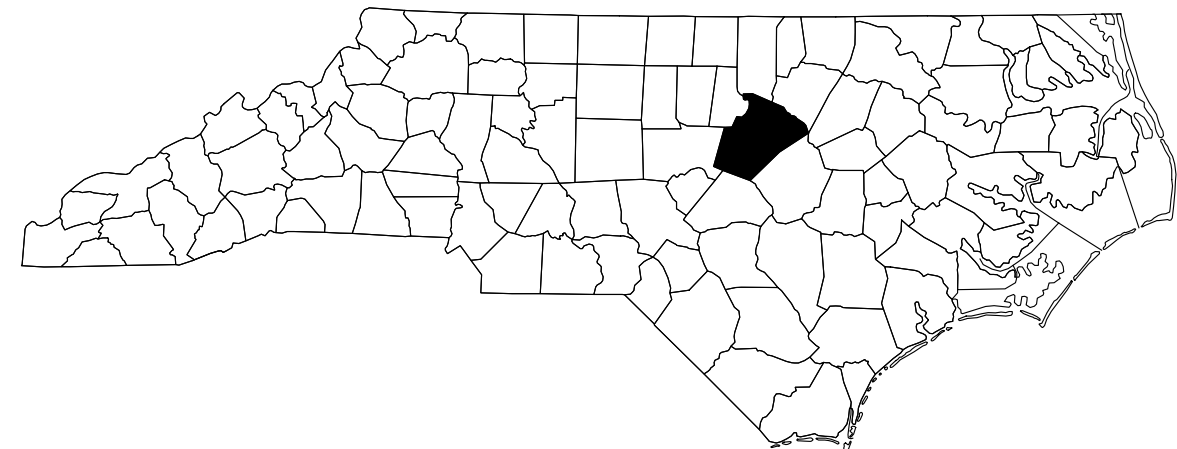


**CONTRACT NO: DA00673 PROJECT: HB-0070**



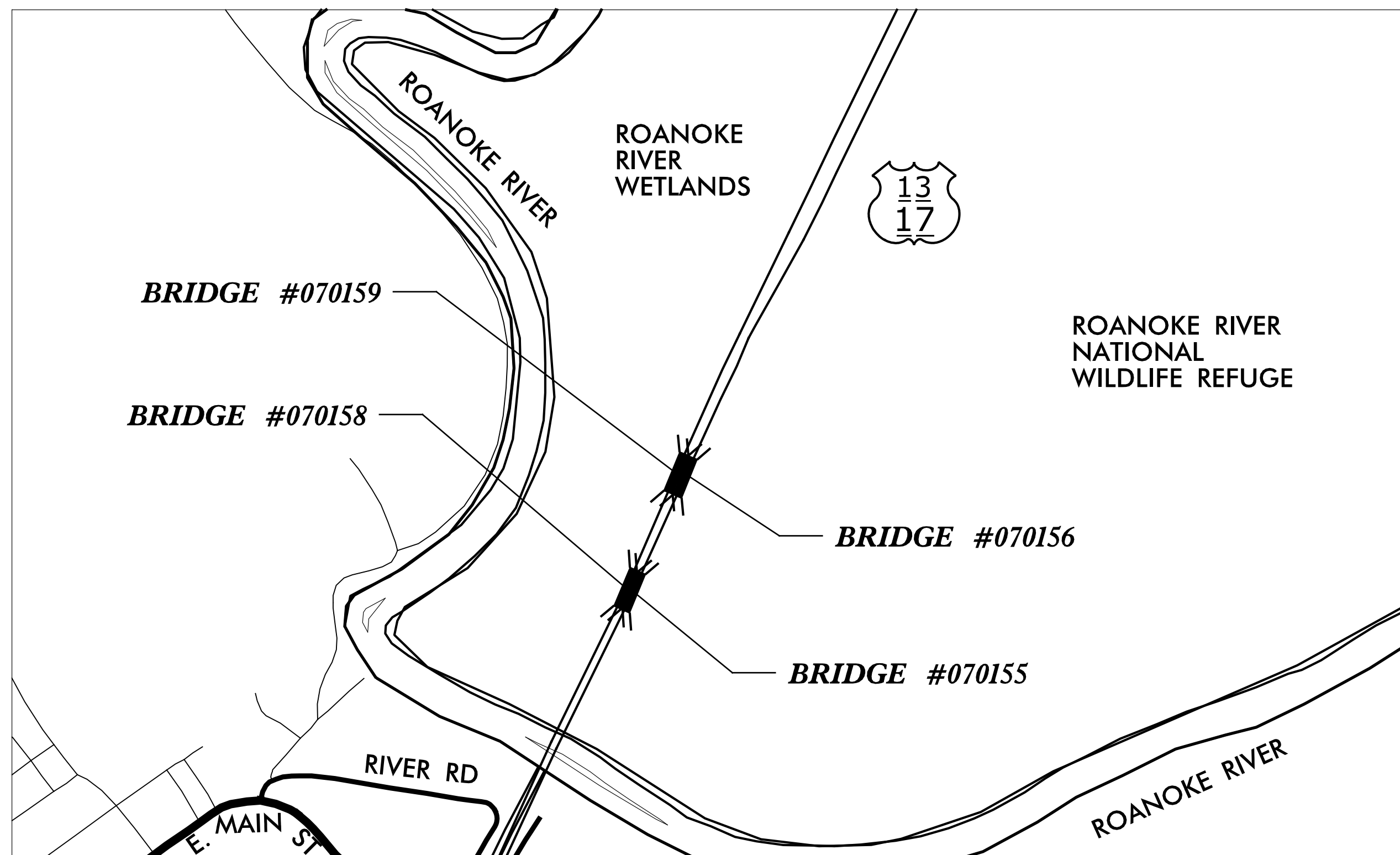
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**BERTIE COUNTY**

| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.   | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C.            | HB-0070                     | 1           | 40           |
| STATE PROJ. NO. | F. A. PROJ. NO.             | DESCRIPTION |              |
| 51308.1.1       | -                           | P.E.        |              |
| 51308.3.1       | -                           | CONST.      |              |
|                 |                             |             |              |
|                 |                             |             |              |

**LOCATION:** BRIDGE #070155, #070156 ON US 13, US 17 (EAST BLVD) NBL  
BRIDGE #070158, #070159, ON US 13, US 17 (EAST BLVD) SBL

**TYPE OF WORK:** BRIDGE REHABILITATION - PRESTRESSED CONCRETE CORED SLAB (PCCS) BRIDGE DECK SURFACE PREPARATION AND REINFORCED CONCRETE WEARING SURFACE, SHEAR KEY AND BENT JOINT REPAIRS, WATERPROOFING SHEAR KEYS AND BENT JOINTS, REPLACEMENT OF PCCS POST TENSIONING STRANDS, AND PCCS BEAM REPAIRS



VICINITY MAP - BERTIE COUNTY

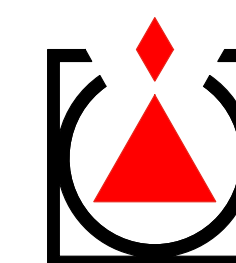


**DESIGN DATA**  
BERTIE COUNTY

|         |     |      |   |        |
|---------|-----|------|---|--------|
| #070155 | ADT | 2018 | = | 12,000 |
| #070156 | ADT | 2018 | = | 12,000 |
| #070158 | ADT | 2018 | = | 12,000 |
| #070159 | ADT | 2018 | = | 12,000 |

**PROJECT LENGTH**  
BERTIE COUNTY

|         |   |      |      |
|---------|---|------|------|
| #070155 | = | 0.10 | MILE |
| #070156 | = | 0.10 | MILE |
| #070158 | = | 0.10 | MILE |
| #070159 | = | 0.10 | MILE |



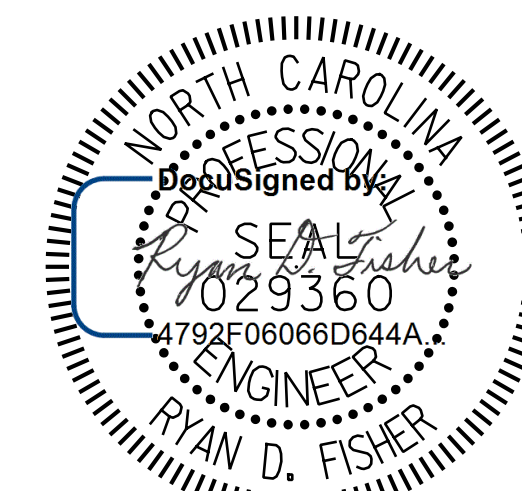
**GANNETT FLEMING**

One Glenwood Avenue  
Suite 900  
Raleigh, NC 27603  
919-420-7660  
NC Lic. No. F-0270

**TIMOTHY M. SHERRILL, P.E.**  
NCDOT PROJECT ENGINEER

2024 STANDARD SPECIFICATIONS

LETTING DATE:  
SEPTEMBER 17, 2025

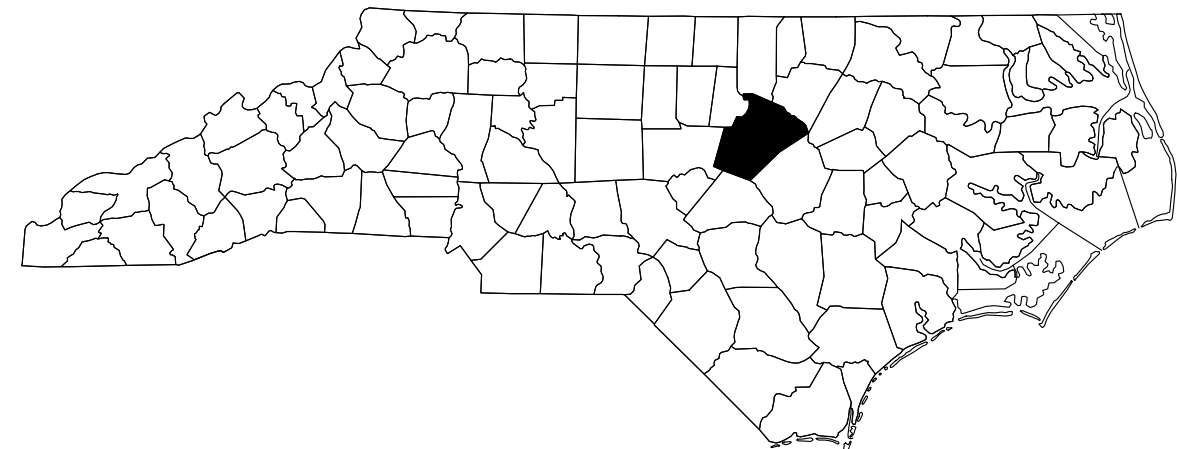


**RYAN D. FISHER**  
PROJECT DESIGN ENGINEER

7/18/2025

**PROJECT: HB-0070**

**CONTRACT NO: DA00673**



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**BERTIE COUNTY**

|                 |                             |             |              |
|-----------------|-----------------------------|-------------|--------------|
| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.   | TOTAL SHEETS |
| N.C.            | HB-0070                     | 1A          | 40           |
| STATE PROJ. NO. | F. A. PROJ. NO.             | DESCRIPTION |              |
| 51308.1.1       | -                           | P.E.        |              |
| 51308.3.1       | -                           | CONST.      |              |
|                 |                             |             |              |
|                 |                             |             |              |

**LOCATION:** BRIDGE #070155, #070156 ON US 13, US 17 (EAST BLVD) NBL  
BRIDGE #070158, #070159, ON US 13, US 17 (EAST BLVD) SBL

**TYPE OF WORK:** BRIDGE REHABILITATION - PRESTRESSED CONCRETE CORED SLAB (PCCS) BRIDGE DECK SURFACE PREPARATION AND REINFORCED CONCRETE WEARING SURFACE, SHEAR KEY AND BENT JOINT REPAIRS, WATERPROOFING SHEAR KEYS AND BENT JOINTS, REPLACEMENT OF PCCS POST TENSIONING STRANDS, AND PCCS BEAM REPAIRS

**INDEX OF DRAWINGS**

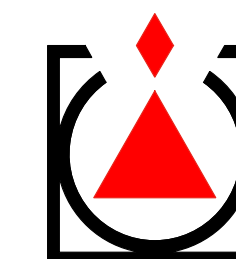
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|--------------------------|--|--------------------------|--|--------------------------|--|--------------------------|--|
| 1                        | TITLE SHEET  |                          |  |                          |  |                          |  |
| 1A                       | INDEX OF DRAWINGS  |                          |  |                          |  |                          |  |
| S-1                      | TOTAL BILL OF MATERIAL   |                          |  |                          |  |                          |  |
| <b>BRIDGE NO. 070155</b> |  | <b>BRIDGE NO. 070155</b> |  | <b>BRIDGE NO. 070159</b> |  | <b>BRIDGE NO. 070156</b> |  |
| S1-1 TO S1-2             | GENERAL DRAWINGS   | S2-1 TO S2-2             | GENERAL DRAWINGS   | S3-1 TO S3-2             | GENERAL DRAWINGS   | S4-1 TO S4-2             | GENERAL DRAWINGS   |
| S1-3                     | TYPICAL SECTION SURFACE PREPARATION DETAILS                              | S2-3                     | TYPICAL SECTION SURFACE PREPARATION DETAILS              | S3-3                     | TYPICAL SECTION SURFACE PREPARATION DETAILS                              | S4-3                     | TYPICAL SECTION SURFACE PREPARATION DETAILS                              |
| S1-4                     | PLAN OF SURFACE PREPARATION & CORED SLAB BEAM REPAIRS                    | S2-4                     | PLAN OF SURFACE PREPARATION & CORED SLAB BEAM REPAIRS    | S3-4                     | PLAN OF SURFACE PREPARATION & CORED SLAB BEAM REPAIRS                    | S4-4                     | PLAN OF SURFACE PREPARATION & CORED SLAB BEAM REPAIRS                    |
| S1-5                     | PLAN OF SHEAR KEY & BENT JOINT REPAIRS                                   | S2-5                     | PLAN OF SHEAR KEY & BENT JOINT REPAIRS                   | S3-5                     | PLAN OF SHEAR KEY & BENT JOINT REPAIRS                                   | S4-5                     | PLAN OF SHEAR KEY & BENT JOINT REPAIRS                                   |
| S1-6                     | PLAN OF OVERLAY  | S2-6                     | PLAN OF OVERLAY  | S3-6                     | PLAN OF OVERLAY  | S4-6                     | PLAN OF OVERLAY  |
| S1-7                     | BENT JOINT REPAIR & JOINT DETAILS  | S2-7                     | BENT JOINT REPAIR & JOINT DETAILS                        | S3-7                     | BENT JOINT REPAIR & JOINT DETAILS  | S4-7                     | BENT JOINT REPAIR & JOINT DETAILS  |
| S1-8                     | END BENT FLOWABLE FILL & RIP RAP REPAIR & BENT END OF CAP SILANE DETAILS | S2-8                     | END BENT RIP RAP REPAIR & BENT END OF CAP SILANE DETAILS | S3-8                     | END BENT FLOWABLE FILL & RIP RAP REPAIR & BENT END OF CAP SILANE DETAILS | S4-8                     | END BENT FLOWABLE FILL & RIP RAP REPAIR & BENT END OF CAP SILANE DETAILS |
| S1-9                     | APPROACH MILLING & TYPICAL ROADWAY SECTIONS                              | S2-9                     | APPROACH MILLING & TYPICAL ROADWAY SECTIONS              | S3-9                     | APPROACH MILLING & TYPICAL ROADWAY SECTIONS                              | S4-9                     | APPROACH MILLING & TYPICAL ROADWAY SECTIONS                              |
| S1-10                    | CONCRETE SLAB REMOVAL AND FULL DEPTH PAVEMENT                            |                          |  |                          |  |                          |  |
| <b>STANDARD SHEETS</b>   |  |                          |  |                          |  |                          |  |
| SN                       |  |                          |  | STANDARD NOTES           |  |                          |  |

**DESIGN DATA**  
BERTIE COUNTY

|         |     |      |   |        |
|---------|-----|------|---|--------|
| #070155 | ADT | 2018 | = | 12,000 |
| #070156 | ADT | 2018 | = | 12,000 |
| #070158 | ADT | 2018 | = | 12,000 |
| #070159 | ADT | 2018 | = | 12,000 |

**PROJECT LENGTH**  
BERTIE COUNTY

|         |   |      |      |
|---------|---|------|------|
| #070155 | = | 0.10 | MILE |
| #070156 | = | 0.10 | MILE |
| #070158 | = | 0.10 | MILE |
| #070159 | = | 0.10 | MILE |



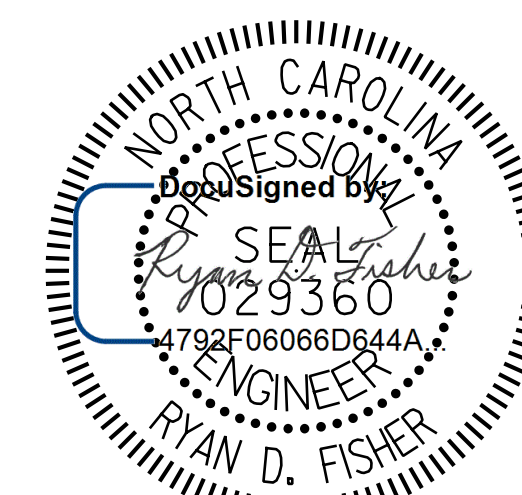
**GANNETT FLEMING**

One Glenwood Avenue  
Suite 900  
Raleigh, NC 27603  
919-420-7660  
NC Lic. No. F-0270

**TIMOTHY M. SHERRILL, P.E.**  
NCDOT PROJECT ENGINEER

2024 STANDARD SPECIFICATIONS

LETTING DATE:  
SEPTEMBER 17, 2025



**RYAN D. FISHER**  
PROJECT DESIGN ENGINEER

7/18/2025

**NOTE:**

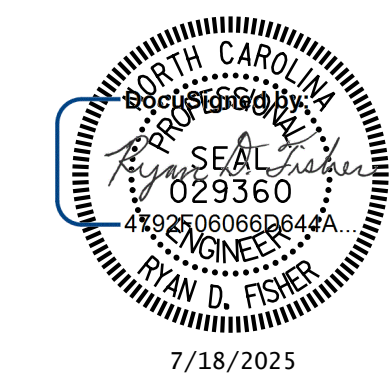
AT THE TIME OF PREPARATION OF THESE PLANS, IT WAS NOT ANTICIPATED THAT ITEM(S) LISTED BELOW WOULD BE REQUIRED. HOWEVER, IT MAY BE DETERMINED IN THE FIELD THAT THE FOLLOWING ITEM(S) LISTED, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. PROJECT SPECIAL PROVISIONS THAT OUTLINE REQUIREMENTS FOR THESE POTENTIAL ADDITIONAL WORK ITEMS HAVE BEEN PROVIDED IN THE PROJECT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES, AND COSTS WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

UNANTICIPATED ITEMS:  
DOWEL HOLE GROUTING EACH

| TOTAL BILL OF MATERIAL |                                       |                    |   |   |  |                              |                                   |                          |                        |                                |
|------------------------|---------------------------------------|--------------------|---|---|--|------------------------------|-----------------------------------|--------------------------|------------------------|--------------------------------|
| BRIDGE NO.             | REMOVAL OF EXISTING CONCRETE PAVEMENT | INCIDENTAL MILLING | ASPHALT CONCRETE BASE COURSE, TYPE B25.0C | ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE i19.0C | ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C | ASPHALT BINDER FOR PLANT MIX | PAINT PAVEMENT MARKING LINES (4") | CONCRETE WEARING SURFACE | GROOVING BRIDGE FLOORS | RIP RAP CLASS II (2'-0" THICK) |
|                        | SQ. YDS.                              | SQ. YDS.           | TONS                                      | TONS  | TONS                                       | TONS                         | LIN. FT.                          | SQ. FT.                  | SQ. FT.                | TONS                           |
| 070158                 | 805                                   | 1,901              | 230                                       | 190   | 360  | 45                           | 2,295                             | 5,149                    | 4,711                  | 16                             |
| 070155                 | -                                     | 1,341              | -   | -   | 160  | 10                           | 1,278                             | 5,149                    | 4,711                  | 16                             |
| 070159                 | -                                     | 1,341              | -   | -   | 160  | 10                           | 1,224                             | 4,245                    | 3,897                  | 16                             |
| 070156                 | -                                     | 1,341              | -   | -   | 160  | 10                           | 1,224                             | 4,245                    | 3,897                  | 16                             |

| TOTAL BILL OF MATERIAL CONT. |                                     |                    |                   |                        |                                    |                                 |                                  |                              |                      |                 |
|------------------------------|-------------------------------------|--------------------|-------------------|------------------------|------------------------------------|---------------------------------|----------------------------------|------------------------------|----------------------|-----------------|
| BRIDGE NO.                   | ASPHALT PLUG JOINT FOR PRESERVATION | BENT JOINT REPAIRS | SHEAR KEY REPAIRS | SCARIFYING BRIDGE DECK | POST TENSIONING STRAND REPLACEMENT | KEVLAR WATERPROOFING JOINT TAPE | SURFACE PREPARATION FOR CONCRETE | SILANE TREATMENT OF CONCRETE | FLOWABLE FILL REPAIR | FIELD MEASURING |
|                              | LIN. FT.                            | LIN. FT.           | LIN. FT.          | SQ. YDS.               | EA.                                | LIN. FT.                        | SQ. FT.                          | SQ. FT.                      | CU. YDS.             | LUMP SUM        |
| 070158                       | 73                                  | 78                 | 1,710.0           | 579                    | 3                                  | 1,765.3                         | 1,015                            | 1,015                        | 3                    | -               |
| 070155                       | 73                                  | 78                 | 1,710.0           | 579                    | 3                                  | 1,765.3                         | 1,015                            | 1,015                        | -                    | -               |
| 070159                       | 72                                  | 78                 | 1,419.0           | 480                    | 3                                  | 1,475.0                         | 835                              | 835                          | 14                   | LUMP SUM        |
| 070156                       | 72                                  | 78                 | 1,419.0           | 480                    | 3                                  | 1,475.0                         | 835                              | 835                          | 9                    | LUMP SUM        |

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
BRIDGE: \_\_\_\_\_



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

**GENERAL DRAWING**

TOTAL BILL OF MATERIAL

DRAWN BY : T. HARTLEY DATE : 01/2025  
CHECKED BY : R. FISHER DATE : 05/2025

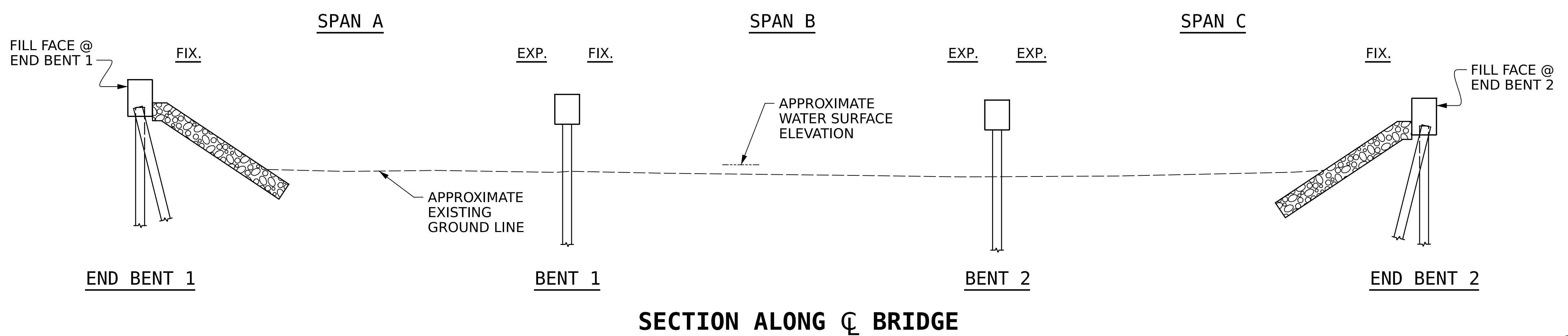


One Glenwood Avenue  
Suite 900  
Raleigh, NC 27603  
919-420-7660  
NC Lic. No. F-0270

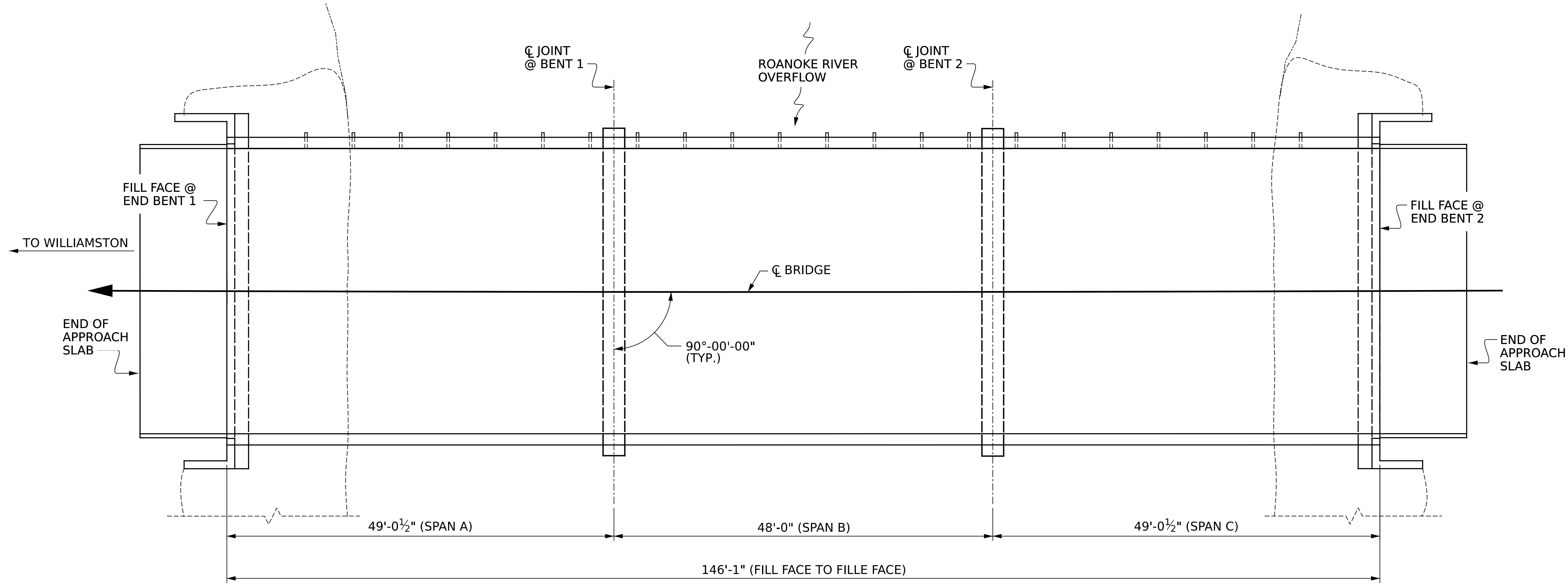
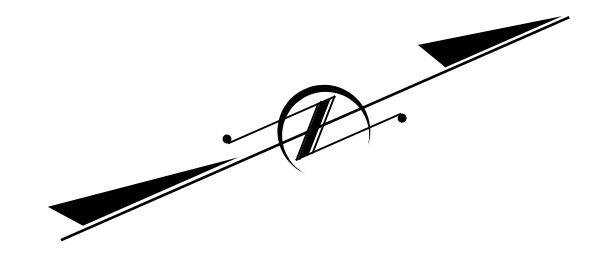
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FINAL UNLESS ALL  
SIGNATURES COMPLETED

| REVISIONS |     |       |   | SHEET NO.    |
|-----------|-----|-------|---|--------------|
| NO.       | BY: | DATE: |   | S-1          |
| 1         |     |       | 3 | TOTAL SHEETS |
| 2         |     |       | 4 | 40           |

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**SECTION ALONG Q BRIDGE**



**PLAN**  
(PILES NOT SHOWN FOR CLARITY)

- NOTES:**  
 GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 09/05/2024.
- BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS/ROUTINE INSPECTION REPORT.
- SCOPE OF WORK**
- REMOVE EXISTING ASPHALT WEARING SURFACE ON BRIDGE DECK AND APPROACH ROADWAY AND PARTIALLY REMOVE TOP OF PCCS UNITS BY SCARIFICATION.
  - PLACE REINFORCED CONCRETE WEARING SURFACE.
  - REPLACE PCCS POST TENSIONING STRANDS.
  - SAW CUT EXISTING SHEAR KEYS, REMOVE EXISTING SHEAR KEY GROUT, AND FILL SHEAR KEYS WITH REPAIR MORTAR.
  - PLACE GROUT IN JOINT OPENINGS AT BENTS 1 AND 2.
  - INSTALL KEVLAR WATERPROOFING JOINT TAPE OVER LONGITUDINAL SHEAR KEYS AND TRANSVERSE DECK JOINTS.
  - INSTALL ASPHALT PLUG JOINTS AT END BENTS.
  - REMOVE & REST EXISTING GUARDRAIL, MILL AND RESURFACE APPROACHES AND PLACE PAVEMENT MARKINGS.
  - PLACE FLOWABLE FILL AT END BENTS.
  - PREPARE THE BRIDGE CONCRETE BARRIER RAIL SURFACES AND APPLY SILANE COATING.
  - PREPARE END OF BENT CAPS 1 & 2 SURFACES AND APPLY SILANE COATING.

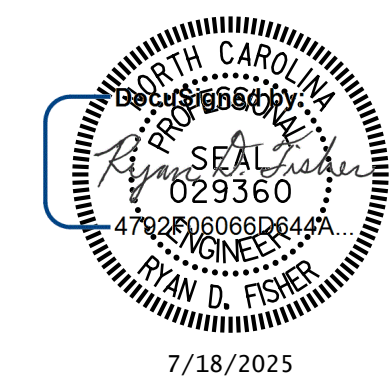
- SEQUENCE OF CONSTRUCTION FOR SURFACE PREPARATION, SHEAR KEYS, AND POST TENSIONING (P/T)**
- 1) REMOVE EXISTING AWS OVERLAY AND NO MORE THAN 1/8" OF CONCRETE FROM PCCS UNITS.
  - 2) DETENSION AND REMOVE EXISTING TRANSVERSE P/T STRANDS, REMOVE EXISTING SHEAR KEY GROUT AND EXISTING JOINT MATERIAL AT BENTS.
  - 3) INSTALL NEW P/T STRAND AND APPLY AN MAINTAIN INITIAL TENSION LOAD OF 10,000 LBS.
  - 4) INSTALL REPAIR MORTAR IN LONGITUDINAL SHEAR KEYS.
  - 5) APPLY FINAL P/T LOAD OF 43,950 LBS.
  - 6) PLACE GROUT AT BENT JOINTS.
  - 7) INSTALL KEVLAR WATERPROOFING JOINT TAPE AT LONGITUDINAL SHEAR KEYS AND BENT JOINTS.
  - 8) PLACE REINFORCED CONCRETE WEARING SURFACE.

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070158**

SHEET 1 OF 2

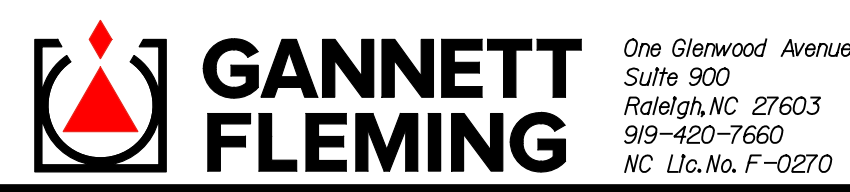
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**GENERAL DRAWING**  
 FOR SBL BRIDGE ON  
 US 13/17 OVER  
 ROANOKE RIVER  
 OVERFLOW



I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



One Glenwood Avenue  
 Suite 900  
 Raleigh, NC 27603  
 919-420-7660  
 NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

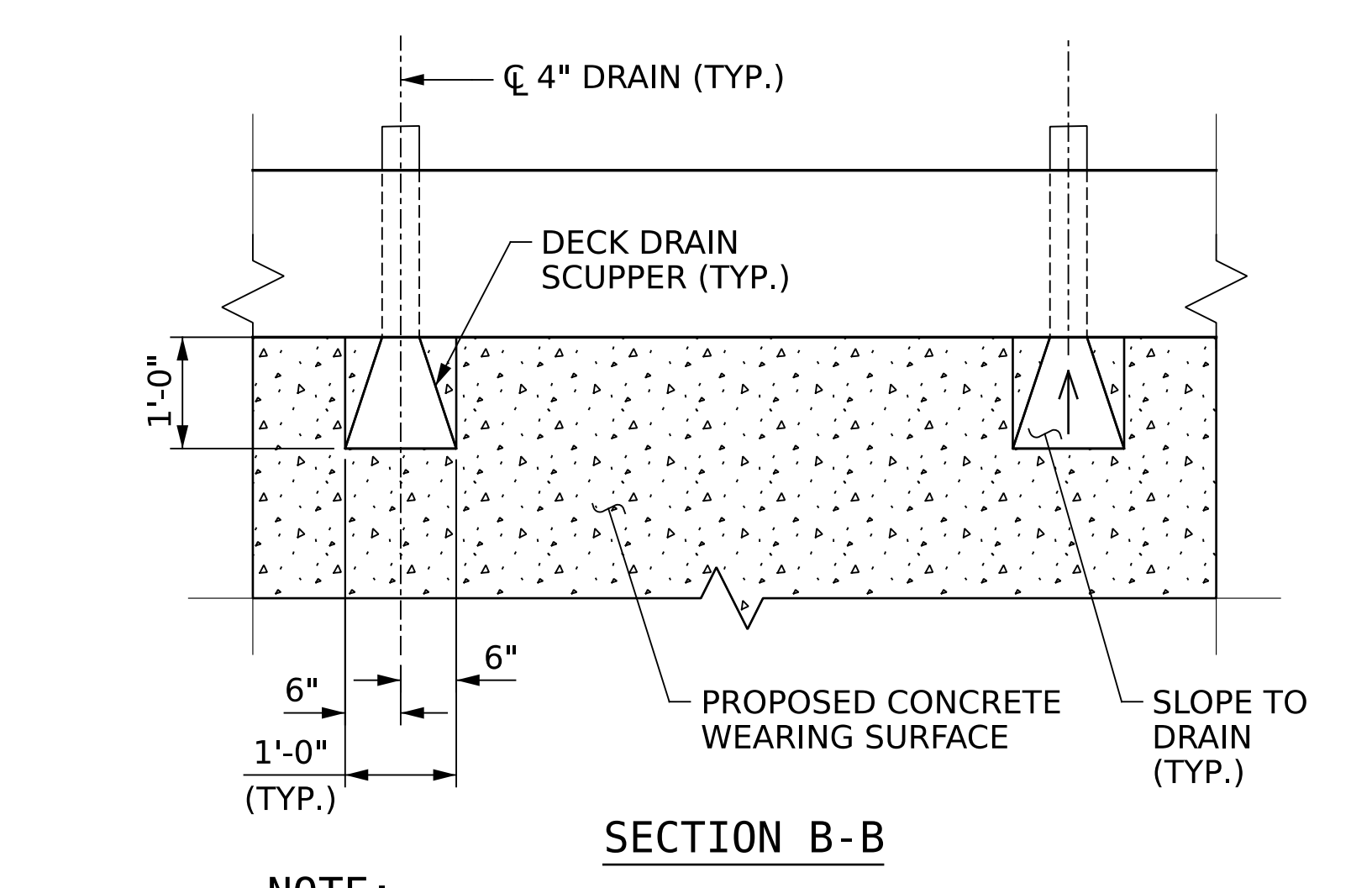
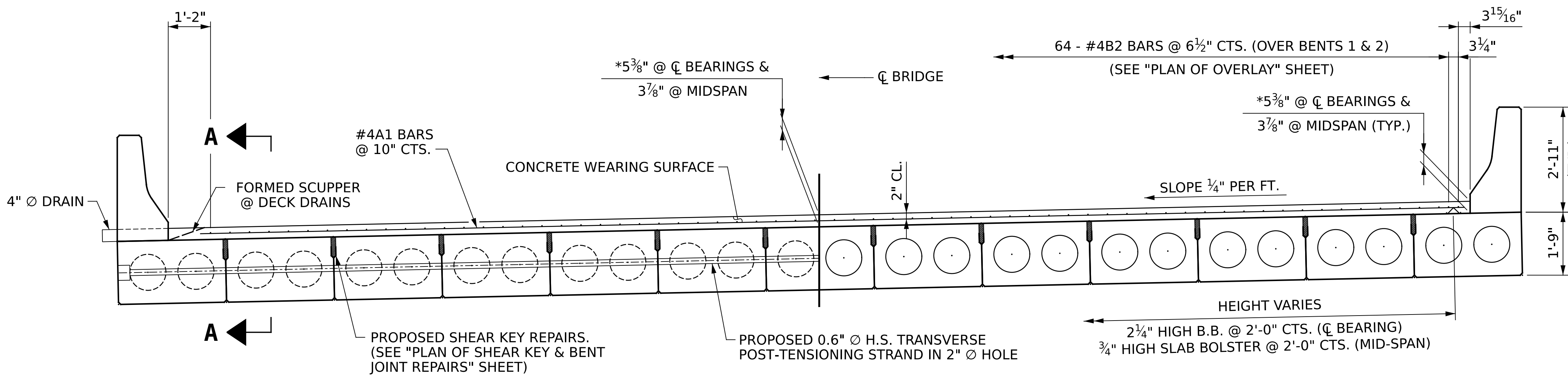
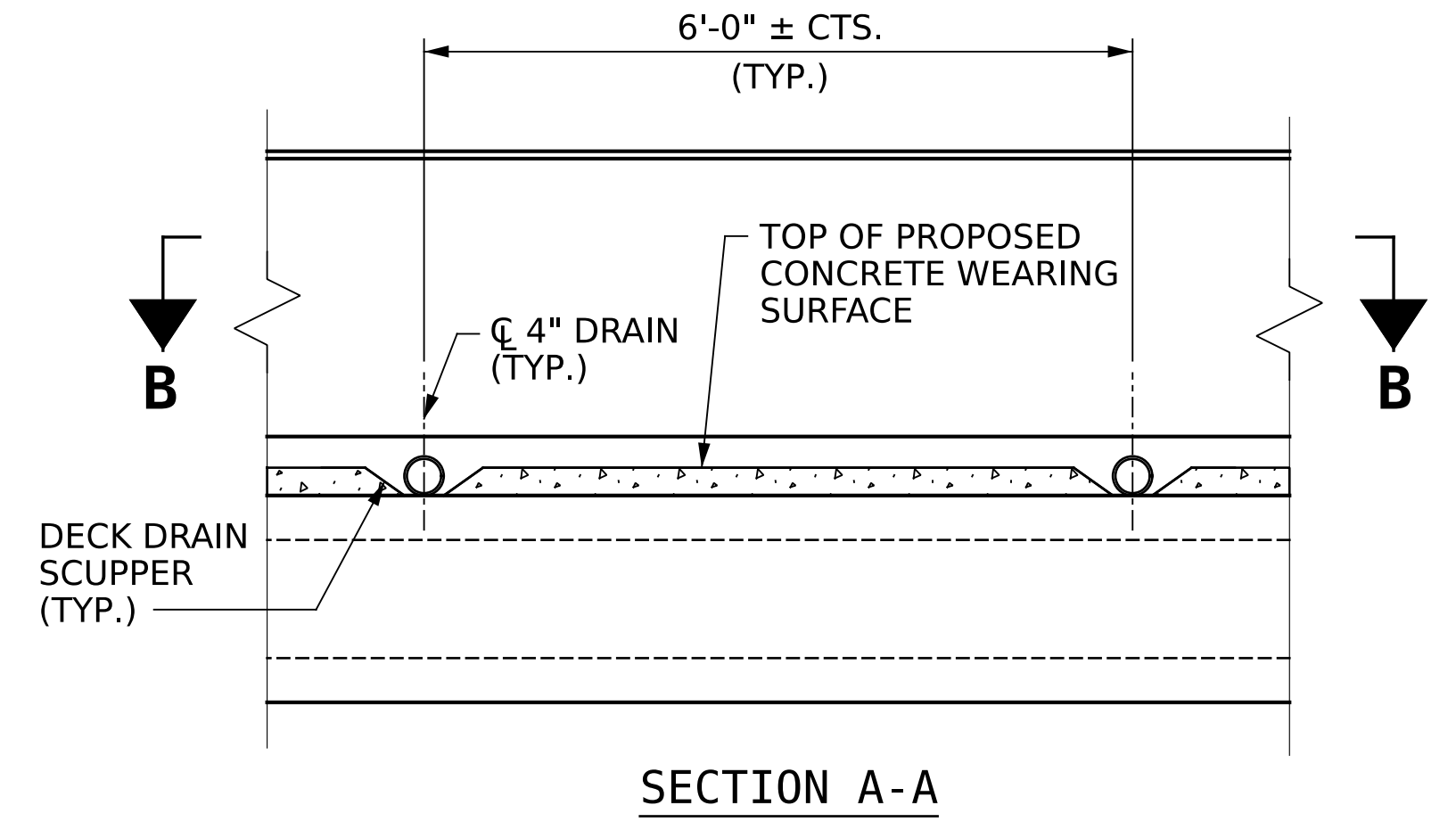
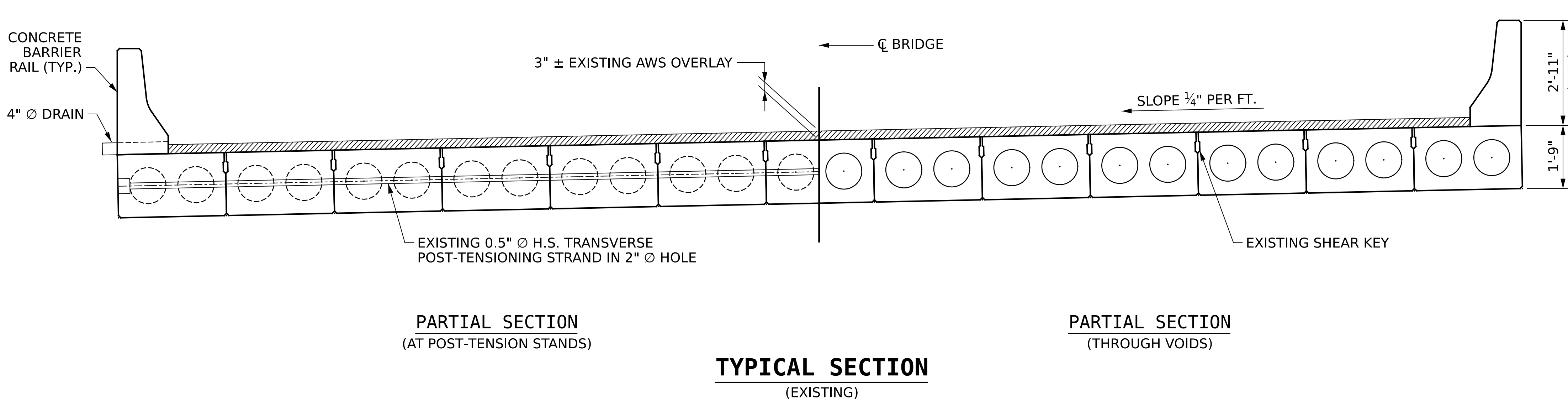
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|-----------|-----|-------|-----|-----------|
| NO.       | BY: | DATE: | NO. | DATE:     |
| 1         |     |       | 3   |           |
| 2         |     |       | 4   |           |

TOTAL SHEETS: 40

DRAWN BY : T. HARTLEY DATE : 01/2025  
 CHECKED BY : R. FISHER DATE : 05/2025



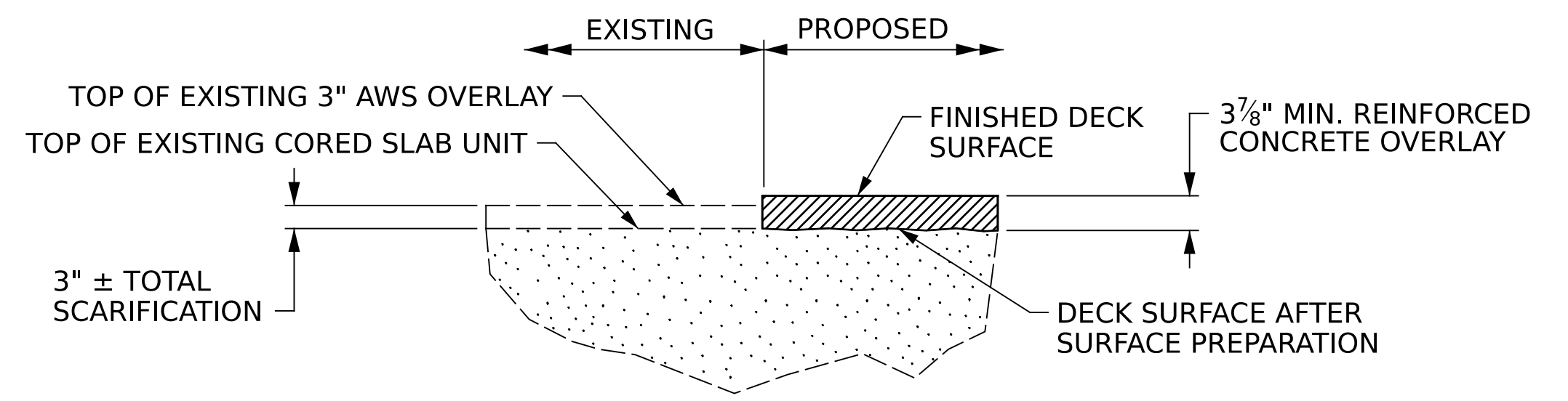
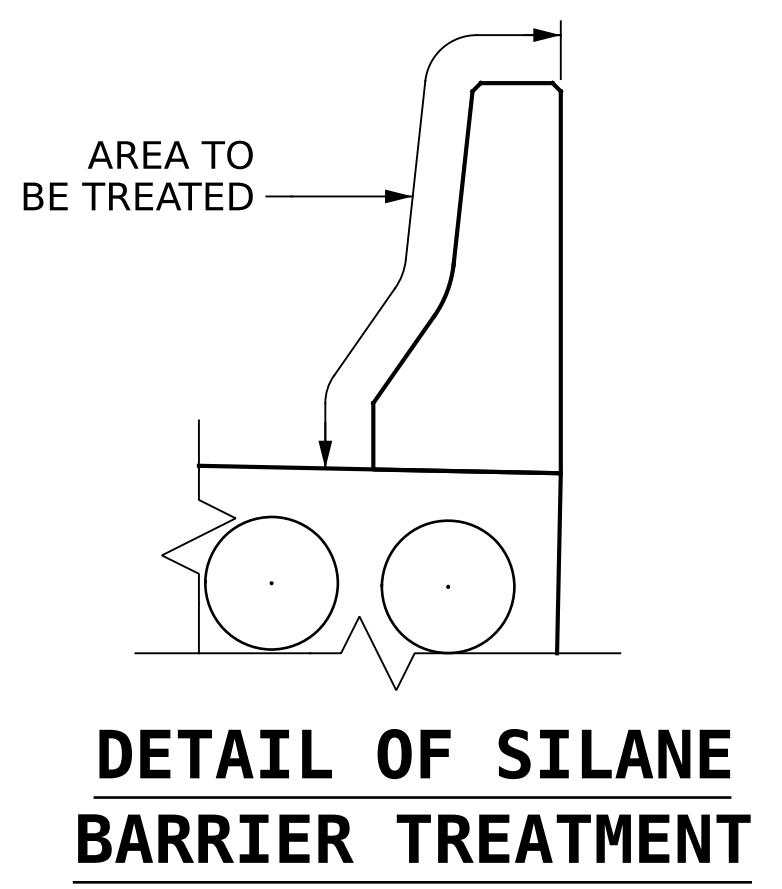
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**NOTE:**  
 THE WORK TO INSTALL DECK DRAIN SCUPPER SHALL BE CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE PAY ITEM FOR CONCRETE WEARING SURFACE.

\* BASED ON PREDICTED FINAL CAMBER AND THEORETICAL GRADE LINE ELEVATIONS FROM THE ORIGINAL DESIGN. FINAL CAMBER MAY VARY.

