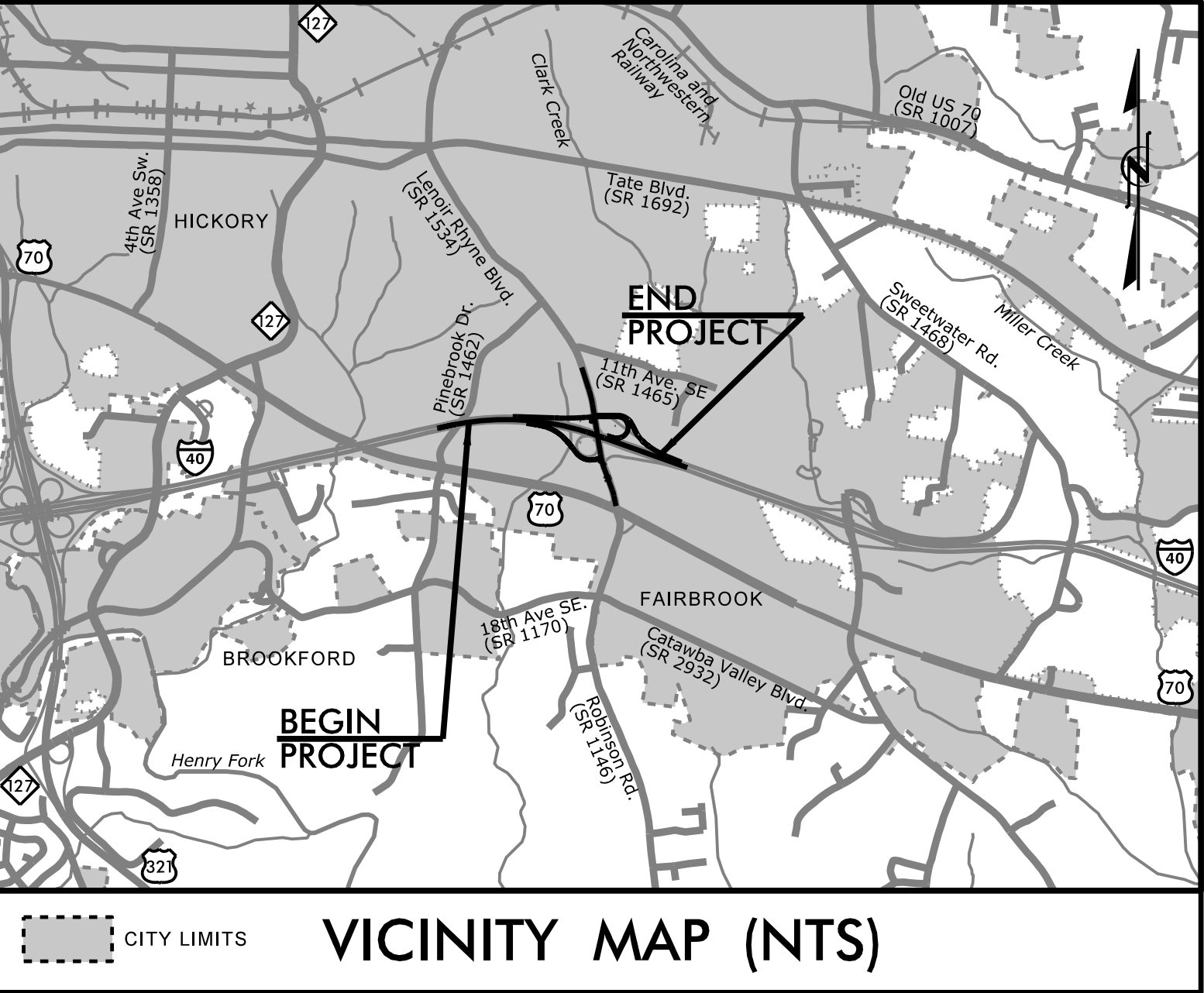


TIP PROJECT: I-5716

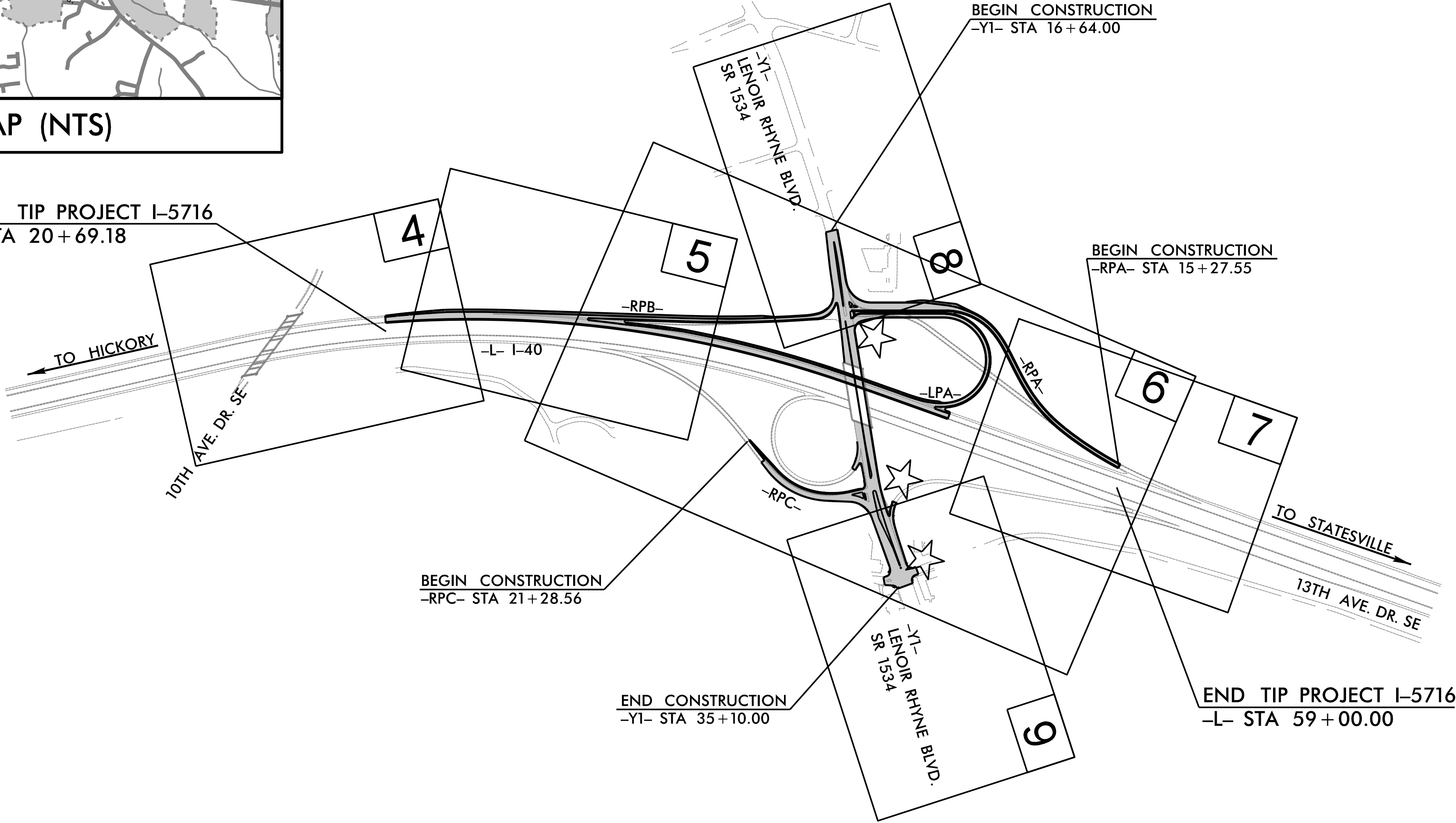
CONTRACT: C205195

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



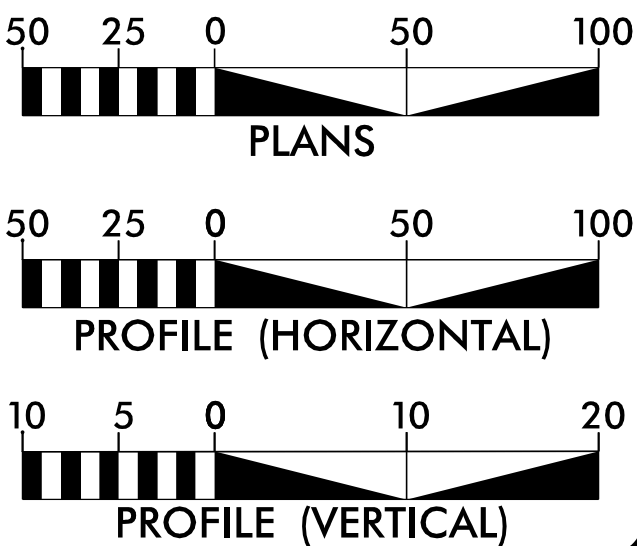
VICINITY MAP (NTS)

BEGIN TIP PROJECT I-5716  
-L- STA 20+69.18



- NOTES:
1. THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.
  2. THIS PROJECT IS LOCATED WITHIN THE MUNICIPAL BOUNDARY OF THE TOWN OF HICKORY.

GRAPHIC SCALES



DESIGN DATA

ADT 2026 = 71494  
ADT 2040 = 75476  
K = 9 %  
D = 55 %  
T = 10 % \*  
V = 70 MPH  
\* TTST = 7% DUAL=3%  
TIER = STATEWIDE  
FUNC CLASS = INTERSTATE

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I-5716 = 0.726 MI.  
LENGTH STRUCTURE TIP PROJECT I-5716 = 0.000 MI.  
TOTAL LENGTH TIP PROJECT I-5716 = 0.726 MI.



Prepared for the North Carolina Department of Transportation in the Office of:  
A. MORTON THOMAS AND ASSOCIATES, INC.  
CONSULTING ENGINEERS  
100 RIDGEFIELD DRIVE, SUITE 325, RALEIGH, NC 27609  
(919) 855-9989 FAX: (919) 855-5887  
EMAIL: AMT1@AMTENGINEERING.COM

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

JULY 19, 2019

LETTING DATE:

JULY 21, 2026

JASON T. GADDY, PE  
PROJECT ENGINEER

AUSTIN B. CARPENTER, PE  
PROJECT DESIGN ENGINEER

NATHAN ADIMA, PE  
NCDOT CONTACT

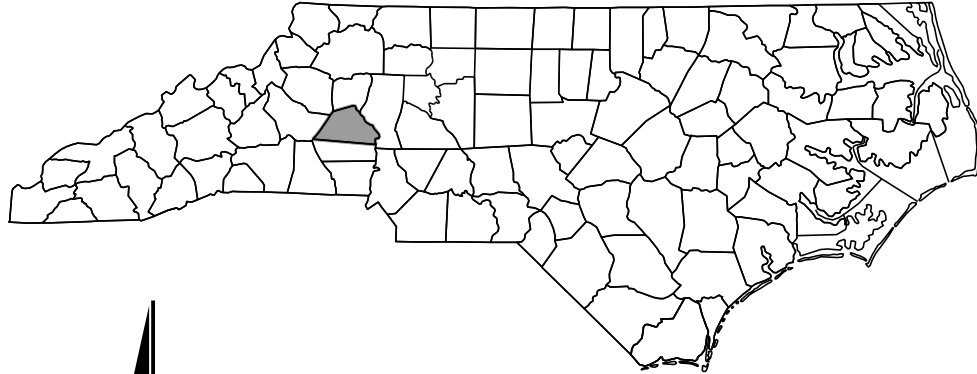
HYDRAULICS ENGINEER

Signed by:  
Josh Daffin  
1089AD8C14994C3  
SIGNATURE: JOSHUA G. DARTON  
6/8/2026  
P.E.

ROADWAY DESIGN ENGINEER

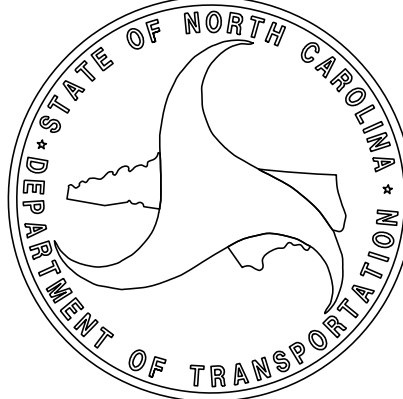
DocuSigned by:  
Jason T. Gaddy  
PAF5D64490BA496  
SIGNATURE: JASON T. GADDY  
6/8/2026  
P.E.

| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.   | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C.            | I-5716                      | 1           | 1            |
| STATE PROJ. NO. | F.A. PROJ. NO.              | DESCRIPTION |              |
| 50133.1.FS1     | NHPP-0402(166)              | PE          |              |
| 50133.2.1       | NHPP-0402(166)              | R/W         |              |
| 50133.2.2       |                             | Util.       |              |
| 50133.3.1       | 0402166                     | Const.      |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |



SIGNAL UPGRADE

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED





# INDEX OF SHEETS & LIST OF STANDARD DRAWINGS

## INDEX OF SHEETS

## LIST OF STANDARD DRAWINGS

## GENERAL NOTES

| SHEET NUMBER        | SHEET                                                                          |
|---------------------|--------------------------------------------------------------------------------|
| 1                   | TITLE SHEET                                                                    |
| 1A                  | INDEX OF SHEETS, GENERAL NOTES AND LIST OF STANDARDS                           |
| 1B                  | CONVENTIONAL SYMBOLS                                                           |
| 2A-1 THRU 2A-3      | PAVEMENT SCHEDULE, TYPICAL SECTIONS AND WEDGING DETAILS                        |
| 2B-1 THRU 2B-2      | ROADWAY INTERSECTION DETAILS                                                   |
| 2B-3                | SHEAR POINT LAYOUT DIAGRAM                                                     |
| 2C-1 THRU 2C-8      | DETAILS USED IN LIEU OF STANDARDS                                              |
| 3B-1                | ROADWAY SUMMARIES (CHAIN LINK FENCE, GUARDRAIL, CURB & GUTTER AND SIDEWALK)    |
| 3B-2                | ROADWAY SUMMARY (EARTHWORK)                                                    |
| 3D-1 THRU 3D-4      | DRAINAGE SUMMARIES                                                             |
| 3G-1                | GEOTECHNICAL SUMMARIES                                                         |
| 3P-1                | PARCEL INDEX SHEET                                                             |
| 4 THRU 9            | PLAN SHEETS                                                                    |
| 10 THRU 16          | PROFILE SHEETS                                                                 |
| RW01 THRU RW07      | SURVEY CONTROL, EXISTING CENTERLINES, RIGHT OF WAY, EASEMENT,AND PROPERTY TIES |
| TMP-1 THRU TMP-37   | TRANSPORTATION MANAGEMENT PLANS                                                |
| PMP-1 THRU PMP-7    | PAVEMENT MARKING PLANS                                                         |
| E-1                 | ELECTRICAL PLANS                                                               |
| EC-1 THRU EC-15     | EROSION CONTROL SHEETS                                                         |
| RF-1                | REFORESTATION DETAIL                                                           |
| SIGN-1 THRU SIGN-5  | SIGNING PLANS                                                                  |
| SD-1 THRU SD-3      | SIGN DESIGN SHEETS                                                             |
| SIG-1 THRU SIG-12.3 | SIGNAL PLAN SHEETS                                                             |
| SCP-1 THRU SCP-19   | SYSTEM COMMUNICATION PLANS                                                     |
| UO-1 THRU UO-3      | UTILITY BY OTHERS SHEETS                                                       |
| X-1                 | CROSS SECTION INDEX                                                            |
| X-1A                | CROSS SECTION SUMMARY SHEET                                                    |
| X-2 THRU X-41       | CROSS-SECTIONS                                                                 |

### 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                     |                                                                                   |
| 200.03                                     | Method of Clearing – Method III                                                   |
| 225.01                                     | Guide for Grading Subgrade – Interstate and Freeway                               |
| 225.03                                     | Deceleration and Acceleration Lanes                                               |
| 225.04                                     | Method of Obtaining Superelevation – Two Lane Pavement                            |
| 225.05                                     | Method of Obtaining Superelevation – Divided Highways                             |
| 225.06                                     | Method of Grading Sight Distances at Intersections                                |
| 225.09                                     | Guide for Shoulder and Ditch Transition at Grade Separations                      |
| 240.01                                     | Guide for Berm Ditch Construction                                                 |
| DIVISION 3 – PIPE CULVERTS                 |                                                                                   |
| 300.01                                     | Method of Pipe Installation                                                       |
| DIVISION 5 – SUBGRADE, BASES AND SHOULDERS |                                                                                   |
| 560.01                                     | Method of Shoulder Construction – High Side of Superelevated Curve Method I       |
| 560.02                                     | Method of Shoulder Construction – High Side of Superelevated Curve Method II      |
| DIVISION 6 – ASPHALT BASES AND PAVEMENTS   |                                                                                   |
| 610.01                                     | Guide for Paving Shoulders Under Bridges – Method I                               |
| 654.01                                     | Pavement Repairs                                                                  |
| 665.01                                     | Asphalt Shoulders – Milled Rumble Strips                                          |
| 665.02                                     | Limits for Asphalt Shoulders – Milled Rumble Strips                               |
| DIVISION 8 – INCIDENTALS                   |                                                                                   |
| 815.02                                     | Subsurface Drain                                                                  |
| 838.01                                     | Concrete Endwall for Single and Double Pipe Culverts – 15” thru 48” Pipe 90° Skew |
| 838.11                                     | Brick Endwall for Single and Double Pipe Culverts – 15” thru 48” Pipe 90° Skew    |
| 838.21                                     | Reinforced Concrete Endwalls – for Single 54” Pipe 90° Skew                       |
| 838.45                                     | Notes for Reinforced Concrete Endwall – Std. Dwg’s 838.21 thru 838.40             |
| 838.51                                     | Reinforced Brick Endwall – for Single 54” Pipe 90°Skew                            |
| 838.75                                     | Notes for Reinforced Brick Endwall – Std. Dwg’s 838.51 thru 838.70                |
| 838.80                                     | Precast Concrete Endwall                                                          |
| 840.00                                     | Concrete Base Pad for Drainage Structures                                         |
| 840.01                                     | Brick Catch Basin – 12” thru 54” Pipe                                             |
| 840.02                                     | Concrete Catch Basin – 12” thru 54” Pipe                                          |
| 840.03                                     | Frame, Grates and Hood – for Use on Standard Catch Basin                          |
| 840.14                                     | Concrete Drop Inlet – 12” thru 30” Pipe                                           |
| 840.15                                     | Brick Drop Inlet – 12” thru 30” Pipe                                              |
| 840.16                                     | Drop Inlet Frame and Grates – for use with Std. Dwg 840.14 and 840.15             |
| 840.17                                     | Concrete Grated Drop Inlet Type ‘A’ – 12” thru 72” Pipe                           |
| 840.18                                     | Concrete Grated Drop Inlet Type ‘B’ – 12” thru 36” Pipe                           |
| 840.19                                     | Concrete Grated Drop Inlet Type ‘D’ – 12” thru 36” Pipe                           |
| 840.22                                     | Frames and Wide Slot Sag Grates                                                   |
| 840.25                                     | Anchorage for Frames – Brick, 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                              |
| 840.28                                     | Brick Grated Drop Inlet Type ‘D’ – 12” thru 36” Pipe                              |
| 840.31                                     | Concrete Junction Box – 12” thru 66” Pipe                                         |
| 840.32                                     | Brick Junction Box – 12” thru 66” Pipe                                            |
| 840.35                                     | Traffic Bearing Grated Drop Inlet – for Double Frame and Grates                   |
| 840.45                                     | Precast Drainage Structure                                                        |
| 840.46                                     | Traffic Bearing Precast Drainage Structure                                        |
| 840.54                                     | Manhole Frame and Cover                                                           |
| 840.66                                     | Drainage Structure Steps                                                          |
| 846.01                                     | Concrete Curb, Gutter and Curb & Gutter                                           |
| 848.01                                     | Concrete Sidewalk                                                                 |
| 848.06                                     | Curb Ramp                                                                         |
| 850.10                                     | Guide for Berm Ditch Outlet – 15” and 18” Pipe                                    |
| 850.11                                     | Guide for Berm Ditch Outlet – 24” and 30” Pipe                                    |
| 852.01                                     | Concrete Islands                                                                  |
| 852.06                                     | Method for Placement of Drop Inlets in Concrete Islands                           |
| 857.01                                     | Precast Reinforced Concrete Barrier – 41” Single Faced                            |
| 862.01                                     | Guardrail Placement                                                               |
| 862.02                                     | Guardrail Installation                                                            |
| 866.01                                     | Chain Link Fence – 4’, 5’, and 6’ High Fence                                      |
| 876.01                                     | Rip Rap in Channels and Ditches                                                   |
| 876.02                                     | Guide to Rip Rap at Pipe Outlets                                                  |
| 876.04                                     | Drainage Ditches with Class ‘B’ Rip Rap                                           |

EFF. 01-16-2024  
REV.

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 III.

### SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 AND 225.05 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 & 560.02

### 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. 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.

### TEMPORARY SHORING:

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

### 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.

### UTILITIES:

UTILITIES PRESENT ON THIS PROJECT ARE:  
DUKE ENERGY, PIEDMONT NATURAL GAS, BRIGHTSPEED, METRONET, CHARTER, AND CITY OF HICKORY WATER, NCDOT IT FIBER CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL UTILITIES WITHIN WORK AREAS BEFORE STARTING WORK.

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

### 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.

### ROCK:

ROCK IS ANTICIPATED BETWEEN RPA STA. 15+50 TO 24+50 AND LPA STA. 14+75 TO 16+25.



