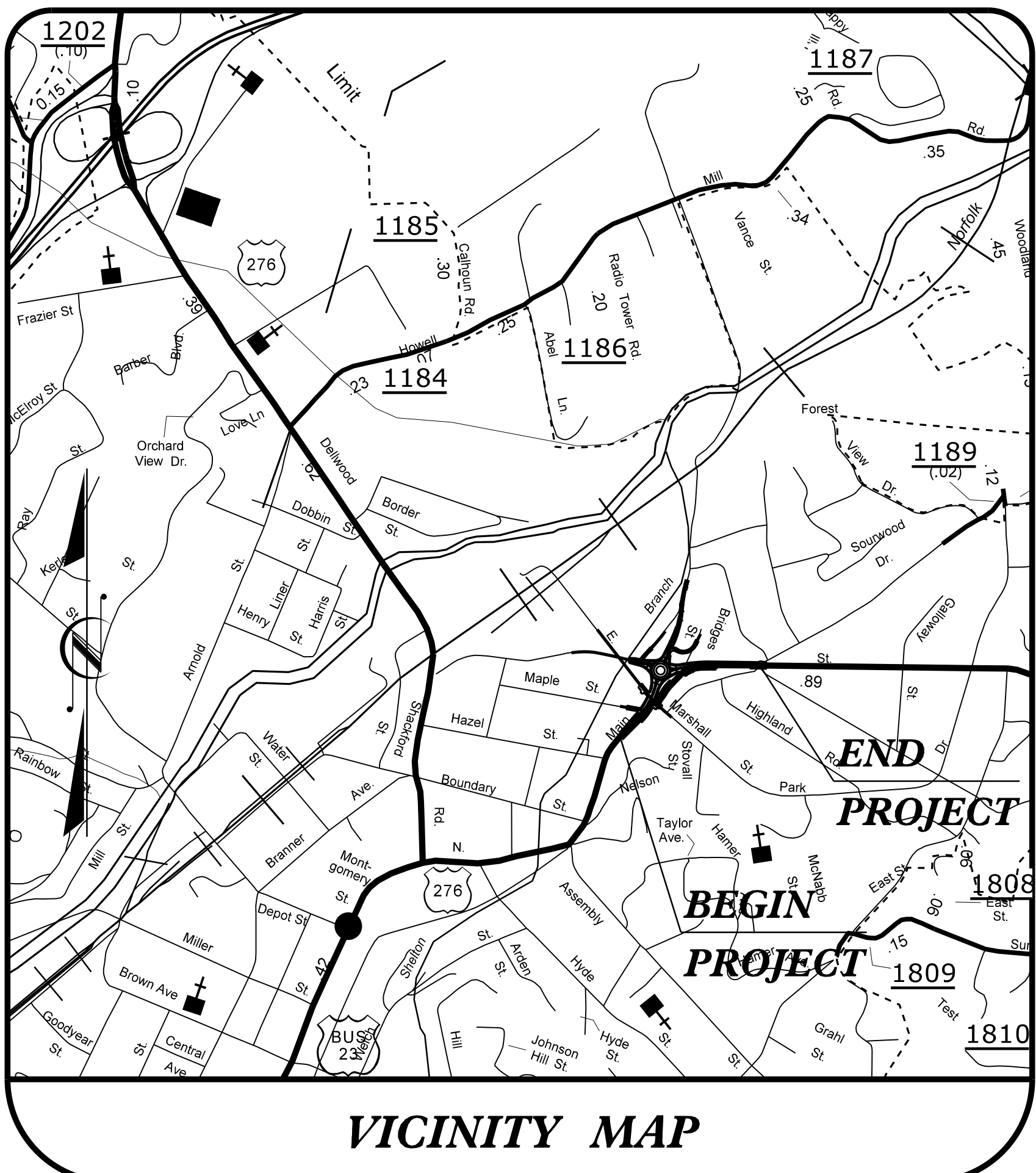


09_2025/219

TIP PROJECT: U-5888

CONTRACT: C204675

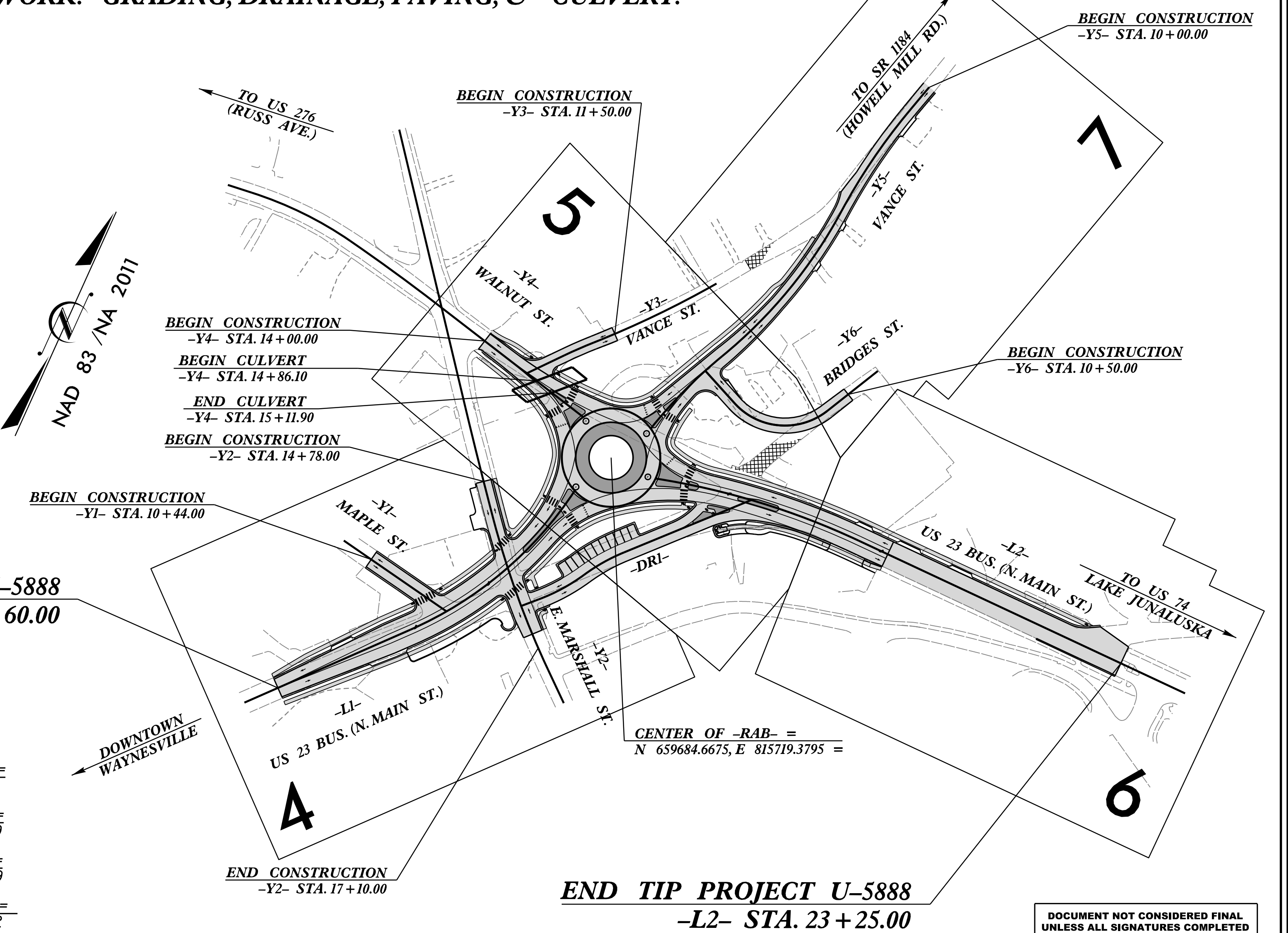
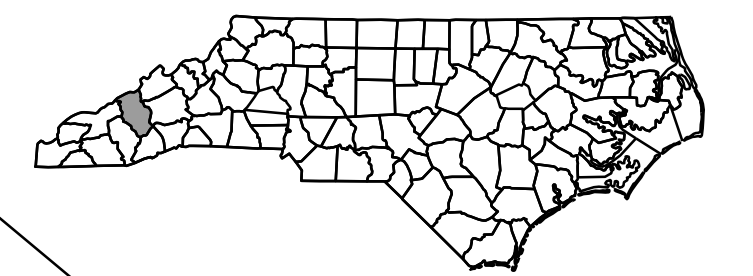


See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
HAYWOOD COUNTY

LOCATION: WAYNESVILLE - INTERSECTION OF US 23 BUSINESS (N. MAIN ST.) AND WALNUT ST.
TYPE OF WORK: GRADING, DRAINAGE, PAVING, & CULVERT.

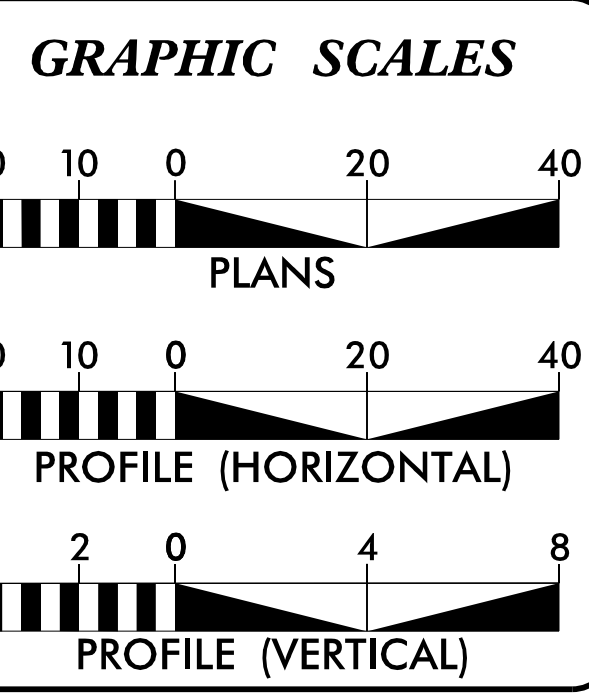
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5888	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
44625.1.1	N/A	PE	
44625.2.1	N/A	RW /UTIL.	
44625.3.1	N/A	CONST.	



BEGIN TIP PROJECT U-5888
-L1- STA. 10+60.00

END TIP PROJECT U-5888
-L2- STA. 23+25.00

- (A) -L1- POC Sta. 15+39.32 =
-RAB- POC Sta. 11+58.41
- (B) -L2- POC Sta. 16+61.25 =
-RAB- POC Sta. 12+86.09
- (C) -Y5- PT Sta. 15+85.02 =
-RAB- POC Sta. 13+55.69
- (D) -Y4- POT Sta. 15+64.37 =
-RAB- POC Sta. 10+47.32



DESIGN DATA

ADT 2021 =	7,800
ADT 2040 =	9,000
K =	9 %
D =	50 %
T =	6 % *
V =	40 MPH
* TTST =	2% DUAL = 4%
FUNC. CLASS =	MINOR ARTERIAL

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-5888	=	0.240 MILES
TOTAL LENGTH TIP PROJECT U-5888	=	0.240 MILES

NOTE: -L1- AND -L2- USED FOR PROJECT LENGTH

Prepared in the Office of:
WETHERILL ENGINEERING
1223 Jones Franklin Rd. Raleigh, N.C. 27606
License No. F-0377
Bus: 919.851.8077 Fax: 919.851.8107
2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
June 30, 2018

LETTING DATE:
December 21, 2021

NCDOT CONTACT:

Prepared for:
DIVISION OF HIGHWAYS
DIVISION 14
253 Webster Road
Sylva NC, 28779

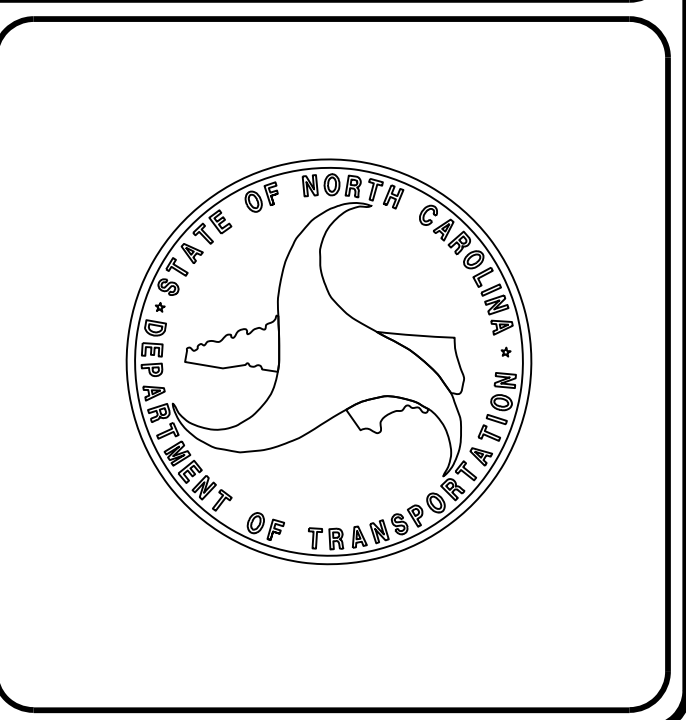
GREG S. PURVIS, PE
PROJECT ENGINEER

JONATHAN HEFNER, PE
PROJECT DESIGN ENGINEER

JOSHUA B. DEYTON, PE
DIVISION 14 PROJECT TEAM LEAD

HYDRAULICS ENGINEER
9/30/2021

ROADWAY DESIGN ENGINEER
9/30/2021



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

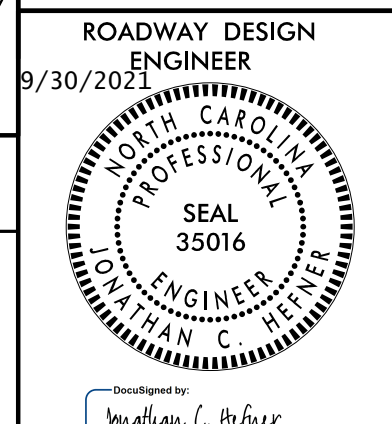


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PROJECT REFERENCE NO.	SHEET NO.
U-5888	1A

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A-1 THRU 2A-4	TYPICAL SECTIONS AND PAVEMENT SCHEDULE
2B-1 THRU 2B-3	ROADWAY DETAILS
2C-1	CURB RAMPS - MEDIAN OR TURN LANE ISLANDS
2C-2	CONCRETE OPEN THROAT CATCH BASIN (3 OR 4 SIDE OPEN THROAT) (MANHOLE OPTIONAL)
2D-1	DRAINAGE DETAILS
3B-1	ROADWAY SUMMARIES
3D-1 THRU 3D-3	DRAINAGE SUMMARIES
3G-1	GEOTECHNICAL SUMMARIES
3P-1	PARCEL INDEX SHEET
4 THRU 7	ROADWAY PLAN SHEETS
8 THRU 12	ROADWAY PROFILE SHEETS
RW-1 THRU RW-7	RIGHT OF WAY PLAN SHEETS
TMP-1 THRU TMP-22	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-4	PAVEMENT MARKING PLANS
E-1 THRU E-7	ELECTRICAL PLANS
L-1 THRU L-4	LIGHTING PLANS
EC-1 THRU EC-11	EROSION CONTROL PLANS
RF-1 THRU RF-3	REFORESTATION PLANS
SIGN-1 THRU SIGN-5	SIGNING PLANS
UC-1 THRU UC-13	UTILITIES CONSTRUCTION PLANS
UD-1 THRU UD-7	UTILITIES BY OTHERS PLANS
X-1	CROSS-SECTION INDEX SHEET
X-1A	CROSS SECTION SUMMARY SHEET
X-2 THRU X-23	CROSS-SECTIONS
C1 THRU C11	CULVERT PLANS

2018 ROADWAY ENGLISH STANDARD DRAWINGS

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 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
815.02	Subsurface Drain
840.00	Concrete Base Pad for Drainage Structures
840.01	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
840.18	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
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
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
840.71	Concrete and Brick Pipe Plug
848.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.02	Driveway Turnout - Radius Type
848.03	Driveway Turnout - Drop Curb Type
848.04	Street Turnout
848.05	Curb Ramp - Proposed Curb & Gutter
852.01	Concrete Islands
852.06	Method for Placement of Drop Inlets in Concrete Islands
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

EFF. 01-16-2018
REV.

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:

GENERAL NOTES

GENERAL NOTES: 2018 SPECIFICATIONS EFFECTIVE: 01-16-2018 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.

DRIVEWAYS: DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3 FOOT RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.03 AT LOCATIONS SHOWN ON PLANS OR AS 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 WORK" IN ACCORDANCE WITH SECTION 104-7.

UTILITIES: UTILITY OWNERS ON THIS PROJECT ARE POWER, WATER, AND SEWER - TOWN OF WAYNESVILLE; COMMUNICATIONS - AT&T, MCNC, BALSAM WEST, IRC; CATV - CHARTER; GAS - PSNC ENERGY. ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

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

CURB RAMPS: CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. CONSTRUCT ALL CURB RAMPS ACCORDANCE WITH STD 848.05 and/or 848.06.

REVISIONS

9/28/2023 1:58:08 PM rdy_psh_01A.dgn
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STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

12/2/2016

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EP
Computed Property Corner	-----
Property 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-☠
Potential Contamination Area: Soil	☠-S-☠
Known Contamination Area: Water	☠-W-☠
Potential Contamination Area: Water	☠-W-☠
Contaminated Site: Known or Potential	☠?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ S
Well	○ W
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	▽
Proposed Lateral, Tail, Head Ditch	-----
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	◆
Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	●
Exist Permanent Easement Pin and Cap	◇
New Permanent Easement Pin and Cap	◆
Vertical Benchmark	⊠
Existing Right of Way Marker	△
Existing Right of Way Line	-----
New Right of Way Line	○ R W
New Right of Way Line with Pin and Cap	○ R W ▲
New Right of Way Line with Concrete or Granite R/W Marker	○ R W
New Control of Access Line with Concrete C/A Marker	○ C/A
Existing Control of Access	○ C/A
New Control of Access	○ C/A
Existing Easement Line	---E---
New Temporary Construction Easement	---E---
New Temporary Drainage Easement	---TDE---
New Permanent Drainage Easement	---PDE---
New Permanent Drainage / Utility Easement	---DUE---
New Permanent Utility Easement	---PUE---
New Temporary Utility Easement	---TUE---
New Aerial Utility Easement	---AUE---

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	---C---
Proposed Slope Stakes Fill	---F---
Proposed Curb Ramp	---CR---
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	⊗

VEGETATION:

Single Tree	○
Single Shrub	○

Note: Not to Scale *S.U.E. = Subsurface Utility Engineering

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

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW
MINOR:	
Head and End Wall	CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	□ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	○ S
Storm Sewer	---S---

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 LOS B (S.U.E.*)	---P---
U/G Power Line LOS C (S.U.E.*)	---P---
U/G Power Line LOS D (S.U.E.*)	---P---

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Pedestal	⊠
Telephone Cell Tower	⊠
U/G Telephone Cable Hand Hole	○
U/G Telephone Cable LOS B (S.U.E.*)	---T---
U/G Telephone Cable LOS C (S.U.E.*)	---T---
U/G Telephone Cable LOS D (S.U.E.*)	---T---
U/G Telephone Conduit LOS B (S.U.E.*)	---TC---
U/G Telephone Conduit LOS C (S.U.E.*)	---TC---
U/G Telephone Conduit LOS D (S.U.E.*)	---TC---
U/G Fiber Optics Cable LOS B (S.U.E.*)	---T FO---
U/G Fiber Optics Cable LOS C (S.U.E.*)	---T FO---
U/G Fiber Optics Cable LOS D (S.U.E.*)	---T FO---

WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
U/G Water Line LOS B (S.U.E.*)	---W---
U/G Water Line LOS C (S.U.E.*)	---W---
U/G Water Line LOS D (S.U.E.*)	---W---
Above Ground Water Line	---A/G Water---

TV:

TV Pedestal	□
TV Tower	⊗
U/G TV Cable Hand Hole	○
U/G TV Cable LOS B (S.U.E.*)	---TV---
U/G TV Cable LOS C (S.U.E.*)	---TV---
U/G TV Cable LOS D (S.U.E.*)	---TV---
U/G Fiber Optic Cable LOS B (S.U.E.*)	---TV FO---
U/G Fiber Optic Cable LOS C (S.U.E.*)	---TV FO---
U/G Fiber Optic Cable LOS D (S.U.E.*)	---TV FO---

GAS:

Gas Valve	◇
Gas Meter	⊕
U/G Gas Line LOS B (S.U.E.*)	---G---
U/G Gas Line LOS C (S.U.E.*)	---G---
U/G Gas Line LOS D (S.U.E.*)	---G---
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 Forced Main Line LOS B (S.U.E.*)	---FSS---
SS Forced Main Line LOS C (S.U.E.*)	---FSS---
SS Forced Main Line LOS D (S.U.E.*)	---FSS---

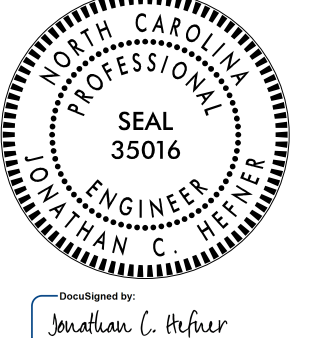
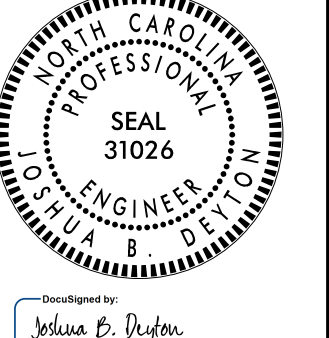

MISCELLANEOUS:

