

TIP PROJECT: 15BPR.138.3

CONTRACT: DC00479

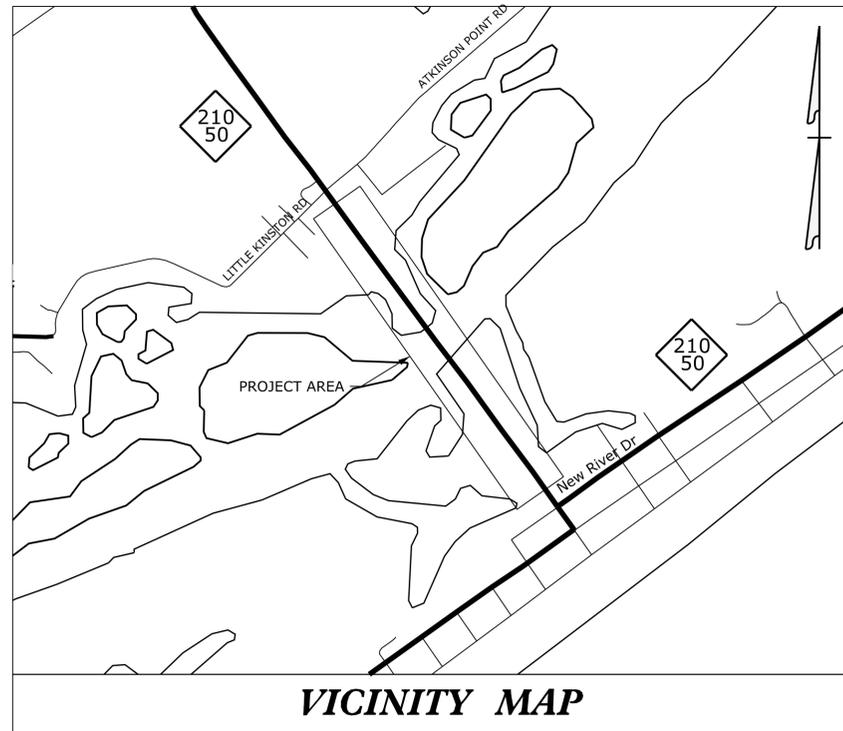
PEDESTRIAN LIGHTING AND TRANSPORTATION MANAGEMENT PLAN

PENDER COUNTY



**LOCATION: NC 210 (SURF CITY BRIDGE) FROM S NEW RIVER DR/S TOPSAIL DR
TO ATKINSON POINT RD/LITTLE KINSTON RD**

**TYPE OF WORK: REMOVAL AND REPLACEMENT OF EXISTING
PEDESTRIAN LIGHTING SYSTEM ON BRIDGE 700016
AND ASSOCIATED PEDESTRIAN AND TRAFFIC
MANAGEMENT**



VICINITY MAP

INDEX OF SHEETS

<u>SHEET NO.</u>	<u>TITLE</u>
T-1	TITLE SHEET, VICINTY MAP, AND INDEX OF SHEETS
E-1	EXISTING CONDITIONS
E-2	CONTROL SYSTEM CHANGES
E-3	NEW CIRCUITING
E-4	LUMINAIRE CIRCUIT WIRING
E-5	LUMINAIRE REPLACEMENT
E-6	PHASED INSTALLATION
TMP-1	MANAGEMENT STRATEGIES AND GENERAL NOTES
TMP-2	DETAIL 1
TMP-3	DETAIL 2

PROJECT NO. 15BPR.138.3
PENDER COUNTY
BRIDGE 700016

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

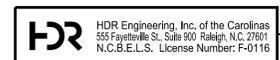
REPAIR OF PEDESTRIAN
LIGHTING SYSTEM



REVISIONS						SHEET NO. T-1 TOTAL SHEETS 10
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

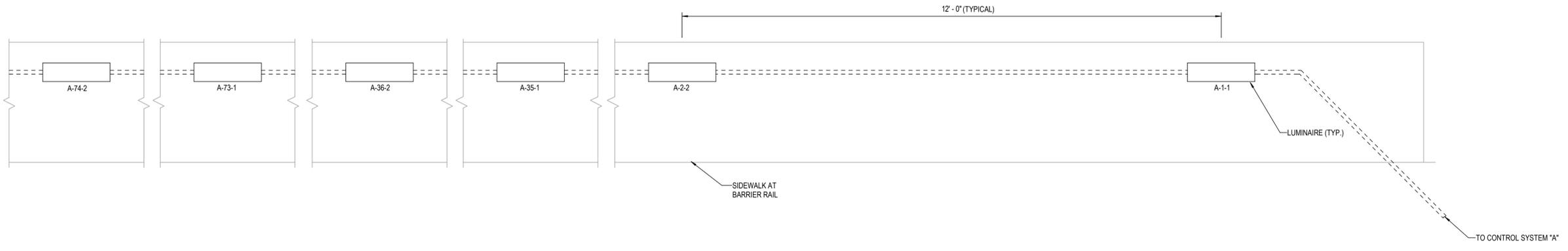
PLOT DRIVER: NCDOT... PENTABLE: NCDOT... USER: BBUSH... FILE: ...

