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09/08/09

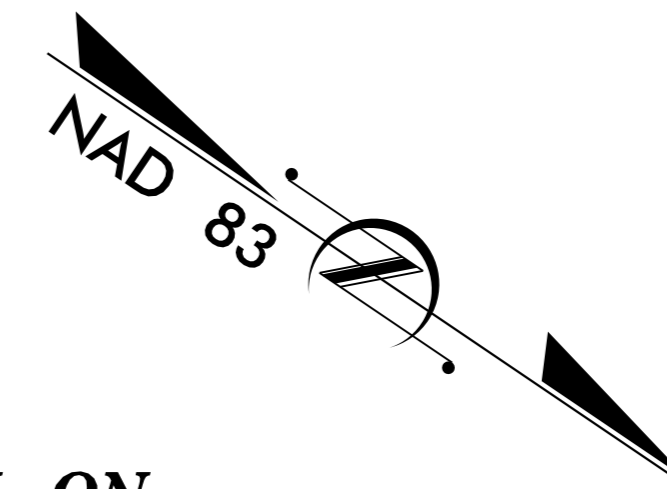
See Sheet 1A For Index of Sheets  
See Sheet 1B For Conventional Symbols

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

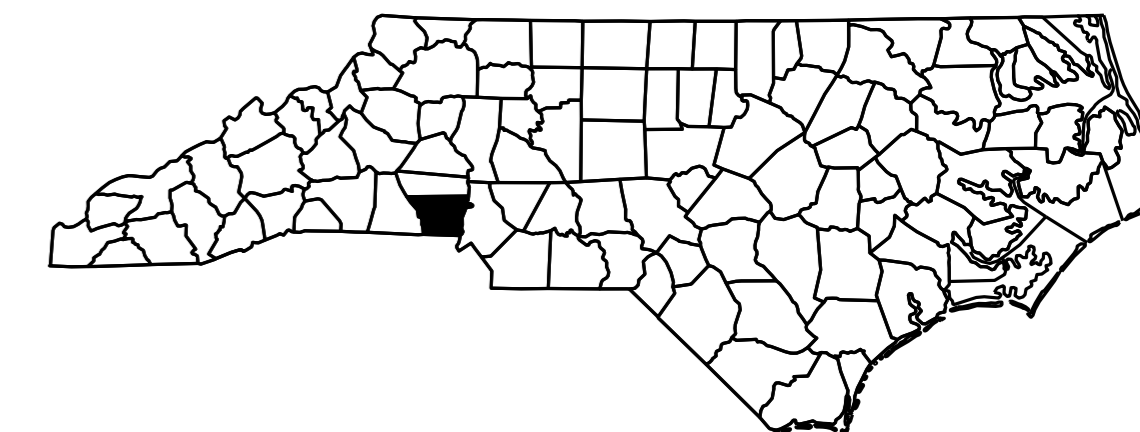
# GASTON COUNTY

LOCATION: BRIDGE No. 203 OVER STANLEY CREEK ON  
SR 1935 (WILLOWSIDE DRIVE)

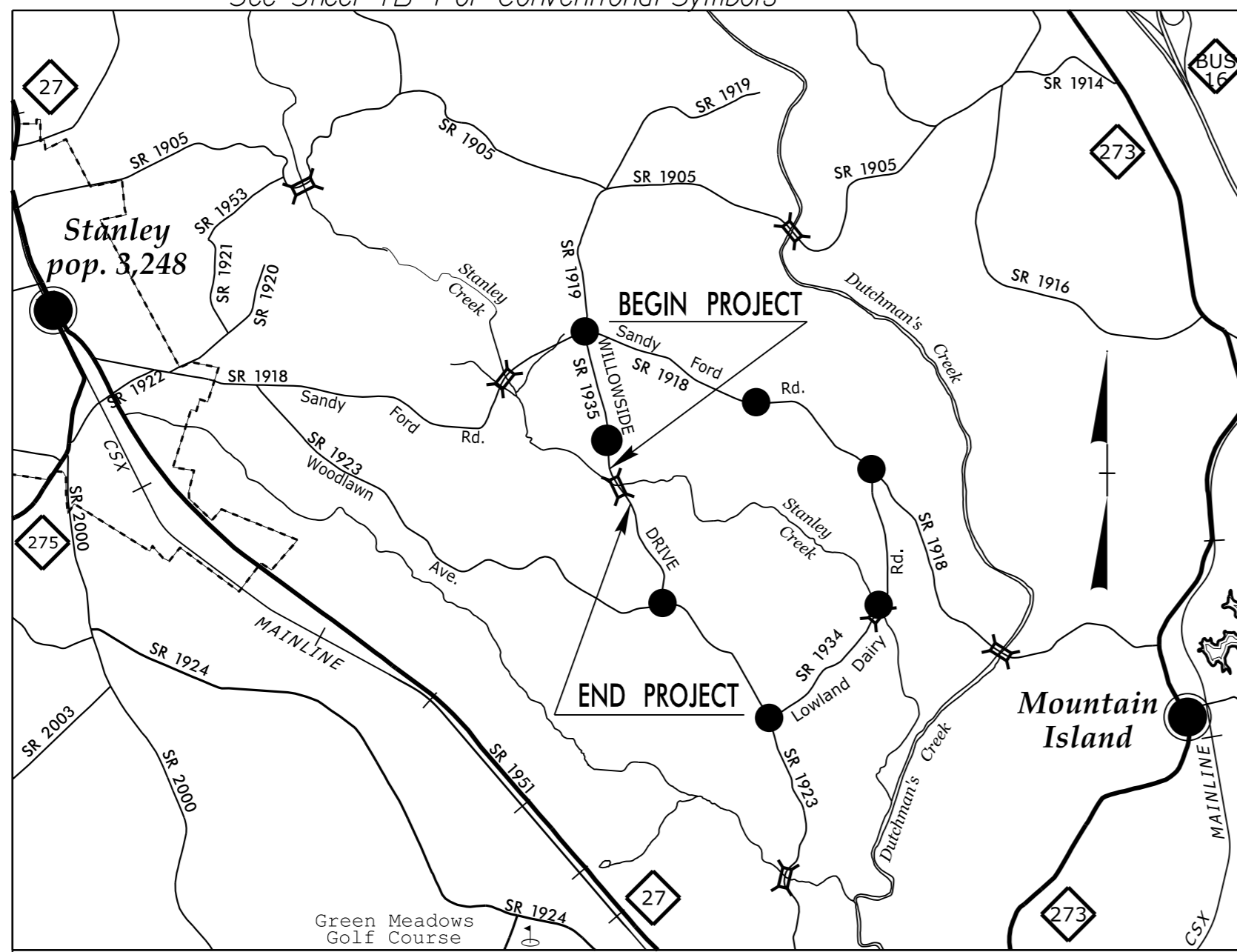
TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURE.



| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.   | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C.            | B-4751                      | 1           |              |
| STATE PROJ. NO. | F.A. PROJ. NO.              | DESCRIPTION |              |
| 38523.1.2       | BRZ-1935(3)                 | PE          |              |
| 38523.2.3       | BRZ-1935(3)                 | RW, UTIL    |              |
| 38523.3.2       |                             | CONST.      |              |



TIP PROJECT: B-4751



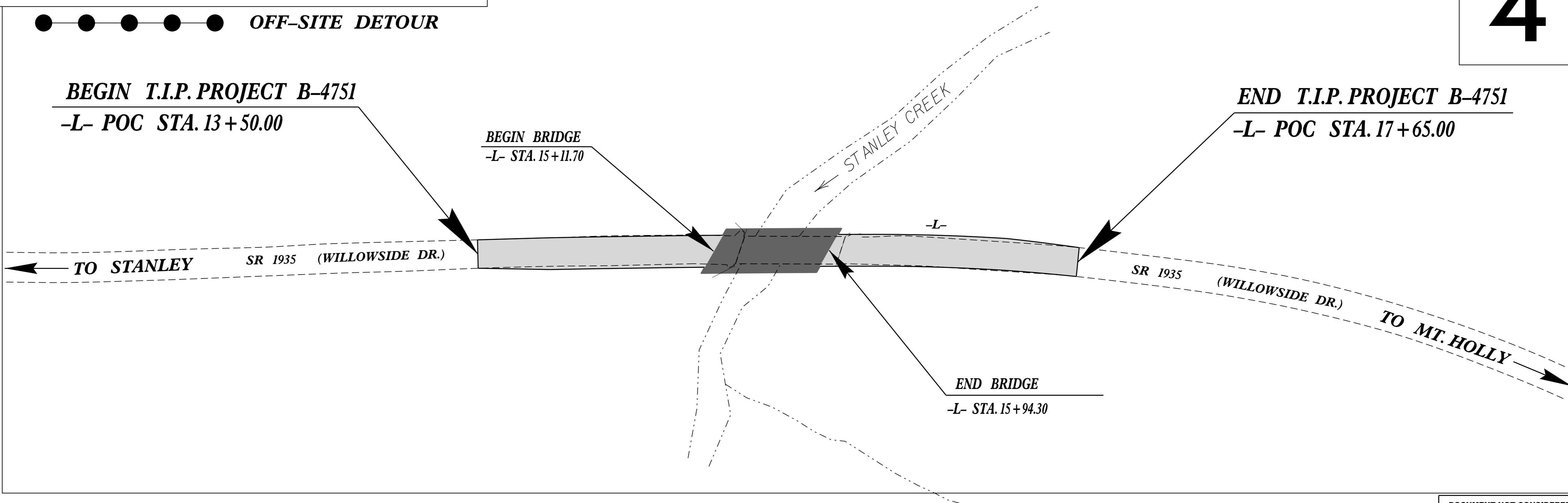
## VICINITY MAP

● ● ● ● ● OFF-SITE DETOUR

BEGIN T.I.P. PROJECT B-4751  
-L- POC STA. 13+50.00

BEGIN BRIDGE  
-L- STA. 15+11.70

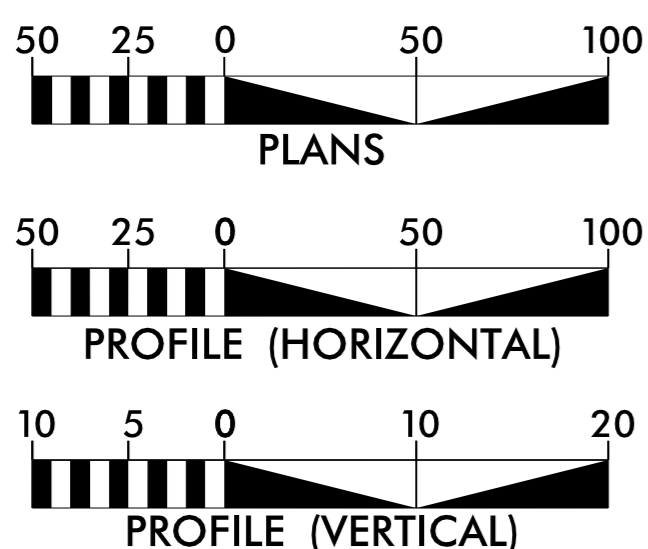
END T.I.P. PROJECT B-4751  
-L- POC STA. 17+65.00