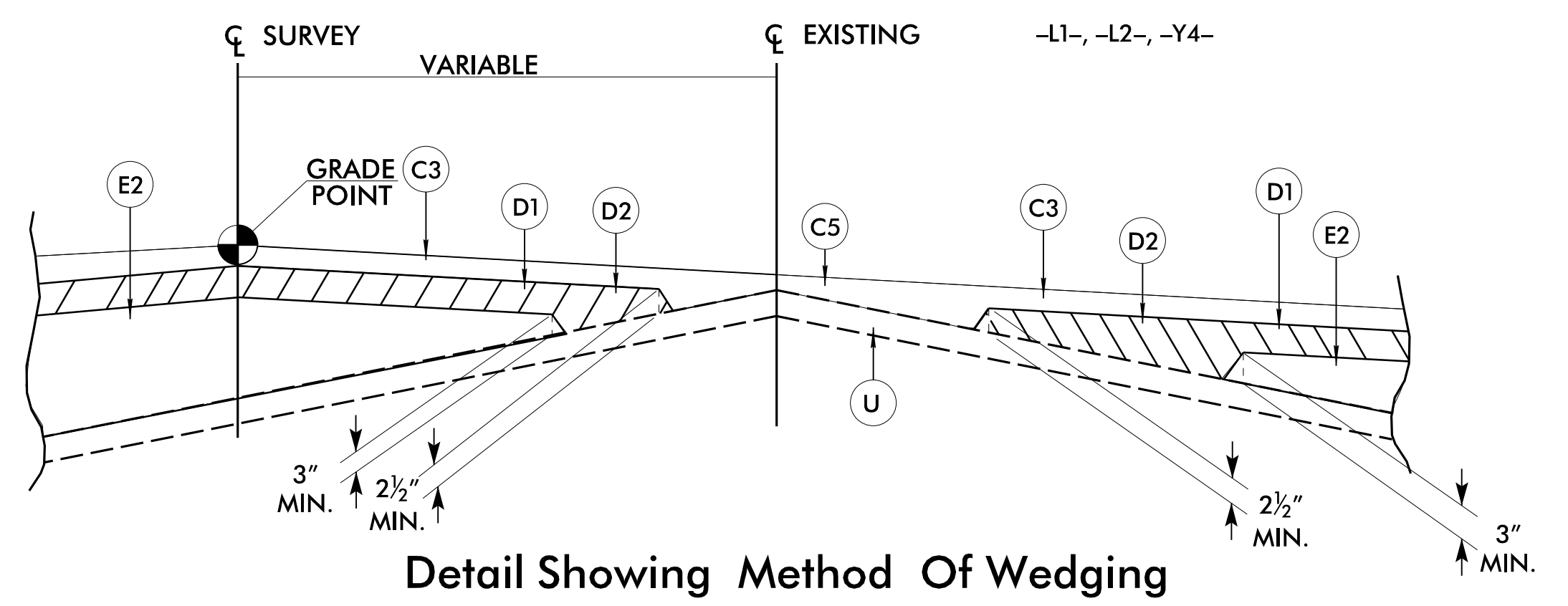
Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line LOS B (S.U.E.*)	---ZUTL---
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	⊕
A/G Tank; Water, Gas, Oil	□
Geoenvironmental Boring	⊕
U/G Test Hole LOS A (S.U.E.*)	○
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

PAVEMENT SCHEDULE

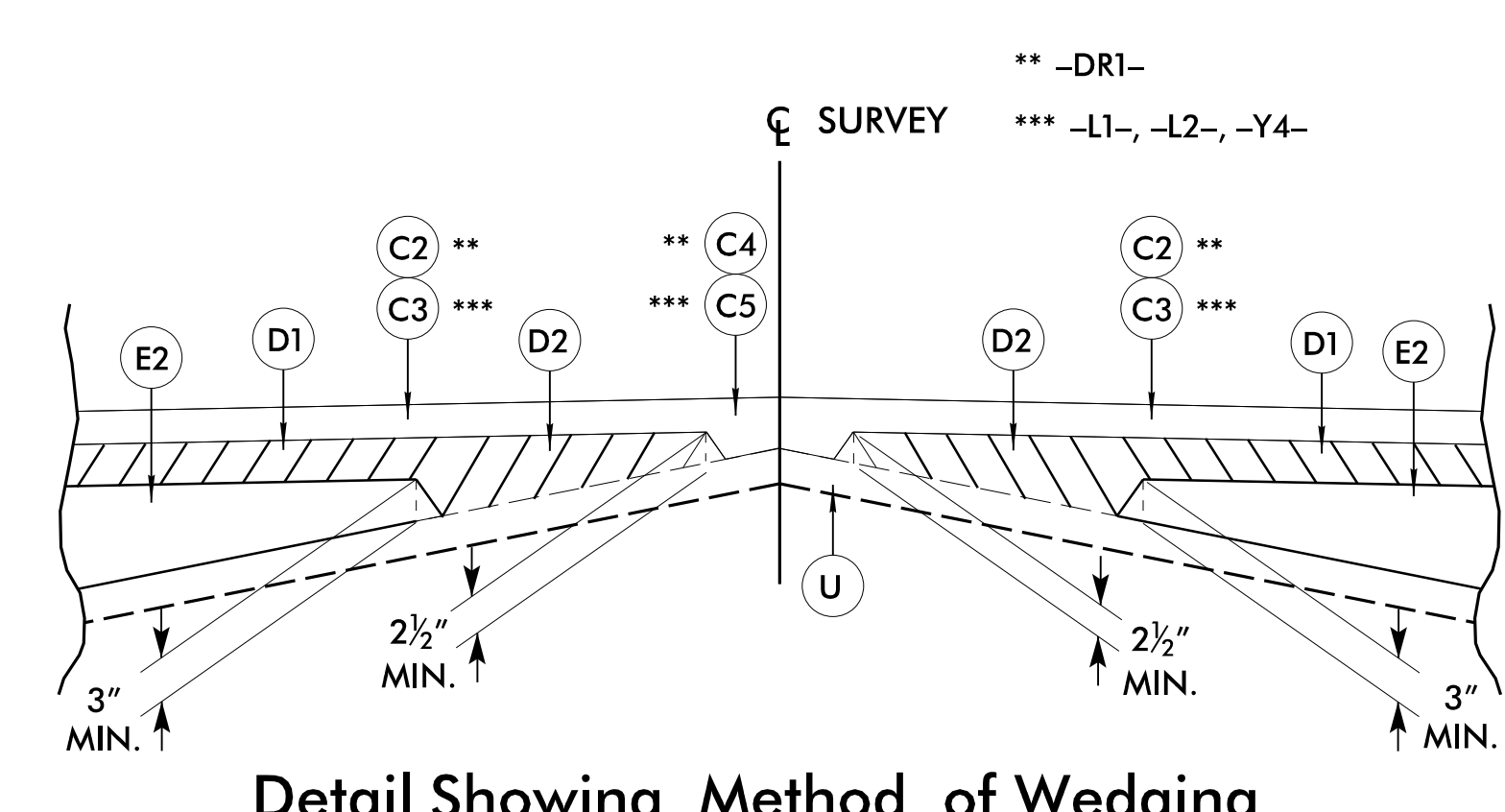
(FINAL PAVEMENT DESIGN)

C1	PROP. APPROX. 2½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R5	5" MONOLITHIC ISLAND, KEYED IN.
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.	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.	S	4" CONCRETE SIDEWALK.
C3	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.	R1	2'-6" CONCRETE CURB AND GUTTER.	T	EARTH MATERIAL.
C4	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.	R2	1'-6" CONCRETE CURB AND GUTTER.	U	EXISTING PAVEMENT.
C5	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.	R3	12" CONCRETE TRUCK APRON.	V	MILLING BITUMINOUS PAVEMENT, 3" DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R4	8" X 18" CONCRETE CURB.	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAILS THIS SHEET).
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.	NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.			

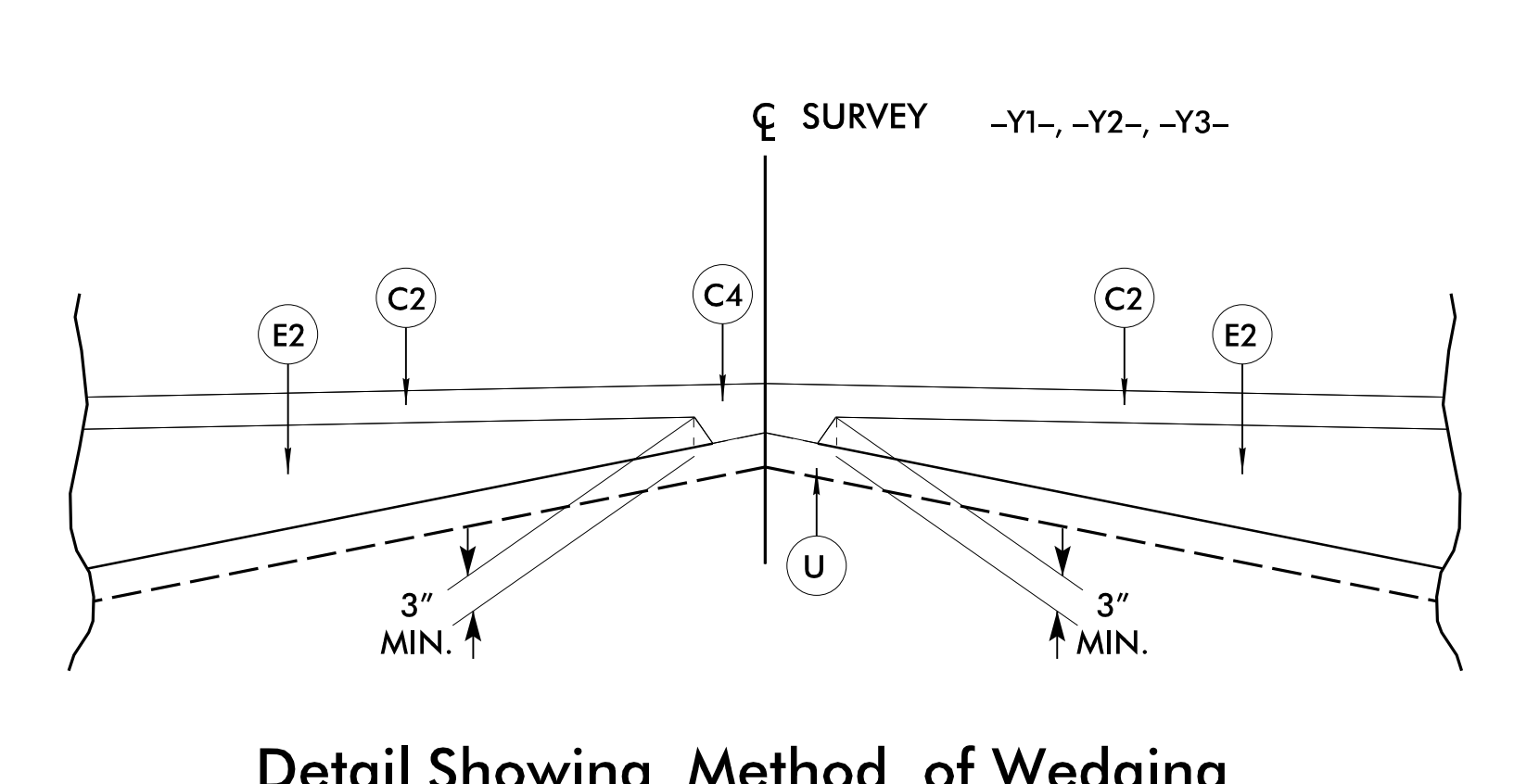
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ROADWAY DESIGN 9/30/2023 ENGINEER 	PAVEMENT DESIGN 9/30/2023 ENGINEER 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
	
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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION	



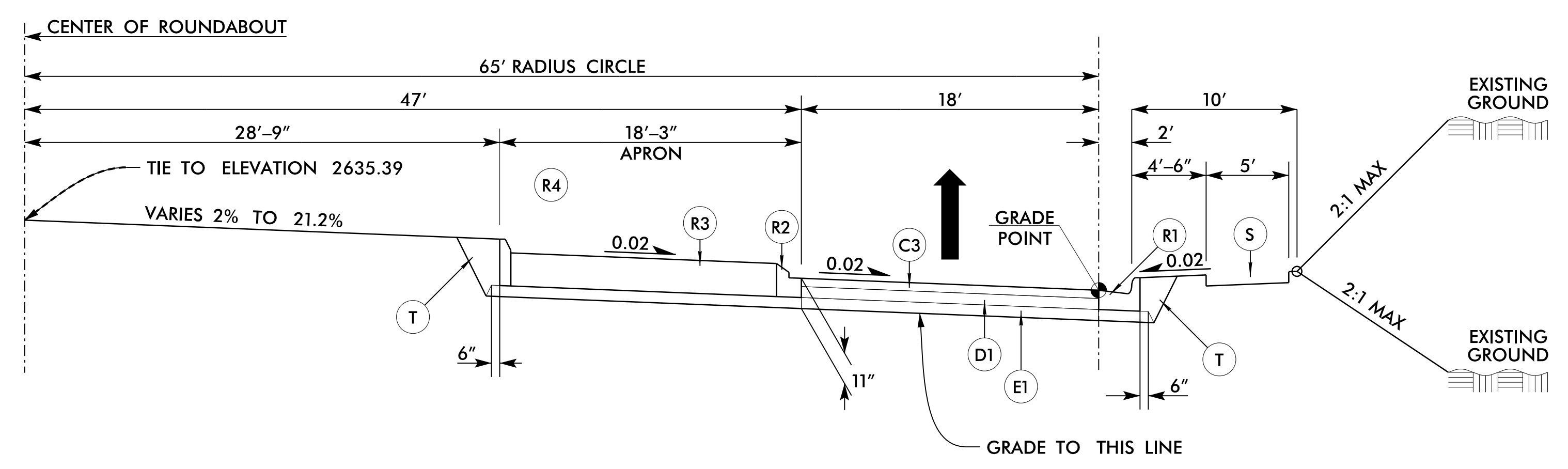
WEDGING DETAIL NO. 1



WEDGING DETAIL NO. 2






WEDGING DETAIL NO. 3



TYPICAL SECTION NO. 1
USE TYPICAL SECTION NO. 1
-RAB- STA. 10+00.00 TO -RAB- STA. 14+08.41

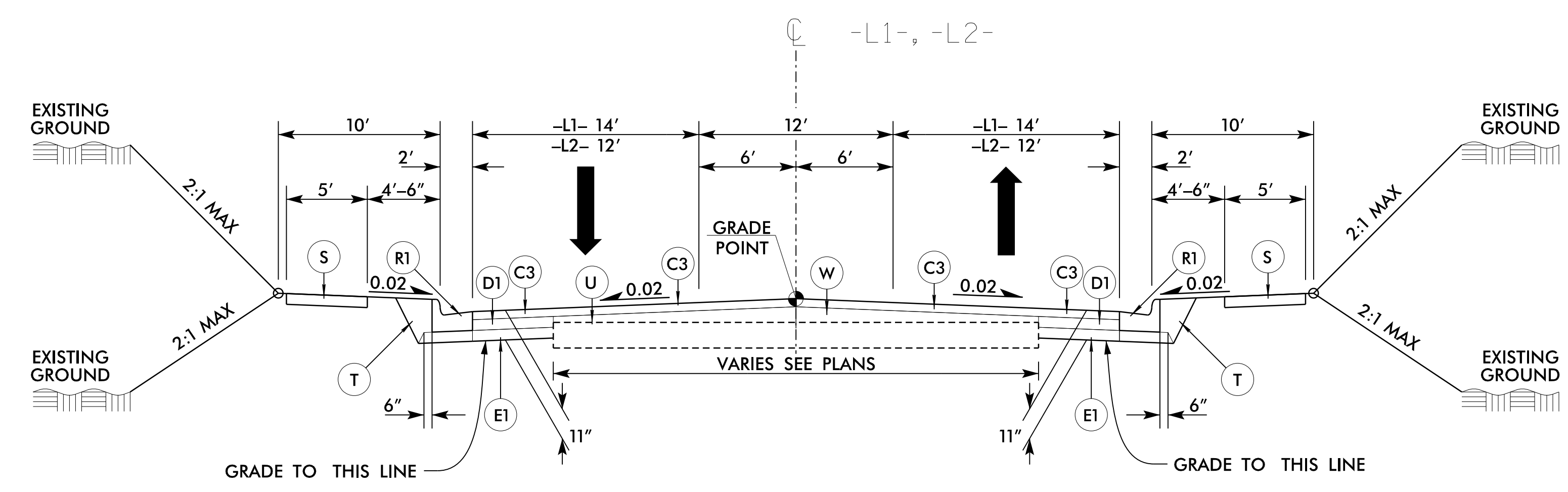
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PROJECT REFERENCE NO. U-5888	SHEET NO. 2A-2
ROADWAY DESIGN ENGINEER 9/30/2021 	PAVEMENT DESIGN ENGINEER 9/30/2021 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 WETHERILL ENGINEERING	
1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107	
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION	

TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2

-L1- STA. 12+20.00 TO -L1- STA. 14+00.00
-L2- STA. 17+80.00 TO -L2- STA. 19+60.00

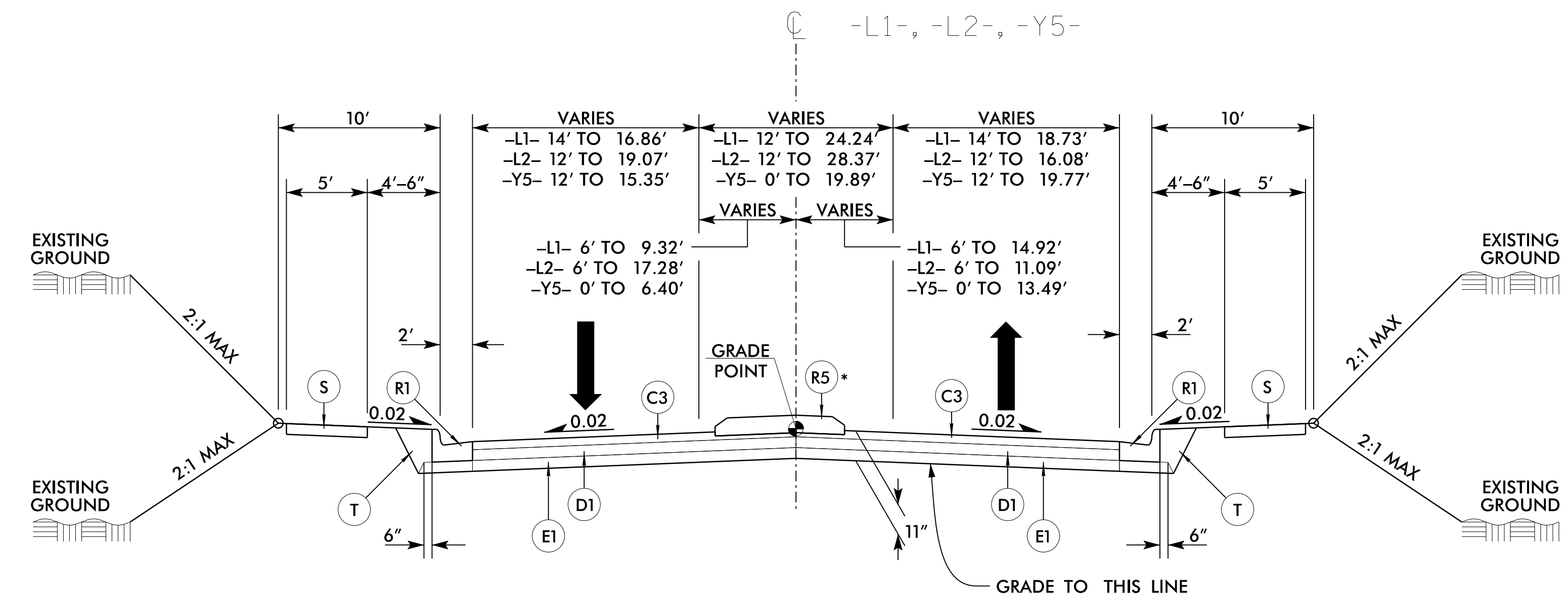


NOTE: TRANSITION FROM EXISTING TO TYPICAL SECTION NO. 2
-L1- STA. 10+60.00 TO -L1- STA. 12+20.00
TRANSITION FROM TYPICAL SECTION NO. 2 TO EXISTING
-L2- STA. 19+60.00 TO 19+85.00

TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3

-L1- STA. 14+00.00 TO -L1- STA. 15+20.00
-L2- STA. 16+75.00 TO -L2- STA. 17+80.00
-Y5- STA. 14+50.54 TO -Y5- STA. 15+75.00



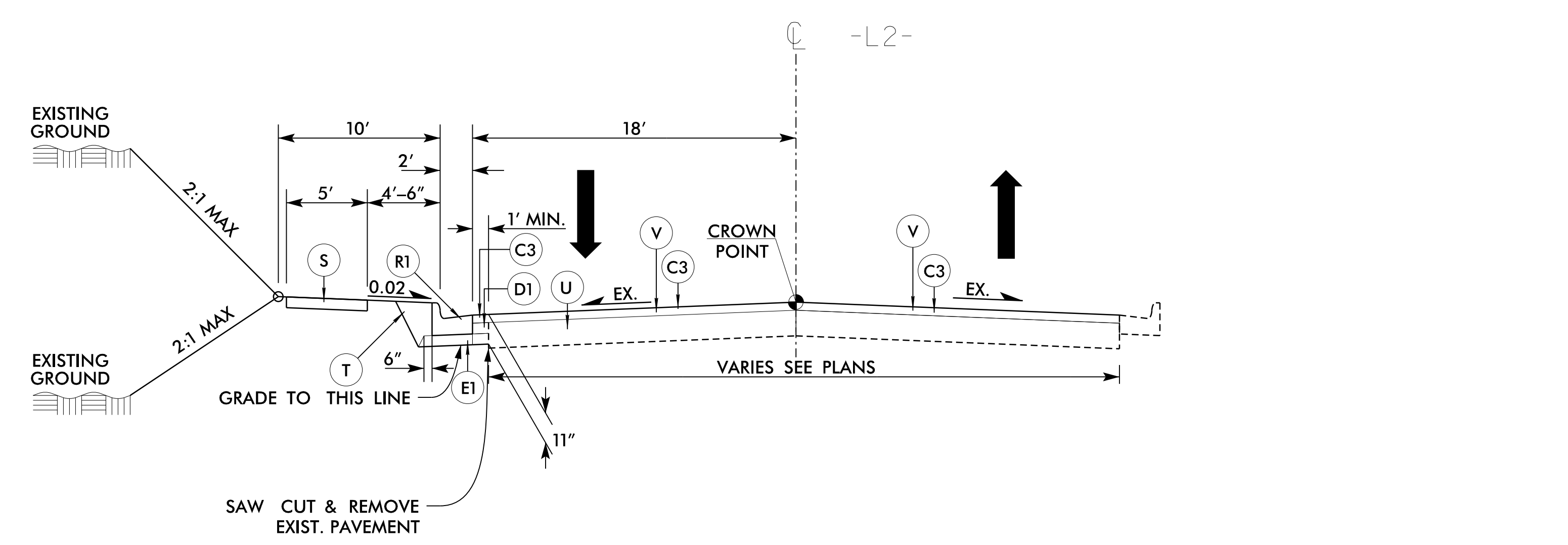
NOTE: TRANSITION FROM TYPICAL SECTION NO. 3 TO ROUNDABOUT
-L1- STA. 15+20.00 TO -L1- STA. 15+39.32
TRANSITION FROM ROUNDABOUT TO TYPICAL SECTION NO. 3
-L2- STA. 16+61.25 TO -L2- STA. 16+75.00
TRANSITION FROM TYPICAL SECTION NO. 3 TO ROUNDABOUT
-Y5- STA. 15+75.00 TO -Y5- STA. 15+85.02

