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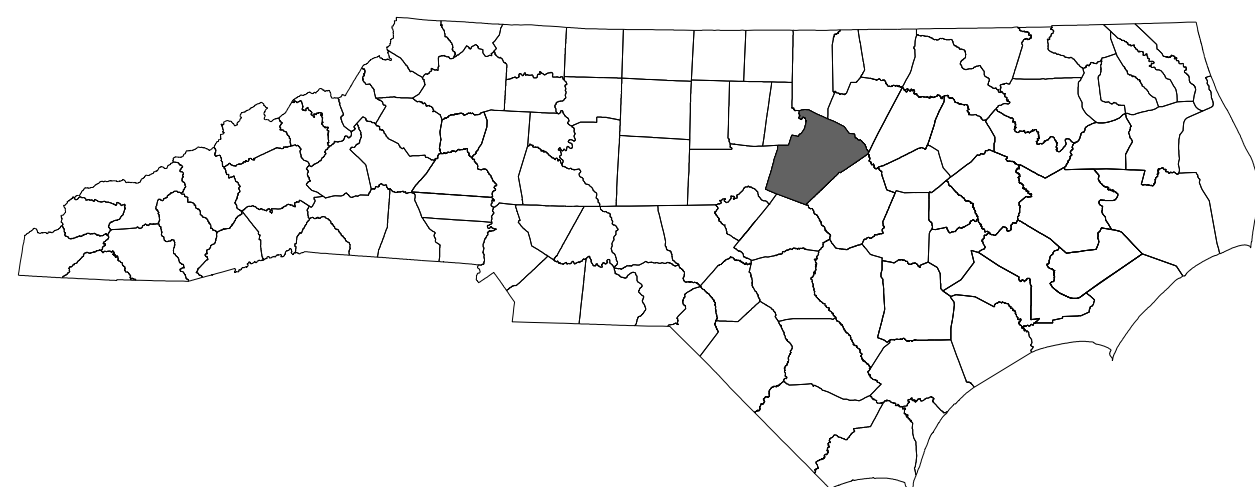
**This file or an individual page  
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**PROJECT: 17BP.5.H.4**

**CONTRACT: DE00290**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

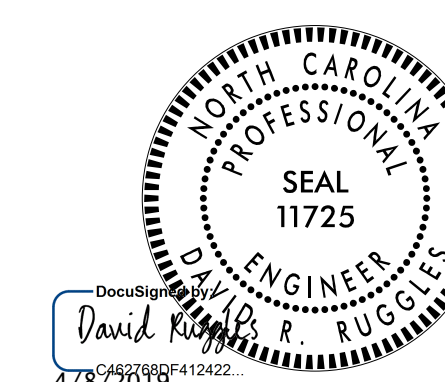
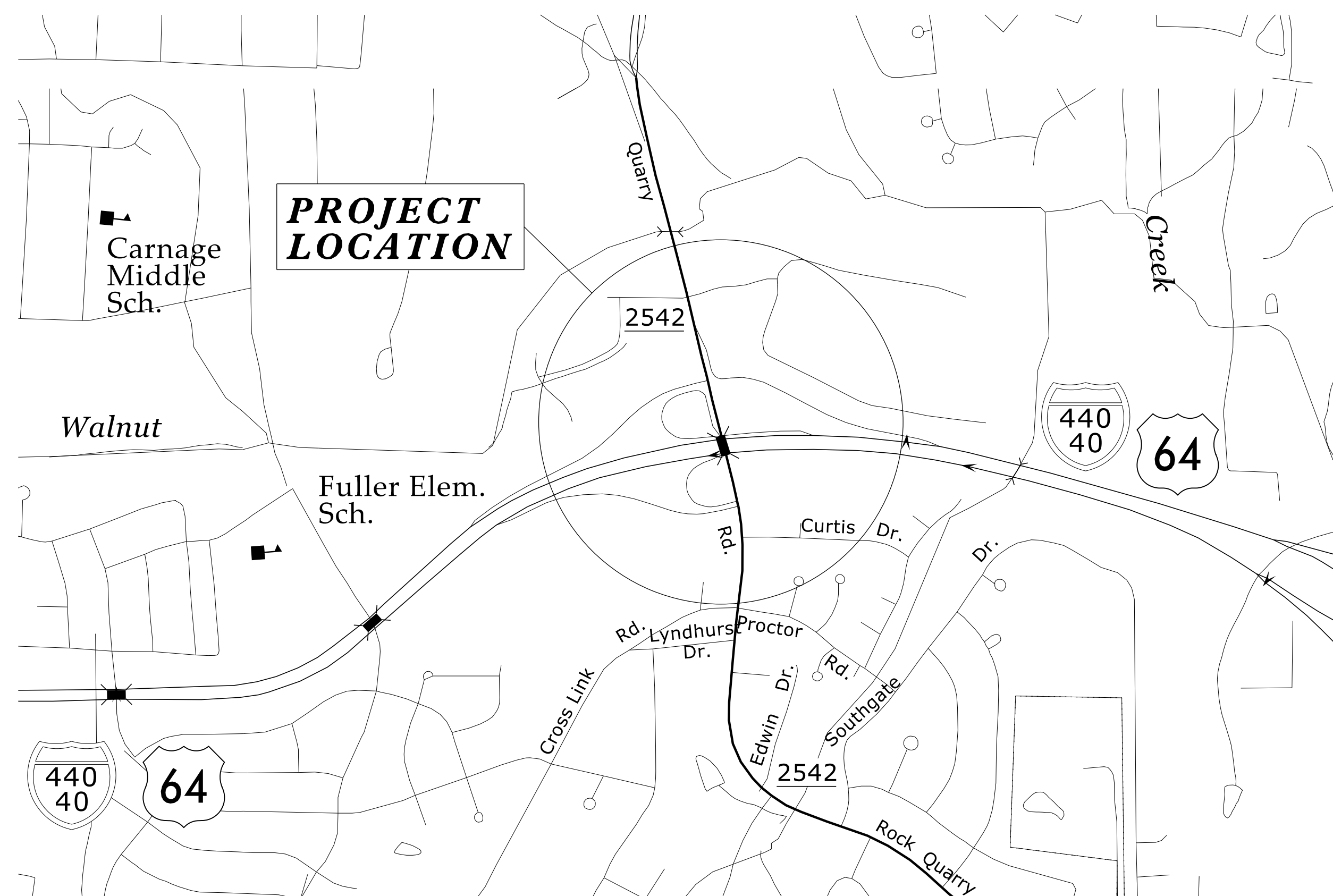
**WAKE COUNTY**



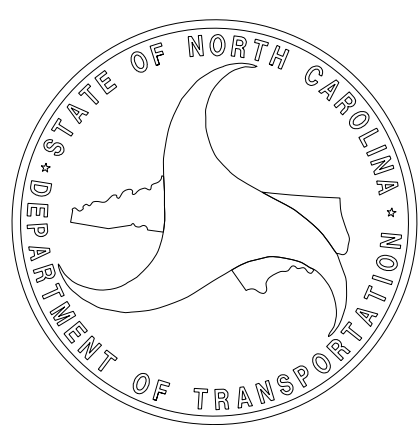
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| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.   | TOTAL SHEETS |
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| STATE PROJ. NO. | F.A. PROJ. NO.              | DESCRIPTION |              |
| 17BP.5.H.4      |                             | PE          |              |
| 5BPR.3.1        |                             | CONST       |              |

**LOCATION:** BRIDGE #316 ON SR 2542 (ROCK QUARRY RD.) OVER I-40/I-440

**TYPE OF WORK:** BRIDGE PRESERVATION - DECK REHABILITATION BY SCARIFYING, SHOT BLAST CLEANING AND PLACEMENT OF POLYESTER POLYMER CONCRETE OVERLAY, DECK GROOVING, REMOVAL AND RECONSTRUCTION OF BRIDGE DECK JOINTS, INSTALLATION OF SILICONE JOINT SEALS AND MOLDED RUBBER SEGMENTAL EXPANSION JOINTS, MILLING AND ASPHALT OVERLAY.



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



**DESIGN DATA**  
BRIDGE # 316 - ADT 2015 = 27,000

**PROJECT LENGTH**  
BRIDGE # 316 - 0.056 MILE

Prepared in the Offices of:



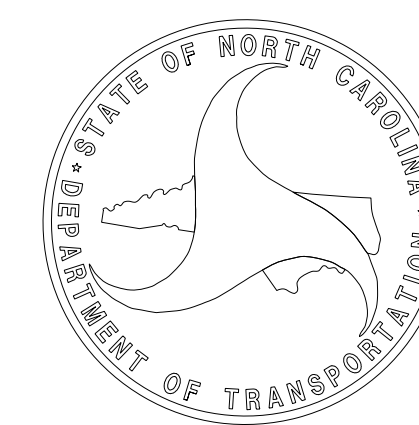
2018 STANDARD SPECIFICATIONS

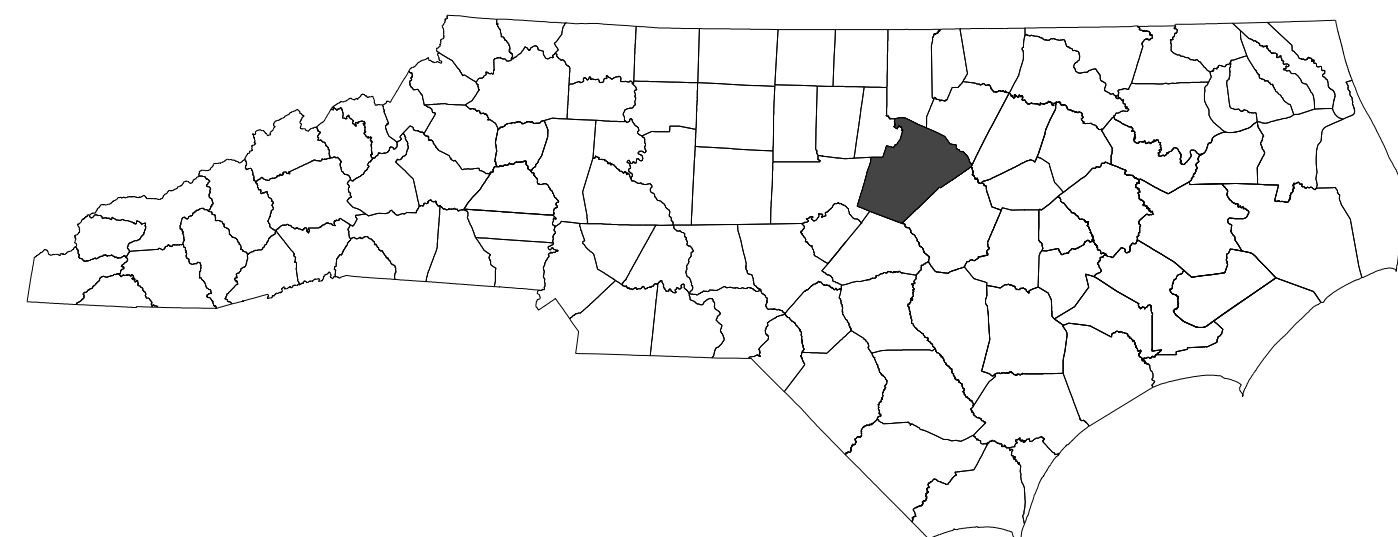
LETTING DATE:  
MAY 8, 2019

DAVID RUGGLES, PE  
PROJECT ENGINEER

JEFF LOFTUS, PE  
PROJECT DESIGN ENGINEER

LISA GILCHRIST, EI  
NCDOT CONTACT



**PROJECT: 17BP.5.H.4****CONTRACT: XXXXXXXX**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**WAKE COUNTY**

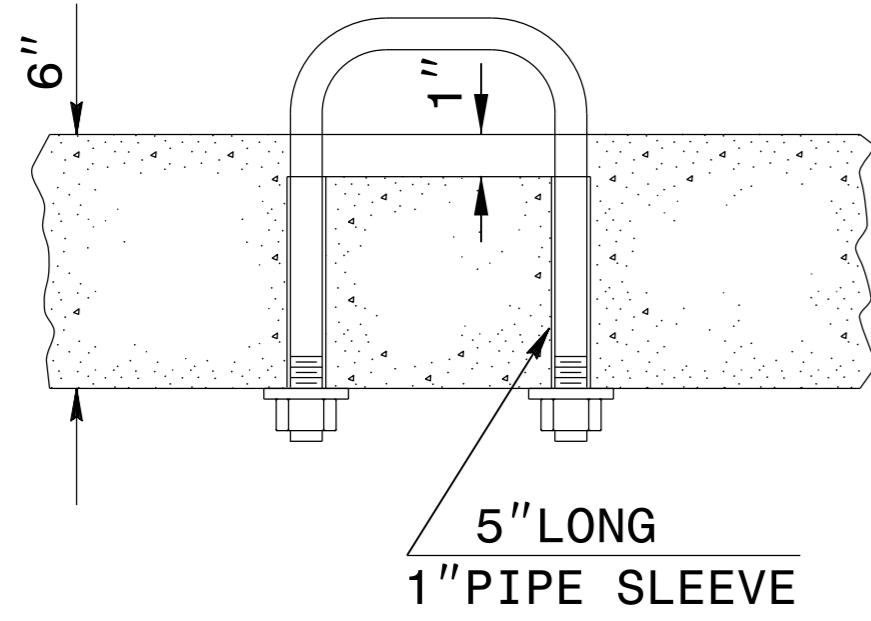
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| STATE PROJ. NO. | F.A. PROJ. NO.              | DESCRIPTION |              |
| 17BP.5.H.4      |                             | PE          |              |
| 5BPR.3.1        |                             | CONST       |              |
|                 |                             |             |              |

**LOCATION:** BRIDGE #316 ON SR 2542 (ROCK QUARRY RD.) OVER I-40/I-440.

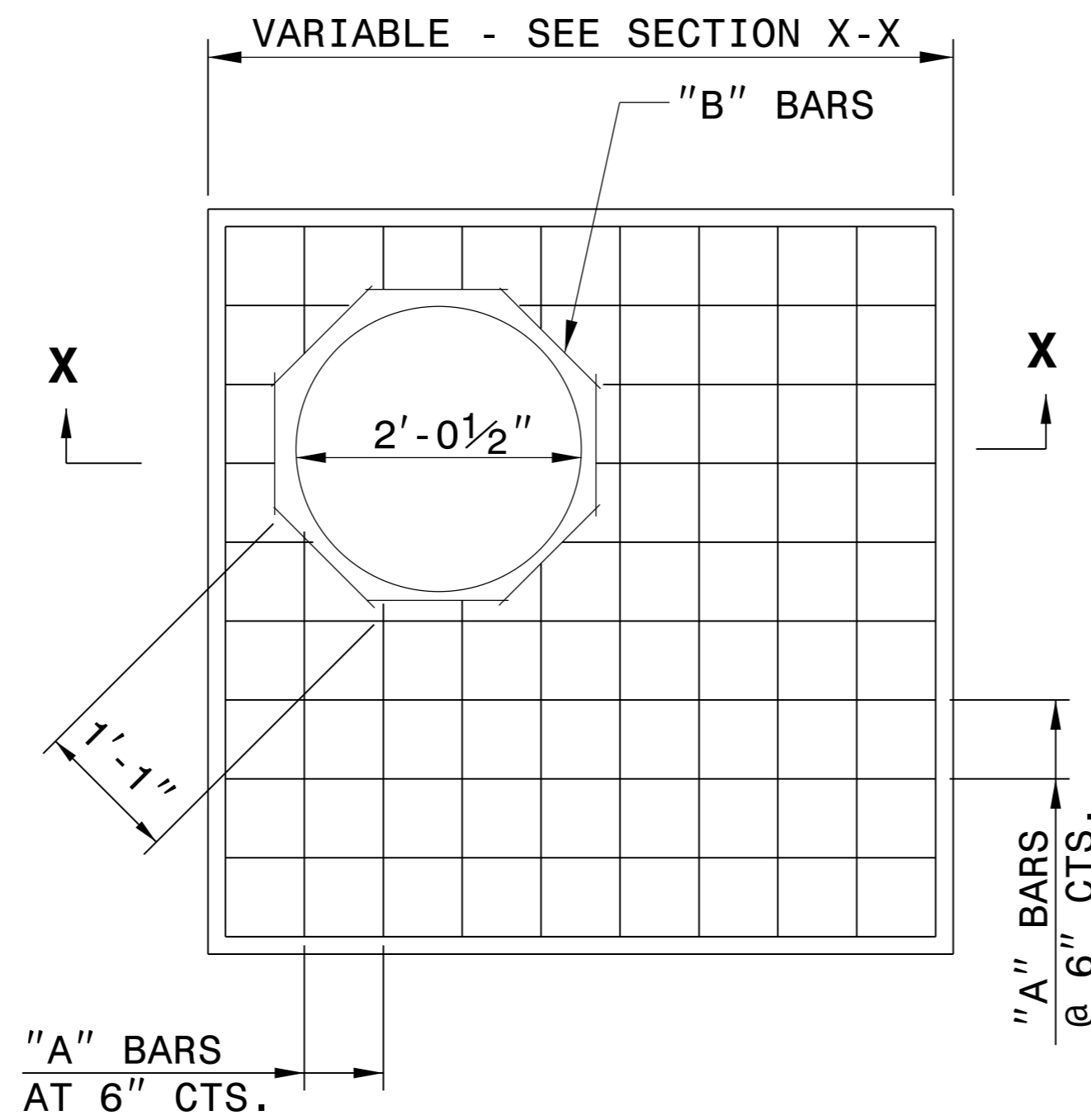
**TYPE OF WORK:** BRIDGE PRESERVATION - DECK REHABILITATION BY SCARIFYING, SHOT BLAST CLEANING AND PLACEMENT OF POLYESTER POLYMER CONCRETE OVERLAY, DECK GROOVING, REMOVAL AND RECONSTRUCTION OF BRIDGE DECK JOINTS, INSTALLATION OF SILICONE JOINT SEALS AND MOLDED RUBBER SEGMENTAL EXPANSION JOINTS, MILLING AND ASPHALT OVERLAY

**INDEX OF SHEETS**

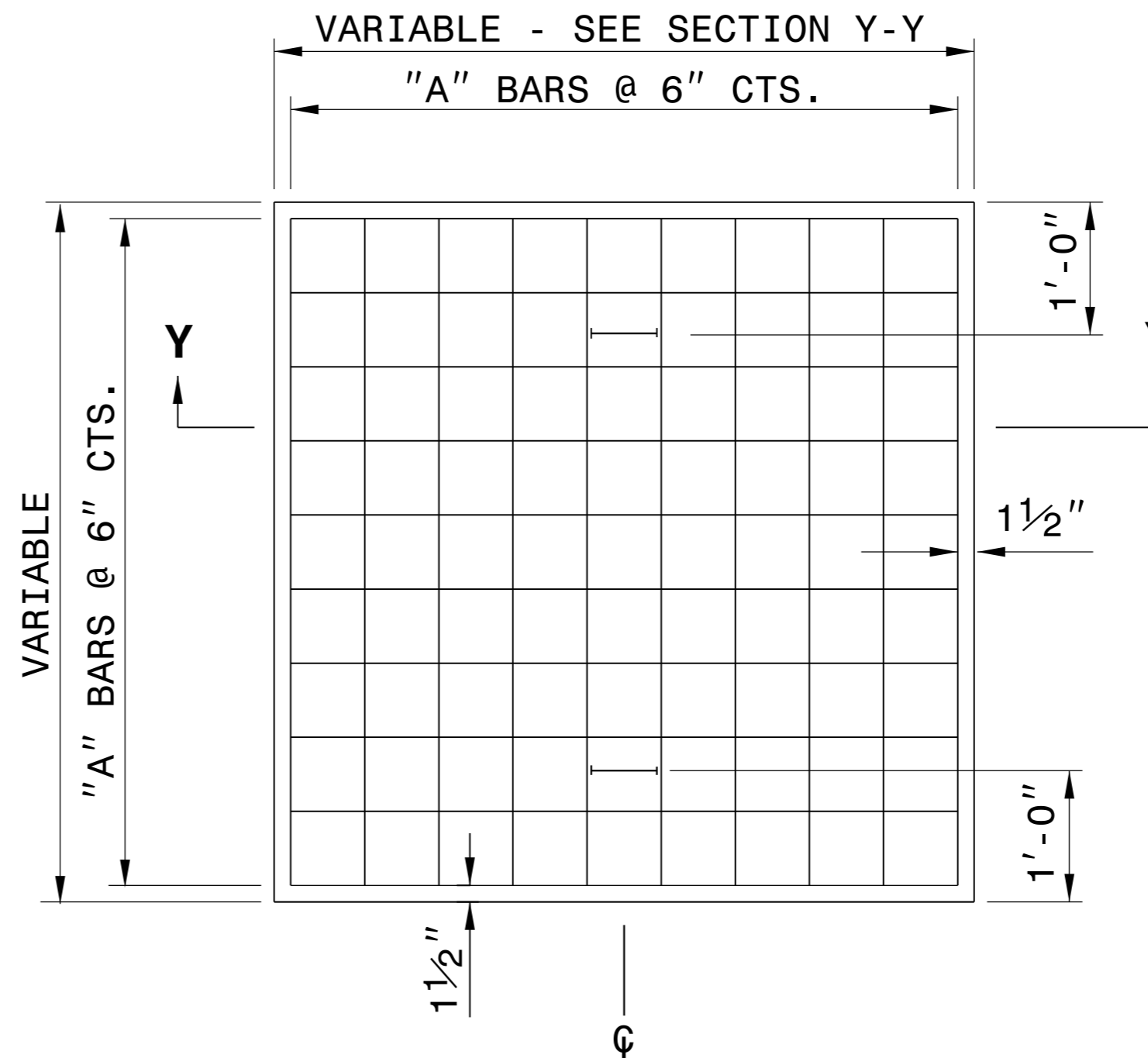
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|-----------------------|--|
| <i>1</i>              | <i>TITLE SHEET</i>                     |
| <i>2</i>              | <i>INDEX OF SHEETS</i>                 |
| <i>3</i>              | <i>DRAINAGE SUMMARY</i>                |
| <i>4 - 4A</i>         | <i>ROADWAY PLANS</i>                   |
| <i>TMP-1 - TMP-25</i> | <i>TRANSPORTATION MANAGEMENT PLANS</i> |
| <i>PMP-1</i>          | <i>PAVEMENT MARKING PLANS</i>          |
| <i>S-1 - S-11</i>     | <i>BRIDGE #316 STRUCTURAL PLANS</i>    |
| <i>SN</i>             | <i>STRUCTURAL STANDARD NOTES</i>       |



**PARTIAL SECTION**



**PLAN**



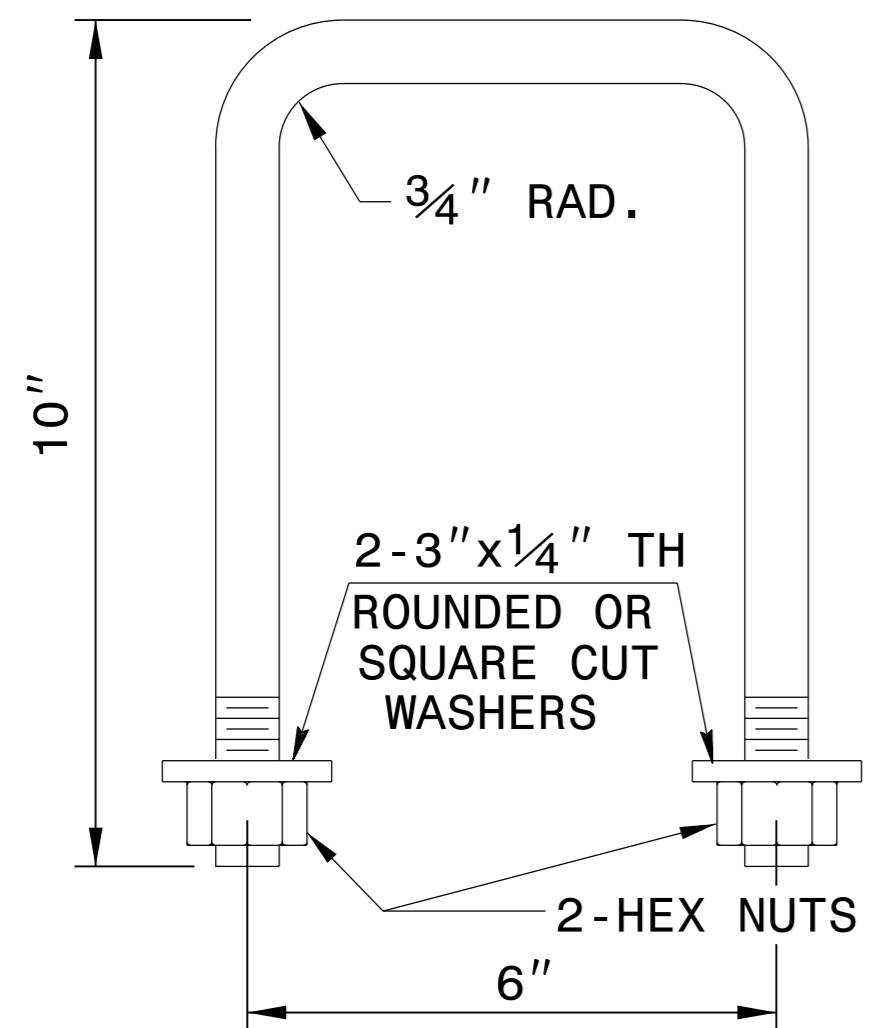
**PLAN**

**GENERAL NOTES:**

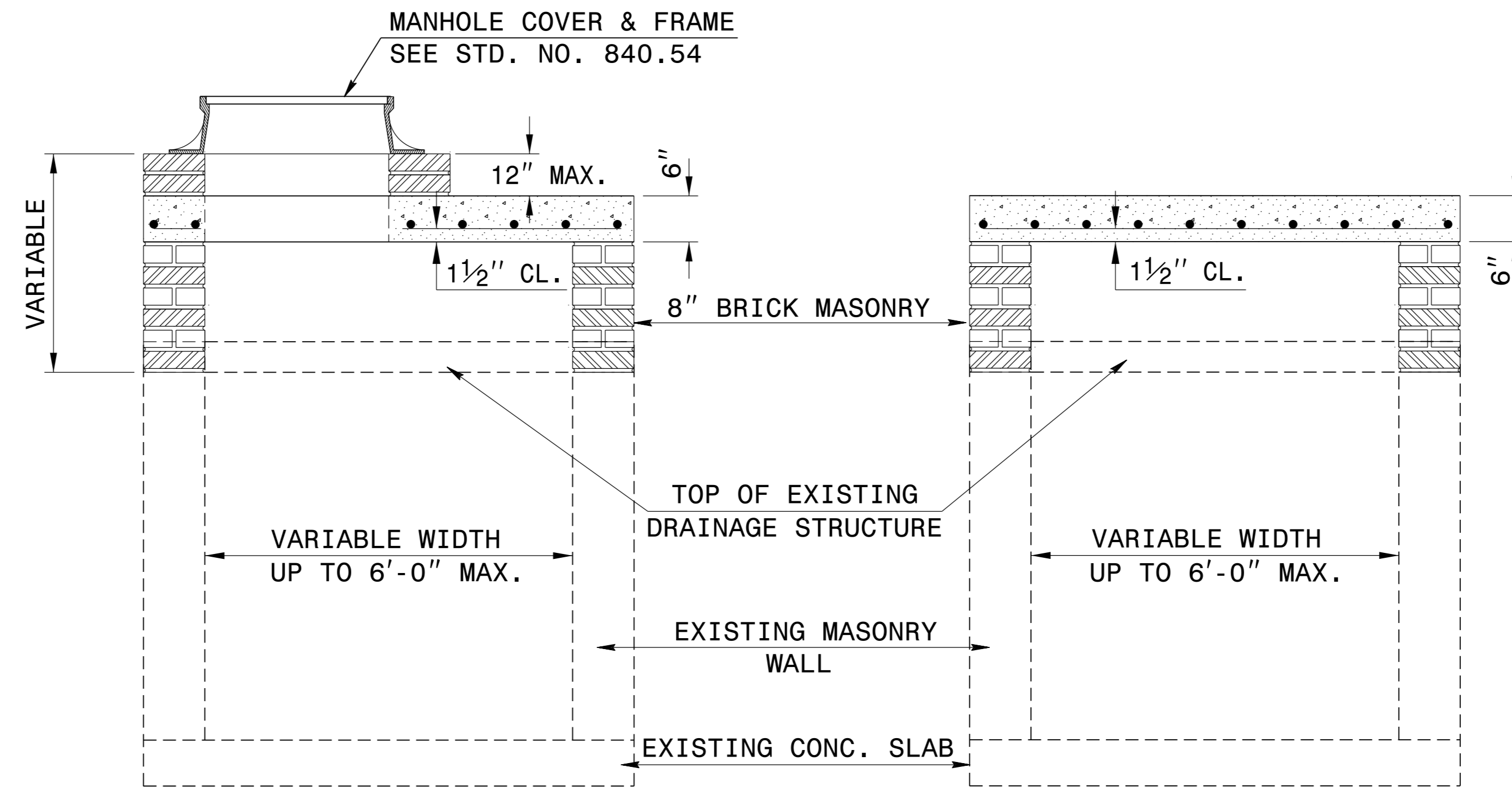
CONSTRUCT IN ACCORDANCE WITH SECTION 859 OF THE STANDARD SPECIFICATIONS.

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

DETAIL INTENDED FOR NON-TRAFFIC BEARING DRAINAGE STRUCTURES.



**DETAIL OF HANDLE**



**SECTION X-X**

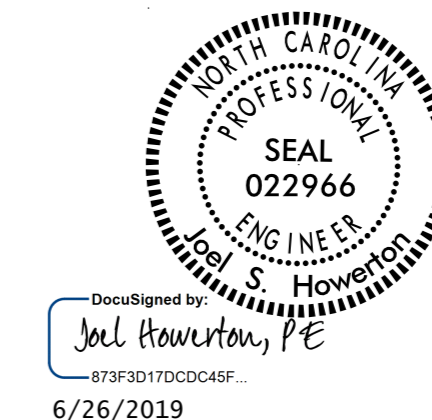
**SECTION Y-Y**

**BILL OF MATERIALS**

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

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

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



**CONTRACT STANDARDS AND DEVELOPMENT UNIT**  
Office 919-707-6950 FAX 919-250-4119  
**DETAIL TO CONVERT EXISTING DI, CB, OTCB or GI TO JUNCTION BOX (MANHOLE OPTIONAL)**

ORIGINAL BY: T.S.S. DATE: NOV. 1997  
MODIFIED BY: T.S.S. DATE: FEB. 2000  
CHECKED BY: DATE:  
FILE SPEC.: ds174:/usr/details/stand/boxtojbe.dgn



## NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

**Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.**

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

REVISIONS

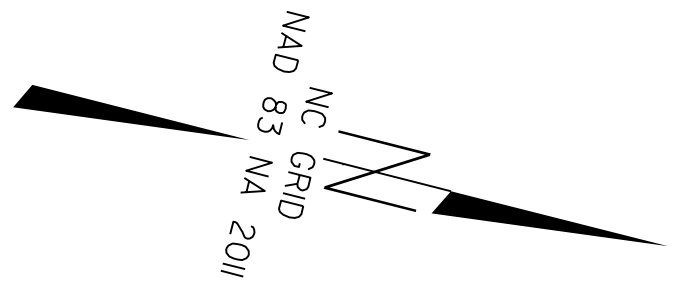
| STATION             | LOCATION (LT, RT, OR CL) | STRUCTURE NO. | TOP ELEVATION | INVERT ELEVATION | INVERT ELEVATION | SLOPE CRITICAL | DRAINAGE PIPE<br>(RCP, CSP, CAAP, HDPE, or PVC) |                |                |                 |                 |                                | C.S. PIPE                           |                                     |                     |                     |        |        | R.C. PIPE<br>CLASS III  |      |     |     |     |     | R.C. PIPE<br>CLASS IV |             |                                     |  |  |   | ENDWALLS | QUANTITIES<br>FOR DRAINAGE<br>STRUCTURES<br><br>*TOTAL L.F. FOR PAY<br>QUANTITY SHALL BE COL.<br>'A' + (1.3 X COL.'B') | FRAME,<br>GRATES,<br>AND HOOD<br>STANDARD<br>840.03 | CONCRETE TRANSITIONAL<br>SECTION | REMARKS |                            |   |                               |                        |                           |                                 |   |  |                       |                 |       |   |   |               |            |             |                                     |  |  |   |                            |   |                               |                        |                           |                                 |   |  |                       |
|---------------------|--------------------------|---------------|---------------|------------------|------------------|----------------|---|----------------|----------------|-----------------|-----------------|--------------------------------|-------------------------------------|-------------------------------------|---------------------|---------------------|--------|--------|-------------------------|------|-----|-----|-----|-----|-----------------------|-------------|-------------------------------------|--|--|---|----------|--|---|----------------------------------|---------|----------------------------|---|-------------------------------|------------------------|---------------------------|---------------------------------|---|--|-----------------------|-----------------|-------|---|---|---------------|------------|-------------|-------------------------------------|--|--|---|----------------------------|---|-------------------------------|------------------------|---------------------------|---------------------------------|---|--|-----------------------|
|                     |                          |               |               |                  |                  |                | 12"   | 15"            | 18"            | 24"             | 30"             | 36"                            | 42"                                 | .064                                | .064                | .064                | .079   | .079   | .109                    | .109 | 12" | 15" | 18" | 24" | 30"                   | 36"         | 42"                                 | 48"                                      | 12"  | 15"   |          |  |   |                                  |         | 18"                        | 24"                                       | 30"                           | 36"                    | 42"                       | 48"                             | CU. YARDS                                 | PER EACH (0' THRU 5.0')                | 5.0' THRU 10.0'       | 10.0' AND ABOVE | PER E | F | G | TYPE OF GRATE | DROP INLET | CATCH BASIN | G.D.I. FRAME WITH GRATE STD. 840.20 | G.D.I. FRAME WITH TWO GRATES STD. 840.22 | G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24 | G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24 | J.B. STD. 840.31 OR 840.32 | CONVERT EX. DROP INLET TO J.B. W/ MANHOLE | FRAME WITH COVER, STD. 840.54 | ADJUSTMENT OF MANHOLES | CONCRETE APRON (PER EACH) | DRAINAGE PIPE ELBOWS NO. & SIZE | CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71 | CONC. COLLARS CL. 'B' C.Y. STD. 840.72 | PIPE REMOVAL LIN. FT. |
|                     |                          |               |               |                  |                  |                | DO NOT USE PVC                                  | DO NOT USE RCP | DO NOT USE CSP | DO NOT USE CAAP | DO NOT USE HDPE | DO NOT USE R.C. PIPE (CLASS V) | RC PIPE CULVERTS, CONTRACTOR DESIGN | RC PIPE CULVERTS, CONTRACTOR DESIGN | 15" SIDE DRAIN PIPE | 18" SIDE DRAIN PIPE | R.C.P. | C.S.P. | PER EACH (0' THRU 5.0') | A    | B   | F   | F   | G   | DROP INLET            | CATCH BASIN | G.D.I. FRAME WITH GRATE STD. 840.20 | G.D.I. FRAME WITH TWO GRATES STD. 840.22 | G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24 | G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24 |          |  |   |                                  |         | J.B. STD. 840.31 OR 840.32 | CONVERT EX. DROP INLET TO J.B. W/ MANHOLE | FRAME WITH COVER, STD. 840.54 | ADJUSTMENT OF MANHOLES | CONCRETE APRON (PER EACH) | DRAINAGE PIPE ELBOWS NO. & SIZE | CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71 | CONC. COLLARS CL. 'B' C.Y. STD. 840.72 | PIPE REMOVAL LIN. FT. |                 |       |   |   |               |            |             |                                     |  |  |   |                            |   |                               |                        |                           |                                 |   |  |                       |
| NW CORNER OF BRIDGE | LT 0908                  |               | 263.64        | 258.53           |                  |                |   |                |                |                 |                 |                                |                                     |                                     | 12'                 |                     |        |        |                         |      |     |     |     |     |                       |             |                                     |  |  |   |          |  |   |                                  |         |                            |   |                               |                        |                           |                                 |   |  |                       |                 |       |   |   |               |            |             |                                     |  |  |   |                            |   |                               |                        |                           |                                 |   |  |                       |
|                     | LT 0907                  | 0908          |               | 259.69           | 258.84           |                |   |                |                |                 |                 |                                |                                     |                                     |                     |                     |        |        |                         |      |     |     |     |     |                       |             |                                     |  |  |   |          |  |   |                                  |         |                            |   |                               |                        |                           |                                 |   |  |                       |                 |       |   |   |               |            |             |                                     |  |  |   |                            |   |                               |                        |                           |                                 |   |  |                       |
| <b>SHEET TOTALS</b> |                          |               |               |                  |                  |                |   |                |                |                 |                 |                                |                                     |                                     | 12'                 |                     |        |        |                         |      |     |     |     |     |                       |             |                                     |  |  |   |          |  |   |                                  |         |                            |   |                               |                        |                           |                                 |   |  |                       |                 |       |   |   |               |            |             |                                     |  |  |   |                            |   |                               |                        |                           |                                 |   |  |                       |

ROADWAY DESIGN ENGINEER

DocuSigned by:  
David R. Stewart  
3/15/2019

STEWART

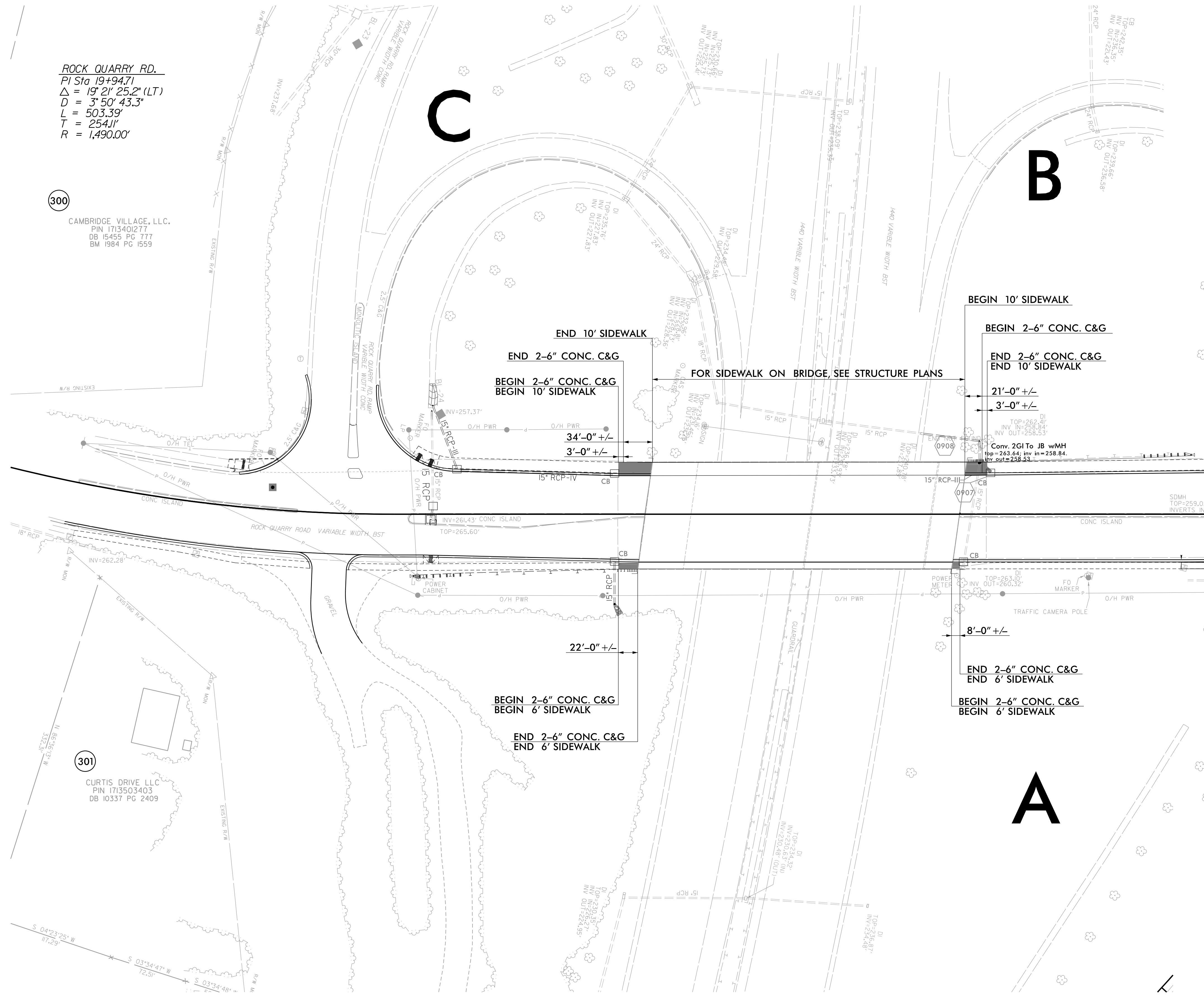
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UNLESS ALL SIGNATURES COMPLETED



ROCK QUARRY RD.  
PI Sta 19+94.71  
 $\Delta = 19^\circ 21' 25.2''$  (LT)  
 $D = 3^\circ 50' 43.3''$   
 $L = 503.39'$   
 $T = 254.11'$   
 $R = 1,490.00'$

300  
CAMBRIDGE VILLAGE, LLC.  
PIN 1713401277  
DB 15455 PG 777  
BM 1984 PG 1559

301  
CURTIS DRIVE, LLC  
PIN 1713503403  
DB 10337 PG 2409



REVISIONS

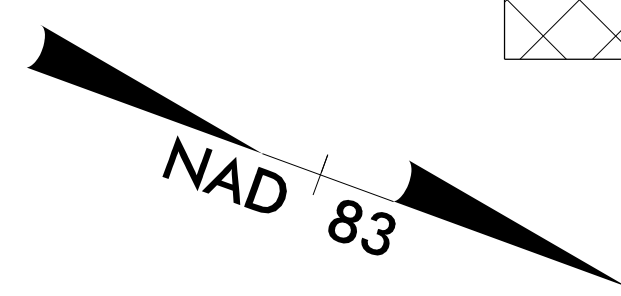
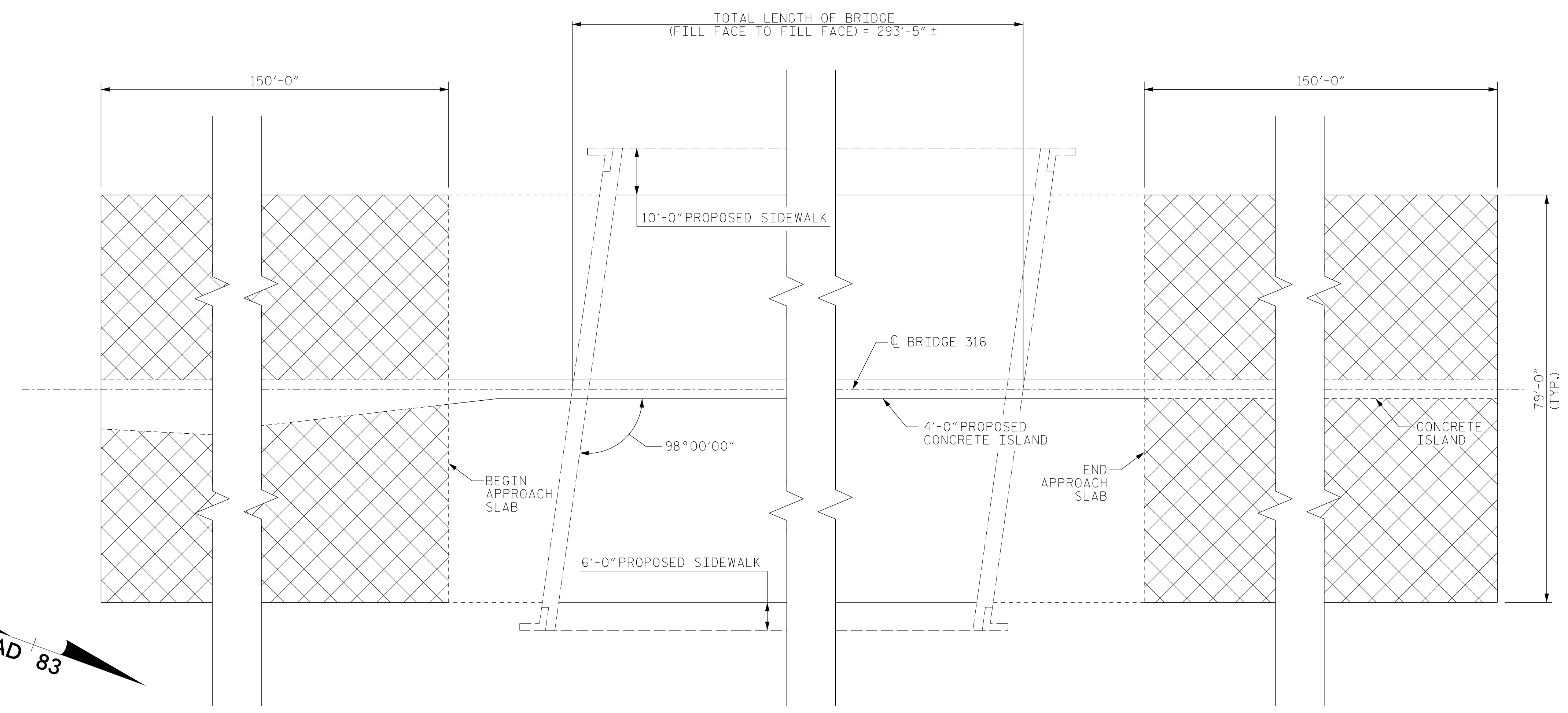
8/17/99

3/15/2019  
17BP.5.H.4  
Rock Quarry.dgn

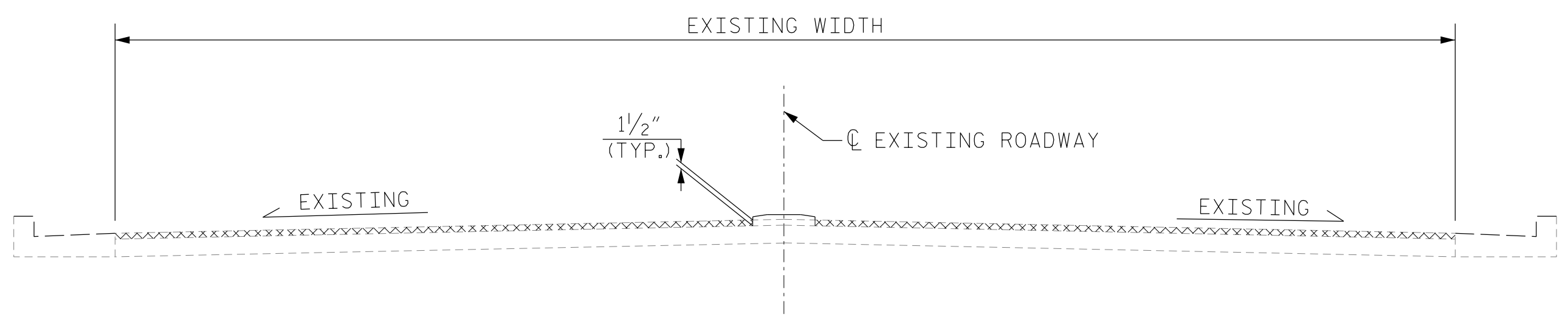


NOTES:  
 EXISTING APPROACH ASPHALT PAVING TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1/2" DEPTH TO ACCOMMODATE NEW ASPHALT PAVING. PROVIDE SMOOTH TRANSITION TO EXISTING ROADWAY AND TO BRIDGE APPROACH SLABS.

| SUMMARY OF QUANTITIES                       |               |        |
|---|---------------|--------|
|   | ESTIMATE      | ACTUAL |
| MILLING                                     | 2410 SQ. YDS. |        |
| ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B | 250 TONS      |        |



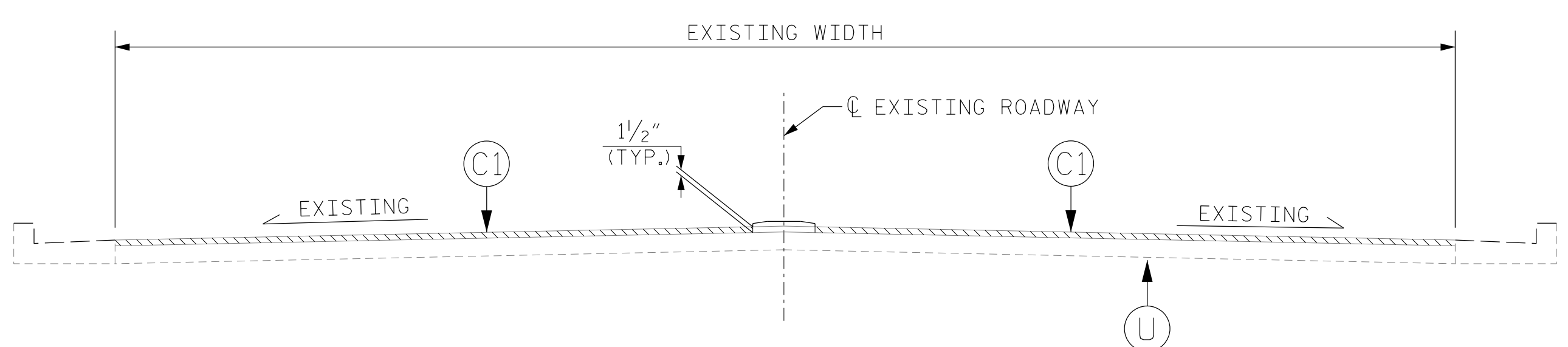
PLAN



TYPICAL ROADWAY MILLING SECTION

MILLING

|    |  |
|----|--|
| C1 | PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF 9.5B 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 1/2" IN DEPTH. |
| U  | EXISTING PAVEMENT  |



TYPICAL ROADWAY SECTION

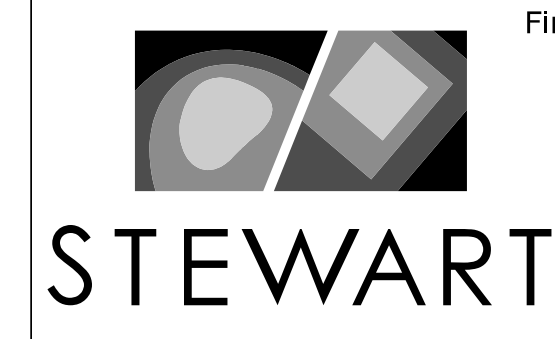
PROJECT NO. 17BP.5.H.4  
WAKE COUNTY  
 BRIDGE NO. 316



