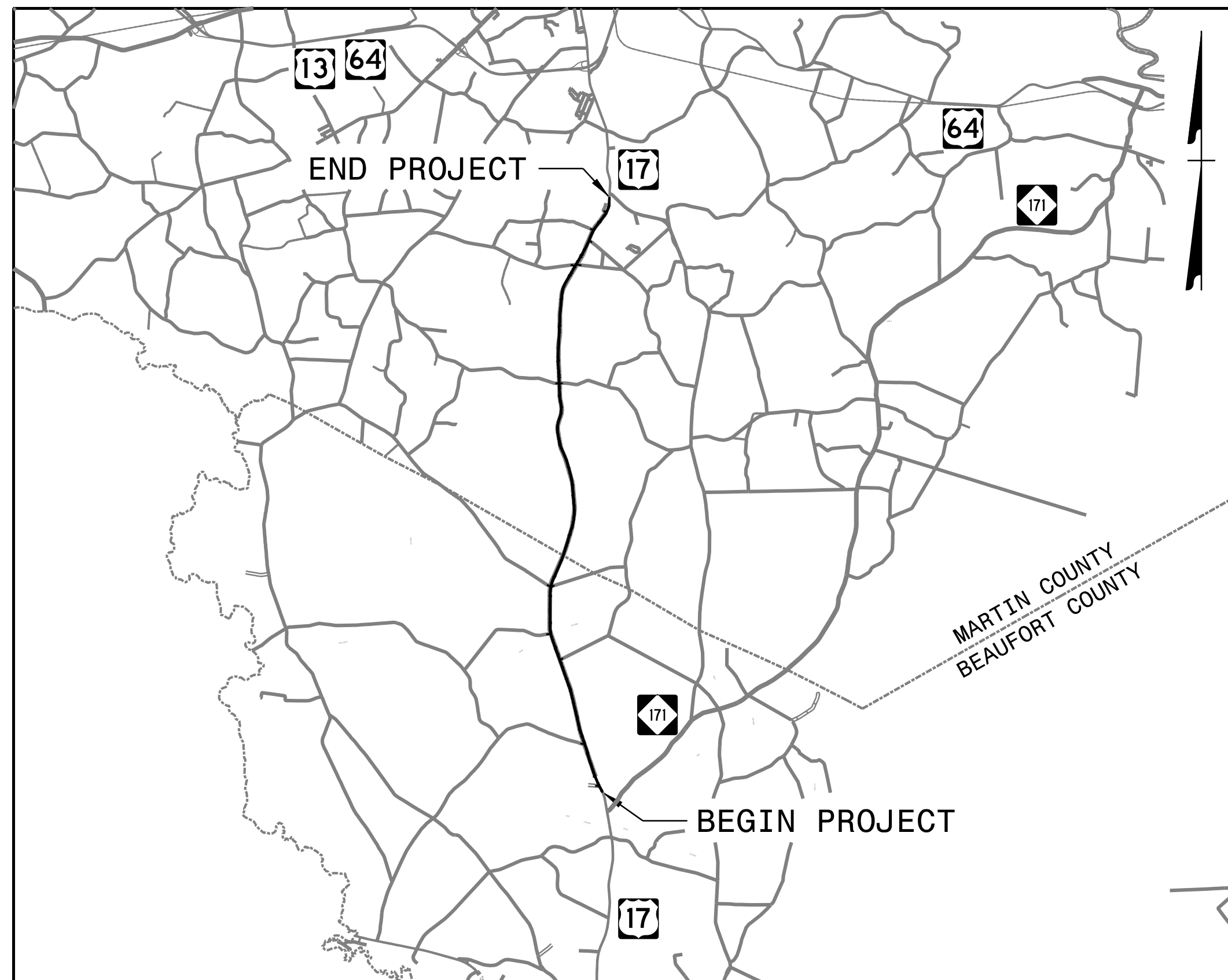
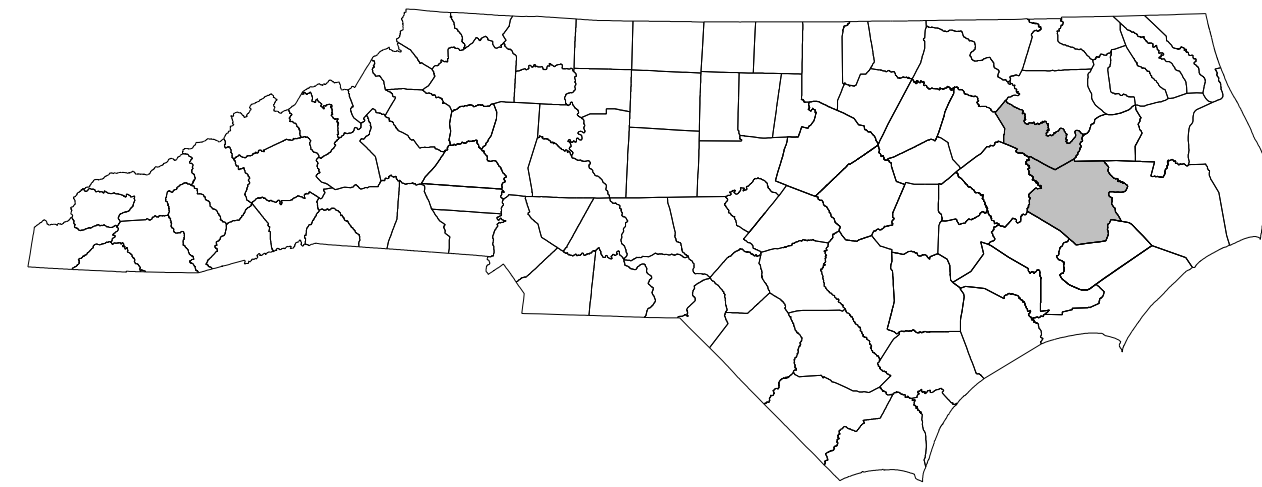


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**  
**BEAUFORT and MARTIN COUNTIES**



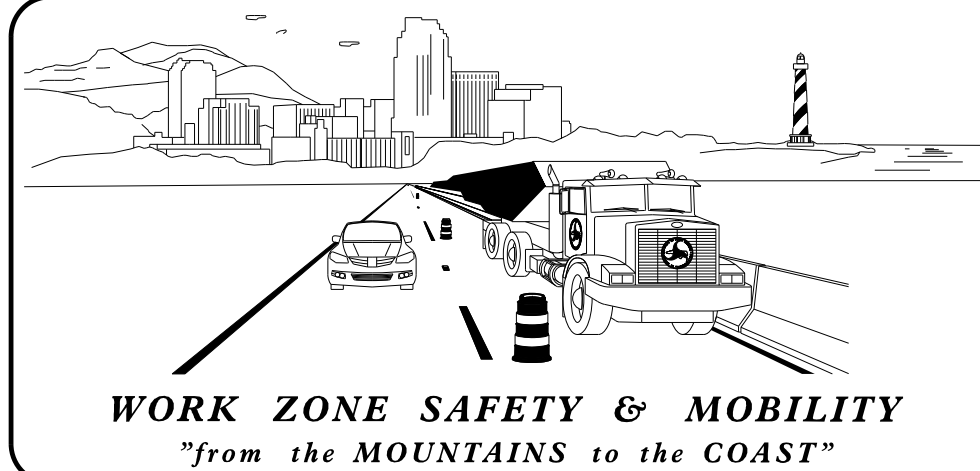
<u>SHEET NO.</u>	<u>TITLE</u>
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B - TMP-1BB	TRANSPORTATION OPERATIONS PLAN: GENERAL NOTES
TMP-1C - TMP-1L	OFFSITE DETOUR DETAILS
TMP-2	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-2A.1 - 2A.3	TEMPORARY SHORING DATA
TMP-2B - 2BB	SPECIAL SIGN DESIGNS
TMP-2C	TEMPORARY PAVEMENT FOR PORTABLE CONCRETE BARRIER
TMP-2D	TYPICAL TEMPORARY DRIVEWAY ACCESS
TMP-3 - 3B	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4 - TMP-26	TEMPORARY TRAFFIC CONTROL PHASE I DETAILS
TMP-27 - TMP-47A	TEMPORARY TRAFFIC CONTROL PHASE II DETAILS
TMP-48 - TMP-64	TEMPORARY TRAFFIC CONTROL PHASE III DETAILS
TMP-65 - TMP-77	TEMPORARY TRAFFIC CONTROL PHASE IV DETAILS
TMP-78 - TMP-86	TEMPORARY TRAFFIC CONTROL PHASE V DETAILS
TMP-87 - TMP-104	TEMPORARY TRAFFIC CONTROL PHASE VI DETAILS

SHEET NO.  
TMP-1

**R-2511**

**TIP PROJECT:**

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



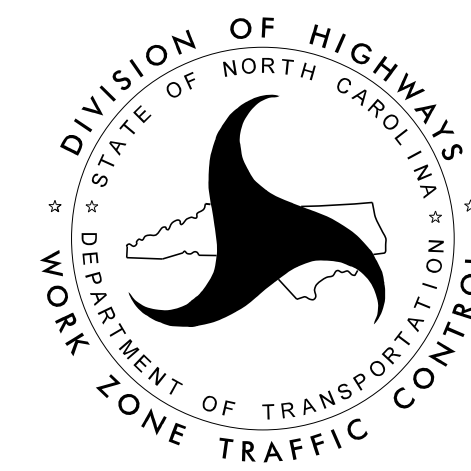
**PLANS PREPARED BY:**

C.B. HOLDEN, PE  
PROJECT MANAGER

K.W. BISBY, PE  
SENIOR PROJECT ENGINEER

**NCDOT CONTACTS:**

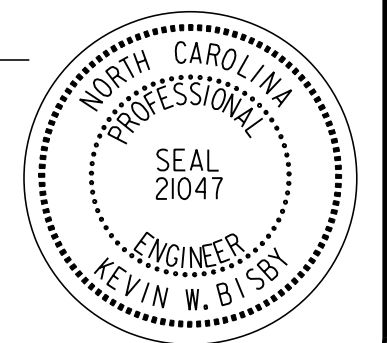
JOHN ABEL, JR.  
PROJECT ENGINEER - DIVISION 1



**PLANS PREPARED BY :**  
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**FOR**  
**DIVISION OF HIGHWAYS**

**APPROVED:**   
**DATE:** 1/14/2022

**SEAL**



1/14/2022  
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KBISBY

# ROADWAY STANDARD DRAWINGS

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

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	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	TRUCK MOUNTED ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND 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
1205.12	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

# 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
- ONGOING CONSTRUCTION

## SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

## PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

## TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN
- PORTABLE CONCRETE BARRIER
- PORTABLE CONCRETE BARRIER (EXISTING)
- SHORING
- PORTABLE CONCRETE BARRIER (SECTION VIEW)
- DRUM (SECTION VIEW)

## TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

## TEMPORARY PAVEMENT MARKING SCHEDULE

PAINT				COLD APPLIED PLASTIC	
Symbol	Description	Symbol	Description	Symbol	Description
P2	WHITE STOPBAR (24")	PK	3 FT. - 9 FT./SP WHITE MINISKIP (6")	C6	WHITE EDGELINE (6")
P6	WHITE EDGELINE (6")	PS	WHITE GORELINE (12")	C7	YELLOW EDGELINE (6")
P7	YELLOW EDGELINE (6")	PU	WHITE DIAGONAL (12")	CJ	10 FT. WHITE SKIP (6")
P11	2 FT. - 6 FT./SP WHITE MINISKIP (6")	PV	YELLOW DIAGONAL (12")	C16	YELLOW DOUBLE CENTER (6")
P12	2 FT. - 6 FT./SP YELLOW MINISKIP (6")	QA	LEFT TURN ARROW	<b>PAVEMENT MARKERS</b>	
P16	YELLOW DOUBLE CENTER (6")	QB	RIGHT TURN ARROW		
PA	WHITE EDGELINE (4")	QC	STRAIGHT ARROW	Symbol	Description
PB	YELLOW EDGELINE (4")	QN	24" YIELD LINE TRIANGLE	MH	TEMPORARY RAISED MARKER (Yellow/Yellow)
PI	YELLOW DOUBLE CENTER (4")	QP	MERGE ARROW	MI	TEMPORARY RAISED MARKER (Crystal/Red)
PJ	10 FT. WHITE SKIP (6")	QT	U-TURN ARROW		

PROJ. REFERENCE NO.	SHEET NO.
R-2511	TMP-1A

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 Responsive People | Creative Solutions

APPROVED:   
 DATE: 10/1/2021  
 SEAL

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

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

**ROADWAY STANDARD DRAWINGS & LEGEND**



# GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

**TIME RESTRICTIONS**

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

ROAD NAME  
US 17

HOLIDAY

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

B) DO NOT STOP TRAFFIC AS FOLLOWS:


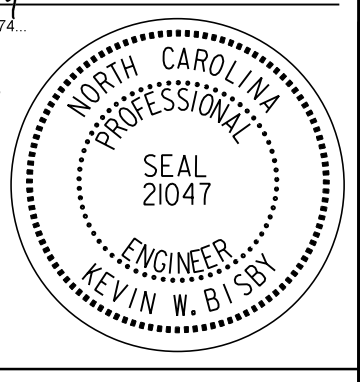
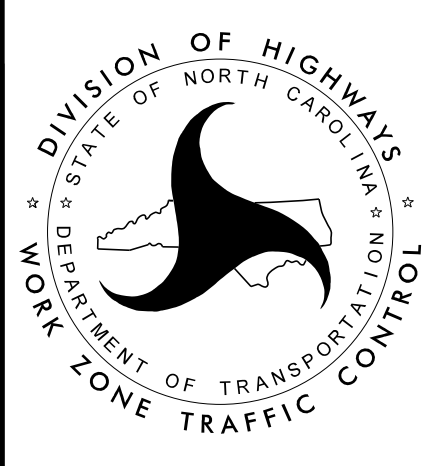
ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
US 17	MONDAY THROUGH FRIDAY 6:00 AM TO 8:00 AM 4:00 PM TO 6:00 PM	15 MINUTES FOR TRAFFIC SHIFTS

C) 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.

**LANE AND SHOULDER CLOSURE REQUIREMENTS**

- D) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED, OR AS DIRECTED BY THE ENGINEER.
- E) WHEN PERSONNEL 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.
- F) 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 LAND 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 LAND USING RDWY. STD. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

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<p>APPROVED:   <small>DocuSigned by: Kevin Bisby BDD802829912474</small></p> <p>DATE: 10/1/2021</p> <p style="text-align: center;">SEAL</p>			<p><b>TRANSPORTATION OPERATIONS PLAN: GENERAL NOTES</b></p>
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			



## GENERAL NOTES

- G) WHEN PERSONNEL OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- H) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT. ON BOTH SIDES OF AN OPEN TRAVEL WAY WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- I) ON TWO-LANE, TWO-WAY FACILITIES, DO NOT INSTALL MORE THAN ONE (1) MILE OF LANE CLOSURE IN ANY ONE DIRECTION ON ANY ROADWAY WITHIN THE PROJECT LIMITS OR IN CONJUNCTION WITH THIS PROJECT, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE. DO NOT INSTALL MORE THAN TWO SIMULTANEOUS LANE CLOSURES IN ANY ONE DIRECTION AND PROVIDE A MINIMUM OF TWO (2) MILES BETWEEN LANE CLOSURES, MEASURED FROM THE END OF ONE CLOSURE TO THE FIRST SIGN OF THE NEXT LANE CLOSURE.

ON MULTI-LANE FACILITIES, DO NOT INSTALL MORE THAN TWO (2) MILES OF LANE CLOSURE IN ANY ONE DIRECTION, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE. DO NOT INSTALL MORE THAN TWO SIMULTANEOUS LANE CLOSURES IN ANY ONE DIRECTION AND PROVIDE A MINIMUM OF TWO (2) MILES BETWEEN LANE CLOSURES, MEASURED FROM THE END OF ONE CLOSURE TO THE FIRST SIGN OF THE NEXT LANE CLOSURE.

### PAVEMENT EDGE DROP-OFF REQUIREMENTS

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

### TRAFFIC PATTERN ALTERATIONS


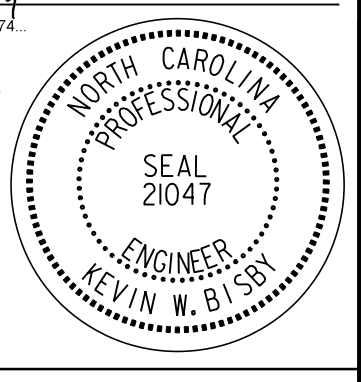
- L) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

### SIGNING

- M) 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.
- N) 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.
- O) 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.
- P) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- Q) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) OR "BUMP" SIGNS (W8-1) 500 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

### TRAFFIC BARRIER

- R) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS OR AS DIRECTED BY THE ENGINEER.  
  
DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.  
  
ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE / RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.  
  
INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.  
  
INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

APPROVED:  <small>DocuSigned by: Kevin W. Bisby BDD8028298912474</small> DATE: 10/1/2021  <div style="text-align: center;">   SEAL </div>		<b>TRANSPORTATION OPERATIONS  PLAN:  GENERAL NOTES</b>
<b>DOCUMENT NOT CONSIDERED FINAL  UNLESS ALL SIGNATURES COMPLETED</b>		



# GENERAL NOTES

S) 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**

- T) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREA NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT. ON-CENTER IN RADIUS, AND 3 FT. OFF THE EDGE OF AN OPEN TRAVEL WAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTION 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- U) PLACE TYPE III BARRICADES WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE THE ENTIRE ROADWAY.
- V) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVEL WAY ON 500 FT. CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

**PAVEMENT MARKINGS AND MARKERS**

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


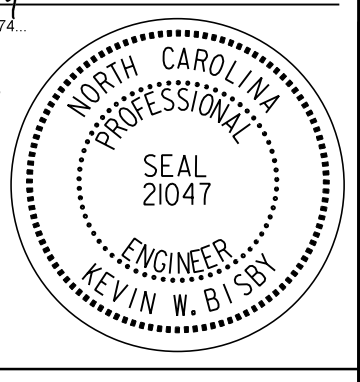
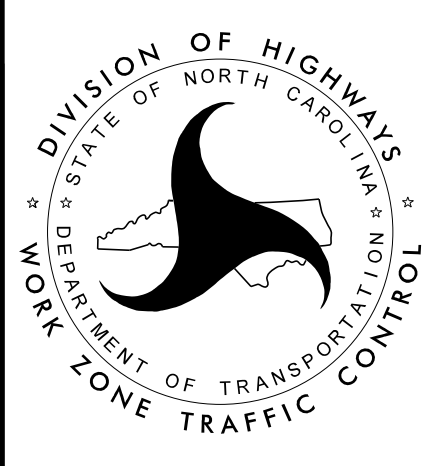
ROAD NAME	MARKING	MARKER
ALL ROADS	PAINT	TEMPORARY RAISED (US 17 ONLY)
CONCRETE PAVEMENT	COLD APPLIED PLASTIC (TYPE 4)	TEMPORARY RAISED

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

**MISCELLANEOUS**

- BB) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND INTERSECTIONS AS DIRECTED BY THE ENGINEER.
- CC) MAINTAIN VEHICULAR ACCESS TO PROPERTIES USING METHODS APPROVED BY THE ENGINEER. CONSTRUCTION METHODS AND MEANS WILL BE DETERMINED IN THE FIELD IN COORDINATION WITH DIVISION AND THE PROPERTY OWNERS.

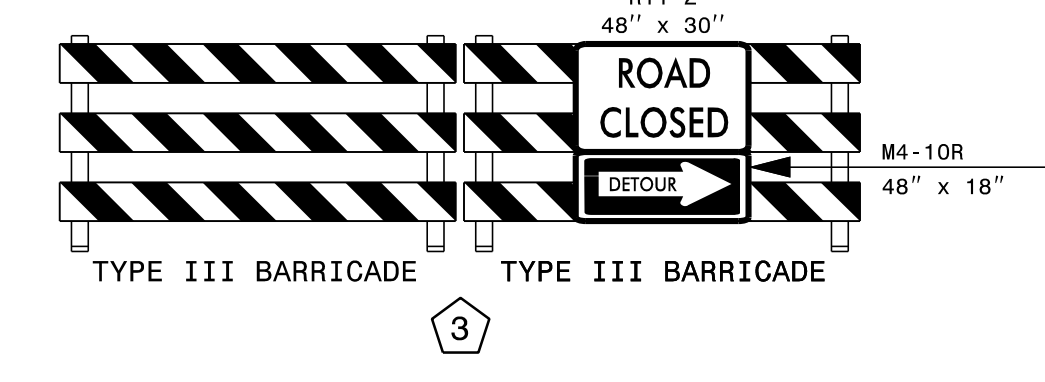
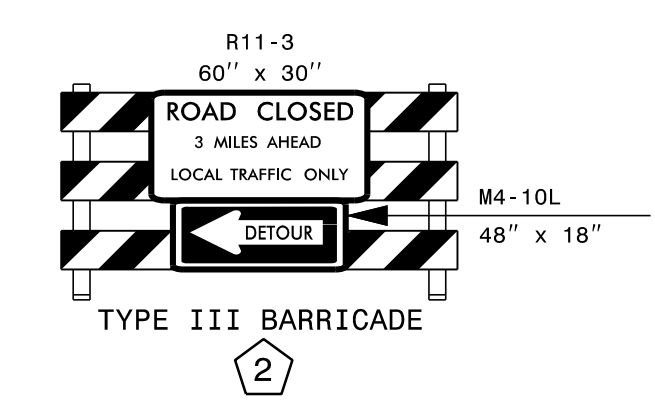
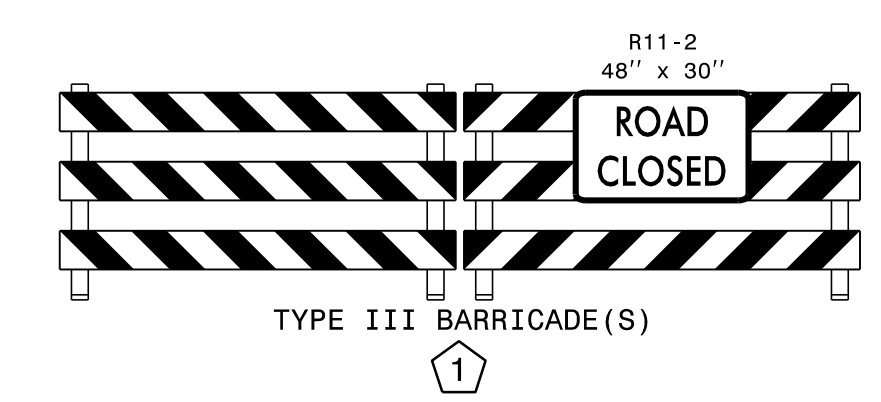
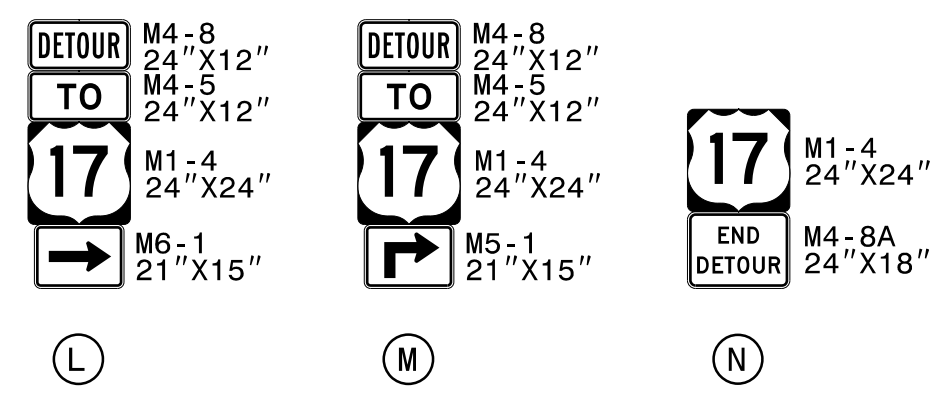
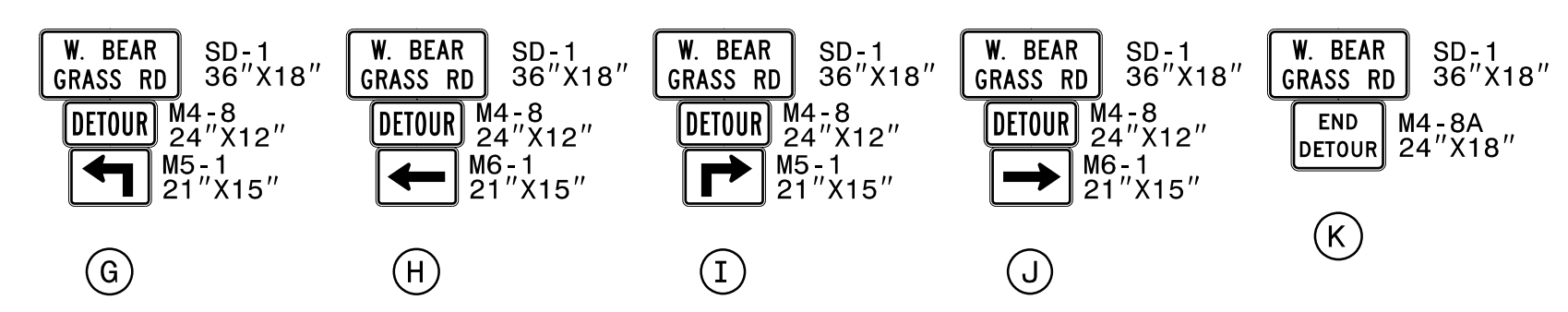
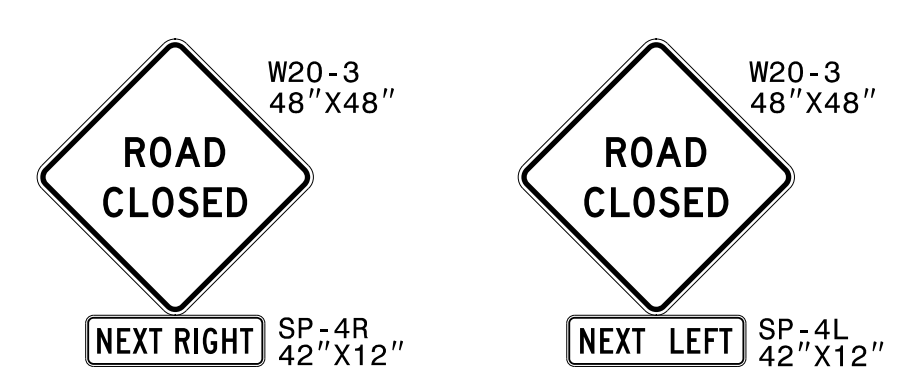
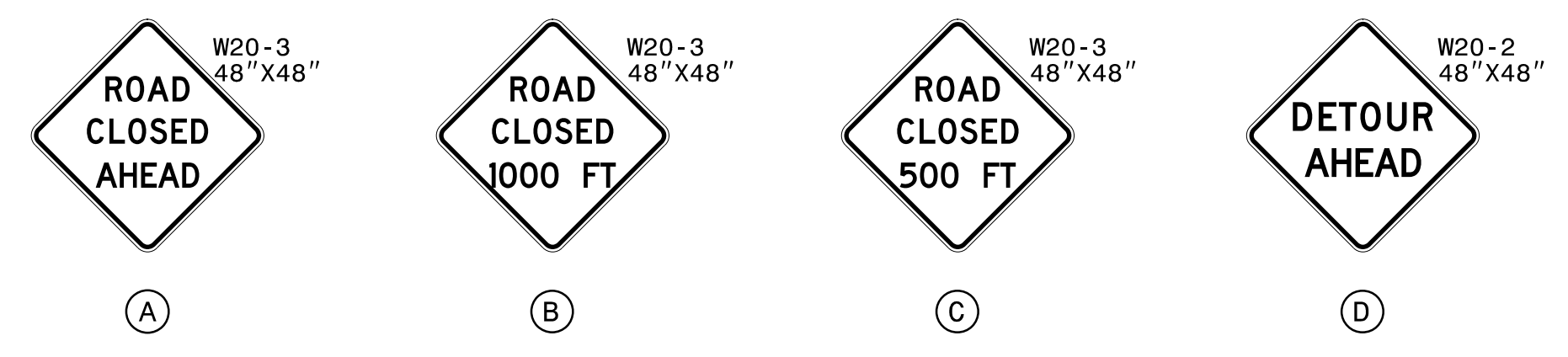
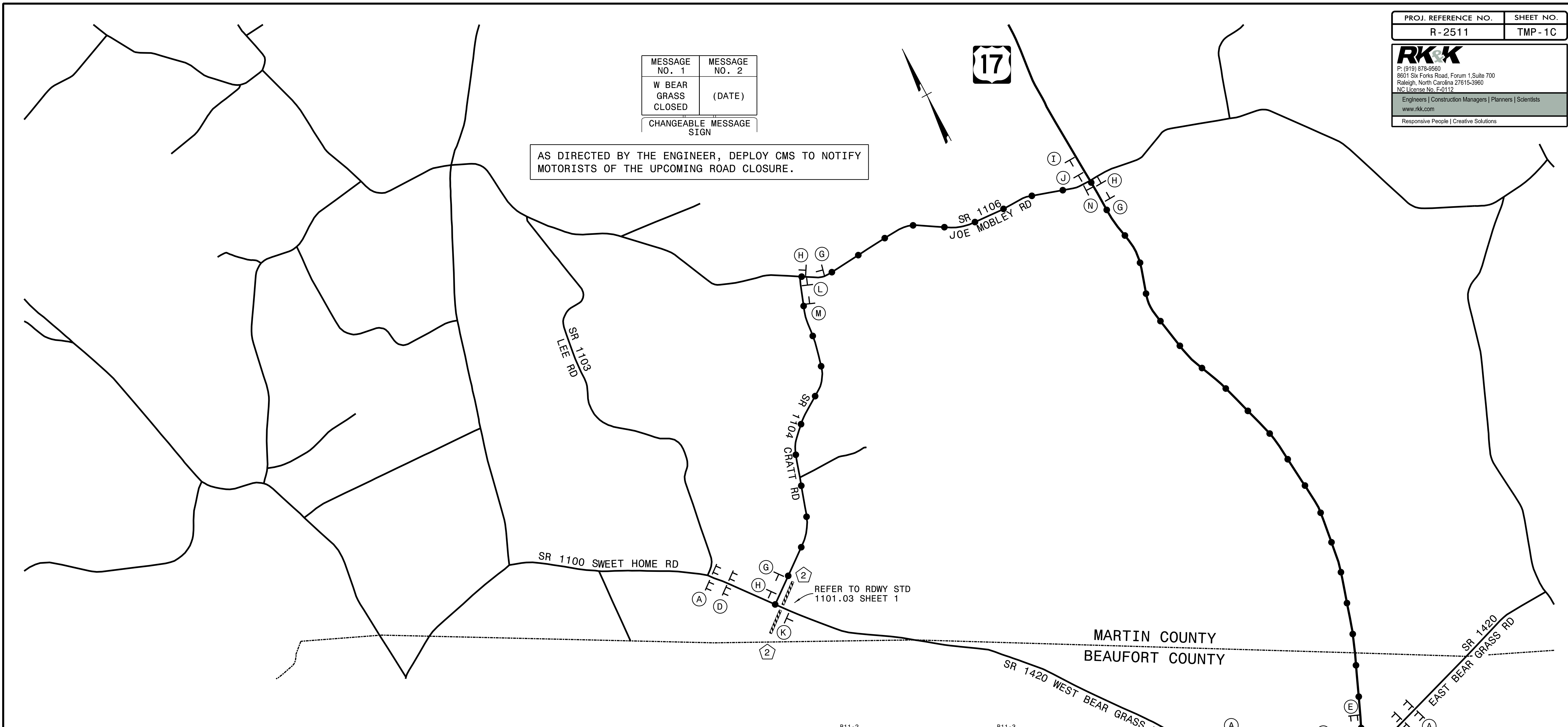
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MESSAGE NO. 1	MESSAGE NO. 2
W BEAR GRASS CLOSED	(DATE)
CHANGEABLE MESSAGE SIGN	

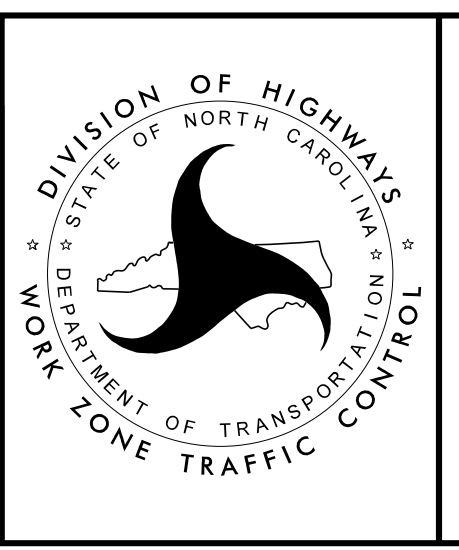
AS DIRECTED BY THE ENGINEER, DEPLOY CMS TO NOTIFY MOTORISTS OF THE UPCOMING ROAD CLOSURE.



SEE TMP-2B FOR SIGN DESIGN  
 SIGN LOCATIONS TO BE APPROVED BY THE ENGINEER.

REFER TO RDWY STD 1101.03 SHEET 2

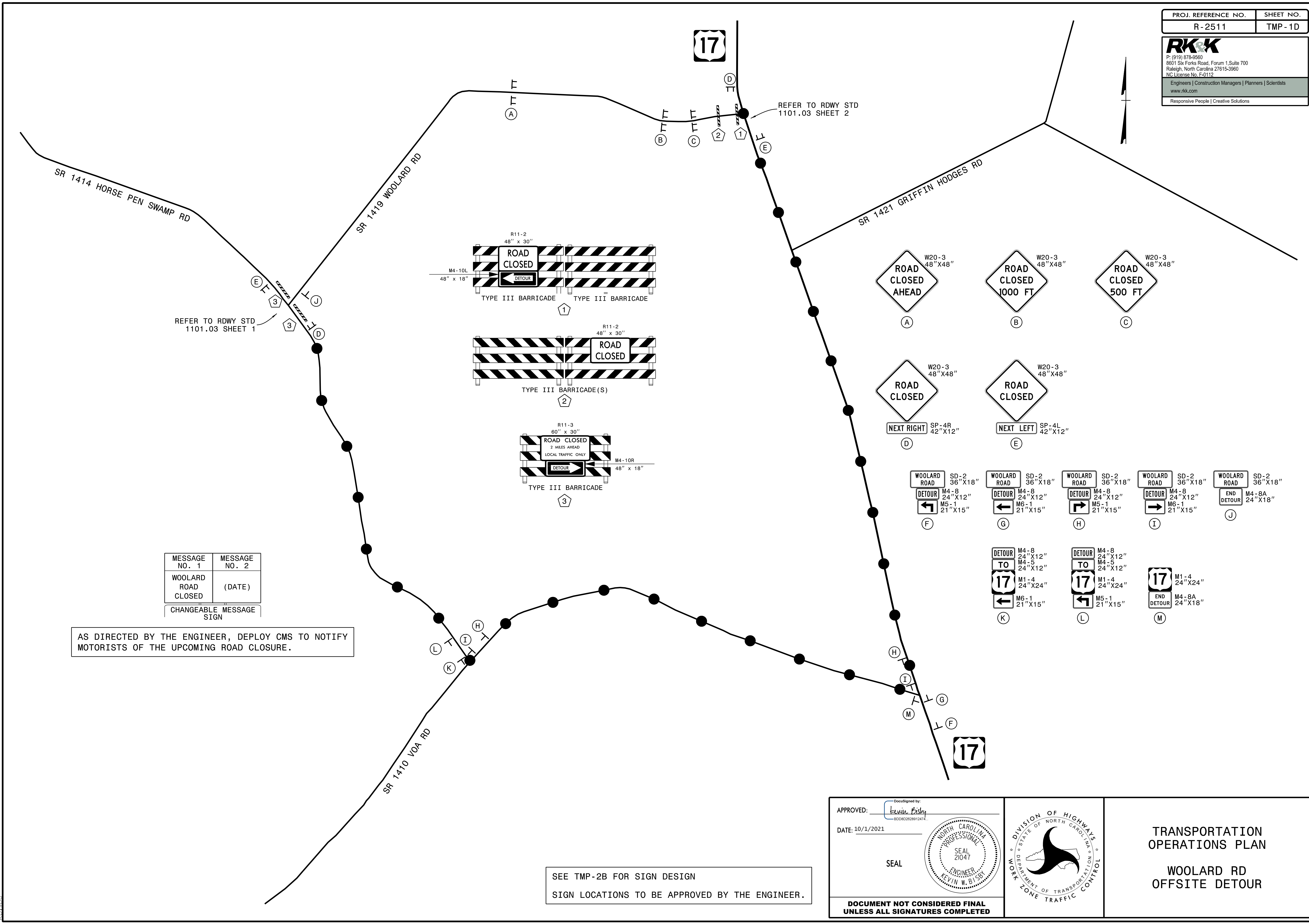
APPROVED: *Kevin Bisby*  
 DATE: 10/1/2021  
 SEAL  
 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



TRANSPORTATION OPERATIONS PLAN  
 WEST BEAR GRASS RD OFFSITE DETOUR  
 DIVISION OF HIGHWAYS  
 DEPARTMENT OF TRANSPORTATION  
 WORK ZONE TRAFFIC CONTROL

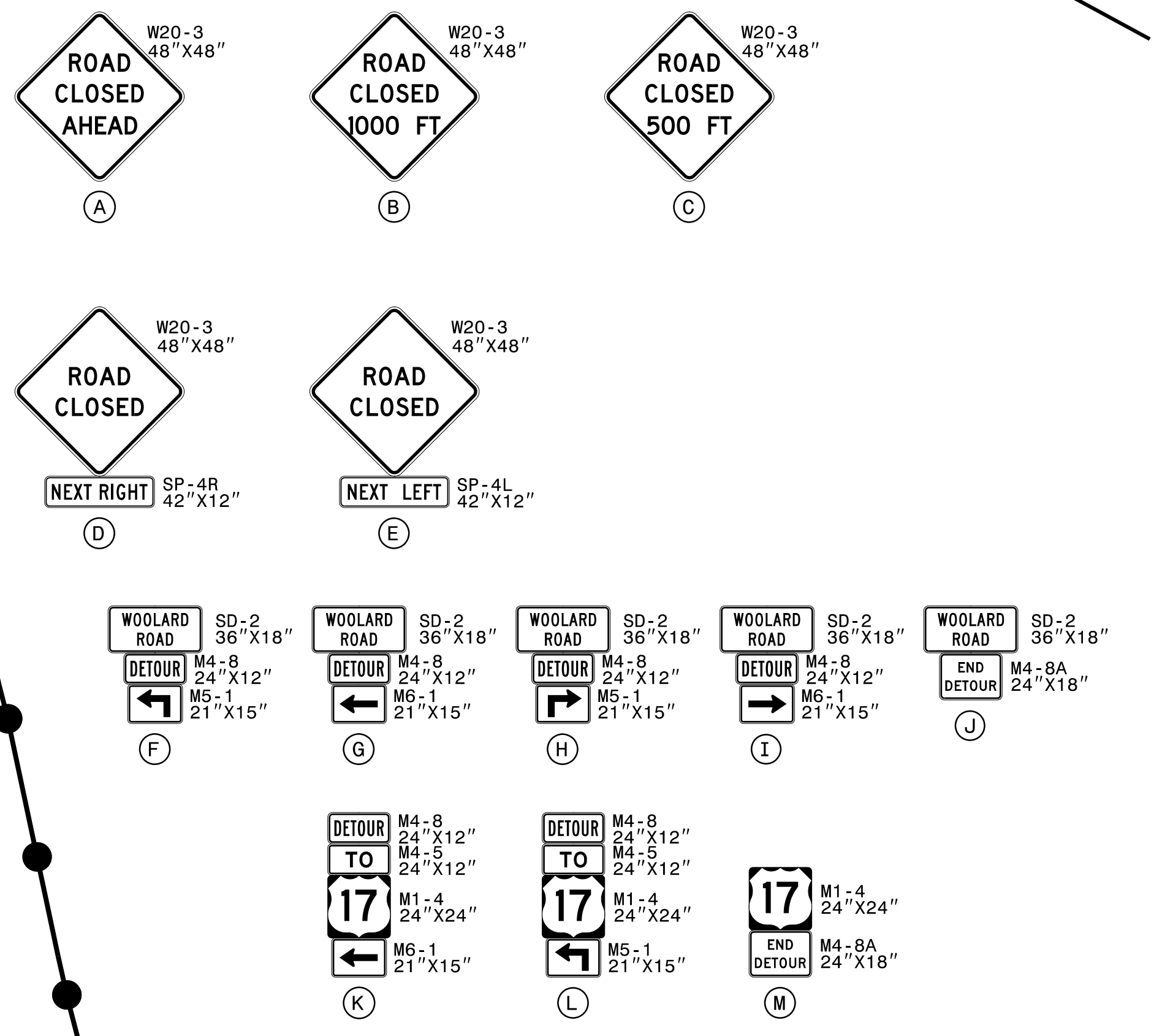
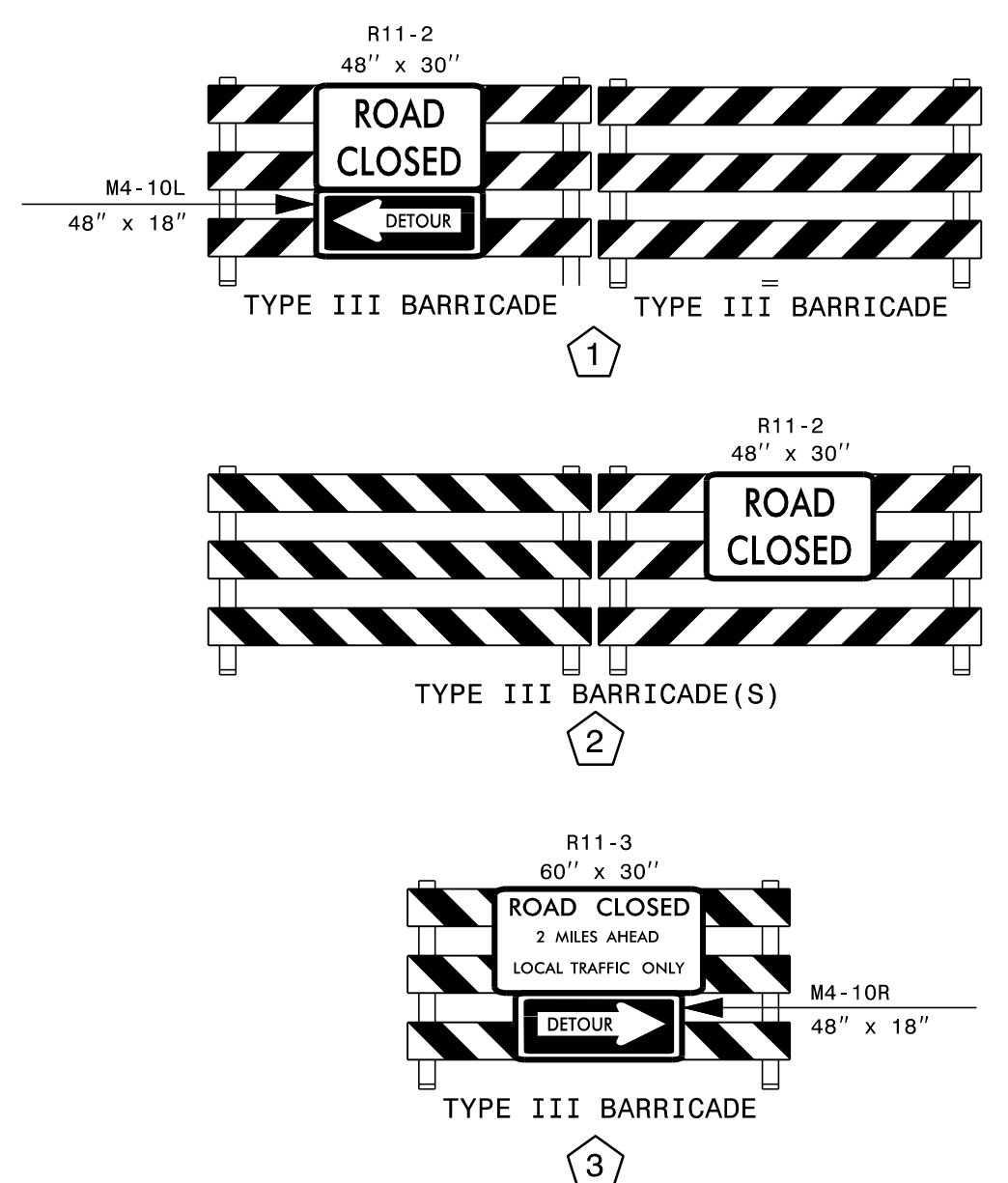
10/1/2021 R2511-TMP\_PSH01C.dgn





REFER TO RDWY STD 1101.03 SHEET 1

REFER TO RDWY STD 1101.03 SHEET 2



MESSAGE NO. 1	MESSAGE NO. 2
WOOLARD ROAD CLOSED	(DATE)
CHANGEABLE MESSAGE SIGN	

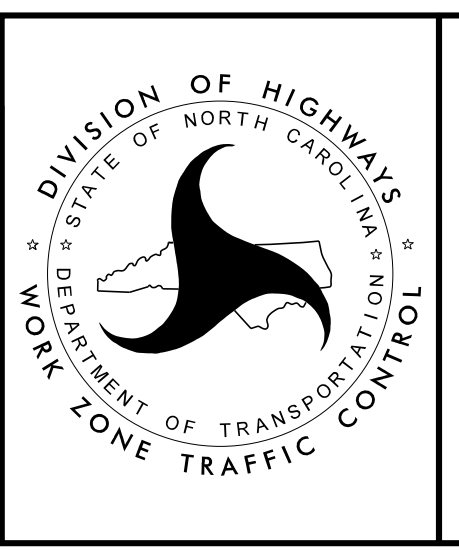
AS DIRECTED BY THE ENGINEER, DEPLOY CMS TO NOTIFY MOTORISTS OF THE UPCOMING ROAD CLOSURE.