PAVEMENT SCHEDULE	
FINAL PAVEMENT DESIGN	
C1	2 1/2" S9.5B
C2	3" S9.5B
C3	3" S9.5C
C4	VAR. S9.5B
C5	VAR. S9.5C
D1	4" I19.0C
D2	VAR. I19.0C
E1	4" B25.0C
E2	VAR. B25.0C
R1	2'-6" C & G
R2	1'-6" C & G
R3	12" TRUCK APRON
R4	8"x18" CURB
R5	5" MCI
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V	3" MILLING
W	WEDGING

TYPICAL SECTION NO. 4




USE TYPICAL SECTION NO. 4

-L2- STA. 19+85.00 TO -L2- STA. 23+25.00

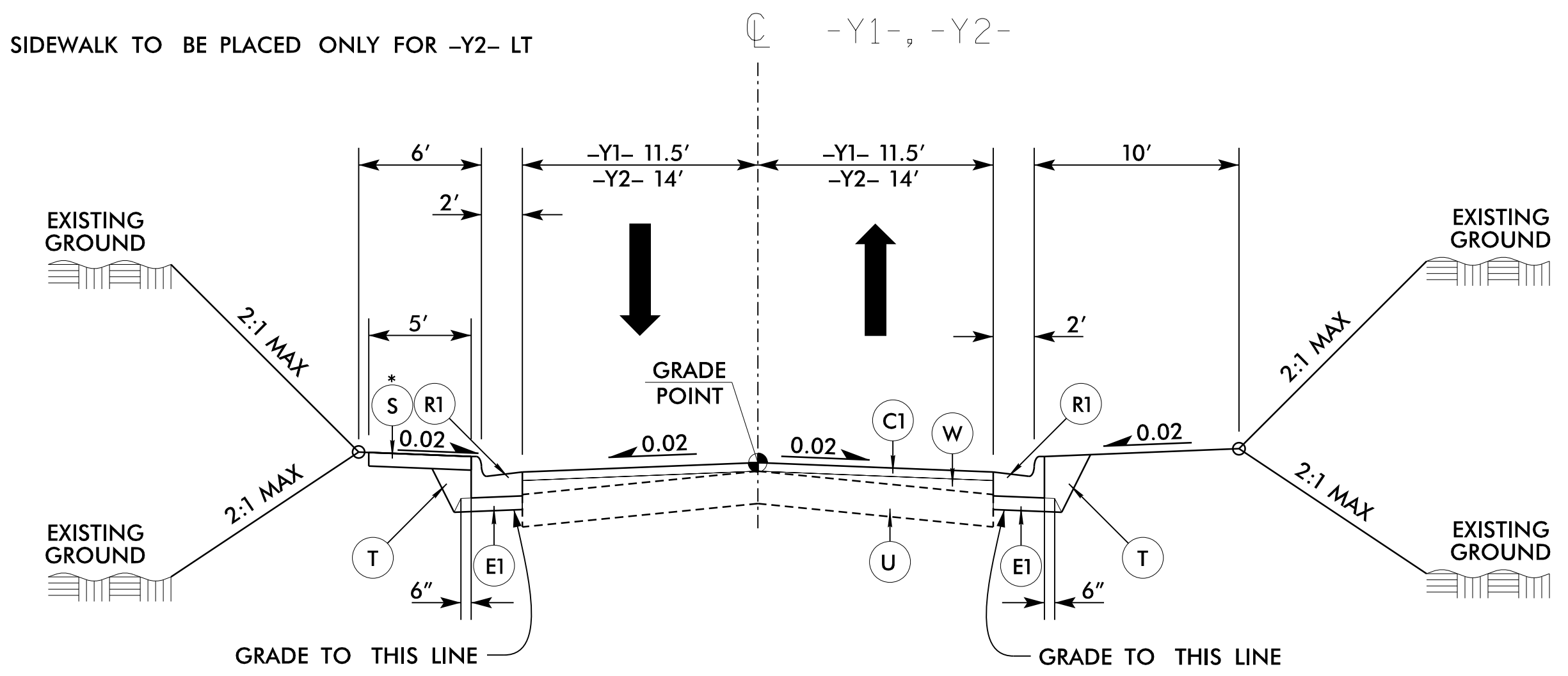


NOTE: EXISTING CURB AND GUTTER AND SIDEWALK IS TO BE REPLACED IN ITS EXISTING LOCATION FROM -L2- STA. 22+10.00 TO -L2- STA. 23+25.00

9/30/2021 11:58:11 AM I:\Projects\2021\U-5888\2A-2_typ.dgn

PROJECT REFERENCE NO. U-5888	SHEET NO. 2A-3
ROADWAY DESIGN ENGINEER 9/30/2023 	PAVEMENT DESIGN ENGINEER 9/30/2023 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107	
<small>TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION</small>	

* SIDEWALK TO BE PLACED ONLY FOR -Y2- LT



TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 5

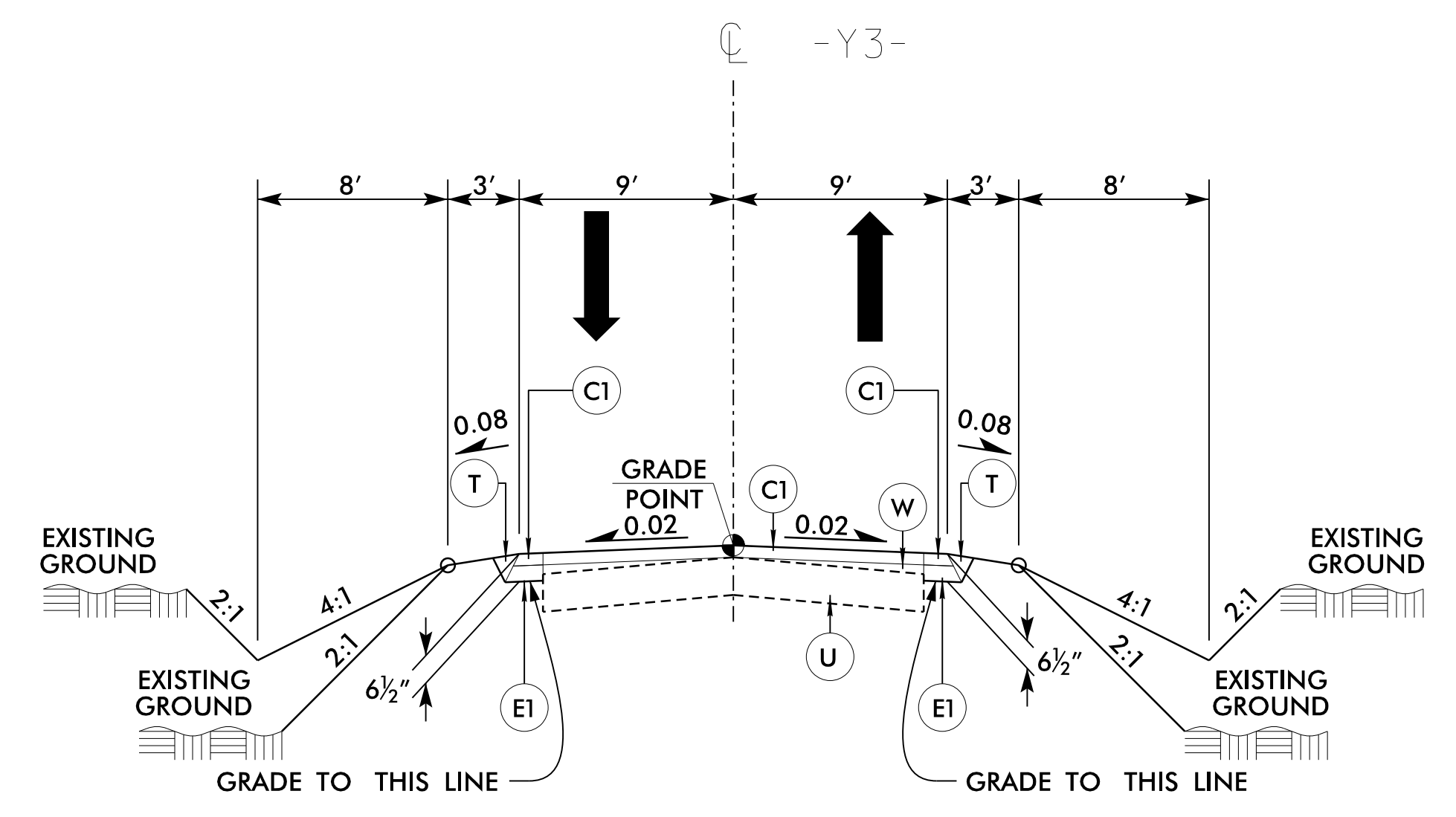
-Y1- STA. 10+94.00 TO -Y1- STA. 11+42.61
 -Y2- STA. 15+28.00 TO -Y2- STA. 15+74.52
 -Y2- STA. 16+18.07 TO -Y2- STA. 16+60.00

NOTE: TRANSITION FROM EXISTING TO TYPICAL SECTION NO. 5
 -Y1- STA. 10+44.00 TO -Y1- STA. 10+94.00

TRANSITION FROM EXISTING TO TYPICAL SECTION NO. 5
 -Y2- STA. 14+78.00 TO -Y2- STA. 15+28.00

TRANSITION FROM TYPICAL SECTION NO. 5 TO EXISTING
 -Y2- STA. 16+60.00 TO -Y2- STA. 17+10.00

PAVEMENT SCHEDULE	
FINAL PAVEMENT DESIGN	
C1	2 1/2" S9.5B
C2	3" S9.5B
C3	3" S9.5C
C4	VAR. S9.5B
C5	VAR. S9.5C
D1	4" I19.0C
D2	VAR. I19.0C
E1	4" B25.0C
E2	VAR. B25.0C
R1	2'-6" C & G
R2	1'-6" C & G
R3	12" TRUCK APRON
R4	8"x18" CURB
R5	5" MCI
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V	3" MILLING
W	WEDGING

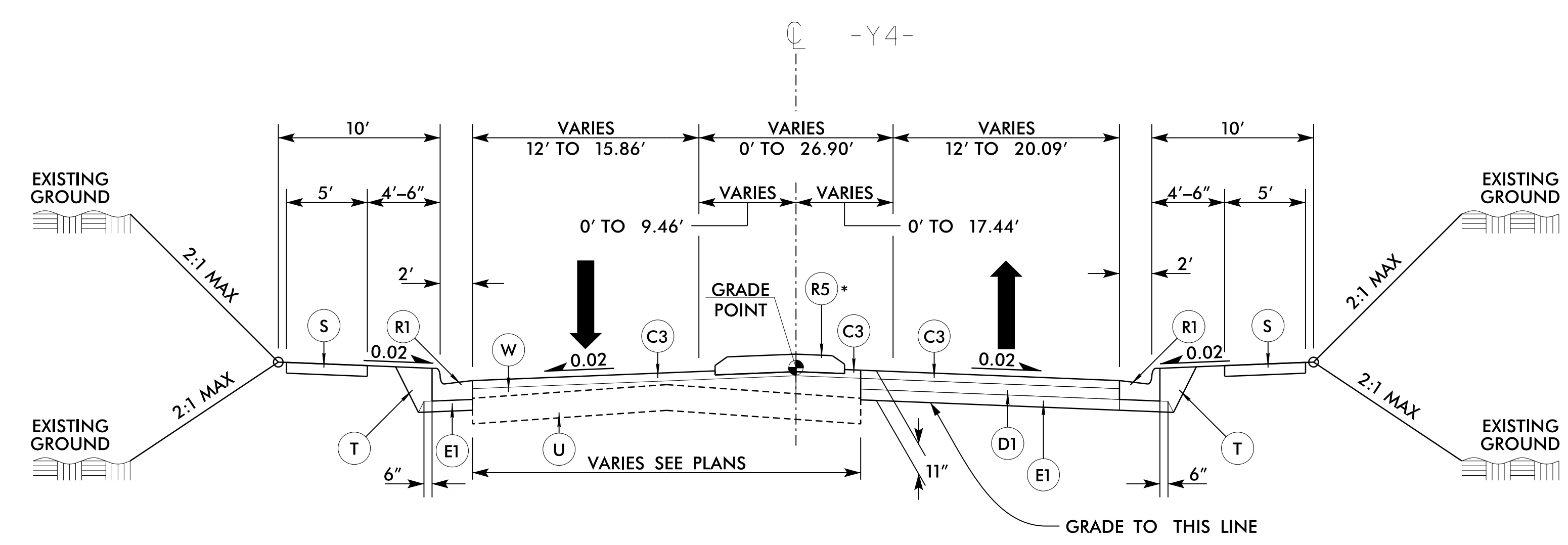


TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 6

-Y3- STA. 11+50.00 TO -Y3- STA. 12+61.84

NOTE: TRANSITION FROM EXISTING TO TYPICAL SECTION NO. 6
 -Y3- STA. 11+50.00 TO -Y3- STA. 11+80.00



TYPICAL SECTION NO. 7

USE TYPICAL SECTION NO. 7

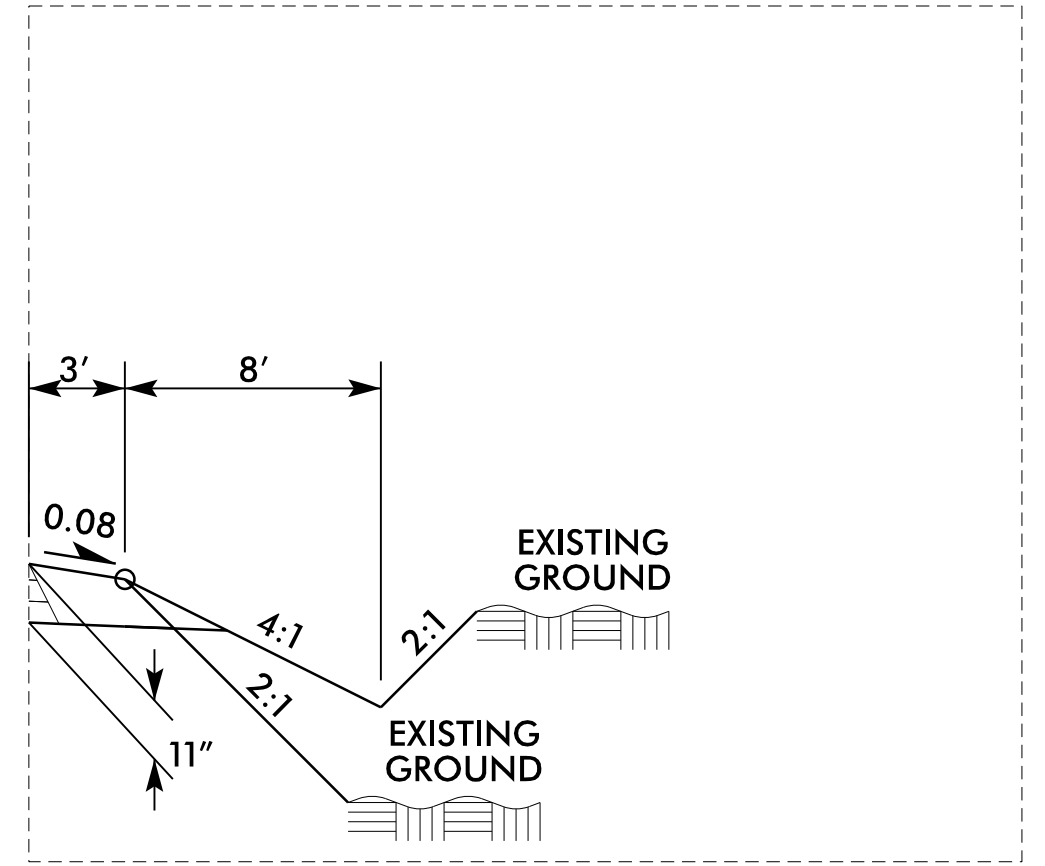
-Y4- STA. 14+00.00 TO -Y4- STA. 15+50.00

* SEE PLANS FOR MONOLITHIC ISLAND LOCATIONS

NOTE: TRANSITION FROM TYPICAL SECTION NO. 7 TO ROUNDABOUT
 -Y4- STA. 15+50.00 TO -Y4- STA. 15+64.37

9/30/2023 11:58:02 AM 02A-3_tup.dgn

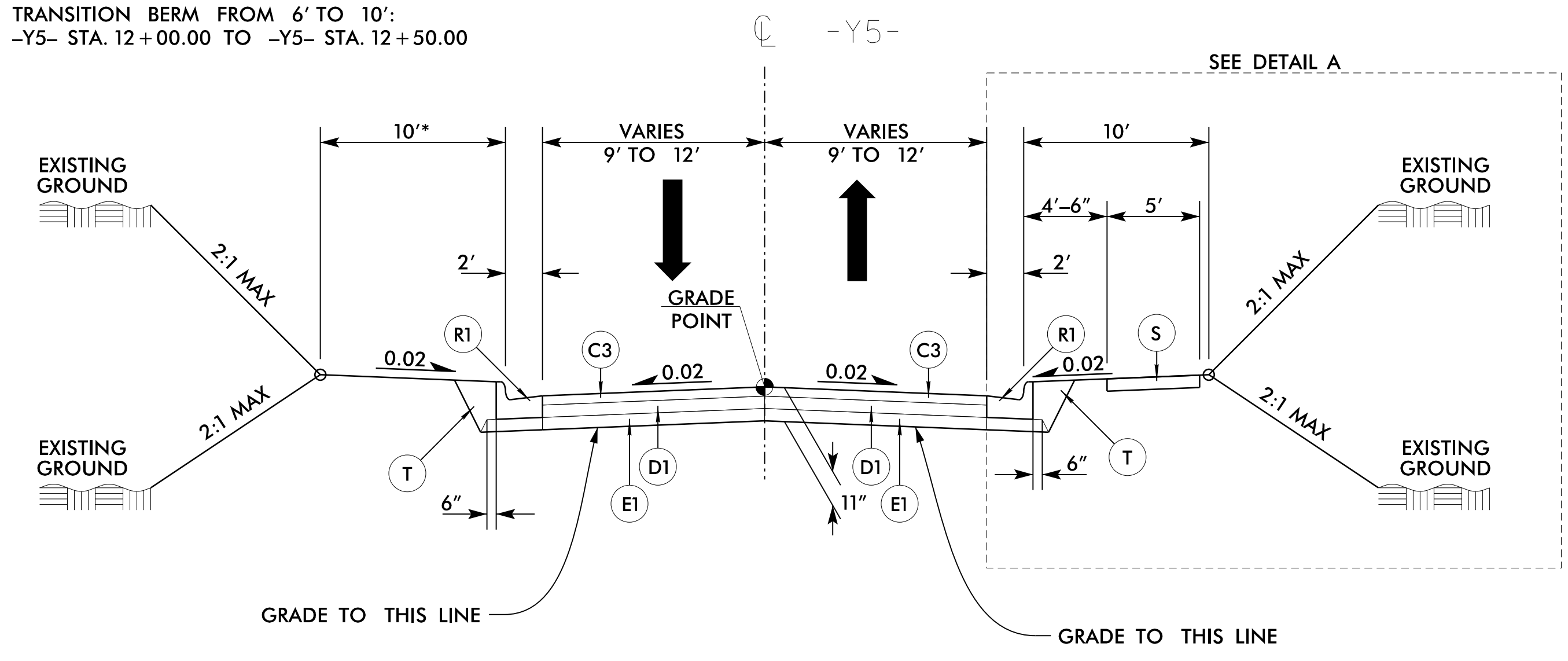
DETAIL A



USE DETAIL A

-Y5- STA. 10+00.00 TO -Y5- STA. 11+79.02 RT

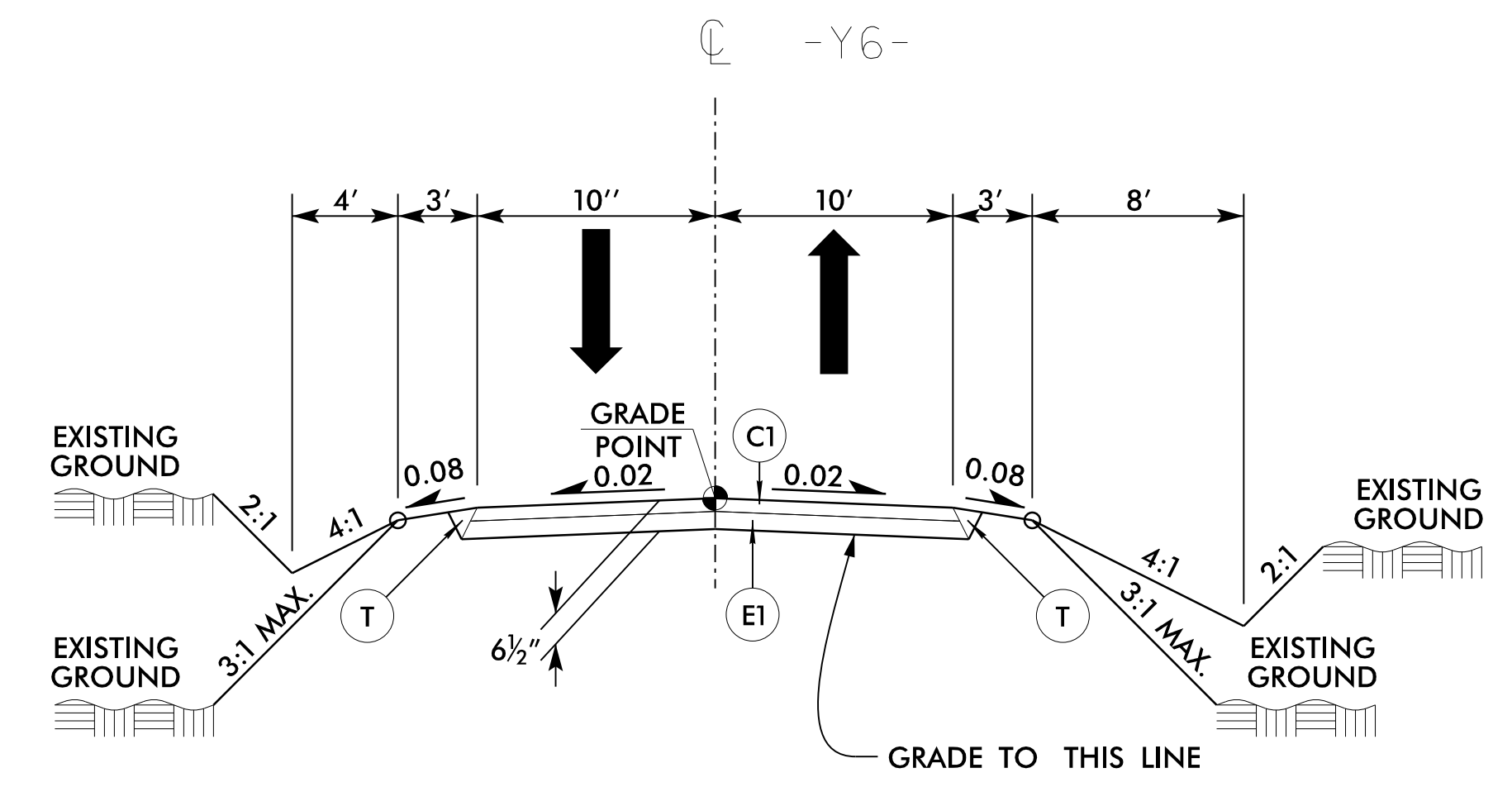
* USE 6' BERM -Y5- STA. 10+00.00 TO -Y5- STA. 12+00.00
 TRANSITION BERM FROM 6' TO 10':
 -Y5- STA. 12+00.00 TO -Y5- STA. 12+50.00