DocuSigned by:  
 David Ruggles  
 3/8/2018

DOCUMENT NOT CONSIDERED  
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 SIGNATURES COMPLETED

Firm License No. C-1051  
 421 Fayetteville St,  
 Suite 400  
 Raleigh, NC 27601  
 T 919.380.8750  
 www.stewartinc.com



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 SUPERSTRUCTURE  
 APPROACH MILLING  
 AND OVERLAY

| REVISIONS |     |       |     |     |       | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|-----------|
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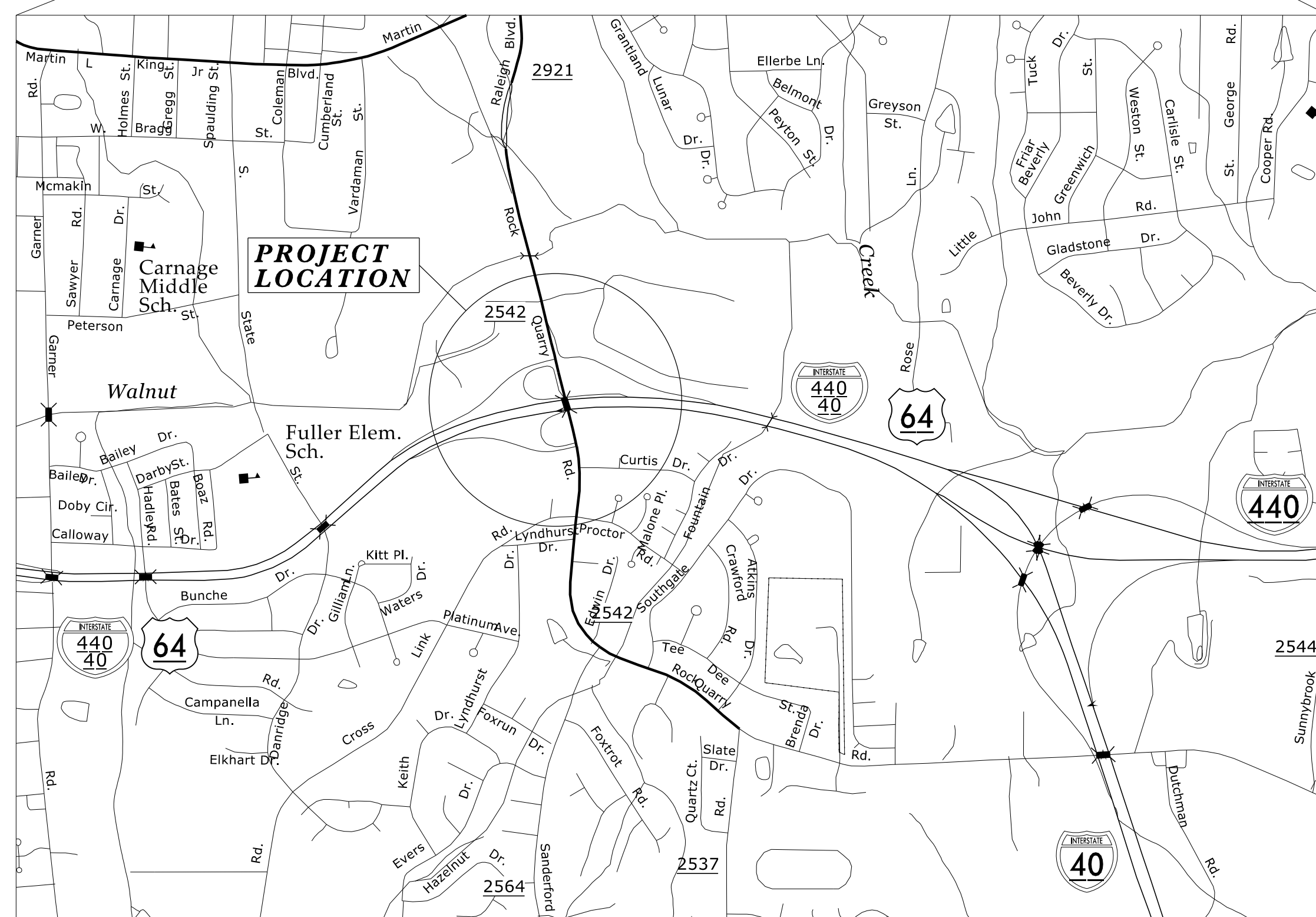
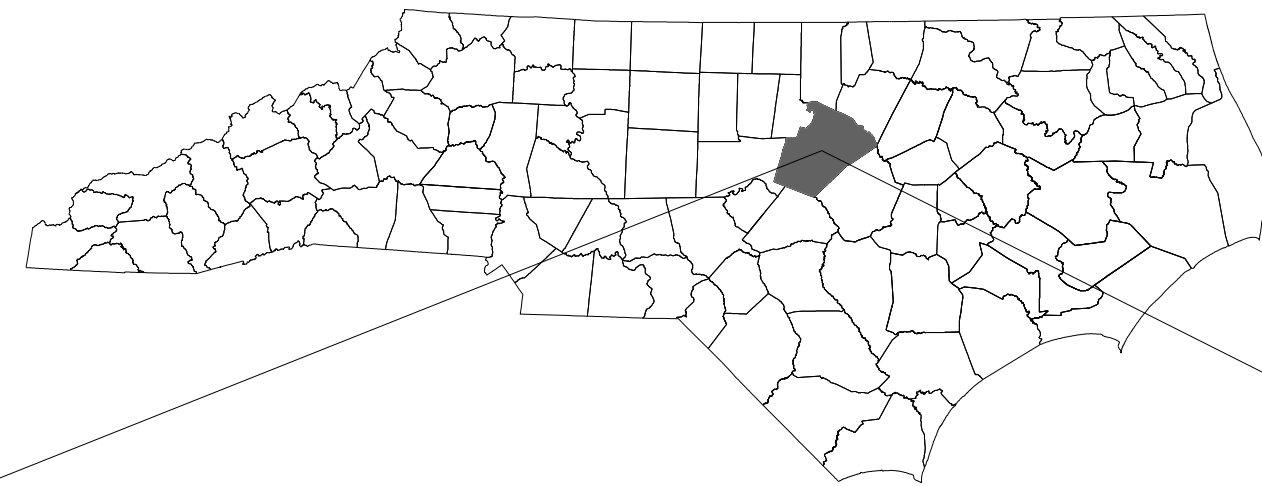
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 CHECKED BY: D. RUGGLES DATE: 09-17  
 DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 09-17

WAKE\_316  
 3/8/2018  
 \\026-RockQuarryRehab-ApproachMilling.dgn  
 USER:ephelps

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

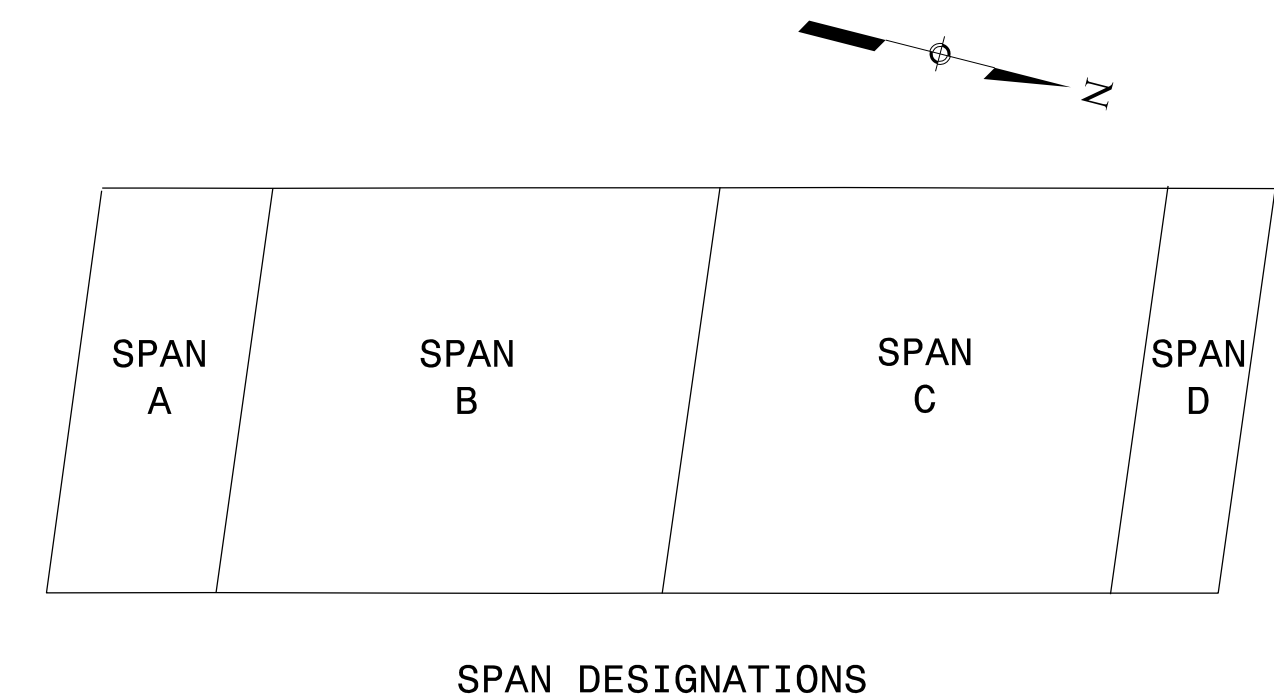
**WAKE COUNTY**



**LOCATION: BRIDGE #316 ON SR 2542 (ROCK QUARRY RD.) OVER I-40/I-440**  
**TYPE OF WORK: BRIDGE REHABILITATION**

**INDEX OF SHEETS**

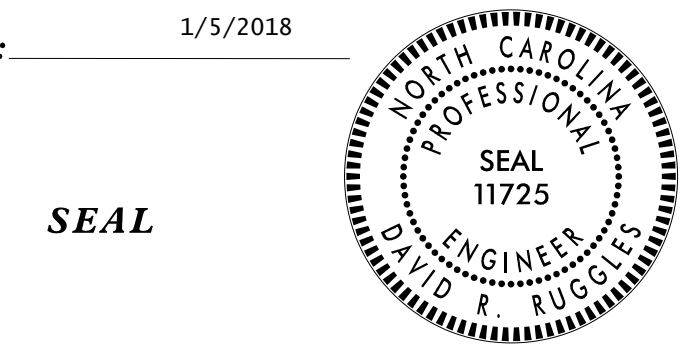
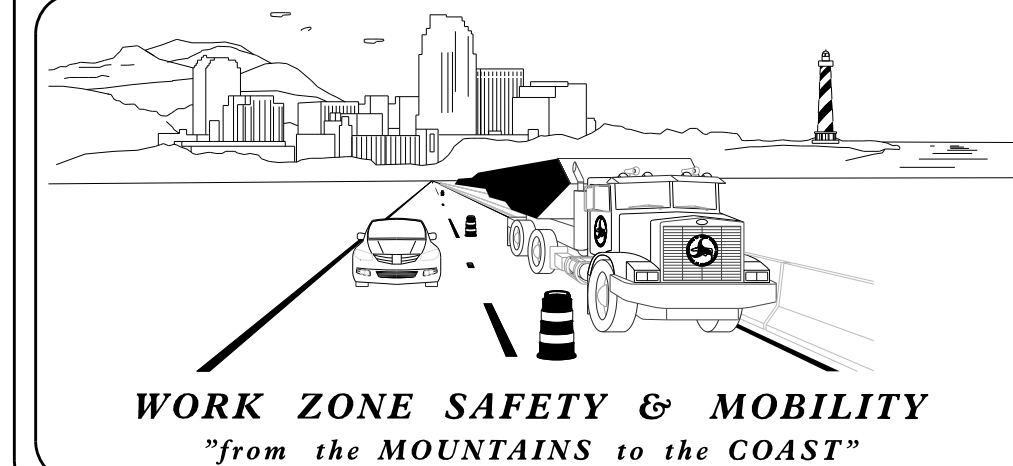
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|------------------|---|
| TMP-1            | TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS  |
| TMP-1A           | LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, PAVEMENT MARKING SCHEDULE AND MANAGEMENT STRATEGIES |
| TMP-1B           | GENERAL NOTES   |
| TMP-2            | NORTHBOUND CUT SECTIONS PHASE I THRU III  |
| TMP-2A           | SOUTHBOUND CUT SECTIONS PHASE IV THRU V   |
| TMP-2B           | CUT SECTIONS PHASE VI THRU VIII   |
| TMP-3            | TEMPORARY TRAFFIC CONTROL PHASING   |
| TMP-4 TO TMP-5   | TEMPORARY TRAFFIC CONTROL PHASE I DETAIL  |
| TMP-6 TO TMP-7   | TEMPORARY TRAFFIC CONTROL PHASE II DETAIL   |
| TMP-8 TO TMP-9   | TEMPORARY TRAFFIC CONTROL PHASE III DETAIL  |
| TMP-10 TO TMP-12 | TEMPORARY TRAFFIC CONTROL PHASE IV DETAIL   |
| TMP-13 TO TMP-14 | TEMPORARY TRAFFIC CONTROL PHASE V DETAIL  |
| TMP-15 TO TMP-16 | TEMPORARY TRAFFIC CONTROL PHASE IV.A DETAIL   |
| TMP-17 TO TMP-19 | TEMPORARY TRAFFIC CONTROL PHASE V.A DETAIL  |
| TMP-20 TO TMP-21 | TEMPORARY TRAFFIC CONTROL PHASE VI  |
| TMP-22 TO TMP-23 | TEMPORARY TRAFFIC CONTROL PHASE VII DETAIL  |
| TMP-24 TO TMP-25 | TEMPORARY TRAFFIC CONTROL PHASE VIII DETAIL   |



DAVID RUGGLES, PE            TRAFFIC CONTROL PROJECT ENGINEER  
ELIZABETH PHELPS, EI            TRAFFIC CONTROL PROJECT DESIGN ENGINEER

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UNLESS ALL SIGNATURES COMPLETED**

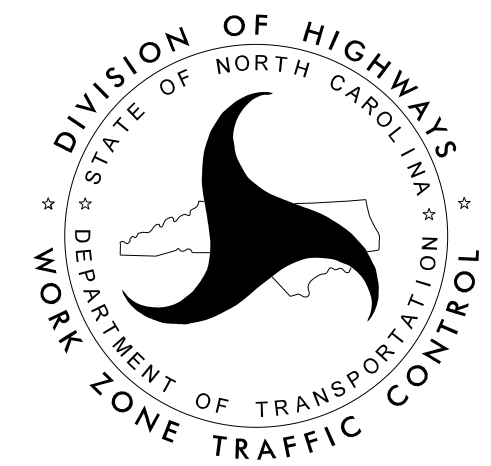
APPROVED: David Ruggles  
DATE: 1/5/2018

**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

JOSEPH HUMMER, PE            STATE TRAFFIC MANAGEMENT ENGINEER  
           TRAFFIC CONTROL PROJECT ENGINEER

MICHAEL STEELMAN            TRAFFIC CONTROL PROJECT DESIGN ENGINEER  
           TRAFFIC CONTROL DESIGN ENGINEER



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



## 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  |
|----------|--|
| 1101.01  | WORK ZONE ADVANCE WARNING SIGNS                      |
| 1101.02  | TEMPORARY LANE CLOSURES                              |
| 1101.04  | TEMPORARY SHOULDER CLOSURES                          |
| 1101.05  | WORK ZONE VEHICLE ACCESSES                           |
| 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  | DRUM   |
| 1135.01  | CONES  |
| 1145.01  | BARRICADES   |
| 1150.01  | FLAGGING DEVICES                                     |
| 1165.01  | WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION    |
| 1180.01  | SKINNY-DRUM  |
| 1205.01  | PAVEMENT MARKINGS - LINE TYPES AND OFFSETS           |
| 1205.02  | PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS |
| 1205.04  | PAVEMENT MARKINGS - INTERSECTIONS                    |
| 1205.05  | PAVEMENT MARKINGS - TURN LANES                       |
| 1205.06  | PAVEMENT MARKINGS - LANE DROPS                       |
| 1205.07  | PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS            |
| 1205.08  | PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES        |
| 1205.12  | PAVEMENT MARKINGS - BRIDGES                          |

## MANAGEMENT STRATEGIES

THE OBJECTIVE OF THIS PROJECT IS TO COMPLETE THE REHABILITATION OF THE HIGH VALUE BRIDGE #316 OVER I-40/I-440 ON SR 2542 (ROCK QUARRY RD) USING A SERIES OF NIGHT TIME LANE CLOSURES.

THE CONTRACTOR WILL ESTABLISH A PLAN OF ACTION / SEQUENCE OF CONSTRUCTION TO COMPLETE THE REHABILITATION AND UTILIZE THE PROVIDED LANE CLOSURES AS DESIRED.

NOTE: THE TIME RESTRICTIONS MAY VARY WITH EACH LANE CLOSURE.

## LEGEND

### GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.

- WORK AREA
- REMOVAL

### TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD (TYPE C)
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- CHANGEABLE MESSAGE SIGN

### TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

### SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

### PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

### PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS


### PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

### TEMPORARY PAVEMENT MARKING SCHEDULE

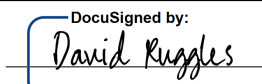
| SYMBOL                                  | DESCRIPTION                   | PAY ITEM   |
|---|-------------------------------|------------|
| <u>TEMPORARY PAVEMENT MARKING LINES</u> |                               |            |
|   |                               | PAINT (4") |
| P8                                      | 2 FT - 6 FT/SP WHITE MINISKIP |            |
| PB                                      | YELLOW EDGELINE               |            |
| PC                                      | 10 FT WHITE SKIP              |            |
| PD                                      | 3 FT - 9 FT/SP WHITE MINISKIP |            |

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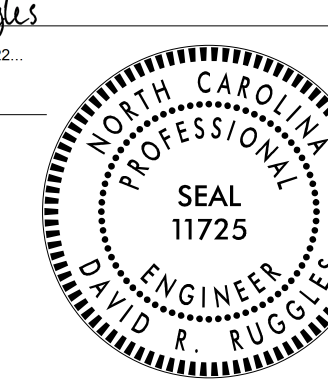


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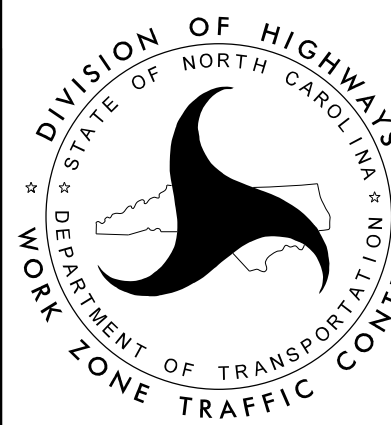
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DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
WORK ZONE TRAFFIC CONTROL

**TRANSPORTATION  
MANAGEMENT PLAN**

**ROADWAY STANDARD  
DRAWINGS, LEGEND,  
PAVEMENT MARKING SCHEDULE  
& MANAGEMENT STRATEGIES**



# 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:

| ROAD NAME   | DAY AND TIME RESTRICTIONS  |
|---|--|
| SR 2542 SB (ROCK QUARRY RD)<br>-CLOSE ONE LANE, TWO LANES OPEN  | 4:00 P.M. - 6:00 P.M. MONDAY THRU FRIDAY   |
| SR 2542 SB (ROCK QUARRY RD)<br>-CLOSE TWO LANES, ONE LANE OPEN  | 7:00 A.M. - 10:00 P.M. MONDAY THRU FRIDAY<br>10:00 A.M. - 10:00 P.M. SATURDAY<br>10:00 A.M. - 9:00 P.M. SUNDAY |
| SR 2542 NB (ROCK QUARRY RD)<br>-CLOSE ONE LANE, ONE LANE OPEN<br>RAMP C (I-40 EB)<br>-CLOSE ONE TURN LANE | 6:00 A.M. - 10:00 P.M. MONDAY THRU FRIDAY<br>9:00 A.M. - 10:00 P.M. SATURDAY<br>10:00 A.M. - 9:00 P.M. SUNDAY  |
| I-40<br>-CLOSE ONE LANE   | 5:00 A.M. - 9:00 P.M. MONDAY THRU FRIDAY<br>6:00 A.M. - 11:00 P.M. SATURDAY THRU SUNDAY                        |

NB DENOTES NORTHBOUND AND SB DENOTES SOUTHBOUND.

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

| ROAD NAME                | HOLIDAY   |
|--------------------------|---|
| SR 2542 (ROCK QUARRY RD) | <ol style="list-style-type: none"> <li>FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.</li> <li>FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31ST TO 10:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 10:00 P.M. THE FOLLOWING TUESDAY.</li> <li>FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 10:00 P.M. MONDAY.</li> <li>FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 10:00 P.M. TUESDAY.</li> <li>FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 10:00 P.M. THE DAY AFTER INDEPENDENCE DAY.<br/><br/>IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 10:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.</li> <li>FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 10:00 P.M. TUESDAY.</li> <li>FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 10:00 P.M. MONDAY.</li> <li>FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 10:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.</li> </ol> |

| ROAD NAME | HOLIDAY   |
|-----------|---|
| I-40      | <ol style="list-style-type: none"> <li>FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.</li> <li>FOR NEW YEAR'S, BETWEEN THE HOURS OF 5:00 A.M. DECEMBER 31ST TO 9:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 9:00 P.M. THE FOLLOWING TUESDAY.</li> </ol> |

- FOR EASTER, BETWEEN THE HOURS OF 5:00 A.M. THURSDAY AND 9:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 5:00 A.M. FRIDAY TO 9:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 5:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE DAY AFTER INDEPENDENCE DAY.  
  
IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 5:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 5:00 A.M. FRIDAY AND 9:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 5:00 A.M. TUESDAY TO 9:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 5:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

**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 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.

**PAVEMENT EDGE DROP OFF REQUIREMENTS**

- BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:  
  
BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.  
  
BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.  
  
BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.
- DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

**TRAFFIC PATTERN ALTERATIONS**

- NOTIFY THE ENGINEER THIRTY (30) 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.
- INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 200 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

**TRAFFIC CONTROL DEVICES**

- 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.
- PLACE TYPE II - ADA COMPLIANT PEDESTRIAN BARRICADES (SAFETY RAIL), WITH "SIDEWALK CLOSED" SIGN R9-9 OR 9-11A ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE SIDEWALK.
- PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

**PAVEMENT MARKINGS AND MARKERS**

- INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:


| ROAD NAME                | MARKING | MARKER |
|--------------------------|---------|--------|
| SR 2542 (ROCK QUARRY RD) | PAINT   | N/A    |

- PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.
- TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.
- TRACE THE EXISTING AND PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO REMOVAL AND INSTALLATION. PLACE DRUMS TO DELINEATE ANY EXISTING AND PROPOSED MONOLITHIC ISLANDS AFTER REMOVAL AND BEFORE INSTALLATION

**MISCELLANEOUS**

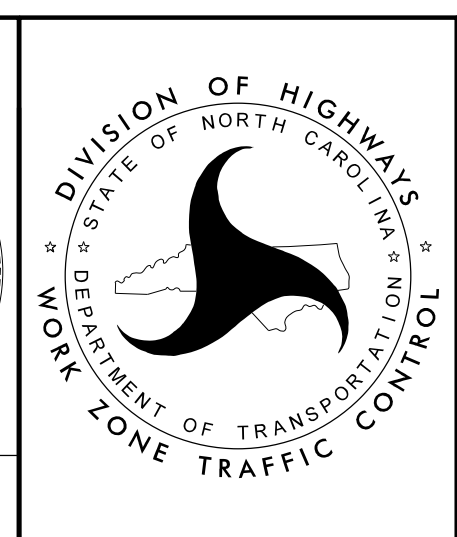
- LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.
- CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS AT ALL TIMES AS STATED IN THE PHASING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY SIDEWALKS (CONCRETE, ASPHALT, OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER) AT ALL LOCATIONS WHERE THE OPEN PEDESTRIAN TRAVELWAY HAS BEEN REMOVED FOR CONSTRUCTION OPERATIONS (UTILITIES, DRAINAGE, ETC.).

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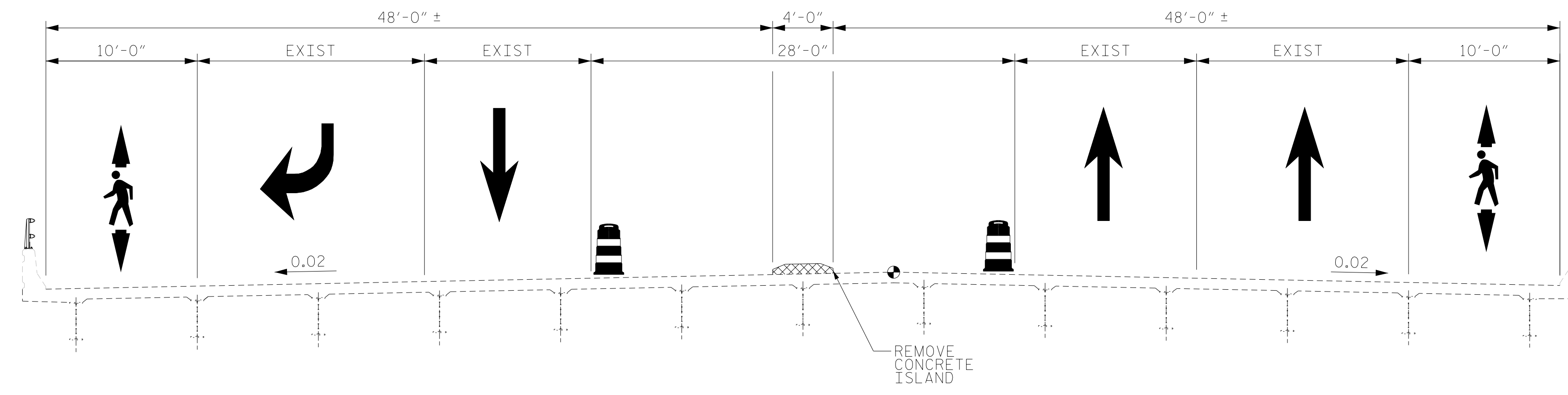
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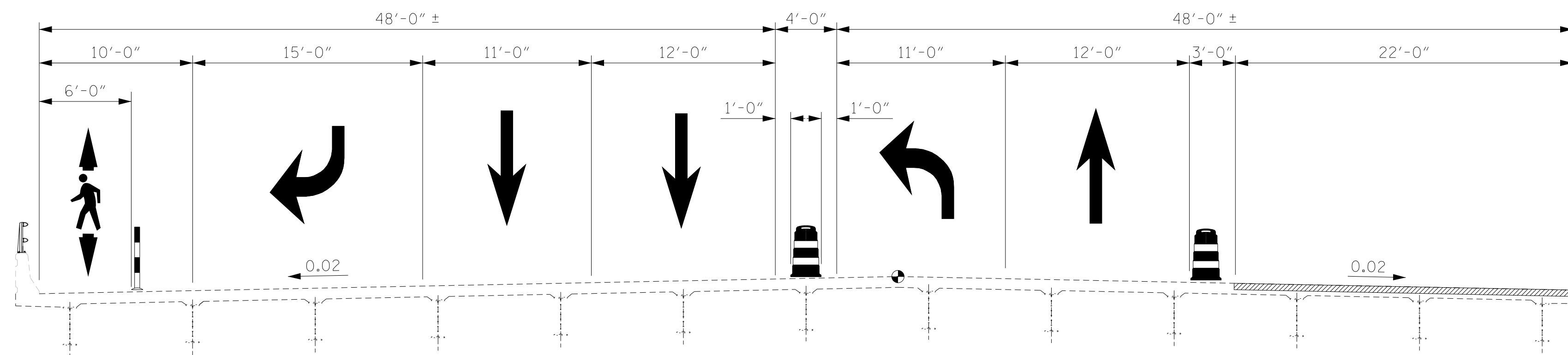
**TRANSPORTATION  
MANAGEMENT PLAN**  
  
**GENERAL NOTES**

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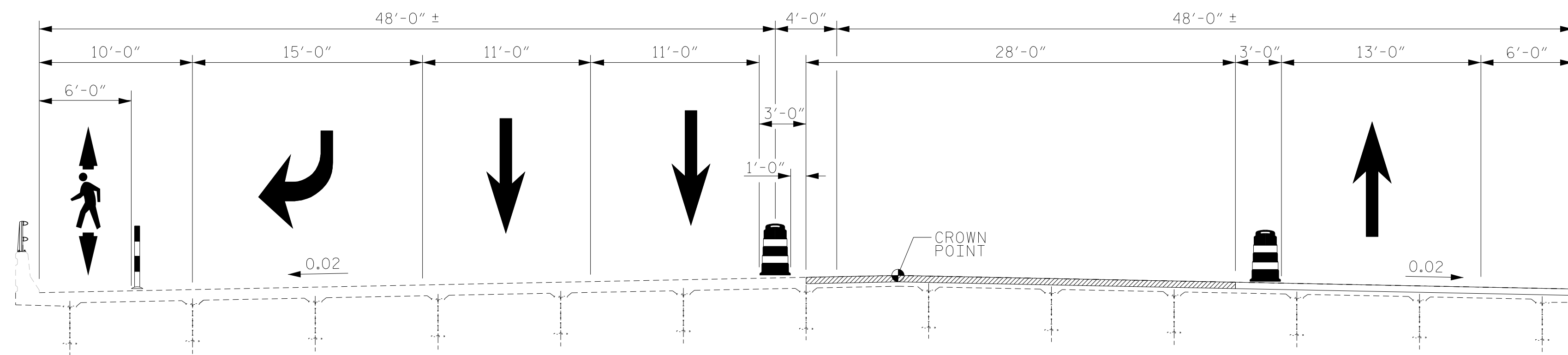
PHASE I  
P1


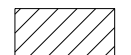



PHASE II  
NB2



PHASE III  
NB3




-  DENOTES REMOVAL OF CONCRETE ISLAND
-  DENOTES AREA FOR POLYESTER POLYMER CONCRETE OVERLAY
-  DENOTES AREA THAT HAS RECEIVED POLYESTER POLYMER CONCRETE OVERLAY

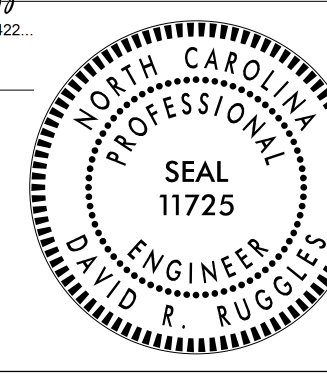


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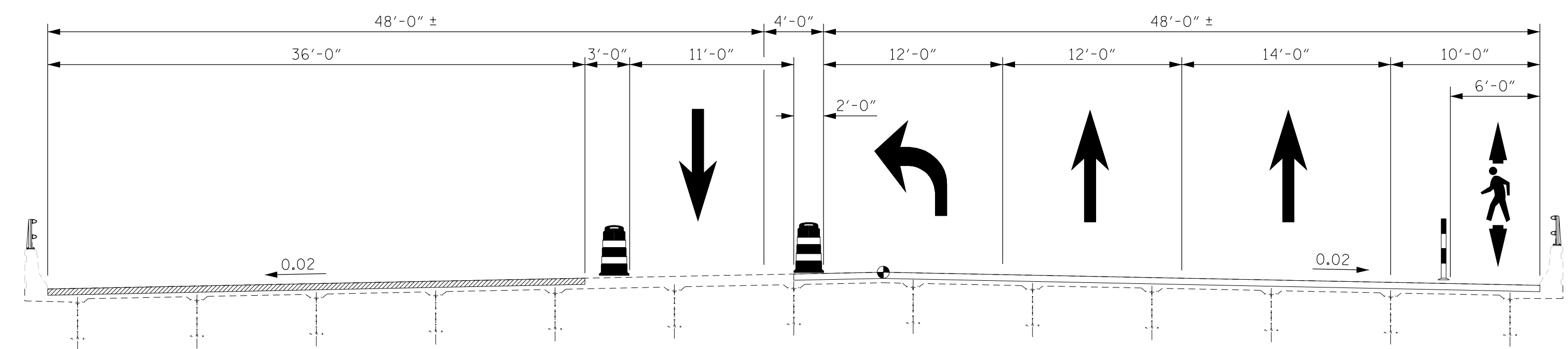
TRANSPORTATION  
MANAGEMENT PLAN

**NORTHBOUND  
CUT SECTIONS**

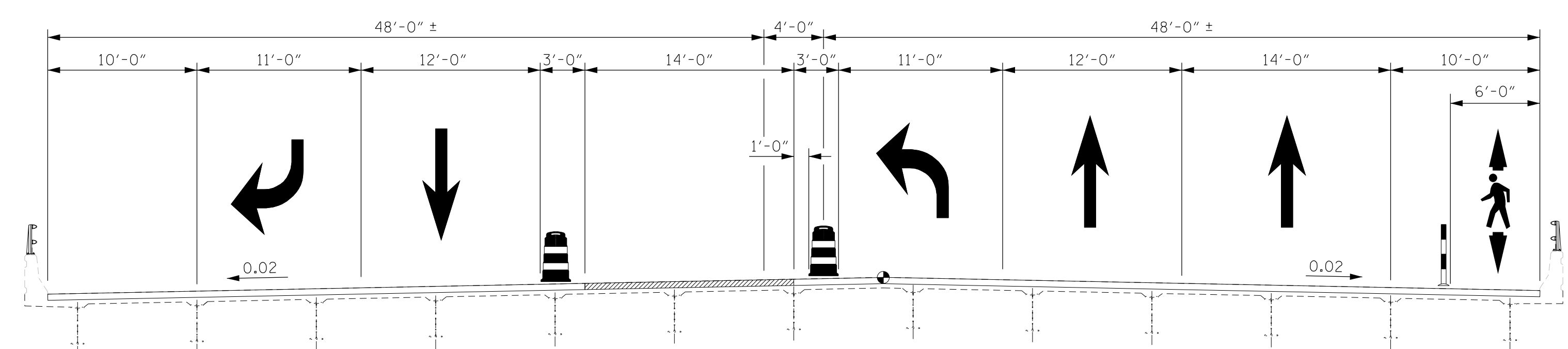
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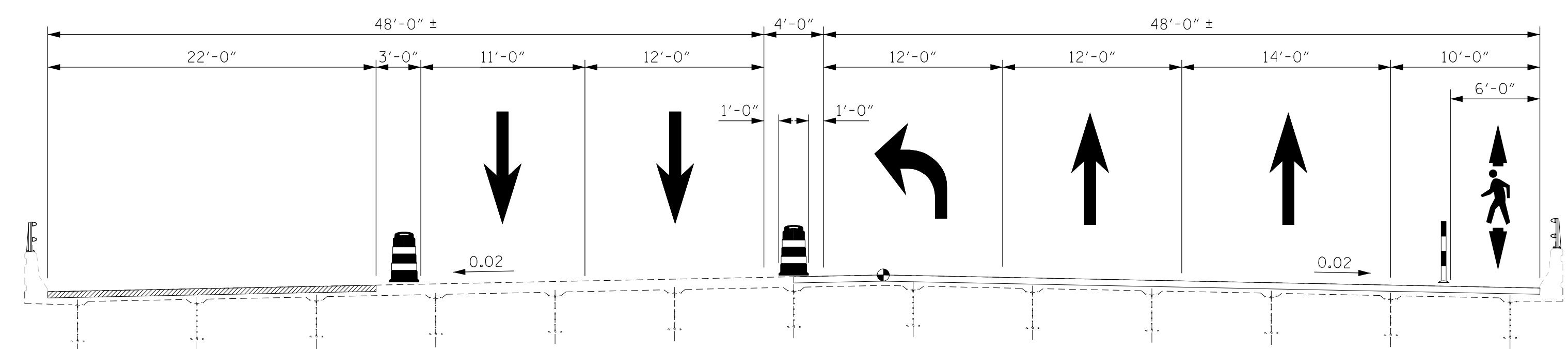
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SB4



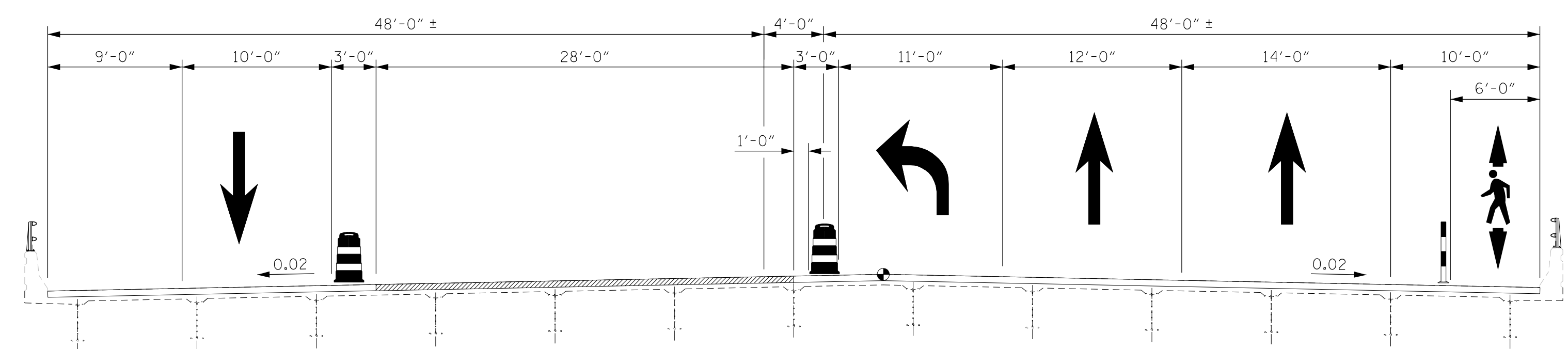
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SB5

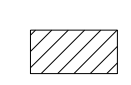
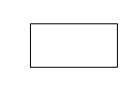



PHASE IV.A  
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SB4A

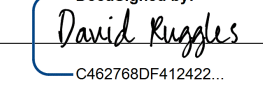
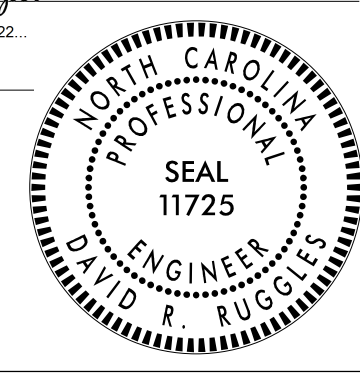


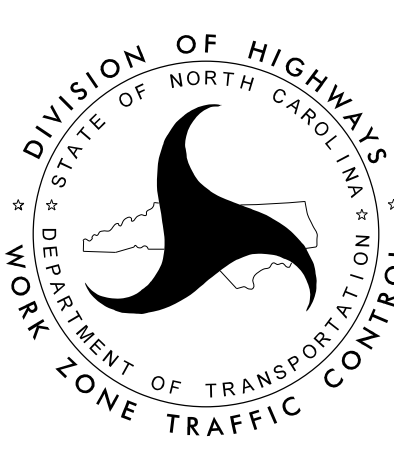
PHASE V.A  
ALTERNATE  
SB5A



 DENOTES AREA FOR POLYESTER POLYMER CONCRETE OVERLAY  
 DENOTES AREA THAT HAS RECEIVED POLYESTER POLYMER CONCRETE OVERLAY

  
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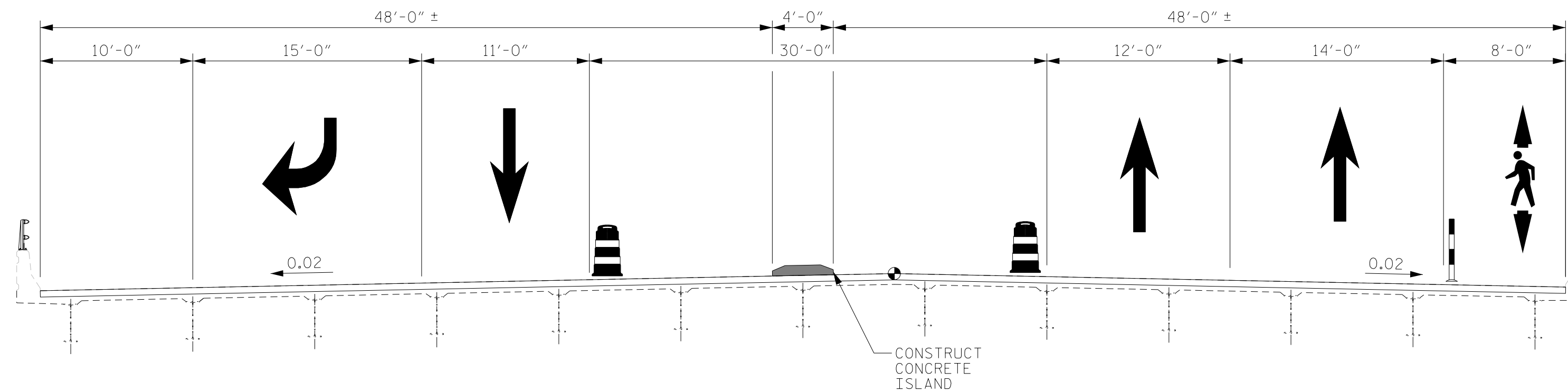


TRANSPORTATION  
 MANAGEMENT PLAN  
  
**SOUTHBOUND  
 CUT SECTIONS**

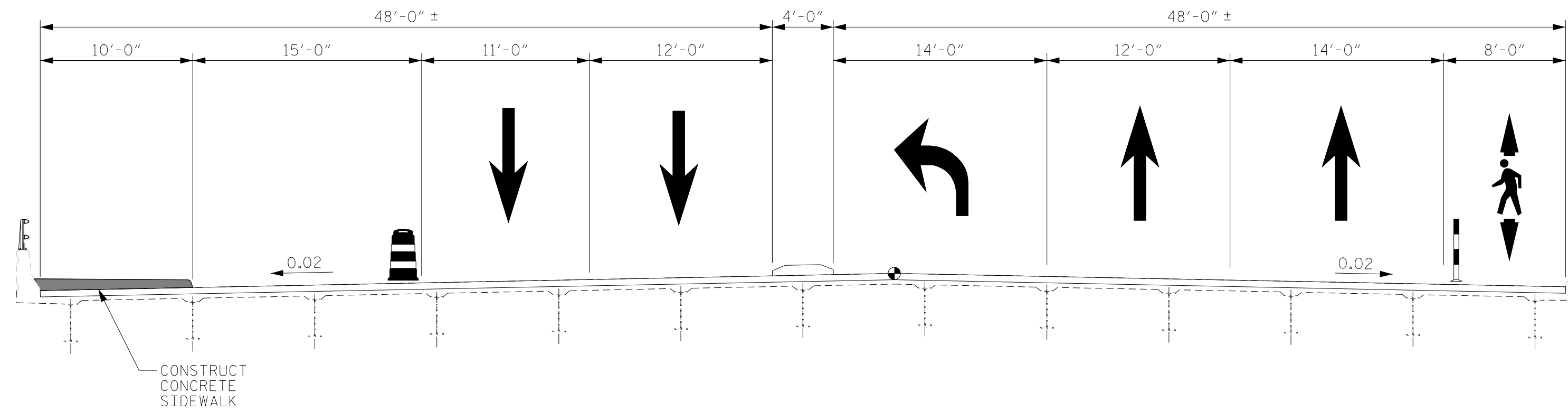
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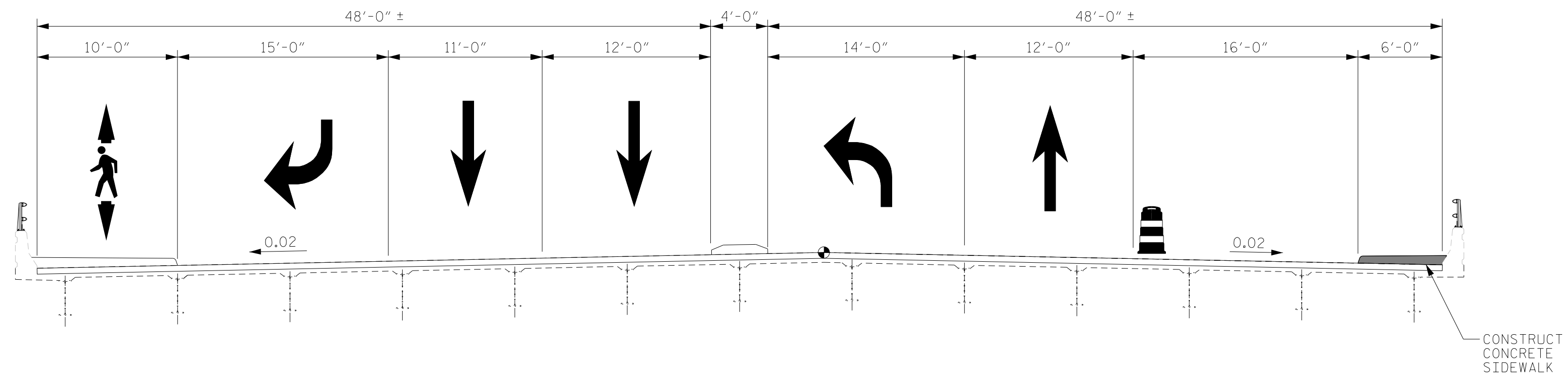
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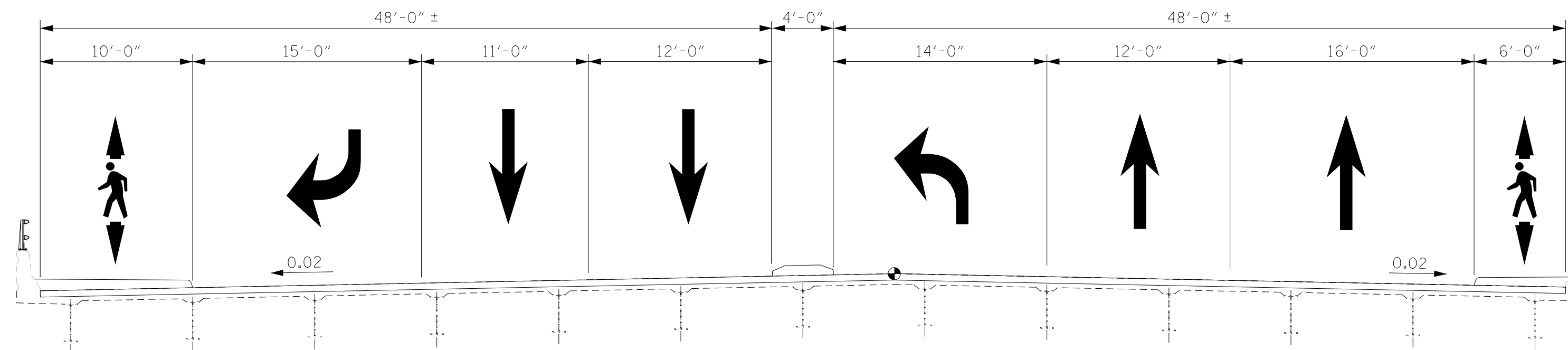
PHASE VII  
P7



PHASE VIII  
P8



FINAL  
TRAFFIC  
PATTERN



- DENOTES CONSTRUCTION OF CONCRETE ISLAND AND SIDEWALK
- DENOTES AREA THAT HAS RECEIVED POLYESTER POLYMER CONCRETE OVERLAY

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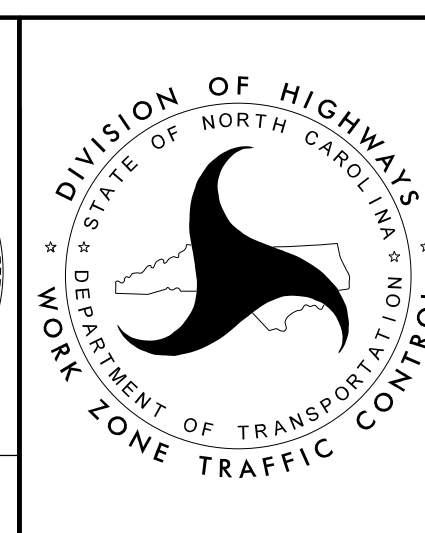
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NORTH CAROLINA PROFESSIONAL ENGINEER  
DAVID R. RUGGLES

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TRANSPORTATION  
MANAGEMENT PLAN

CUT SECTIONS

# PHASING

## NOTES

REPLACE MARKINGS AND RETURN TRAFFIC TO THE CURRENT TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD UNLESS OTHERWISE NOTED IN THE PHASING OR AS DIRECTED BY THE ENGINEER. TEMPORARY MARKINGS SHALL MATCH "FINAL TRAFFIC PATTERN" TYPICAL SECTION SHOWN ON TMP-2B.

MAINTAIN VEHICULAR ACCESS TO ALL BUSINESSES DURING THE LIFE OF THE CONTRACT UNLESS OTHERWISE NOTED IN THE PHASING OR AS DIRECTED BY THE ENGINEER.

THE TERM RSD DENOTES "ROADWAY STANDARD DRAWING".

THE TERM SB DENOTES "SOUTHBOUND" AND NB DENOTES "NORTHBOUND".

THE TERM PPC DENOTES "POLYESTER POLYMER CONCRETE".

PHASING BELOW STARTS ON RIGHT SIDE OF BRIDGE (LOOKING UPSTATION). CONTRACTOR MAY START ON LEFT SIDE OF BRIDGE PROVIDED REVISED WORK PLAN IS SUBMITTED TO AND APPROVED BY ENGINEER.

CONTRACTOR TO PERFORM SURFACE PREPARATION, SHOTBLASTING AND PPC OVERLAY FOR ONE SPAN PER EVENING FOR EACH PHASE. CONTRACTOR MAY PERFORM SURFACE PREPARATION, SHOTBLASTING AND PPC OVERLAY FOR UP TO FOUR SPANS PER EVENING PROVIDED WORK CAN BE COMPLETED AND CONCRETE CURED WITHIN TIME RESTRICTIONS PROVIDED. CONTRACTOR MUST PLACE PPC OVERLAY FOR A COMPLETE SPAN DURING EVENING OPERATIONS; PARTIAL SPAN PLACEMENT OF PPC OVERLAY IS NOT ALLOWED.

