



## ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

<u>STD. NO.</u>	<u>TITLE</u>
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE 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
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
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.

- WORK AREA
- REMOVAL
- USER DEFINED (IF NEEDED)
- USER DEFINED (IF NEEDED)

### TEMPORARY PAVEMENT MARKINGS

PA - 4" WHITE EDGELINE (PAINT)

### TRAFFIC CONTROL DEVICES

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

### TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

### SIGNALS

- EXISTING    PROPOSED    TEMPORARY

### PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES


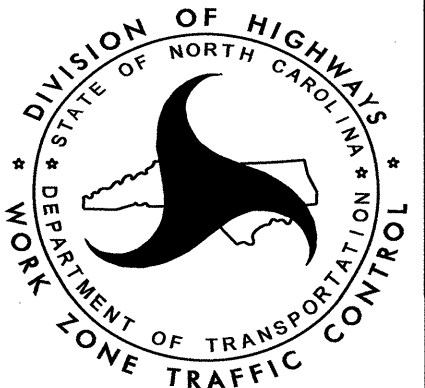
### PAVEMENT MARKERS

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

### PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

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<b>ROADWAY STANDARD DRAWINGS &amp; LEGEND</b>			

## 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.

### LANE AND SHOULDER CLOSURE REQUIREMENTS

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

### PAVEMENT EDGE DROP OFF REQUIREMENTS

- F) 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.

### TRAFFIC PATTERN ALTERATIONS

- G) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

### SIGNING

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

### TRAFFIC CONTROL DEVICES

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

### PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
SR 1580	PAINT	N/A

- M) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.
- N) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

## TRANSPORTATION OPERATIONS

PROJ. REFERENCE NO.	SHEET NO.
B-4325	TMP-1B

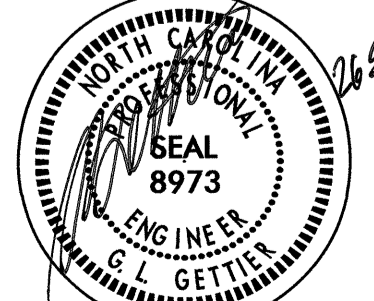
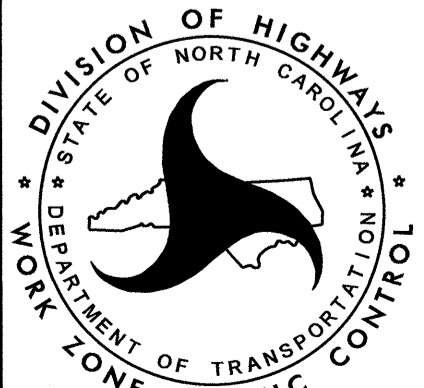
### CONSTRUCTION

CONSTRUCT REALIGNMENT OF SR 1580 (KUENZEL-ELLER DR.) INCLUDING NEW BRIDGE AND ROADWAY APPROACHES AS SHOWN IN THE CONSTRUCTION PLANS. OBLITERATE EXISTING BRIDGE AND WING WALLS. REMOVE EXISTING PAVEMENT AS SHOWN IN THE CONSTRUCTION PLANS.

### TMP DESIGN PARAMETERS

UTILIZE FLAGGERS, TEMPORARY SIGNAGE, TRAFFIC CONTROL DEVICES, AND TEMPORARY GUARDRAIL TO CONSTRUCT SR 1580 (KUENZEL-ELLER DR.) REALIGNMENT (SEE SHEET TMP-2 AND TMP-3).

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APPROVED: _____ DATE: _____ 		<h1 style="margin: 0;">TRANSPORTATION OPERATIONS PLAN</h1>
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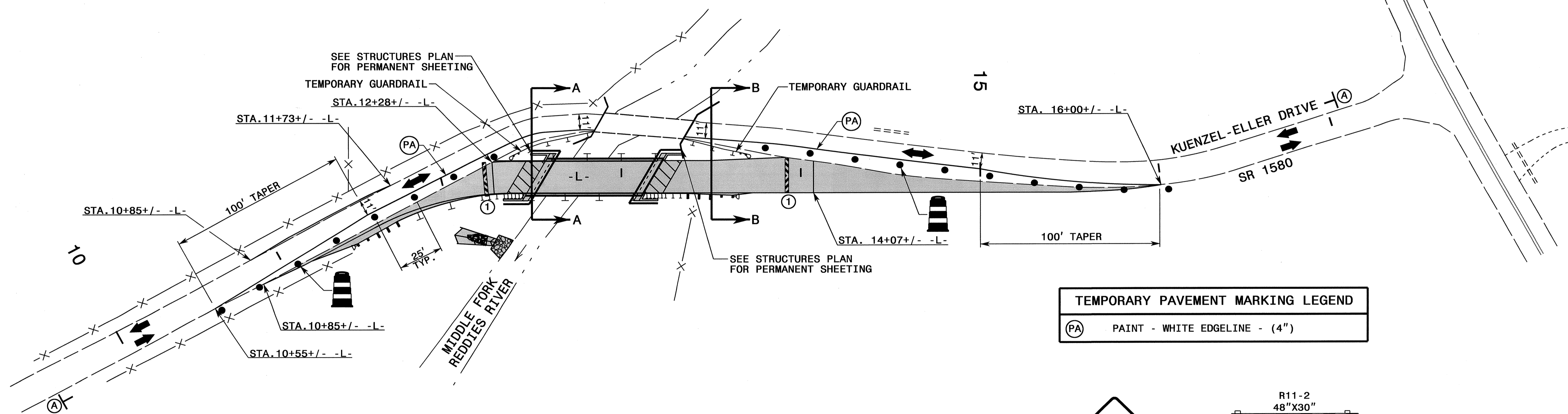
# PHASING