TYPICAL SECTION NO. 8

USE TYPICAL SECTION NO. 8

-Y5- STA. 10+00.00 TO -Y5- STA. 14+50.54

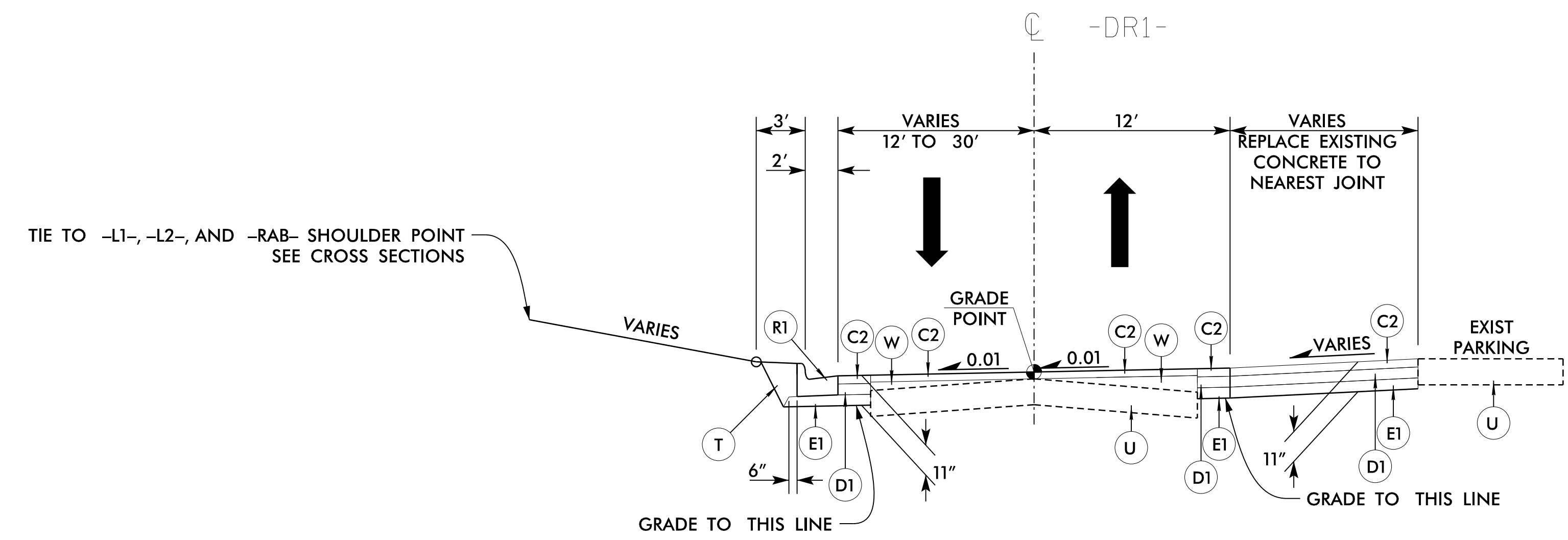


TYPICAL SECTION NO. 9

USE TYPICAL SECTION NO. 9

-Y6- STA. 10+85.00 TO -Y6- STA. 12+66.01

NOTE: TRANSITION FROM EXISTING TO TYPICAL SECTION NO. 9
 -Y6- STA. 10+50.00 TO -Y6- STA. 10+85.00



TYPICAL SECTION NO. 10

USE TYPICAL SECTION NO. 10

-DR1- STA. 10+19.50 TO -DR1- STA. 13+06.49

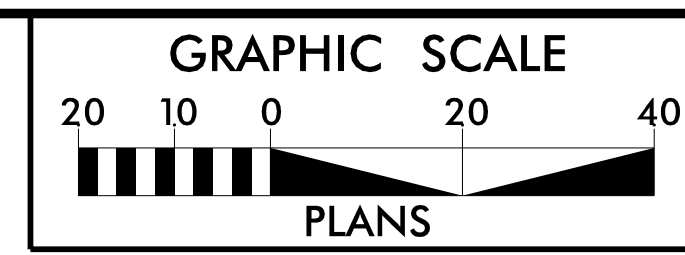
TIE TO -L1-, -L2-, AND -RAB- SHOULDER POINT
 SEE CROSS SECTIONS

PROJECT REFERENCE NO. U-5888	SHEET NO. 2A-4
ROADWAY DESIGN ENGINEER 9/30/2021 NORTH CAROLINA PROFESSIONAL SEAL 35016 JONATHAN C. JOHNSON	PAVEMENT DESIGN ENGINEER 9/30/2021 NORTH CAROLINA PROFESSIONAL SEAL 31026 JULIAN E. PROFFER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107	
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION	

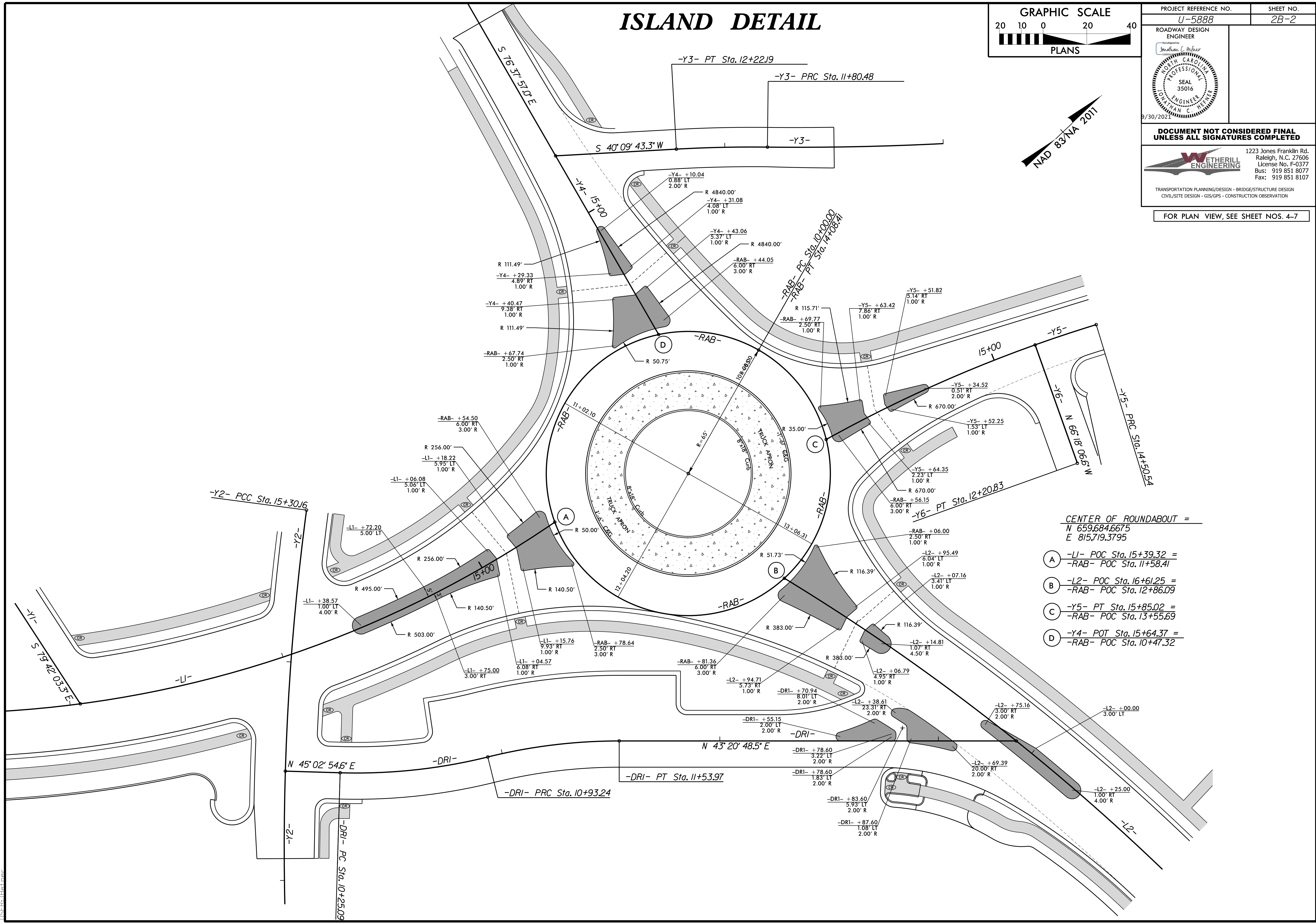
PAVEMENT SCHEDULE	
FINAL PAVEMENT DESIGN	
C1	2½" S9.5B
C2	3" S9.5B
C3	3" S9.5C
C4	VAR. S9.5B
C5	VAR. S9.5C
D1	4" I19.0C
D2	VAR. I19.0C
E1	4" B25.0C
E2	VAR. B25.0C
R1	2'-6" C & G
R2	1'-6" C & G
R3	12" TRUCK APRON
R4	8"x18" CURB
R5	5" MCI
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V	3" MILLING
W	WEDGING

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ISLAND DETAIL



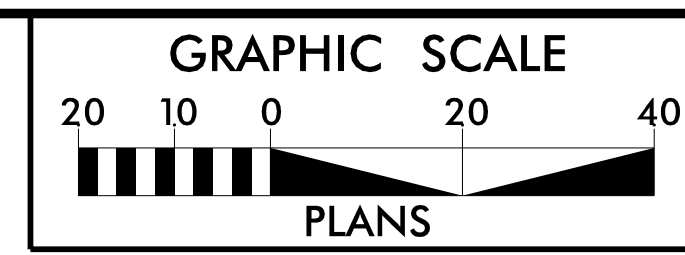
PROJECT REFERENCE NO. U-5888	SHEET NO. 2B-2
ROADWAY DESIGN ENGINEER <i>Jonathan C. Heiser</i>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107	
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION	
FOR PLAN VIEW, SEE SHEET NOS. 4-7	



- CENTER OF ROUNDABOUT =
 N 659,684.6675
 E 815,719.3795
- (A) -L1- POC Sta. 15+39.32 =
-RAB- POC Sta. 11+58.41
 - (B) -L2- POC Sta. 16+61.25 =
-RAB- POC Sta. 12+86.09
 - (C) -Y5- PT Sta. 15+85.02 =
-RAB- POC Sta. 13+55.69
 - (D) -Y4- POT Sta. 15+64.37 =
-RAB- POC Sta. 10+47.32

9/28/2021 15888_rdy_psh_02B-2.dgn
 JCH:JCH

BACK OF CURB ALIGNMENTS



PROJECT REFERENCE NO. U-5888	SHEET NO. 2B-3
ROADWAY DESIGN ENGINEER <i>Jonathan L. Peifer</i>	

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

WETHERILL ENGINEERING
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. E-03777
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

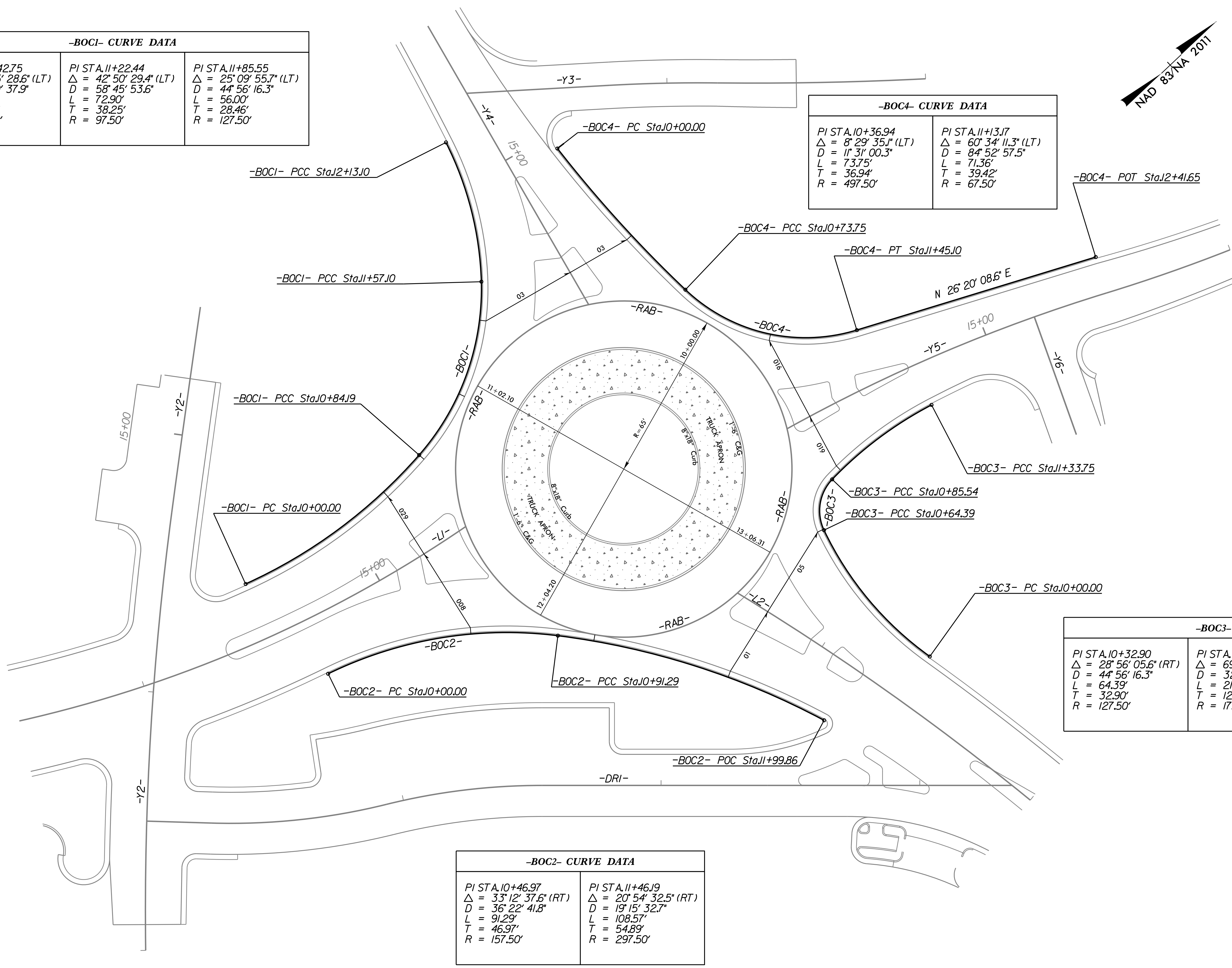
FOR PROFILES, SEE SHEET NO. 12

-BOC1- CURVE DATA		
PI STA.10+42.75 $\Delta = 24^{\circ} 25' 28.6"$ (LT) D = 29' 00" 37.9" L = 84.19' T = 42.75' R = 197.50'	PI STA.11+22.44 $\Delta = 42^{\circ} 50' 29.4"$ (LT) D = 58' 45" 53.6" L = 72.90' T = 38.25' R = 97.50'	PI STA.11+85.55 $\Delta = 25^{\circ} 09' 55.7"$ (LT) D = 44' 56" 16.3" L = 56.00' T = 28.46' R = 127.50'

-BOC4- CURVE DATA	
PI STA.10+36.94 $\Delta = 8^{\circ} 29' 35.1"$ (LT) D = 11' 31" 00.3" L = 73.75' T = 36.94' R = 497.50'	PI STA.11+13.17 $\Delta = 60^{\circ} 34' 11.3"$ (LT) D = 84' 52" 57.5" L = 71.36' T = 39.42' R = 67.50'

-BOC3- CURVE DATA		
PI STA.10+32.90 $\Delta = 28^{\circ} 56' 05.6"$ (RT) D = 44' 56" 16.3" L = 64.39' T = 32.90' R = 127.50'	PI STA.10+76.47 $\Delta = 69^{\circ} 14' 40.8"$ (RT) D = 327' 24" 16.0" L = 2115' T = 12.08' R = 17.50'	PI STA.11+09.86 $\Delta = 18^{\circ} 43' 45.7"$ (RT) D = 38' 50" 40.5" L = 48.22' T = 24.33' R = 147.50'

-BOC2- CURVE DATA	
PI STA.10+46.97 $\Delta = 33^{\circ} 12' 37.6"$ (RT) D = 36' 22" 41.8" L = 91.29' T = 46.97' R = 157.50'	PI STA.11+46.19 $\Delta = 20^{\circ} 54' 32.5"$ (RT) D = 19' 15" 32.7" L = 108.57' T = 54.89' R = 297.50'



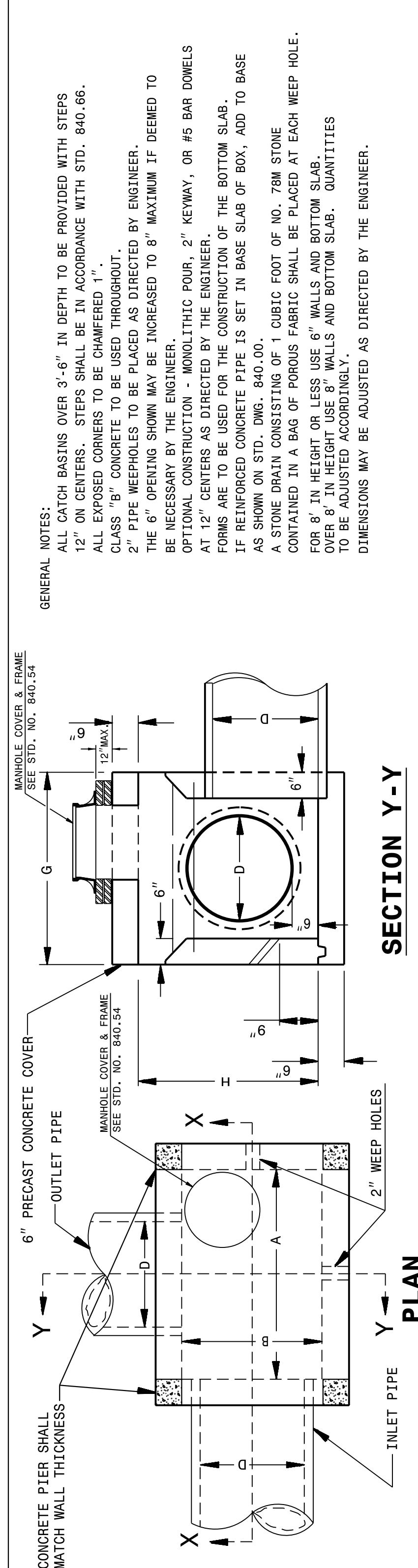
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24-APR-2019 07:24
 S:\Contracts\Contractors\Special Details\jhover-ton\840d04 3 or 4 side OTCB.dgn
 jhover-ton AT CSD-292595

5/14/99

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

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



ENGLISH DETAIL DRAWING FOR
CONCRETE CATCH BASIN
 (3 OR 4 SIDE OPEN THROAT)
 (MANHOLE OPTIONAL)

ENGLISH DETAIL DRAWING FOR
CONCRETE CATCH BASIN
 (3 OR 4 SIDE OPEN THROAT)
 (MANHOLE OPTIONAL)