## PHASE I

- STEP 1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ON ROCK QUARRY RD (SR 2542) AND I-440 RAMPS AND LOOPS ACCORDING TO RSD 1101.01.
- STEP 2: PLACE ADVANCE SIGNING AND CLOSE CENTER SB LANE AND CENTER NB LANE OF ROCK QUARRY ROAD AS SHOWN IN PHASE I DETAIL. DEMOLISH EXISTING CONCRETE ISLAND ON BRIDGE AS SHOWN ON TYPICAL P1 AND REMOVE MATERIAL OFF SITE. SWEEP UP ANY LOOSE DEBRIS AND PLACE DRUMS AT PREVIOUS ISLAND LOCATION.

## PHASE II

- STEP 1: PLACE TEMPORARY SIGNING, BARRICADES, AND TUBULAR MARKERS AND DETOUR PEDESTRIAN TRAFFIC TO WEST SIDE OF ROCK QUARRY ROAD AS SHOWN ON PHASE II DETAIL.
- STEP 2: PLACE ADVANCE SIGNING AND CLOSE NB ROCK QUARRY RIGHT LANE AND RIGHT SHOULDER TO TRAFFIC AS SHOWN ON PHASE II DETAIL.
- STEP 3: PERFORM SHOTBLASTING AND PLACE PPC OVERLAY ON APPROACH SLAB 1 & SPAN A, RIGHT LANE AND SHOULDER, AS SHOWN ON TYPICAL NB2. PERFORM JOINT DEMOLITION AND TEMPORARY/PERMANENT JOINT REPLACEMENT AS REQUIRED. REPEAT STEP 3 FOR SPANS B, C, D, AND APPROACH SLAB 2.
- STEP 4: PLACE TEMPORARY PAVEMENT MARKINGS AS REQUIRED, MATCHING "FINAL TRAFFIC PATTERN" TYPICAL SECTION.
- STEP 5: OPEN NB ROCK QUARRY RIGHT LANE TO TRAFFIC. KEEP PEDESTRIAN DETOUR AND BARRICADES IN PLACE.

## PHASE III

- STEP 1: PLACE ADVANCE SIGNING AND CLOSE NB ROCK QUARRY MIDDLE LANE AND LEFT TURN LANE TO TRAFFIC AS SHOWN ON PHASE III DETAIL.
- STEP 2: PERFORM SHOTBLASTING AND PLACE PPC OVERLAY ON APPROACH SLAB 1 & SPAN A, MIDDLE LANE AND LEFT TURN LANE, AS SHOWN ON TYPICAL NB3. PERFORM JOINT DEMOLITION AND TEMPORARY/PERMANENT JOINT REPLACEMENT AS REQUIRED. REPEAT STEP 2 FOR SPANS B, C, D, AND APPROACH SLAB 2.
- STEP 3: PLACE TEMPORARY PAVEMENT MARKINGS AS REQUIRED, MATCHING "FINAL TRAFFIC PATTERN" TYPICAL SECTION.
- STEP 4: OPEN NB ROCK QUARRY MIDDLE LANE AND LEFT TURN LANE TO TRAFFIC. REMOVE PEDESTRIAN DETOUR, BARRICADES, AND TUBULAR MARKERS.

## PHASE IV

- STEP 1: PLACE TEMPORARY SIGNING, BARRICADES AND TUBULAR MARKERS AND DETOUR PEDESTRIAN TRAFFIC TO EAST SIDE OF ROCK QUARRY ROAD AS SHOWN ON PHASE IV DETAIL.
- STEP 2: PLACE ADVANCE SIGNING AND CLOSE SB ROCK QUARRY MIDDLE LANE, RIGHT TURN LANE AND RIGHT SHOULDER (LEFT TWO LANES AND LEFT SHOULDER LOOKING UP STATION) TO TRAFFIC AS SHOWN ON PHASE IV DETAIL.
- STEP 3: PERFORM SHOTBLASTING AND PLACE PPC OVERLAY ON APPROACH SLAB 1 & SPAN A, MIDDLE LANE, RIGHT TURN LANE AND SHOULDER, AS SHOWN ON TYPICAL SB4. PERFORM JOINT DEMOLITION AND TEMPORARY/PERMANENT JOINT REPLACEMENT AS REQUIRED. REPEAT STEP 3 FOR SPANS B, C, D, AND APPROACH SLAB 2.
- STEP 4: PLACE TEMPORARY PAVEMENT MARKINGS AS REQUIRED, MATCHING "FINAL TRAFFIC PATTERN" TYPICAL SECTION.
- STEP 5: OPEN SB ROCK QUARRY MIDDLE LANE, RIGHT TURN LANE, AND SHOULDER TO TRAFFIC. KEEP PEDESTRIAN DETOUR AND BARRICADES IN PLACE.

## PHASE V

- STEP 1: PLACE ADVANCE SIGNING AND CLOSE SB ROCK QUARRY INSIDE LANE TO TRAFFIC AS SHOWN ON PHASE V DETAIL.
- STEP 2: PERFORM SHOTBLASTING AND PLACE PPC OVERLAY ON APPROACH SLAB 1 & SPAN A, INSIDE LANE, AS SHOWN ON TYPICAL SB5. PERFORM JOINT DEMOLITION AND TEMPORARY/PERMANENT JOINT REPLACEMENT AS REQUIRED. REPEAT STEP 2 FOR SPANS B, C, D AND APPROACH SLAB 2.
- STEP 3: PLACE TEMPORARY PAVEMENT MARKINGS AS REQUIRED, MATCHING "FINAL TRAFFIC PATTERN" TYPICAL SECTION.
- STEP 4: OPEN SB ROCK QUARRY INSIDE LANE TO TRAFFIC. KEEP PEDESTRIAN DETOUR AND BARRICADES IN PLACE.

## PHASE IV (ALTERNATE)

- STEP 1: PLACE BARRICADES AND TUBULAR MARKERS AND DETOUR PEDESTRIAN TRAFFIC TO EAST SIDE OF ROCK QUARRY ROAD AS SHOWN ON PHASE IV.A DETAIL.
- STEP 2: PLACE ADVANCE SIGNING AND CLOSE SB ROCK QUARRY RIGHT TURN LANE AND RIGHT SHOULDER (LEFT LANE AND LEFT SHOULDER LOOKING UP STATION) TO TRAFFIC AS SHOWN ON PHASE IV.A DETAIL.
- STEP 3: PERFORM SHOTBLASTING AND PLACE PPC OVERLAY ON APPROACH SLAB 1 & SPAN A, RIGHT TURN LANE AND SHOULDER, AS SHOWN ON TYPICAL SB4A. PERFORM JOINT DEMOLITION AND TEMPORARY/PERMANENT JOINT REPLACEMENT AS REQUIRED. REPEAT STEP 3 FOR SPANS B, C, D AND APPROACH SLAB 2.
- STEP 4: PLACE TEMPORARY PAVEMENT MARKINGS AS REQUIRED, MATCHING "FINAL TRAFFIC PATTERN" TYPICAL SECTION.
- STEP 5: OPEN SB ROCK QUARRY RIGHT TURN LANE AND SHOULDER TO TRAFFIC. KEEP PEDESTRIAN DETOUR AND BARRICADES IN PLACE.

## PHASE V (ALTERNATE)

- STEP 1: PLACE ADVANCE SIGNING AND CLOSE SB ROCK QUARRY MIDDLE LANE AND INSIDE LANE TO TRAFFIC AS SHOWN ON PHASE V.A DETAIL.
- STEP 2: PERFORM SHOTBLASTING AND PLACE PPC OVERLAY ON APPROACH SLAB 1 & SPAN A, MIDDLE LANE AND INSIDE LANE, AS SHOWN ON TYPICAL SB5A. PERFORM JOINT DEMOLITION AND TEMPORARY/PERMANENT JOINT REPLACEMENT AS REQUIRED. REPEAT STEP 2 FOR SPANS B, C, D AND APPROACH SLAB 2.
- STEP 3: PLACE TEMPORARY PAVEMENT MARKINGS AS REQUIRED, MATCHING "FINAL TRAFFIC PATTERN" TYPICAL SECTION.
- STEP 4: OPEN SB ROCK QUARRY MIDDLE LANE AND INSIDE LANE TO TRAFFIC. KEEP PEDESTRIAN DETOUR AND BARRICADES IN PLACE.

## PHASE VI

- STEP 1: PLACE ADVANCE SIGNING AND CLOSE NB AND SB ROCK QUARRY CENTER LANES TO TRAFFIC AS SHOWN ON PHASE VI DETAIL.
- STEP 2: CONSTRUCT NEW CONCRETE ISLAND AS SHOWN ON TYPICAL P6.
- STEP 3: OPEN ROCK QUARRY CENTER LANES TO TRAFFIC. KEEP PEDESTRIAN DETOUR AND BARRICADES IN PLACE.

## PHASE VII

- STEP 1: PLACE ADVANCE SIGNING AND CLOSE SB ROCK QUARRY RIGHT TURN LANE TO TRAFFIC AS SHOWN ON PHASE VII DETAIL.
- STEP 2: CONSTRUCT NEW CONCRETE SIDEWALK AS SHOWN ON TYPICAL P7.
- STEP 3: OPEN SB ROCK QUARRY RIGHT TURN LANE TO TRAFFIC. REMOVE PEDESTRIAN DETOUR, BARRICADES, AND TUBULAR MARKERS.

## PHASE VIII

- STEP 1: PLACE BARRICADES AND TUBULAR MARKERS AND DETOUR PEDESTRIAN TRAFFIC TO WEST SIDE OF ROCK QUARRY ROAD, AS SHOWN ON PHASE VIII DETAIL.
- STEP 2: PLACE ADVANCE SIGNING AND CLOSE NB ROCK QUARRY RIGHT LANE TO TRAFFIC AS SHOWN ON PHASE VIII DETAIL.
- STEP 3: CONSTRUCT NEW CONCRETE SIDEWALK AS SHOWN ON TYPICAL P8.
- STEP 4: OPEN NB ROCK QUARRY RIGHT LANE TO TRAFFIC. REMOVE PEDESTRIAN DETOUR, BARRICADES, AND TUBULAR MARKERS.


## PHASE IX

- STEP 1: PLACE 150 FEET OF ASPHALT ON ROCK QUARRY ROAD ON NORTH SIDE OF BRIDGE AND 150 FEET OF ASPHALT ON SOUTH SIDE OF BRIDGE AS SHOWN ON PAVEMENT MARKING PLANS.
- STEP 2: PLACE FINAL PAVEMENT MARKINGS ON BRIDGE AND ON NEW ASPHALT SURFACES AS SHOWN ON PAVEMENT MARKING PLANS.
- STEP 3: COMPLETE ALL WORK AS REQUIRED BY PLAN DOCUMENTS AND REMOVE ALL TEMPORARY SIGNING.

2/18/2019  
...007\_RockQuarry\_Phasing01.dgn  
USER:default




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C462780DF412422...

DATE: 2/19/2019

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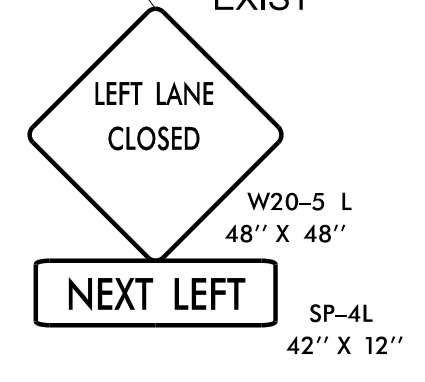
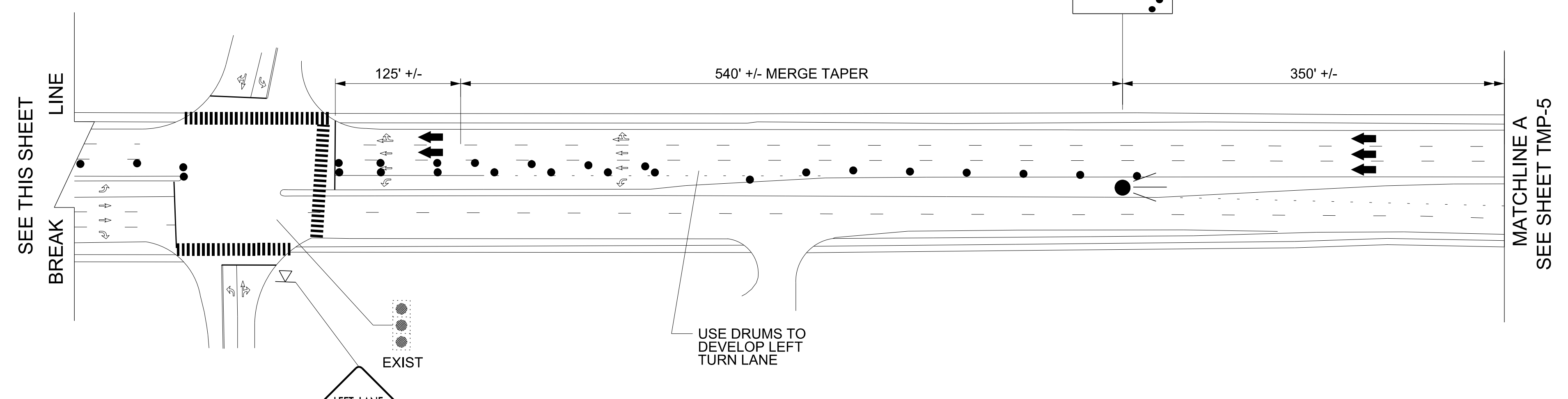
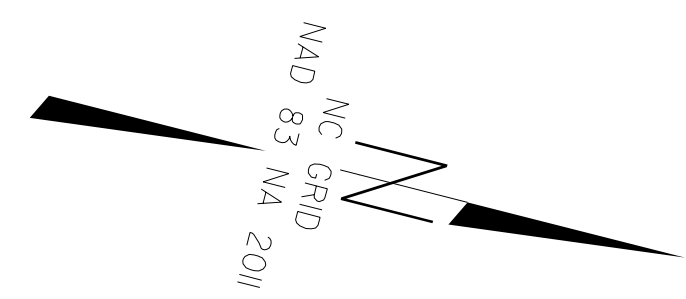
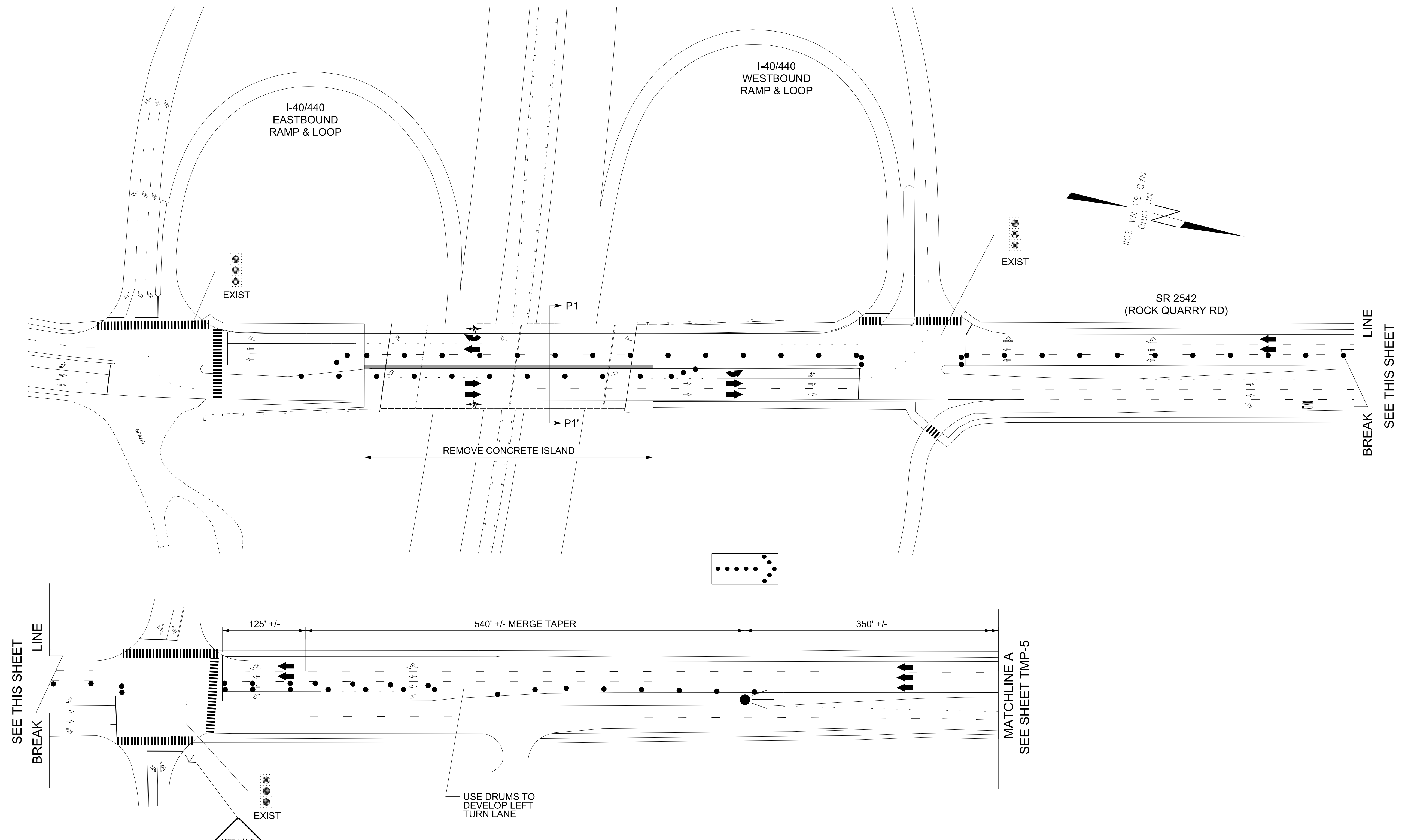


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PHASING





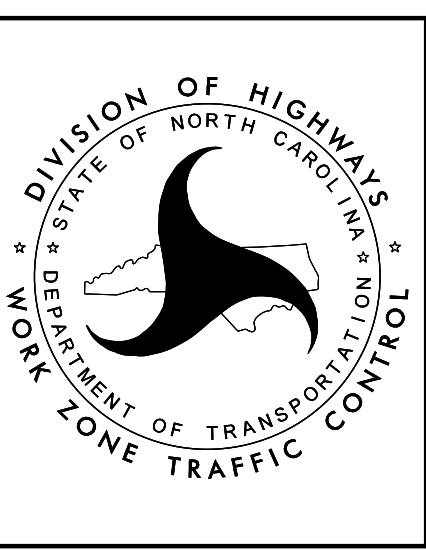
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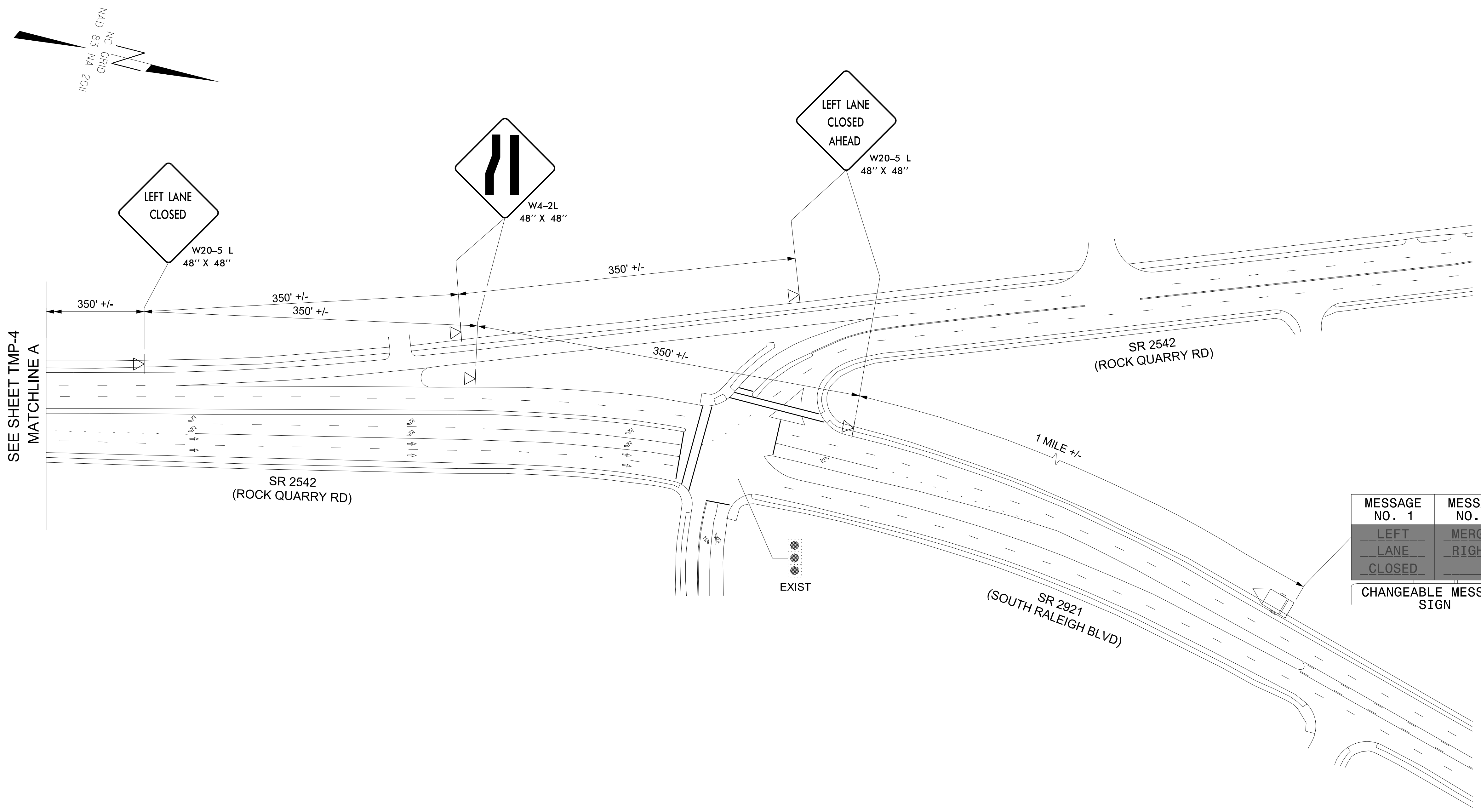
TRANSPORTATION  
 MANAGEMENT PLAN

**PHASE I DETAIL**

LINE  
 BREAK  
 SEE THIS SHEET

SEE THIS SHEET  
 LINE  
 BREAK

MATCHLINE A  
 SEE SHEET TMP-5



|                         |               |
|-------------------------|---------------|
| MESSAGE NO. 1           | MESSAGE NO. 2 |
| LEFT LANE CLOSED        | MERGE RIGHT   |
| CHANGEABLE MESSAGE SIGN |               |

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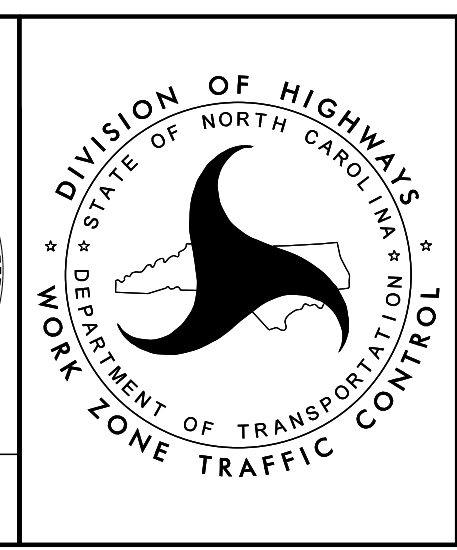
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SEAL  
 11725  
 ENGINEER  
 DAVID R. RUGGLES

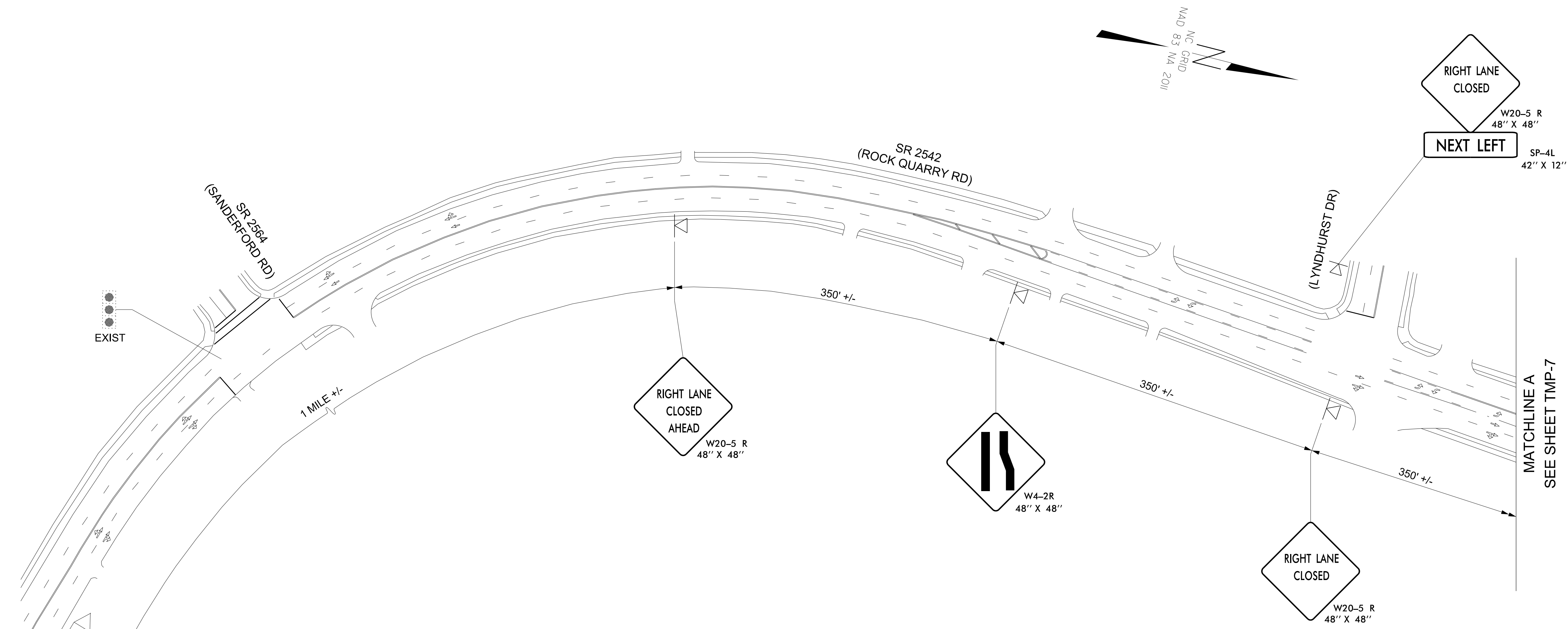


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**PHASE I DETAIL**

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EXIST

SR 2564  
(SANDERFORD RD)

SR 2542  
(ROCK QUARRY RD)

(LYNDHURST DR)

1 MILE +/-

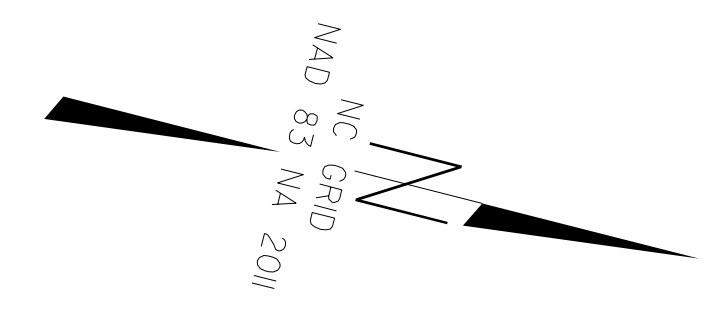
350' +/-

350' +/-

350' +/-

MATCHLINE A  
SEE SHEET TMP-7

|                         |               |
|-------------------------|---------------|
| MESSAGE NO. 1           | MESSAGE NO. 2 |
| RIGHT LANE CLOSED       | MERGE LEFT    |
| CHANGEABLE MESSAGE SIGN |               |



RIGHT LANE CLOSED  
W20-5 R  
48\" X 48\"

NEXT LEFT  
SP-4L  
42\" X 12\"

RIGHT LANE CLOSED AHEAD  
W20-5 R  
48\" X 48\"

W4-2R  
48\" X 48\"

RIGHT LANE CLOSED  
W20-5 R  
48\" X 48\"

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

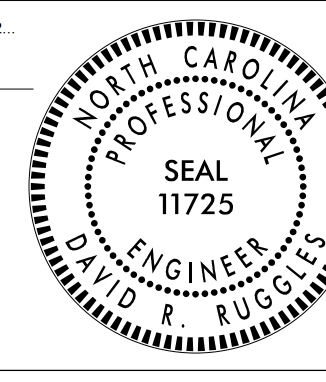


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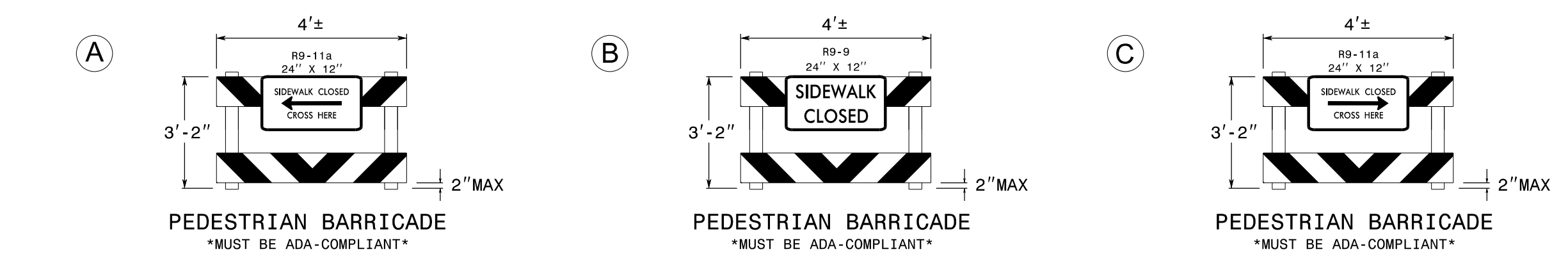
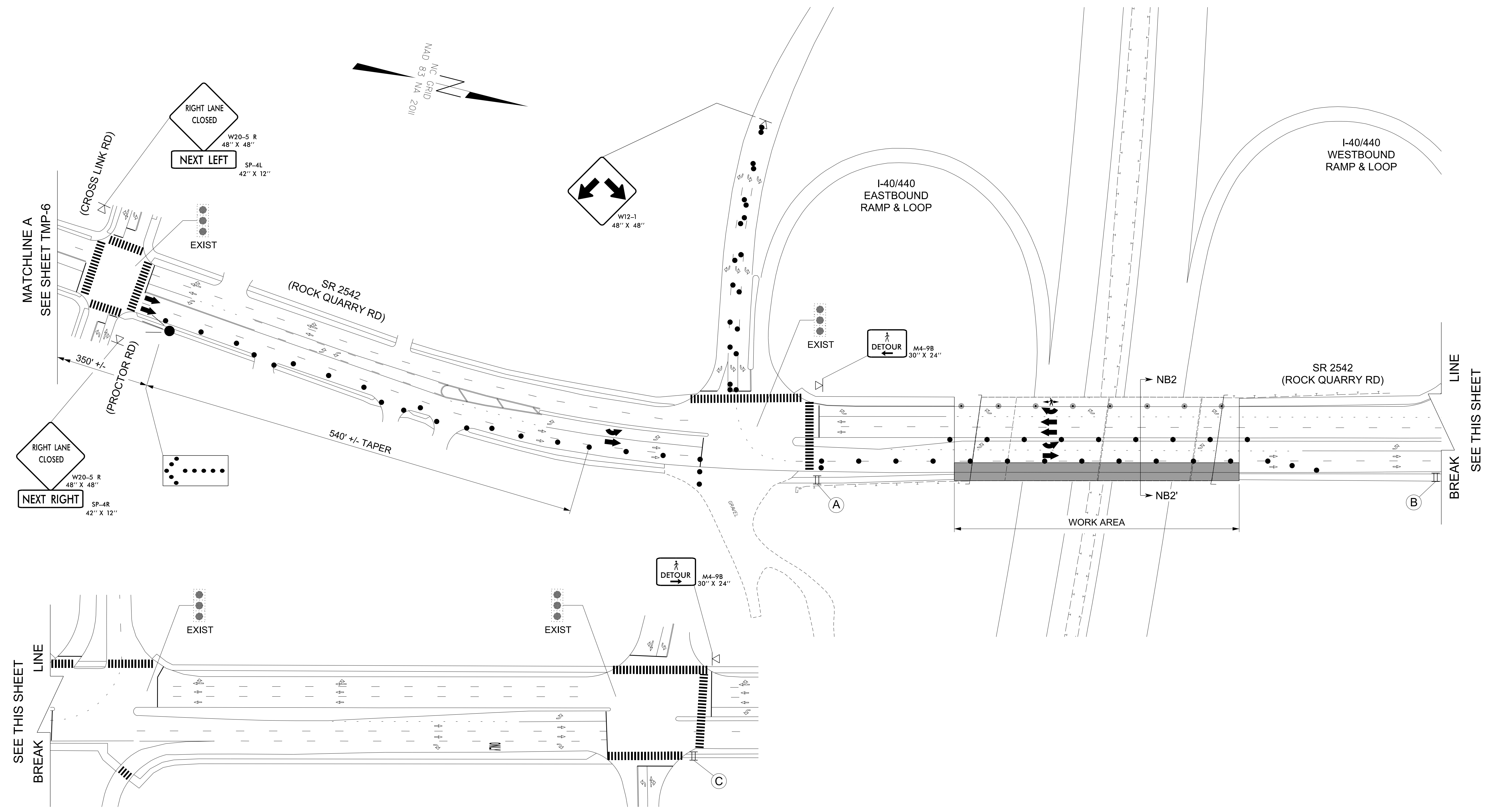


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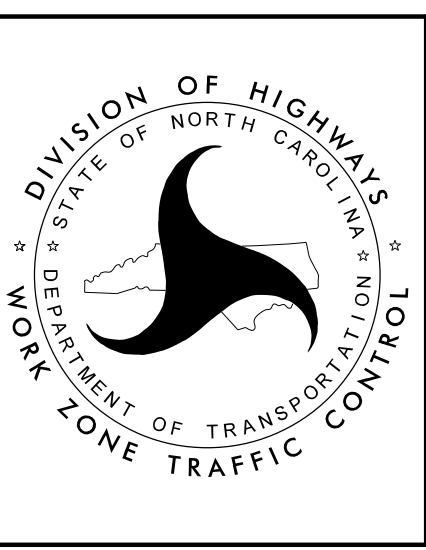
TRANSPORTATION  
MANAGEMENT PLAN

**PHASE II DETAIL**



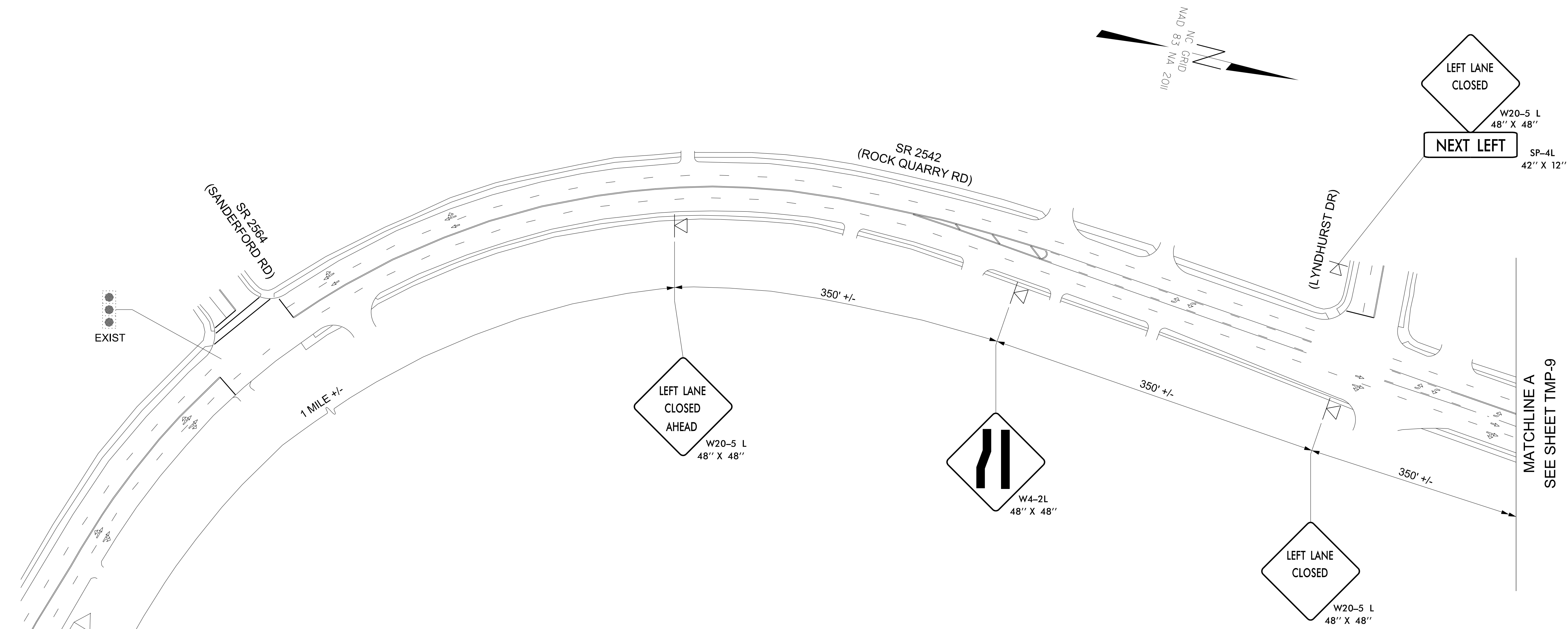
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TRANSPORTATION MANAGEMENT PLAN  
**PHASE II DETAIL**

\$\$\$\$\$SYSTEMTIME\$\$\$\$\$  
 \$\$\$DCON\$\$\$\$\$  
 \$\$\$USERNAME\$\$\$\$\$



|                         |               |
|-------------------------|---------------|
| MESSAGE NO. 1           | MESSAGE NO. 2 |
| LEFT LANE CLOSED        | MERGE RIGHT   |
| CHANGEABLE MESSAGE SIGN |               |

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

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 11725  
 ENGINEER  
 DAVID R. RUGGLES

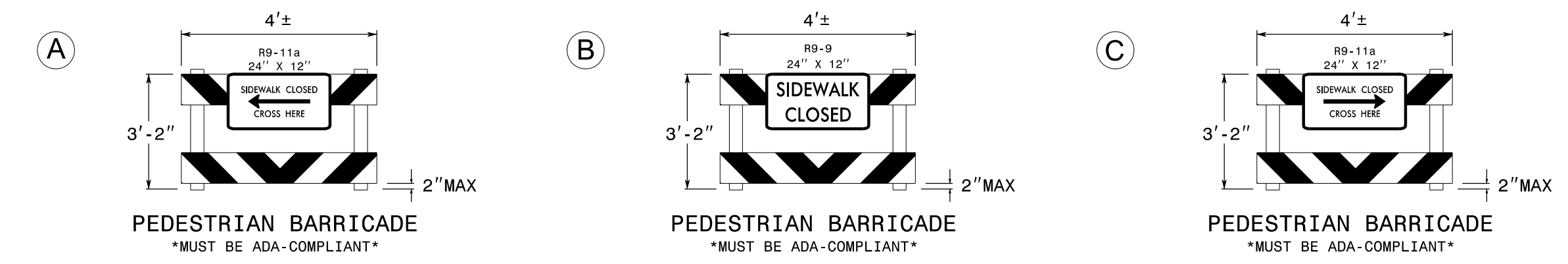
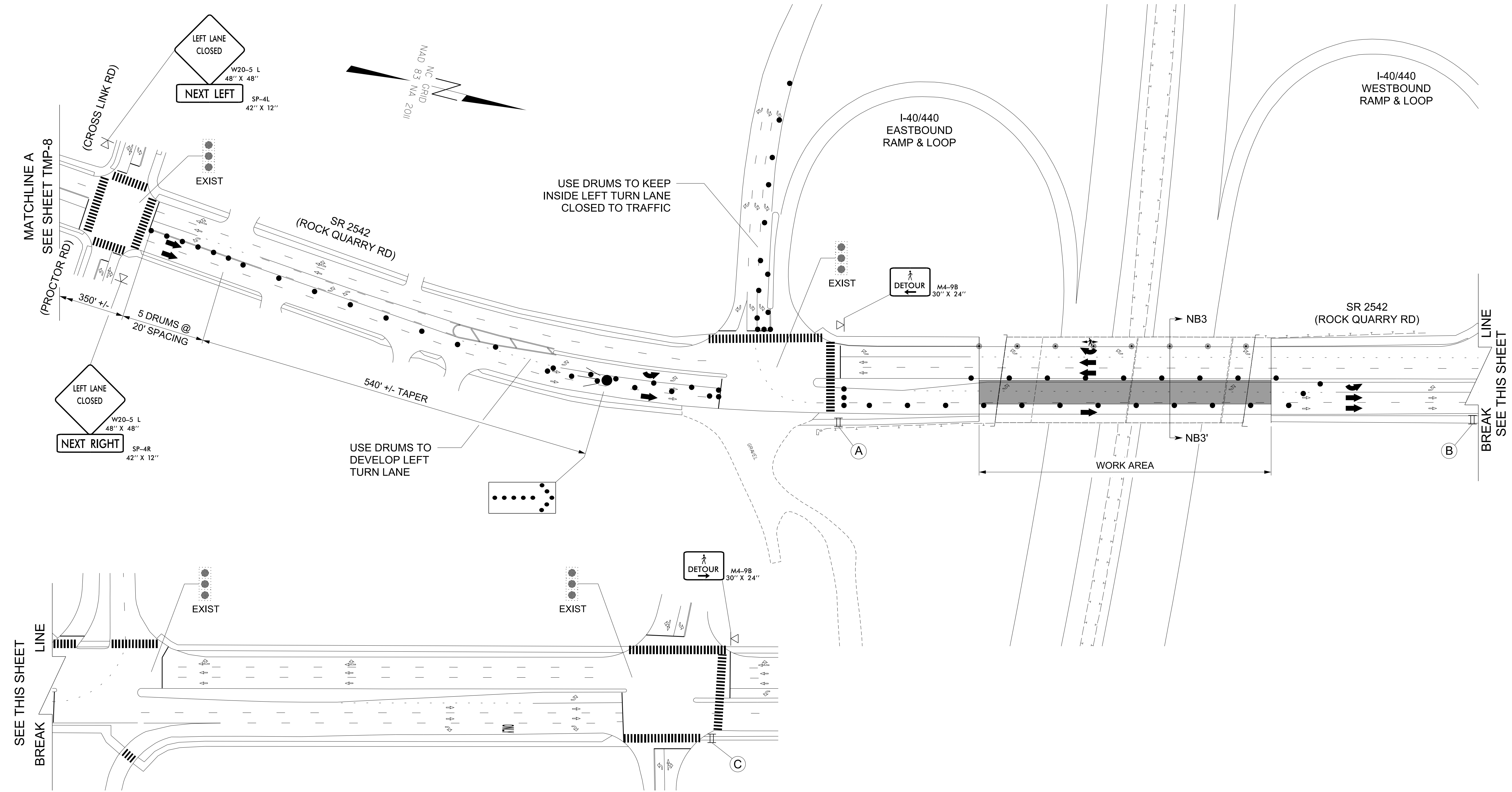
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PHASE III DETAIL





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DocuSigned by:  
David Ruggles  
C46278DF412422

SEAL  
11725  
NORTH CAROLINA  
PROFESSIONAL  
ENGINEER  
DAVID R. RUGGLES

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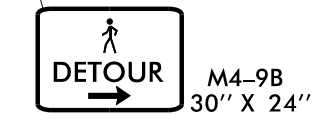
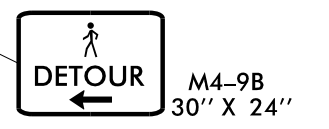
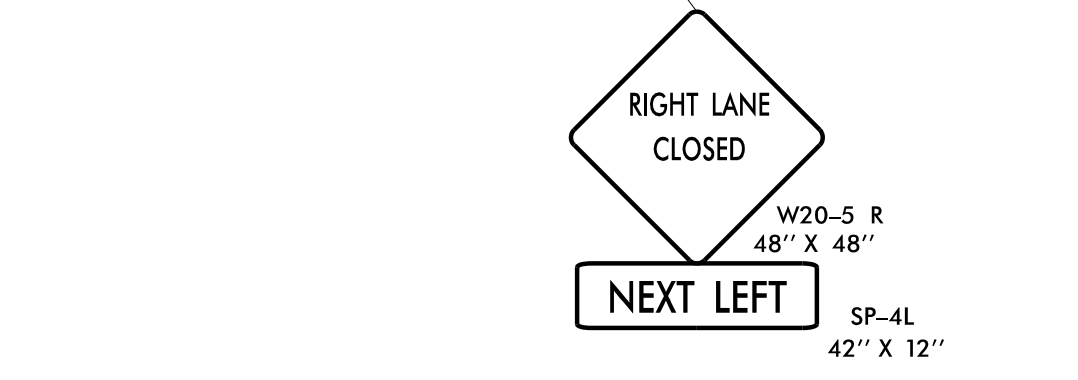
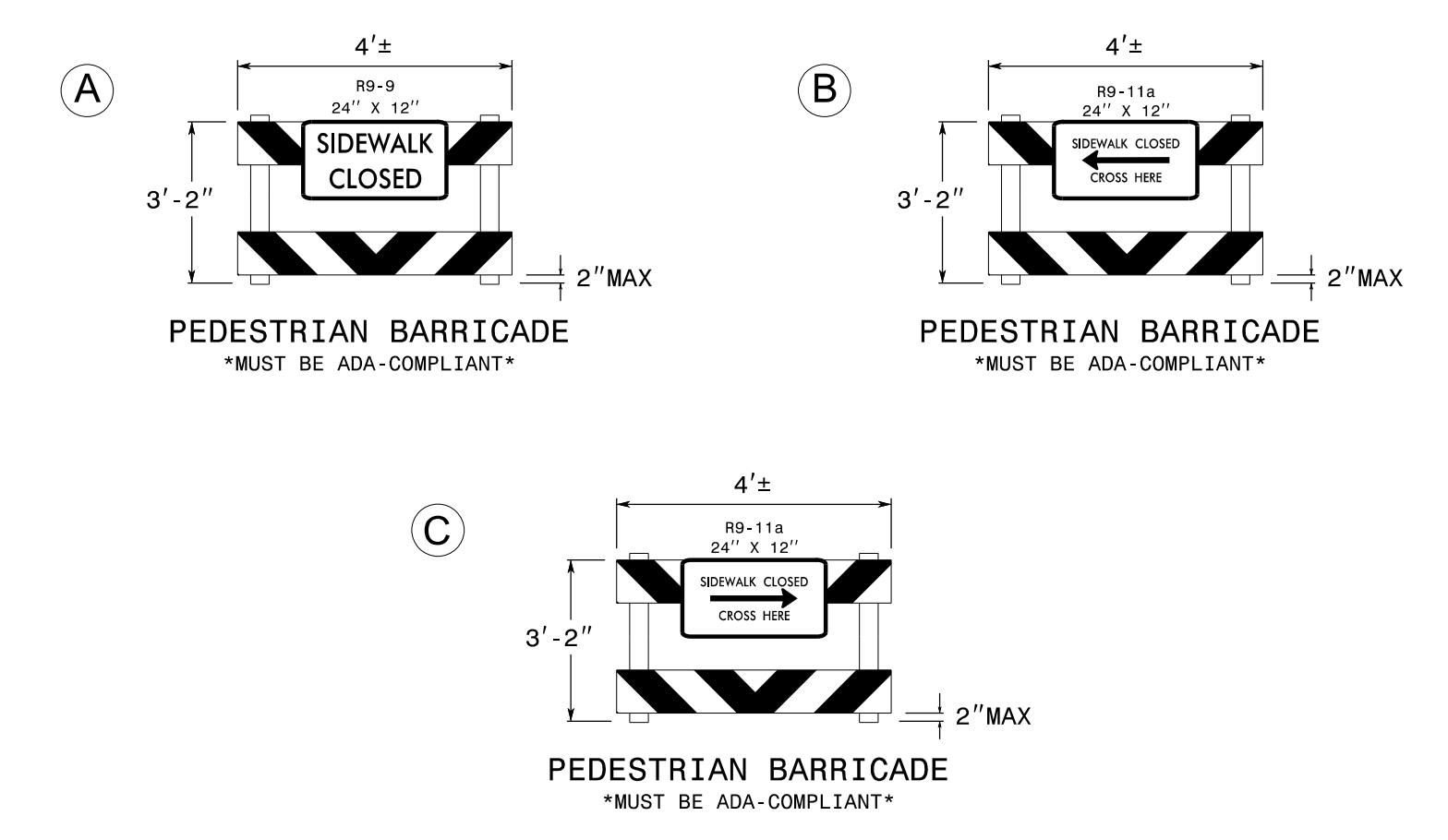
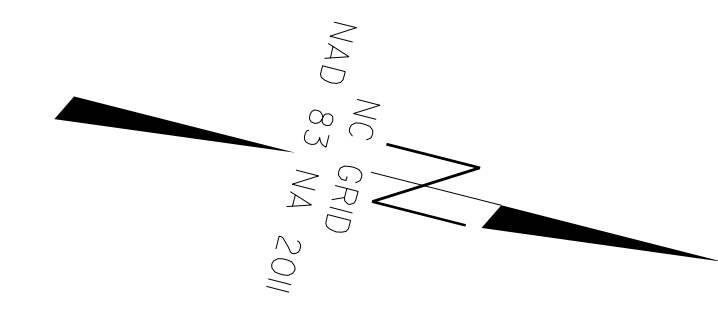
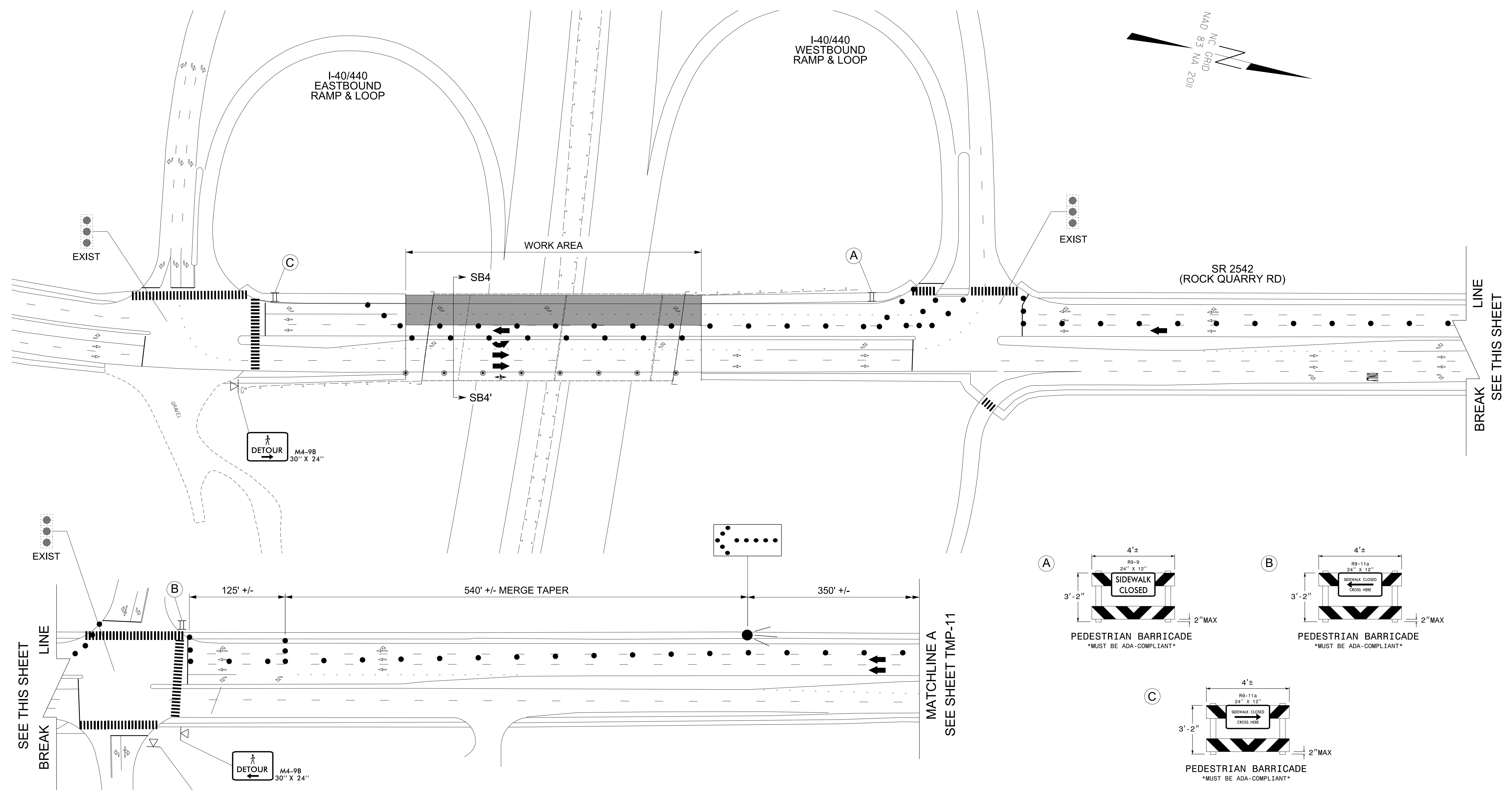
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MANAGEMENT PLAN

