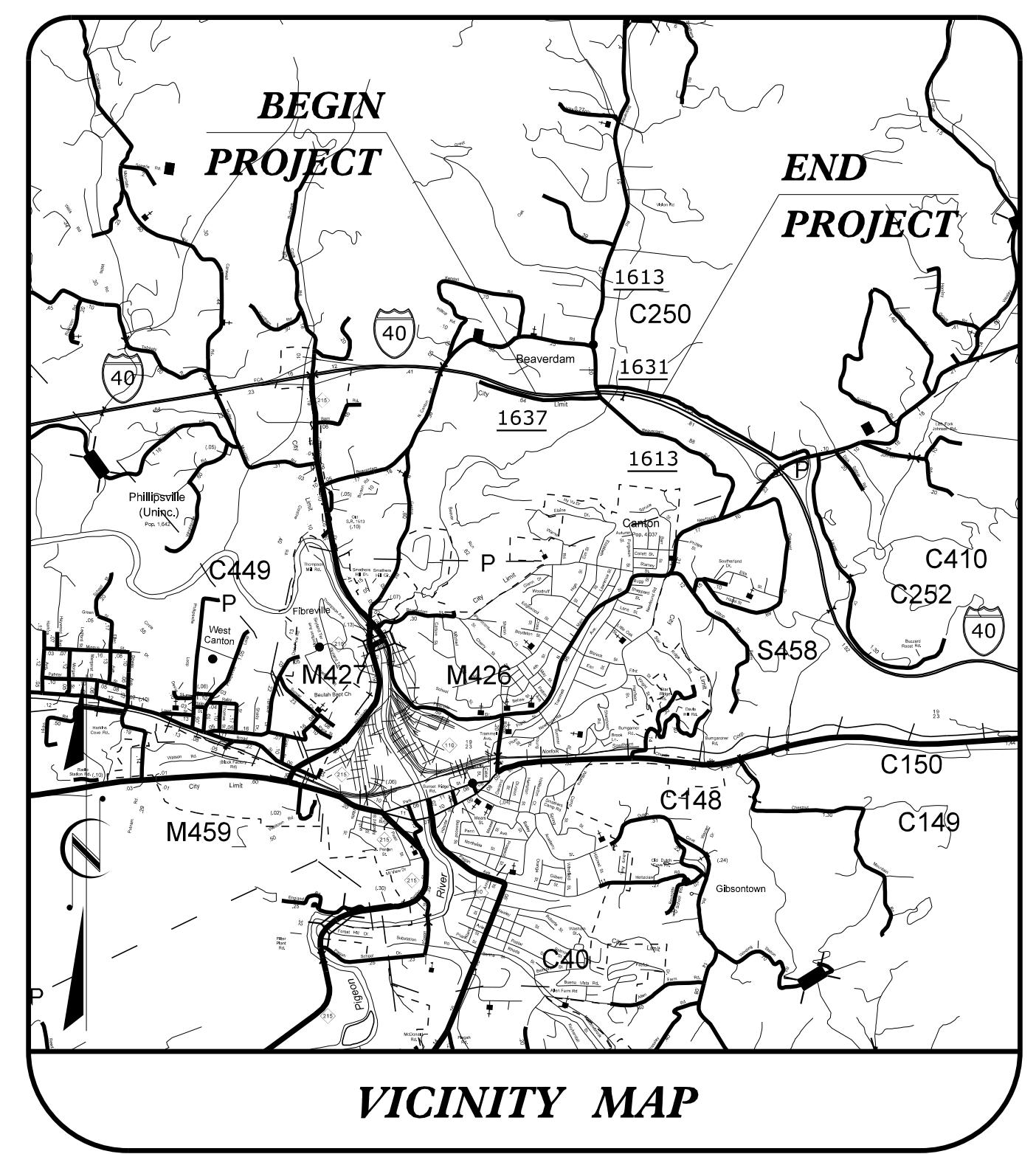
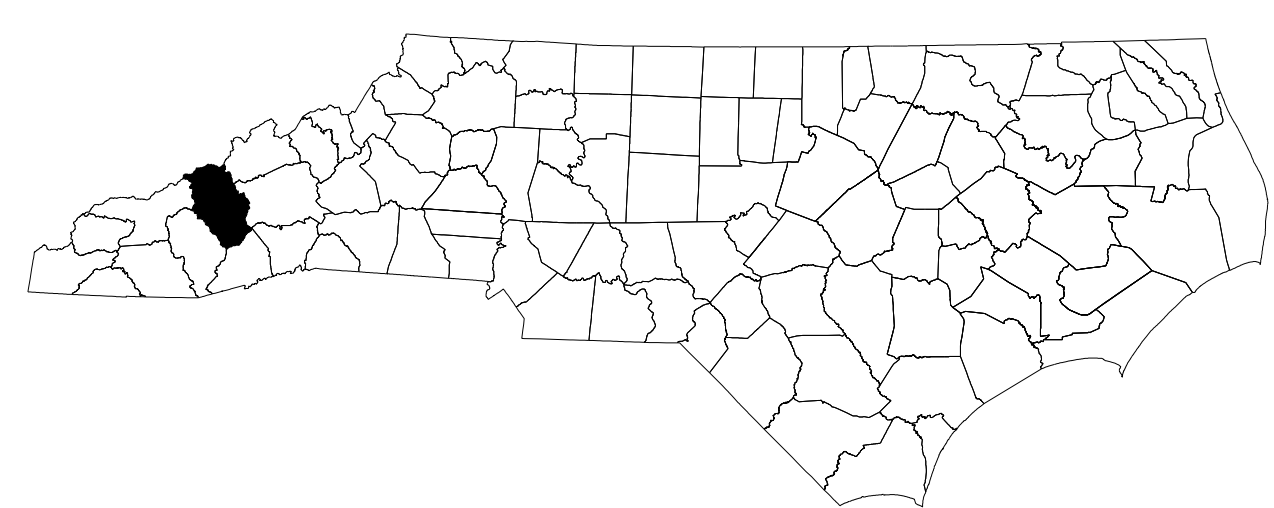


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

HAYWOOD COUNTY



**LOCATION: BRIDGES 248 & 249 ON I-40 OVER
SR 1613 (BEAVERDAM ROAD)**

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

INDEX OF SHEETS

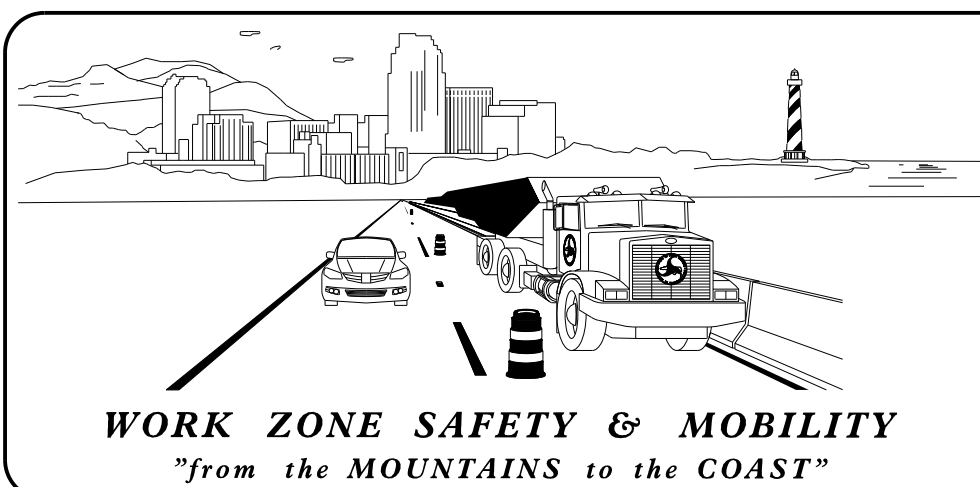
| SHEET NO. | TITLE |
|------------------|---------------------------------------------------------------------------|
| TMP-01 | TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS |
| TMP-01A | LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND |
| TMP-01B THRU 01C | TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES AND GENERAL NOTES) |
| TMP-01D | OFFSITE DETOUR SIGNING AND DEVICE LEGEND |
| TMP-02 THRU 02A | OFFSITE DETOURS |
| TMP-02B | SPECIAL SIGN DESIGN(S) |
| TMP-02C | PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS |
| TMP-02D | TEMPORARY SHORING DATA |
| TMP-02E | TEMPORARY SIGNAL AT BEAVERDAM RD AND NEWFOUND RD |
| TMP-02F | DYNAMIC ZIPPER MERGE SYSTEM LAYOUT |
| TMP-03 | TEMPORARY TRAFFIC CONTROL PHASING |
| TMP-04 THRU 06C | TEMPORARY TRAFFIC CONTROL PHASE I DETAIL |
| TMP-07 THRU 09 | TEMPORARY TRAFFIC CONTROL PHASE II DETAIL |
| TMP-10 THRU 12 | TEMPORARY TRAFFIC CONTROL PHASE III DETAIL |
| TMP-13 THRU 15 | TEMPORARY TRAFFIC CONTROL PHASE IV DETAIL |
| TMP-16 THRU 18 | TEMPORARY TRAFFIC CONTROL PHASE V DETAIL |
| TMP-19 THRU 32 | TEMPORARY CUT SECTIONS |

SHEET NO.
TMP-01

HB-0002

TIP PROJECT:

3/26/2024
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User: AHayes



PLANS PREPARED BY:

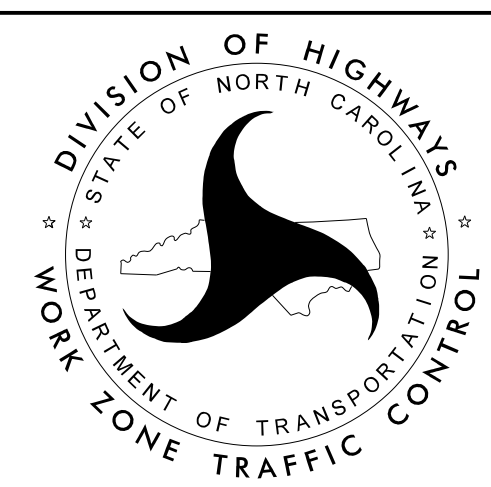
JONATHAN HEFNER, P.E.

D. ALLEN HAYES, E.I.

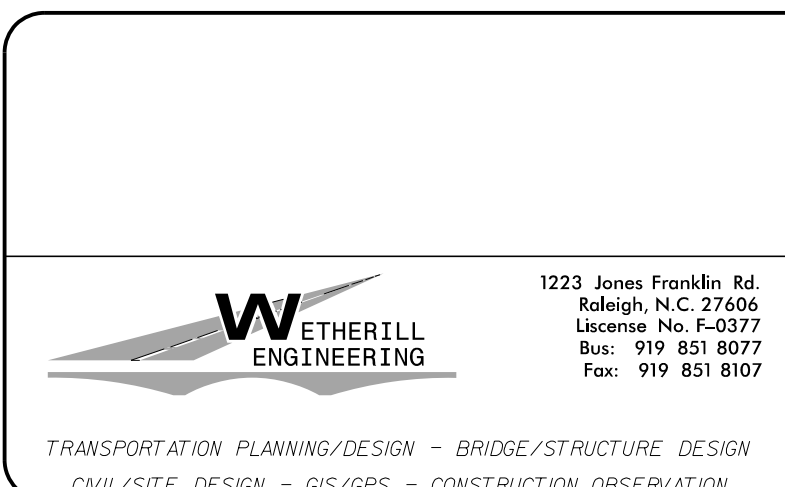
NCDOT CONTACTS:

ZACH SHULER
PROJECT ENGINEER

PROJECT DESIGN ENGINEER



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APPROVED: *Greg S. Purvis*
D19F7C256E3403

DATE: 3/26/2024

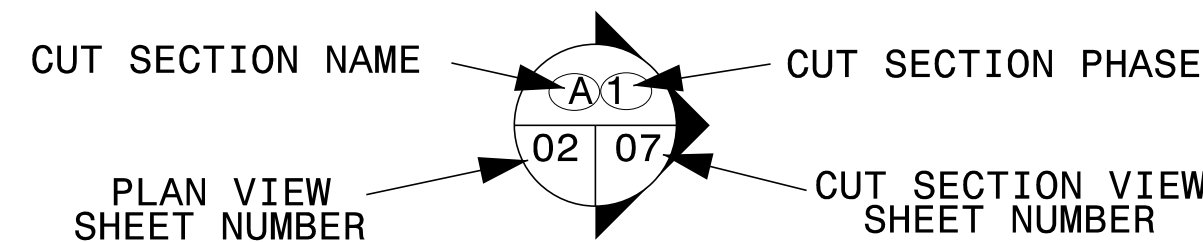
SEAL

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - 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 WARNING SIGNS |
| 1101.02 | TEMPORARY LANE CLOSURES |
| 1101.03 | TEMPORARY ROAD CLOSURES |
| 1101.04 | TEMPORARY SHOULDER CLOSURES |
| 1101.05 | WORK ZONE VEHICLE ACCESSES |
| 1101.06 | WARNING SIGNS FOR BLASTING ZONES |
| 1101.11 | TRAFFIC CONTROL DESIGN TABLES |
| 1110.01 | STATIONARY WORK ZONE SIGNS |
| 1110.02 | PORTABLE WORK ZONE SIGNS |
| 1115.01 | FLASHING ARROW BOARDS |
| 1130.01 | DRUMS |
| 1135.01 | CONES |
| 1145.01 | BARRICADES |
| 1150.01 | FLAGGING DEVICES |
| 1160.01 | TEMPORARY CRASH CUSHION |
| 1165.01 | TRUCK MOUNTED ATTENUATOR |
| 1170.01 | PORTABLE CONCRETE BARRIER |
| 1180.01 | SKINNY - DRUMS |
| 1205.01 | PAVEMENT MARKINGS - LINE TYPES AND OFFSETS |
| 1205.02 | PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS |
| 1205.04 | PAVEMENT MARKINGS - INTERSECTIONS |
| 1205.08 | PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES |
| 1250.01 | RAISED PAVEMENT MARKERS - INSTALLATION SPACING |
| 1251.01 | RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY) |
| 1261.01 | GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING |
| 1261.02 | GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING |
| 1262.01 | GUARDRAIL END DELINEATION |
| 1264.01 | OBJECT MARKERS - TYPES |
| 1264.02 | OBJECT MARKERS - INSTALLATION |



LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (EXCAVATION) (LOCATION PURPOSES ONLY)
- TEMP. SHORING (FILL) (LOCATION PURPOSES ONLY)

WORK AREA

REMOVAL

TEMPORARY PAVEMENT

WEDGING

SIGNALS

- PORTABLE
- PORTABLE
- PORTABLE

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- DRUM
- TEMPORARY CRASH CUSHION

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN

PAVEMENT MARKING SYMBOLS

- EXISTING PAVEMENT MARKING

TEMPORARY PAVEMENT MARKING

| SYMBOL | DESCRIPTION | PAY ITEM |
|--------|---------------------------------|---------------------------------------------|
| P1 | WHITE SOLID EDGE LINE | PAINT (4") |
| P5 | 2 FT. - 6 FT./SP WHITE MINISKIP | PAINT (4") |
| P10 | YELLOW EDGELINE | PAINT (4") |
| P13 | YELLOW DOUBLE CENTER | PAINT (4") |
| P61 | WHITE STOPBAR | PAINT (24") |
| Z21 | WHITE SOLID EDGE LINE | WORK ZONE PERFORMANCE PAVEMENT MARKING (6") |
| Z22 | 10 FT. - 30 FT./SP WHITE SKIP | WORK ZONE PERFORMANCE PAVEMENT MARKING (6") |
| Z31 | YELLOW SOLID LINE | WORK ZONE PERFORMANCE PAVEMENT MARKING (6") |
| MH | YELLOW & YELLOW | TEMPORARY RAISED MARKER |
| MI | CRYSTAL & RED | TEMPORARY RAISED MARKER |

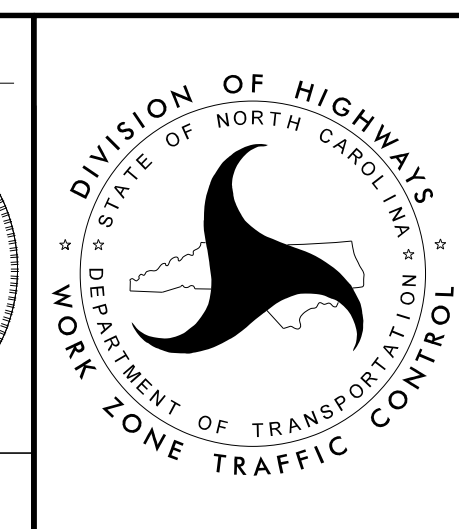
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DATE: 2/29/2024

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LIST OF APPLICABLE
ROADWAY STANDARD
DRAWINGS, AND LEGEND

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 UNDESIRE 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 |
|---------------|--------------------------------------------------------------------------------------------------------------------------|
| 1. -L- (I-40) | 6:00 A.M. - 7:00 P.M. MONDAY THRU THURSDAY 6:00 A.M. - 9:00 P.M. FRIDAY 9:00 A.M. - 9:00 P.M. SATURDAY THRU SUNDAY |

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

| ROAD NAME |
|---------------|
| 1. -L- (I-40) |

HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 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.
- FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 9:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 9:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 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 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 9:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 9:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

9. FOR LEAF SEASON, FROM OCTOBER 6TH TO NOVEMBER 7TH, BETWEEN THE HOURS OF 6:00 A.M AND 7:00 P.M.

D) DO NOT STOP TRAFFIC AS FOLLOWS:

| ROAD NAME | DAY AND TIME RESTRICTIONS | DURATION AND OPERATION |
|------------------|---------------------------|------------------------|
| 1. ALL -Y- LINES | 7:00 A.M. - 9:00 A.M. | TRAFFIC OPERATIONS |

F) DO NOT CONDUCT SINGLE VEHICLE HAULING AS FOLLOWS:

| ROAD NAME | DAY AND TIME RESTRICTIONS |
|-----------|--------------------------------------------------------------------------------------------------------------------------|
| 1. I-40 | 6:00 A.M. - 7:00 P.M. MONDAY THRU THURSDAY 6:00 A.M. - 9:00 P.M. FRIDAY 9:00 A.M. - 9:00 P.M. SATURDAY THRU SUNDAY |

G) DO NOT CONDUCT MULTI-VEHICLE HAULING AS FOLLOWS:

| ROAD NAME | DAY AND TIME RESTRICTIONS |
|-----------|--------------------------------------------------------------------------------------------------------------------------|
| 1. I-40 | 6:00 A.M. - 7:00 P.M. MONDAY THRU THURSDAY 6:00 A.M. - 9:00 P.M. FRIDAY 9:00 A.M. - 9:00 P.M. SATURDAY THRU SUNDAY |

H) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

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

N) DO NOT INSTALL MORE THAN 1 MI OF LANE CLOSURE ON I-40 MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE. THE CONTRACTOR SHALL COORDINATE WITH ADJACENT PROJECTS PRIOR TO SETTING UP ANY LANE CLOSURES ON I-40.

O) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON I-40.

PAVEMENT EDGE DROP OFF REQUIREMENTS

R) 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.

S) 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) 500 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

T) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

U) 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.

V) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

AND

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

W) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

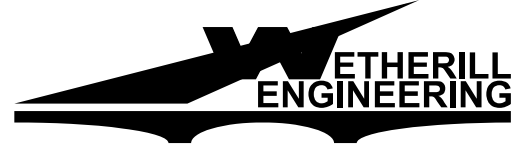
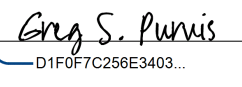
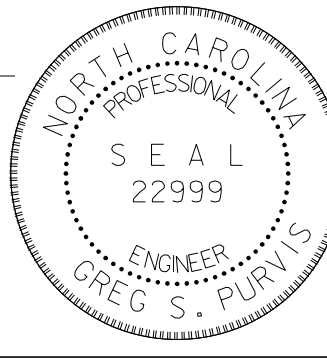

AND

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

X) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

Y) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500 FT/MI IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

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|  <p>1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107</p> <p style="font-size: small;">TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION</p> | <p>APPROVED:  D11F0FC298E3403</p> <p>DATE: 2/29/2024</p> <div style="text-align: center;">  </div> <p style="text-align: center; font-weight: bold; font-size: small;">DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p> |  | <p style="font-weight: bold; font-size: large;">TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES AND GENERAL NOTES)</p> |
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GENERAL NOTES (continued)

TRAFFIC BARRIER

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

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

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

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

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

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

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

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

TRAFFIC CONTROL DEVICES

BB) 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.

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

DD) 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

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

| ROAD NAME | MARKING | MARKER |
|--------------|----------------------------------------|------------------|
| 1. I-40 | WORK ZONE PERFORMANCE PAVEMENT MARKING | TEMPORARY RAISED |
| 2. -Y- LINES | PAINT | TEMPORARY RAISED |

HH) 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.

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

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

MISCELLANEOUS

MM) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 500 FT AND 500 FT RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

QQ) ALL STATIONS ARE CONSIDERED +/- UNLESS OTHERWISE SHOWN ON THE PLANS.

MANAGEMENT STRATEGIES

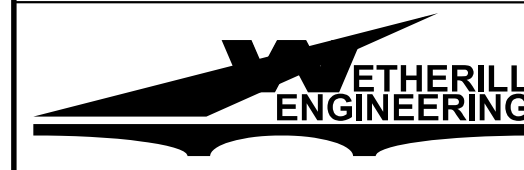
THE FOLLOWING LISTED WORK ZONE STRATEGIES ARE RECOMMENDED FOR INCLUSION WITHIN THIS TRANSPORTATION MANAGEMENT PLAN (TMP).

RECOMMENDED STRATEGIES:

TRAFFIC MANAGEMENT STRATEGIES:
 FULL ROADWAY CLOSURES
 LANE SHIFTS OR CLOSURES
 SHOULDER CLOSURES
 ONE-LANE, TWO WAY OPERATION (FLAGGING)
 WORK HOUR RESTRICTIONS FOR PEAK TRAVEL
 OFF-SITE DETOURS

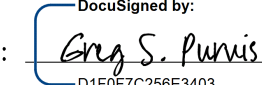
WORK ZONE SAFETY & MOBILITY STRATEGIES:
 TEMPORARY TRAFFIC SIGNALS

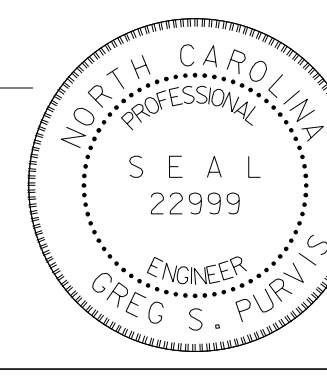
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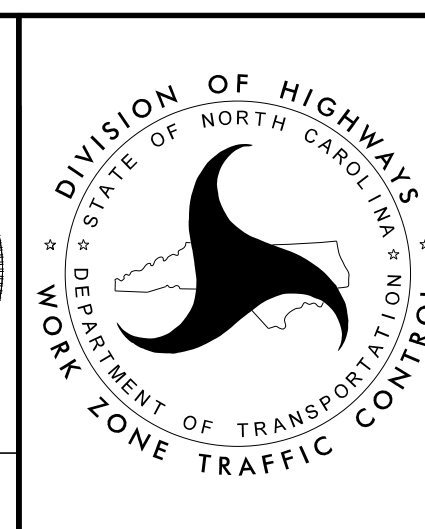
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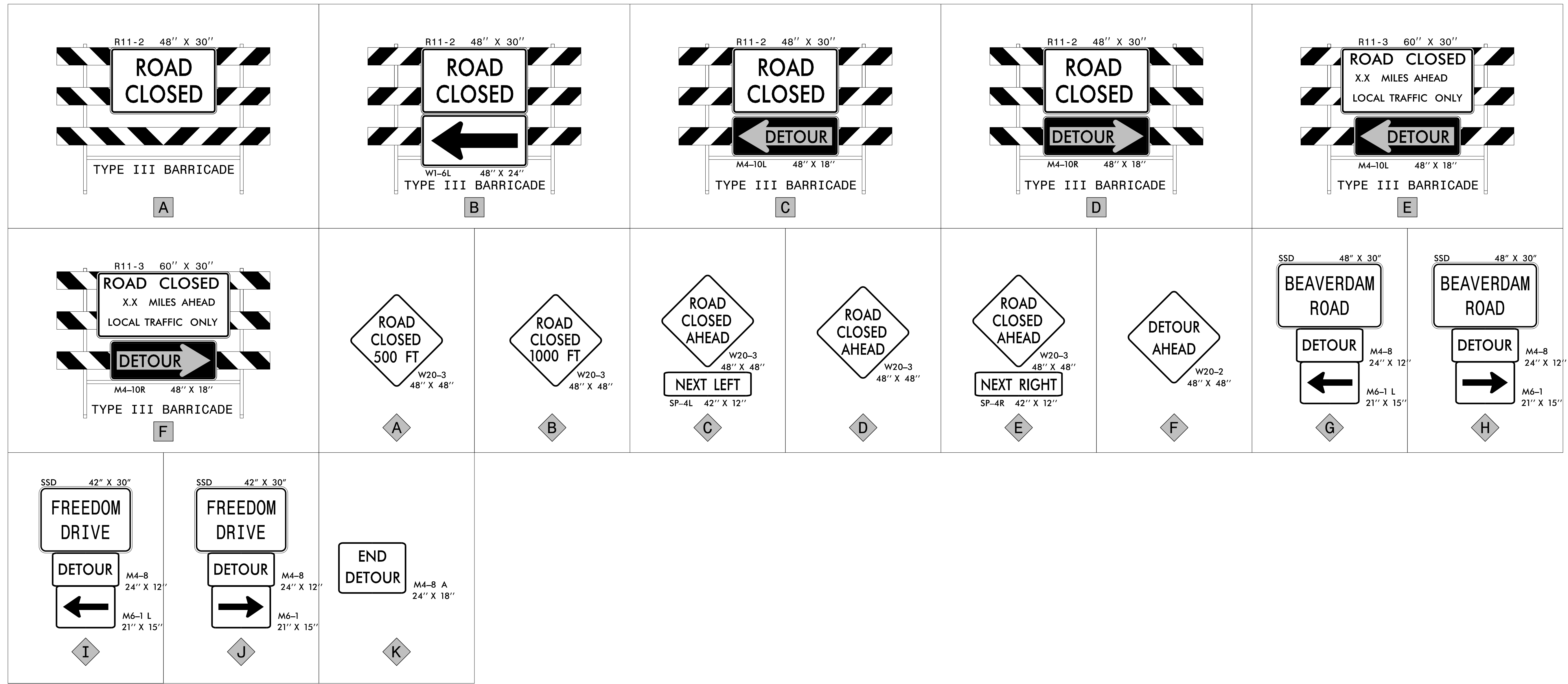
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TRANSPORTATION OPERATIONS
 PLAN: (MANAGEMENT
 STRATEGIES AND GENERAL
 NOTES)



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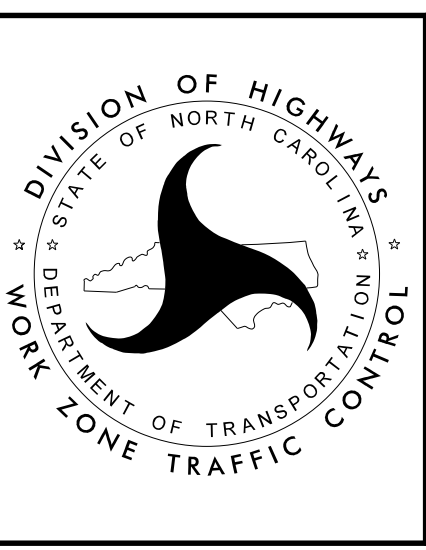
WETHERILL ENGINEERING
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

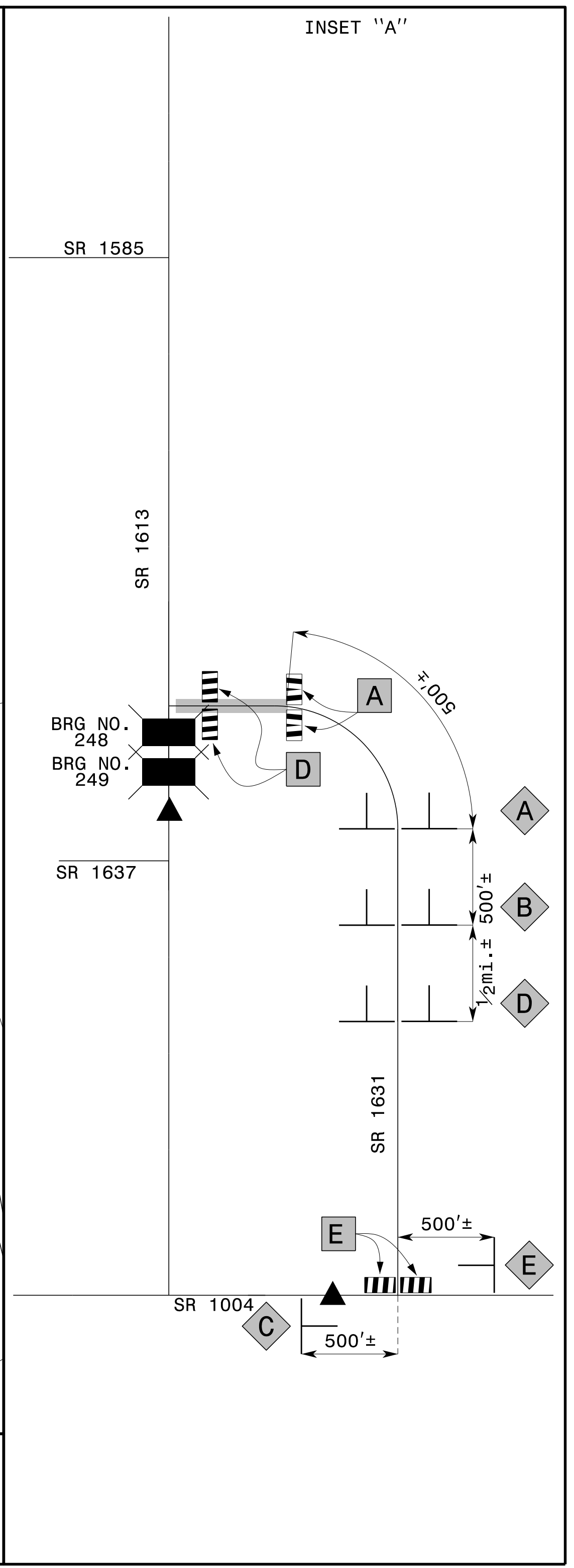
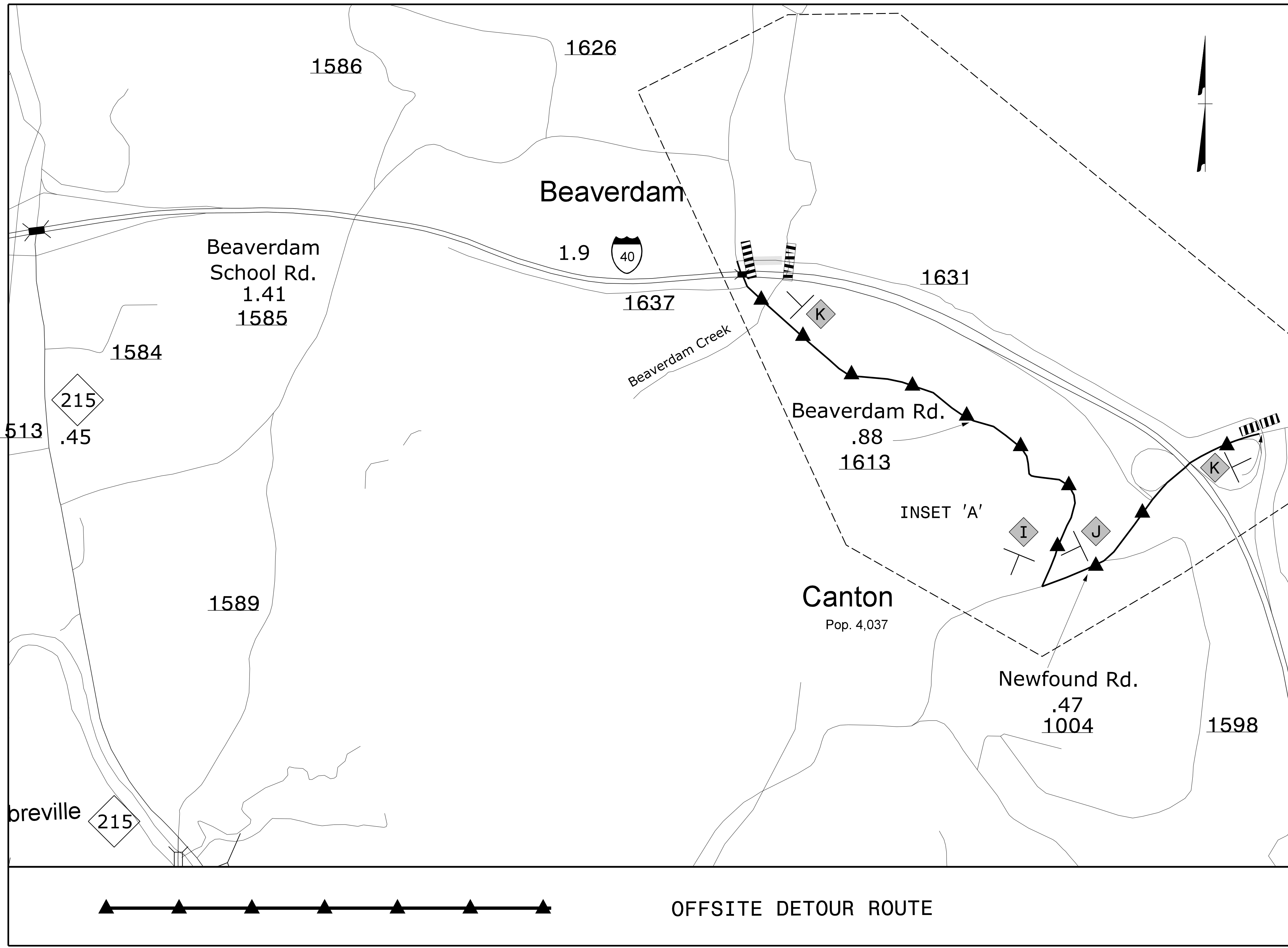
APPROVED: *Greg S. Purvis*
 DATE: 2/29/2024

NORTH CAROLINA PROFESSIONAL SEAL
 ENGINEER
 GREG S. PURVIS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



OFFSITE DETOUR SIGN AND DEVICE LEGEND



NOTES:
 1) REFER TO SHEET TMP-01D FOR SIGN AND DEVICE LEGEND.
 2) FOR INSET "A", REFER TO ROADWAY STANDARD DRAWINGS 1101.03, SHEETS 1 & 2 OF 9 FOR APPLICABLE NOTES.