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070158**

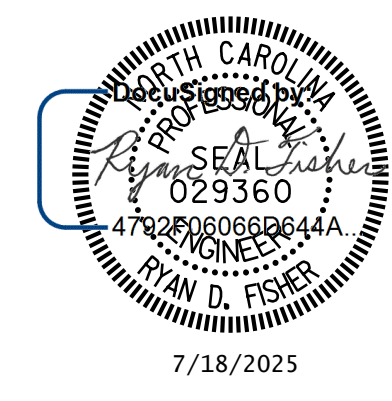


DRAWN BY: T. HARTLEY      DATE: 01/2025  
 CHECKED BY: R. FISHER      DATE: 05/2025



One Glenwood Avenue  
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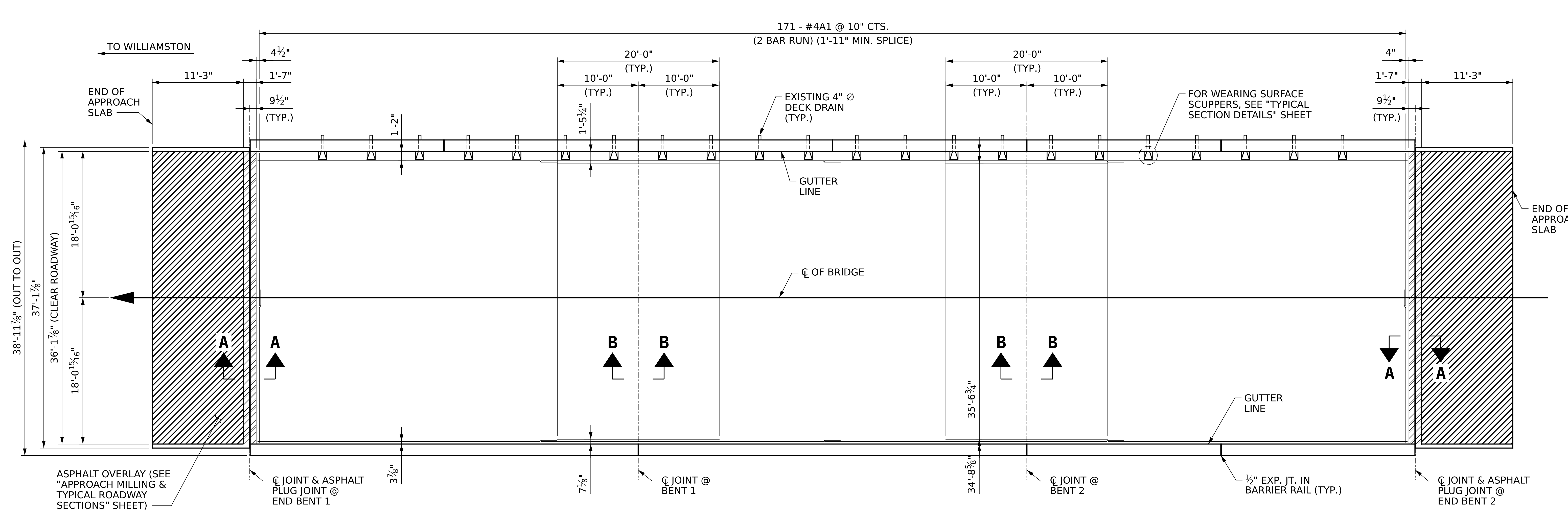


|  |  |     |  |       |              |
|--|--|-----|--|-------|--------------|
| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH |  |     |  |       |              |
| <b>TYPICAL SECTION DETAILS</b>                                     |  |     |  |       |              |
| NO.  |  | BY: |  | DATE: |              |
| 1  |  | 3   |  |       |              |
| 2  |  | 4   |  |       |              |
| REVISIONS  |  |     |  |       | SHEET NO.    |
|  |  |     |  |       | S1-3         |
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APPROACH SLAB @ END BENT 1      SPAN A      SPAN B      SPAN C      APPROACH SLAB @ END BENT 2

**PLAN**

**REINFORCING STEEL BILL OF MATERIAL FOR CONCRETE WEARING SURFACE**

| BAR                         | NO. | SIZE | TYPE | LENGTH      | WEIGHT |
|-----------------------------|-----|------|------|-------------|--------|
| *A1                         | 342 | #4   | STR. | 18'-10"     | 4,303  |
| *B1                         | 260 | #4   | STR. | 37'-0"      | 6,426  |
| *B2                         | 128 | #4   | STR. | 20'-0"      | 1,710  |
| * EPOXY COATED REINF. STEEL |     |      |      | 12,439 LBS. |        |

- CONCRETE WEARING SURFACE
- ASPHALT OVERLAY
- ASPHALT PLUG JOINT

**NOTES:**

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

FOR SECTION A-A AND B-B, SEE "BENT JOINT REPAIR & JOINT DETAILS" SHEET.

THE COST OF REINFORCING STEEL CAST WITH THE CONCRETE WEARING SURFACE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE WEARING SURFACE.

FOR CONCRETE WEARING SURFACE, SEE PCCS DECK AND SUPERSTRUCTURE REPAIR SPECIAL PROVISION.

FOR ASPHALT PLUG JOINT FOR PRESERVATION, SEE SPECIAL PROVISIONS.

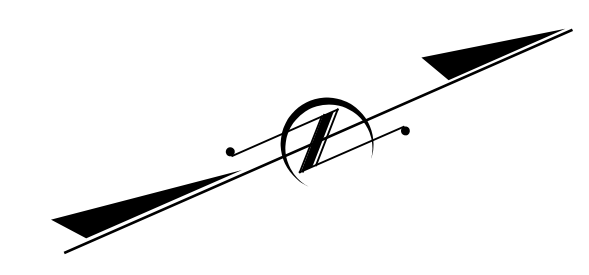
FOR TYPICAL SECTION, SEE SHEET S1-3.

**AS-BUILT REPAIR QUANTITY TABLE**

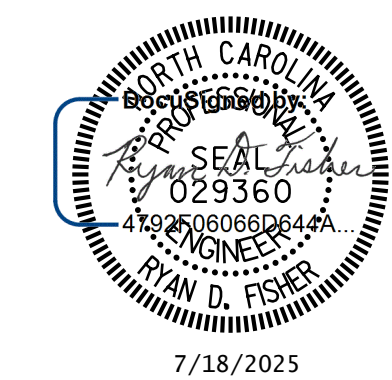
| TOP OF DECK REPAIRS                 |          |        |
|-------------------------------------|----------|--------|
|                                     | ESTIMATE | ACTUAL |
| CONCRETE WEARING SURFACE            | 5,149 SF |        |
| GROOVING BRIDGE FLOORS              | 4,711 SF |        |
| ASPHALT PLUG JOINT FOR PRESERVATION | 73 LF    |        |

**REINFORCING STEEL SPLICE CHART**

| BAR SIZE | SPLICE LENGTH |
|----------|---------------|
| #4       | 1'-11"        |



PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070158**



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

**PLAN OF OVERLAY**

DRAWN BY : T. HARTLEY      DATE : 01/2025  
 CHECKED BY : R. FISHER      DATE : 05/2025



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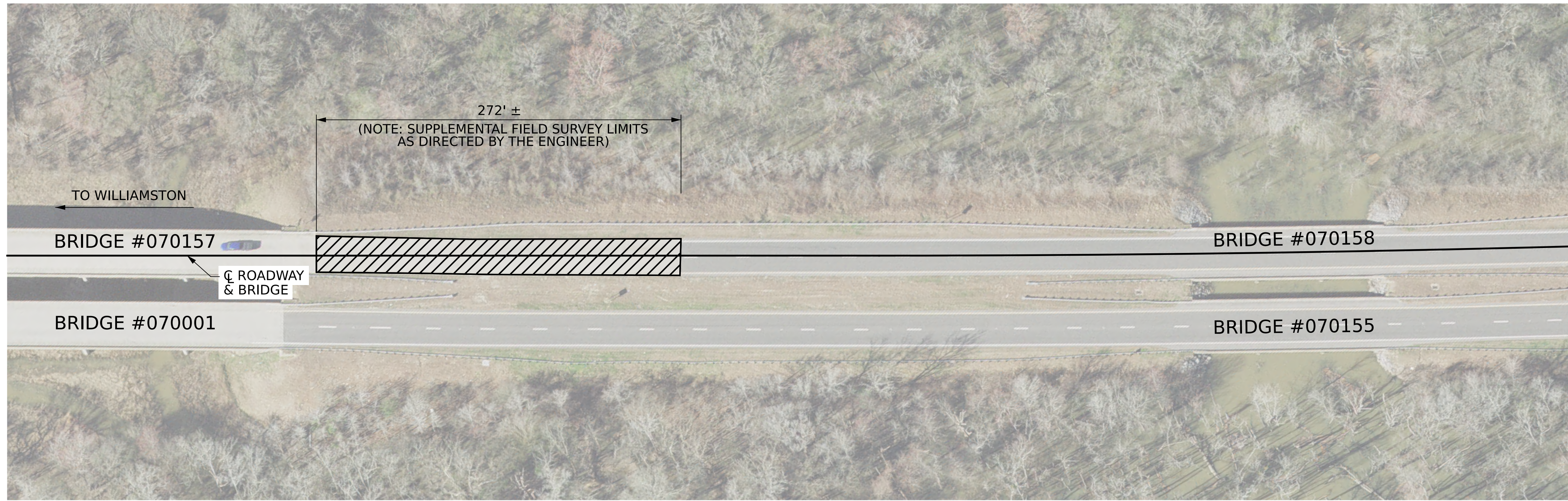
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TOTAL SHEETS: 40

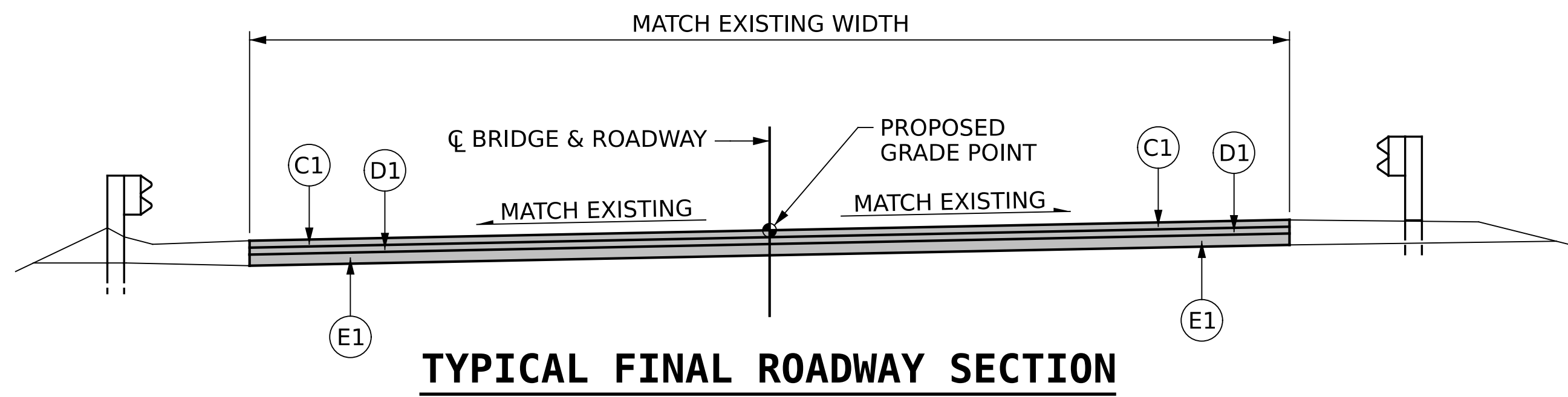








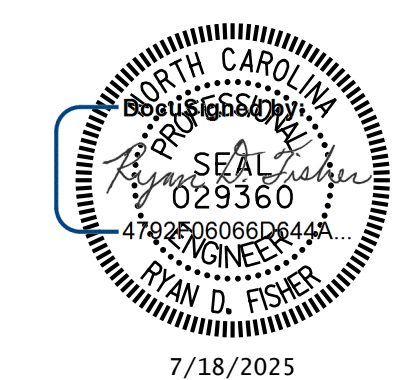
**PLAN**



- C1** PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YARD IN EACH OF TWO LAYERS
- D1** PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD
- E1** PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD.

| SUMMARY OF QUANTITIES                             |          |        |
|---|----------|--------|
| DESCRIPTION                                       | ESTIMATE | ACTUAL |
| REMOVAL OF EXISTING CONCRETE PAVEMENT             | 805 SY   |        |
| ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C       | 140 TONS |        |
| ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C | 190 TONS |        |
| ASPHALT CONCRETE BASE COURSE, TYPE B25.0C         | 230 TONS |        |
| ASPHALT BINDER FOR PLANT MIX                      | 30 TONS  |        |

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070158**



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**CONCRETE SLAB  
 REMOVAL AND FULL  
 DEPTH PAVEMENT**

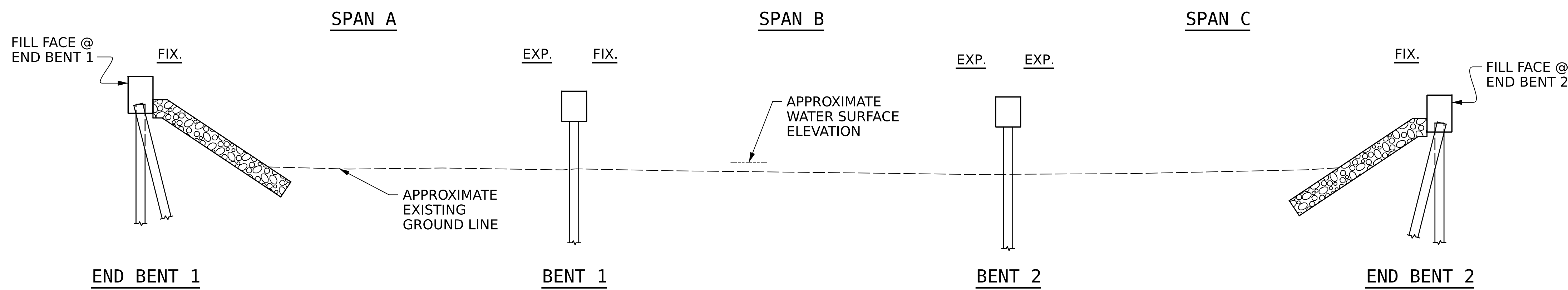
DRAWN BY : T. HARTLEY DATE : 01/2025  
 CHECKED BY : R. FISHER DATE : 05/2025



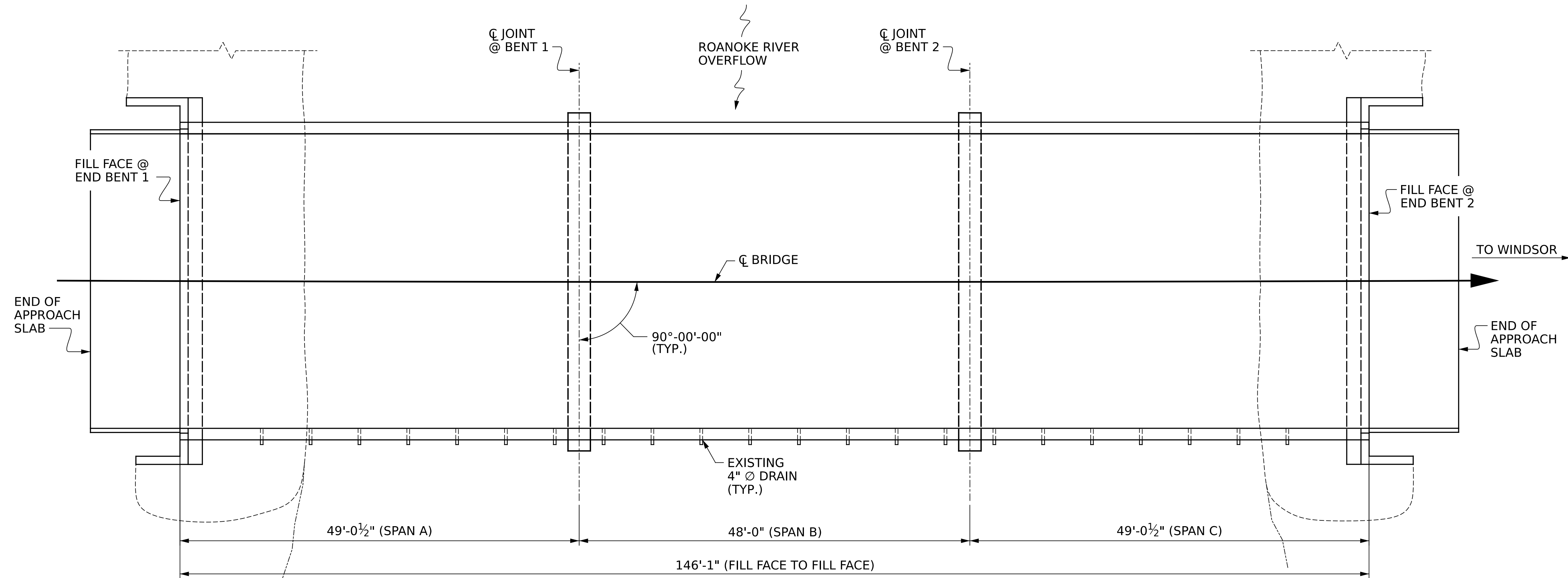
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| 2         |     |       | 4   |     |       | 40           |

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**SECTION ALONG CL BRIDGE**



**PLAN**

(PILES NOT SHOWN FOR CLARITY)

**NOTES:**

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 09/05/2024.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS/ROUTINE INSPECTION REPORT.

**SCOPE OF WORK**

- REMOVE EXISTING ASPHALT WEARING SURFACE ON BRIDGE DECK AND APPROACH ROADWAY AND PARTIALLY REMOVE TOP OF PCCS UNITS BY SCARIFICATION.
- PLACE REINFORCED CONCRETE WEARING SURFACE.
- REPLACE PCCS POST TENSIONING STRANDS.
- SAW CUT EXISTING SHEAR KEYS, REMOVE EXISTING SHEAR KEY GROUT, AND FILL SHEAR KEYS WITH REPAIR MORTAR.
- PLACE GROUT IN JOINT OPENINGS AT BENTS 1 AND 2.
- INSTALL KEVLAR WATERPROOFING JOINT TAPE OVER LONGITUDINAL SHEAR KEYS AND TRANSVERSE DECK JOINTS.
- INSTALL ASPHALT PLUG JOINTS AT END BENTS.
- REMOVE & REST EXISTING GUARDRAIL, MILL AND RESURFACE APPROACHES AND PLACE PAVEMENT MARKINGS.
- PLACE FLOWABLE FILL AT END BENTS.
- PREPARE THE BRIDGE CONCRETE BARRIER RAIL SURFACES AND APPLY SILANE COATING.
- PREPARE END OF BENT CAPS 1 & 2 SURFACES AND APPLY SILANE COATING.

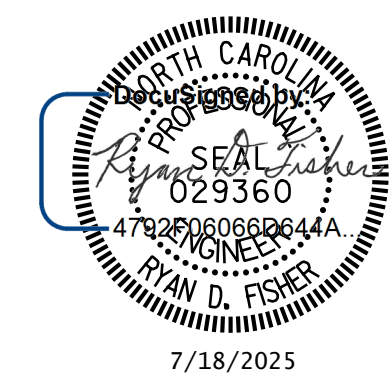
**SEQUENCE OF CONSTRUCTION FOR SURFACE PREPARATION, SHEAR KEYS, AND POST TENSIONING (P/T)**

- 1) REMOVE EXISTING AWS OVERLAY AND NO MORE THAN 1/8" OF CONCRETE FROM PCCS UNITS.
- 2) DETENSION AND REMOVE EXISTING TRANSVERSE P/T STRANDS, REMOVE EXISTING SHEAR KEY GROUT AND EXISTING JOINT MATERIAL AT BENTS.
- 3) INSTALL NEW P/T STRAND AND APPLY AN MAINTAIN INITIAL TENSION LOAD OF 10,000 LBS.
- 4) INSTALL REPAIR MORTAR IN LONGITUDINAL SHEAR KEYS.
- 5) APPLY FINAL P/T LOAD OF 43,950 LBS.
- 6) PLACE GROUT AT BENT JOINTS.
- 7) INSTALL KEVLAR WATERPROOFING JOINT TAPE AT LONGITUDINAL SHEAR KEYS AND BENT JOINTS.
- 8) PLACE REINFORCED CONCRETE WEARING SURFACE.

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070155**

I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**GENERAL DRAWING**  
 FOR NBL BRIDGE ON  
 US 13/17 OVER  
 ROANOKE RIVER  
 OVERFLOW

DRAWN BY: T. HARTLEY DATE: 01/2025  
 CHECKED BY: R. FISHER DATE: 05/2025

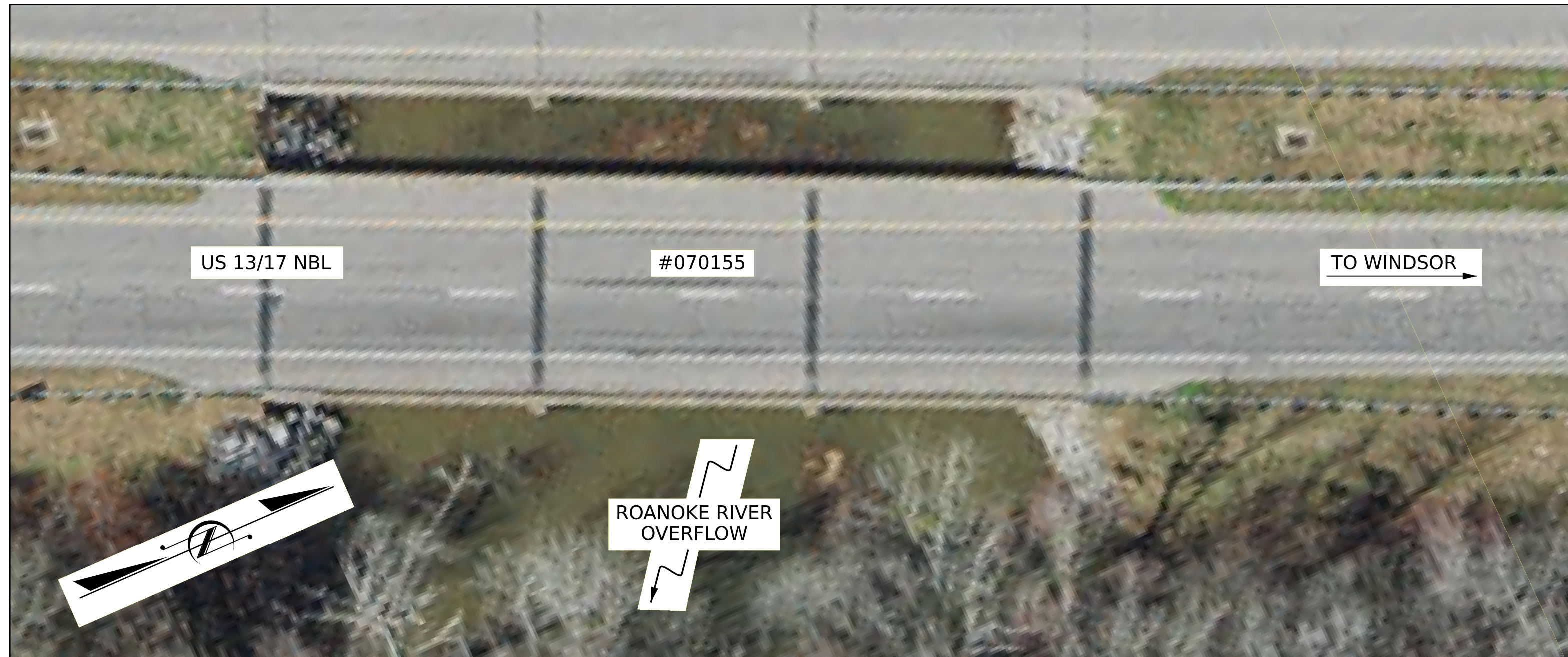


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TOTAL SHEETS: 40

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**LOCATION SKETCH**

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

**GENERAL NOTES**

SEE CONTRACT DOCUMENTS FOR SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR CONCRETE OVERLAY AND SUPERSTRUCTURE REPAIRS.

FOR NEW ASPHALT PLACEMENT, SEE STANDARD SPECIFICATIONS.

THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT DUE TO THE NATURE OF PRESERVATION PROJECTS, THE EXTENT OF WORK CANNOT ALWAYS BE ACCURATELY DETERMINED PRIOR TO COMMENCEMENT OF WORK. REPAIR LOCATIONS AND ESTIMATES OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN WHAT IS SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

WORK ON THE BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW THE BRIDGE, EXCEPT WHERE THE CONTRACTOR'S PLAN USES PLATFORMS, NETS, SCREENS OR OTHER PROTECTIVE DEVICES TO CAPTURE THE MATERIAL. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.

THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SUCH THAT THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY PART OF THE EXISTING STRUCTURE THAT IS TO REMAIN IN PLACE, THE DAMAGED AREA SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT NO ADDITIONAL COST TO THE DEPARTMENT.

ANY DAMAGE TO EXISTING REINFORCING STEEL DURING CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND PERFORMED AT NO ADDITIONAL COST TO THE DEPARTMENT.

| BRIDGE COORDINATES |                   |
|--------------------|-------------------|
| LATITUDE           | LONGITUDE         |
| 35° - 51' - 47.88" | 77° - 2' - 15.27" |

PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPLETE SEQUENCE OF TASKS FOR EACH OPERATION AFFECTING THE BRIDGE SURFACE AND/OR TRAFFIC.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

ALL PAVEMENT MARKINGS WILL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE ENGINEER.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATIONS OF THE BRIDGE DECK. THE CONTRACTOR SHALL TAKE CARE THAT ANY CONSTRUCTION DEBRIS THAT COLLECTS IN THE DRAINS IS CONTAINED. DRAINS IN SHOULDERS OF ADJACENT TRAVEL LANE(S) SHALL BE KEPT FREE AND CLEAR OF DEBRIS.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

FOR POST TENSIONING STRAND REPLACEMENT, SEE PCCS POST TENSIONING REPLACEMENT SPECIAL PROVISIONS.

FOR SCARIFYING BRIDGE DECK, SHEAR KEY REPAIRS, BENT JOINT REPAIRS, AND CONCRETE WEARING SURFACE, SEE PCCS DECK AND SUPERSTRUCTURE REPAIR SPECIAL PROVISIONS.

THE CONTRACTOR SHALL TAKE CARE DURING JOINT REHAB OPERATIONS NOT TO DROP ANY MATERIAL BELOW THE BRIDGE WITHOUT PROTECTIVE DEVICES TO CATCH THE MATERIAL. FOR BENT JOINT REPAIRS, ANY MATERIAL DEPOSITED ON BENT CAPS OR BELOW SHALL BE COLLECTED AND DISPOSED OF BY THE CONTRACTOR AT NO EXTRA COST TO THE DEPARTMENT.

FOR ASPHALT PLUG JOINT FOR PRESERVATION, SEE SPECIAL PRESERVATIONS.

FOR KEVLAR WATERPROOFING JOINT TAPE, SEE SPECIAL PROVISIONS.

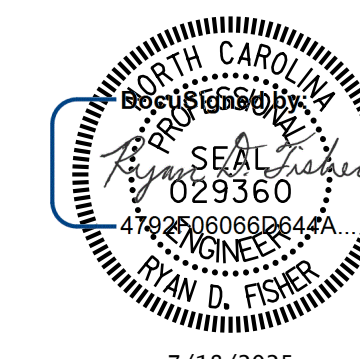
FOR VERY HIGH PERFORMANCE CONCRETE MATERIAL, SEE SPECIAL PROVISIONS.

FOR FLOWABLE FILL, SEE SPECIAL PROVISIONS.

FOR SURFACE PREPARATION AND SILANE TREATMENT OF CONCRETE, SEE SPECIAL PROVISIONS.

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070155**

SHEET 2 OF 2



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**GENERAL DRAWING**  
 FOR NBL BRIDGE  
 ON US 13/17 OVER  
 ROANOKE RIVER  
 OVERFLOW

DRAWN BY : T. HARTLEY DATE : 01/2025  
 CHECKED BY : R. FISHER DATE : 05/2025

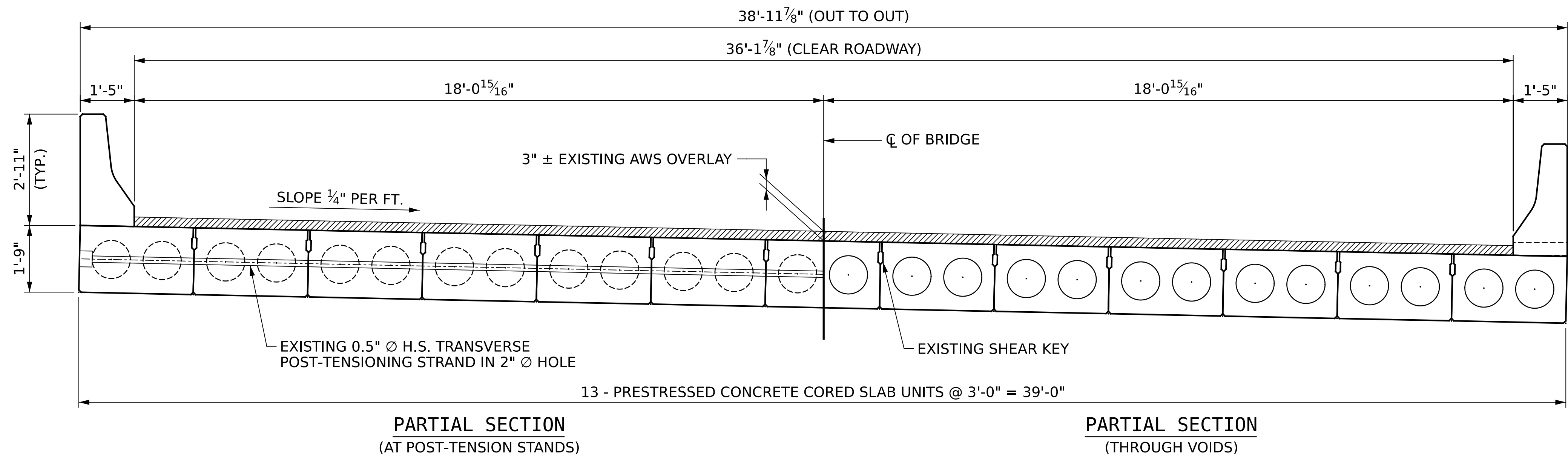


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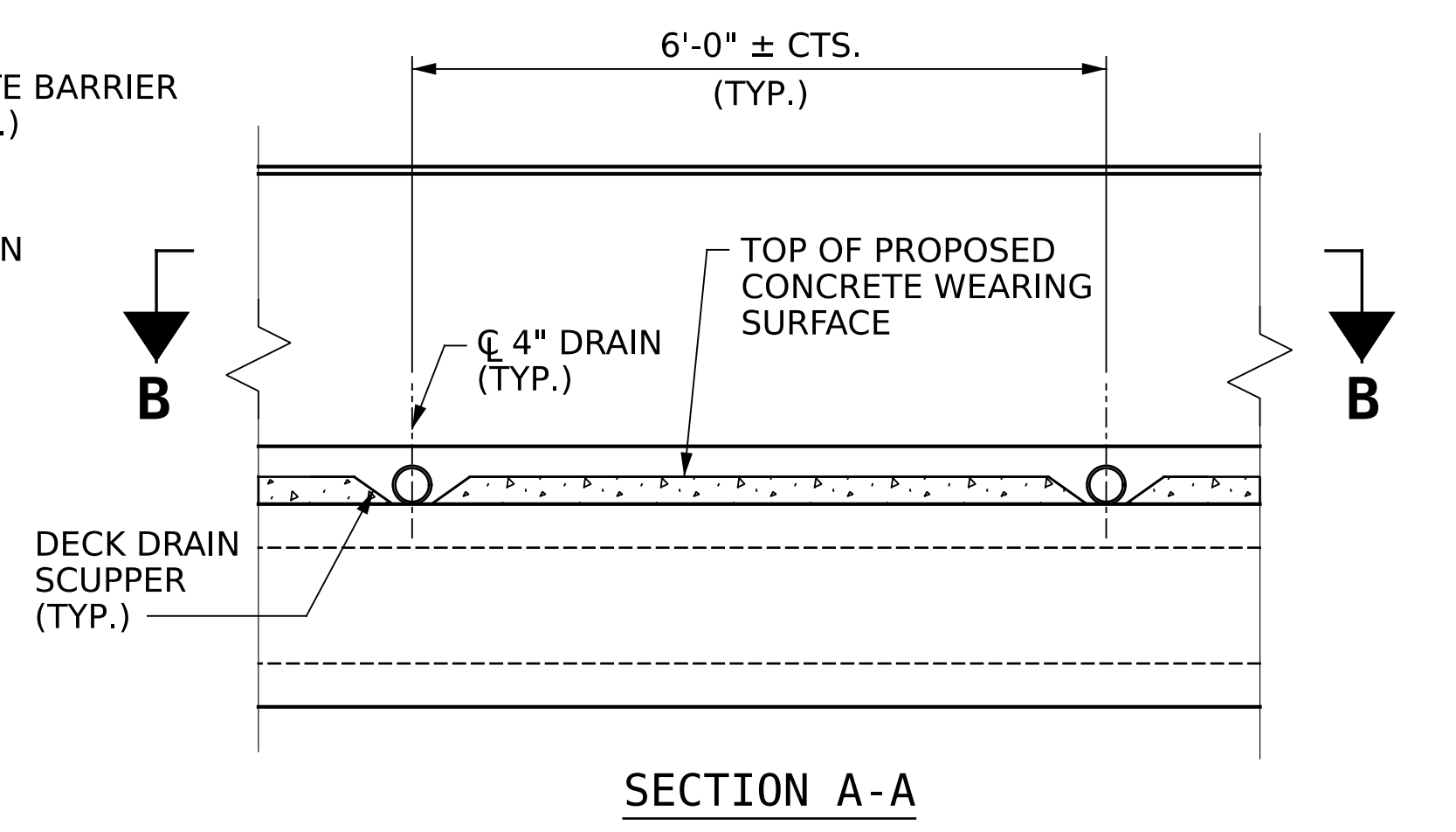
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TOTAL SHEETS: 40

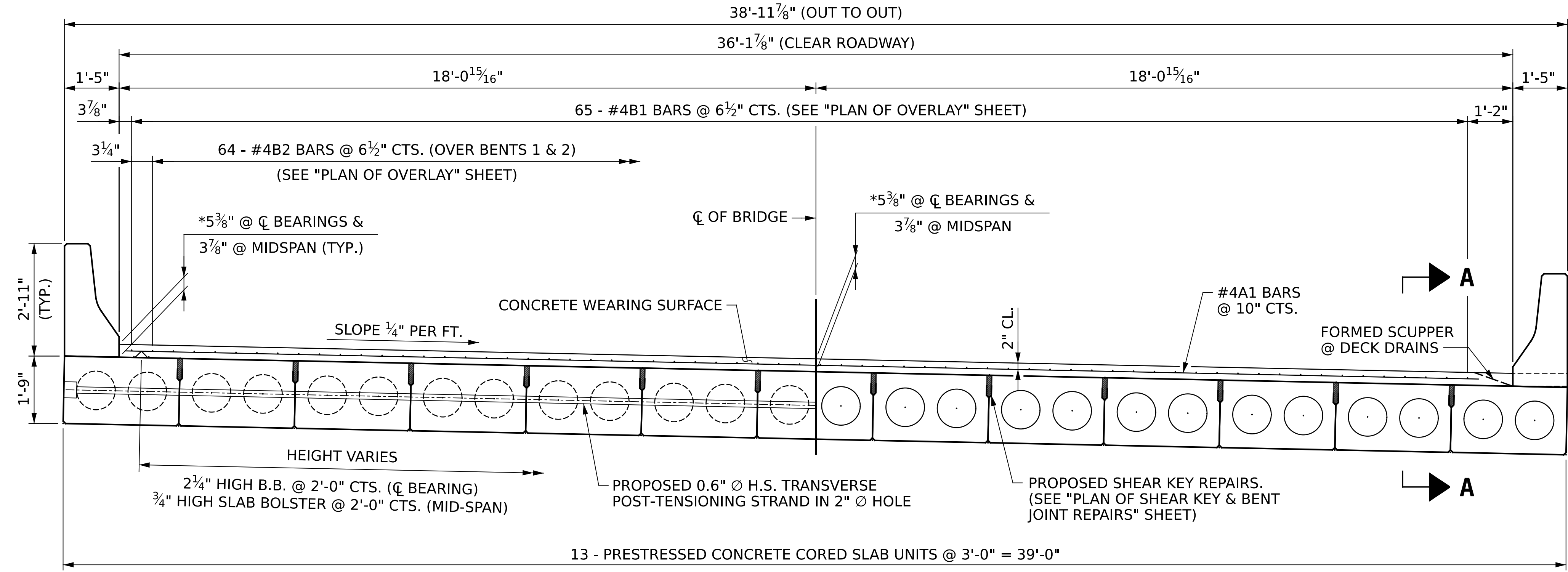
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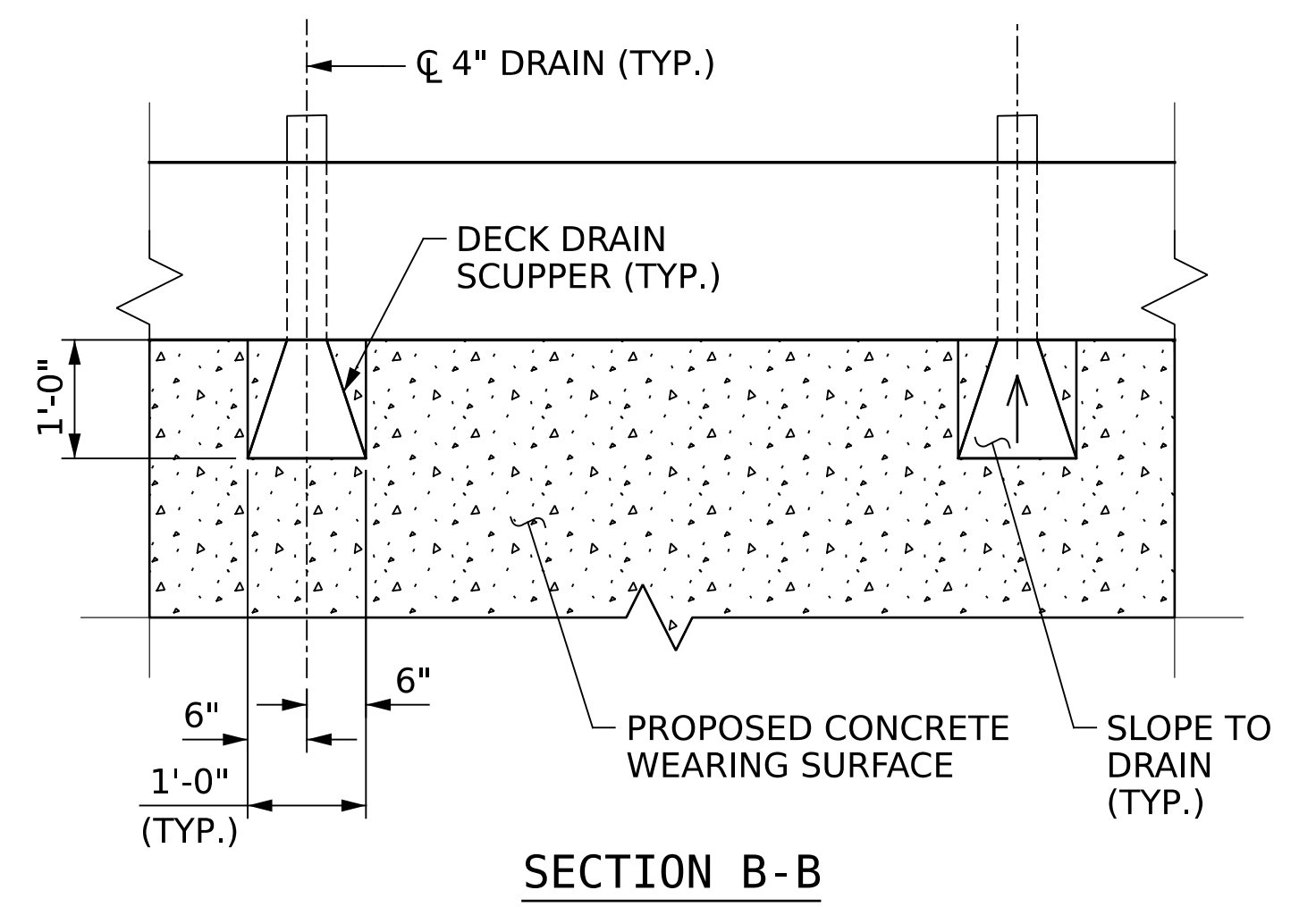
**TYPICAL SECTION**  
(EXISTING)



**SECTION A-A**



**TYPICAL SECTION**  
(PROPOSED)

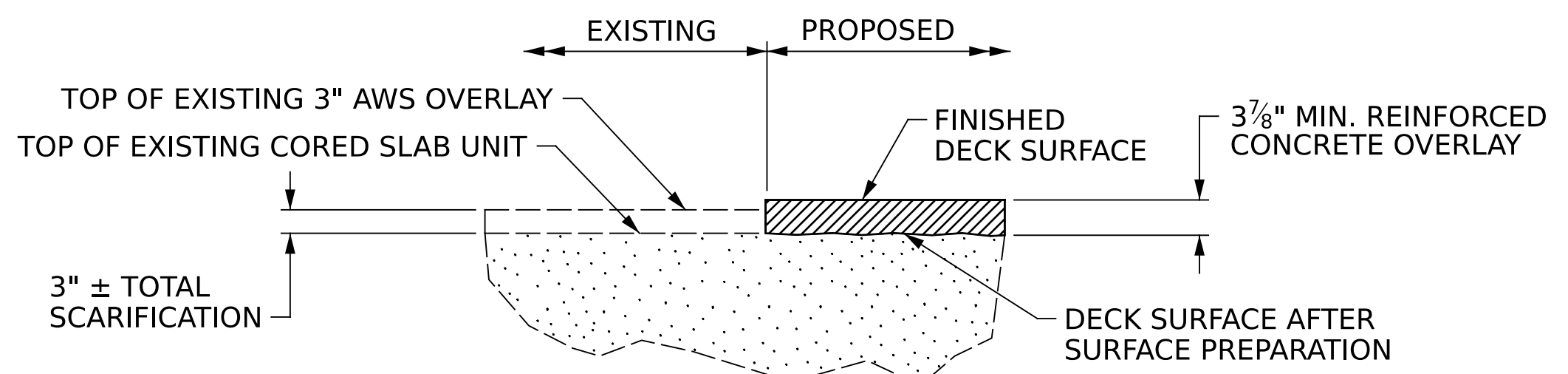
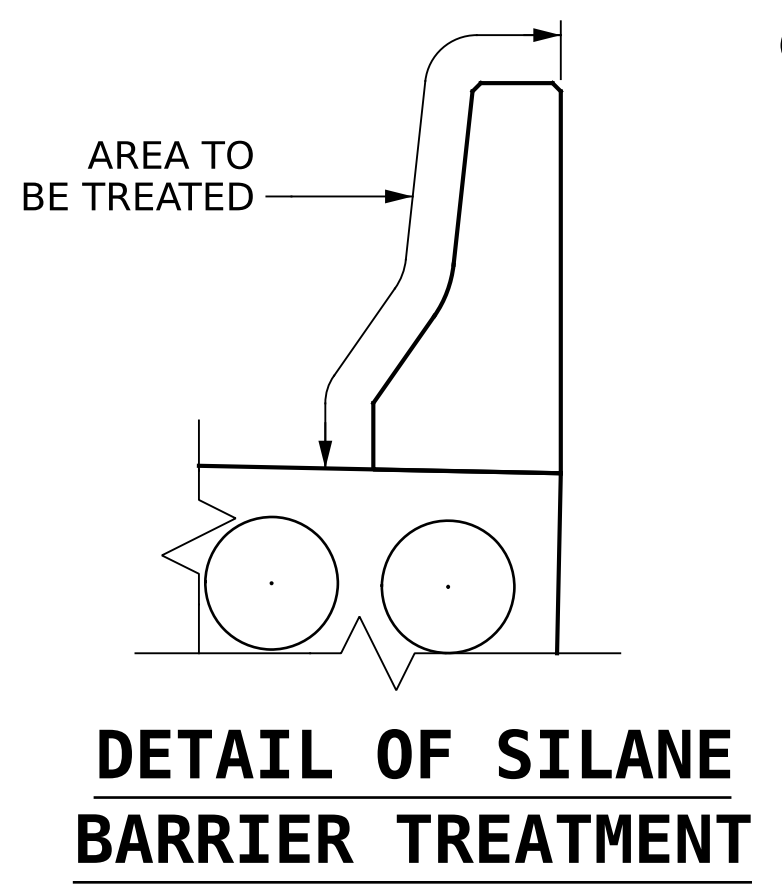


**SECTION B-B**

**NOTE:**  
THE WORK TO INSTALL DECK DRAIN SCUPPER SHALL BE CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE PAY ITEM FOR CONCRETE WEARING SURFACE.

\* BASED ON PREDICTED FINAL CAMBER AND THEORETICAL GRADE LINE ELEVATIONS FROM THE ORIGINAL DESIGN. FINAL CAMBER MAY VARY.

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
BRIDGE: **070155**



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

**TYPICAL SECTION DETAILS**

7/18/2025

DRAWN BY: T. HARTLEY DATE: 01/2025  
CHECKED BY: R. FISHER DATE: 05/2025



One Glenwood Avenue  
Suite 900  
Raleigh, NC 27603  
919-420-7660  
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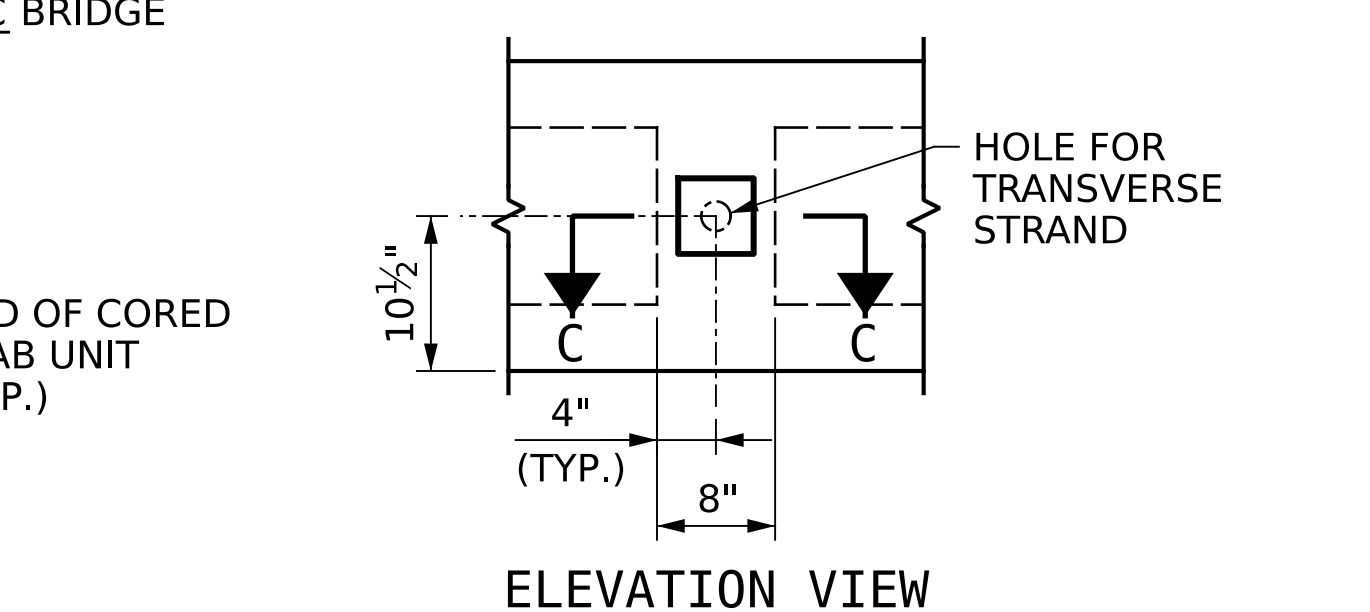
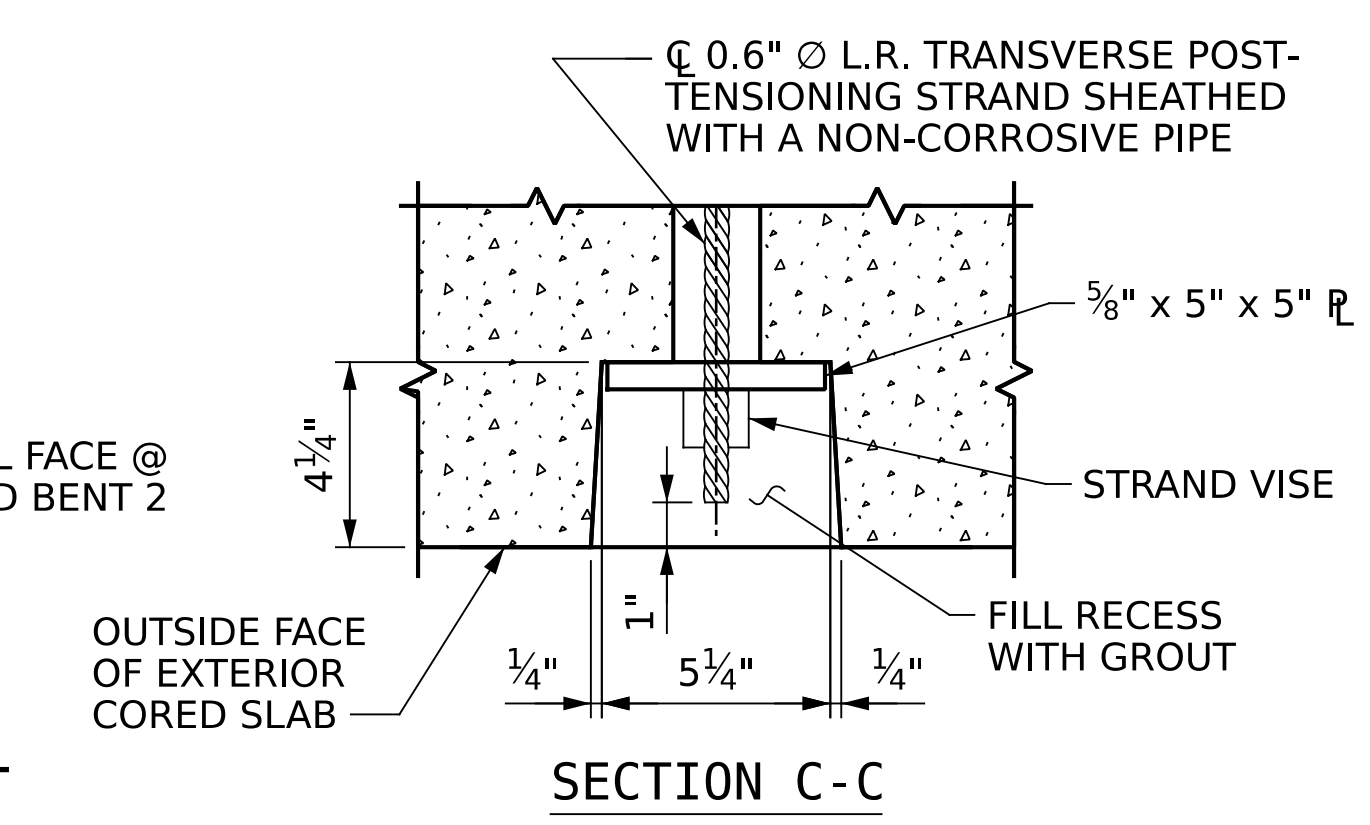
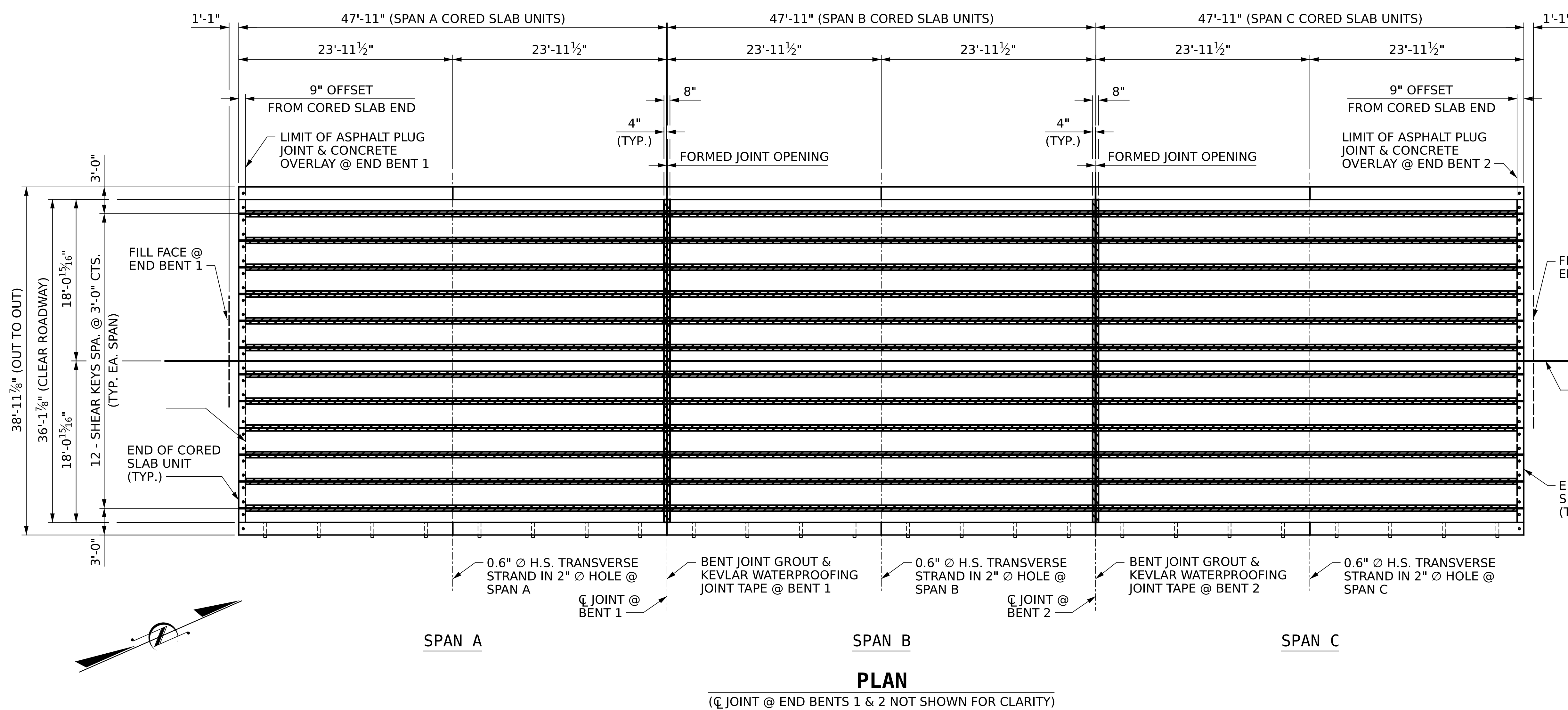
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| AS-BUILT REPAIR QUANTITY TABLE     |            |        |
|------------------------------------|------------|--------|
| TOP OF DECK REPAIRS                |            |        |
|                                    | ESTIMATE   | ACTUAL |
| SHEAR KEY REPAIRS                  | 1,710.0 LF |        |
| BENT JOINT REPAIRS                 | 78.0 LF    |        |
| KEVLAR WATERPROOFING JOINT TAPE    | 1,765.3 LF |        |
| POST TENSIONING STRAND REPLACEMENT | 3 EA       |        |



### PCCS POST TENSIONING DETAILS

POST TENSIONING SEQUENCE:

PERFORM P/T IN STAGES AFTER DECK SURFACE PREPARATION AND SHEAR KEY DEMOLITION IS COMPLETE.

