

09.05/249

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DAVIDSON COUNTY

LOCATION: NC 8 (WINSTON ROAD) FROM US 29/US 70 TO
SR 1846 (ARRINGTON DRIVE) IN LEXINGTON

TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNALS

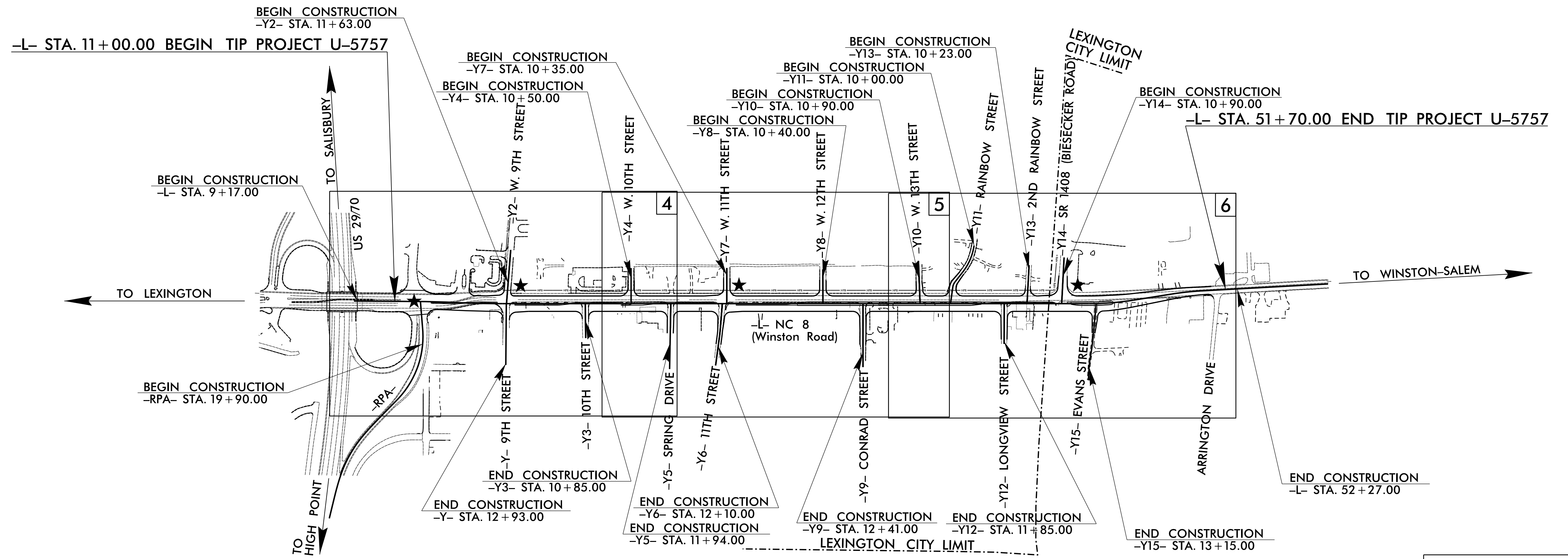
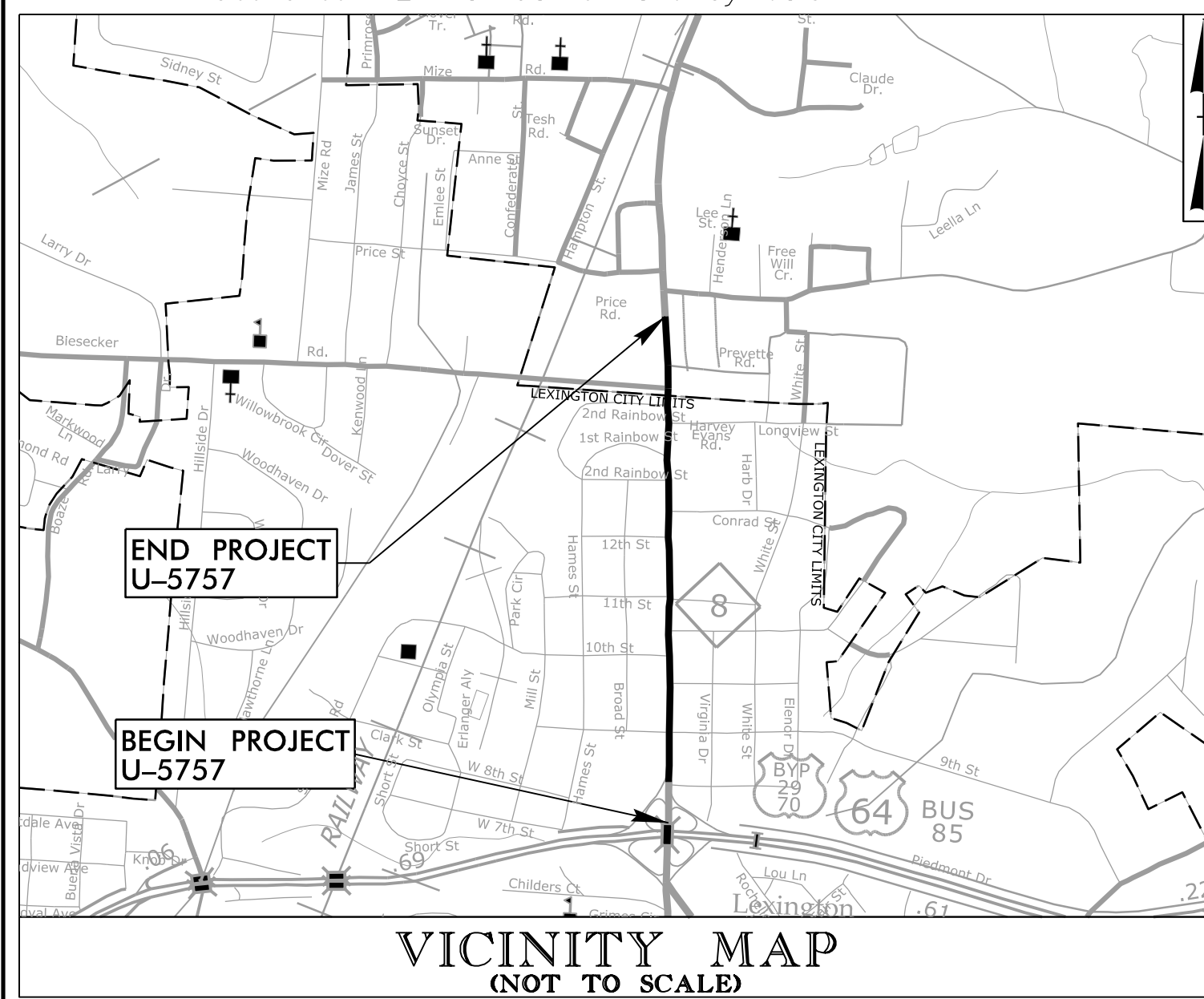
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5757	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
54035.1.1	N/A	PE	
54035.2.1	N/A	RW & UTILITIES	
54035.3.1	N/A	CONST.	

★ SIGNAL UPGRADES



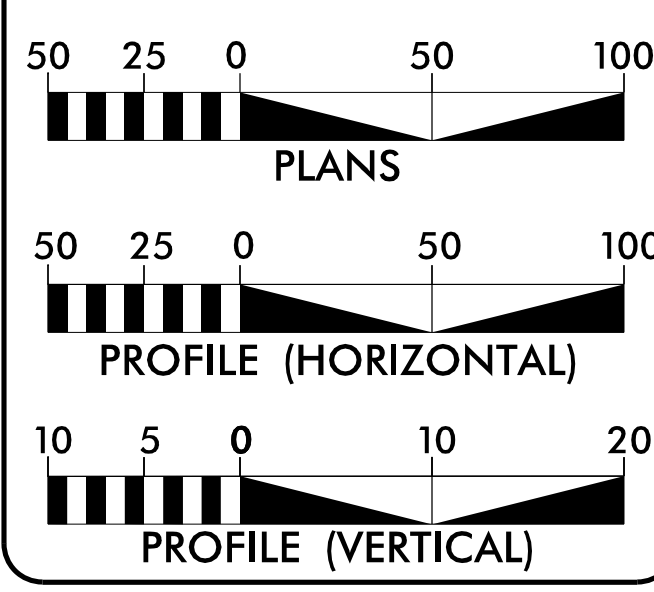
TIP PROJECT: U-5757

CONTRACT: C204941



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UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2024 = 20467
 ADT 2040 = 23800
 K = 9 %
 D = 55 %
 T = 5 % *
 V = 40 MPH
 * TTST = 2% DUAL = 3%
 FUNC CLASS =
 PRINCIPAL ARTERIAL
 "REGIONAL TIER"

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-5757 = 0.771 MILES
 TOTAL LENGTH TIP PROJECT U-5757 = 0.771 MILES

TRANSYSTEMS

Prepared in the Office of:
 1 Glenwood Avenue
 Raleigh, NC 27603
 Tel: 919.789.9977
 Fax: 919.789.9591
 License: F-0453

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
 APRIL 29, 2019

LETTING DATE:
 SEPTEMBER 17, 2024

RAJIT RAMKUMAR, PE, LEED AP
 PROJECT ENGINEER

DANIEL W. GARDNER, JR., PE
 PROJECT DESIGN ENGINEER

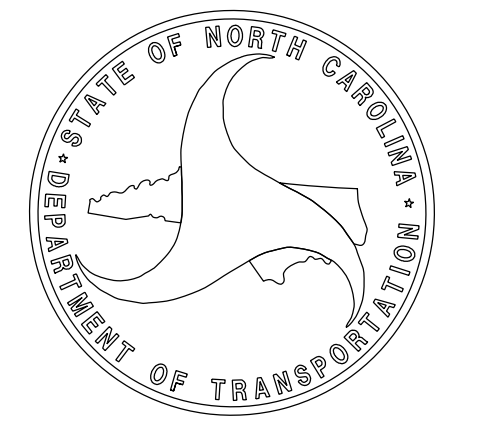
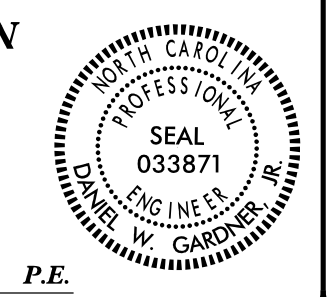
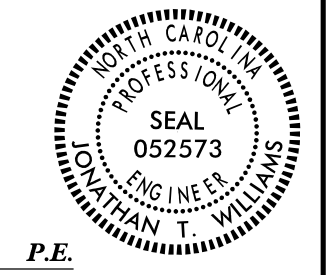
RYAN C. NEWCOMB, PE
 NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: _____
 P.E.

ROADWAY DESIGN ENGINEER

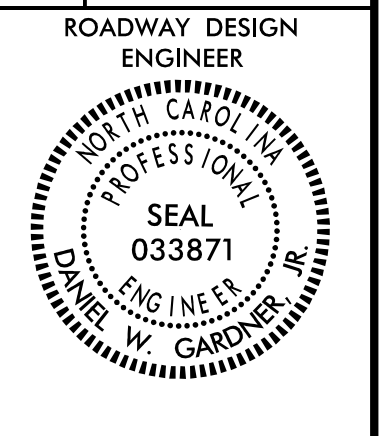
SIGNATURE: _____
 P.E.



6/24/2024
U:\Proj\U-5757_Rdy_+sh.dgn
USER:dgardner



1 Glenwood Avenue
Raleigh, NC 27603
Tel: 919.789.9977
Fax: 919.789.9591
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EFF. 01-16-2024
REV.

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL PLAN SHEET SYMBOLS
2A-1 THRU 2A-8	PAVEMENT SCHEDULE, WEDGING DETAIL, AND TYPICAL SECTIONS
2B-1 THRU 2B-2	ROADWAY INTERSECTION DETAILS
2C-1	DETAIL OF 2'-6" CURB AND GUTTER TO VALLEY GUTTER TRANSITION
2C-2	CURB RAMP DETAIL - PARALLEL RAMP
2C-3	CURB RAMP DETAIL - SHARED LANDING
2C-4	MODIFIED CONCRETE FLUME DETAIL
3B-1	SUMMARY OF EARTHWORK, ASPHALT PAVEMENT REMOVAL SUMMARY, AND CHAIN LINK FENCE SUMMARY
3D-1 THRU 3D-5	DRAINAGE SUMMARIES
3G-1	GEOTECHNICAL SUMMARIES
3P-1	PARCEL INDEX SHEET
4 THRU 6	PLAN SHEETS
7 THRU 12	PROFILE SHEETS
RW01 THRU RW06	RIGHT OF WAY PLAN SHEETS
TMP-1 THRU TMP-12	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-6	PAVEMENT MARKING PLANS
EC-1 THRU EC-9	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-9	SIGNING PLANS
SIG-1.0 THRU SIG-15.2	SIGNAL PLANS
SIG-M1A THRU SIG-M9	METAL POLE STANDARD DRAWINGS
SCP-1 THRU SCP-4	SIGNAL COMMUNICATION PLANS
UC-1 THRU UC-10	UTILITIES CONSTRUCTION PLANS
UD-1 THRU UD-4A	UTILITIES BY OTHERS PLANS
X-1	CROSS-SECTION INDEX SHEET
X-1A THRU X-1B	CROSS-SECTION SUMMARY SHEET
X-2 THRU X-4S	CROSS-SECTIONS

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

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

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

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

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

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

BERM DITCHES:
BERM DITCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 240.01 AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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 RADIUS OR RADIUS AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

STREET TURNOUT:
STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADIUS NOTED ON PLANS.

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

SUBSURFACE PLANS:
NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE City of Lexington Electric - (Distribution) & (Transmission), Duke Energy Carolinas (Distribution), City of Lexington Gas (Distribution), Verizon (Communications), Windstream (Communications), Charter (Communications), and City of Lexington - Water and Sewer
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 CONTRACT.

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

2024 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, 2024 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Super-elevation - Two Lane Pavement
225.06	Method of Grading Sight Distance at Intersections
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
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
840.18	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
840.34	Traffic Bearing Junction Box - for use with Pipes 42" and Under
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frames and Grates
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.51	Brick Manhole - 12" thru 36" Pipe
840.52	Precast Manhole - 4', 5' and 6' Diameter 12" thru 48" Pipe
840.53	Precast Manhole with Masonry Base - 12" thru 42" Pipe - 4', 5' and 6' Diameter
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
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)
850.01	Concrete Paved Ditches
850.10	Guide for Berm Drainage Outlet - 15" and 18" Pipe
852.01	Concrete Islands
852.05	Median Curb for Catch Basin - for use with 1'-6" Curb and Gutter
866.01	Chain Link Fence - 4', 5' and 6' High Fence
876.01	Rip Rap in Channels and Ditches
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

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

Note: Not to Scale

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin (EIP)	○
Computed Property Corner	×
Existing Concrete Monument (ECM)	□
Parcel/Sequence Number	(123)
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	WLB
Proposed Wetland Boundary	WLB
Existing Endangered Animal Boundary	EAB
Existing Endangered Plant Boundary	EPB
Existing Historic Property Boundary	HPB
Known Contamination Area: Soil	☠-s-☠-s-
Potential Contamination Area: Soil	☠-s-☠-s-
Known Contamination Area: Water	☠-w-☠-w-
Potential Contamination Area: Water	☠-w-☠-w-
Contaminated Site: Known or Potential	☠ ?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
Well	○
Small Mine	×
Foundation	□
Area Outline	□
Cemetery	□
Building	□
School	□
Church	□
Dam	□

HYDROLOGY:

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

RAILROADS:

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

RIGHT OF WAY & PROJECT CONTROL:

Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	●
Secondary Horiz and Vert Control Point	◆
Vertical Benchmark	⊕
Existing Right of Way Monument	△
Proposed Right of Way Monument (Rebar and Cap)	▲
Proposed Right of Way Monument (Concrete)	▲
Existing Permanent Easement Monument	◇
Proposed Permanent Easement Monument (Rebar and Cap)	◆
Existing C/A Monument	△
Proposed C/A Monument (Rebar and Cap)	▲
Proposed C/A Monument (Concrete)	▲
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Existing Control of Access Line	-----
Proposed Control of Access Line	-----
Proposed ROW and CA Line	-----
Existing Easement Line	-----
Proposed Temporary Construction Easement	E
Proposed Temporary Drainage Easement	TDE
Proposed Permanent Drainage Easement	PDE
Proposed Permanent Drainage/Utility Easement	DUE
Proposed Permanent Utility Easement	PUE
Proposed Temporary Utility Easement	TUE
Proposed 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	T
Proposed Guardrail	T
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	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	○
Storm Sewer	S

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	PH
H-Frame Pole	●
U/G Power Line Test Hole (SUE - LOS A)*	⊕
U/G Power Line (SUE - LOS B)*	P
U/G Power Line (SUE - LOS C)*	P
U/G Power Line (SUE - LOS D)*	P

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	○
Telephone Pedestal	□
Telephone Cell Tower	⊕
U/G Telephone Cable Hand Hole	PH
U/G Telephone Test Hole (SUE - LOS A)*	⊕
U/G Telephone Cable (SUE - LOS B)*	T
U/G Telephone Cable (SUE - LOS C)*	T
U/G Telephone Cable (SUE - LOS D)*	T
U/G Telephone Conduit (SUE - LOS B)*	TC
U/G Telephone Conduit (SUE - LOS C)*	TC
U/G Telephone Conduit (SUE - LOS D)*	TC
U/G Fiber Optics Cable (SUE - LOS B)*	T FO
U/G Fiber Optics Cable (SUE - LOS C)*	T FO
U/G Fiber Optics Cable (SUE - LOS D)*	T FO

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)*	P
U/G Water Line (SUE - LOS C)*	P
U/G Water Line (SUE - LOS D)*	P
Above Ground Water Line	A/G Water

TV:

TV Pedestal	□
TV Tower	⊗
U/G TV Cable Hand Hole	PH
U/G TV Test Hole (SUE - LOS A)*	⊕
U/G TV Cable (SUE - LOS B)*	TV
U/G TV Cable (SUE - LOS C)*	TV
U/G TV Cable (SUE - LOS D)*	TV
U/G Fiber Optic Cable (SUE - LOS B)*	TV FO
U/G Fiber Optic Cable (SUE - LOS C)*	TV FO
U/G Fiber Optic Cable (SUE - LOS D)*	TV FO

GAS:

Gas Valve	◇
Gas Meter	⊕
U/G Gas Line Test Hole (SUE - LOS A)*	⊕
U/G Gas Line (SUE - LOS B)*	G
U/G Gas Line (SUE - LOS C)*	G
U/G Gas Line (SUE - LOS D)*	G
Above Ground Gas Line	A/G Gas

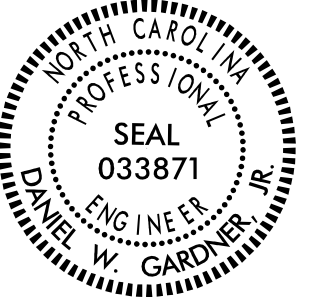
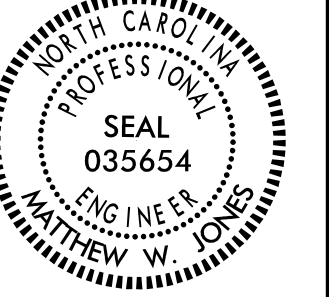

SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	SS
Above Ground Sanitary Sewer	A/G Sanitary Sewer
SS Force Main Line Test Hole (SUE - LOS A)*	⊕
SS Force Main Line (SUE - LOS B)*	FSS
SS Force Main Line (SUE - LOS C)*	FSS
SS Force Main Line (SUE - LOS D)*	FSS

MISCELLANEOUS:

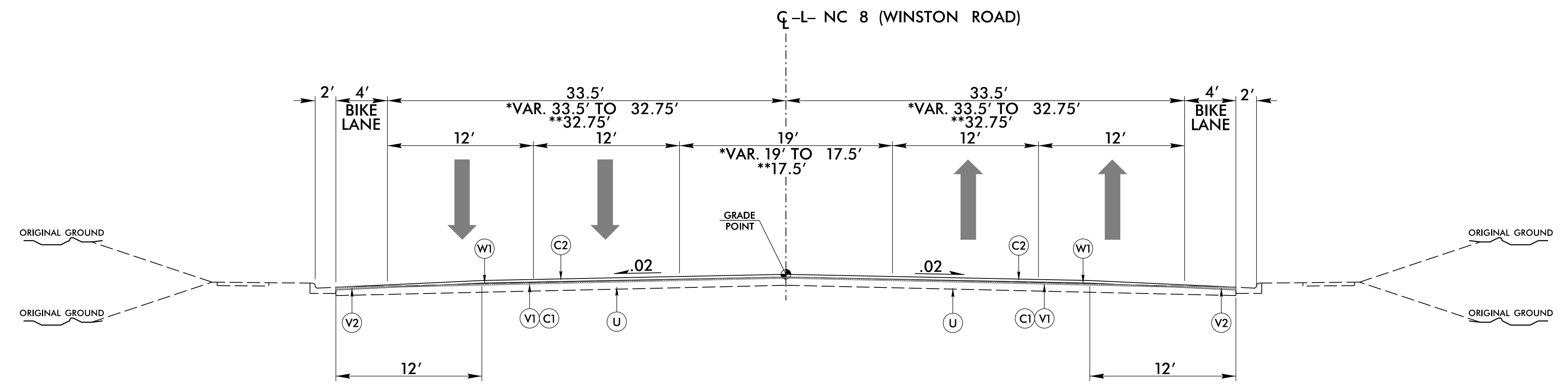
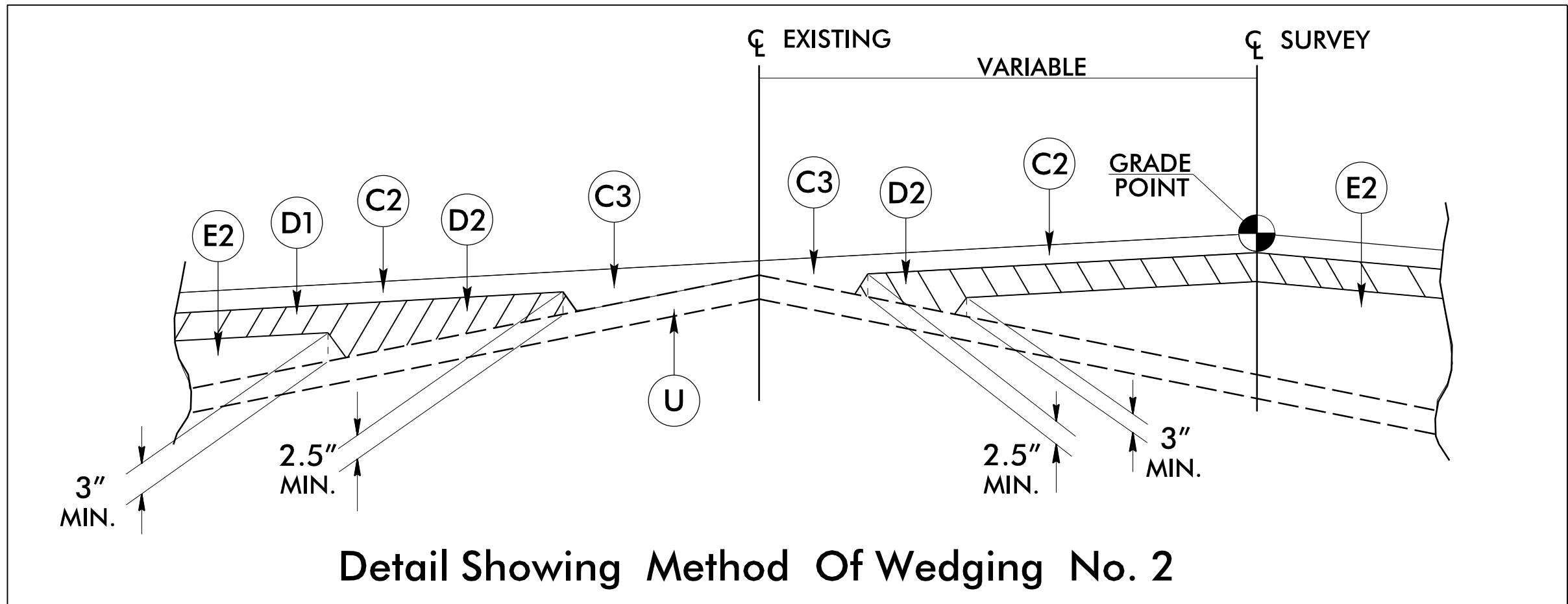
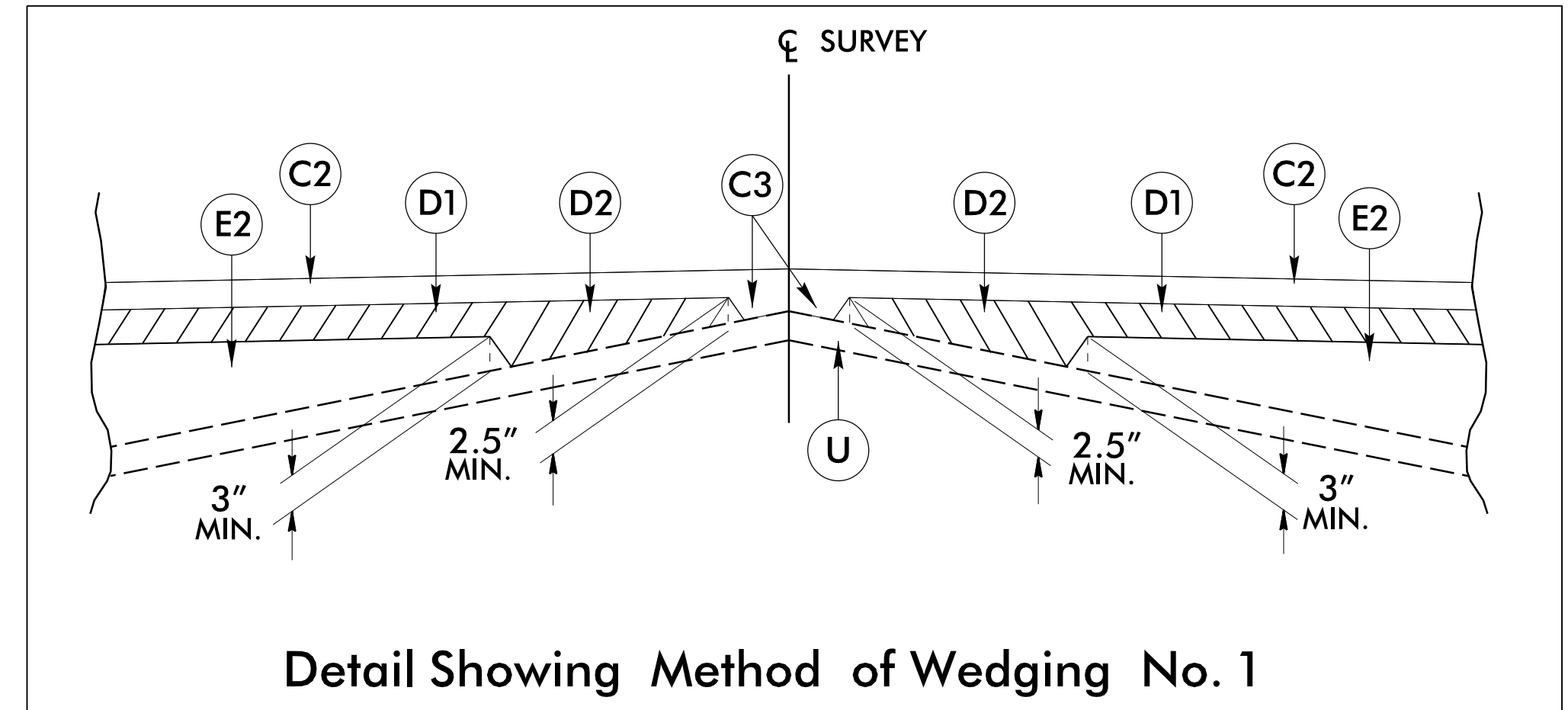
Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line (SUE - LOS B)*	UTL
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	UST
A/G Tank; Water, Gas, Oil	□
Geoenvironmental Boring	⊕
Abandoned According to Utility Records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

6/2/09

PROJECT REFERENCE NO. <i>U-5757</i>	SHEET NO. <i>2A-1</i>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
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FINAL PAVEMENT SCHEDULE			
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	R4	VALLEY GUTTER
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	8" X 18" CONCRETE CURB
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.	S	4" CONCRETE SIDEWALK
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	T	EARTH MATERIAL
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4" IN DEPTH.	U	EXISTING PAVEMENT
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	V1	MILLING ASPHALT PAVEMENT, 1.5" DEPTH
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.	V2	MILLING ASPHALT PAVEMENT, 0" TO 3"
R1	1'-6" CONCRETE CURB AND GUTTER	W1	VAR. DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL NO. 1).
R2	2'-6" CONCRETE CURB AND GUTTER	W2	VAR. DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL NO. 2).
R3	5" MONOLITHIC CONCRETE ISLAND (KEYED IN)		

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



USE TYPICAL SECTION NO. 1 AS FOLLOWS
 -L- STA. 11+00.00 TO STA. 11+60.00
 *-L- STA. 11+60.00 TO STA. 12+00.00
 **-L- STA. 12+00.00 TO STA. 12+44.05

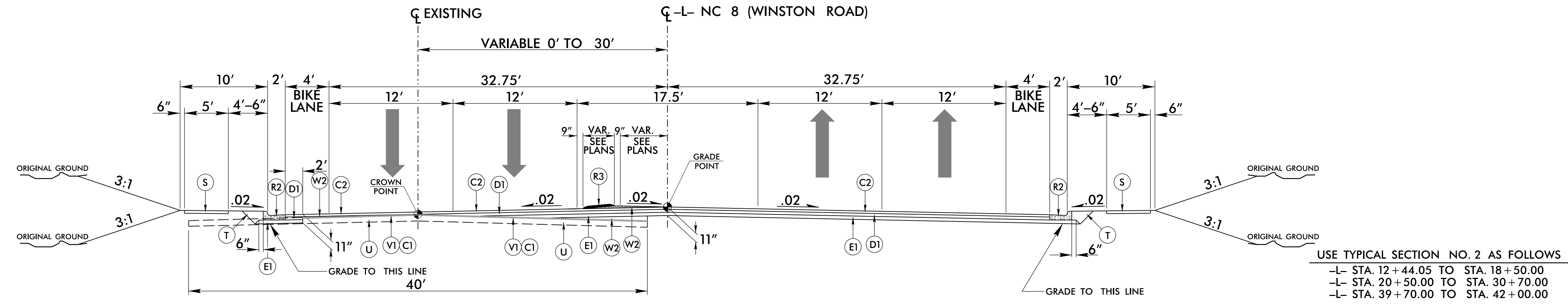
6/24/2004 11:57:57 -Relu...typ.dgn

6/2/09

PROJECT REFERENCE NO. U-5757	SHEET NO. 2A-2
ROADWAY DESIGN ENGINEER SEAL 033871 DAVID W. GARDNER	PAVEMENT DESIGN ENGINEER SEAL 035654 MATTHEW W. JONES

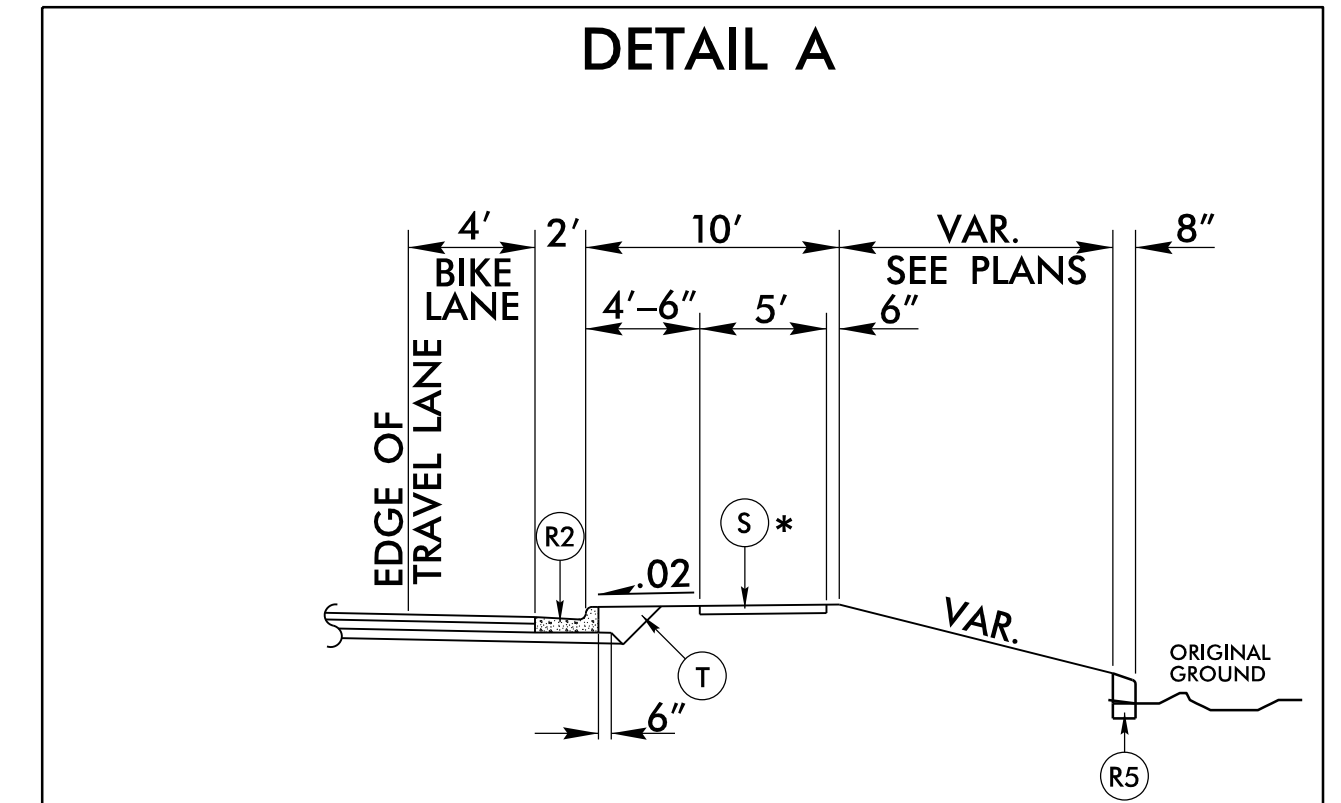
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Raleigh, NC 27603
Tel: 919.789.9977
Fax: 919.789.9591
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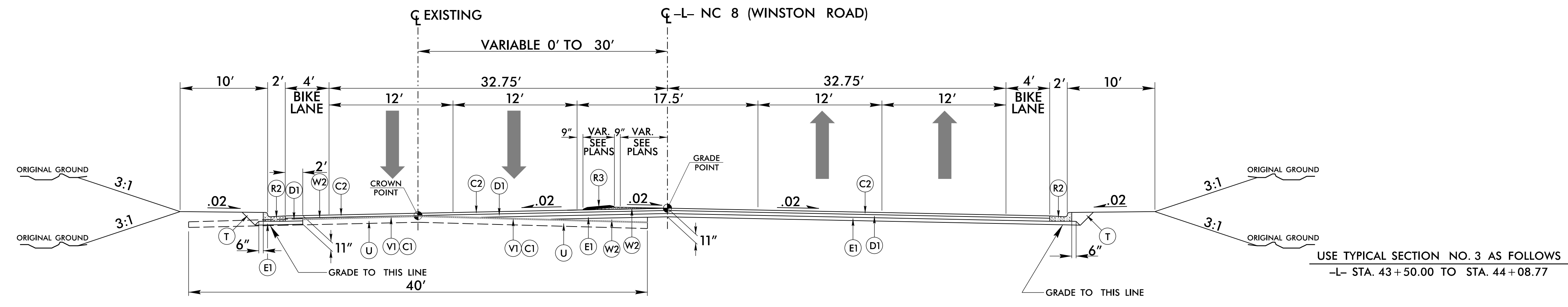


USE TYPICAL SECTION NO. 2 AS FOLLOWS
 -L- STA. 12+44.05 TO STA. 18+50.00
 -L- STA. 20+50.00 TO STA. 30+70.00
 -L- STA. 39+70.00 TO STA. 42+00.00

TYPICAL SECTION NO. 2



USE WITH TYPICAL SECTION NO. 2, NO. 7, AND NO. 8
 *-L- STA. 16+62.11 TO STA. 17+63.53 RT.
 *-L- STA. 27+13.51 TO STA. 28+65.37 RT.
 -L- STA. 45+37.56 TO STA. 51+11.03 RT.



