

09/08/19

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional symbols
See Sheet RW01 Thru RW10 For RW Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

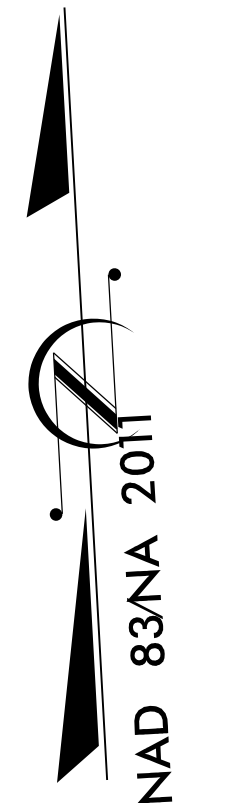
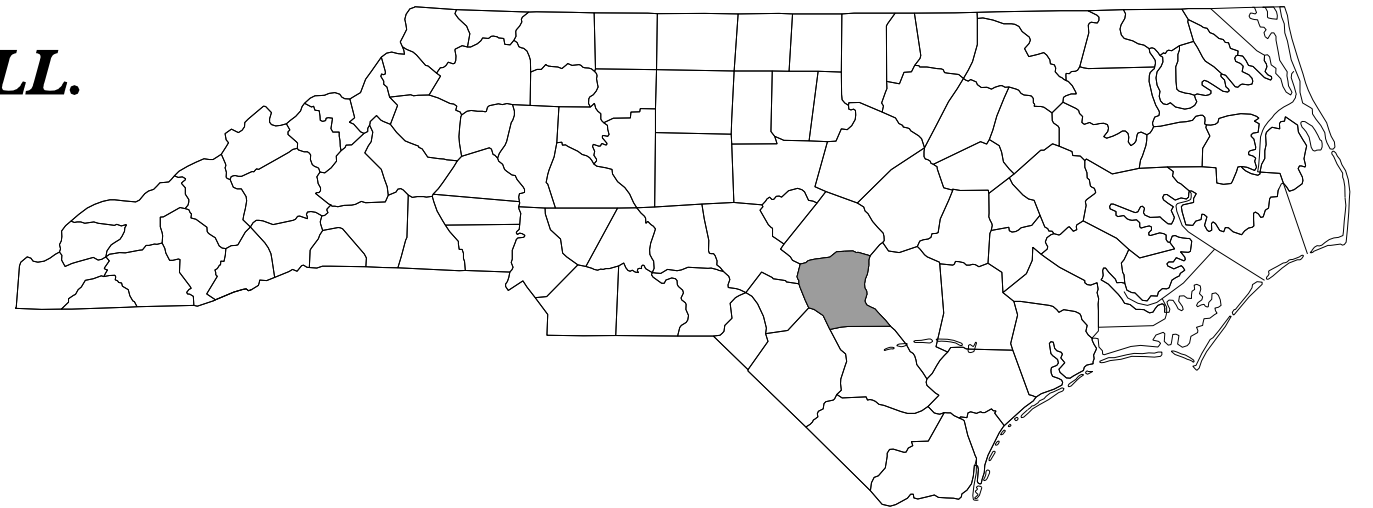
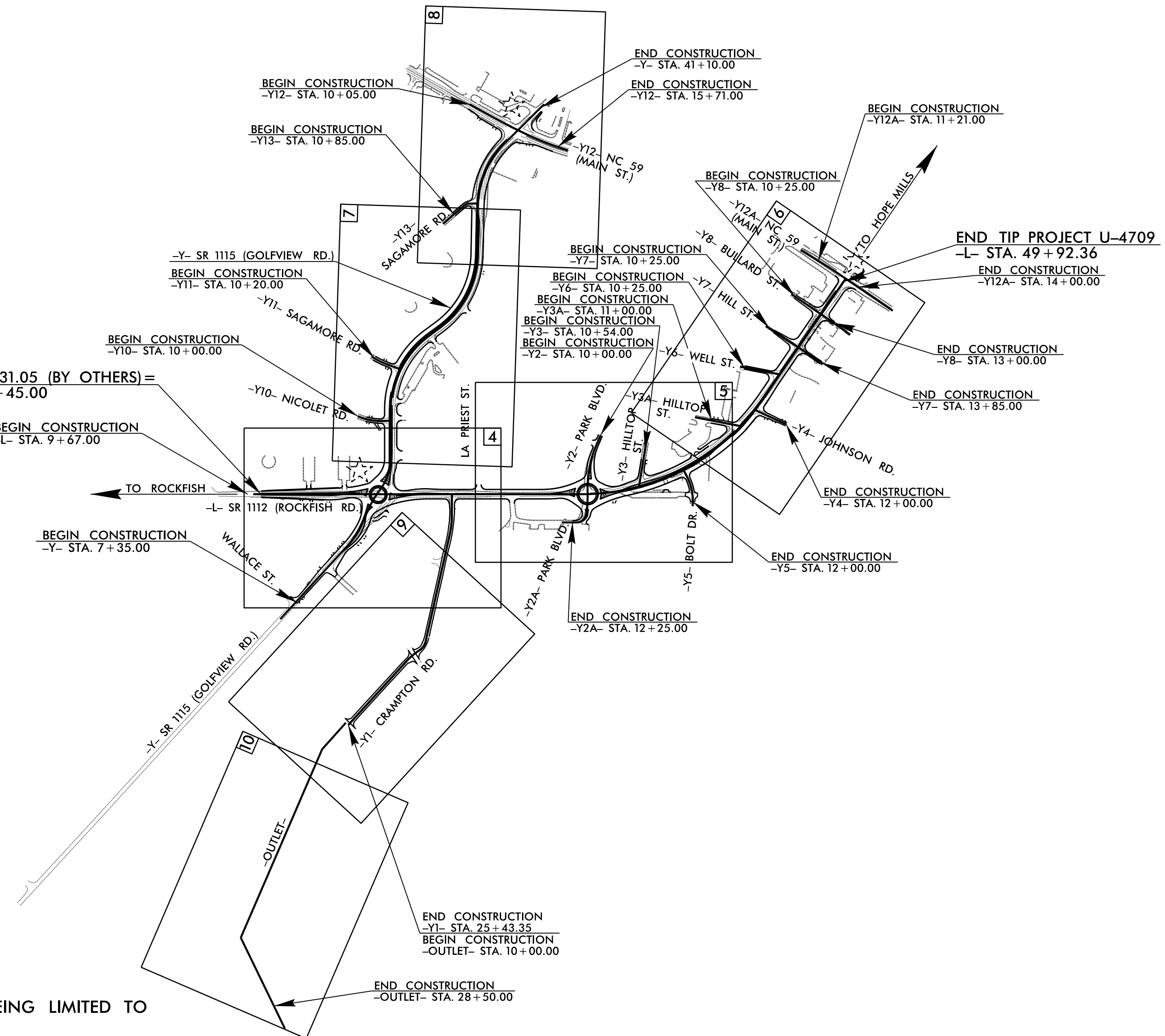
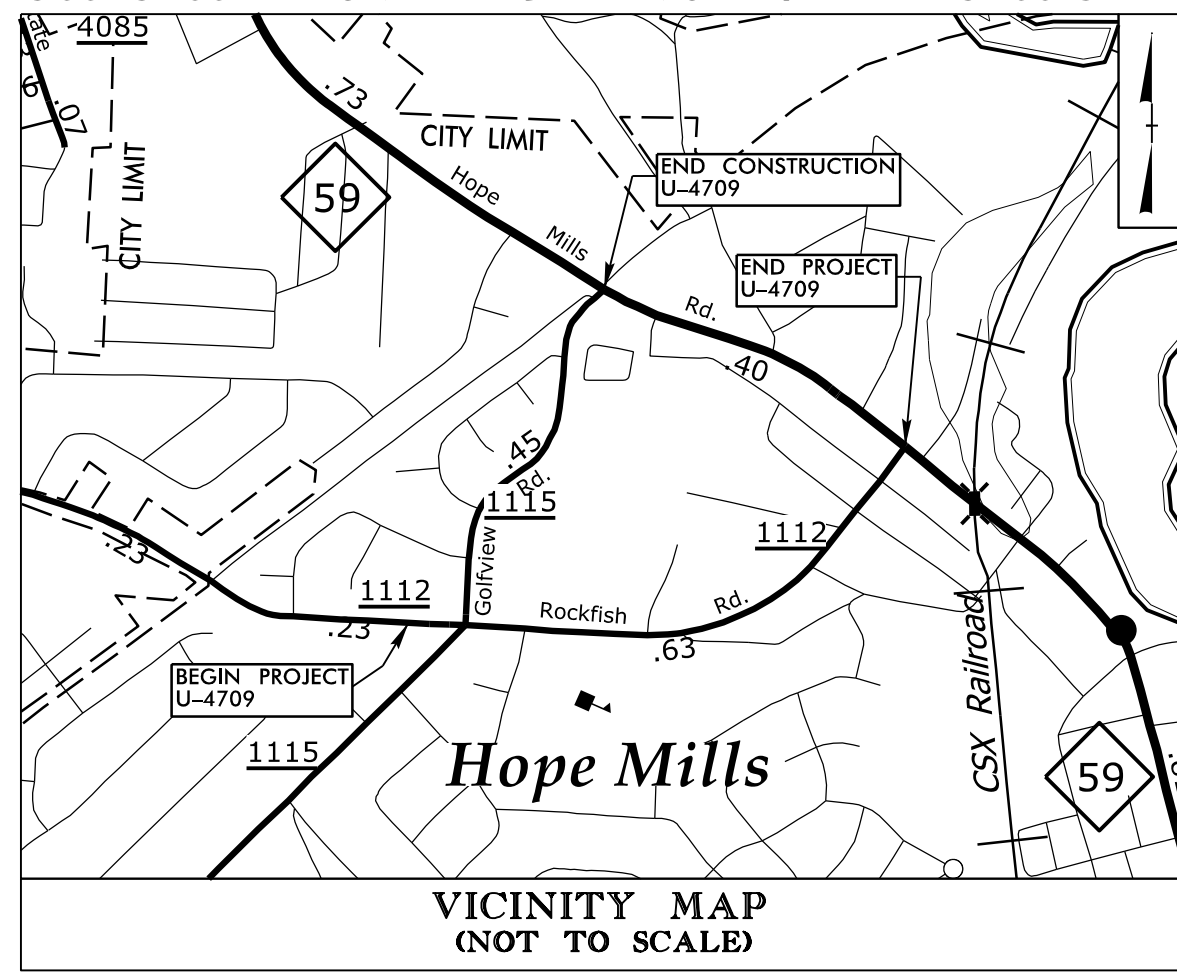
CUMBERLAND COUNTY

LOCATION: SR 1112 (ROCKFISH ROAD) FROM WEST OF SR 1115 (GOLFVIEW ROAD) TO NC 59 (MAIN STREET) AND SR 1115 (GOLFVIEW ROAD)
FROM SR 1112 (ROCKFISH ROAD) TO NC 59 (MAIN STREET)
TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNALS, AND RETAINING WALL.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4709	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
39073.1.1	N/A	PE	
39073.2.1	N/A	R/W	
39073.2.2	N/A	UTILITIES	
39073.3.1	N/A	CONST.	

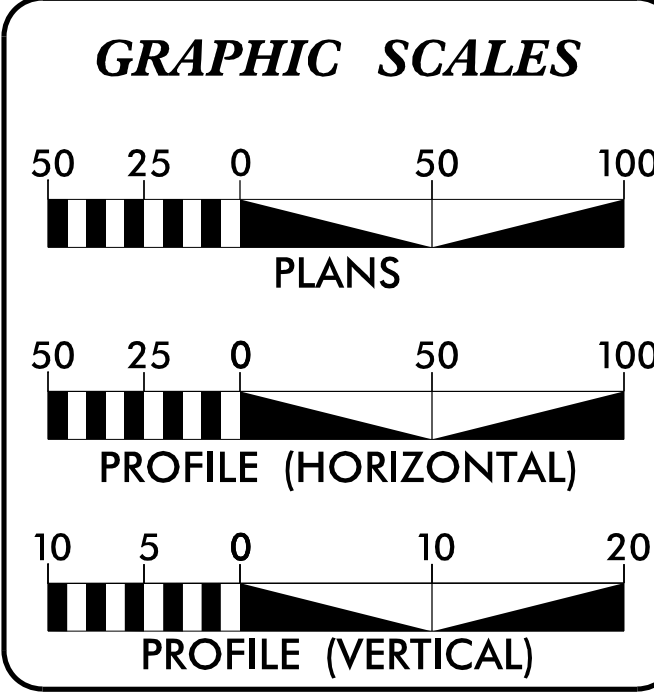
TIP PROJECT: U-4709

CONTRACT: C204760



THIS IS A PARTIAL CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS SHOWN ON THE PLANS.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



DESIGN DATA

ADT 2024 =	10,974
ADT 2040 =	13,200
K =	9 %
D =	55 %
T =	4 % *
V =	40 MPH
* TTST =	1% DUAL = 3%
FUNC CLASS =	MINOR ARTERIAL
	"REGIONAL TIER"

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT U-4709 = 0.748 MILES
TOTAL LENGTH OF TIP PROJECT U-4709 = 0.748 MILES

Prepared in the Office of:

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

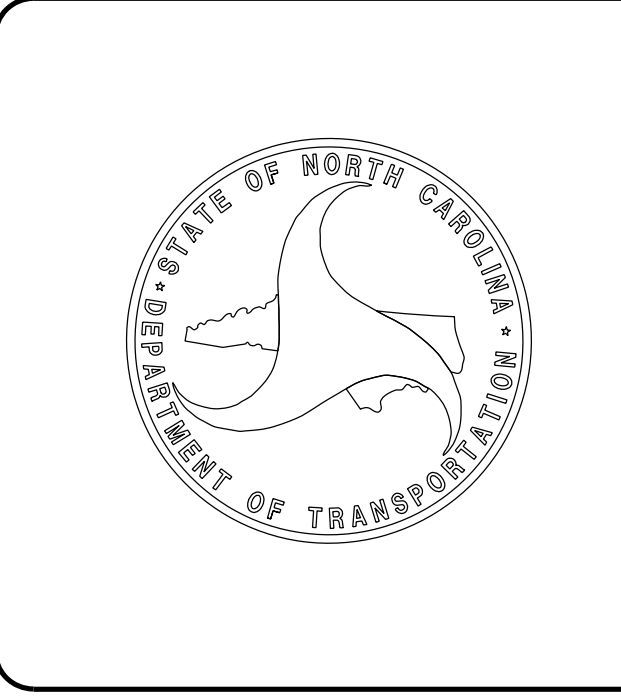
2024 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: JULY 30, 2021	RAJIT RAMKUMAR, PE, LEED AP PROJECT ENGINEER
LETTING DATE: JANUARY 21, 2025	DANIEL W. GARDNER, JR., PE PROJECT DESIGN ENGINEER
	SEAN MATUSZEWSKI, PE NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

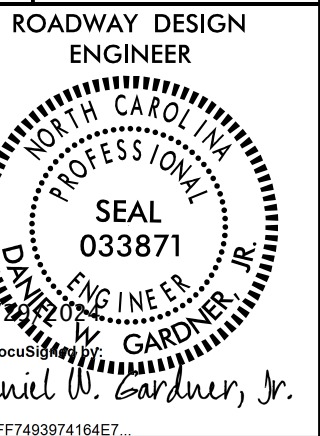


12/3/2024 I:\Roadway\Proj\U4709_Rdy_tsh.dgn USER:dgardner



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PROJECT REFERENCE NO. SHEET NO.
U-4709 1A



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UNLESS ALL SIGNATURES COMPLETED**

EFF. 01-16-2024
REV.

SHEET NUMBER	INDEX OF SHEETS
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	ROUNDBOUT DETAIL SHEETS
2B-3	MULTI-USE PATH ALIGNMENT DETAIL SHEET
2B-4	ASPHALT WEDGE CURBING DETAIL
2C-1	METHOD OF PIPE INSTALLATION (FLEXIBLE PIPE) DETAIL
2C-2	METHOD OF PIPE INSTALLATION (RIGID PIPE) DETAIL
2C-3	CONCRETE SIDEWALK DETAIL
2C-4	CURB RAMP DETAIL - PARALLEL RAMP
2C-5	CURB RAMP DETAIL - SHARED LANDING
2C-6	GUARDRAIL PLACEMENT DETAIL (TWO LANE-TWO WAY LOCATIONS)
2C-7	GUARDRAIL PLACEMENT DETAIL (BEGINNING OF GUARDRAIL IN CUT OR FILL SECTION)
2C-8	GUARDRAIL PLACEMENT DETAIL (CURB AND GUTTER)
2C-9	DETAIL OF 1'-6" TO 2'-9" CURB AND GUTTER TRANSITION SECTION
2C-10	EMERGENCY VEHICLE ACCESS FOR CONCRETE ISLAND DETAIL
2C-11	PEDESTRIAN SAFETY RAIL DETAIL
2C-12	MEDIAN CURB FOR TRAFFIC BEARING GRATED DROP INLET DETAIL
2C-13	CONCRETE GRATED DROP INLET TYPE 'A' MINIMUM DEPTH DETAIL
2C-14	MINIMUM DEPTH CONCRETE CATCH BASIN DETAIL
3B-1	SUMMARY OF EARTHWORK
3B-2	GUARDRAIL SUMMARY AND ASPHALT PAVEMENT REMOVAL SUMMARY
3D-1 THRU 3D-9	DRAINAGE SUMMARIES
3G-1	GEOTECHNICAL SUMMARIES
3P-1	PARCEL INDEX SHEET
4 THRU 10	PLAN SHEETS
11 THRU 19	PROFILE SHEETS
RW01 THRU RW10	RIGHT OF WAY PLAN SHEETS
TMP-1 THRU TMP-19	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-8	PAVEMENT MARKING PLANS
EC-1 THRU EC-17	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-12	SIGNING PLANS
SIG-1 THRU SIG-7.2	SIGNAL PLANS
SIG.M1A THRU SIG.M9	METAL POLE STANDARD DRAWINGS
SCP-1 THRU SCP-10	SIGNAL COMMUNICATION PLANS
UC-1 THRU UC-17	UTILITIES CONSTRUCTION PLANS
UD-1 THRU UD-8	UTILITIES BY OTHERS PLANS
X-1	CROSS-SECTION INDEX SHEET
X-1A THRU X-1C	CROSS-SECTION SUMMARY SHEET
X-1 THRU X-108	CROSS-SECTIONS
W-1 THRU W-2	RETAINING WALL PLANS

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 11.

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.

UNDERDRAINS:
UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 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.

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 Duke Energy-Power (Distribution), Piedmont Natural Gas-Gas (Distribution), Brightspeed-Communications, Fayetteville PWC-Communications, Charter-Communications, Sagra-Communications, Metronet-Communications, Fayetteville PWC-Water and Sanitary 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 OTHERS.

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" Contracts Standards and Development Unit - N. C. Department of Transportation - Raleigh, N. C., Dated January 16, 2024 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method 11
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 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Super-elevated Curve - Method 1
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
815.02	Subsurface Drain
815.03	Pipe Underdrain and Blind 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
840.04	Concrete Open Throat Catch Basin - 12" thru 48" Pipe
840.05	Brick Open Throat Catch Basin - 12" thru 48" Pipe
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.17	Concrete Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.24	Frames and Narrow Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.26	Brick Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.34	Traffic Bearing Junction Box - for Use with Pipes 42" and Under
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
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
848.02	Driveway Turnout - Radius Type
848.04	Street Turnout
848.06	Curb Ramp (Use Details in Lieu of Standards for Sheets 9 and 10 of 13)
852.01	Concrete Islands
852.06	Method for Placement of Drop Inlets in Concrete Islands
862.01	Guardrail Placement (Use Details in Lieu of Standards for Sheets 4, 6, 12, and 14 of 15)
862.02	Guardrail Installation
876.01	Rip Rap in Channels and Ditches
876.02	Guide for Rip Rap at Pipe Outlets

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	↓
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	-----
Proposed Slope Stakes Fill	-----
Proposed Curb Ramp	-----
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	-----
VEGETATION:	
Single Tree	○
Single Shrub	○
Hedge	-----

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

EXISTING STRUCTURES:

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

UTILITIES:

* SUE - Subsurface Utility Engineering
LOS - Level of Service - A,B,C or D (Accuracy)

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊕
Power Transformer	⊕
U/G Power Cable Hand Hole	⊕
H-Frame Pole	●
U/G Power Line Test Hole (SUE - LOS A)*	⊕
U/G Power Line (SUE - LOS B)*	-----
U/G Power Line (SUE - LOS C)*	-----
U/G Power Line (SUE - LOS D)*	-----

TELEPHONE:

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

WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊕
Water Hydrant	⊕
U/G Water Line Test Hole (SUE - LOS A)*	⊕
U/G Water Line (SUE - LOS B)*	-----
U/G Water Line (SUE - LOS C)*	-----
U/G Water Line (SUE - LOS D)*	-----
Above Ground Water Line	A/G Water

TV:

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

GAS:

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

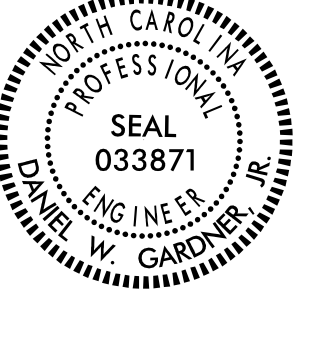


SANITARY SEWER:

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

MISCELLANEOUS:

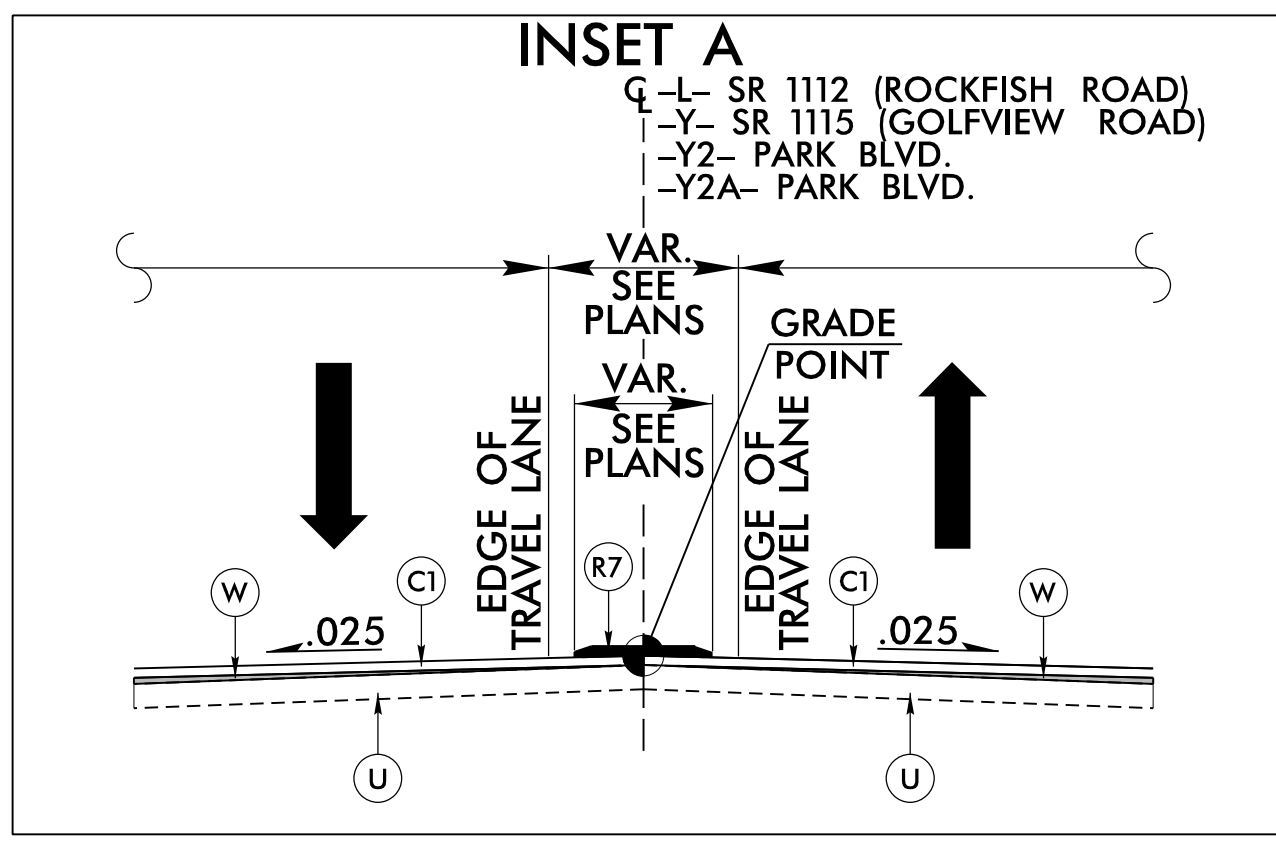
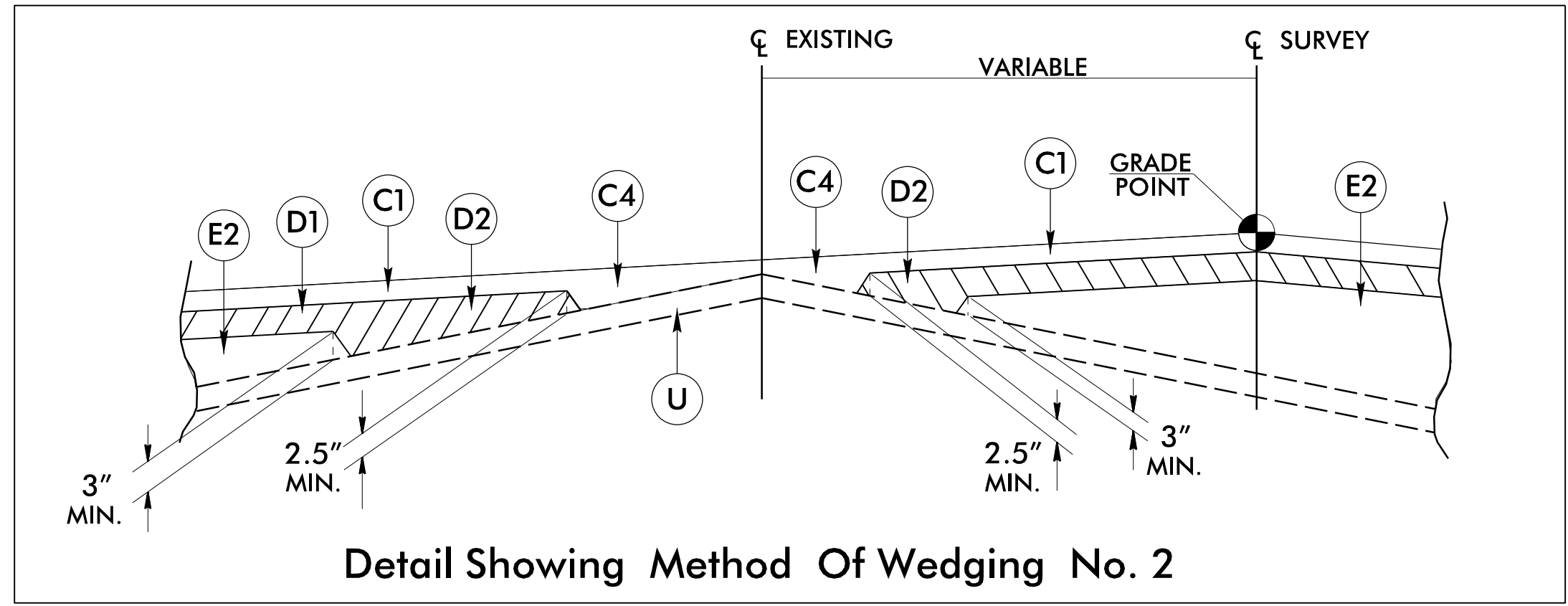
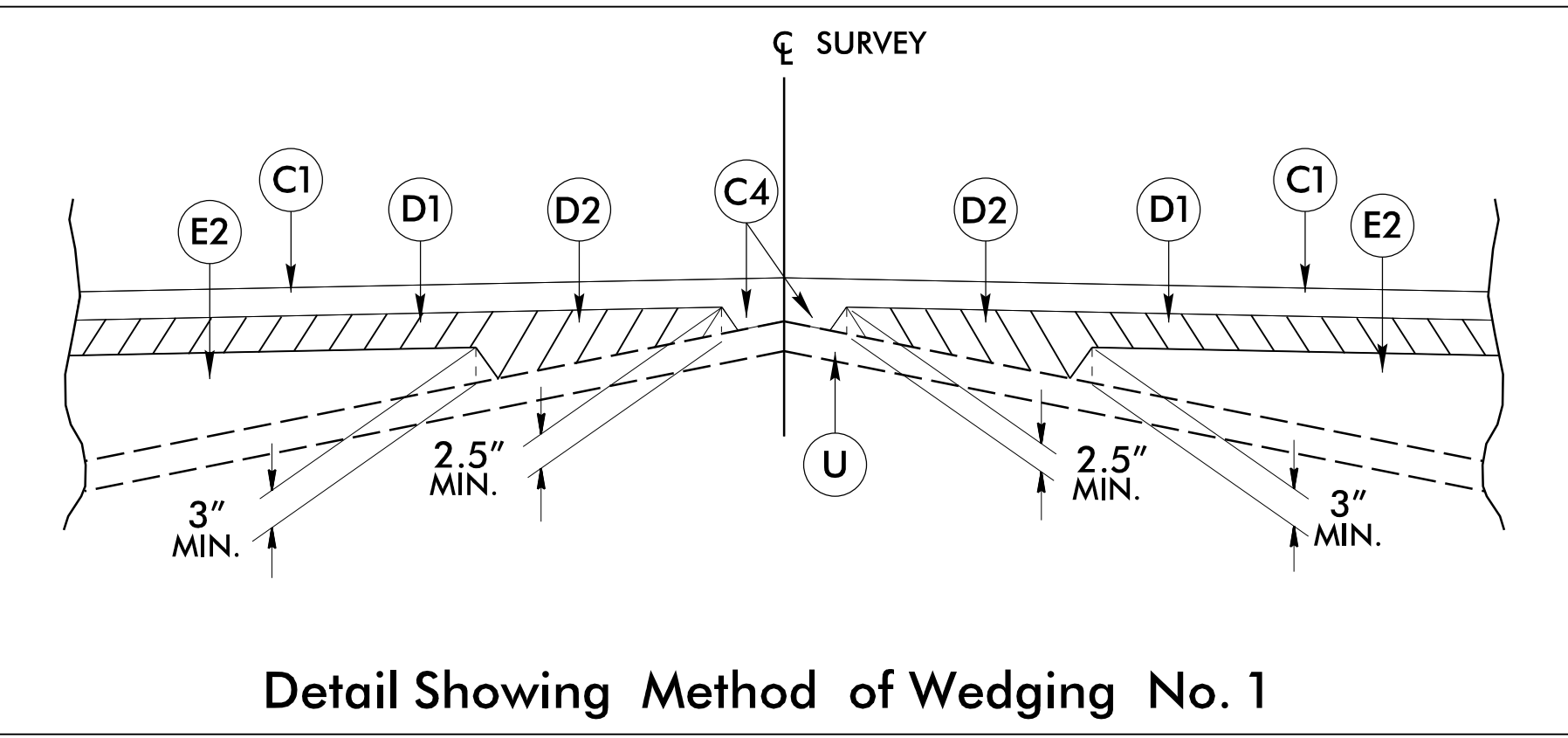
Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line (SUE - LOS B)*	-----
U/G Tank; Water, Gas, Oil	-----
Underground Storage Tank, Approx. Loc.	(UST)
A/G Tank; Water, Gas, Oil	-----
Geoenvironmental Boring	⊕
Abandoned According to Utility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

6/2/99

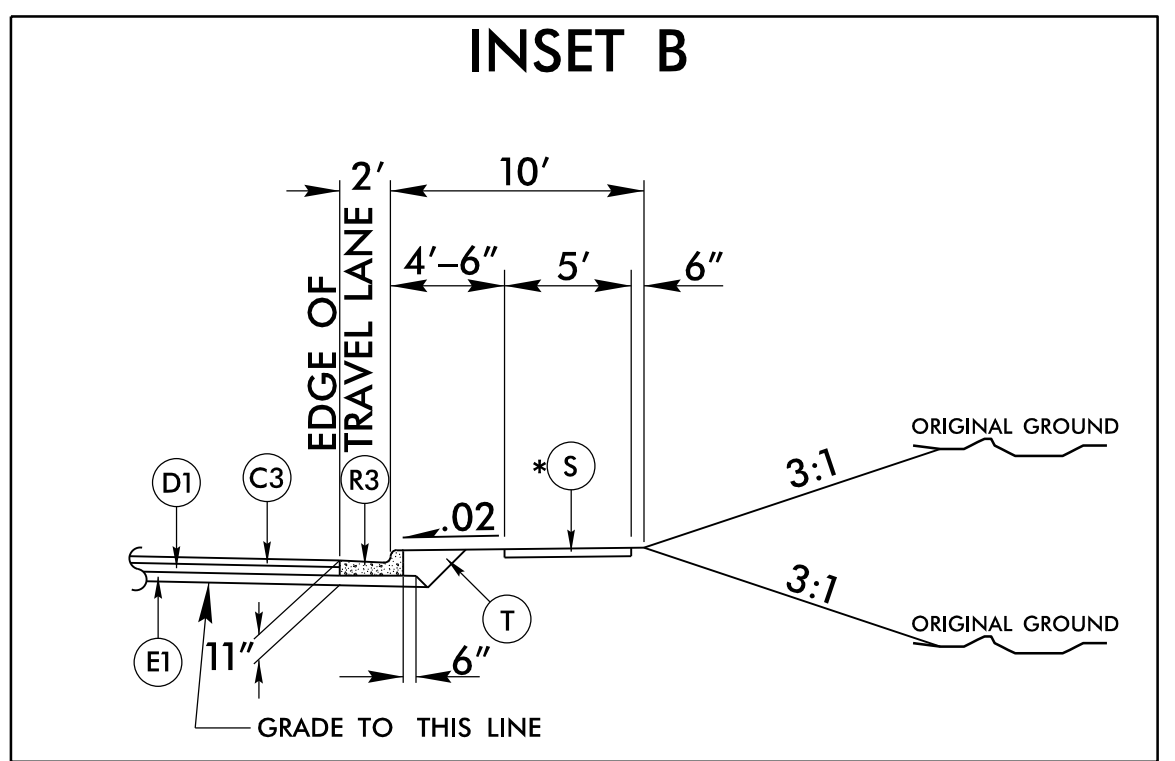
PROJECT REFERENCE NO. U-4709	SHEET NO. 2A-1
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
	
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FINAL PAVEMENT SCHEDULE			
A	12" PORTLAND CEMENT CONCRETE TRUCK APRON, CLASS AA CONCRETE	R2	1'-6" CONCRETE CURB AND GUTTER
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.	R3	2'-6" CONCRETE CURB AND GUTTER
C2	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	R4	2'-9" CONCRETE CURB AND GUTTER
C3	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.	R5	8"x18" CONCRETE CURB
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 1.5" IN DEPTH.	R6	9"x18" CONCRETE CURB
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R7	5" MONOLITHIC CONCRETE ISLAND (KEYED-IN)
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 1/2" OR GREATER THAN 4" IN DEPTH.	S	4" CONCRETE SIDEWALK
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	T	EARTH MATERIAL
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" OR GREATER THAN 5 1/2" IN DEPTH.	U	EXISTING PAVEMENT
J1	PROP. 6" AGGREGATE BASE COURSE	V1	INCIDENTAL MILLING
J2	PROP. 8" AGGREGATE BASE COURSE	V2	MILLING EXISTING ASPHALT PAVEMENT, 1.5" DEPTH
P	PRIME COAT AT THE RATE OF 0.35 GAL. PER SQ. YD.	W	VAR. DEPTH WEDGING (SEE STANDARD WEDGING DETAIL)
R1	2'-0" CONCRETE CURB AND GUTTER (ROLLED CURB), CLASS AA CONCRETE		

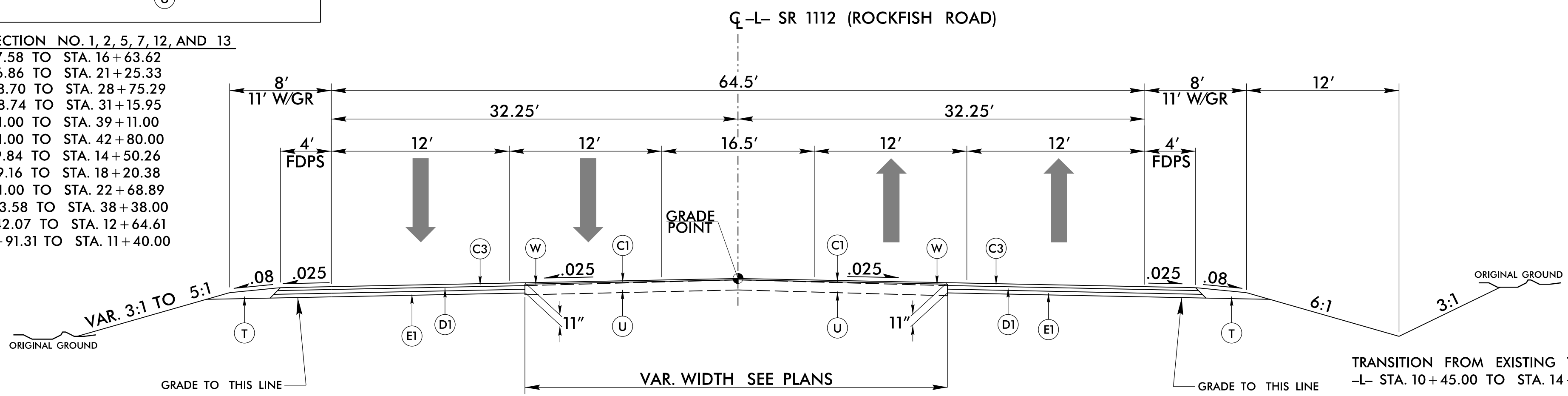
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE SHOWN.



- USE WITH TYPICAL SECTION NO. 1, 2, 5, 7, 12, AND 13
- L- STA. 14+37.58 TO STA. 16+63.62
 - L- STA. 17+96.86 TO STA. 21+25.33
 - L- STA. 26+98.70 TO STA. 28+75.29
 - L- STA. 30+28.74 TO STA. 31+15.95
 - L- STA. 37+61.00 TO STA. 39+11.00
 - L- STA. 38+81.00 TO STA. 42+80.00
 - Y- STA. 11+49.84 TO STA. 14+50.26
 - Y- STA. 16+09.16 TO STA. 18+20.38
 - Y- STA. 20+51.00 TO STA. 22+68.89
 - Y- STA. 33+63.58 TO STA. 38+38.00
 - Y2- STA. 11+42.07 TO STA. 12+64.61
 - Y2A- STA. 10+91.31 TO STA. 11+40.00



- USE WITH TYPICAL SECTION NO. 1
- L- STA. 14+98.59 TO STA. 16+49.51 LT.
 - *-L- STA. 15+45.65 TO STA. 16+49.51 LT.
 - L- STA. 14+10.31 TO STA. 16+49.51 RT.
 - *-L- STA. 14+30.72 TO STA. 16+49.51 RT.



