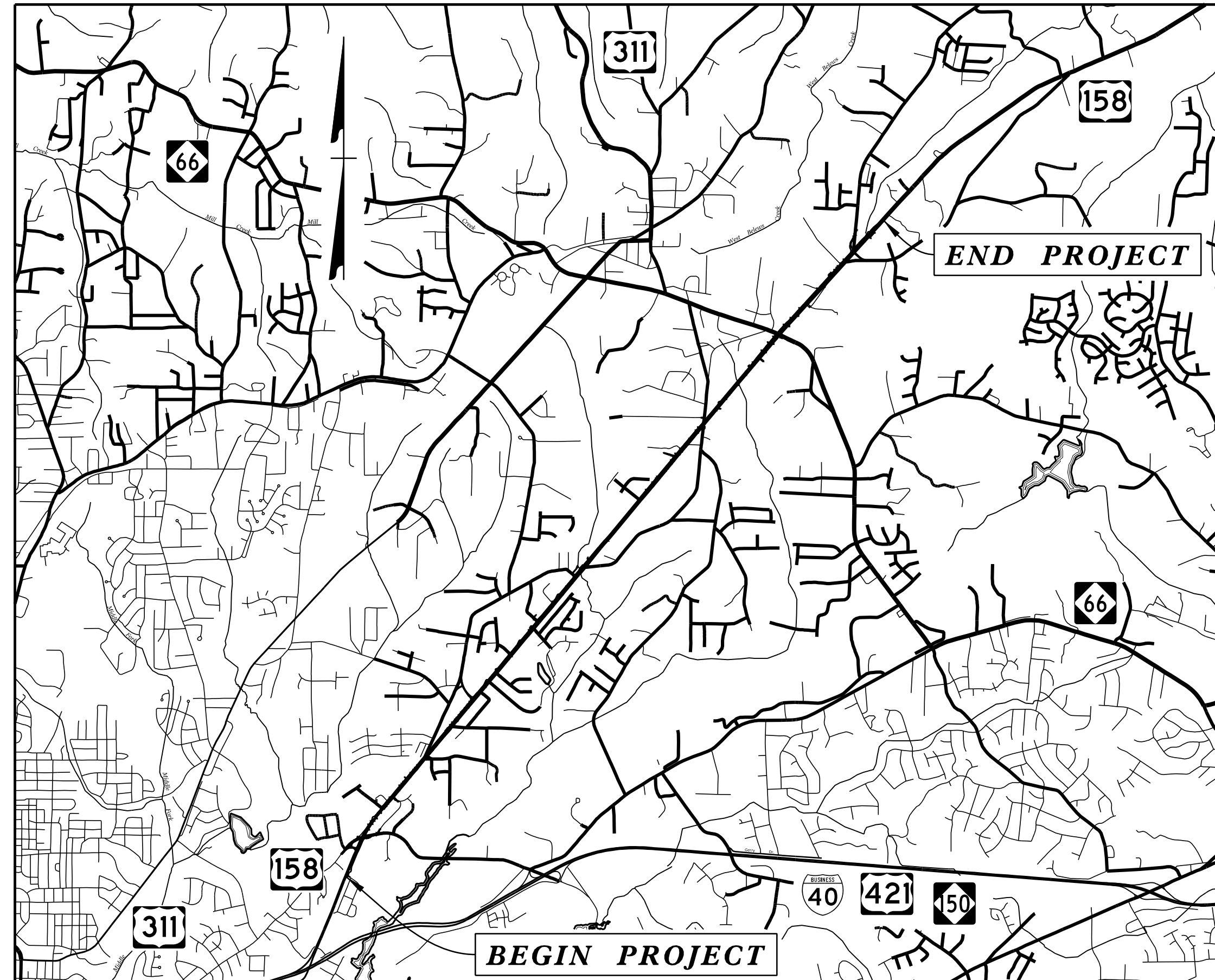
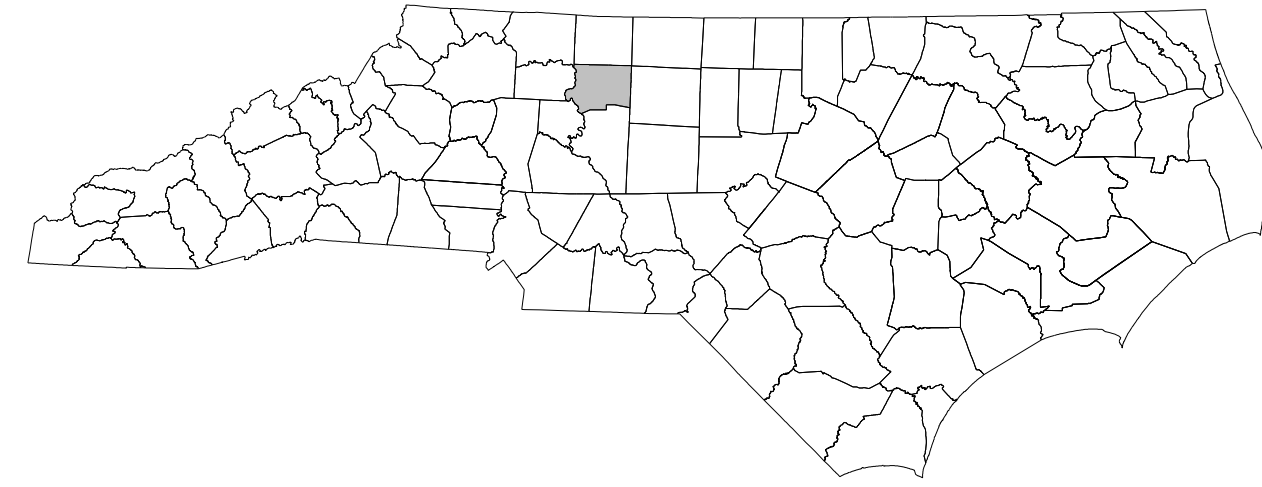


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**  
**FORSYTH COUNTY**



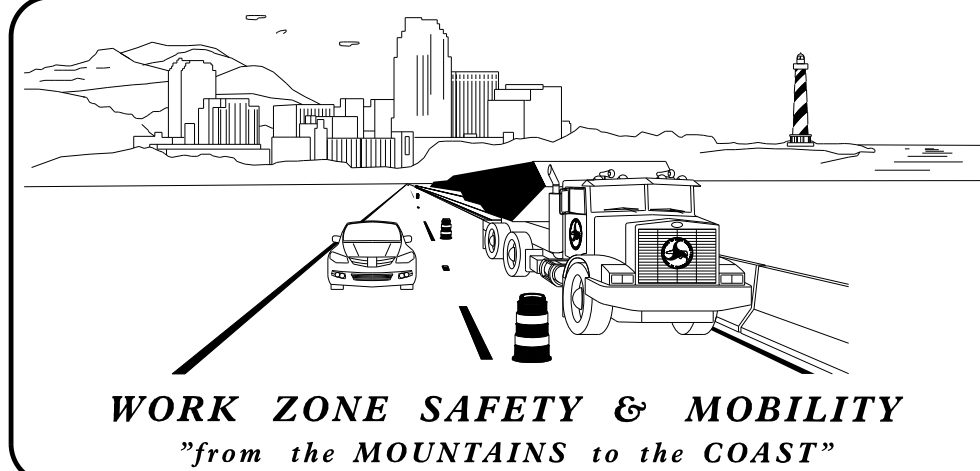
**INDEX OF SHEETS**

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B AND 1C	TRANSPORTATION OPERATIONS PLAN: GENERAL NOTES
TMP-2	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-2A	TEMPORARY SHORING DATA
TMP-2B THROUGH 2I	OFFSITE DETOUR DETAILS
TMP-2J AND 2K	SPECIAL SIGN DESIGNS
TMP-3 THROUGH 3B	TRAFFIC CONTROL PHASING
TMP-4 THROUGH 6I	TRAFFIC CONTROL PHASE I DETAILS
TMP-62 THROUGH 107	TRAFFIC CONTROL PHASE II DETAILS
TMP-108 THROUGH 143A	TRAFFIC CONTROL PHASE III DETAILS

SHEET NO.  
TMP-1

**R-2577A**

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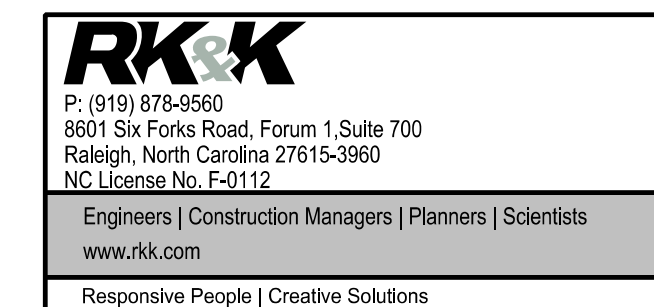
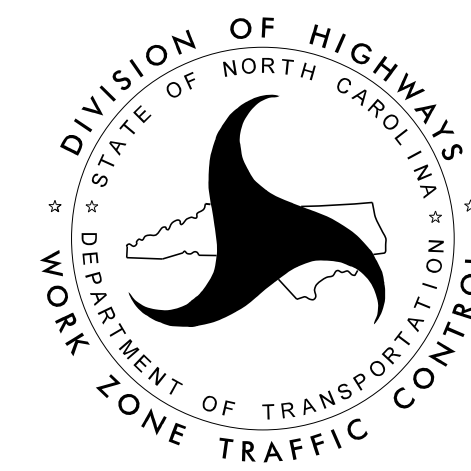
**PLANS PREPARED BY:**

**Byron Holden, PE**  
**PROJECT MANAGER**

**Kevin Bisby, PE**  
**TECHNICAL MANAGER**

**NC DOT CONTACTS:**

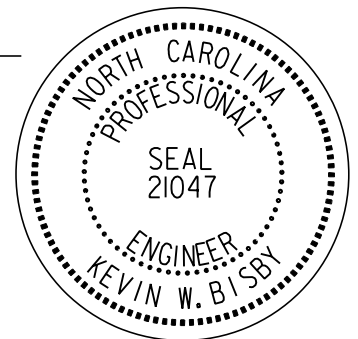
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**DIVISION PROJECT DEVELOPMENT**  
**TEAM LEAD**



**APPROVED:** 

**DATE:** 3/7/2024

**SEAL**



**PROJECT:**

# 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
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.06	WARNING SIGNS FOR BLASTING ZONES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	POSITIVE PROTECTION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1205.15	PAVEMENT MARKINGS - SUPERSTREETS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

PROJ. REFERENCE NO. R - 2577A	SHEET NO. TMP - 1A
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# 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
- CONTINUED CONSTRUCTION
- WEDGING
- COMPLETED MONOLITHIC ISLAND

## SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

## 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
- PORTABLE CONCRETE BARRIER
- PORTABLE CONCRETE BARRIER (EXISTING)
- PORTABLE CONCRETE BARRIER (SECTION VIEW)
- DRUM (SECTION VIEW)

## TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

## PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

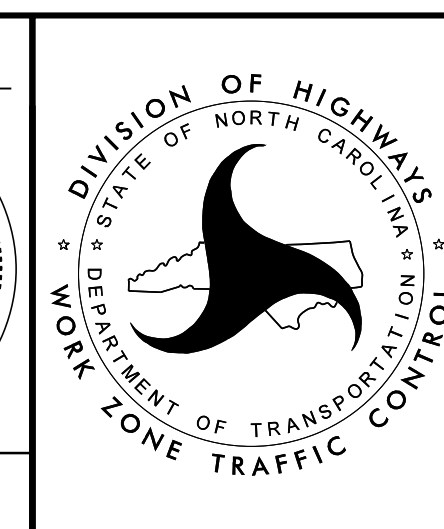
## TEMPORARY PAVEMENT MARKING SCHEDULE

PAINT				COLD APPLIED PLASTIC	
Symbol	Description	Symbol	Description	Symbol	Description
P1	WHITE EDGELINE (4")	P50	WHITE GORELINE (12")	C20	WHITE EDGELINE (6")
P2	WHITE SOLID LANE LINE (4")	P51	WHITE DIAGONAL (12")	C23	3 FT. - 9 FT./SP WHITE MINISKIP (6")
P3	10 FT. WHITE SKIP (4")	P52	YELLOW DIAGONAL (12")	C33	YELLOW DOUBLE CENTER (6")
P4	3 FT. - 9 FT./SP WHITE MINISKIP (4")	P53	WHITE SOLID LANE LINE (12")	C50	WHITE GORELINE (12")
P5	2 FT. - 6 FT./SP WHITE MINISKIP (4")	P54	3 FT. - 9 FT./SP WHITE MINISKIP (12")	C51	WHITE DIAGONAL (12")
P10	YELLOW EDGELINE (4")	P61	WHITE STOPBAR (24")		
P13	YELLOW DOUBLE CENTER (4")		LEFT TURN ARROW	<b>TEMPORARY RAISED PAVEMENT MARKERS</b>	
P20	WHITE EDGELINE (6")		RIGHT TURN ARROW	Symbol	Description
P21	WHITE SOLID LANE LINE (6")		STRAIGHT ARROW	MH	YELLOW/YELLOW
P22	10 FT. WHITE SKIP (6")		COMBO. LEFT/STRAIGHT ARROW	MI	CRYSTAL RED
P23	3 FT. - 9 FT./SP WHITE MINISKIP (6")		COMBO. RIGHT/STRAIGHT ARROW		
P24	2 FT. - 6 FT./SP WHITE MINISKIP (6")		U-TURN ARROW		
P30	YELLOW EDGELINE (6")		MERGE ARROW		
P33	YELLOW DOUBLE CENTER (6")	SCHOOL ONLY	ALPHANUMERIC CHARACTER		
P34	2 FT. - 6 FT./SP YELLOW MINISKIP (6")	SCHOOL ONLY	ALPHANUMERIC CHARACTER		
P42	YELLOW DIAGONAL (8")		24" YIELD LINE TRIANGLE		

APPROVED:   
DATE: 3/7/2024

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**ROADWAY STANDARD DRAWINGS & LEGEND**

3/7/2024  
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R015BY

## 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
-L- US 158	MONDAY THROUGH FRIDAY 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM

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

ROAD NAME  
-L- US 158

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 7:00 AM DECEMBER 31<sup>ST</sup> TO 6:00 PM JANUARY 2<sup>ND</sup>. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY, THEN UNTIL 6:00 PM THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 7:00 AM THURSDAY AND 6:00 PM MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 AM FRIDAY TO 6:00 PM TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 AM THE DAY BEFORE INDEPENDENCE DAY AND 6:00 PM THE DAY AFTER INDEPENDENCE DAY. IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY, THEN BETWEEN THE HOURS OF 7:00 AM THE THURSDAY BEFORE INDEPENDENCE DAY AND 6:00 PM THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 7:00 AM FRIDAY TO 6:00 PM TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 7:00 AM TUESDAY AND 6:00 PM MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 7:00 AM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00 PM THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
9. FOR "CHRISTMAS IN JULY" CELEBRATION, THE 1<sup>ST</sup> WEEKEND IN JULY, BETWEEN THE HOURS OF 7:00 AM FRIDAY TO 6:00 PM MONDAY.

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
-L- US 158	MONDAY THROUGH FRIDAY 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM	30 MINUTES FOR TRAFFIC SHIFTS, PAVEMENT TIE-INS AND PAVEMENT MARKING TIE-INS

D) DO NOT CONDUCT ANY HAULING OPERATION AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVEL WAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL, OR AS DIRECTED BY THE ENGINEER.

E) FOR BLASTING OPERATIONS, STOP TRAFFIC IF REQUIRED USING RDWY STD 1101.06.

**LANE AND SHOULDER CLOSURE REQUIREMENTS**

F) 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.

G) WHEN PERSONNEL OR EQUIPMENT ARE WORKING WITHIN 15 FT. OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING RDWY. STD. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL, OR A LANE CLOSURE IS INSTALLED.

H) WHEN PERSONNEL OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT. OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING RDWY. STD. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT. OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING RDWY. STD. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

I) WHEN PERSONNEL OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL, 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 EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

J) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT. ON BOTH SIDES OF AN OPEN TRAVEL WAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

**PAVEMENT EDGE DROP-OFF REQUIREMENTS**

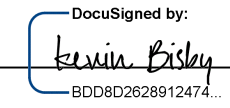
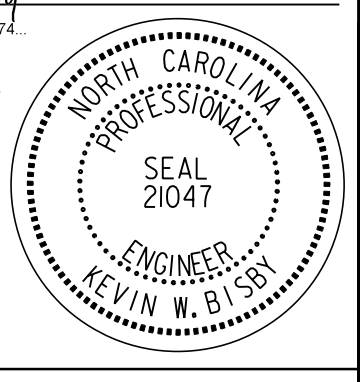

K) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER AT NO EXPENSE TO THE DEPARTMENT.

L) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500' IN ADVANCE AND A MINIMUM OF EVERY 2000' THROUGHOUT THE UNEVEN AREA.

<p>APPROVED:   <small>DocuSigned by: Kevin W. Bissby BDD0802928912474</small></p> <p>DATE: 3/20/2024</p> <p style="text-align: center;">SEAL</p>			<h3>GENERAL NOTES</h3>
<p><b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b></p>			

## GENERAL NOTES

**TRAFFIC PATTERN ALTERATIONS**

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

**SIGNING**

N) 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.

O) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS. PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

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

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

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

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

**TRAFFIC BARRIER**

S) 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. CONSTRUCT A TEMPORARY ASPHALT PAD TO THE EDGE AND ELEVATION OF THE EXISTING PAVEMENT AS NEEDED TO ACCOMMODATE BARRIER.

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 (45 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.

T) 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 (mph)	MINIMUM OFFSET (ft.)
< 40	15
45 - 50	20
55	25
> 60	30

**TRAFFIC CONTROL DEVICES**

U) 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.

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

W) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES (DRUMS) PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

**PAVEMENT MARKINGS AND MARKERS**

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

ROAD NAME	MARKING	MARKER
-L- US 158, -Y20- NC 66	PAINT	TEMPORARY RAISED
CONCRETE SURFACES	COLD APPLIED PLASTIC (TYPE 4)	TEMPORARY RAISED
ALL OTHER -Y- LINES	PAINT	NONE

Y) 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.

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

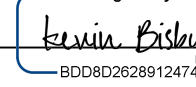
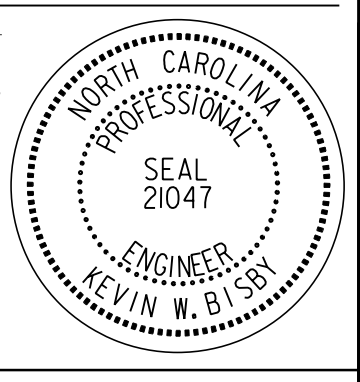

AA) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

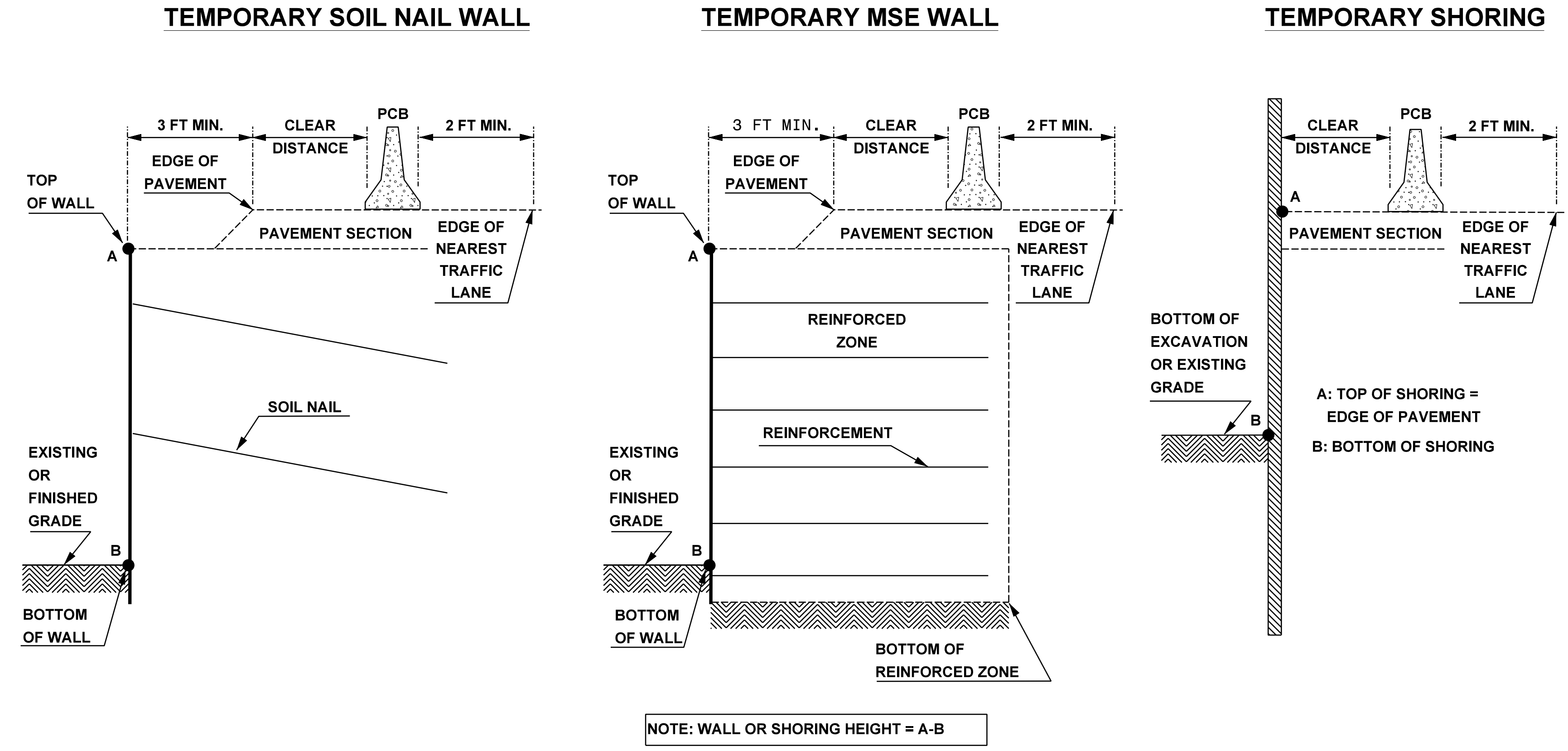
BB) TRACE THE EXISTING AND PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO REMOVAL AND INSTALLATION. PLACE DRUMS TO DELINEATE ANY EXISTING AND PROPOSED MONOLITHIC ISLANDS.

**MISCELLANEOUS**

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

3/19/2024  
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R015bby

<p>APPROVED:   <small>DocuSigned by: Kevin Bishop 800802028919247</small></p> <p>DATE: 3/19/2024</p> <p style="text-align: center;">SEAL</p>			<p><b>MANAGEMENT STRATEGIES AND GENERAL NOTES</b></p>
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			



## FIGURE A

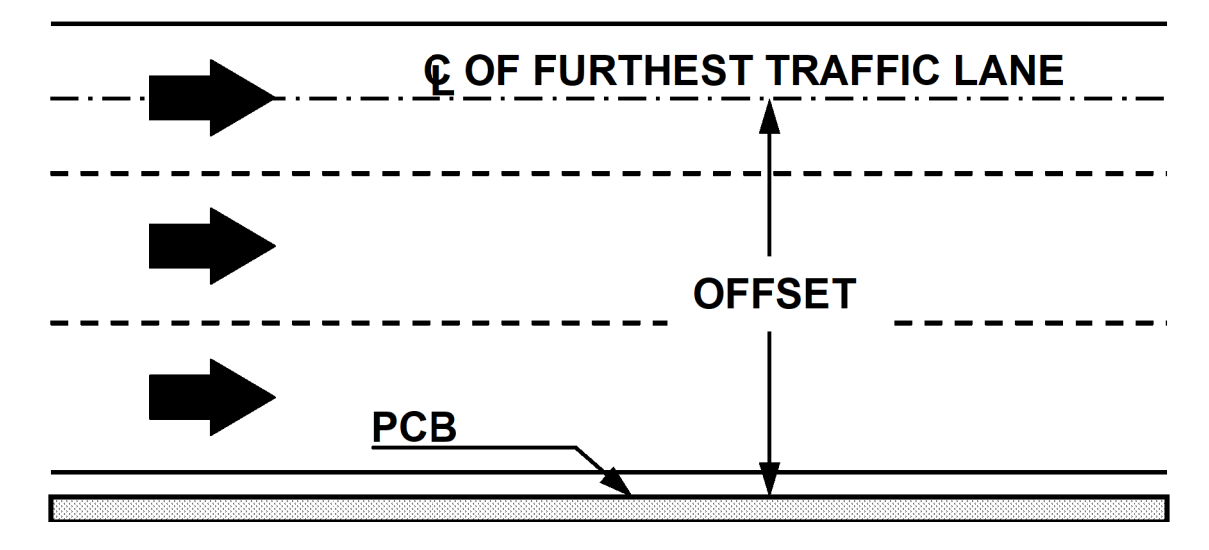
### NOTES


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

MINIMUM REQUIRED CLEAR DISTANCE, inches

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

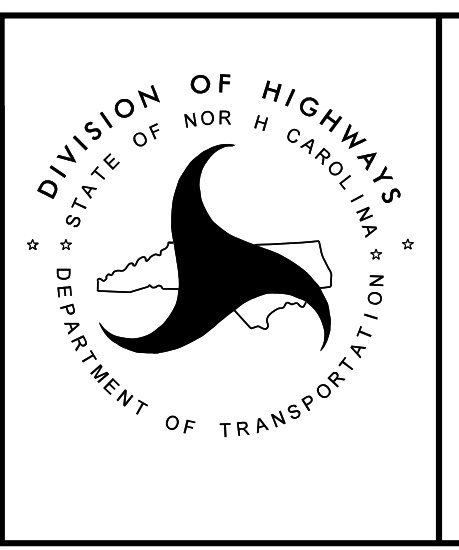
\* See Figure Below



APPROVED:   
 DATE: 3/7/2024

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER  
 KEVIN W. D. ISBY  
 SEAL 21047



PORTABLE CONCRETE BARRIER  
 AT  
 TEMPORARY SHORING LOCATIONS

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

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**Table 1: Temporary Shoring Locations**

Shoring Location No.	Begin Station & Offset	End Station & Offset	Estimated Average Height (ft)	Estimated Maximum Height (ft)	Shoring Location, Type, Traffic Control Plan
1	-L- STA 137+75± 4.0 ft LT	-L- STA 139+81± 4.0 ft LT	9.7	12.0	Roadway Embankment and Bridge End Bent Construction (Fill, TC Phase I Step 1, TMP-14 to TMP-15)
2	-L- STA 141+08± 4.0 ft LT	-L- STA 142+76± 4.0 ft LT	8.2	9.9	Roadway Embankment and Bridge End Bent Construction (Fill, TC Phase I Step 1, TMP-15)

The following notes on plans are recommended for the proposed shoring locations:

**Shoring Location No. 1:**

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

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

DESIGN TEMPORARY SHORING FROM STATION -L- 137+75±, 4.0 FT LT TO STATION -L- 139+81±, 4.0 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT ( $\gamma$ ): 120 PCF
- FRICTION ANGLE ( $\phi$ ): 30 DEGREES
- COHESION ( $c$ ): 0 PSF
- GROUNDWATER ELEVATION: VARIES, USE ELEVATION  $\pm$ 840 FT

AT THE CONTRACTOR'S OPTION, USE STANDARD SHORING FOR TEMPORARY SHORING FROM STATION FROM STATION -L- 137+75±, 4.0 FT LT TO STATION -L- 139+81±, 4.0 FT LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 137+75±, 4.0 FT LT TO STATION -L- 139+81±, 4.0 FT LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. THE SUBSURFACE INFORMATION THAT IS AVAILABLE CAN BE FOUND IN THE ROADWAY SUBSURFACE INVENTORY REPORT.

DRIVEN PILING FOR TEMPORARY SHORING FROM -L- 137+75±, 4.0 FT LT TO STATION -L- 139+81±, 4.0 FT LT, MAY NOT PENETRATE BELOW ELEVATION 868 FT DUE TO WEATHERED OR HARD ROCK.

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

**Shoring Location No. 2:**

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

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

DESIGN TEMPORARY SHORING FROM STATION -L- 141+08±, 4.0 FT LT TO STATION -L- 142+76±, 4.0 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT ( $\gamma$ ): 120 PCF
- FRICTION ANGLE ( $\phi$ ): 30 DEGREES
- COHESION ( $c$ ): 0 PSF
- GROUNDWATER ELEVATION: VARIES, USE ELEVATION  $\pm$ 840 FT


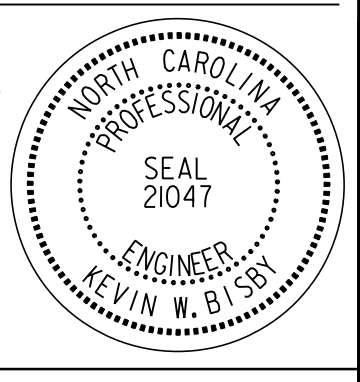

AT THE CONTRACTOR'S OPTION, USE STANDARD SHORING FOR TEMPORARY SHORING FROM STATION FROM STATION -L- 141+08±, 4.0 FT LT TO STATION -L- 142+76±, 4.0 FT LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

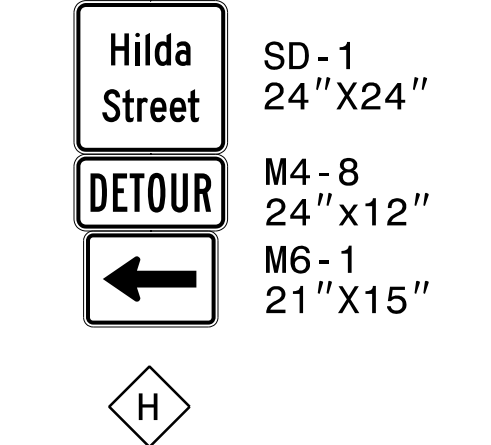
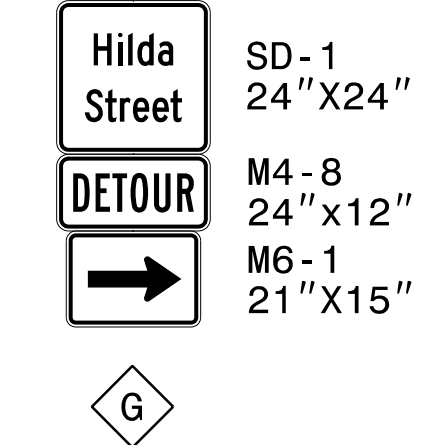
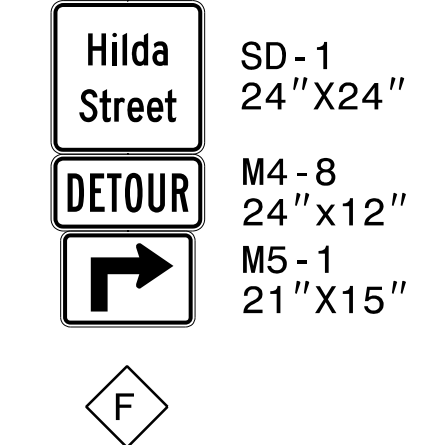
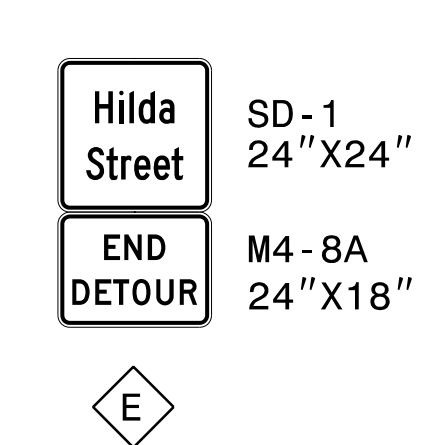
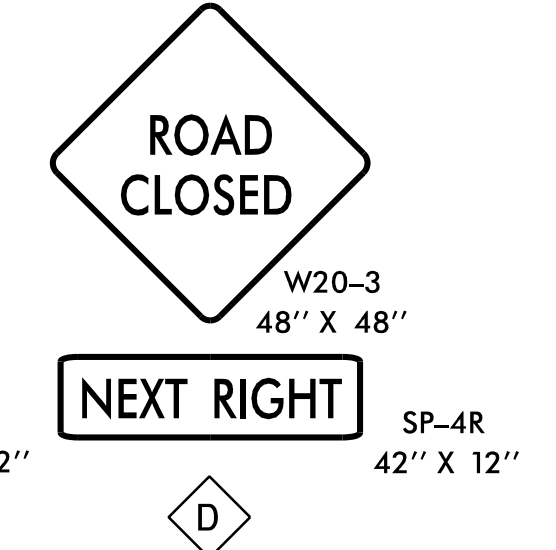
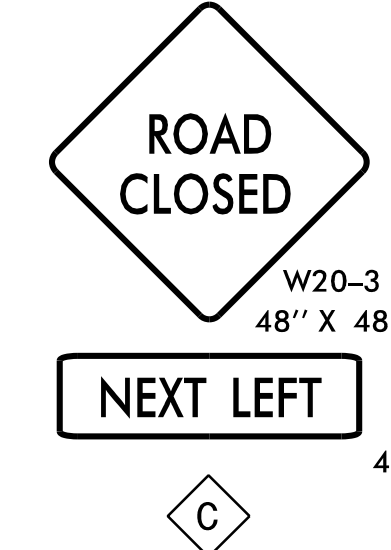
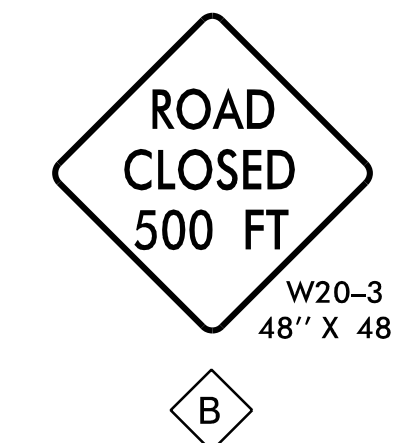
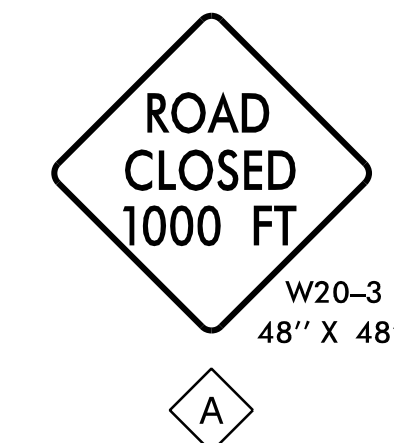
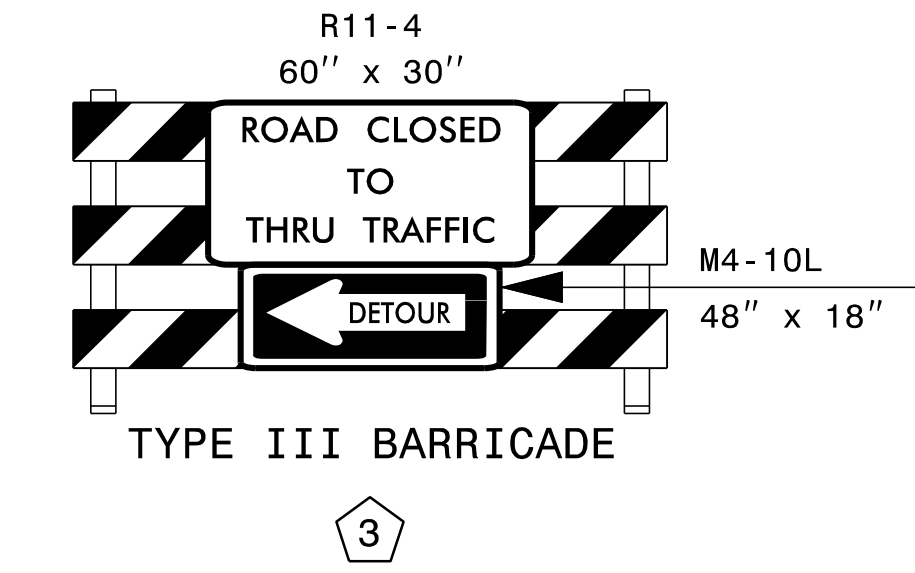
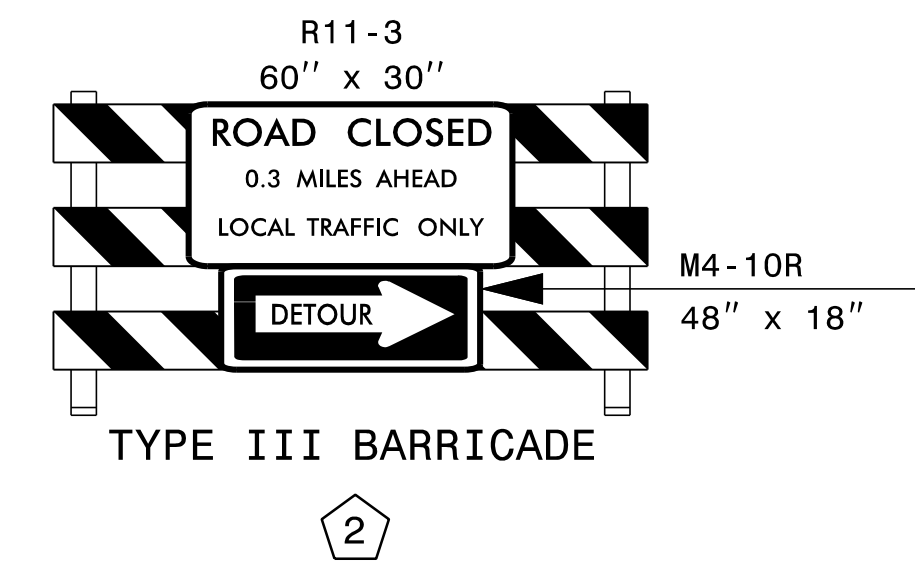
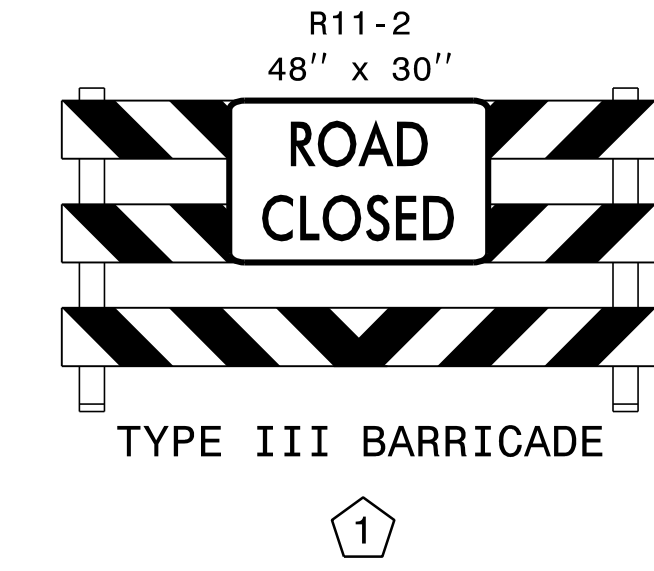
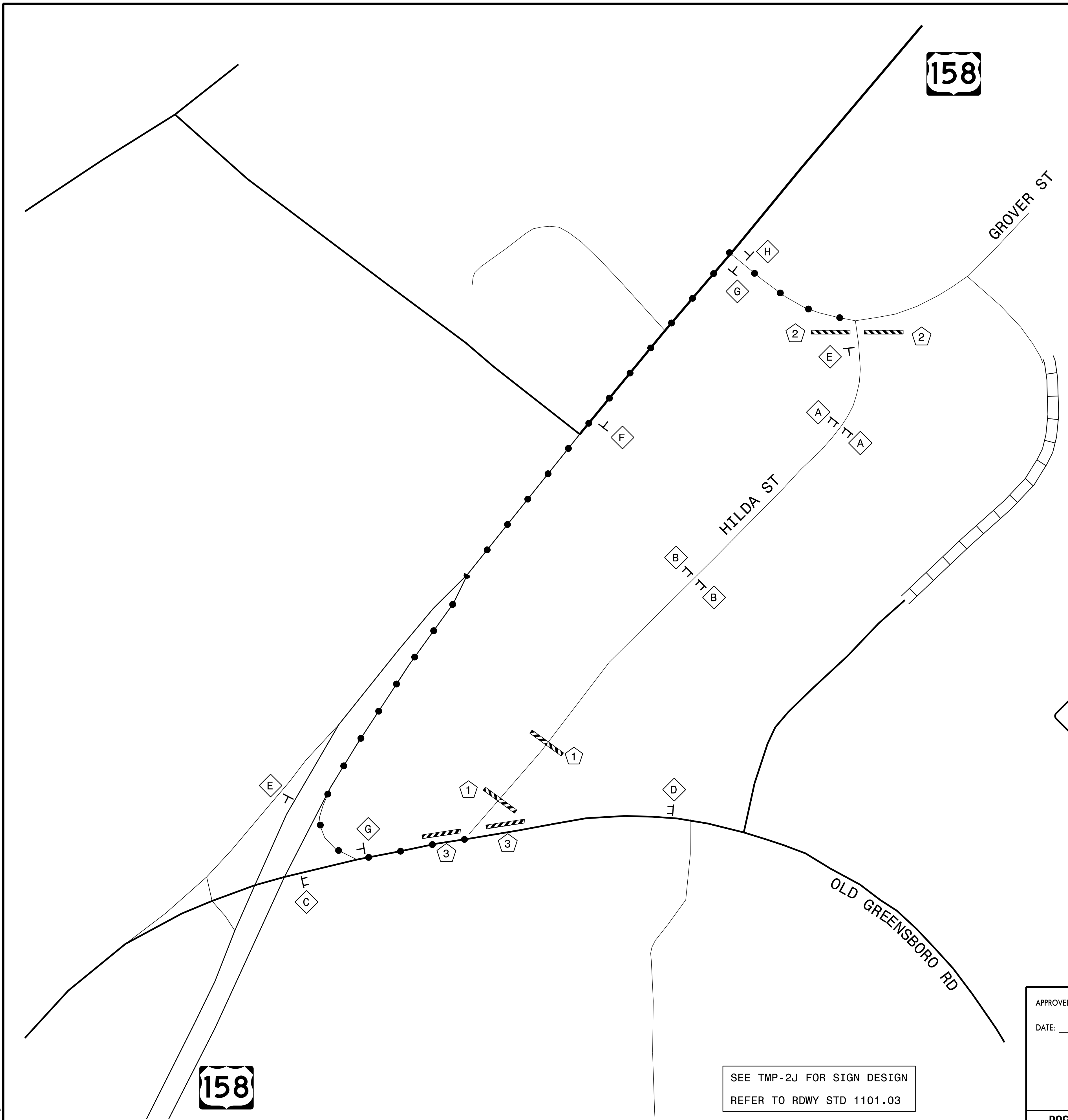
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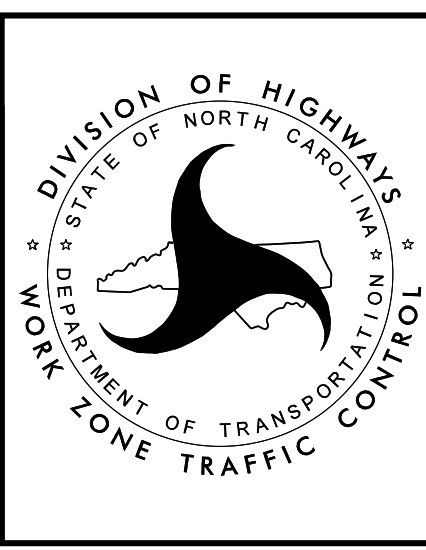
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SEE TMP-2J FOR SIGN DESIGN  
REFER TO RDWY STD 1101.03

APPROVED: *Kevin Bisby*  
 DATE: 3/7/2024

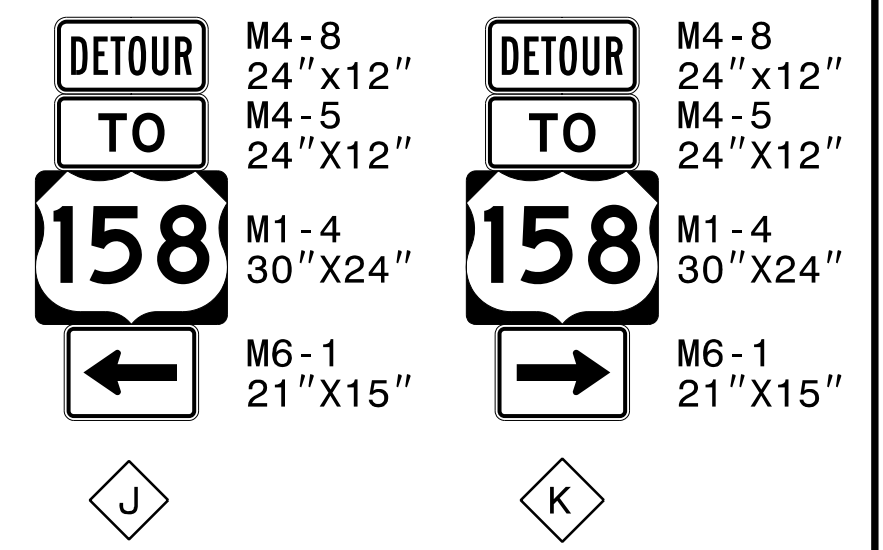
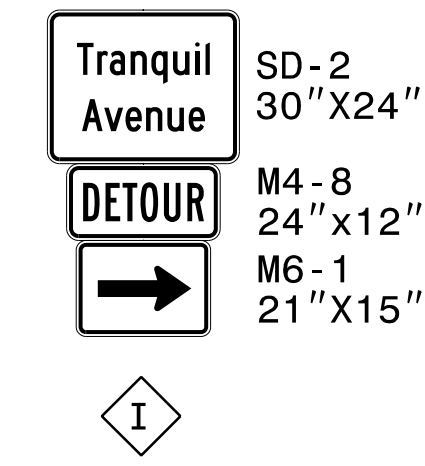
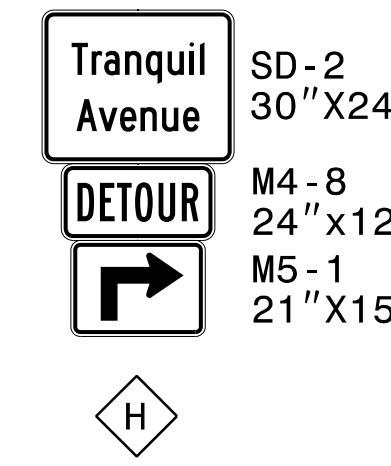
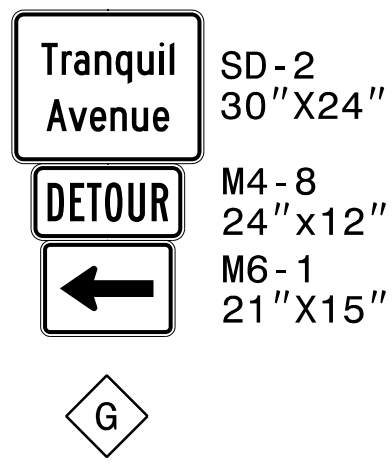
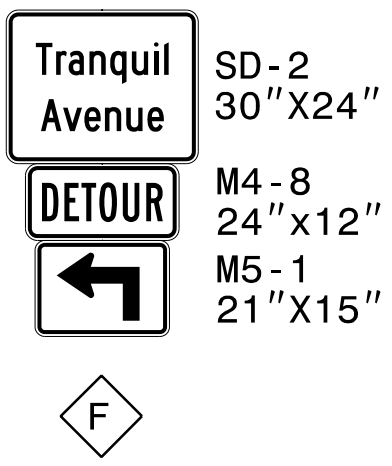
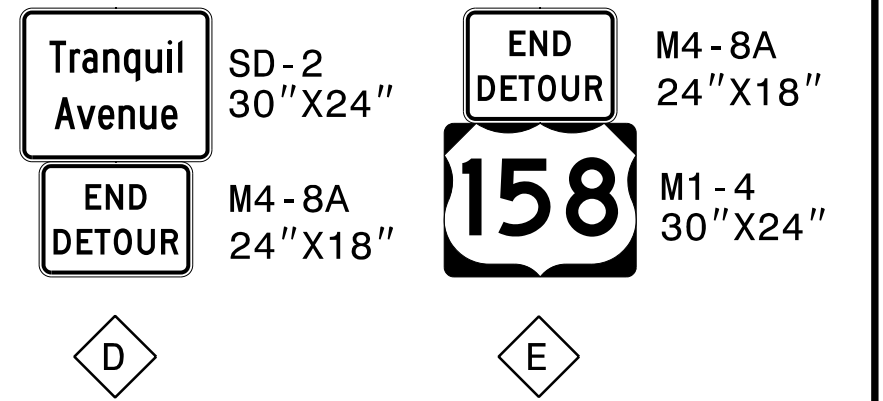
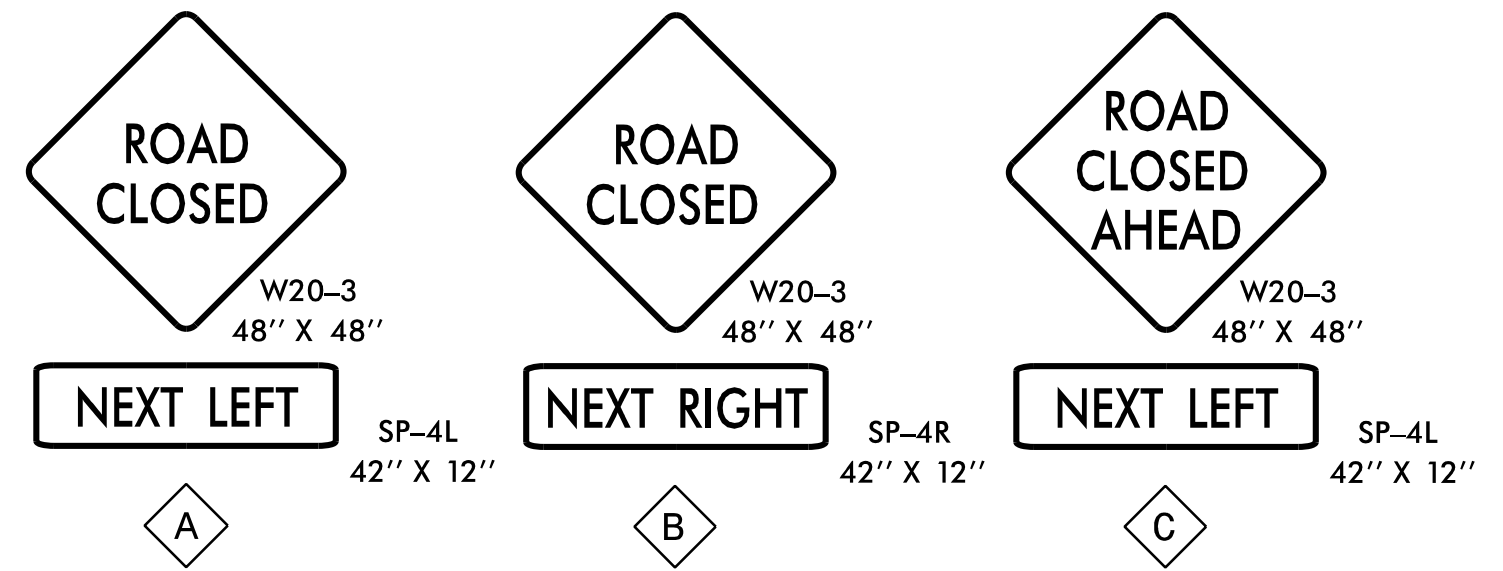
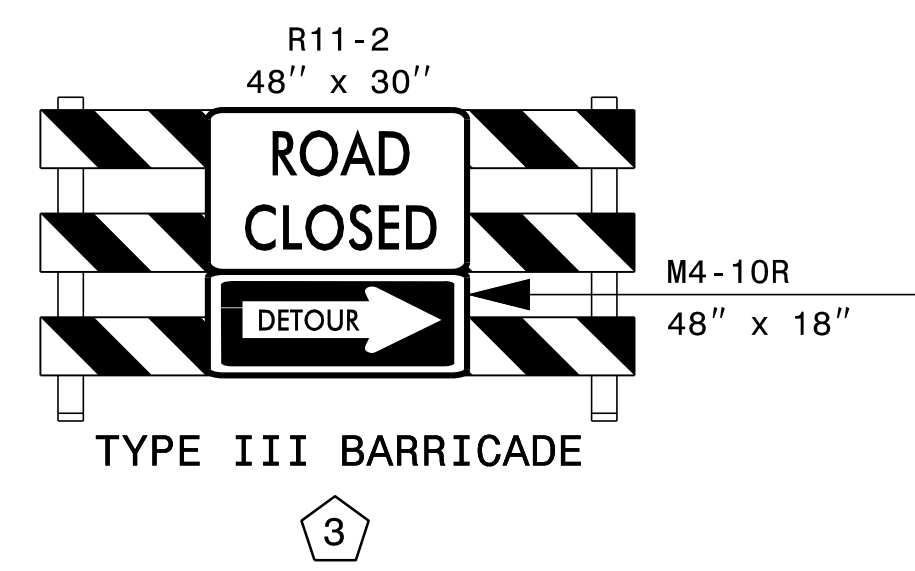
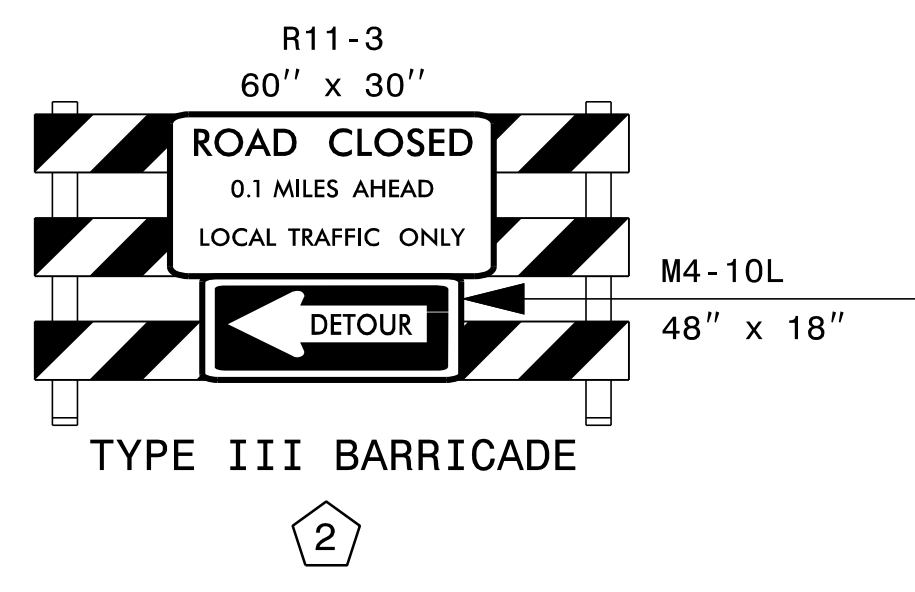
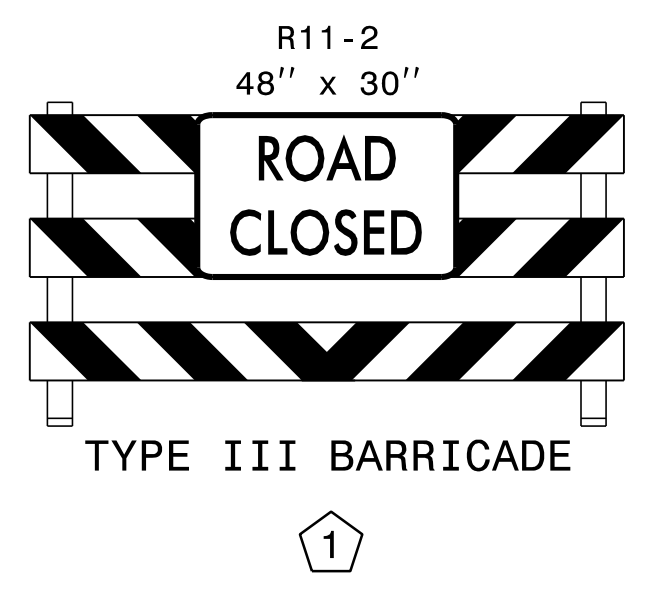
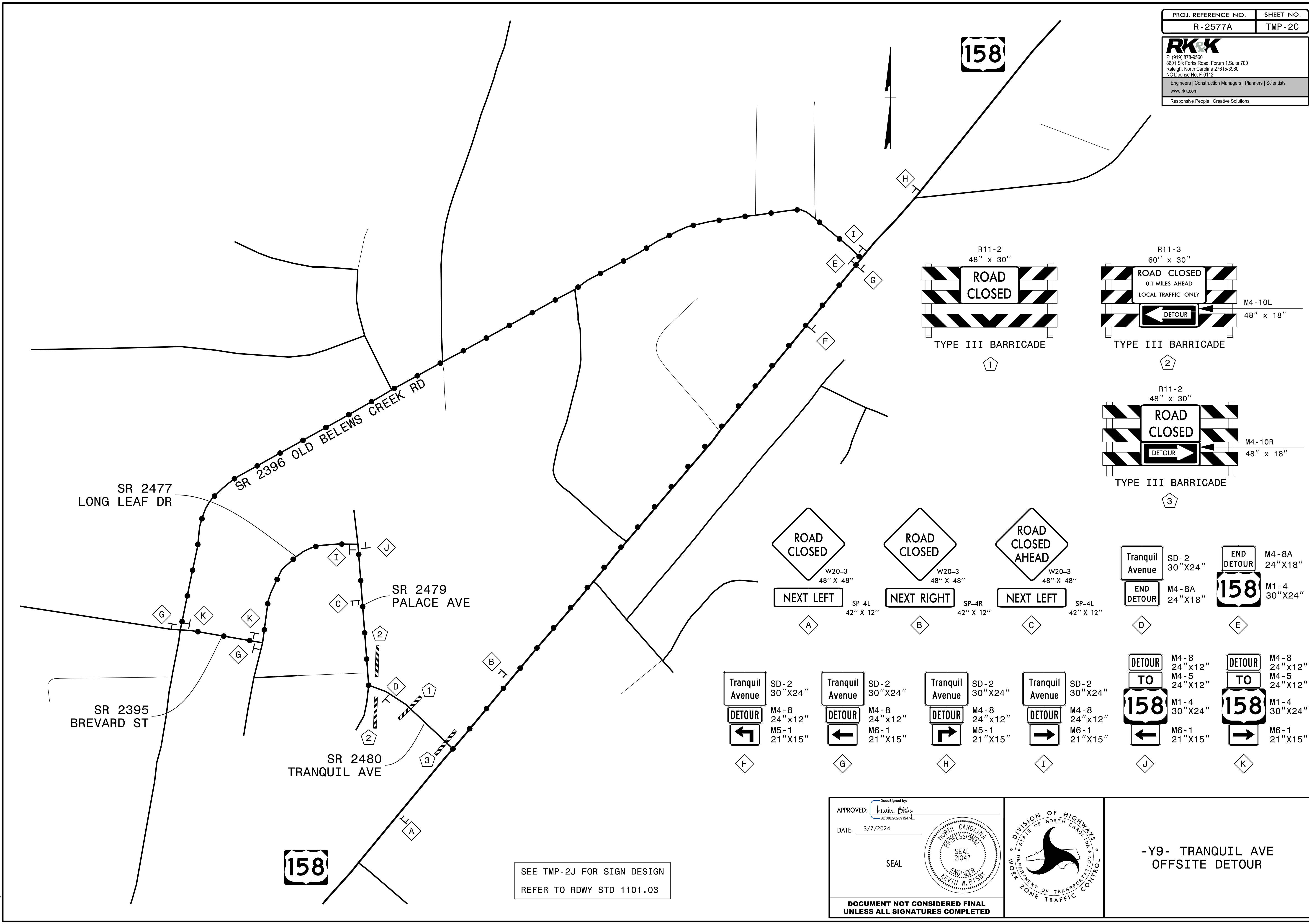
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-Y1D- HILDA ST  
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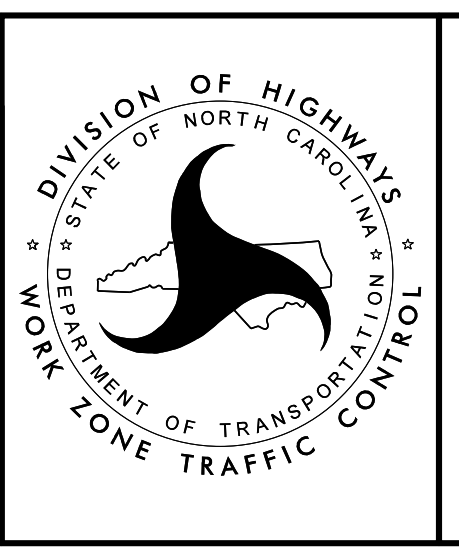
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 DATE: 3/7/2024

