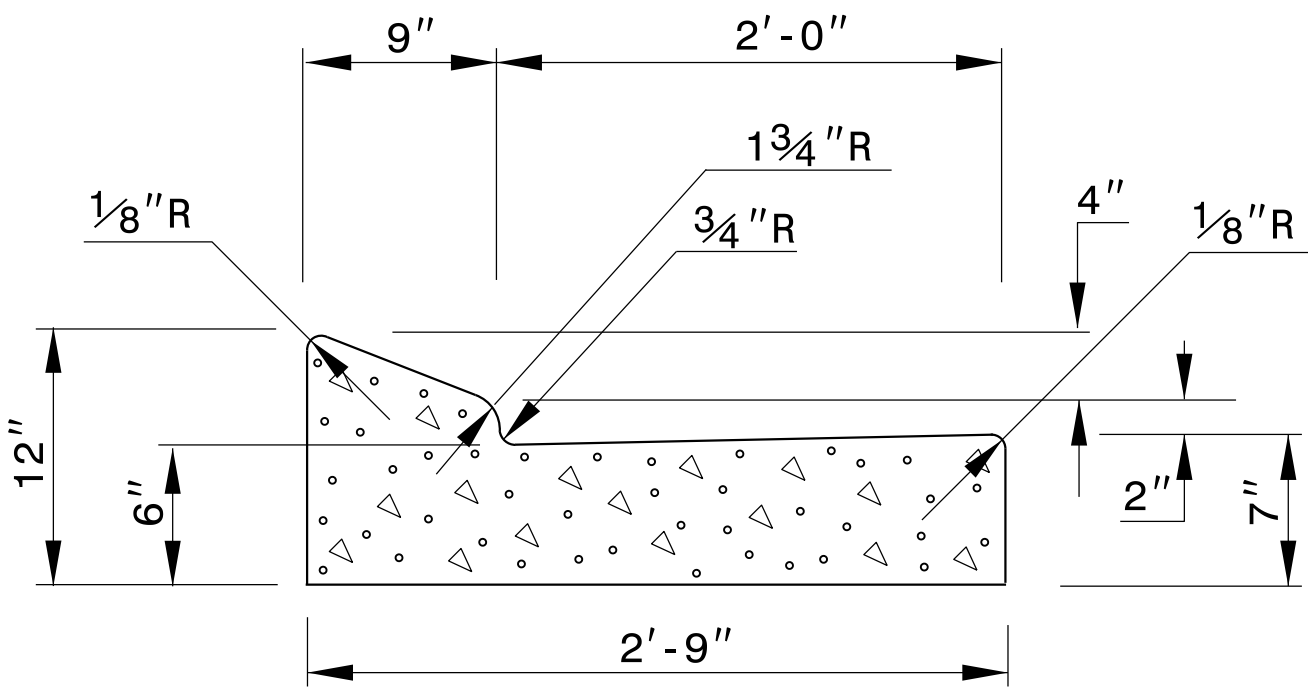
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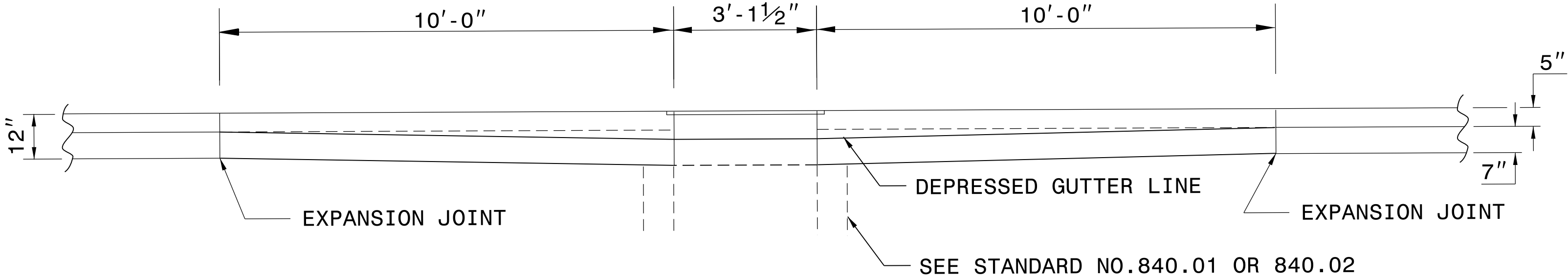
PROJECT REFERENCE NO.	SHEET NO.
U-6005	2C-10



**ISOMETRIC VIEW OF
TRANSITIONING CURB & GUTTER**



**PROPOSED
2'-9" CURB & GUTTER**



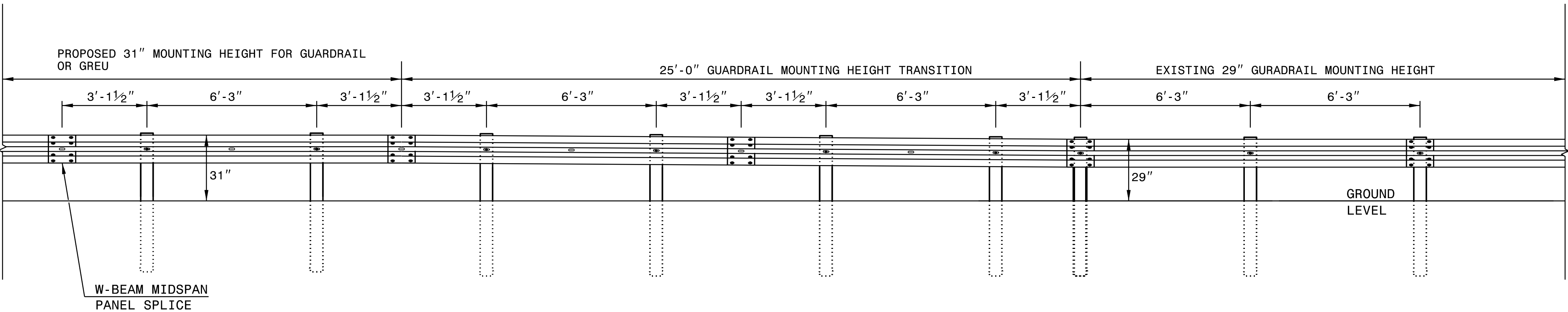
ELEVATION

* MAINTAIN THE EDGE OF PAVEMENT. TRANSITION THE CURB ALONG THE BACK OF THE CURB.

CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
DETAIL OF 2'-9" TO 2'-6" CURB & GUTTER TRANSITION SECTION	
ORIGINAL BY: _____	DATE: _____
MODIFIED BY: tspell	DATE: july 14, 2009
CHECKED BY: _____	DATE: _____
FILE SPEC.: s:eric/usr/details/stand/cgtranst.dgn	

PROJECT REFERENCE NO.	SHEET NO.
U-6005	2C-11

NOTE: IF EXISTING GUARDRAIL IS LOWER THAN 29", USE AN ADDITIONAL 12'-6" LONG SECTION OF GUARDRAIL,
FOR EVERY 1" OF HEIGHT DIFFERENCE, TO TRANSITION FROM EXISTING GUARDRAIL TO PROPOSED 31" GUARDRAIL.



ELEVATION VIEW

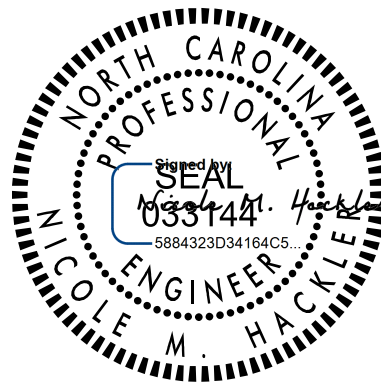
TRANSITION FROM 29" TO 31" W-BEAM GUARDRAIL MOUNTING HEIGHT

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ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 5 OF 9

862D02



4/23/2025

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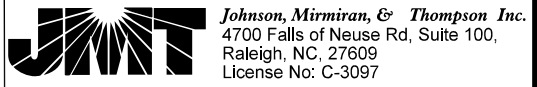
SEE TITLE BLOCK

ORIGINAL BY: K. Aldridge DATE: 02-25
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.:

5/14/99

COMPUTED BY:	KTB	DATE:	2-10-25
CHECKED BY:	JCL	DATE:	2-11-25

PROJECT REFERENCE NO.	SHEET NO.
U-6005	3B-1



SUMMARY OF ASPHALT PAVEMENT REMOVAL

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	ASPHALT REMOVAL (SY)	ASPHALT BREAKUP (SY)	CONCRETE REMOVAL	CONCRETE BREAKUP
-L-	12 + 54.00	14 + 50.00	LT	44			
-L-	23 + 68.00	29 + 58.00	MED RT	131			
-L-	23 + 68.00	29 + 58.00	MED LT	131			
-Y6Rev1-	10 + 29.00	12 + 10.00	LT	40			
-Y7Rev-	10 + 84.00	12 + 00.00	LT	26			
-L-	31 + 35.00	34 + 55.00	MED LT	71			
-L-	31 + 35.00	34 + 55.00	MED RT	71			
-L-	31 + 35.00	33 + 44.00	RT	46			
-L-	36 + 20.00	48 + 44.00	LT	282			
-L-	47 + 15.00	50 + 57.00	LT	76			
	50 + 48.00	61 + 25.00	RT	239			
-L-	29 + 90.00	31 + 15.00	CL	847			
-Y6Rev1-	10 + 70.00	12 + 30.00	LT	107			
-Y7Rev-	10 + 50.00	11 + 10.00	LT	40			
-L-	23 + 68.00	29 + 59.00	MED	1127			
-L-	31 + 34.00	34 + 55.00	MED	621			
-L-	37 + 40.00	43 + 86.00	MED	895			
-L-	47 + 12.00	50 + 58.00	MED	667			
-L-	56 + 71.00	58 + 89.00	MED	390			
-L-	50 + 99.00	60 + 50.00	RT	1059			
-L-	36 + 35.00	49 + 00.00	LT	776			
			TOTAL	7,685			
			SAY	7,700			

NOTE: Earthwork quantities are calculated by JMT. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

Note: Approximate quantities only. Unclassified Excavation, Fine Grading, Clearing and Grubbing, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