SHEET 1 OF 2
840D04

SHEET 1 OF 2
840D04

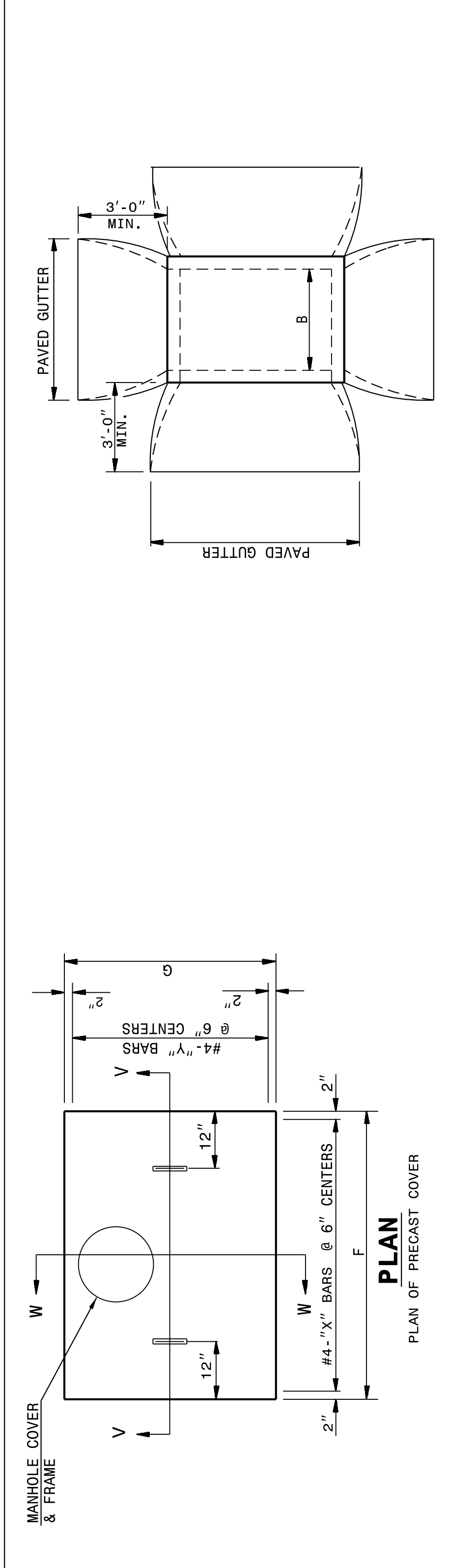
PART SECTION Y-Y
 SHOWING METHOD OF CONSTRUCTION
 IF INCREASED OPENING IS USED

PART SECTION Y-Y
 SHOWING METHOD OF
 CONSTRUCTION FOR 6" OPENING

PIPE DIM'S OF BOX & PIPE	MIN. DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN (BASED ON MIN. HEIGHT, H)				TOTAL QUANTITIES		DEDUCTION ONE PIPE 6" THROAT OPENING									
	REINFORCING		DIMENSIONS		BOX & SLABS	R. C.										
PIPE	SPAN	WIDTH	HEIGHT	BAIRS - X	BAIRS - Y	BAIRS - Z	NO. LENGTH	NO. LENGTH	CU. YDS. CONC.	TOP SLAB (BOT. SLAB)	REIN. (FT. H)	REIN. (YD ³)	R. C.			
12"	3'-6"	2'-3"	1'-10"	4	3'-0"	6	4'-3"	4'-6"	0.181	0.271	0.250	27	1.046	0.015	0.032	0.046
15"	3'-6"	2'-3"	2'-1"	4	3'-0"	6	4'-3"	4'-6"	0.181	0.271	0.250	27	1.108	0.023	0.036	0.046
18"	4'-0"	2'-8"	2'-4"	5	3'-5"	7	4'-9"	5'-0"	0.226	0.340	0.284	35	1.379	0.033	0.049	0.053
24"	4'-0"	2'-8"	2'-10"	5	3'-5"	7	4'-9"	5'-0"	0.226	0.340	0.284	35	1.521	0.059	0.085	0.083
30"	4'-0"	3'-6"	3'-4"	5	4'-3"	9	4'-9"	5'-0"	0.278	0.417	0.315	43	1.916	0.092	0.127	0.053
36"	5'-0"	4'-6"	4'-4"	5	5'-3"	12	5'-9"	6'-0"	0.340	0.510	0.352	51	2.390	0.132	0.178	0.069
42"	5'-0"	4'-6"	4'-4"	5	5'-3"	12	5'-9"	6'-0"	0.407	0.611	0.389	64	2.914	0.180	0.243	0.066
48"	5'-0"	5'-0"	4'-10"	5	5'-9"	13	5'-9"	6'-0"	0.444	0.666	0.407	68	3.298	0.235	0.317	0.066

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

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



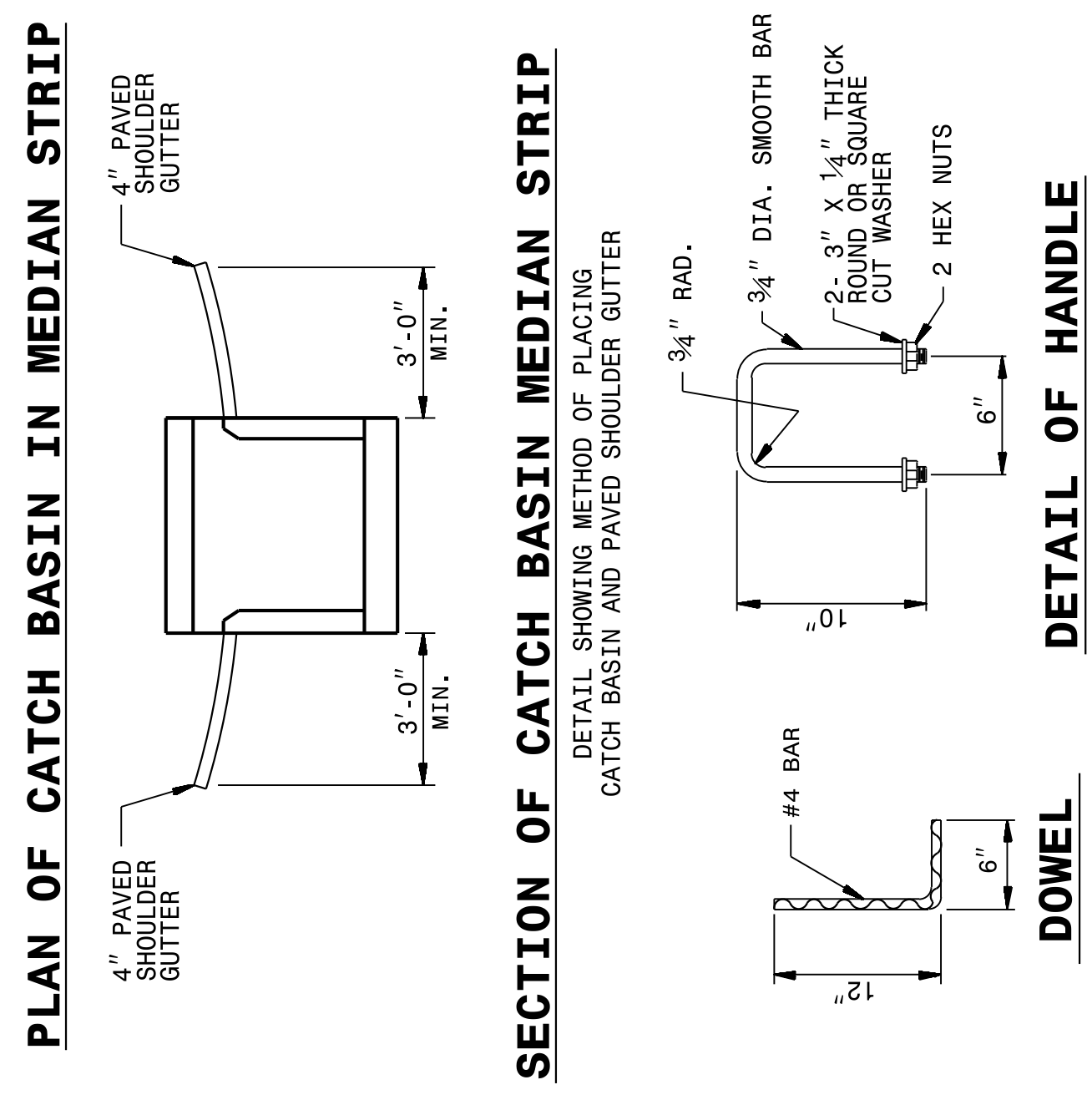
ENGLISH DETAIL DRAWING FOR
CONCRETE CATCH BASIN
 (3 OR 4 SIDE OPEN THROAT)
 (MANHOLE OPTIONAL)

ENGLISH DETAIL DRAWING FOR
CONCRETE CATCH BASIN
 (3 OR 4 SIDE OPEN THROAT)
 (MANHOLE OPTIONAL)

SHEET 2 OF 2
840D04

SHEET 2 OF 2
840D04

SECTION OF CATCH BASIN MEDIAN STRIP
 DETAIL SHOWING METHOD OF PLACING
 CATCH BASIN AND PAVED SHOULDER GUTTER



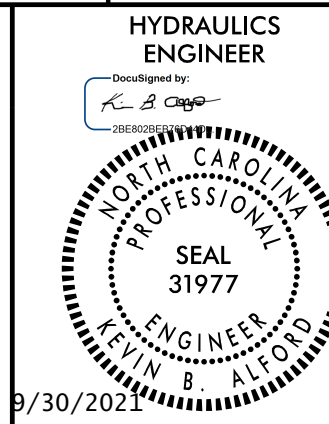

CONTRACT STANDARDS
 AND DEVELOPMENT UNIT
 Office 919-707-6950 FAX 919-250-4119

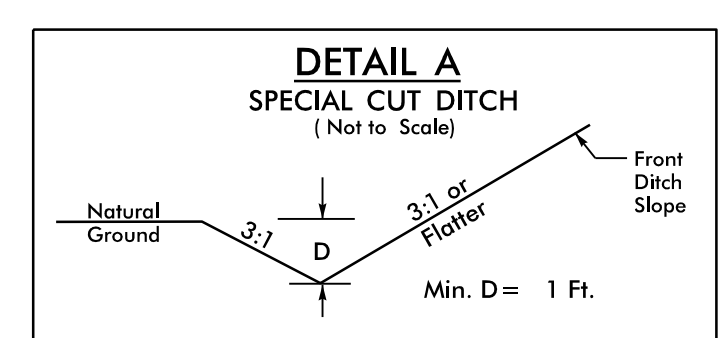
SEE PLATE FOR TITLE

ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: rnbritt DATE: 07-03-2014
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: details/rnbritt/english/hydro/840d04.dgn

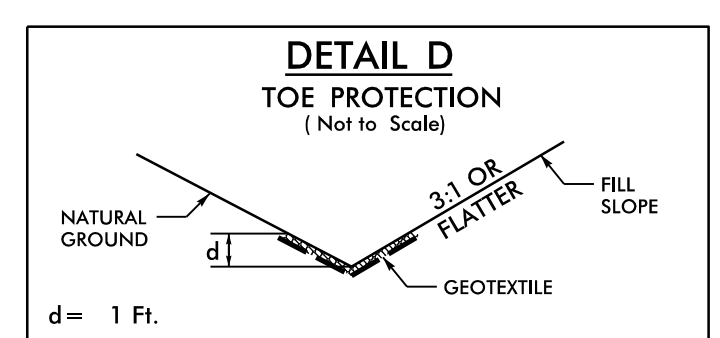


DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

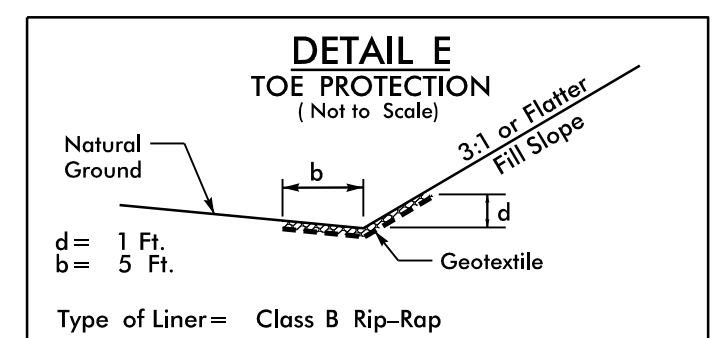
PROJECT REFERENCE NO. U-5888	SHEET NO. 2D-1
HYDRAULICS ENGINEER  KEVIN B. ALFORD	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107	
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION	



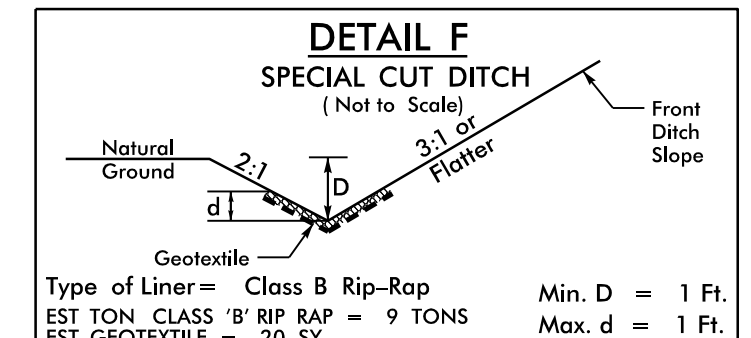
FROM -L1- STA. 11+00 TO STA. 11+65 RT.
 FROM -Y5- STA. 13+00 TO STA. 14+29 LT.
 FROM -Y6- STA. 11+50 TO STA. 12+37 RT.



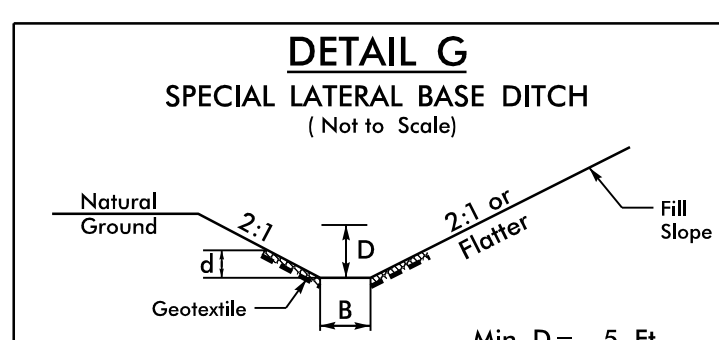
FROM -Y6- STA. 11+77 TO STA. 12+03 LT.



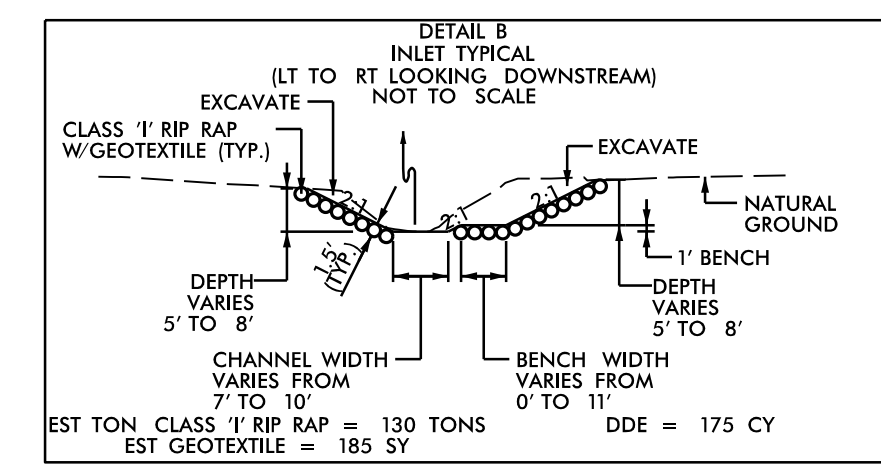
FROM -Y6- STA. 12+03 TO STA. 12+31 LT.



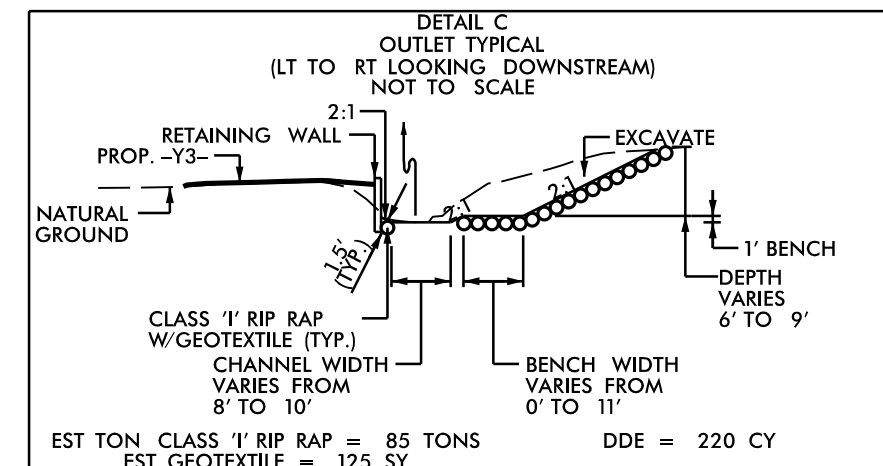
FROM -Y6- STA. 11+50 TO STA. 11+77 LT.



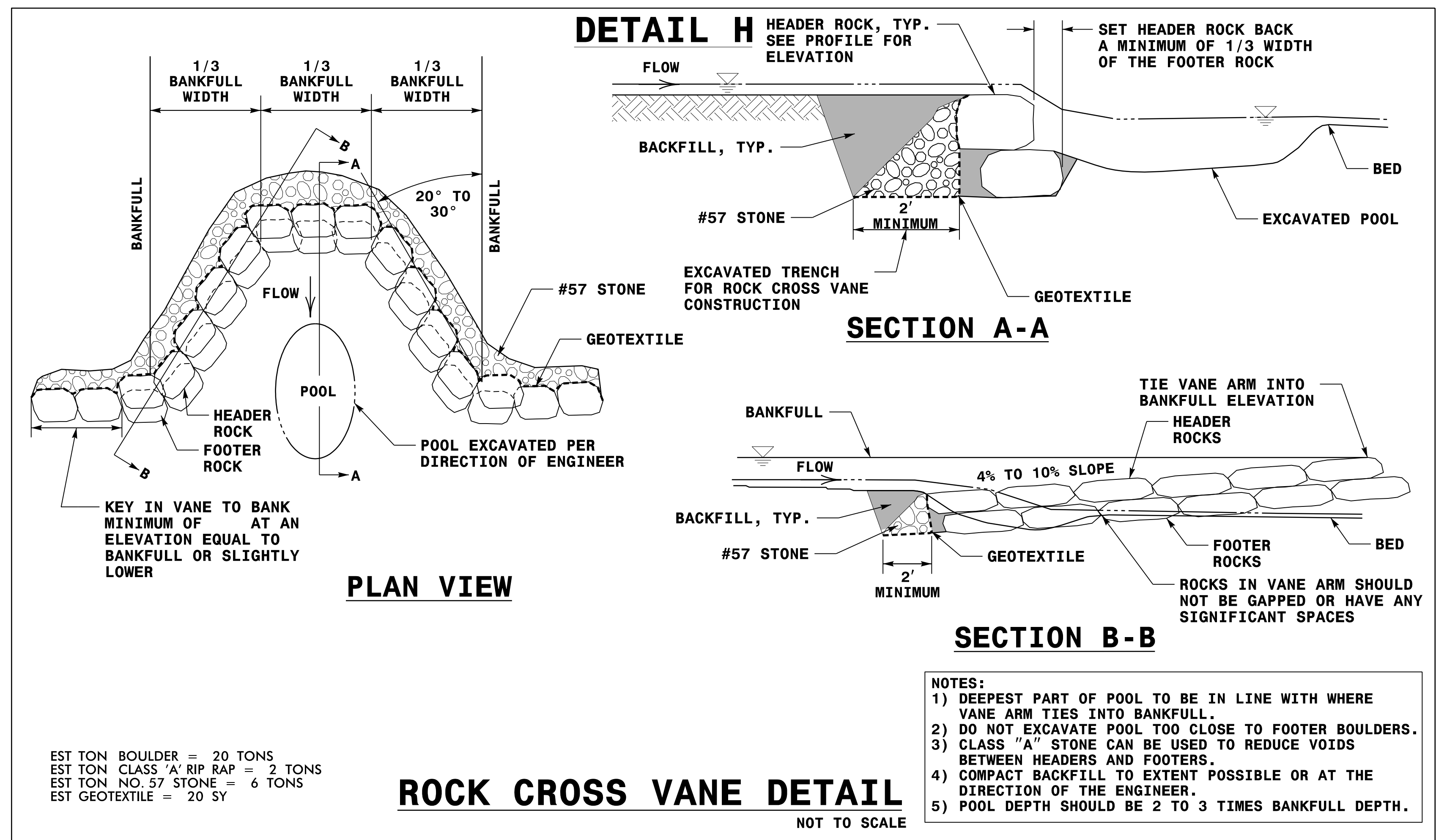
FROM -Y5- STA. 12+04 TO STA. 13+39 RT.



FROM -Y4- STA. 14+38 TO STA. 14+97 RT.



FROM -Y4- STA. 15+12 TO STA. 15+62 LT.



-Y5- STA. 12+07 RT.