SEE TMP-2B FOR SIGN DESIGN  
 SIGN LOCATIONS TO BE APPROVED BY THE ENGINEER.

APPROVED: *Kevin Bisby*  
 DATE: 10/1/2021

SEAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



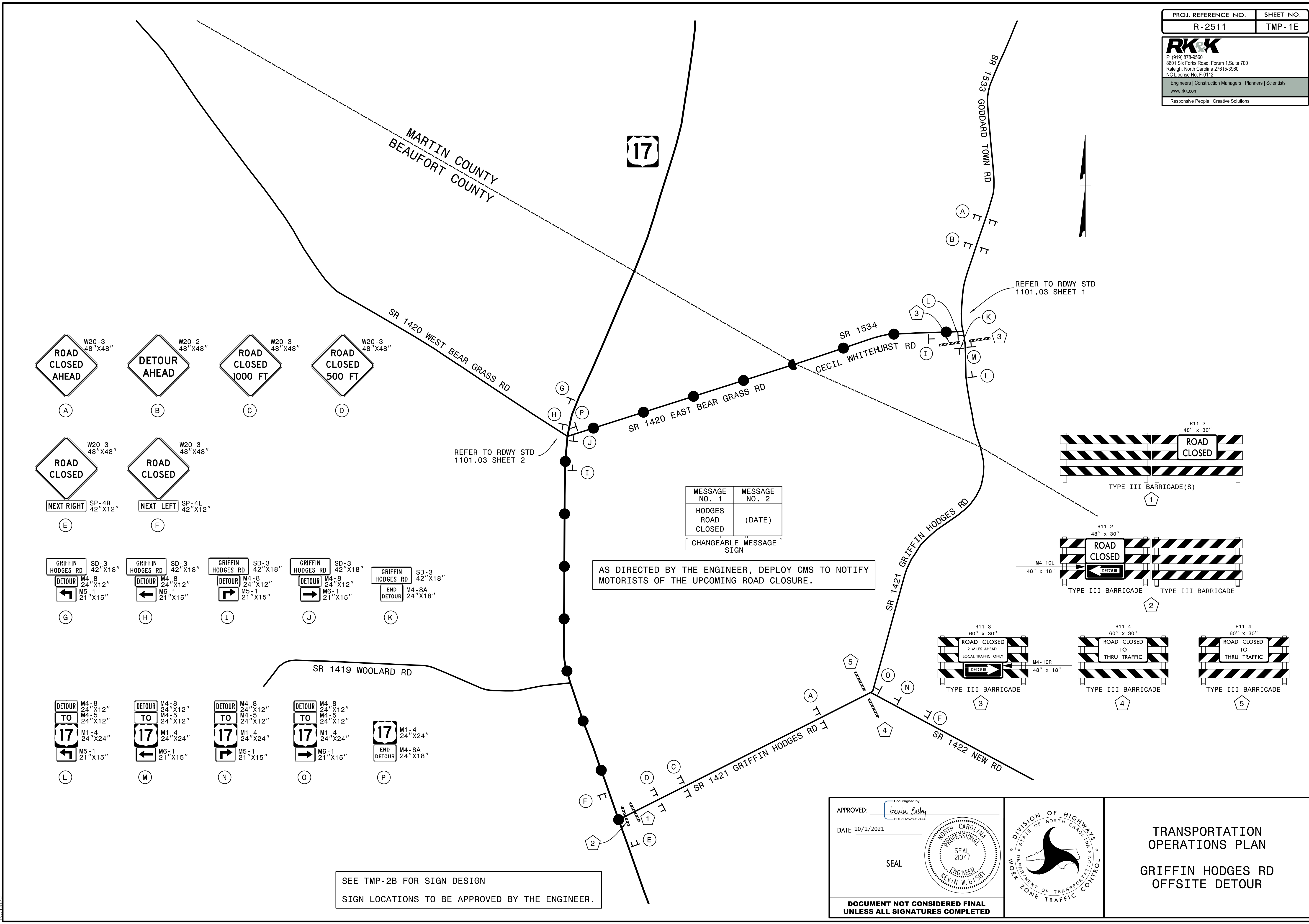
TRANSPORTATION OPERATIONS PLAN

WOOLARD RD OFFSITE DETOUR

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

10/1/2021 R2511-TMP\_PSH01D.dgn KSB





- (A) ROAD CLOSED AHEAD W20-3 48" x 48"
- (B) DETOUR AHEAD W20-2 48" x 48"
- (C) ROAD CLOSED 1000 FT W20-3 48" x 48"
- (D) ROAD CLOSED 500 FT W20-3 48" x 48"
- (E) ROAD CLOSED W20-3 48" x 48"
- (F) ROAD CLOSED W20-3 48" x 48"
- (G) GRIFFIN HODGES RD SD-3 42" x 18" DETOUR M4-8 24" x 12" M5-1 21" x 15"
- (H) GRIFFIN HODGES RD SD-3 42" x 18" DETOUR M4-8 24" x 12" M6-1 21" x 15"
- (I) GRIFFIN HODGES RD SD-3 42" x 18" DETOUR M4-8 24" x 12" M5-1 21" x 15"
- (J) GRIFFIN HODGES RD SD-3 42" x 18" DETOUR M4-8 24" x 12" M6-1 21" x 15"
- (K) GRIFFIN HODGES RD SD-3 42" x 18" END DETOUR M4-8A 24" x 18"
- (L) DETOUR TO 17 M4-8 24" x 12" M4-5 24" x 12" M1-4 24" x 24" M5-1 21" x 15"
- (M) DETOUR TO 17 M4-8 24" x 12" M4-5 24" x 12" M1-4 24" x 24" M6-1 21" x 15"
- (N) DETOUR TO 17 M4-8 24" x 12" M4-5 24" x 12" M1-4 24" x 24" M5-1 21" x 15"
- (O) DETOUR TO 17 M4-8 24" x 12" M4-5 24" x 12" M1-4 24" x 24" M6-1 21" x 15"
- (P) END DETOUR 17 M1-4 24" x 24" M4-8A 24" x 18"

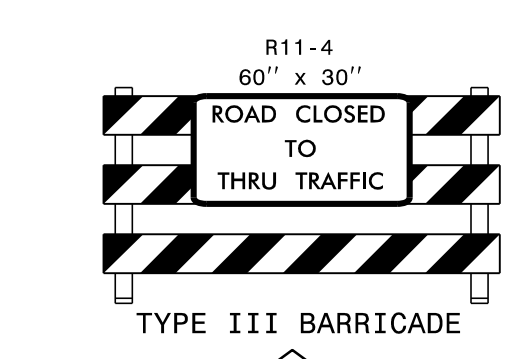
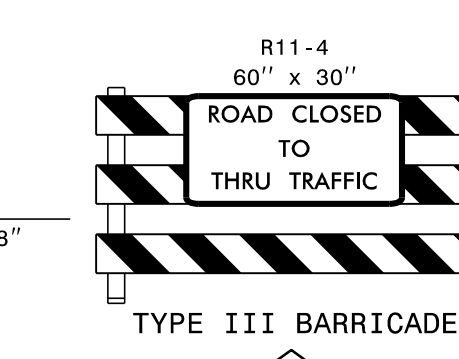
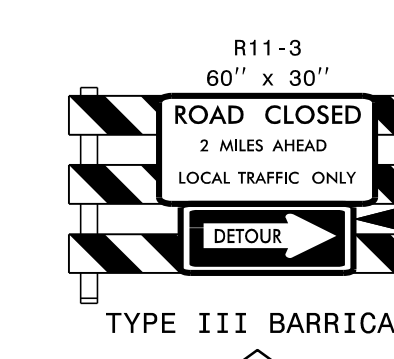
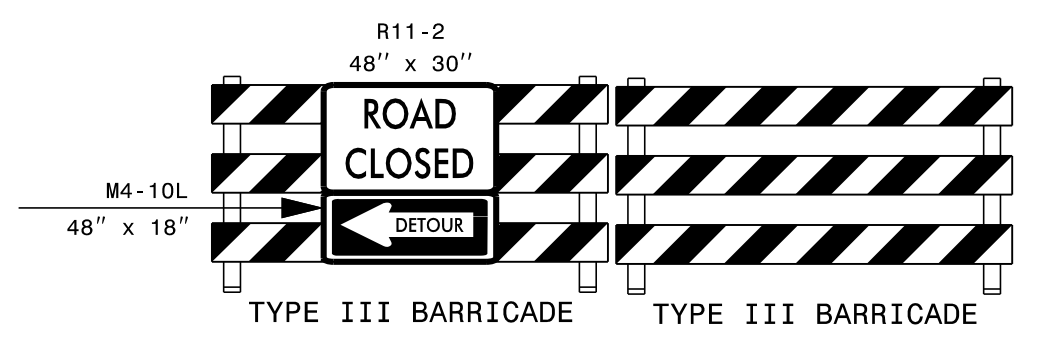
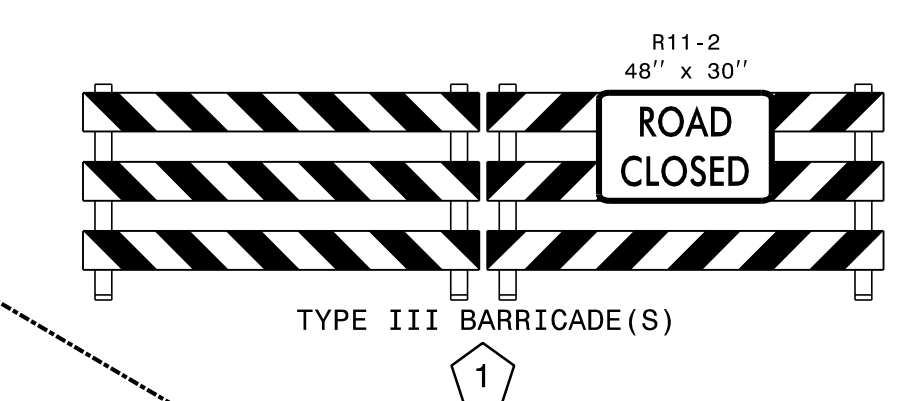
REFER TO RDWY STD 1101.03 SHEET 2

MESSAGE NO. 1	MESSAGE NO. 2
HODGES ROAD CLOSED	(DATE)

CHANGEABLE MESSAGE SIGN

AS DIRECTED BY THE ENGINEER, DEPLOY CMS TO NOTIFY MOTORISTS OF THE UPCOMING ROAD CLOSURE.

REFER TO RDWY STD 1101.03 SHEET 1

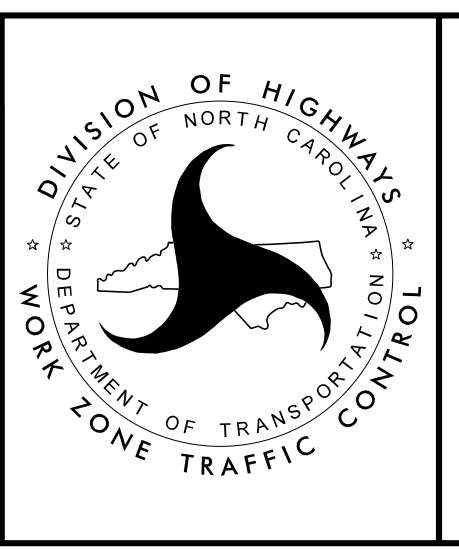


SEE TMP-2B FOR SIGN DESIGN  
 SIGN LOCATIONS TO BE APPROVED BY THE ENGINEER.

APPROVED: *Kevin Bisby*  
 DATE: 10/1/2021

SEAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



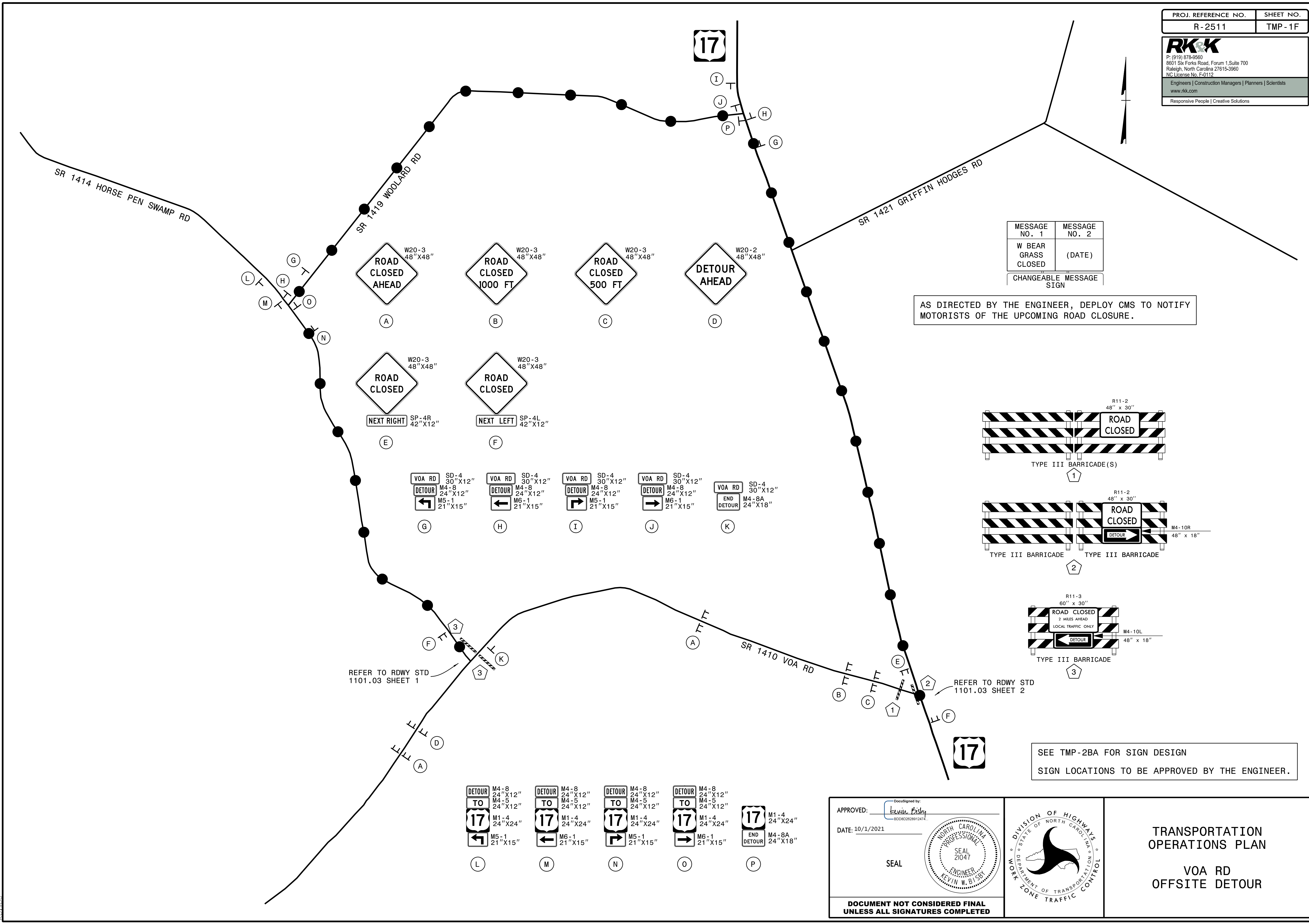
TRANSPORTATION OPERATIONS PLAN

GRIFFIN HODGES RD OFFSITE DETOUR

DIVISION OF HIGHWAYS  
 DEPARTMENT OF TRANSPORTATION  
 TRAFFIC CONTROL

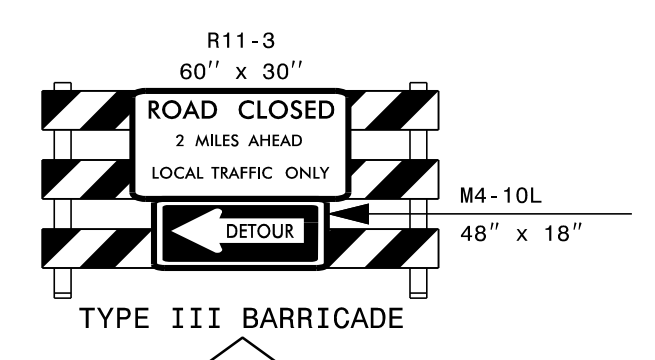
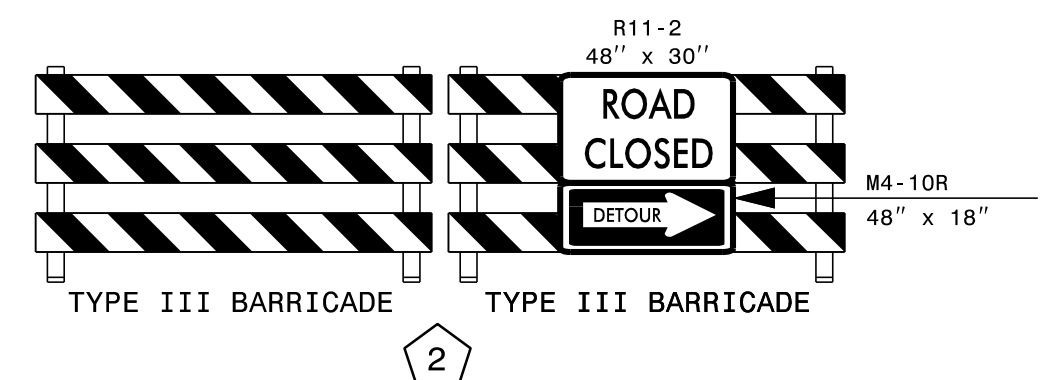
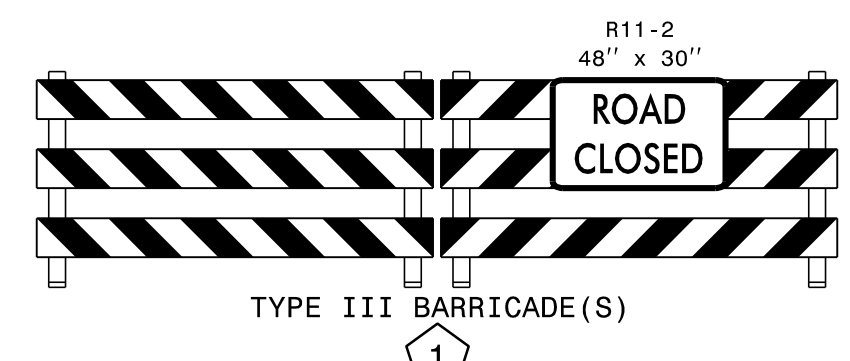
10/1/2021 R2511-TMP-PSH01E.dgn





MESSAGE NO. 1	MESSAGE NO. 2
W BEAR GRASS CLOSED	(DATE)
CHANGEABLE MESSAGE SIGN	

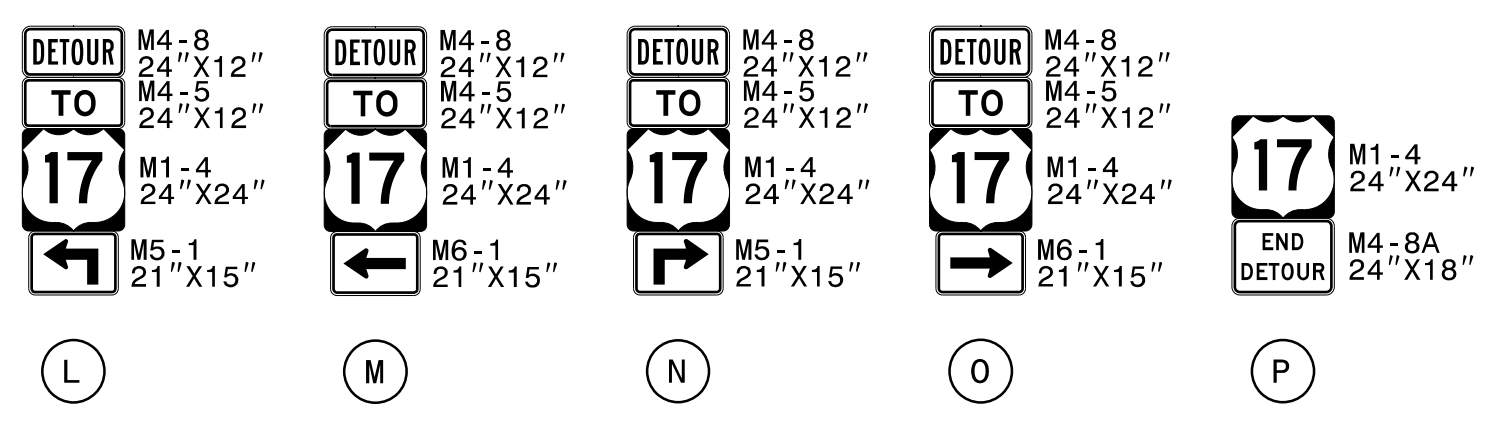
AS DIRECTED BY THE ENGINEER, DEPLOY CMS TO NOTIFY MOTORISTS OF THE UPCOMING ROAD CLOSURE.



SEE TMP-2BA FOR SIGN DESIGN  
 SIGN LOCATIONS TO BE APPROVED BY THE ENGINEER.

REFER TO RDWY STD 1101.03 SHEET 1

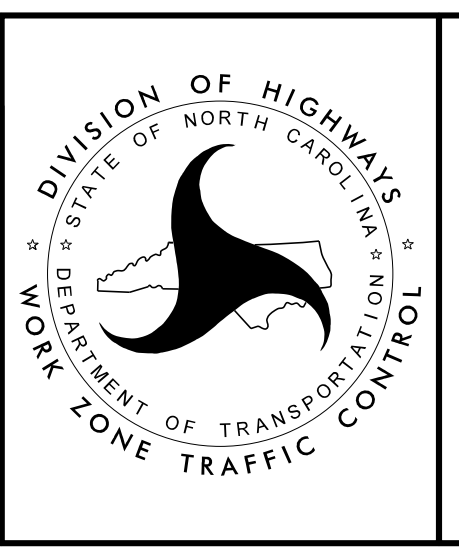
REFER TO RDWY STD 1101.03 SHEET 2



APPROVED: *Kevin Bisby*  
 DATE: 10/1/2021

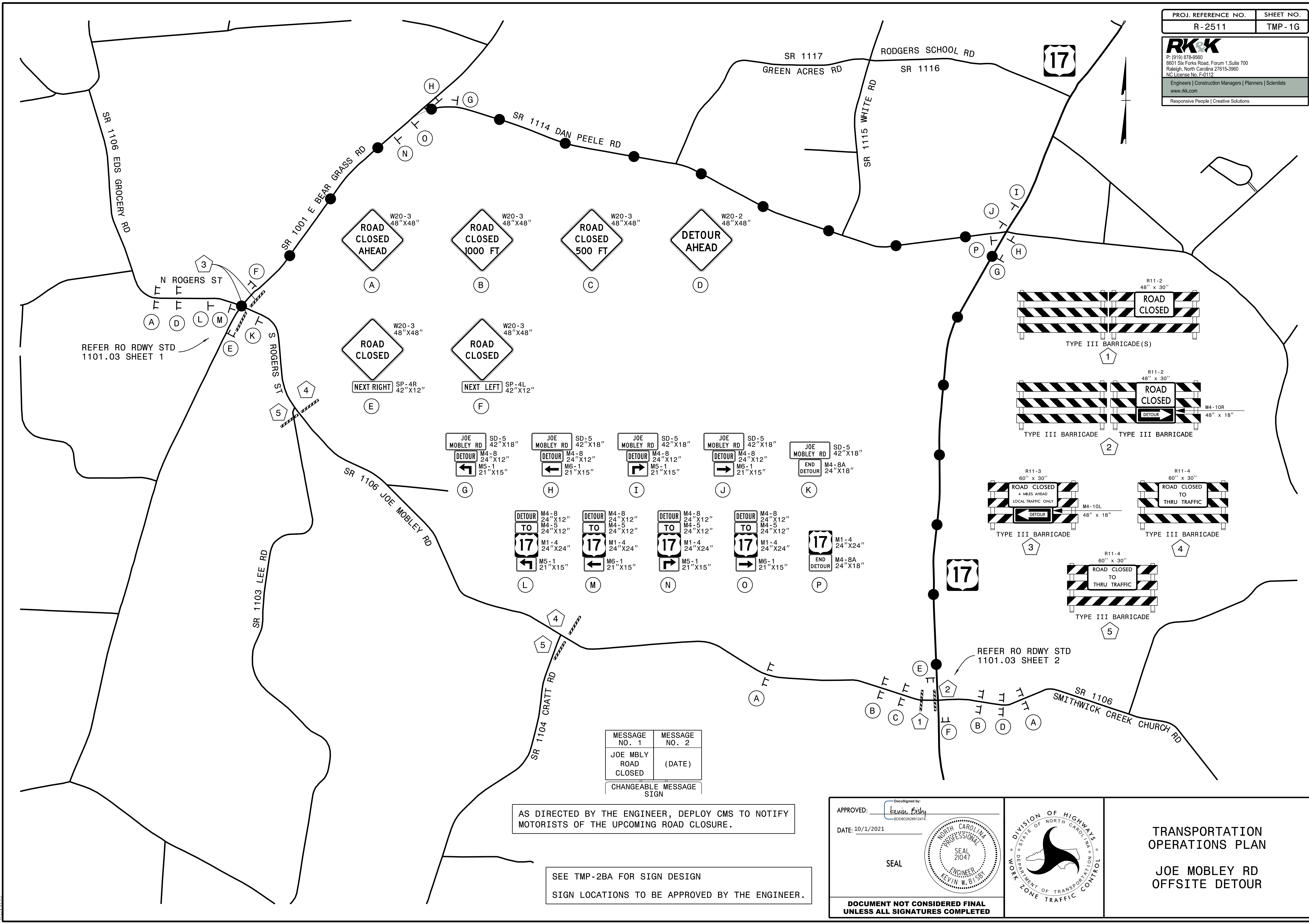
SEAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



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

TRANSPORTATION OPERATIONS PLAN  
 VOA RD OFFSITE DETOUR




REFER RO RDWY STD  
1101.03 SHEET 1

REFER RO RDWY STD  
1101.03 SHEET 2

MESSAGE NO. 1	MESSAGE NO. 2
JOE MBLY ROAD CLOSED	(DATE)
CHANGEABLE MESSAGE SIGN	

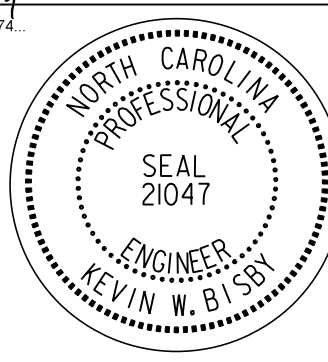
AS DIRECTED BY THE ENGINEER, DEPLOY CMS TO NOTIFY MOTORISTS OF THE UPCOMING ROAD CLOSURE.

SEE TMP-2BA FOR SIGN DESIGN  
SIGN LOCATIONS TO BE APPROVED BY THE ENGINEER.

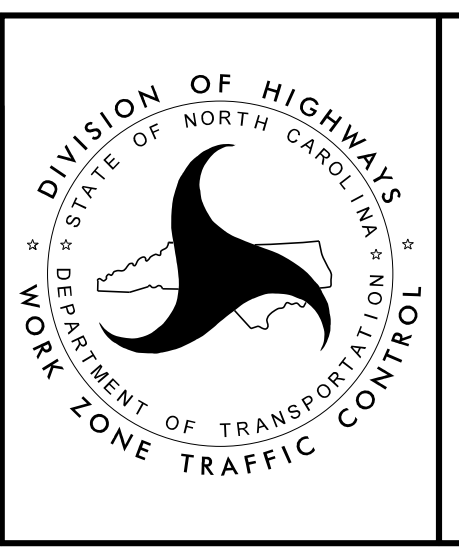
APPROVED: 

DATE: 10/1/2021

SEAL



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

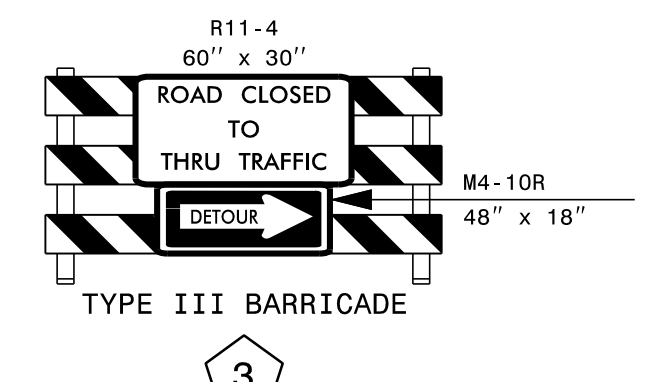
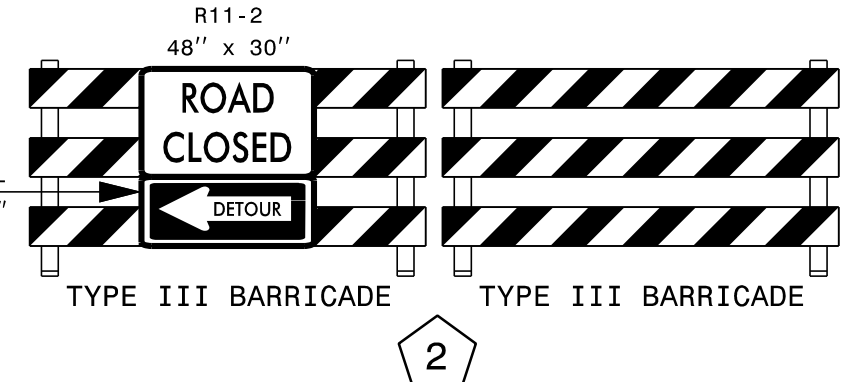
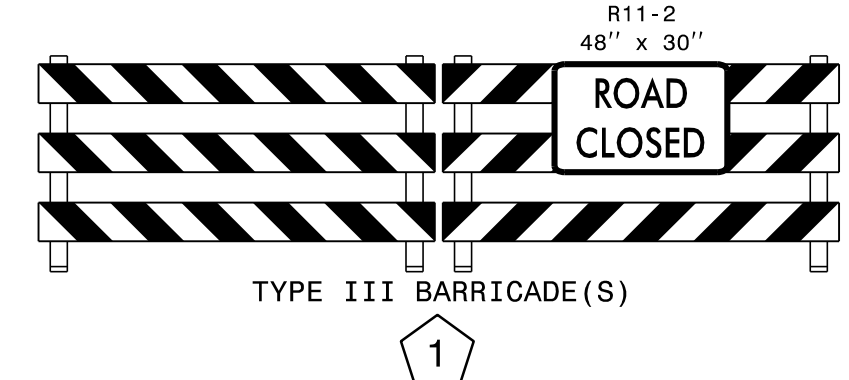
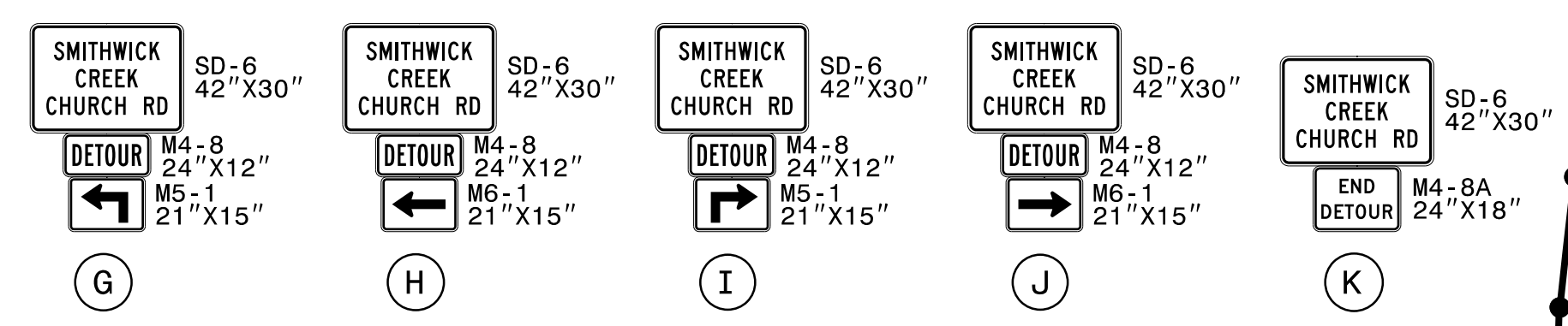
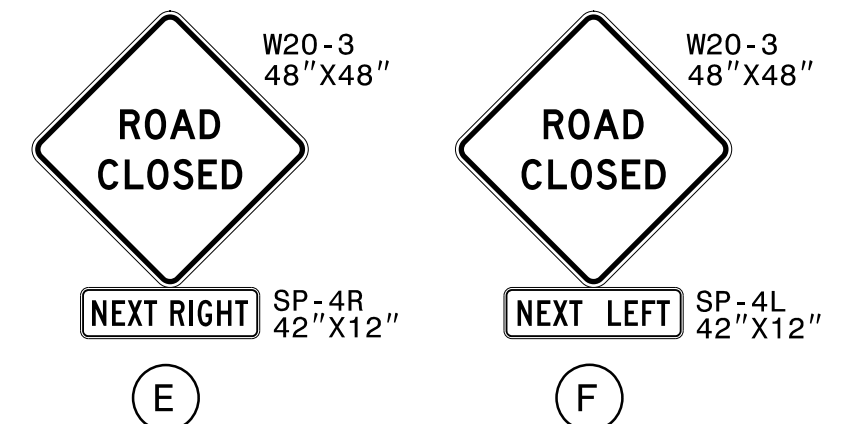
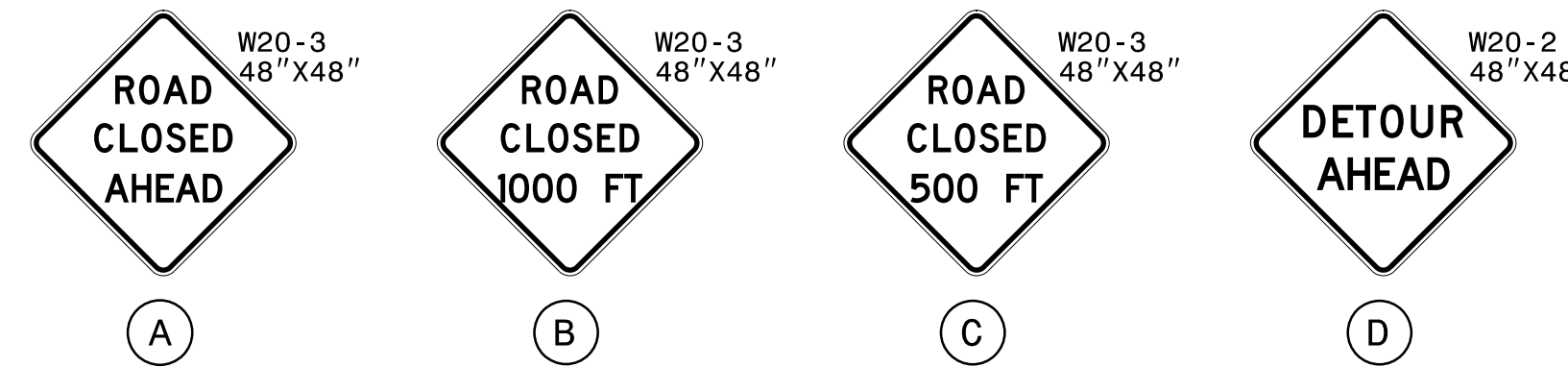
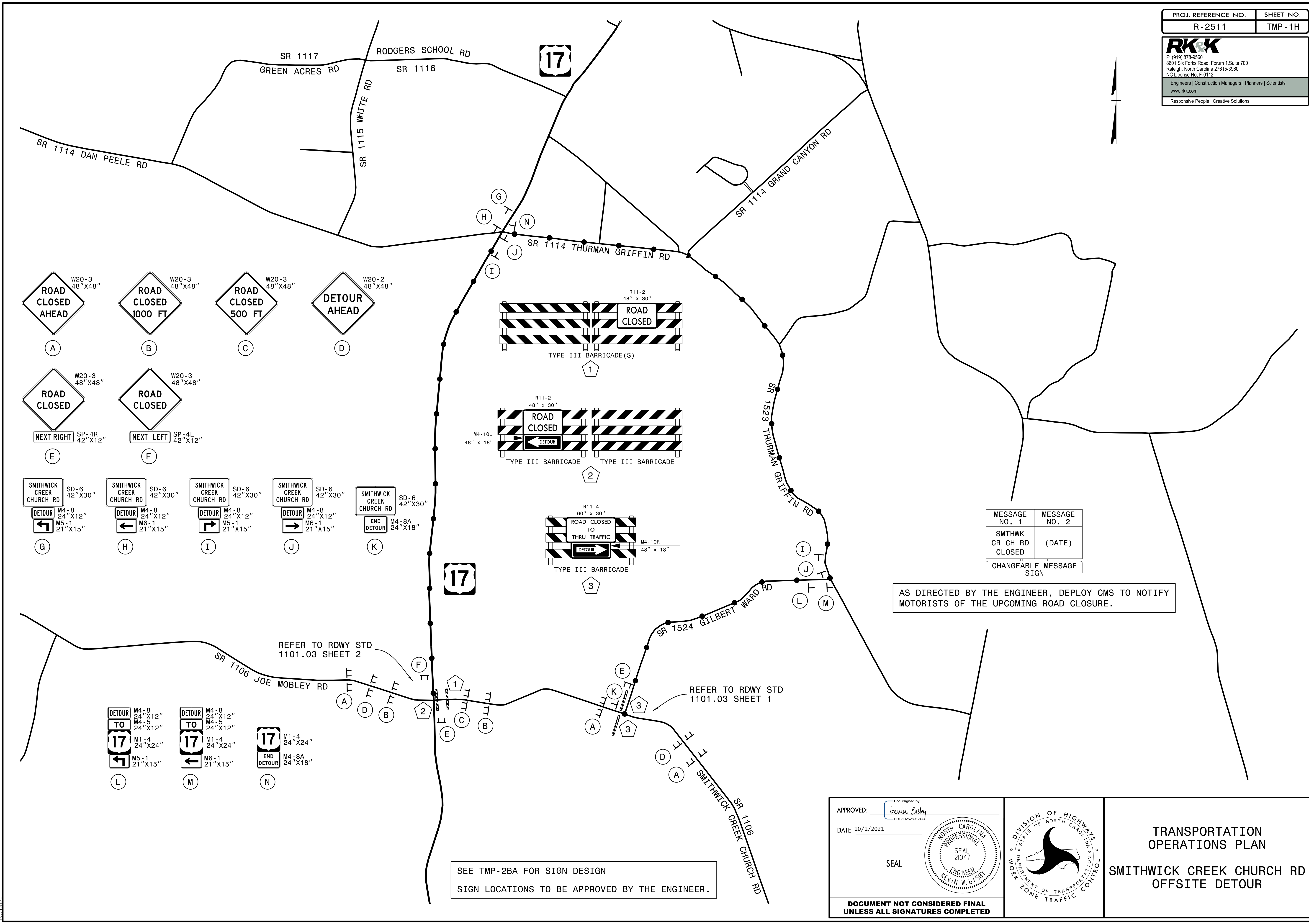


TRANSPORTATION OPERATIONS PLAN

JOE MOBLEY RD OFFSITE DETOUR

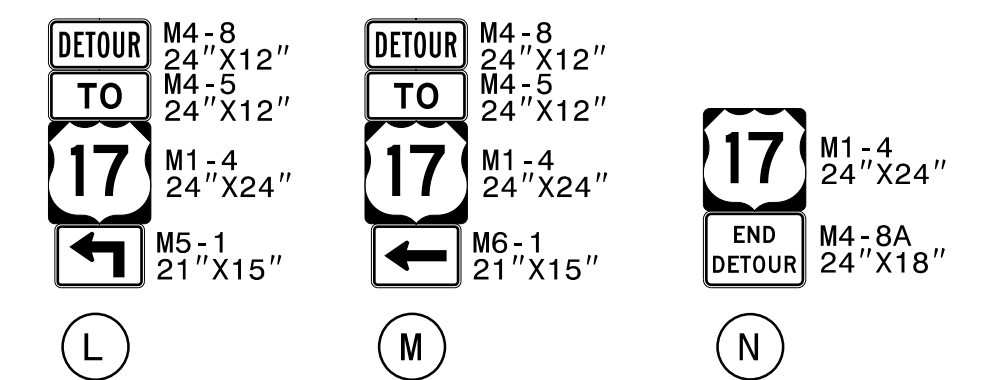
10/1/2021 R2511-TMP-PSH01G.dgn





MESSAGE NO. 1	MESSAGE NO. 2
SMTHWK CR CH RD CLOSED	(DATE)
CHANGEABLE MESSAGE SIGN	

AS DIRECTED BY THE ENGINEER, DEPLOY CMS TO NOTIFY MOTORISTS OF THE UPCOMING ROAD CLOSURE.

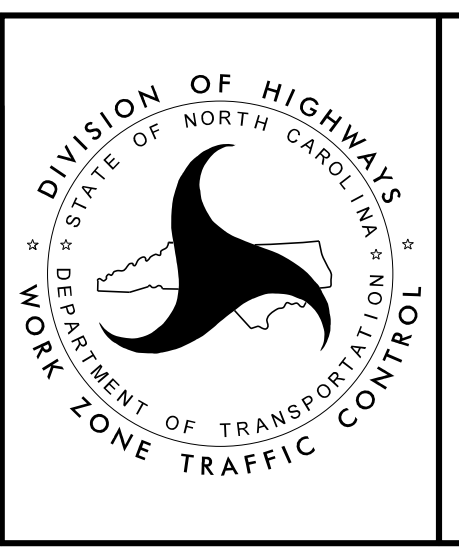


SEE TMP-2BA FOR SIGN DESIGN  
 SIGN LOCATIONS TO BE APPROVED BY THE ENGINEER.