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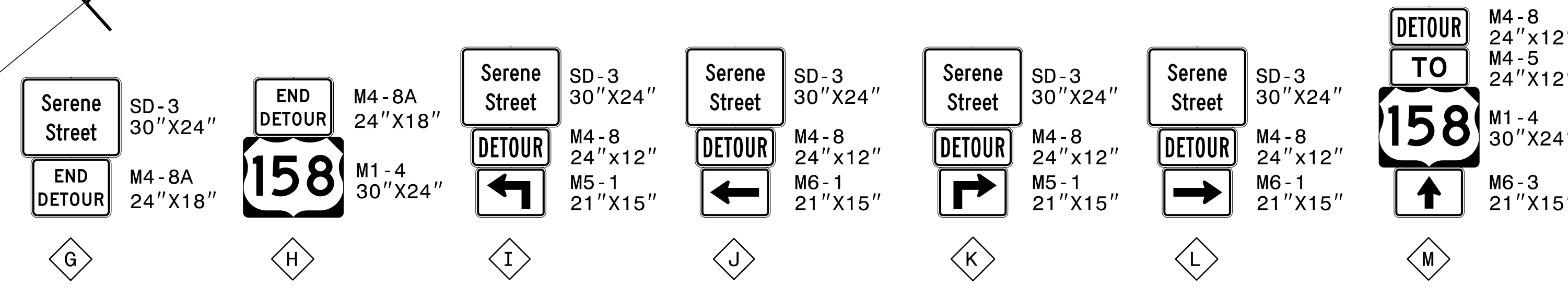
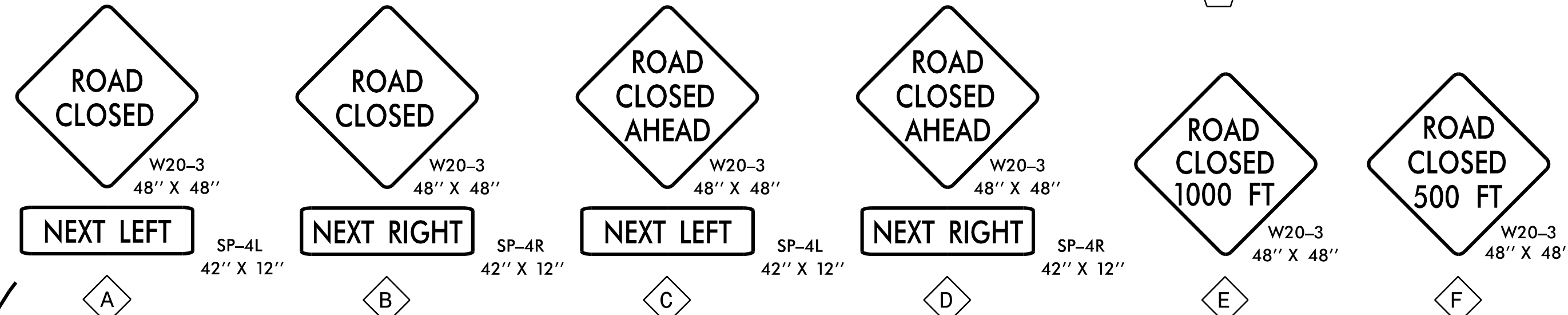
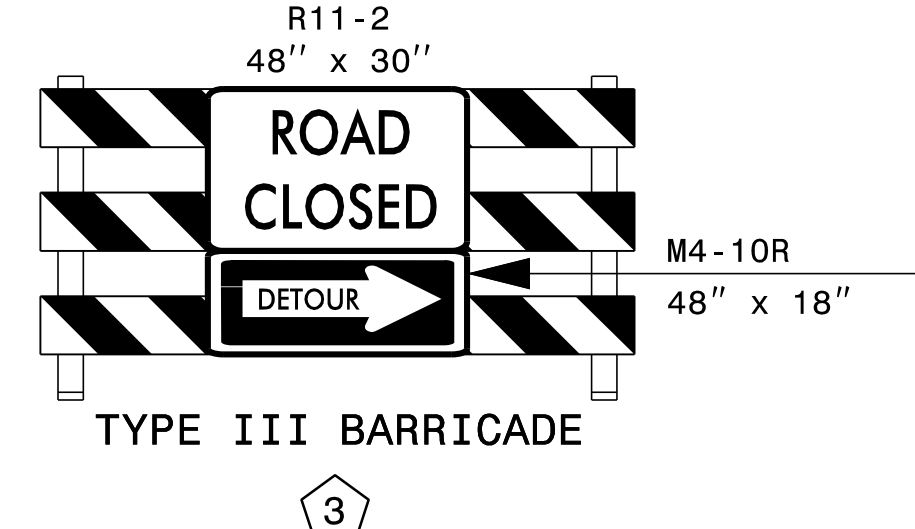
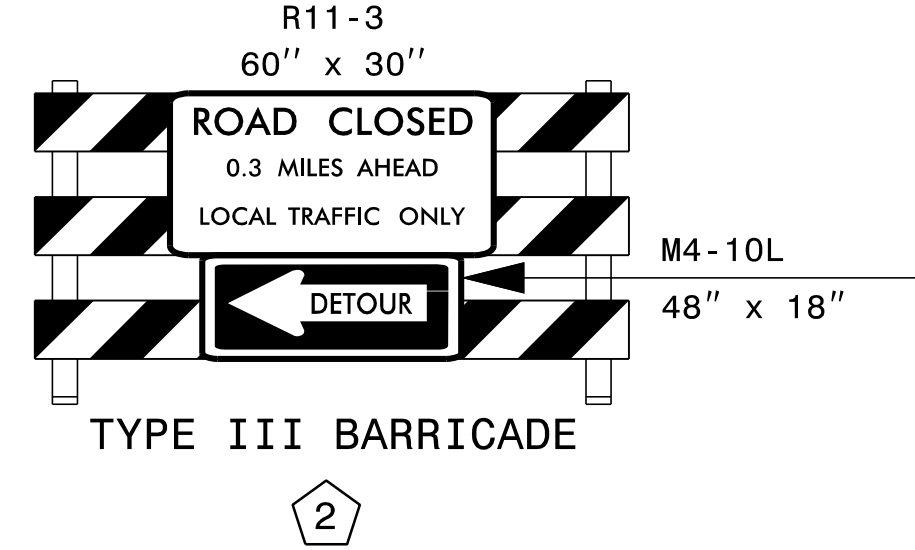
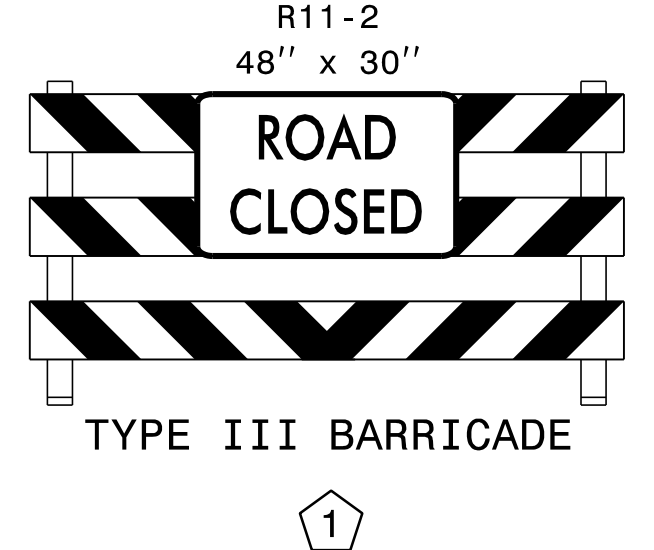
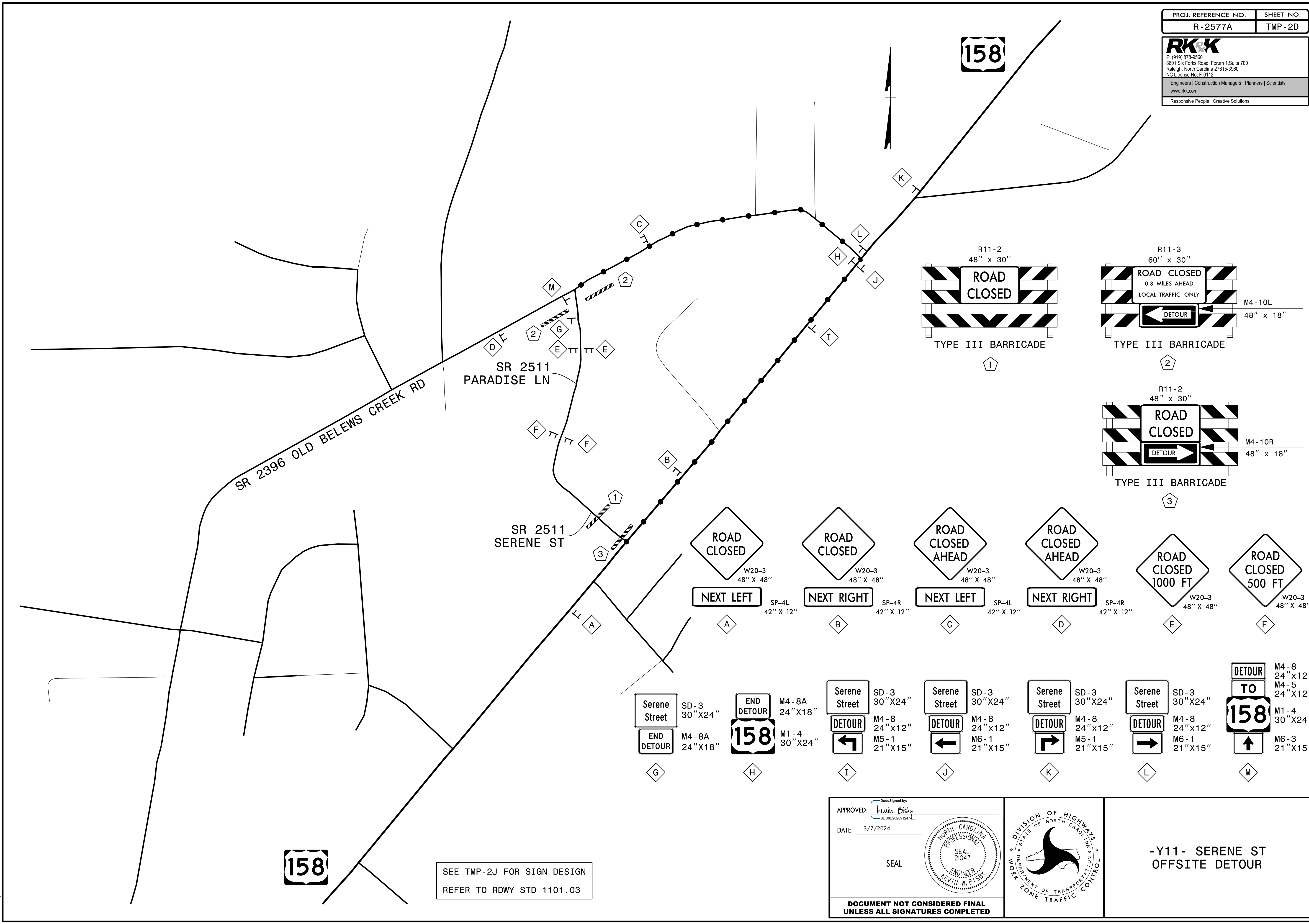
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DIVISION OF HIGHWAYS  
 NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 TRAFFIC CONTROL

-Y9- TRANQUIL AVE  
 OFFSITE DETOUR



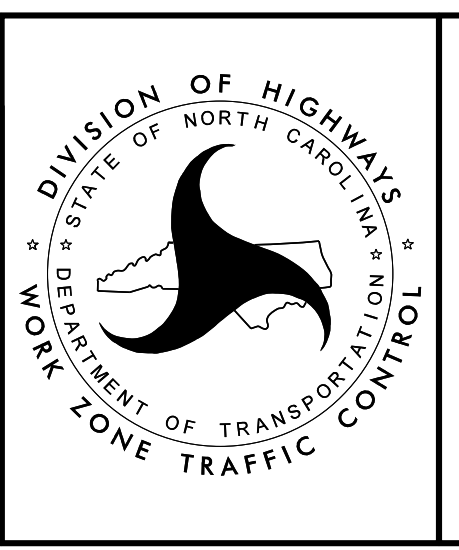


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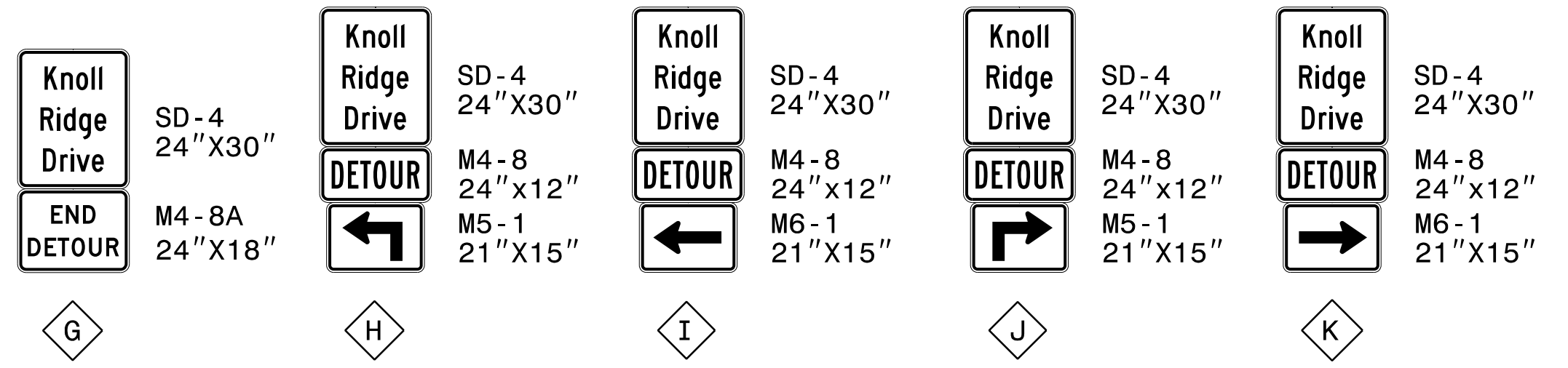
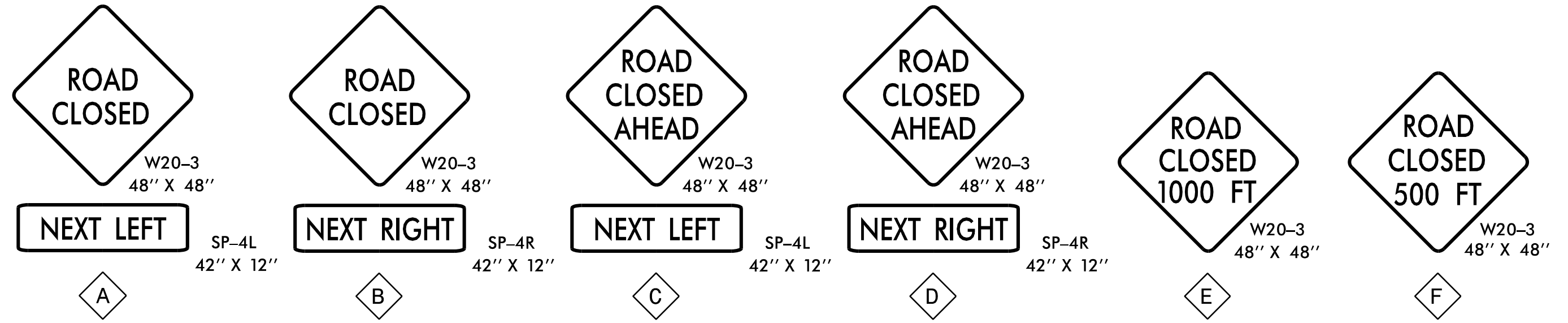
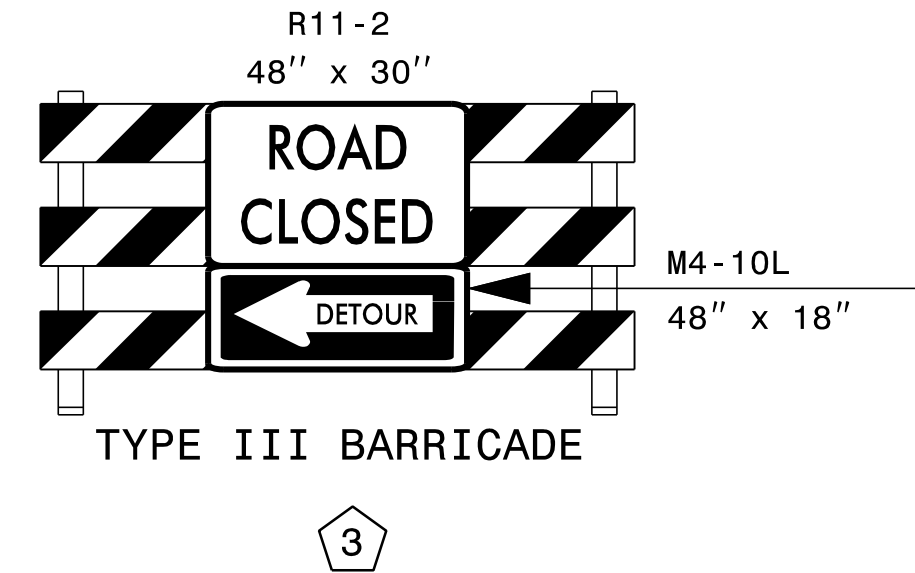
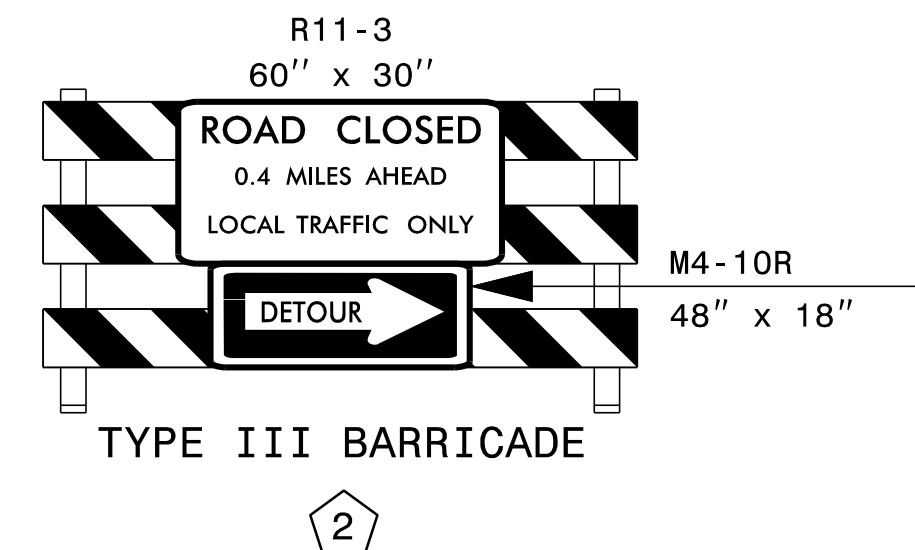
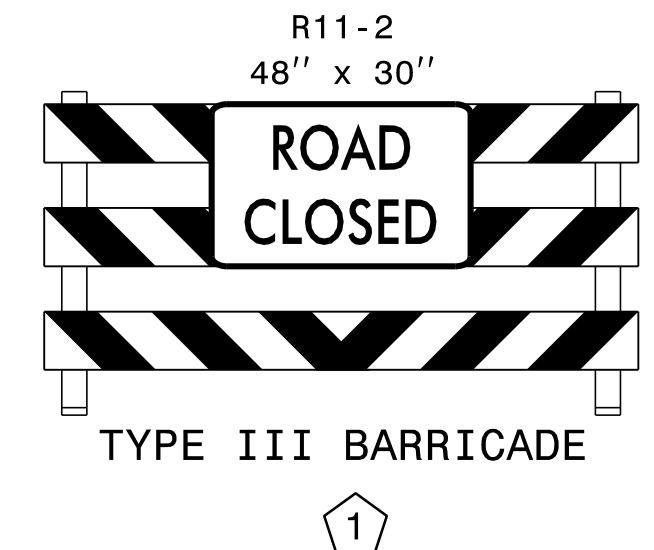
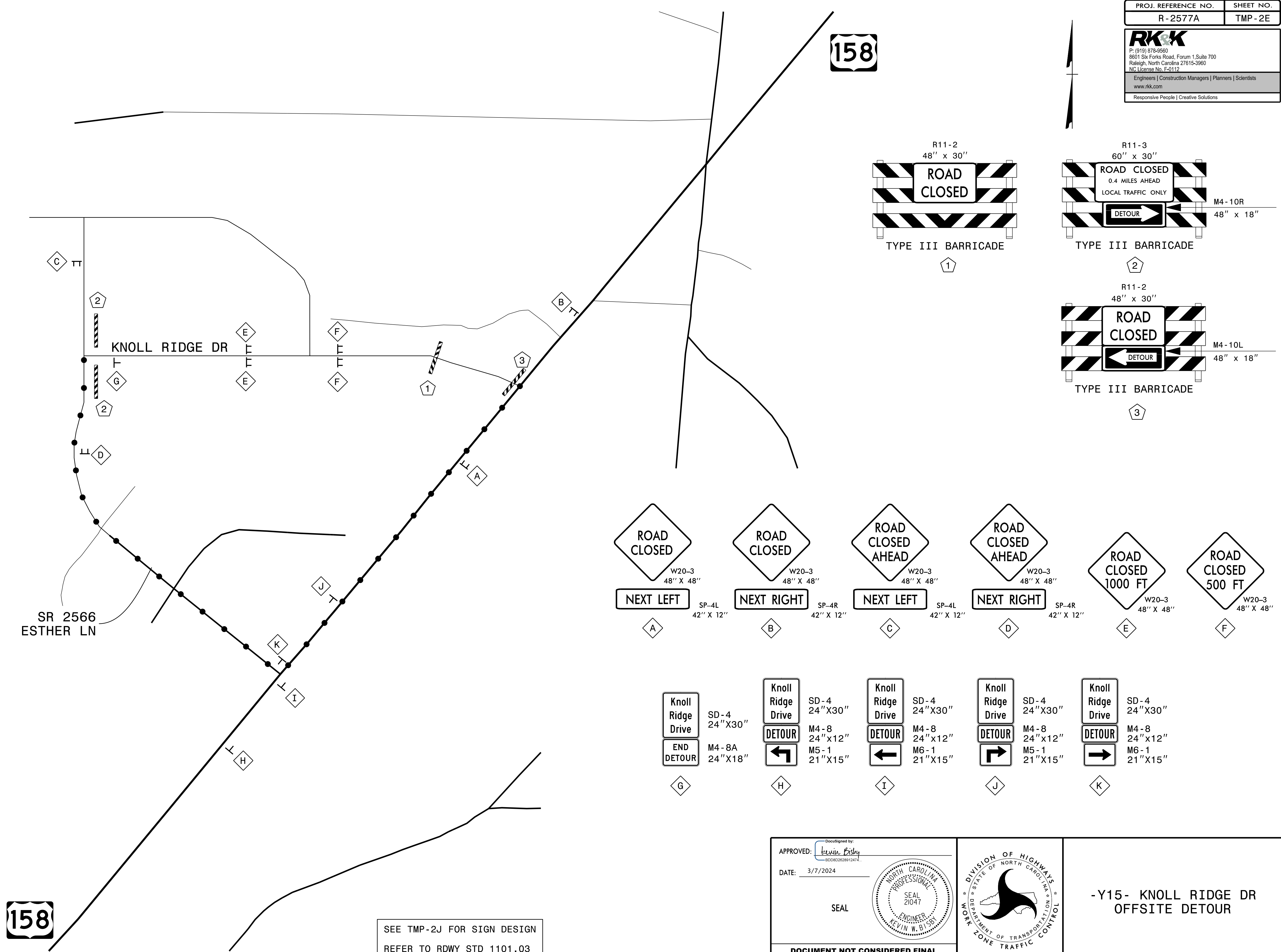
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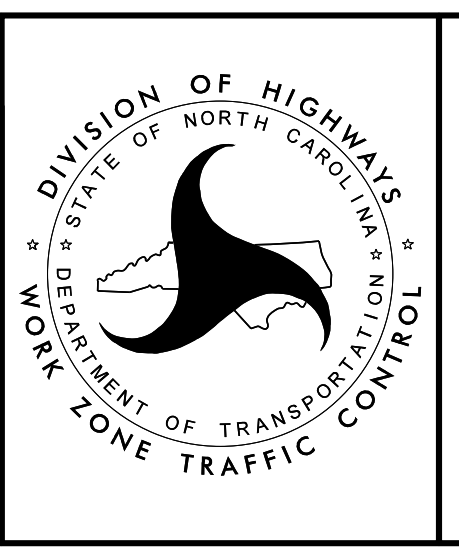


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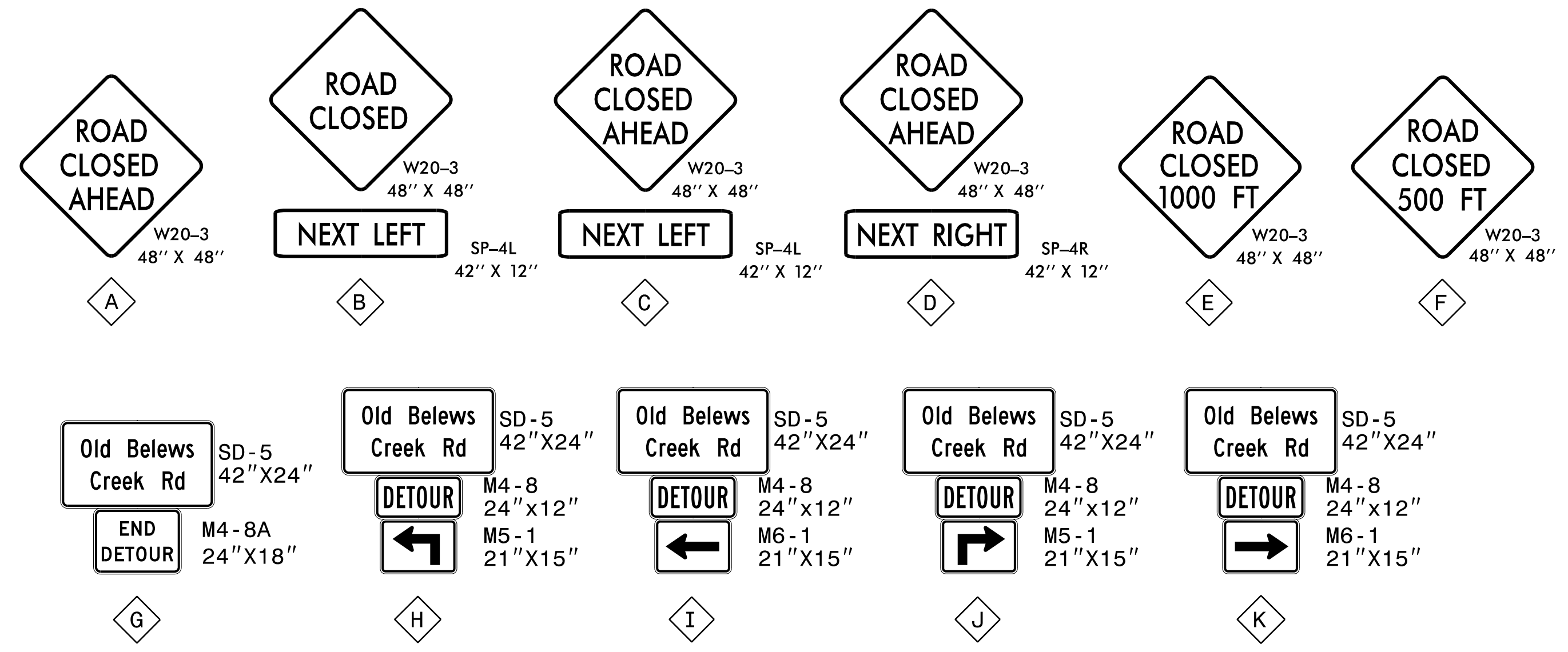
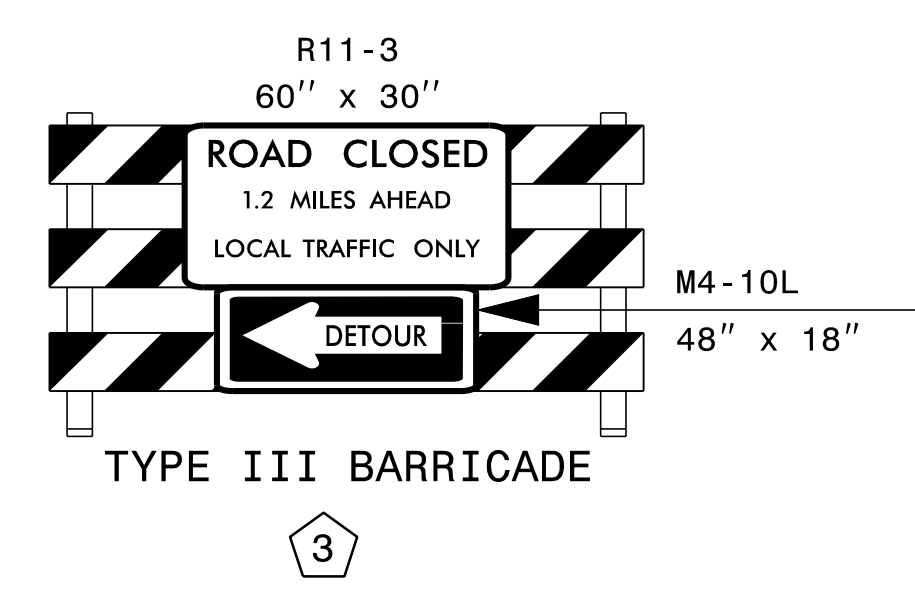
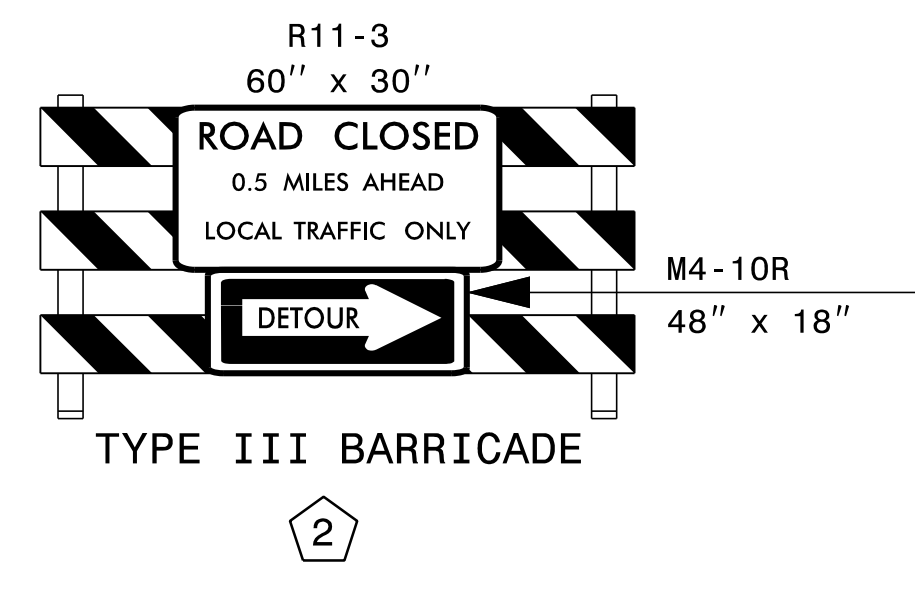
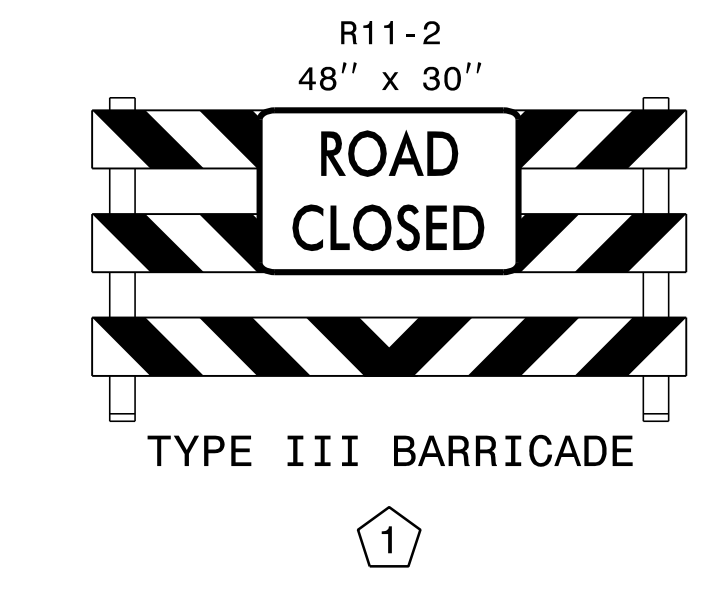
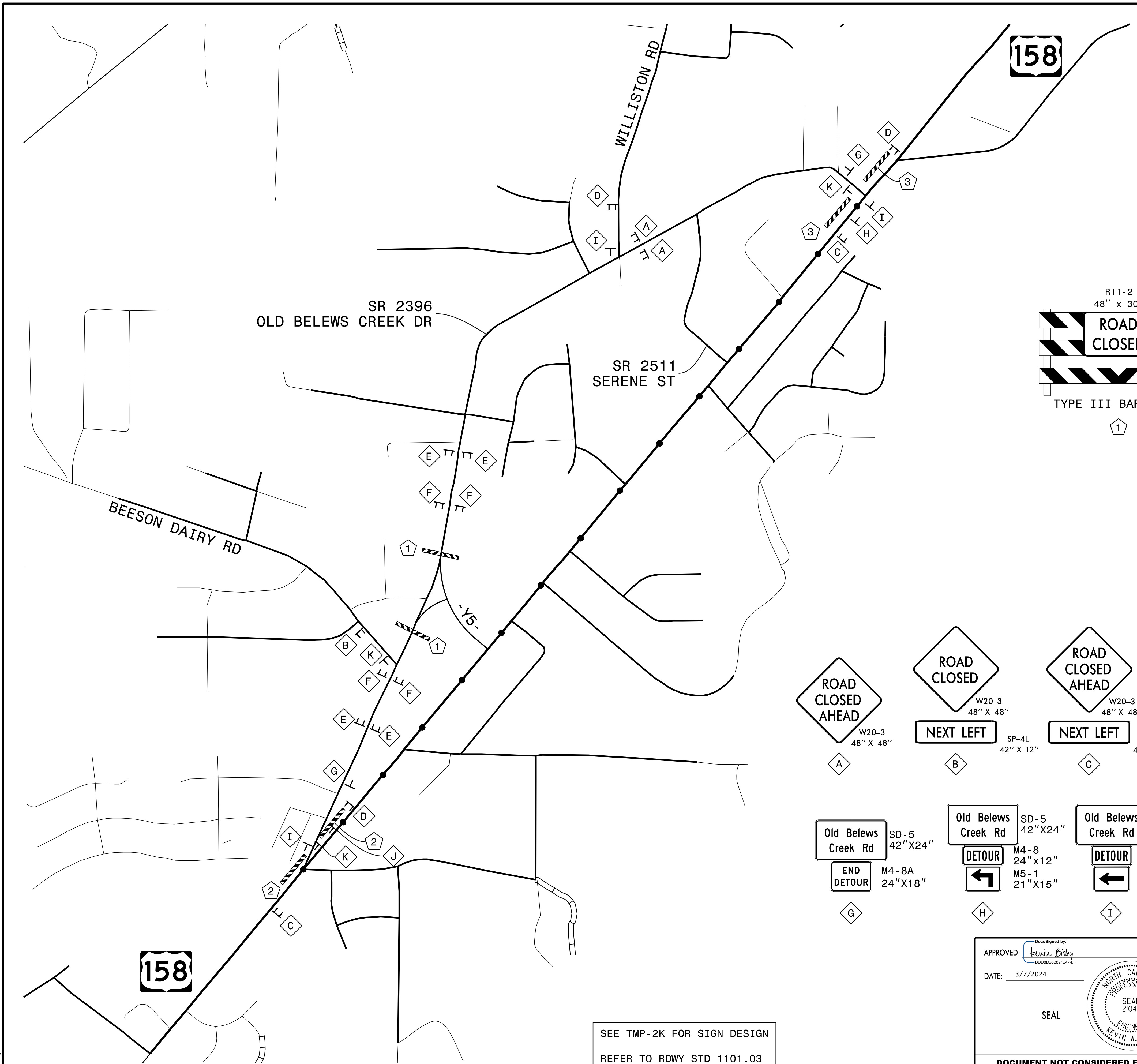
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-Y15- KNOLL RIDGE DR  
OFFSITE DETOUR

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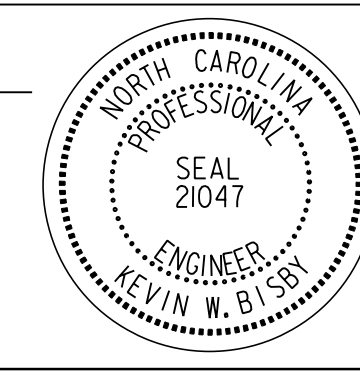
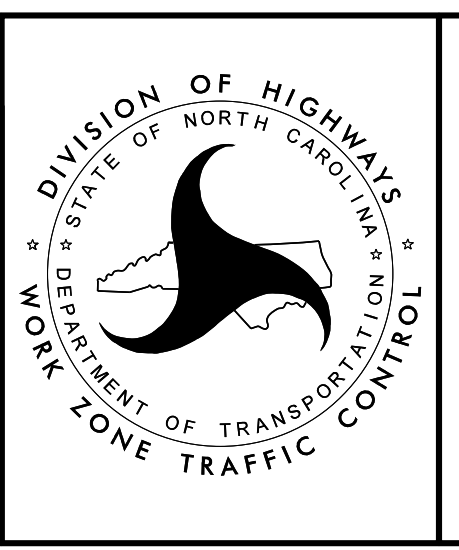


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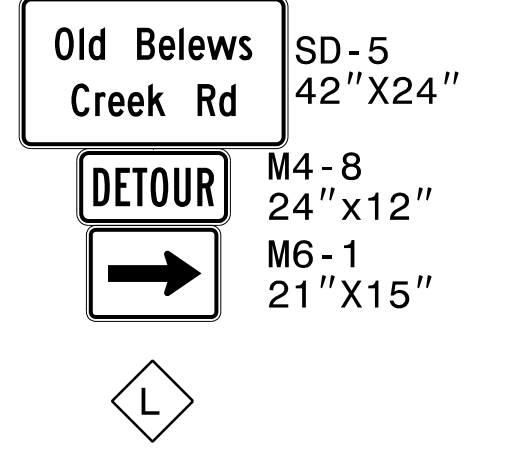
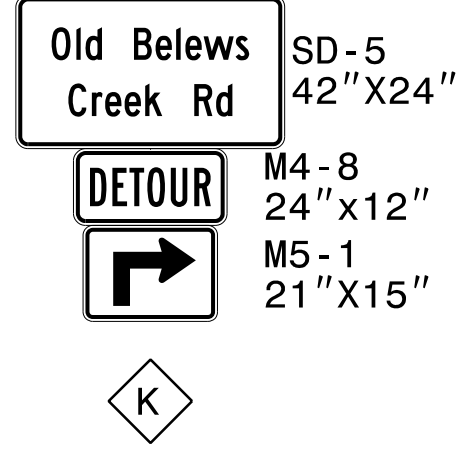
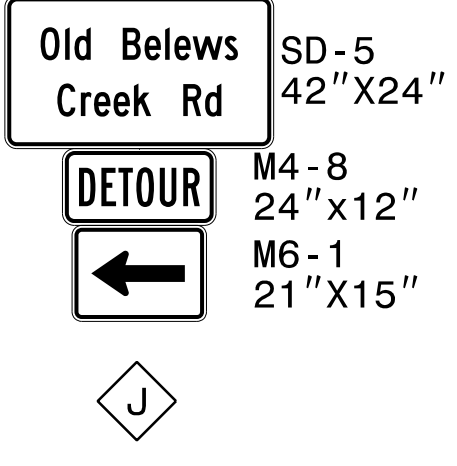
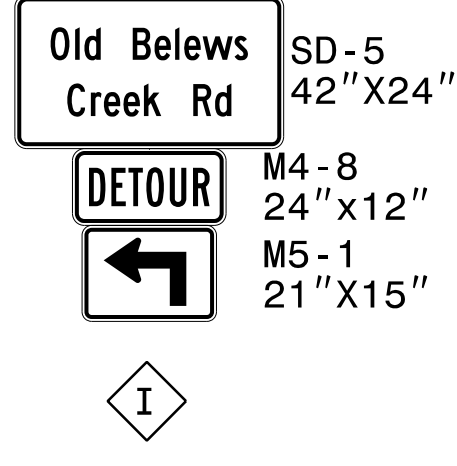
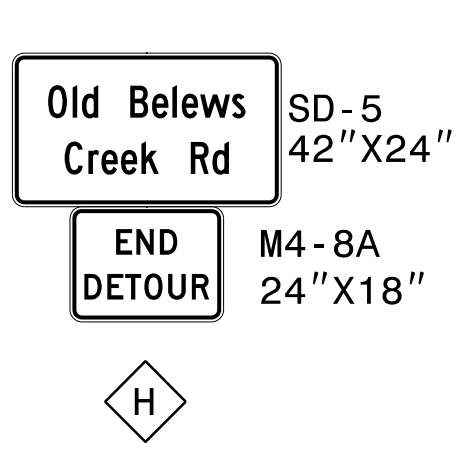
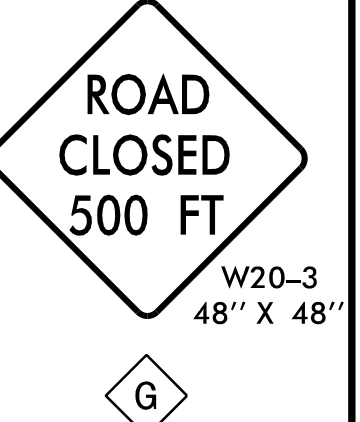
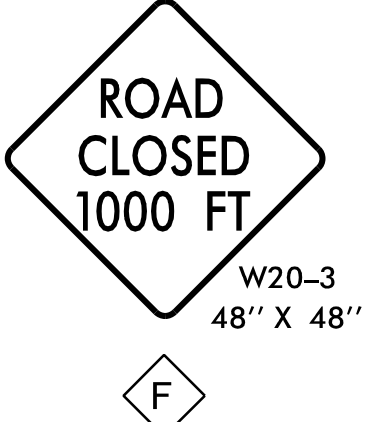
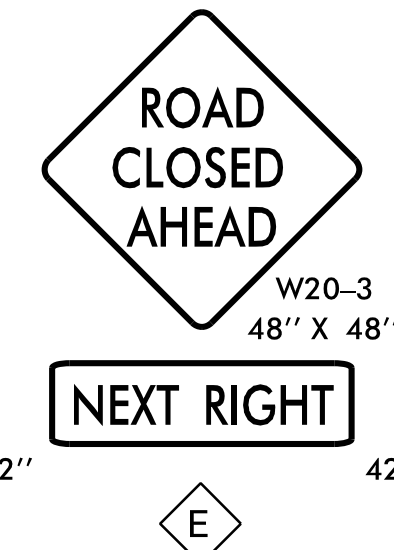
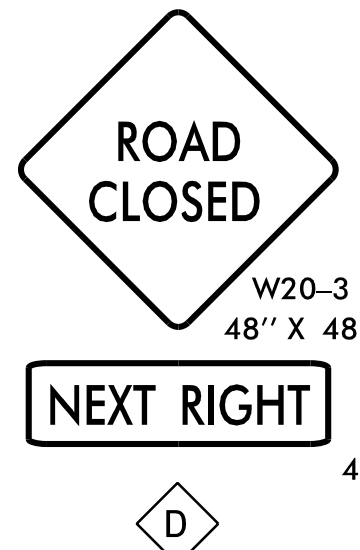
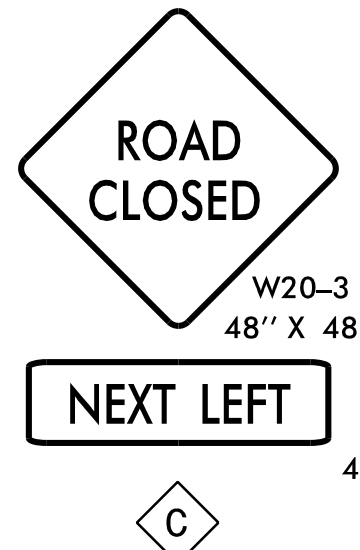
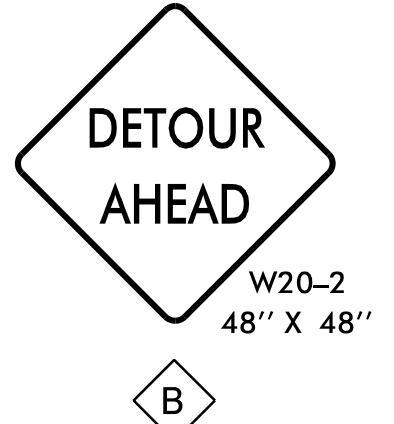
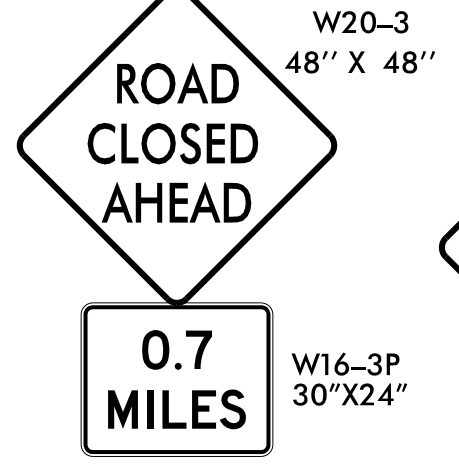
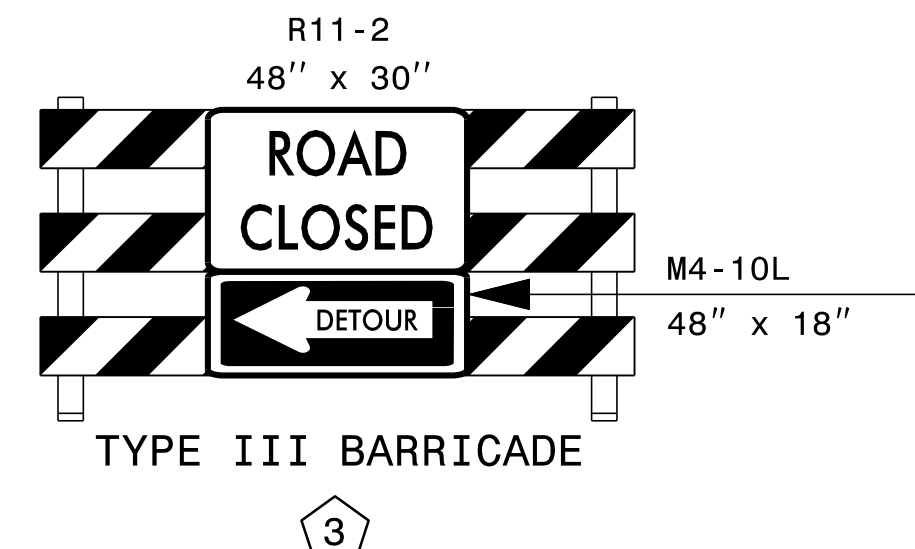
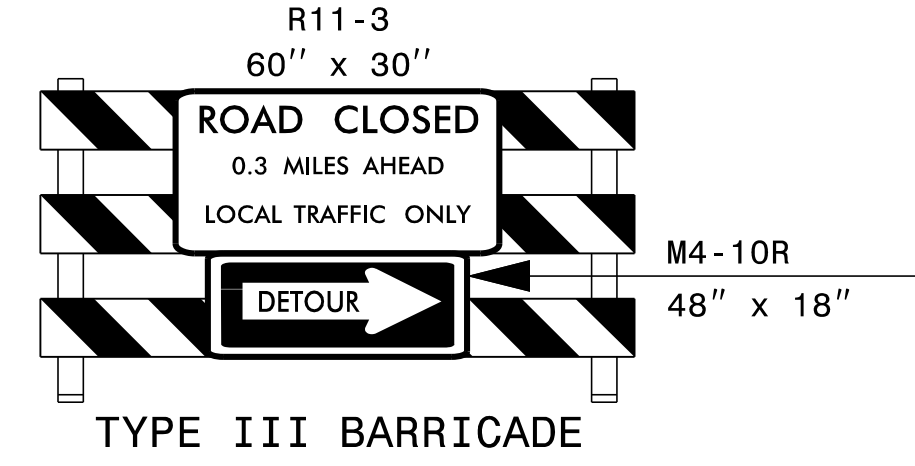
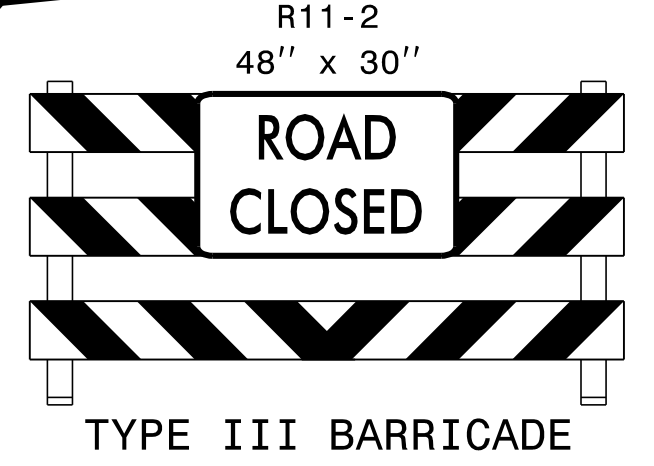
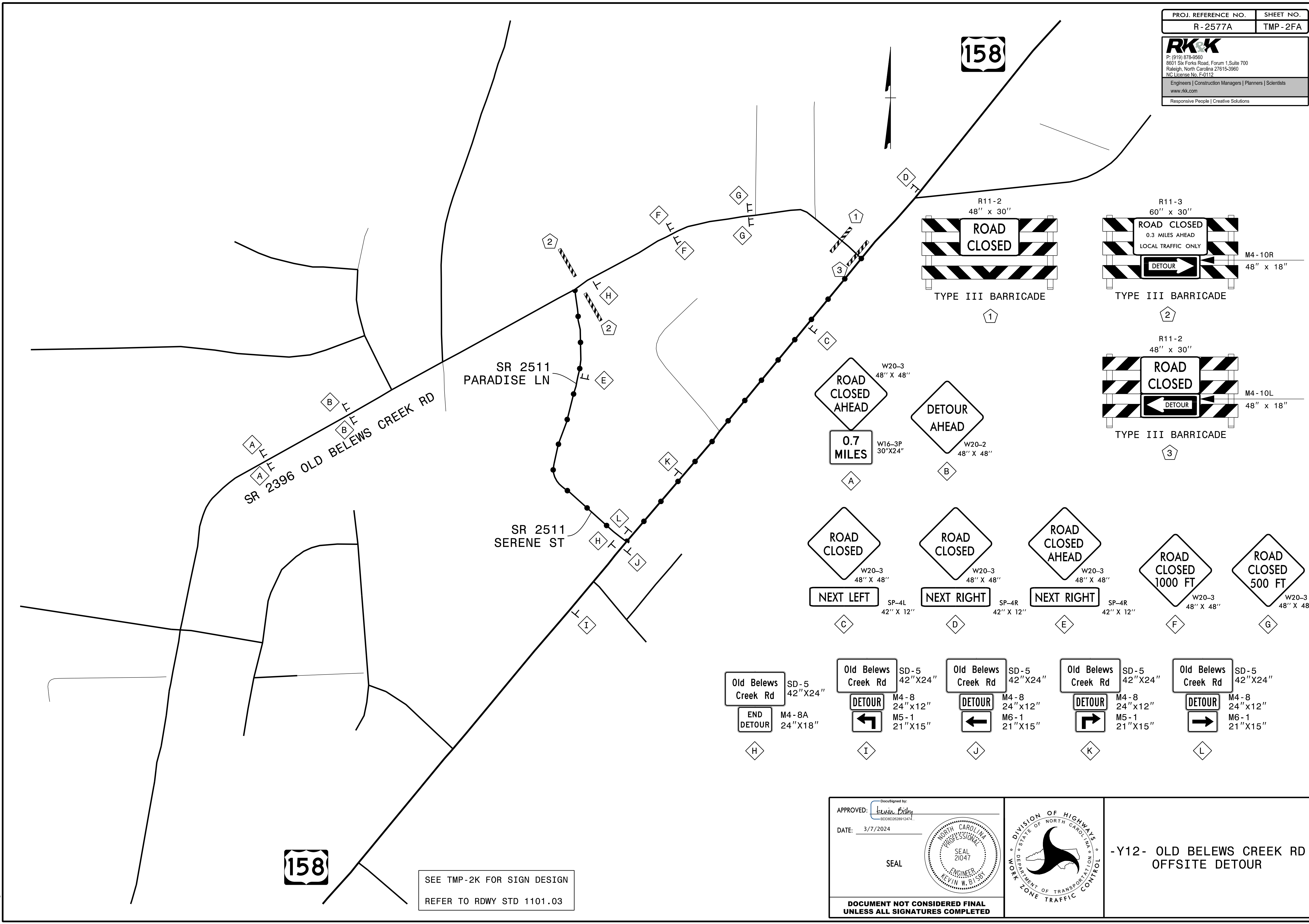
DATE: 3/7/2024