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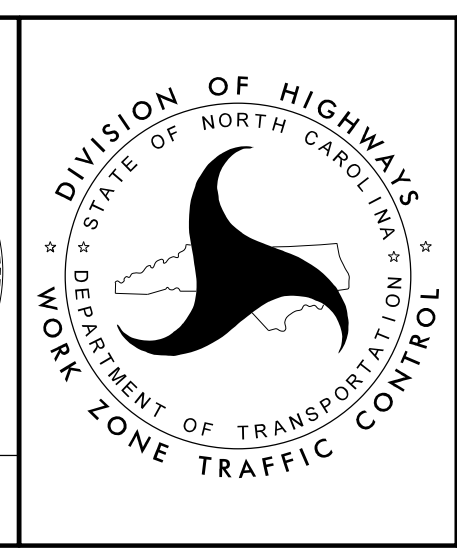
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 NORTH CAROLINA PROFESSIONAL ENGINEER  
 DAVID R. RUGGLES

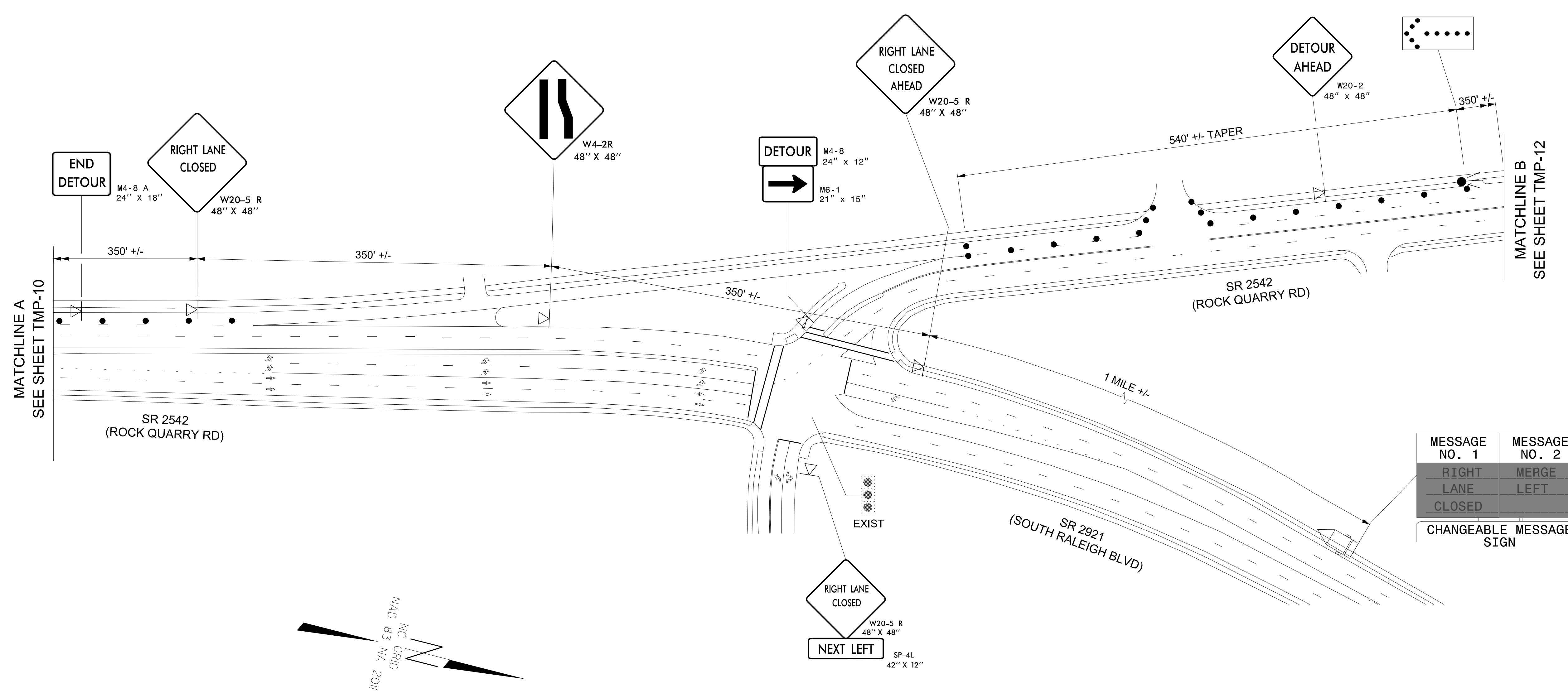
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 MANAGEMENT PLAN

**PHASE IV DETAIL**

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



| MESSAGE NO. 1           | MESSAGE NO. 2 |
|-------------------------|---------------|
| RIGHT LANE CLOSED       | MERGE LEFT    |
| CHANGEABLE MESSAGE SIGN |               |

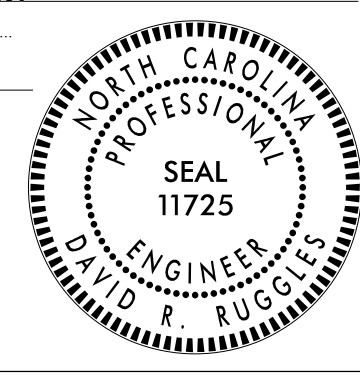
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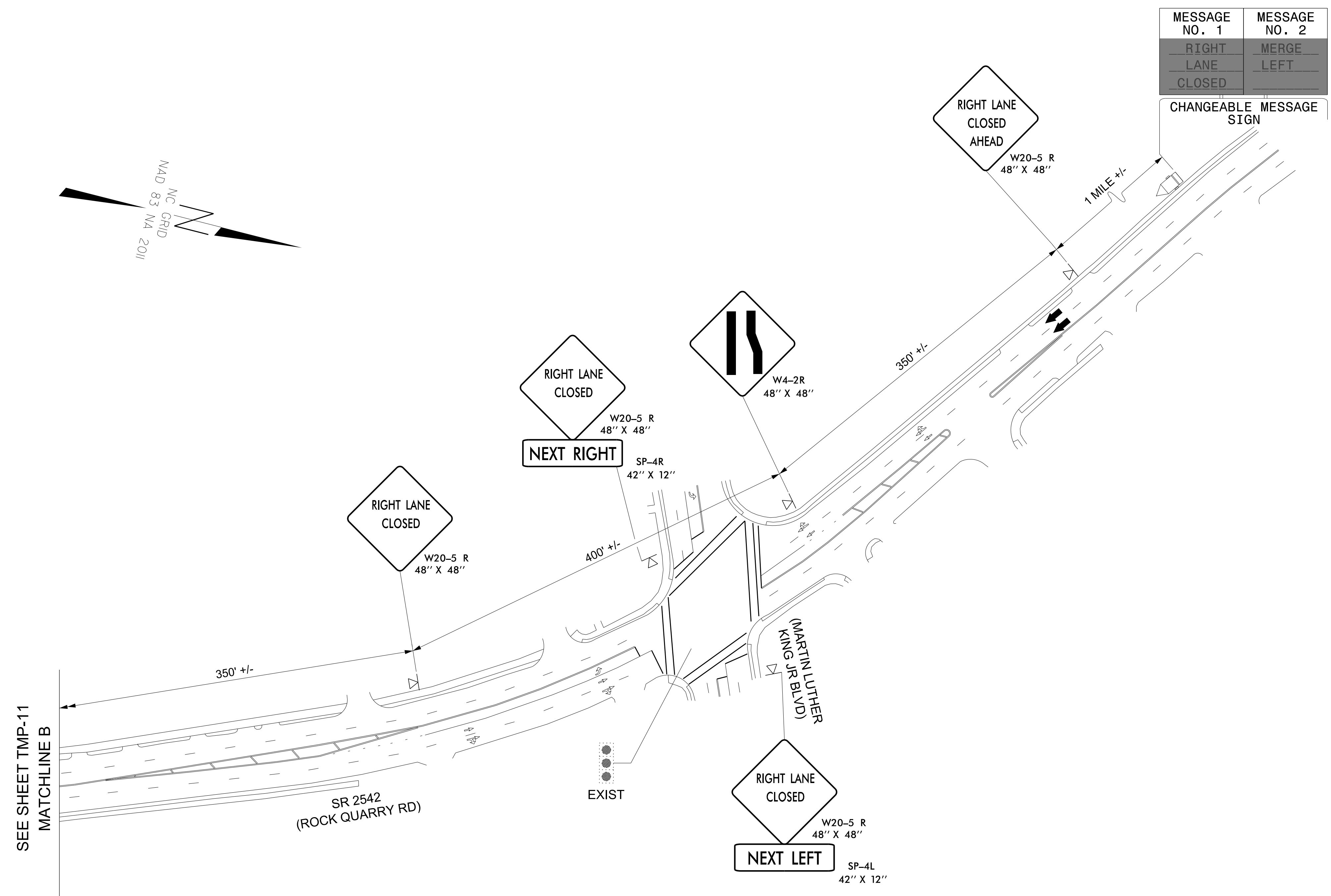
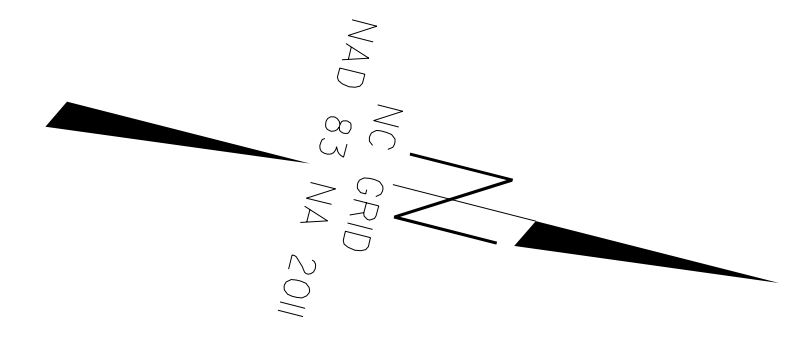


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**PHASE IV DETAIL**





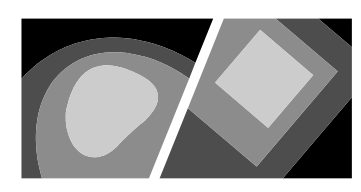
SEE SHEET TMP-11  
MATCHLINE B

SR 2542  
(ROCK QUARRY RD)

(MARTIN LUTHER  
KING JR BLVD)

EXIST

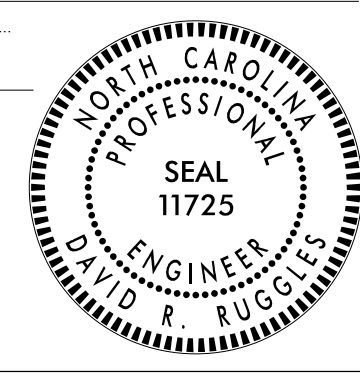
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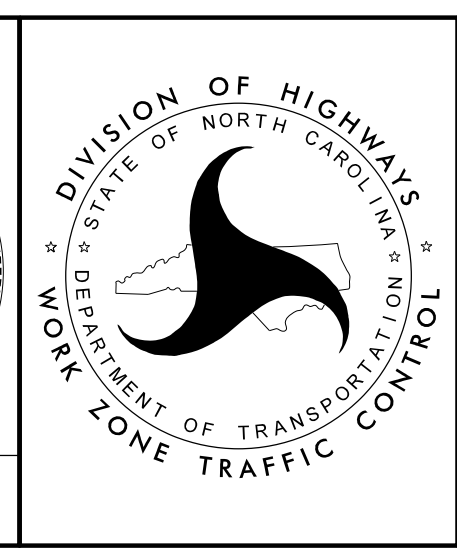
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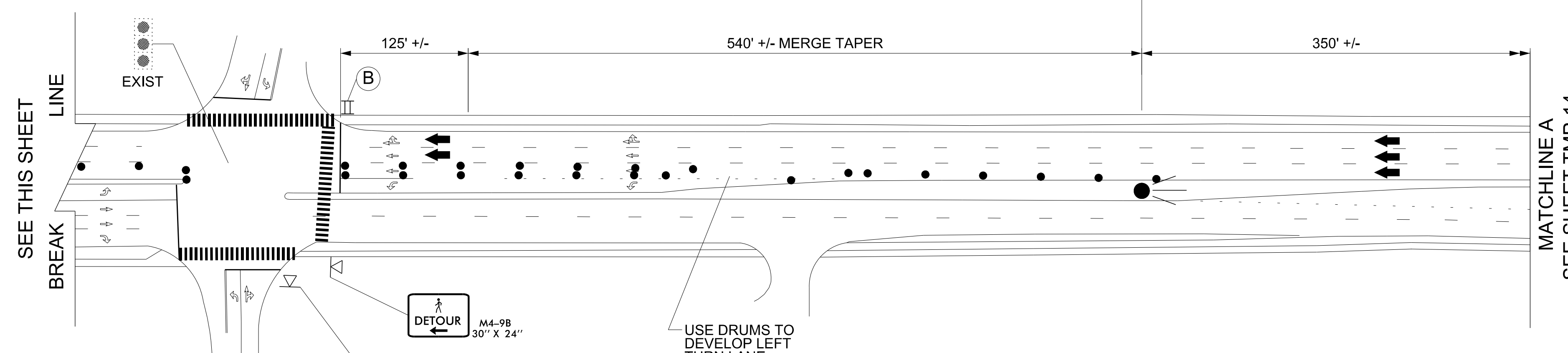
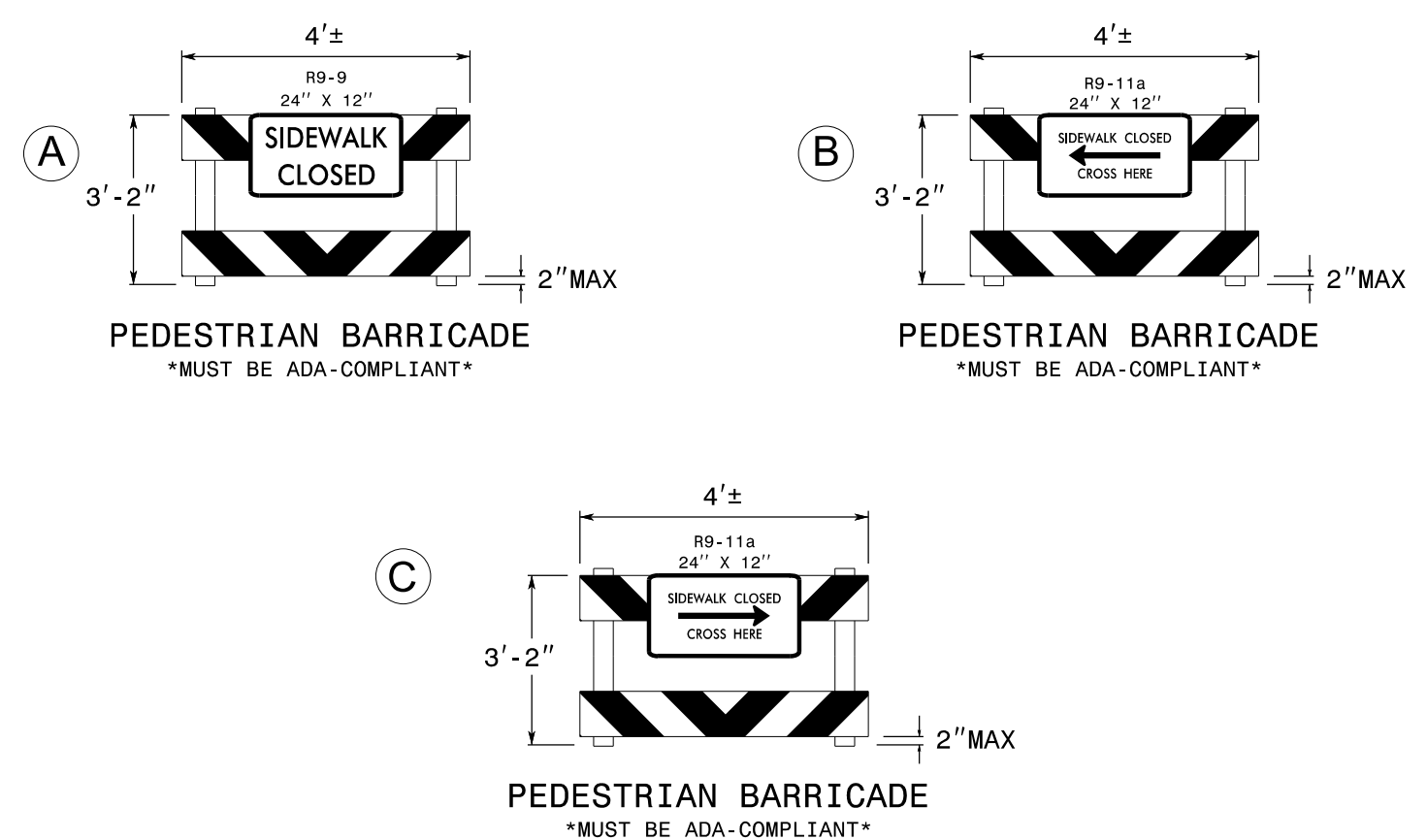
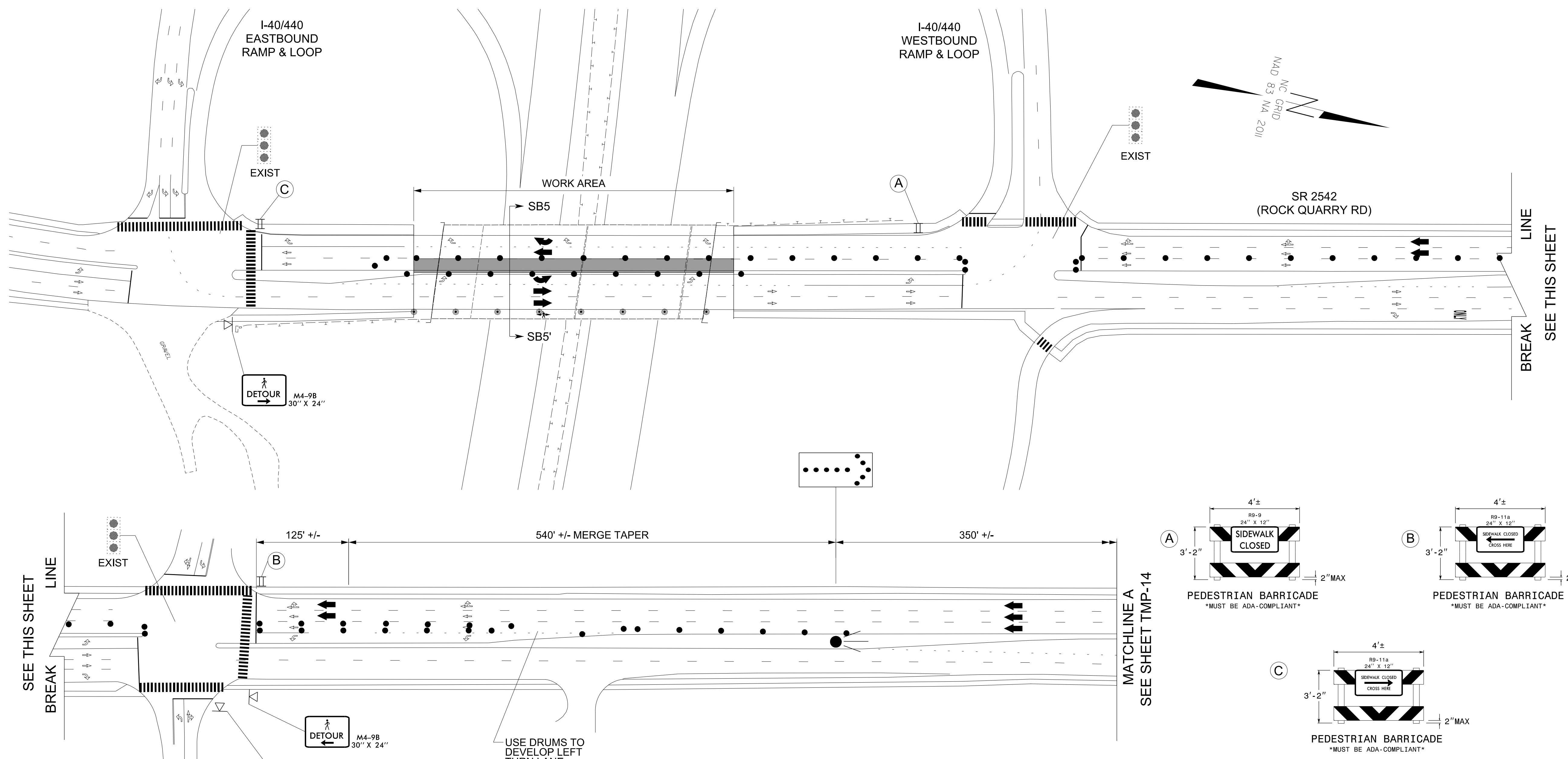


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**PHASE IV DETAIL**



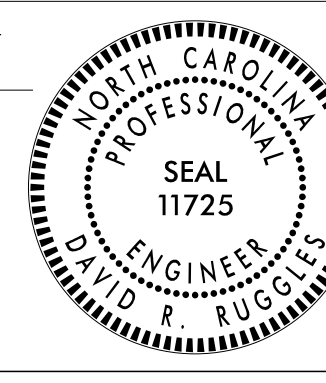
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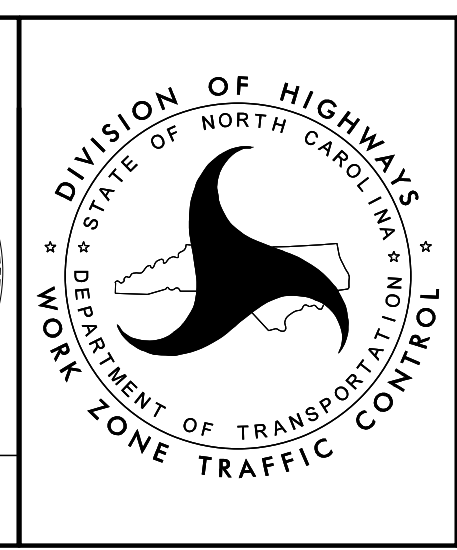
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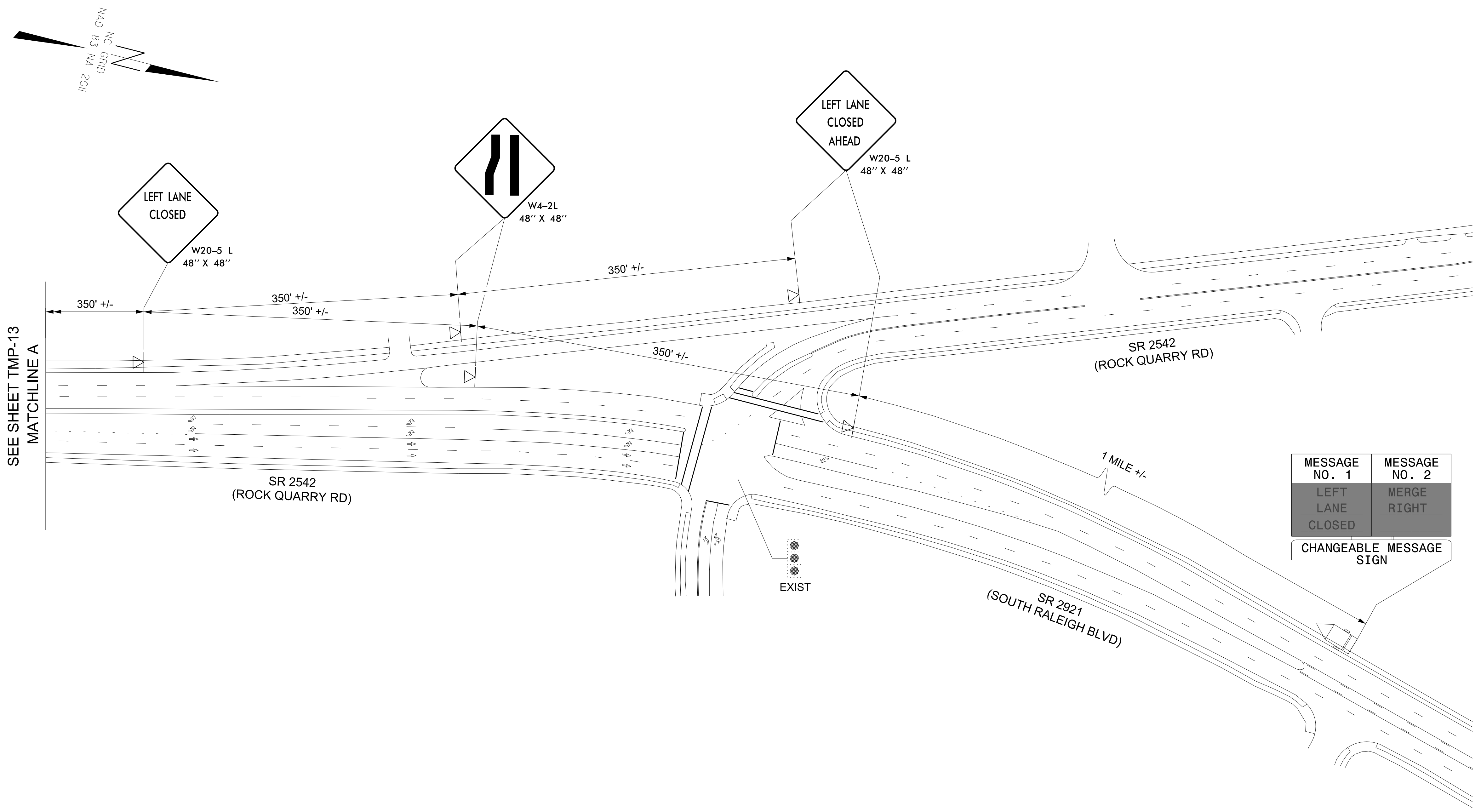
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**PHASE V DETAIL**





| MESSAGE NO. 1    | MESSAGE NO. 2 |
|------------------|---------------|
| LEFT LANE CLOSED | MERGE RIGHT   |

CHANGEABLE MESSAGE SIGN

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



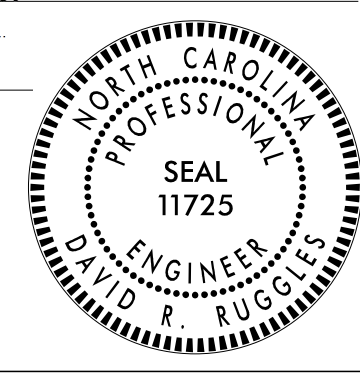
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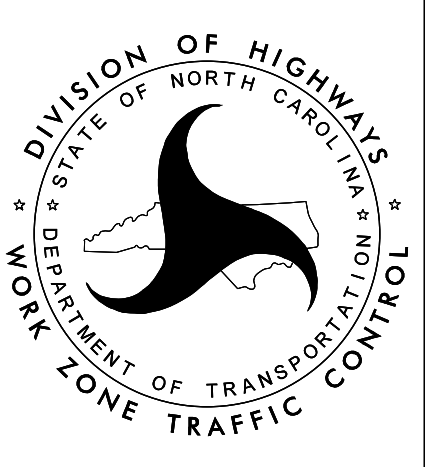
APPROVED: *David Ruggles*  
DocuSigned by: CAR2769DF412422

DATE: 1/5/2018

SEAL

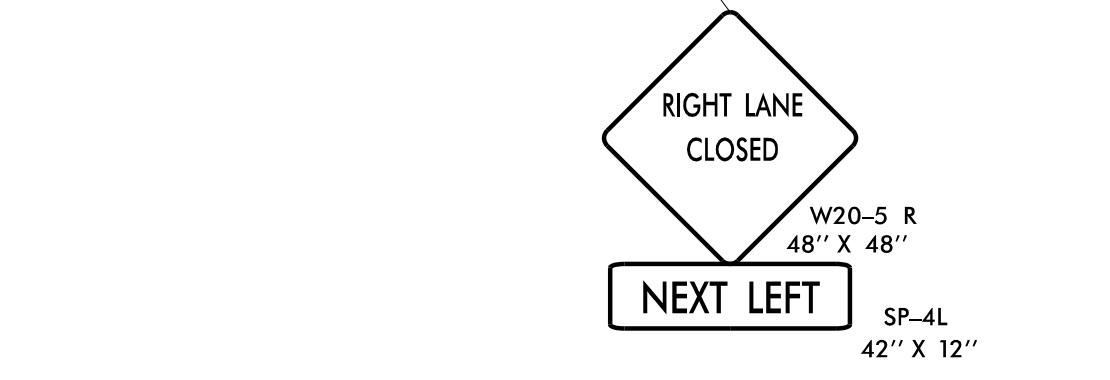
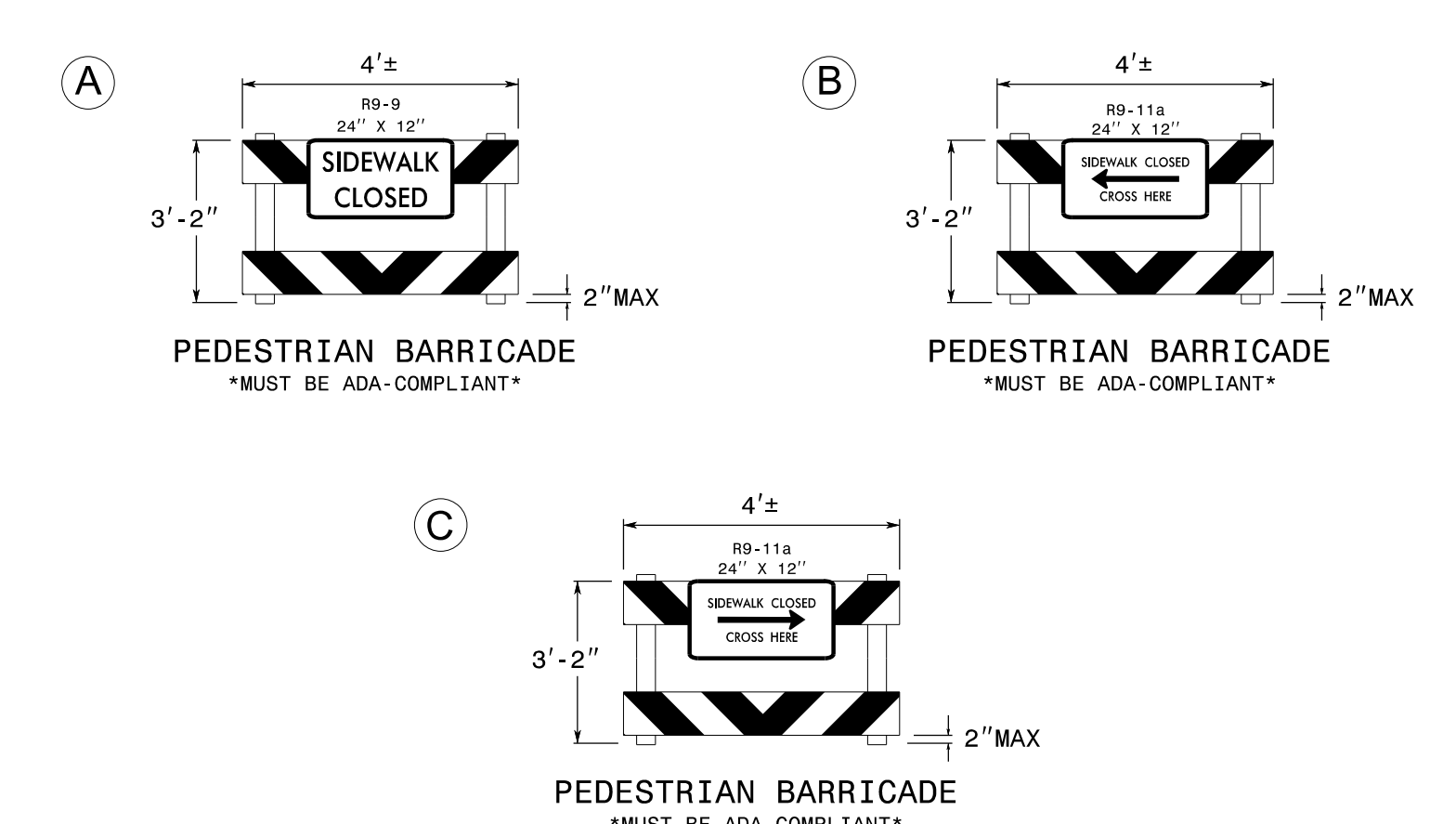
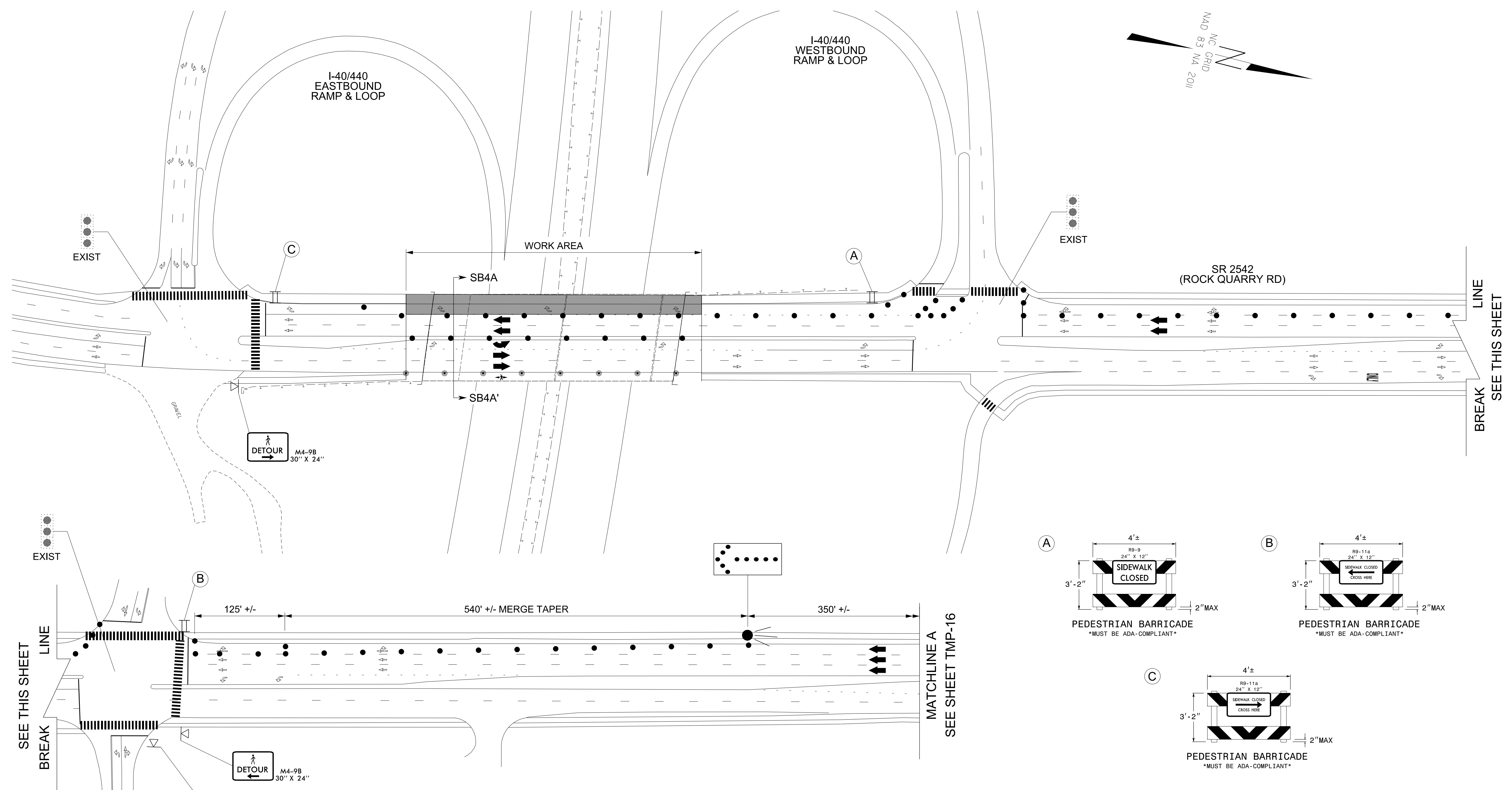


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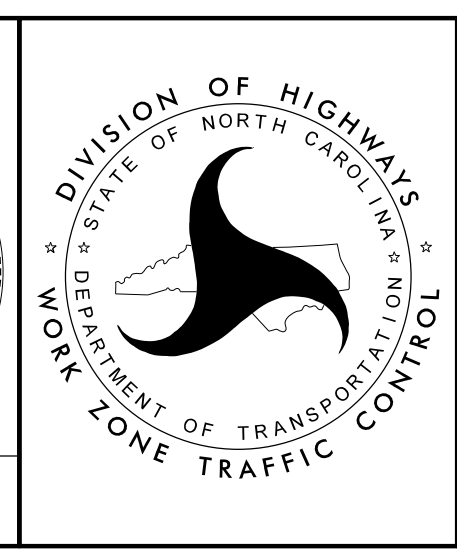


TRANSPORTATION  
 MANAGEMENT PLAN

**PHASE V DETAIL**



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 DATE: 1/5/2018  
 SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 DAVID R. RUGGLES  
 SEAL 11725



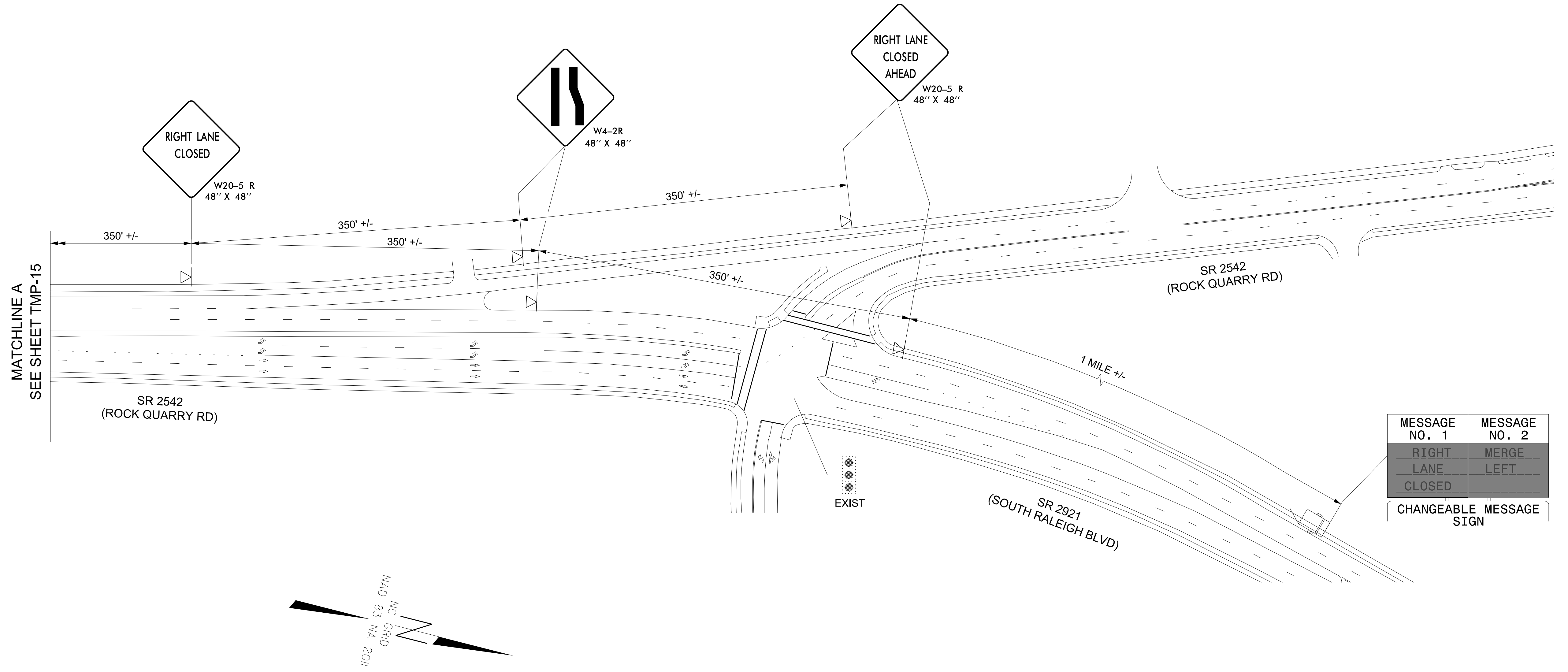
TRANSPORTATION MANAGEMENT PLAN  
 PHASE IV.A  
 DETAIL  
 ALTERNATE PHASING

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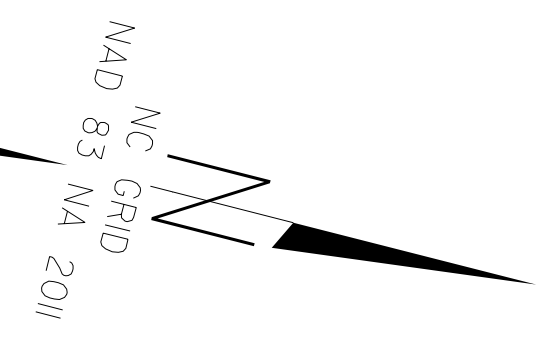
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| MESSAGE NO. 1     | MESSAGE NO. 2 |
|-------------------|---------------|
| RIGHT LANE CLOSED | MERGE LEFT    |

CHANGEABLE MESSAGE SIGN



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

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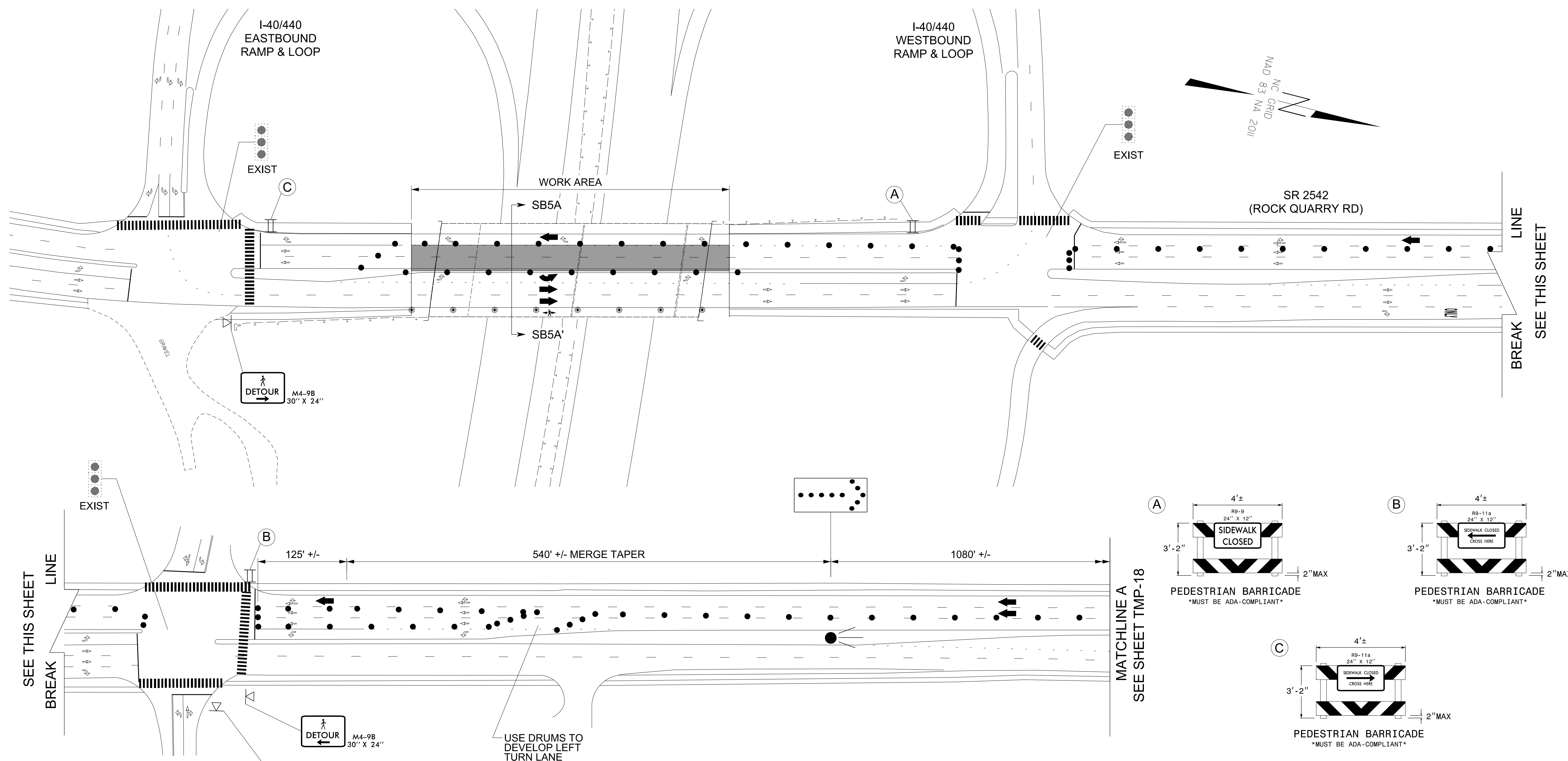
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 STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 WORK ZONE TRAFFIC CONTROL