PRIOR TO PLACEMENT OF REPAIR MORTAR IN THE PREPARED SHEAR KEYS, REMOVE EXISTING P/T, INSTALL NEW P/T STRAND, AND TENSION AND MAINTAIN AN INITIAL LOAD OF 10,000 LBS.

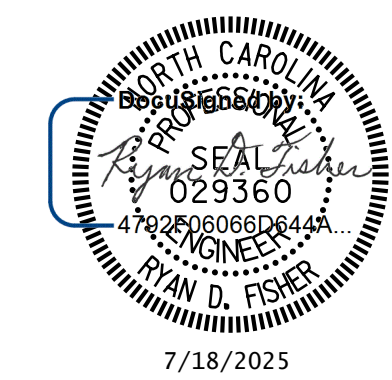
PLACE REPAIR MORTAR IN THE SHEAR KEYS, APPLY THE FINAL P/T LOAD OF 43,950 LBS AFTER SHEAR KEY MORTAR HAS ACHIEVED A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI AND NO LESS THAN A MINIMUM OF THREE DAYS OF CURING FOR THE REPAIR MORTAR.

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070155**

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

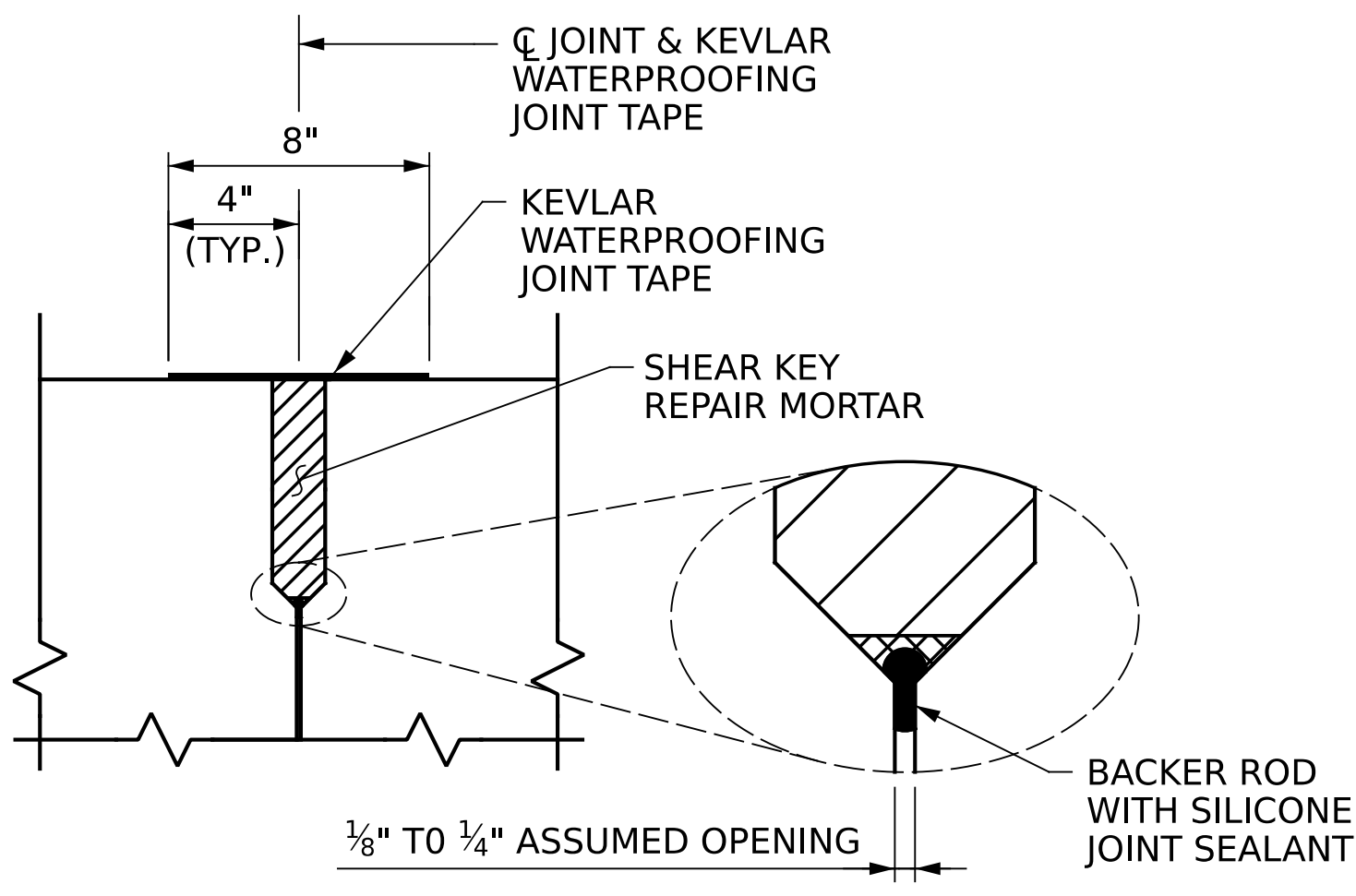
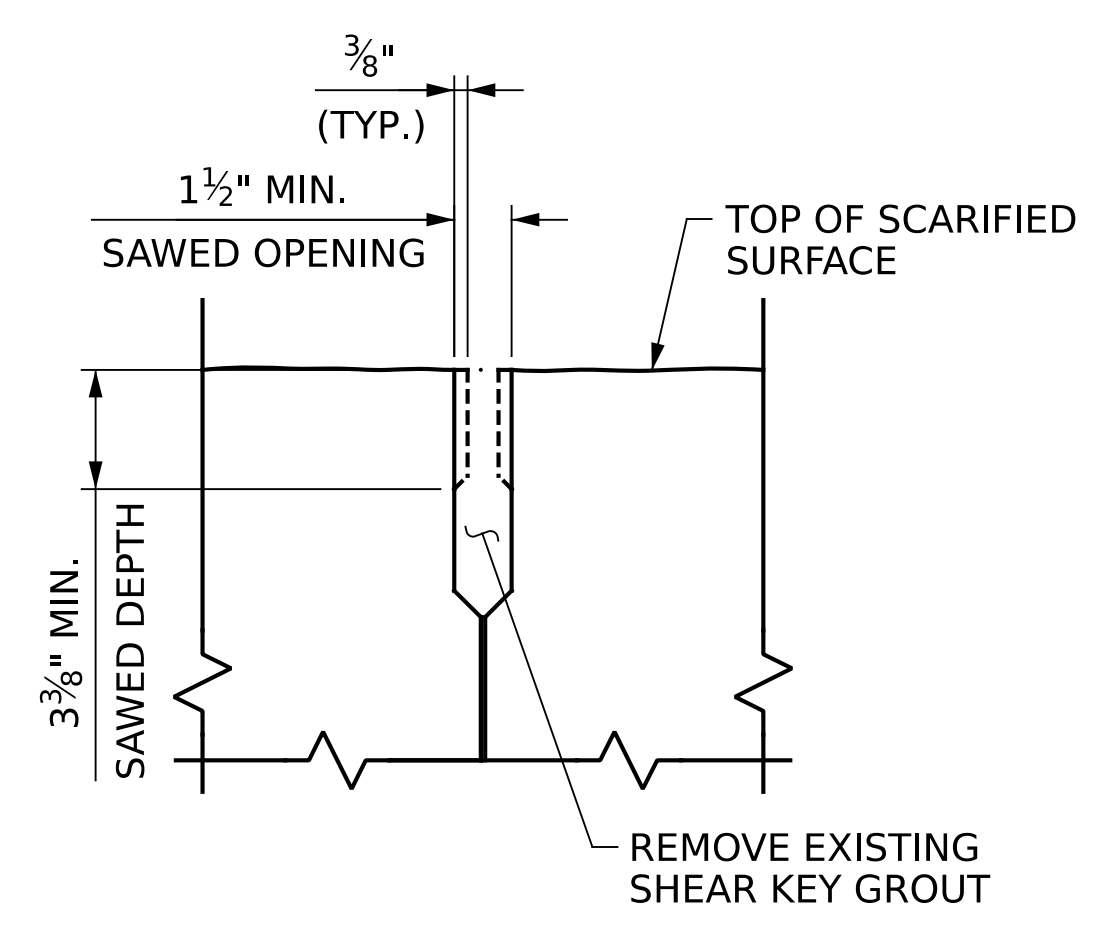
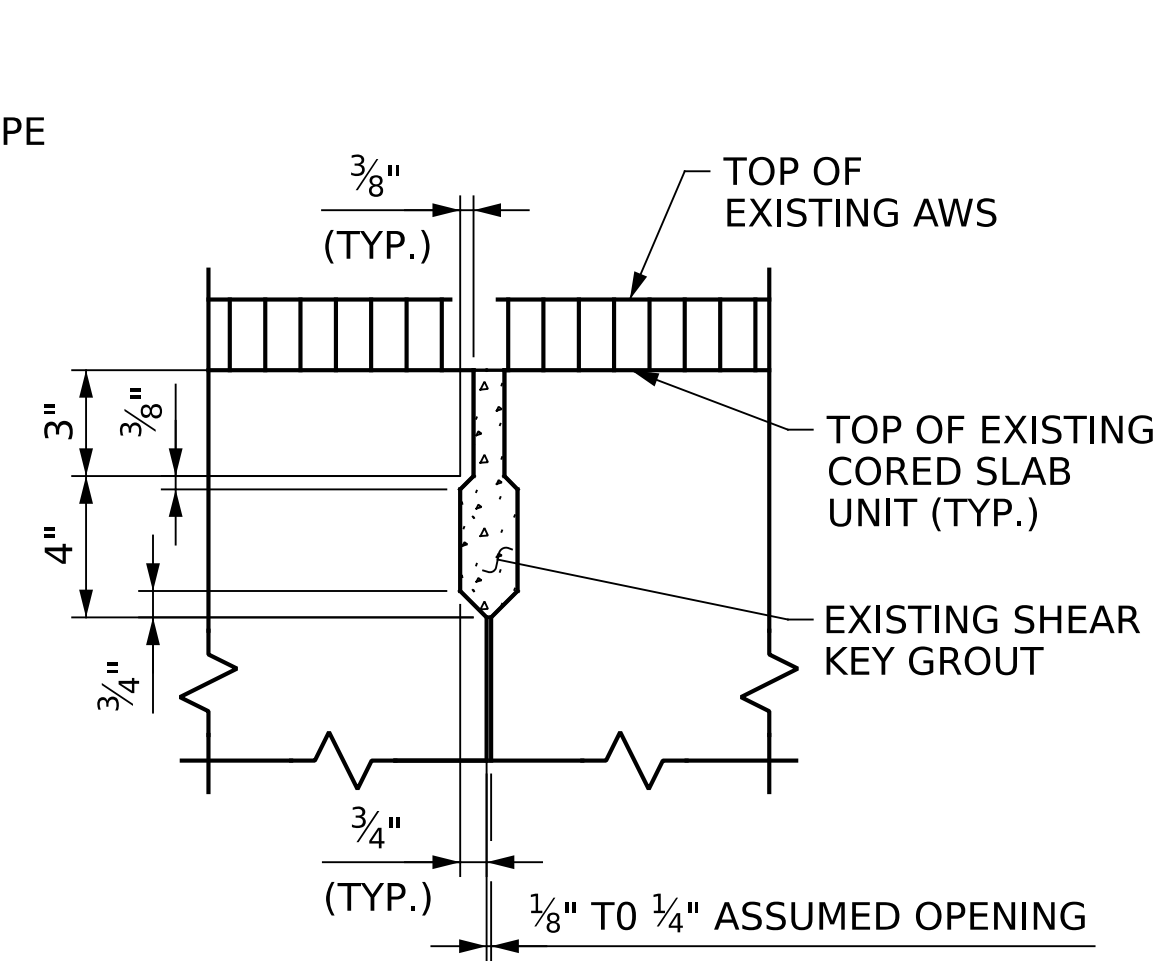
**PLAN OF SHEAR KEY & BENT JOINT REPAIRS**

7/18/2025



- KEVLAR WATERPROOFING JOINT TAPE
- SHEAR KEY & BENT JOINT REPAIRS

**NOTES:**  
 FOR POST TENSIONING STRAND REPLACEMENT, SEE PCCS POST TENSIONING REPLACEMENT SPECIAL PROVISION.  
 FOR SHEAR KEY REPAIRS AND BENT JOINT REPAIRS, SEE PCCS DECK AND SUPERSTRUCTURE REPAIR SPECIAL PROVISION.  
 FOR BENT JOINT REPAIR GROUT DETAILS, SEE "BENT JOINT REPAIR & JOINT DETAILS" SHEET.  
 FOR KEVLAR WATERPROOFING JOINT TAPE, SEE SPECIAL PROVISIONS.



### SHEAR KEY REPAIR DETAILS

DRAWN BY: T. HARTLEY DATE: 01/2025  
 CHECKED BY: R. FISHER DATE: 05/2025



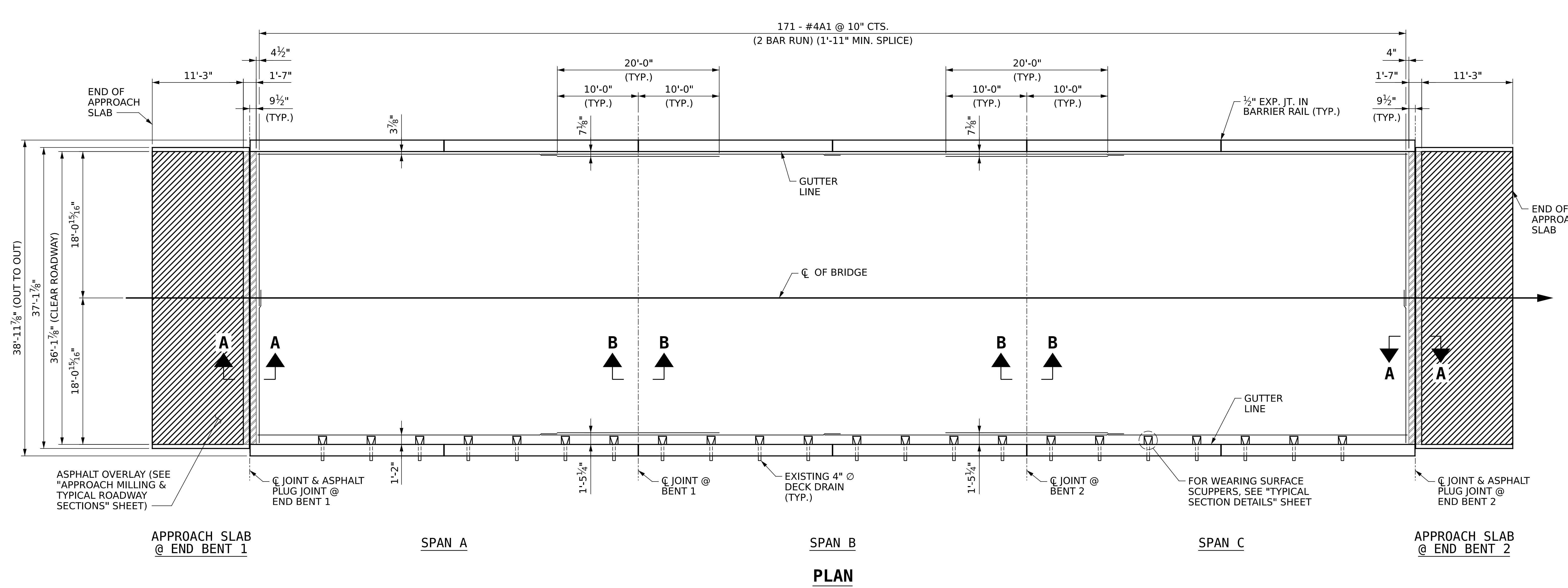
One Glenwood Avenue  
 Suite 900  
 Raleigh, NC 27603  
 919-420-7660  
 NC Lic. No. F-0270

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| 2         |     |       | 4   |           |

TOTAL SHEETS: 40

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**REINFORCING STEEL BILL OF MATERIAL FOR CONCRETE WEARING SURFACE**

| BAR                         | NO. | SIZE | TYPE | LENGTH      | WEIGHT |
|-----------------------------|-----|------|------|-------------|--------|
| *A1                         | 342 | #4   | STR. | 18'-10"     | 4,303  |
| *B1                         | 260 | #4   | STR. | 37'-0"      | 6,426  |
| *B2                         | 128 | #4   | STR. | 20'-0"      | 1,710  |
| * EPOXY COATED REINF. STEEL |     |      |      | 12,439 LBS. |        |

- CONCRETE WEARING SURFACE
- ASPHALT OVERLAY
- ASPHALT PLUG JOINT

**AS-BUILT REPAIR QUANTITY TABLE**

| TOP OF DECK REPAIRS                 |          |        |
|-------------------------------------|----------|--------|
|                                     | ESTIMATE | ACTUAL |
| CONCRETE WEARING SURFACE            | 5,149 SF |        |
| GROOVING BRIDGE FLOORS              | 4,711 SF |        |
| ASPHALT PLUG JOINT FOR PRESERVATION | 73 LF    |        |

**REINFORCING STEEL SPLICE CHART**

| BAR SIZE | SPLICE LENGTH |
|----------|---------------|
| #4       | 1'-11"        |

**NOTES:**

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

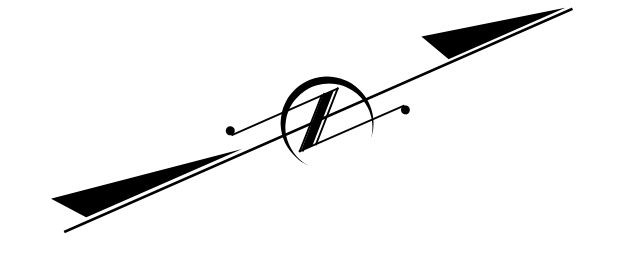
FOR SECTION A-A AND B-B, SEE "BENT JOINT REPAIR & JOINT DETAILS" SHEET.

THE COST OF REINFORCING STEEL CAST WITH THE CONCRETE WEARING SURFACE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE WEARING SURFACE.

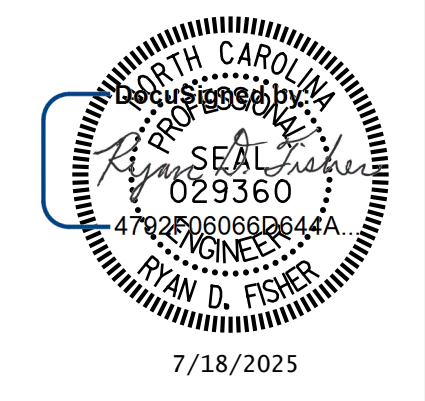
FOR CONCRETE WEARING SURFACE, SEE PCCS DECK AND SUPERSTRUCTURE REPAIR SPECIAL PROVISION.

FOR ASPHALT PLUG JOINT FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR TYPICAL SECTION, SEE SHEET S2-3.



PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070155**



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**PLAN OF OVERLAY**

DRAWN BY: T. HARTLEY DATE: 01/2025  
 CHECKED BY: R. FISHER DATE: 05/2025



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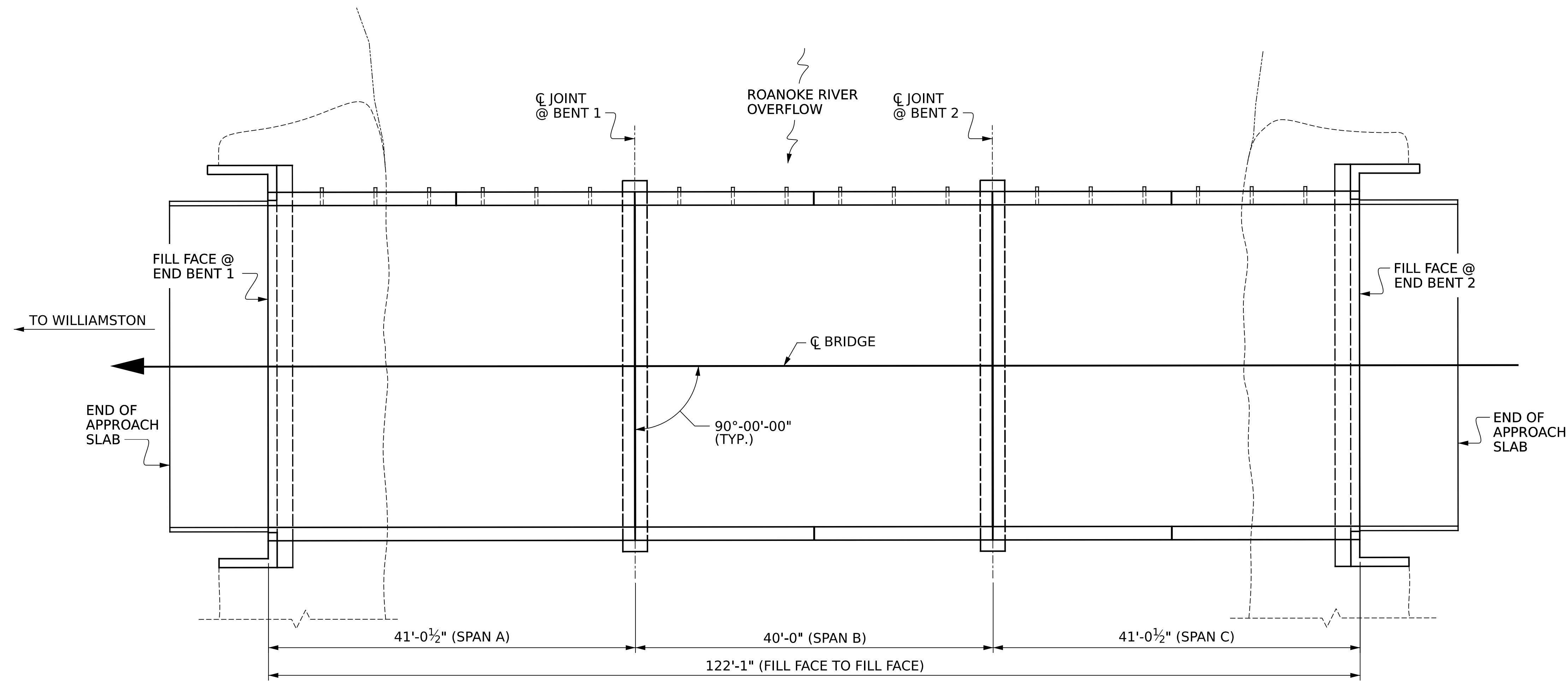
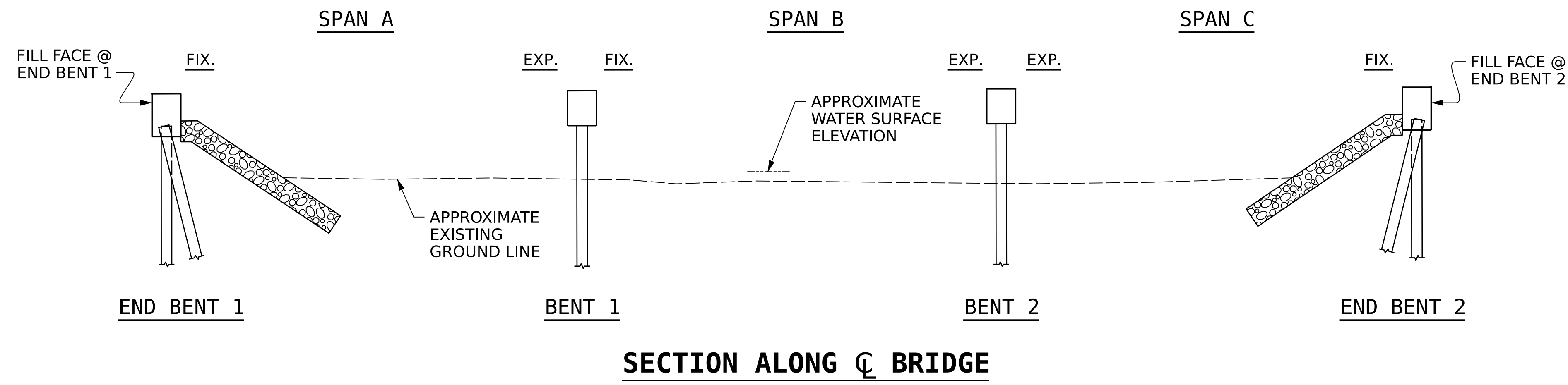
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| 2         |     |       |  | 40           |







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**PLAN**  
(PILES NOT SHOWN FOR CLARITY)

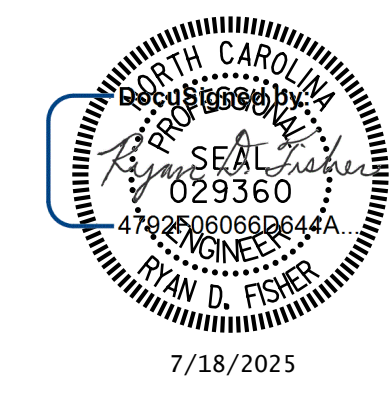
I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

- NOTES:**  
 GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 09/05/2024.
- BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS/ROUTINE INSPECTION REPORT.
- SCOPE OF WORK**
- REMOVE EXISTING ASPHALT WEARING SURFACE ON BRIDGE DECK AND APPROACH ROADWAY AND PARTIALLY REMOVE TOP OF PCCS UNITS BY SCARIFICATION.
  - PLACE REINFORCED CONCRETE WEARING SURFACE.
  - REPLACE PCCS POST TENSIONING STRANDS.
  - SAW CUT EXISTING SHEAR KEYS, REMOVE EXISTING SHEAR KEY GROUT, AND FILL SHEAR KEYS WITH REPAIR MORTAR.
  - PLACE GROUT IN JOINT OPENINGS AT BENTS 1 AND 2.
  - INSTALL KEVLAR WATERPROOFING JOINT TAPE OVER LONGITUDINAL SHEAR KEYS AND TRANSVERSE DECK JOINTS.
  - INSTALL ASPHALT PLUG JOINTS AT END BENTS.
  - REMOVE & REST EXISTING GUARDRAIL, MILL AND RESURFACE APPROACHES AND PLACE PAVEMENT MARKINGS.
  - PLACE FLOWABLE FILL AT END BENTS.
  - PREPARE THE BRIDGE CONCRETE BARRIER RAIL SURFACES AND APPLY SILANE COATING.
  - PREPARE END OF BENT CAPS 1 & 2 SURFACES AND APPLY SILANE COATING.

- SEQUENCE OF CONSTRUCTION FOR SURFACE PREPARATION, SHEAR KEYS, AND POST TENSIONING (P/T)**
- 1) REMOVE EXISTING AWS OVERLAY AND NO MORE THAN 1/8" OF CONCRETE FROM PCCS UNITS.
  - 2) DETENSION AND REMOVE EXISTING TRANSVERSE P/T STRANDS, REMOVE EXISTING SHEAR KEY GROUT AND EXISTING JOINT MATERIAL AT BENTS.
  - 3) INSTALL NEW P/T STRAND AND APPLY AN MAINTAIN INITIAL TENSION LOAD OF 10,000 LBS.
  - 4) INSTALL REPAIR MORTAR IN LONGITUDINAL SHEAR KEYS.
  - 5) APPLY FINAL P/T LOAD OF 43,950 LBS.
  - 6) PLACE GROUT AT BENT JOINTS.
  - 7) INSTALL KEVLAR WATERPROOFING JOINT TAPE AT LONGITUDINAL SHEAR KEYS AND BENT JOINTS.
  - 8) PLACE REINFORCED CONCRETE WEARING SURFACE.

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070159**



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**GENERAL DRAWING**  
 FOR SBL BRIDGE ON  
 US 13/17 OVER  
 ROANOKE RIVER  
 OVERFLOW

DRAWN BY : T. HARTLEY DATE : 01/2025  
 CHECKED BY : R. FISHER DATE : 05/2025



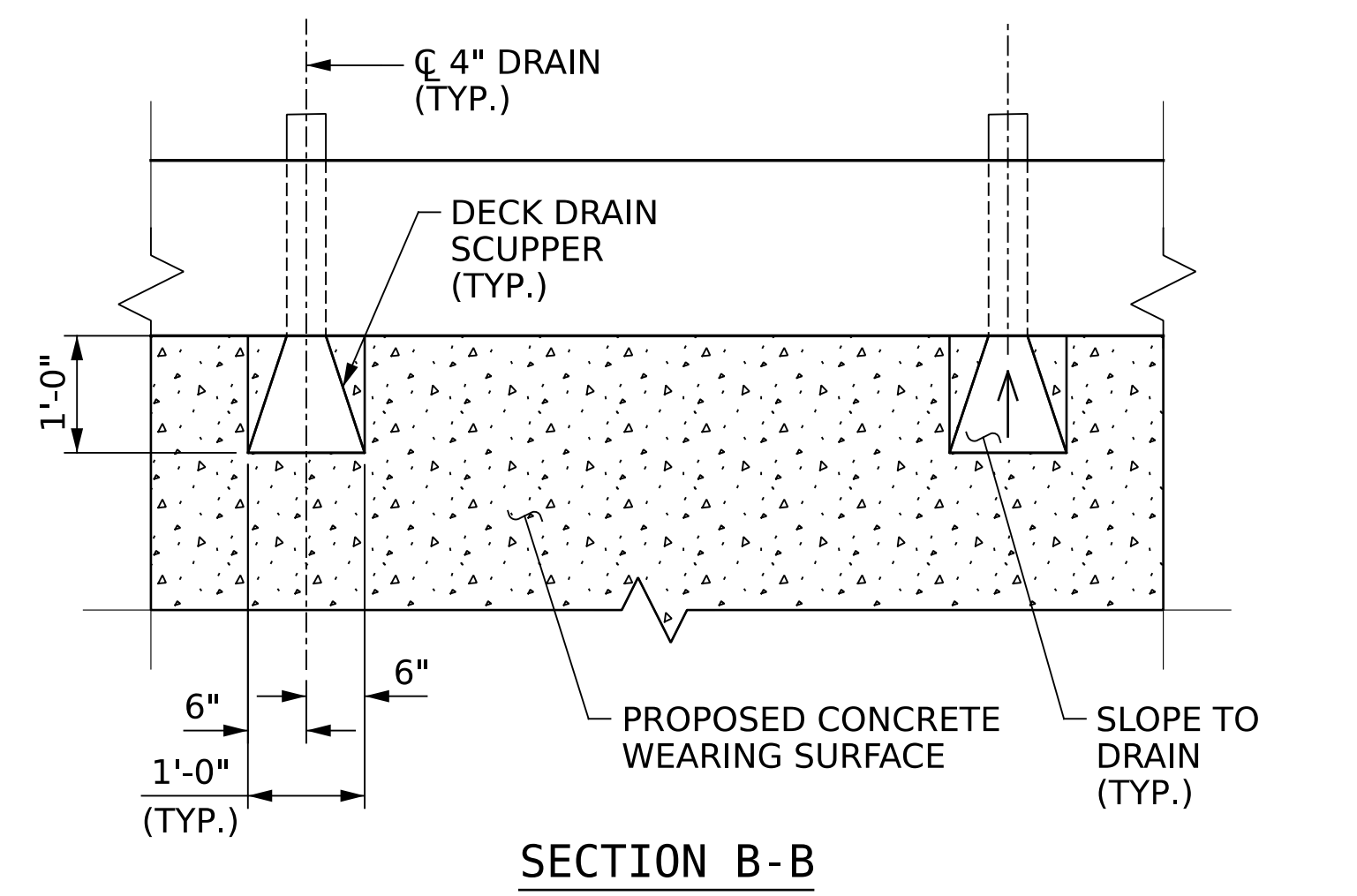
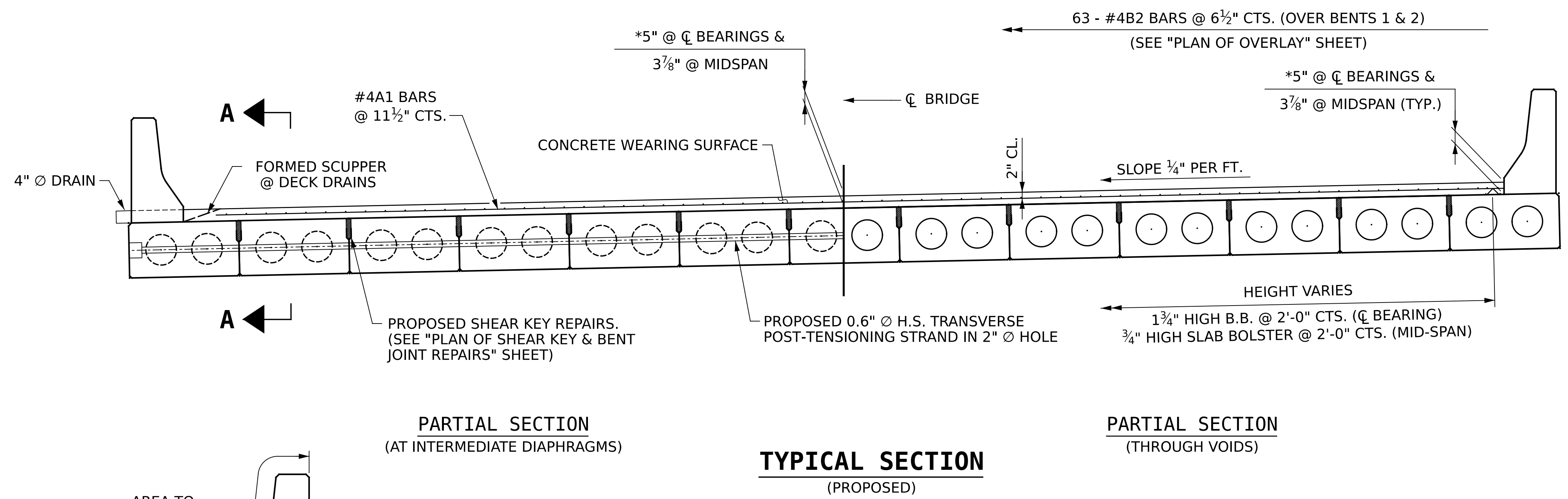
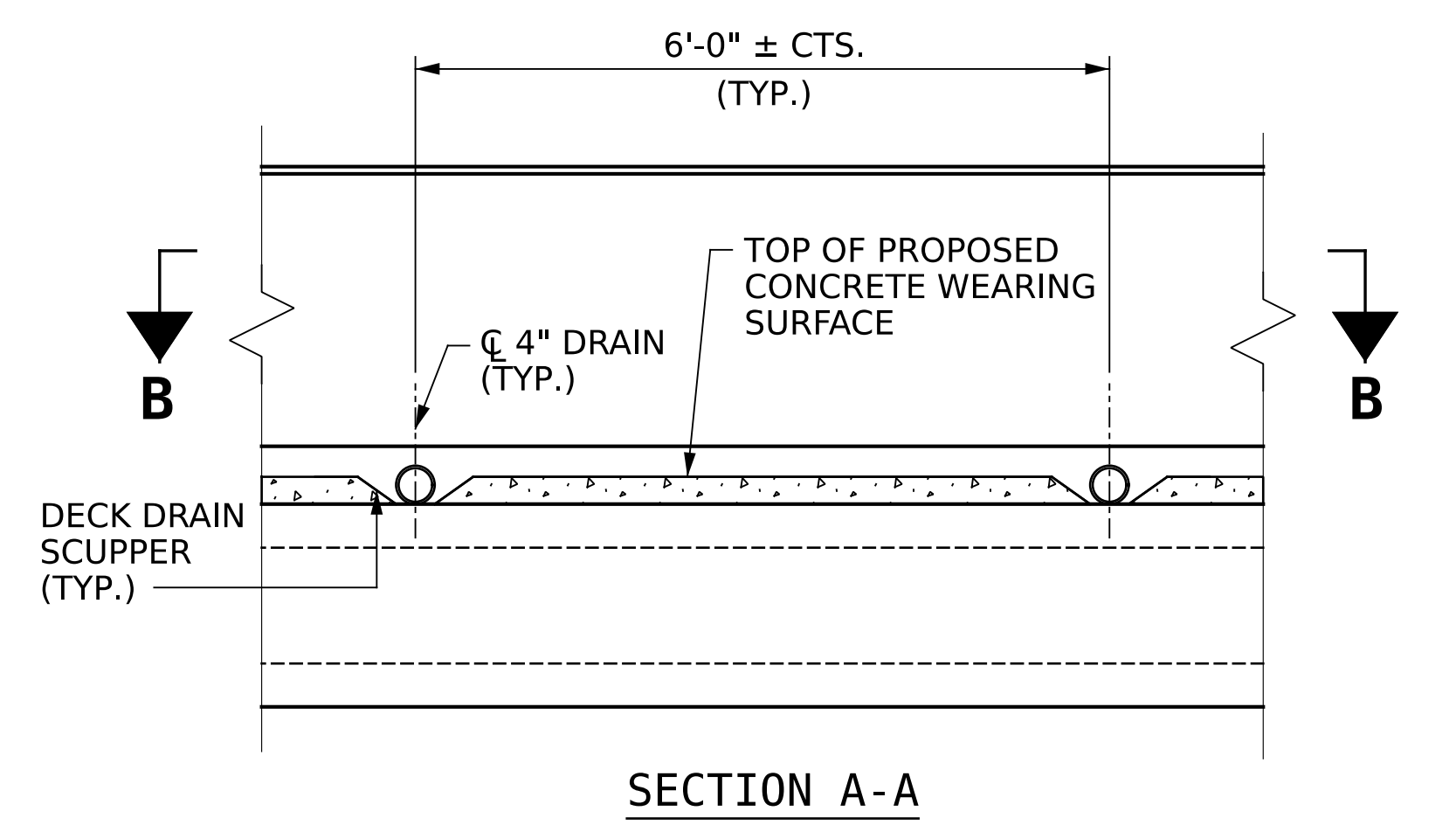
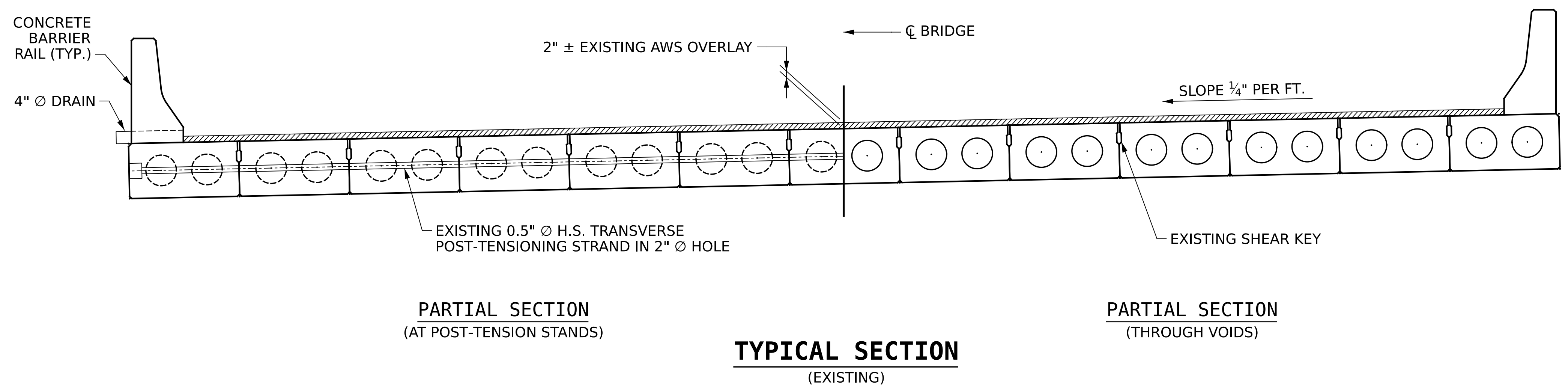
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TOTAL SHEETS: 40



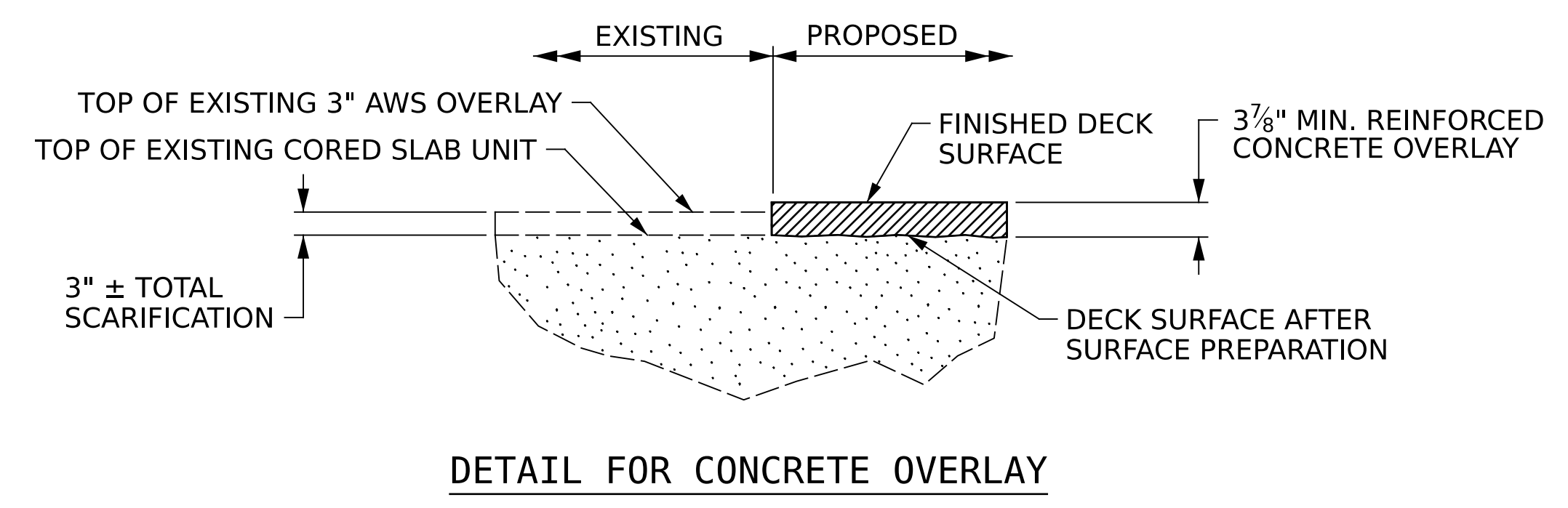
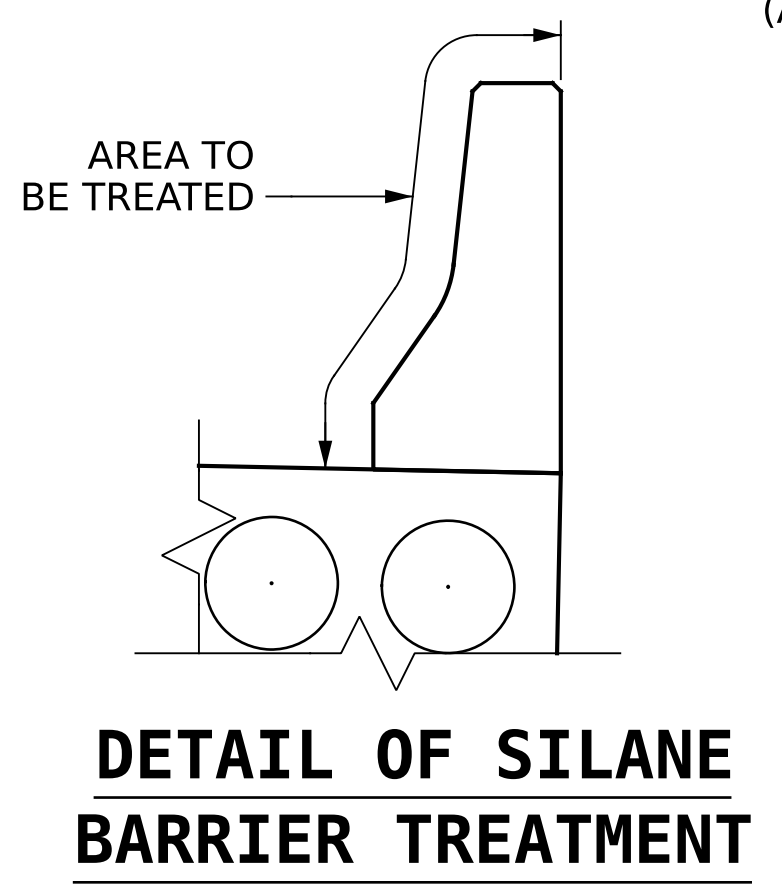
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**NOTE:**  
 THE WORK TO INSTALL DECK DRAIN SCUPPER SHALL BE CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE PAY ITEM FOR CONCRETE WEARING SURFACE.

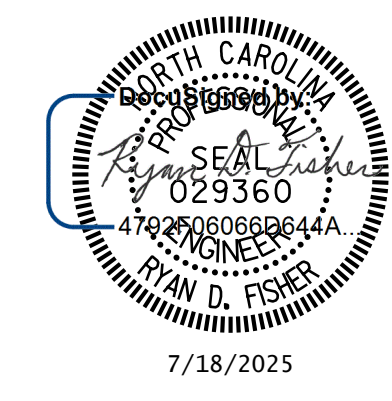
\* BASED ON PREDICTED FINAL CAMBER AND THEORETICAL GRADE LINE ELEVATIONS FROM THE ORIGINAL DESIGN. FINAL CAMBER MAY VARY.

