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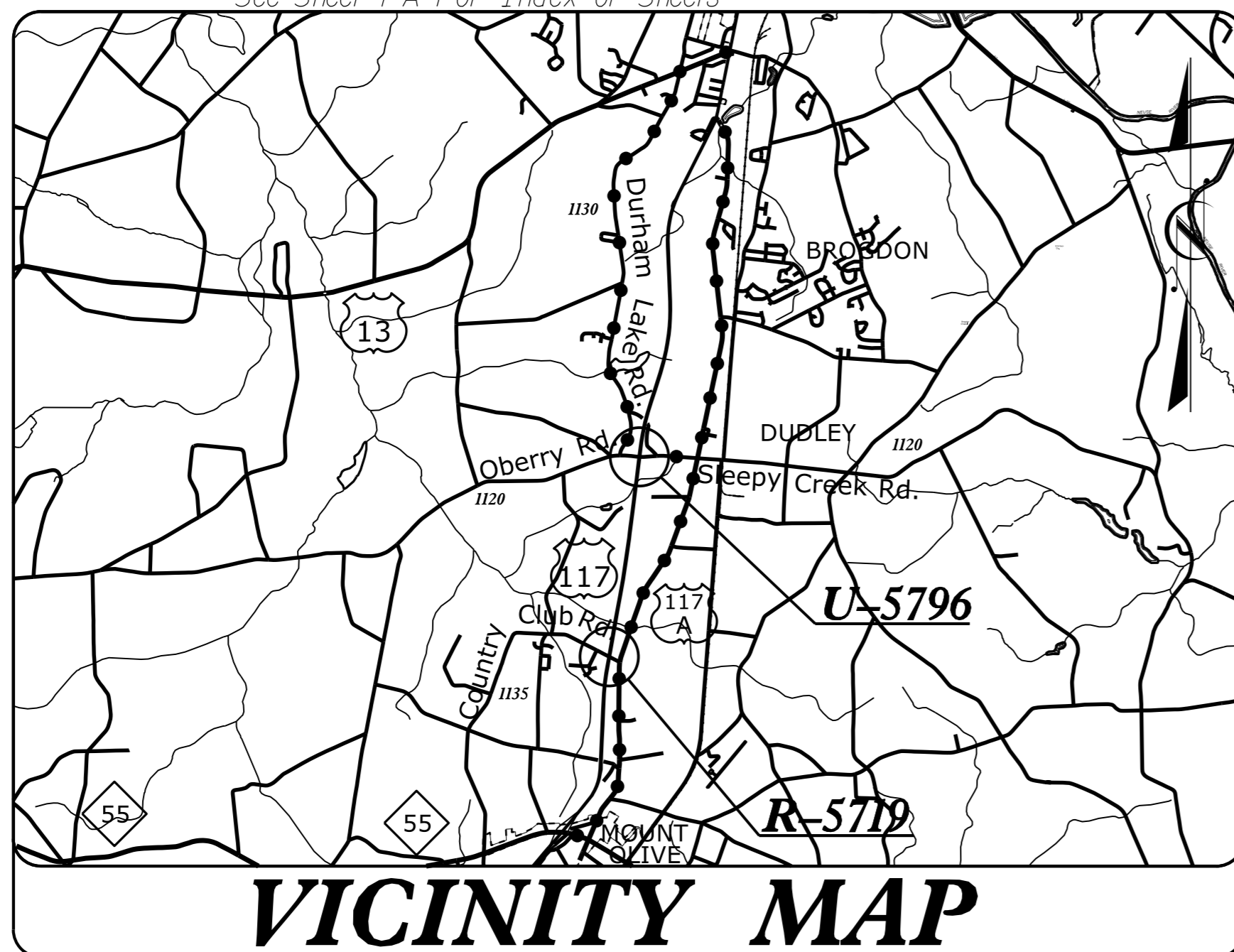
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09/08/19

TIP PROJECT: R-5719/U-5796

CONTRACT: C203959

See Sheet 1-A For Index of Sheets



VICINITY MAP

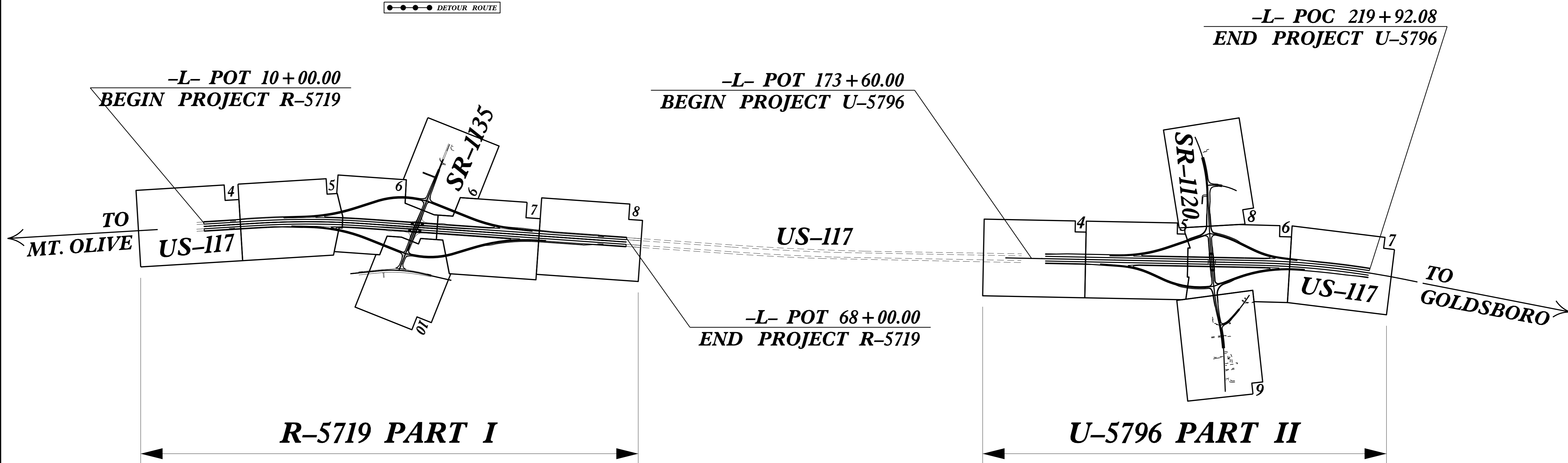
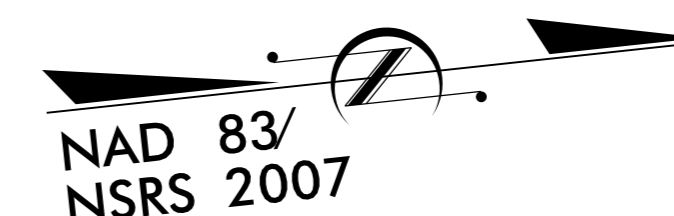
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**WAYNE COUNTY**

LOCATION: R-5719 US 117 AND SR 1135 (COUNTRY CLUB RD.)  
U-5796 US 117 AND SR 1120 (O'BERRY RD.)

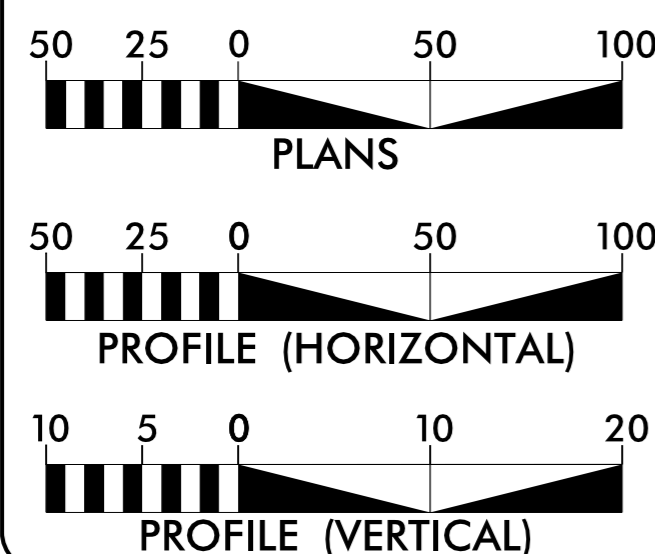
TYPE OF WORK: R-5719 GRADING, DRAINAGE, PAVING, AND STRUCTURES  
U-5796 GRADING, DRAINAGE, PAVING, AND STRUCTURE

| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.         | TOTAL SHEETS |
|-----------------|-----------------------------|-------------------|--------------|
| N.C.            | R-5719 /U-5796              | 1                 |              |
| STATE PROJ. NO. | F.A. PROJ. NO.              | DESCRIPTION       |              |
| 50473.1.FD1     | NHP-0117(31)                | R-5719 (PE)       |              |
| 50473.2.1       |                             | R-5719 (RW&UTIL.) |              |
| 50473.3.1       |                             | R-5719 CONST      |              |
| 54039.1.FD1     | NHP-0117(32)                | U-5796 (PE)       |              |
| 54039.2.1       |                             | U-5796 (RW&UTIL.) |              |
| 50473.3.1       |                             | U-5796 (CONST.)   |              |



THIS IS A CONTRLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES

GRAPHIC SCALES



PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-5719 = 1.076 MI  
LENGTH STRUCTURE TIP PROJECT R-5719 = 0.022 MI  
TOTAL LENGTH TIP PROJECT R-5719 = 1.098 MI

LENGTH ROADWAY TIP PROJECT U-5796 = 0.877 MI  
TOTAL LENGTH TIP PROJECT U-5796 = 0.877 MI

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**

1000 Birch Ridge Dr., Raleigh NC, 27610

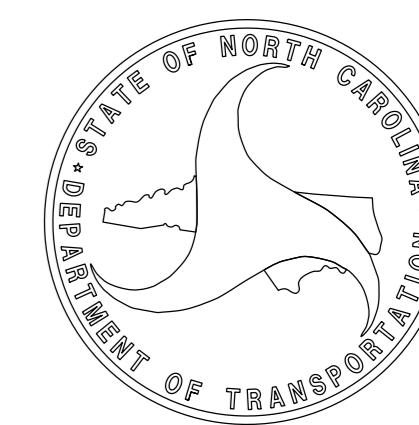
2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
AUGUST 1, 2016

LETTING DATE:  
JUNE 20, 2017

T.M. LITTLE, PE  
PROJECT ENGINEER

D.R. ETHRIDGE  
PROJECT DESIGN ENGINEER



06-APR-2017 13:35 R:\Roadway\Proj\combined\_title\R5719&U5796\_DD04\_TSH.dgn

8/17/09

INDEX OF SHEETS

| SHEET NUMBER             | DESCRIPTION  |
|--------------------------|--|
| 1                        | COMBINED TITLE SHEET   |
| 1A                       | COMBINED INDEX OF SHEETS, GENERAL NOTES AND LIST OF STANDARDS  |
| 1B                       | CONVENTIONAL SYMBOLS   |
| PLANS FOR PROJECT R-5719 |  |
| 1                        | TITLE SHEET  |
| 1C-1 THRU 2C-2           | SURVEY CONTROL SHEETS  |
| 2A-1 THRU 2A-3           | PAVEMENT SCHEDULE AND TYPICAL SECTIONS   |
| 2C-1                     | DETAIL FOR GUARDRAIL ANCHOR UNIT TYPE B-77   |
| 2C-2                     | DETAIL FOR METHOD III FOR PAVING UNDER BRIDGES   |
| 2C-3                     | DETAIL FOR COAL COMBUSTION PRODUCT PLACEMENT   |
| 3B-1                     | SUMMARY OF EARTHWORK, SUMMARY OF REMOVAL OF EXISTING ASPHALT PAVEMENT, SUMMARY OF BREAKING OF EXISTING ASPHALT PAVEMENT, SHOULDER BERM GUTTER SUMMARY, SUMMARY OF RIP RAP, WOVEN WIRE FENCE, DRAINAGE DITCH EXCAVATION, MILLING ASPHALT PAVEMENT AND PARCEL INDEX GUARDRAIL SUMMARY AND DOUBLE FACED CABLE GUIDERAIL SUMMARY |
| 3B-2                     | DRAINAGE SUMMARIES   |
| 3D-1 THRU 3D-3           | GEOTECHNICAL SUMMARIES   |
| 3G-1                     | PLAN AND PROFILE SHEETS  |
| 4 THRU 20                | COMBINED TRANSPORTATION MANAGEMENT PLANS   |
| TMP-1 THRU TMP-A2-18     | PAVEMENT MARKING PLANS   |
| PMP-A2-1 THRU PMP-A2-8   | EROSION CONTROL PLANS  |
| EC-1 THRU EC-17          | REFORESTATION  |
| RF-01                    | SIGNING PLANS  |
| SIGN-1 THRU SIGN-11      | UTILITIES BY OTHERS PLANS  |
| UO-1 THRU UO-4           | CROSS-SECTION SUMMARY SHEET  |
| X-1A THRU X-1B           | CROSS-SECTIONS   |
| X-1 THRU X-80            | STRUCTURE PLANS  |
| S-01-1 THRU S02-26       | CULVERT PLANS  |
| C-01-1 THRU C-01-2       |  |

|                          |  |
|--------------------------|--|
| PLANS FOR PROJECT U-5796 |  |
| 1                        | TITLE SHEET  |
| 1C-1 THRU 2C-2           | SURVEY CONTROL SHEETS  |
| 2A-1 THRU 2A-3           | PAVEMENT SCHEDULE AND TYPICAL SECTIONS   |
| 2C-1                     | DETAIL FOR GUARDRAIL ANCHOR UNIT TYPE B-77   |
| 2C-2                     | DETAIL FOR METHOD III FOR PAVING UNDER BRIDGES   |
| 2C-3                     | DETAIL FOR COAL COMBUSTION PRODUCT PLACEMENT   |
| 2C-4                     | DETAIL FOR MEDIAN HAZARD PROTECTION  |
| 3B-1                     | SUMMARY OF EARTHWORK, SUMMARY OF REMOVAL OF EXISTING ASPHALT PAVEMENT, SUMMARY OF BREAKING OF EXISTING ASPHALT PAVEMENT, SHOULDER BERM GUTTER SUMMARY, SUMMARY OF RIP RAP, WOVEN WIRE FENCE, DRAINAGE DITCH EXCAVATION, MILLING ASPHALT PAVEMENT AND PARCEL INDEX GUARDRAIL SUMMARY AND DOUBLE FACED CABLE GUIDERAIL SUMMARY |
| 3B-2                     | DRAINAGE SUMMARIES   |
| 3D-1 THRU 3D-3           | GEOTECHNICAL SUMMARIES   |
| 3G-1                     | PLAN AND PROFILE SHEETS  |
| 4 THRU 16                | COMBINED TRANSPORTATION MANAGEMENT PLANS   |
| PMP-A1-1 THRU PMP-A1-7   | PAVEMENT MARKING PLANS   |
| EC-1 THRU EC-15          | EROSION CONTROL PLANS  |
| SIGN-1 THRU SIGN-11      | SIGNING PLANS  |
| UO-1 THRU UO-4           | UTILITIES BY OTHERS PLANS  |
| X-1A THRU X-1C           | CROSS-SECTION SUMMARY SHEET  |
| X-1 THRU X-67            | CROSS-SECTIONS   |
| S01-1 THRU S01-34        | STRUCTURE PLANS  |

GENERAL NOTES: 2012 SPECIFICATIONS  
 EFFECTIVE: 01-17-2012  
 REVISED: 10-31-2014

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 OR STD. NO. 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

SIDE ROADS:

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

SUBSURFACE DRAINS:

SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

TEMPORARY SHORING:

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

END BENTS:

THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE Duke Energy, A) Tri-County EMC

Piedmont Natural Gas, AT&T, Time Warner Cable/Charter,

Southeastern Wayne Sanitary District, and D) Town of Mount Olive

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

RIGHT-OF-WAY MARKERS:

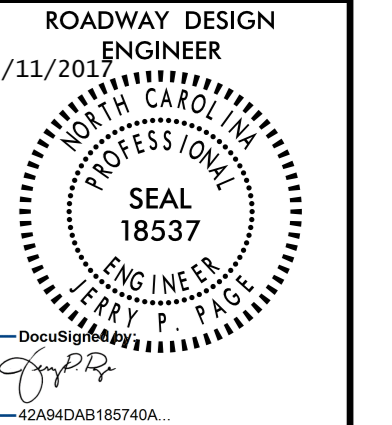
ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY CONTRACT.

2012 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, 2012 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   |
| 225.02                                     | Guide for Grading Subgrade - Secondary and Local  |
| 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 Distance at Intersections   |
| 225.07                                     | Grading for False Cut at Grade Separations  |
| 225.08                                     | Earth Berm Median Pier Protection   |
| 225.09                                     | Guide for Shoulder and Ditch Transition at Grade Separations  |
| DIVISION 3 - PIPE CULVERTS                 |   |
| 300.01                                     | Method of Pipe Installation   |
| 310.10                                     | Driveway Pipe Construction  |
| DIVISION 4 - MAJOR STRUCTURES              |   |
| 422.11                                     | Bridge Approach Fills - Sub Regional Tier   |
| 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 (Sheet 2 of 3 is no longer applicable) |
| DIVISION 6 - ASPHALT BASES AND PAVEMENTS   |   |
| 654.01                                     | Pavement Repairs  |
| 665.01                                     | Asphalt Shoulders - Milled Rumble Strips  |
| DIVISION 8 - INCIDENTALS                   |   |
| 806.01                                     | Concrete Right-of-Way Marker  |
| 806.02                                     | Granite Right-of-Way Marker   |
| 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 Endwall - for Single 54" Pipe 90 Skew   |
| 838.45                                     | Notes for Reinforced Concrete Endwall - Std. Dwg 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 838.51 thru 838.70  |
| 838.80                                     | Precast Endwalls - 12" thru 72" Pipe 90 Skew  |
| 840.00                                     | Concrete Base Pad for Drainage Structures   |
| 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   |
| 840.20                                     | Frames and Wide Slot Flat Grates  |
| 840.22                                     | Frames and Wide Slot Sag Grates   |
| 840.25                                     | Anchorage for Frames - Brick or Concrete or Precast   |
| 840.26                                     | Brick Grated Drop Inlet Type 'A' - 12" thru 72" Pipe  |
| 840.27                                     | Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe  |
| 840.28                                     | Brick Grated Drop Inlet Type 'D' - 12" thru 36" Pipe  |
| 840.29                                     | Frames and Narrow Slot Flat Grates  |
| 840.31                                     | Concrete Junction Box - 12" thru 66" Pipe   |
| 840.32                                     | Brick Junction Box - 12" thru 66" Pipe  |
| 840.45                                     | Precast Drainage Structure  |
| 840.54                                     | Manhole Frame and Cover   |
| 840.66                                     | Drainage Structure Steps  |
| 840.71                                     | Concrete and Brick Pipe Plug  |
| 840.72                                     | Pipe Collar   |
| 846.01                                     | Concrete Curb, Gutter and Curb & Gutter   |
| 846.04                                     | Drop Inlet Installation in Shoulder Berm Gutter   |
| 852.01                                     | Concrete Islands  |
| 857.01                                     | Precast Reinforced Concrete Barrier - 41" Single Faced  |
| 862.01                                     | Guardrail Placement   |
| 862.02                                     | Guardrail Installation  |
| 862.04                                     | Anchoring End of Guardrail - B-77 and B-83 Anchor Units   |
| 865.01                                     | Cable Guiderail   |
| 866.02                                     | Woven Wire Fence - with Wood Post   |
| 876.01                                     | Rip Rap in Channels   |
| 876.02                                     | Guide for Rip Rap at Pipe Outlets   |
| 876.04                                     | Drainage Ditches with Class 'B' Rip Rap   |

|  |                  |
|--|------------------|
| PROJECT REFERENCE NO.<br>R-5719 & U-5796 | SHEET NO.<br>1-A |
|--|------------------|



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

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

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

### BOUNDARIES AND PROPERTY:

|                                       |            |
|---------------------------------------|------------|
| State Line                            | -----      |
| County Line                           | -----      |
| Township Line                         | -----      |
| City Line                             | -----      |
| Reservation Line                      | -----      |
| Property Line                         | -----      |
| Existing Iron Pin                     | ○ EP       |
| Property Corner                       | -----      |
| Property Monument                     | □ EDM      |
| Parcel/Sequence Number                | ⑫③         |
| Existing Fence Line                   | -x-x-x-    |
| Proposed Woven Wire Fence             | ○          |
| Proposed Chain Link Fence             | □          |
| Proposed Barbed Wire Fence            | ◇          |
| Existing Wetland Boundary             | ----- RL-B |
| Proposed Wetland Boundary             | ----- RL-B |
| Existing Endangered Animal Boundary   | ----- EAB  |
| Existing Endangered Plant Boundary    | ----- EPB  |
| Existing Historic Property Boundary   | ----- HPB  |
| Known Contamination Area: Soil        | ☠-S-☠      |
| Potential Contamination Area: Soil    | ??-S-??    |
| Known Contamination Area: Water       | ☠-W-☠      |
| Potential Contamination Area: Water   | ??-W-??    |
| Contaminated Site: Known or Potential | ☠??        |

### BUILDINGS AND OTHER CULTURE:

|                               |     |
|-------------------------------|-----|
| Gas Pump Vent or U/G Tank Cap | ○   |
| Sign                          | ○ S |
| Well                          | ○ W |
| Small Mine                    | ✕   |
| Foundation                    | □   |
| Area Outline                  | □   |
| Cemetery                      | □ † |
| Building                      | □   |
| School                        | □   |
| Church                        | □   |
| Dam                           | ▬   |

### HYDROLOGY:

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

### RAILROADS:

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

### RIGHT OF WAY:

|   |            |
|---|------------|
| Baseline Control Point  | ◆          |
| Existing Right of Way Marker                                  | △          |
| Existing Right of Way Line                                    | -----      |
| Proposed Right of Way Line                                    | ----- RW   |
| Proposed Right of Way Line with Iron Pin and Cap Marker       | ----- RW ▲ |
| Proposed Right of Way Line with Concrete or Granite RW Marker | ----- RW ▲ |
| Proposed Control of Access Line with Concrete CA Marker       | ----- CA   |
| Existing Control of Access                                    | ----- CA   |
| Proposed Control of Access                                    | ----- CA   |
| Existing Easement Line  | ----- E    |
| Proposed Temporary Construction Easement                      | ----- E    |
| Proposed Temporary Drainage Easement                          | ----- TDE  |
| Proposed Permanent Drainage Easement                          | ----- PDE  |
| Proposed Permanent Drainage / Utility Easement                | ----- DUE  |
| Proposed Permanent Utility Easement                           | ----- PUE  |
| Proposed Temporary Utility Easement                           | ----- TUE  |
| Proposed Aerial Utility Easement                              | ----- AUE  |
| Proposed Permanent Easement with Iron Pin and Cap Marker      | ◆          |

### ROADS AND RELATED FEATURES:

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

### VEGETATION:

|              |       |
|--------------|-------|
| Single Tree  | ☼     |
| Single Shrub | ☼     |
| Hedge        | ----- |
| Woods Line   | ----- |

|          |            |
|----------|------------|
| Orchard  | ☼☼☼☼       |
| Vineyard | □ Vineyard |

### EXISTING STRUCTURES:

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

### UTILITIES:

|                                |         |
|--------------------------------|---------|
| POWER:                         |         |
| Existing Power Pole            | ●       |
| Proposed Power Pole            | ○       |
| Existing Joint Use Pole        | ●       |
| Proposed Joint Use Pole        | ○       |
| Power Manhole                  | ⊕       |
| Power Line Tower               | □       |
| Power Transformer              | ▣       |
| U/G Power Cable Hand Hole      | □       |
| H-Frame Pole                   | ●       |
| U/G Power Line LOS B (S.U.E.*) | ----- P |
| U/G Power Line LOS C (S.U.E.*) | ----- P |
| U/G Power Line LOS D (S.U.E.*) | ----- P |

### TELEPHONE:

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

### WATER:

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

### TV:

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

### GAS:

|                                     |                          |
|-------------------------------------|--------------------------|
| Gas Valve                           | ◇                        |
| Gas Meter                           | ⊕                        |
| U/G Gas Line LOS B (S.U.E.*)        | ----- G                  |
| U/G Gas Line LOS C (S.U.E.*)        | ----- G                  |
| U/G Gas Line LOS D (S.U.E.*)        | ----- G                  |
| Above Ground Gas Line               | ----- A/G Gas            |
| SANITARY SEWER:                     |                          |
| Sanitary Sewer Manhole              | ⊕                        |
| Sanitary Sewer Cleanout             | ⊕                        |
| U/G Sanitary Sewer Line             | ----- SS                 |
| Above Ground Sanitary Sewer         | ----- A/G Sanitary Sewer |
| SS Forced Main Line LOS B (S.U.E.*) | ----- FSS                |
| SS Forced Main Line LOS C (S.U.E.*) | ----- FSS                |
| SS Forced Main Line LOS D (S.U.E.*) | ----- FSS                |