# 4

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

### GRAPHIC SCALES



### DESIGN DATA

ADT 2016 = 700  
ADT 2036 = 1400  
K = 12 %  
D = 75 %  
T = 5 % \*  
V = 50 MPH  
\* TTST = 1% DUAL 4%  
FUNC CLASS = LOCAL RURAL  
SUB-REGIONAL TIER

### PROJECT LENGTH

LENGTH ROADWAY T.I.P. PROJECT B-4751 = 0.063 MI  
LENGTH STRUCTURE T.I.P. PROJECT B-4751 = 0.016 MI  
TOTAL LENGTH OF T.I.P. PROJECT B-4751 = 0.079 MI

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

#### 2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
MARCH 31, 2015

LETTING DATE:  
MARCH 15, 2016

JASON MOORE, PE  
PROJECT ENGINEER

NYA K. BOAYUE, PE  
PROJECT DESIGN ENGINEER

#### HYDRAULICS ENGINEER

12/29/2015

DocuSigned by:  
Stephen R. Morgan  
1209641E3FC1415...  
P.E.

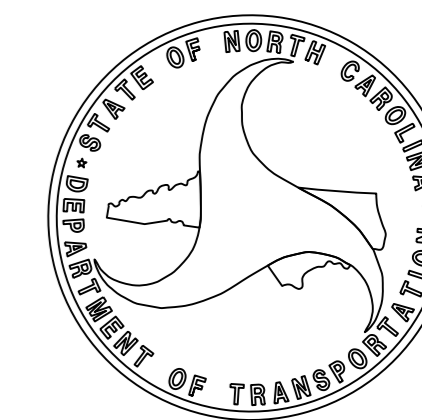
SIGNATURE:

#### ROADWAY DESIGN ENGINEER

12/29/2015

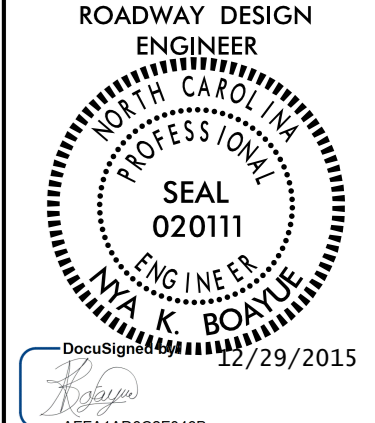
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\$\$\$\$\$USERNAME\$\$\$\$\$

CONTRACT: C203673



EFF. 01-17-2012  
REV. 10-30-2012

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

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

GRADING AND SURFACING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED 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 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.

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.

SUBSURFACE PLANS:

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

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 AT&T AND DUKE ENERGY.

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

RIGHT-OF-WAY MARKERS:

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

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   |
| 225.02                                   | Guide for Grading Subgrade - Secondary and Local                              |
| 225.04                                   | Method of Obtaining Superelevation - Two Lane Pavement                        |
| DIVISION 3 - PIPE CULVERTS               |   |
| 300.01                                   | Method of Pipe Installation   |
| DIVISION 4 - MAJOR STRUCTURES            |   |
| 422.11                                   | Reinforced Bridge Approach Fills - Sub Regional Tier                          |
| DIVISION 5                               |   |
| 560.01                                   | Method of Shoulder Construction - High Side of Superelevated Curve - Method I |
| DIVISION 6 - ASPHALT BASES AND PAVEMENTS |   |
| 654.01                                   | Pavement Repairs  |
| DIVISION 8 - INCIDENTALS                 |   |
| 840.00                                   | Concrete Base Pad for Drainage Structures                                     |
| 840.25                                   | Anchorage for Frames - Brick or Concrete or Precast                           |
| 840.29                                   | Frames and Narrow Slot Flat Grates  |
| 840.35                                   | Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates     |
| 840.46                                   | Traffic Bearing Precast Drainage Structure                                    |
| 840.66                                   | Drainage Structure Steps  |
| 846.01                                   | Concrete Curb, Gutter and Curb & Gutter                                       |
| 846.04                                   | Drop Inlet Installation in Shoulder Berm Gutter                               |
| 862.01                                   | Guardrail Placement   |
| 862.02                                   | Guardrail Installation  |
| 862.03                                   | Structure Anchor Units  |
| 876.01                                   | Rip Rap in Channels   |
| 876.02                                   | Guide for Rip Rap at Pipe Outlets   |

INDEX OF SHEETS

| SHEET NUMBER     | SHEET   |
|------------------|---|
| 1                | TITLE SHEET   |
| 1A               | INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS                               |
| 1B               | CONVENTIONAL SYMBOLS  |
| 1C-1 THRU 1C-2   | SURVEY CONTROL SHEETS   |
| 2A-1             | PAVEMENT SCHEDULE AND TYPICAL SECTIONS  |
| 3B-1             | PAVEMENT REMOVAL SUMMARY, SUMMARY OF EARTHWORK, SHOULDER BERM GUTTER, AND GUARDRAIL SUMMARY |
| 3D-1             | SUMMARY OF PIPE 48" AND UNDER   |
| 3G-1             | GEOTECHNICAL SUMMARIES  |
| 4                | PLAN AND PROFILE SHEET  |
| TMP-1 THRU TMP-3 | TRAFFIC MANAGEMENT PLANS  |
| PMP-1            | PAVEMENT MARKING PLAN   |
| EC-1 THRU EC-5   | EROSION CONTROL PLANS   |
| SIGN-1           | SIGNING PLAN  |
| UO-1 THRU UO-2   | UTILITY BY OTHERS PLANS   |
| X-1              | CROSS-SECTION SUMMARY SHEET   |
| X-2 THRU X-8     | CROSS-SECTIONS  |
| S-1 THRU S-19    | STRUCTURE PLANS   |