APPROVED: *Kevin Bisby*  
 DATE: 10/1/2021

SEAL

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED



TRANSPORTATION OPERATIONS PLAN

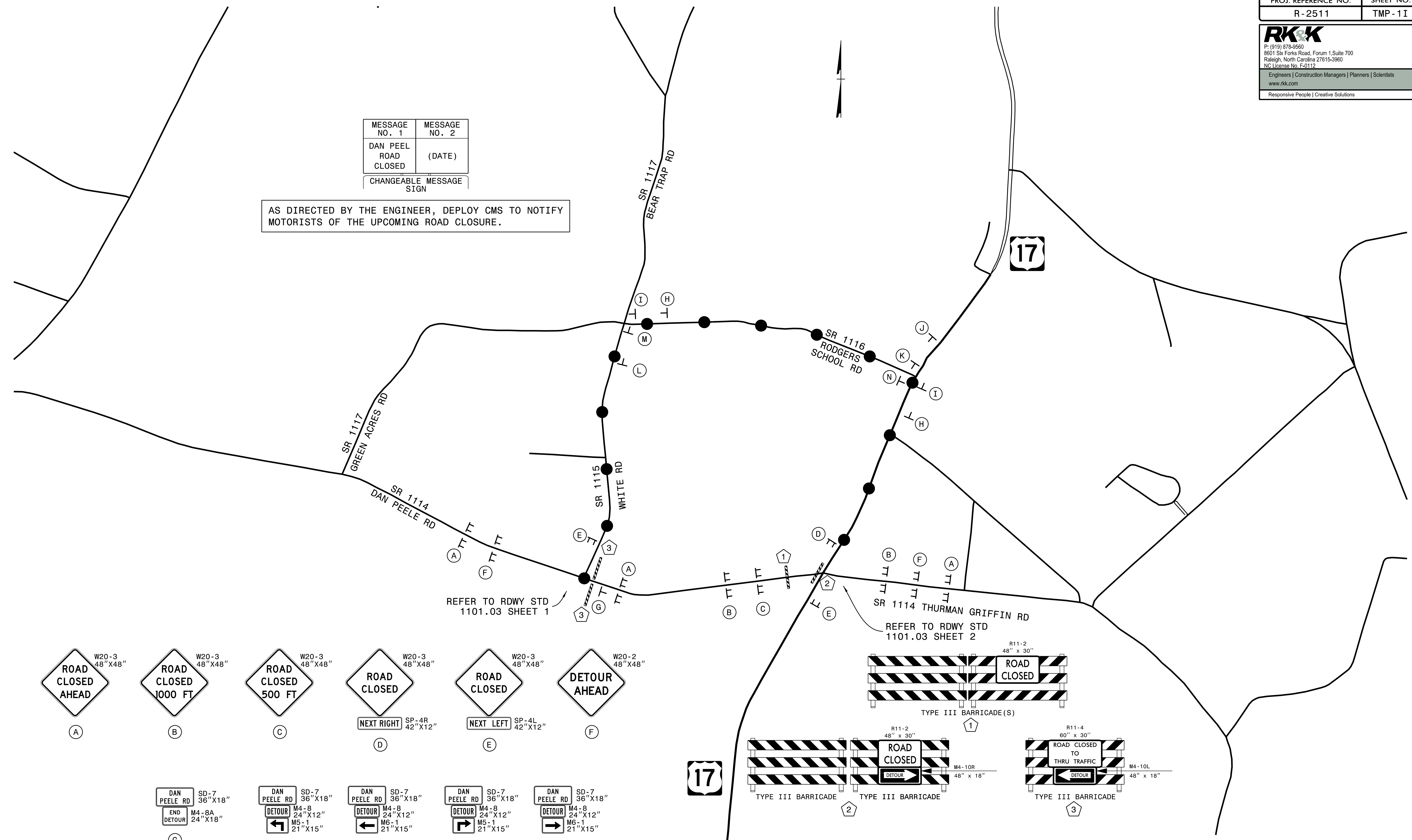
SMITHWICK CREEK CHURCH RD OFFSITE DETOUR

DIVISION OF HIGHWAYS  
 DEPARTMENT OF TRANSPORTATION  
 WORK ZONE TRAFFIC CONTROL

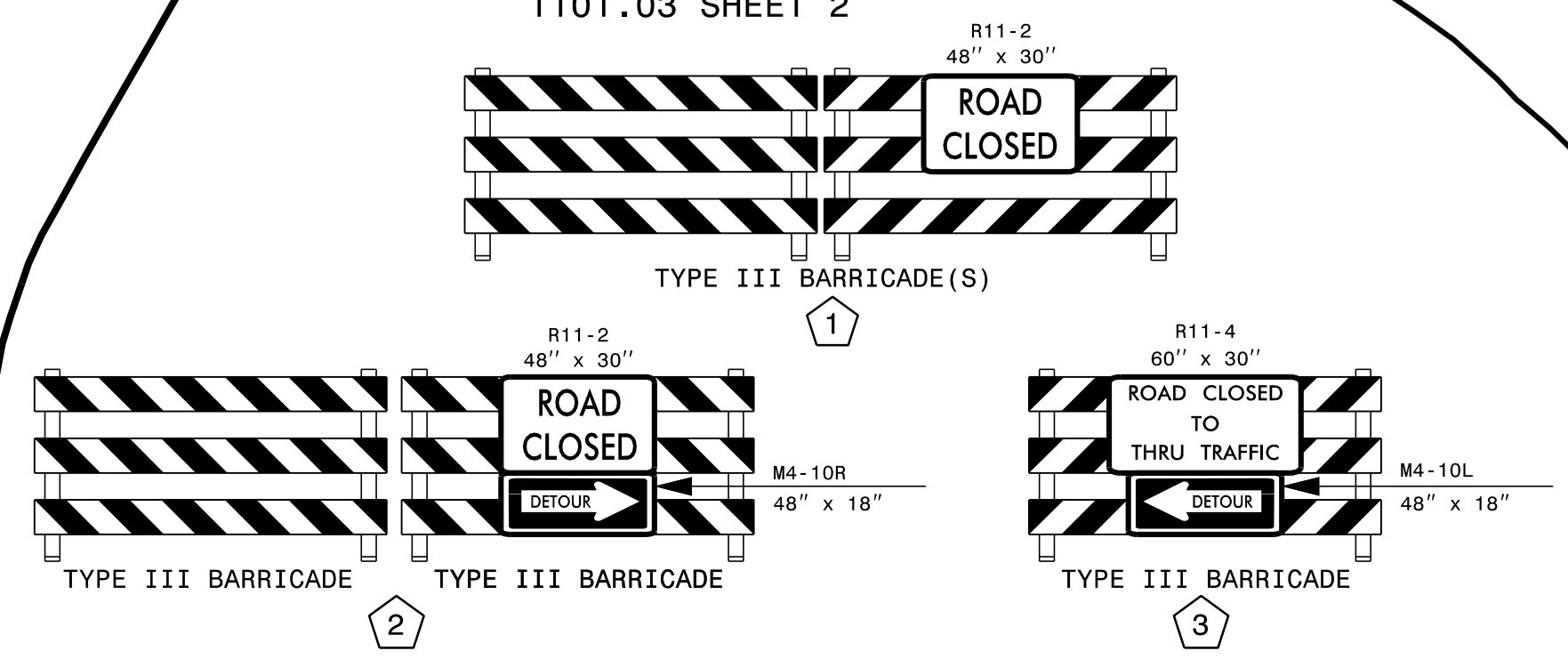
10/1/2021 R2511-TMP-PSH01H.dgn

MESSAGE NO. 1	MESSAGE NO. 2
DAN PEELE ROAD CLOSED	(DATE)
CHANGEABLE MESSAGE SIGN	

AS DIRECTED BY THE ENGINEER, DEPLOY CMS TO NOTIFY MOTORISTS OF THE UPCOMING ROAD CLOSURE.

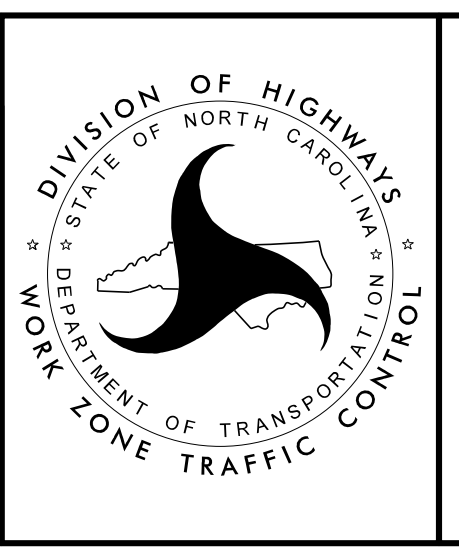


- (A) ROAD CLOSED AHEAD W20-3 48" x 48"
- (B) ROAD CLOSED 1000 FT W20-3 48" x 48"
- (C) ROAD CLOSED 500 FT W20-3 48" x 48"
- (D) ROAD CLOSED NEXT RIGHT SP-4R 42" x 12"
- (E) ROAD CLOSED NEXT LEFT SP-4L 42" x 12"
- (F) DETOUR AHEAD W20-2 48" x 48"
- (G) DAN PEELE RD END DETOUR SD-7 36" x 18" M4-BA 24" x 18"
- (H) DAN PEELE RD DETOUR SD-7 36" x 18" M4-8 24" x 12" M5-1 21" x 15"
- (I) DAN PEELE RD DETOUR SD-7 36" x 18" M4-8 24" x 12" M6-1 21" x 15"
- (J) DAN PEELE RD DETOUR SD-7 36" x 18" M4-8 24" x 12" M5-1 21" x 15"
- (K) DAN PEELE RD DETOUR SD-7 36" x 18" M4-8 24" x 12" M6-1 21" x 15"
- (L) DETOUR TO SR 1114 M4-8 24" x 12" M4-5 24" x 12" M1-4 24" x 24" M5-1 21" x 15"
- (M) DETOUR TO SR 1115 M4-8 24" x 12" M4-5 24" x 12" M1-4 24" x 24" M6-1 21" x 15"
- (N) END DETOUR M1-4 24" x 24" M4-BA 24" x 18"



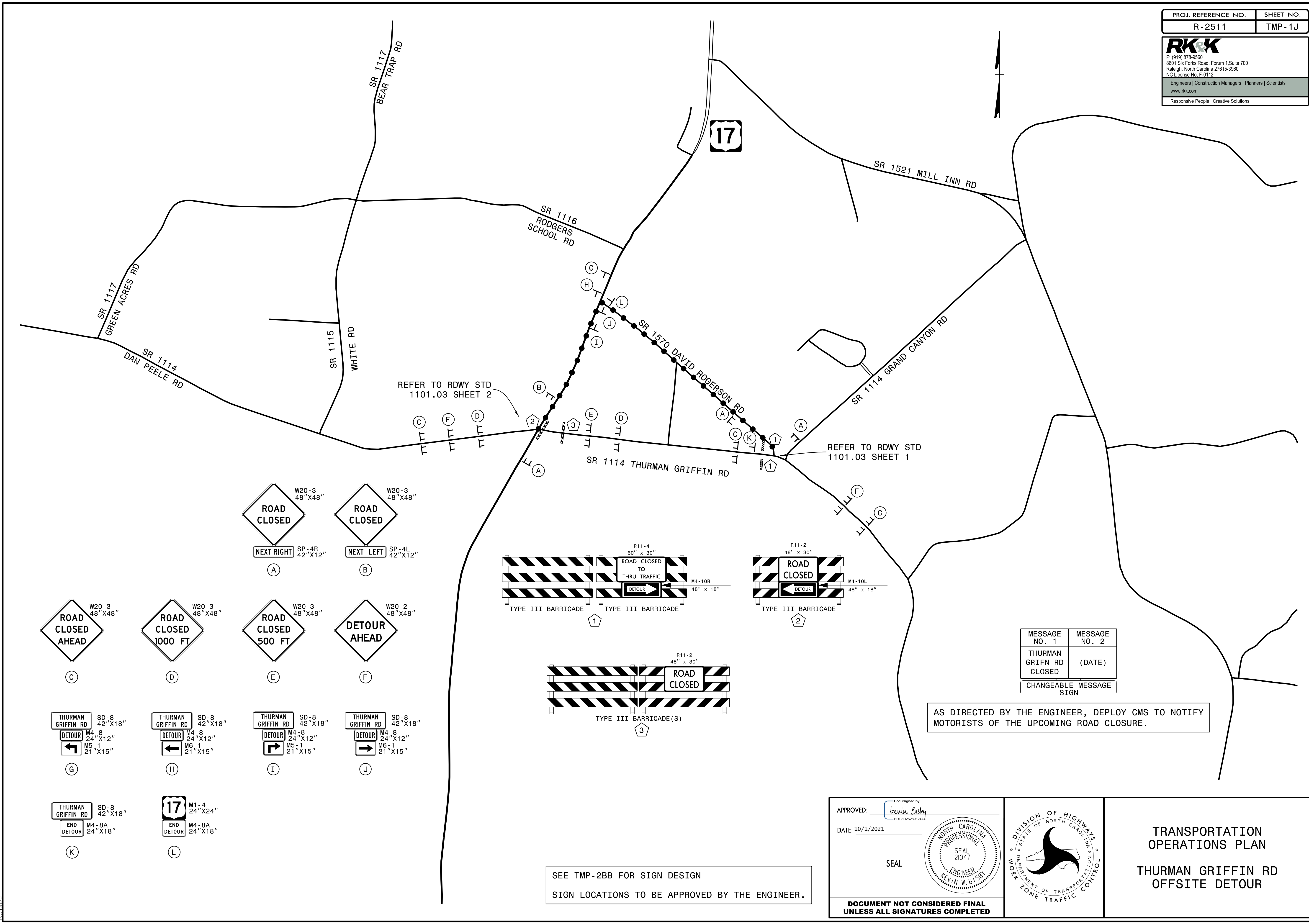
SEE TMP-2BA FOR SIGN DESIGN  
 SIGN LOCATIONS TO BE APPROVED BY THE ENGINEER.

APPROVED: *Kevin Bisby*  
 DATE: 10/1/2021  
 SEAL  
 DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED



TRANSPORTATION OPERATIONS PLAN  
 DAN PEELE RD OFFSITE DETOUR  
 DIVISION OF HIGHWAYS  
 NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 TRAFFIC CONTROL

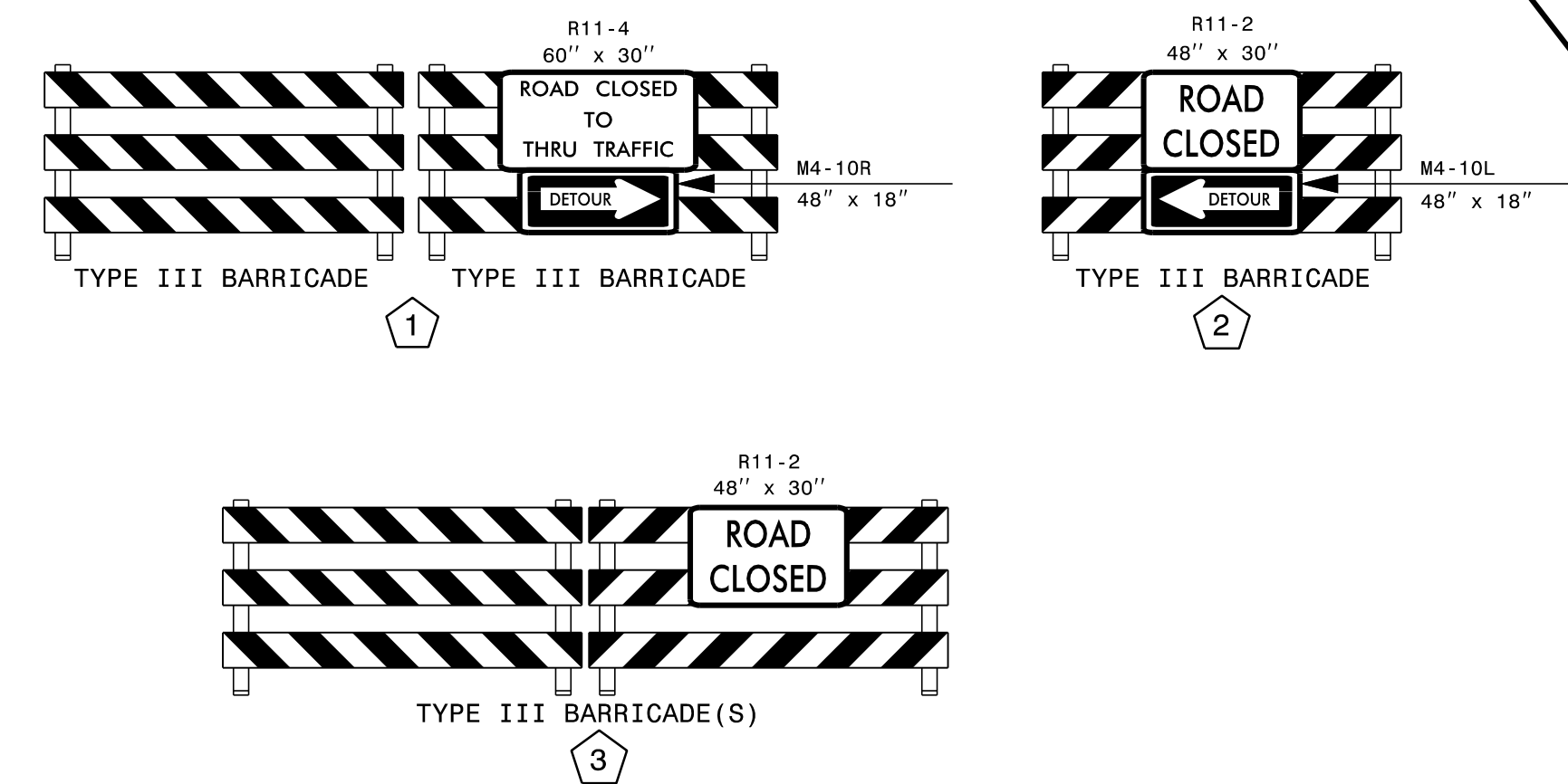




REFER TO RDWY STD 1101.03 SHEET 2

REFER TO RDWY STD 1101.03 SHEET 1

- (A) ROAD CLOSED W20-3 48"X48" NEXT RIGHT SP-4R 42"X12"
- (B) ROAD CLOSED W20-3 48"X48" NEXT LEFT SP-4L 42"X12"
- (C) ROAD CLOSED AHEAD W20-3 48"X48"
- (D) ROAD CLOSED 1000 FT W20-3 48"X48"
- (E) ROAD CLOSED 500 FT W20-3 48"X48"
- (F) DETOUR AHEAD W20-2 48"X48"
- (G) THURMAN GRIFFIN RD SD-8 42"X18" DETOUR M4-8 24"X12" M5-1 21"X15"
- (H) THURMAN GRIFFIN RD SD-8 42"X18" DETOUR M4-8 24"X12" M6-1 21"X15"
- (I) THURMAN GRIFFIN RD SD-8 42"X18" DETOUR M4-8 24"X12" M5-1 21"X15"
- (J) THURMAN GRIFFIN RD SD-8 42"X18" DETOUR M4-8 24"X12" M6-1 21"X15"
- (K) THURMAN GRIFFIN RD SD-8 42"X18" END DETOUR M4-8A 24"X18"
- (L) SR 17 M1-4 24"X24" END DETOUR M4-8A 24"X18"

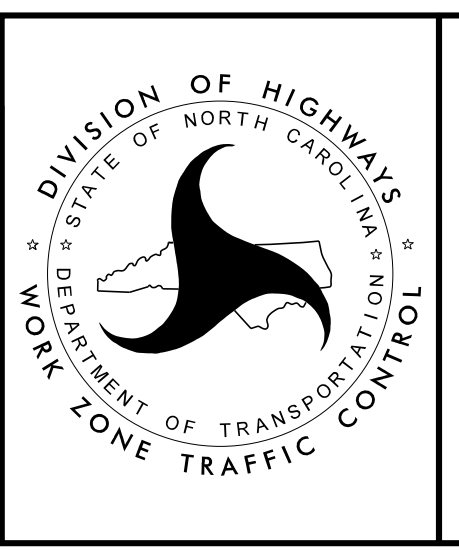


MESSAGE NO. 1	MESSAGE NO. 2
THURMAN GRIFFIN RD CLOSED	(DATE)
CHANGEABLE MESSAGE SIGN	

AS DIRECTED BY THE ENGINEER, DEPLOY CMS TO NOTIFY MOTORISTS OF THE UPCOMING ROAD CLOSURE.

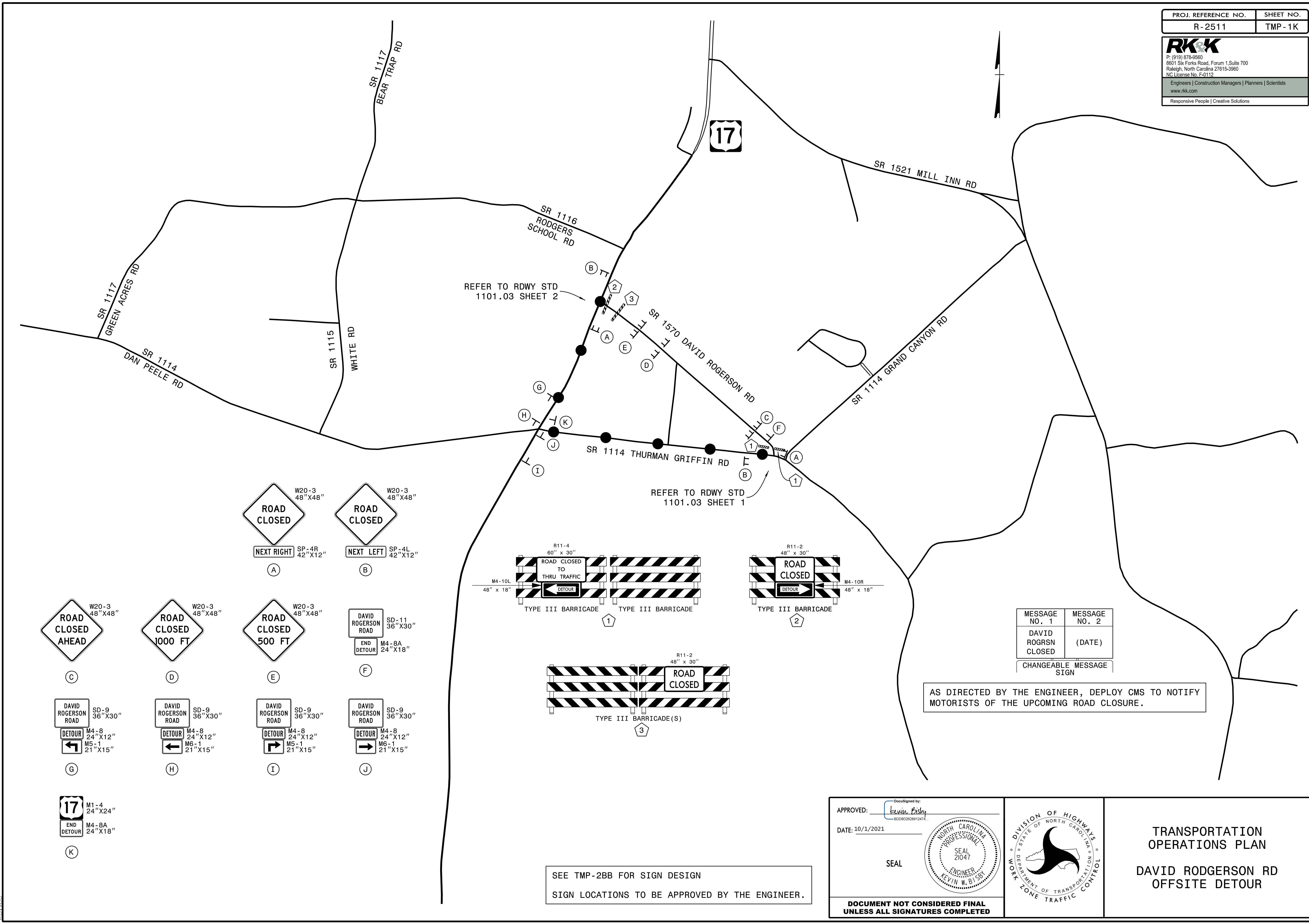
SEE TMP-2BB FOR SIGN DESIGN  
 SIGN LOCATIONS TO BE APPROVED BY THE ENGINEER.

APPROVED: *Kevin Bisby*  
 DATE: 10/1/2021  
 SEAL  
 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



TRANSPORTATION OPERATIONS PLAN  
 THURMAN GRIFFIN RD OFFSITE DETOUR

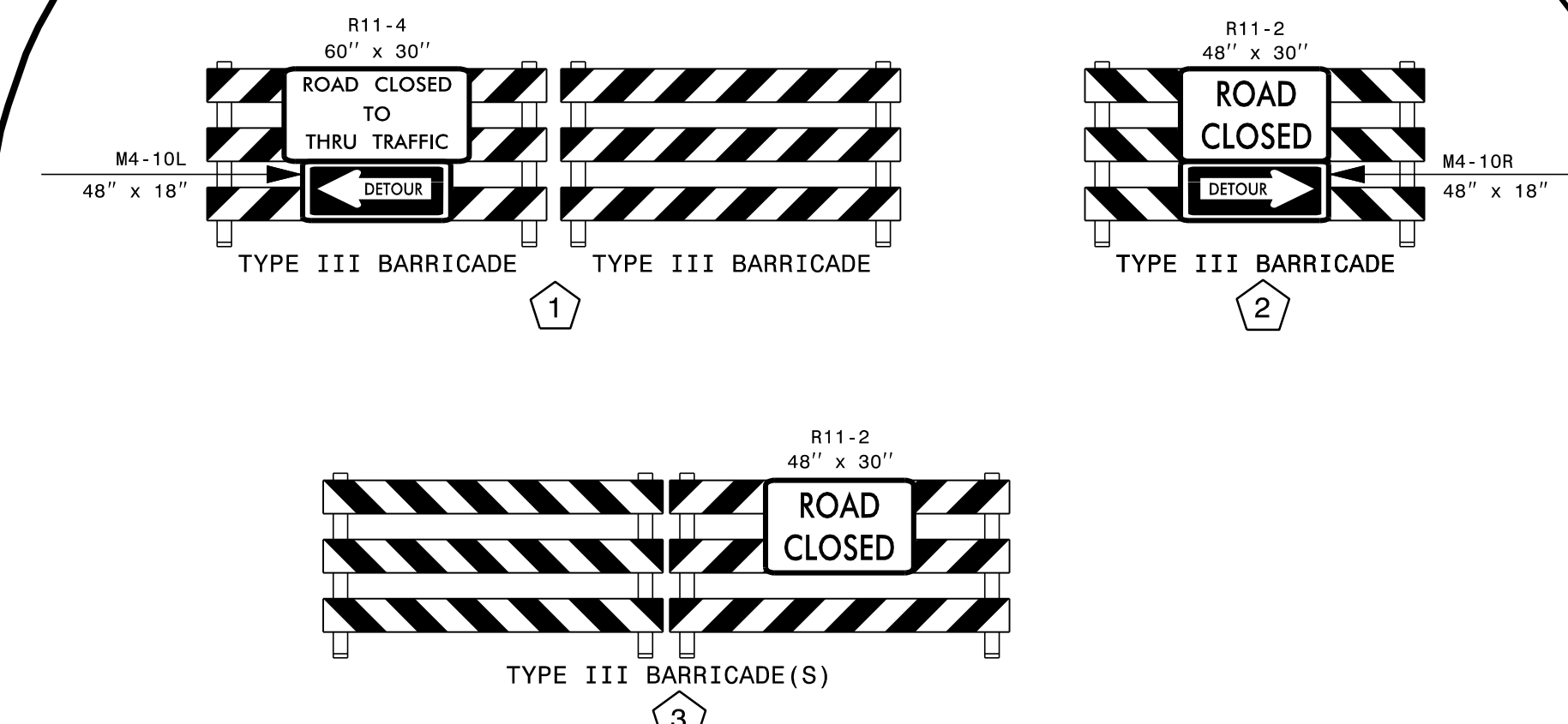
10/1/2021 R2511-TMP-PSH01J.dgn ksb



REFER TO RDWY STD  
1101.03 SHEET 2

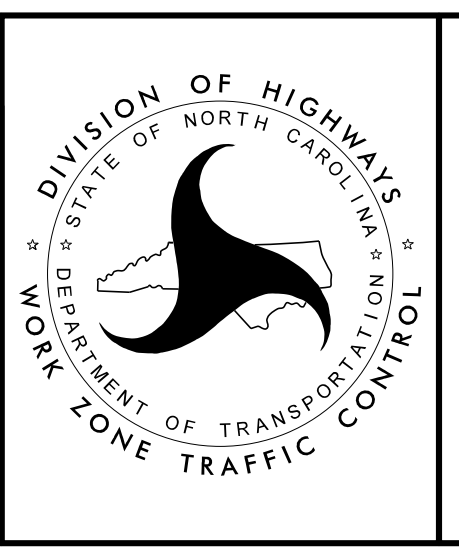
REFER TO RDWY STD  
1101.03 SHEET 1

- (A) ROAD CLOSED W20-3 48"X48" NEXT RIGHT SP-4R 42"X12"
- (B) ROAD CLOSED W20-3 48"X48" NEXT LEFT SP-4L 42"X12"
- (C) ROAD CLOSED AHEAD W20-3 48"X48"
- (D) ROAD CLOSED 1000 FT W20-3 48"X48"
- (E) ROAD CLOSED 500 FT W20-3 48"X48"
- (F) DAVID ROGERSON ROAD SD-11 36"X30" END DETOUR M4-8A 24"X18"
- (G) DAVID ROGERSON ROAD SD-9 36"X30" DETOUR M4-8 24"X12" M5-1 21"X15"
- (H) DAVID ROGERSON ROAD SD-9 36"X30" DETOUR M4-8 24"X12" M6-1 21"X15"
- (I) DAVID ROGERSON ROAD SD-9 36"X30" DETOUR M4-8 24"X12" M5-1 21"X15"
- (J) DAVID ROGERSON ROAD SD-9 36"X30" DETOUR M4-8 24"X12" M6-1 21"X15"
- (K) 17 M1-4 24"X24" END DETOUR M4-8A 24"X18"



SEE TMP-2BB FOR SIGN DESIGN  
SIGN LOCATIONS TO BE APPROVED BY THE ENGINEER.

APPROVED: *Kevin Bisby*  
 DATE: 10/1/2021  
 SEAL  
 DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

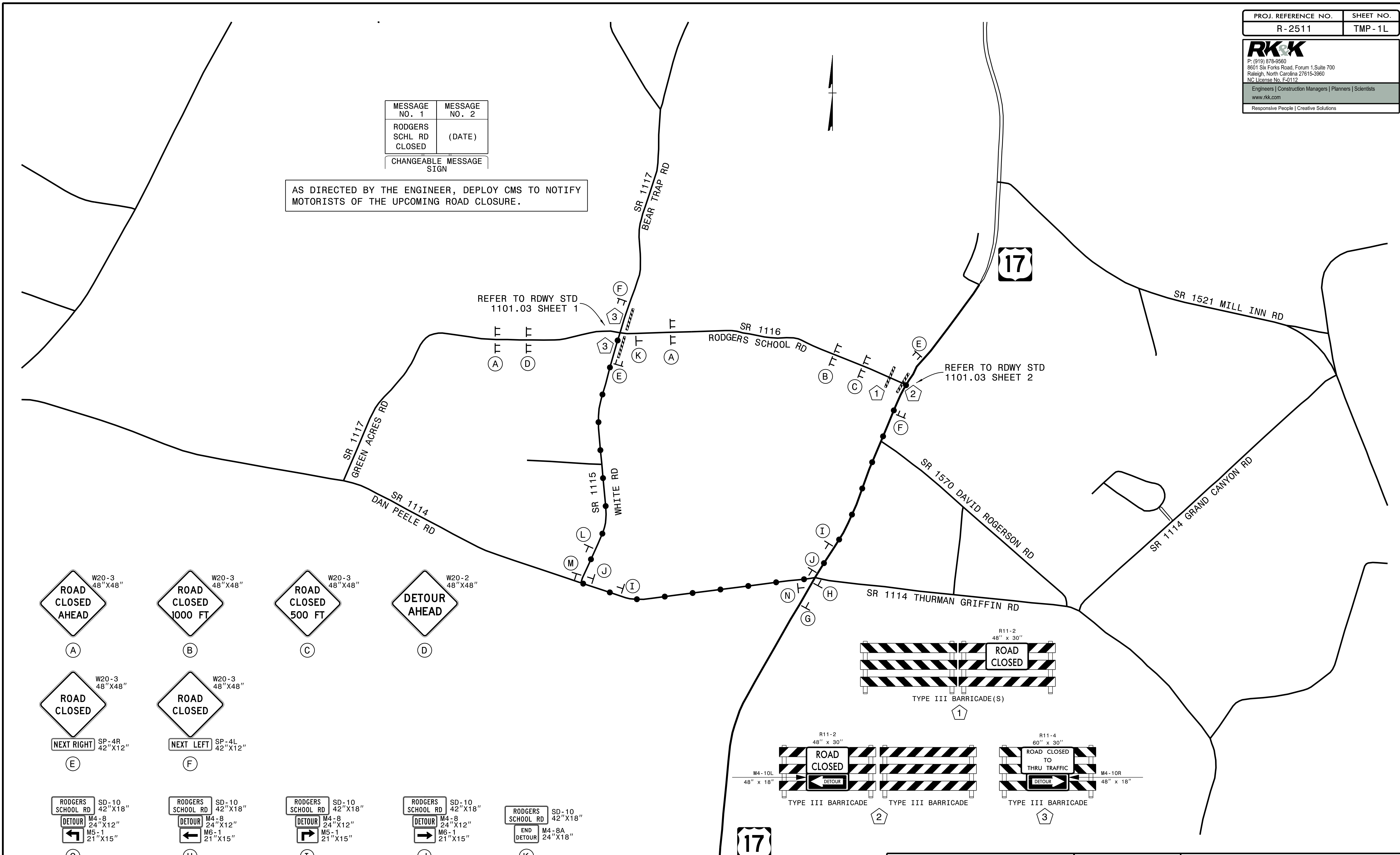


TRANSPORTATION OPERATIONS PLAN  
 DAVID RODGERSON RD  
 OFFSITE DETOUR



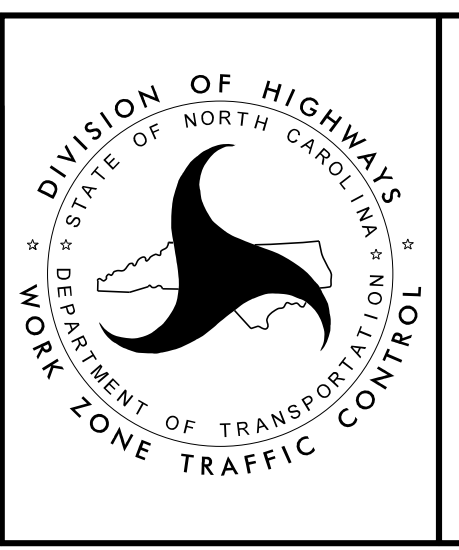
MESSAGE NO. 1	MESSAGE NO. 2
RODGERS SCHL RD CLOSED	(DATE)
CHANGEABLE MESSAGE SIGN	

AS DIRECTED BY THE ENGINEER, DEPLOY CMS TO NOTIFY MOTORISTS OF THE UPCOMING ROAD CLOSURE.

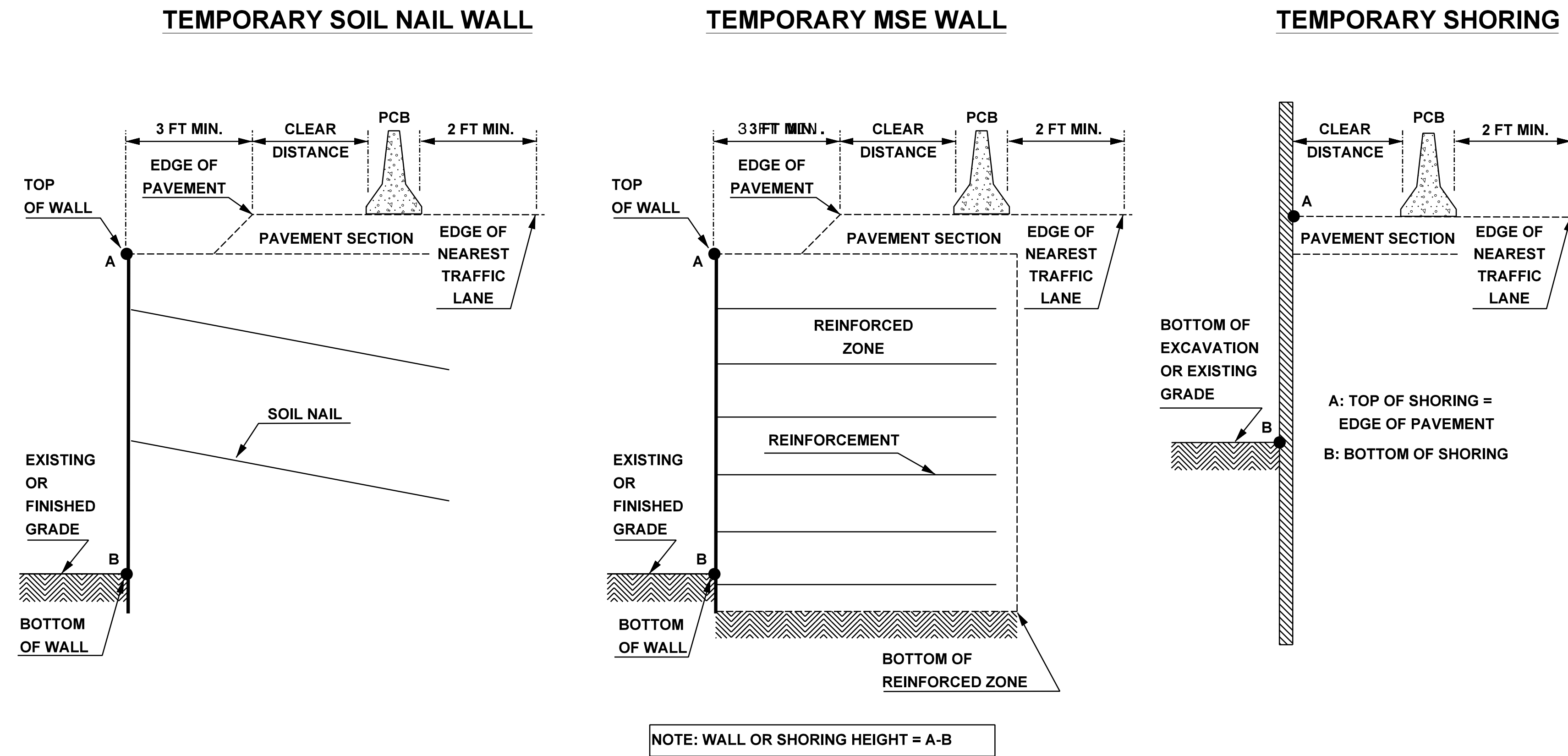



SEE TMP-2BB FOR SIGN DESIGN  
 SIGN LOCATIONS TO BE APPROVED BY THE ENGINEER.

APPROVED:   
 DATE: 10/1/2021  
 SEAL  
 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



TRANSPORTATION OPERATIONS PLAN  
 RODGERS SCHOOL RD OFFSITE DETOUR



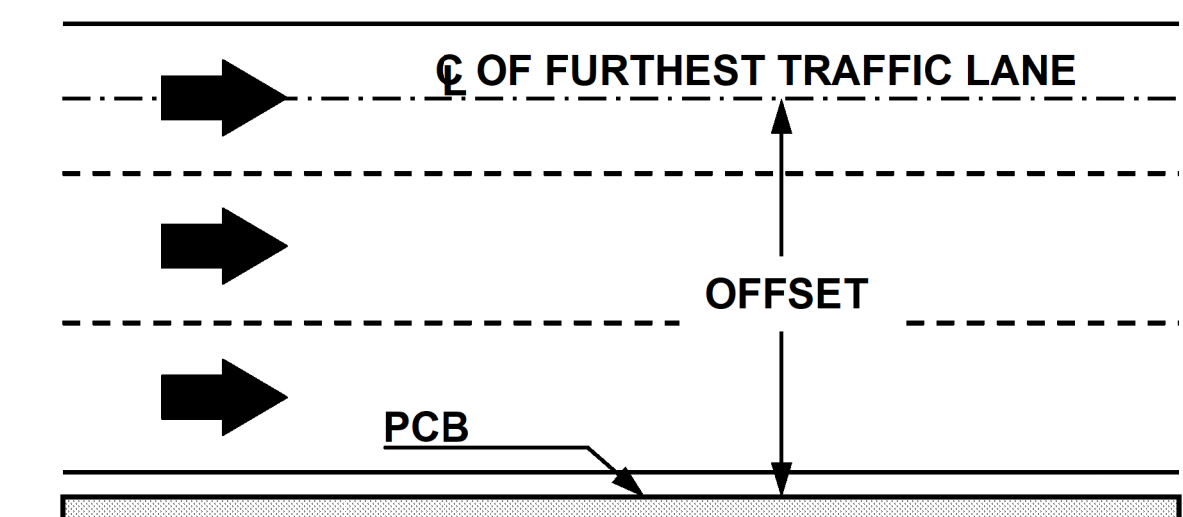
### NOTES

- 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	26-32	24	25	27	28	32	35
		32-38	24	26	27	30	33	36
		38-44	25	26	28	30	34	37
		44-50	26	26	28	32	35	37
		50-56	26	26	28	32	35	38
		>56	26	27	29	32	36	38
		All Offsets	24 for All Design Speeds					
Anchored PCB	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

\* See Figure Below



### FIGURE B

APPROVED: <i>Kevin Bisby</i> DATE: 1/14/2022 SEAL		<p>PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS</p>
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>		



TEMPORARY SHORING TABLE							
SHORING I.D.	BEGIN/OFFSET		END/OFFSET		EST. AVG. HEIGHT (ft)	EST MAX HEIGHT (ft)	EST SHORING AREA (sf)
1	-L- STA 42+74±	18.0' LT	-L- STA 43+33±	18.0' LT	5.6	6	330.4
2	-L- STA 68+97±	19.1' LT	-L- STA 69+63±	19.6' LT	6.7	7	442.2
3	-L- STA 68+97±	10.7' LT	-L- STA 69+63±	8.5' LT	6.7	7	442.2
4	-L- STA 156+73±	9.4' LT	-L- STA 156+99±	12.4' LT	3.6	4	93.6
5	-L- STA 230+00±	5.4' RT	-L- STA 230+73±	10.5' RT	6.5	7	474.5
6	-L- STA 230+00±	15.0' RT	-L- STA 230+73±	15.0' RT	6.5	7	474.5
7	-L- STA 251+76±	1.2' LT	-L- STA 252+45±	2.7' LT	6.7	7	462.3
8	-L- STA 369+00±	18.0' LT	-L- STA 376+00±	18.0' LT	7.8	8	5460
9	-L- STA 511+48±	28.9' RT	-L- STA 512+34±	18.1' RT	8.2	8.5	705.2
10	-L- STA 157+07±	15.0' LT	-L- STA 159+67±	15.0' LT	4.3	4.5	1118

**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- 42+74±, 18.0' LT, TO STATION -L- 43+33±, 18.0' LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT ( $\gamma$ ) = 120 LB/CF FRICTION ANGLE ( $\phi$ ) = 30 DEGREES  
 COHESION (c) = 0 LB/SF  
 GROUNDWATER ELEVATION = 42.0 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 42+74±, 18.0' LT, TO STATION -L- 43+33±, 18.0' LT.

AT THE CONTRACTOR'S OPTION AND WHEN APPLICABLE, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 42+74±, 18.0' LT, TO STATION -L- 43+33±, 18.0' LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD 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- 68+97±, 19.1' LT, TO STATION -L- 69+63±, 19.6' LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT ( $\gamma$ ) = 120 LB/CF FRICTION ANGLE ( $\phi$ ) = 30 DEGREES  
 COHESION (c) = 0 LB/SF  
 GROUNDWATER ELEVATION = 32.0 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 68+97±, 19.1' LT, TO STATION -L- 69+63±, 19.6' LT.

AT THE CONTRACTOR'S OPTION AND WHEN APPLICABLE, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 68+97±, 19.1' LT, TO STATION -L- 69+63±, 19.6' LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

**SHORING LOCATION NO. 3**

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.

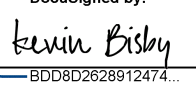
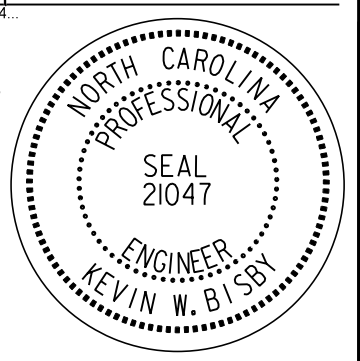
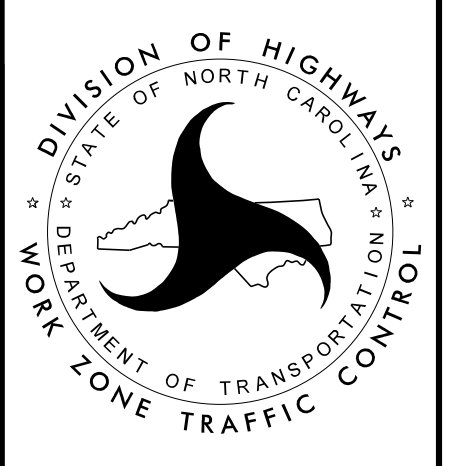
DESIGN TEMPORARY SHORING FROM STATION -L- 68+97±, 10.7' LT, TO STATION -L- 69+63±, 8.5' LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT ( $\gamma$ ) = 120 LB/CF FRICTION ANGLE ( $\phi$ ) = 30 DEGREES  
 COHESION (c) = 0 LB/SF  
 GROUNDWATER ELEVATION = 32.0 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 68+97±, 10.7' LT, TO STATION -L- 69+63±, 8.5' LT.