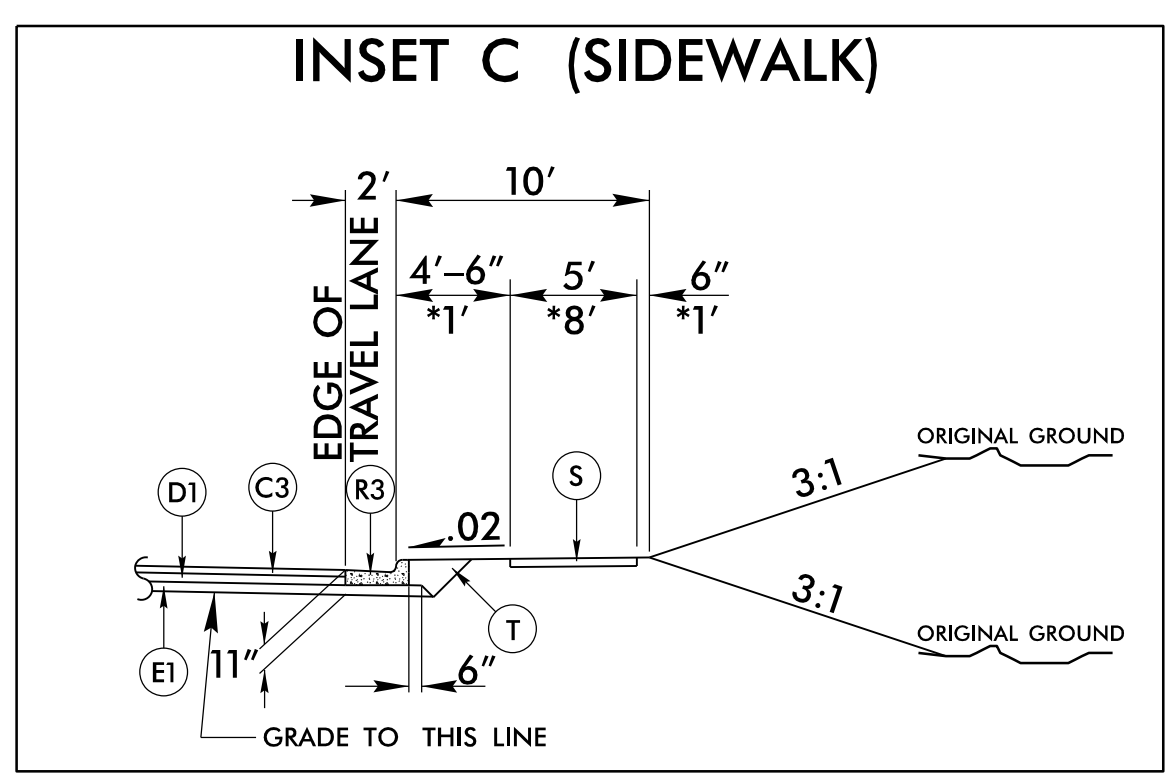
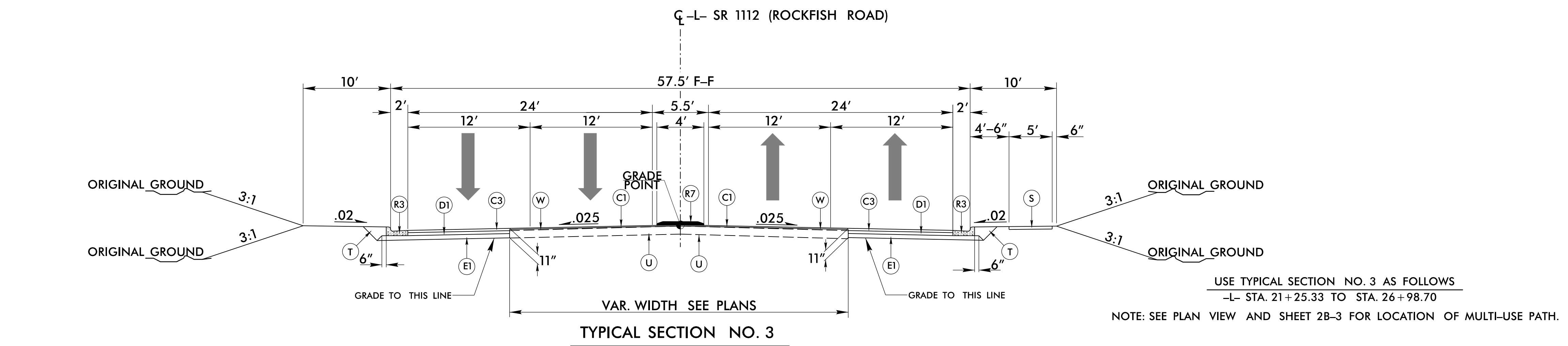
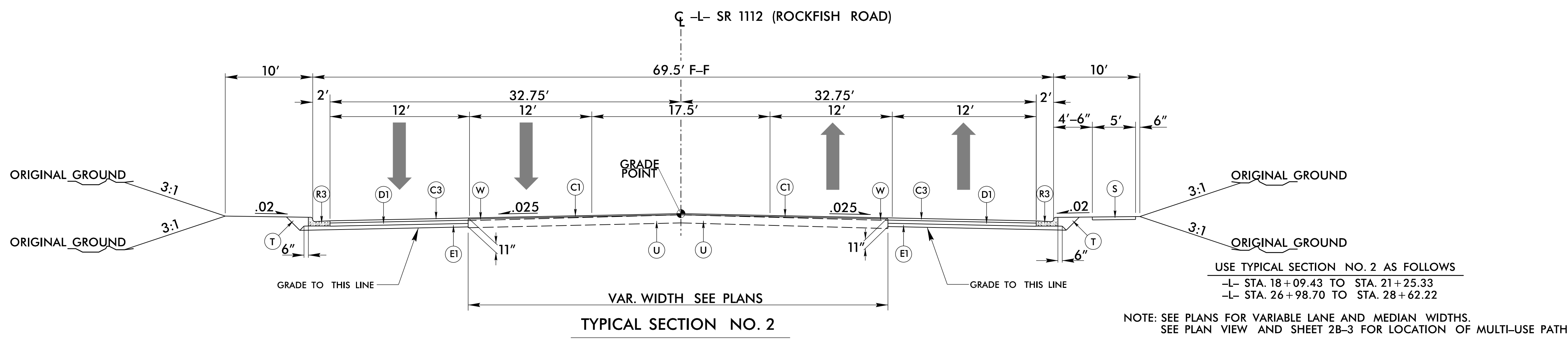
TRANSITION FROM EXISTING TO TYPICAL SECTION NO. 1
 -L- STA. 10+45.00 TO STA. 14+37.58

USE TYPICAL SECTION NO. 1 AS FOLLOWS
 -L- STA. 14+37.58 TO STA. 16+49.51
 NOTE: SEE PLANS FOR VARIABLE LANE AND MEDIAN WIDTHS.

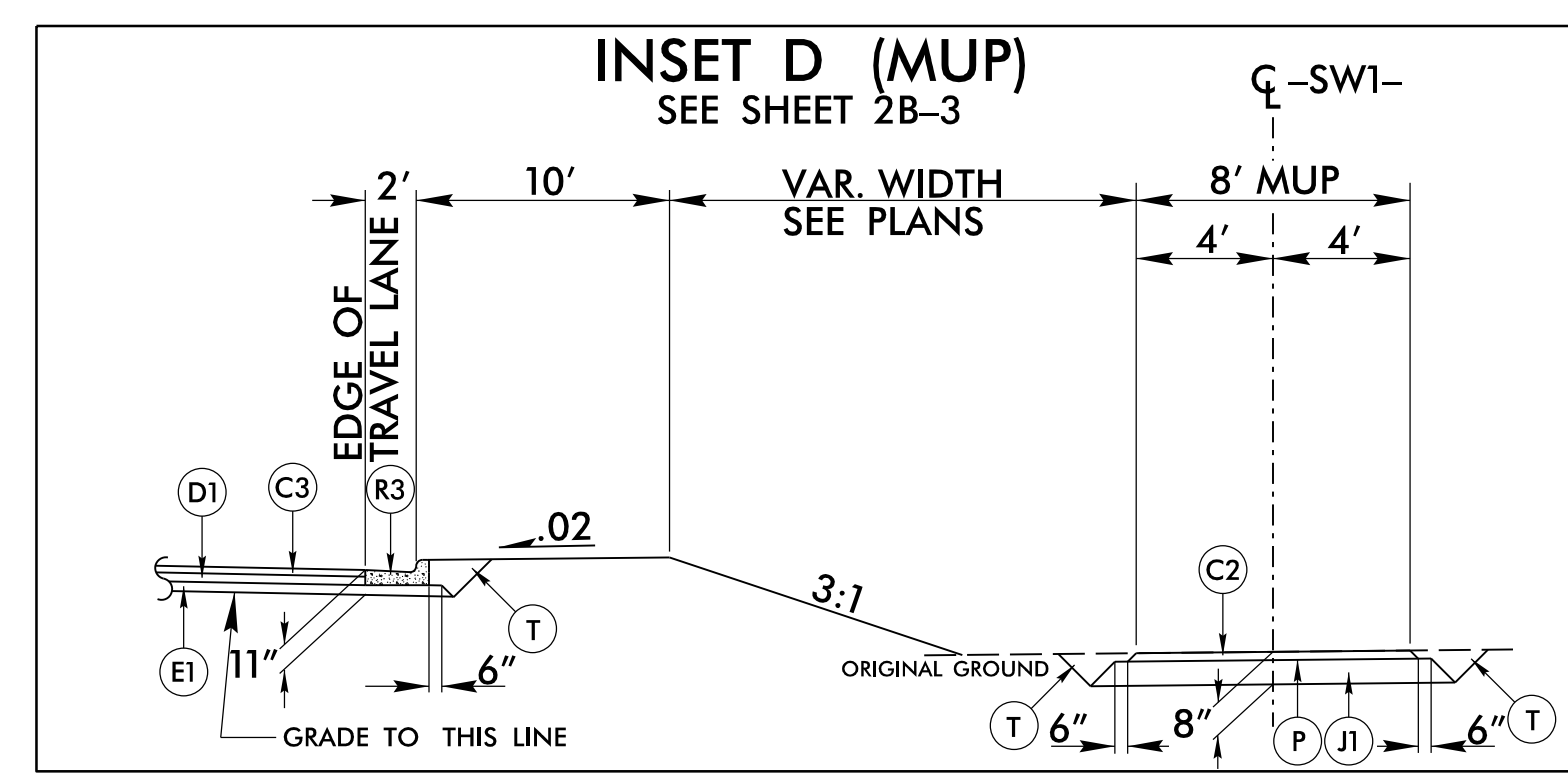
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6/2/2019

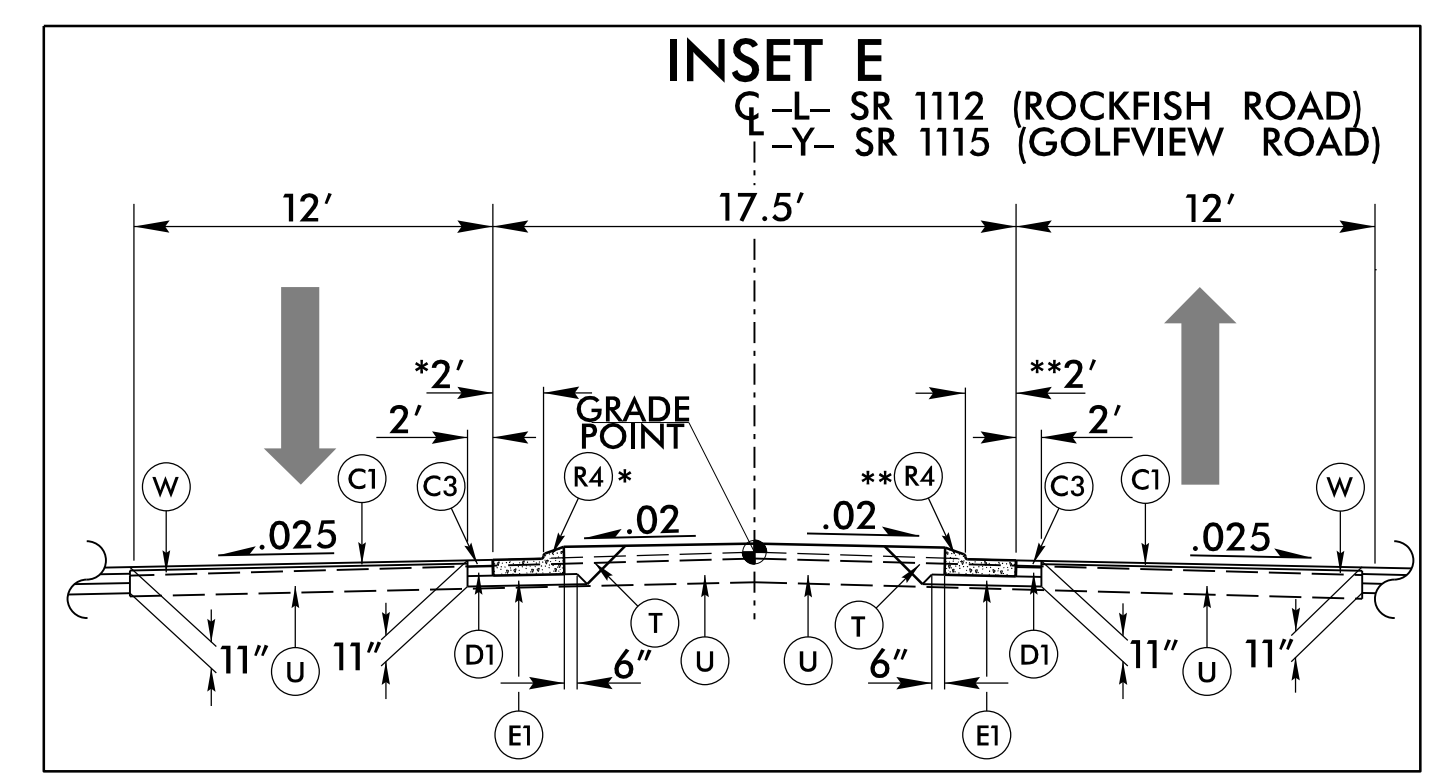
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 User: jgarcia



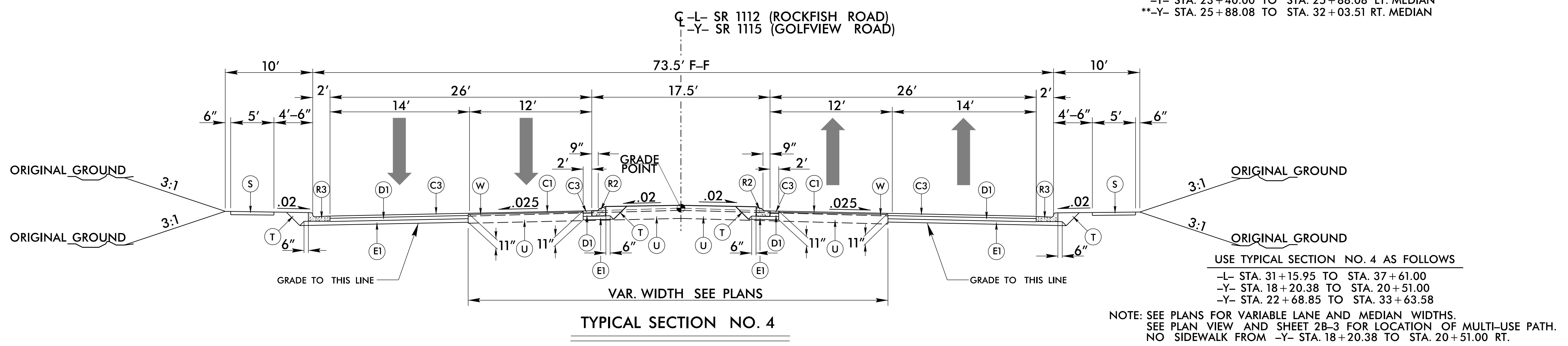
USE WITH TYPICAL SECTION NO. 4, 5, 12, AND 13
 *-Y- STA. 20+14.70 TO STA. 27+50.27 RT.
 -Y2A- STA. 10+90.00 TO STA. 11+22.10 LT.
 -Y2A- STA. 10+90.00 TO STA. 12+25.00 RT.

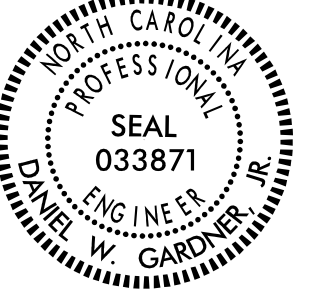



USE WITH TYPICAL SECTION NO. 2, 5, AND 13
 -L- STA. 18+55.72 TO STA. 28+62.22 LT.
 -Y- STA. 16+56.90 TO STA. 19+74.59 RT.
 -Y2- STA. 10+71.17 TO STA. 12+78.21 RT.



USE INSET E FOR R4 (2'-9" C & G) WITH TYPICAL SECTION NO. 4
 **L- STA. 31+47.24 TO STA. 37+61.00 RT. MEDIAN
 *-Y- STA. 19+66.71 TO STA. 20+51.00 LT. MEDIAN
 *-Y- STA. 23+40.00 TO STA. 25+88.08 LT. MEDIAN
 **-Y- STA. 25+88.08 TO STA. 32+03.51 RT. MEDIAN



PROJECT REFERENCE NO. U-4709	SHEET NO. 2A-2
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 

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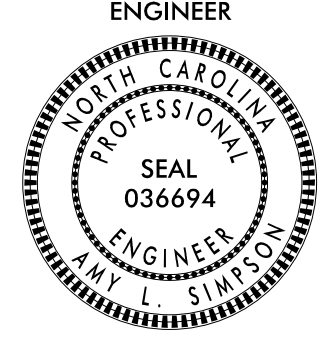
TRANSYSTEMS

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

FINAL PAVEMENT SCHEDULE

A	12" CONC. TRUCK APRON
C1	1.5" S9.5B
C2	2" S9.5B
C3	3" S9.5B
C4	VAR. DEPTH S9.5B
D1	4" I19.0C
D2	VAR. DEPTH I19.0C
E1	4" B25.0C
E2	VAR. DEPTH B25.0C
J1	6" ABC
J2	8" ABC
P	PRIME COAT
R1	2'-0" C & G, CL. AA CONC.
R2	1'-6" C & G
R3	2'-6" C & G
R4	2'-9" C & G
R5	8"x18" CONC. CURB
R6	9"x18" CONC. CURB
R7	5" MONO. ISLAND (KEYED-IN)
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING, 1.5" DEPTH
W	VAR. DEPTH WEDGING

6/2/99

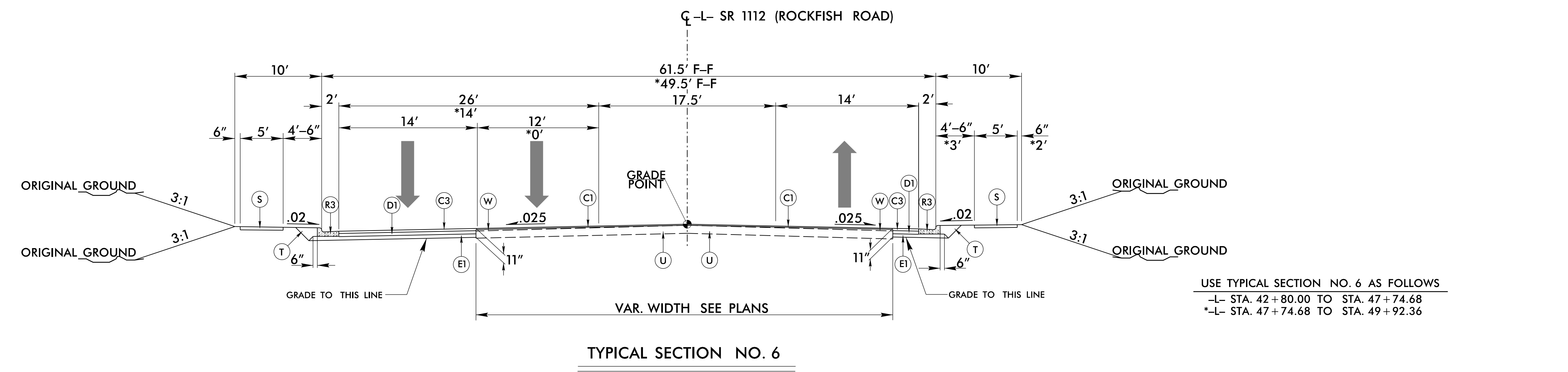
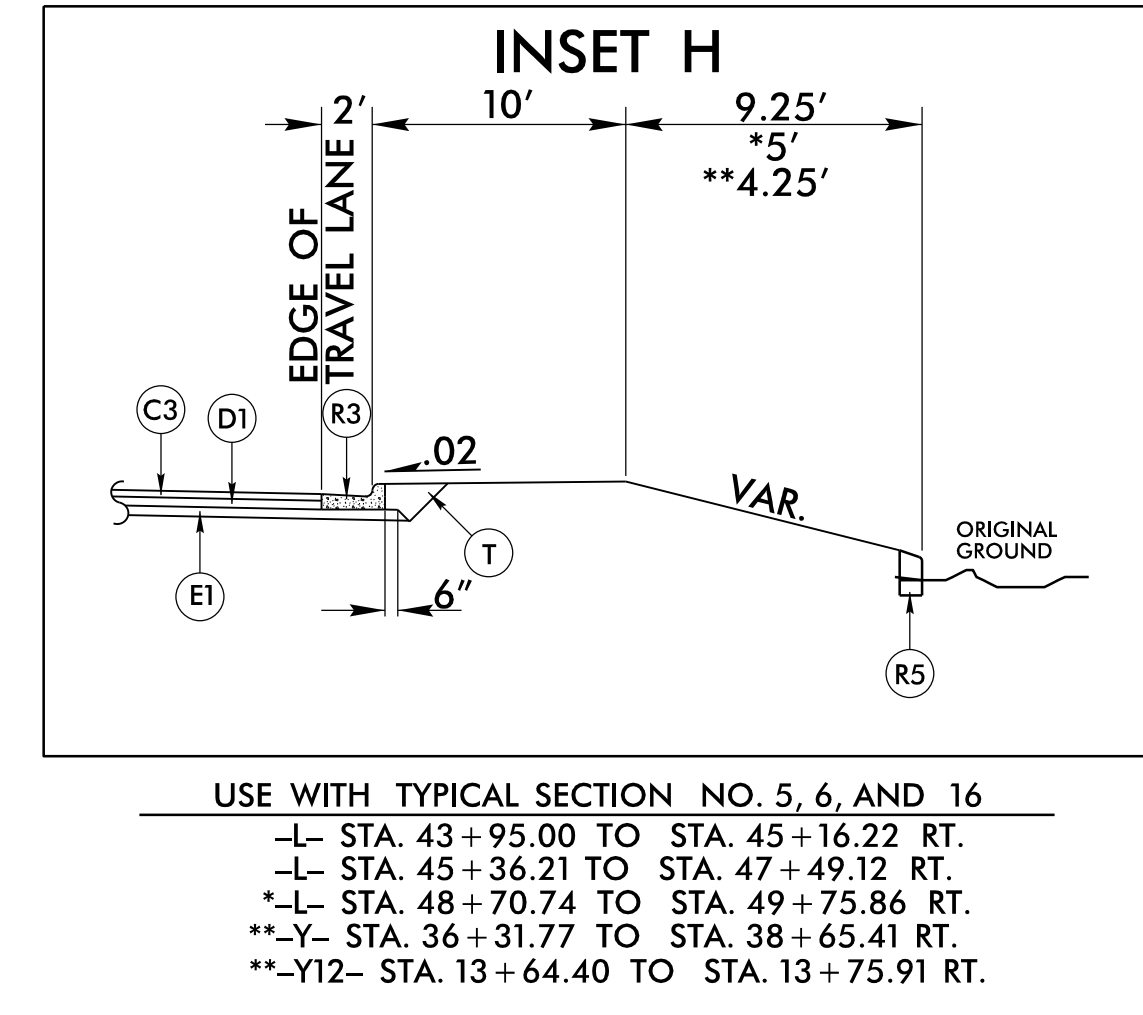
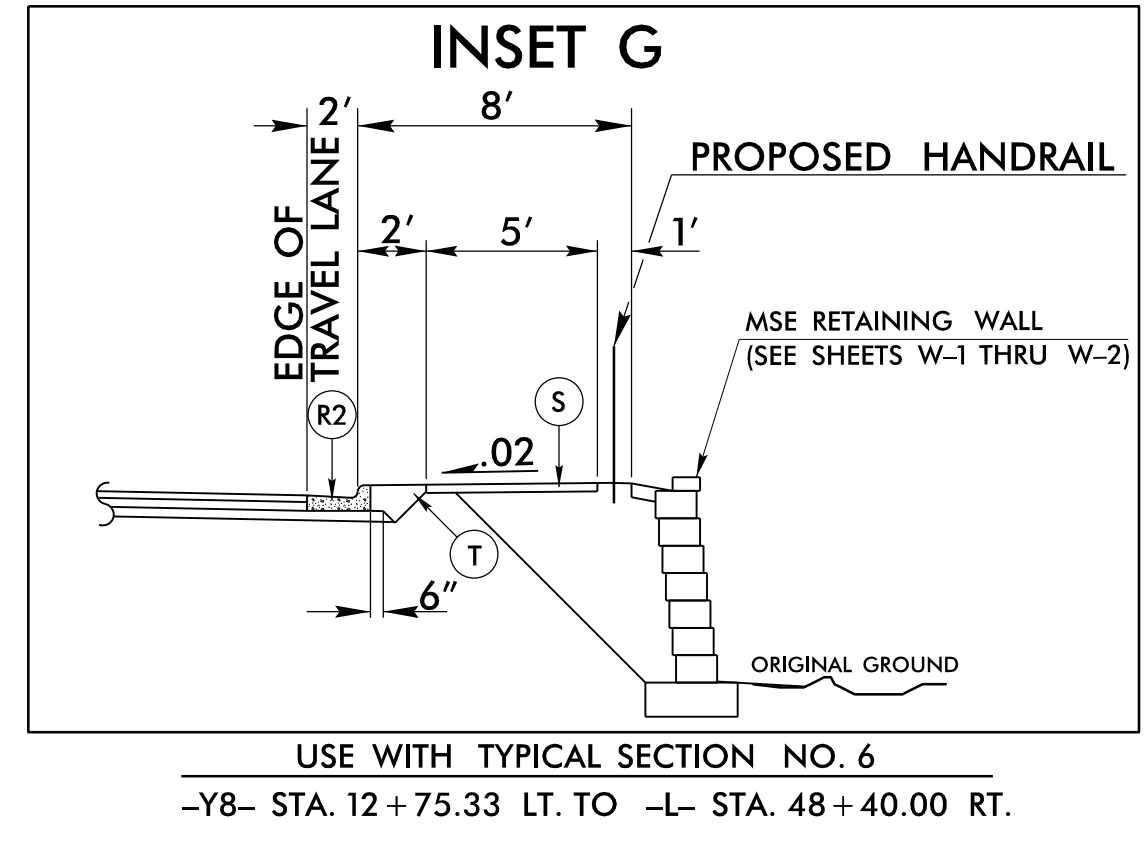
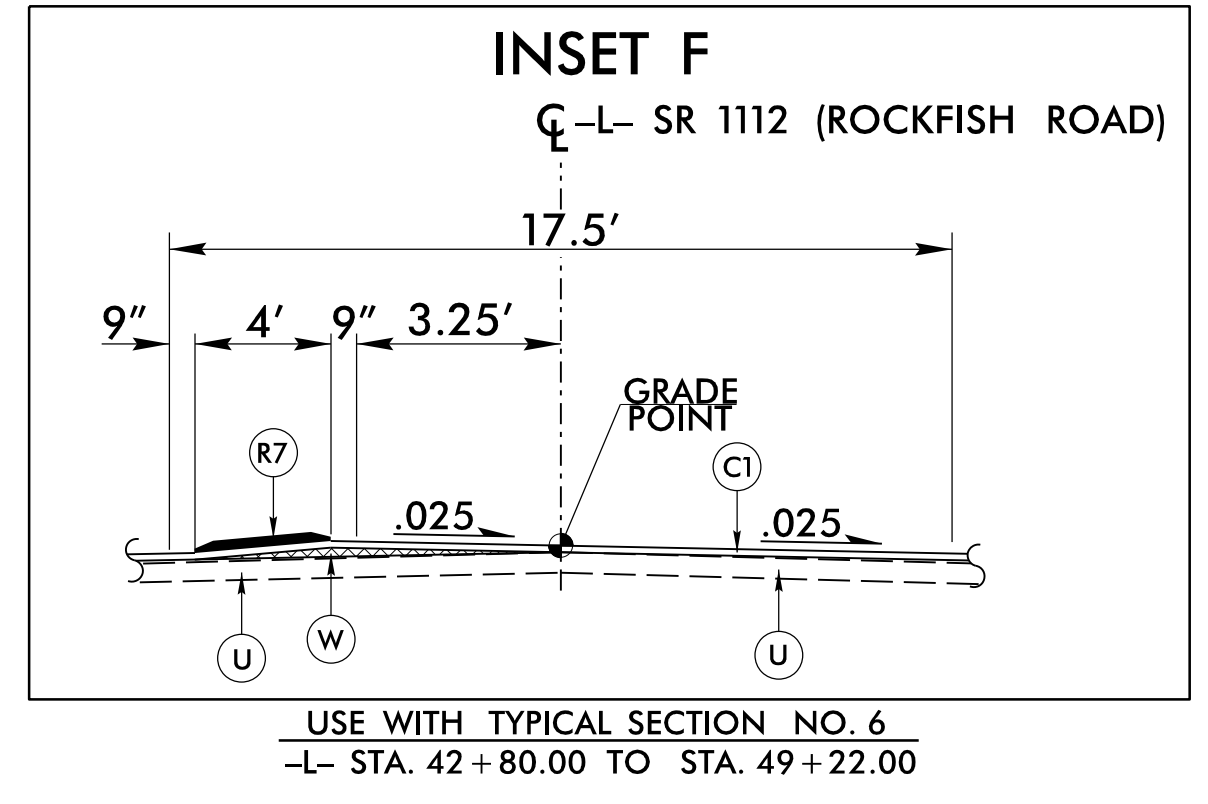
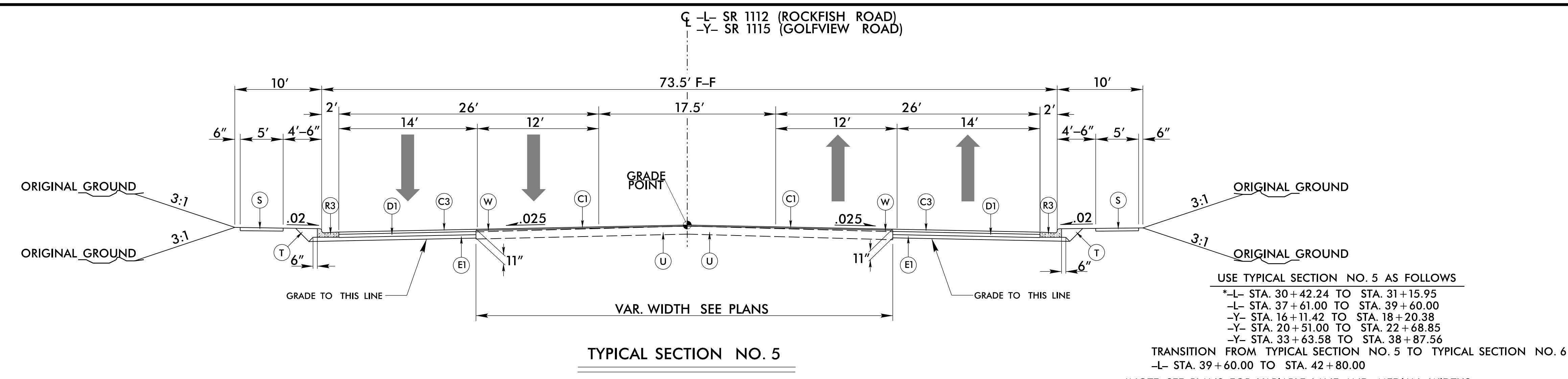
PROJECT REFERENCE NO. U-4709	SHEET NO. 2A-3
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 

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Fax: 919.789.9591
License: F-0453

FINAL PAVEMENT SCHEDULE

A	12" CONC. TRUCK APRON
C1	1.5" S9.5B
C2	2" S9.5B
C3	3" S9.5B
C4	VAR. DEPTH S9.5B
D1	4" I19.0C
D2	VAR. DEPTH I19.0C
E1	4" B25.0C
E2	VAR. DEPTH B25.0C
J1	6" ABC
J2	8" ABC
P	PRIME COAT
R1	2'-0" C & G, CL. AA CONC.
R2	1'-6" C & G
R3	2'-6" C & G
R4	2'-9" C & G
R5	8"x18" CONC. CURB
R6	9"x18" CONC. CURB
R7	5" MONO. ISLAND (KEYED-IN)
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING, 1.5" DEPTH
W	VAR. DEPTH WEDGING



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6/2/99

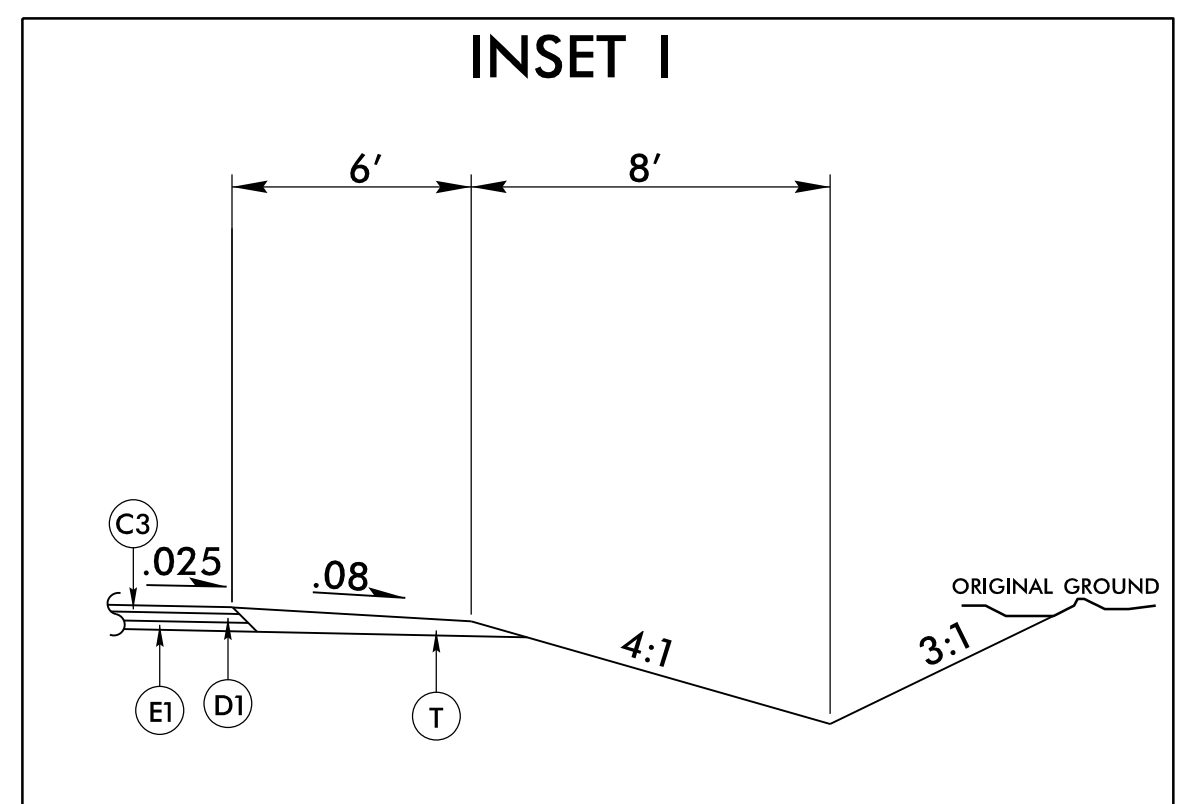
PROJECT REFERENCE NO. U-4709	SHEET NO. 2A-4
ROADWAY DESIGN ENGINEER SEAL 033871 ENGINEER W. GARDNER	PAVEMENT DESIGN ENGINEER SEAL 036694 ENGINEER L. SIMPSON

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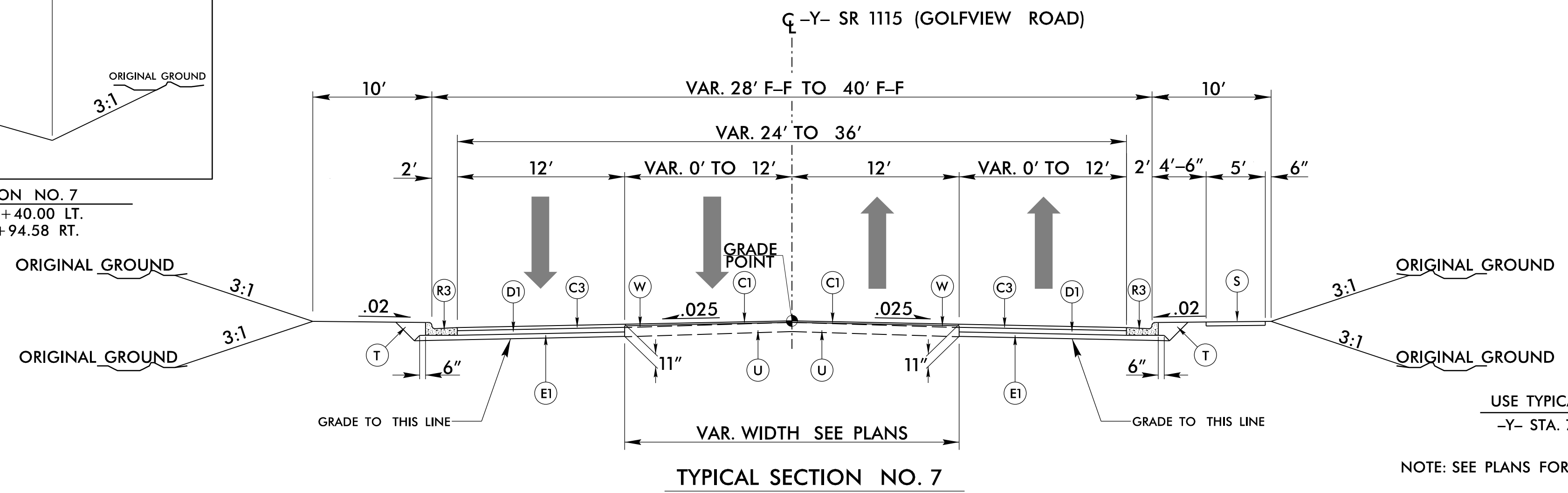
TRANSYSTEMS
1 Glenwood Avenue
Raleigh, NC 27603
Tel: 919.789.9977
Fax: 919.789.9591
License: F-0453

FINAL PAVEMENT SCHEDULE

A	12" CONC. TRUCK APRON
C1	1.5" S9.5B
C2	2" S9.5B
C3	3" S9.5B
C4	VAR. DEPTH S9.5B
D1	4" I19.0C
D2	VAR. DEPTH I19.0C
E1	4" B25.0C
E2	VAR. DEPTH B25.0C
J1	6" ABC
J2	8" ABC
P	PRIME COAT
R1	2'-0" C & G, CL. AA CONC.
R2	1'-6" C & G
R3	2'-6" C & G
R4	2'-9" C & G
R5	8"x18" CONC. CURB
R6	9"x18" CONC. CURB
R7	5" MONO. ISLAND (KEYED-IN)
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING, 1.5" DEPTH
W	VAR. DEPTH WEDGING

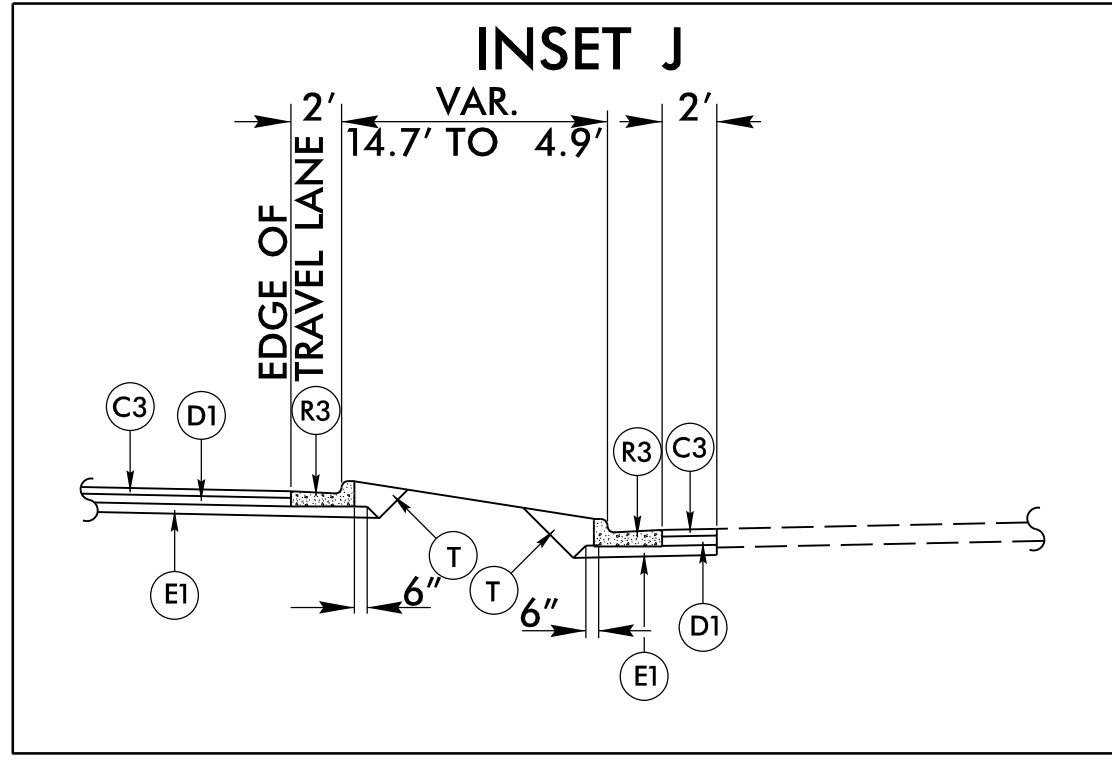


USE WITH TYPICAL SECTION NO. 7
 -Y- STA. 7+35.00 TO STA. 10+40.00 LT.
 -Y- STA. 7+35.00 TO STA. 9+94.58 RT.

