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STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**CHEROKEE, CLAY, GRAHAM, HAYWOOD  
HENDERSON, JACKSON, MACON, POLK  
SWAIN AND TRANSYLVANIA COUNTIES**

**DIVISION 14**



**LOCATION:**  
**CHEROKEE COUNTY** - 13 BRIDGES  
**CLAY COUNTY** - 1 BRIDGE  
**GRAHAM COUNTY** - 2 BRIDGES  
**HAYWOOD COUNTY** - 19 BRIDGES  
**HENDERSON COUNTY** - 11 BRIDGES  
**JACKSON COUNTY** - 12 BRIDGES  
**MACON COUNTY** - 4 BRIDGES  
**POLK COUNTY** - 4 BRIDGES  
**SWAIN COUNTY** - 5 BRIDGES  
**TRANSYLVANIA COUNTY** - 2 BRIDGES

**TYPE OF WORK:**  
**TRAFFIC MANAGEMENT FOR BRIDGE PRESERVATION**

**INDEX OF SHEETS**

| SHEET NO.        | TITLE  |
|------------------|--|
| TMP-1            | TITLE SHEET, INDEX OF SHEETS AND TRAFFIC MANAGEMENT STRATEGIES |
| TMP-2            | LIST OF ROADWAY STANDARD DRAWINGS AND LEGEND                   |
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| TMP-4            | GENERAL NOTES, CONT'D AND TRAFFIC CONTROL PHASING              |
| TMP-5            | TRAFFIC CONTROL PHASING CONT'D                                 |
| TMP-6 TO TMP-17  | VICINITY MAPS  |
| TMP-18           | DETAIL FOR RIGHT LANE CLOSURE ON A DIVIDED FACILITY            |
| TMP-19           | DETAIL FOR LEFT LANE CLOSURE ON A DIVIDED FACILITY             |
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| TMP-22 TO TMP-23 | JACKSON #005 LANE CLOSURE WITH MEDIAN ISLAND                   |
| TMP-24           | JACKSON #005 US 74 EXIT 69 CLOSURE                             |
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| TMP-26           | JACKSON #005 US 441 DETOUR ROUTE                               |
| TMP-27           | SUMMARY OF QUANTITIES  |
| TMP-28 TO TMP-32 | ROADWAY STANDARD DRAWINGS                                      |

**TRAFFIC MANAGEMENT STRATEGY**

WORK ON THE FOLLOWING BRIDGES WILL BE PERFORMED USING TEMPORARY LANE CLOSURES:

CHEROKEE COUNTY - BRIDGE #'S 050, 055, 071, 075, 087, 088, 089, 090, 091, 093, 112, 269, 271  
 CLAY COUNTY - BRIDGES # - 006  
 GRAHAM COUNTY - BRIDGES #'S 130, 142  
 HAYWOOD COUNTY - BRIDGE #'S 023, 036, 069, 094, 107, 109, 110, 111, 112, 114, 138, 141, 204, 211, 251, 272, 374, 445  
 HENDERSON COUNTY - BRIDGE #'S 006, 021, 034, 061, 127, 145, 146, 169, 181, 373, 379  
 JACKSON COUNTY - BRIDGE #'S 029, 052, 106, 193, 211  
 MACON COUNTY - BRIDGE #'S 016, 054, 093, 094  
 POLK COUNTY - BRIDGES #'S 002, 047, 074, 105  
 SWAIN COUNTY - BRIDGE #'S 009, 024, 074, 106  
 TRANSYLVANIA COUNTY - BRIDGE #'S 053, 069

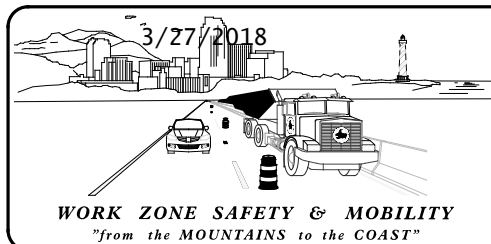
WORK ON THE FOLLOWING BRIDGES WILL BE PERFORMED USING TEMPORARY LANE CLOSURES AND PORTABLE CONCRETE BARRIERS:

JACKSON COUNTY - BRIDGE #'S 005, 085, 096, 100, 104, 109, 110  
 SWAIN COUNTY - BRIDGE # 186

WORK ON THE FOLLOWING BRIDGE WILL BE PERFORMED USING TEMPORARY LANE CLOSURES WITH TRAFFIC PLACED IN A ONE-LANE, TWO-WAY PATTERN USING PORTABLE CONCRETE BARRIERS AND TEMPORARY PORTABLE SIGNALS:

HAYWOOD COUNTY - BRIDGE # 098

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



N.C.D.O.T. WORK ZONE TRAFFIC CONTROL  
 1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561  
 750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)  
 PHONE: (919) 814-5000 FAX: (919) 771-2745

J. E. Hummer, PhD, PE STATE TRAFFIC MANAGEMENT ENGINEER

\_\_\_\_\_ TRAFFIC CONTROL PROJECT ENGINEER

\_\_\_\_\_ TRAFFIC CONTROL PROJECT DESIGN ENGINEER

\_\_\_\_\_ TRAFFIC CONTROL DESIGN ENGINEER



PLANS PREPARED BY:  
**Gannett Fleming**  
 Excellence Delivered As Promised

2610 Wycliff Road  
 Suite 122  
 Raleigh, NC 27607-3073  
 (919) 420-7660  
 NC Lic. No. F-0270

APPROVED: DocuSigned by:  
 DATE: 3/27/2018

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\$\$\$\$\$ SYSTEM TIME\$\$\$\$\$  
 \$\$\$ USER NAME\$\$\$\$\$  
 \$\$\$ USER NAME\$\$\$\$\$  
 \$\$\$ USER NAME\$\$\$\$\$

# ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

| STD. NO. | TITLE   |
|----------|---|
| 665.01   | ASPHALT SHOULDERS - MILLED RUMBLE STRIPS            |
| 1101.01  | WORK ZONE WARNING SIGNS                             |
| 1101.02  | TEMPORARY LANE CLOSURES                             |
| 1101.03  | TEMPORARY ROAD CLOSURES                             |
| 1101.04  | TEMPORARY SHOULDER CLOSURES                         |
| 1101.11  | TRAFFIC CONTROL DESIGN TABLES                       |
| 1110.01  | STATIONARY WORK ZONE SIGNS                          |
| 1110.02  | PORTABLE WORK ZONE SIGNS                            |
| 1115.01  | FLASHING ARROW BOARDS                               |
| 1130.01  | DRUMS   |
| 1135.01  | CONES   |
| 1145.01  | BARRICADES  |
| 1150.01  | FLAGGING DEVICES                                    |
| 1160.01  | TEMPORARY CRASH CUSHION                             |
| 1165.01  | TRUCK MOUNTED ATTENUATOR - DELINATION               |
| 1170.01  | PORTABLE CONCRETE BARRIER                           |
| 1205.01  | PAVEMENT MARKINGS - LINE TYPES AND OFFSETS          |
| 1205.02  | PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS |
| 1205.03  | PAVEMENT MARKINGS - EXIT AND ENTRANCE RAMPS         |
| 1205.12  | PAVEMENT MARKINGS - BRIDGES                         |
| 1250.01  | RAISED PAVEMENT MARKERS - INSTALLATION SPACING      |
| 1251.01  | RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY) |
| 1253.01  | SNOWPLOWABLE RAISED PAVEMENT MARKERS                |

## LEGEND

### GENERAL

- DIRECTION OF TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- WORK AREA

### SIGNALS

- PORTABLE

### PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

### TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- DRUM
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- CHANGEABLE MESSAGE SIGN
- PORTABLE CONCRETE BARRIER
- TRUCK MOUNTED IMPACT ATTENUATOR

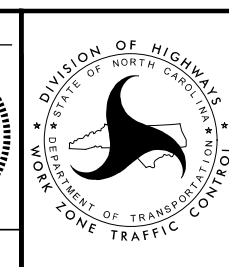
### TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

\$\$\$ SYSTEMS DESIGN \$\$\$  
 \$\$\$ USER NAME \$\$\$

PLANS PREPARED BY: **Gannett Fleming**  
 2610 Wycliff Road, Suite 102  
 Raleigh, NC 27607-3073  
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 Excellence Delivered As Promised NC Lic. No. F-0270

APPROVED:   
 DATE: 3/15/2018  
 DocuSigned by: 27268C2E163A0D8



ROADWAY STANDARD DRAWINGS & LEGEND

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

## GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRABLE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

### TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

DAY AND TIME RESTRICTIONS  
6:00 AM TO 9:00 AM AND 4:00 PM TO 7:00 PM MONDAY THRU FRIDAY

#### ROAD NAME

Cherokee County  
•NC 294 (050)

Haywood County  
•SR 1503 - Upper Crabtree Rd. (036)  
•US 19 (094)  
•US 276 (111)  
•SR 1147 - New Allens Creek Rd. (112)  
•US 23/74 (141)  
•SR 1334 - Max Patch Rd. (204)  
•SR 1519 - Richlands Creek Rd. (211)  
•SR 251 - Newfound Rd. (251)

Henderson County  
•SR 1338 - S. Mills River Rd. (006)  
•SR 1528 - Brookside Camp Rd. (021)  
•US 25 (127, 379)  
•US 74A (145)  
•SR 1534 - Naples Rd. (373)

Jackson County  
•SR 1456 - Jimmy Morris Rd. (029)  
•SR 1157 - Pine Creek Rd. (193)

Macon County  
•SR 1674 - Nickajack Rd. (054)

Polk County  
•SR 1151 - Green River Cove Rd. (047, 105)

Swain County  
•US 19 (024)  
•SR 1309 - Lower Alarka Rd. (106)

Transylvania County  
•US 64 (053, 069)

DAY AND TIME RESTRICTIONS  
6:00 AM TO 9:00 PM MONDAY THRU SUNDAY

#### ROAD NAME

Cherokee County  
•US 64 (269, 271)

Haywood County  
•NC 110 (023)  
•NC 209 (098)  
•US 19/23/74 (107)  
•US 23/74 (109, 138)  
•US 19/23 (110)  
•US 74 (114)  
•SR 1643 - Bridge St. (272)

Henderson County  
•NC 191 (146)  
•US 25 (169, 181)  
Jackson County  
•US 441 (005)  
•US 23B (106)

Swain County  
•SR 1180 (074) - (Restrictions apply April 1st thru November 30th only)

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

#### ROAD NAME

#### ALL ROADS

#### HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR CHRISTMAS / NEW YEAR'S, BETWEEN DECEMBER 18TH THROUGH JANUARY 4TH.
- FOR EASTER, BETWEEN THURSDAY BEFORE EASTER THROUGH TUESDAY AFTER EASTER.
- FOR MEMORIAL DAY, BETWEEN THURSDAY BEFORE MEMORIAL DAY THROUGH TUESDAY AFTER MEMORIAL DAY.
- IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY, BETWEEN THE THURSDAY BEFORE INDEPENDENCE DAY THROUGH THE TUESDAY AFTER INDEPENDENCE DAY.  
  
IF INDEPENDENCE DAY IS ON A TUESDAY, WEDNESDAY OR THURSDAY, BETWEEN THE HOURS OF 12:00 NOON THE FRIDAY BEFORE INDEPENDENCE DAY THROUGH 8:00 A.M. THE MONDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THURSDAY BEFORE LABOR DAY THROUGH TUESDAY AFTER LABOR DAY.
- FOR THANKSGIVING DAY, BETWEEN TUESDAY BEFORE THANKSGIVING THROUGH MONDAY AFTER THANKSGIVING.

#### ROAD NAME

US 74 (HAYWOOD 107, 109, 114, 138, 141 AND JACKSON 085, 096, 100, 104, 109, 110)

#### LEAF SEASON RESTRICTIONS

FROM THE THURSDAY CLOSEST TO OCTOBER 7TH TO THE MONDAY CLOSEST TO NOVEMBER 4TH:

- 6:00 AM TO 7:00 PM MONDAY THROUGH THURSDAY
- 6:00 AM TO 9:00 PM FRIDAY
- 9:00 AM TO 9:00 PM SATURDAY
- 12:00 NOON TO 8:00 PM SUNDAY

#### SUMMER RESTRICTIONS

FROM THE THURSDAY PRIOR TO MEMORIAL DAY WEEKEND TO THE TUESDAY FOLLOWING LABOR DAY WEEKEND:

- 6:00 AM TO 7:00 PM MONDAY THROUGH THURSDAY
- 6:00 AM TO 9:00 PM FRIDAY
- 9:00 AM TO 9:00 PM SATURDAY
- 12:00 NOON TO 8:00 PM SUNDAY

#### CHRISTMAS RETAIL SEASON RESTRICTIONS

BETWEEN 6:00 AM ON THE FRIDAY PRIOR TO THANKSGIVING THROUGH 6:00 ON THE THIRD WEEKDAY FOLLOWING NEW'S YEAR DAY, EXCEPT LANE CLOSURES WILL BE ALLOWED FROM 9:00 PM TO 6:00 AM ON MONDAY, TUESDAY, AND WEDNESDAY NIGHT.

### LANE AND SHOULDER CLOSURE REQUIREMENTS

- REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

### TRAFFIC PATTERN ALTERATIONS

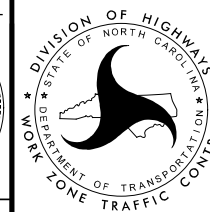
- NOTIFY THE ENGINEER TWENTY-ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

### SIGNING

- INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

SYSTEM TIME: 03/15/2018 10:00:00 AM  
 USER: TKG  
 PROJECT: 14BPR.3.1  
 SHEET: TMP-3

APPROVED: \_\_\_\_\_ DocuSigned by: \_\_\_\_\_  
 DATE: 3/15/2018  
 27268C2E166A4188  
 SEAL  
 012975  
 ENGINEER  
 THOMAS K. GOODWIN



## GENERAL NOTES CONT'D

### TRAFFIC BARRIER

K) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION, PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE / RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC, REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

L) PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO 1101.05)

| POSTED SPEED LIMIT | MINIMUM OFFSET |
|--------------------|----------------|
| 40 OR LESS         | 15 FT          |
| 45 - 50            | 20 FT          |
| 55                 | 25 FT          |
| 60 MPH or HIGHER   | 30 FT          |

### TRAFFIC CONTROL DEVICES

M) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

N) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

### PAVEMENT MARKINGS AND MARKERS

O) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

P) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

### MISCELLANEOUS

Q) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

## PHASING

### BRIDGE JOINT REPLACEMENT

THE PHASING BELOW APPLIES TO ALL BRIDGES INCLUDED IN THE CONTRACT EXCEPT THOSE WITH OVERLAYS DESCRIBED BELOW.

BRIDGES MAY BE WORKED ON SEPARATELY OR CONCURRENTLY.

USING ROADWAY STANDARD DRAWING NUMBER 1101.02, CLOSE A LANE OF TRAVEL AS REQUIRED TO REPLACE THE APPROPRIATE JOINT AS LISTED BELOW:

TWO-LANE / TWO-WAY – STANDARD 1101.02 SHEET 1 OF 14  
 CHEROKEE COUNTY – BRIDGE #S 050, 078, 112, 269, 271  
 GRAHAM COUNTY – BRIDGE #S 130, 142  
 HAYWOOD COUNTY – BRIDGE #S 023, 036, 111, 112, 204, 211, 251, 272, 374  
 HENDERSON COUNTY – BRIDGE #S 006, 021, 034, 061, 145, 373  
 JACKSON COUNTY – BRIDGE #S 029, 193, 211  
 MACON COUNTY – BRIDGE #S 016, 054  
 POLK COUNTY – BRIDGE #S 002, 047, 074, 105  
 SWAIN COUNTY – BRIDGE #S 074, 106  
 TRANSYLVANIA COUNTY – BRIDGE #S 053, 069

TWO-LANE / ONE-WAY – STANDARD 1101.02 SHEETS 3 AND 4 OF 14  
 CHEROKEE COUNTY – BRIDGE #S 087, 088, 089, 090, 091, 093  
 HAYWOOD COUNTY – BRIDGE #S 107, 109, 110, 114, 445  
 HENDERSON COUNTY – BRIDGE #S 127, 379  
 JACKSON COUNTY – BRIDGE # 106  
 MACON COUNTY – BRIDGE #S 093, 094  
 SWAIN COUNTY – BRIDGE # 009

TWO-LANE / ONE-WAY – SEE SHEETS TMP-18 AND TMP-19  
 SWAIN COUNTY – BRIDGE #186

THREE-LANE / ONE WAY – STANDARD 1101.02 SHEET 8 OF 14  
 HAYWOOD COUNTY – BRIDGE #S 138, 141  
 HENDERSON COUNTY – BRIDGE # 181

THREE-LANE / TWO-WAY – STANDARD 1101.02 SHEET 2 OF 14  
 CHEROKEE COUNTY – BRIDGE # 071  
 HAYWOOD COUNTY – BRIDGE #069  
 JACKSON COUNTY – BRIDGE #052

FIVE-LANE / TWO-WAY – STANDARD 1101.02 SHEETS 2 AND 3 OF 14  
 CHEROKEE COUNTY – BRIDGE # 055  
 CLAY COUNTY – BRIDGE #006  
 HAYWOOD COUNTY – BRIDGE #094  
 HENDERSON COUNTY – BRIDGE #S 146, 169  
 SWAIN COUNTY – BRIDGE #024

BRIDGES: HAYWOOD COUNTY #114 AND SWAIN COUNTY #9 & #186

INTERMEDIATE CONTRACT TIME:  
 WORK ON BRIDGES HAYWOOD #144, SWAIN #9 and SWAIN #186 SHALL NOT BEGIN UNTIL JUNE 11 AND MUST BE COMPLETED BY AUGUST 10 OF EACH CALENDAR YEAR. COMPLETE THE REQUIREMENTS FOR SWAIN #186 WITHIN THE CONSECUTIVE CALENDAR DAY PERIOD LISTED BELOW.

SWAIN COUNTY #186                      36 CALENDAR DAYS

### SWAIN COUNTY #186

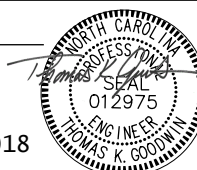
STEP 1  
 USING ROADWAY STANDARD DRAWING NUMBER 1101.01, PLACE WORK ZONE ADVANCE WARNING SIGNS.

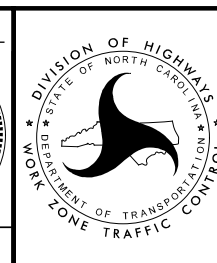
STEP 2  
 USING ROADWAY STANDARD DRAWING NUMBER 1101.02, CLOSE THE RIGHT LANE AND INSTALL THE PORTABLE CONCRETE BARRIER (PCB) FOR JOINT 1. SEE SHEET TMP-18.

STEP 3  
 PERFORM RIGHT SIDE BRIDGE JOINT 1 REMOVAL AND CONCRETE REPAIR.

\$\$\$ SYSTEM TIME \$\$\$  
 \$\$\$ DRAWN BY: JLD/SGM \$\$\$  
 \$\$\$ CHECKED BY: JLD/SGM \$\$\$  
 \$\$\$ DATE: 01/29/18 \$\$\$  
 \$\$\$ PROJECT: 14BPR.3.1 \$\$\$  
 \$\$\$ SHEET: TMP-4 \$\$\$  
 \$\$\$ TOTAL SHEETS: 4 \$\$\$

PLANS PREPARED BY:  
  
 2610 Wycliff Road  
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 (919) 420-7660  
 Excellence Delivered As Promised NC Lic. No. F-0270

APPROVED: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 SEAL  
 4/16/2018  
  
 DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED



GENERAL NOTES, CONT'D  
 &  
 TRAFFIC CONTROL PHASING

## PHASING CONT'D

STEP 4  
USING ROADWAY STANDARD DRAWING NUMBER 1101.02, SHIFT THE PCB FOR JOINT 2. SEE SHEET TMP-18.

STEP 5  
PERFORM RIGHT SIDE BRIDGE JOINT 2 REMOVAL AND CONCRETE REPAIR.

STEP 6  
USING ROADWAY STANDARD DRAWING NUMBER 1101.02, SHIFT ONE-LANE, ONE-WAY TRAFFIC TO THE RIGHT LANE AND SHIFT THE PCB FOR JOINT 1. SEE SHEET TMP-19.

STEP 7  
PERFORM LEFT SIDE BRIDGE JOINT 1 REMOVAL AND CONCRETE REPAIR.

STEP 8  
USING ROADWAY STANDARD DRAWING NUMBER 1101.02, SHIFT THE PCB FOR JOINT 2. SEE SHEET TMP-19.

STEP 9  
PERFORM LEFT SIDE BRIDGE JOINT 2 REMOVAL AND CONCRETE REPAIR.

STEP 10  
USING ROADWAY STANDARD DRAWING NUMBER 1101.02, REMOVE THE PCB AND OPEN THE LEFT LANE TO TRAFFIC.