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                |  |
| Existing Fence Line                   |  |
| Proposed Woven Wire Fence             |  |
| Proposed Chain Link Fence             |  |
| Proposed Barbed Wire Fence            |  |
| Existing Wetland Boundary             |  |
| Proposed Wetland Boundary             |  |
| Existing Endangered Animal Boundary   |  |
| Existing Endangered Plant Boundary    |  |
| Existing Historic Property Boundary   |  |
| Known Contamination Area: Soil        |  |
| Potential Contamination Area: Soil    |  |
| Known Contamination Area: Water       |  |
| Potential Contamination Area: Water   |  |
| Contaminated Site: Known or Potential |  |

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

|                                    |  |
|------------------------------------|--|
| Stream or Body of Water            |  |
| Hydro, Pool or Reservoir           |  |
| Jurisdictional Stream              |  |
| Buffer Zone 1                      |  |
| Buffer Zone 2                      |  |
| Flow Arrow                         |  |
| Disappearing Stream                |  |
| Spring                             |  |
| Wetland                            |  |
| Proposed Lateral, Tail, Head Ditch |  |
| False Sump                         |  |

RAILROADS:

|                    |  |
|--------------------|--|
| Standard Gauge     |  |
| RR Signal Milepost |  |
| Switch             |  |
| RR Abandoned       |  |
| RR Dismantled      |  |

RIGHT OF WAY & PROJECT CONTROL:

|                                                      |  |
|------------------------------------------------------|--|
| Primary Horiz Control Point                          |  |
| Primary Horiz and Vert Control Point                 |  |
| Secondary Horiz and Vert Control Point               |  |
| Vertical Benchmark                                   |  |
| Existing Right of Way Monument                       |  |
| Proposed Right of Way Monument (Rebar and Cap)       |  |
| Proposed Right of Way Monument (Concrete)            |  |
| Existing Permanent Easement Monument                 |  |
| Proposed Permanent Easement Monument (Rebar and Cap) |  |
| Existing C/A Monument                                |  |
| Proposed C/A Monument (Rebar and Cap)                |  |
| Proposed C/A Monument (Concrete)                     |  |
| Existing Right of Way Line                           |  |
| Proposed Right of Way Line                           |  |
| Existing Control of Access Line                      |  |
| Proposed Control of Access Line                      |  |
| Proposed ROW and CA Line                             |  |
| Existing Easement Line                               |  |
| Proposed Temporary Construction Easement             |  |
| Proposed Temporary Drainage Easement                 |  |
| Proposed Permanent Drainage Easement                 |  |
| Proposed Permanent Drainage/Utility Easement         |  |
| Proposed Permanent Utility Easement                  |  |
| Proposed Temporary Utility Easement                  |  |
| Proposed Aerial Utility Easement                     |  |

ROADS AND RELATED FEATURES:

|                            |  |
|----------------------------|--|
| Existing Edge of Pavement  |  |
| Existing Curb              |  |
| Proposed Slope Stakes Cut  |  |
| Proposed Slope Stakes Fill |  |
| Proposed Curb Ramp         |  |
| Existing Metal Guardrail   |  |
| Proposed Guardrail         |  |
| Existing Cable Guiderail   |  |
| Proposed Cable Guiderail   |  |
| Equality Symbol            |  |
| Pavement Removal           |  |
| VEGETATION:                |  |
| Single Tree                |  |
| Single Shrub               |  |
| Hedge                      |  |

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

EXISTING STRUCTURES:

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

UTILITIES:

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

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

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

MISCELLANEOUS:

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



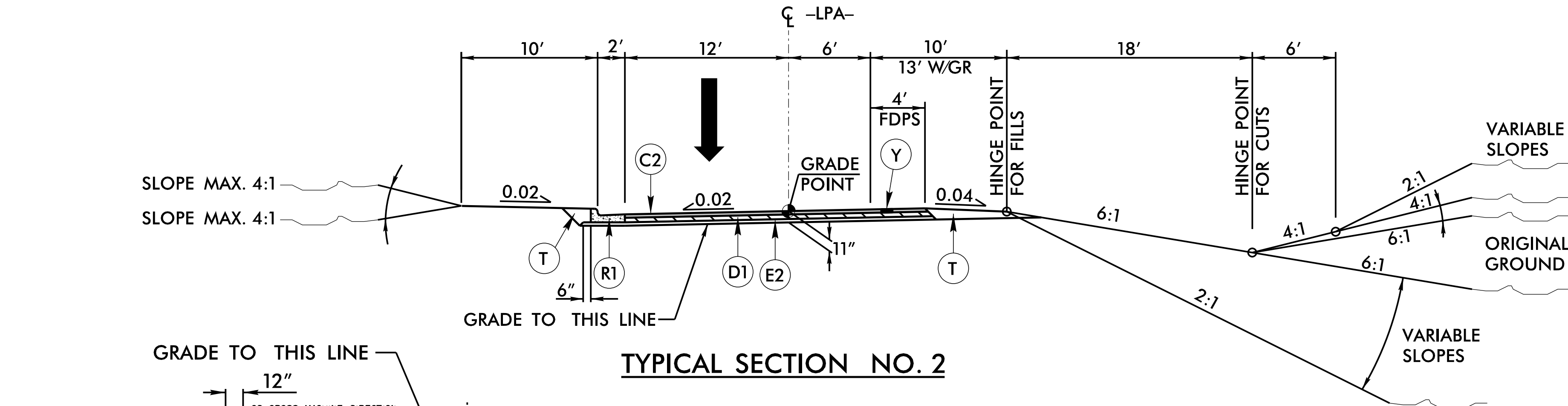




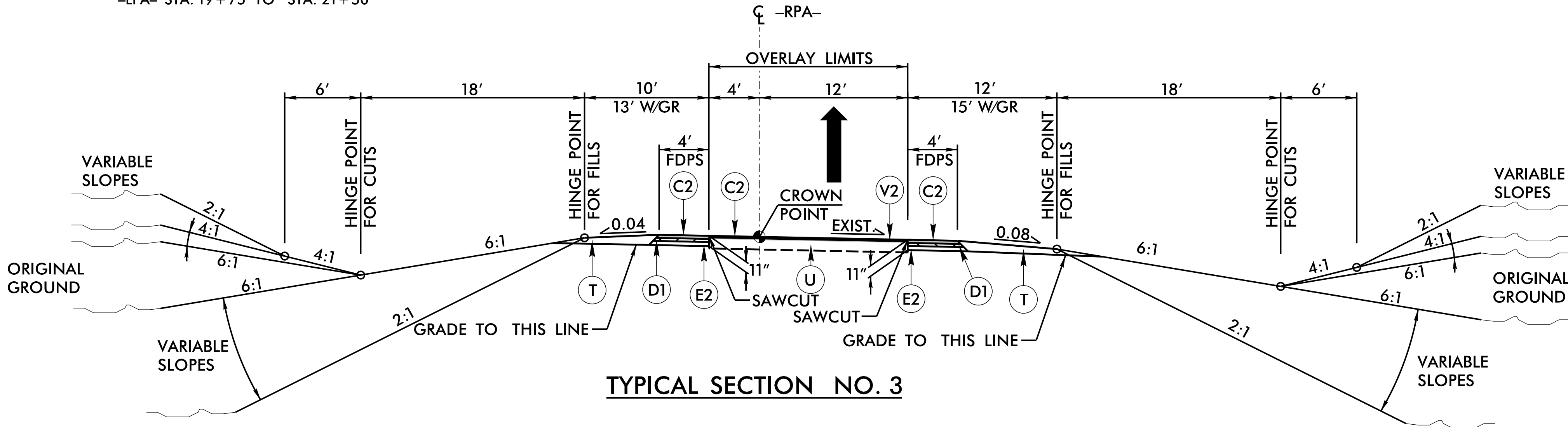
6/2/2026

5/5/2026 3:15 PM \\114-568 - NCDOT- I-5716 I-40 Lenoir-Rhyne Interchange\05-CAD\15716-Roadway\Proj\15716-r.dgn

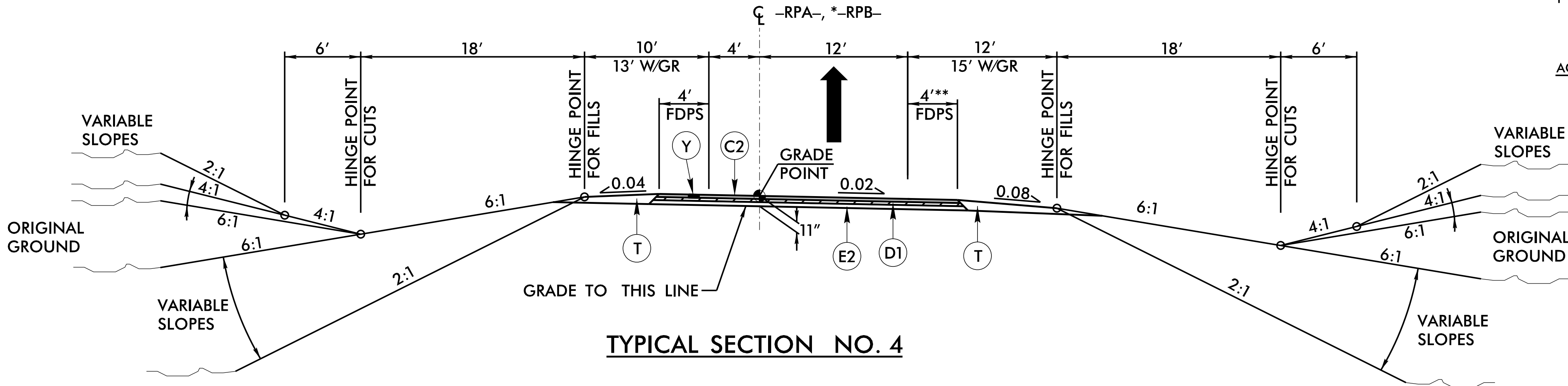
| PAVEMENT SCHEDULE<br>(FINAL PAVEMENT DESIGN) |                               |
|----------------------------------------------|-------------------------------|
| C2                                           | 3" S9.5C                      |
| C3                                           | VAR. S9.5C                    |
| D1                                           | 4" I19.0C                     |
| D2                                           | VAR. I19.0C                   |
| E1                                           | 8" B25.0C                     |
| E2                                           | 4" B25.0C                     |
| E3                                           | VAR. B25.0C                   |
| J1                                           | 4" ABC                        |
| K                                            | 8" CLASS IV                   |
| N                                            | GEOTEXTILE                    |
| R1                                           | 2'-6" C & G                   |
| R2                                           | 5" MONO. ISLAND<br>(KEYED IN) |
| S                                            | 4" CONC. SW                   |
| T                                            | EARTH MATERIAL                |
| U                                            | EXIST. PAVEMENT               |
| V1                                           | 1.5" MILLING                  |
| V2                                           | 3" MILLING                    |
| V3                                           | INCID. MILLING                |
| W                                            | WEDGING                       |
| Y                                            | RUMBLE STRIPS                 |



USE TYPICAL SECTION NO. 2  
-LPA- STA. 10+00.00 TO STA. 24+15.31



USE TYPICAL SECTION NO. 3  
-RPA- STA. 15+27.55 TO 17+75.78



USE TYPICAL SECTION NO. 4  
-RPA- STA. 17+75.78 TO 32+42.06  
-RPB- STA. 10+00.00 TO 27+63.51

\*REVERSE TYPICAL FOR -RPB-  
\*\*PAVE TO FACE OF GUARDRAIL

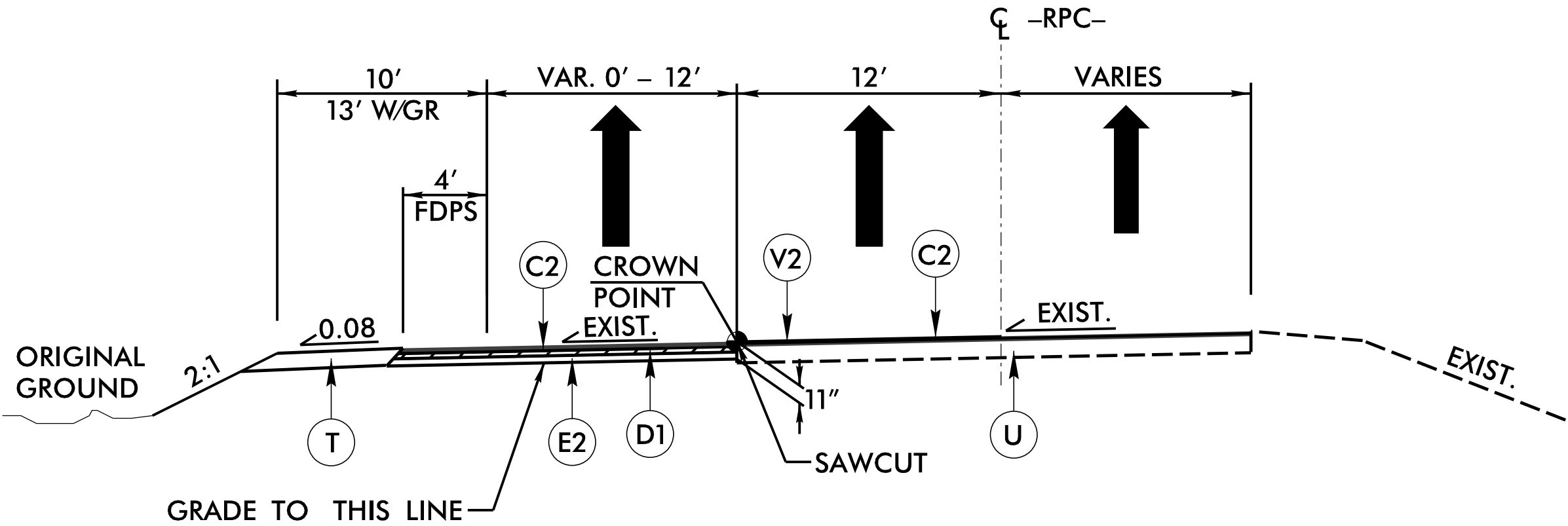
| PROJECT REFERENCE NO.                                                                                                                                                                                                    | SHEET NO.                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| 1-5716                                                                                                                                                                                                                   | 2A-2                                                             |
| ROADWAY DESIGN ENGINEER<br>JASON T. GADDY<br>045246<br>6/8/2026                                                                                                                                                          | PAVEMENT DESIGN ENGINEER<br>JASON T. GADDY<br>024964<br>6/9/2026 |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED                                                                                                                                                         |                                                                  |
| A. MORTON THOMAS AND ASSOCIATES, INC.<br>CONSULTING ENGINEERS<br>900 RIDGEFIELD DRIVE SUITE 325, RALEIGH, NC 27609<br>PHONE: 919.887.4300 FAX: 919.887.4301<br>EMAIL: AMT1@AMTEngineering.com<br>NCBELS LICENSE # F-1049 |                                                                  |



6/2/2026

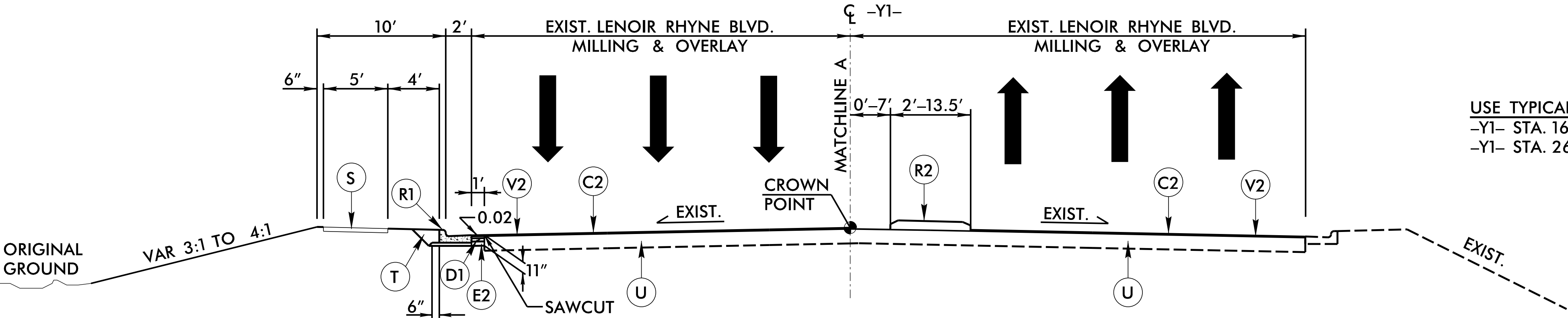
5/5/2026 3:15 PM NCDOT- I-5716 I-40 Lenoir-Rhyne Interchange\05-CAD\I5716-Roadway\Proj\I5716\_rdy-tyd-tyd.dgn

| PAVEMENT SCHEDULE<br>(FINAL PAVEMENT DESIGN) |                               |
|----------------------------------------------|-------------------------------|
| C2                                           | 3" S9.5C                      |
| C3                                           | VAR. S9.5C                    |
| D1                                           | 4" I19.0C                     |
| D2                                           | VAR. I19.0C                   |
| E1                                           | 8" B25.0C                     |
| E2                                           | 4" B25.0C                     |
| E3                                           | VAR. B25.0C                   |
| J1                                           | 4" ABC                        |
| K                                            | 8" CLASS IV                   |
| N                                            | GEOTEXTILE                    |
| R1                                           | 2'-6" C & G                   |
| R2                                           | 5" MONO. ISLAND<br>(KEYED IN) |
| S                                            | 4" CONC. SW                   |
| T                                            | EARTH MATERIAL                |
| U                                            | EXIST. PAVEMENT               |
| V1                                           | 1.5" MILLING                  |
| V2                                           | 3" MILLING                    |
| V3                                           | INCID. MILLING                |
| W                                            | WEDGING                       |
| Y                                            | RUMBLE STRIPS                 |



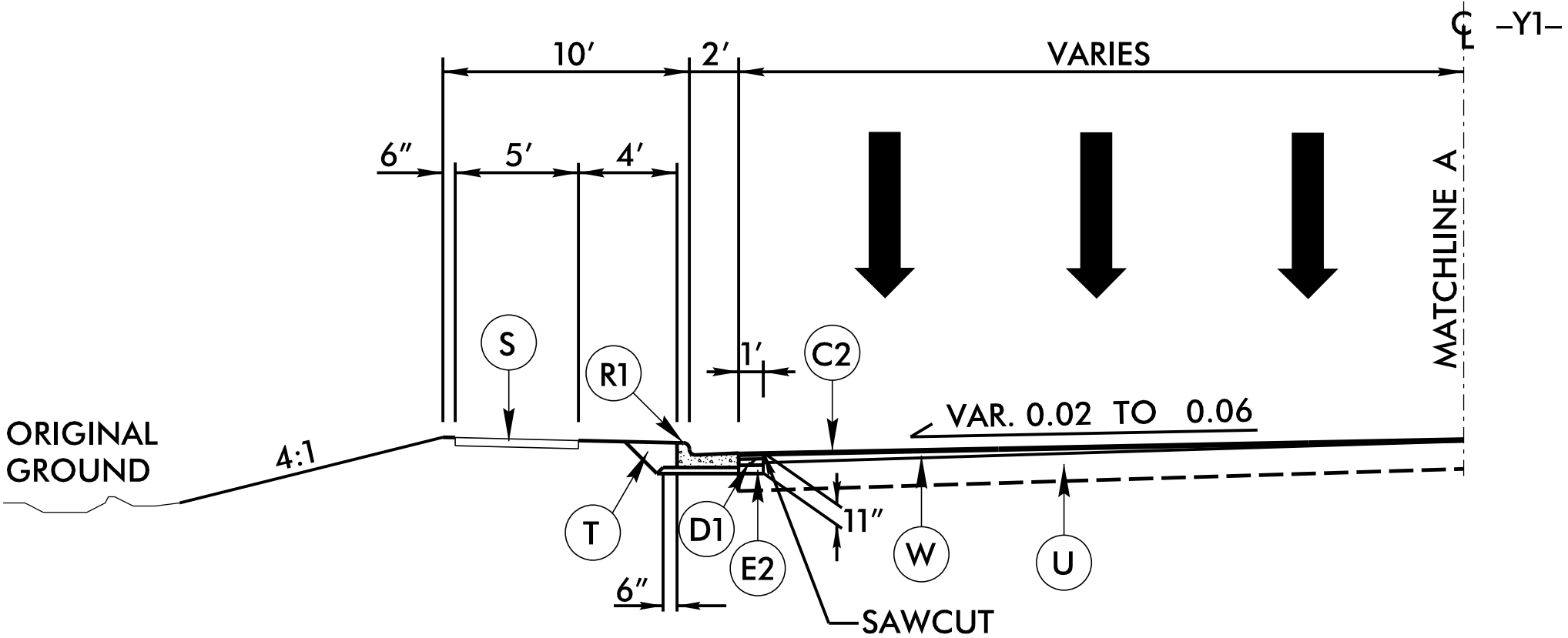
TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 5  
-RPC- STA. 21+28.56 TO 28+56.21



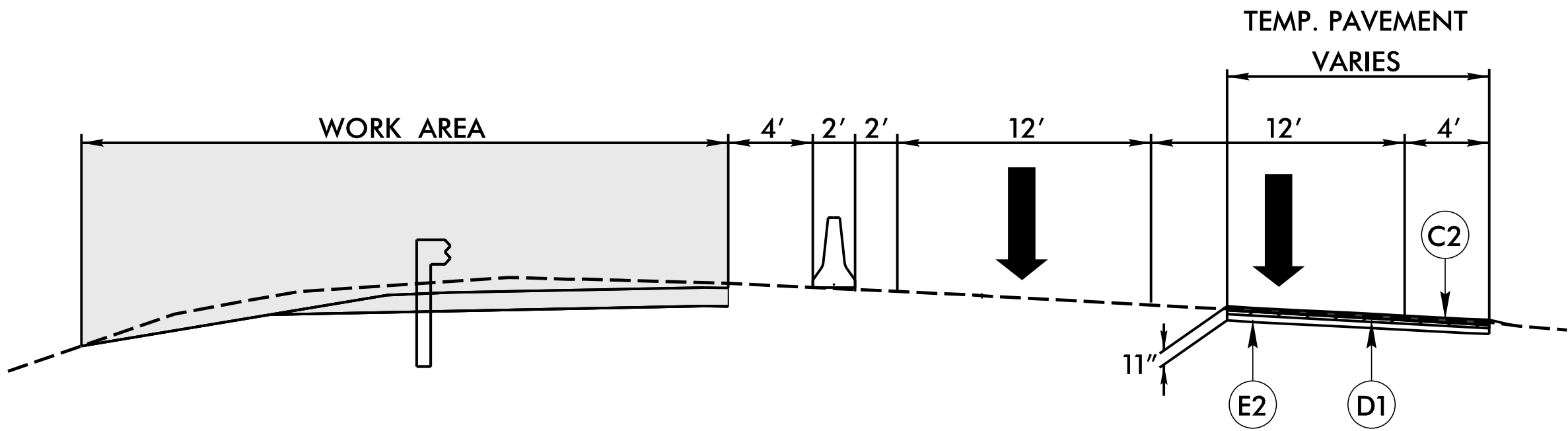
TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 6  
-Y1- STA. 16+64.00 TO STA. 23+60.87 (BEGIN EXIST. BRIDGE)  
-Y1- STA. 26+58.73 (END EXIST. BRIDGE) TO STA. 35+10.00