SUMMARY OF EARTHWORK

IN CUBIC YARDS

STATION	STATION	UNCL. EXCAV.	EMBANK. + %	BORROW	WASTE
12 + 00.00	29 + 92.14 -L-	291	4,689	4,398	
31 + 12.05	42 + 00.00 -L-	282	3,207	2,925	
11 + 40.00	12 + 36.90 -Y2-	1	12	11	
10 + 25.23	11 + 00.00 -Y3-	7	76	69	
12 + 40.00	13 + 21.61 -Y4-	11	44	33	
10 + 24.75	11 + 30.00 -Y5-	2	68	66	
10 + 30.00	11 + 99.20 -Y6Rev1-	11	318	307	
10 + 00.00	12 + 63.89 -RAB-	51	1,090	1,039	
10 + 60.00	12 + 00.00 -Y7Rev-	17	28	11	
10 + 24.87	11 + 50.00 -Y8-	2	33	31	
SUBTOTAL		675	9,564	8,889	
42 + 00.00	61 + 25.00 -L-	798	6,384	5,586	
10 + 24.86	12 + 15.00 -Y9-	64	811	747	
10 + 24.84	11 + 00.00 -Y10-	10	7		3
10 + 10.00	12 + 08.00 -Y11-	124			124
SUBTOTAL		996	7,201	6,332	127
TOTAL		1,671	16,765	15,221	127
LOSS DUE TO CLEARING AND GRUBBING		-225		225	
WASTE IN LIEU OF BORROW				-127	-127
PROJECT TOTAL		1,446	16,765	15,319	
EST. 5% TO REPLACE SOIL IN BORROW PIT				766	
GRAND TOTAL		1,446		16,085	
SAY:		1,500		16,200	

DRAINAGE DITCH EXCAVATION: 20 CY
UNDERCUT EXCAVATION: 1000 CY (CONTINGENCY)
SELECT GRANULAR MATERIAL: 1000 CY (CONTINGENCY)
GEOTEXTILE FOR SOIL STABILIZATION: 2500 SY (CONTINGENCY)
UNCLASSIFIED EXCAVATION- ACCEPTABLE, BUT NOT TO BE PLACED IN THE TOP 3' OF EMBANKMENT OR BACKFILL: 400 CY
-L- Sta. 31+75.00 to 33+75.00 RT
-L- Sta. 56+25.00 to 58+25.00 LT
-L- Sta. 58+75.00 to 61+20.00 LT & RT

GUARDRAIL SUMMARY

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS										IMPACT ATTENUATOR TYPE 350							REMARKS		
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	GREU TL-3	Type III	CAT-1										PERMITTED							
																											NO.						G	NG
-L-	40 + 62.00	43 + 87.00	RT	325'			41 + 50		15'	15' Berm					1		1											PLACE GUARDRAIL 13' FROM FACE OF CURB						
		TOTAL		325'											1		1																	
		(DEDUCTION FOR ANCHORS)																																
		1 - GREU TYPE TL-3 @ 50'		-50.0'																														
		1 - CAT-1 @ 6.25'		-6.25'																														
		PROJECT TOTAL		268.75'											1		1																	
		SAY		275'			ADDITIONAL GUARDRAIL POSTS 5 EA																											

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SHEET TOTALS

SHEET TOTALS

PROJECT TOTALS

COMPUTED BY: NDM _____ DATE: 06/28/22
CHECKED BY: JSJ _____ DATE: 06/29/22
UPDATED BY: S. YANG _____ DATE: 4/24/25

(12-17-19)

STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

PROJECT NO.
U-6005

SHEET NO.
3G-1

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
			CONTINGENCY	SD	1000
				TOTAL LF:	1000

*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	12	500	1000	1500	
			TOTAL CY/TONS/SY:		500	1000**	1500**	0	0

*ASU(1/2) = Aggregate Subgrade (Type 1 or 2)

*AST = Aggregate Stabilization

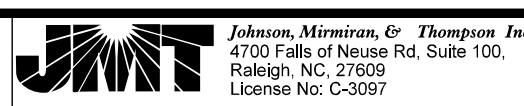
**Total tons of "Class IV Subgrade Stabilization" and total square yards of "Geotextile for Subgrade Stabilization" are only the estimated quantities for ASU(1/2)/AST and may only represent a portion of the subgrade stabilization and geotextile quantities shown in the Item Sheets of the Proposal.

PARCEL INDEX SHEET

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
30	5	TAMEKA MEBANE
31	5	RANDY C. PATERSON
32	5 & 6	BITTING HALL HOMEOWNER'S ASSOCIATION INC.
33	5	BENNY L. SPELL
34	5	RACHEL WILMOTH
35	5	CHARLES SANDS
36	5 & 6	HELEN L. VERNON
37	6	SARAH B. GOFF
38	6	JAMES R. BYRD
39	6	DELMAR R. COCKINGHAM
40	6	JOHN T. MOORE
41	6	DAVID B. McGLAMERY
42	6	SCENIC DEVELOPMENT, LLC
43	6	RANDALL F. REECE
44	6	CAROL A. ROGERS
45	6	CAROLYN L. LANDRY
46	6 & 7	JERRY M. TAYLOR
47	6 & 7	MATTHEW A. COTNER
48	7	REALTY INCOME PROPERTIES 29, LLC
49	7	HAWTHORNE MIDWAY SUMMERWOOD, LLC
50	7	LORI O. COE
51	7	MANUEL DE JESUS CONTRERAS
52	5	FREDA DAVIS
53	5	ANGELA AUSTIN

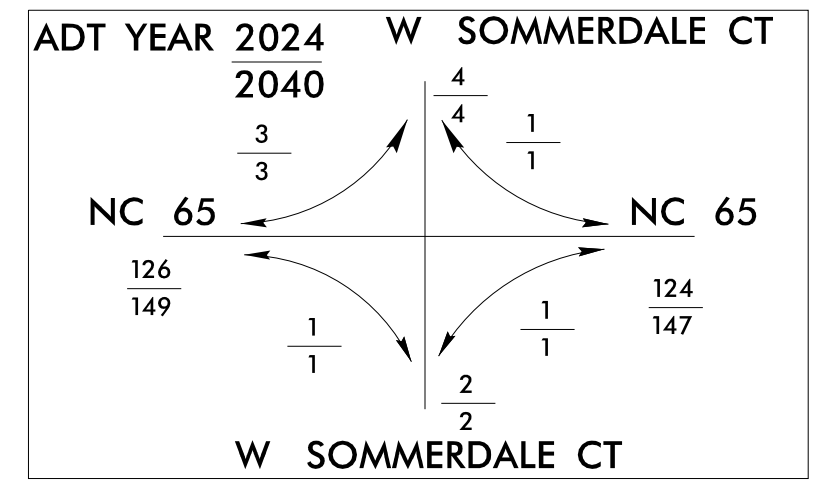
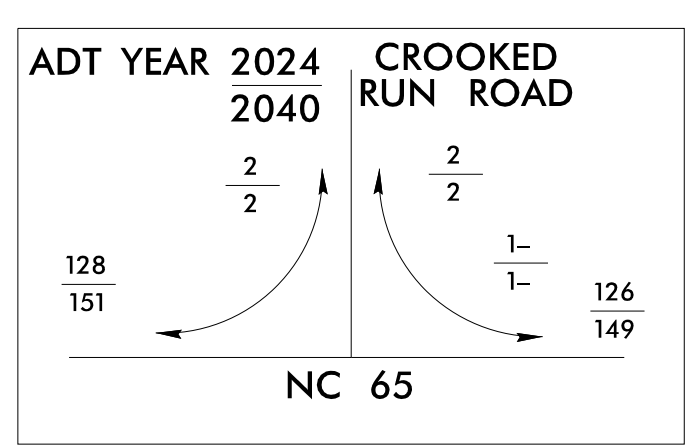
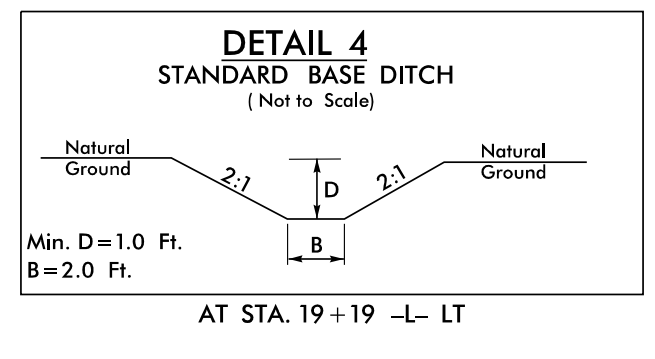
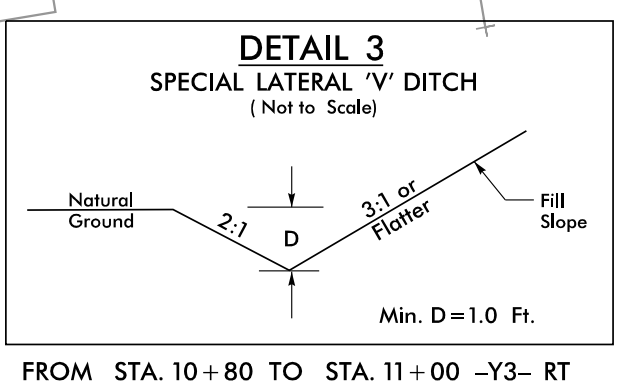
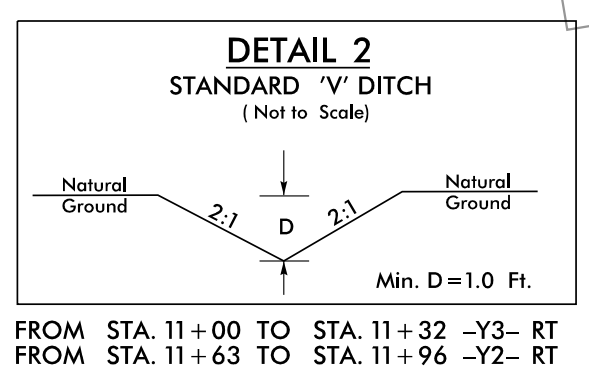
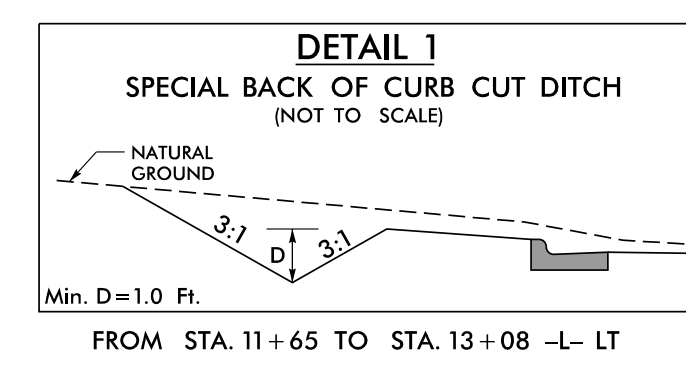
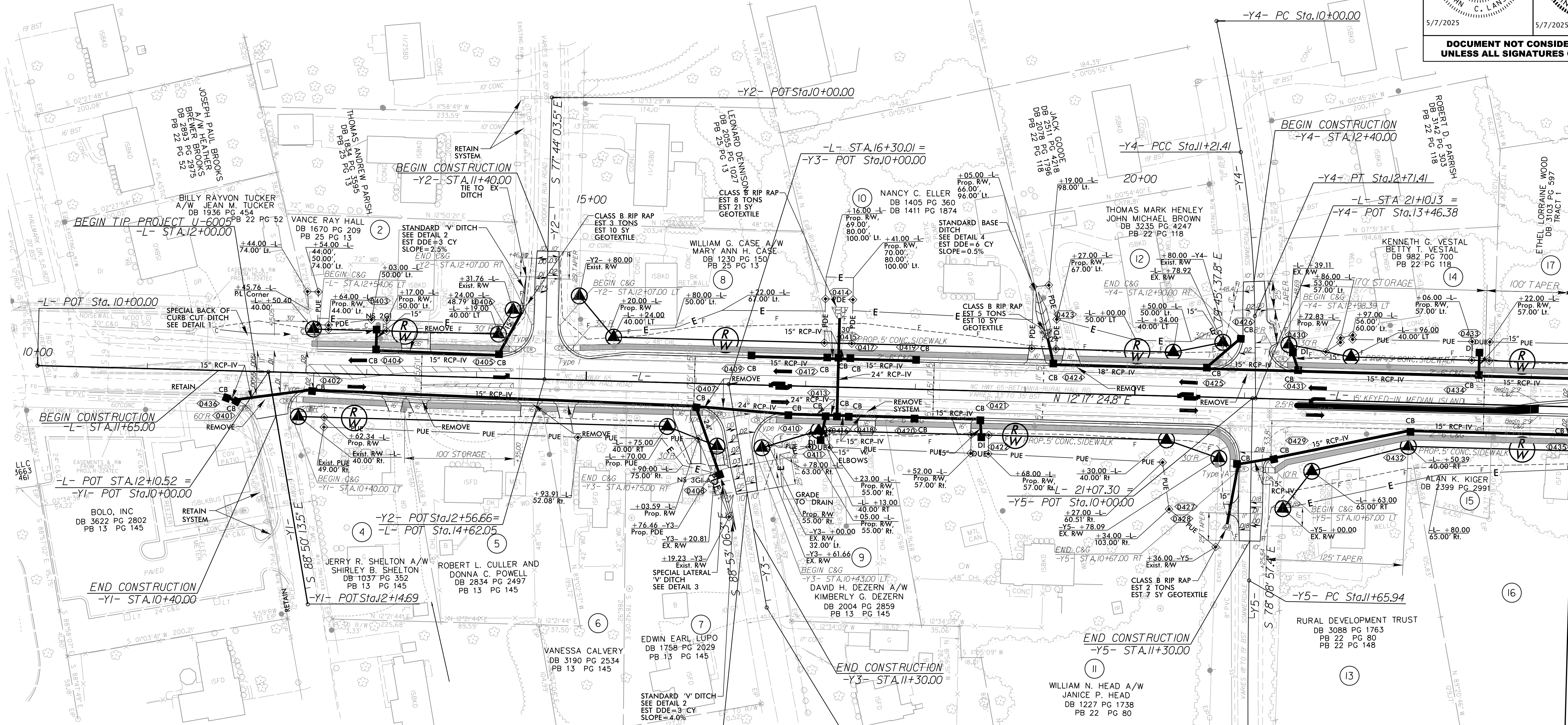
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-Y4- CURVE DATA		-Y5- CURVE DATA
PI Sta 10+60.71	PI Sta 11+96.56	PI Sta 13+36.26
$\Delta = 2^{\circ}19'07.7''$ (RT)	$\Delta = 8^{\circ}48'53.0''$ (RT)	$\Delta = 3^{\circ}32'51.5''$ (LT)
D = 154' 35.5"	D = 552' 35.4"	D = 102' 30.3"
L = 121.41'	L = 150.00'	L = 340.55'
T = 60.71'	T = 75.15'	T = 170.33'
R = 3,000.00'	R = 975.00'	R = 5,500.00'
SE = EXISTING	SE = NC	SE = EXISTING
	DS = 15 MPH	