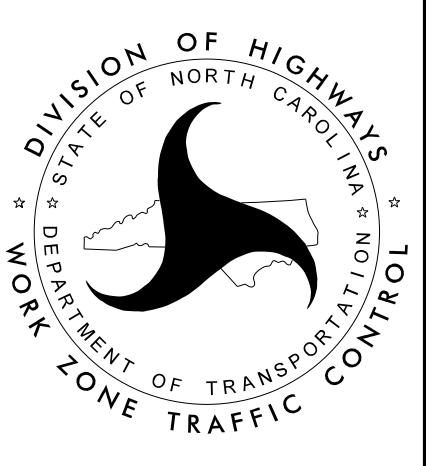
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APPROVED: *Greg S. Purvis*
DocuSigned by: Greg S. Purvis
 01F07C258E3403
 DATE: 2/29/2024

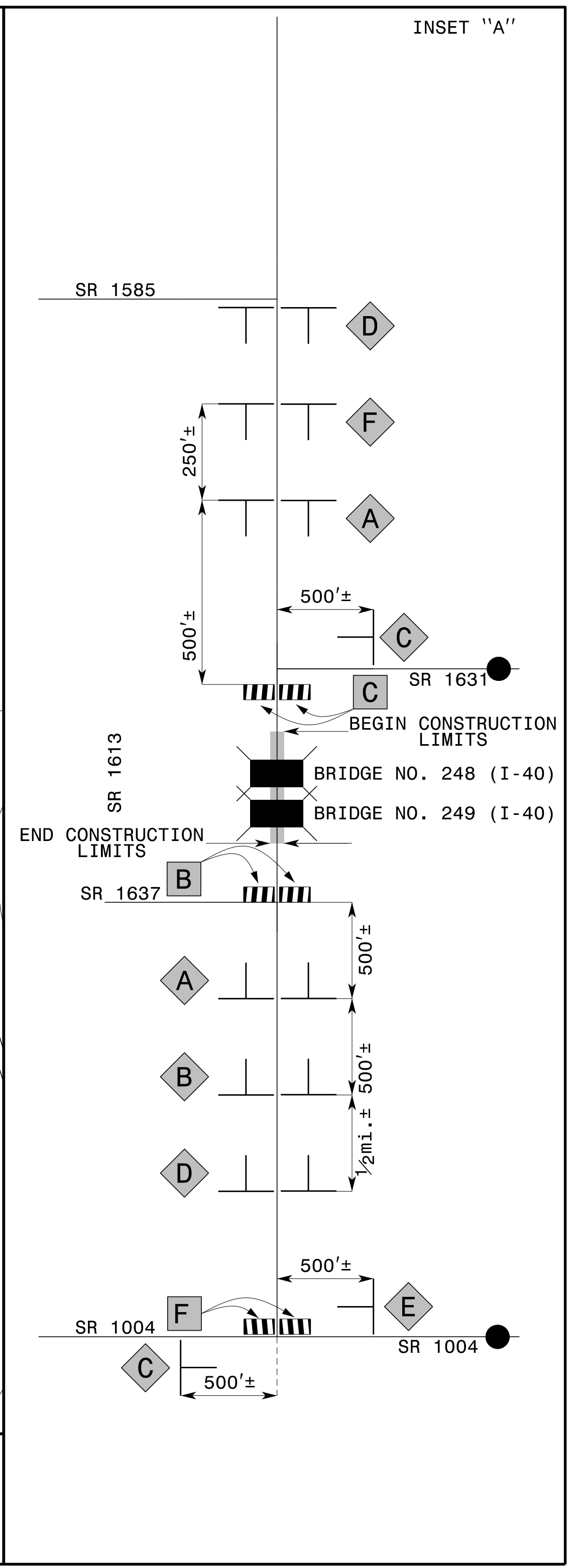
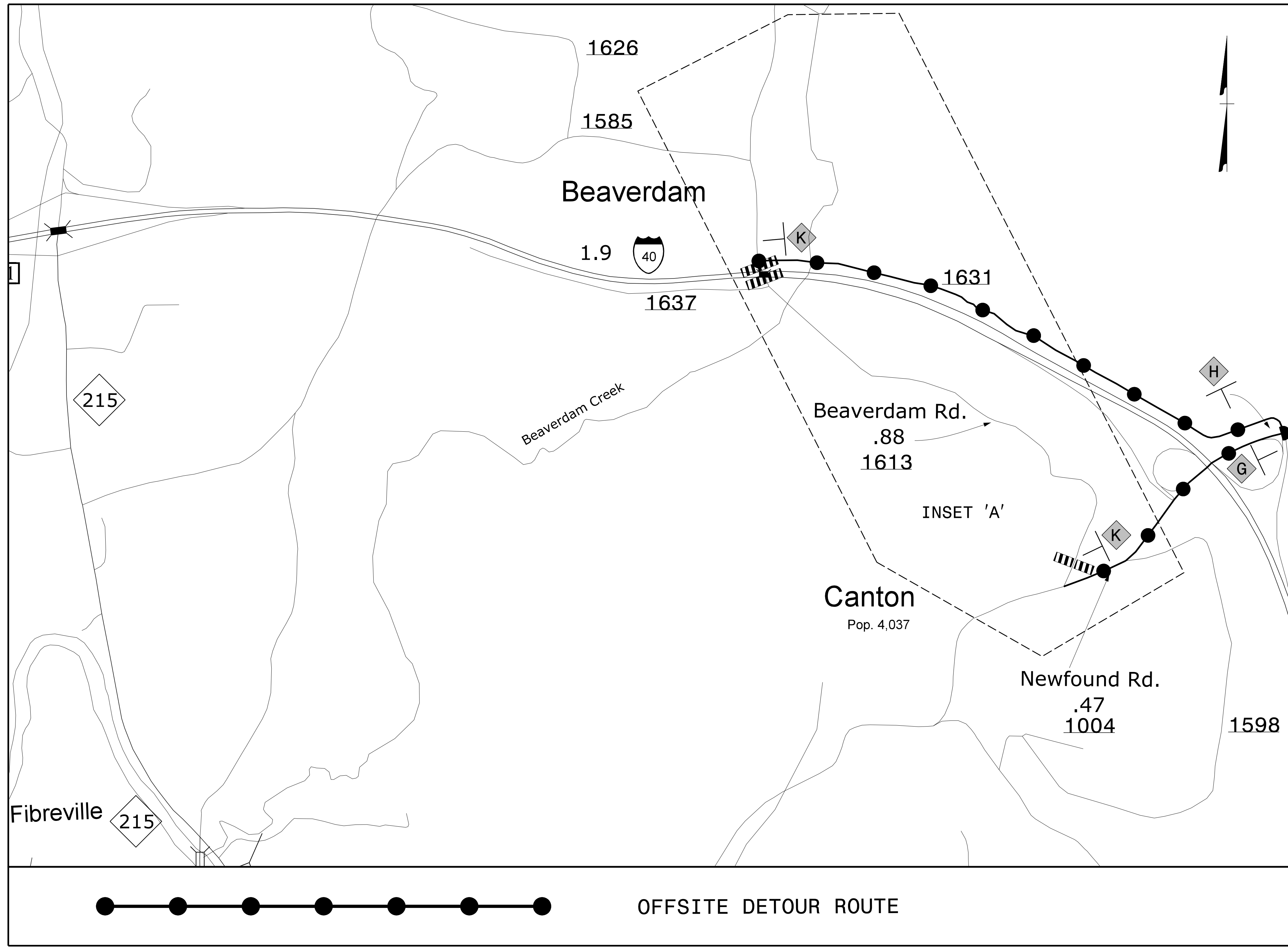
NORTH CAROLINA PROFESSIONAL SEAL
 ENGINEER
 GREG S. PURVIS

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



-Y2- OFFSITE DETOUR

2/29/2024
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 User: AHayes



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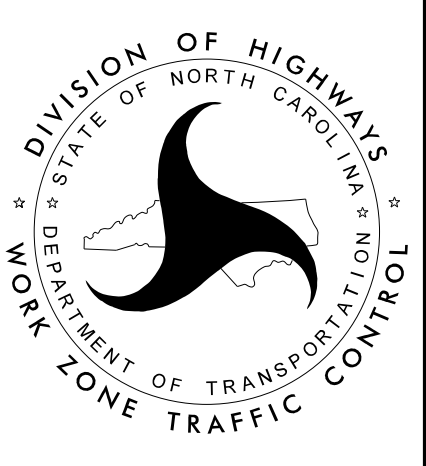
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APPROVED: *Greg S. Purvis*
DocuSigned by:
Greg S. Purvis
D1F07C298E3403

DATE: 2/29/2024

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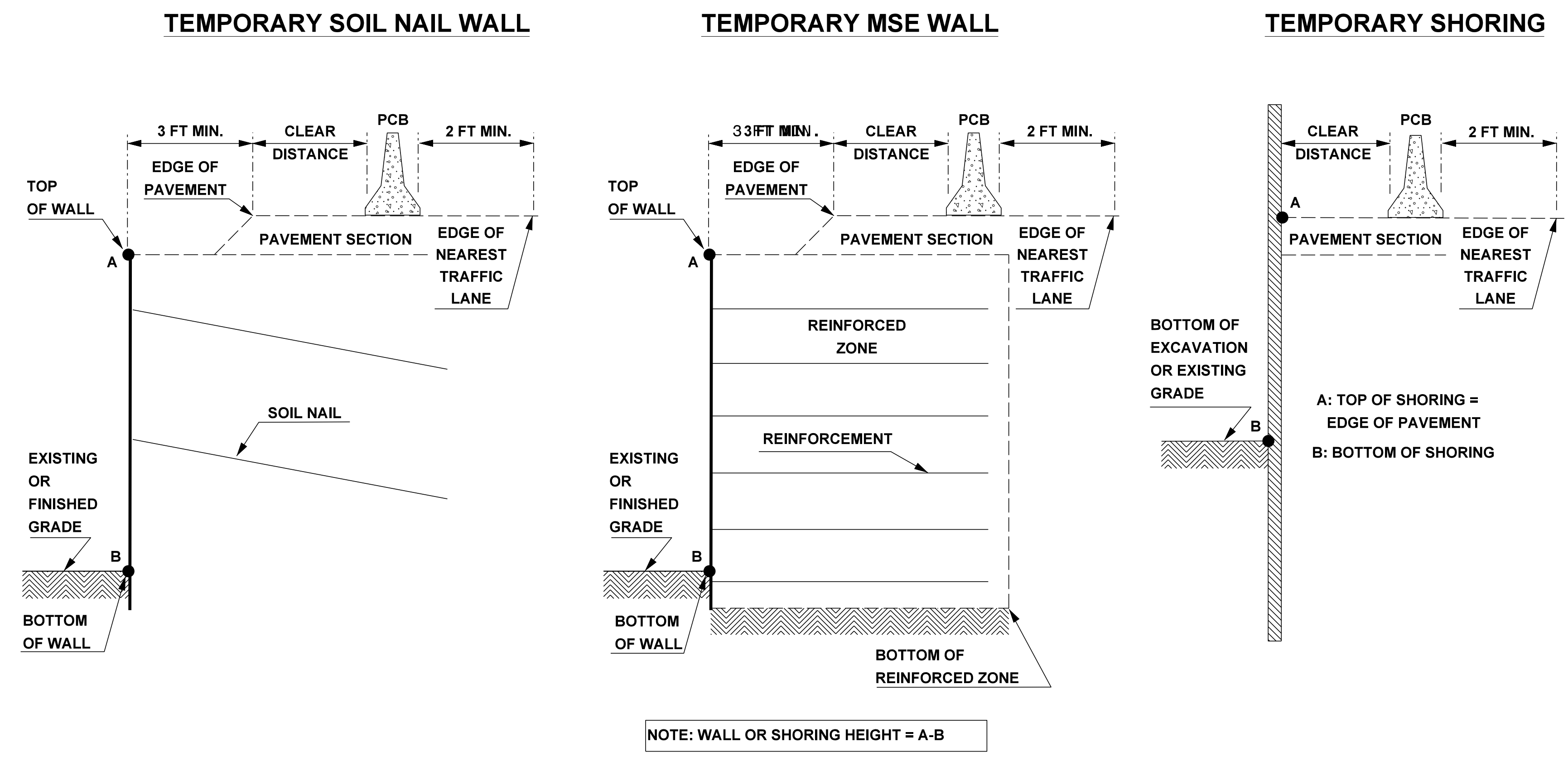
-Y1- OFFSITE DETOUR

| <p>SIGN NUMBER: name TYPE: STATIONARY QUANTITY: SEE PLANS SIGN WIDTH: 4'-0" HEIGHT: 2'-6" TOTAL AREA: 10.0 Sq.Ft.</p> <p>BORDER TYPE: INSET RECESS: 0.38" WIDTH: 0.63" RADII: 1.5"</p> <p>NO. Z BARS: LENGTH:</p> | <p>BACKG COLOR: Fluorescent Orange COPY COLOR: Black</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p>MAT'L: 0.080" (2.0 mm) ALUMINUM</p> | SYMBOL | X | Y | WID | HT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | <p>DESIGN BY: DAH PROJECT ID: HB-0002</p> <p>CHECKED BY: WEI LOCATION: OFFSITE DETOUR</p> <p style="text-align: right;">Jul 11, 2023 DIV: 14</p> | <div style="text-align: center;"> </div> <p style="text-align: center;">Spacing Factor is 1 unless specified otherwise</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <p>USE NOTES: 1,2</p> <p>1. Legend and border shall be direct applied black non-reflective sheeting. 2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>LETTER POSITIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="10">Letter locations are panel edge to lower left corner</th> <th>Series/Size</th> <th>Text Length</th> </tr> <tr> <th>B</th><th>E</th><th>A</th><th>V</th><th>E</th><th>R</th><th>D</th><th>A</th><th>M</th><th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>5.5</td><td>9.8</td><td>13.4</td><td>17.6</td><td>22.2</td><td>26.3</td><td>30.7</td><td>34.7</td><td>39.4</td><td></td> <td></td> <td>C 2000</td> <td>37.9</td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td> <td>C 2000</td> <td>16.6</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p style="font-size: small;">FILENAME: HB-0002_TMP_02C SSD NORTH CAROLINA D.O.T. SIGN DETAIL</p> | | | | Letter locations are panel edge to lower left corner | | | | | | | | | | Series/Size | Text Length | B | E | A | V | E | R | D | A | M | | | | 5.5 | 9.8 | 13.4 | 17.6 | 22.2 | 26.3 | 30.7 | 34.7 | 39.4 | | | C 2000 | 37.9 | | | | | | | | | | | | C 2000 | 16.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Letter locations are panel edge to lower left corner | | | | | | | | | | Series/Size | Text Length | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | E | A | V | E | R | D | A | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <p>SIGN NUMBER: name TYPE: STATIONARY QUANTITY: SEE PLANS SIGN WIDTH: 3'-6" HEIGHT: 2'-6" TOTAL AREA: 8.8 Sq.Ft.</p> <p>BORDER TYPE: INSET RECESS: 0.38" WIDTH: 0.63" RADII: 1.5"</p> <p>NO. Z BARS: LENGTH:</p> | <p>BACKG COLOR: Fluorescent Orange COPY COLOR: Black</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p>MAT'L: 0.080" (2.0 mm) ALUMINUM</p> | SYMBOL | X | Y | WID | HT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | <p>DESIGN BY: DAH PROJECT ID: HB-0002</p> <p>CHECKED BY: WEI LOCATION: OFFSITE DETOUR</p> <p style="text-align: right;">Jul 11, 2023 DIV: 14</p> | <div style="text-align: center;"> </div> <p style="text-align: center;">Spacing Factor is 1 unless specified otherwise</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <p>USE NOTES: 1,2</p> <p>1. Legend and border shall be direct applied black non-reflective sheeting. 2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>LETTER POSITIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="10">Letter locations are panel edge to lower left corner</th> <th>Series/Size</th> <th>Text Length</th> </tr> <tr> <th>F</th><th>R</th><th>E</th><th>E</th><th>D</th><th>O</th><th>M</th><th></th><th></th><th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>6.2</td><td>10.1</td><td>14.5</td><td>18.6</td><td>22.7</td><td>27.1</td><td>31.8</td><td></td><td></td><td></td> <td></td> <td>C 2000</td> <td>29.6</td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td> <td>C 2000</td> <td>18.2</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p style="font-size: small;">FILENAME: HB-0002_TMP_02C SSD NORTH CAROLINA D.O.T. SIGN DETAIL</p> | | | | Letter locations are panel edge to lower left corner | | | | | | | | | | Series/Size | Text Length | F | R | E | E | D | O | M | | | | | | 6.2 | 10.1 | 14.5 | 18.6 | 22.7 | 27.1 | 31.8 | | | | | C 2000 | 29.6 | | | | | | | | | | | | C 2000 | 18.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <p>1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107</p> <p style="font-size: x-small;">TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION</p> | <p>APPROVED: DATE: 2/29/2024</p> | | | <p>SPECIAL SIGN DESIGNS</p> |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | | | | |



NOTE: WALL OR SHORING HEIGHT = A-B

FIGURE A

NOTES

- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.
- REFER TO THE "TEMPORARY SHORING" STANDARD PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PCB).
- PCB IS REQUIRED IF TEMPORARY SHORING/WALL IS LOCATED WITHIN THE CLEAR ZONE IN ACCORDANCE WITH THE AASHTO ROADSIDE DESIGN GUIDE. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT FOR APPLICABLE PAVEMENT DESIGN).
- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED OR ANCHORED PCB FROM THE TABLE SHOWN IN FIGURE B. CLEAR DISTANCE IS DEFINED AS SHOWN IN FIGURE A AND OFFSET IS DEFINED AS SHOWN IN FIGURE B.
- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET PCB NEXT TO AND UP AGAINST THE TRAFFIC SIDE OF THE TEMPORARY SHORING/WALLS EXCEPT FOR BARRIER ABOVE TEMPORARY WALLS. PCB WITH THE MINIMUM REQUIRED CLEAR DISTANCE IS REQUIRED ABOVE TEMPORARY WALLS.
- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- SET PCB WITH A MINIMUM HORIZONTAL DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A UNLESS OTHERWISE SHOWN IN THE PLANS OR APPROVED BY THE ENGINEER.
- FOR PCB ABOVE AND BEHIND TEMPORARY WALLS, PROVIDE A MINIMUM DISTANCE OF 3 FT BETWEEN THE EDGE OF PAVEMENT AND THE WALL FACE AS SHOWN IN FIGURE A. IF THIS MINIMUM REQUIRED DISTANCE IS NOT AVAILABLE, CONTACT THE ENGINEER.
- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS.

MINIMUM REQUIRED CLEAR DISTANCE, inches

| Barrier Type | Pavement Type | Offset * ft | Design Speed, mph | | | | | |
|----------------|---------------|----------------|--------------------------|-------|-------|-------|-------|-------|
| | | | <30 | 31-40 | 41-50 | 51-60 | 61-70 | 71-80 |
| Unanchored PCB | Asphalt | <8 | 24 | 26 | 29 | 32 | 36 | 40 |
| | | 8-14 | 26 | 28 | 31 | 35 | 38 | 42 |
| | | 14-20 | 27 | 29 | 34 | 36 | 39 | 43 |
| | | 20-26 | 28 | 31 | 35 | 38 | 40 | 44 |
| | | 26-32 | 29 | 32 | 36 | 39 | 42 | 45 |
| | | 32-38 | 30 | 34 | 38 | 41 | 43 | 46 |
| | | 38-44 | 31 | 34 | 41 | 43 | 45 | 48 |
| | 44-50 | 31 | 35 | 41 | 43 | 46 | 49 | |
| | 50-56 | 32 | 36 | 42 | 44 | 47 | 50 | |
| | >56 | 32 | 36 | 42 | 45 | 47 | 51 | |
| | Concrete | <8 | 17 | 18 | 21 | 22 | 25 | 26 |
| | | 8-14 | 19 | 20 | 23 | 25 | 26 | 29 |
| | | 14-20 | 22 | 22 | 24 | 26 | 28 | 31 |
| | | 20-26 | 23 | 24 | 26 | 27 | 30 | 34 |
| 26-32 | | 24 | 25 | 27 | 28 | 32 | 35 | |
| 32-38 | | 24 | 26 | 27 | 30 | 33 | 36 | |
| 38-44 | | 25 | 26 | 28 | 30 | 34 | 37 | |
| 44-50 | 26 | 26 | 28 | 32 | 35 | 37 | | |
| 50-56 | 26 | 26 | 28 | 32 | 35 | 38 | | |
| >56 | 26 | 27 | 29 | 32 | 36 | 38 | | |
| Anchored PCB | Asphalt | All Offsets | 24 for All Design Speeds | | | | | |
| | | | 12 for All Design Speeds | | | | | |

* See Figure Below

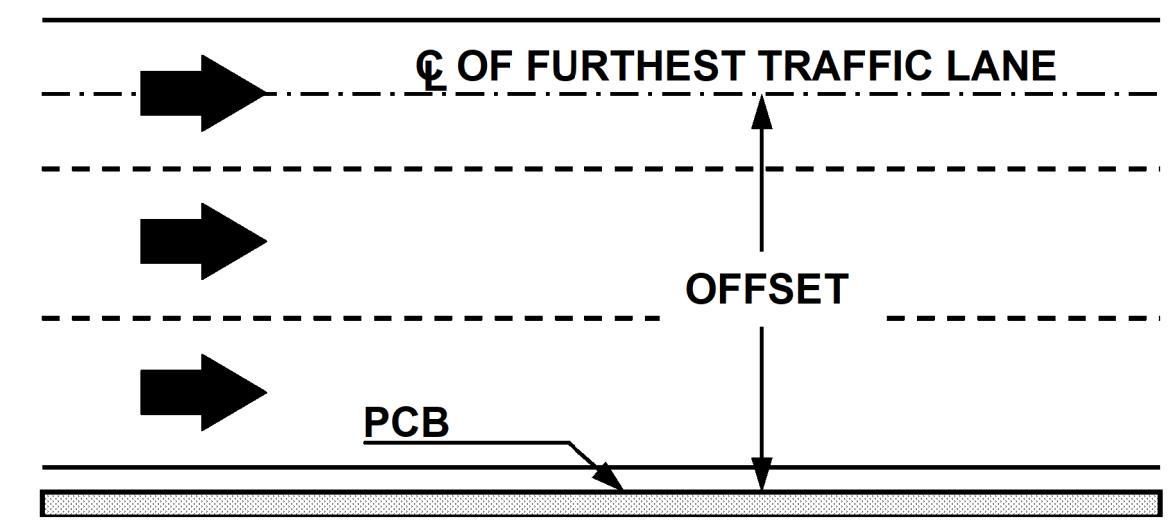


FIGURE B

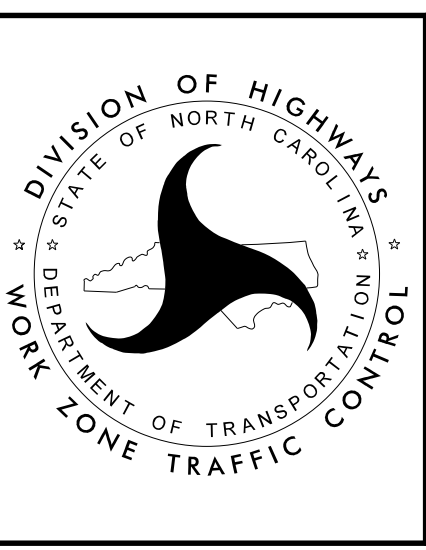
2/29/2024 \\wei-f501\projects\2021\2147.07_HB-0002\Traffic\Traffic\Pre-Let\Plan\WZTC_AR\HB-0002_TMP_02C_TS.dgn User: AHayes

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APPROVED: *Greg S. Purvis*
 DATE: 2/29/2024

NORTH CAROLINA
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 SEAL
 22999
 ENGINEER
 GREG S. PURVIS

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**PORTABLE CONCRETE
 BARRIER AT TEMPORARY
 SHORING LOCATIONS**

Shoring for Maintenance of Traffic Location Nos. ①, ②, ⑥, and ⑦

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING NOS. 1, 2, 6 AND 7, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT (γ) = 120 PCF
- FRICTION ANGLE (ϕ) = 30 DEGREES
- COHESION (c) = 0 PSF
- GROUNDWATER ELEVATION = N/A FT

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING NOS. 1, 2, 6 AND 7. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

Shoring for Maintenance of Traffic Location Nos. ③, ④, ⑤, ⑧, ⑨, and ⑩

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING LOCATION NOS. 3, 4, 5, 8, 9, AND 10, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT (γ) = 120 PCF
- FRICTION ANGLE (ϕ) = 30 DEGREES
- COHESION (c) = 0 PSF
- GROUNDWATER ELEVATION = N/A FT

WHEN BACKFILL FOR RETAINING WALLS OVERLAPS WITH THE REINFORCED ZONE OF TEMPORARY WALLS, USE SHORING BACKFILL OR BACKFILL MATERIAL REQUIRED FOR RETAINING WALLS, WHICHEVER IS BETTER, IN THE REINFORCED ZONE OF TEMPORARY WALLS.

Shoring for Maintenance of Traffic Location Nos. ⑪ and ⑫

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING LOCATION NOS. 11 AND 12, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

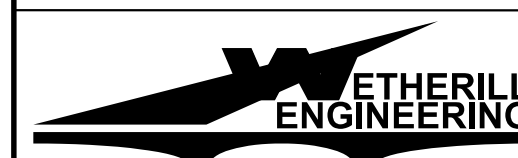
- UNIT WEIGHT (γ) = 120 PCF
- FRICTION ANGLE (ϕ) = 30 DEGREES
- COHESION (c) = 0 PSF
- GROUNDWATER ELEVATION = N/A FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING LOCATION NOS. 11 AND 12. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING LOCATION NOS. 11 AND 12. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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NOTE: ALL DATA INCLUDING STATIONS, OFFSETS, ETC. HAVE BEEN DETERMINED BY THE NCDOT GEOTECHNICAL UNIT.