9/28/2021 15:58:08_rdy_psh_02D-1.dgn
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12/06/07

COMPUTED BY: JCH DATE: 20210923
 CHECKED BY: GSP DATE: 20210927

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. SHEET NO.
 U-5888 3B-1

★ APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW 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
-RAB- 10+00.00	-RAB- 14+08.41	34	3,593	3,559	
-L1- 10+60.00	-L1- 15+20.00	315	988	673	
-L2- 16+75.00	-L2- 22+80.00	140	214	74	
-Y1- 10+44.00	-Y1- 11+20.00	22	18		4
-Y2- 14+78.00	-Y2- 15+58.00	2	66	64	
-Y2- 16+35.00	-Y2- 16+90.00	2	58	56	
-Y3- 11+50.00	-Y3- 12+35.00	2	30	28	
-Y4- 14+00.00	-Y4- 15+50.00	34	401	367	
-Y5- 10+00.00	-Y5- 15+75.00	789	3,658	2,869	
-Y6- 10+50.00	-Y6- 12+43.00	229	1,165	936	
-DR1- 10+25.00	-DR1- 12+92.37	147	274	127	
TOTALS:		1,716	10,465	8,753	4
WASTE IN LIEU OF BORROW				-4	-4
PROJECT TOTAL		1,716	10,465	8,749	
5% TO REPLACE TOP SOIL ON BORROW PIT				437	
GRAND TOTAL:		1,716		9,186	
SAY:		1,800		10,000	

ESTIMATED DRAINAGE DITCH EXCAVATION = 400 CY
 ESTIMATED UNDERCUT = 400 CY
 ESTIMATED SHALLOW UNDERCUT = 442 CY

Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

★ PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD ²
-L1-	10+60.00	10+90.00	LT	3.30
-L1-	11+20.00	13+80.00	RT	195.23
-L1-	13+99.00	14+55.00	RT	140.47
-L2-	16+00.00	19+20.00	LT	691.49
-L2-	17+50.00	18+63.00	RT	84.42
-L2-	20+65.00	21+40.00	LT	4.53
-Y1-	10+44.00	11+25.00	RT	17.74
-Y1-	10+44.00	11+49.00	LT	26.50
-Y2-	14+78.00	15+57.00	LT	17.16
-Y2-	15+30.00	15+78.00	RT	5.31
-Y2-	16+63.00	16+90.00	LT	4.91
-Y4-	14+00.00	15+58.00	LT	42.60
-Y5-	10+60.00	13+39.00	RT	703.46
-Y6-	10+50.00	11+80.00	CL	373.02
-DR1-	10+57.00	11+88.00	LT	75.88
TOTAL:				2386.02
SAY:				2500

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12/06/07

COMPUTED BY: REK	DATE: 05/31/18
CHECKED BY: SSL	DATE: 05/31/18

PROJECT REFERENCE NO.	SHEET NO.
U-5888	36-1

(1-16-18)

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
CONTINGENCY				SD	200
TOTAL LF:					200

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


SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	Station	Station	Aggregate Type* ASU/AST	Aggregate Thickness INCHES	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Soil Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
-L2-	19+25	20+25	ASU	24	54	116	88		
-Y5-	11+25	12+75	ASU	24	288	564	427		
CONTINGENCY					100	100	200		
TOTAL CY/TONS/SY:					442	780**	715**	0	0

*ASU = Aggregate Subgrade
*AST = Aggregate Stabilization

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

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>U-5888</i>	SHEET NO. <i>3P-1</i>
	
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PARCEL INDEX

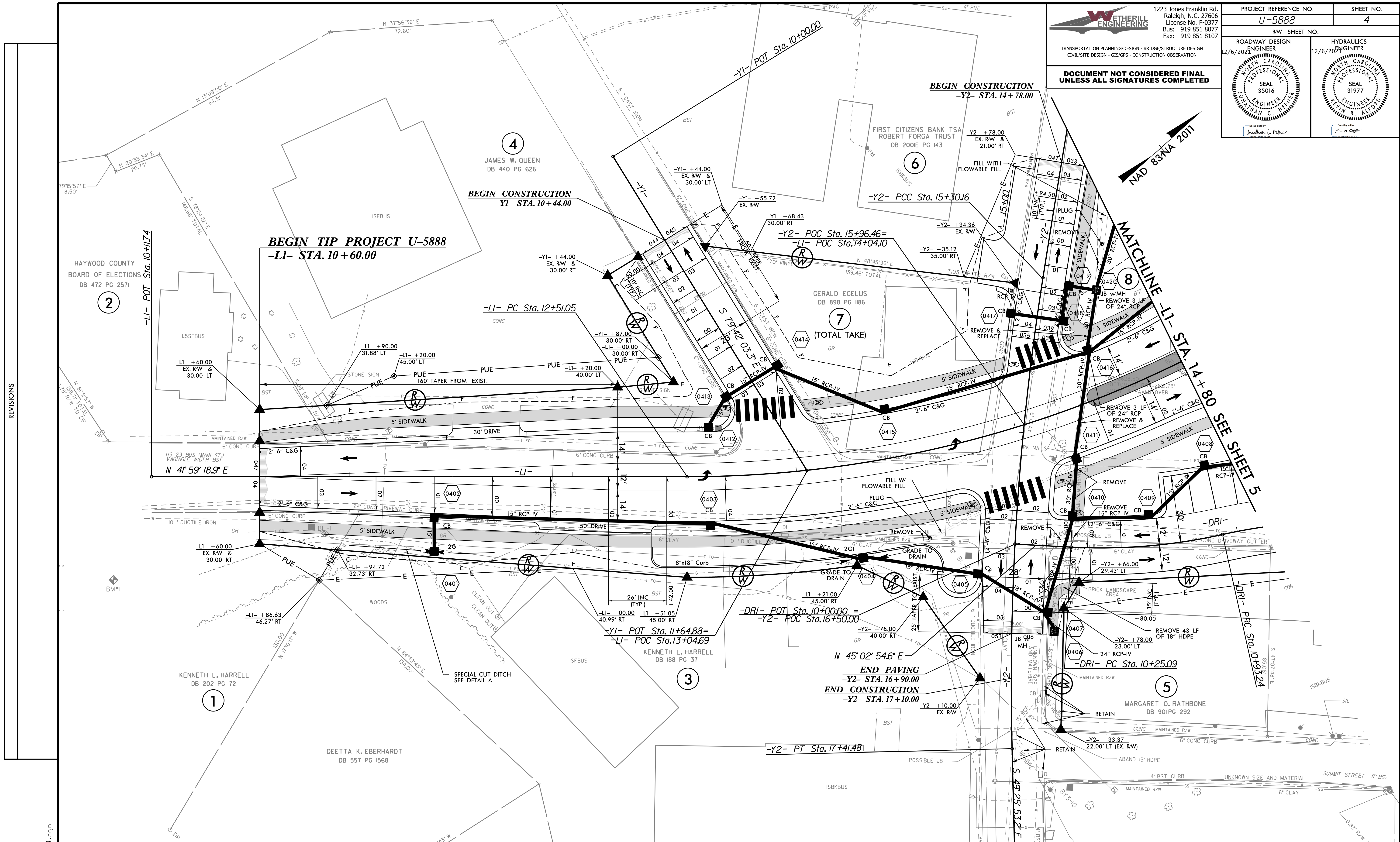
PARCEL No.	SHEET No.	PROPERTY OWNER NAME
1	4	KENNETH L. HARRELL
2	4	HAYWOOD COUNTY BOARD OF ELECTIONS
3	4	KENNETH L. HARRELL
4	4	JAMES W. QUEEN
5	4	MARGARET Q. RATHBONE
6	4,5	FIRST CITIZENS BANK TSA ROBERT FORGA TRUST
7	4	GERALD EGELUS
8	4,5	CLIFFORD GOULD LLC
9	5	TOWN OF WAYNESVILLE
10	5,6	SHARON B. MASSIE
11	5,6,7	DEREK S. OATES
12	6	CLIFFORD GOULD LLC
13	6,7	WILLIAM L. NORRIS
14	5	CHARLES E. WARREN
15	7	TOWN OF WAYNESVILLE
16	7	BETTE H. EDWARDS
17	7	TIMOTHY F. LINDSEY
18	7	BRENDA J. MORROW
19	7	WILLIAM L. NORRIS
20	7	RODNEY D. LOWE
21	7	MOUNTAIN HIGH PROPERTIES & INV
22	4,5	REBECCA J. ROBINSON
23	5	WILLIAM L. NORRIS
24	6	TOWN OF WAYNESVILLE

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PROJECT REFERENCE NO. U-5888	SHEET NO. 4
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER 2/6/2021	2/6/2021



REVISIONS

-LI-	-Y2-	-DRI-	-DRI-
PI Sta 14+32.97 Δ = 39° 59' 11.5" (LT) D = 11' 27' 33.0" L = 348.95' T = 181.92' R = 500.00'	PI Sta 14+53.81 Δ = 1° 24' 07.8" (LT) D = 0' 55' 05.5" L = 152.71' T = 76.36' R = 6,240.08'	PI Sta 16+36.11 Δ = 10° 20' 55.4" (LT) D = 4' 53' 49.5" L = 211.32' T = 105.95' R = 1,170.00'	PI Sta 10+59.38 Δ = 15° 37' 08.5" (RT) D = 22' 55' 05.9" L = 68.15' T = 34.29' R = 250.00'
			PI Sta 11+23.76 Δ = 13° 55' 02.5" (RT) D = 22' 55' 05.9" L = 60.73' T = 30.51' R = 250.00'

LYNDA D. MACLEAN
 DB 649 PG. 475

FOR -LI- PROFILE, SEE SHEET NO. 8
 FOR -Y1- PROFILE, SEE SHEET NO. 10
 FOR -Y2- PROFILE, SEE SHEET NO. 10
 FOR -DRI- PROFILE, SEE SHEET NO. 12
 SEE SHEET NO. 2B-1 FOR INTERSECTION DETAILS
 SEE SHEET NO. 2D-1 FOR DRAINAGE DETAILS

12/6/2021 15888_rdy_psh_04.dgn

84.09' TOTAL

-RAB- PI Sta 10+00.00 Δ = 360° 00' 00.0" (LT) D = 88' 08" 50.5" L = 408.41' T = 0.00' R = 65.00'	-LI- PI Sta 14+32.97 Δ = 39° 59' 11.5" (LT) D = 11' 27" 33.0" L = 348.95' T = 181.92' R = 500.00'	-L2- PI Sta 17+73.02 Δ = 19° 37' 56.5" (RT) D = 5' 43" 46.5" L = 342.65' T = 173.02' R = 1,000.00'	-Y6- PI Sta 11+69.64 Δ = 86° 18' 51.6" (RT) D = 63' 39" 43.1" L = 135.58' T = 84.39' R = 90.00'	-DRI- PI Sta 11+23.76 Δ = 13° 55' 02.5" (RT) D = 22' 55" 05.9" L = 60.73' T = 30.51' R = 250.00'
-Y3- PI Sta 10+90.38 Δ = 7° 54' 21.7" (RT) D = 4' 22" 50.0" L = 180.48' T = 90.38' R = 1,307.96'	-Y5- PI Sta 12+01.34 Δ = 3° 48' 58.3" (LT) D = 9' 08" 59.6" L = 41.71' T = 20.86' R = 626.19'	-Y5- PI Sta 13+27.42 Δ = 22° 19' 53.1" (RT) D = 8' 57" 08.9" L = 249.44' T = 126.33' R = 640.00'	-Y5- PI Sta 15+49.01 Δ = 17° 29' 37.7" (LT) D = 8' 57" 08.9" L = 195.41' T = 98.47' R = 640.00'	

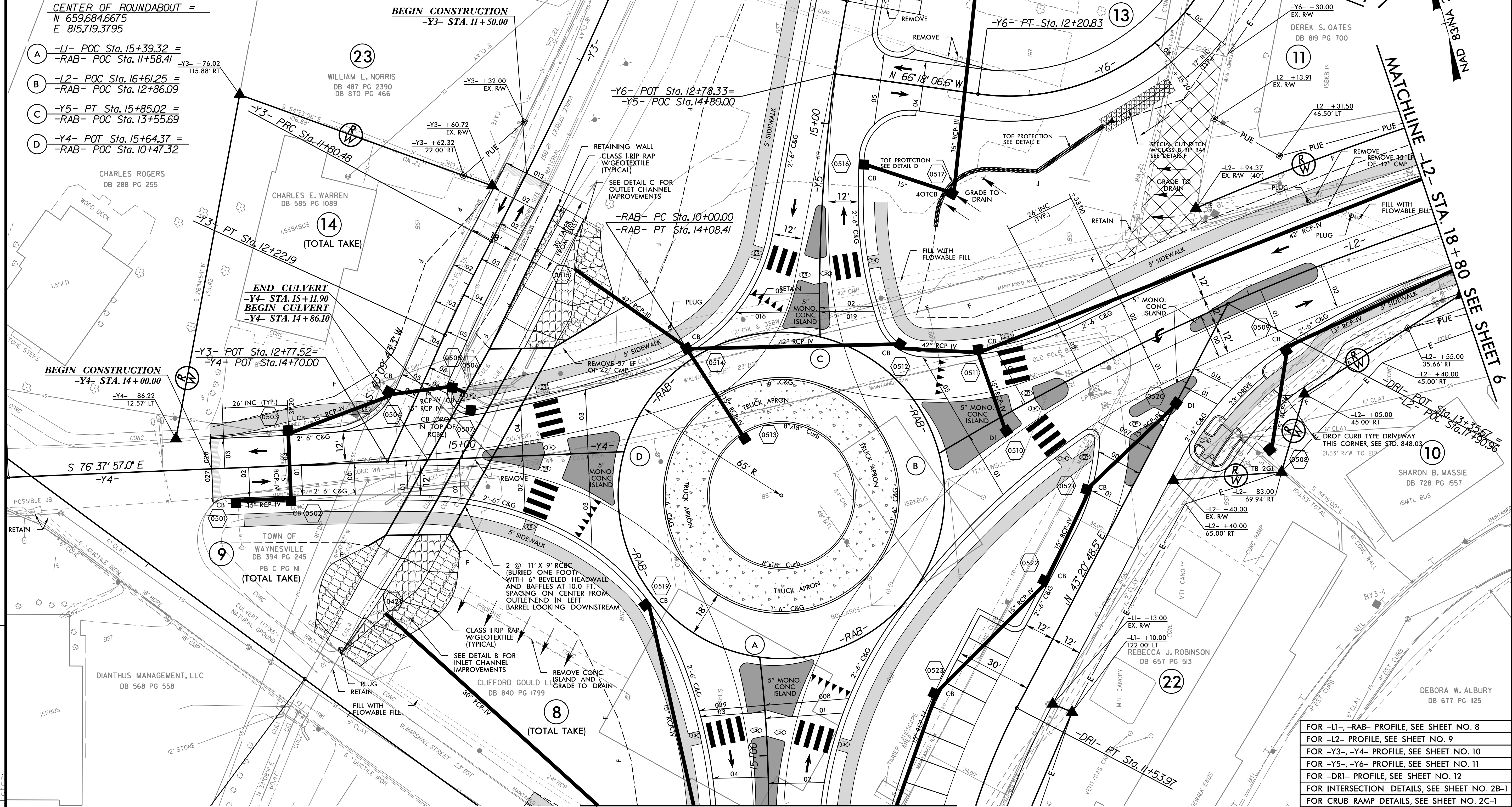
NOTE: FOR DRAINAGE STR NO. 507, SEE CULVERT PLANS, SHEET C3

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PROJECT REFERENCE NO. U-5888	SHEET NO. 5
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER 9/30/2021	9/30/2021



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PROJECT REFERENCE NO. U-5888	SHEET NO. 6
RW SHEET NO. 9/30/2021	HYDRAULICS ENGINEER 9/30/2021
ROADWAY DESIGN ENGINEER 9/30/2021	PROFESSIONAL ENGINEER SEAL 35016 KEVIN B. ALFORD

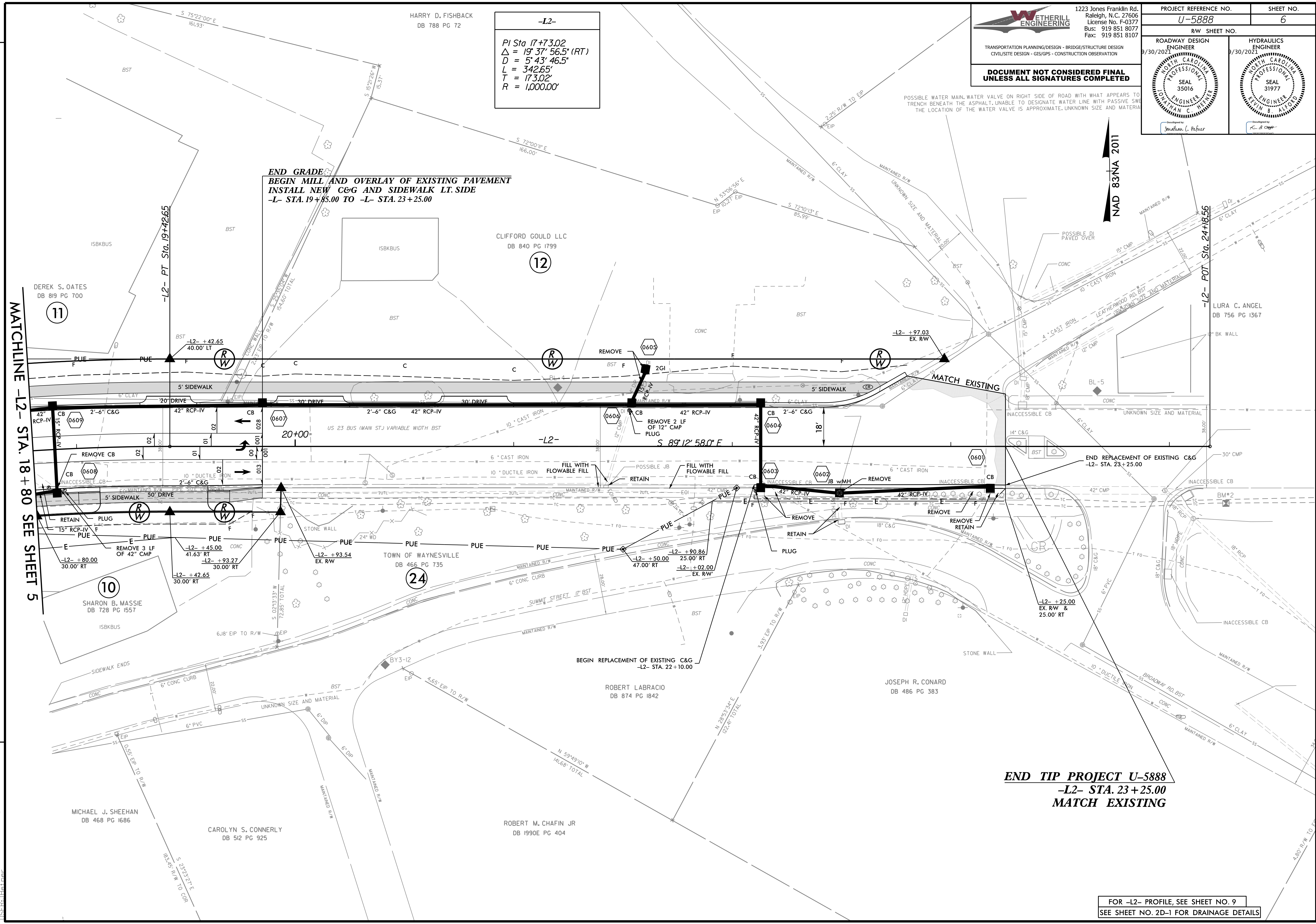
-L2-

PI Sta 17+73.02
 $\Delta = 19' 37" 56.5" (RT)$
 $D = 5' 43" 46.5"$
 $L = 342.65'$
 $T = 173.02'$
 $R = 1,000.00'$

**END GRADE
 BEGIN MILL AND OVERLAY OF EXISTING PAVEMENT
 INSTALL NEW C&G AND SIDEWALK LT. SIDE
 -L- STA. 19+85.00 TO -L- STA. 23+25.00**

POSSIBLE WATER MAIN WATER VALVE ON RIGHT SIDE OF ROAD WITH WHAT APPEARS TO BE TRENCH BENEATH THE ASPHALT. UNABLE TO DESIGNATE WATER LINE WITH PASSIVE SWG. THE LOCATION OF THE WATER VALVE IS APPROXIMATE. UNKNOWN SIZE AND MATERIAL.

NAD 83/NA 2011



MATCHLINE -L2- STA. 18 + 80 SEE SHEET 5

**END TIP PROJECT U-5888
 -L2- STA. 23 + 25.00
 MATCH EXISTING**

FOR -L2- PROFILE, SEE SHEET NO. 9
 SEE SHEET NO. 2D-1 FOR DRAINAGE DETAILS

REVISIONS

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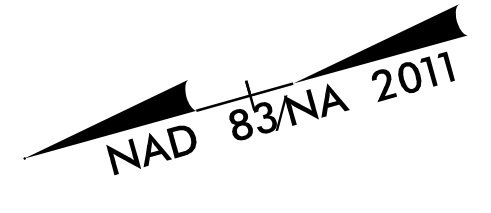
-Y5-		-Y6-	
PI Sta 10+23.34	PI Sta 11+24.13	PI Sta 13+27.42	PI Sta 11+69.64
$\Delta = 0^{\circ} 58' 56.1''$ (LT)	$\Delta = 1^{\circ} 03' 33.9''$ (LT)	$\Delta = 22^{\circ} 19' 53.1''$ (RT)	$\Delta = 86^{\circ} 18' 51.6''$ (RT)
D = 2' 06" 15.9"	D = 7' 09" 43.1"	D = 8' 57" 08.9"	D = 63' 39" 43.1"
L = 46.68'	L = 154.42'	L = 249.44'	L = 135.58'
T = 23.34'	T = 77.45'	T = 126.33'	T = 84.39'
R = 2,722.64'	R = 800.00'	R = 640.00'	R = 90.00'

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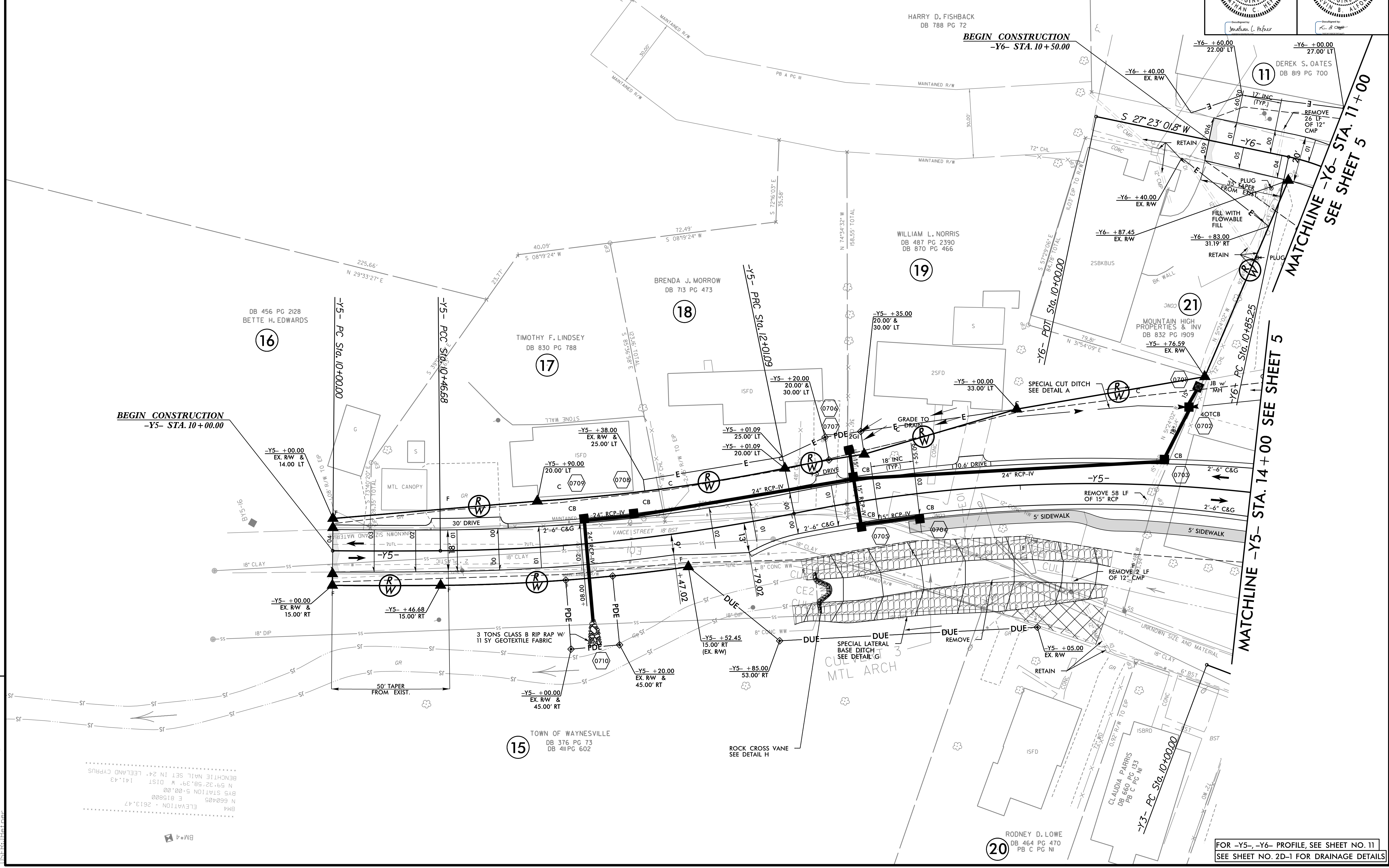
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PROJECT REFERENCE NO. U-5888	SHEET NO. 7
RW SHEET NO. 9/30/2021	HYDRAULICS ENGINEER 9/30/2021
ROADWAY DESIGN ENGINEER SEAL 35016 KEVIN S. ALFORD	HYDRAULICS ENGINEER SEAL 31977 DEREK S. OATES