AT THE CONTRACTOR'S OPTION AND WHEN APPLICABLE, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 68+97±, 10.7' LT, TO STATION -L- 69+63±, 8.5' LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

1/14/2022 R2511-TMP-PSH02A-1.dgn ksb

APPROVED:  DATE: 1/14/2022 SEAL 		TEMPORARY SHORING DATA
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		



**SHORING LOCATION NO. 4**

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- 156+73±, 9.4' LT, TO STATION -L- 156+99±, 12.4' LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT ( $\gamma$ ) = 120 LB/CF FRICTION ANGLE ( $\phi$ ) = 30 DEGREES  
 COHESION (c) = 0 LB/SF  
 GROUNDWATER ELEVATION = 35.0 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 156+73±, 9.4' LT, TO STATION -L- 156+99±, 12.4' LT.

AT THE CONTRACTOR'S OPTION AND WHEN APPLICABLE, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 156+73±, 9.4' LT, TO STATION -L- 156+99±, 12.4' LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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. 5**

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- 230+00±, 5.4' RT, TO STATION -L- 230+73±, 10.5' RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT ( $\gamma$ ) = 120 LB/CF FRICTION ANGLE ( $\phi$ ) = 30 DEGREES  
 COHESION (c) = 0 LB/SF  
 GROUNDWATER ELEVATION = 51.5 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 230+00±, 5.4' RT, TO STATION -L- 230+73±, 10.5' RT.

AT THE CONTRACTOR'S OPTION AND WHEN APPLICABLE, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 230+00±, 5.4' RT, TO STATION -L- 230+73±, 10.5' RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

**SHORING LOCATION NO. 6**

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- 230+00±, 15.0' RT, TO STATION -L- 230+73±, 15.0' RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT ( $\gamma$ ) = 120 LB/CF FRICTION ANGLE ( $\phi$ ) = 30 DEGREES  
 COHESION (c) = 0 LB/SF  
 GROUNDWATER ELEVATION = 51.5 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 230+00±, 15.0' RT, TO STATION -L- 230+73±, 15.0' RT.

AT THE CONTRACTOR'S OPTION AND WHEN APPLICABLE, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 230+00±, 15.0' RT, TO STATION -L- 230+73±, 15.0' RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

**SHORING LOCATION NO. 7**

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

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


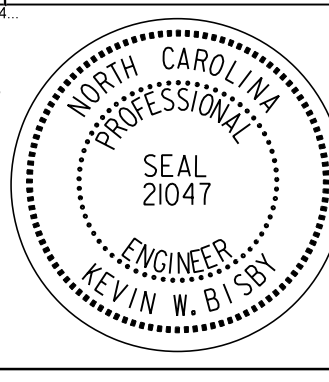
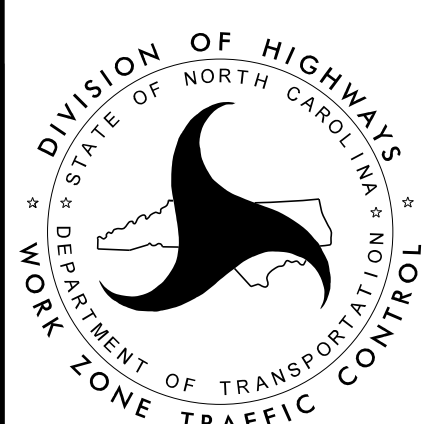
DESIGN TEMPORARY SHORING FROM STATION -L- 251+76±, 1.2' LT, TO STATION -L- 252+45±, 2.7' LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT ( $\gamma$ ) = 120 LB/CF FRICTION ANGLE ( $\phi$ ) = 30 DEGREES  
 COHESION (c) = 0 LB/SF  
 GROUNDWATER ELEVATION = 57.0 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 251+76±, 1.2' LT, TO STATION -L- 252+45±, 2.7' LT.

AT THE CONTRACTOR'S OPTION AND WHEN APPLICABLE, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 251+76±, 1.2' LT, TO STATION -L- 252+45±, 2.7' LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

1/14/2022  
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ksb

<p>APPROVED: </p> <p>DATE: 1/14/2022</p> <p>SEAL</p> 		<p>TEMPORARY SHORING DATA</p>
<p><b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b></p>		



**SHORING LOCATION NO. 8**

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- 369+00±, 18.0' LT, TO STATION -L- 376+00±, 18.0' LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT ( $\gamma$ ) = 120 LB/CF  
 FRICTION ANGLE ( $\phi$ ) = 30 DEGREES  
 COHESION ( $c$ ) = 0 LB/SF  
 GROUNDWATER ELEVATION = VARIES (40.0 FT ± TO 46.0 FT ±)

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 369+00±, 18.0' LT, TO STATION -L- 376+00±, 18.0' LT.

AT THE CONTRACTOR'S OPTION AND WHEN APPLICABLE, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 369+00±, 18.0' LT, TO STATION -L- 376+00±, 18.0' LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

**SHORING LOCATION NO. 9**

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- 511+48±, 28.9' RT, TO STATION -L- 512+34±, 18.1' RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT ( $\gamma$ ) = 120 LB/CF FRICTION ANGLE ( $\phi$ ) = 30 DEGREES  
 COHESION ( $c$ ) = 0 LB/SF  
 GROUNDWATER ELEVATION = 85.0 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 511+48±, 28.9' RT, TO STATION -L- 512+34±, 18.1' RT.

AT THE CONTRACTOR'S OPTION AND WHEN APPLICABLE, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 511+48±, 28.9' RT, TO STATION -L- 512+34±, 18.1' RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

**SHORING LOCATION NO. 10**

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

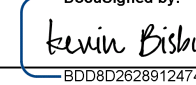
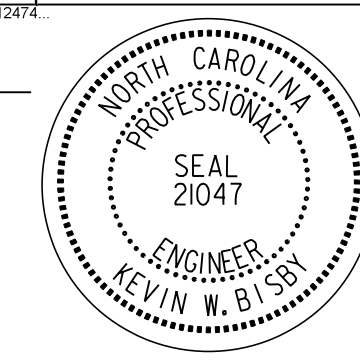
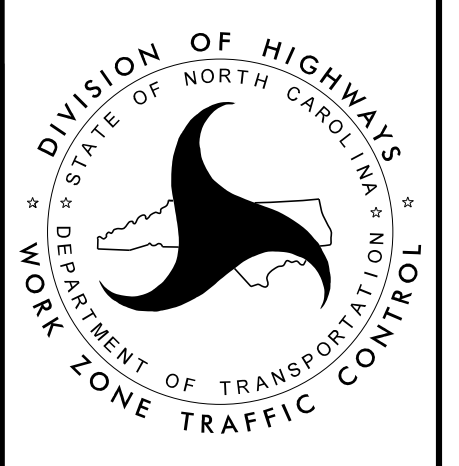
BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -L- 157+07±, 15.0' LT, TO STATION -L- 159+67±, 15.0' LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT ( $\gamma$ ) = 120 LB/CF FRICTION ANGLE ( $\phi$ ) = 30 DEGREES  
 COHESION ( $c$ ) = 0 LB/SF GROUNDWATER ELEVATION = 35.0 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 157+07±, 15.0' LT, TO STATION -L- 159+67±, 15.0' LT.

AT THE CONTRACTOR'S OPTION AND WHEN APPLICABLE, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 157+07±, 15.0' LT, TO STATION -L- 159+67±, 15.0' LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

<p>APPROVED: </p> <p>DATE: 1/14/2022</p> <p>SEAL</p> 		<p>TEMPORARY SHORING DATA</p>
<p><b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b></p>		

SIGN NUMBER: SD-1 TYPE: D QUANTITY: SEE PLAN SIGN WIDTH: 3'-0" HEIGHT: 1'-6" TOTAL AREA: 4.5 Sq.Ft. BORDER TYPE: RECESSED RECESS: 0.38" WIDTH: 0.63" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Fluorescent Orange COPY COLOR: Black SYMBOL X Y WID HT MAT'L: 0.080" ALUMINUM	DESIGN BY: K. Bisby PROJECT ID: R-2511	CHECKED BY: B. Holden LOCATION: SEE PLAN	Mar 26, 2020 DIV: 1
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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 spacings are to start of next letter											Series/Size
											Text Length
	W	.		B	E	A	R				C 2000
6.3	4.1	0.8	5	3.6	3	3.9	2.8	6.4			23.3
	G	R	A	S	S	R	D				C 2000
3.8	3.8	3.2	3.6	3.4	2.8	5	3.6	2.8	3.8		28.4

FILENAME: R2511\_TMP\_SIGN DESIGNS NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SD-2 TYPE: D QUANTITY: SEE PLAN SIGN WIDTH: 3'-0" HEIGHT: 1'-6" TOTAL AREA: 4.5 Sq.Ft. BORDER TYPE: RECESSED RECESS: 0.38" WIDTH: 0.63" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Fluorescent Orange COPY COLOR: Black SYMBOL X Y WID HT MAT'L: 0.080" ALUMINUM	DESIGN BY: K. Bisby PROJECT ID: R-2511	CHECKED BY: B. Holden LOCATION: SEE PLAN	Mar 26, 2020 DIV: 1
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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 spacings are to start of next letter											Series/Size
											Text Length
	W	O	O	L	A	R	D				C 2000
5.3	4.4	3.8	3.9	2.9	3.9	3.6	2.8	5.3			25.4
	R	O	A	D							C 2000
11.1	3.6	3.5	3.9	2.8	11.1						13.8

FILENAME: R2511\_TMP\_SIGN DESIGNS NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SD-3 TYPE: D QUANTITY: SEE PLAN SIGN WIDTH: 3'-6" HEIGHT: 1'-6" TOTAL AREA: 5.3 Sq.Ft. BORDER TYPE: RECESSED RECESS: 0.38" WIDTH: 0.63" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Fluorescent Orange COPY COLOR: Black SYMBOL X Y WID HT MAT'L: 0.080" ALUMINUM	DESIGN BY: K. Bisby PROJECT ID: R-2511	CHECKED BY: B. Holden LOCATION: SEE PLAN	Mar 26, 2020 DIV: 1
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USE NOTES: 1, 2

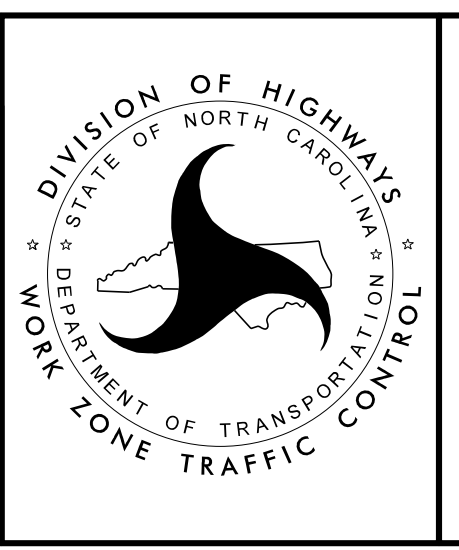
- Legend and border shall be direct applied black non-reflective sheeting.
- Background shall be NC Grade B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

Letter spacings are to start of next letter											Series/Size
											Text Length
	G	R	I	F	F	I	N				C 2000
10.8	3.8	3.7	1.8	3.3	3.2	1.8	2.8	10.8			20.4
	H	O	D	G	E	S	R	D			C 2000
4.7	3.8	3.9	3.7	3.8	3.1	2.8	5	3.7	2.8	4.7	32.7

FILENAME: R2511\_TMP\_SIGN DESIGNS NORTH CAROLINA D.O.T. SIGN DETAIL

APPROVED:   
DATE: 10/1/2021  
SEAL  
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



DIVISION OF HIGHWAYS  
DEPARTMENT OF TRANSPORTATION  
NORTH CAROLINA  
W.P.K. ZONE TRAFFIC CONTROL  
SPECIAL SIGN DESIGNS





**SIGN NUMBER:** SD-4  
**TYPE:** D  
**QUANTITY:** SEE PLAN  
**SIGN WIDTH:** 2'-6"  
**HEIGHT:** 1'-0"  
**TOTAL AREA:** 2.5 Sq.Ft.  
**BORDER TYPE:** RECESSED  
**RECESS:** 0.38"  
**WIDTH:** 0.44"  
**RADII:** 1.5"  
**MAT'L:** 0.063" ALUMINUM

**DESIGN BY:** K. Bisby  
**CHECKED BY:** B. Holden  
**PROJECT ID:** R-2511  
**LOCATION:** SEE PLAN  
**MAR 26, 2020**  
**DIV:** 1

**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 spacings are to start of next letter											Series/Size
											Text Length
V	O	A		R	D						C 2000
4.1	3.7	3.5	3.2	5	3.6	2.8	4				21.9

FILENAME: R2511\_TMP\_SIGN DESIGNS NORTH CAROLINA D.O.T. SIGN DETAIL

**SIGN NUMBER:** SD-5  
**TYPE:** D  
**QUANTITY:** SEE PLAN  
**SIGN WIDTH:** 3'-6"  
**HEIGHT:** 1'-6"  
**TOTAL AREA:** 5.3 Sq.Ft.  
**BORDER TYPE:** RECESSED  
**RECESS:** 0.38"  
**WIDTH:** 0.63"  
**RADII:** 1.5"  
**MAT'L:** 0.080" ALUMINUM

**DESIGN BY:** K. Bisby  
**CHECKED BY:** B. Holden  
**PROJECT ID:** R-2511  
**LOCATION:** SEE PLAN  
**MAR 26, 2020**  
**DIV:** 1

**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 spacings are to start of next letter											Series/Size
											Text Length
J	O	E									C 2000
16	3.6	4	2.6	16							10.1
M	O	B	L	E	Y		R	D			C 2000
4.6	4.3	4	3.7	3.3	3	3.2	5	3.6	2.8	4.6	32.8

FILENAME: R2511\_TMP\_SIGN DESIGNS NORTH CAROLINA D.O.T. SIGN DETAIL

**SIGN NUMBER:** SD-6  
**TYPE:** D  
**QUANTITY:** SEE PLAN  
**SIGN WIDTH:** 3'-6"  
**HEIGHT:** 2'-6"  
**TOTAL AREA:** 8.8 Sq.Ft.  
**BORDER TYPE:** RECESSED  
**RECESS:** 0.5"  
**WIDTH:** 0.75"  
**RADII:** 1.88"  
**MAT'L:** 0.080" ALUMINUM

**DESIGN BY:** K. Bisby  
**CHECKED BY:** B. Holden  
**PROJECT ID:** R-2511  
**LOCATION:** SEE PLAN  
**MAR 26, 2020**  
**DIV:** 1

**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 spacings are to start of next letter											Series/Size
											Text Length
S	M	I	T	H	W	I	C	K			C 2000
6.5	3.7	4.4	1.4	3.3	3.5	4.5	1.7	3.8	2.8	6.5	29
C	R	E	E	K							C 2000
12.5	3.8	3.7	3.4	3.4	2.8	12.5					17.1
C	H	U	R	C	H		R	D			C 2000
4.4	3.8	3.9	3.9	3.5	3.8	2.8	5	3.6	2.8	4.4	33.2

FILENAME: R2511\_TMP\_SIGN DESIGNS NORTH CAROLINA D.O.T. SIGN DETAIL

**SIGN NUMBER:** SD-7  
**TYPE:** D  
**QUANTITY:** SEE PLAN  
**SIGN WIDTH:** 3'-0"  
**HEIGHT:** 1'-6"  
**TOTAL AREA:** 4.5 Sq.Ft.  
**BORDER TYPE:** RECESSED  
**RECESS:** 0.38"  
**WIDTH:** 0.63"  
**RADII:** 1.5"  
**MAT'L:** 0.080" ALUMINUM

**DESIGN BY:** K. Bisby  
**CHECKED BY:** B. Holden  
**PROJECT ID:** R-2511  
**LOCATION:** SEE PLAN  
**MAR 26, 2020**  
**DIV:** 1

**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

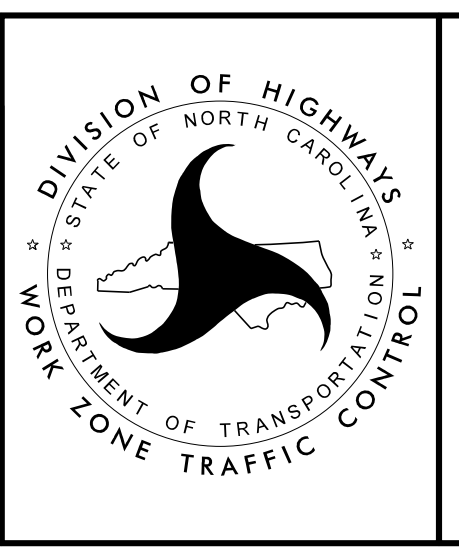
Letter spacings are to start of next letter											Series/Size
											Text Length
D	A	N									C 2000
12.9	3.4	3.9	2.8	13							10.1
P	E	E	L	E		R	D				C 2000
4.1	3.8	3.4	3.4	3.3	2.6	5	3.6	2.8	4.1		27.9

FILENAME: R2511\_TMP\_SIGN DESIGNS NORTH CAROLINA D.O.T. SIGN DETAIL

APPROVED:   
DATE: 10/1/2021

SEAL

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**SPECIAL SIGN DESIGNS**

10/1/2021 R2511\_TMP\_PSH02BA.dgn kbisby



SIGN NUMBER: SD-8  
TYPE: D  
QUANTITY: SEE PLAN  
SIGN WIDTH: 3'-6"  
HEIGHT: 1'-6"  
TOTAL AREA: 5.3 Sq.Ft.  
BORDER TYPE: RECESSED  
RECESS: 0.38"  
WIDTH: 0.63"  
RADII: 1.5"  
NO. Z BARS:  
LENGTH:

BACKG COLOR: Fluorescent Orange  
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT'L: 0.080" ALUMINUM

DESIGN BY: K. Bisby  
PROJECT ID: R-2511  
CHECKED BY: B. Holden  
LOCATION: SEE PLAN  
Mar 26, 2020  
DIV: 1

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
	T	H	U	R	M	A	N						C 2000
8.3	3.3	3.9	3.9	3.7	4	3.9	2.8	8.3					25.4
	G	R	I	F	F	I	N		R	D			C 2000
5.1	3.8	3.6	1.8	3.3	3.3	1.8	2.8	5	3.7	2.8	5.1		31.8

FILENAME: R2511\_TMP\_SIGN DESIGNS  
NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SD-9  
TYPE: D  
QUANTITY: SEE PLAN  
SIGN WIDTH: 3'-0"  
HEIGHT: 2'-6"  
TOTAL AREA: 7.5 Sq.Ft.  
BORDER TYPE: RECESSED  
RECESS: 0.5"  
WIDTH: 0.75"  
RADII: 1.88"  
NO. Z BARS:  
LENGTH:

BACKG COLOR: Fluorescent Orange  
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT'L: 0.080" ALUMINUM

DESIGN BY: K. Bisby  
PROJECT ID: R-2511  
CHECKED BY: B. Holden  
LOCATION: SEE PLAN  
Mar 26, 2020  
DIV: 1

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
	D	A	V	I	D								C 2000
10.3	3.4	3.5	3.8	1.8	2.8	10.4							15.3
	R	O	G	E	R	S	O	N					C 2000
3.8	3.5	3.8	3.8	3.4	3.4	3.5	4	2.8	3.9				28.3
	R	O	A	D									C 2000
11.1	3.6	3.6	3.9	2.8	11.1								13.8

FILENAME: R2511\_TMP\_SIGN DESIGNS  
NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SD-10  
TYPE: D  
QUANTITY: SEE PLAN  
SIGN WIDTH: 3'-6"  
HEIGHT: 1'-6"  
TOTAL AREA: 5.3 Sq.Ft.  
BORDER TYPE: RECESSED  
RECESS: 0.38"  
WIDTH: 0.63"  
RADII: 1.5"  
NO. Z BARS:  
LENGTH:

BACKG COLOR: Fluorescent Orange  
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT'L: 0.080" ALUMINUM

DESIGN BY: K. Bisby  
PROJECT ID: R-2511  
CHECKED BY: B. Holden  
LOCATION: SEE PLAN  
Mar 26, 2020  
DIV: 1

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
	R	O	D	G	E	R	S						C 2000
8.7	3.6	4	3.7	3.8	3.4	3.4	2.8	8.7					24.6
	S	C	H	O	O	L	R	D					C 2000
4.5	3.6	3.8	3.8	3.9	2.6	5	3.7	2.8	4.5				33

FILENAME: R2511\_TMP\_SIGN DESIGNS  
NORTH CAROLINA D.O.T. SIGN DETAIL

APPROVED: DocuSigned by: Kevin W. Bisby  
DATE: 10/1/2021

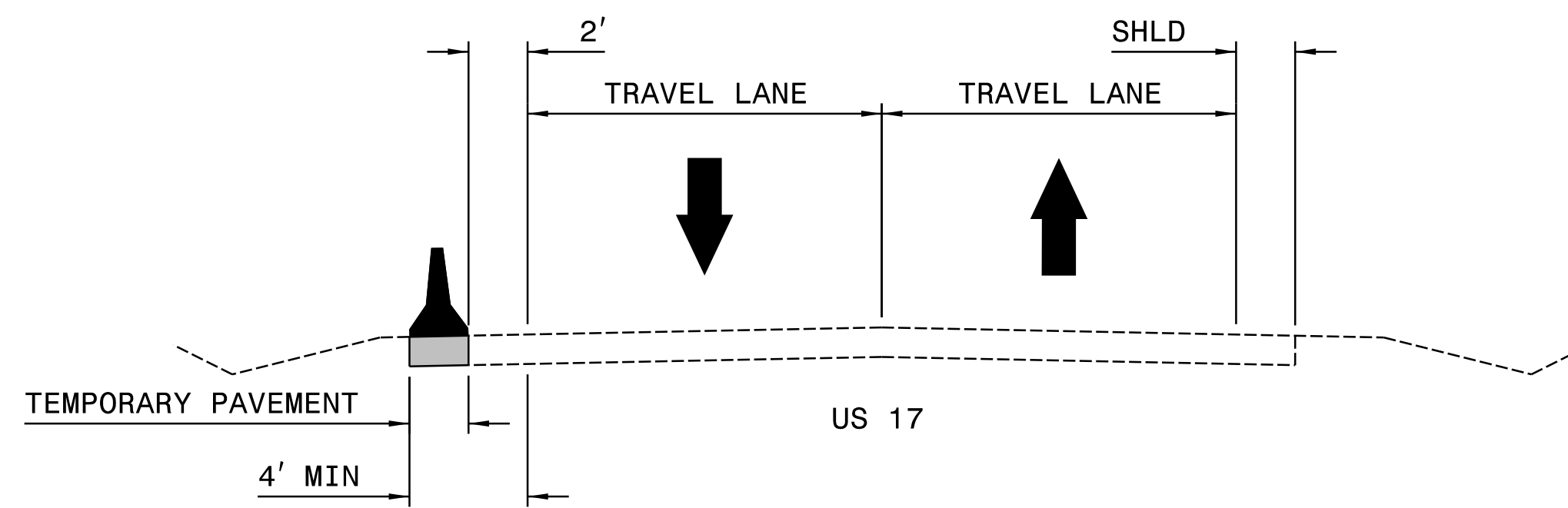
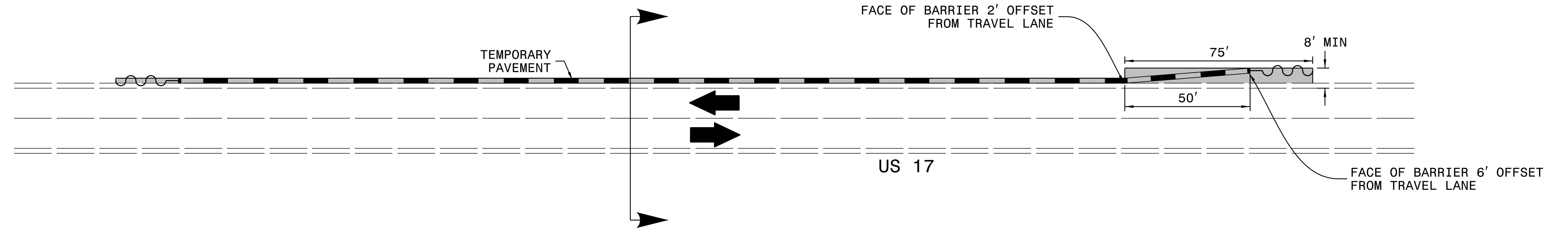
SEAL

SPECIAL SIGN DESIGNS

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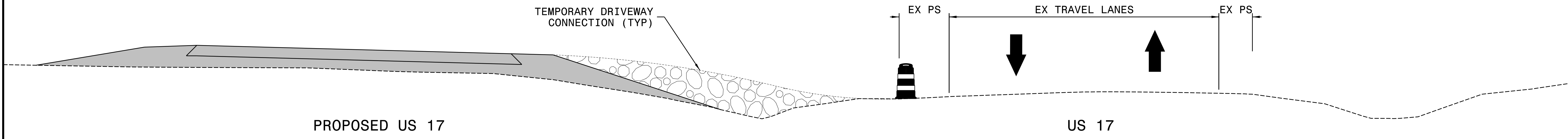
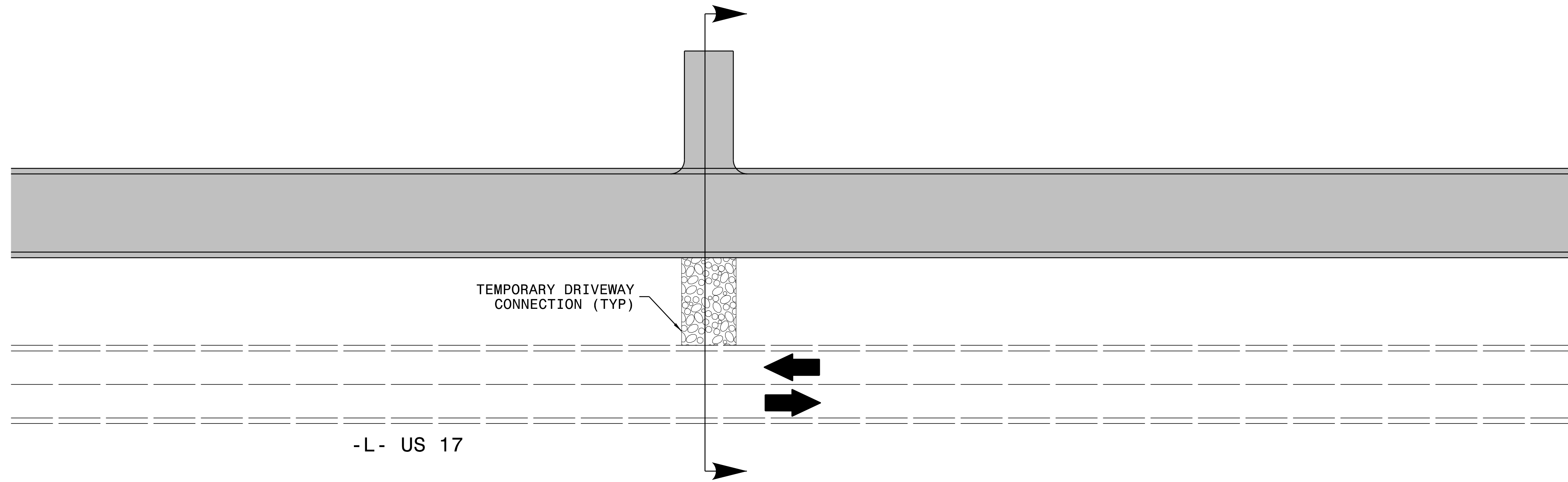
10/1/2021 R2511\_TMP\_PSH02BB.dgn kbisby






10/1/2021  
 R2511\_TMP\_PSH02C.dgn  
 kbs/bbl

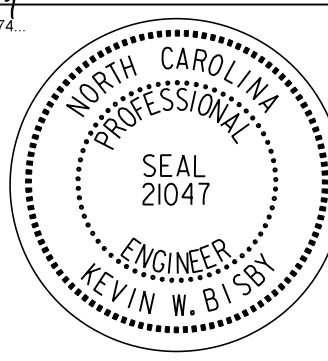
<p>APPROVED: <i>Kevin Bisby</i>          DATE: 10/1/2021</p> <p>SEAL</p> <p><b>DOCUMENT NOT CONSIDERED FINAL          UNLESS ALL SIGNATURES COMPLETED</b></p>		<p style="text-align: center;"><b>TYPICAL          TEMPORARY PAVEMENT FOR          PORTABLE CONCRETE BARRIER</b></p>
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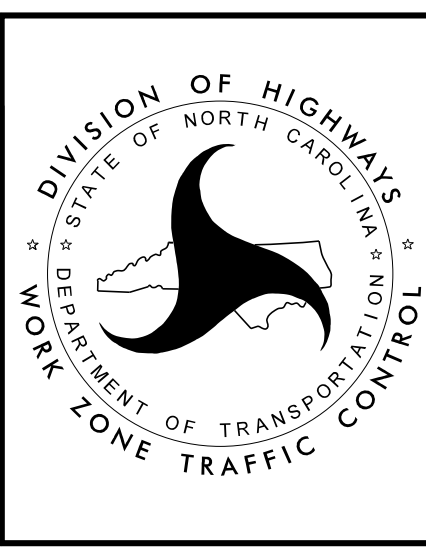
10/1/2021  
 R2511\_TMP\_PSH02D.dgn  
 KWS/BJ

MATERIAL USED FOR DRIVEWAY CONNECTION SHALL BE APPROVED BY THE ENGINEER.

APPROVED:   
 DATE: 10/1/2021  
 SEAL



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 UNLESS ALL SIGNATURES COMPLETED**



TYPICAL  
 TEMPORARY DRIVEWAY ACCESS



PROJ. REFERENCE NO.	SHEET NO.
R - 2511	TMP - 3



P: (919) 878-8560  
 8601 Six Forks Road, Forum 1, Suite 700  
 Raleigh, North Carolina 27615-3960  
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**PHASE I**

STEP 1:  
 ERECT WORK ZONE ADVANCE WARNING SIGNS IN ACCORDANCE WITH RDWY STD 1101.01.

STEP 2:  
 USING RDWY STD 1101.02, CONSTRUCT WIDENING -L- STA 7+75± TO STA 17+50± LT AND -Y1- (N. ROBERSON RD) TO THE EDGE AND ELEVATION OF THE EXISTING PAVEMENT. (SEE TMP-4)

USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS ON -L- US 17 S FROM -L- STA 11+99± TO STA 24+13± AND SET PORTABLE CONCRETE BARRIER. (SEE TMP-4 AND 5)

USING RDWY STD 1101.02, CONSTRUCT TEMPORARY PAVEMENT ADJACENT TO US 17 N FROM -L- STA 36+50± TO STA 52+71± TO THE EDGE AND ELEVATION OF THE EXISTING PAVEMENT, APPLY PAVEMENT MARKINGS, AND DIRECT TRAFFIC ONTO THE TEMPORARY PAVEMENT. SET PORTABLE CONCRETE BARRIER ADJACENT TO -L- US 17 S. (SEE TMP-5)

USING RDWY STD 1101.02 CONSTRUCT TEMPORARY PAVEMENT ADJACENT TO US 17 S FROM -L- STA 466+35± TO STA 482+90± TO THE EDGE AND ELEVATION OF THE EXISTING PAVEMENT, APPLY PAVEMENT MARKINGS, AND DIRECT TRAFFIC ONTO THE TEMPORARY PAVEMENT. (SEE TMP-15)

USING RDWY STD 1101.02 APPLY PAVEMENT MARKINGS REVISING THE US 17 N TRAFFIC PATTERN NORTH OF -Y11- HOLLY CREEK BLVD. (SEE TMP-18 AND 19)

USING RDWY STD 1101.02, **BEGIN** CONSTRUCTION OF US 17 EXCLUDING THE FINAL LAYER OF SURFACE COURSE. ADJACENT TO EXISTING TRAVEL LANES, CONSTRUCT TO EDGE AND ELEVATION OF THE EXISTING PAVEMENT SUCH THAT POSITIVE DRAINAGE IS MAINTANED: (SEE TMP-5 THROUGH 18)

- -L- STA 50+00± TO STA 64+50± RT
- -TEMP3- STA 10+00± TO STA 25+78±
- -L- STA 74+70± TO STA 157+00± LT
- -TEMP4- STA 10+00± TO STA 17+14±
- -L- STA 163+96± TO STA 227+00± RT
- -TEMP5- STA 10+00± TO STA 21+66±
- -L- STA 234+50± TO STA 257+00± LT
- -TEMP6- STA 10+00± TO STA 18+13±
- -L- STA 261+49± TO STA 265+53± RT
- -TEMP19- STA 10+00± TO STA 21+93±
- -L- STA 273+00± TO STA 298+00± LT
- -TEMP7- STA 10+00± TO STA 19+58±
- -L- STA 303+00± TO STA 328+11± RT
- -TEMP8- STA 10+00± TO STA 20+21±
- -L- STA 334+50± TO STA 388+64± LT
- -L- STA 390+74± TO STA 413+50± LT
- -TEMP9- STA 10+00± TO STA 19+30±
- -L- STA 418+50± TO STA 425+04± RT
- -L- STA 431+50± TO STA 440+00± LT
- -TEMP10- STA 10+00± TO STA 32+89±
- -L- STA 447+92± TO STA 471+20± RT
- -L- STA 480+00± TO STA 498+85± LT
- -L- STA 502+00± TO STA 510+00± LT
- -TEMP18- STA 10+00± TO STA 19+42±
- -L- STA 517+50± TO STA 523+87± RT
- -L- STA 525+85± TO STA 555+14± RT

USING RDWY STD 1101.02 **BEGIN** WIDENING CONSTRUCTION -L- STA 547+28± TO STA 568+50± LT AND -Y11- HOLLY CREEK BLVD TO THE EDGE AND ELEVATION OF THE EXISTING PAVEMENT. (SEE TMP-18 AND 19)

STEP 3:  
 USING RDWY STD 1101.02 AND BEHIND BARRIER, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE. ADJACENT TO EXISTING TRAVEL LANES, CONSTRUCT TO EDGE AND ELEVATION OF THE EXISTING PAVEMENT SUCH THAT POSITIVE DRAINAGE IS MAINTANED: (SEE TMP-4 THROUGH 5A)

- -L- STA 17+50± TO STA 42+50± LT
- -TEMP2- STA 10+00± TO STA 18+25±

USING RDWY STD 1101.02, **BEGIN** CONSTRUCTION EXCLUDING THE FINAL LAYER OF SURFACE COURSE. ADJACENT TO EXISTING TRAVEL LANES, CONSTRUCT TO EDGE AND ELEVATION OF THE EXISTING PAVEMENT SUCH THAT POSITIVE DRAINAGE IS MAINTANED: (SEE TMP-15, 15A, 18 AND 19)

- -TEMP12- STA 10+00± TO STA 19+11±
- -L- STA 555+14± TO STA 568+50± RT

STEP 4A:  
 USING RDWY STD 1101.02, REMOVE MEDIAN ISLANDS ON US 17 AT THE INTERSECTION WITH -Y1- ROBERSON RD AND REPAIR FLUSH WITH EXISTING PAVEMENT. (SEE TMP-20)

USING RDWY STD 1101.02, PAVE, APPLY PAVEMENT MARKINGS, SET PORTABLE CONCRETE BARRIER, AND DIRECT US 17 S TRAFFIC ONTO NEW US 17 S PAVEMENT FROM -L- STA 14+50± TO STA 50+77±. (SEE TMP-20 THROUGH 21A)

**COMPLETE THE WORK REQUIRED OF PHASE I STEP 4B WITHIN 30 CONSECUTIVE CALENDAR DAYS. SEE SPECIAL PROVISIONS FOR INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.**

STEP 4B:  
 USING RDWY STD 1101.03 CLOSE -Y5- W. BEAR GRASS RD AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE. CONCURRENTLY USING RDWY STD 1101.02, PAVE, APPLY PAVEMENT MARKINGS, SET PORTABLE CONCRETE BARRIER, AND DIRECT US 17 TRAFFIC ONTO NEW US 17 N PAVEMENT IN A TWO LANE, TWO WAY PATTERN FROM -L- STA 156+80± TO STA 238+63±. (SEE TMP-1C AND 22 THROUGH 24A)

STEP 5:  
 USING RDWY STD 1101.02, **BEGIN** CONSTRUCTION EXCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -L- STA 164+00± TO STA 199+36± AND -L- STA 201+68± TO STA 234+50±. (SEE TMP-22 THROUGH 24A)

STEP 6:  
 USING RDWY STD 1101.02 CONSTRUCT -TEMP1-. (SEE TMP-25)

USING RDWY STD 1101.02, CONSTRUCT -TEMP2- STA 12+00± TO STA 15+33± (RT). (SEE TMP-26)

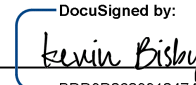
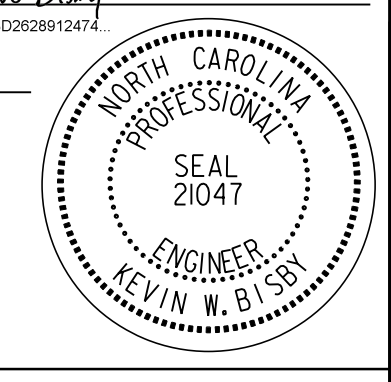
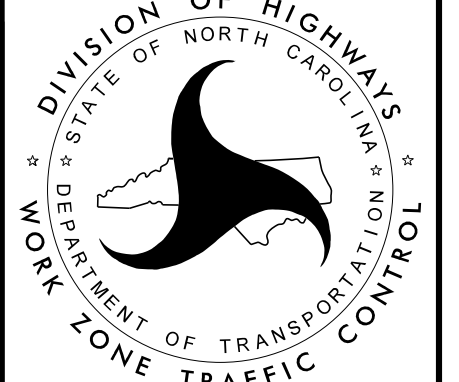
**PHASE II**

STEP 1:  
 USING RDWY STD 1101.02 PAVE, APPLY PAVEMENT MARKINGS, SET PORTABLE CONCRETE BARRIER AND DIRECT US 17 TRAFFIC ONTO THE US 17 S MEDIAN LANE FROM -L- STA 5+40± TO STA 52+71±. (SEE TMP-27 THROUGH 29A)

USING RDWY STD 1101.02 PAVE, APPLY PAVEMENT MARKINGS AND DIRECT US 17 N TRAFFIC ONTO THE US 17 N LANES IN A TWO LANE, TWO WAY PATTERN: (SEE TMP-32 THROUGH 36A)

- -L- STA 253+39± TO STA 277+38±
- -L- STA 293+47± TO STA 338+43±
- -L- STA 409+18± TO STA 482+22±

1/31/2022  
 R-2511-TMP-PSH03.dgn  
 ksb

APPROVED:  DATE: 1/31/2022 <div style="text-align: center;">SEAL</div>			<b>TRAFFIC CONTROL PHASING</b>
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>			





**STEP 2:**

USING RDWY STD 1101.02, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (SEE TMP-32, 32A AND 33)

- L- STA 257+00± TO STA 273+00± LT
- L- STA 298+00± TO -TEMP15- STA 19+45±

**COMPLETE CONSTRUCTION:**

- TEMP3- STA 10+00± TO STA 25+78±
- L- STA 74+70± TO STA 157+00± LT
- L- STA 164+00± TO STA 199+36± LT
- L- STA 201+68± TO STA 257+00± LT
- L- STA 273+00± TO STA 298+00± LT

USING RDWY STD 1101.02, REMOVE EXISTING PAVEMENT PER ROADWAY PLAN AS SHOWN ON TMP-32.