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**-Y5- OLD BELEWS CREEK RD  
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3/7/2024  
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 Robby



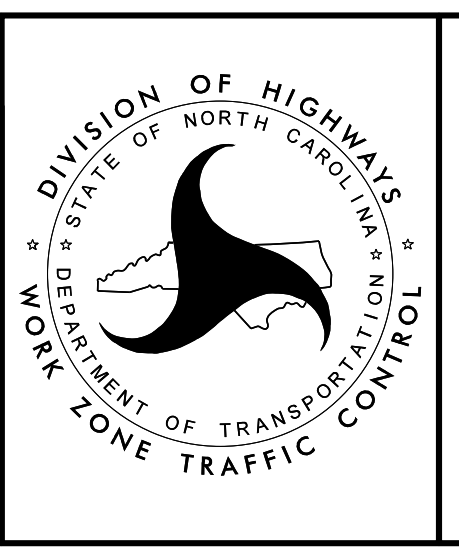
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REFER TO RDWY STD 1101.03

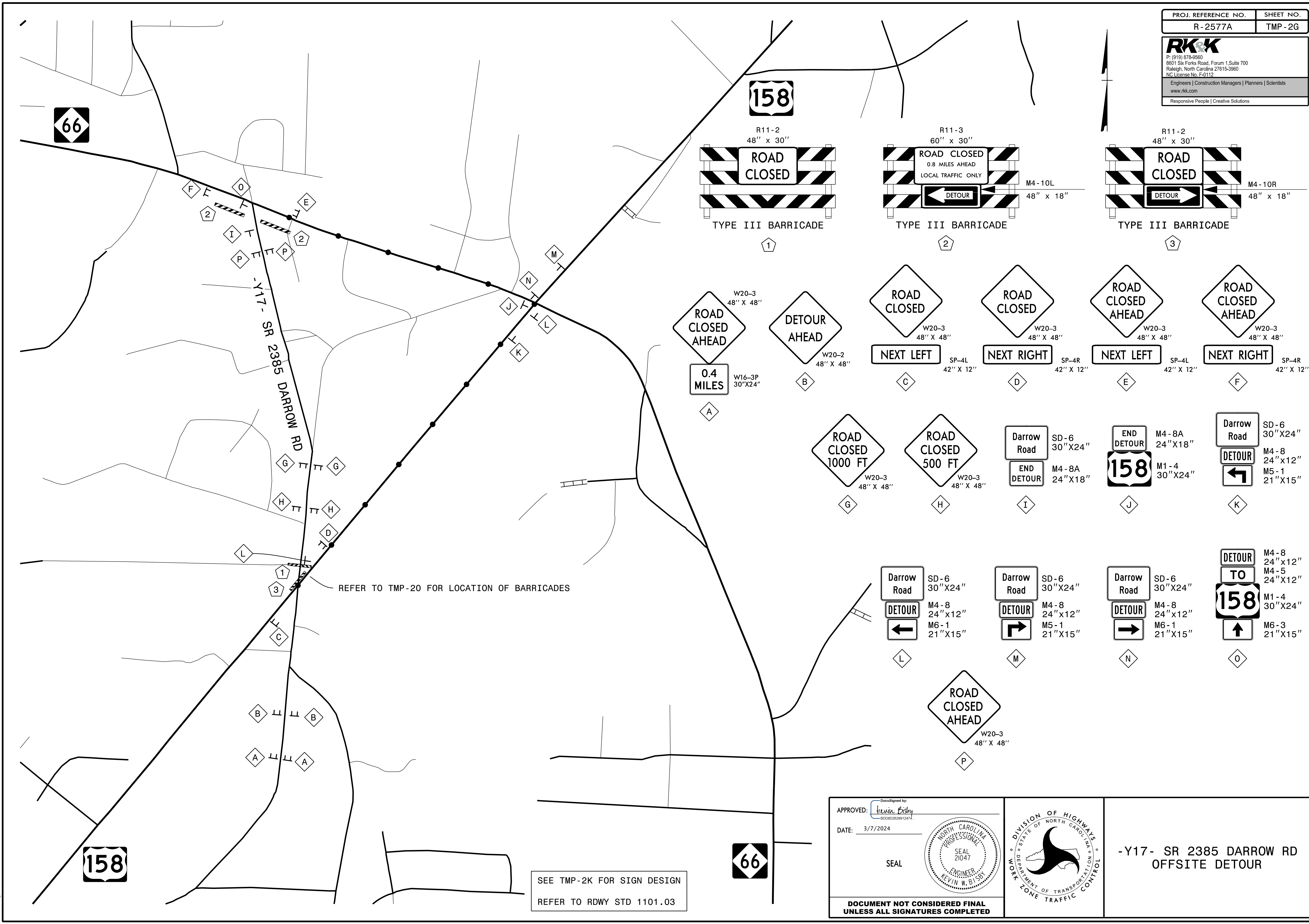
APPROVED: *Kevin W. Bissby*  
 DATE: 3/7/2024

SEAL



-Y12- OLD BELEVS CREEK RD  
OFFSITE DETOUR

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



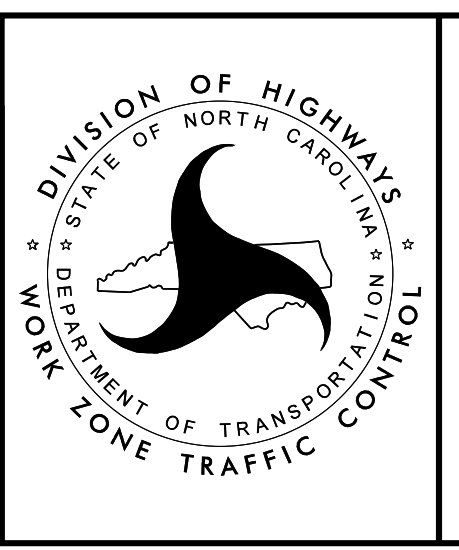
3/7/2024  
 R-2577A\_TMP\_PSH02G.dgn  
 Robby

SEE TMP-2K FOR SIGN DESIGN  
 REFER TO RDWY STD 1101.03

APPROVED: *Kevin Bishy*  
 DATE: 3/7/2024

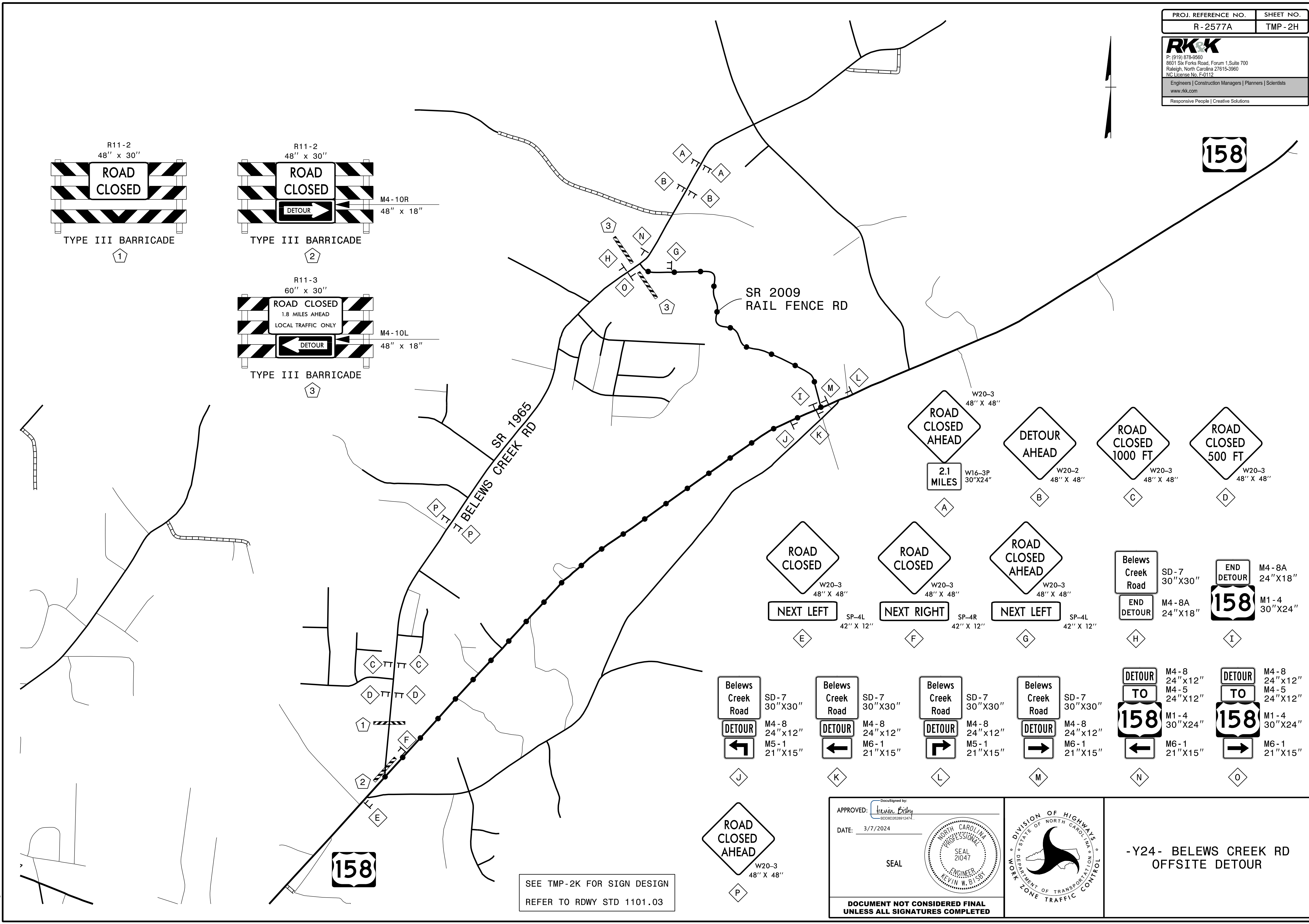
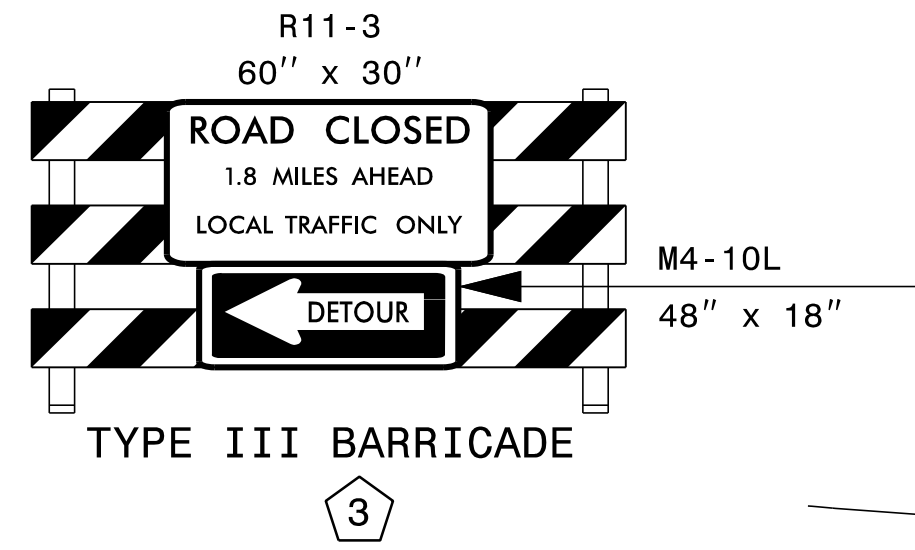
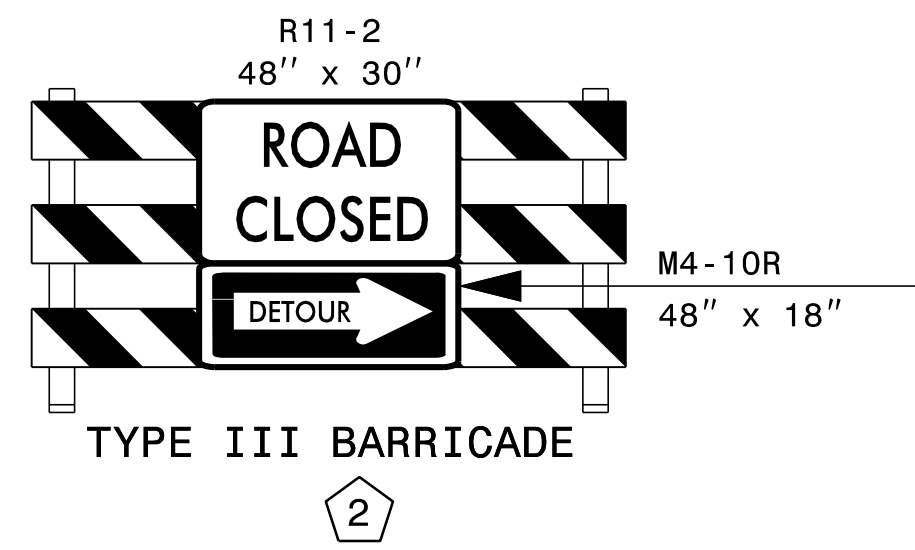
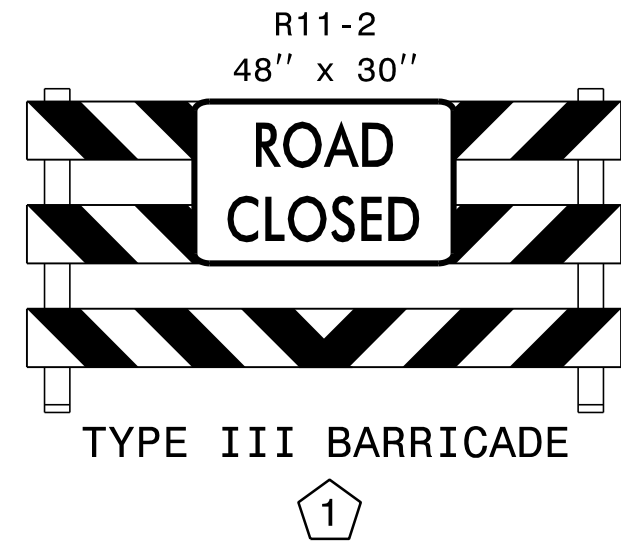
SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER  
 KEVIN W. BISHY  
 SEAL 21047



-Y17- SR 2385 DARROW RD  
 OFFSITE DETOUR

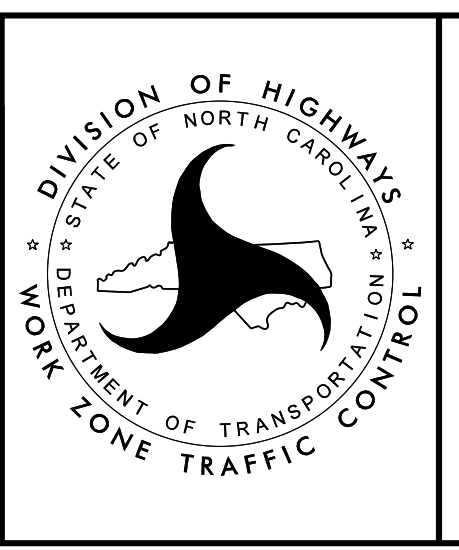
DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED



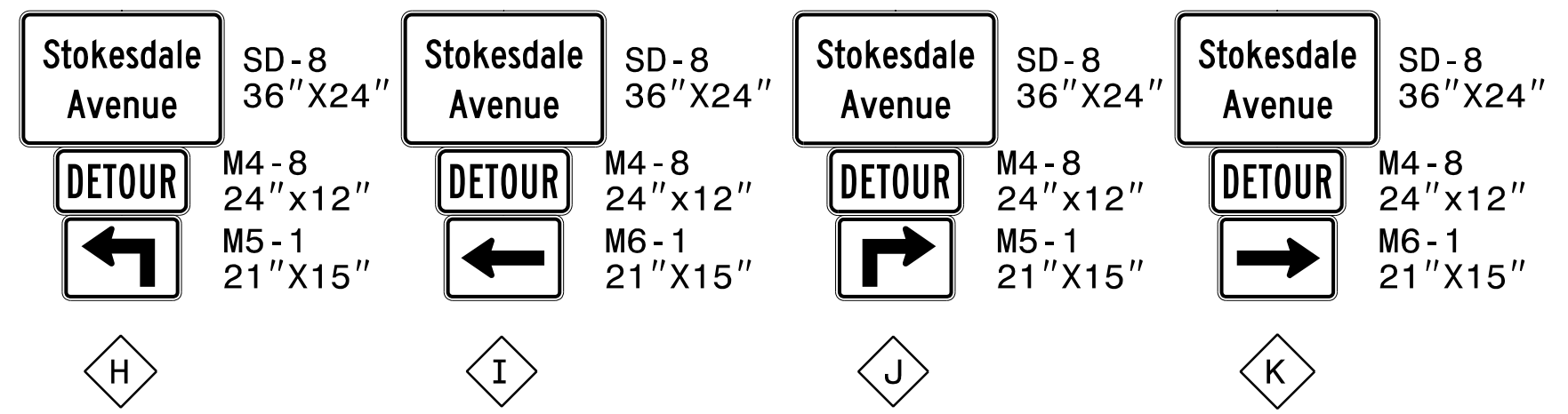
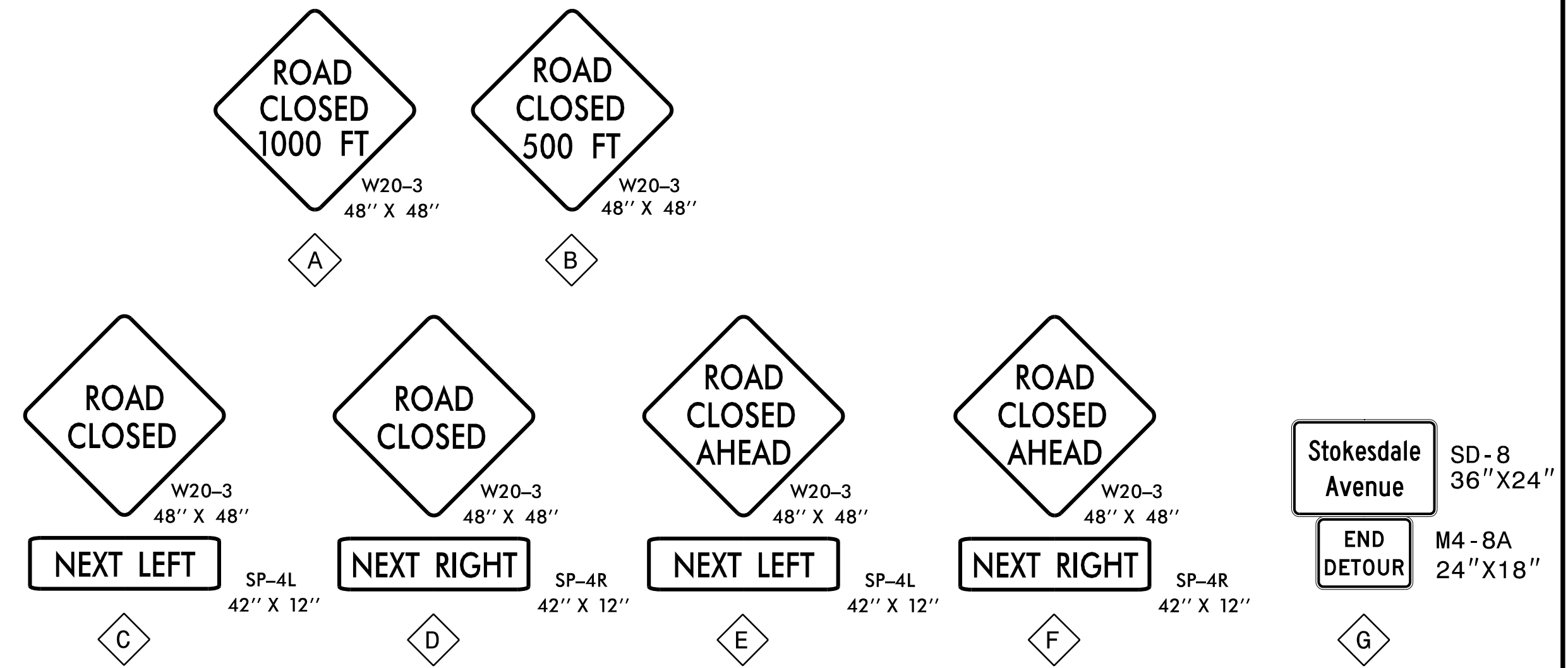
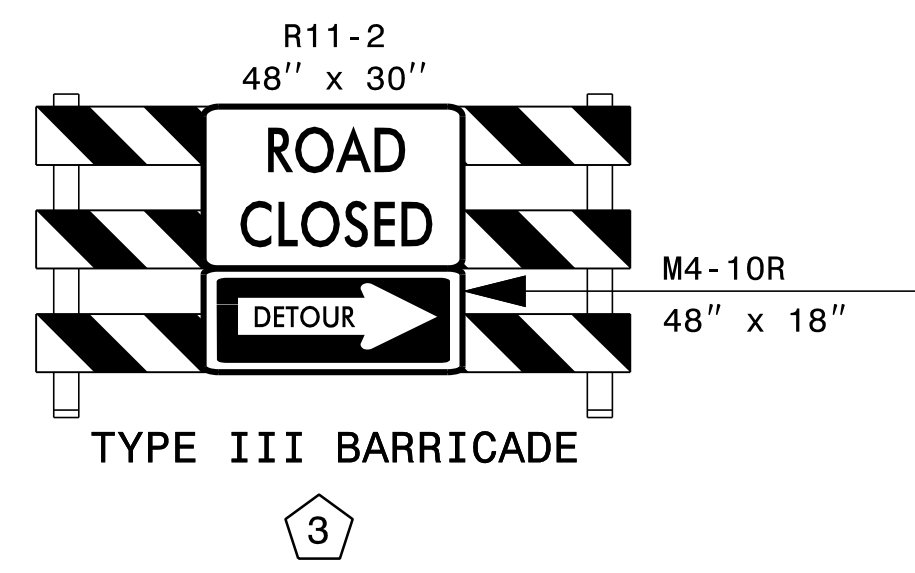
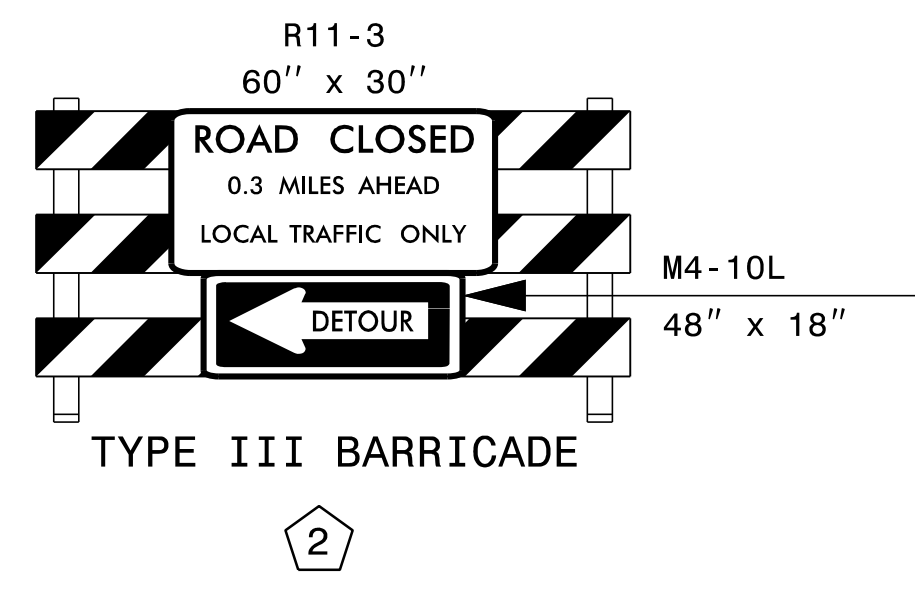
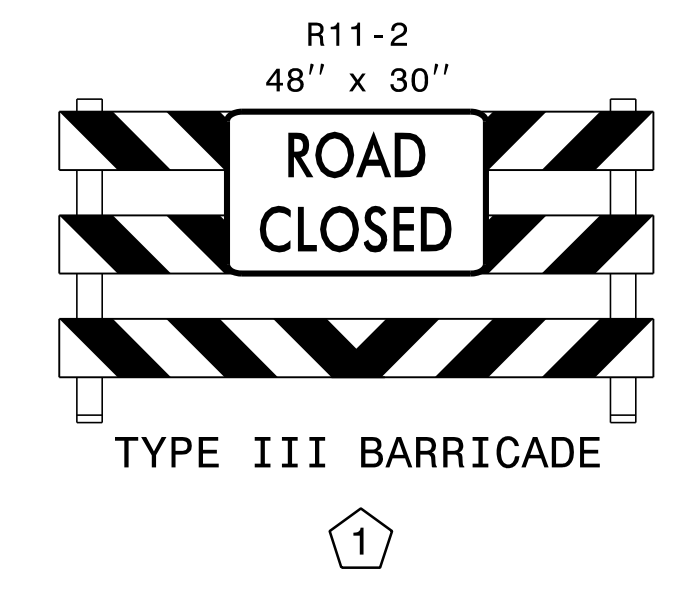
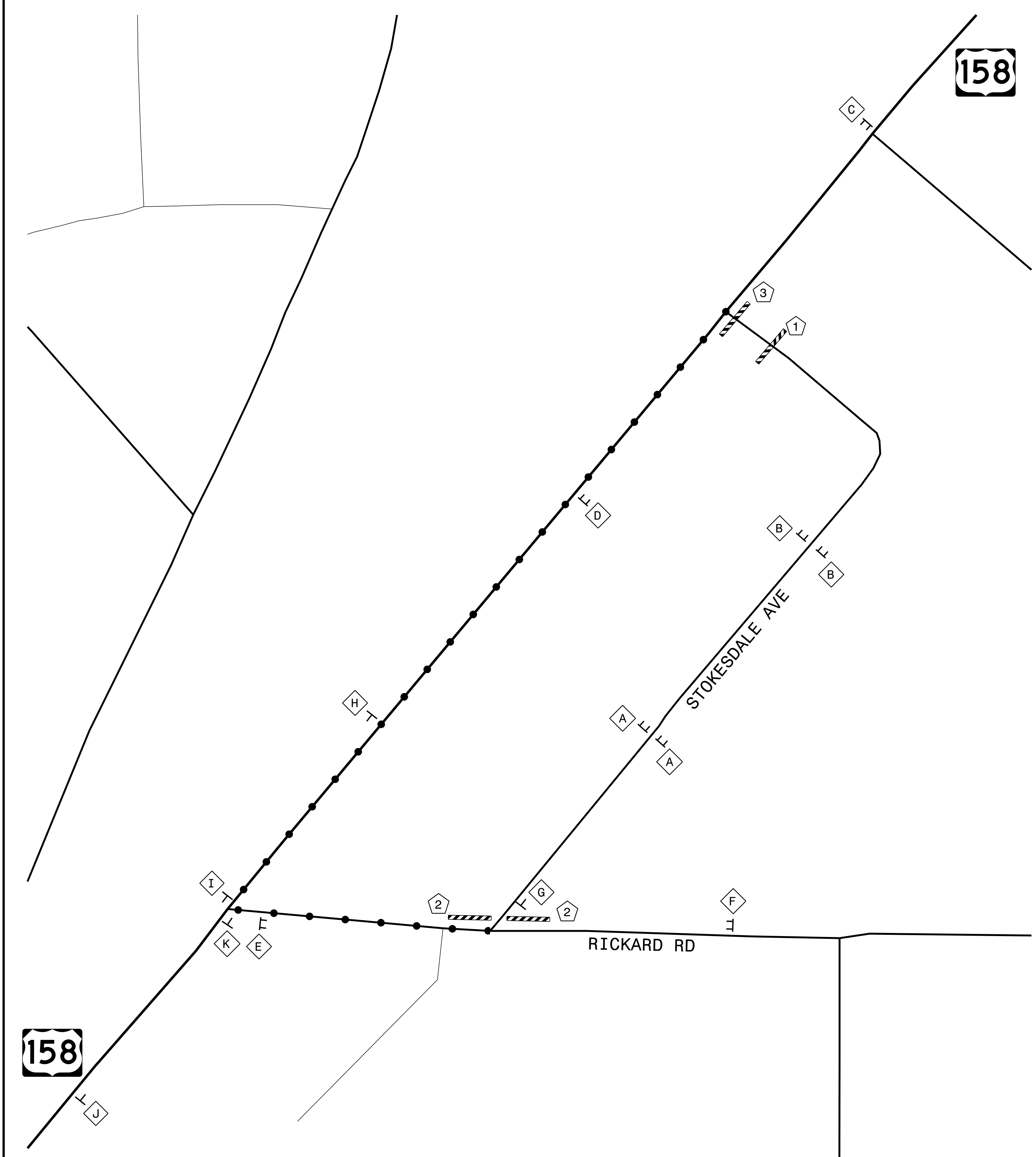
3/7/2024  
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 R015bby

SEE TMP-2K FOR SIGN DESIGN  
 REFER TO RDWY STD 1101.03

APPROVED: *Kevin Bishy*  
 DATE: 3/7/2024  
 SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 KEVIN W. BISHY  
 21047



-Y24- BELEWS CREEK RD  
 OFFSITE DETOUR

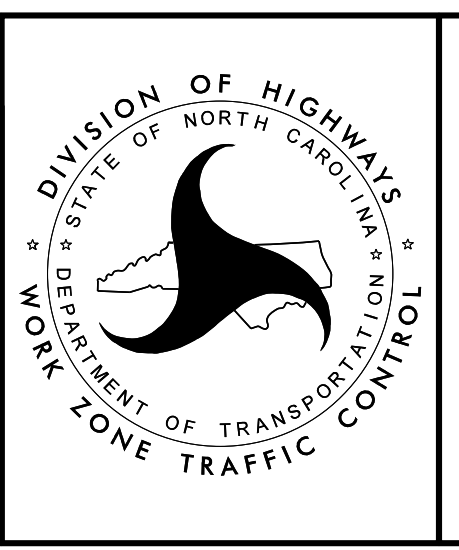


SEE TMP-2K FOR SIGN DESIGN  
 REFER TO RDWY STD 1101.03

APPROVED: *Kevin Bishy*  
 DATE: 3/7/2024

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER KEVIN W. BISHY



-Y7- STOKESDALE AVE  
 OFFSITE DETOUR

3/7/2024  
 R-2577A\_TMP\_PSH02I.dgn  
 Robby

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

SIGN NUMBER: SD-1      BACKG COLOR: Fluorescent Orange  
TYPE: STATIONARY      COPY COLOR: Black      DESIGN BY: K.Bisby      CHECKED BY: B. Holden      Mar 30, 2023  
PROJECT ID: R-2577A      LOCATION: See Plan      DIV: 9

QUANTITY: SEE PLANS

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 2'-0"  
HEIGHT: 2'-0"  
TOTAL AREA: 4.0 Sq.Ft.

BORDER TYPE: INSET  
RECESS: 0.38"  
WIDTH: 0.63"  
RADII: 1.5"

NO. Z BARS:  
LENGTH:

MAT'L: 0.080" (2.0 mm) ALUMINUM

USE NOTES: 1,2  
1. Legend and border shall be direct applied black non-reflective sheeting.  
2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter										Series/Size
										Text Length
H	i	l	a							C 2000
5.8	3.8	1.6	1.5	3.2	2.4	5.8				12.5
S	t	r	e	e	t					C 2000
4.4	3.2	2.3	2.1	3	2.8	1.8	4.4			15.2

FILENAME: R-2577A\_TMP\_SIGN DESIGNS      NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SD-2      BACKG COLOR: Fluorescent Orange  
TYPE: STATIONARY      COPY COLOR: Black      DESIGN BY: K.Bisby      CHECKED BY: B. Holden      Mar 30, 2023  
PROJECT ID: R-2577A      LOCATION: See Plan      DIV: 9

QUANTITY: SEE PLANS

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 2'-6"  
HEIGHT: 2'-0"  
TOTAL AREA: 5.0 Sq.Ft.

BORDER TYPE: INSET  
RECESS: 0.38"  
WIDTH: 0.63"  
RADII: 1.5"

NO. Z BARS:  
LENGTH:

MAT'L: 0.080" (2.0 mm) ALUMINUM

USE NOTES: 1,2  
1. Legend and border shall be direct applied black non-reflective sheeting.  
2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter										Series/Size
										Text Length
T	r	a	n	q	u	i	l			C 2000
4.6	3.2	1.9	3.3	3.3	3.4	3.4	1.6	0.7	4.6	20.8
A	v	e	n	u	e					C 2000
5.4	3.4	3.3	3.2	3.3	3.3	2.6	5.4			19.2

FILENAME: R-2577A\_TMP\_SIGN DESIGNS      NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SD-3      BACKG COLOR: Fluorescent Orange  
TYPE: STATIONARY      COPY COLOR: Black      DESIGN BY: K.Bisby      CHECKED BY: B. Holden      Mar 30, 2023  
PROJECT ID: R-2577A      LOCATION: See Plan      DIV: 9

QUANTITY: SEE PLANS

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 2'-6"  
HEIGHT: 2'-0"  
TOTAL AREA: 5.0 Sq.Ft.

BORDER TYPE: INSET  
RECESS: 0.38"  
WIDTH: 0.63"  
RADII: 1.5"

NO. Z BARS:  
LENGTH:

MAT'L: 0.080" (2.0 mm) ALUMINUM

USE NOTES: 1,2  
1. Legend and border shall be direct applied black non-reflective sheeting.  
2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter										Series/Size
										Text Length
S	e	r	e	n	e					C 2000
6.2	3.4	3.2	2.1	3.2	3.3	2.6	6.2			17.7
S	t	r	e	e	t					C 2000
7.4	3.2	2.3	2.1	3.1	2.8	1.8	7.4			15.2

FILENAME: R-2577A\_TMP\_SIGN DESIGNS      NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SD-4      BACKG COLOR: Fluorescent Orange  
TYPE: STATIONARY      COPY COLOR: Black      DESIGN BY: K.Bisby      CHECKED BY: B. Holden      Mar 30, 2023  
PROJECT ID: R-2577A      LOCATION: See Plan      DIV: 9

QUANTITY: SEE PLANS

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 2'-0"  
HEIGHT: 2'-6"  
TOTAL AREA: 5.0 Sq.Ft.

BORDER TYPE: INSET  
RECESS: 0.38"  
WIDTH: 0.63"  
RADII: 1.5"

NO. Z BARS:  
LENGTH:

MAT'L: 0.080" (2.0 mm) ALUMINUM

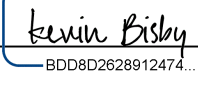
USE NOTES: 1,2  
1. Legend and border shall be direct applied black non-reflective sheeting.  
2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

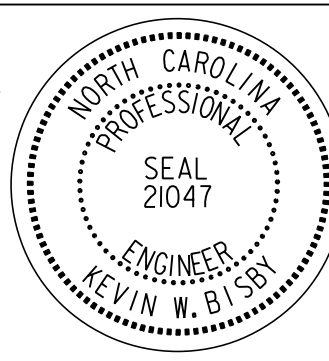
LETTER POSITIONS

Letter spacings are to start of next letter										Series/Size
										Text Length
K	n	o	l	l						C 2000
5.8	3.5	3.3	3.3	1.6	0.7	5.8				12.4
R	i	d	g	e						C 2000
4.9	3.6	1.4	3.3	3.3	2.6	4.9				14.2
D	r	i	v	e						C 2000
5.5	3.7	2.2	1.3	3.4	2.6	5.5				13.1

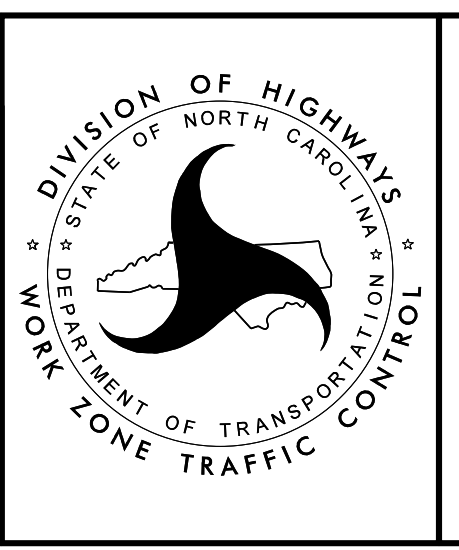
FILENAME: R-2577A\_TMP\_SIGN DESIGNS      NORTH CAROLINA D.O.T. SIGN DETAIL

APPROVED:   
DATE: 3/7/2024

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UNLESS ALL SIGNATURES COMPLETED



SIGN DESIGNS



SIGN NUMBER: SD-5      BACKG COLOR: Fluorescent Orange  
 TYPE: STATIONARY      COPY COLOR: Black      DESIGN BY: K.Bisby      CHECKED BY: B. Holden      Mar 30, 2023  
 PROJECT ID: R-2577A      LOCATION: See Plan      DIV: 9

QUANTITY: SEE PLANS

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 3'-6"  
 HEIGHT: 2'-0"  
 TOTAL AREA: 7.0 Sq.Ft.

BORDER TYPE: INSET  
 RECESS: 0.38"  
 WIDTH: 0.63"  
 RADII: 1.5"

NO. Z BARS:  
 LENGTH:

MAT'L: 0.080" (2.0 mm) ALUMINUM

USE NOTES: 1,2

- Legend and border shall be direct applied black non-reflective sheeting.
- Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size	
											Text Length	
5.6	3.8	1.4	2.6	5	3.4	3.2	1.4	2.9	5	2.1	5.6	C 2000
O l d B e l e w s C r e e k R d											30.9	
8.2	3.7	2.1	3.1	3.2	2.7	5	3.4	2.6	8.2			C 2000
C r e e k R d											25.7	

FILENAME: R-2577A\_TMP\_SIGN DESIGNS      NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SD-6      BACKG COLOR: Fluorescent Orange  
 TYPE: STATIONARY      COPY COLOR: Black      DESIGN BY: K.Bisby      CHECKED BY: B. Holden      Mar 30, 2023  
 PROJECT ID: R-2577A      LOCATION: See Plan      DIV: 9

QUANTITY: SEE PLANS

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 2'-6"  
 HEIGHT: 2'-0"  
 TOTAL AREA: 5.0 Sq.Ft.

BORDER TYPE: INSET  
 RECESS: 0.38"  
 WIDTH: 0.63"  
 RADII: 1.5"

NO. Z BARS:  
 LENGTH:

MAT'L: 0.080" (2.0 mm) ALUMINUM

USE NOTES: 1,2

- Legend and border shall be direct applied black non-reflective sheeting.
- Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size	
											Text Length	
5.7	3.4	3.3	2.2	2	2.9	4.7	5.7					C 2000
D a r r o w R o a d											18.6	
9	3.4	3.1	3.1	2.6	9							C 2000
R o a d											12.1	

FILENAME: R-2577A\_TMP\_SIGN DESIGNS      NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SD-7      BACKG COLOR: Fluorescent Orange  
 TYPE: STATIONARY      COPY COLOR: Black      DESIGN BY: K.Bisby      CHECKED BY: B. Holden      Mar 30, 2023  
 PROJECT ID: R-2577A      LOCATION: See Plan      DIV: 9

QUANTITY: SEE PLANS

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 2'-6"  
 HEIGHT: 2'-6"  
 TOTAL AREA: 6.3 Sq.Ft.

BORDER TYPE: INSET  
 RECESS: 0.38"  
 WIDTH: 0.63"  
 RADII: 1.5"

NO. Z BARS:  
 LENGTH:

MAT'L: 0.080" (2.0 mm) ALUMINUM

USE NOTES: 1,2

- Legend and border shall be direct applied black non-reflective sheeting.
- Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size	
											Text Length	
6	3.4	3.2	1.5	2.8	5	2.1	6					C 2000
B e l e w s C r e e k R o a d											18	
7.7	3.7	2	3.1	3.2	2.7	7.6						C 2000
C r e e k R o a d											14.7	
9	3.4	3.1	3.1	2.6	8.9							C 2000
R o a d											12.1	

FILENAME: R-2577A\_TMP\_SIGN DESIGNS      NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SD-8      BACKG COLOR: Fluorescent Orange  
 TYPE: STATIONARY      COPY COLOR: Black      DESIGN BY: K.Bisby      CHECKED BY: B. Holden      Apr 02, 2023  
 PROJECT ID: R-2577A      LOCATION: See Plan      DIV: 9

QUANTITY: SEE PLANS

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 3'-0"  
 HEIGHT: 2'-0"  
 TOTAL AREA: 6.0 Sq.Ft.

BORDER TYPE: INSET  
 RECESS: 0.38"  
 WIDTH: 0.63"  
 RADII: 1.5"

NO. Z BARS:  
 LENGTH:

MAT'L: 0.080" (2.0 mm) ALUMINUM

USE NOTES: 1,2


- Legend and border shall be direct applied black non-reflective sheeting.
- Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

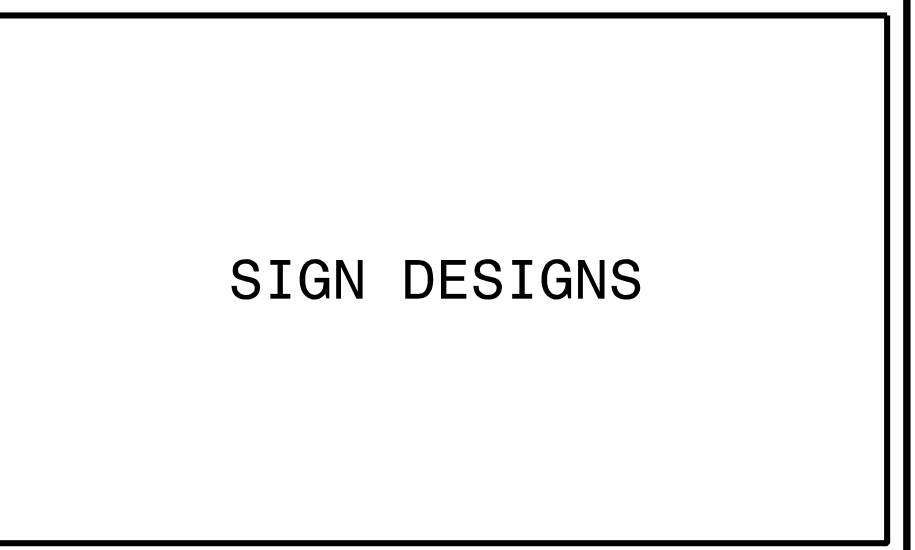
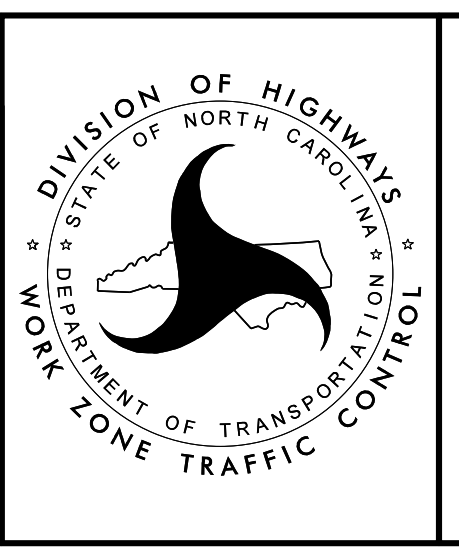
Letter spacings are to start of next letter											Series/Size	
											Text Length	
4.2	3.2	2.2	3.3	3.1	2.9	2.6	3.2	3.3	1.4	2.6	4.2	C 2000
S t o k e s d a l e A v e n u e											27.6	
8.4	3.4	3.3	3.2	3.3	3.3	2.6	8.4					C 2000
A v e n u e											19.2	

FILENAME: R-2577A\_TMP\_SIGN DESIGNS      NORTH CAROLINA D.O.T. SIGN DETAIL

APPROVED:   
 DATE: 3/7/2024

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 UNLESS ALL SIGNATURES COMPLETED**



SIGN DESIGNS

# TRAFFIC CONTROL PHASING

PROJ. REFERENCE NO. R - 2577A	SHEET NO. TMP - 3
----------------------------------	----------------------

P: (919) 878-8560  
 8601 Six Forks Road, Forum 1, Suite 700  
 Raleigh, North Carolina 27615-3960  
 NC License No. F-0112  
 Engineers | Construction Managers | Planners | Scientists  
 www.rkk.com  
 Responsive People | Creative Solutions

THE CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS USING METHODS APPROVED BY THE ENGINEER.

USE DRUMS TO DELINEATE DRIVEWAY ACCESS THROUGH CONSTRUCTION AREAS.

THE CONTRACTOR SHALL USE CONSTRUCTION METHODS THAT PROVIDE POSITIVE DRAINAGE AND MEET HYDRAULIC SPREAD REQUIREMENTS.

DURING ROAD CLOSURES, STAGGER BARRICADES TO ALLOW PROPERTY OWNER ACCESS. USE INCIDENTAL STONE OR OTHER METHODS AS APPROVED BY THE ENGINEER TO MAINTAIN VEHICULAR ACCESS.

TRANSITION BETWEEN 4" AND 6" WHITE EDGE LINE PAVEMENT MARKINGS AT THE MIDPOINT OF THE INTERSECTION RADIUS.

USE RDWY STD 1101.06 WHEN BLASTING IS REQUIRED.

SEE SPECIAL PROVISIONS FOR DELAY OF ENTRY REQUIREMENTS.

**PHASE I**

STEP 1:  
ERECT ADVANCED WORK ZONE SIGNS ON -L- US 158 AND ALL -Y-LINES IN ACCORDANCE WITH RDWY STD 1101.01.

NOTE:  
USE RDWY STD 1101.02 TO CONSTRUCT TEMPORARY SIGNALS AT THE US 158 INTERSECTIONS WITH -Y1B- OLD GREENSBORO RD, -Y16-/-Y17- DARROW RD, -Y20- NC 66 AND -Y24- BELEWS CREEK RD.

STEP 2:  
USING RDWY STD 1101.02, CONSTRUCT TEMPORARY PAVEMENT FROM -L- STA 25+00± TO STA 47+32± TO THE EDGE AND ELEVATION OF THE EXISTING PAVEMENT, APPLY PAVEMENT MARKINGS, AND DIRECT TRAFFIC ONTO THE TEMPORARY PAVEMENT. COMPLETE THE TRAFFIC SHIFT PRIOR TO LEFT SIDE WIDENING FROM -L- STA 32+00± AND 51+00±. (SEE TMP-6 THROUGH 8)

- USING RDWY STD 1101.02 BEGIN WIDENING/WEDGING/TEMPORARY PAVEMENT CONSTRUCTION EXCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:
- -Y1A- STA 10+00± TO STA 16+61± (TMP-5)
  - -Y1E- STA 13+98± TO STA 16+39± (TMP-5)
  - -Y1B- STA 10+56± TO STA 18+00± TMP-5 AND 6)
  - -Y4- STA 10+28± TO STA 14+00± (TMP-8)
  - -Y6- STA 10+36± TO STA 12+26± (TMP-9)
  - -Y20- STA 96+41± TO STA 100+31± (TMP-24)
  - -L- STA 0+00± TO STA 13+50± LT (TMP-4 AND 5)
  - -L- STA 0+00± TO STA 25+00± RT (TMP-4 THROUGH 6)
  - -L- STA 32+00± TO STA 51+00± LT INCLUDING TEMPORARY PAVEMENT (TMP-7 AND 8)
  - -L- STA 54+60± TO STA 77+79± LT (TMP-8 THROUGH 10)
  - -L- STA 80+15± TO STA 99+25± LT (TMP-10 THROUGH 12)
  - -L- STA 106+93± TO STA 114+68± LT (TMP-12 AND 13)
  - -L- STA 116+16± TO STA 135+65± LT (TMP-13 AND 14)
  - -L- STA 138+00± TO STA 144+50± LT (TMP-14 AND 15)
  - -L- STA 172+57± TO STA 191+80± LT (TMP-17 THROUGH 19)
  - -L- STA 193+81± TO STA -L2- STA 208+00± LT (TMP-19 AND 20)
  - -L2- STA 210+44± TO STA 220+50± LT (TMP-20 AND 21)
  - -L2- STA 232+00± TO -L- STA 289+50± LT (TMP-22 THROUGH 27)
  - -L- STA 292+25± TO STA 305+02± LT (TMP-27 AND 28)

USING RDWY STD 1101.02 CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

- -Y2- STA 10+35± TO STA 14+39±
- -Y14- STA 10+11± TO STA 13+50± OPEN TO TRAFFIC PRIOR TO LEFT SIDE WIDENING CONSTRUCTION. (TMP-14 AND 15)
- -Y24- STA 18+75± TO STA 23+40± (TMP-27)
- -Y23- STA 10+54± TO STA 17+03± INCLUDING A PORTION OF -Y23A- (TMP-27 AND 30)
- -Y5- STA 16+00± TO STA 24+04± (TMP-10 AND 29)
- -Y5A- STA 14+50± TO STA 16+44± (TMP-29)
- -L- STA 20+54± TO STA 32+00± LT (TMP-6 AND 7)
- -L- STA 77+79± TO STA 80+15± LT (TMP-10)
- -L- STA 114+68± TO STA 116+16± LT (TMP-13)
- -L- STA 191+80± TO STA 193+81± LT (TMP-19)
- -L2- STA 208+00 TO STA 210+44± LT (TMP-20)
- -L2- STA 219+20± TO STA 234+12± RT TEMPORARY PAVEMENT. CONSTRUCT CULVERT EXTENSIONS BEHIND GUARDRAIL PRIOR TO CONSTRUCTING TEMPORARY PAVEMENT. (TMP-21 AND 22)

NOTE:  
THE CONTRACTOR MAY CONSTRUCT STEPS 2A THROUGH 2E IN ANY ORDER AND MAY OCCUR DURING STEP 2 CONSTRUCTION. **-Y9- TRANQUIL AVE AND -Y11- SERENE ST SHALL NOT BE CLOSED CONCURRENTLY.**

COMPLETE THE WORK DESCRIBED IN STEP 2A WITHIN 20 CALENDAR DAYS (SEE SPECIAL PROVISIONS)

STEP 2A:  
USING RDWY STD 1101.03, CLOSE -Y1D- HILDA ST AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE. UPON COMPLETION, APPLY PAVEMENT MARKINGS, REMOVE DETOUR SIGNING AND OPEN TO TRAFFIC. (SEE TMP-2B, 2J, 6 AND 34)

COMPLETE THE WORK DESCRIBED IN STEP 2B WITHIN 75 CALENDAR DAYS (SEE SPECIAL PROVISIONS)

STEP 2B:  
USING RDWY STD 1101.03, CLOSE -Y9- TRANQUIL AVE AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE. USING RDWY STD 1101.02, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE -L- STA 99+25± TO STA 106+93±. UPON COMPLETION, APPLY PAVEMENT MARKINGS, REMOVE DETOUR SIGNING AND OPEN TO TRAFFIC. (SEE TMP-2C, 2J, 12 AND 12A)

COMPLETE THE WORK DESCRIBED IN STEP 2C WITHIN 30 CALENDAR DAYS (SEE SPECIAL PROVISIONS)

STEP 2C:  
USING RDWY STD 1101.03, CLOSE -Y11- SERENE ST AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE. USING RDWY STD 1101.02, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE -L- STA 114+68± TO STA 116+16±. UPON COMPLETION, APPLY PAVEMENT MARKINGS, REMOVE DETOUR SIGNING AND OPEN TO TRAFFIC. (SEE TMP-2D, 2J, 13 AND 13A)

COMPLETE THE WORK DESCRIBED IN STEP 2D WITHIN 40 CALENDAR DAYS (SEE SPECIAL PROVISIONS)

STEP 2D:  
USING RDWY STD 1101.03, CLOSE -Y15- KNOLL RIDGE DR AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE. USING RDWY STD 1101.02, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE -L- STA 191+80± TO STA 193+81±. UPON COMPLETION, APPLY PAVEMENT MARKINGS, REMOVE DETOUR SIGNING AND OPEN TO TRAFFIC. (SEE TMP-2E, 2J, 19 AND 19A)

COMPLETE THE WORK DESCRIBED IN STEP 2E WITHIN 30 CALENDAR DAYS (SEE SPECIAL PROVISIONS)

STEP 2E:  
USING RDWY STD 1101.03, CLOSE -Y17- DARROW RD AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE. USING RDWY STD 1101.02, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE -L2- STA 208+00± TO STA 210+44±. UPON COMPLETION, APPLY PAVEMENT MARKINGS, REMOVE DETOUR SIGNING AND OPEN TO TRAFFIC. (SEE TMP-2G, 2K, 20 AND 20A)

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# TRAFFIC CONTROL PHASING

PROJ. REFERENCE NO. R - 2577A	SHEET NO. TMP - 3A
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**NOTE:**  
THE CONTRACTOR MAY CONSTRUCT STEPS 3A AND 3B IN ANY ORDER.

COMPLETE THE WORK DESCRIBED IN STEP 3A WITHIN 30 CALENDAR DAYS (SEE SPECIAL PROVISIONS)

**STEP 3A:**  
 USING RDWY STD 1101.03, CLOSE -Y5- OLD BELEWS CREEK RD AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (TMP-2F, 2K, 31, 31A AND 31B)  
 • -Y5- STA 10+16± TO STA 16+00±  
 • -Y5A- STA 10+00± TO STA 14+50±  
 UPON COMPLETION, APPLY PAVEMENT MARKINGS, REMOVE DETOUR SIGNING AND OPEN TO TRAFFIC. SIMULTANEOUSLY DEPLOY TYPE III BARRICADES WITH SIGN R11-2 TO CLOSE OLD BELEWS CREEK RD AT THE PERMANENT CLOSURE LOCATION.

COMPLETE THE WORK DESCRIBED IN STEP 3B WITHIN 40 CALENDAR DAYS (SEE SPECIAL PROVISIONS)

**STEP 3B:**  
 USING RDWY STD 1101.02 AND 1101.03, REVISE TEMPORARY SIGNAL, CLOSE -Y24- BELEWS CREEK RD AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (TMP-2H, 2K, 32 AND 32A)  
 • -L- STA 289+50± TO STA 292+25±  
 • -Y24- STA 13+09± TO STA 18+75±  
 UPON COMPLETION, APPLY PAVEMENT MARKINGS, REMOVE DETOUR SIGNING AND OPEN TO TRAFFIC.

**NOTE:**  
COMPLETE CONSTRUCTION OF -Y1B- OLD GREENSBORO RD, -Y4- GAITHER RD AND -Y6- RICKARD RD PRIOR TO COMMENCING WORK DESCRIBED IN STEP 4.