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PROJECT REFERENCE NO. U-6005		SHEET NO. 4
RW SHEET NO.		
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		



SEE SHEET 8 FOR -L- PROFILE
SEE SHEET 10 FOR -Y2- PROFILE
SEE SHEET 10 FOR -Y3- AND -Y4- PROFILE
SEE SHEET 11 FOR -Y5- PROFILE

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

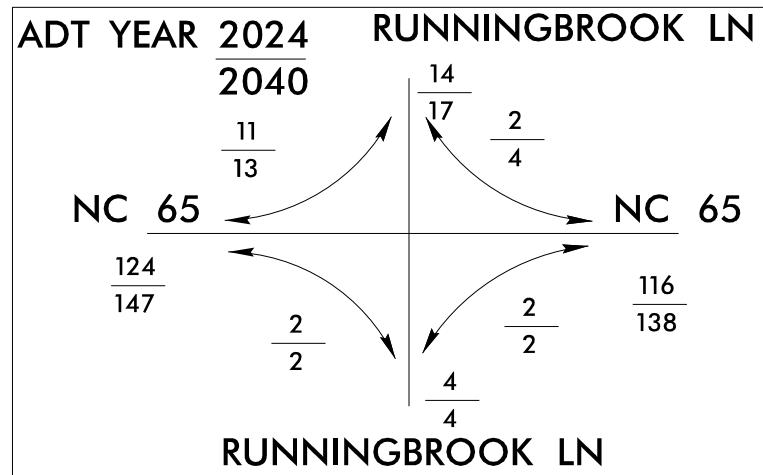
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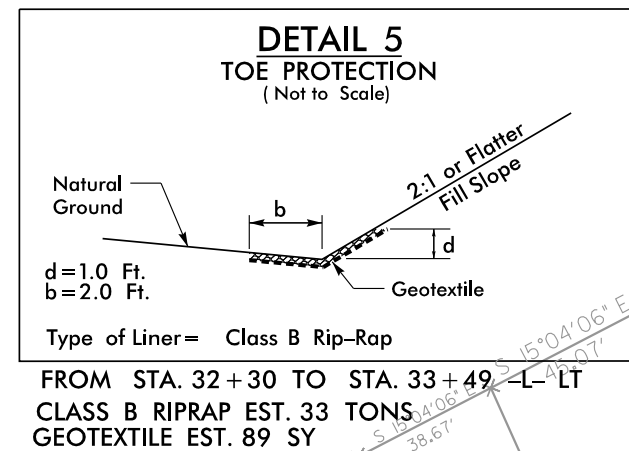
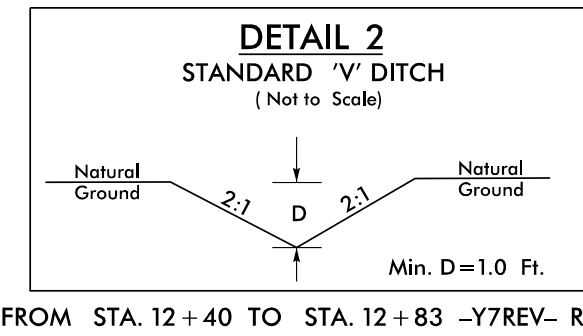
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- 27
- 28
- 29
- 30
- 52
- 53

BITTING HALL HOMEOWNERS ASSOC. INC.
DB 2866 PG 4490
U.S. S.F.E. ASSET COMPANY 5, LLC.
DB 3362 PG 129
DESHAUNDA HAMPTON
DB 2873 PG 191
WESLEY A. BLEVINS
DB 3135 PG 1709
TAMEKA MEBANE
DB 3243 PG 3161
FREDA DAVIS
DB 2917 PG 1531
ANGELA AUSTIN
DB 2915 PG 626



RETAIN SYSTEM
(NOT SURVEY LOCATED)



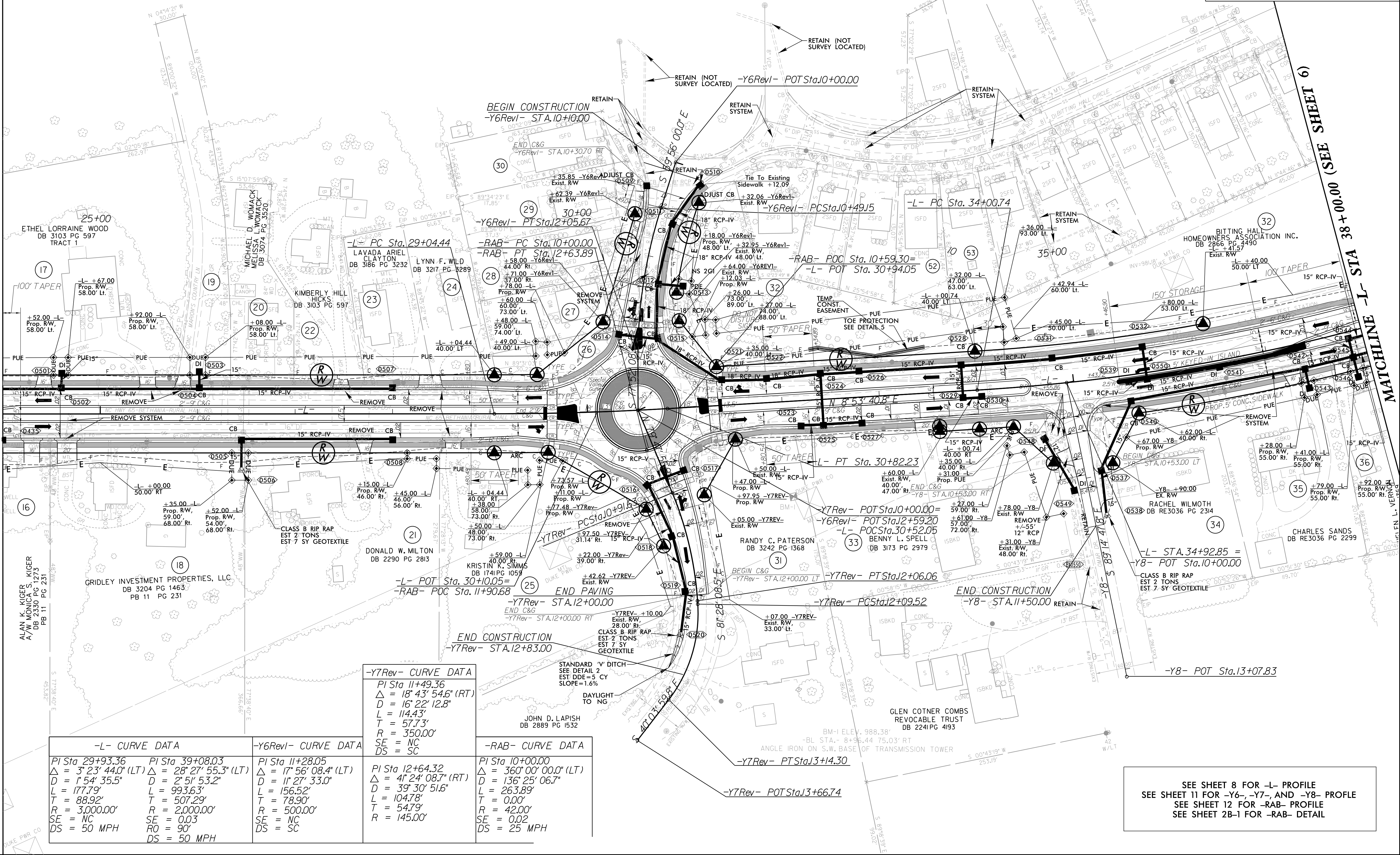
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PROJECT REFERENCE NO.		SHEET NO.
U-6005		5
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
5/7/2025		5/7/2025
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