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12/05/11

Note: Not to Scale

\*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# CONVENTIONAL PLAN SHEET SYMBOLS

### BOUNDARIES AND PROPERTY:

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

### 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 | ○ CSX TRANSPORTATION<br>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 | ----- |

### EXISTING STRUCTURES:

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

### UTILITIES:

|                                     |         |
|-------------------------------------|---------|
| POWER:                              |         |
| Existing Power Pole                 | ●       |
| Proposed Power Pole                 | ○       |
| Existing Joint Use Pole             | ●       |
| Proposed Joint Use Pole             | ○       |
| Power Manhole                       | ⊕       |
| Power Line Tower                    | ⊗       |
| Power Transformer                   | ⊗       |
| H-Frame Pole                        | ●       |
| Recorded U/G Power Line             | ----- P |
| Designated U/G Power Line (S.U.E.*) | ----- P |

### TELEPHONE:

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

### WATER:

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

### TV:

|  |             |
|--|-------------|
| TV Satellite Dish                          | ☼           |
| TV Pedestal                                | □           |
| TV Tower                                   | ⊗           |
| U/G TV Cable Hand Hole                     | □           |
| Recorded U/G TV Cable                      | ----- TV    |
| Designated U/G TV Cable (S.U.E.*)          | ----- TV    |
| Recorded U/G Fiber Optic Cable             | ----- TV FO |
| Designated U/G Fiber Optic Cable (S.U.E.*) | ----- TV FO |

### GAS:

|                                   |               |
|-----------------------------------|---------------|
| Gas Valve                         | ◇             |
| Gas Meter                         | ⊕             |
| Recorded U/G Gas Line             | ----- G       |
| Designated U/G Gas Line (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 |
| Recorded SS Forced Main Line             | ----- FSS                |
| Designated SS Forced Main Line (S.U.E.*) | ----- FSS                |

### MISCELLANEOUS:

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

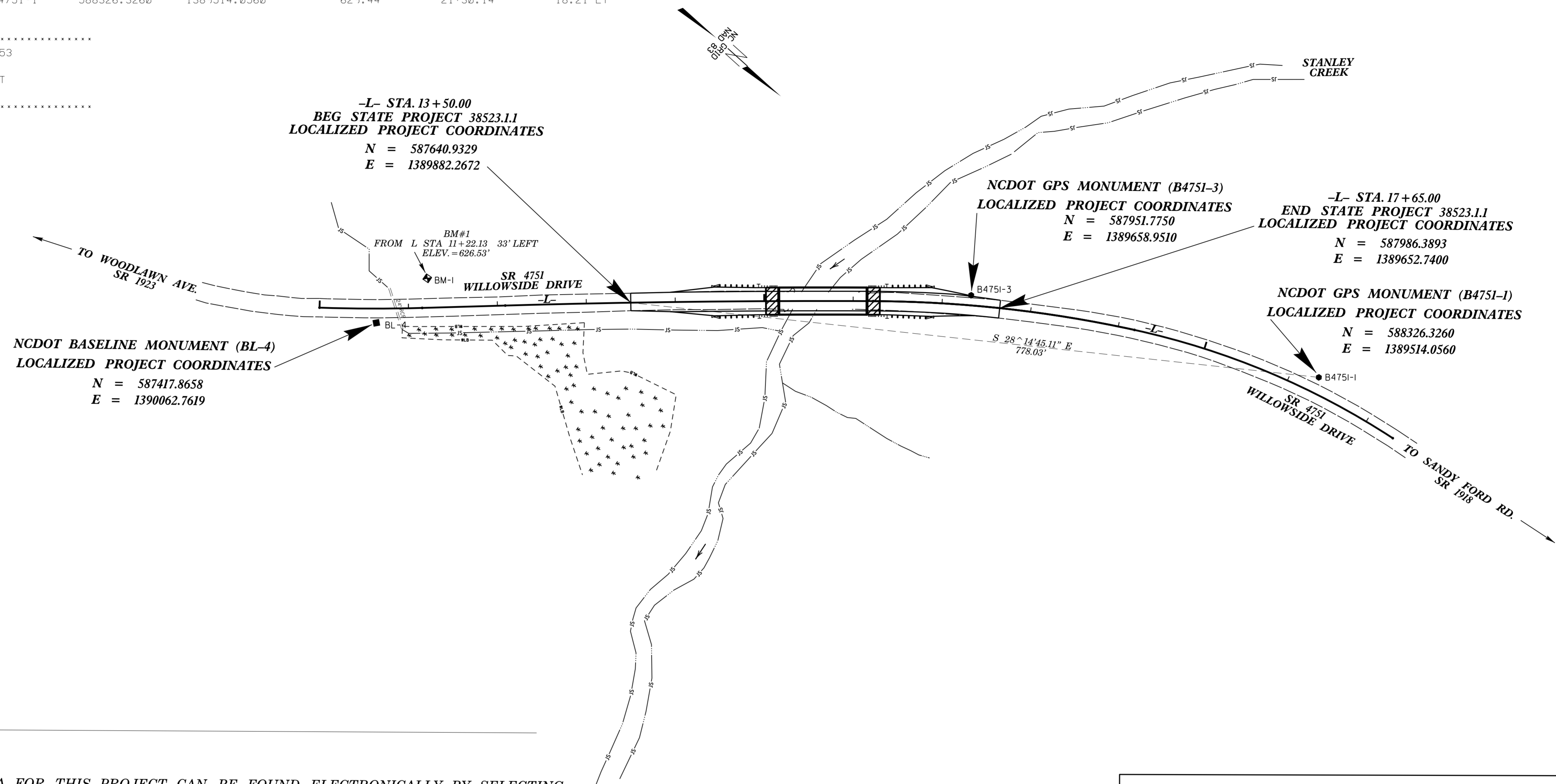
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# SURVEY CONTROL SHEET B-4751