INSET NO. 6A

-Y1- STA. 27+50.00 TO STA. 31+43.00



-L- TEMPORARY PAVEMENT  
SEE TMP PLANS FOR LOCATIONS

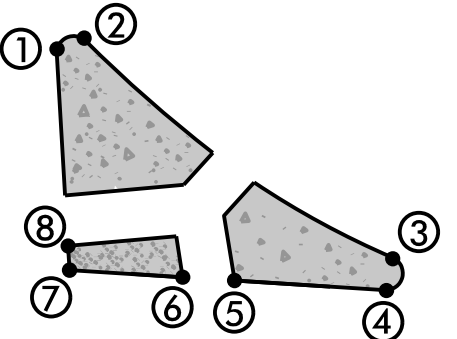
|                                                                                                                                                                                                                                     |  |                                                                                                                                      |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------|--|
| PROJECT REFERENCE NO.<br><b>1-5716</b>                                                                                                                                                                                              |  | SHEET NO.<br><b>2A-3</b>                                                                                                             |  |
| ROADWAY DESIGN ENGINEER<br>DocuSigned by<br>A. MORTON THOMAS AND ASSOCIATES, INC.<br>SEAL<br>045246<br>JASON T. GADDY<br>6/8/2026                                                                                                   |  | PAVEMENT DESIGN ENGINEER<br>DocuSigned by<br>A. MORTON THOMAS AND ASSOCIATES, INC.<br>SEAL<br>024964<br>JASON T. HOLLAND<br>6/9/2026 |  |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED                                                                                                                                                                    |  |                                                                                                                                      |  |
| <b>AMT</b> A. MORTON THOMAS AND ASSOCIATES, INC.<br>CONSULTING ENGINEERS<br>900 RIDGEFIELD DRIVE SUITE 325, RALEIGH, NC 27609<br>PHONE: 919.881.4500 FAX: 919.881.4501<br>EMAIL: AMT1@AMTENGINEERING.COM<br>NCBELS LICENSE # F-1049 |  |                                                                                                                                      |  |



8/17/99  
4/3/2026  
X:\Projects\114-568 - NCDOT- I-5716, I-40 Lenoir-Rhine Interchange\05-CAD\15716\Roadway\Proj\15716\_Rd+ps\sh02B.1.dgn  
scott.baker

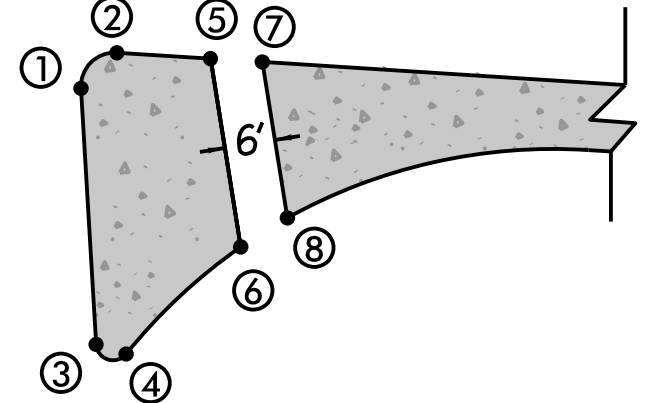
INTERSECTION DETAIL -RPA-, -LPA- & -RPB- AT -Y1-

**INSET A**

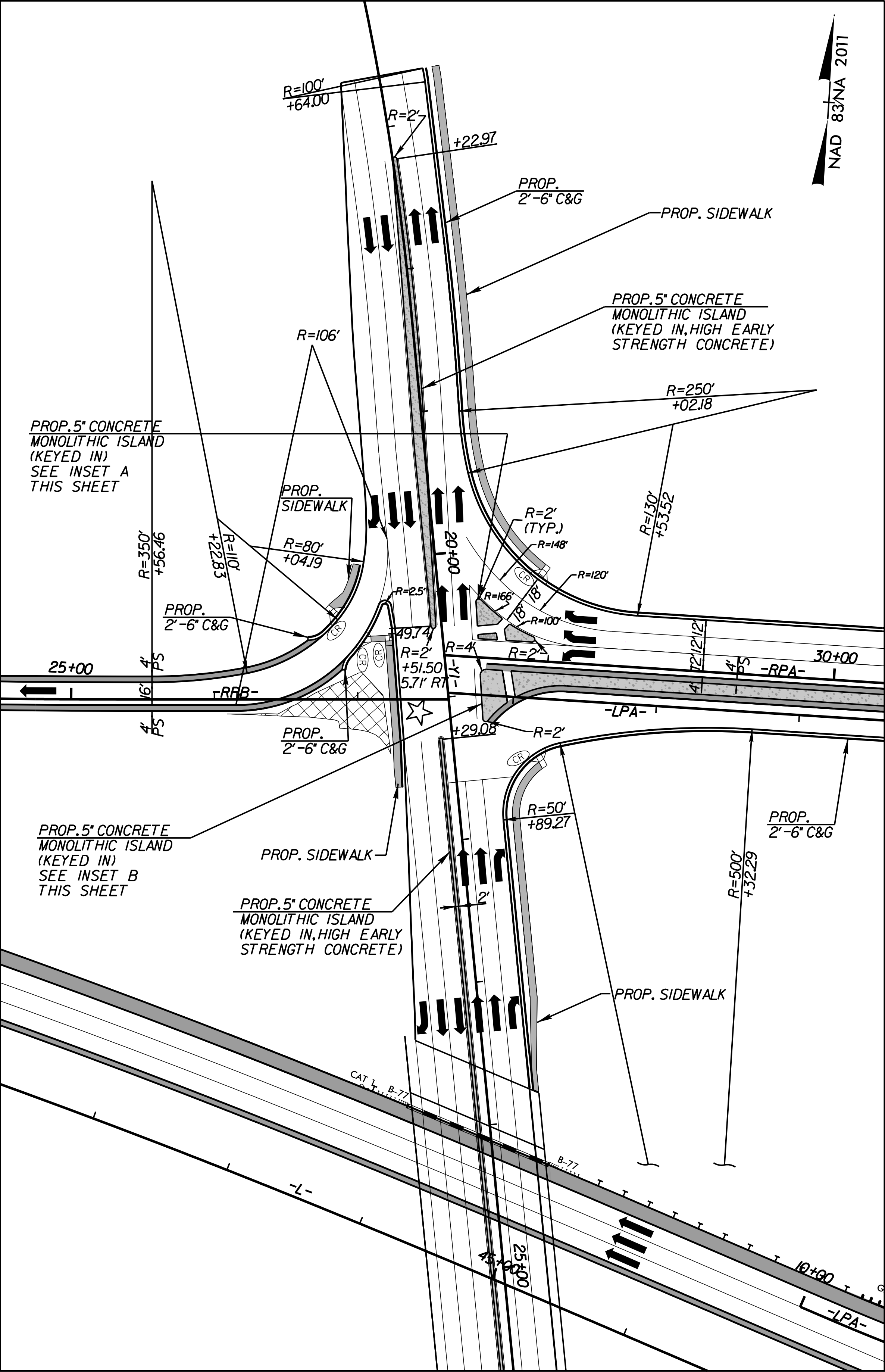


| LINE | STATION | OFFSET               |
|------|---------|----------------------|
| ①    | -RPA-   | 32 + 52.78 38.48' RT |
| ②    | -RPA-   | 32 + 49.48 40.23' RT |
| ③    | -RPA-   | 32 + 11.53 16.88' RT |
| ④    | -RPA-   | 32 + 12.20 13.00' RT |
| ⑤    | -RPA-   | 32 + 30.06 13.00' RT |
| ⑥    | -RPA-   | 32 + 36.21 13.00' RT |
| ⑦    | -RPA-   | 32 + 49.66 13.00' RT |
| ⑧    | -RPA-   | 32 + 50.01 15.84' RT |

**INSET B**



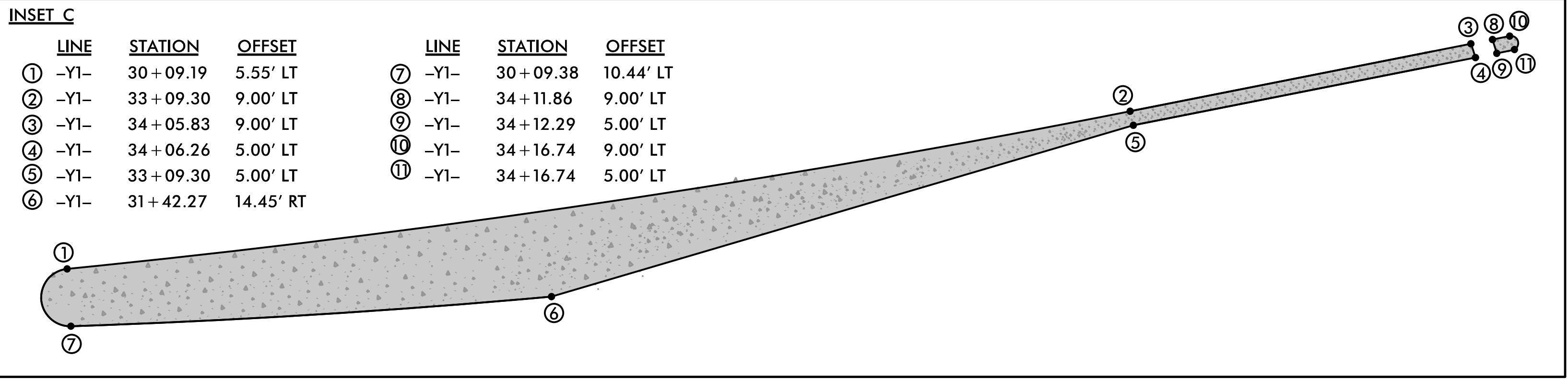
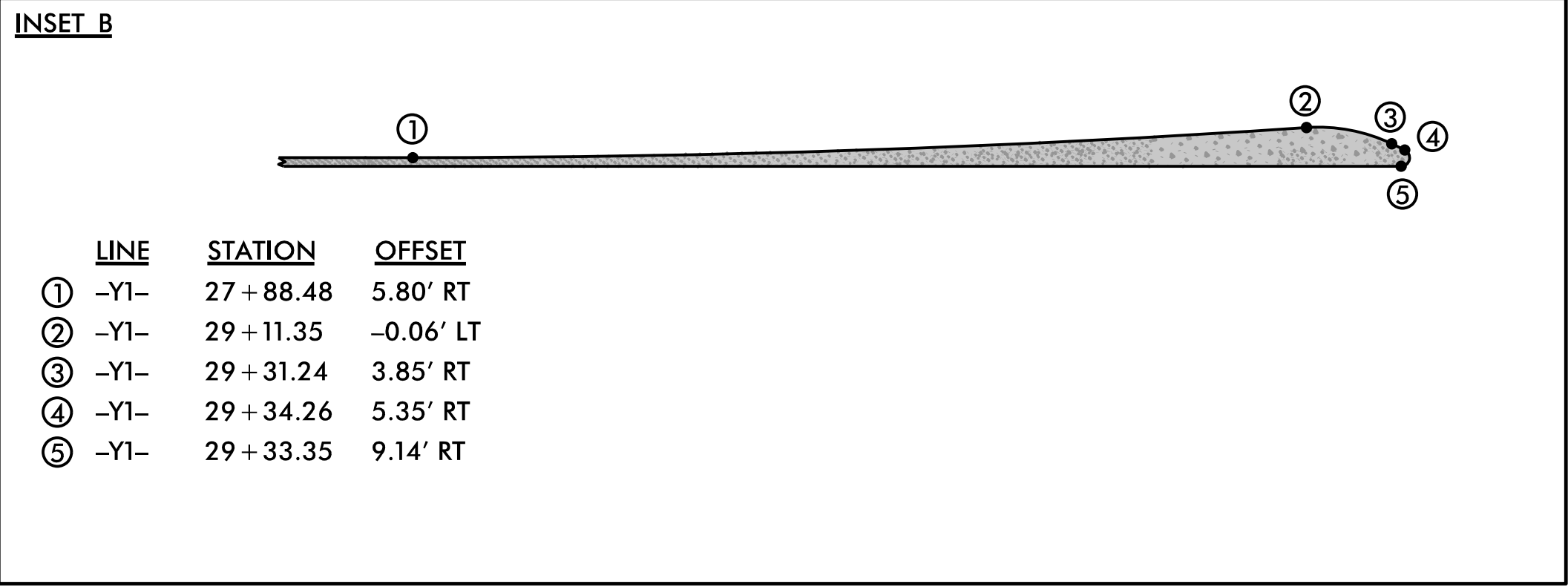
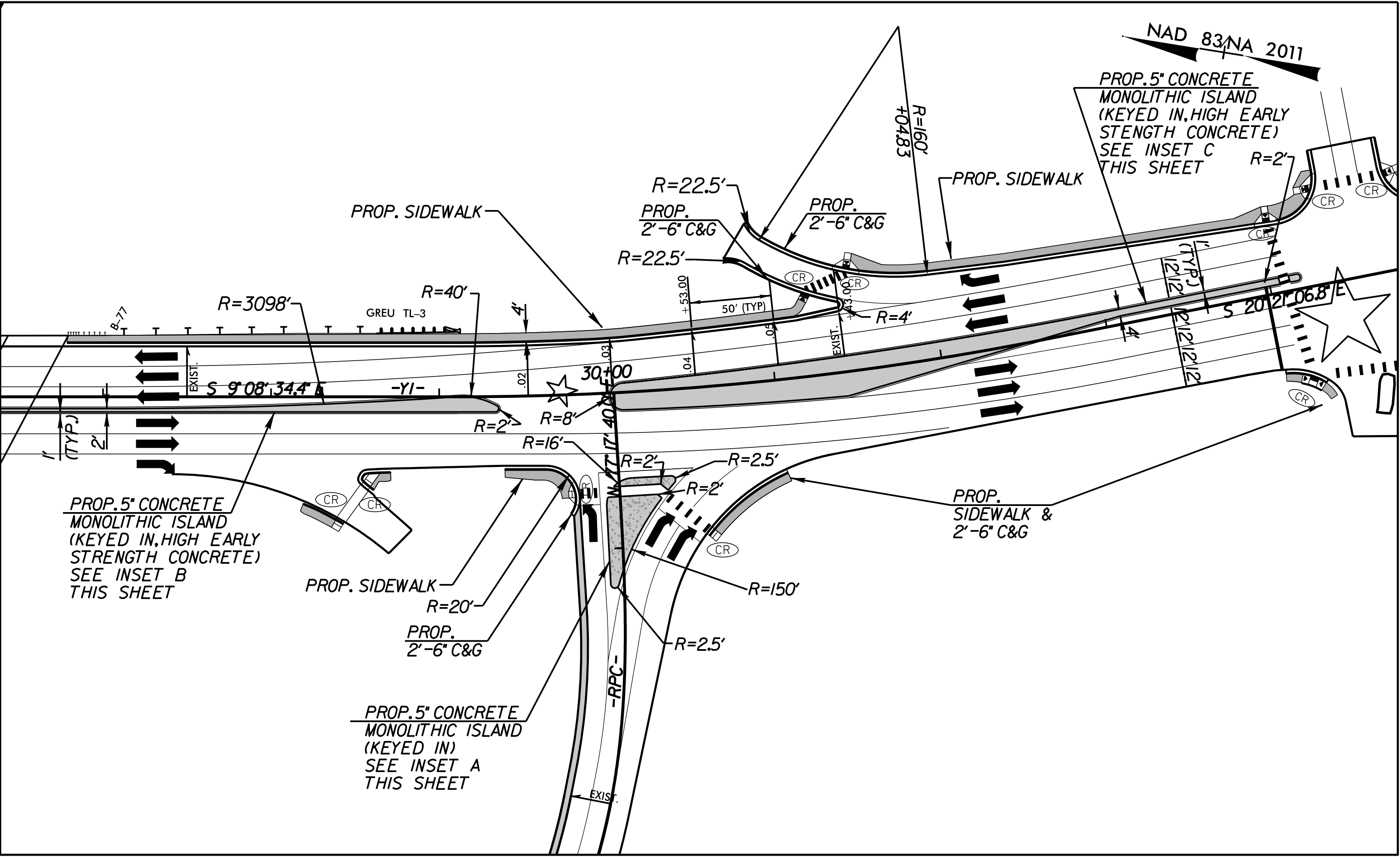
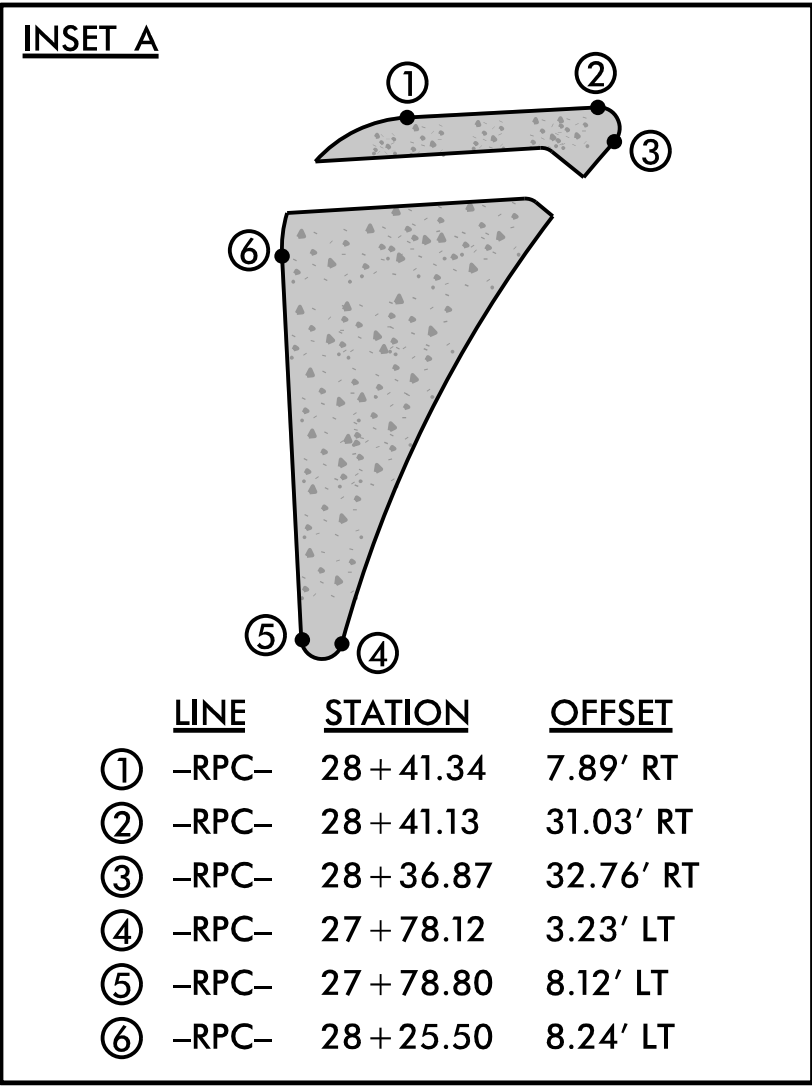
| LINE | STATION | OFFSET               |
|------|---------|----------------------|
| ①    | -Y1-    | 20 + 87.27 23.60' LT |
| ②    | -Y1-    | 20 + 83.47 28.23' LT |
| ③    | -Y1-    | 21 + 17.66 22.45' LT |
| ④    | -Y1-    | 21 + 19.13 25.88' LT |
| ⑤    | -Y1-    | 20 + 85.24 39.20' LT |
| ⑥    | -Y1-    | 21 + 07.81 40.64' LT |
| ⑦    | -Y1-    | 20 + 86.22 45.28' LT |
| ⑧    | -Y1-    | 21 + 04.91 46.47' LT |



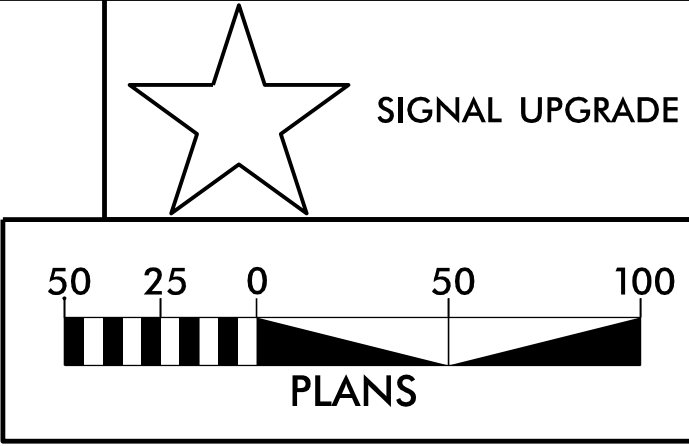
| PROJECT REFERENCE NO.                                                                                                                                                                                                            | SHEET NO.                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| 1-5716                                                                                                                                                                                                                           | 2B-1                                                                     |
| R/W SHEET NO.                                                                                                                                                                                                                    |                                                                          |
| ROADWAY DESIGN ENGINEER<br>Signed by<br>JASON T. GADY<br>045246<br>6/8/2026                                                                                                                                                      | HYDRAULICS ENGINEER<br>Signed by<br>OPHUA G. DALTON<br>26971<br>6/8/2026 |
| <b>DOCUMENT NOT CONSIDERED FINAL<br/>UNLESS ALL SIGNATURES COMPLETED</b>                                                                                                                                                         |                                                                          |
| <b>AMT</b> A. MORTON THOMAS AND ASSOCIATES, INC.<br>CONSULTING ENGINEERS<br>900 RIDGEFIELD DRIVE, SUITE 325, RALEIGH, NC 27609<br>(919) 855-9800 FAX (919) 855-3881<br>EMAIL: AMT1@AMTENGINEERING.COM<br>NCBELS LICENSE # F-1049 |                                                                          |
| ★ SIGNAL UPGRADE                                                                                                                                                                                                                 |                                                                          |
| REMOVE EXIST. PAVEMENT                                                                                                                                                                                                           |                                                                          |
| 50 25 0 50 100<br>PLANS                                                                                                                                                                                                          |                                                                          |



INTERSECTION DETAIL -RPC- AT -Y1-



| PROJECT REFERENCE NO.                                            | SHEET NO.           |
|------------------------------------------------------------------|---------------------|
| I-5716                                                           | 2B-2                |
| R/W SHEET NO.                                                    |                     |
| ROADWAY DESIGN ENGINEER                                          | HYDRAULICS ENGINEER |
|                                                                  |                     |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED |                     |
|                                                                  |                     |





12/9912/9912/99







| PROJECT REFERENCE NO. | SHEET NO. |
|-----------------------|-----------|
| I-5716                | 2C-2      |

STATE OF  
NORTH CAROLINA  
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**

**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.

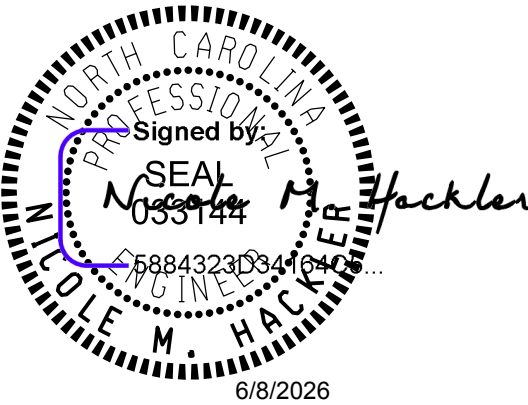
REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

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.