REVISIONS



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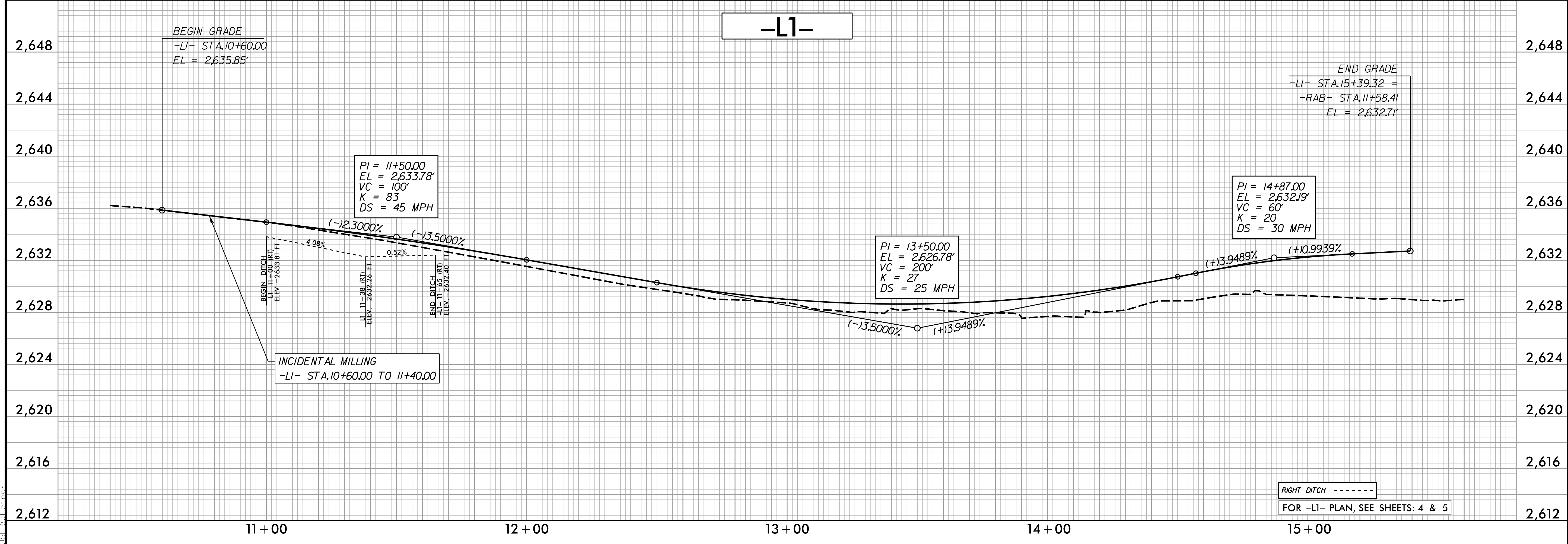
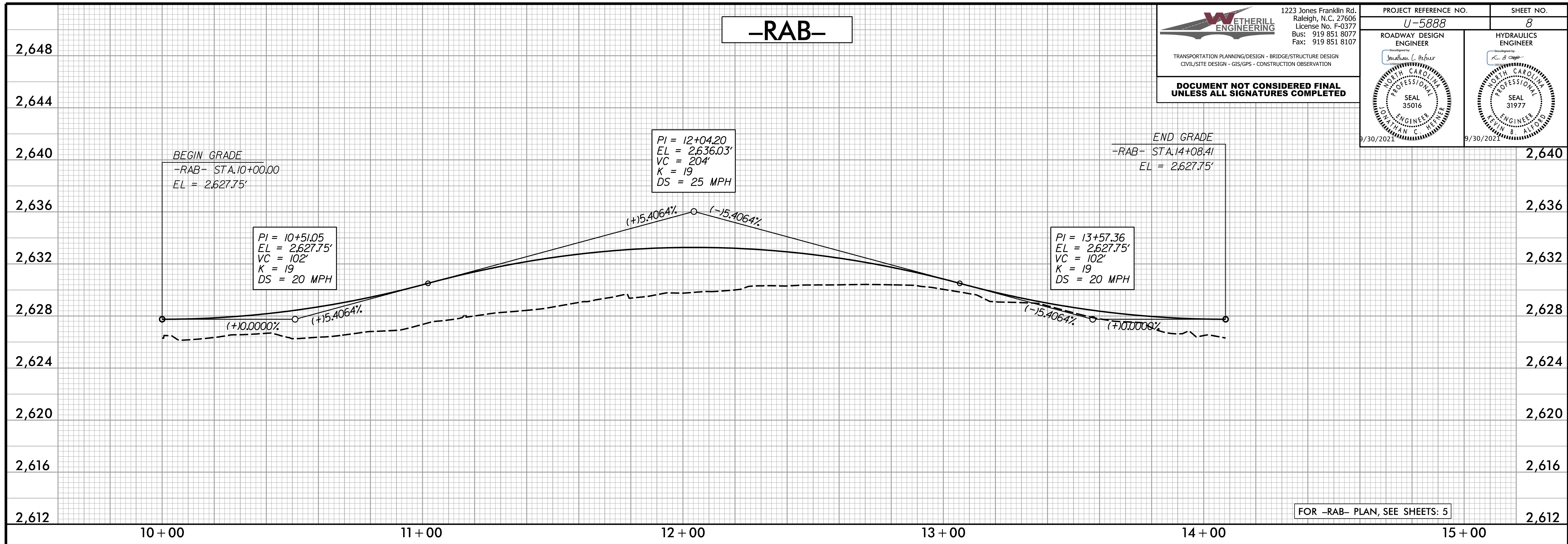
FOR -Y5-, -Y6- PROFILE, SEE SHEET NO. 11
 SEE SHEET NO. 2D-1 FOR DRAINAGE DETAILS

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PROJECT REFERENCE NO. U-5888	SHEET NO. 8
ROADWAY DESIGN ENGINEER <i>Jonathan C. Pfeifer</i>	HYDRAULICS ENGINEER <i>K. G. Goff</i>
SEAL 35016 JONATHAN C. PFEIFER ENGINEER	SEAL 31977 KEVIN ALFORD ENGINEER
9/30/2021	9/30/2021



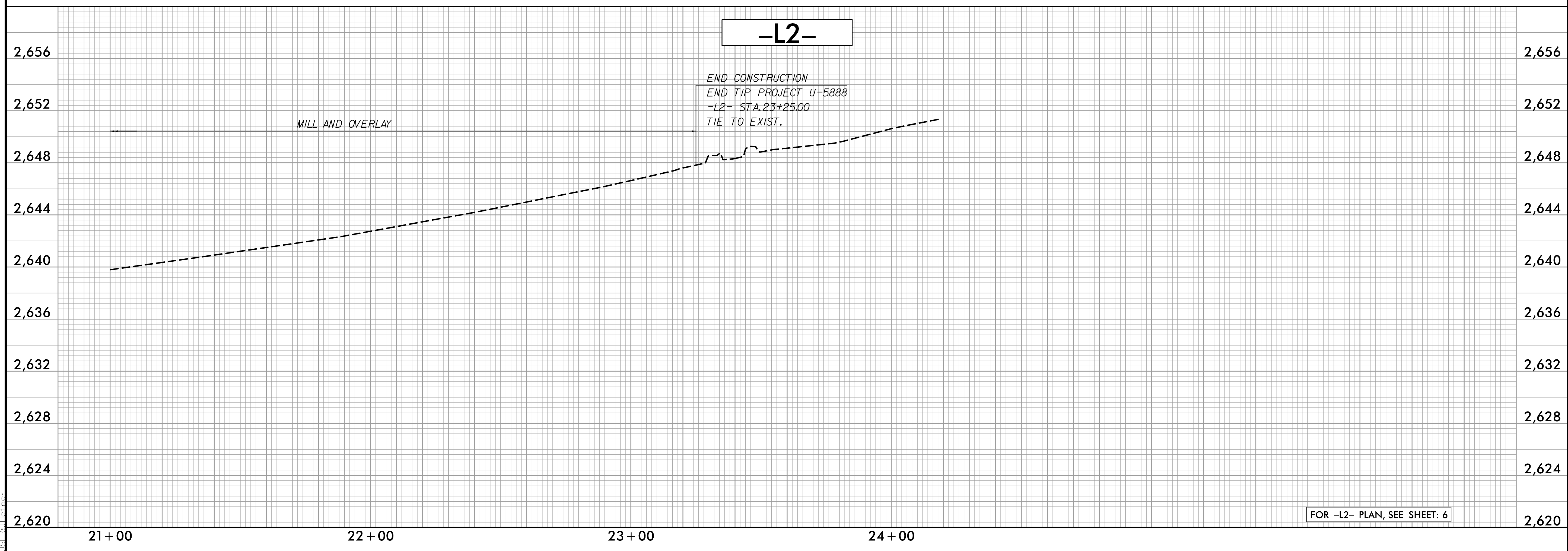
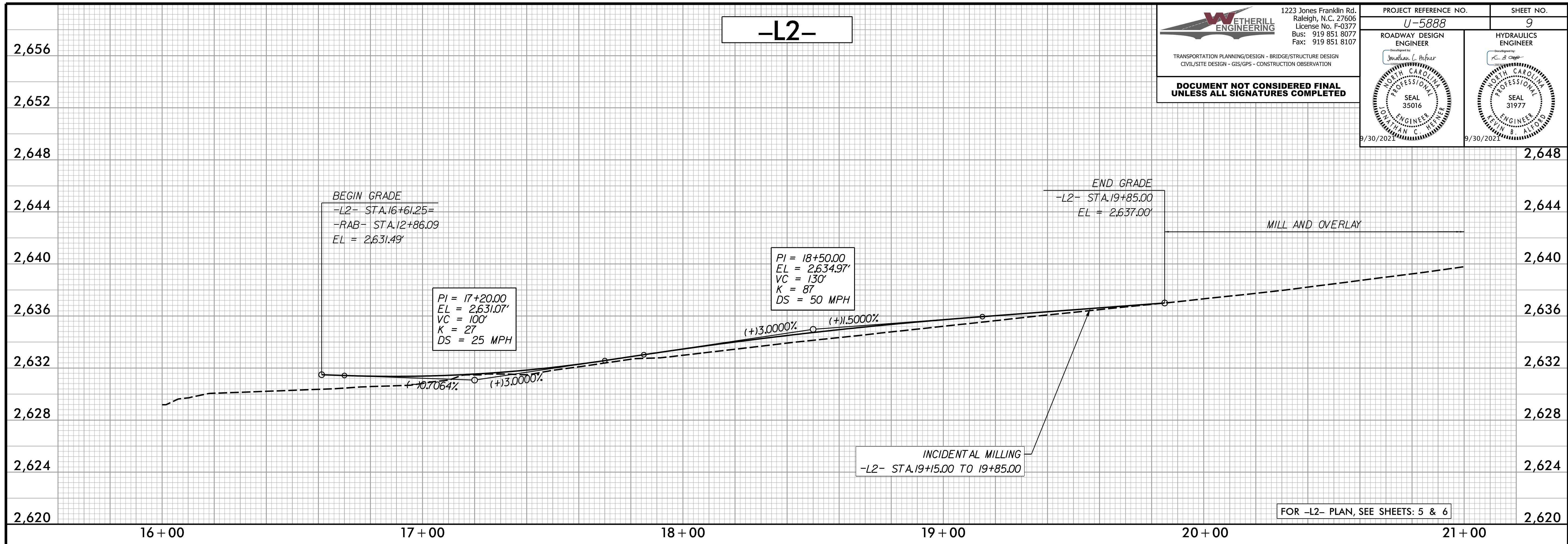
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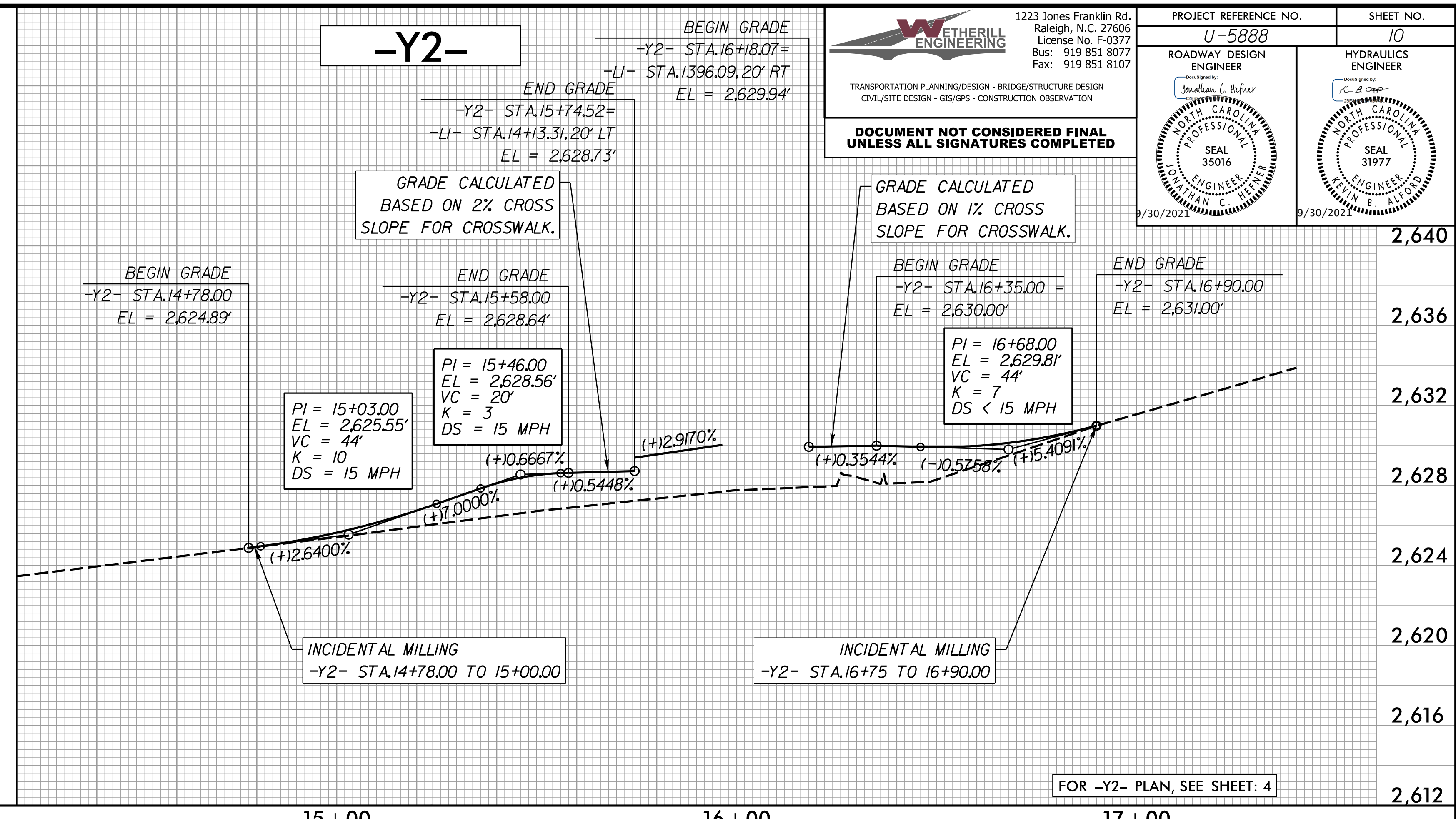
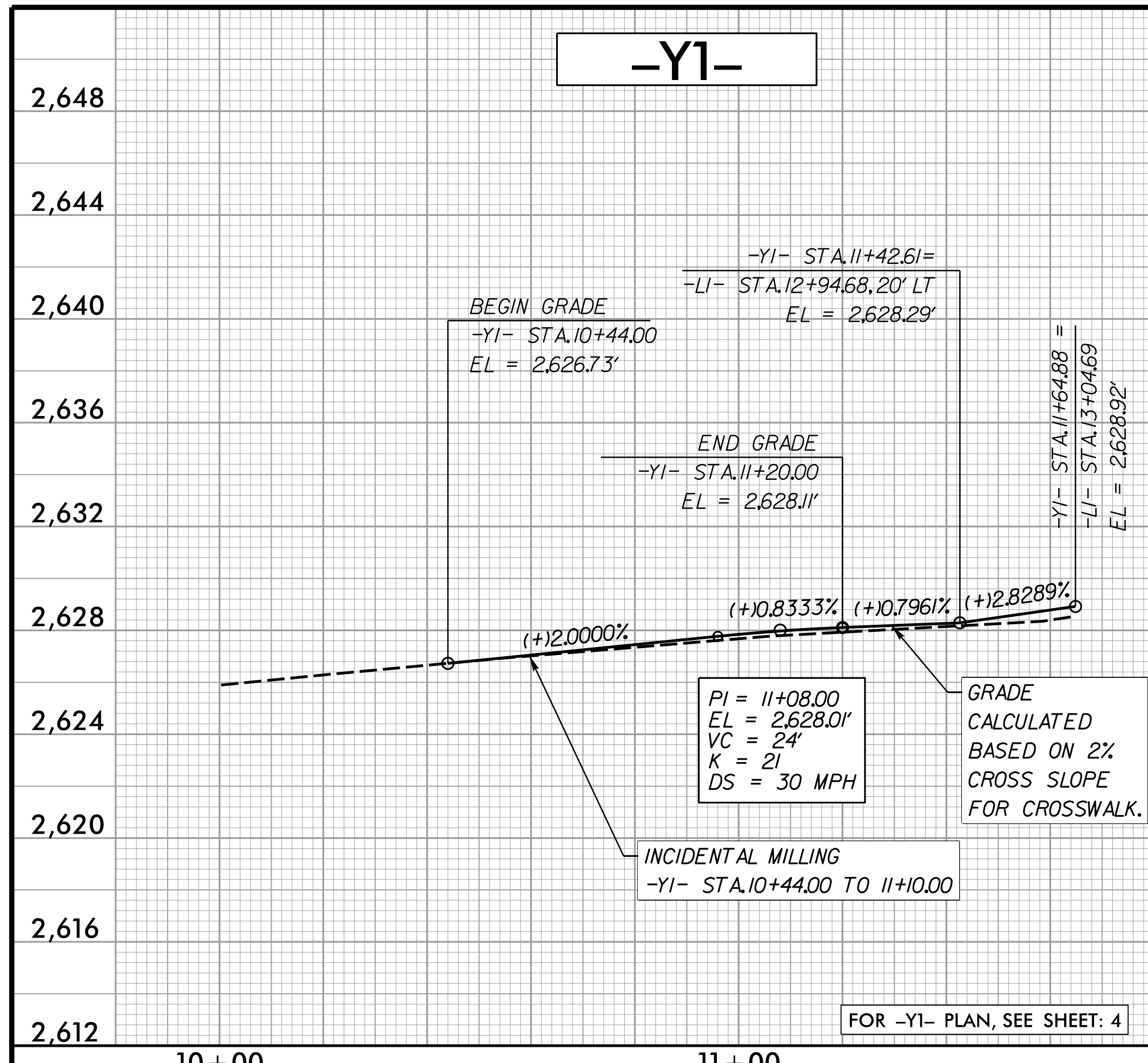
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PROJECT REFERENCE NO. U-5888	SHEET NO. 9
ROADWAY DESIGN ENGINEER <i>Jonathan C. Heiser</i>	HYDRAULICS ENGINEER <i>K. G. Goff</i>
SEAL 35016 JONATHAN C. HEISER 9/30/2021	SEAL 31977 KEVIN ALFORD 9/30/2021