STEP 11  
USING ROADWAY STANDARD DRAWING NUMBER 1101.02 SHEET 3 OF 14, CLOSE A LANE OF TRAVEL AS REQUIRED TO INSTALL ELASTOMERIC CONCRETE AND JOINT SEALS.

### BRIDGE DECK OVERLAY

BRIDGES: JACKSON COUNTY #85, #96, #100, #104, #109, #110

STEP 1  
USING ROADWAY STANDARD DRAWING NUMBER 1101.01, PLACE WORK ZONE ADVANCE WARNING SIGNS.

INTERMEDIATE CONTRACT TIME:  
COMPLETE THE REQUIREMENTS OF STEPS 2-6 WITHIN THE CONSECUTIVE CALENDAR DAY PERIOD LISTED BELOW. THIS WORK SHALL NOT BE SUBJECT TO THE LANE CLOSURE TIME RESTRICTIONS STATED IN NOTES A AND B ON SHEET TMP-2.

|                     |                  |
|---------------------|------------------|
| JACKSON COUNTY #85  | 33 CALENDAR DAYS |
| JACKSON COUNTY #96  | 33 CALENDAR DAYS |
| JACKSON COUNTY #100 | 33 CALENDAR DAYS |
| JACKSON COUNTY #104 | 33 CALENDAR DAYS |
| JACKSON COUNTY #109 | 39 CALENDAR DAYS |
| JACKSON COUNTY #110 | 39 CALENDAR DAYS |

STEP 2  
USING ROADWAY STANDARD DRAWING NUMBER 1101.02, CLOSE THE RIGHT LANE AND INSTALL THE PORTABLE CONCRETE BARRIER (PCB). SEE SHEET TMP-18.

STEP 3  
PERFORM RIGHT SIDE BRIDGE DECK OVERLAY AND ASSOCIATED MILLING AND PAVING.

USING ROADWAY STANDARD DRAWING NUMBER 1205.02, INSTALL PAVEMENT MARKINGS FOR THE RIGHT LANE.

STEP 4  
USING ROADWAY STANDARD DRAWING NUMBER 1101.02, SHIFT ONE-LANE, ONE-WAY TRAFFIC TO THE RIGHT LANE AND SHIFT THE PCB. SEE SHEET TMP-19.

STEP 5  
PERFORM LEFT SIDE BRIDGE DECK OVERLAY AND ASSOCIATED MILLING AND PAVING.

USING ROADWAY STANDARD DRAWING NUMBER 1205.02, INSTALL PAVEMENT MARKINGS FOR THE LEFT LANE.

STEP 6  
USING ROADWAY STANDARD DRAWING NUMBER 1101.02, REMOVE THE PCB AND OPEN THE LEFT LANE TO TRAFFIC.

BRIDGE: JACKSON COUNTY # 5

STEP 1  
USING ROADWAY STANDARD DRAWING NUMBER 1101.01, PLACE WORK ZONE ADVANCE WARNING SIGNS.

INTERMEDIATE CONTRACT TIME:  
COMPLETE THE REQUIREMENTS OF STEPS 2-8 WITHIN A CONSECUTIVE THIRTY FOUR (34) CALENDAR DAY PERIOD. THIS WORK SHALL NOT BE SUBJECT TO THE LANE CLOSURE TIME RESTRICTIONS STATED IN NOTES A AND B ON SHEET TMP-2.

WORK MAY NOT BEGIN UNTIL THE END OF THE JACKSON COUNTY SCHOOL YEAR AND MUST BE COMPLETED BY THE BEGINNING OF THE NEXT JACKSON COUNTY SCHOOL YEAR.

STEP 2  
PLACE CHANGEABLE MESSAGE SIGNS (CMS) ON US 74 EASTBOUND AT EXIT 69, 1/2 MILE WEST OF EXIT 69, AND 1 MILE WEST OF EXIT 69.

MESSAGE 1: "EXIT 74 CLOSED AHEAD"  
MESSAGE 2: "USE EXIT 69 SR 1190"

PLACE A CMS ON US 74 EASTBOUND AT EXIT 74 AND USING DRUMS CLOSE EASTBOUND EXIT 74.

MESSAGE 1: "EXIT 74 CLOSED"

STEP 3  
USING ROADWAY STANDARD DRAWING NUMBER 1101.02, SHIFT THE SOUTHBOUND US 441 TRAFFIC TO THE OUTSIDE SHOULDER. REMOVE THE EXISTING CONCRETE ISLAND ON THE BRIDGE PLACE TCB. SEE SHEET TMP-21. REMOVE AN ADDITIONAL 200-FEET OF CONCRETE ISLAND APPROXIMATELY 200-FEET FROM THE END OF THE BRIDGE IN EACH DIRECTION TO ALLOW FOR THE SHIFTING OF TRAFFIC IN STEP 5.

STEP 4  
PERFORM LEFT SIDE (US 441 NORTHBOUND) BRIDGE DECK OVERLAY AND ASSOCIATED MILLING AND PAVING.

STEP 5  
USING ROADWAY STANDARD DRAWING NUMBER 1101.02, SHIFT US 441 SOUTHBOUND TRAFFIC TO THE US 441 NORTHBOUND LANE. SEE SHEET TMP-21.

STEP 6  
PERFORM RIGHT SIDE (US 441 SOUTHBOUND) BRIDGE DECK OVERLAY AND ASSOCIATED MILLING AND PAVING.

STEP 7  
USING ROADWAY STANDARD DRAWING NUMBER 1101.02, SHIFT THE SOUTHBOUND US 441 TRAFFIC TO THE OUTSIDE SOUTHBOUND SHOULDER AND CONSTRUCT THE PROPOSED CONCRETE ISLAND. USING ROADWAY STANDARD DRAWING NUMBER 1205.02, INSTALL PAVEMENT MARKINGS IN THE FINAL TRAFFIC PATTERN FOR NORTHBOUND US 441.

STEP 8  
REMOVE TRAFFIC CONTROL DEVICES AND CMSS AND OPEN EASTBOUND EXIT 74 TO TRAFFIC.

USING ROADWAY STANDARD DRAWING NUMBER 1205.02, INSTALL ALL REMAINING PAVEMENT MARKINGS IN THE FINAL TRAFFIC PATTERN.

BRIDGE: HAYWOOD COUNTY 98

STEP 1  
USING ROADWAY STANDARD DRAWING NUMBER 1101.01, PLACE WORK ZONE ADVANCE WARNING SIGNS.

INTERMEDIATE CONTRACT TIME:  
COMPLETE THE REQUIREMENTS OF STEPS 2-6 WITHIN A CONSECUTIVE FORTY-NINE CALENDAR DAY PERIOD. THIS WORK SHALL NOT BE SUBJECT TO THE LANE CLOSURE TIME RESTRICTIONS STATED IN NOTES A AND B ON SHEET TMP-2.

WORK MAY NOT BEGIN UNTIL THE END OF THE RIVERBEND ELEMENTARY SCHOOL YEAR AND MUST BE COMPLETED BY THE BEGINNING OF THE NEXT RIVERBEND ELEMENTARY SCHOOL YEAR.

STEP 2  
USING ROADWAY STANDARD DRAWING NUMBER 1101.02, SHEET 14 OF 14, SHEET TMP-20, AND USING PORTABLE SIGNALS ON NC 209 AND GOLF COURSE ROAD, CLOSE THE NORTHBOUND LANE OF NC 209, PLACE ONE-LANE, TWO-WAY TRAFFIC IN THE SOUTHBOUND LANE AND INSTALL THE PORTABLE CONCRETE BARRIER (TCB). SEE SHEET TMP-20.

STEP 3  
PERFORM NORTHBOUND SIDE BRIDGE DECK OVERLAY AND ASSOCIATED MILLING AND PAVING.

USING ROADWAY STANDARD DRAWING NUMBER 1205.02, INSTALL PAVEMENT MARKINGS FOR THE NORTHBOUND LANE.

STEP 4  
USING ROADWAY STANDARD DRAWING NUMBER 1101.02, SHEET 14 OF 14, SHEET TMP-20, AND USING PORTABLE SIGNALS ON NC 209 AND GOLF COURSE ROAD, SHIFT THE ONE-LANE, TWO-WAY TRAFFIC TO THE NORTHBOUND LANE AND RELOCATE THE PORTABLE CONCRETE BARRIER (TCB). SEE SHEET TMP-20.

STEP 5  
PERFORM SOUTHBOUND SIDE BRIDGE DECK OVERLAY AND ASSOCIATED MILLING AND PAVING.

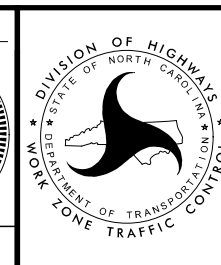
USING ROADWAY STANDARD DRAWING NUMBER 1205.02, INSTALL PAVEMENT MARKINGS FOR THE NORTHBOUND LANE.

STEP 6  
REMOVE TCB, INSTALL ANY REQUIRED FINAL PAVEMENT MARKINGS IN THE FINAL PATTERN AND OPEN NC 209 TO TWO-LANE, TWO-WAY TRAFFIC.

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27268C2E16324D8  
3/27/2018

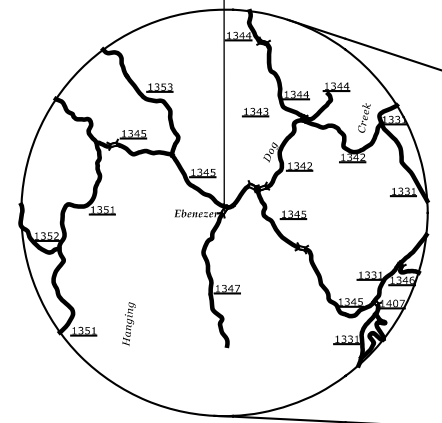
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SEAL  
012975  
ENGINEER  
THOMAS K. GOODWIN

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UNLESS ALL SIGNATURES COMPLETED**

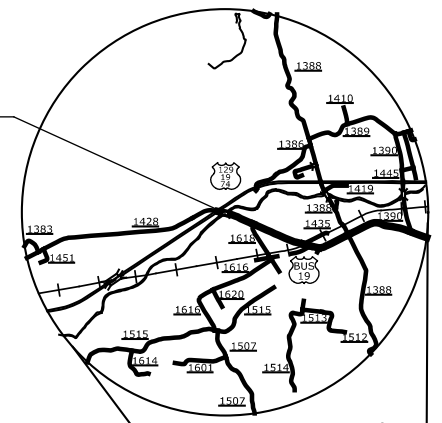


TRAFFIC CONTROL  
PHASING

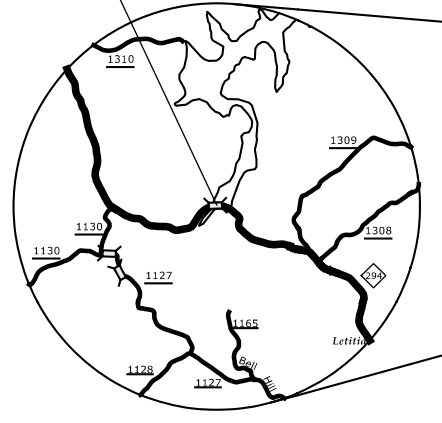
Bridge #112



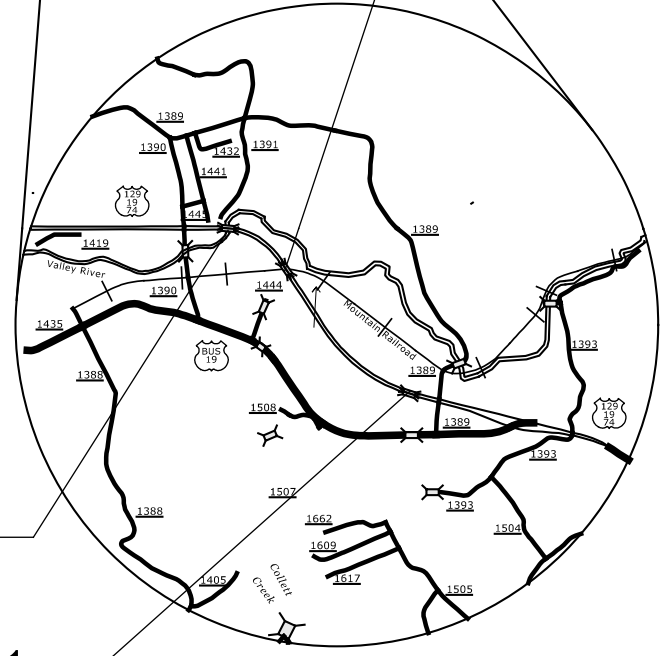
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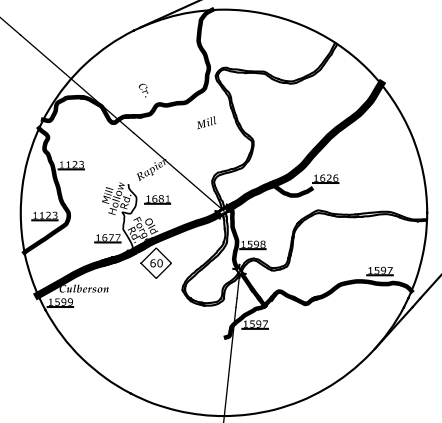
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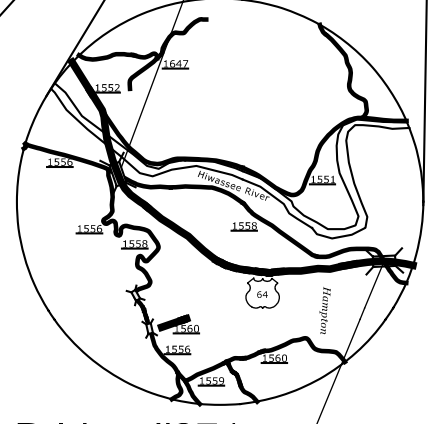
Bridge #089  
Bridge #090



Bridge #055



Bridge #269



Bridge #087  
Bridge #088

Bridge #091  
Bridge #093

Bridge #078

Bridge #271

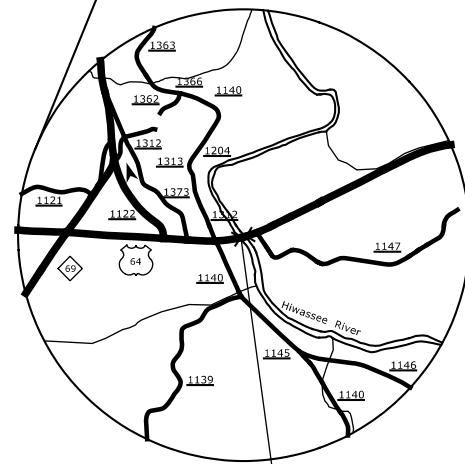
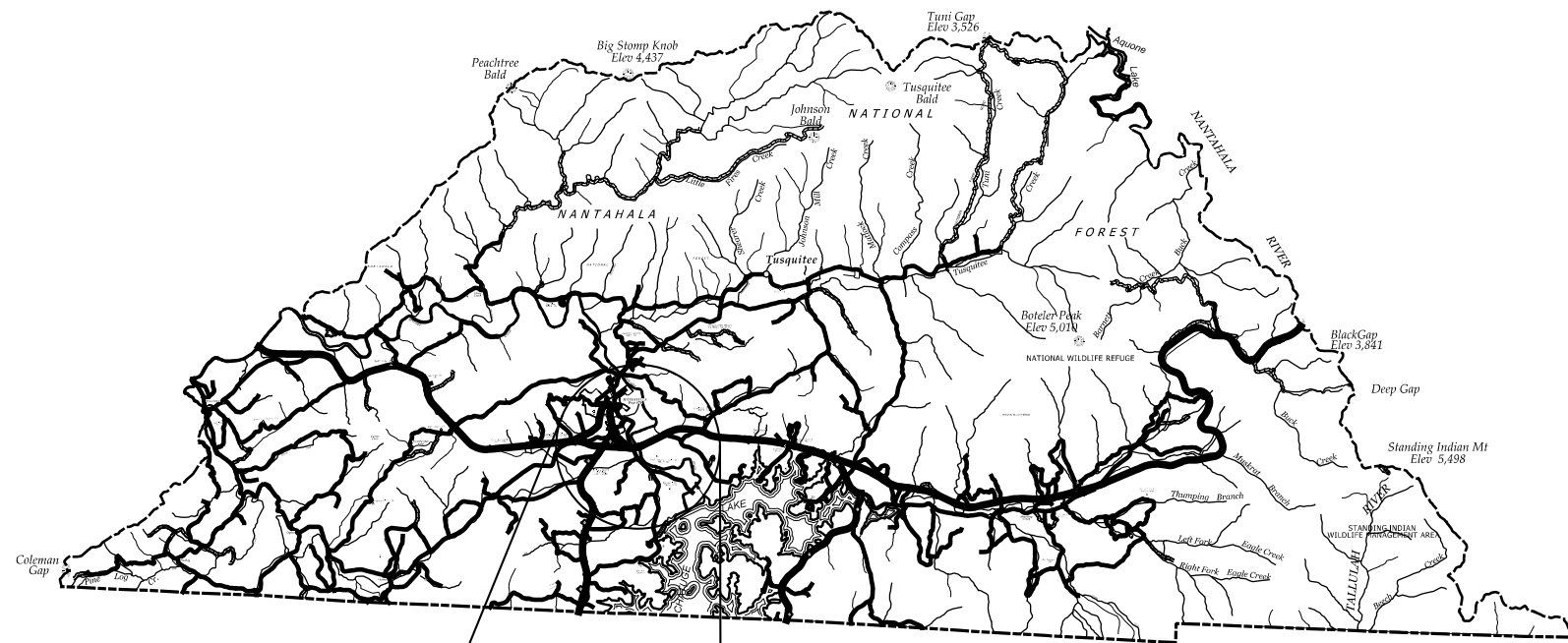
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 DATE: 3/15/2018  
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 SEAL 012975  
 ENGINEER  
 THOMAS K. GOODWIN



CHEROKEE COUNTY  
BRIDGE LOCATIONS

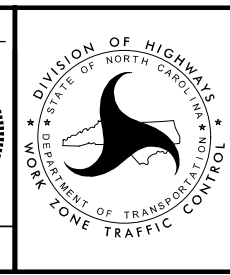
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Bridge #006

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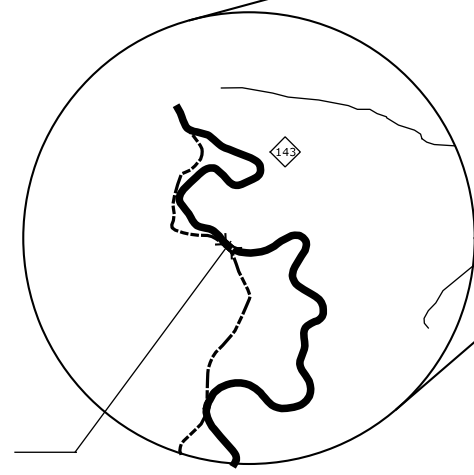
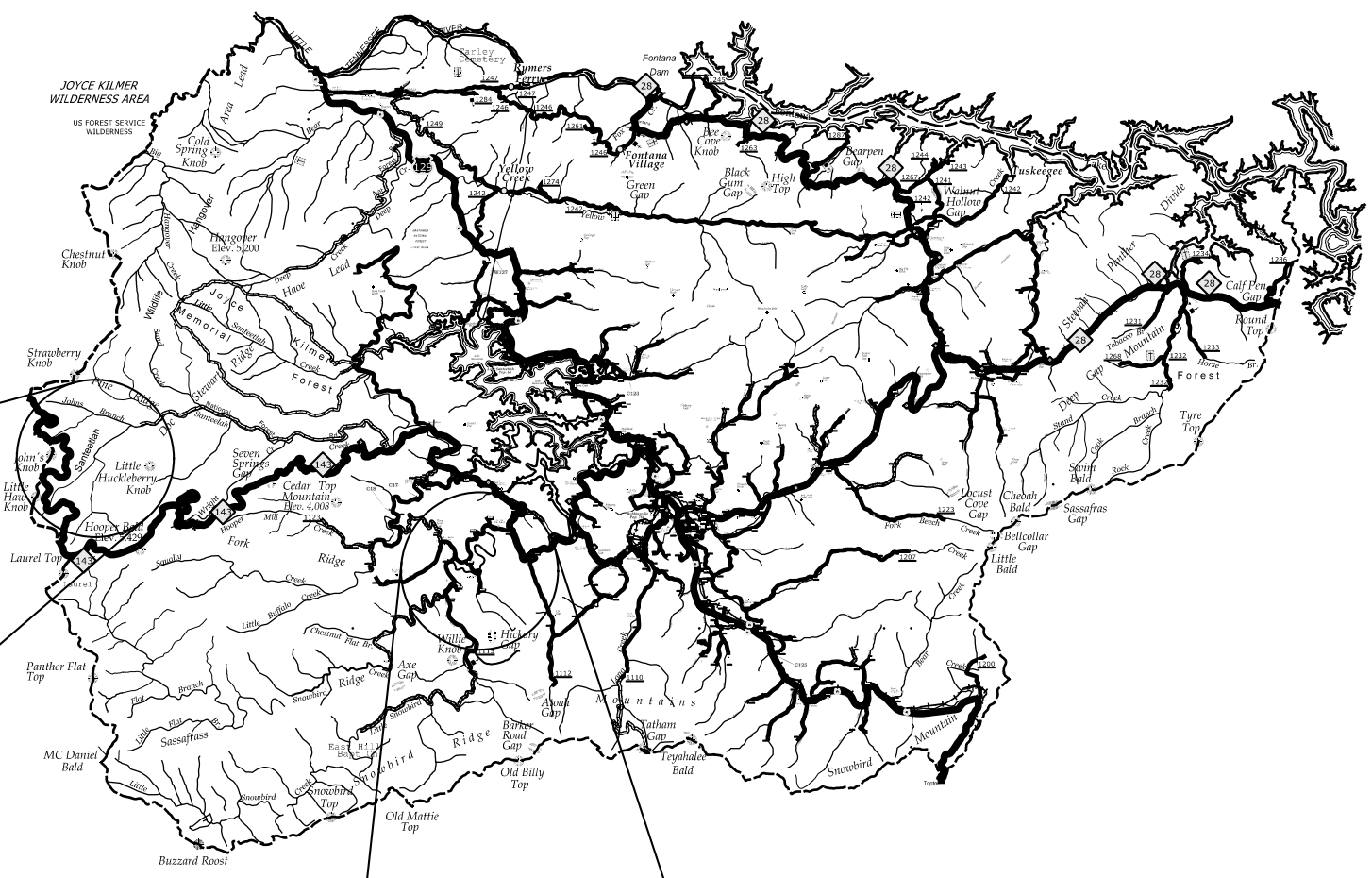
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*Thomas K. Goodwin*  
DATE: 3/15/2018  
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**SEAL**  
012975  
ENGINEER  
THOMAS K. GOODWIN