### MISCELLANEOUS:

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

09/08/19

See Sheet 1-A For Index of Sheets

# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

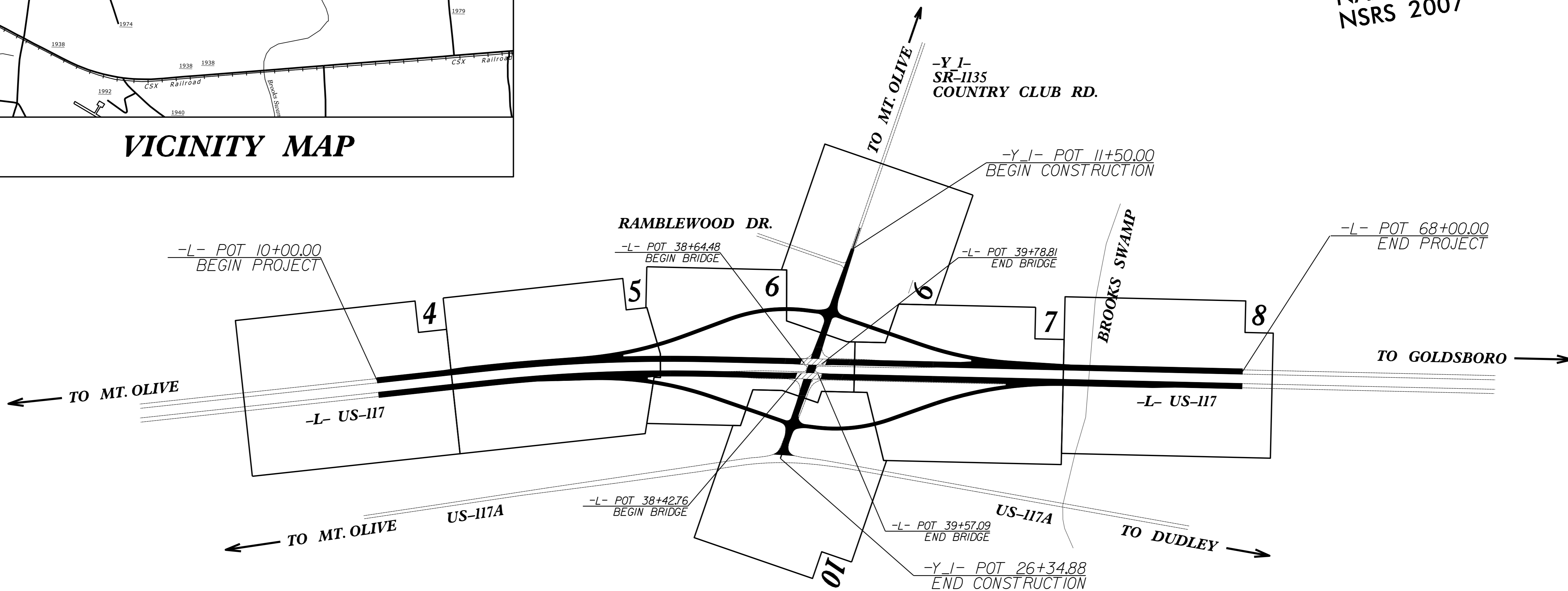
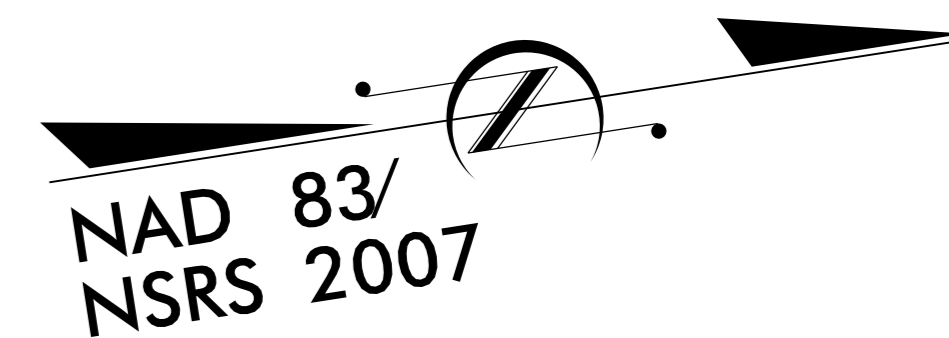
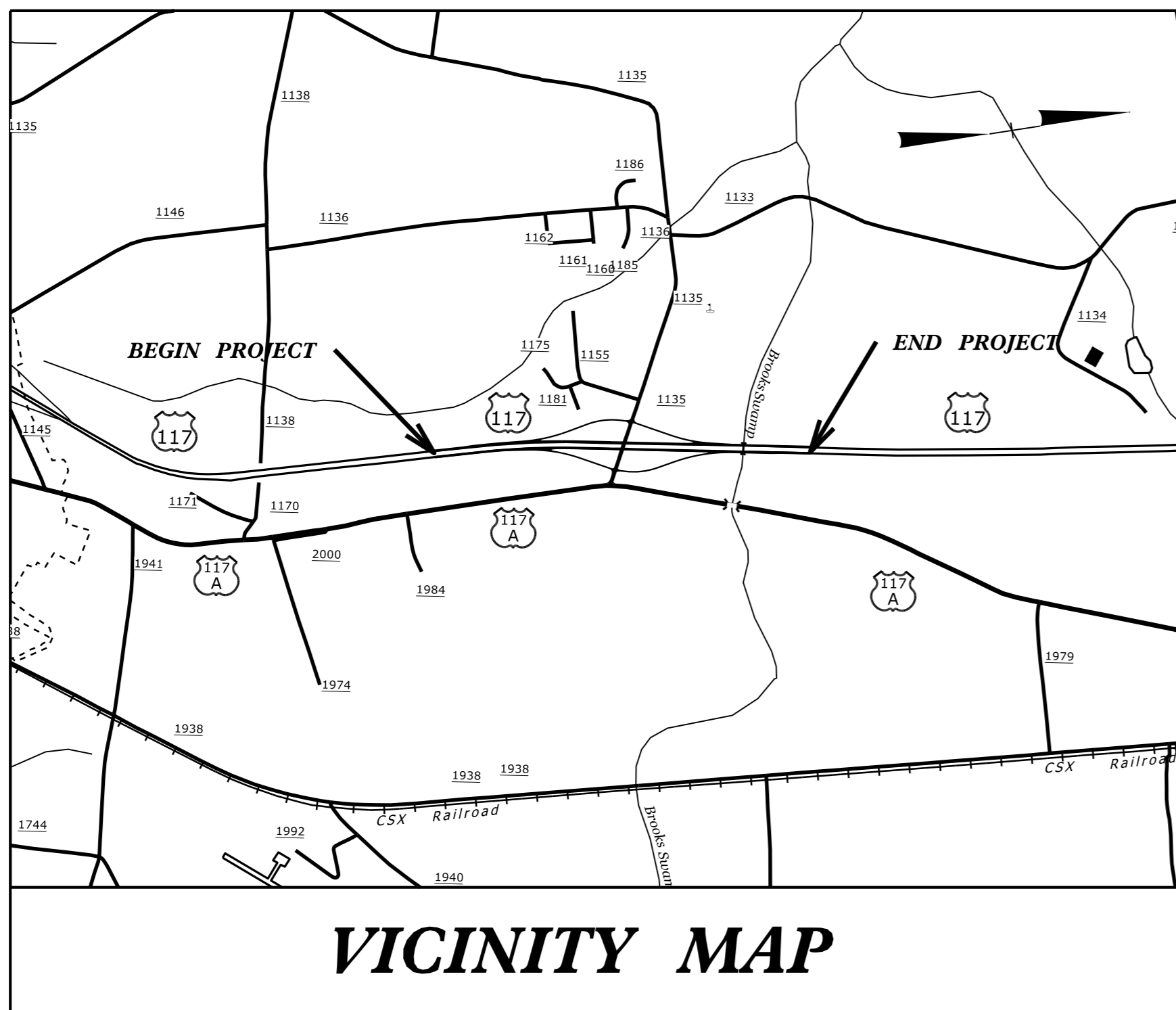
## WAYNE COUNTY

**LOCATION: CONSTRUCT INTERCHANGE AT US-117 AND SR-1135 (COUNTRY CLUB ROAD)**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES**

|                 |                             |             |              |
|-----------------|-----------------------------|-------------|--------------|
| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.   | TOTAL SHEETS |
| N.C.            | R-5719                      | 1           |              |
| STATE PROJ. NO. | F. A. PROJ. NO.             | DESCRIPTION |              |
| 50473.1.FD1     | NHP-0117(31)                | PE          |              |
| 50473.2.1       |                             | RW & UTIL.  |              |
| 50473.3.1       |                             | CONST.      |              |

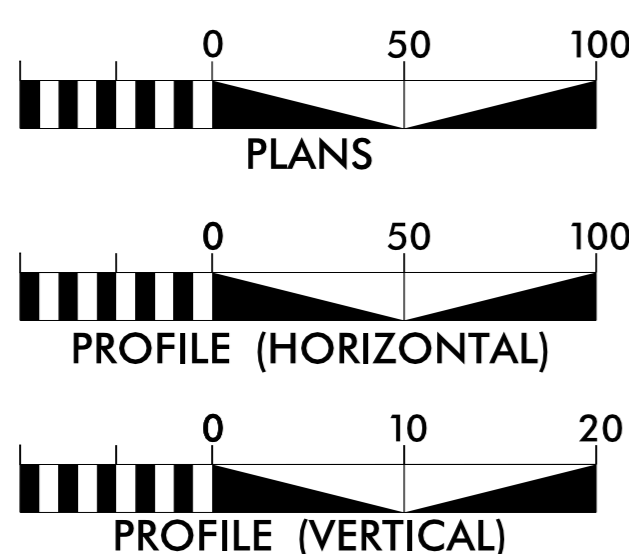
**TIP PROJECT: R-5719**



THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

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

### GRAPHIC SCALES



### DESIGN DATA

ADT 2017 = 15500  
 ADT 2040 = 27700  
 K = 9 %  
 D = 55 %  
 T = 11 % \*  
 V = 70 MPH

\*TTST=8% DUAL=3%  
 PRINCIPAL ARTERIAL  
 STATEWIDE TIER

### PROJECT LENGTH

**LENGTH ROADWAY TIP PROJECT R-5719 = 1.076 MI**  
**LENGTH STRUCTURE TIP PROJECT R-5719 = 0.022 MI**  
**TOTAL LENGTH TIP PROJECT R-5719 = 1.098 MI**

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
 1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
 AUGUST 01, 2016

**LETTING DATE:**  
 JUNE 20, 2017

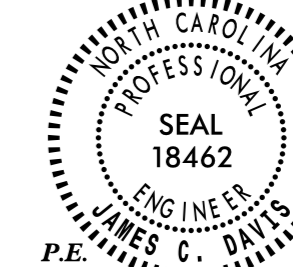
**T.M. LITTLE, PE**  
 PROJECT ENGINEER

**D.R. ETHRIDGE**  
 PROJECT DESIGN ENGINEER

### HYDRAULICS ENGINEER

4/7/2017

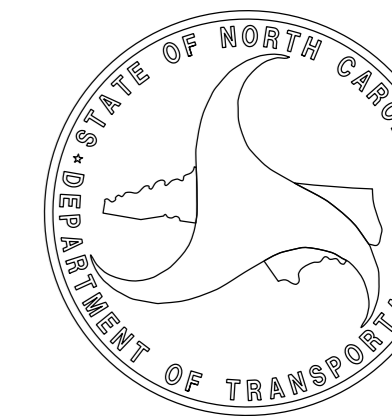
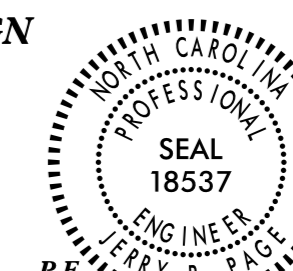
DocuSigned by:  
 James C. Davis  
 E79B9AFAD20C4E8  
 SIGNATURE:



### ROADWAY DESIGN ENGINEER

4/6/2017

DocuSigned by:  
 D.R. Ethridge  
 E79B9AFAD20C4E8  
 SIGNATURE:



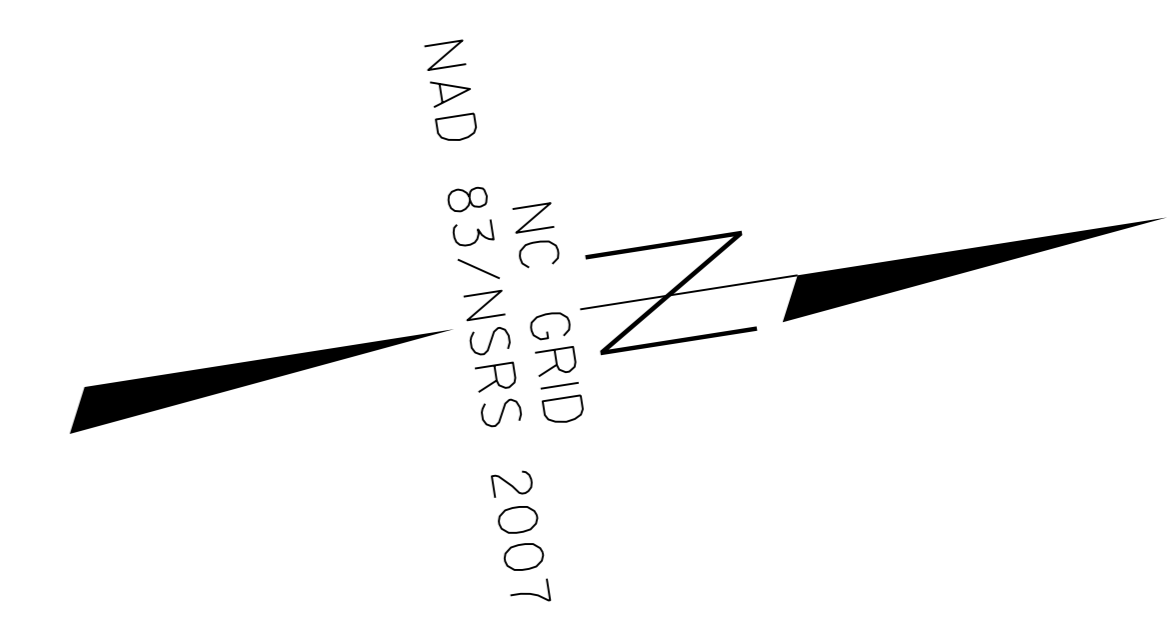
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\$\$\$\$\$USERNAME\$\$\$\$\$

# SURVEY CONTROL SHEET R-5719

| BL  | POINT  | DESC.  | NORTH       | EAST         | ELEVATION | L STATION | OFFSET  |
|-----|--------|--------|-------------|--------------|-----------|-----------|---------|
| 100 | BL-100 | BL-100 | 541520.2910 | 2280906.9020 | 144.11    | 22+75.75  | 3.26 LT |
| 3   |        | GPS3   | 542229.1920 | 2281008.9810 | 141.72    | 29+92.16  | 9.06 RT |
| 4   |        | GPS4   | 543098.7870 | 2281149.9680 | 138.33    | 38+73.19  | 2.78 LT |
| 101 | BL-101 | BL-101 | 543852.8600 | 2281293.1500 | 131.75    | 46+40.69  | 5.28 RT |
| 102 | BL-102 | BL-102 | 544594.2040 | 2281424.3730 | 125.91    | 53+93.56  | 3.80 RT |
| 103 | BL-103 | BL-103 | 545346.6200 | 2281563.6950 | 128.92    | 61+58.75  | 8.35 RT |

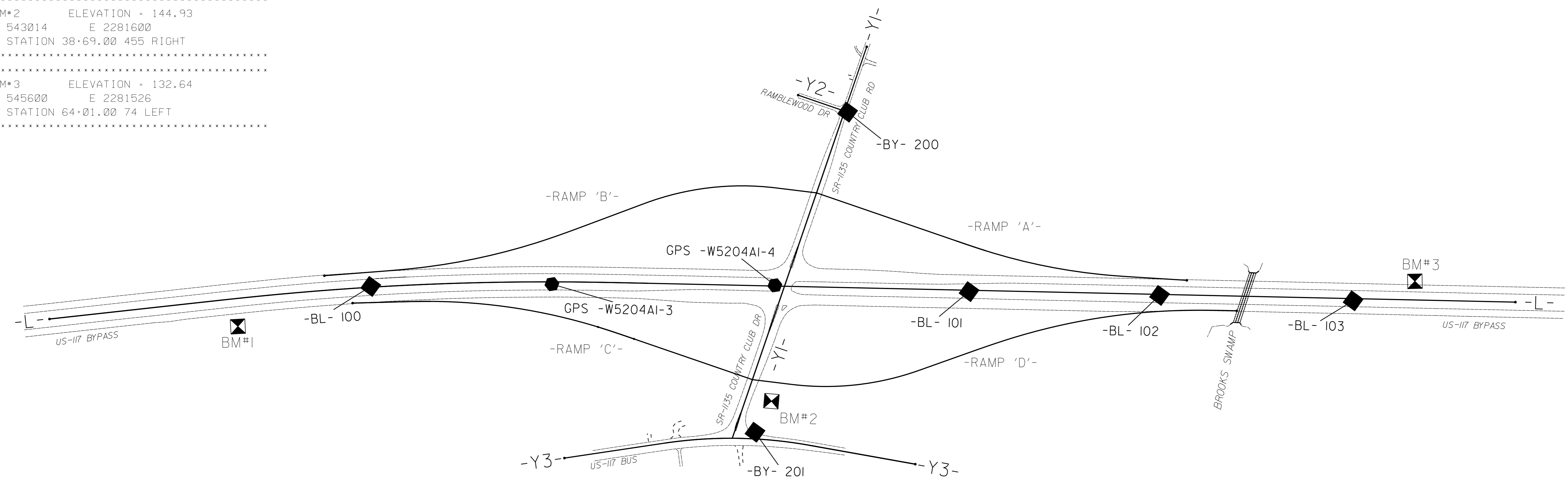
| BY  | POINT  | DESC.  | NORTH       | EAST         | ELEVATION | Y_1 STATION | OFFSET   |
|-----|--------|--------|-------------|--------------|-----------|-------------|----------|
| 200 | BY-200 | BY-200 | 543488.4710 | 2280518.4700 | 140.13    | 12+68.48    | 12.33 LT |
| 201 | BY-201 | BY-201 | 542931.2220 | 2281710.6360 | 141.37    | 25+82.87    | 76.97 LT |



\*\*\*\*\*  
 BM#1 ELEVATION = 150.06  
 N 540977 E 2280982  
 L STATION 17+37.00 110 RIGHT  
 \*\*\*\*\*

\*\*\*\*\*  
 BM#2 ELEVATION = 144.93  
 N 543014 E 2281600  
 L STATION 38+69.00 455 RIGHT  
 \*\*\*\*\*

\*\*\*\*\*  
 BM#3 ELEVATION = 132.64  
 N 545600 E 2281526  
 L STATION 64+01.00 74 LEFT  
 \*\*\*\*\*



**DATUM DESCRIPTION**

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "W-5204-GPS2" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 553939.446(ft) EASTING: 2282808.616(ft) ELEVATION: 167.20(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99987027

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "W5204GPS2" TO -L- STATION 10+00 IS S 8°11'26.51"W 13834.1296

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

**NOTE: DRAWING NOT TO SCALE**

**NOTES:**

- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:  
[HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/](https://connect.ncdot.gov/resources/location/)  
 THE FILES TO BE FOUND ARE AS FOLLOWS:  
 R5719\_LS\_CONTROL.TXT
- SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.  
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

6/2/99  
 06-APR-2017 13:56  
 C:\Roadwork\PROJ\R-5719\_1s\_1c1.dgn  
 \$\$\$USERNAME\$\$\$

# SURVEY CONTROL SHEET R-5719

## FINAL

### PERMANENT EASEMENT

| ALIGN  | STATION  | OFFSET | NORTH        | EAST          |
|--------|----------|--------|--------------|---------------|
| RAMP_A | 21+50.00 | 90.00  | 543680.18291 | 2280904.34969 |
| RAMP_A | 21+50.00 | 79.62  | 543675.33121 | 2280913.52534 |
| RAMP_A | 21+90.00 | 90.00  | 543644.82186 | 2280885.65221 |
| RAMP_A | 21+90.00 | 79.63  | 543639.97504 | 2280894.81861 |

### RAMP\_A

| TYPE | STATION  | NORTH       | EAST         |
|------|----------|-------------|--------------|
| POT  | 10+00.00 | 544709.8702 | 2281382.2960 |
| TS   | 11+86.91 | 544527.3562 | 2281342.0007 |
| SC   | 13+11.91 | 544405.5497 | 2281313.9447 |
| CS   | 18+03.64 | 543944.8312 | 2281144.8067 |
| ST   | 19+28.63 | 543833.8139 | 2281087.3904 |
| POT  | 25+12.18 | 543317.9363 | 2280814.6154 |

### L

| TYPE | STATION  | NORTH       | EAST         |
|------|----------|-------------|--------------|
| POT  | 10+00.00 | 540246.4332 | 2280837.6920 |
| TS   | 15+68.72 | 540814.5530 | 2280863.8214 |
| SC   | 18+68.72 | 541114.1709 | 2280878.9120 |
| CS   | 30+72.06 | 542309.4849 | 2281012.8125 |
| ST   | 33+72.04 | 542604.9958 | 2281064.3875 |
| POT  | 68+00.00 | 545979.3038 | 2281668.4818 |

### PERMANENT EASEMENT

| ALIGN  | STATION  | OFFSET  | NORTH        | EAST          |
|--------|----------|---------|--------------|---------------|
| RAMP_B | 10+03.00 | -96.00  | 541356.62522 | 2280741.33651 |
| RAMP_B | 10+03.00 | -87.00  | 541355.91585 | 2280750.30455 |
| RAMP_B | 10+29.00 | -88.26  | 541381.93396 | 2280751.10237 |
| RAMP_B | 10+29.00 | -96.00  | 541382.54427 | 2280743.38670 |
| RAMP_B | 23+60.00 | -100.00 | 542679.11719 | 2280642.13841 |
| RAMP_B | 23+60.00 | -85.01  | 542681.38909 | 2280656.95980 |
| RAMP_B | 24+00.00 | -100.00 | 542722.36046 | 2280636.31242 |
| RAMP_B | 24+00.00 | -84.27  | 542724.17726 | 2280651.93989 |

### RAMP\_B

| TYPE | STATION  | NORTH       | EAST         |
|------|----------|-------------|--------------|
| POT  | 10+00.00 | 541346.0646 | 2280836.8010 |
| TS   | 11+78.91 | 541524.4219 | 2280850.9090 |
| SC   | 13+78.91 | 541723.9775 | 2280864.0191 |
| CS   | 18+82.13 | 542225.3870 | 2280833.0390 |
| ST   | 20+82.12 | 542421.8011 | 2280795.4651 |
| PC   | 23+04.73 | 542639.8682 | 2280750.7272 |
| PT   | 28+31.98 | 543161.7250 | 2280770.2078 |
| POT  | 29+94.38 | 543317.9363 | 2280814.6154 |

### Y\_1

| TYPE | STATION  | NORTH       | EAST         |
|------|----------|-------------|--------------|
| POT  | 10+00.00 | 543603.0724 | 2280275.3602 |
| POT  | 12+68.54 | 543477.5469 | 2280512.7567 |
| POT  | 16+10.00 | 543317.9363 | 2280814.6154 |
| POT  | 20+00.00 | 543135.6354 | 2281159.3866 |
| POT  | 23+90.00 | 542953.3350 | 2281504.1569 |
| POT  | 26+34.88 | 542838.8696 | 2281720.6362 |

### RAMP\_C

| TYPE | STATION  | NORTH       | EAST         |
|------|----------|-------------|--------------|
| POT  | 10+00.00 | 541439.4494 | 2280961.0158 |
| TS   | 11+58.66 | 541596.8099 | 2280981.2851 |
| SC   | 13+08.66 | 541745.3558 | 2281002.0687 |
| CS   | 19+79.80 | 542382.7834 | 2281204.3218 |
| ST   | 21+29.79 | 542516.1289 | 2281272.9792 |
| POT  | 26+24.35 | 542953.3350 | 2281504.1569 |

### Y\_2

| TYPE | STATION  | NORTH       | EAST         |
|------|----------|-------------|--------------|
| POT  | 10+00.00 | 543477.5469 | 2280512.7567 |
| POT  | 11+93.96 | 543306.0854 | 2280422.0948 |

### RAMP\_D

| TYPE | STATION  | NORTH       | EAST         |
|------|----------|-------------|--------------|
| TS   | 10+00.00 | 544886.2864 | 2281531.7236 |
| SC   | 11+99.99 | 544688.9879 | 2281499.1107 |
| CS   | 19+08.67 | 543982.6863 | 2281502.3494 |
| ST   | 21+08.66 | 543785.6952 | 2281536.7703 |
| PC   | 22+88.29 | 543609.1748 | 2281570.0454 |
| PT   | 27+97.88 | 543104.6421 | 2281547.1667 |
| POT  | 29+55.19 | 542953.3350 | 2281504.1569 |

### Y\_3

| TYPE | STATION  | NORTH       | EAST         |
|------|----------|-------------|--------------|
| POT  | 10+00.00 | 542171.6556 | 2281695.4448 |
| PC   | 14+00.00 | 542571.6470 | 2281698.3207 |
| PT   | 19+72.56 | 543133.5196 | 2281794.5257 |
| POT  | 24+00.00 | 543537.6229 | 2281933.8291 |

### DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "W-5204-GPS2"  
 WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF  
 NORTHING: 553939.446(ft) EASTING: 2282808.616(ft)  
 ELEVATION: 167.20(ft)  
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99987027  
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "W5204GPS2" TO -L- STATION 10+00 IS  
 S 8°11'26.51"W 13834.1296  
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES  
 VERTICAL DATUM USED IS NAVD 88

#### NOTES:

1. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:  
[HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/](https://connect.ncdot.gov/resources/location/)

THE FILES TO BE FOUND ARE AS FOLLOWS:  
 R5719\_LS\_CONTROL.TXT

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INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.  
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