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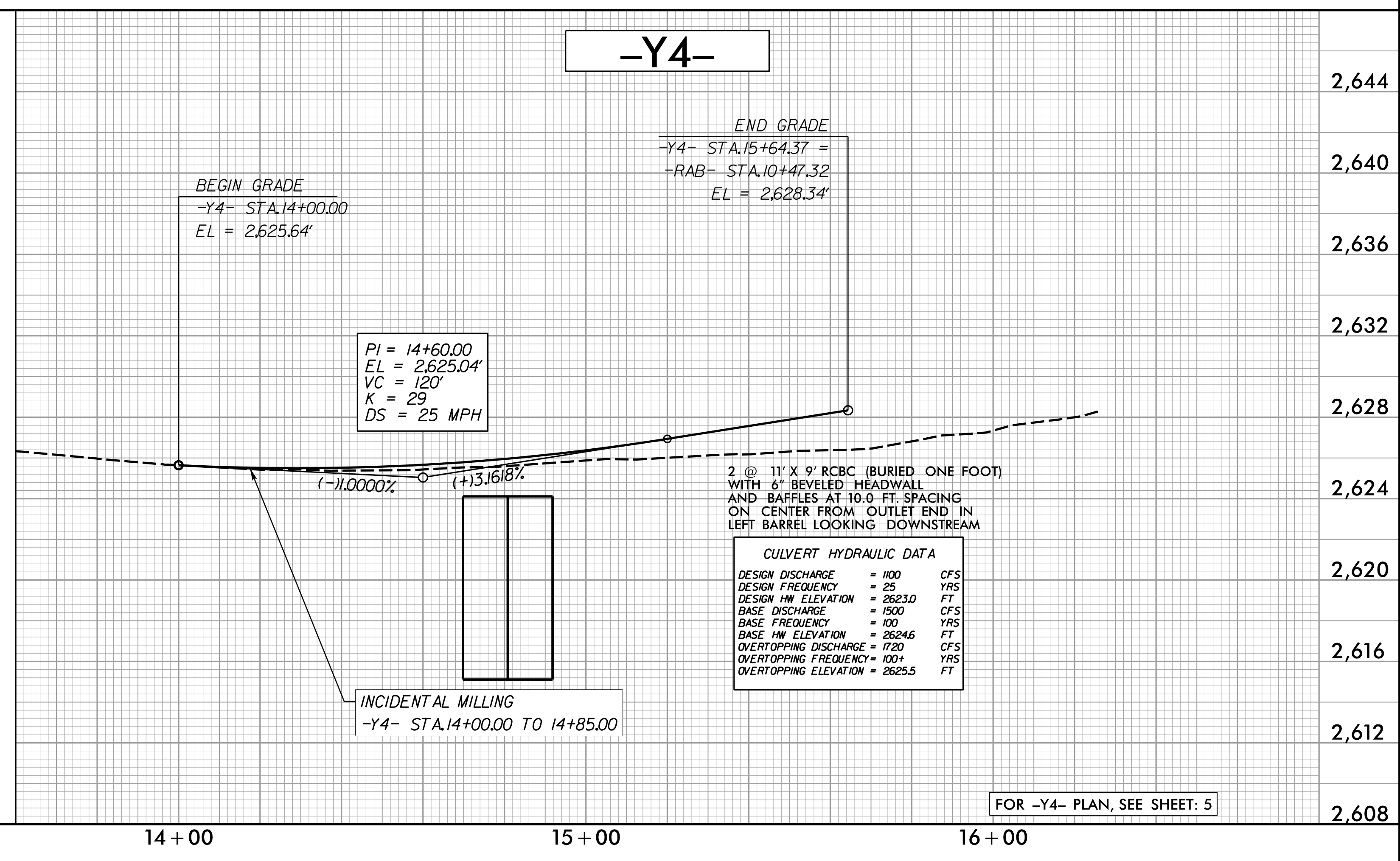
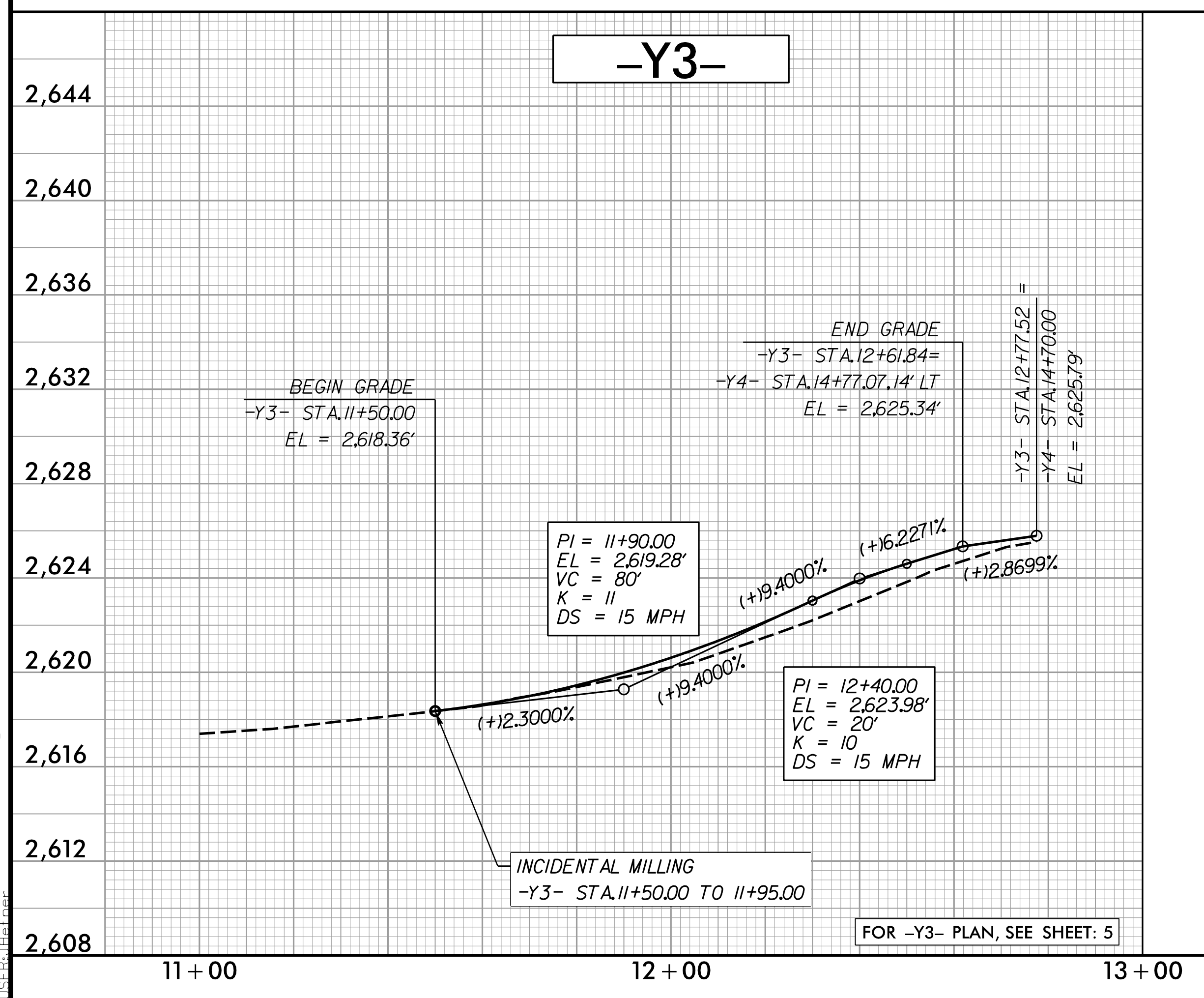
PROJECT REFERENCE NO. **U-5888**

SHEET NO. **10**

ROADWAY DESIGN ENGINEER
Jonathan L. Parker
SEAL 35016
9/30/2021

HYDRAULICS ENGINEER
K. S. Sipes
SEAL 31977
9/30/2021

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2 @ 11' X 9' RCBC (BURIED ONE FOOT) WITH 6" BEVELED HEADWALL AND BAFFLES AT 10.0 FT. SPACING ON CENTER FROM OUTLET END IN LEFT BARREL LOOKING DOWNSTREAM

CULVERT HYDRAULIC DATA	
DESIGN DISCHARGE	= 1100 CFS
DESIGN FREQUENCY	= 25 YRS
DESIGN HW ELEVATION	= 2623.0 FT
BASE DISCHARGE	= 1500 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 2624.6 FT
OVERTOPPING DISCHARGE	= 1720 CFS
OVERTOPPING FREQUENCY	= 100+ YRS
OVERTOPPING ELEVATION	= 2625.5 FT

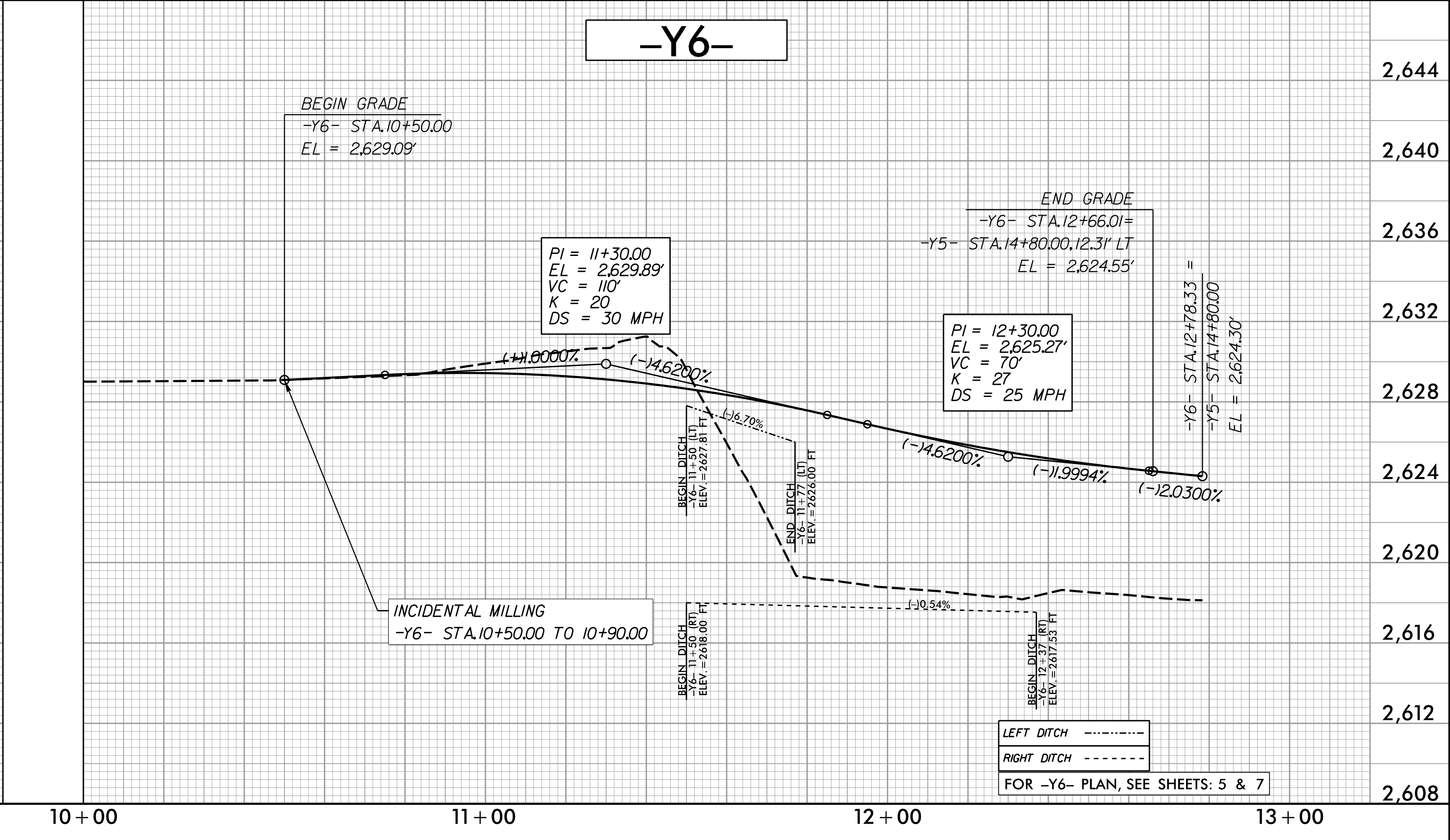
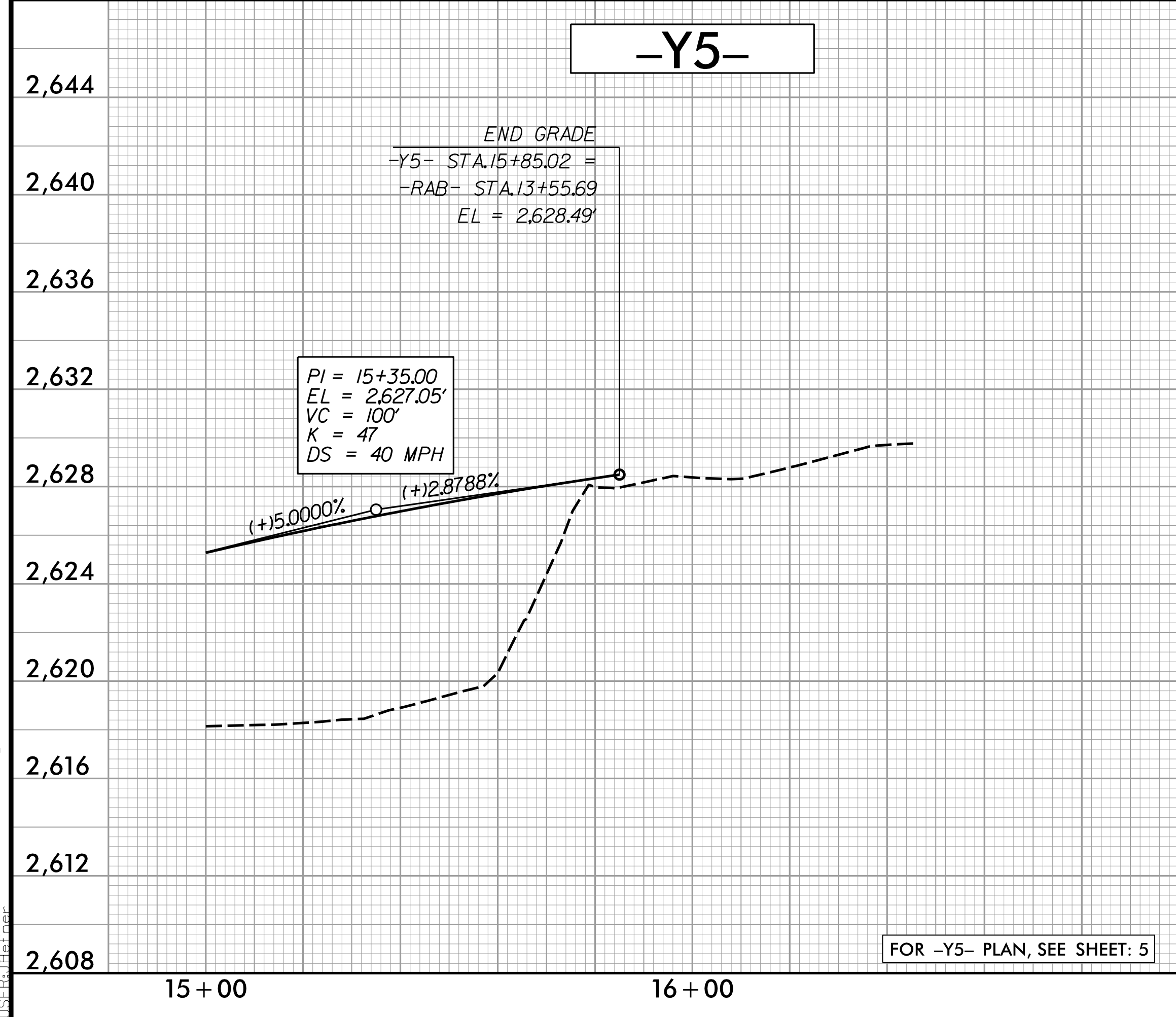
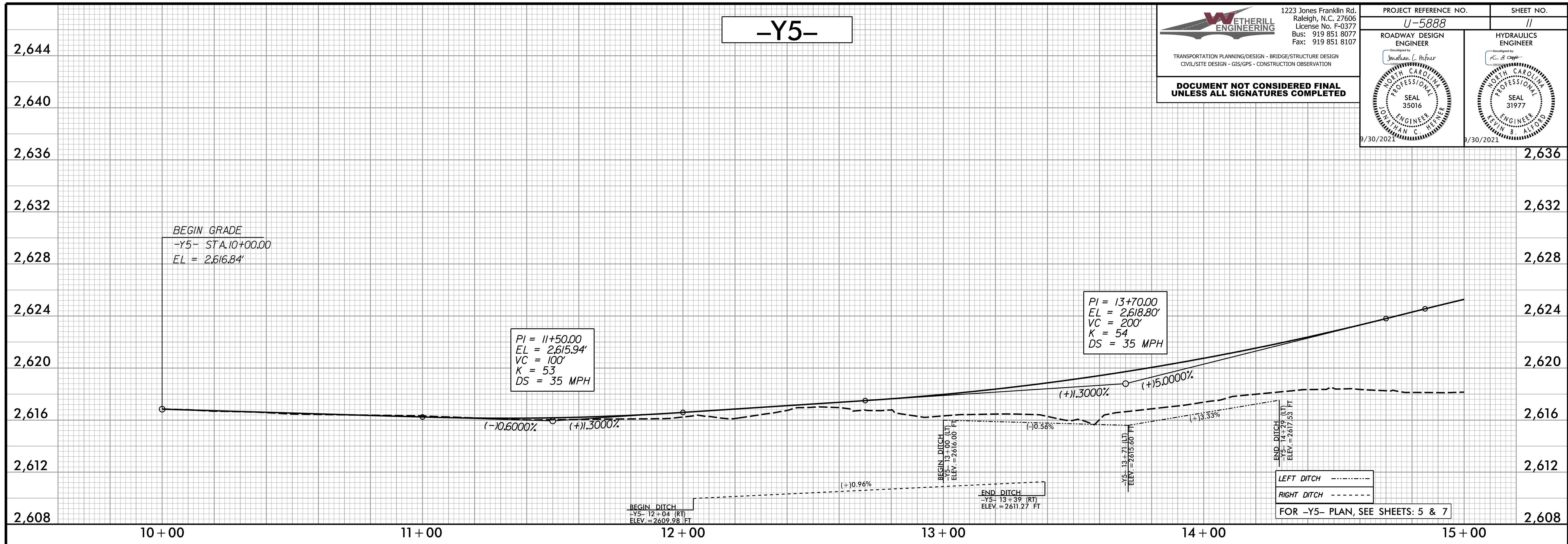
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PROJECT REFERENCE NO. U-5888	SHEET NO. 11
ROADWAY DESIGN ENGINEER <i>Jonathan C. Heifer</i>	HYDRAULICS ENGINEER <i>K. S. Cope</i>
SEAL 35016 JONATHAN C. HEIFER	SEAL 31977 KEVIN ALFORD
9/30/2021	9/30/2021



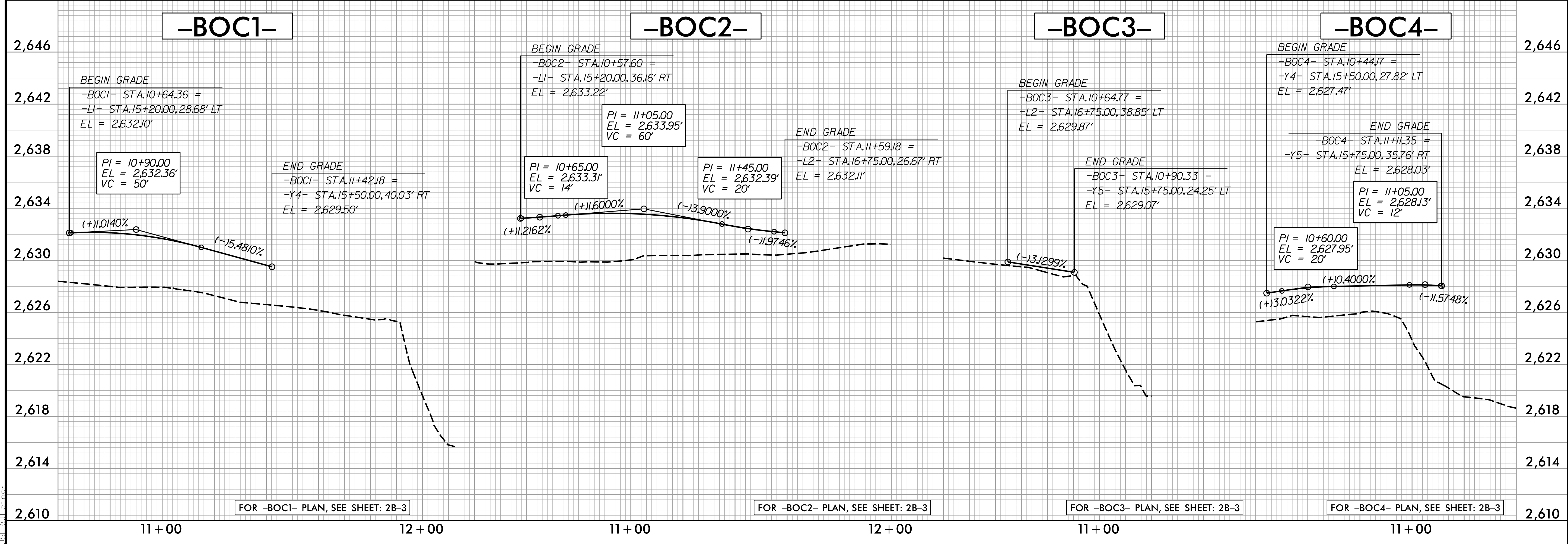
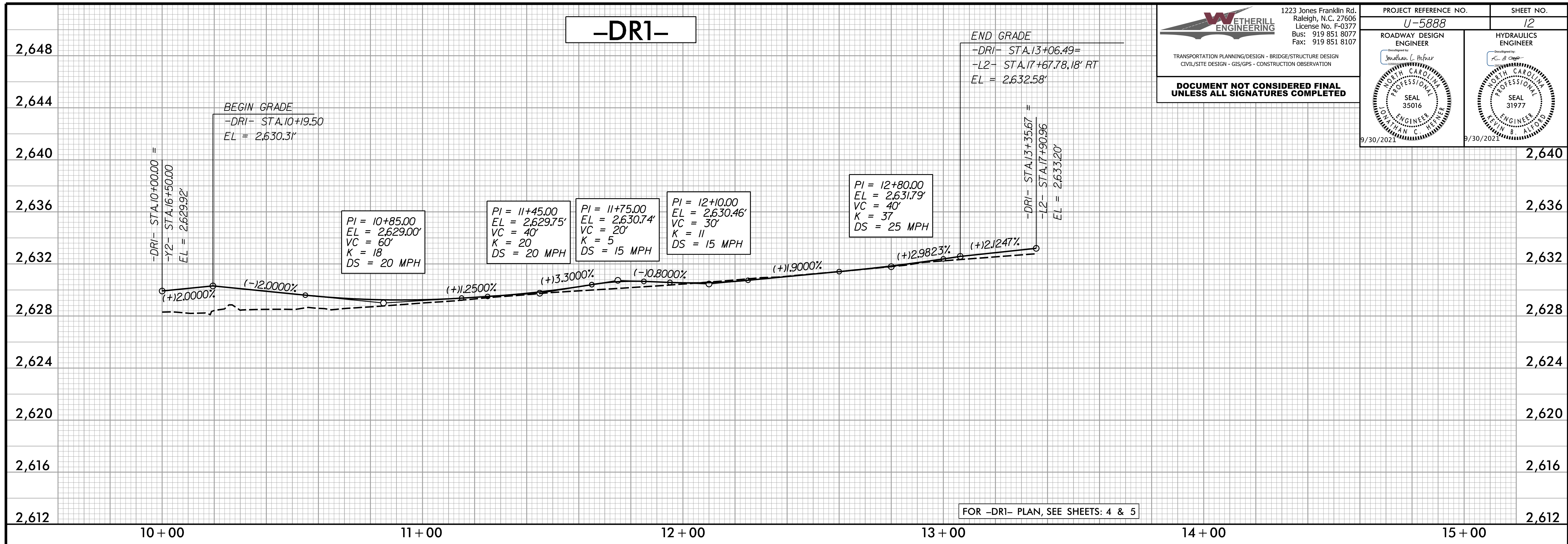
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PROJECT REFERENCE NO. U-5888	SHEET NO. 12
ROADWAY DESIGN ENGINEER <i>Jonathan L. Poirier</i>	HYDRAULICS ENGINEER <i>K. S. Cooper</i>
SEAL 35016 JONATHAN L. POIRIER	SEAL 31977 KEVIN ALFORD
9/30/2022	9/30/2022



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