## PHASE I

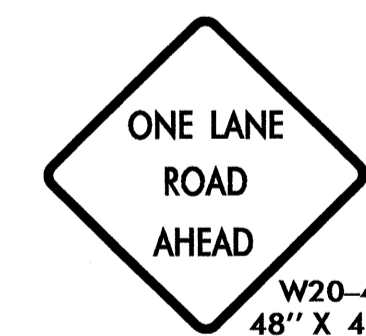
- STEP 1. INSTALL ALL ADVANCE WORK ZONE SIGNS ON SR 1580 (KUENZEL-ELLER DR. / -L-), SEE RSD 1101.01 (SHEET 3 OF 3).
- STEP 2. USING RSD NO. 1101.02 (SHEET 1 OF 15), PLACE TEMPORARY (PAINT) PAVEMENT MARKINGS, TRAFFIC CONTROL DEVICES, TEMPORARY GUARDRAIL, AND SIGNAGE (SEE CONSTRUCTION PLANS AND TMP-2). SHIFT TRAFFIC TO A TEMPORARY ONE-LANE, TWO-WAY PATTERN.
- STEP 3. USING RSD NO. 1101.02 (SHEET 1 OF 15), CONSTRUCT -L- UP TO EDGE AND ELEVATION OF THE EXISTING PAVEMENT AS FOLLOWS (SEE CONSTRUCTION PLANS AND TMP-2):
- STA. 10+85+/- -L- TO STA. 12+28+/- -L-
  - STA. 14+07+/- -L- TO STA. 16+00+/- -L-
- AWAY FROM TRAFFIC, CONSTRUCT -L- LINE, INCLUDING PROPOSED PERMANENT SHEETING, NEW BRIDGE AND APPROACHES, AND GUARDRAIL UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS (SEE CONSTRUCTION PLANS AND TMP-2):
- STA. 12+28+/- -L- TO STA. 14+07+/- -L-

## PHASE II

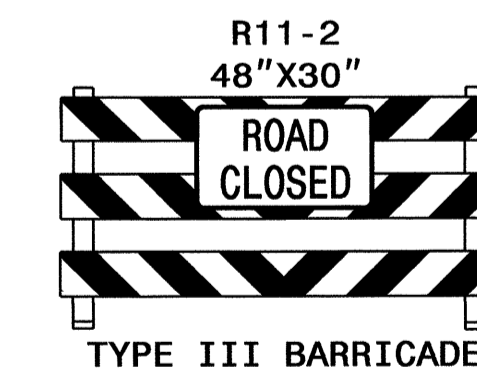
- STEP 1. USING RSD NO. 1101.02 (SHEET 1 OF 15), PAVE/WEDGE -L- UP TO, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE, INSTALL REMAINDER OF PROPOSED GUARDRAIL, AND SHIFT TRAFFIC TO FINAL TRAFFIC PATTERN AS FOLLOWS (SEE CONSTRUCTION PLANS AND TMP-3):
- STA. 10+85+/- -L- TO STA. 12+28+/- -L-
  - STA. 14+07+/- -L- TO STA. 16+00+/- -L-
- STEP 2. USING RSD NO. 1101.02 (SHEET 1 OF 15), OBLITERATE EXISTING BRIDGE, REMOVE PAVEMENT, AND CONSTRUCT DRIVEWAY (SEE CONSTRUCTION PLANS AND TMP-3):
- STEP 3. USING RSD NO. 1101.02 (SHEET 1 OF 15), PLACE FINAL LAYER OF SURFACE COURSE AND OPEN TO FINAL TRAFFIC AS FOLLOWS (SEE CONSTRUCTION PLANS AND TMP-3):
- STA. 10+85+/- -L- TO STA. 16+00+/- -L-
- REMOVE ALL TRAFFIC CONTROL DEVICES AND ADVANCE WARNING SIGNS FROM SR 1580 (-L-).