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

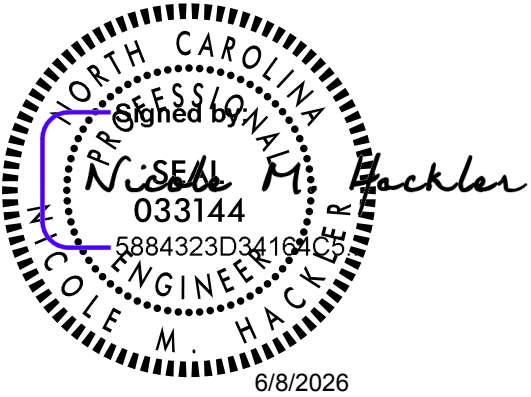
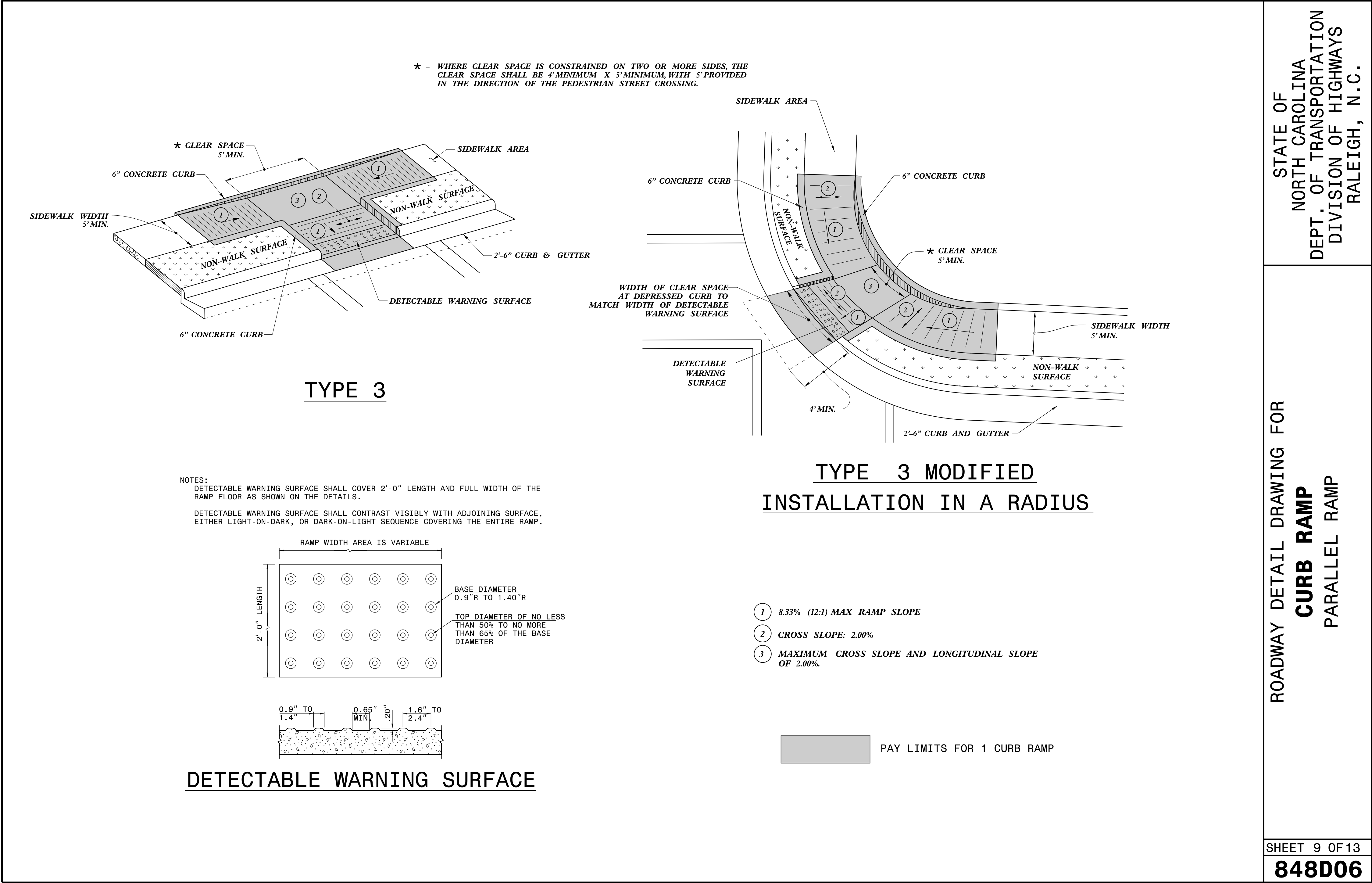
**CONTRACTS STANDARDS  
AND DEVELOPMENT UNIT**  
Office 919-707-6950 FAX 919-250-4119

**SEE TITLE BLOCK**

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



| PROJECT REFERENCE NO. | SHEET NO. |
|-----------------------|-----------|
| I-5716                | 2C-3      |



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

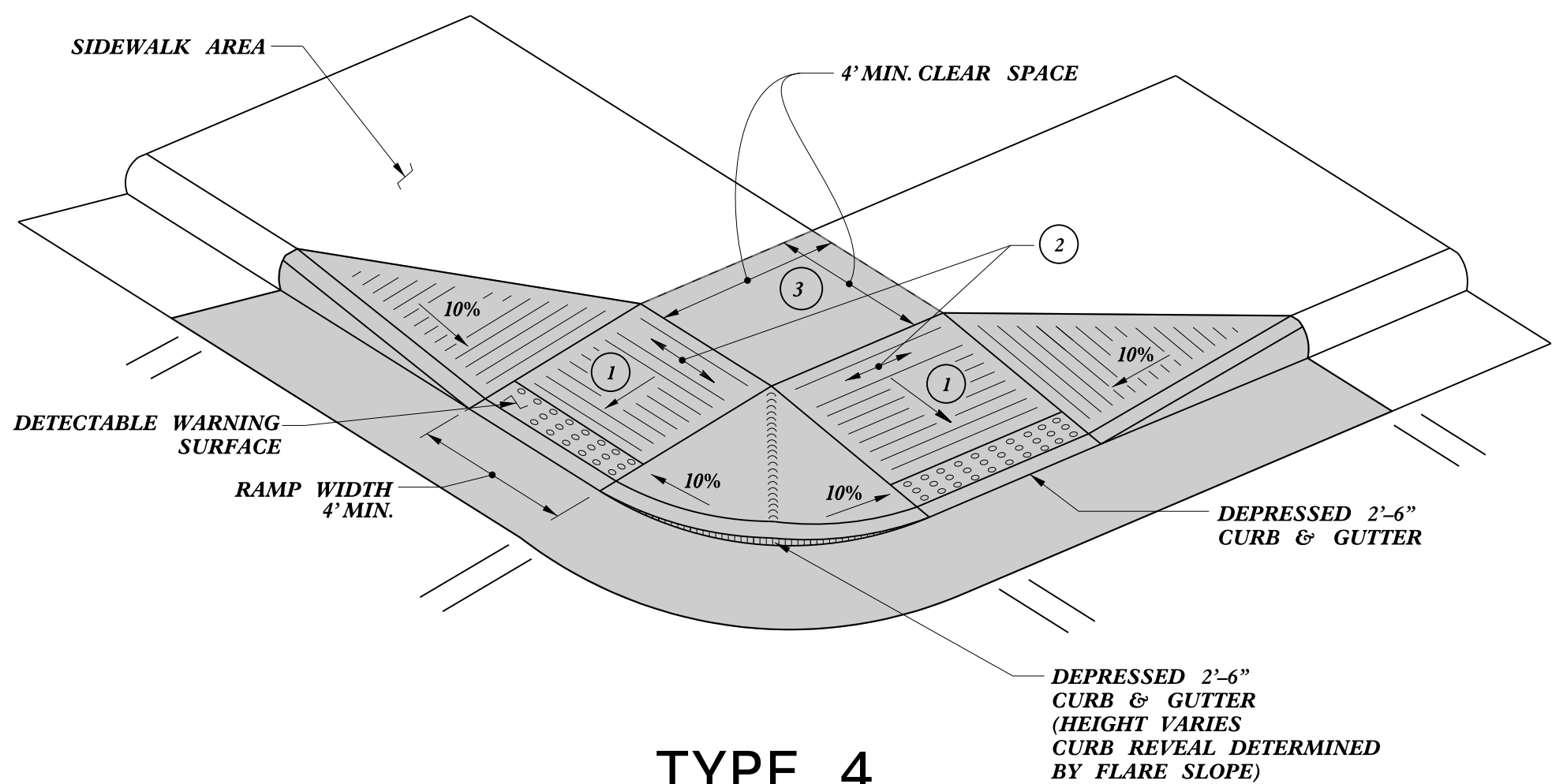
CONTRACTS STANDARDS  
AND DEVELOPMENT UNIT  
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

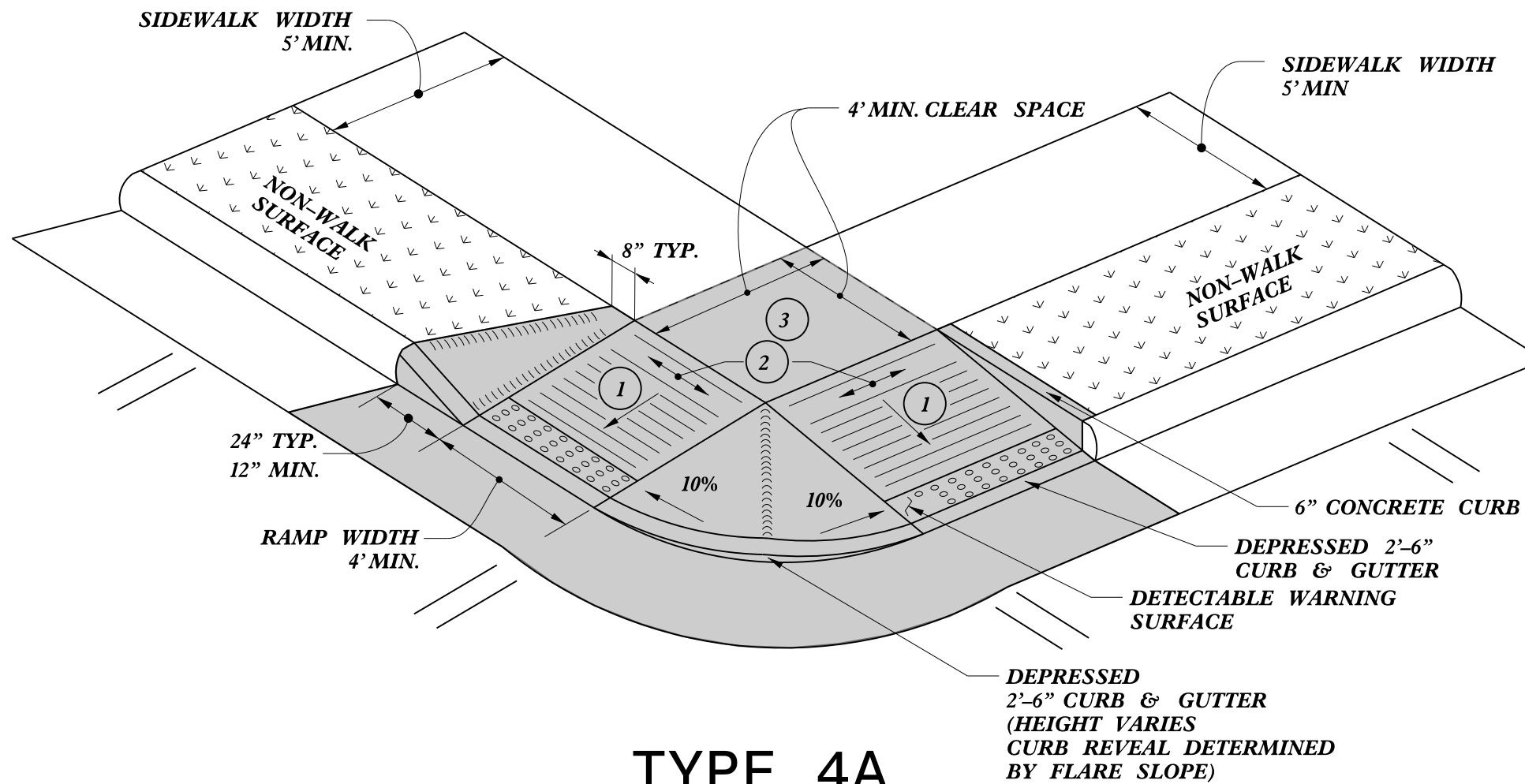
ORIGINAL BY: S.CALHOUN DATE: 12-22-2023  
MODIFIED BY: DATE:  
CHECKED BY: DATE:  
FILE SPEC.: special\_details\nmhackler\DO609.dgn



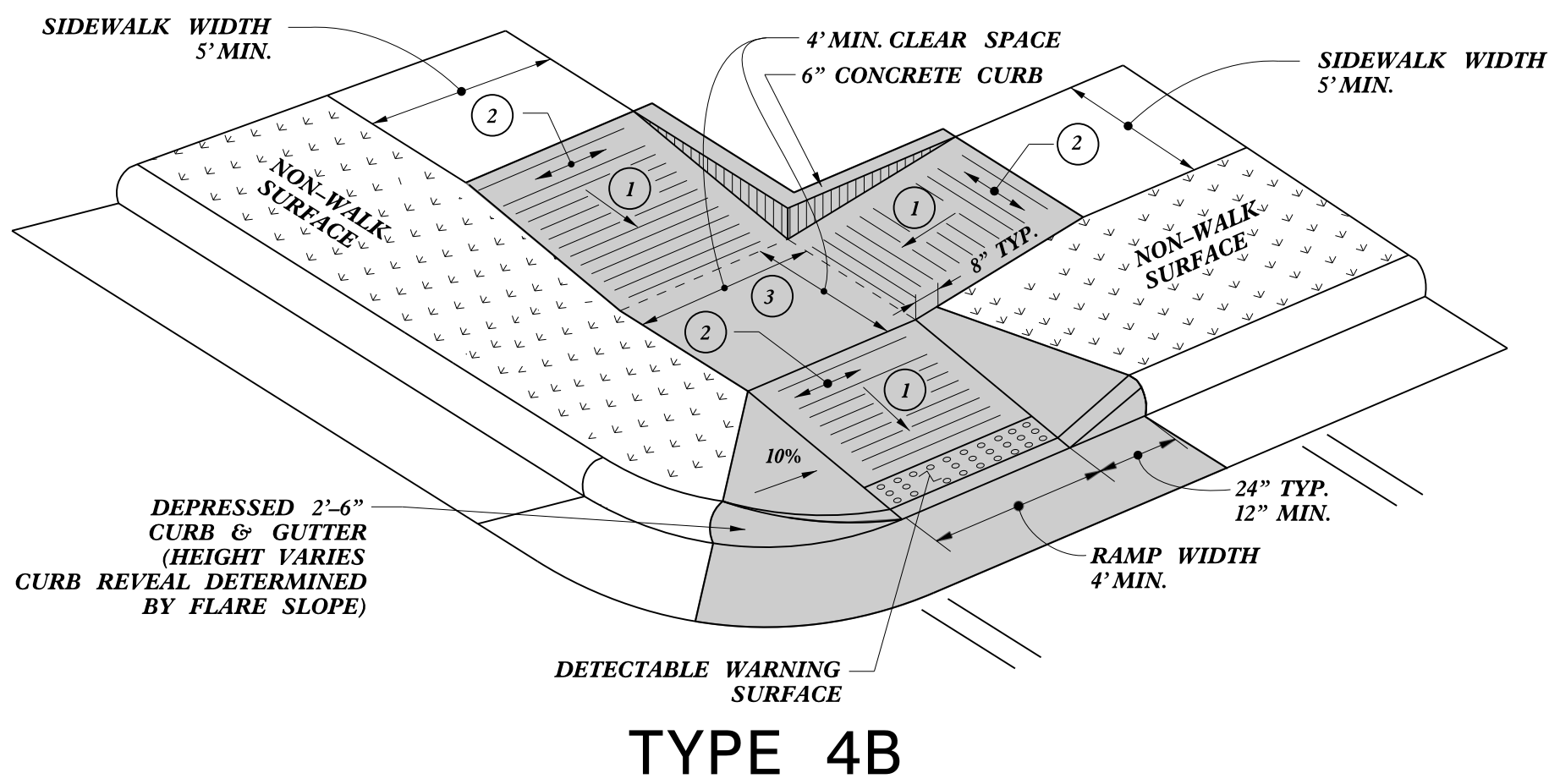
| PROJECT REFERENCE NO. | SHEET NO. |
|-----------------------|-----------|
| I-5716                | 2C-4      |



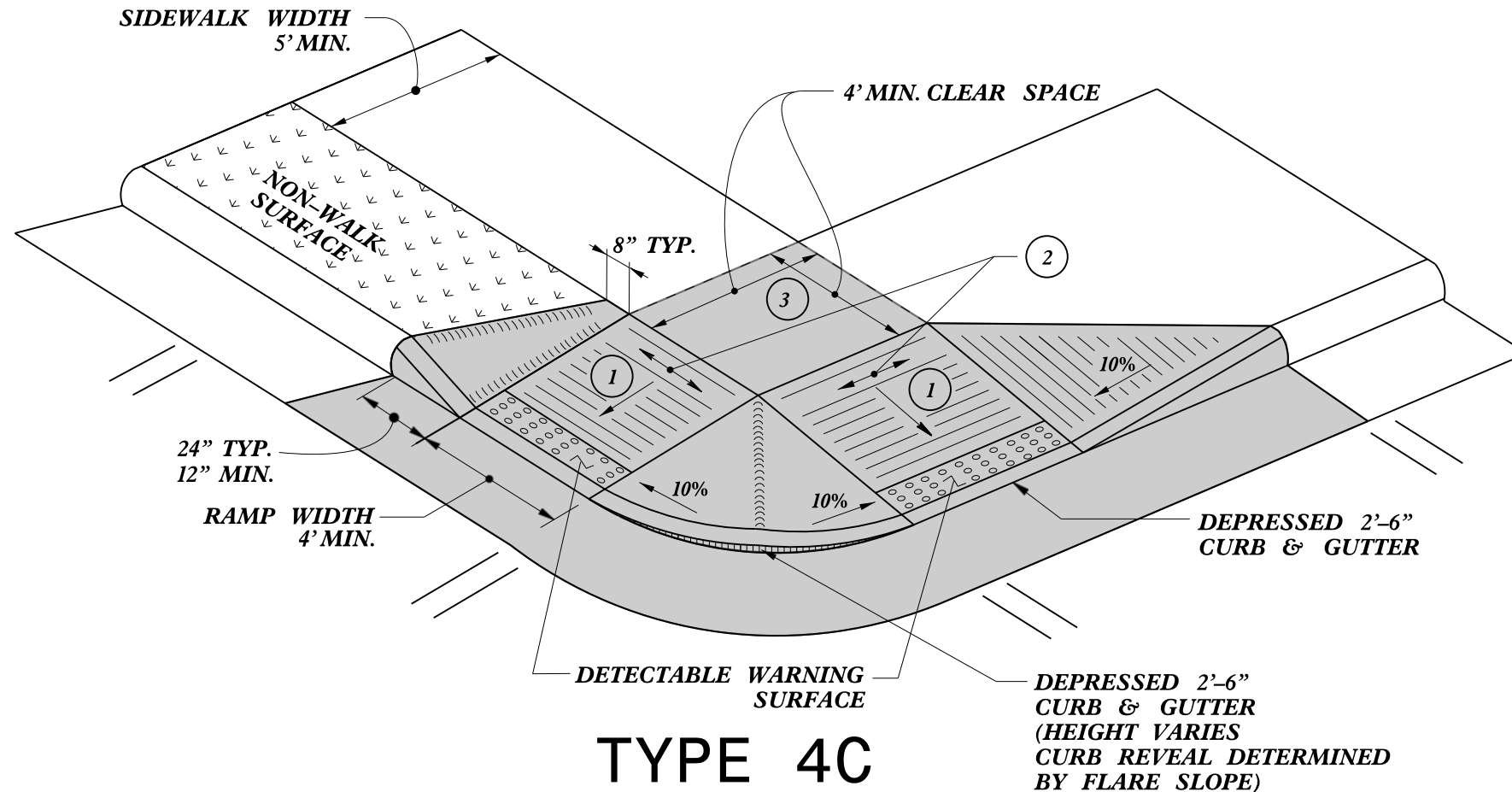
TYPE 4



TYPE 4A

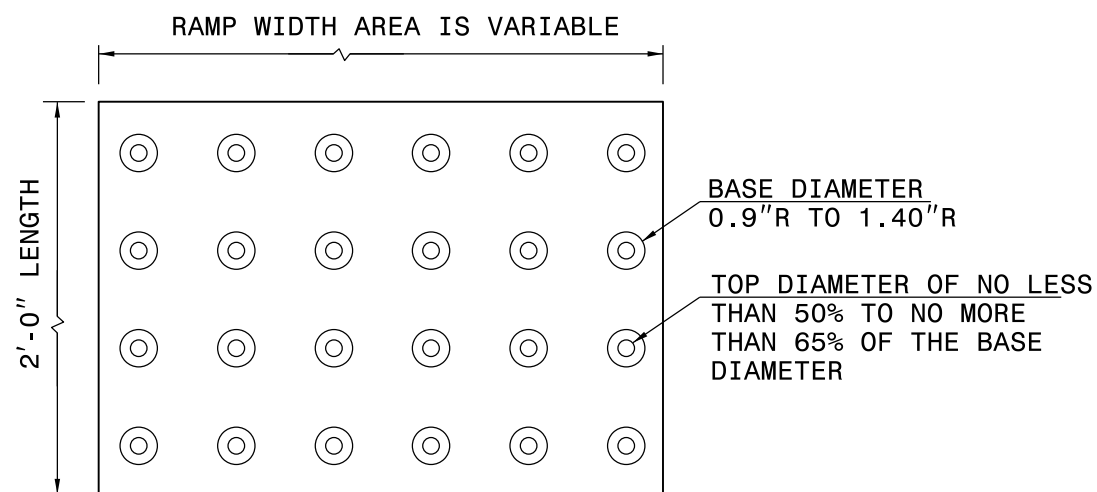


TYPE 4B



TYPE 4C

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



DETECTABLE WARNING SURFACE

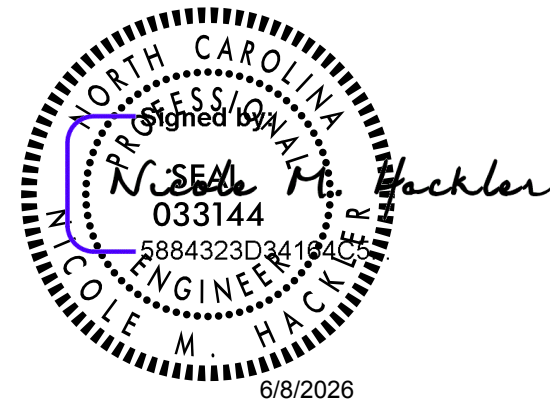
- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%.