USE TYPICAL SECTION NO. 3 AS FOLLOWS
 -L- STA. 43+50.00 TO STA. 44+08.77

TYPICAL SECTION NO. 3

PAVEMENT SCHEDULE	
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	1'-6" C & G
R2	2'-6" C & G
R3	5" MONO. ISLAND (KEYED IN)
R4	VALLEY GUTTER
R5	8" X 18" CONCRETE CURB
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	MILLING 1.5" DEPTH
V2	MILLING, 0" TO 3"
W1	VAR. DEPTH WEDGING NO. 1
W2	VAR. DEPTH WEDGING NO. 2

6/24/2004 11:57:57 AM U:\Projects\U-5757\Relay_tup.dgn

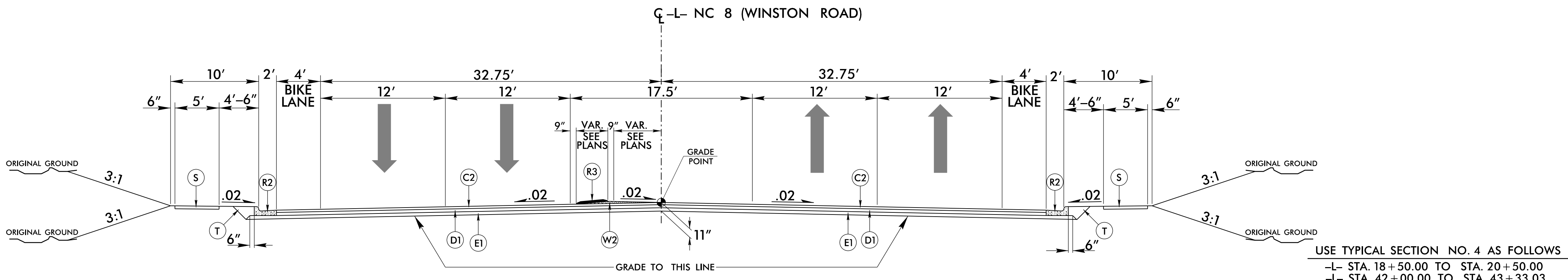
6/2/2024

6/24/2024 U:\1-5757-Relay.txdgn

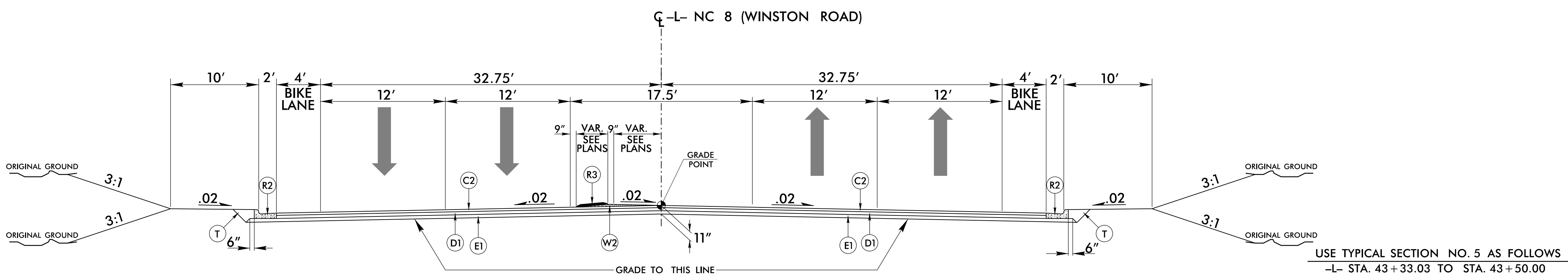
PROJECT REFERENCE NO. U-5757	SHEET NO. 2A-3
ROADWAY DESIGN ENGINEER DAVID W. GARDNER SEAL 033871 ENGINEER	PAVEMENT DESIGN ENGINEER MATTHEW W. JONES SEAL 035654 ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

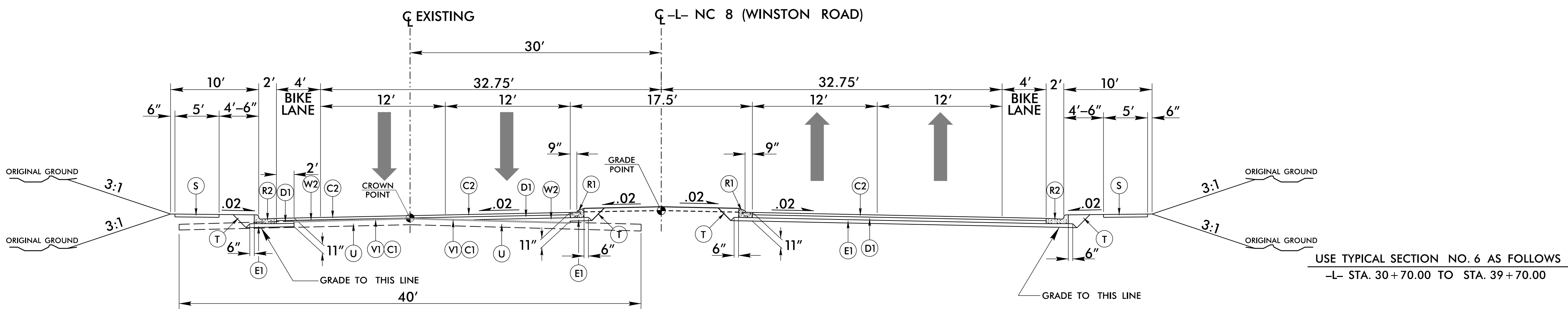
TRANSYSTEMS
1 Glenwood Avenue
Raleigh, NC 27603
Tel: 919.789.9977
Fax: 919.789.9591
License: F-0453



TYPICAL SECTION NO. 4



TYPICAL SECTION NO. 5





TYPICAL SECTION NO. 6

PAVEMENT SCHEDULE

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	1'-6" C & G
R2	2'-6" C & G
R3	5" MONO. ISLAND (KEYED IN)
R4	VALLEY GUTTER
R5	8" X 18" CONCRETE CURB
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	MILLING 1.5" DEPTH
V2	MILLING, 0" TO 3"
W1	VAR. DEPTH WEDGING NO. 1
W2	VAR. DEPTH WEDGING NO. 2

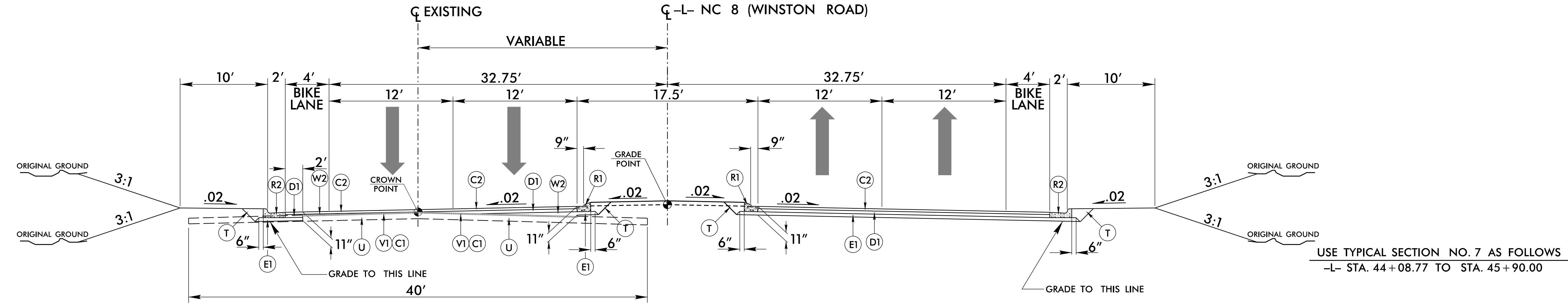
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6/24/2004
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J:\Gardner

PROJECT REFERENCE NO. U-5757	SHEET NO. 2A-4
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 

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

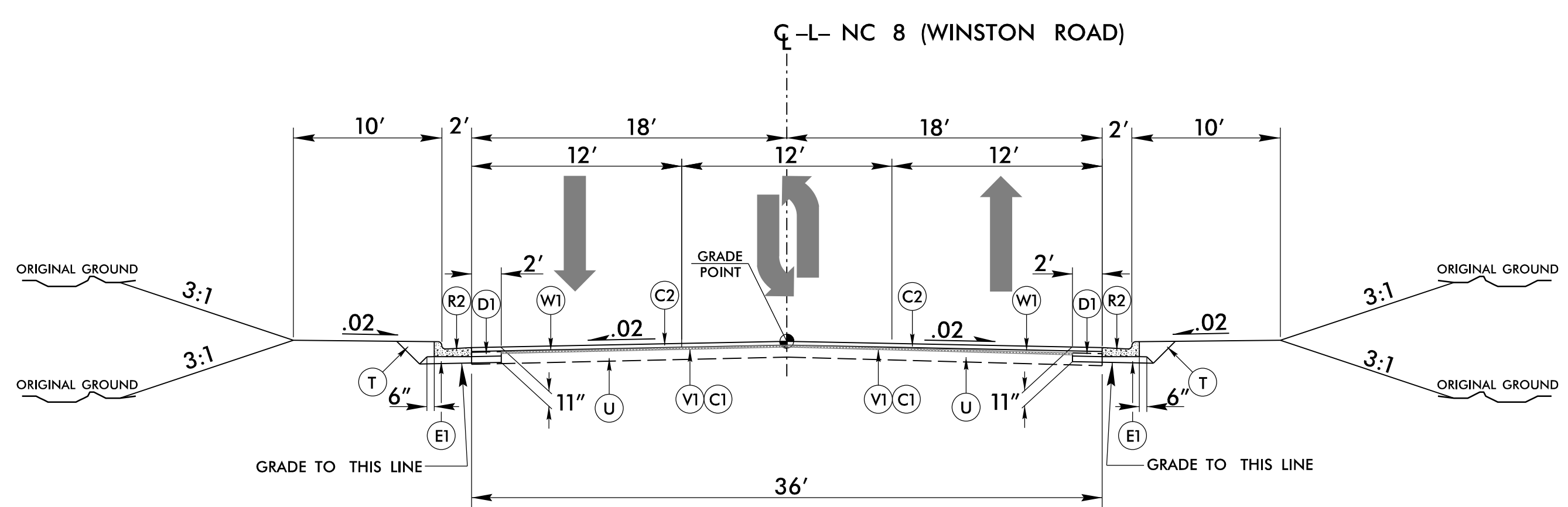
TRANSYSTEMS
1 Glenwood Avenue
Raleigh, NC 27603
Tel: 919.789.9977
Fax: 919.789.9591
License: F-0453



TYPICAL SECTION NO. 7

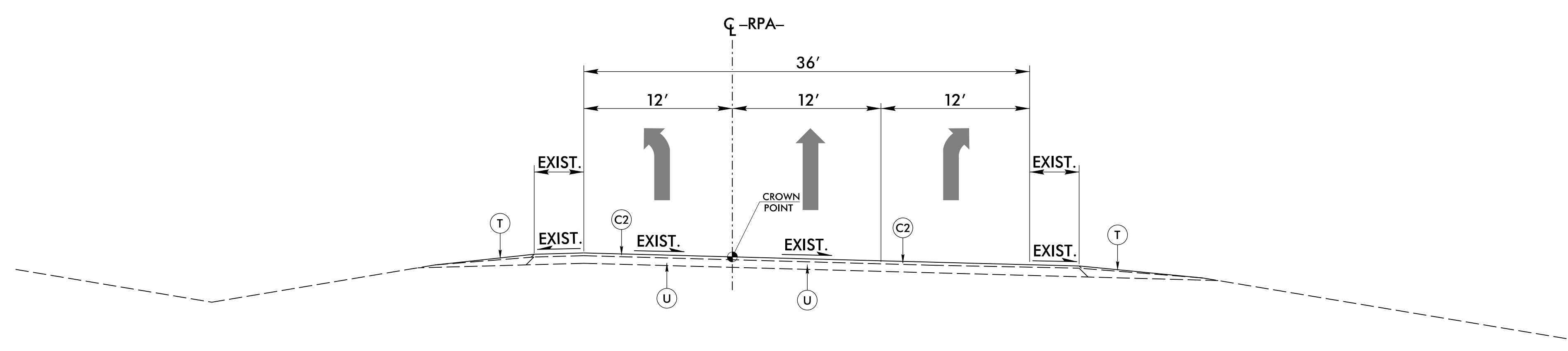
NOTE: TRANSITION FROM T.S. NO. 7 TO T.S. NO. 8
 -L- STA. 45+90.00 TO STA. 50+50.00 (OUTSIDE LANE TRANSITION 16' TO 0') LT.RT.
 -L- STA. 45+90.00 TO STA. 50+50.00 (MEDIAN TRANSITION 17.5' TO 12')

USE TYPICAL SECTION NO. 7 AS FOLLOWS
 -L- STA. 44+08.77 TO STA. 45+90.00



TYPICAL SECTION NO. 8

USE TYPICAL SECTION NO. 8 AS FOLLOWS
 -L- STA. 50+50.00 TO STA. 51+00.00



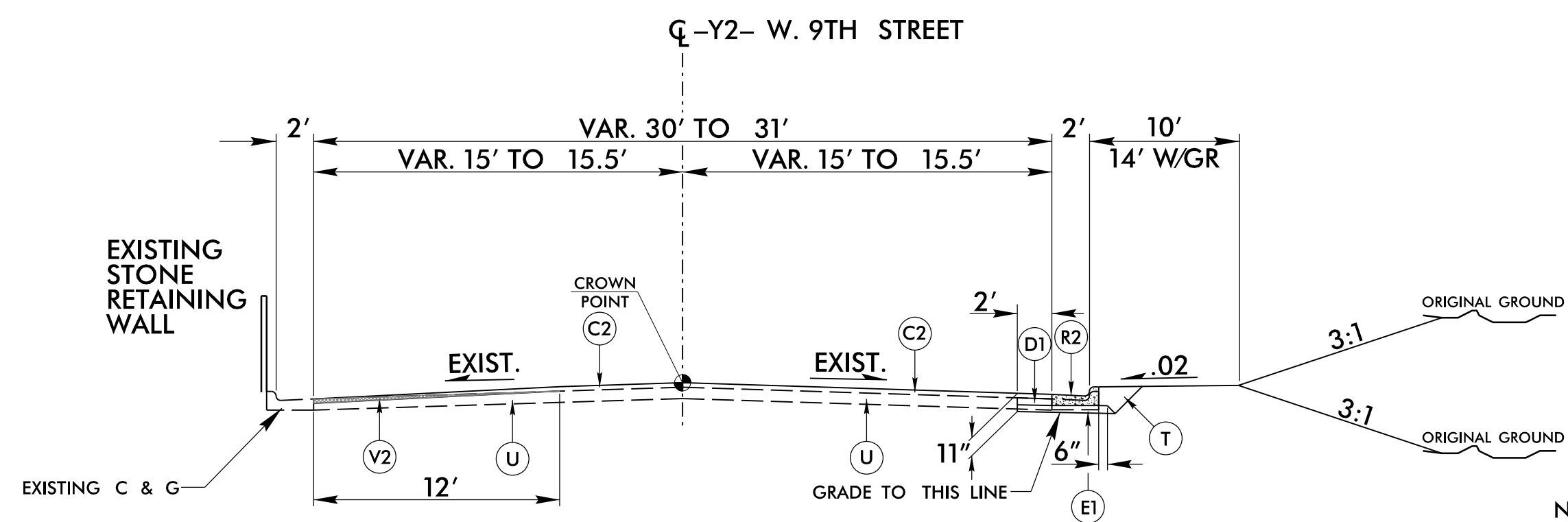
TYPICAL SECTION NO. 9

USE TYPICAL SECTION NO. 9 AS FOLLOWS
 -RPA- STA. 21+35.00 TO STA. 21+62.08

NOTE: FOR INCIDENTAL MILLING, SEE MILLING DETAIL.

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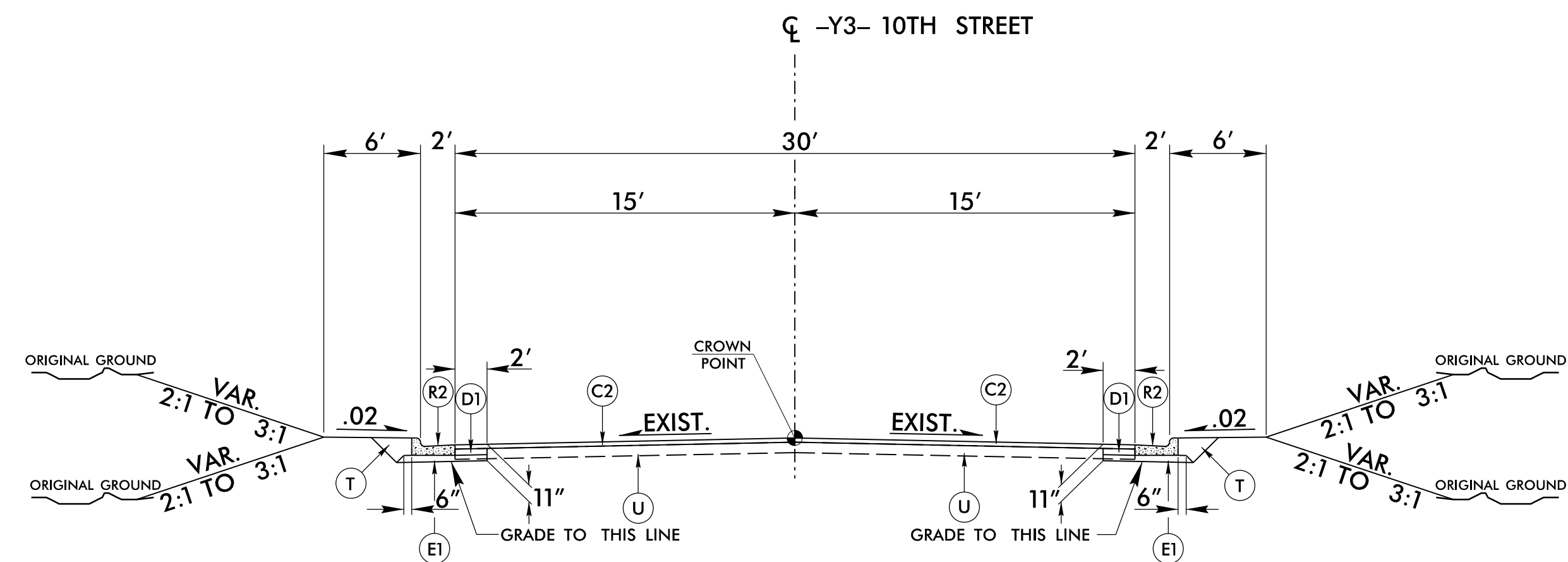
TYPICAL SECTION NO. 10

USE TYPICAL SECTION NO. 10 AS FOLLOWS
-Y2- STA. 11+63.00 TO STA. 11+96.38

NOTE: MILL AND MAINTAIN EXISTING C & G ALONG -Y2- STA. 11+63.00 TO 12+06.58 LT.

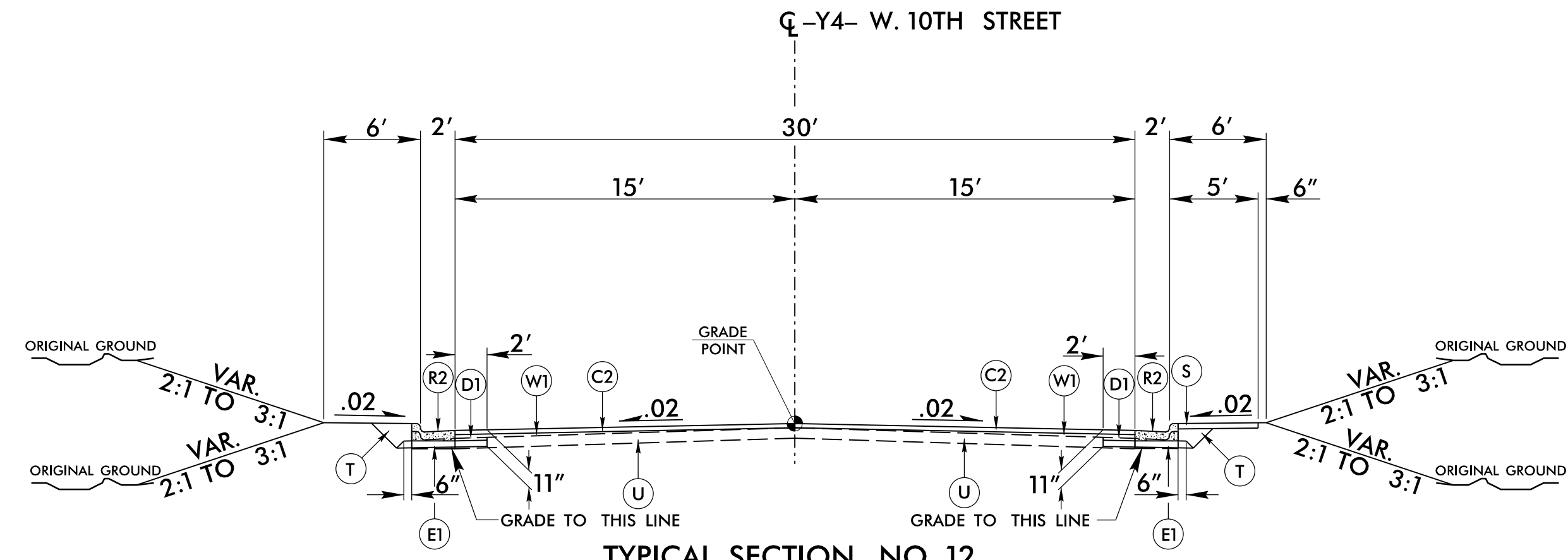
PAVEMENT SCHEDULE

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	1'-6" C & G
R2	2'-6" C & G
R3	5" MONO. ISLAND (KEYED IN)
R4	VALLEY GUTTER
R5	8" X 18" CONCRETE CURB
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	MILLING 1.5" DEPTH
V2	MILLING, 0" TO 3"
W1	VAR. DEPTH WEDGING NO. 1
W2	VAR. DEPTH WEDGING NO. 2



TYPICAL SECTION NO. 11

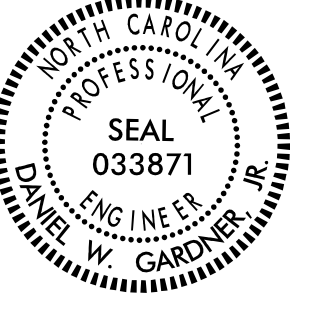
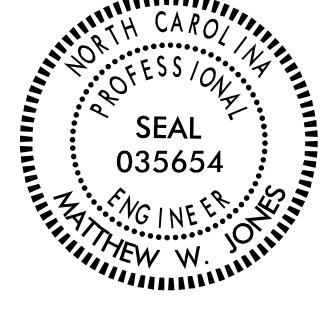
USE TYPICAL SECTION NO. 11 AS FOLLOWS
-Y3- STA. 10+71.18 TO STA. 10+75.00



TYPICAL SECTION NO. 12

USE TYPICAL SECTION NO. 12 AS FOLLOWS
-Y4- STA. 10+60.00 TO STA. 10+97.45

6/2/09

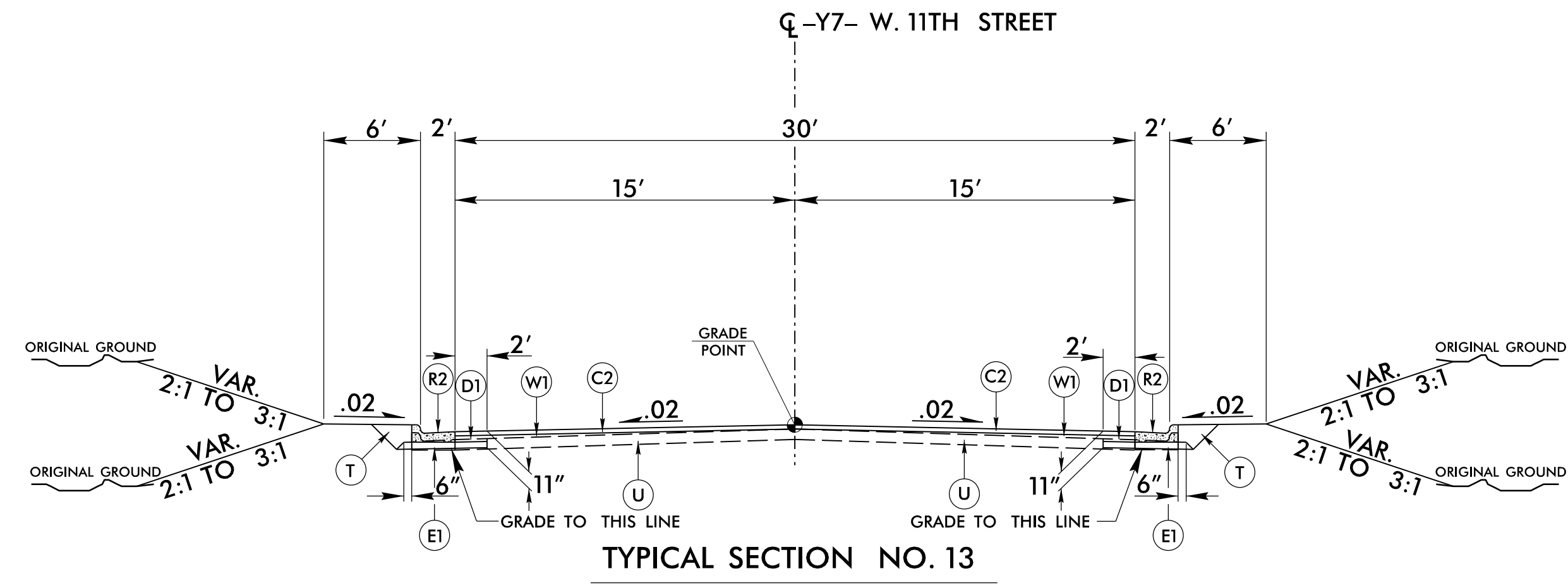
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
--	---

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TRANSYSTEMS
 1 Glenwood Avenue
 Raleigh, NC 27603
 Tel: 919.789.9977
 Fax: 919.789.9591
 License: F-0453

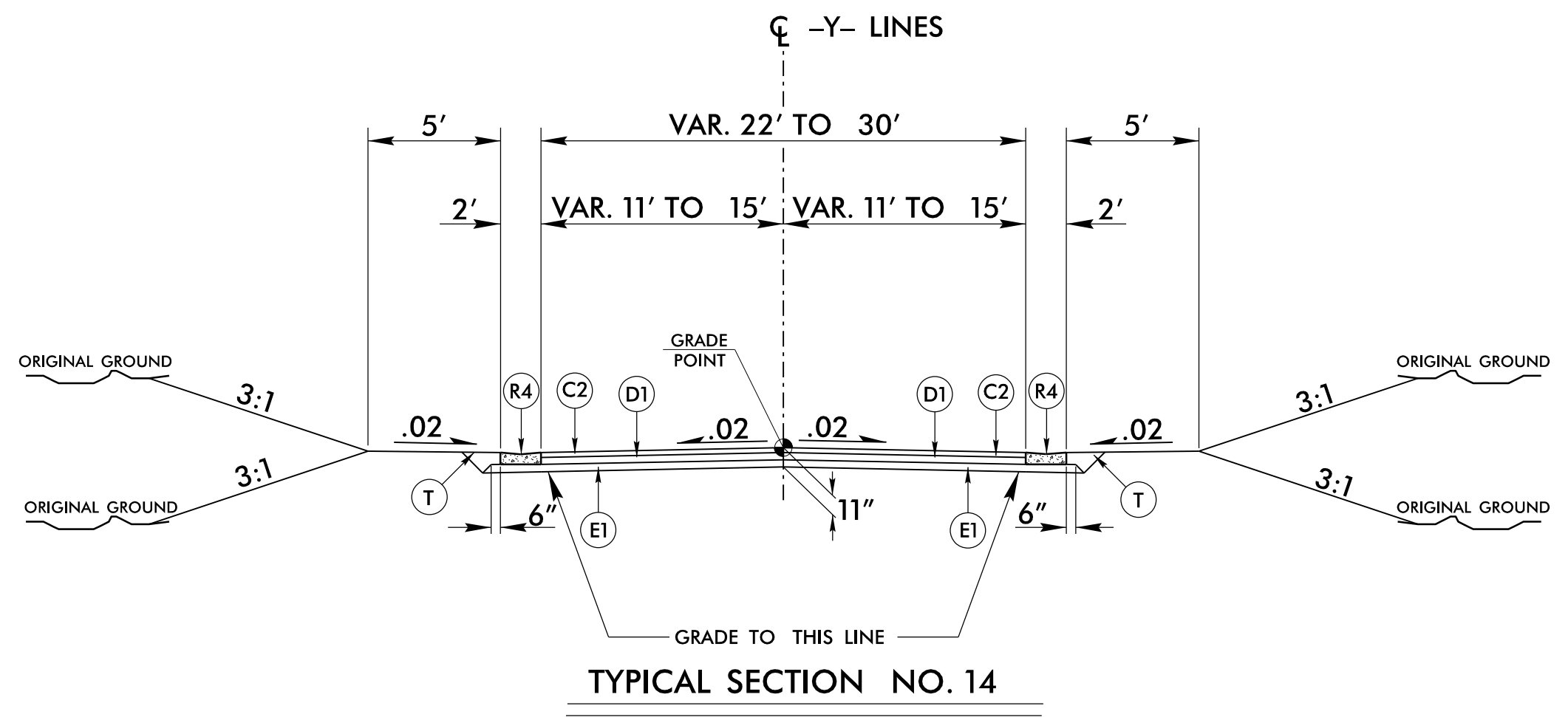
PAVEMENT SCHEDULE

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	1'-6" C & G
R2	2'-6" C & G
R3	5" MONO. ISLAND (KEYED IN)
R4	VALLEY GUTTER
R5	8" X 18" CONCRETE CURB
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	MILLING 1.5" DEPTH
V2	MILLING, 0" TO 3"
W1	VAR. DEPTH WEDGING NO. 1
W2	VAR. DEPTH WEDGING NO. 2