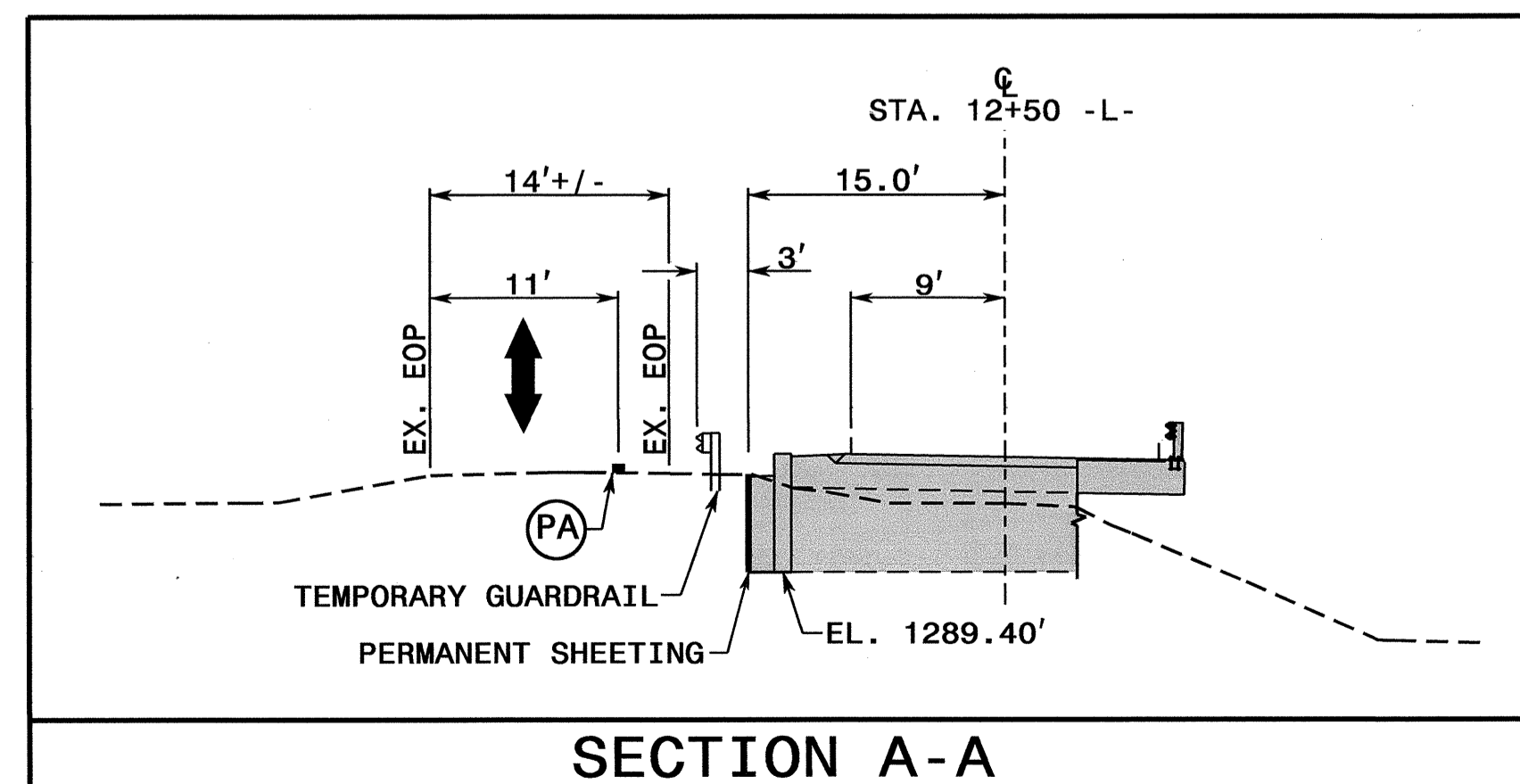
TEMPORARY PAVEMENT MARKING LEGEND	
(PA)	PAINT - WHITE EDGELINE - (4")