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

STATE OF  
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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

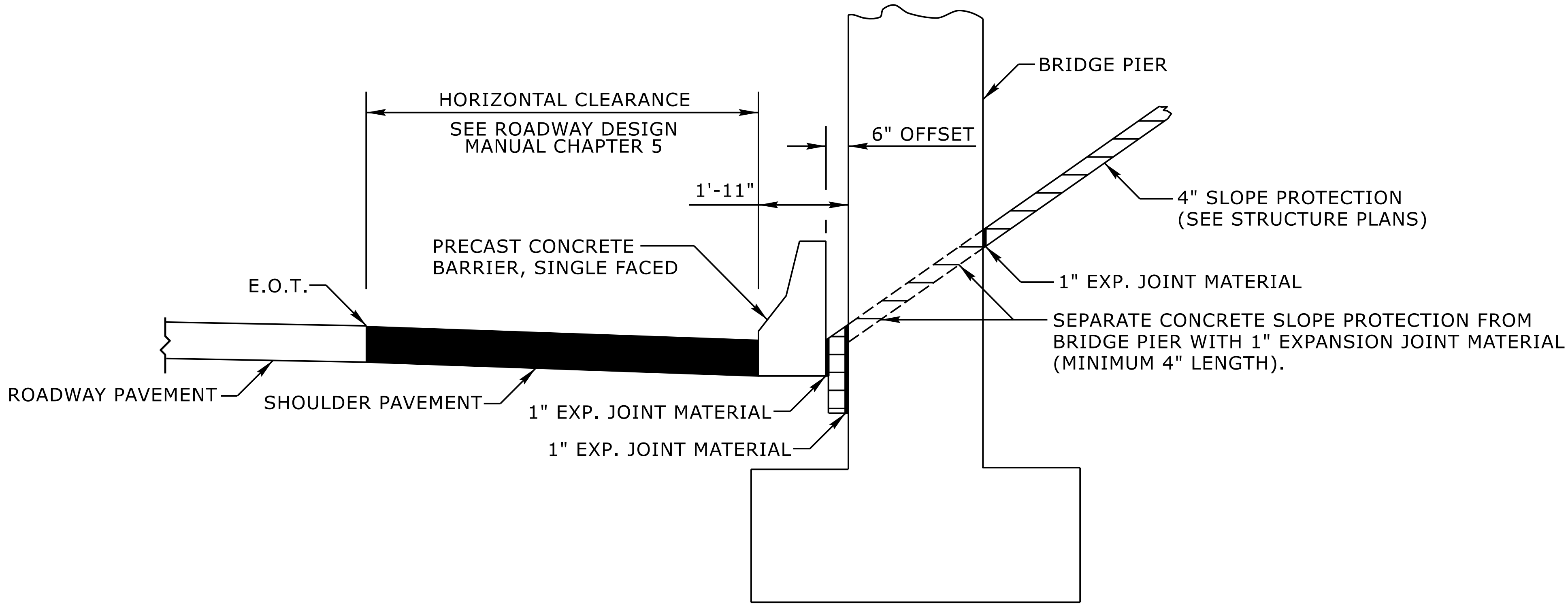
CONTRACTS STANDARDS  
AND DEVELOPMENT UNIT  
Office 919-707-6950 FAX 919-250-4119

**SEE TITLE BLOCK**

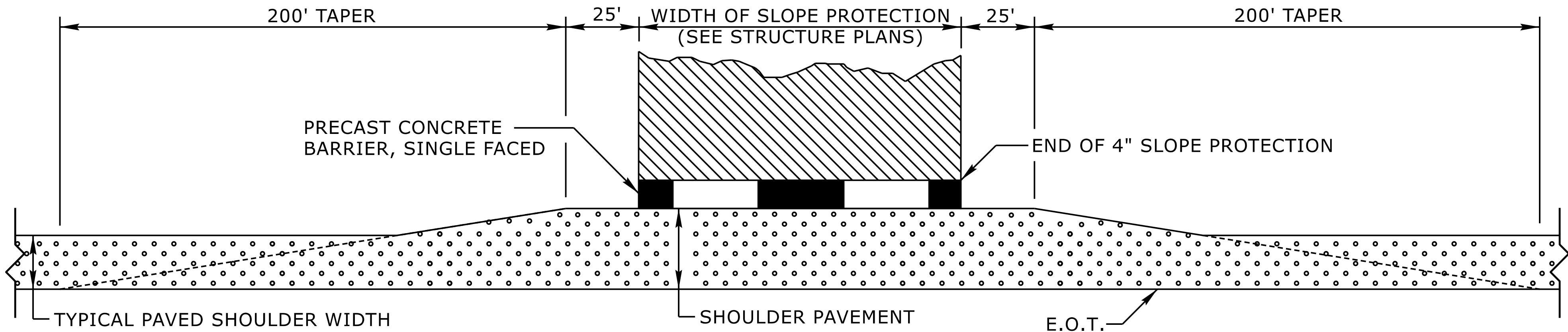
ORIGINAL BY: S.CALHOUN DATE: 12-22-2023  
MODIFIED BY: DATE:  
CHECKED BY: DATE:  
FILE SPEC.: special\_details\nmhackler\848D0610.dgn



| PROJECT REFERENCE NO. | SHEET NO. |
|-----------------------|-----------|
| I-5716                | 2C-5      |



ELEVATION



PLAN

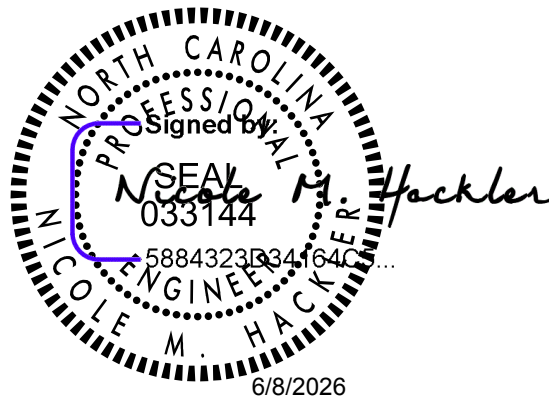
- NOTES:
1. SHOULDER PAVEMENT SHOULD BE CONSTRUCTED AS SHOWN IN THE PLANS WITH THE SAME PAVEMENT DESIGN USED ON THE PAVED SHOULDER APPROACHING THE STRUCTURE UNDERPASS.
  2. SLOPE PROTECTION SHALL BE REINFORCED CONCRETE IN ACCORDANCE WITH SECTION 462.

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

ROADWAY DETAIL DRAWING FOR  
**GUIDE FOR PAVING  
SHOULDERS UNDER BRIDGES**  
METHOD I

SHEET 1 OF 1

**610D01**



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: L.SMITH DATE: 9-17-2025  
MODIFIED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
FILE SPEC.: \_\_\_\_\_



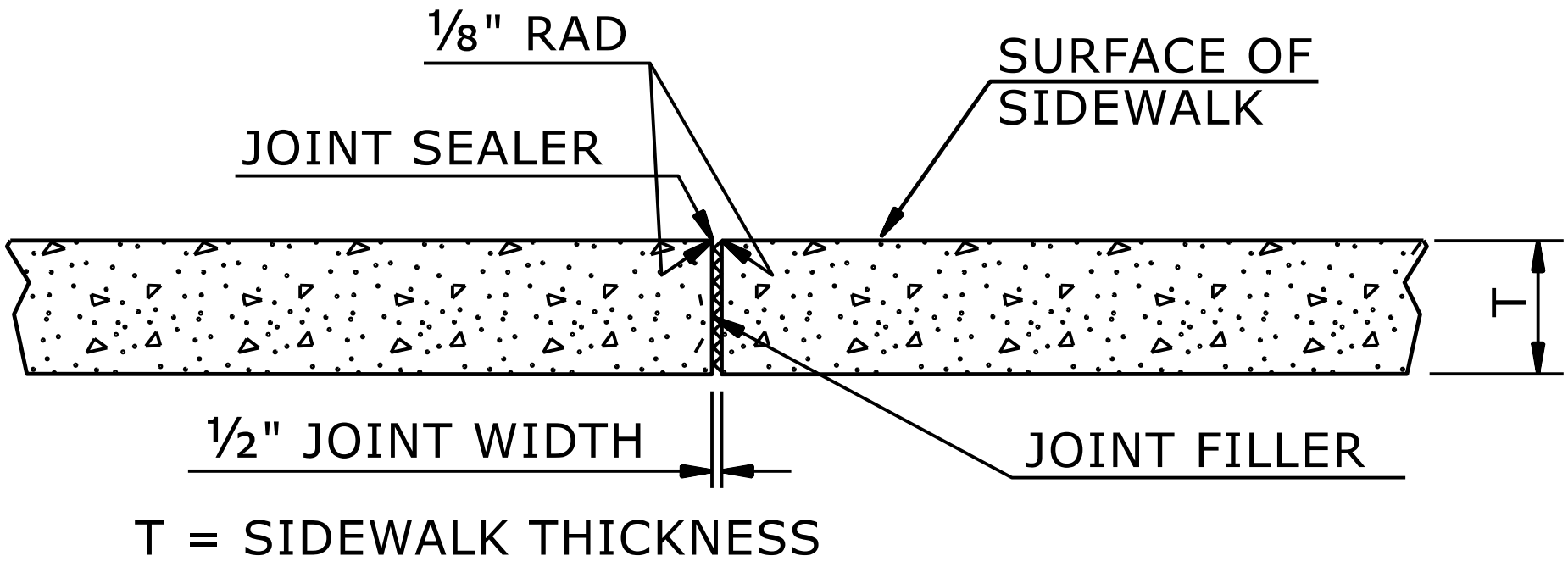
| PROJECT REFERENCE NO. | SHEET NO. |
|-----------------------|-----------|
| I-5716                | 2C-6      |

NOTES:

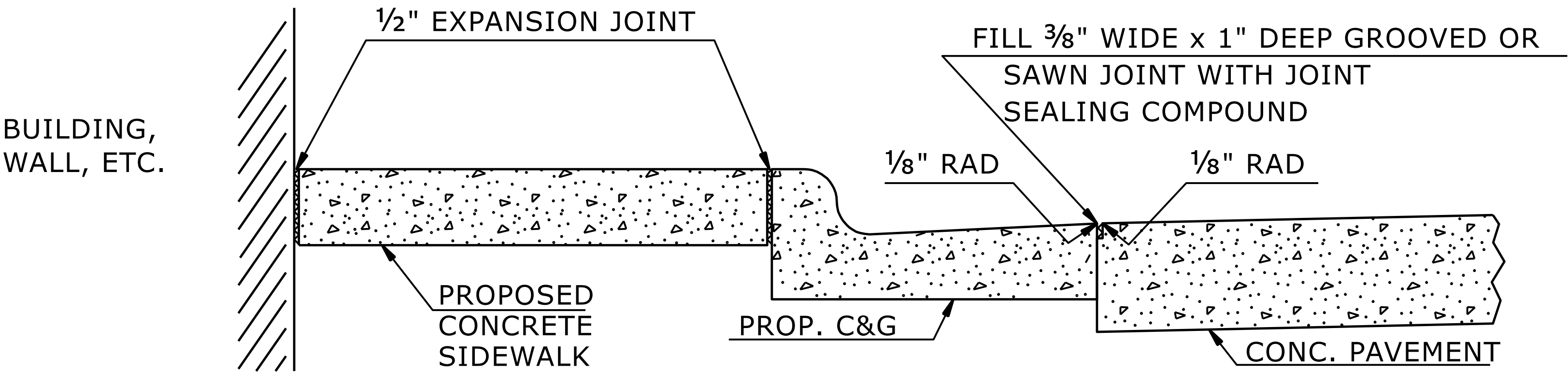
CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

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

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



TRANSVERSE EXPANSION JOINT  
IN SIDEWALK



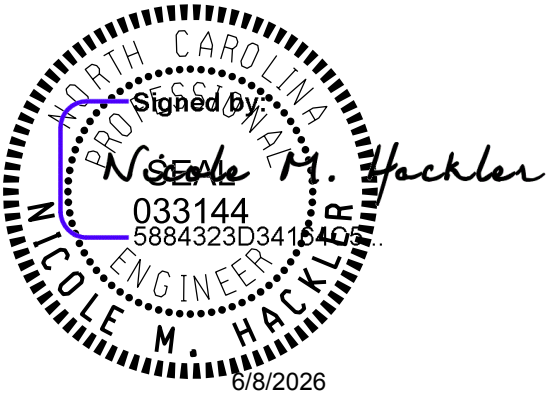
DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

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

ROADWAY DETAIL DRAWING FOR  
**CONCRETE SIDEWALK**

SHEET 1 OF 1

**848D01**



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**CONTRACTS STANDARDS  
AND DEVELOPMENT UNIT**

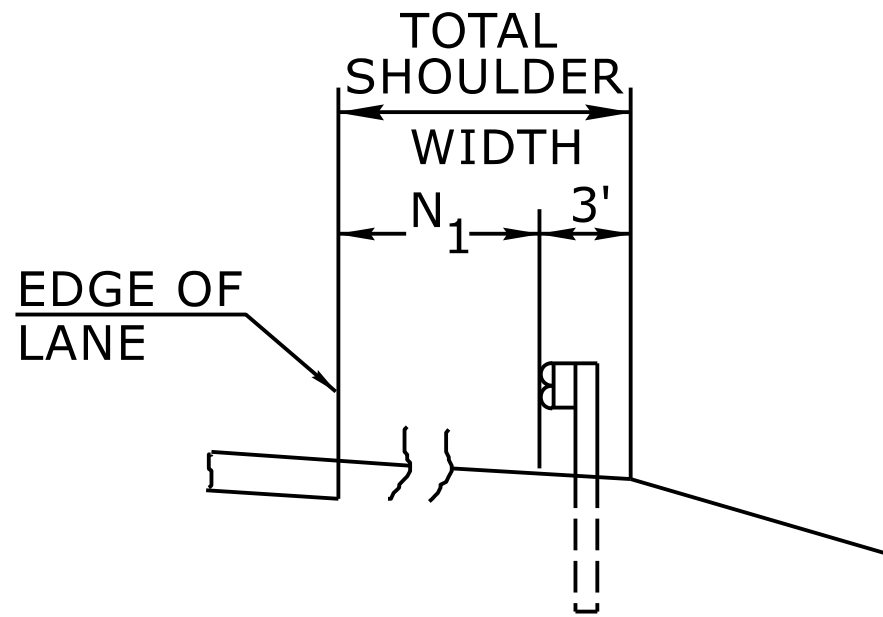
Office 919-707-6950 FAX 919-250-4119

**SEE TITLE BLOCK**

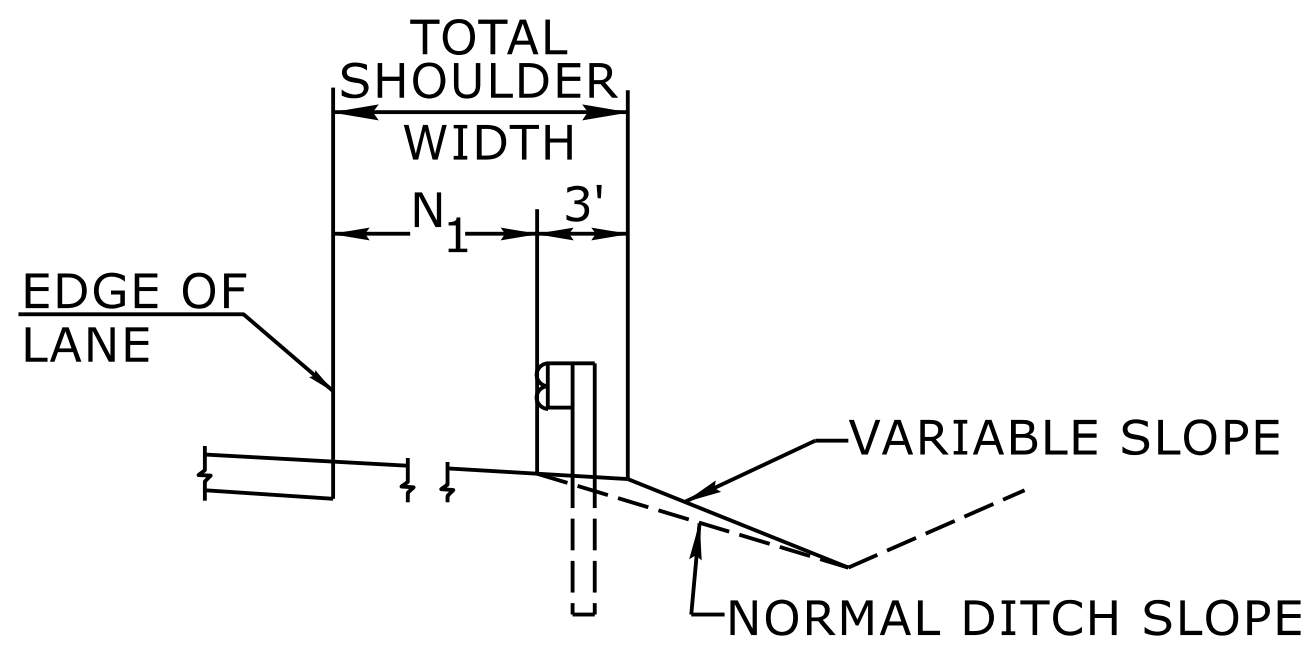
ORIGINAL BY: S.CALHOUN DATE: 7-25-2024  
MODIFIED BY: DATE:  
CHECKED BY: DATE:  
FILE SPEC.: DATE:



| PROJECT REFERENCE NO. | SHEET NO. |
|-----------------------|-----------|
| I-5716                | 2C-7      |

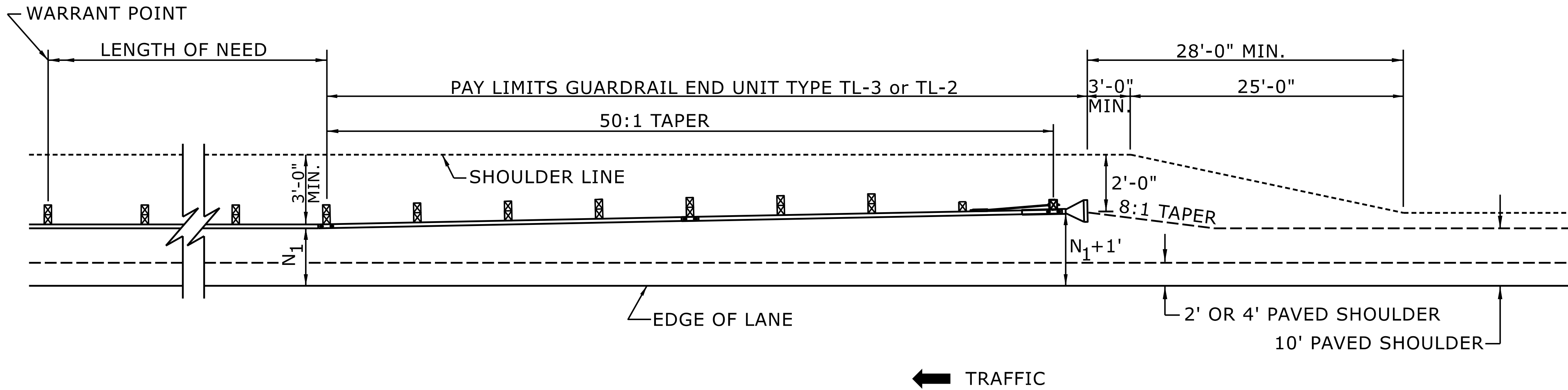


FILL SECTION



CUT SECTION

"N<sub>1</sub>"= DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL WHERE GUARDRAIL IS PARALLEL TO LANE.