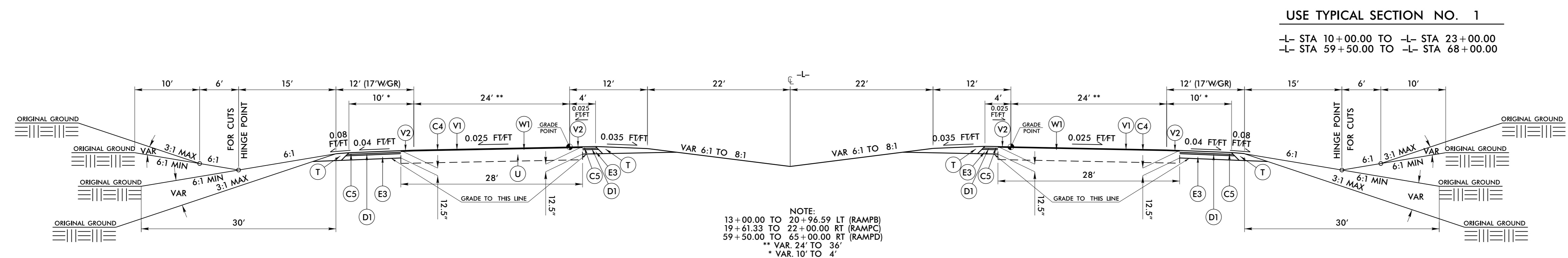
**NOTE: DRAWING NOT TO SCALE**

PAVEMENT SCHEDULE

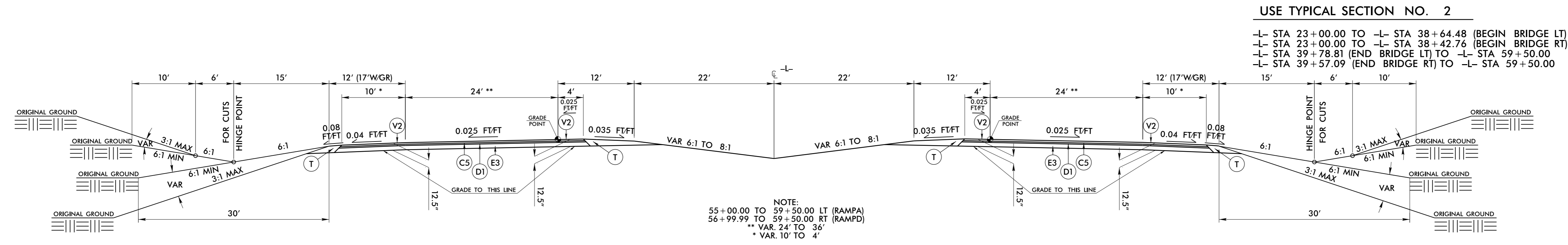
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

|  |   |
|--|---|
| PROJECT REFERENCE NO.<br>R-5719  | SHEET NO.<br>2A-1   |
| ROADWAY DESIGN ENGINEER<br>4/7/2017<br>SEAL 18537<br>NORTH CAROLINA PROFESSIONAL ENGINEER<br>JERRY P. PAGE | PAVEMENT DESIGN ENGINEER<br>4/7/2017<br>SEAL 18537<br>NORTH CAROLINA PROFESSIONAL ENGINEER<br>JERRY P. PAGE |
| <b>DOCUMENT NOT CONSIDERED FINAL<br/>UNLESS ALL SIGNATURES COMPLETED</b>                                   |   |

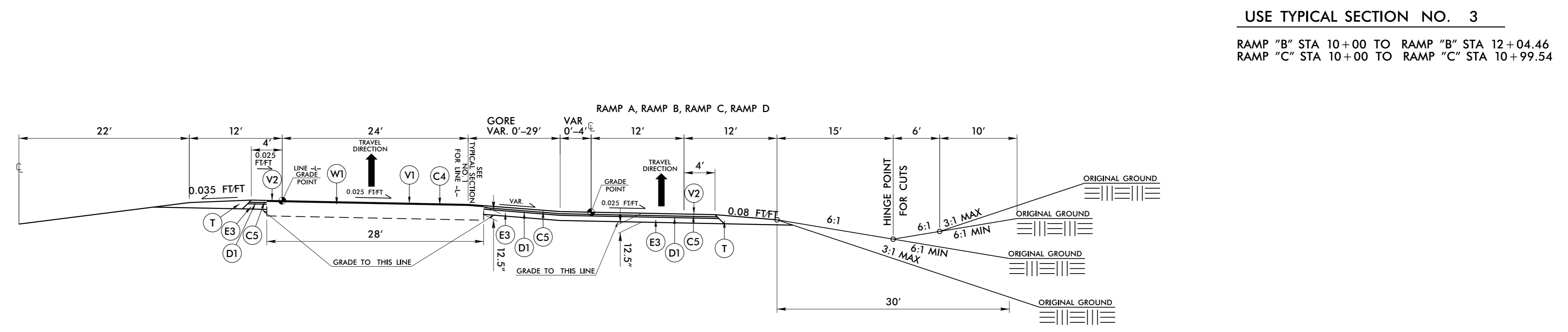
|    |   |    |  |    |   |
|----|---|----|--|----|---|
| C1 | PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD.  | D2 | PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 2.5" OR GREATER THAN 4" IN DEPTH. | R1 | CONCRETE SHOULDER BERM GUTTER                                 |
| C2 | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD. IN EACH OF TWO LAYERS.                                     | E1 | PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YARD.   | T  | EARTH MATERIAL.   |
| C3 | PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YARD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 2" DEPTH. | E2 | PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 3" OR GREATER THAN 5.5" IN DEPTH.        | U  | EXISTING PAVEMENT.  |
| C4 | PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD.  | E3 | PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YARD.   | V1 | MILLING BITUMINOUS PAVEMENT. 1.5" DEPTH.                      |
| C5 | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD. IN EACH OF TWO LAYERS.                                     | E4 | PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 3" OR GREATER THAN 5.5" IN DEPTH.        | V2 | MILLED RUMBLE STRIPS  |
| C6 | PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YARD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 2" DEPTH. | E5 | PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YARD.   | W1 | VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL) |
| D1 | PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YARD.  | L  | SHALLOW UNDERCUT AND CLASS IV SUBGRADE STABILIZATION   | W2 | VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL) |
|    |   | N  | GEOTEXTILE FOR SOIL STABILIZATION  |    |   |



TYPICAL SECTION NO. 1



TYPICAL SECTION NO. 2



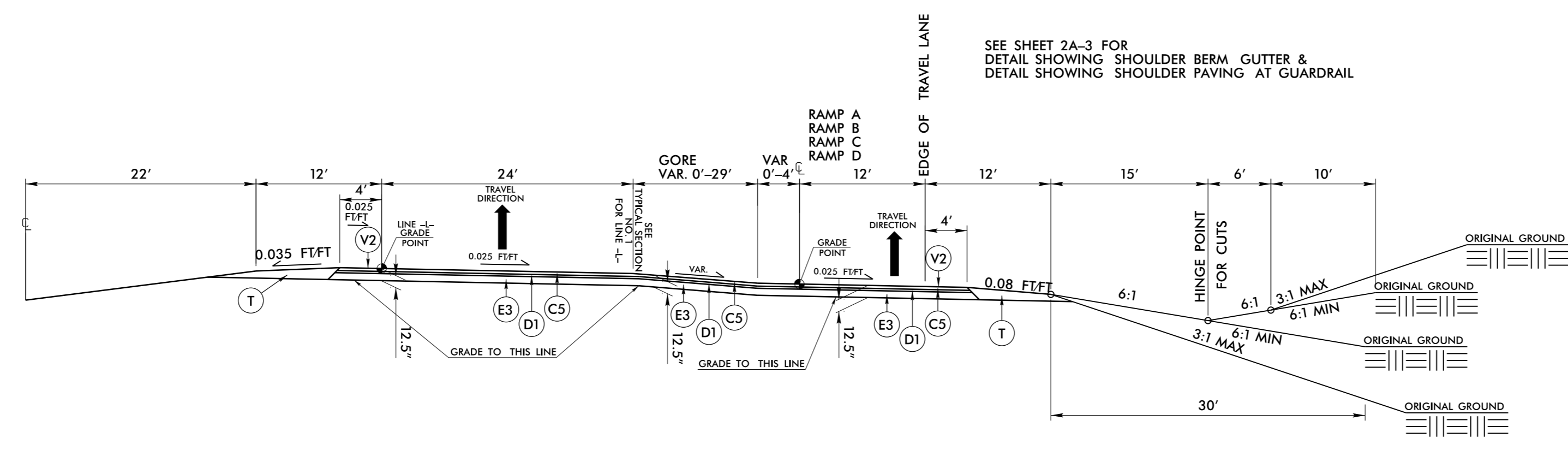
TYPICAL SECTION NO. 3

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USE TYPICAL SECTION NO. 4

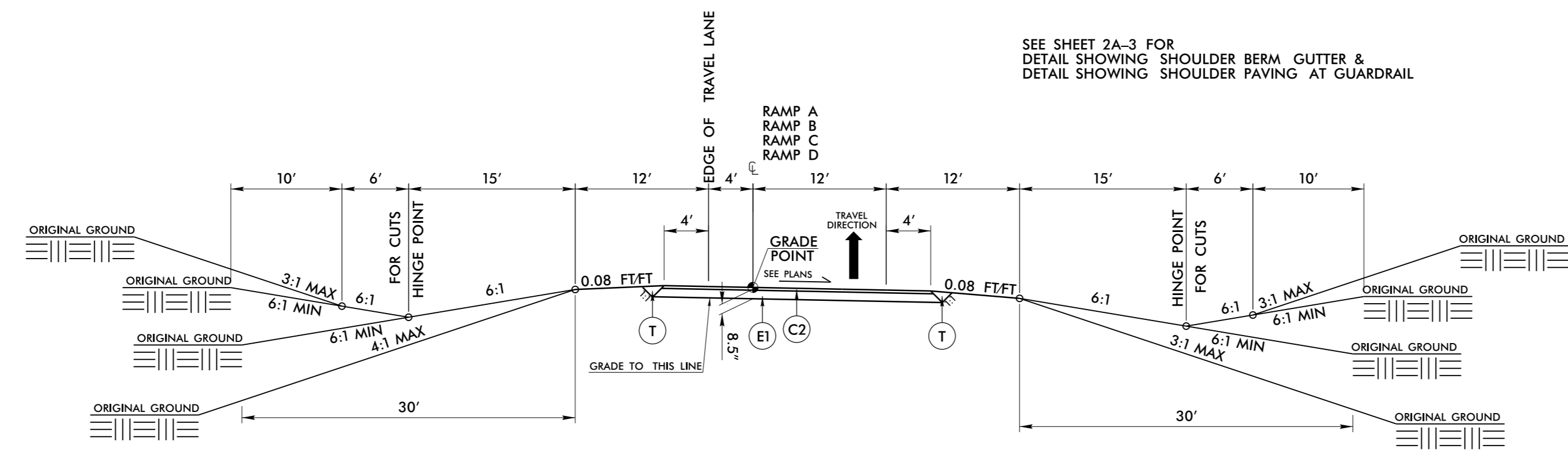
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 RAMP "B" STA 12+04.46 TO RAMP "B" STA 15+59.50  
 RAMP "C" STA 10+99.54 TO RAMP "C" STA 16+09.82  
 RAMP "D" STA 10+00.00 TO RAMP "D" STA 14+83.34



TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 5

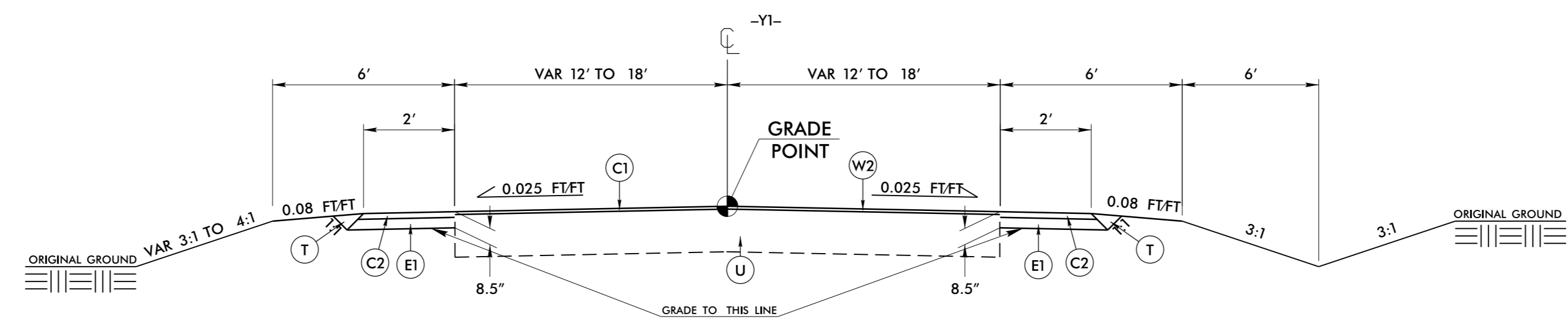
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 RAMP "B" STA 15+59.50 TO RAMP "B" STA 29+73.94  
 RAMP "C" STA 16+09.82 TO RAMP "C" STA 26+04.49  
 RAMP "D" STA 14+83.34 TO RAMP "D" STA 29+34.74



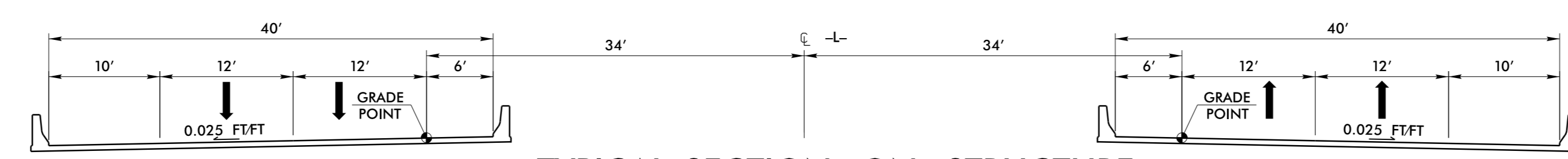
TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 6

-Y1- STA 11+50 TO -Y1- STA 26+34.88



TYPICAL SECTION NO. 6



TYPICAL SECTION ON STRUCTURE

-L- STA 38+64.48 TO -L- STA 39+78.81 (LEFT)  
 -L- STA 38+42.76 TO -L- STA 39+57.09 (RIGHT)

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

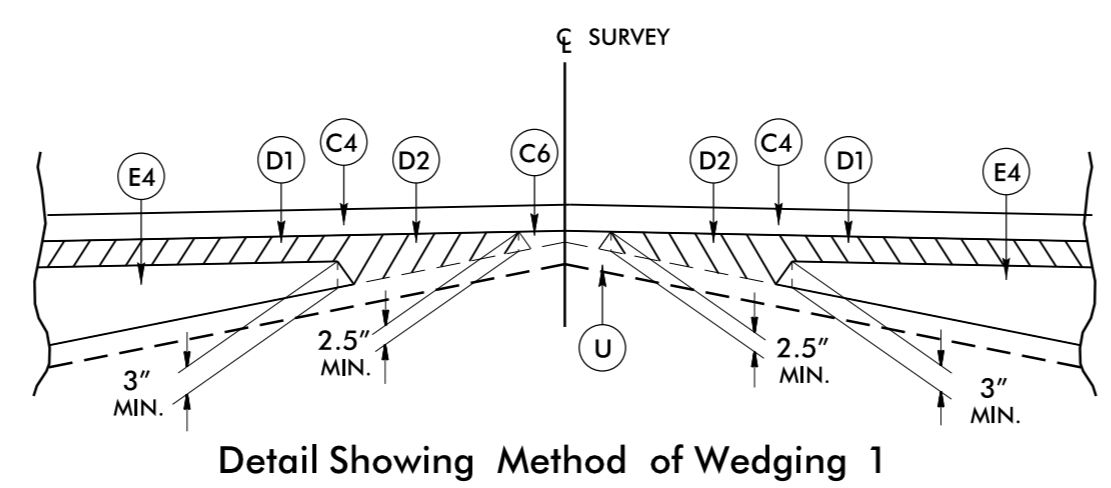
PAVEMENT SCHEDULE

|    |                                    |
|----|------------------------------------|
| C1 | 1.5" S9.5B                         |
| C2 | 3" S9.5B                           |
| C3 | VAR" S9.5B                         |
| C4 | 1.5" S9.5C                         |
| C5 | 3" S9.5C                           |
| C6 | VAR" S9.5C                         |
| D1 | 4" I19.0C                          |
| D2 | VAR" I19.0C                        |
| E1 | 4.5" B25.0B                        |
| E1 | 5.5" B25.0B                        |
| E2 | VAR" B25.0B                        |
| E3 | 5.5" B25.0C                        |
| E4 | VAR" B25.0C                        |
| E5 | 4" B25.0C                          |
| L  | SHALLOW UNDERCUT CLASS IV SUBGRADE |
| N  | GEOTEXTILE FOR SOIL STABILIZATION  |
| R1 | SBG                                |
| T  | EARTH MATERIAL                     |
| U  | EXIST. PAVEMENT                    |
| V1 | 1.5" MILLING                       |
| V2 | RUMBLE STRIPS                      |
| W1 | WEDGING                            |
| W2 | WEDGING                            |

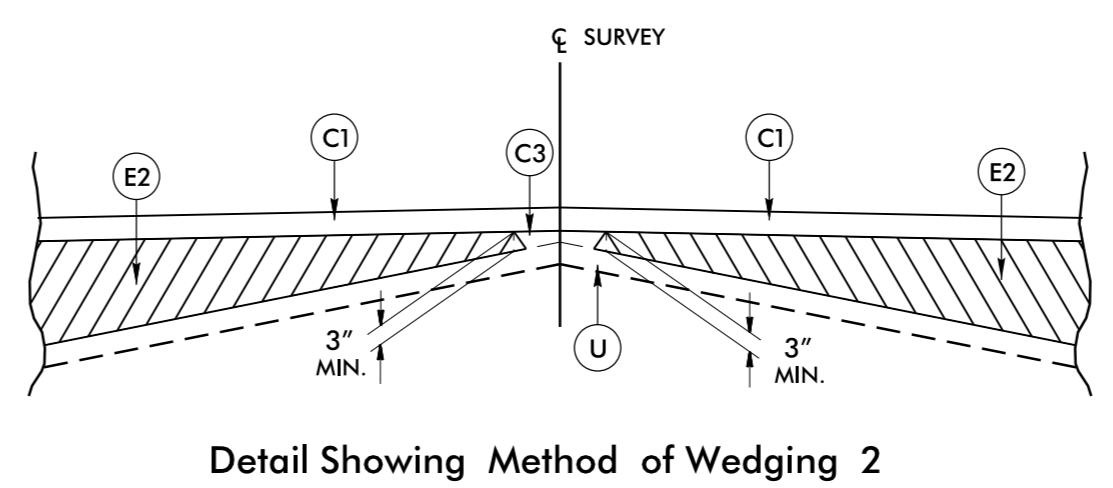
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PAVEMENT SCHEDULE

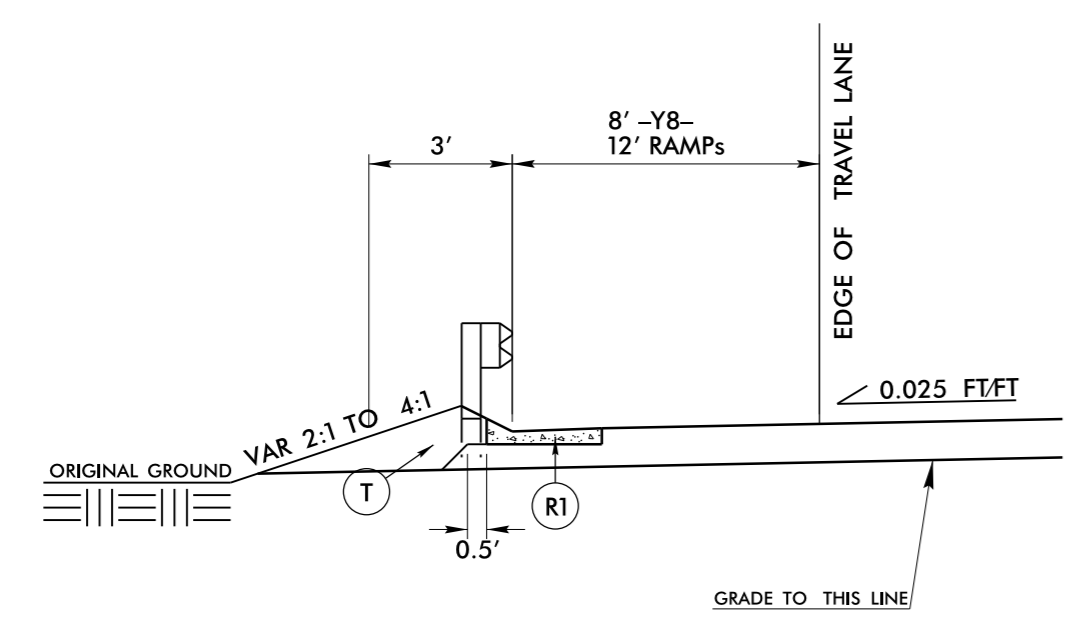
|    |                                    |
|----|------------------------------------|
| C1 | 1.5" S9.5B                         |
| C2 | 3" S9.5B                           |
| C3 | VAR" S9.5B                         |
| C4 | 1.5" S9.5C                         |
| C5 | 3" S9.5C                           |
| C6 | VAR" S9.5C                         |
| D1 | 4" I19.0C                          |
| D2 | VAR" I19.0C                        |
| E1 | 4.5" B25.0B                        |
| E1 | 5.5" B25.0B                        |
| E2 | VAR" B25.0B                        |
| E3 | 5.5" B25.0C                        |
| E4 | VAR" B25.0C                        |
| E5 | 4" B25.0C                          |
| L  | SHALLOW UNDERCUT CLASS IV SUBGRADE |
| N  | GEOTEXTILE FOR SOIL STABILIZATION  |
| R1 | SBG                                |
| T  | EARTH MATERIAL                     |
| U  | EXIST. PAVEMENT                    |
| V1 | 1.5" MILLING                       |
| V2 | RUMBLE STRIPS                      |
| W1 | WEDGING                            |
| W2 | WEDGING                            |



Detail Showing Method of Wedging 1

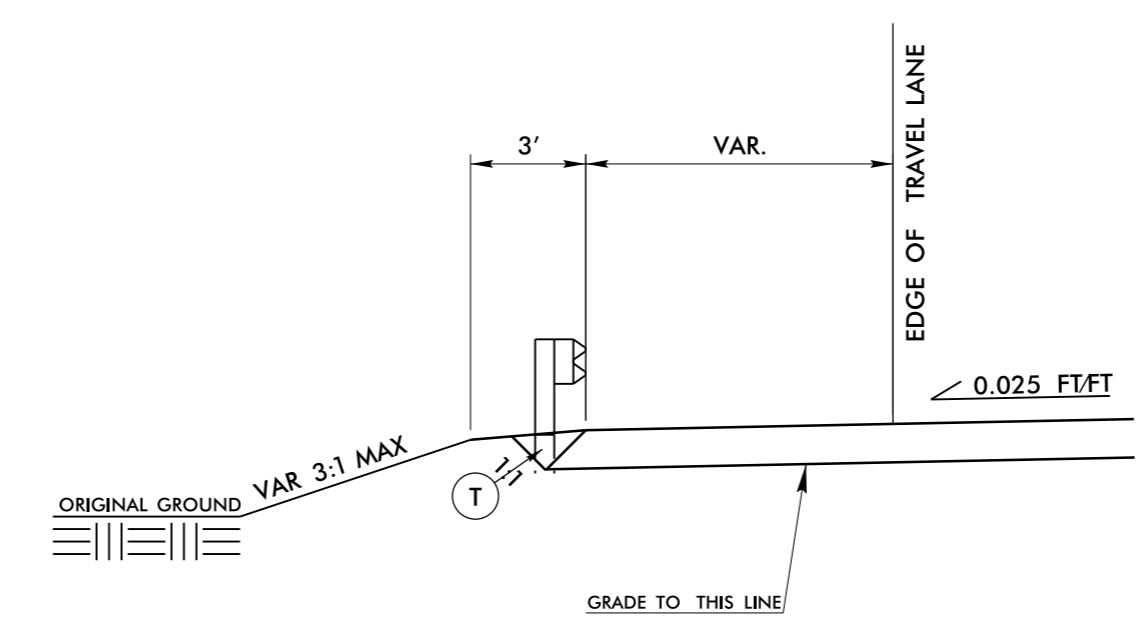


Detail Showing Method of Wedging 2



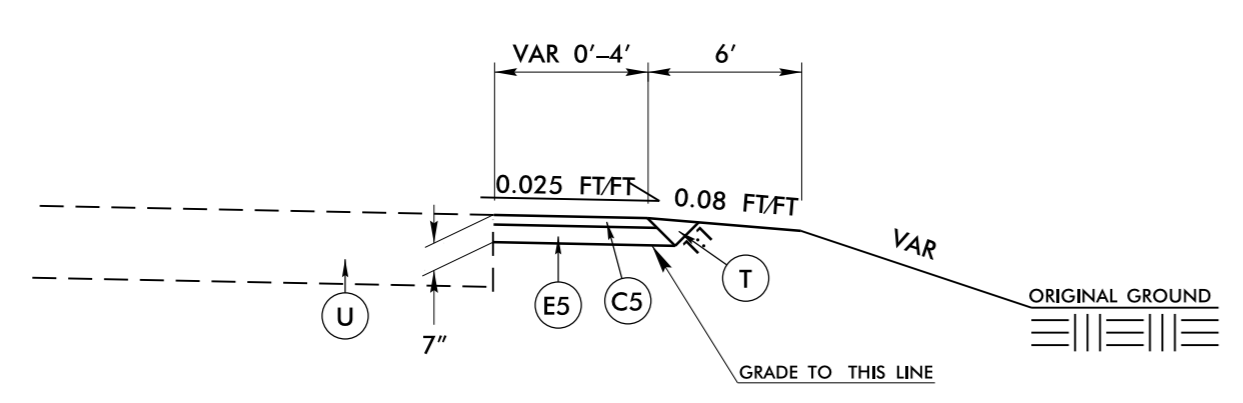
DETAIL SHOWING SHOULDER BERM GUTTER (SBG)