**COMPLETE THE WORK REQUIRED OF PHASE II STEP 3A WITHIN 75 CONSECUTIVE CALENDAR DAYS. SEE SPECIAL PROVISIONS FOR INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.**

**STEP 3A:**

USING RDWY STD 1101.03 CLOSE -Y4- WOOLARD RD AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE. CONSTRUCT US 17 FROM -L- STA 157+00± TO STA 164+00±. (SEE TMP-1D, 30 AND 30A)

**COMPLETE THE WORK REQUIRED OF PHASE II STEP 3B WITHIN 30 CONSECUTIVE CALENDAR DAYS. SEE SPECIAL PROVISIONS FOR INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.**

**STEP 3B:**

USING RDWY STD 1101.02, PAVE -TEMP3-, APPLY PAVEMENT MARKINGS, SET PORTABLE CONCRETE BARRIER, AND OPEN NEW US 17 S LANES TO TRAFFIC IN A TWO LANE, TWO WAY PATTERN FROM -L- STA 58+96± TO STA 307+45±. (SEE TMP-38 THROUGH 45)

CONCURRENT WITH THE TRAFFIC SHIFT, CLOSE -Y3- GRIFFIN HODGES RD USING RDWY STD 1101.03 AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE TMP-1E AND 40)

**STEP 4:**

USING RDWY STD 1101.02, **BEGIN** WIDENING CONSTRUCTION TO THE EDGE AND ELEVATION OF THE EXISTING PAVEMENT FROM -L- STA 7+75± TO STA 16+50± RT. (SEE TMP-37)

USING RDWY STD 1101.02, **BEGIN** CONSTRUCTION EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (SEE TMP-37, 38, 38A, 41, 42, 46, 47 AND 47A)

- L- STA 16+50± TO STA 50+00± RT
- L- STA 173+13± TO STA 180+48± RT (LT TURN LANE)
- L- STA 202+82± TO STA 210+83± RT (LT TURN LANE)
- L- STA 413+50 TO STA 430+00± LT
- L- STA 440+00± TO STA 477+00± LT
- TEMP14-

**PHASE III**

**STEP 1:**

USING RDWY STD 1101.02, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (SEE TMP-48 THROUGH 53A)

- L- STA 64+50± TO STA 132+15± RT
- L- STA 134+26± TO STA 161+96± RT
- L- STA 227+00± TO STA 261+49± RT
- L- STA 265+53± TO STA 303+00± RT

USING RDWY STA 1101.02, REMOVE EXISING PAVEMENT PER RDWY PLAN AS SHOWN ON TMP-48, 49, 51 AND 53)

**COMPLETE CONSTRUCTION:**

- L- STA 7+75± TO STA 64+50± RT
- L- STA 334+50± TO STA 388+64± LT
- L- STA 390+74± TO STA 477+00± LT

**COMPLETE THE WORK REQUIRED OF PHASE III STEP 2 WITHIN 30 CONSECUTIVE CALENDAR DAYS. SEE SPECIAL PROVISIONS FOR INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.**

**STEP 2:**

USING RDWY STD 1101.02, PAVE, APPLY PAVEMENT MARKINGS, ERECT PROPOSED SIGNING AS REQUIRED, AND DIRECT US 17 TRAFFIC ONTO THE NEW US 17 N TRAVEL LANES IN A DIVIDED PATTERN FROM -L- STA 7+75± TO STA 33+38±, AND A TWO LANE, TWO WAY PATTERN FROM -L- STA 33+38 TO STA 338+43±. (SEE TMP-54 THROUGH 62)

CONCURRENT WITH THE TRAFFIC SHIFT, CLOSE -Y2- VOA RD USING RDWY STD 1101.03 AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE TMP-1F AND 55)

**COMPLETE THE WORK REQUIRED OF PHASE III STEP 3 WITHIN 30 CONSECUTIVE CALENDAR DAYS. SEE SPECIAL PROVISIONS FOR INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.**

**STEP 3:**

CLOSE -Y6- JOE MOBLEY RD USING RDWY STD 1101.03 AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE TMP-1G AND 63)

**PHASE IV**

**STEP 1:**

USING RDWY STD 1101.02, PAVE, APPLY PAVEMENT MARKINGS, ERECT PROPOSED SIGNING AS REQUIRED, AND DIRECT US 17 TRAFFIC ONTO THE NEW US 17 S TRAVEL LANES IN A DIVIDED PATTERN FROM -L- STA 7+75± TO STA 330+58±, AND A TWO LANE, TWO WAY PATTERN FROM -L- STA 330+58 TO STA 446+48±. (SEE TMP-65 THROUGH 76A)

**STEP 2A:**

USING RDWY STA 1101.02, REMOVE EXISING PAVEMENT PER RDWY PLAN AS SHOWN ON TMP-65, 66, 73, 74 AND 76)

COMPLETE THE WORK REQUIRED ON PHASE IV STEP 2B

**COMPLETE THE WORK REQUIRED OF PHASE IV STEP 2B WITHIN 30 CONSECUTIVE CALENDAR DAYS. SEE SPECIAL PROVISIONS FOR INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.**

**STEP 2B:**

CLOSE -Y6- SMITHWICK CREEK CHURCH RD USING RDWY STD 1101.03 AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE TMP-1H AND 74)

**STEP 3:**

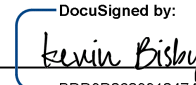
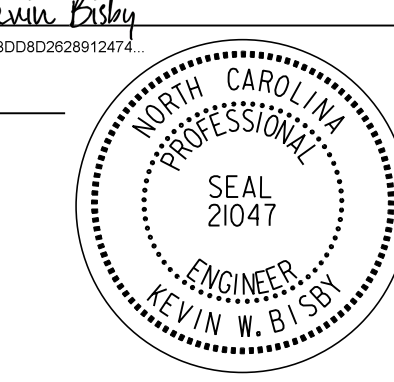

**COMPLETE CONSTRUCTION:**

- L- STA 477+00± TO STA 498+85± LT
- L- STA 501+87± TO -TEMP18- STA 19+42± LT

USING RDWY STD 1101.02, **BEGIN** CONSTRUCTION EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (SEE TMP-73 THROUGH 76A)

- L- STA 329+50± TO STA 388+64± RT
- L- STA 390+74± TO STA 417+50± RT
- L- STA 427+00± TO STA 446+00± RT

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**COMPLETE THE WORK REQUIRED OF PHASE IV STEP 4 WITHIN 45 CONSECUTIVE CALENDAR DAYS. SEE SPECIAL PROVISIONS FOR INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.**

STEP 4:  
CLOSE -Y7- DAN PEELE RD USING RDWY STD 1101.03 AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE TMP-1I AND 77)

**PHASE V**

**COMPLETE THE WORK REQUIRED OF PHASE V STEP 1 WITHIN 40 CONSECUTIVE CALENDAR DAYS. SEE SPECIAL PROVISIONS FOR INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.**

STEP 1:  
USING RDWY STD 1101.02, PAVE, APPLY PAVEMENT MARKINGS, AND DIRECT US 17 TRAFFIC ONTO THE NEW US 17 S TRAVEL LANES IN A TWO LANE, TWO WAY PATTERN FROM -L- STA 455+04± TO STA 521+26±. (SEE TMP-81 THROUGH 83A)

CONCURRENT WITH THE TRAFFIC SHIFT, CLOSE -Y8- THURMAN GRIFFIN RD USING RDWY STD 1101.03 AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE TMP-1J AND 82)

STEP 2:  
USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS, ERECT PROPOSED SIGNING, AND OPEN MEDIAN TURN LANES. (SEE TMP-78 AND 79)

USING RDWY STD 1101.02, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (SEE TMP-81 THROUGH 83A)

- L- STA 473+00± TO STA 499+96± RT
- L- STA 501+92± TO STA 517+50± RT

**COMPLETE CONSTRUCTION:**

- L- STA 329+50± TO STA 388+64± RT
- L- STA 390+74± TO STA 417+50± RT
- L- STA 427+00± TO STA 446+00± RT
- L- STA 517+50± TO STA 523+87± RT
- L- STA 525+85± TO STA 568+50± RT

USING RDWY STA 1101.02, REMOVE EXISING PAVEMENT PER RDWY PLAN AS SHOWN ON TMP-81, 82, AND 83)

USING RDWY STD 1101.02, CONSTRUCT -TEMP20- TO THE EDGE AND ELEVATION OF THE EXISTING PAVEMENT. (SEE TMP-86)

**COMPLETE THE WORK REQUIRED OF PHASE V STEP 3 WITHIN 30 CONSECUTIVE CALENDAR DAYS. SEE SPECIAL PROVISIONS FOR INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.**

STEP 3:  
CLOSE -Y9- DAVID ROGERSON RD USING RDWY STD 1101.03 AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE TMP-1K AND 85)

**PHASE VI**

STEP 1:  
USING RDWY STD 1101.02, PAVE, APPLY PAVEMENT MARKINGS, ERECT PROPOSED SIGNING AS REQUIRED, AND DIRECT US 17 TRAFFIC ONTO THE NEW US 17 NORTH TRAVEL LANES IN A DIVIDED PATTERN FROM -L- STA 301+78± TO STA 494+54±, AND A TWO LANE, TWO WAY PATTERN FROM -L- STA 494+54± TO STA 561+01±. (SEE TMP-87 THROUGH 95)

STEP 2:  
USING RDWY STA 1101.02, REMOVE EXISING PAVEMENT PER RDWY PLAN AS SHOWN ON TMP-87 AND 88)

USING RDWY STD 1101.02. CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (SEE TMP-93 THROUGH 95)

- L- STA 513+00± TO STA 533+34± LT
- L- STA 535+42± TO STA 553+18± LT
- L- STA 555+35± TO STA 564+00± LT

**COMPLETE WIDENING CONSTRUCTION ON -Y11- HOLLY CREEK BLVD AND APPLY PAVEMENT MARKINGS. (SEE TMP-94)**

**COMPLETE THE WORK REQUIRED OF PHASE VI STEP 3A WITHIN 30 CONSECUTIVE CALENDAR DAYS. SEE SPECIAL PROVISIONS FOR INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.**


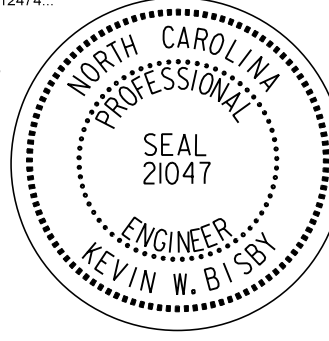

STEP 3A:  
CLOSE -Y10- RODGERS SCHOOL RD USING RDWY STD 1101.03 AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE TMP-1L AND 94)

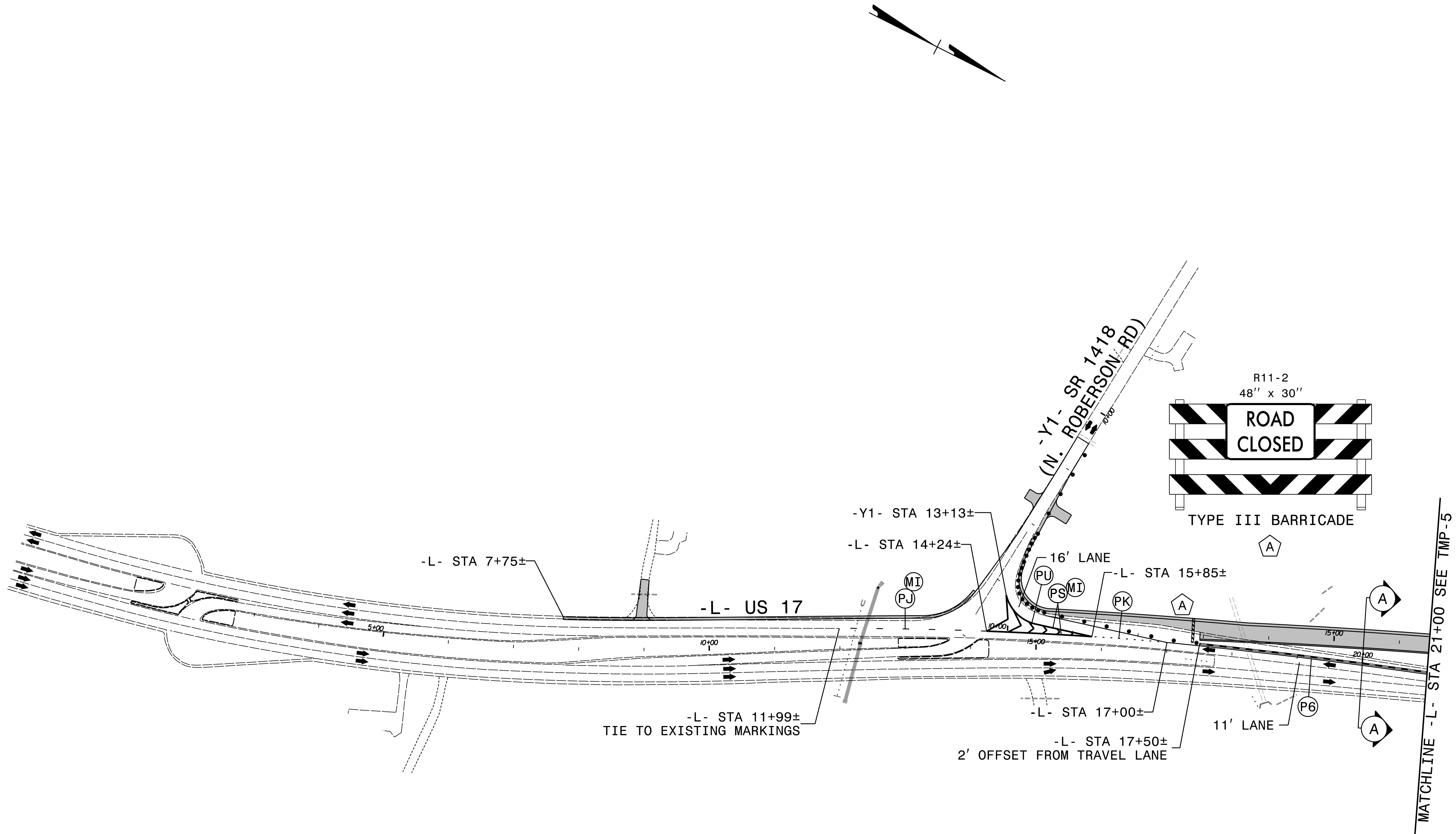
STEP 3B:  
USING RDWY STD 1101.02, CONSTRUCT -Y11- HOLLY CREEK BLVD EXCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE TMP-96)

STEP 4:  
USING RDWY STD 1101.02, PAVE, APPLY PAVEMENT MARKINGS, ERECT PROPOSED SIGNING AS REQUIRED, AND DIRECT US 17 TRAFFIC INTO A DIVIDED PATTERN FROM -L- STA 467+06± TO STA 568+50±. (SEE TMP-97 THROUGH 104)

STEP 5:  
USING RDWY STA 1101.02, REMOVE EXISING PAVEMENT PER RDWY PLAN AS SHOWN ON TMP-98, 103 AND 104)

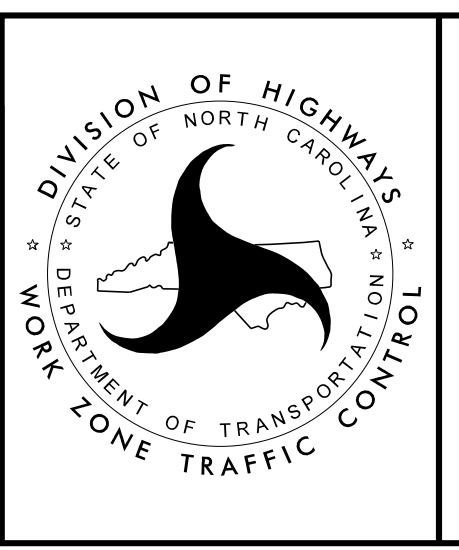
STEP 6:  
USING RDWY STD 1101.02, PAVE THE FINAL LAYER OF SURFACE COURSE AND APPLY THE FINAL PAVEMENT MARKINGS.

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SEE TMP-4A FOR SECTION VIEW.

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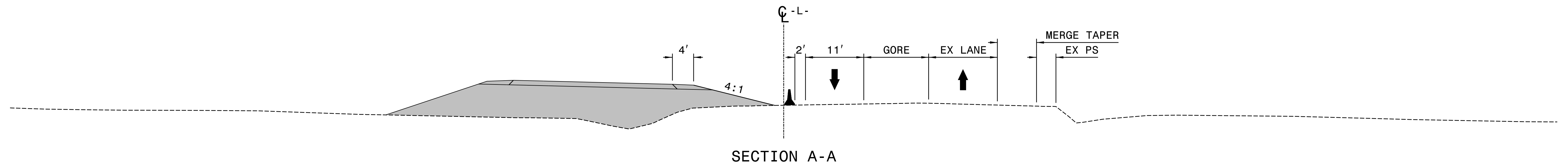
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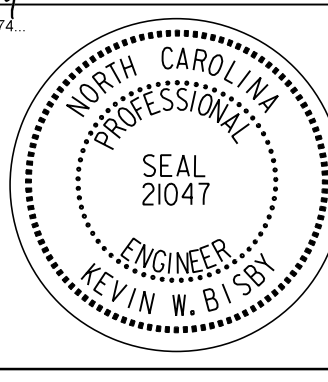
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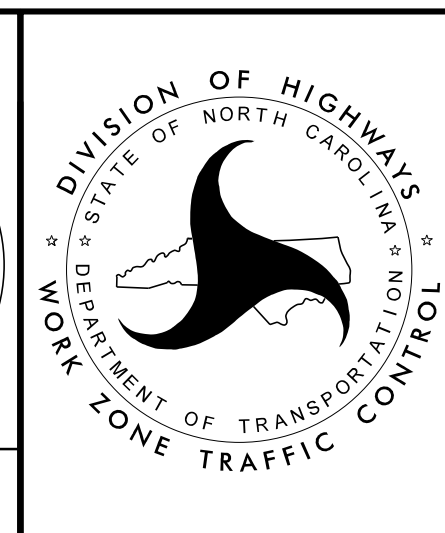
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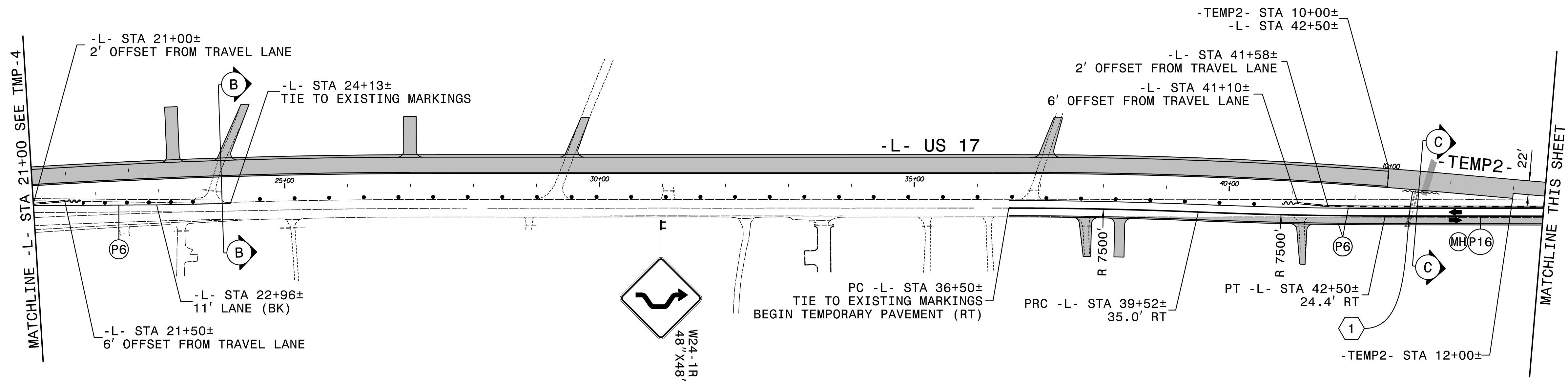
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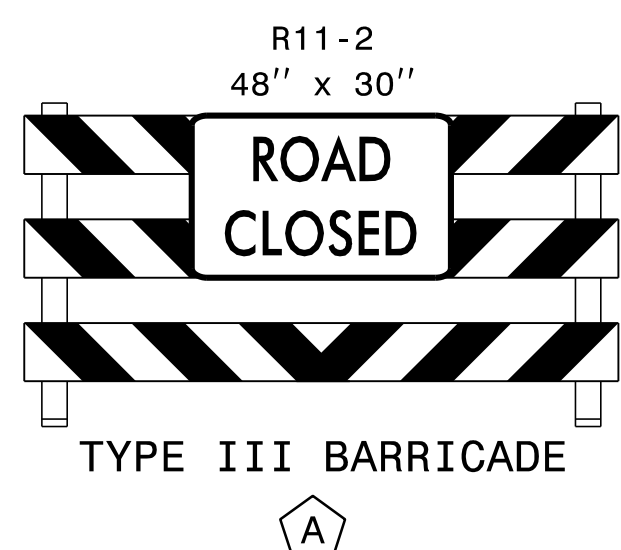
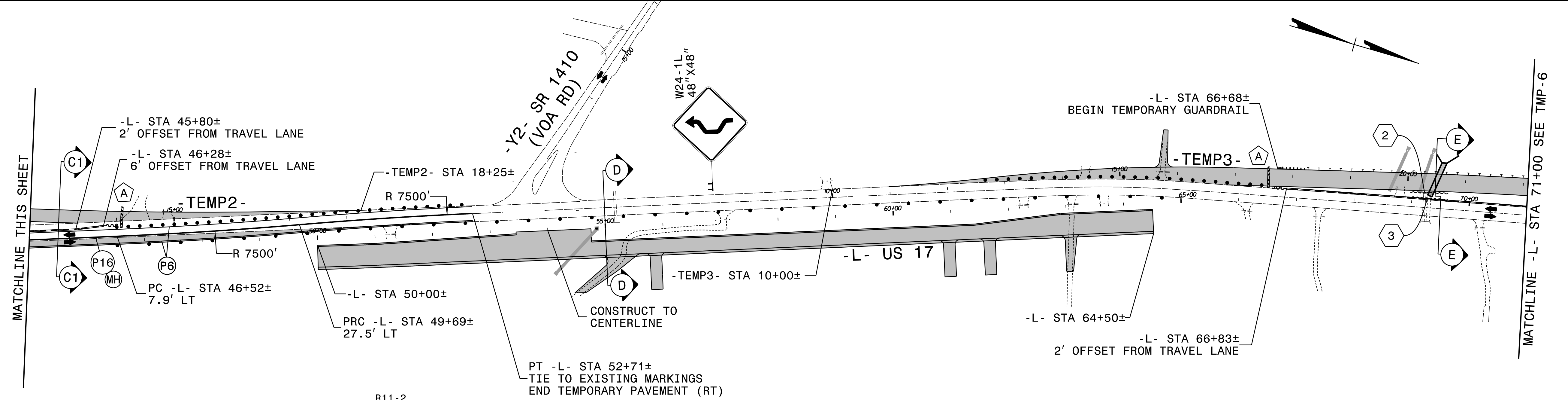
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1 2 3 SEE TMP-2A.1 FOR TEMPORARY SHORING DATA



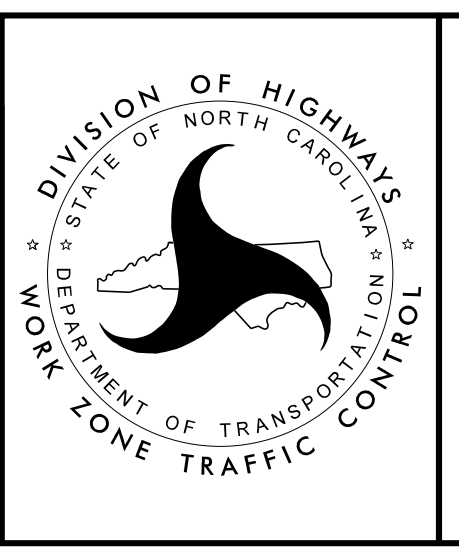
SEE TMP-5A AND 5B FOR SECTION VIEWS.

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 ENGINEER  
 KEVIN W. BISBY

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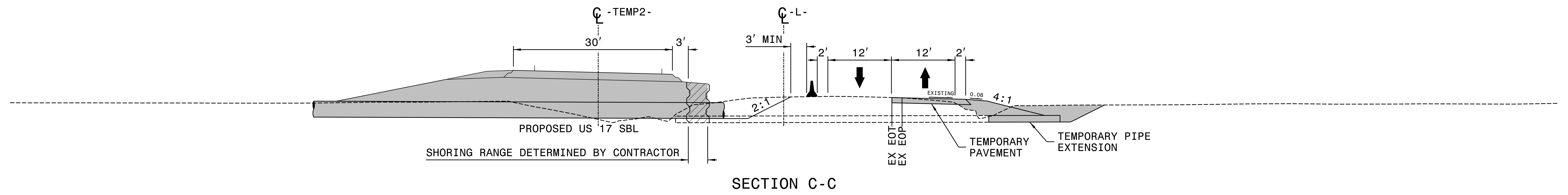
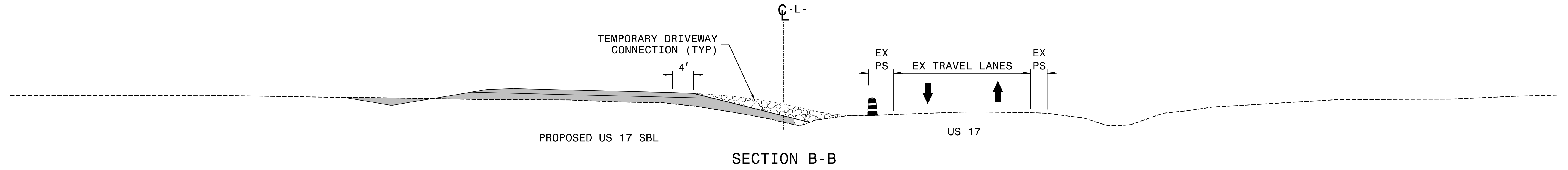


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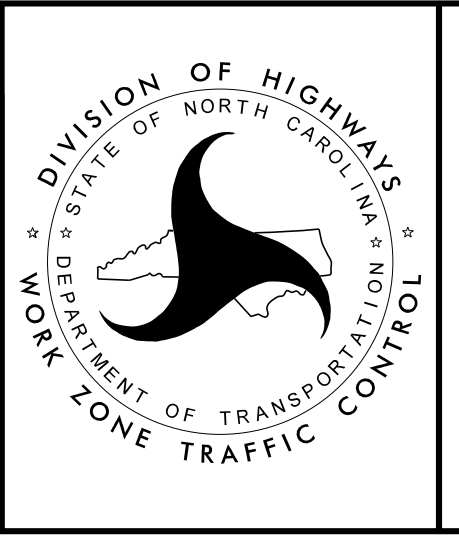
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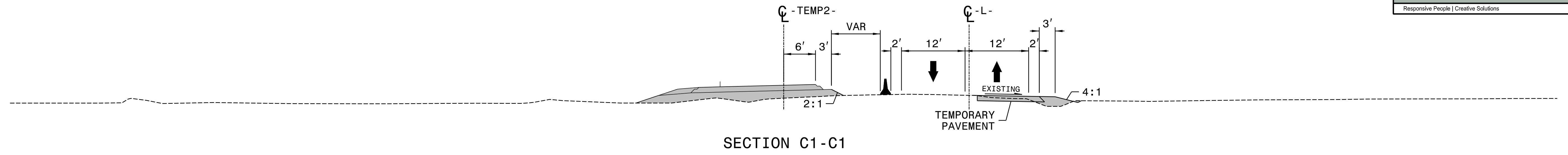
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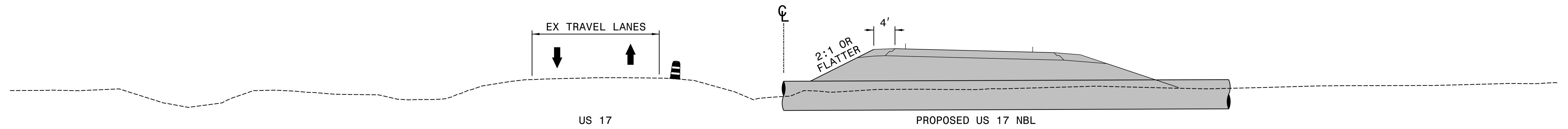
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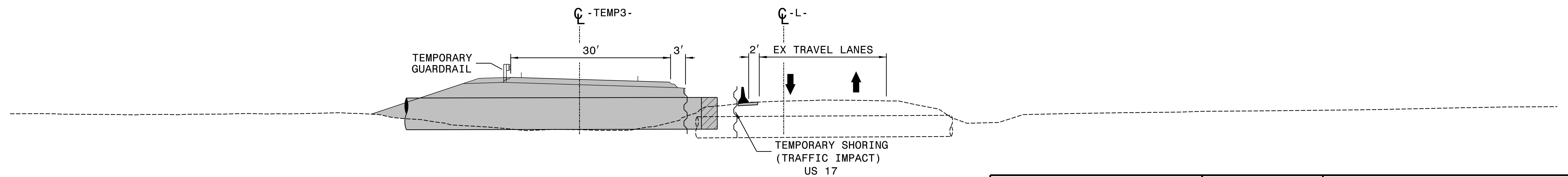
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SECTION C1-C1



SECTION D-D



SECTION E-E

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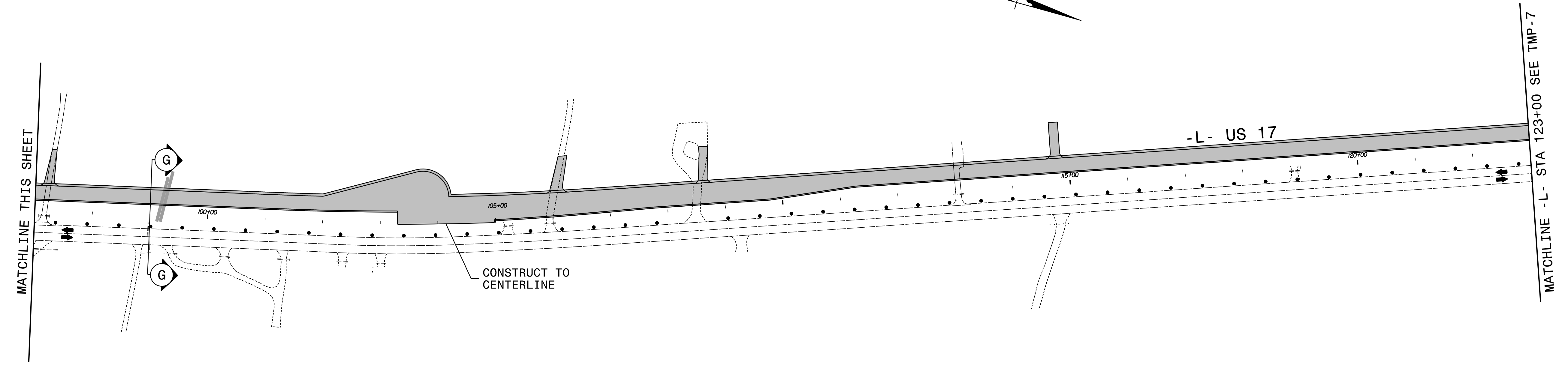
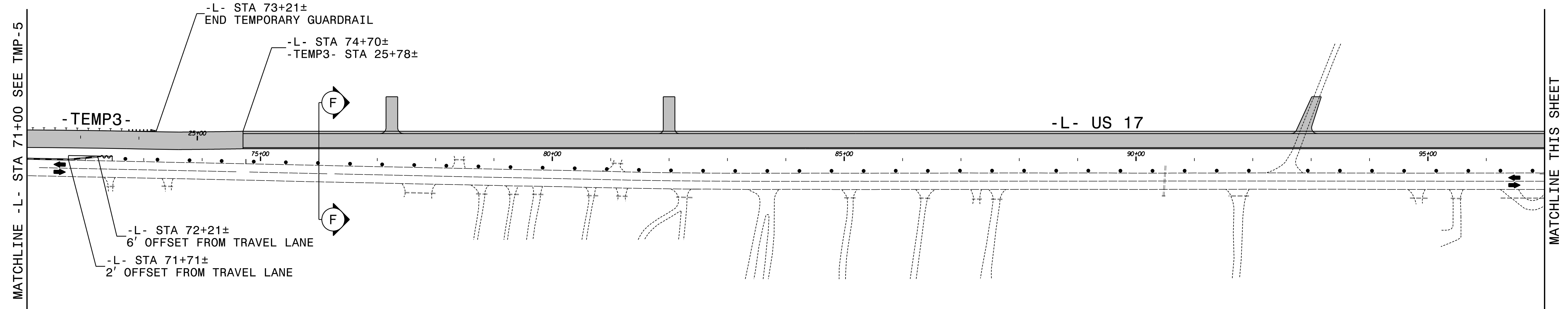
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 21047  
 ENGINEER  
 KEVIN W. BISBY



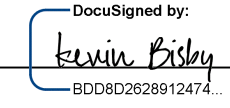
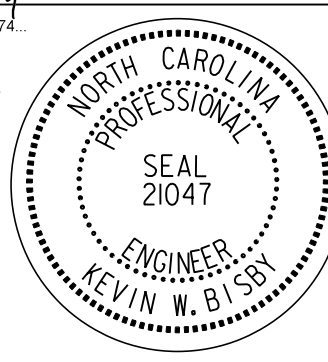
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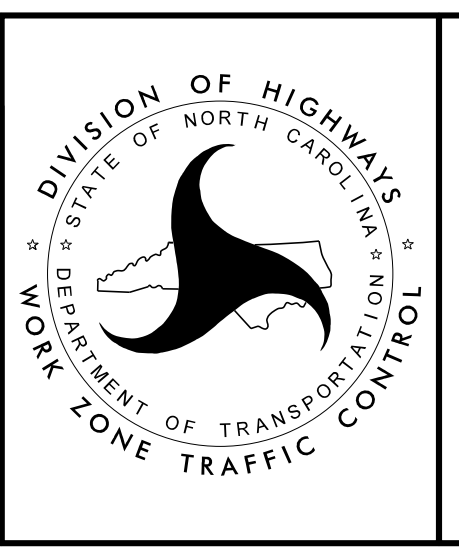




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SEE TMP-6A FOR SECTION VIEWS.

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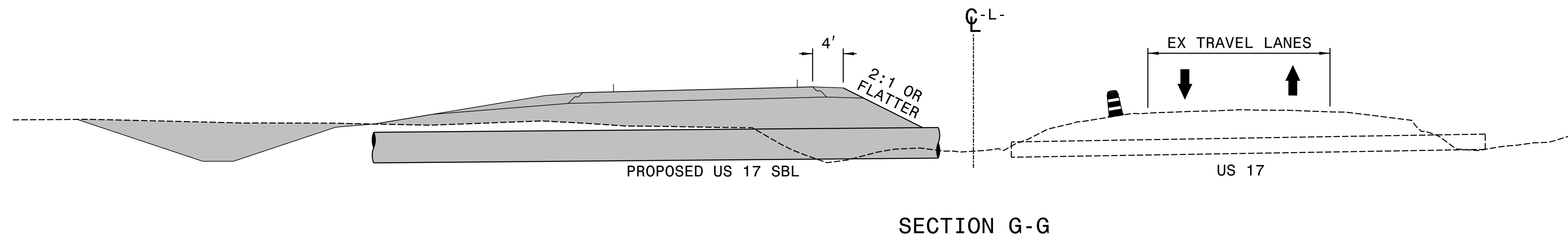
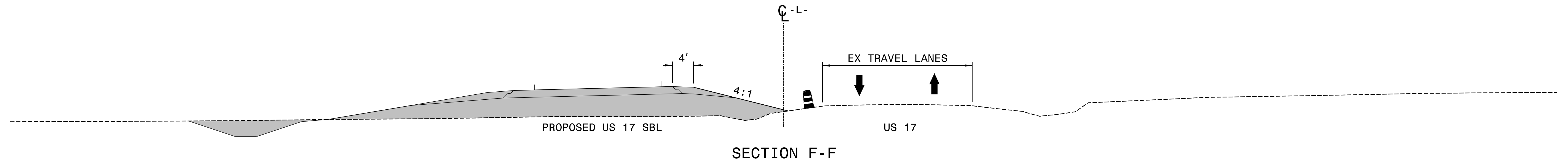


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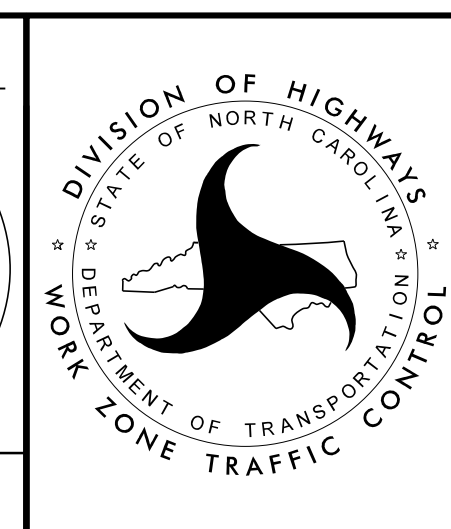


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PROFESSIONAL ENGINEER  
 KEVIN W. BISBY  
 SEAL 21047



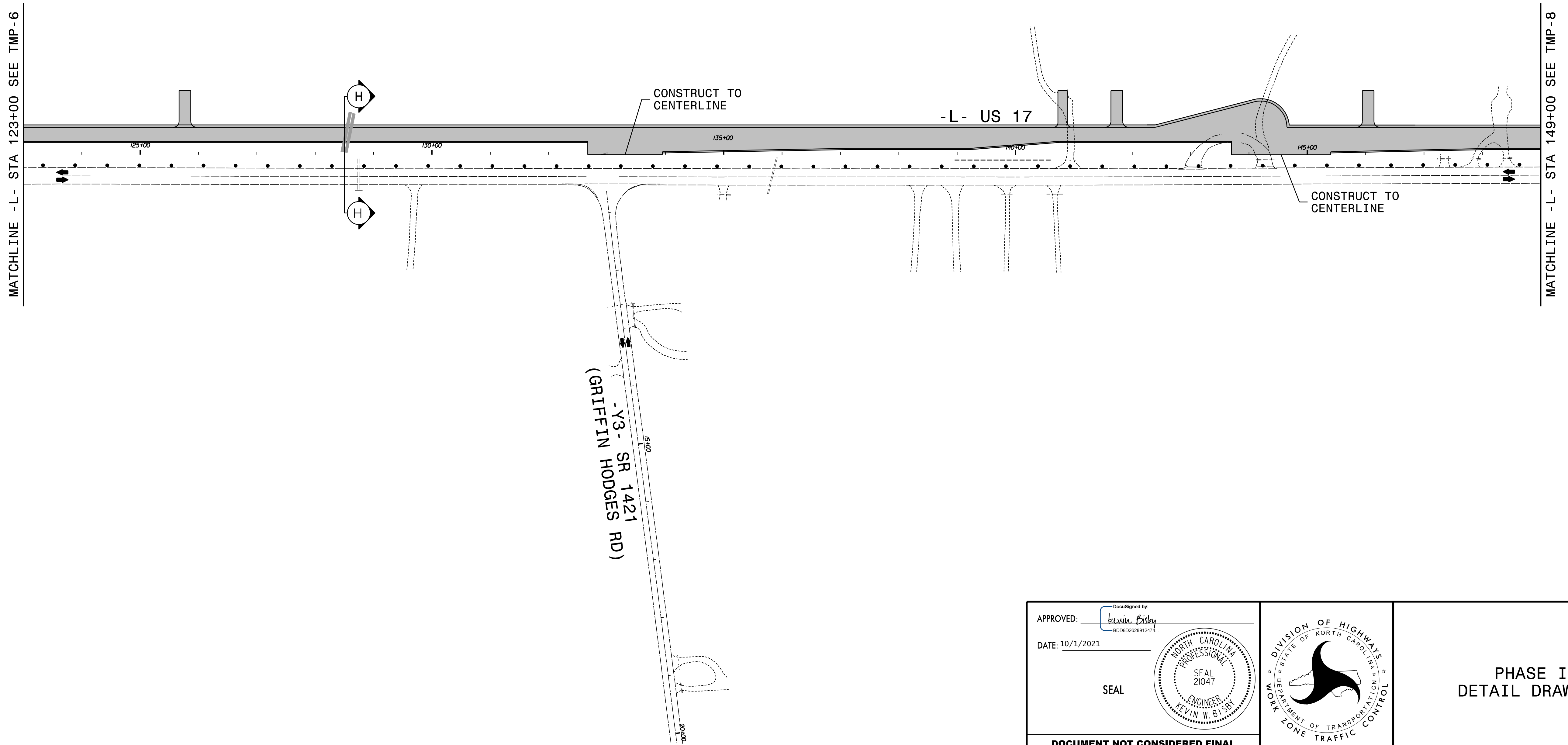
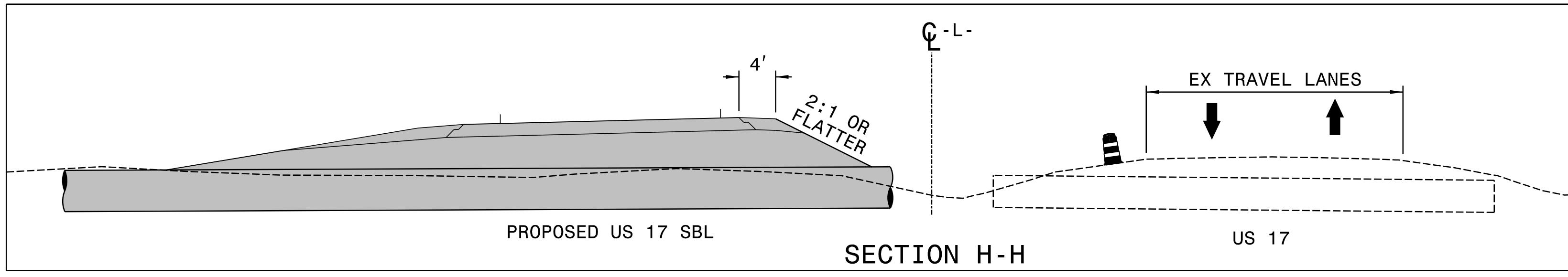
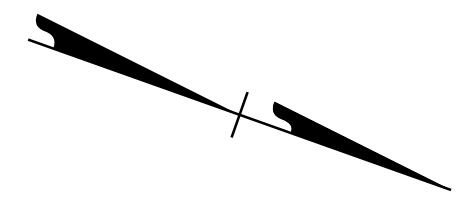
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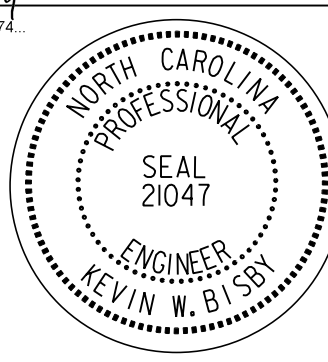
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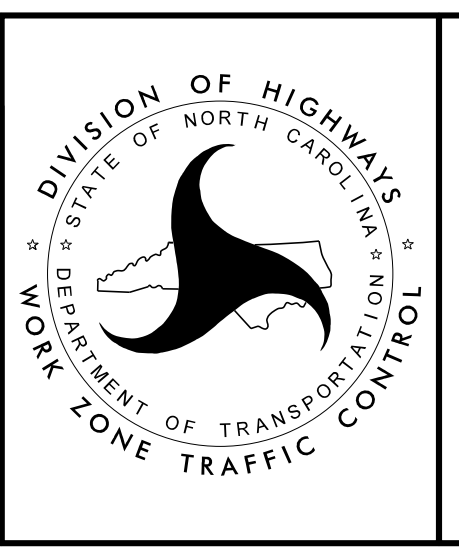
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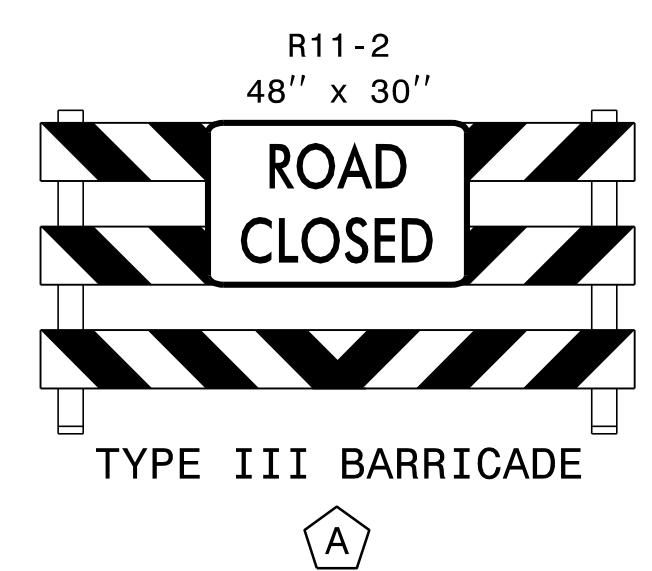
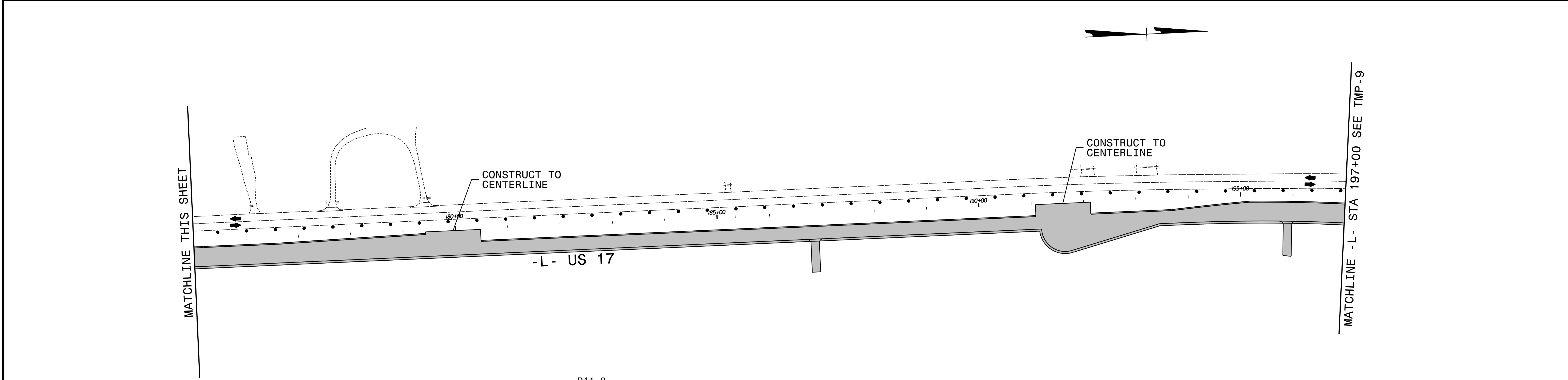
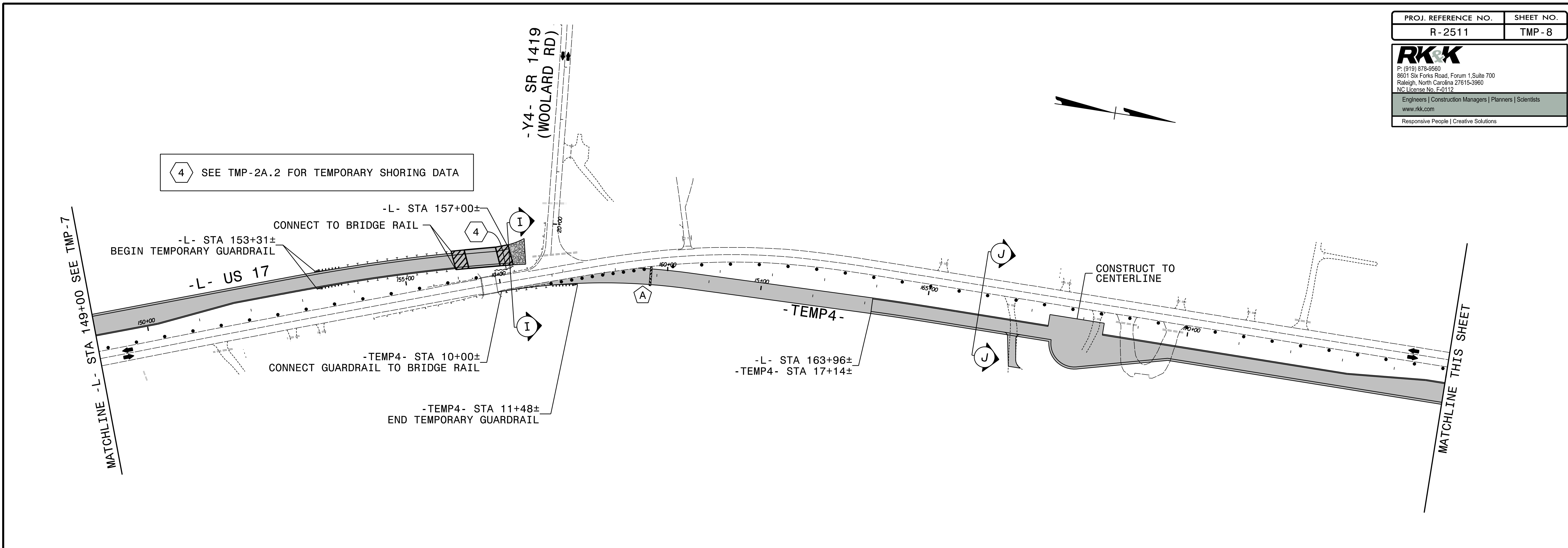
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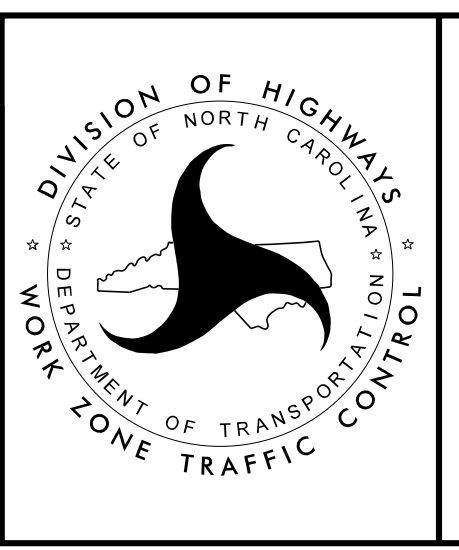
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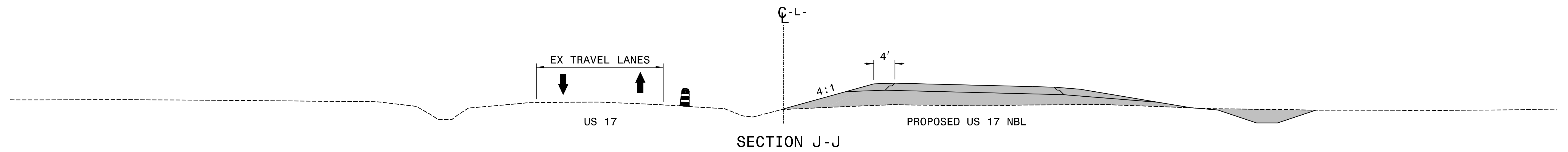
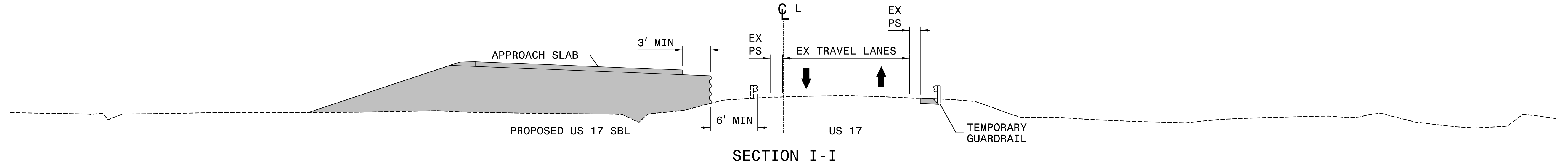
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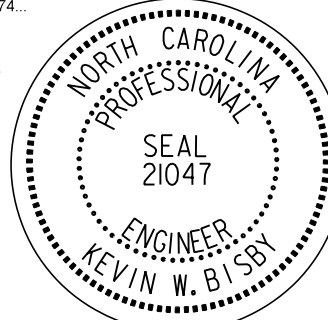