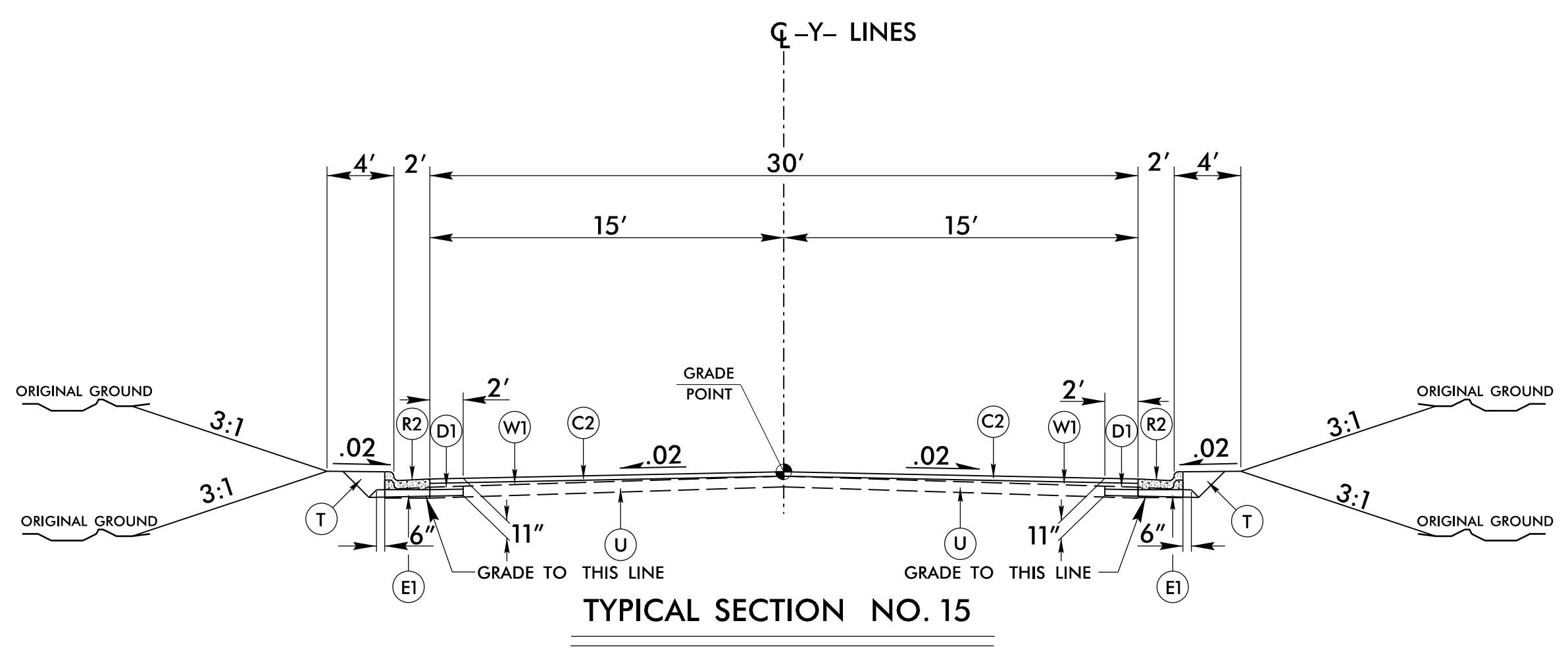
TYPICAL SECTION NO. 13

USE TYPICAL SECTION NO. 13 AS FOLLOWS
-Y7- STA. 10+50.00 TO STA. 10+98.63



TYPICAL SECTION NO. 14

USE TYPICAL SECTION NO. 14 AS FOLLOWS
-Y5- STA. 10+72.74 TO STA. 11+45.00
-Y6- STA. 10+75.93 TO STA. 12+00.00
-Y15- STA. 10+72.19 TO STA. 11+45.00



TYPICAL SECTION NO. 15

USE TYPICAL SECTION NO. 15 AS FOLLOWS
-Y8- STA. 10+50.00 TO STA. 10+95.88

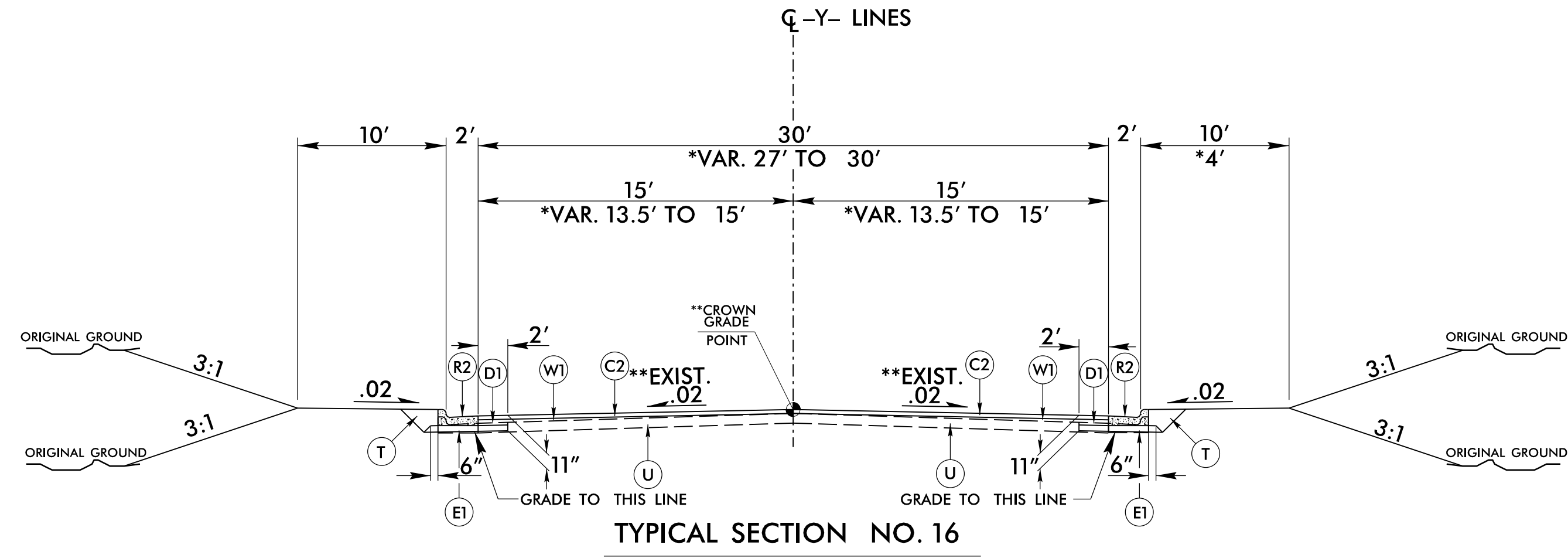
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DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

TRANSYSTEMS
1 Glenwood Avenue
Raleigh, NC 27603
Tel: 919.789.9577
Fax: 919.789.9591
License: F-0453

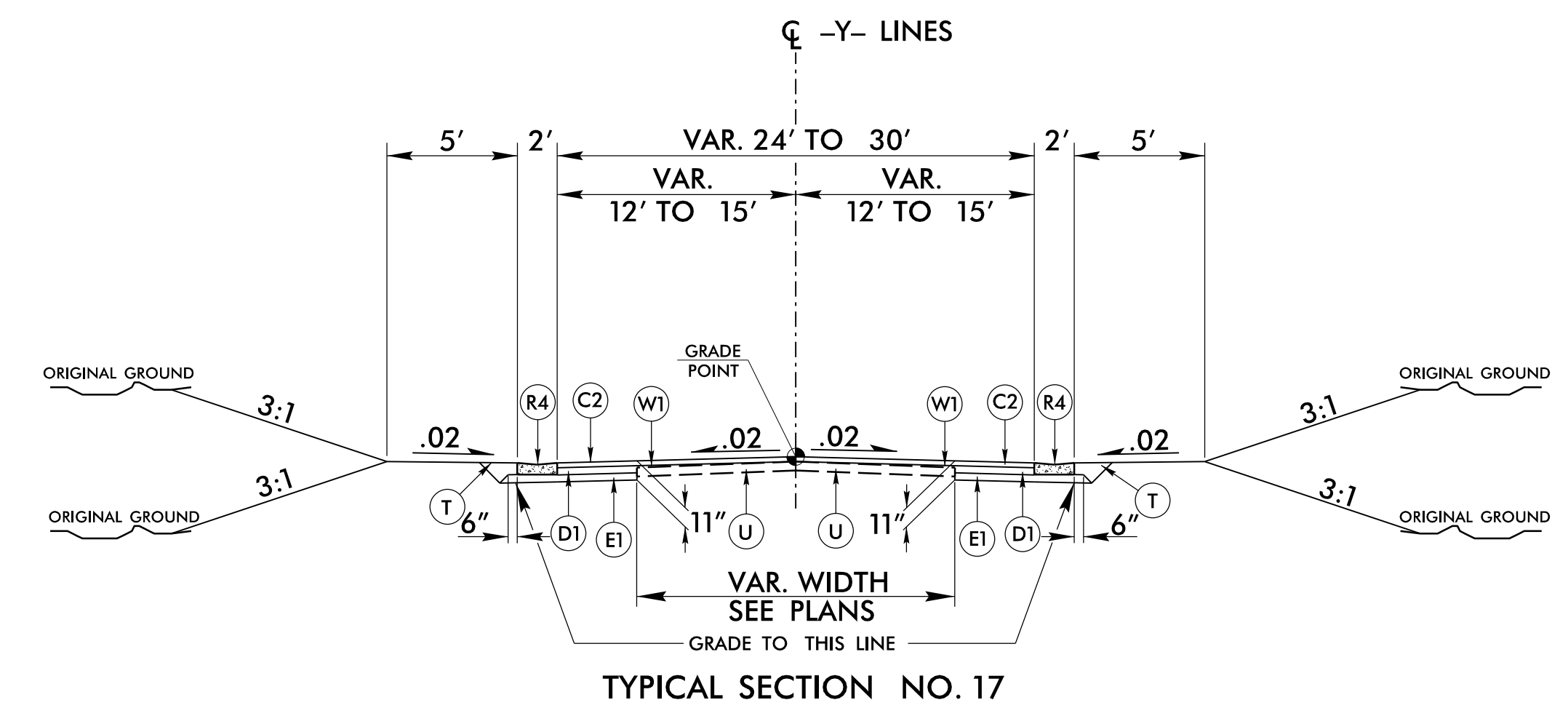
PAVEMENT SCHEDULE

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	1'-6" C & G
R2	2'-6" C & G
R3	5" MONO. ISLAND (KEYED IN)
R4	VALLEY GUTTER
R5	8" X 18" CONCRETE CURB
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	MILLING 1.5" DEPTH
V2	MILLING, 0" TO 3"
W1	VAR. DEPTH WEDGING NO. 1
W2	VAR. DEPTH WEDGING NO. 2



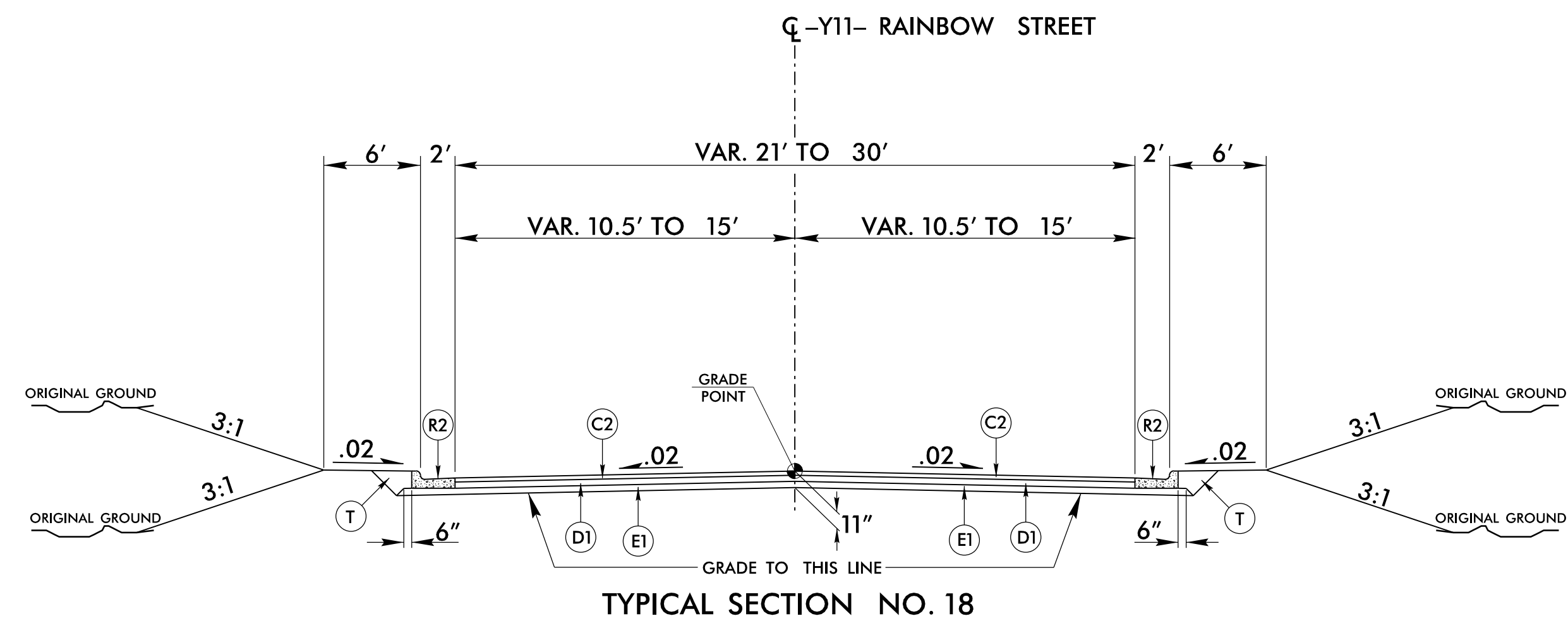
USE TYPICAL SECTION NO. 16 AS FOLLOWS
 **Y- STA. 10+75.35 TO STA. 10+80.00
 *-Y10- STA. 11+00.00 TO STA. 11+35.92

TYPICAL SECTION NO. 16



USE TYPICAL SECTION NO. 17 AS FOLLOWS
 -Y9- STA. 10+71.75 TO STA. 12+00.00
 -Y12- STA. 10+71.89 TO STA. 11+75.00

TYPICAL SECTION NO. 17



USE TYPICAL SECTION NO. 18 AS FOLLOWS
 -Y11- STA. 11+50.00 TO STA. 12+33.98

TYPICAL SECTION NO. 18

6/2/99

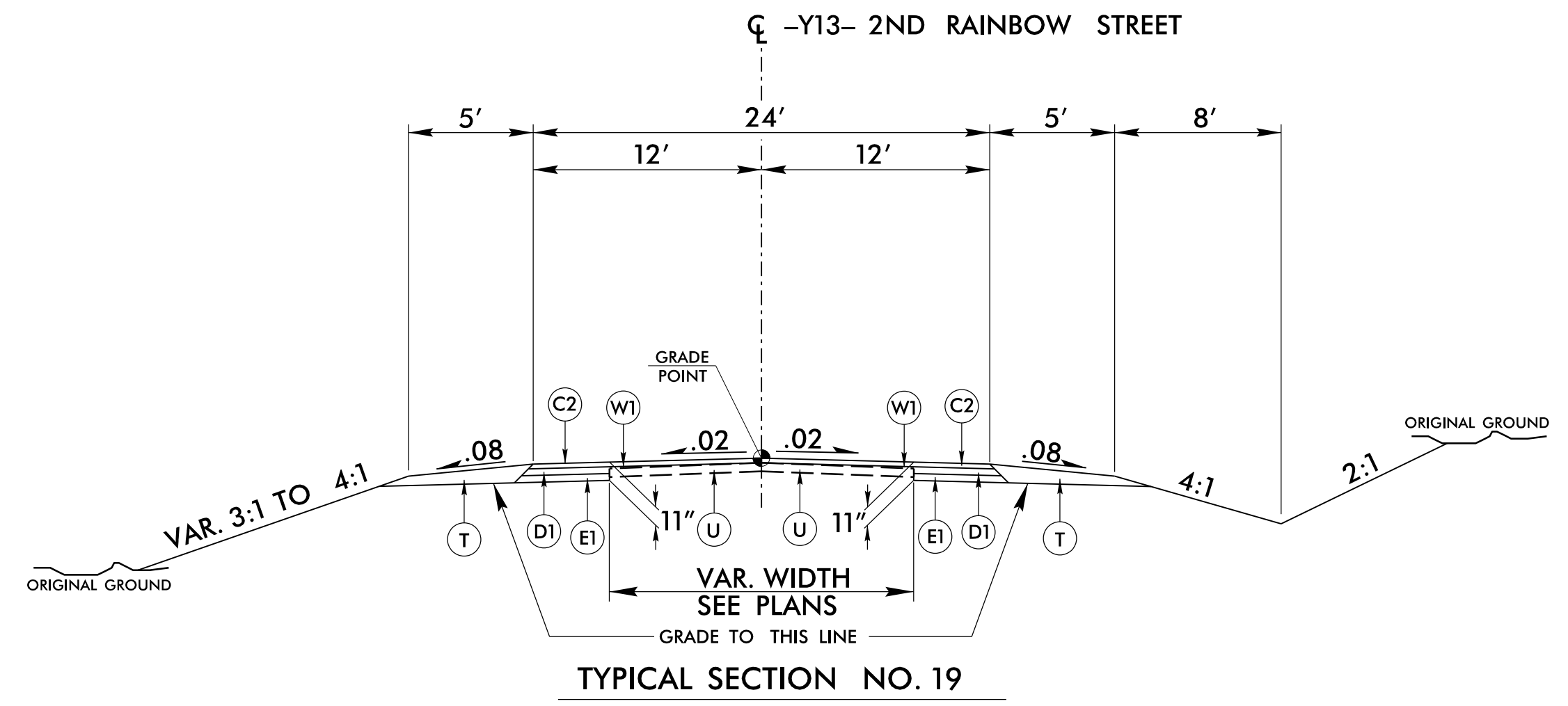
PROJECT REFERENCE NO. U-5757	SHEET NO. 2A-8
ROADWAY DESIGN ENGINEER DANIEL W. GARDNER, JR. SEAL 033871 ENGINE EX.	PAVEMENT DESIGN ENGINEER MATTHEW W. JONES SEAL 035654 ENGINE EX.

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

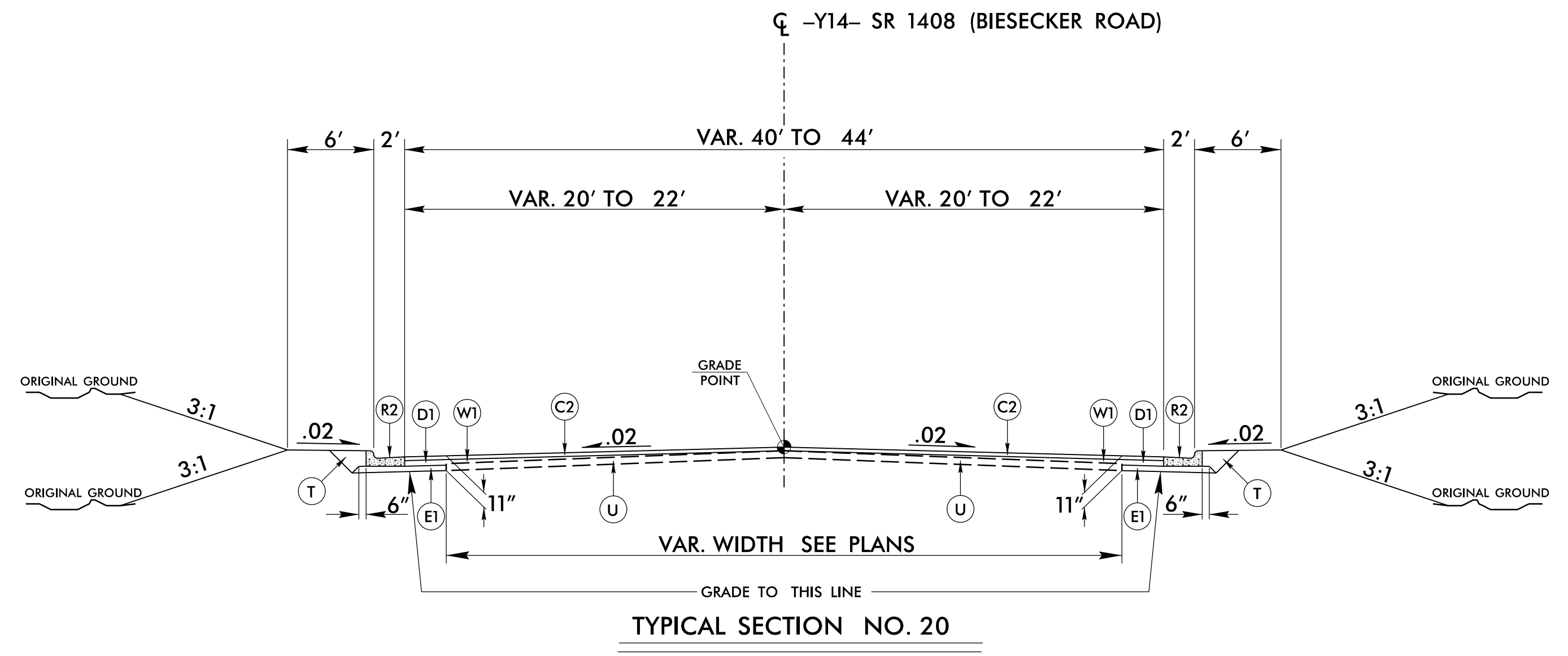
TRANSYSTEMS
1 Glenwood Avenue
Raleigh, NC 27603
Tel: 919.789.9977
Fax: 919.789.9591
License: F-0453

PAVEMENT SCHEDULE

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	1'-6" C & G
R2	2'-6" C & G
R3	5" MONO. ISLAND (KEYED IN)
R4	VALLEY GUTTER
R5	8" X 18" CONCRETE CURB
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	MILLING 1.5" DEPTH
V2	MILLING, 0" TO 3"
W1	VAR. DEPTH WEDGING NO. 1
W2	VAR. DEPTH WEDGING NO. 2



USE TYPICAL SECTION NO. 19 AS FOLLOWS
-Y13- STA. 11+00.00 TO STA. 11+14.34



USE TYPICAL SECTION NO. 20 AS FOLLOWS
-Y14- STA. 10+90.00 TO STA. 11+35.81

MILLING DETAIL

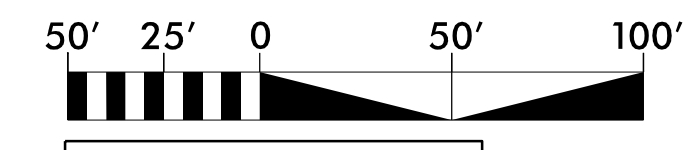
-L- STA. 11+00.00 TO STA. 12+00.00
 -L- STA. 49+50.00 TO STA. 51+00.00
 -Y- STA. 10+36.75 TO STA. 10+80.00
 -Y2- STA. 11+63.00 TO STA. 12+27.28
 -Y3- STA. 10+36.75 TO STA. 10+75.00
 -Y4- STA. 10+60.00 TO STA. 11+10.00
 -Y7- STA. 10+50.00 TO STA. 11+00.00
 -Y8- STA. 10+50.00 TO STA. 11+00.00
 -Y9- STA. 11+50.00 TO STA. 12+00.00
 -Y10- STA. 11+00.00 TO STA. 11+50.00
 -Y12- STA. 11+25.00 TO STA. 11+75.00
 -Y13- STA. 11+00.00 TO STA. 11+51.90
 -Y14- STA. 10+90.00 TO STA. 11+30.00
 -RPA- STA. 21+35.00 TO STA. 21+62.08

NOTE: MIRROR FOR END OF CONSTRUCTION

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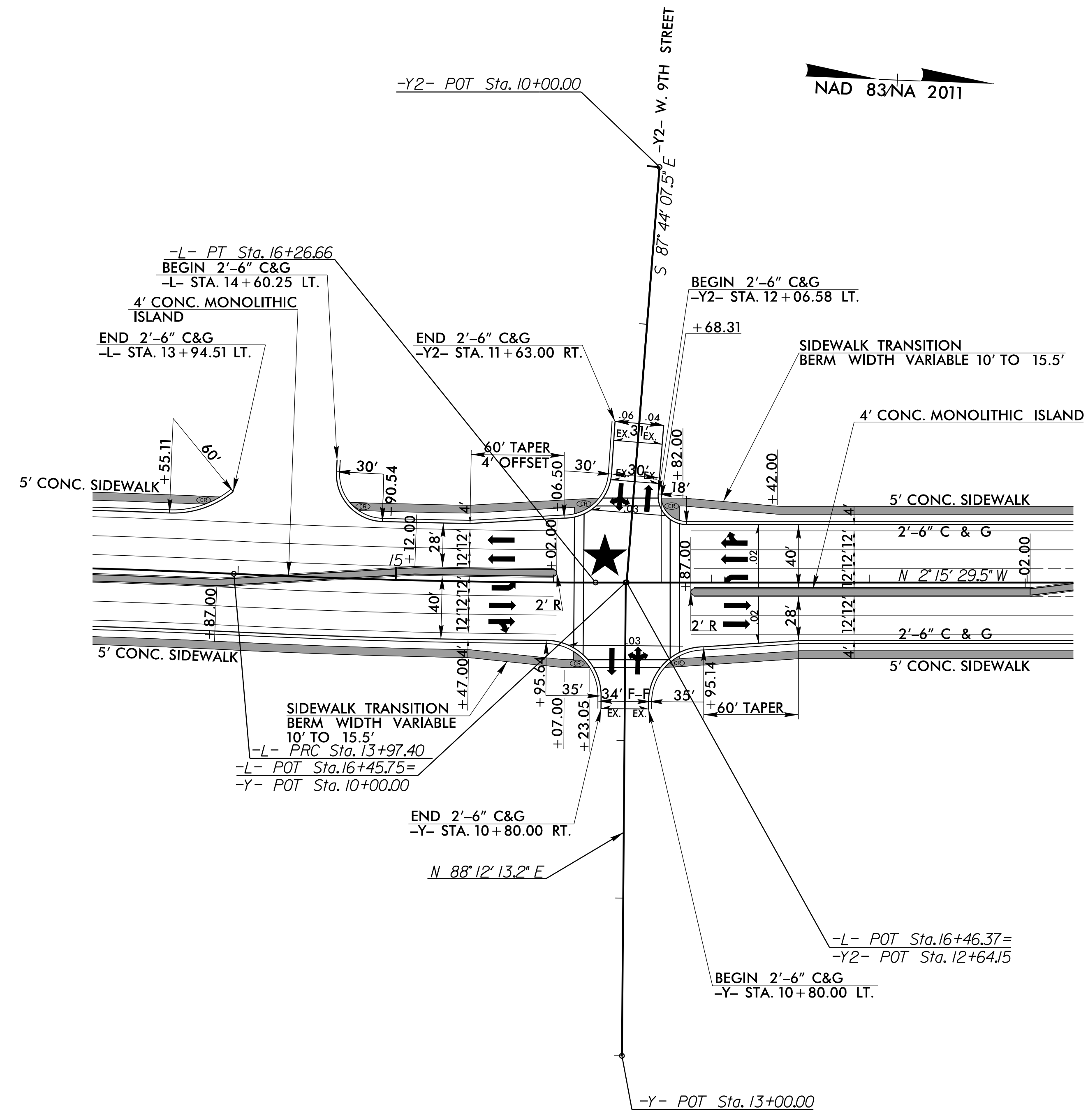
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5/28/2004
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US:R:\d:\pdr

GRAPHIC SCALE



★ SIGNAL UPGRADE

INTERSECTION DETAIL
-L-, -Y-, AND -Y2-



NAD 83/NA 2011

SEE SHEET 4 FOR PLAN VIEW

GRAPHIC SCALE



TRANSYSTEMS

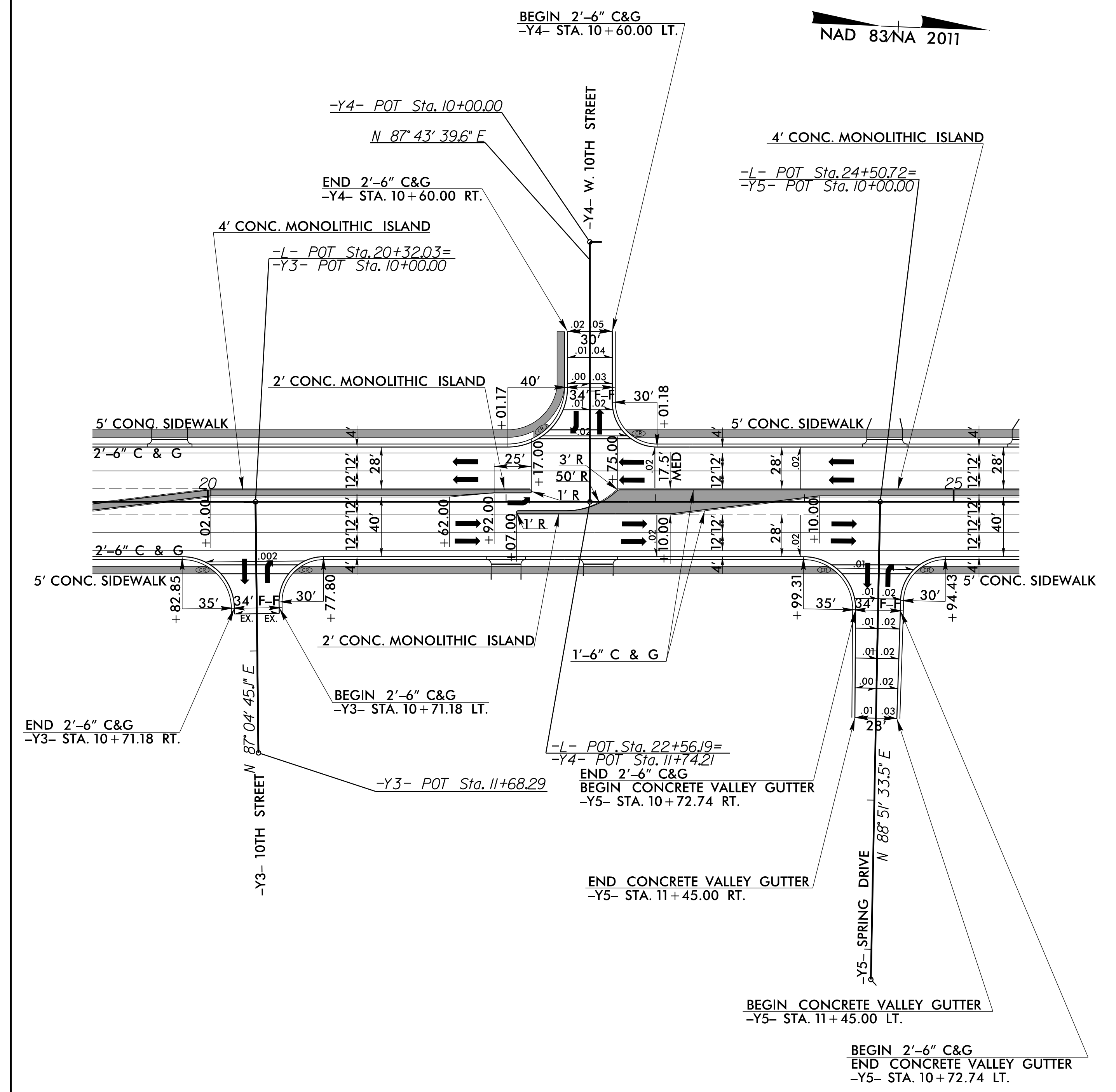
1 Glenwood Avenue
Raleigh, NC 27603
Tel: 919.789.9977
Fax: 919.789.9591
License: F-0453