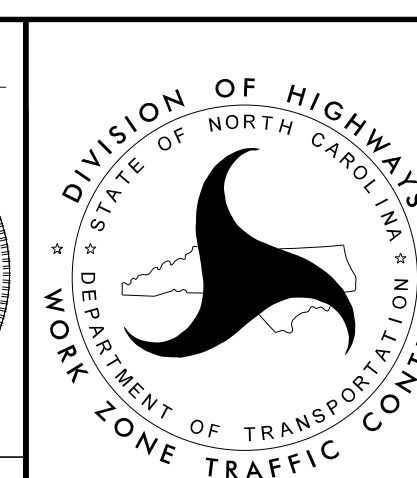
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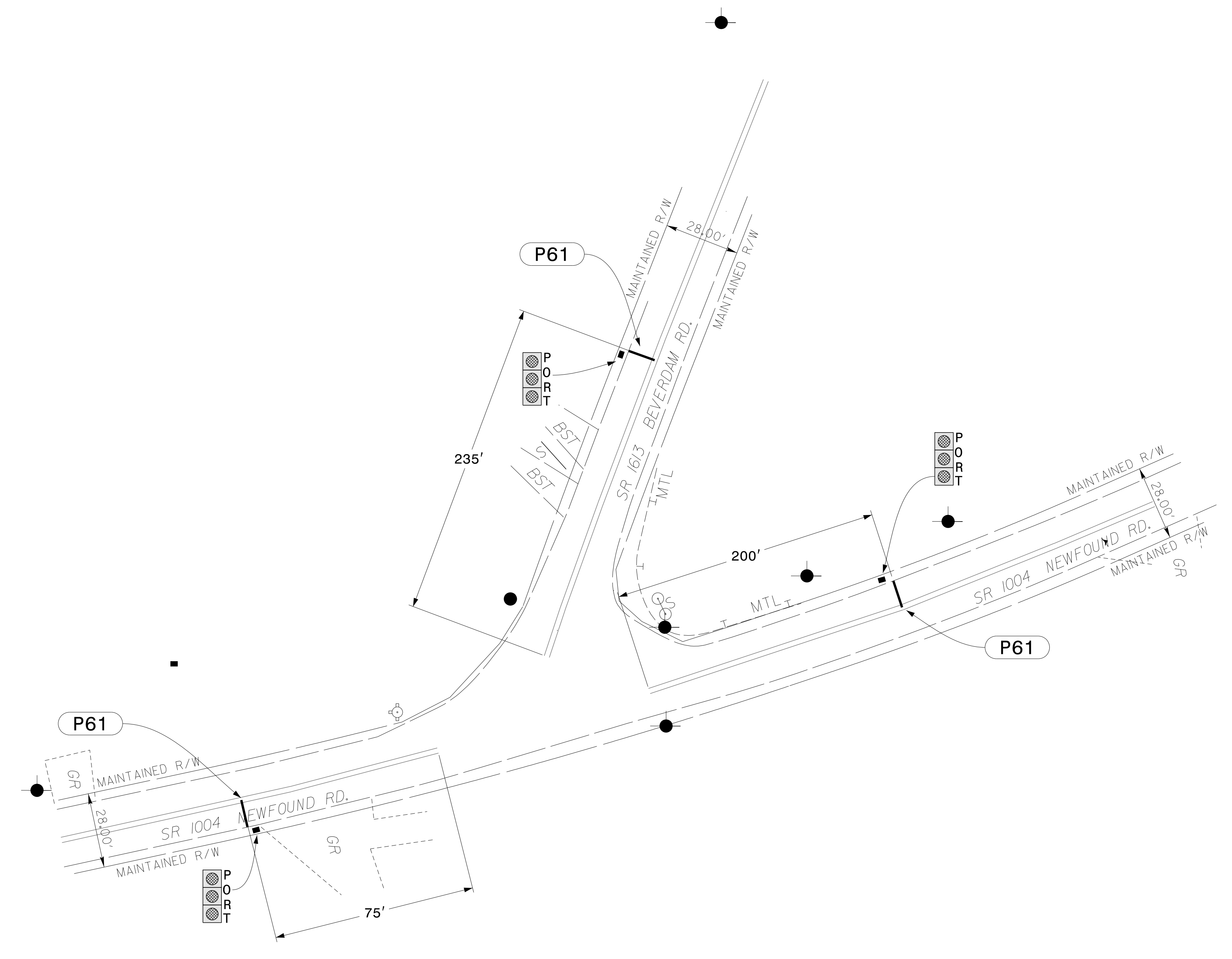
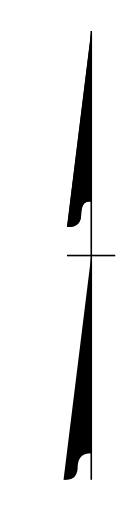
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TEMPORARY SHORING DATA



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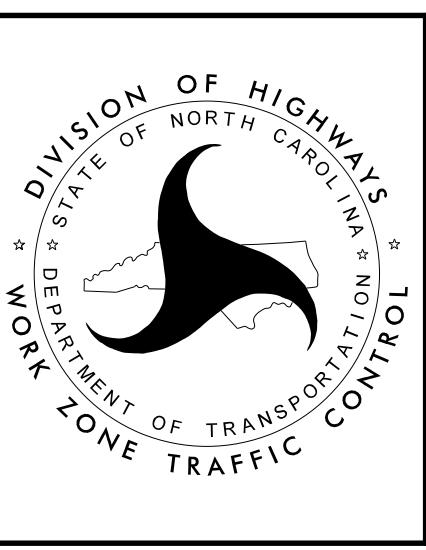
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 MAINTAINED R/W
 GR
 28,00'
 SR 1004 NEWFOUND RD.
 MAINTAINED R/W
 GR
 75'
 PORT
 P61
 235'
 MAINTAINED R/W
 SR 1613 BEVERDAM RD.
 MAINTAINED R/W
 28,00'
 MAINTAINED R/W
 200'
 MAINTAINED R/W
 SR 1004 NEWFOUND RD.
 MAINTAINED R/W
 28,00'
 GR
 MAINTAINED R/W
 P61
 PORT
 MAINTAINED R/W
 28,00'
 MAINTAINED R/W
 28,00'

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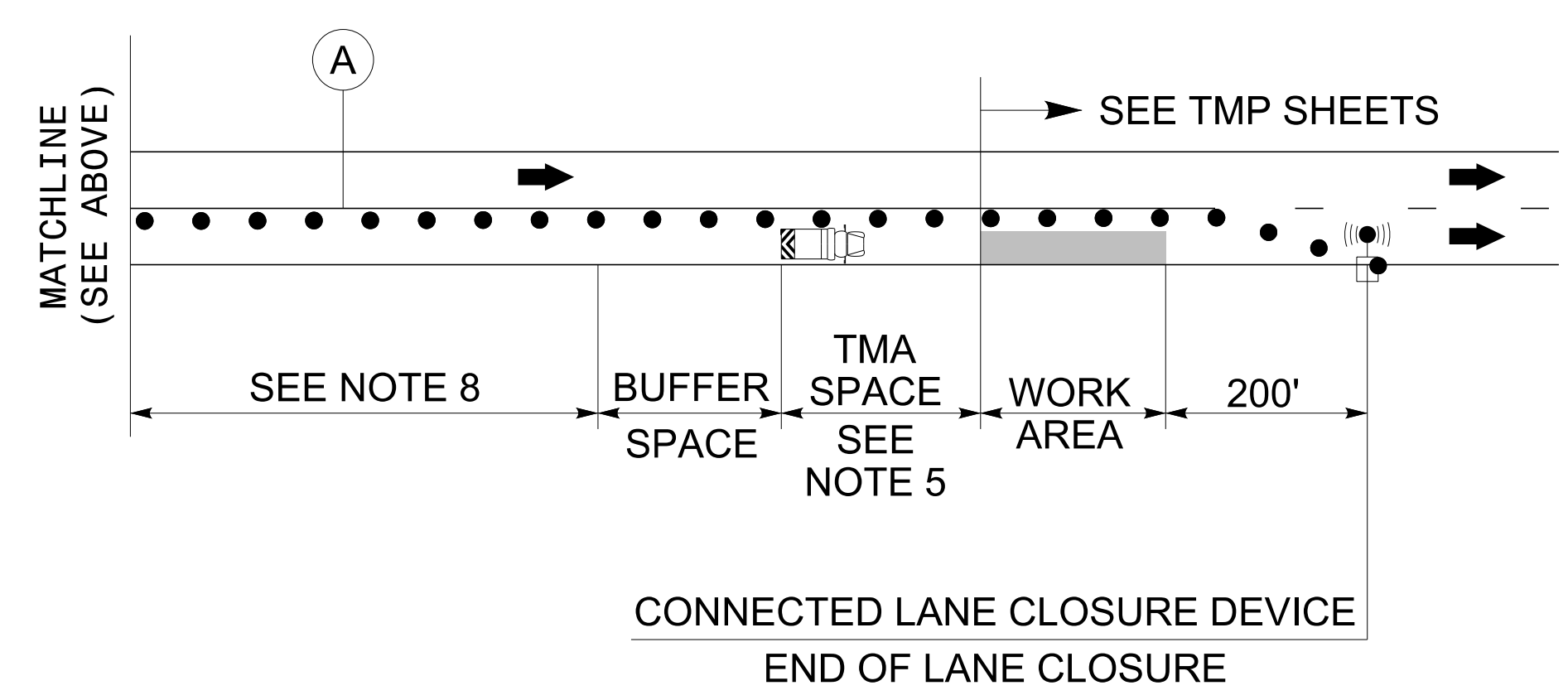
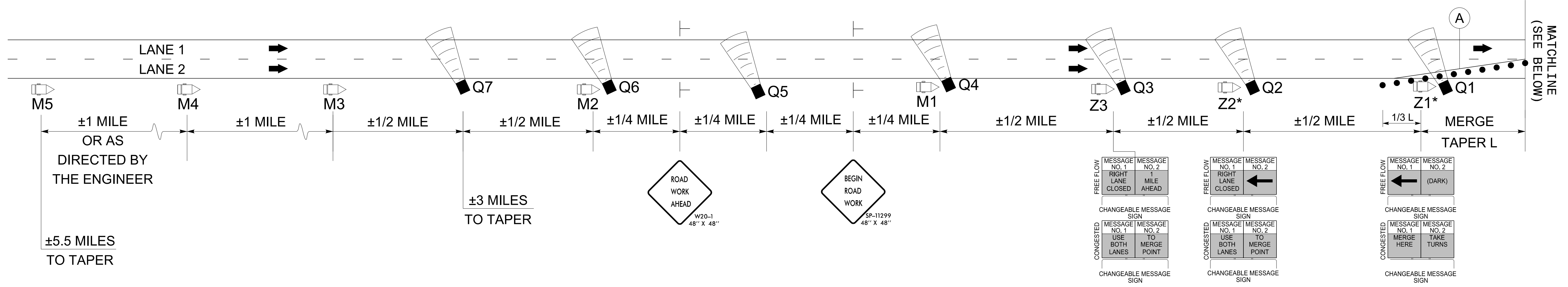
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DocuSigned by:
Greg S. Purvis
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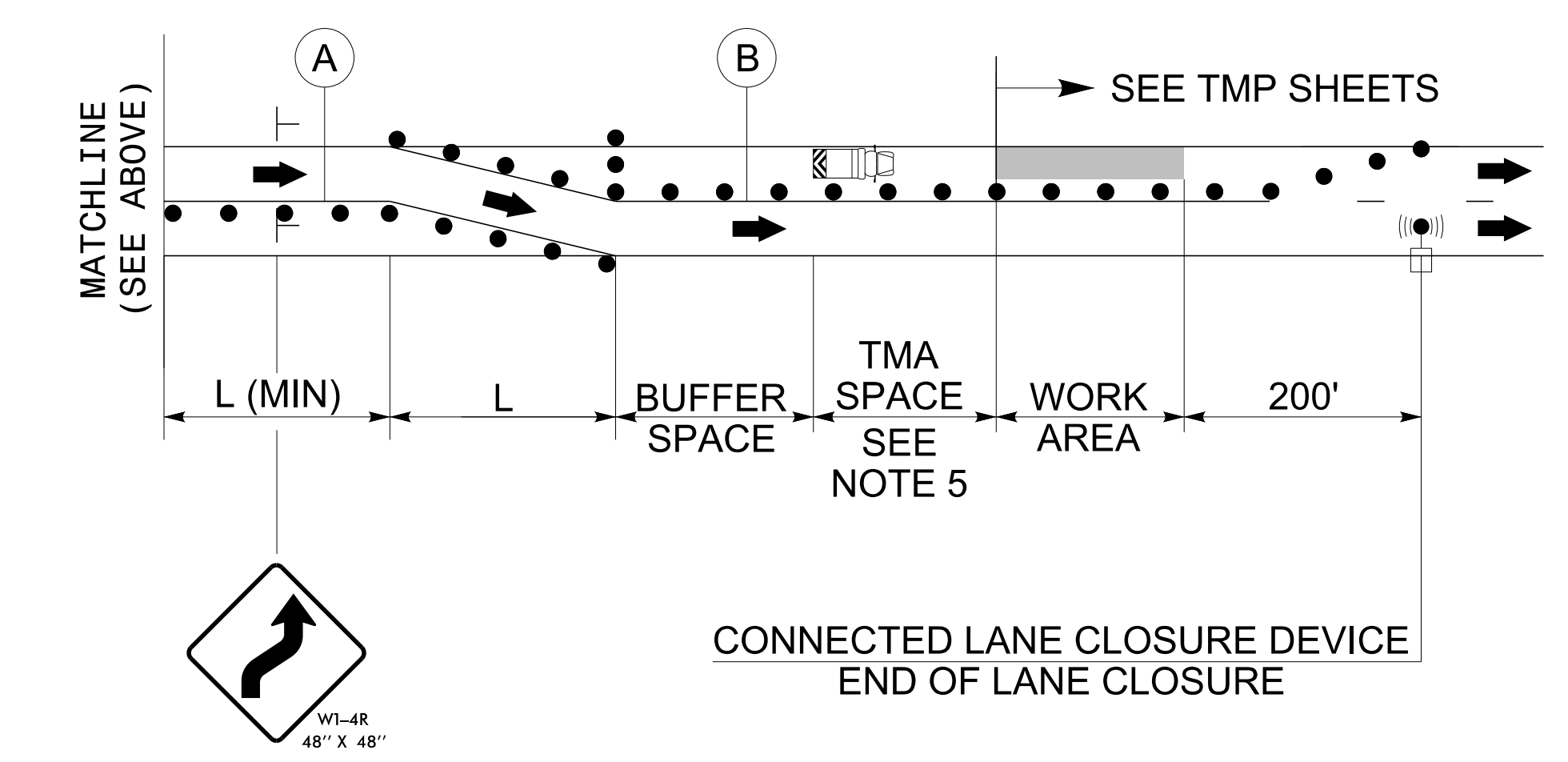
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TEMPORARY SIGNAL AT
 BEAVERDAM RD AND
 NEWFOUND RD



RIGHT LANE WORK AREA



LEFT LANE WORK AREA * (IF APPLICABLE)

GENERAL NOTES

- 1- PLACE DRUMS IN TAPERS AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. PLACE DRUMS ALONG THE WORK AREA AT THE MAXIMUM SPACING EQUAL TO 2 TIMES THE POSTED SPEED LIMIT.
- 2- REFER TO RSD. 1101.11, SHEETS 1 & 2, FOR "L" DISTANCE AND BUFFER SPACE.
- 3- REFER TO RSD. 1101.02, SHEETS 9 & 10, FOR TREATMENT OF LANE CLOSURES THRU INTERCHANGES.
- 4- INSTALL LANE CLOSURES WITH THE FLOW OF TRAFFIC, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. REMOVE LANE CLOSURES AGAINST THE FLOW OF TRAFFIC, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
5. POSITION THE TMAS TO MAINTAIN A ROLL-AHEAD DISTANCE AS RECOMMENDED BY THE MANUFACTURER AND CONTINUOUSLY ADVANCE TMAS AS WORK PROGRESSES. USE TMAS AS REQUIRED TO SHIELD WORKERS FROM ERRANT VEHICLES AND TRAFFIC FROM POTENTIAL HAZARDS IN THE WORK AREA.
6. REMOVE OR COVER EXISTING ADVANCED WARNING SIGNS PREVIOUSLY INSTALLED USING RSD 1101.01, SHEET 2 OF 3.
7. IN THE EVENT OF A SYSTEM MALFUNCTION, IMMEDIATELY INSTALL WORK ZONE SIGNS ACCORDING TO RSD 1101.02, SHEET 4. SIGNAGE SHOULD REMAIN IN PLACE UNTIL SYSTEM OPERATION IS FULLY RESTORED.
8. IF A LEFT LANE WORK AREA WILL BE NEEDED AT ANY TIME DURING THE PROJECT, USE 2L. IF NO LEFT LANE WORK AREA IS NEEDED, OMIT THIS SPACE.
9. REMOVE ANY CONFLICTING PAVEMENT MARKINGS & MARKERS.

- (A) 6" WHITE EDGELINE
- (B) 6" YELLOW EDGELINE

LEGEND

- SPEED SENSOR Q#(1-7)
- PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)
M#(1-5) = MAINLINE
Z#(1-3) = ZIPPER MERGE
*Z1 & Z2 SHALL BE FULL MATRIX
- CONNECTED LANE CLOSURE DEVICE
- DRUM
- TRUCK MOUNTED ATTENUATOR (TMA)
- STATIONARY SIGN

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APPROVED:
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DYNAMIC ZIPPER MERGE SYSTEM LAYOUT

NOTE: ANY WORK THAT REQUIRES A DROP OFF WITHIN OR NEXT TO THE EDGE OF PAVEMENT MORE THAN 2" AND NOT PROTECTED BY PORTABLE CONCRETE BARRIER SHALL BE SAFED UP TO AN ACCEPTABLE ELEVATION BY THE END OF THE WORK PERIOD. REFER TO GENERAL NOTE 'R' ON SHEET TMP-01B.

PHASE I

STEP 1) USING ROADWAY STANDARD DRAWING (RSD) 1101.01, INSTALL ALL ADVANCE WORK ZONE SIGNING.

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK IN PHASE I, STEP 2 IN 120 CONSECUTIVE CALENDAR DAYS. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 2) INSTALL PORTABLE TRAFFIC SIGNALS. INSTALL OFF-SITE DETOUR SIGNING, CLOSE -Y2- WITH TYPE III BARRICADES, AND DETOUR TRAFFIC OFF-SITE. THEN COMPLETE THE FOLLOWING [TMP-02, 02E, 05, & 06]:

- CONSTRUCT -Y2- (NOT INCLUDING RETAINING WALL) UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE
- CONSTRUCT -Y2- UNDERGROUND UTILITIES AND DRAINAGE
- CONSTRUCT 10' CULVERT PIPE
- INSTALL TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -Y2-

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK IN PHASE I, STEP 3 IN 5 CONSECUTIVE CALENDAR DAYS. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 3) REMOVE TYPE III BARRICADES, RE-OPEN -Y2- TO TRAFFIC, AND REMOVE DETOUR SIGNING. THEN INSTALL OFF-SITE DETOUR SIGNING AND TYPE III BARRICADES FOR THE -Y1- DETOUR, CLOSE -Y1- NEAR PROPOSED 60" PIPE, AND DETOUR TRAFFIC OFF-SITE. INSTALL 60" PIPE AND 16" ENCASEMENT PIPE AS SHOWN ON SHEET TMP-05. THEN, REMOVE TYPE III BARRICADES, RE-OPEN -Y1- TO TRAFFIC, AND COVER DETOUR SIGNING. [TMP-02A & 05A]

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK IN PHASE I, STEP 4 FROM MONDAY 8:00 P.M TO THURSDAY 6:00 A.M. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 4) USING RSD 1101.02, INSTALL FULL DEPTH SHOULDER RECONSTRUCTION ON I-40 WB. ANY WORK THAT HAS A DROP OFF NEXT TO THE EDGE OF PAVEMENT MORE THAN 2" SHALL BE SAFED UP TO AN ACCEPTABLE ELEVATION BY THE END OF THE WORK PERIOD. REFER TO GENERAL NOTE 'R' ON SHEET TMP-01B. [TMP-04B THRU 06B]

NOTE: UPON COMPLETION OF SHOULDER WORK PERFORMED FROM STA. 322+00 -L- TO STA. 331+50-L-, INSTALL PORTABLE CONCRETE BARRIER ON THE SHOULDER. PROVIDE A 50' OVERLAP BETWEEN PCB AND EXISTING GUARDRAIL. SEE SHEETS TMP-05C AND 06C FOR STATIONS AND OFFSETS.

STEP 5) USING RSD 1101.02, INSTALL PCB ALONG THE OUTSIDE SHOULDER OF -L- WB. TIE PCB TO PCB INSTALLED IN PHASE I, STEP 4. UNCOVER OFF-SITE DETOUR SIGNING AND INSTALL TYPE III BARRICADES FOR THE -Y1- DETOUR, CLOSE -Y1-, AND DETOUR TRAFFIC OFF-SITE. THEN COMPLETE THE FOLLOWING [TMP-02, 04C THRU 06C]:

- CONSTRUCT PHASE I TEMPORARY ALIGNMENT
- INSTALL PHASE I TEMPORARY SHORING
- CONSTRUCT FIRST STAGE OF TRAFFIC CULVERT
- CONSTRUCT -Y1- FROM BEGIN CONSTRUCTION LIMITS TO THE CULVERT UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE

USING RSD 1101.02, CONSTRUCT -Y2- RETAINING WALL. [TMP-05C]

USING RSD 1101.02, CONSTRUCT -Y3- UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE. [TMP-05C]

PHASE II

NOTE: PHASE II, STEPS 1 AND 1A MAY BE COMPLETED SIMULTANEOUSLY.

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK IN PHASE II, STEP 1 FROM MONDAY 8:00 P.M TO THURSDAY 6:00 A.M. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 1) AWAY FROM TRAFFIC INSTALL PCB, TEMPORARY PAVEMENT MARKINGS, AND MARKERS ON PHASE I TEMPORARY ALIGNMENT AS MUCH AS POSSIBLE. THEN USING RSD 1101.02, REMOVE PCB ON I-40 WB AS NEEDED, MILL/WEDGE AS NEEDED THE PHASE I TEMPORARY ALIGNMENT, SHIFT TRAFFIC, AND INSTALL TEMPORARY PAVEMENT MARKINGS AND MARKERS, TEMPORARY PAVEMENT, AND REMAINING PCB. [TMP-07 THRU 09]

STEP 1A) USING RSD 1101.02, WEDGE -Y3- UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE, INSTALL TEMPORARY MARKINGS AND MARKERS, AND SHIFT TRAFFIC ONTO THE NEW ALIGNMENT. [TMP-08]

STEP 2) USING RSD 1101.02, COMPLETE THE FOLLOWING ON I-40 EB [TMP-08 & 09]:

- REMOVE EXISTING PAVEMENT MARKINGS AND REPLACE WITH TEMPORARY PAVEMENT MARKINGS
- SHIFT TRAFFIC ONTO THE TEMPORARY PATTERN

STEP 3) USING RSD 1101.02 ON I-40 EB, COMPLETE THE FOLLOWING [TMP-07 THRU 09]:

- REMOVE EXISTING MEDIAN WALL WITHIN PROJECT LIMITS AS SHOWN AND INSTALL A TEMPORARY CRASH CUSHION
- REMOVE EXISTING MEDIAN GUARDRAIL AND INSTALL A TEMPORARY ATTENUATOR
- INSTALL PCB AND DRUMS ALONG THE MEDIAN SHOULDER AND CONSTRUCT THE PHASE II TEMPORARY ALIGNMENT AS MUCH AS POSSIBLE
- CONSTRUCT STAGE II TRAFFIC CULVERT AND TEMPORARY SHORING

AWAY FROM TRAFFIC, REMOVE EXISTING -Y3- AND CONSTRUCT DRAINAGE. [TMP-08]

PHASE III

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK IN PHASE III, STEP 1 FROM MONDAY 8:00 P.M TO THURSDAY 6:00 A.M. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 1) AWAY FROM TRAFFIC INSTALL PCB, TEMPORARY PAVEMENT MARKINGS, AND MARKERS ON PHASE II TEMPORARY ALIGNMENT AS MUCH AS POSSIBLE. THEN USING RSD 1101.02, REMOVE PCB ON I-40 EB AS NEEDED, MILL/WEDGE AS NEEDED THE PHASE II TEMPORARY ALIGNMENT, SHIFT TRAFFIC, AND INSTALL TEMPORARY PAVEMENT MARKINGS AND MARKERS, AND REMAINING PCB. [TMP-10 THRU 12]

STEP 2) BEHIND BARRIER COMPLETE THE FOLLOWING [TMP-10 THRU 12]:

- CONSTRUCT I-40 EB AS MUCH AS POSSIBLE UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE
- CONSTRUCT STAGE III TRAFFIC CULVERT
- CONSTRUCT MEDIAN WALL AS SHOWN

USING RSD 1101.02, WIDEN -Y1- FROM -Y3- TO END CONSTRUCTION LIMITS UP TO THE EXISTING EDGE AND ELEVATION. [TMP-11]

AWAY FROM TRAFFIC, CONSTRUCT -Y1- FROM -Y2- TO -Y3- UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE. [TMP-11]

PHASE IV

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK IN PHASE IV, STEP 1 FROM MONDAY 8:00 P.M TO THURSDAY 6:00 A.M. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 1) AWAY FROM TRAFFIC INSTALL PCB, TEMPORARY PAVEMENT MARKINGS, AND MARKERS ON I-40 EB AS MUCH AS POSSIBLE. THEN USING RSD 1101.02, REMOVE PCB ON PHASE II TEMPORARY ALIGNMENT AS NEEDED, MILL/WEDGE AS NEEDED I-40 EB, SHIFT TRAFFIC, AND INSTALL TEMPORARY PAVEMENT MARKINGS AND MARKERS, AND REMAINING PCB. [TMP-13 THRU 15]

STEP 2) BEHIND BARRIER COMPLETE THE FOLLOWING [TMP-13 THRU 15]:

- CONSTRUCT I-40 WB AS MUCH AS POSSIBLE UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE
- CONSTRUCT REMAINING MEDIAN WALL AND DRAINAGE

USING RSD 1101.02 AS NEEDED, WEDGE -Y1- CONSTRUCTED IN PHASE III AS NEEDED, INSTALL TEMPORARY PAVEMENT MARKINGS AND MARKERS, AND RE-OPEN -Y1- TO TRAFFIC. REMOVE DETOUR SIGNING AND PORTABLE SIGNALS. [TMP-14]

PHASE V

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK IN PHASE V, STEP 1 FROM MONDAY 8:00 P.M TO THURSDAY 6:00 A.M. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 1) AWAY FROM TRAFFIC INSTALL PCB, TEMPORARY PAVEMENT MARKINGS, AND MARKERS ON I-40 WB AS MUCH AS POSSIBLE. THEN USING RSD 1101.02, REMOVE PCB ON PHASE I TEMPORARY ALIGNMENT AS NEEDED, MILL/WEDGE AS NEEDED I-40 WB, SHIFT TRAFFIC, AND INSTALL TEMPORARY PAVEMENT MARKINGS AND MARKERS, AND REMAINING PCB. [TMP-16 THRU 18]

STEP 2) BEHIND BARRIER COMPLETE THE FOLLOWING [TMP-16 THRU 18]:

- CONSTRUCT REMAINING PORTIONS OF I-40 WB UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE
- REMOVE REMAINING PHASE I TEMPORARY ALIGNMENT

PHASE VI

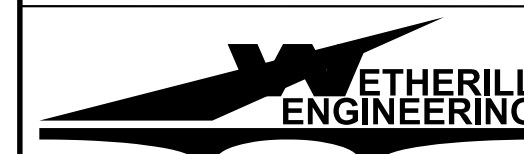
STEP 1) USING RSD 1101.02 ON I-40 AND ONE DIRECTION AT A TIME, COMPLETE THE FOLLOWING:

- REMOVE ALL PCB
- INSTALL THE FINAL LIFT OF SURFACE COURSE, FINAL PAVEMENT MARKINGS, AND MARKERS
- SHIFT TRAFFIC ONTO THE FINAL ALIGNMENT PATTERN

USING RSD 1101.02 ON ALL -Y- LINES, INSTALL THE FINAL LIFT OF SURFACE COURSE, FINAL PAVEMENT MARKINGS, AND MARKERS, AND RETURN TRAFFIC TO THE FINAL PATTERN.

STEP 2) REMOVE ANY REMAINING TRANSPORTATION MANAGEMENT DEVICES AND SIGNING INSTALLED DURING CONSTRUCTION.

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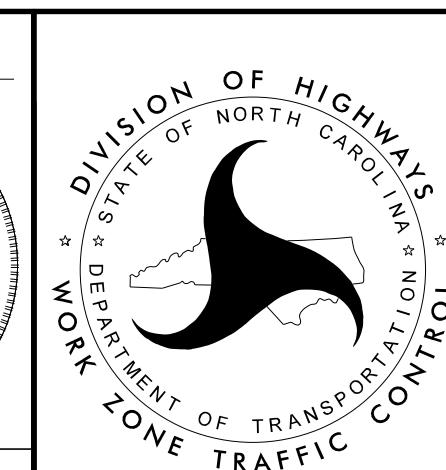
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
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DATE: 4/11/2024

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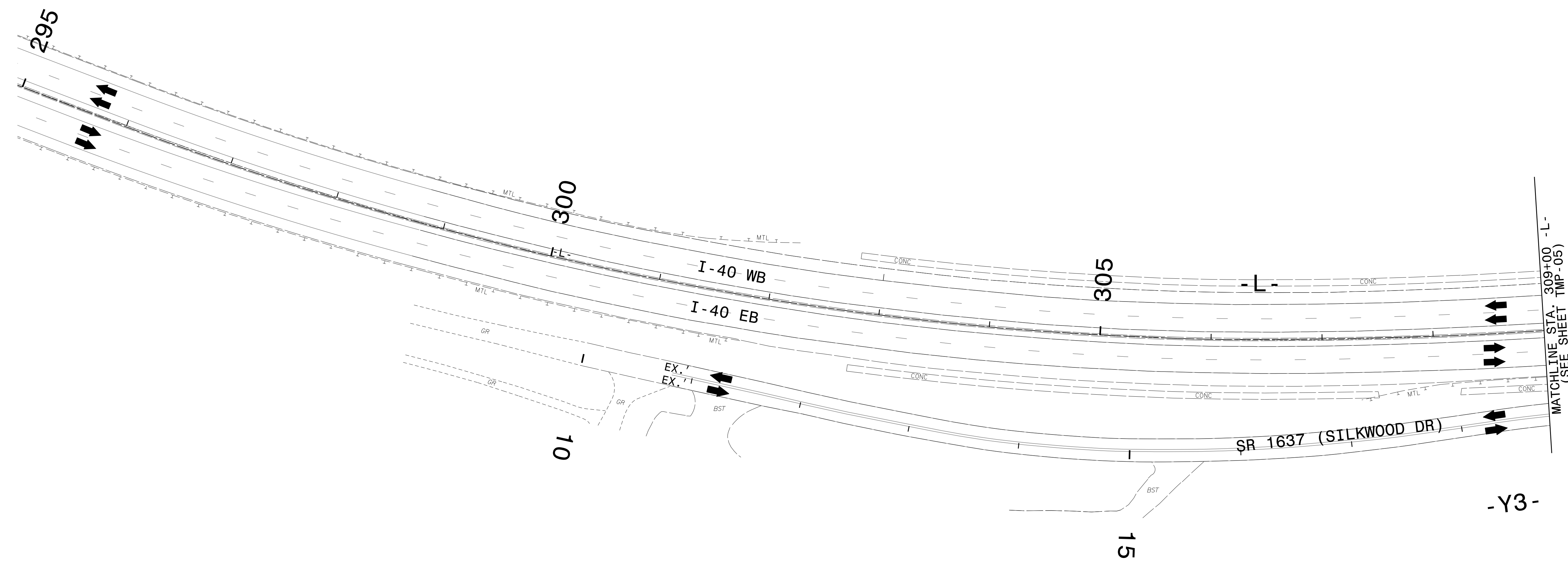
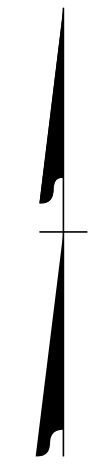
NORTH CAROLINA
PROFESSIONAL
SEAL
22999
ENGINEER
GREG S. PURVIS

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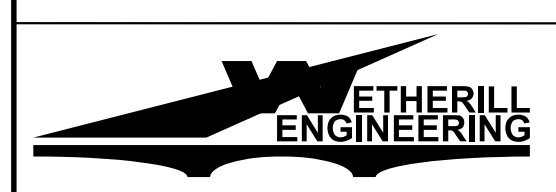
PHASING

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| PROJ. REFERENCE NO. | SHEET NO. |
| HB-0002 | TMP-04 |