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070159**



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
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**TYPICAL SECTION DETAILS**



DRAWN BY: T. HARTLEY DATE: 01/2025  
 CHECKED BY: R. FISHER DATE: 05/2025

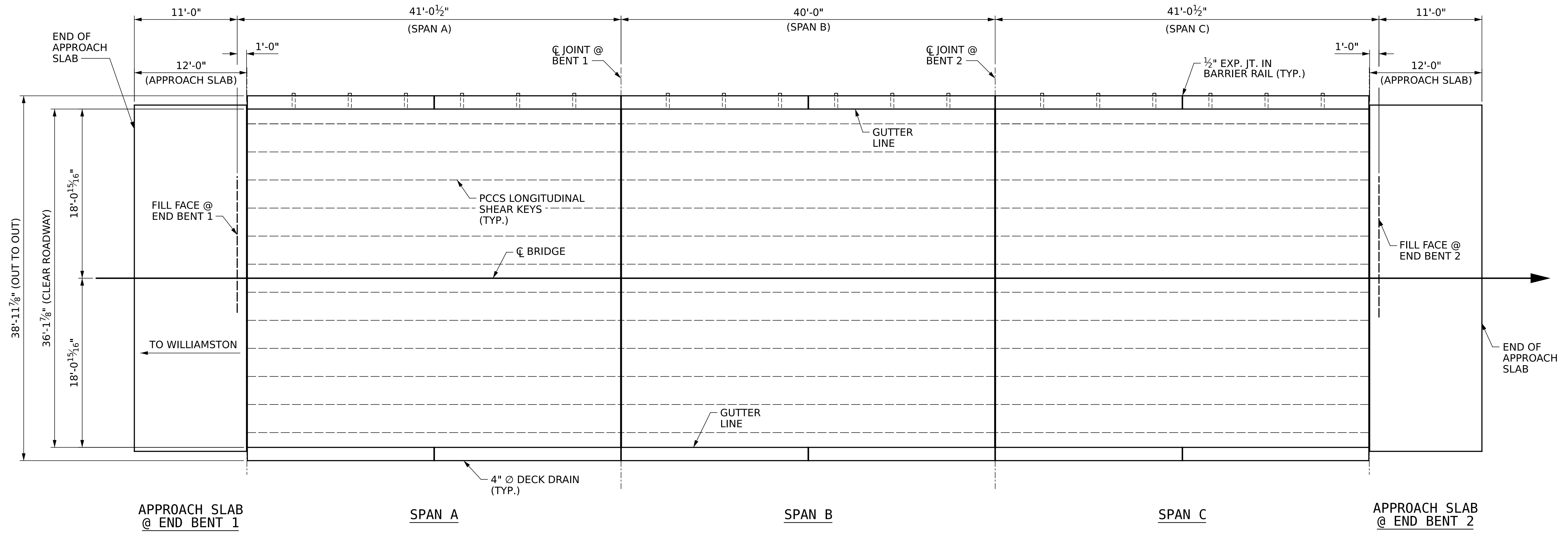


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TOTAL SHEETS: 40

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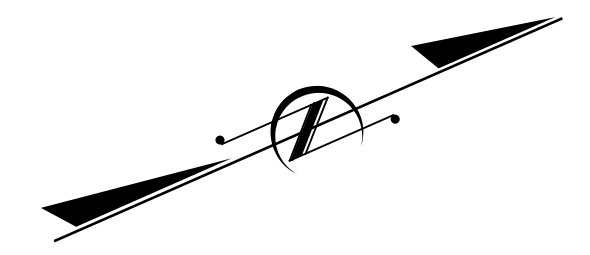


**NOTES:**

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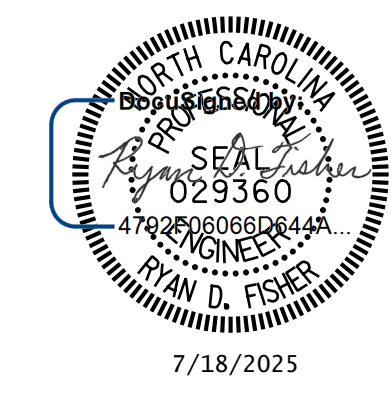
FOR SCARIFYING BRIDGE DECK, SEE PCCS DECK AND SUPERSTRUCTURE REPAIR SPECIAL PROVISION.

SCARIFYING BRIDGE DECK



| AS-BUILT QUANTITY REPAIR TABLE |              |        |              |        |              |        |
|--------------------------------|--------------|--------|--------------|--------|--------------|--------|
| TOP OF DECK REPAIRS            | SPAN A       |        | SPAN B       |        | SPAN C       |        |
|                                | ESTIMATE     | ACTUAL | ESTIMATE     | ACTUAL | ESTIMATE     | ACTUAL |
| SCARIFYING BRIDGE DECK         | 160 SQ. YDS. |        | 160 SQ. YDS. |        | 160 SQ. YDS. |        |
| SILANE BARRIER RAIL TREATMENT  | 265 SQ. FT.  |        | 265 SQ. FT.  |        | 265 SQ. FT.  |        |

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070159**



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**PLAN OF  
 SURFACE PREPARATION  
 & CORED SLAB  
 BEAM REPAIRS**

DRAWN BY : T. HARTLEY DATE : 01/2025  
 CHECKED BY : R. FISHER DATE : 05/2025



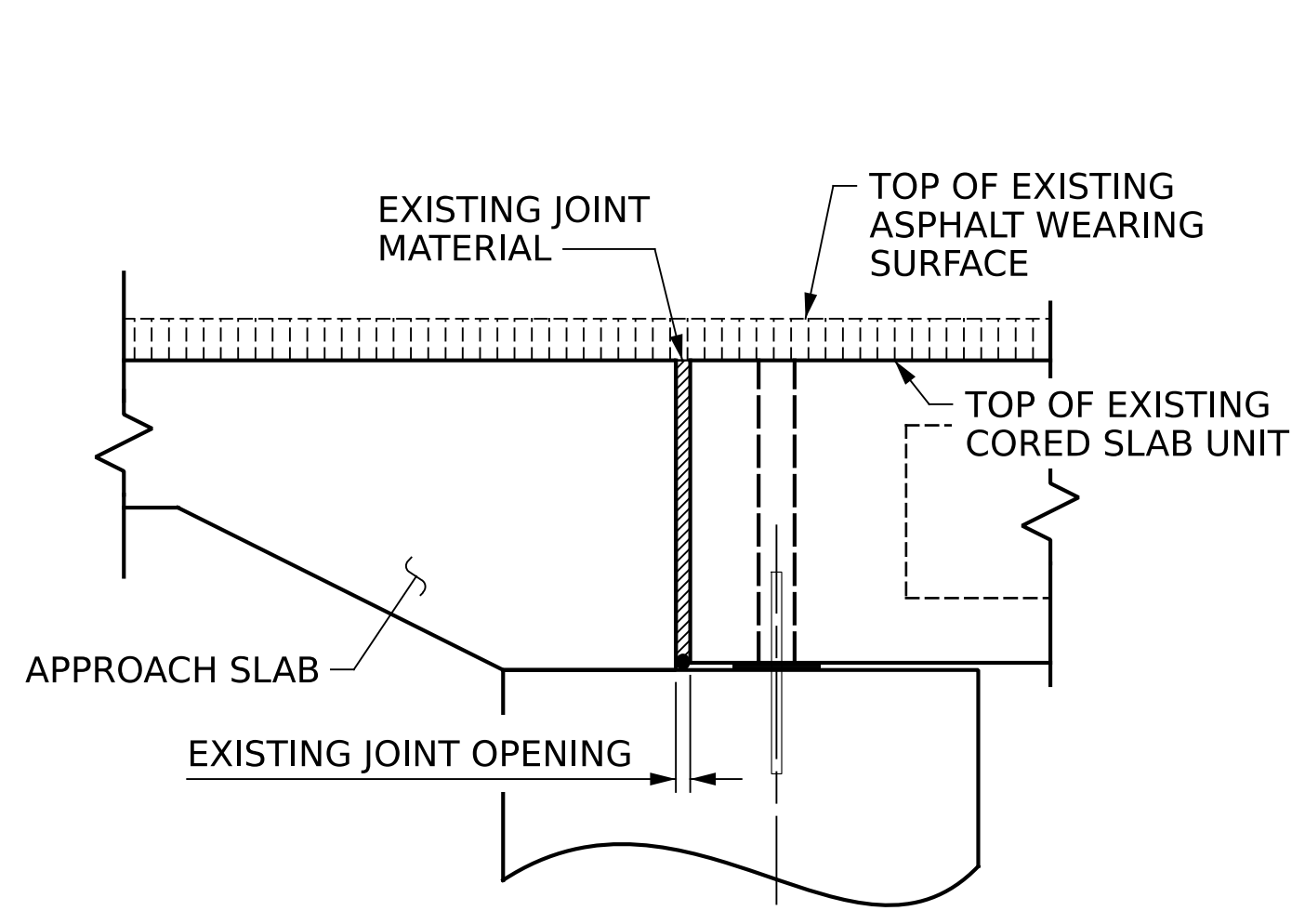
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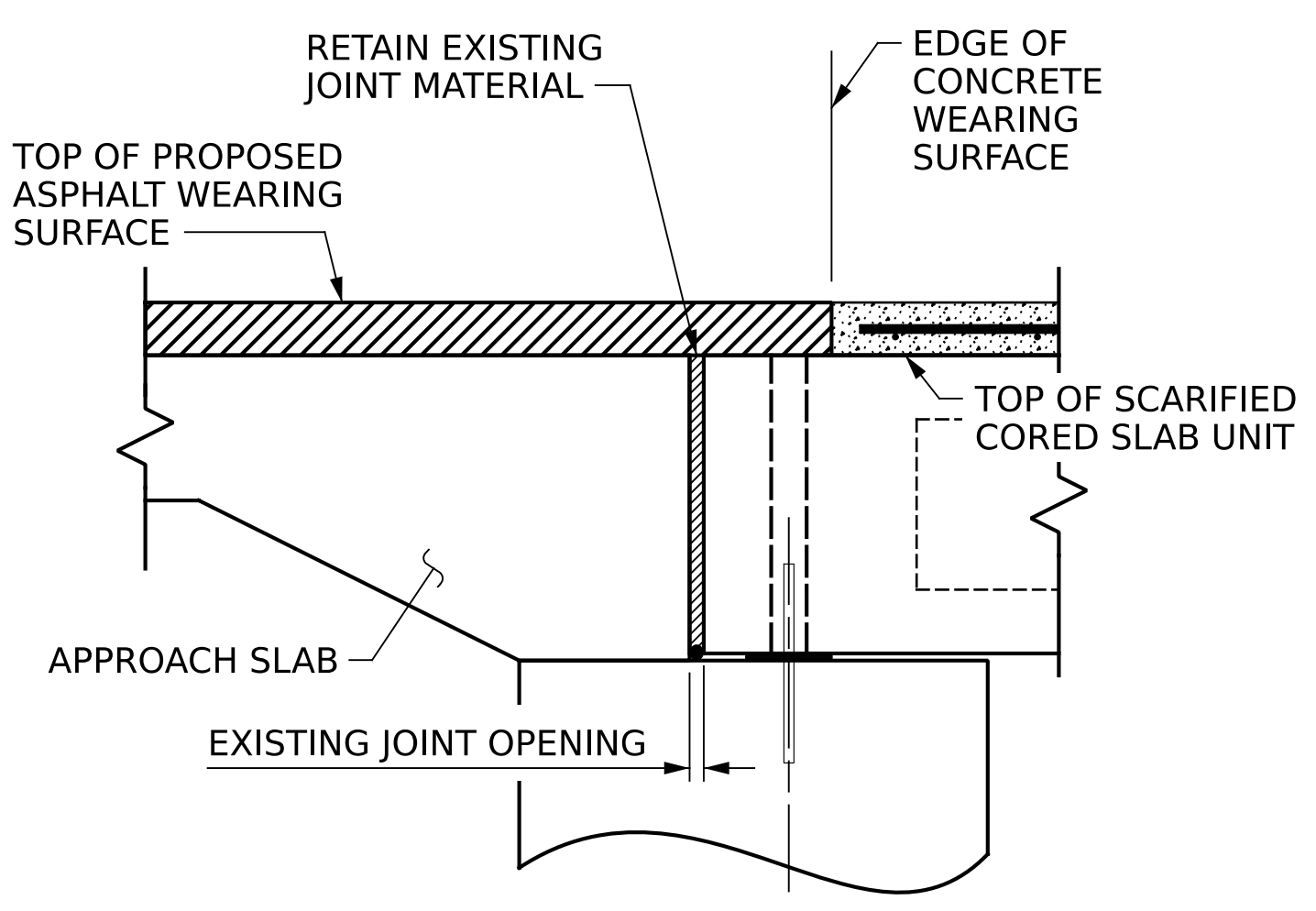




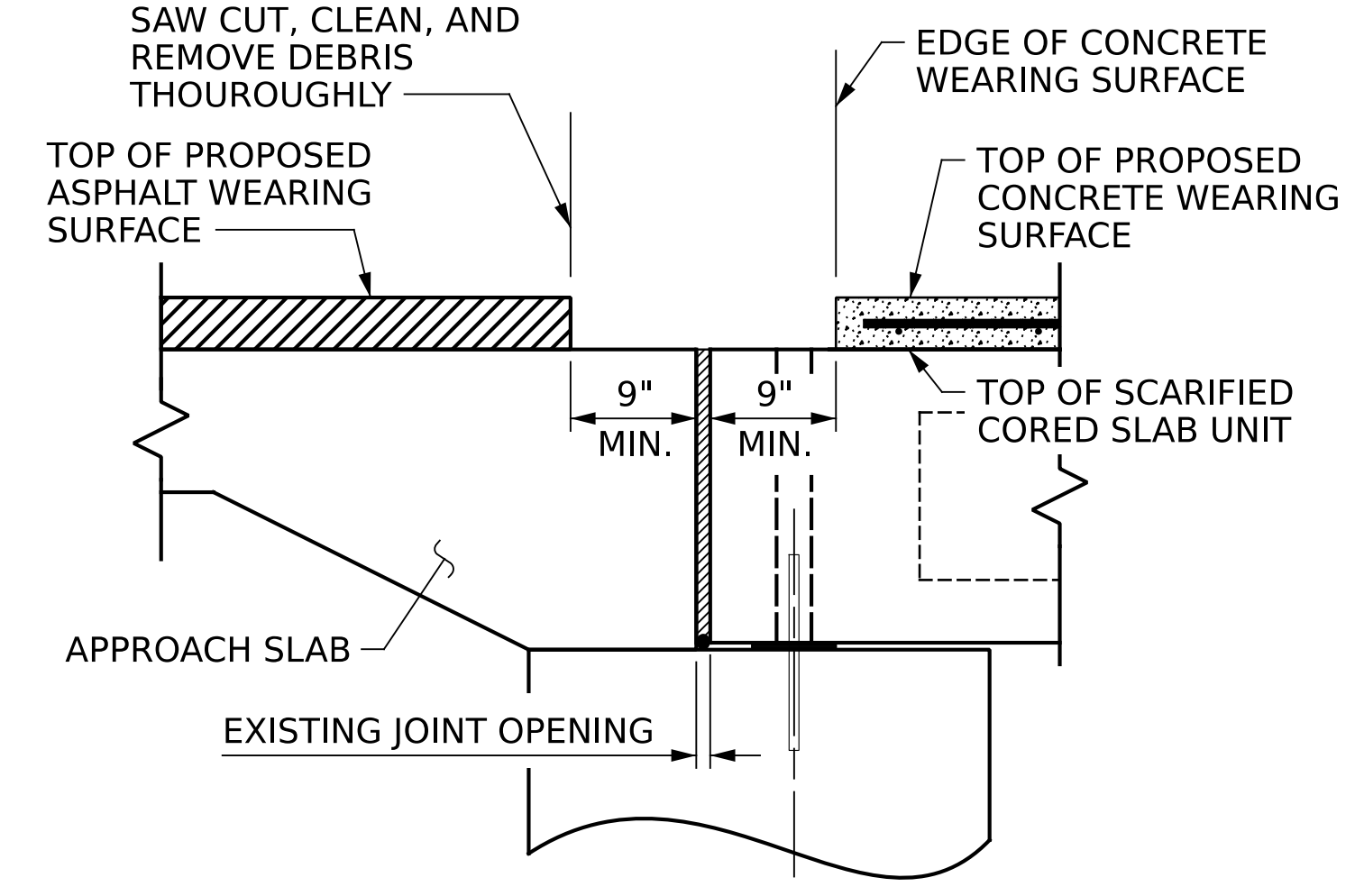
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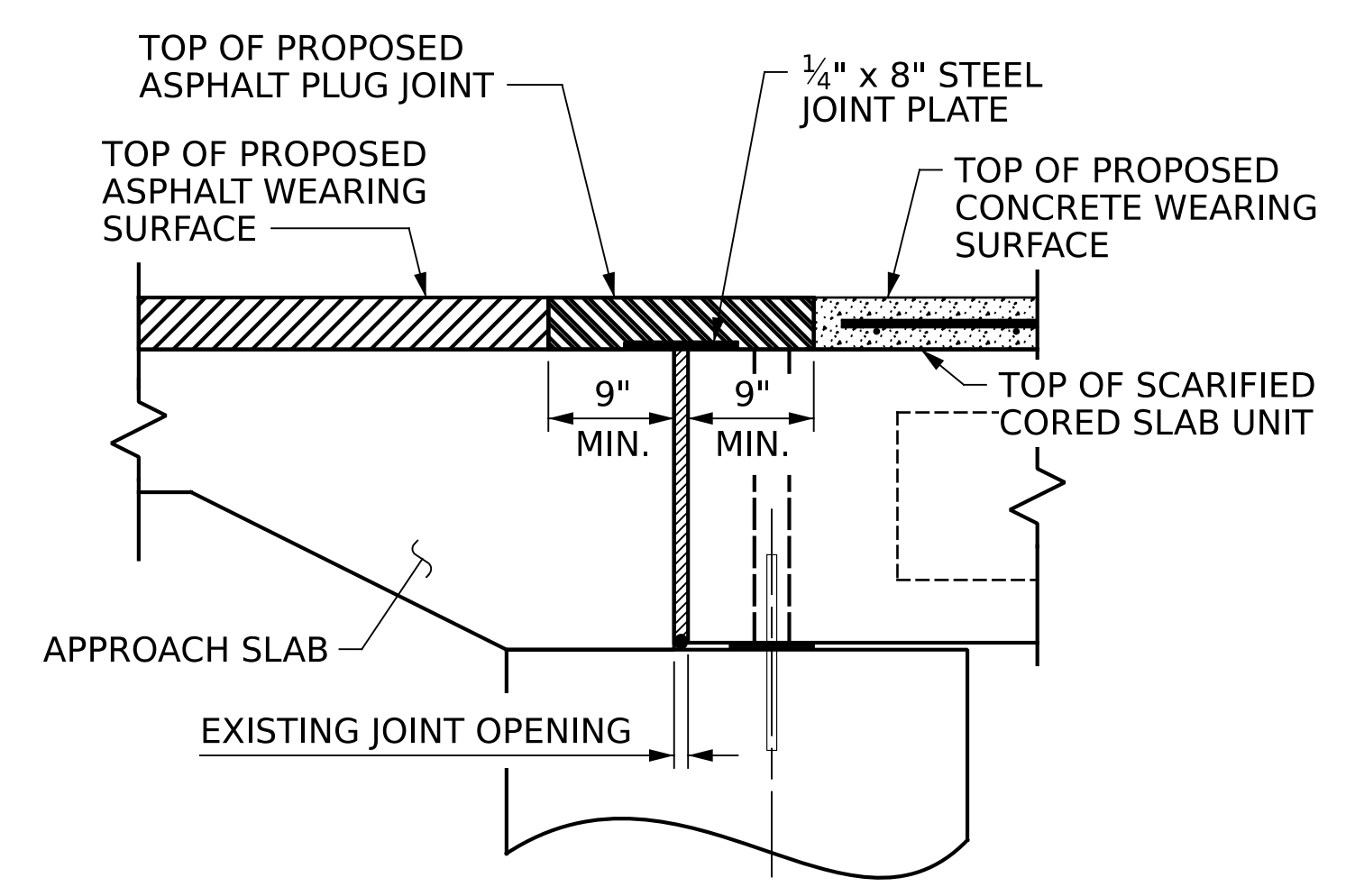
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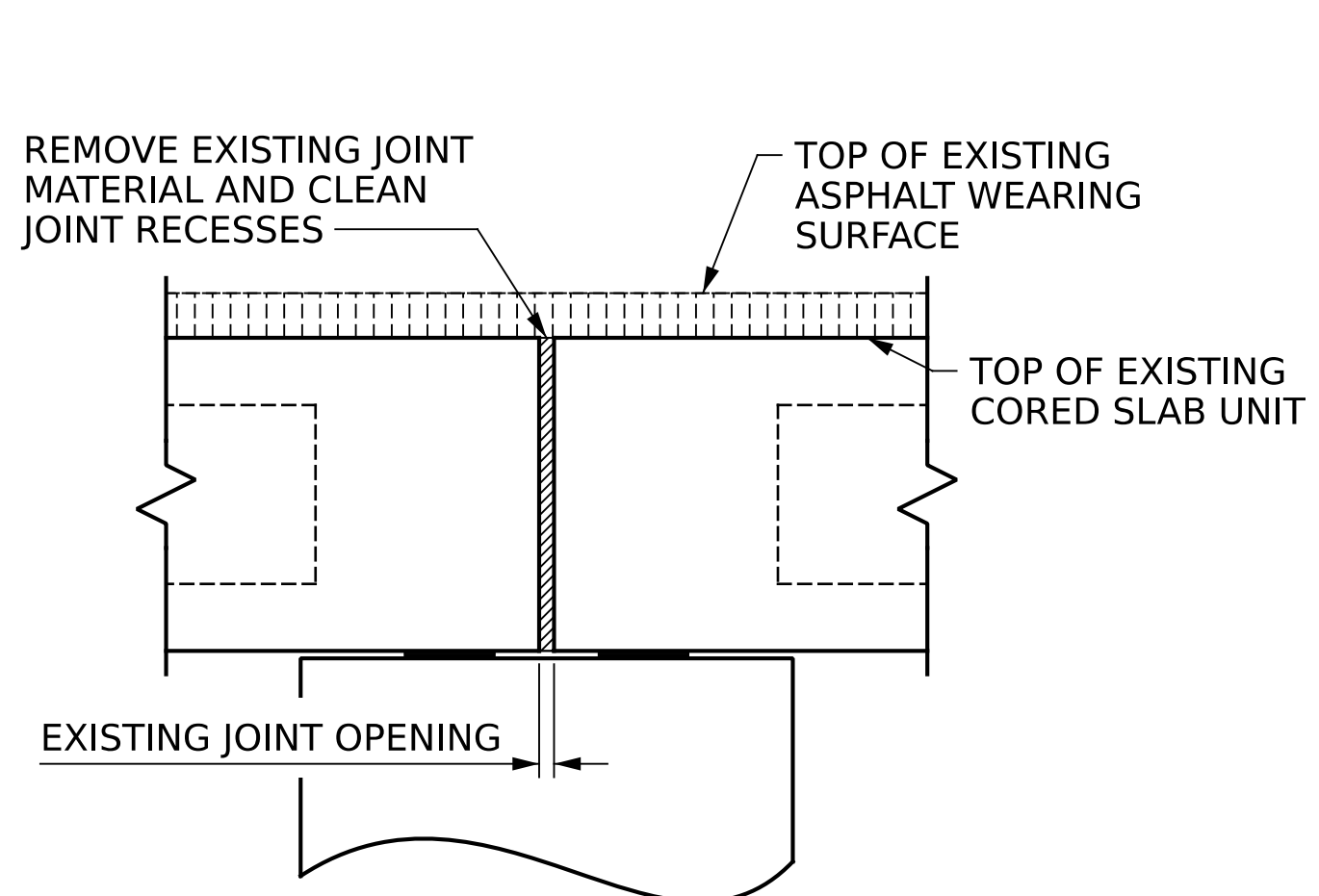
**PROPOSED OVERLAY**



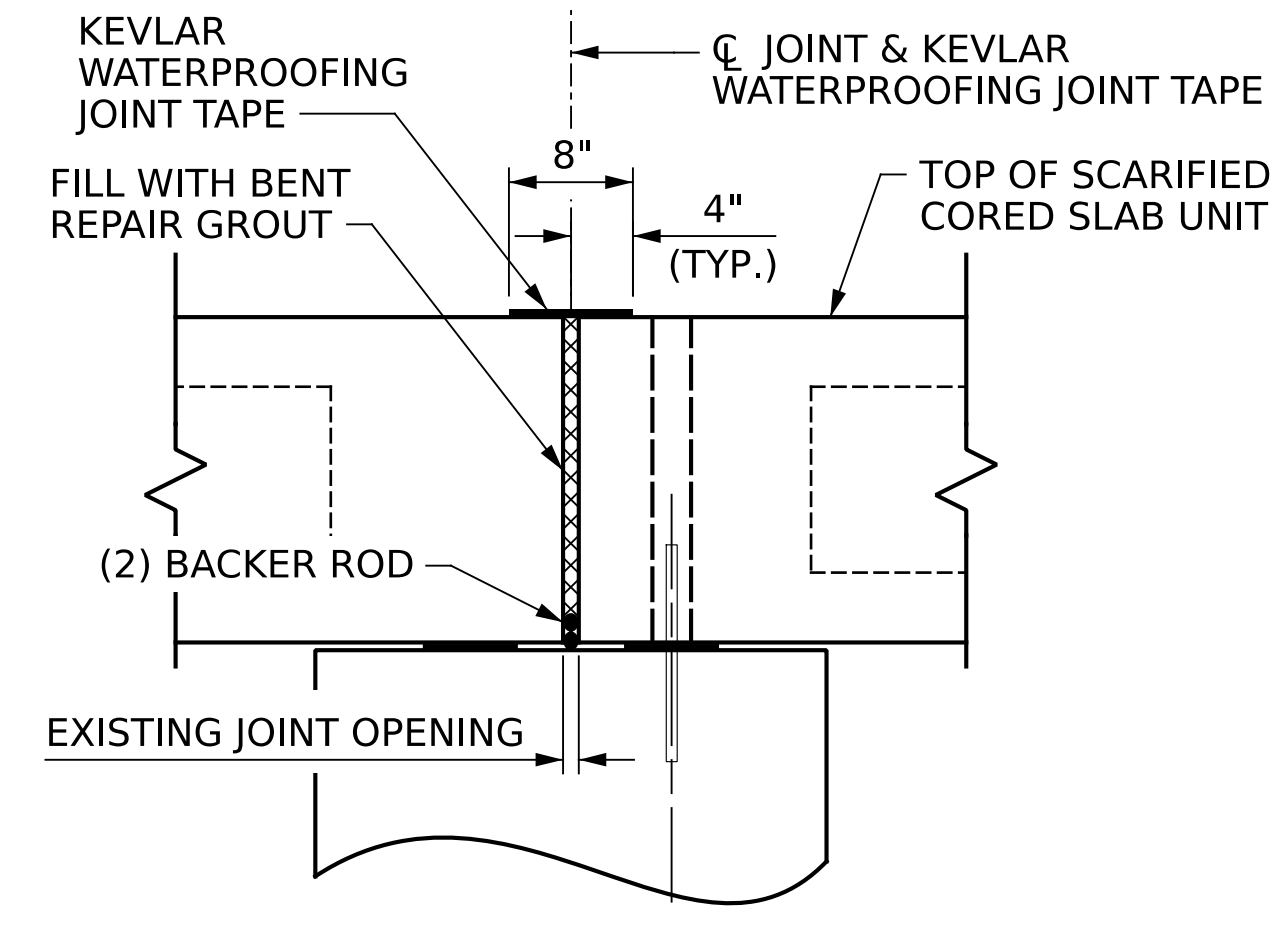
**PROPOSED JOINT DEMOLITION**



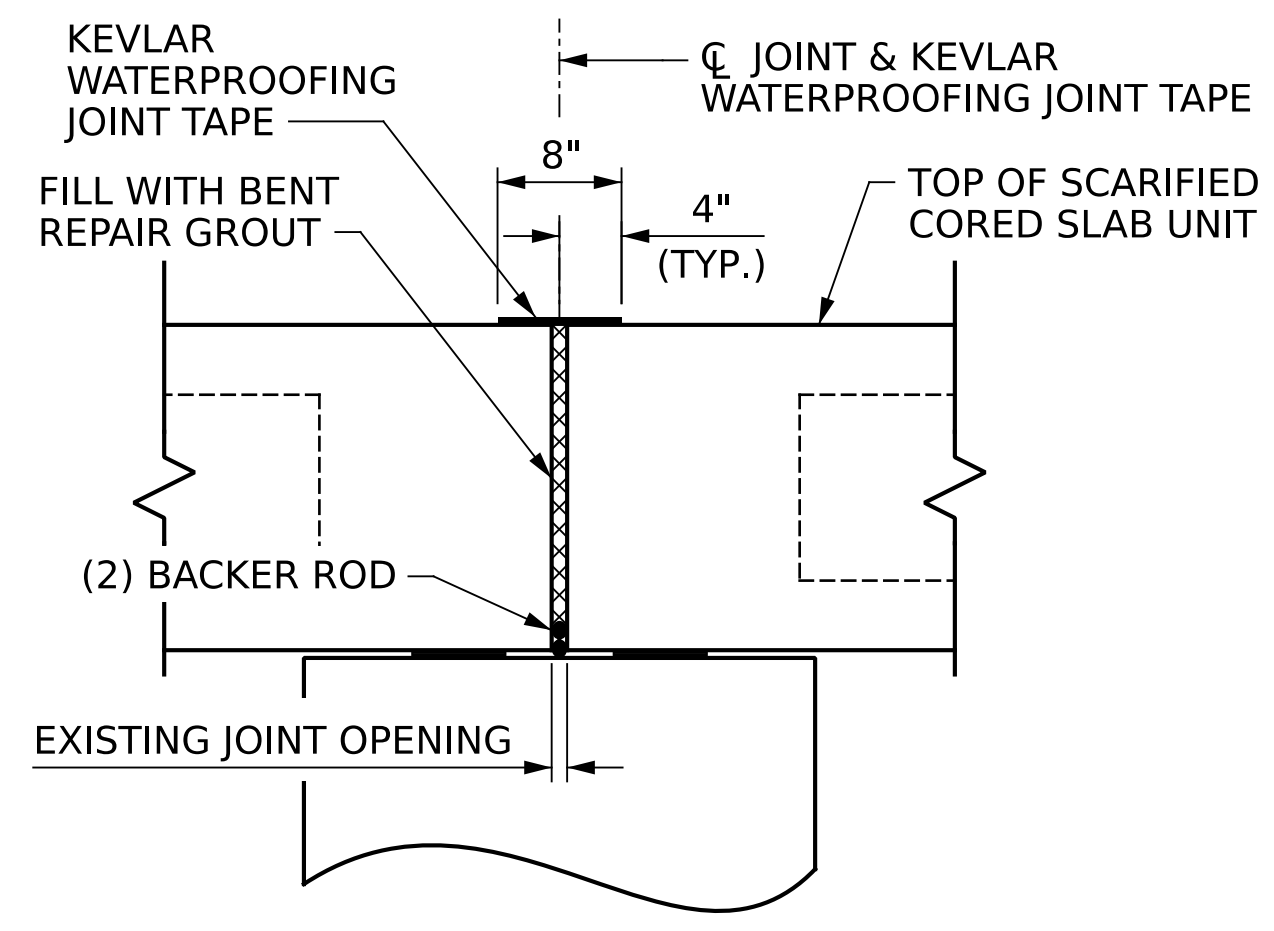
**PROPOSED ASPHALT PLUG JOINT**



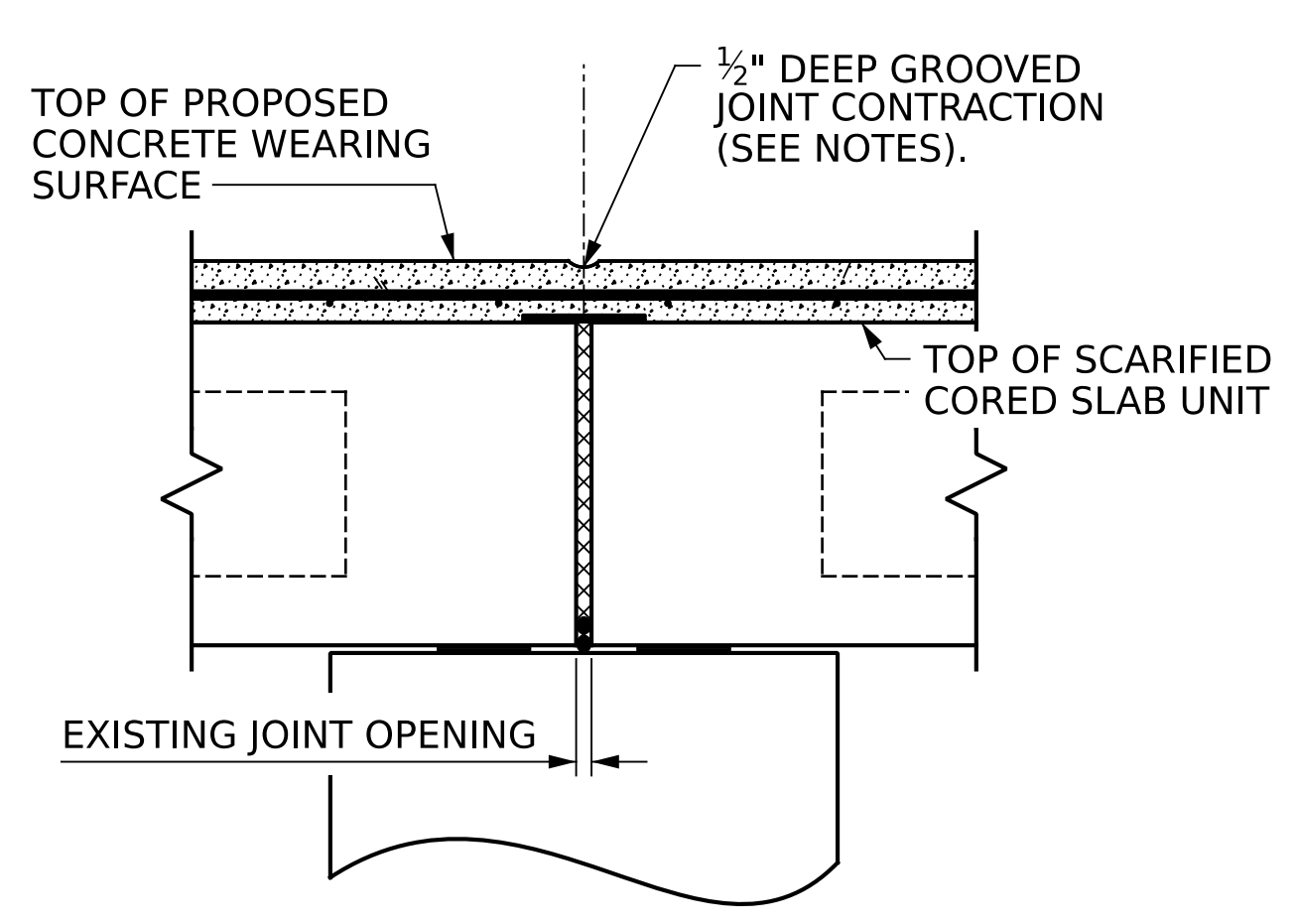
**EXISTING (DOWELS NOT SHOWN)**



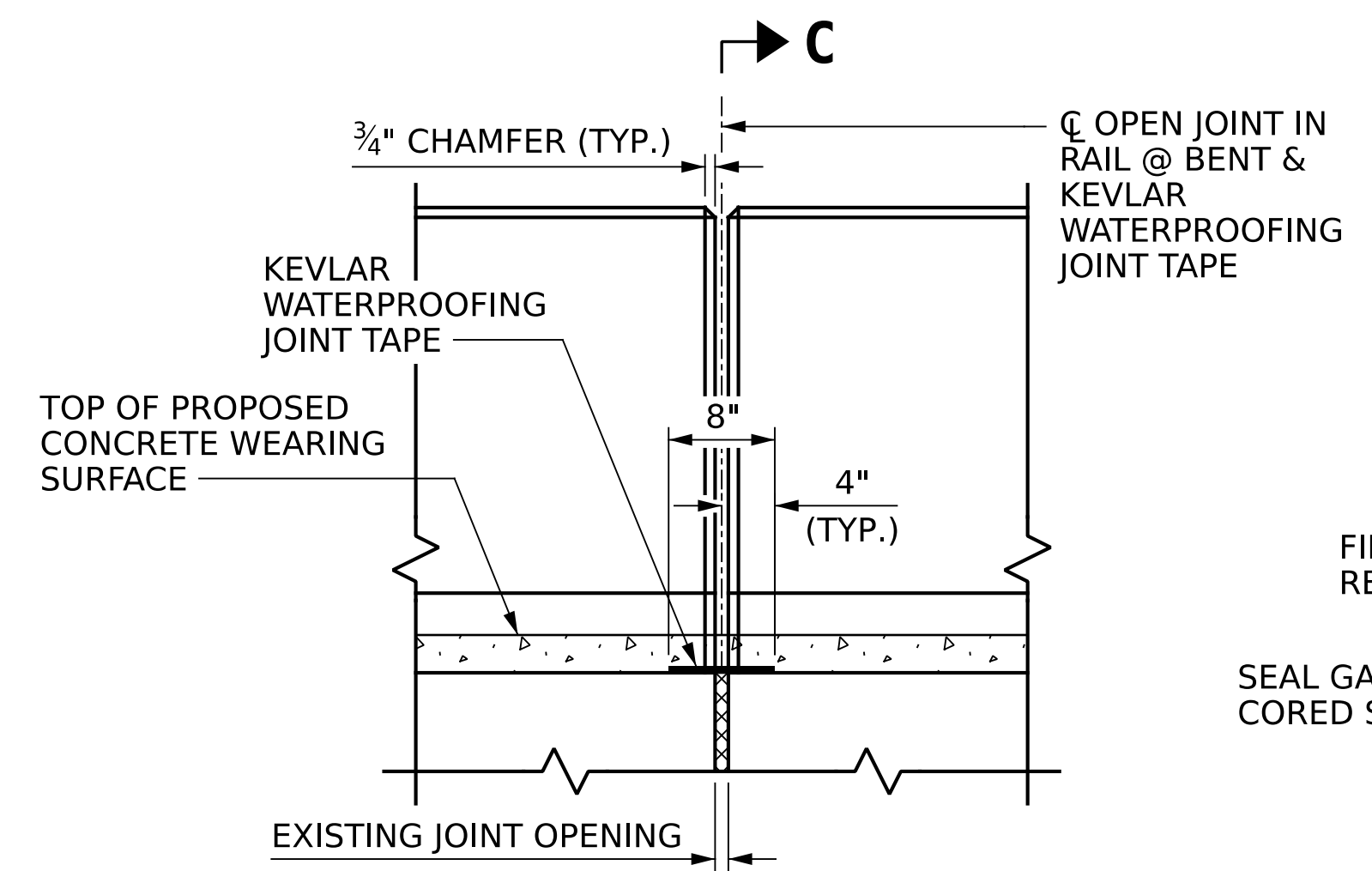
**PROPOSED JOINT WITH EPOXY GROUT BENT 1**



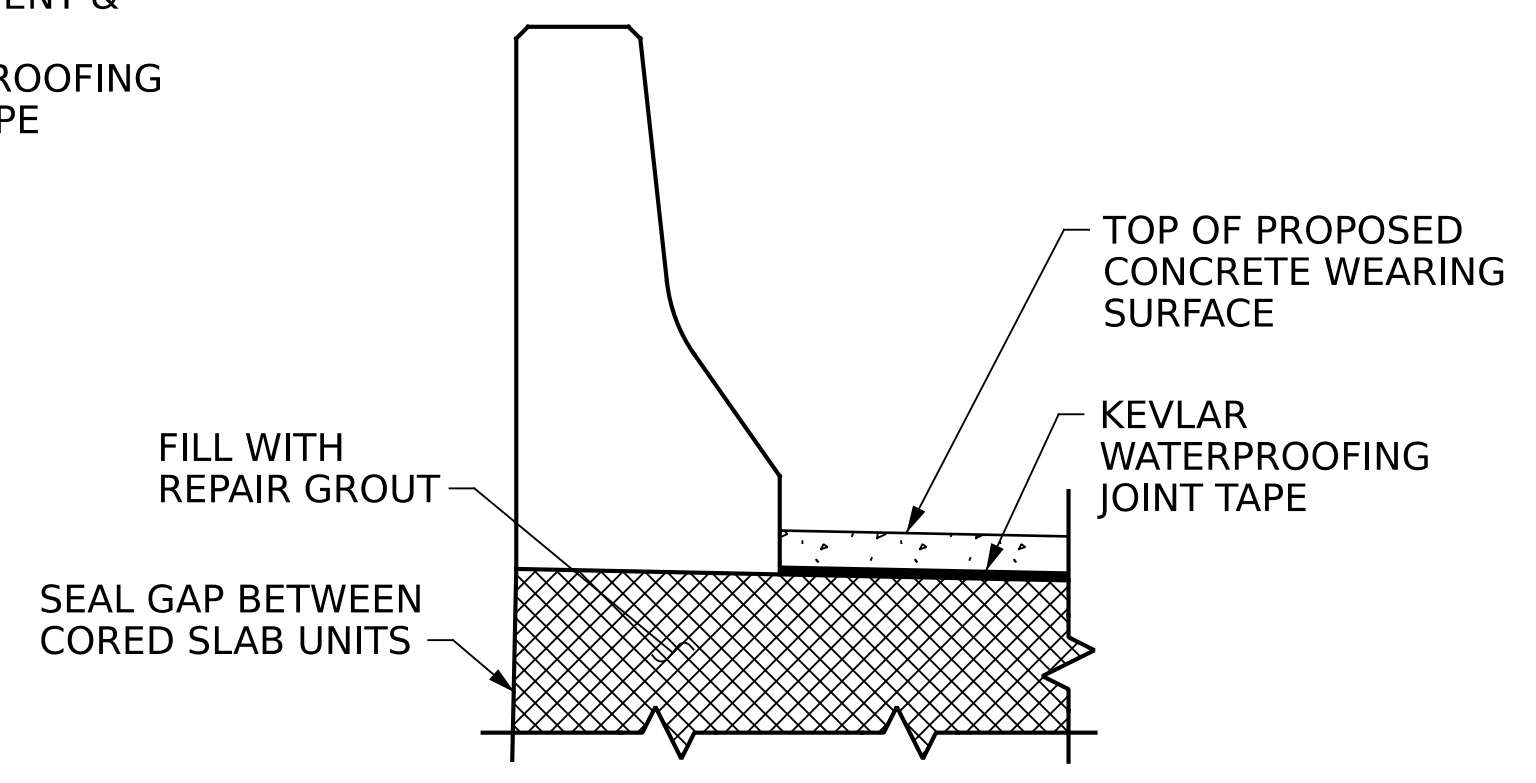
**PROPOSED JOINT WITH EPOXY GROUT BENT 2**



**PROPOSED CONCRETE WEARING SURFACE BENT 1 OR 2 (DOWELS NOT SHOWN)**



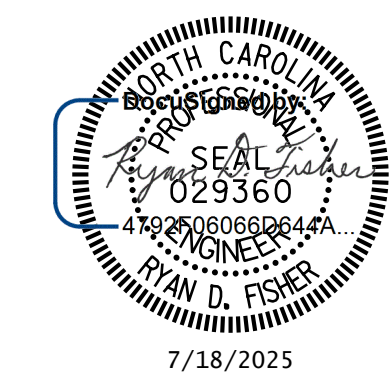
**ELEVATION AT EXPANSION JOINTS (TYP. AT BENTS 1 & 2)**



**SECTION C-C**

**JOINT DETAILS AT CONCRETE BARRIER RAILS**

**NOTES:**  
 FOR SCARIFYING BRIDGE DECK AND BENT JOINT REPAIRS, SEE PCCS DECK AND SUPERSTRUCTURE REPAIR SPECIAL PROVISIONS.  
 FOR KEVLAR WATERPROOFING JOINT TAPE, SEE SPECIAL PROVISIONS.  
 THE CONTRACTOR SHALL TAKE CARE DURING BENT JOINT REPAIR OPERATIONS NOT TO DROP ANY MATERIAL BELOW THE BRIDGE WITHOUT PROTECTIVE DEVICES BELOW TO CATCH THE MATERIAL. ANY MATERIAL THAT FALLS BELOW THE BRIDGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO EXTRA COST TO THE DEPARTMENT. IF THE ENGINEER DETERMINES THAT THE PROTECTIVE DEVICES ARE NOT ADEQUATE OR NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.  
 SELECT AND INSTALL BACKER ROD OF SUFFICIENT SIZE TO CREATE A WATER TIGHT-BARRIER TO KEEP GROUT FROM LEAKING THROUGH THE JOINT.  
 BACKER ROD FOR SHEAR KEY AND BENT JOINT REPAIRS SHALL BE INSTALLED IN CONTINUOUS ONE PIECE LENGTHS.  
 GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN CONCRETE WEARING SURFACE IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. THE CONTRACTION JOINTS SHALL BE LOCATED AT BENTS 1 AND 2 AS SHOWN IN SECTION B-B.  
 DEMOLISH BRIDGE JOINT AREA SUCH THAT THE BOTTOM OF THE EXCAVATION SHALL BE REASONABLY FLAT AND LEVEL AND TO THE NECESSARY DEPTH, SUCH THAT ASPHALT JOINT SHALL BE FOUNDED ON CONCRETE SUBSTRATE.



PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070159**

STATE OF NORTH CAROLINA  
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 RALEIGH

**BENT JOINT REPAIR & JOINT DETAILS**

DRAWN BY : T. HARTLEY DATE : 01/2025  
 CHECKED BY : R. FISHER DATE : 05/2025

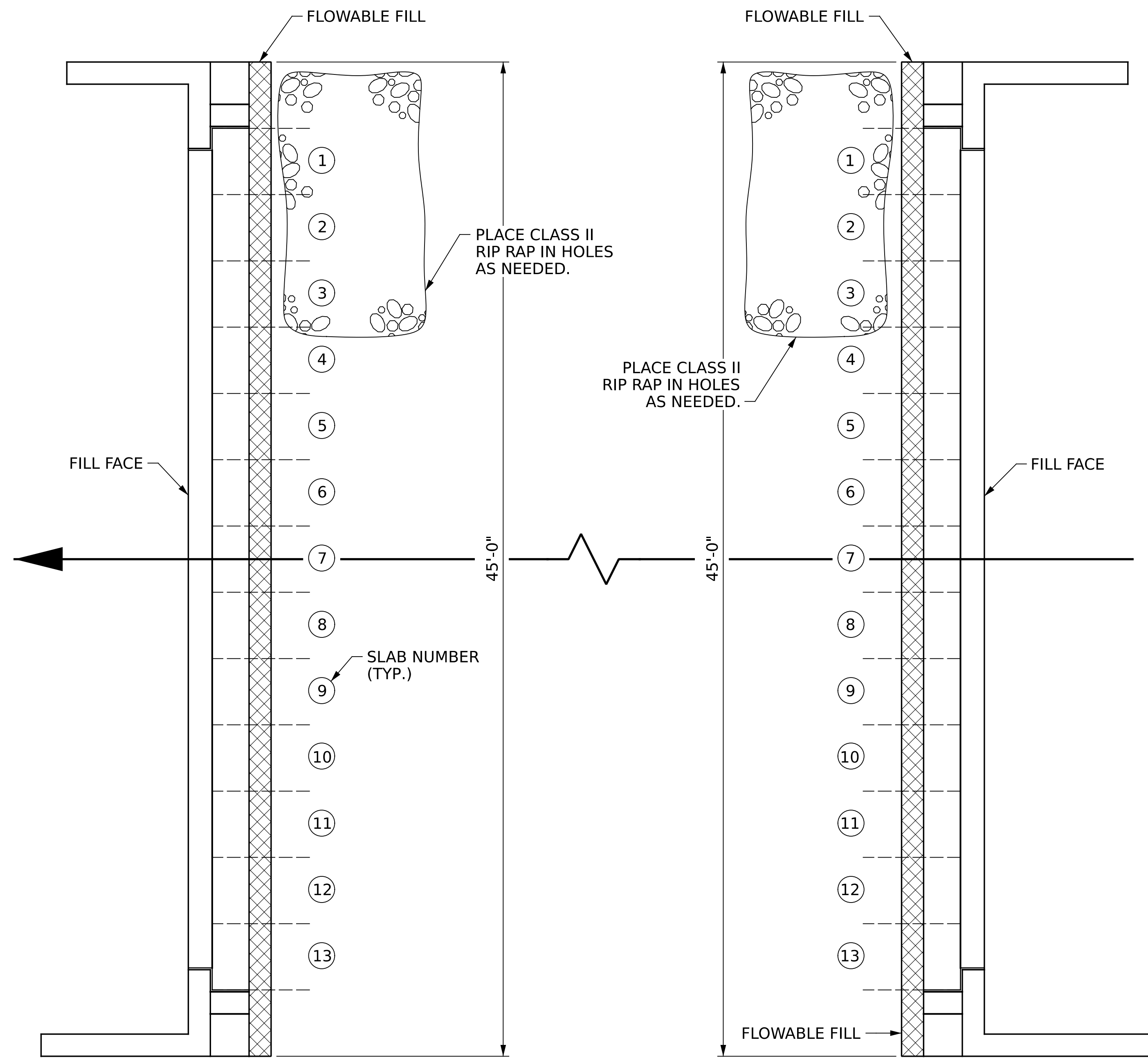


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TOTAL SHEETS: 40

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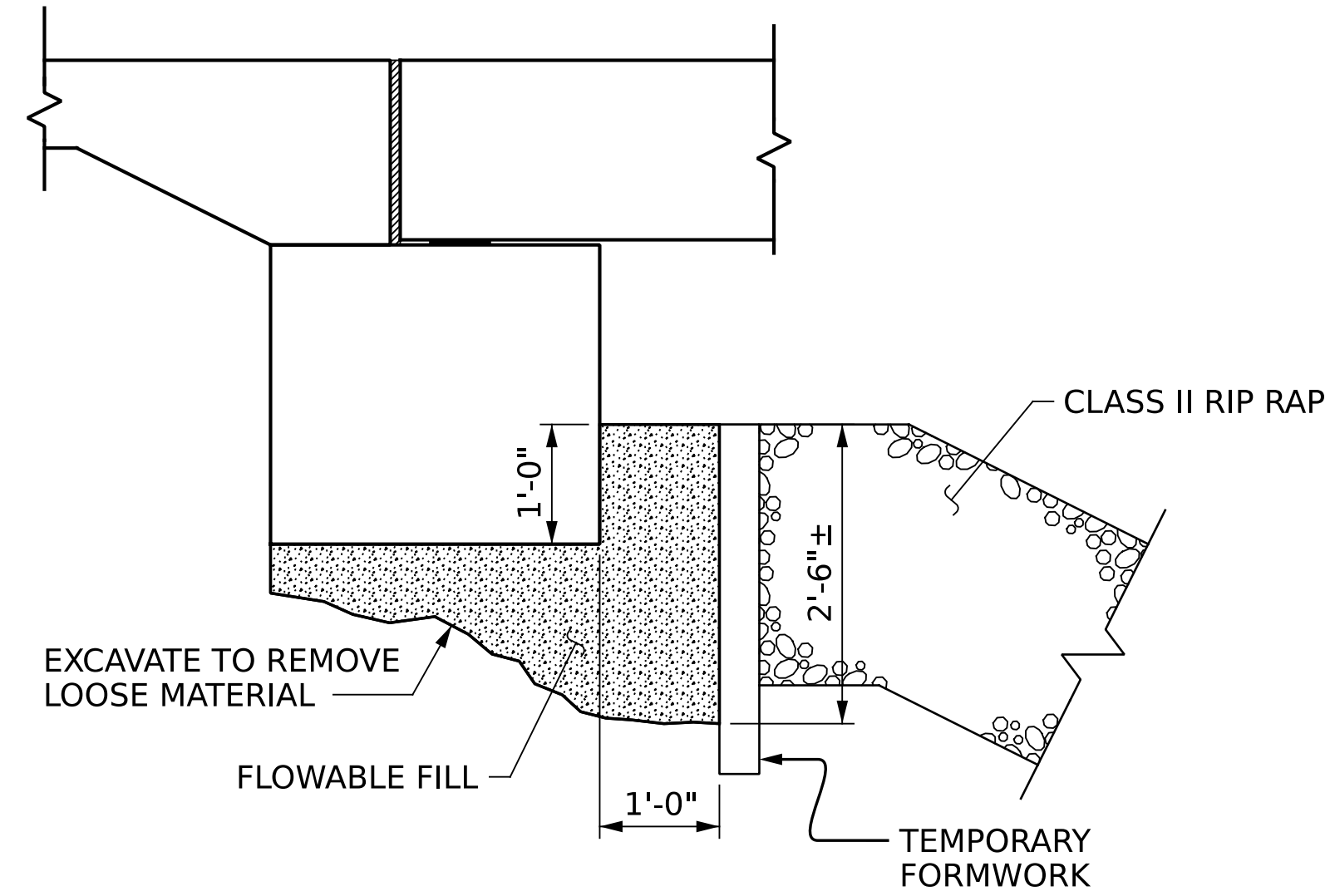


END BENT 1

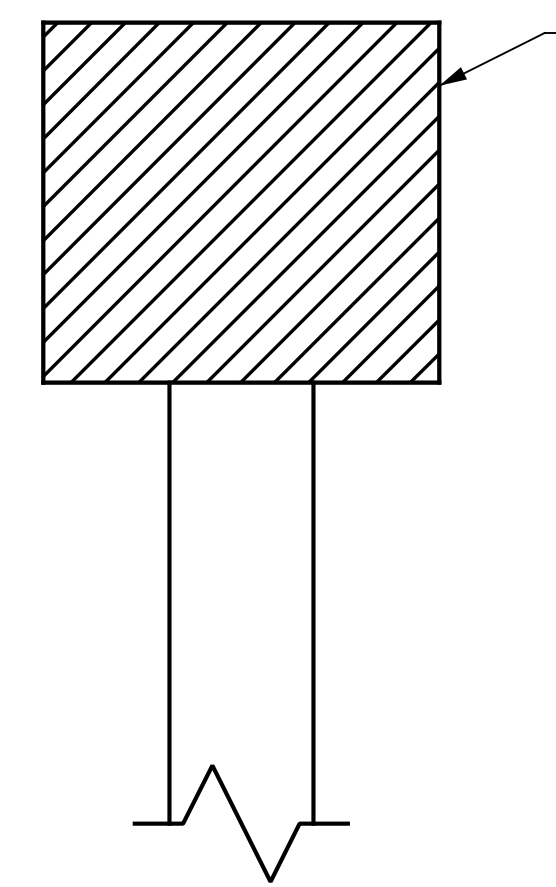
END BENT 2

**PLAN**

- FLOWABLE FILL



**FLOWABLE FILL DETAIL**

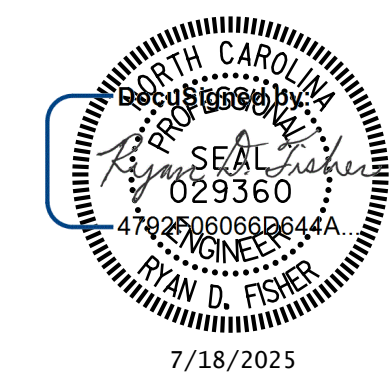


**DETAIL OF SILANE TREATMENT (END OF BENT CAPS)**

**NOTES:**  
 IT APPEARS THAT UNDERMINING IS PRESENT AT END BENT 1 BUT IS HIDDEN BY THE RIP RAP. THE CONTRACTOR SHALL PULL BACK RIP RAP SO THAT THE UNDERMINING BE EVALUATED. PAYMENT FOR THIS WORK IS MADE UNDER THE PAY ITEM FOR FIELD MEASURING.  
 FOR FIELD MEASURING, SEE SPECIAL PROVISIONS.  
 THE CONTRACTOR SHALL PLACE CLASS II RIP RAP IN AREAS WHERE IT IS MISSING IN FRONT OF THE END BENTS.  
 FOR SURFACE PREPARATION AND SILANE TREATMENT OF CONCRETE, SEE SPECIAL PROVISIONS.  
 THE TEMPORARY FORMWORK AND THE EXCAVATION OF LOOSE MATERIAL UNDER THE END BENT IS INCLUDED IN THE UNIT PRICE BID FOR FLOWABLE FILL.

| AS-BUILT QUANTITY REPAIR TABLE        |            |            |        |
|---------------------------------------|------------|------------|--------|
|                                       |            | ESTIMATE   | ACTUAL |
| FLOWABLE FILL REPAIR                  | END BENT 1 | 6 CU. YDS. |        |
|                                       | END BENT 2 | 8 CU. YDS. |        |
| CLASS II RIP RAP REPAIR (2'-0" THICK) | END BENT 1 | 8 TONS     |        |
|                                       | END BENT 2 | 8 TONS     |        |
| SILANE TREATMENT OF CONCRETE          | BENT 1     | 20 SQ. FT. |        |
|                                       | BENT 2     | 20 SQ. FT. |        |

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070159**



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**END BENT FLOWABLE FILL AND RIP RAP REPAIR & BENT END CAP SILANE DETAILS**

DRAWN BY : T. HARTLEY DATE : 01/2025  
 CHECKED BY : R. FISHER DATE : 05/2025



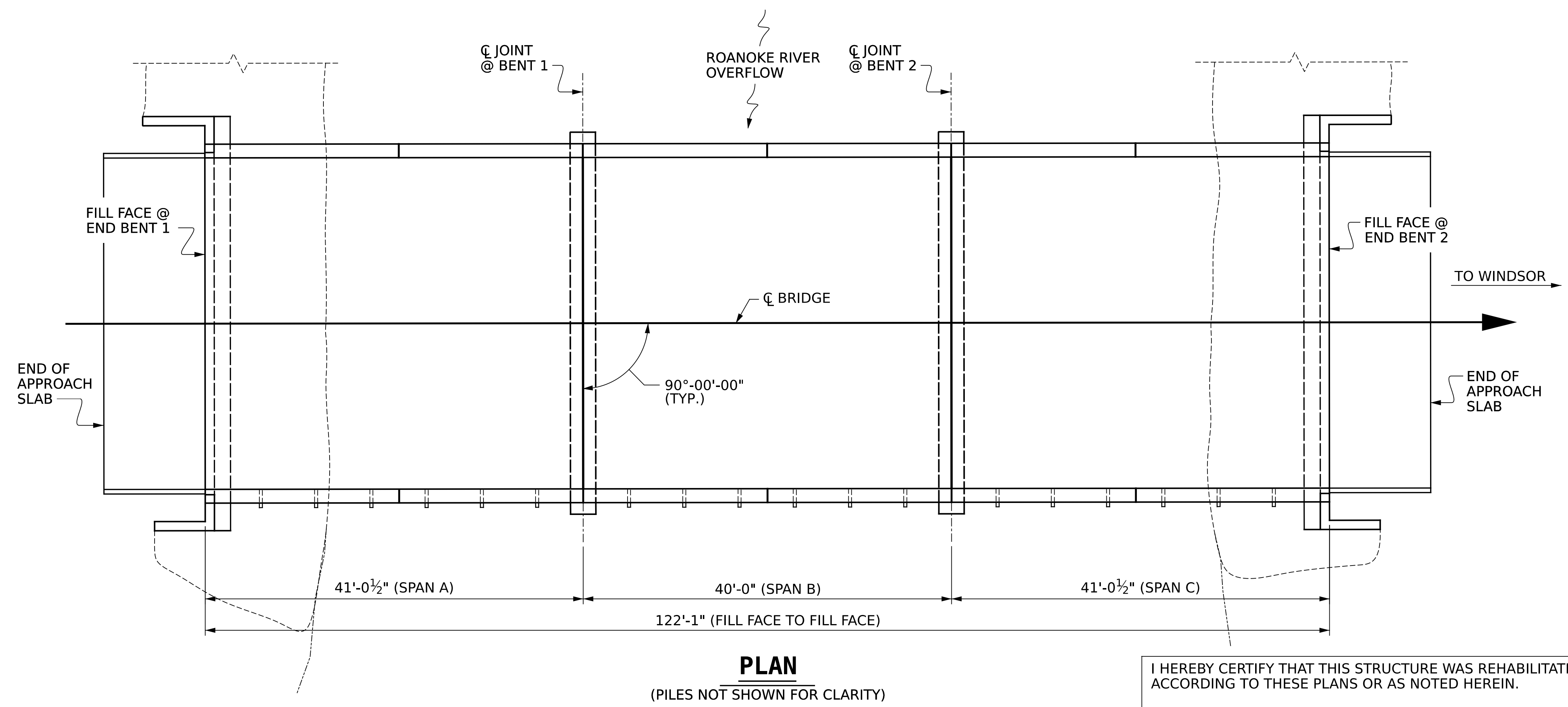
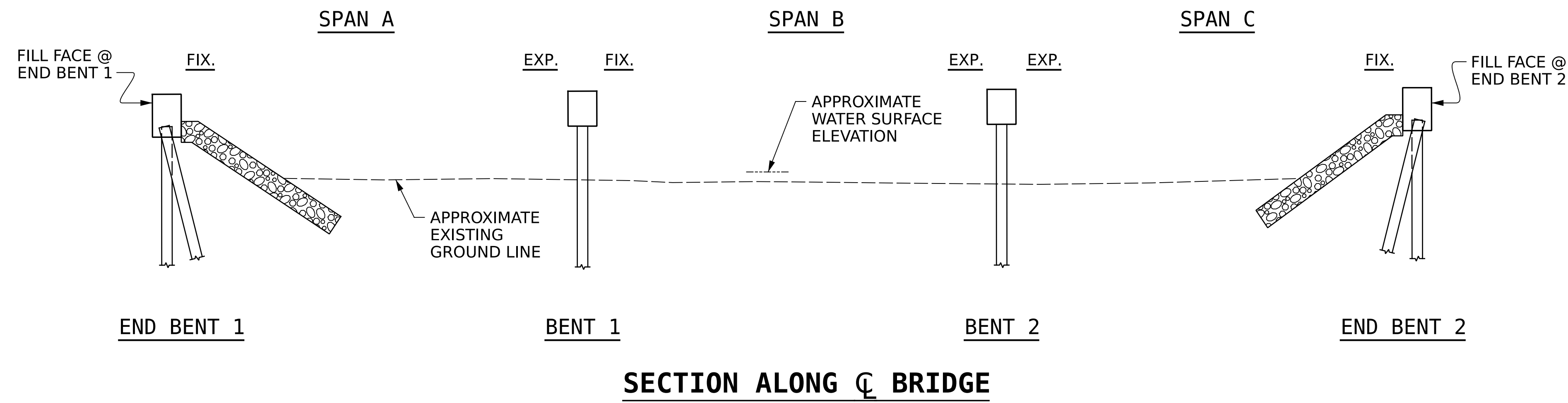
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**PLAN**  
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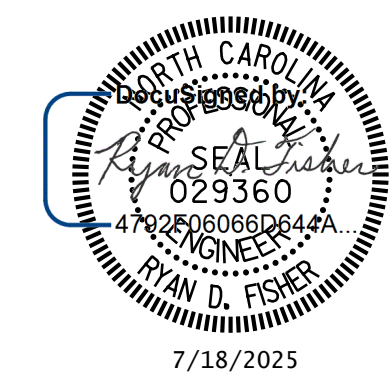
I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

- NOTES:**
- GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 09/05/2024.
- BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS/ROUTINE INSPECTION REPORT.
- SCOPE OF WORK**
- REMOVE EXISTING ASPHALT WEARING SURFACE ON BRIDGE DECK AND APPROACH ROADWAY AND PARTIALLY REMOVE TOP OF PCCS UNITS BY SCARIFICATION.
  - PLACE REINFORCED CONCRETE WEARING SURFACE.
  - REPLACE PCCS POST TENSIONING STRANDS.
  - SAW CUT EXISTING SHEAR KEYS, REMOVE EXISTING SHEAR KEY GROUT, AND FILL SHEAR KEYS WITH REPAIR MORTAR.
  - PLACE GROUT IN JOINT OPENINGS AT BENTS 1 AND 2.
  - INSTALL KEVLAR WATERPROOFING JOINT TAPE OVER LONGITUDINAL SHEAR KEYS AND TRANSVERSE DECK JOINTS.
  - INSTALL ASPHALT PLUG JOINTS AT END BENTS.
  - REMOVE & REST EXISTING GUARDRAIL, MILL AND RESURFACE APPROACHES AND PLACE PAVEMENT MARKINGS.
  - PLACE FLOWABLE FILL AT END BENTS.
  - PREPARE THE BRIDGE CONCRETE BARRIER RAIL SURFACES AND APPLY SILANE COATING.
  - PREPARE END OF BENT CAPS 1 & 2 SURFACES AND APPLY SILANE COATING.

- SEQUENCE OF CONSTRUCTION FOR SURFACE PREPARATION, SHEAR KEYS, AND POST TENSIONING (P/T)**
- 1) REMOVE EXISTING AWS OVERLAY AND NO MORE THAN 1/8" OF CONCRETE FROM PCCS UNITS.
  - 2) DETENSION AND REMOVE EXISTING TRANSVERSE P/T STRANDS, REMOVE EXISTING SHEAR KEY GROUT AND EXISTING JOINT MATERIAL AT BENTS.
  - 3) INSTALL NEW P/T STRAND AND APPLY AN MAINTAIN INITIAL TENSION LOAD OF 10,000 LBS.
  - 4) INSTALL REPAIR MORTAR IN LONGITUDINAL SHEAR KEYS.
  - 5) APPLY FINAL P/T LOAD OF 43,950 LBS.
  - 6) PLACE GROUT AT BENT JOINTS.
  - 7) INSTALL KEVLAR WATERPROOFING JOINT TAPE AT LONGITUDINAL SHEAR KEYS AND BENT JOINTS.
  - 8) PLACE REINFORCED CONCRETE WEARING SURFACE.

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070156**



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**GENERAL DRAWING**  
 FOR NBL BRIDGE ON  
 US 13/17 OVER  
 ROANOKE RIVER  
 OVERFLOW

DRAWN BY : T. HARTLEY DATE : 01/2025  
 CHECKED BY : R. FISHER DATE : 05/2025

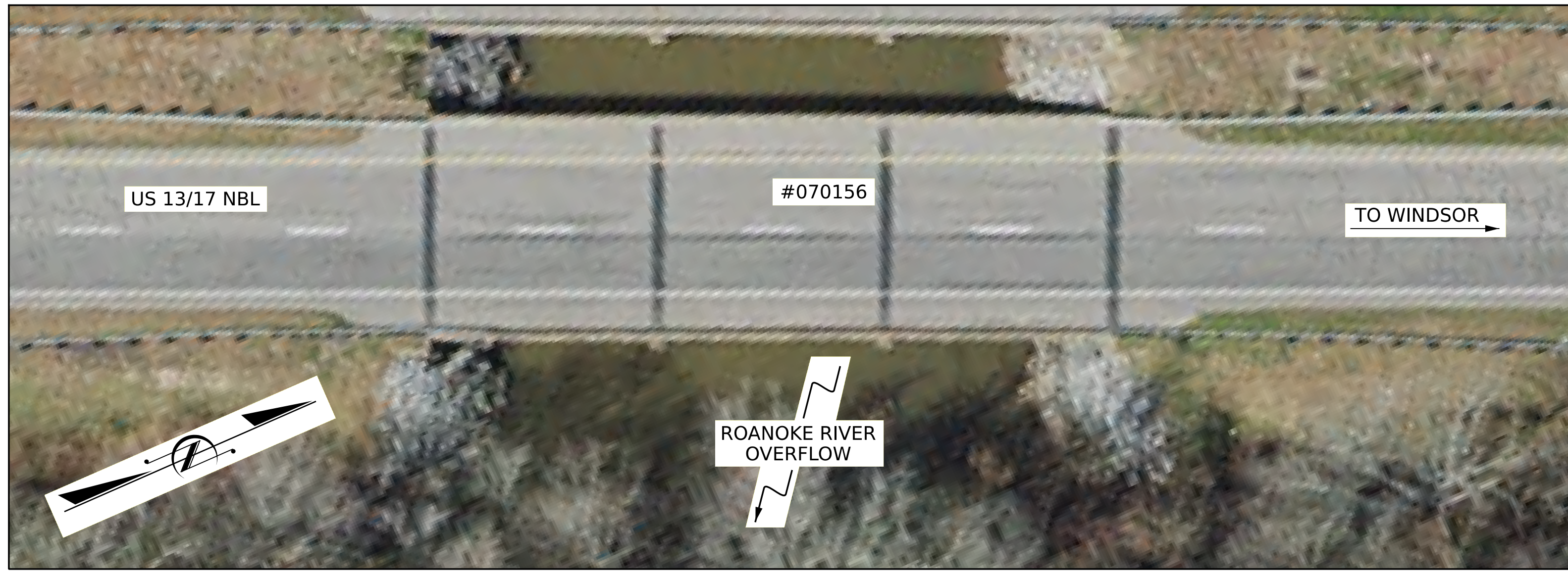


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TOTAL SHEETS: 40

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**LOCATION SKETCH**

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

**GENERAL NOTES**

SEE CONTRACT DOCUMENTS FOR SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR CONCRETE OVERLAY AND SUPERSTRUCTURE REPAIRS.

PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPLETE SEQUENCE OF TASKS FOR EACH OPERATION AFFECTING THE BRIDGE SURFACE AND/OR TRAFFIC.

FOR NEW ASPHALT PLACEMENT, SEE STANDARD SPECIFICATIONS.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT DUE TO THE NATURE OF PRESERVATION PROJECTS, THE EXTENT OF WORK CANNOT ALWAYS BE ACCURATELY DETERMINED PRIOR TO COMMENCEMENT OF WORK. REPAIR LOCATIONS AND ESTIMATES OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

ALL PAVEMENT MARKINGS WILL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE ENGINEER.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATIONS OF THE BRIDGE DECK. THE CONTRACTOR SHALL TAKE CARE THAT ANY CONSTRUCTION DEBRIS THAT COLLECTS IN THE DRAINS IS CONTAINED. DRAINS IN SHOULDERS OF ADJACENT TRAVEL LANE(S) SHALL BE KEPT FREE AND CLEAR OF DEBRIS.

THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN WHAT IS SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR POST TENSIONING STRAND REPLACEMENT, SEE PCCS POST TENSIONING REPLACEMENT SPECIAL PROVISIONS.

WORK ON THE BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW THE BRIDGE, EXCEPT WHERE THE CONTRACTOR'S PLAN USES PLATFORMS, NETS, SCREENS OR OTHER PROTECTIVE DEVICES TO CAPTURE THE MATERIAL. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.

FOR SCARIFYING BRIDGE DECK, SHEAR KEY REPAIRS, BENT JOINT REPAIRS, AND CONCRETE WEARING SURFACE, SEE PCCS DECK AND SUPERSTRUCTURE REPAIR SPECIAL PROVISIONS.

THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SUCH THAT THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY PART OF THE EXISTING STRUCTURE THAT IS TO REMAIN IN PLACE, THE DAMAGED AREA SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT NO ADDITIONAL COST TO THE DEPARTMENT.

THE CONTRACTOR SHALL TAKE CARE DURING JOINT REHAB OPERATIONS NOT TO DROP ANY MATERIAL BELOW THE BRIDGE WITHOUT PROTECTIVE DEVICES TO CATCH THE MATERIAL. FOR BENT JOINT REPAIRS, ANY MATERIAL DEPOSITED ON BENT CAPS OR BELOW SHALL BE COLLECTED AND DISPOSED OF BY THE CONTRACTOR AT NO EXTRA COST TO THE DEPARTMENT.

ANY DAMAGE TO EXISTING REINFORCING STEEL DURING CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND PERFORMED AT NO ADDITIONAL COST TO THE DEPARTMENT.

FOR ASPHALT PLUG JOINT FOR PRESERVATION, SEE SPECIAL PRESERVATIONS.

FOR KEVLAR WATERPROOFING JOINT TAPE, SEE SPECIAL PROVISIONS.

FOR VERY HIGH PERFORMANCE CONCRETE MATERIAL, SEE SPECIAL PROVISIONS.

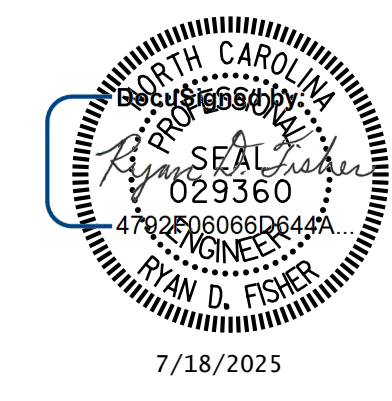
FOR FLOWABLE FILL, SEE SPECIAL PROVISIONS.

FOR SURFACE PREPARATION AND SILANE TREATMENT OF CONCRETE, SEE SPECIAL PROVISIONS.

| BRIDGE COORDINATES |                |
|--------------------|----------------|
| LATITUDE           | LONGITUDE      |
| 35° -51' -56.92"   | 77° -2' -9.96" |

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070156**

SHEET 2 OF 2



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**GENERAL DRAWING**  
 FOR NBL BRIDGE  
 ON US 13/17 OVER  
 ROANOKE RIVER  
 OVERFLOW



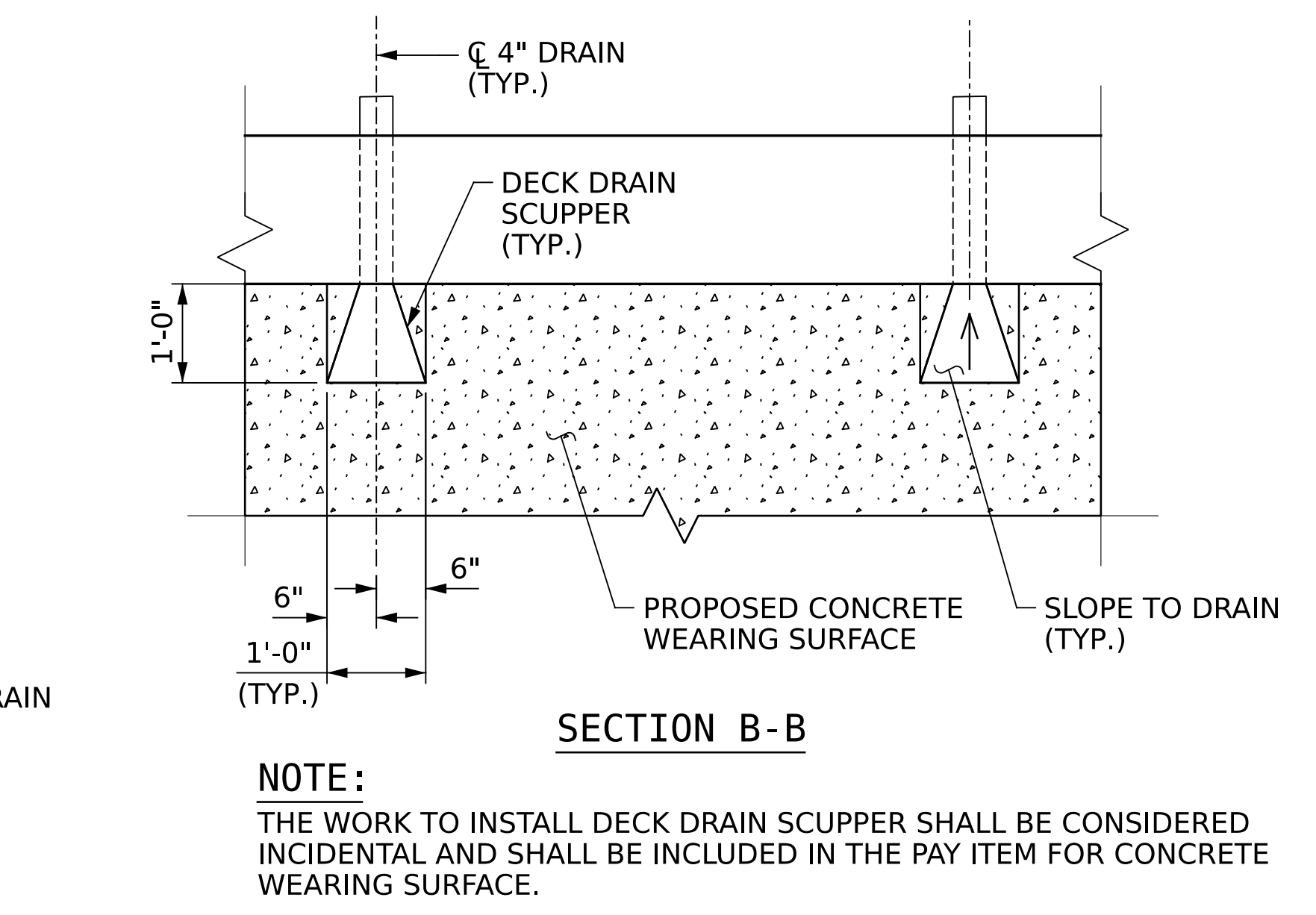
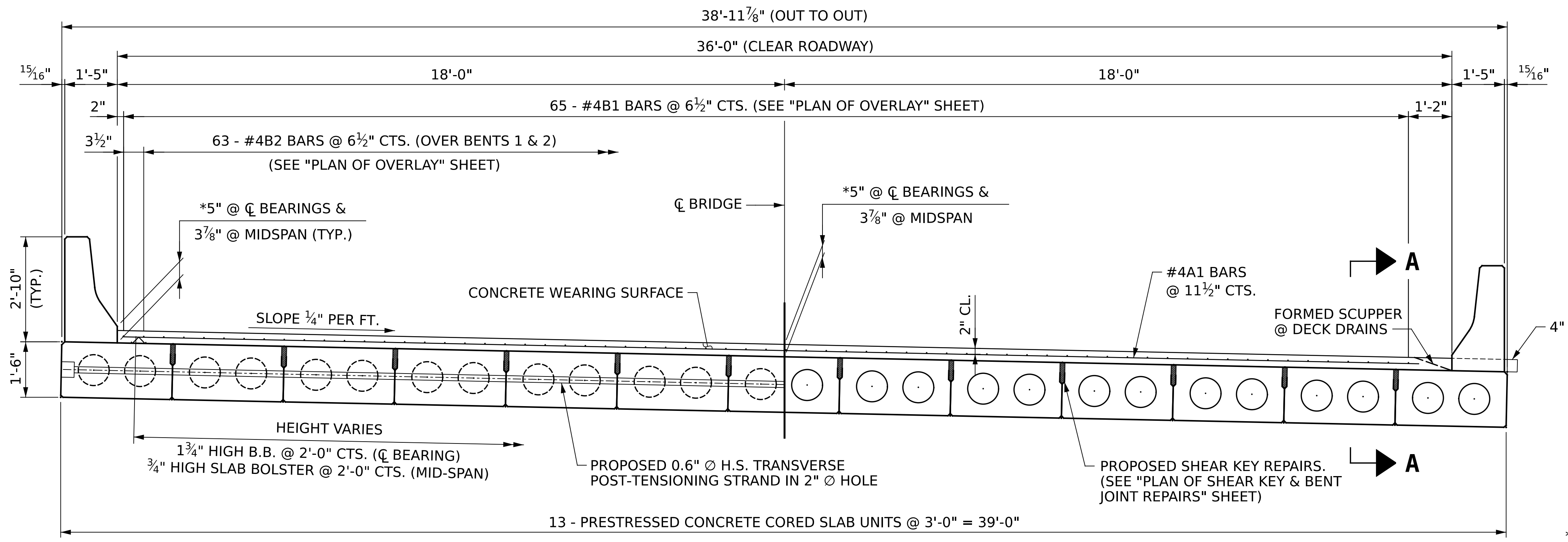
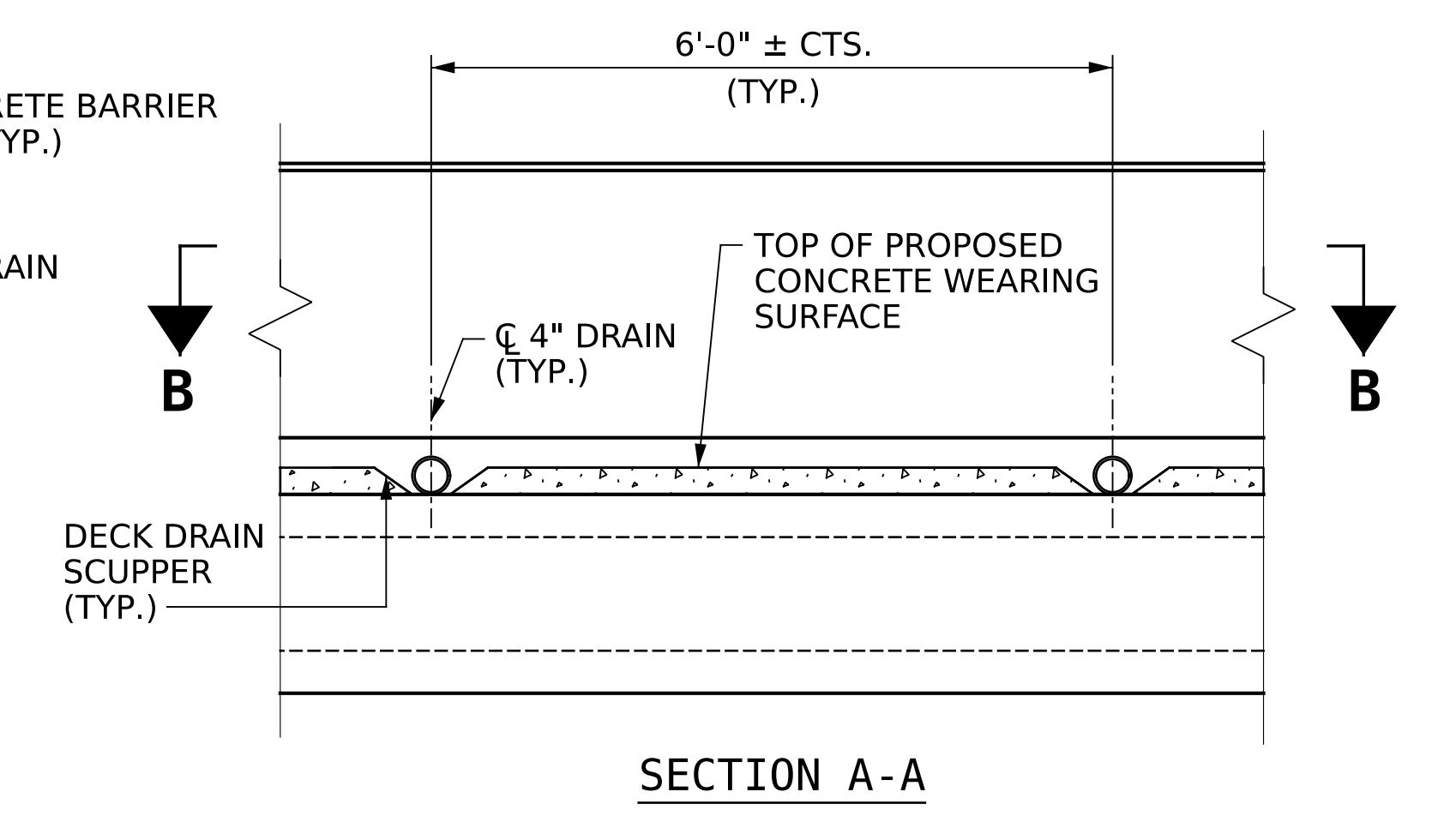
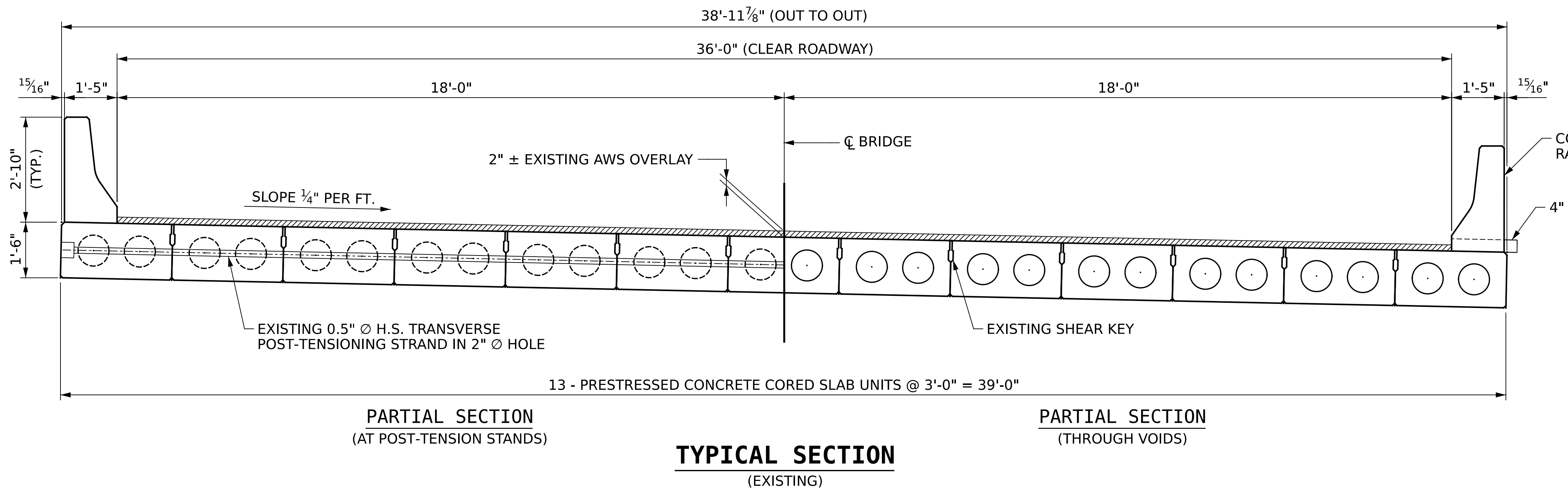
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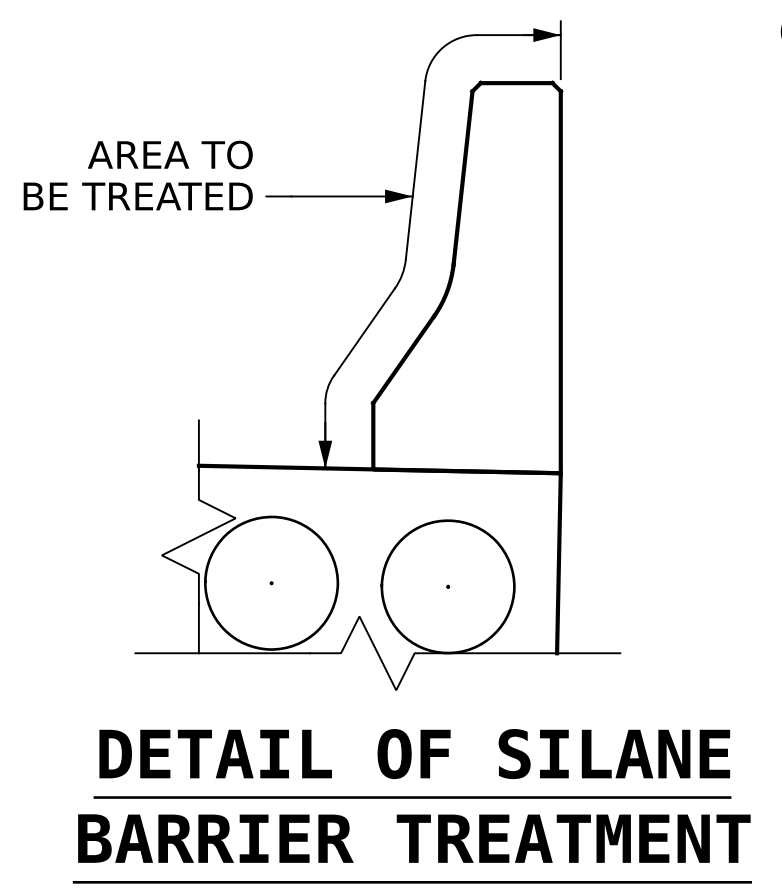
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\* BASED ON PREDICTED FINAL CAMBER AND THEORETICAL GRADE LINE ELEVATIONS FROM THE ORIGINAL DESIGN. FINAL CAMBER MAY VARY.

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070156**



**DETAIL FOR CONCRETE OVERLAY**

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**TYPICAL SECTION DETAILS**

7/18/2025

DRAWN BY: T. HARTLEY DATE: 01/2025  
 CHECKED BY: R. FISHER DATE: 05/2025

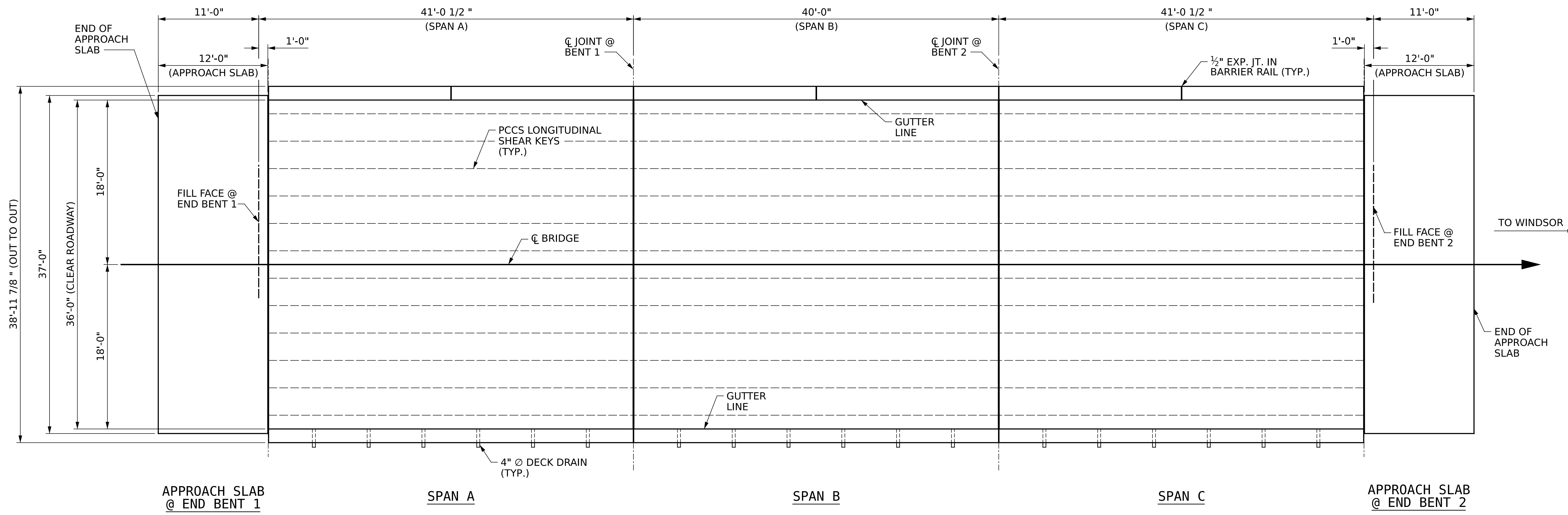


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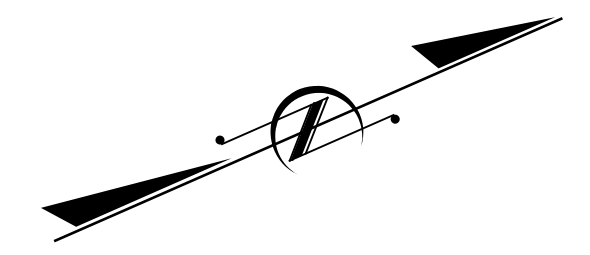
**PLAN**

**NOTES:**

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

FOR SCARIFYING BRIDGE DECK, SEE PCCS DECK AND SUPERSTRUCTURE REPAIR SPECIAL PROVISION.

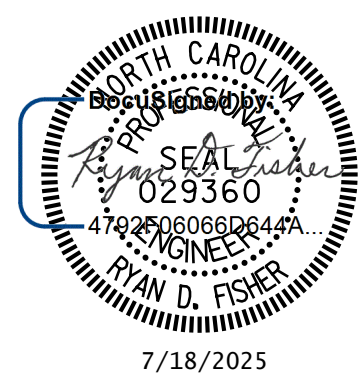
SCARIFYING BRIDGE DECK



**AS-BUILT QUANTITY REPAIR TABLE**

| TOP OF DECK REPAIRS           | SPAN A       |        | SPAN B       |        | SPAN C       |        |
|-------------------------------|--------------|--------|--------------|--------|--------------|--------|
|                               | ESTIMATE     | ACTUAL | ESTIMATE     | ACTUAL | ESTIMATE     | ACTUAL |
| SCARIFYING BRIDGE DECK        | 160 SQ. YDS. |        | 160 SQ. YDS. |        | 160 SQ. YDS. |        |
| SILANE BARRIER RAIL TREATMENT | 265 SQ. FT.  |        | 265 SQ. FT.  |        | 265 SQ. FT.  |        |

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070156**



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**PLAN OF  
 SURFACE PREPARATION  
 & CORED SLAB  
 BEAM REPAIRS**

DRAWN BY: T. HARTLEY DATE: 01/2025  
 CHECKED BY: R. FISHER DATE: 05/2025



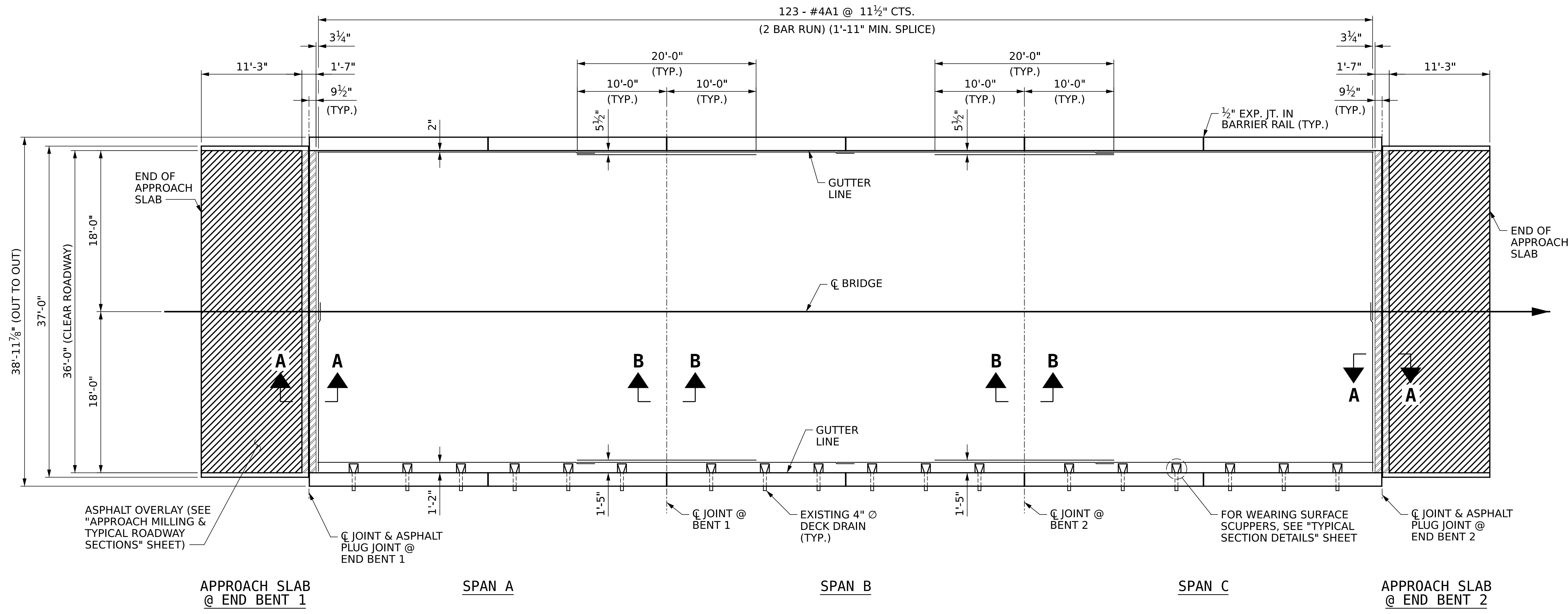
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 Suite 900  
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**PLAN**

**REINFORCING STEEL BILL OF MATERIAL FOR CONCRETE WEARING SURFACE**

| BAR                         | NO. | SIZE | TYPE | LENGTH      | WEIGHT |
|-----------------------------|-----|------|------|-------------|--------|
| *A1                         | 246 | #4   | STR. | 18'-9"      | 3,081  |
| *B1                         | 260 | #4   | STR. | 31'-0"      | 5,384  |
| *B2                         | 126 | #4   | STR. | 20'-0"      | 1,684  |
| * EPOXY COATED REINF. STEEL |     |      |      | 10,149 LBS. |        |

- CONCRETE WEARING SURFACE
- ASPHALT OVERLAY
- ASPHALT PLUG JOINT

**NOTES:**

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FOR SECTION A-A AND B-B, SEE "BENT JOINT REPAIR & JOINT DETAILS" SHEET.

THE COST OF REINFORCING STEEL CAST WITH THE CONCRETE WEARING SURFACE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE WEARING SURFACE.

FOR CONCRETE WEARING SURFACE, SEE PCCS DECK AND SUPERSTRUCTURE REPAIR SPECIAL PROVISION.

FOR ASPHALT PLUG JOINT FOR PRESERVATION, SEE SPECIAL PROVISIONS.

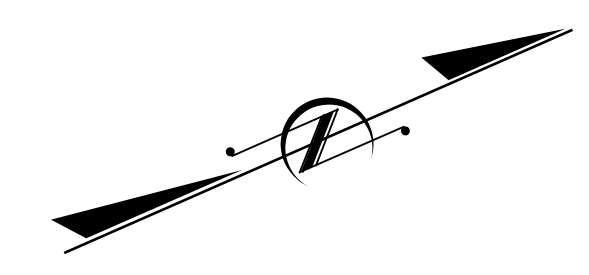
FOR TYPICAL SECTION, SEE SHEET S4-3.