**STEP 4:**  
 USING RDWY STD 1101.02, PERFORM WEDGING OPERATIONS EXCLUDING THE FINAL LAYER OF SURFACE COURSE, APPLY PAVEMENT MARKINGS AND DIRECT US 158 TRAFFIC INTO THE PATTERN SHOWN. MAINTAIN THE EXISTING TRAFFIC PATTERN THROUGH THE -Y1B- OLD GREENSBORO RD INTERSECTION UNTIL -Y1B- OLD GREENSBORO RD CAN BE DIRECTED ONTO THE NEW ALIGNMENT. CONSTRUCT MONOLITHIC ISLANDS AFTER THE TRAFFIC SHIFT IS COMPLETE. (TMP-33 THROUGH 35)

USING RDWY STD 1101.02, TIE IN -Y1B- OLD GREENSBORO RD EAST OF US 158, APPLY PAVEMENT MARKINGS AND DIRECT TRAFFIC ONTO THE NEW ALIGNMENT. (TMP-33 AND 34)

USING RDWY STD 1101.02, PAVE/WEDGE -L- STA 48+23± TO STA 54+60± EXCLUDING THE FINAL SURFACE COURSE, TIE IN GAITHER RD, APPLY PAVEMENT MARKINGS AND OPEN GAITHER RD TO TRAFFIC ON THE NEW ALIGNMENT. (TMP-36)

USING RDWY STD 1101.02 CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE -L- STA 51+00± TO STA 54+60± LT AND OLD BELEWS CREEK RD TURN-AROUND. (TMP-36)

USING RDWY STD 1101.02, PAVE/WEDGE -L- STA 66+74± TO STA 68+07± EXCLUDING THE FINAL SURFACE COURSE, TIE IN -Y6- RICKARD RD, APPLY PAVEMENT MARKINGS AND OPEN -Y6- RICKARD RD TO TRAFFIC ON THE NEW ALIGNMENT. (TMP-37)

USING RDWY STD 1101.02, CONSTRUCT TEMPORARY PAVEMENT ON -Y25- ANGEL DR FROM -Y25- STA 10+39± TO STA 14+05± TO THE EDGE AND ELEVATION OF THE EXISTING PAVEMENT. (TMP-38)

USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS AND DIRECT US 158 TRAFFIC ONTO THE TEMPORARY PAVEMENT FROM -L2- STA 219+20± TO STA 234+82±, AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE -L2- STA 220+50± TO STA 232+00± LT. (TMP-39 AND 40)

USING RDWY STD 1101.02, REMOVE MEDIAN ISLANDS AND REPAIR PAVEMENT FLUSH WITH EXISTING ON US 158 NEAR -Y19-. TRACE THE REMOVED ISLAND WITH 6" DOUBLE YELLOW PAINT PAVEMENT MARKING AND YELLOW/YELLOW MARKERS. (TMP-41)

USING RDWY STD 1101.02, TIE IN -Y23- AND -Y23A- VANCE RD, APPLY PAVEMENT MARKINGS, REVISE TEMPORARY SIGNAL AND OPEN -Y23-, -Y23A- VANCE RD AND -Y24- BELEWS CREEK RD TO TRAFFIC. (TMP-42 THROUGH 44)

COMPLETE CONSTRUCTION OF -L- STA 116+16± TO STA 135+65± AND -L- STA 138+00± TO STA 144+50± AS BEGUN IN STEP 2.

**STEP 5:**  
 USING RDWY STD 1101.02, REMOVE -Y1B- OLD GREENSBORO RD PAVEMENT PER THE ROADWAY PLAN. (TMP-45 AND 46)

USING RDWY STD 1101.02, CONSTRUCT LEFT SIDE WIDENING EXCLUDING THE FINAL SURFACE COURSE -Y1B- STA 13+15± TO STA 15+78±. (TMP-45 AND 46)

USING RDWY STD 1101.02, CONSTRUCT DRIVEWAYS ON THE RIGHT SIDE OF US 158. (TMP-46)

COMPLETE THE WORK DESCRIBED IN STEP 6.1 THROUGH 6.4 WITHIN 90 CALENDAR DAYS (SEE SPECIAL PROVISIONS)

**STEP 6.1:**  
 USING RDWY STD 1101.02 AND 1101.03 CLOSE -Y12- OLD BELEWS CREEK RD REVISE PAVEMENT MARKINGS ON US 158W BETWEEN -Y13- WM TUCKER RD AND NORTH OF ESTHER LN. CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (TMP-2FA, 2K AND 47 THROUGH 51)  
 • -L- STA 135+65± TO STA 138+00±  
 • -L- STA 143+00 TO 150+25± INCLUDING TEMPORARY PAVEMENT  
 • -Y12- STA 22+00 TO STA 24+74±

USING RDWY STD 1101.02, CONSTRUCT TEMPORARY PAVEMENT TO THE EDGE AND ELEVATION OF THE EXISTING PAVEMENT -Y13- STA 10+38± TO STA 13+00±. (TMP-48 AND 48A)

**STEP 6.2:**  
 USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS, REVISE TEMPORARY SIGNALS AT THE WINSTON-SALEM NORTHERN BELTWAY RAMPS AND DIRECT US 158 TRAFFIC INTO THE PATTERN SHOWN. (TMP-52 THROUGH 57)

**STEP 6.3:**  
 USING RDWY STD 1101.02, CONSTRUCT TEMPORARY PAVEMENT TO THE EDGE AND ELEVATION OF THE EXISTING PAVEMENT -L- STA 145+43± TO STA 149+00±. (TMP-54)

**STEP 6.4:**  
 USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS, REVISE TEMPORARY SIGNALS AT THE WINSTON-SALEM NORTHERN BELTWAY RAMPS, DIRECT US 158 TRAFFIC INTO THE PATTERN SHOWN, REMOVE DETOUR SIGNING AND OPEN -Y12- OLD BELEWS CREEK RD TO TRAFFIC. (TMP-58 THROUGH 61)

**PHASE II**

**NOTE:**  
COMPLETE CONSTRUCTION OF -Y1A- OLD GREENSBORO RD AND -Y1E- AS BEGUN IN PHASE I STEP 2 PRIOR TO BEGINNING STEP 1.

**STEP 1:**  
 USING RDWY STD 1101.02, CONSTRUCT PROPOSED SIGNAL AT THE U-TURN -L- STA 2+00±, -Y1A- OLD GREENSBORO RD AND THE TEMPORARY SIGNAL AT THE U-TURN -L- STA 23+50±.

USING RDWY STD 1101.02, TIE IN -Y1A- AND -Y1E- EXCLUDING THE FINAL LAYER OF SURFACE COURSE, APPLY PAVEMENT MARKINGS, ACTIVATE THE PROPOSED SIGNALS AND OPEN -Y1A- AND -Y1E- TO TRAFFIC. SIMULTANEOUSLY, CLOSE MEDIAN ACCESS AT -Y1B-, ACTIVATE THE TEMPORARY SIGNAL AND OPEN U-TURN -L- STA 23+50±. (TMP-62 THROUGH 63A)

**STEP 2:**  
 USING RDWY STD 1101.02 WEDGE/PAVE/WIDEN EXCLUDING THE FINAL LAYER OF SURFACE COURSE AND APPLY PAVEMENT MARKINGS -L- STA 11+39± TO STA 20+43±. (TMP-63 THROUGH 64A)

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# TRAFFIC CONTROL PHASING

PROJ. REFERENCE NO.	SHEET NO.
R - 2577A	TMP - 3B

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**NOTE:**  
 COMPLETE ALL OUTSTANDING WORK AS BEGUN IN PHASE I STEP 2 PRIOR TO BEGINNING STEP 3:

**STEP 3:**  
 USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS, REVISE TEMPORARY SIGNALS, AND DIRECT TRAFFIC INTO A TWO-LANE, TWO-WAY PATTERN ON PROPOSED WESTBOUND US 158. (SEE TMP-64 THROUGH 84)

**STEP 4:**  
 USING RDWY STD 1101.02, REMOVE EXISTING PAVEMENT ADJACENT TO -Y1A- OLD GREENSBORO RD. (TMP-85 AND 86)

- USING RDWY STD 1101.02, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE:
- L- STA 25+00± TO STA 52+32± RT INCLUDING -Y3- GROVER ST (TMP-86 THROUGH 88)
  - L- STA 53+73± TO STA 66+00± RT (TMP-88 AND 89)
  - L- STA 68+01± TO STA 79+68± RT (TMP-89 AND 90)
  - L- STA 83+68± TO STA 91+71± RT INCLUDING -Y8- STANLEY AVE AND -Y25- ANGEL DR RT (TMP-90 AND 91)
  - L- STA 92+49± TO STA 150+25± RT INCLUDING -Y10- STANLEY PARK RD AND -Y13- WM TUCKER RD (TMP-91 THROUGH 95)
  - L- STA 176+27± TO STA 289+50± RT INCLUDING -Y16- DARROW RD, -Y18- WALKERTOWN COMMONS RD, -Y19-, -Y19A-, -Y20- NC 66, -Y21- PEARL VIEW DR AND -Y22- WALKERTOWN LANDING DR. (TMP-96 THROUGH 105)
  - L- STA 291+52± TO STA 305+02± RT (TMP-105 AND 106)

UPON COMPLETION OF -Y25- ANGEL DR RIGHT SIDE CONSTRUCTION, USING RDWY STD 1101.02 APPLY PAVEMENT MARKINGS AND SHIFT TRAFFIC AS SHOWN. CONSTRUCT THE LEFT SIDE EXCLUDING THE FINAL LAYER OF SURFACE COURSE -Y25- STA 10+00± TO STA 13+00±. (TMP-107)

**NOTE:**  
 COMMENCEMENT OF STEP 4A CONSTRUCTION MAY OCCUR DURING STEP 4 CONSTRUCTION.

COMPLETE THE WORK DESCRIBED IN STEP 4A WITHIN 40 CALENDAR DAYS (SEE SPECIAL PROVISIONS)

**STEP 4A:**  
 USING RDWY STD 1101.02 AND 1101.03, CLOSE -Y7- STOKESDALE AVE AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (TMP-21, 2K AND 90)

- L- STA 79+68± TO STA 83+68±
- Y7- STA 10+00± TO STA 12+00±

REPLACE PAVEMENT MARKINGS AND ERECT STOP SIGN PRIOR TO OPENING TO TRAFFIC.

**PHASE III**

**STEP 1:**  
 USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS, REVISE TEMPORARY SIGNALS, AND DIRECT EASTBOUND US 158 TRAFFIC INTO THE PROPOSED OUTSIDE LANE. OPEN SELECTED U-TURN LOCATIONS. (TMP-108 THROUGH 131)

**STEP 2:**  
 USING RDWY STD 1101.02 CONSTRUCT OUTSIDE WIDENING EXCLUDING THE FINAL LAYER OF SURFACE COURSE -L- STA 13+50± TO STA 21+40±. (TMP-108 AND 109)

USING RDWY STD 1101.02, CONSTRUCT US 158 MEDIAN AND MONOLITHIC ISLANDS:

- L- STA 23+95± TO STA 54+60± (TMP-109, 110 AND 111)
- L- STA 66+74± TO STA 88+06± (TMP-112 THROUGH 114)
- L- STA 91+09± TO STA 92+36± (TMP-114)
- L- STA 106+62± TO STA 112+14± (TMP-115 AND 116)
- L- STA 136+94± TO STA 150+25± (TMP-117 AND 118)
- L- STA 172+55± TO -L2- STA 207+00± (TMP-120 THROUGH 123)
- L2- STA 210+00± TO STA 241+56± (TMP-123 THROUGH 126)
- L- STA 252+18± TO STA 280+00± (TMP-127 THROUGH 129)
- L- STA 284+92± TO STA 291+52± (TMP-129 AND 130)

USING RDWY STD 1101.02, CONSTRUCT MONOLITHIC ISLANDS:

- Y1B- OLD GREENSBORO RD (TMP-108)
- Y4- GAITHER RD (TMP-111)
- Y5- OLD BELEWS CREEK RD (TMP-113)
- Y10- STANLEY PARK RD (TMP-116)
- Y12- OLD BELEWS CREEK RD (TMP-117)
- Y16- DARROW RD (TMP-123)
- Y17- DARROW RD (TMP-123)
- Y23- VANCE RD (TMP-130)
- Y24- BELEWS CREEK RD (TMP-130)

**STEP 3:**  
 USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS AND OPEN U-TURNS AS SHOWN. SIMULTANEOUSLY, CLOSE -Y16-/ -Y17- DARROW RD THROUGH MEDIAN ACCESS (TMP-132 THROUGH 141)

**STEP 4:**  
 USING RDWY STD 1101.02, CONSTRUCT MONOLITHIC ISLANDS AT -Y5- OLD BELEWS CREEK RD AND -Y16-/ -Y17- DARROW RD. (TMP-134 AND 139)

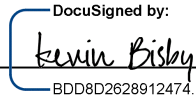
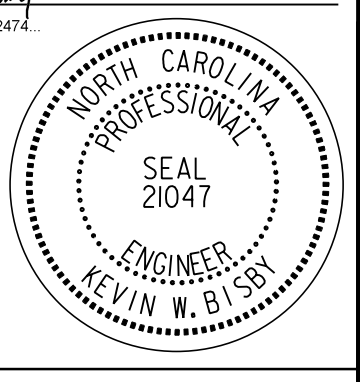
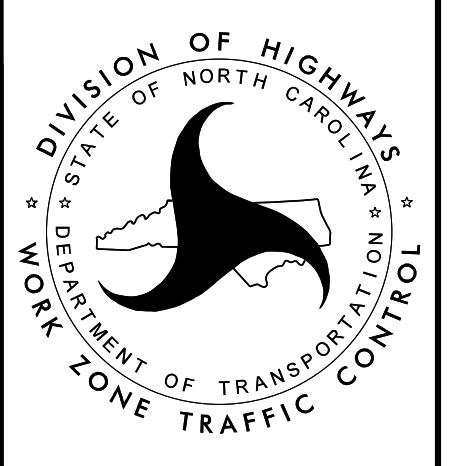
**STEP 5:**  
 USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS, REVISE TEMPORARY SIGNALS AND OPEN US 158 TURN LANES AT -Y5- OLD BELEWS CREEK RD, -Y16-/ -Y17- DARROW RD. (TMP-142 THROUGH 143A)

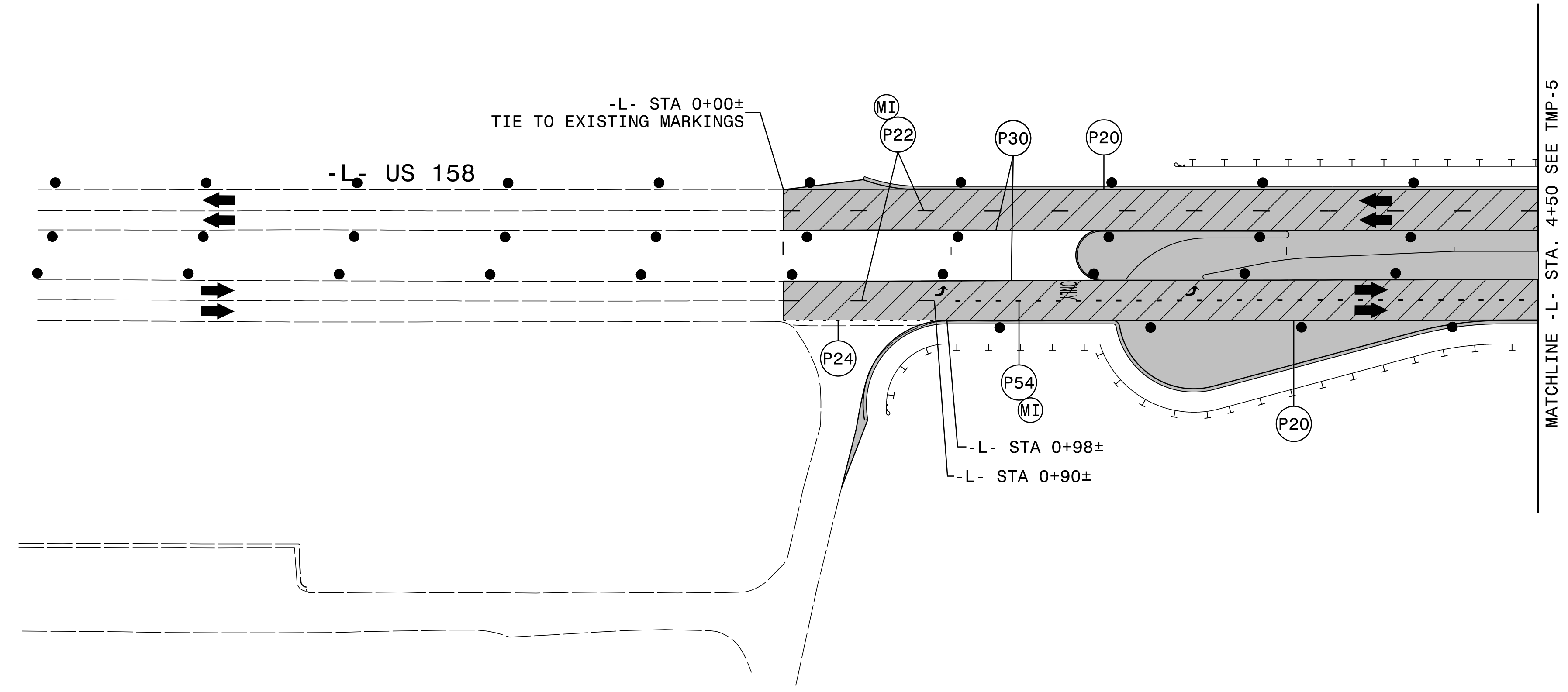
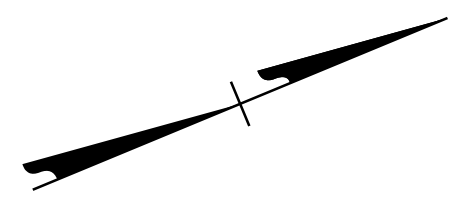
USING RDWY STD 1101.02, CONSTRUCT FINAL SIGNALS PER SIGNAL PLAN.

**PHASE IV: (NOT ILLUSTRATED)**

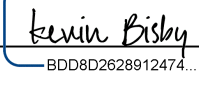
USING RDWY STD DWG 1101.02, PAVE THE FINAL LAYER OF SURFACE COURSE, APPLY THE FINAL PAVEMENT MARKINGS, ACTIVATE PROPOSED SIGNALS, REMOVE ALL TRAFFIC CONTROL DEVICES AND OPEN ALL LANES TO TRAFFIC.

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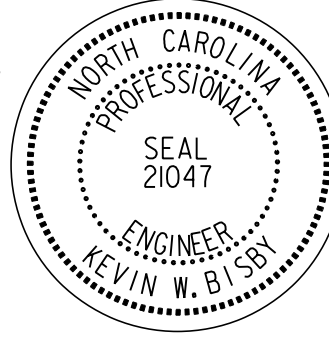
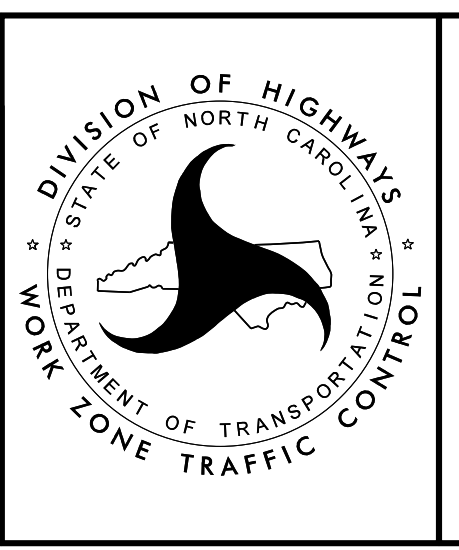


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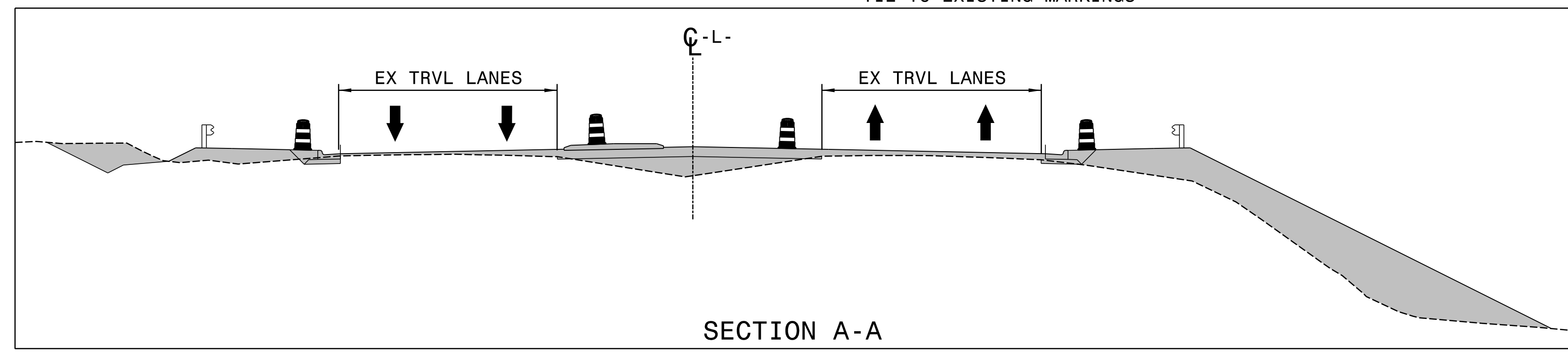
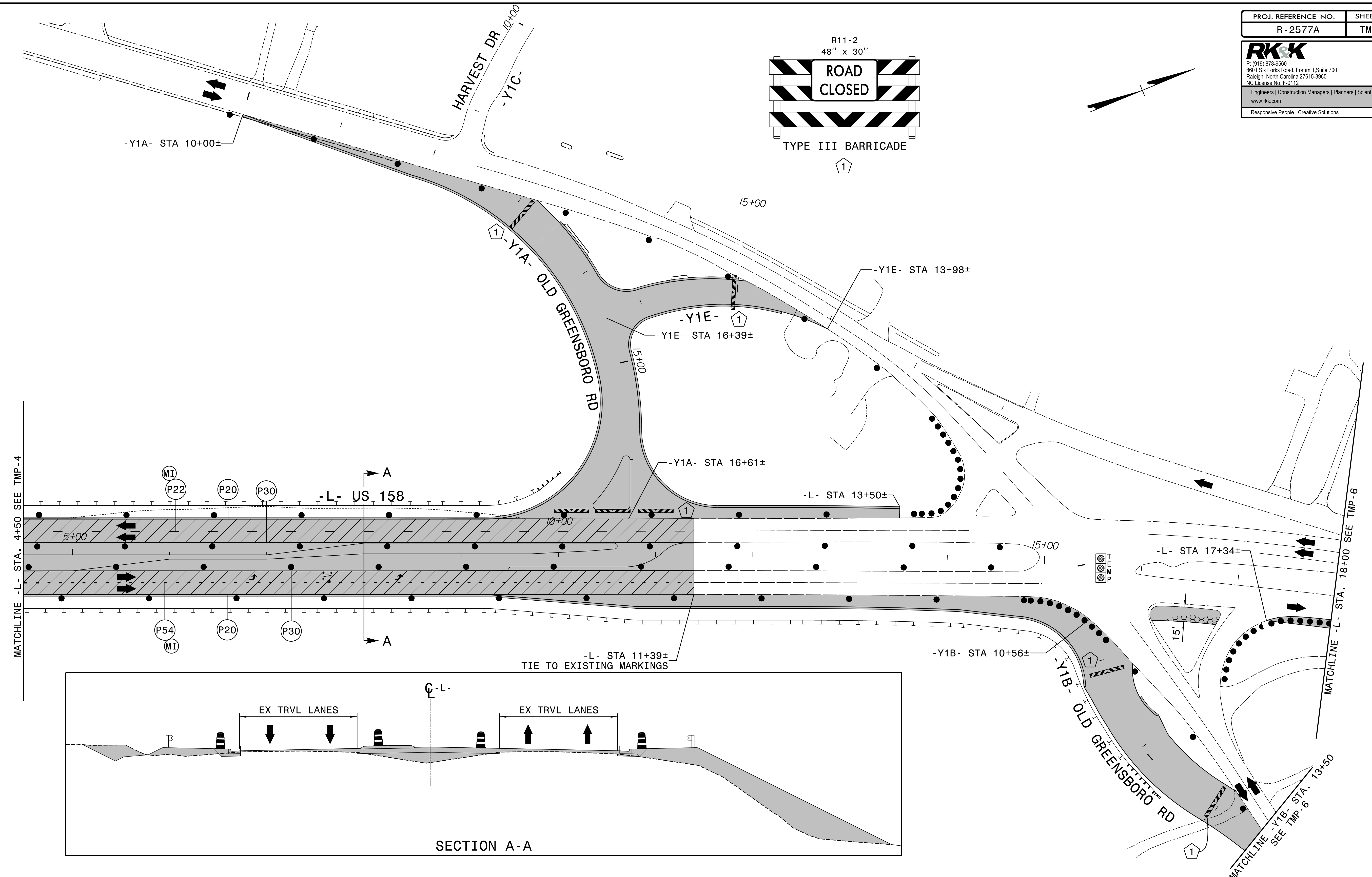
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PHASE I - STEP 2

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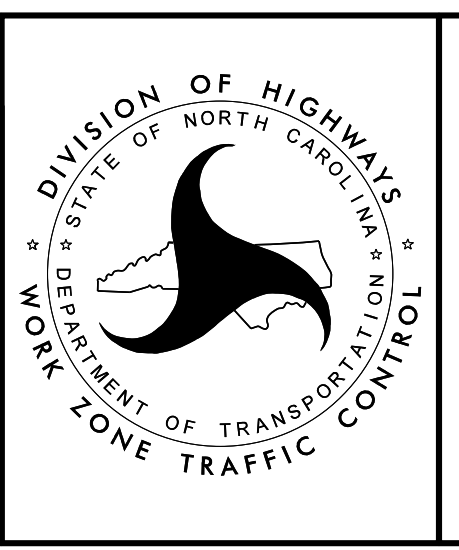
EXISTING LANE WIDTHS UNLESS OTHERWISE INDICATED

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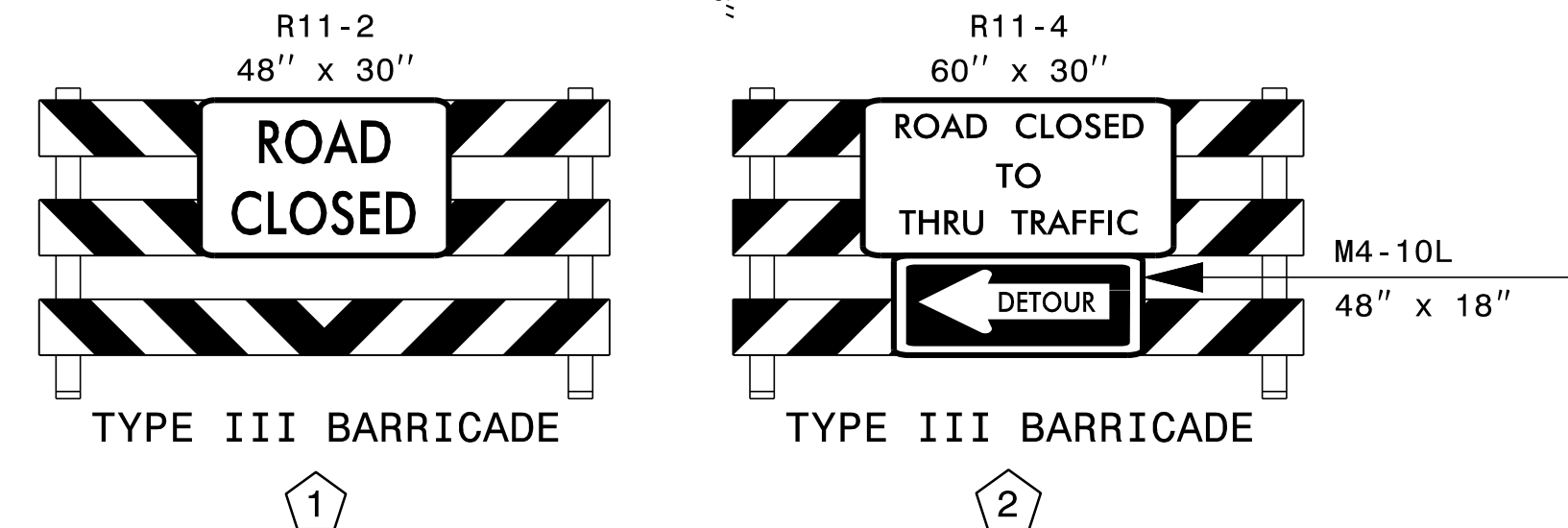
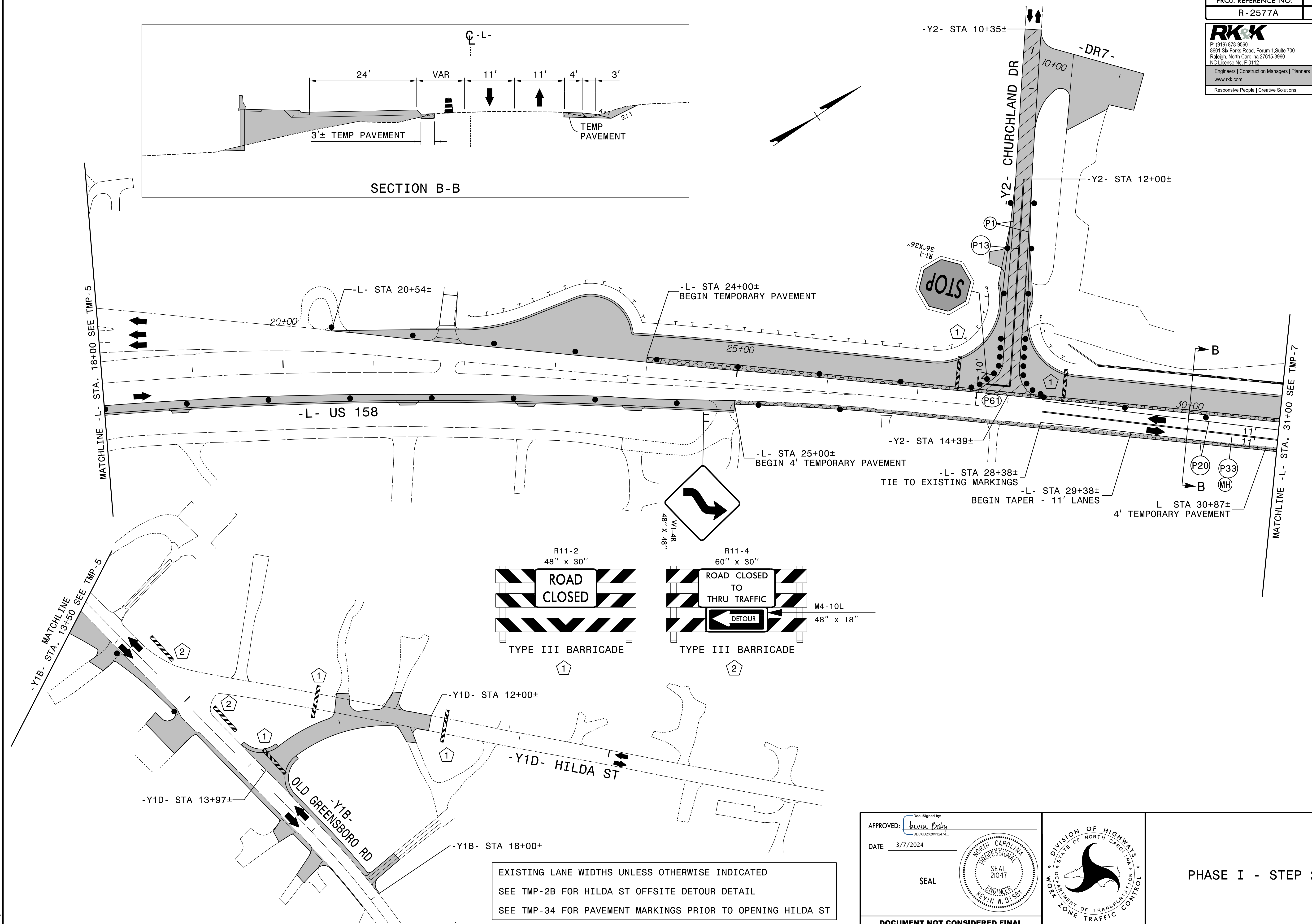
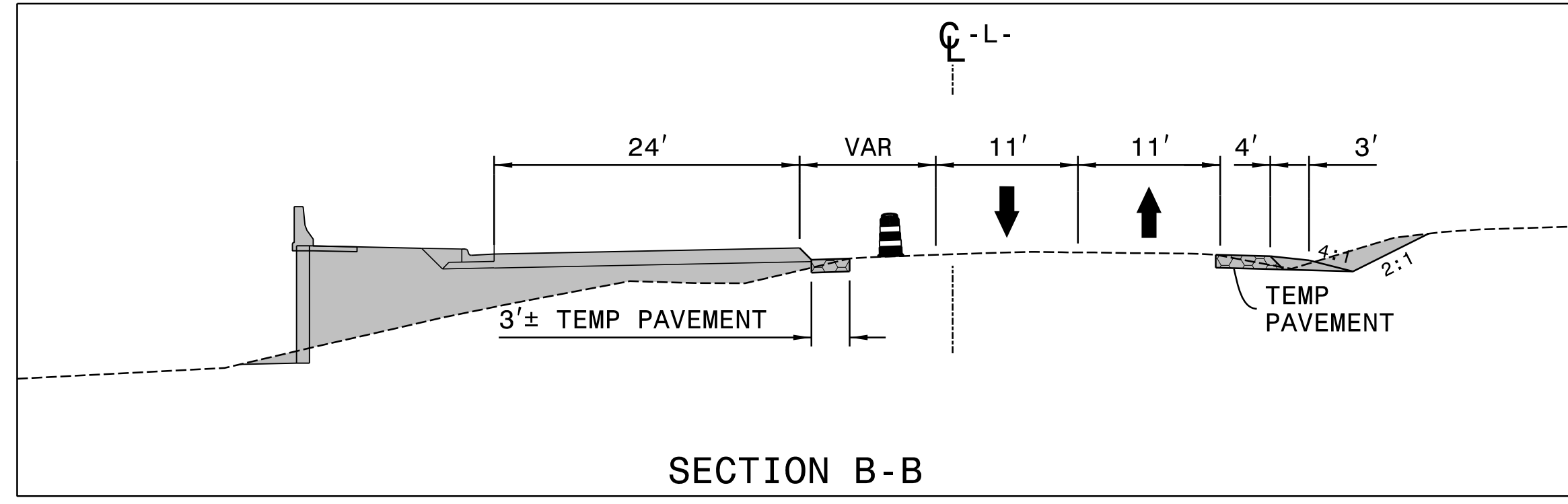
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 SEAL 21047  
 KEVIN W. BISBY

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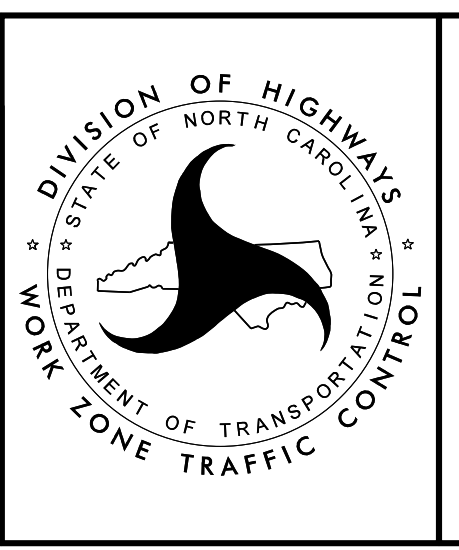


EXISTING LANE WIDTHS UNLESS OTHERWISE INDICATED  
 SEE TMP-2B FOR HILDA ST OFFSITE DETOUR DETAIL  
 SEE TMP-34 FOR PAVEMENT MARKINGS PRIOR TO OPENING HILDA ST

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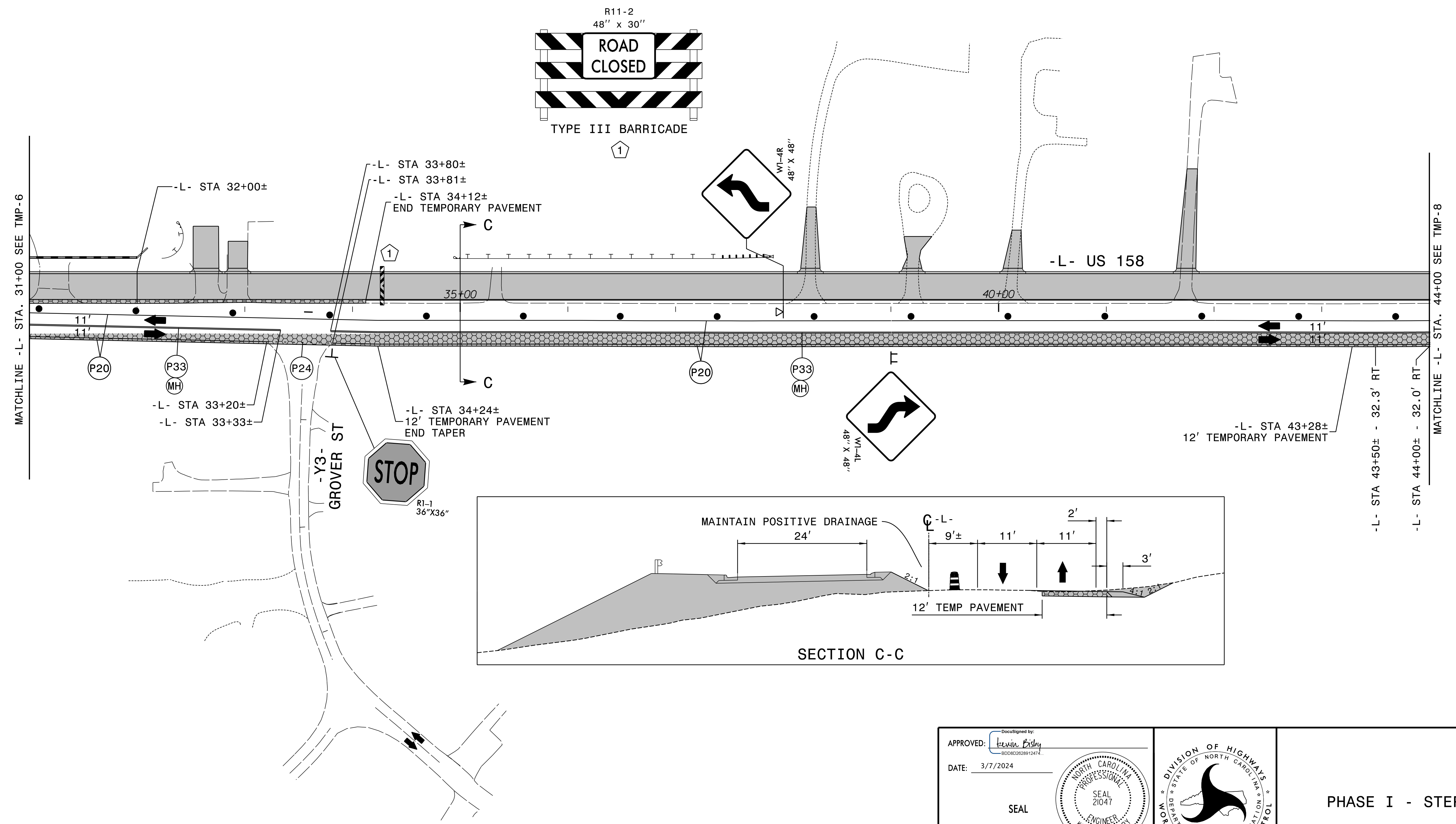
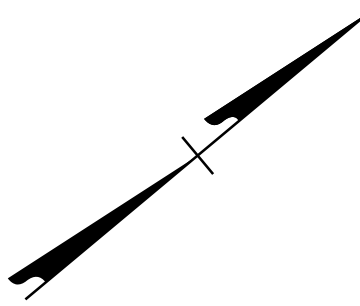
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 ENGINEER  
 KEVIN W. BISHY  
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PHASE I - STEP 2

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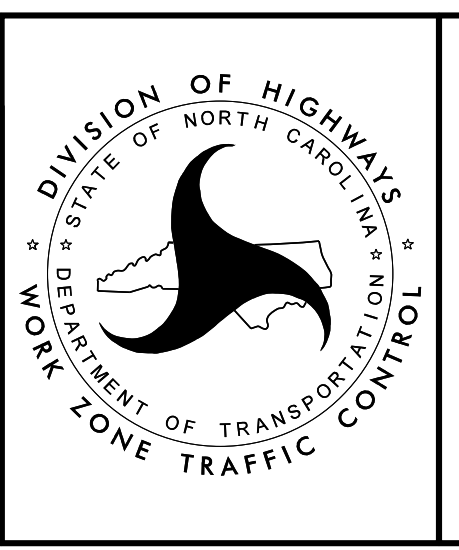


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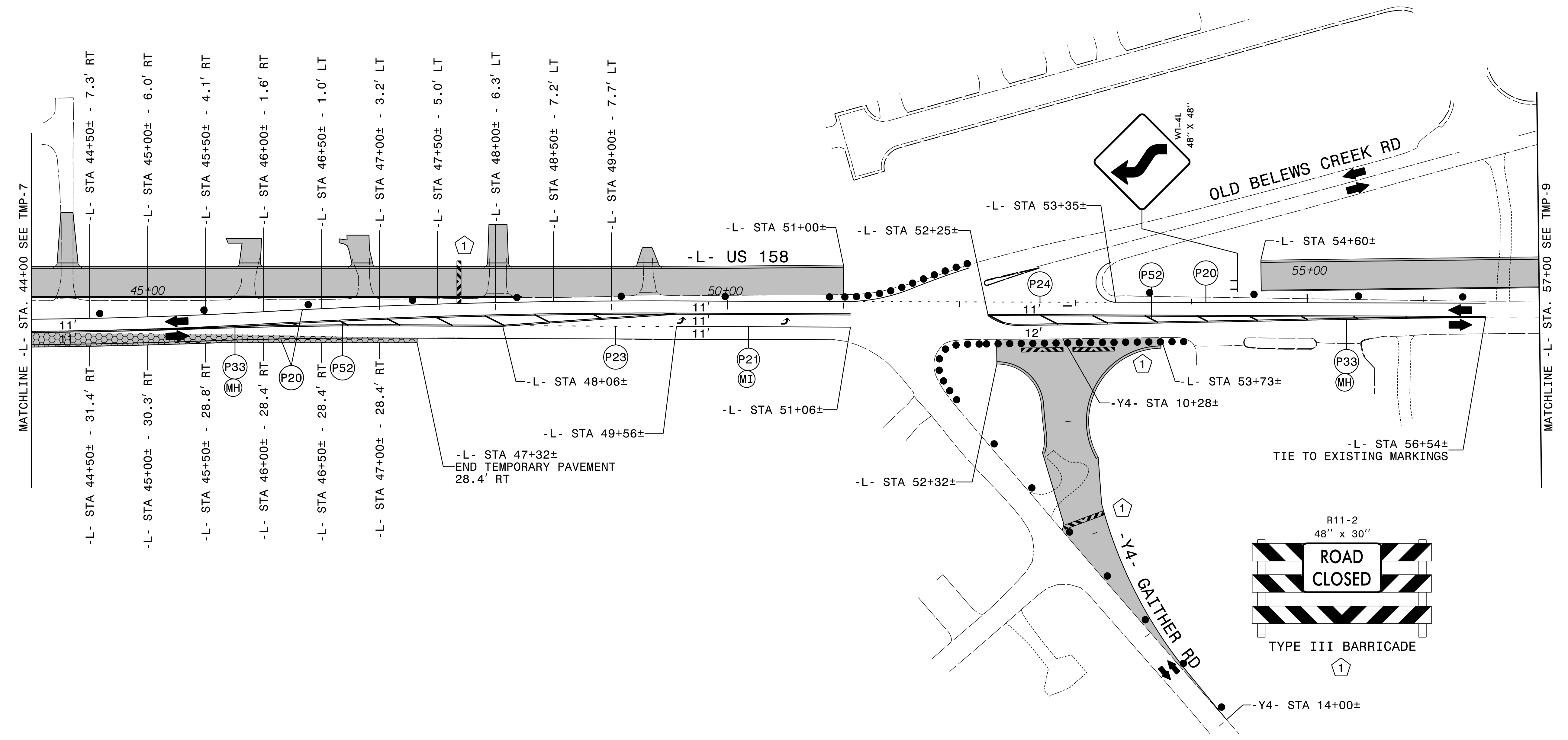
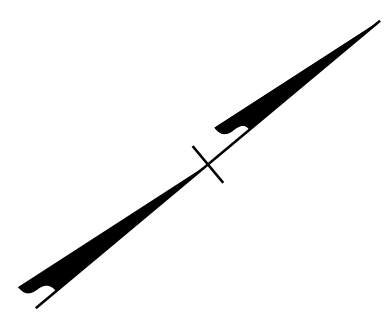
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 ENGINEER  
 KEVIN W. BISHY




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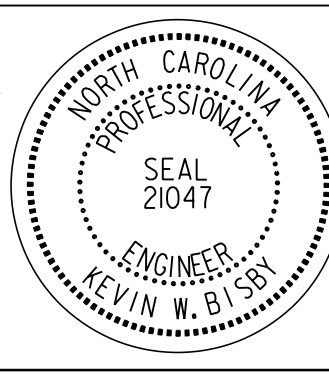




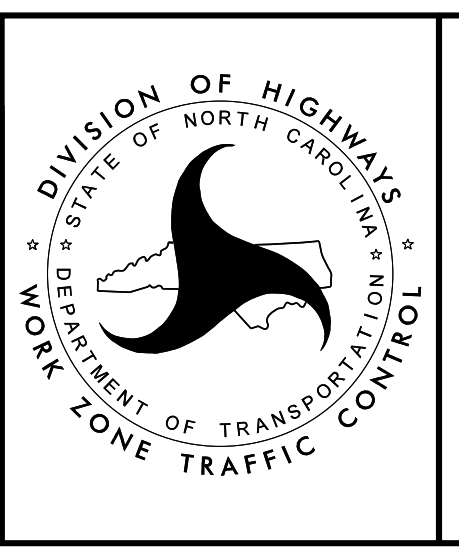
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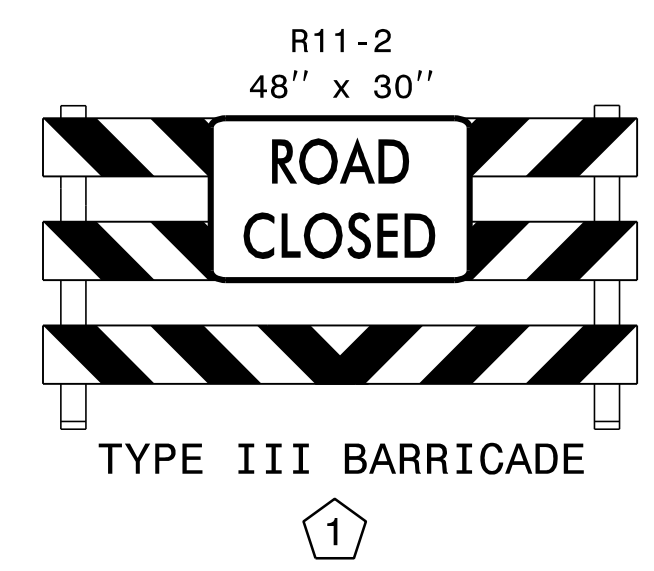
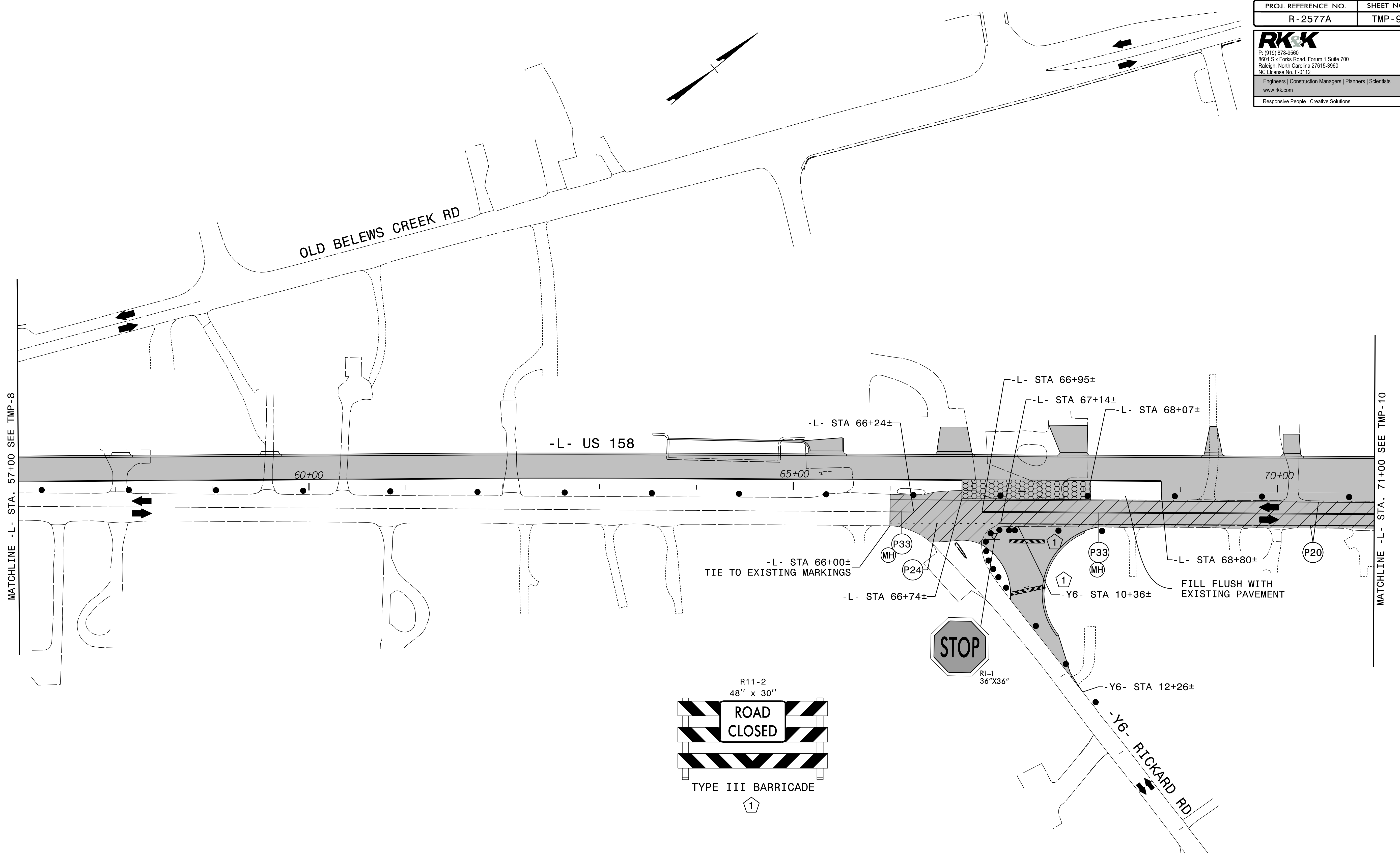
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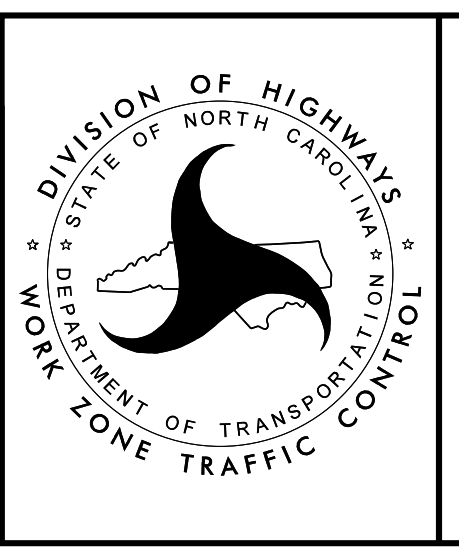


PHASE I - STEP 2



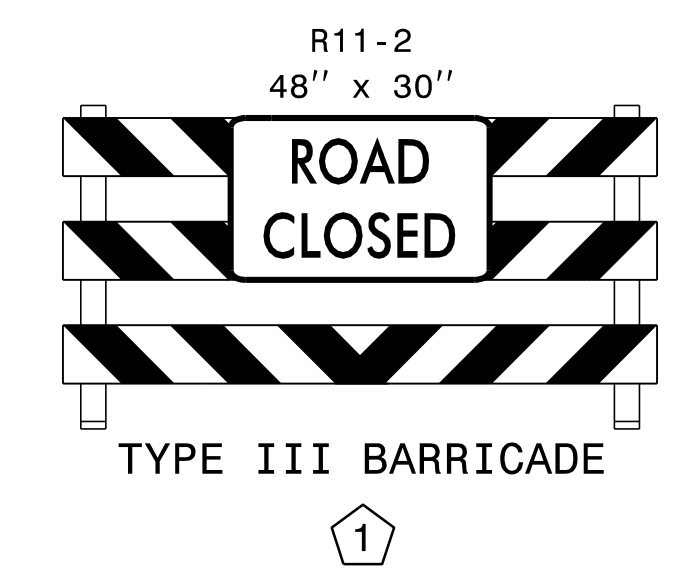
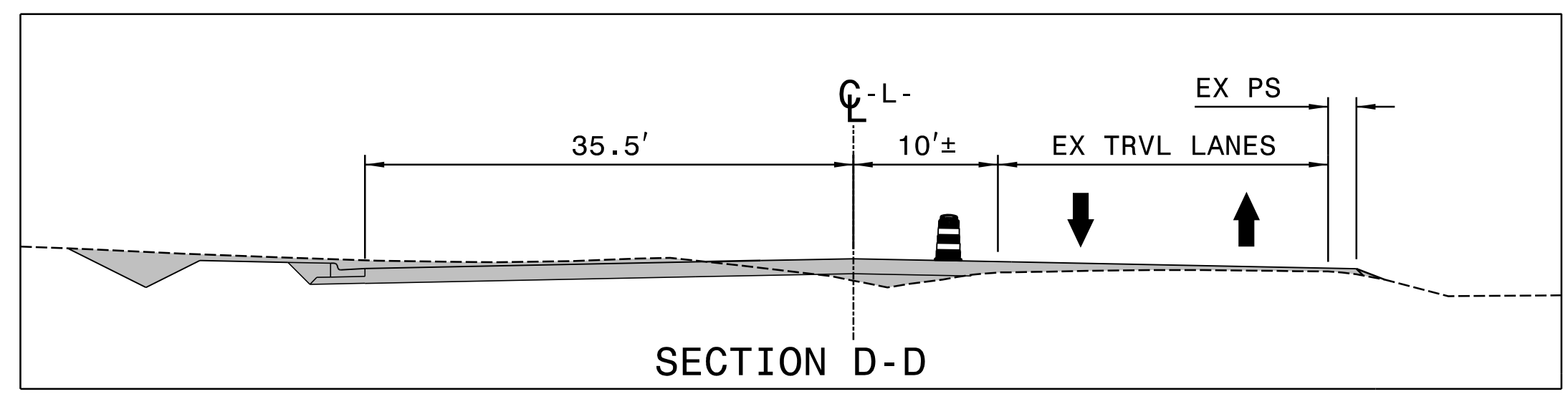
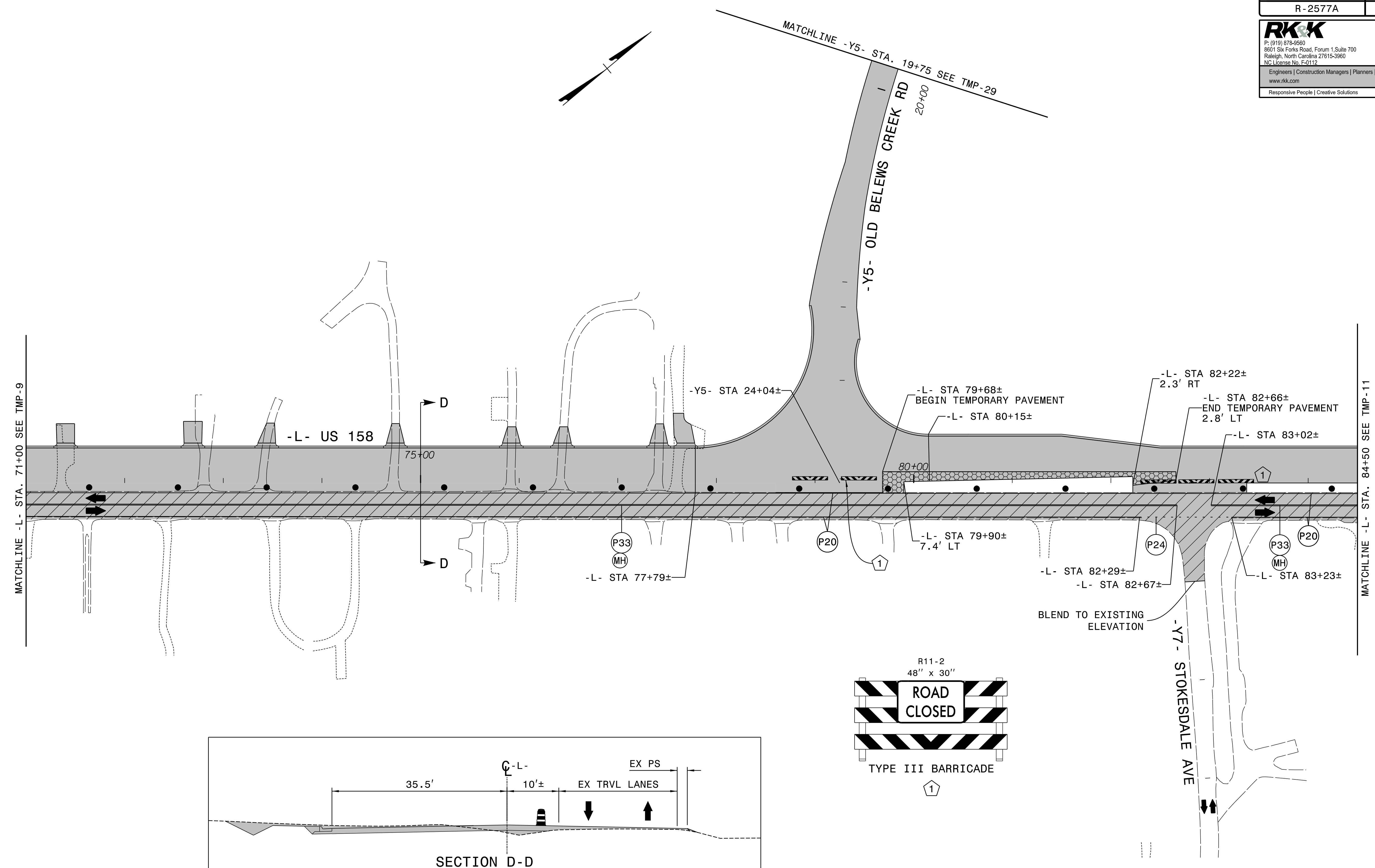
EXISTING LANE WIDTHS UNLESS OTHERWISE INDICATED