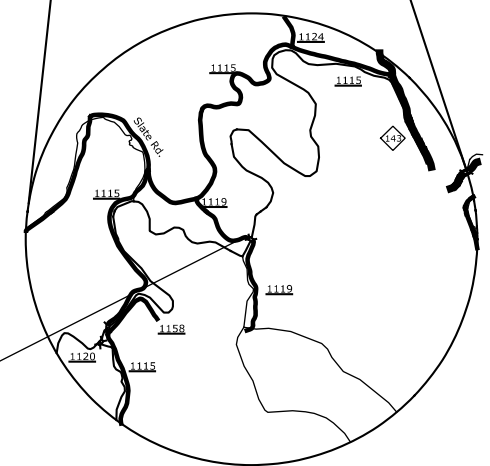
CLAY COUNTY  
BRIDGE LOCATIONS

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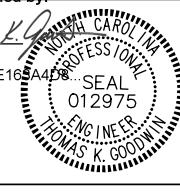
Bridge # 142



Bridge # 130

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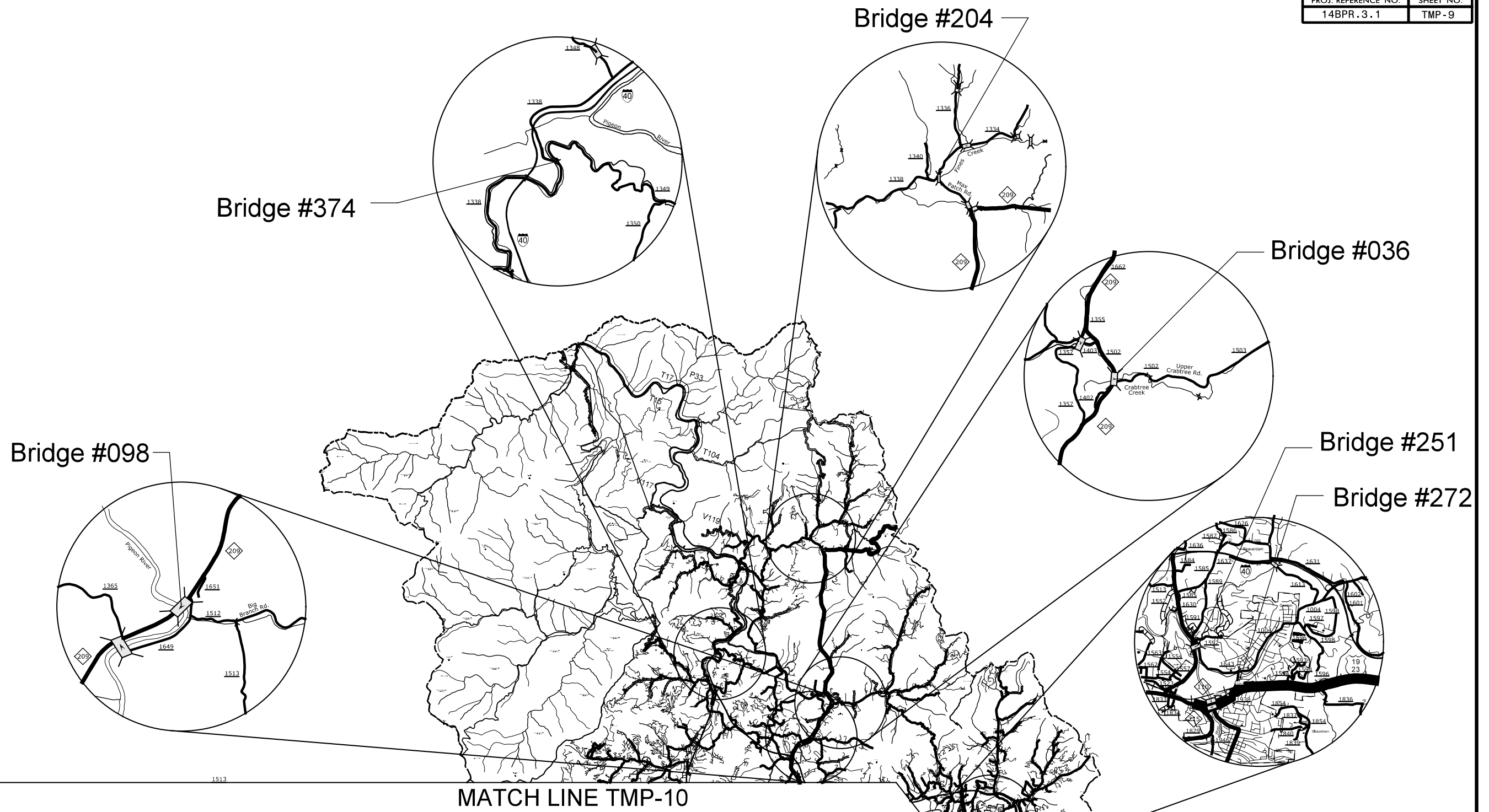
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3/15/2018



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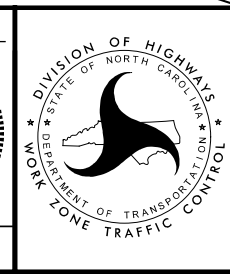
GRAHAM COUNTY  
BRIDGE LOCATIONS



MATCH LINE TMP-10

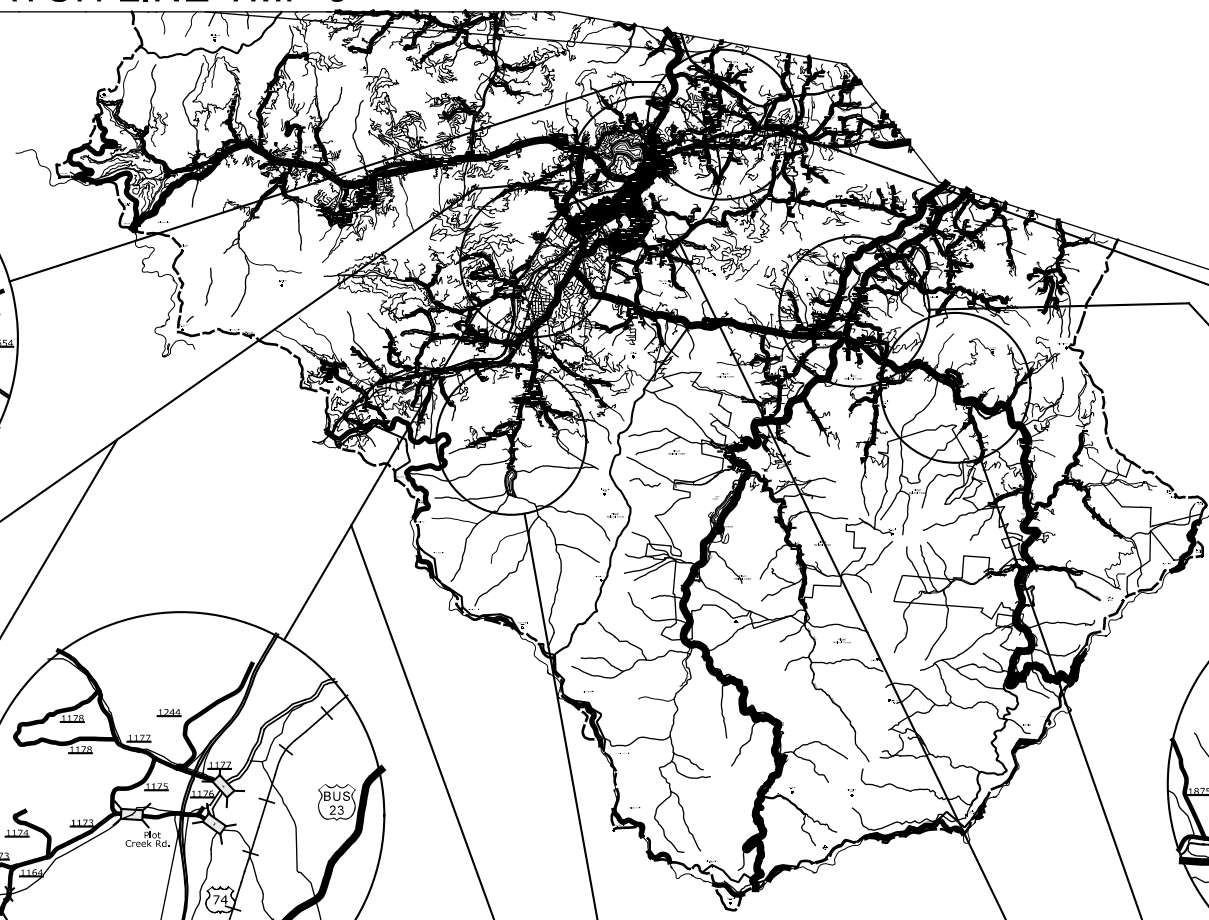
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 DATE: 3/15/2018  
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 SEAL  
 012975  
 ENGINEER  
 THOMAS K. GOODWIN

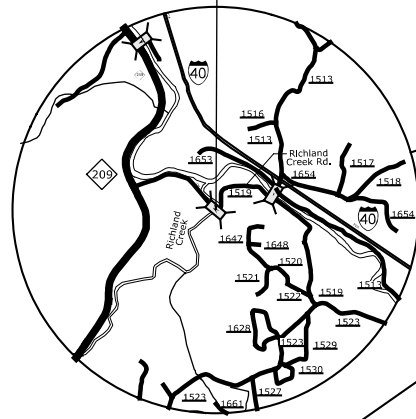


NORTHERN HAYWOOD COUNTY  
 BRIDGE LOCATIONS

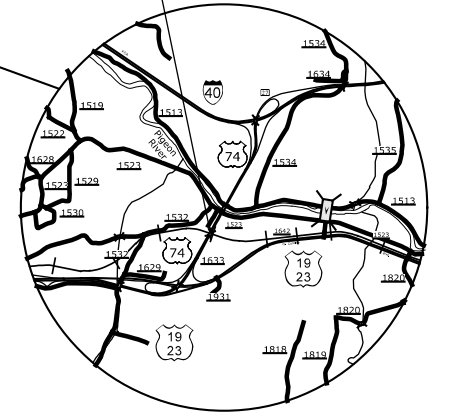
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 UNLESS ALL SIGNATURES COMPLETED