**AS-BUILT REPAIR QUANTITY TABLE**

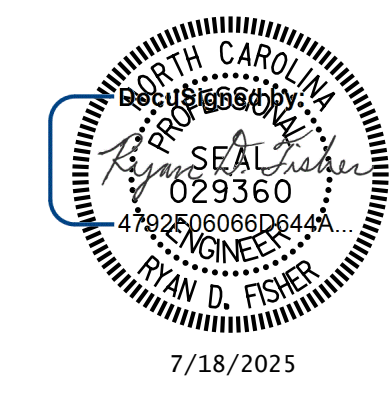
| TOP OF DECK REPAIRS                 |          |        |
|-------------------------------------|----------|--------|
|                                     | ESTIMATE | ACTUAL |
| CONCRETE WEARING SURFACE            | 4,245 SF |        |
| GROOVING BRIDGE FLOORS              | 3,897 SF |        |
| ASPHALT PLUG JOINT FOR PRESERVATION | 72 LF    |        |

**REINFORCING STEEL SPLICE CHART**

| BAR SIZE | SPLICE LENGTH |
|----------|---------------|
| #4       | 1'-11"        |



PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070156**



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**PLAN OF OVERLAY**

DRAWN BY: T. HARTLEY DATE: 01/2025  
 CHECKED BY: R. FISHER DATE: 05/2025

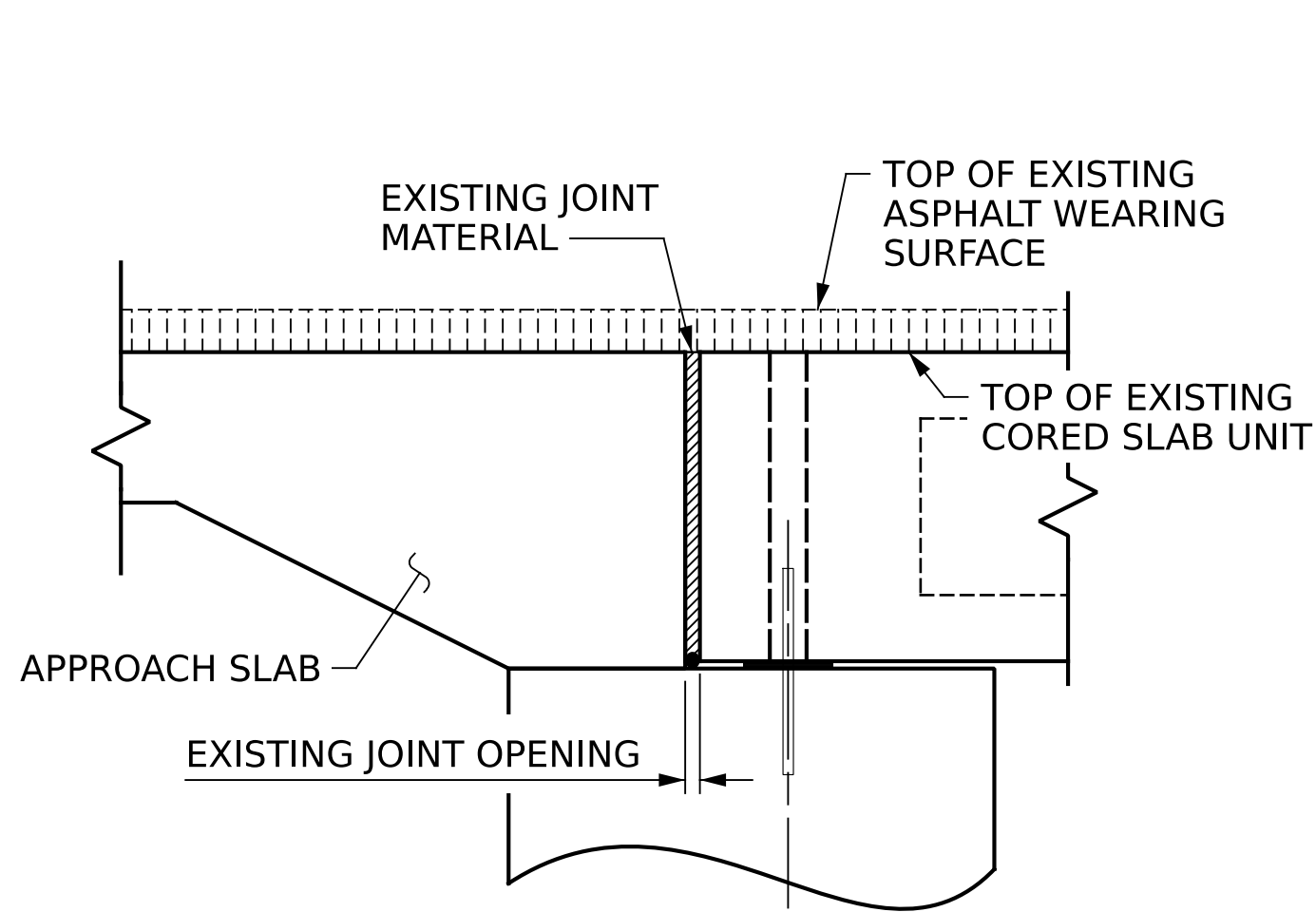


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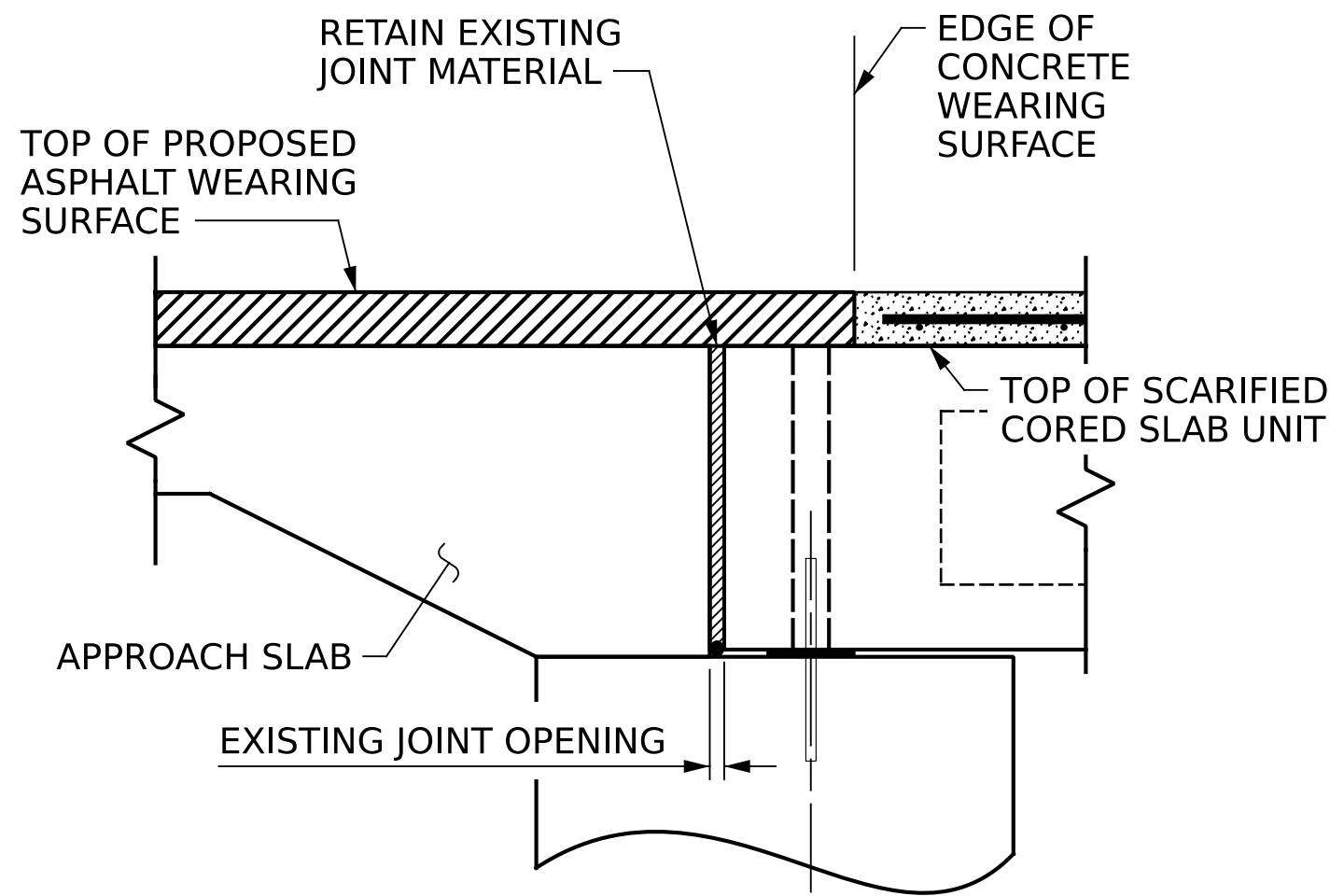
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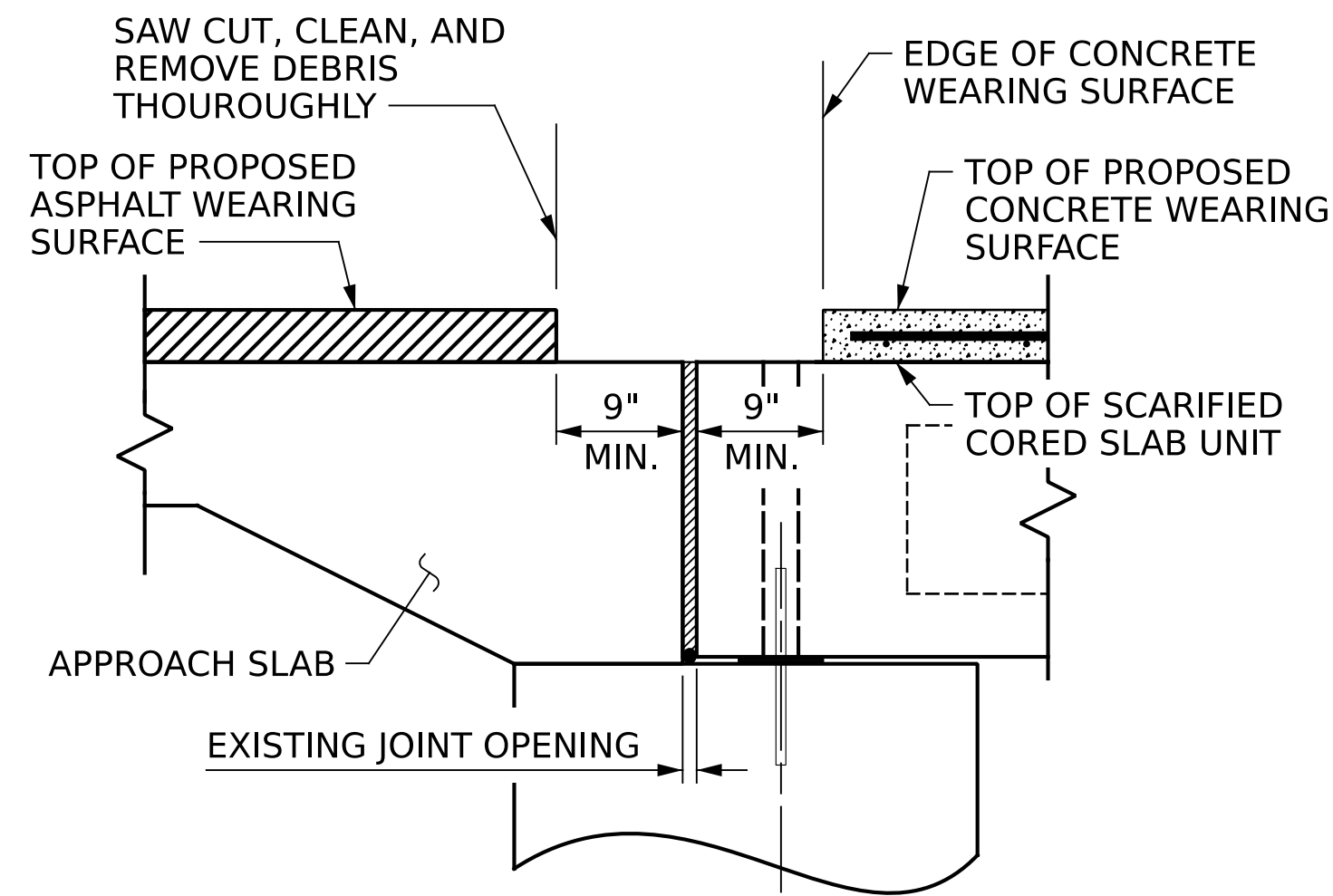
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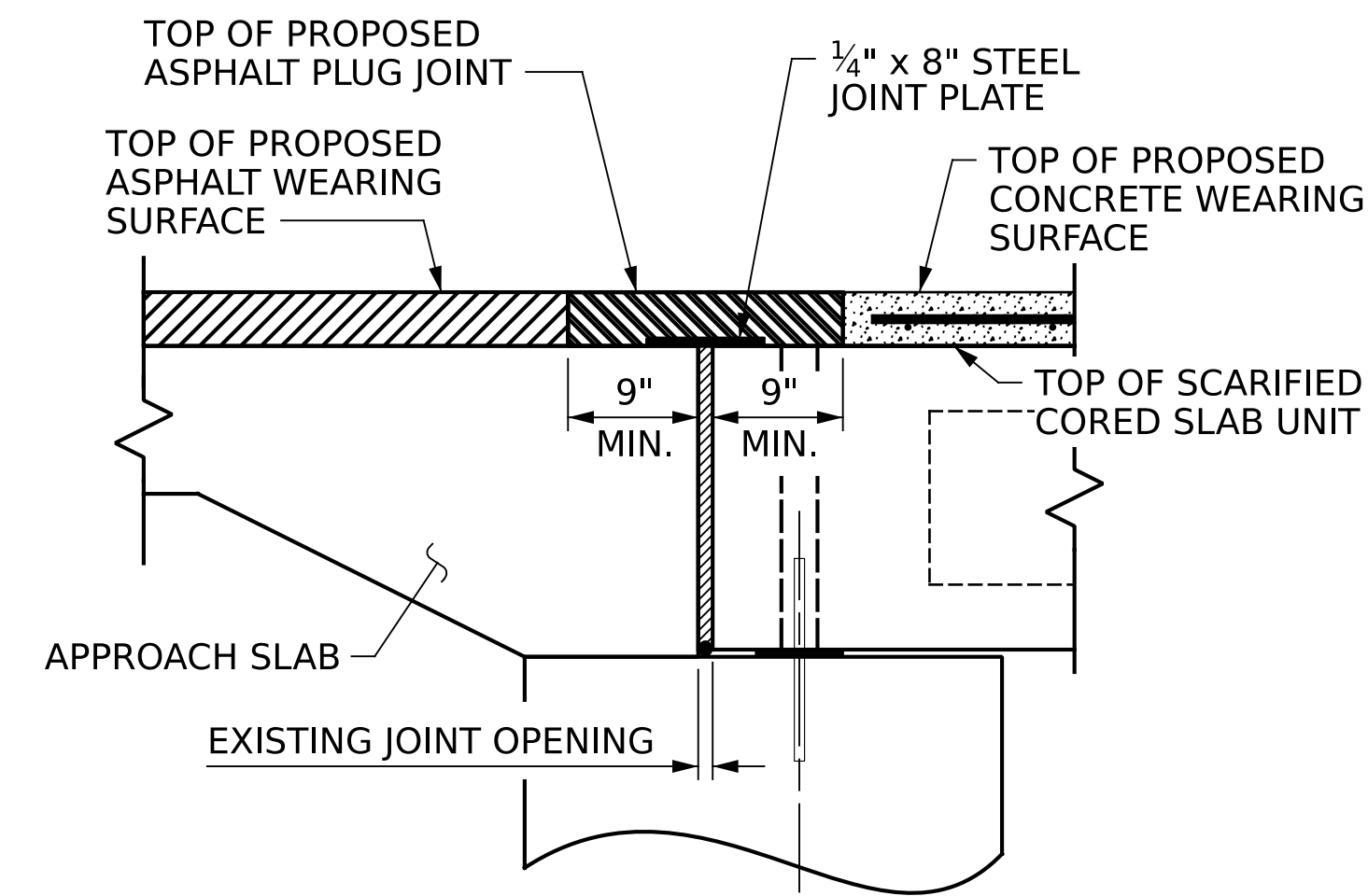
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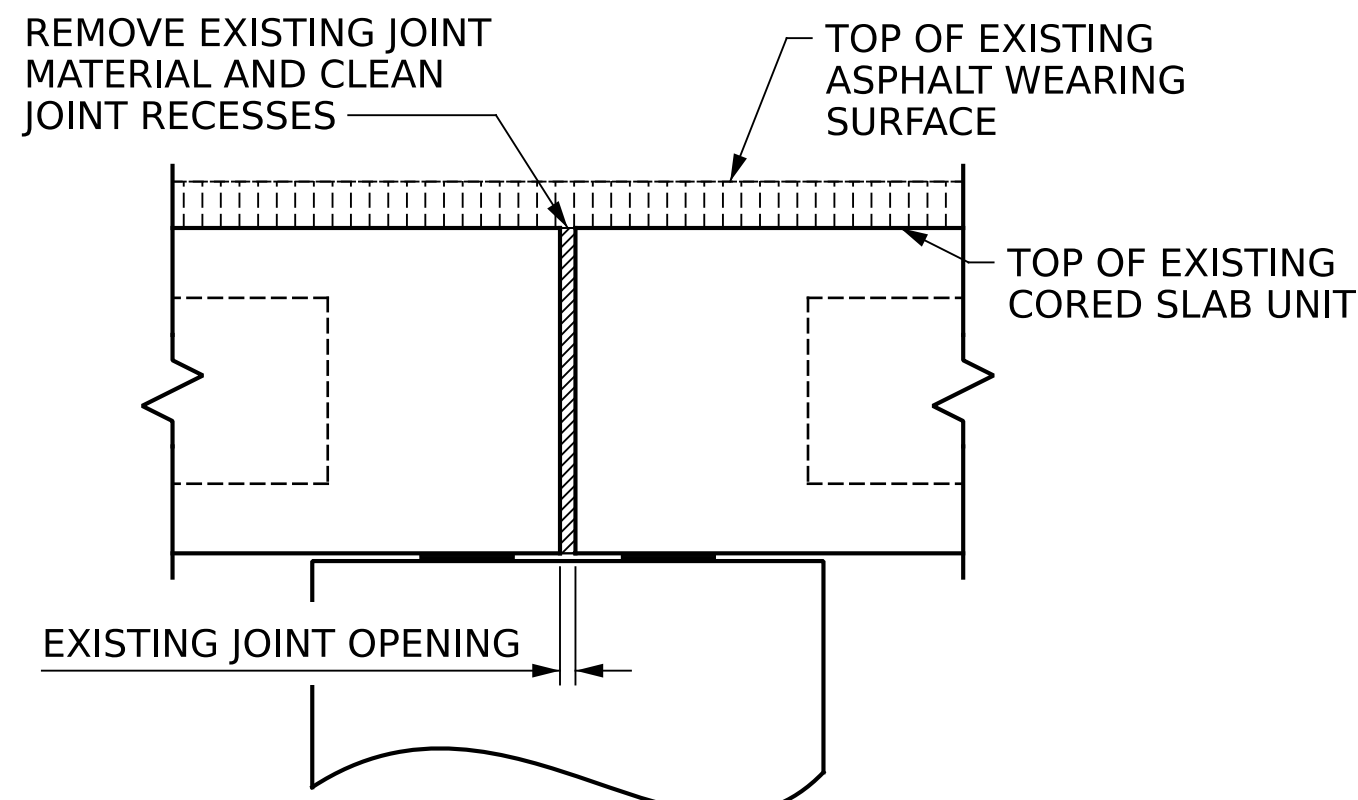
**PROPOSED OVERLAY**



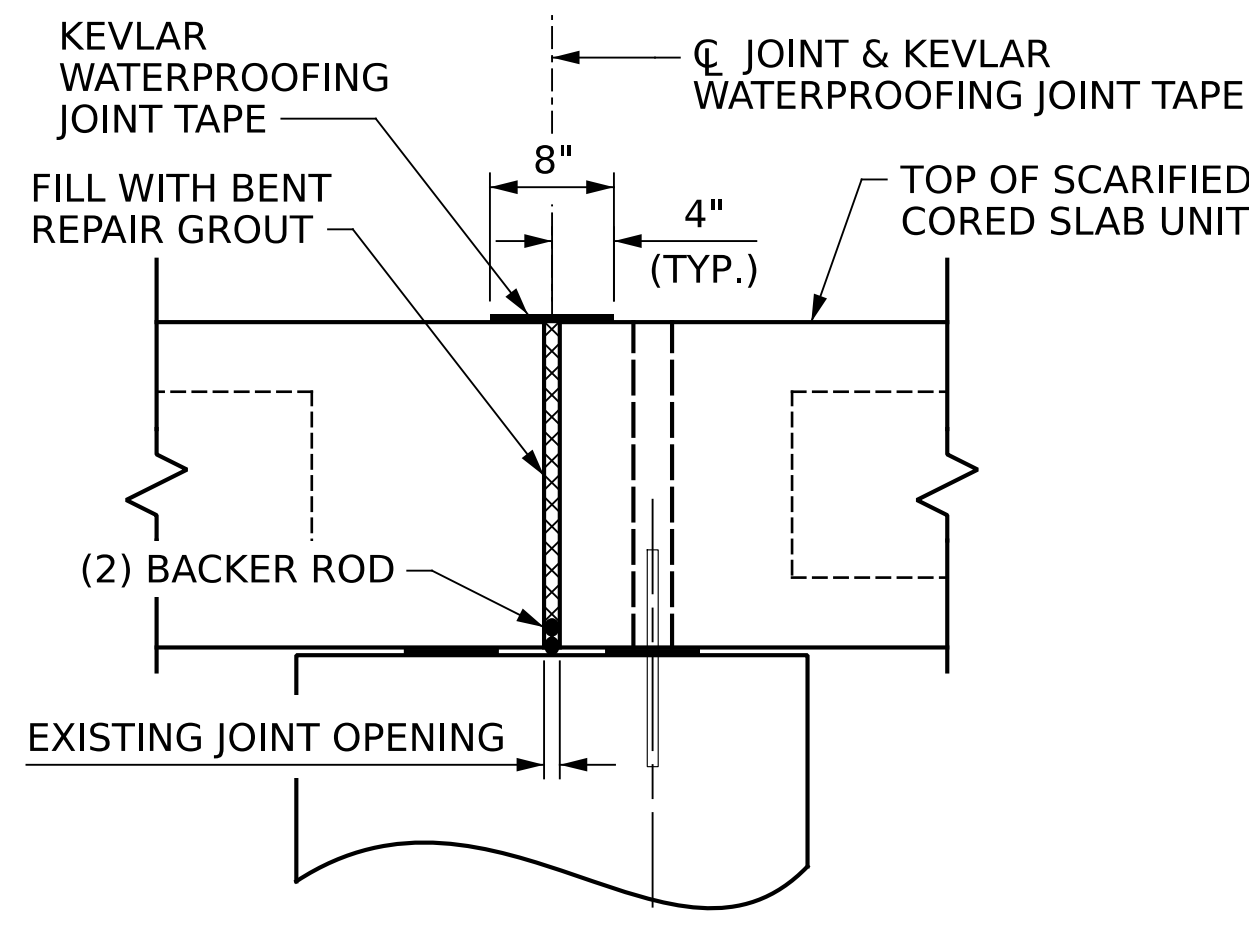
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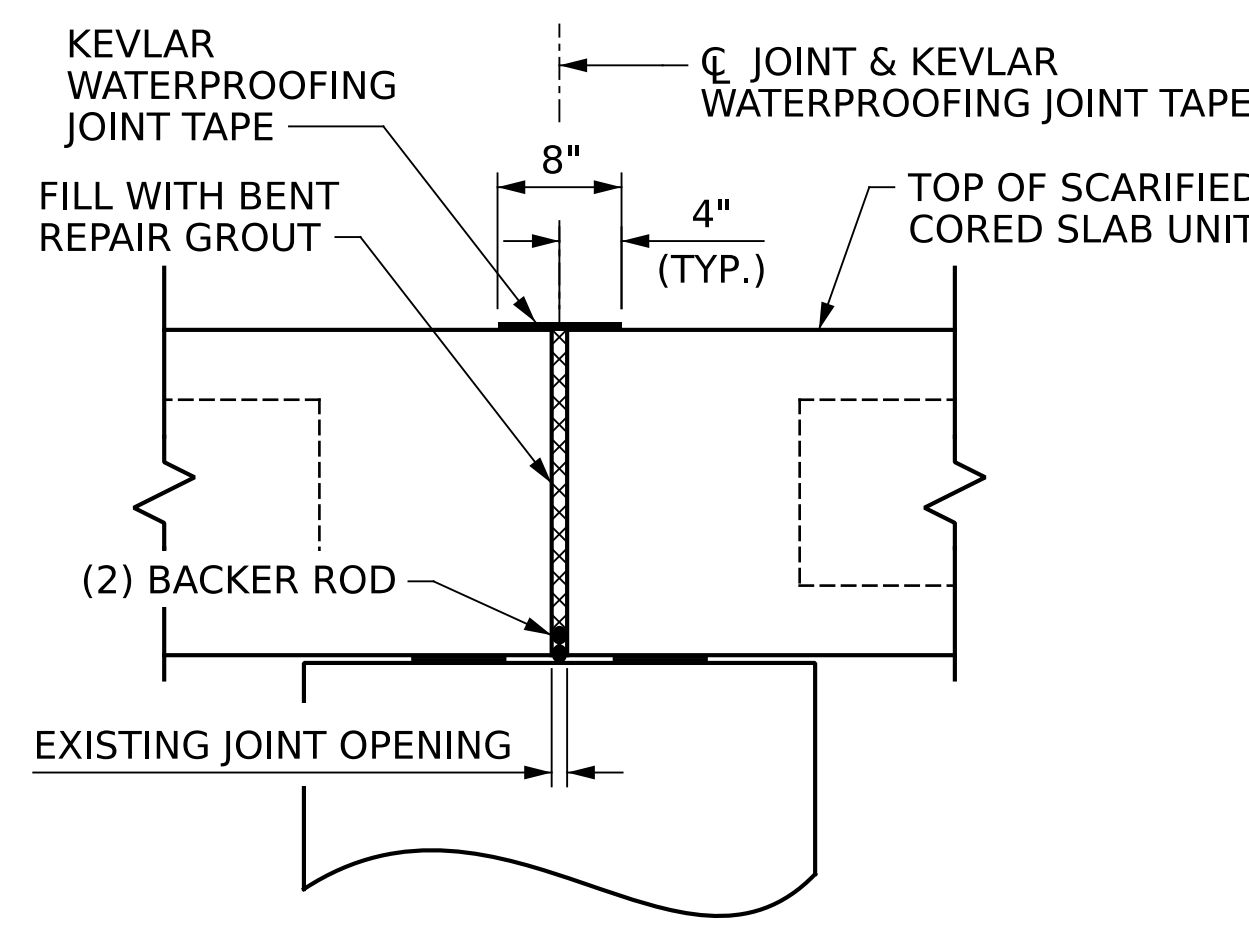
**PROPOSED ASPHALT PLUG JOINT**



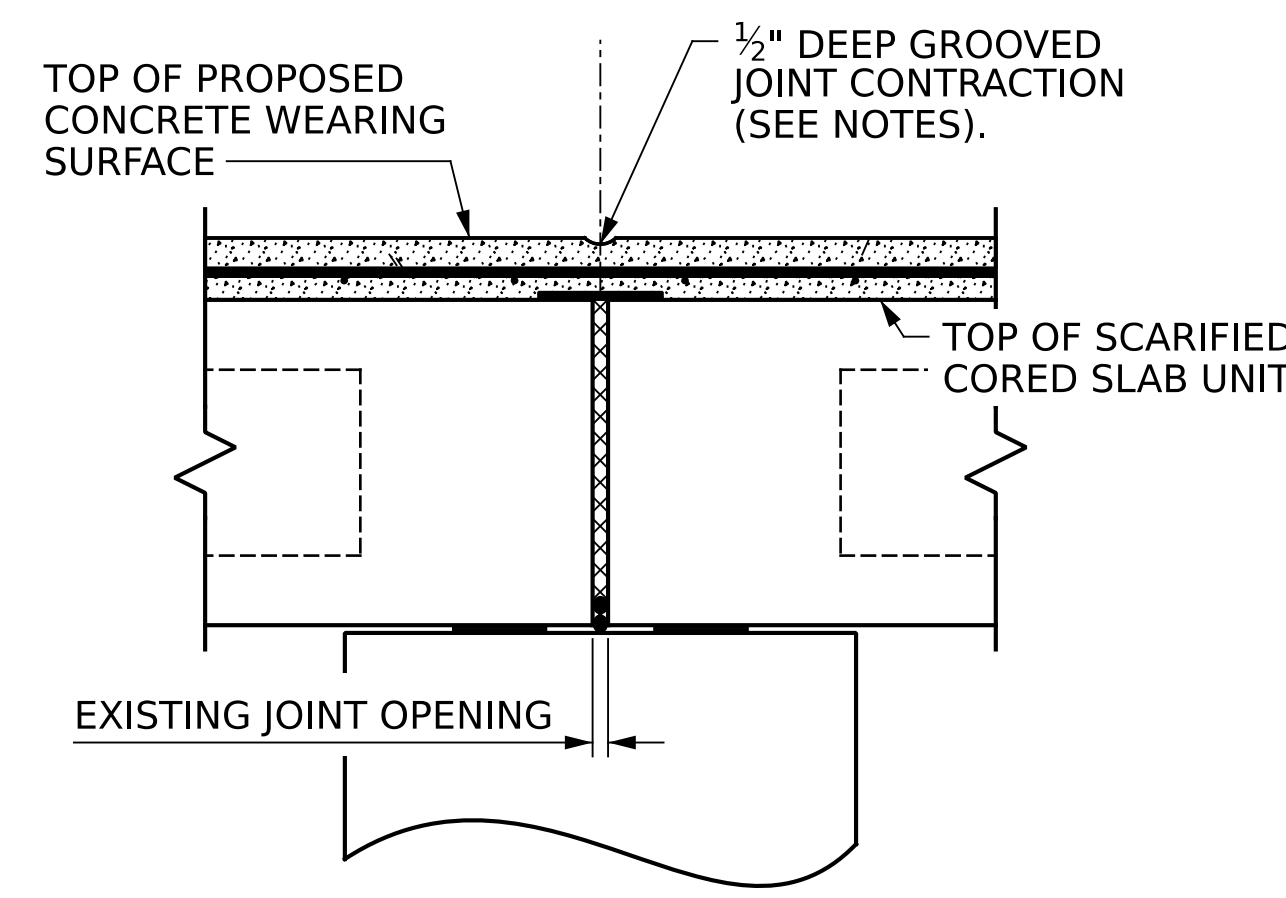
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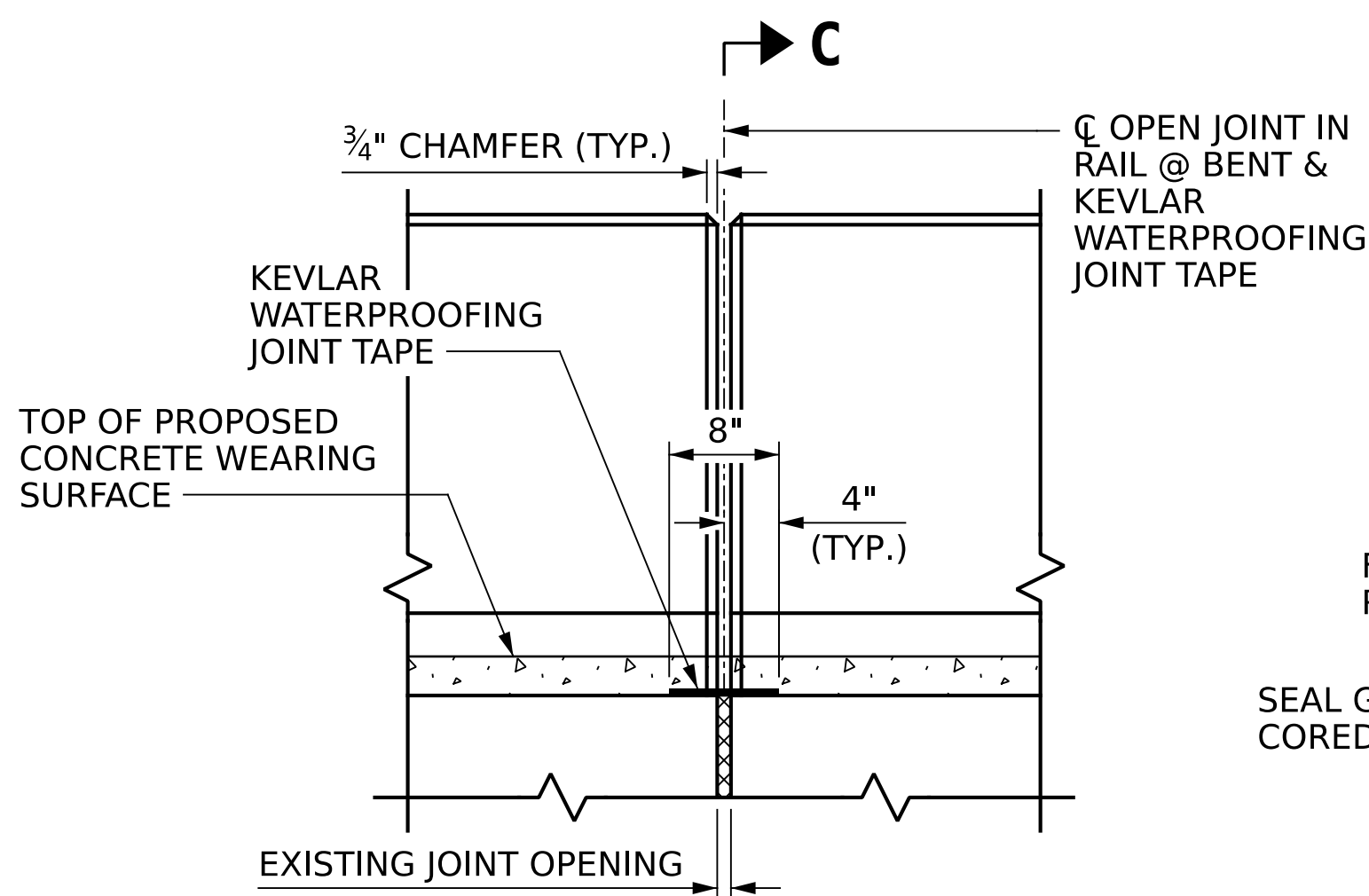
**PROPOSED JOINT WITH EPOXY GROUT BENT 1**



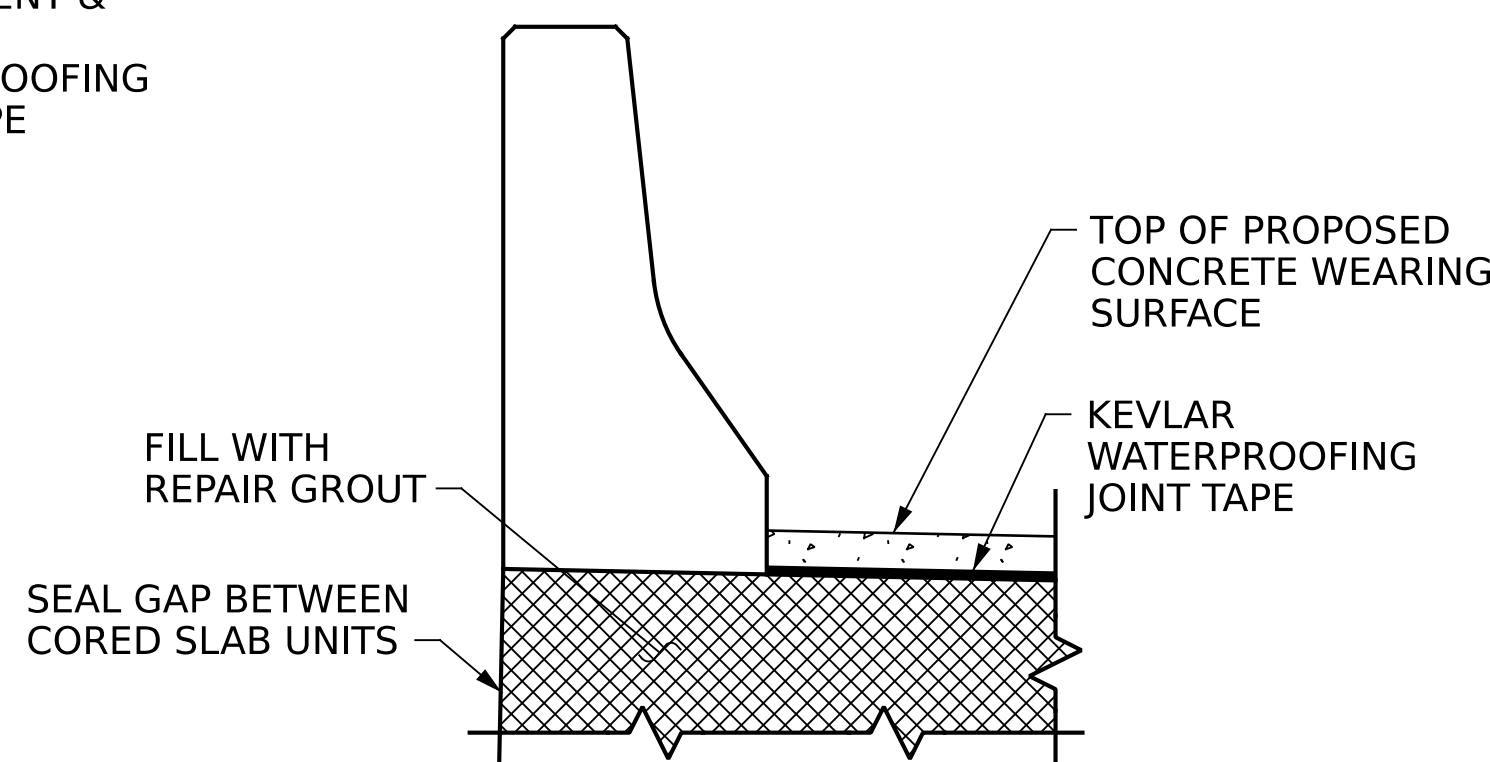
**PROPOSED JOINT WITH EPOXY GROUT BENT 2**



**PROPOSED CONCRETE WEARING SURFACE BENT 1 OR 2 (DOWELS NOT SHOWN)**



**ELEVATION AT EXPANSION JOINTS (TYP. AT BENTS 1 & 2)**



**SECTION C-C**

**JOINT DETAILS AT CONCRETE BARRIER RAILS**

**NOTES:**

FOR SCARIFYING BRIDGE DECK AND BENT JOINT REPAIRS, SEE PCCS DECK AND SUPERSTRUCTURE REPAIR SPECIAL PROVISIONS.

FOR KEVLAR WATERPROOFING JOINT TAPE, SEE SPECIAL PROVISIONS.

THE CONTRACTOR SHALL TAKE CARE DURING BENT JOINT REPAIR OPERATIONS NOT TO DROP ANY MATERIAL BELOW THE BRIDGE WITHOUT PROTECTIVE DEVICES BELOW TO CATCH THE MATERIAL. ANY MATERIAL THAT FALLS BELOW THE BRIDGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO EXTRA COST TO THE DEPARTMENT. IF THE ENGINEER DETERMINES THAT THE PROTECTIVE DEVICES ARE NOT ADEQUATE OR NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.

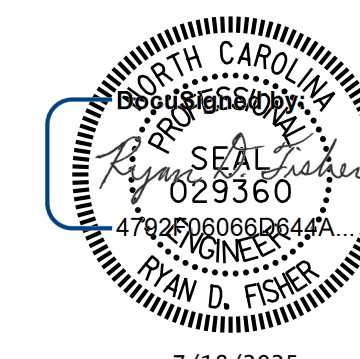
SELECT AND INSTALL BACKER ROD OF SUFFICIENT SIZE TO CREATE A WATER TIGHT-BARRIER TO KEEP GROUT FROM LEAKING THROUGH THE JOINT.

BACKER ROD FOR SHEAR KEY AND BENT JOINT REPAIRS SHALL BE INSTALLED IN CONTINUOUS ONE PIECE LENGTHS.

GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN CONCRETE WEARING SURFACE IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. THE CONTRACTION JOINTS SHALL BE LOCATED AT BENTS 1 AND 2 AS SHOWN IN SECTION B-B.

DEMOLISH BRIDGE JOINT AREA SUCH THAT THE BOTTOM OF THE EXCAVATION SHALL BE REASONABLY FLAT AND LEVEL AND TO THE NECESSARY DEPTH, SUCH THAT ASPHALT JOINT SHALL BE FOUNDED ON CONCRETE SUBSTRATE.

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070156**



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**BENT JOINT REPAIR & JOINT DETAILS**

DRAWN BY: T. HARTLEY DATE: 01/2025  
 CHECKED BY: R. FISHER DATE: 05/2025



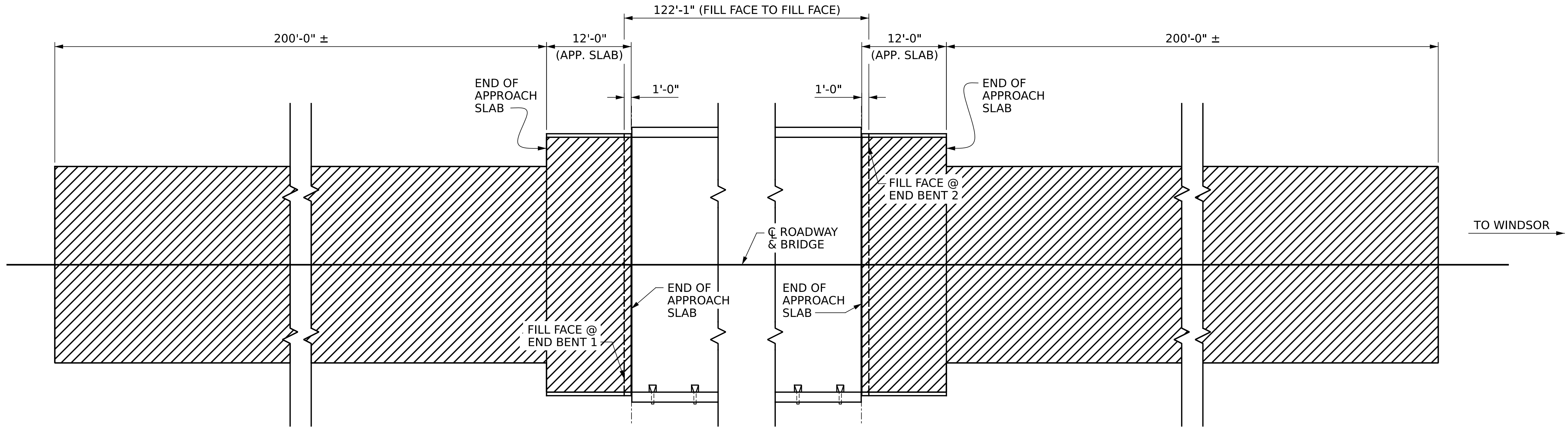
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

| REVISIONS |     | SHEET NO. |     |       |
|-----------|-----|-----------|-----|-------|
| NO.       | BY: | DATE:     | NO. | DATE: |
| 1         |     |           | 3   |       |
| 2         |     |           | 4   |       |

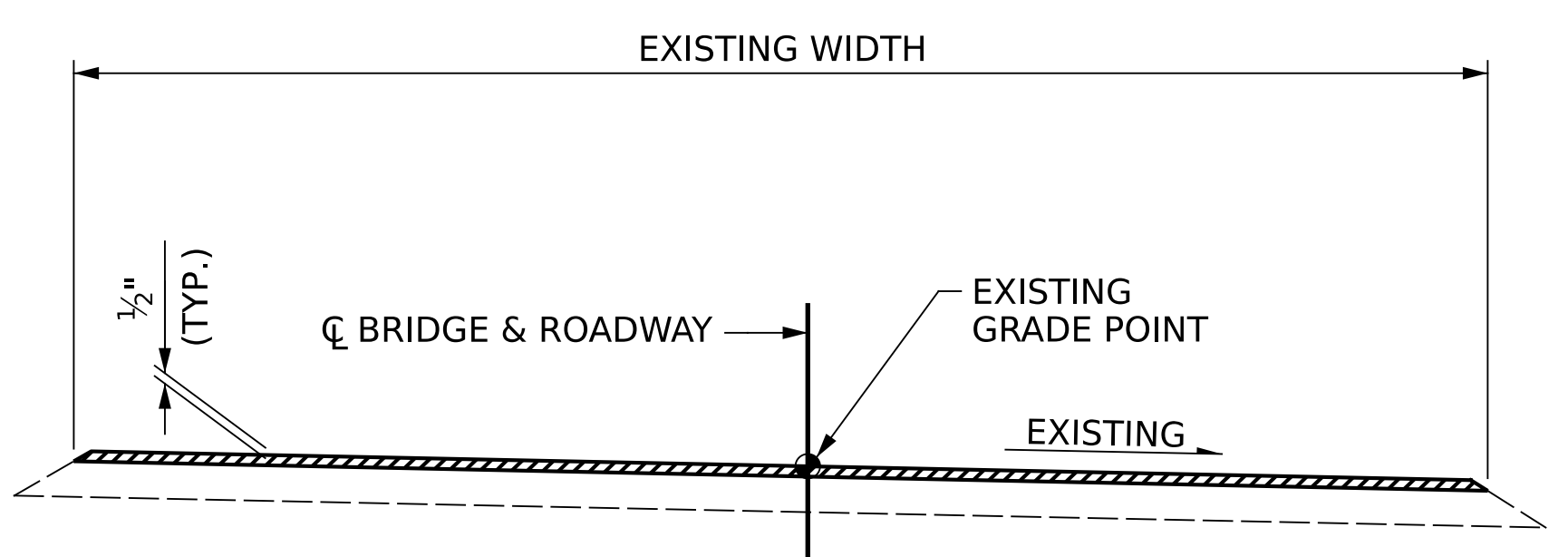
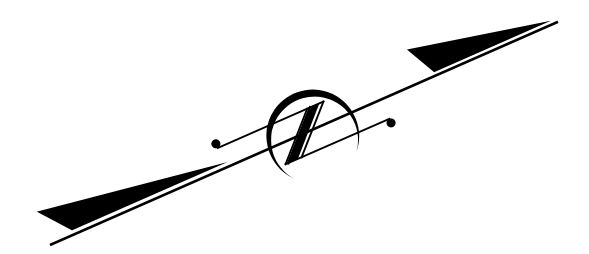
TOTAL SHEETS: 40



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 Rehb/5-Working/Structures/070156/CAD/3.0-100%  
 Berfile\_100%.tbl  
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**PLAN**



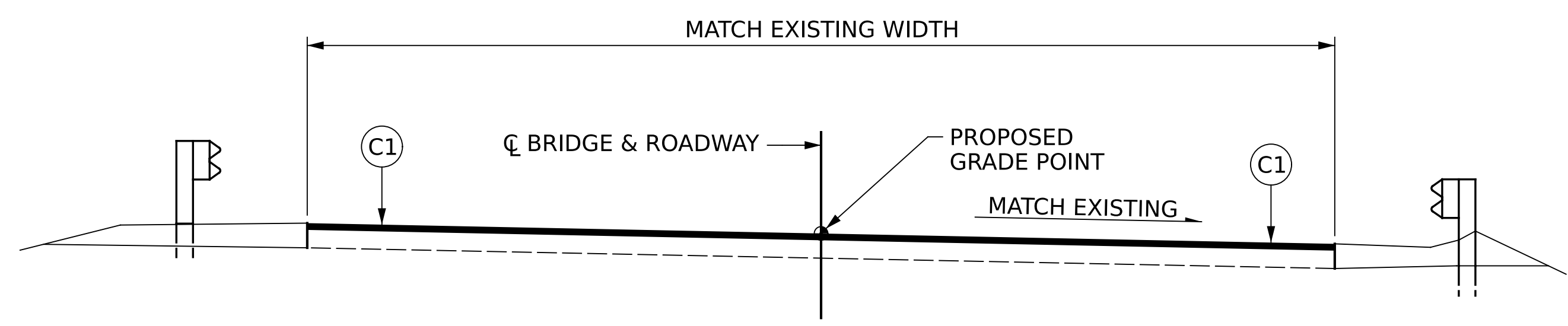
**TYPICAL ROADWAY MILLING SECTION**  
(MILL TO APPROXIMATELY 1/2" DEPTH)

- INCIDENTAL MILLING

**NOTES:**  
 INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 2" DEPTH OF NEW ASPHALT PAVEMENT. NEW ASPHALT PAVEMENT SHALL BE OF THICKNESS NECESSARY TO CREATE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK.