|                       |           |
|-----------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| B-4751                | 1C-1      |
| Location and Surveys  |           |

| BL | POINT | DESC. | NORTH       | EAST         | ELEVATION | L STATION | OFFSET   |
|----|-------|-------|-------------|--------------|-----------|-----------|----------|
| 4  |       | BL-4  | 587417.8658 | 1390062.7619 | 623.93    | 10+63.86  | 16.02 RT |
|    |       | GPS3  | B4751-3     | 587951.7750  | 622.80    | 17+31.86  | 11.38 LT |
|    |       | GPS1  | B4751-1     | 588326.3260  | 629.44    | 21+30.14  | 18.21 LT |

.....  
 BM1 ELEVATION = 626.53  
 N 587437 E 1389989  
 L STATION 11+22.13 33' LEFT  
 RR SPIKE IN 30' BEECH  
 .....



### NOTES:

- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:  
[HTTP://WWW.DOH.DOT.STATE.NC.US/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/](http://www.doh.dot.state.nc.us/preconstruct/highway/location/project/)  
 THE FILES TO BE FOUND ARE AS FOLLOWS:  
 B4751\_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.  
 NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)

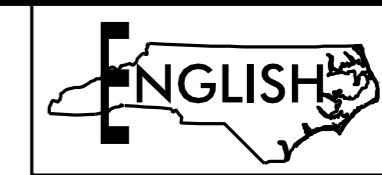
### DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "B4751-1"  
 WITH NAD 83 STATE PLANE GRID COORDINATES OF  
 NORTHING: 588326.326(ft) EASTING: 1389514.056(ft)  
 ELEVATION: 629.44(ft)  
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99938118  
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4751-1" TO -L- STATION 13+50.00 IS  
 S 28°14'45.11" E 778.03'  
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES  
 VERTICAL DATUM USED IS NAVD 88

NOTE: DRAWING NOT TO SCALE

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# SURVEY CONTROL SHEET B-4751



|                       |           |
|-----------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| B-4751                | 1C-2      |
| Location and Surveys  |           |

## (FINAL)

### (DESIGN ALIGNMENTS)

| TYPE | STATION  | L           |              |
|------|----------|-------------|--------------|
|      |          | NORTH       | EAST         |
| PC   | 10+00.00 | 587355.5484 | 1390084.8024 |
| PT   | 11+15.43 | 587450.8934 | 1390019.7734 |
| PC   | 12+08.83 | 587526.3774 | 1389964.7639 |
| PCC  | 16+22.53 | 587864.6854 | 1389726.6899 |
| PCC  | 19+18.53 | 588125.1825 | 1389587.2733 |
| PT   | 22+35.17 | 588433.5367 | 1389523.4290 |

### (ROW MARKERS)

| ALIGN | STATION  | OFFSET | ROW MARKER IRON PIN AND CAP |              |
|-------|----------|--------|-----------------------------|--------------|
|       |          |        | NORTH                       | EAST         |
| L     | 12+97.80 | -22.82 | 587585.1562                 | 1389894.0876 |
| L     | 13+00.00 | 22.17  | 587613.1777                 | 1389929.3484 |
| L     | 13+00.00 | 30.00  | 587617.7441                 | 1389935.7114 |
| L     | 13+19.30 | -30.00 | 587598.4852                 | 1389875.6992 |
| L     | 16+22.53 | 30.00  | 587881.5421                 | 1389751.5063 |
| L     | 16+22.53 | -30.00 | 587847.8286                 | 1389701.8736 |
| L     | 18+00.00 | -30.00 | 588003.7879                 | 1389609.7474 |
| L     | 18+00.00 | 30.00  | 588030.9850                 | 1389663.2294 |
| L     | 18+00.00 | -21.88 | 588007.4692                 | 1389616.9866 |
| L     | 18+00.00 | 23.12  | 588027.8676                 | 1389657.0991 |

### (PERMANENT EASEMENTS)

| ALIGN | STATION  | OFFSET | PERMANENT EASEMENT (IRON PIN AND CAP) |              |
|-------|----------|--------|---------------------------------------|--------------|
|       |          |        | NORTH                                 | EAST         |
| L     | 13+50.00 | 30.00  | 587658.3266                           | 1389906.7102 |
| L     | 14+00.00 | 60.00  | 587716.3207                           | 1389902.3839 |
| L     | 15+00.00 | 70.00  | 587803.5646                           | 1389853.5504 |
| L     | 15+35.00 | 30.00  | 587809.4828                           | 1389800.8229 |
| L     | 15+35.00 | 45.00  | 587817.9978                           | 1389813.1717 |

**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:  
[B4751\\_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.  
NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)  
SEE GPS CALIBRATION SHEET FOR HORIZONTAL AND VERTICAL COORDINATE VALUES.