APPROVED: *Kevin Bishy*  
DocuSigned by: Kevin Bishy  
 B0C8D2628912477  
 DATE: 3/7/2024  
 SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 SEAL 21047  
 KEVIN W. BISHY



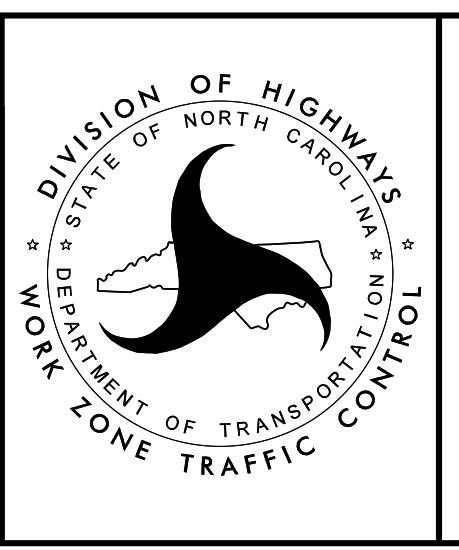
PHASE I - STEP 2

3/7/2024  
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 KRobby



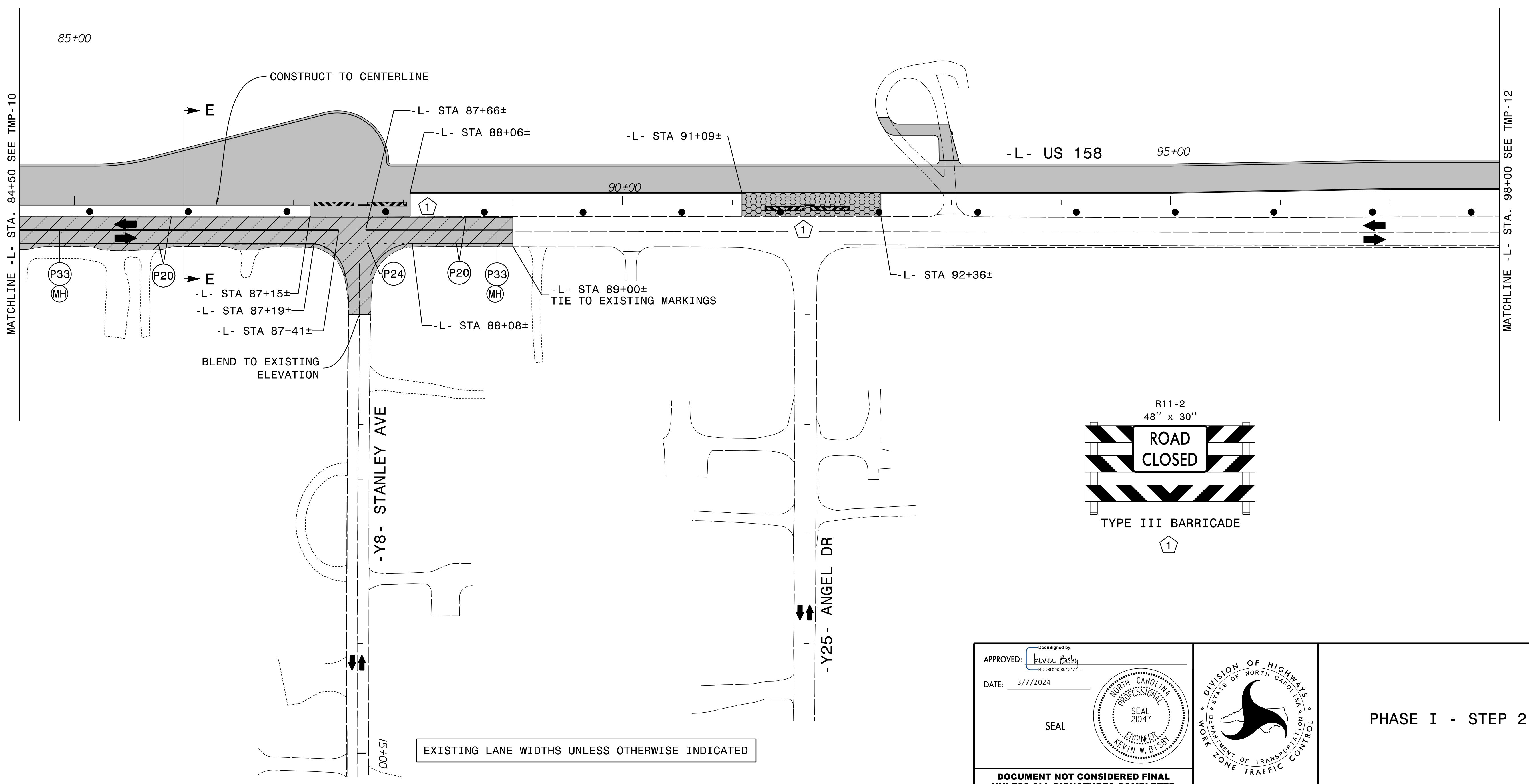
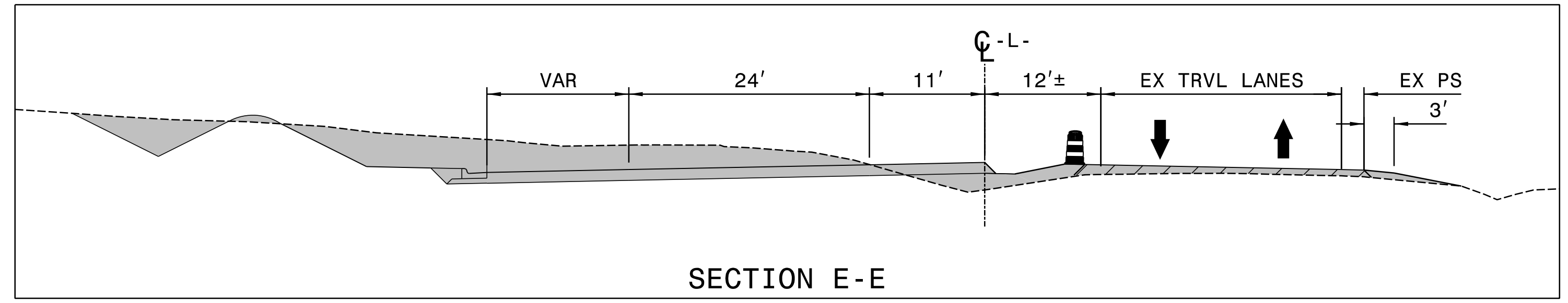
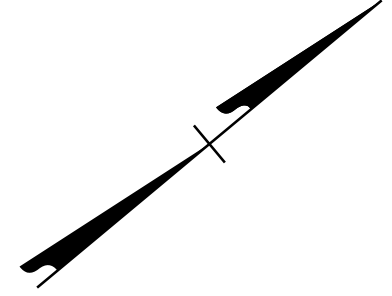
EXISTING LANE WIDTHS UNLESS OTHERWISE INDICATED

APPROVED: *Kevin Bisby*  
 DATE: 3/7/2024  
 SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 KEVIN W. BISBY  
 SEAL 21047



PHASE I - STEP 2

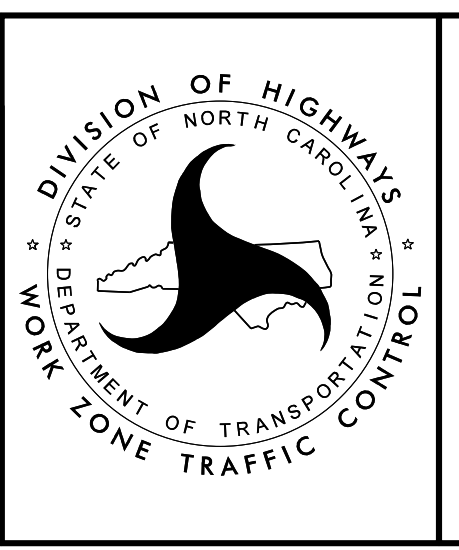
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 K.Bisby



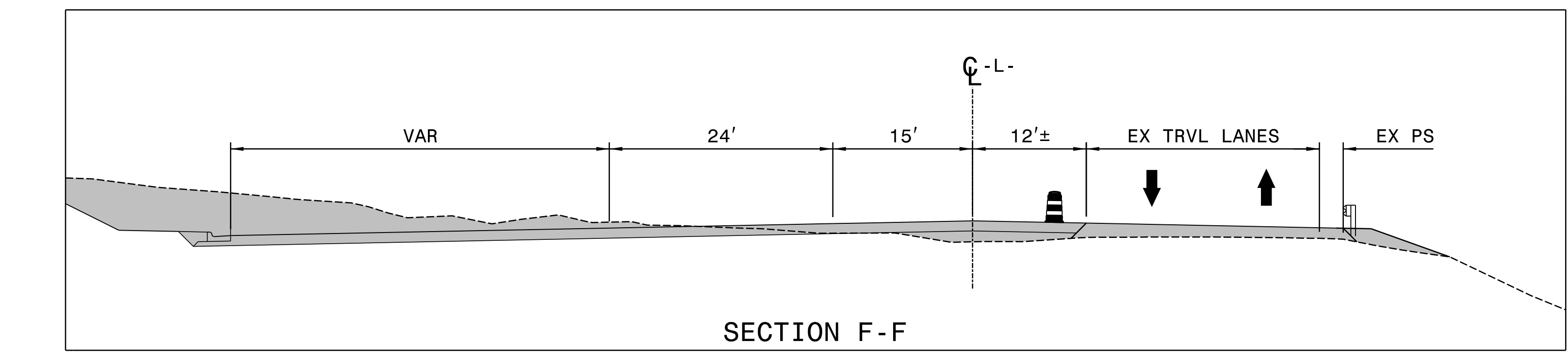
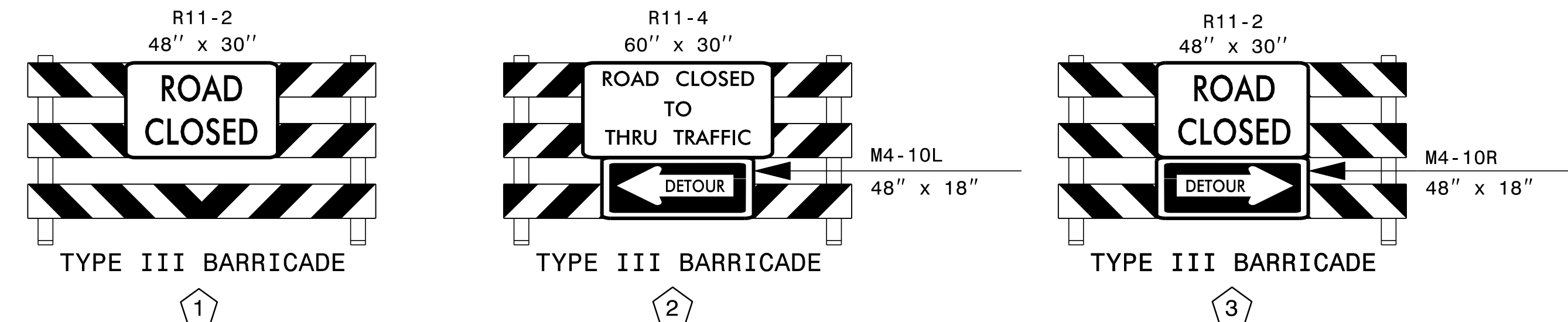
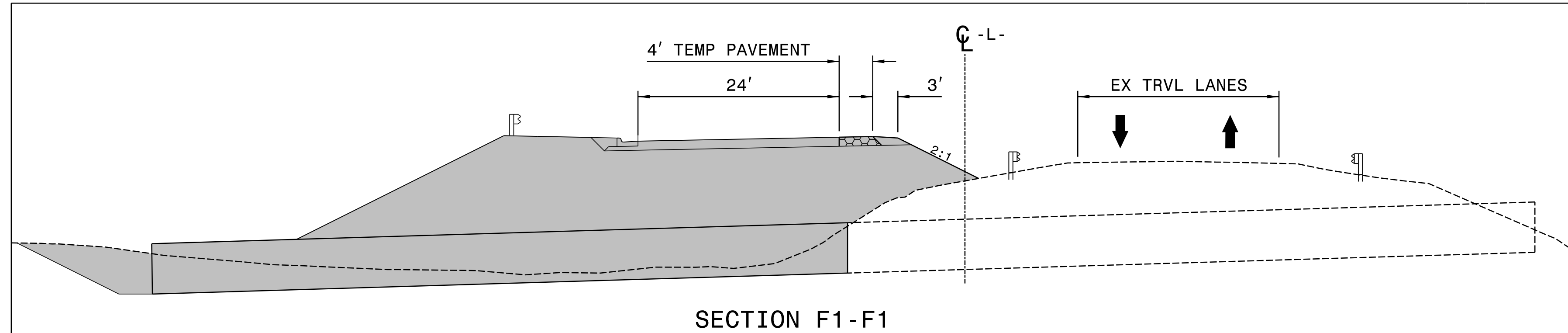
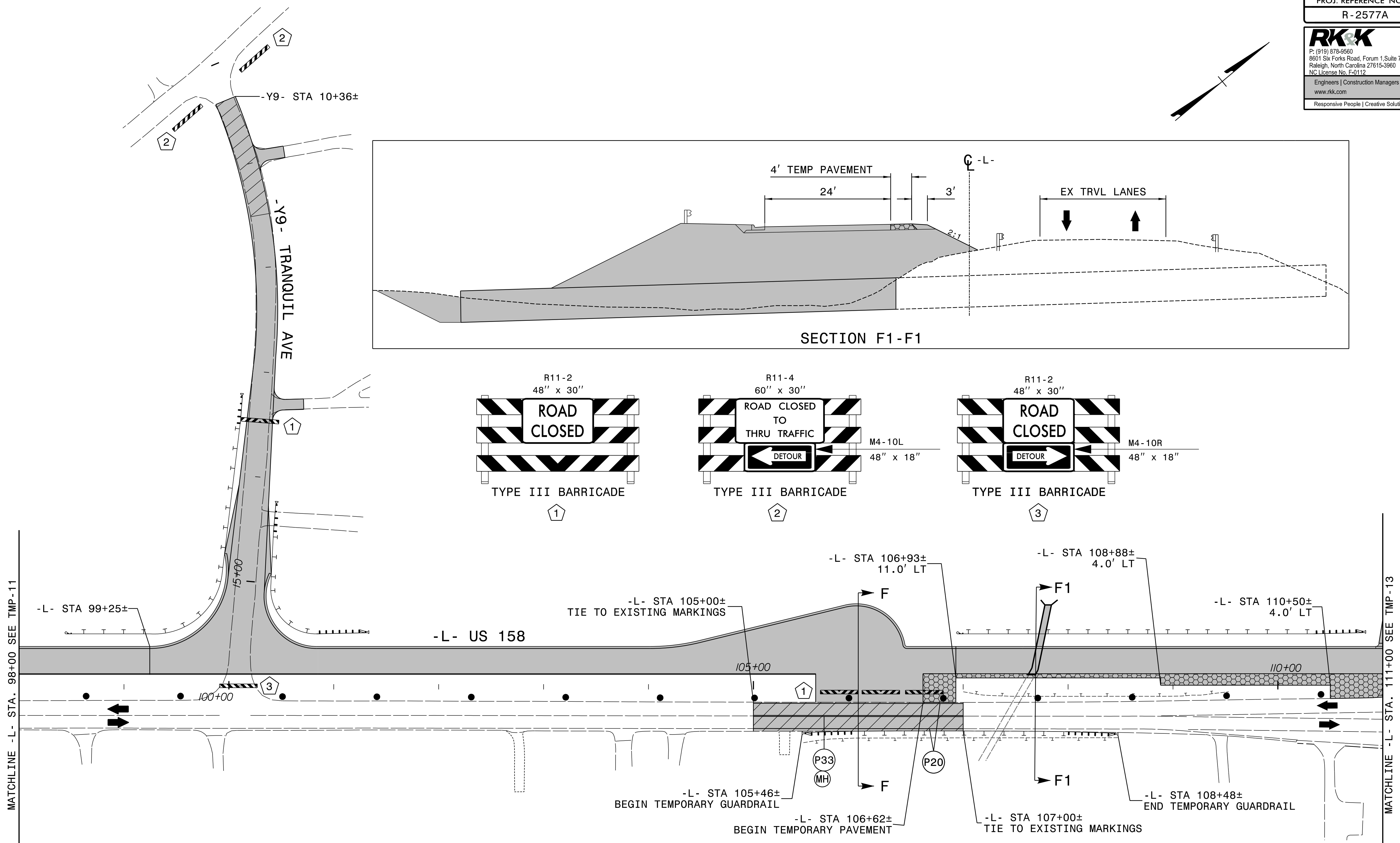
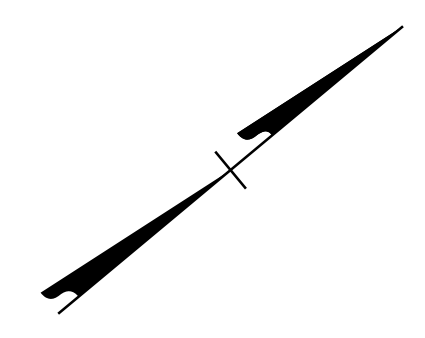
3/7/2024  
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 KRobby

APPROVED: *Kevin Bishy*  
 DATE: 3/7/2024

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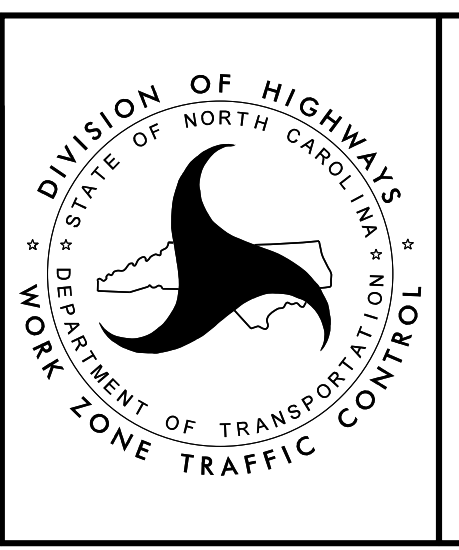


PHASE I - STEP 2

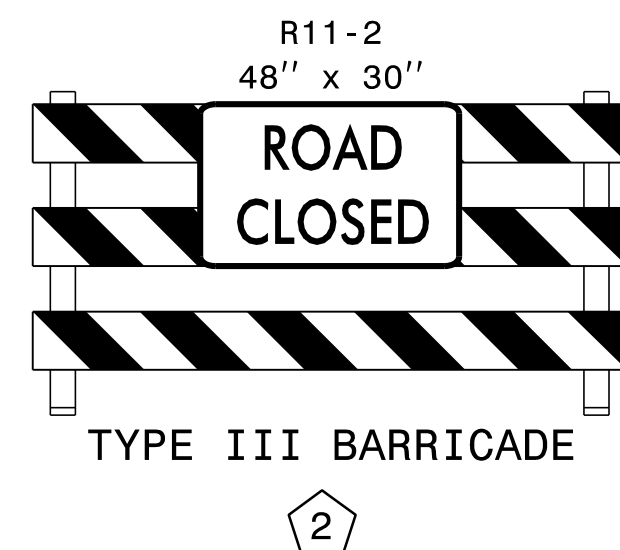
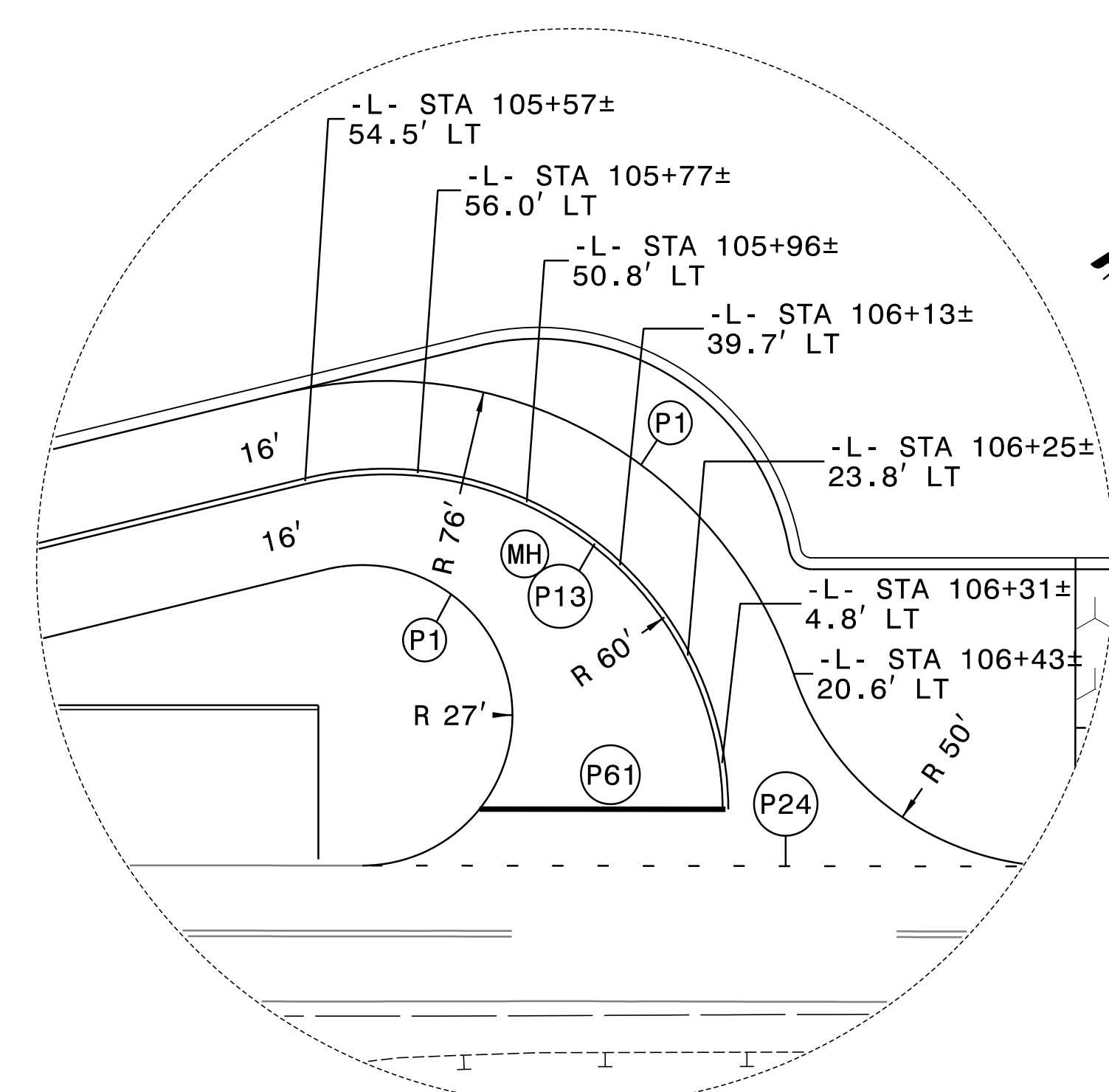
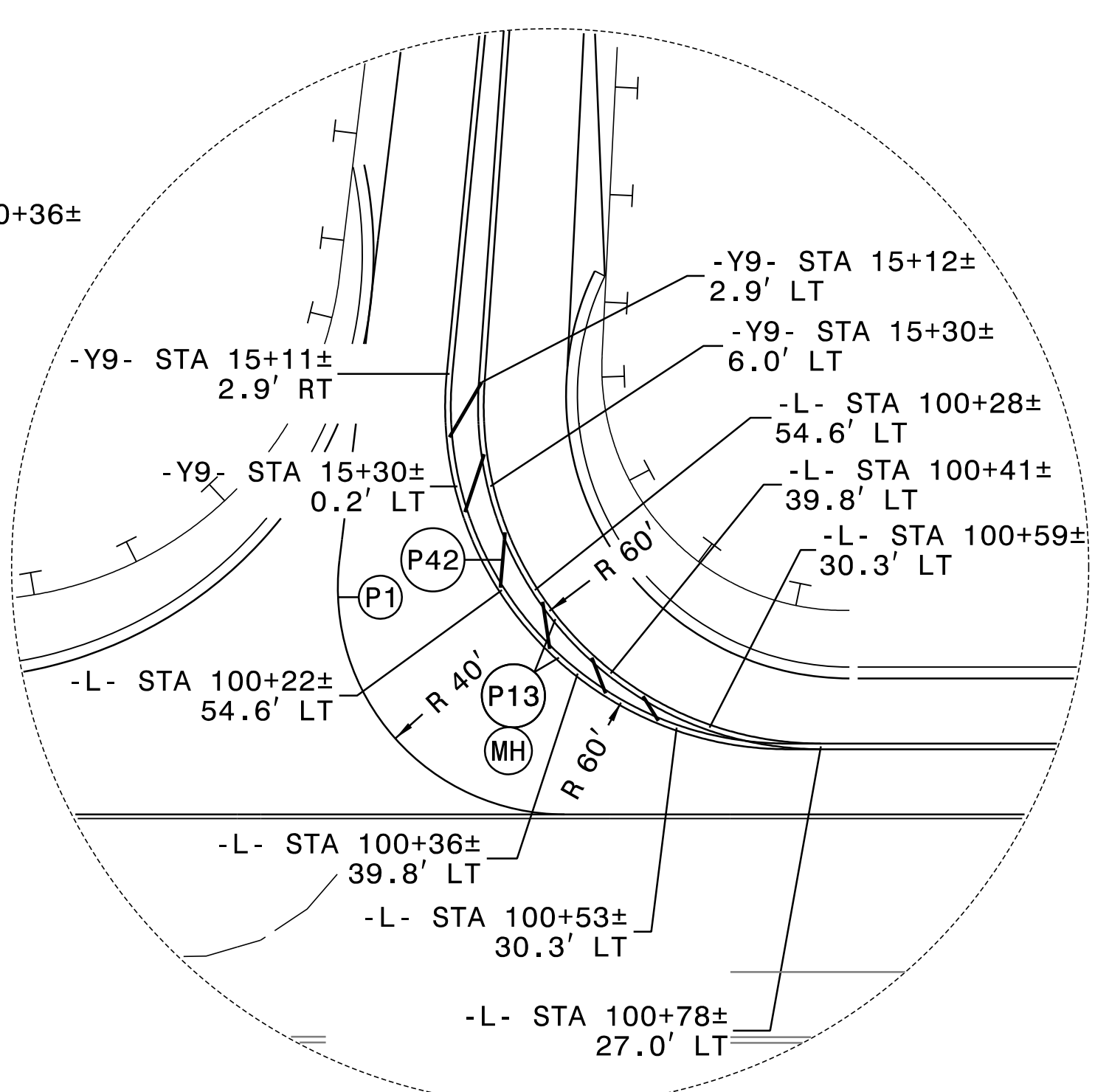
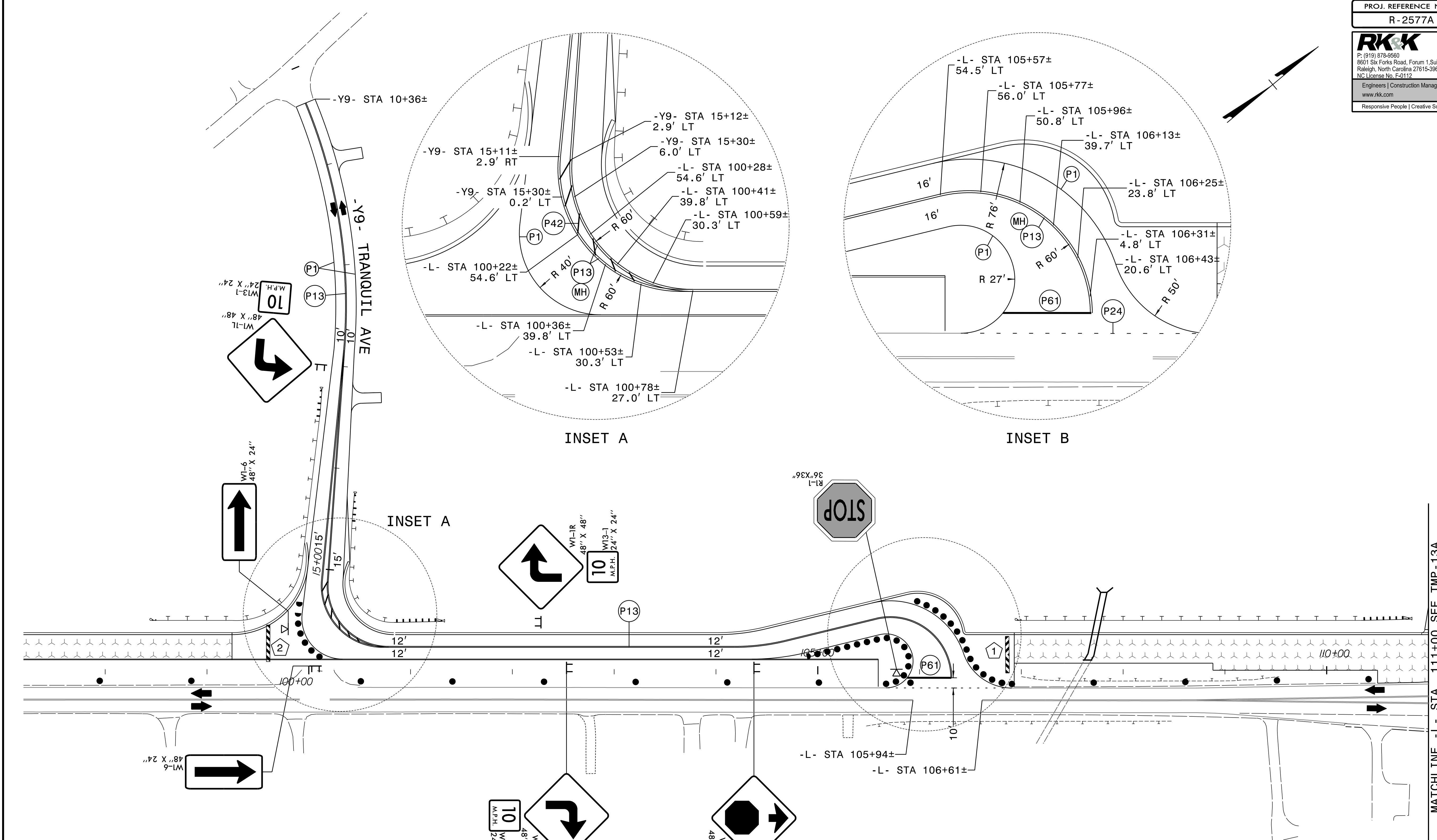
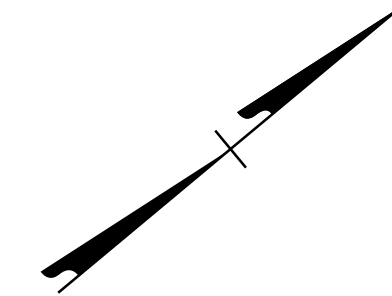


EXISTING LANE WIDTHS UNLESS OTHERWISE INDICATED  
 SEE TMP-2C FOR TRANQUIL AVE OFFSITE DETOUR DETAIL.  
 SEE TMP-12A FOR PAVEMENT MARKINGS PRIOR TO OPENING TRANQUIL AVE

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 KEVIN W. BISHY  
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PHASE I - STEP 2



APPLY PAVEMENT MARKERS AT 10' INTERVALS ON RADII

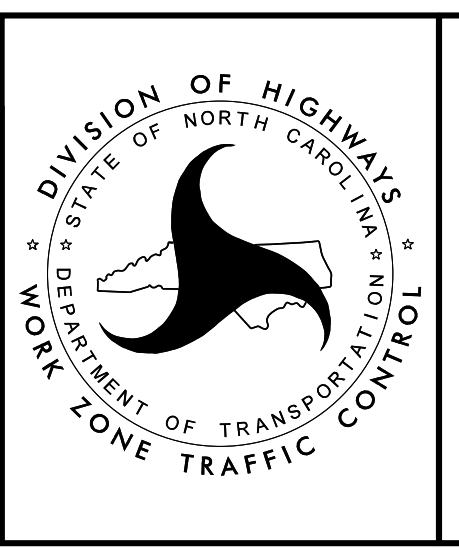
MATCHLINE -L- STA. 111+00 SEE TMP-13A

3/7/2024  
R-2577A\_tmp\_psh12A.dgn  
Robby

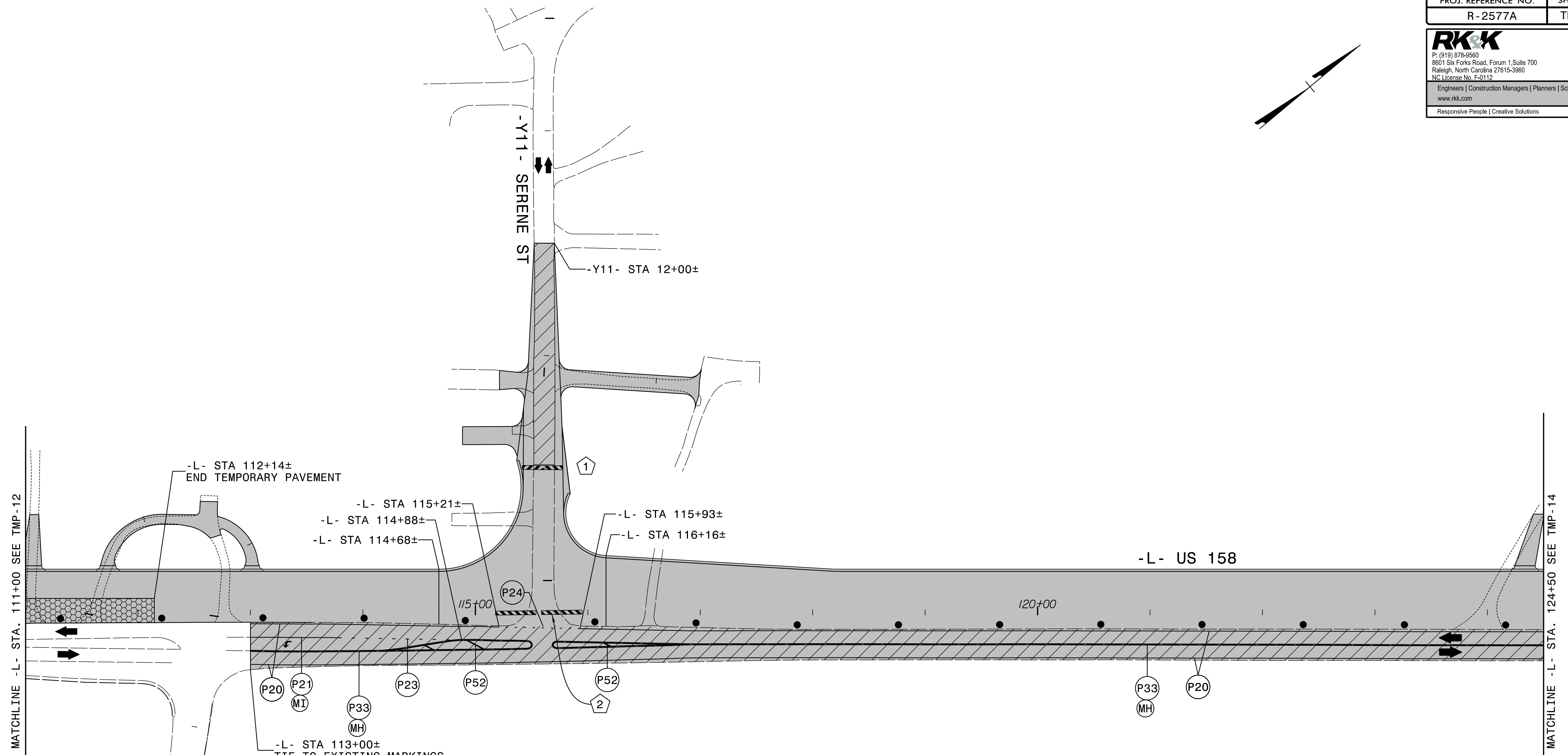
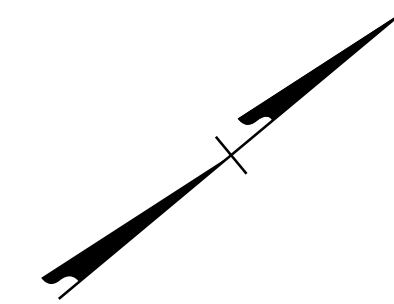
APPROVED: *Kevin Bishy*  
 DATE: 3/7/2024

SEAL

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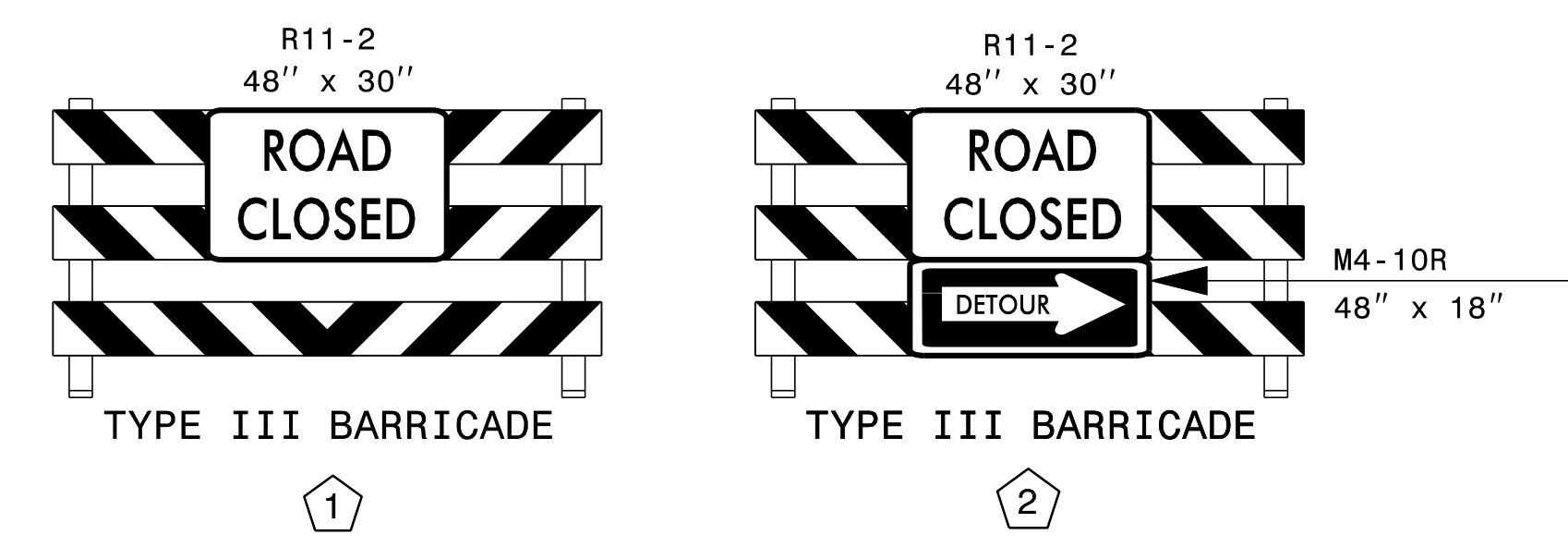


PHASE I - STEP 2



MATCHLINE -L- STA. 111+00 SEE TMP-12

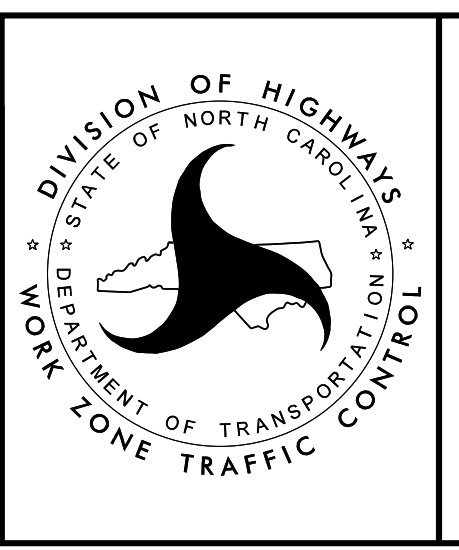
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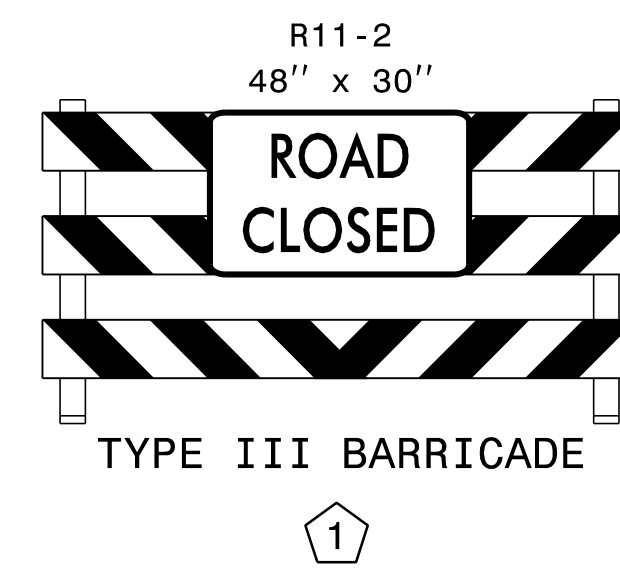
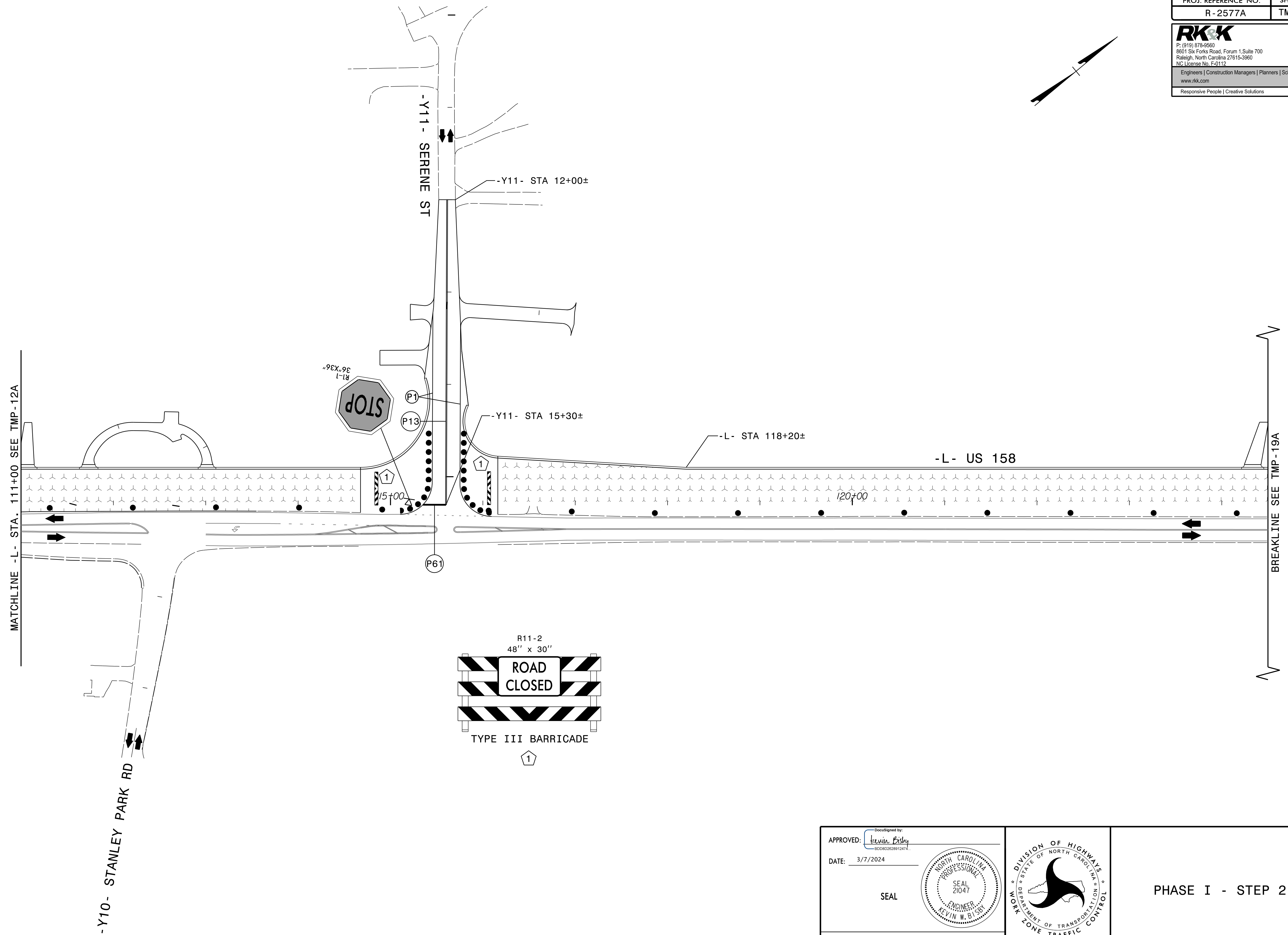
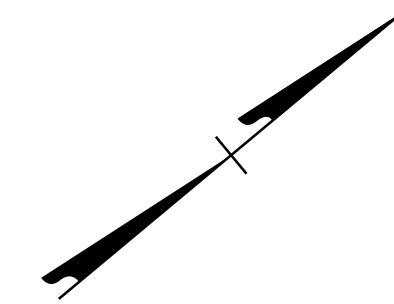
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EXISTING LANE WIDTHS UNLESS OTHERWISE INDICATED  
 SEE TMP-2D FOR SERENE ST OFFSITE DETOUR DETAIL  
 SEE TMP-13A FOR PAVEMENT MARKINGS PRIOR TO OPENING SERENE ST

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 DATE: 3/7/2024  
 SEAL



PHASE I - STEP 2

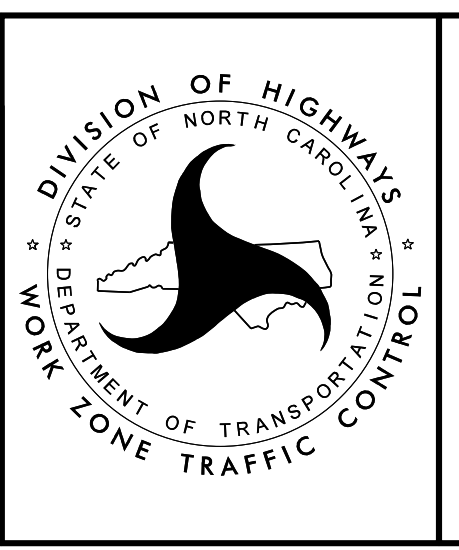


3/7/2024  
 R-2577A\_tmp-psht13A.dgn  
 KRobby

APPROVED: *Kevin Bisby*  
DocuSigned by: Kevin Bisby  
 B0C802628912472

DATE: 3/7/2024

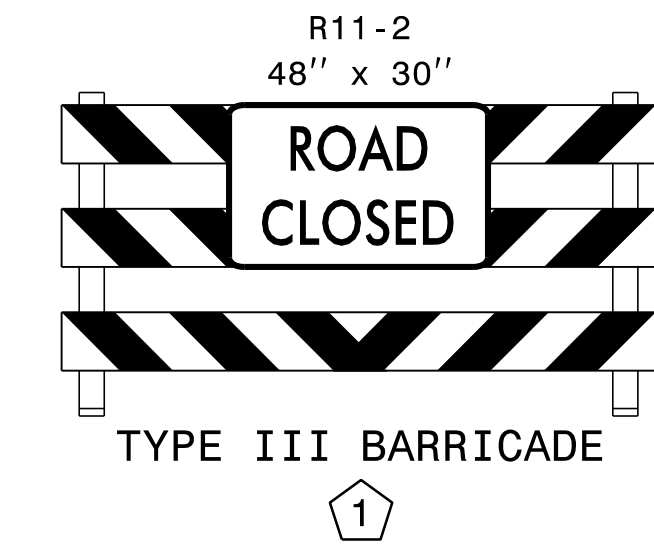
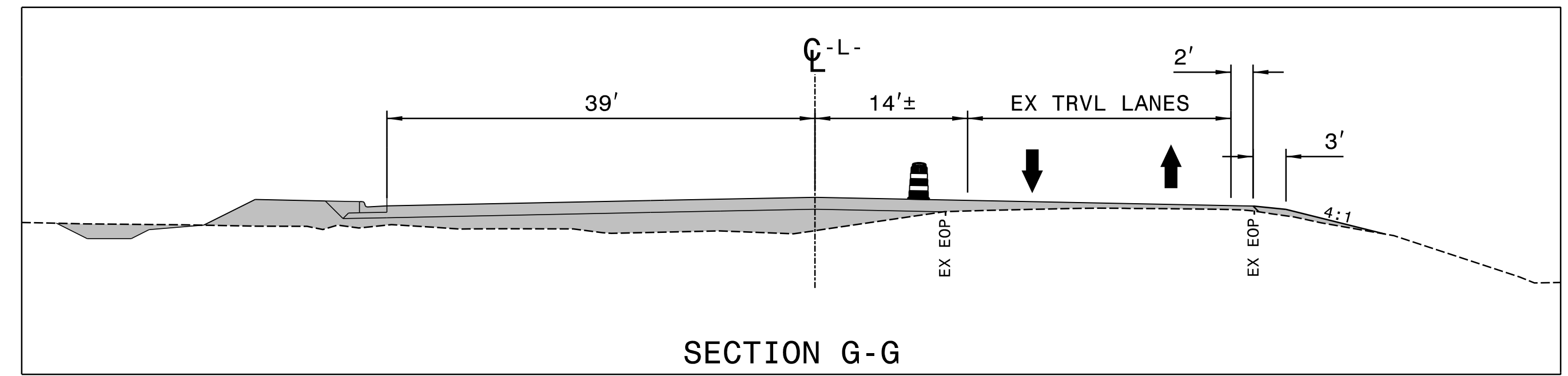
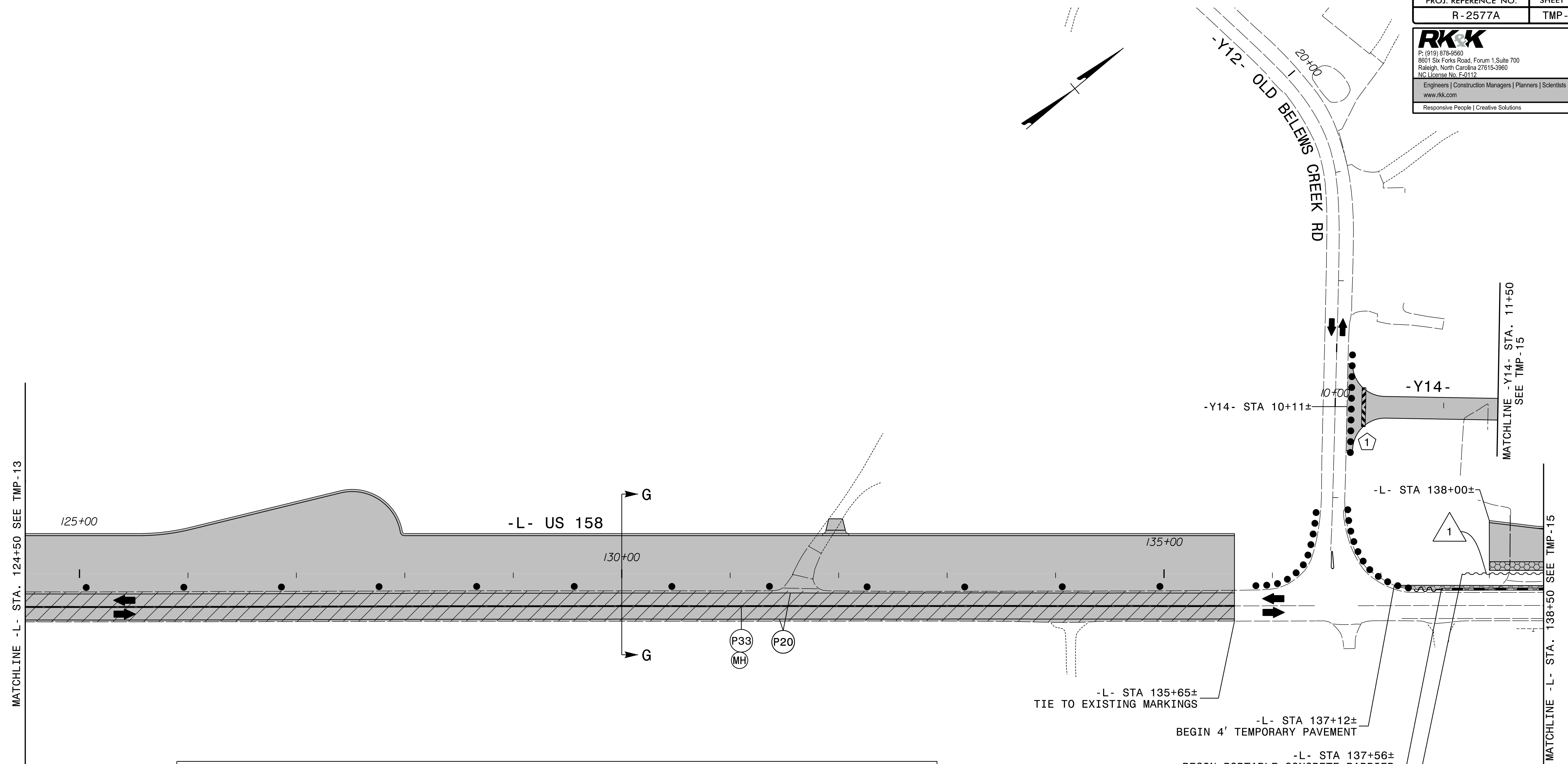
SEAL