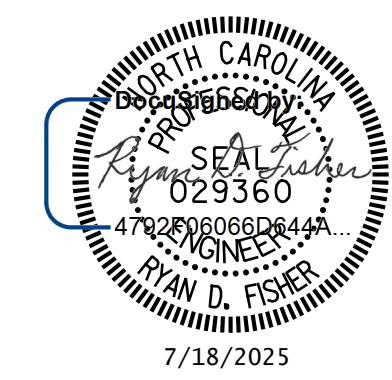
|           |   |
|-----------|---|
| <b>C1</b> | PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH. |
|           |   |

| SUMMARY OF QUANTITIES                       |            |        |
|---|------------|--------|
| DESCRIPTION                                 | ESTIMATE   | ACTUAL |
| INCIDENTAL MILLING                          | 1,341 SY   |        |
| ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C | 160 TONS   |        |
| ASPHALT BINDER FOR PLANT MIX                | 10 TONS    |        |
| PAINT PAVEMENT MARKING LINES (4")           | 1,224 L.F. |        |



**TYPICAL FINAL ROADWAY SECTION**

PROJECT NO. **HB-0070**  
**BERTIE** COUNTY  
 BRIDGE: **070156**



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**APPROACH MILLING AND TYPICAL ROADWAY SECTIONS**

DRAWN BY : T. HARTLEY DATE : 01/2025  
 CHECKED BY : R. FISHER DATE : 05/2025



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

| REVISIONS |     |       |     |     |       | SHEET NO.       |
|-----------|-----|-------|-----|-----|-------|-----------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                 |
| 1         |     |       | 3   |     |       | S4-9            |
| 2         |     |       | 4   |     |       | TOTAL SHEETS 40 |

## STANDARD NOTES

DESIGN DATA:

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

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2024 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

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

CONCRETE:

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

CONCRETE CHAMFERS:

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

DOWELS:

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

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

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

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

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

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

REINFORCING STEEL:

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

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

STRUCTURAL STEEL:

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

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

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

HANDRAILS AND POSTS:

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

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

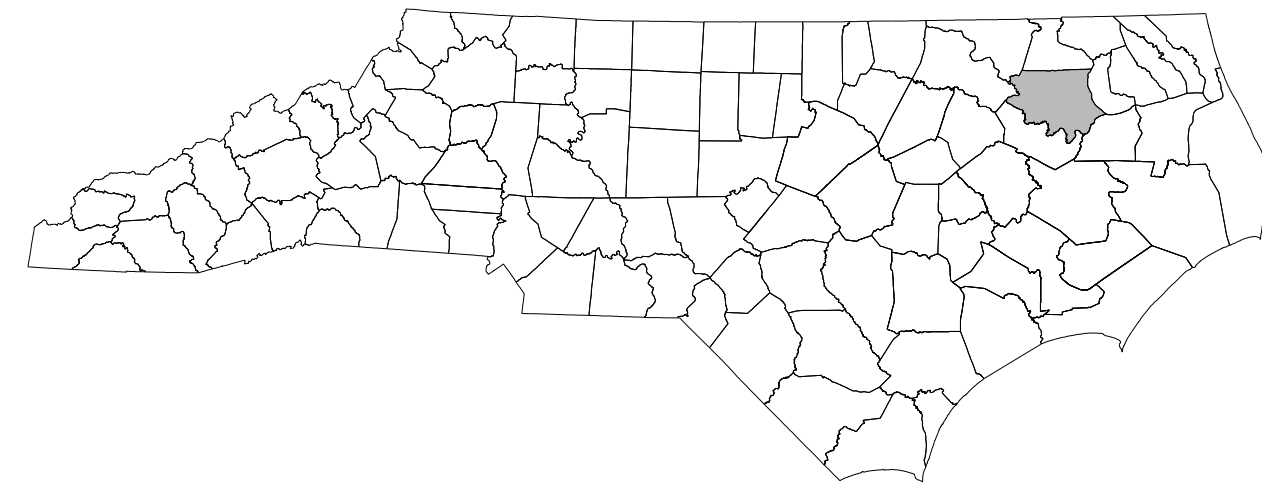
SPECIAL NOTES:

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

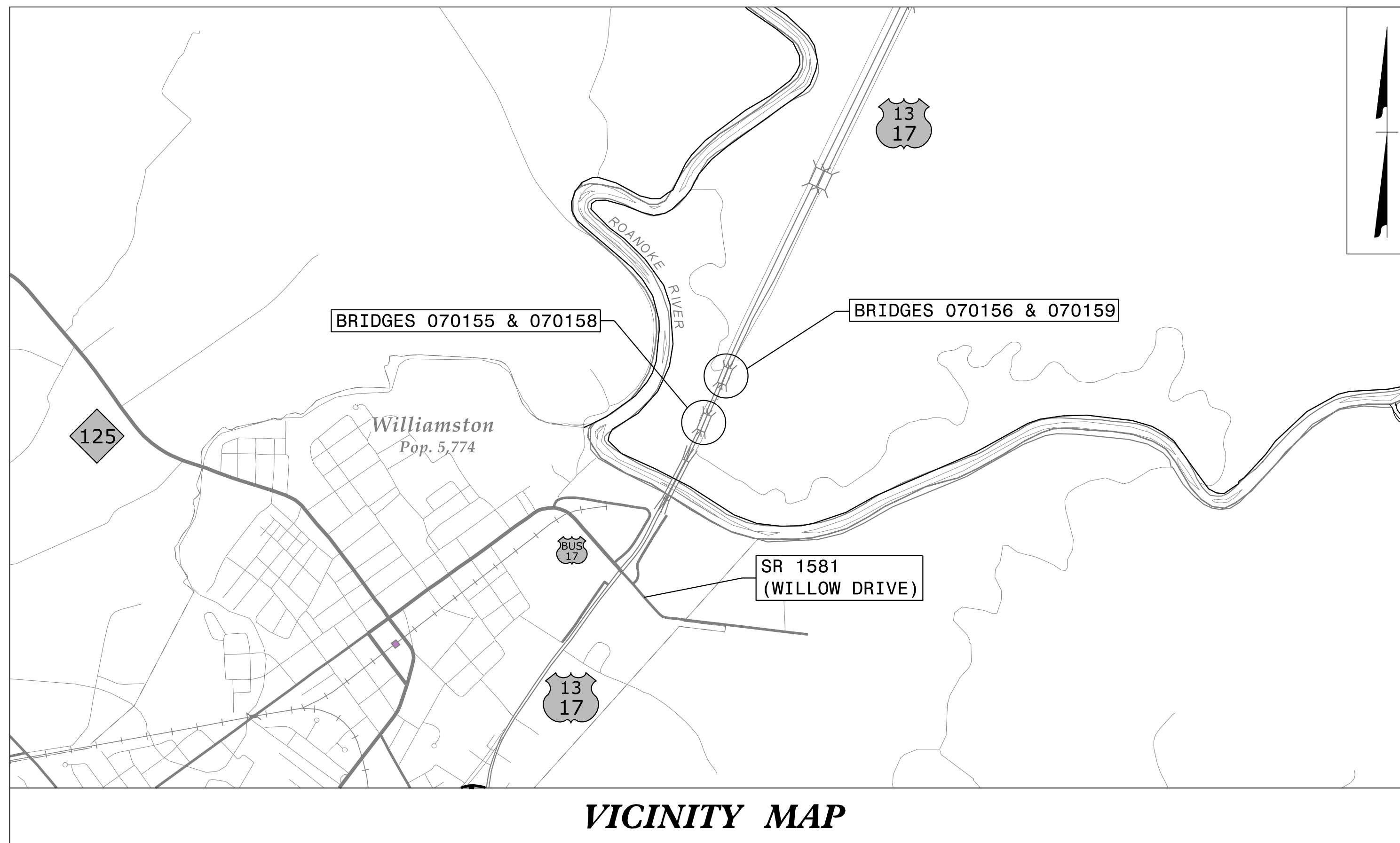
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**BERTIE COUNTY**



**LOCATION: BRIDGE NO. 070155 & 070156 ON US 13 /US 17 (EAST BLVD) NBL  
BRIDGE NO. 070158 & 070159 ON US 13 /US 17 (EAST BLVD) SBL**



**VICINITY MAP**

**INDEX OF SHEETS**

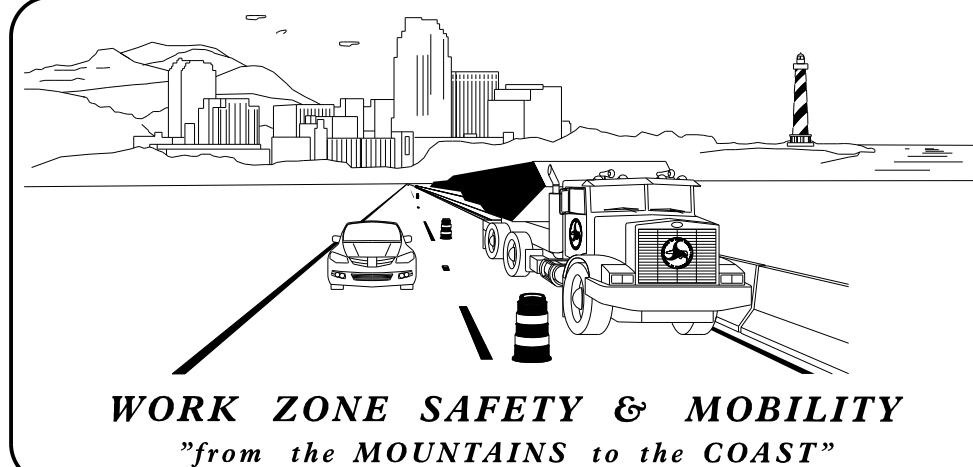
| SHEET NO.         | TITLE  |
|-------------------|--|
| TMP-1             | TITLE SHEET, VICINITY MAP, INDEX OF SHEETS AND MANAGEMENT STRATEGIES |
| TMP-1A            | LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS AND LEGEND              |
| TMP-1B            | GENERAL NOTES  |
| TMP-3             | PHASING  |
| TMP-4             | PHASE I DETAIL   |
| TMP-5 THRU TMP-7  | PHASE I DETAILS  |
| TMP-8 THRU TMP-10 | PHASE II DETAILS   |

**MANAGEMENT STRATEGIES**

TRAFFIC MANAGEMENT STRATEGIES:  
 - LANE SHIFTS OR CLOSURES  
 - TEMPORARY CLOSURE OF ONE DIRECTION ON FOUR-LANE DIVIDED FACILITY. TRAFFIC WILL BE MAINTAINED ON US 13/US 17 IN TEMPORARY TWO-LANE, TWO-WAY PATTERN USING TEMPORARY MEDIAN CROSSOVERS.

SHEET NO.  
TMP-1

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

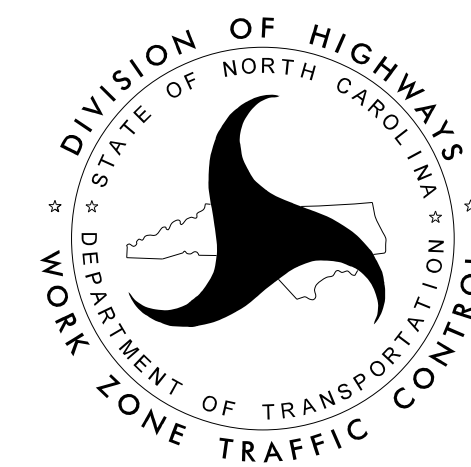


PLANS PREPARED BY:

RICK NELSON, PE  
PROJECT ENGINEER  
  
BENJAMIN A. WHITE, PE  
PROJECT DESIGN ENGINEER

NCDOT CONTACTS:

RYAN L. SHOOK  
PROJECT MANAGER



APPROVED:   
DATE: 8/20/2025

SEAL



**TIP PROJECT: HB-0070**

# ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

| STD. NO. | TITLE   |
|----------|---|
| 1101.01  | WORK ZONE ADVANCE WARNING SIGNS                     |
| 1101.02  | TEMPORARY LANE CLOSURES                             |
| 1101.03  | TEMPORARY ROAD CLOSURES                             |
| 1101.11  | TRAFFIC CONTROL DESIGN TABLES                       |
| 1110.01  | STATIONARY WORK ZONE SIGNS                          |
| 1110.02  | PORTABLE WORK ZONE SIGNS                            |
| 1115.01  | FLASHING ARROW BOARDS                               |
| 1130.01  | DRUMS   |
| 1145.01  | BARRICADES  |
| 1165.01  | TRUCK MOUNTED ATTENUATOR                            |
| 1170.01  | PORTABLE CONCRETE BARRIER                           |
| 1205.01  | PAVEMENT MARKINGS - LINE TYPES AND OFFSETS          |
| 1205.02  | PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS |

# LEGEND

## GENERAL

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

- WORK AREA
- REMOVAL
- TEMPORARY PAVEMENT

## SIGNALS

- PROPOSED
- TEMPORARY
- PORTABLE
- DS

## PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

## TRAFFIC CONTROL DEVICES

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

## TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

## PAVEMENT MARKERS

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

## PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

## TEMPORARY PAVEMENT MARKING

| SYMBOL | DESCRIPTION                 |
|--------|-----------------------------|
| P1     | PAINT WHITE EDGE LINE (4")  |
| P10    | PAINT YELLOW EDGE LINE (4") |

APPROVED:   
 DATE: 8/20/2025

SEAL

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



**ROADWAY STANDARD  
DRAWINGS & 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 UNDESIRED 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 DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

#### ROAD NAME

US 13 / US 17

#### HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 7:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 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 7:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

### LANE AND SHOULDER CLOSURE REQUIREMENTS

- B) 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.
- C) 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.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 5 FT OF AN OPEN TRAVEL LANE ON AN UNDIVIDED FACILITY, 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 10 FT OF AN OPEN TRAVEL LANE ON A DIVIDED FACILITY, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

- E) 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.
- F) USE SEQUENTIAL FLASHING WARNING LIGHTS ON DRUMS USED FOR THE MERGING TAPERS OF NIGHTTIME LANE CLOSURES IN ACCORDANCE WITH SECTION 1140 IN THE STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
- G) NOTIFY THE NCDOT STATEWIDE TRANSPORTATION OPERATIONS CENTER (STOC) AT 877-627-7862 APPROXIMATELY 30 MINUTES PRIOR TO INSTALLING AND WITHIN 15 MINUTES AFTER REMOVING LANE CLOSURES ON INTERSTATES, FREEWAYS, CONTROLLED ACCESS FACILITIES, AND US ROUTES.

### TRAFFIC PATTERN ALTERATIONS

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

### SIGNING

- I) 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.
- J) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

### TRAFFIC BARRIER

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

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

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

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

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

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

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

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

### TRAFFIC CONTROL DEVICES

- M) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- N) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- O) 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

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

| ROAD NAME     | MARKING | MARKER |
|---------------|---------|--------|
| US 13 / US 17 | PAINT   | N/A    |

- Q) 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.
- R) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- S) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

## PHASING

NOTE: BEFORE BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL PLACE WORK ZONE ADVANCE WARNING SIGNS ALONG US 13 / US 17. SEE ROADWAY STANDARD DRAWING 1101.01, SHEET 2 OF 3.

### PHASE I

**STEP 1:** USING ROADWAY STANDARD DRAWING 1101.02 SHEET 3 OF 19, CONSTRUCT TEMPORARY ASPHALT PAVEMENT IN MEDIAN AS SHOWN ON SHEET TMP-4.

### PHASE II

**STEP 1:** USING ROADWAY STANDARD DRAWING 1101.02 SHEET 3 OF 19, PLACE PORTABLE CONCRETE BARRIER ALONG NORTHBOUND LANES OF US 13 / US 17 AND THROUGH THE MEDIAN CROSSOVERS AND PLACE TEMPORARY PAVEMENT MARKINGS FOR TEMPORARY TWO-LANE, TWO-WAY TRAFFIC PATTERN AS SHOWN ON SHEETS TMP-5 THRU TMP-7.

**STEP 2:** PLACE TRAFFIC INTO TEMPORARY PATTERN ALONG US 13 / US 17 NORTHBOUND LANES. PERFORM BRIDGE WORK TO STRUCTURES 070158 AND 070159 INCLUDING APPROACH MILLING. PERFORM SLAB REMOVAL AND FULL DEPTH ASPHALT REPLACEMENT AT STRUCTURE 070157 AS SHOWN IN THE STRUCTURE PLANS.

**STEP 3:** ONCE BRIDGE WORK IS COMPLETE, REPLACE ANY DAMAGED PAVEMENT MARKINGS WITH TEMPORARY PAINT AND RE-OPEN US 13 / US 17 SOUTHBOUND LANES TO TRAFFIC. REMOVE PORTABLE CONCRETE BARRIER FROM NORTHBOUND LANES OF US 13 / US 17 AND PREPARE TO RESET IN SOUTHBOUND LANES FOR PHASE III.


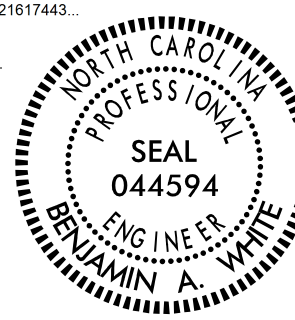
### PHASE III

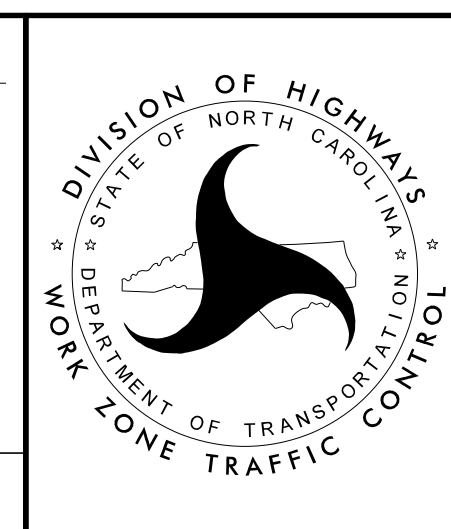
**STEP 1:** USING ROADWAY STANDARD DRAWING 1101.02 SHEET 3 OF 19, PLACE PORTABLE CONCRETE BARRIER ALONG SOUTHBOUND LANES OF US 13 / US 17 AND THROUGH THE MEDIAN CROSSOVERS AND PLACE TEMPORARY PAVEMENT MARKINGS FOR TEMPORARY TWO-LANE, TWO-WAY TRAFFIC PATTERN AS SHOWN ON SHEETS TMP-8 THRU TMP-10.

**STEP 2:** PLACE TRAFFIC INTO TEMPORARY PATTERN ALONG US 13 / US 17 SOUTHBOUND LANES. PERFORM BRIDGE WORK TO STRUCTURES 070155 AND 070156 INCLUDING APPROACH MILLING.

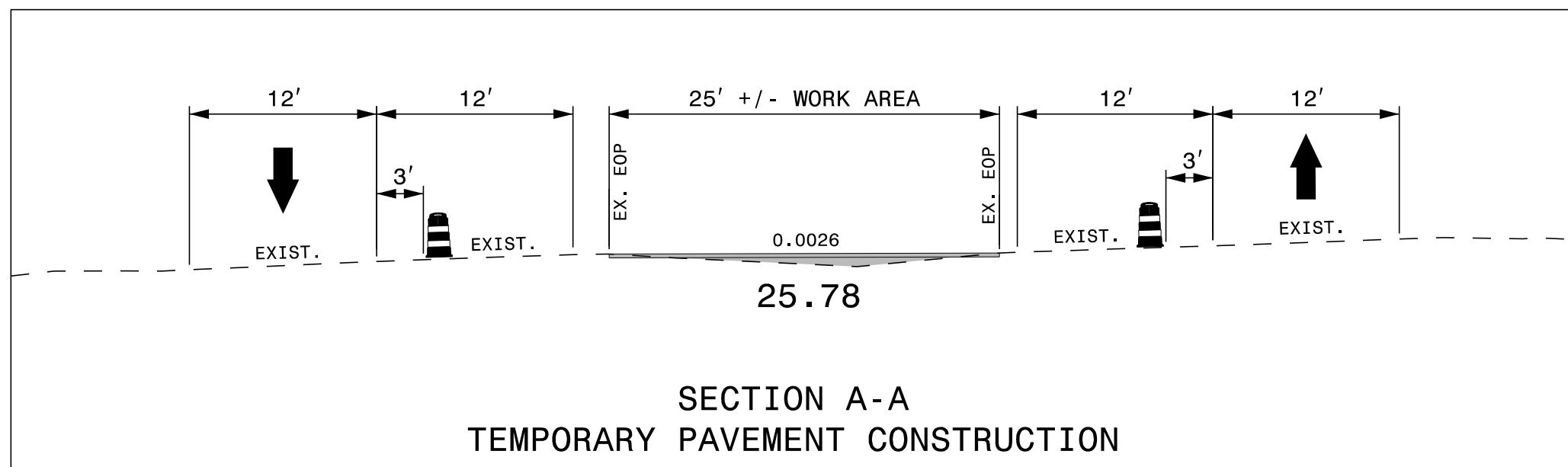
**STEP 3:** ONCE BRIDGE WORK IS COMPLETE, REMOVE TEMPORARY PAVEMENT MARKINGS AND PLACE FINAL PAVEMENT MARKINGS ALONG NORTHBOUND LANES OF US 13 / US 17. REMOVE PORTABLE CONCRETE BARRIER FROM SOUTHBOUND LANES OF US 13 / US 17.

**STEP 4:** USING ROADWAY STANDARD DRAWING 1101.02 SHEET 3 OF 19, REMOVE TEMPORARY PAVEMENT MARKINGS AND PLACE FINAL PAVEMENT MARKINGS ALONG SOUTHBOUND LANES OF US 13 / 17 AND PLACE TRAFFIC BACK INTO ORIGINAL TRAFFIC PATTERN.

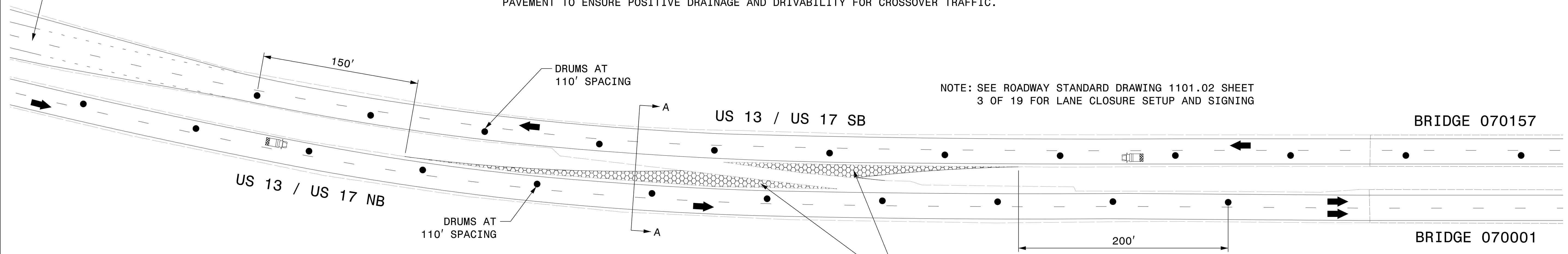
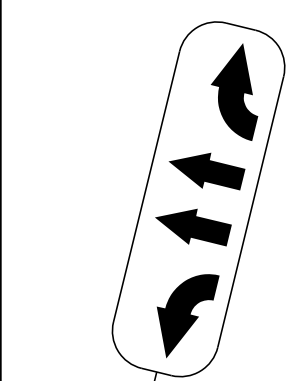
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PHASING



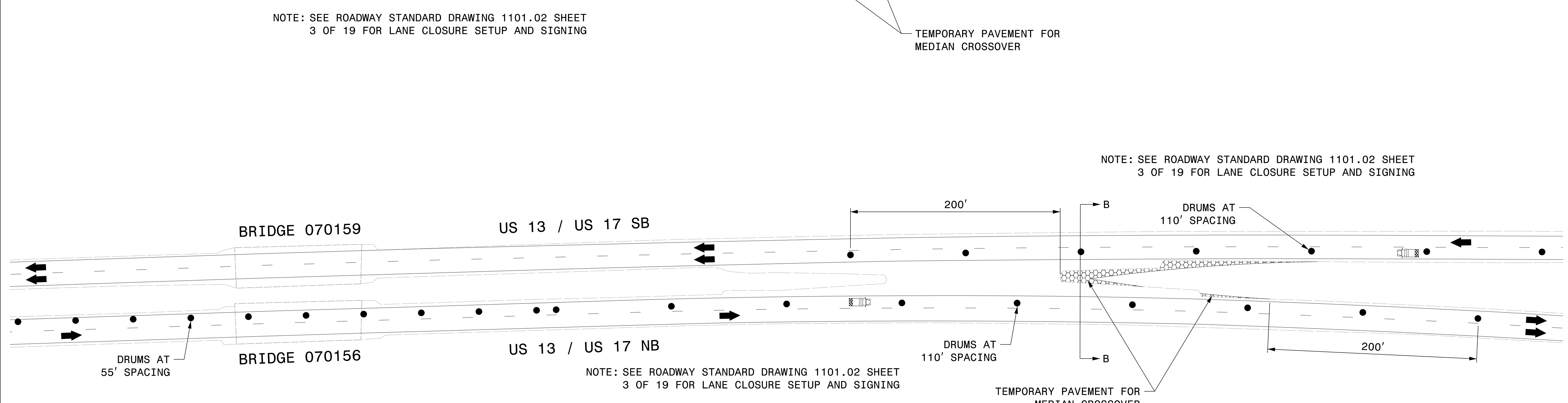
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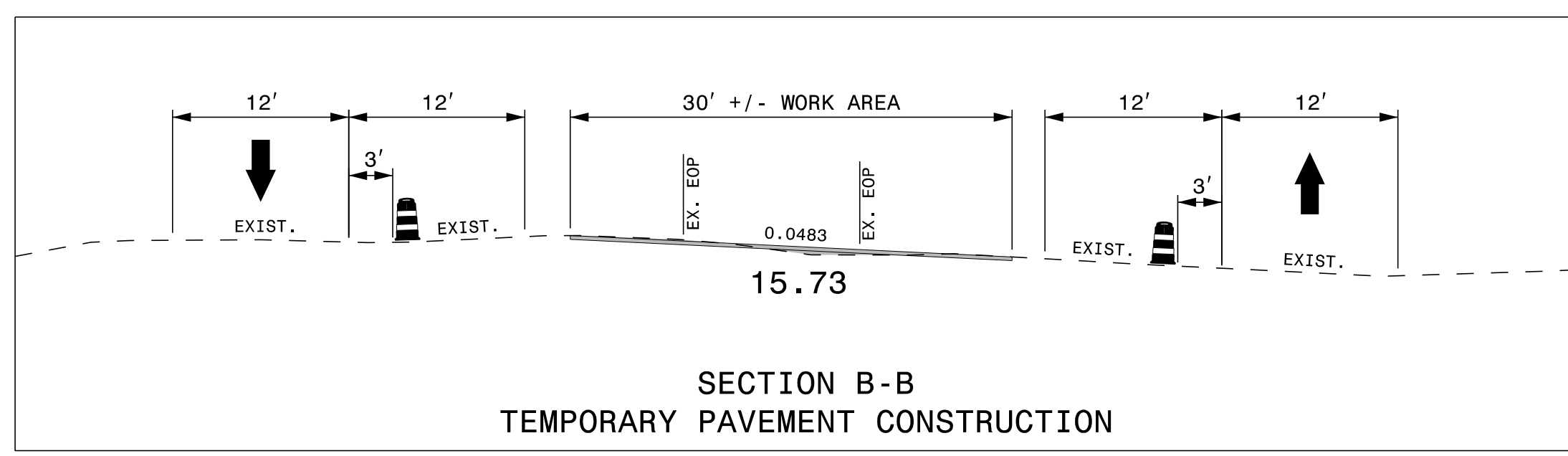
NOTE: SEE ROADWAY STANDARD DRAWING 1101.02 SHEET 3 OF 19 FOR LANE CLOSURE SETUP AND SIGNING

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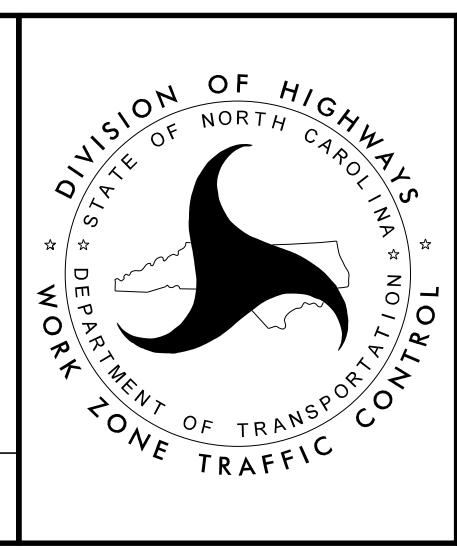


NOTE: CONSTRUCT TEMPORARY ASPHALT PAVEMENT IN MEDIAN BETWEEN EXISTING EDGES OF PAVEMENT TO ENSURE POSITIVE DRAINAGE AND DRIVABILITY FOR CROSSOVER TRAFFIC.

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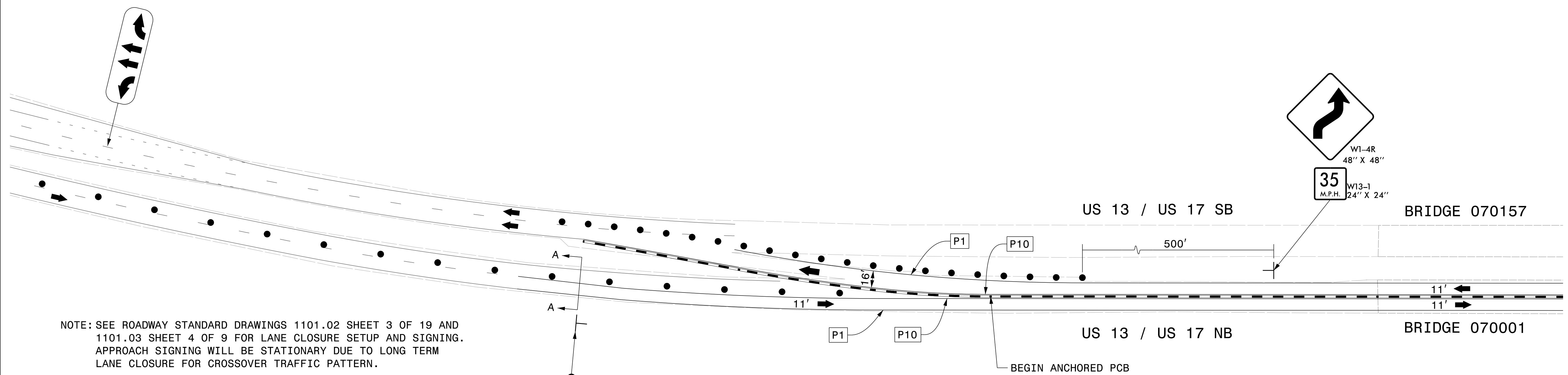
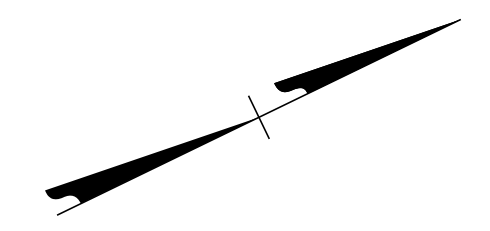
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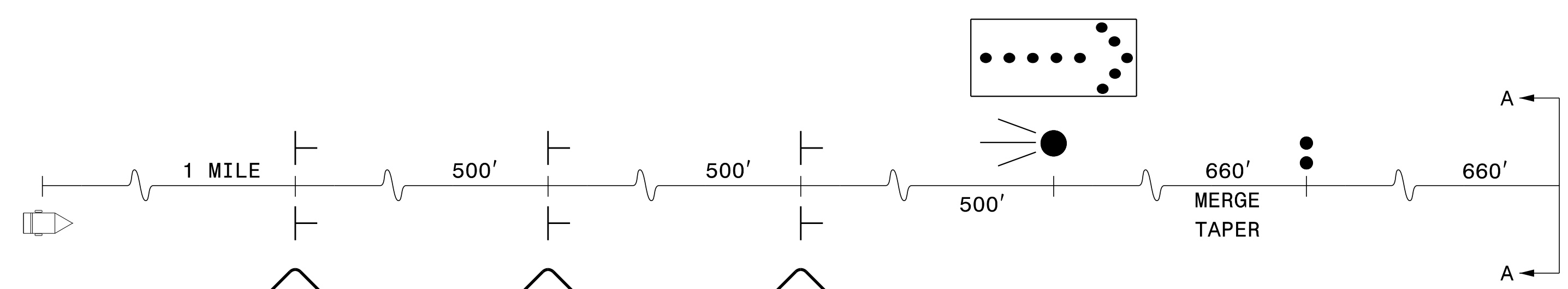
PHASE I DETAIL

Division of Highways  
 State of North Carolina  
 Department of Transportation  
 Work Zone Traffic Control

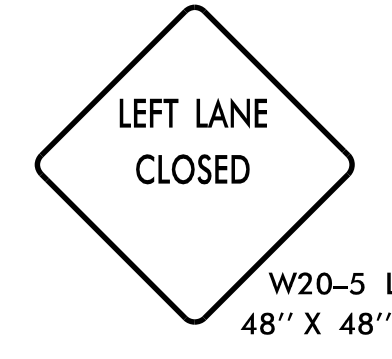
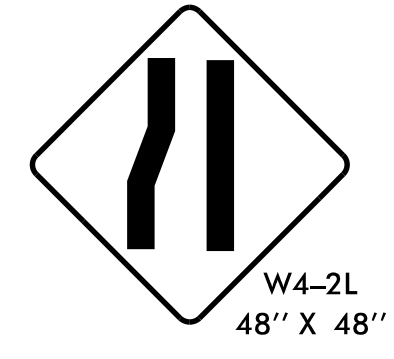
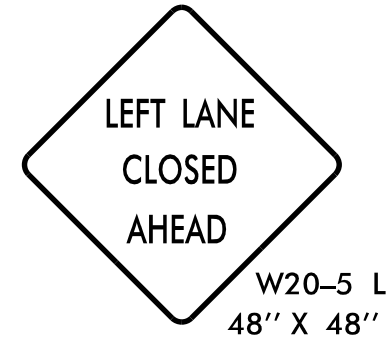




NOTE: SEE ROADWAY STANDARD DRAWINGS 1101.02 SHEET 3 OF 19 AND 1101.03 SHEET 4 OF 9 FOR LANE CLOSURE SETUP AND SIGNING. APPROACH SIGNING WILL BE STATIONARY DUE TO LONG TERM LANE CLOSURE FOR CROSSOVER TRAFFIC PATTERN.

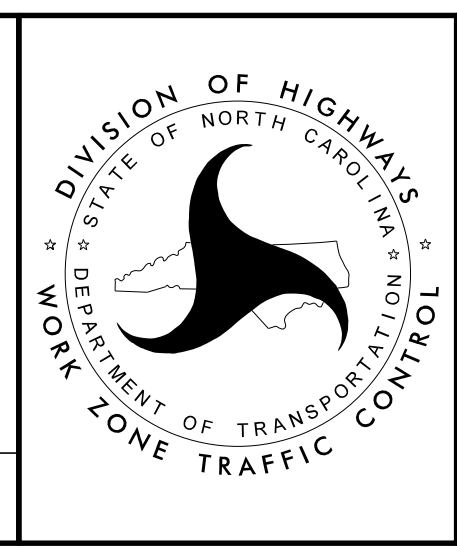


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| CHANGEABLE MESSAGE SIGN |               |

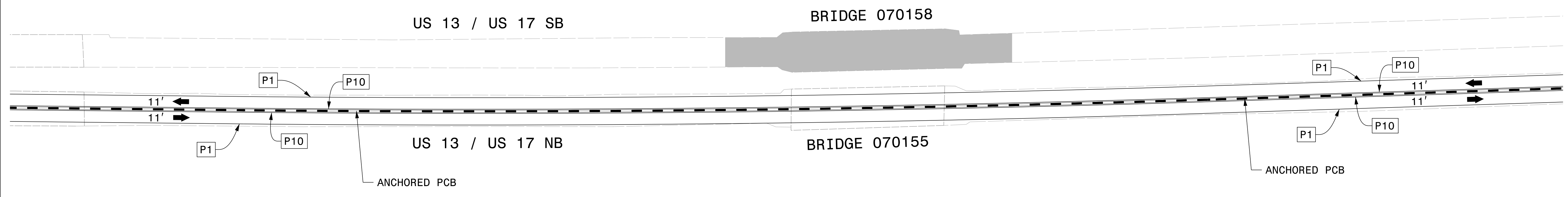
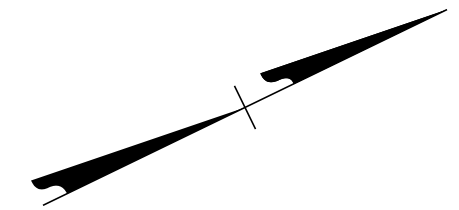


**GANNETT FLEMING**  
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 NC Lic. No. P-0270

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DIVISION OF HIGHWAYS  
 DEPARTMENT OF TRANSPORTATION  
 WORK ZONE TRAFFIC CONTROL  
**PHASE II DETAIL**



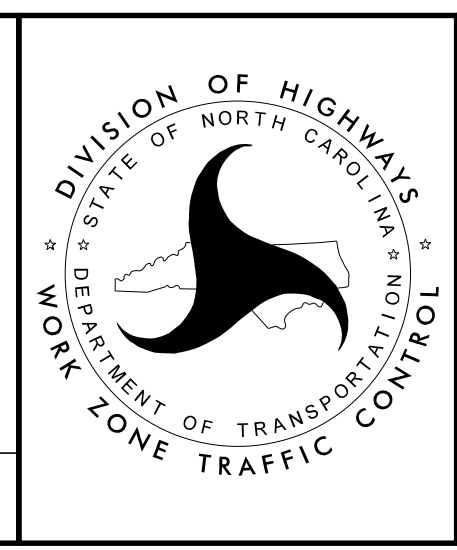
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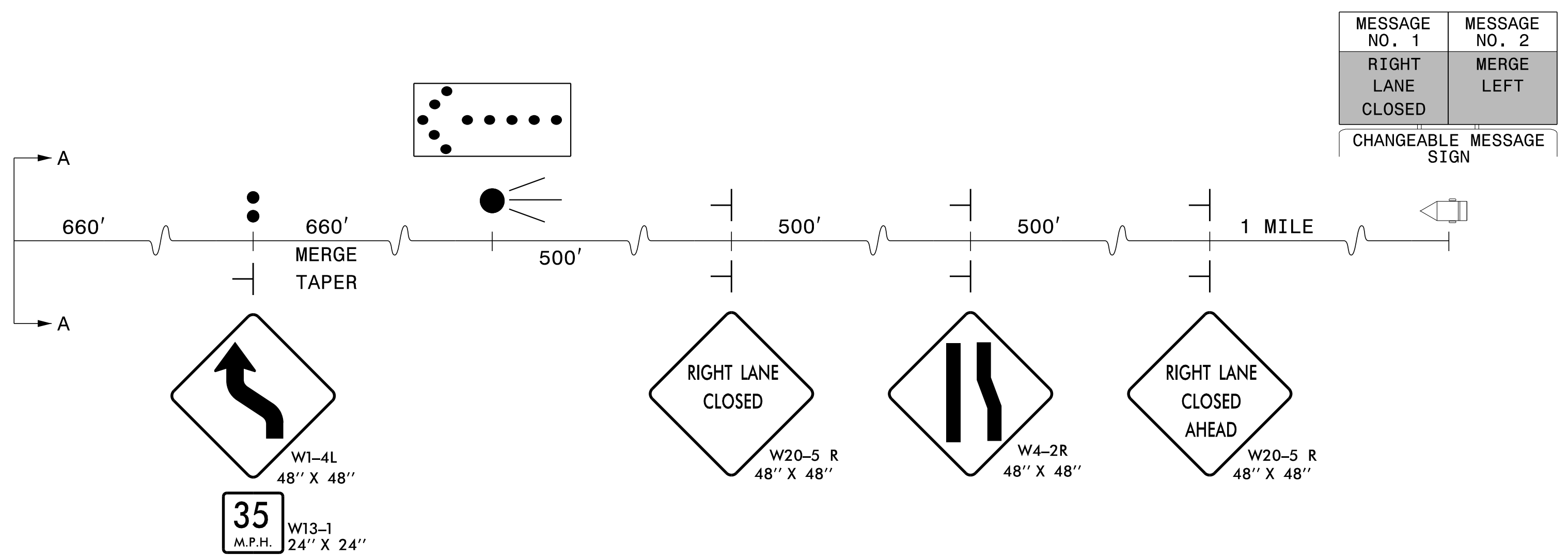
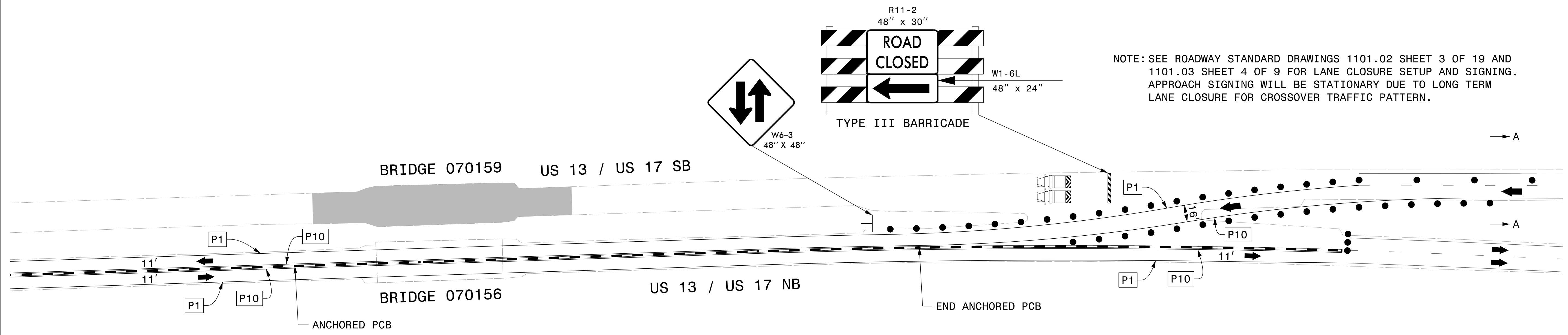
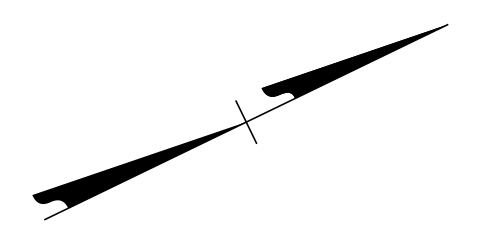
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**SEAL**  
 NORTH CAROLINA  
 PROFESSIONAL  
 ENGINEER  
 044594  
 BENJAMIN A. WHITE

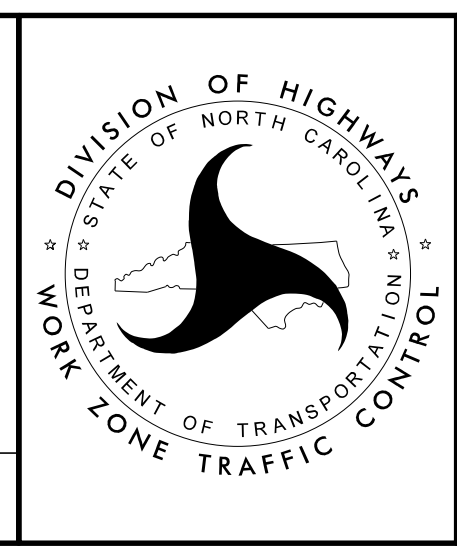
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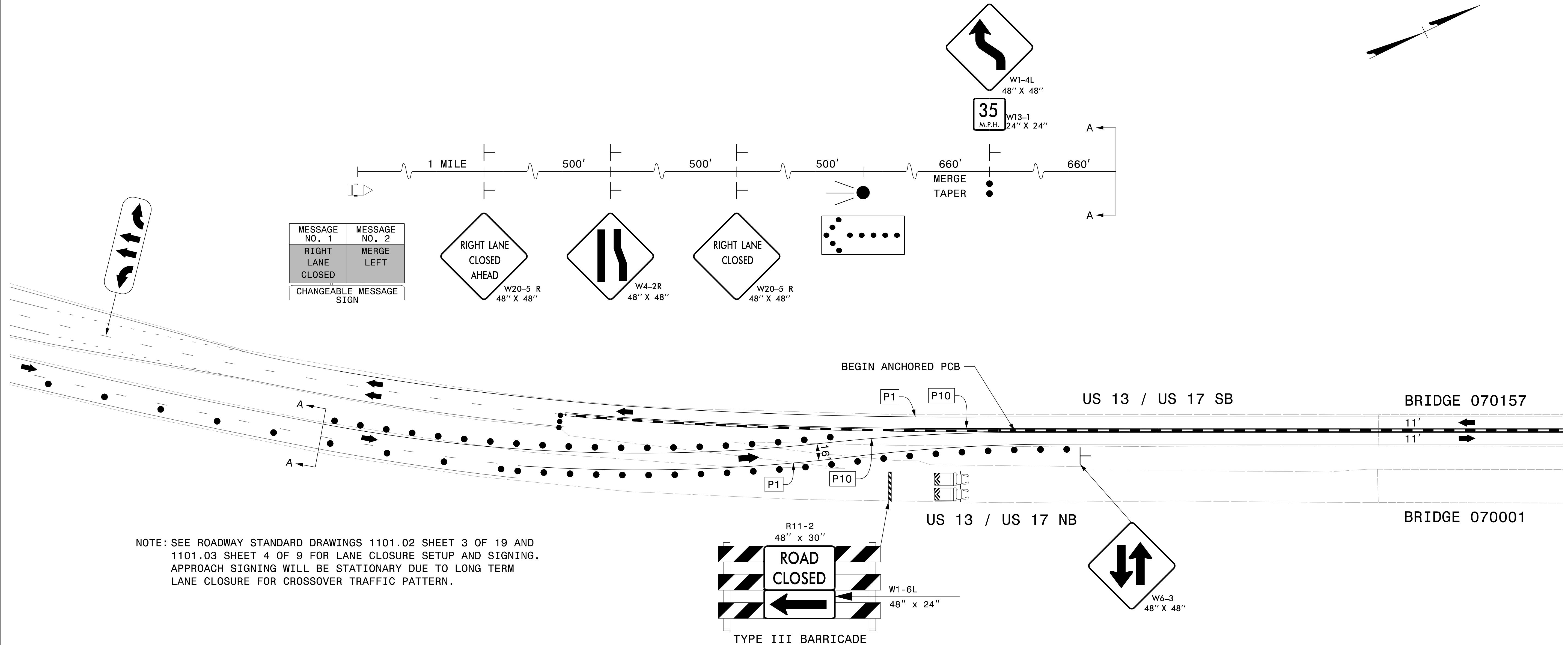
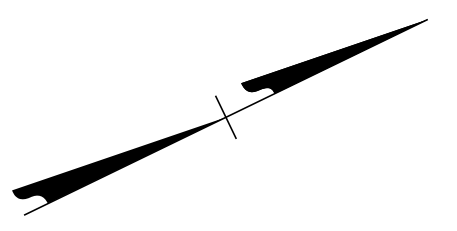


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 PROFESSIONAL ENGINEER  
 BENJAMIN A. WHITE  
 044594



PHASE II DETAIL

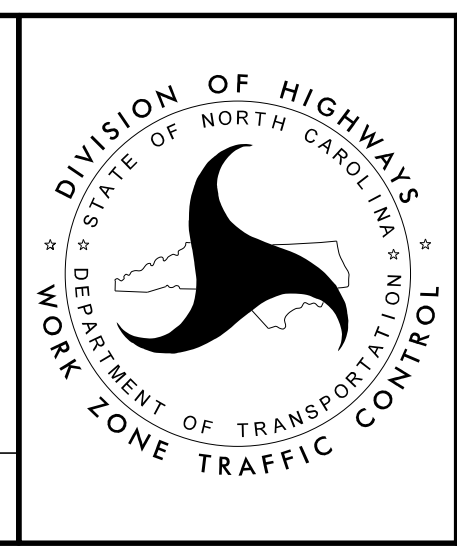
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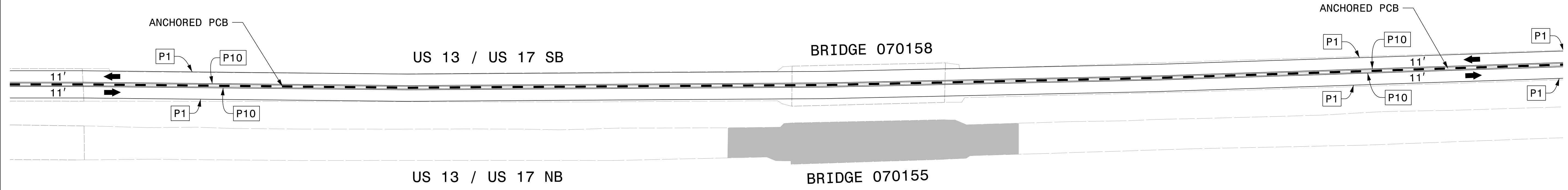
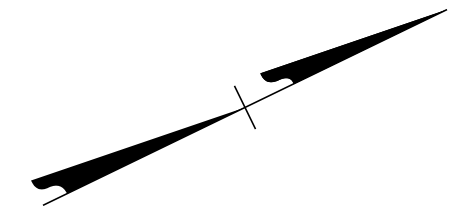
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| CHANGEABLE MESSAGE SIGN |               |

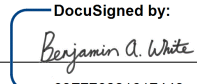
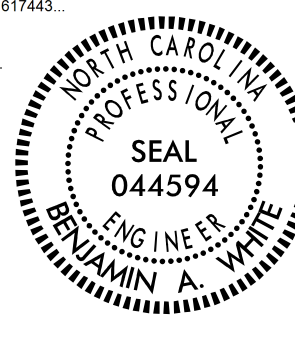
NOTE: SEE ROADWAY STANDARD DRAWINGS 1101.02 SHEET 3 OF 19 AND 1101.03 SHEET 4 OF 9 FOR LANE CLOSURE SETUP AND SIGNING. APPROACH SIGNING WILL BE STATIONARY DUE TO LONG TERM LANE CLOSURE FOR CROSSOVER TRAFFIC PATTERN.