MATCHLINE -L- STA 24+00.00 (SEE SHEET 4)



-L- CURVE DATA	
PI Sta 29+93.36	PI Sta 39+08.03
$\Delta = 3^{\circ} 23' 44.0''$ (LT)	$\Delta = 28^{\circ} 27' 55.3''$ (LT)
$D = 1^{\circ} 54' 35.5''$	$D = 2^{\circ} 51' 53.2''$
$L = 177.79'$	$L = 993.63'$
$T = 88.92'$	$T = 507.29'$
$R = 3,000.00'$	$R = 2,000.00'$
SE = NC	SE = 003
DS = 50 MPH	RO = 90'
	DS = 50 MPH

-Y6Rev- CURVE DATA	
PI Sta 11+28.05	PI Sta 11+28.05
$\Delta = 17^{\circ} 56' 08.4''$ (LT)	$\Delta = 17^{\circ} 56' 08.4''$ (LT)
$D = 11^{\circ} 27' 33.0''$	$D = 11^{\circ} 27' 33.0''$
$L = 156.52'$	$L = 156.52'$
$T = 78.90'$	$T = 78.90'$
$R = 500.00'$	$R = 500.00'$
SE = NC	SE = NC
DS = SC	DS = SC

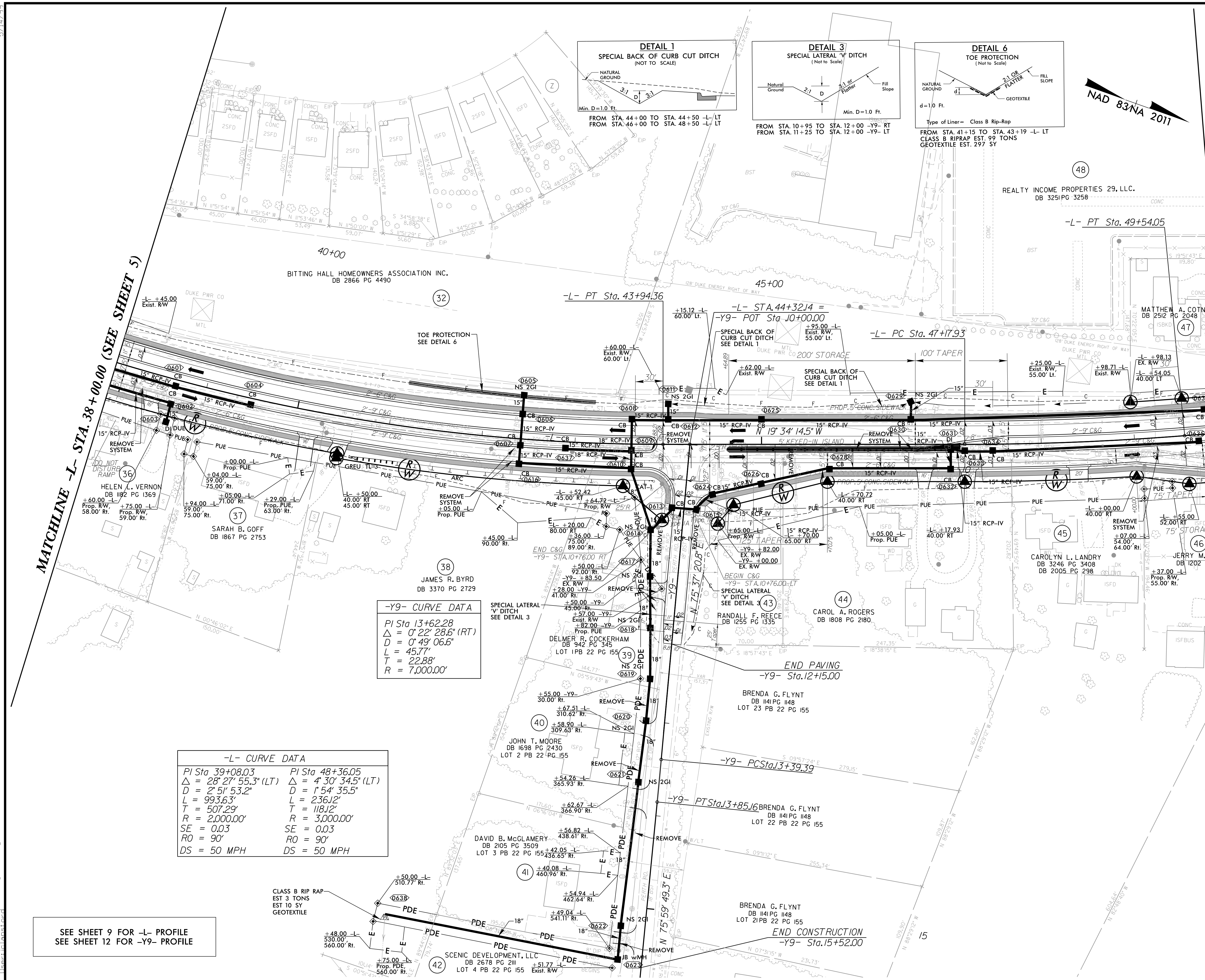
-Y7Rev- CURVE DATA	
PI Sta 12+64.32	PI Sta 12+64.32
$\Delta = 41^{\circ} 24' 08.7''$ (RT)	$\Delta = 41^{\circ} 24' 08.7''$ (RT)
$D = 39^{\circ} 30' 51.6''$	$D = 39^{\circ} 30' 51.6''$
$L = 104.78'$	$L = 104.78'$
$T = 54.79'$	$T = 54.79'$
$R = 145.00'$	$R = 145.00'$
SE = NC	SE = NC
DS = SC	DS = SC

-RAB- CURVE DATA	
PI Sta 10+00.00	PI Sta 10+00.00
$\Delta = 360^{\circ} 00' 00.0''$ (LT)	$\Delta = 360^{\circ} 00' 00.0''$ (LT)
$D = 136^{\circ} 25' 06.7''$	$D = 136^{\circ} 25' 06.7''$
$L = 263.89'$	$L = 263.89'$
$T = 0.00'$	$T = 0.00'$
$R = 42.00'$	$R = 42.00'$
SE = 002	SE = 002
DS = 25 MPH	DS = 25 MPH

SEE SHEET 8 FOR -L- PROFILE
SEE SHEET 11 FOR -Y6-, -Y7-, AND -Y8- PROFILE
SEE SHEET 12 FOR -RAB- PROFILE
SEE SHEET 28-1 FOR -RAB- DETAIL

5/14/2025

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SEE SHEET 9 FOR -L- PROFILE
SEE SHEET 12 FOR -Y9- PROFILE

PROJECT REFERENCE NO. U-6005		SHEET NO. 6	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
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License No: C-3097

PROJECT REFERENCE NO.

U-6005

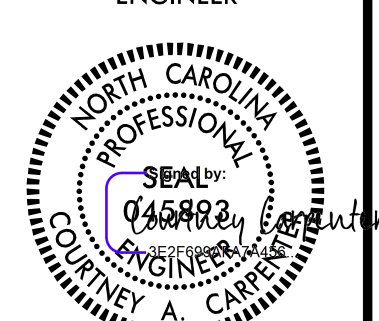
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R/W SHEET NO.

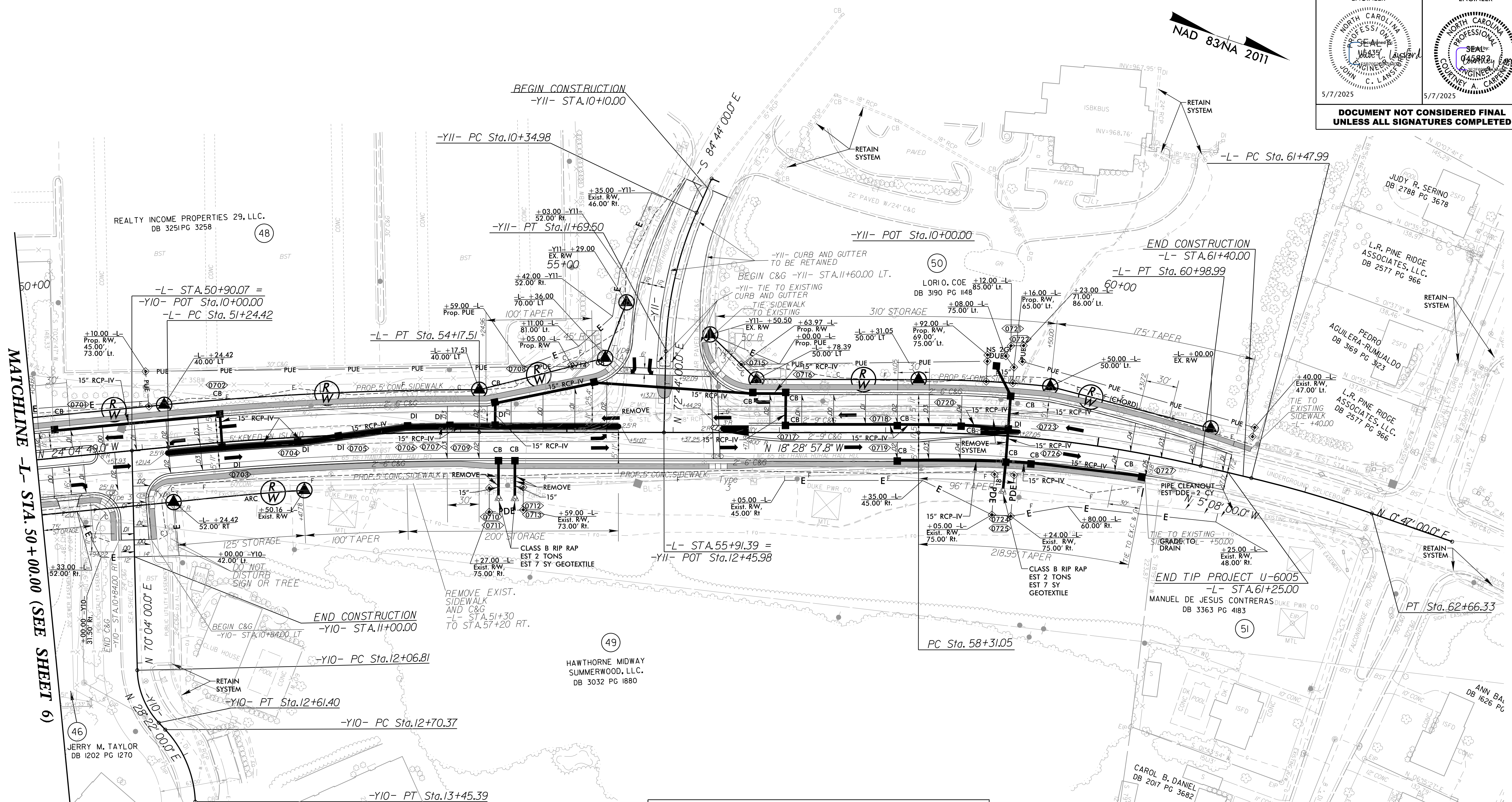
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ENGINEERHYDRAULICS
ENGINEER