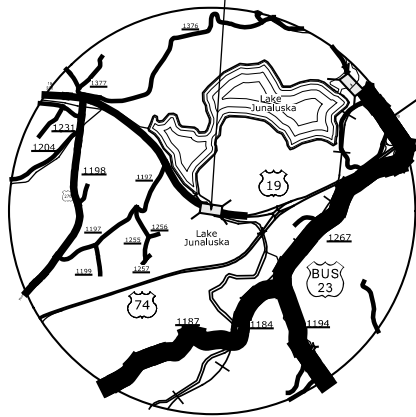
Bridge #211



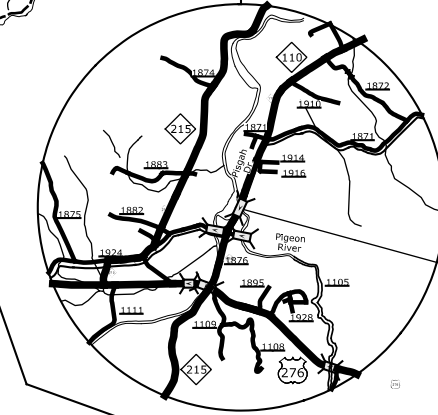
Bridge #114



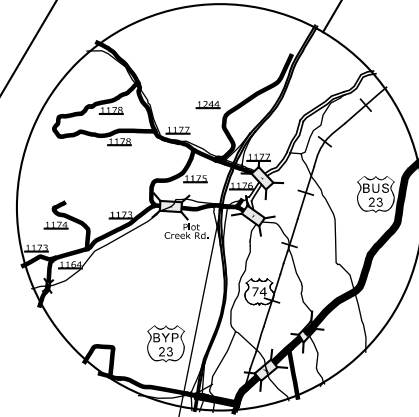
Bridge #094



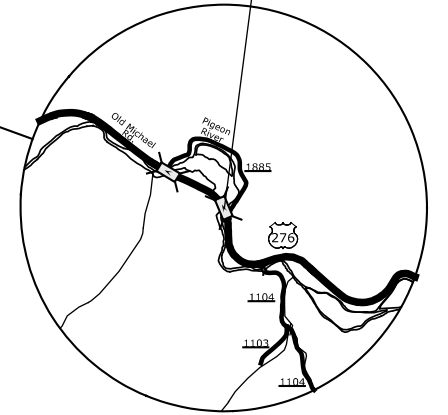
Bridge #023



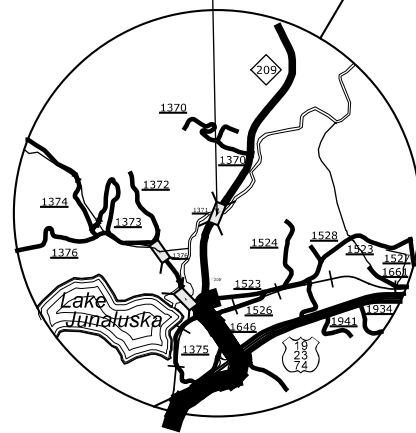
Bridge #109



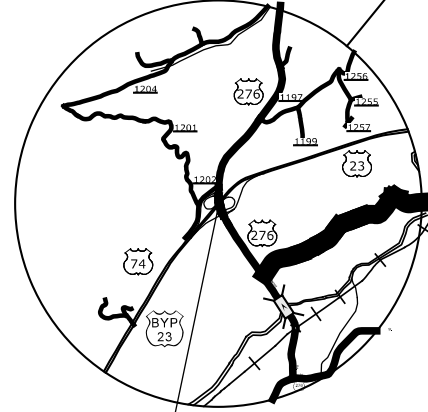
Bridge #111



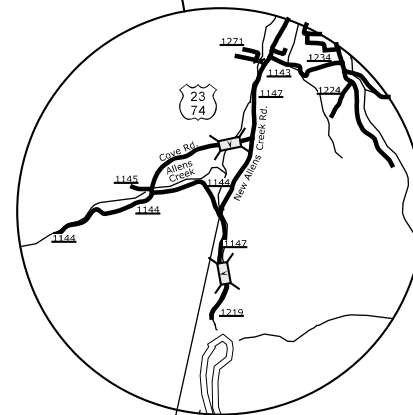
Bridge #069



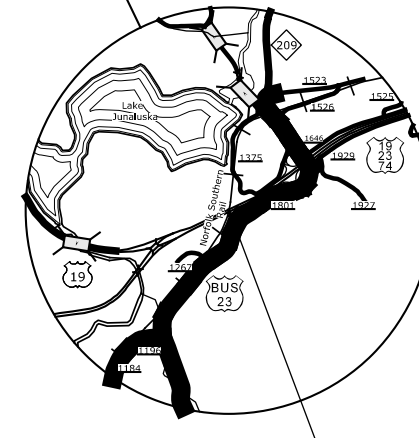
Bridge #138  
Bridge #141



Bridge #112

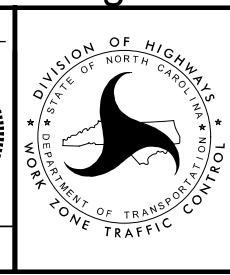


Bridge #107  
Bridge #110

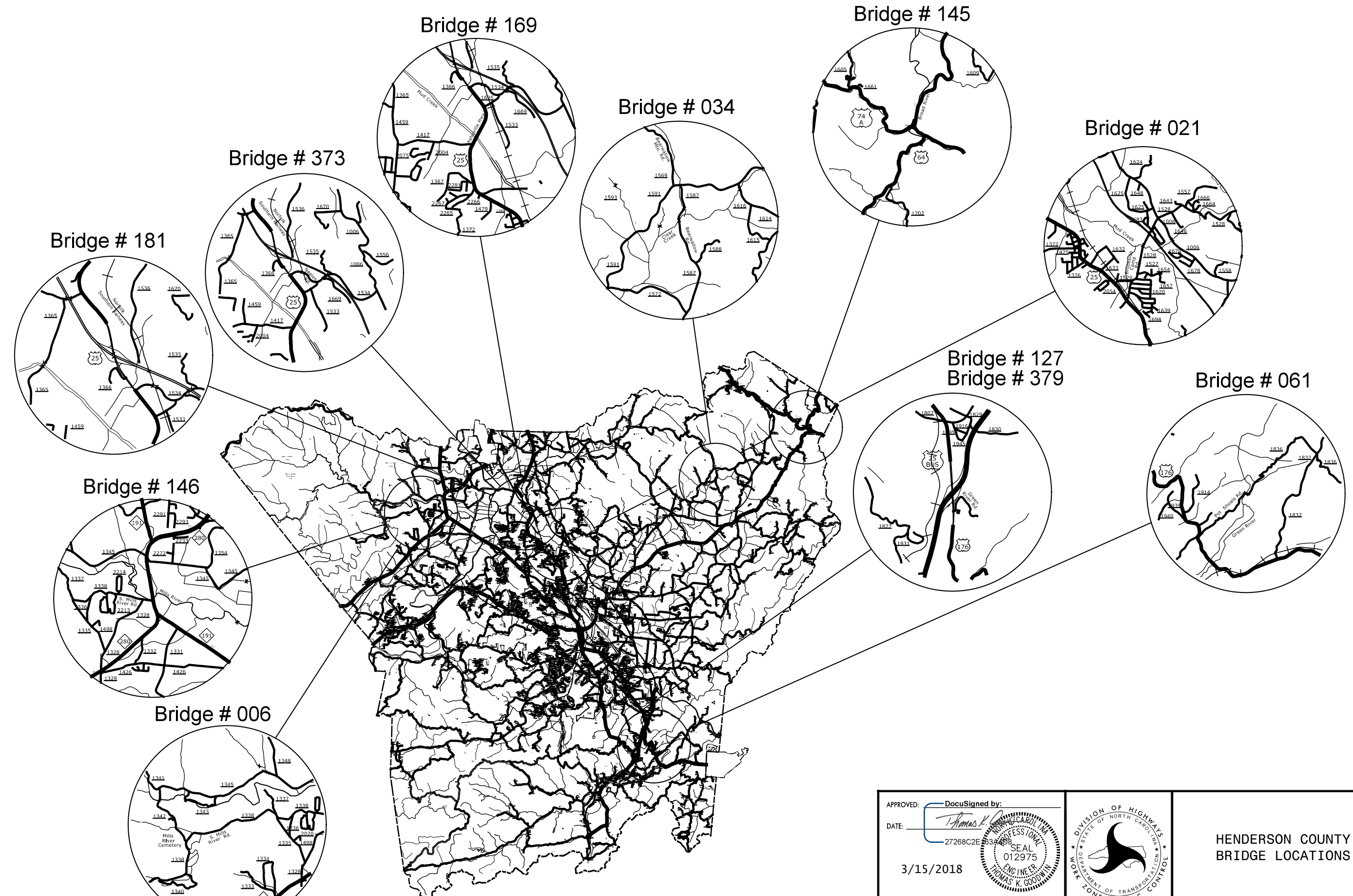


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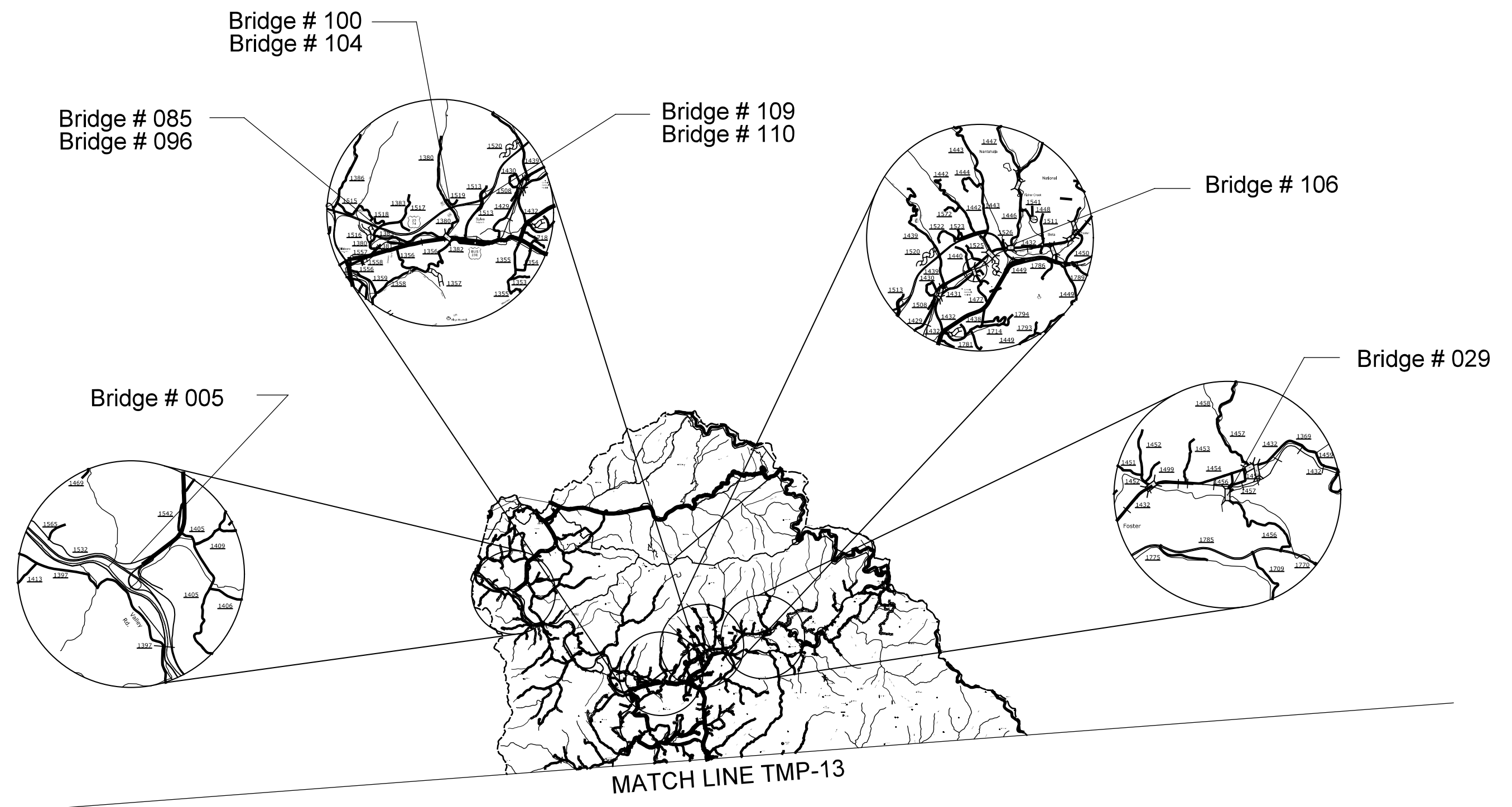


DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
WORK ZONE TRAFFIC CONTROL  
SOUTHERN HAYWOOD COUNTY  
BRIDGE LOCATIONS



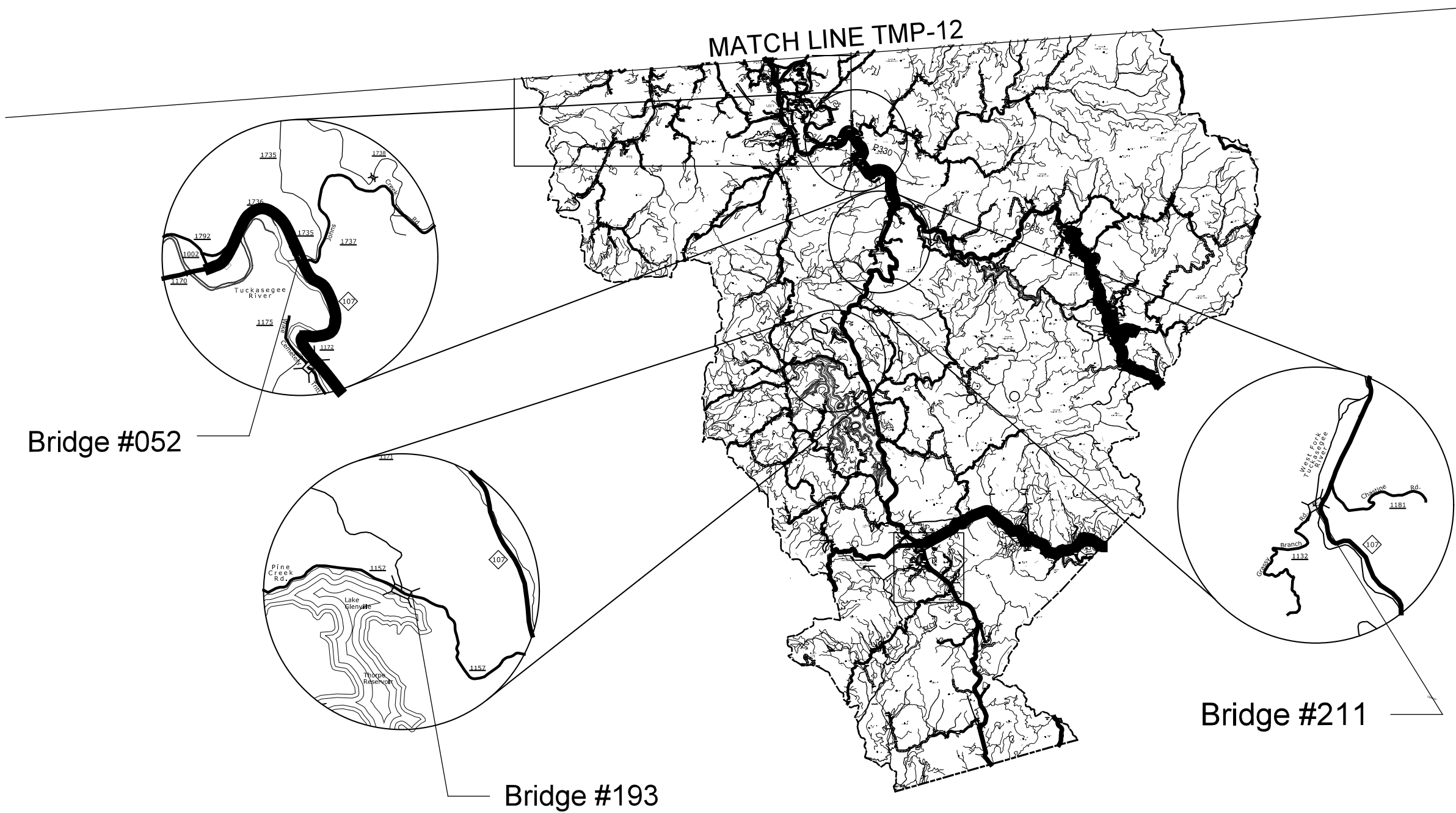
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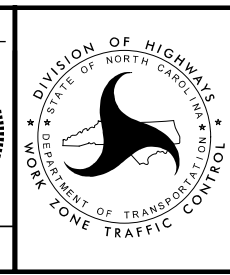
Bridge #052

Bridge #193

Bridge #211

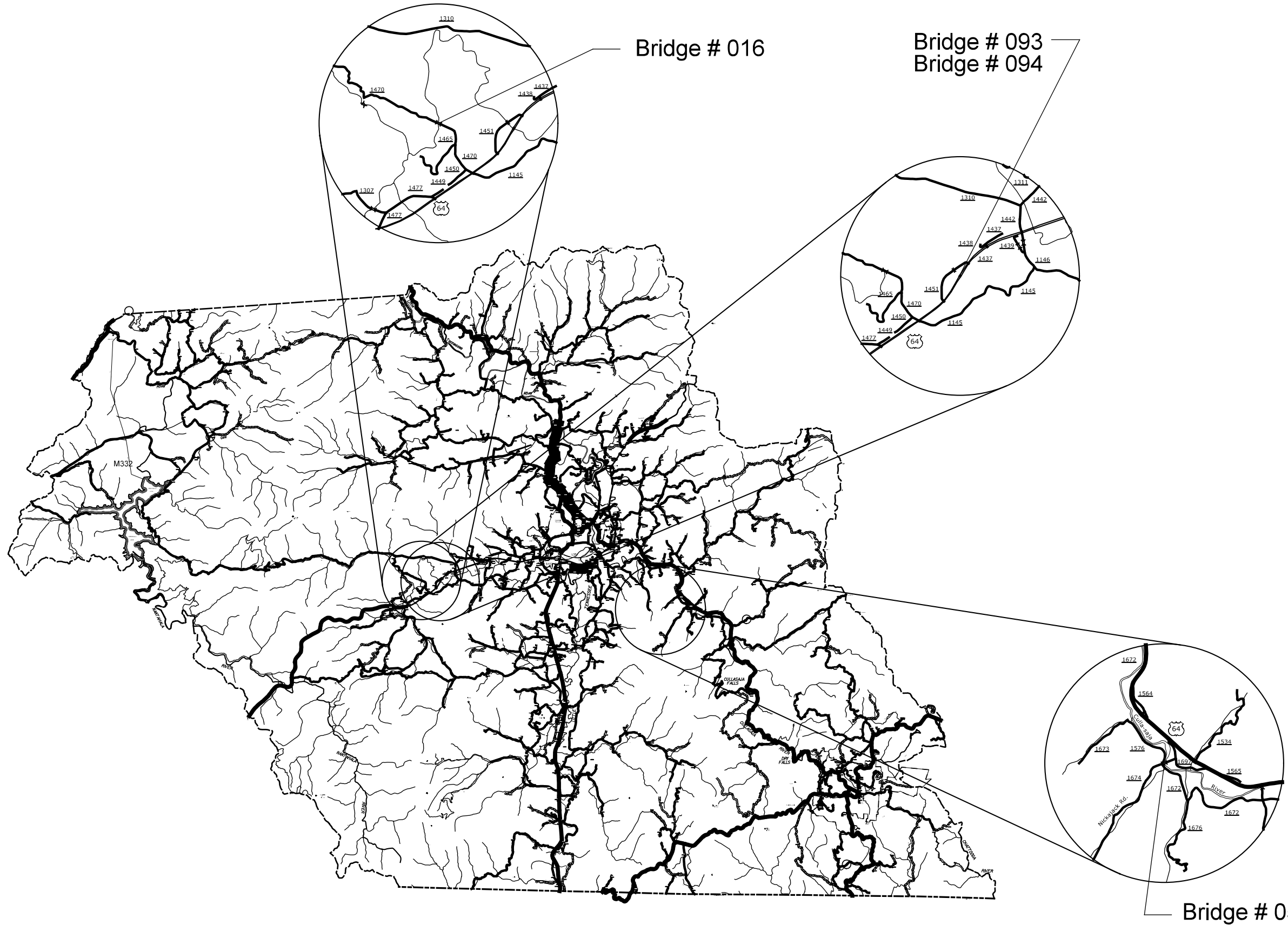
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 DATE: 3/15/2018  
 27268C2E1634AD  
 PROFESSIONAL SEAL  
 ENGINEER  
 THOMAS K. GOODWIN



SOUTHERN JACKSON COUNTY  
 BRIDGE LOCATIONS

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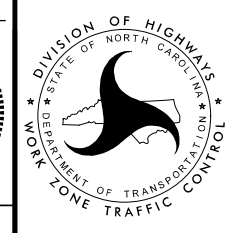
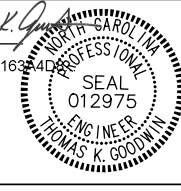
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Bridge # 093  
Bridge # 094

Bridge # 054

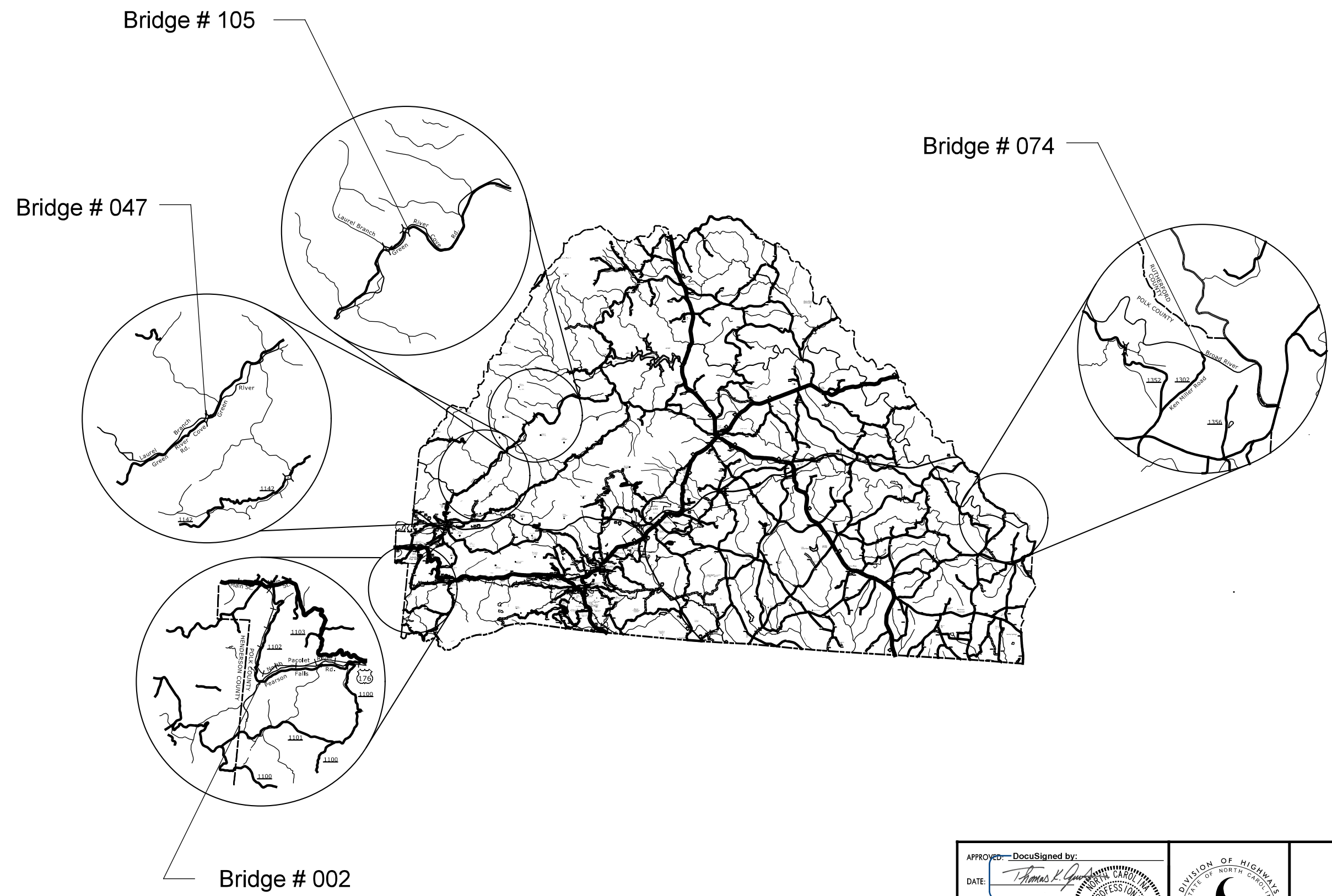
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3/15/2018



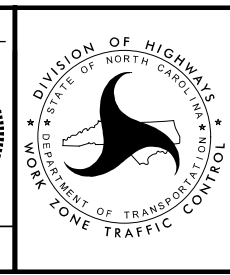
MACON COUNTY  
BRIDGE LOCATIONS

DOCUMENT NOT CONSIDERED FINAL  
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 3/15/2018



DIVISION OF HIGHWAYS  
 STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 WORK ZONE TRAFFIC CONTROL

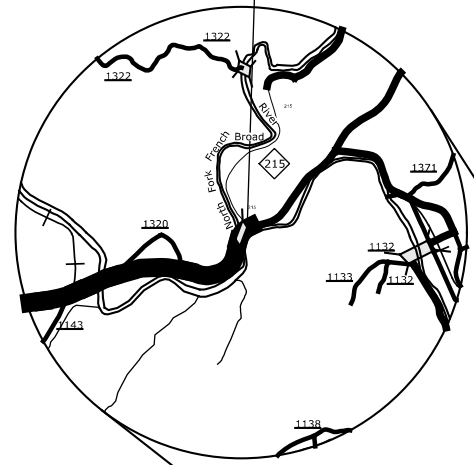
POLK COUNTY  
 BRIDGE LOCATIONS

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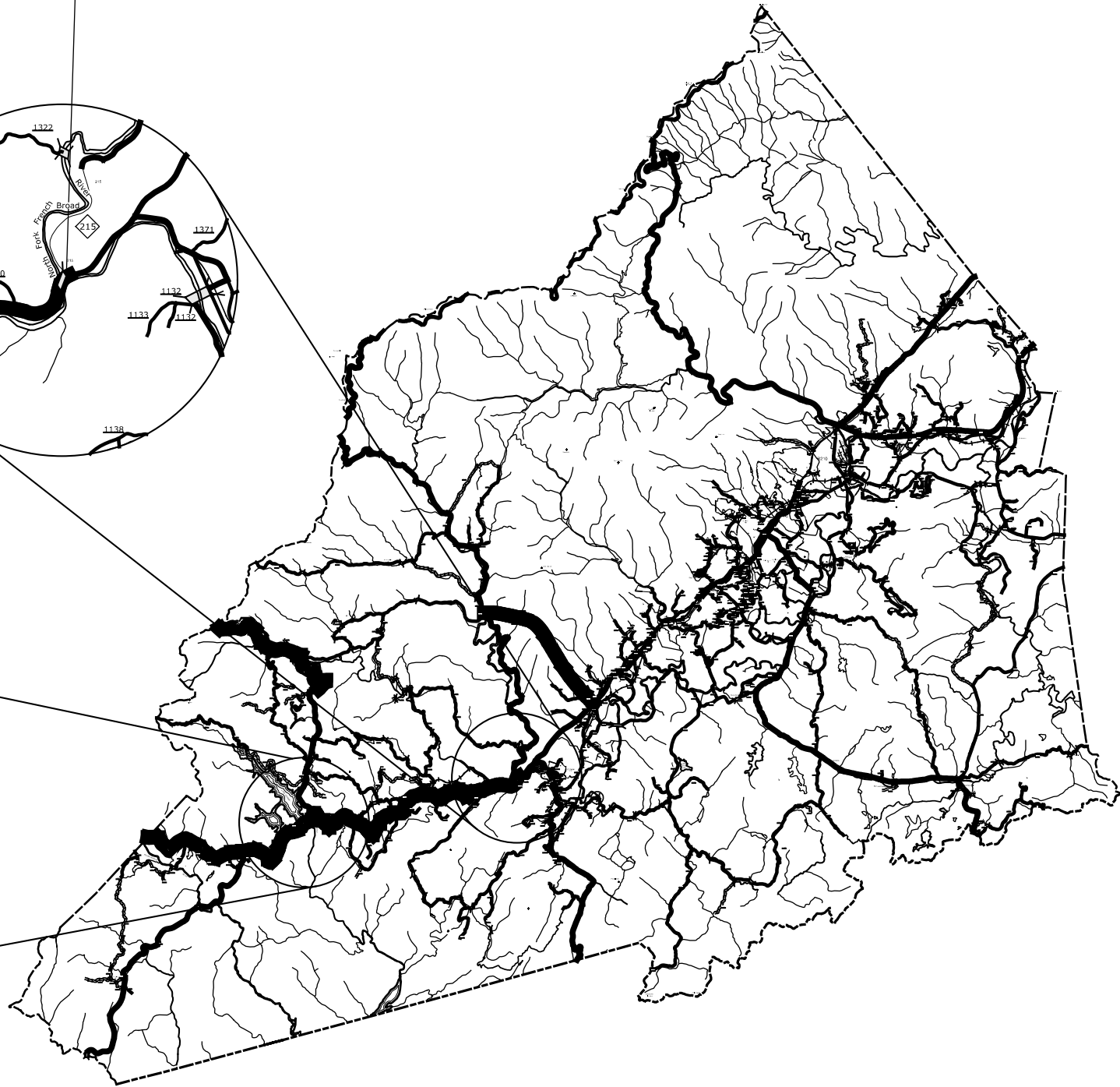
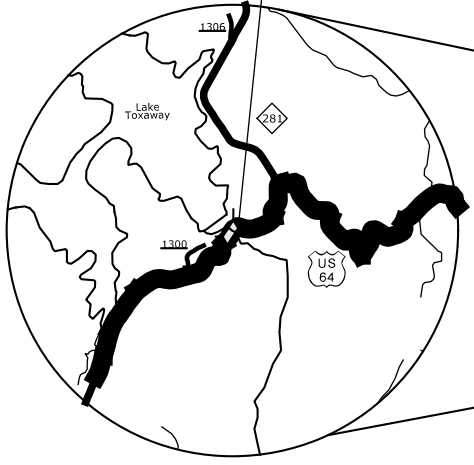