PROJECT REFERENCE NO. U-5757
SHEET NO. 2B-1

ROADWAY DESIGN
ENGINEER
SEAL
033871
W. GARDNER, JR.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

INTERSECTION DETAIL
-L-, -Y3-, -Y4-, AND -Y5-



NAD 83/NA 2011

SEE SHEET 4 AND 5 FOR PLAN VIEW

8.17.99
5/28/2004
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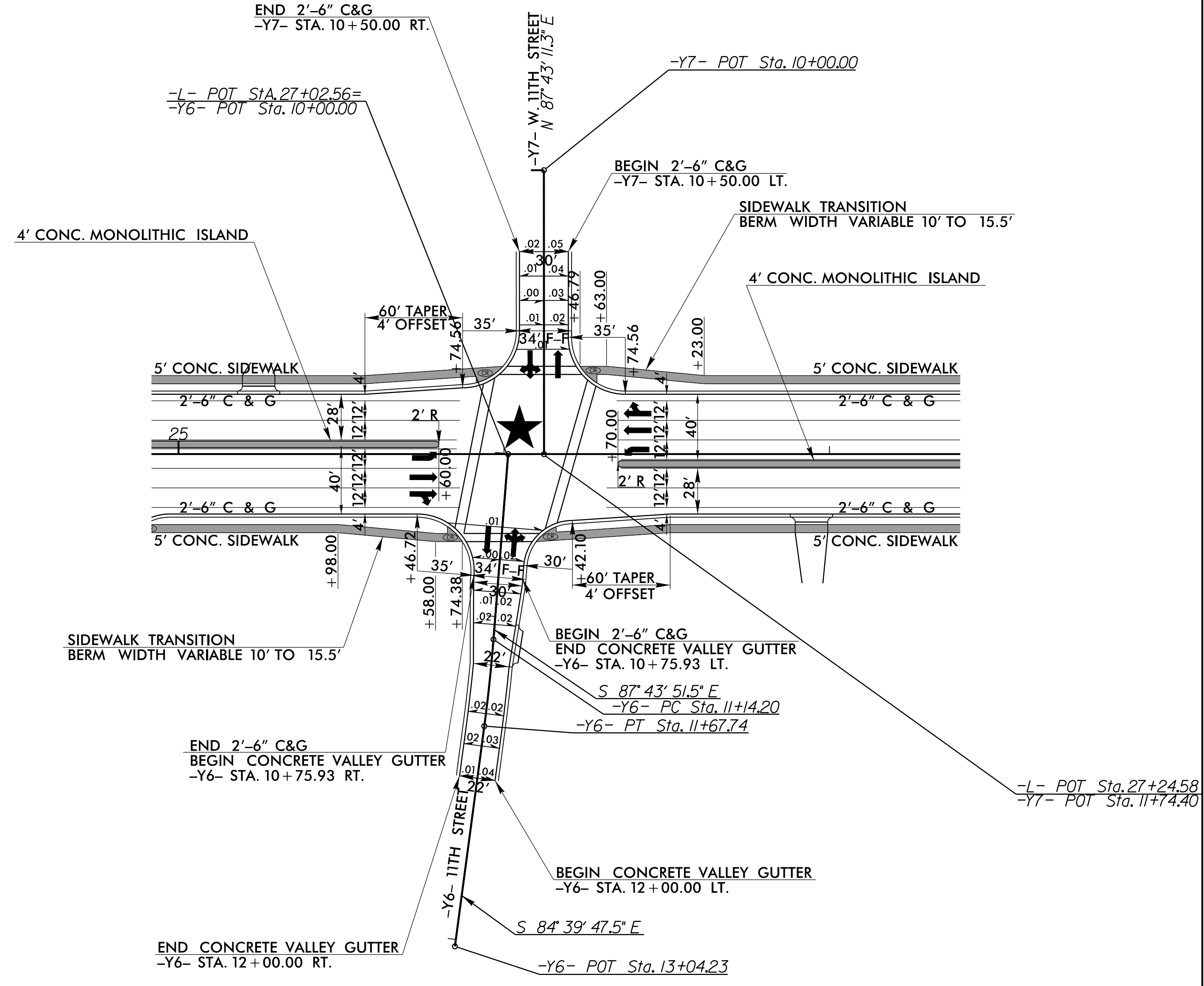
GRAPHIC SCALE



★ SIGNAL UPGRADE

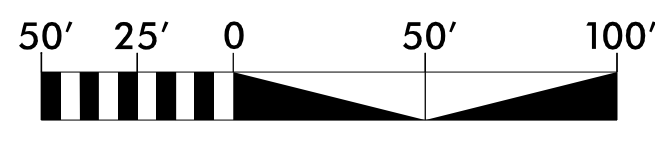
INTERSECTION DETAIL
-L-, -Y6-, AND -Y7-

NAD 83/NA 2011



SEE SHEET 5 FOR PLAN VIEW

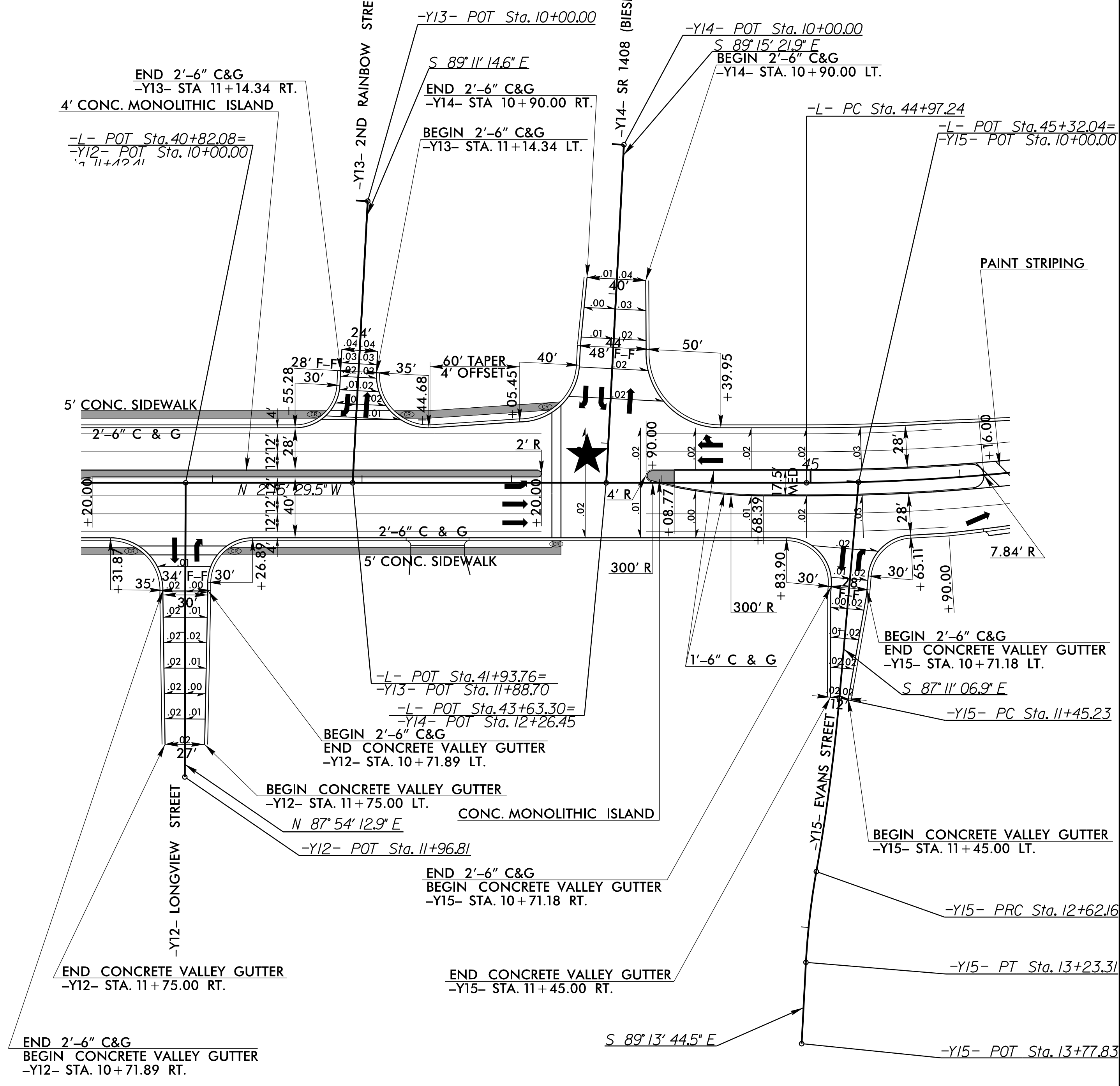
GRAPHIC SCALE



★ SIGNAL UPGRADE

INTERSECTION DETAIL
-L-, -Y12-, -Y13-, -Y14-, AND -Y15-

NAD 83/NA 2011



SEE SHEET 6 FOR PLAN VIEW

TRANSYSTEMS

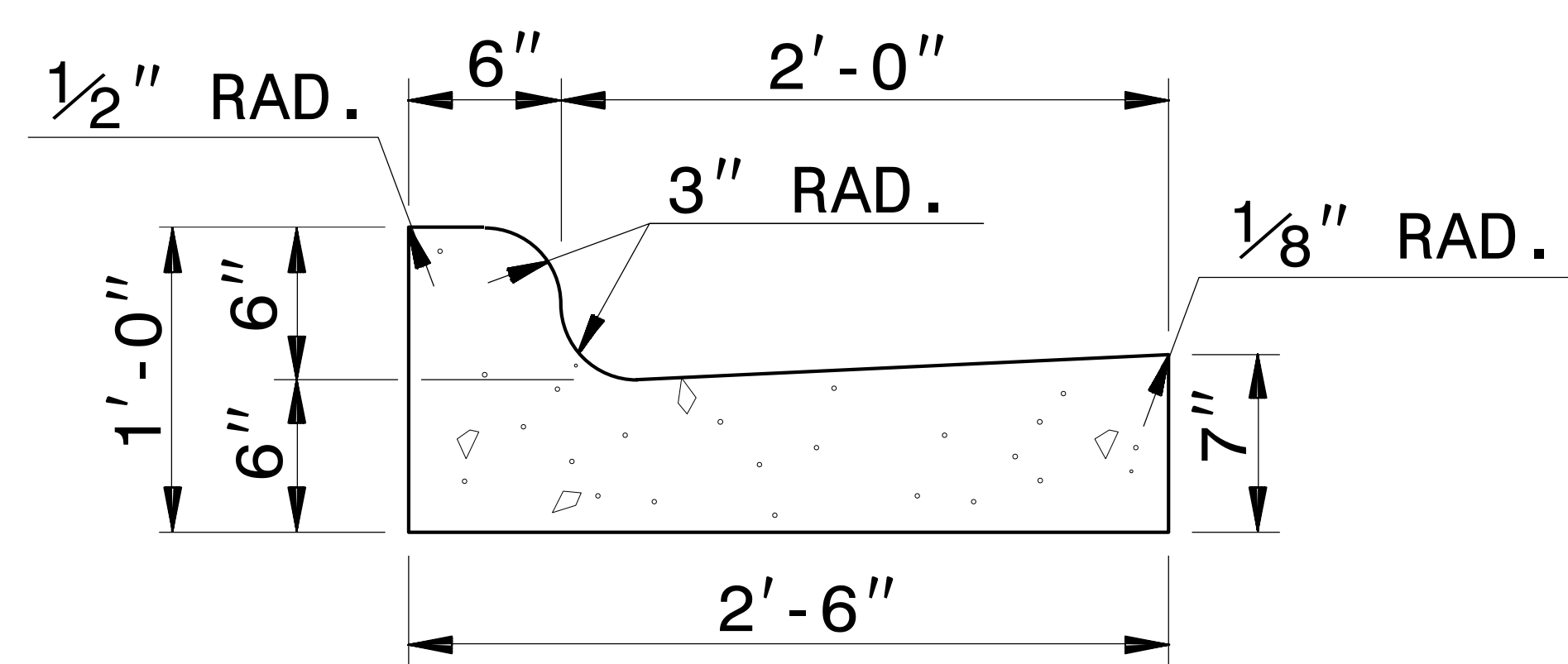
1 Glenwood Avenue
Raleigh, NC 27603
Tel: 919.789.9977
Fax: 919.789.9591
License: F-0453

PROJECT REFERENCE NO.	SHEET NO.
U-5757	2B-2

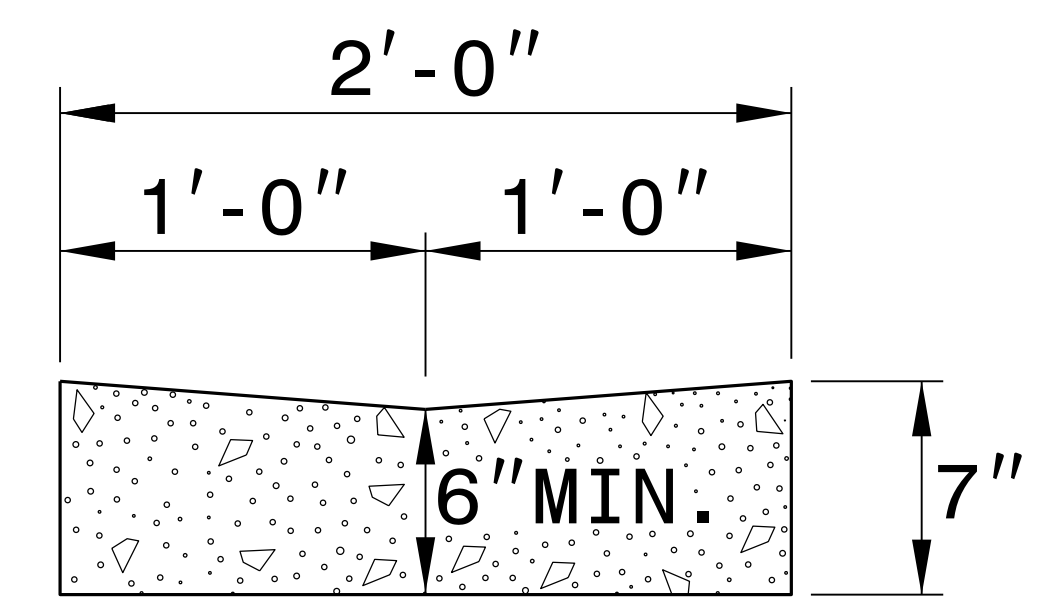
ROADWAY DESIGN
ENGINEER
SEAL
033871
ENGINEER
DAVID W. GARDNER, JR.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

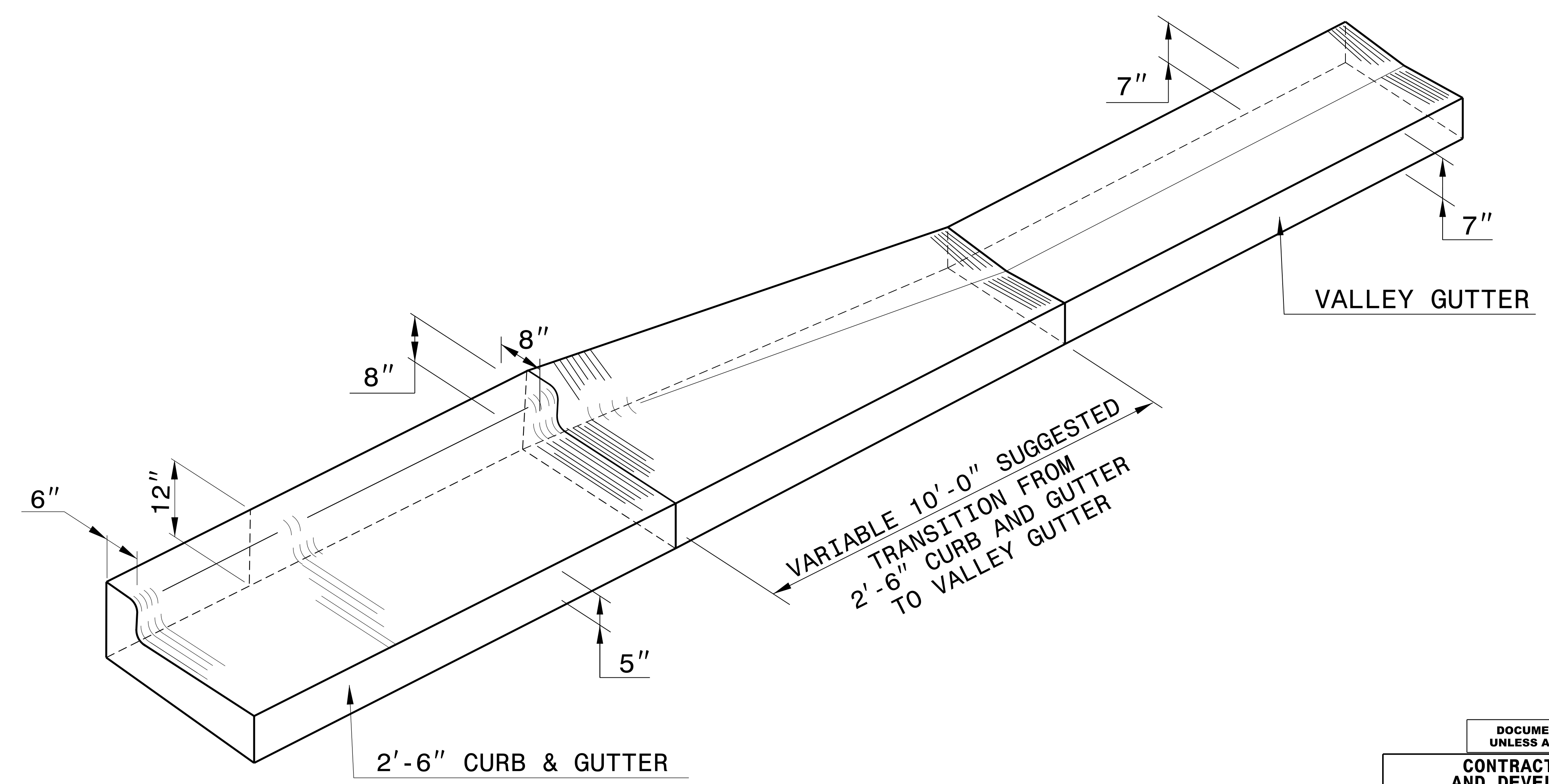
*NOTE: SEE STD. DWG. 846.01
FOR GENERAL NOTES



2'-6" CURB AND GUTTER



VALLEY GUTTER



ISOMETRIC VIEW OF TRANSITION



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

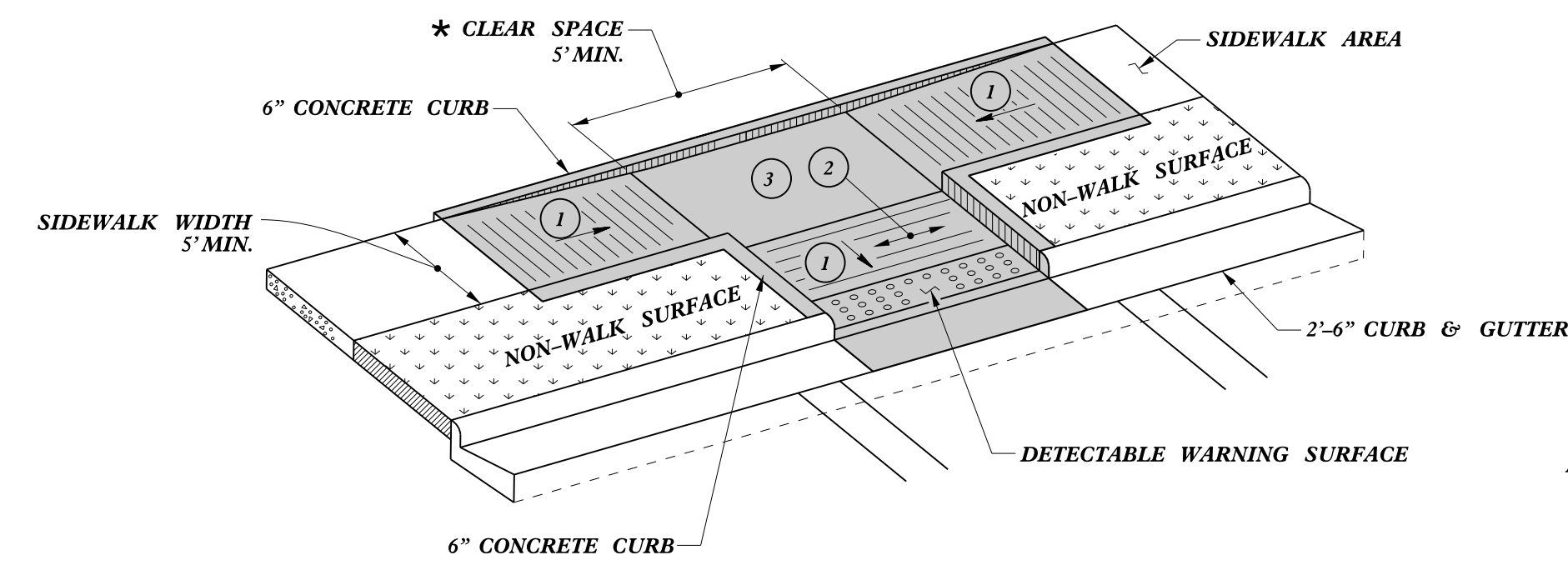
**CONTRACT STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

**TRANSITION FROM
2'-6" CURB AND GUTTER
TO VALLEY GUTTER**

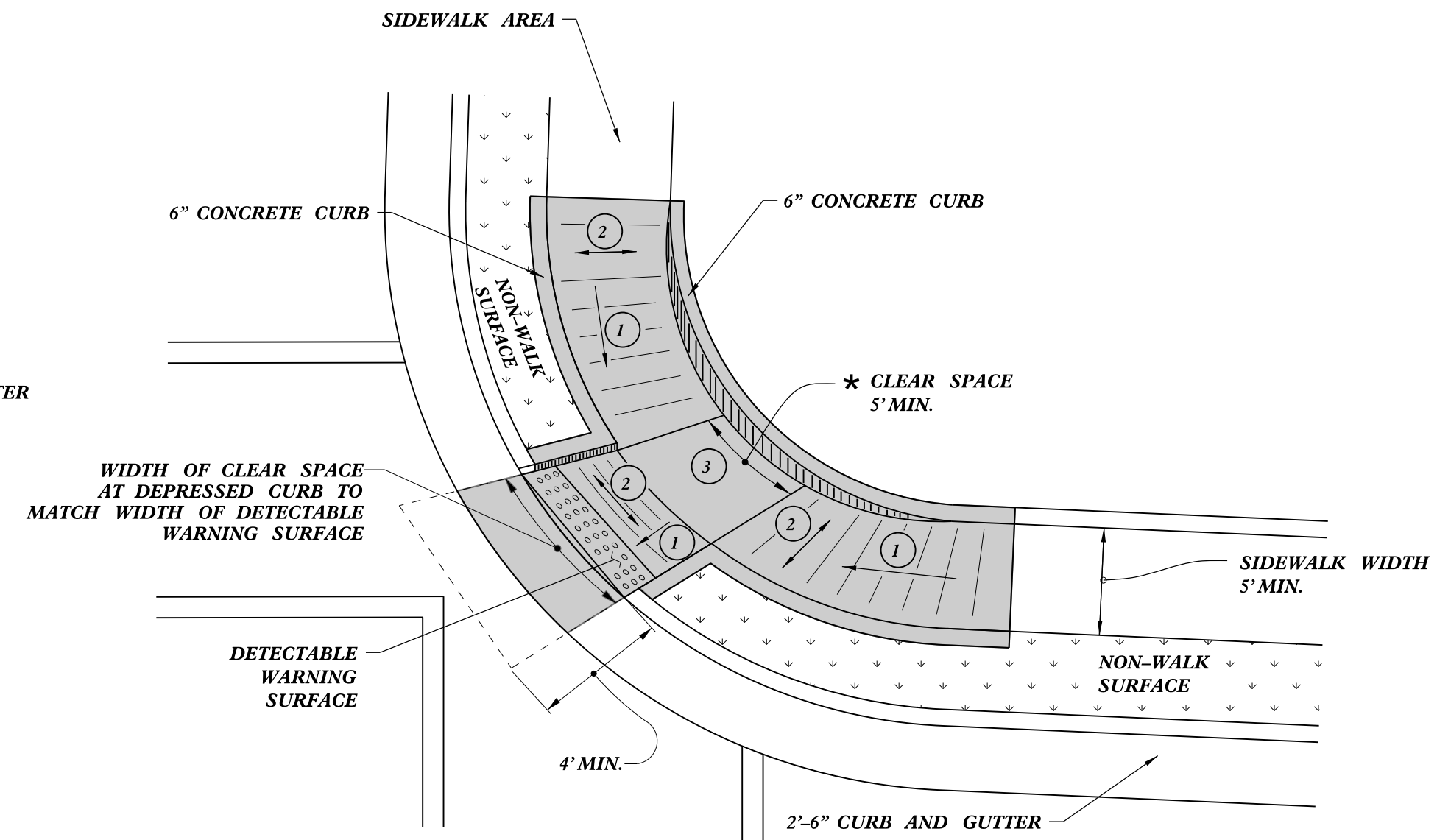
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MODIFIED BY: DATE:
CHECKED BY: DATE:
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07-SEP-2017 08:20 S:\Contracts\Special Details\vericard\usr\details\stand\c&g transition sections.dgn Jhower-ton AT USD-292595

* - WHERE CLEAR SPACE IS CONSTRAINED ON TWO OR MORE SIDES, THE CLEAR SPACE SHALL BE 4' MINIMUM X 5' MINIMUM, WITH 5' PROVIDED IN THE DIRECTION OF THE PEDESTRIAN STREET CROSSING.

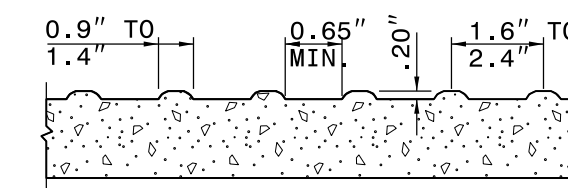
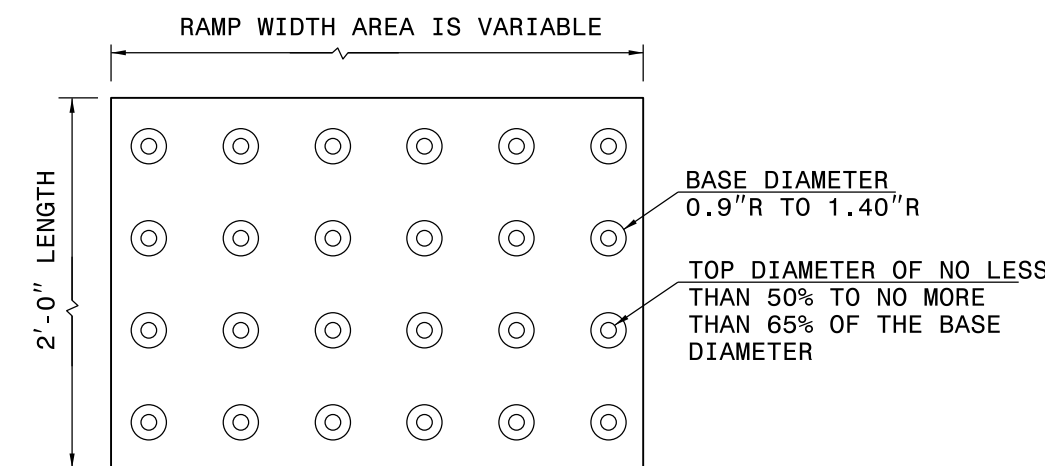


TYPE 3



**TYPE 3 MODIFIED
INSTALLATION IN A RADIUS**

NOTES:
 1. DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
 2. 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 CURB RAMP