USE WITH TYPICAL SECTION NO. 1&2  
 -L- STA 35+81.90 TO 38+07.77 (BEGIN APPROACH SLAB) (RT)  
 -L- 40+13.80 (END APPROACH SLAB) TO STA 42+39.67 (LT)  
 -L- STA 55+00.00 TO STA 63+50.00 (LT)  
 -L- STA 56+99.99 TO STA 62+06.24 (RT)  
 -RPA- STA 10+00.00 TO STA 11+06.25 (RT)  
 -RPD- STA 10+00.00 TO STA 17+12.5 (LT)



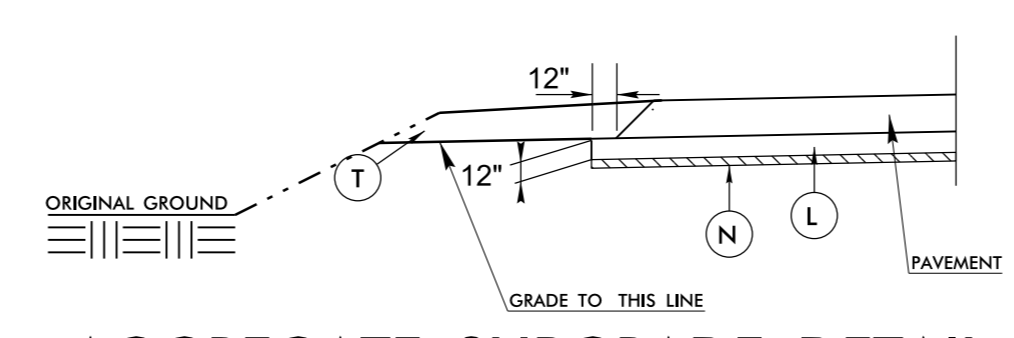
DETAIL SHOWING SHOULDER PAVING AT GUARDRAIL

USE WITH TYPICAL SECTION NO. 2  
 -L- 36+33.03 TO BEGIN APPROACH SLAB (MED)  
 -L- END APPROACH SLAB TO 41+88.52 (MED)



TEMPORARY PAVEMENT DETAIL

-L- STA 56+00 TO -L- STA 60+50  
 SEE TRANSPORTATION MANAGEMENT PLANS



AGGREGATE SUBGRADE DETAIL

USE WITH TYPICAL SECTIONS NO. 1,2,3,4,5,&6  
 -L- STA 10+00 TO 24+30  
 -L- STA 57+75 TO 68+00  
 -RAMP A- STA 23+90 TO 24+92  
 -RAMP B- STA 10+00 TO 13+15  
 -RAMP C- STA 10+00 TO 12+25  
 -RAMP D- STA 24+20 TO 25+05  
 -RAMP E- STA 26+70 TO 29+30  
 -Y 1- STA 11+50 TO 14+00



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

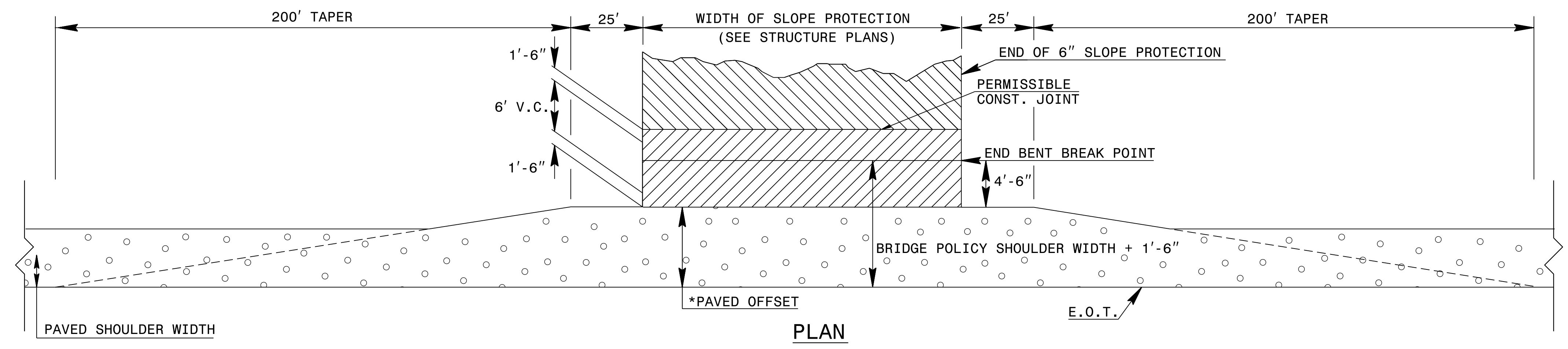
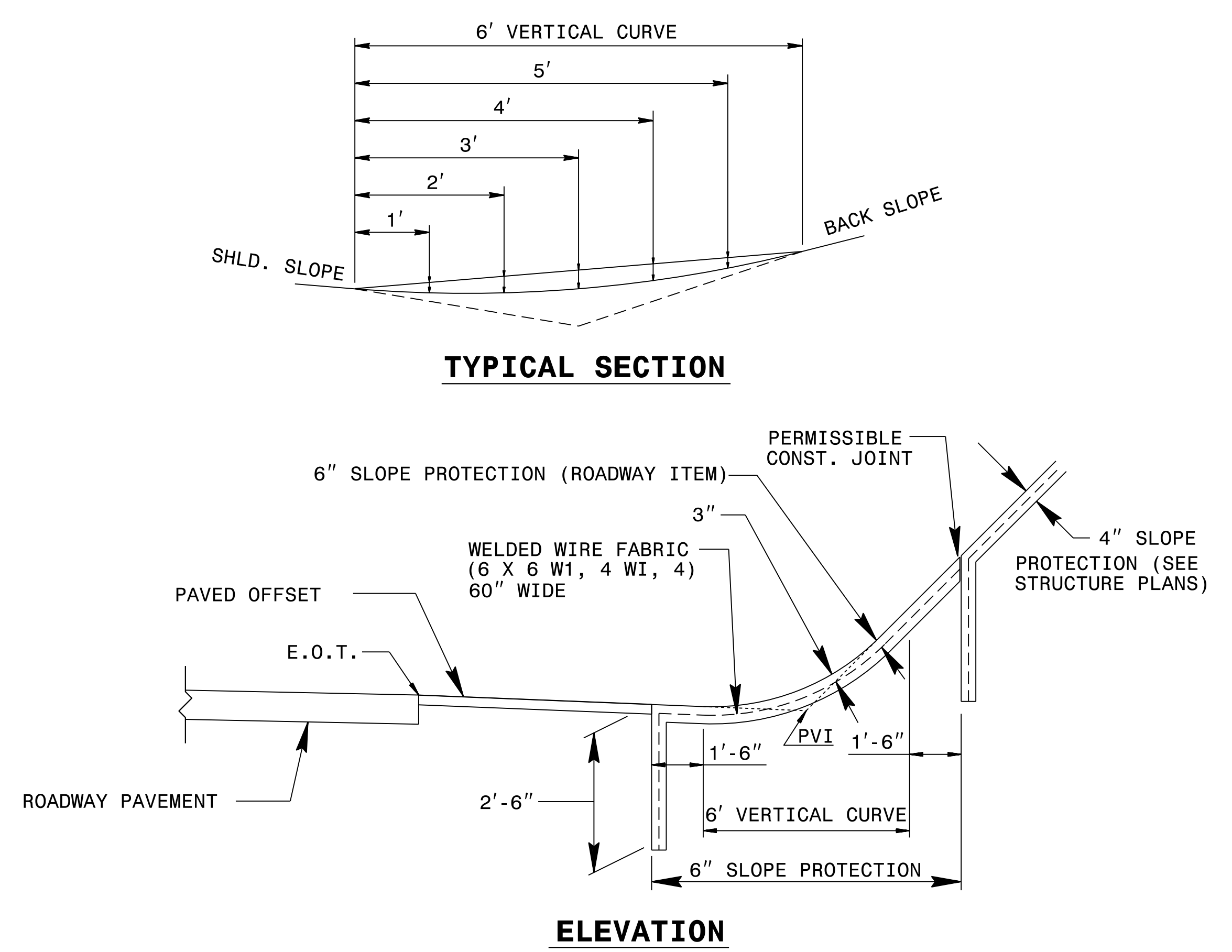
ENGLISH DETAIL DRAWING FOR  
**GUIDE FOR PAVING SHOULDERS UNDER BRIDGES**  
 METHOD III

SHEET 1 OF 1  
**610D03**

| HORZ. DIM. | 1½:1 BACK SLOPE |       |       |       |       |       |       |       |       |       |
|------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|            | SHOULDER SLOPE  |       |       |       |       |       |       |       |       |       |
|            | .04             | .03   | .02   | .01   | .00   | -.01  | -.02  | -.03  | -.04  | -.05  |
| 1'         | 0.26'           | 0.27' | 0.27' | 0.27' | 0.28' | 0.28' | 0.28' | 0.29' | 0.30' | 0.31' |
| 2'         | 0.42'           | 0.42' | 0.43' | 0.44' | 0.44' | 0.45' | 0.46' | 0.46' | 0.47' | 0.48' |
| 3'         | 0.47'           | 0.48' | 0.49' | 0.49' | 0.50' | 0.51' | 0.52' | 0.52' | 0.53' | 0.54' |
| 4'         | 0.42'           | 0.42' | 0.43' | 0.44' | 0.44' | 0.45' | 0.46' | 0.46' | 0.47' | 0.48' |
| 5'         | 0.26'           | 0.27' | 0.27' | 0.27' | 0.28' | 0.28' | 0.28' | 0.29' | 0.30' | 0.31' |

| HORZ. DIM. | 2:1 BACK SLOPE |       |       |       |       |       |       |       |       |       |
|------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|            | SHOULDER SLOPE |       |       |       |       |       |       |       |       |       |
|            | .04            | .03   | .02   | .01   | .00   | -.01  | -.02  | -.03  | -.04  | -.05  |
| 1'         | 0.19'          | 0.20' | 0.20' | 0.20' | 0.21' | 0.21' | 0.22' | 0.22' | 0.23' | 0.23' |
| 2'         | 0.31'          | 0.31' | 0.32' | 0.33' | 0.33' | 0.34' | 0.35' | 0.35' | 0.36' | 0.37' |
| 3'         | 0.35'          | 0.35' | 0.36' | 0.37' | 0.38' | 0.38' | 0.39' | 0.40' | 0.41' | 0.41' |
| 4'         | 0.31'          | 0.31' | 0.32' | 0.33' | 0.33' | 0.34' | 0.35' | 0.35' | 0.36' | 0.37' |
| 5'         | 0.19'          | 0.20' | 0.20' | 0.20' | 0.21' | 0.21' | 0.22' | 0.22' | 0.23' | 0.23' |

**VERTICAL CURVE OFFSET**  
(FOR 6' V.C. AT BRIDGES)



**NOTES:**  
 PAVE THE FULL WIDTH OF THE SHOULDER AS SHOWN WITH SHOULDER PAVEMENT MATERIAL AS SHOWN ON PLANS.  
 \* PAVED OFFSET BASED ON BRIDGE POLICY (SEE STRUCTURE PLANS).  
 PROTECT SLOPE WITH REINFORCED CONCRETE PAVING. CONCRETE BLOCK PAVING WILL NOT BE PERMITTED.  
 OFFSETS FOR 6' V.C. DENOTES FINISHED GRADE OF SLOPE PROTECTION.

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

ENGLISH DETAIL DRAWING FOR  
**GUIDE FOR PAVING SHOULDERS UNDER BRIDGES**  
 METHOD III

SHEET 1 OF 1  
**610D03**

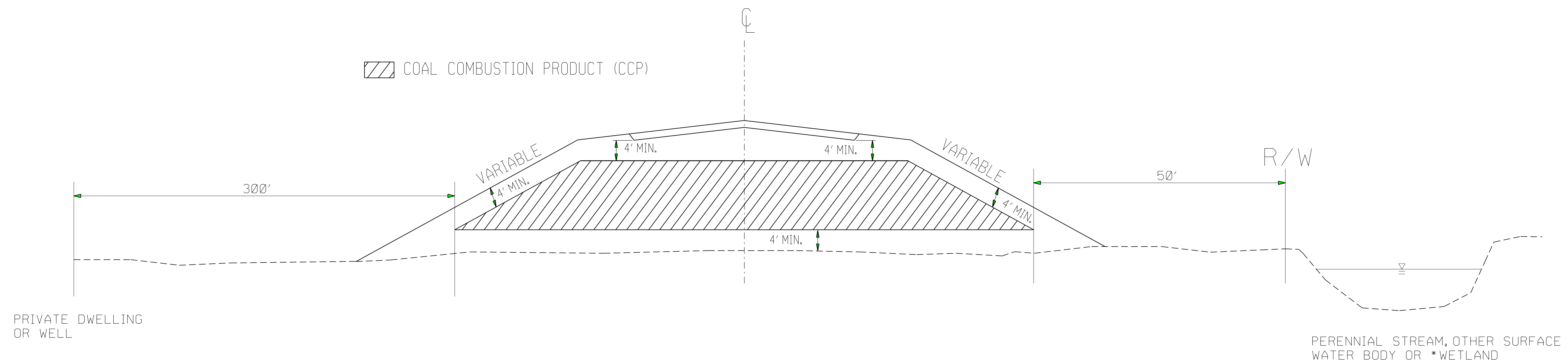
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DocuSigned by:  
 Joel S. Howerton  
 873F3D17DCDC45F  
 4/7/2017  
**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**



**CONTRACT STANDARDS AND DEVELOPMENT UNIT**  
 Office 919-707-6950 FAX 919-250-4119  
**SEE TITLE BLOCK**  
 ORIGINAL BY: J. HOWERTON DATE: 06-22-12  
 MODIFIED BY: DATE:  
 CHECKED BY: DATE:  
 FILE SPEC.:

# COAL COMBUSTION PRODUCT PLACEMENT



PLACE CCP IN HATCHED AREA IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISIONS

PLACE CCP A MINIMUM OF 5' ABOVE SEASONAL HIGH GROUND WATER

PLACE AT LOCATIONS AS APPROVED BY THE ENGINEER

PLACE SOIL BORROW MATERIAL ON THE OUTSIDE OF CCP AS EACH LIFT OF CCP IS PLACED

PERENNIAL STREAM, OTHER SURFACE WATER BODY OR \*WETLAND

\*(OBTAIN PERMISSION FROM ARMY CORPS OF ENGINEERS)

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

**COAL COMBUSTION PRODUCT PLACEMENT DETAIL**

ORIGINAL BY: J.S.H. DATE: 3/16/15  
MODIFIED BY: DATE: \_\_\_\_\_  
CHECKED BY: DATE: \_\_\_\_\_  
FILE SPEC.: joel/coal combustion material detail.dgn



DocuSigned by:  
Joel S. Howerton  
873F3D17CC0C45F...  
4/7/2017

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DIVISION OF HIGHWAYS  
 STATE OF NORTH CAROLINA

SUMMARY OF EARTHWORK  
 Volumes in Cubic Yards

| STATION TO STATION                        |          |    |          | Uncl. Excav. | Undercut | Embank +% | Borrow | Waste |
|---|----------|----|----------|--------------|----------|-----------|--------|-------|
| L   | 10+00.00 | TO | 38+64.48 | 1986         |          | 217554    | 216178 | 610   |
| RAMPB                                     | 10+00.00 | TO | 29+50.00 | 1252         |          | 35867     | 34615  |       |
| RAMPC                                     | 10+00.00 | TO | 26+00.00 | 1277         |          | 25344     | 24067  |       |
|   |          |    | SUBTOTAL | 4515         |          | 278765    | 274860 | 610   |
| L   | 39+78.81 | TO | 68+00.00 | 971          |          | 262830    | 261859 |       |
| RAMPA                                     | 10+00.00 | TO | 25+00.00 | 153          |          | 33883     | 33883  | 153   |
| RAMPD                                     | 10+00.00 | TO | 29+50.00 | 1598         |          | 45055     | 43457  |       |
|   |          |    | SUBTOTAL | 2722         |          | 341768    | 339199 | 153   |
| Y1  | 11+50.00 | TO | 25+50.00 | 572          |          | 460       | 25     | 137   |
|   |          |    | SUBTOTAL | 572          |          | 460       | 25     | 137   |
| TOTAL                                     |          |    |          | 7809         |          | 620993    | 614084 | 900   |
| LOSS DUE TO CLEARING AND GRUBBING         |          |    |          | -100         |          |           |        | 100   |
| EST. SHOULDER MATERIAL                    |          |    |          |              |          | 6000      | 6000   |       |
| PROJECT TOTAL                             |          |    |          | 7709         |          | 626993    | 620184 | 900   |
| ESTIMATE TO REPLACE TOPSOIL ON BORROW PIT |          |    |          |              |          |           | 31009  |       |
| R-5719 GRAND TOTAL                        |          |    |          | 7709         |          | 626993    | 651193 | 900   |
| R-5719 ESTIMATE UNDERCUT                  |          |    |          |              | 500      |           |        |       |
| R-5719 SAY                                |          |    |          | 7800         | 500      |           | 651200 |       |
| U-5796 SAY                                |          |    |          | 26900        | 3750     |           | 276300 |       |
| COMBINE SAY TOTAL                         |          |    |          | 34700        | 4250     |           | 927500 |       |

UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN TOP 3' OF EMBANKMENT OR BACKFILL  
 -L- 15+50 - 19+75 (500 CY), -L- 59+20 - 68+00 (700 CY), RPB 10+00 - 14+10 (250 CY), RPC 10+00 - 13+70 (450 CY)  
 RPC 23+90 - 25+05 (100 CY), RPD 26+70 - 29+30 (1300 CY), -Y1- 11+50 - 14+00 (200 CY), -Y1- 24+55 - 25+50 (100 CY)  
 PER GEOTECH

SUMMARY OF RIP RAP

| LINE                    | STATION | LOCATION | PIPE SIZE | RIP RAP, CLASS II TONS | RIP RAP, CLASS I TONS | RIP RAP, CLASS B TONS | GEOTEXTILE FOR DRAINAGE SY |
|-------------------------|---------|----------|-----------|------------------------|-----------------------|-----------------------|----------------------------|
| RAMP_B                  | 10+15   | LT       | 36"       |                        | 11                    |                       | 22                         |
| RAMP_B                  | 14+62   | LT       | 18"       |                        |                       | 3                     | 10                         |
| RAMP_B                  | 20+58   | RT       | 24"       |                        |                       | 5                     | 14                         |
| -L- 23+70 TO RP B 24+50 |         |          |           |                        |                       | 30                    | 68                         |
| RAMP_C                  | 21+87   | LT       | 30"       |                        | 11                    |                       | 22                         |
| L                       | 35+85   | RT       | 15"       |                        |                       | 2                     | 7                          |
| L                       | 39+75   | RT       | 15"       |                        |                       | 2                     | 7                          |
| L                       | 40+52   | LT       | 15"       |                        |                       | 2                     | 7                          |
| L                       | 42+61   | LT       | 48"       |                        | 73                    |                       | 102                        |
| RAMP_D                  | 25+25   | LT       | 18"       |                        |                       | 3                     | 10                         |
| RAMP_D                  | 19+83   | LT       | 24"       |                        |                       | 5                     | 14                         |
| RAMP_D                  | 15+20   | LT       | 15"       |                        |                       | 1                     | 5                          |
| RAMP_D                  | 13+29   | LT       | 18"       |                        |                       | 3                     | 10                         |
| RAMP_A                  | 21+76   | RT       | 54"       |                        | 46                    |                       | 65                         |
| L                       | 59+80   | LT       | 24"       |                        | 9                     |                       | 19                         |
| Y_1                     | 17+95   | LT       | 30"       |                        |                       | 8                     | 21                         |
| FROM EROSION CONTROL    |         |          |           |                        |                       |                       | 1315                       |
| R-5719 TOTAL            |         |          |           |                        | 150                   | 64                    | 1718                       |
| R-5719 SAY              |         |          |           |                        | 150                   | 70                    | 1720                       |
| U-5796 SAY              |         |          |           |                        | 53                    | 18                    | 633                        |
| COMBINE TOTAL           |         |          |           |                        | 203                   | 88                    | 2353                       |

WOVEN WIRE FENCE, 47" FABRIC

| STATION TO STATION          | LOC | FABRIC L.F. | END BRACE | CORNER BRACE | LINE BRACE | 4" POSTS | 5" POSTS |
|-----------------------------|-----|-------------|-----------|--------------|------------|----------|----------|
| RAMP B 10+03.00 TO 10+29.00 | LT  | 26.00       |           |              |            | 2        | 0        |
| RAMP B 22+85.00 TO 24+59.00 | LT  | 186.00      |           |              |            | 13       | 0        |
| RAMP C 20+75.00 TO 21+50.00 | RT  | 75.00       |           |              |            | 5        | 0        |
| RAMP D 24+50.00 TO 25+25.00 | LT  | 82.00       |           |              |            | 6        | 0        |
| RAMP A 21+50.00 TO 21+90.00 | RT  | 40.00       |           |              |            | 3        | 0        |
| R-5719 TOTAL                |     | 409.00      |           |              |            | 29       | 0        |
| R-5719 SAY                  |     | 410.00      |           |              |            | 30       | 0        |
| U-5796 SAY                  |     | 2150.00     |           |              |            | 150      | 20       |
| COMBINE TOTAL               |     | 2560        |           |              |            | 180      | 20       |

ADDITIONAL BARBED WIRE (R-5719) 50 LF  
 ADDITIONAL BARBED WIRE (U-5796) 50 LF  
 COMBINE TOTAL 100 LF

SUMMARY OF REMOVAL OF EXISTING ASPHALT PAVEMENT

| STATION TO STATION |     |       |    |       | LOC | SQUARE YARDS |
|--------------------|-----|-------|----|-------|-----|--------------|
| L                  | STA | 23+00 | TO | 25+00 | LT  | 618.92       |
| L                  | STA | 23+00 | TO | 25+00 | RT  | 615.68       |
| L                  | STA | 56+50 | TO | 59+50 | LT  | 935.58       |
| L                  | STA | 56+50 | TO | 59+50 | RT  | 928.38       |
| Y1                 | STA | 18+94 | TO | 21+69 | RT  | 819.43       |
| Y1                 | STA | 18+52 | TO | 23+41 | LT  | 1155.08      |
| Y1                 | STA | 24+85 | TO | 25+95 | RT  | 24.00        |
| Y1                 | STA | 24+44 | TO | 25+62 | LT  | 10.13        |
| R-5719 TOTAL       |     |       |    |       |     | 5107.2       |
| R-5719 SAY         |     |       |    |       |     | 5110         |
| U-5796 SAY         |     |       |    |       |     | 3220         |
| COMBINE TOTAL      |     |       |    |       |     | 8330         |

SUMMARY OF BREAKING OF EXISTING ASPHALT PAVEMENT

| STATION TO STATION |     |       |    |       | LOC | SQUARE YARDS |
|--------------------|-----|-------|----|-------|-----|--------------|
| L                  | STA | 25+00 | TO | 38+50 | LT  | 4177.03      |
| L                  | STA | 25+00 | TO | 38+23 | RT  | 5074.62      |
| L                  | STA | 39+99 | TO | 56+50 | LT  | 6464.99      |
| L                  | STA | 39+67 | TO | 56+50 | RT  | 7007.78      |
| R-5719 TOTAL       |     |       |    |       |     | 22724.42     |
| R-5719 SAY         |     |       |    |       |     | 22730        |
| U-5796 SAY         |     |       |    |       |     | 4170         |
| COMBINE TOTAL      |     |       |    |       |     | 26900        |

DRAINAGE DITCH EXCAVATION

| STATION TO STATION |       |    |       |    | CY    |
|--------------------|-------|----|-------|----|-------|
| L                  | 30+50 | TO | 37+50 | LT | 1797  |
| L                  | 37+50 | TO | 39+29 | LT | 908   |
| L                  | 40+15 | TO | 42+60 | LT | 827   |
| L                  | 42+71 | TO | 45+50 | LT | 594   |
| L                  | 33+00 | TO | 37+50 | RT | 729   |
| L                  | 37+50 | TO | 38+00 | RT | 80    |
| L                  | 39+50 | TO | 41+50 | RT | 1668  |
| L                  | 43+00 | TO | 47+14 | RT | 312   |
| RPA                | 11+75 | TO | 16+50 | RT | 234   |
| RPB                | 14+50 | TO | 18+00 | LT | 184   |
| RPB                | 18+00 | TO | 20+50 | LT | 256   |
| RPB                | 23+70 | TO | 24+50 | LT | 18    |
| RPB                | 21+50 | TO | 26+50 | RT | 283   |
| RPC                | 13+80 | TO | 21+50 | RT | 908   |
| RPD                | 16+60 | TO | 21+50 | LT | 630   |
| RPD                | 19+80 | TO | 26+50 | RT | 157   |
| Y1                 | 22+00 | TO | 23+31 | LT | 107   |
| Y1                 | 22+00 | TO | 22+50 | LT | 63    |
| RPD                | 25+25 |    |       | LT | 15    |
| R-5719 TOTAL       |       |    |       |    | 9770  |
| R-5719 SAY         |       |    |       |    | 9770  |
| U-5796 SAY         |       |    |       |    | 1350  |
| COMBINE TOTAL      |       |    |       |    | 11120 |

SHOULDER BERM GUTTER SUMMARY

| STATION TO STATION |     |          |    |          | LOC |         |
|--------------------|-----|----------|----|----------|-----|---------|
| L                  | STA | 35+81.90 | TO | 38+07.77 | RT  | 225.87  |
| L                  | STA | 40+13.80 | TO | 42+39.67 | LT  | 225.87  |
| RAMP D             | STA | 10+00.00 | TO | 17+12.50 | LT  | 712.50  |
| RAMP A             | STA | 10+00.00 | TO | 11+06.25 | RT  | 106.25  |
| L                  | STA | 56+99.99 | TO | 62+06.24 | RT  | 506.25  |
| L                  | STA | 55+00.00 | TO | 63+50.00 | LT  | 850.00  |
| R-5719 TOTAL       |     |          |    |          |     | 2626.74 |
| R-5719 SAY         |     |          |    |          |     | 2630    |
| U-5796 SAY         |     |          |    |          |     | 1440    |
| COMBINE TOTAL      |     |          |    |          |     | 4070    |

MILLING ASPHALT PAVEMENT, 1.5" DEPTH

| STATION TO STATION |          |    |          |    | SY    |
|--------------------|----------|----|----------|----|-------|
| -L-                | 10+00.00 | TO | 23+00.00 | LT | 4068  |
| -L-                | 10+00.00 | TO | 23+00.00 | RT | 4041  |
| -L-                | 59+50.00 | TO | 68+00.00 | LT | 2646  |
| -L-                | 59+50.00 | TO | 68+00.00 | RT | 2637  |
| R-5719 TOTAL       |          |    |          |    | 13392 |
| R-5719 SAY         |          |    |          |    | 13400 |
| U-5796 SAY         |          |    |          |    | 29130 |
| COMBINE TOTAL      |          |    |          |    | 42530 |

PARCEL INDEX

| PARCEL NO. | SHEET NO. | PROPERTY OWNERS NAMES            |
|------------|-----------|----------------------------------|
| 1          | 5,6       | MARGARET K. PRICE                |
| 2          | 6         | MARGARET K. PRICE                |
| 3          | 7,9       | SOUTHERN WAYNE RECREATION, INC.  |
| 4          | 9         | DAVID K. HINES & TERESA W. KELLY |
| 5          | 9         | SOUTHERN WAYNE RECREATION, INC.  |
| 6          | 9         | JOHN T. DAVIS JR.                |
| 7          | 10        | EMMA M. LANE HEIRS               |











COMPUTED BY: ALEXANDER, M. J.  
 CHECKED BY: RIGGS, A. F.