Bridge #069



Bridge # 053

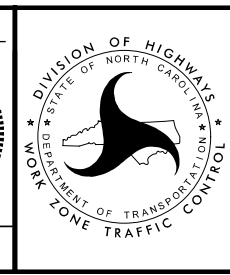


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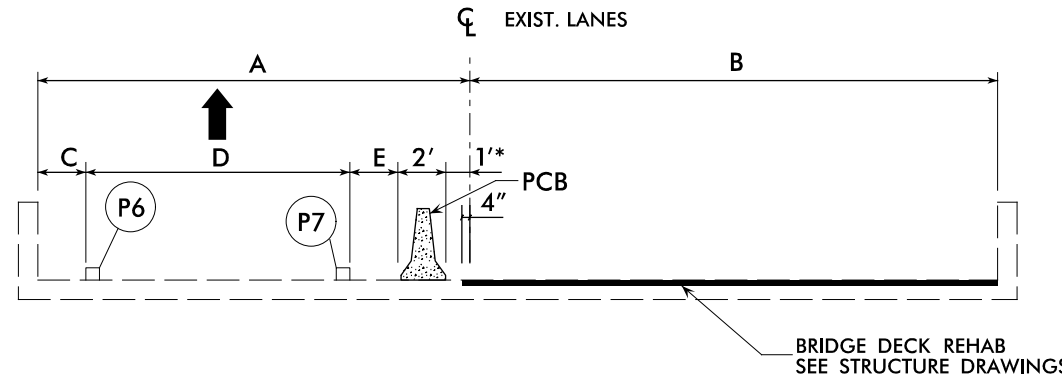
3/15/2018

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DIVISION OF HIGHWAYS  
 STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 WORK ZONE TRAFFIC CONTROL

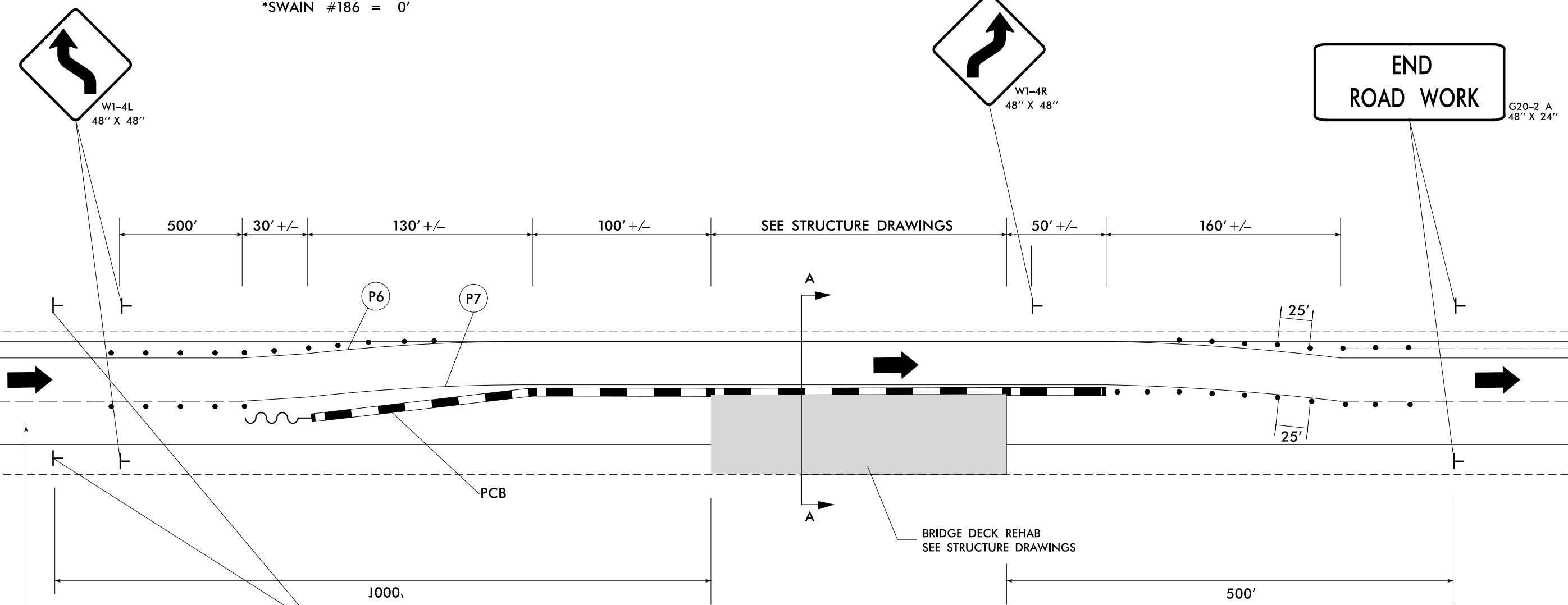
TRANSYLVANIA COUNTY  
 BRIDGE LOCATIONS



| COUNTY  | BRIDGE # | A   | B   | C  | D   | E  |
|---------|----------|-----|-----|----|-----|----|
| SWAIN   | 186      | 16' | 18' | 2' | 10' | 2' |
| JACKSON | 085      | 20' | 20' | 2' | 12' | 3' |
| JACKSON | 096      | 20' | 20' | 2' | 12' | 3' |
| JACKSON | 100      | 20' | 20' | 2' | 12' | 3' |
| JACKSON | 104      | 20' | 20' | 2' | 12' | 3' |
| JACKSON | 109      | 20' | 20' | 2' | 12' | 3' |
| JACKSON | 110      | 24' | 24' | 3' | 12' | 3' |

| TEMPORARY PAVEMENT MARKING LEGEND |                            |
|-----------------------------------|----------------------------|
| (P6)                              | 6" PAINT - WHITE EDGELINE  |
| (P7)                              | 6" PAINT - YELLOW EDGELINE |

SECTION A - A  
\*SWAIN #186 = 0'



FOR LANE CLOSURE PRIOR TO  
WORK ZONE, SEE RDY STD. 1101.02  
SHEET 3 OF 14,

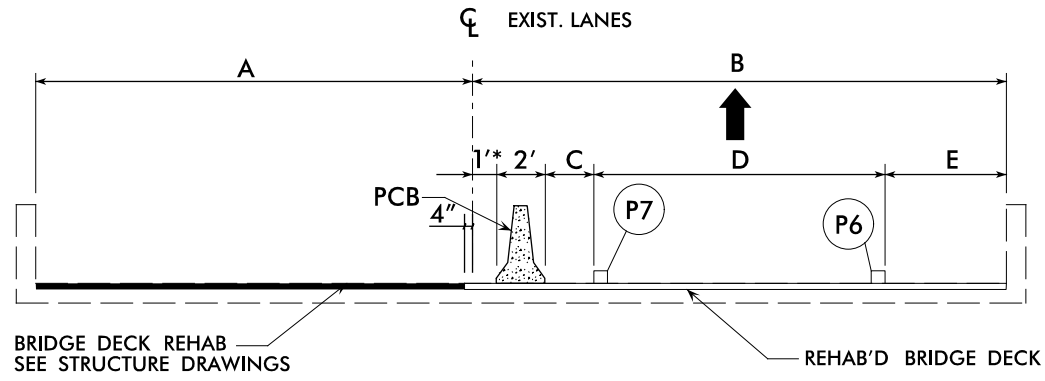
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27268C2E163A4D8  
3/27/2018



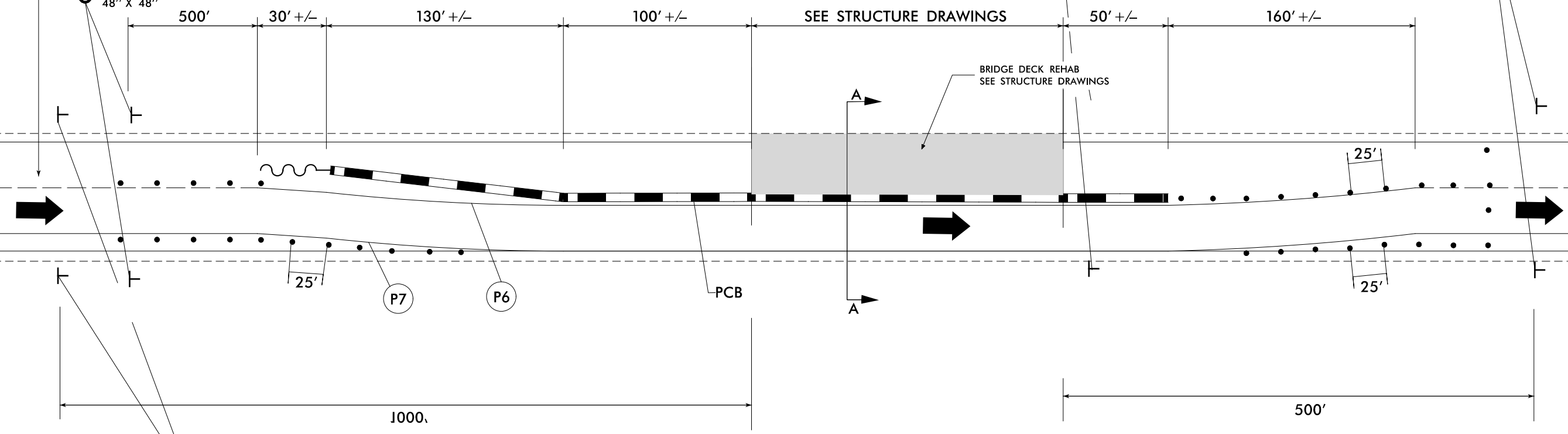
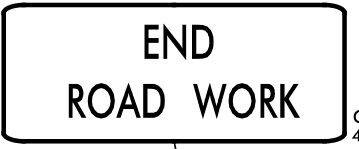
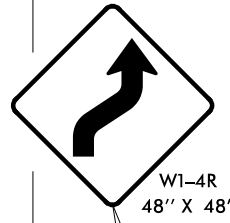
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

| COUNTY  | BRIDGE # | A   | B   | C  | D   | E  |
|---------|----------|-----|-----|----|-----|----|
| SWAIN   | 186      | 16' | 18' | 2' | 10' | 2' |
| JACKSON | 085      | 20' | 20' | 2' | 12' | 6' |
| JACKSON | 096      | 20' | 20' | 2' | 12' | 6' |
| JACKSON | 100      | 20' | 20' | 2' | 12' | 6' |
| JACKSON | 104      | 20' | 20' | 2' | 12' | 6' |
| JACKSON | 109      | 20' | 20' | 2' | 12' | 6' |
| JACKSON | 110      | 24' | 24' | 3' | 12' | 6' |



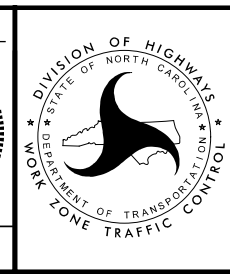
| TEMPORARY PAVEMENT MARKING LEGEND |                            |
|-----------------------------------|----------------------------|
| (P6)                              | 6" PAINT - WHITE EDGELINE  |
| (P7)                              | 6" PAINT - YELLOW EDGELINE |

FOR LANE CLOSURE PRIOR TO WORK ZONE, SEE RDY STD. 1101.02 SHEET 3 OF 14,



\$\$\$\$\$ SYSTEM TIME\$\$\$\$\$  
\$\$\$\$\$ USER NAME\$\$\$\$\$

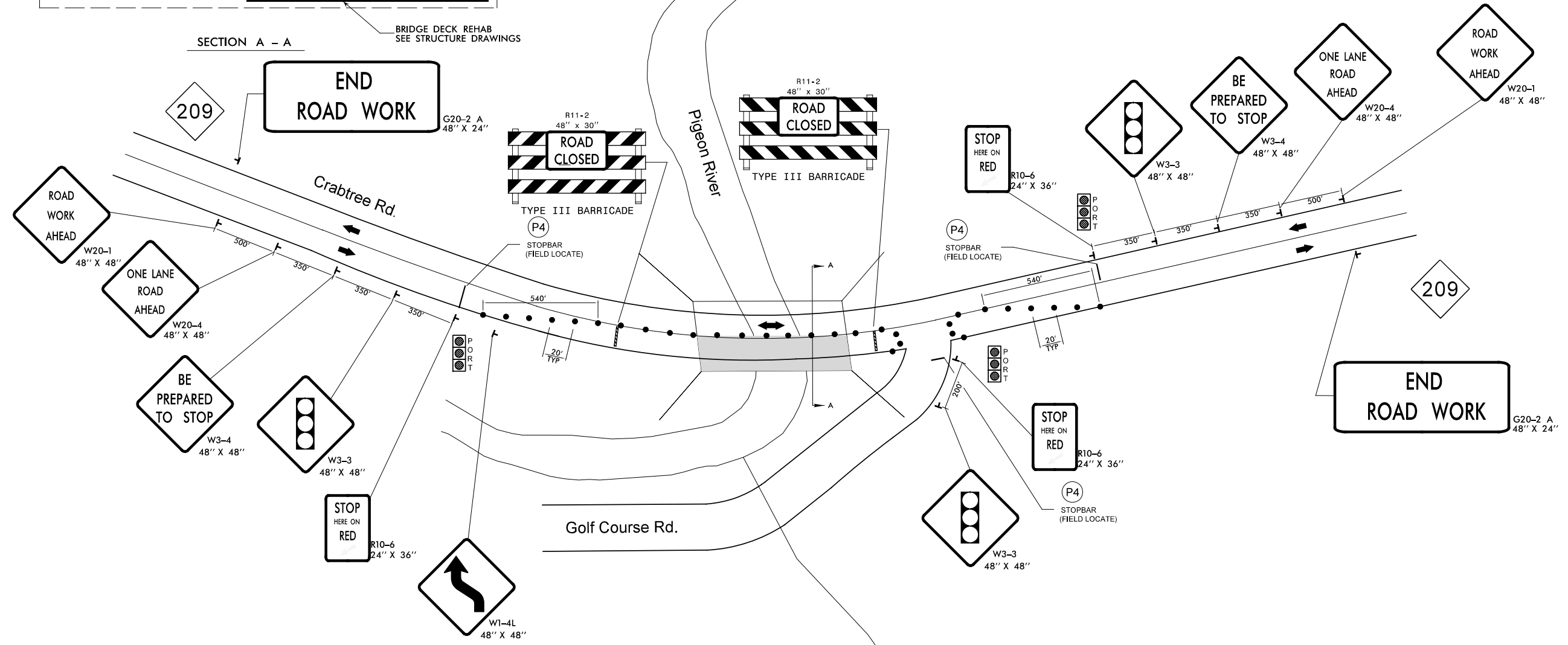
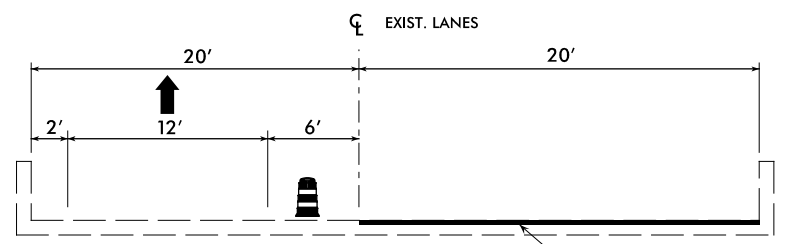
APPROVED: DocuSigned by:  
DATE: 3/15/2018  
27268C2E163A48B



NC 28 NBL  
US 23/US 74 NBL  
US 23/US 74 SBL

LEFT LANE CLOSURE  
FOR BRIDGE DECK REHABS

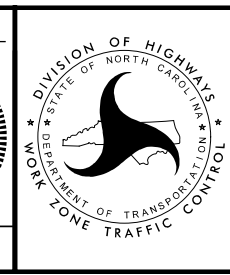
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



\*NOTE: PORTABLE SIGNAL LOCATED ON GOLF COURSE ROAD MUST BE COORDINATED WITH PORTABLE SIGNALS LOCATED ON CRABTREE RD.

| TEMPORARY PAVEMENT MARKING/MARKER LEGEND |                              |
|--|------------------------------|
| (P4)                                     | PAINT - WHITE STOP BAR (24") |

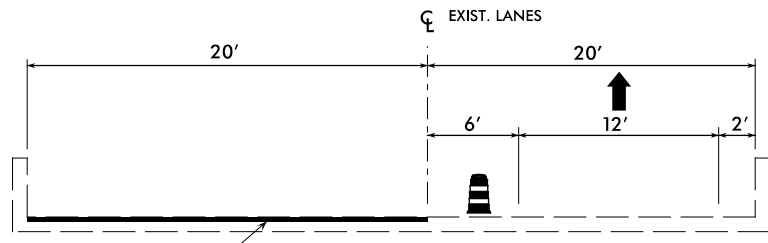
APPROVED: *Thomas K. Goodwin*  
 DATE: 4/3/2018  
 SEAL  
 27268C2E163  
 PROFESSIONAL ENGINEER  
 THOMAS K. GOODWIN



HAYWOOD #098  
 PORTABLE SIGNAL APPLICATIONS

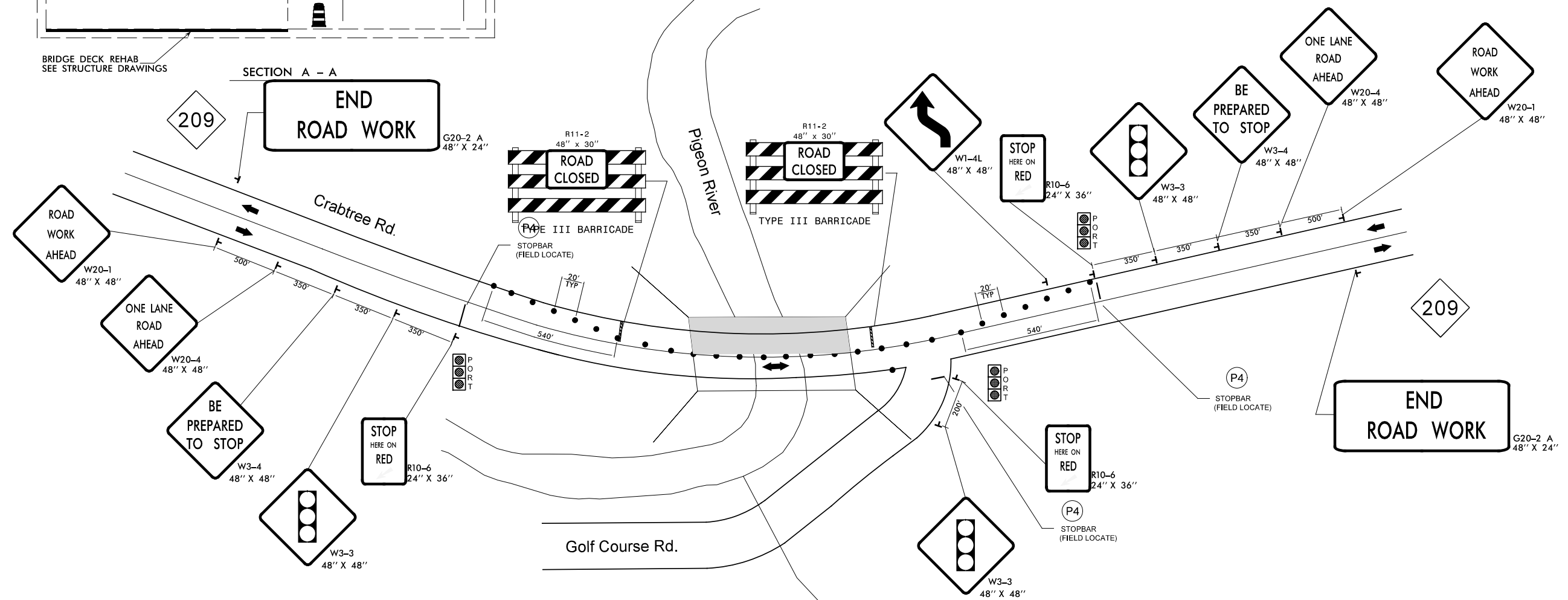
DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