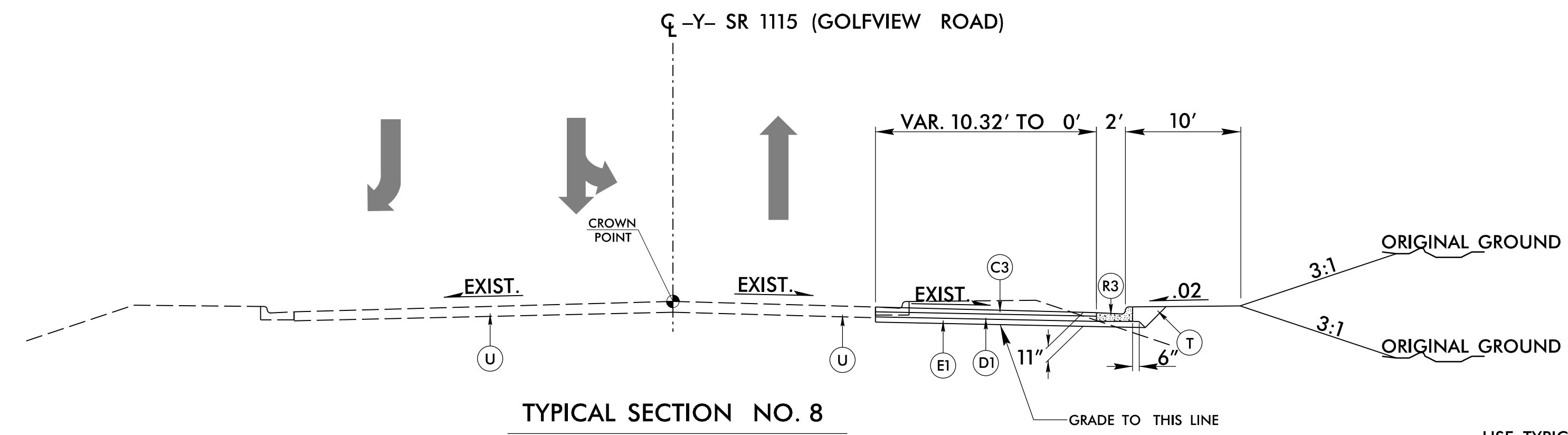


USE TYPICAL SECTION NO. 7 AS FOLLOWS
 -Y- STA. 7+35.00 TO STA. 14+51.65

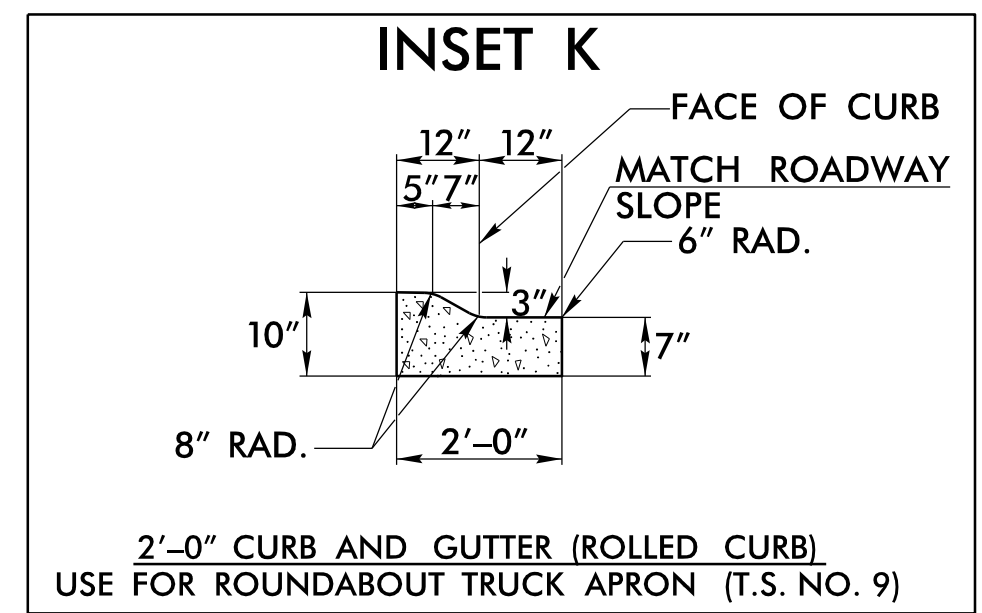
NOTE: SEE PLANS FOR VARIABLE LANE AND MEDIAN WIDTHS.



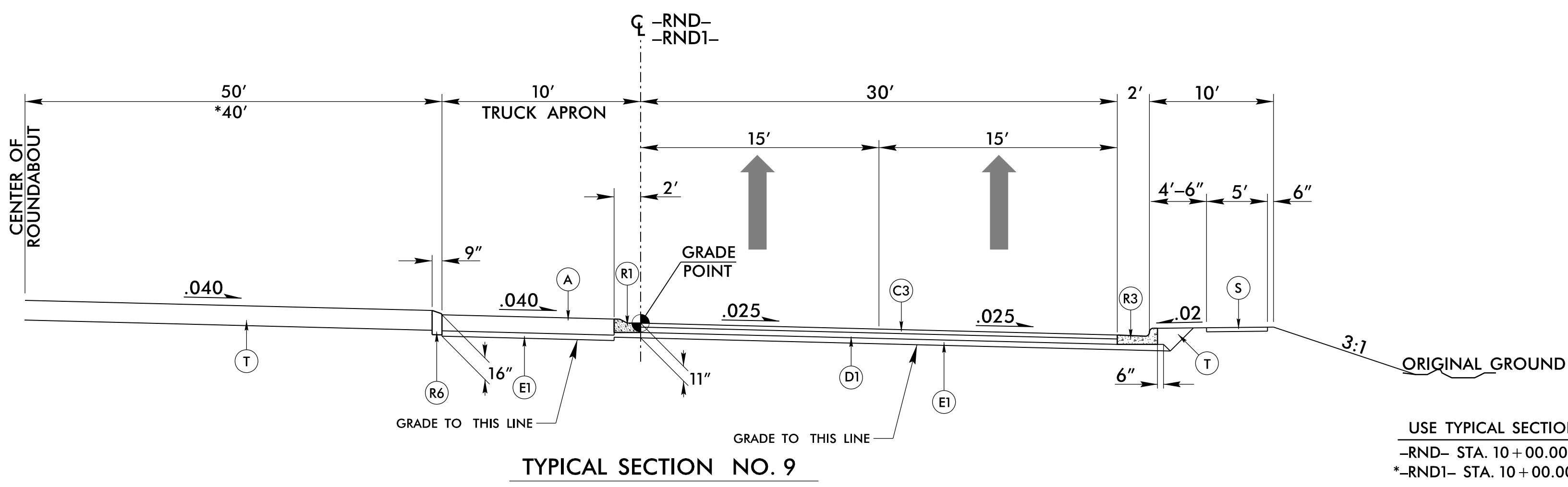
USE WITH TYPICAL SECTION NO. 8
 -Y- STA. 40+32.29 TO STA. 40+96.65 RT.



USE TYPICAL SECTION NO. 8 AS FOLLOWS
 -Y- STA. 39+85.42 TO STA. 40+96.65 RT.



2'-0" CURB AND GUTTER (ROLLED CURB)
 USE FOR ROUNDABOUT TRUCK APRON (T.S. NO. 9)



USE TYPICAL SECTION NO. 9 AS FOLLOWS
 -RND- STA. 10+00.00 TO STA. 13+76.99
 *-RND1- STA. 10+00.00 TO STA. 13+14.16

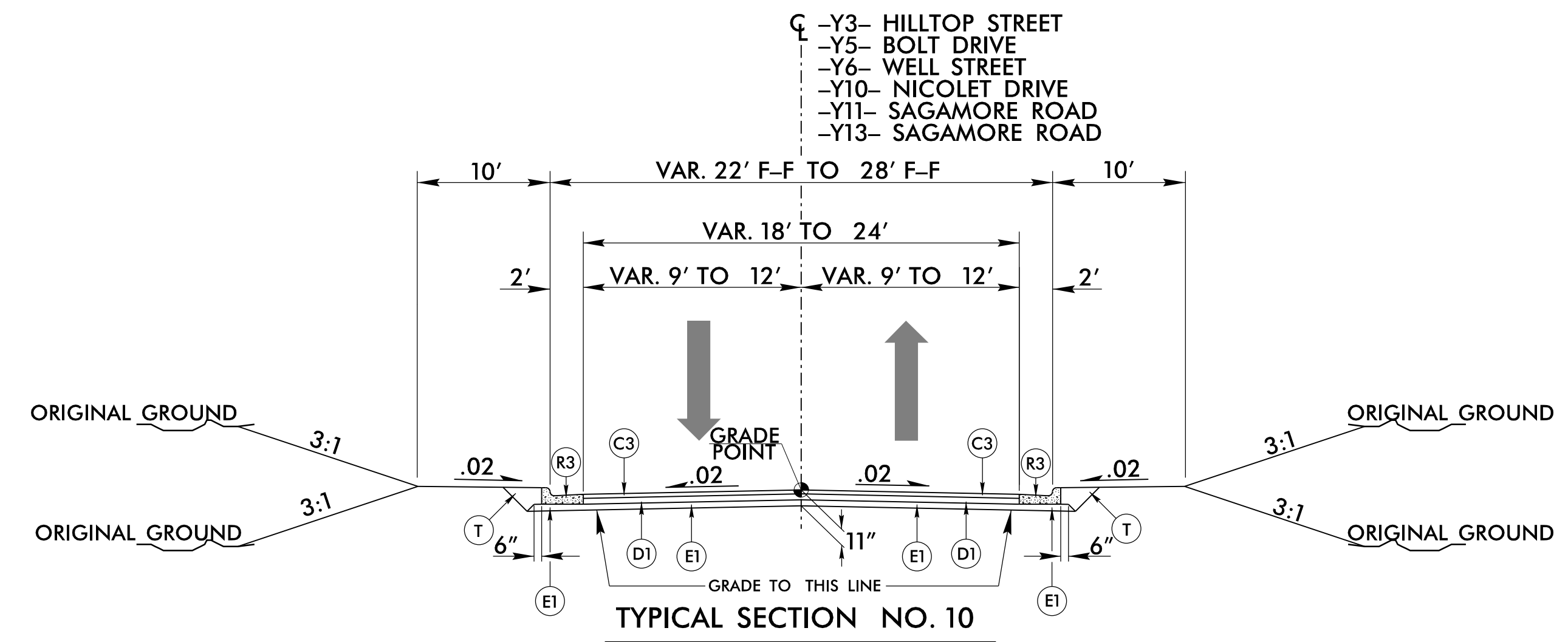
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UNLESS ALL SIGNATURES COMPLETED

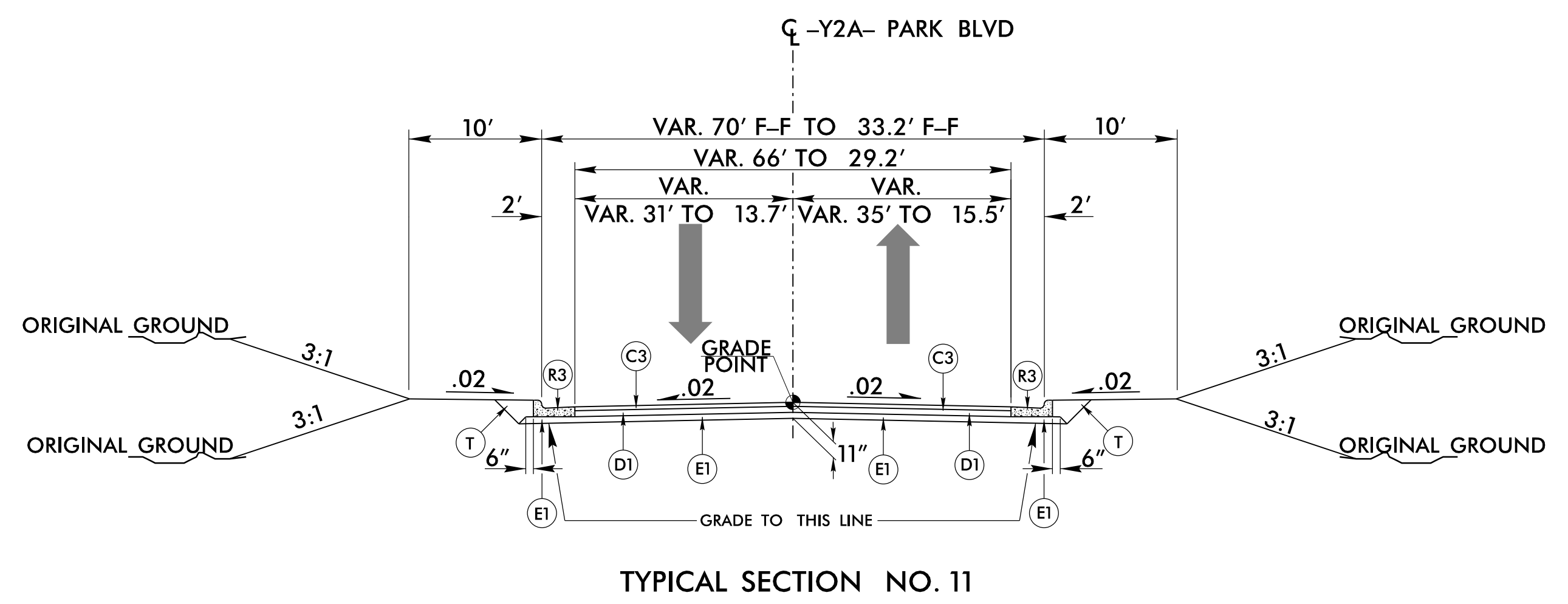
TRANSYSTEMS
1 Glenwood Avenue
Raleigh, NC 27603
Tel: 919.789.9977
Fax: 919.789.9591
License: F-0453

FINAL PAVEMENT SCHEDULE

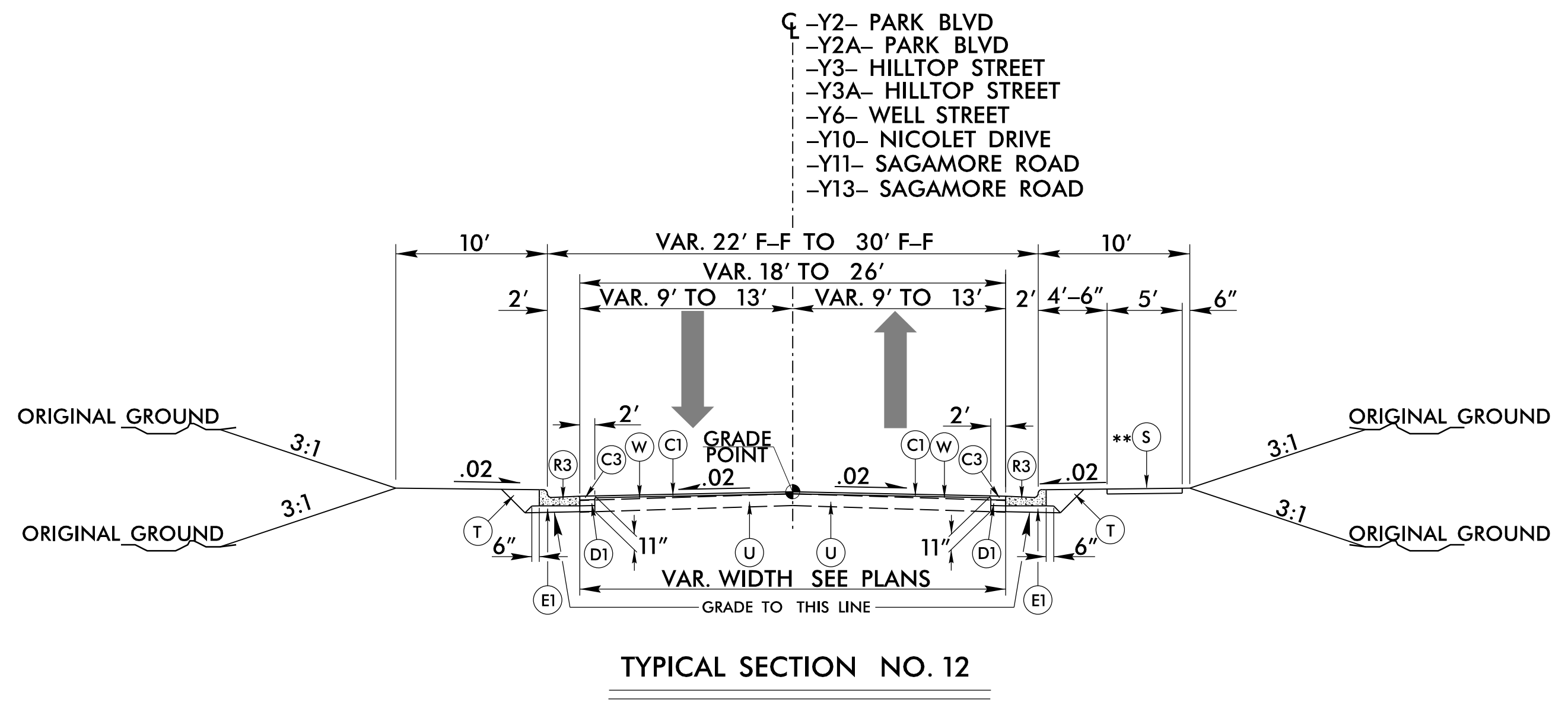
A	12" CONC. TRUCK APRON
C1	1.5" S9.5B
C2	2" S9.5B
C3	3" S9.5B
C4	VAR. DEPTH S9.5B
D1	4" I19.0C
D2	VAR. DEPTH I19.0C
E1	4" B25.0C
E2	VAR. DEPTH B25.0C
J1	6" ABC
J2	8" ABC
P	PRIME COAT
R1	2'-0" C & G, CL. AA CONC.
R2	1'-6" C & G
R3	2'-6" C & G
R4	2'-9" C & G
R5	8"x18" CONC. CURB
R6	9"x18" CONC. CURB
R7	5" MONO. ISLAND (KEYED-IN)
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING, 1.5" DEPTH
W	VAR. DEPTH WEDGING



USE TYPICAL SECTION NO. 10 AS FOLLOWS
 -Y3- STA. 11+50.00 TO STA. 11+54.37
 -Y5- STA. 10+66.65 TO STA. 12+00.00
 -Y6- STA. 10+75.00 TO STA. 11+50.16
 -Y10- STA. 11+25.00 TO STA. 11+34.76
 -Y11- STA. 11+00.00 TO STA. 11+15.08
 -Y13- STA. 11+25.00 TO STA. 11+66.17



USE TYPICAL SECTION NO. 11 AS FOLLOWS
 -Y2A- STA. 10+90.00 TO STA. 11+75.00



USE TYPICAL SECTION NO. 12 AS FOLLOWS
 *-Y2- STA. 10+00.00 TO STA. 12+65.89
 -Y2A- STA. 11+75.00 TO STA. 12+25.00
 -Y3- STA. 11+00.00 TO STA. 11+50.00
 **-Y3A- STA. 11+00.00 TO STA. 11+73.17
 -Y6- STA. 10+25.00 TO STA. 10+75.00
 -Y10- STA. 10+50.00 TO STA. 11+25.00
 -Y11- STA. 10+20.00 TO STA. 11+00.00
 -Y13- STA. 10+85.00 TO STA. 11+25.00

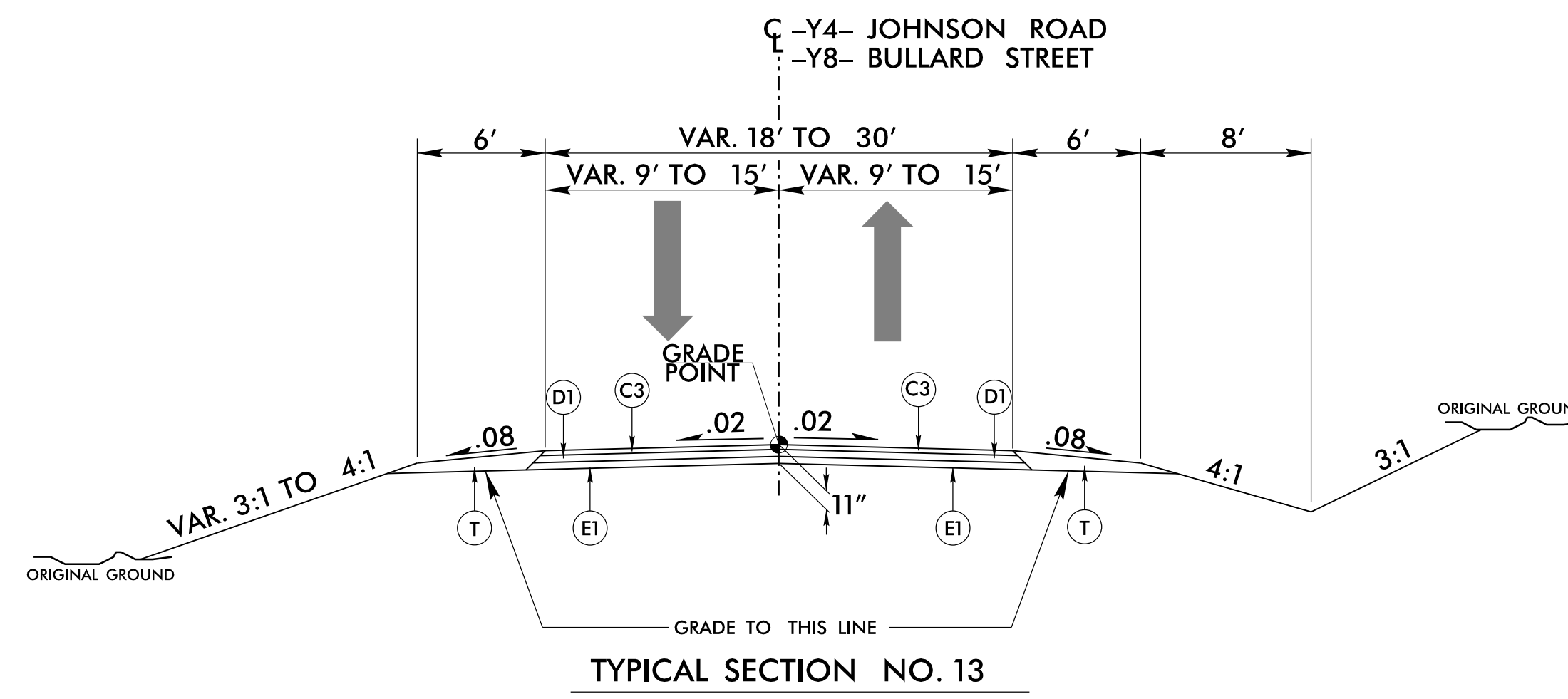
*NOTE: SEE PLAN VIEW AND SHEET 2B-3 FOR LOCATION OF MULTI-USE PATH.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

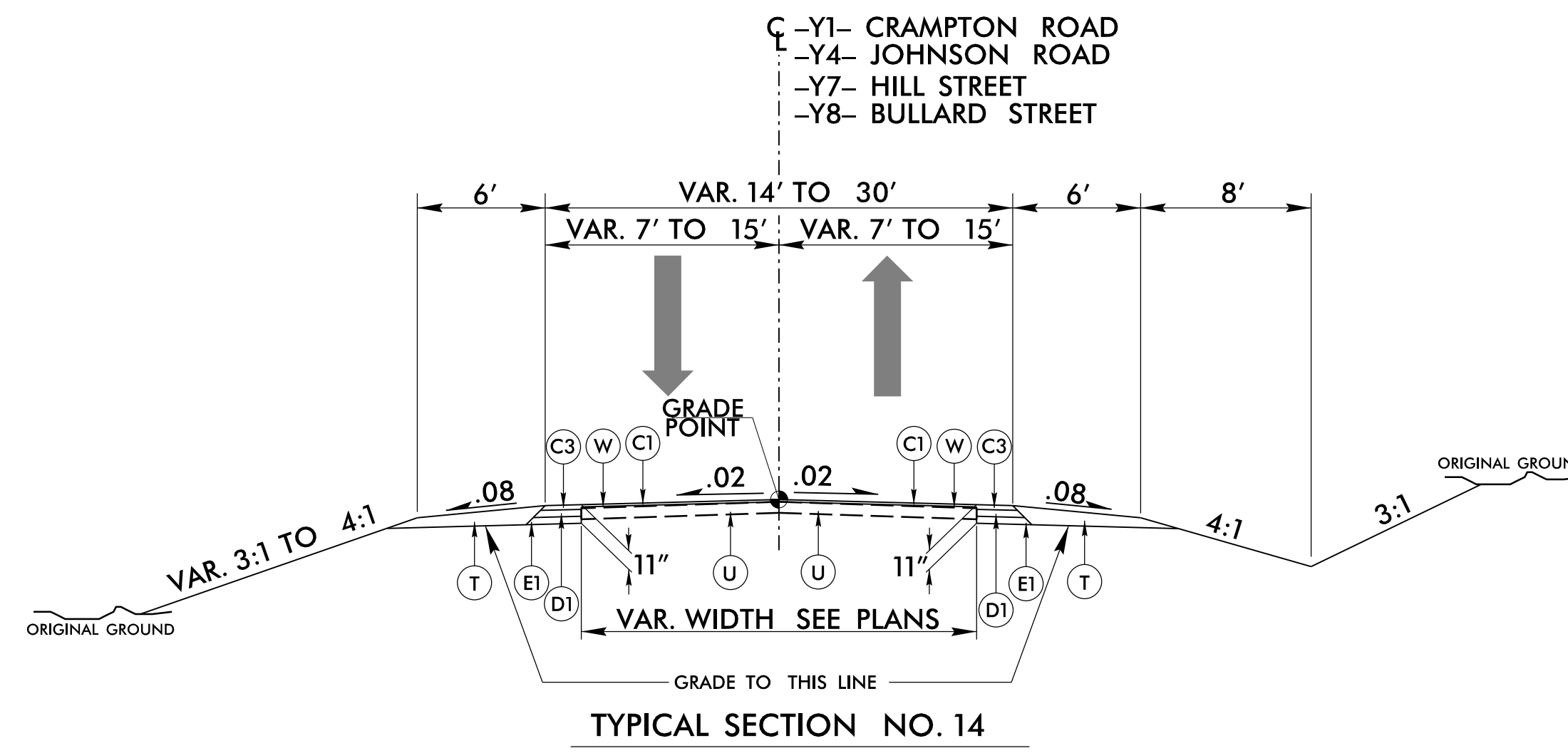
TRANSYSTEMS
1 Glenwood Avenue
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Fax: 919.789.9591
License: F-0453

FINAL PAVEMENT SCHEDULE

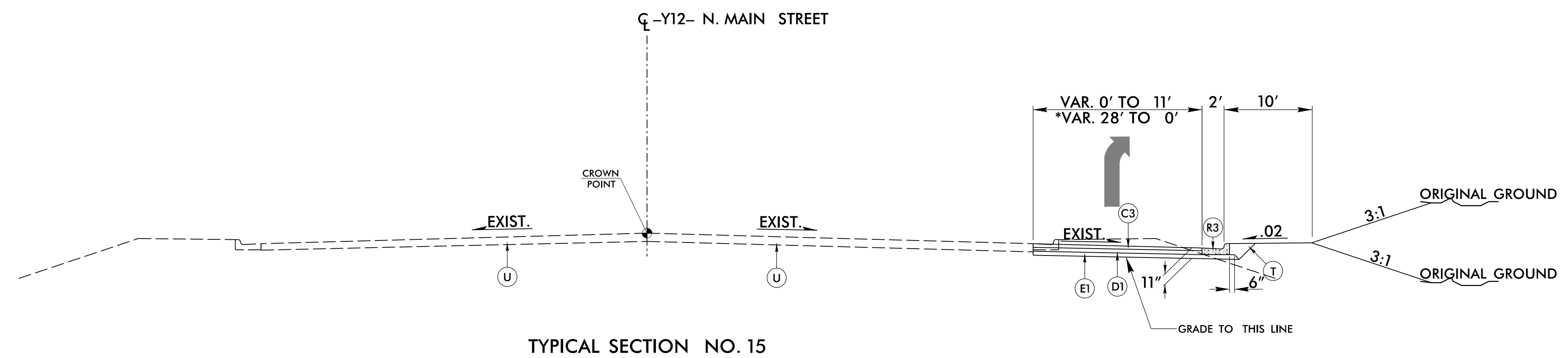
A	12" CONC. TRUCK APRON
C1	1.5" S9.5B
C2	2" S9.5B
C3	3" S9.5B
C4	VAR. DEPTH S9.5B
D1	4" I19.0C
D2	VAR. DEPTH I19.0C
E1	4" B25.0C
E2	VAR. DEPTH B25.0C
J1	6" ABC
J2	8" ABC
P	PRIME COAT
R1	2'-0" C & G, CL. AA CONC.
R2	1'-6" C & G
R3	2'-6" C & G
R4	2'-9" C & G
R5	8"x18" CONC. CURB
R6	9"x18" CONC. CURB
R7	5" MONO. ISLAND (KEYED-IN)
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING, 1.5" DEPTH
W	VAR. DEPTH WEDGING



USE TYPICAL SECTION NO. 13 AS FOLLOWS
-Y4- STA. 10+63.82 TO STA. 11+25.00
-Y8- STA. 10+75.00 TO STA. 11+45.74



USE TYPICAL SECTION NO. 14 AS FOLLOWS
-Y1- STA. 10+56.94 TO STA. 11+00.00
-Y4- STA. 11+25.00 TO STA. 12+00.00
-Y7- STA. 10+53.70 TO STA. 11+53.70
-Y8- STA. 10+25.00 TO STA. 10+75.00
-Y8- STA. 12+75.33 TO STA. 13+00.00



USE TYPICAL SECTION NO. 15 AS FOLLOWS
-Y12- STA. 10+05.00 TO STA. 12+13.77 RT.
*-Y12- STA. 13+64.40 TO STA. 14+54.40 RT.

NOTE: REPLACE 2'-6" CURB AND GUTTER FROM -Y12- STA. 14+54.40 TO STA. 15+53.00 RT.

6/2/99

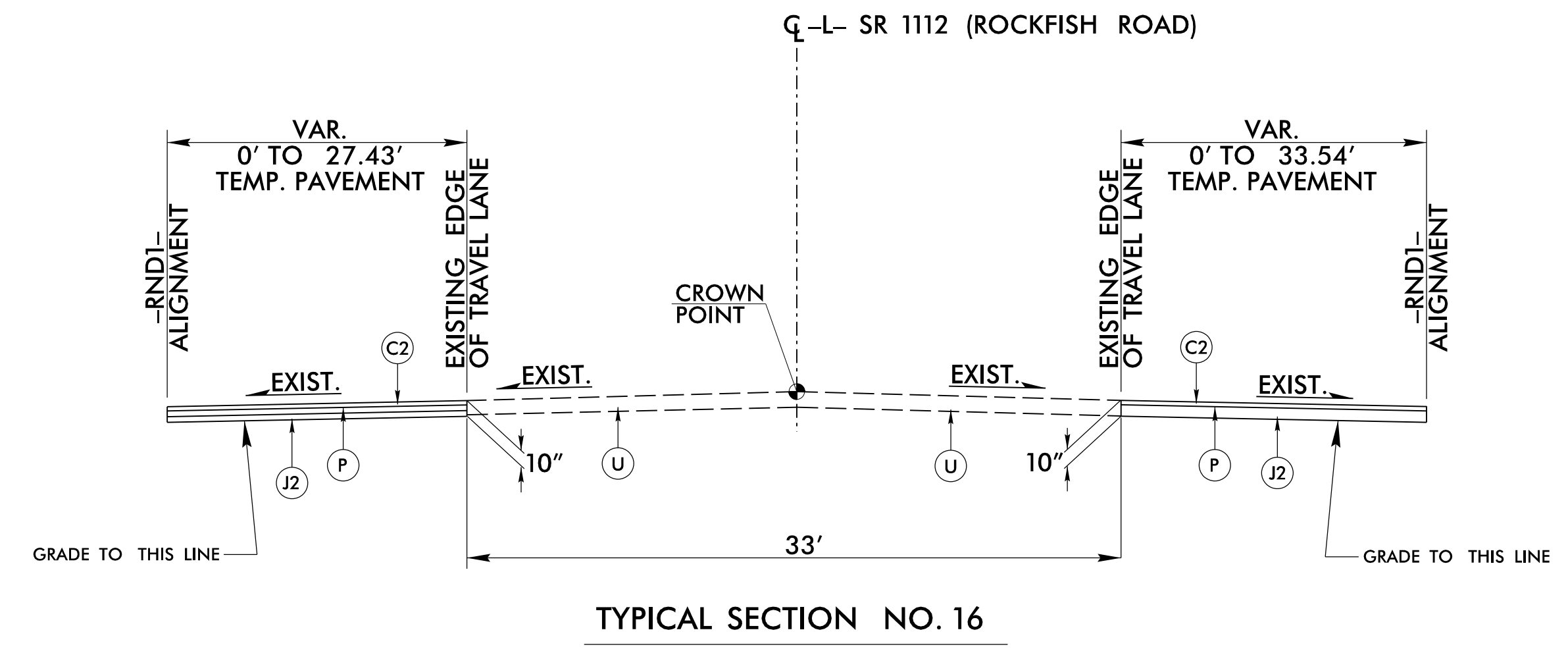
PROJECT REFERENCE NO. <i>U-4709</i>	SHEET NO. <i>2A-7</i>
ROADWAY DESIGN ENGINEER DAVID W. GARDNER, JR. SEAL 033871 ENGINEER	PAVEMENT DESIGN ENGINEER L. SIMPSON SEAL 036694 ENGINEER

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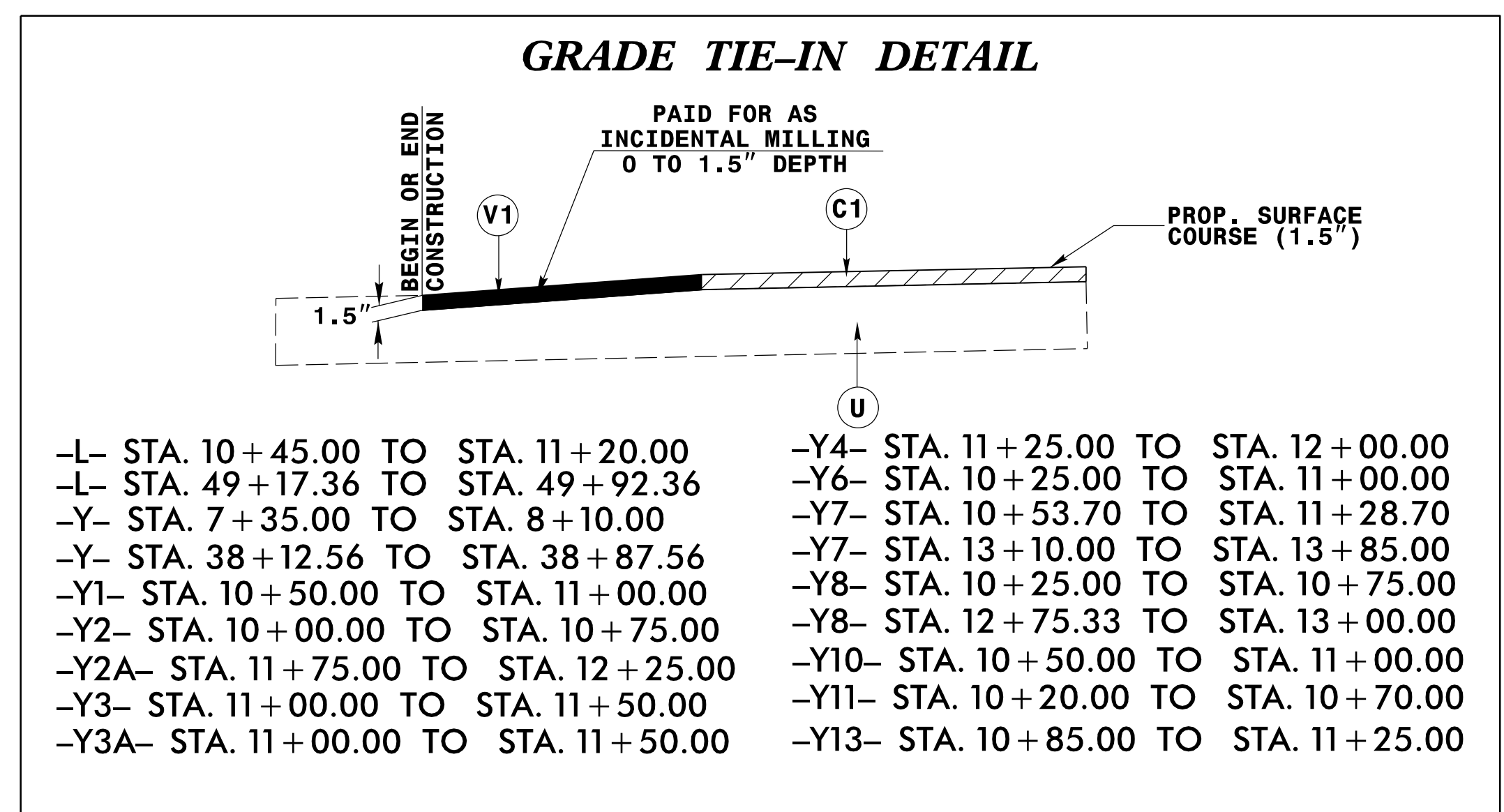
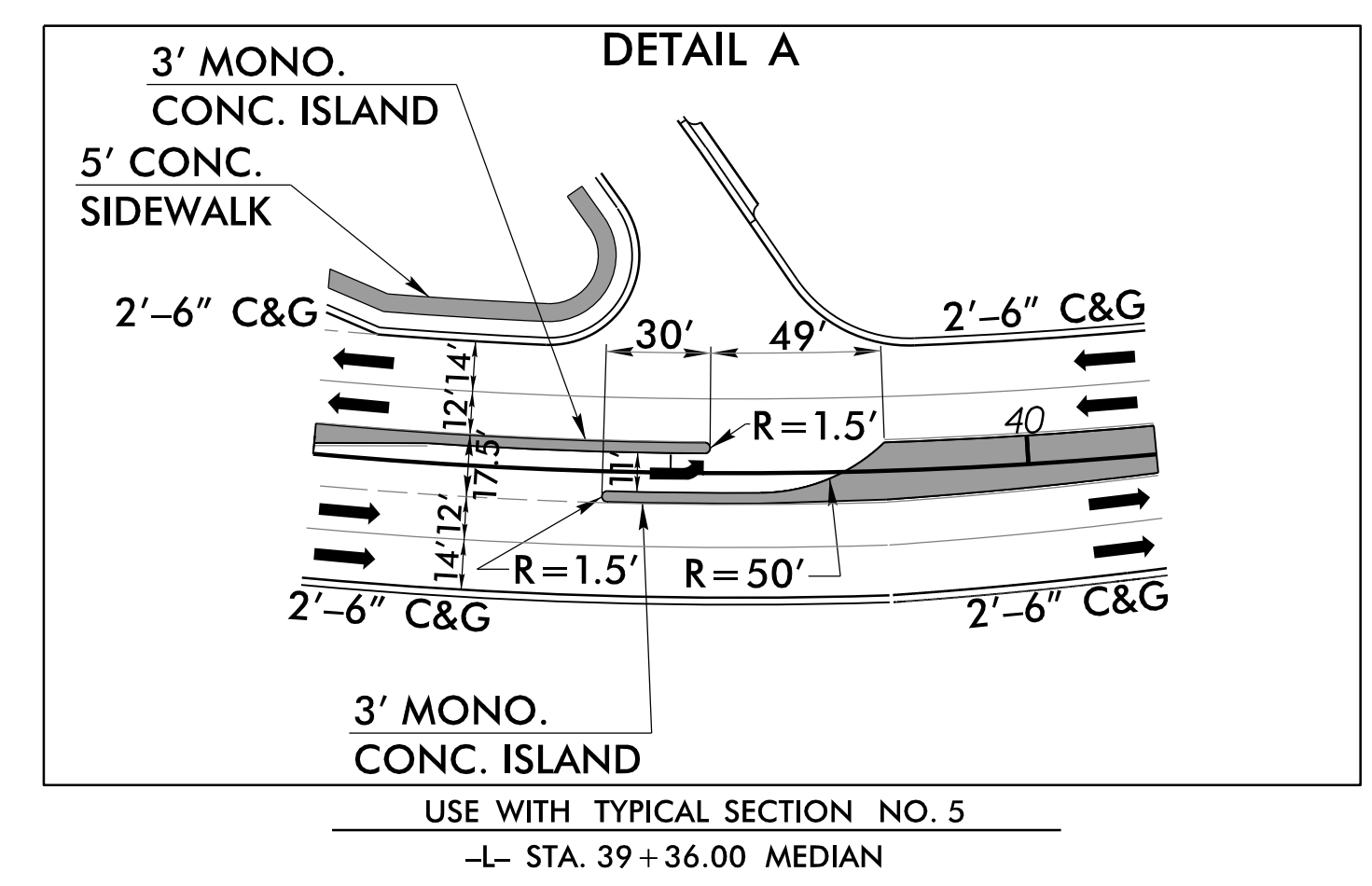
FINAL PAVEMENT SCHEDULE