DES BY: J. WILES DATE: 03/24 DWG BY: J. WILES DATE: 03/24
DES CHK: B. SCHOENBAUER DATE: 03/24 CHK BY: B. SCHOENBAUER DATE: 03/24

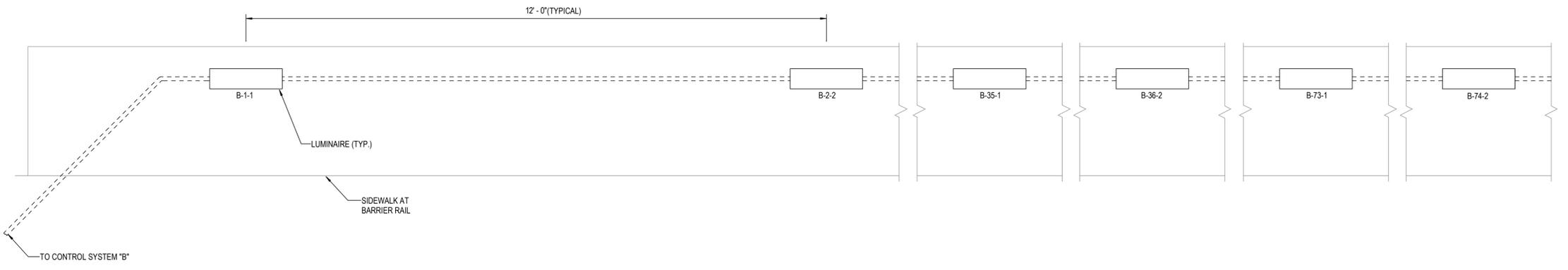


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NOTES:
 1 SEE SHEET E-5 FOR CIRCUIT WIRING REQUIREMENTS.



LUMINAIRE CIRCUITING (CONTROL SYSTEM "A")
 3/4" = 1'-0"



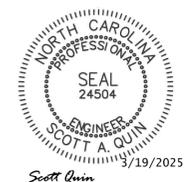
LUMINAIRE CIRCUITING (CONTROL SYSTEM "B")
 3/4" = 1'-0"

PROJECT NO. 15BPR.138.3
PENDER COUNTY
 BRIDGE 700016

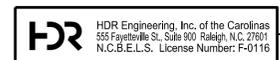
STATE OF NORTH CAROLINA
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 RALEIGH

REPAIR OF PEDESTRIAN
 LIGHTING SYSTEM

NEW CIRCUITING



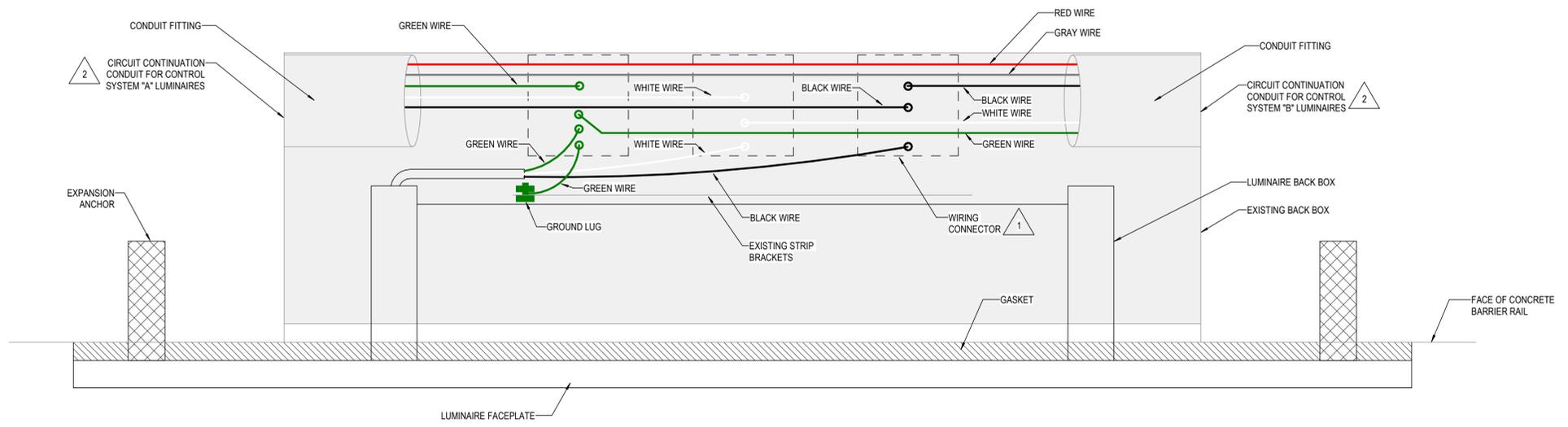
DES BY: <u>M. THEOLOGIDY</u>	DATE : <u>03/24</u>	DWG BY: <u>M. THEOLOGIDY</u>	DATE : <u>03/24</u>
DES CHK: <u>S. QUIN</u>	DATE : <u>03/24</u>	CHK BY: <u>S. QUIN</u>	DATE : <u>03/24</u>