DATE: JANUARY 2017  
 DATE: JANUARY 2017

(2-16-16)

|                       |                   |
|-----------------------|-------------------|
| PROJECT NO.<br>R-5719 | SHEET NO.<br>3G-1 |
|-----------------------|-------------------|

**STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS**

**SUMMARY OF BRIDGE WAITING PERIODS**

| Bridge Description                                 | End Bent | MONTHS |
|--|----------|--------|
| DUAL BRIDGES ON -L- OVER -Y1- AT STA. 39+11.12 -L- | 1        | 2      |
| DUAL BRIDGES ON -L- OVER -Y1- AT STA. 39+11.12 -L- | 2        | 2      |

**SUMMARY OF  
 SETTLEMENT GAUGES**

| Gauge No.                   | LINE and Station | Offset      |                 |
|-----------------------------|------------------|-------------|-----------------|
|                             |                  | Distance FT | Direction LT/RT |
| 1                           | 36+50 -L-        | 68          | LT              |
| 2                           | 36+50 -L-        | 30          | LT              |
| 3                           | 36+50 -L-        | 30          | RT              |
| 4                           | 36+50 -L-        | 68          | LT              |
| 5                           | 38+00 -L-        | 68          | LT              |
| 6                           | 38+00 -L-        | 29          | LT              |
| 7                           | 38+00 -L-        | 29          | RT              |
| 8                           | 38+00 -L-        | 68          | RT              |
| 9                           | 40+50 -L-        | 68          | LT              |
| 10                          | 40+50 -L-        | 30          | LT              |
| 11                          | 40+50 -L-        | 30          | RT              |
| 12                          | 40+50 -L-        | 68          | RT              |
| 13                          | 42+00 -L-        | 68          | LT              |
| 14                          | 42+00 -L-        | 30          | LT              |
| 15                          | 42+00 -L-        | 30          | RT              |
| 16                          | 42+00 -L-        | 68          | RT              |
| <b>TOTAL GAUGES (EACH):</b> |                  |             | 16              |
| <b>R-5719 TOTAL</b>         |                  |             | 16              |
| <b>U-5796 TOTAL</b>         |                  |             | 12              |
| <b>COMBINE TOTAL</b>        |                  |             | 28              |

**SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION**

| LINE                     | Station | Station | Aggregate Type* ASU/AST | Aggregate Thickness INCHES | Shallow Undercut CY | Class IV Subgrade Stabilization TONS | Geotextile for Soil Stabilization SY | Stabilizer Aggregate TONS | Class IV Aggregate Stabilization TONS |
|--------------------------|---------|---------|-------------------------|----------------------------|---------------------|--------------------------------------|--------------------------------------|---------------------------|---------------------------------------|
| -L-                      | 10+00   | 24+30   | ASU                     | 12                         | 2100                | 4000                                 | 7750                                 |                           |                                       |
| -L-                      | 57+75   | 68+00   | ASU                     | 12                         | 1450                | 2750                                 | 5550                                 |                           |                                       |
| -RAMP A-                 | 23+90   | 24+92   | ASU                     | 12                         | 50                  | 100                                  | 350                                  |                           |                                       |
| -RAMP B-                 | 10+00   | 13+15   | ASU                     | 12                         | 200                 | 300                                  | 650                                  |                           |                                       |
| -RAMP C-                 | 10+00   | 12+25   | ASU                     | 12                         | 150                 | 200                                  | 450                                  |                           |                                       |
| -RAMP C-                 | 24+20   | 25+05   | ASU                     | 12                         | 50                  | 100                                  | 200                                  |                           |                                       |
| -RAMP D-                 | 26+70   | 29+30   | ASU                     | 12                         | 200                 | 400                                  | 800                                  |                           |                                       |
| -Y 1-                    | 11+50   | 14+00   | ASU                     | 12                         | 100                 | 200                                  | 400                                  |                           |                                       |
| CONTINGENCY              |         |         | ASU                     | 12                         | 450                 | 850                                  | 1300                                 |                           |                                       |
| CONTINGENCY              |         |         | AST                     | 3                          |                     |                                      |                                      |                           | 250                                   |
| <b>TOTAL CY/TONS/SY:</b> |         |         |                         |                            | 4750                | 8900                                 | 17450**                              | 0                         | 250                                   |
| <b>R-5719 TOTAL</b>      |         |         |                         |                            | 4750                | 8900                                 | 17450                                | 0                         | 250                                   |
| <b>U-5796 TOTAL</b>      |         |         |                         |                            | 5250                | 12715                                | 22150                                |                           | 500                                   |
| <b>COMBINE TOTAL</b>     |         |         |                         |                            | 10000               | 21615                                | 39600**                              | 0                         | 750                                   |

\*ASU = Aggregate Subgrade

\*AST = Aggregate Stabilization

\*\*Total square yards of "Geotextile for Soil Stabilization" is only the estimated quantity for ASU/AST and may only represent a portion of the geotextile quantity shown in the Item Sheets of the Proposal.

**SUMMARY OF SUBSURFACE DRAINAGE**

| LINE                 | Station | Station | Location LT/RT/CL | Drain Type* UD/BD/SD | LF   |
|----------------------|---------|---------|-------------------|----------------------|------|
|                      |         |         |                   |                      |      |
|                      |         |         |                   |                      |      |
| CONTINGENCY          |         |         |                   | SD                   | 2000 |
| <b>R-5719 TOTAL</b>  |         |         |                   |                      | 2000 |
| <b>U-5796 TOTAL</b>  |         |         |                   |                      | 2500 |
| <b>COMBINE TOTAL</b> |         |         |                   |                      | 4500 |

\*UD = Underdrain

\*BD = Blind Drain

\*SD = Subsurface Drain

8/17/99

REVISIONS

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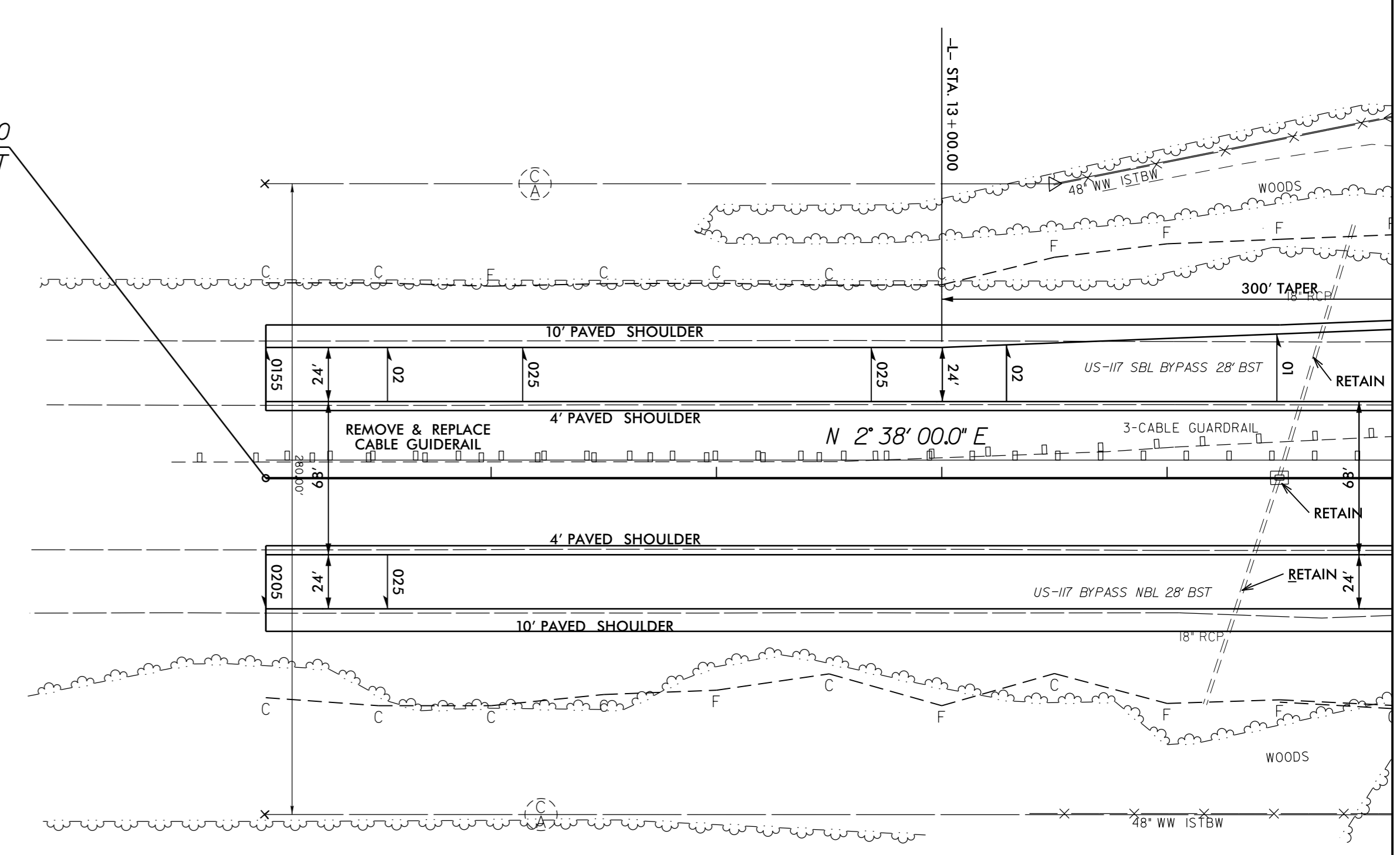
NOTE:  
SEE SHEETS 11, 12, 13 FOR -L- RT PROFILE  
SEE SHEETS 13, 14, 15 FOR -L- LT PROFILE

NAD 83/NSRS 2007

KERMIT SHELTON PRICE  
CAROL PRICE KALEEL  
DB 1619 PG 663

|  |  |
|--|--|
| PROJECT REFERENCE NO.<br><i>R-5719</i>                                   | SHEET NO.<br><i>04</i>                                   |
| RW SHEET NO. <i>04</i>   |  |
| ROADWAY DESIGN ENGINEER<br>4/6/2017<br><i>FERRY P. PAGE</i>              | HYDRAULICS ENGINEER<br>4/7/2017<br><i>JAMES C. DAVIS</i> |
| SEAL 18537   | SEAL 18462   |
| DocuSign<br>42984DAB18574DA  | DocuSign<br>E7986AFAD20C8E6                              |
| <b>DOCUMENT NOT CONSIDERED FINAL<br/>UNLESS ALL SIGNATURES COMPLETED</b> |  |

-L- POT 10+00.00  
BEGIN PROJECT



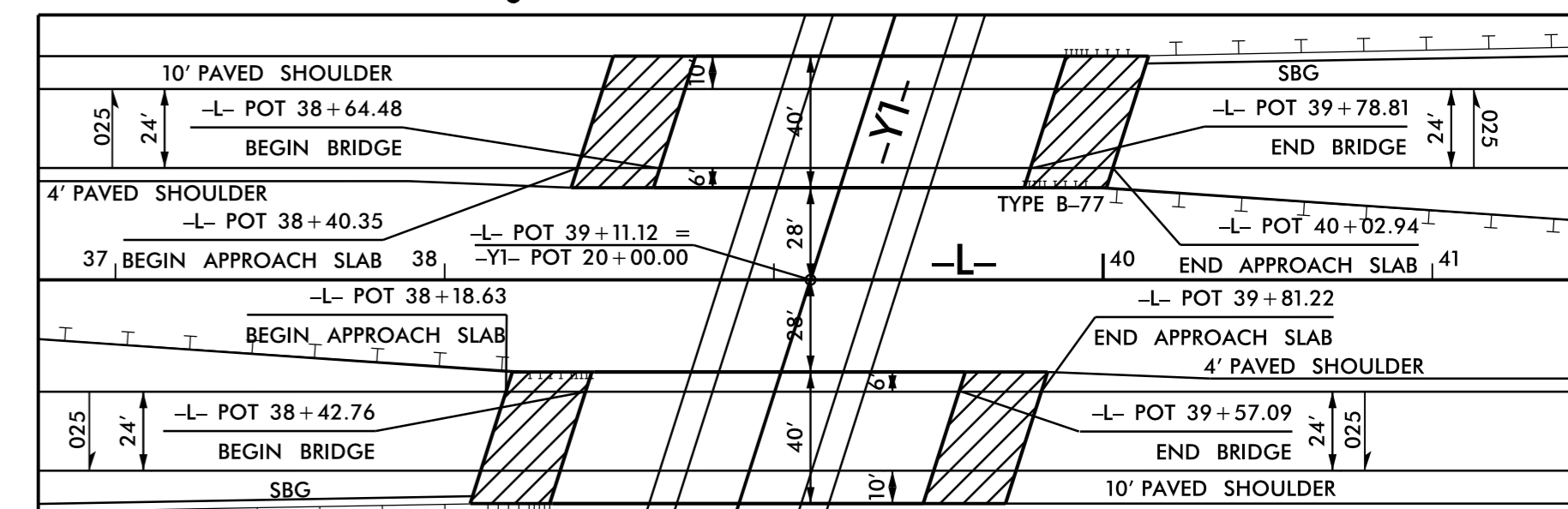
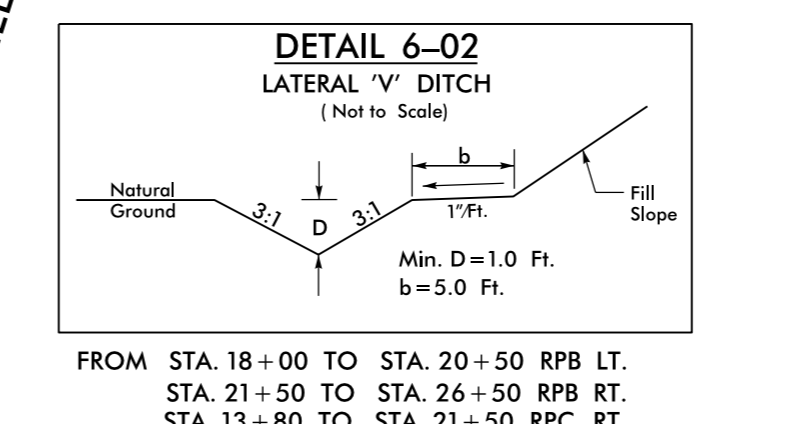
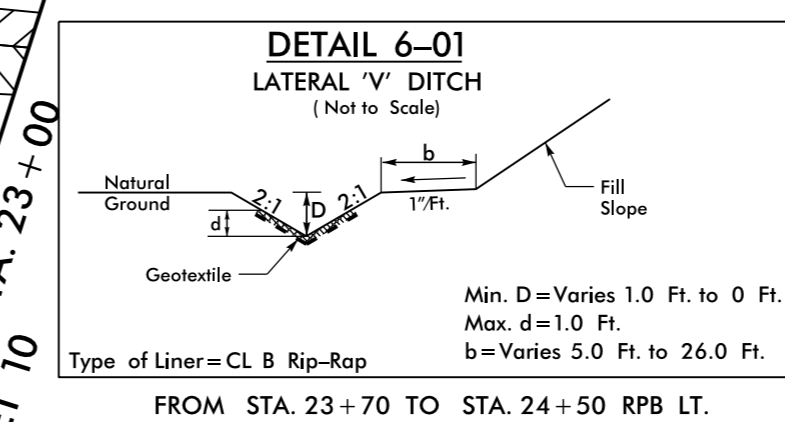
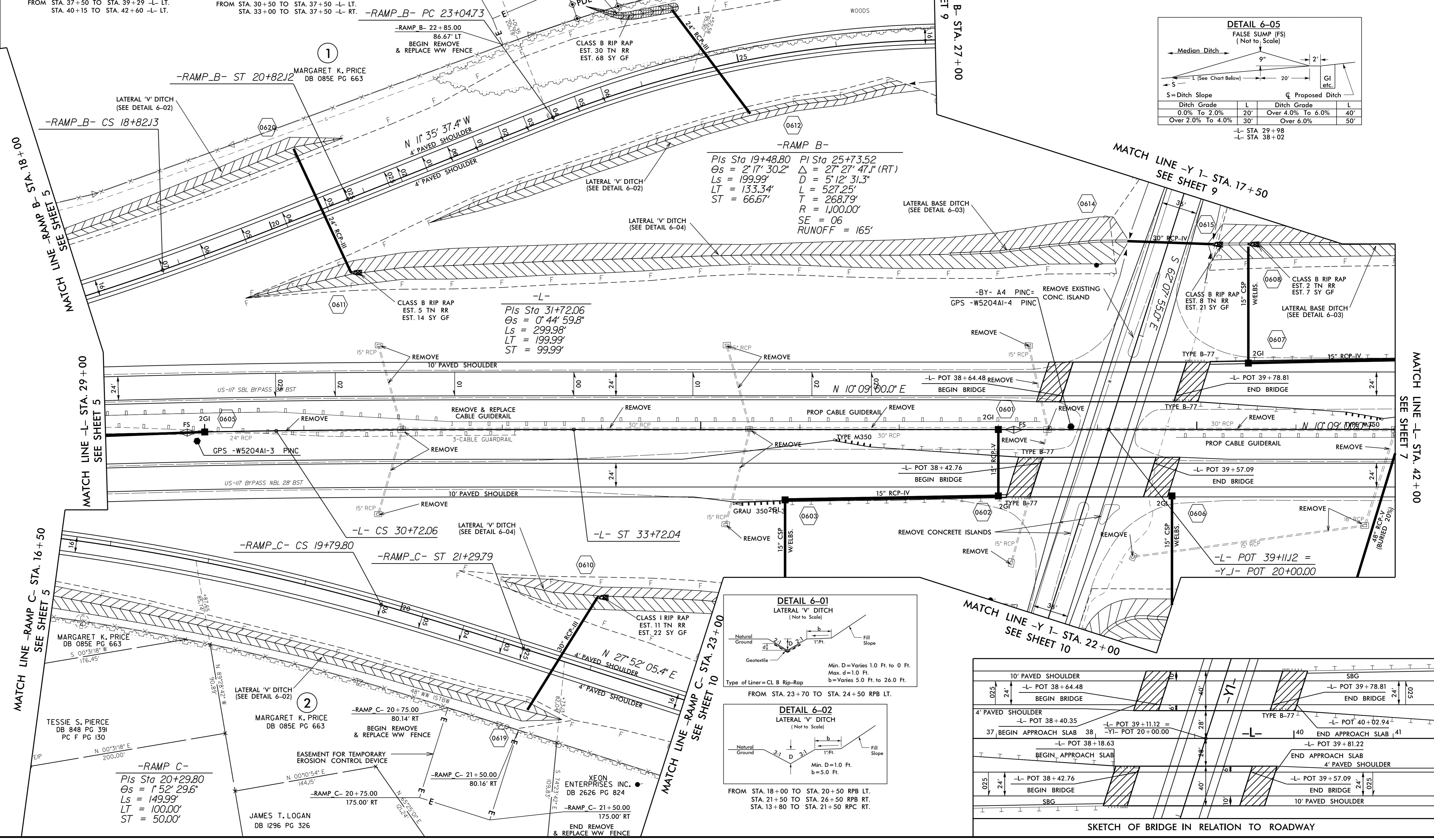
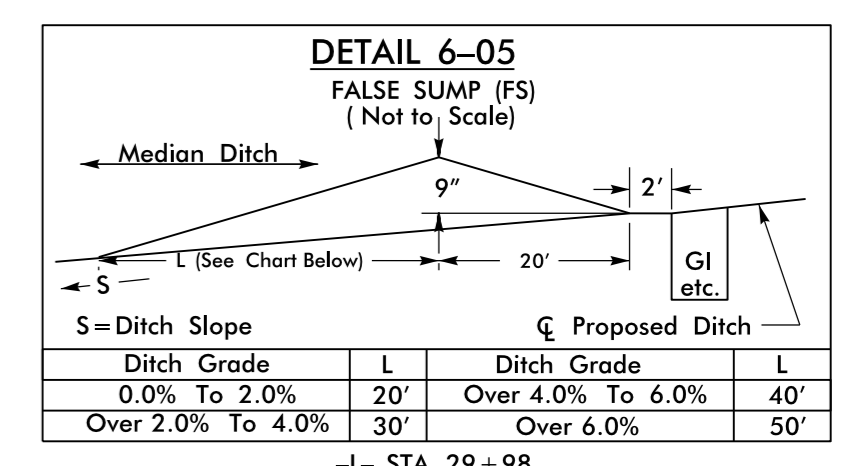
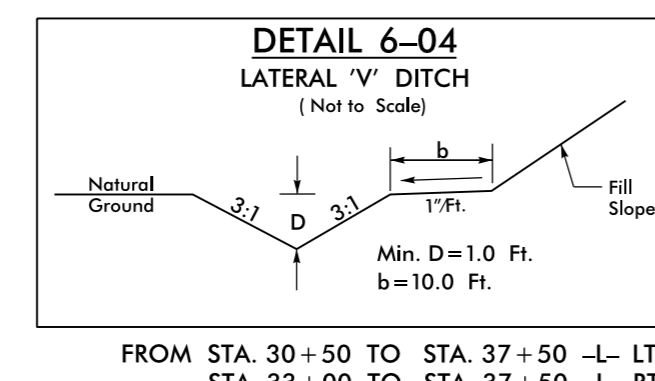
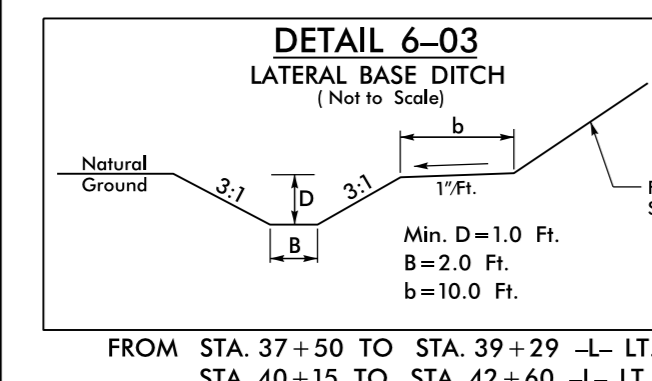
KERMIT SHELTON PRICE  
CAROL PRICE KALEEL  
DB 1619 PG 663