A	12" CONC. TRUCK APRON
C1	1.5" S9.5B
C2	2" S9.5B
C3	3" S9.5B
C4	VAR. DEPTH S9.5B
D1	4" I19.0C
D2	VAR. DEPTH I19.0C
E1	4" B25.0C
E2	VAR. DEPTH B25.0C
J1	6" ABC
J2	8" ABC
P	PRIME COAT
R1	2'-0" C & G, CL. AA CONC.
R2	1'-6" C & G
R3	2'-6" C & G
R4	2'-9" C & G
R5	8"x18" CONC. CURB
R6	9"x18" CONC. CURB
R7	5" MONO. ISLAND (KEYED-IN)
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING, 1.5" DEPTH
W	VAR. DEPTH WEDGING



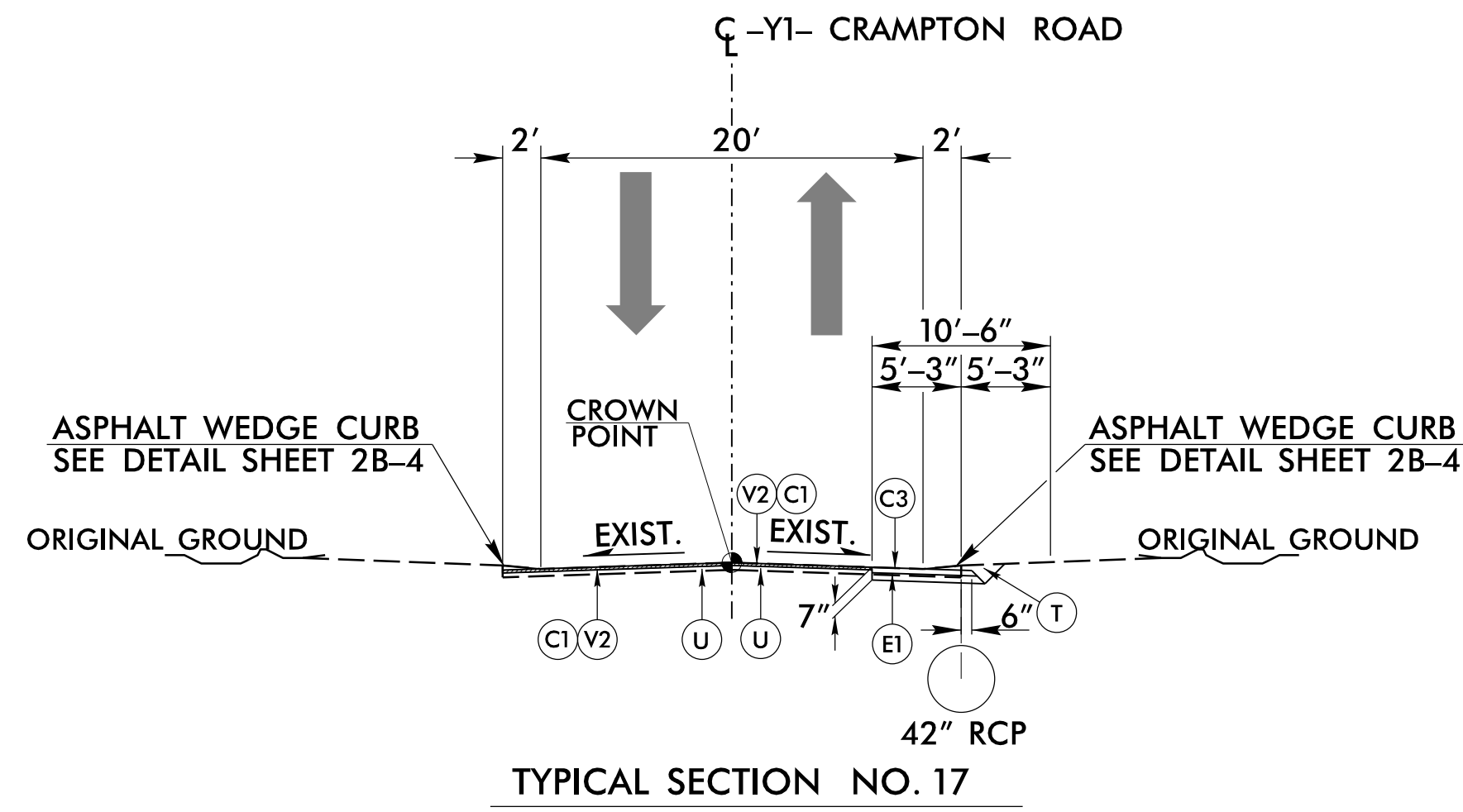
TYPICAL SECTION NO. 16

USE TYPICAL SECTION NO. 16 AS FOLLOWS
 -L- STA. 16+85.03 TO STA. 17+71.03 LT.
 -L- STA. 16+82.62 TO STA. 17+55.13 RT.
 NOTE: SEE SHEET TMP-4 FOR TEMPORARY PAVEMENT WIDENING DETAILS.



NOTE: MIRROR FOR END OF CONSTRUCTION

9/27/2024
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USE TYPICAL SECTION NO. 17 AS FOLLOWS
 -Y1- STA. 11+00.00 TO STA. 19+69.91
 -Y1- STA. 19+95.60 TO STA. 25+29.60

PROJECT REFERENCE NO. U-4709	SHEET NO. 2A-8
ROADWAY DESIGN ENGINEER DAVID W. GARDNER, JR. SEAL 033871 ENGINEER NORTH CAROLINA PROFESSIONAL	PAVEMENT DESIGN ENGINEER ANDREW D. WARRICK SEAL 044590 ENGINEER NORTH CAROLINA PROFESSIONAL

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 Raleigh, NC 27603
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 Fax: 919.789.9591
 License: F-0453

FINAL PAVEMENT SCHEDULE	
A	12" CONC. TRUCK APRON
C1	1.5" S9.5B
C2	2" S9.5B
C3	3" S9.5B
C4	VAR. DEPTH S9.5B
D1	4" I19.0C
D2	VAR. DEPTH I19.0C
E1	4" B25.0C
E2	VAR. DEPTH B25.0C
J1	6" ABC
J2	8" ABC
P	PRIME COAT
R1	2'-0" C & G, CL. AA CONC.
R2	1'-6" C & G
R3	2'-6" C & G
R4	2'-9" C & G
R5	8"x18" CONC. CURB
R6	9"x18" CONC. CURB
R7	5" MONO. ISLAND (KEYED-IN)
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING, 1.5" DEPTH
W	VAR. DEPTH WEDGING

ROUNDBABOUT DETAIL

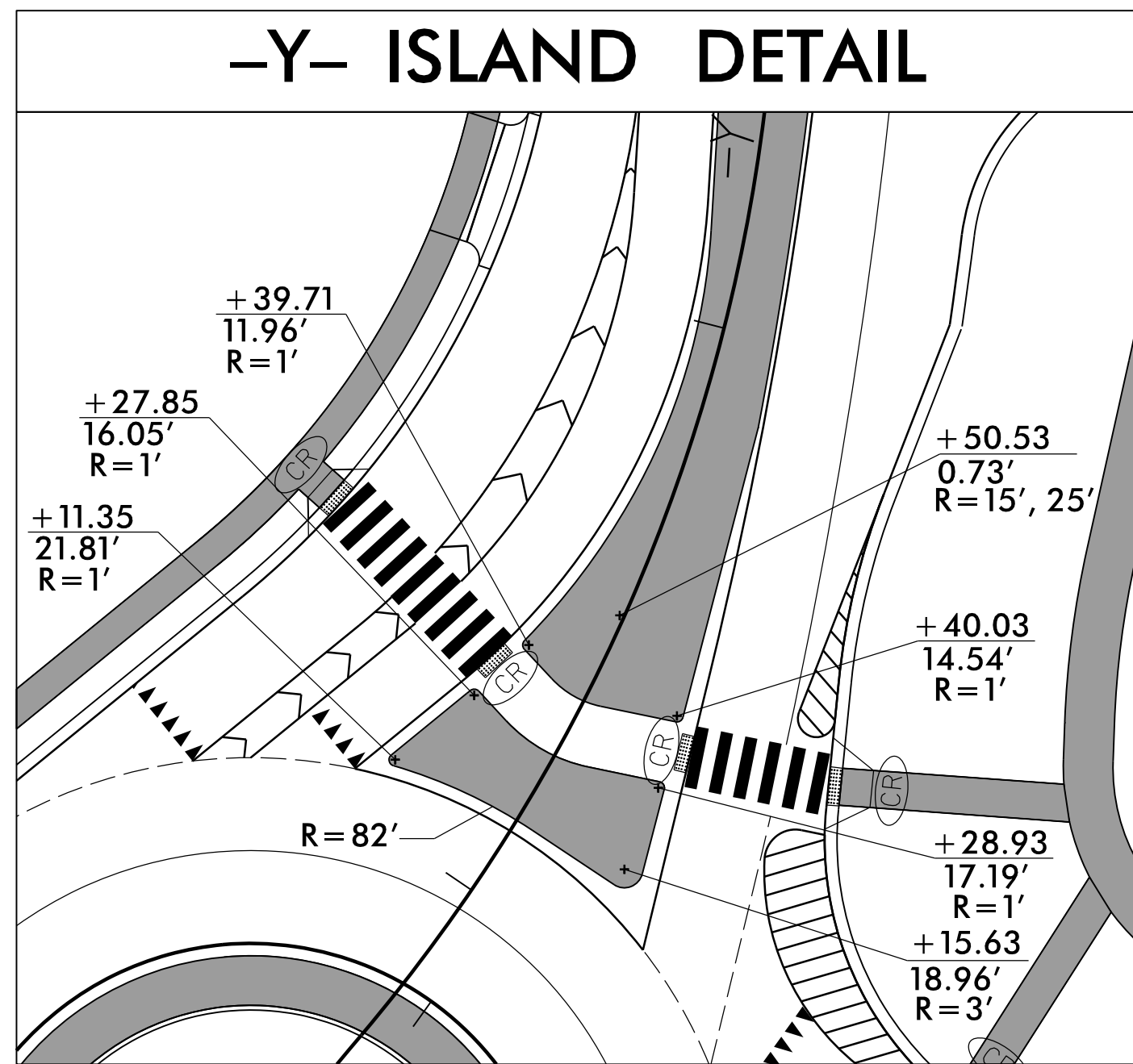
TRANSYSTEMS

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

PROJECT REFERENCE NO. U-4709	SHEET NO. 2B-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	

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-Y- ISLAND DETAIL



NAD 83/NA 2011

2'-6" C & G

+55.36 -Y-

+86.06 -Y-

R=800'

+82.25 -Y-

+48.42 -Y-

R=115'

+54.65 -Y-

+37.66 -Y-

R=40'

R=53'

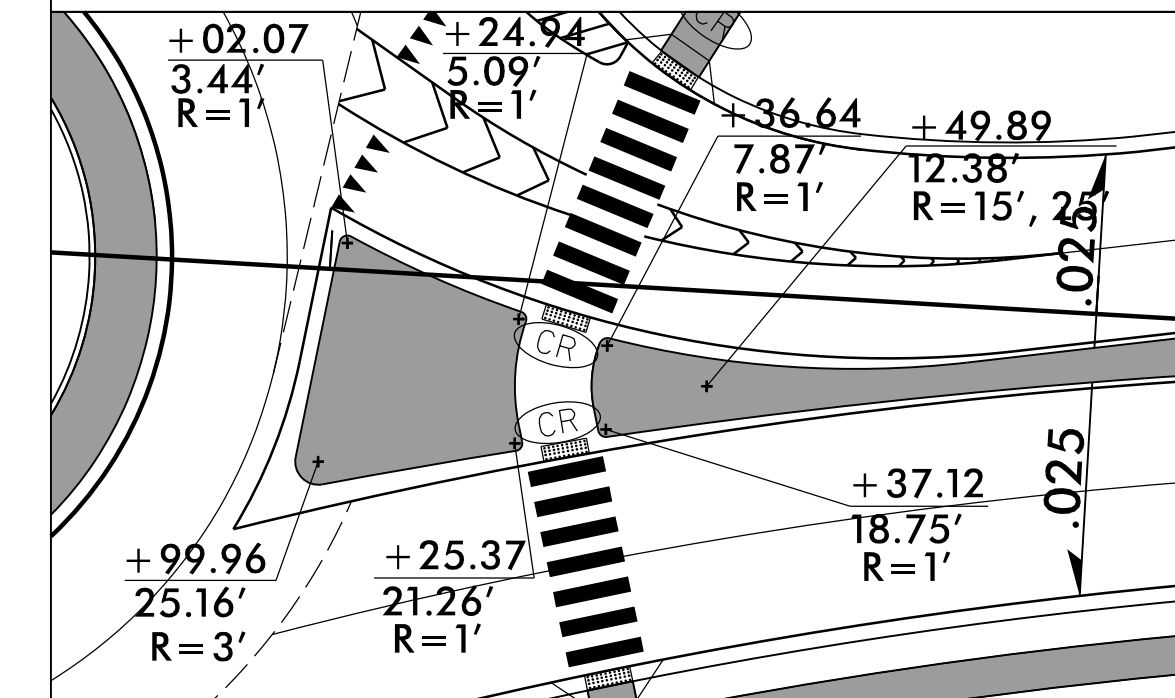
+28.96 -L-

+68.16 -L-

R=144'

+89.61 -L-

-L- ISLAND DETAIL



R=504'

+78.17 -L-

+21.61 -L-

+20.60 -L-

R=480'

R=1140'

+77.15 -L-

1'-6" C & G

R=44'

+53.86 -RND1-

+65.35 -RND1-

9" X 18" CURB

R=850'

R=665'

+74.19 -L-

+06.67 -L-

+23.01 -Y-

R=140'

R=145'

R=110'

R=110'

R=110'

R=110'

R=110'

R=110'

R=110'

R=110'

R=110'

R=110'

R=110'

R=110'

R=110'

R=110'

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R=110'

R=110'

R=110'

R=110'

R=110'

R=110'

R=110'

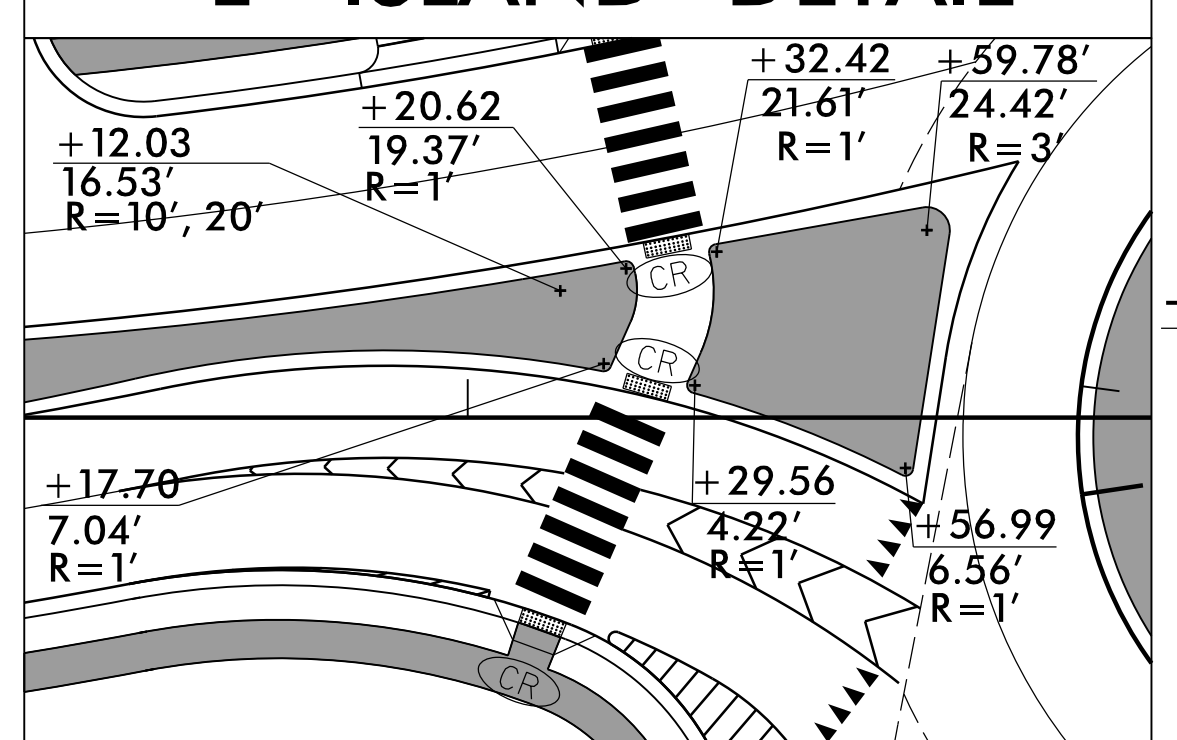
R=110'

R=110'

R=110'

R=110'

-L- ISLAND DETAIL



+30.00 -Y-

+15.00 -Y-

+99.16 -Y-

R=500'

+30.00 -Y-

R=600'

R=80'

R=80'

R=102'

R=102'

R=102'

R=102'

R=102'

R=102'

R=102'

R=102'

R=102'

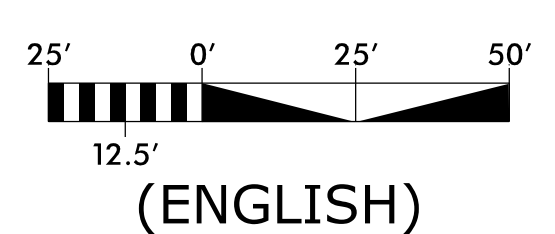
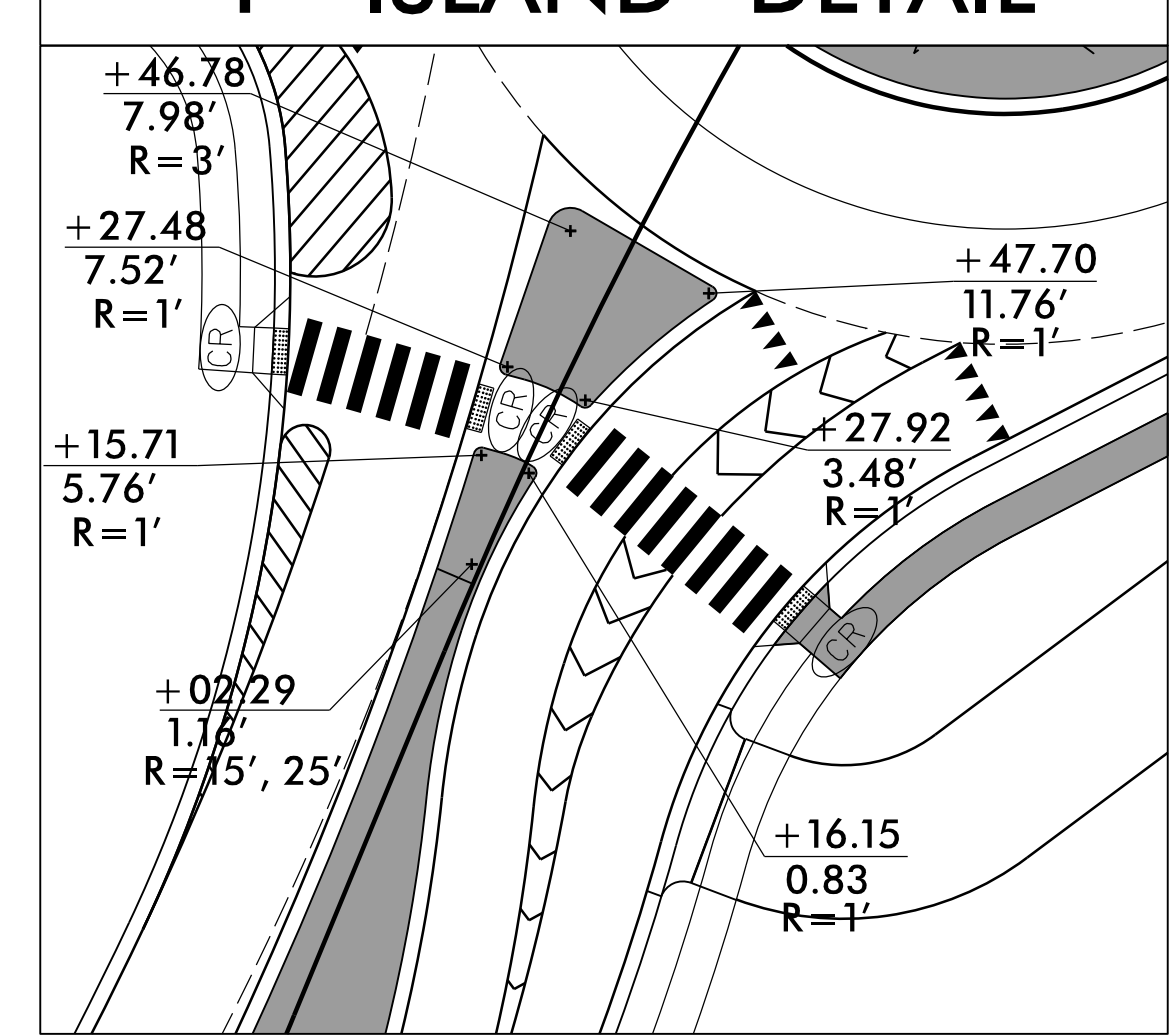
R=102'

R=102'

R=102'

R=102'

-Y- ISLAND DETAIL



SEE SHEET 4 FOR PLAN VIEW

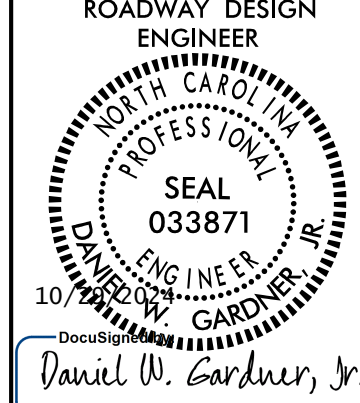
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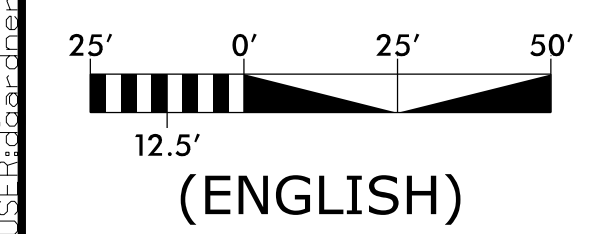
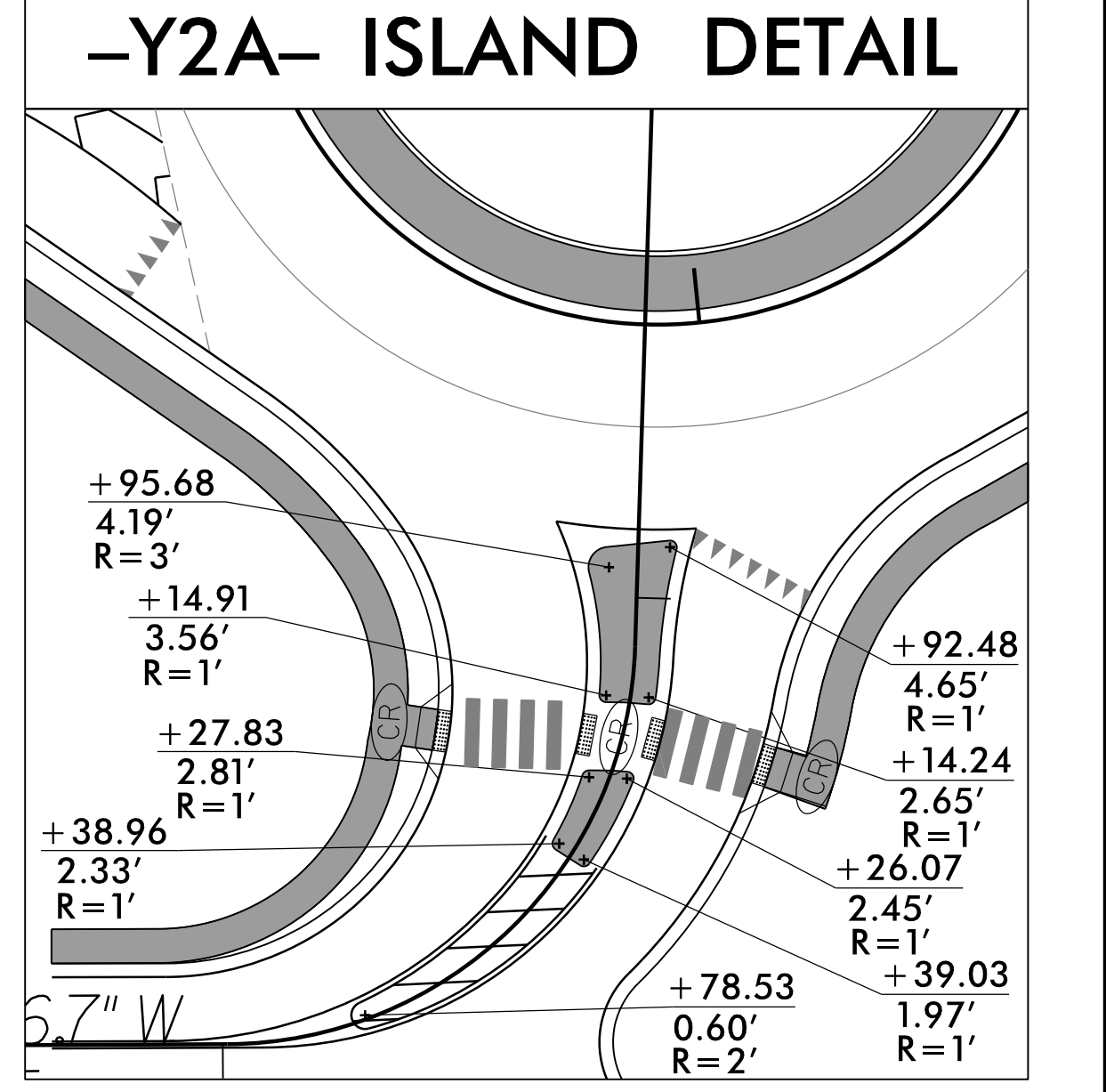
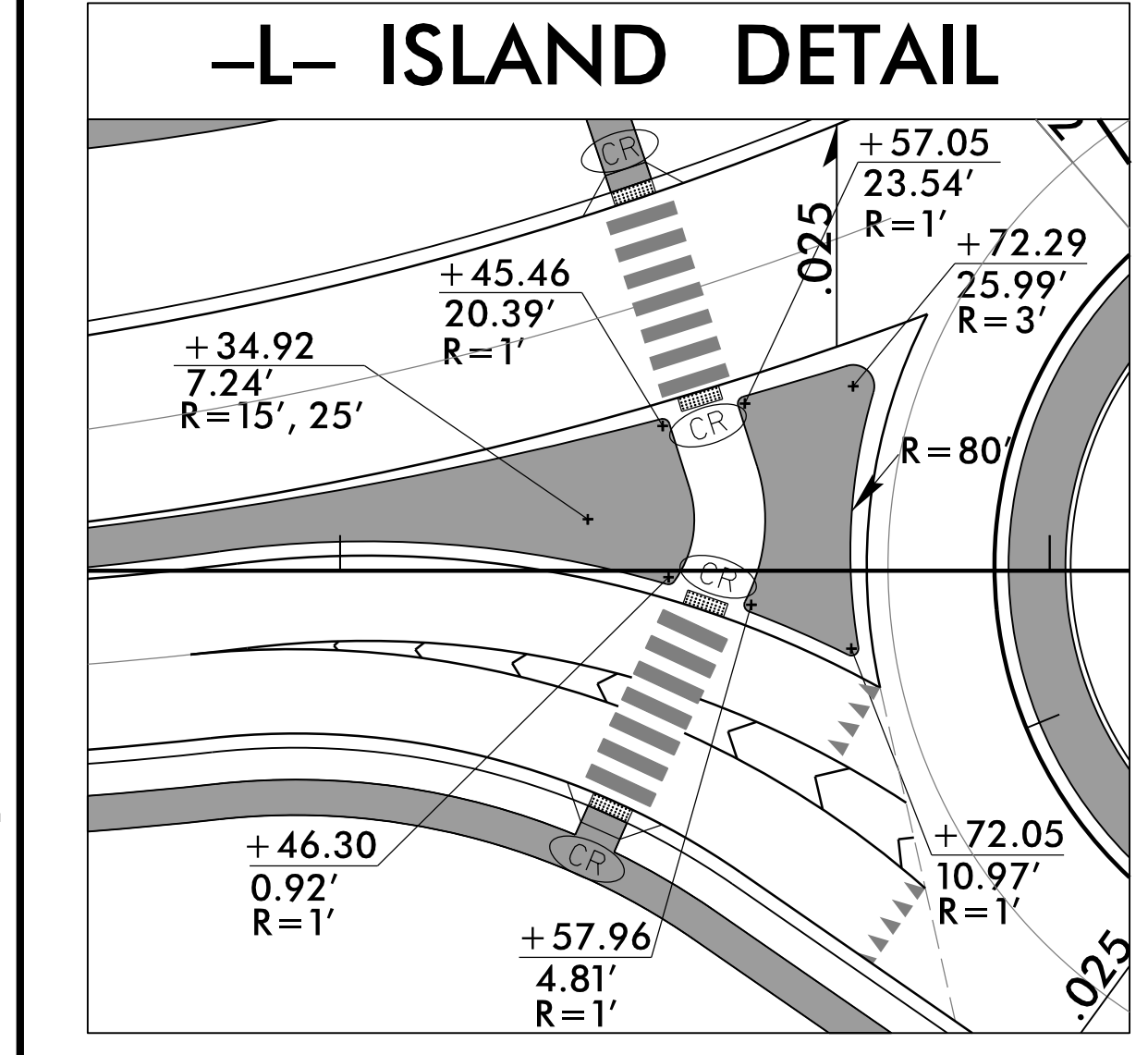
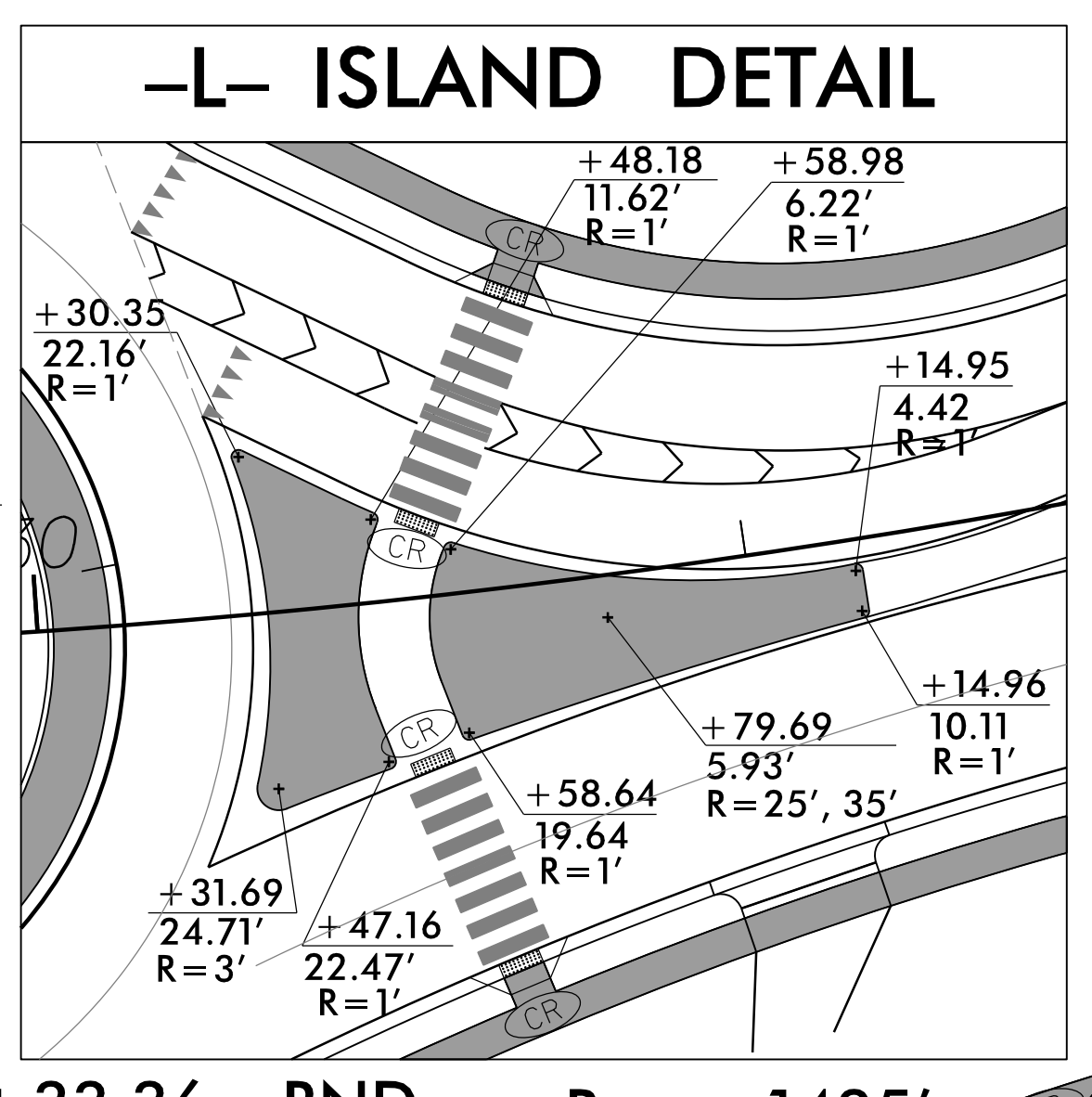
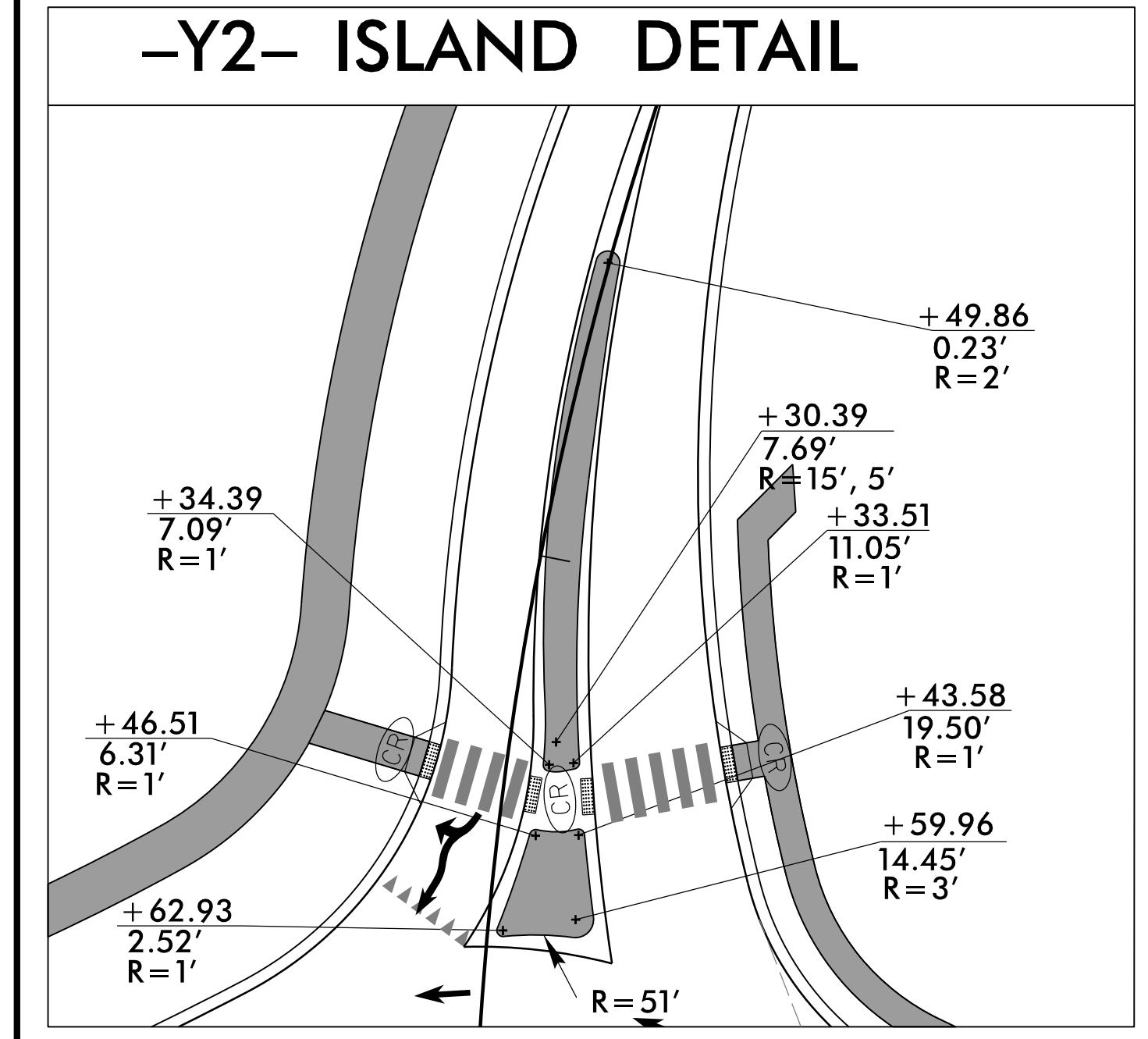
ROUNDBABOUT DETAIL

TRANSYSTEMS

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

PROJECT REFERENCE NO. **U-4709** SHEET NO. **2B-2**

RW SHEET NO. ROADWAY DESIGN ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