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

ROADWAY DETAIL DRAWING FOR
CURB RAMP
 PARALLEL RAMP



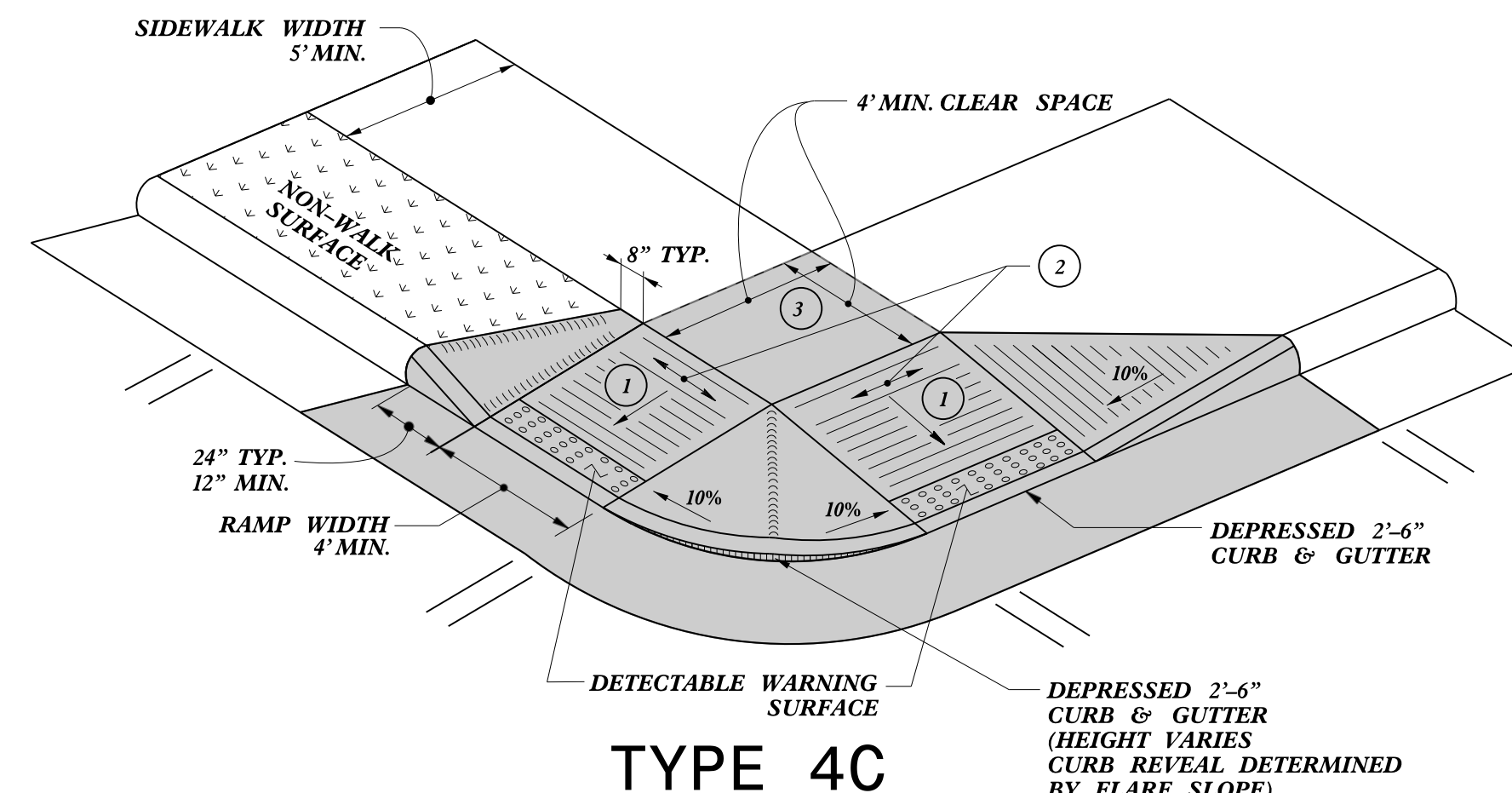
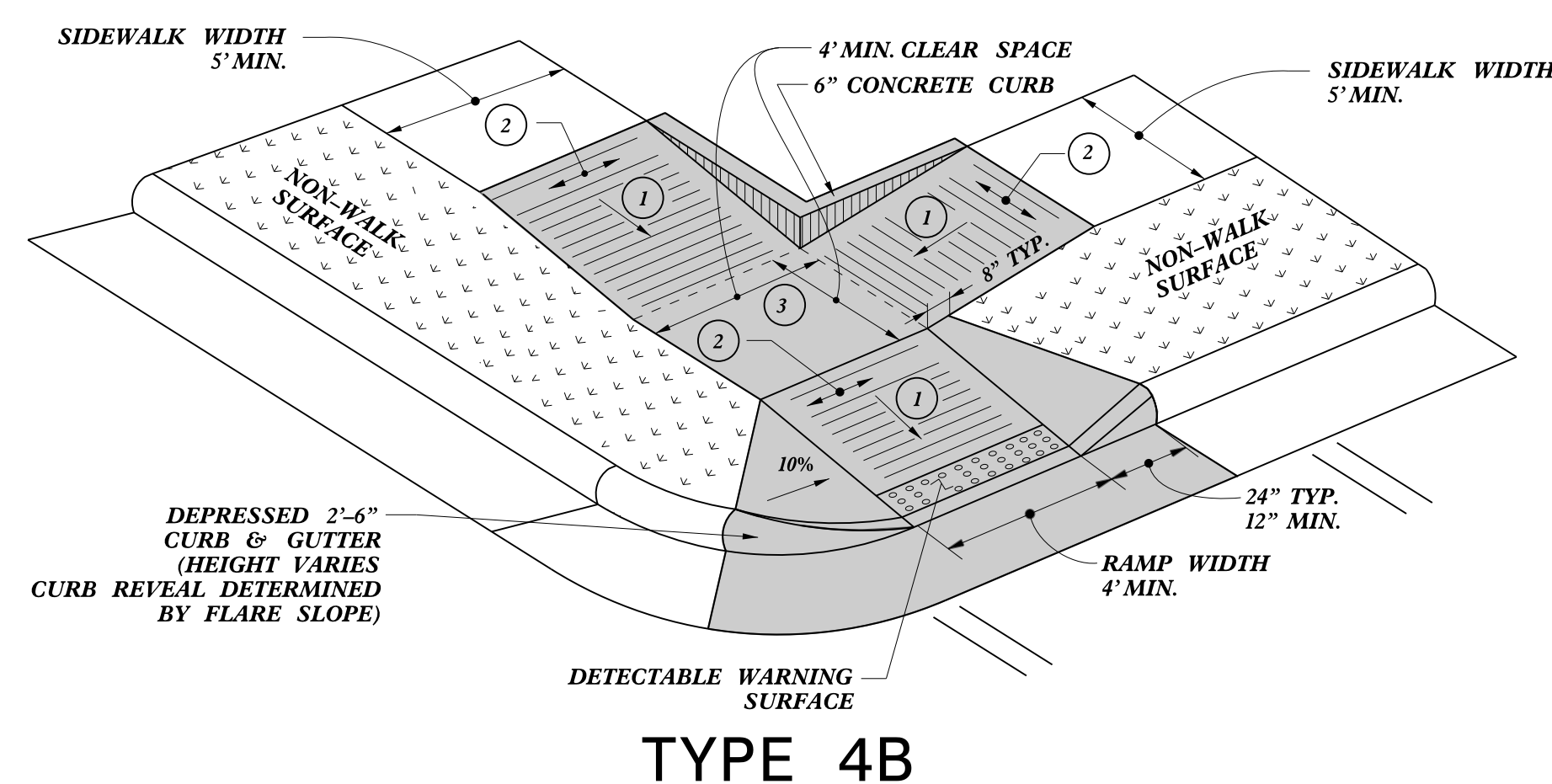
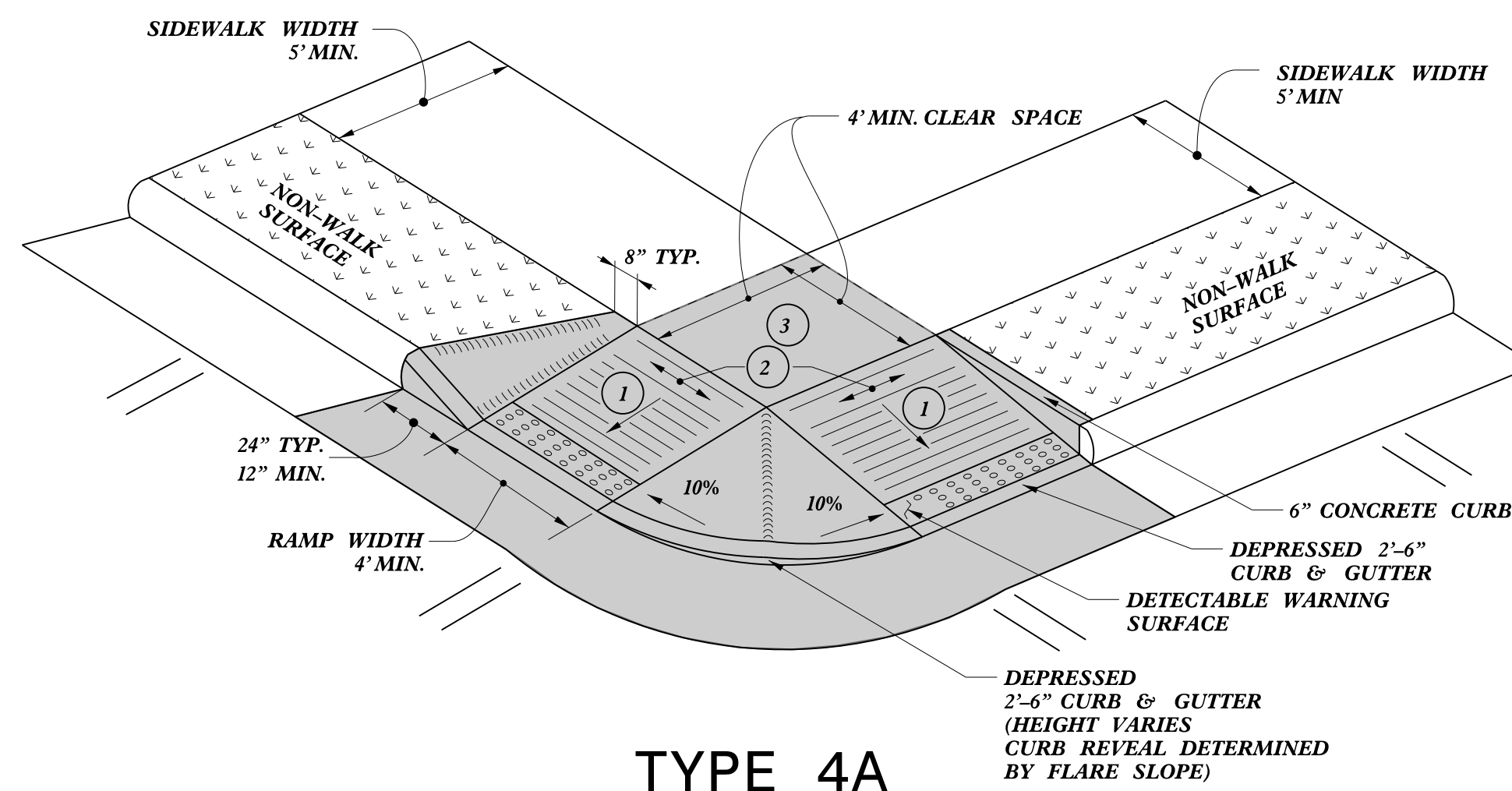
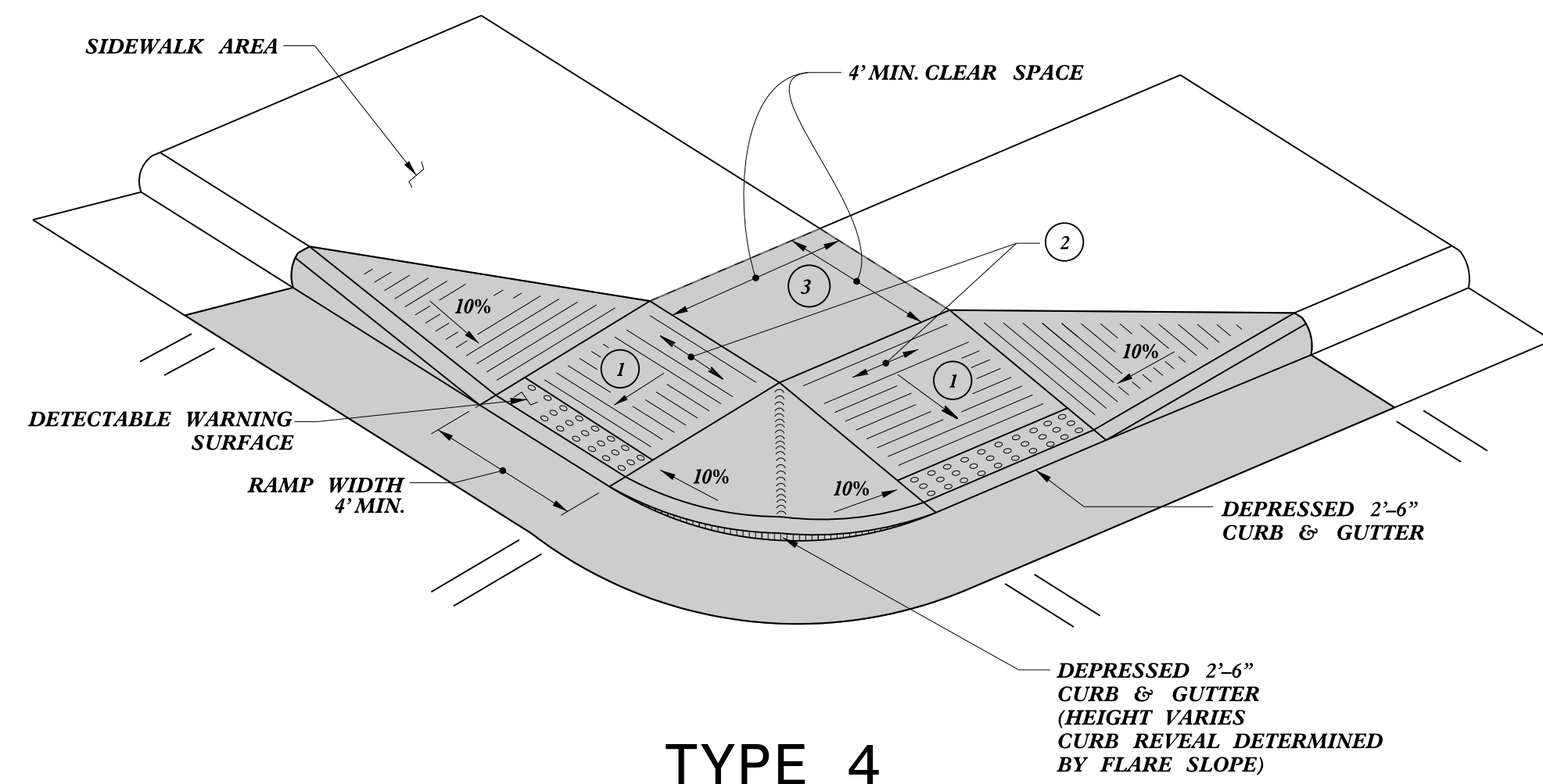
SHEET 9 OF 13
848D06

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

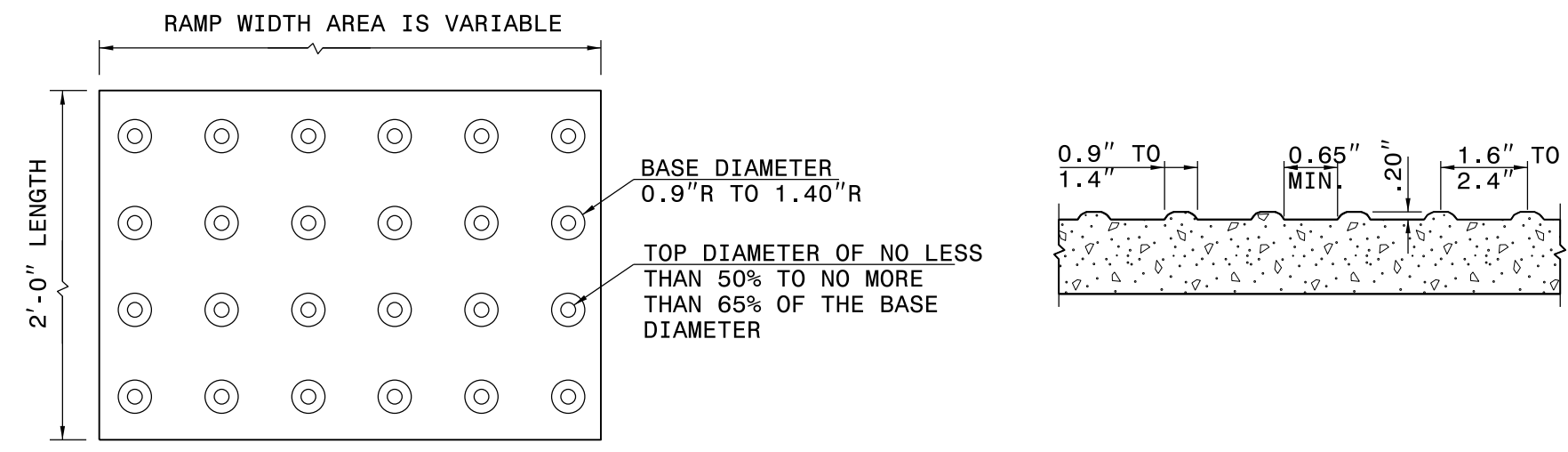
**CONTRACTS STANDARDS
 AND DEVELOPMENT UNIT**
 Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 12-22-2023
 MODIFIED BY: DATE: _____
 CHECKED BY: DATE: _____
 FILE SPEC.: special_details\nmhackler\0609.dgn



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)

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

ROADWAY DETAIL DRAWING FOR
CURB RAMP
 SHARED LANDING



SHEET 10 OF 13
848D06

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

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\848D0610.dgn

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

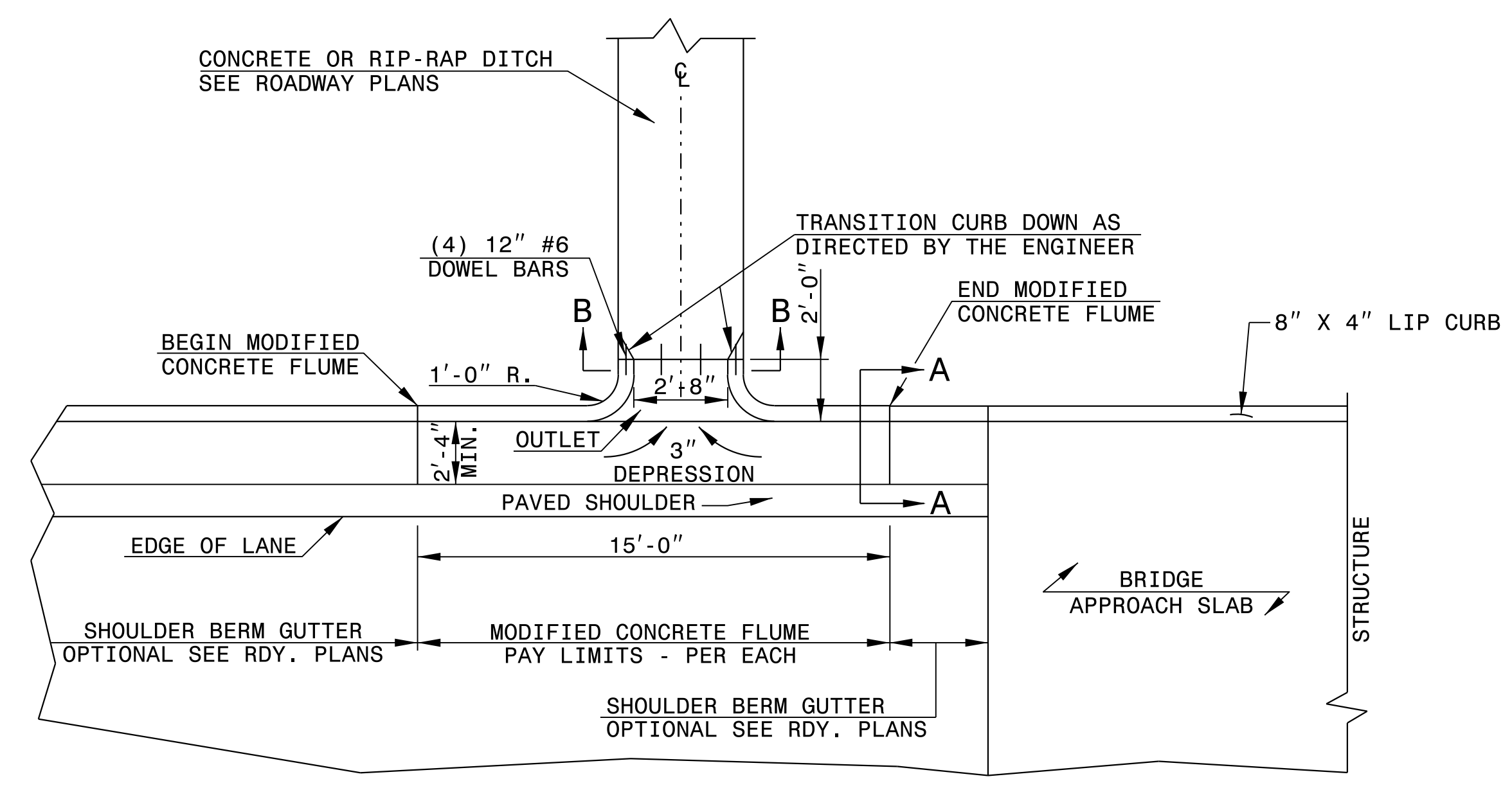
ENGLISH DETAIL DRAWING FOR
MODIFIED CONCRETE FLUME
WITH CONCRETE OR RIP-RAP DITCH

SHEET 1 OF 1
MODFLMDTCH

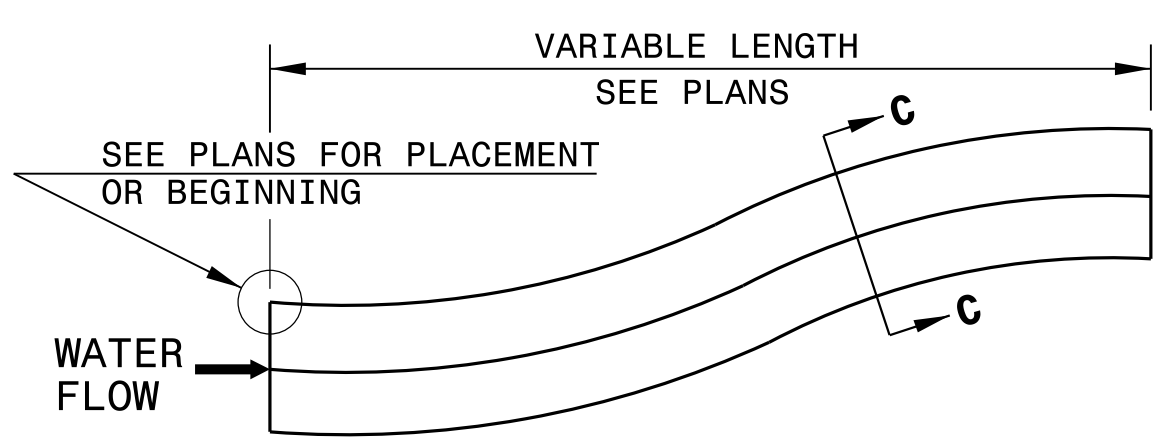
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
MODIFIED CONCRETE FLUME
WITH CONCRETE OR RIP-RAP DITCH

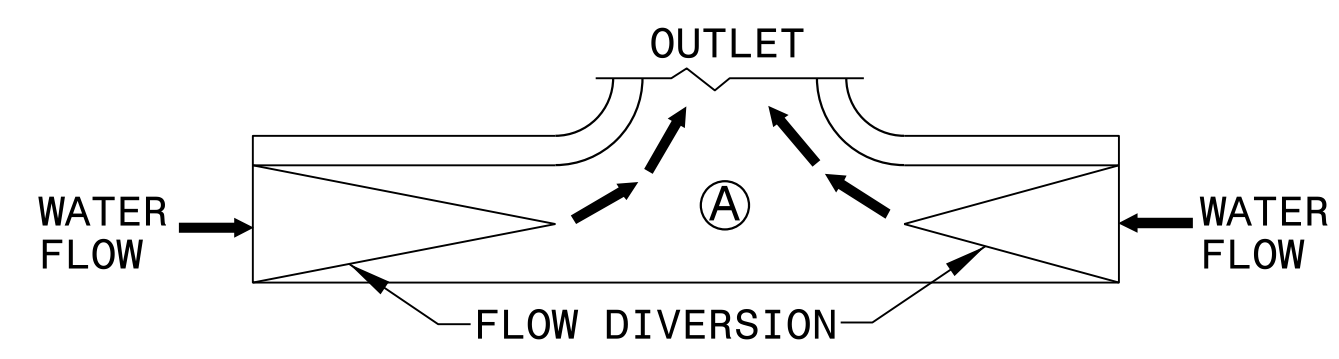
SHEET 1 OF 1
MODFLMDTCH



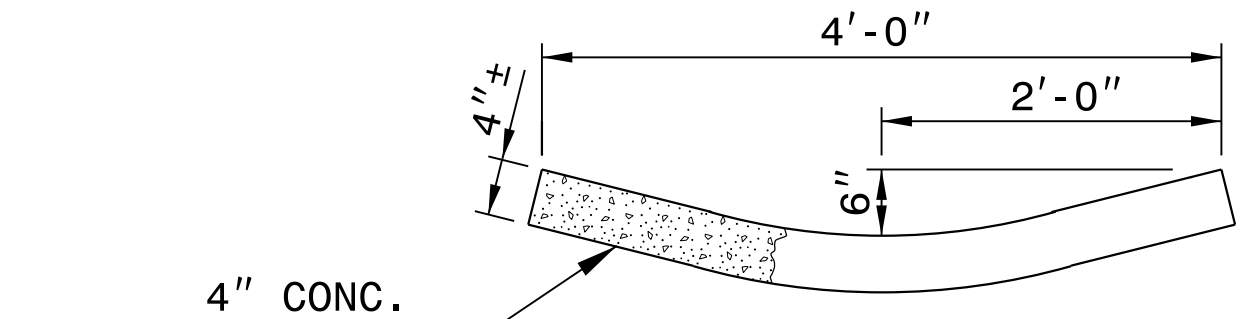
PLAN VIEW



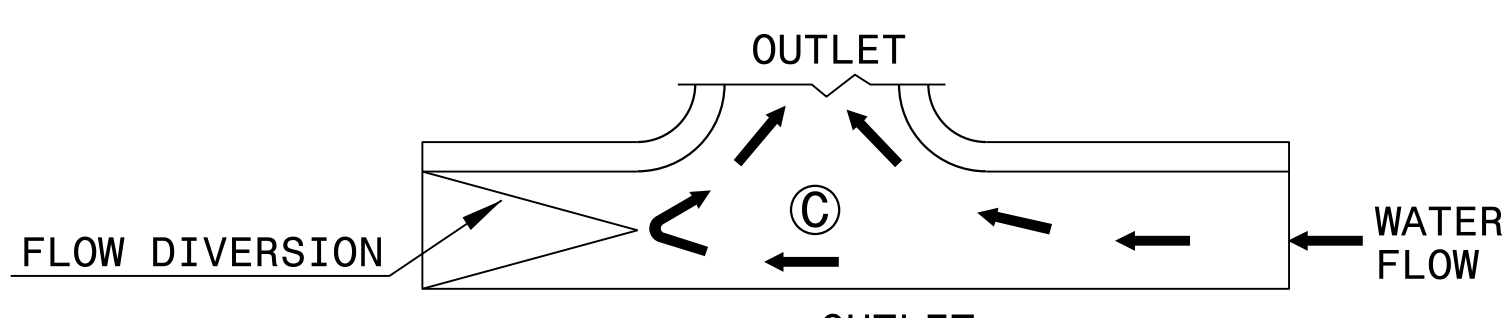
DOWNGRADE OR SAG



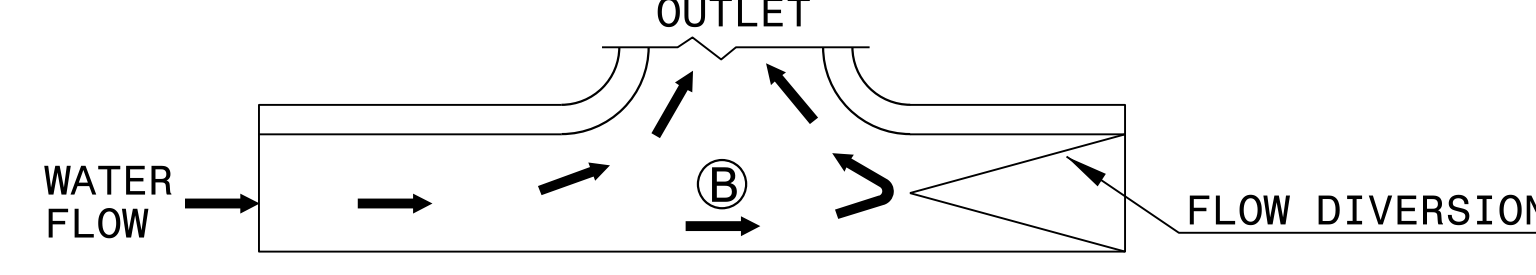
SAG



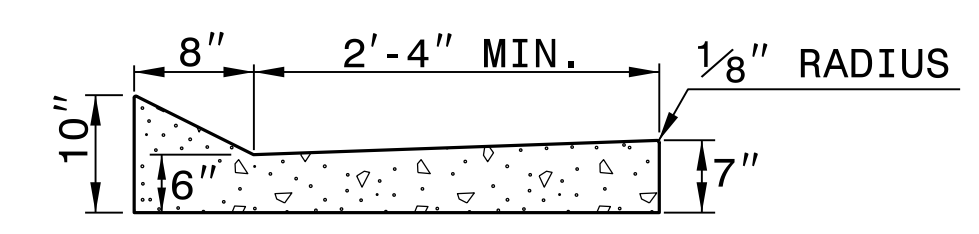
SECTION C-C



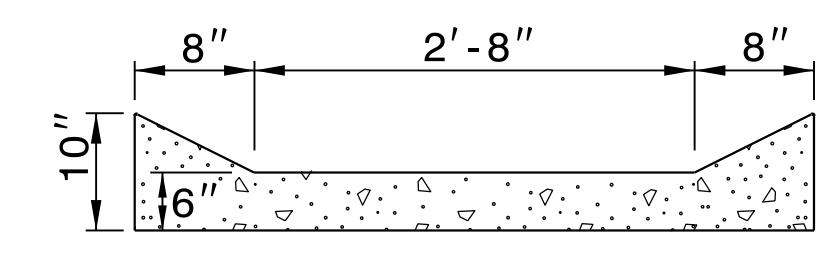
FLOW DIVERSION EXAMPLES



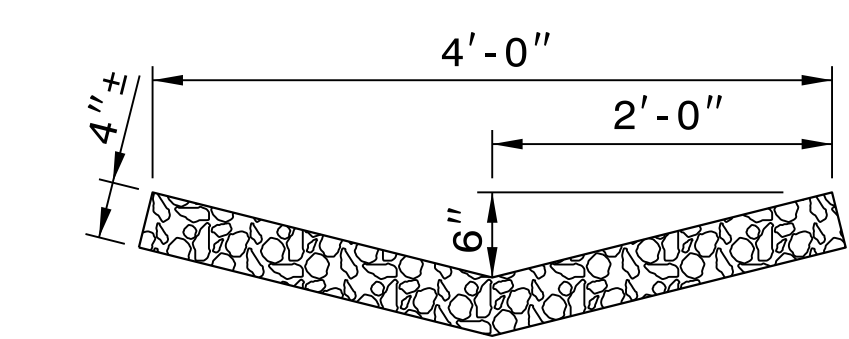
DOWN GRADE



SECTION A-A



SECTION B-B



RIP-RAP LINED DITCH

NOTES:

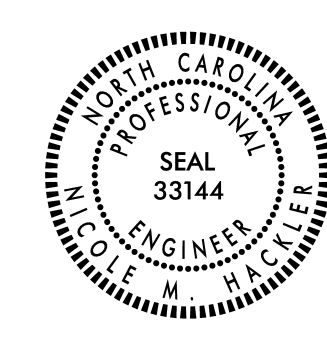
- CONSTRUCT MODIFIED CONCRETE FLUME AND SHOULDER BERM GUTTER IN ACCORDANCE WITH THIS DETAIL.
- CONSTRUCT CONCRETE DITCH IN ACCORDANCE WITH STD. DWG. NO. 850.01.
- CONSTRUCT RIP RAP LINED DITCH IN ACCORDANCE WITH THIS DETAIL, IF CALLED FOR IN PLANS.
- CONCRETE OR RIP RAP LINED DITCH SHALL BE THE TYPE AND LENGTH SPECIFIED BY THE ROADWAY PLANS. THE DITCH SHALL TERMINATE AS SHOWN ON THE PLANS. IF NO TERMINATION IS INDICATED PLACE RIP-RAP AT THE END OF THE DITCH AS INDICATED BY STD. DWG. 876.02 FOR AN 18" PIPE. TRANSITIONS FROM THE DITCH TO TERMINATION SHALL BE AS DIRECTED BY THE ENGINEER.
- MODIFICATIONS SHALL BE AS DICTATED BY SITE CONDITIONS AND DIRECTED BY THE ENGINEER.

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UNLESS ALL SIGNATURES COMPLETED

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

SEE PLATE FOR TITLE

ORIGINAL BY: E.E. Ward	DATE: Apr. 2002
MODIFIED BY: J.S. Howerton	DATE: October 2017
CHECKED BY:	DATE:
FILE SPEC.: w:\details\stand\modifiedflume.dgn	



18-QCT-2017 1417
S:\Contracts\Contract\Stand\Stand\modiflume.dgn
J.Howerton AI CS0-232955

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS



1 Glenwood Avenue
 Raleigh, NC 27603
 Tel: 919.789.9977
 Fax: 919.789.9591
 License: F-0453

SUMMARY OF EARTHWORK
 IN CUBIC YARDS

STATION	STATION	UNCL. EXCAV.	UNDERCUT	EMBANK. +%	BORROW	WASTE
PHASE I						
SUMMARY NO. 1 (RT.)						
-L- STA. 11+00.00	-L- STA. 27+00.00	2,130	244	476		1,898
-Y- STA. 10+36.75	-Y- STA. 10+80.00	31		6		25
-Y3- STA. 10+36.75	-Y3- STA. 10+75.00	19		5		14
-Y5- STA. 10+36.75	-Y5- STA. 11+45.00	325				325
-Y6- STA. 10+36.75	-Y6- STA. 12+00.00	377		28		349
TOTAL SUMMARY NO. 1		2,882	244	515		2,611
SUMMARY NO. 2 (RT.)						
-L- STA. 27+00.00	-L- STA. 51+00.00	257	2,362	8,740	8,500	2,379
-Y9- STA. 10+37.75	-Y9- STA. 12+00.00	38		182	144	
-Y12- STA. 10+36.75	-Y12- STA. 11+75.00	23		55	32	
-Y15- STA. 10+36.98	-Y15- STA. 11+45.00	27		148	121	
TOTAL SUMMARY NO. 2		345	2,362	9,125	8,797	2,379
PHASE II						
SUMMARY NO. 3 (LT.)						
-L- STA. 11+00.00	-L- STA. 27+00.00	346		646	310	10
-Y2- STA. 11+63.00	-Y2- STA. 12+27.28	9		12	3	
-Y4- STA. 10+60.00	-Y4- STA. 11+37.48	25		28	3	
-Y7- STA. 10+50.00	-Y7- STA. 11+37.65	15		34	19	
TOTAL SUMMARY NO. 3		395		720	335	10
SUMMARY NO. 4 (LT.)						
-L- STA. 27+00.00	-L- STA. 51+00.00	264	594	1,706	1,595	747
-Y8- STA. 10+50.00	-Y8- STA. 11+30.93	20		1		19
-Y10- STA. 11+00.00	-Y10- STA. 11+72.95	19		22	3	
-Y11- STA. 11+50.00	-Y11- STA. 12+76.21	211		20		191
-Y13- STA. 11+00.00	-Y13- STA. 11+51.90	51				51
-Y14- STA. 10+90.00	-Y14- STA. 11+89.65	13		71	58	
TOTAL SUMMARY NO. 4		578	594	1,820	1,656	1,008
SUMMARY TOTALS		4,200	3,200	12,180	10,788	6,008
WASTE IN LIEU OF BORROW					-2,268	-2,268
UNDERCUT CONTINGENCY			1,000	1,200	1,200	1,000
GRADEPOINT UNDERCUT			800	960	960	800
LOSS DUE TO CLEARING & GRUBBING		-700			700	
PROJECT TOTALS		3,500	5,000	14,340	11,380	5,540
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT					569	
GRAND TOTALS		3,500	5,000	14,340	11,949	5,540
SAY		3,800	5,000		12,300	

ASPHALT PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	SQUARE YARDS
-L-	12+80.31	13+86.82	LT	67.58
-L-	14+60.26	16+39.01	LT	455.03
-L-	16+66.29	22+33.47	LT	1,531.34
-L-	22+73.61	26+99.96	LT	690.32
-L-	27+43.21	31+72.60	LT	708.66
-L-	32+17.06	36+45.56	LT	740.26
-L-	36+85.55	38+06.58	LT	185.52
-L-	38+51.99	41+79.38	LT	511.57
-L-	42+00.00	43+50.00	LT/RT	753.64
-L-	43+90.28	51+00.00	LT	965.39
-Y-	10+00.00	10+36.68	LT/RT	218.12
-Y3-	10+00.00	10+36.75	LT/RT	174.55
-Y5-	10+00.00	11+45.00	LT/RT	503.07
-Y6-	10+00.00	12+00.00	LT/RT	591.33
-Y9-	10+00.00	10+36.75	LT/RT	164.68
-Y11-	11+50.00	12+75.29	LT/RT	448.58
-Y12-	10+00.00	10+36.75	LT/RT	155.13
-Y15-	10+00.00	10+24.72	LT/RT	71.89
TOTALS				8,936.66
SAY				9,000

DDE = 640 CY
 SELECT GRANULAR MATERIAL = 4,810 CY
 CLASS IV SUBGRADE STABILIZATION = 800 TONS
 GEOTEXTILE FOR SOIL STABILIZATION = 5,010 SY
 SHALLOW UNDERCUT = 350 CY

Earthwork quantities are calculated by Transystems. These earthwork quantities are based in part on subsurface data provided by Falcon Engineering.