8/17/99

|   |  |                     |  |
|---|--|---------------------|--|
| PROJECT REFERENCE NO.   |  | SHEET NO.           |  |
| R-5719  |  | 06                  |  |
| RW SHEET NO.  |  | 06                  |  |
| ROADWAY DESIGN ENGINEER                                       |  | HYDRAULICS ENGINEER |  |
| 5/11/2017   |  | 5/11/2017           |  |
| SEAL 18537  |  | SEAL 18462          |  |
| JAMES C. DAVIS  |  | JAMES C. DAVIS      |  |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED |  |                     |  |

|       |          |          |
|-------|----------|----------|
| -Y-1- | 1200     | 1500     |
| 300   | 600      | 15500    |
| 500   | 900      | 27700    |
| 400   | 1300     |          |
| 600   | 1900     |          |
| -Y-1- | 2000     | 2600     |
|       | ADT 2017 | ADT 2040 |



REVISIONS

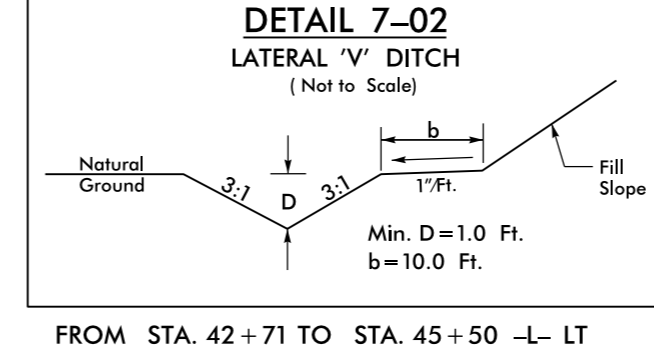
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| ROADWAY DESIGN ENGINEER<br>5/11/2017   | HYDRAULICS ENGINEER<br>5/11/2017 |
| SEAL 18537                             | SEAL 18462                       |
| James G. Davis                         | James G. Davis                   |

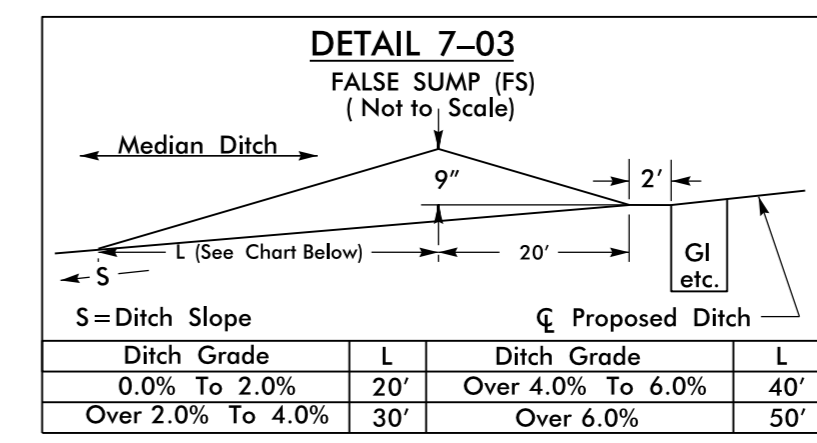
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UNLESS ALL SIGNATURES COMPLETED**

**-RAMP\_A-**

|  |   |   |
|--|---|---|
| PI Sta 18+45.30<br>Δs = 1° 33' 44.6"<br>Ls = 124.99'<br>LT = 83.33'<br>ST = 41.67' | PI Sta 15+58.72<br>Δ = 12° 17' 35.4" (RT)<br>D = 2° 30' 00.0"<br>L = 491.73'<br>T = 246.81'<br>R = 2,291.83'<br>SE = 06 | PIs Sta 12+70.25<br>Δs = 1° 33' 45.0"<br>Ls = 125.00'<br>LT = 83.34'<br>ST = 41.67' |
|--|---|---|

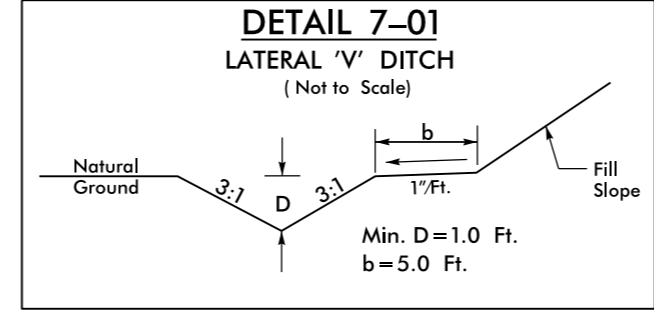


SOUTHERN WAYNE RECREATION, INC.  
DB 1551 PG 797



**-RAMP\_D-**

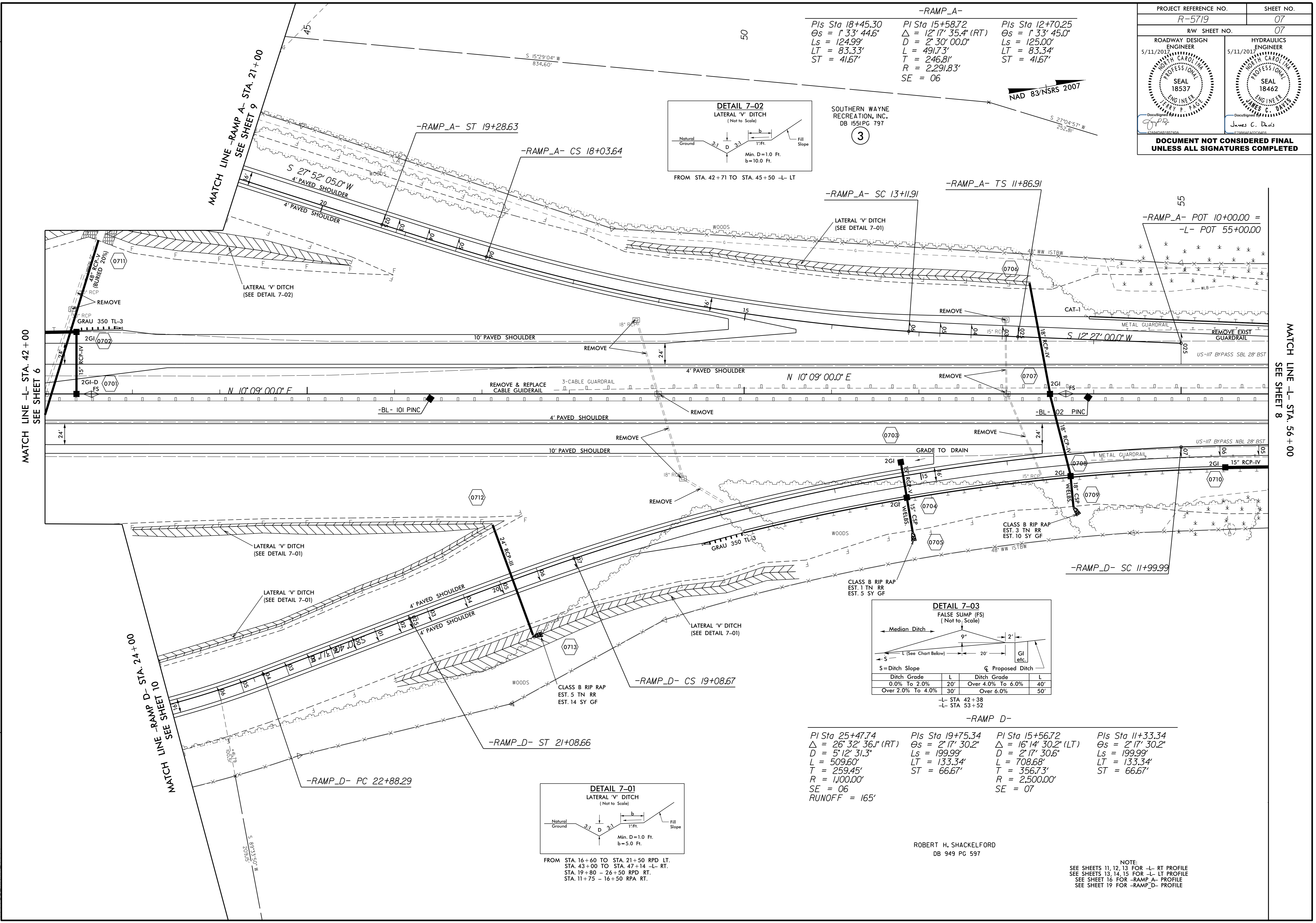
|  |  |   |  |
|--|--|---|--|
| PI Sta 25+47.74<br>Δ = 26° 32' 36.1" (RT)<br>D = 5° 12' 31.3"<br>L = 509.60'<br>T = 259.45'<br>R = 1,100.00'<br>SE = 06<br>RUNOFF = 165' | PIs Sta 19+75.34<br>Δs = 2° 17' 30.2"<br>Ls = 199.99'<br>LT = 133.34'<br>ST = 66.67' | PI Sta 15+56.72<br>Δ = 16° 14' 30.2" (LT)<br>D = 2° 17' 30.6"<br>L = 708.68'<br>T = 356.73'<br>R = 2,500.00'<br>SE = 07 | PIs Sta 11+33.34<br>Δs = 2° 17' 30.2"<br>Ls = 199.99'<br>LT = 133.34'<br>ST = 66.67' |
|--|--|---|--|



FROM STA. 16+60 TO STA. 21+50 RPD LT.  
STA. 43+00 TO STA. 47+14 -L- RT.  
STA. 19+80 - 26+50 RPD RT.  
STA. 11+75 - 16+50 RPA RT.

ROBERT H. SHACKELFORD  
DB 949 PG 597

NOTE:  
SEE SHEETS 11, 12, 13 FOR -L- RT PROFILE  
SEE SHEETS 13, 14, 15 FOR -L- LT PROFILE  
SEE SHEET 16 FOR -RAMP\_A- PROFILE  
SEE SHEET 19 FOR -RAMP\_D- PROFILE



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MATCH LINE -L- STA. 56+00  
SEE SHEET 8

MATCH LINE -L- STA. 42+00  
SEE SHEET 6

MATCH LINE -RAMP\_D- STA. 24+00  
SEE SHEET 10

MATCH LINE -RAMP\_A- STA. 21+00  
SEE SHEET 9

|  |   |
|--|---|
| PROJECT REFERENCE NO.<br>R-5719                                  | SHEET NO.<br>08   |
| RW SHEET NO. 08  |   |
| ROADWAY DESIGN ENGINEER<br>4/6/2017<br>SEAL 18537<br>FRY P PAGE  | HYDRAULICS ENGINEER<br>4/7/2017<br>SEAL 18462<br>JAMES C. DAVIS |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED |   |

NOTE:  
SEE SHEETS 11, 12, 13 FOR -L- RT PROFILE  
SEE SHEETS 13, 14, 15 FOR -L- LT PROFILE

NAD 83/NSRS 2007

ALLEN S. & LAMURIEL W. SWINSON  
DB 2777 PG 404

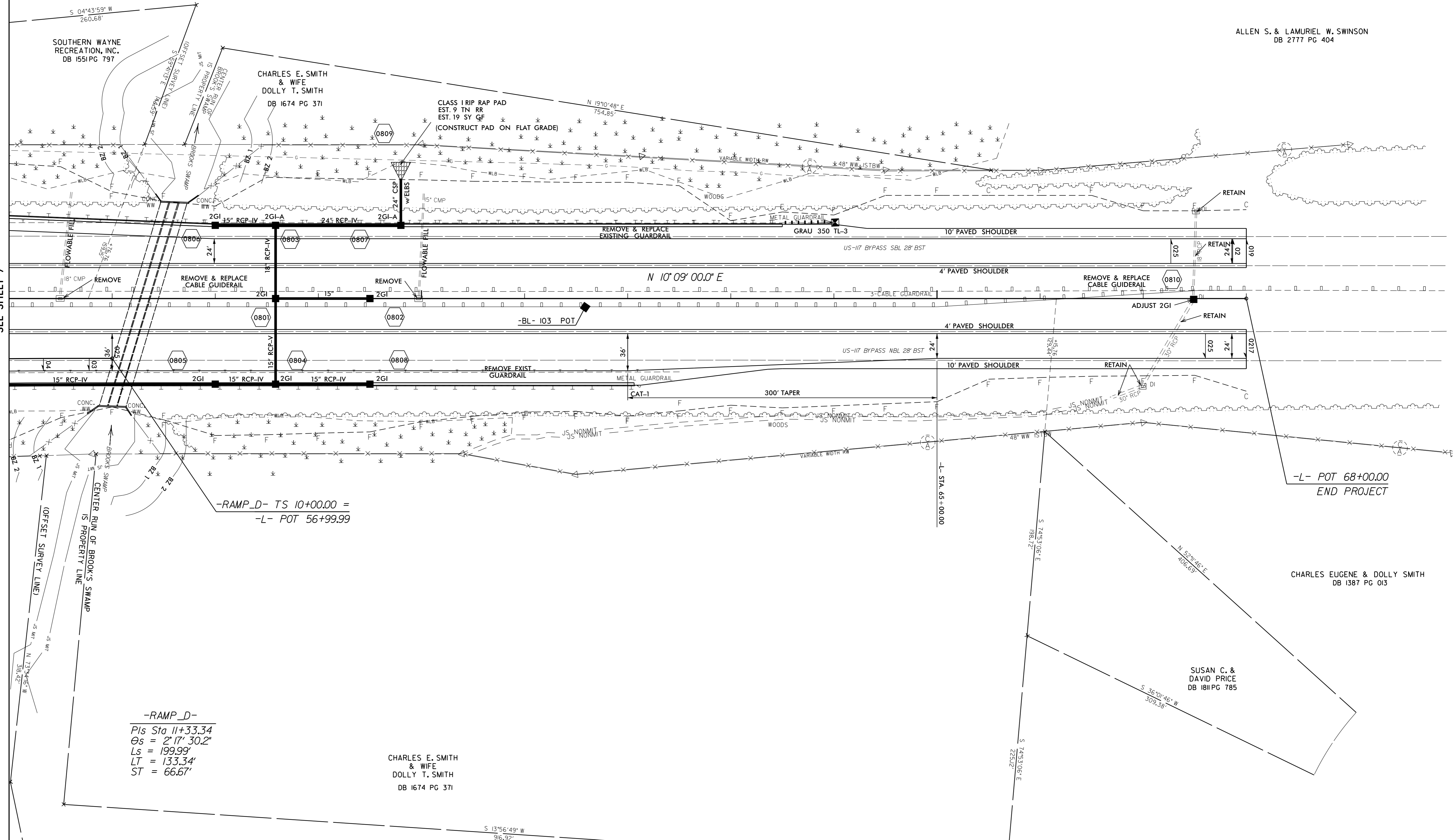
CHARLES EUGENE & DOLLY SMITH  
DB 1387 PG 013

SUSAN C. & DAVID PRICE  
DB 1811 PG 785

CHARLES E. SMITH & WIFE  
DOLLY T. SMITH  
DB 1674 PG 371

-RAMP\_D-  
Pls Sta 11+33.34  
Gs = 2' 17' 30.2"  
Ls = 199.99'  
LT = 133.34'  
ST = 66.67'

MATCH LINE -L- STA. 56+00  
SEE SHEET 7



REVISIONS

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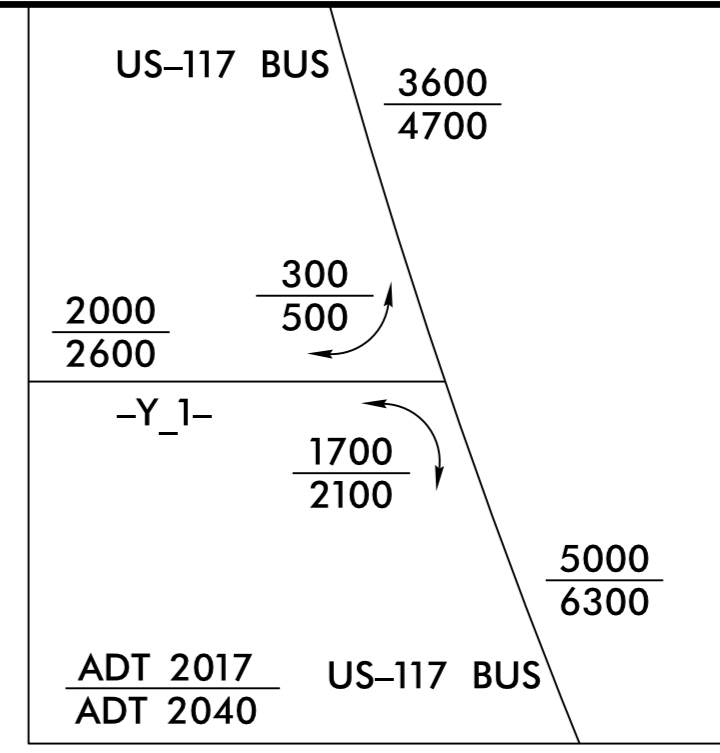
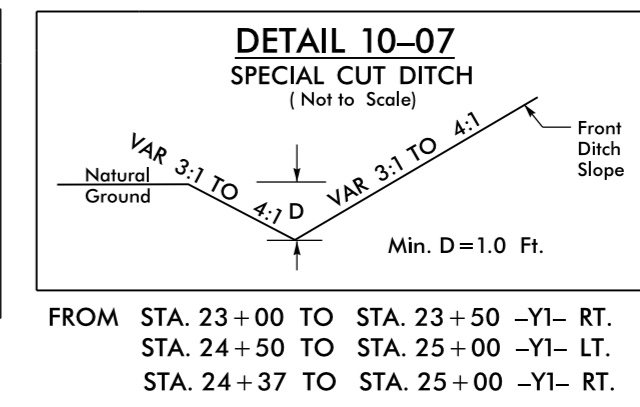
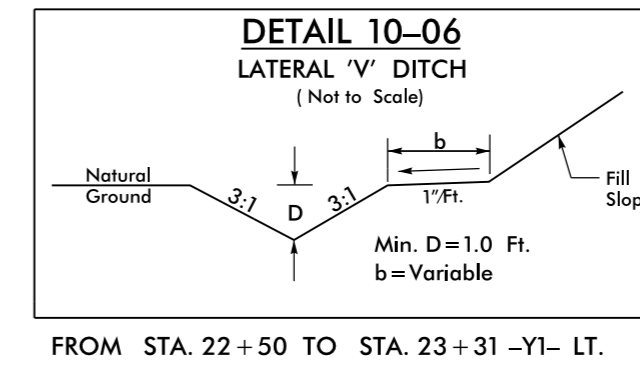
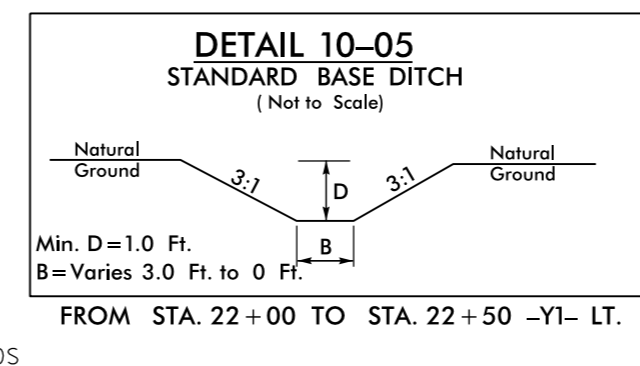
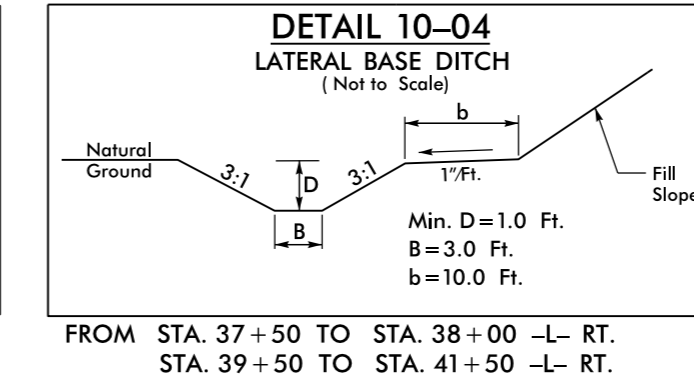
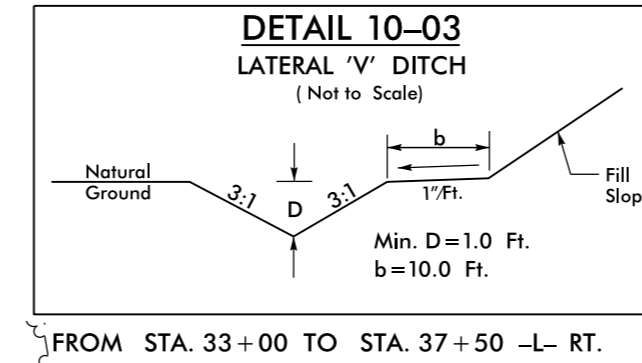
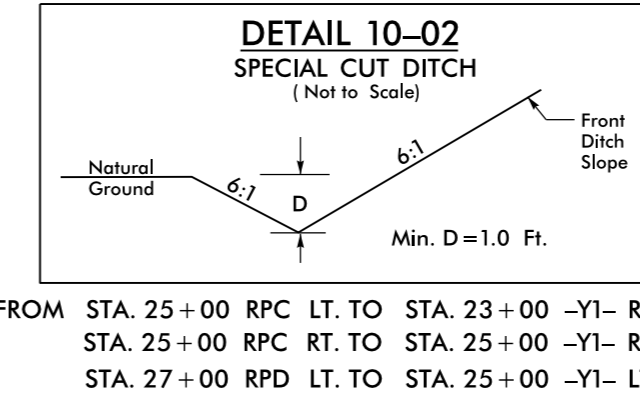
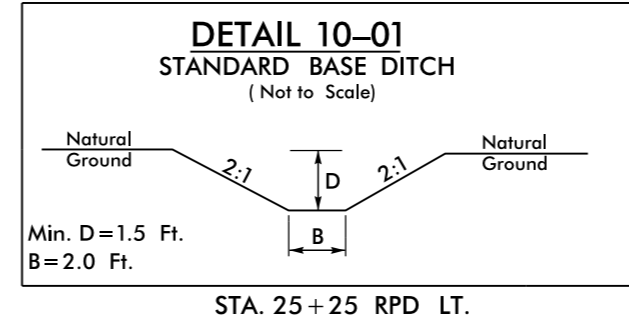
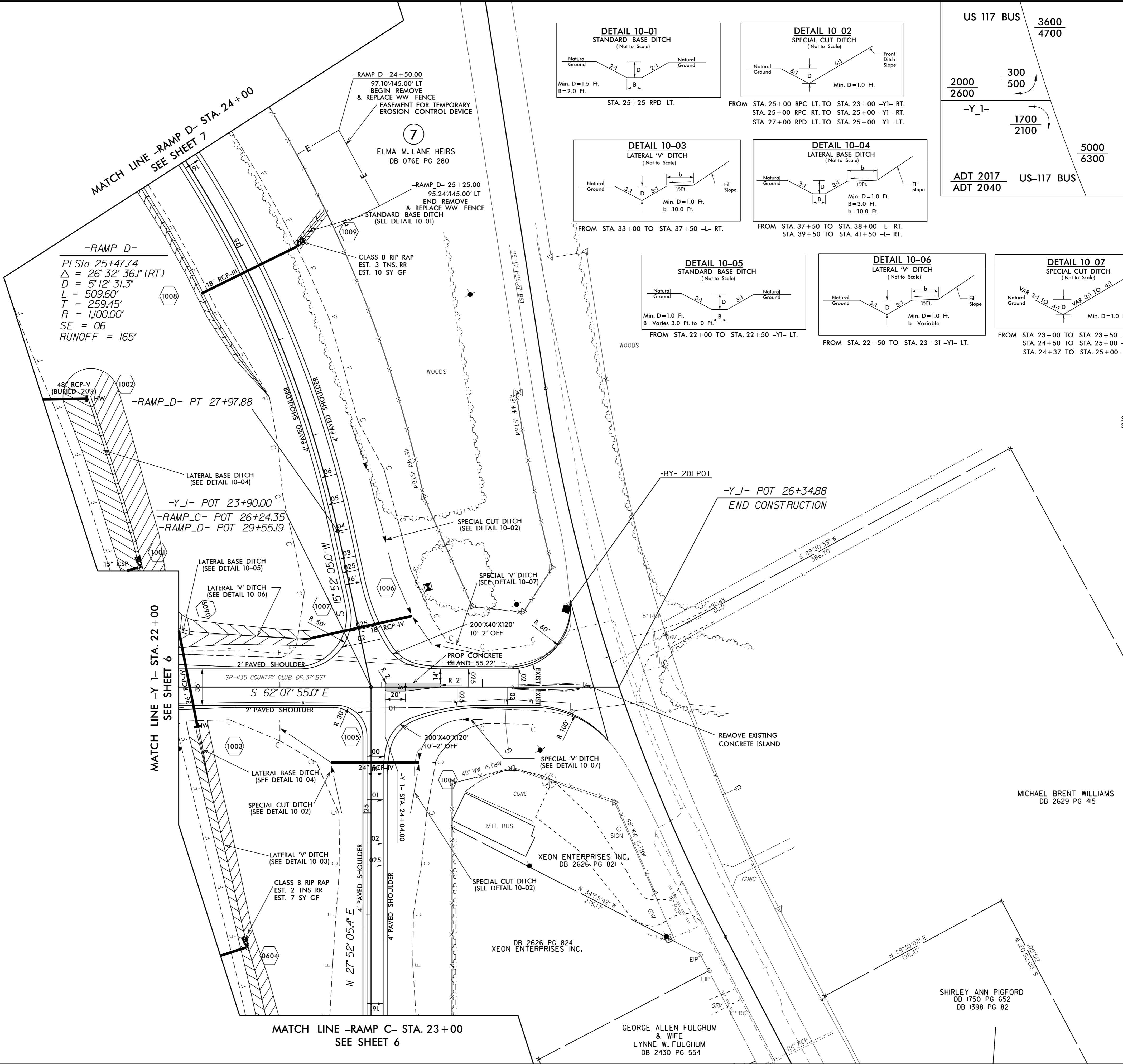




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REVISIONS

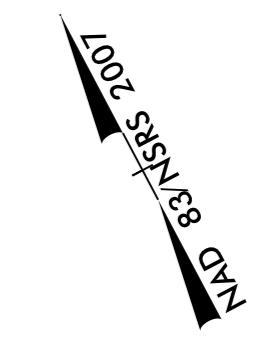
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| ROADWAY DESIGN ENGINEER<br>4/6/2017<br>SEAL 18537<br>JERRY P. PAGE | HYDRAULICS ENGINEER<br>4/7/2017<br>SEAL 18462<br>JAMES C. DAVIS |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED   |   |

ELMA M. LANE HEIRS  
 DB 076E PG 280

NOTE:  
 SEE SHEET 20 FOR -Y 1- PROFILE  
 SEE SHEET 18 FOR -RAMP C- PROFILE  
 SEE SHEET 19 FOR -RAMP D- PROFILE



MICHAEL BRENT WILLIAMS  
 DB 2629 PG 415

DB 2626 PG 824  
 XEON ENTERPRISES INC.