SEE SHEET 5 FOR PLAN VIEW

8/17/99 9/27/2004 11:47:09 Pldj_psh_2B-2.dgn

8/17/99

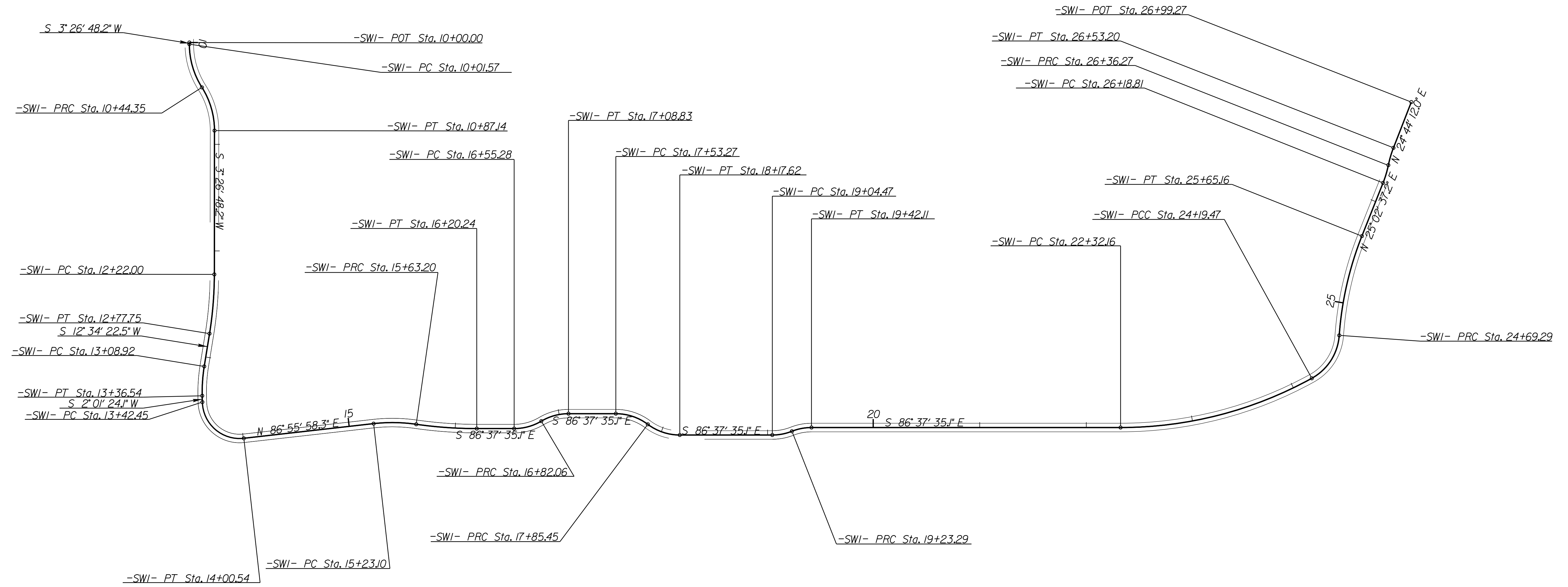
MULTI-USE PATH ALIGNMENT (8' ASPHALT MUP)

TRANSYSTEMS

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

PROJECT REFERENCE NO. U-4709	SHEET NO. 2B-3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
Daniel W. Gardner, Jr. <small>DocuSign ID: BFF7493074164E7</small>	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



PI Sta 10+23.56 Δ = 32° 41' 00.5\" (LT) D = 76' 23' 39.7\" L = 42.78' T = 21.99' R = 75.00'	PI Sta 10+66.34 Δ = 32° 41' 00.5\" (RT) D = 76' 23' 39.7\" L = 42.78' T = 21.99' R = 75.00'	PI Sta 12+49.93 Δ = 9° 07' 34.3\" (RT) D = 16' 22' 12.8\" L = 55.75' T = 27.93' R = 350.00'	PI Sta 13+22.77 Δ = 10° 32' 58.4\" (LT) D = 38' 11' 49.9\" L = 27.62' T = 13.85' R = 150.00'	PI Sta 13+80.71 Δ = 95° 05' 25.8\" (LT) D = 163' 42' 08.0\" L = 58.09' T = 38.26' R = 35.00'	PI Sta 15+43.26 Δ = 14° 36' 40.1\" (RT) D = 36' 26' 30.7\" L = 40.09' T = 20.16' R = 157.23'	PI Sta 15+91.77 Δ = 8° 10' 13.5\" (LT) D = 14' 19' 26.2\" L = 57.04' T = 28.57' R = 400.00'	PI Sta 16+69.00 Δ = 30° 41' 00.3\" (LT) D = 114' 35' 29.6\" L = 26.78' T = 13.72' R = 50.00'
------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------

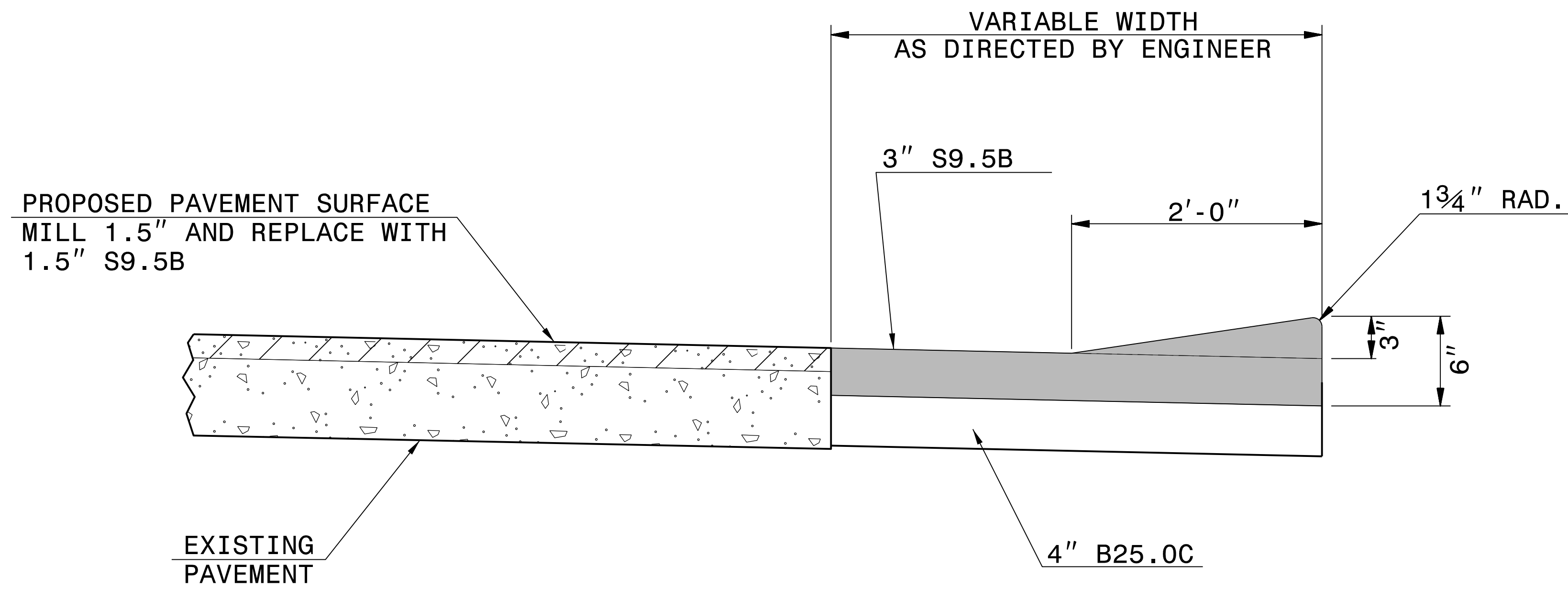
PI Sta 16+95.77 Δ = 30° 41' 00.3\" (RT) D = 114' 35' 29.6\" L = 26.78' T = 13.72' R = 50.00'	PI Sta 17+69.94 Δ = 36° 52' 11.6\" (RT) D = 114' 35' 29.6\" L = 32.18' T = 16.67' R = 50.00'	PI Sta 18+02.11 Δ = 36° 52' 11.6\" (LT) D = 114' 35' 29.6\" L = 32.18' T = 16.67' R = 50.00'	PI Sta 19+13.99 Δ = 21° 33' 54.7\" (LT) D = 114' 35' 29.6\" L = 18.82' T = 9.52' R = 50.00'	PI Sta 19+32.81 Δ = 21° 33' 54.7\" (RT) D = 114' 35' 29.6\" L = 18.82' T = 9.52' R = 50.00'	PI Sta 23+27.85 Δ = 28° 50' 54.3\" (LT) D = 15' 24' 07.5\" L = 187.30' T = 95.68' R = 372.00'	PI Sta 24+46.66 Δ = 57° 05' 17.7\" (LT) D = 114' 35' 29.6\" L = 49.82' T = 27.20' R = 50.00'	PI Sta 25+17.60 Δ = 17° 36' 24.3\" (RT) D = 18' 21' 50.5\" L = 95.88' T = 48.32' R = 312.00'	PI Sta 26+27.56 Δ = 10° 00' 24.8\" (LT) D = 57' 17' 44.8\" L = 17.47' T = 8.75' R = 100.00'	PI Sta 26+44.76 Δ = 9° 41' 59.6\" (RT) D = 57' 17' 44.8\" L = 16.93' T = 8.49' R = 100.00'
-------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------

SEE SHEETS 4, 5, AND 7 FOR PLAN VIEW

9/27/2004
U:\4709_Pldj_psh_2B-3.dgn
D:\E:\dwd\psh

- GENERAL NOTES:
- MATCH EXISTING SUPERELEVATION ALONG ROADWAY.
 - MATCH EXISTING WEDGE CURB.
 - THE EXISTING SHOULDER SHOULD BE GRADED TO BE FLUSH WITH NEW WEDGE CURB.

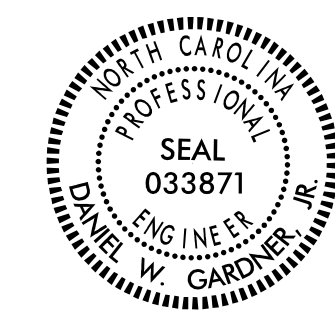
ENGLISH DETAIL DRAWING FOR
ASPHALT WEDGE CURBING



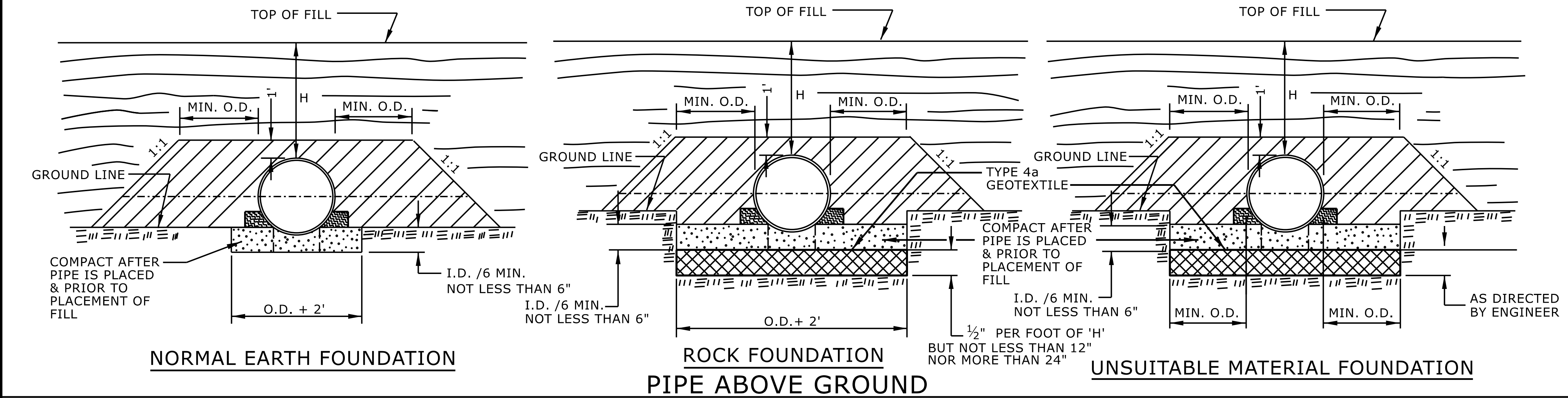
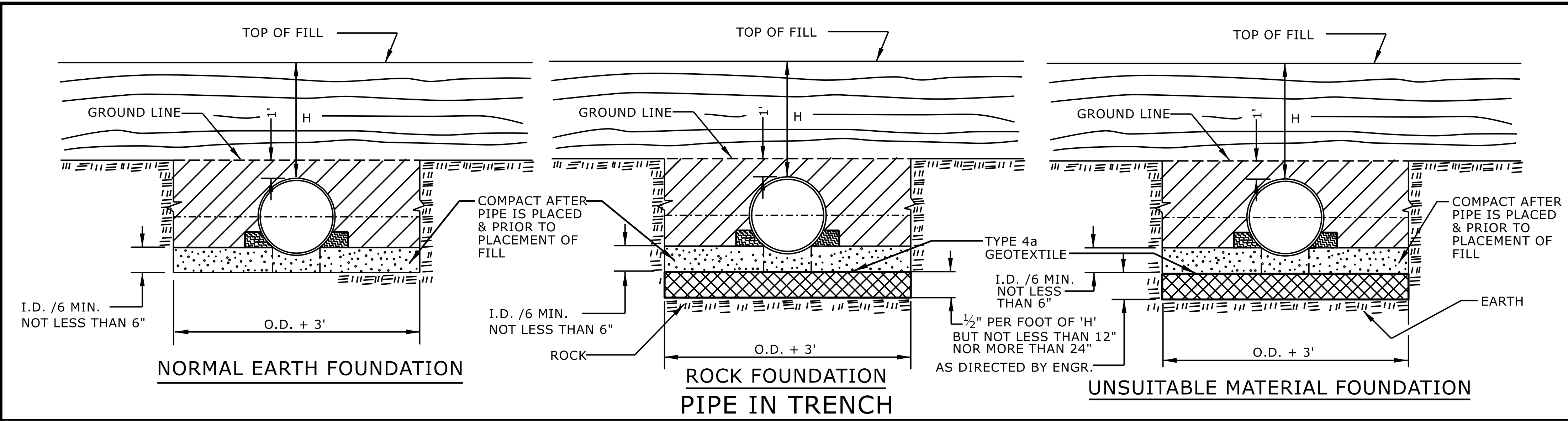
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ASPHALT WEDGE CURBING

SHEET 1 OF 1



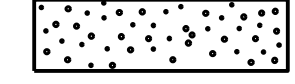
SHEET 1 OF 1



10/29/2024
Designed by:
Daniel W. Gardner, Jr.
BFF7403974164E7

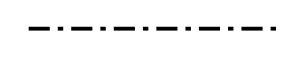
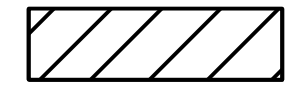
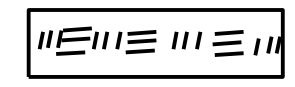
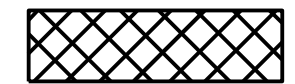


GENERAL NOTES:
 I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
 O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
 H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

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

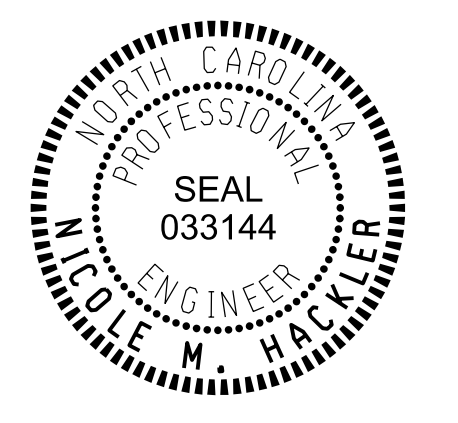
DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

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

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

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

ROADWAY DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
 FLEXIBLE PIPE



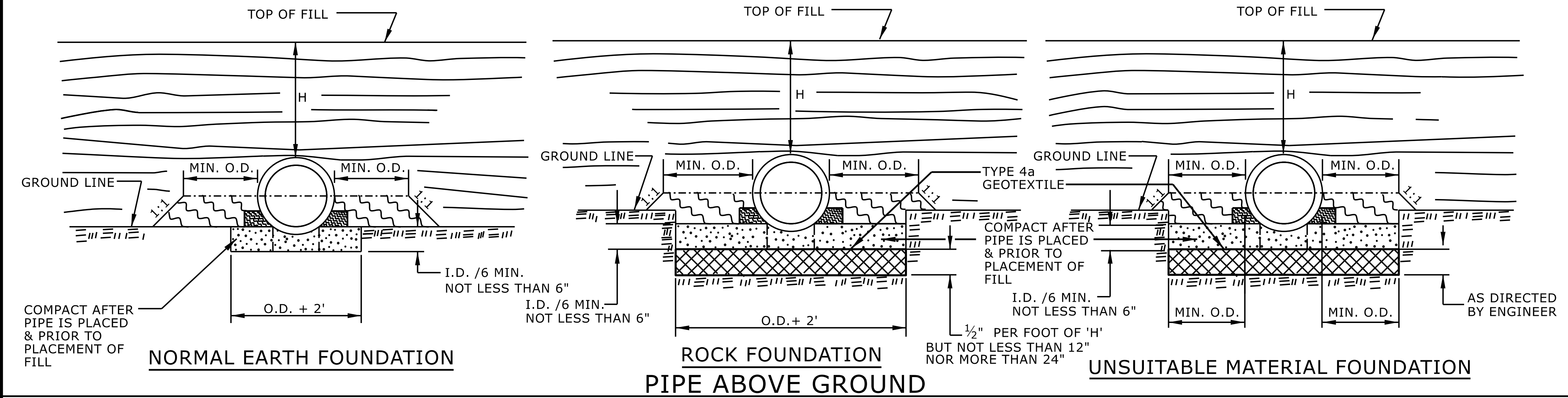
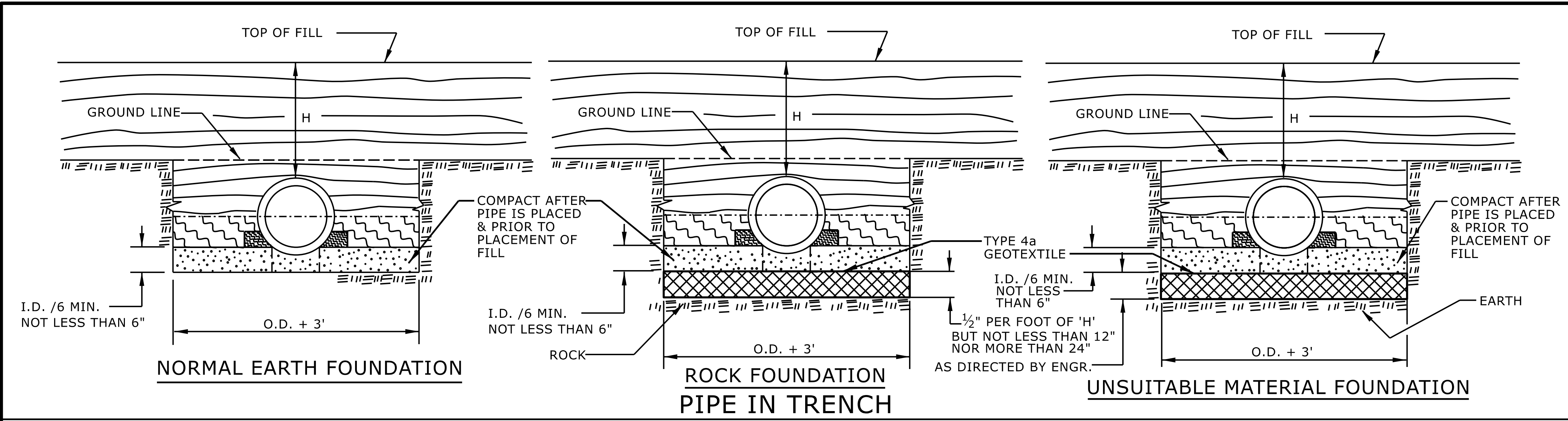
SHEET 1 OF 2
300.01

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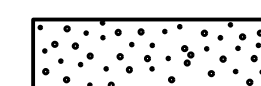
CONTRACTS STANDARDS AND DEVELOPMENT UNIT
 Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

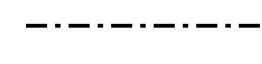

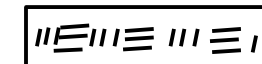

ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
 MODIFIED BY: DATE:
 CHECKED BY: DATE:
 FILE SPEC.:



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

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

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.
 REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

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

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

ROADWAY DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
 RIGID PIPE

SHEET 2 OF 2
300.01



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

SEE TITLE BLOCK

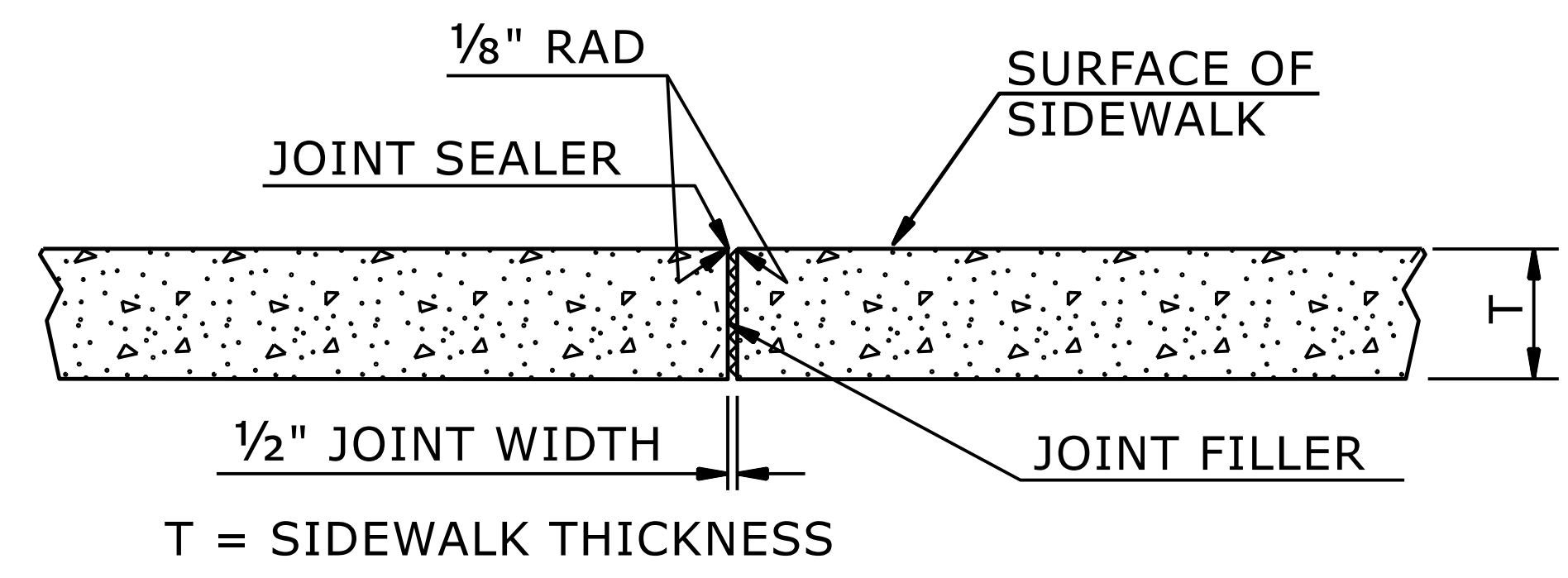
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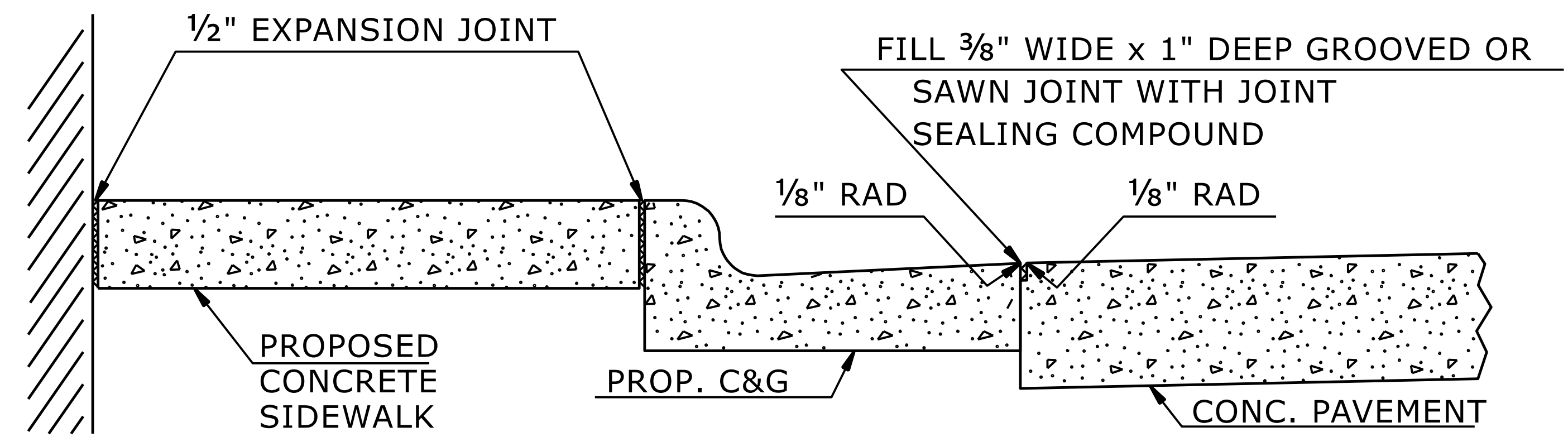
CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

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

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



TRANSVERSE EXPANSION JOINT
IN SIDEWALK



DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

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DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
CONCRETE SIDEWALK



SHEET 1 OF 1
848D01

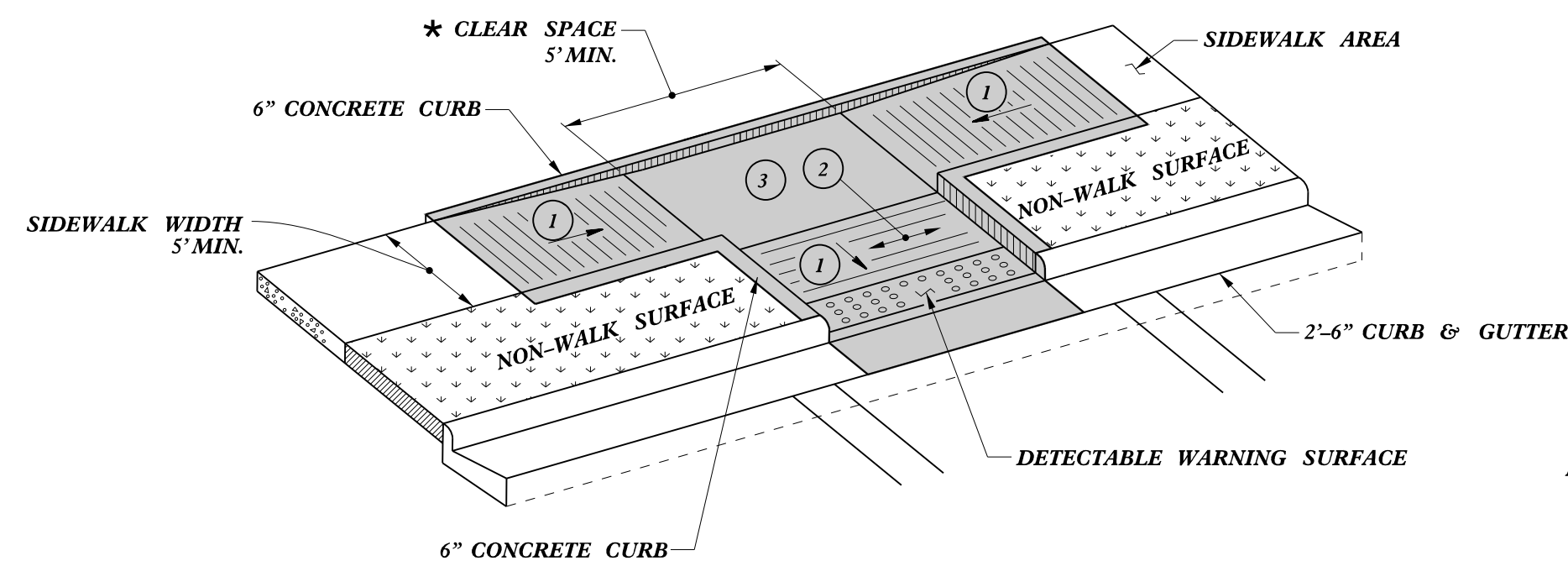
DOCUMENT NOT CONSIDERED FINAL
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AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

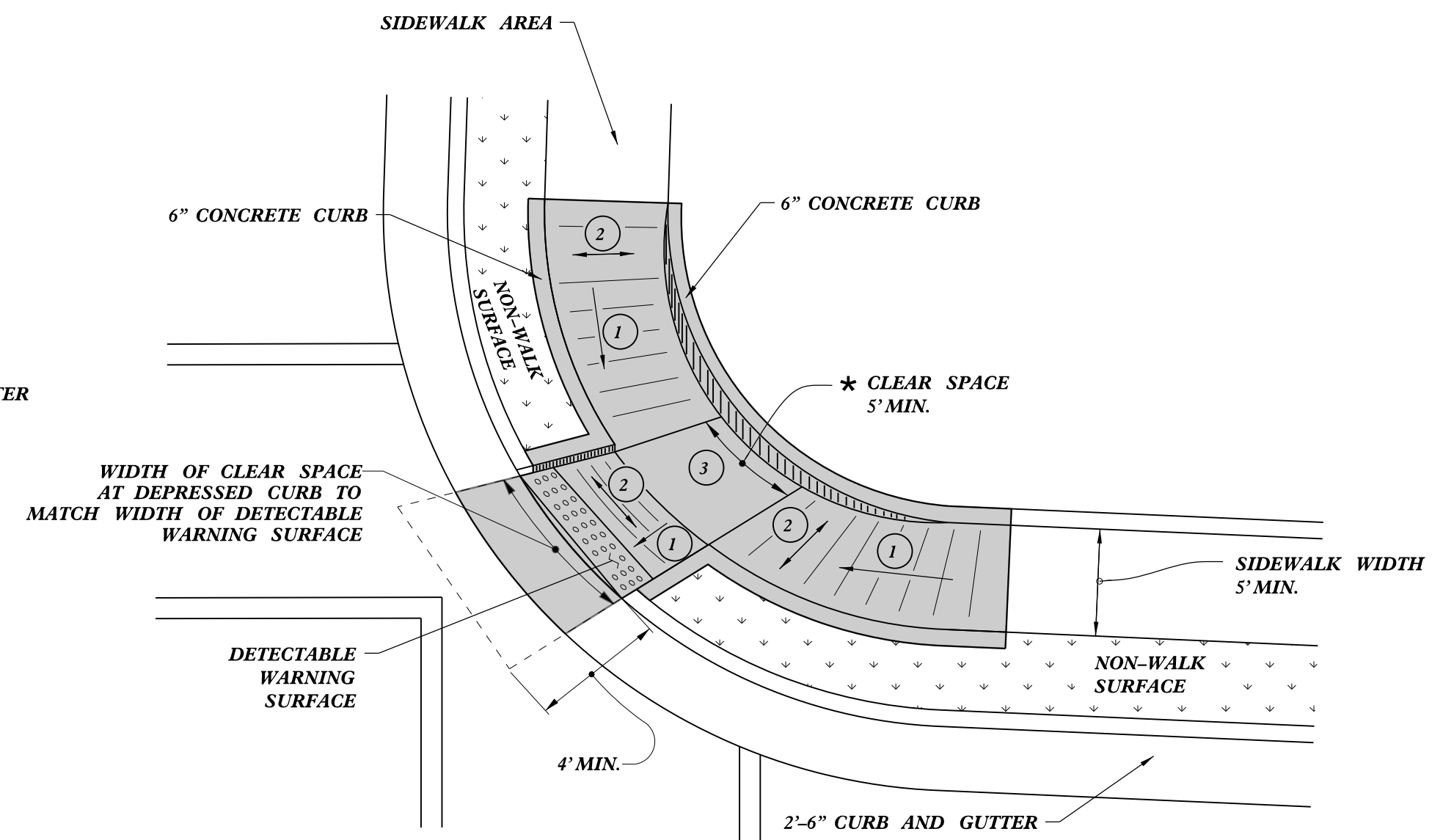
SEE TITLE BLOCK

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

* - 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.

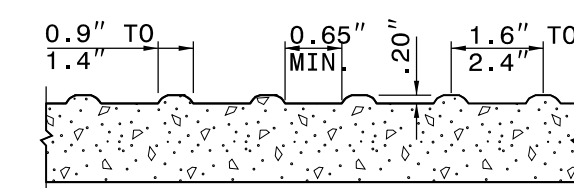
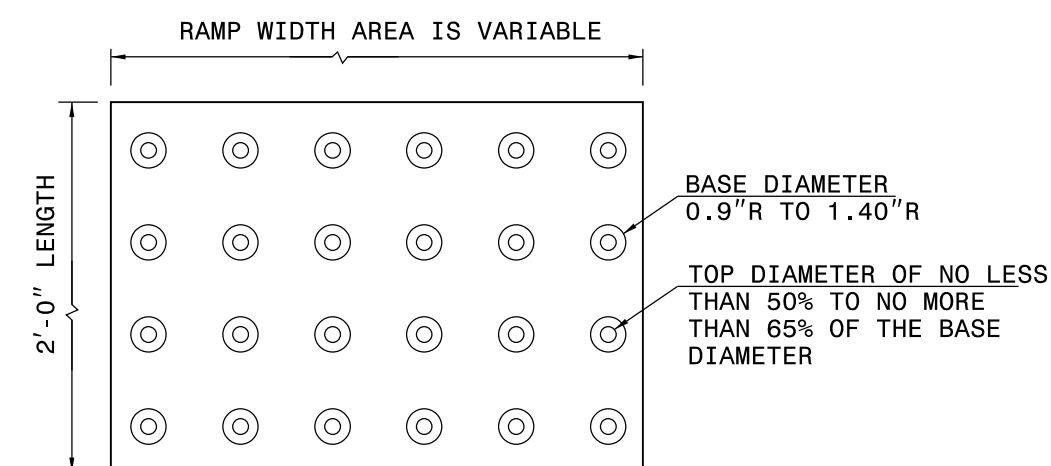