PHASE I - STEP 2

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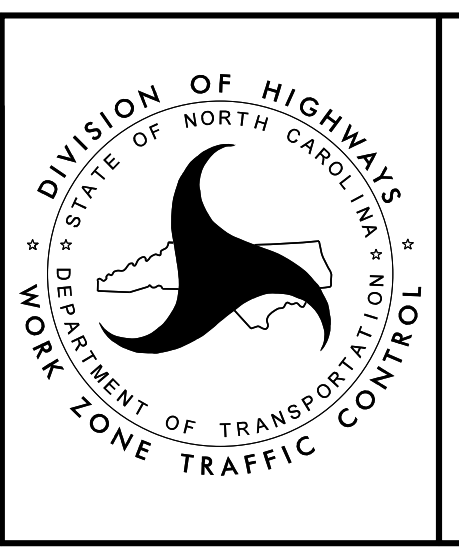


SHORING ID	BEGIN	END	ESTIMATED AVG HEIGHT (ft)	ESTIMATED MAX HEIGHT (ft)	AREA (SF)	EXISTING LANE WIDTHS UNLESS OTHERWISE INDICATED
1	-L- STA 137+75± LT	-L- STA 139+81± LT	9.7	12	1999	1 SEE TMP-2A FOR SHORING DATA

APPROVED: *Kevin Bishy*  
DocuSigned by: Kevin Bishy 800802628912472

DATE: 3/7/2024

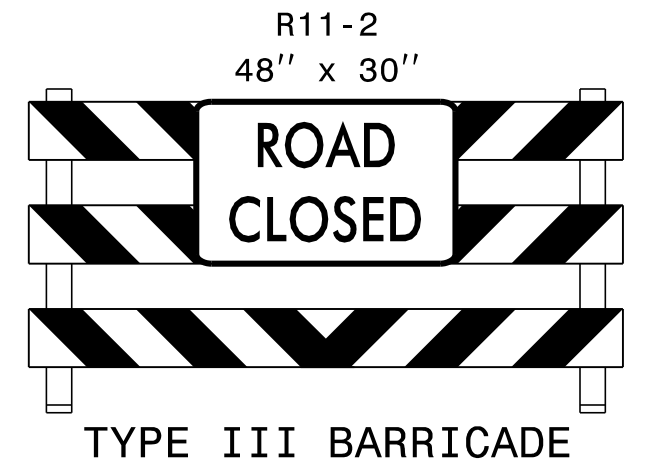
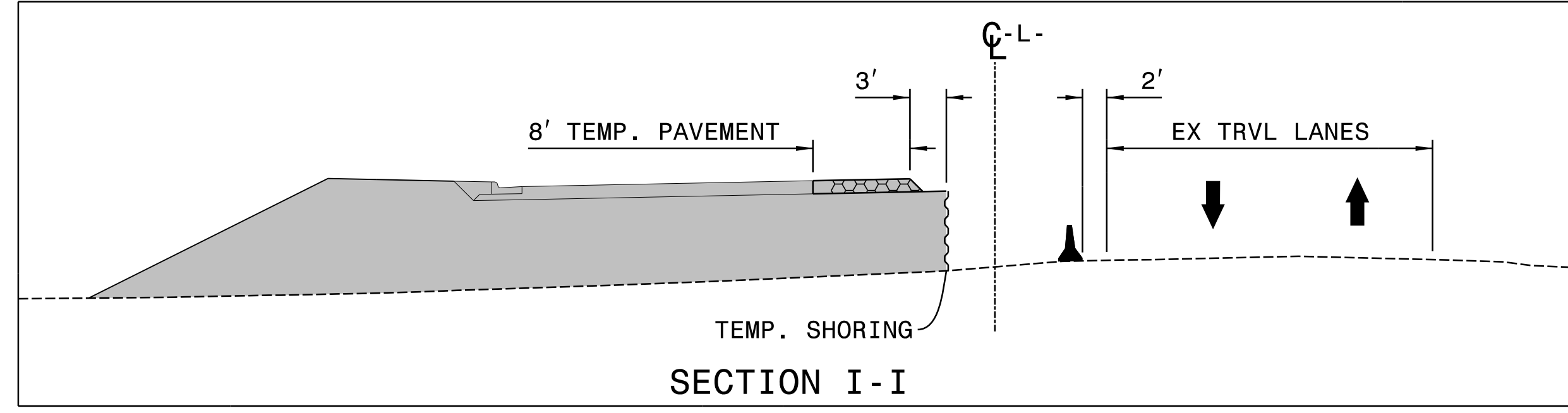
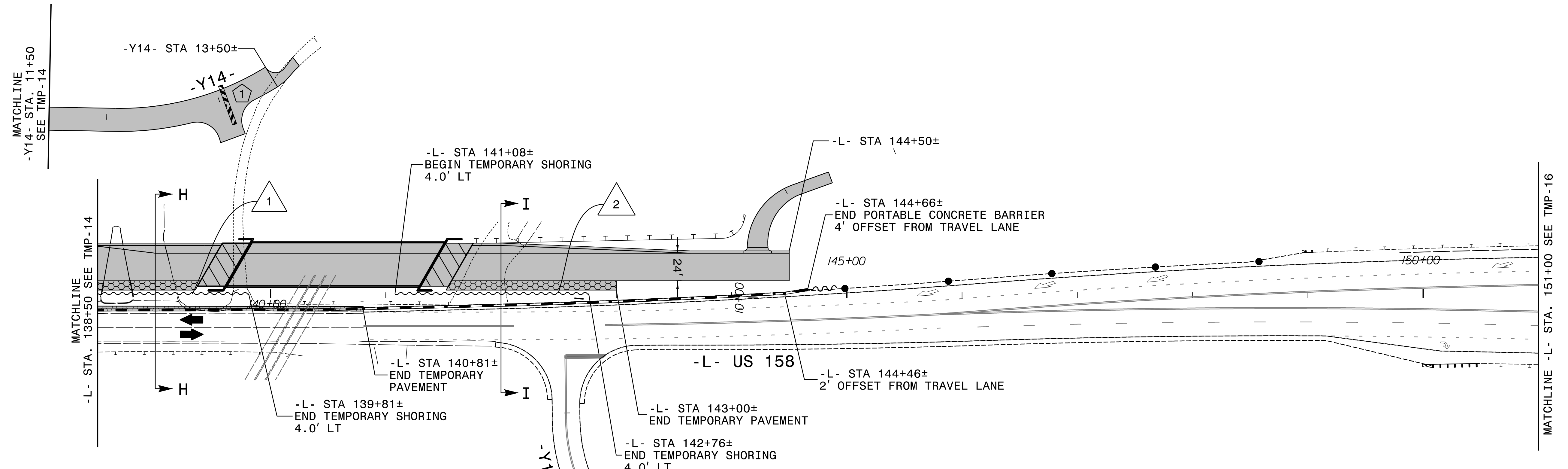
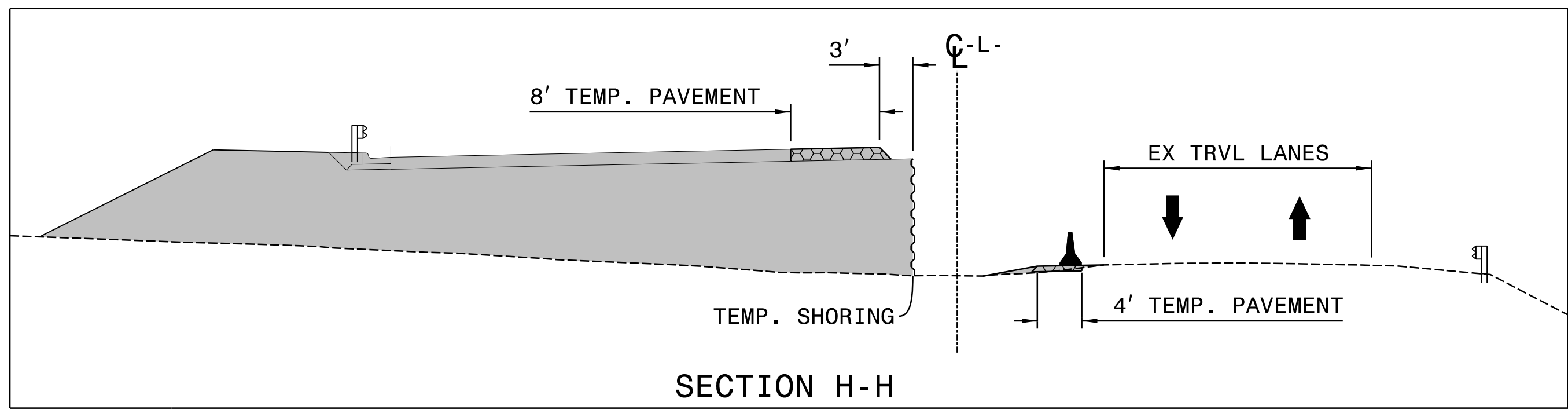
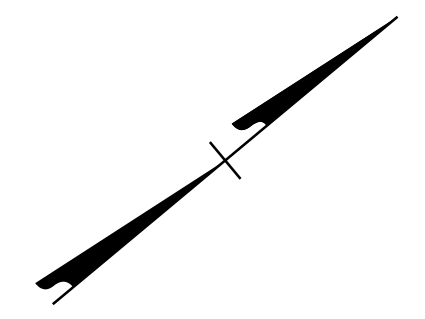
SEAL



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3/7/2024  
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 R01bby

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SHORING ID	BEGIN	END	ESTIMATED AVG HEIGHT (ft)	ESTIMATED MAX HEIGHT (ft)	AREA (SF)
1	-L- STA 137+75± LT	-L- STA 139+81± LT	9.7	12	1999
2	-L- STA 141+08± LT	-L- STA 142+76± LT	8.2	9.9	1378

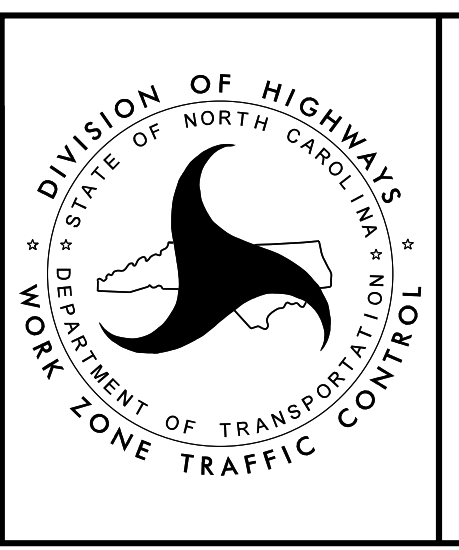
1 2 SEE TMP-2A FOR SHORING DATA

APPROVED: *Kevin Bishy*  
 DATE: 3/7/2024

SEAL

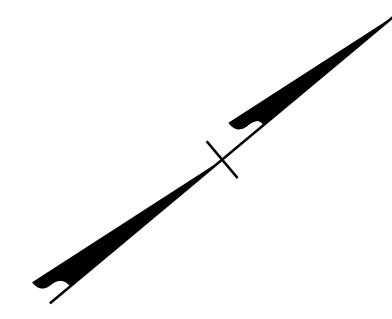
**PROFESSIONAL ENGINEER**  
 KEVIN W. BISHY  
 21047

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PHASE I - STEP 2

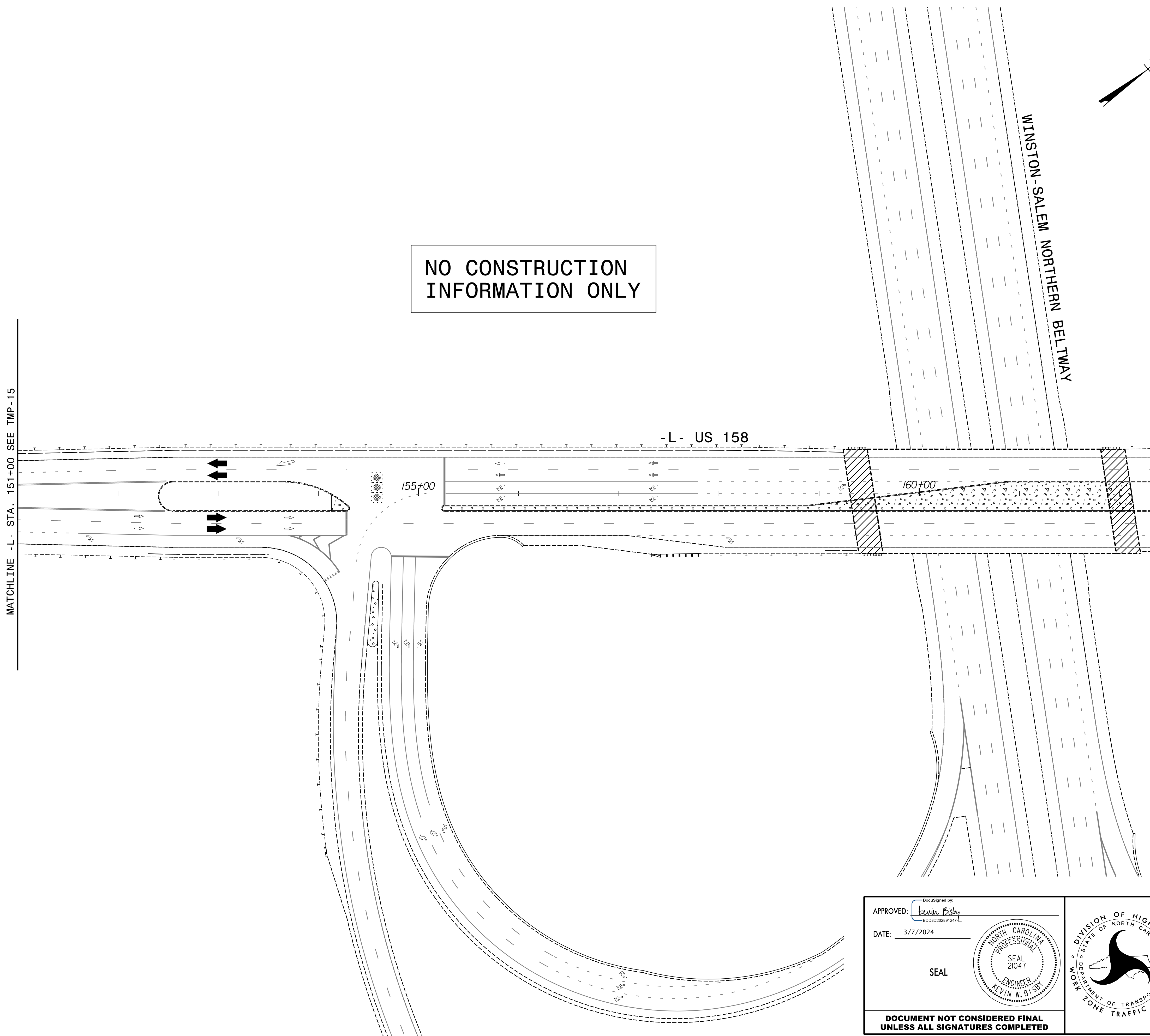
3/7/2024  
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 Robby



NO CONSTRUCTION  
 INFORMATION ONLY

MATCHLINE -L- STA. 151+00 SEE TMP - 15

MATCHLINE -L- STA. 164+00 SEE TMP - 17

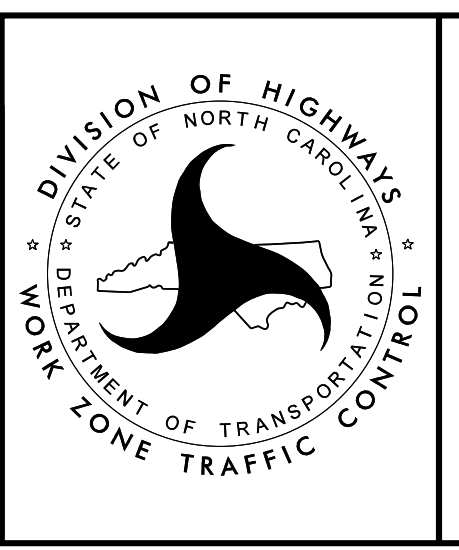


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 KRobby

APPROVED: *Kevin Bishop*  
DocuSigned by: Kevin Bishop  
 8D0802628912472

DATE: 3/7/2024

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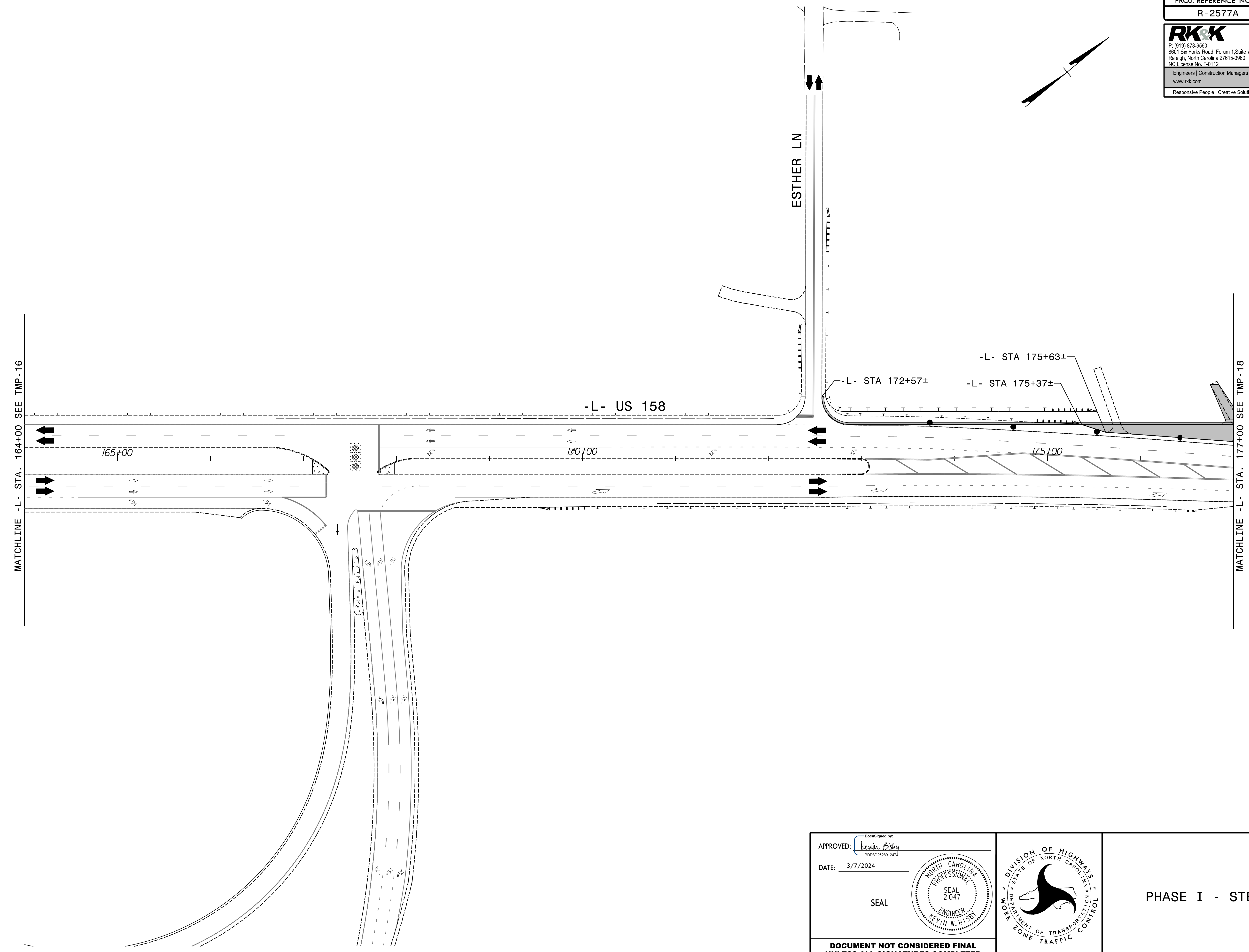
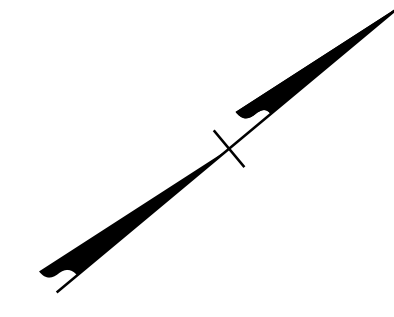


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PROJ. REFERENCE NO.	SHEET NO.
R-2577A	TMP-17

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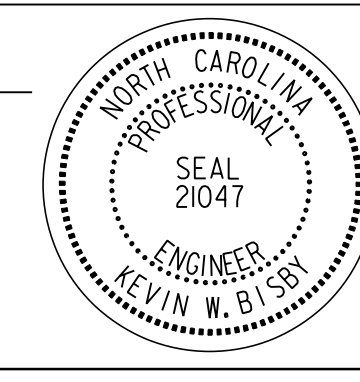
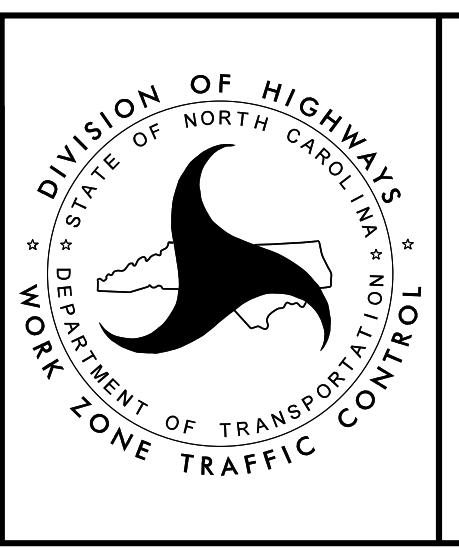


3/7/2024  
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APPROVED:   
DocuSigned by: Kevin W. Bisby  
 B0C8D2628912472

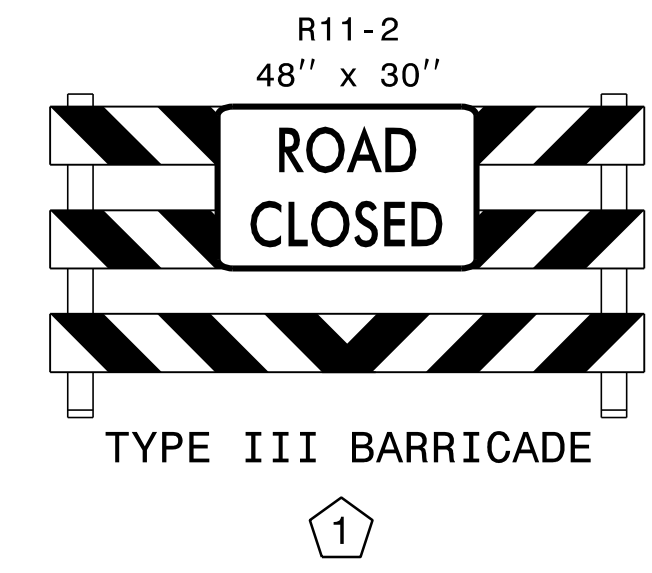
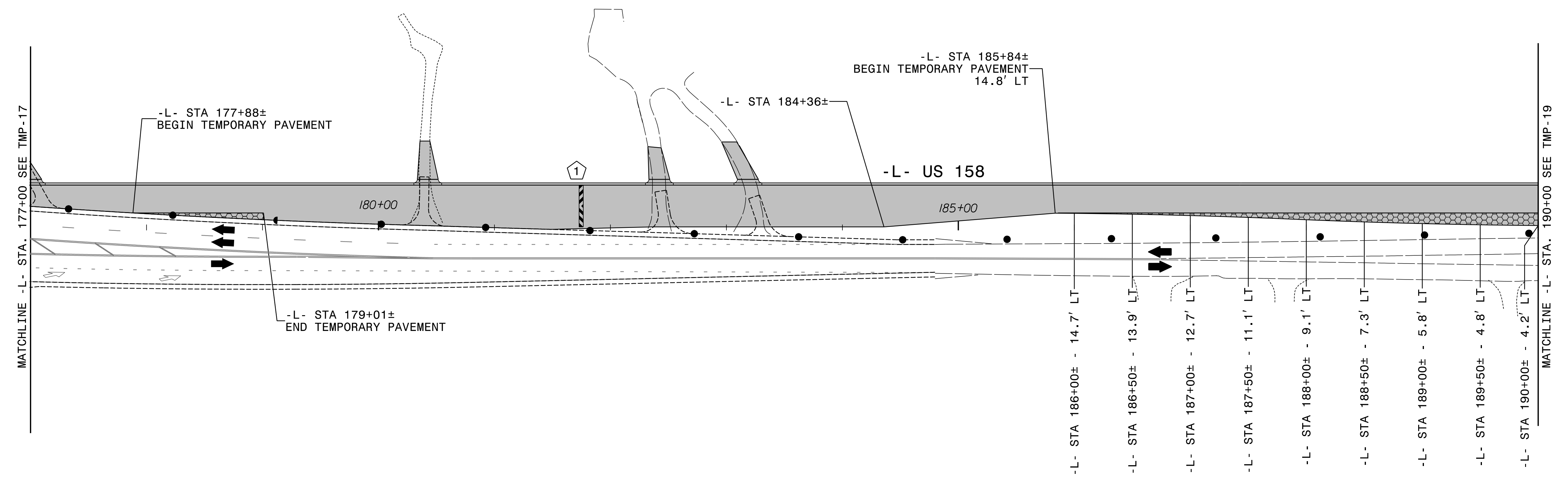
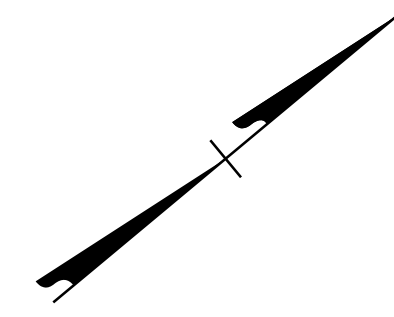
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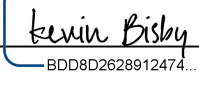



PHASE I - STEP 2

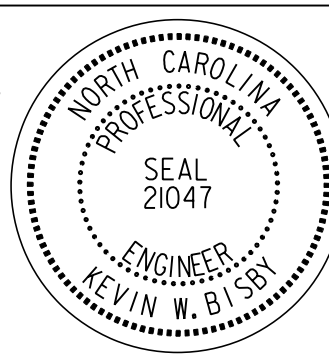
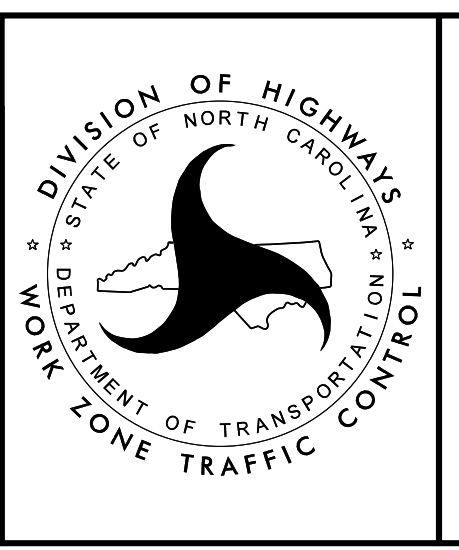
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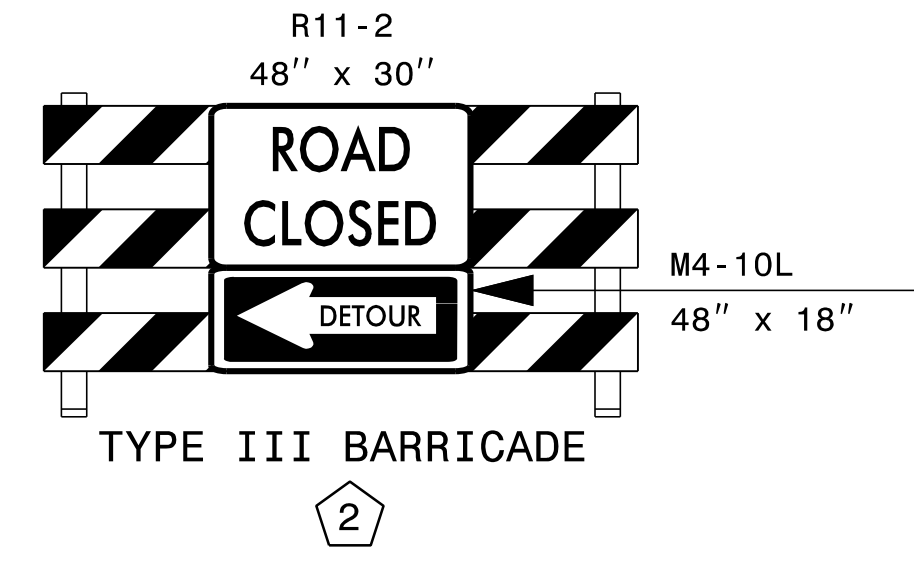
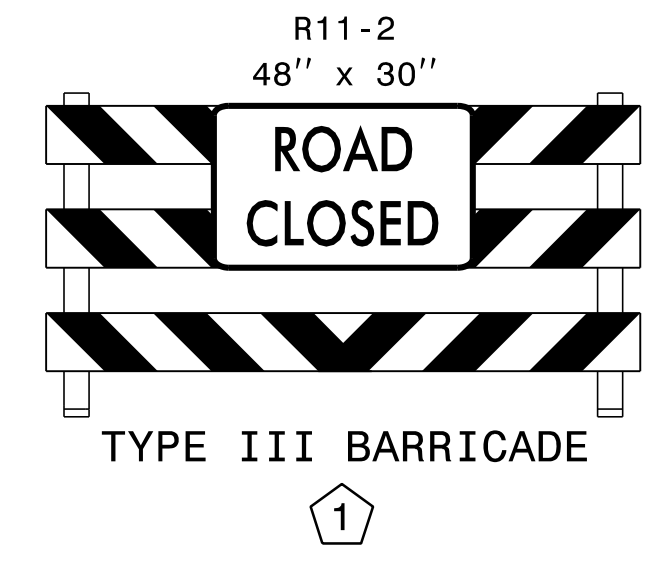
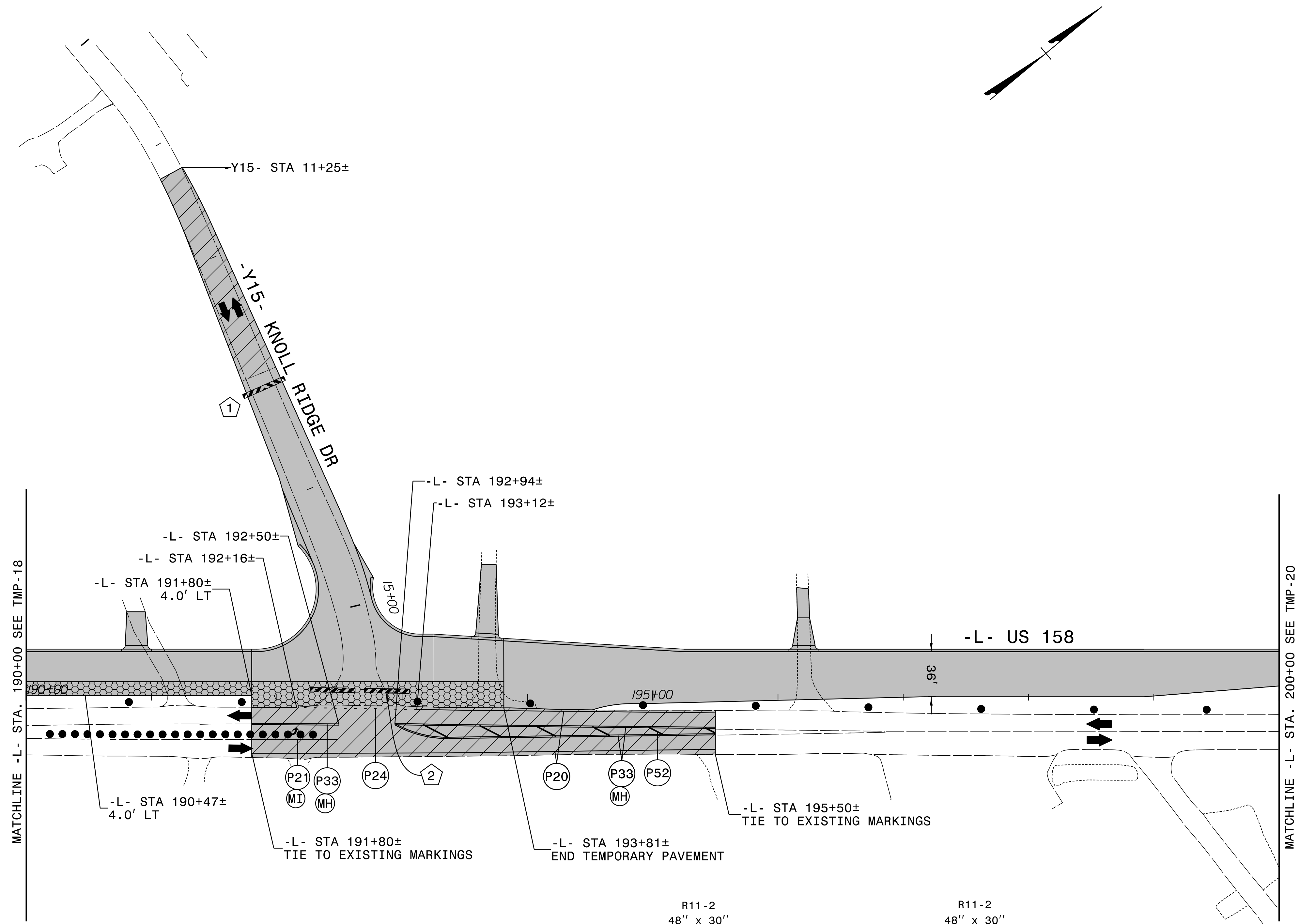
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 DATE: 3/7/2024

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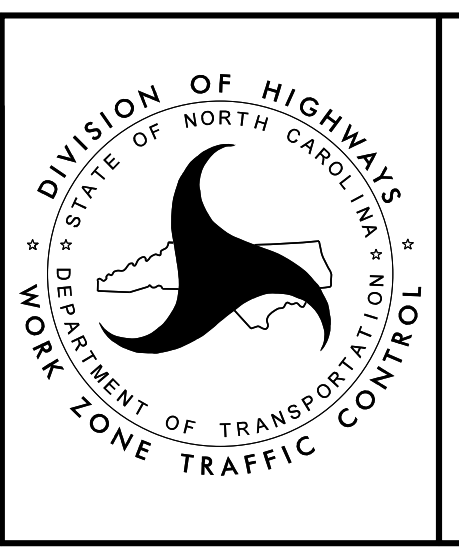
PHASE I - STEP 2

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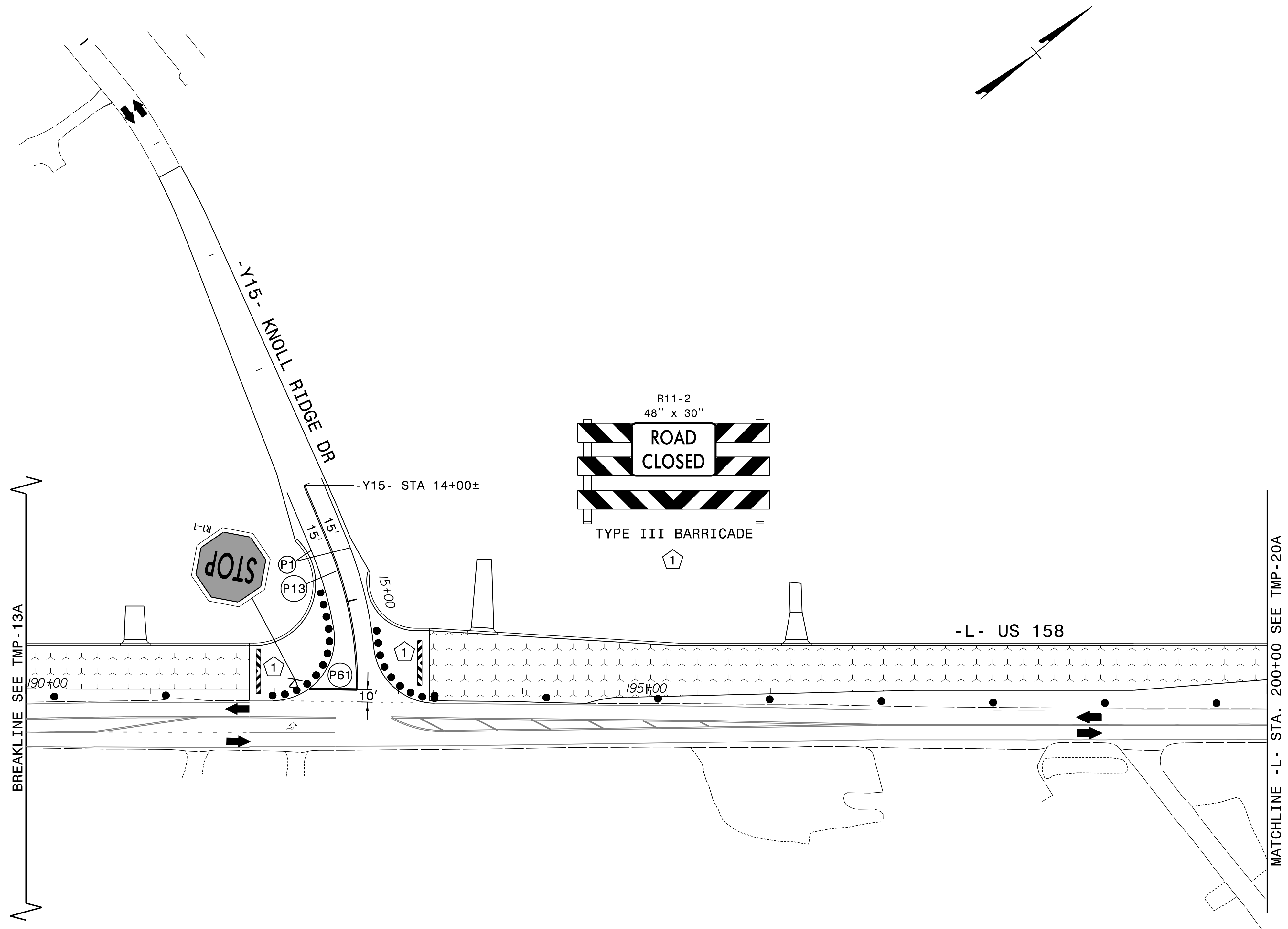
EXISTING LANE WIDTHS UNLESS OTHERWISE INDICATED  
 SEE TMP-2E FOR KNOLL RIDGE DR OFFSITE DETOUR DETAIL  
 SEE TMP-19A FOR PAVEMENT MARKINGS PRIOR TO OPENING KNOLL RIDGE DR

APPROVED: *Kevin Bishy*  
 DATE: 3/7/2024  
 SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 KEVIN W. BISHY  
 SEAL 21047



PHASE I - STEP 2

3/7/2024  
 R-2577A\_tmp\_psh19.dgn  
 KRobby

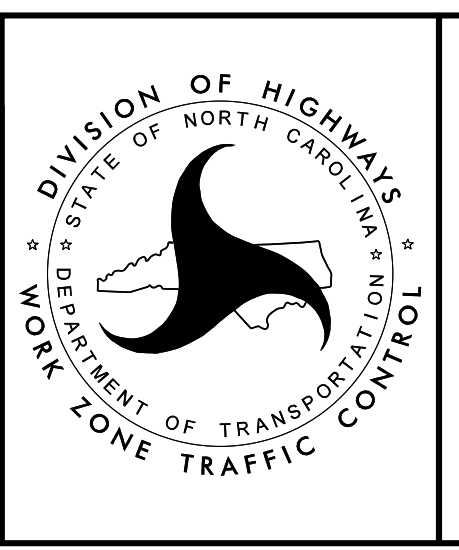


3/7/2024  
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 Kolsby

APPROVED: *Kevin Bishy*  
DocuSigned by: Kevin Bishy  
 B0C802628912472

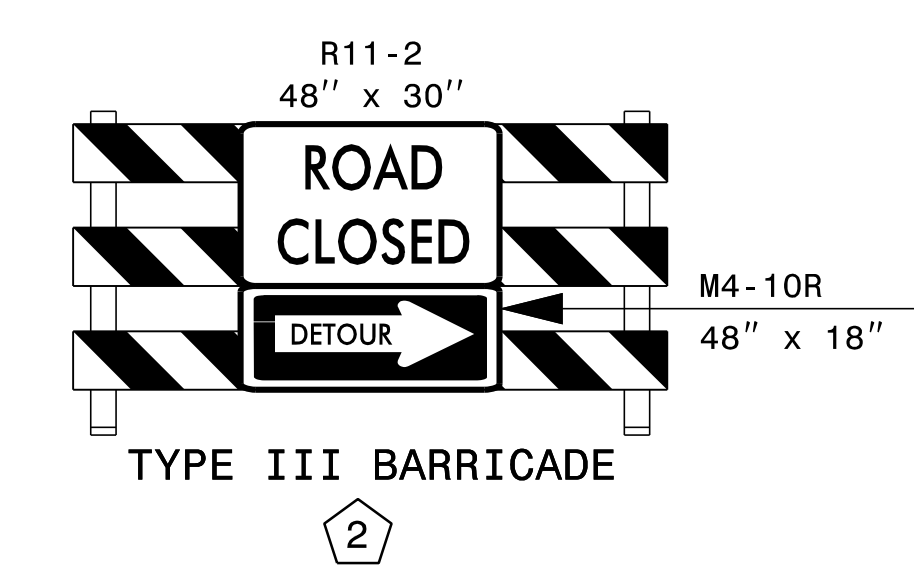
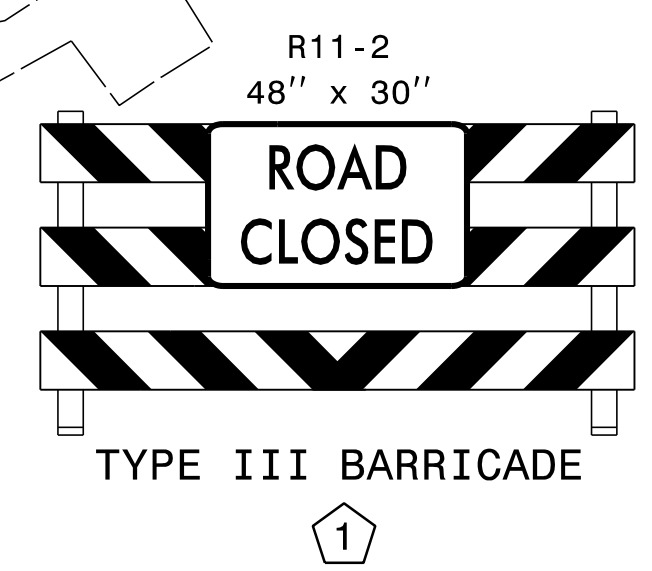
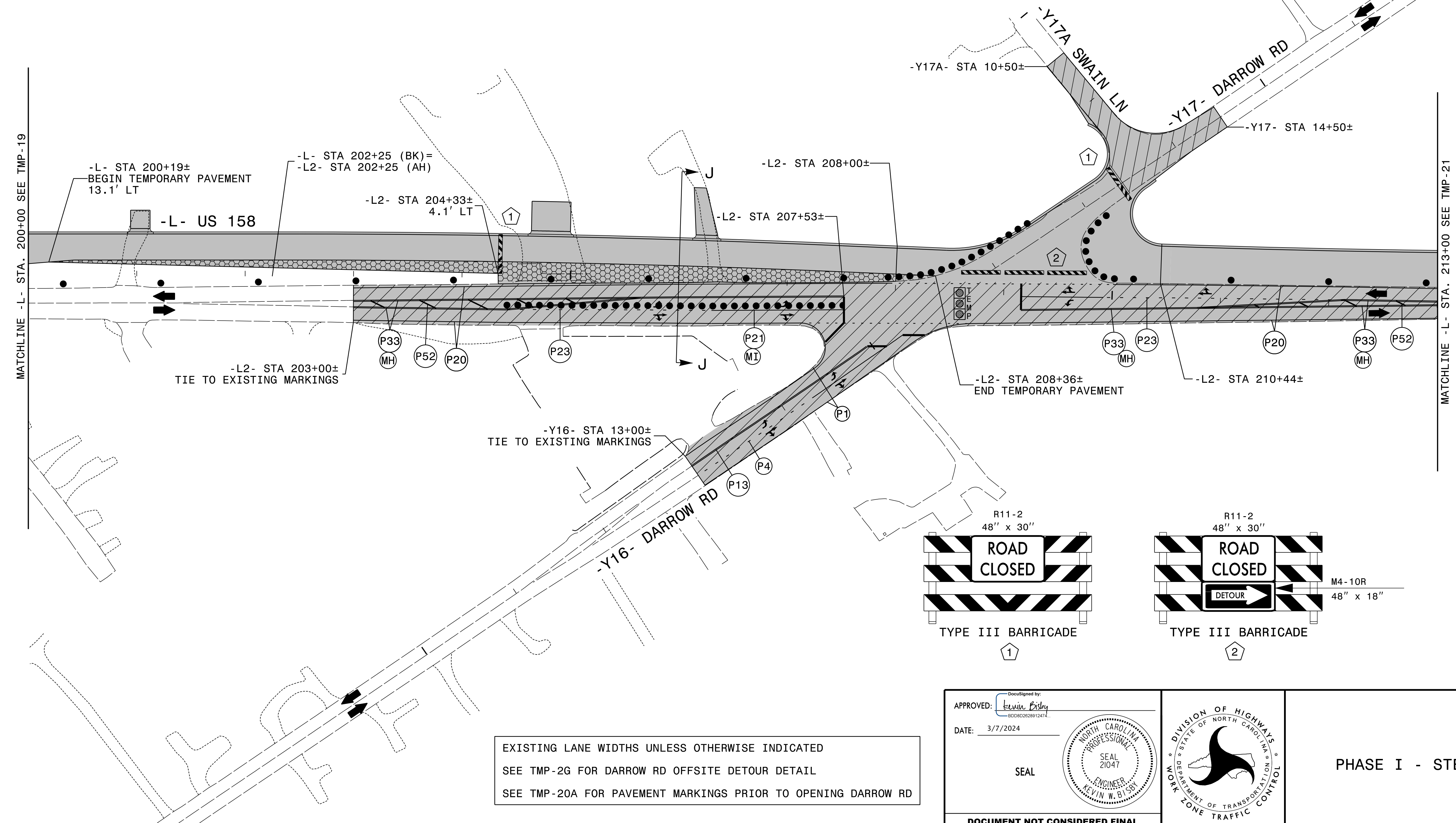
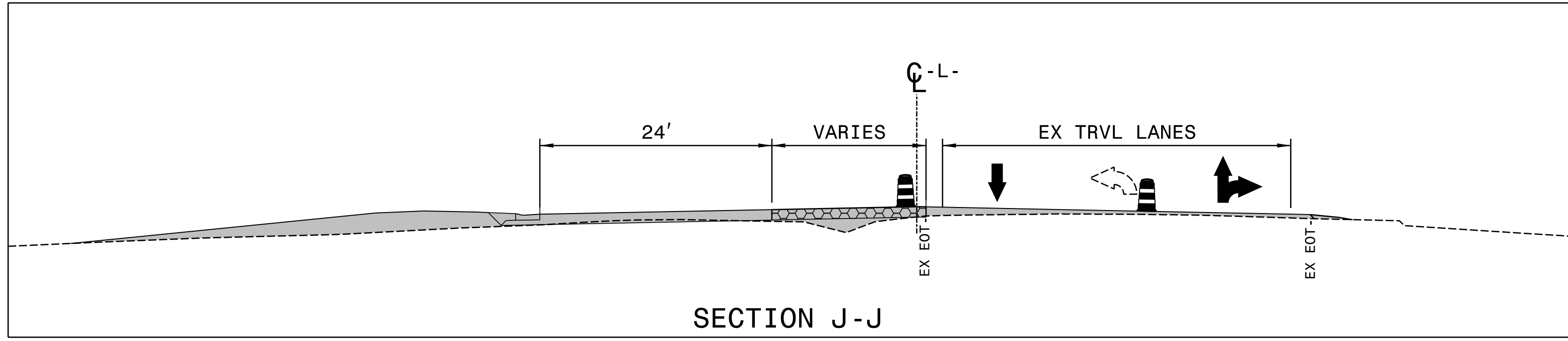
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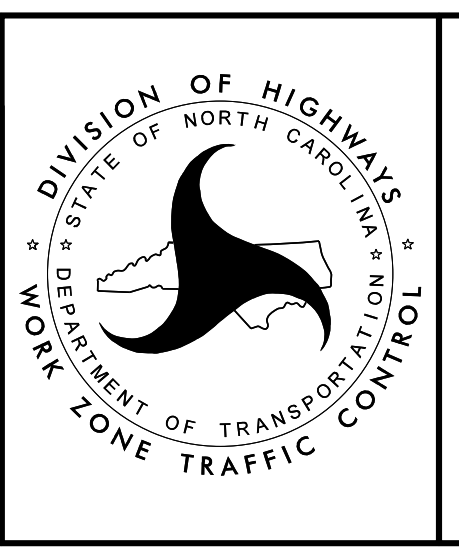
PHASE I - STEP 2

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EXISTING LANE WIDTHS UNLESS OTHERWISE INDICATED  
 SEE TMP-2G FOR DARROW RD OFFSITE DETOUR DETAIL  
 SEE TMP-20A FOR PAVEMENT MARKINGS PRIOR TO OPENING DARROW RD

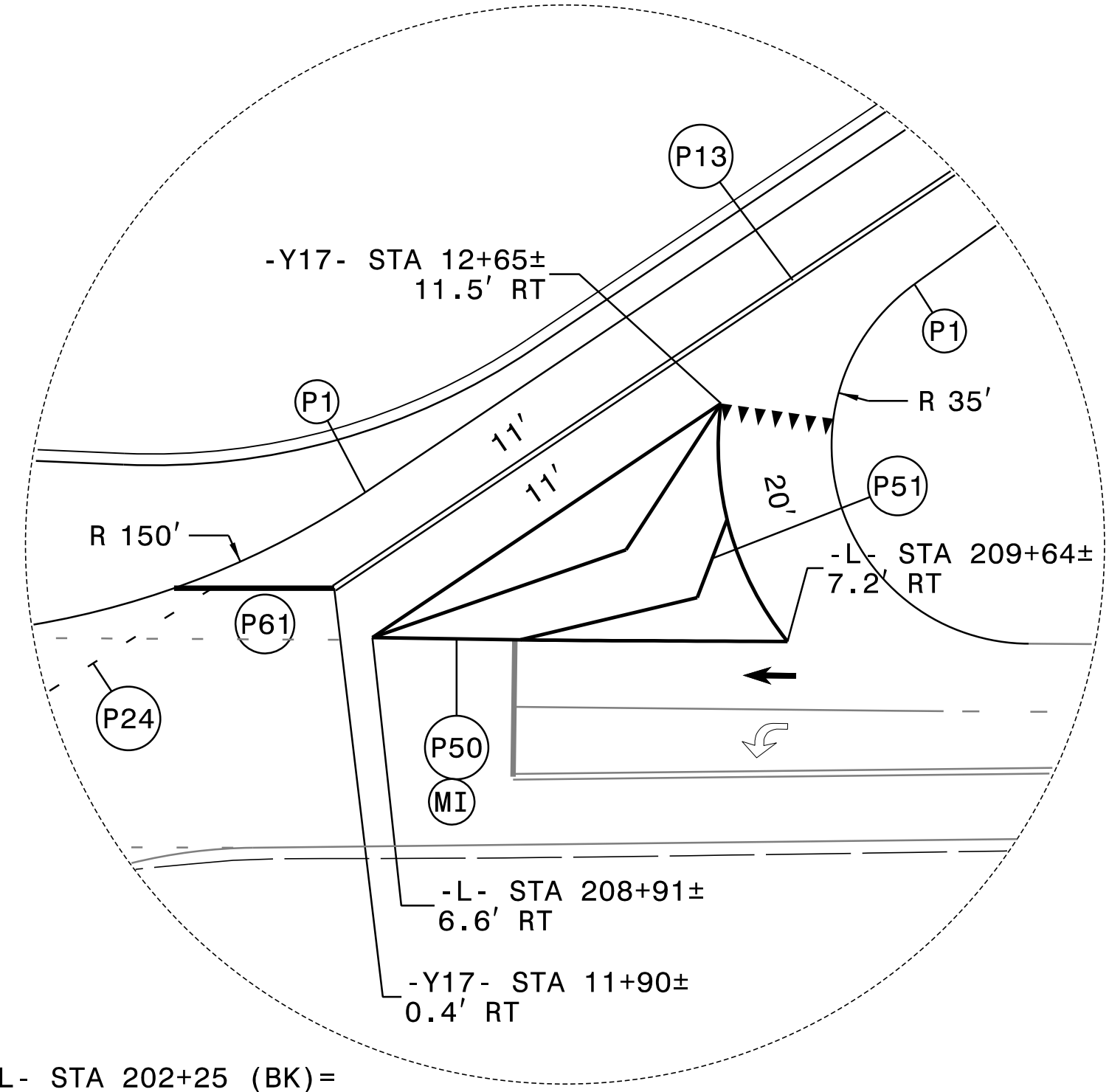
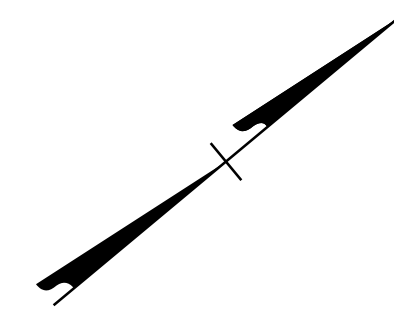
APPROVED: *Kevin Bishy*  
 DATE: 3/7/2024  
 SEAL  
 DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED



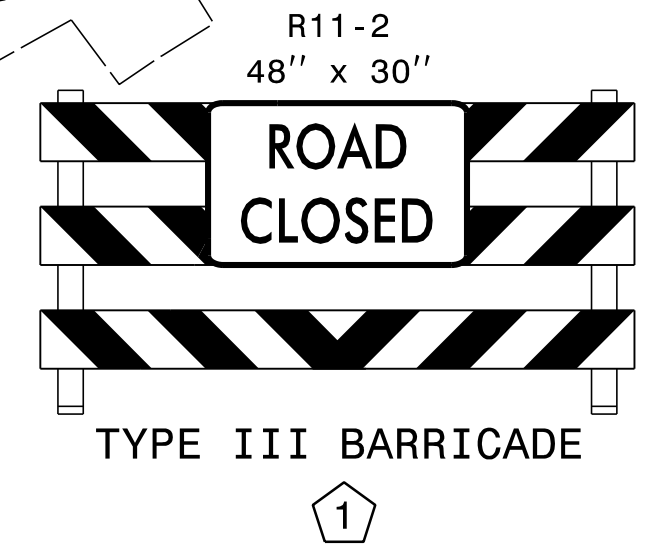
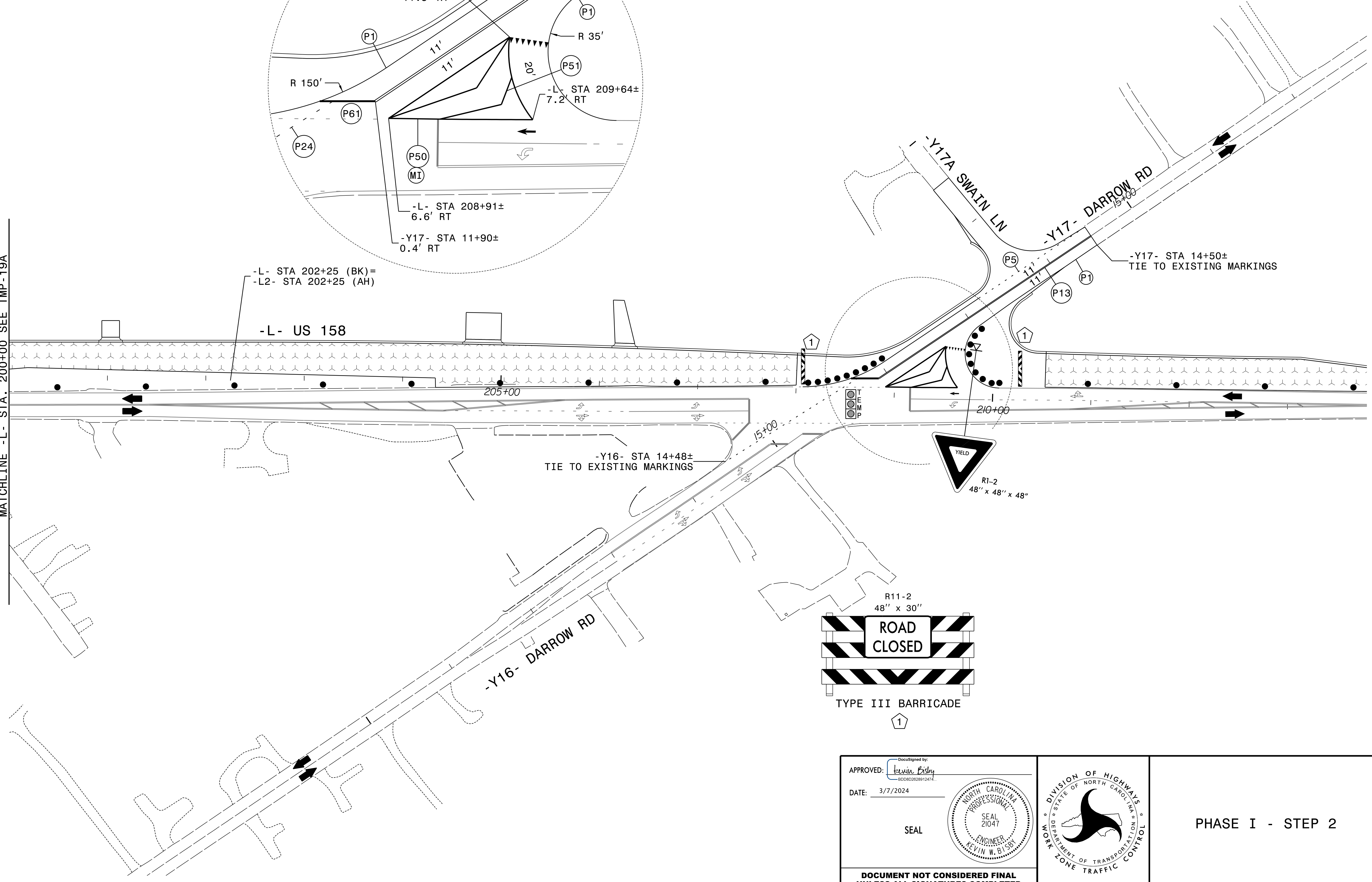
DIVISION OF HIGHWAYS  
 NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 WORK ZONE TRAFFIC CONTROL  
 PHASE I - STEP 2