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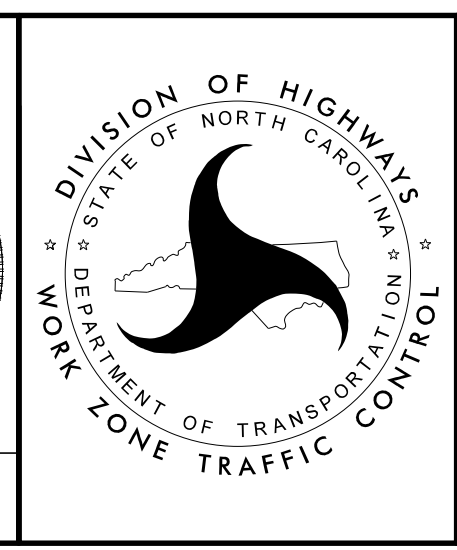
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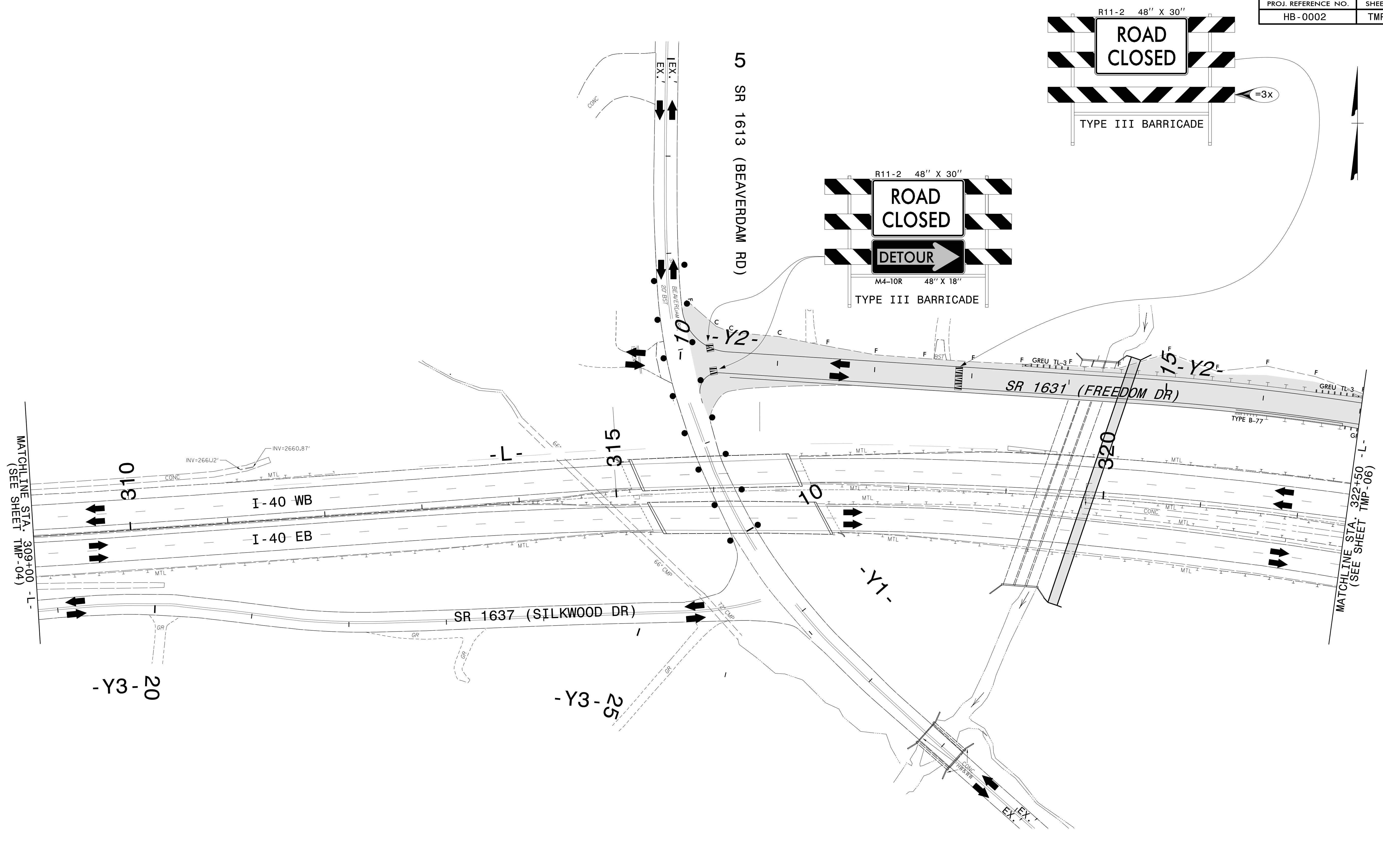
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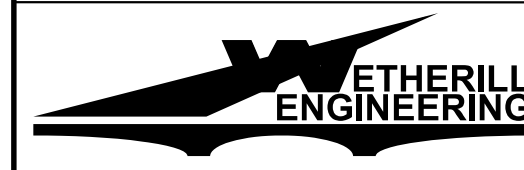


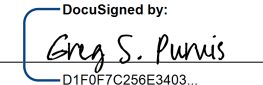

PHASE I, STEP 2 DETAIL

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| HB-0002 | TMP-05 |



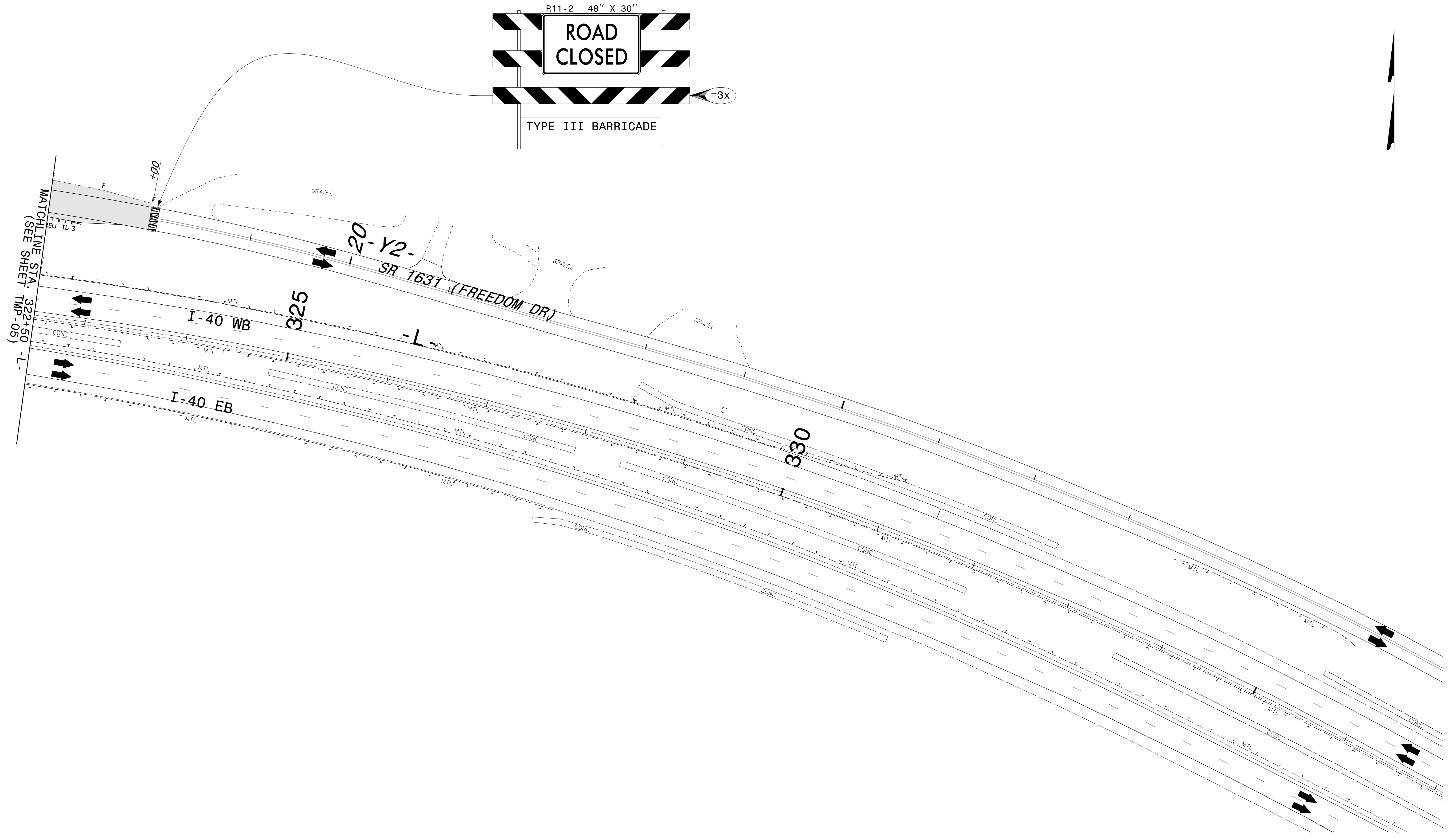
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PHASE I, STEP 2 DETAIL



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MATCHLINE STA. 322+50 -L- (SEE SHEET TMP-05)

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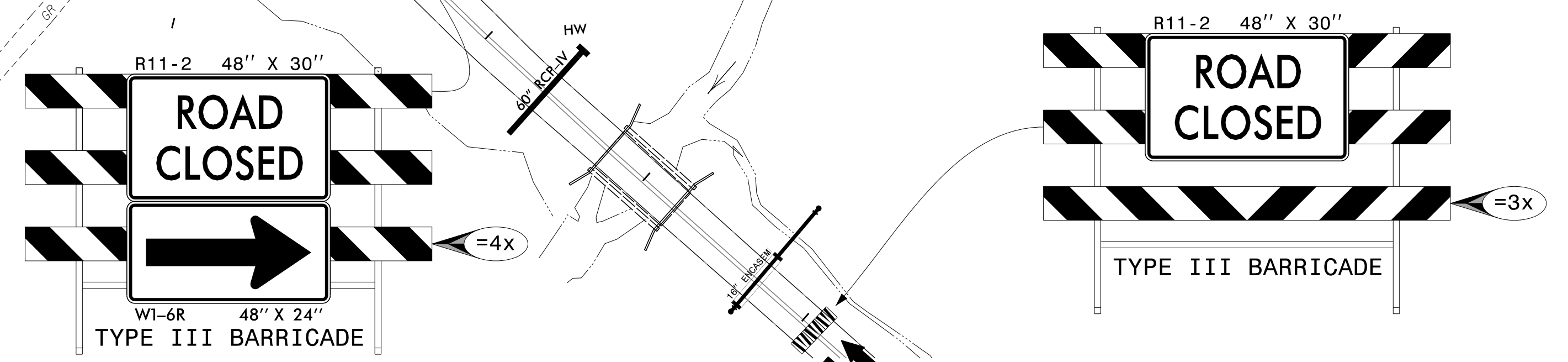
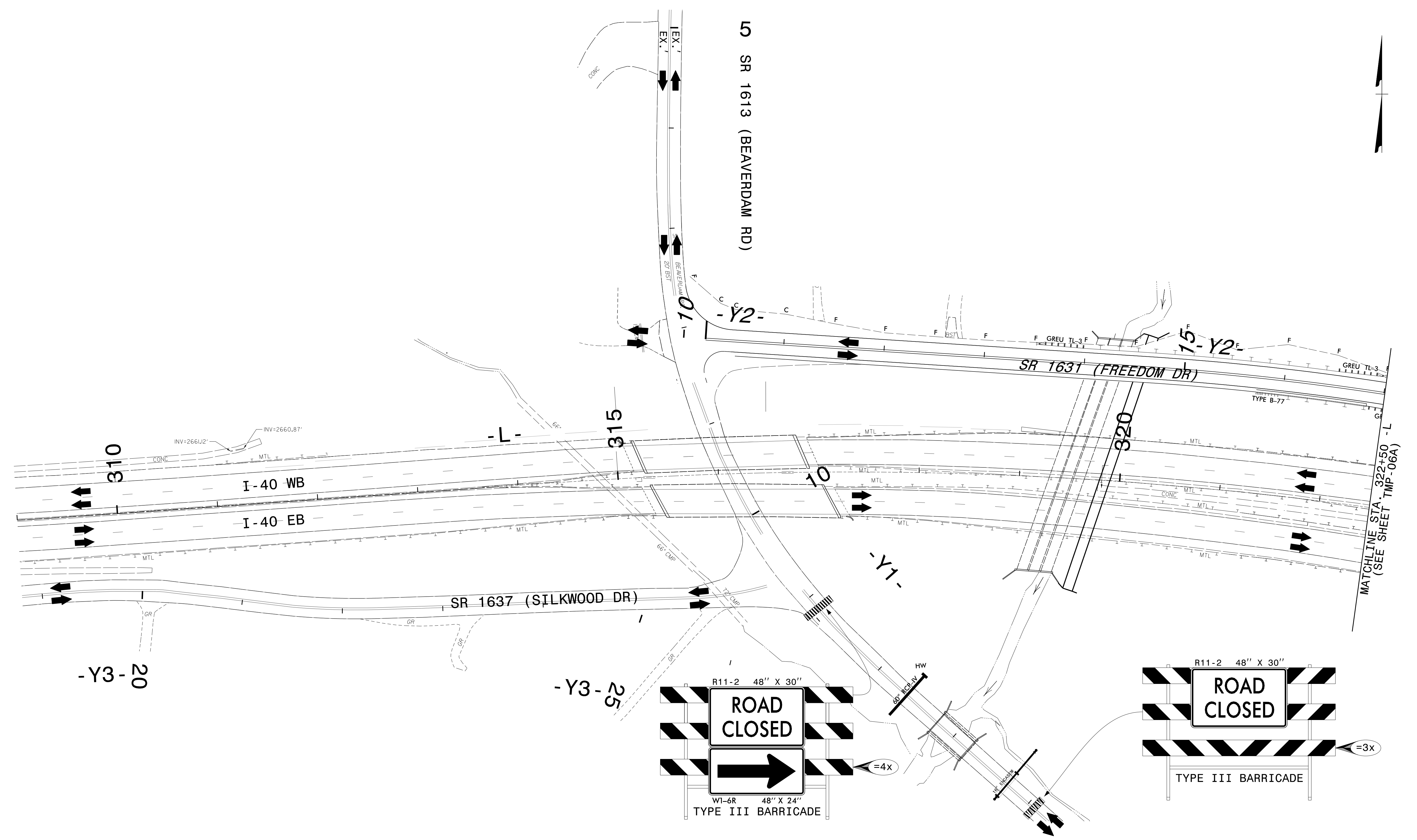
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Greg S. Purvis
D11F0FC256E3403

DATE: 3/26/2024

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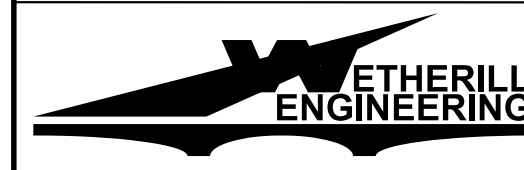


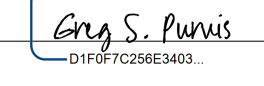
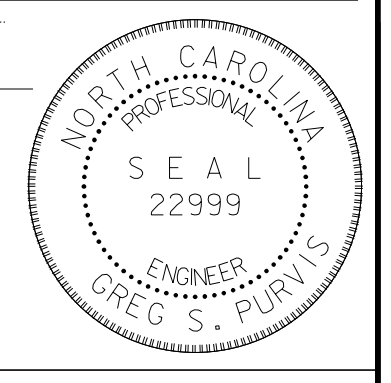
PHASE I, STEP 2 DETAIL

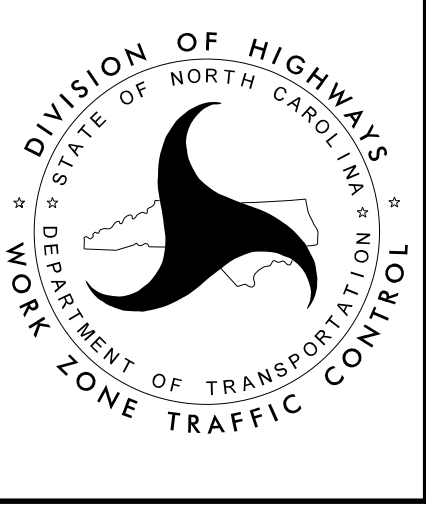


NOTES:
 1) SEE FINAL PAVEMENT MARKING PLAN FOR INFORMATION RELATED TO -Y2-.

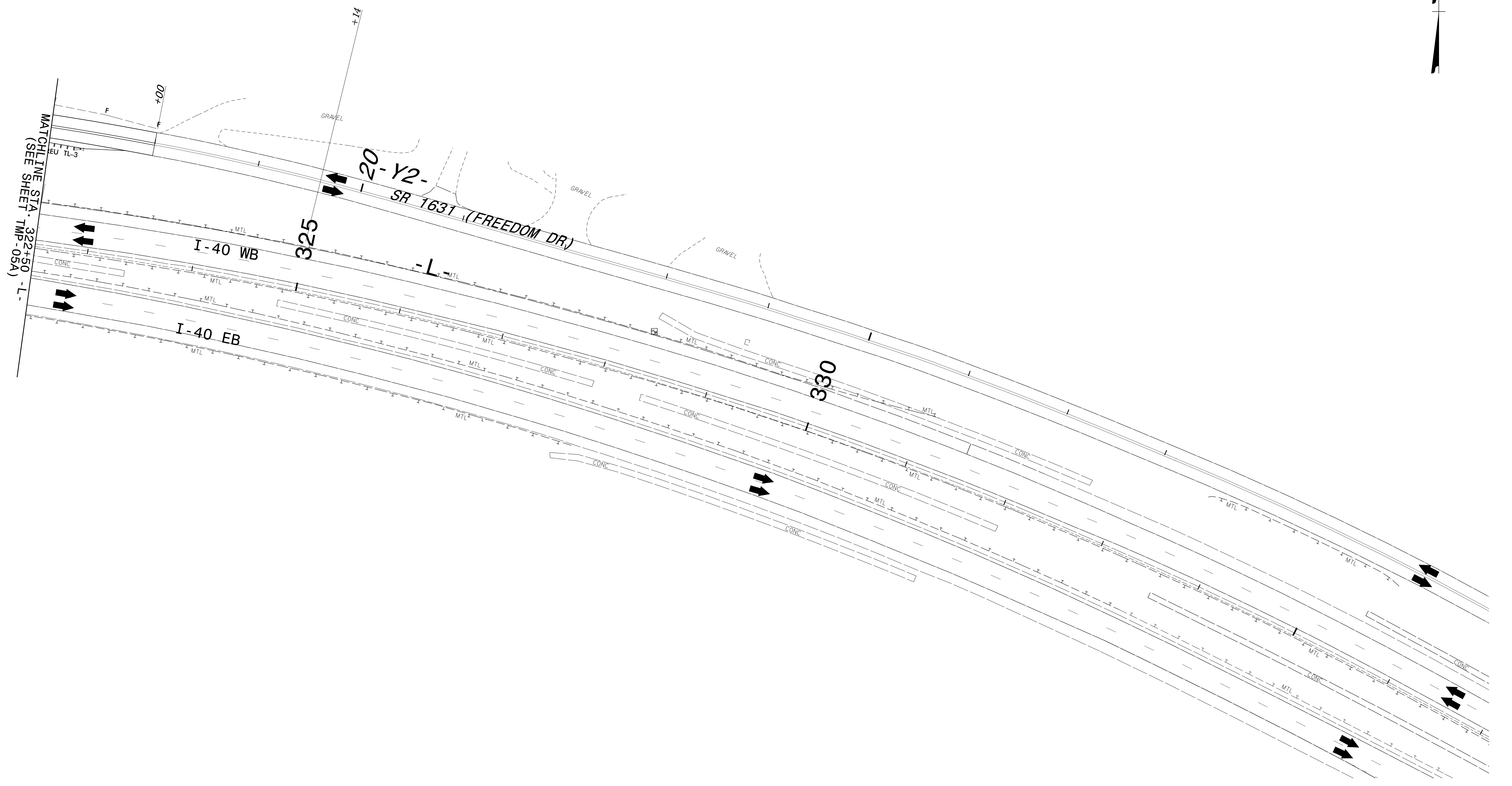
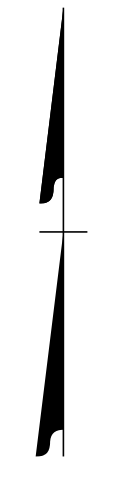
3/26/2024
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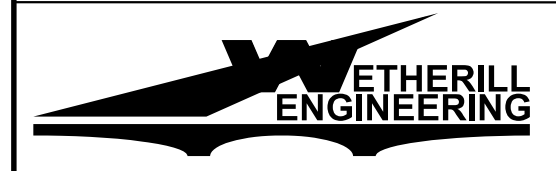
PHASE I, STEP 3 DETAIL



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NOTES:

- 1) SEE FINAL PAVEMENT MARKING PLAN FOR INFORMATION RELATED TO -Y2-.



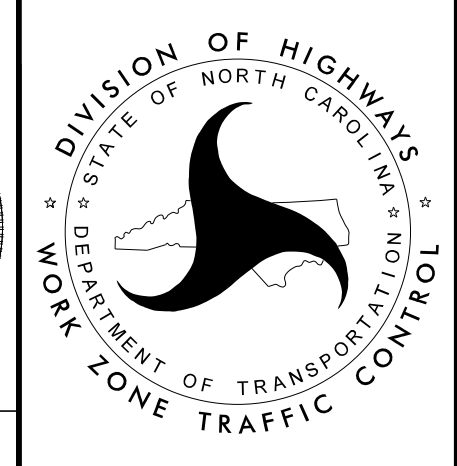
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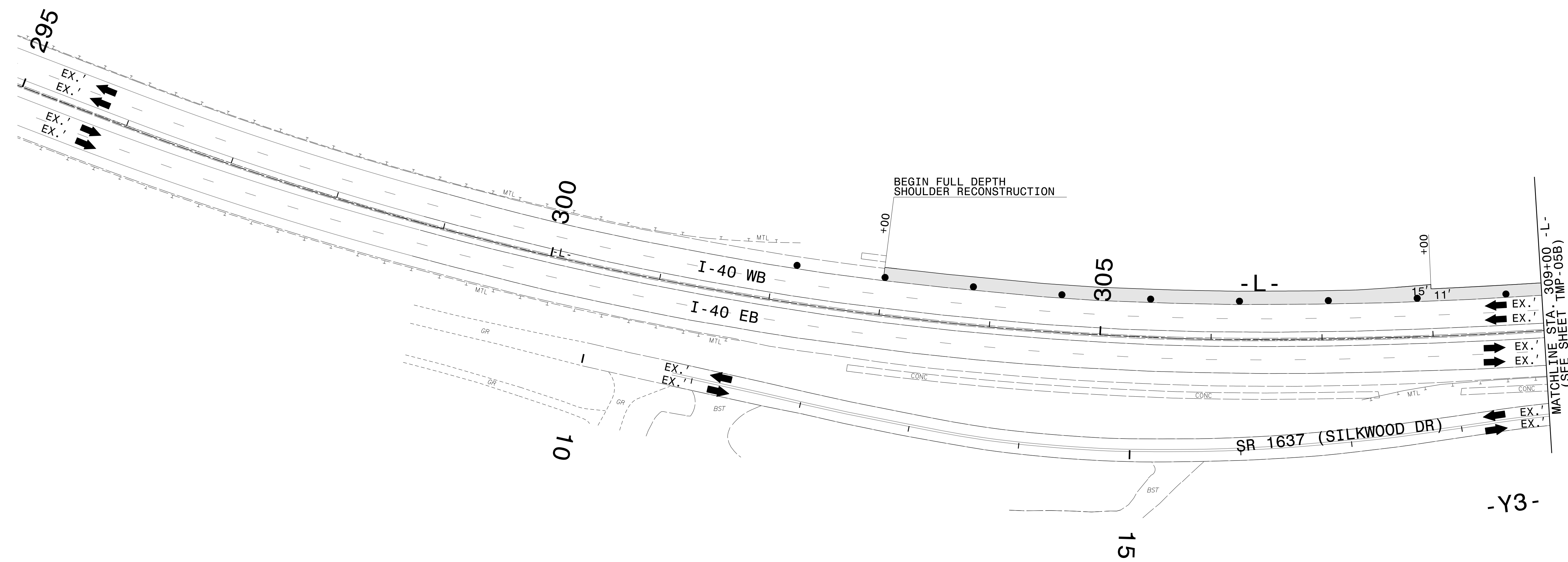
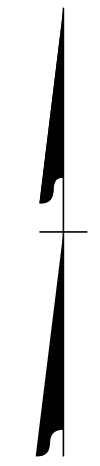


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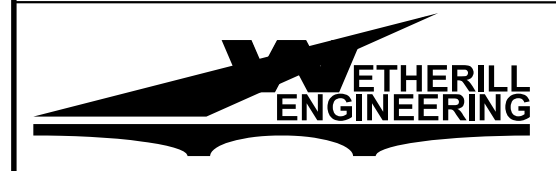
PHASE I, STEP 3 DETAIL

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| HB-0002 | TMP-04B |



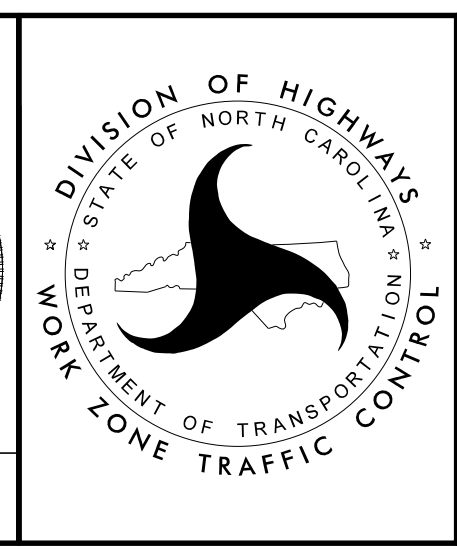
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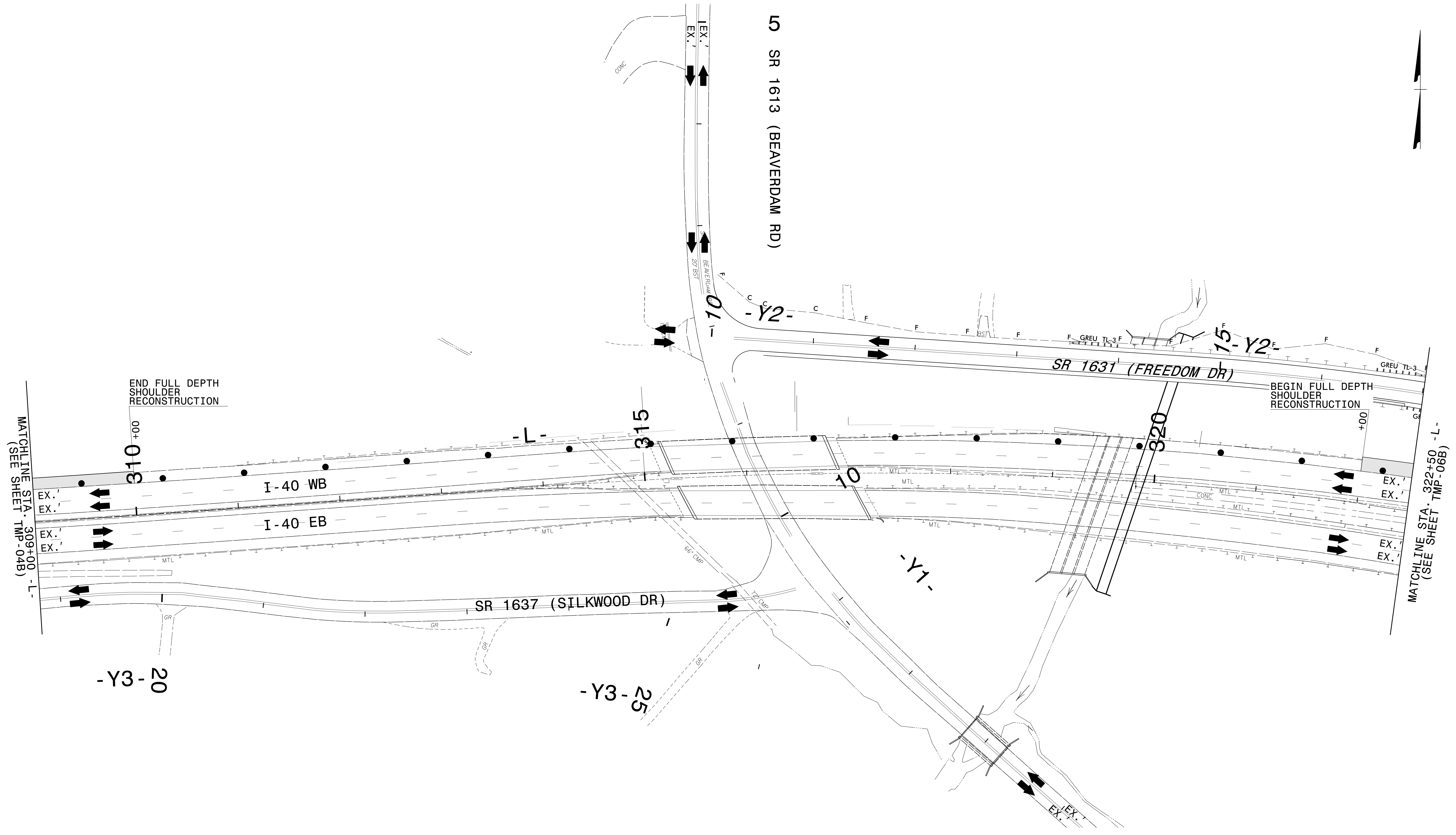
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
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| PROJ. REFERENCE NO. | SHEET NO. |
| HB-0002 | TMP-05B |

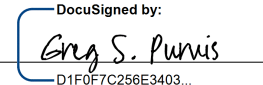


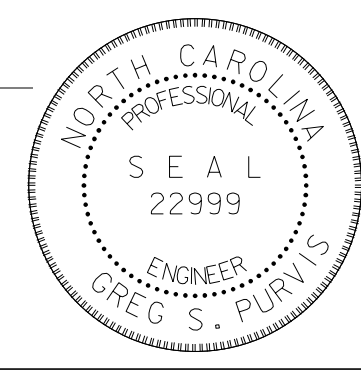
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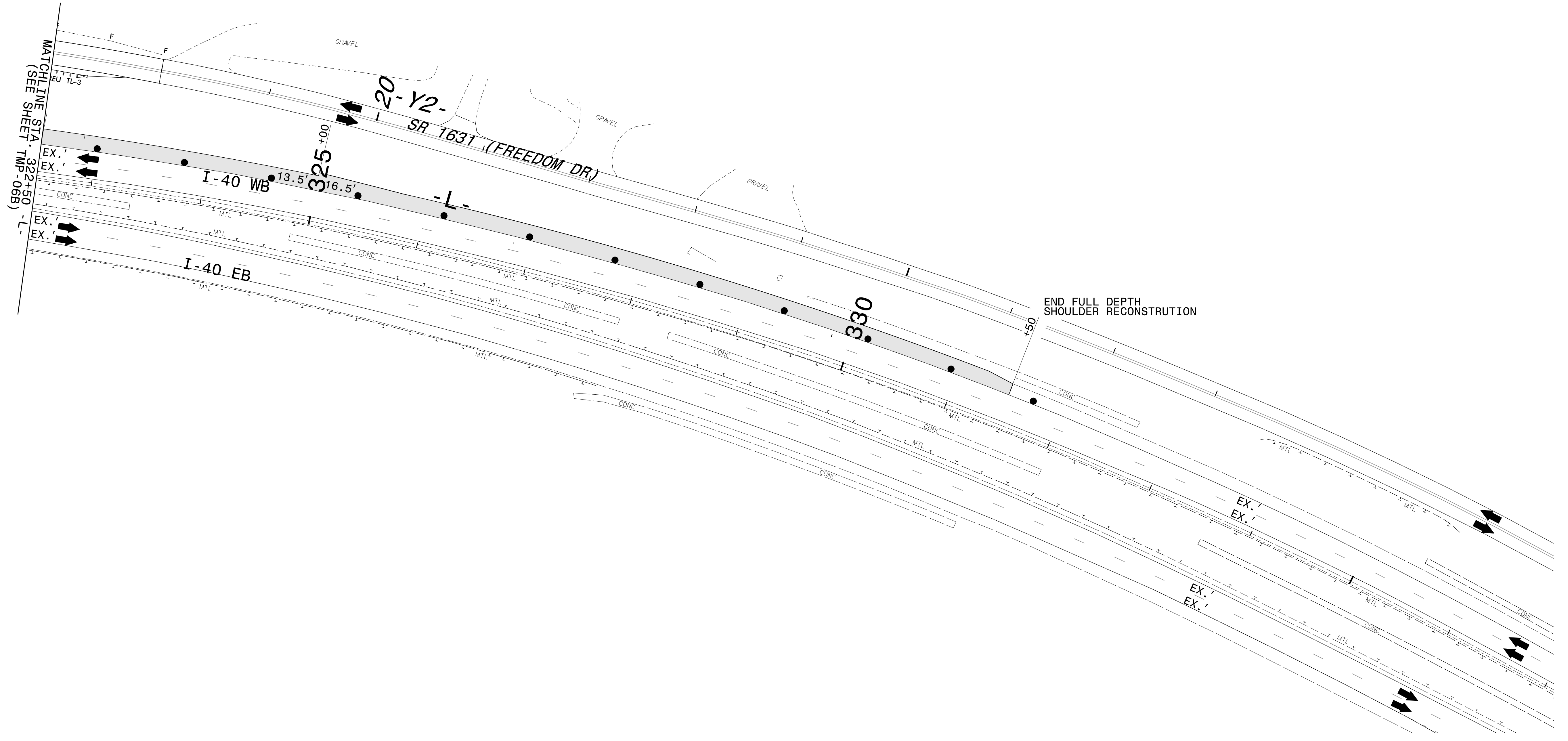
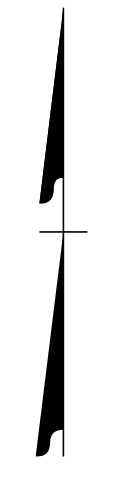
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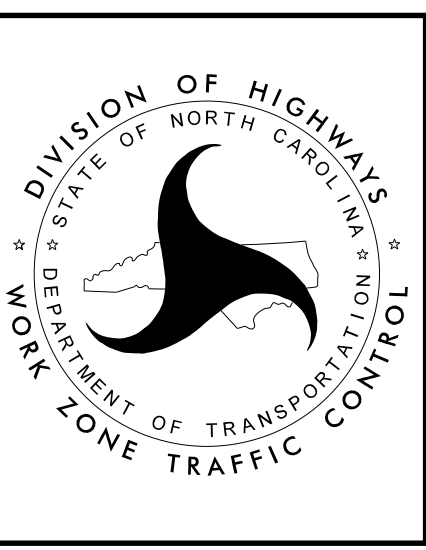
MATCHLINE STA. 322+50
 (SEE SHEET TMP-06B)