TRANSPORTATION  
 MANAGEMENT PLAN

**PHASE IV.A  
 DETAIL  
 ALTERNATE PHASING**



\$\$\$\$\$SYTIME\$\$\$\$\$  
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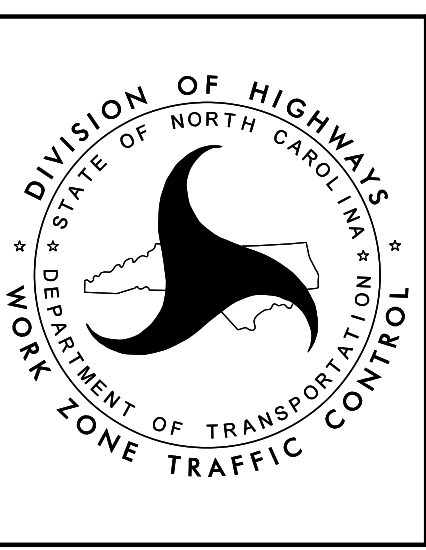
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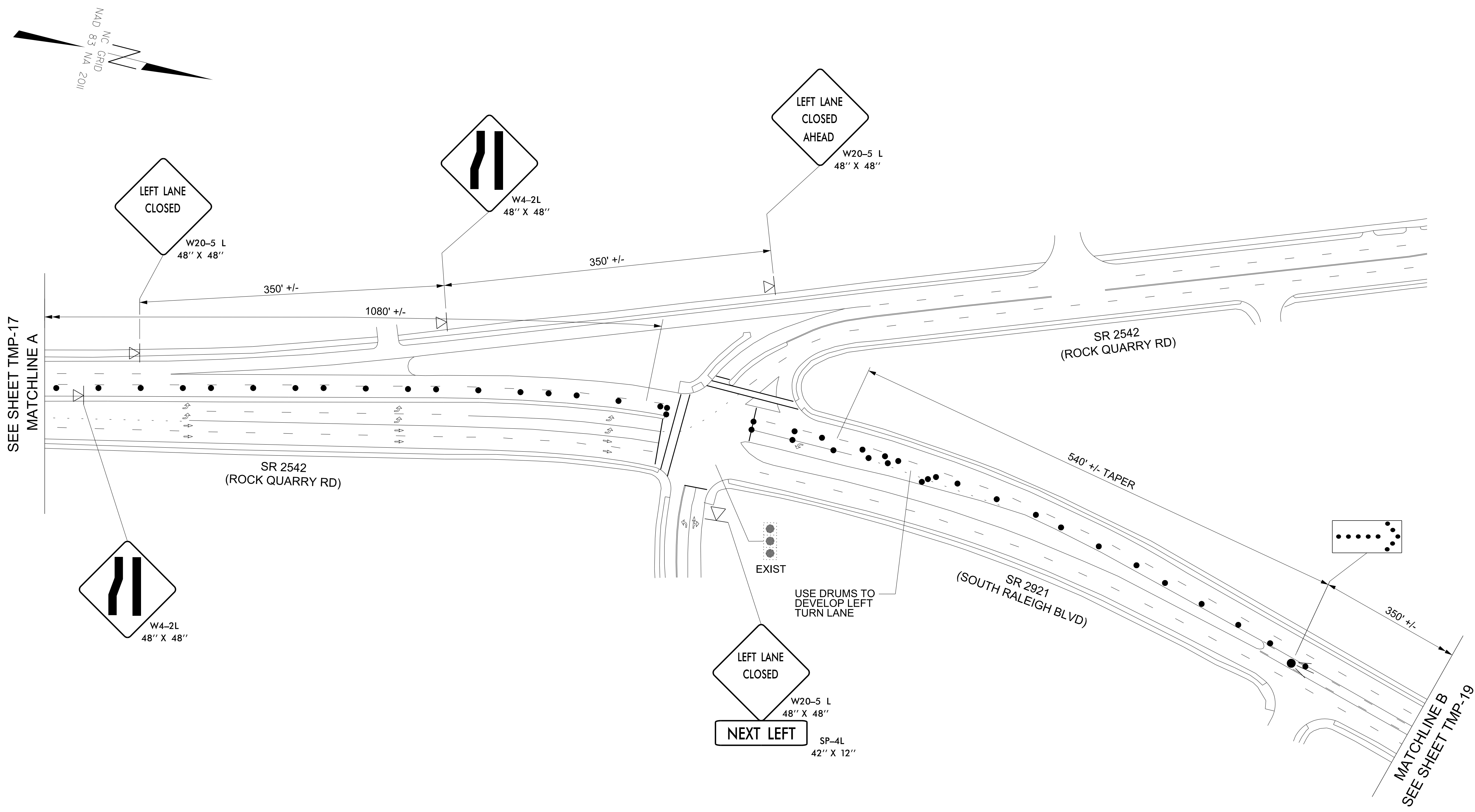
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 PROFESSIONAL  
 ENGINEER  
 DAVID R. RUGGLES  
 11725

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TRANSPORTATION  
 MANAGEMENT PLAN  
**PHASE V.A**  
 DETAIL  
 ALTERNATE PHASING





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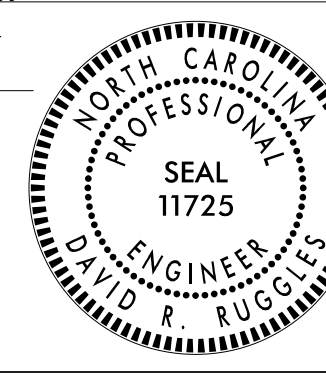
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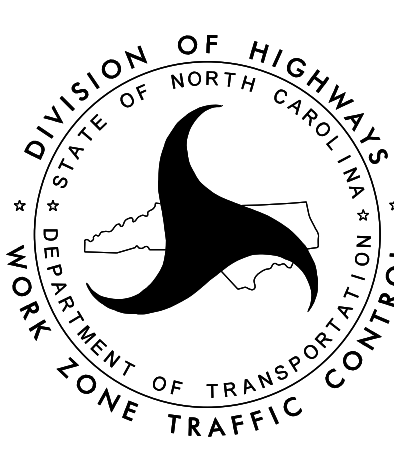
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 David Ruggles  
 CA82780DF412422

DATE: 1/5/2018

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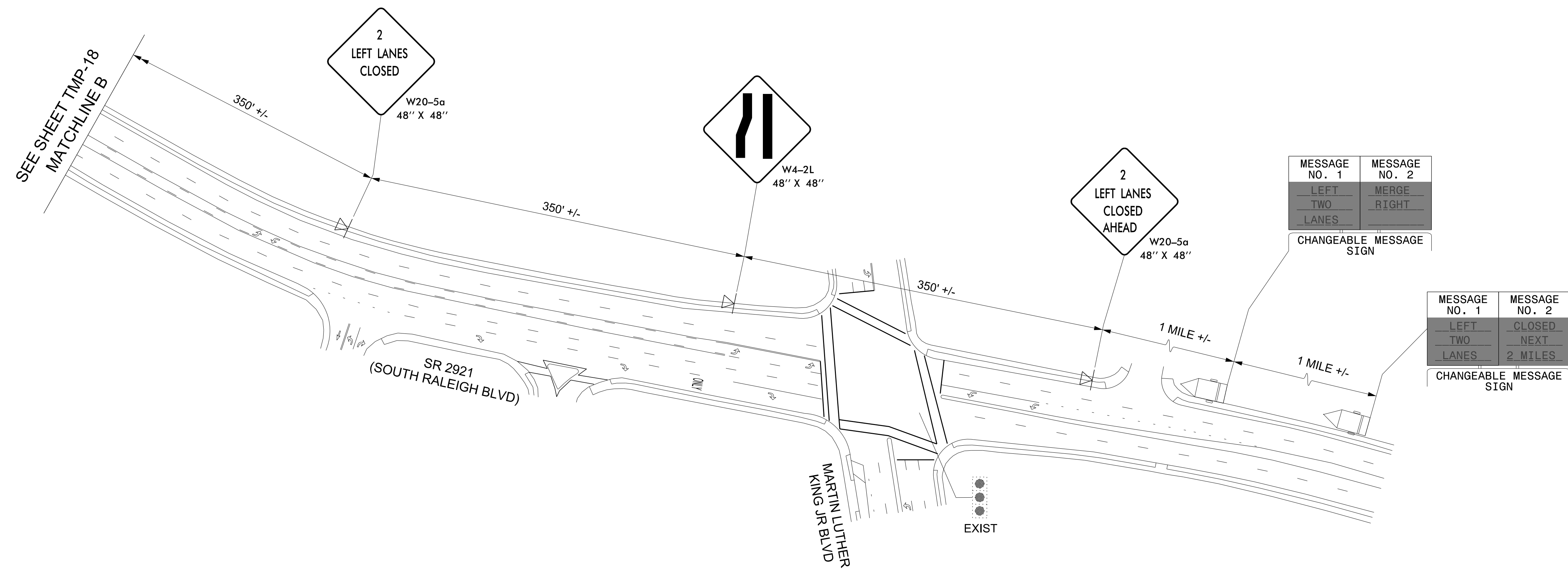
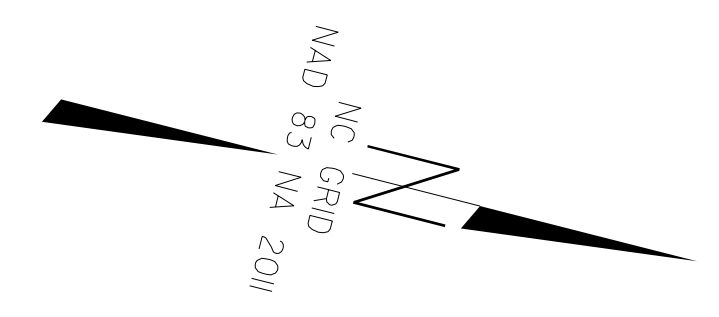


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TRANSPORTATION  
 MANAGEMENT PLAN

**PHASE V.A  
 DETAIL  
 ALTERNATE PHASING**



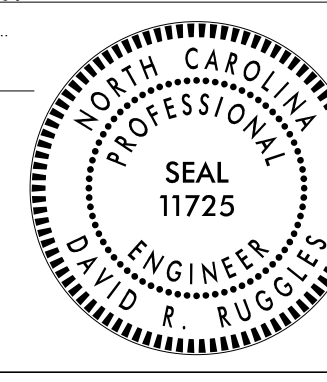
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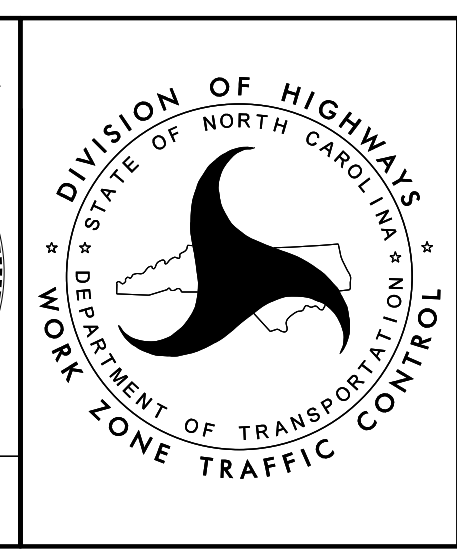
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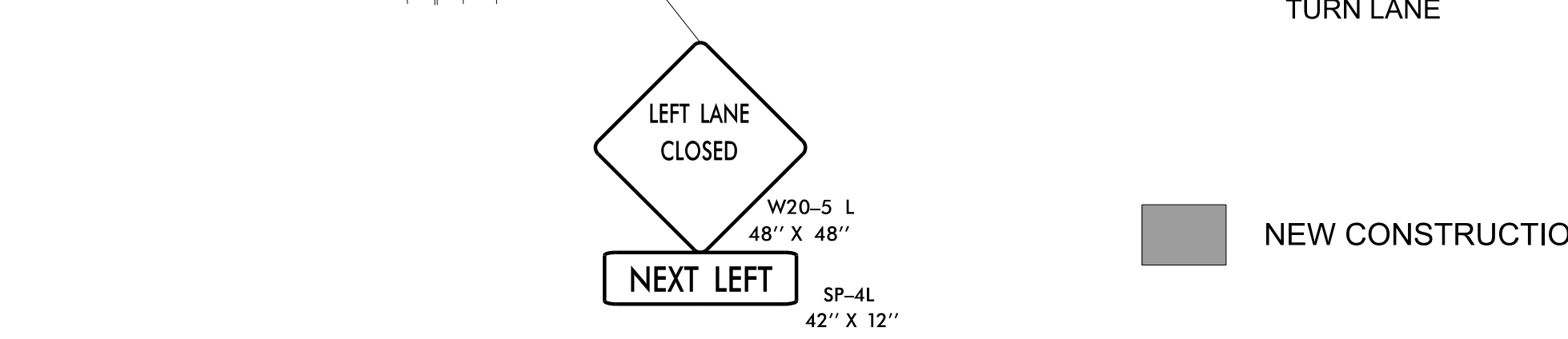
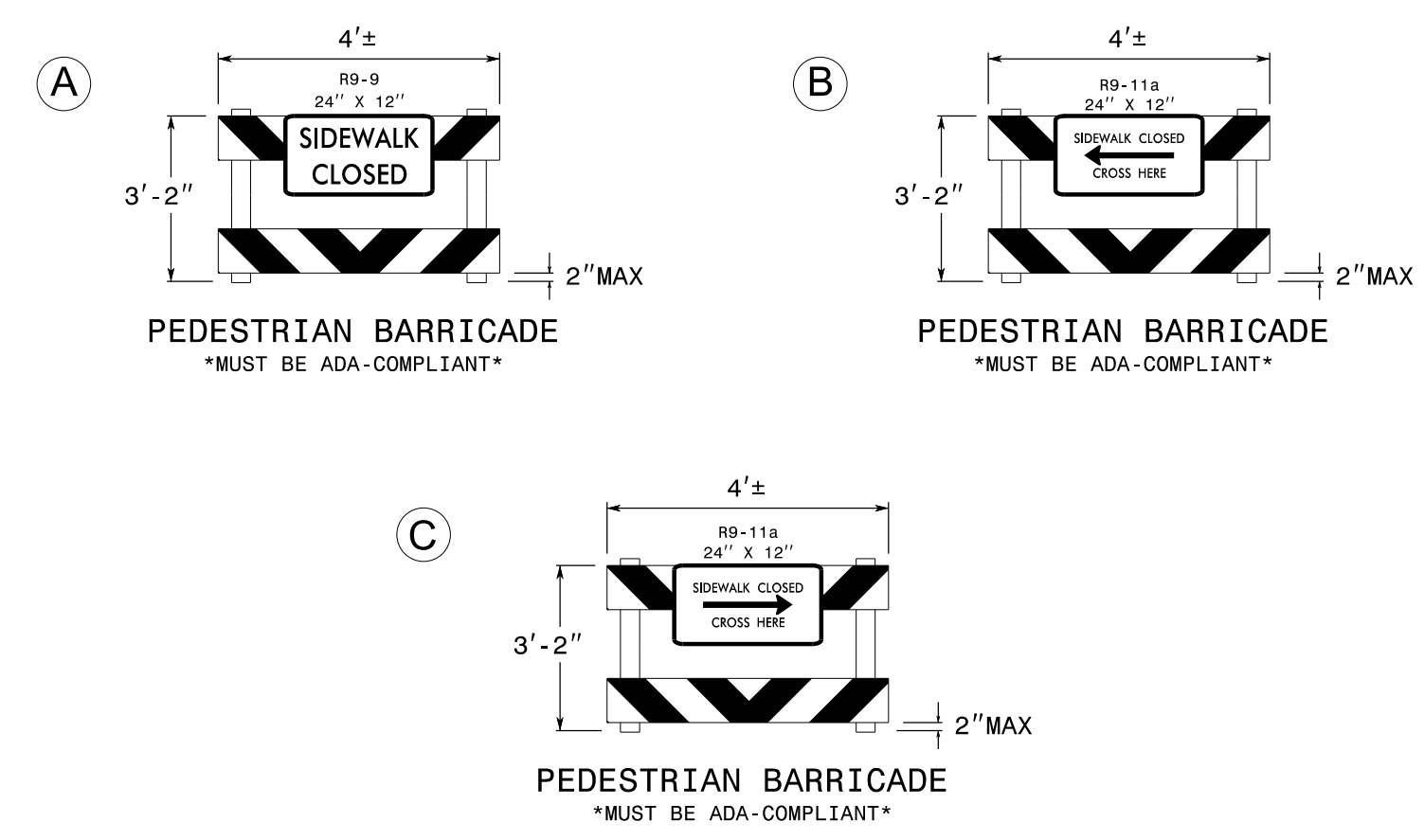
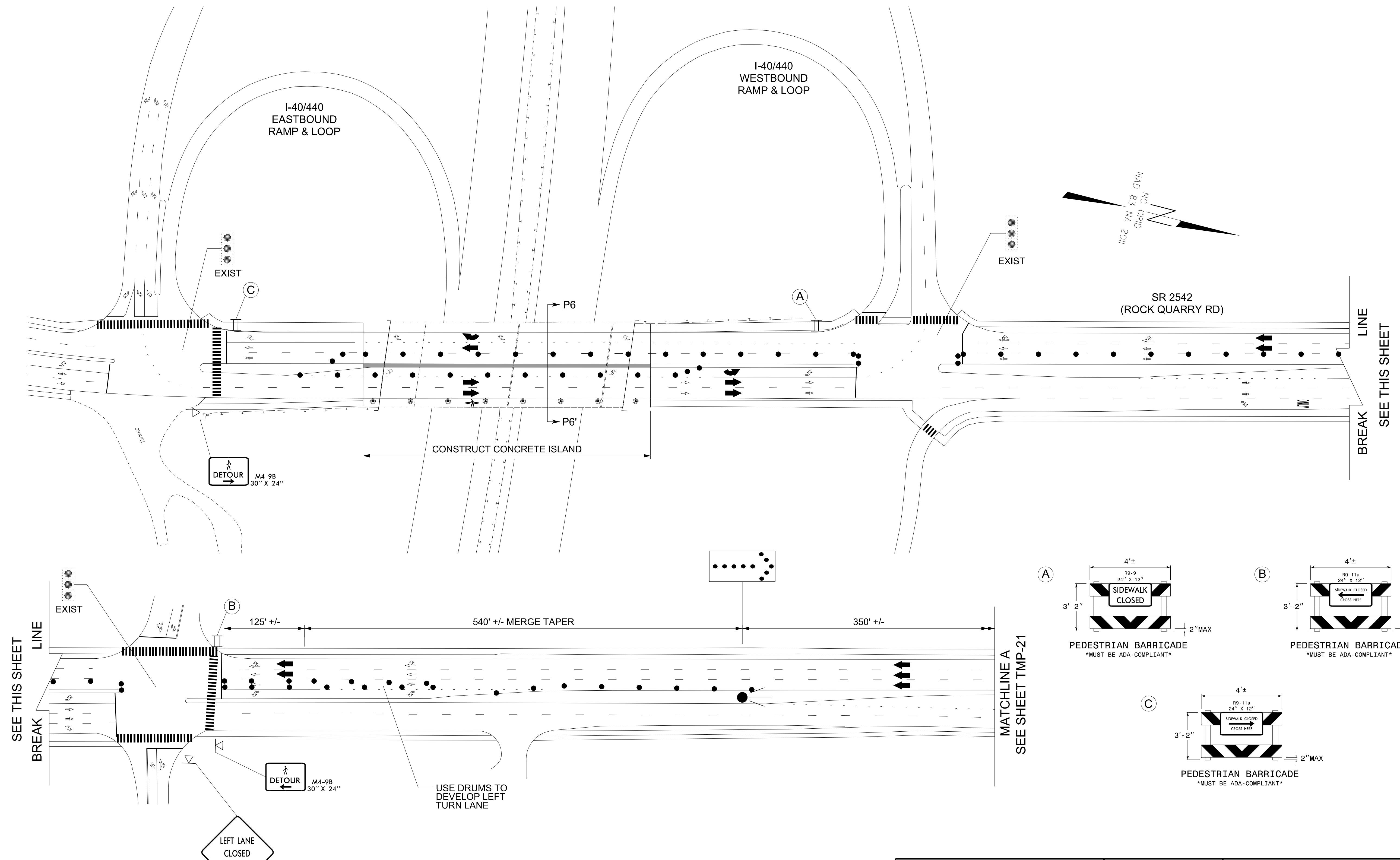


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TRANSPORTATION  
 MANAGEMENT PLAN

**PHASE V.A  
 DETAIL  
 ALTERNATE PHASING**



**STEWART**

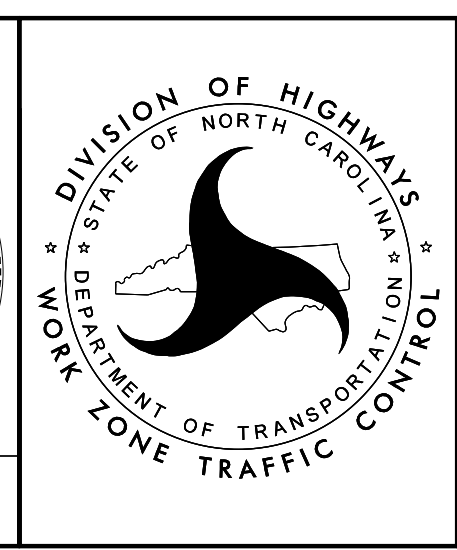
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**SEAL**  
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 ENGINEER  
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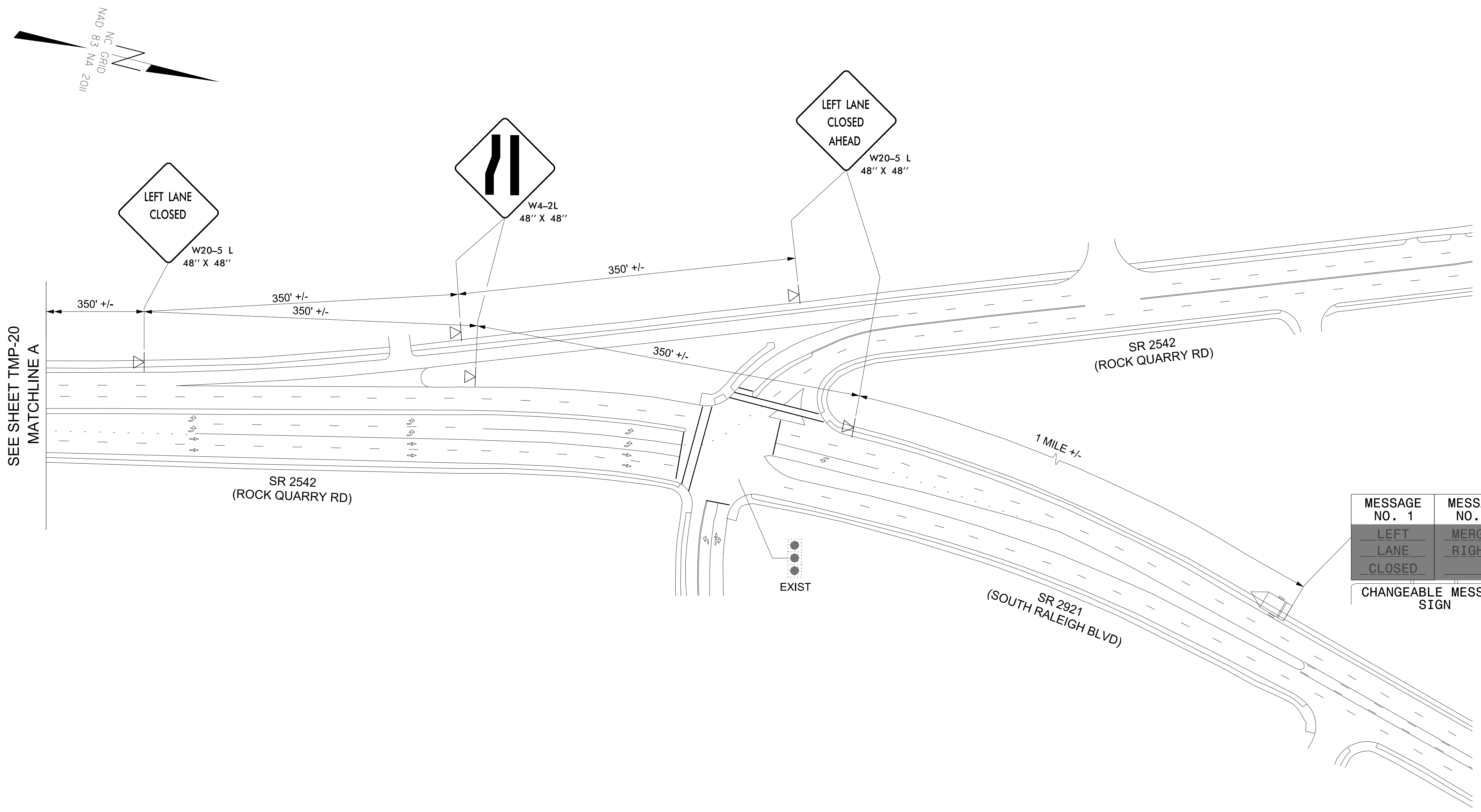


TRANSPORTATION  
 MANAGEMENT PLAN

**PHASE VI DETAIL**

\$\$\$\$\$SYTIME\$\$\$\$\$  
 \$\$\$DCGN\$\$\$\$\$  
 \$\$\$USERNAME\$\$\$\$\$





| MESSAGE NO. 1    | MESSAGE NO. 2 |
|------------------|---------------|
| LEFT LANE CLOSED | MERGE RIGHT   |

CHANGEABLE MESSAGE SIGN

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



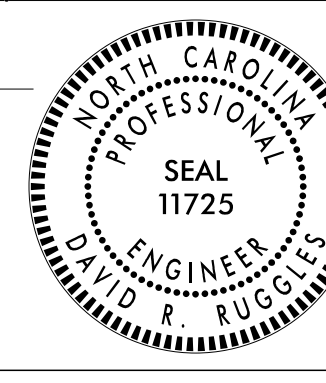
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DocuSigned by:  
 C46278EDF412422

DATE: 1/5/2018

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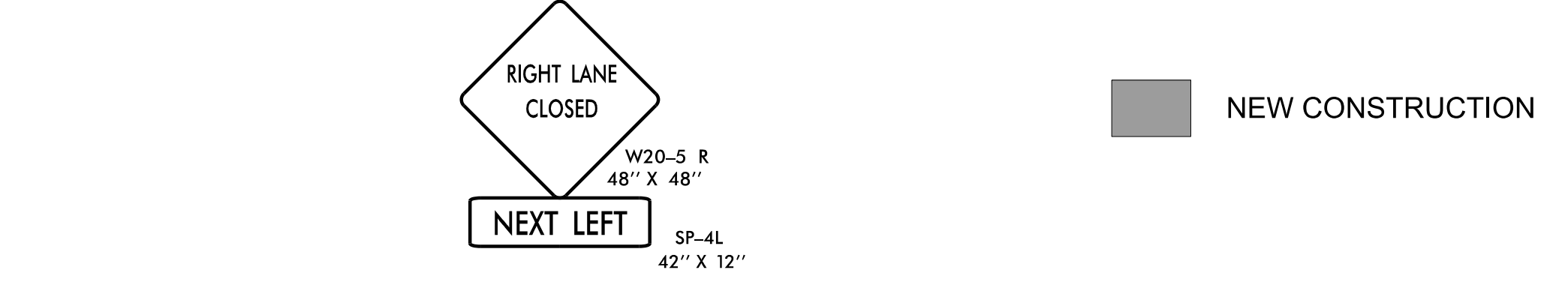
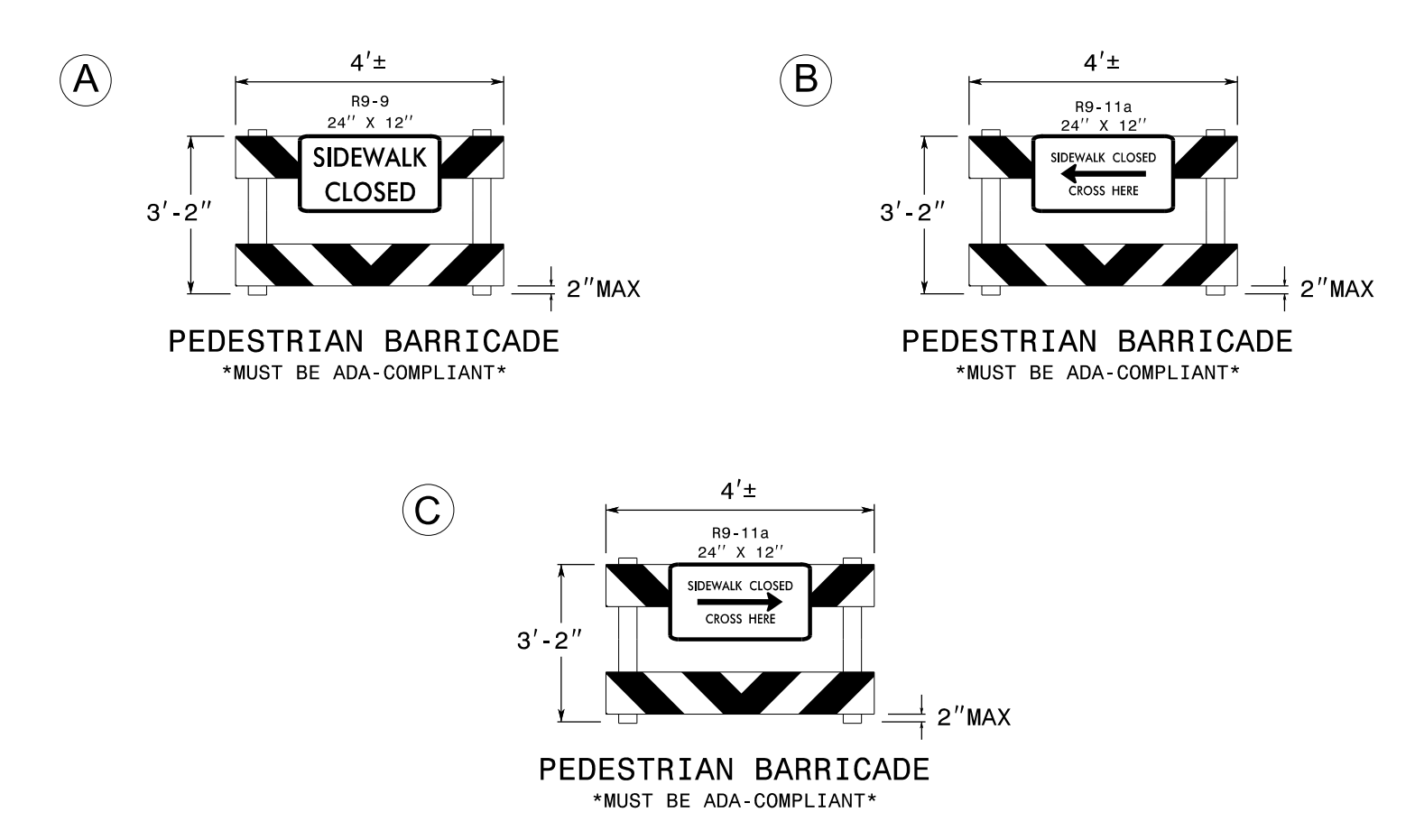
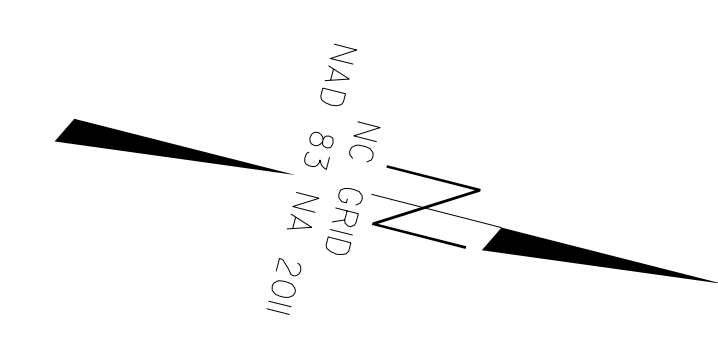
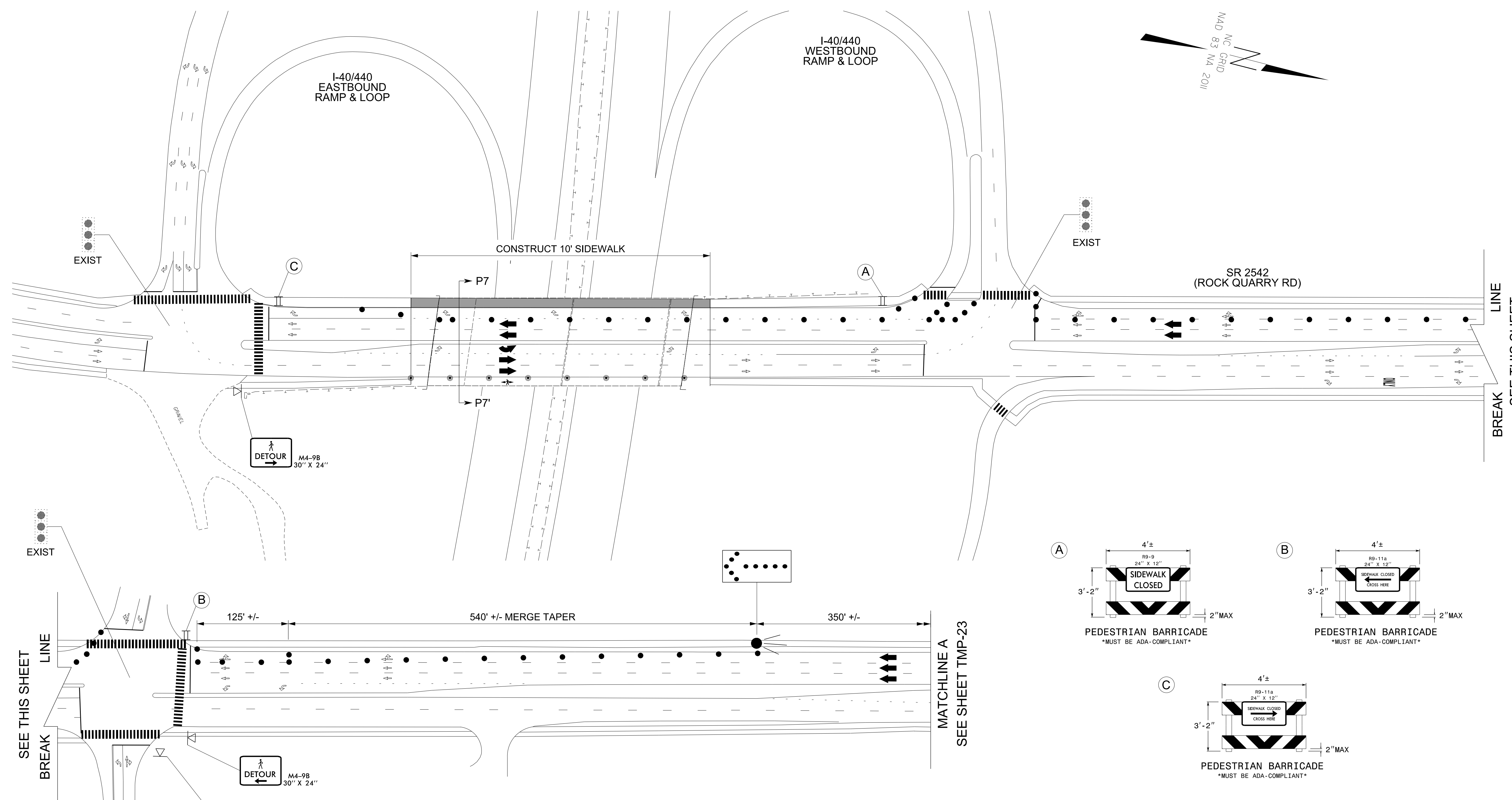
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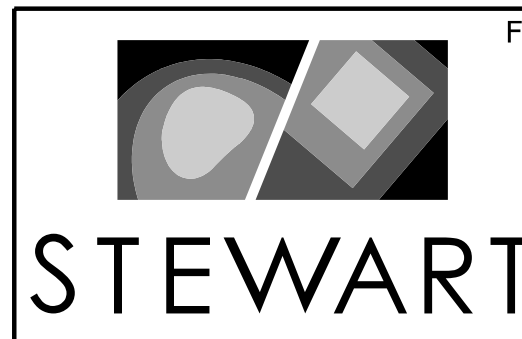
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**PHASE VI DETAIL**



■ NEW CONSTRUCTION

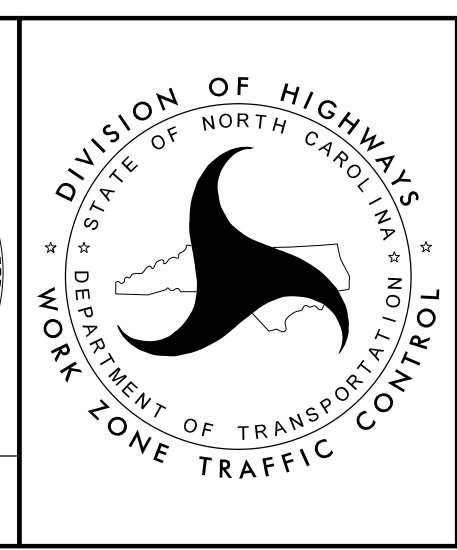


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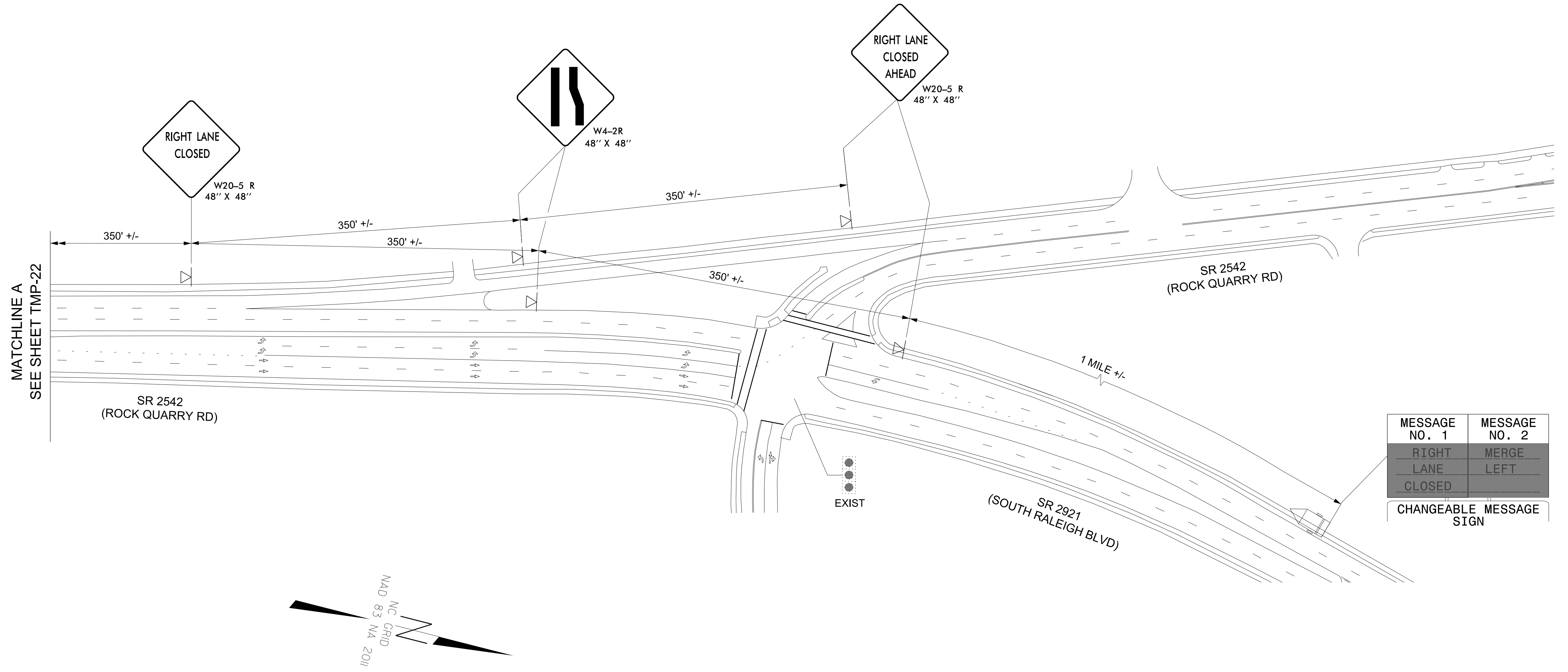
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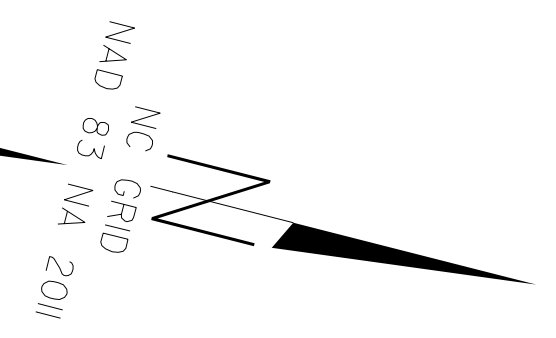
TRANSPORTATION  
MANAGEMENT PLAN

PHASE VII DETAIL

\$\$\$\$\$SYTIME\$\$\$\$\$  
\$\$\$\$\$DCGN\$\$\$\$\$  
\$\$\$\$\$USERNAME\$\$\$\$\$



| MESSAGE NO. 1           | MESSAGE NO. 2 |
|-------------------------|---------------|
| RIGHT LANE CLOSED       | MERGE LEFT    |
| CHANGEABLE MESSAGE SIGN |               |



\$\$\$\$\$SYSTEM\$\$\$\$\$  
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 \$\$\$USERNAME\$\$\$\$\$

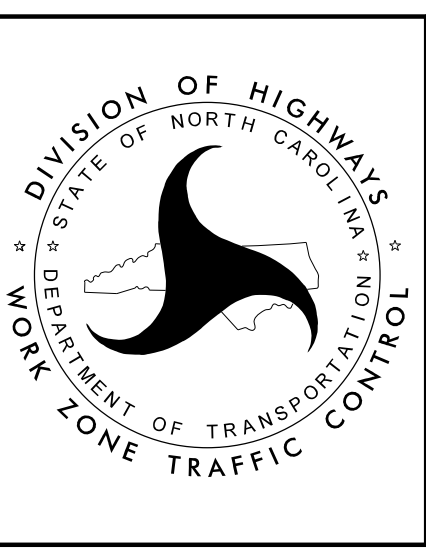
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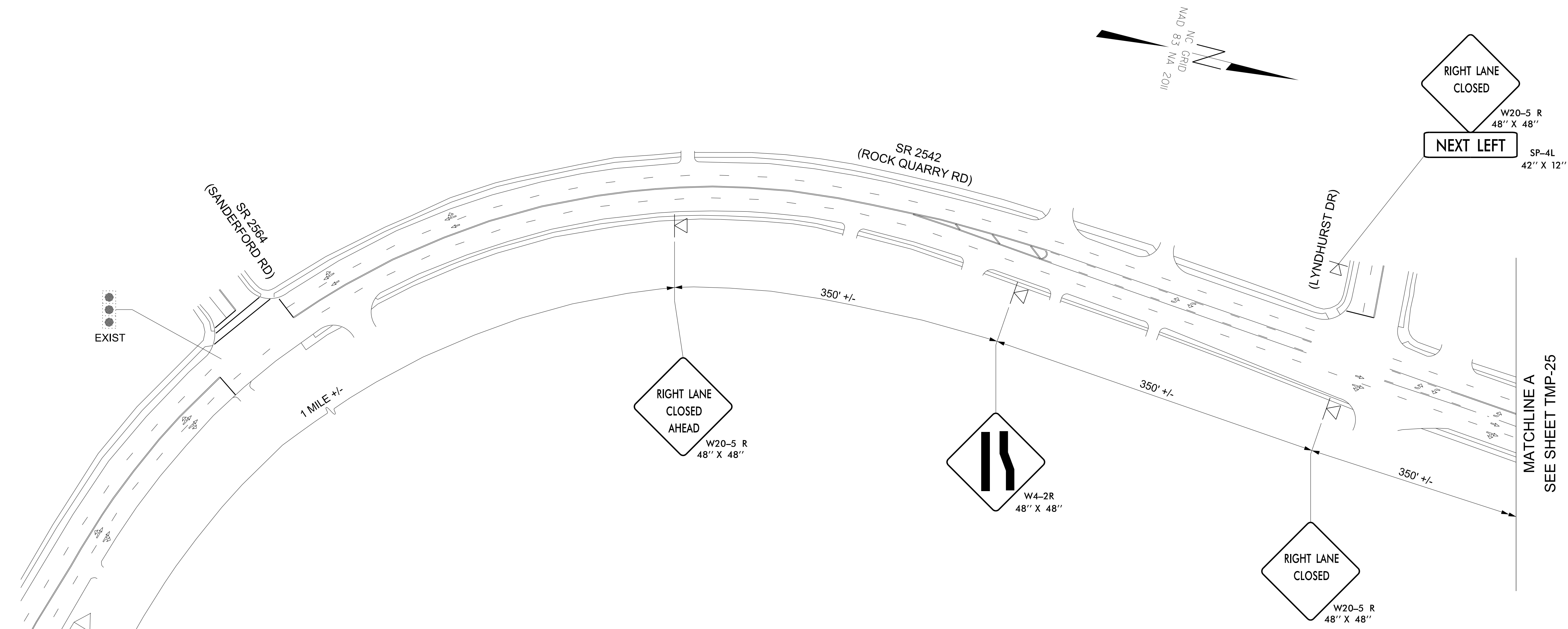
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TRANSPORTATION  
 MANAGEMENT PLAN

**PHASE VII DETAIL**





EXIST

SR 2564  
(SANDERFORD RD)

SR 2542  
(ROCK QUARRY RD)

(LYNDHURST DR)

1 MILE +/-

350' +/-

350' +/-

350' +/-

MATCHLINE A  
SEE SHEET TMP-25

|                         |               |
|-------------------------|---------------|
| MESSAGE NO. 1           | MESSAGE NO. 2 |
| RIGHT LANE CLOSED       | MERGE LEFT    |
| CHANGEABLE MESSAGE SIGN |               |

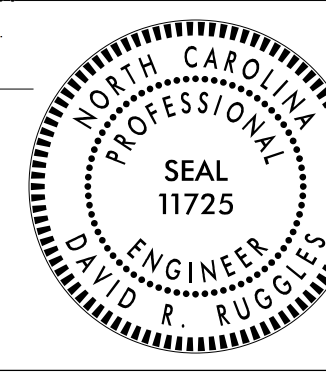
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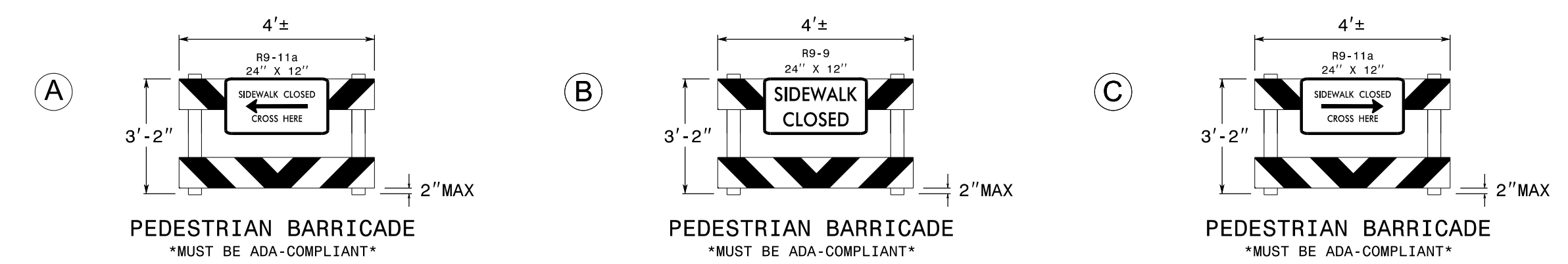
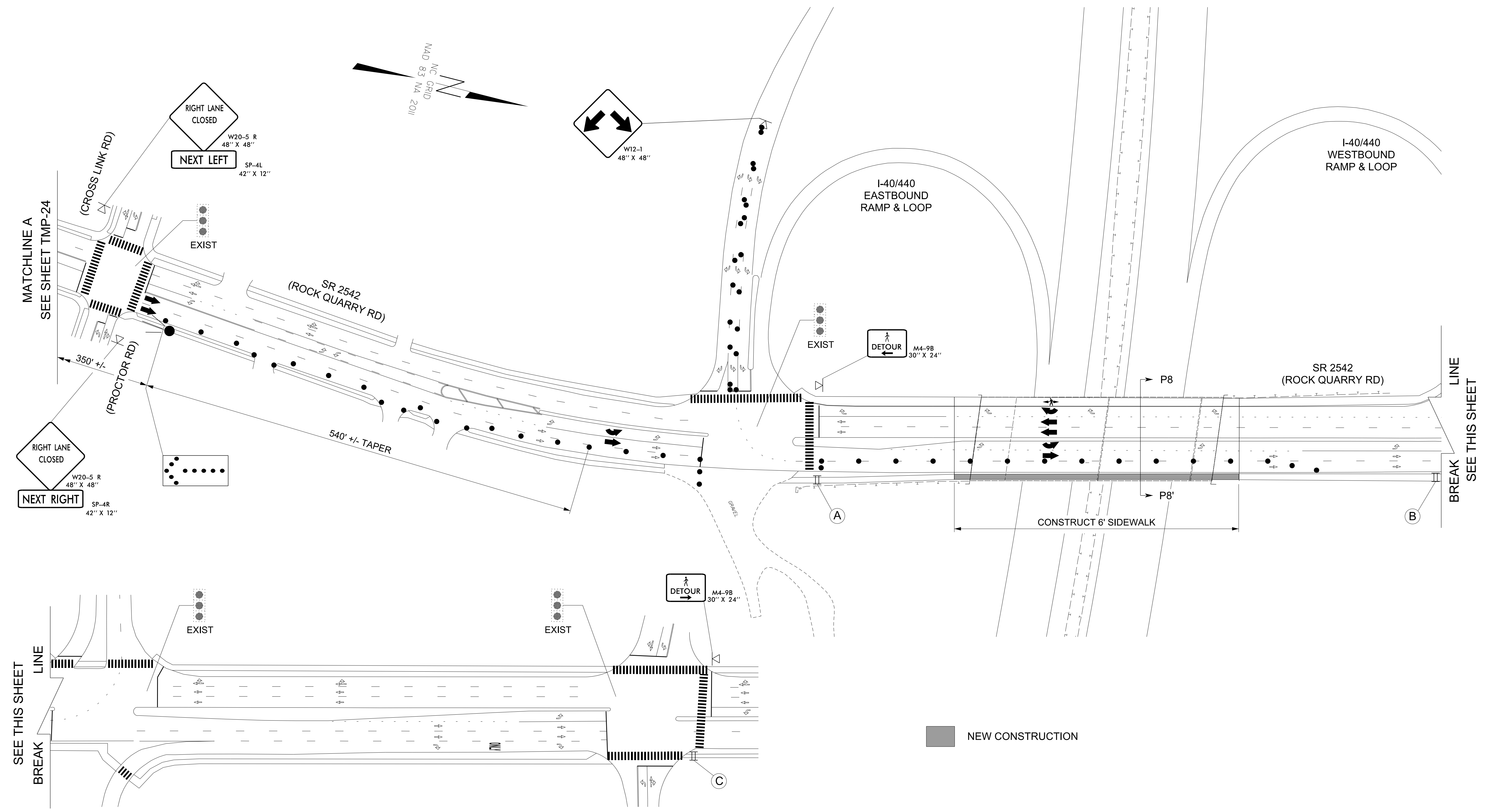


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TRANSPORTATION  
MANAGEMENT PLAN

**PHASE VIII DETAIL**



**STEWART**

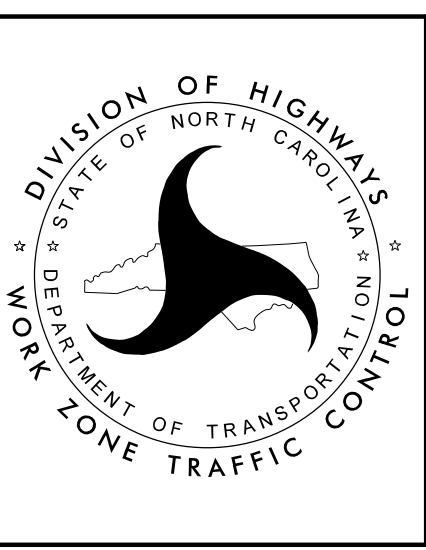
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DAVID R. RUGGLES