5/7/2025

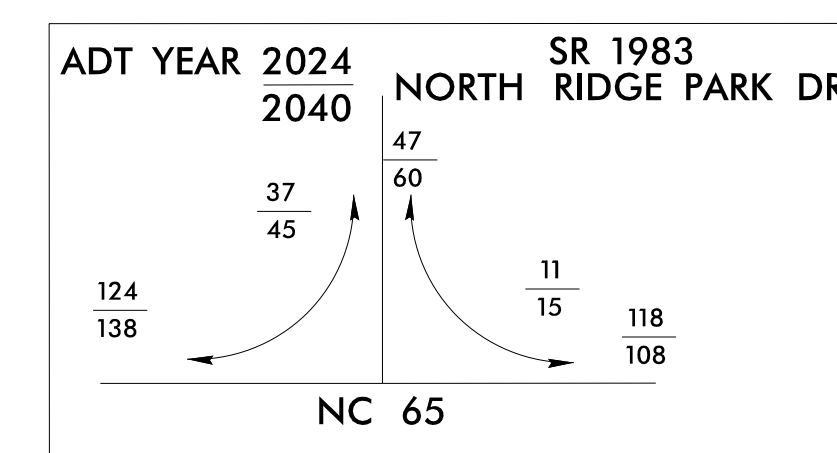


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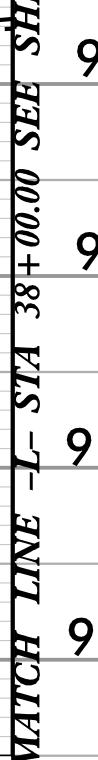
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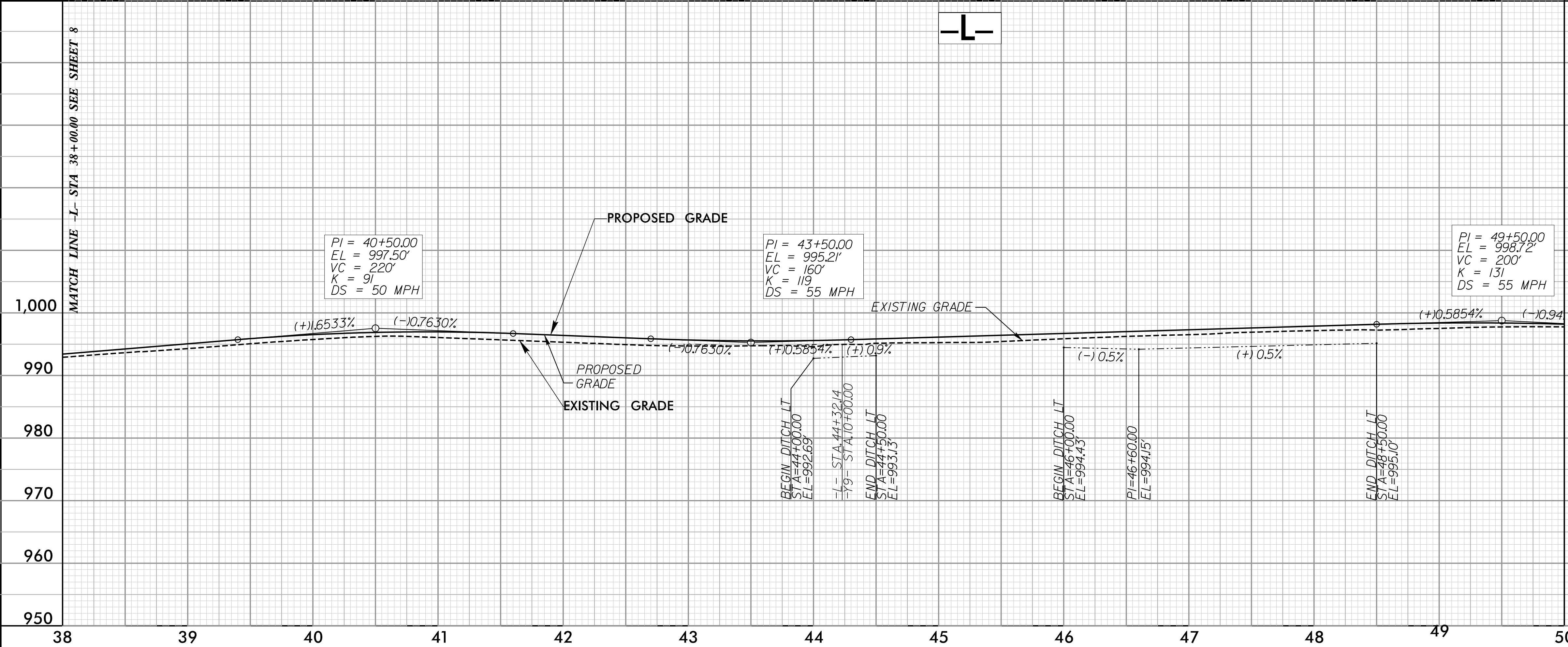
-L- CURVE DATA		
PI Sta 52+71.08	PI Sta 59+65.63	PI Sta 62+07.21
$\Delta = 5^\circ 35' 51.2" (RT)$	$\Delta = 13^\circ 20' 57.8" (RT)$	$\Delta = 5^\circ 55' 00.0" (RT)$
$D = 1^\circ 54' 35.5"$	$D = 4^\circ 58' 56.1"$	$D = 5^\circ 00' 00.0"$
$L = 293.0'$	$L = 267.94'$	$L = 118.33'$
$T = 146.66'$	$T = 134.58'$	$T = 59.22'$
$R = 3,000.00'$	$R = 1,150.00'$	$R = 1,145.92'$
SE = RC	SE = 0.04	SE = 0.04
DS = 50 MPH	DS = 50 MPH	DS = 50 MPH
-Y10- CURVE DATA		
PI Sta 12+35.38	PI Sta 13+09.56	PI Sta 11+03.12
$\Delta = 41^\circ 42' 00.0" (LT)$	$\Delta = 40^\circ 56' 08.6" (RT)$	$\Delta = 22^\circ 32' 00.0" (LT)$
$D = 76^\circ 23' 39.7"$	$D = 54^\circ 34' 02.7"$	$D = 16^\circ 45' 00.0"$
$L = 545.9'$	$L = 750.2'$	$L = 134.53'$
$T = 28.56'$	$T = 39.19'$	$T = 68.14'$
$R = 750.0'$	$R = 105.00'$	$R = 342.06'$
SE = EXIST.	SE = EXIST.	SE = EXIST.



SEE SHEET 9 FOR -L- PROFILE
SEE SHEET 12 FOR -Y10- AND -Y11- PROFILE



5/28/99



PROJECT REFERENCE NO.
U-6005

ROADWAY DESIGN ENGINEER
JOHN C. LAINE
5/7/2025

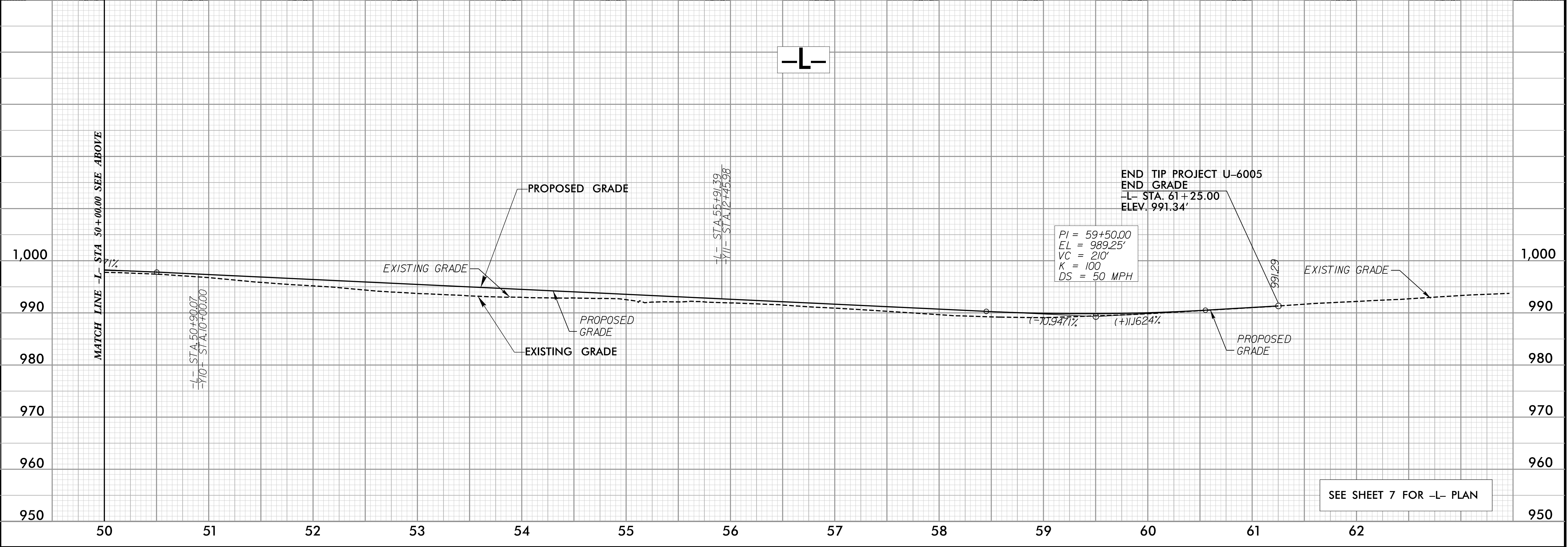
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9

HYDRAULICS ENGINEER
JOHN C. LAINE
5/7/2025

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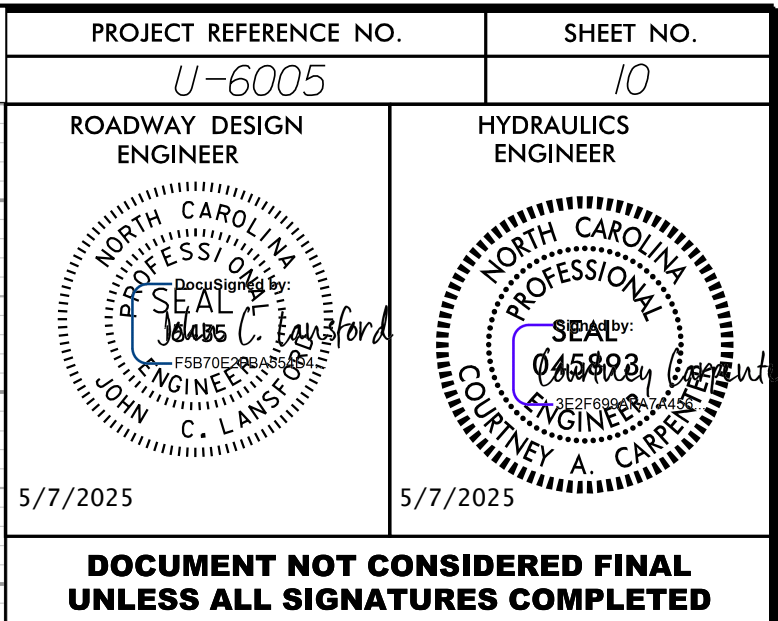
JMT Johnson, Mirmiran, & Thompson Inc.
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Raleigh, NC 27609
License No: C-3097