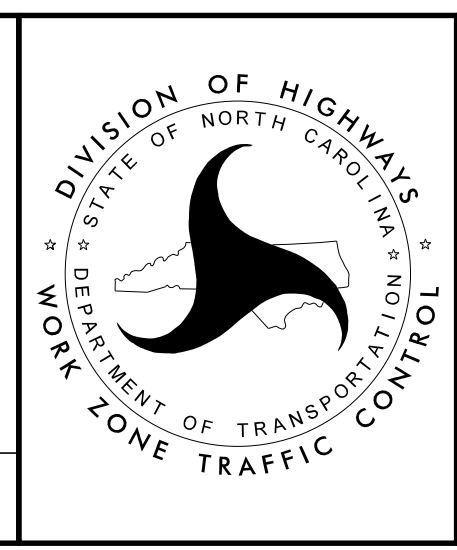
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PHASE III DETAIL

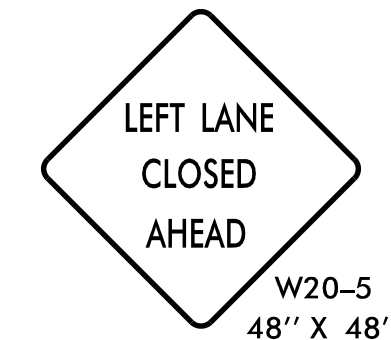
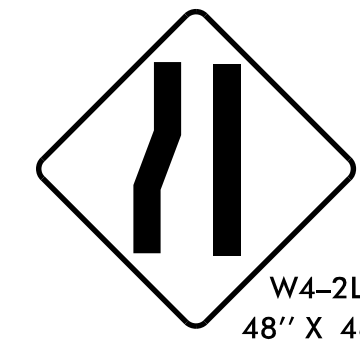
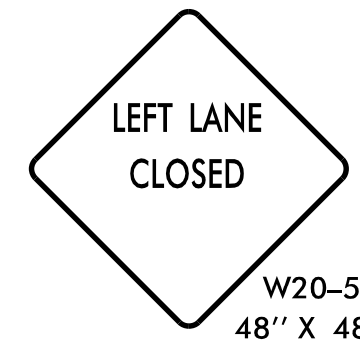
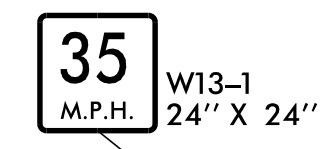
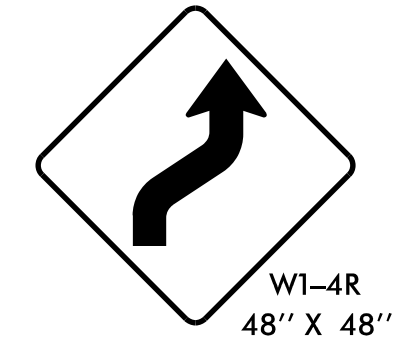
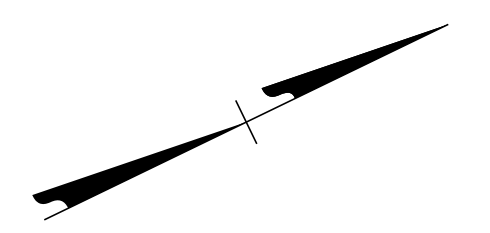
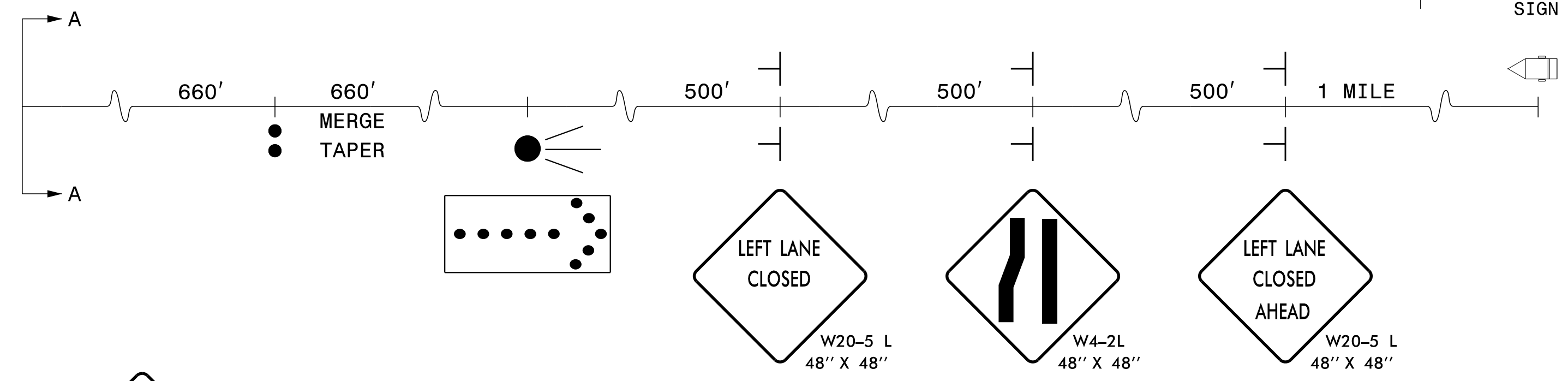


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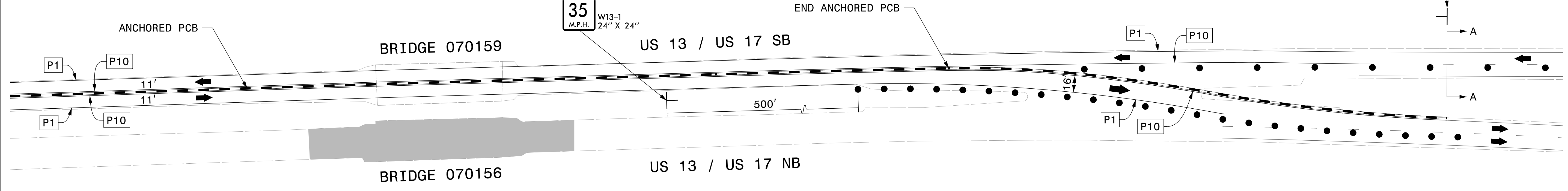
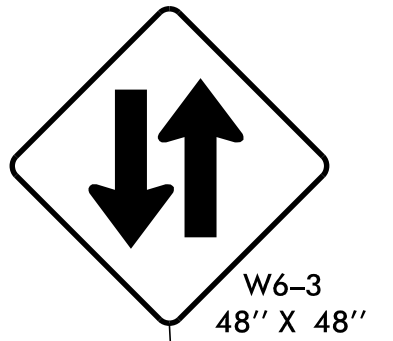


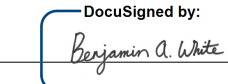
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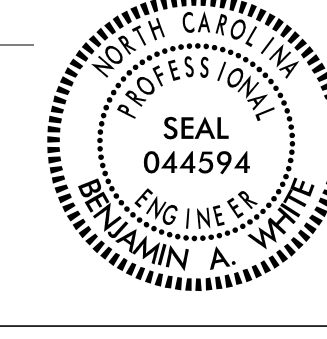


NOTE: SEE ROADWAY STANDARD DRAWINGS 1101.02 SHEET 3 OF 19 AND 1101.03 SHEET 4 OF 9 FOR LANE CLOSURE SETUP AND SIGNING. APPROACH SIGNING WILL BE STATIONARY DUE TO LONG TERM LANE CLOSURE FOR CROSSOVER TRAFFIC PATTERN.




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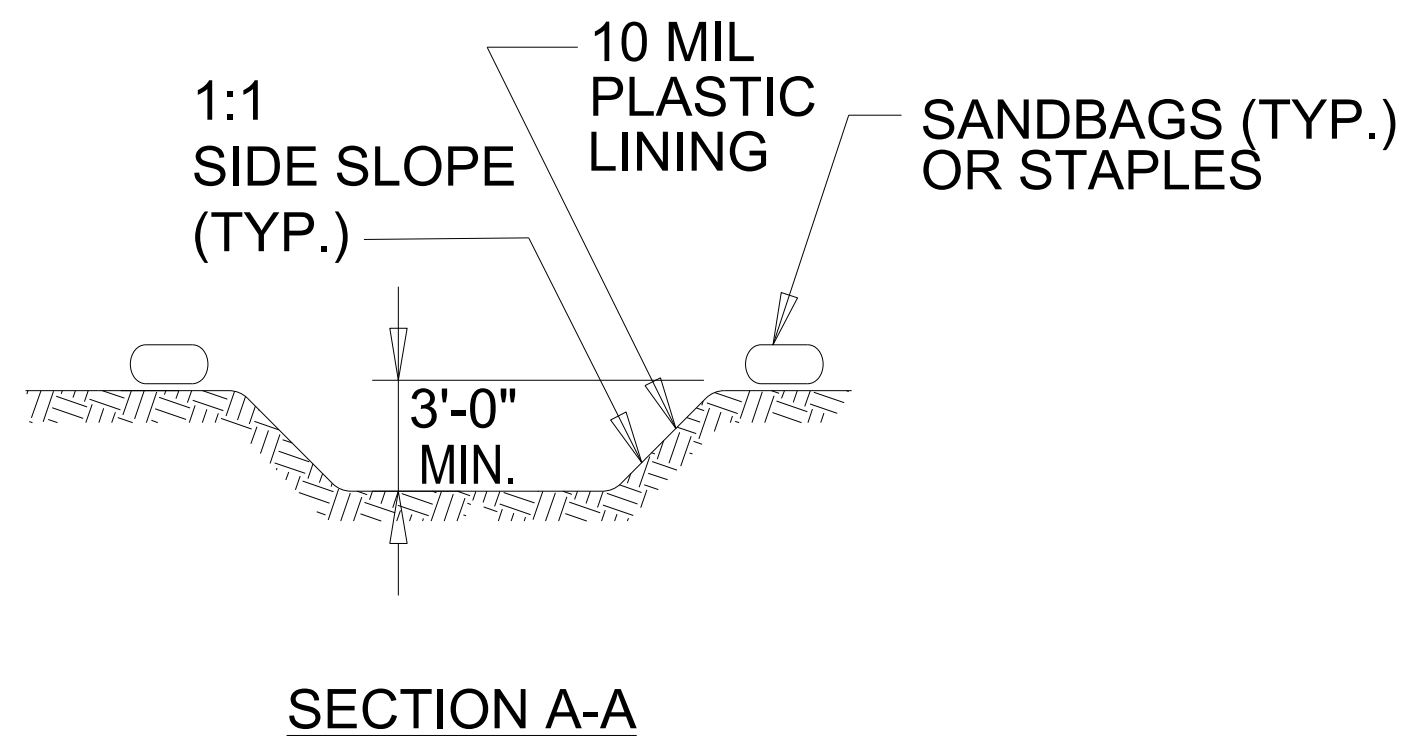
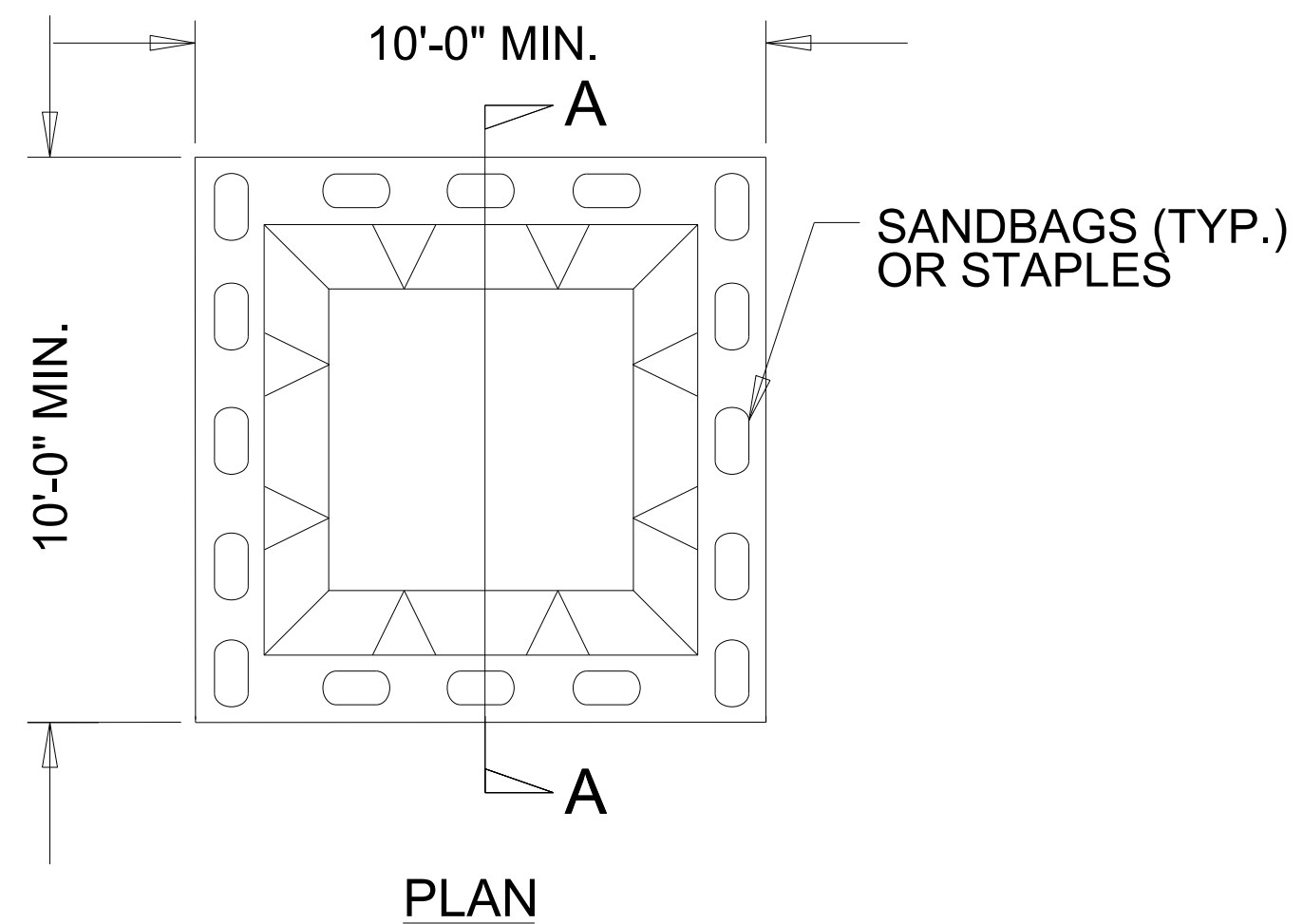
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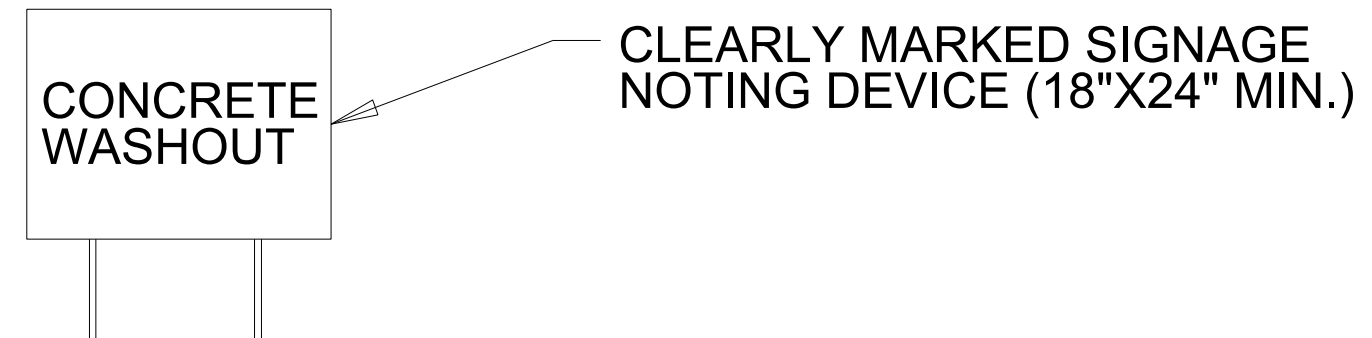
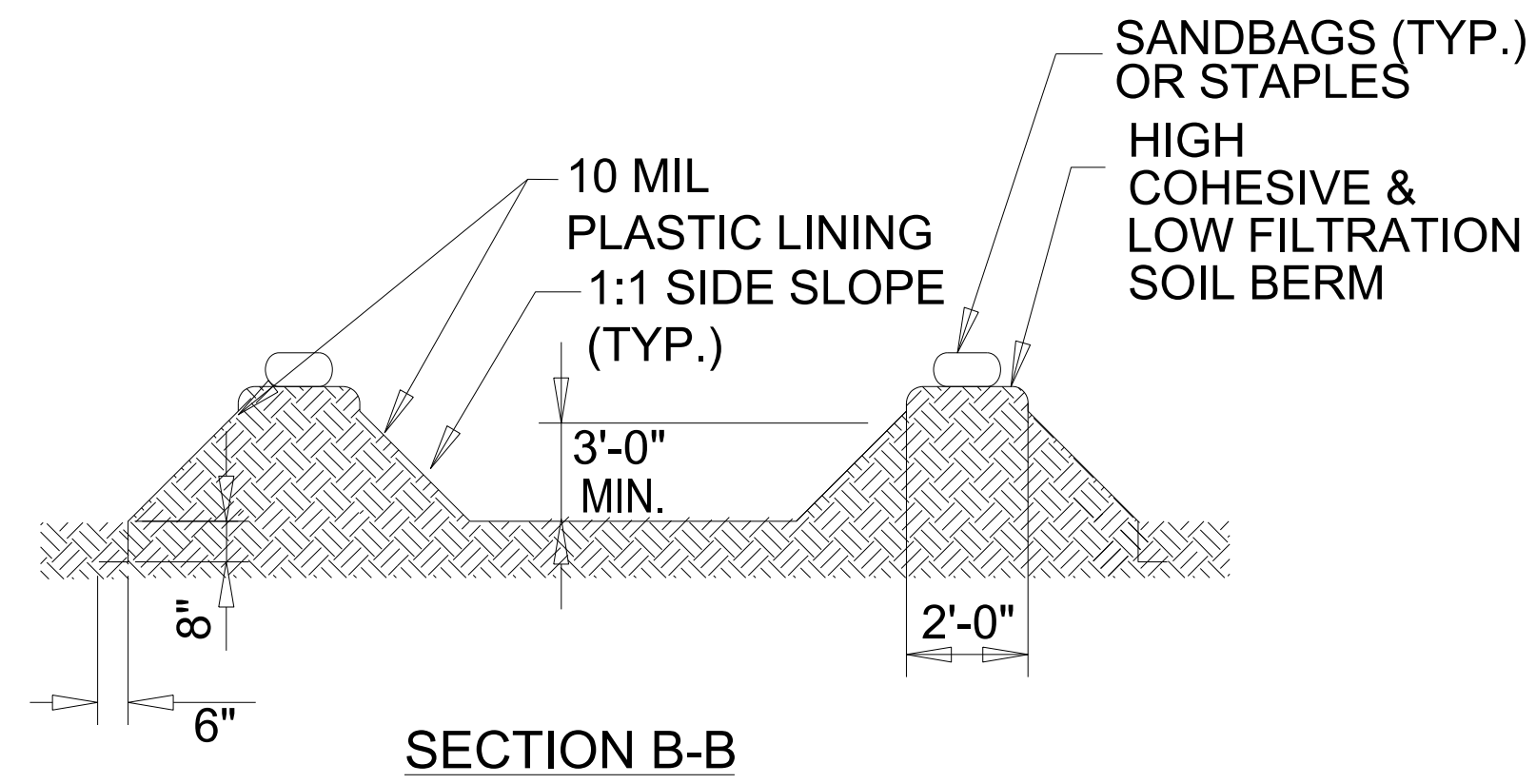
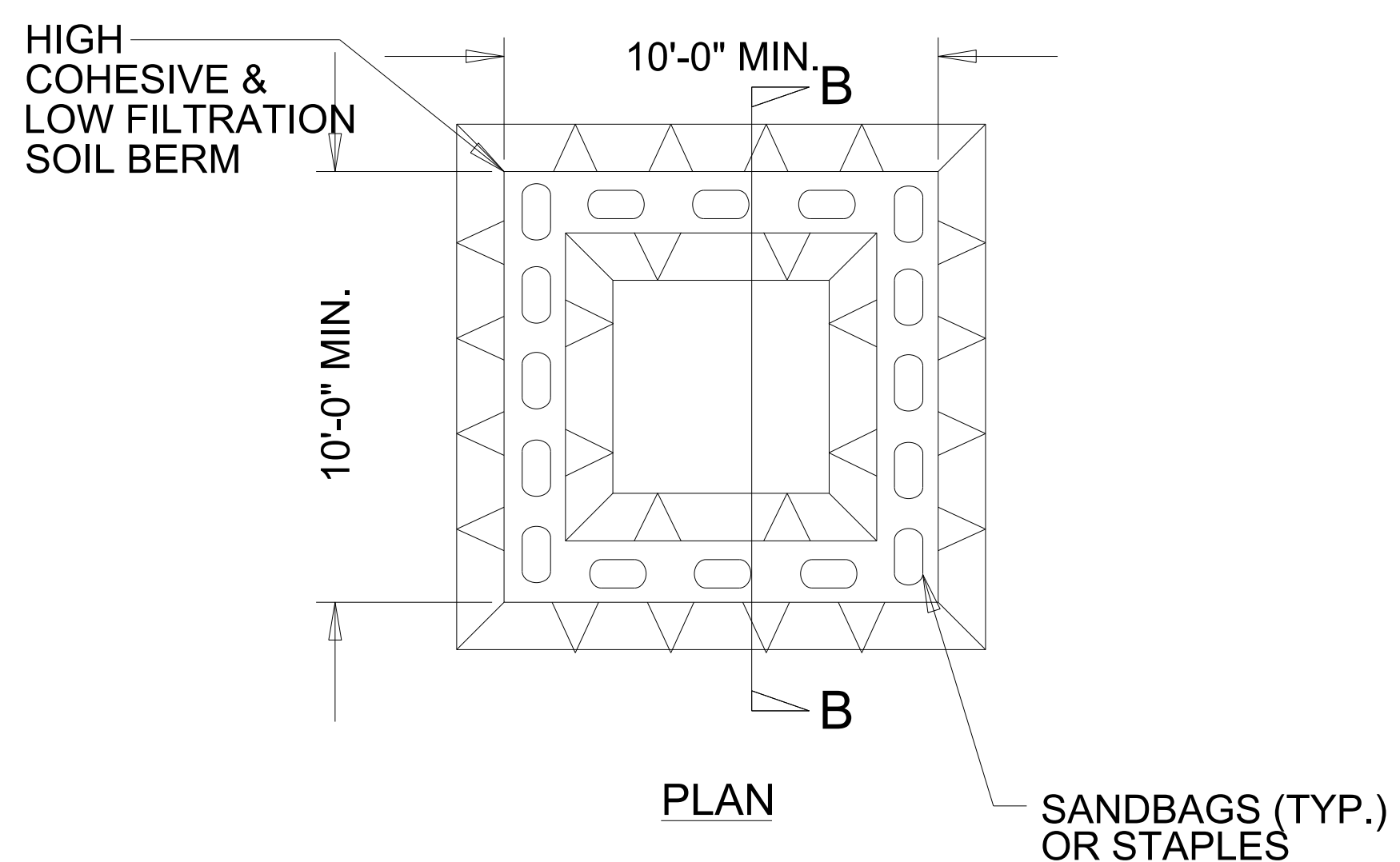
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| PROJECT REFERENCE NO.<br>HB-0070 | SHEET NO.<br>EC-1   |
| RW SHEET NO.                     |                     |
| ROADWAY DESIGN ENGINEER          | HYDRAULICS ENGINEER |

# ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



**BELOW GRADE WASHOUT STRUCTURE**  
NOT TO SCALE

- NOTES:**
1. ACTUAL LOCATION DETERMINED IN FIELD
  2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
  3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.



**ABOVE GRADE WASHOUT STRUCTURE**  
NOT TO SCALE

- NOTES:**
1. ACTUAL LOCATION DETERMINED IN FIELD
  2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
  3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

|   |                          |
|---|--------------------------|
| PROJECT REFERENCE NO.<br><i>HB-0070</i> | SHEET NO.<br><i>EC-2</i> |
| ROADWAY DESIGN<br>ENGINEER              | HYDRAULICS<br>ENGINEER   |

# ***SOIL STABILIZATION TIMEFRAMES***

| <i>SITE DESCRIPTION</i>                      | <i>STABILIZATION TIME</i> | <i>TIMEFRAME EXCEPTIONS</i>   |
|--|---------------------------|---|
| PERIMETER DIKES, SWALES, DITCHES AND SLOPES  | 7 DAYS                    | NONE  |
| HIGH QUALITY WATER (HQW) ZONES               | 7 DAYS                    | NONE  |
| SLOPES STEEPER THAN 3:1                      | 7 DAYS                    | IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.  |
| SLOPES 3:1 TO 4:1                            | 14 DAYS                   | 7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH WITH SLOPES STEEPER THAN 4:1.<br>7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES |
| ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1 | 14 DAYS                   | 7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES   |

# EROSION CONTROL PLAN

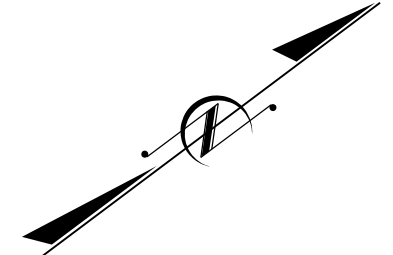
|                                  |                           |
|----------------------------------|---------------------------|
| PROJECT REFERENCE NO.<br>HB-0070 | SHEET NO.<br>EC-3/CONST.3 |
| RW SHEET NO.                     |                           |
| ROADWAY DESIGN ENGINEER          | HYDRAULICS ENGINEER       |

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

For "Paving Only Section" install Erosion Control Measures as directed.



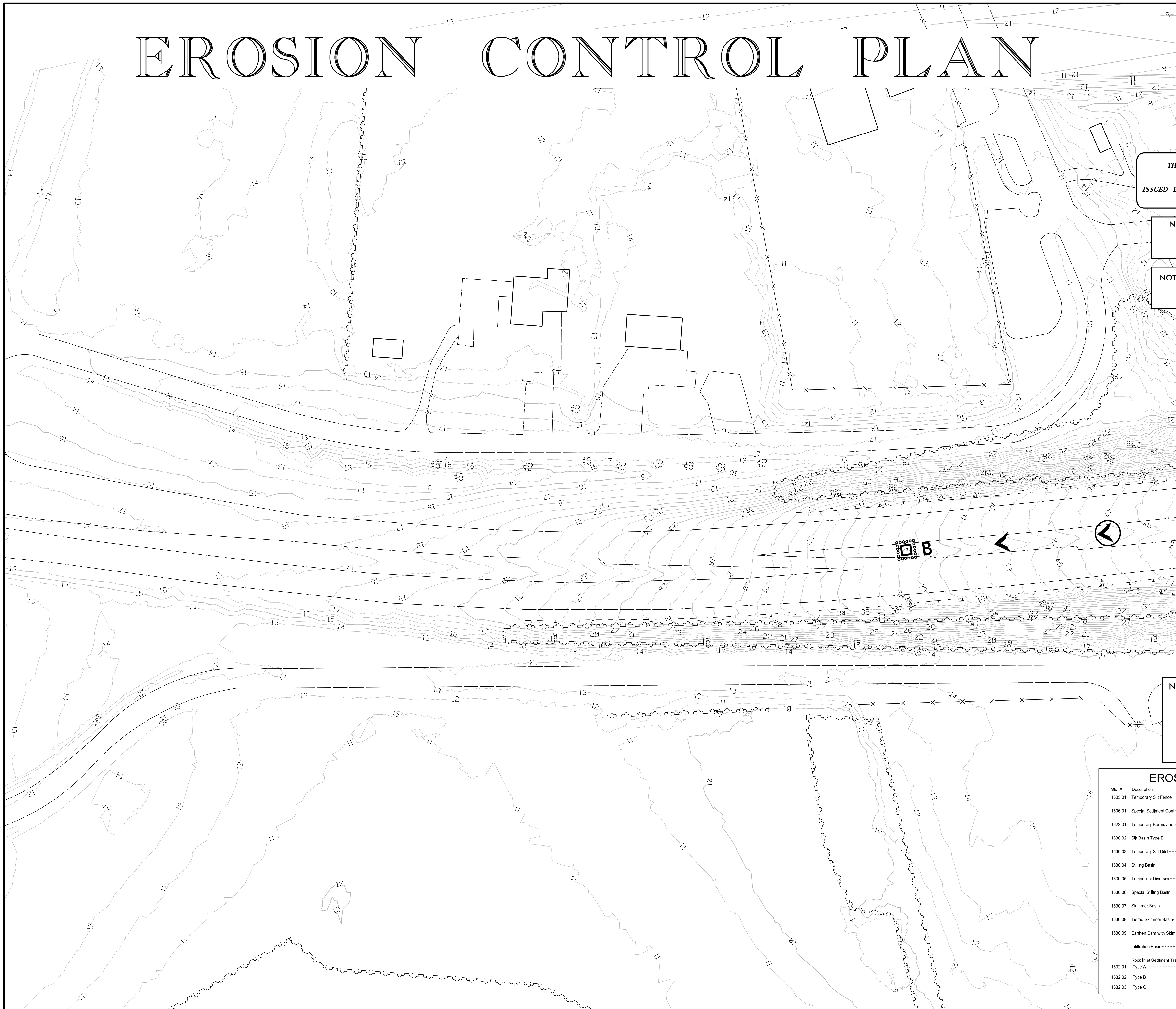
HANNAH AREY  
LEVEL IIIA NAME  
  
4651  
LEVEL IIIA CERTIFICATION NO.

ROADSIDE ENVIRONMENTAL UNIT  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALPH, N.C.  
  
2024 STANDARD SPECIFICATIONS

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.  
  
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

MATCHLINE EC-5

| EROSION & SEDIMENT CONTROL LEGEND |                                  |        |         |  |        |
|-----------------------------------|----------------------------------|--------|---------|--|--------|
| Std. #                            | Description                      | Symbol | Std. #  | Description  | Symbol |
| 1605.01                           | Temporary Silt Fence             |        | 1633.01 | Temporary Rock Silt Check Type A                                       |        |
| 1606.01                           | Special Sediment Control Fence   |        | 1633.02 | Temporary Rock Silt Check Type B                                       |        |
| 1622.01                           | Temporary Berms and Slope Drains |        | 1633.03 | Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant |        |
| 1630.02                           | Silt Basin Type B                |        | 1634.01 | Temporary Rock Sediment Dam Type A                                     |        |
| 1630.03                           | Temporary Silt Ditch             |        | 1634.02 | Temporary Rock Sediment Dam Type B                                     |        |
| 1630.04                           | Stilling Basin                   |        | 1635.01 | Rock Pipe Inlet Sediment Trap Type A                                   |        |
| 1630.05                           | Temporary Diversion              |        | 1635.02 | Rock Pipe Inlet Sediment Trap Type B                                   |        |
| 1630.06                           | Special Stilling Basin           |        | 1636.01 | Excelsior Wattle Check   |        |
| 1630.07                           | Skimmer Basin                    |        | 1636.01 | Excelsior Wattle Check with Flocculant                                 |        |
| 1630.08                           | Tiered Skimmer Basin             |        | 1636.01 | Coir Fiber Wattle Check  |        |
| 1630.09                           | Earthen Dam with Skimmer         |        | 1636.01 | Coir Fiber Wattle Check with Flocculant                                |        |
|                                   | Infiltration Basin               |        | 1636.02 | Silt Fence Excelsior Wattle Break                                      |        |
|                                   | Rock Inlet Sediment Trap         |        |         | Silt Fence Coir Fiber Wattle Break                                     |        |
| 1632.01                           | Type A                           |        | 1636.03 | Excelsior Wattle Barrier   |        |
| 1632.02                           | Type B                           |        | 1636.03 | Coir Fiber Wattle Barrier  |        |
| 1632.03                           | Type C                           |        |         |  |        |



# EROSION CONTROL PLAN

|                                  |                           |
|----------------------------------|---------------------------|
| PROJECT REFERENCE NO.<br>HB-0070 | SHEET NO.<br>EC-4/CONST.4 |
| RW SHEET NO.                     |                           |
| ROADWAY DESIGN ENGINEER          | HYDRAULICS ENGINEER       |

For "Paving Only Section" install Erosion Control Measures as directed.

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

MATCHLINE EC-4

MATCHLINE EC-6

HANNAH AREY  
LEVEL IIIA NAME

4651  
LEVEL IIIA CERTIFICATION NO.

| EROSION & SEDIMENT CONTROL LEGEND |  |        |
|-----------------------------------|--|--------|
| Std. #                            | Description  | Symbol |
| 1605.01                           | Temporary Silt Fence   |        |
| 1606.01                           | Special Sediment Control Fence   |        |
| 1622.01                           | Temporary Berms and Slope Drains                                       |        |
| 1630.02                           | Silt Basin Type B  |        |
| 1630.03                           | Temporary Silt Ditch   |        |
| 1630.04                           | Stilling Basin   |        |
| 1630.05                           | Temporary Diversion  |        |
| 1630.06                           | Special Stilling Basin   |        |
| 1630.07                           | Skimmer Basin  |        |
| 1630.08                           | Throated Skimmer Basin   |        |
| 1630.09                           | Earthen Dam with Skimmer   |        |
|                                   | Infiltration Basin   |        |
|                                   | Rock Inlet Sediment Trap:  |        |
| 1632.01                           | Type A   |        |
| 1632.02                           | Type B   |        |
| 1632.03                           | Type C   |        |
| 1633.01                           | Temporary Rock Silt Check Type A                                       |        |
| 1633.02                           | Temporary Rock Silt Check Type B                                       |        |
| 1633.03                           | Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant |        |
| 1634.01                           | Temporary Rock Sediment Dam Type A                                     |        |
| 1634.02                           | Temporary Rock Sediment Dam Type B                                     |        |
| 1635.01                           | Rock Pipe Inlet Sediment Trap Type A                                   |        |
| 1635.02                           | Rock Pipe Inlet Sediment Trap Type B                                   |        |
| 1636.01                           | Excelsior Wattle Check   |        |
| 1636.01                           | Excelsior Wattle Check with Flocculant                                 |        |
| 1636.01                           | Coir Fiber Wattle Check  |        |
| 1636.01                           | Coir Fiber Wattle Check with Flocculant                                |        |
| 1636.02                           | Silt Fence Excelsior Wattle Break                                      |        |
|                                   | Silt Fence Coir Fiber Wattle Break                                     |        |
| 1636.03                           | Excelsior Wattle Barrier   |        |
| 1636.03                           | Coir Fiber Wattle Barrier  |        |

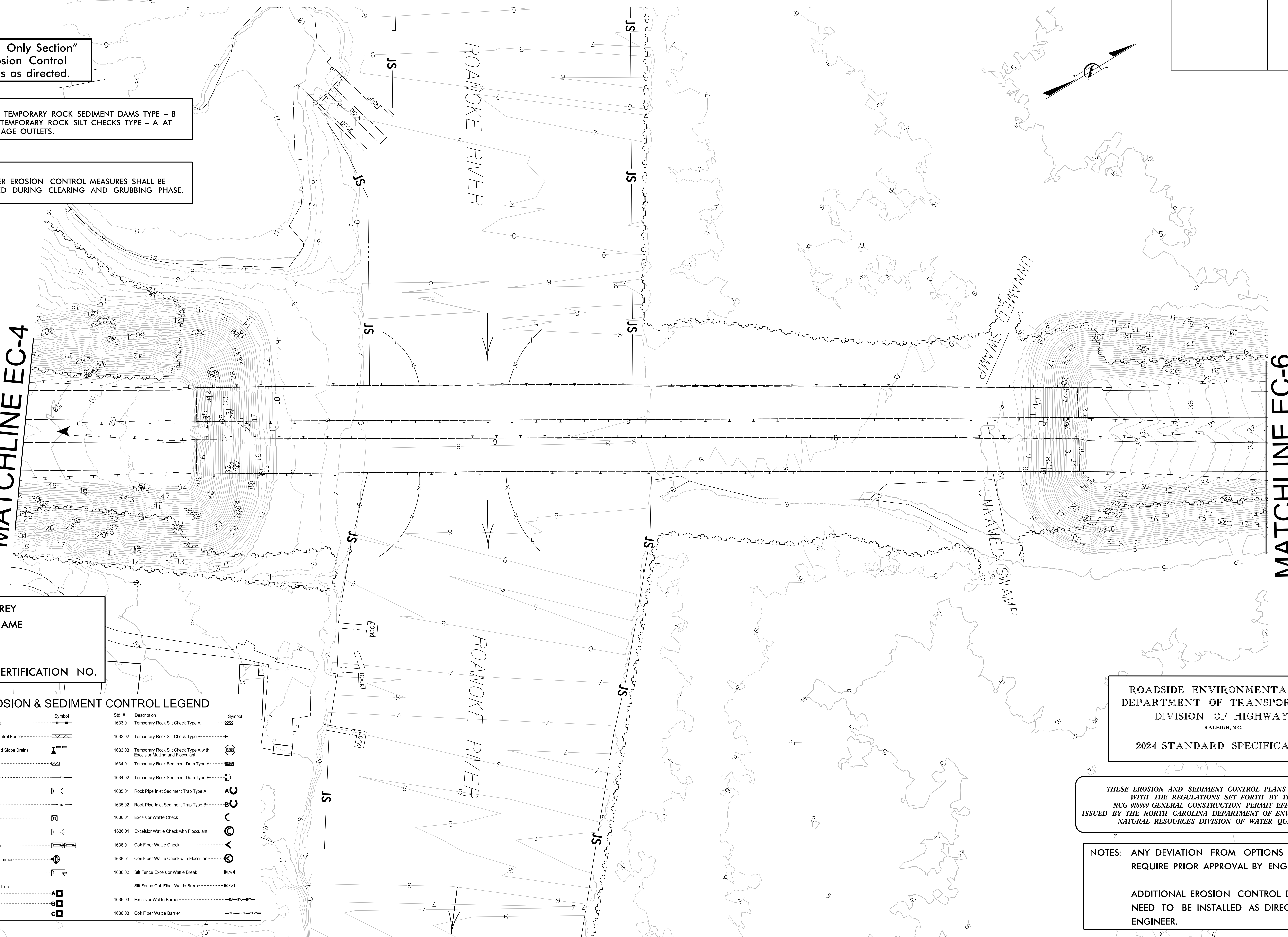
ROADSIDE ENVIRONMENTAL UNIT  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

2024 STANDARD SPECIFICATIONS

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

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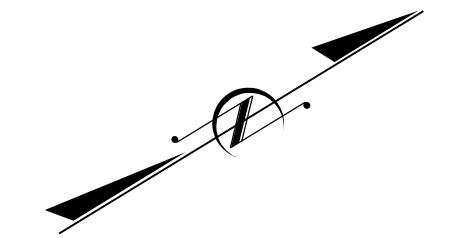
# EROSION CONTROL PLAN

|                                  |                           |
|----------------------------------|---------------------------|
| PROJECT REFERENCE NO.<br>HB-0070 | SHEET NO.<br>EC-5/CONST.5 |
| RW SHEET NO.                     |                           |
| ROADWAY DESIGN ENGINEER          | HYDRAULICS ENGINEER       |

For "Paving Only Section" install Erosion Control Measures as directed.

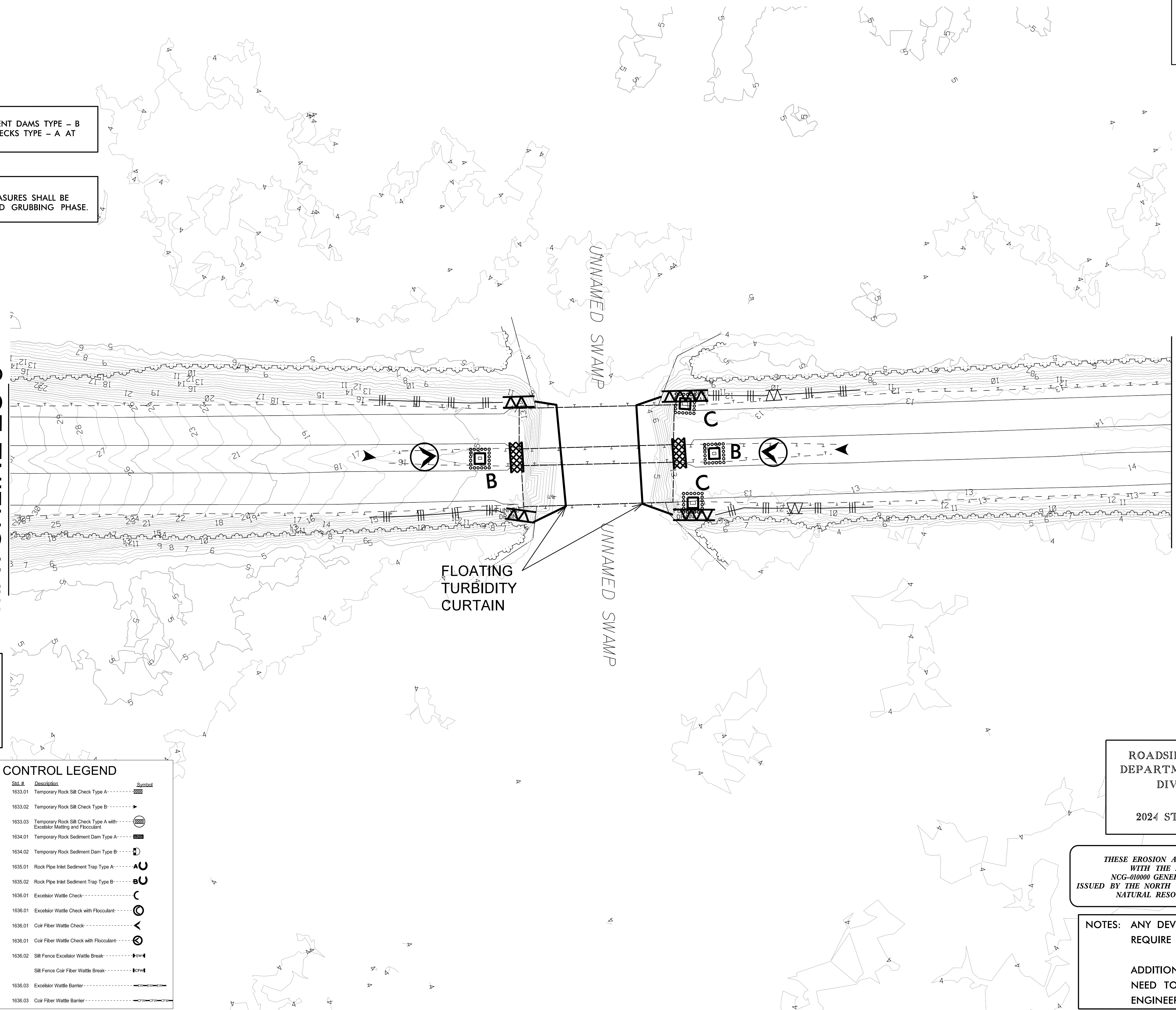
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



MATCHLINE EC-5

MATCHLINE EC-7



HANNAH AREY  
LEVEL IIIA NAME  
  
4651  
LEVEL IIIA CERTIFICATION NO.

### EROSION & SEDIMENT CONTROL LEGEND

| Std. #  | Description                      | Symbol      | Std. #  | Description  | Symbol      |
|---------|----------------------------------|-------------|---------|--|-------------|
| 1605.01 | Temporary Silt Fence             | --- ---     | 1633.01 | Temporary Rock Silt Check Type A                                       | --- --- --- |
| 1606.01 | Special Sediment Control Fence   | --- --- --- | 1633.02 | Temporary Rock Silt Check Type B                                       | --- --- --- |
| 1622.01 | Temporary Berms and Slope Drains | --- ---     | 1633.03 | Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant | --- --- --- |
| 1630.02 | Silt Basin Type B                | --- ---     | 1634.01 | Temporary Rock Sediment Dam Type A                                     | --- ---     |
| 1630.03 | Temporary Silt Ditch             | --- ---     | 1634.02 | Temporary Rock Sediment Dam Type B                                     | --- ---     |
| 1630.04 | Stilling Basin                   | --- ---     | 1635.01 | Rock Pipe Inlet Sediment Trap Type A                                   | --- ---     |
| 1630.05 | Temporary Diversion              | --- ---     | 1635.02 | Rock Pipe Inlet Sediment Trap Type B                                   | --- ---     |
| 1630.06 | Special Stilling Basin           | --- ---     | 1636.01 | Excelsior Wattle Check   | --- ---     |
| 1630.07 | Skimmer Basin                    | --- ---     | 1636.01 | Excelsior Wattle Check with Flocculant                                 | --- ---     |
| 1630.08 | Tiered Skimmer Basin             | --- ---     | 1636.01 | Coir Fiber Wattle Check  | --- ---     |
| 1630.09 | Earthen Dam with Skimmer         | --- ---     | 1636.01 | Coir Fiber Wattle Check with Flocculant                                | --- ---     |
|         | Infiltration Basin               | --- ---     | 1636.02 | Silt Fence Excelsior Wattle Break                                      | --- ---     |
|         | Rock Inlet Sediment Trap:        |             |         | Silt Fence Coir Fiber Wattle Break                                     | --- ---     |
| 1632.01 | Type A                           | --- ---     | 1636.03 | Excelsior Wattle Barrier   | --- ---     |
| 1632.02 | Type B                           | --- ---     | 1636.03 | Coir Fiber Wattle Barrier  | --- ---     |
| 1632.03 | Type C                           | --- ---     |         |  |             |

ROADSIDE ENVIRONMENTAL UNIT  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.  
  
2024 STANDARD SPECIFICATIONS

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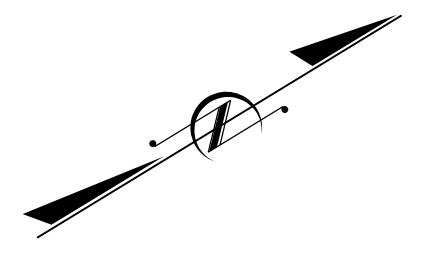
# EROSION CONTROL PLAN

|                                  |                           |
|----------------------------------|---------------------------|
| PROJECT REFERENCE NO.<br>HB-0070 | SHEET NO.<br>EC-6/CONST.6 |
| RW SHEET NO.                     |                           |
| ROADWAY DESIGN ENGINEER          | HYDRAULICS ENGINEER       |

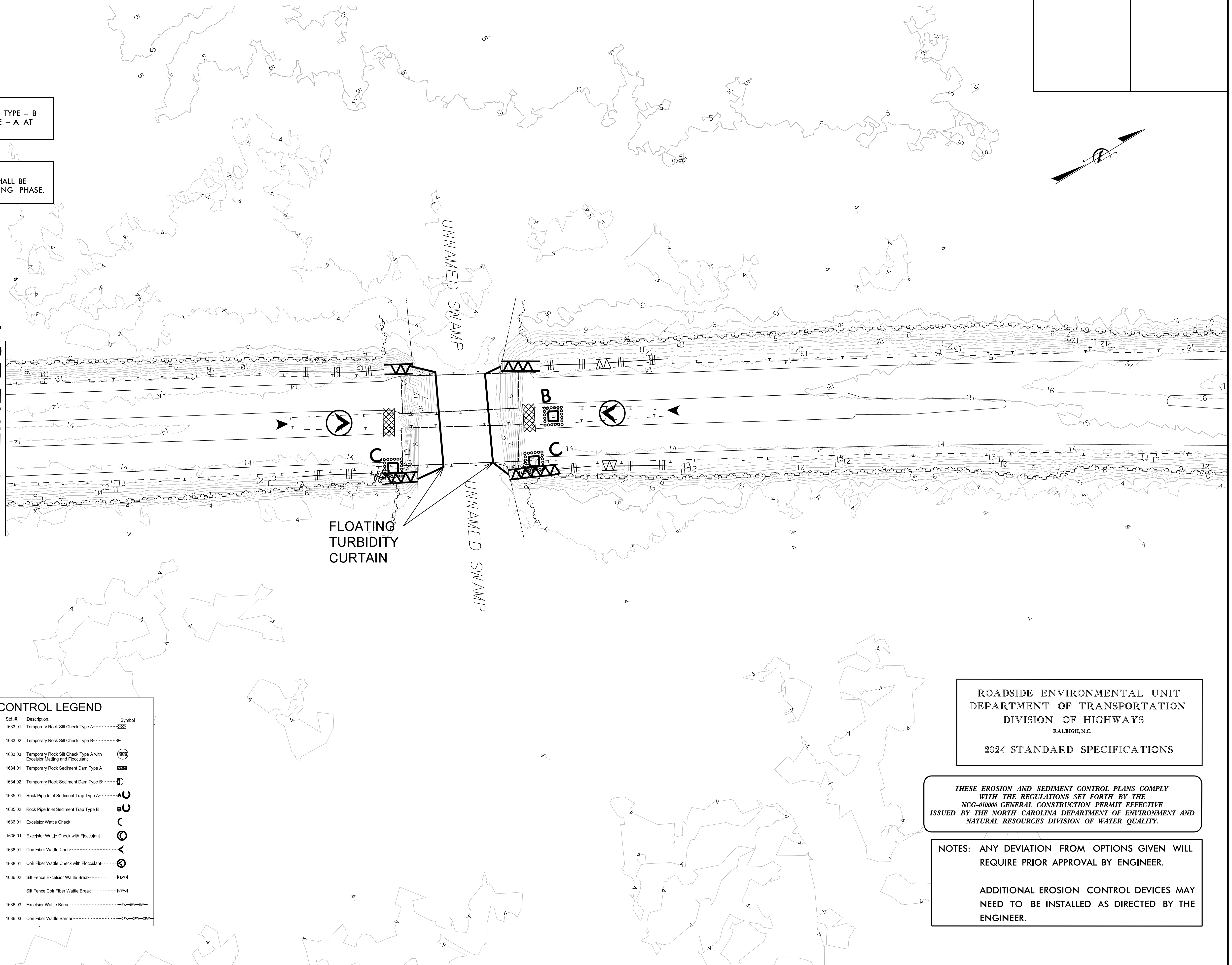
For "Paving Only Section"  
install Erosion Control  
Measures as directed.

NOTE:  
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B  
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT  
DRAINAGE OUTLETS.

NOTE:  
PERIMETER EROSION CONTROL MEASURES SHALL BE  
INSTALLED DURING CLEARING AND GRUBBING PHASE.



MATCHLINE EC-7



HANNAH AREY  
LEVEL IIIA NAME

4651  
LEVEL IIIA CERTIFICATION NO.

| EROSION & SEDIMENT CONTROL LEGEND |                                  |             |         |   |             |
|-----------------------------------|----------------------------------|-------------|---------|---|-------------|
| Std. #                            | Description                      | Symbol      | Std. #  | Description   | Symbol      |
| 1605.01                           | Temporary Silt Fence             | --- ---     | 1633.01 | Temporary Rock Silt Check Type A  | --- --- --- |
| 1606.01                           | Special Sediment Control Fence   | --- --- --- | 1633.02 | Temporary Rock Silt Check Type B  | --- --- --- |
| 1622.01                           | Temporary Berms and Slope Drains | --- --- --- | 1633.03 | Temporary Rock Silt Check Type A with<br>Excelsior Matting and Flocculant | --- --- --- |
| 1630.02                           | Silt Basin Type B                | --- --- --- | 1634.01 | Temporary Rock Sediment Dam Type A  | --- --- --- |
| 1630.03                           | Temporary Silt Ditch             | --- --- --- | 1634.02 | Temporary Rock Sediment Dam Type B  | --- --- --- |
| 1630.04                           | Stilling Basin                   | --- --- --- | 1635.01 | Rock Pipe Inlet Sediment Trap Type A                                      | --- --- --- |
| 1630.05                           | Temporary Diversion              | --- --- --- | 1635.02 | Rock Pipe Inlet Sediment Trap Type B                                      | --- --- --- |
| 1630.06                           | Special Stilling Basin           | --- --- --- | 1636.01 | Excelsior Wattle Check  | --- --- --- |
| 1630.07                           | Skimmer Basin                    | --- --- --- | 1636.01 | Excelsior Wattle Check with Flocculant                                    | --- --- --- |
| 1630.08                           | Tiered Skimmer Basin             | --- --- --- | 1636.01 | Coir Fiber Wattle Check   | --- --- --- |
| 1630.09                           | Earthen Dam with Skimmer         | --- --- --- | 1636.01 | Coir Fiber Wattle Check with Flocculant                                   | --- --- --- |
|                                   | Infiltration Basin               | --- --- --- | 1636.02 | Silt Fence Excelsior Wattle Break   | --- --- --- |
|                                   | Rock Inlet Sediment Trap:        |             |         | Silt Fence Coir Fiber Wattle Break  | --- --- --- |
| 1632.01                           | Type A                           | --- --- --- | 1636.03 | Excelsior Wattle Barrier  | --- --- --- |
| 1632.02                           | Type B                           | --- --- --- | 1636.03 | Coir Fiber Wattle Barrier   | --- --- --- |
| 1632.03                           | Type C                           | --- --- --- |         |   |             |

ROADSIDE ENVIRONMENTAL UNIT  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

2024 STANDARD SPECIFICATIONS

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