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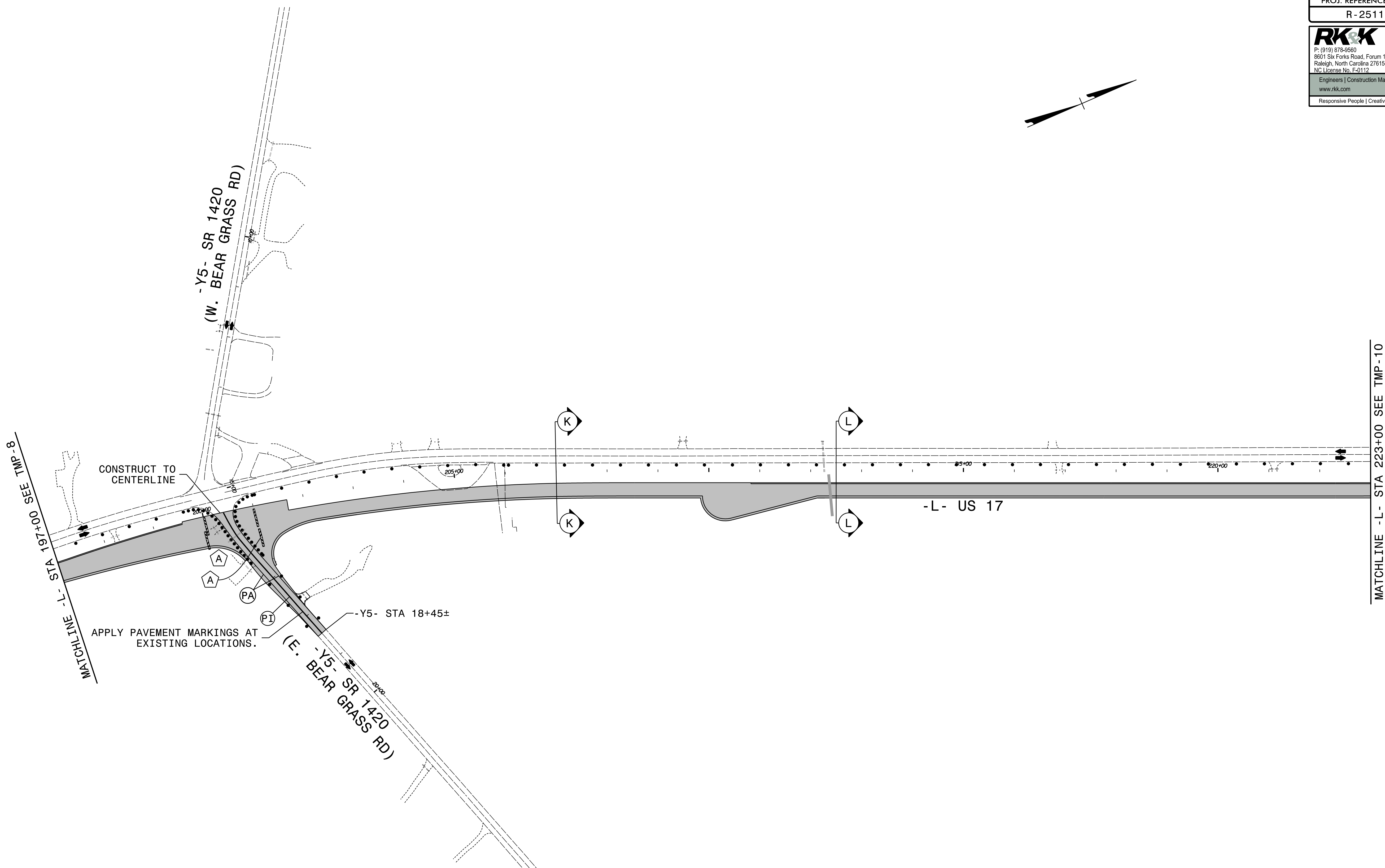
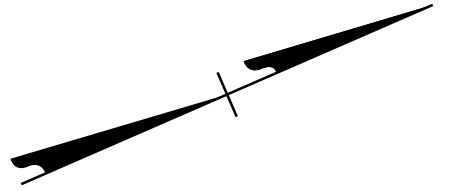


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MATCHLINE - L - STA 197+00 SEE TMP-8

CONSTRUCT TO CENTERLINE

APPLY PAVEMENT MARKINGS AT EXISTING LOCATIONS.

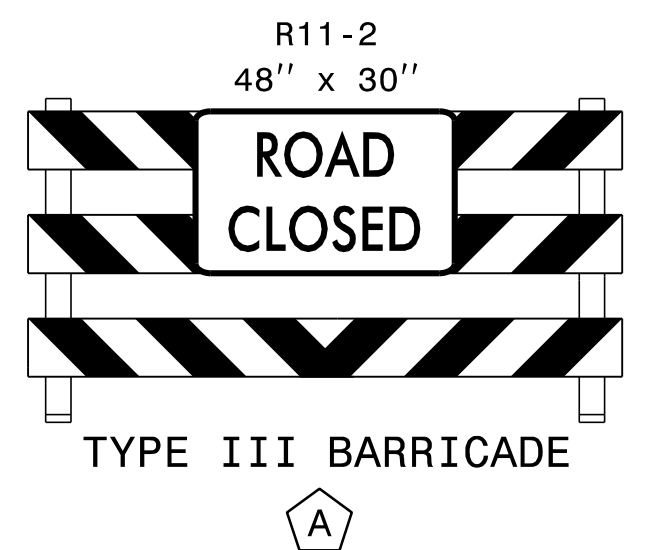
-Y5- SR 1420  
(W. BEAR GRASS RD)

-Y5- SR 1420  
(E. BEAR GRASS RD)


-Y5- STA 18+45±

-L- US 17

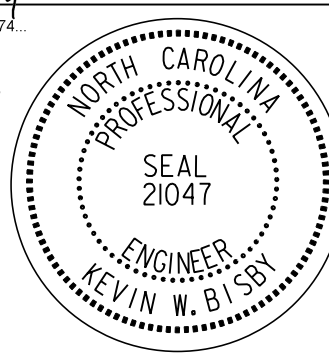
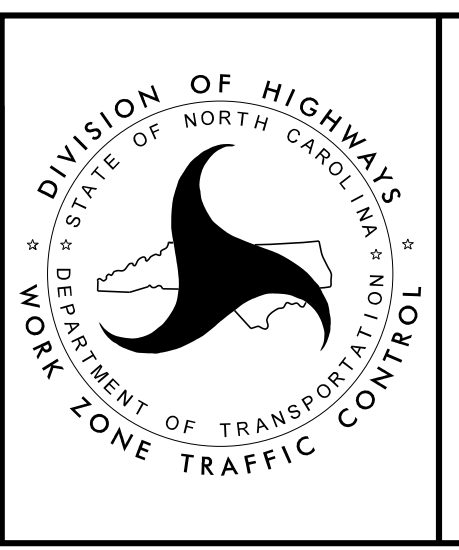
MATCHLINE - L - STA 223+00 SEE TMP-10



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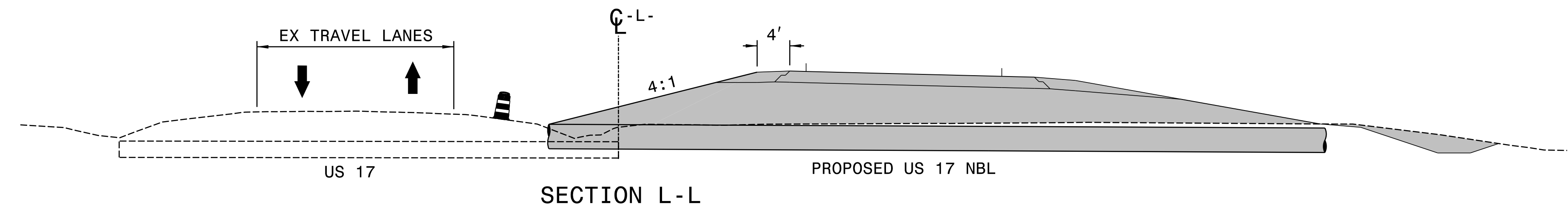
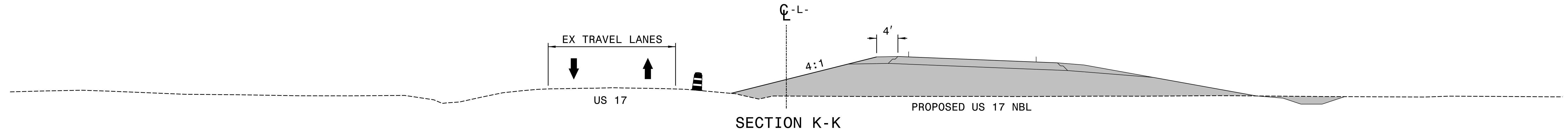
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R-2511	TMP-9A

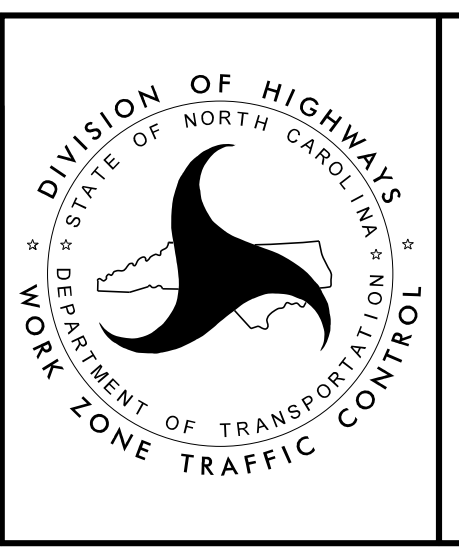
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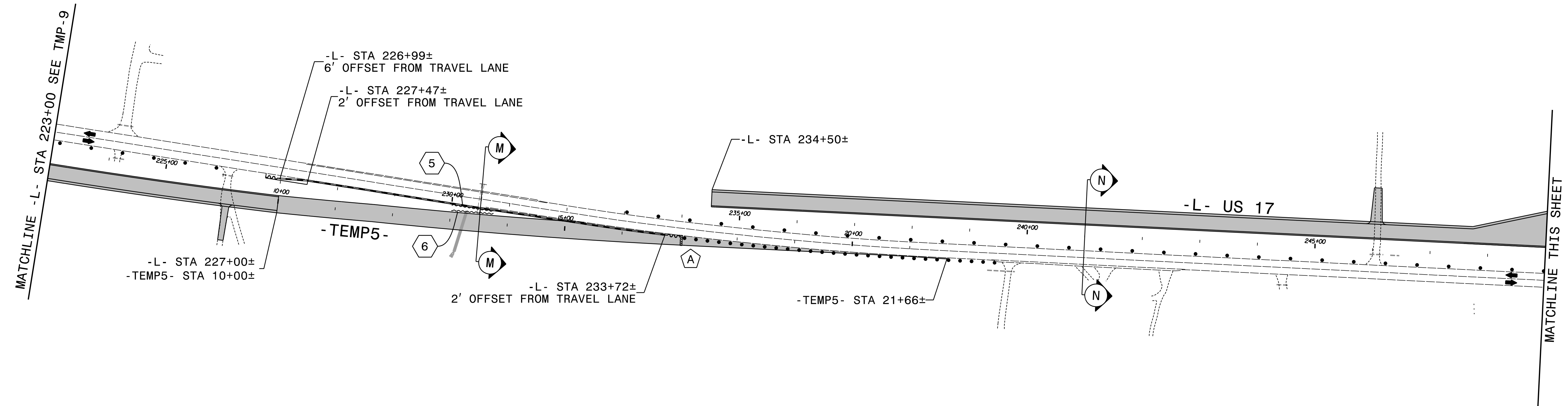
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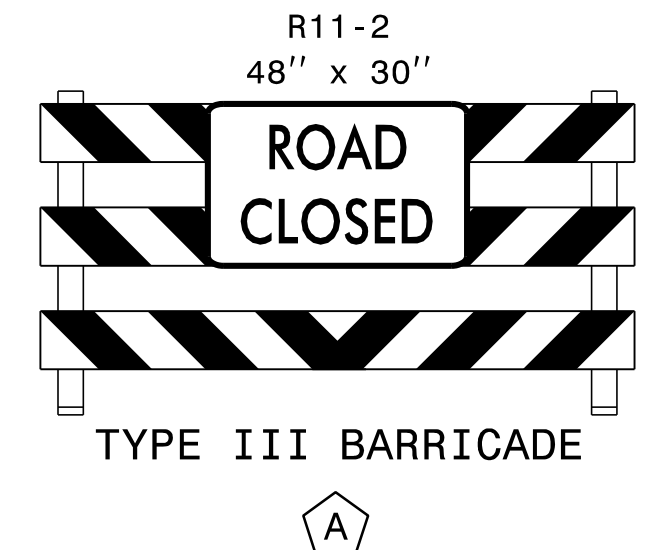
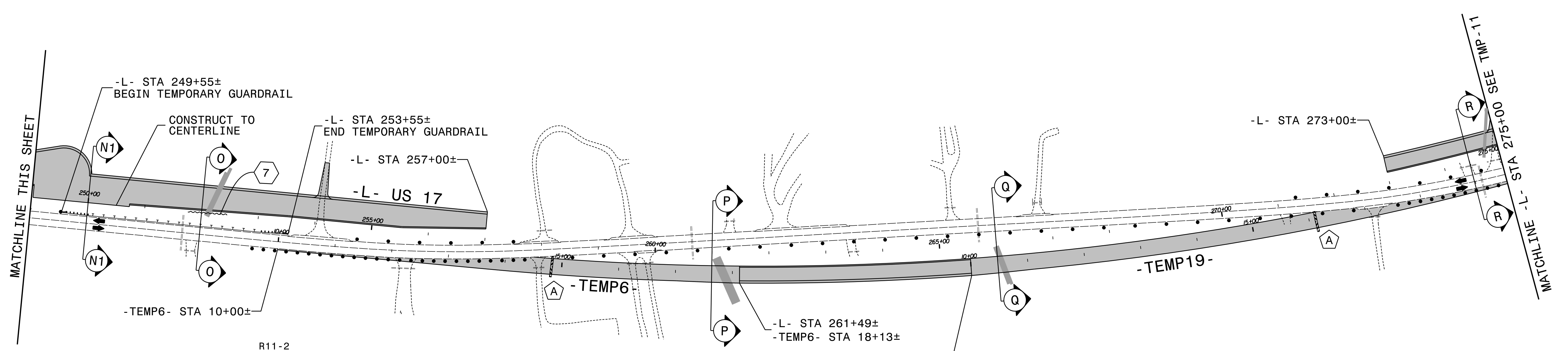


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5 6 7 SEE TMP-2A.2 FOR TEMPORARY SHORING DATA

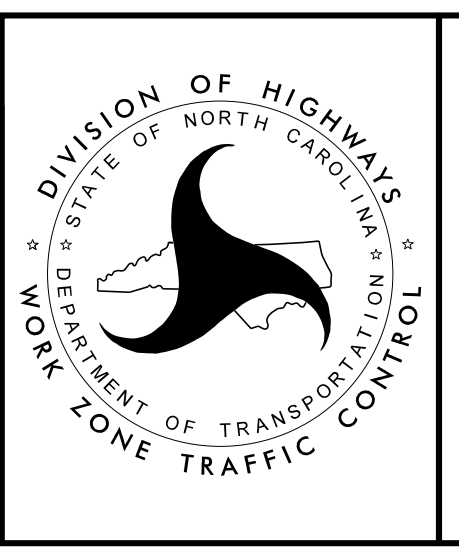


SEE TMP-10A, 10B AND 10C FOR SECTION VIEWS.

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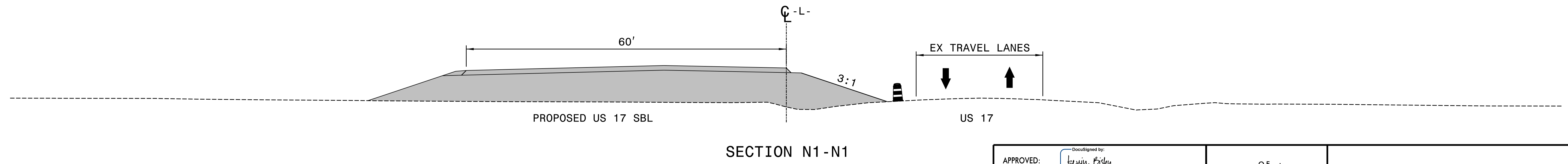
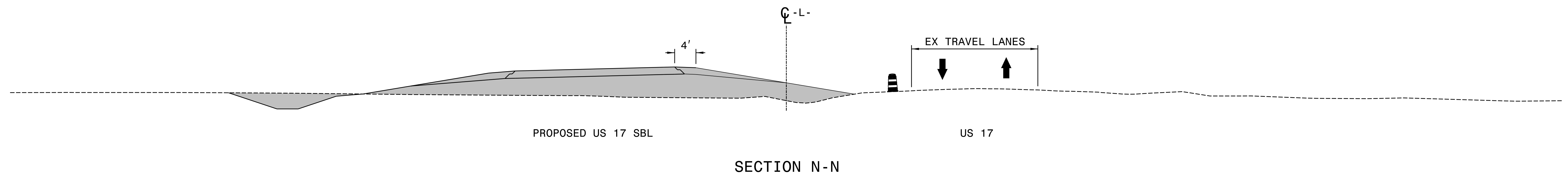
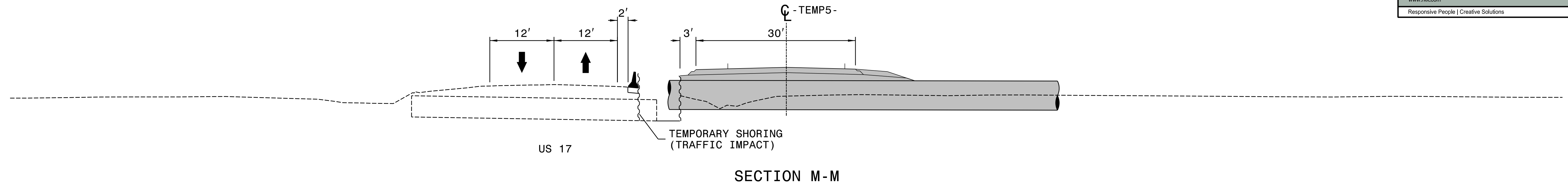
PHASE I  
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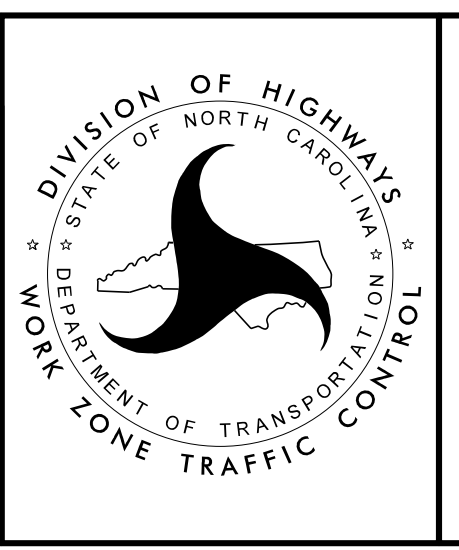


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KBS/bl

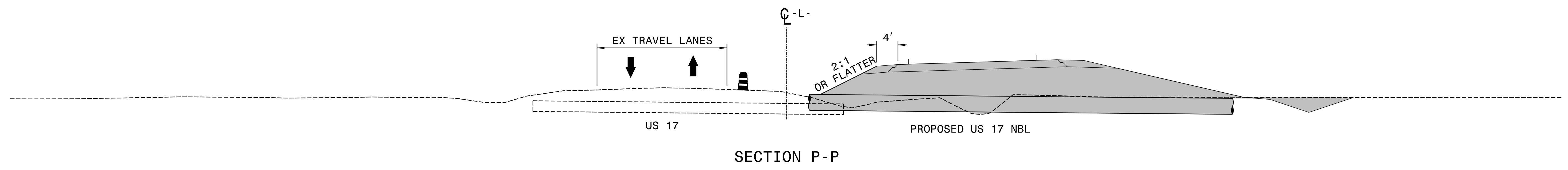
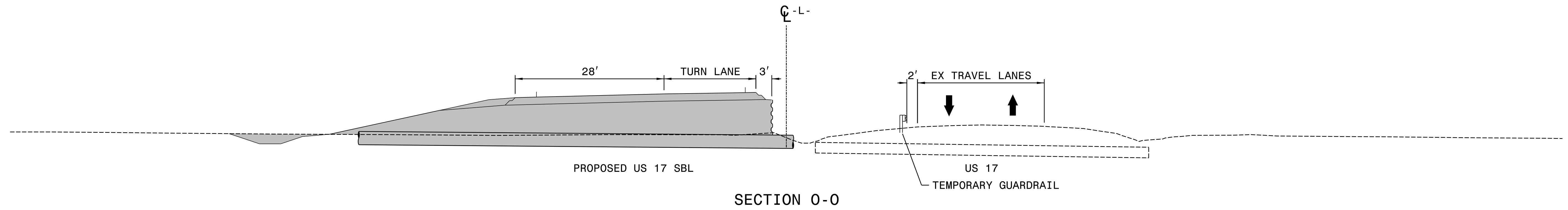
APPROVED: *Kevin Bisby*  
 DATE: 10/1/2021

SEAL


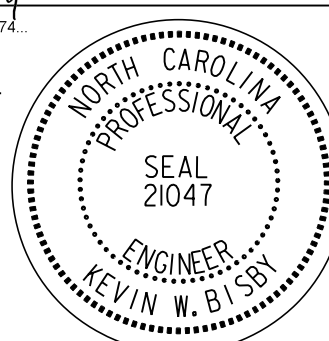

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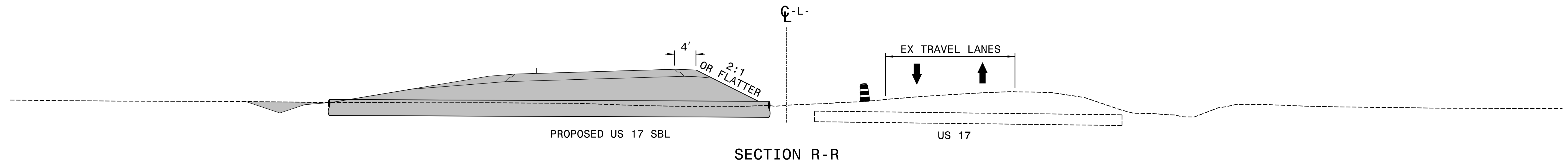
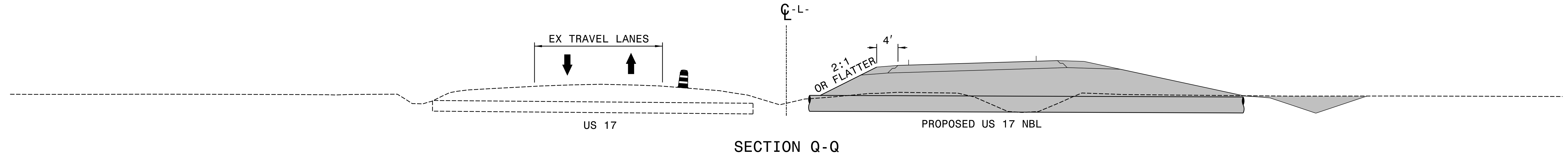
10/1/2021  
 R2511\_TMP\_PSH10B.dgn  
 ksb1

APPROVED:  DATE: 10/1/2021 SEAL			<p><b>PHASE I DETAIL DRAWING</b></p>
<p><b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b></p>			


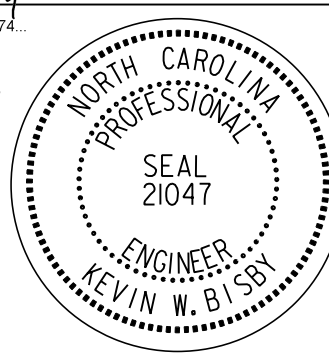



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R-2511	TMP-10C

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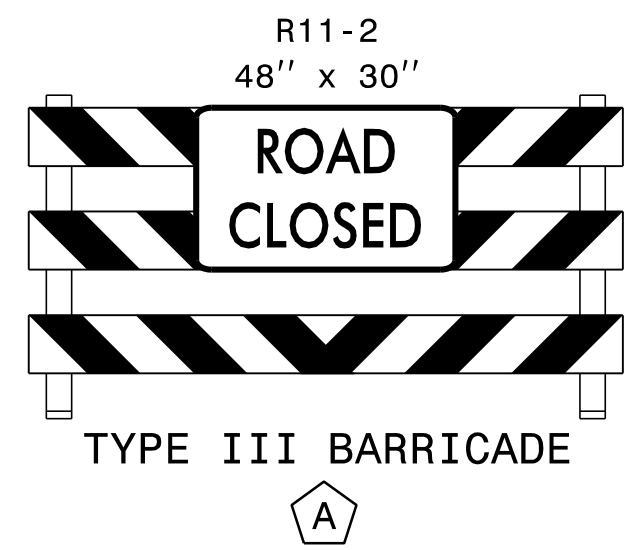
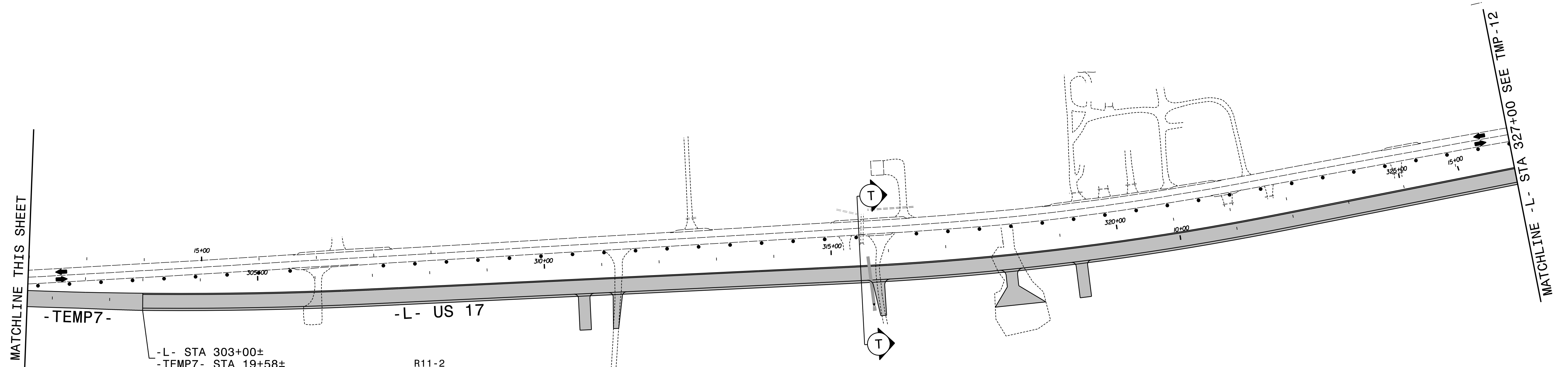
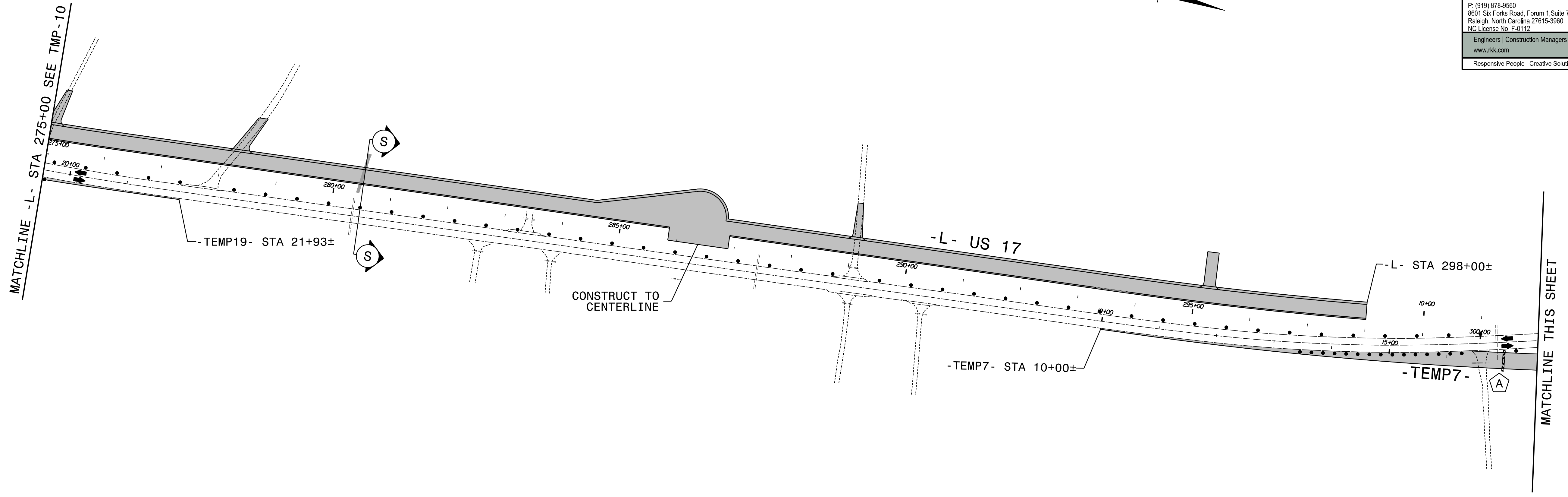


10/1/2021  
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 kbs/bl

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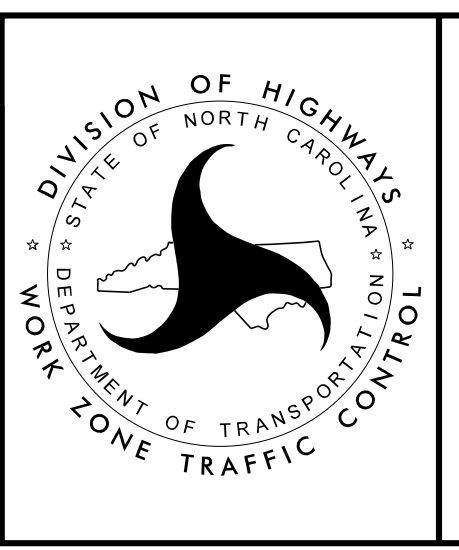
PROJ. REFERENCE NO.	SHEET NO.
R-2511	TMP-11

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SEE TMP-11A FOR SECTION VIEWS.

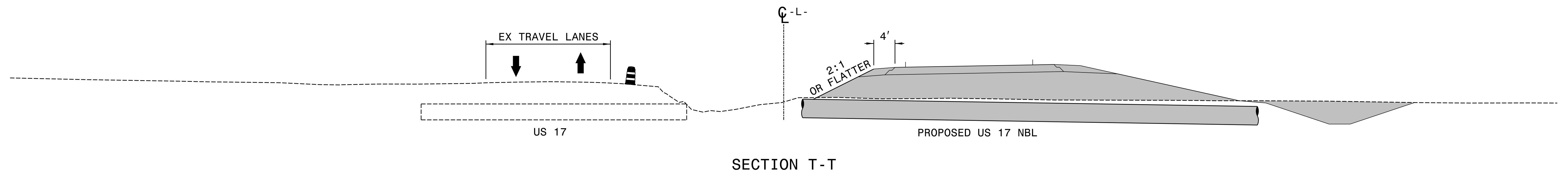
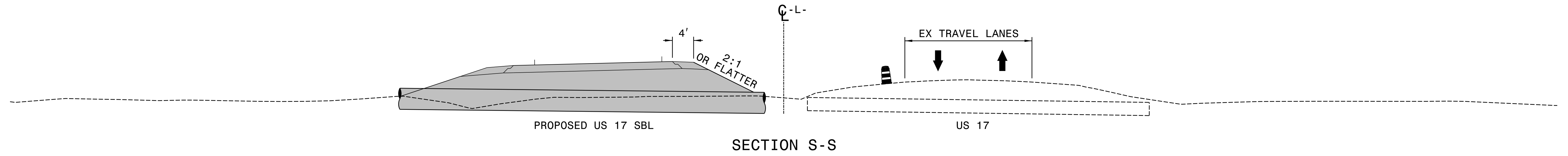
APPROVED: *Kevin Bisby*  
 DATE: 10/1/2021  
 SEAL  
 DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED




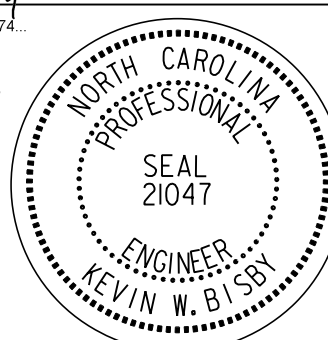

PHASE I  
 DETAIL DRAWING

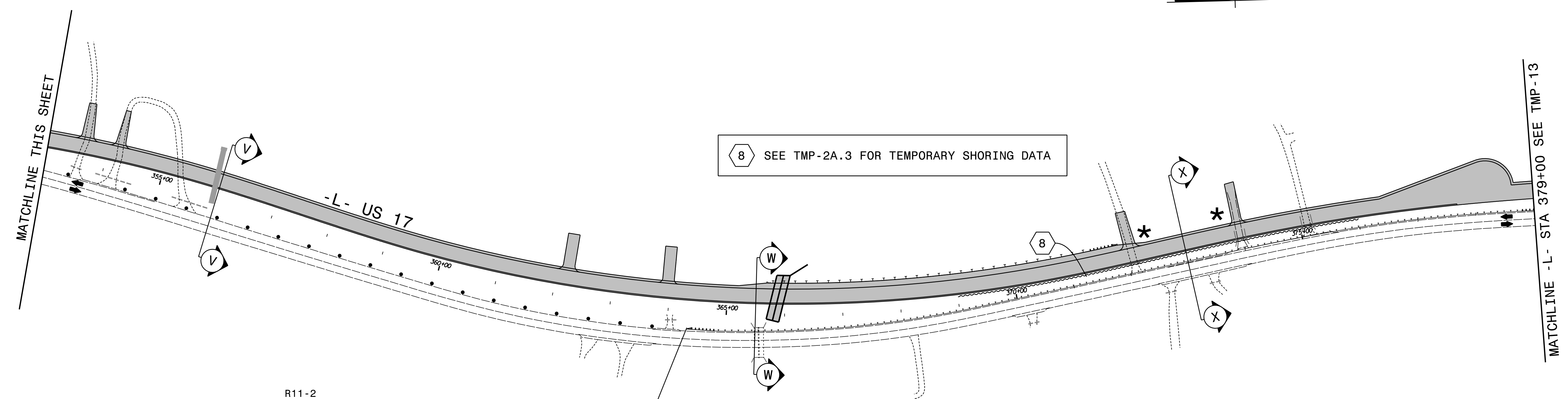
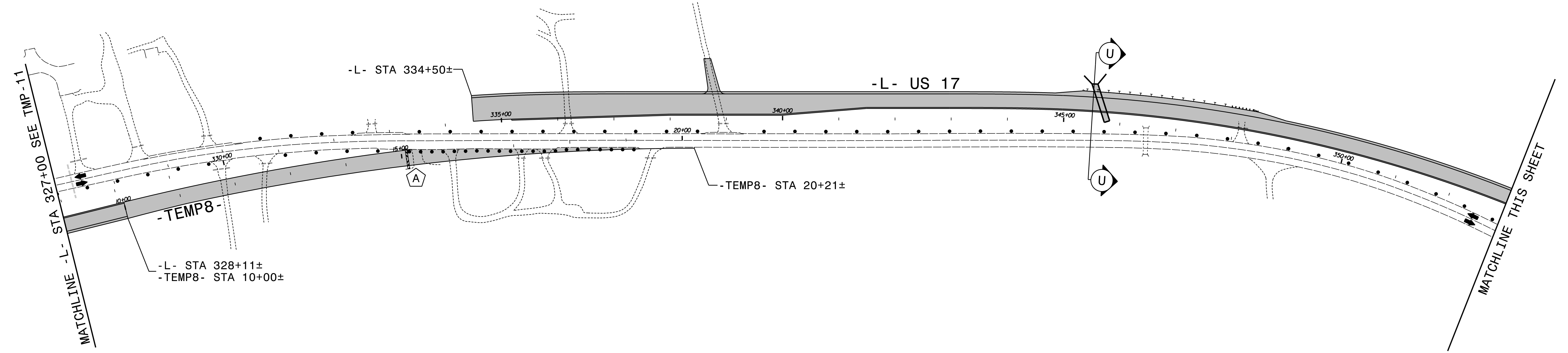
10/1/2021  
 R2511\_TMP\_PSH11.dgn  
 KSB



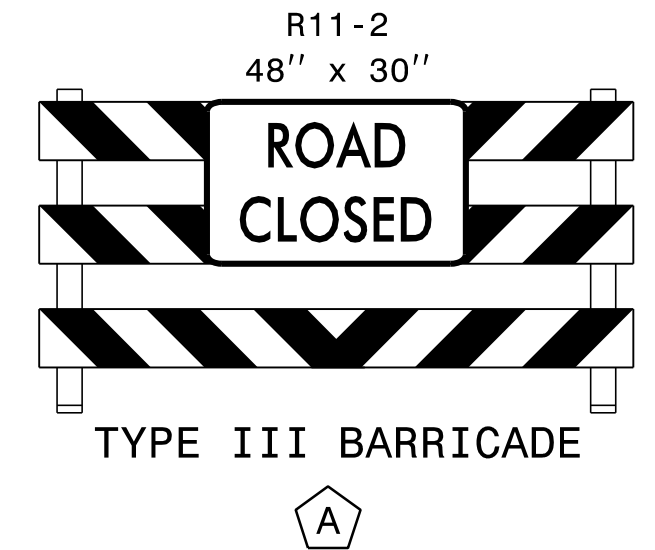


10/1/2021  
 R2511\_TMP\_PSH11A.dgn  
 kbs/bj

APPROVED:  DATE: 10/1/2021 SEAL			<p><b>PHASE I DETAIL DRAWING</b></p>
<p><b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b></p>			



8 SEE TMP-2A.3 FOR TEMPORARY SHORING DATA



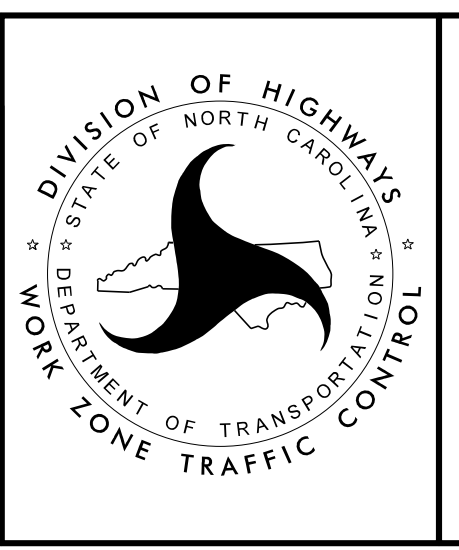
-L- STA 364+34±  
BEGIN TEMPORARY GUARDRAIL

SEE TMP-12A AND 12B FOR SECTION VIEWS.  
 \* MAINTAIN DRIVEWAY ACCESS. ALLOW OPENINGS IN GUARDRAIL AS APPROVED BY THE ENGINEER.