3/7/2024  
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 R01sby

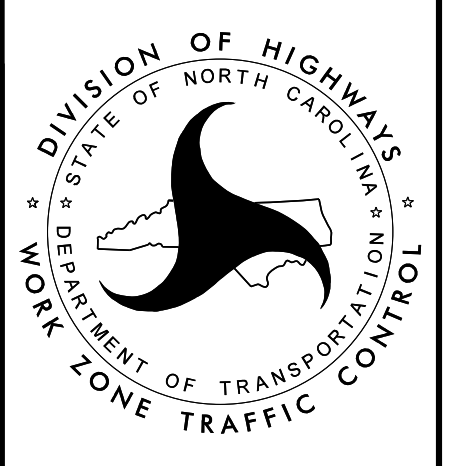
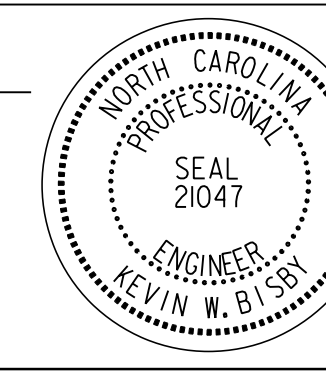




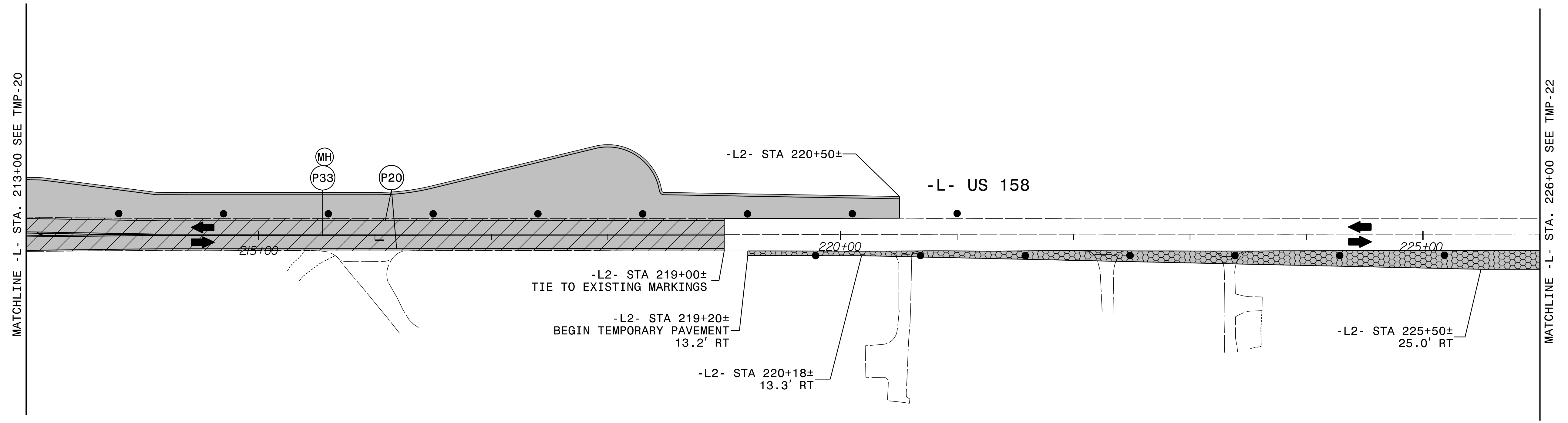
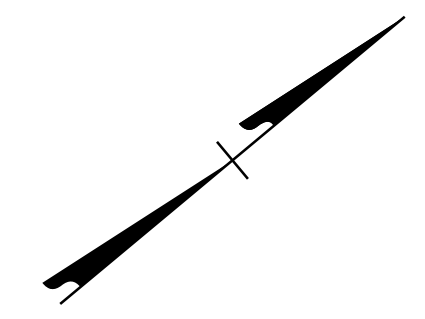
MATCHLINE -L- STA. 200+00 SEE TMP-19A



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 SEAL  
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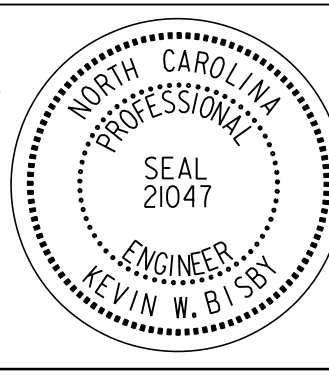



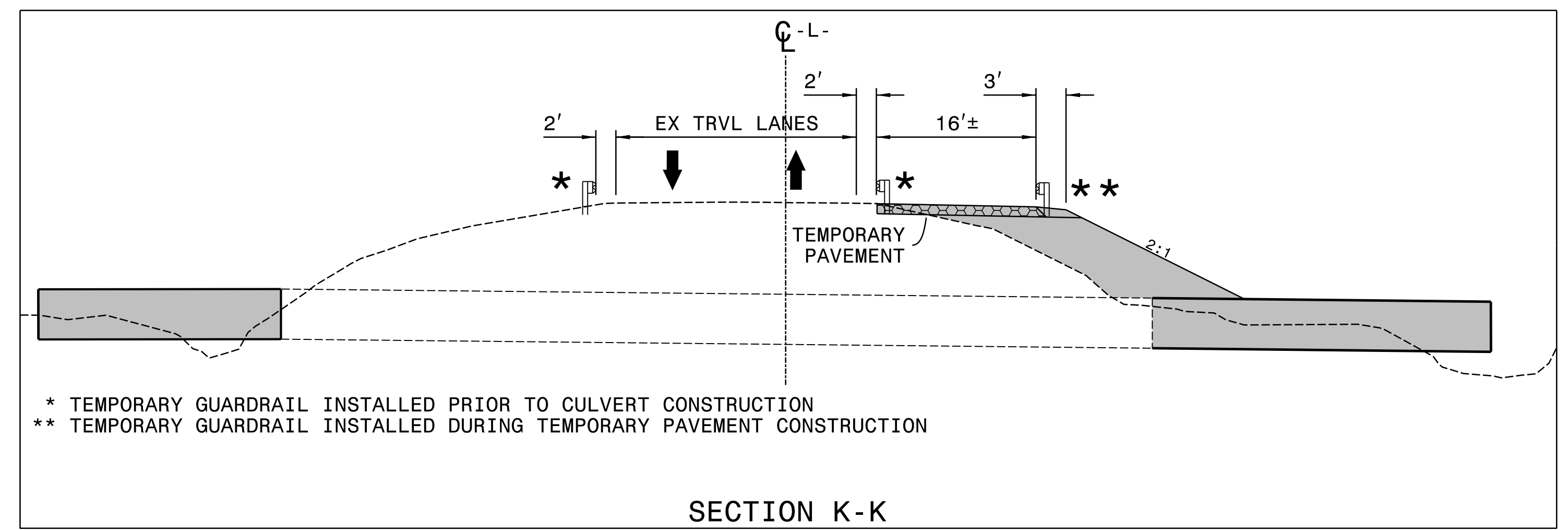
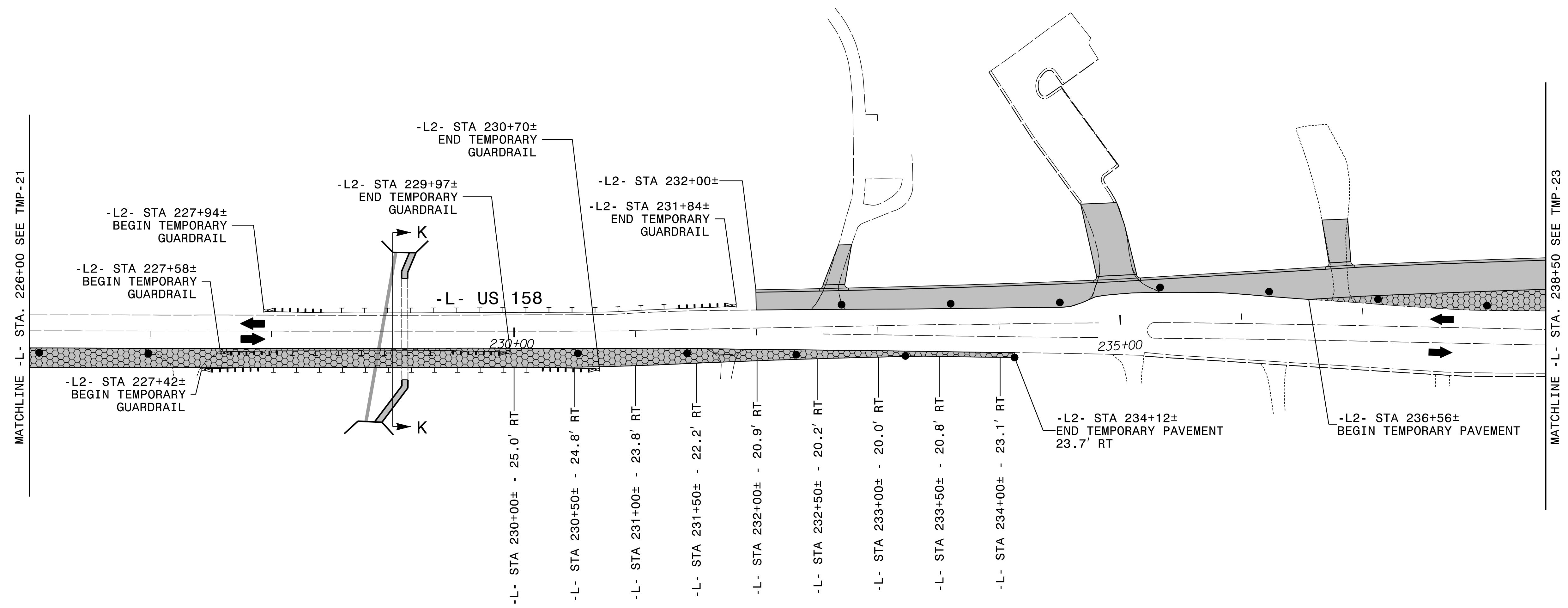
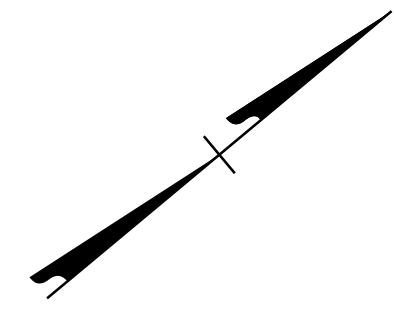
PHASE I - STEP 2



3/7/2024  
 R-2577A\_tmp\_psh21.dgn  
 Kolsby

EXISTING LANE WIDTHS UNLESS OTHERWISE INDICATED

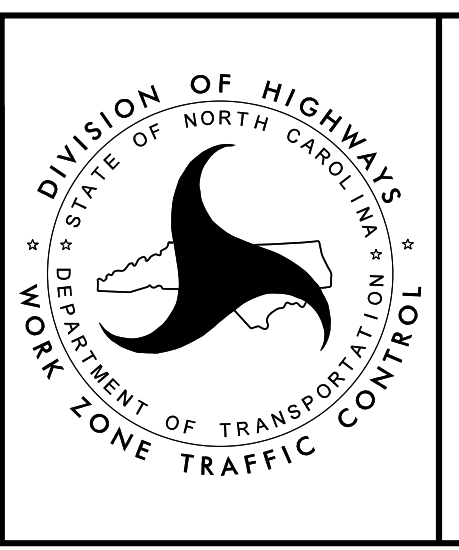
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APPROVED: *Kevin Bishy*  
 DATE: 3/7/2024

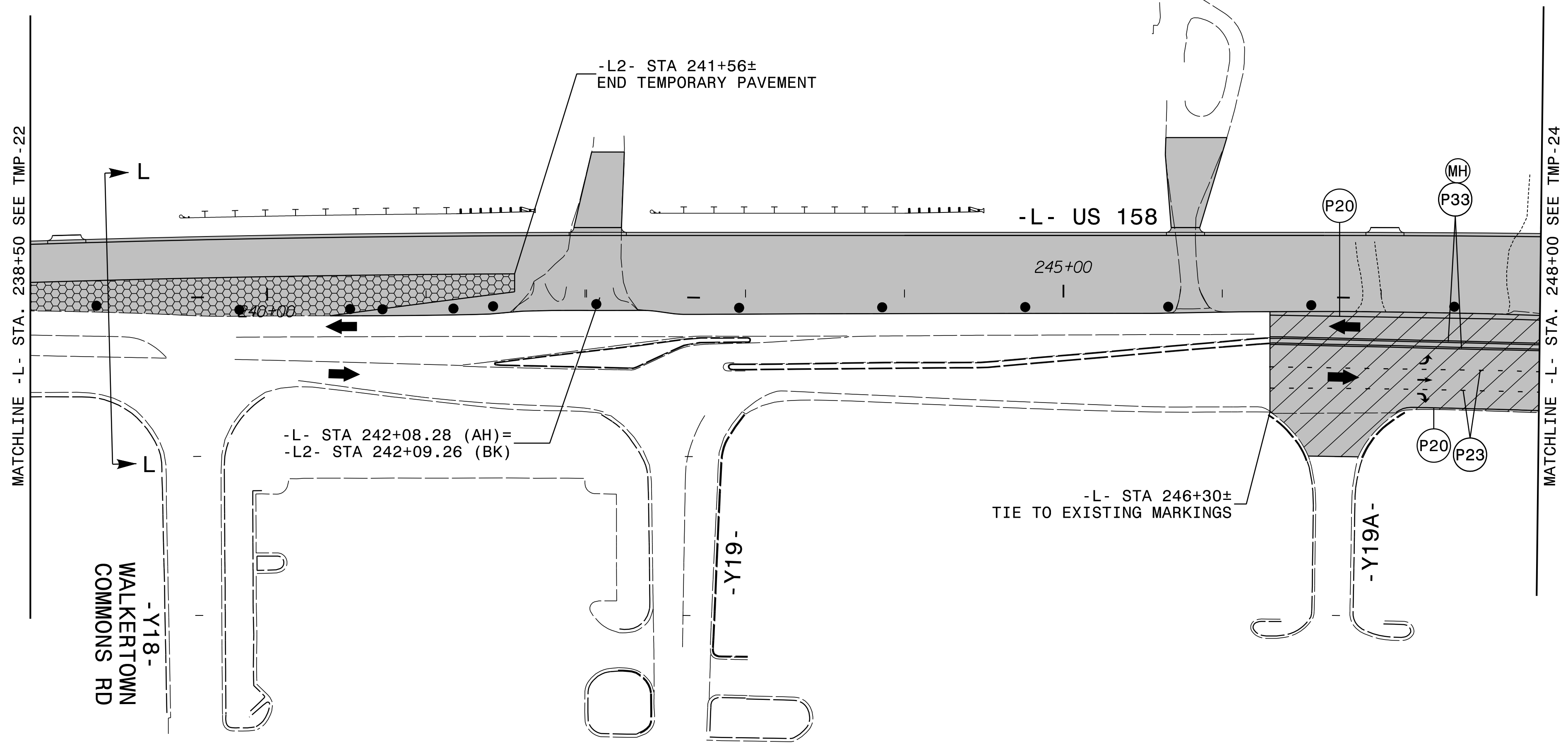
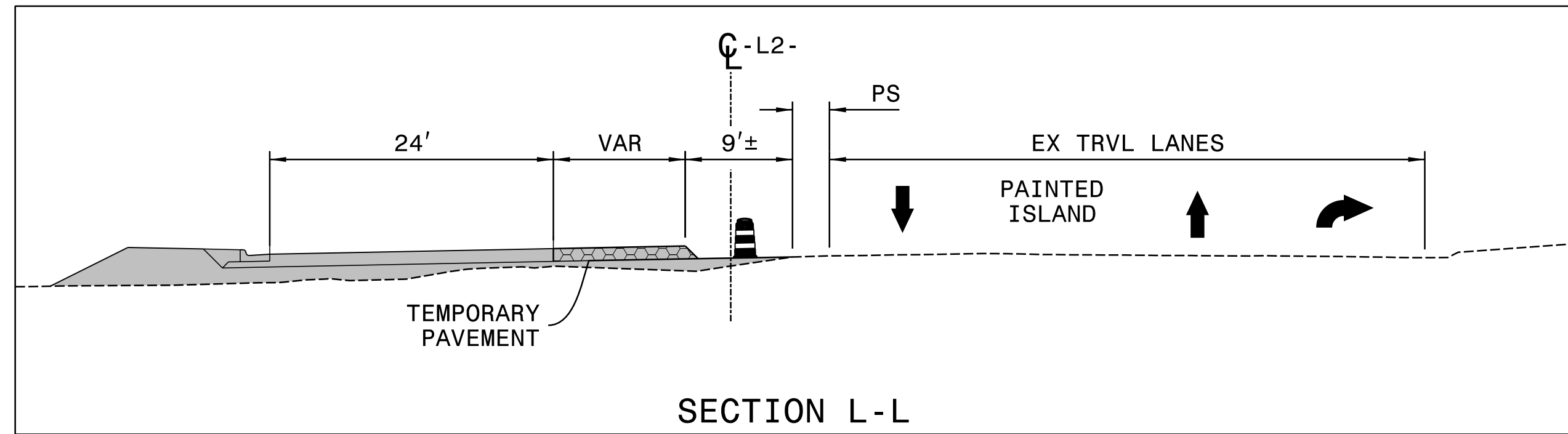
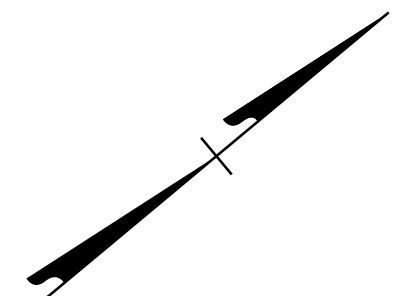
SEAL

Professional Engineer Seal for Kevin W. Bishy, North Carolina License No. 21047.



PHASE I - STEP 2

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 KRobby

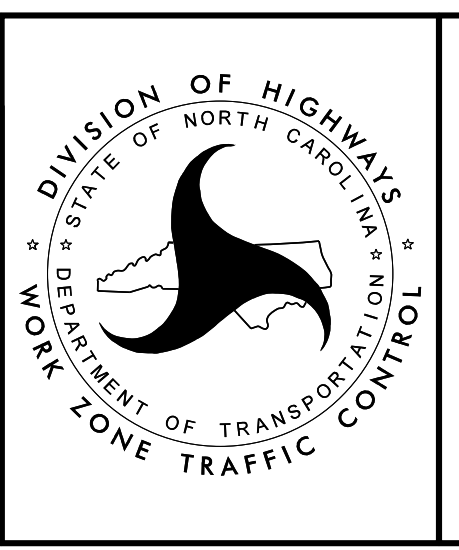


EXISTING LANE WIDTHS UNLESS OTHERWISE INDICATED

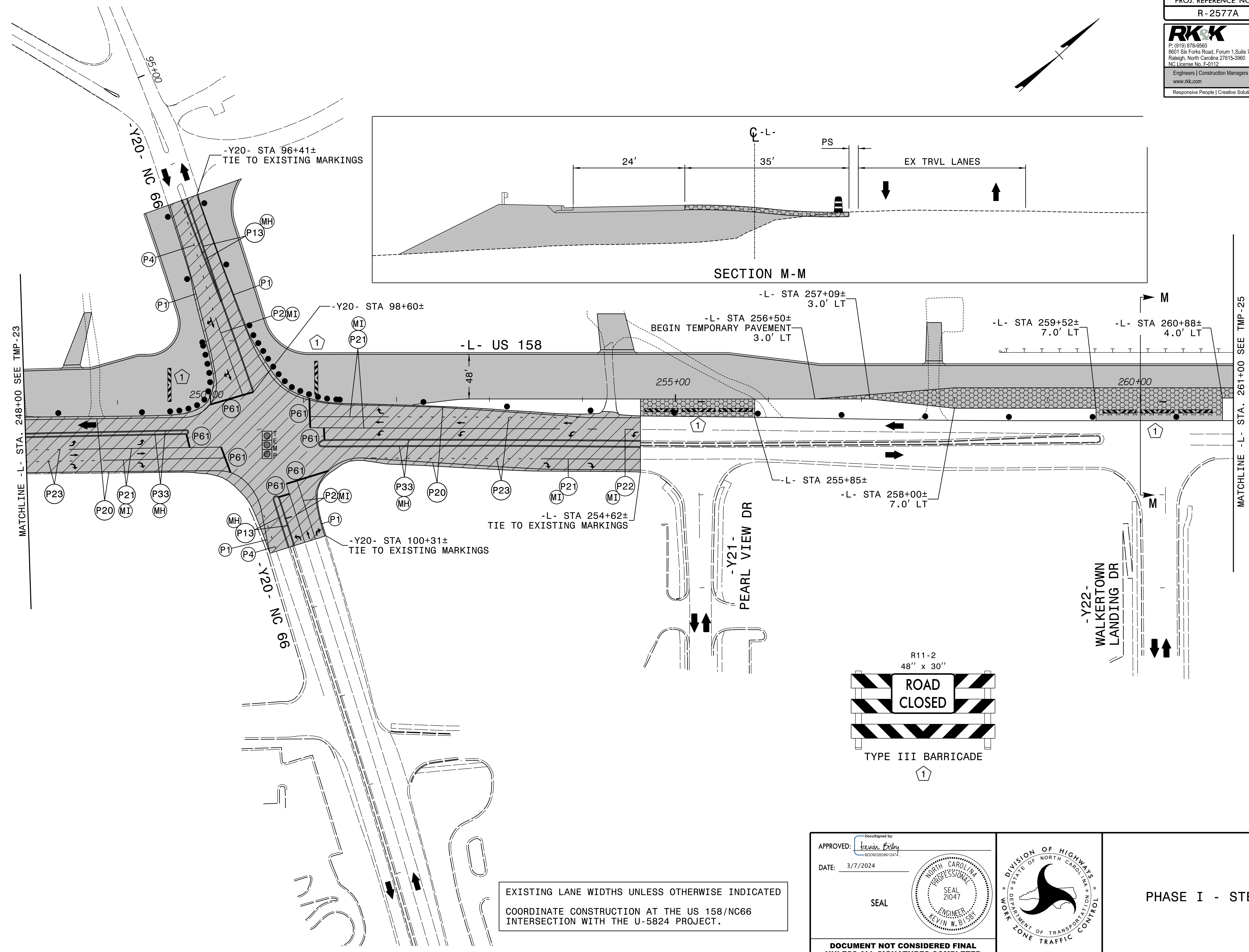
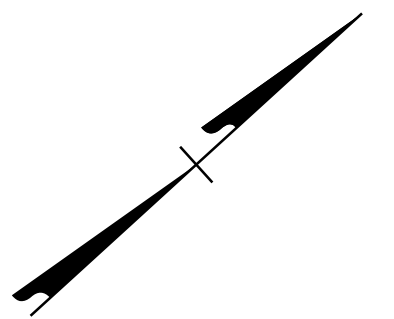
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 DATE: 3/7/2024

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MATCHLINE - L- STA. 248+00 SEE TMP-23

MATCHLINE - L- STA. 261+00 SEE TMP-25

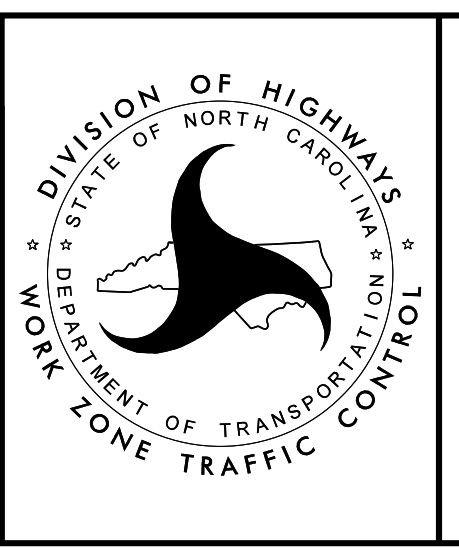
EXISTING LANE WIDTHS UNLESS OTHERWISE INDICATED  
 COORDINATE CONSTRUCTION AT THE US 158/NC66  
 INTERSECTION WITH THE U-5824 PROJECT.

APPROVED: *Kevin Bishy*  
 DATE: 3/7/2024

SEAL

**SEAL**  
 NORTH CAROLINA  
 PROFESSIONAL  
 ENGINEER  
 KEVIN W. BISHY  
 21047

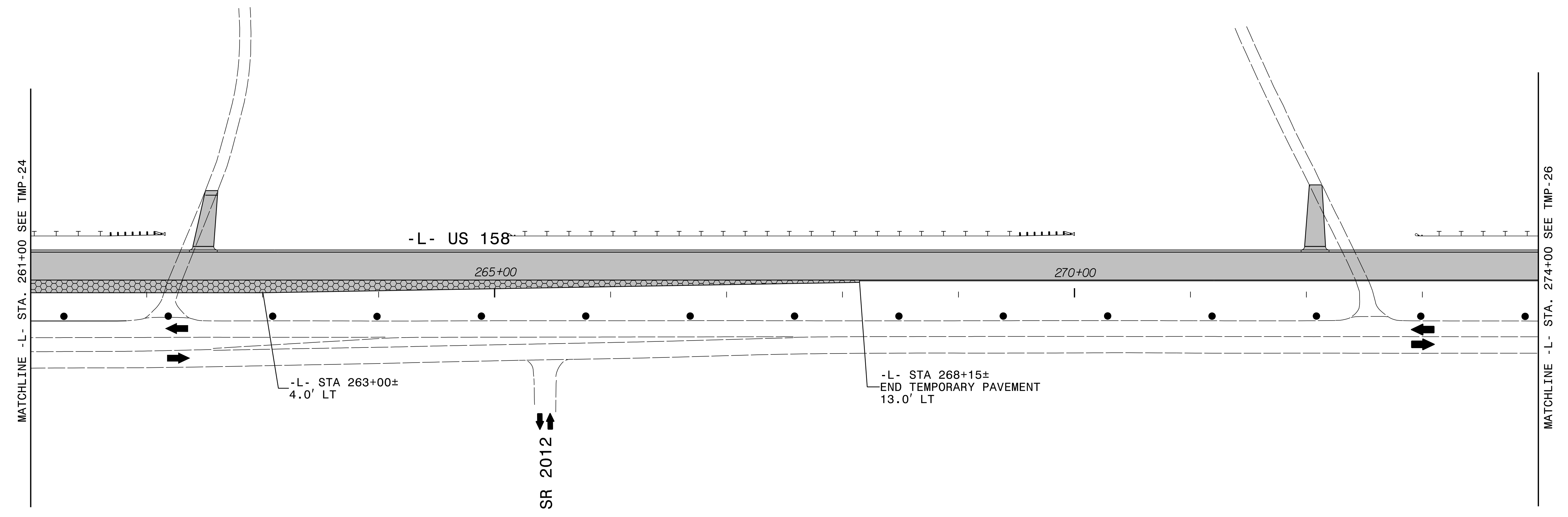
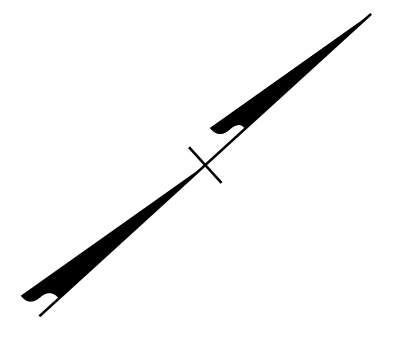
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PROJ. REFERENCE NO.	SHEET NO.
R - 2577A	TMP - 25

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 Raleigh, North Carolina 27615-3960  
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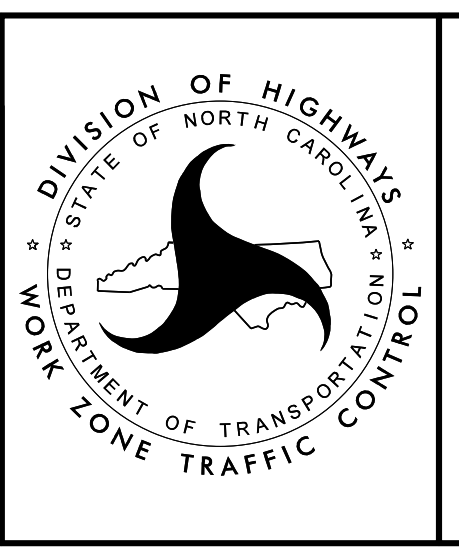


3/7/2024  
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 KRobby

APPROVED: *Kevin Bisby*  
DocuSigned by: Kevin Bisby  
 B0C802628912472

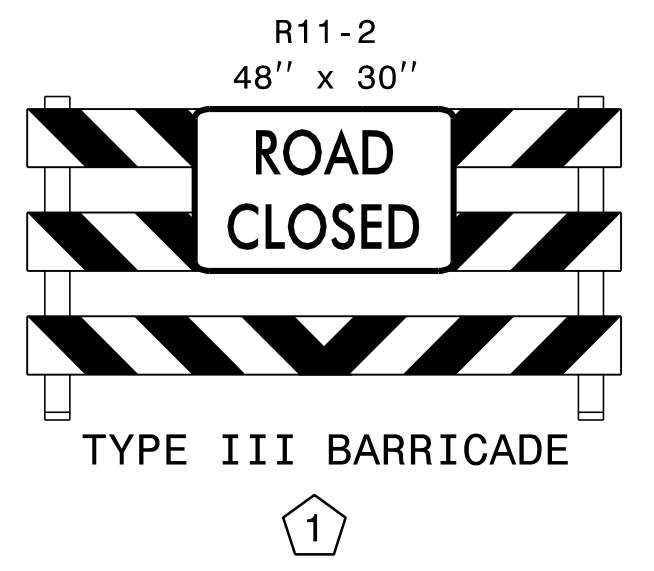
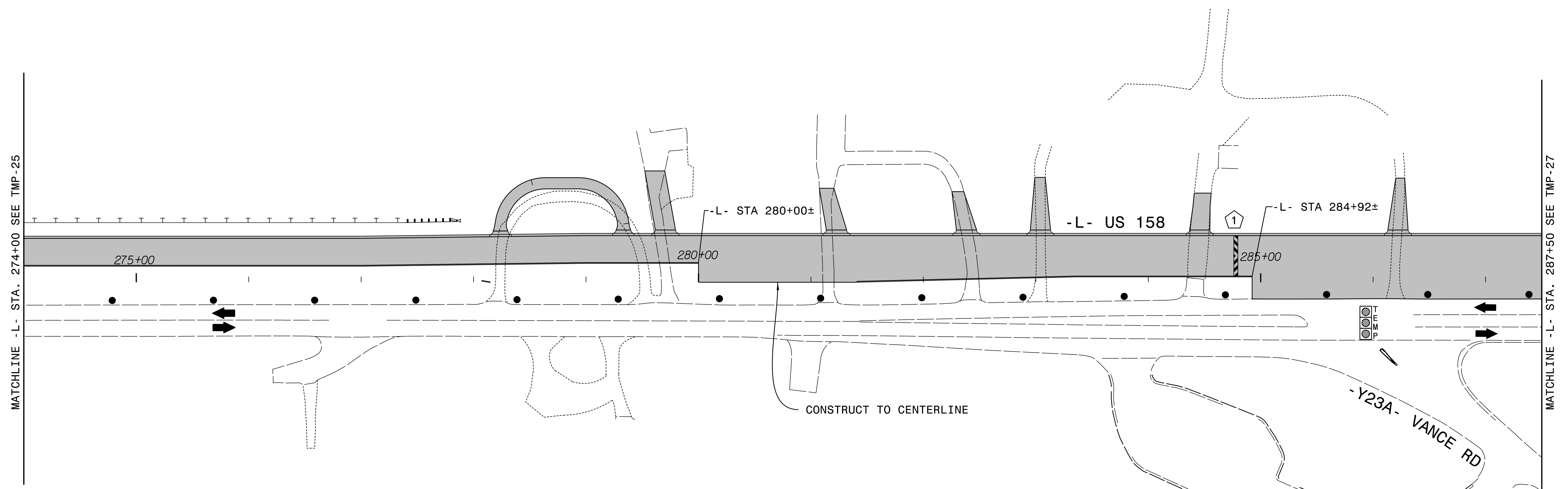
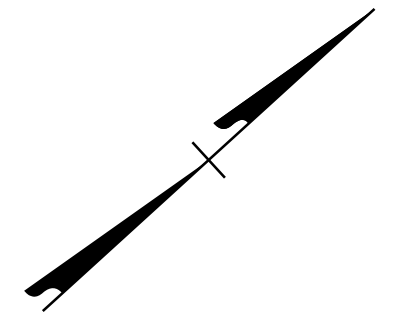
DATE: 3/7/2024

SEAL




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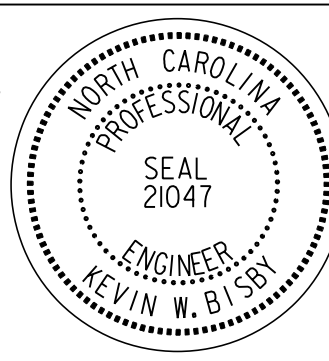
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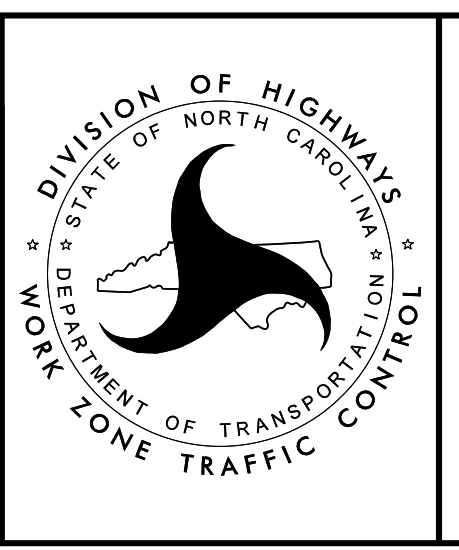
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 KRobby

APPROVED:   
 DATE: 3/7/2024

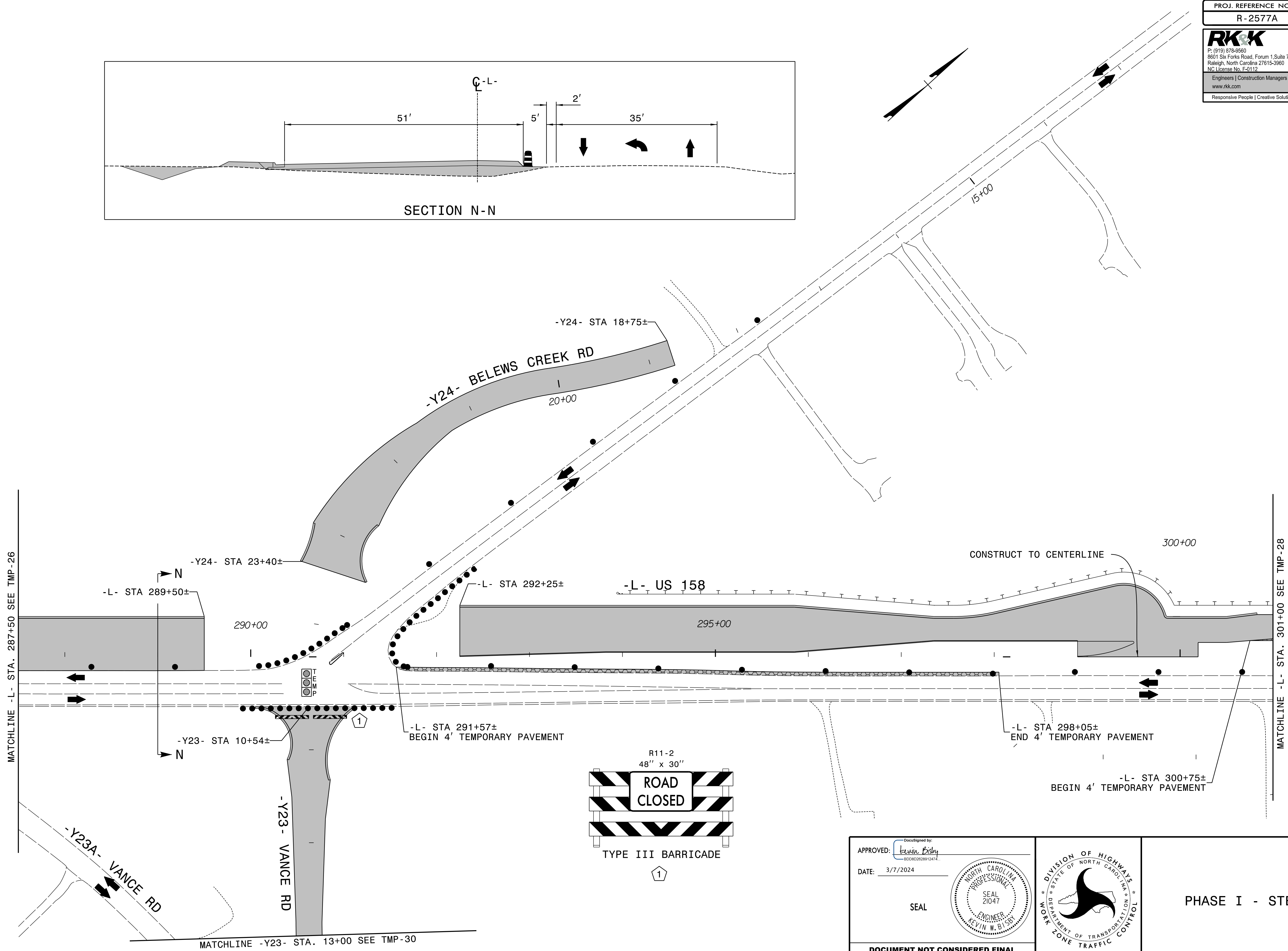
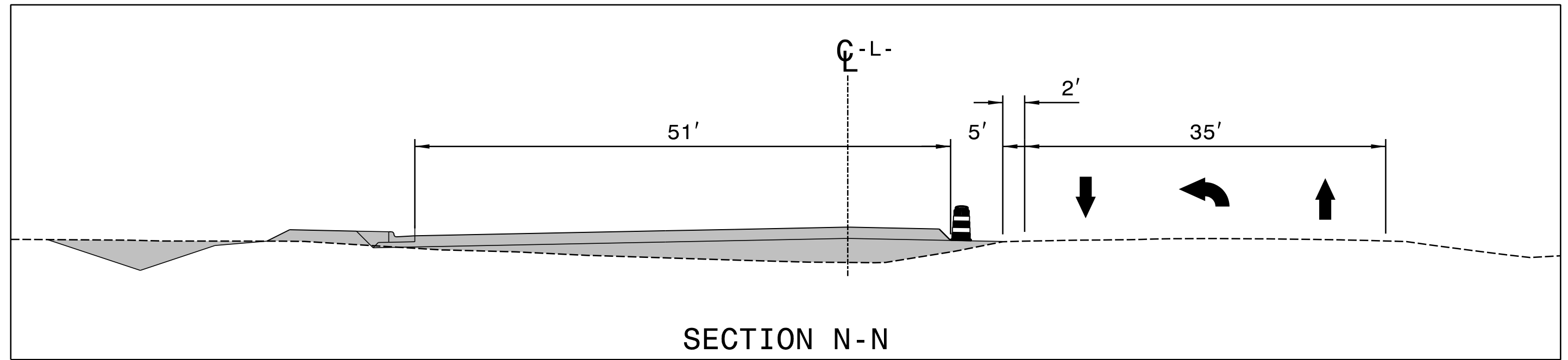
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 Robby

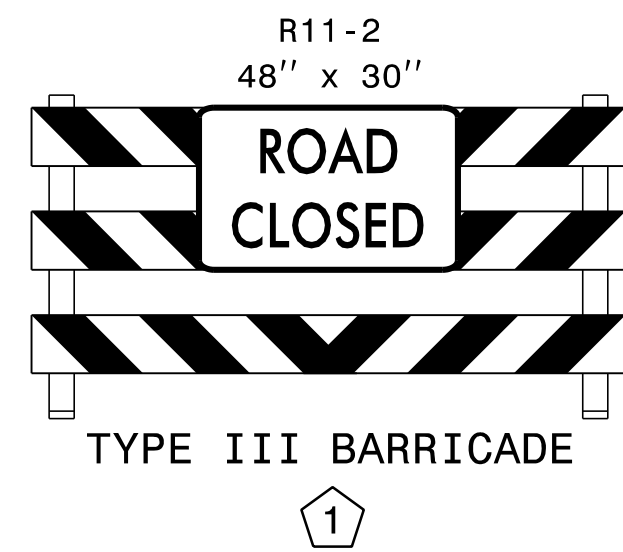
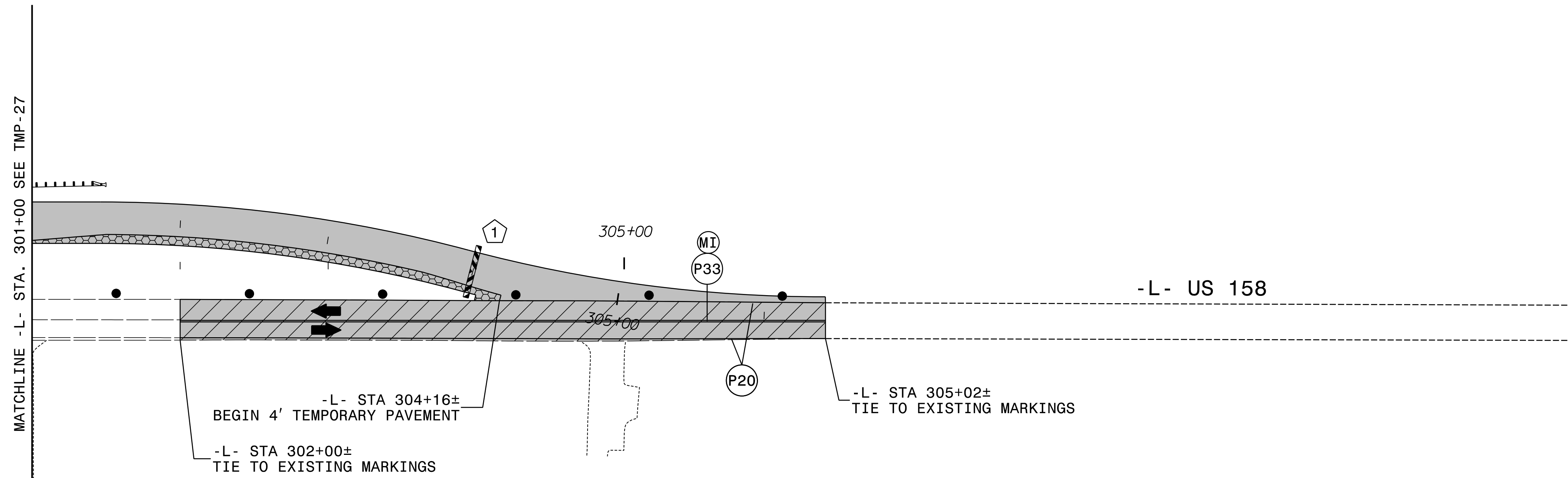
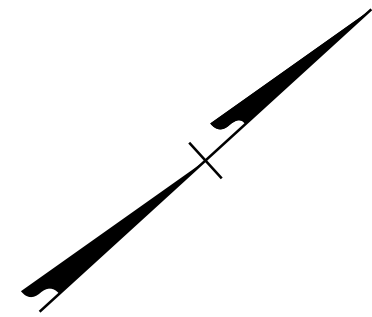
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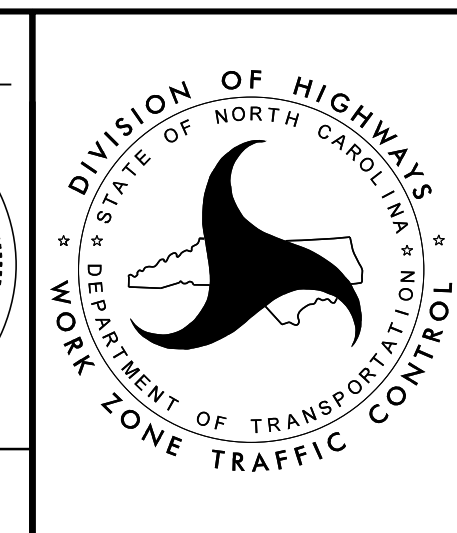


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 B0C802628912472

DATE: 3/7/2024

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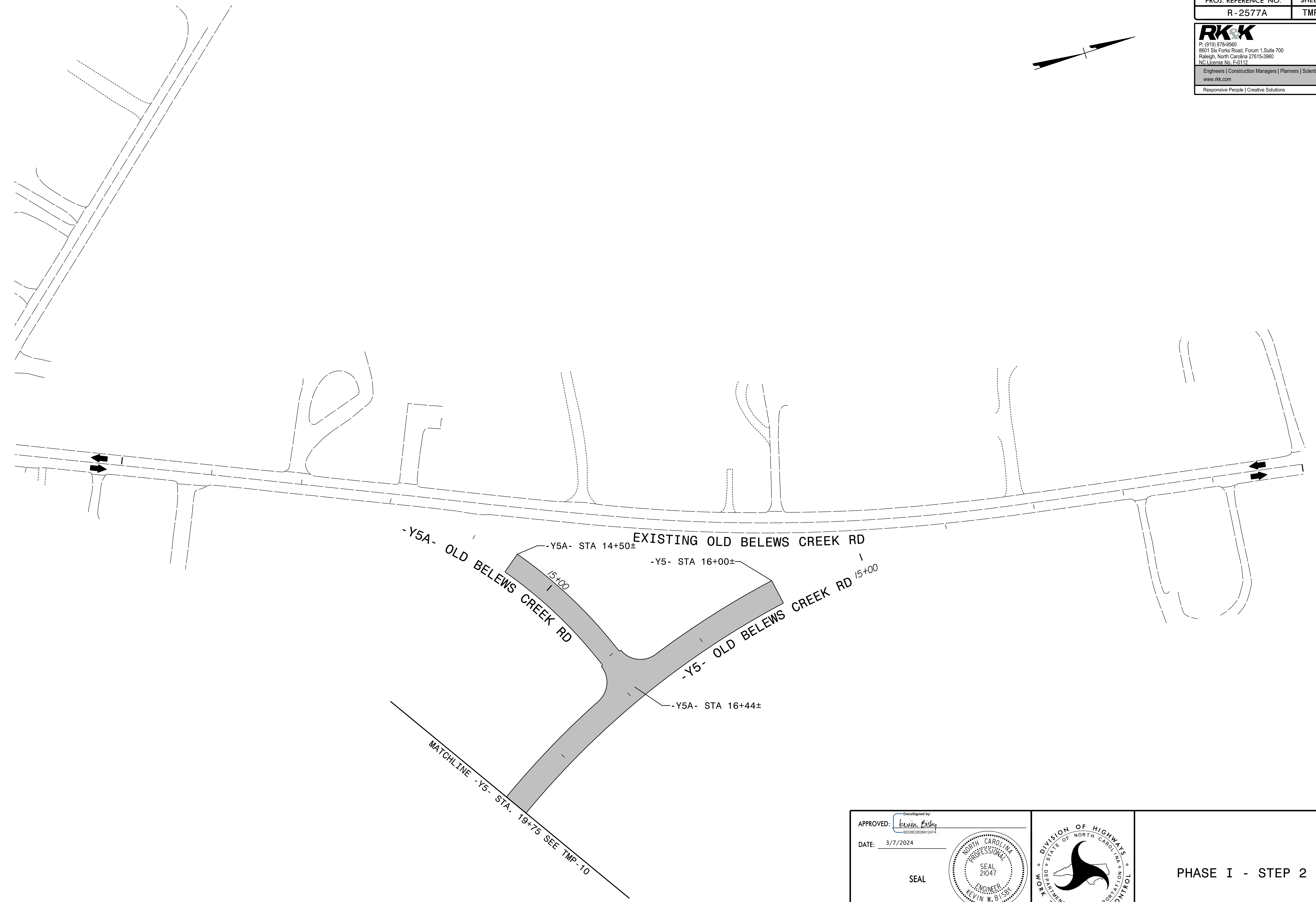
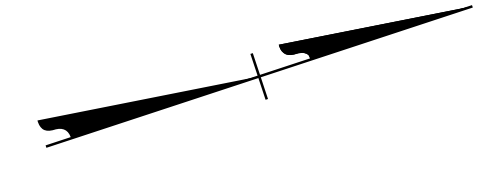


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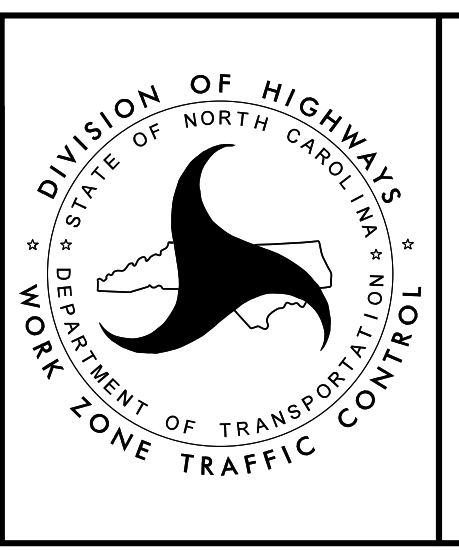


3/7/2024  
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 Kolsby

APPROVED: *Kevin Bishy*  
DocuSigned by: Kevin Bishy  
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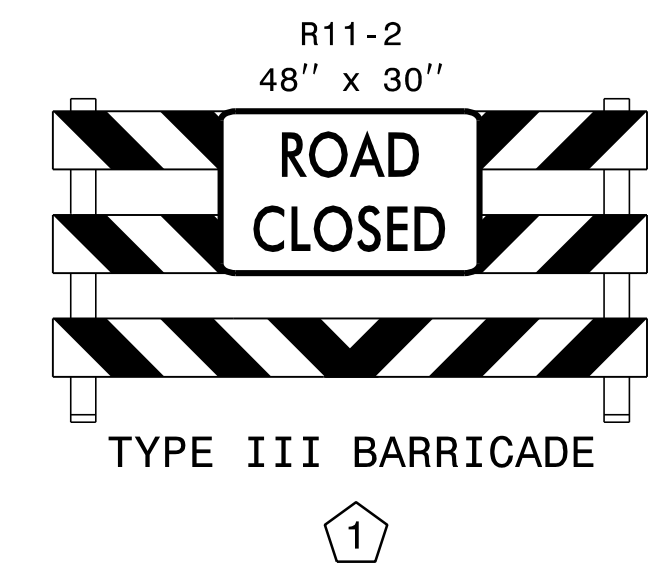
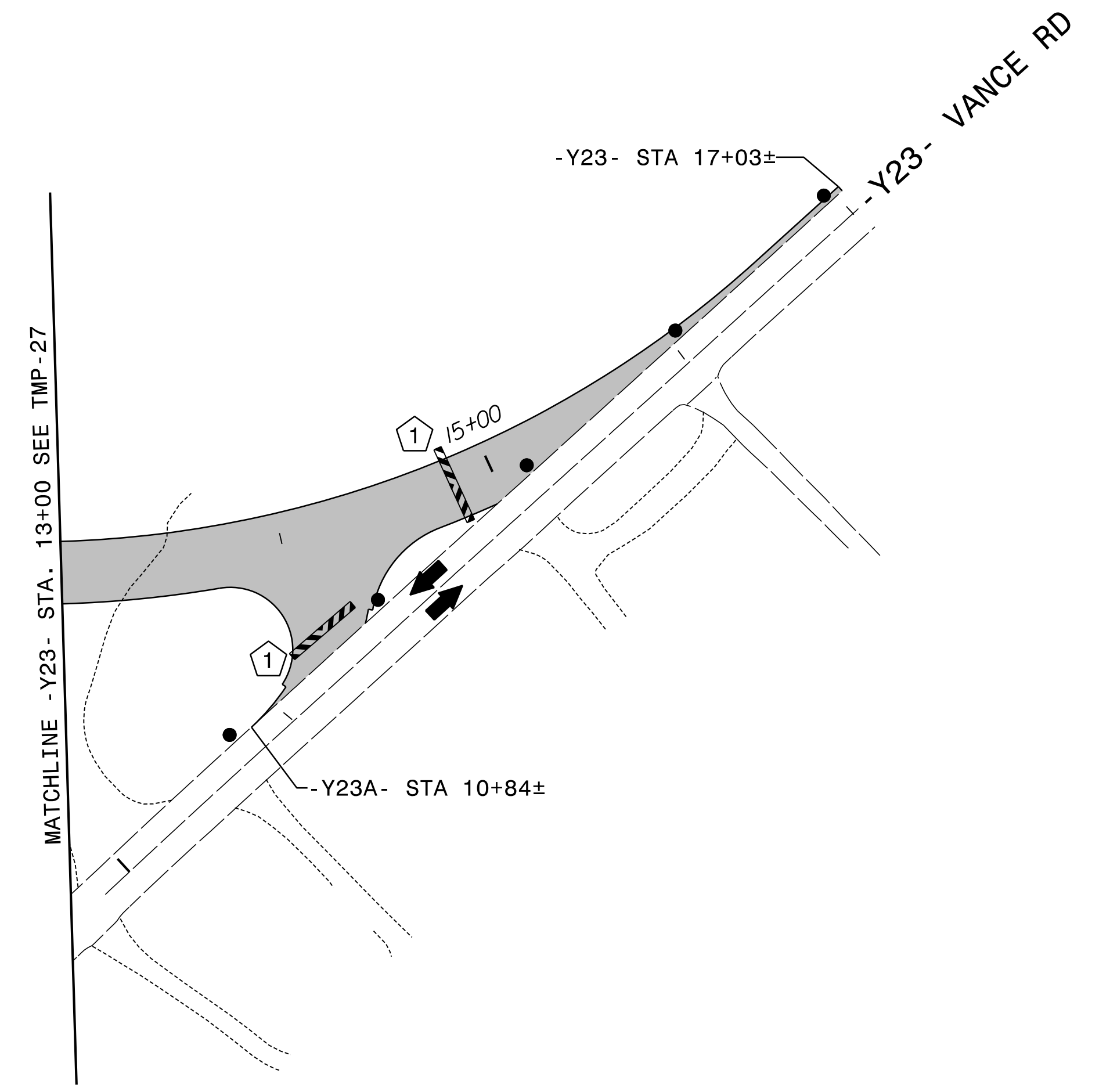
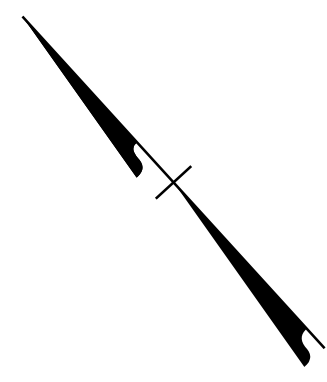
DATE: 3/7/2024

SEAL



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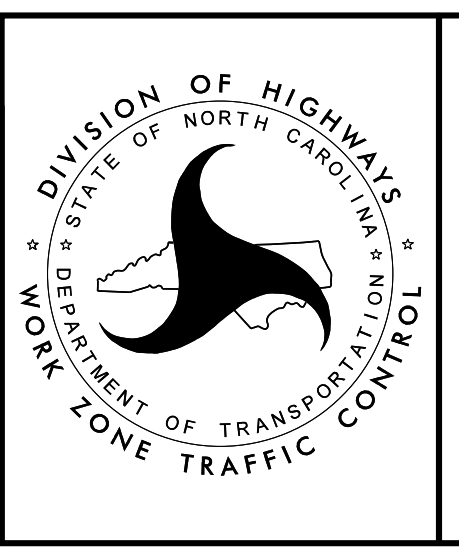


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 KRobby

APPROVED: *Kevin Bisby*  
DocuSigned by: Kevin Bisby  
 BDC0802628912477

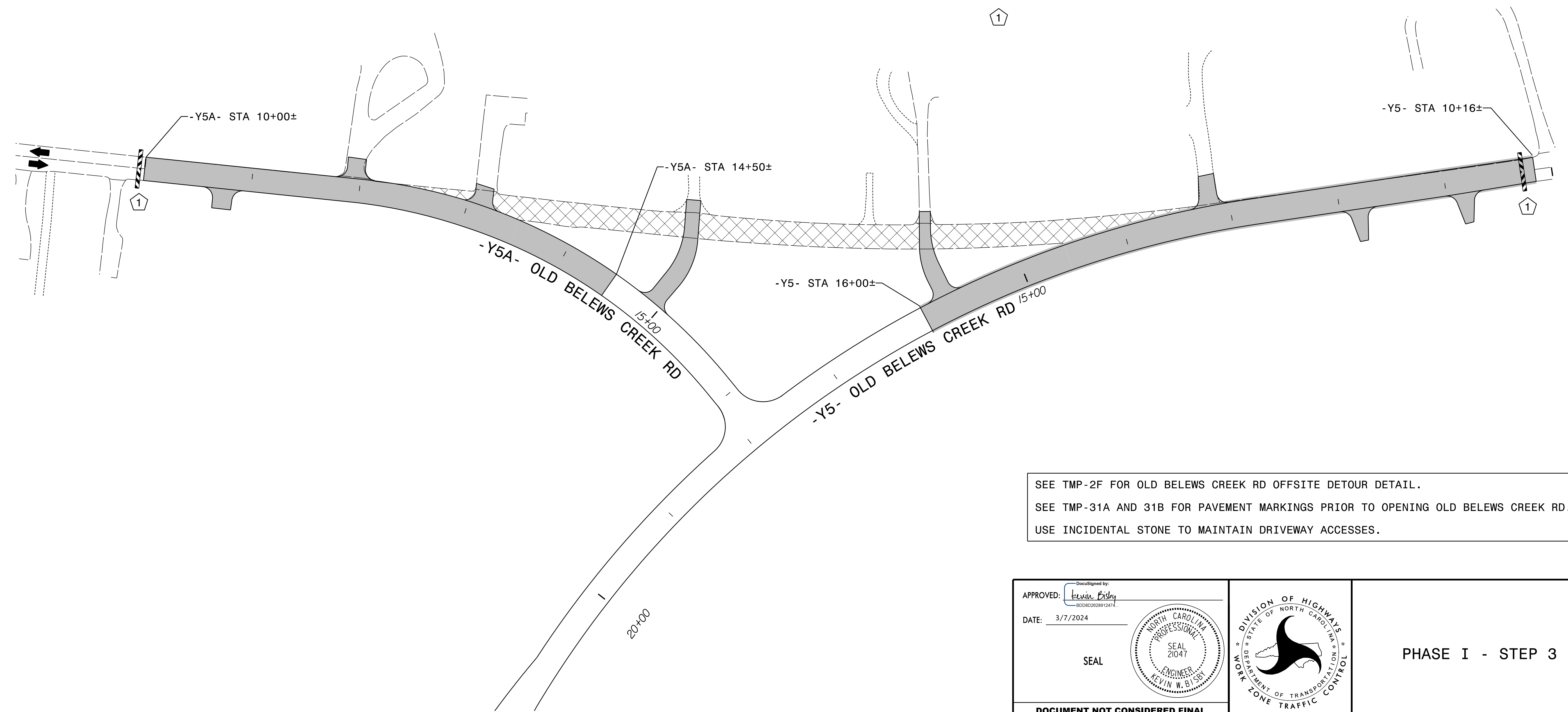
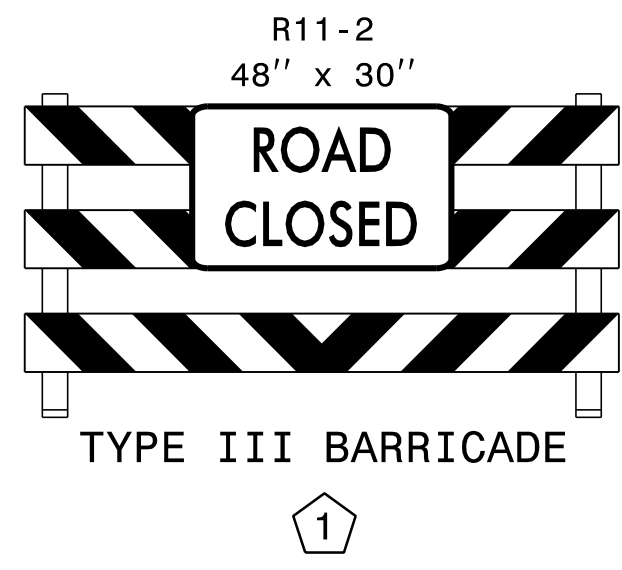
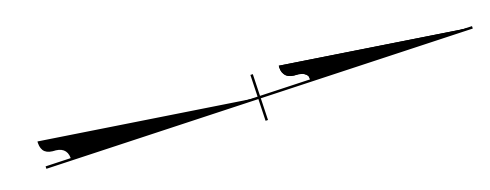
DATE: 3/7/2024

SEAL



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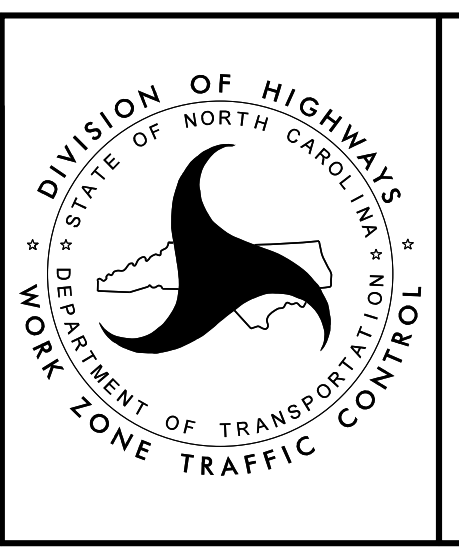


SEE TMP-2F FOR OLD BELEWS CREEK RD OFFSITE DETOUR DETAIL.  
 SEE TMP-31A AND 31B FOR PAVEMENT MARKINGS PRIOR TO OPENING OLD BELEWS CREEK RD.  
 USE INCIDENTAL STONE TO MAINTAIN DRIVEWAY ACCESSSES.