SHIRLEY ANN PIGFORD  
 DB 1750 PG 652  
 DB 1398 PG 82

GEORGE ALLEN FULGHUM & WIFE  
 LYNNE W. FULGHUM  
 DB 2430 PG 554

5/28/99

BM #1  
110' RT OF -L- 17+37  
EL = 150.06'

-L-  
PI = 10+00.00  
EL = 151.68'  
BEGIN GRADE

-L-  
PI = 11+00.00  
EL = 151.46'  
VC = 75.00'  
K = 421

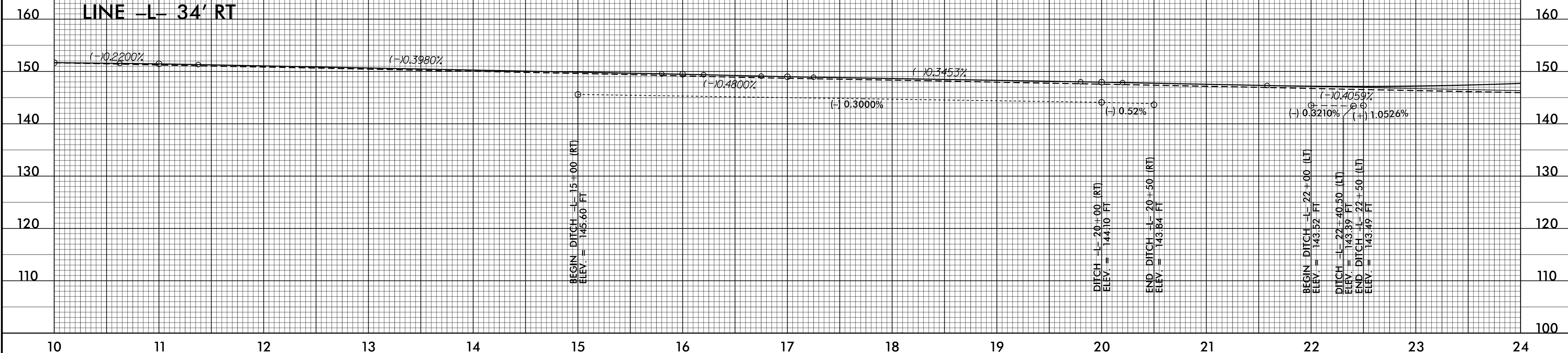
-L-  
PI = 16+00.00  
EL = 149.47'  
VC = 40.00'  
K = 488

-L-  
PI = 17+00.00  
EL = 148.99'  
VC = 50.00'  
K = 371

-L-  
PI = 20+00.00  
EL = 147.95'  
VC = 40.00'  
K = 660

| DITCH LEGEND |       |
|--------------|-------|
| LEFT DITCH   | ----- |
| MEDIAN DITCH | ----- |
| RIGHT DITCH  | ----- |

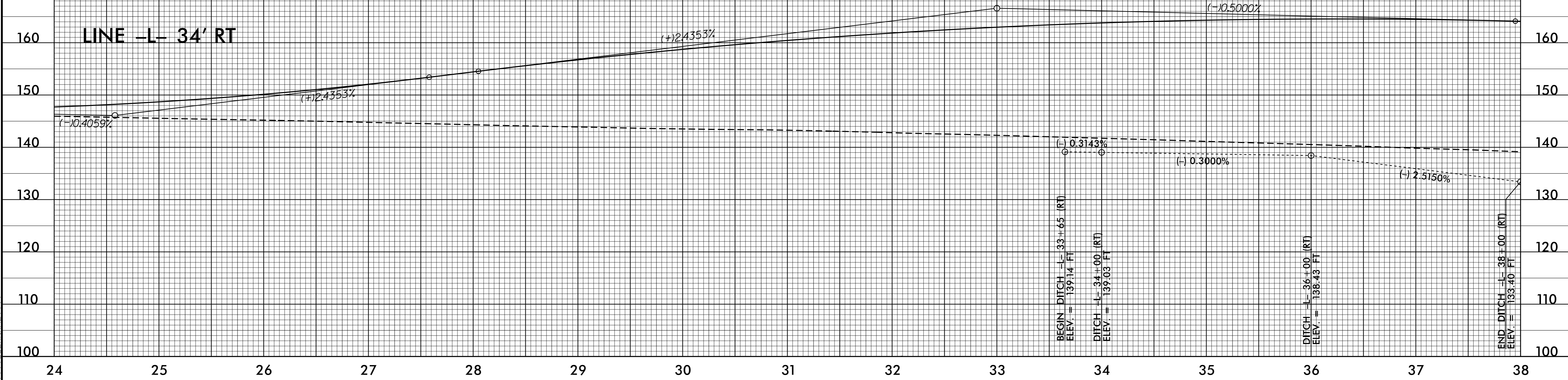
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|  |                                    |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED |                                    |



-L-  
PI = 24+58.00  
EL = 146.09'  
VC = 600.00'  
K = 211

-L-  
PI = 33+00.00  
EL = 166.60'  
VC = 990.00'  
K = 337

| DITCH LEGEND |       |
|--------------|-------|
| LEFT DITCH   | ----- |
| MEDIAN DITCH | ----- |
| RIGHT DITCH  | ----- |

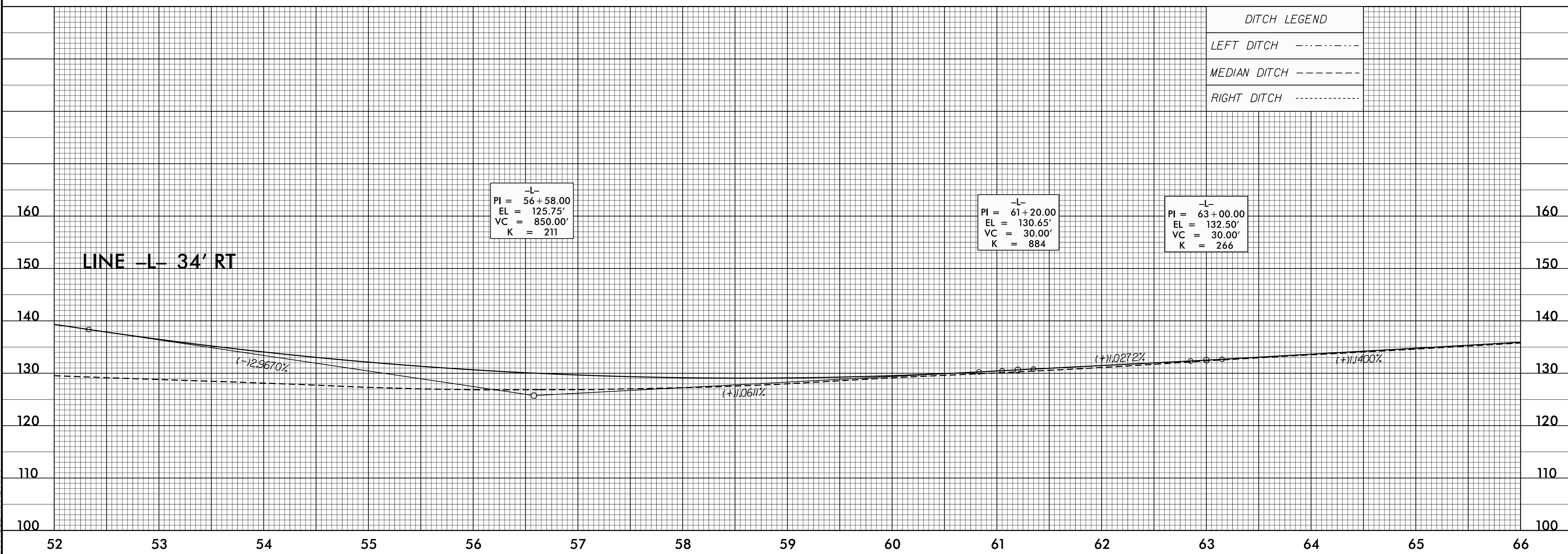
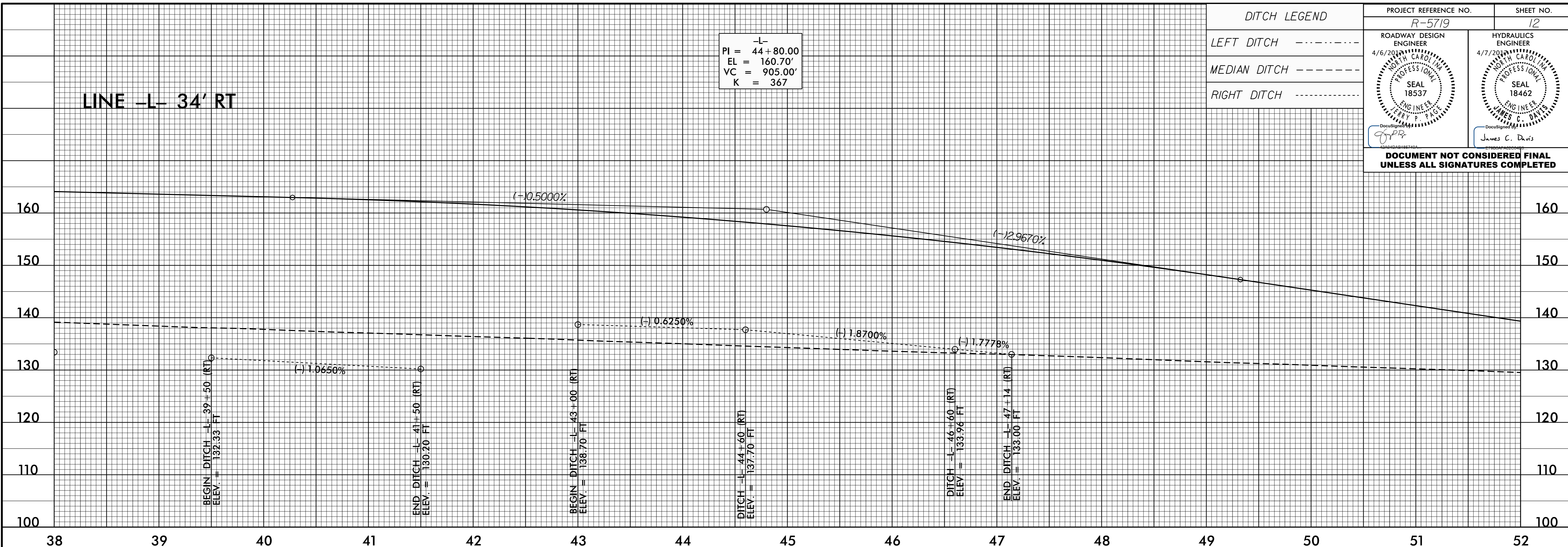


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5/28/99

|   |   |
|---|---|
| PROJECT REFERENCE NO.<br>R-5719                                   | SHEET NO.<br>12   |
| ROADWAY DESIGN ENGINEER<br>4/6/2014<br>JERRY P. FIG<br>SEAL 18537 | HYDRAULICS ENGINEER<br>4/7/2014<br>JAMES C. DAVIS<br>SEAL 18462 |

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

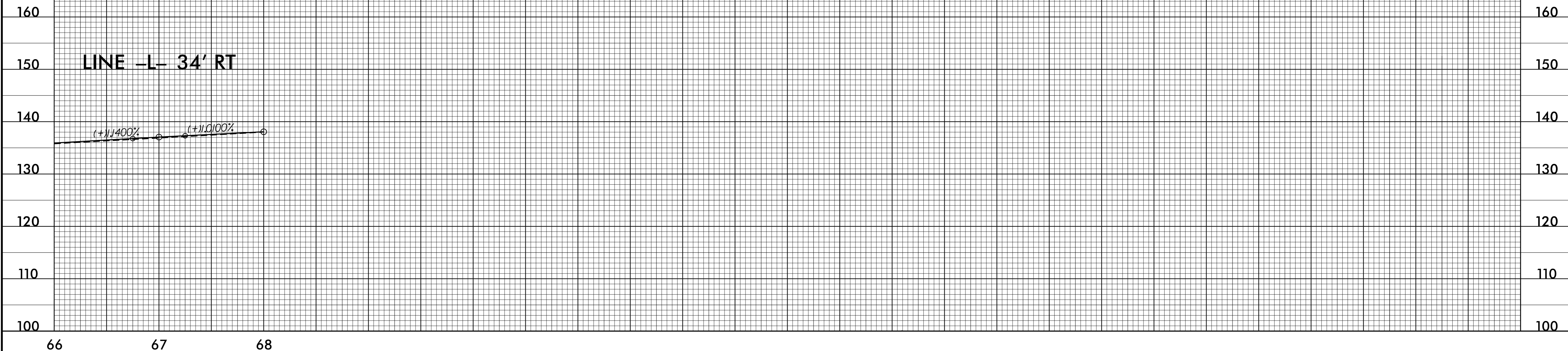


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JERRY P. FIG

|   |   |   |
|---|---|---|
| DITCH LEGEND<br>LEFT DITCH - - - - -<br>MEDIAN DITCH - - - - -<br>RIGHT DITCH - - - - - | PROJECT REFERENCE NO.<br>R-5719                                   | SHEET NO.<br>13   |
|   | ROADWAY DESIGN ENGINEER<br>4/6/2001<br>SEAL 18537<br>JERRY P. FIG | HYDRAULICS ENGINEER<br>4/7/2001<br>SEAL 18462<br>JAMES C. DAVIS |

-L-  
PI = 67+00.00  
EL = 137.06'  
VC = 50.00'  
K = 385

-L-  
PI = 68+00.00  
EL = 138.07'  
END GRADE



|   |   |   |
|---|---|---|
| DITCH LEGEND<br>LEFT DITCH - - - - -<br>MEDIAN DITCH - - - - -<br>RIGHT DITCH - - - - - | PROJECT REFERENCE NO.<br>R-5719                                   | SHEET NO.<br>13   |
|   | ROADWAY DESIGN ENGINEER<br>4/6/2001<br>SEAL 18537<br>JERRY P. FIG | HYDRAULICS ENGINEER<br>4/7/2001<br>SEAL 18462<br>JAMES C. DAVIS |

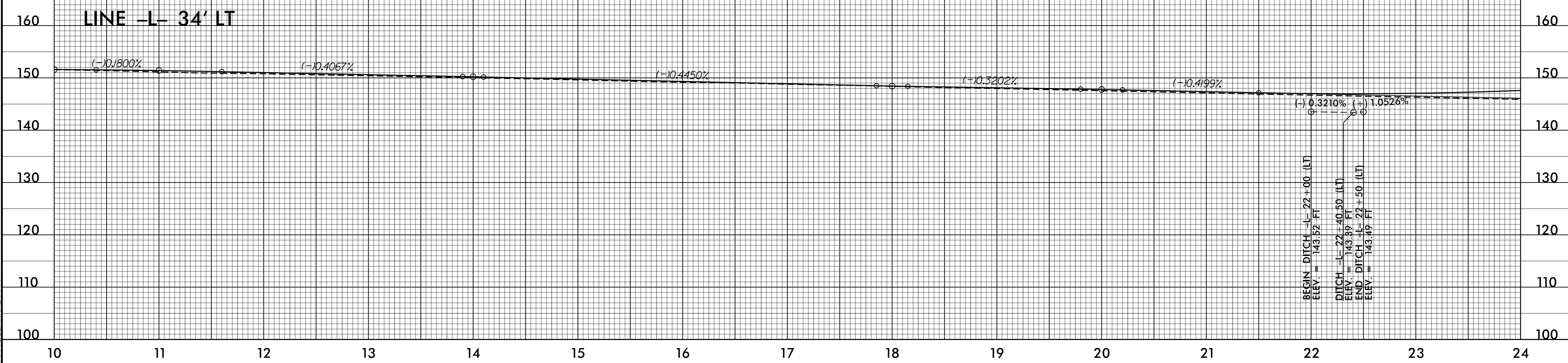
-L-  
PI = 10+00.00  
EL = 151.61'  
BEGIN GRADE

-L-  
PI = 11+00.00  
EL = 151.43'  
VC = 120.00'  
K = 529

-L-  
PI = 14+00.00  
EL = 150.21'  
VC = 20.00'  
K = 522

-L-  
PI = 18+00.00  
EL = 148.43'  
VC = 30.00'  
K = 240

-L-  
PI = 20+00.00  
EL = 147.79'  
VC = 40.00'  
K = 401



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

5/28/99

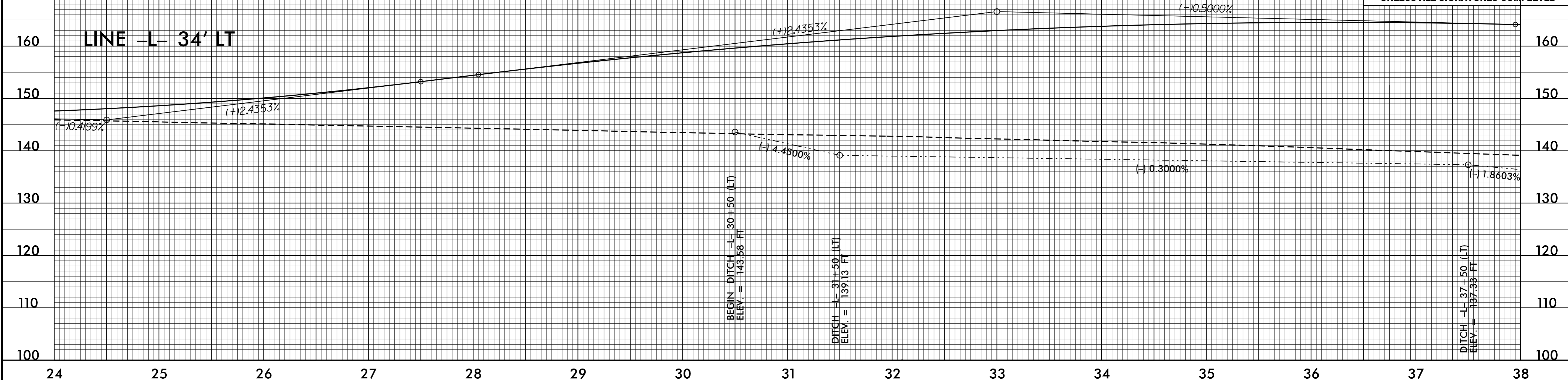
-L-  
PI = 24 + 50.00  
EL = 145.90'  
VC = 600.00'  
K = 210

-L-  
PI = 33 + 00.00  
EL = 166.60'  
VC = 990.00'  
K = 337

| DITCH LEGEND |       |
|--------------|-------|
| LEFT DITCH   | ----- |
| MEDIAN DITCH | ----- |
| RIGHT DITCH  | ----- |

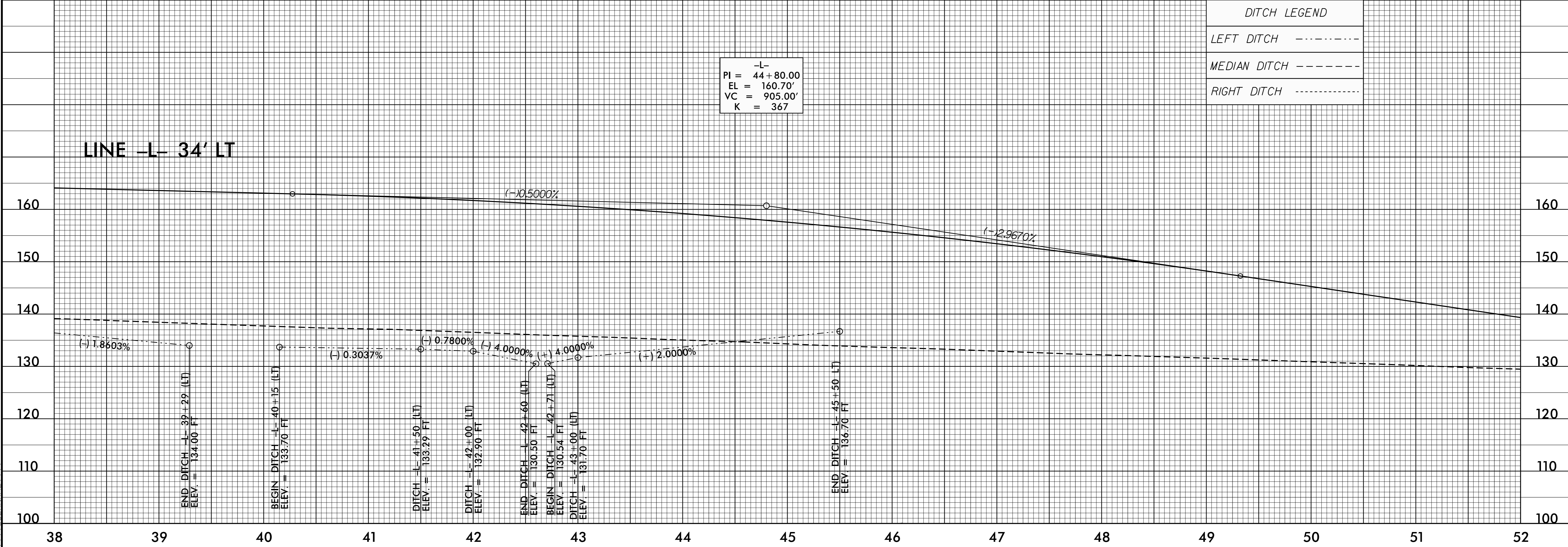
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|---|---|
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| ROADWAY DESIGN ENGINEER<br>4/6/2017<br>JERRY P. FIG | HYDRAULICS ENGINEER<br>4/7/2017<br>JAMES C. DAVIS |
| PROFESSIONAL SEAL 18537                             | PROFESSIONAL SEAL 18462                           |
| DocuSign  | DocuSign  |

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



-L-  
PI = 44 + 80.00  
EL = 160.70'  
VC = 905.00'  
K = 367

| DITCH LEGEND |       |
|--------------|-------|
| LEFT DITCH   | ----- |
| MEDIAN DITCH | ----- |
| RIGHT DITCH  | ----- |



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JERRY P. FIG

5/28/99

| DITCH LEGEND |       |
|--------------|-------|
| LEFT DITCH   | ----- |
| MEDIAN DITCH | ----- |
| RIGHT DITCH  | ----- |

BM #3  
74' LT OF -L- 64+01  
EL = 132.64

|   |   |
|---|---|
| PROJECT REFERENCE NO.<br>R-5719                                   | SHEET NO.<br>15   |
| ROADWAY DESIGN ENGINEER<br>4/6/2017<br>SEAL 18537<br>JERRY P. FIG | HYDRAULICS ENGINEER<br>4/7/2017<br>SEAL 18462<br>JAMES C. DAVIS |

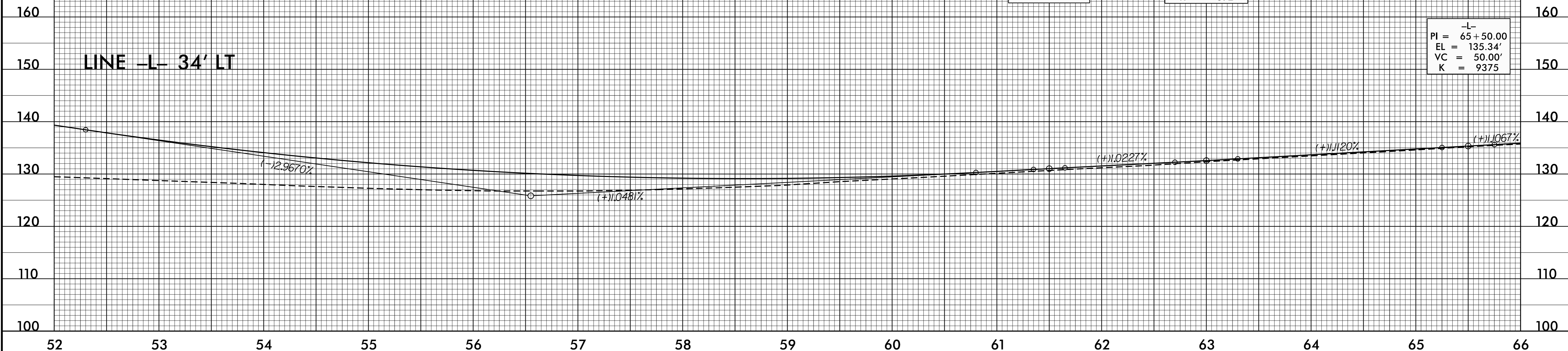
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