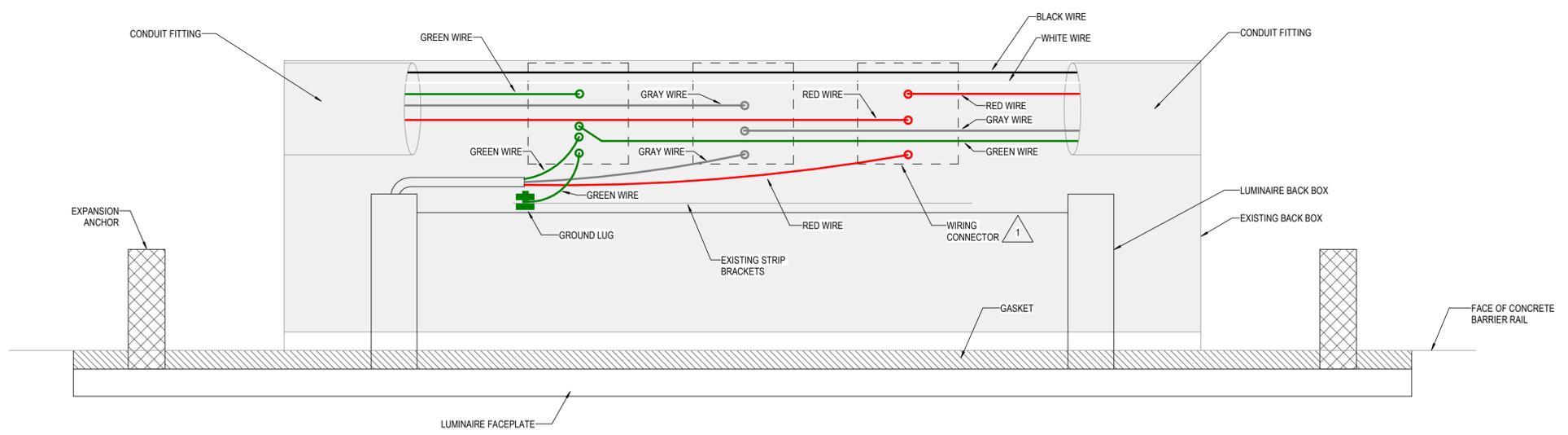
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REVISIONS						SHEET NO. E-3 TOTAL SHEETS 10
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

- NOTES:
- 1 SEE DETAIL 1 ON THIS SHEET.
 - 2 AT EVERY FIFTH LUMINAIRE (E.G. A5, A10, A15, ETC.), FILL ONE CONDUIT WITH EXPANDING FOAM SEALANT. APPLY SEALANT TO THE CIRCUIT CONTINUATION CONDUIT THAT CONTINUES THE CIRCUITS TO THE DOWNSTREAM LUMINAIRES. DO NOT APPLY SEALANT TO THE CIRCUIT SUPPLY CONDUIT.
 - 3 EXPANDING FOAM SEALANT TO BE UL LISTED FOR USE WITH CONDUIT AND WIRE. BASIS OF DESIGN: POLYWATER FST



LUMINAIRE WIRING FOR CIRCUITS "A1" AND "B1"
NOT TO SCALE



LUMINAIRE WIRING FOR CIRCUITS "A2" AND "B2"
NOT TO SCALE



1 WIRING CONNECTOR
NOT TO SCALE

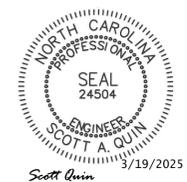
- BASIS OF DESIGN
INSULATED CONNECTOR WITH THE FOLLOWING REQUIRED FEATURES:
- 3 PORT CONFIGURATION FOR PHASE AND NEUTRAL
 - 4 PORT CONFIGURATION FOR GROUND
 - PRE-FILLED WITH OXIDE INHIBITOR
 - WEATHER TIGHT, WATER TIGHT

PROJECT NO. 15BPR.138.3
PENDER COUNTY
 BRIDGE 700016

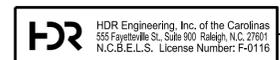
STATE OF NORTH CAROLINA
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 RALEIGH