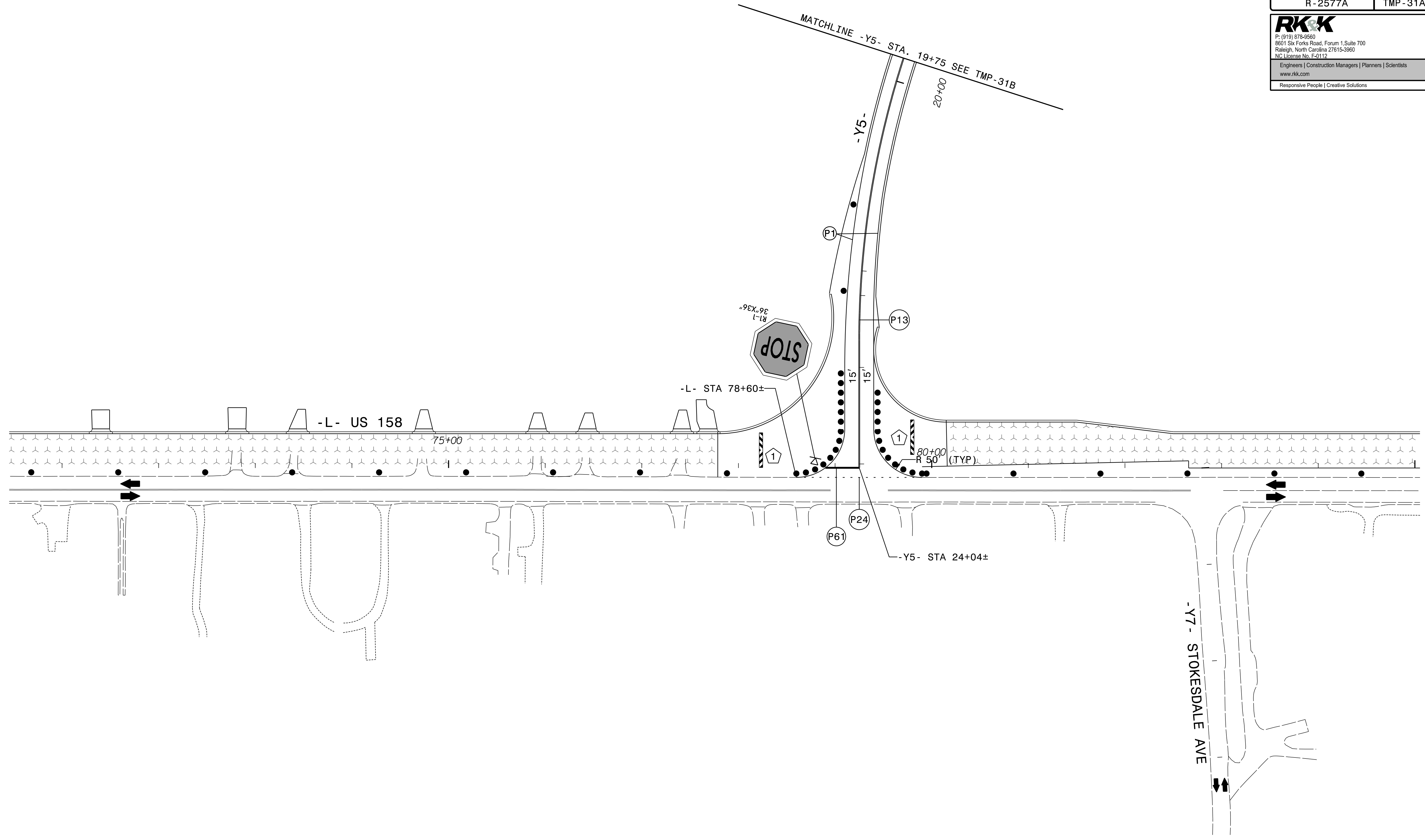
APPROVED: *Kevin Bisby*  
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 BDC0802628912474

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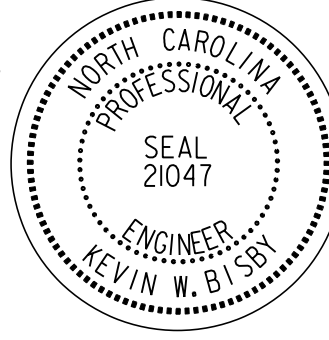

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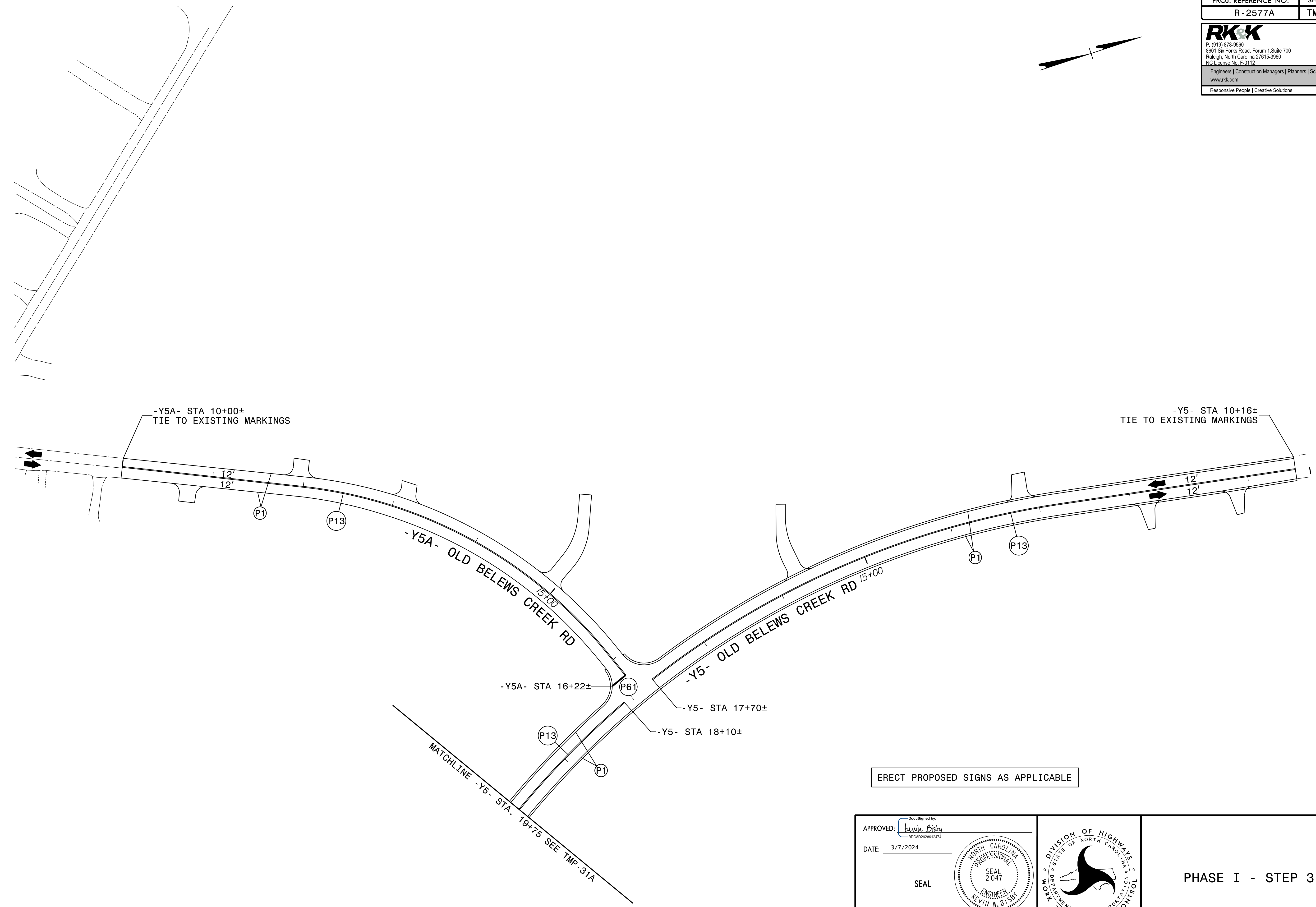
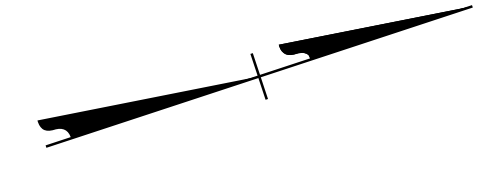


PHASE I - STEP 3



3/7/2024  
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 KRobby

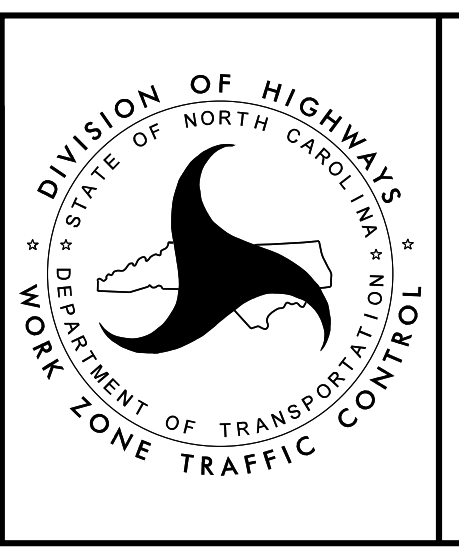
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ERECT PROPOSED SIGNS AS APPLICABLE

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 B0D8D2628912474  
 DATE: 3/7/2024

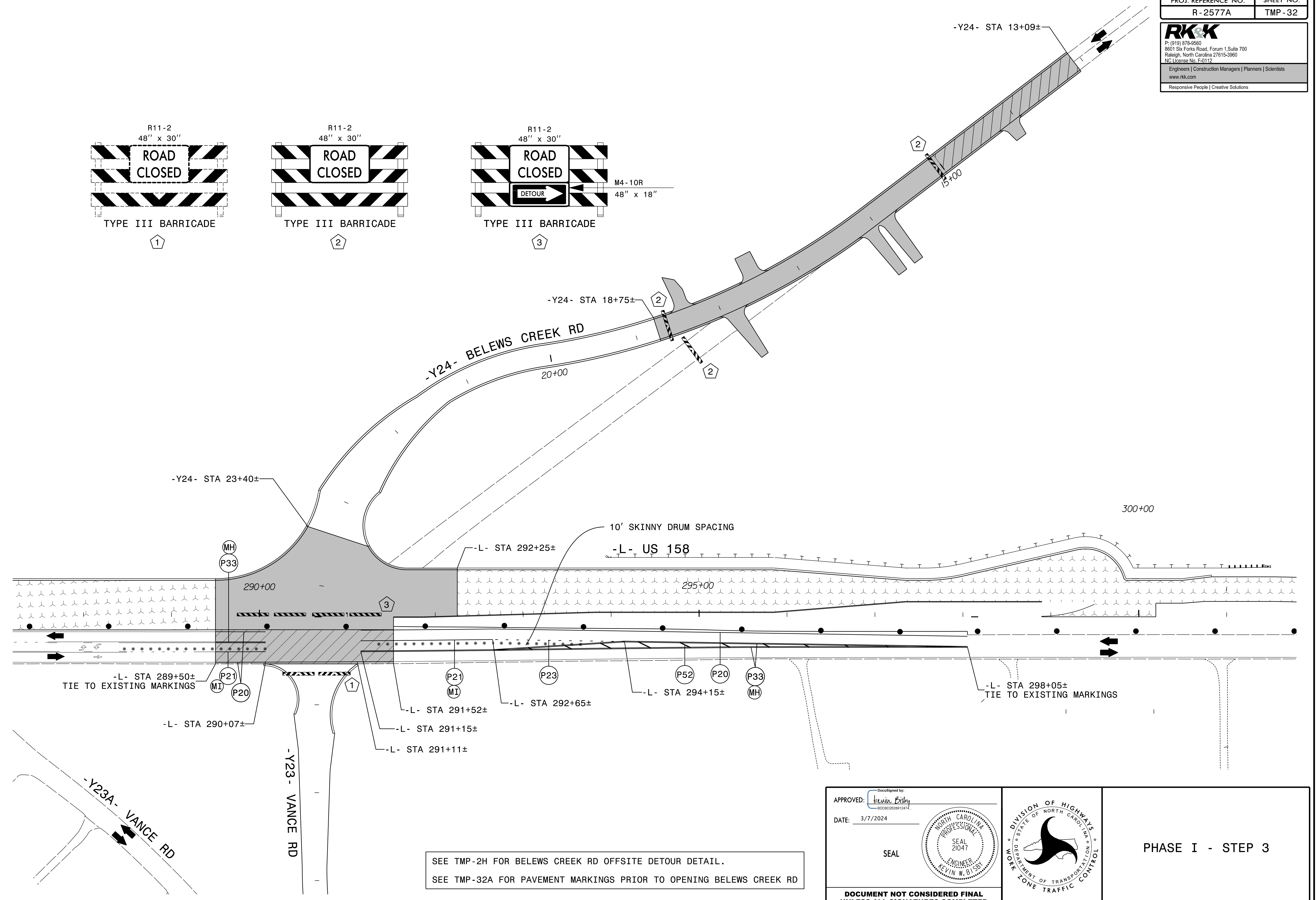
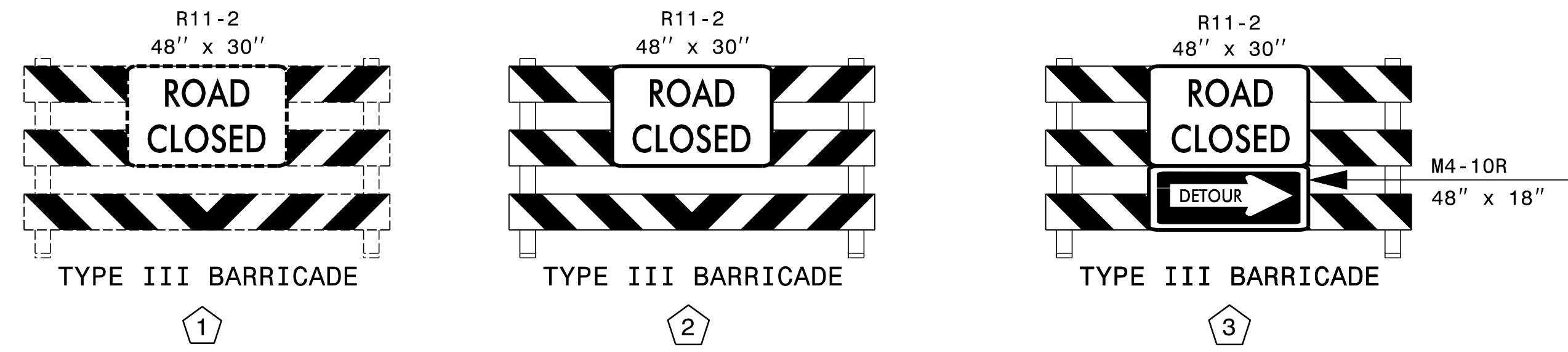
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3/7/2024  
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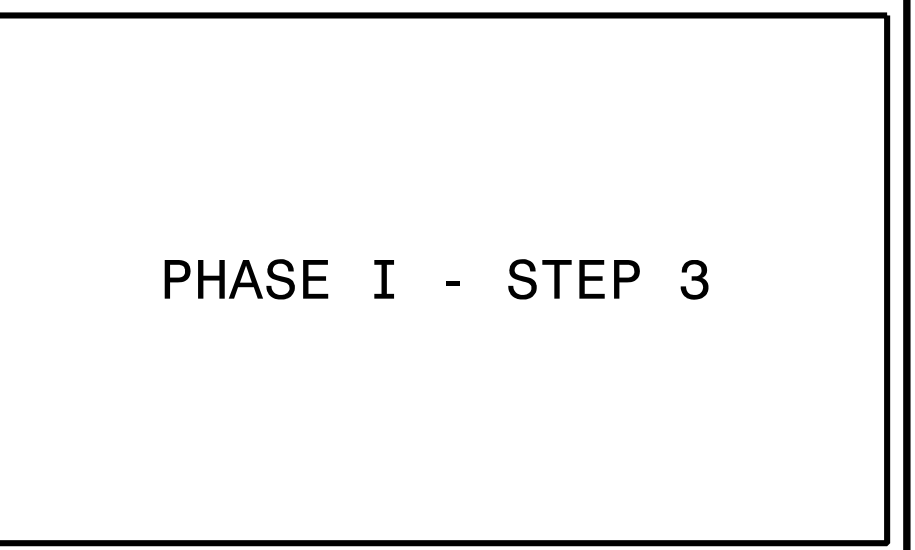
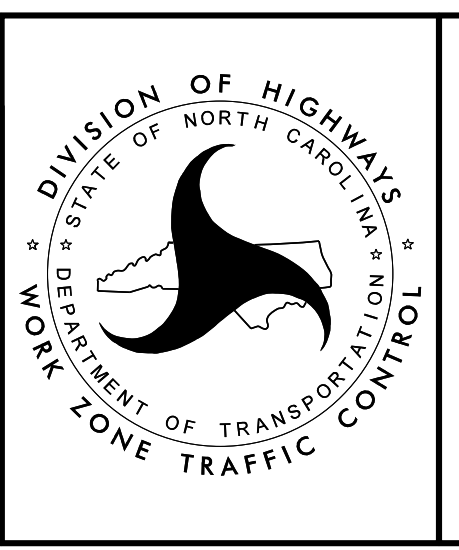


SEE TMP-2H FOR BELEWS CREEK RD OFFSITE DETOUR DETAIL.  
 SEE TMP-32A FOR PAVEMENT MARKINGS PRIOR TO OPENING BELEWS CREEK RD

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 DATE: 3/7/2024

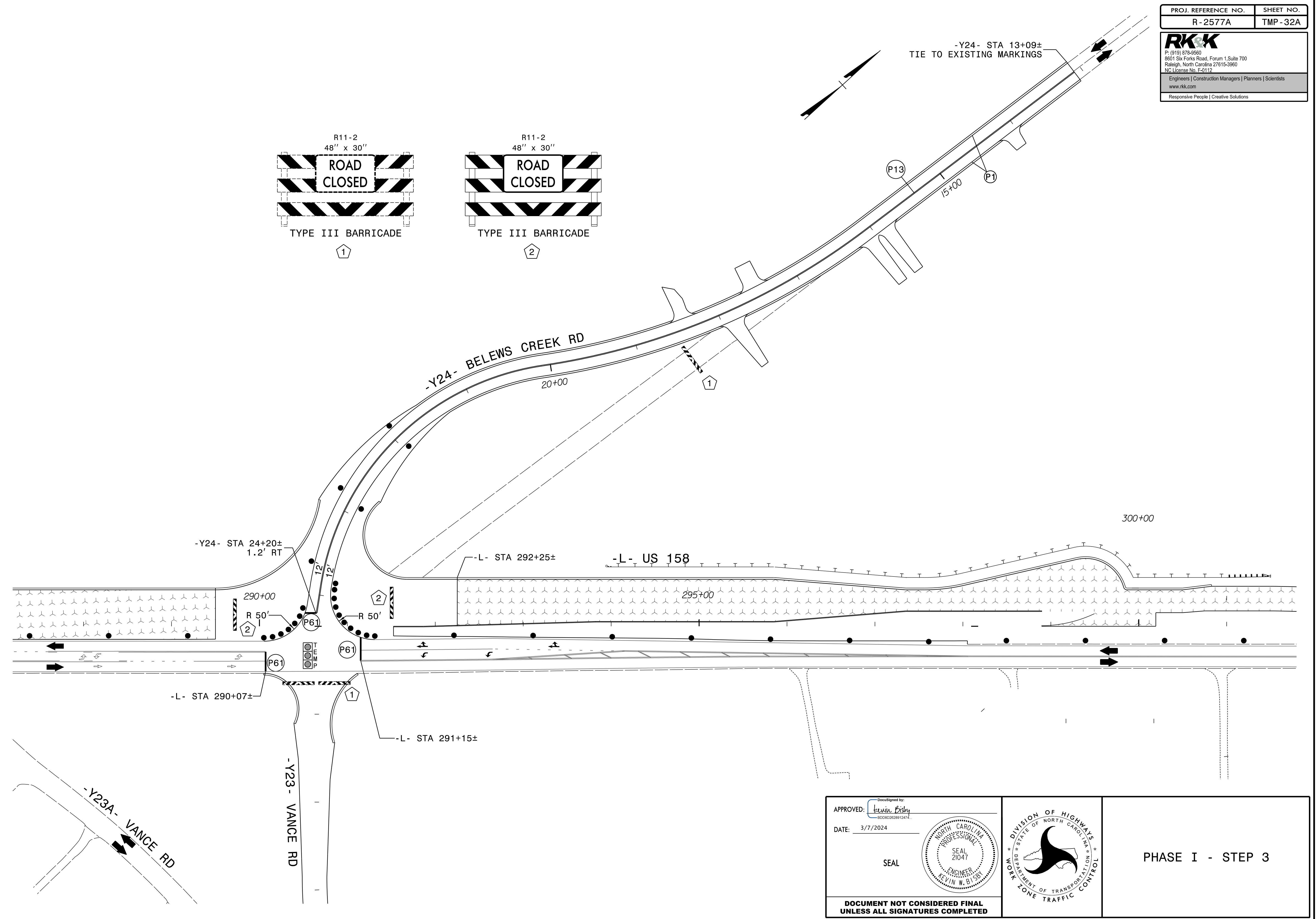
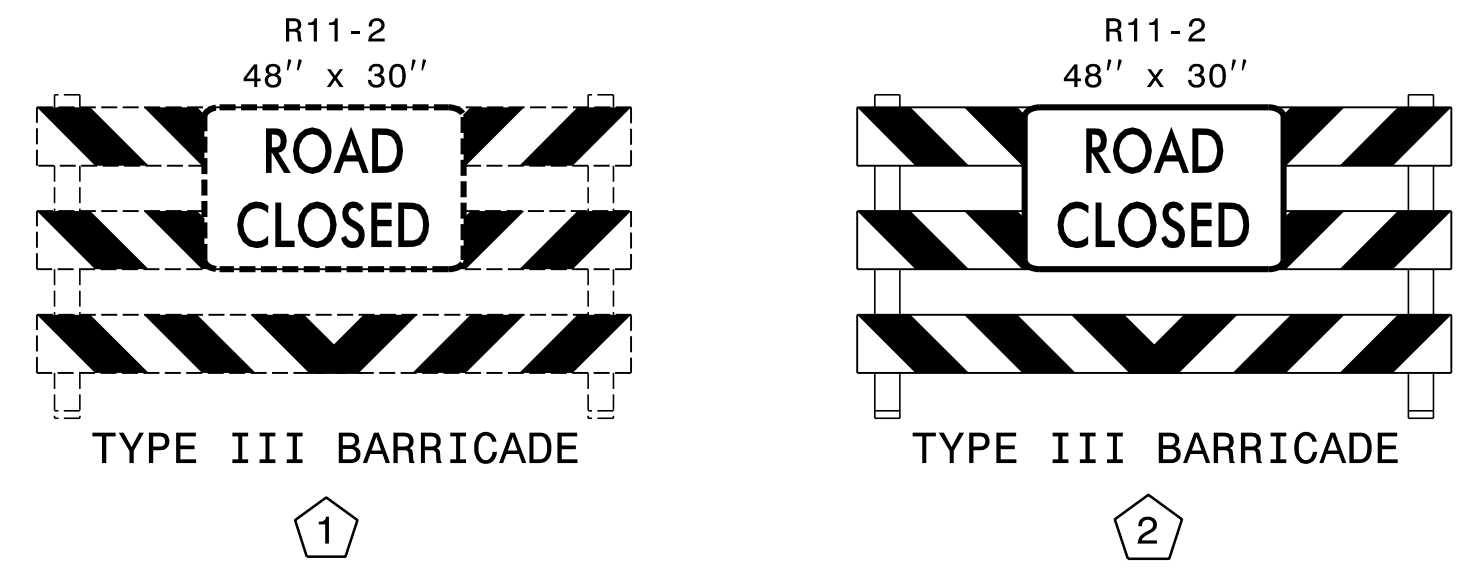
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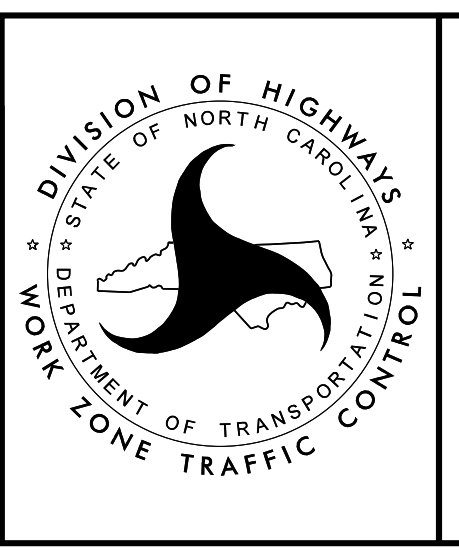
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 R-2577A\_tmp\_psh32.dgn  
 KRobby



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 DATE: 3/7/2024

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SEAL 21047  
 ENGINEER  
 KEVIN W. BISHY

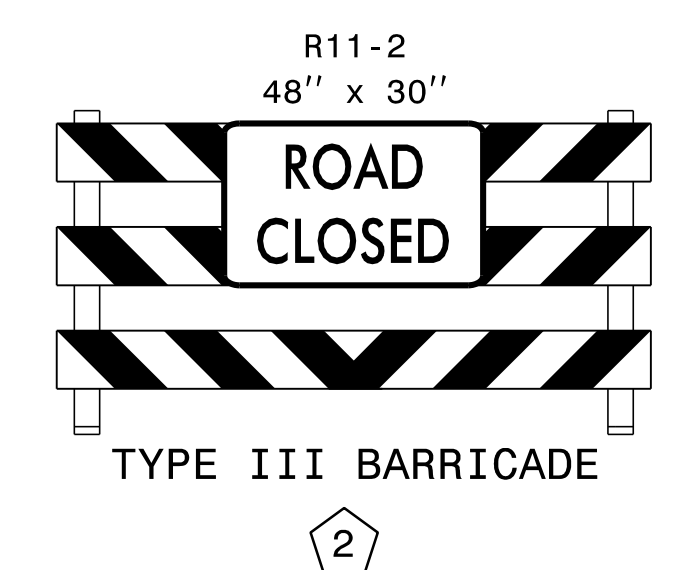
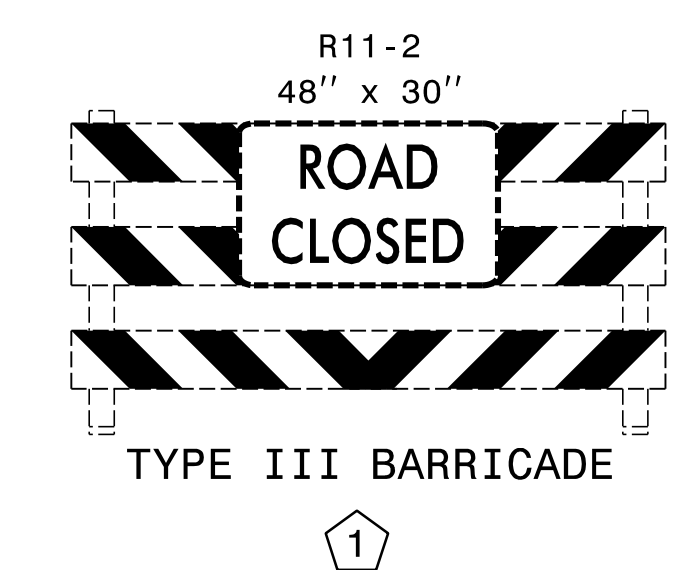
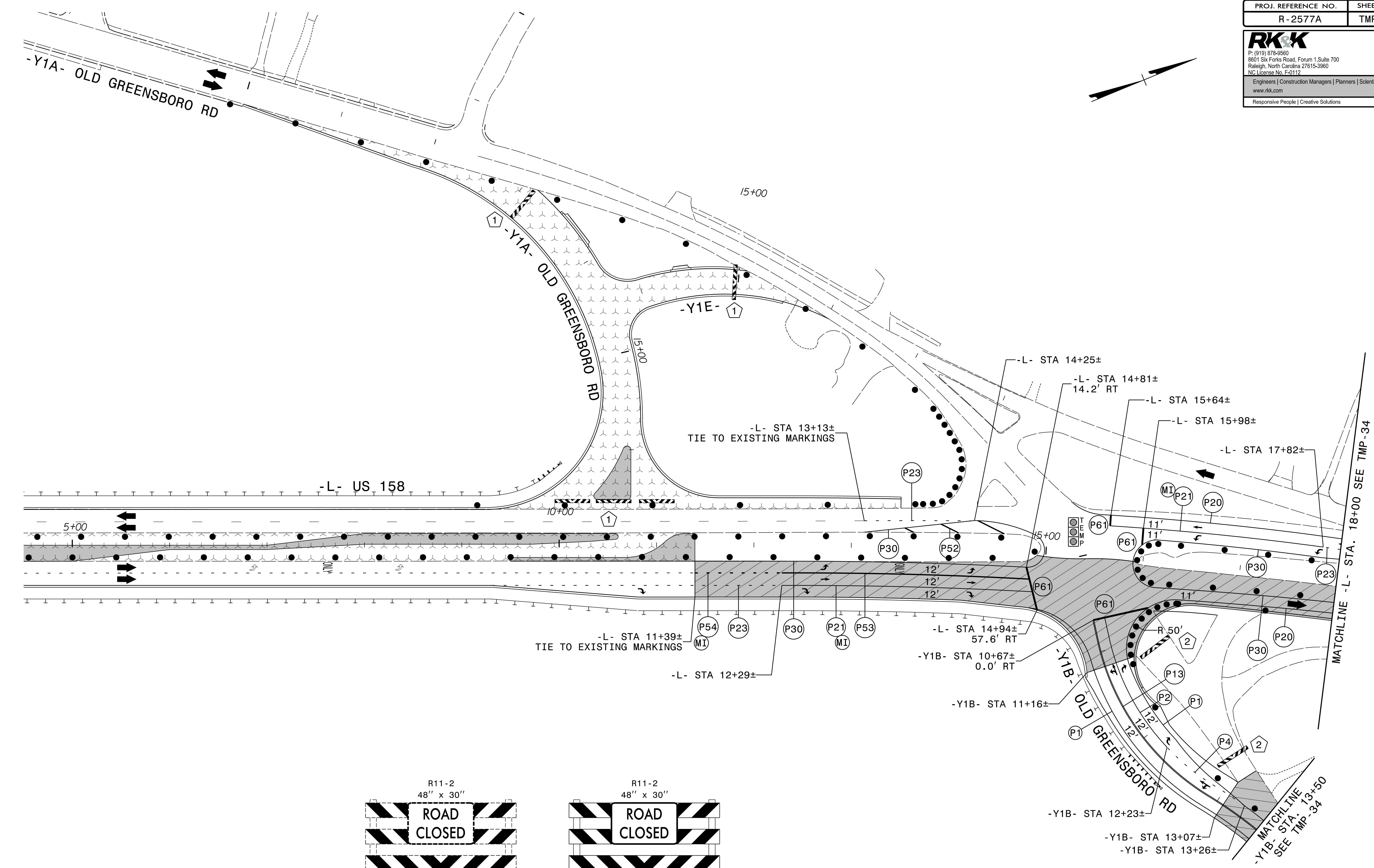
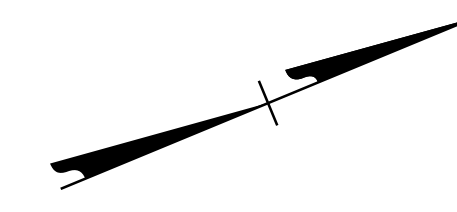


PHASE I - STEP 3

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3/7/2024  
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 R. Bishy



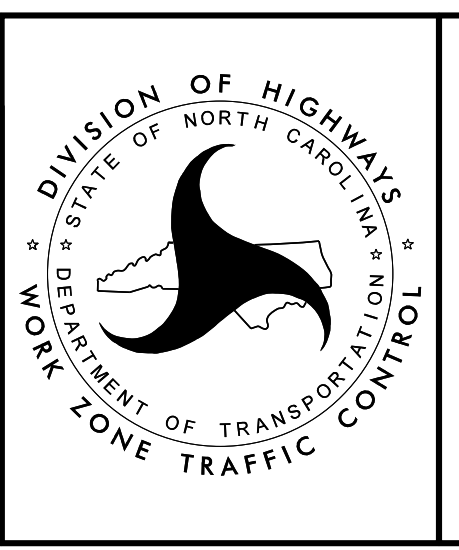


45' DRUM SPACING IN THE MEDIAN  
 SEE TMP-33A FOR PAVEMENT MARKING STATION-OFFSET

APPROVED: *Kevin Bishy*  
 DATE: 3/7/2024

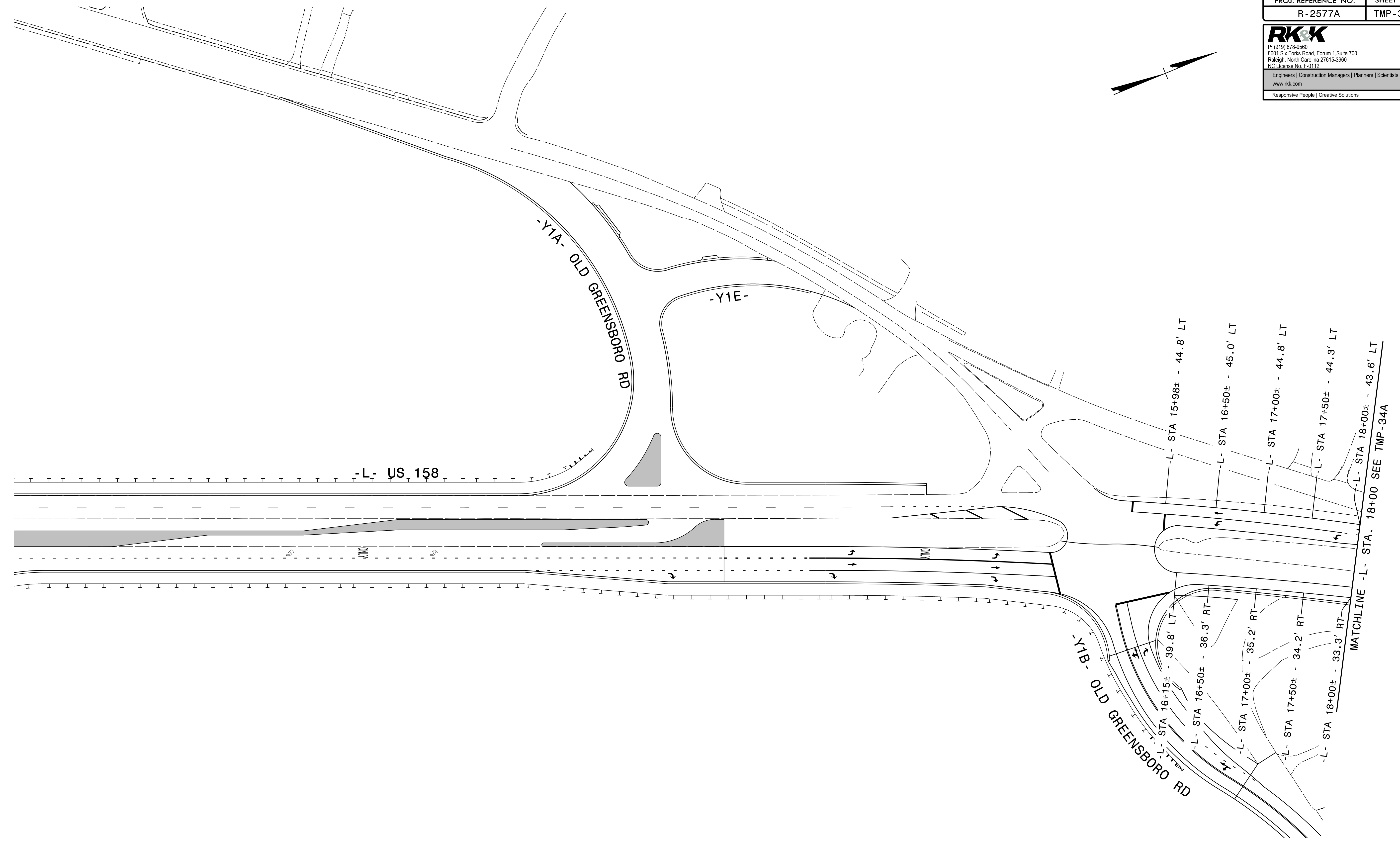
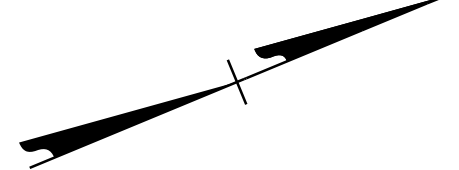
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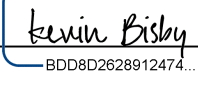


PHASE I - STEP 4

3/7/2024  
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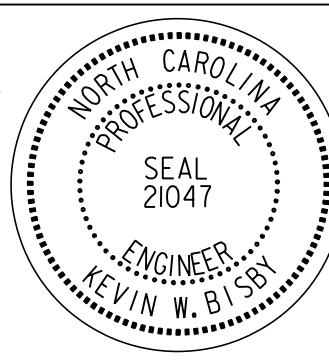


3/7/2024  
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 KRobby

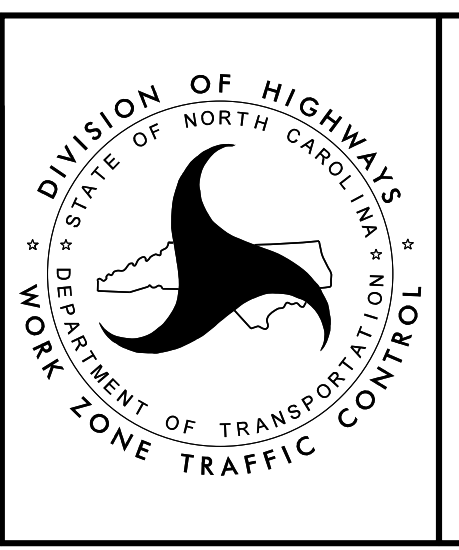
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 B0C8D262891247

DATE: 3/7/2024

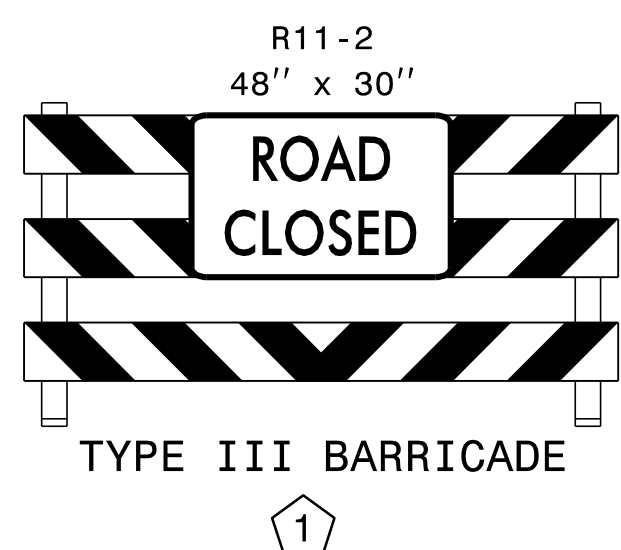
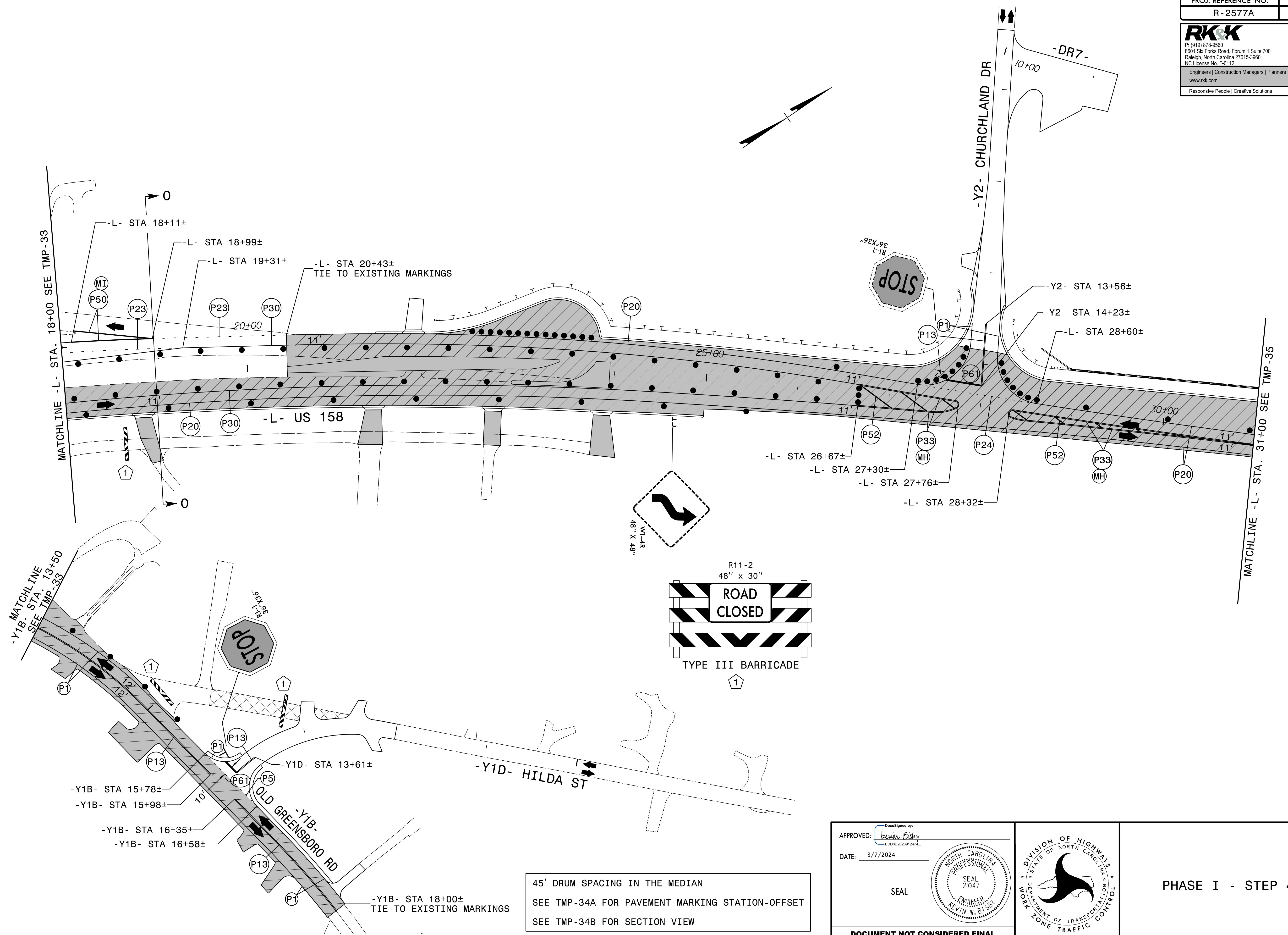
SEAL



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PHASE I - STEP 4



45' DRUM SPACING IN THE MEDIAN  
 SEE TMP-34A FOR PAVEMENT MARKING STATION-OFFSET  
 SEE TMP-34B FOR SECTION VIEW

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 DATE: 3/7/2024

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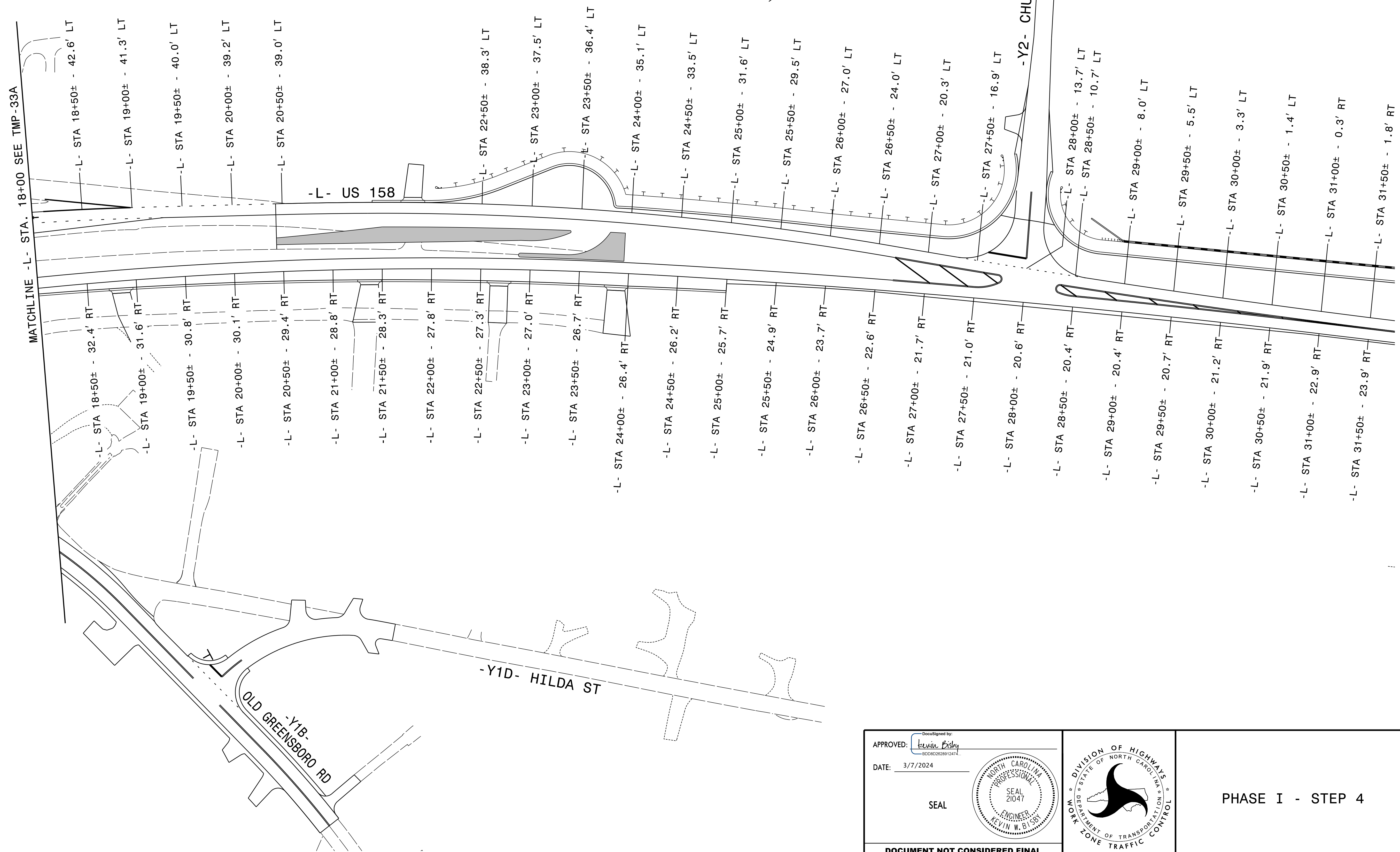
**PROFESSIONAL ENGINEER**  
 KEVIN W. BISHY  
 SEAL 21047

**STATE OF NORTH CAROLINA**  
 DEPARTMENT OF TRANSPORTATION  
 WORK ZONE TRAFFIC CONTROL


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PHASE I - STEP 4

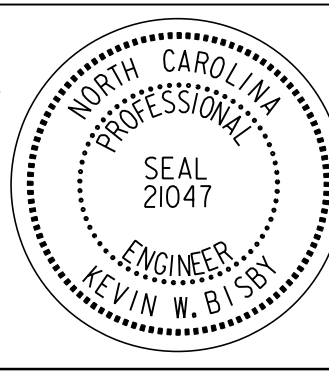
3/7/2024  
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 R01bby



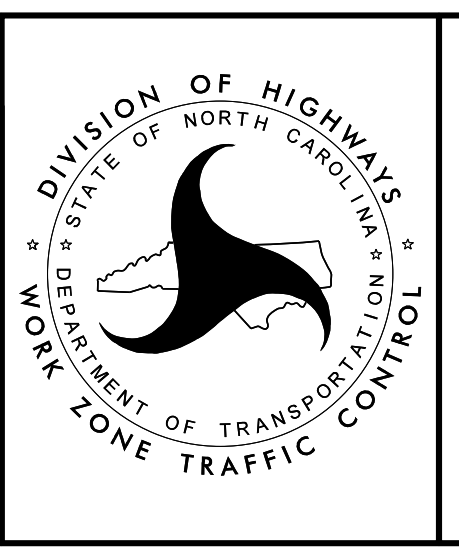
3/7/2024  
 P:\25177A\_tmp\_pst34a.dgn  
 KRobby

APPROVED:   
 DATE: 3/7/2024

SEAL



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



PHASE I - STEP 4