#### DATUM DESCRIPTION

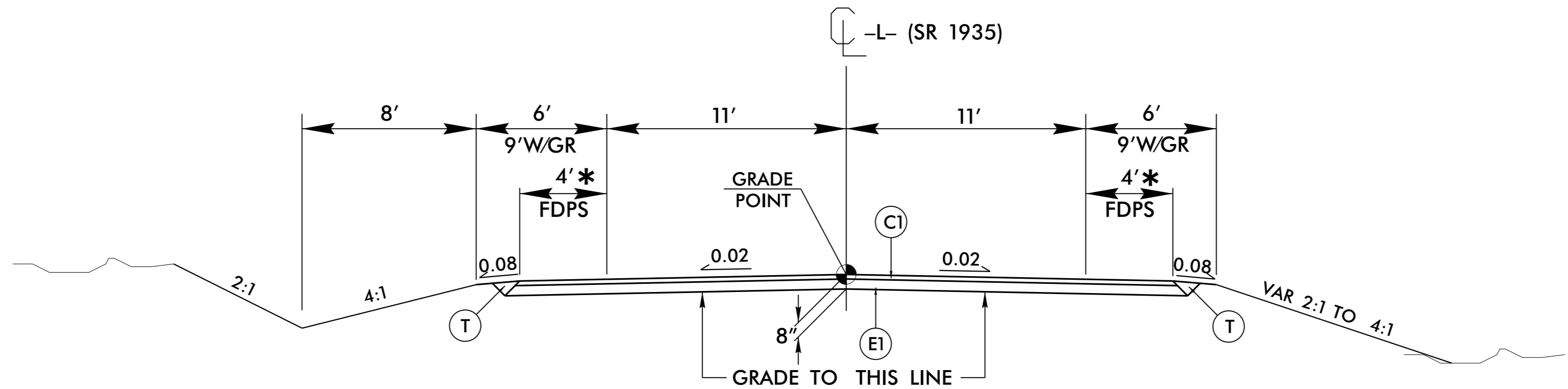
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "B4751-1"  
WITH NAD 83 STATE PLANE GRID COORDINATES OF  
NORTHING: 588326.326(±) EASTING: 1389514.056(±)  
ELEVATION: 629.44(±)  
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99938118  
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4751-1" TO -L- STATION 13+50.00 IS  
S 28°14'45.11" E 778.03'  
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES  
VERTICAL DATUM USED IS NAVD 88

6/2/09

|   |   |
|---|---|
| PROJECT REFERENCE NO.<br>B-4751   | SHEET NO.<br>2A-1   |
| ROADWAY DESIGN ENGINEER<br>SEAL 020111<br>KYA K. BOYAKU<br>ENGINEER<br>NORTH CAROLINA PROFESSIONAL SEAL<br>12/29/2015 | PAVEMENT DESIGN ENGINEER<br>SEAL 039819<br>LYONIA T. HOWARD<br>ENGINEER<br>NORTH CAROLINA PROFESSIONAL SEAL<br>12/29/2015 |
| <b>DOCUMENT NOT CONSIDERED FINAL<br/>UNLESS ALL SIGNATURES COMPLETED</b>  |   |

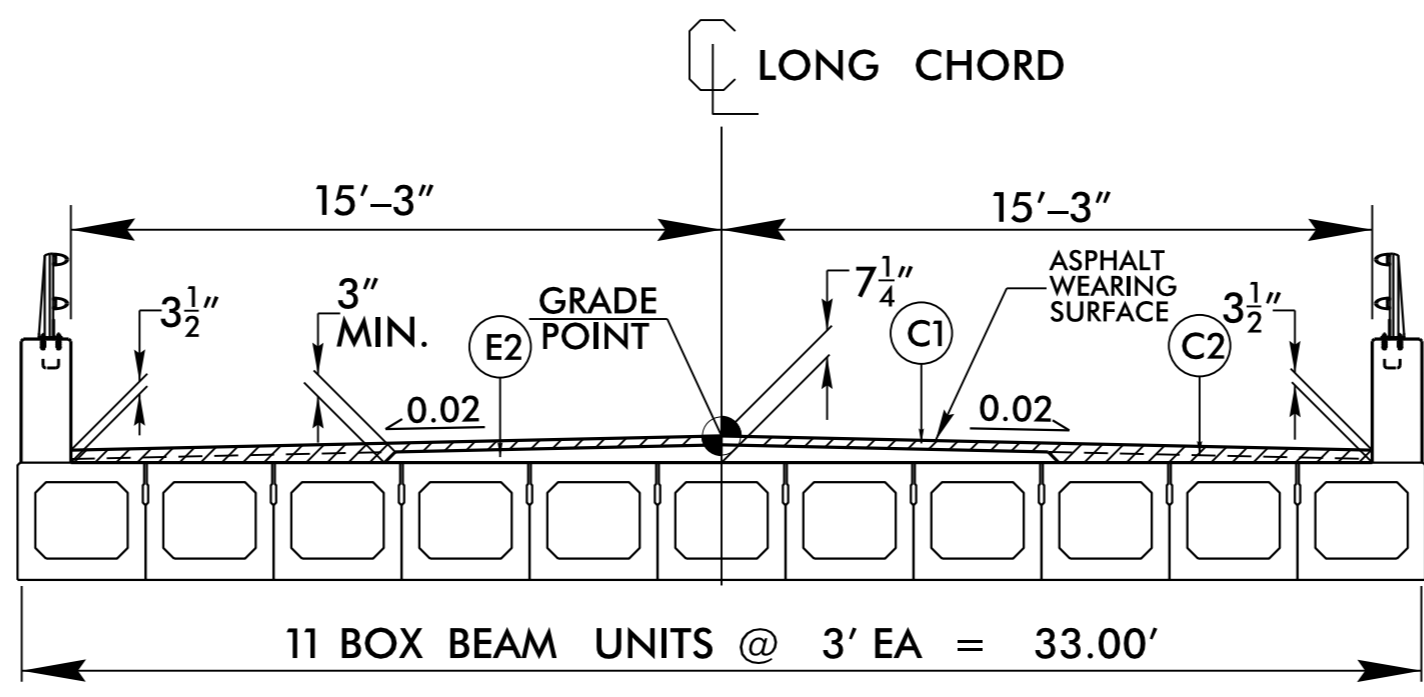
| PAVEMENT SCHEDULE       |   |
|-------------------------|---|
| (FINAL PAVEMENT DESIGN) |   |
| C1                      | PROP. APPROX. 2½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.   |
| C2                      | PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1" IN DEPTH OR GREATER THAN 1½" IN DEPTH. |
| E1                      | PROP. APPROX. 5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.   |
| E2                      | PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH. |
| T                       | EARTH MATERIAL.   |
| R                       | CONCRETE SHOULDER BERM GUTTER.  |
| U                       | EXISTING PAVEMENT.  |