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TRANSPORTATION  
MANAGEMENT PLAN

**PHASE VIII DETAIL**

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



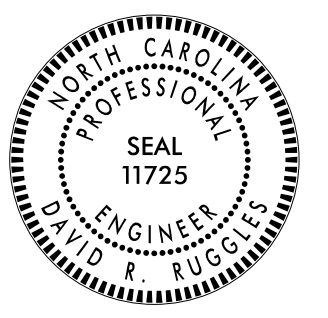
**PROJECT: 17BP.5.H.4**

**CONTRACT: DE00290**

**STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN  
WAKE COUNTY**

**LOCATION: BRIDGE NO. 316 ON SR 2542 (ROCK QUARRY RD.) OVER I-40/I-440**

|   |                                     |
|---|-------------------------------------|
| <small>PROJ. REFERENCE NO.</small><br>17BP.5.H.4                                    | <small>SHEET NO.</small><br>PMP - 1 |
| <small>APPROVED:</small> <i>David Ruggles</i><br><small>DATE:</small> 3/11/2019     |                                     |
|  |                                     |
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**QUANTITIES**

| <u>PAY ITEM</u>   | <u>QUANTITY</u> |
|---|-----------------|
| COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE II (4") | 300 LF          |
| COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE II (8") | 90 LF           |
| COLD APPLIED PLASTIC PAVEMENT MARKING CHARACTER, TYPE II  | 4 EA            |
| COLD APPLIED PLASTIC PAVEMENT MARKING SYMBOL, TYPE II     | 7 EA            |
| THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)        | 300 LF          |
| THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)        | 200 LF          |
| THERMOPLASTIC PAVEMENT MARKING CHARACTER (90 MILS)        | 4 EA            |
| THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)           | 5 EA            |
| SNOWPLOWABLE PAVEMENT MARKERS                             | 50 EA           |

**PAVEMENT MARKING SCHEDULE**

| <u>SYMBOL</u> | <u>DESCRIPTION</u>                 | <u>PAY ITEM</u>                    |
|---------------|------------------------------------|------------------------------------|
|               |                                    | COLD APPLIED PLASTIC (TYPE II)     |
| C13           | 3 FT - 9 FT/SP WHITE MINISKIP (8") |                                    |
| CC            | 10 FT WHITE SKIP (4")              |                                    |
| CD            | 3 FT - 9 FT WHITE MINISKIP (4")    |                                    |
|               |                                    | COLD APPLIED PLASTIC SYMBOLS       |
| DA            | LEFT TURN ARROW                    |                                    |
| DB            | RIGHT TURN ARROW                   |                                    |
| DC            | STRAIGHT ARROW                     |                                    |
|               |                                    | COLD APPLIED PLASTIC CHARACTERS    |
| DI            | ALPHANUMERIC CHARACTER             |                                    |
|               |                                    | THERMOPLASTIC (90 MILS)            |
| T13           | 3 FT - 9 FT/SP WHITE MINISKIP (8") |                                    |
| TC            | 10 FT WHITE SKIP (4")              |                                    |
| TD            | 3 FT - 9 FT/SP WHITE MINISKIP (4") |                                    |
| TE            | WHITE SOLID LANE LINE (4")         |                                    |
| TR            | WHITE SOLID LANE LINE (8")         |                                    |
|               |                                    | THERMOPLASTIC SYMBOLS (90 MILS)    |
| UB            | RIGHT TURN ARROW                   |                                    |
| UC            | STRAIGHT ARROW                     |                                    |
|               |                                    | THERMOPLASTIC CHARACTERS (90 MILS) |
| UI            | ALPHANUMERIC CHARACTER             |                                    |
|               |                                    | PAVEMENT MARKERS                   |
| MB            | CRYSTAL & RED                      |                                    |

**ROADWAY STANDARD DRAWING**

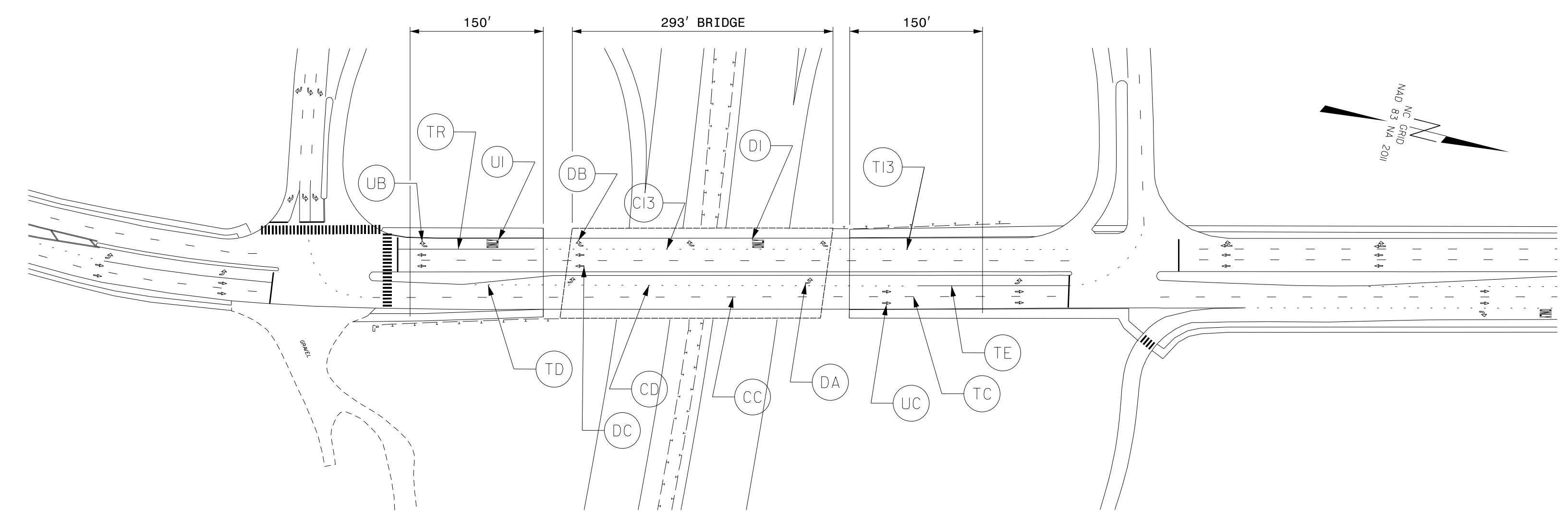
THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

| <u>STD. NO.</u> | <u>TITLE</u>  |
|-----------------|---|
| 1205.01         | PAVEMENT MARKINGS - LINE TYPES AND OFFSETS          |
| 1205.02         | PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS |
| 1205.04         | PAVEMENT MARKINGS - INTERSECTIONS                   |
| 1205.05         | PAVEMENT MARKINGS - TURN LANES                      |
| 1205.07         | PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS           |
| 1205.08         | PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES       |
| 1205.12         | PAVEMENT MARKINGS - BRIDGES                         |
| 1250.01         | RAISED PAVEMENT MARKERS - INSTALLATION SPACING      |
| 1251.01         | RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY   |

**GENERAL NOTES**

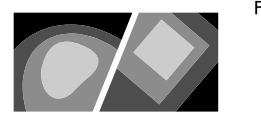
- THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.
- A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

| <u>ROAD NAME</u>           | <u>MARKING</u>                        | <u>MARKER</u> |
|----------------------------|---------------------------------------|---------------|
| SR 2542 (ROCK QUARRY ROAD) | COLD APPLIED PLASTIC<br>THERMOPLASTIC | SNOW PLOWABLE |
  - B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
  - C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS.
  - D) REFER TO NCDOT ROADWAY STANDARD DRAWING NO. 1205.08, SHEETS 1 THRU 8 FOR SYMBOLS AND WORD MESSAGES. COLD APPLIED PAVEMENT MARKINGS AND SYMBOLS TO BE PLACED ON CONCRETE BRIDGE DECK AND APPROACH SLABS. THERMOPLASTIC PAVEMENT MARKINGS AND SYMBOLS TO BE PLACED ON ASPHALT PAVEMENT.
  - E) FOR FINAL LANE PATTERN, SEE SHEET TMP-2B.



**PLAN PREPARED BY: STEWART**

|                             |                         |
|-----------------------------|-------------------------|
| <b>DAVID RUGGLES, PE</b>    | PROJECT ENGINEER        |
| <b>ELIZABETH PHELPS, EI</b> | PROJECT DESIGN ENGINEER |



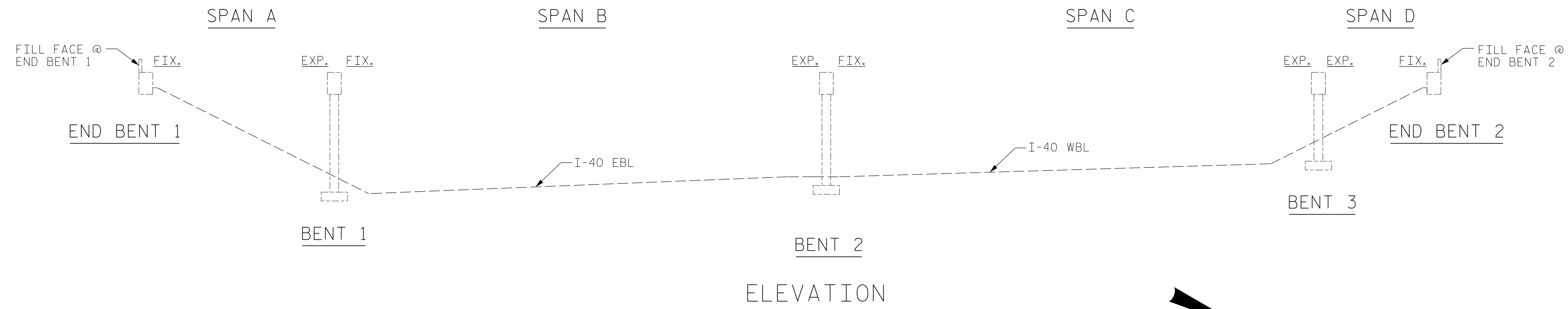
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Raleigh, NC 27601  
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www.stewartinc.com

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USER:repheips

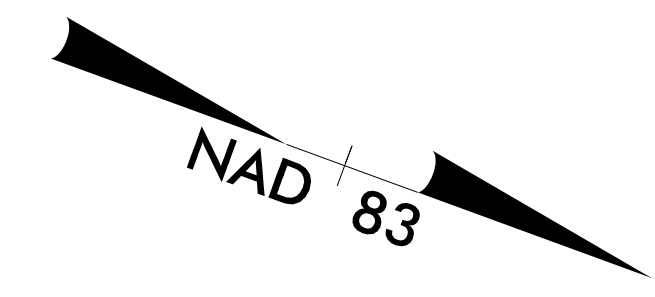


**SCOPE OF WORK**

- PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATIONS AND SHOTBLASTING METHODS
- REPLACE EXISTING COMPRESSION JOINTS WITH SILICONE JOINT SEALANT
- DEMOLISH EXISTING RUBBER PLATE EXPANSION JOINTS AND REPLACE WITH MOLDED RUBBER PLATE TYPE EXPANSION JOINTS
- OVERLAY PREPARED BRIDGE DECK WITH POLYMER CONCRETE
- GROOVE POLYESTER POLYMER CONCRETE
- MILLING
- PAVING
- SIDEWALK CONSTRUCTION



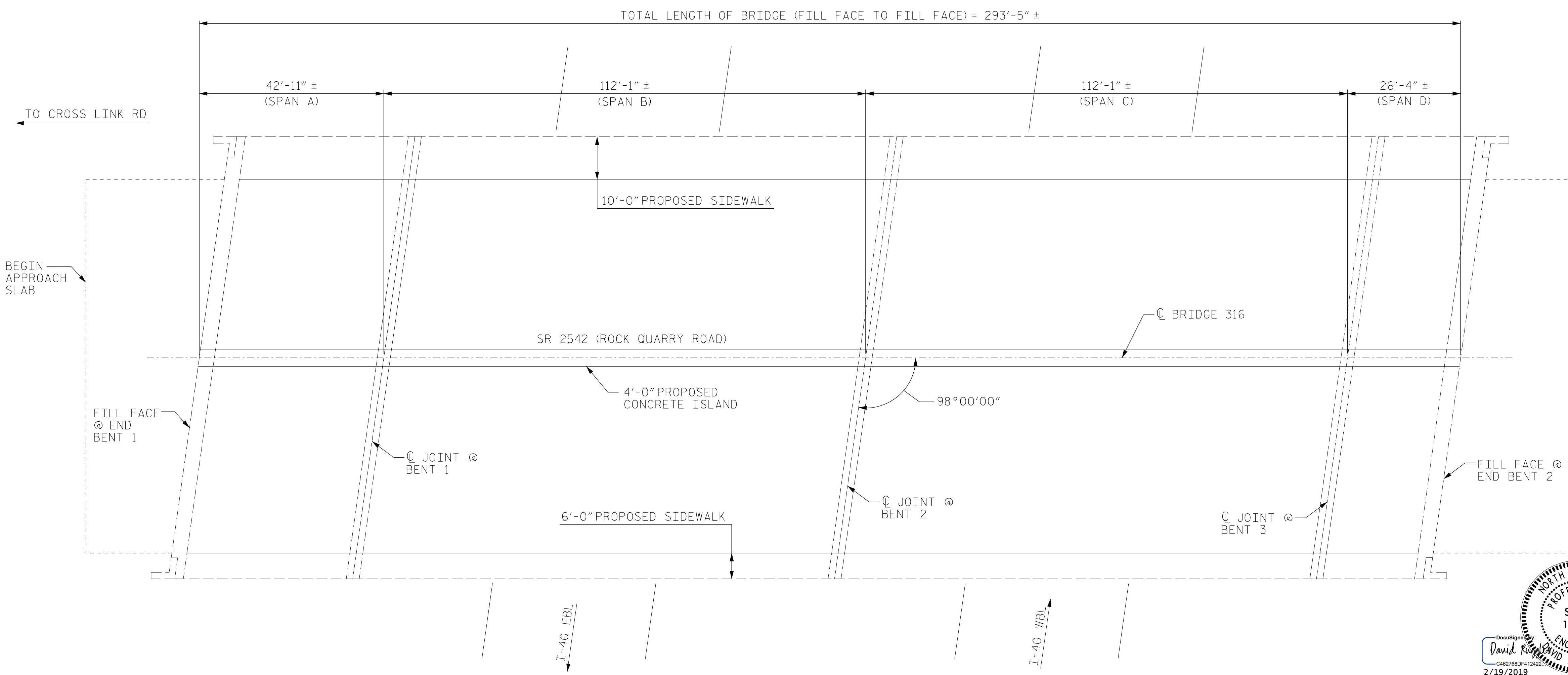
**ELEVATION**



I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer \_\_\_\_\_ Date \_\_\_\_\_

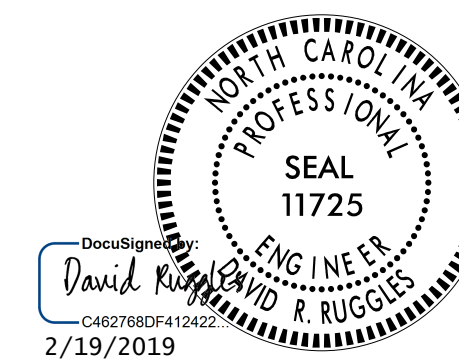
NOTES:  
 CONTRACTOR SHOULD BE AWARE THAT THERE ARE POWER LINES AND OTHER UTILITIES IN CLOSE PROXIMITY TO THE BRIDGE. CONTRACTOR SHALL HAVE UTILITIES MARKED BY NC811.ORG BEFORE BEGINNING WORK AND PLAN WORK TO STAY WELL CLEAR OF UTILITIES. THERE IS ALSO AN ELECTRICAL CONDUIT EMBEDDED IN CONCRETE BARRIER THAT SHOULD BE CONSIDERED WHEN PLANNING WORK ACTIVITIES.



**PLAN**

PROJECT NO. 17BP.5.H.4  
 WAKE COUNTY  
 BRIDGE NO. 316

SHEET 1 OF 2



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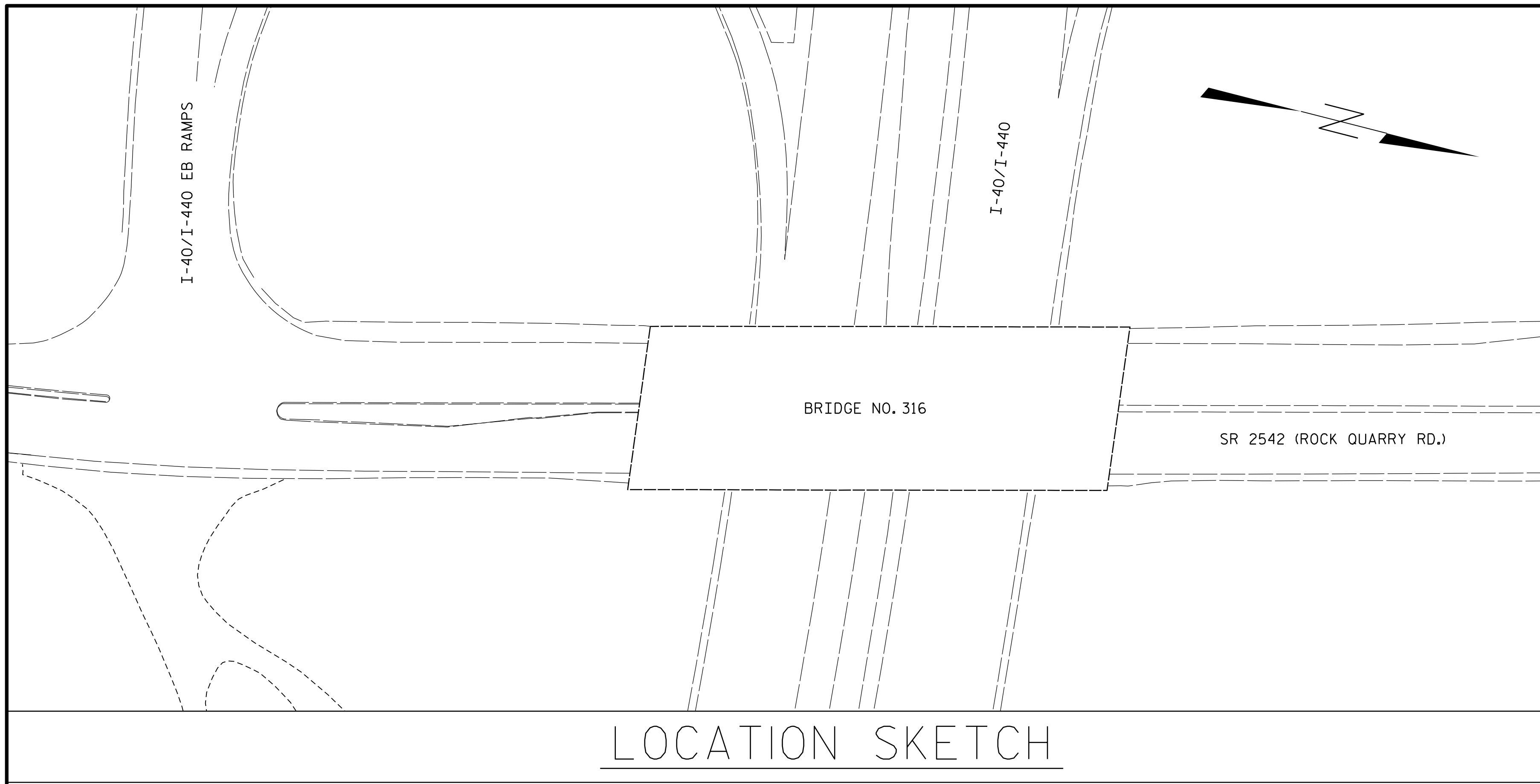
**GENERAL DRAWING**  
 FOR BRIDGE OVER I-40  
 ON SR 2542 (ROCK QUARRY RD)  
 BETWEEN CROSS LINK RD AND  
 MARTIN LUTHER KING JR BLVD

| REVISIONS |     |       |     |     |       | SHEET NO.    |
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WAKE 316

2/18/2019  
 \\001\_RockQuarryRehab\_0001.dgn  
 USER:vcchung

DRAWN BY: E. PHELPS DATE: 06-17  
 CHECKED BY: D. RUGGLES DATE: 09-17  
 DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 09-17



**NOTES:**

- INFORMATION INDICATED ON THE GENERAL DRAWING AND LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAY, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.
- EXISTING DIMENSIONS AND BRIDGE CONDITIONS ARE FROM BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.
- PRIOR TO BEGINNING WORK, CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPLETE SEQUENCE OF TASKS FOR EACH OPERATION AFFECTING THE BRIDGE SURFACE AND/OR TRAFFIC.
- EXISTING JOINTS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK.
- LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.
- WORK ON BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE TO ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLAN.
- ANY DAMAGE TO EXISTING REINFORCING STEEL, DURING CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND PERFORMED AT NO ADDITIONAL COST.
- FOR OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE, SEE SPECIAL PROVISION.
- FOR POLYESTER POLYMER CONCRETE BRIDGE DECK OVERLAY, SEE SPECIAL PROVISIONS.
- FOR JOINT REPAIR, SEE SPECIAL PROVISIONS.
- FOR MOLDED RUBBER SEGMENTAL EXPANSION JOINT, SEE SPECIAL PROVISION FOR JOINT REPAIR.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
- FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.
- FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- FOR TEMPORARY STEEL COVER FOR EXPANSION JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.

LOCATION SKETCH

TOTAL BILL OF MATERIAL

|            | MILLING ASPHALT PAVEMENT 1/2" DEPTH | ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B | ASPHALT BINDER FOR PLANT MIX | GROOVING BRIDGE FLOORS | CLASS AA CONCRETE | EPOXY COATED REINFORCING STEEL | * CLASS II SURFACE PREPARATION | SCARIFYING BRIDGE DECK | SHOTBLASTING BRIDGE DECK | * CONCRETE DECK REPAIR FOR PPC OVERLAY | PPC MATERIALS | PLACING AND FINISHING PPC OVERLAY | SILICONE JOINT SEALANT | MOLDED RUBBER SEGMENTAL EXPANSION JOINT | JOINT REPAIR | TEMPORARY STEEL COVER FOR EXP. JT. SEAL REPAIR |
|------------|-------------------------------------|---|------------------------------|------------------------|-------------------|--------------------------------|--------------------------------|------------------------|--------------------------|--|---------------|-----------------------------------|------------------------|---|--------------|--|
|            | SO. YDS.                            | TONS  | TONS                         | SO. FT.                | CU. YDS.          | LBS.                           | SO. YDS.                       | SO. YDS.               | SO. YDS.                 | SO. YDS.                               | CU. YD.       | SO. YDS.                          | LIN. FT.               | LUMP SUM                                | SO. FT.      | LIN. FT.                                       |
| BRIDGE 316 | 2,410                               | 250   | 13                           | 32,185                 | 142.8             | 7,283                          | 2.0                            | 3,715.9                | 3,715.9                  | 2.0                                    | 129.0         | 3,715.9                           | 312.0                  | LUMP SUM                                | 242.8        | 101.0  |
| TOTAL      | 2,410                               | 250   | 13                           | 32,185                 | 142.8             | 7,283                          | 2.0                            | 3,715.9                | 3,715.9                  | 2.0                                    | 129.0         | 3,715.9                           | 312.0                  | LUMP SUM                                | 242.8        | 101.0  |

\* CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY ARE NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II SURFACE PREPARATION AREAS ARE ENCOUNTERED.

PROJECT NO. 17BP.5.H.4  
WAKE COUNTY  
 BRIDGE NO. 316

SHEET 2 OF 2



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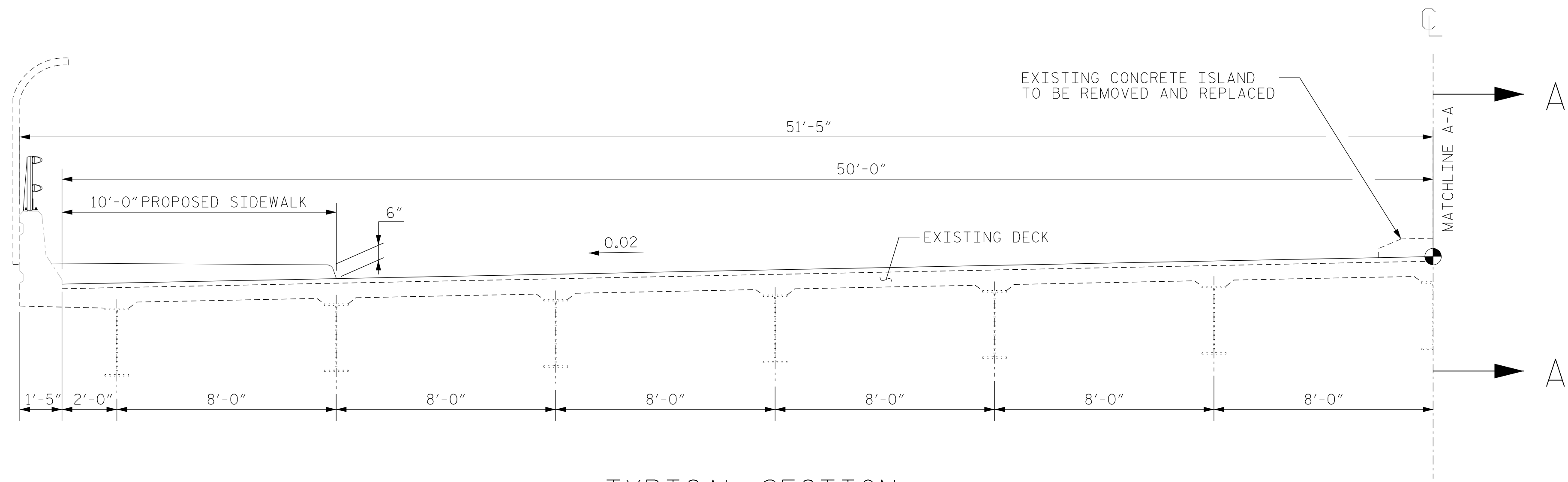
**GENERAL DRAWING  
 FOR BRIDGE OVER I-40  
 ON SR 2542 (ROCK QUARRY RD)  
 BETWEEN CROSS LINK RD AND  
 MARTIN LUTHER KING JR BLVD**

| REVISIONS |     |       |     |     |       | SHEET NO.    |
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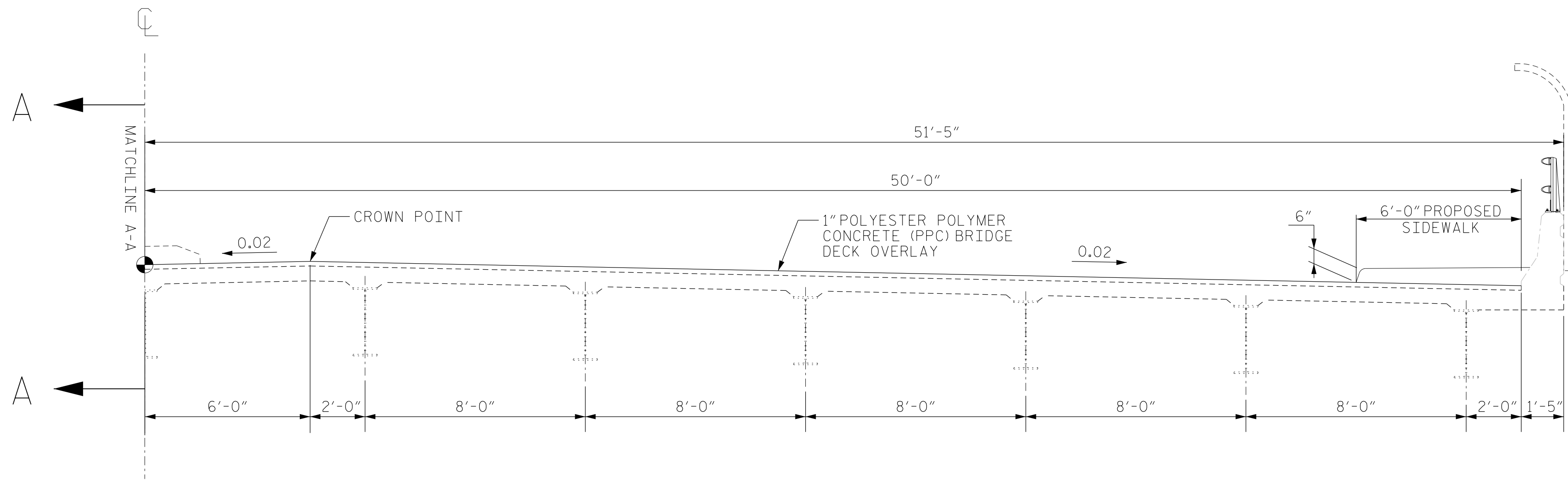
DRAWN BY: E. PHELPS DATE : 06-17  
 CHECKED BY: D. RUGGLES DATE : 09-17  
 DESIGN ENGINEER OF RECORD: D. RUGGLES DATE : 09-17

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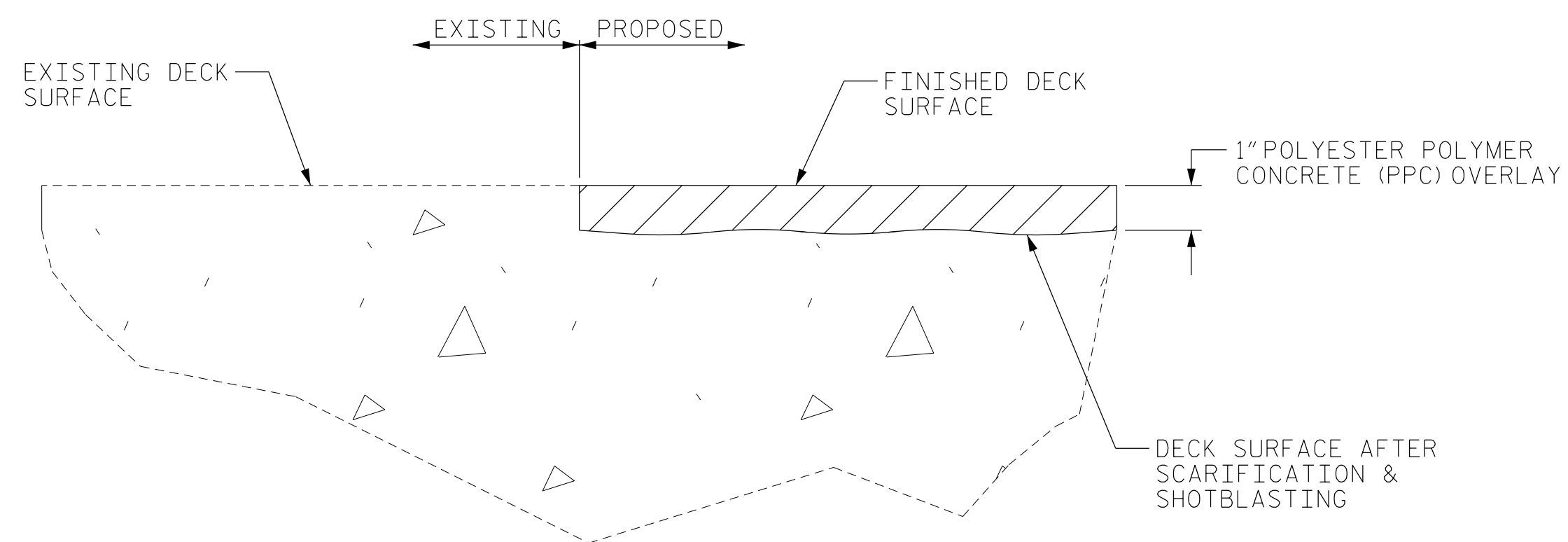
WAKE 316



TYPICAL SECTION



TYPICAL SECTION



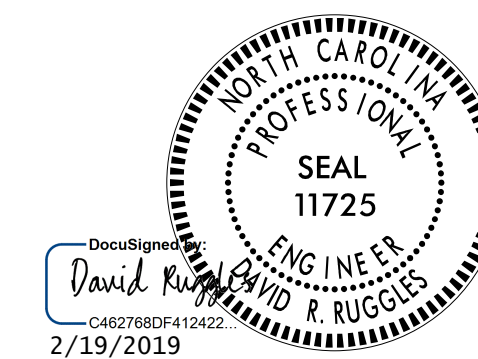
DETAIL OF POLYESTER POLYMER CONCRETE OVERLAY

NOTES:

SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF SURFACE PREPARATION AND PPC OVERLAY.

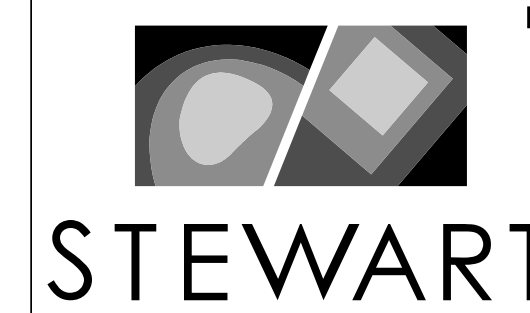
THE EXISTING DECK DRAINS IN SPANS "A" AND "D" ARE TO BE PLUGGED BEFORE CASTING THE PROPOSED SIDEWALKS. METHOD OF PLUGGING DECK DRAINS SHALL BE APPROVED BY THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE MADE FOR DECK DRAIN GROUTING. THE ENTIRE COST OF THIS WORK SHALL BE DISTRIBUTED AMONG THE VARIOUS PAY ITEMS.

PROJECT NO. 17BP.5.H.4  
 WAKE COUNTY  
 BRIDGE NO. 316



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 RALEIGH  
 SUPERSTRUCTURE  
 TYPICAL SECTION & DETAILS

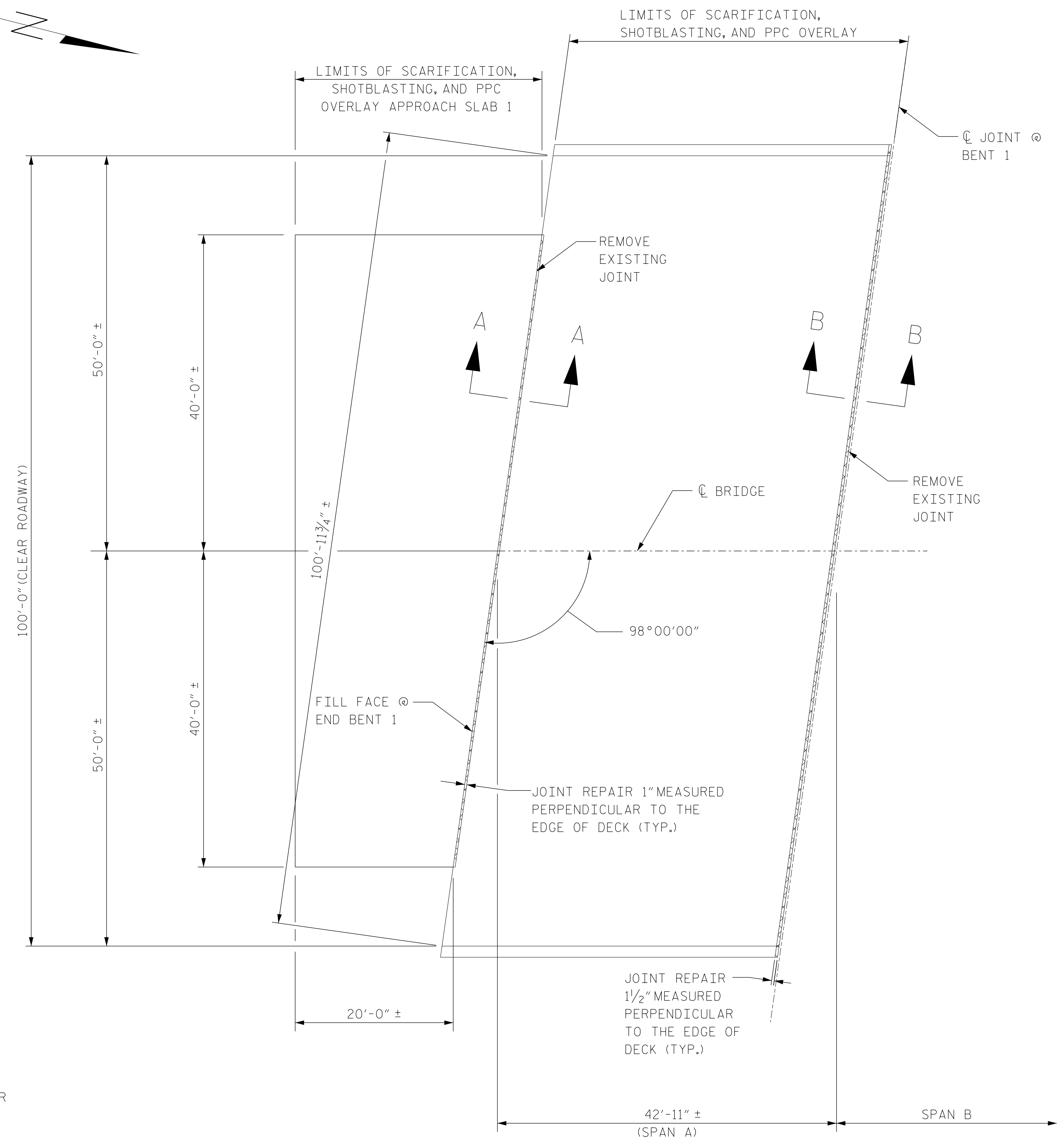
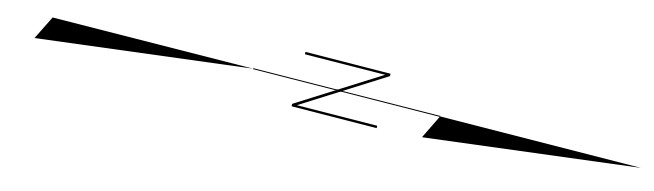
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 DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 09-17

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WAKE\_316





- JOINT REPAIR
- SCARIFICATION, SHOTBLASTING, AND POLYESTER POLYMER CONCRETE (PPC) OVERLAY

**PLAN OF SPAN A AND APPROACH SLAB 1**  
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-8)

| SPAN "A" QUANTITIES                  |                      |                 |                    |               |
|--------------------------------------|----------------------|-----------------|--------------------|---------------|
|                                      | ESTIMATE APP. SLAB 1 | ESTIMATE SPAN A | ACTUAL APP. SLAB 1 | ACTUAL SPAN A |
| SCARIFYING BRIDGE DECK               | 227.8 SQ. YDS.       | 476.9 SQ. YDS.  |                    |               |
| CLASS II SURFACE PREPARATION         | -                    | 0.5 SQ. YDS.    |                    |               |
| CONCRETE DECK REPAIR FOR PPC OVERLAY | -                    | 0.5 SQ. YDS.    |                    |               |
| SHOTBLASTING BRIDGE DECK             | 227.8 SQ. YDS.       | 476.9 SQ. YDS.  |                    |               |
| PPC MATERIALS                        | 7.9 CU. YDS.         | 16.6 CU. YDS.   |                    |               |
| PLACING AND FINISHING PPC OVERLAY    | 227.8 SQ. YDS.       | 476.9 SQ. YDS.  |                    |               |
| GROOVING BRIDGE FLOORS               | 2,023.3 SQ. FT.      | 4,130.6 SQ. FT. |                    |               |
| JOINT REPAIR (END BENT 1)            | 4.4 SQ. FT.          | 4.4 SQ. FT.     |                    |               |
| JOINT REPAIR (BENT 1)                | -                    | 8.7 SQ. FT.     |                    |               |

QUANTITIES IN TABLES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF SNOWPLOWABLE MARKERS AND UNSOUND CONCRETE (MIN. 2" CLEAR TO SAW CUT). SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISIONS.

ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE "ACTUAL" COLUMN OF THE REPAIR QUANTITY TABLE.

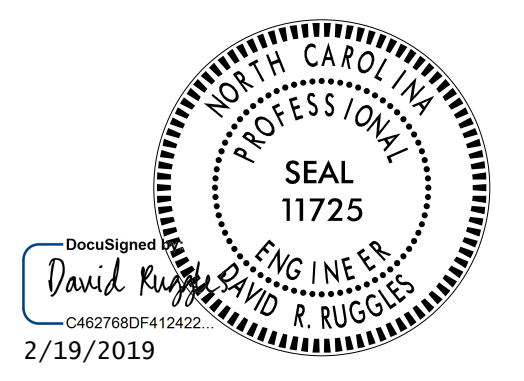
FOR SCARIFYING BRIDGE DECK, SHOTBLASTING BRIDGE DECK AND CLASS II SURFACE PREPARATIONS, SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.

FOR CONCRETE DECK REPAIR FOR PPC OVERLAY, PPC MATERIALS, AND PLACING AND FINISHING PPC OVERLAY, SEE POLYESTER POLYMER CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISIONS.

EXISTING JOINTS TO BE REMOVED AND JOINT OPENING CLEANED. PROVIDE TEMPORARY JOINT FOR EACH SECTION OF BRIDGE RECEIVING PPC OVERLAY. AFTER PPC PLACEMENT FOR ALL LANES IS COMPLETED, INSTALL PERMANENT SILICONE JOINT AT END BENT 1 AND BENT 1.

PPC DENOTES POLYESTER POLYMER CONCRETE

PROJECT NO. 17BP.5.H.4  
WAKE COUNTY  
 BRIDGE NO. 316  
 SHEET 1 OF 5



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STATE OF NORTH CAROLINA  
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SURFACE PREPARATION

**SPAN A**

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 DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 09-17

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| SPAN "B" QUANTITIES                  |                  |        |
|--------------------------------------|------------------|--------|
|                                      | ESTIMATE         | ACTUAL |
| SCARIFYING BRIDGE DECK               | 1245.4 SQ. YDS.  |        |
| CLASS II SURFACE PREPARATION         | 0.5 SQ. YDS.     |        |
| CONCRETE DECK REPAIR FOR PPC OVERLAY | 0.5 SQ. YDS.     |        |
| SHOTBLASTING BRIDGE DECK             | 1245.4 SQ. YDS.  |        |
| PPC MATERIALS                        | 43.2 CU. YDS.    |        |
| PLACING AND FINISHING PPC OVERLAY    | 1245.4 SQ. YDS.  |        |
| GROOVING BRIDGE FLOORS               | 10,791.2 SQ. FT. |        |
| JOINT REPAIR (BENT 1)                | 8.7 SQ. FT.      |        |
| JOINT REPAIR (BENT 2)                | 52.0 SQ. FT.     |        |

QUANTITIES IN TABLES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF SNOW PLOWABLE MARKERS AND UNSOUND CONCRETE (MIN. 2" CLEAR TO SAW CUT). SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISIONS.

ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE "ACTUAL" COLUMN OF THE REPAIR QUANTITY TABLE.

FOR SCARIFYING BRIDGE DECK, SHOTBLASTING BRIDGE DECK AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.

FOR CONCRETE DECK REPAIR FOR PPC OVERLAY, PPC MATERIALS, AND PLACING AND FINISHING PPC OVERLAY, SEE POLYESTER POLYMER CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISIONS.

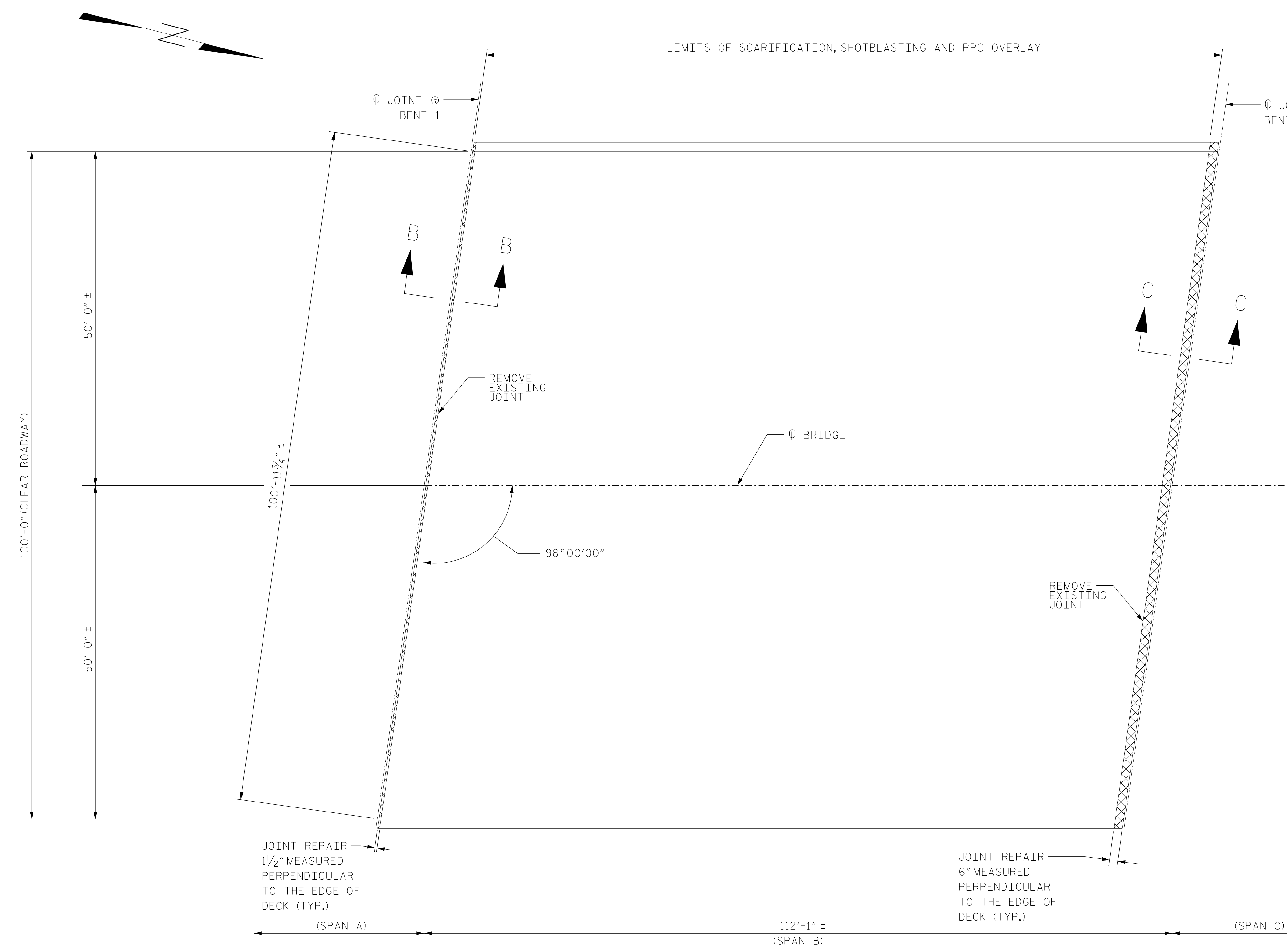
EXISTING JOINTS TO BE REMOVED AND JOINT OPENING CLEANED. PROVIDE TEMPORARY JOINT FOR EACH SECTION OF BRIDGE RECEIVING OVERLAY (CORRESPONDING TO PHASES).

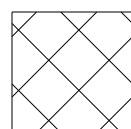

AFTER PPC PLACEMENT FOR ALL LANES IS COMPLETED, INSTALL PERMANENT SILICONE JOINT AT BENT 1 AND MOLDED RUBBER JOINT AT BENT 2. ALTERNATELY AT BENT 2, CONTRACTOR MAY INSTALL PERMANENT RUBBER PLATE JOINTS WITH STRIP LENGTHS CORRESPONDING TO WIDTH OF PPC OVERLAY BEING PLACED IN THAT PHASE.

IF MOLDED RUBBER JOINT IS INSTALLED IN PHASES, CONTRACTOR MUST BEGIN JOINT INSTALLATION AT OUTSIDE OF BRIDGE AND WORK TOWARDS CENTER OF BRIDGE.

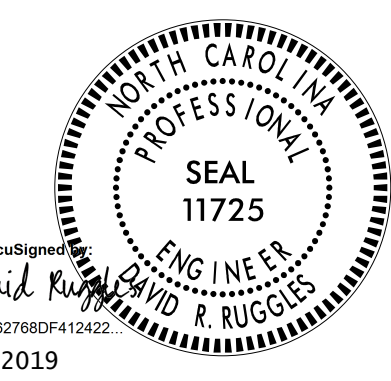
PROPOSED TEMPORARY JOINT AT BENT 2 TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL. FOR TEMPORARY STEEL COVER FOR EXPANSION JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.

PPC DENOTES POLYESTER POLYMER CONCRETE



-  JOINT REPAIR
-  SCARIFICATION, SHOT BLASTING, AND POLYESTER POLYMER CONCRETE (PPC) OVERLAY

**PLAN OF SPAN B**  
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-8)



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PROJECT NO. 17BP.5.H.4  
WAKE COUNTY  
BRIDGE NO. 316  
SHEET 2 OF 5

| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH |     |       |     |     |                    |
|--|-----|-------|-----|-----|--------------------|
| SURFACE PREPARATION<br>SPAN B                                      |     |       |     |     |                    |
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CHECKED BY: D. RUGGLES DATE: 09-17  
DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 09-17

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2/18/2019  
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USER:rvchung

| SPAN "C" QUANTITIES                  |                  |        |
|--------------------------------------|------------------|--------|
|                                      | ESTIMATE         | ACTUAL |
| SCARIFYING BRIDGE DECK               | 1245.4 SQ. YDS.  |        |
| CLASS II SURFACE PREPARATION         | 0.5 SQ. YDS.     |        |
| CONCRETE DECK REPAIR FOR PPC OVERLAY | 0.5 SQ. YDS.     |        |
| SHOTBLASTING BRIDGE DECK             | 1245.4 SQ. YDS.  |        |
| PPC MATERIALS                        | 43.2 CU. YDS.    |        |
| PLACING AND FINISHING PPC OVERLAY    | 1245.4 SQ. YDS.  |        |
| GROOVING BRIDGE FLOORS               | 10,742.7 SQ. FT. |        |
| JOINT REPAIR (BENT 2)                | 52.0 SQ. FT.     |        |
| JOINT REPAIR (BENT 3)                | 52.0 SQ. FT.     |        |

QUANTITIES IN TABLES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF SNOW PLOWABLE MARKERS AND UNSOUND CONCRETE (MIN. 2" CLEAR TO SAW CUT). SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISIONS.

ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE "ACTUAL" COLUMN OF THE REPAIR QUANTITY TABLE.

FOR SCARIFYING BRIDGE DECK, SHOTBLASTING BRIDGE DECK AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.

FOR CONCRETE DECK REPAIR FOR PPC OVERLAY, PPC MATERIALS, AND PLACING AND FINISHING PPC OVERLAY, SEE POLYESTER POLYMER CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISIONS.

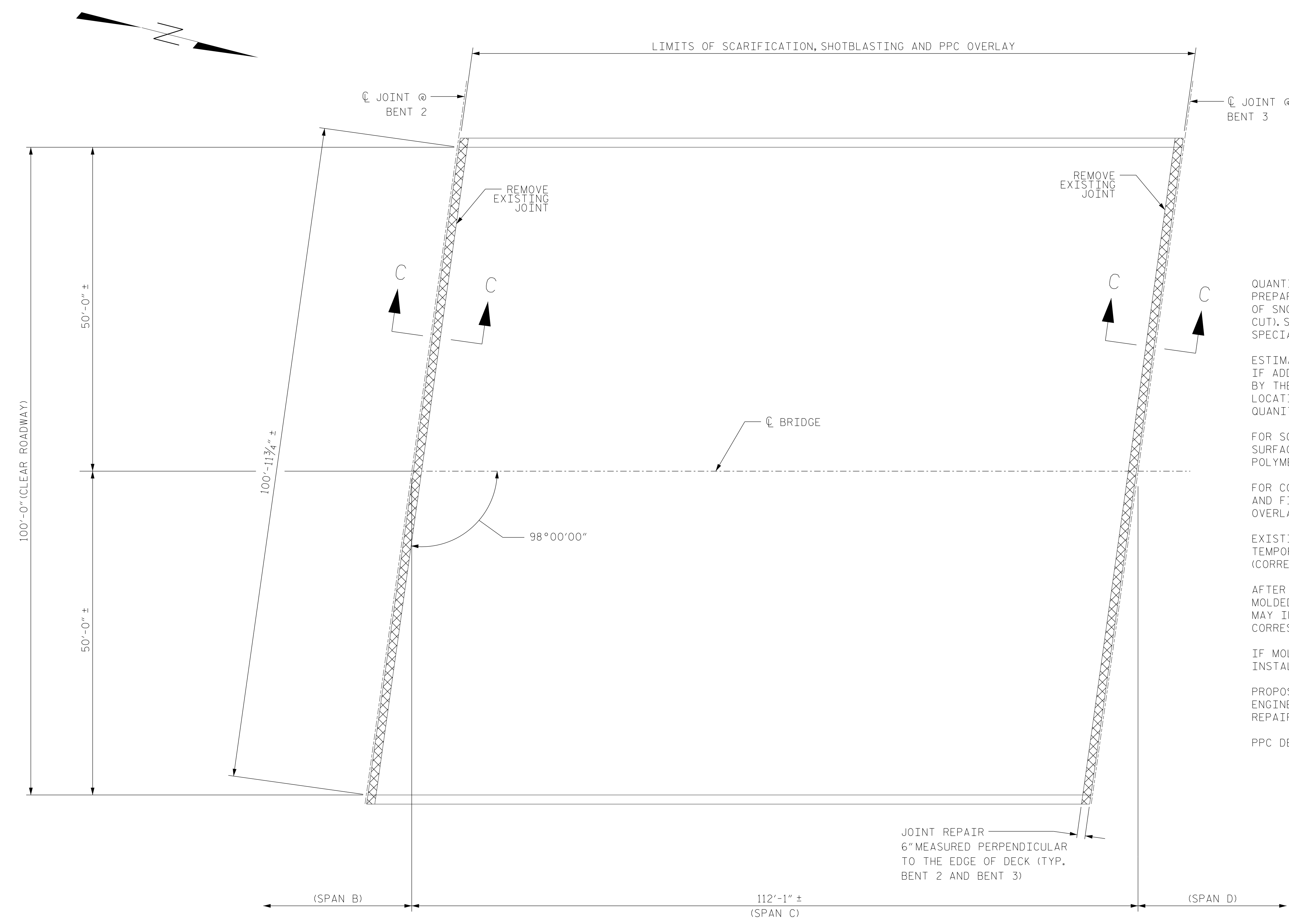
EXISTING JOINTS TO BE REMOVED AND JOINT OPENING CLEANED. PROVIDE TEMPORARY JOINT FOR EACH SECTION OF BRIDGE RECEIVING OVERLAY (CORRESPONDING TO PHASES).

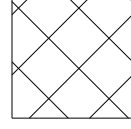

AFTER PPC PLACEMENT FOR ALL LANES IS COMPLETED, INSTALL PERMANENT MOLDED RUBBER JOINT AT BENT 2 AND BENT 3. ALTERNATELY, THE CONTRACTOR MAY INSTALL PERMANENT MOLDED RUBBER JOINTS WITH STRIP LENGTHS CORRESPONDING TO WIDTH OF PPC OVERLAY BEING PLACED IN THAT PHASE.

IF MOLDED RUBBER JOINT IS INSTALLED IN PHASES, CONTRACTOR MUST BEGIN JOINT INSTALLATION AT OUTSIDE OF BRIDGE AND WORK TOWARDS CENTER OF BRIDGE.

PROPOSED TEMPORARY JOINTS AT BENT 2 AND BENT 3 TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL. FOR TEMPORARY STEEL COVER FOR EXPANSION JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.

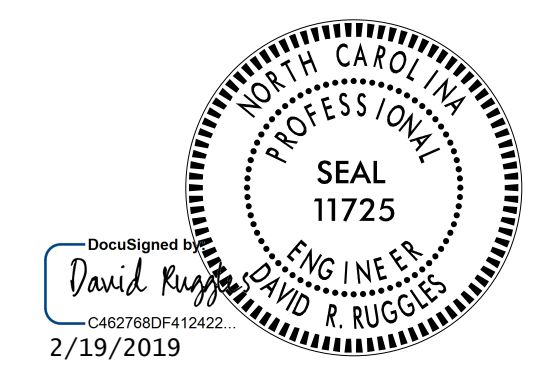
PPC DENOTES POLYESTER POLYMER CONCRETE



-  JOINT REPAIR
-  SCARIFICATION, SHOT BLASTING, AND POLYESTER POLYMER CONCRETE (PPC) OVERLAY

**PLAN OF SPAN C**  
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-8)

PROJECT NO. 17BP.5.H.4  
WAKE COUNTY  
 BRIDGE NO. 316  
 SHEET 3 OF 5



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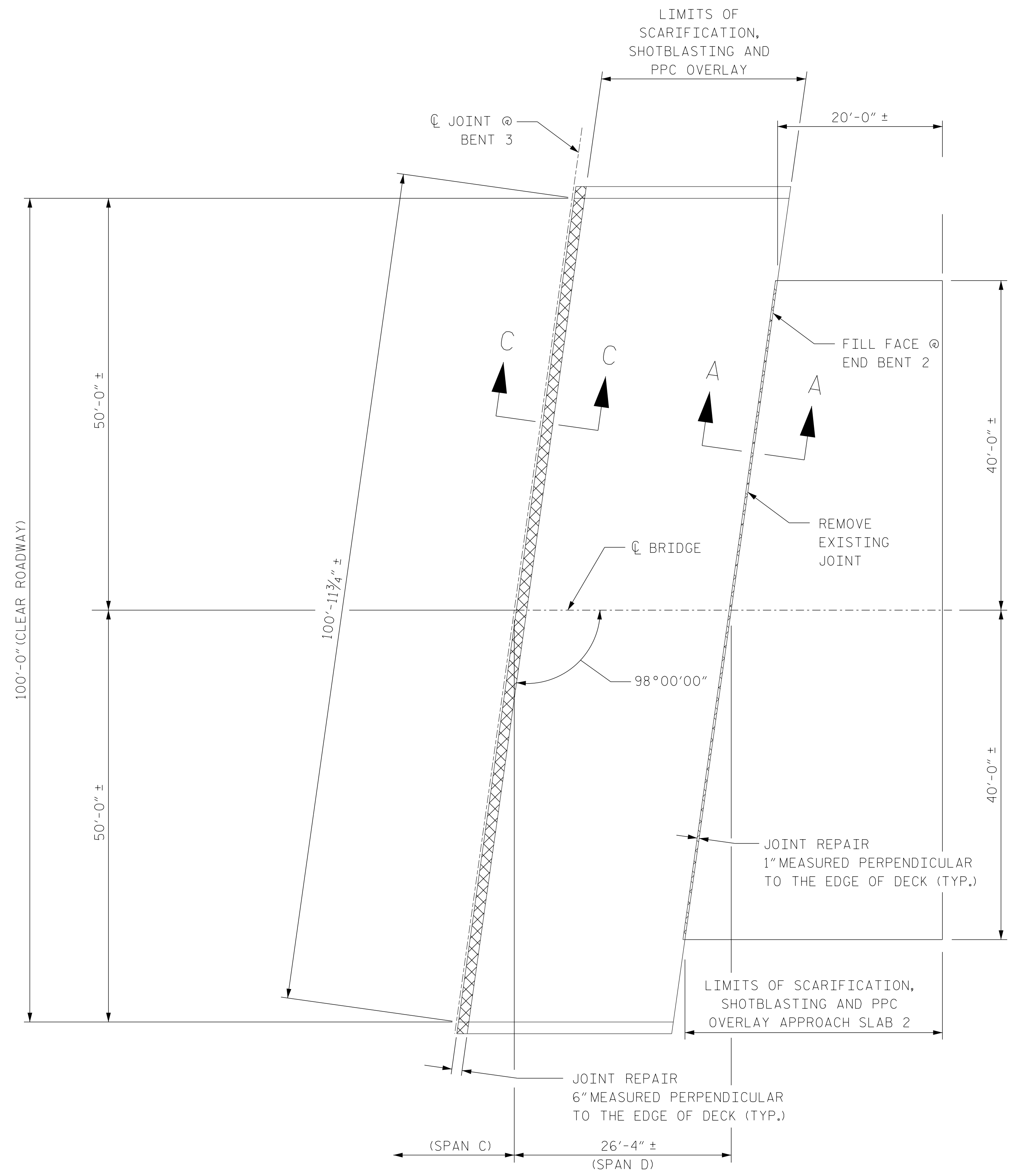
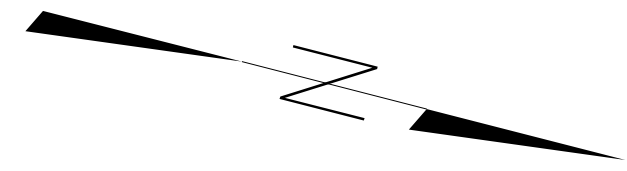
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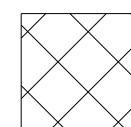
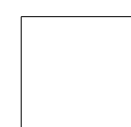
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 DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 09-17

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-  JOINT REPAIR
-  SCARIFICATION, SHOTBLASTING, AND POLYESTER POLYMER CONCRETE (PPC) OVERLAY

**PLAN OF SPAN D AND APPROACH SLAB 2**  
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-8)

| SPAN "D" QUANTITIES                  |                      |                 |                    |               |
|--------------------------------------|----------------------|-----------------|--------------------|---------------|
|                                      | ESTIMATE APP. SLAB 2 | ESTIMATE SPAN D | ACTUAL APP. SLAB 2 | ACTUAL SPAN D |
| SCARIFYING BRIDGE DECK               | 227.8 SQ. YDS.       | 292.6 SQ. YDS.  |                    |               |
| CLASS II SURFACE PREPARATION         | -                    | 0.5 SQ. YDS.    |                    |               |
| CONCRETE DECK REPAIR FOR PPC OVERLAY | -                    | 0.5 SQ. YDS.    |                    |               |
| SHOTBLASTING BRIDGE DECK             | 227.8 SQ. YDS.       | 292.6 SQ. YDS.  |                    |               |
| PPC MATERIALS                        | 7.9 CU. YDS.         | 10.2 CU. YDS.   |                    |               |
| PLACING AND FINISHING PPC OVERLAY    | 227.8 SQ. YDS.       | 292.6 SQ. YDS.  |                    |               |
| GROOVING BRIDGE FLOORS               | 2,023.3 SQ. FT.      | 2,473.5 SQ. FT. |                    |               |
| JOINT REPAIR (BENT 3)                | -                    | 52.0 SQ. FT.    |                    |               |
| JOINT REPAIR (END BENT 2)            | 4.4 SQ. FT.          | 4.4 SQ. FT.     |                    |               |

QUANTITIES IN TABLES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF SNOW PLOWABLE MARKERS AND UNSOUND CONCRETE (MIN. 2" CLEAR TO SAW CUT). SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISIONS.

ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE "ACTUAL" COLUMN OF THE REPAIR QUANTITY TABLE.

FOR SCARIFYING BRIDGE DECK, SHOTBLASTING BRIDGE DECK AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.

FOR CONCRETE DECK REPAIR FOR PPC OVERLAY, PPC MATERIALS, AND PLACING AND FINISHING PPC OVERLAY, SEE POLYESTER POLYMER CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISIONS.

EXISTING JOINTS TO BE REMOVED AND JOINT OPENING CLEANED. PROVIDE TEMPORARY JOINT FOR EACH SECTION OF BRIDGE RECEIVING OVERLAY (CORRESPONDING TO PHASES).

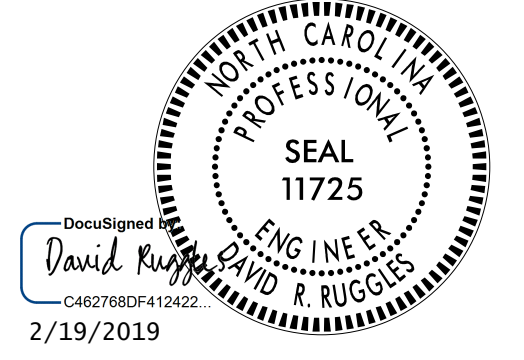
AFTER PPC PLACEMENT FOR ALL LANES IS COMPLETED, INSTALL PERMANENT MOLDED RUBBER JOINT AT BENT 3 AND PERMANENT SILICONE JOINT AT END BENT 2. ALTERNATELY, THE CONTRACTOR MAY INSTALL PERMANENT MOLDED RUBBER JOINTS WITH STRIP LENGTHS CORRESPONDING TO WIDTH OF PPC OVERLAY BEING PLACED AT THAT TIME.

IF MOLDED RUBBER JOINT IS INSTALLED IN PHASES, CONTRACTOR MUST BEGIN JOINT INSTALLATION AT OUTSIDE OF BRIDGE AND WORK TOWARDS CENTER OF BRIDGE.

PROPOSED TEMPORARY JOINT AT BENT 3 TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL. FOR TEMPORARY STEEL COVER FOR EXPANSION JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.

PPC DENOTES POLYESTER POLYMER CONCRETE

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WAKE COUNTY  
 BRIDGE NO. 316  
 SHEET 4 OF 5



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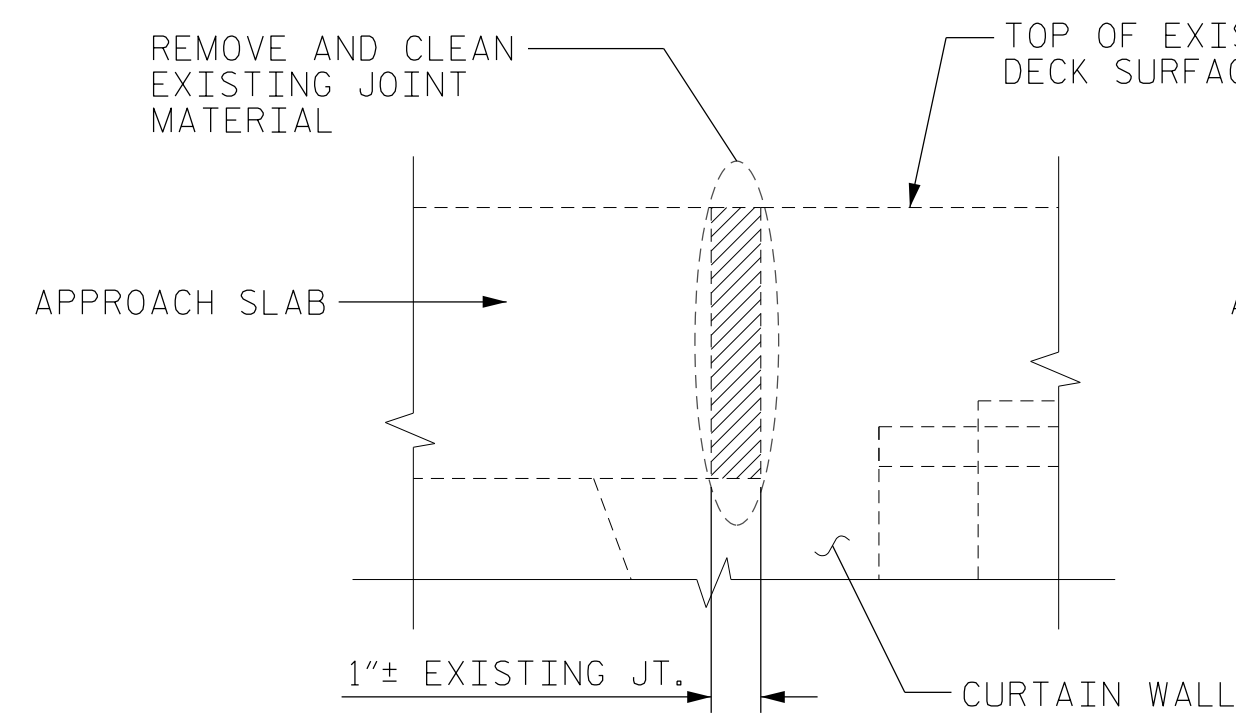
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 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

SURFACE PREPARATION  
 SPAN D

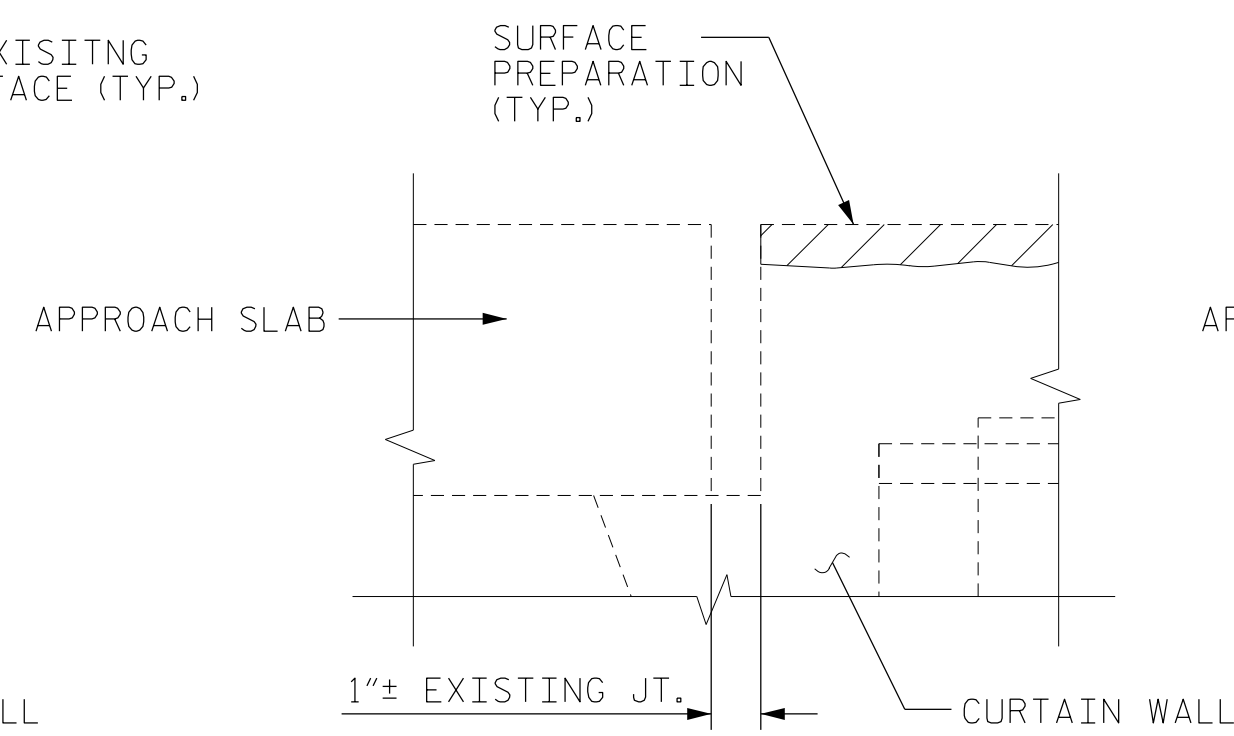
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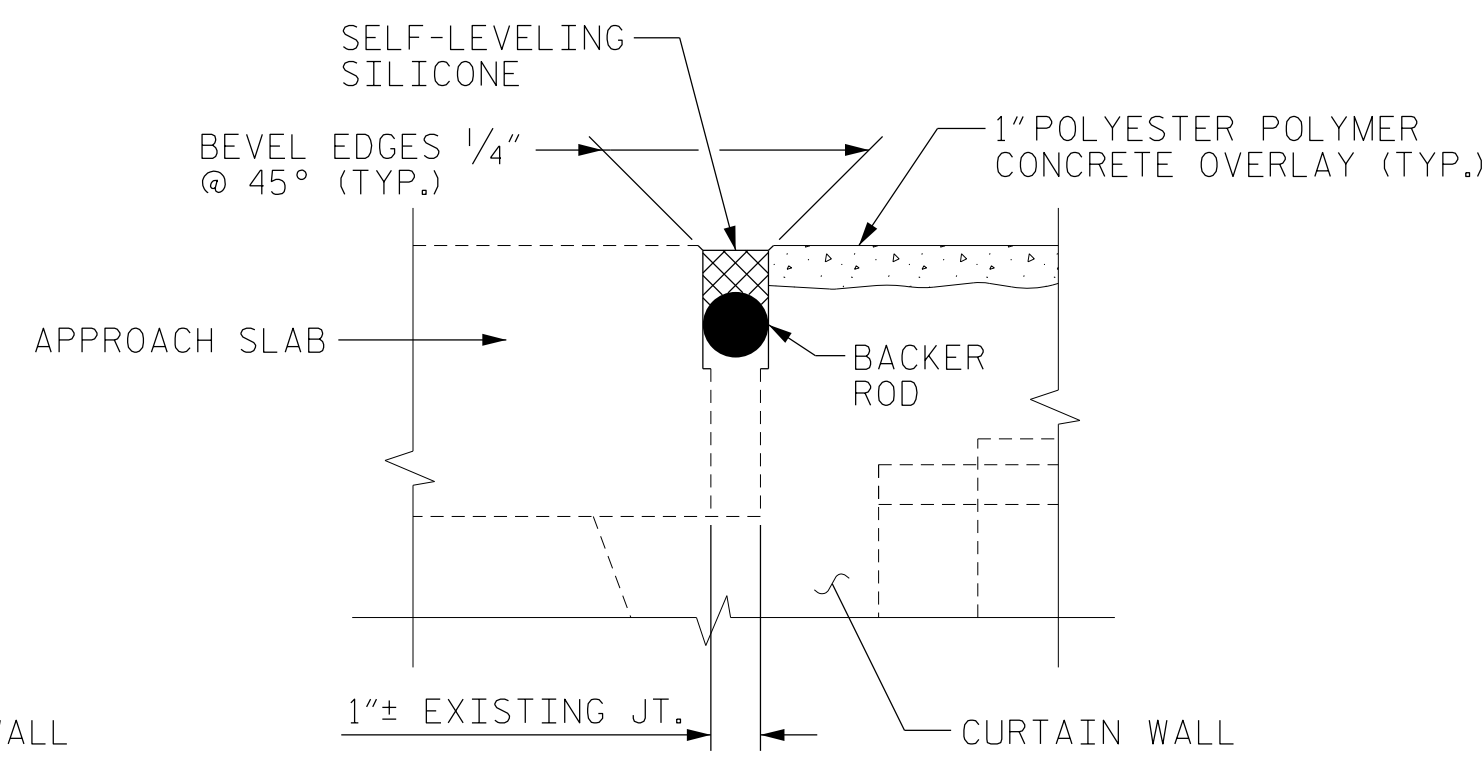
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EXISTING JOINT



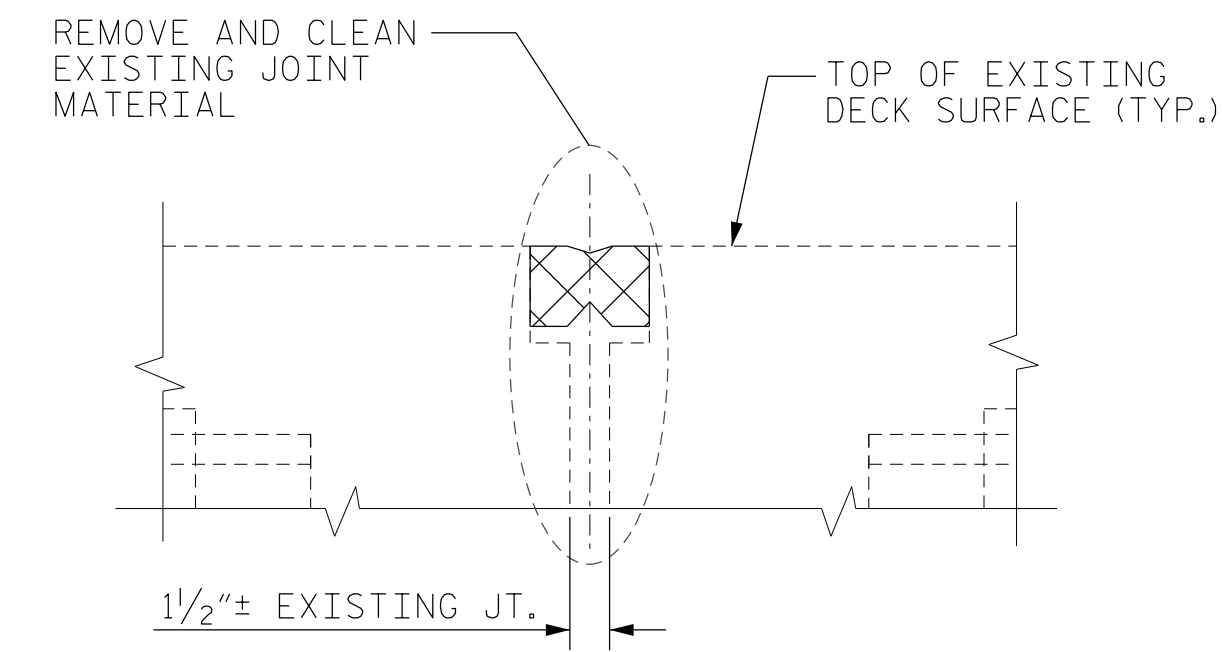
MINIMUM EXISTING JOINT DEMOLITION



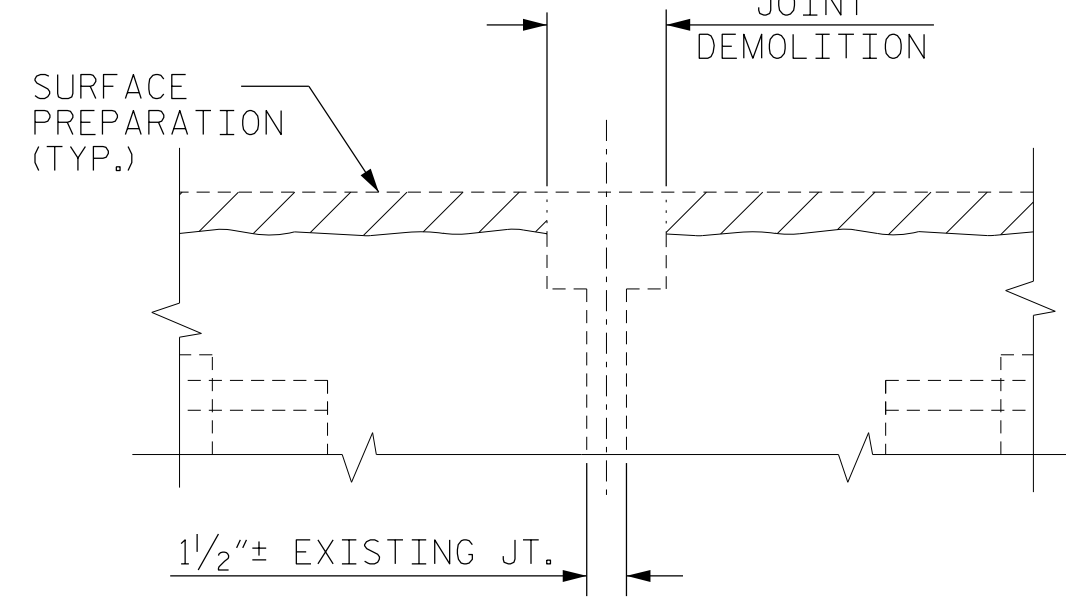
PROPOSED JOINT

JOINT INSTALLATION SEQUENCE AT END BENTS

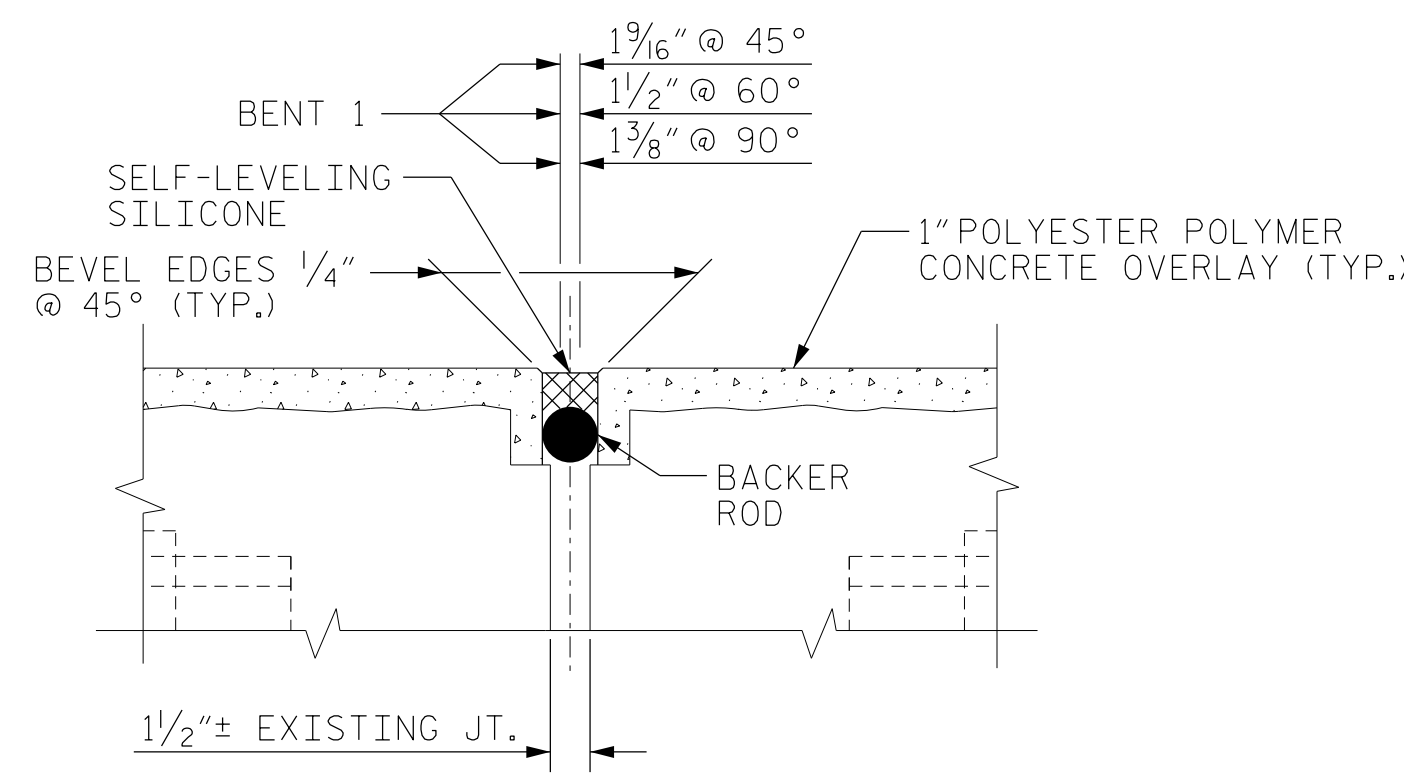
SECTION A-A



EXISTING JOINT



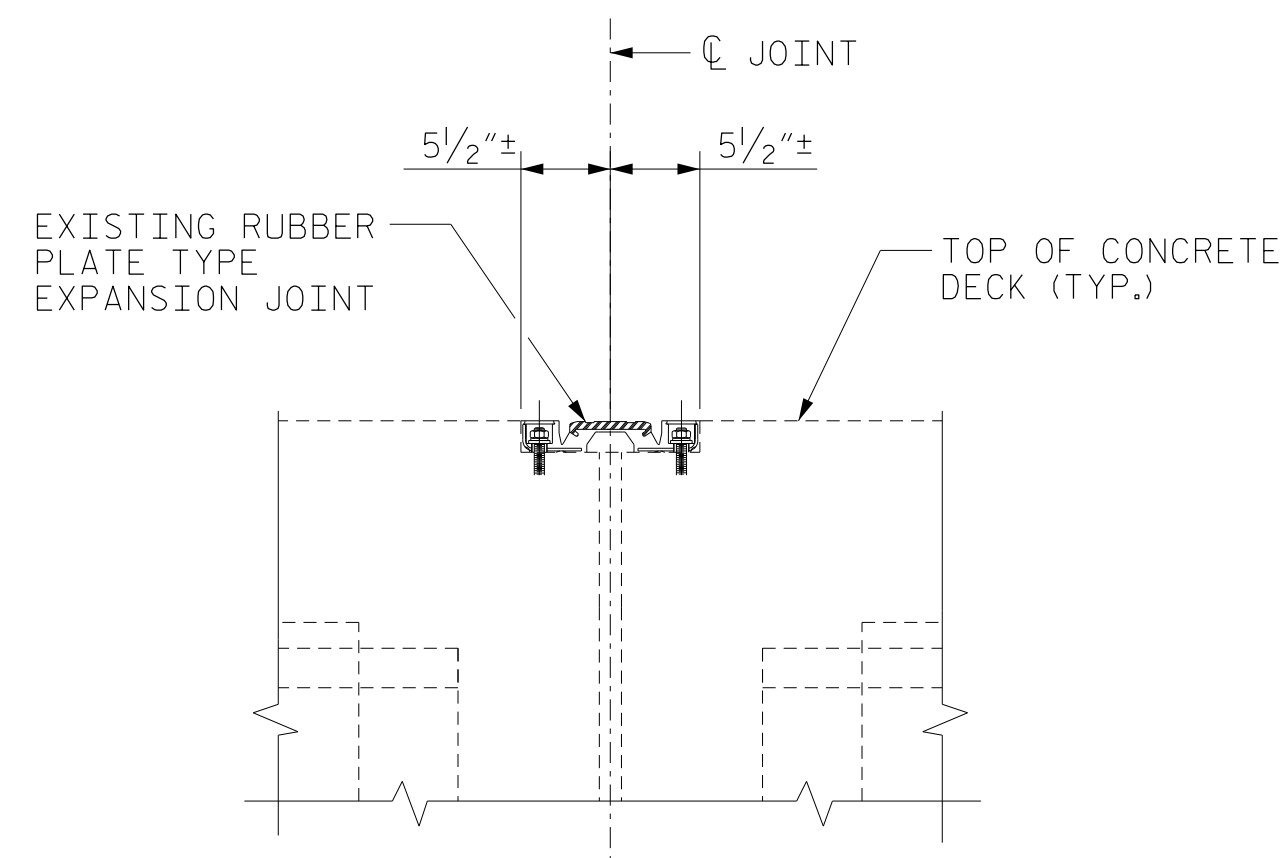
MINIMUM EXISTING JOINT DEMOLITION



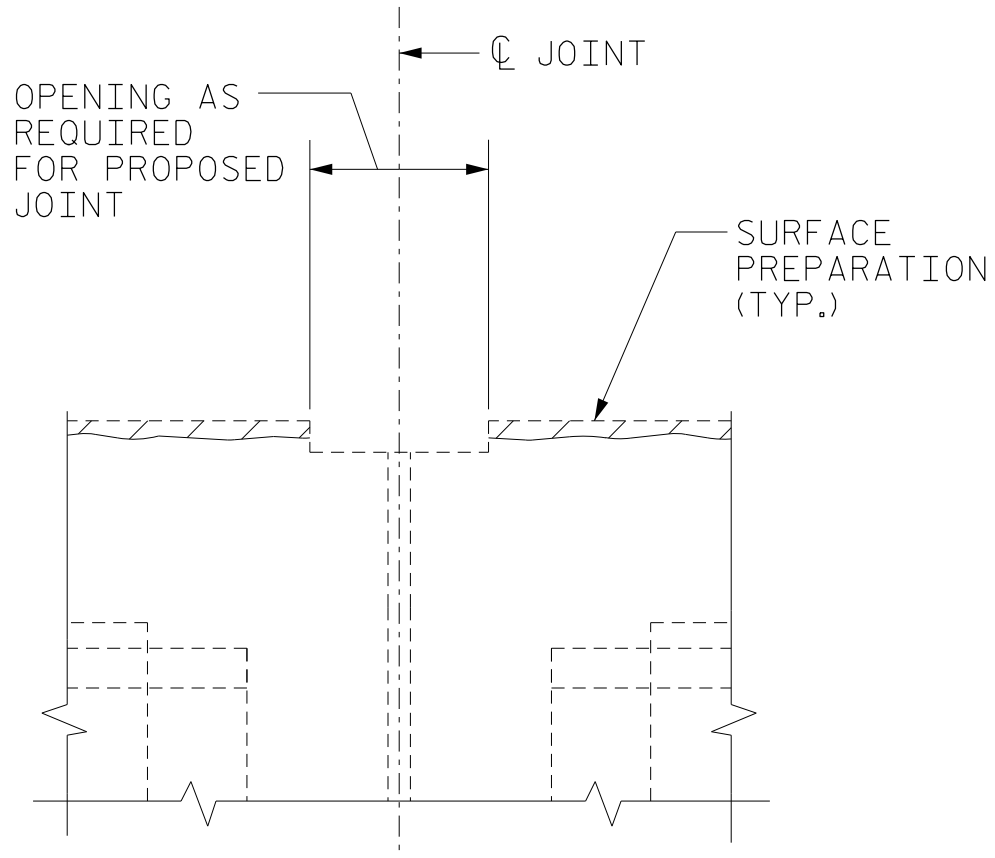
PROPOSED JOINT

JOINT INSTALLATION SEQUENCE AT BENT 1

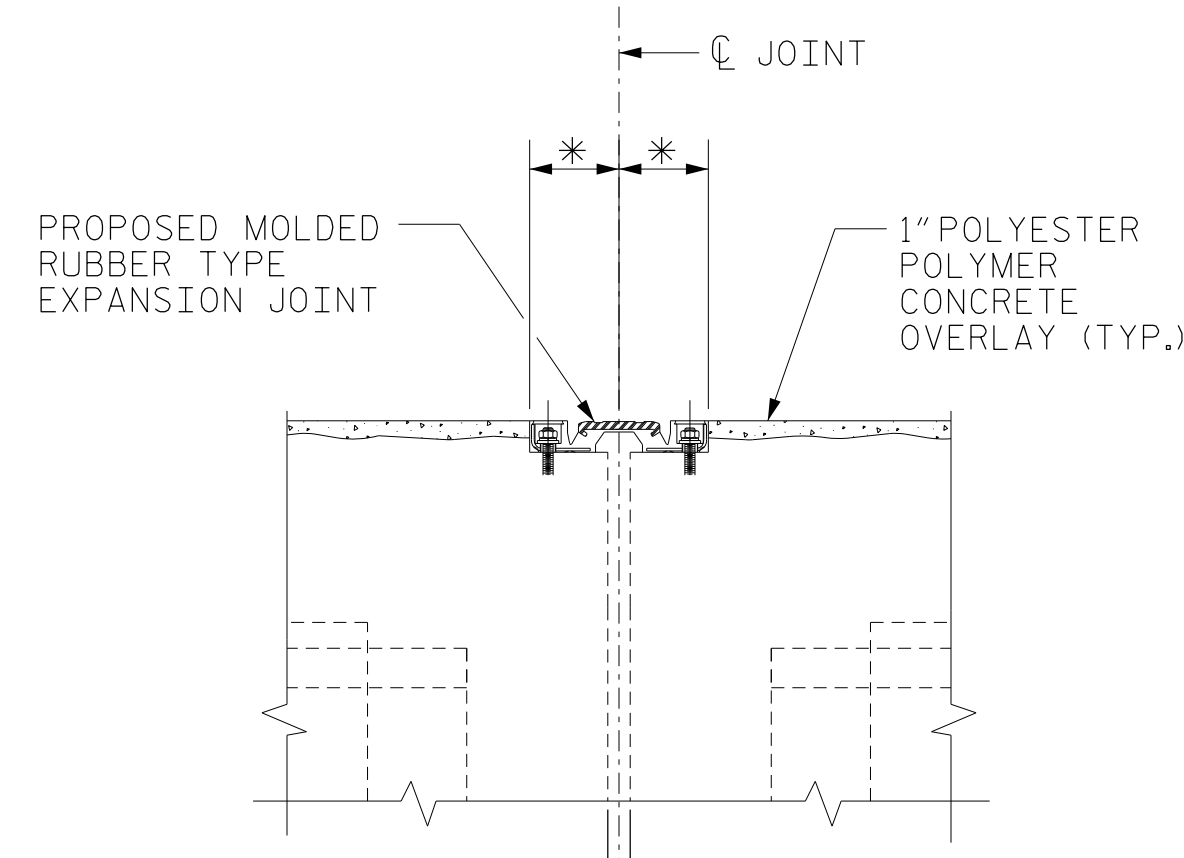
SECTION B-B



EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION

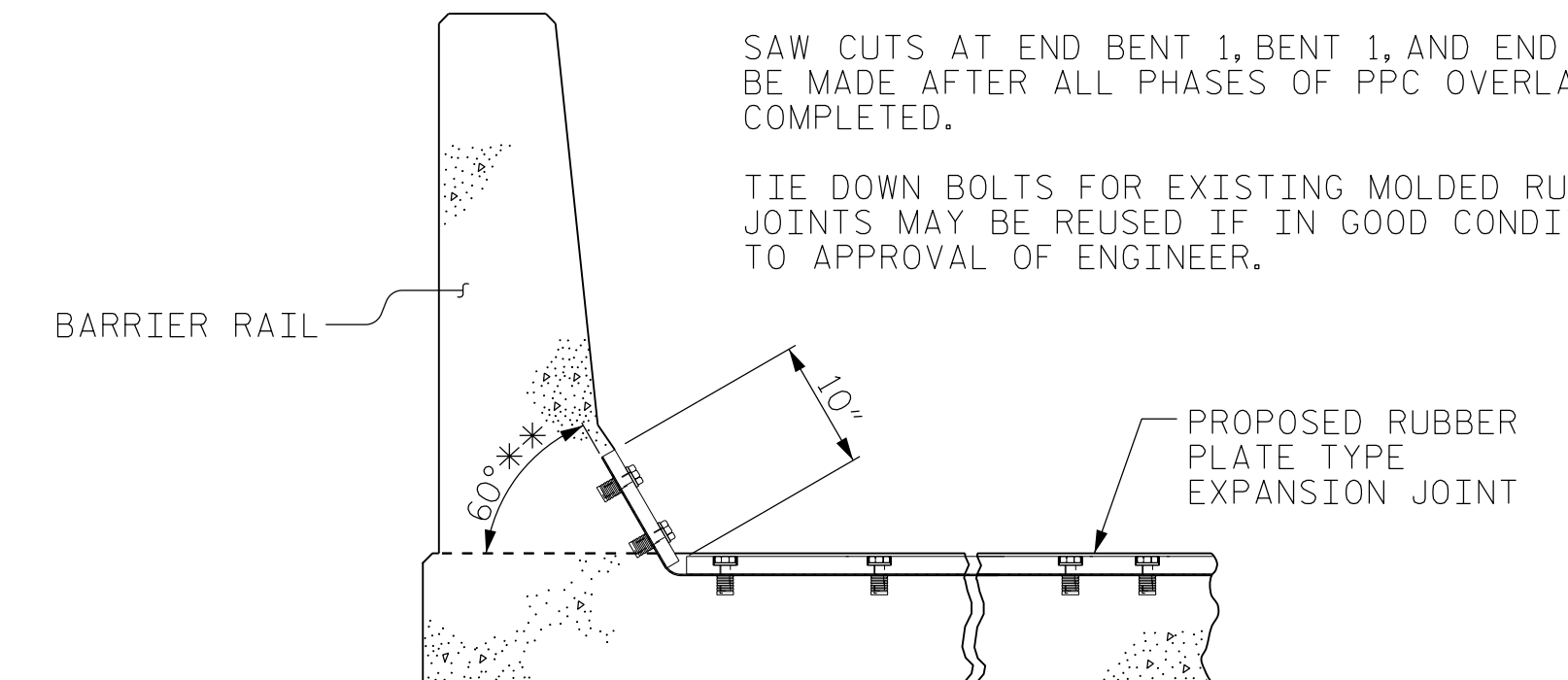


PROPOSED JOINT

\* DIMENSIONS TO BE ESTABLISHED PER JOINT MANUFACTURER'S RECOMMENDATIONS

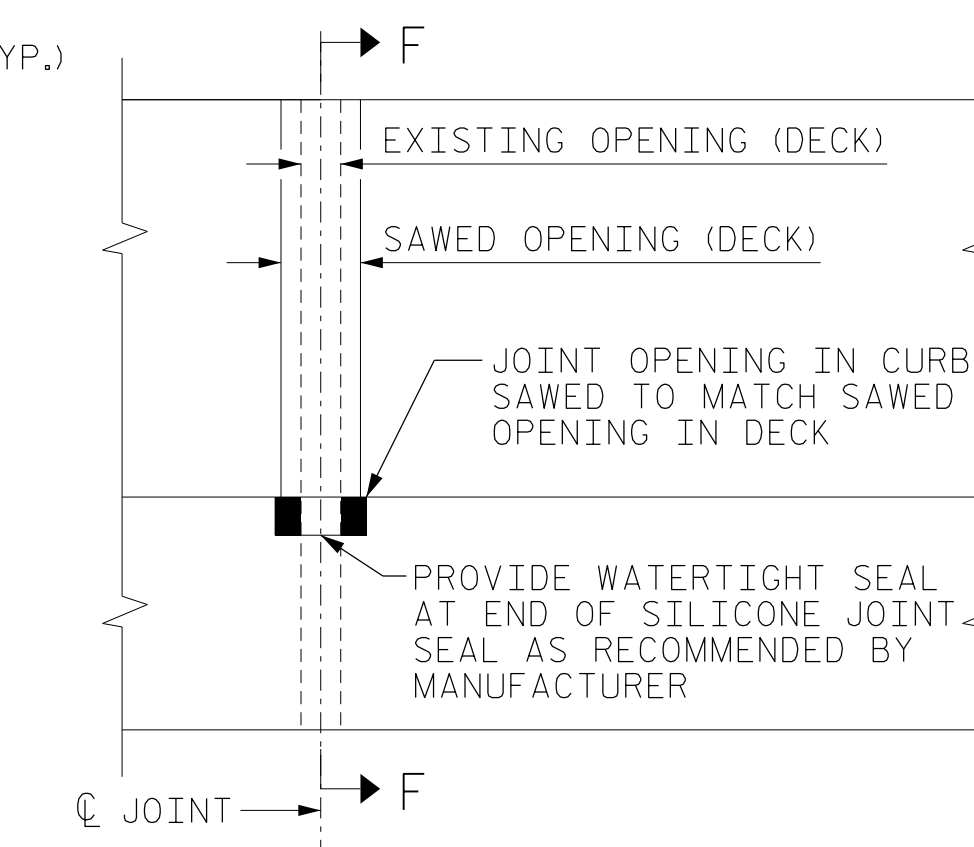
JOINT INSTALLATION SEQUENCE AT BENTS 2 & 3

SECTION C-C

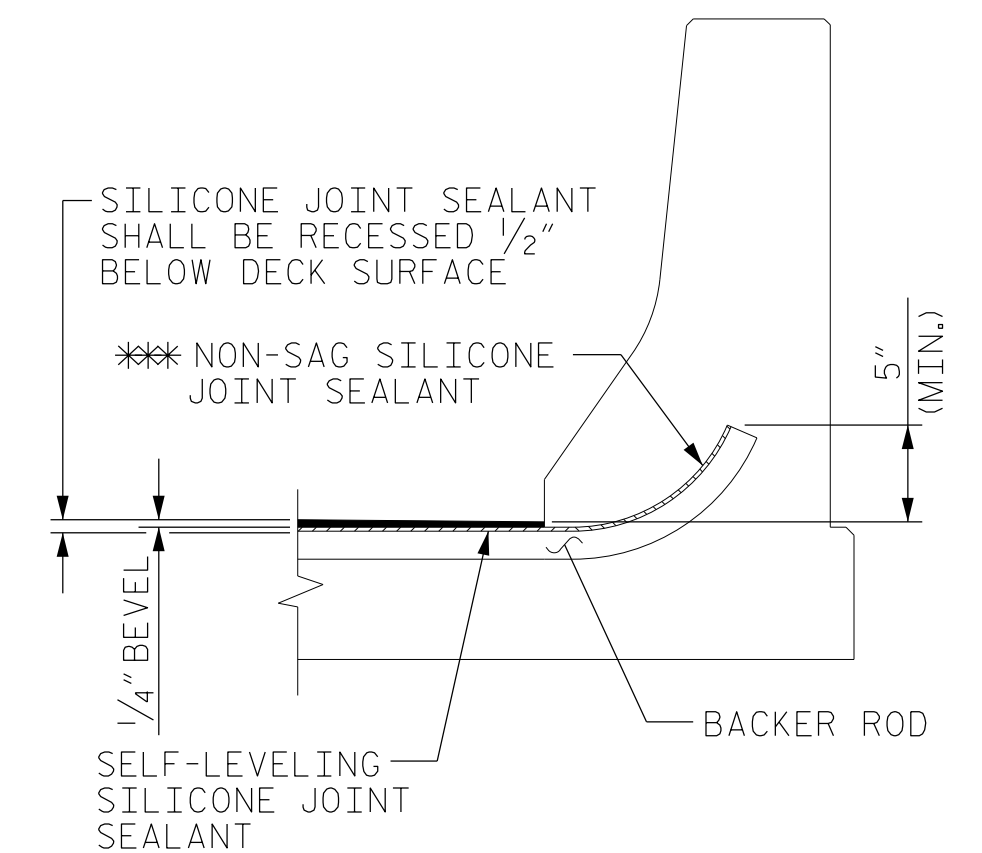


SECTION THRU JOINT AT BARRIER RAIL

\*\* 60° ANGLE BREAK TO BE FIELD VERIFIED



SILICONE JOINT PLAN  
APPLICABLE AT END BENT 1, BENT 1, AND END BENT 2

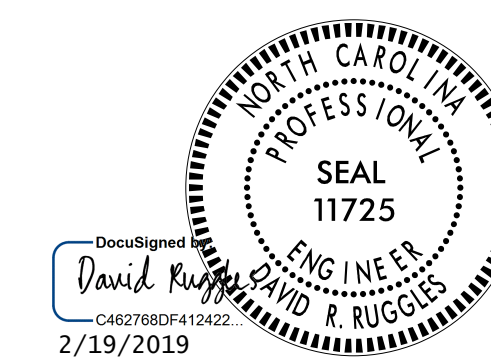


SECTION F-F

\*\*\* NON-SAG SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF SELF-LEVELING SILICONE JOINT SEALANT.