REPAIR OF PEDESTRIAN LIGHTING SYSTEM

LUMINAIRE CIRCUIT WIRING

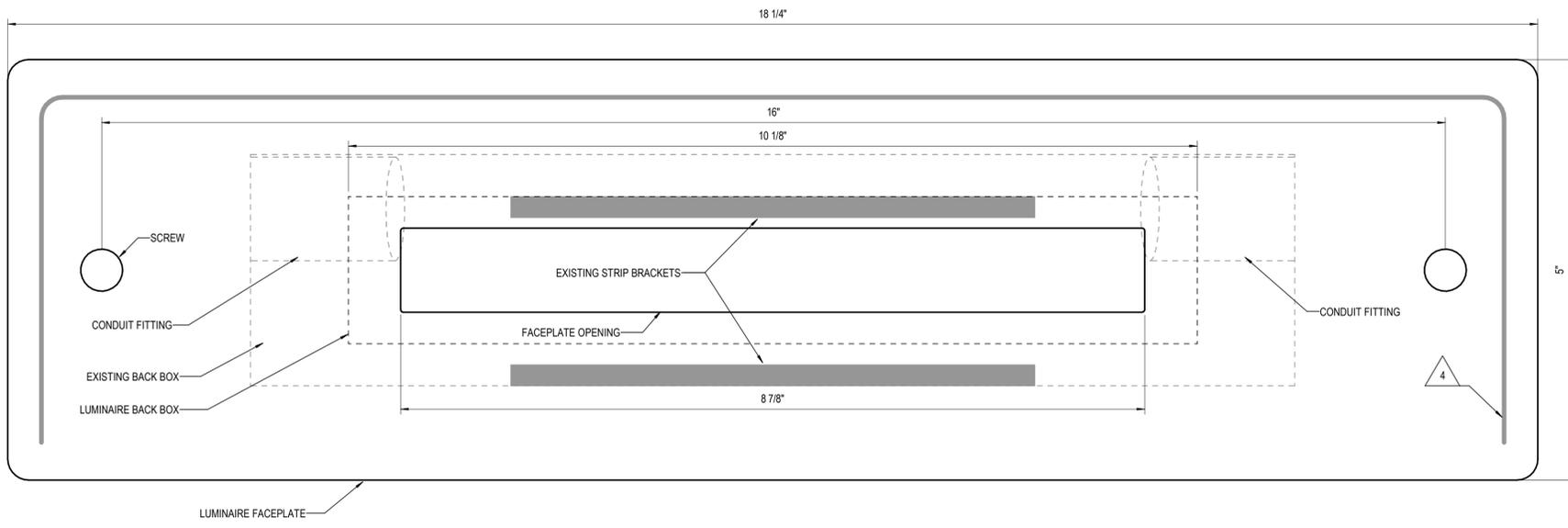


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DES CHK: <u>S. QUIN</u>	DATE : <u>03/24</u>	CHK BY: <u>S. QUIN</u>	DATE : <u>03/24</u>