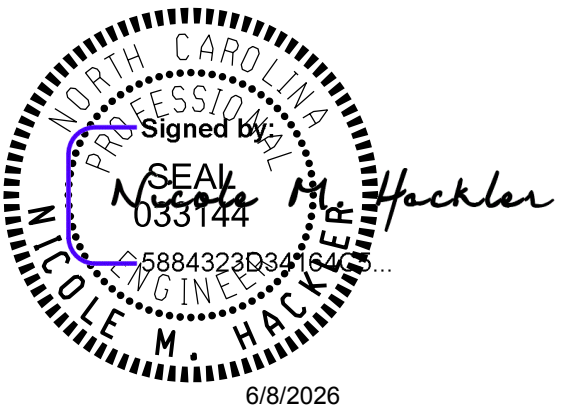
FOR POSTED SPEEDS ≥ 45mph USE GREU TYPE TL-3  
FOR POSTED SPEEDS < 45mph USE GREU TYPE TL-2

DETAIL OF BEGINNING OF GUARDRAIL IN CUT OR FILL SECTION

ROADWAY DETAIL DRAWING FOR  
**GUARDRAIL PLACEMENT**

SHEET 6 OF 15  
**862D01**

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



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**CONTRACTS STANDARDS  
AND DEVELOPMENT UNIT**

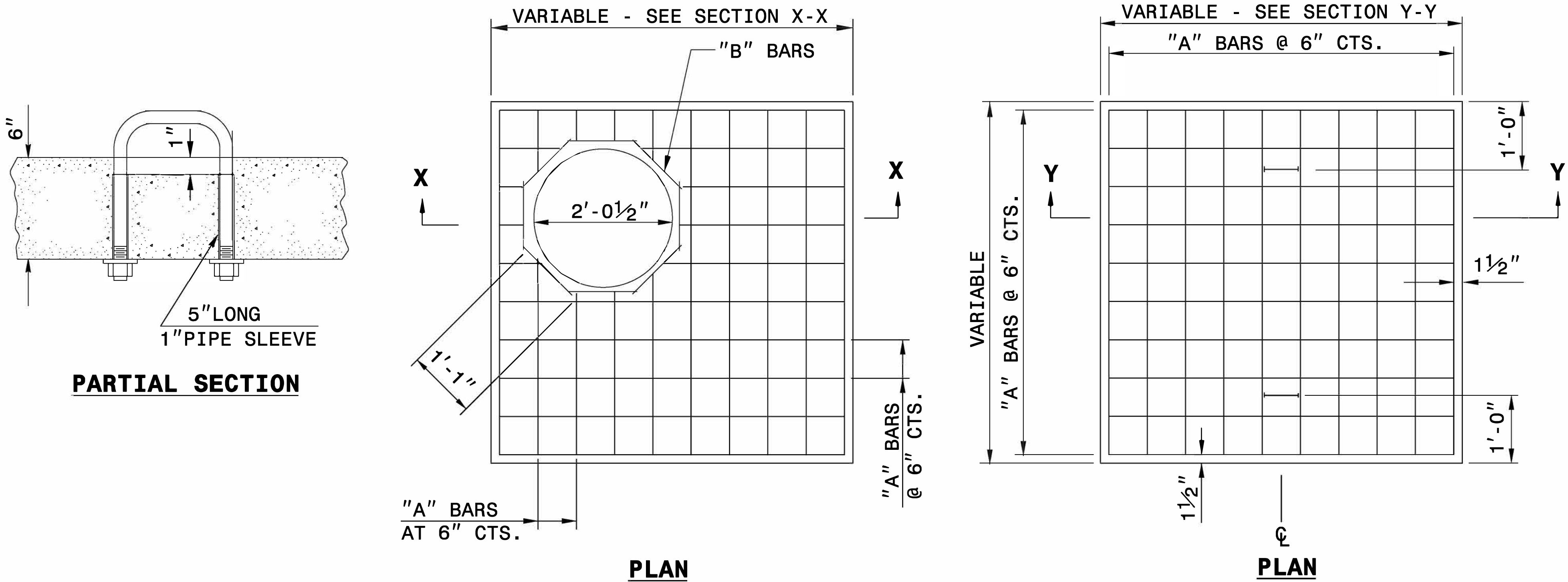
Office 919-707-6950 FAX 919-250-4119

**SEE TITLE BLOCK**

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



| PROJECT REFERENCE NO. | SHEET NO. |
|-----------------------|-----------|
| I-5716                | 2C-8      |



**GENERAL NOTES:**

CONSTRUCT IN ACCORDANCE WITH SECTION 859 OF THE STANDARD SPECIFICATIONS.

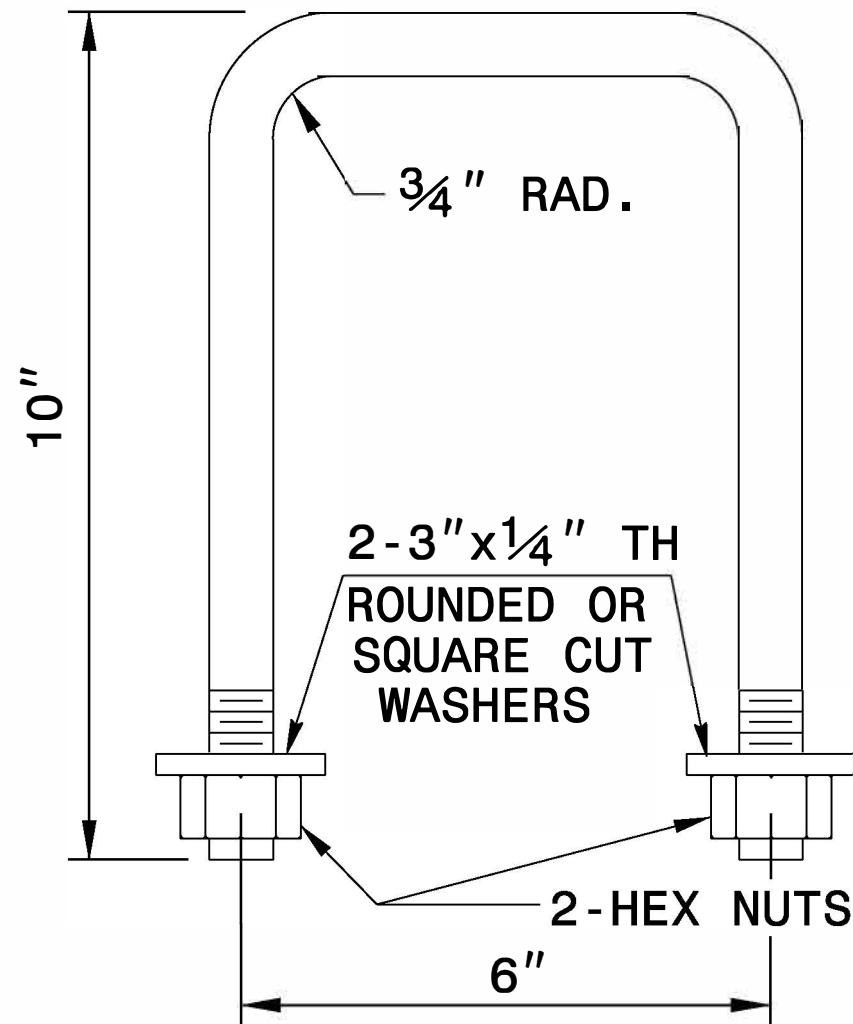
THE DIMENSIONS FOR THE EXISTING BOXES ARE APPROXIMATE AND MAY VARY SLIGHTLY.

DETAIL INTENDED FOR NON-TRAFFIC BEARING DRAINAGE STRUCTURES.

**BILL OF MATERIALS**

| REINFORCING STEEL             |      |      |        |                   |
|-------------------------------|------|------|--------|-------------------|
| CODE                          | SIZE | QTY. | LENGTH | REINF. STEEL LBS. |
| A                             | #4   | 20   | 4'-6"  | 60.12             |
| B                             | #4   | 8    | 1'-1"  | 5.79              |
| TOTAL                         |      |      |        | 65.91 *           |
| MASONRY                       |      |      |        | CU YDS            |
| TOP SLAB CONCRETE CLASS "B"   |      |      |        | .4326 *           |
| BRICK MASONRY PER FT HT (MIN) |      |      |        | .4111             |

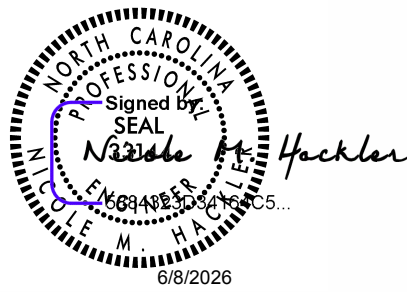
**\* NOTE:**  
QUANTITIES BASED ON 3'-6" X 3'-6" DRAINAGE STRUCTURE. ADJUST QUANTITIES FOR LARGER STRUCTURES AND MANHOLE CONSTRUCTION.



**DETAIL OF HANDLE**

**SECTION X-X**

**SECTION Y-Y**



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

| CONTRACT STANDARDS<br>AND DEVELOPMENT UNIT                                                |                  |
|-------------------------------------------------------------------------------------------|------------------|
| Office 919-707-6950                                                                       | FAX 919-250-4119 |
| DETAIL TO CONVERT EXISTING<br>DI, CB, OTCB or GI<br>TO JUNCTION BOX<br>(MANHOLE OPTIONAL) |                  |
| ORIGINAL BY: T.S.S.                                                                       | DATE: NOV.1997   |
| MODIFIED BY: T.S.S.                                                                       | DATE: FEB.2000   |
| CHECKED BY:                                                                               | DATE:            |
| FILE SPEC.: ds174:/usr/details/stand/boxtojbe.dgn                                         |                  |







5/9/06  
5/5/2026  
\\14-568 - NCDOT- I-5716 I-40 Lenox-Rhine Interchange\05-CAD\15716\_Roadway\Proj\15716\_Rdy\_psh03B-2.dgn  
5/5/2026  
5/5/2026  
5/5/2026

|                  |                |
|------------------|----------------|
| COMPUTED BY: ABC | DATE: 04/13/26 |
| CHECKED BY: JTG  | DATE: 04/13/26 |

|                                                                                                                                                                                                                                                               |           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| PROJECT REFERENCE NO.                                                                                                                                                                                                                                         | SHEET NO. |
| I-5716                                                                                                                                                                                                                                                        | 3B-2      |
| <div><div>AMT</div><div>A. MORTON THOMAS AND ASSOCIATES, INC.<br/>CONSULTING ENGINEERS<br/>900 RIDGEFIELD DRIVE SUITE 325, KALISCH, NC 27609<br/>(919) 837-9999 FAX (919) 835-3885<br/>EMAIL: AMT1@AMTENGINEERING.COM<br/>NCBELS LICENSE # F-1049</div></div> |           |

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

SUMMARY OF EARTHWORK

IN CUBIC YARDS

| LOCATION                        | UNCLASSIFIED EXCAVATION | UNDERCUT | EMBANKMENT | BORROW | WASTE |
|---------------------------------|-------------------------|----------|------------|--------|-------|
| -L- STA. 20+69 - 46+50          | 9497                    |          | 3348       |        | 6149  |
| -RPB- STA. 21+00 - 26+50        | 916                     |          | 599        |        | 317   |
| SUBTOTALS                       | 10413                   |          | 3947       |        | 6466  |
|                                 |                         |          |            |        |       |
| -Y1- STA. 17+00 - 23+00         | 182                     |          | 337        | 155    |       |
| -LPA- STA. 10+00 - 24+00        | 8222                    |          | 15177      | 6955   |       |
| -RPA- STA. 15+50 - 24+50        | 28077                   |          | 176        |        | 27901 |
| SUBTOTALS                       | 36481                   |          | 15690      | 7110   | 27901 |
|                                 |                         |          |            |        |       |
| -Y1- STA. 27+00 - 35+10         | 196                     |          | 339        | 143    |       |
| -RPC- STA. 21+50 - 28+00        | 205                     |          | 160        |        | 45    |
| SUBTOTALS                       | 401                     |          | 499        | 143    | 45    |
|                                 |                         |          |            |        |       |
| TOTAL                           | 47295                   |          | 20136      | 7253   | 34412 |
| LOSS DUE TO CLEARING & GRUBBING | -200                    |          |            |        | -200  |
| ROCK WASTE TO REPLACE BORROW    |                         |          |            | -5631  | -5631 |
| ADJUST FOR ROCK WASTE           |                         |          | -845       | -845   |       |
| WASTE IN LIEU OF BORROW         |                         |          |            | -777   | -777  |
| PROJECT TOTAL                   | 47095                   |          | 19291      |        | 27804 |
|                                 |                         |          |            |        |       |
| GRAND TOTAL                     | 47095                   |          | 19291      |        | 27804 |
|                                 |                         |          |            |        |       |
| SAY                             | 47200                   |          |            |        |       |

UNDERCUT EXCAVATION = 550 CY  
SHOULDER BORROW = 1380 CY  
SELECT GRANULAR MATERIAL, CLASS III = 400 CY  
SHALLOW UNDERCUT = 100 CY

NOTE: EARTHWORK QUANTITIES ARE CALCULATED BY THE ROADWAY DESIGN UNIT.  
THESE EARTHWORK QUANTITIES ARE BASED IN PART ON SUBSURFACE DATA  
PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT.

APPROXIMATE QUANTITIES ONLY. SHOULDER BORROW, FINE GRADING,  
CLEARING AND GRUBBING, AND REMOVAL OF EXISTING ASPHALT PAVEMENT  
WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING."







[illegible]



COMPUTED BY: DJS

CHECKED BY: JGD

DATE: 05/04/2026

DATE: 05/04/2026

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PROJECT NO.

I-5716

SHEET NO.

3D-3

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)

| LINE & STATION | OFFSET | STRUCTURE NUMBER | TOP ELEVATION<br>FT. | INVERT ELEVATION<br>FT. | INVERT ELEVATION<br>FT. | % MINIMUM REQUIRED SLOPE | Side Drain Pipe<br>(RCP, CSP, CAAP, HDPE, or PVC) |    |    |    |    |    |                |                | R. C. PIPE<br>CLASS III |                 |                 |                 |                |    |    |    | R. C. PIPE<br>CLASS IV |    |    |    |    |    |    |    | ENDWALLS<br>STD. 83&0.01 OR STD. 83&1.11<br>(UNLESS NOTED OTHERWISE) | CY | REINFORCED ENDWALLS<br>CY | DRAINAGE STRUCTURE<br>CY | MASONRY<br>CY | QUANTITIES<br>FOR DRAINAGE<br>STRUCTURES |    | NOTE:<br>TOTAL LIN. FT.<br>FOR PAY<br>QUANTITY<br>SHALL BE<br>A + (1.3 X B) | FRAME,<br>GRATES,<br>AND HOOD<br>STD. 840.03 | GRATE<br>TYPE | CONCRETE<br>TRANSITIONAL<br>SECTION |                                                                      | D.I. STD. 852.04 OR STD. 852.06 | C.B. STD. 852.05 | D.I. STD. 840.14 OR STD. 840.15 | D.I. FRAME AND GRATES STD. 840.16 | G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26 | G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27 | G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28 | G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22 | G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24 | G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24 | G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29 | G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29 | DRIVEWAY D.I. STD. 840.30 | FRAME W/ GRATE FOR DRIVEWAY STD. 840.30 | J.B. STD. 840.31 OR STD. 840.32 | T.B.J.B. STD. 840.34 | T.B.D.I. STD. 840.35 | T.B.D.I. FOR STEEL GRATES STD. 840.36 | M.H. STD. 840.51, STD. 840.52, OR STD. 840.53 | M.H. FRAME AND COVER STD. 840.54 | CONVERT EXISTING C.B. TO J.B. | CONVERT EXISTING D.I. TO J.B. | CONVERT EXISTING J.B. TO D.I. | ADJUST C.B. | ADJUST D.I. | 15" SIDE DRAIN PIPE ELBOW | 24" SIDE DRAIN PIPE ELBOW | 30" SIDE DRAIN PIPE ELBOW | BERM DITCH OUTLET STD. 850.10 (4" CONCRETE PA | BERM DITCH OUTLET STD. 850.11 (4" CONCRETE PA | MODIFIED CONC. FLUME | CY | FLOWABLE FILL | CY | CONCRETE COLLARS CL. "B" STD. 840.72 | CY | CONCRETE AND BRICK PIPE PLUG STD. 840.71 | PIPE REMOVAL<br>LIN. FT. | ABBREVIATIONS |                                                                      |               |             |               |   |                                 |                  |                                 |                                   |                                            |                                            |                                            |                                                  |                                                 |                                                  |                                                 |                                                 |                                                  |                                                  |                                                  |                                                  |                                 |                                         |                                 |                                       |                                               |                                       |                                               |                                  |                               |                               |                               |                           |                           |                           |                                               |                                               |                                               |                                               |                      |    |                                      |    |                                          |                          |                                          |                          |        |      |        |          |        |          |      |        |      |          |          |          |          |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |    |
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|                |        |                  |                      |                         |                         |                          | 12                                                | 15 | 18 | 24 | 30 | 36 | 42             | 48             | DO NOT USE RCP          | DO NOT USE CSP  | DO NOT USE CAAP | DO NOT USE HDPE | DO NOT USE PVC | 12 | 15 | 18 | 24                     | 30 | 36 | 42 | 48 | 12 | 15 | 18 |                                                                      |    |                           |                          |               | 24                                       | 30 |                                                                             |                                              |               | 36                                  | 42                                                                   |                                 |                  |                                 |                                   |                                            |                                            |                                            |                                                  |                                                 |                                                 |                                                 |                                                 |                                                  |                                                  |                           |                                         |                                 |                      |                      |                                       |                                               |                                  |                               |                               |                               |             |             |                           |                           |                           |                                               |                                               |                      |    |               |    |                                      |    |                                          |                          | 48            | ENDWALLS<br>STD. 83&0.01 OR STD. 83&1.11<br>(UNLESS NOTED OTHERWISE) | 0' THRU 5'    | 5' THRU 10' | 10' AND ABOVE | E | F                               | G                | D.I. STD. 852.04 OR STD. 852.06 | C.B. STD. 852.05                  | D.I. STD. 840.14 OR STD. 840.15            | D.I. FRAME AND GRATES STD. 840.16          | G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26 | G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27       | G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28      | G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22 | G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24  | G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24  | G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29 | G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29 | DRIVEWAY D.I. STD. 840.30       | FRAME W/ GRATE FOR DRIVEWAY STD. 840.30 | J.B. STD. 840.31 OR STD. 840.32 | T.B.J.B. STD. 840.34                  | T.B.D.I. STD. 840.35                          | T.B.D.I. FOR STEEL GRATES STD. 840.36 | M.H. STD. 840.51, STD. 840.52, OR STD. 840.53 | M.H. FRAME AND COVER STD. 840.54 | CONVERT EXISTING C.B. TO J.B. | CONVERT EXISTING D.I. TO J.B. | CONVERT EXISTING J.B. TO D.I. | ADJUST C.B.               | ADJUST D.I.               | 15" SIDE DRAIN PIPE ELBOW | 24" SIDE DRAIN PIPE ELBOW                     | 30" SIDE DRAIN PIPE ELBOW                     | BERM DITCH OUTLET STD. 850.10 (4" CONCRETE PA | BERM DITCH OUTLET STD. 850.11 (4" CONCRETE PA | MODIFIED CONC. FLUME | CY | FLOWABLE FILL                        | CY | CONCRETE COLLARS CL. "B" STD. 840.72     | CY                       | CONCRETE AND BRICK PIPE PLUG STD. 840.71 | PIPE REMOVAL<br>LIN. FT. | C.A.A. | C.B. | C.S.   | D.I.     | G.D.I. | H.D.P.E. | J.B. | M.H.   | N.S. | P.V.C.   | R.C.     | T.B.D.I. | T.B.J.B. | W.S. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |    |
|                |        |                  |                      |                         |                         |                          | 12                                                | 15 | 18 | 24 | 30 | 36 | 42             | 48             | DO NOT USE RCP          | DO NOT USE CSP  | DO NOT USE CAAP | DO NOT USE HDPE | DO NOT USE PVC | 12 | 15 | 18 | 24                     | 30 | 36 | 42 | 48 | 12 | 15 | 18 |                                                                      |    |                           |                          |               | 24                                       | 30 |                                                                             |                                              |               | 36                                  | 42                                                                   |                                 |                  |                                 |                                   |                                            |                                            |                                            |                                                  |                                                 |                                                 |                                                 |                                                 |                                                  |                                                  |                           |                                         |                                 |                      |                      |                                       |                                               |                                  |                               |                               |                               |             |             |                           |                           |                           |                                               |                                               |                      |    |               |    |                                      |    |                                          |                          | 48            | ENDWALLS<br>STD. 83&0.01 OR STD. 83&1.11<br>(UNLESS NOTED OTHERWISE) | 0' THRU 5'    | 5' THRU 10' | 10' AND ABOVE | E | F                               | G                | D.I. STD. 852.04 OR STD. 852.06 | C.B. STD. 852.05                  | D.I. STD. 840.14 OR STD. 840.15            | D.I. FRAME AND GRATES STD. 840.16          | G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26 | G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27       | G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28      | G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22 | G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24  | G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24  | G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29 | G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29 | DRIVEWAY D.I. STD. 840.30       | FRAME W/ GRATE FOR DRIVEWAY STD. 840.30 | J.B. STD. 840.31 OR STD. 840.32 | T.B.J.B. STD. 840.34                  | T.B.D.I. STD. 840.35                          | T.B.D.I. FOR STEEL GRATES STD. 840.36 | M.H. STD. 840.51, STD. 840.52, OR STD. 840.53 | M.H. FRAME AND COVER STD. 840.54 | CONVERT EXISTING C.B. TO J.B. | CONVERT EXISTING D.I. TO J.B. | CONVERT EXISTING J.B. TO D.I. | ADJUST C.B.               | ADJUST D.I.               | 15" SIDE DRAIN PIPE ELBOW | 24" SIDE DRAIN PIPE ELBOW                     | 30" SIDE DRAIN PIPE ELBOW                     | BERM DITCH OUTLET STD. 850.10 (4" CONCRETE PA | BERM DITCH OUTLET STD. 850.11 (4" CONCRETE PA | MODIFIED CONC. FLUME | CY | FLOWABLE FILL                        | CY | CONCRETE COLLARS CL. "B" STD. 840.72     | CY                       | CONCRETE AND BRICK PIPE PLUG STD. 840.71 | PIPE REMOVAL<br>LIN. FT. | C.A.A. | C.B. | C.S.   | D.I.     | G.D.I. | H.D.P.E. | J.B. | M.H.   | N.S. | P.V.C.   | R.C.     | T.B.D.I. | T.B.J.B. | W.S. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |    |
|                | 12     | 15               |                      |                         |                         |                          | 18                                                | 24 | 30 | 36 | 42 | 48 | DO NOT USE RCP | DO NOT USE CSP | DO NOT USE CAAP         | DO NOT USE HDPE | DO NOT USE PVC  | 12              | 15             | 18 | 24 | 30 | 36                     | 42 | 48 | 12 | 15 | 18 | 24 | 30 |                                                                      |    |                           |                          |               | 36                                       | 42 |                                                                             |                                              |               | 48                                  | ENDWALLS<br>STD. 83&0.01 OR STD. 83&1.11<br>(UNLESS NOTED OTHERWISE) |                                 |                  |                                 |                                   |                                            |                                            |                                            |                                                  |                                                 |                                                 |                                                 |                                                 |                                                  |                                                  |                           |                                         |                                 |                      |                      |                                       |                                               |                                  |                               |                               |                               |             |             |                           |                           |                           |                                               |                                               |                      |    |               |    |                                      |    |                                          |                          | 0' THRU 5'    | 5' THRU 10'                                                          | 10' AND ABOVE | E           | F             | G | D.I. STD. 852.04 OR STD. 852.06 | C.B. STD. 852.05 | D.I. STD. 840.14 OR STD. 840.15 | D.I. FRAME AND GRATES STD. 840.16 | G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26 | G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27 | G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28 | G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22  | G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24 | G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24 | G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29 | G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29 | DRIVEWAY D.I. STD. 840.30                        | FRAME W/ GRATE FOR DRIVEWAY STD. 840.30          | J.B. STD. 840.31 OR STD. 840.32 | T.B.J.B. STD. 840.34                    | T.B.D.I. STD. 840.35            | T.B.D.I. FOR STEEL GRATES STD. 840.36 | M.H. STD. 840.51, STD. 840.52, OR STD. 840.53 | M.H. FRAME AND COVER STD. 840.54      | CONVERT EXISTING C.B. TO J.B.                 | CONVERT EXISTING D.I. TO J.B.    | CONVERT EXISTING J.B. TO D.I. | ADJUST C.B.                   | ADJUST D.I.                   | 15" SIDE DRAIN PIPE ELBOW | 24" SIDE DRAIN PIPE ELBOW | 30" SIDE DRAIN PIPE ELBOW | BERM DITCH OUTLET STD. 850.10 (4" CONCRETE PA | BERM DITCH OUTLET STD. 850.11 (4" CONCRETE PA | MODIFIED CONC. FLUME                          | CY                                            | FLOWABLE FILL        | CY | CONCRETE COLLARS CL. "B" STD. 840.72 | CY | CONCRETE AND BRICK PIPE PLUG STD. 840.71 | PIPE REMOVAL<br>LIN. FT. | C.A.A.                                   | C.B.                     | C.S.   | D.I. | G.D.I. | H.D.P.E. | J.B.   | M.H.     | N.S. | P.V.C. | R.C. | T.B.D.I. | T.B.J.B. | W.S.     |          |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |    |
| RPA 24+64      | 49     | RT               |                      |                         |                         |                          |                                                   |    |    |    |    |    |                |                |                         |                 |                 |                 |                |    |    |    |                        |    |    |    |    |    |    |    |                                                                      |    |                           |                          |               |                                          |    |                                                                             |                                              |               |                                     |                                                                      |                                 |                  |                                 |                                   |                                            |                                            |                                            |                                                  |                                                 |                                                 |                                                 |                                                 |                                                  |                                                  |                           |                                         |                                 |                      |                      |                                       |                                               |                                  |                               |                               |                               |             |             |                           |                           |                           |                                               |                                               |                      |    |               |    |                                      |    |                                          |                          |               |                                                                      |               |             |               |   |                                 |                  |                                 |                                   |                                            |                                            |                                            |                                                  |                                                 |                                                  |                                                 |                                                 |                                                  |                                                  |                                                  |                                                  |                                 |                                         |                                 |                                       |                                               |                                       |                                               |                                  |                               |                               |                               |                           |                           |                           |                                               |                                               |                                               |                                               |                      |    |                                      |    |                                          |                          |                                          |                          |        |      |     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[illegible]