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

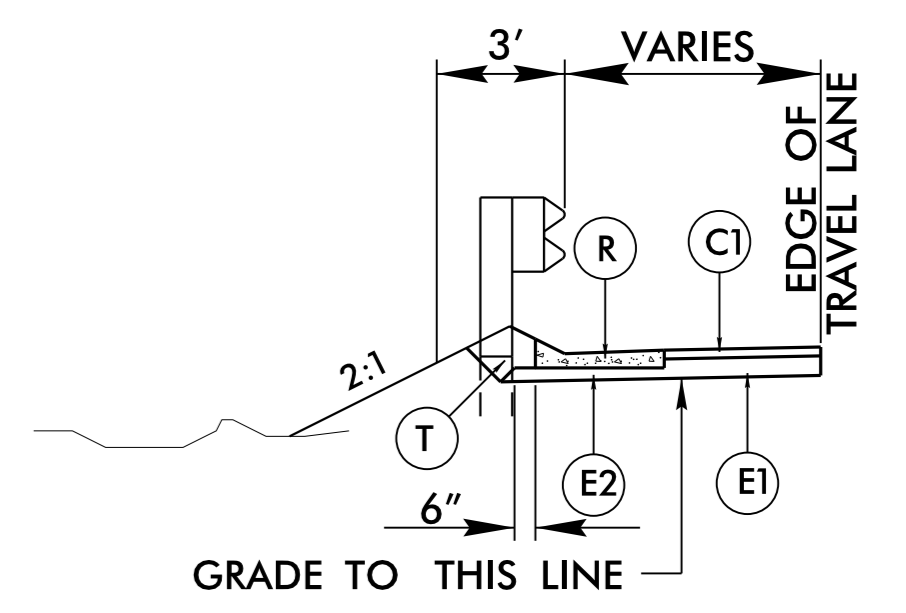


**TYPICAL SECTION NO. 1**

USE TYPICAL SECTION NO. 1  
 -L- STA. 13+50.00 TO BEG. BRIDGE 15+11.70  
 -L- STA. END BRIDGE 15+94.30 TO 17+65.00  
 \* PAVE TO FACE OF GUARDRAIL AS SHOWN ON SHEET 4.



**TYPICAL SECTION ON STRUCTURE  
(SEE STRUCTURE PLANS)**  
 -L- STA. 15+11.70 TO 15+94.30



**TYPICAL SECTION NO. 1A**  
 IN CONJUNCTION WITH T.S. # 1  
 USE TYPICAL SECTION NO. 1A  
 -L- STA. 16+14.00 TO 16+65.00 LT.  
 -L- STA. 15+96.50 TO 16+65.00 RT.