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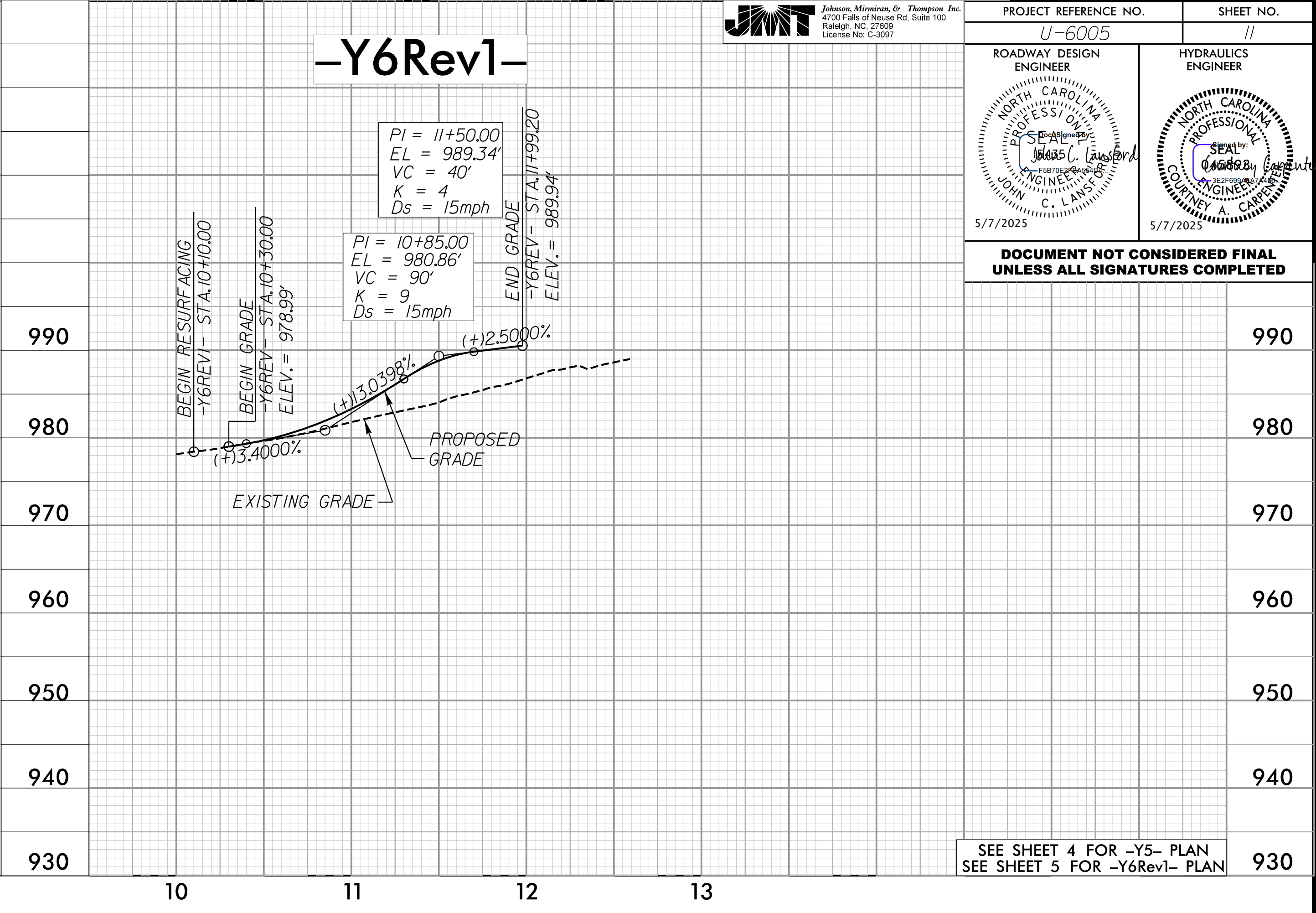
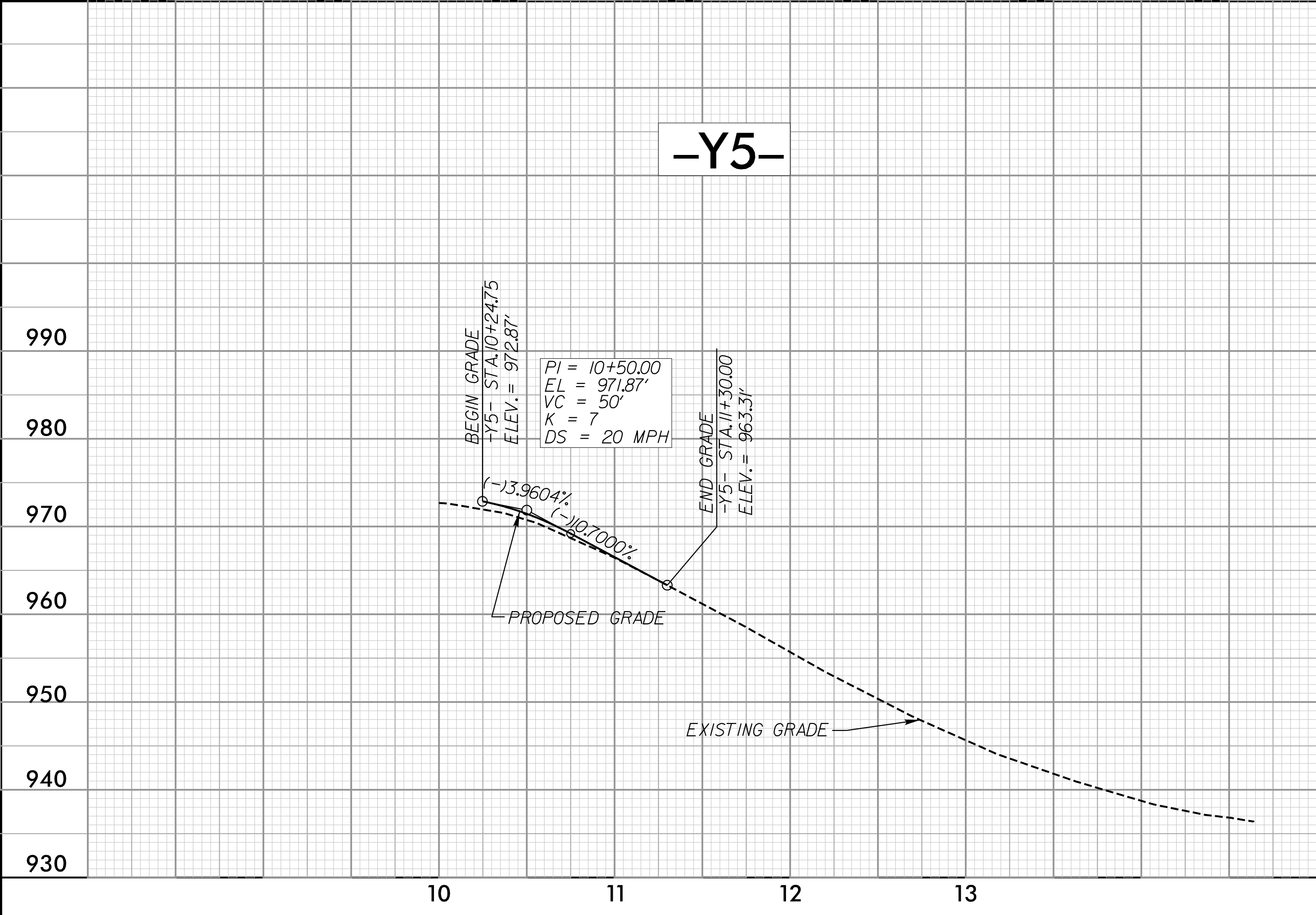
SEE SHEET 6 FOR -L- PLAN

SEE SHEET 7 FOR -L- PLAN



SEE SHEET 4 FOR -Y3- AND -Y4- PLAN

5/28/24



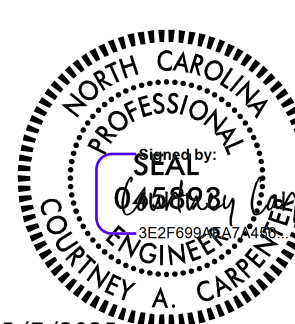
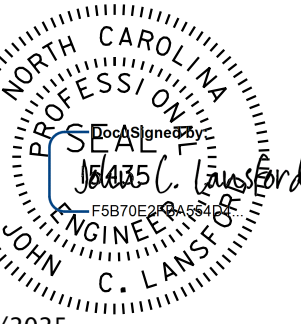
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U-6005

SHEET NO.
11

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER



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SEE SHEET 4 FOR -Y5- PLAN
SEE SHEET 5 FOR -Y6Rev1- PLAN