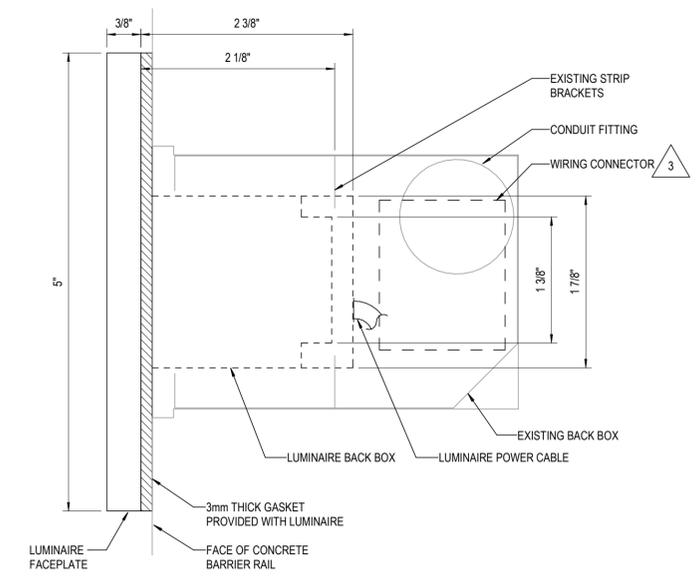


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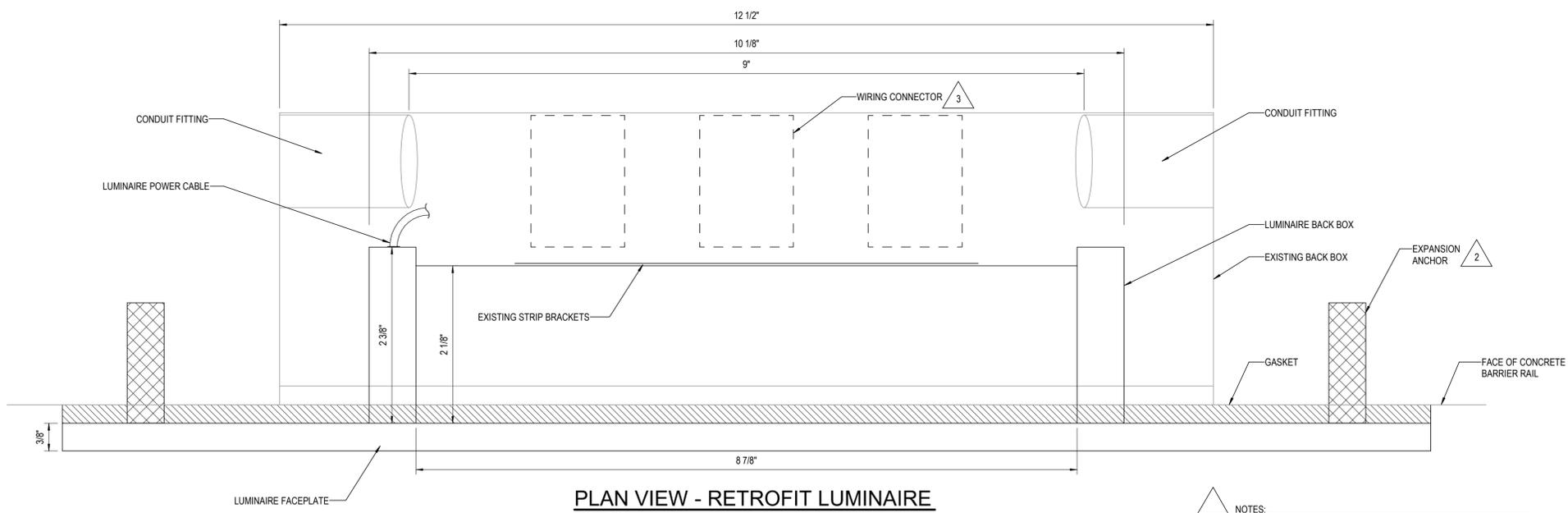
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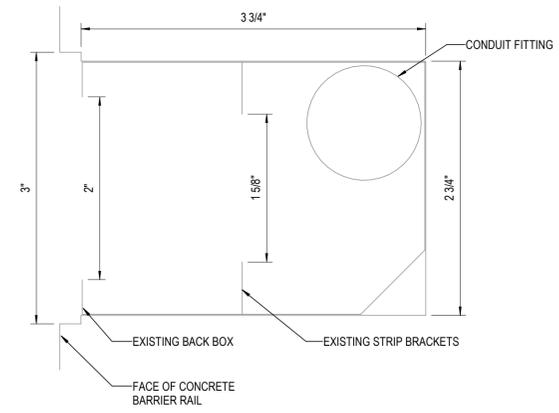
FRONT VIEW - RETROFIT LUMINAIRE
 12" = 1'-0"



SIDE VIEW - RETROFIT LUMINAIRE
 12" = 1'-0"



PLAN VIEW - RETROFIT LUMINAIRE
 12" = 1'-0"



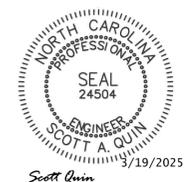
SIDE VIEW - EXISTING BACK BOX
 12" = 1'-0"

NOTES:

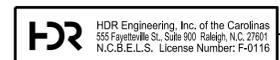
- 1 LUMINAIRE BASIS OF DESIGN IS MP LIGHTING, MODEL NO. L771-8-W27H-F-S6.
 REQUIRED FEATURES:
 • LED LIFE IS 50,000 HOURS (NOMINAL)
 • LUMEN OUTPUT IS 410LM (NOMINAL)
 • 120V, 8W
 • STAINLESS STEEL FACEPLATE
 • BACK BOX MADE OF MARINE GRADE ALUMINUM
 • IP66 RATED
 • LED ENGINE IS REPLACEABLE
 • LED DRIVER IS REPLACEABLE
- 2 #10 PLASTIC CONICAL EXPANSION ANCHORS AND #10 PAN HEAD SCREWS SHALL BE USED TO INSTALL THE LUMINAIRES. #10 PAN HEAD SCREWS SHALL BE 1 1/2" IN LENGTH AND SHALL BE 316 STAINLESS STEEL. DRILL ANCHOR LOCATIONS AND INSTALL EXPANSION ANCHORS IN ACCORDANCE WITH INSTRUCTIONS FROM ANCHOR MANUFACTURER. INCLUDE COSTS FOR EXPANSION ANCHORS WITH REPLACE EXISTING LIGHTING AND WIRING PAY ITEM.
- 3 SEE DETAIL 1 ON SHEET E-4.
- 4 INSTALL BEAD OF CAULK ALONG THREE SIDES BEHIND FACEPLATE AS SHOWN.

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STATE OF NORTH CAROLINA
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 REPAIR OF PEDESTRIAN
 LIGHTING SYSTEM
 LUMINAIRE REPLACEMENT