\$\$\$\$\$ SYSTEM TIME\$\$\$\$\$  
 \$\$\$ USER NAME\$\$\$\$\$



BRIDGE DECK REHAB  
SEE STRUCTURE DRAWINGS

SECTION A - A

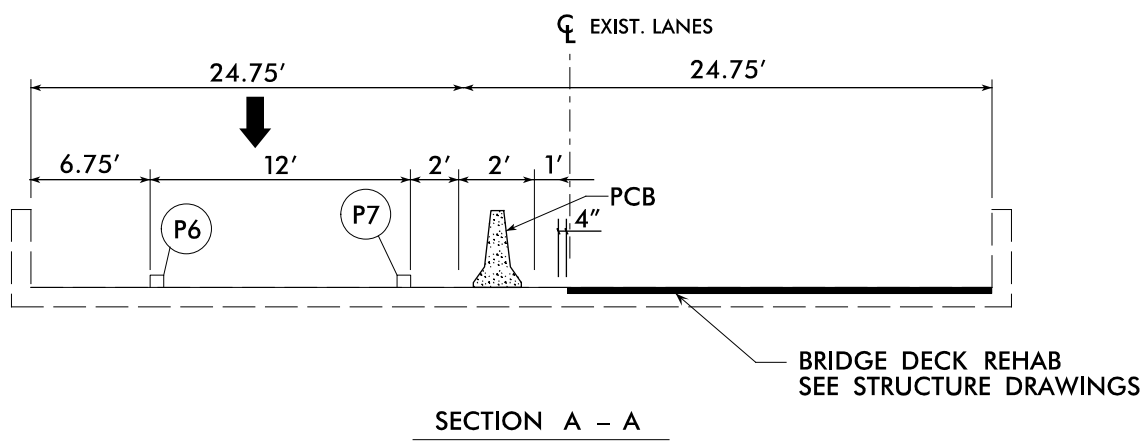


| TEMPORARY PAVEMENT MARKING/MARKER LEGEND |                              |
|--|------------------------------|
| (P4)                                     | PAINT - WHITE STOP BAR (24") |

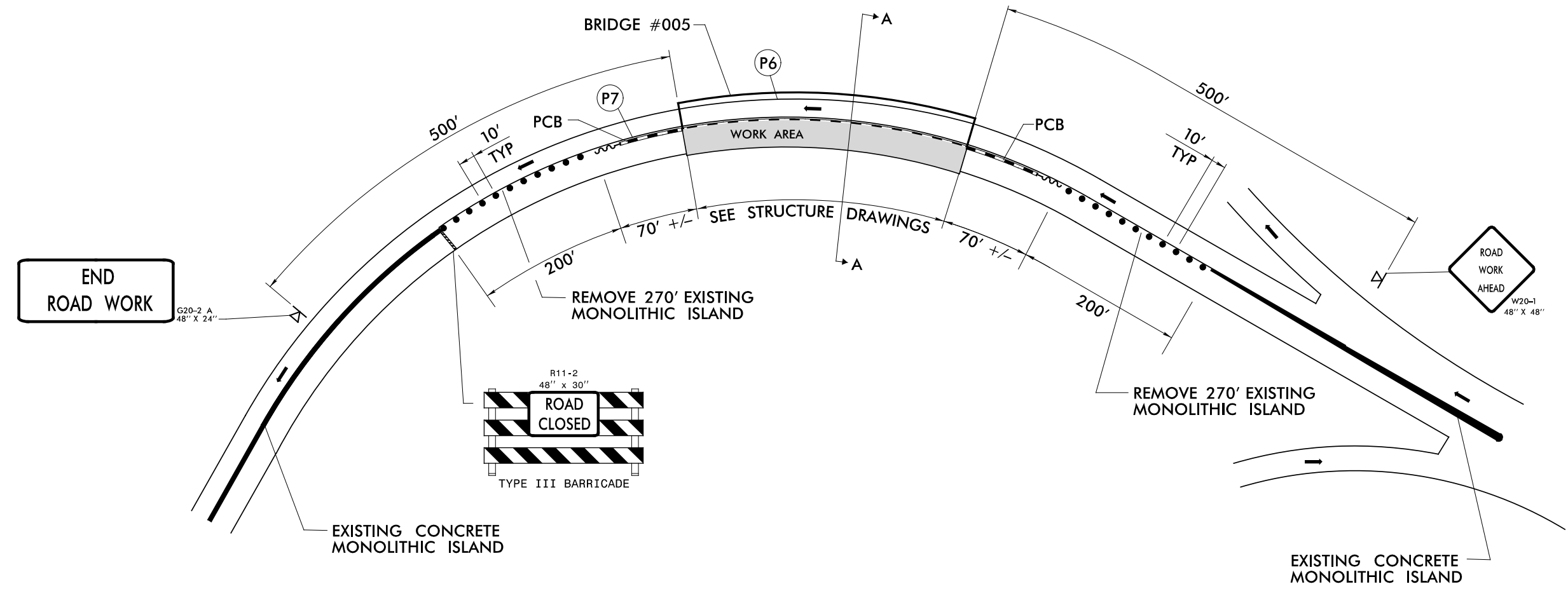
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\$\$\$\$\$ SYSTEM TIME\$\$\$\$\$  
\$\$\$\$\$ USER NAME\$\$\$\$\$

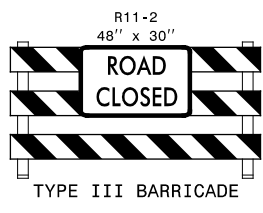
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| APPROVED: <i>Thomas K. Goodwin</i><br>DATE: 4/3/2018<br>SEAL<br>27268C2E163A08<br>012975<br>THOMAS K. GOODWIN<br>PROFESSIONAL ENGINEER |  | HAYWOOD #098<br><br>PORTABLE SIGNAL APPLICATIONS |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED   |  |  |



| TEMPORARY PAVEMENT MARKING LEGEND |                            |
|-----------------------------------|----------------------------|
| (P6)                              | 6" PAINT - WHITE EDGELINE  |
| (P7)                              | 6" PAINT - YELLOW EDGELINE |

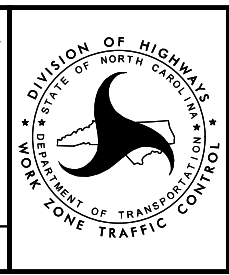


END ROAD WORK



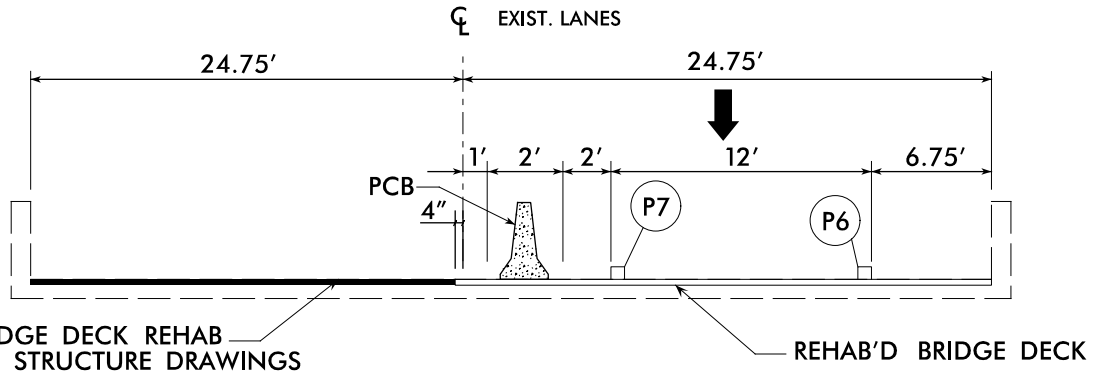
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 \$\$\$DDGN\$\$\$\$\$  
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APPROVED: DocuSigned by:  
 DATE: 4/3/2018  
 27268C2E16A4B6

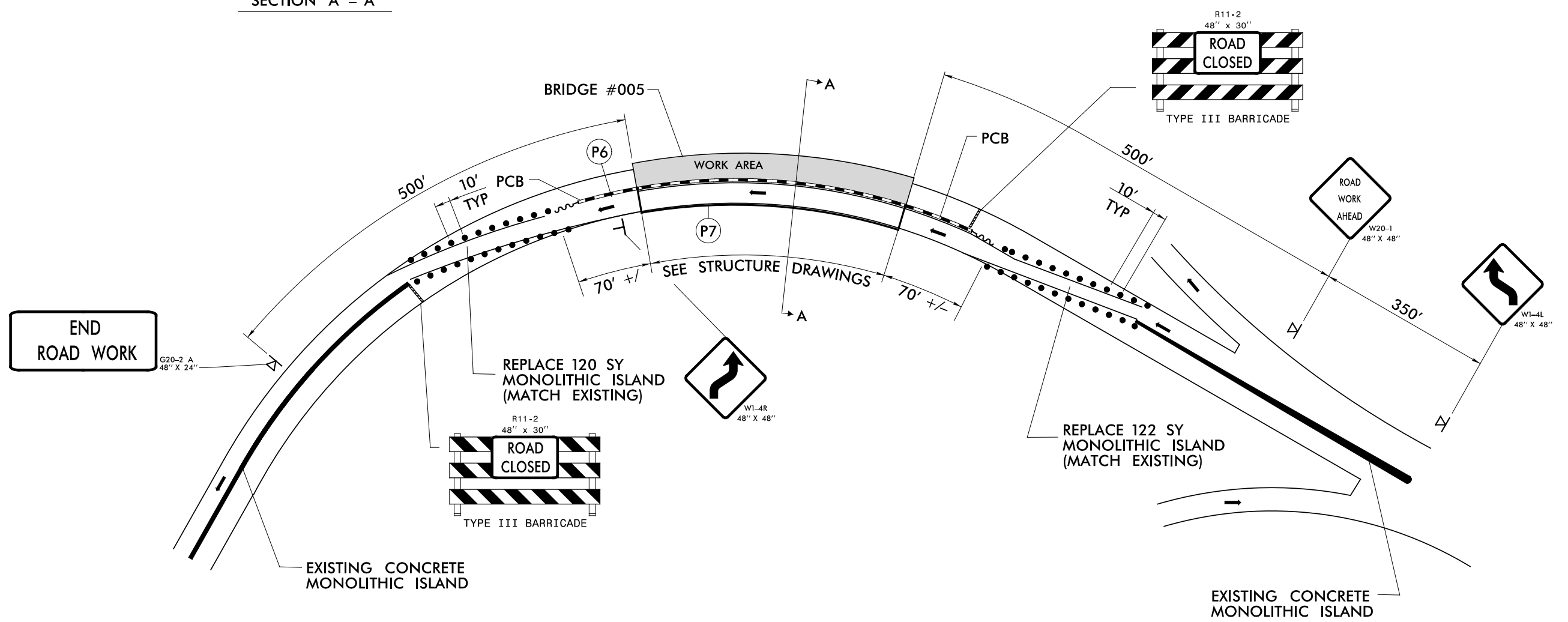


JACKSON 005  
 MONOLITHIC ISLAND DETAIL

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

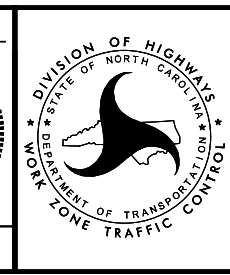


| TEMPORARY PAVEMENT MARKING LEGEND |                            |
|-----------------------------------|----------------------------|
| (P6)                              | 6" PAINT - WHITE EDGELINE  |
| (P7)                              | 6" PAINT - YELLOW EDGELINE |



\$\$\$\$\$ SYSTEM TIME\$\$\$\$\$  
 \$\$\$ USER NAME\$\$\$\$\$

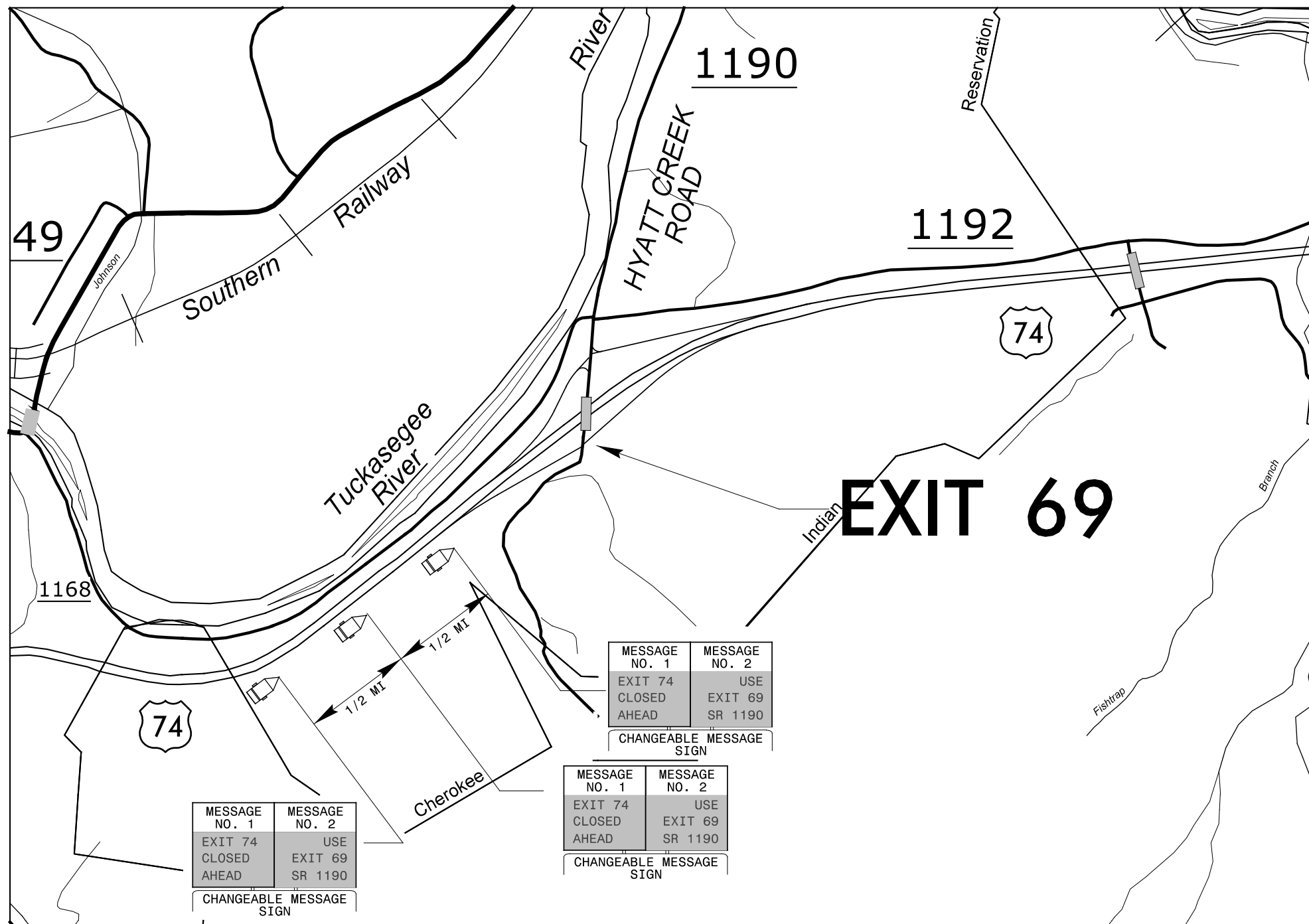
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 DATE: *Thomas K. Goodwin*  
 27268C2E163A008  
 4/3/2018



JACKSON 005  
 MONOLITHIC ISLAND DETAIL

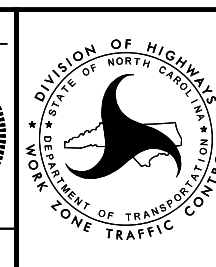
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\$\$\$\$\$SYTIME\$\$\$\$\$  
\$\$\$\$\$DGN\$\$\$\$\$  
\$\$\$\$\$USER\$\$\$\$\$

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 DATE: 3/27/2018  
 27268C2E16  
 PROFESSIONAL SEAL  
 ENGINEER  
 THOMAS K. GOODWIN



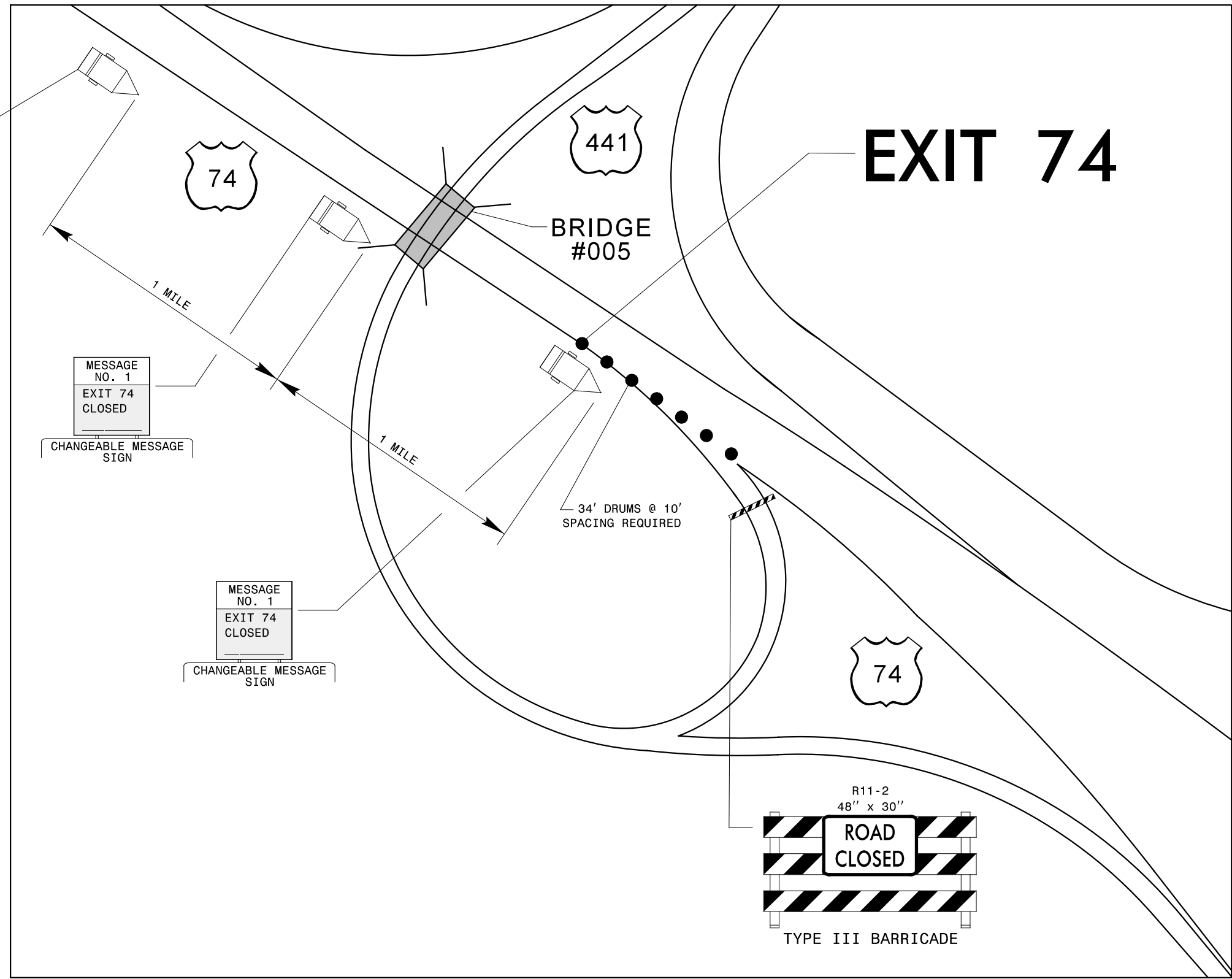
JACKSON 005  
 US 74  
 EXIT 69 RAMP CLOSURE

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

MESSAGE NO. 1  
EXIT 74  
CLOSED  
CHANGEABLE MESSAGE SIGN

MESSAGE NO. 1  
EXIT 74  
CLOSED  
CHANGEABLE MESSAGE SIGN

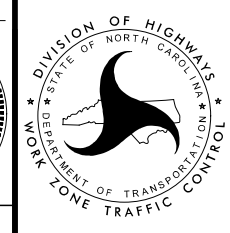
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CHANGEABLE MESSAGE SIGN