990

980

970

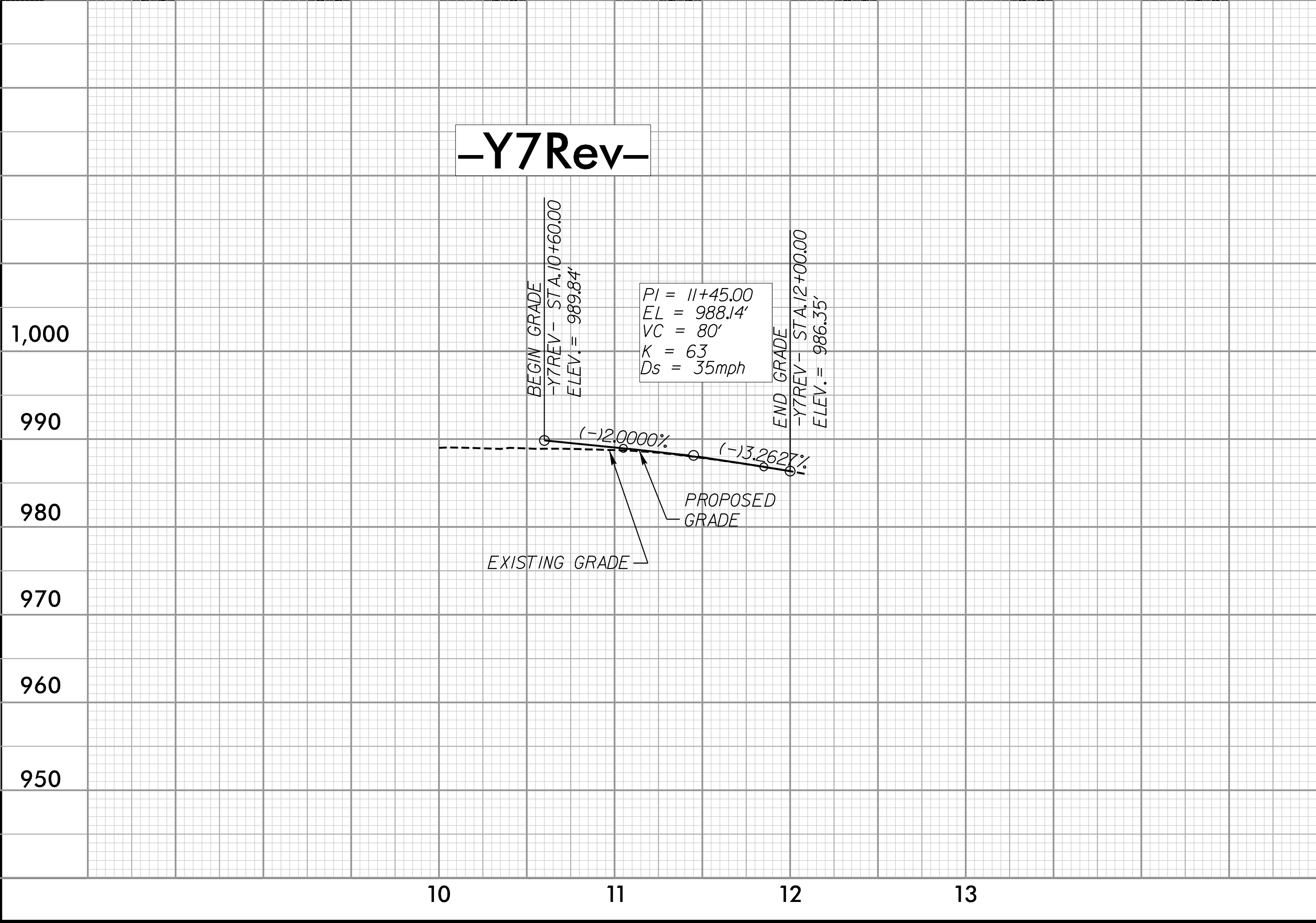
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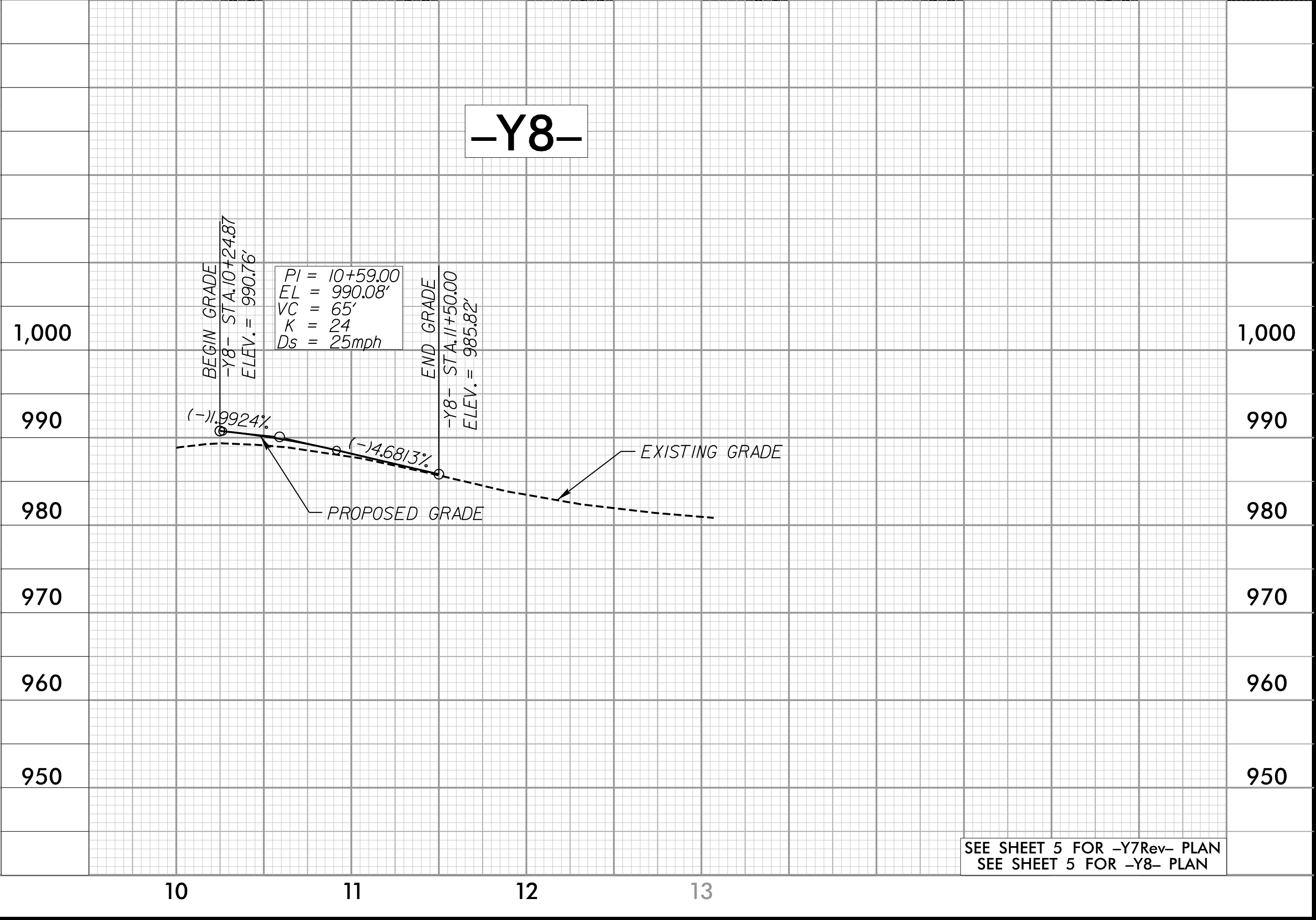
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-Y7Rev-



-Y8-



SEE SHEET 5 FOR -Y7Rev- PLAN
SEE SHEET 5 FOR -Y8- PLAN

1,000

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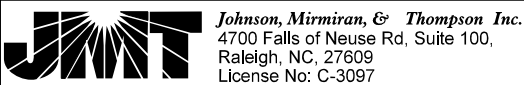
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5/28/24



PROJECT REFERENCE NO.
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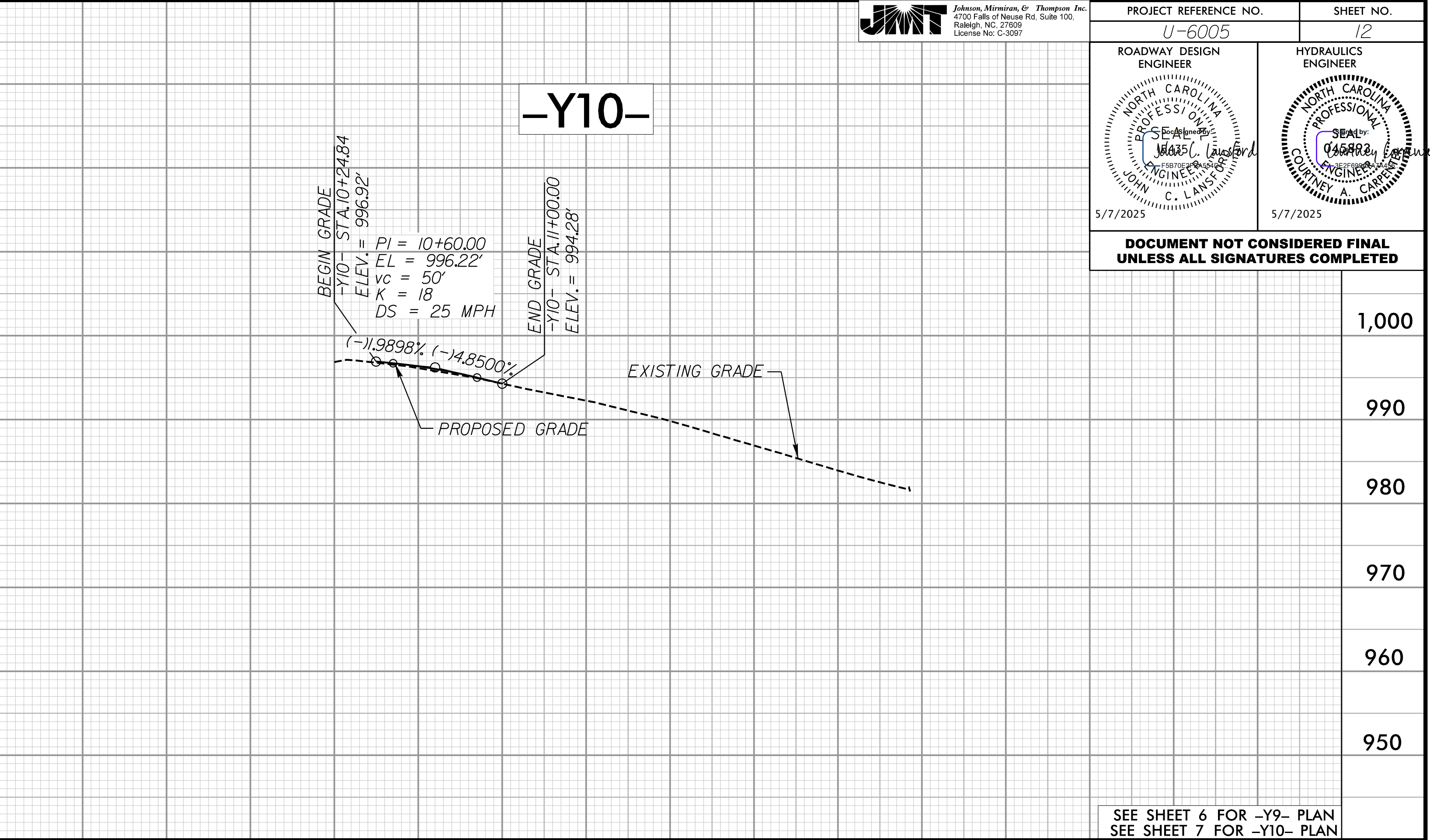
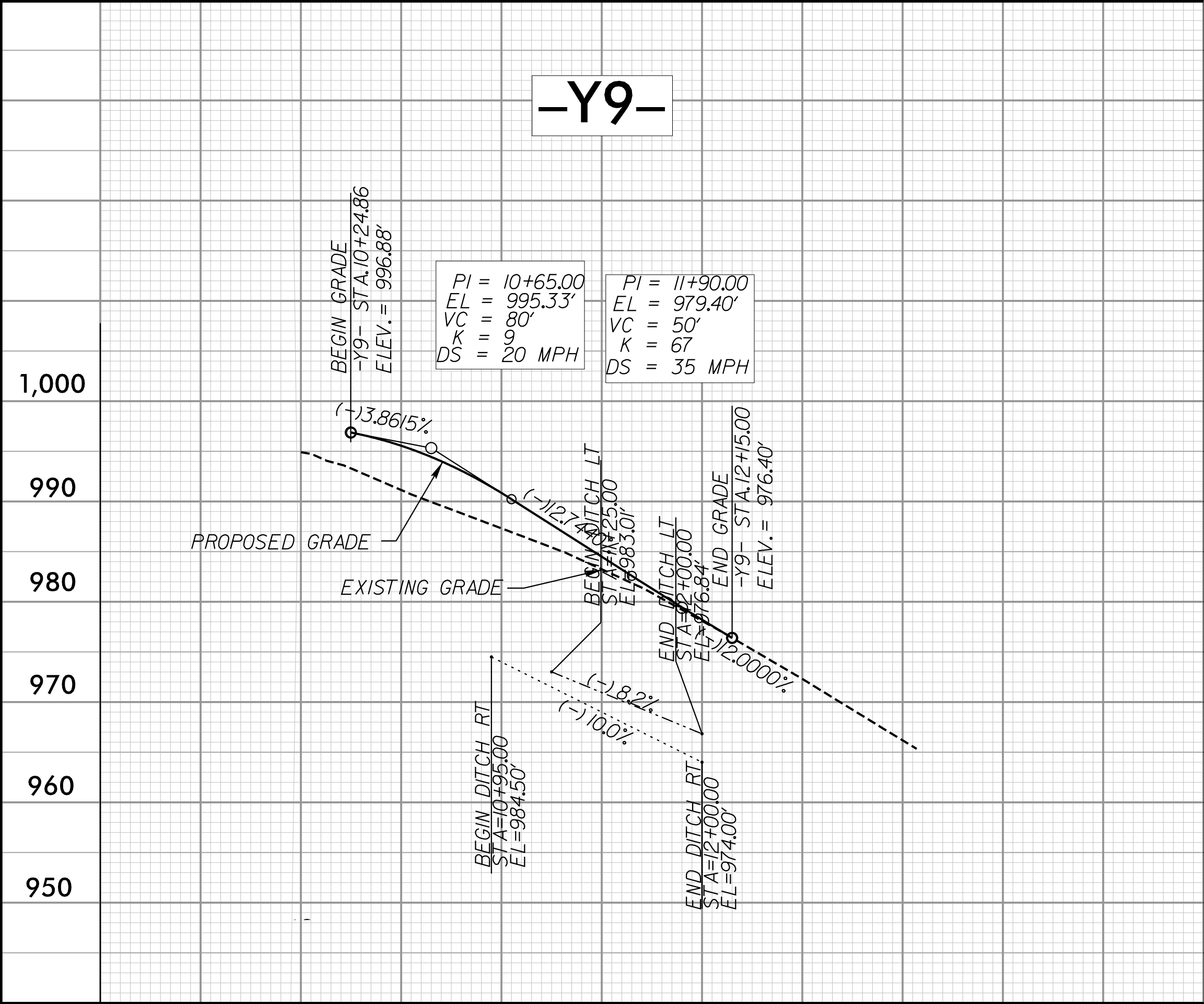
ROADWAY DESIGN ENGINEER