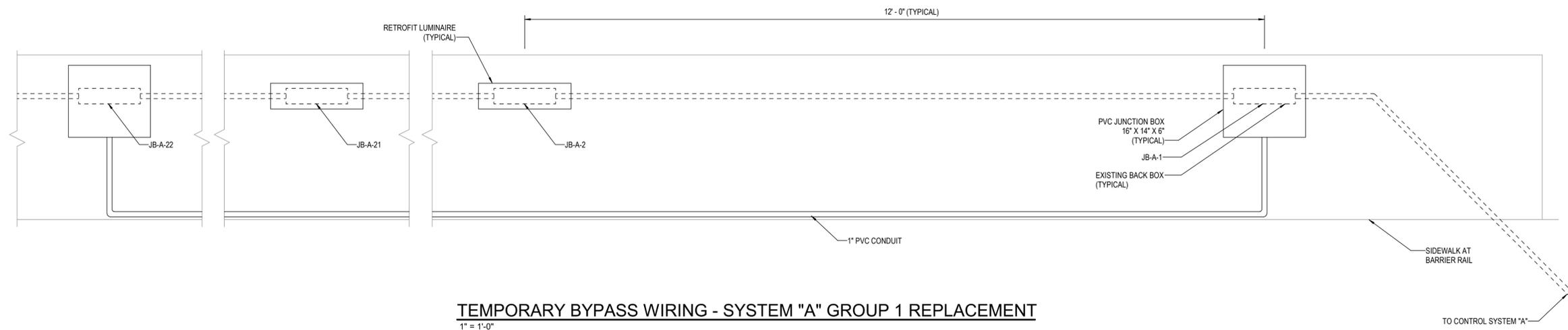


DES BY: M. THEOLOGIDY	DATE: 03/24	DWG BY: M. THEOLOGIDY	DATE: 03/24
DES CHK: S. QUIN	DATE: 03/24	CHK BY: S. QUIN	DATE: 03/24



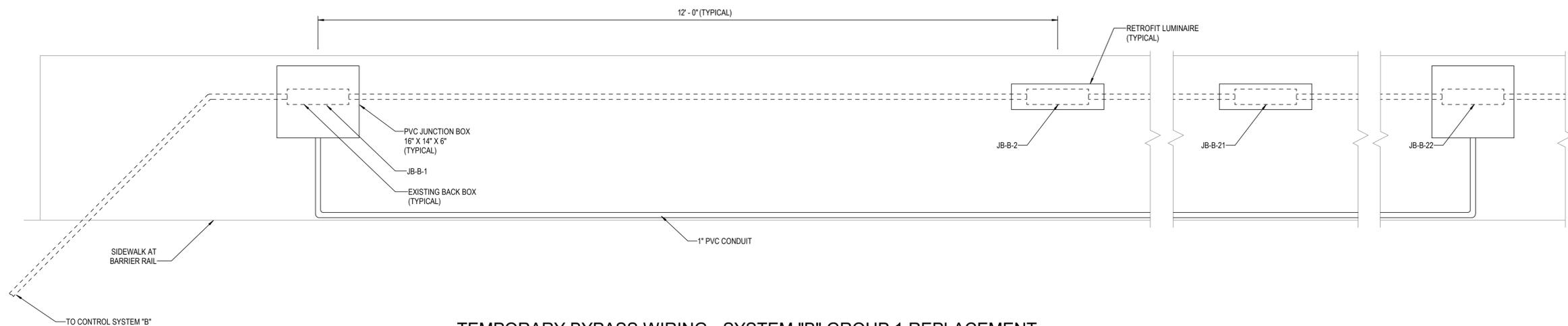
REVISIONS						SHEET NO. E-5 TOTAL SHEETS 10
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TEMPORARY BYPASS WIRING - SYSTEM "A" GROUP 1 REPLACEMENT

1" = 1'-0"



TEMPORARY BYPASS WIRING - SYSTEM "B" GROUP 1 REPLACEMENT

1" = 1'-0"

- NOTES:**
1. REPLACEMENT OF THE LUMINAIRES WILL BE PHASED IN ORDER TO LIMIT DISRUPTION OF ILLUMINATION PROVIDED BY BARRIER RAIL LIGHTING.
 2. OPERATION OF THE EXISTING LUMINAIRES WILL BE MAINTAINED BY PROVIDING TEMPORARY WIRING TO BYPASS EACH GROUP OF LUMINAIRES BEING REPLACED.
 3. FOR EACH GROUP REPLACEMENT, A MAXIMUM OF 20 LUMINAIRES MAY BE REPLACED.
 4. MOUNT TEMPORARY BYPASS JUNCTION BOX TO THE CONCRETE BARRIER RAIL UTILIZING EXPANSION ANCHORS.
 5. ATTACH TEMPORARY BYPASS CONDUIT TO THE CONCRETE BARRIER RAIL WITH ONE-HOLE STRAPS. REPAIR THE CONCRETE WHEN THE ONE-HOLE STRAPS ARE REMOVED.
- FOR GROUT FOR STRUCTURE, SEE SPECIAL PROVISIONS.

LIGHTING QUANTITIES	
REPLACE EXISTING LIGHTING AND WIRING	LUMP SUM
BARRIER RAIL LUMINAIRE (INSTALLED AND SPARES)*	368' EA.

* INCLUDES 334 INSTALLED LUMINAIRES AND 34 SPARE LUMINAIRES

STEPS FOR GROUP 1 REPLACEMENT:

1. REMOVE EXISTING LUMINAIRES A-1.
2. REMOVE EXISTING WIRING FROM CONTROL STATION "A" TO JB-A-1.
3. PREPARE JB-A-1. SEE NOTES 1, 2, 3 ON SHEET E-1, AND NOTE 2 ON SHEET E-5.
4. INSTALL NEW CIRCUIT WIRING FROM CONTROL STATION "A" TO JB-A-1. SEE NOTE ON SHEET E-2.
5. REMOVE EXISTING LUMINAIRE A-22.
6. AT JB-A-22, INSTALL EXPANSION ANCHORS FOR NEW RETROFIT LUMINAIRE. SEE NOTE 2 ON SHEET E-5.
7. INSTALL TEMPORARY BYPASS WIRING FROM JB-A-1 TO JB-A-22. PROVIDE #8 THWN WIRE.
8. REMOVE EXISTING LUMINAIRES A-2 THROUGH A-21.
9. REMOVE EXISTING WIRING FROM JB-A-1 TO JB-A-22.
10. PREPARE JB-A-2 THROUGH JB-A-21. SEE NOTES 1, 2, 3 ON SHEET E-1, AND NOTE 2 ON SHEET E-5.
11. INSTALL NEW CIRCUIT WIRING FROM JB-A-1 THROUGH JB-A-21. SEE SHEETS E-3 AND E-4 FOR CIRCUIT WIRING.
12. INSTALL NEW RETROFIT LUMINAIRES A-2 THROUGH A-20.
13. REMOVE TEMPORARY WIRING.
14. INSTALL NEW RETROFIT LUMINAIRE A-1.
15. INSTALL TEMPORARY BYPASS JUNCTION BOX AT JB-A-21.

STEPS FOR GROUP 2 REPLACEMENT (TYPICAL FOR GROUPS 3 AND ABOVE):

1. REMOVE EXISTING LUMINAIRES A-42.
2. AT JB-A-42, INSTALL EXPANSION ANCHORS FOR NEW RETROFIT LUMINAIRE. SEE NOTE 2 ON SHEET E-5.
3. INSTALL TEMPORARY BYPASS WIRING FROM JB-A-21 TO JB-A-42.
4. REMOVE EXISTING LUMINAIRES JB-A-21 TO JB-A-42.
5. REMOVE EXISTING WIRING FROM JB-A-21 TO JB-A-42.
6. PREPARE JB-A-22 THROUGH JB-A-41. SEE NOTES 1, 2, 3 ON SHEET E-1, AND NOTE 2 ON SHEET E-5.
7. INSTALL NEW CIRCUIT WIRING FROM JB-A-21 THROUGH JB-A-41. SEE SHEETS E-3 AND E-4 FOR CIRCUIT WIRING.
8. INSTALL NEW RETROFIT LUMINAIRES A-22 THROUGH A-40.
9. REMOVE TEMPORARY WIRING.
10. INSTALL NEW RETROFIT LUMINAIRE A-21.
11. INSTALL TEMPORARY BYPASS JUNCTION BOX AT JB-A-41.



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PENDER COUNTY
 BRIDGE 700016

STATE OF NORTH CAROLINA
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 RALEIGH

REPAIR OF PEDESTRIAN LIGHTING SYSTEM

PHASED INSTALLATION

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. E-6
 TOTAL SHEETS 10

DES BY: <u>M. THEOLOGIDY</u>	DATE: <u>03/24</u>	DWG BY: <u>M. THEOLOGIDY</u>	DATE: <u>03/24</u>
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MANAGEMENT STRATEGIES

- 1) DURING PEDESTRIAN LIGHTING INSTALLATION USE FLAGGERS AND PEDESTRIAN CHANNELIZING DEVICES TO DIRECT PEDESTRIAN TRAFFIC THROUGH THE WORK AREA.
- 2) USE ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 19, AS NECESSARY, FOR VEHICULAR TRAFFIC ON NC 210/NC 50.
- 3) USE ROADWAY STANDARD DRAWING 1101.02 SHEET 18 OF 19, AS NECESSARY, FOR VEHICULAR TRAFFIC ON NC 210/ S TOPSAIL DR ROUNDABOUT.

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 AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
NC 210	MONDAY THRU FRIDAY
NC 50	6:00 A.M. TO 9:00 A.M. 4:00 P.M. TO 7:00 P.M.
	AND
	12:00 A.M. SATURDAY TO 12:00 A.M. MONDAY

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

ROAD NAME
NC 210
NC 50

HOLIDAY AND PEAK SEASON

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 9:00 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 PEAK SEASON, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE MEMORIAL DAY AND 9:00 P.M. THE TUESDAY AFTER LABOR DAY.
5. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY.
6. 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.

GENERAL NOTES (CONT.)

- C) DO NOT CLOSE OR NARROW THE MULTI-USE PATH OR SIDEWALK DURING THE PEAK SEASON (FROM 6:00 A.M. THE FRIDAY BEFORE MEMORIAL DAY TO 9:00 P.M. TUESDAY AFTER LABOR DAY) AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
MULTI-USE PATH	FRIDAY 6:00 A.M. TO THE FOLLOWING SUNDAY 9:00 P.M.
SIDEWALKS	(NO NARROWING OR CLOSURE ALLOWED FRIDAY, SATURDAY, AND SUNDAY)

LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) 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.
- E) 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.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

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

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PENDER COUNTY
 BRIDGE 700016