15-DEC-2015 09:52 04751\_Rdy-tyr.dgn







COMPUTED BY: J. P. ROGERS    DATE: 07/01/2014  
 CHECKED BY: S. C. CLARK    DATE: 12/08/2015

PROJECT NO.    SHEET NO.  
 B-4751    3G-1

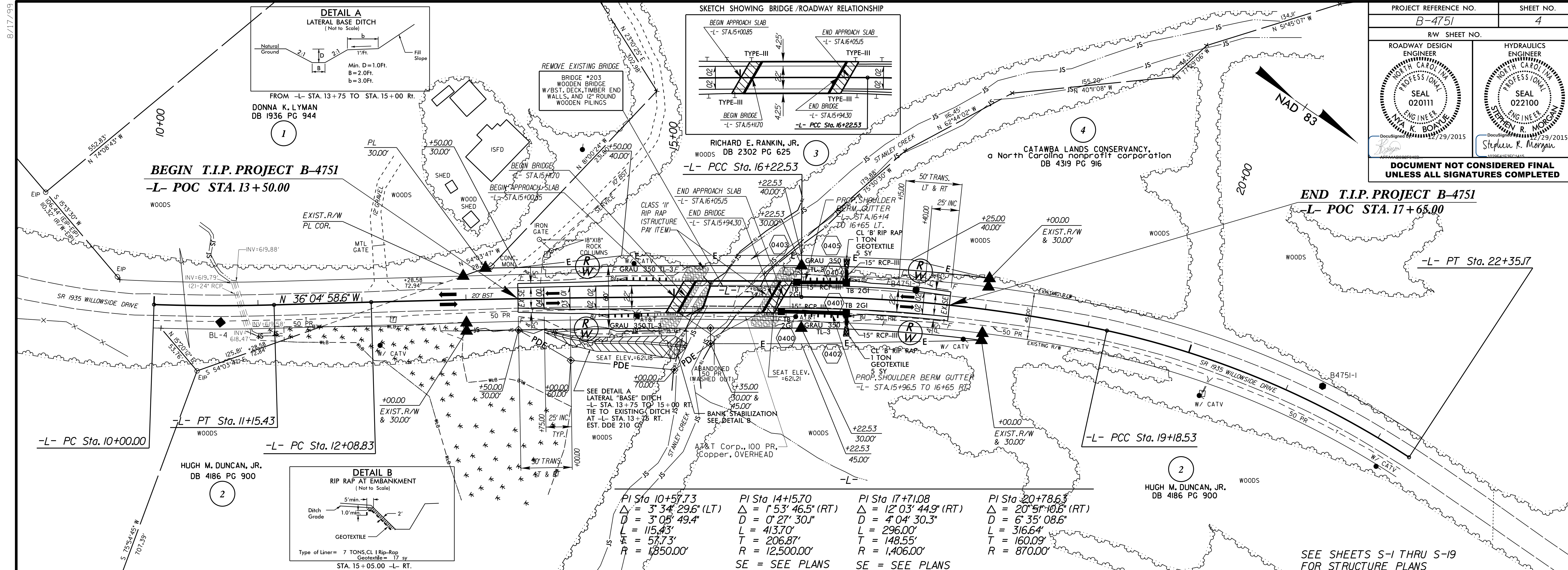
**STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS**

**SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION**

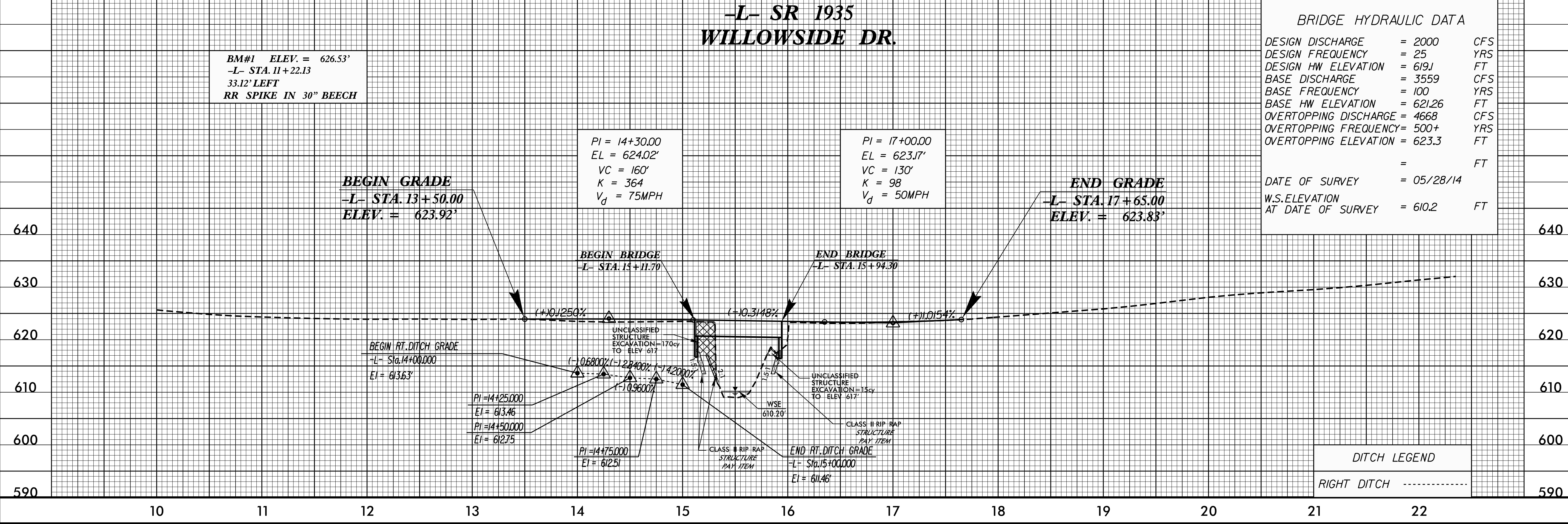
| LINE | Station | Station | Aggregate Type<br>ASU/AST | Aggregate Thickness<br>INCHES | Shallow Undercut<br>CY | Class IV Subgrade Stabilization<br>TONS | Geotextile for Soil Stabilization<br>SY | Stabilizer Aggregate<br>TONS | Class IV Aggregate Stabilization<br>TONS |
|------|---------|---------|---------------------------|-------------------------------|------------------------|---|---|------------------------------|--|
|      |         |         |                           |                               |                        |   |   |                              |  |
|      |         |         |                           |                               |                        |   |   |                              |  |
|      |         |         | ASU                       |                               | 75                     | 150                                     | 225                                     |                              |  |
|      |         |         | <b>TOTAL CY/TONS/SY:</b>  |                               | 75                     | 150                                     | 225*                                    | 0                            | 0  |

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.



**-L- SR 1935 WILLOWSIDE DR.**



14-DEC-2015 09:12 B:\4751\1.Rdy.psh.4.dgn