SHEET NO.
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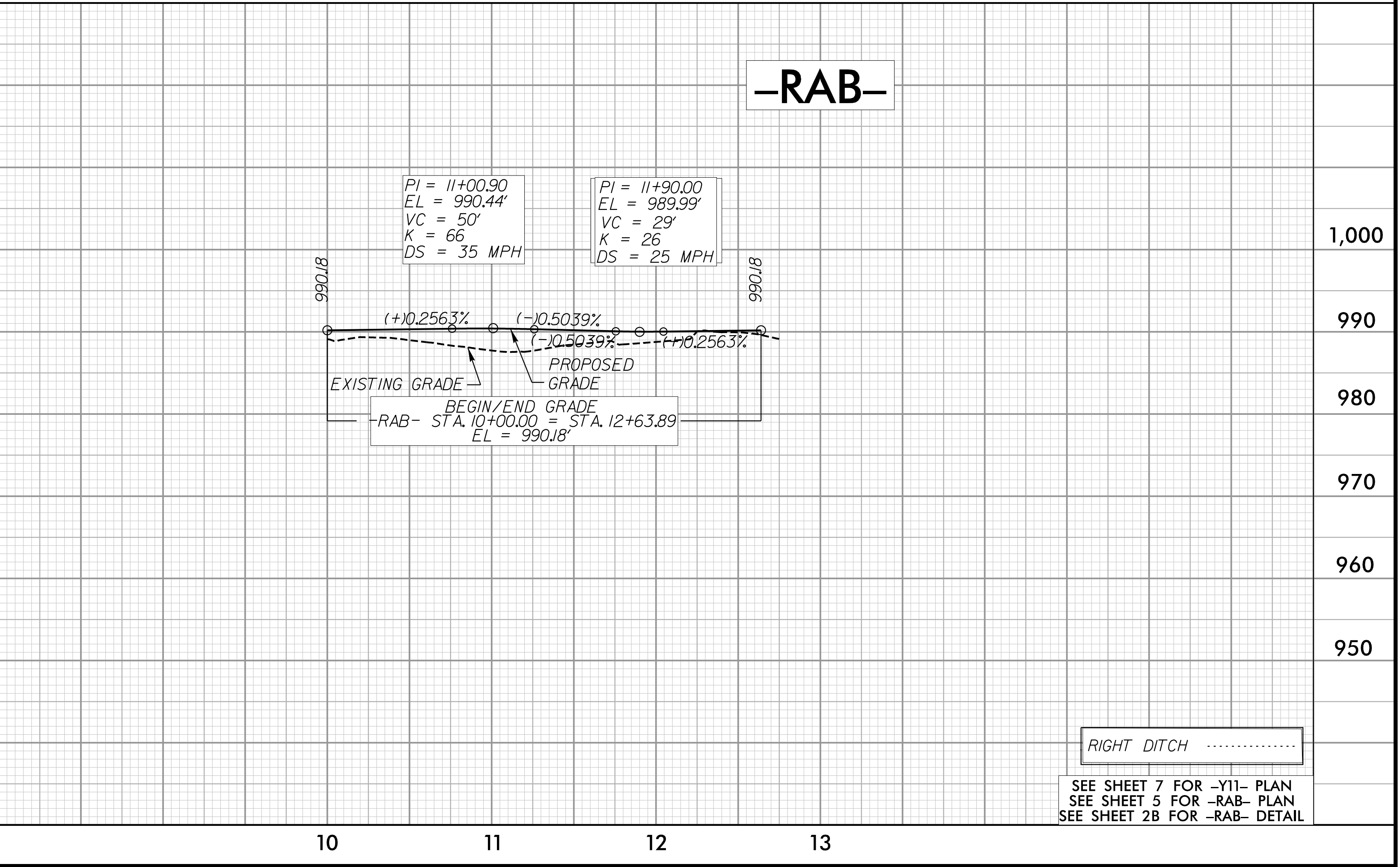
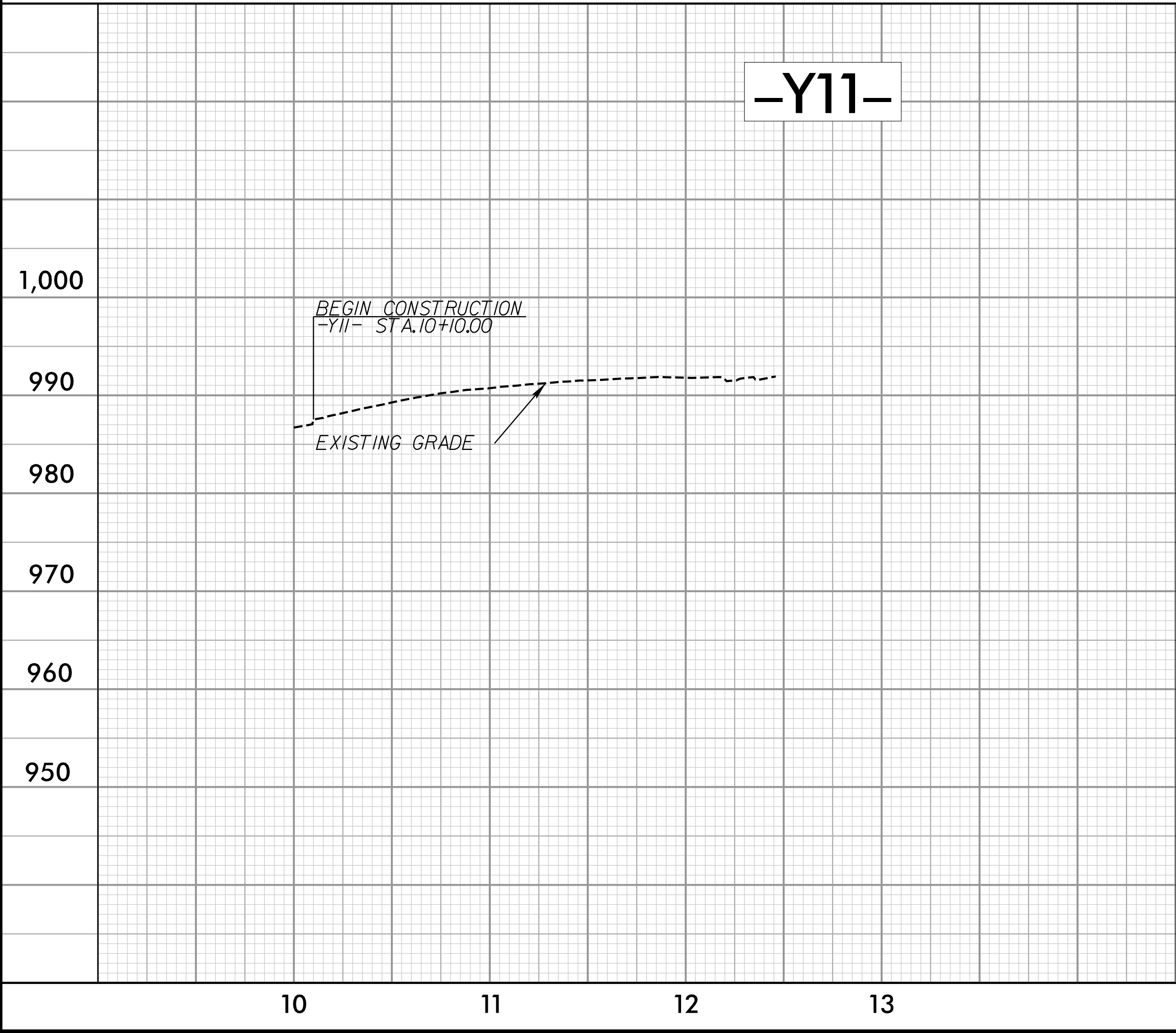
HYDRAULICS ENGINEER

5/7/20255/7/2025

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SEE SHEET 6 FOR -Y9- PLAN
SEE SHEET 7 FOR -Y10- PLAN



RIGHT DITCH

SEE SHEET 7 FOR -Y11- PLAN
SEE SHEET 5 FOR -RAB- PLAN
SEE SHEET 2B FOR -RAB- DETAIL

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