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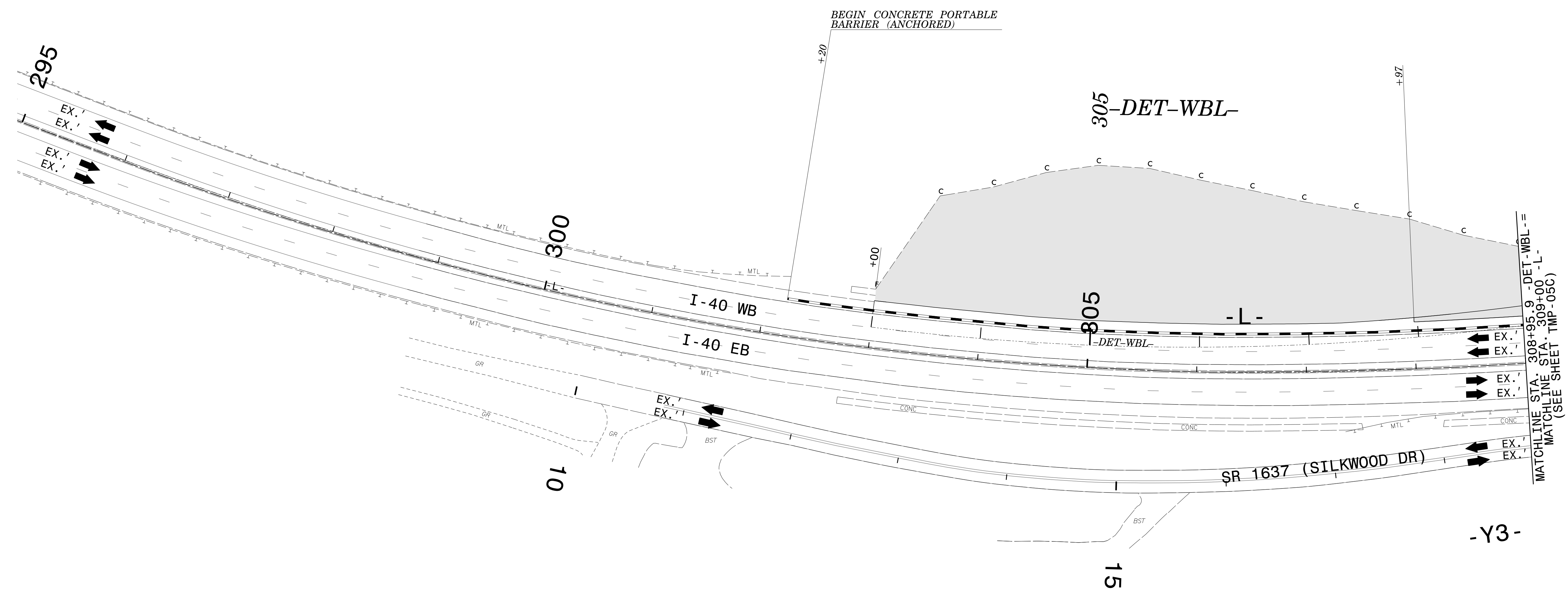
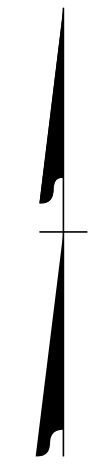
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DocuSigned by: Greg S. Purvis 01F07C256E3403
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PHASE I, STEP 4 DETAIL

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| PROJ. REFERENCE NO. | SHEET NO. |
| HB-0002 | TMP-04C |

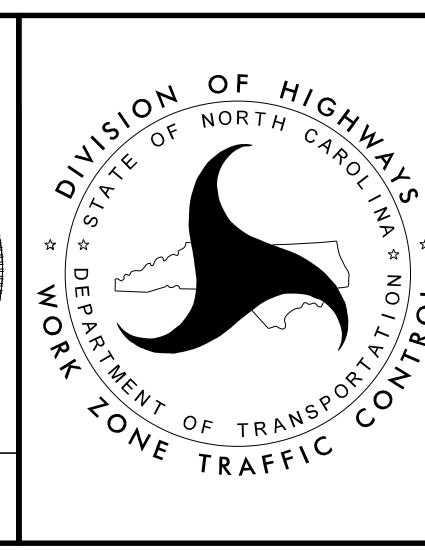


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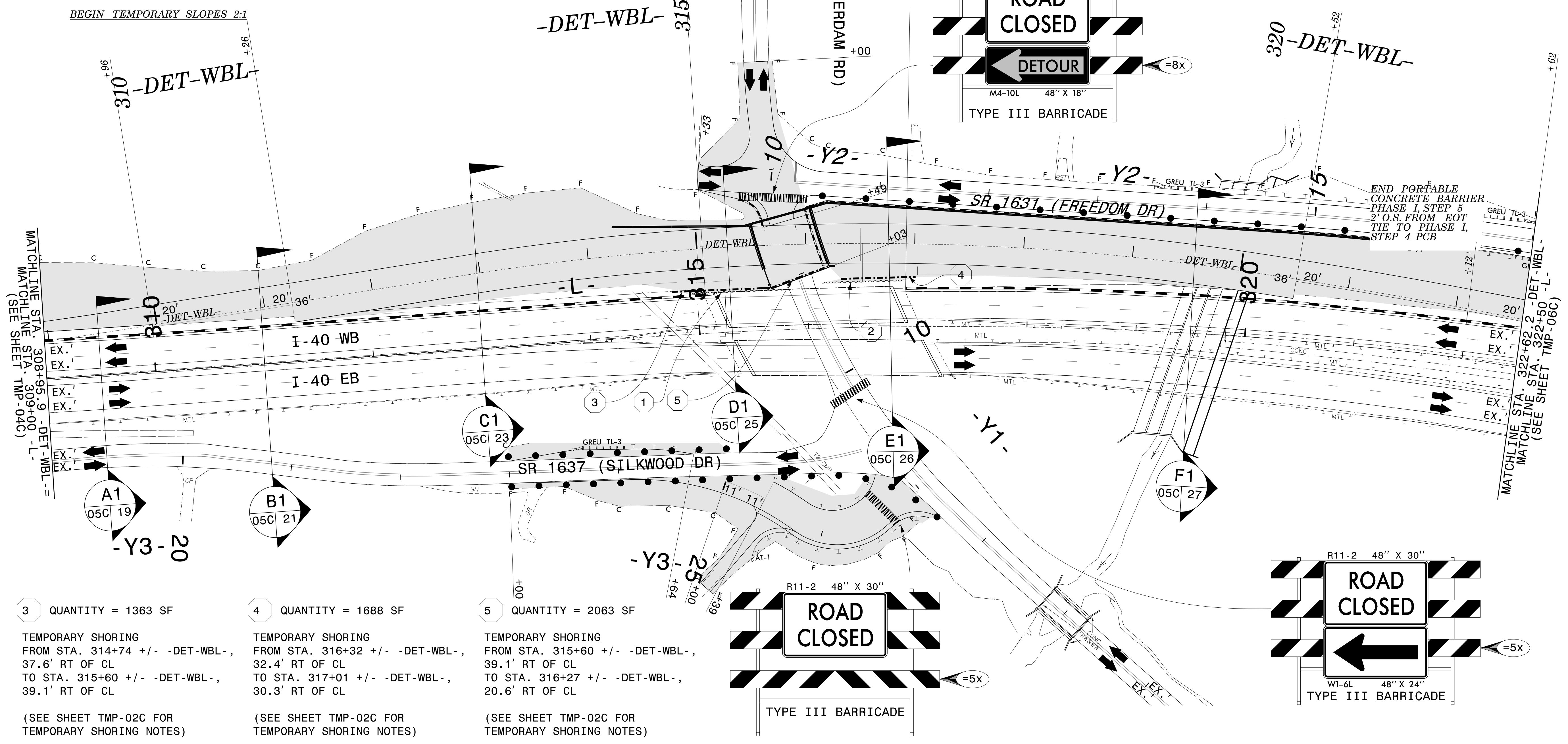
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PHASE I, STEP 5 DETAIL

| | |
|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 1 QUANTITY = 502 SF | 2 QUANTITY = 919 SF |
| TEMPORARY SHORING FROM STA. 314+88 +/- -DET-WBL-, 40' RT OF CL TO STA. 315+60 +/- -DET-WBL-, 39.1' RT OF CL | TEMPORARY SHORING FROM STA. 316+14 +/- -DET-WBL-, 35.7' RT OF CL TO STA. 316+90 +/- -DET-WBL-, 33.7' RT OF CL |
| (SEE SHEET TMP-02C FOR TEMPORARY SHORING NOTES) | (SEE SHEET TMP-02C FOR TEMPORARY SHORING NOTES) |



| | | |
|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 3 QUANTITY = 1363 SF | 4 QUANTITY = 1688 SF | 5 QUANTITY = 2063 SF |
| TEMPORARY SHORING FROM STA. 314+74 +/- -DET-WBL-, 37.6' RT OF CL TO STA. 315+60 +/- -DET-WBL-, 39.1' RT OF CL | TEMPORARY SHORING FROM STA. 316+32 +/- -DET-WBL-, 32.4' RT OF CL TO STA. 317+01 +/- -DET-WBL-, 30.3' RT OF CL | TEMPORARY SHORING FROM STA. 315+60 +/- -DET-WBL-, 39.1' RT OF CL TO STA. 316+27 +/- -DET-WBL-, 20.6' RT OF CL |
| (SEE SHEET TMP-02C FOR TEMPORARY SHORING NOTES) | (SEE SHEET TMP-02C FOR TEMPORARY SHORING NOTES) | (SEE SHEET TMP-02C FOR TEMPORARY SHORING NOTES) |

NOTES:
 1) SEE FINAL PAVEMENT MARKING PLAN FOR INFORMATION RELATED TO -Y2-.
 2) ALL DATA INCLUDING STATIONS, OFFSETS, ETC. HAVE BEEN DETERMINED BY THE NCDOT GEOTECHNICAL UNIT.

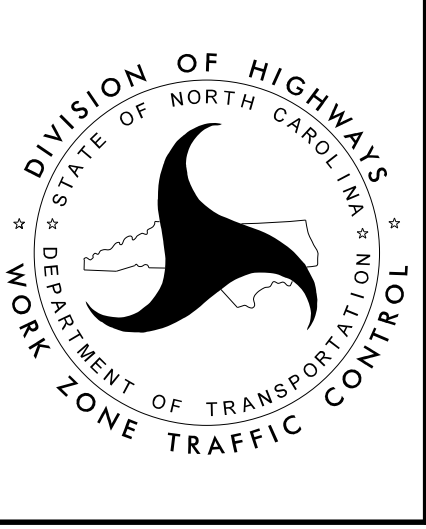
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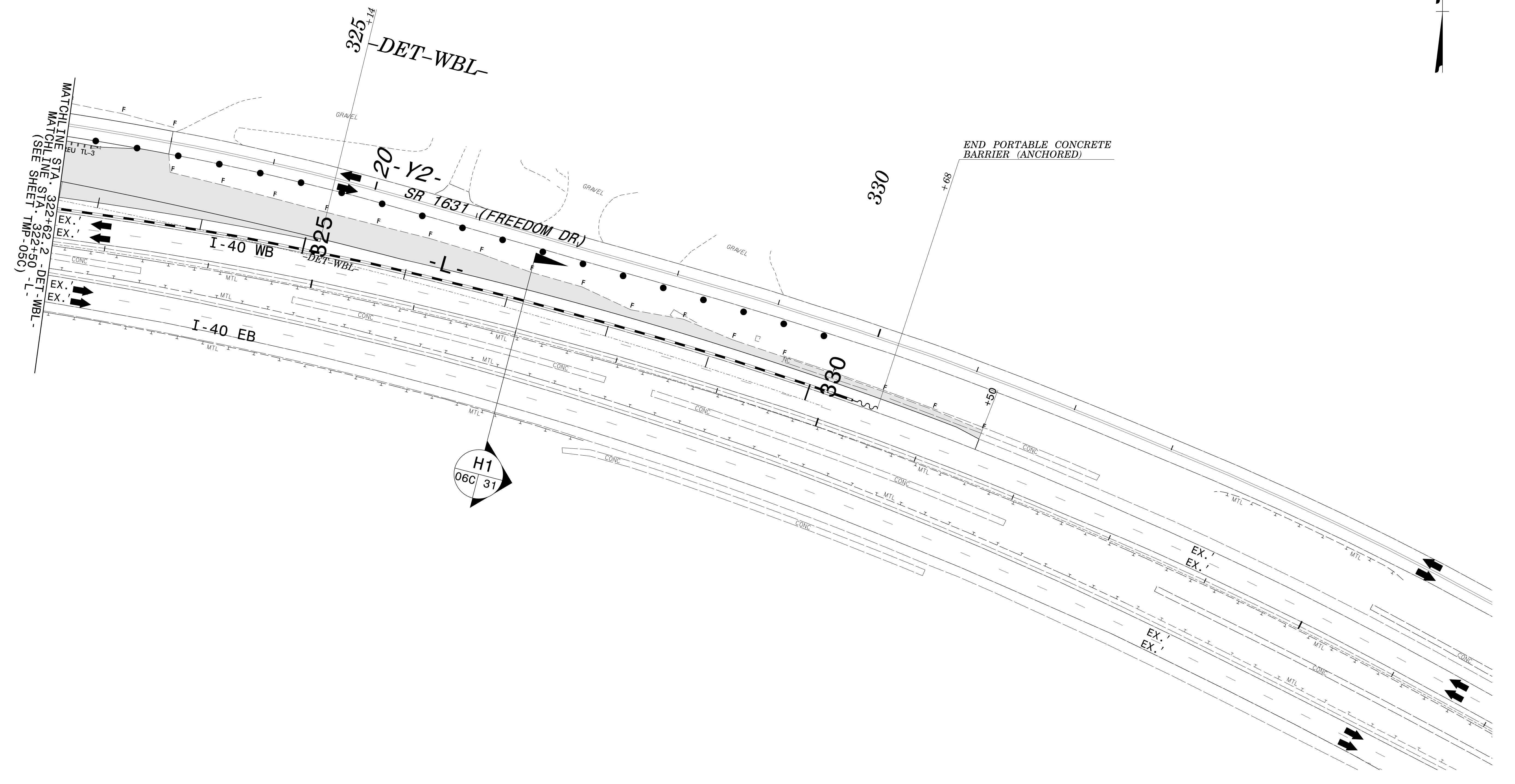
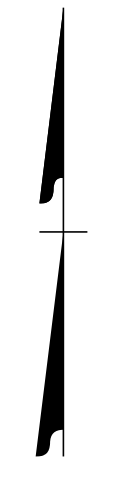
NORTH CAROLINA PROFESSIONAL SEAL
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PHASE I, STEP 5 DETAIL

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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

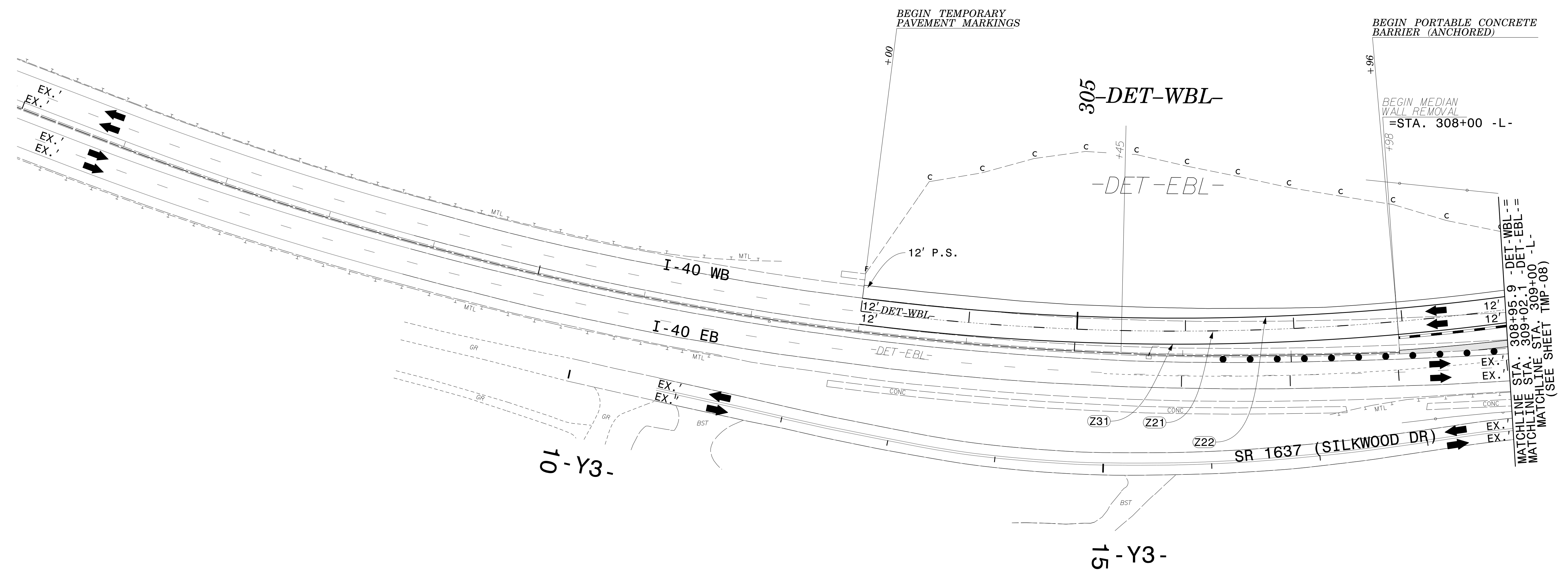
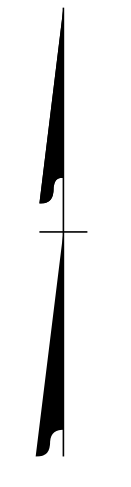
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PHASE I, STEP 5 DETAIL

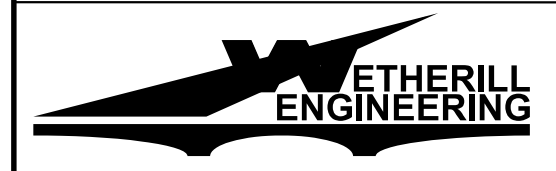
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| PROJ. REFERENCE NO. | SHEET NO. |
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3/26/2024
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MATCHLINE STA. 308+95.9 -DET-WBL-
 MATCHLINE STA. 309+02.1 -DET-EBL-
 MATCHLINE STA. 309+00 -L-
 (SEE SHEET TMP-08)

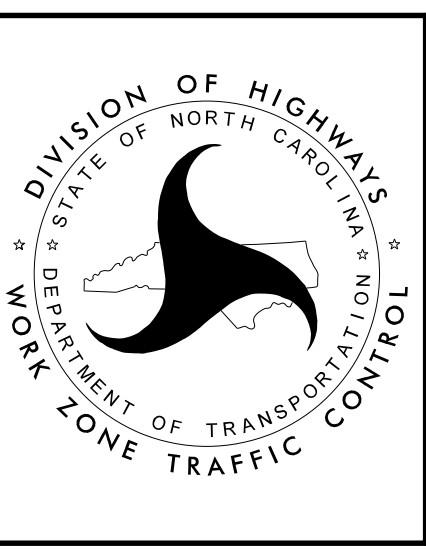
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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

APPROVED: *Greg S. Purvis*
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PHASE II DETAIL

6 QUANTITY = 502 SF
 TEMPORARY SHORING
 FROM STA. 315+12 +/- -DET-EBL-,
 45.5' RT OF CL
 TO STA. 316+01 +/- -DET-EBL-,
 48.2' RT OF CL

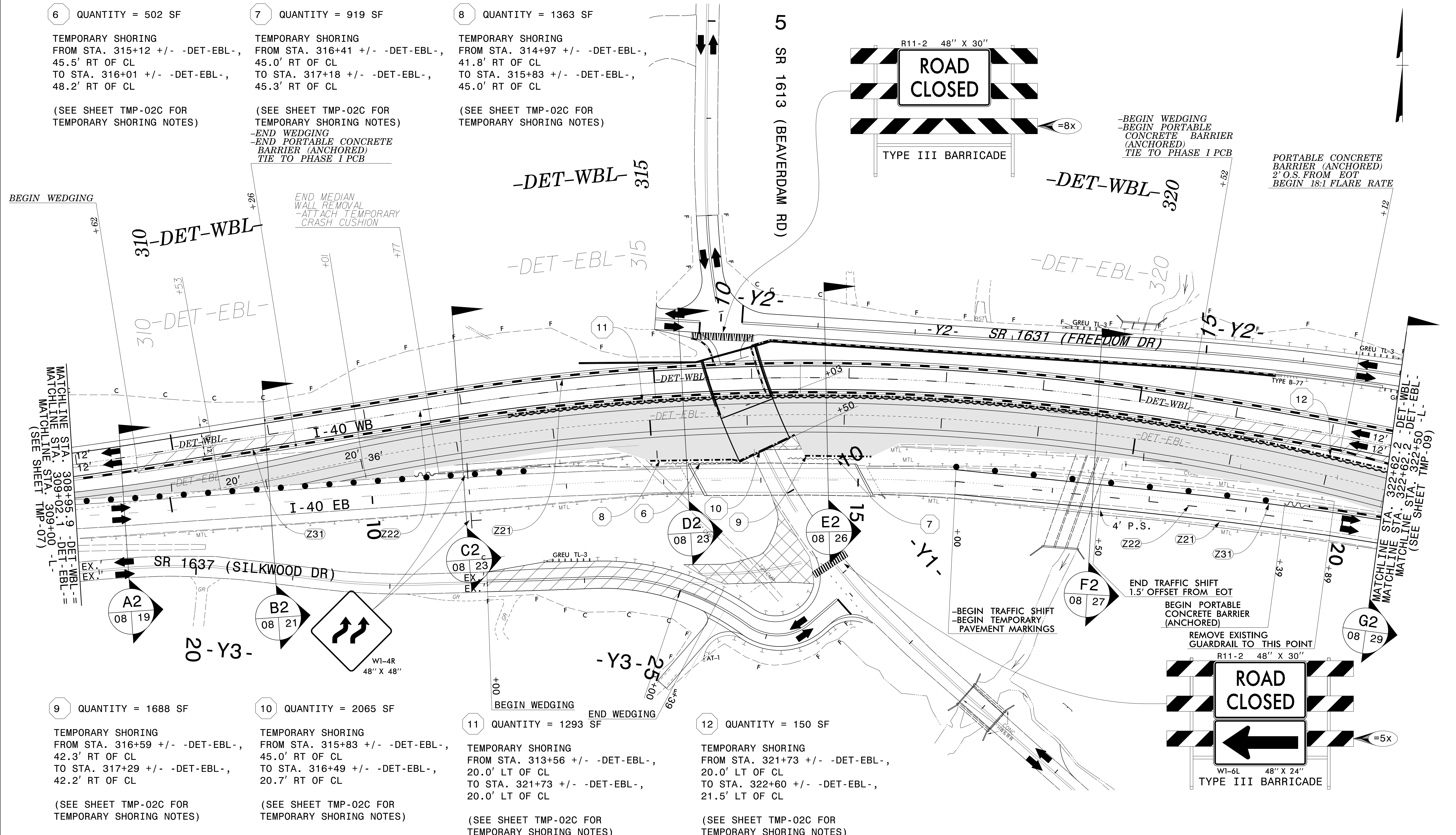
(SEE SHEET TMP-02C FOR
 TEMPORARY SHORING NOTES)

7 QUANTITY = 919 SF
 TEMPORARY SHORING
 FROM STA. 316+41 +/- -DET-EBL-,
 45.0' RT OF CL
 TO STA. 317+18 +/- -DET-EBL-,
 45.3' RT OF CL

(SEE SHEET TMP-02C FOR
 TEMPORARY SHORING NOTES)

8 QUANTITY = 1363 SF
 TEMPORARY SHORING
 FROM STA. 314+97 +/- -DET-EBL-,
 41.8' RT OF CL
 TO STA. 315+83 +/- -DET-EBL-,
 45.0' RT OF CL

(SEE SHEET TMP-02C FOR
 TEMPORARY SHORING NOTES)



9 QUANTITY = 1688 SF
 TEMPORARY SHORING
 FROM STA. 316+59 +/- -DET-EBL-,
 42.3' RT OF CL
 TO STA. 317+29 +/- -DET-EBL-,
 42.2' RT OF CL

(SEE SHEET TMP-02C FOR
 TEMPORARY SHORING NOTES)

10 QUANTITY = 2065 SF
 TEMPORARY SHORING
 FROM STA. 315+83 +/- -DET-EBL-,
 45.0' RT OF CL
 TO STA. 316+49 +/- -DET-EBL-,
 20.7' RT OF CL

(SEE SHEET TMP-02C FOR
 TEMPORARY SHORING NOTES)

11 QUANTITY = 1293 SF
 TEMPORARY SHORING
 FROM STA. 313+56 +/- -DET-EBL-,
 20.0' LT OF CL
 TO STA. 321+73 +/- -DET-EBL-,
 20.0' LT OF CL

(SEE SHEET TMP-02C FOR
 TEMPORARY SHORING NOTES)

12 QUANTITY = 150 SF
 TEMPORARY SHORING
 FROM STA. 321+73 +/- -DET-EBL-,
 20.0' LT OF CL
 TO STA. 322+60 +/- -DET-EBL-,
 21.5' LT OF CL

(SEE SHEET TMP-02C FOR
 TEMPORARY SHORING NOTES)

- NOTES:
- SEE FINAL PAVEMENT MARKING PLAN FOR INFORMATION RELATED TO -Y1-, -Y2-, AND -Y3-.
 - ALL DATA INCLUDING STATIONS, OFFSETS, ETC. HAVE BEEN DETERMINED BY THE NCDOT GEOTECHNICAL UNIT.

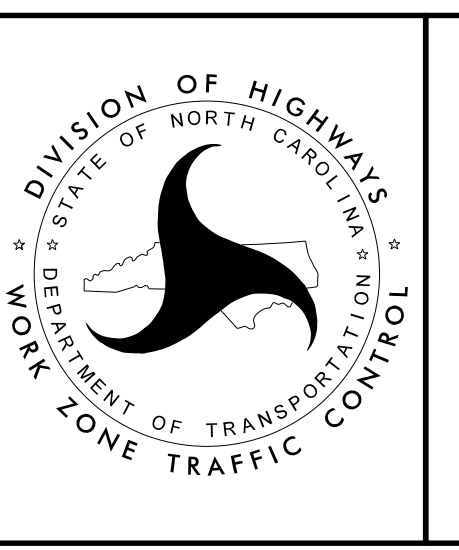
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APPROVED: *Greg S. Purvis*
 DATE: 5/13/2024

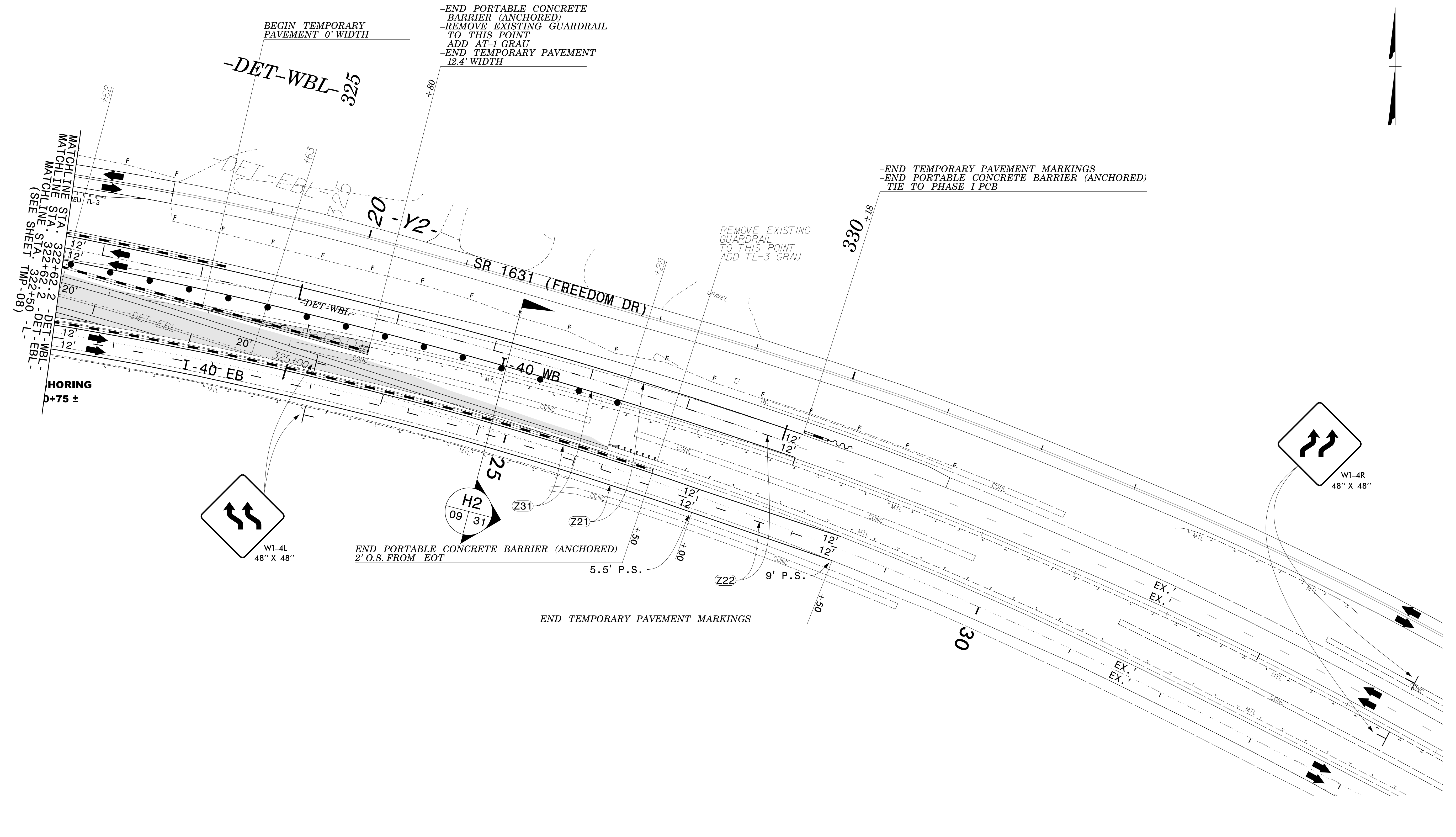
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PHASE II DETAIL

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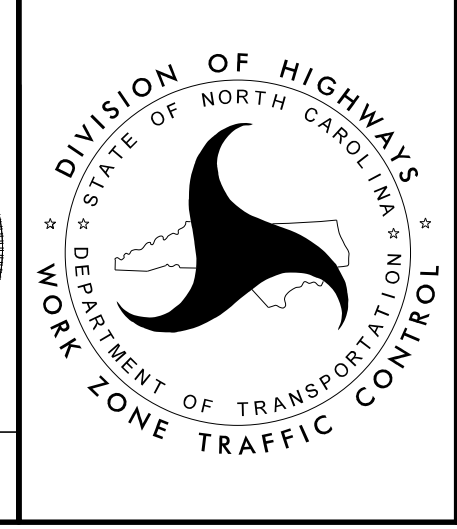
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NOTE: SEE FINAL PAVEMENT MARKING PLAN FOR INFORMATION RELATED TO -Y3-.