6/21/00

5/5/2026 3:15 PM C:\Users\user\OneDrive\Documents\14-568 - NCDOT- I-5716 I-40 Lenoir-Rhyne Interchange\05-CAD\15716\_I5716\_Rdy\_psh03G.1.dgn

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

| LINE        | Station | Station | Aggregate Type*<br>ASU(1/2)/<br>AST | Aggregate Thickness<br>INCHES<br>[8" fro<br>ASU(2)] | Shallow Undercut<br>CY | Class IV Subgrade Stabilization<br>TONS | Geotextile for Subgrade Stabilization<br>SY | Stabilizer Aggregate<br>TONS | Class IV Aggregate Stabilization<br>TONS |
|-------------|---------|---------|-------------------------------------|-----------------------------------------------------|------------------------|-----------------------------------------|---------------------------------------------|------------------------------|------------------------------------------|
| LPA         | 19+75   | 21+50   | ASU (2)                             | 8                                                   |                        | 400                                     | 900                                         |                              |                                          |
| RPA         | 27+75   | 30+25   | ASU (2)                             | 8                                                   |                        | 600                                     | 1200                                        |                              |                                          |
| CONTINGENCY |         |         | ASU (1)                             | 12                                                  | 100                    | 200                                     | 300                                         |                              |                                          |
|             |         |         | TOTAL CY/TONSSY:                    |                                                     | 100                    | 1200**                                  | 2400**                                      | 0                            | 0                                        |

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

SUMMARY OF SUBSURFACE DRAINAGE

| LINE        | Station | Station | Location<br>LT/RT/CL | Drain Type*<br>UD/BD/SD | LF   |
|-------------|---------|---------|----------------------|-------------------------|------|
|             |         |         |                      |                         |      |
|             |         |         |                      |                         |      |
|             |         |         |                      |                         |      |
|             |         |         |                      |                         |      |
| CONTINGENCY |         |         |                      | SD                      | 1000 |
|             |         |         |                      | TOTAL LF:               | 1000 |

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



5/9/06

4/13/2026  
4/13/2026  
4/13/2026

14-568 - NCDOT- I-5716 I-40 Lenoir-Rhine Interchange\05-CAD\15716\_Roadway\Proj\15716\_Rd+psh03p-1.dgn

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

PARCEL INDEX SHEET

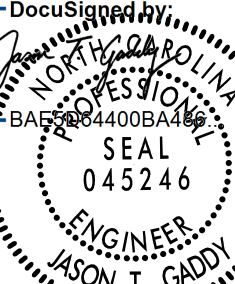
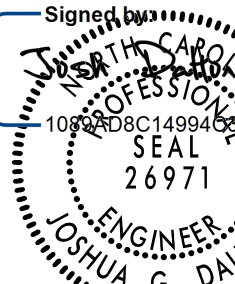
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| PROJECT REFERENCE NO. | SHEET NO. |
| I-5716                | 3P-1      |

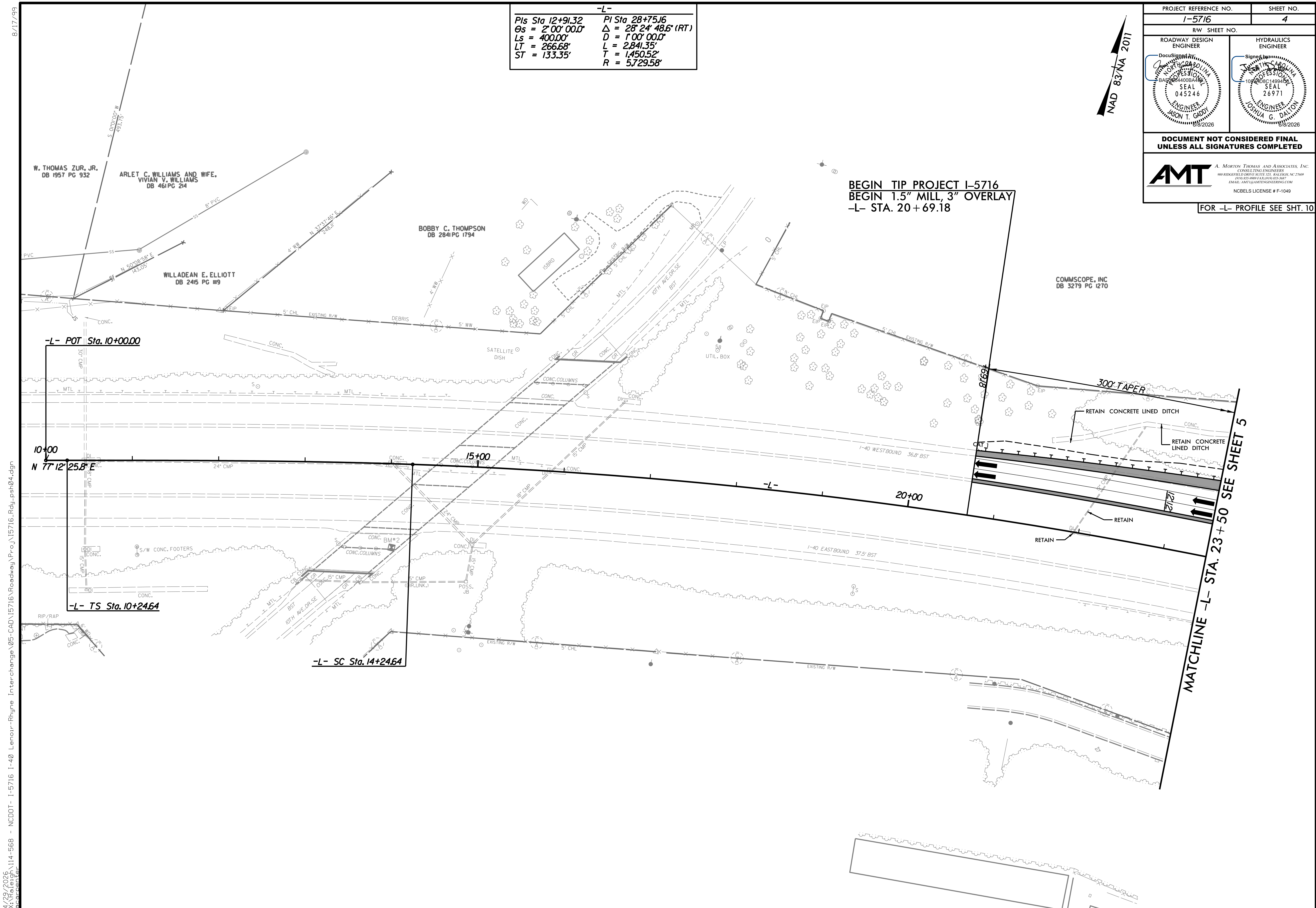
AMT

A. MORTON THOMAS AND ASSOCIATES, INC.  
CONSULTING ENGINEERS  
900 RIDGEFIELD DRIVE SUITE 325, RALEIGH, NC 27609  
(919) 855-9907 FAX (919) 855-5861  
EMAIL: AMT1@AMTENGINEERING.COM  
NCBELS LICENSE # F-1049

| PARCEL NO. | SHEET NO. | PROPERTY OWNER NAME                                                      | TOTAL AREA (AC) | ROW AREA (AC) | TEMPORARY CONSTRUCTION EASEMENT (AC) | PERMANENT DRAINAGE EASEMENT (AC) | TEMPROARY DRAINAGE EASEMENT (AC) | PERMANENT UTILITY EASEMENT (AC) |
|------------|-----------|--------------------------------------------------------------------------|-----------------|---------------|--------------------------------------|----------------------------------|----------------------------------|---------------------------------|
| 1          | 5         | SOMA CHURCH, INC                                                         | 11.47           |               |                                      | 0.0234                           | 0.0422                           |                                 |
| 2          | 6         | LR PROPERTIES OF THE TRIAD II, LLC & LR PROPERTIES OF THE TRIAD III, LLC | 2.19            |               | 0.0039                               |                                  |                                  |                                 |
| 3          | 6         | ASPHALT PAVING COMPANY                                                   | 24.75           |               |                                      | 0.0098                           | 0.009                            |                                 |
| 4          | 6         | ANN B BANKS AND DEBORAH BEAL DELLINGER                                   | 0.55            |               |                                      |                                  |                                  |                                 |

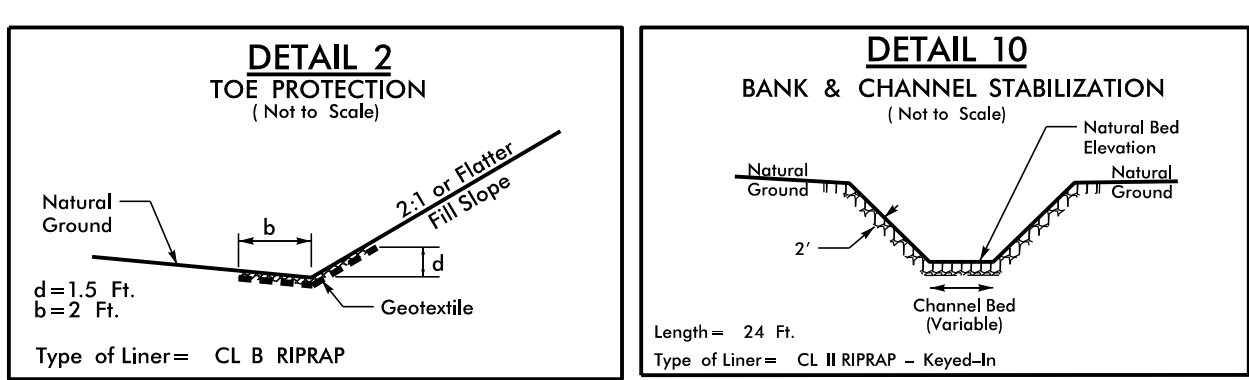


|                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                               |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------|--|
| PROJECT REFERENCE NO.                                                                                                                                                                                                                                                                                                                                                        |  | SHEET NO.                                                                                                     |  |
| 1-5716                                                                                                                                                                                                                                                                                                                                                                       |  | 4                                                                                                             |  |
| RW SHEET NO.                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                                               |  |
| ROADWAY DESIGN<br>ENGINEER<br>                                                                                                                                                                                                                                                            |  | HYDRAULICS<br>ENGINEER<br> |  |
| <p align="center"><b>DOCUMENT NOT CONSIDERED FINAL<br/>UNLESS ALL SIGNATURES COMPLETED</b></p>                                                                                                                                                                                                                                                                               |  |                                                                                                               |  |
|  <div style="float: right; text-align: right;"> A. MORTON THOMAS AND ASSOCIATES, INC.<br/> CONSULTING ENGINEERS<br/> 900 RIDGEFIELD DRIVE SUITE 300, RALEIGH, NC 27609<br/> (919) 855-0980 FAX (919) 855-5861<br/> EMAIL: AMT@AMORTONTHOMAS.COM<br/> <br/> NCBELS LICENSE # F-1049 </div> |  |                                                                                                               |  |
| <div style="border: 1px solid black; padding: 5px; text-align: center; font-weight: bold; font-size: 1.2em;"> FOR -L- PROFILE SEE SHT. 10 </div>                                                                                                                                                                                                                             |  |                                                                                                               |  |



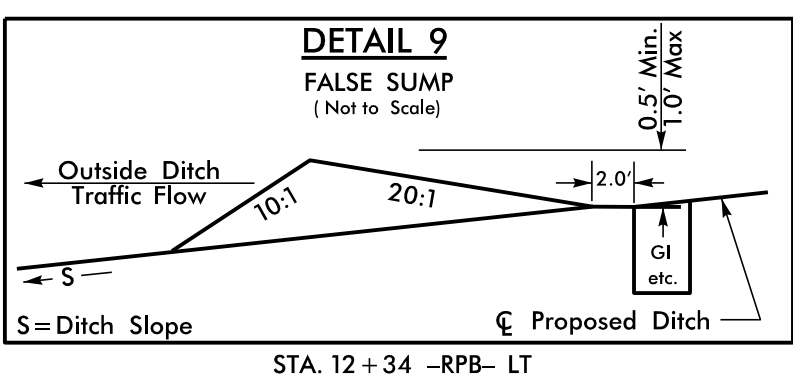


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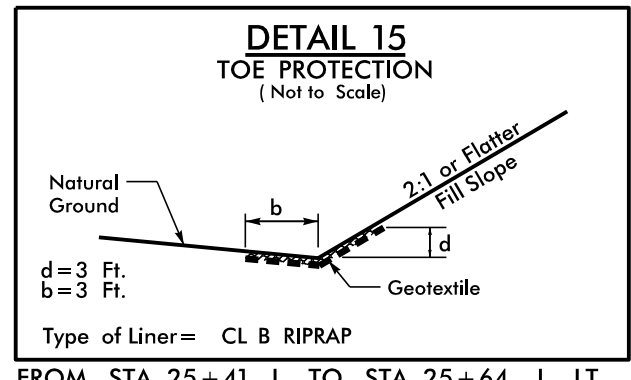


FROM STA. 25+10 -L- TO STA. 25+29 -L- LT

STA. 25+29 -L- LT



STA. 12+34 -RPB- LT



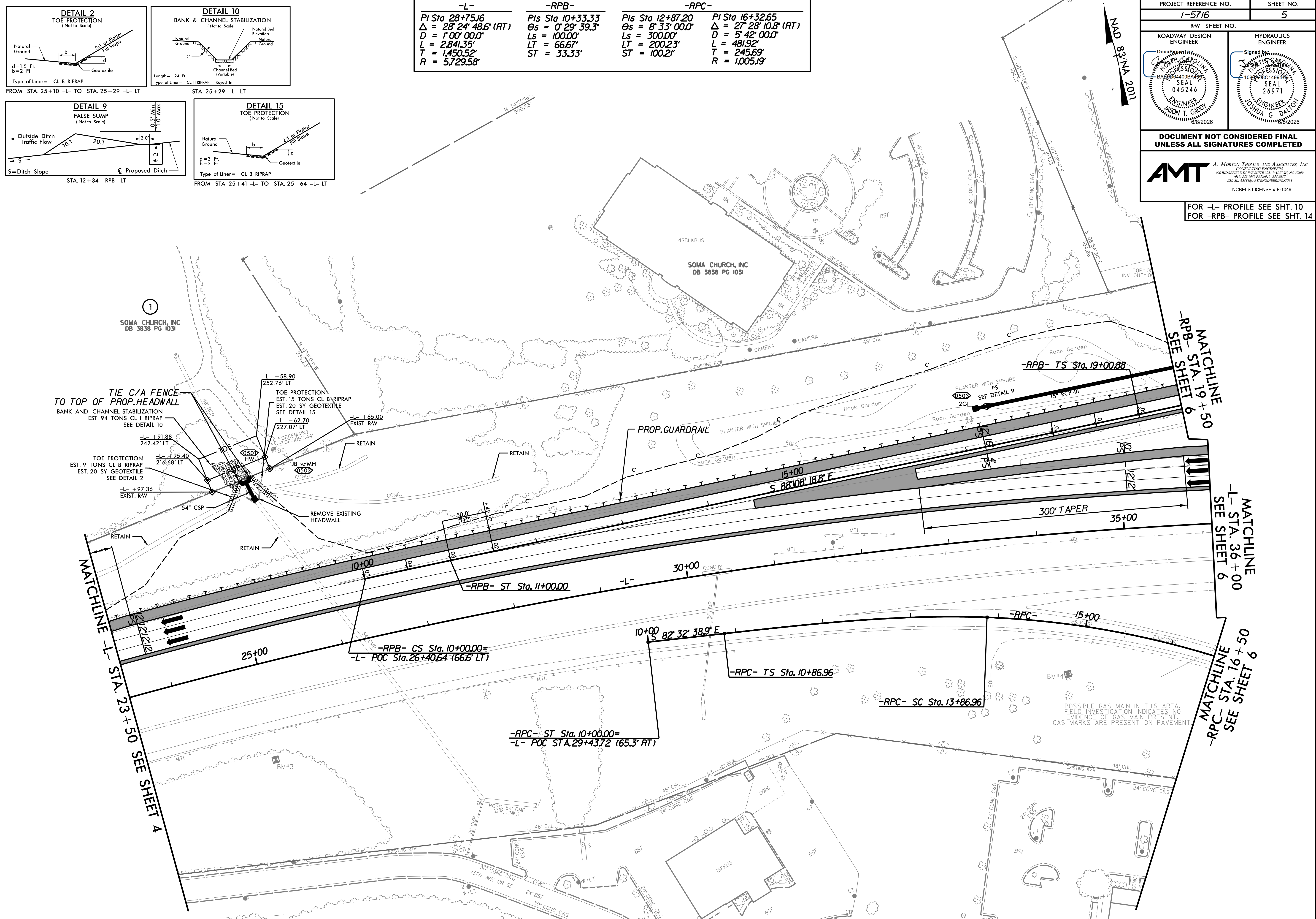
FROM STA. 25+41 -L- TO STA. 25+64 -L- LT

| -L-                                                                                                              | -RPB-                                                                               | -RPC-                                                                                                        |
|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| PI Sta 28+75.16<br>Δ = 28' 24' 48.6" (RT)<br>D = 1' 00' 00.0"<br>L = 2,841.35'<br>T = 1,450.52'<br>R = 5,729.58' | PIs Sta 10+33.33<br>Θs = 0' 29' 39.3"<br>Ls = 100.00'<br>LT = 66.67'<br>ST = 33.33' | PIs Sta 12+87.20<br>Θs = 8' 33' 00.0"<br>Ls = 300.00'<br>LT = 200.23'<br>ST = 100.21'                        |
|                                                                                                                  |                                                                                     | PI Sta 16+32.65<br>Δ = 27' 28' 10.8" (RT)<br>D = 5' 42' 00.0"<br>L = 481.92'<br>T = 245.69'<br>R = 1,005.19' |