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

REPAIR OF PEDESTRIAN
 LIGHTING SYSTEM



John Wiles
 3/19/2025

REVISIONS

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

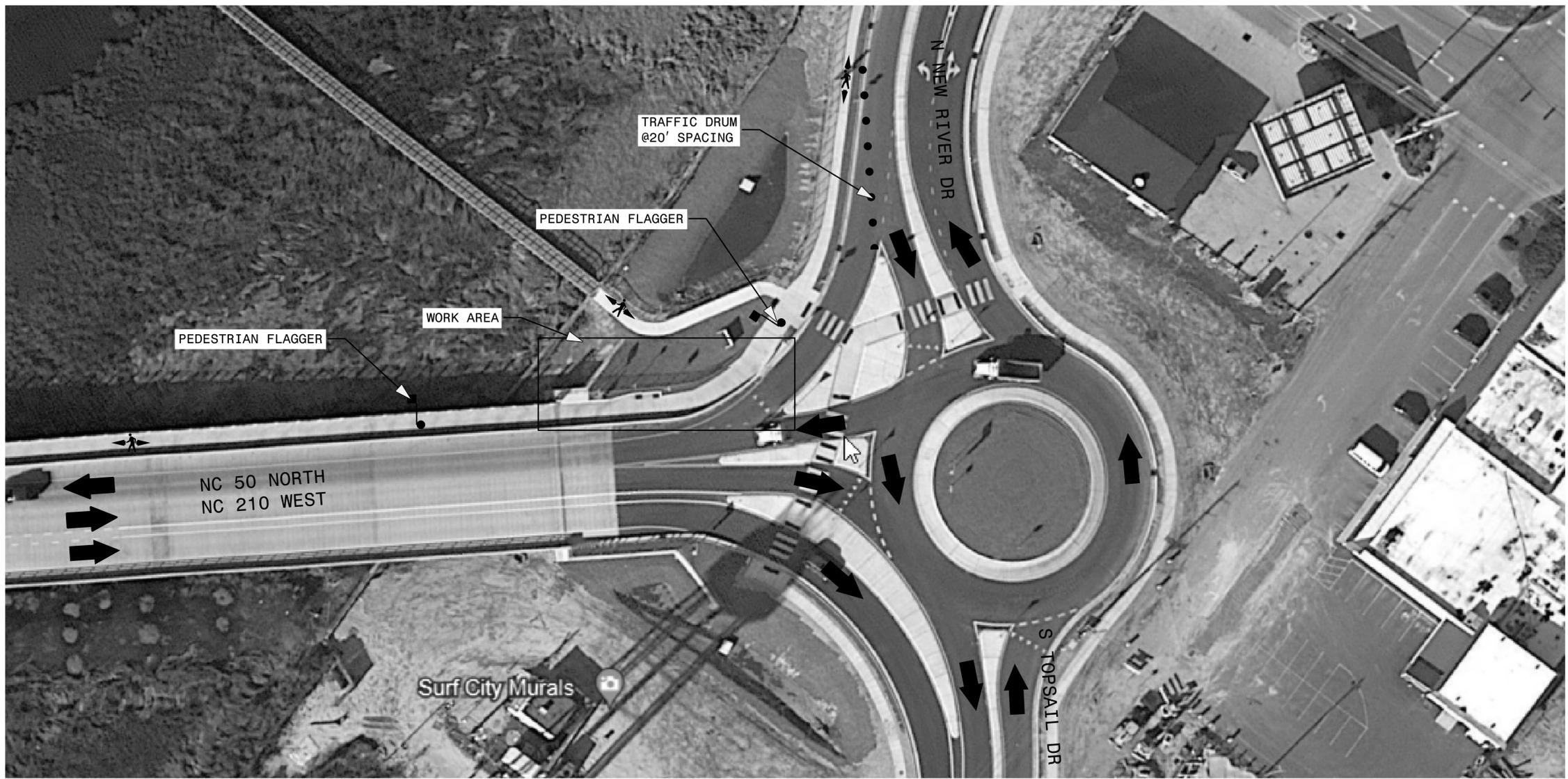
SHEET
 NO.
 TMP-1
 TOTAL
 SHEETS
 10



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DES BY: J. WILES	DATE: 03/24	DWG BY: J. WILES	DATE: 03/24
DES CHK: B. SCHOENBAUER	DATE: 03/24	CHK BY: B. SCHOENBAUER	DATE: 03/24

MESSAGE NO. 1	MESSAGE NO. 2
NC 50 N	USE
NC 210 W	TRAFFIC CIRCLE
CHANGEABLE MESSAGE SIGN	



PLOT DRIVER: NCDOT_STRUCTURE_DEFAULT_PEN.TBI
 USER: BBUSH DATE: 3/18/2025
 TIME: 12:11:45 PM

FILE: ...TrafficControl\TMP-03

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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 REPAIR OF PEDESTRIAN LIGHTING SYSTEM



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DES CHK: B. SCHOENBAUER	DATE: 03/24	CHK BY: B. SCHOENBAUER	DATE: 03/24

HDR HDR Engineering, Inc. of the Carolinas
 555 Fayetteville St., Suite 900 Raleigh, N.C. 27601
 N.C.B.E.L.S. License Number: F-0116

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REVISIONS						SHEET NO. TMP-2
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 10
2			4			