-L-  
PI = 56+55.00  
EL = 125.84'  
VC = 850.00'  
K = 212

-L-  
PI = 61+50.00  
EL = 131.03'  
VC = 30.00'  
K = 1181

-L-  
PI = 63+00.00  
EL = 132.56'  
VC = 60.00'  
K = 672

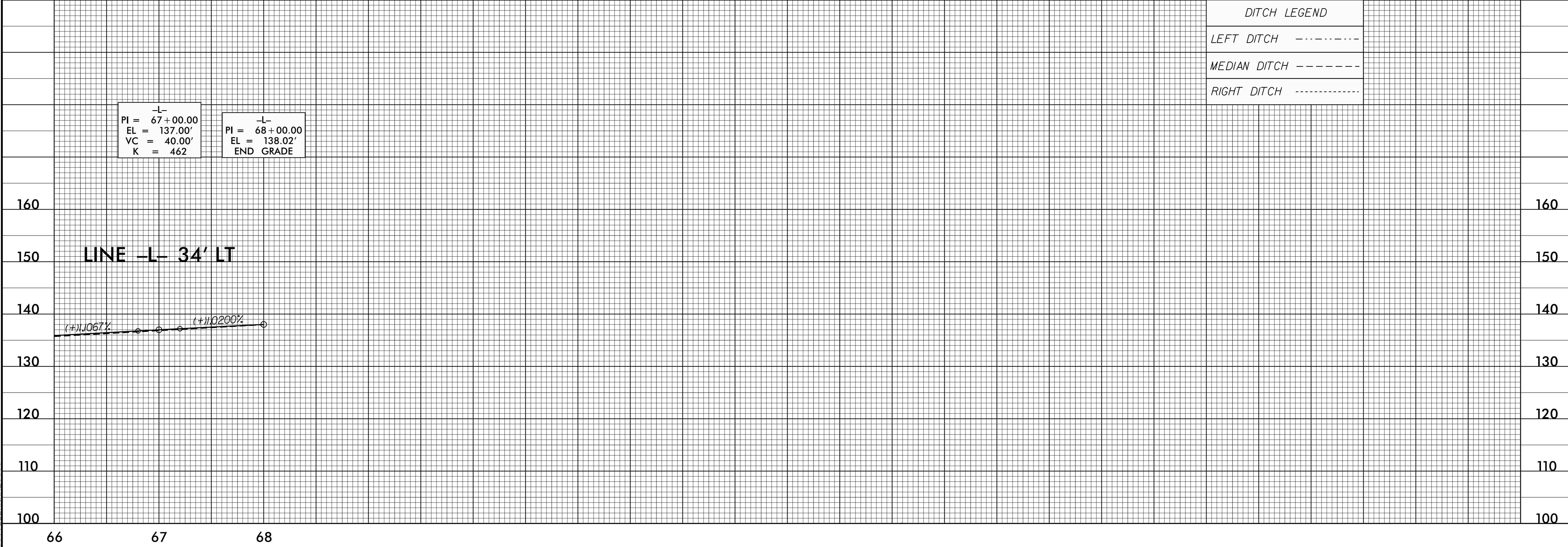
-L-  
PI = 65+50.00  
EL = 135.34'  
VC = 50.00'  
K = 9375



| DITCH LEGEND |       |
|--------------|-------|
| LEFT DITCH   | ----- |
| MEDIAN DITCH | ----- |
| RIGHT DITCH  | ----- |

-L-  
PI = 67+00.00  
EL = 137.00'  
VC = 40.00'  
K = 462

-L-  
PI = 68+00.00  
EL = 138.02'  
END GRADE

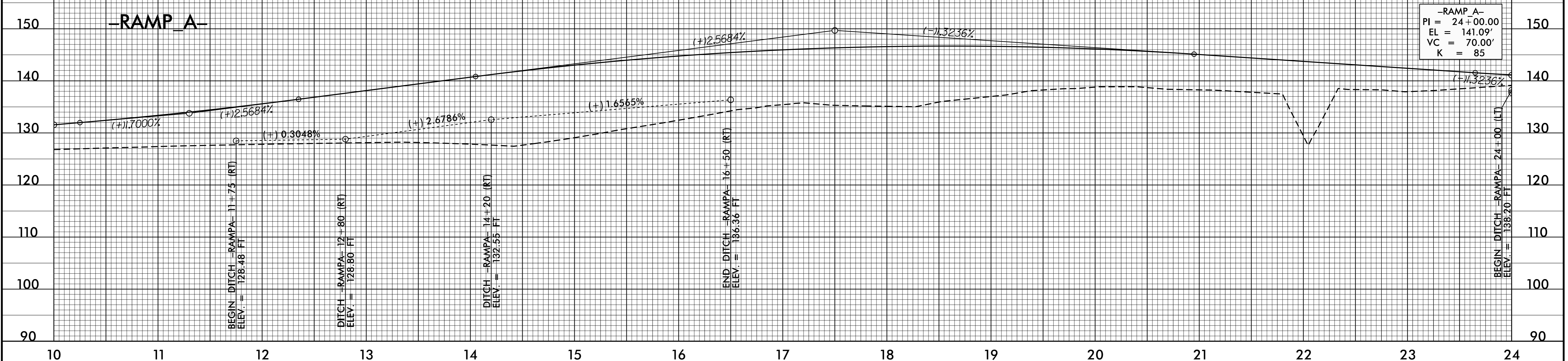


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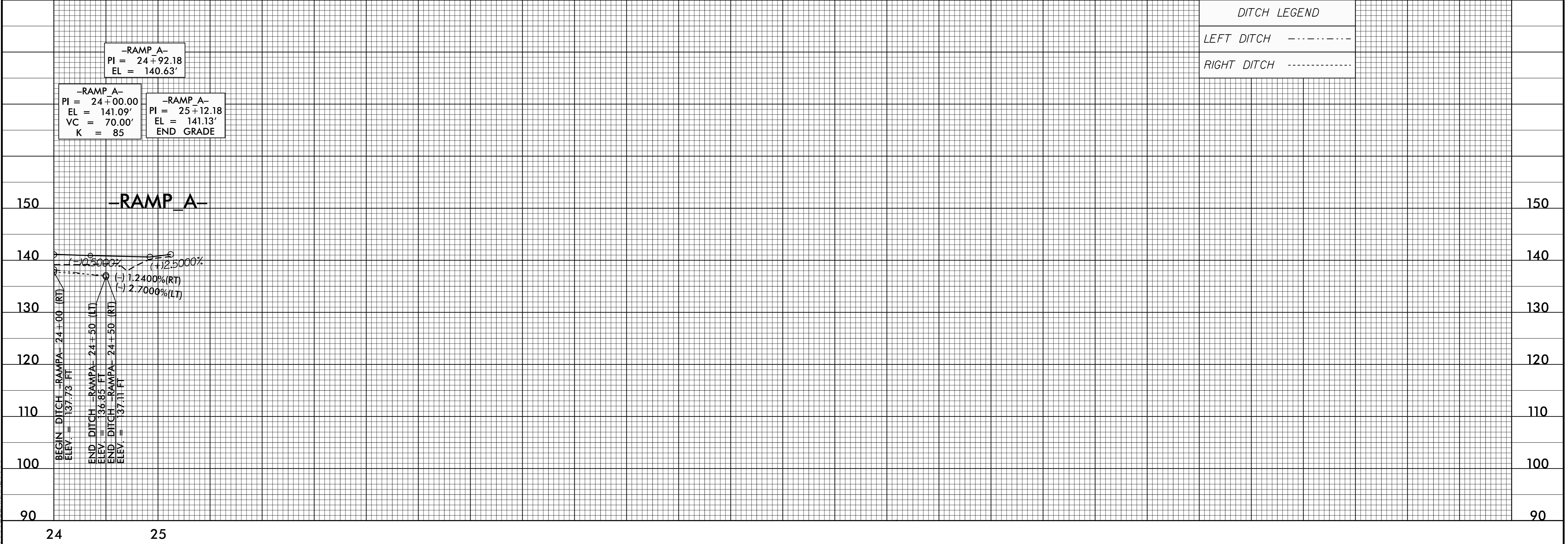
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|   |   |                 |
|---|---|-----------------|
| PROJECT REFERENCE NO.<br>R-5719   |   | SHEET NO.<br>16 |
| ROADWAY DESIGN<br>ENGINEER<br>4/6/2017<br>JAMES C. DAVIS<br>SEAL<br>18537<br>NORTH CAROLINA<br>PROFESSIONAL<br>ENGINEER | HYDRAULICS<br>ENGINEER<br>4/7/2017<br>JAMES C. DAVIS<br>SEAL<br>18462<br>NORTH CAROLINA<br>PROFESSIONAL<br>ENGINEER |                 |

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



|              |       |
|--------------|-------|
| DITCH LEGEND |       |
| LEFT DITCH   | ----- |
| RIGHT DITCH  | ----- |



|              |       |
|--------------|-------|
| DITCH LEGEND |       |
| LEFT DITCH   | ----- |
| RIGHT DITCH  | ----- |

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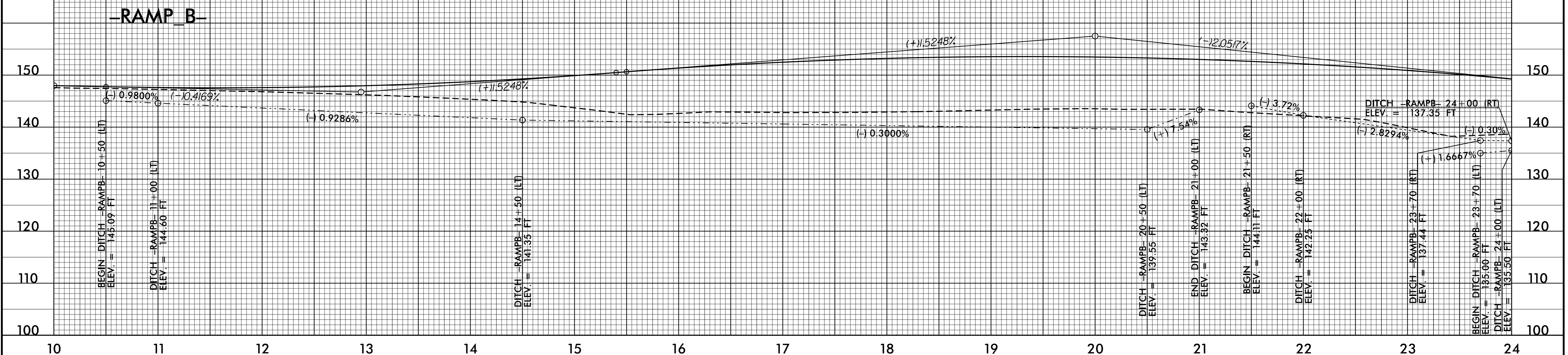
DITCH LEGEND  
 LEFT DITCH - - - - -  
 RIGHT DITCH - - - - -

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|---|---|
| PROJECT REFERENCE NO.<br>R-5719   | SHEET NO.<br>17   |
| ROADWAY DESIGN<br>ENGINEER<br>4/6/2017<br>SEAL<br>18537<br>JERRY P. FIG | HYDRAULICS<br>ENGINEER<br>4/7/2017<br>SEAL<br>18462<br>JAMES C. DAVIS |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED        |   |

-RAMP B-  
 PI = 10+00.00  
 EL = 147.98'  
 BEGIN GRADE

-RAMP B-  
 PI = 12+95.00  
 EL = 146.75'  
 VC = 490.00'  
 K = 252

-RAMP B-  
 PI = 20+00.00  
 EL = 157.50'  
 VC = 900.00'  
 K = 252

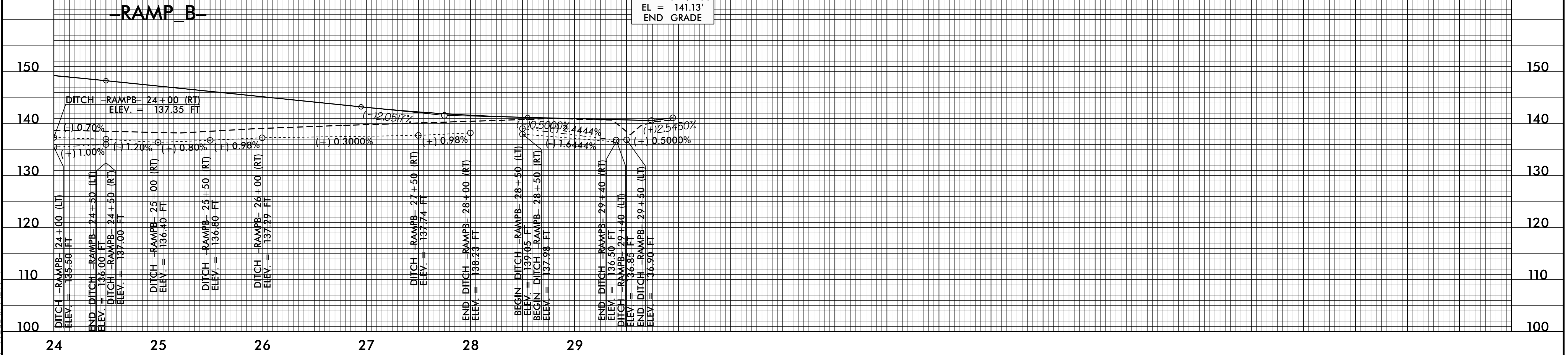


DITCH LEGEND  
 LEFT DITCH - - - - -  
 RIGHT DITCH - - - - -

-RAMP B-  
 PI = 27+75.00  
 EL = 141.60'  
 VC = 160.00'  
 K = 103

-RAMP B-  
 PI = 29+73.94  
 EL = 140.61'

-RAMP B-  
 PI = 29+94.38  
 EL = 141.13'  
 END GRADE



DITCH LEGEND

LEFT DITCH - - - - -

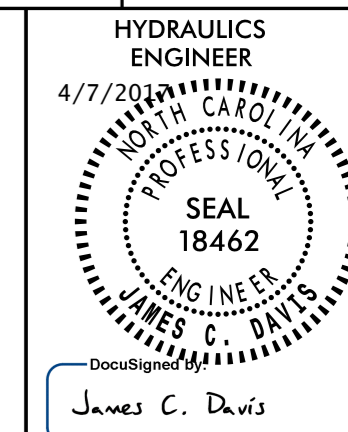
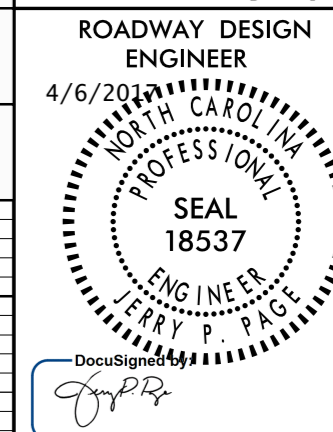
RIGHT DITCH - - - - -

PROJECT REFERENCE NO.

R-5719

SHEET NO.

18



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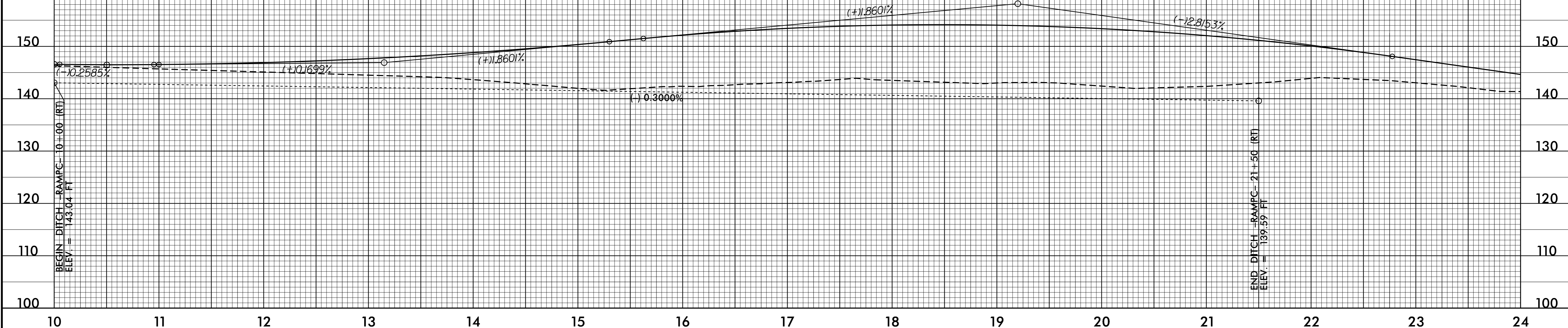
-RAMP C-  
PI = 19+20.00  
EL = 158.15'  
VC = 715.00'  
K = 153

-RAMP C-  
PI = 13+15.00  
EL = 146.90'  
VC = 430.00'  
K = 254

-RAMP C-  
PI = 10+00.00  
EL = 146.58'  
BEGIN GRADE

-RAMP C-  
PI = 10+50.23  
EL = 146.45'  
VC = 90.00'  
K = 210

-RAMP C-



DITCH LEGEND

LEFT DITCH - - - - -

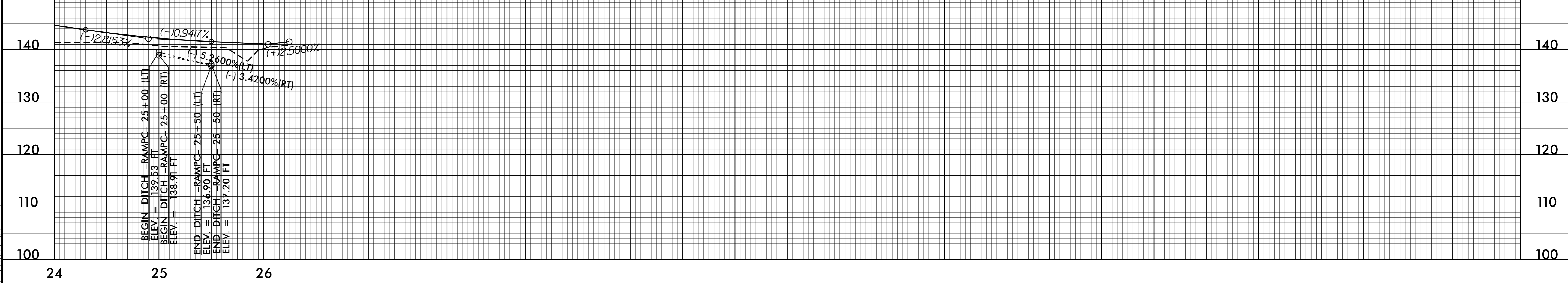
RIGHT DITCH - - - - -

-RAMP C-  
PI = 24+90.00  
EL = 142.11'  
VC = 120.00'  
K = 64

-RAMP C-  
PI = 26+04.35  
EL = 141.03'

-RAMP C-  
PI = 26+24.35  
EL = 141.53'  
END GRADE

-RAMP C-



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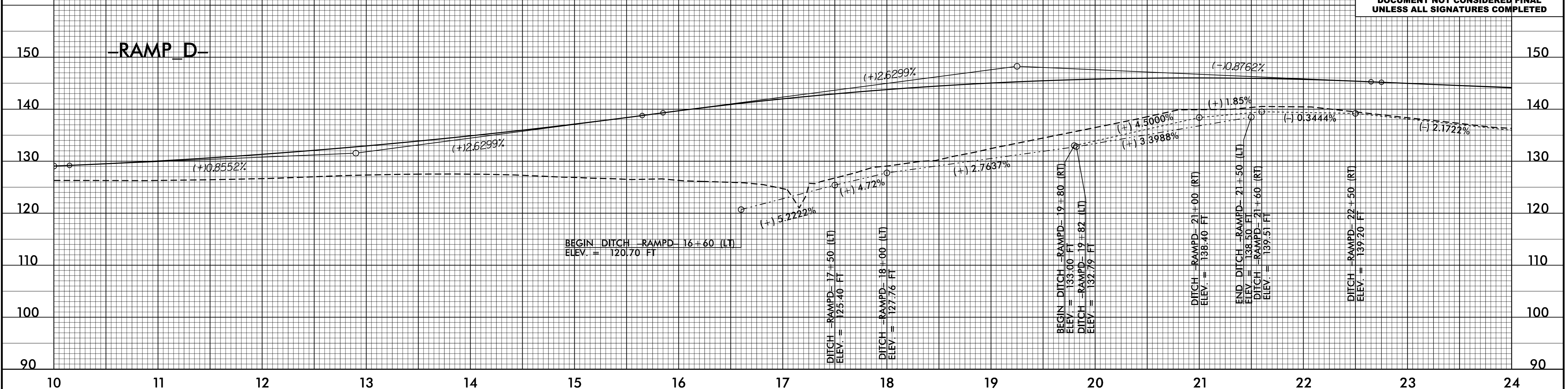
DITCH LEGEND  
 LEFT DITCH - - - - -  
 RIGHT DITCH - - - - -

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|--|--|
| PROJECT REFERENCE NO.<br>R-5719  | SHEET NO.<br>19  |
| ROADWAY DESIGN<br>ENGINEER<br>4/6/2017<br>NOTARY PUBLIC<br>PROFESSIONAL<br>SEAL<br>18537<br>JERRY P. FIG | HYDRAULICS<br>ENGINEER<br>4/7/2017<br>NOTARY PUBLIC<br>PROFESSIONAL<br>SEAL<br>18462<br>JAMES C. DAVIS |

-RAMP D-  
 PI = 10+00.00  
 EL = 129.07'  
 BEGIN GRADE

-RAMP D-  
 PI = 12+90.00  
 EL = 131.55'  
 VC = 550.00'  
 K = 310

-RAMP D-  
 PI = 19+25.00  
 EL = 148.25'  
 VC = 680.00'  
 K = 194



DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

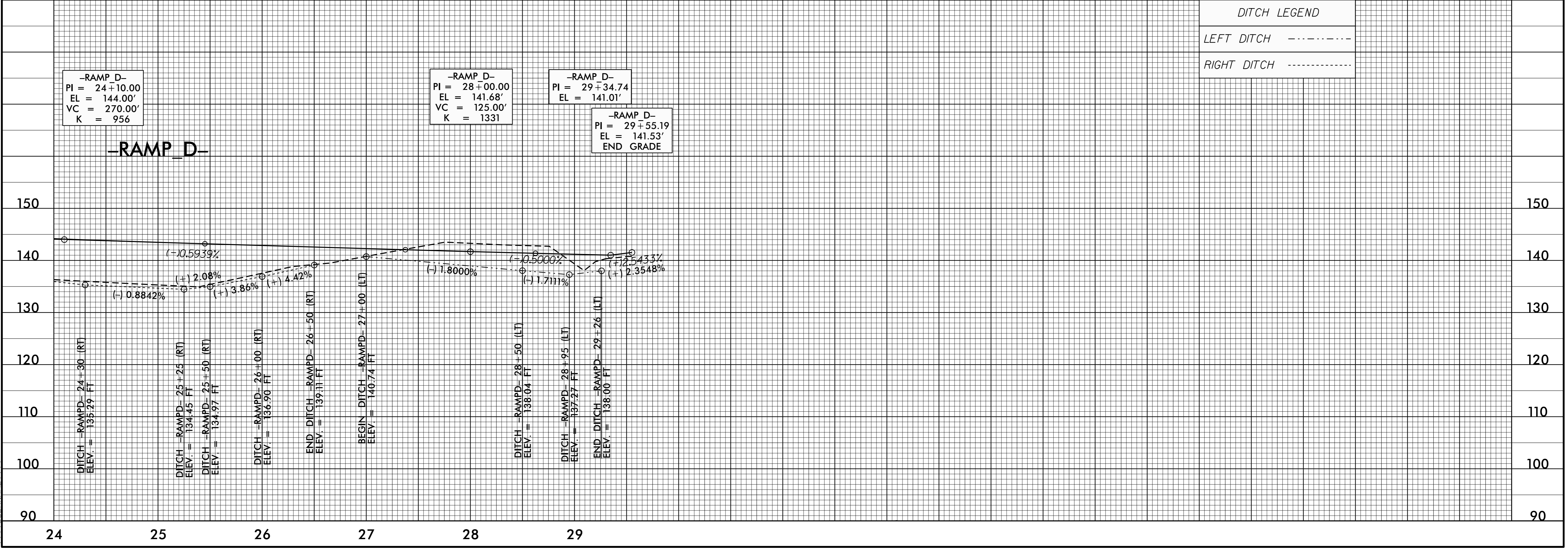
DITCH LEGEND  
 LEFT DITCH - - - - -  
 RIGHT DITCH - - - - -

-RAMP D-  
 PI = 24+10.00  
 EL = 144.00'  
 VC = 270.00'  
 K = 956

-RAMP D-  
 PI = 28+00.00  
 EL = 141.68'  
 VC = 125.00'  
 K = 1331

-RAMP D-  
 PI = 29+34.74  
 EL = 141.01'

-RAMP D-  
 PI = 29+55.19  
 EL = 141.53'  
 END GRADE



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|  |   |   |
|--|---|---|
| DITCH LEGEND<br>LEFT DITCH - - - - -<br>RIGHT DITCH - - - - -    | PROJECT REFERENCE NO.<br>R-5719                                   | SHEET NO.<br>20   |
|  | ROADWAY DESIGN ENGINEER<br>4/6/2004<br>SEAL 18537<br>JERRY P. FIG | HYDRAULICS ENGINEER<br>4/7/2004<br>SEAL 18462<br>JAMES C. DAVIS |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED |   |   |