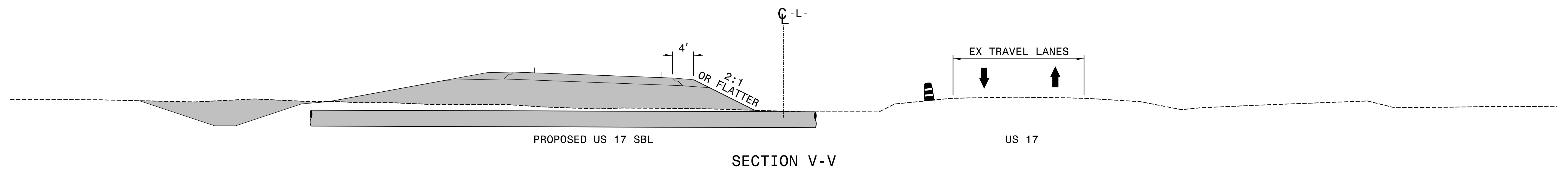
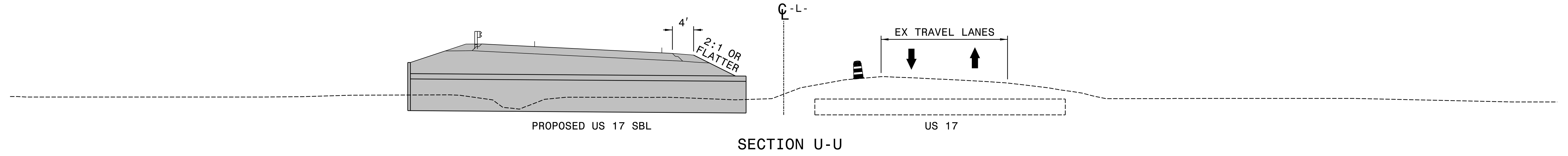
APPROVED: *Kevin Bissby*  
 DATE: 1/12/2022

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**PHASE I  
DETAIL DRAWING**

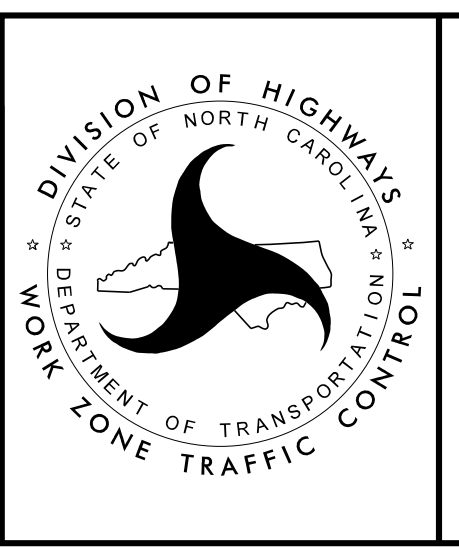


APPROVED: *Kevin Bisby*  
 DATE: 10/1/2021

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SEAL 21047  
 ENGINEER  
 KEVIN W. BISBY

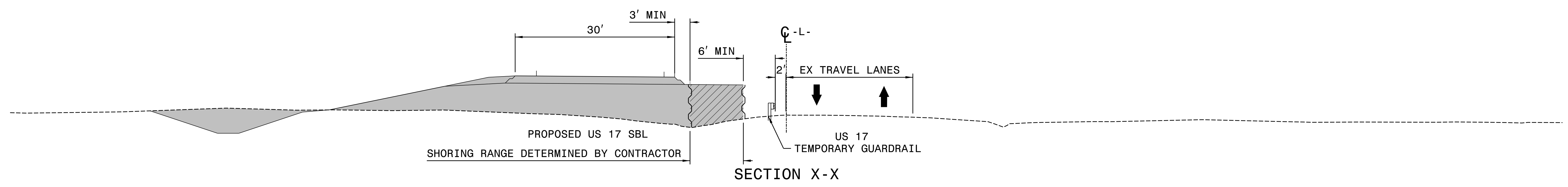
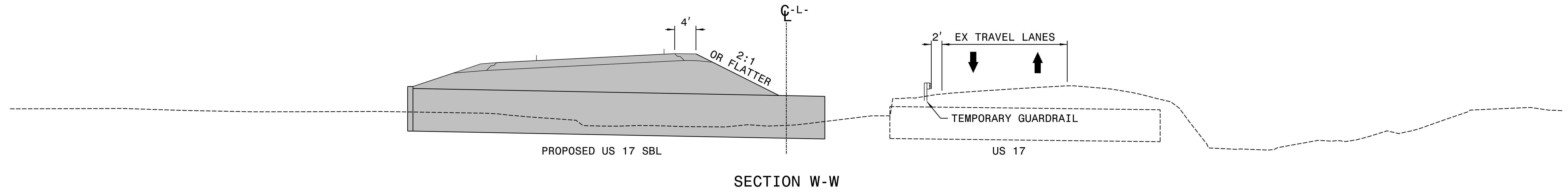
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 DETAIL DRAWING

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 R2511\_TMP\_PSH12A.dgn  
 kbisby



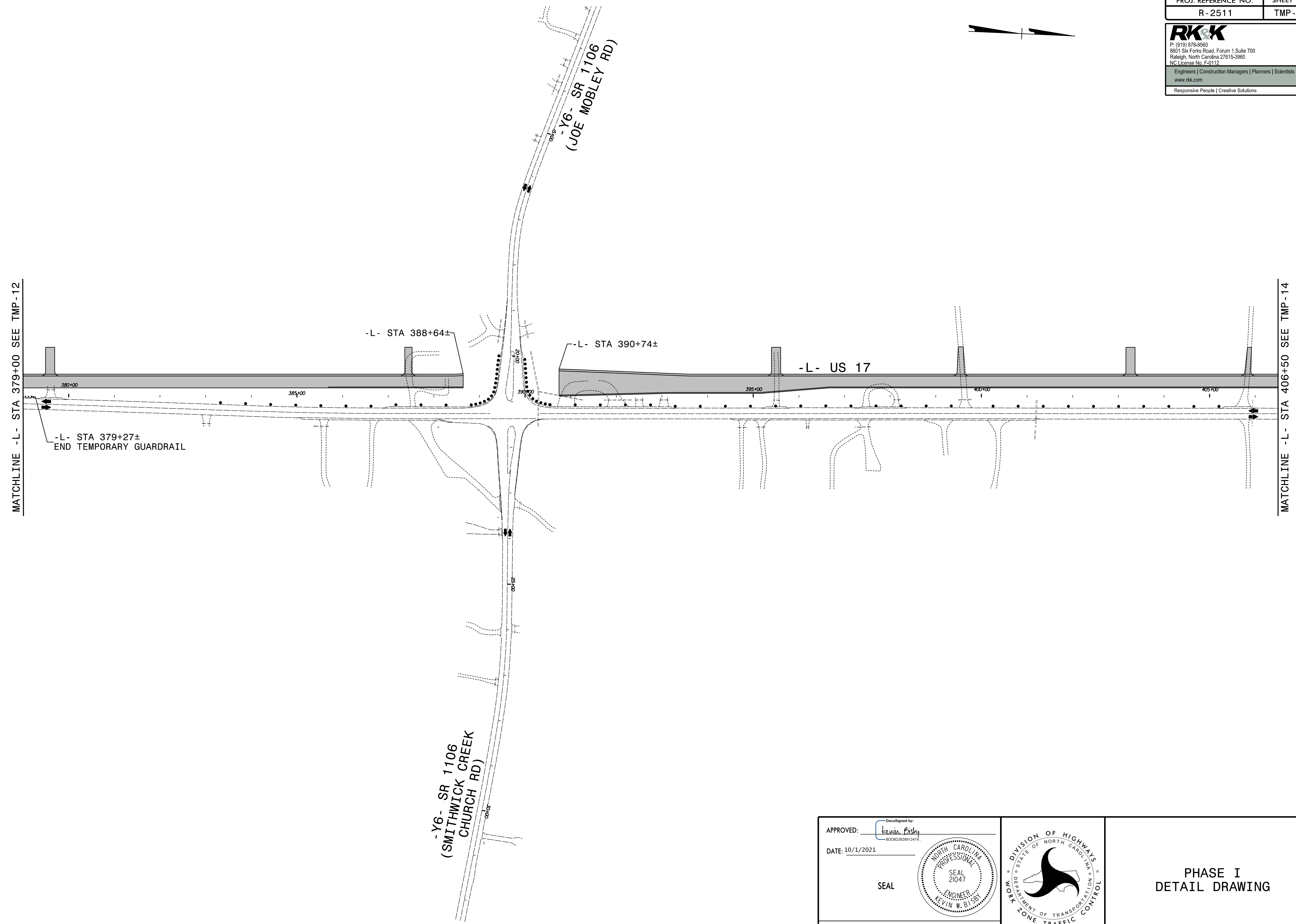
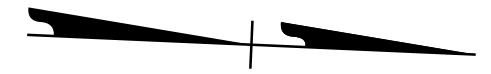


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 R2511\_TMP\_PSH12B.dgn  
 KWS/bl


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<p><b>DOCUMENT NOT CONSIDERED FINAL          UNLESS ALL SIGNATURES COMPLETED</b></p>			

PROJ. REFERENCE NO.	SHEET NO.
R-2511	TMP-13

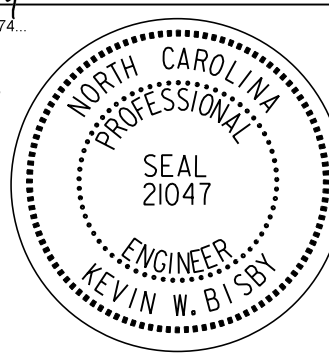
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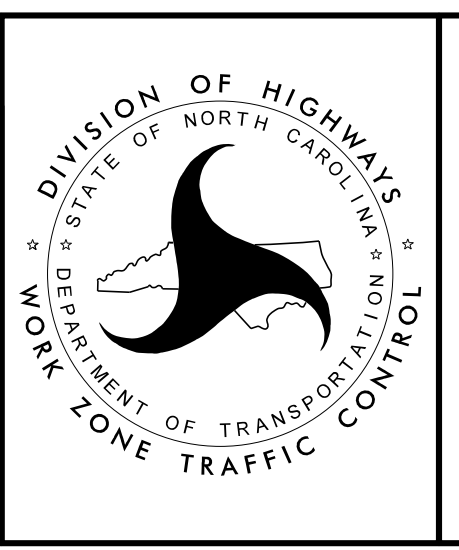
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 R2511\_TMP\_PSH13.dgn  
 KSB

APPROVED:   
 DATE: 10/1/2021

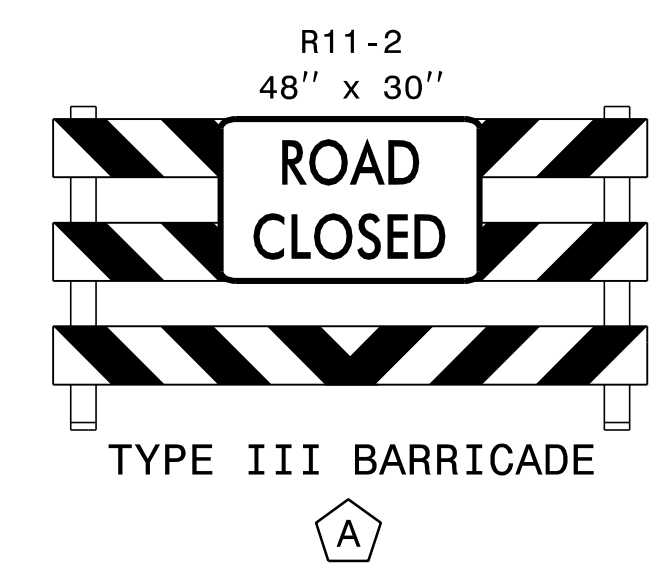
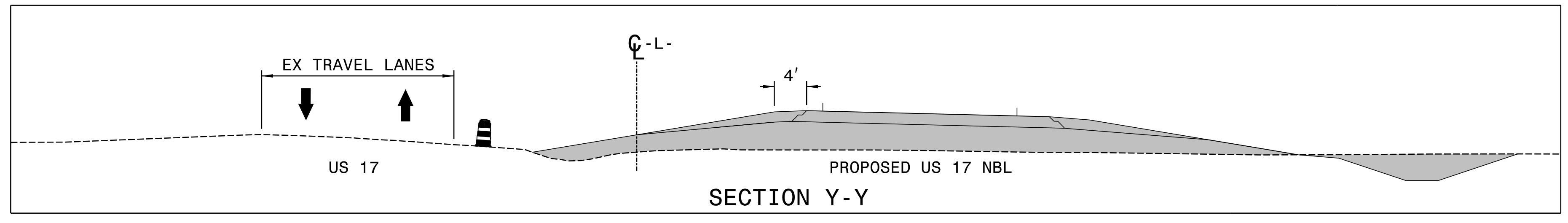
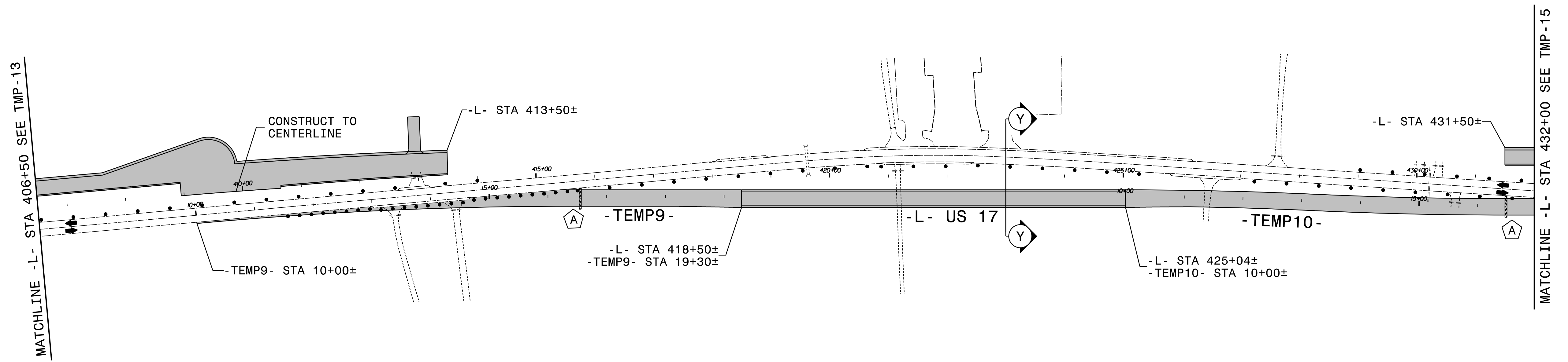
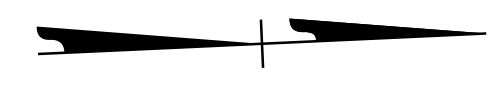
SEAL



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**PHASE I  
 DETAIL DRAWING**



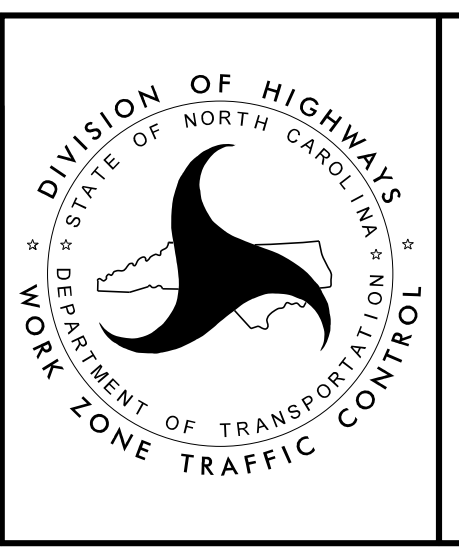
APPROVED: *Kevin Bisby*  
 DATE: 10/1/2021

SEAL

DocuSigned by:  
Kevin Bisby  
BDD802529912474

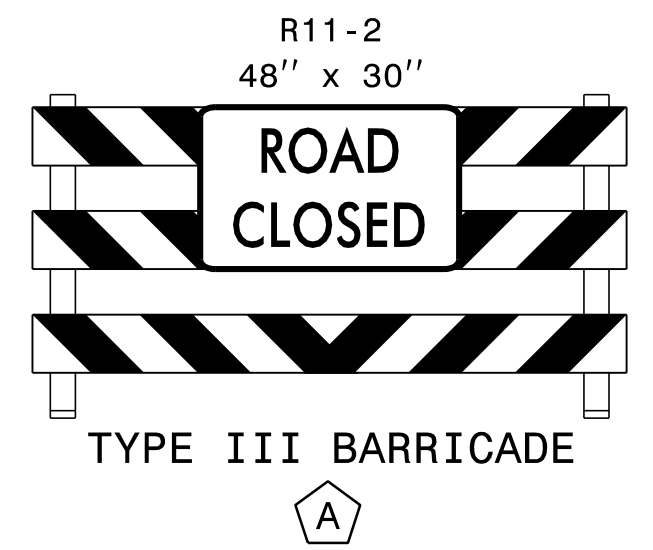
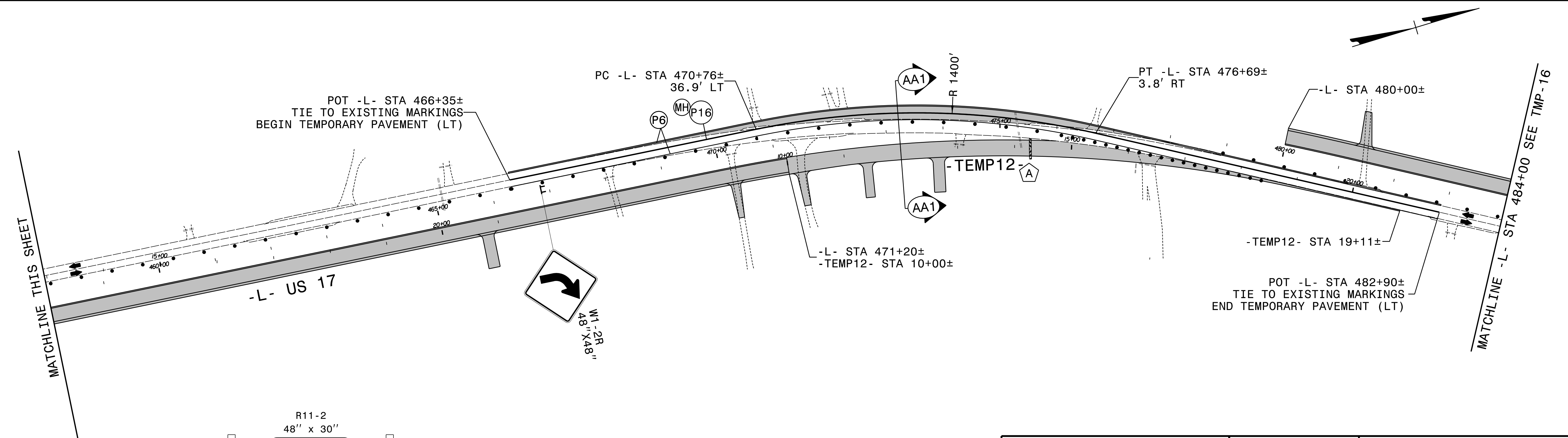
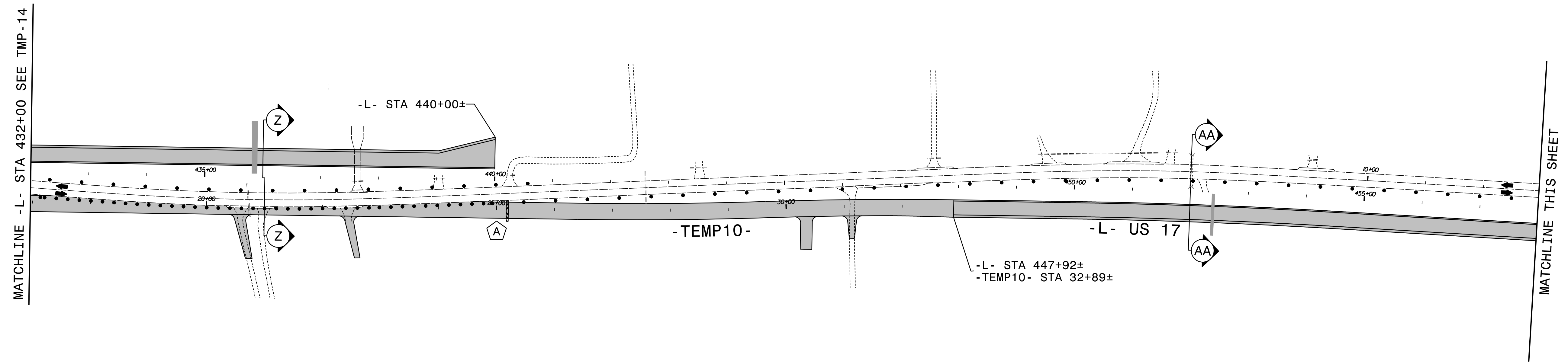
NORTH CAROLINA  
PROFESSIONAL  
SEAL  
21047  
ENGINEER  
KEVIN W. BISBY

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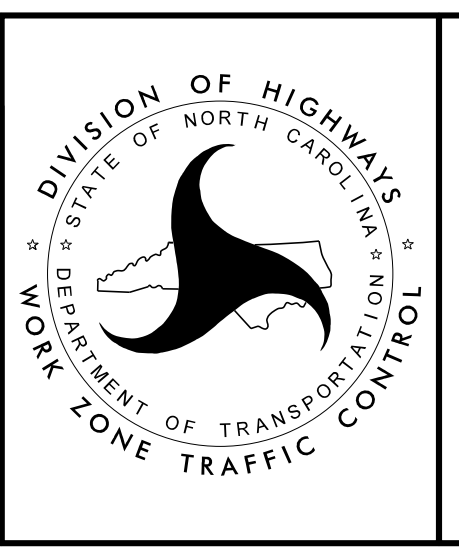
PHASE I  
 DETAIL DRAWING





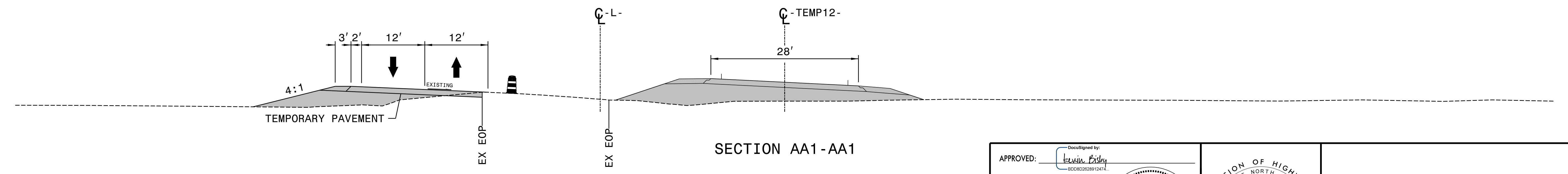
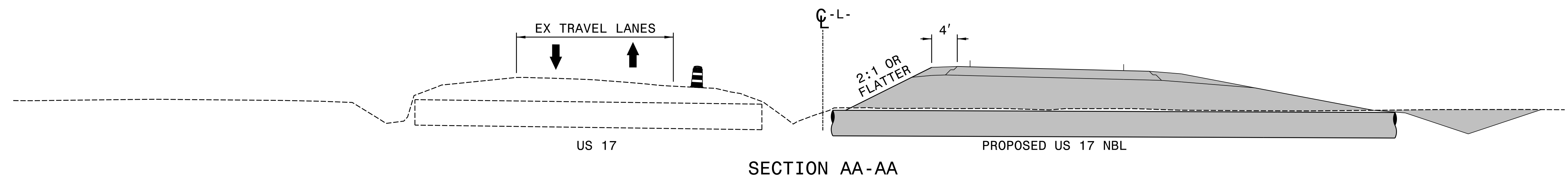
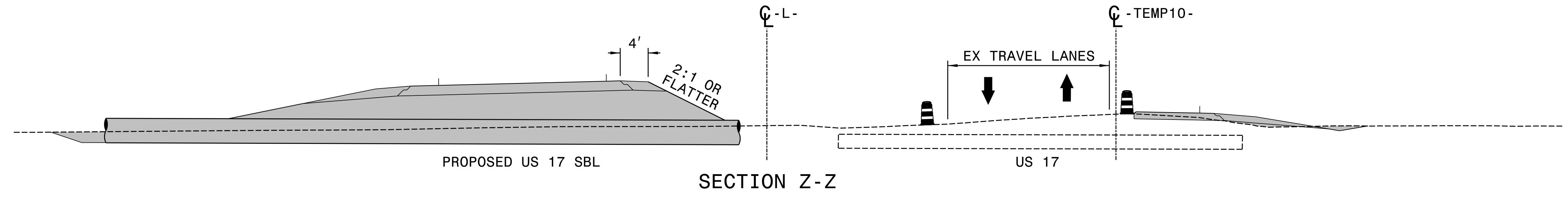
SEE TMP-15A FOR SECTION VIEWS.

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 DATE: 10/1/2021  
 SEAL  
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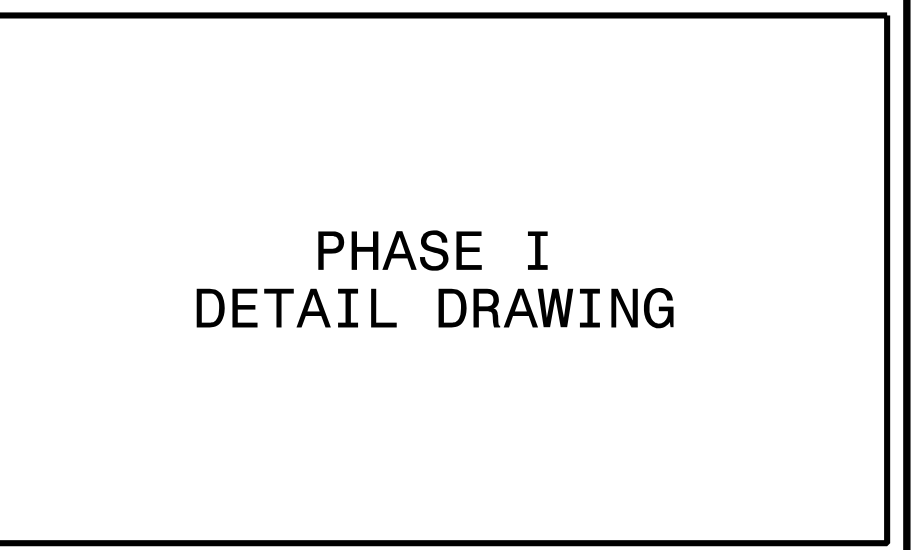
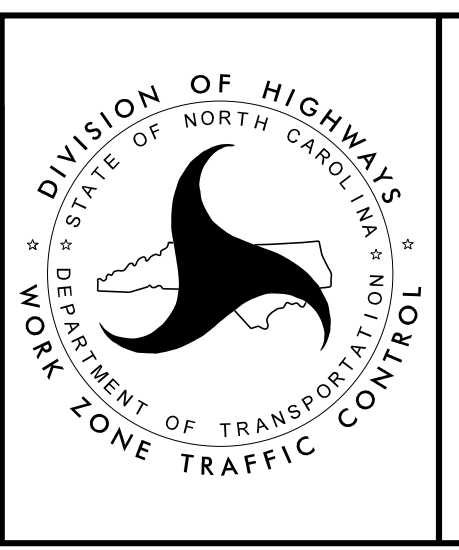
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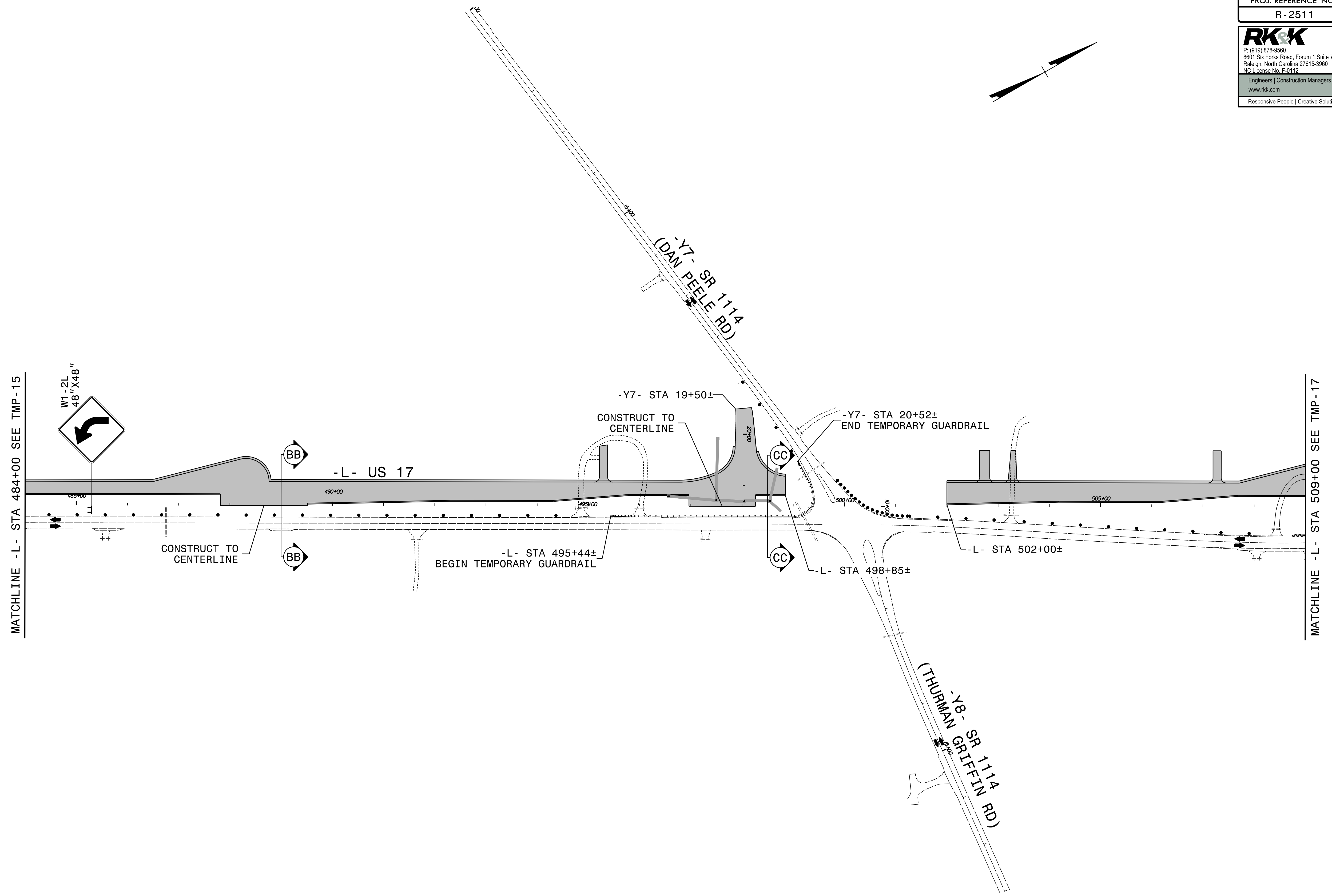
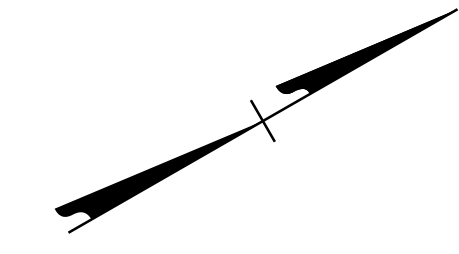


APPROVED: *Kevin Bisby*  
 DATE: 10/1/2021

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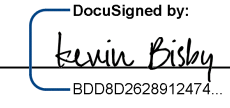
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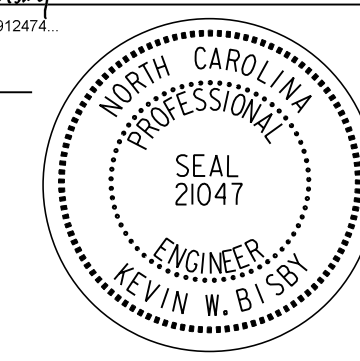


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 KCS/BJL

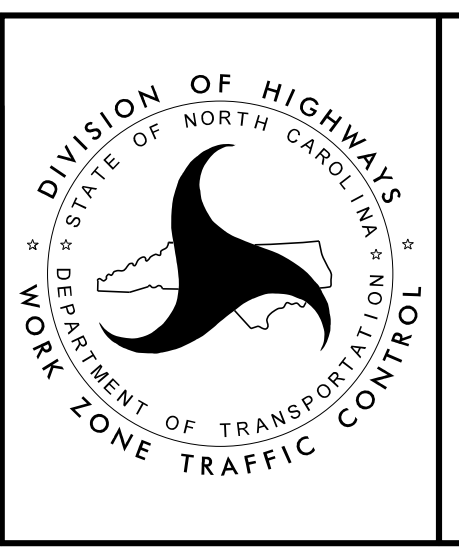
SEE TMP-16A FOR SECTION VIEWS.

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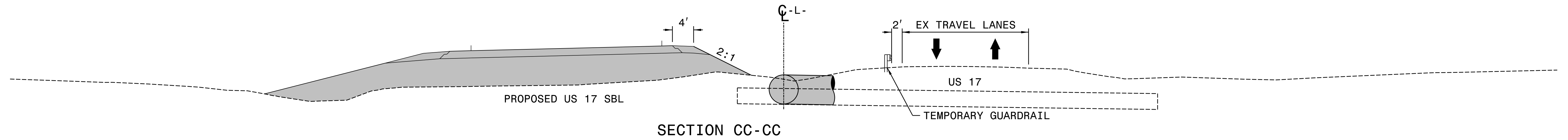
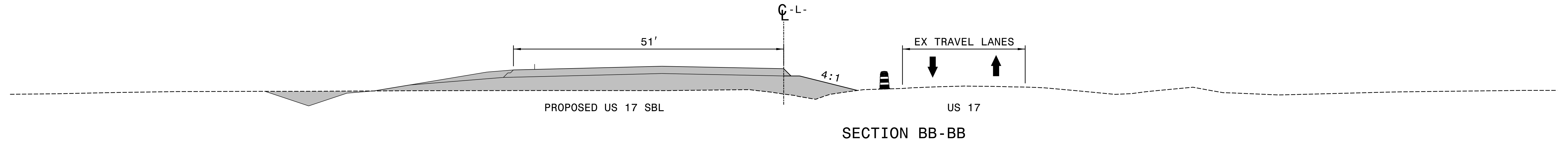


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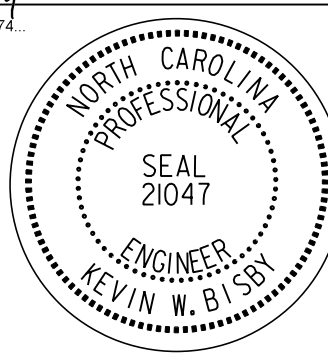




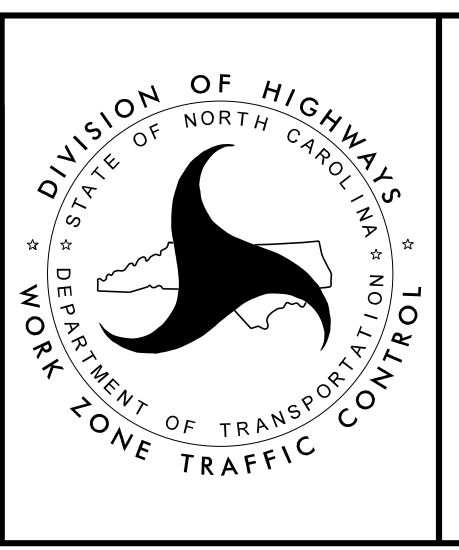
10/1/2021  
 R2511\_TMP\_PSH16A.dgn  
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APPROVED:   
 DATE: 10/1/2021

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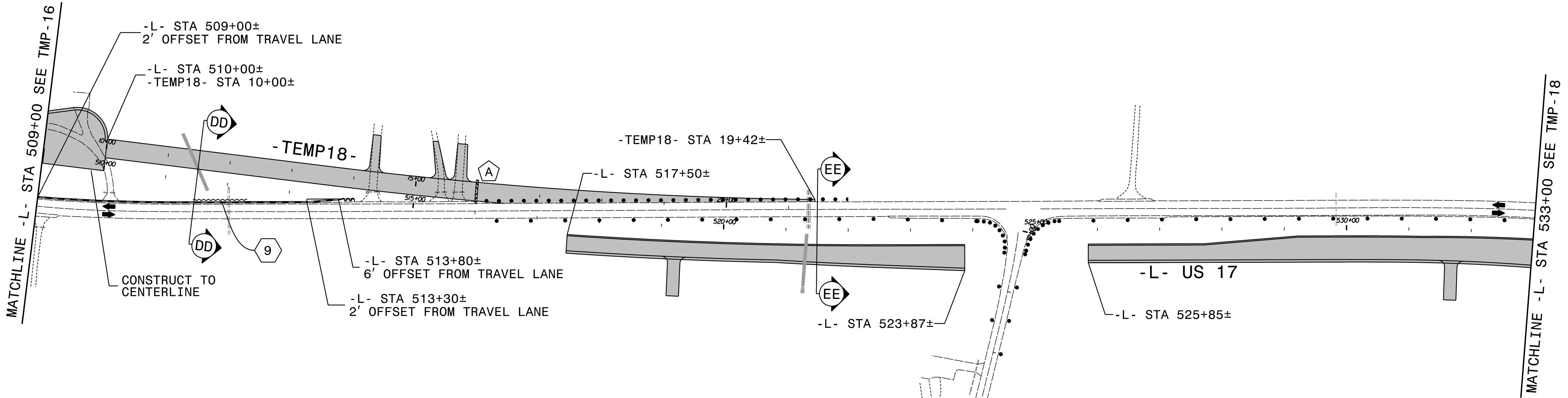
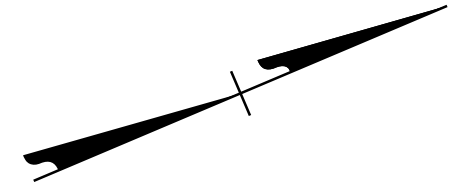
**DOCUMENT NOT CONSIDERED FINAL  
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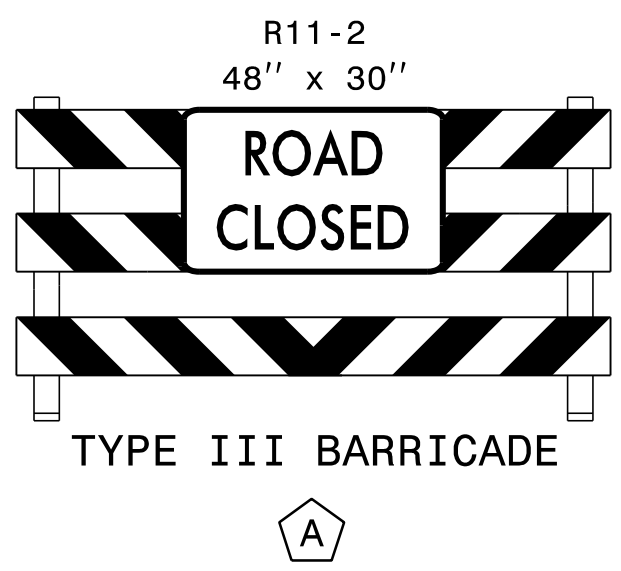
**PHASE I  
 DETAIL DRAWING**

PROJ. REFERENCE NO.	SHEET NO.
R-2511	TMP-17

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9 SEE TMP-2A.3 FOR TEMPORARY SHORING DATA

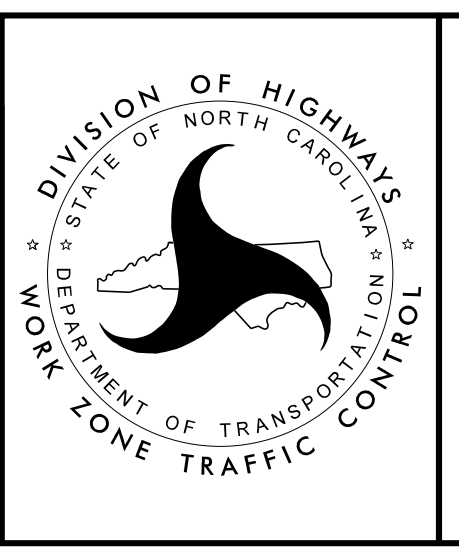


SEE TMP-17A FOR SECTION VIEWS.