Note: 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."

48" CHAIN LINK FENCE

STATION TO STATION	LOC. LT/RT	48" FABRIC LF	LINE POSTS	TERMINAL POSTS
-L- STA. 13+37.85 TO STA. 15+57.00	RT	219.15	18.26	2
TOTALS		219.15	18.26	2
SAY		220.00	19.00	2

6/24/2024 11:57:57 AM U:\Projects\2023\U-5757-Relay-sum-3B-1.dgn

6/24/2024 11:57:57 - Rdy_psh04.dgn

-L-		-RPA-			
PI Sta 12+98.80 Δ = 2' 22" 08.7" (RT) D = 1' 12" 04.2" L = 197.23' T = 98.63' R = 4,770.00' SE = NC	PI Sta 15+2.06 Δ = 2' 45" 13.7" (LT) D = 1' 12" 04.2" L = 229.26' T = 114.65' R = 4,770.00' SE = NC	PIs Sta 11+97.82 Θs = 8' 58" 47.7" Ls = 184.00' L = 122.82' ST = 61.48'	PI Sta 13+24.10 Δ = 12' 39" 23.3" (RT) D = 9' 45" 38.8" L = 129.67' T = 65.10' R = 587.00'	PIs Sta 14+50.14 Θs = 8' 58" 47.7" Ls = 184.00' L = 122.82' ST = 61.48'	PI Sta 18+86.34 Δ = 48' 51" 27.8" (LT) D = 12' 54" 16.0" L = 378.61' T = 201.68' R = 444.00' SE = SEE PLANS

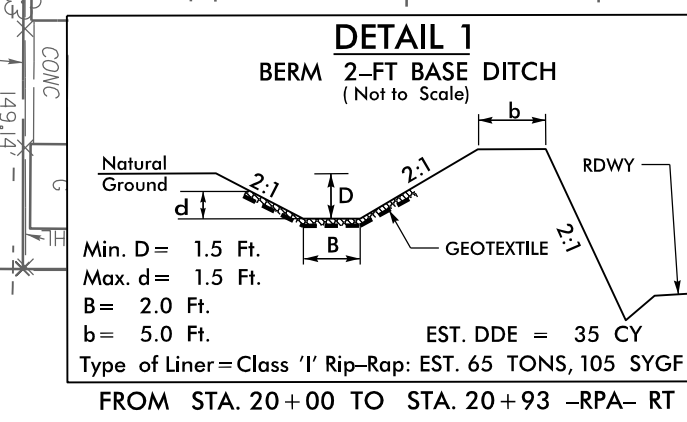
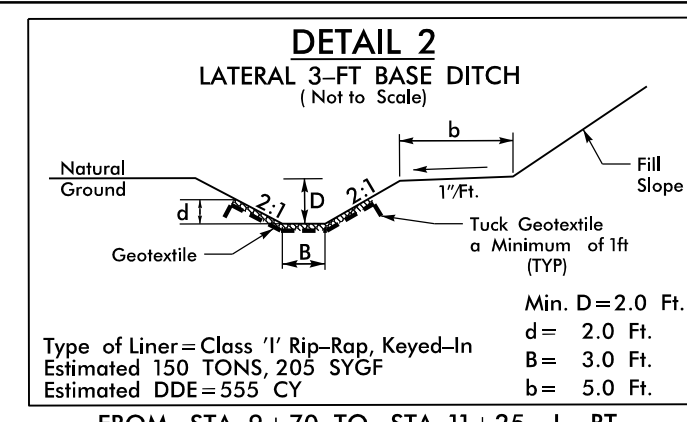
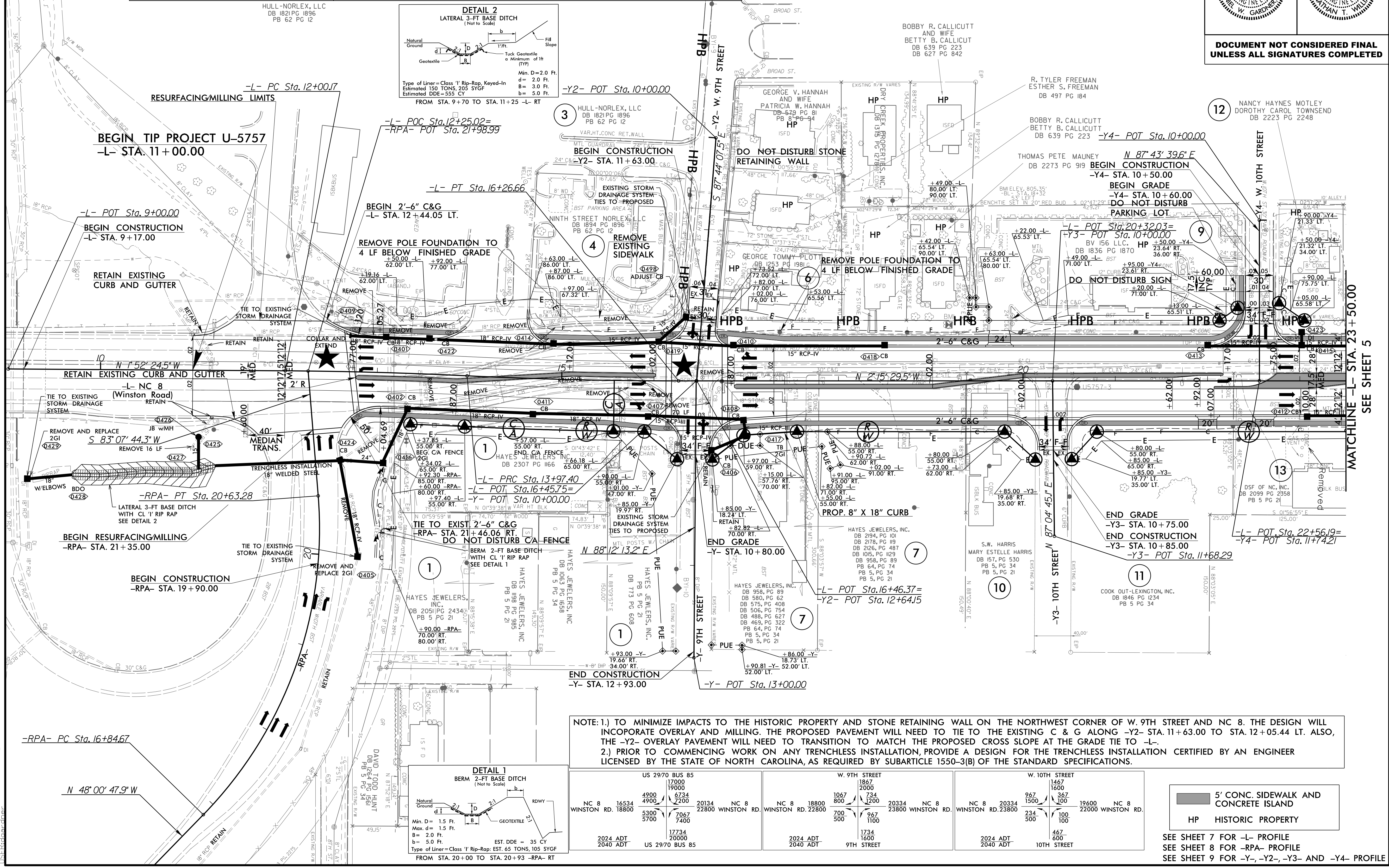
★ SIGNAL UPGRADES

TRANSYSTEMS

1 Glenwood Avenue
Raleigh, NC 27603
Tel: 919.789.9977
Fax: 919.789.9561
License: F-0453

PROJECT REFERENCE NO. U-5757	SHEET NO. 4
Roadway Design Engineer SEAL 033871 DANIEL ENGINEER	Hydraulics Engineer SEAL 052573 NATHAN T. WILLIAMS ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



NOTE: 1.) TO MINIMIZE IMPACTS TO THE HISTORIC PROPERTY AND STONE RETAINING WALL ON THE NORTHWEST CORNER OF W. 9TH STREET AND NC 8. THE DESIGN WILL INCORPORATE OVERLAY AND MILLING. THE PROPOSED PAVEMENT WILL NEED TO TIE TO THE EXISTING C & G ALONG -Y2- STA. 11+63.00 TO STA. 12+05.44 LT. ALSO, THE -Y2- OVERLAY PAVEMENT WILL NEED TO TRANSITION TO MATCH THE PROPOSED CROSS SLOPE AT THE GRADE TIE TO -L-.
2.) PRIOR TO COMMENCING WORK ON ANY TRENCHLESS INSTALLATION, PROVIDE A DESIGN FOR THE TRENCHLESS INSTALLATION CERTIFIED BY AN ENGINEER LICENSED BY THE STATE OF NORTH CAROLINA, AS REQUIRED BY SUBARTICLE 1550-3(B) OF THE STANDARD SPECIFICATIONS.

US 2970 BUS 85		W. 9TH STREET		W. 10TH STREET	
NC 8 16534	4900	1067	1067	967	967
18800	4900	700	700	234	234
	5300	500	500	500	500
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8.17.799

★ SIGNAL UPGRADES

TRANSYSTEMS

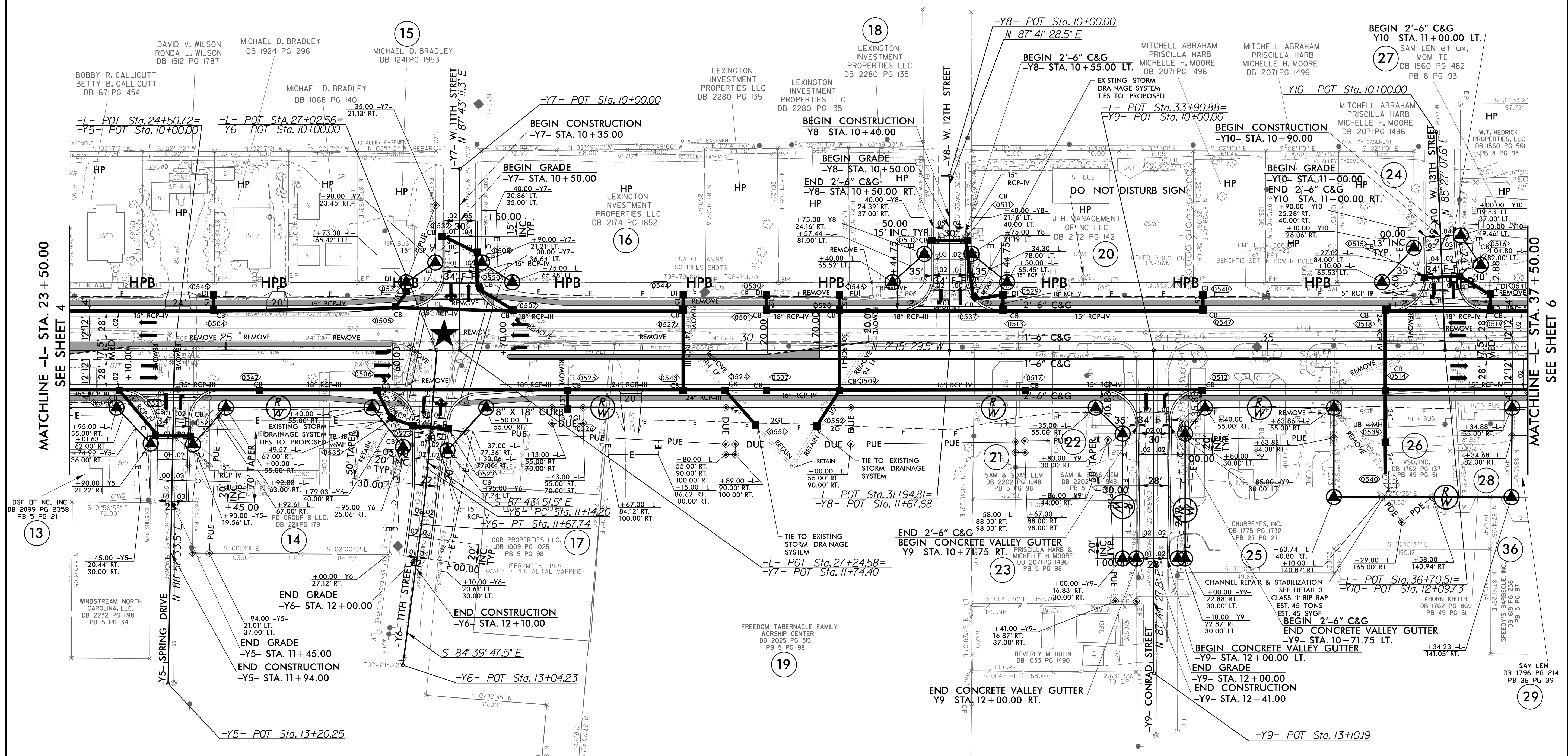
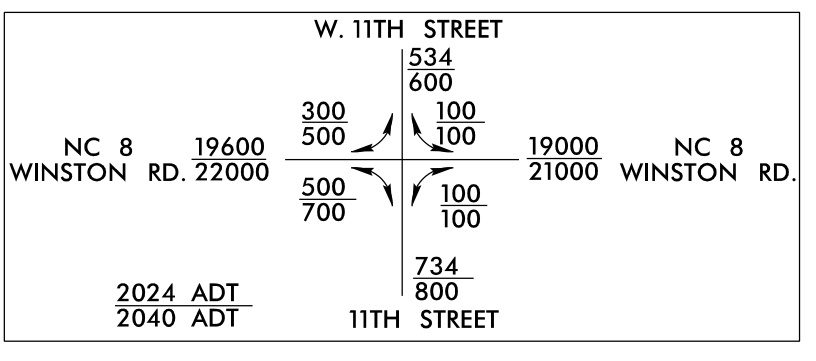
1 Glenwood Avenue
Raleigh, NC 27603
Tel: 919.789.9977
Fax: 919.789.9561
License: F-0453

PROJECT REFERENCE NO. U-5757	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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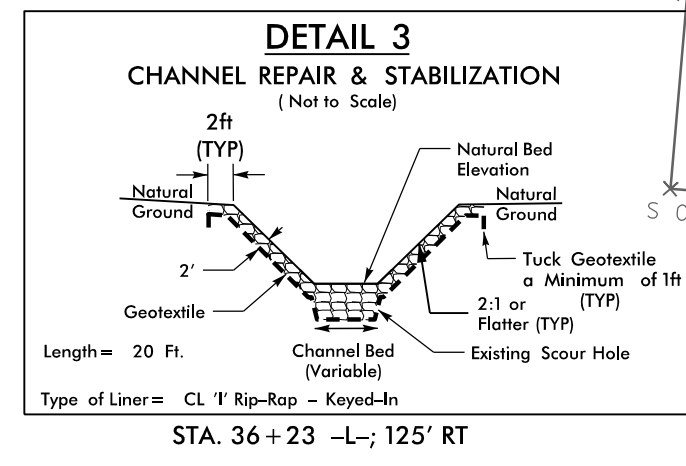
NAD 83/NA 2011

-Y6-
PI Sta 11+40.98
 $\Delta = 3^{\circ}04'04.0''$ (RT)
 $D = 5^{\circ}43'46.5''$
 $L = 53.54'$
 $T = 26.78'$
 $R = 1,000.00'$
SE = SEE PLANS



MATCHLINE -L- STA. 23 + 50.00
SEE SHEET 4

MATCHLINE -L- STA. 37 + 50.00
SEE SHEET 6



STRUCTURES 0551 AND 0552 ARE APPROXIMATE
BASED UPON BEST AVAILABLE DATA DURING
DESIGN. FIELD VERIFY HORIZONTAL AND
VERTICAL LOCATIONS. ADJUST DESIGN AS
NECESSARY AND AS DIRECTED BY THE
ENGINEER.

5' CONC. SIDEWALK AND
CONCRETE ISLAND
HP HISTORIC PROPERTY

SEE SHEET 7 FOR -L- PROFILE
SEE SHEET 10 FOR -Y5-, -Y6-, -Y7-, AND -Y8- PROFILE
SEE SHEET 11 FOR -Y9- AND -Y10- PROFILE

6/24/2024 11:57:57 -Rdy_psh05.dgn

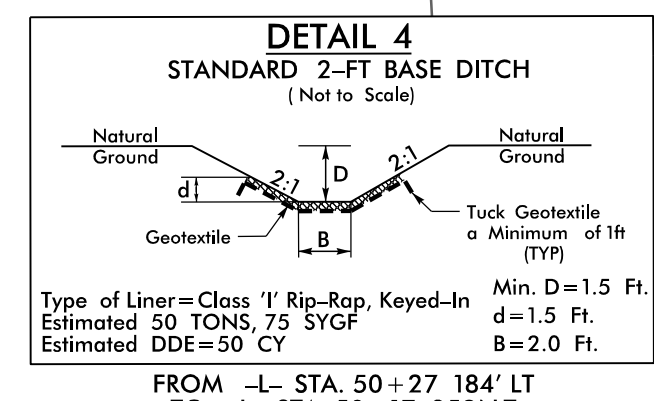
6/24/2024 11:57:57 -Relu_psh06.dgn

-L-		-Y11-	
PI Sta 46+05.70	PI Sta 49+77.46	PI Sta 10+72.84	PI Sta 12+17.47
$\Delta = 9^{\circ}03'09.9"$ (LT)	$\Delta = 5^{\circ}55'10.2"$ (RT)	$\Delta = 29^{\circ}40'13.2"$ (RT)	$\Delta = 30^{\circ}13'37.4"$ (LT)
$D = 4^{\circ}10'55.8"$	$D = 4^{\circ}10'55.8"$	$D = 20^{\circ}50'05.4"$	$D = 11^{\circ}35'29.6"$
$L = 216.46'$	$L = 141.54'$	$L = 142.41'$	$L = 26.38'$
$T = 108.46'$	$T = 70.83'$	$T = 72.84'$	$T = 13.50'$
$R = 1,370.00'$	$R = 1,370.00'$	$R = 275.00'$	$R = 500.00'$
$SE = 0.03$	$SE = 0.03$	$SE = SEE PLANS$	$SE = SEE PLANS$
$RO = III'$	$RO = SEE PLANS$	$SE = SEE PLANS$	$SE = SEE PLANS$

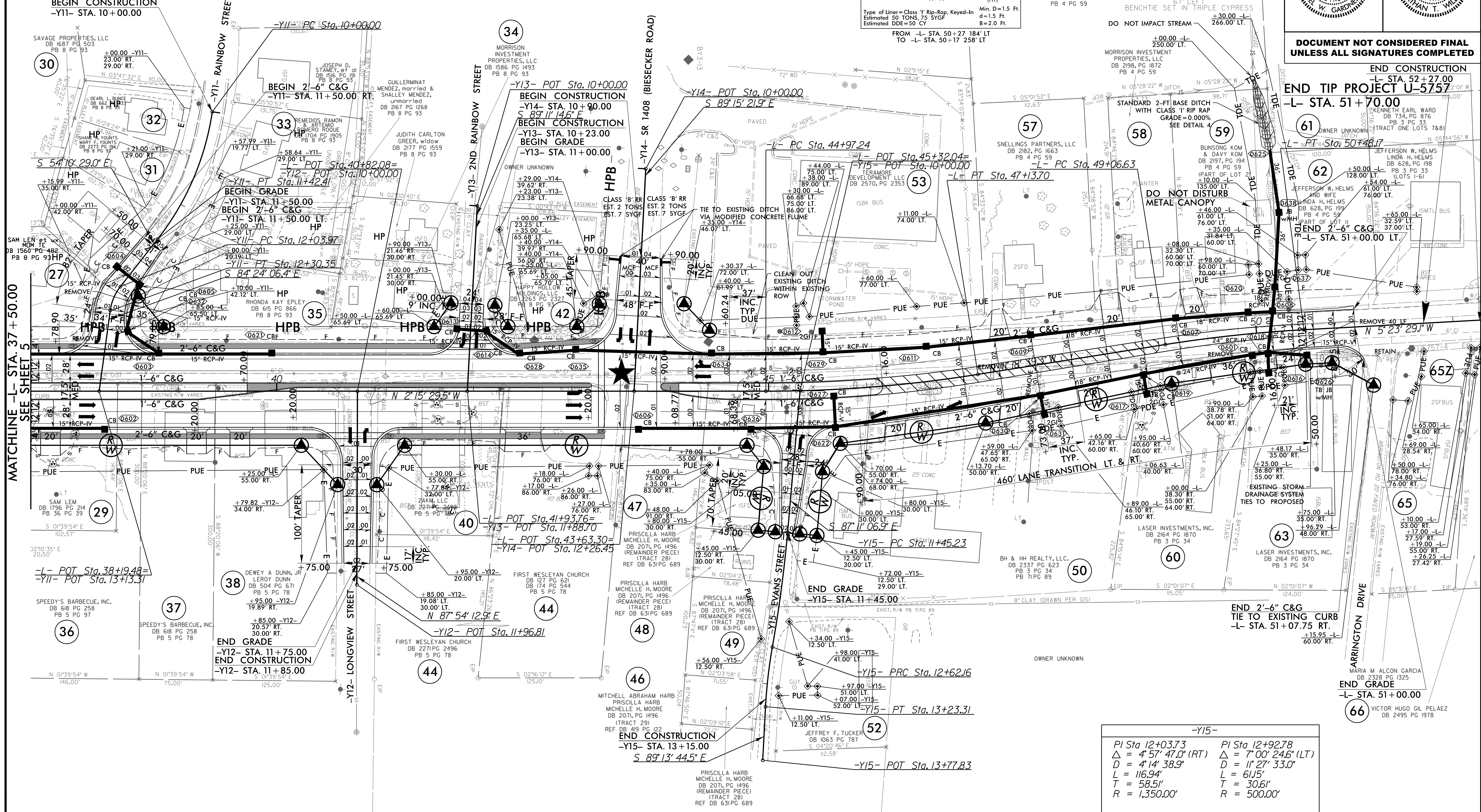
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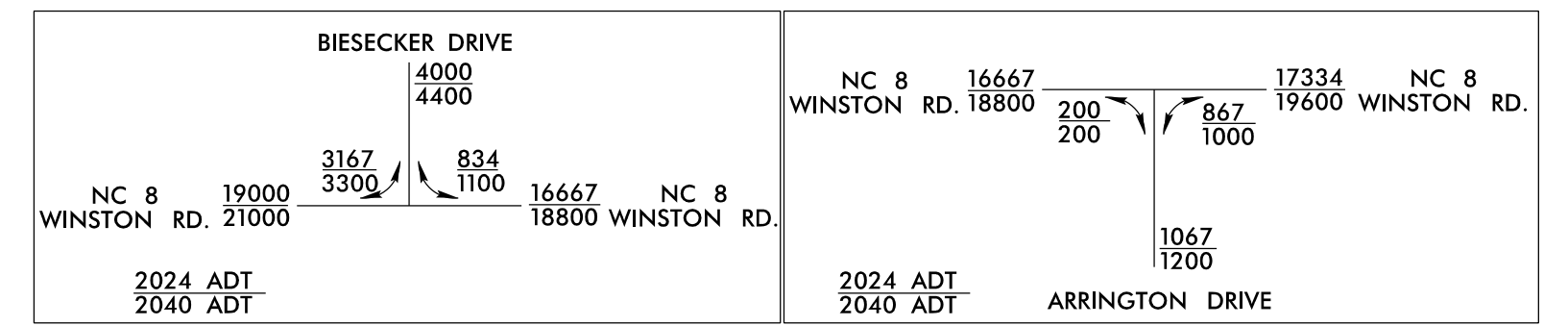
PROJECT REFERENCE NO. U-5757	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PROFESSIONAL SEAL 033871 DANIEL W. GARDNER, R. REGISTERED PROFESSIONAL ENGINEER STATE OF NORTH CAROLINA	PROFESSIONAL SEAL 052573 NATHAN T. WILLIAMS REGISTERED PROFESSIONAL ENGINEER STATE OF NORTH CAROLINA
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



NAD 83/NA 2011
BM3 ELEV. 79.30
BL - STA. 45+37.67 LEFT
BENCHM SET IN TRIPLE CYPRESS
DO NOT IMPACT STREAM
+30.00 -L-
266.00' LT.



-Y15-	
PI Sta 12+03.73	PI Sta 12+92.78
$\Delta = 4^{\circ}57'47.0"$ (RT)	$\Delta = 7^{\circ}00'24.6"$ (LT)
$D = 4^{\circ}14'38.9"$	$D = 1^{\circ}27'33.0"$
$L = 116.94'$	$L = 61.15'$
$T = 58.51'$	$T = 30.61'$
$R = 1,350.00'$	$R = 500.00'$



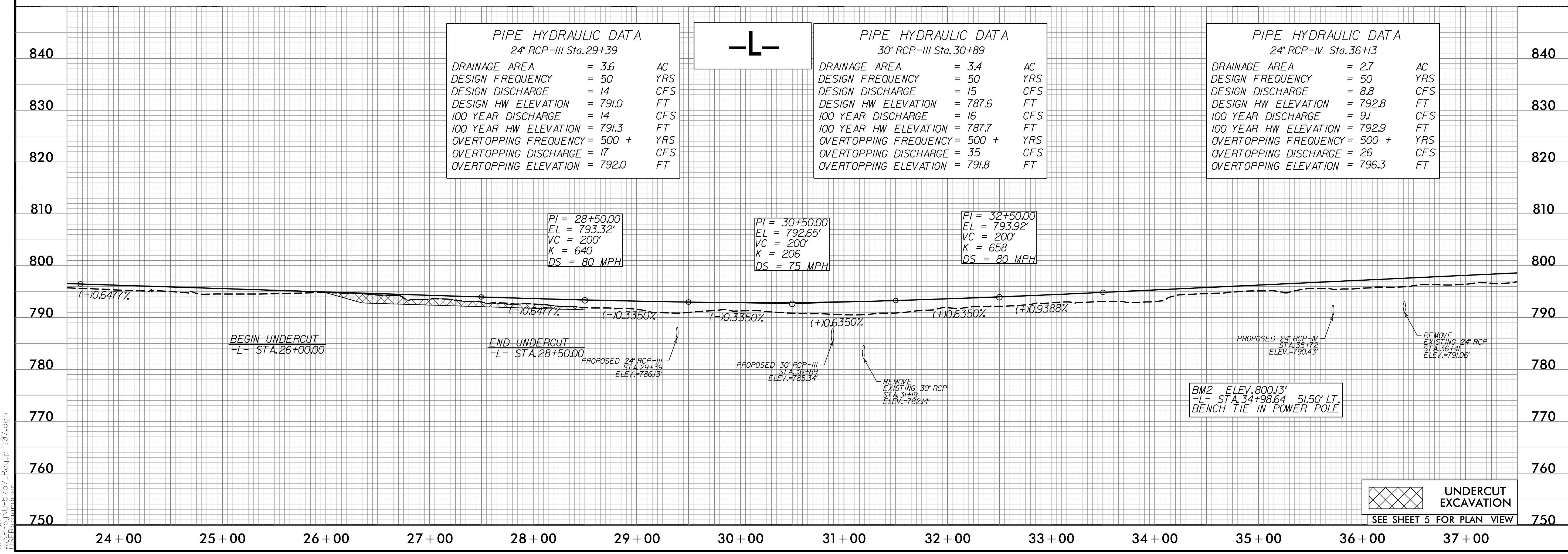
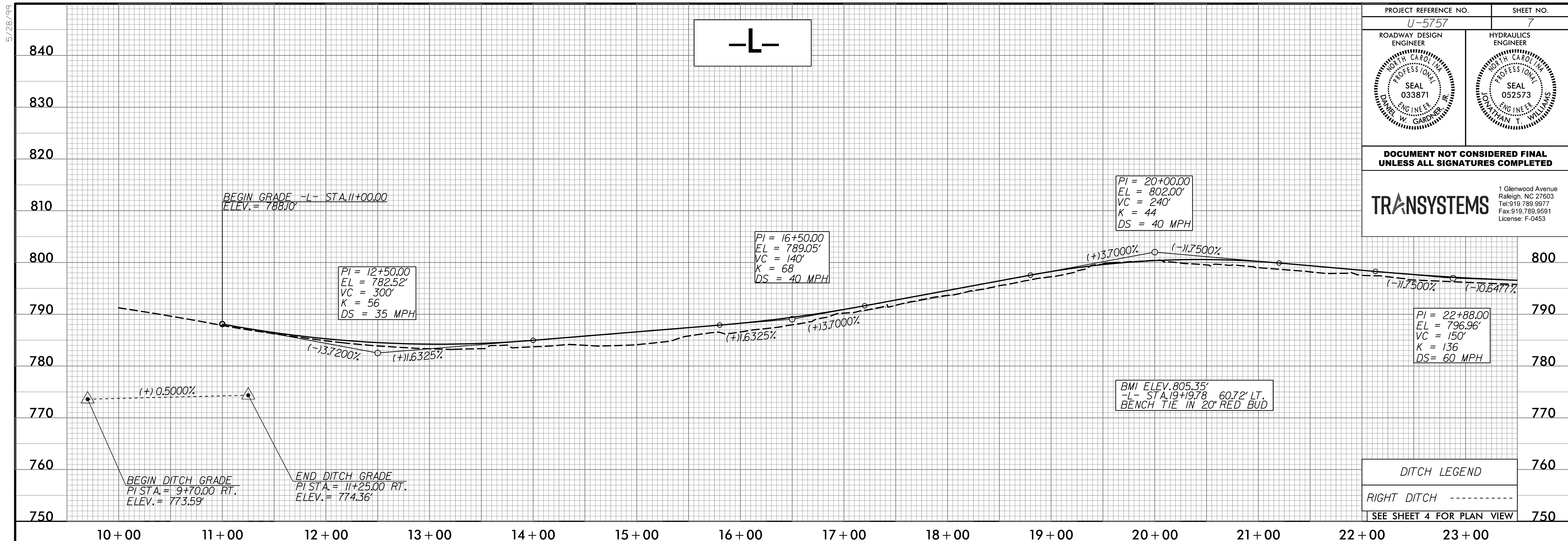
5' CONC. SIDEWALK AND CONCRETE ISLAND
HP HISTORIC PROPERTY

SEE SHEET 8 FOR -L- PROFILE
SEE SHEET 11 FOR -Y11- AND -Y12- PROFILE
SEE SHEET 12 FOR -Y13-, -Y14- AND -Y15- PROFILE

PROJECT REFERENCE NO. U-5757	SHEET NO. 7
ROADWAY DESIGN ENGINEER W. GARDNER	HYDRAULICS ENGINEER WILLIAMS
SEAL 033871	SEAL 052573