NOTES:  
CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL.  
FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.  
UNLESS NOTED OTHERWISE RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.  
ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.  
SAW CUTS AT END BENT 1, BENT 1, AND END BENT 2 SHALL BE MADE AFTER ALL PHASES OF PPC OVERLAY HAVE BEEN COMPLETED.  
TIE DOWN BOLTS FOR EXISTING MOLDED RUBBER EXPANSION JOINTS MAY BE REUSED IF IN GOOD CONDITION SUBJECT TO APPROVAL OF ENGINEER.

| MOVEMENT AND SETTING AT JOINT |             |                               |                                      |                                      |                                      |
|-------------------------------|-------------|-------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| BENT NO.                      | SKREW ANGLE | TOTAL MOVEMENT (ALONG C RDWY) | PERPENDICULAR JOINT OPENING AT 45° F | PERPENDICULAR JOINT OPENING AT 60° F | PERPENDICULAR JOINT OPENING AT 90° F |
| 2                             | 98°         | 7/8"                          | 1 1/8"                               | 1 1/2"                               | 1 1/4"                               |
| 3                             | 98°         | 1 1/16"                       | 1 1/16"                              | 1 1/2"                               | 1 3/16"                              |



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WAKE COUNTY  
BRIDGE NO. 316  
SHEET 5 OF 5

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

JOINT DETAILS

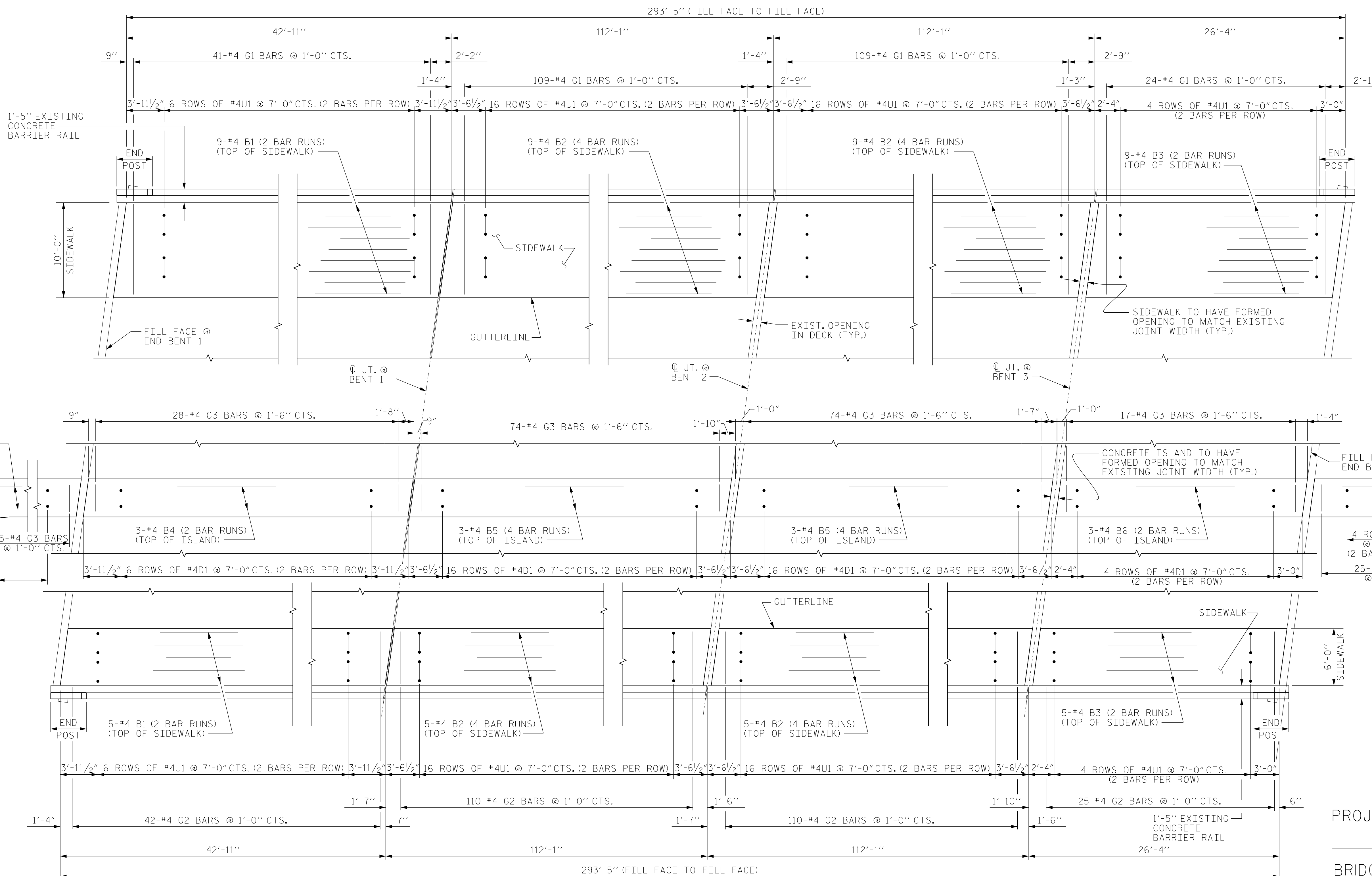
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SHEET NO. S-8  
TOTAL SHEETS 11

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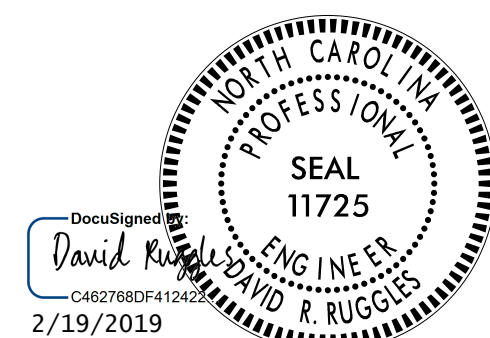




ALL DIMENSIONS ARE TAKEN ALONG THE GUTTERLINE OF THE EXISTING BARRIER RAIL.

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SHEET 1 OF 3



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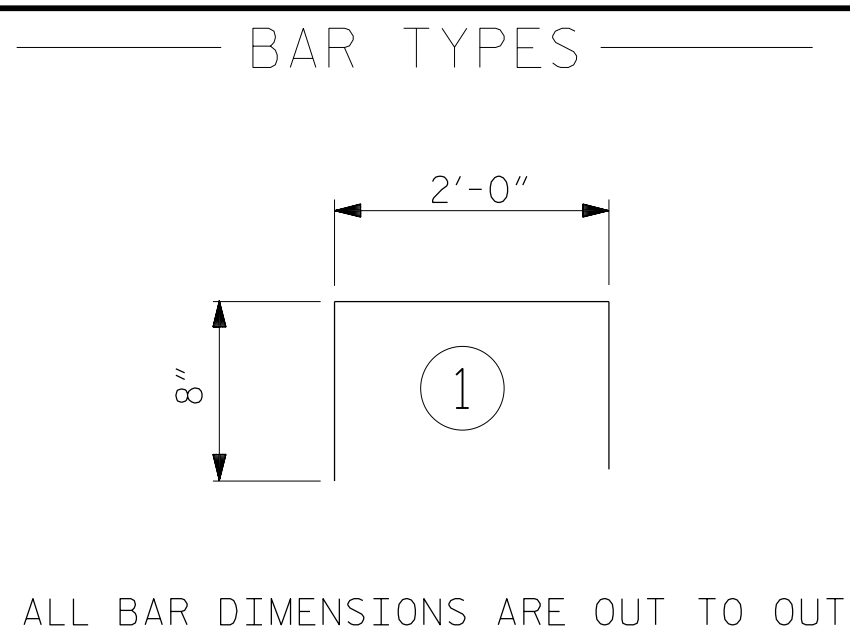
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| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH |     |       |     |     |                 |
| SUPERSTRUCTURE<br>SIDEWALK AND<br>CONCRETE ISLAND<br>PLAN          |     |       |     |     |                 |
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**BILL OF MATERIAL**

**10'-0" CONCRETE SIDEWALK**

| BAR | NUMBER | SIZE | TYPE | LENGTH  | WEIGHT |
|-----|--------|------|------|---------|--------|
| B1  | 18     | #4   | STR  | 22'-2"  | 267    |
| B2  | 72     | #4   | STR  | 29'-3"  | 1407   |
| B3  | 18     | #4   | STR  | 13'-11" | 167    |
| U1  | 84     | #4   | 1    | 3'-4"   | 187    |
| G1  | 283    | #4   | STR  | 9'-6"   | 1796   |

EPOXY COATED REINFORCING STEEL 3,824 LBS.  
CLASS AA CONCRETE 80.8 CU.YDS.

**6'-0" CONCRETE SIDEWALK**

| BAR | NUMBER | SIZE | TYPE | LENGTH  | WEIGHT |
|-----|--------|------|------|---------|--------|
| B1  | 10     | #4   | STR  | 22'-2"  | 148    |
| B2  | 40     | #4   | STR  | 29'-3"  | 782    |
| B3  | 10     | #4   | STR  | 13'-11" | 93     |
| U1  | 84     | #4   | 1    | 3'-4"   | 187    |
| G2  | 287    | #4   | STR  | 5'-6"   | 1054   |

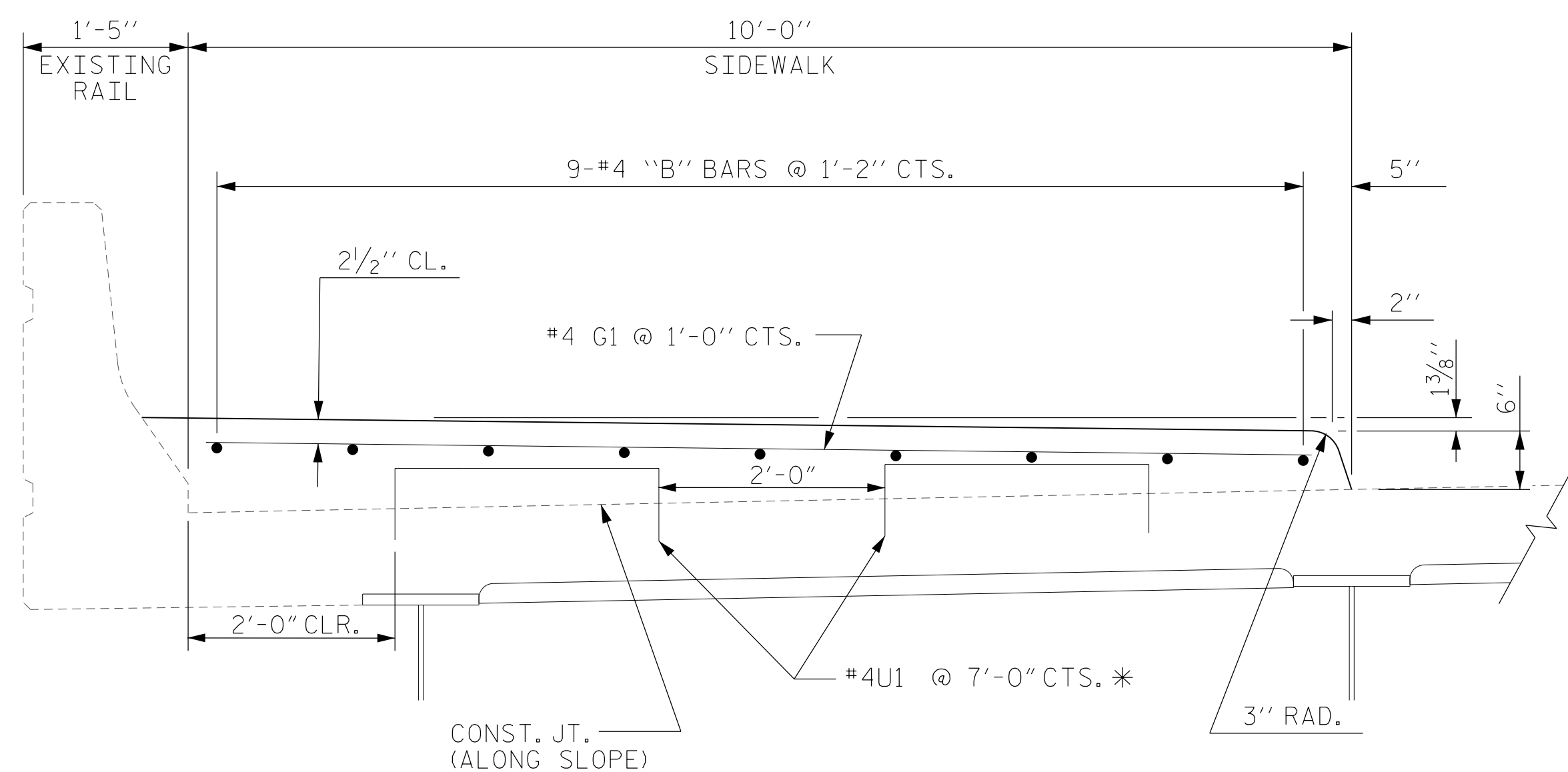
EPOXY COATED REINFORCING STEEL 2,264 LBS.  
CLASS AA CONCRETE 45.6 CU.YDS.

**4'-0" CONCRETE ISLAND**

| BAR | NUMBER | SIZE | TYPE | LENGTH  | WEIGHT |
|-----|--------|------|------|---------|--------|
| B4  | 6      | #4   | STR  | 22'-2"  | 89     |
| B5  | 24     | #4   | STR  | 29'-3"  | 469    |
| B6  | 6      | #4   | STR  | 13'-11" | 56     |
| B8  | 12     | #4   | STR  | 13'-7"  | 109    |
| D1  | 100    | #4   | STR  | 0'-7"   | 39     |
| G3  | 243    | #4   | STR  | 2'-8"   | 433    |

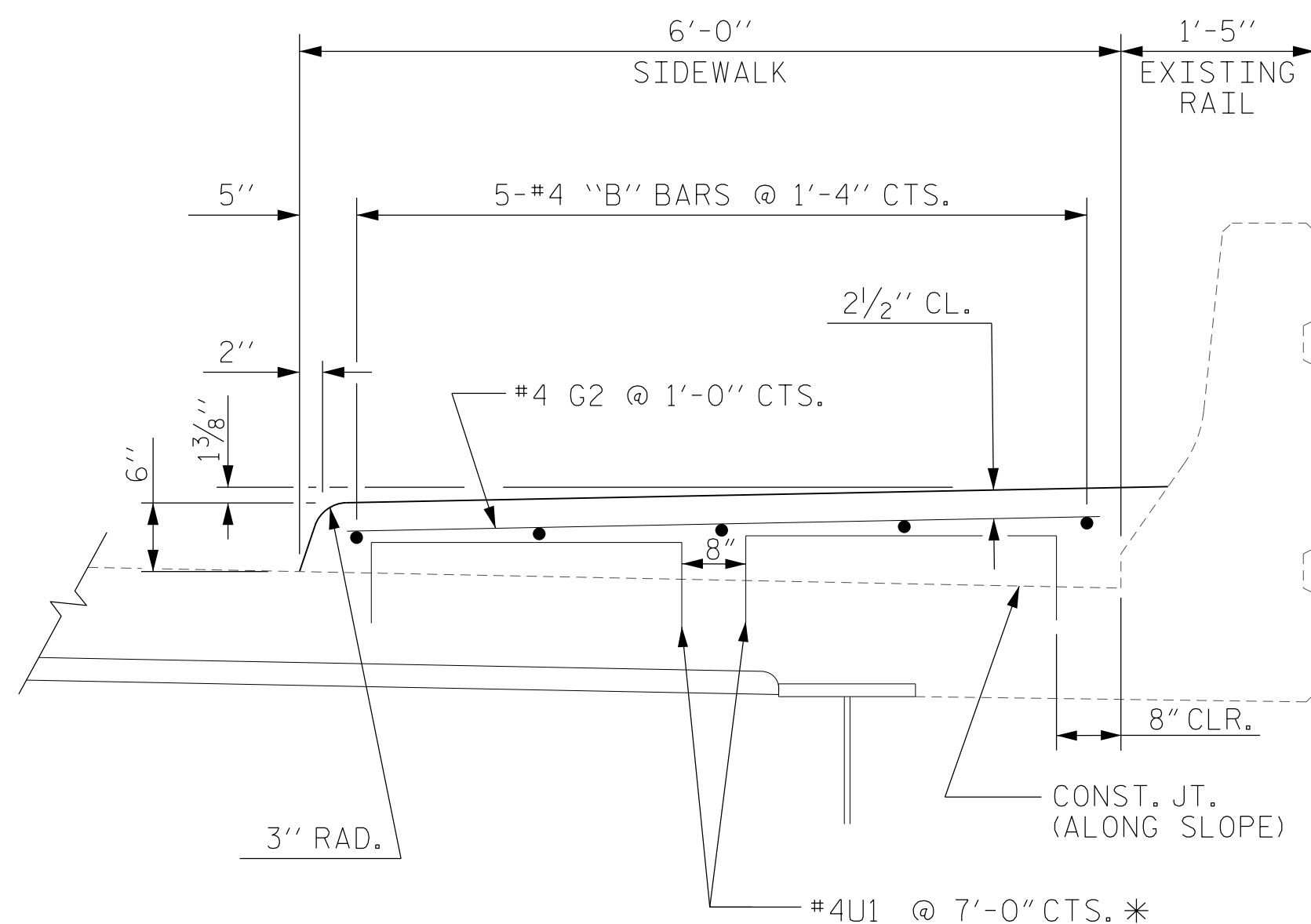
EPOXY COATED REINFORCING STEEL 1,195 LBS.  
CLASS AA CONCRETE 16.4 CU.YDS.

SPLICE LENGTH FOR #4 "B" BARS = 1'-9"



**SECTION THRU 10'-0" SIDEWALK**

\* #4 U1 DOWELS SHALL HAVE A MIN. EMBEDMENT OF 4" INTO EXISTING CONCRETE SLAB

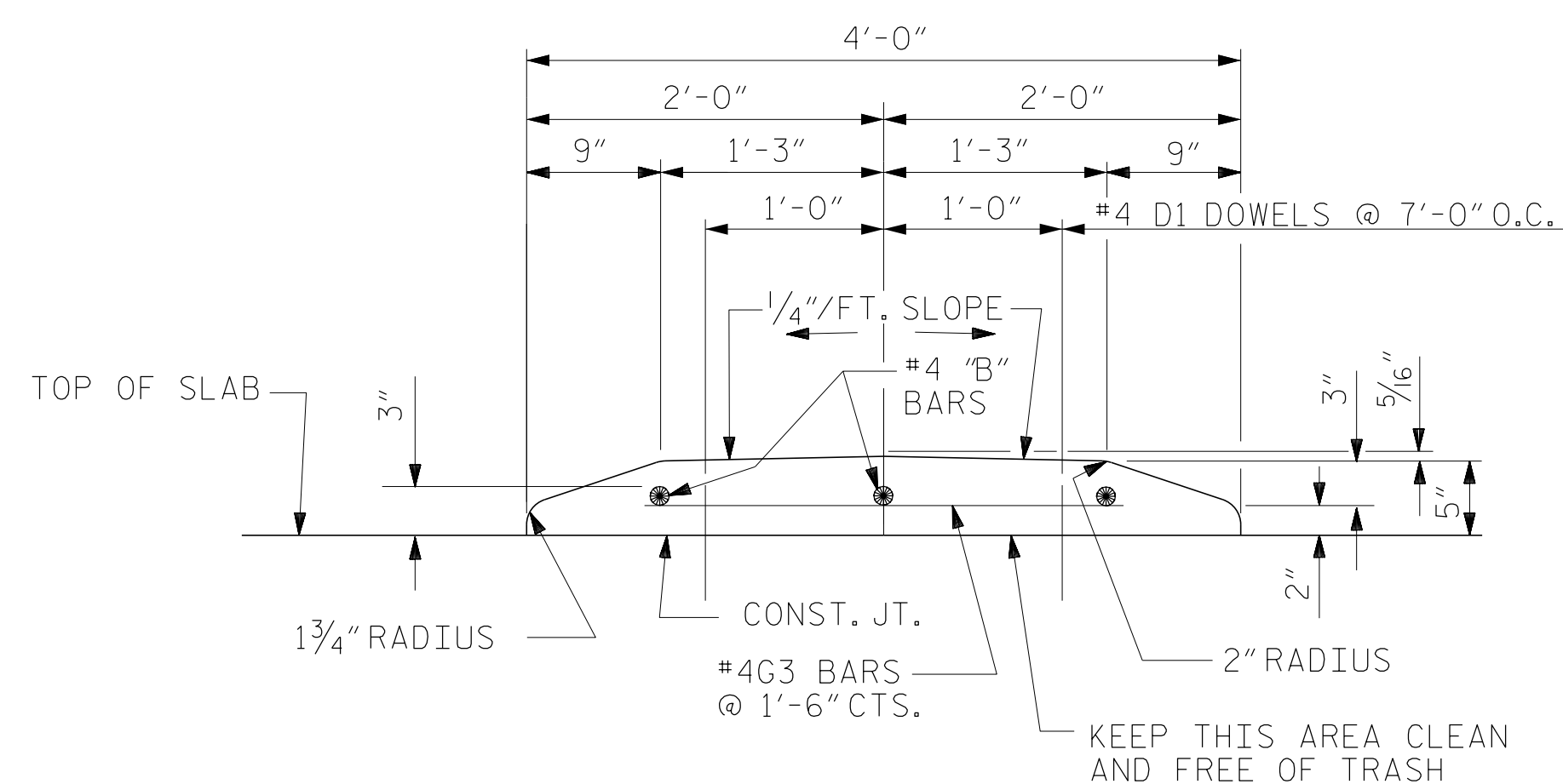


**SECTION THRU 6'-0" SIDEWALK**

\* #4 U1 DOWELS SHALL HAVE A MIN. EMBEDMENT OF 4" INTO EXISTING CONCRETE SLAB

**NOTES:**

- ALL REINFORCING STEEL SHALL BE GRADE 60.
- CONCRETE FOR SIDEWALKS SHALL BE CLASS "AA".
- GROOVED CONSTRUCTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE SIDEWALK IN ACCORDANCE WITH ARTICLE 825-10 (B) OF THE STANDARD SPECIFICATIONS. THE CONTRACTION JOINTS SHALL BE LOCATED AT A SPACING OF 8 FT. TO 10 FT. BETWEEN EXPANSION JOINTS. NO CONTRACTION JOINTS WILL BE REQUIRED FOR SEGMENTS LESS THAN 10 FEET IN LENGTH.
- ALL REINFORCING STEEL IN THE SIDEWALK & MONOLITHIC CONCRETE ISLAND SHALL BE EPOXY COATED.



**SECTION THRU MONOLITHIC CONCRETE ISLAND**



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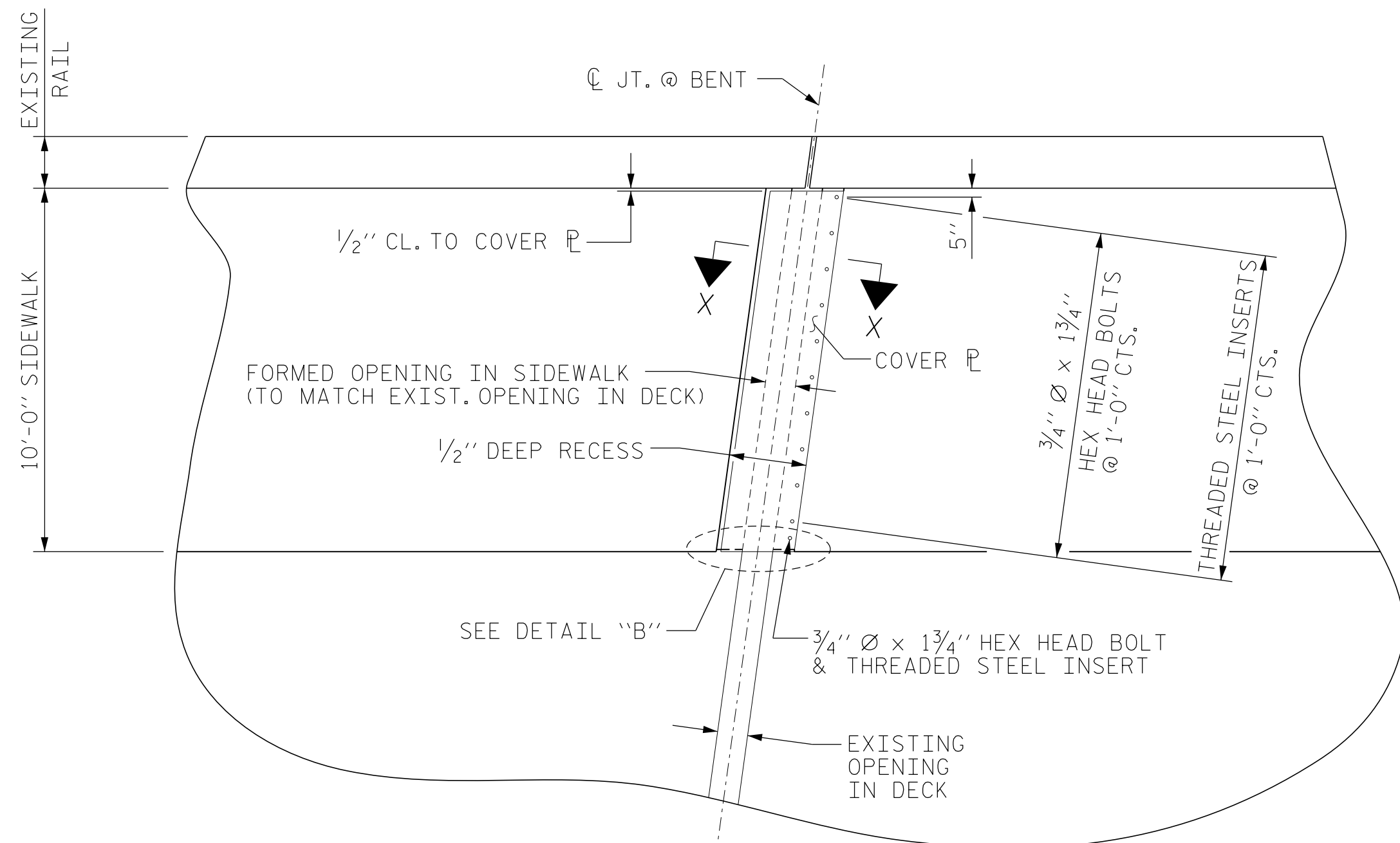
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WAKE COUNTY  
BRIDGE NO. 316

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUPERSTRUCTURE  
SIDEWALK AND  
CONCRETE ISLAND  
DETAILS

| REVISIONS |     |       |     |     |       | SHEET NO.    |
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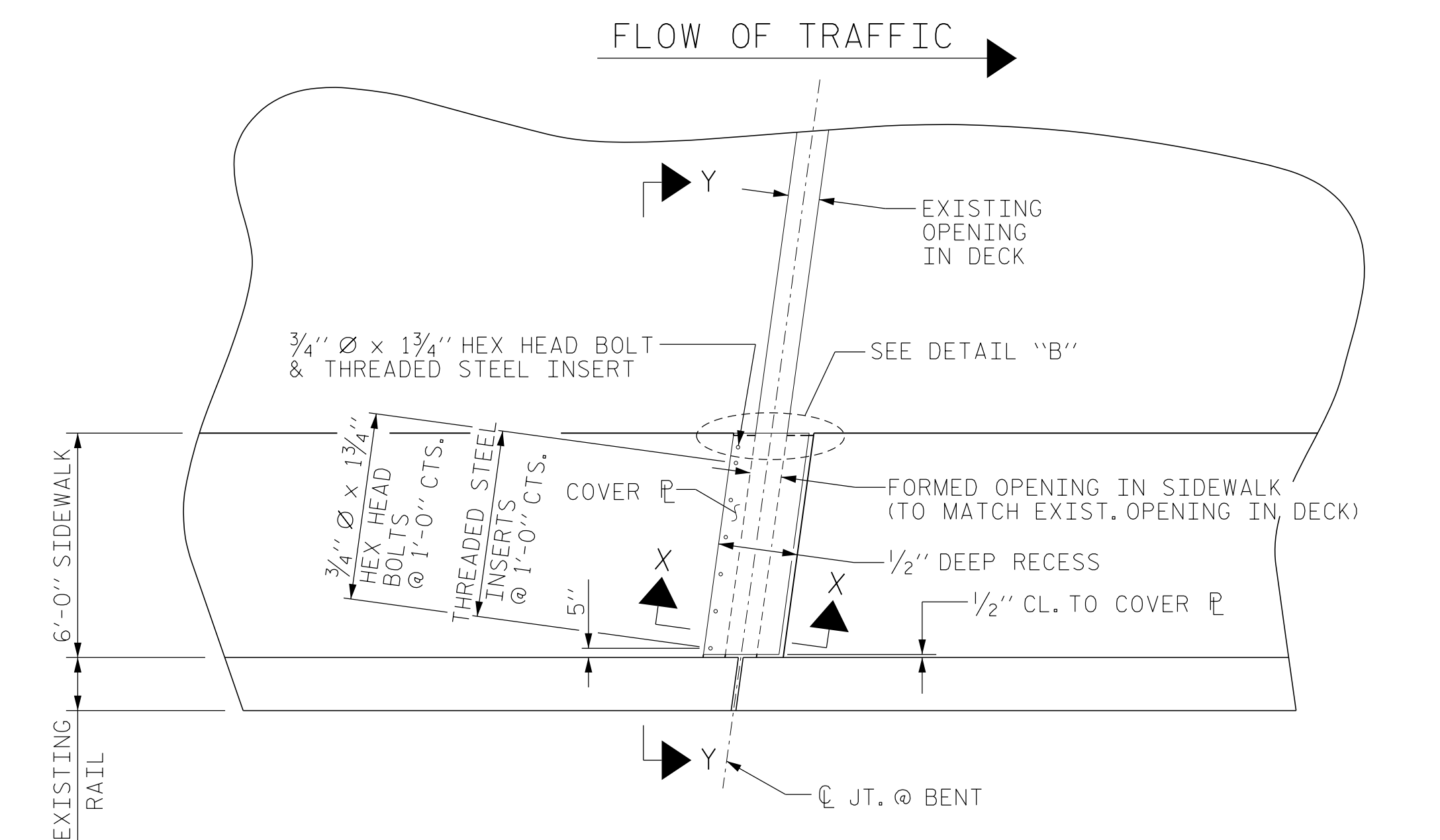
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 USER:rvchung



PLAN OF 10'-0" SIDEWALK COVER PLATE @ BENTS

TYPICAL AT ALL BENTS

← FLOW OF TRAFFIC



PLAN OF 6'-0" SIDEWALK COVER PLATE @ BENTS

TYPICAL AT ALL BENTS

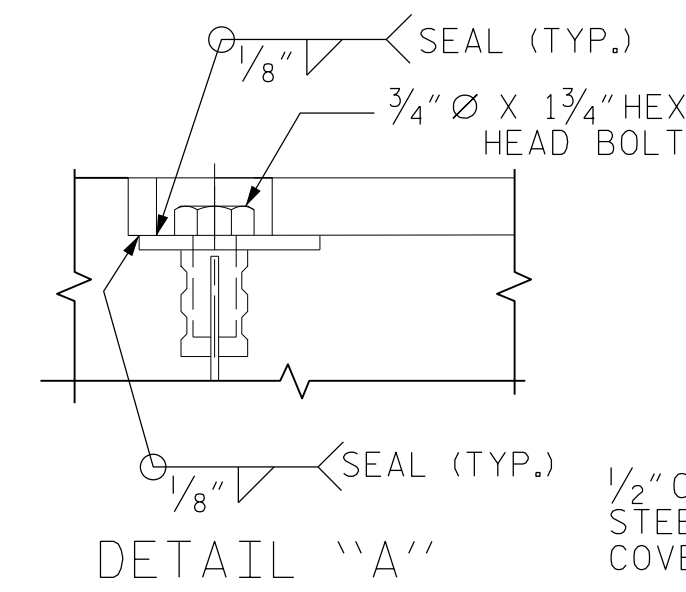
→ FLOW OF TRAFFIC

COVER PLATE NOTES:

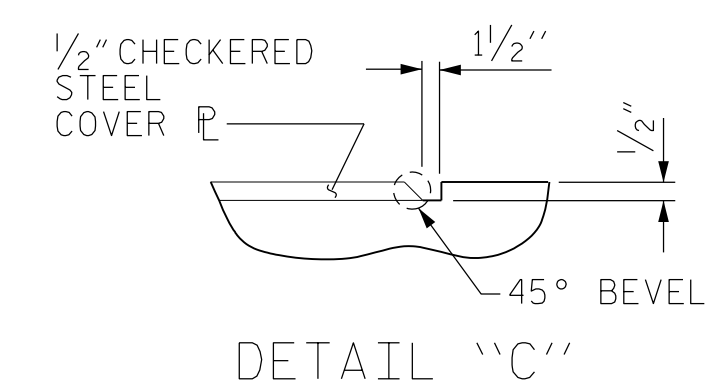
THE STEEL PLATES SHALL CONFORM TO AASHTO M270 GRADE 36 OR APPROVED EQUAL. AFTER FABRICATION, THE PLATES SHALL BE COMMERCIALY BLAST CLEANED AND EITHER COATED WITH A MINIMUM THICKNESS OF 4 MILS (DRY) OF ZINC-RICH PAINT, GALVANIZED OR METALLIZED TO A MINIMUM THICKNESS OF 6 MILS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. FOR THERMAL SPRAYED COATINGS (METALLIZATION), SEE SPECIAL PROVISIONS.

THE 3/4" DIAMETER HEX HEAD BOLTS SHALL CONFORM TO ASTM F593 ALLOY 304 STAINLESS STEEL.

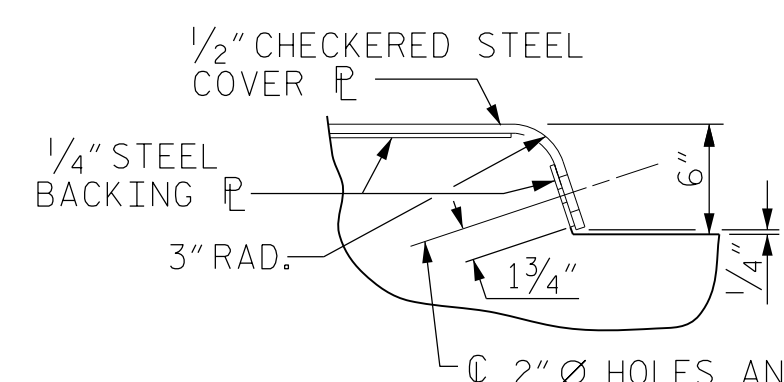
NO SEPARATE PAYMENT WILL BE MADE FOR FURNISHING AND INSTALLING THE COVER PLATE. THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE PAY ITEMS FOR MOLDED RUBBER SEGMENTAL EXPANSION JOINT AND JOINT REPAIR.



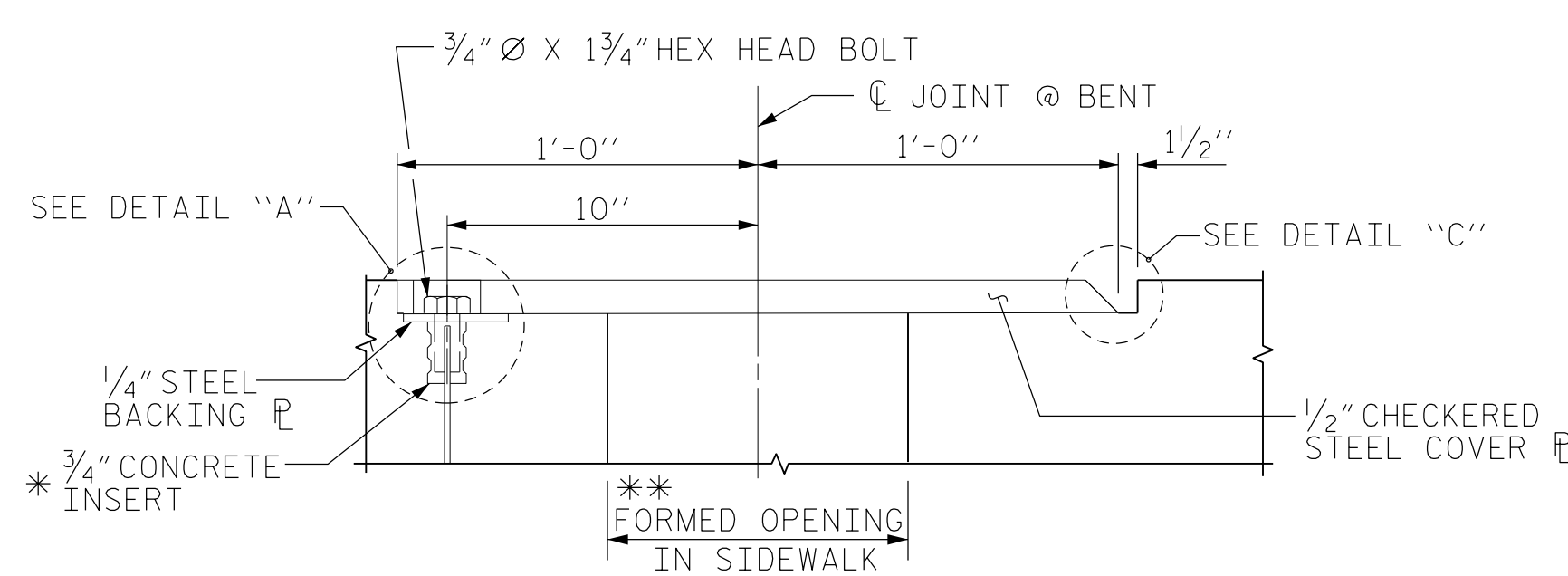
DETAIL "A"



DETAIL "C"



DETAIL "B"

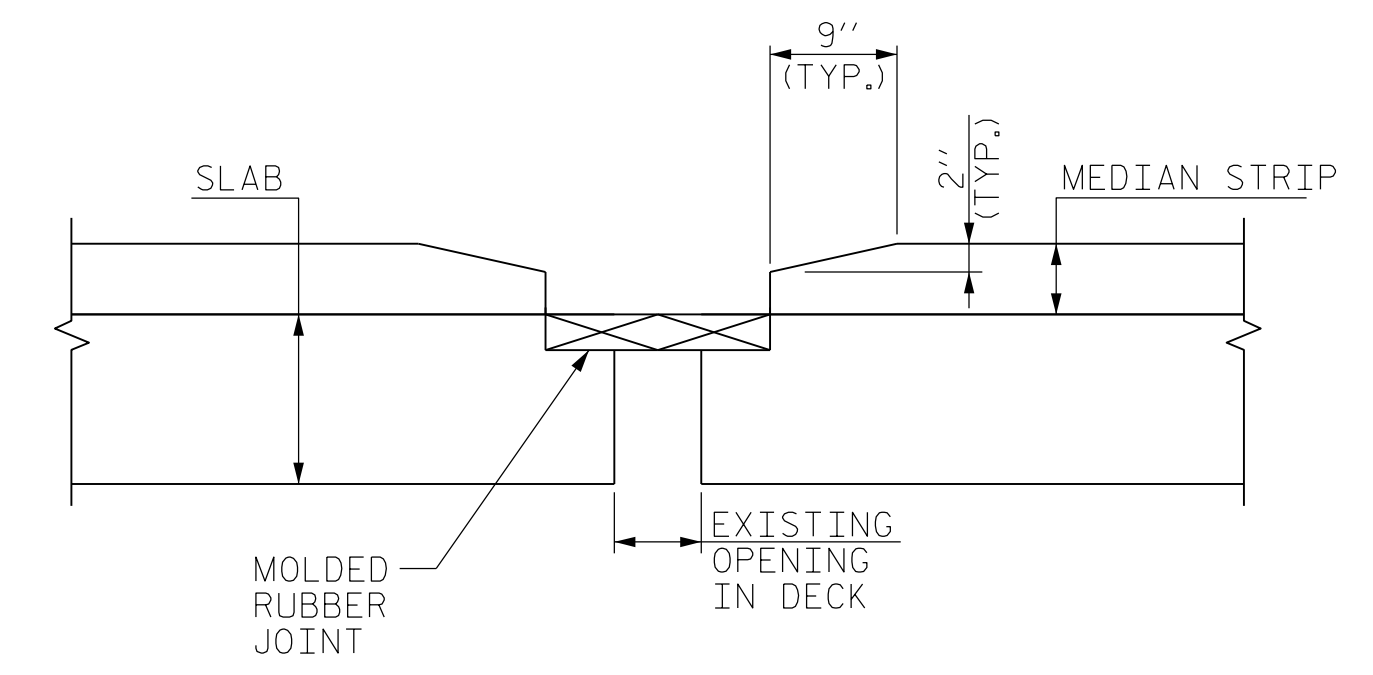


SECTION X-X

\* THE 3/4" CONCRETE INSERTS SHALL BE CLOSED-END FERRULES WITH LOOPED WIRE STRUTS ATTACHED TO THEM. THE INSERTS SHALL CONFORM TO AASHTO M169, GRADE 12L14 AND SHALL HAVE A TENSILE WORKING LOAD CAPACITY OF 3000 LBS.

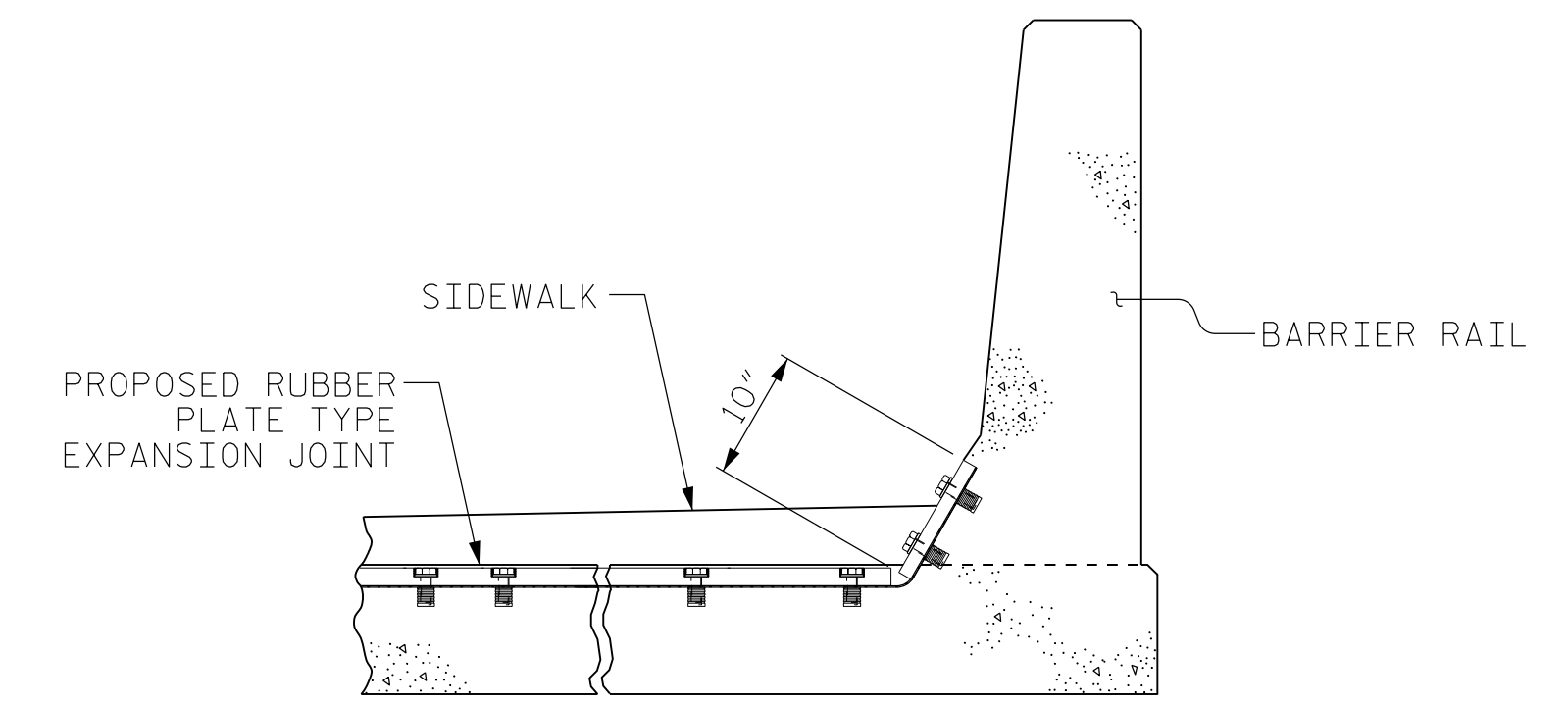
\*\* FORMED OPENING TO MATCH WIDTH OF MOLDED RUBBER EXPANSION JOINT.

SIDEWALK COVER PLATE DETAILS



CONCRETE ISLAND DETAIL AT EXPANSION JOINTS

TYPICAL AT ALL BENTS



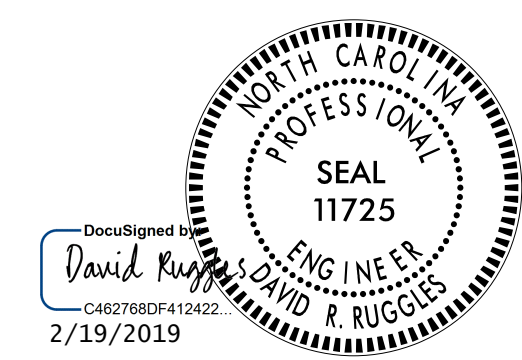
SECTION Y-Y

PROJECT NO. 17BP.5.H.4

WAKE COUNTY

BRIDGE NO. 316

SHEET 3 OF 3



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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|  |     |       |     |     |                 |
|--|-----|-------|-----|-----|-----------------|
| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH |     |       |     |     |                 |
| SUPERSTRUCTURE   |     |       |     |     |                 |
| SIDEWALK DETAILS   |     |       |     |     |                 |
| REVISIONS  |     |       |     |     |                 |
| NO.  | BY: | DATE: | NO. | BY: | DATE:           |
| 1  |     |       | 3   |     |                 |
| 2  |     |       | 4   |     |                 |
| SHEET NO. S-11   |     |       |     |     | TOTAL SHEETS 11 |

DRAWN BY: E. PHELPS DATE: 06-17  
 CHECKED BY: D. RUGGLES DATE: 09-17  
 DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 09-17

2/18/2019  
 \\011-RockQuarryRehab-SidewalkDetail02.dgn  
 USER:rvchung  
 WAKE\_316

## STANDARD NOTES

### DESIGN DATA:

|  |       |                         |
|--|-------|-------------------------|
| SPECIFICATIONS                               | ----- | A.A.S.H.T.O. (CURRENT)  |
| LIVE LOAD                                    | ----- | SEE PLANS               |
| IMPACT ALLOWANCE                             | ----- | SEE A.A.S.H.T.O.        |
| STRESS IN EXTREME FIBER OF                   |       |                         |
| STRUCTURAL STEEL - AASHTO M270 GRADE 36      | -     | 20,000 LBS. PER SQ. IN. |
| - AASHTO M270 GRADE 50W                      | -     | 27,000 LBS. PER SQ. IN. |
| - AASHTO M270 GRADE 50                       | -     | 27,000 LBS. PER SQ. IN. |
| REINFORCING STEEL IN TENSION                 |       |                         |
| GRADE 60                                     | --    | 24,000 LBS. PER SQ. IN. |
| CONCRETE IN COMPRESSION                      | ----- | 1,200 LBS. PER SQ. IN.  |
| CONCRETE IN SHEAR                            | ----- | SEE A.A.S.H.T.O.        |
| STRUCTURAL TIMBER - TREATED OR               |       |                         |
| UNTREATED - EXTREME FIBER STRESS             | ----- | 1,800 LBS. PER SQ. IN.  |
| COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER | ----- | 375 LBS. PER SQ. IN.    |
| EQUIVALENT FLUID PRESSURE OF EARTH           | ----- | 30 LBS. PER CU. FT.     |
|  |       | (MINIMUM)               |

### MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2012 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

### CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

### CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

### DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

### ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE. ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

### REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

### STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16" INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

### HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

### SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

PROJECT NO. 17BP.5.H.4  
WAKE COUNTY  
BRIDGE NO. 316

|                              |     |       |     |     |              |
|------------------------------|-----|-------|-----|-----|--------------|
| STATE OF NORTH CAROLINA      |     |       |     |     |              |
| DEPARTMENT OF TRANSPORTATION |     |       |     |     |              |
| RALEIGH                      |     |       |     |     |              |
| STANDARD NOTES               |     |       |     |     |              |
| REVISIONS                    |     |       |     |     | SHEET NO.    |
| NO.                          | BY: | DATE: | NO. | BY: | DATE:        |
| 1                            |     |       | 3   |     |              |
| 2                            |     |       | 4   |     |              |
|                              |     |       |     |     | TOTAL SHEETS |

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JANUARY, 1990