APPROVED: *Kevin Blisby*  
 DATE: 1/12/2022

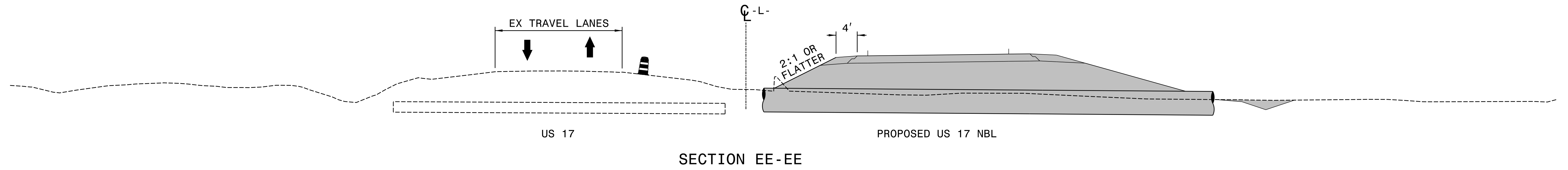
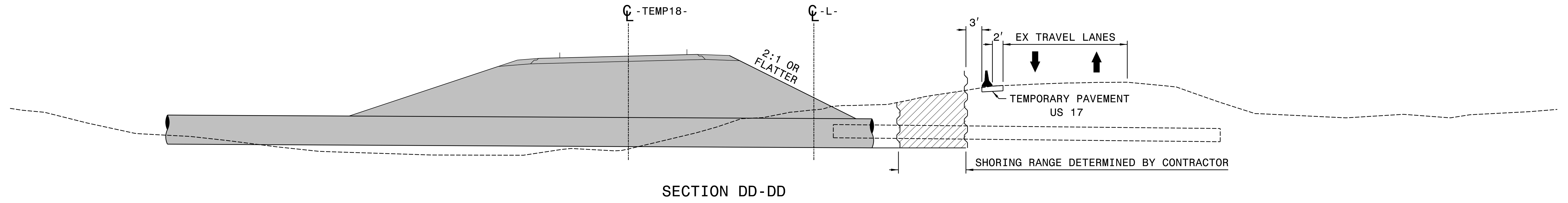
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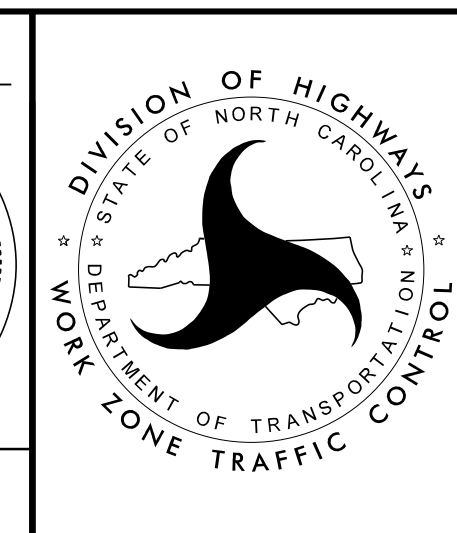


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ksf/bbl

APPROVED: Kevin Bisby  
 DATE: 10/1/2021

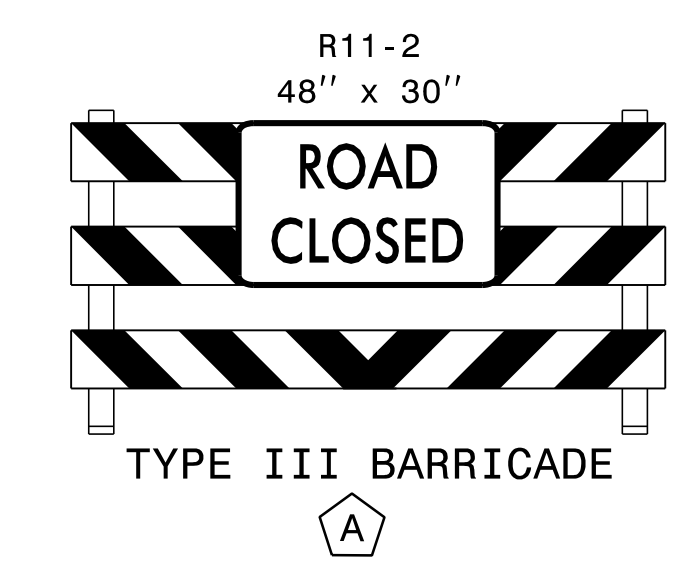
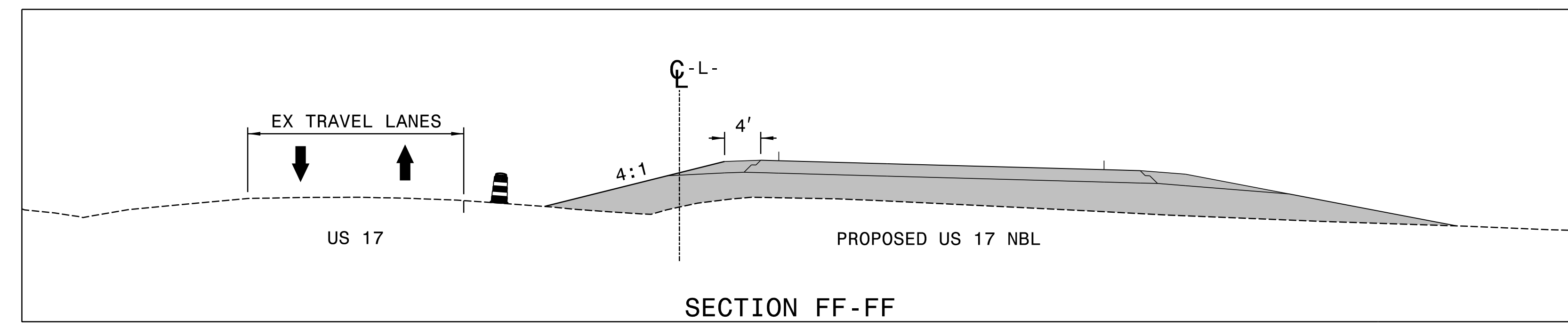
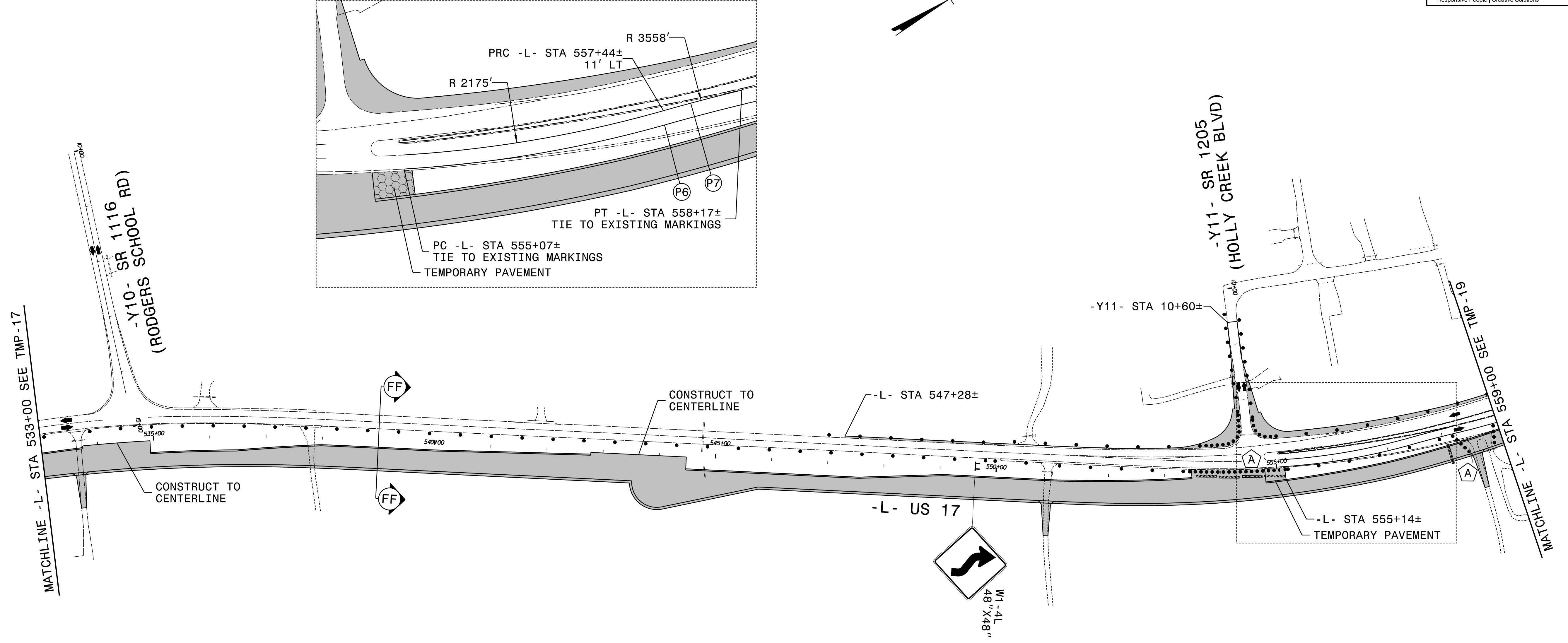
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UNLESS ALL SIGNATURES COMPLETED

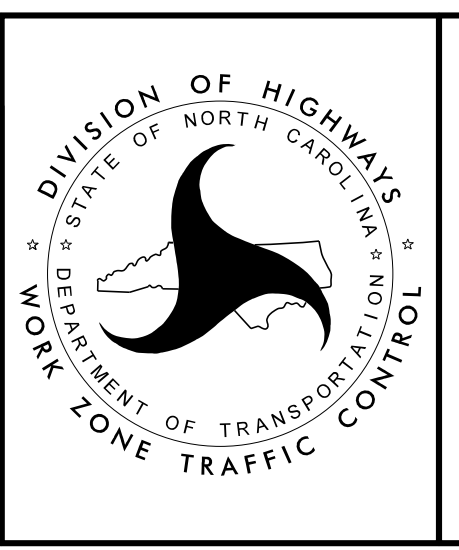


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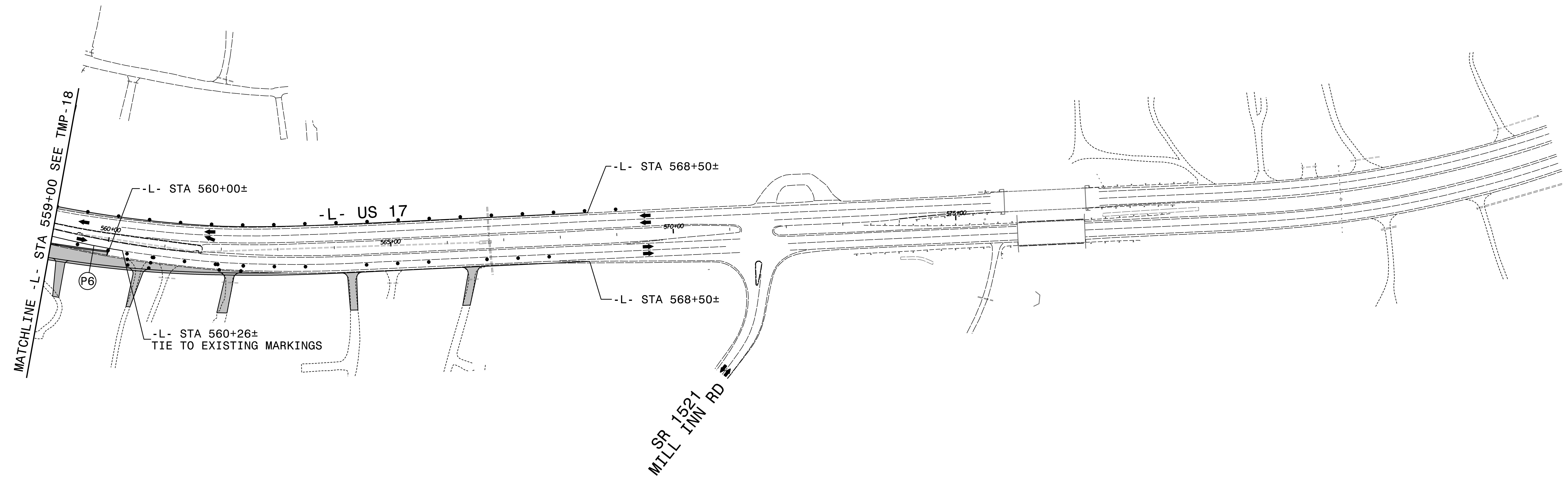


DIVISION OF HIGHWAYS  
 STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 TRAFFIC CONTROL  
 PHASE I  
 DETAIL DRAWING


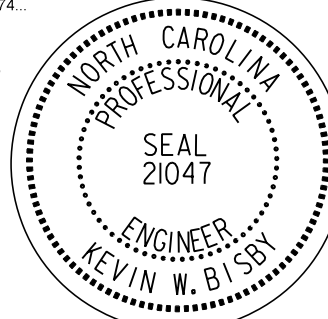
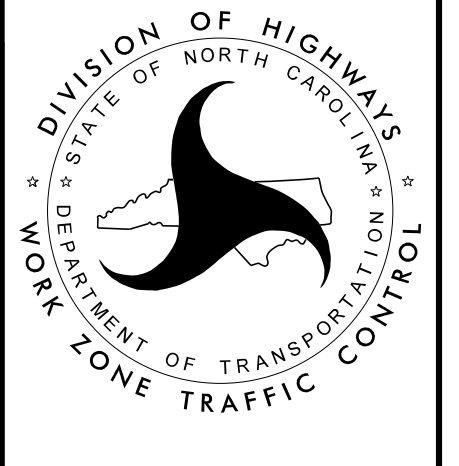
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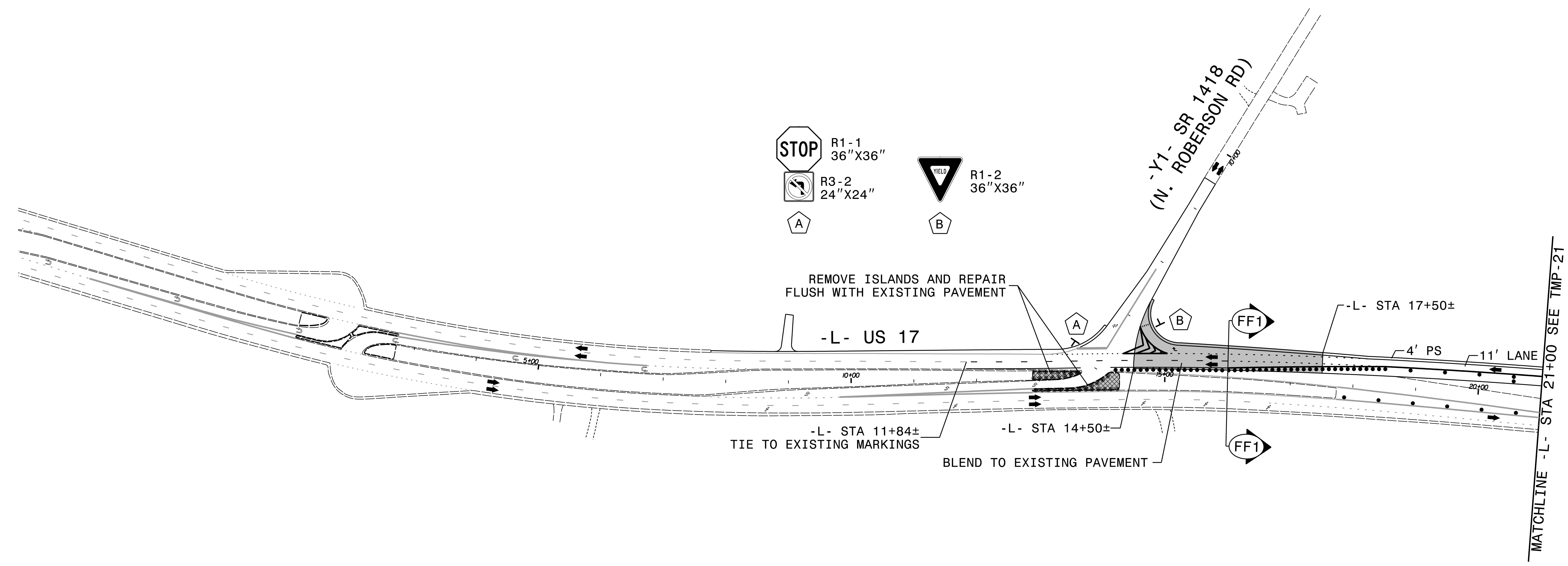
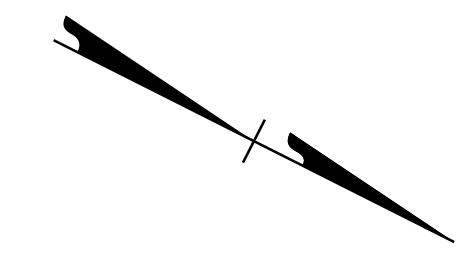
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R-2511	TMP-19

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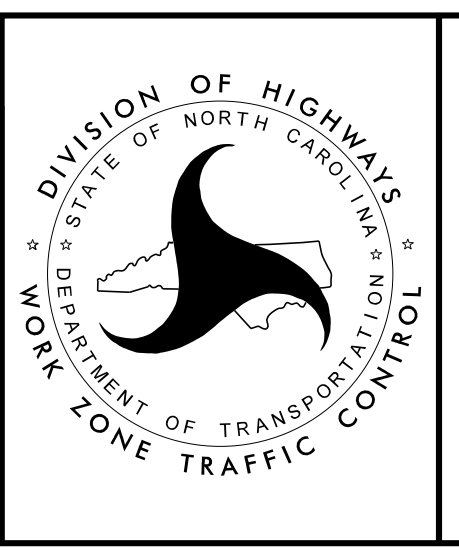
SEE TMP-20A FOR SECTION VIEW.  
 SEE TMP-20B FOR PAVEMENT MARKINGS.

APPROVED: *Kevin Bisby*  
 DATE: 10/1/2021

SEAL

DocuSigned by:  
 Kevin Bisby  
 BDC08028298912474

SEAL 21047  
 ENGINEER  
 KEVIN W. BISBY



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 NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
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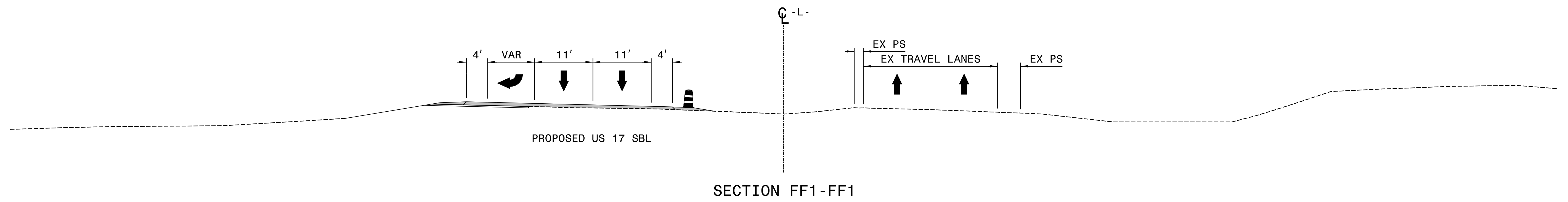
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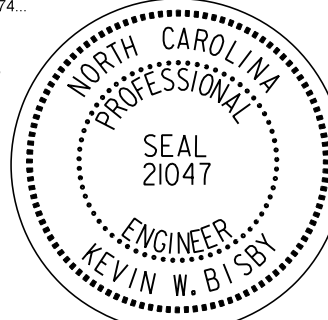



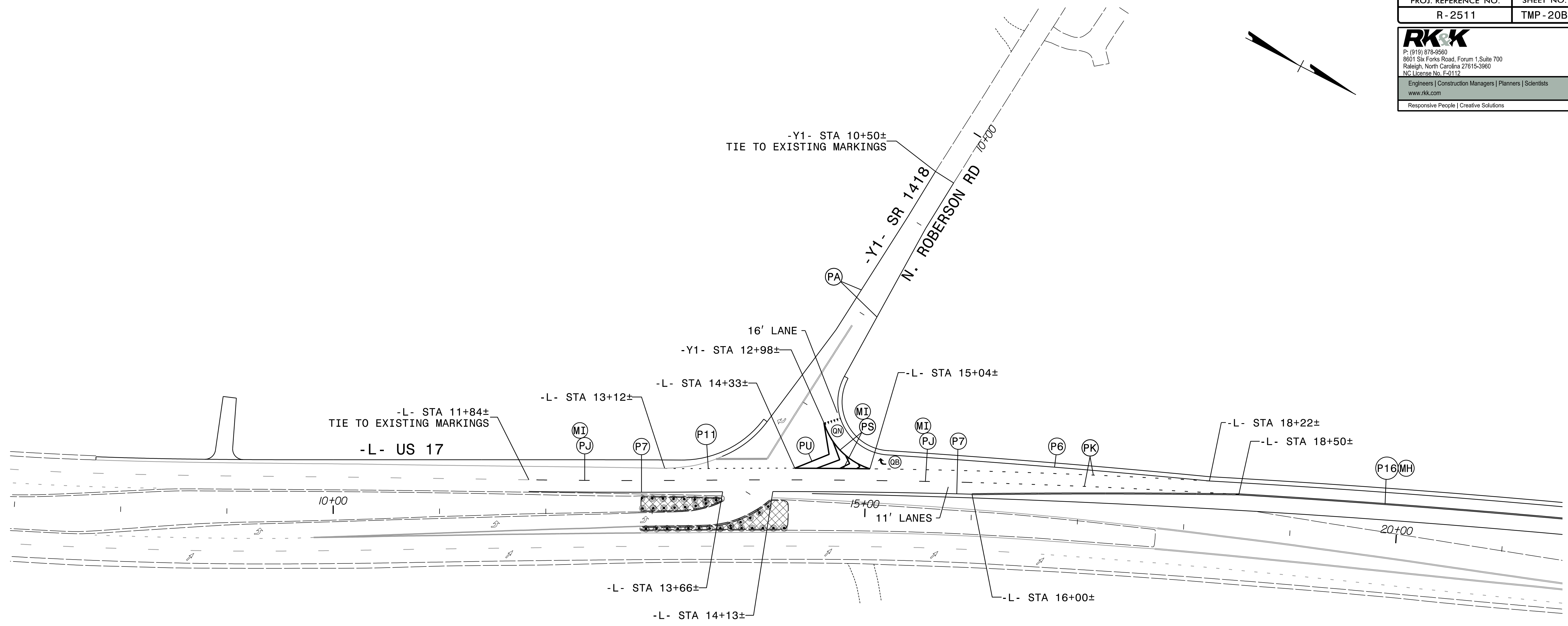
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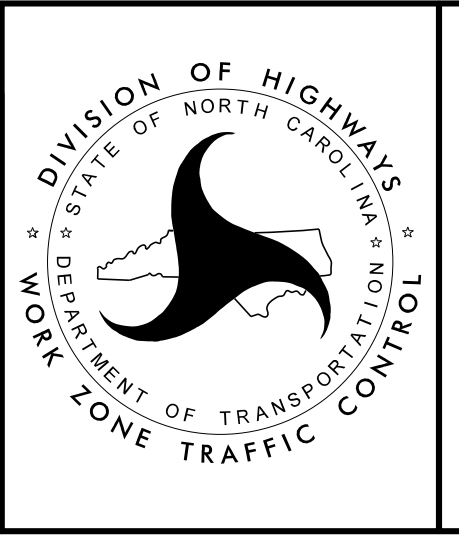
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 DATE: 10/1/2021

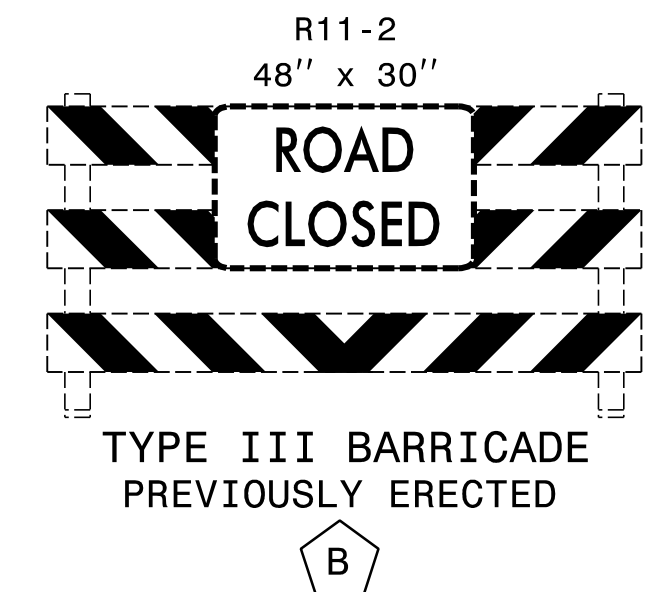
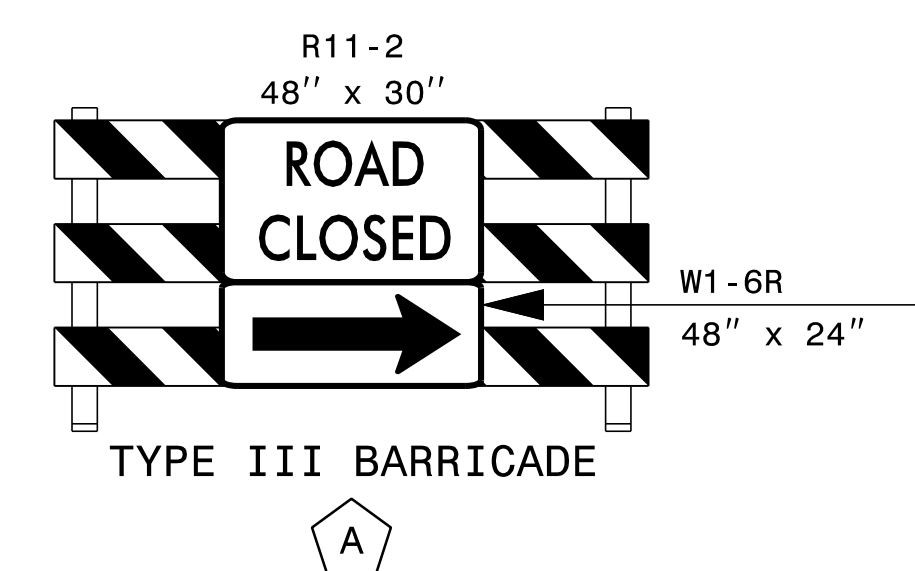
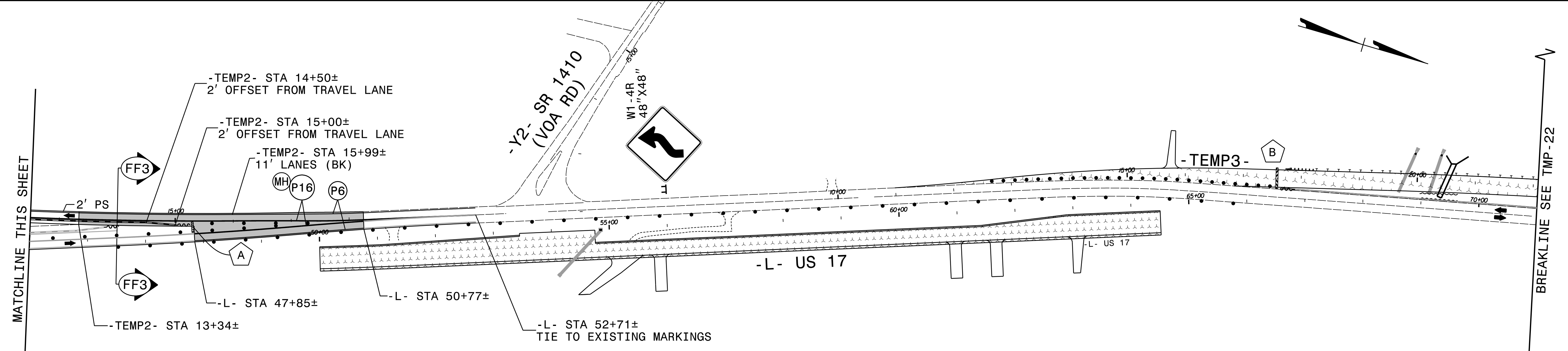
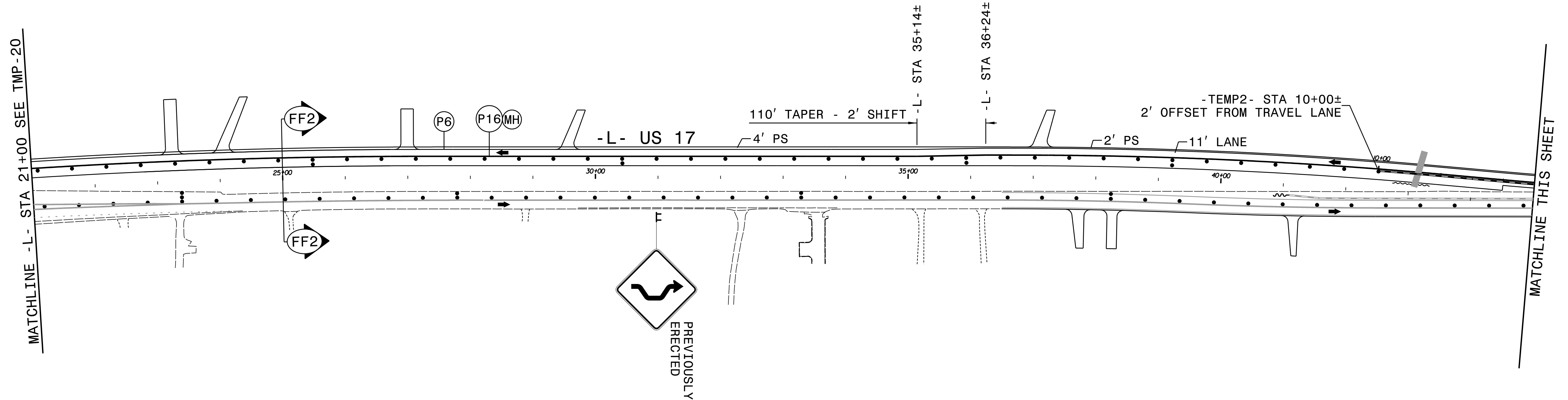
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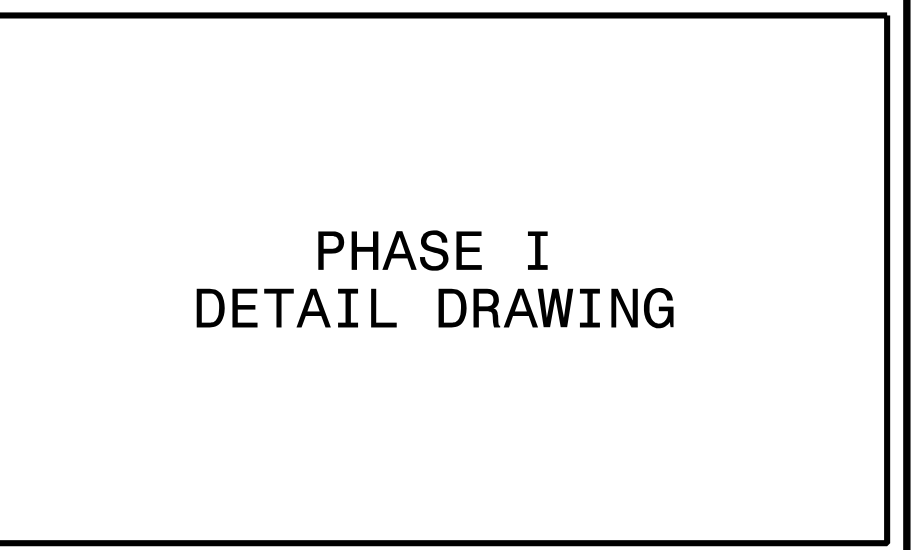
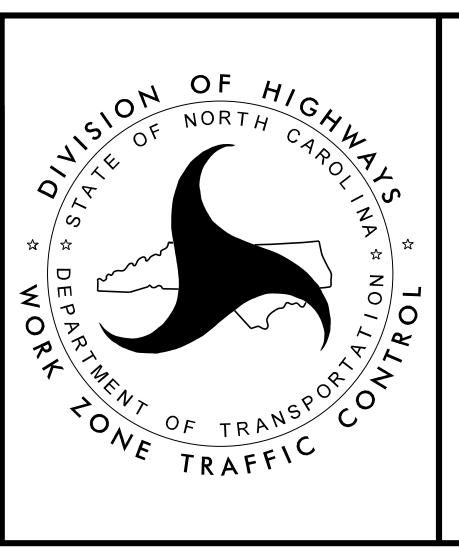


**PHASE I  
DETAIL DRAWING**



SEE TMP-21A FOR SECTION VIEWS.

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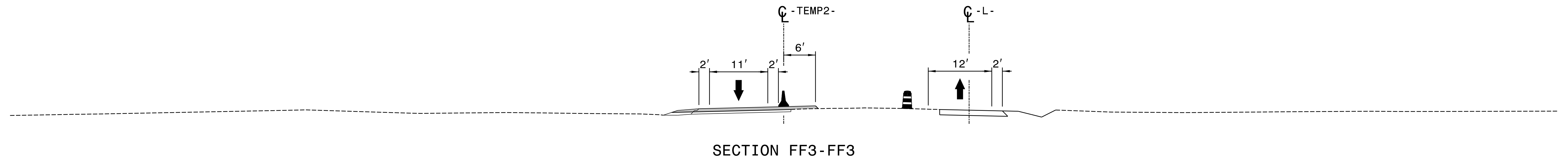
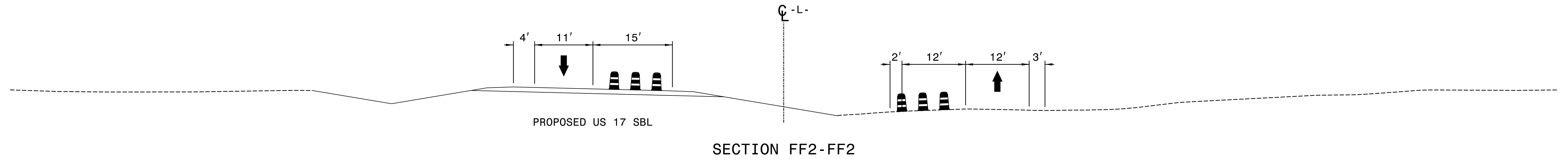


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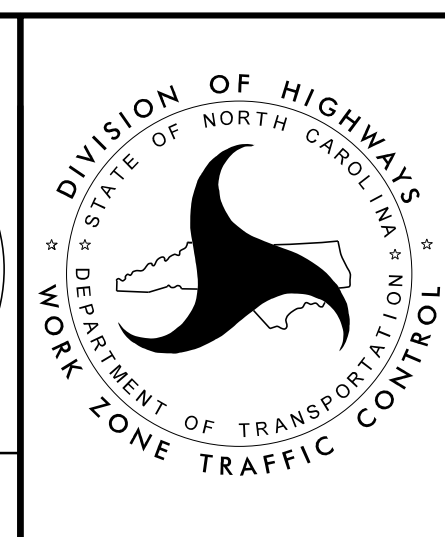


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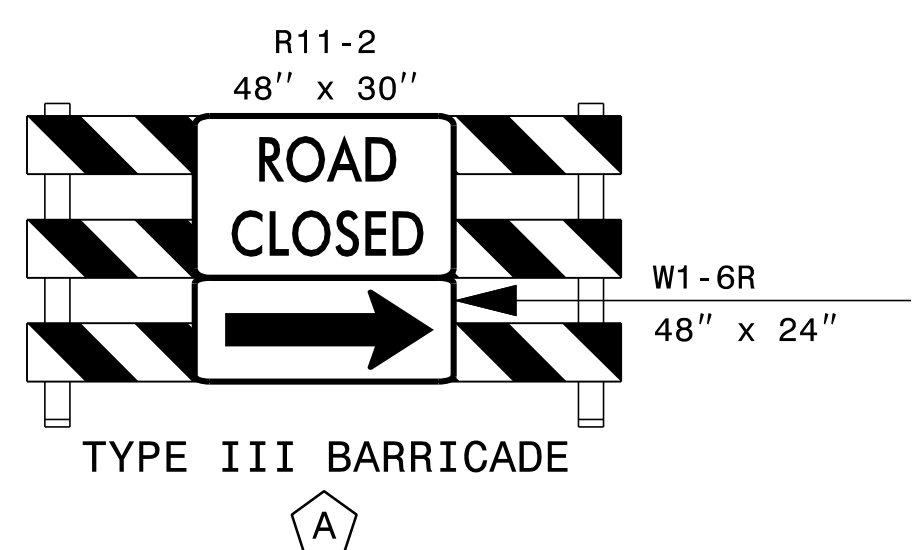
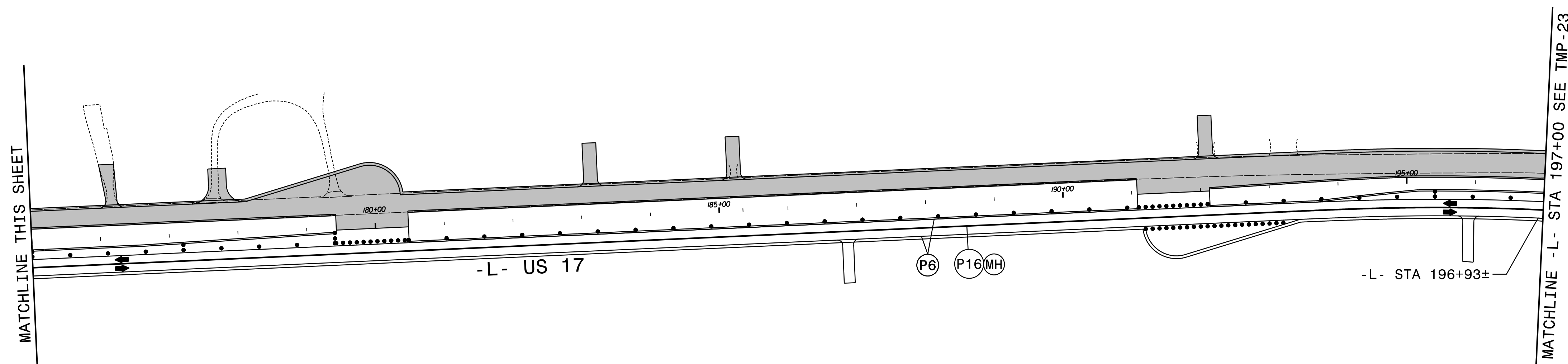
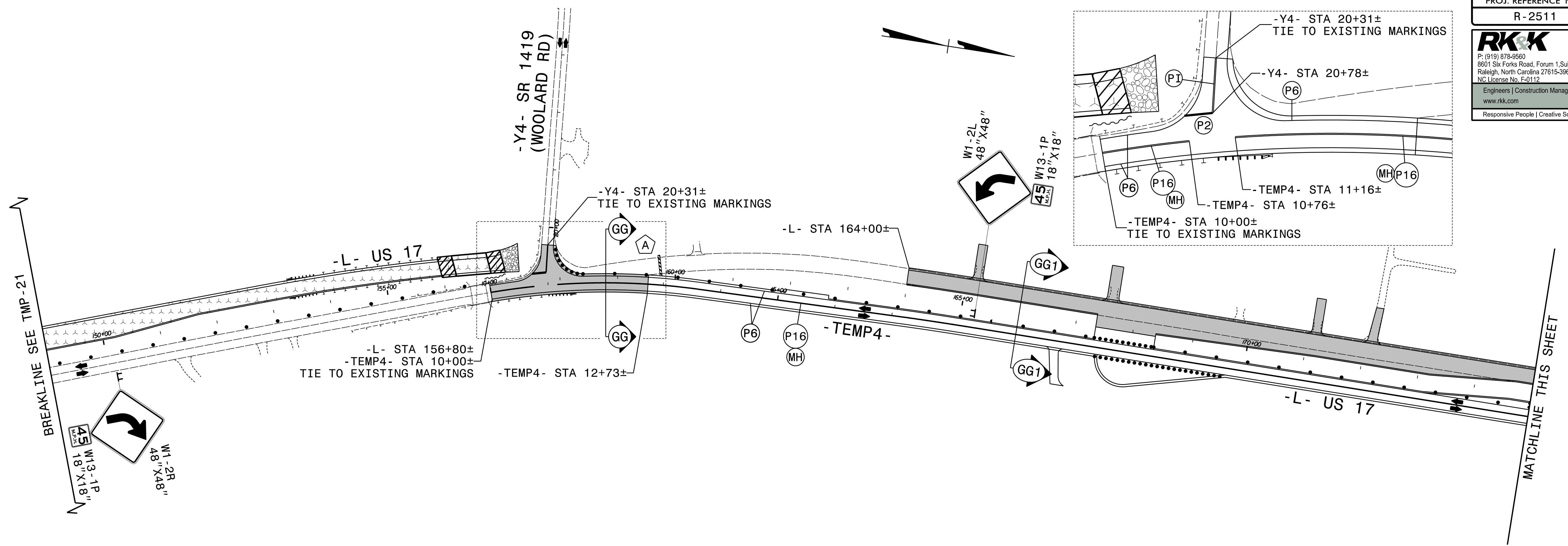
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PROFESSIONAL ENGINEER  
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 SEAL 21047  
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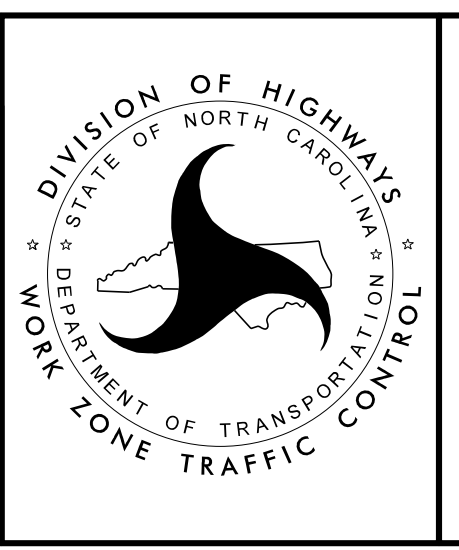


SEE TMP-22A FOR SECTION VIEWS.  
 LANE WIDTHS 12' ON US 17.

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 DATE: 10/1/2021

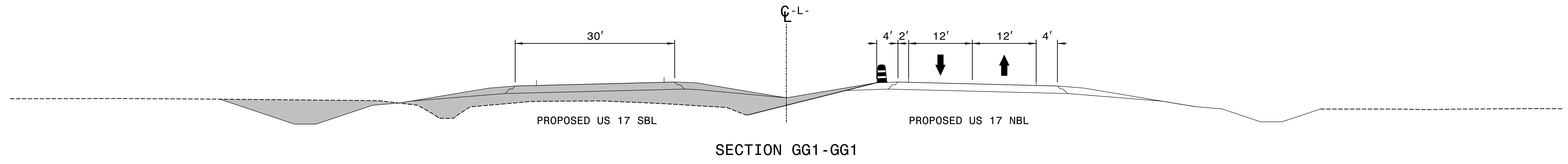
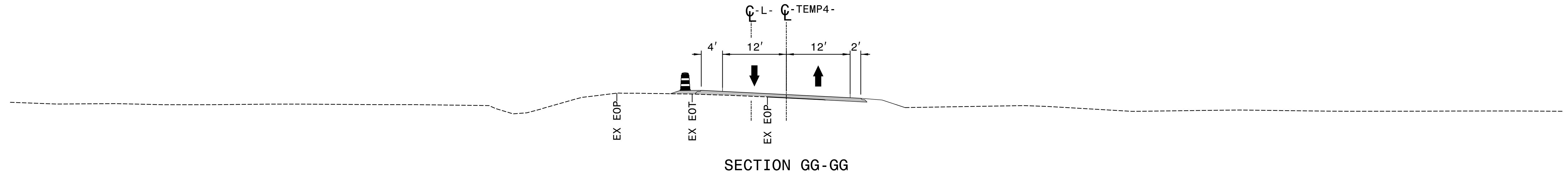
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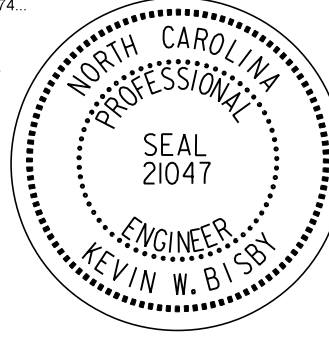
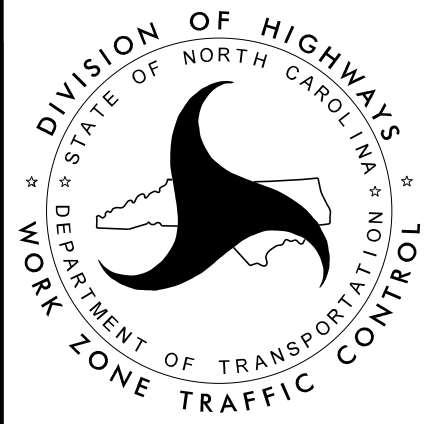


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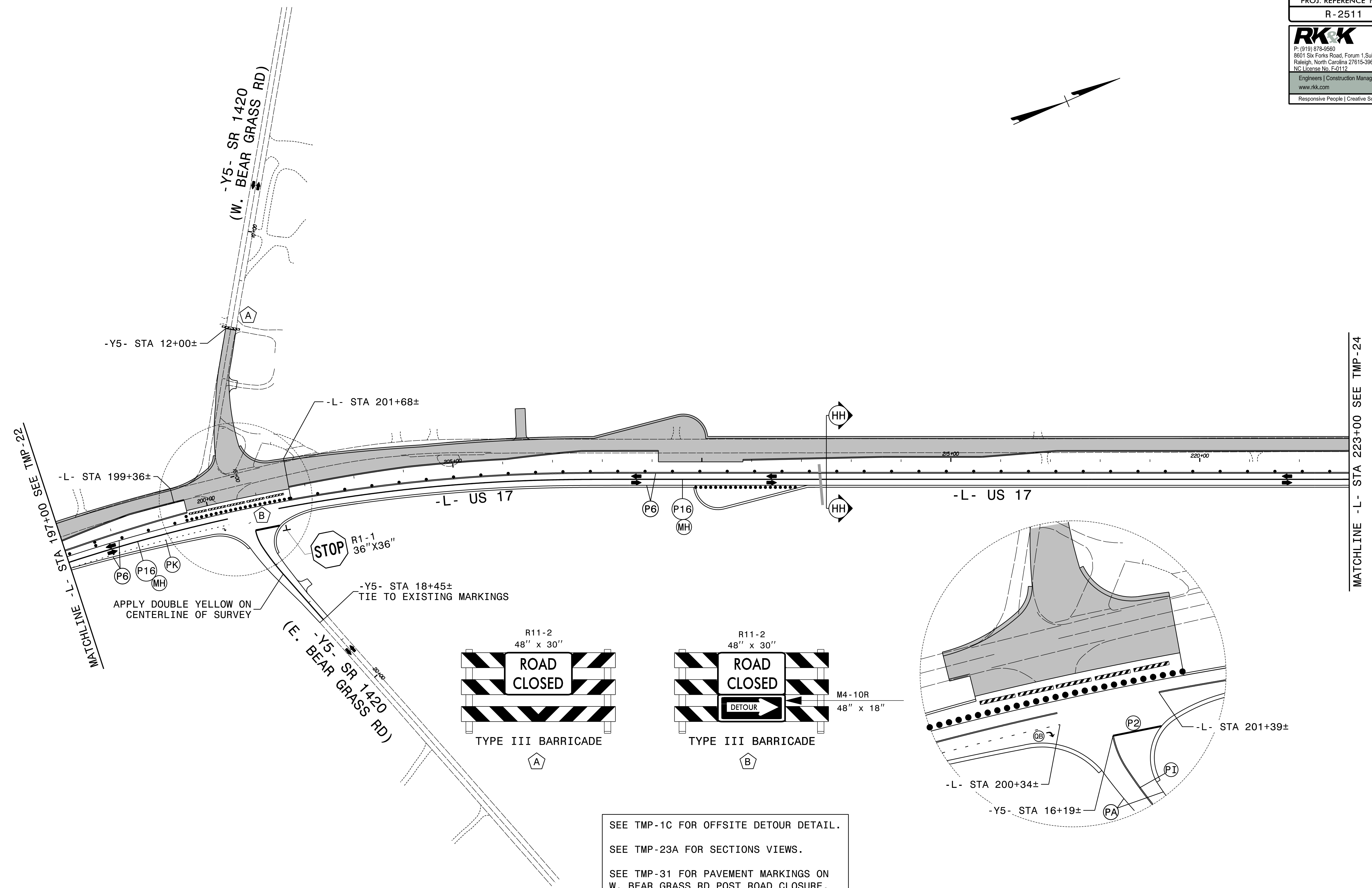
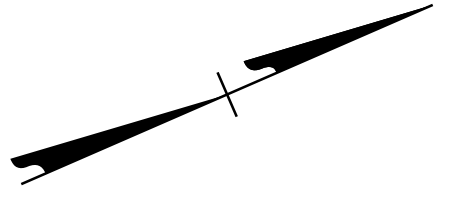
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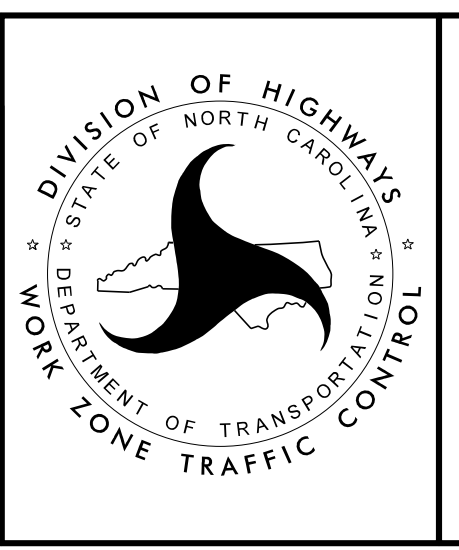
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SEE TMP-1C FOR OFFSITE DETOUR DETAIL.  
 SEE TMP-23A FOR SECTIONS VIEWS.  
 SEE TMP-31 FOR PAVEMENT MARKINGS ON  
 W. BEAR GRASS RD POST ROAD CLOSURE.  
 LANE WIDTHS 12' ON US 17.

APPROVED: *Kevin Bisby*  
 DATE: 10/1/2021  
 SEAL  
 N.C. PROFESSIONAL ENGINEER  
 KEVIN W. BISBY  
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