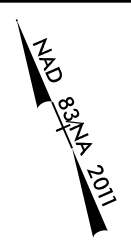
NAD 83/NA 2011

|                                                                                                                                                                                                                     |                                                                                                                                                                                                                 |                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| PROJECT REFERENCE NO.<br><b>1-5716</b>                                                                                                                                                                              |                                                                                                                                                                                                                 | SHEET NO.<br><b>5</b> |
| R/W SHEET NO.                                                                                                                                                                                                       |                                                                                                                                                                                                                 |                       |
| ROADWAY DESIGN ENGINEER<br>A. MORTON THOMAS AND ASSOCIATES, INC.<br>100 RIDGEBLVD DRIVE SUITE 325 RALEIGH NC 27609<br>(919) 855-9880 FAX (919) 855-3881<br>EMAIL: AMT@AMTENGINEERING.COM<br>NCBELS LICENSE # F-1049 | HYDRAULICS ENGINEER<br>A. MORTON THOMAS AND ASSOCIATES, INC.<br>100 RIDGEBLVD DRIVE SUITE 325 RALEIGH NC 27609<br>(919) 855-9880 FAX (919) 855-3881<br>EMAIL: AMT@AMTENGINEERING.COM<br>NCBELS LICENSE # F-1049 |                       |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED                                                                                                                                                    |                                                                                                                                                                                                                 |                       |
| <b>AMT</b>                                                                                                                                                                                                          |                                                                                                                                                                                                                 |                       |
| FOR -L- PROFILE SEE SHT. 10<br>FOR -RPB- PROFILE SEE SHT. 14                                                                                                                                                        |                                                                                                                                                                                                                 |                       |

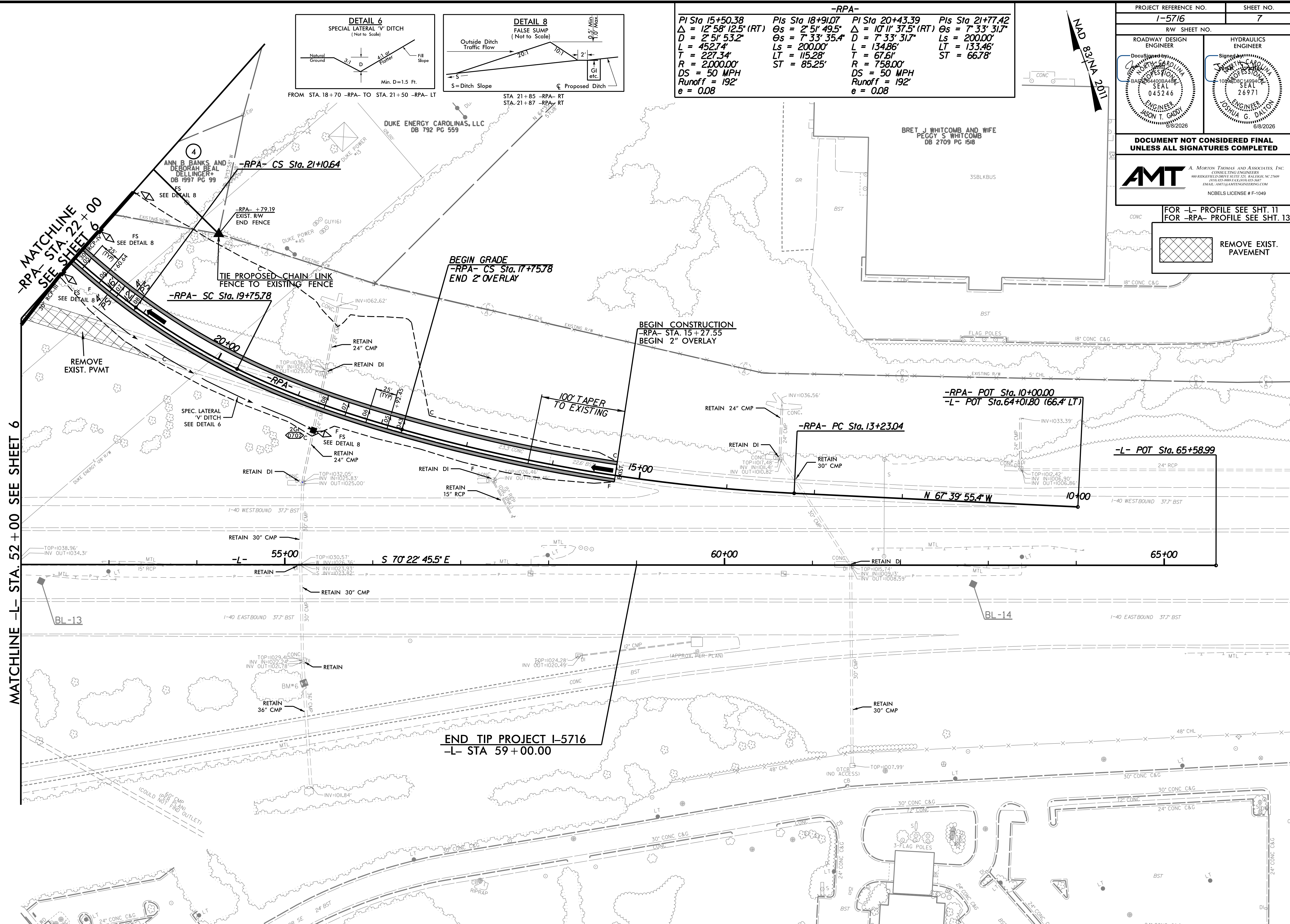
4/30/2026 11:4-568 - NCDOT- 1-5716, I-40 Lenox-Rhine Interchange 05-CAD\15716-Roadway\Proj\15716\_Rdy\_psh05.dgn



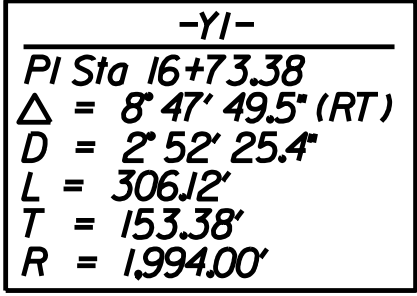








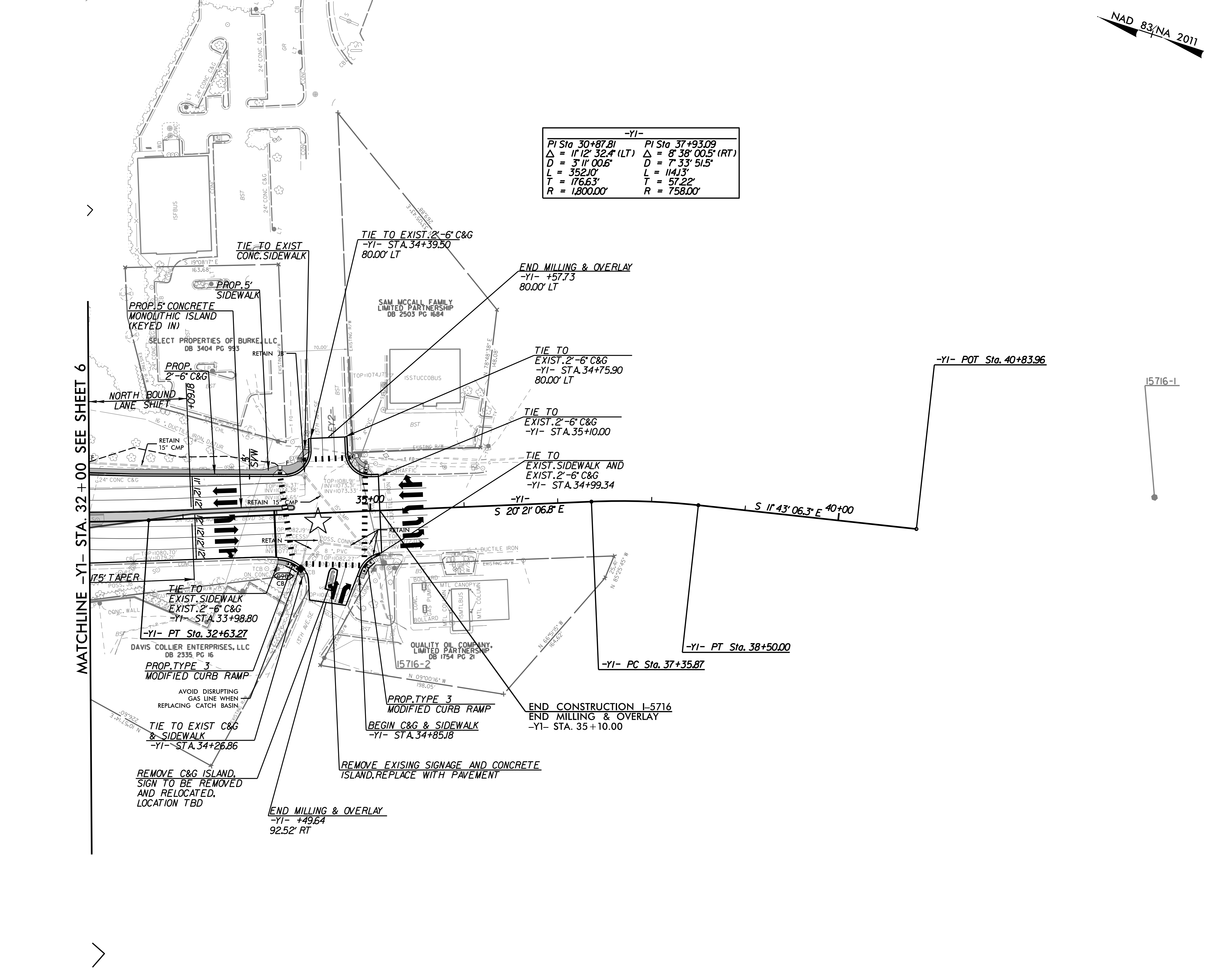




|                                                                                                                                                                                                                                                                                                                                                                 |  |                        |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------|--|
| PROJECT REFERENCE NO.                                                                                                                                                                                                                                                                                                                                           |  | SHEET NO.              |  |
| 1-5716                                                                                                                                                                                                                                                                                                                                                          |  | 8                      |  |
| RW SHEET NO.                                                                                                                                                                                                                                                                                                                                                    |  |                        |  |
| ROADWAY DESIGN<br>ENGINEER                                                                                                                                                                                                                                                                                                                                      |  | HYDRAULICS<br>ENGINEER |  |
|                                                                                                                                                                                                                                                                                                                                                                 |  |                        |  |
| <p align="center"><b>DOCUMENT NOT CONSIDERED FINAL<br/>UNLESS ALL SIGNATURES COMPLETED</b></p>                                                                                                                                                                                                                                                                  |  |                        |  |
| <p align="center"> <br/> <b>A. MORTON THOMAS AND ASSOCIATES, INC.</b><br/>         CONSULTING ENGINEERS<br/>         900 RIDGEBELL DRIVE SUITE 225, BALA RICH, NE 27609<br/>         (703) 255-9000 FAX (703) 255-9001<br/>         EMAIL: <a href="mailto:AMT@MORTONTHOMASINC.COM">AMT@MORTONTHOMASINC.COM</a><br/>         NCBELS LICENSE # F-1049       </p> |  |                        |  |
| <p align="center">FOR INTERSECTION DETAIL SEE SHT. 2B-1<br/>FOR -YI- PROFILE SEE SHT. 16</p>                                                                                                                                                                                                                                                                    |  |                        |  |



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4/28/2026  
X:\15716\15716-1\14-568 - NCDOT- I-5716, I-40 Lenoir-Rhine Interchange\05-CAD\15716\Roadway\Proj\15716\_Rd\psh03.dgn  
15716-1



| -YI-                                |                                    |
|-------------------------------------|------------------------------------|
| PI Sta 30+87.81                     | PI Sta 37+93.09                    |
| $\Delta = 11^{\circ}12'32.4\"$ (LT) | $\Delta = 8^{\circ}38'00.5\"$ (RT) |
| D = 3'11'00.6"                      | D = 7'33'51.5"                     |
| L = 352.10'                         | L = 114.13'                        |
| T = 176.63'                         | T = 57.22'                         |
| R = 1,800.00'                       | R = 758.00'                        |

|                                                                          |  |                       |  |
|--------------------------------------------------------------------------|--|-----------------------|--|
| PROJECT REFERENCE NO.<br><b>I-5716</b>                                   |  | SHEET NO.<br><b>9</b> |  |
| R/W SHEET NO.                                                            |  | HYDRAULICS ENGINEER   |  |
| ROADWAY DESIGN ENGINEER                                                  |  | SEAL                  |  |
|                                                                          |  |                       |  |
| <b>DOCUMENT NOT CONSIDERED FINAL<br/>UNLESS ALL SIGNATURES COMPLETED</b> |  |                       |  |
|                                                                          |  |                       |  |
| FOR INTERSECTION DETAIL SEE SHT. 2B-2<br>FOR -YI- PROFILE SEE SHT. 16    |  |                       |  |
| SIGNAL UPGRADE                                                           |  |                       |  |





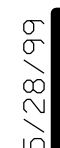










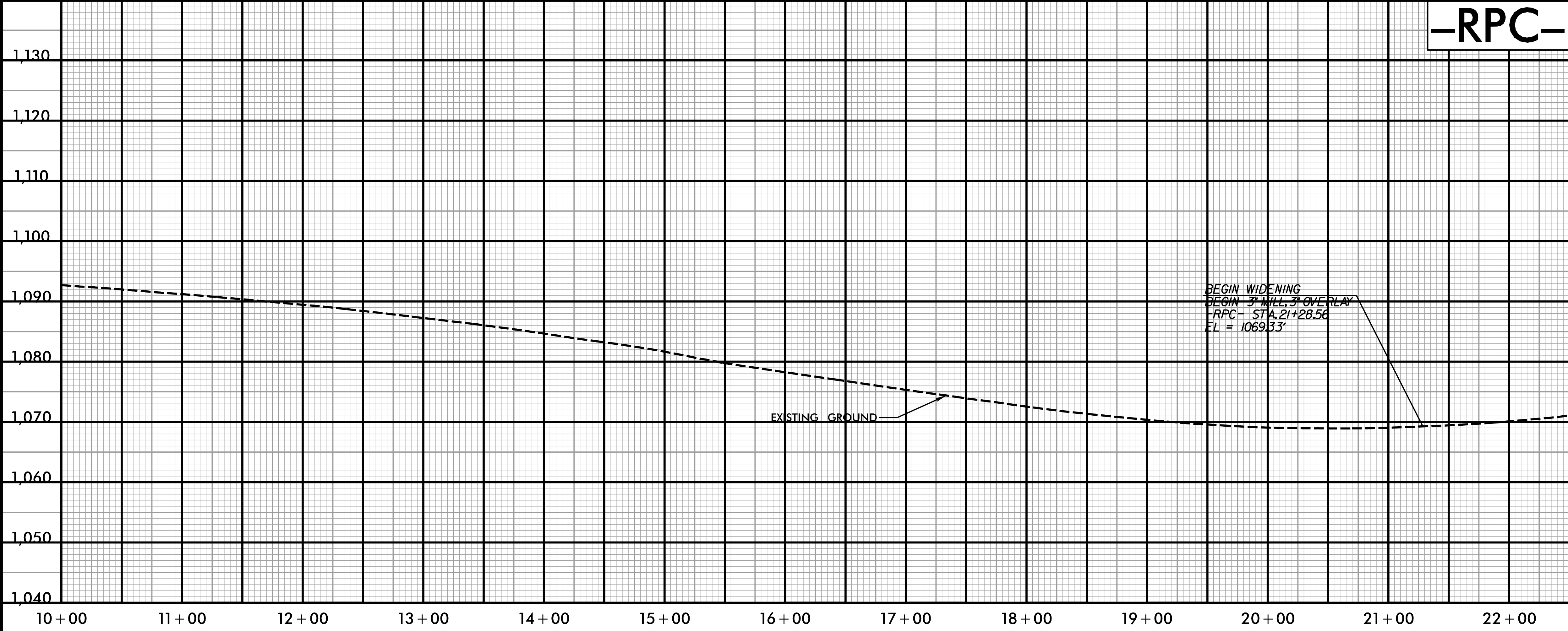


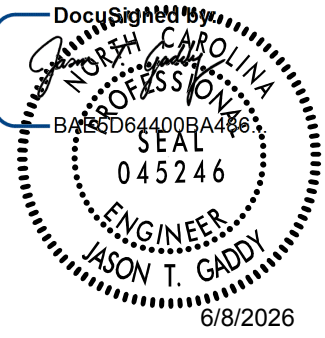
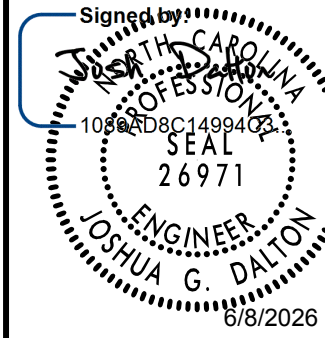






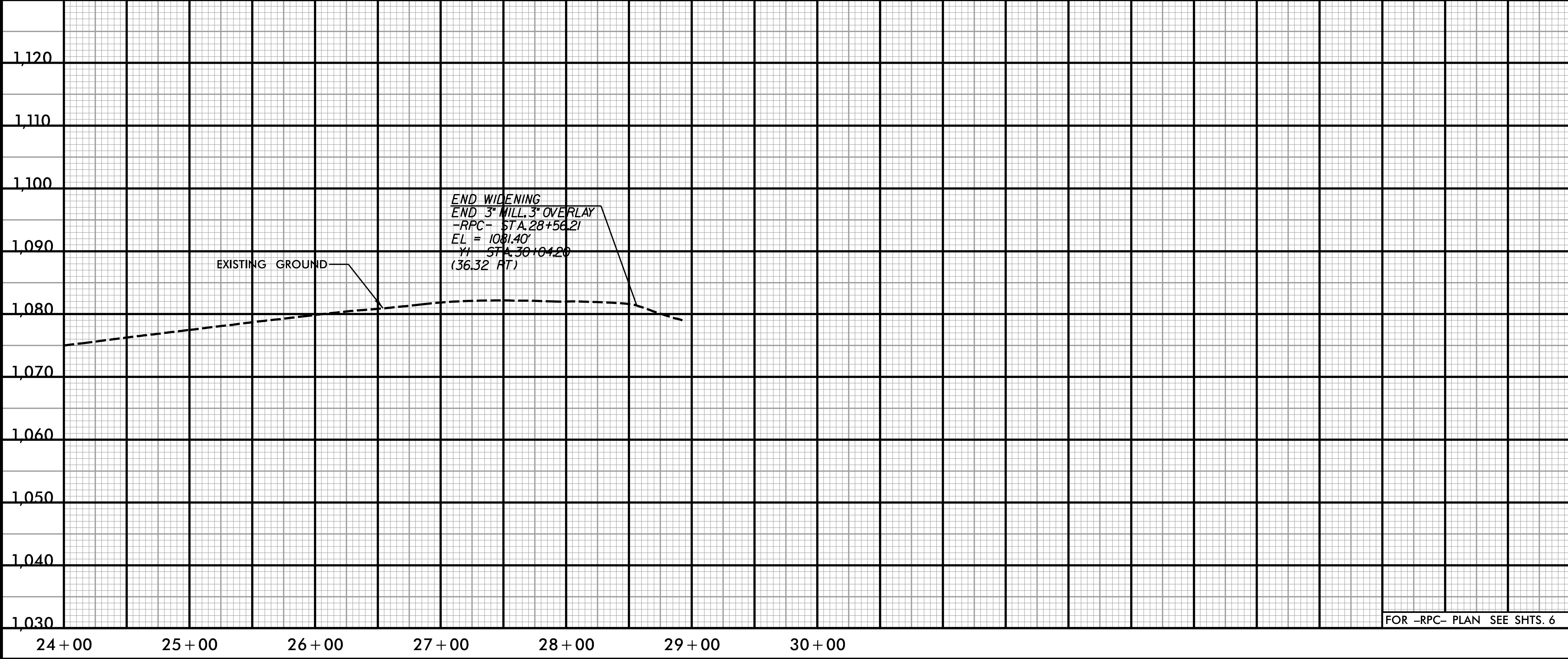
5/28/99



|                                                                                                                  |  |                                                                                                              |  |
|------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------|--|
| PROJECT REFERENCE NO.<br><b>1-5716</b>                                                                           |  | SHEET NO.<br><b>15</b>                                                                                       |  |
| ROADWAY DESIGN<br>ENGINEER                                                                                       |  | HYDRAULICS<br>ENGINEER                                                                                       |  |
| <div>Documented by<br/></div> |  | <div>Signed by<br/></div> |  |

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

4/13/2026 11:14:568 - NCDOT- I-5716 I-40 Lenoir-Rhyne Interchange\05-CAD\15716\Roadway\Proj\15716\_Rdy-pl15.dgn





**A. MORTON THOMAS AND ASSOCIATES, INC.**  
CONSULTING ENGINEERS  
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(919) 555-9991 FAX (919) 555-5501  
EMAIL: AMT@AMTENGINEERING.COM  
NCBELS LICENSE # F-1049

FOR -RPC- PLAN SEE SHTS. 6