TYPE 3



**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.



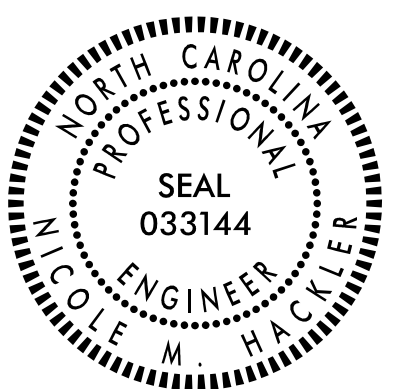
DETECTABLE WARNING SURFACE

- 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 STANDARD DRAWING FOR
CURB RAMP
 PARALLEL RAMP



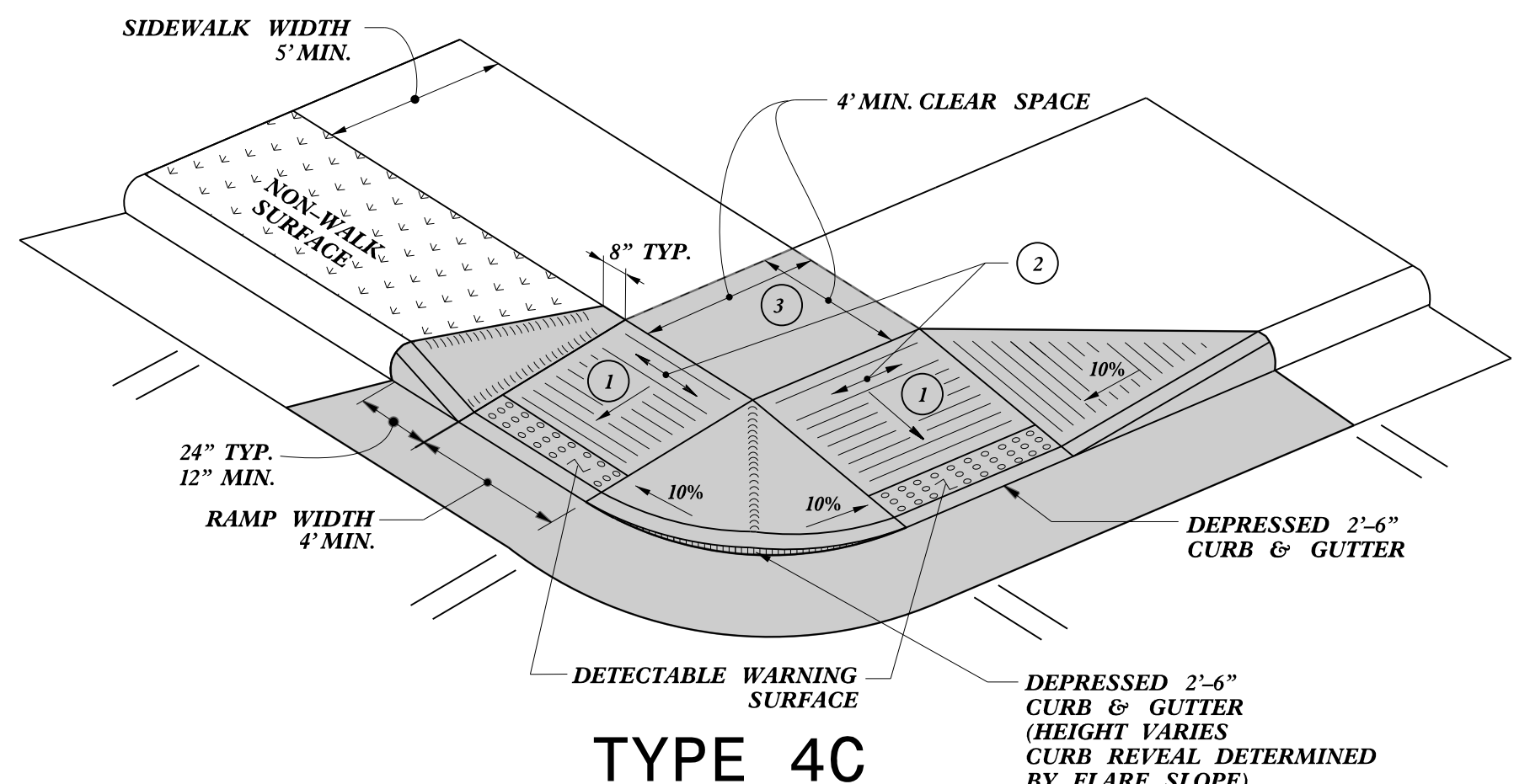
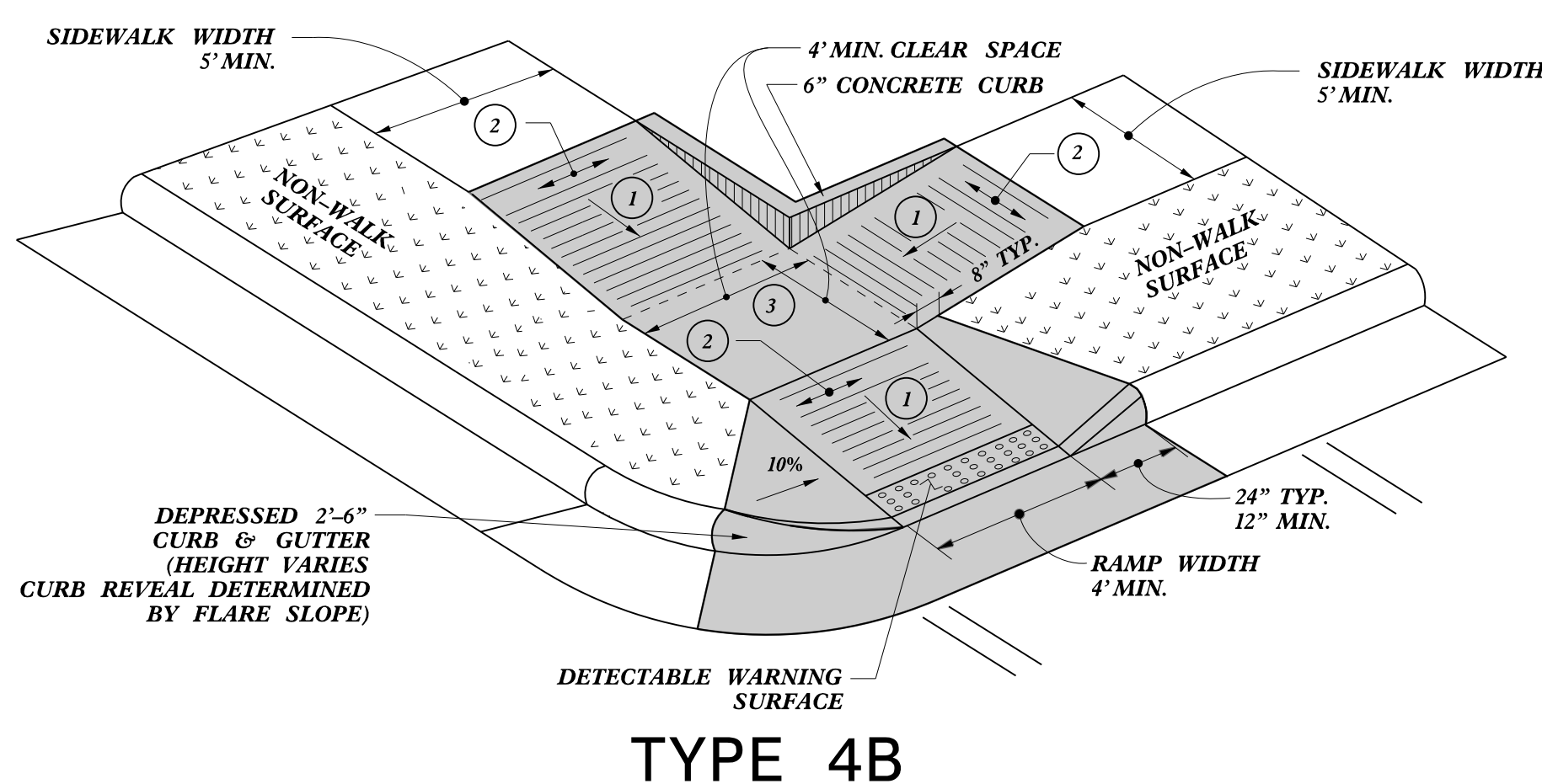
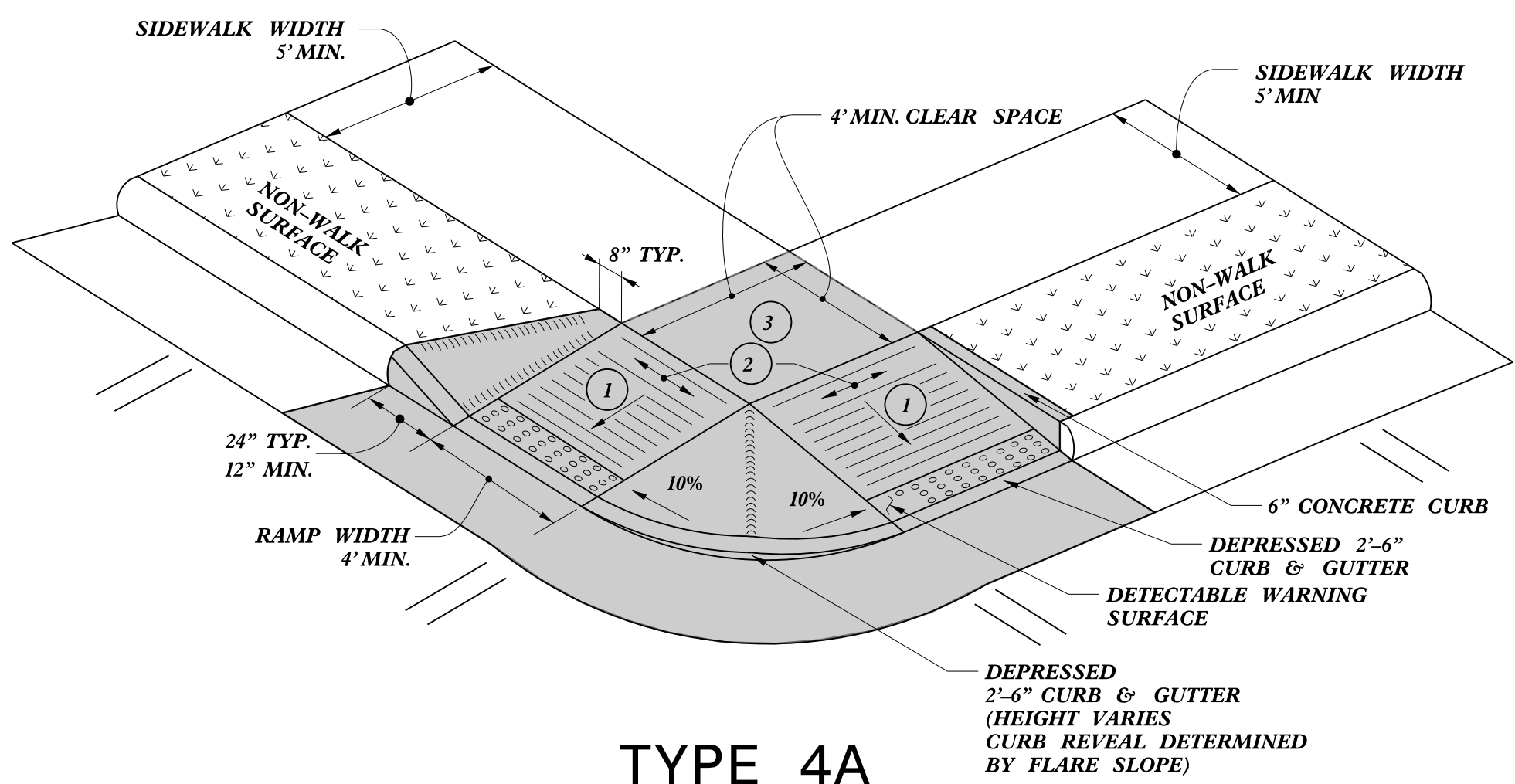
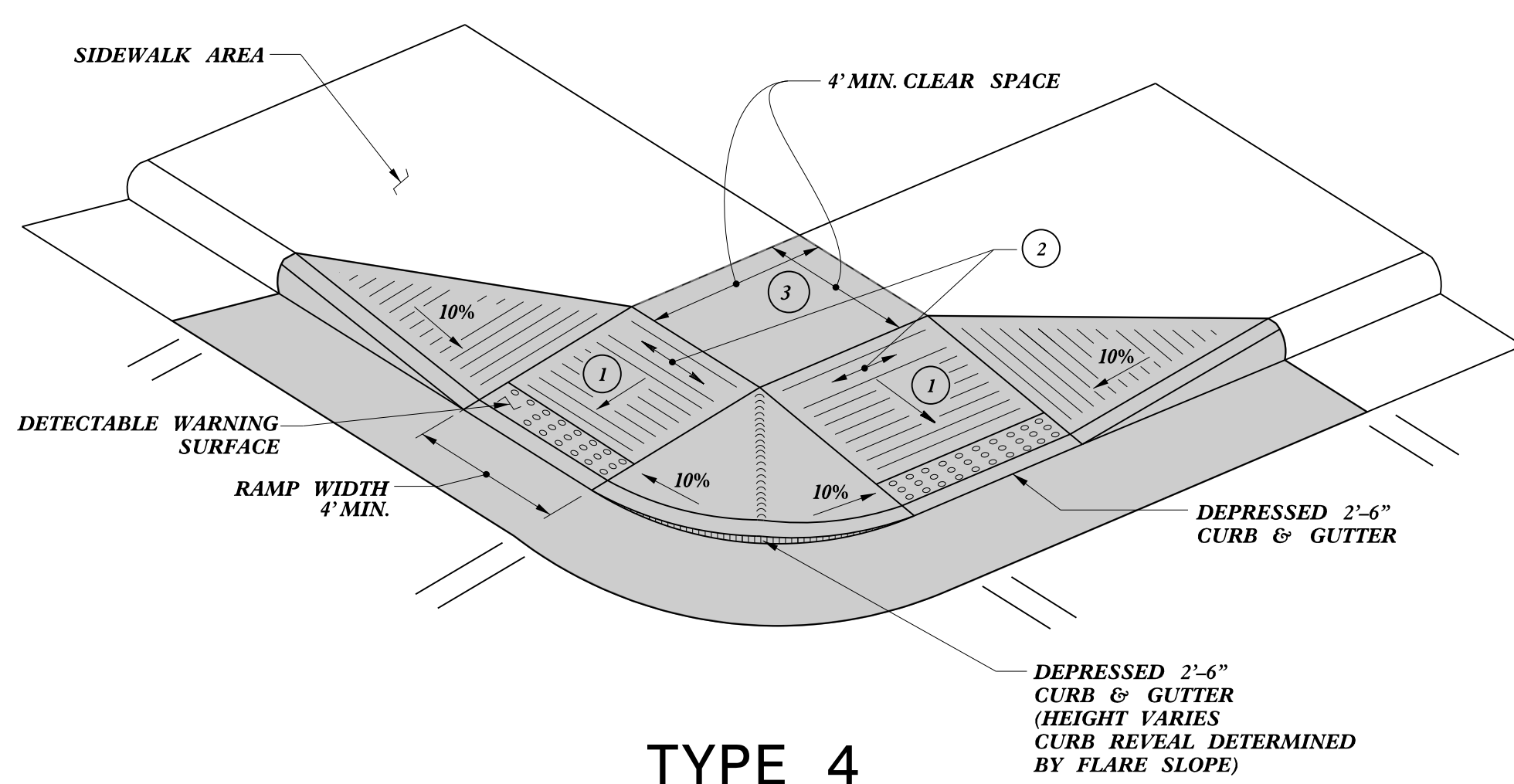
SHEET 9 OF 13
848D06

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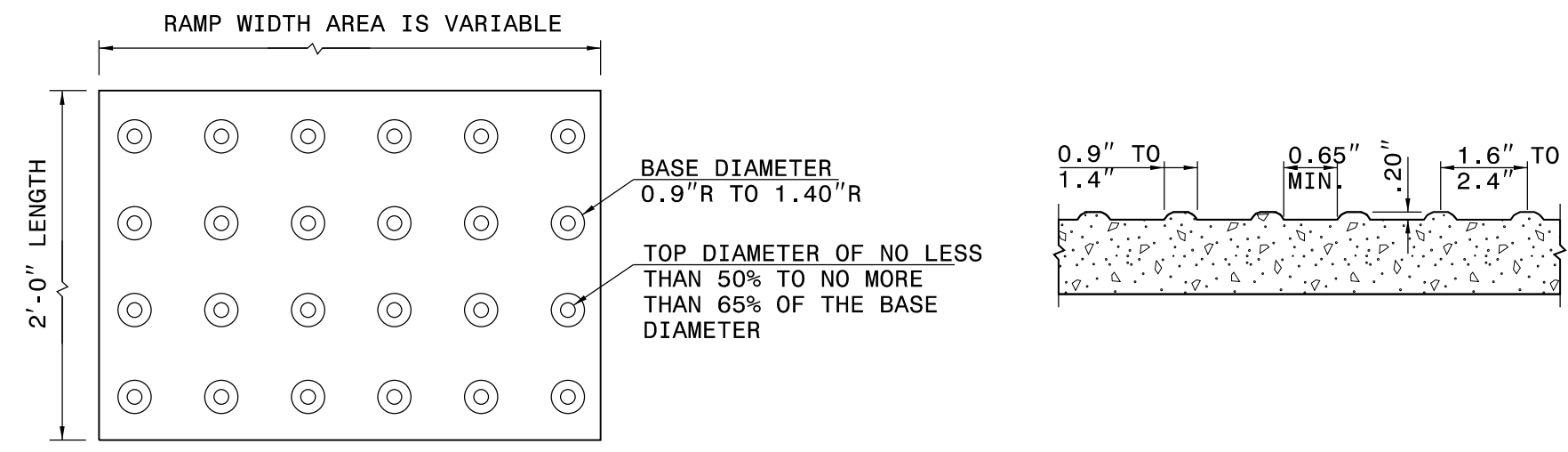
CONTRACTS STANDARDS
 AND DEVELOPMENT UNIT
 Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

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



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

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

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 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CURB RAMP
 SHARED LANDING



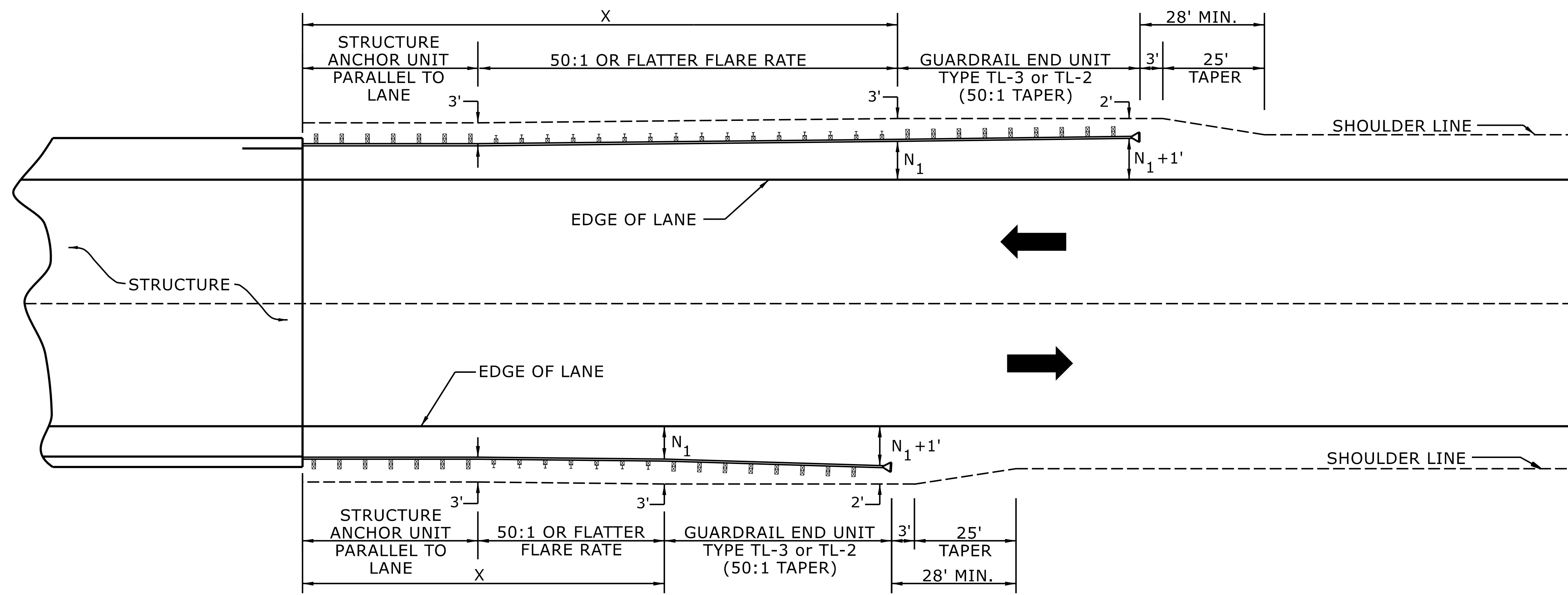
SHEET 10 OF 13
848D06

DOCUMENT NOT CONSIDERED FINAL
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CONTRACTS STANDARDS AND DEVELOPMENT UNIT
 Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

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



USE FLARE RATE AS THE CONTROL IF THE " N_1 " DISTANCE IS NOT OBTAINED.
 (" N_1 " IS BASED ON SHOULDER WIDTHS IN THE ROADWAY DESIGN MANUAL)
 SEE STD. 862.03 FOR STRUCTURE ANCHOR UNITS
 FOR POSTED SPEEDS \geq 45MPH USE GREU TYPE TL-3
 FOR POSTED SPEEDS $<$ 45MPH USE GREU TYPE TL-2
 GUARDRAIL LENGTH OF NEED (X) IS CALCULATED BASED ON THE AASHTO ROADSIDE DESIGN GUIDE.

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

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 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT



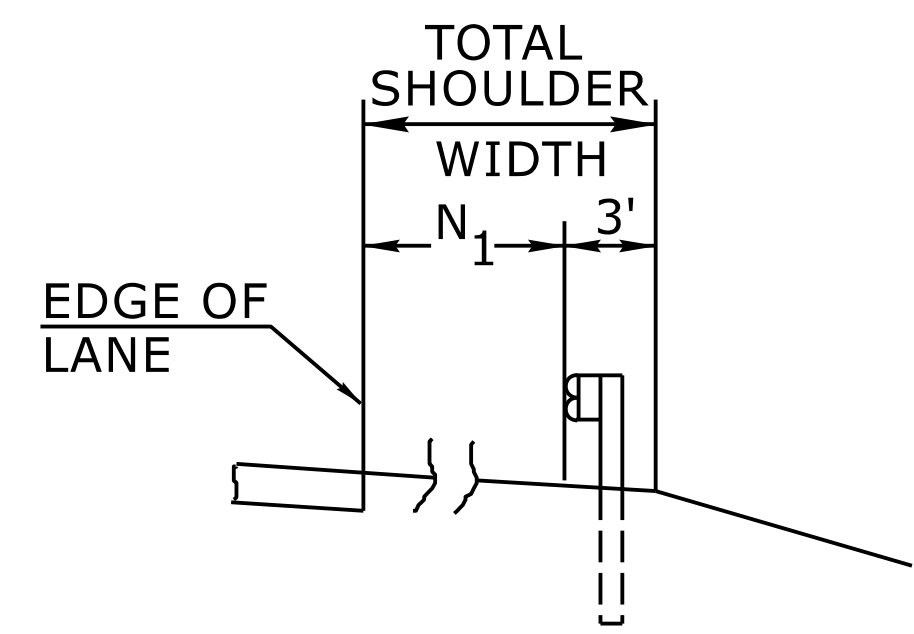
SHEET 4 OF 15
862D01

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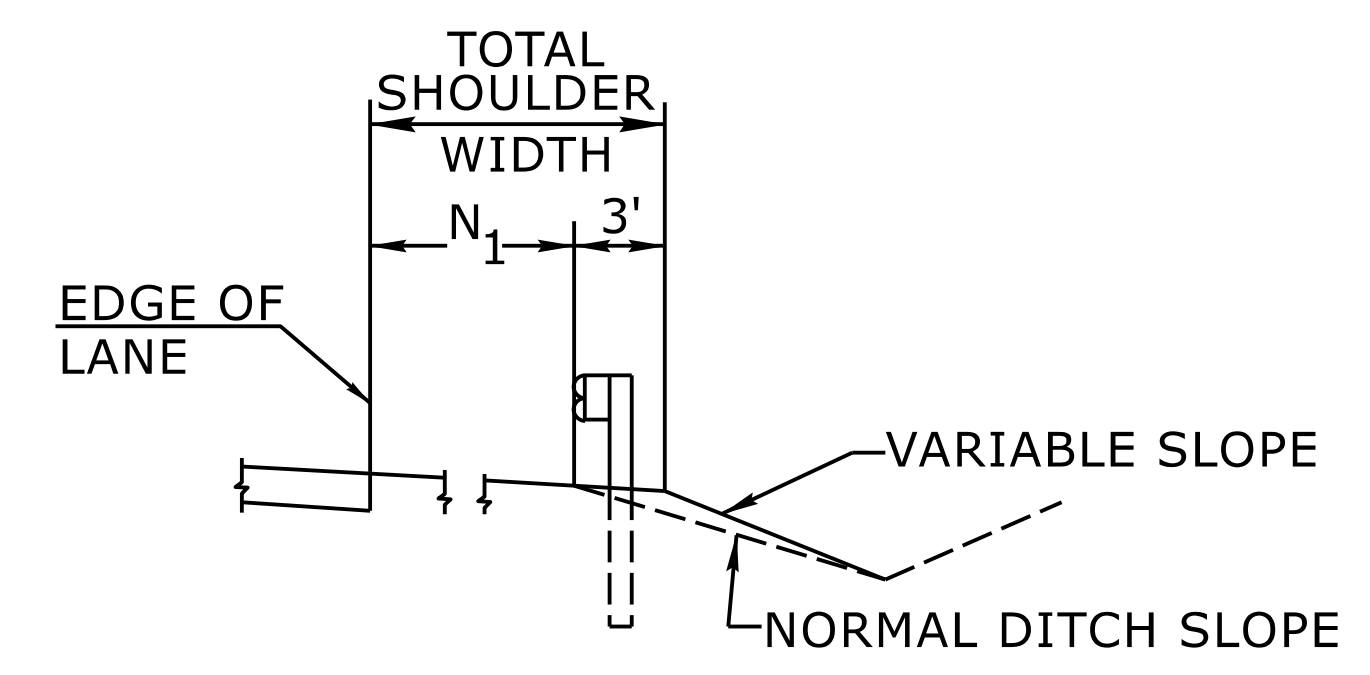
CONTRACTS STANDARDS AND DEVELOPMENT UNIT
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SEE TITLE BLOCK

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 MODIFIED BY: _____ DATE: _____
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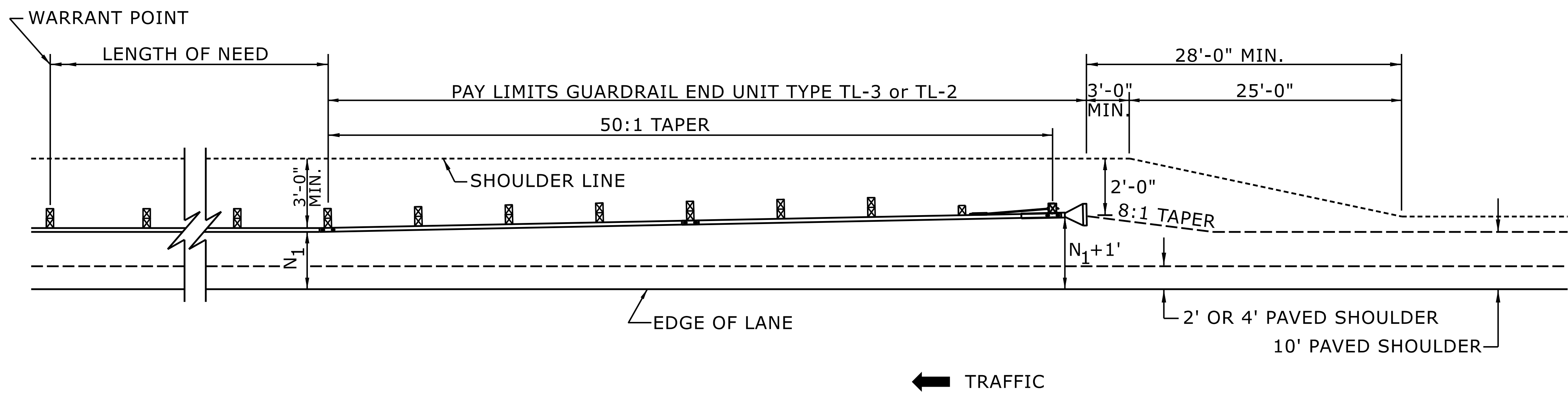


FILL SECTION



CUT SECTION

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



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

DETAIL OF BEGINNING OF GUARDRAIL IN CUT OR FILL SECTION

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT



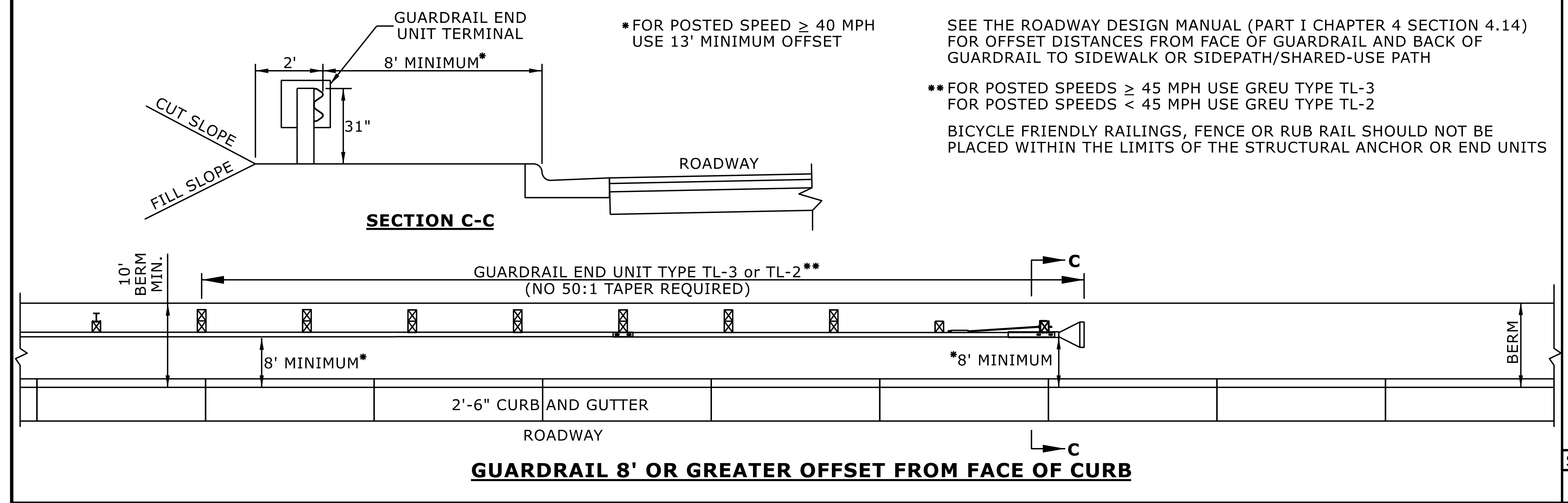
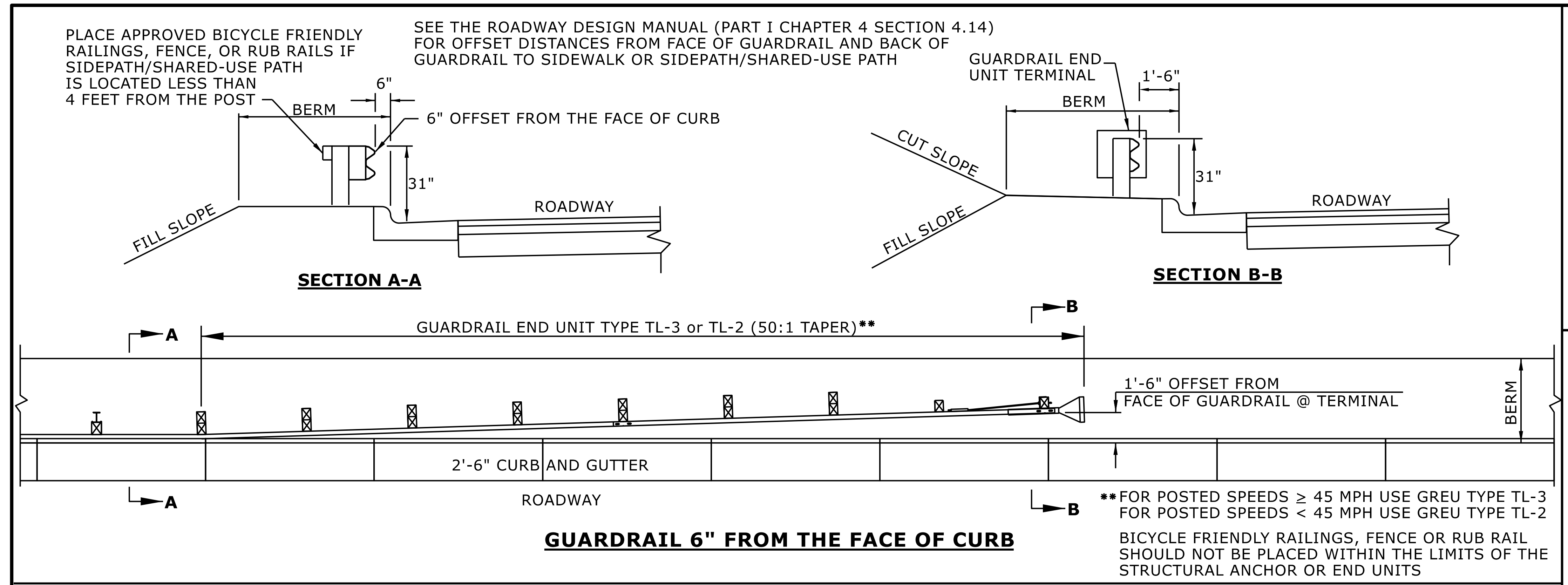
SHEET 6 OF 15
862D01

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



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

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



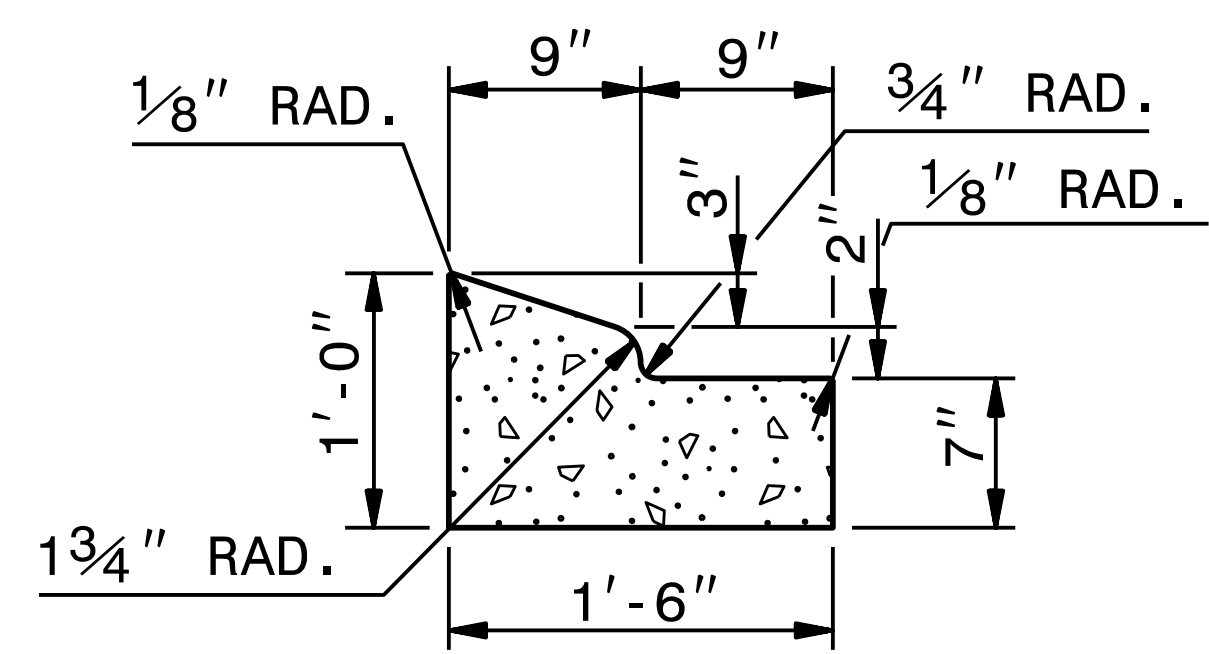
SHEET 12 OF 15
862D01

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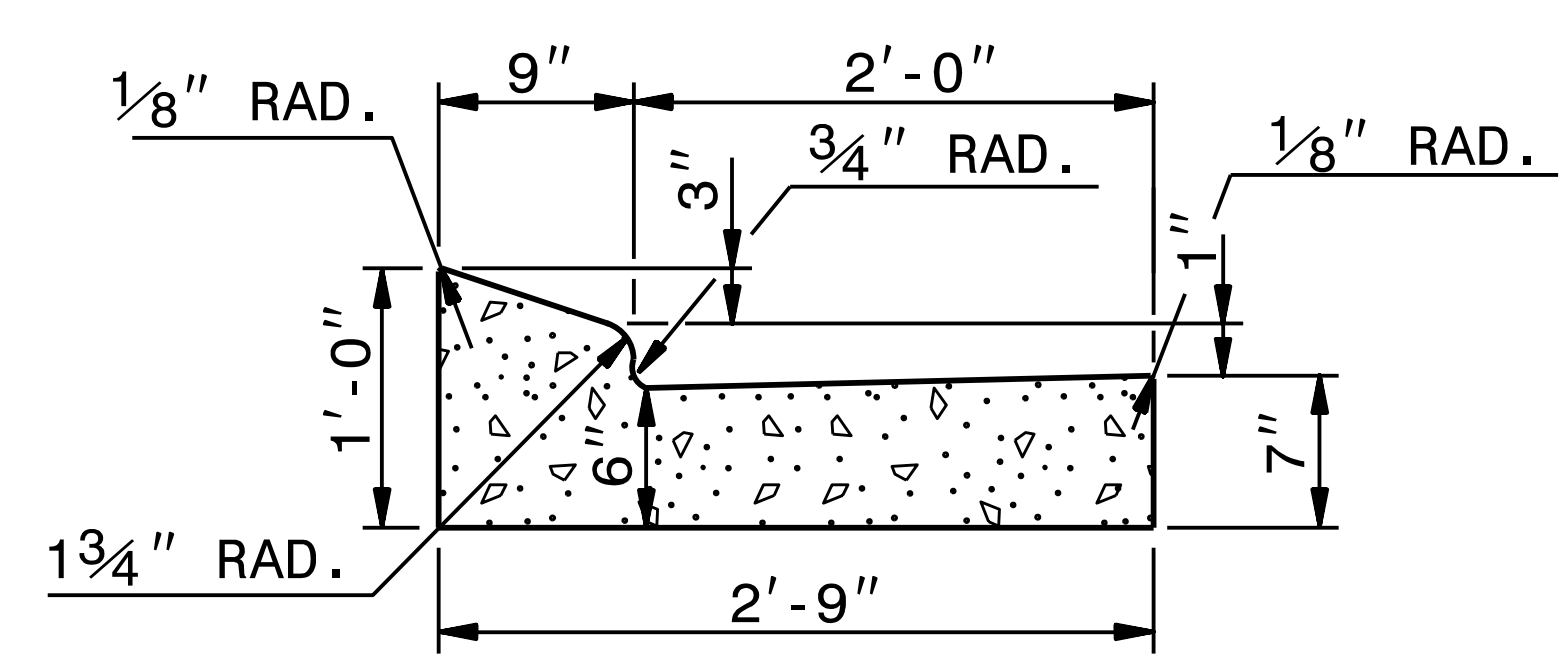
**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

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



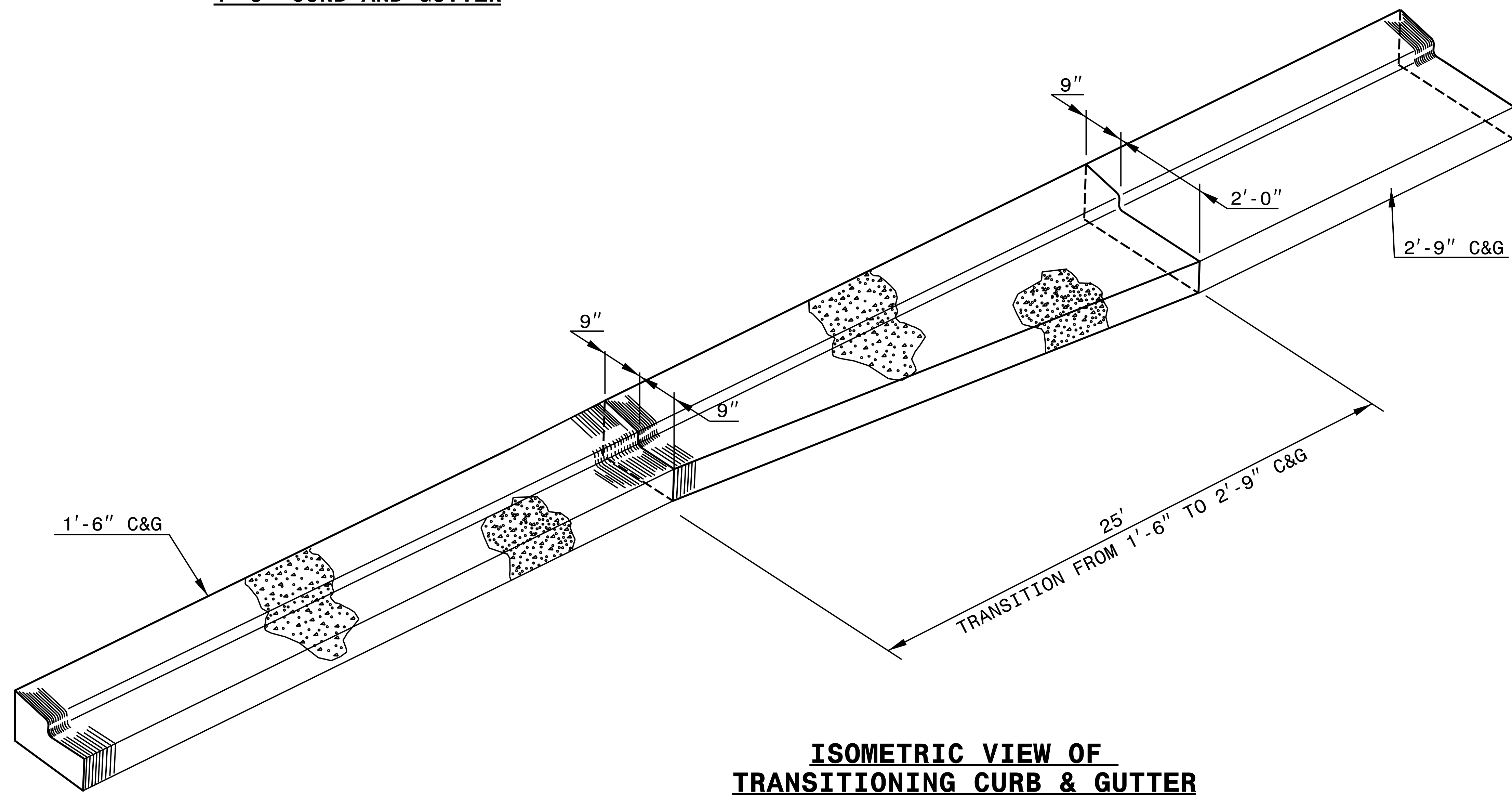
1'-6" CURB AND GUTTER



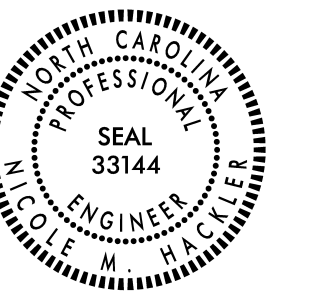
2'-9" CURB AND GUTTER

NOTE: SEE STD. DWG. 846.01 FOR ADDITIONAL CURB AND GUTTER INFORMATION.

SEE ROADWAY PLANS FOR LOCATION OF CURB TRANSITION.