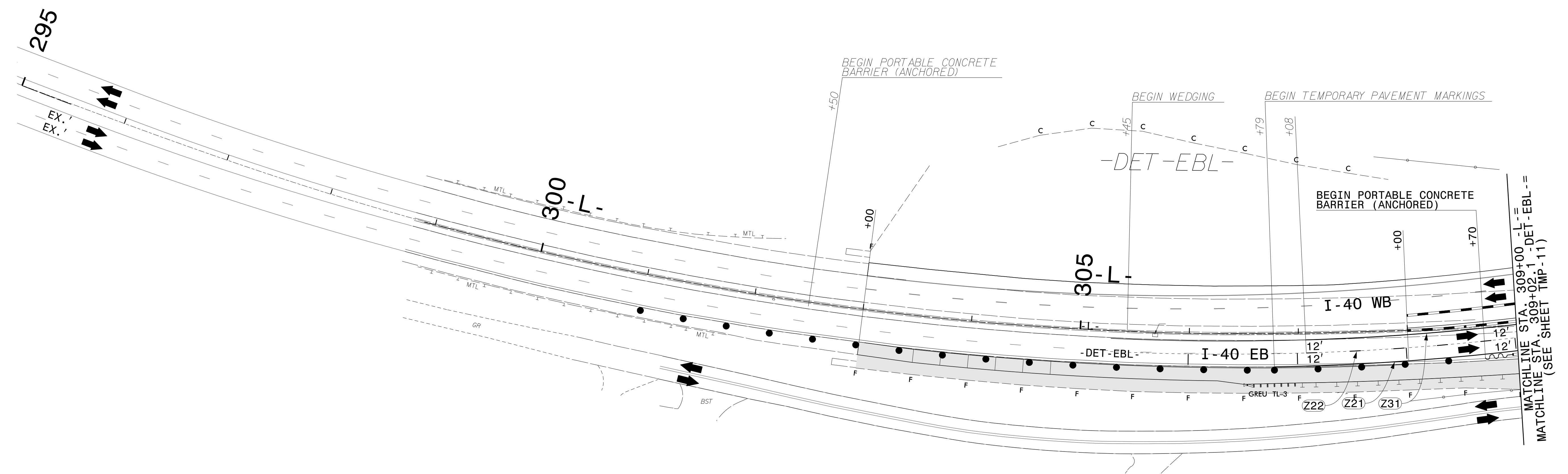
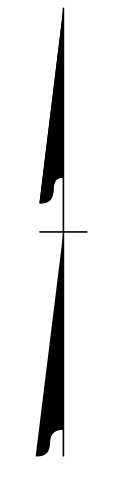
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APPROVED:
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PHASE II DETAIL



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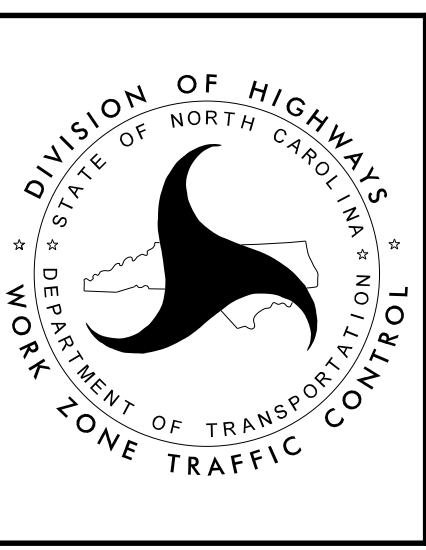
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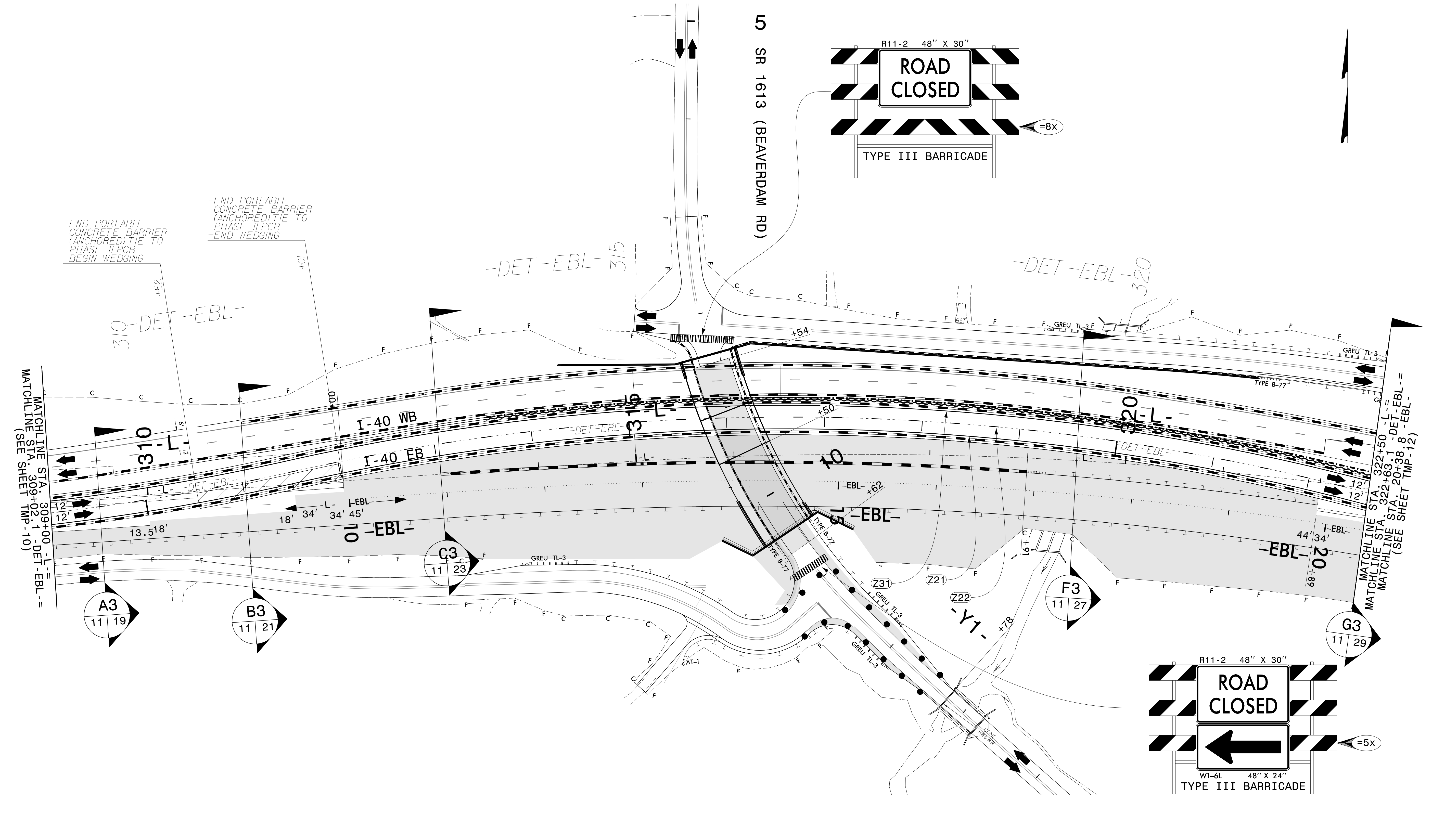
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D1F07C25E3403

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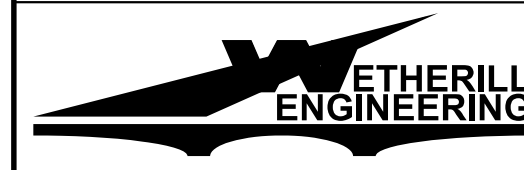
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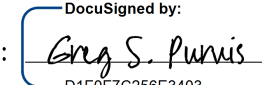
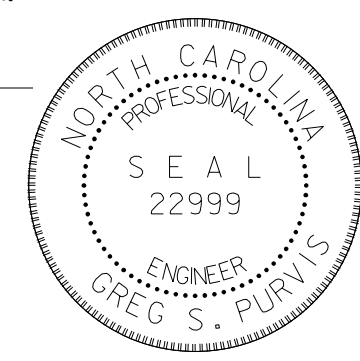


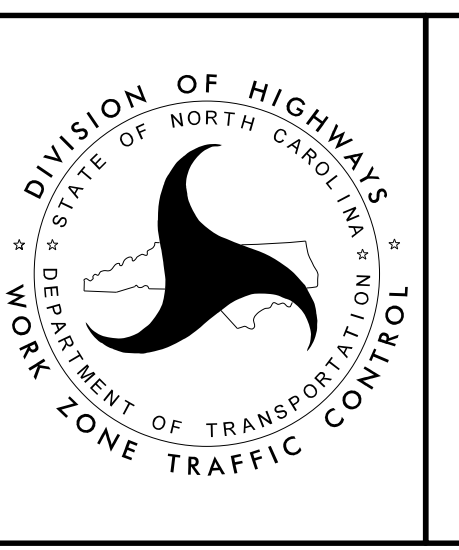
PHASE III DETAIL



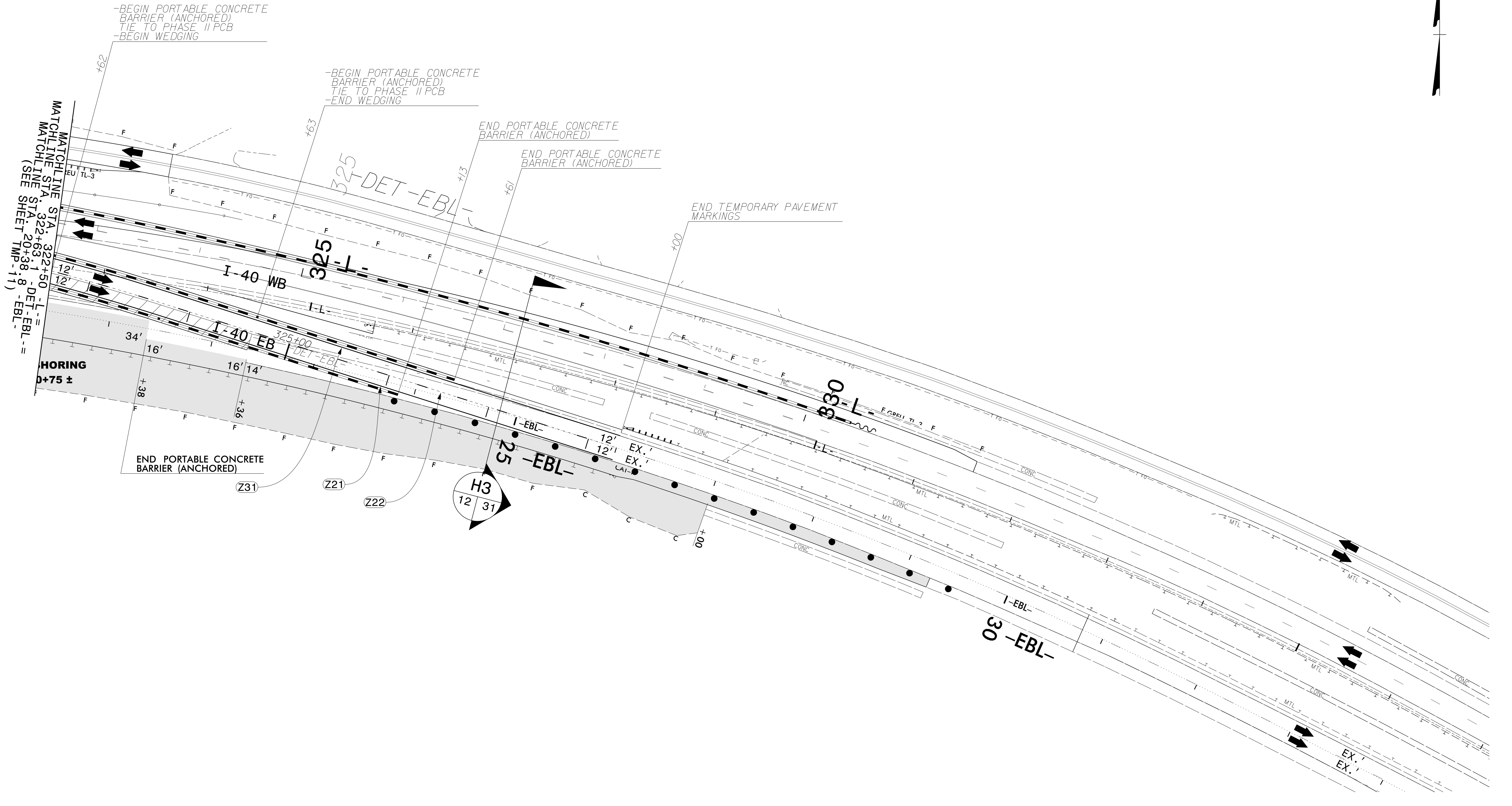
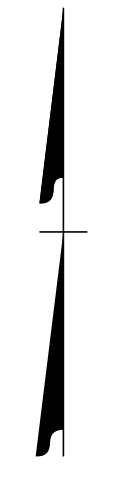
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 User: AHayes


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 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

Approved by: 
 DATE: 5/13/2024

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PHASE III DETAIL



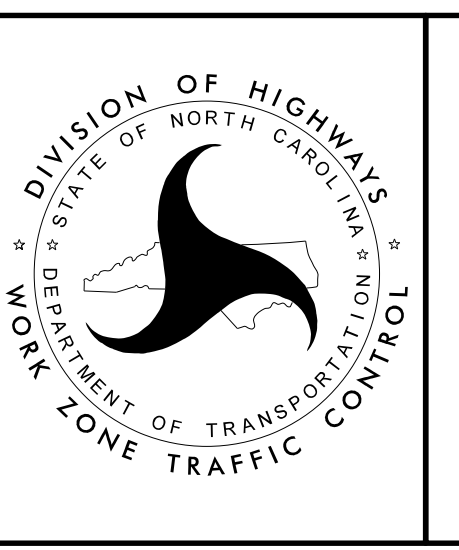
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Fax: 919 851 8107

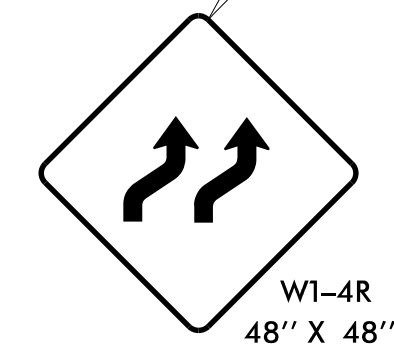
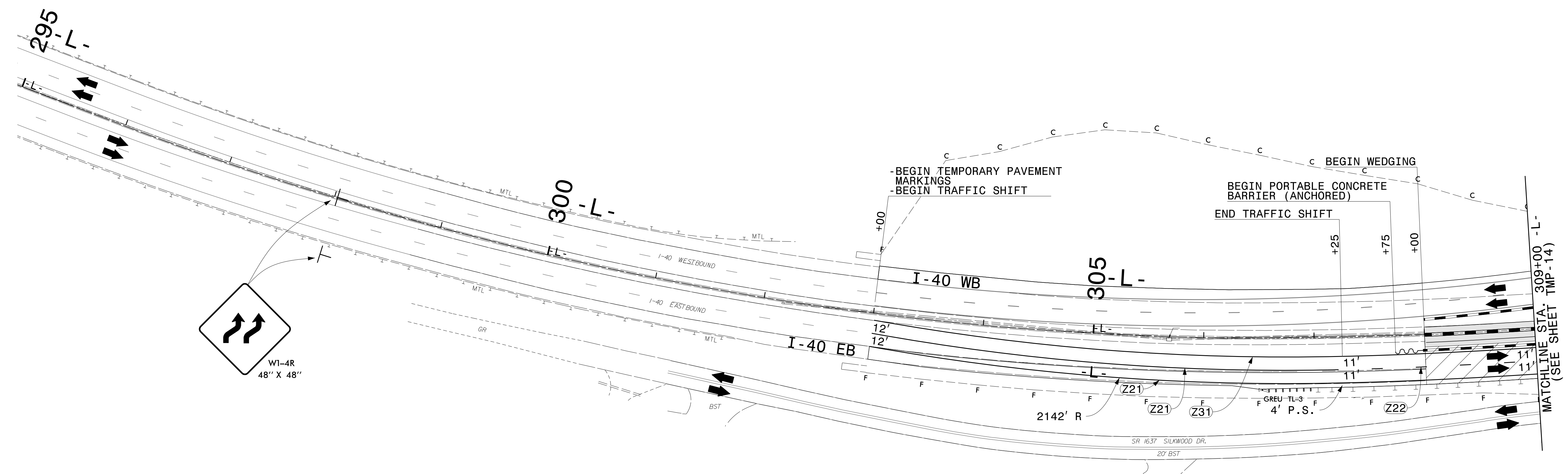
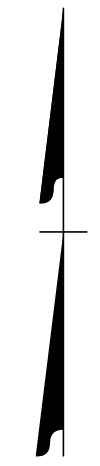
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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

APPROVED:
DATE: 3/26/2024

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PHASE III DETAIL



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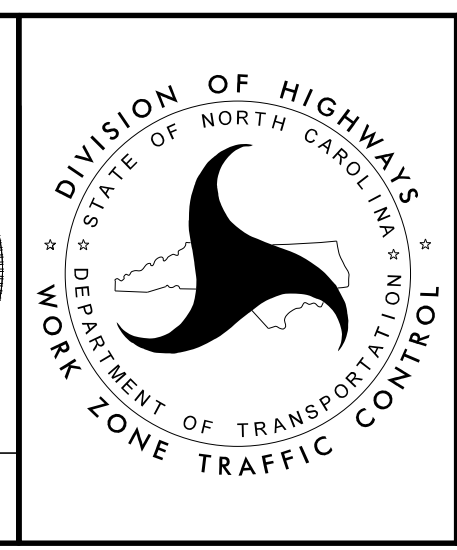
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1223 Jones Franklin Rd.
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 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

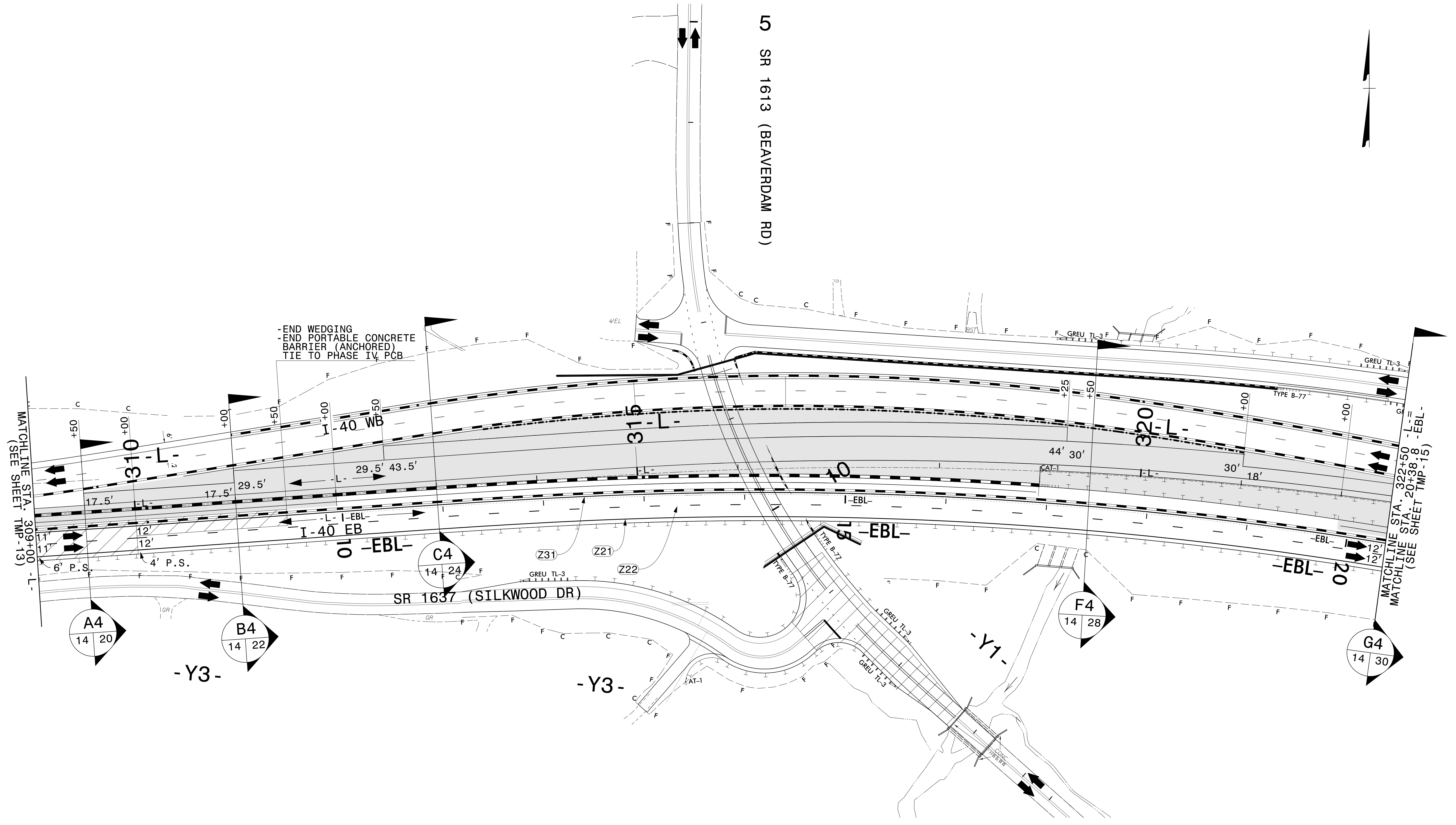
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APPROVED:
 DATE: 3/26/2024

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NOTE: SEE FINAL PAVEMENT MARKING PLAN FOR INFORMATION RELATED TO -Y1- AND -Y3-.

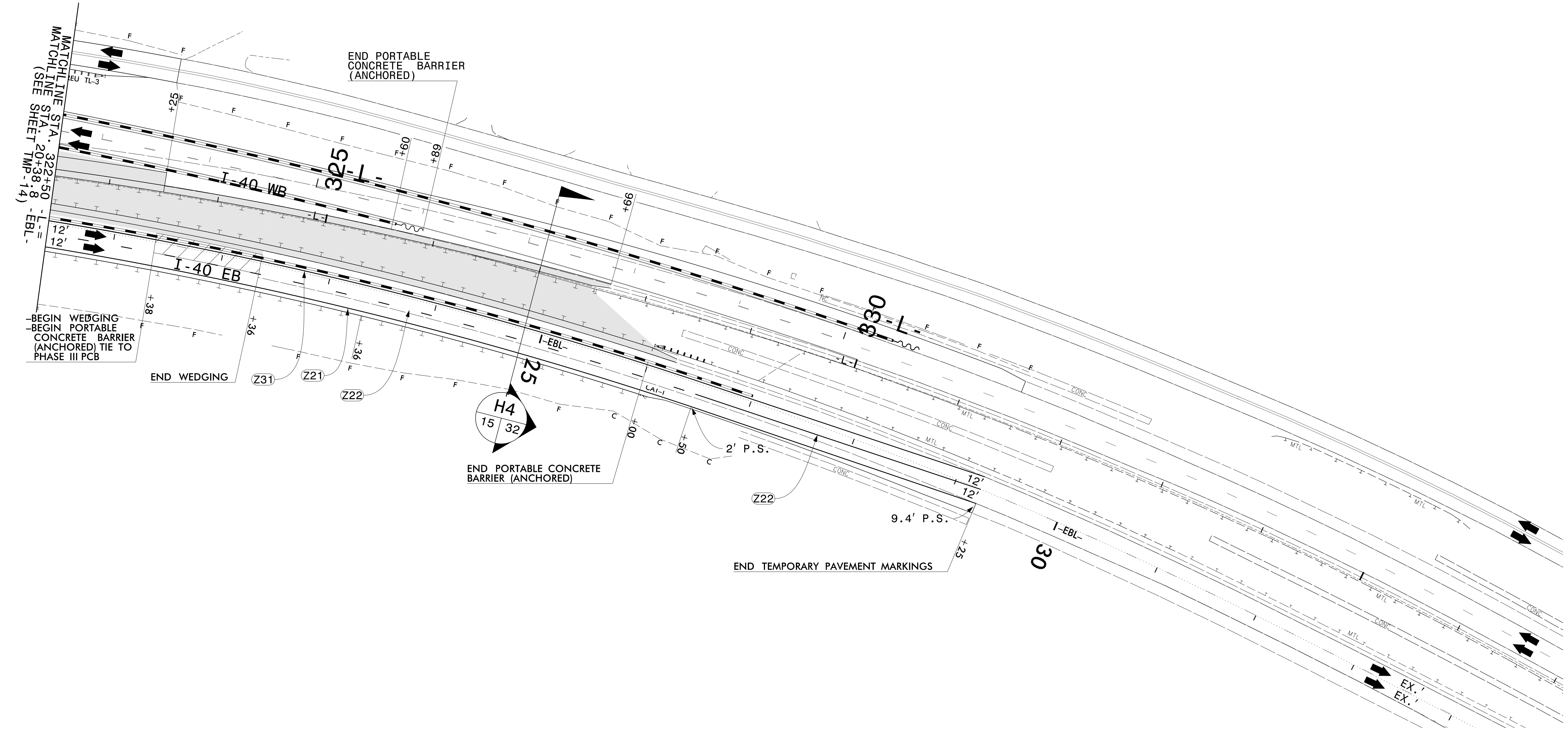
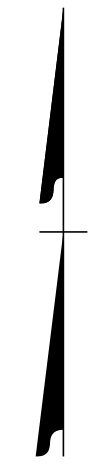
WETHERILL ENGINEERING
 1223 Jones Franklin Rd.
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 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107
 TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

APPROVED:
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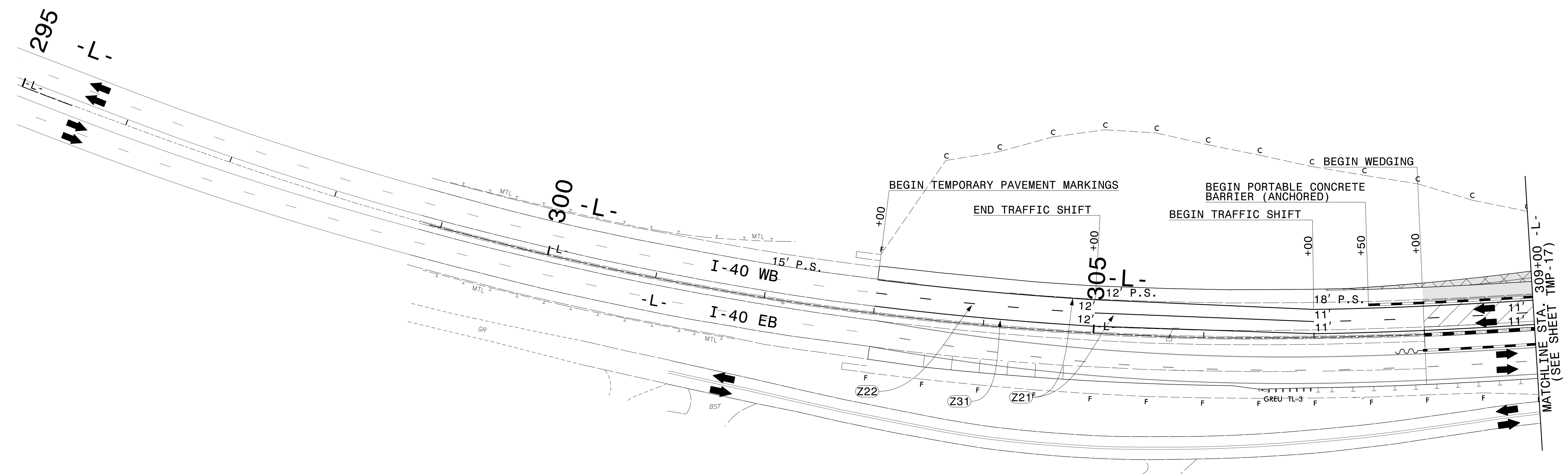
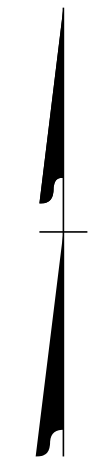
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 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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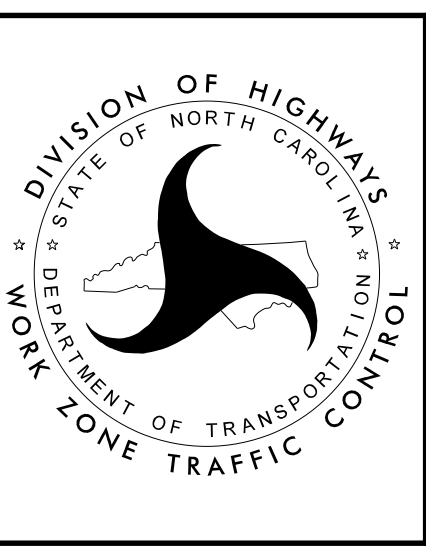