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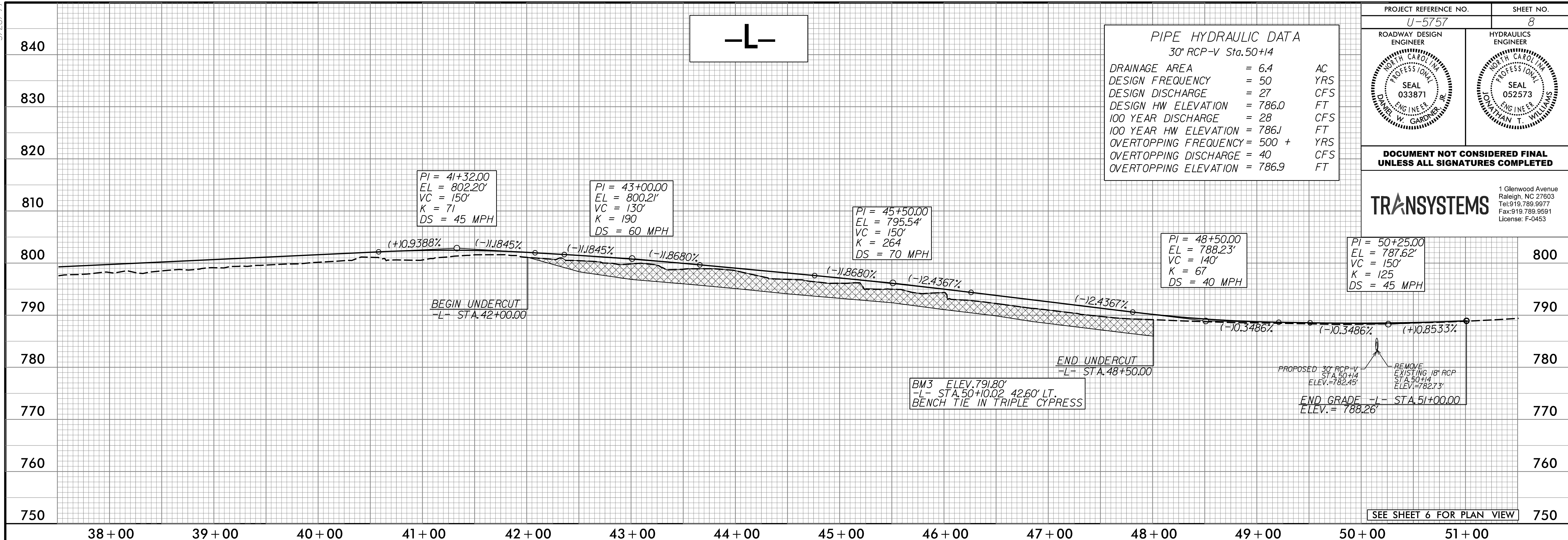
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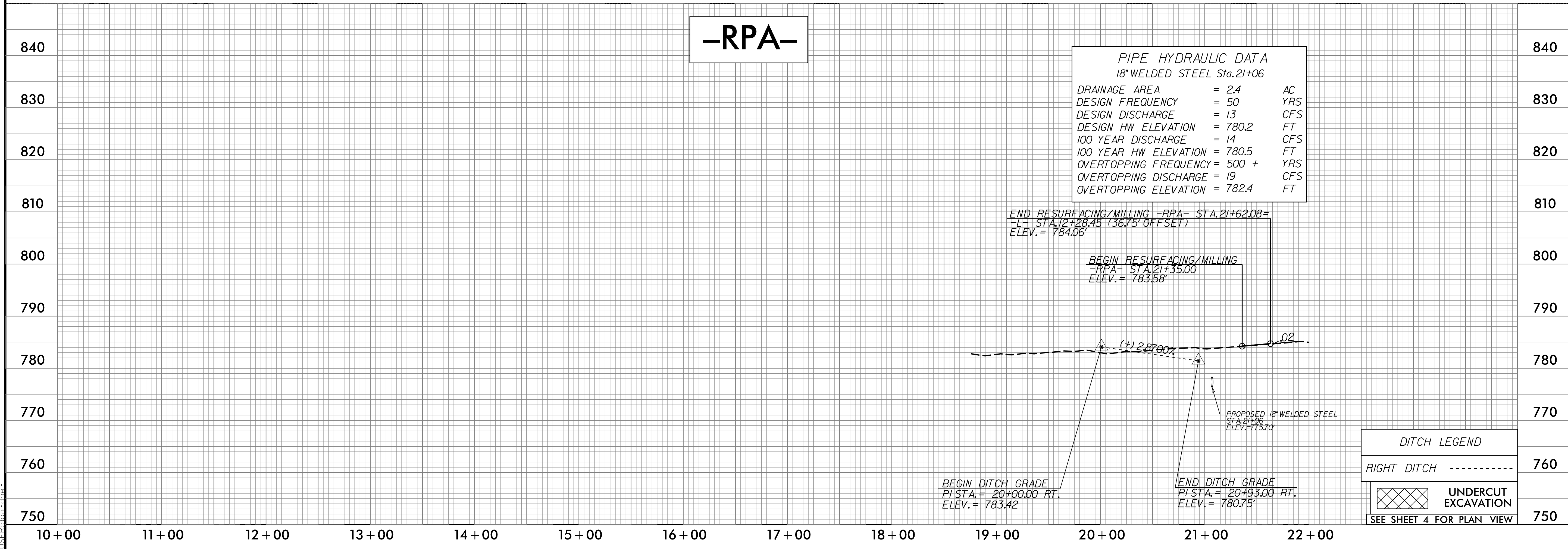
PIPE HYDRAULIC DATA	
30" RCP-V Sta. 50+14	
DRAINAGE AREA	= 6.4 AC
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 27 CFS
DESIGN HW ELEVATION	= 786.0 FT
100 YEAR DISCHARGE	= 28 CFS
100 YEAR HW ELEVATION	= 786J FT
OVERTOPPING FREQUENCY	= 500 + YRS
OVERTOPPING DISCHARGE	= 40 CFS
OVERTOPPING ELEVATION	= 786.9 FT



SEE SHEET 6 FOR PLAN VIEW

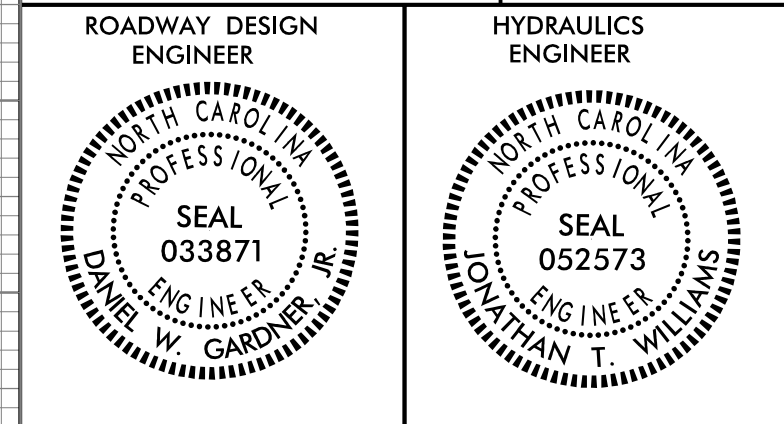
-RPA-

PIPE HYDRAULIC DATA	
18" WELDED STEEL Sta. 21+06	
DRAINAGE AREA	= 2.4 AC
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 13 CFS
DESIGN HW ELEVATION	= 780.2 FT
100 YEAR DISCHARGE	= 14 CFS
100 YEAR HW ELEVATION	= 780.5 FT
OVERTOPPING FREQUENCY	= 500 + YRS
OVERTOPPING DISCHARGE	= 19 CFS
OVERTOPPING ELEVATION	= 782.4 FT



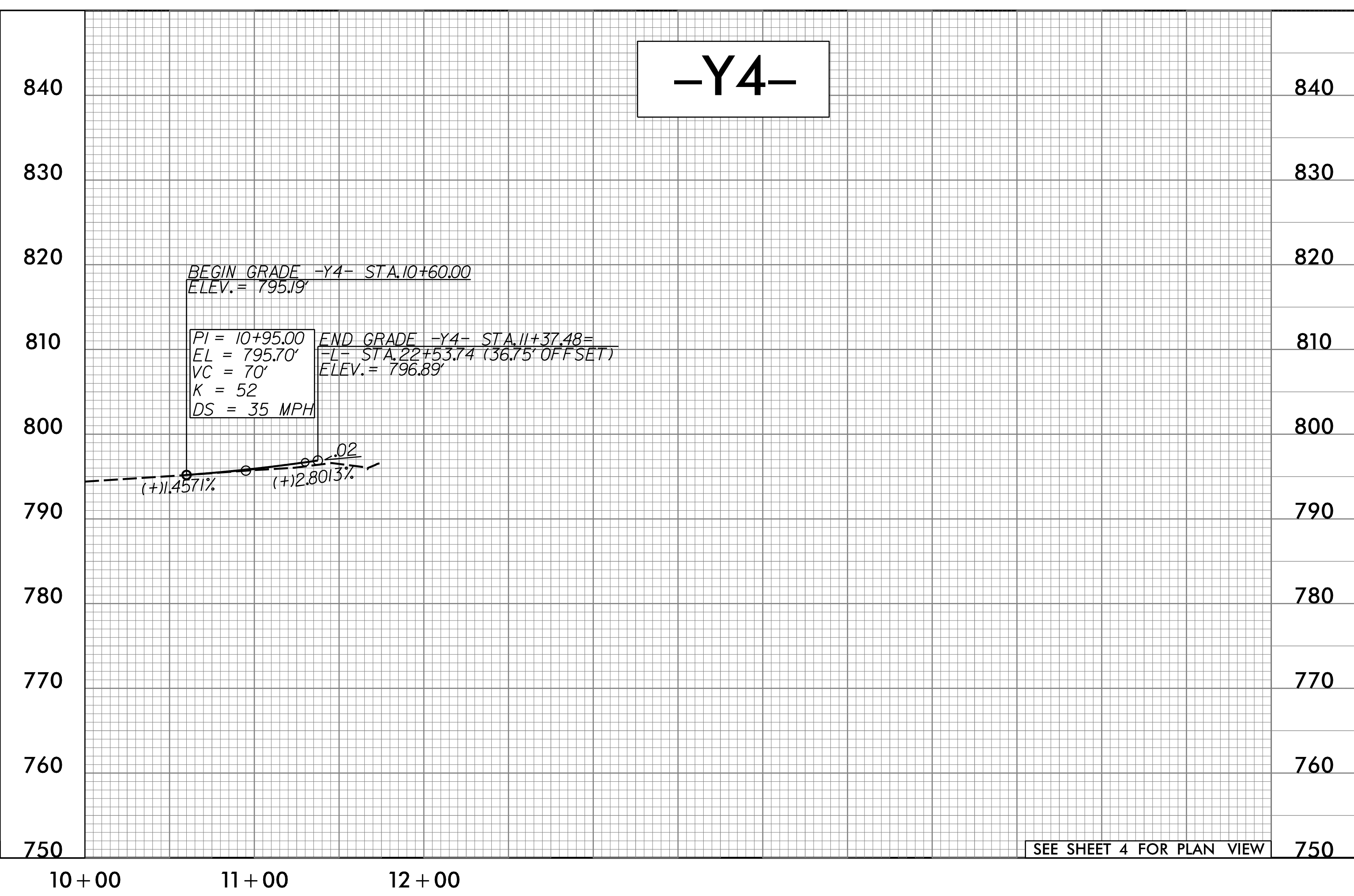
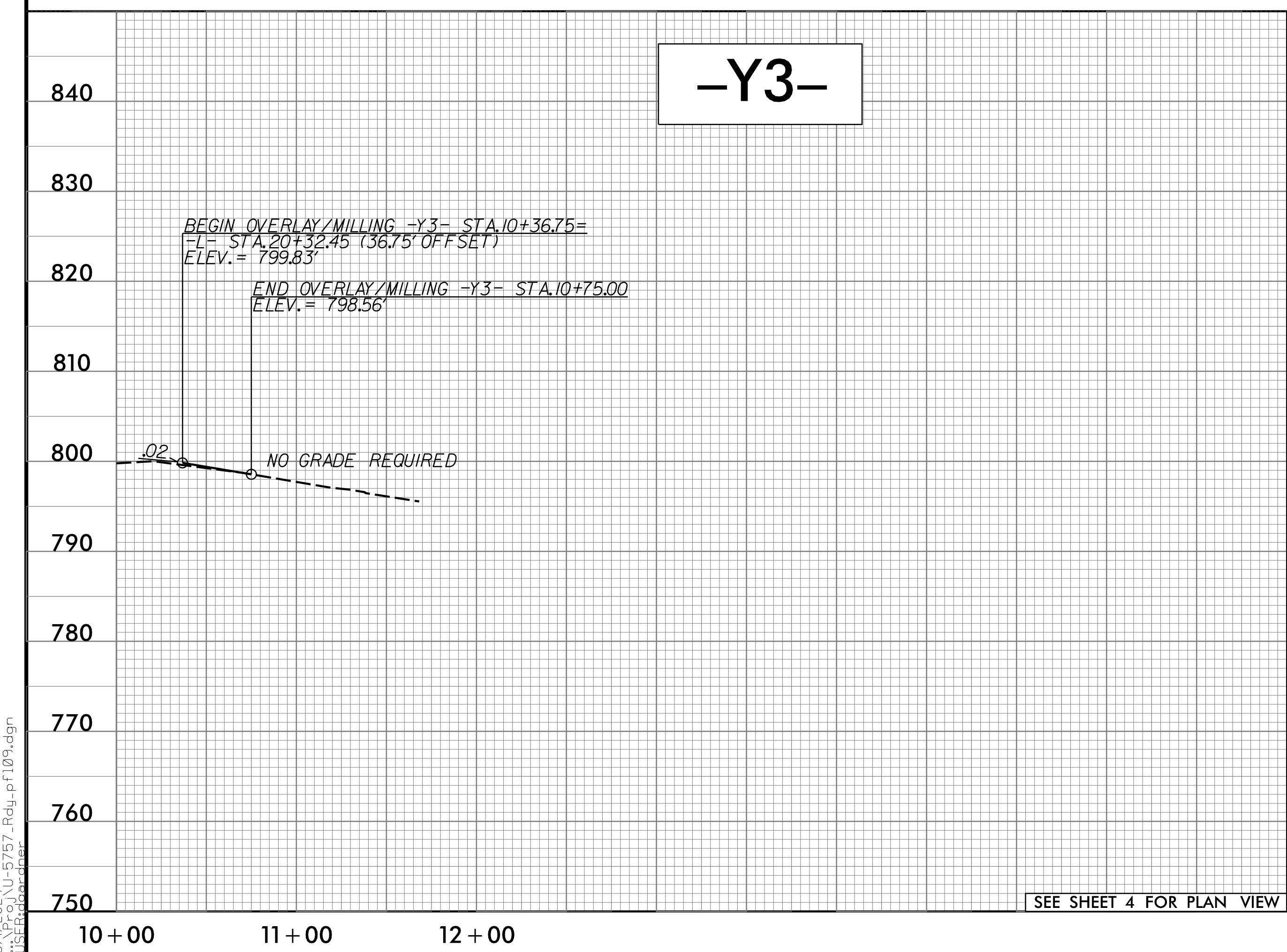
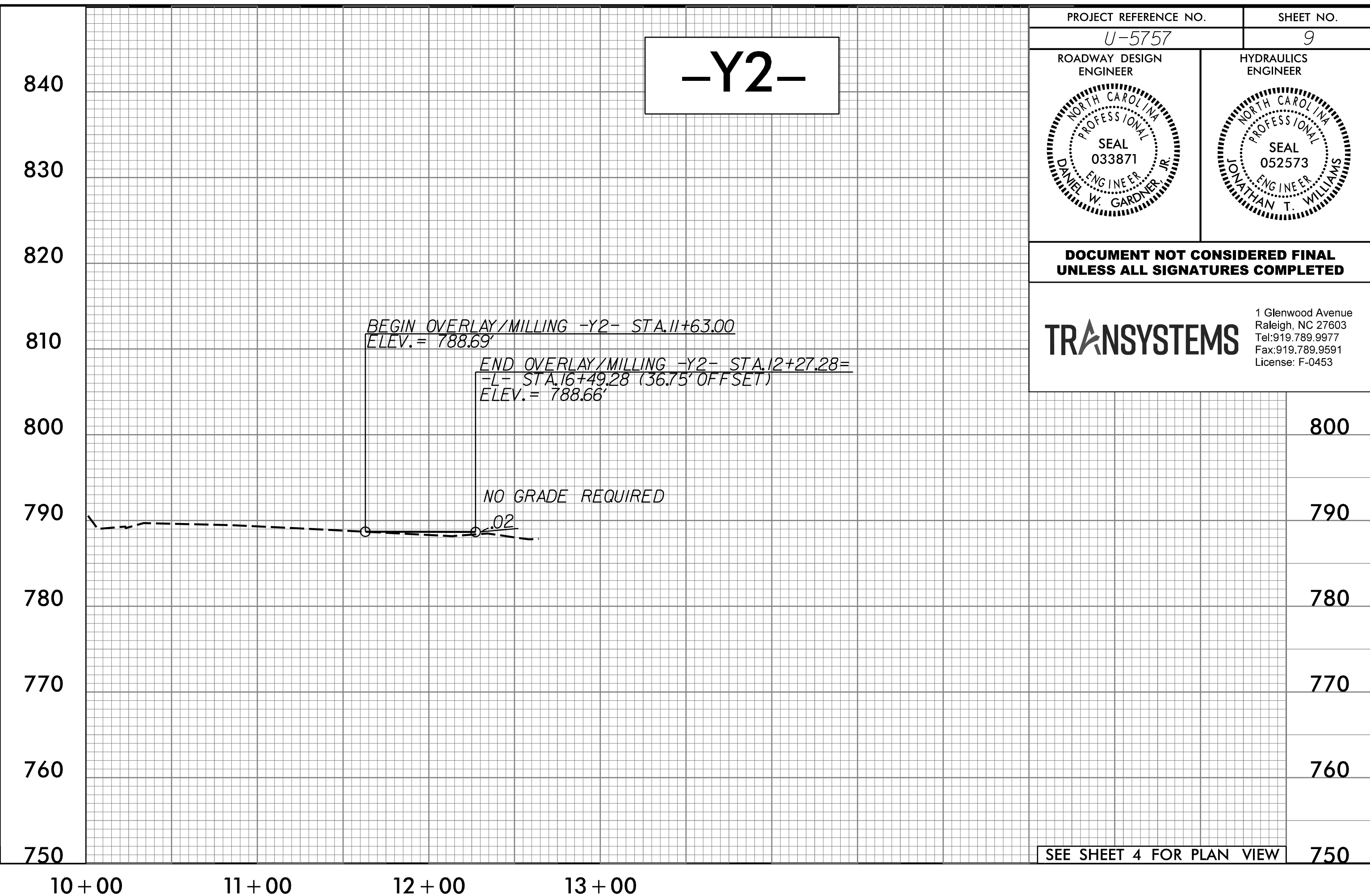
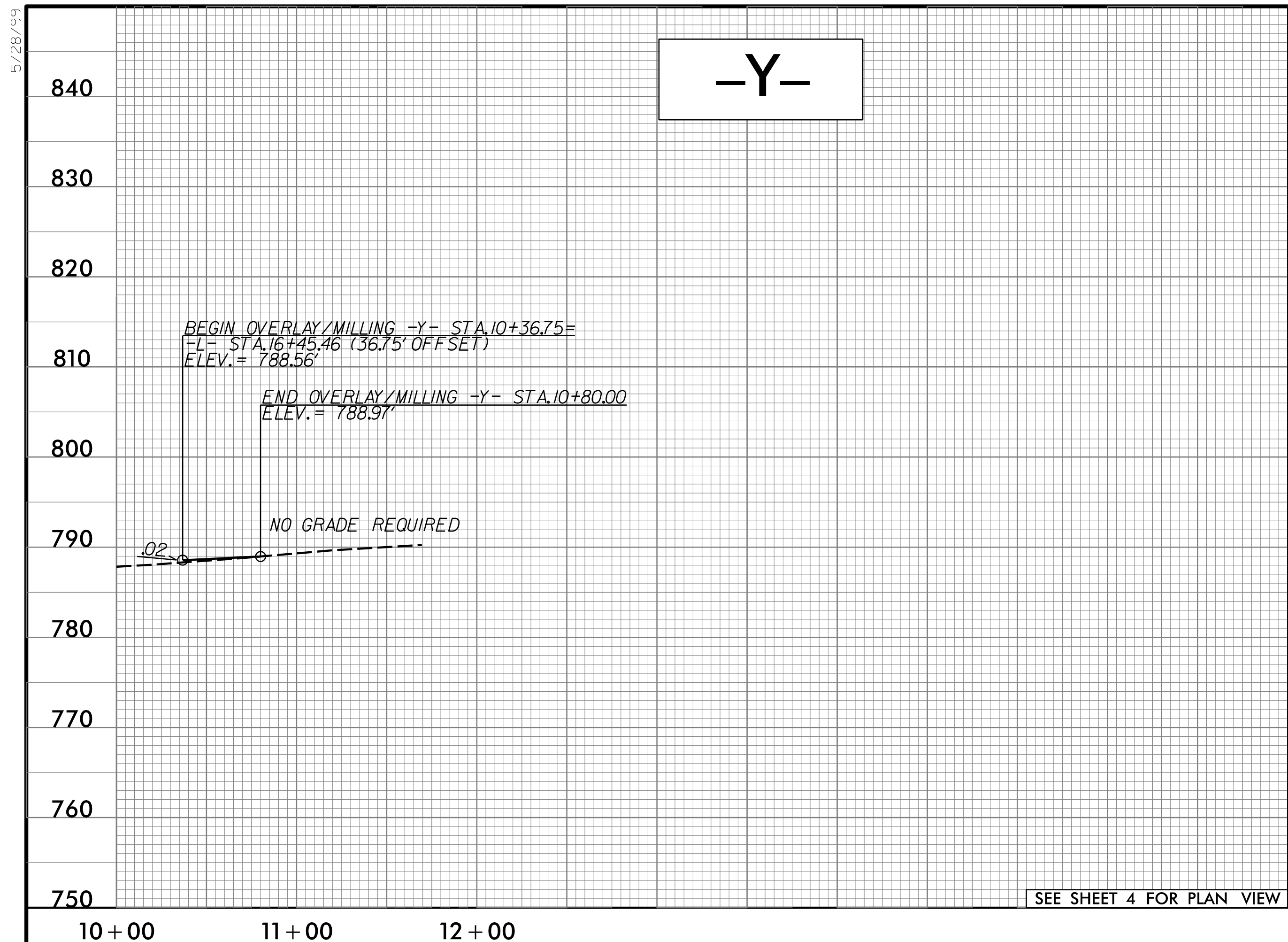
DITCH LEGEND	
	RIGHT DITCH
	UNDERCUT EXCAVATION