**ISOMETRIC VIEW OF
TRANSITIONING CURB & GUTTER**

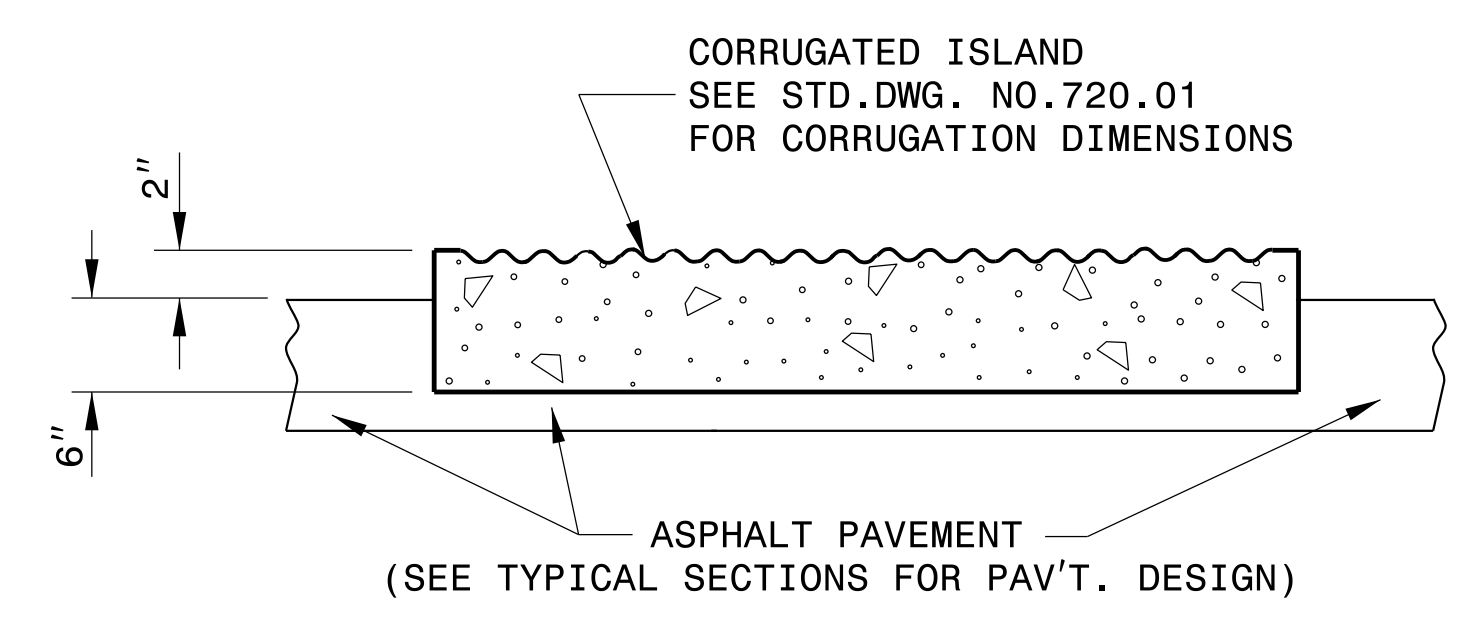
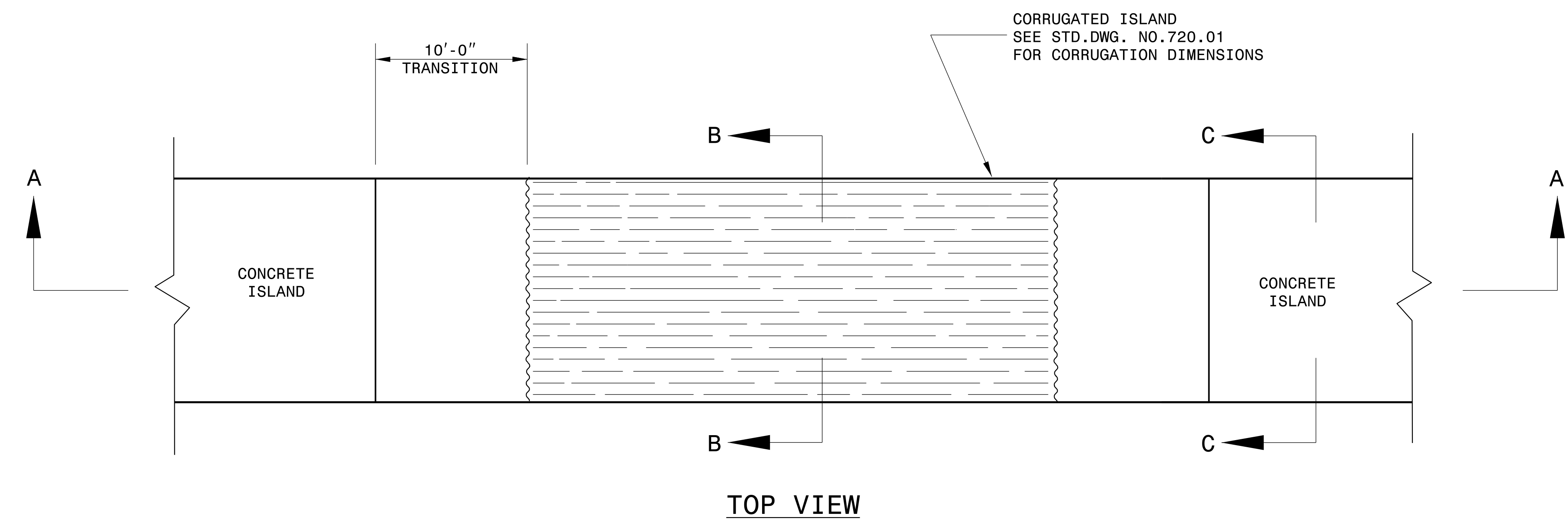


DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

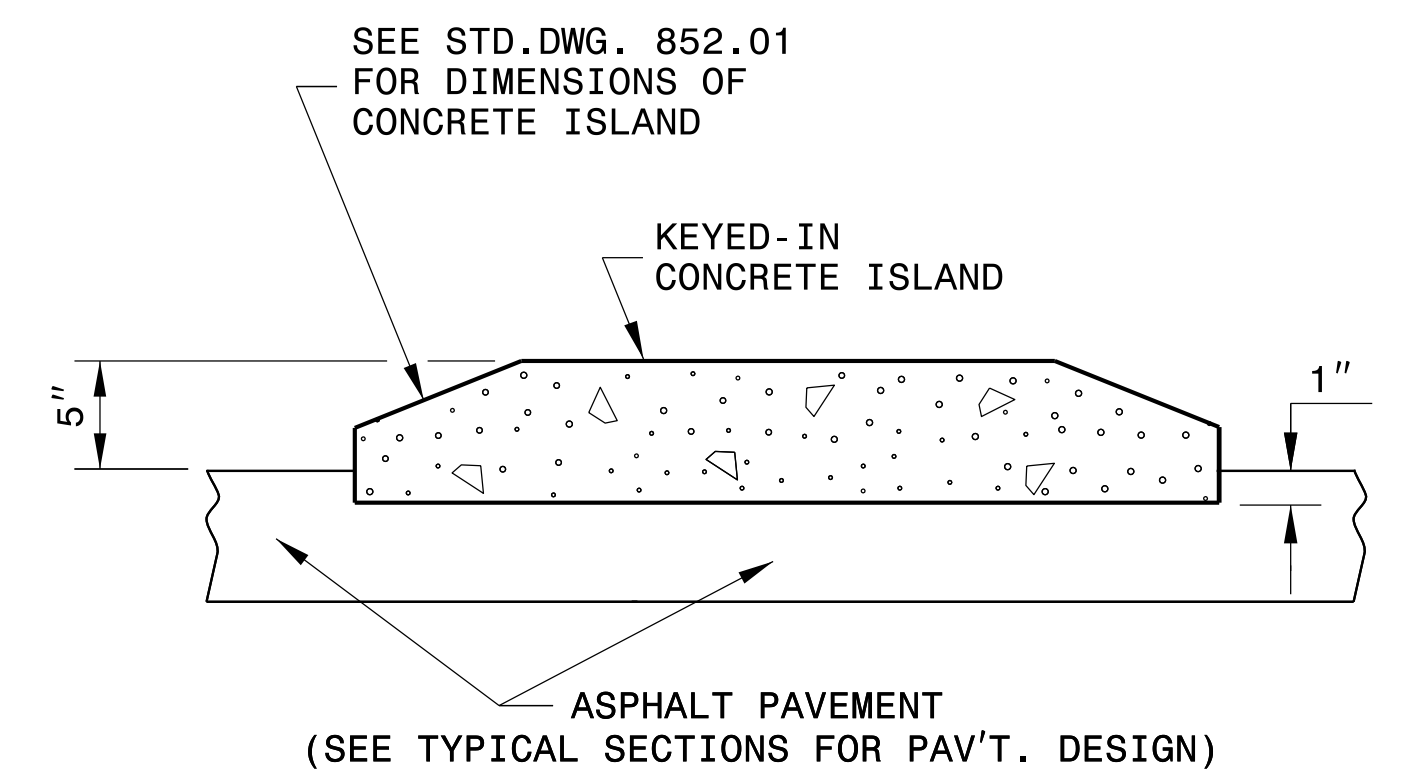
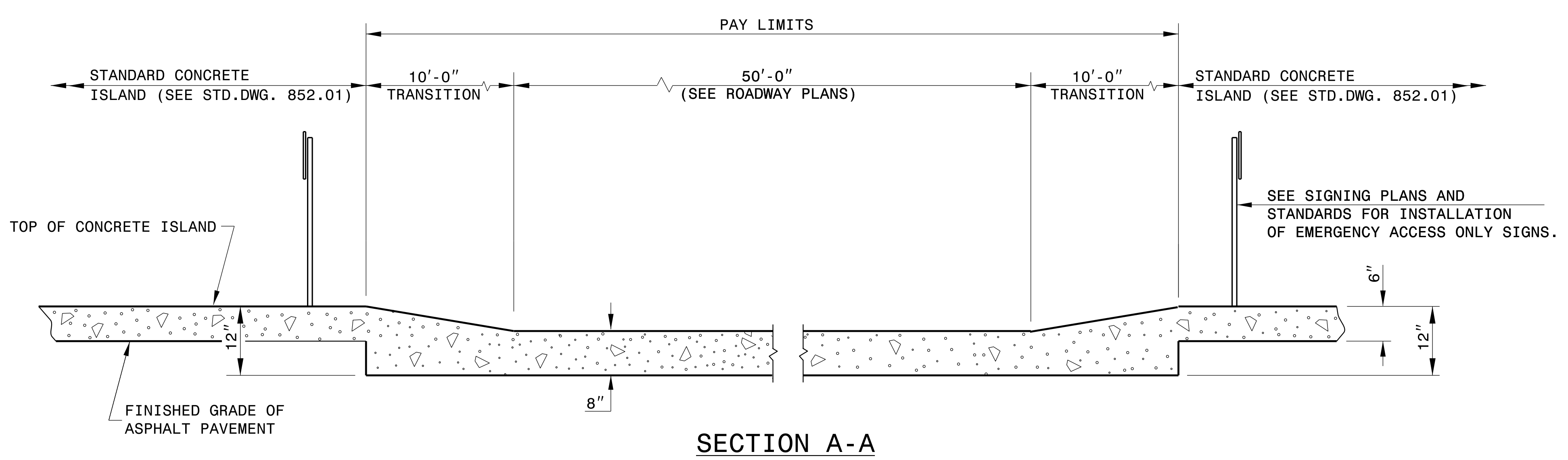
CONTRACT STANDARDS
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Office 919-707-6950 FAX 919-250-4119

**DETAIL OF 1'-6"
TO 2'-9" CURB & GUTTER
TRANSITION SECTION**

ORIGINAL BY: T.S. SPELL DATE: NOV. 26, 2001
 MODIFIED BY: T.S. SPELL DATE: JAN. 23, 2007
 CHECKED BY: DATE:
 FILE SPEC.: DS174:/usr/details/stand/catransit.dgn



SECTION B-B



SECTION C-C

DETAIL OF EMERGENCY VEHICLE ACCESS

- NOTES:
- REFER TO SECTION 852 OF STANDARD SPECIFICATIONS FOR CONCRETE ISLANDS.
 - REFER TO STANDARD DRAWING 852.01 FOR CONTRACTION/EXPANSION JOINTS.
 - PLACE W6xW6 REINFORCING WIRE MESH IN THE BOTTOM 3RD OF THE EMERGENCY VEHICLE ACCESS PORTION OF THE CONCRETE ISLAND THAT MEETS SECTION 1070 OF THE STANDARD SPECIFICATIONS.



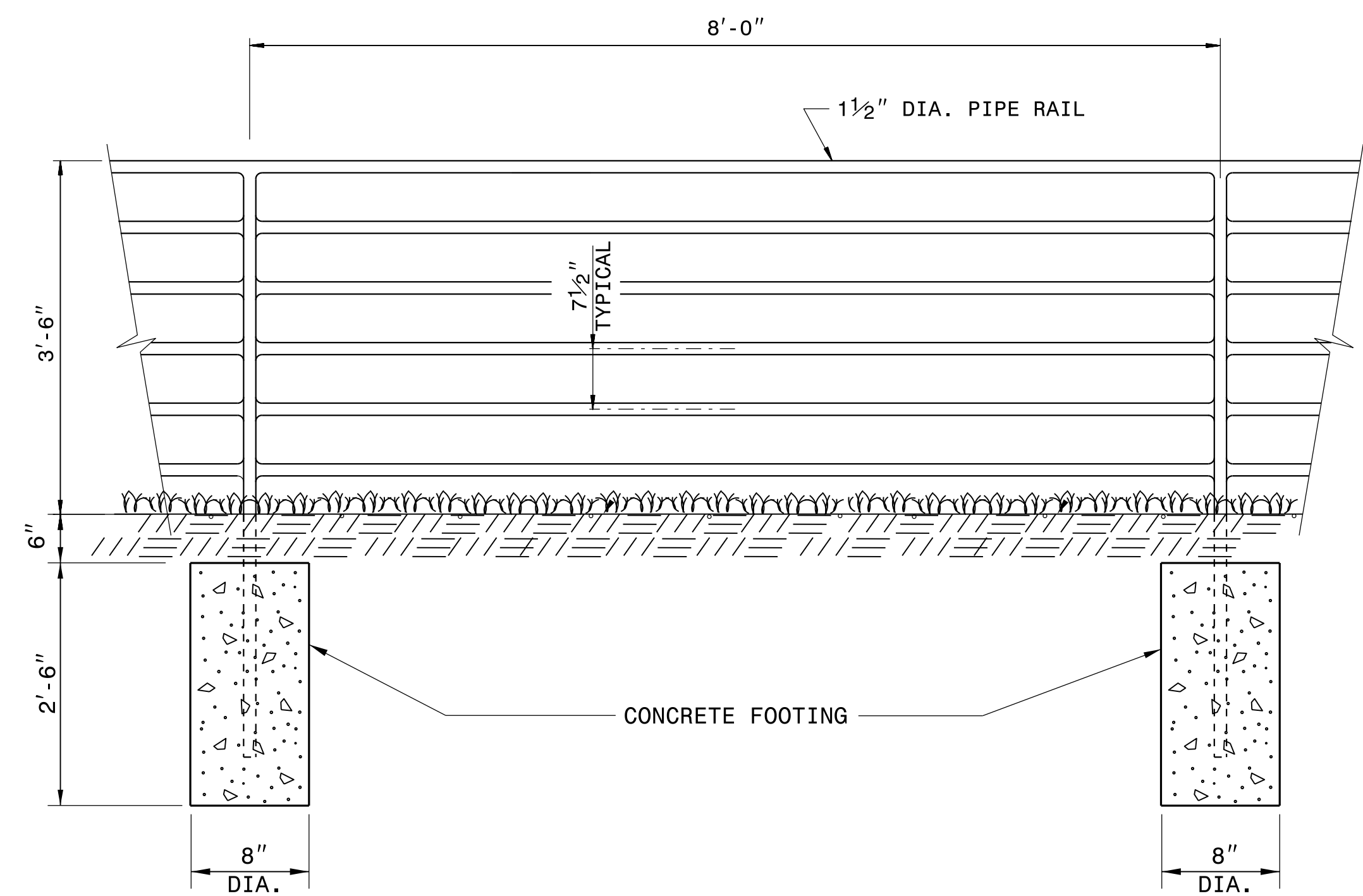
CONTRACT STANDARDS & DEVELOPMENT UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-707-6950 FAX 919-250-4119

**EMERGENCY VEHICLE ACCESS
FOR CONCRETE ISLAND**

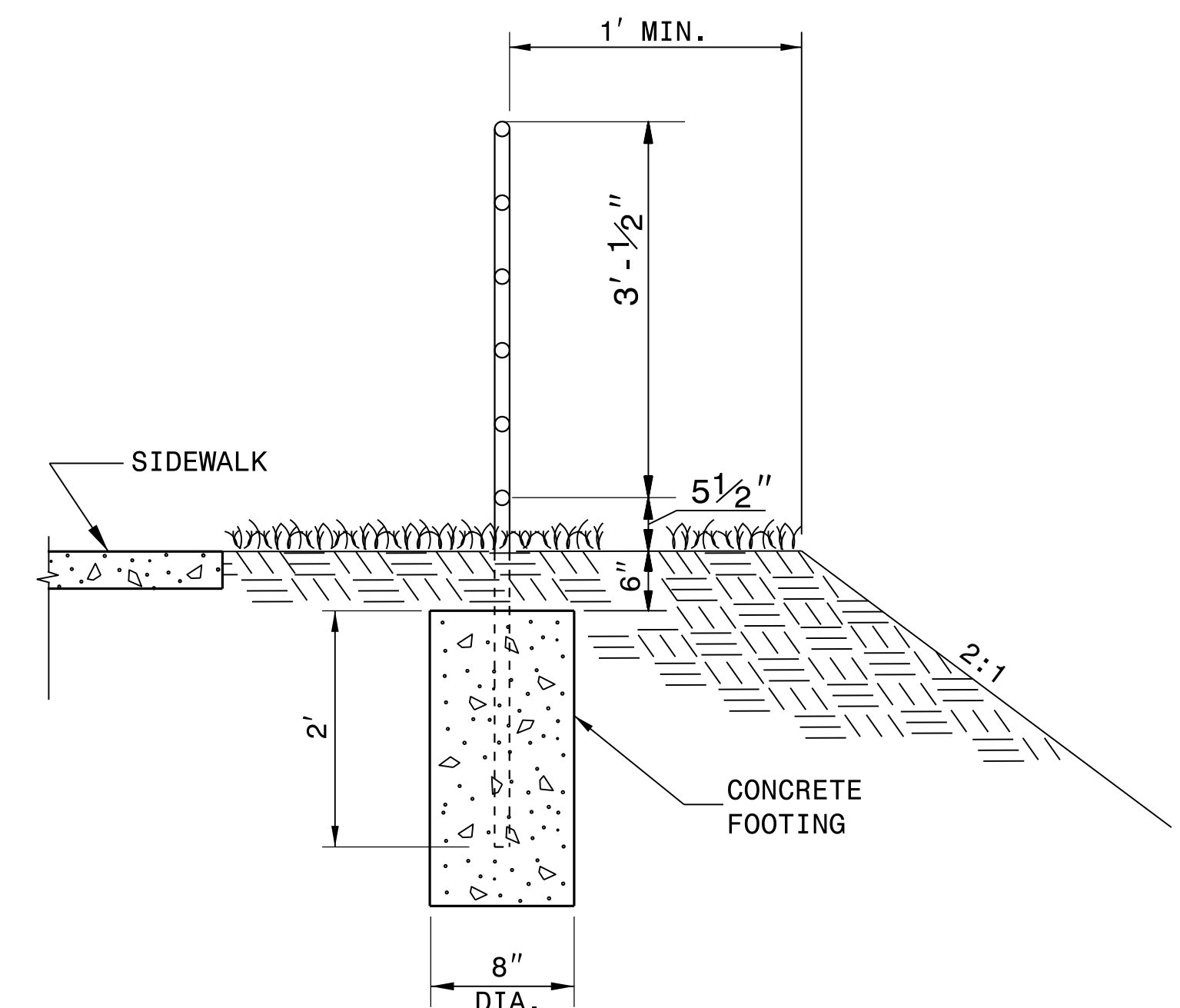
ORIGINAL BY: E.E. WARD DATE: 12-99
 MODIFIED BY: J.S. HOWERTON DATE: 9-18
 CHECKED BY: DATE:
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DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

26-SEP-2018 10:01 S:\Contracts\Special Details\nbritt\metric\murban\03613b_emergency_access.dgn J.Howerton AT USD-292595



ELEVATION



SECTION VIEW

NOTES:

CONSTRUCT PROPOSED STEEL PIPE RAIL OF 1 1/2" DIAMETER SCHEDULE 40 PLAIN END GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A53.

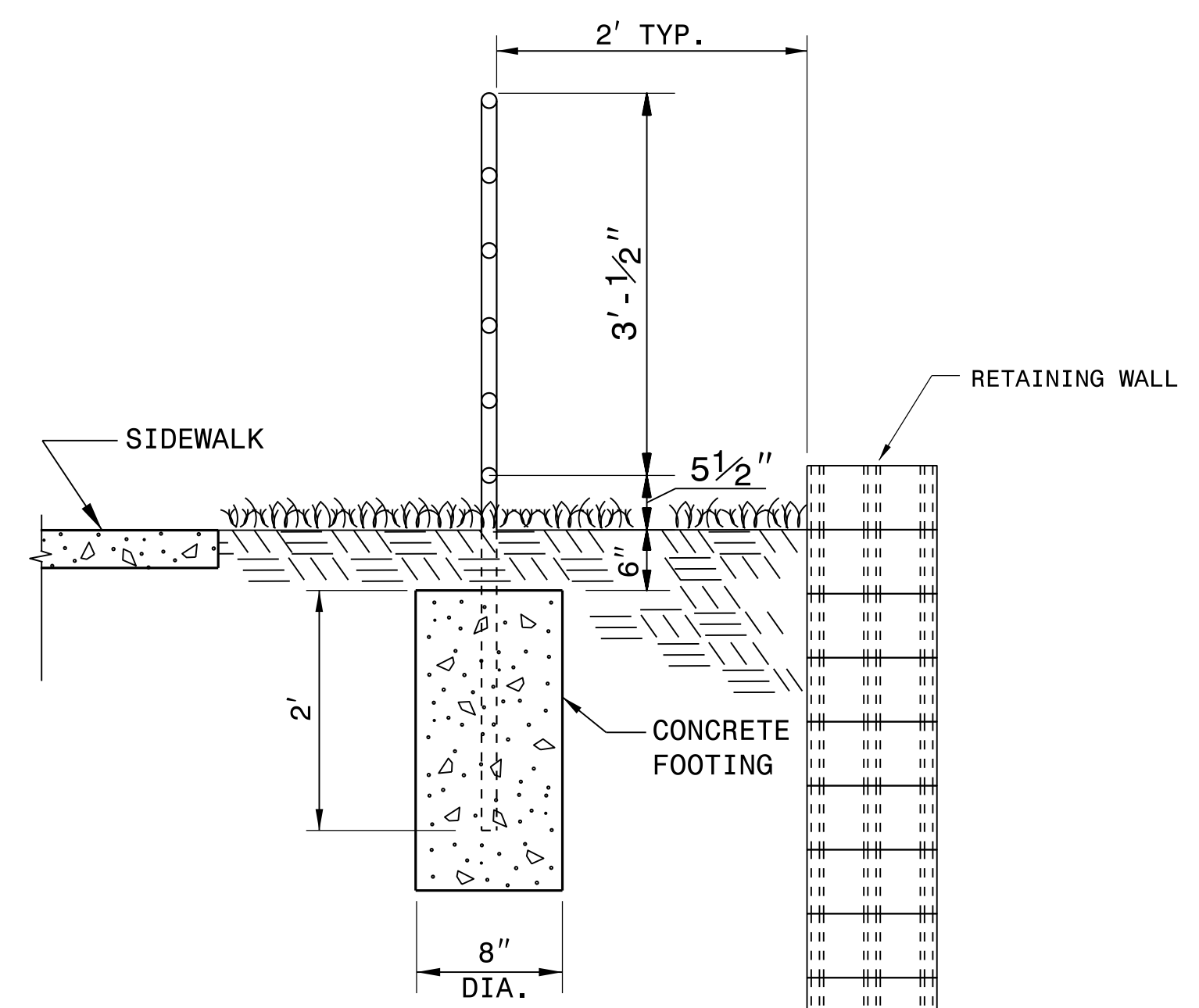
REPAIR GALVANIZING IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS SECTION 1076.

PAINT, IF REQUIRED BY THE ENGINEER, IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS SECTION 1080.

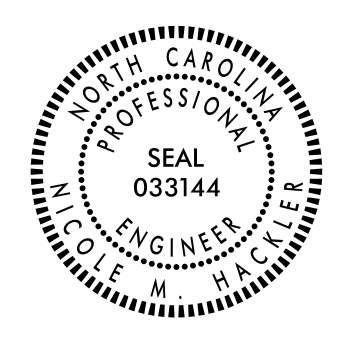
WELD IN ACCORDANCE WITH ARTICLE 1072-18 OF THE STANDARD SPECIFICATIONS.

USE CLASS 'B' CONCRETE FOR HANDRAIL FOOTINGS.

PLACEMENT OF HANDRAIL IN RELATION TO RETAINING WALL AND SIDEWALK MAY BE MODIFIED AS DIRECTED BY THE ENGINEER.



**SECTION VIEW
ADJACENT TO
RETAINING WALL**

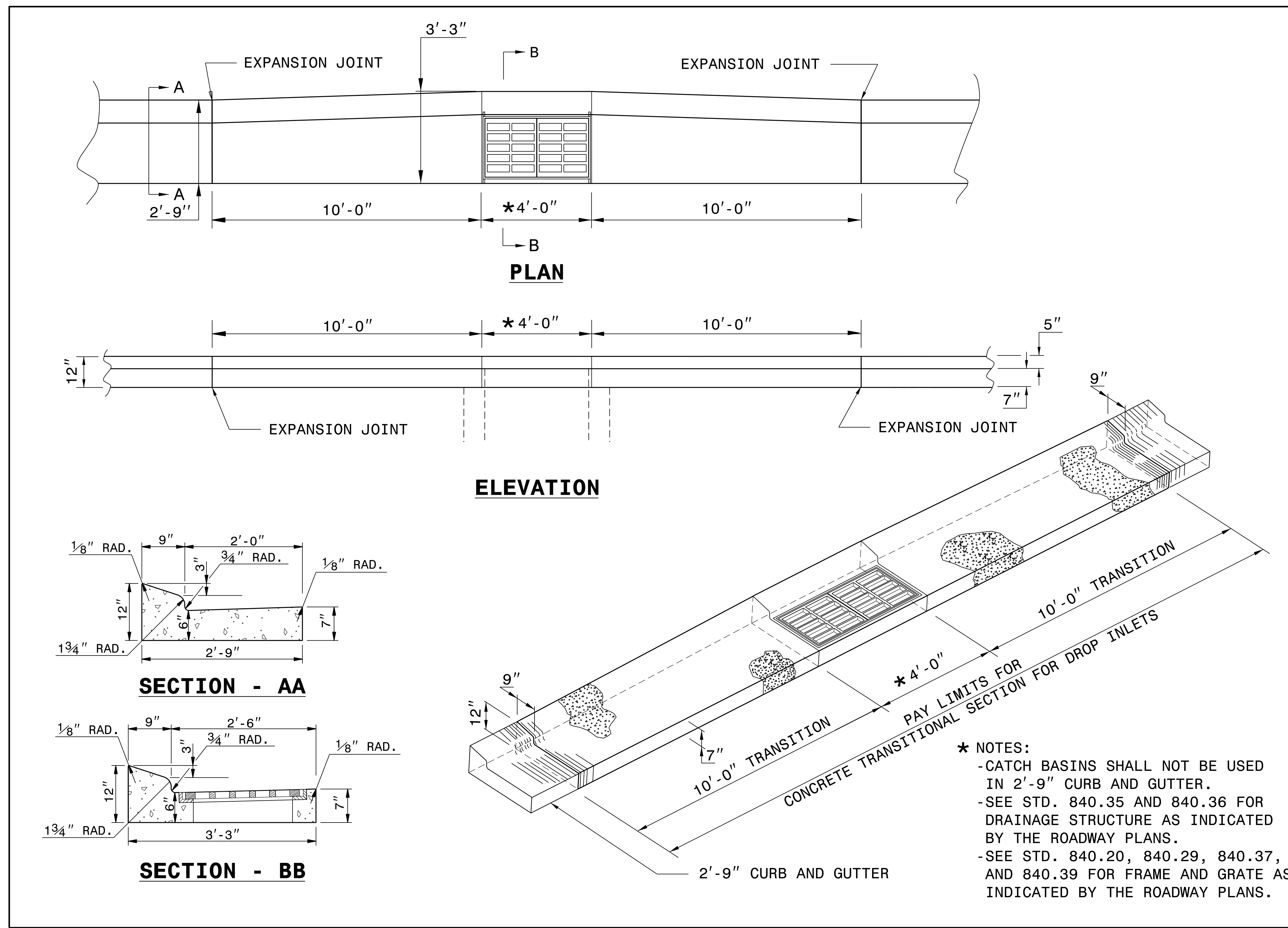


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AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

PEDESTRIAN SAFETY RAIL

ORIGINAL BY:	DATE:
MODIFIED BY: K.A. KEMPF	DATE: 7-20-23
CHECKED BY:	DATE:
FILE SPEC.: details\kempf\english\safety rails 2024.dgn	



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

ROADWAY DETAIL DRAWING FOR
MEDIAN CURB FOR TRAFFIC BEARING
GRADED DROP INLET
(FOR USE WITH 2'-9" CURB AND GUTTER)

SHEET 1 OF 1
852D07

- * NOTES:
- CATCH BASINS SHALL NOT BE USED IN 2'-9" CURB AND GUTTER.
 - SEE STD. 840.35 AND 840.36 FOR DRAINAGE STRUCTURE AS INDICATED BY THE ROADWAY PLANS.
 - SEE STD. 840.20, 840.29, 840.37, AND 840.39 FOR FRAME AND GRATE AS INDICATED BY THE ROADWAY PLANS.



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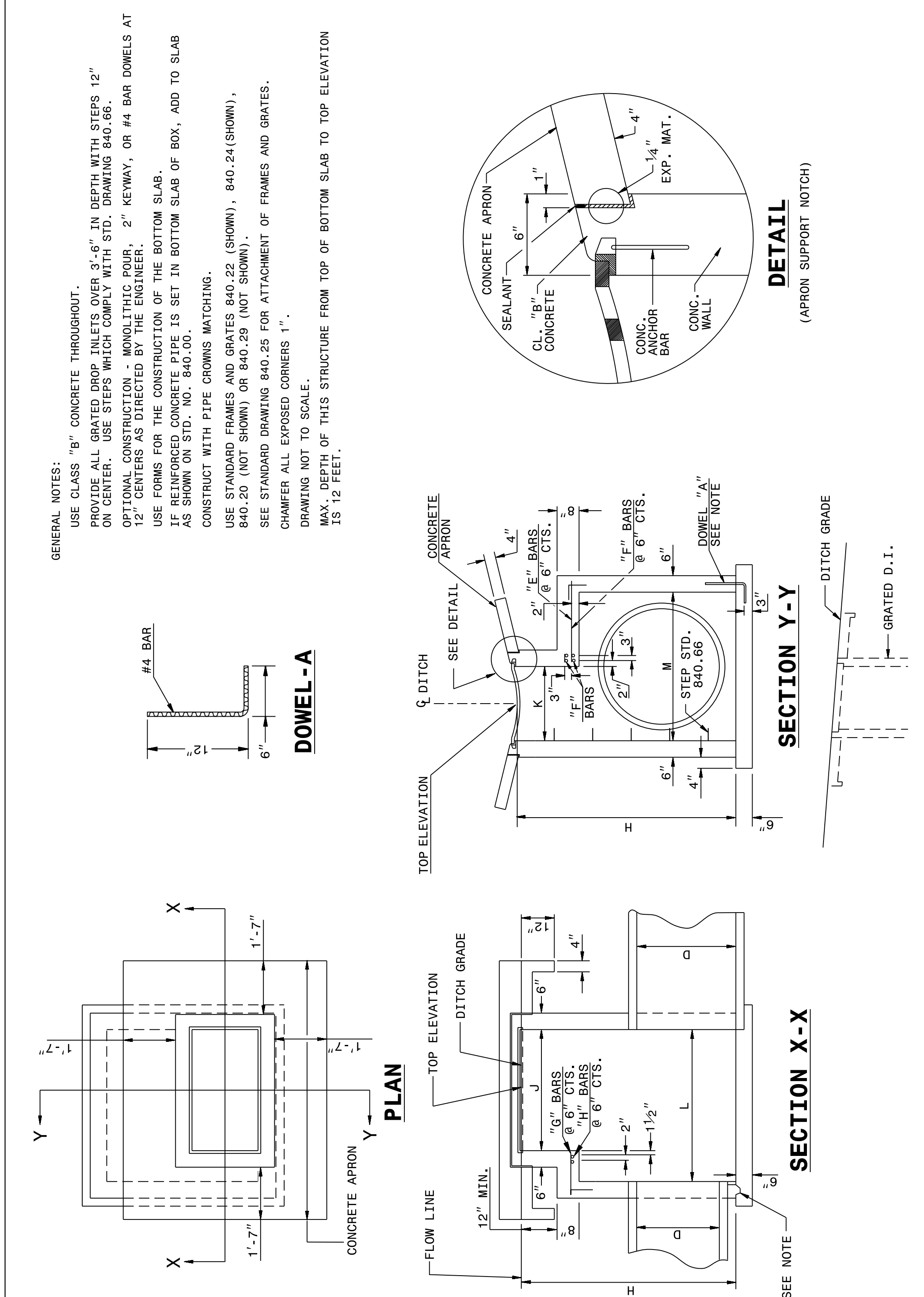
ORIGINAL BY: K.A. KEMPF	DATE: 7-20-23
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.: 2024 details in lieu\852D0701.dgn	

11-JAN-2024 12:49
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STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR CONCRETE GRATED DROP INLET TYPE 'A' MINIMUM DEPTH 12" THRU 72" PIPE

SHEET 1 OF 2 840d17



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

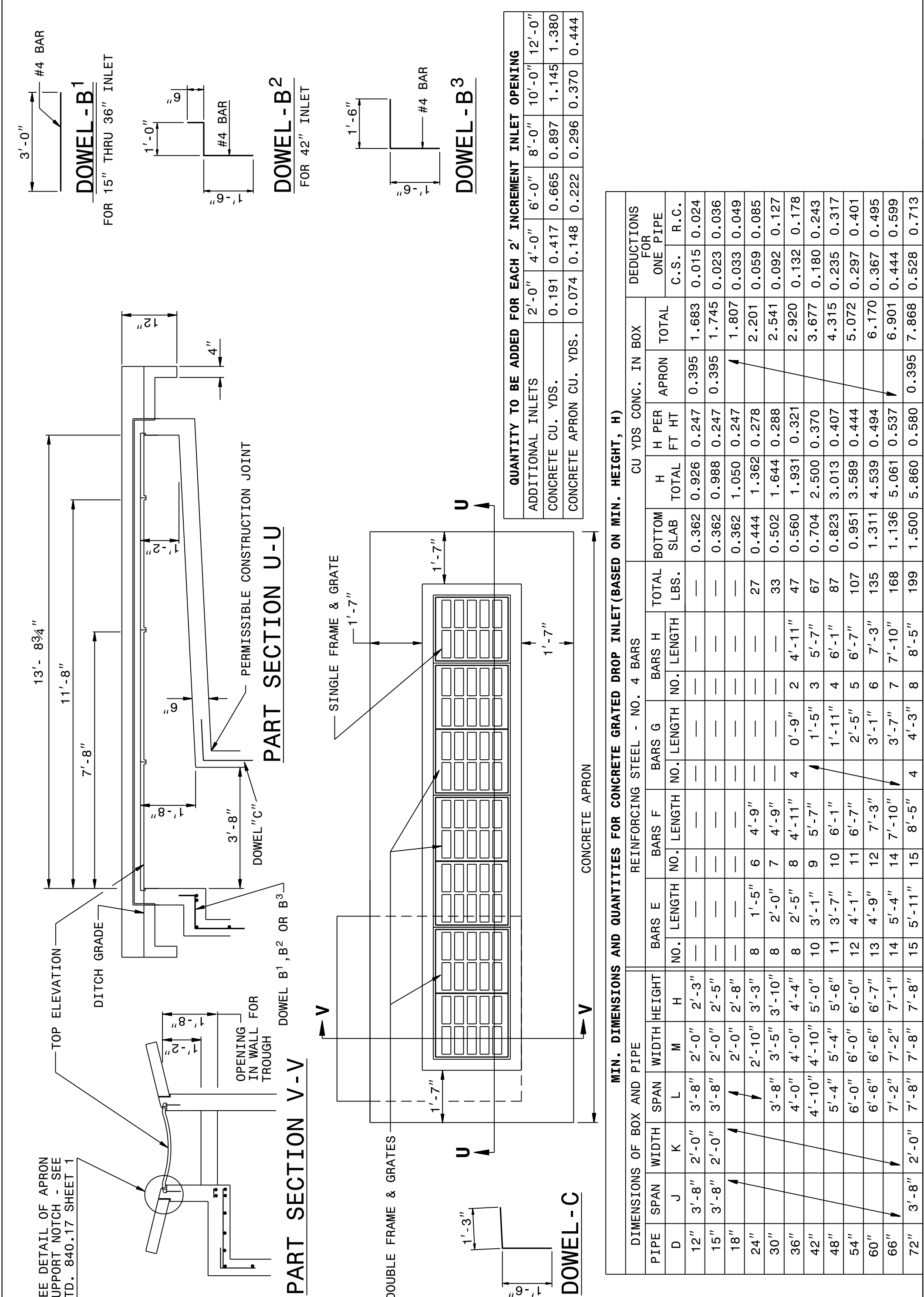
ENGLISH DETAIL DRAWING FOR CONCRETE GRATED DROP INLET TYPE 'A' MINIMUM DEPTH 12" THRU 72" PIPE