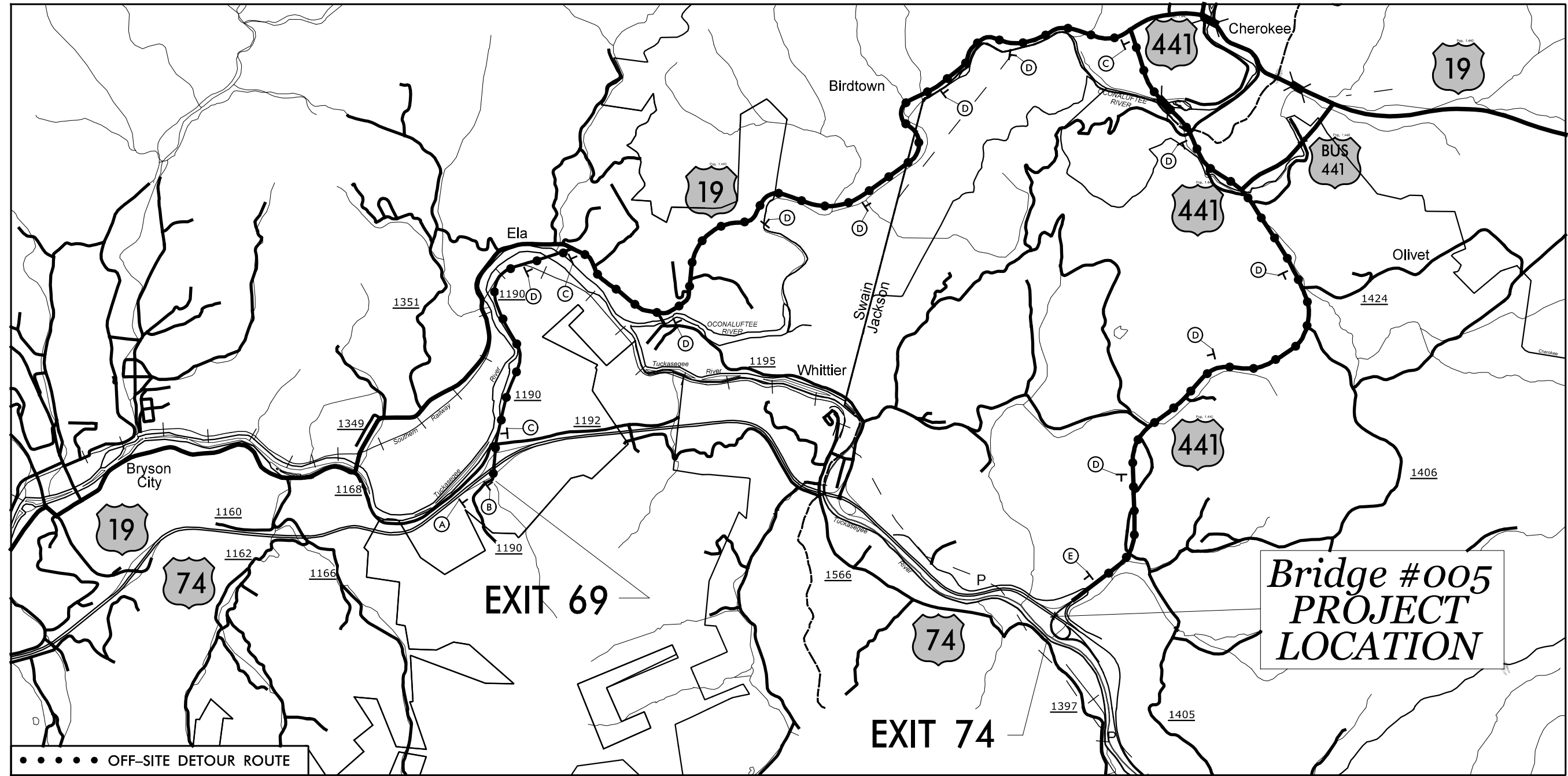
R11-2  
48" x 30"  
ROAD  
CLOSED  
TYPE III BARRICADE

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DATE: *Thomas K. Goodwin*  
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3/15/2018  
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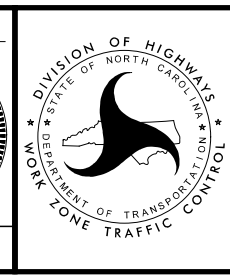
JACKSON 005  
US 74  
EXIT 74 RAMP CLOSURE



**Bridge #005  
PROJECT  
LOCATION**

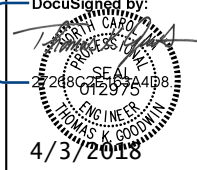
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|--------------|--------------|--------------|--------------|--------------|
| <br><b>A</b> | <br><b>B</b> | <br><b>C</b> | <br><b>D</b> | <br><b>E</b> |
|--------------|--------------|--------------|--------------|--------------|

APPROVED: DocuSigned by:  
 DATE: 3/27/2018  
 27268C2E163A  
 PROFESSIONAL SEAL  
 012975  
 ENGINEER  
 THOMAS K. GOODWIN



JACKSON 005  
 US 441  
 OFFSITE DETOUR

3/26/2018 10:42:42 AM C:\Users\jackson\Documents\Projects\0636339-NCDOT Bridge Design&Rehab\Work\Task\_0014BPR\Discipline\Highway\TMP\Jackson\_005 offsite detour.dgn User: jackson

|   |                     |
|---|---------------------|
| PROJECT REFERENCE NO.<br>14BPR3J  | SHEET NO.<br>TMP-27 |
| RW SHEET NO.  |                     |
| ROADWAY DESIGN ENGINEER   | HYDRAULICS ENGINEER |
| DocuSigned by:<br><br>4/3/2018 |                     |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED  |                     |

# SUMMARY OF QUANTITIES

| COUNTY     | BRIDGE | ROUTE        | BRIDGE LENGTH (LF) | WIDTH | LENGTH OF APPROACH (FT) | PORTABLE LIGHTING (LS) | PORTABLE WORK ZONE SIGN (SF) | STATIONARY WORK ZONE SIGN (SF) | WORK ZONE SIGNS (BARRICADE MOUNTED) (SF) | PORTABLE CONCRETE BARRIER (LF) | REMOVE AND RESET PORTABLE CONCRETE BARRIER (LF) | TEMPORARY PORTABLE TRAFFIC SIGNAL SYSTEM (EA) | DRUMS (EA) | TEMPORARY CRASH CUSHIONS (EA) | REMOVE & RESET TEMPORARY CRASH CUSHIONS (EA) | TRUCK MOUNTED IMPACT ATTENUATOR (EA) |
|------------|--------|--------------|--------------------|-------|-------------------------|------------------------|------------------------------|--------------------------------|--|--------------------------------|---|---|------------|-------------------------------|--|--------------------------------------|
| JACKSON    | 5      | US 441       | 218                | 49.5  | 50                      |                        |                              | 236                            | 18                                       | 618                            | 618   |   | 70         | 2                             |  |                                      |
| JACKSON    | 85     | US 23/74 NBL | 164                | 40    | 50                      |                        |                              | 112                            |  | 444                            | 444   |   | 65         | 1                             | 1  |                                      |
| JACKSON    | 96     | US 23/74 SBL | 134                | 40    | 50                      |                        |                              | 112                            |  | 414                            | 414   |   | 65         | 1                             | 1  |                                      |
| JACKSON    | 100    | US 23/74 NBL | 123                | 40    | 50                      |                        |                              | 112                            |  | 403                            | 403   |   | 65         | 1                             | 1  |                                      |
| JACKSON    | 104    | US 23/74 SBL | 105                | 40    | 50                      |                        |                              | 112                            |  | 385                            | 385   |   | 65         | 1                             | 1  |                                      |
| JACKSON    | 109    | US 23/74 NBL | 176                | 40    | 50                      |                        |                              | 112                            |  | 436                            | 436   |   | 65         | 1                             | 1  |                                      |
| JACKSON    | 110    | US 23/74 SBL | 160                | 48    | 50                      |                        |                              | 112                            |  | 440                            | 440   |   | 65         | 1                             | 1  |                                      |
| HAYWOOD    | 98     | NC 209       | 410                | 40    | 100                     |                        | 160                          | 162                            | 12                                       |                                |   | 3   | 81         |                               |  |                                      |
| SWAIN      | 186    | NC 28 NBL    | 753                | 34    | 50                      |                        |                              | 112                            |  | 330                            | 990   |   | 65         | 1                             | 1  |                                      |
| INCIDENTAL |        |              |                    |       |                         |                        |                              |                                |  |                                |   |   |            |                               |  | 3                                    |
| SUM        |        |              |                    |       |                         | 1                      | 256                          | 1182                           | 30                                       | 3470                           | 4130  | 3   | 541        | 9                             | 7  | 3                                    |

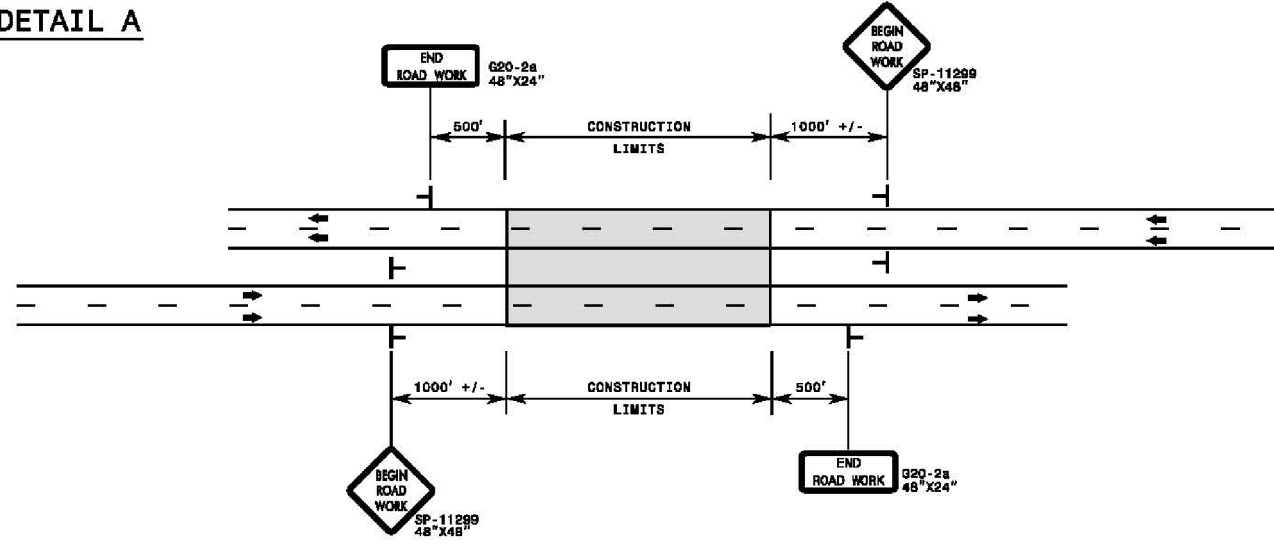
| COUNTY     | BRIDGE | ROUTE        | PAINT PAVEMENT MARKING LINES (24") (LF) | PAINT PAVEMENT MARKING LINES (6") (LF) | SNOWPLOWABLE PAVEMENT MARKERS (EA) | PAINT PAVEMENT MARKING LINES (4") (LF) | REMOVAL OF PAVEMENT MARKING LINES (24") (LF) | REMOVAL OF PAVEMENT MARKING LINES (6") (LF) | REMOVAL OF PAVEMENT MARKING LINES (4") (LF) | MILLED RUMBLE STRIPS (LF) | REMOVE & REPLACE 5" MONO CONC ISLAND (SY) | LAW ENFORCEMENT (HR) | FLAGGER (DAY) | CHANGEABLE MESSAGE SIGNS (EA) | BARRICADES (TYPE III) (LF) | FLASHING ARROW BOARD (EA) | CONES (EA) |
|------------|--------|--------------|---|--|------------------------------------|--|--|---|---|---------------------------|---|----------------------|---------------|-------------------------------|----------------------------|---------------------------|------------|
| JACKSON    | 5      | US 441       |   | 6864                                   |                                    |  |  | 6864  |   |                           | 242                                       |                      |               | 6                             | 24                         |                           |            |
| JACKSON    | 85     | US 23/74 NBL |   | 4668                                   | 2                                  |  |  | 4668  |   | 200                       |   |                      |               |                               |                            |                           |            |
| JACKSON    | 96     | US 23/74 SBL |   | 4458                                   | 2                                  |  |  | 4458  |   | 200                       |   |                      |               |                               |                            |                           |            |
| JACKSON    | 100    | US 23/74 NBL |   | 4381                                   | 2                                  |  |  | 4381  |   | 200                       |   |                      |               |                               |                            |                           |            |
| JACKSON    | 104    | US 23/74 SBL |   | 4255                                   | 2                                  |  |  | 4255  |   | 200                       |   |                      |               |                               |                            |                           |            |
| JACKSON    | 109    | US 23/74 NBL |   | 4752                                   | 2                                  |  |  | 4752  |   | 200                       |   |                      |               |                               |                            |                           |            |
| JACKSON    | 110    | US 23/74 SBL |   | 4640                                   | 2                                  |  |  | 4640  |   | 200                       |   |                      |               |                               | 16                         |                           |            |
| HAYWOOD    | 98     | NC 209       | 36                                      |  | 2                                  | 4600                                   | 36   |   | 4600  |                           |   |                      |               |                               |                            |                           |            |
| SWAIN      | 186    | NC 28 NBL    |   | 8791                                   |                                    |  |  | 8791  |   |                           |   |                      |               |                               |                            |                           |            |
| INCIDENTAL |        |              |   |  |                                    |  |  |   |   |                           |   |                      | 180           |                               |                            | 3                         | 135        |
| SUM        |        |              | 36                                      | 42809                                  | 14                                 | 4600                                   | 36   | 42809                                       | 4600  | 1200                      | 242                                       | 100                  | 180           | 6                             | 40                         | 3                         | 135        |

REVISIONS

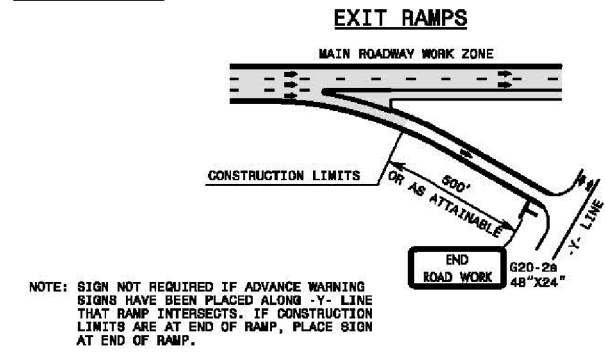
8/17/09

CONSTRUCTION

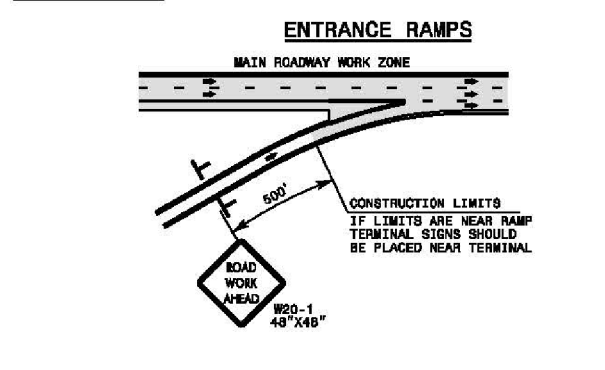
**DETAIL A**



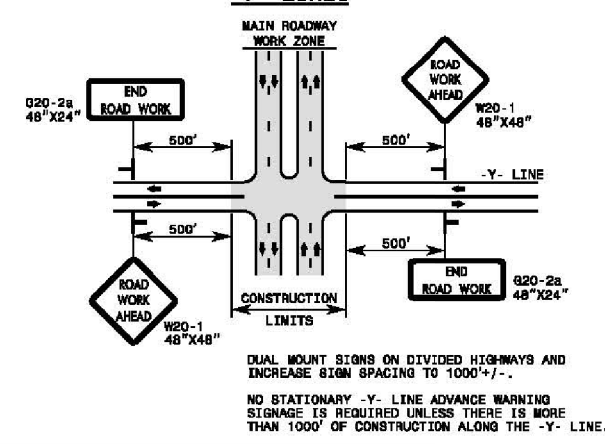
**DETAIL B**



**DETAIL C**



**DETAIL D**



- GENERAL NOTES**
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK UNLESS COVERED.
  - SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT LONGER THAN 3 CONSECUTIVE DAYS.
  - ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
  - ERECT SIGNS PER RSD. 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATIONS FOR WORK ZONE SIGNS.
  - WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH RSD. 1110.01.
  - DO NOT BACK BRACE SIGN SUPPORTS.
  - TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

**LEGEND**  
 STATIONARY SIGN  
 DIRECTION OF TRAFFIC FLOW

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

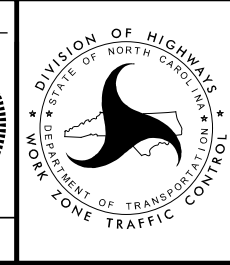
ROADWAY STANDARD DRAWING FOR  
**WORK ZONE ADVANCE WARNING SIGNS FOR FACILITIES ≤ 55 MPH**

SHEET 2 OF 3  
**1101.01**

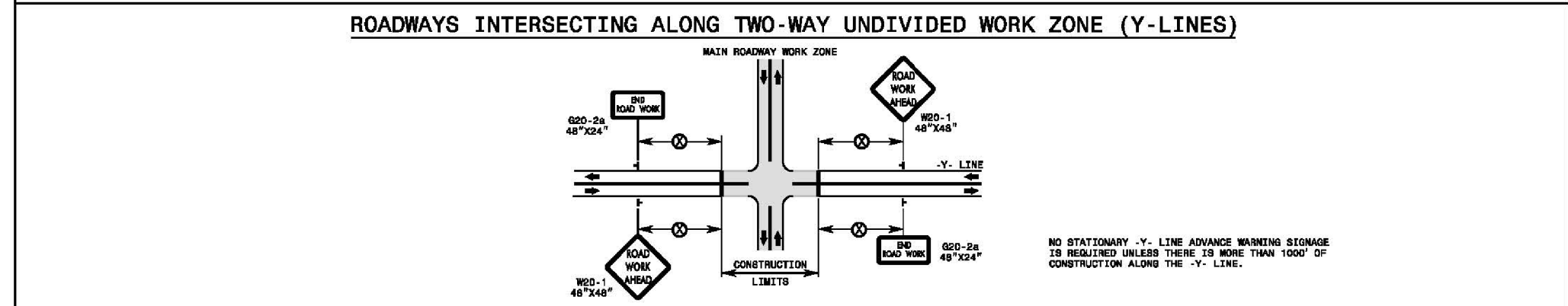
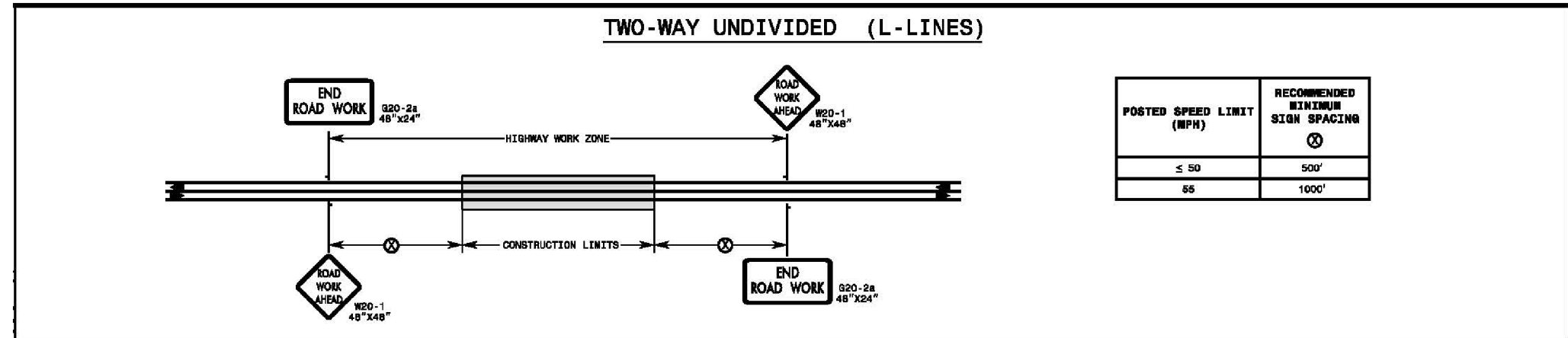
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\$\$\$\$\$DCN\$\$\$\$\$  
\$\$\$\$\$USERNAME\$\$\$\$\$

PLANS PREPARED BY:  
**Gannett Fleming**  
2610 Wycliff Road  
Suite 102  
Raleigh NC 27607-3073  
(919) 420-7660  
Excellence Delivered As Promised NC Lic. No. F-0270

APPROVED: DocuSigned by:  
DATE: *Thomas K. Goodwin*  
27268C2E164168  
3/15/2018  
**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**



ROADWAY STD. 1101.01  
SHEET 2 OF 3



#### GENERAL NOTES

- 1- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK UNLESS COVERED.
- 2- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT LONGER THAN 3 CONSECUTIVE DAYS.
- 3- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- 4- ERECT SIGNS PER RSD 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATIONS FOR WORK ZONE SIGNS.
- 5- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH RSD. 1110.01.
- 6- DO NOT BACK BRACE SIGN SUPPORTS.

**LEGEND**

┆ STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW

1-18 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.  
  