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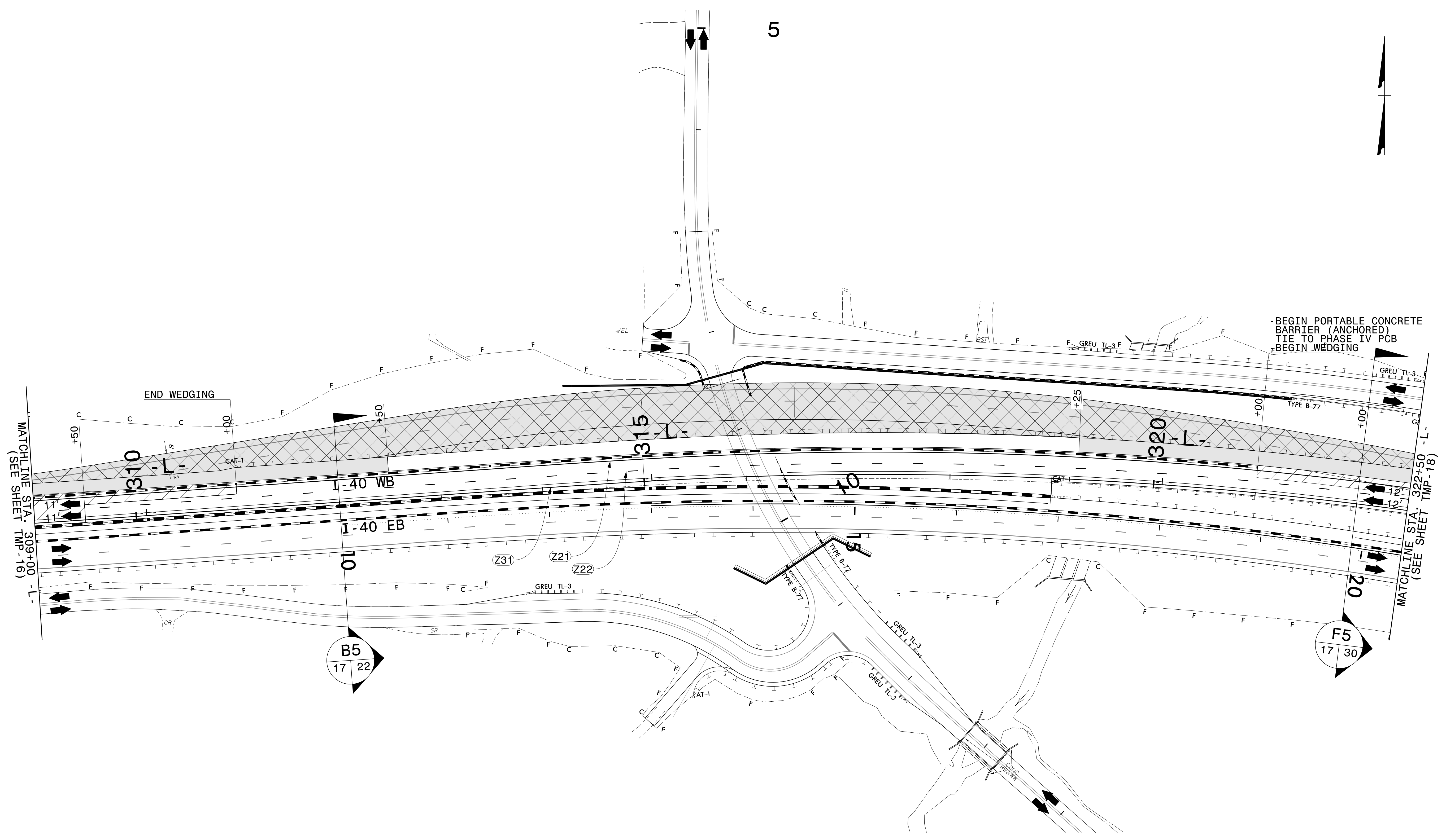
1223 Jones Franklin Rd.
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 DATE: 3/26/2024

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PHASE V DETAIL



-BEGIN PORTABLE CONCRETE BARRIER (ANCHORED) TIE TO PHASE IV PCB -BEGIN WEDGING

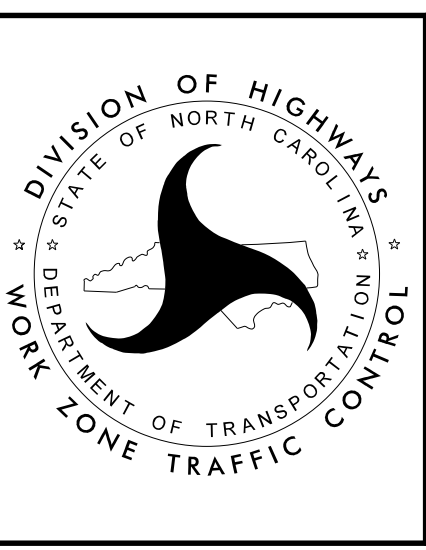
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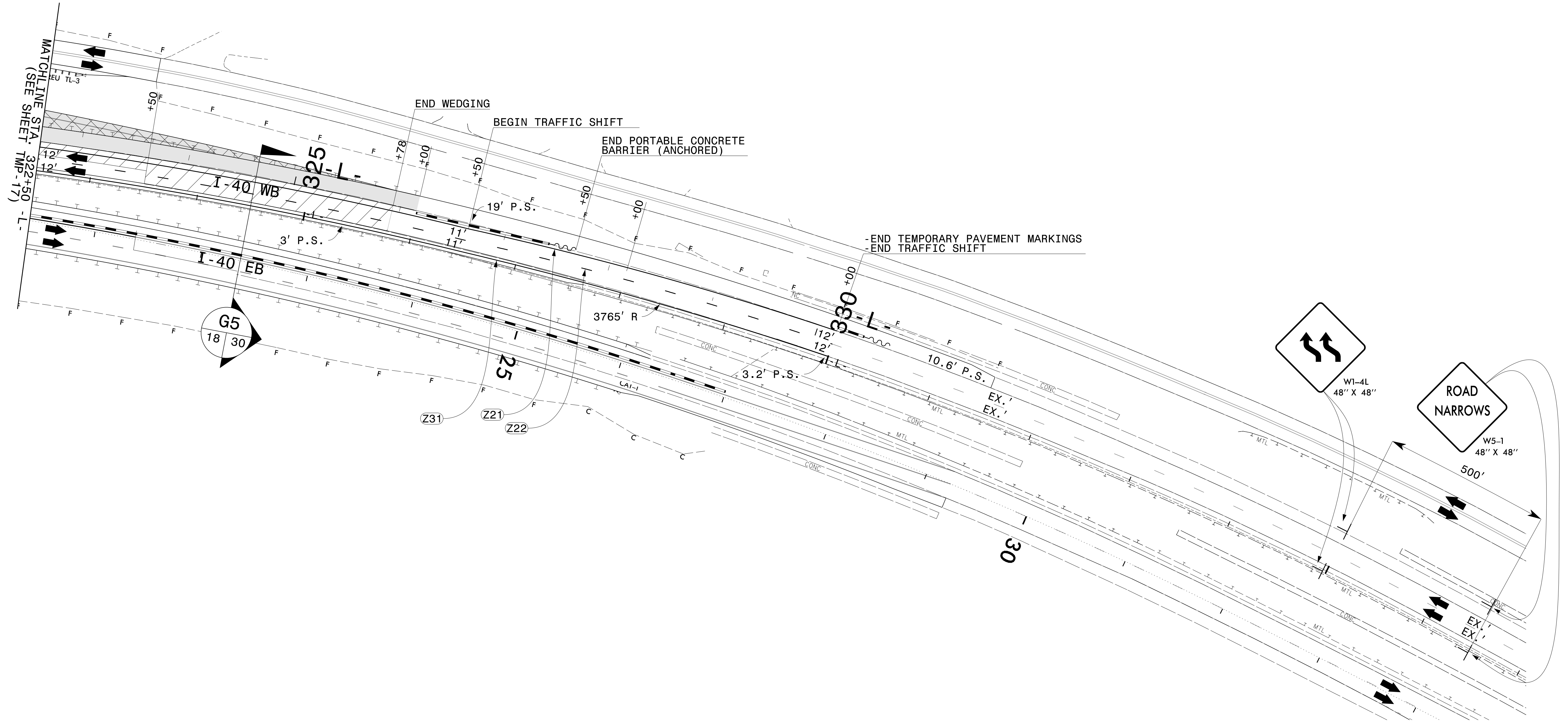
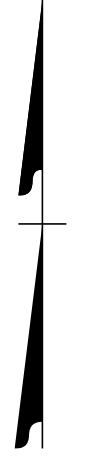
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 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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PHASE V DETAIL



3/26/2024
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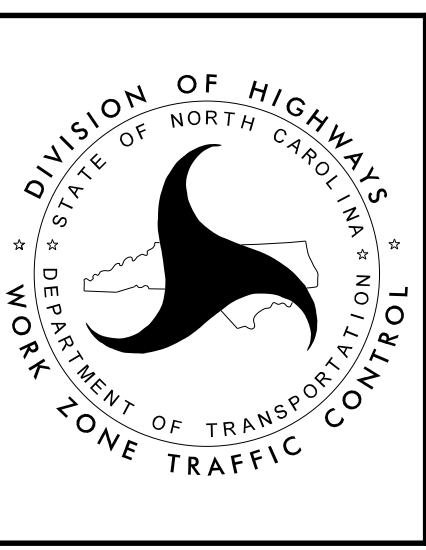
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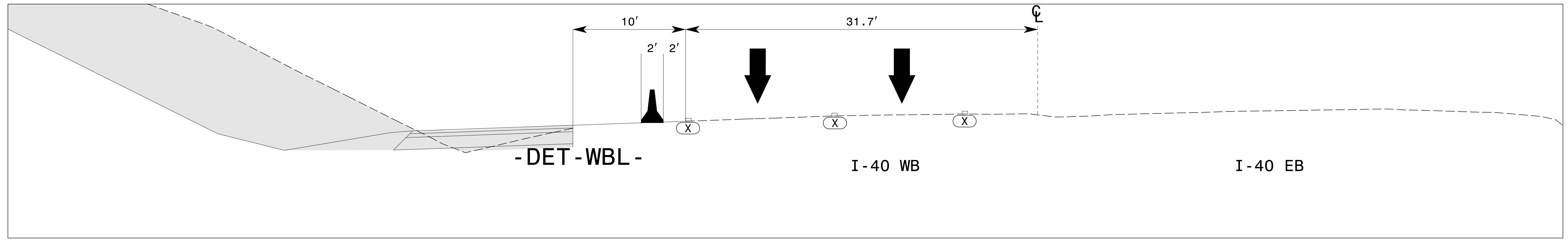
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DATE: 3/26/2024

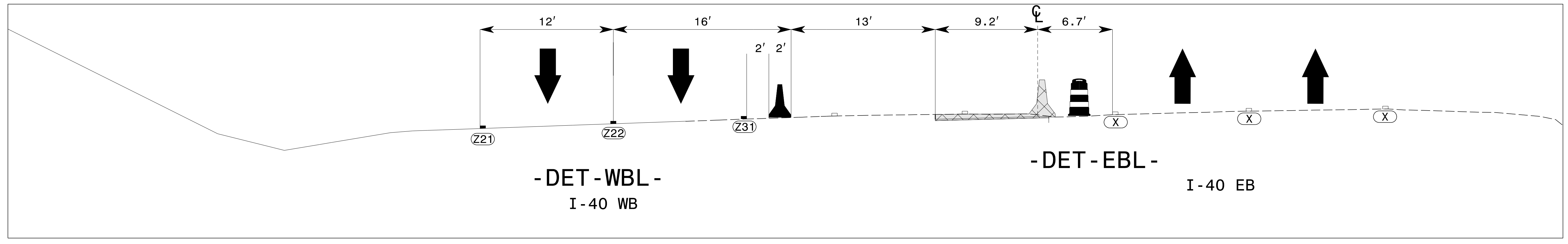
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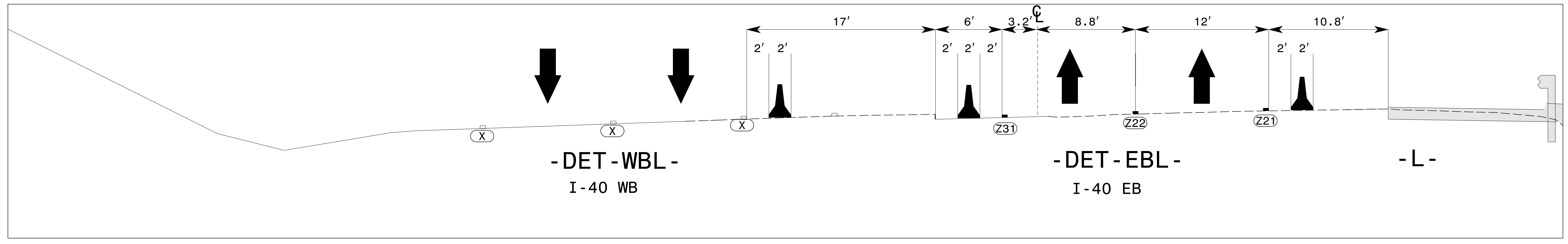
PHASE V DETAIL



A1
05C | 19
STA. 309+50 -L-
CUT SECTION



A2
08 | 19
STA. 309+50 -L-
CUT SECTION



A3
11 | 19
STA. 309+50 -L-
CUT SECTION

3/26/2024
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 User: AHayes

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 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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 DATE: 3/26/2024

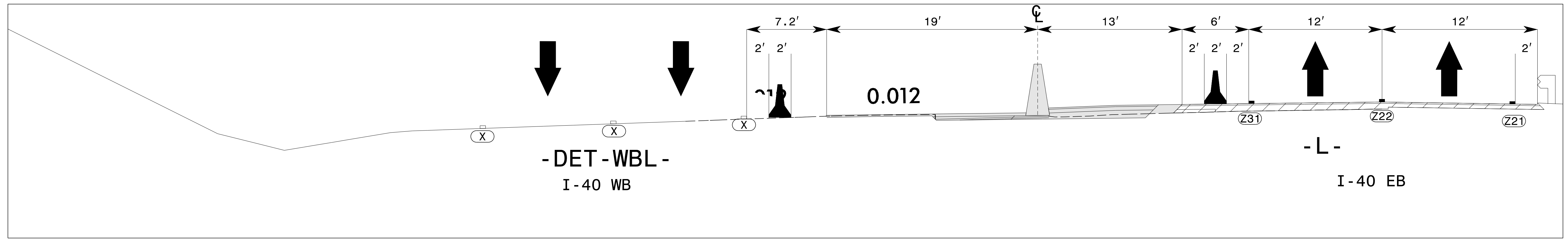
NORTH CAROLINA
 PROFESSIONAL
 SEAL
 22999
 ENGINEER
 GREG S. PURVIS

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

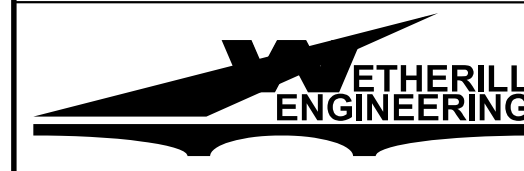
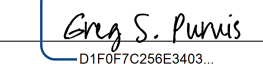

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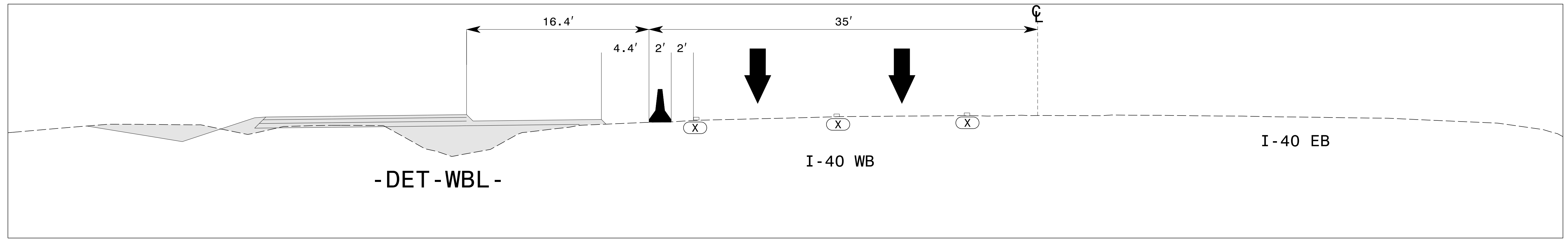
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| PROJ. REFERENCE NO. | SHEET NO. |
| HB-0002 | TMP-20 |



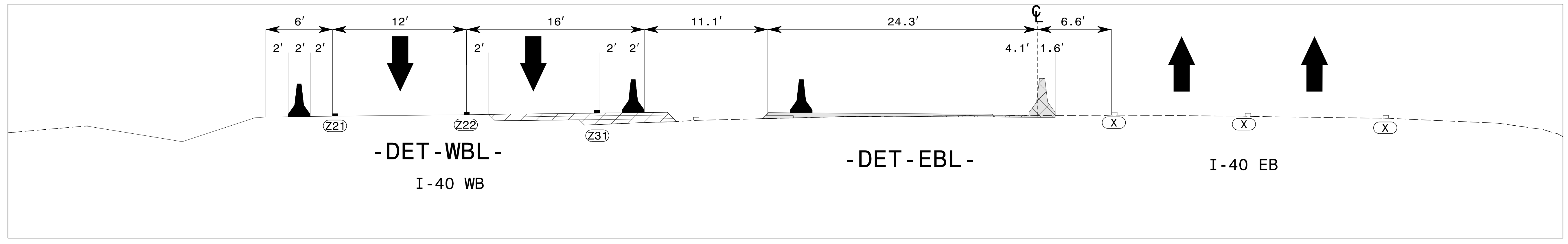
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STA. 309+50 -L-
CUT SECTION

3/26/2024
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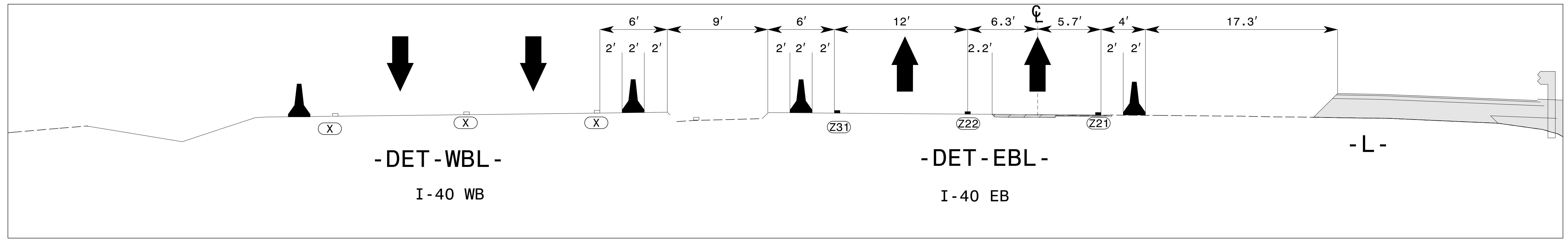
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|  <p>1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107</p> <p style="font-size: small;">TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION</p> | <p>APPROVED: </p> <p>DATE: 3/26/2024</p> <div style="border: 1px solid black; border-radius: 50%; padding: 5px; text-align: center;"> <p style="font-size: x-small;">NORTH CAROLINA PROFESSIONAL SEAL 22999 ENGINEER GREG S. PURVIS</p> </div> |  | <p>TEMPORARY CUT SECTION 'A'</p> |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | | | |



B1
05C | 21
STA. 311+00 -L-
CUT SECTION



B2
08 | 21
STA. 311+00 -L-
CUT SECTION



B3
11 | 21
STA. 311+00 -L-
CUT SECTION

3/26/2024
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 User: AHayes

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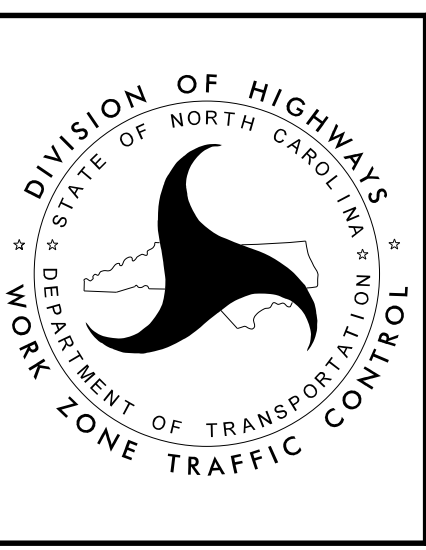
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
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APPROVED: *Greg S. Purvis*
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Greg S. Purvis
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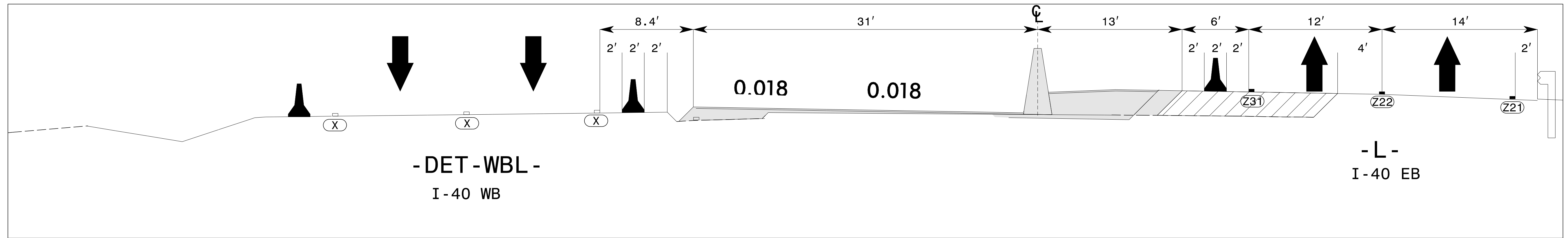
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NORTH CAROLINA PROFESSIONAL SEAL
 ENGINEER
 GREG S. PURVIS
 22999

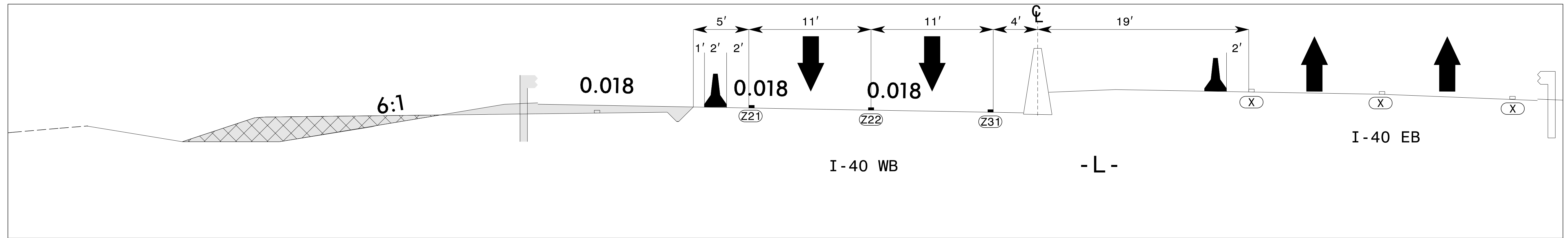
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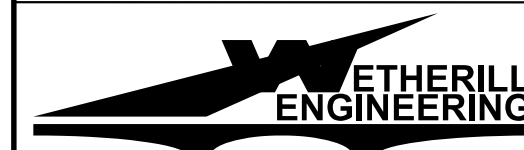


B4
14 | 22
STA. 311+00 -L-
CUT SECTION



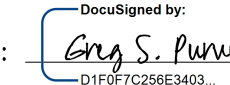
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17 | 22
STA. 311+00 -L-
CUT SECTION

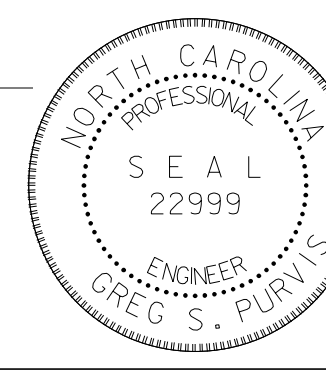
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 User: AHayes



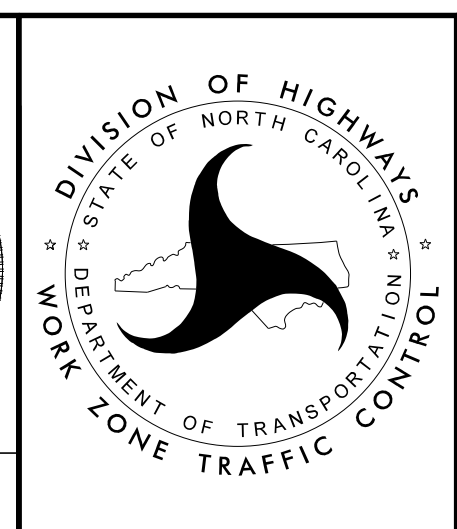
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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
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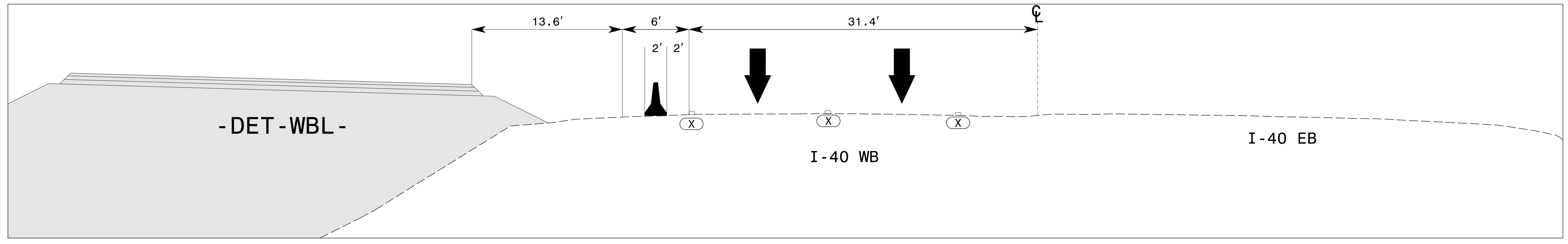
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Greg S. Purvis
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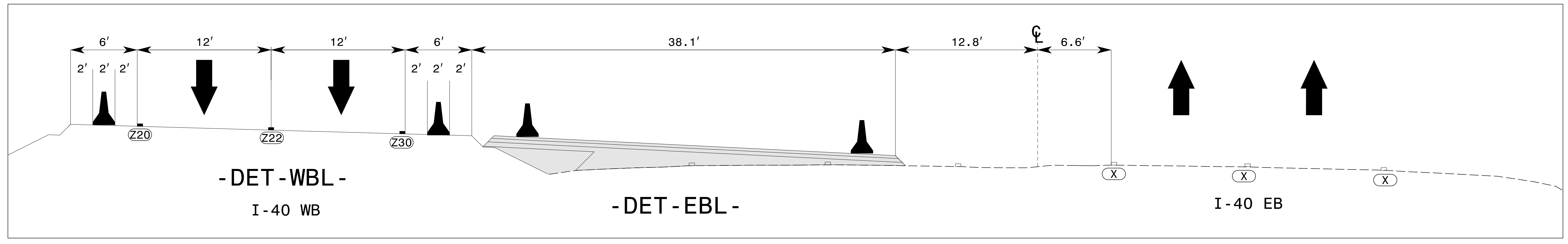
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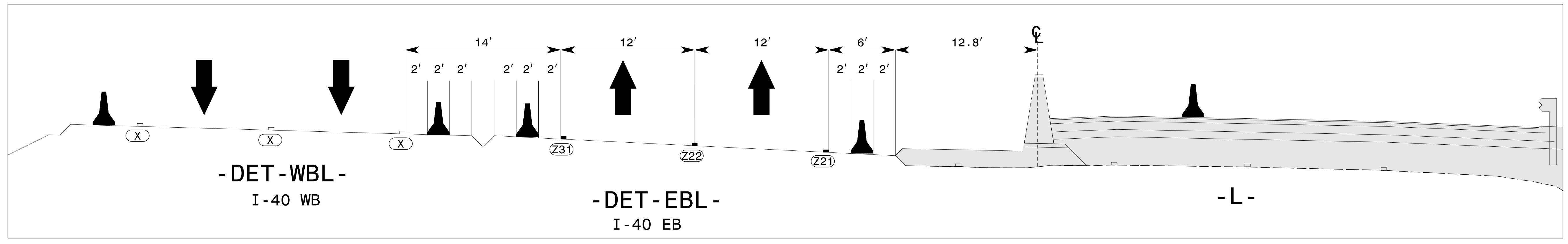
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C1
05C | 23
STA. 313+00 -L-
CUT SECTION



C2
08 | 23
STA. 313+00 -L-
CUT SECTION



C3
11 | 23
STA. 313+00 -L-
CUT SECTION

3/26/2024
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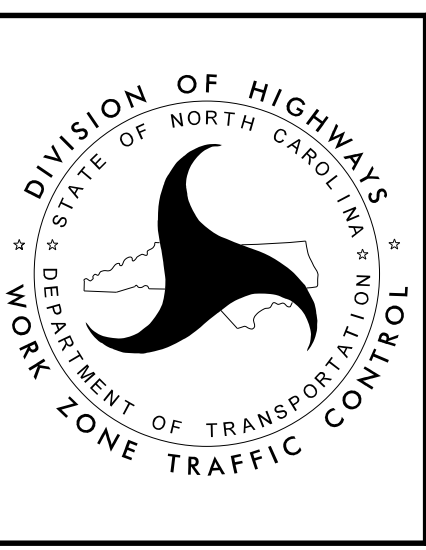
ETHERILL ENGINEERING
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 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

APPROVED: *Greg S. Purvis*
 DATE: 3/26/2024

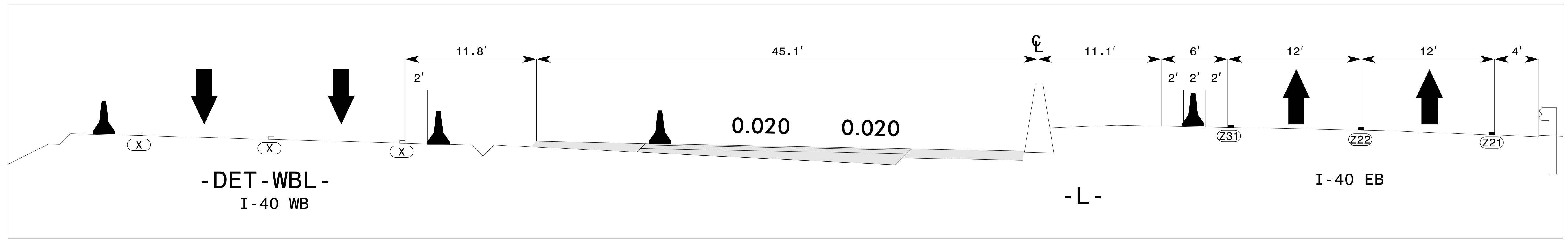
SEAL
 NORTH CAROLINA
 PROFESSIONAL ENGINEER
 GREG S. PURVIS
 22999

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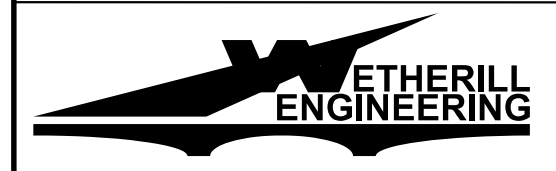
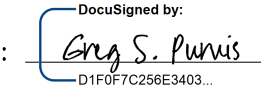
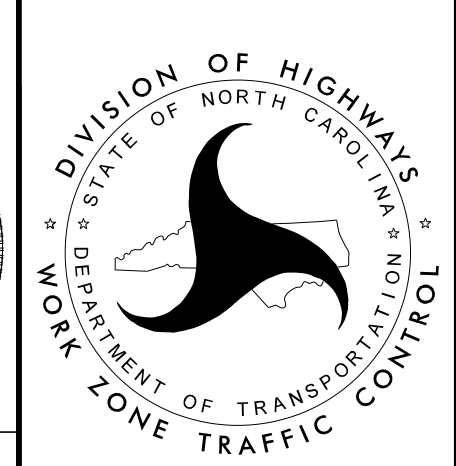
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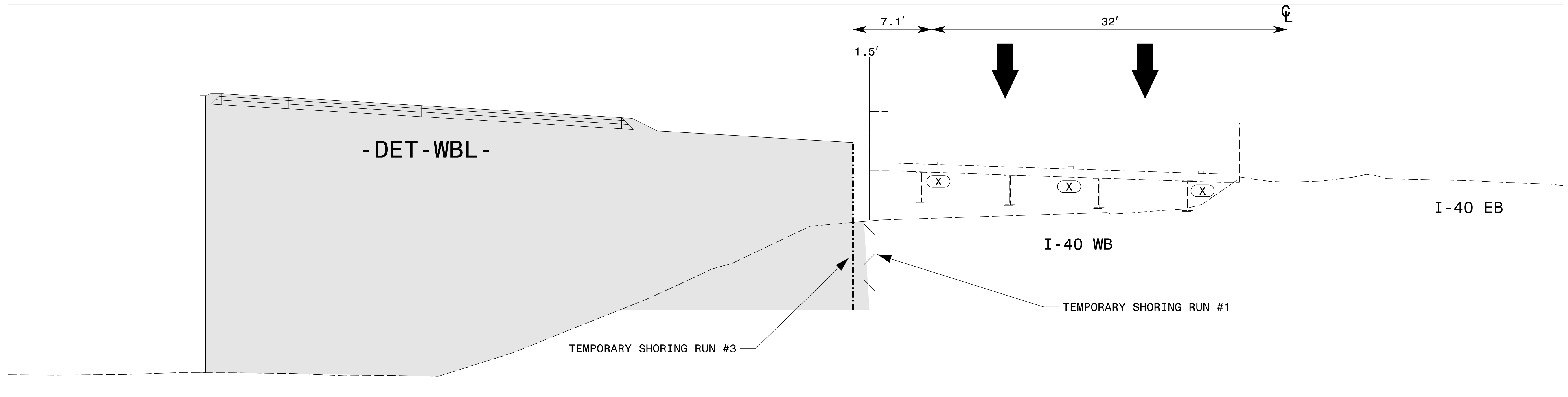
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| HB-0002 | TMP-24 |