SHEET 1 OF 2 840d17

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

ENGLISH DETAIL DRAWING FOR CONCRETE GRATED DROP INLET TYPE 'A' MINIMUM DEPTH 12" THRU 72" PIPE

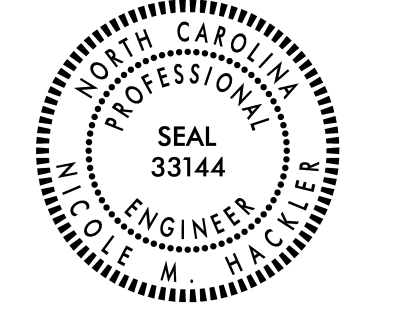
SHEET 2 OF 2 840d17



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

ENGLISH DETAIL DRAWING FOR CONCRETE GRATED DROP INLET TYPE 'A' MINIMUM DEPTH 12" THRU 72" PIPE

SHEET 2 OF 2 840d17



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CONTRACT STANDARDS AND DEVELOPMENT UNIT
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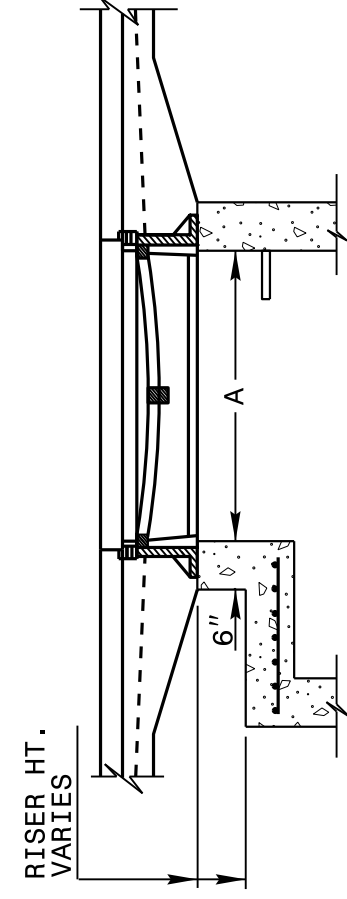
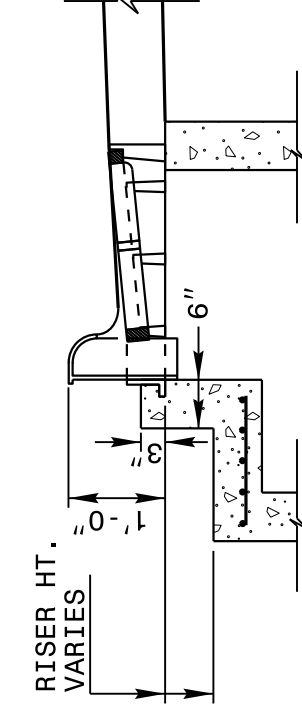
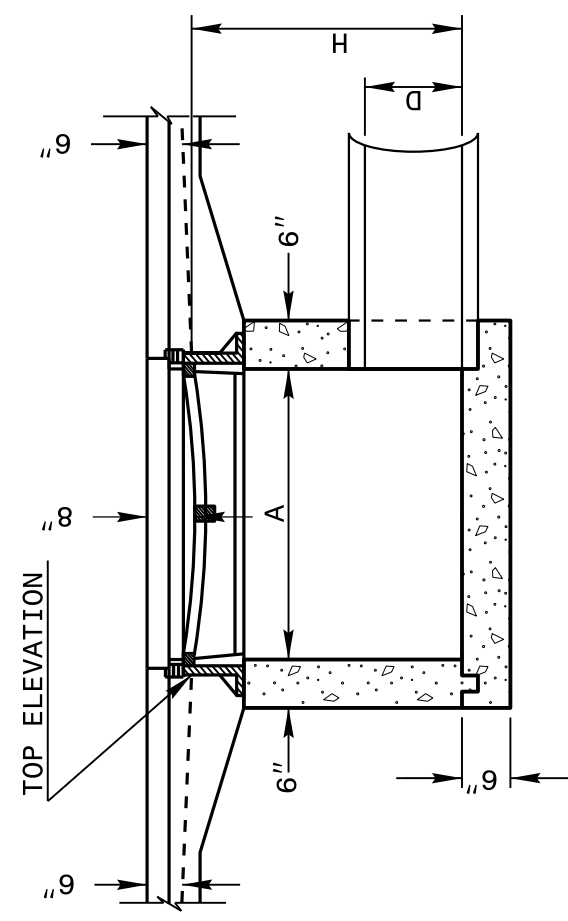
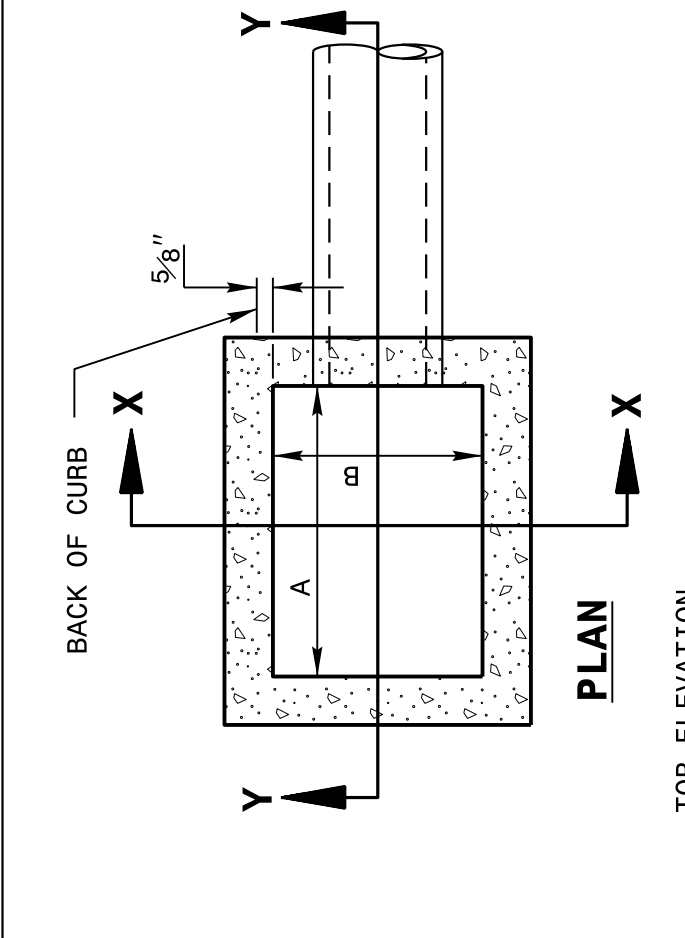
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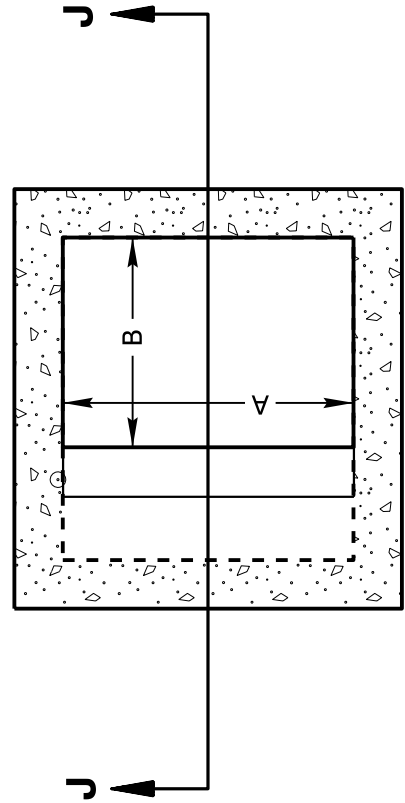
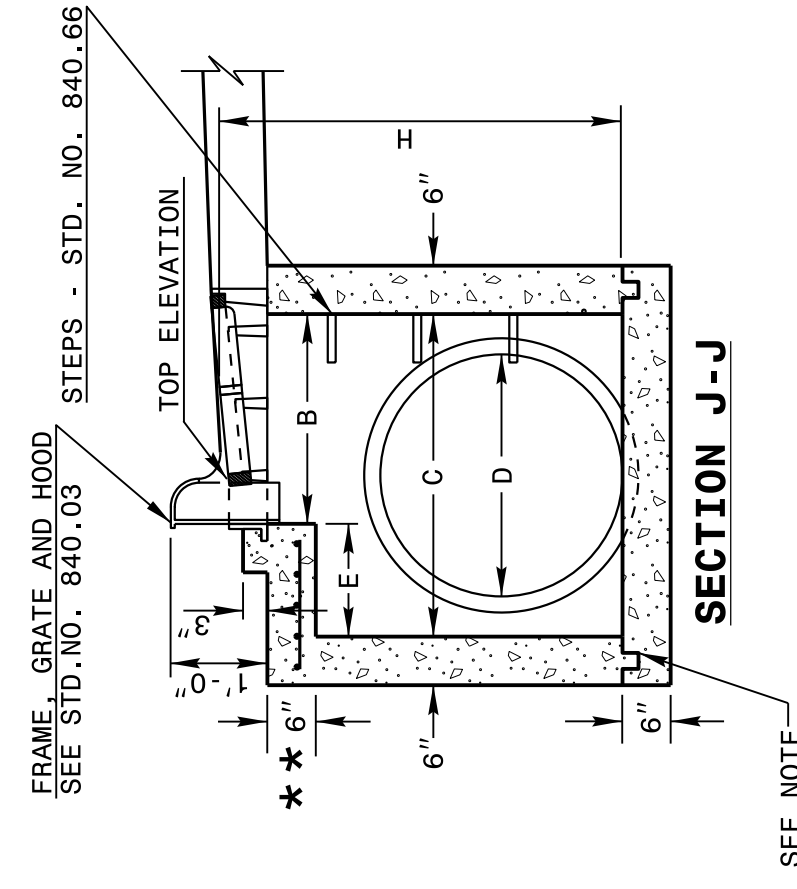
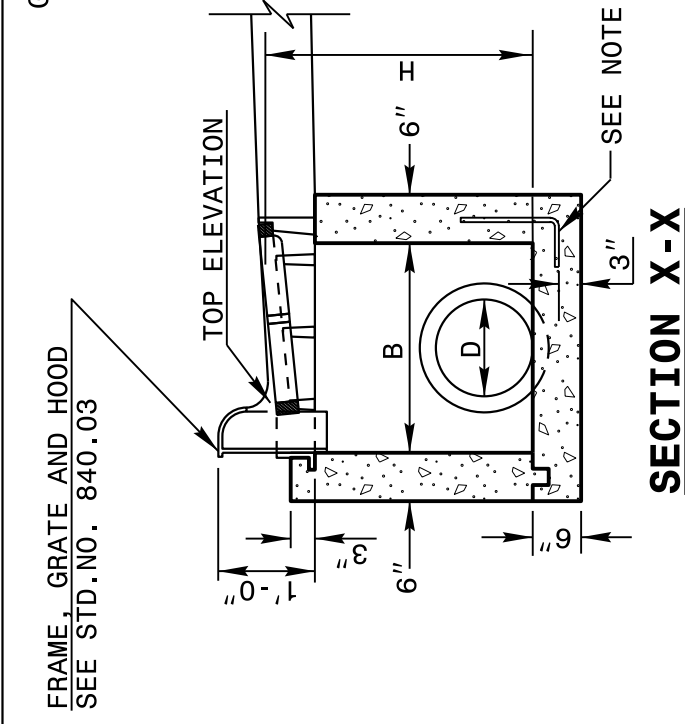
STATE OF
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 RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
MINIMUM DEPTH
CONCRETE CATCH BASIN
 12" THRU 84" PIPE

SHEET 1 OF 2
840D02



DETAIL SHOWING METHOD OF RISER CONSTRUCTION



PLAN

GENERAL NOTES:
 USE CLASS "B" CONCRETE THROUGHOUT.
 PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
 USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
 IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
 USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.
 FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER 8'-0" TO 16'-0" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.
 CONSTRUCT WITH PIPE CROWNS MATCHING.
 CHAMFER ALL EXPOSED CORNERS 1".
 ** FOR STRUCTURES WITH PIPE LARGER THAN 54", MAKE THE TOP SLAB 8" THICK.

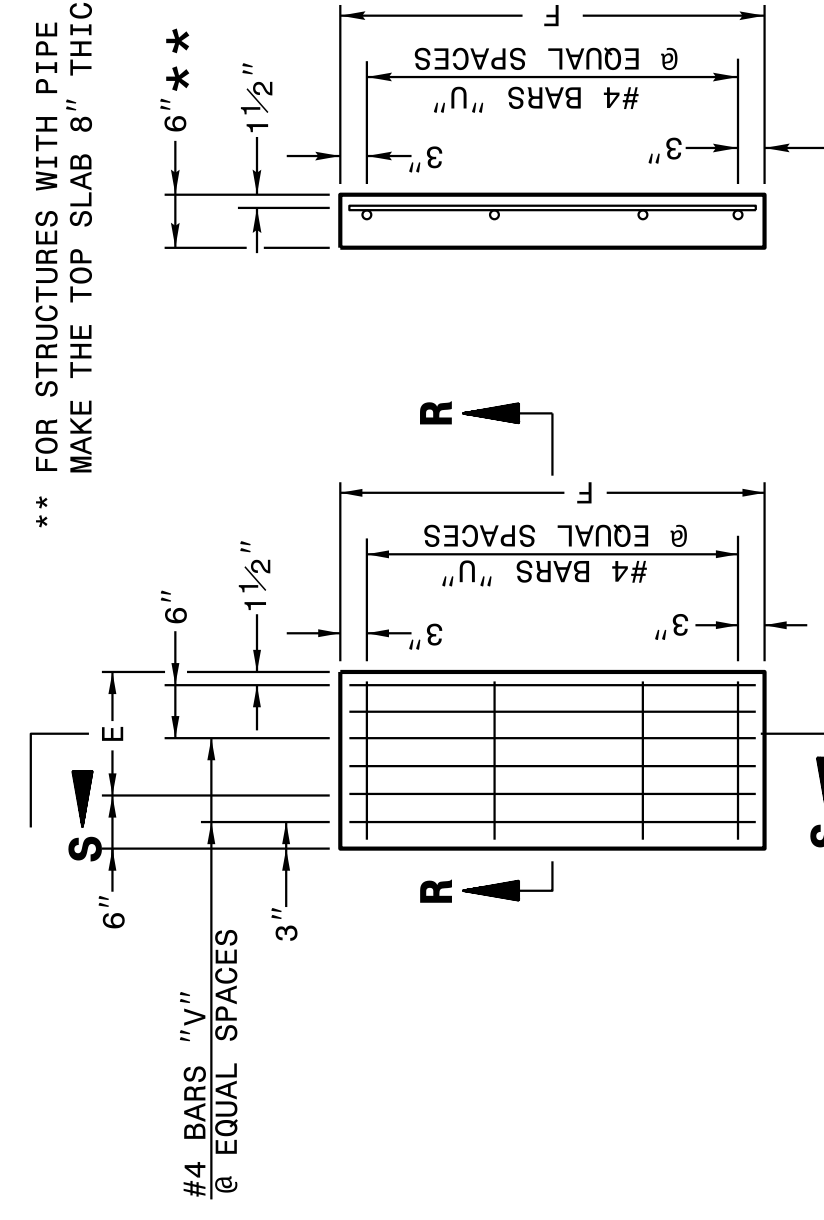
ENGLISH DETAIL DRAWING FOR
MINIMUM DEPTH
CONCRETE CATCH BASIN
 12" THRU 84" PIPE

SHEET 1 OF 2
840D02

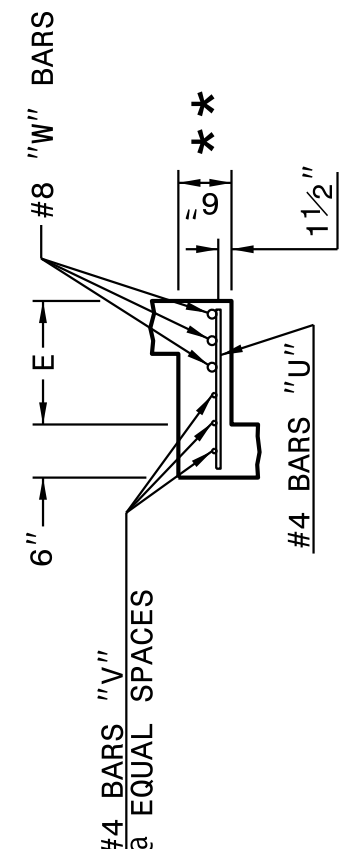
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 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
MINIMUM DEPTH
CONCRETE CATCH BASIN
 12" THRU 84" PIPE

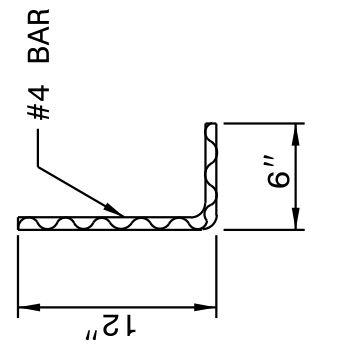
SHEET 2 OF 2
840D02



PLAN OF TOP SLAB



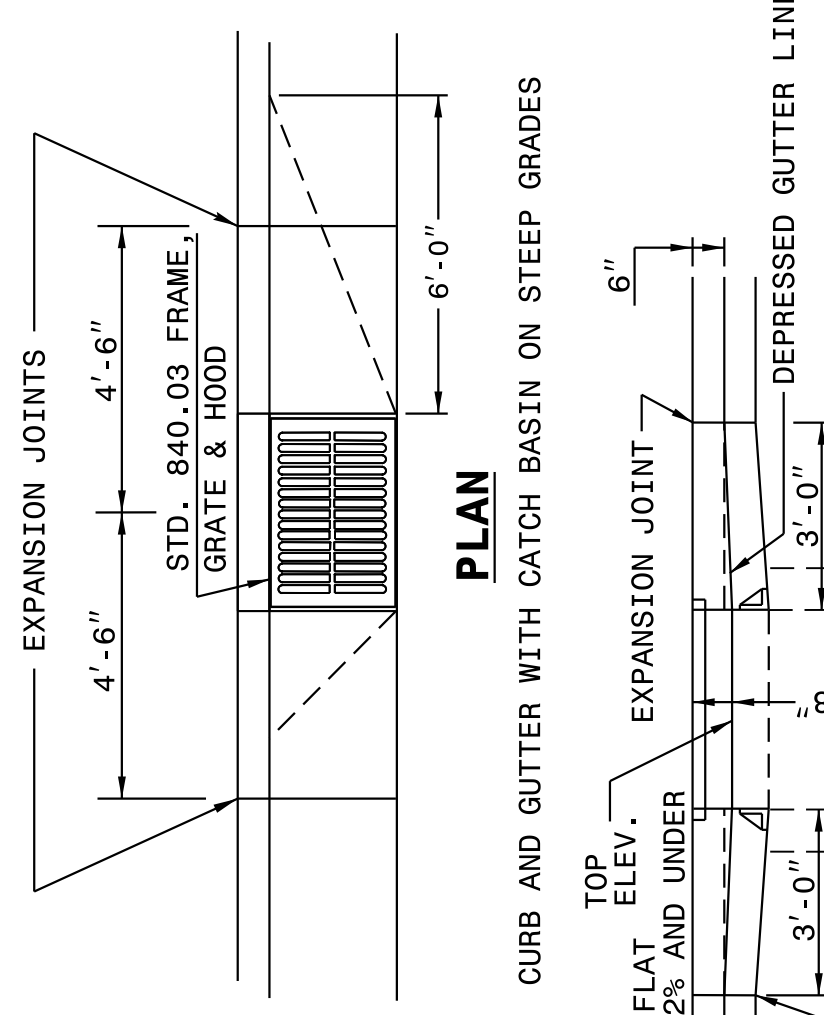
SECTION R-R



SECTION S-S

DOWEL

** FOR STRUCTURES WITH PIPE LARGER THAN 54", MAKE THE TOP SLAB 8" THICK.



ELEVATION

ELEVATION

ELEVATION

ELEVATION

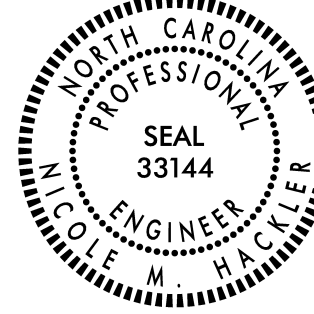
* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

PIPE D.	DIMENSIONS OF BOX AND PIPE				COVER DIMENSION				MINIMUM DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN (BASED ON MIN. HEIGHT, H, WITH NO RISER) *					
	SPAN	WIDTH	DEPTH	MIN. HEIGHT	E	F	G	H	BARS-U NO.	BARS-V LENGTH	BARS-W NO.	TOTAL LBS.	TOP SLAB CU. YDS. CONC.	DEDUCTIONS ONE PIPE C.M.
12"	3'-0"	2'-2"	2'-2"	2'-0"	..	..	..	..	..	..	..	..	0.235	0.015
15"	3'-0"	2'-2"	2'-2"	2'-3"	..	..	..	..	..	..	..	..	0.235	0.023
18"	3'-0"	2'-2"	2'-2"	3'-1"	..	..	..	..	..	..	..	..	0.235	0.033
24"	3'-0"	2'-2"	2'-2"	3'-10"	..	..	..	..	..	..	..	..	0.235	0.059
30"	3'-0"	2'-2"	3'-4"	3'-4"	1'-2"	4'-4"	4	1'-5"	2	4'-1"	3	4'-1"	0.123	0.092
36"	3'-0"	2'-2"	3'-10"	4'-6"	1'-8"	4'-10"	4	1'-11"	3	4'-7"	3	4'-7"	0.161	0.132
42"	3'-0"	2'-2"	4'-5"	4'-5"	2'-2"	5'-5"	5	2'-5"	4	5'-2"	4	5'-2"	0.200	0.178
48"	3'-0"	2'-2"	5'-0"	5'-0"	2'-10"	6'-0"	5	3'-1"	4	5'-9"	3	5'-9"	0.235	0.243
54"	3'-0"	2'-2"	5'-7"	6'-0"	3'-5"	6'-7"	6	3'-8"	5	6'-4"	3	6'-4"	0.285	0.317
60"	3'-0"	2'-2"	6'-3"	6'-6"	4'-1"	7'-3"	6	4'-4"	5	7'-0"	3	7'-0"	0.289	0.401
66"	3'-0"	2'-2"	6'-11"	7'-0"	4'-9"	7'-11"	7	5'-0"	6	7'-8"	3	7'-8"	0.391	0.440
72"	3'-0"	2'-2"	7'-6"	7'-6"	5'-3"	8'-6"	7	5'-6"	6	8'-3"	3	8'-3"	0.442	0.524
78"	3'-0"	2'-2"	8'-1"	8'-1"	5'-11"	9'-1"	8	6'-2"	7	8'-10"	3	8'-10"	0.493	0.615
84"	3'-0"	2'-2"	8'-9"	8'-9"	6'-7"	9'-9"	8	6'-10"	7	9'-6"	3	9'-6"	0.544	0.713

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

SEE PLATE FOR TITLE

ORIGINAL BY: 2002 Std.840.01 DATE: _____
 MODIFIED BY: E.E. WARD DATE: 3-1-02
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: s:Special Details/jhowerton/840d02.dgn



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SUMMARY OF EARTHWORK
 IN CUBIC YARDS

STATION	STATION	UNCL. EXCAV.	EMBANK. +%	BORROW	WASTE
PHASE I					
SUMMARY NO. 1 (LT.)					
-L- STA. 10+45.00	-L- STA. 16+49.51	998	0	0	998
-RND1- STA. 10+00.00	-RND1- STA. 13+14.16	736	621	0	115
TOTAL SUMMARY NO. 1		1,734	621	0	1,113
SUMMARY NO. 2 (LT.)					
-L- STA. 18+09.43	-L- STA. 28+62.22	181	976	795	0
-RND- STA. 10+00.00	-RND- STA. 13+76.99	6	2,730	2,724	0
TOTAL SUMMARY NO. 2		187	3,706	3,519	0
SUMMARY NO. 3 (LT.)					
-L- STA. 30+42.24	-L- STA. 49+92.36	693	818	125	0
-Y2- STA. 10+00.00	-Y2- STA. 12+65.89	141	158	17	0
-Y3- STA. 11+00.00	-Y3- STA. 12+14.95	137	14	0	123
-Y3A- STA. 11+00.00	-Y3A- STA. 12+31.75	48	30	0	18
-Y6- STA. 10+25.00	-Y6- STA. 11+99.65	305	3	0	302
-Y7- STA. 10+53.70	-Y7- STA. 11+92.77	128	56	0	72
-Y8- STA. 10+25.00	-Y7- STA. 11+75.94	202	48	0	154
TOTAL SUMMARY NO. 3		1,654	1,127	142	669
PHASE II					
SUMMARY NO. 4 (RT.)					
-L- STA. 10+45.00	-L- STA. 16+49.51	134	399	265	0
TOTAL SUMMARY NO. 4		134	399	265	0
SUMMARY NO. 5 (RT.)					
-L- STA. 18+09.43	-L- STA. 28+62.22	299	736	437	0
-Y1- STA. 10+32.50	-Y1- STA. 11+00.00	21	15	0	6
TOTAL SUMMARY NO. 5		320	751	437	6
SUMMARY NO. 6 (RT.)					
-L- STA. 30+42.24	-L- STA. 49+92.36	464	9,000	8,536	0
-Y2A- STA. 10+60.00	-Y2A- STA. 12+25.00	61	364	303	0
-Y5- STA. 10+34.75	-Y5- STA. 12+00.00	16	1,043	1,027	0
-Y4- STA. 10+30.88	-Y4- STA. 12+00.00	9	515	506	0
-Y7- STA. 12+50.27	-L- STA. 13+85.00	35	58	23	0
-Y8- STA. 12+33.44	-Y8- STA. 13+00.00	8	188	180	0
TOTAL SUMMARY NO. 6		593	11,168	10,575	0

STATION	STATION	UNCL. EXCAV.	EMBANK. +%	BORROW	WASTE
PHASE III					
SUMMARY NO. 7 (LT.)					
-Y- STA. 7+35.00	-Y- STA. 14+51.65	567	103	0	465
TOTAL SUMMARY NO. 7		567	103	0	465
SUMMARY NO. 8 (LT.)					
-Y- STA. 16+11.42	-Y- STA. 38+87.56	1,396	3,284	1,888	0
-Y10- STA. 10+50.00	-Y10- STA. 11+60.09	15	163	148	0
-Y11- STA. 10+20.00	-Y11- STA. 11+47.37	16	145	129	0
-Y12- STA. 10+05.00	-Y12- STA. 13+00.00	89	99	10	0
-Y13- STA. 10+85.00	-Y13- STA. 12+12.69	11	503	492	0
TOTAL SUMMARY NO. 8		1,527	4,194	2,667	0
PHASE IV					
SUMMARY NO. 9 (RT.)					
-Y- STA. 7+35.00	-Y- STA. 14+51.65	496	696	200	0
TOTAL SUMMARY NO. 9		496	696	200	0
SUMMARY NO. 10 (RT.)					
-Y- STA. 16+11.42	-Y- STA. 38+87.56	652	3,095	2,443	0
-Y- STA. 39+44.74	-Y- STA. 40+96.65	73	5	0	68
-Y12- STA. 13+00.00	-Y12- STA. 15+53.00	97	14	0	83
TOTAL SUMMARY NO. 10		822	3,114	2,443	151
SUMMARY TOTALS		8,034	25,879	20,248	2,404
MATERIAL FOR SHOULDER CONSTRUCTION			425		
WASTE IN LIEU OF BORROW				-2,404	-2,404
PROJECT TOTALS		8,034	26,304	18,269	0
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT				913	
GRAND TOTALS		8,034	26,304	19,182	0
SAY		8,200		20,000	

DDE = 723 CY
 SELECT GRANULAR MATERIAL, CLASS III = 900 CY
 GEOTEXTILE FOR SOIL STABILIZATION = 400 SY
 CLASS IV SUBGRADE STABILIZATION = 1,000 TONS
 UNDERCUT = 400 CY
 SHALLOW UNDERCUT = 500 CY

Earthwork quantities are calculated by TRANSYSTEMS.
 These earthwork quantities are based in part on subsurface data provided by NCDOT.

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."

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS



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

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
 TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
 FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
 W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
 G = GATING IMPACT ATTENUATOR TYPE 350
 NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH		W		ANCHORS								IMPACT ATTENUATOR TYPE 350			REMOVE EXISTING GUARDRAIL	REMARKS			
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	TERMINAL SECTION									EA	G	NG						
-L-	33+30.00		RT.	33.85'										2																GUARDRAIL BARRICADE
			SUBTOTALS	33.85'										2																
			PROJECT TOTALS	33.85'										2																
			ADDITIONAL GUARDRAIL POSTS = 5 EA.	SAY 50'										2																

ASPHALT PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION L/R/V/C/L	SQUARE YARDS	
-L-	16+49.51	18+09.43	LT./RT.	1,749.21	
-L-	28+62.22	30+42.24	LT./RT.	1,159.33	
-L-	31+24.92	37+61.00	LT./RT.	1,034.32	
-Y-	18+20.38	20+51.00	LT./RT.	325.34	
-Y-	22+68.89	33+63.58	RT.	244.25	
-Y-	39+83.42	40+96.65	RT.	23.13	
-Y1-	11+00.00	19+69.91	RT.	507.45	
-Y1-	19+95.60	25+43.35	RT.	319.52	
-Y2-	10+00.00	12+59.71	LT./RT.	68.13	
-Y3-	10+50.00	11+50.00	LT./RT.	22.22	
-Y3-	11+50.00	12+26.94	LT./RT.	248.81	
-Y3A-	11+00.00	12+30.64	LT./RT.	44.42	
-Y4-	10+03.56	11+25.00	LT./RT.	362.82	
-Y5-	11+49.20	12+00.00	LT./RT.	251.79	
-Y6-	10+25.00	10+75.00	LT./RT.	22.21	
-Y8-	10+75.00	11+86.37	LT./RT.	272.87	
-Y10-	10+50.00	11+25.00	LT./RT.	33.33	
-Y10-	11+25.00	11+92.67	LT./RT.	234.98	
-Y11-	10+20.00	11+00.00	LT./RT.	35.56	
-Y11-	11+00.00	11+80.72	LT./RT.	265.93	
-Y12-	10+05.00	10+53.84	RT.	10.86	
-Y12-	14+47.10	15+53.00	RT.	22.91	
-Y12A-	12+50.00	12+76.83	RT.	4.57	
-Y12A-	12+78.00	12+92.00	LT.	4.73	
-Y12A-	13+29.00	13+75.00	LT.	11.13	
-Y12A-	13+38.00	13+80.00	LT.	14.82	
-Y13-	10+85.00	11+25.00	LT./RT.	17.78	
-Y13-	11+25.00	12+42.62	LT./RT.	466.13	
TEMPORARY PAVEMENT					
-L-	16+85.03	17+71.03	LT.	186.47	
-L-	16+82.62	17+55.13	RT.	206.82	
				TOTAL:	8,535.42
				SAY:	8,600

RAGNHKT3

COMPUTED BY: DWG DATE: August 12, 2024
CHECKED BY: BMS (Revised by JTW) DATE: October 16, 2024

PROJECT NO. SHEET NO.
U-4709 3D-1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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

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

Table with columns for LINE & STATION, SIZE, THICKNESS OR GAUGE, OFFSET, STRUCTURE NUMBER, TOP ELEVATION, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), A. A. PIPE, R. C. PIPE CLASS III, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, ENDWALLS, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, CONCRETE TRANSITIONAL SECTION, and ABBREVIATIONS. Includes a SHEET TOTALS row at the bottom.

RAGNHKT3

COMPUTED BY: DWG DATE: August 12, 2024
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PROJECT NO. SHEET NO.
U-4709 3D-2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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

Table with columns for LINE & STATION, OFFSET, STRUCTURE NUMBER, TOPELEVATION, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), A. A. PIPE, R. C. PIPE CLASS III, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, ENDWALLS, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, CONCRETE TRANSITIONAL SECTION, and REMARKS. Includes a SHEET TOTALS row at the bottom.

RAGNHKT3

COMPUTED BY: DWG DATE: August 12, 2024
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PROJECT NO. SHEET NO.
U-4709 3D-3

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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

Table with columns for LINE & STATION, OFFSET, STRUCTURE NUMBER, TOP ELEVATION, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), A. A. PIPE, R. C. PIPE CLASS III, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, ENDWALLS, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, CONCRETE TRANSITIONAL SECTION, OPEN THROAT C.B. STD., D.I. STD., G.D.I. TYPE, G.D.I. TYPE, G.D.I. (N.S. SAG) FRAME W/ 2 GRATES, G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES, T.B.J.B. STD., T.B.D.I. STD., M.H. FRAME AND COVER, MIN. DEPTH CB, ENERGY DISSIPATION BASIN, FLOWABLE FILL, CONCRETE COLLARS, CONCRETE AND BRICK PIPE PLUG, PIPE REMOVAL, and REMARKS. Includes a SHEET TOTALS row at the bottom.

RAGNHKT3

COMPUTED BY: DWG DATE: August 12, 2024
CHECKED BY: BMS (Revised by JTW) DATE: October 16, 2024

PROJECT NO. SHEET NO.
U-4709 3D-4

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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

Table with columns for LINE & STATION, OFFSET, STRUCTURE NUMBER, TOPELEVATION, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), A. A. PIPE, R. C. PIPE CLASS III, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, ENDWALLS, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, CONCRETE TRANSITIONAL SECTION, OPEN THROAT C.B. STD., D.I. STD., D.I. FRAME AND GRATES STD., G.D.I. TYPE, G.D.I. TYPE, G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD., G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD., T.B.J.B. STD., T.B.D.I. STD., M.H. FRAME AND COVER STD., MIN. DEPTH CB, SPECIAL DETAIL SHEET, ENERGY DISSIPATION BASIN, FLOWABLE FILL, CONCRETE COLLARS CL., CONCRETE AND BRICK PIPE PLUG, PIPE REMOVAL, and REMARKS.

SHEET TOTALS

Summary row for SHEET TOTALS with values: 104, 56, 552, 16, 464, 156, 16, 26, 22.0, 3.2, 18, 4, 6, 8, 2, 4, 4, 1, 1, 3, 3.

RAGNHKT3

COMPUTED BY: DWG DATE: August 12, 2024
CHECKED BY: BMS (Revised by JTW) DATE: October 16, 2024

PROJECT NO. SHEET NO.
U-4709 3D-5

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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See "Standard Specifications For Roads and Structures, Section 300-5".

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

Table with columns for LINE & STATION, SIZE, THICKNESS OR GAUGE, OFFSET, STRUCTURE NUMBER, TOP ELEVATION, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), A. A. PIPE, R. C. PIPE CLASS III, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, ENDWALLS, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, CONCRETE TRANSITIONAL SECTION, and REMARKS.

SHEET TOTALS

Summary row for SHEET TOTALS with numerical values for various columns.

RAGNHKT3

COMPUTED BY: DWG DATE: August 12, 2024
CHECKED BY: BMS (Revised by JTW) DATE: October 16, 2024

PROJECT NO. SHEET NO.
U-4709 3D-6

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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See "Standard Specifications For Roads and Structures, Section 300-5".

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

Table with columns for LINE & STATION, OFFSET, STRUCTURE NUMBER, TOP ELEVATION, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), A. A. PIPE, R. C. PIPE CLASS III, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, ENDWALLS, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, CONCRETE TRANSITIONAL SECTION, OPEN THROAT C.B. STD., D.I. STD., G.D.I. TYPE, G.D.I. TYPE, G.D.I. (N.S. SAG) FRAME W/ 2 GRATES, G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES, T.B.J.B. STD., T.B.D.I. STD., M.H. FRAME AND COVER, MIN. DEPTH CB, ENERGY DISSIPATION BASIN, FLOWABLE FILL, CONCRETE COLLARS, CONCRETE AND BRICK PIPE PLUG, PIPE REMOVAL, and REMARKS.

SHEET TOTALS

104 16 428 196 124 216 232 72 2 52 52 25 28.6 7.6 13 1 10 2 3 4 4 2 5 3 1 3 25 0.3990 0.336

RAGNHKT3

COMPUTED BY: DWG DATE: August 12, 2024
CHECKED BY: BMS (Revised by JTW) DATE: October 16, 2024

PROJECT NO. SHEET NO.
U-4709 3D-7

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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See "Standard Specifications For Roads and Structures, Section 300-5".

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

Table with columns for LINE & STATION, SIZE, THICKNESS OR GAUGE, OFFSET, STRUCTURE NUMBER, TOP ELEVATION, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), A. A. PIPE, R. C. PIPE CLASS III, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, ENDWALLS, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, CONCRETE TRANSITIONAL SECTION, OPEN THROAT C.B. STD., D.I. STD., D.I. FRAME AND GRATES STD., G.D.I. TYPE, G.D.I. TYPE, G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD., G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD., T.B.J.B. STD., T.B.D.I. STD., M.H. FRAME AND COVER STD., MIN. DEPTH CB, SPECIAL DETAIL SHEET, ENERGY DISSIPATION BASIN, FLOWABLE FILL, CONCRETE COLLARS CL., CONCRETE AND BRICK PIPE PLUG, PIPE REMOVAL, and REMARKS.

SHEET TOTALS

1492 868 276 148 14 49.3 33.1 2 2 1 1 9 1 10 2 1 1566

RAGNHKT3

COMPUTED BY: DWG DATE: August 12, 2024
CHECKED BY: BMS (Revised by JTW) DATE: October 16, 2024

PROJECT NO. SHEET NO.
U-4709 3D-8

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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See "Standard Specifications For Roads and Structures, Section 300-5".

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

Table with columns for LINE & STATION, SIZE, THICKNESS OR GAUGE, OFFSET, STRUCTURE NUMBER, TOP ELEVATION, INVERT ELEVATION, MINIMUM REQUIRED SLOPE, Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC), A. A. PIPE, R. C. PIPE CLASS III, R. C. PIPE CLASS IV, R. C. PIPE CLASS V, ENDWALLS, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, CONCRETE TRANSITIONAL SECTION, PIPE REMOVAL, and REMARKS. Includes a SHEET TOTALS row at the bottom.

SHEET TOTALS

1198

**STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS**

PARCEL INDEX SHEET

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
1	4	ELIZABETH DERRICK & DAVID J. SARTY
1A	4	LISETTE WATKINS
3	4	JOHN W. BIZUB
4	4	JESUS LORENZO OLVERA & ANNA MARIA OLVERA
5	4	JOHN W. BIZUB
6	4	THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS
7	4	KIMBERLEE BIZUB BOZEMAN
8	4	FUAD S. ALSAIDI
9	4	DENNIS E. BRECHNER & DONNA L. BRECHNER
10	4 & 5 & 7	TOWN OF HOPE MILLS
11	4	WILLIAM T. SCIFRES & PATRICIA A. SCIFRES
12	4	HARVEY E. STEWART, SR.
13	4	CRAIG R. POWELL & ALMA K. POWELL
14	4	DONNA MARIE MAULTSBY THORNE
15	4 & 5	CUMBERLAND COUNTY BOARD OF EDUCATION
16	5 & 7 & 8	TOWN OF HOPE MILLS
17	5	AGAPE CHRISTIAN WORSHIP CENTER
18	5	TOWN OF HOPE MILLS
19	5	WENDY BRITT BENTLEY
20	5 & 6	ALBERMARLE OIL COMPANY
21	5	KENT & JULIA DEAN PROPERTIES, LLC.
22	5 & 6	KENT & JULIA DEAN PROPERTIES, LLC.
23	6	SHERRY RATLEY WORSLEY
24	6	K & S DENTAL ASSOCIATES, LLC.
25	6	CHARLES T. GARDNER
26	6	JACQUELINE SMITH WARNER
27	6	UNKNOWN
28	6	JOHN D. HORNADAY & SUSAN H. HORNADAY
29	6	BILL P. PAPPAS & MARIA G. PAPPAS
30	6	RICHARD ARNOLD SMITH & MARY S. SMITH
31	6	EDWINA LYNN KELLY
32	6	MARK DEPIETO
33	6	DAVID C. MATTHEWS, JR. & CINDY M. MATTHEWS
34	6	MCCAULEY & MCDONALD INVESTMENTS, INC.
35	6	MARCO ANTONION GARCIA
36	6	CIRCLE K STORES INC
37	6	EDWINA KELLY
38	6	REFUGE PENTECOSTAL CHURCH
39	6	LUMBEE GUARANTY BANK
40	6	MML & ASSOCIATES
41	4	WILLIE J LOCKETT JR
42	4	SECRETARY OF VETERANS AFFAIRS
43	4	BRANDON CLEVER
44	4	ROSA HERRING SAUNDERS HORNE & ALFRED M. HORNE
45	4	LANCE ZADROZNY
46	4	CHRISTAIN G. LEE
47	4	SAMUAL G. WILSON
48	4	VERON D. GROSS
49	4	MARCELLA J. RECZEK
50	4	JOHN K. WATSON & LORA L. WATSON
51	4	MIALINDA GALE FRANCIS
52	4	CARL MCCLANAHAN & PATRICIA C. MCCLANAHAN
53	4 & 7	SYLVIA T. CARR
54	4 & 7	LESLIE RUTH ALDRIDGE
55	7	YOGI D. BREWINGTON
56	7	DAVID BRENT CALAGIS & TONYA RENEE CALAGIS
57	7	CATHY JO NAYLOR
58	7	COUNTY OF CUMBERLAND

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
60	7	CAROL S. SIERRA
61	7	DBH PROPERTIES, INC.
62	7	JOSE A. LOPEZ & ROSA E. LOPEZ
63	7	HENRY J. JIMERSON, III
64	7	CAROLYN B. MOORE
65	7	CHARLOTTE L. GOINS
66	7	SECURE, INC.
67	7	DARLA J. HALL
68	7	TRUSTEES OF LEBANON LODGE #391 A.F. & A.M.
69	7 & 8	BARBARA J. MCCANN
70	8	LORENZO JOHNSON
71	8	JOSEPH H. CANNON & PATRICIA J. CANNON
72	8	ALDERWOODS, INC.
73	8	CHARLOTTE MCKENZIE
74	8	GODFREY ONIME
75	8	GDO PROPERTIES, LLC.
77	8	TLCV INVESTMENTS, LLC.
78	8	HOPE MILLS INVESTMENTS, LLC.
79	4	MICHAEL RAY PERRY
80	4	MARK CRABTREE
81	4 & 9	LARRY M POOLE
82	9	ROBERT E WESTBROOK
83	9	GLORIA J RAYNOR
84	9	MATTHEW J LUSARDI
85	9	THURMAN S BLACKMAN
86	9	DANIEL R DECRISCIO
87	9	JOHN WAYNE HILL JR
88	9	DEAN L RICHARDSON
89	9	MICHAEL O GILLIS
90	9	BRYAN J SMITH
91	9 & 10	YOUNG MENS CHRISTIAN ASSOCIATION OF FAYETTEVILLE NC INC
92	10	TOWN OF HOPE MILLS
93	9 & 10	JNM OF NC INC