 ROADWAY STANDARD DRAWING FOR  
  
**WORK ZONE ADVANCE WARNING SIGNS FOR TWO-WAY UNDIVIDED FACILITIES**  
  
 SHEET 3 OF 3  
**1101.01**

\$\$\$SYTIME\$\$\$  
 \$\$\$DGN\$\$\$  
 \$\$\$USERNAME\$\$\$  
 \$\$\$\$\$\$

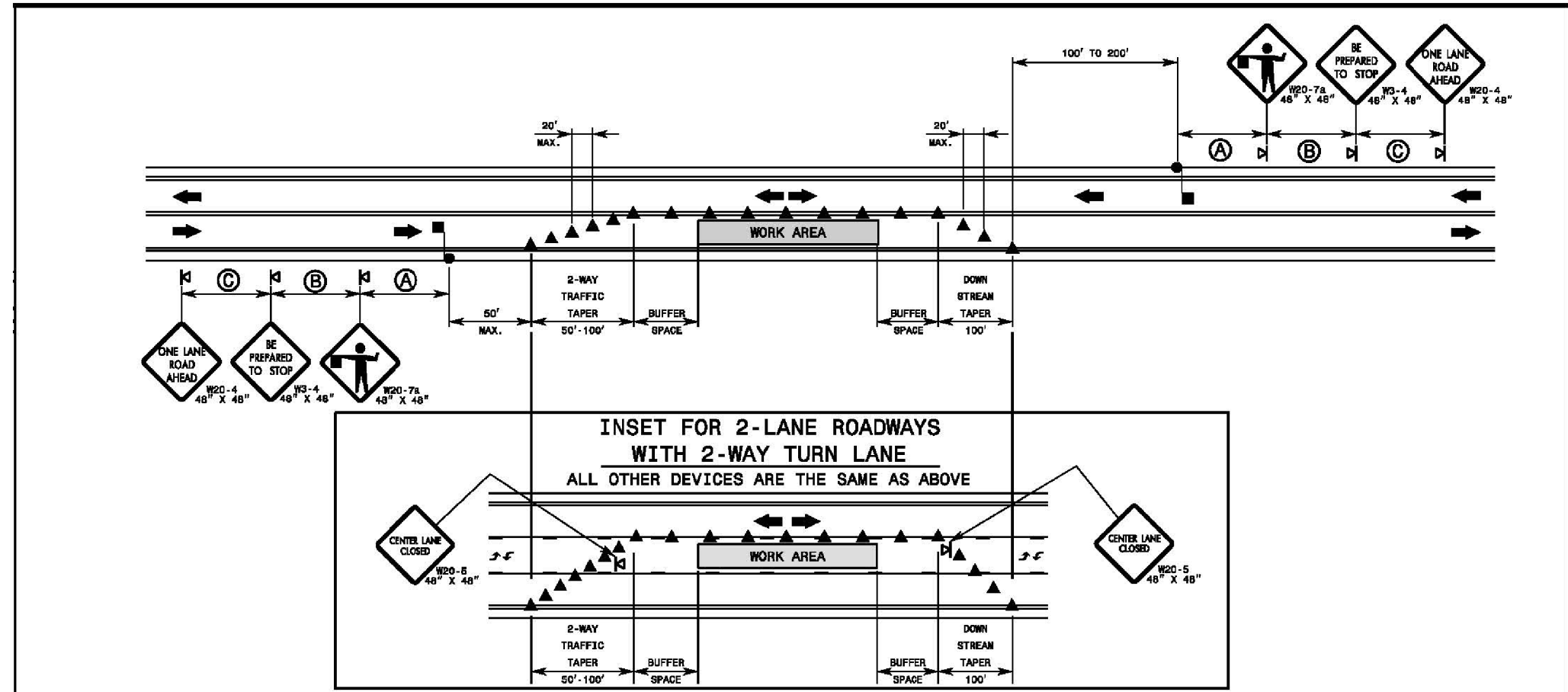
PLANS PREPARED BY:  
**Gannett Fleming**  
 Excellence Delivered As Promised  
 2610 Wycliff Road  
 Suite 102  
 Raleigh NC 27607-3073  
 (919) 420-7660  
 NC Lic. No. F-0270

APPROVED: DocuSigned by:  
 DATE: 3/15/2018  
 27268C2E163AD  
 SEAL 012975  
 ENGINEER  
 THOMAS K. GOODWIN



ROADWAY STD. 1101.01  
 SHEET 3 OF 3

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



- GENERAL NOTES FOR FLAGGING OPERATIONS**
- 1- REFER TO RSD. 1101.11, SHEETS 1 & 4, FOR "L" DISTANCE AND SIGN SPACING.
  - 2- INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC.
  - 3- REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
  - 4- PLACE CONES THRU THE WORK AREA AT THE MAXIMUM SPACING EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT.
  - 5- EXTEND LANE CLOSURES AT THE BUFFER SPACE SUCH THAT STOPPING SIGHT DISTANCE IS PROVIDED TO THE FLAGGER (REFER TO RSD. 1101.11, SHEET 2).
  - 6- DO NOT STOP TRAFFIC IN ANY ONE DIRECTION FOR MORE THAN 5 MINUTES AT A TIME.
  - 7- DRUMS OR SKINNY DRUMS MAY BE USED IN LIEU OF CONES. REFER TO RSD. 1180.01 FOR SKINNY DRUM REQUIREMENTS.
  - 8- USE FLAGGERS TO CONTROL TRAFFIC AT INTERSECTIONS AFFECTED BY THE LANE CLOSURE. SUPPLEMENT FLAGGERS LOCATED AT INTERSECTIONS WITH FLAGGER AHEAD SIGNS (W20-7a) PLACED APPROXIMATELY 250 FT. IN ADVANCE OF THE FLAGGER. FOR SIGNALIZED INTERSECTIONS PLACE SIGNALS IN THE FLASH MODE AND USE LAW ENFORCEMENT.
  - 9- REFER TO THE CURRENT MUTCD FOR FLAGGER CONTROL, REQUIREMENTS, AND PROCEDURES.
  - 10- DO NOT EXCEED A 1 MILE LANE CLOSURE LENGTH UNLESS OTHERWISE SHOWN IN THE TMP OR AS DIRECTED BY THE ENGINEER.

- 11- IF VEHICLE QUEUES WILL REACH WITHIN 15' OF EITHER SIDE OF ACTIVE RAILROAD TRACKS, PROVIDE A UNIFORMED LAW ENFORCEMENT OFFICER OR FLAGGER TO PREVENT VEHICLES FROM STOPPING WITHIN THE GRADE CROSSING. PROVIDE OFFICER OR FLAGGER EVEN IF AUTOMATIC WARNING MEASURES ALREADY EXIST.
- GENERAL NOTES FOR PILOT CAR OPERATIONS**
- 1- USE PILOT CARS WHEN DIRECTED BY THE ENGINEER.
  - 2- IF ROADWAY WIDTH IS LESS THAN 22 FEET (EOP TO EOP), CONES MAY NOT BE REQUIRED ALONG WORK AREA, AND AT THE DISCRETION OF THE ENGINEER, CONES MAY BE OMITTED ALONG THE WORK AREA IF USING A PILOT CAR.
  - 3- CONES ARE ALWAYS REQUIRED IN THE UPSTREAM AND DOWNSTREAM TAPERS.
  - 4- MOUNT SIGN G20-4 "PILOT CAR FOLLOW ME" AT A CONSPICUOUS POSITION ON THE REAR OF THE PILOT VEHICLE.
  - 5- DO NOT INSTALL MORE THAN ONE (1) MILE OF LANE CLOSURE, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
  - 6- ADVISE RESIDENTS AND BUSINESSES WITHIN THE LANE CLOSURE LIMITS ABOUT METHODS OF SAFE EGRESS AND INGRESS FROM DRIVEWAYS DURING FLAGGING AND PILOT CAR OPERATIONS.

**LEGEND**

- FLAGGER
- CONES
- PORTABLE SIGN
- DIRECTION OF TRAFFIC FLOW

1-18  
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DIVISION OF HIGHWAYS  
RALEIGH, N.C.

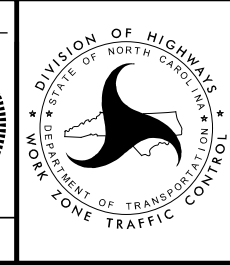
ROADWAY STANDARD DRAWING FOR  
**TEMPORARY LANE CLOSURES**  
2-LANE, 2-WAY ROADWAY-1 LANE CLOSED

SHEET 1 OF 14  
**1101.02**

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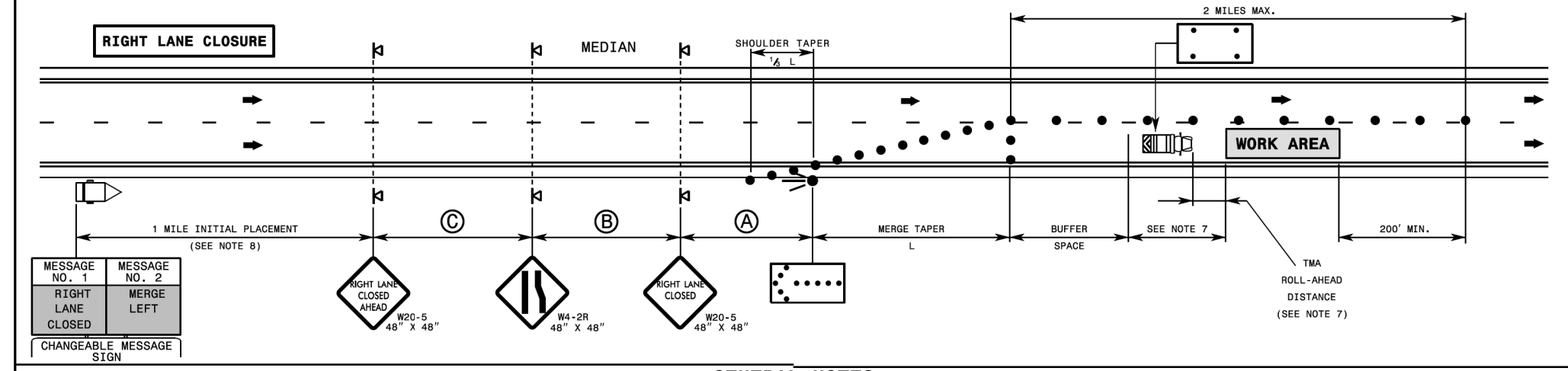
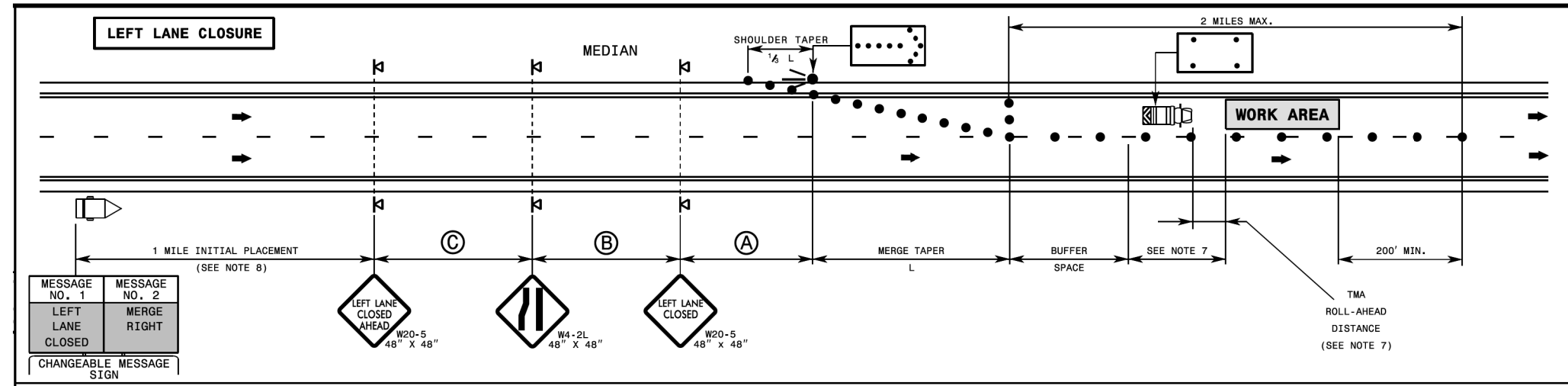
PLANS PREPARED BY:  
**Gannett Fleming**  
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Excellence Delivered As Promised NC Lic. No. F-0270

APPROVED - DocuSigned by:  
DATE: 3/15/2018  
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SEAL  
012975  
ENGINEER  
THOMAS K. GOODWIN



ROADWAY STD. 1101.02  
SHEET 1 OF 14

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**GENERAL NOTES**

- IF NECESSARY USE THIS RSD. FOR ONE-WAY CITY TYPE STREETS WHERE SIGNS MAY BE MOUNTED ON BOTH SIDES OF THE ROADWAY.
- PLACE FLASHING ARROW BOARDS (FAB) ON THE SHOULDER (PAVED OR UNPAVED). PLACE FAB WITHIN THE TAPER IF SHOULDERS DO NOT EXIST. MEET THE REQUIREMENTS FOR STOPPING SIGHT DISTANCE AT THE FAB LOCATION. IF NEEDED, EXTEND LANE CLOSURES AT THE BUFFER SPACE, SUCH THAT STOPPING SIGHT DISTANCE TO THE FAB IS MET (SEE RSD. 1101.11, SHEET 2).
- PLACE DRUMS IN TAPERS AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. PLACE DRUMS ALONG THE WORK AREA AT THE MAXIMUM SPACING EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT.
- REFER TO RSD. 1101.11, SHEETS 1, 2, & 4, FOR "L" DISTANCE, BUFFER SPACE, AND SIGN SPACING.
- REFER TO RSD. 1101.02, SHEETS 9 & 10, FOR TREATMENT OF LANE CLOSURES THRU INTERCHANGES.
- INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW. BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
- POSITION THE TMAs TO MAINTAIN A ROLL-AHEAD DISTANCE AS RECOMMENDED BY THE MANUFACTURER AND CONTINUOUSLY ADVANCE TMAs AS WORK PROGRESSES.
- PLACE CHANGEABLE MESSAGE SIGN (CMS) ON THE OUTSIDE OF THE TRAVELWAY, UNLESS DIRECTED OTHERWISE BY THE ENGINEER. PLACE CMS APPROXIMATELY 1 MILE IN ADVANCE OF THE FIRST W20-5 SIGNS. IF TRAFFIC BACKS UP TO WHERE THE CMS IS INITIALLY PLACED, RELOCATE CMS 1/2 MILE IN ADVANCE OF ANTICIPATED BACKUP. MONITOR TRAFFIC, AND WHEN NECESSARY, MOVE CMS APPROXIMATELY 1/2 MILE IN ADVANCE OF ANTICIPATED BACKUP.
- DO NOT EXCEED A 2 MILE LANE CLOSURE LENGTH UNLESS OTHERWISE SHOWN IN THE TMP OR AS DIRECTED BY THE ENGINEER.

**LEGEND**

- FLASHING ARROW BOARD
- FLASHING ARROW BOARD (96"X48" MIN.), "CAUTION MODE"
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN (CMS)
- DRUM
- PORTABLE SIGN
- DIRECTION OF TRAFFIC FLOW

1-18  
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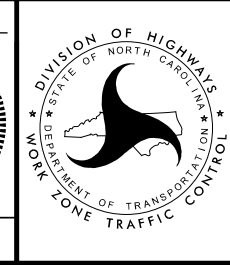
ROADWAY STANDARD DRAWING FOR  
**TEMPORARY LANE CLOSURES**  
DIVIDED MULTI-LANE ROADWAY-1 LANE CLOSED  
(FOR ROADWAYS < 60 MPH)

SHEET 3 OF 14  
**1101.02**

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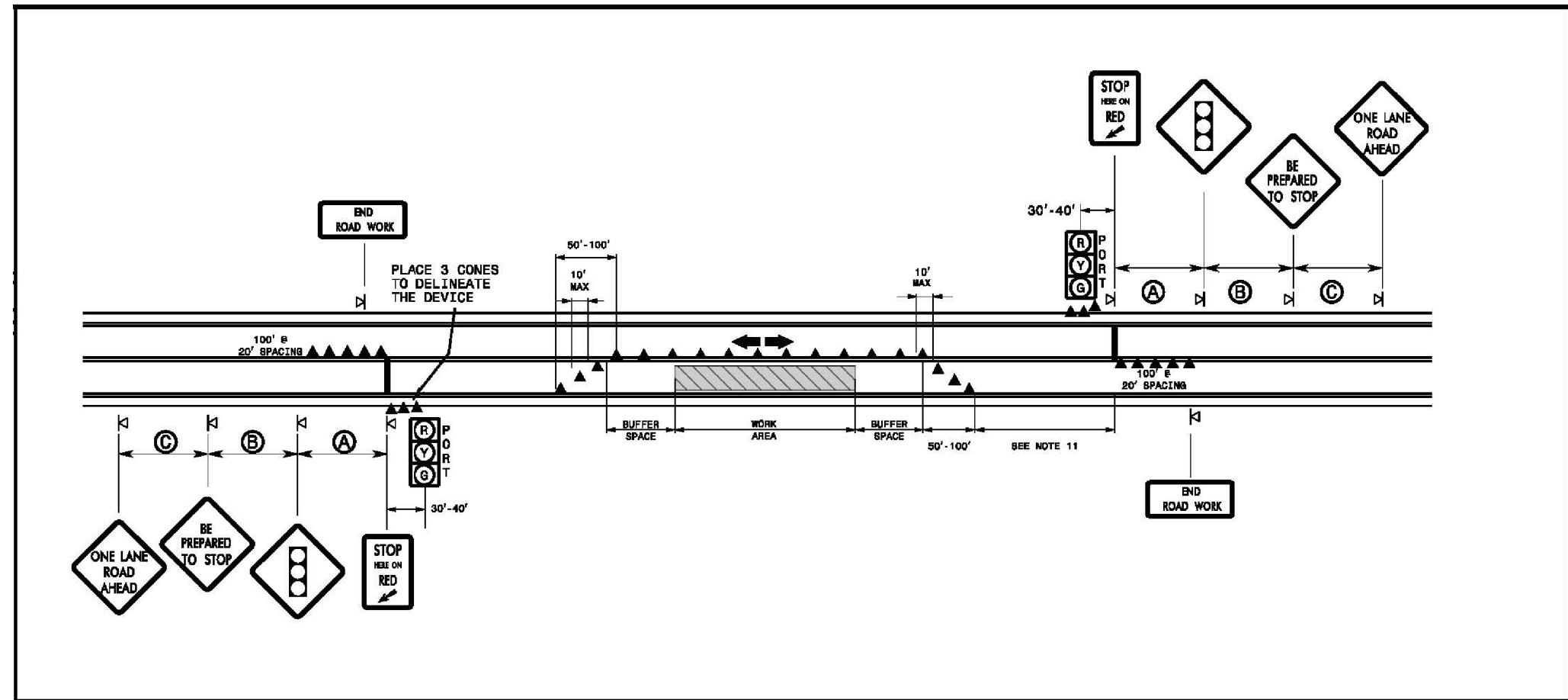
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SEAL 012975  
ENGINEER  
THOMAS K. GOODWIN



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SHEET 3 OF 14

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**GENERAL NOTES**

- REFER TO RSD. 1101.11, SHEETS 1 & 4, FOR "L" DISTANCE AND SIGN SPACING.
- INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC.
- REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
- PLACE CONES THRU THE WORK AREA AT THE MAXIMUM SPACING EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT.
- EXTEND LANE CLOSURES AT THE BUFFER SPACE SUCH THAT STOPPING SIGHT DISTANCE IS PROVIDED TO THE SIGNAL (REFER TO RSD 1101.11, SHEET 2).
- DRUMS OR SKINNY DRUMS MAY BE USED IN LIEU OF CONES. REFER TO RSD 1180.01 FOR SKINNY DRUM REQUIREMENTS.
- REFER TO THE CURRENT MUTCD FOR REQUIREMENTS AND PROCEDURES.
- DO NOT EXCEED A 1 MILE LANE CLOSURE LENGTH UNLESS OTHERWISE SHOWN IN THE TMP OR AS DIRECTED BY THE ENGINEER.
- DO NOT PLACE TEMPORARY SIGNALS IN LOCATIONS SUCH THAT VEHICLE QUEUES WILL REACH WITHIN 15' OF EITHER SIDE OF ACTIVE RAILROAD TRACKS.
- INTERSECTIONS AND DRIVEWAYS LOCATED WITHIN THE ONE-LANE OPERATION WILL REQUIRE ADDITIONAL SIGNALIZATION.
- ALLOW ADEQUATE ROOM FOR ROAD USERS TO RETURN TO THEIR NORMAL DRIVING PATH.

**LEGEND**

- ▤ PORTABLE SIGN
- ← DIRECTION OF TRAFFIC FLOW
- PORTABLE SIGNAL
- ▲ CONE

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ENGLISH STANDARD DRAWING FOR  
**TEMPORARY LANE CLOSURES**  
 2-LANE, 2-WAY ROADWAY - 1 LANE CLOSED  
 PORTABLE TEMPORARY SIGNALS

SHEET 14 OF 14  
**1101.02**

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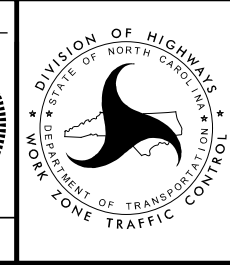
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 SHEET 14 OF 14