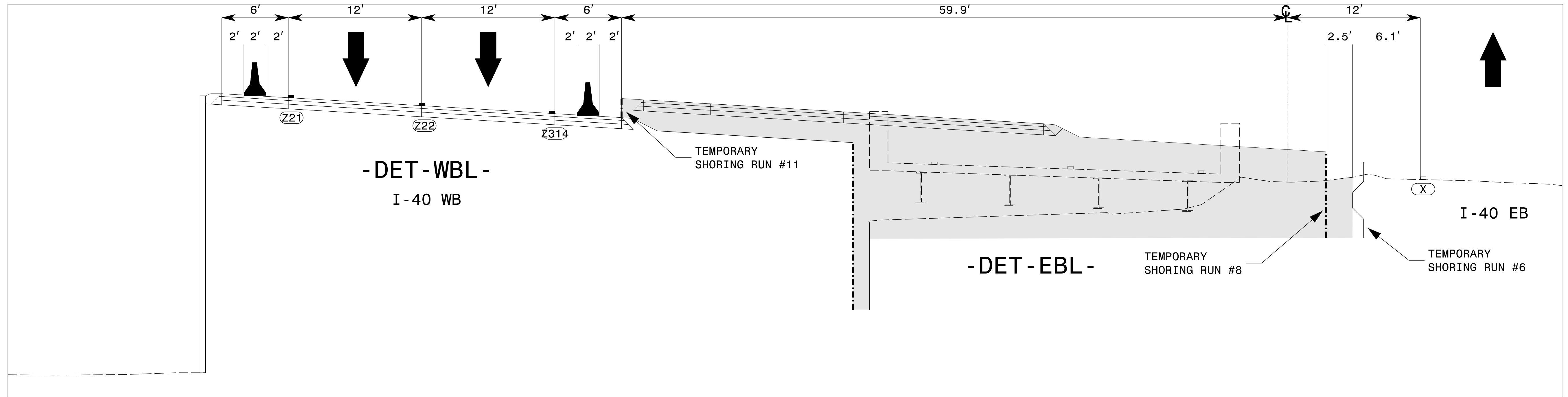
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 STA. 313+00 -L-
 14 | 24 CUT SECTION

3/26/2024
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 User: AHayes

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|  <p>1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107</p> <p style="font-size: small;">TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION</p> | <p>APPROVED: </p> <p>DATE: 3/26/2024</p> <div style="border: 1px solid black; border-radius: 50%; padding: 5px; text-align: center;"> <p style="font-size: x-small;">NORTH CAROLINA PROFESSIONAL SEAL 22999 ENGINEER GREG S. PURVIS</p> </div> |  | <p>TEMPORARY CUT SECTION 'B'</p> |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | | | |



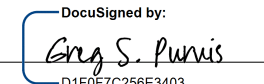

D1
05C 25
STA. 315+25 -L-
CUT SECTION



D2
08 25
STA. 315+25 -L-
CUT SECTION

3/26/2024
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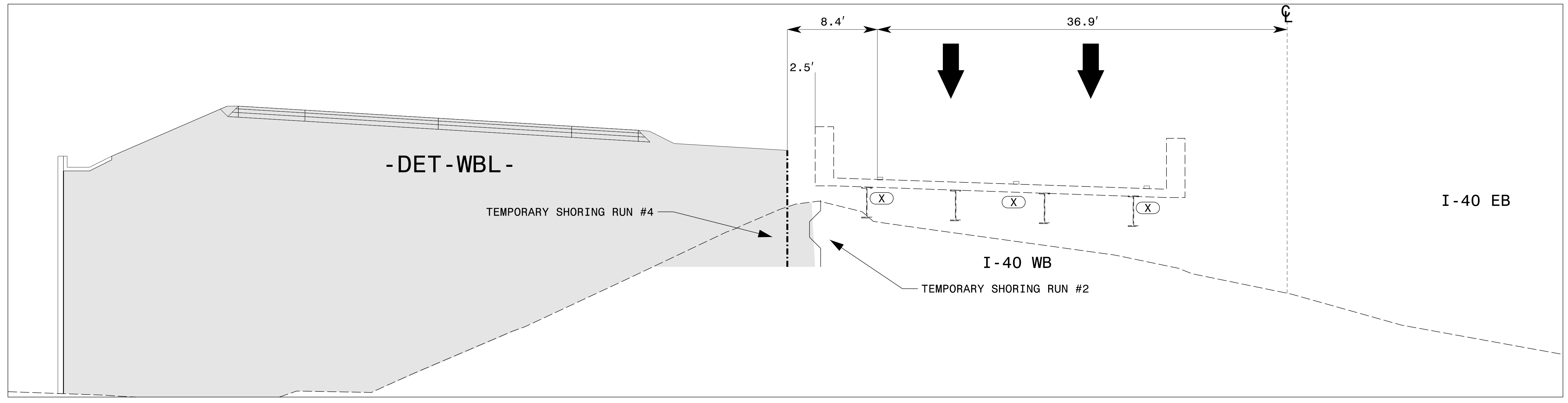

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 DATE: 3/26/2024


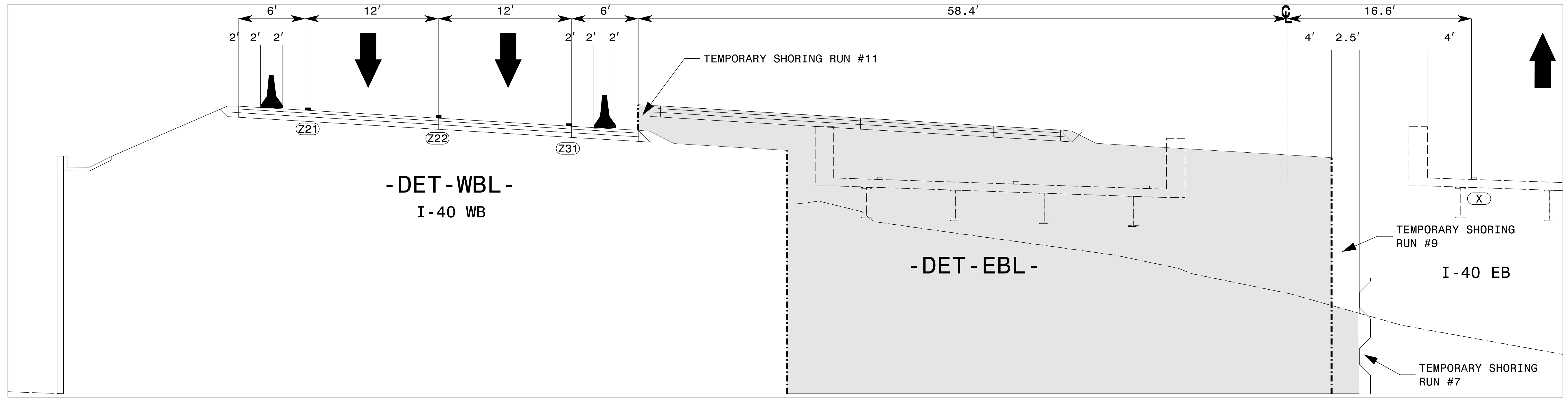


TEMPORARY CUT SECTION 'D'

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E1
05C 26
STA. 316+75 -L-
CUT SECTION



E2
08 26
STA. 316+75 -L-
CUT SECTION

3/26/2024
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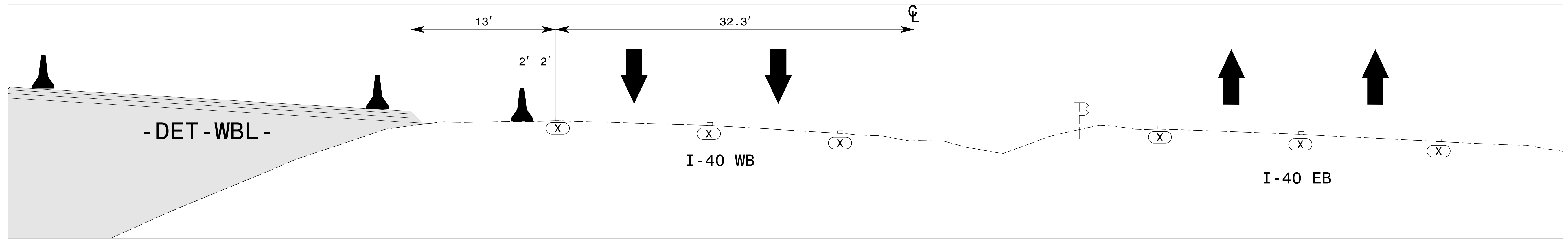
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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DATE: 3/26/2024

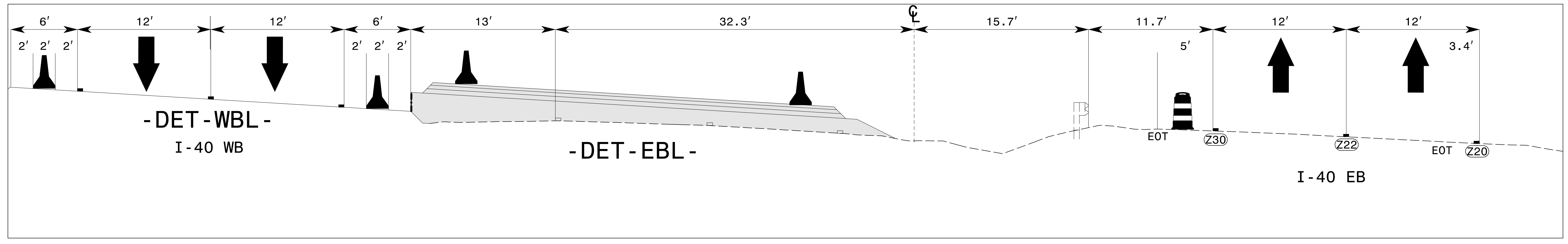
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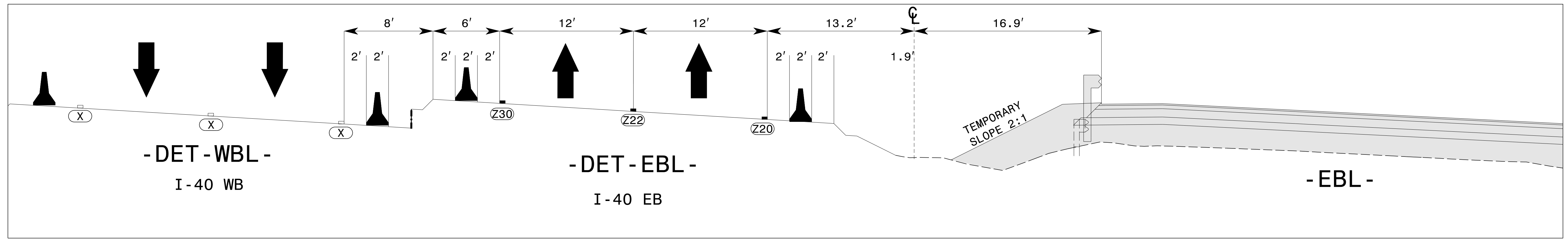
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F1
05C | 27
STA. 319+50 -L-
CUT SECTION



F2
08 | 27
STA. 319+50 -L-
CUT SECTION



F3
11 | 27
STA. 319+50 -L-
CUT SECTION

3/26/2024
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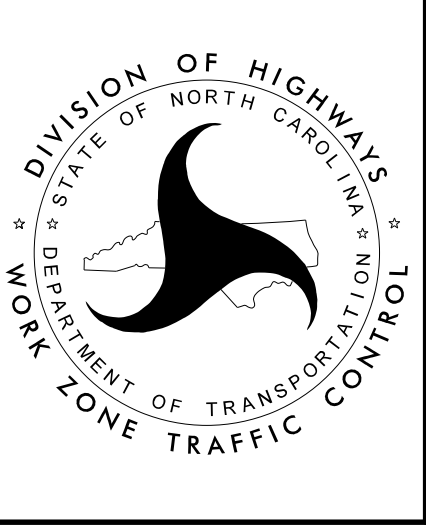
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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

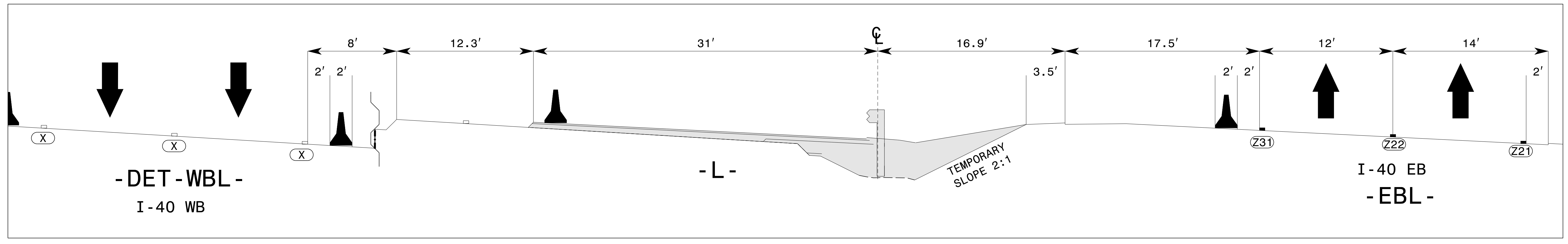
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 SEAL
 22999
 ENGINEER
 GREG S. PURVIS

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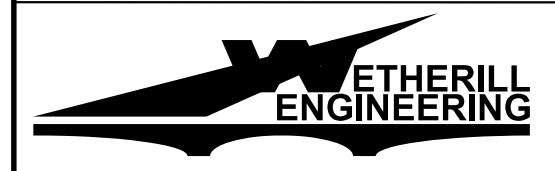
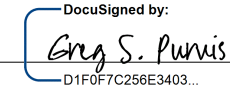

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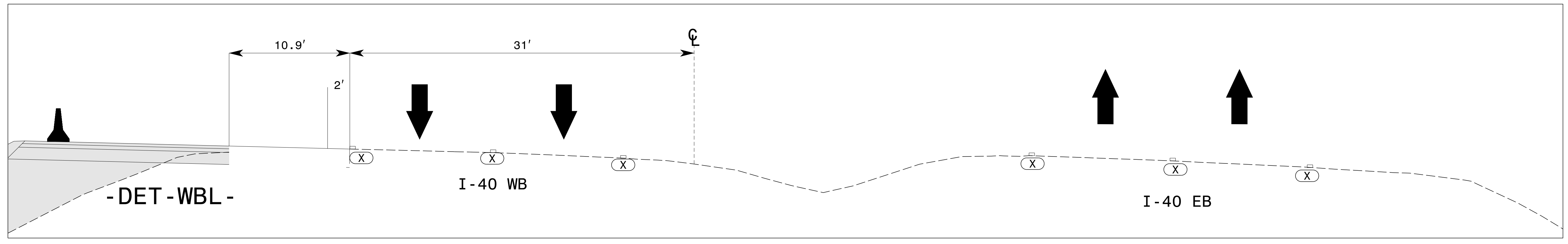


F4
 14 | 28

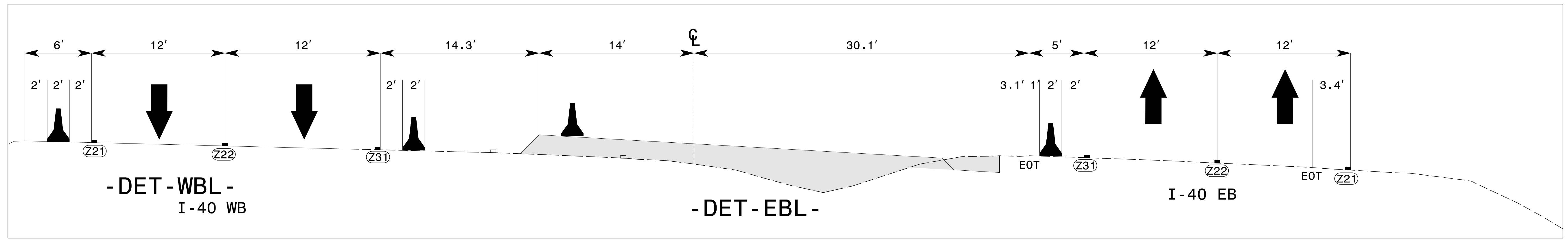
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 CUT SECTION

3/26/2024
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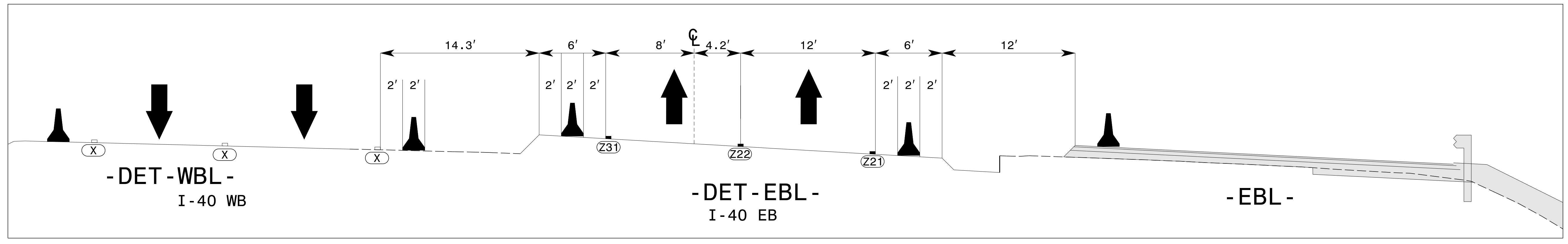
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|  <p>1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107</p> <p style="font-size: small;">TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION</p> | <p>APPROVED:  DATE: 3/26/2024</p> <div style="border: 1px solid black; border-radius: 50%; padding: 5px; text-align: center;"> NORTH CAROLINA PROFESSIONAL SEAL 22999 ENGINEER GREG S. PURVIS </div> |  | <p>TEMPORARY CUT SECTION 'F'</p> |
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G1
05C | 29
STA. 322+50 -L-
CUT SECTION



G2
08 | 29
STA. 322+50 -L-
CUT SECTION



G3
11 | 29
STA. 322+50 -L-
CUT SECTION

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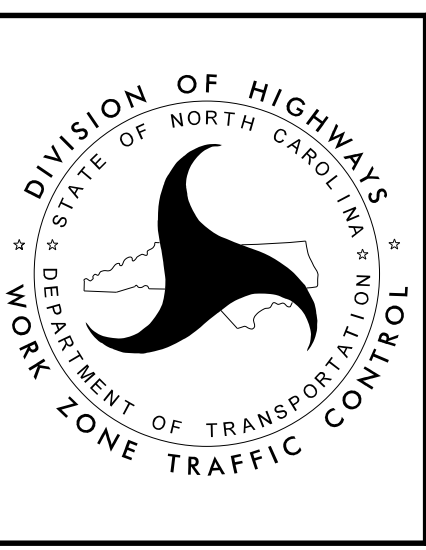
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Fax: 919 851 8107

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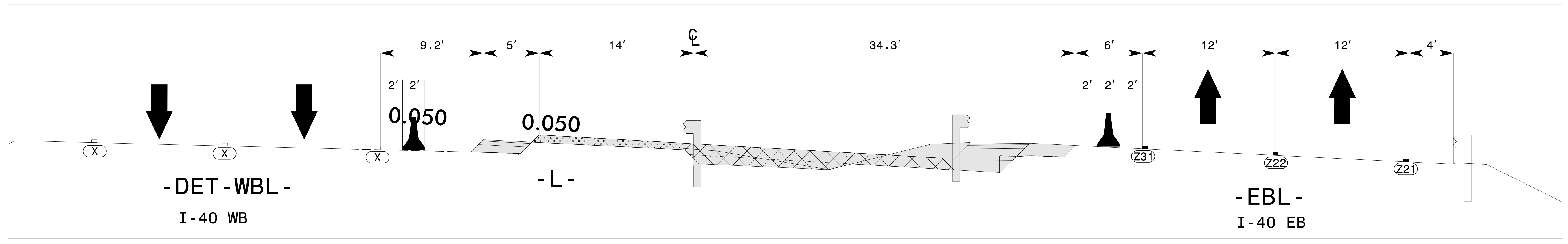
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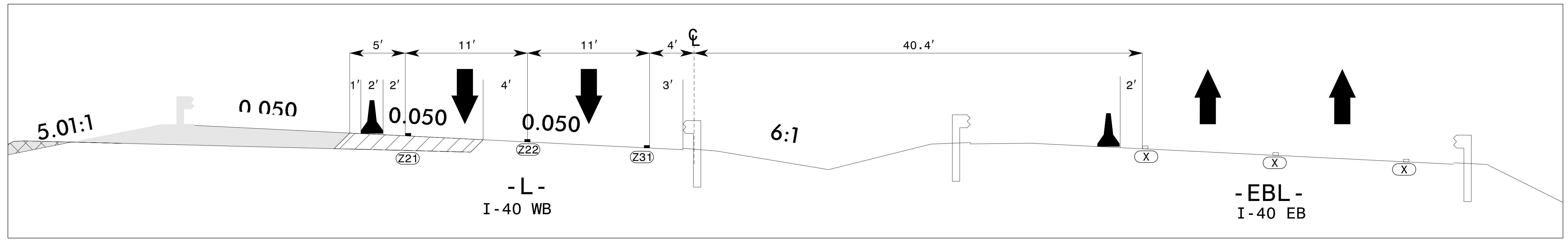
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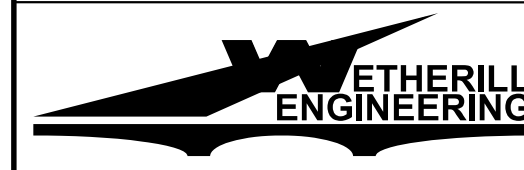


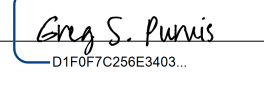
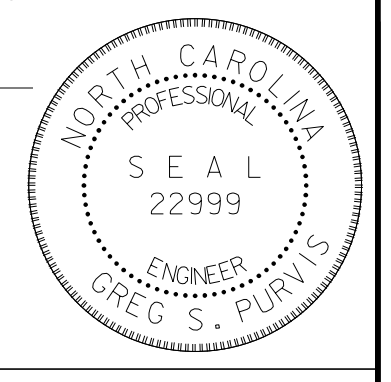
G4
14 | 30
STA. 322+50 -L-
CUT SECTION

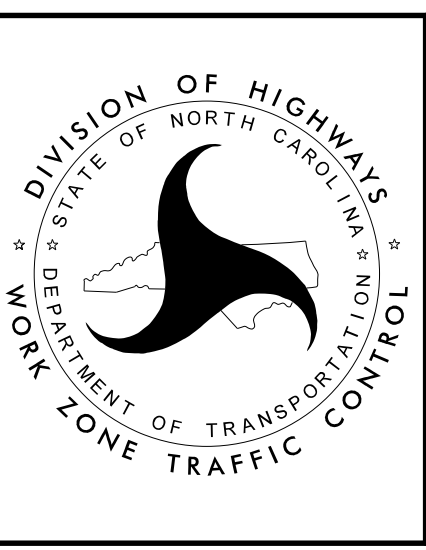


G5
17 | 30
STA. 322+50 -L-
CUT SECTION

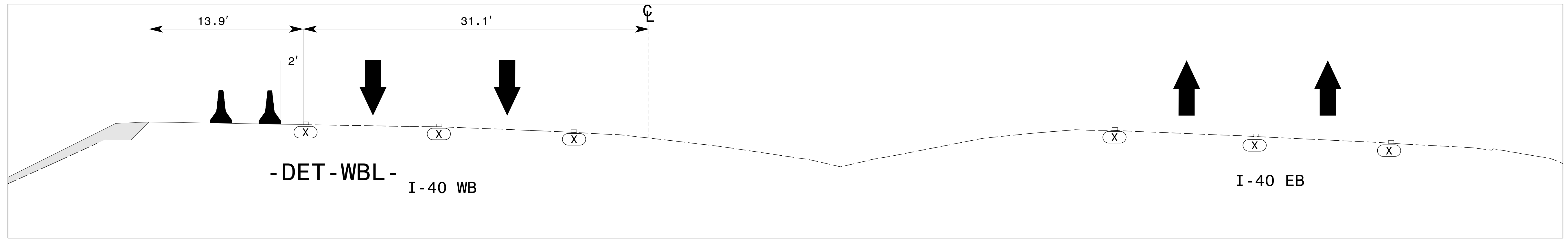
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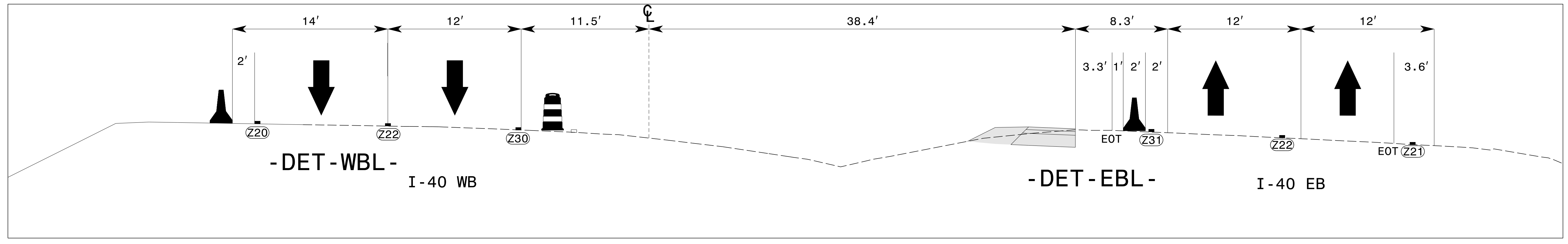
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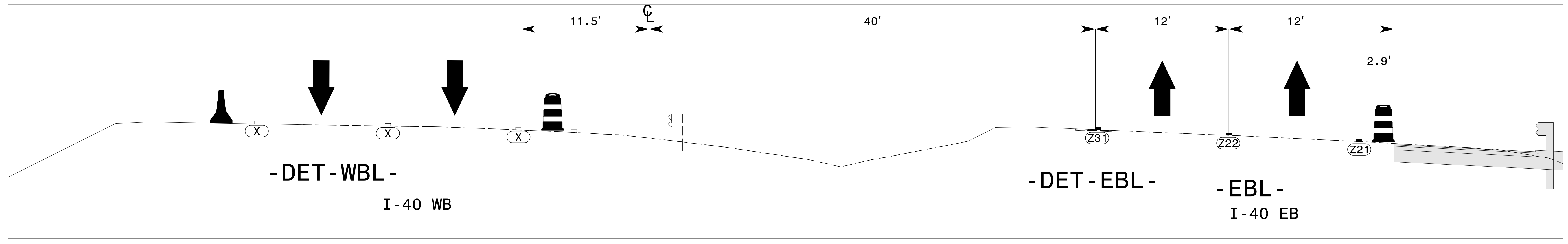
TEMPORARY CUT SECTION 'G'



H1
06C | 31
STA. 327+00 -L-
CUT SECTION



H2
09 | 31
STA. 327+00 -L-
CUT SECTION



H3
12 | 31
STA. 327+00 -L-
CUT SECTION

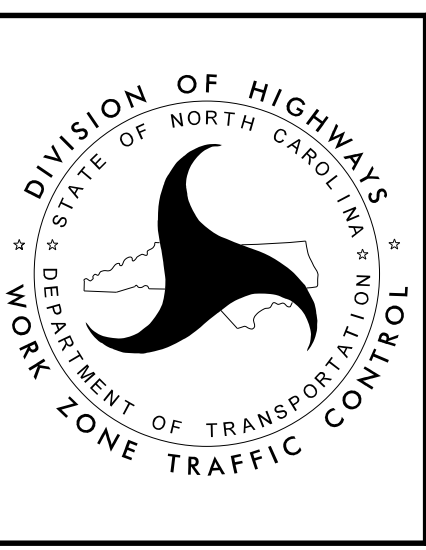
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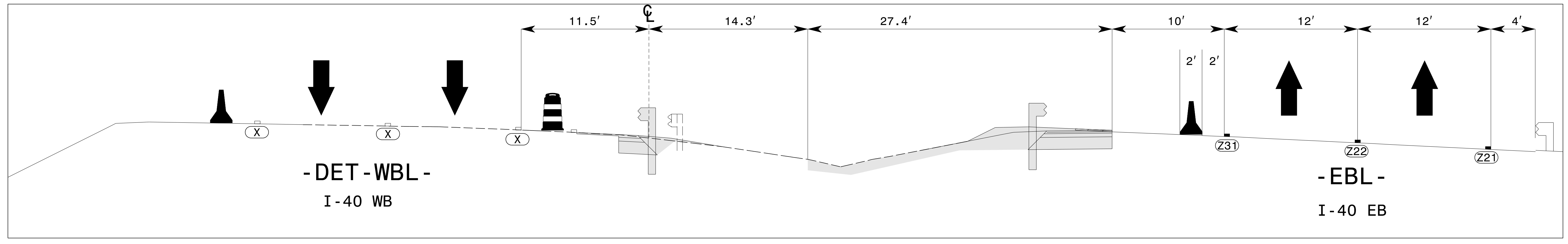
APPROVED: *Greg S. Purvis*
DATE: 3/26/2024

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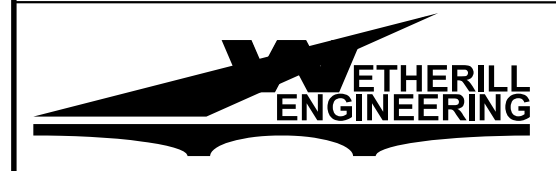
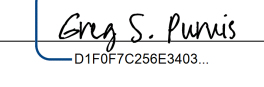

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| PROJ. REFERENCE NO. | SHEET NO. |
| HB-0002 | TMP-31 |



H4
 15 | 32

 STA. 327+00 -L-
 CUT SECTION

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|  <p>1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107</p> <p style="font-size: small;">TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION</p> | <p>APPROVED:  DATE: 3/26/2024</p> <div style="border: 1px solid black; border-radius: 50%; padding: 5px; text-align: center;"> NORTH CAROLINA PROFESSIONAL SEAL 22999 ENGINEER GREG S. PURVIS </div> |  | <p>TEMPORARY CUT SECTION 'H'</p> |
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