SEE SHEET 4 FOR PLAN VIEW

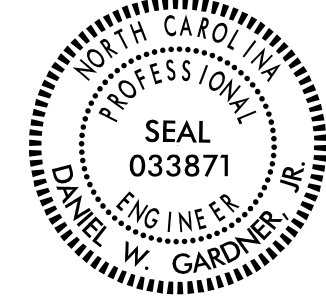



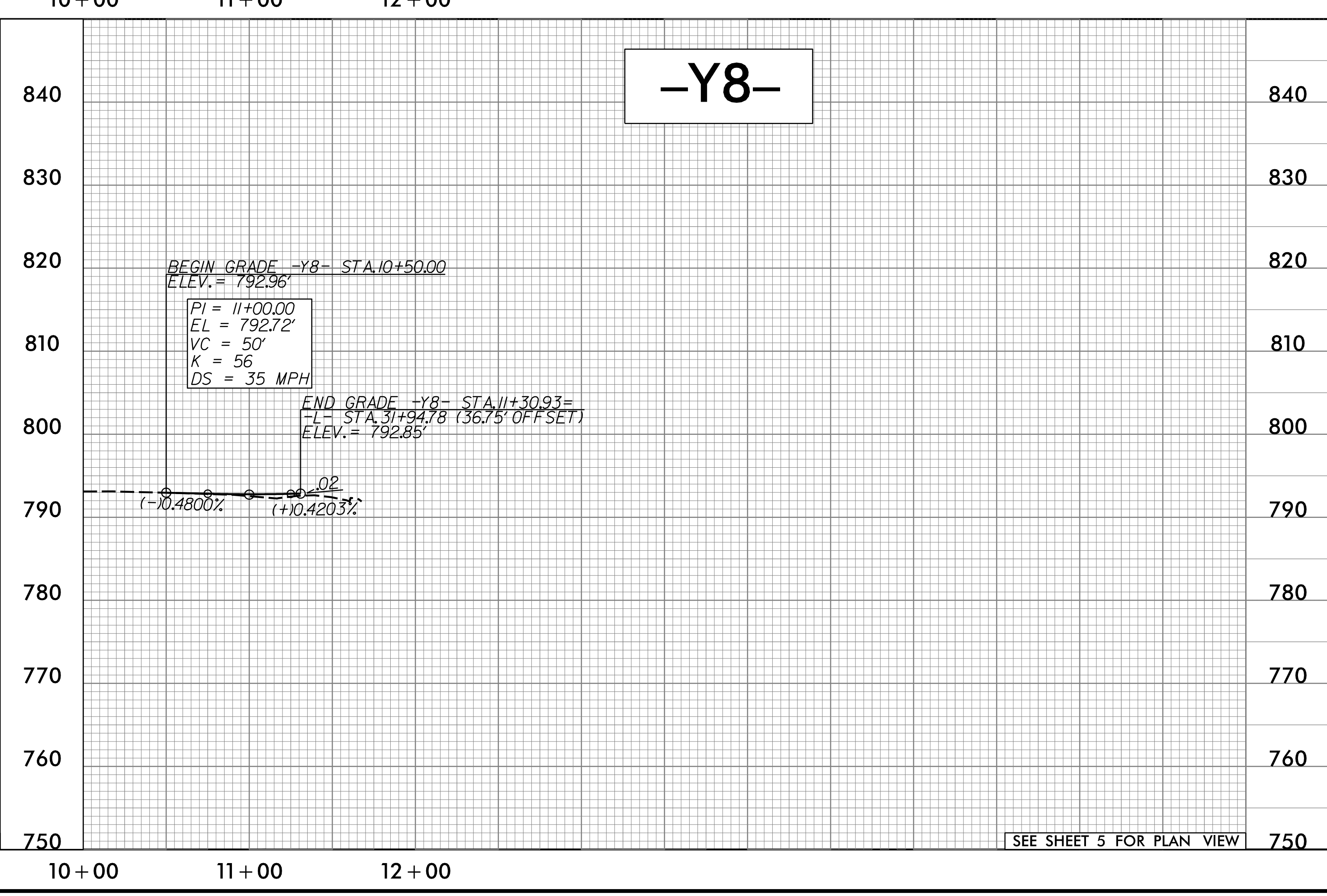
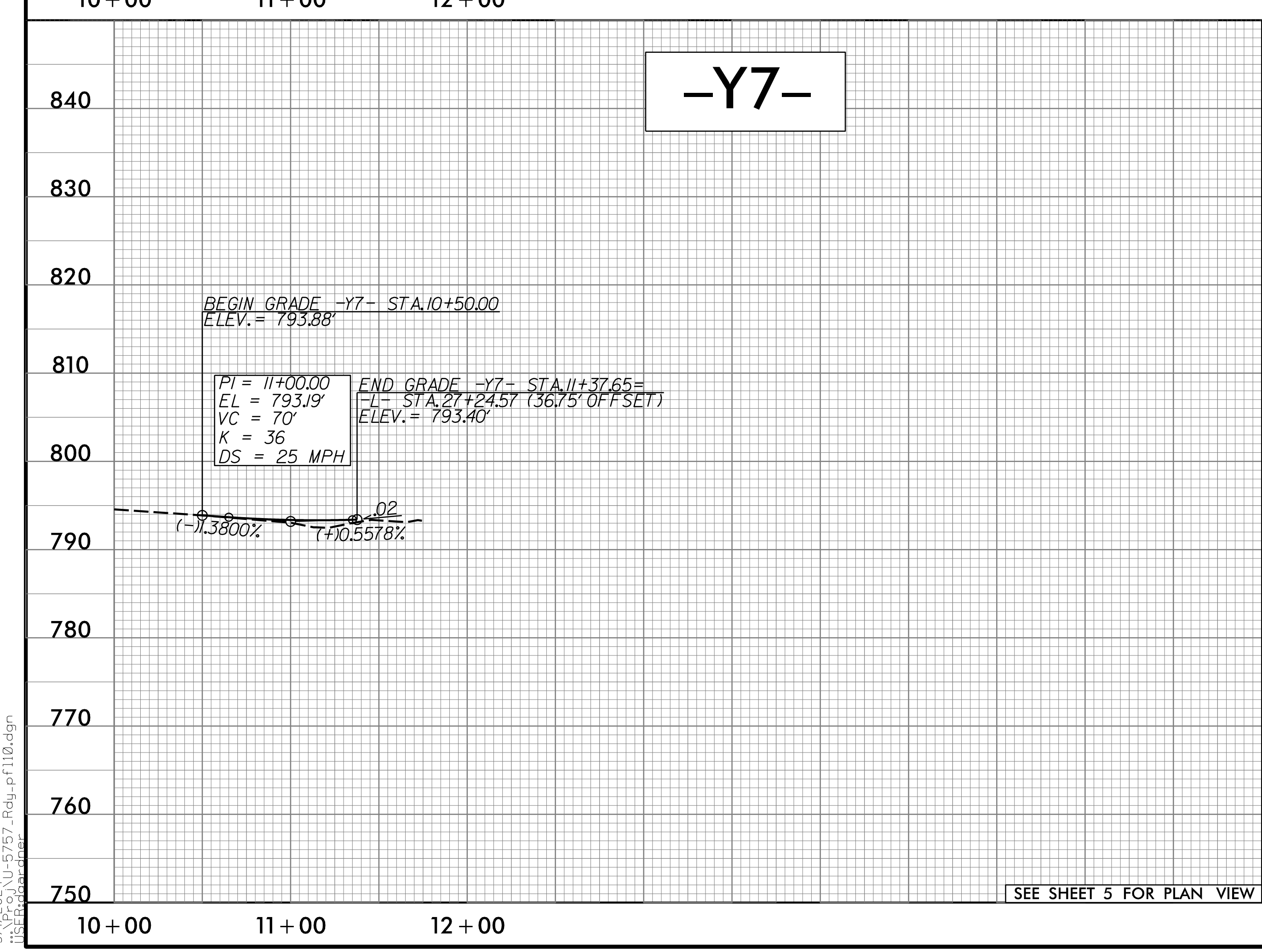
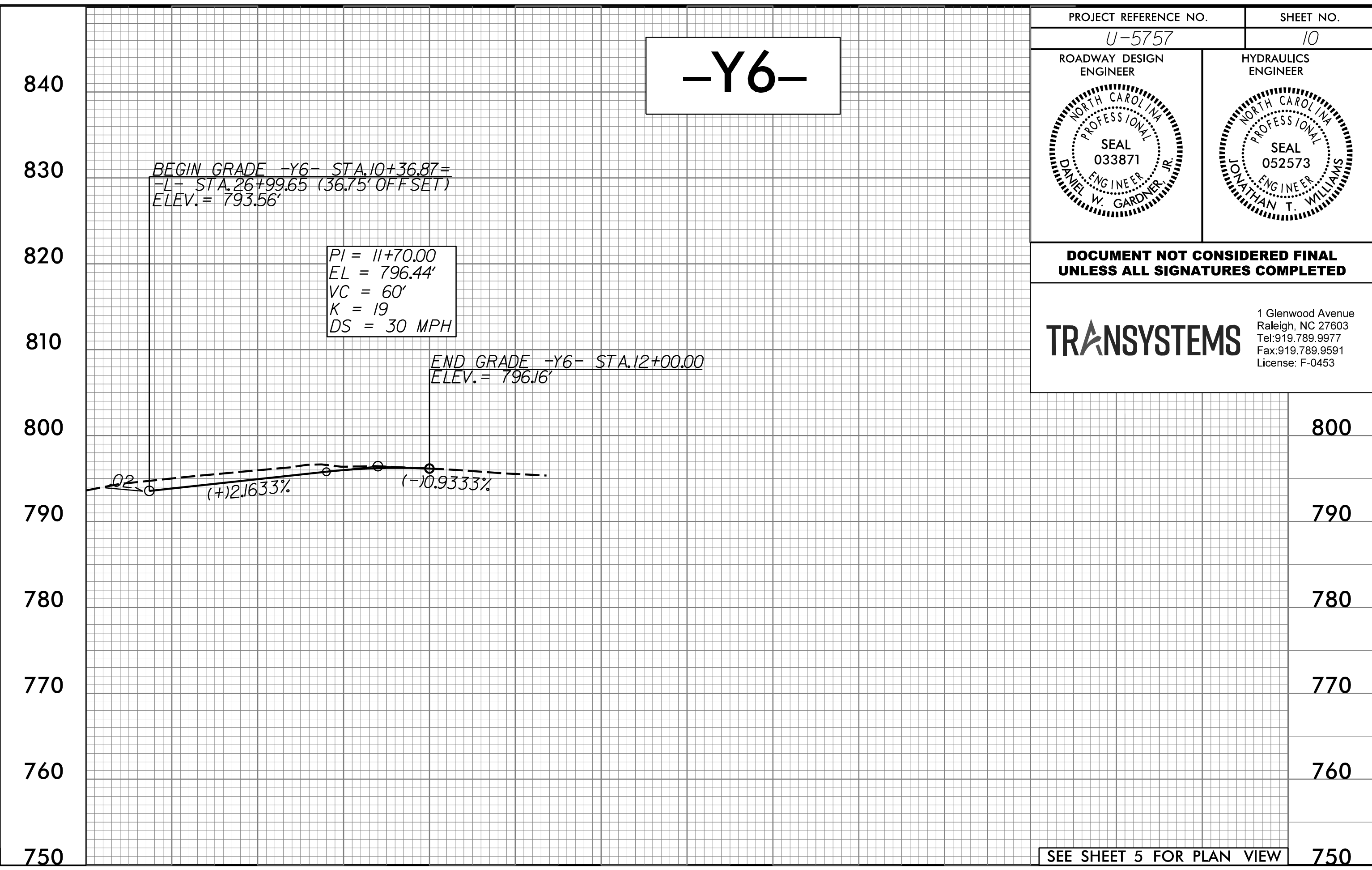
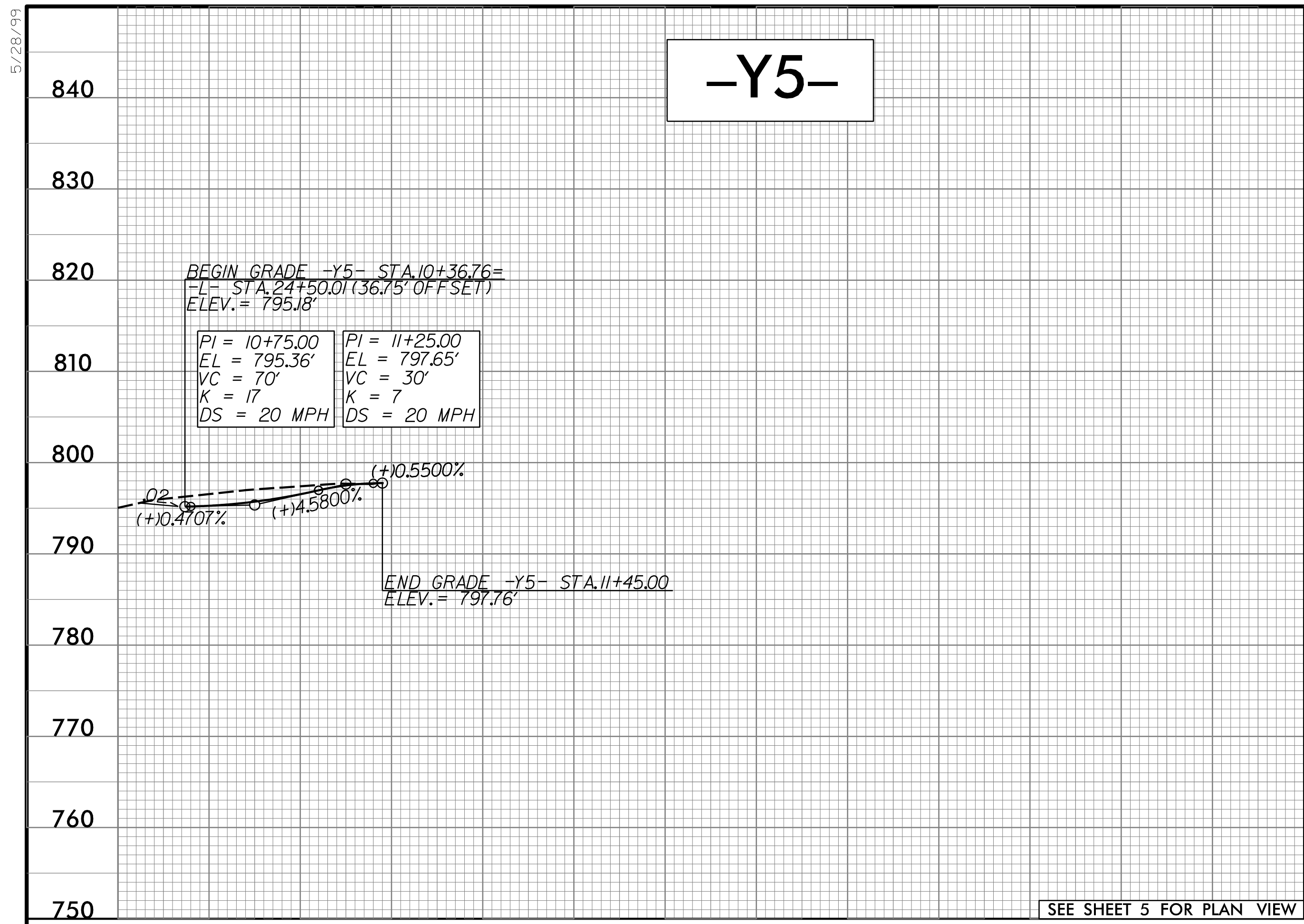
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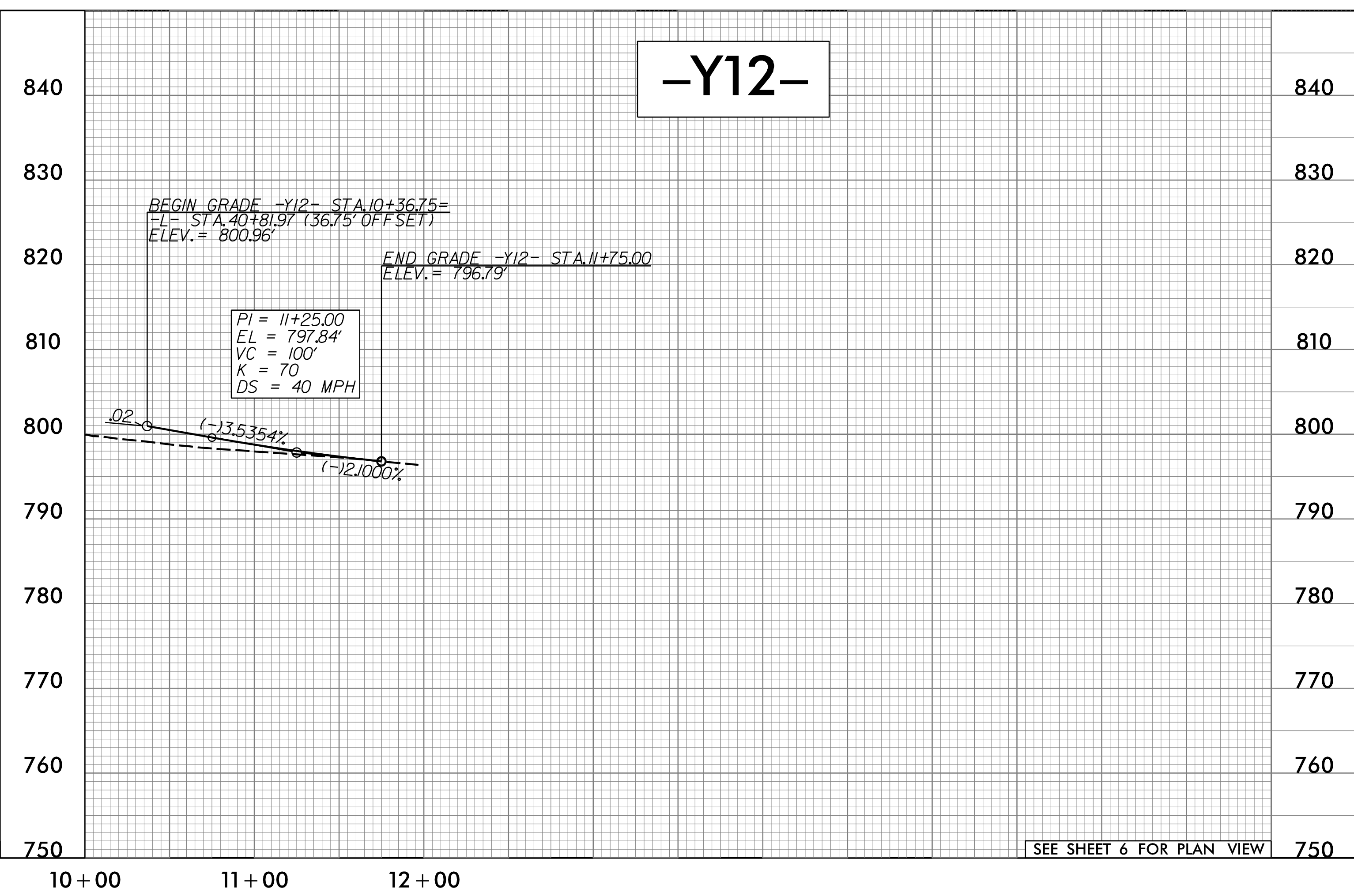
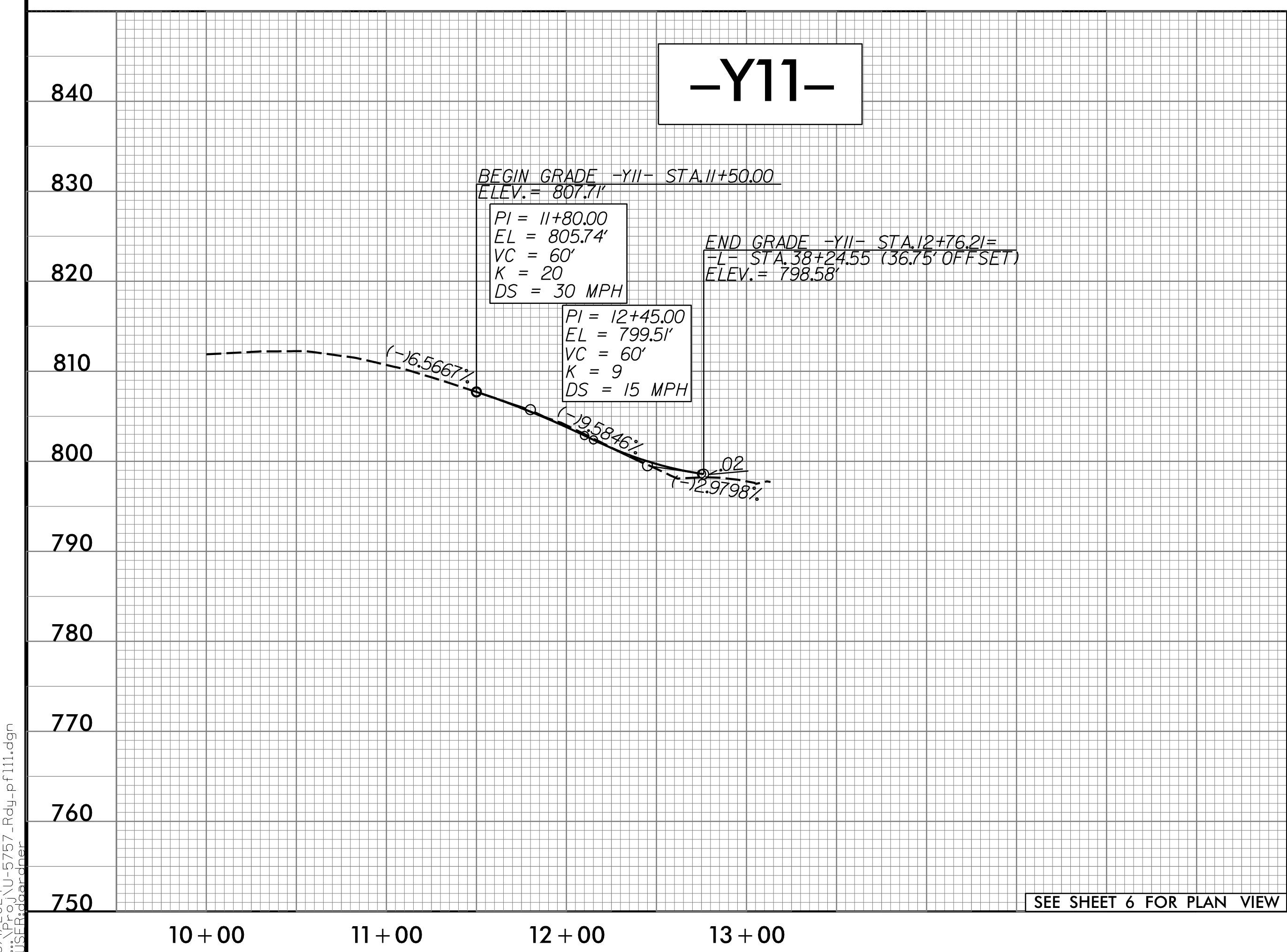
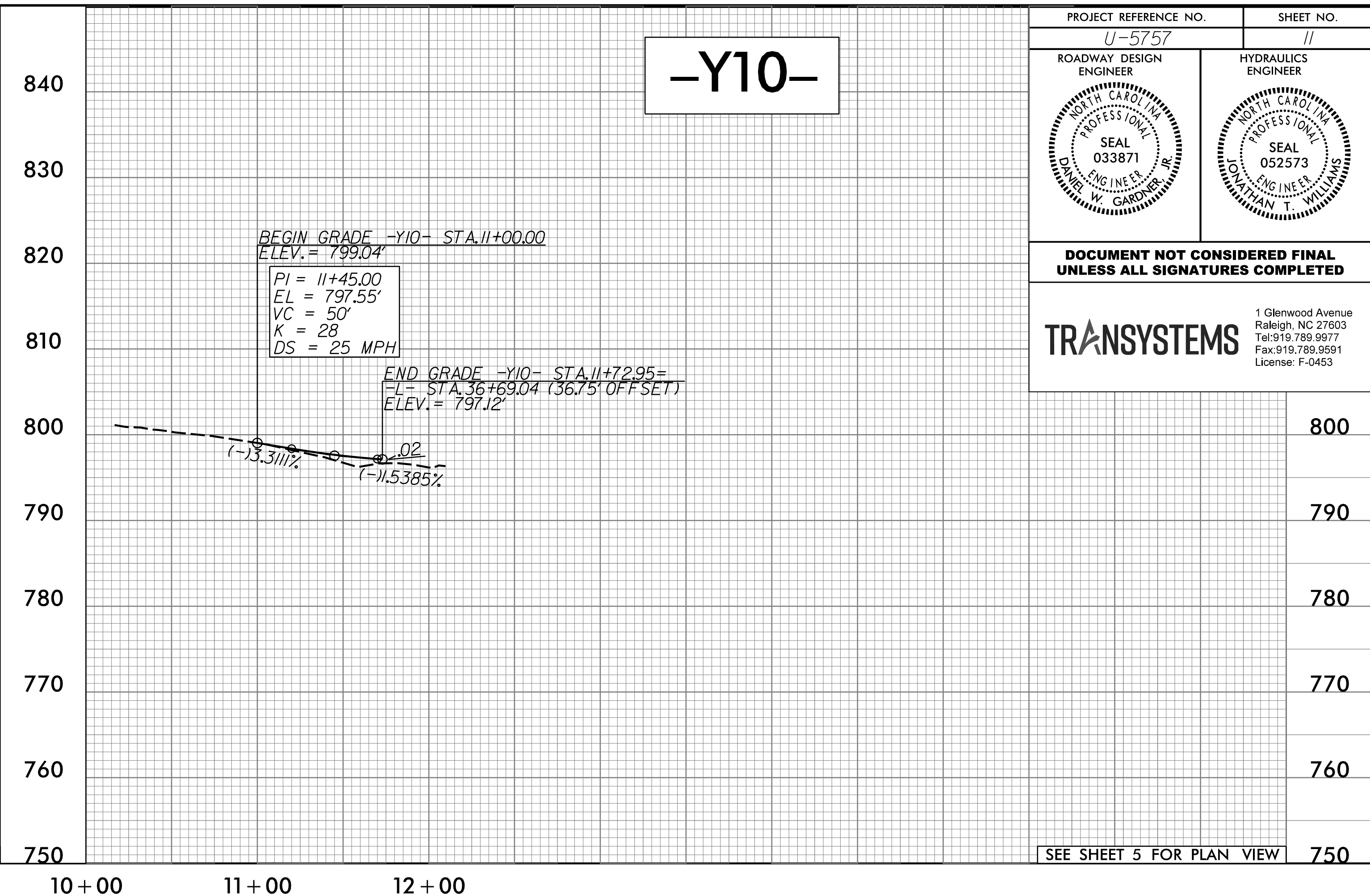
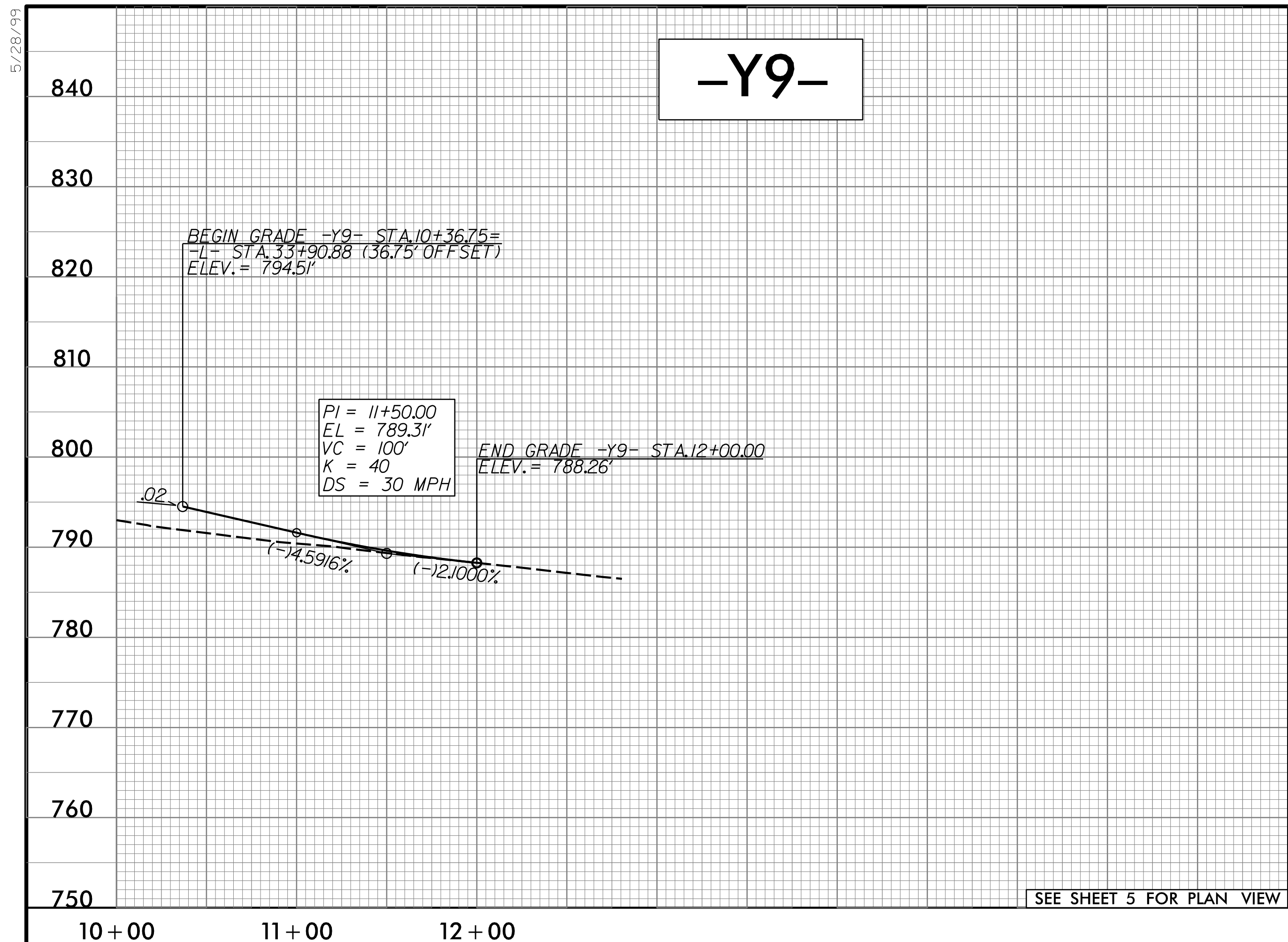
PROJECT REFERENCE NO. U-5757	SHEET NO. 10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
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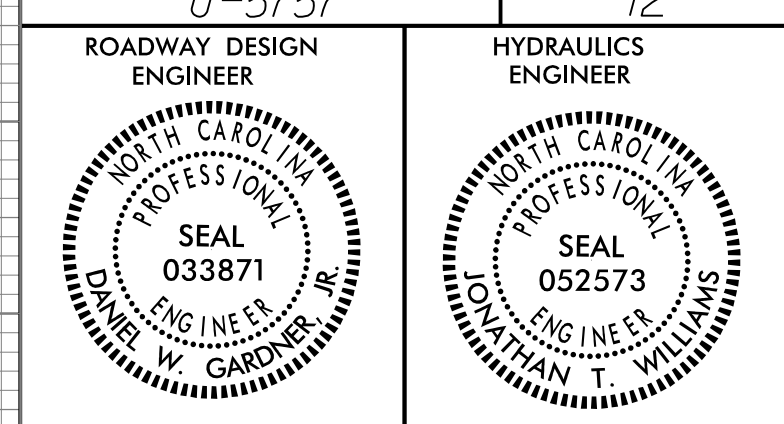
PROJECT REFERENCE NO. U-5757	SHEET NO. 11
ROADWAY DESIGN ENGINEER SEAL 033871 W. GARDNER	HYDRAULICS ENGINEER SEAL 052573 NATHAN T. WILLIAMS
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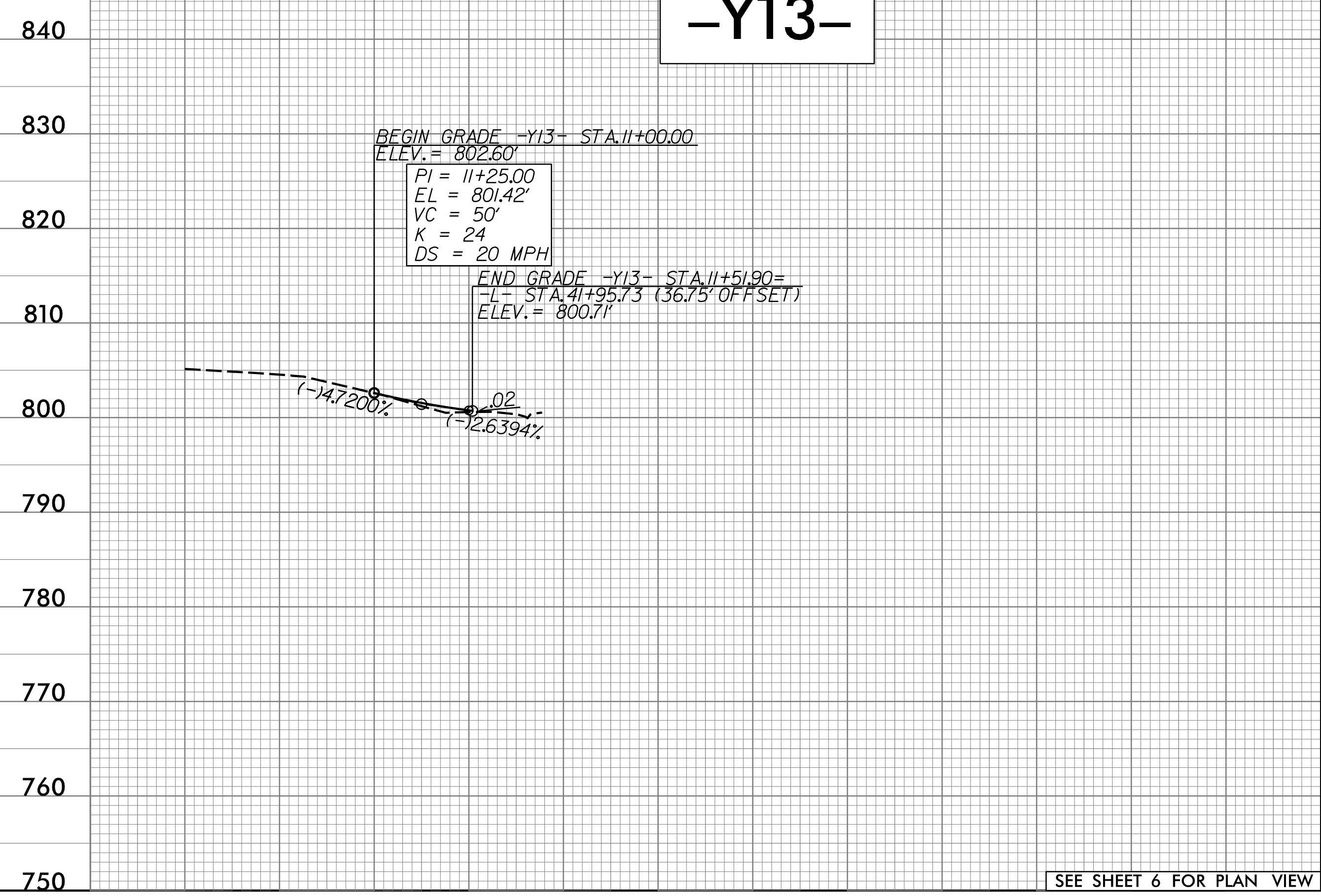
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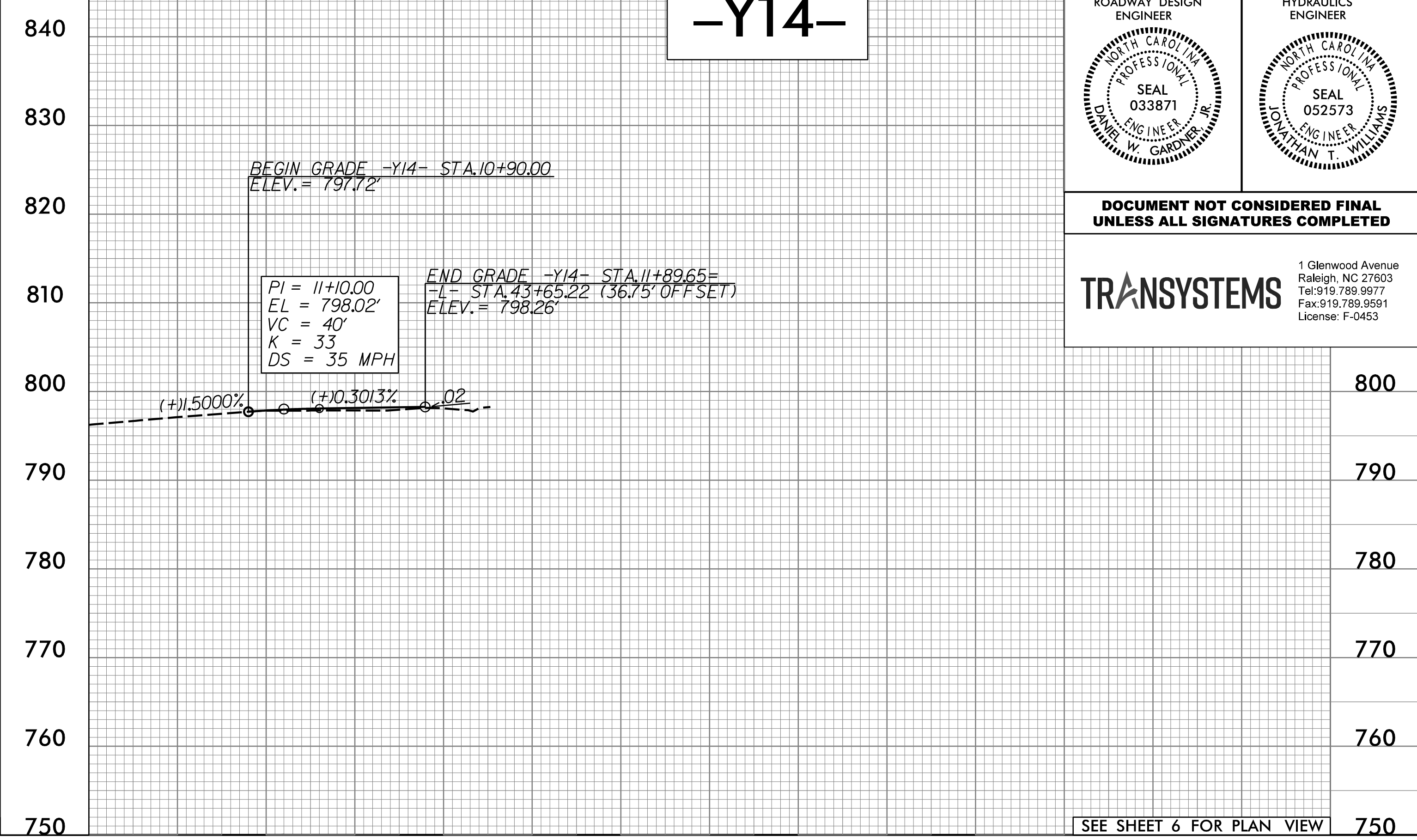
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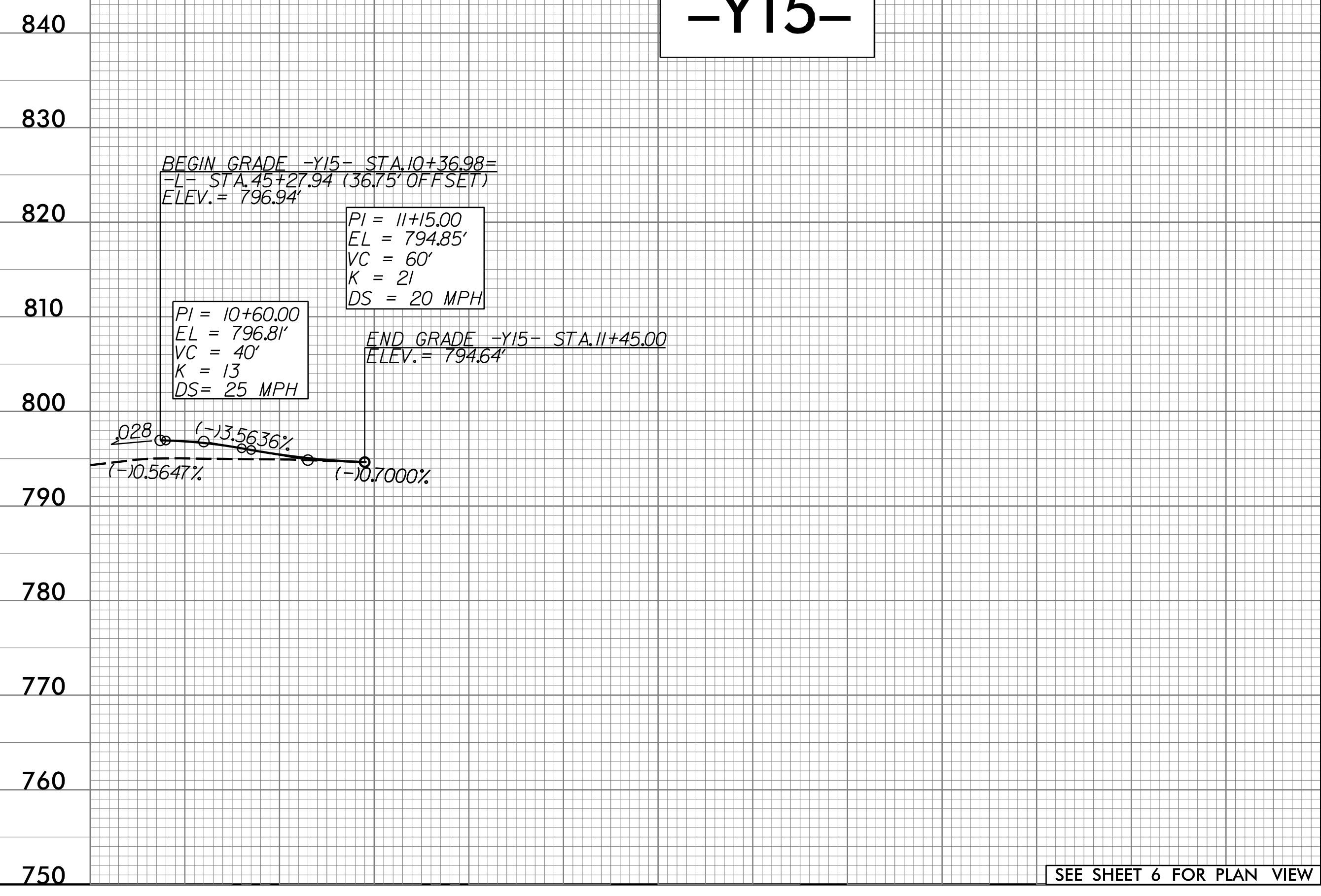
-Y13-



-Y14-



-Y15-



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