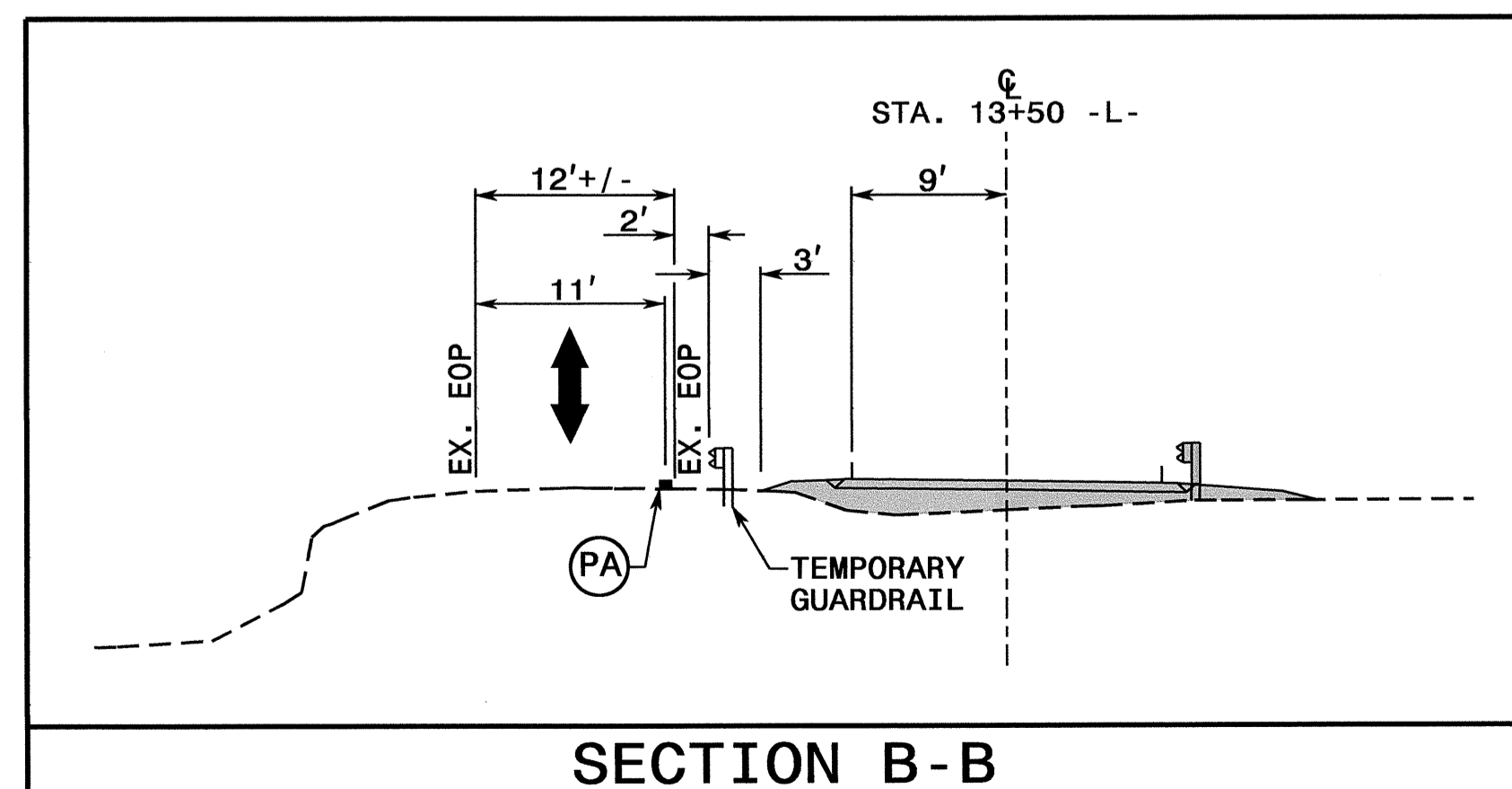
(A)  
 STA. 9+55+/- -L-  
 STA. 17+00+/- -L-



(1)

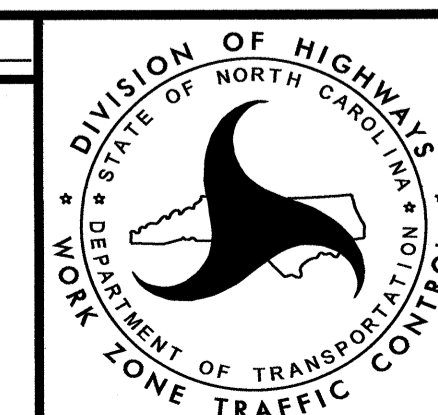
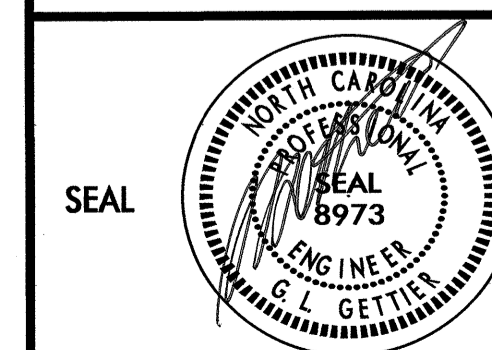


SECTION A-A

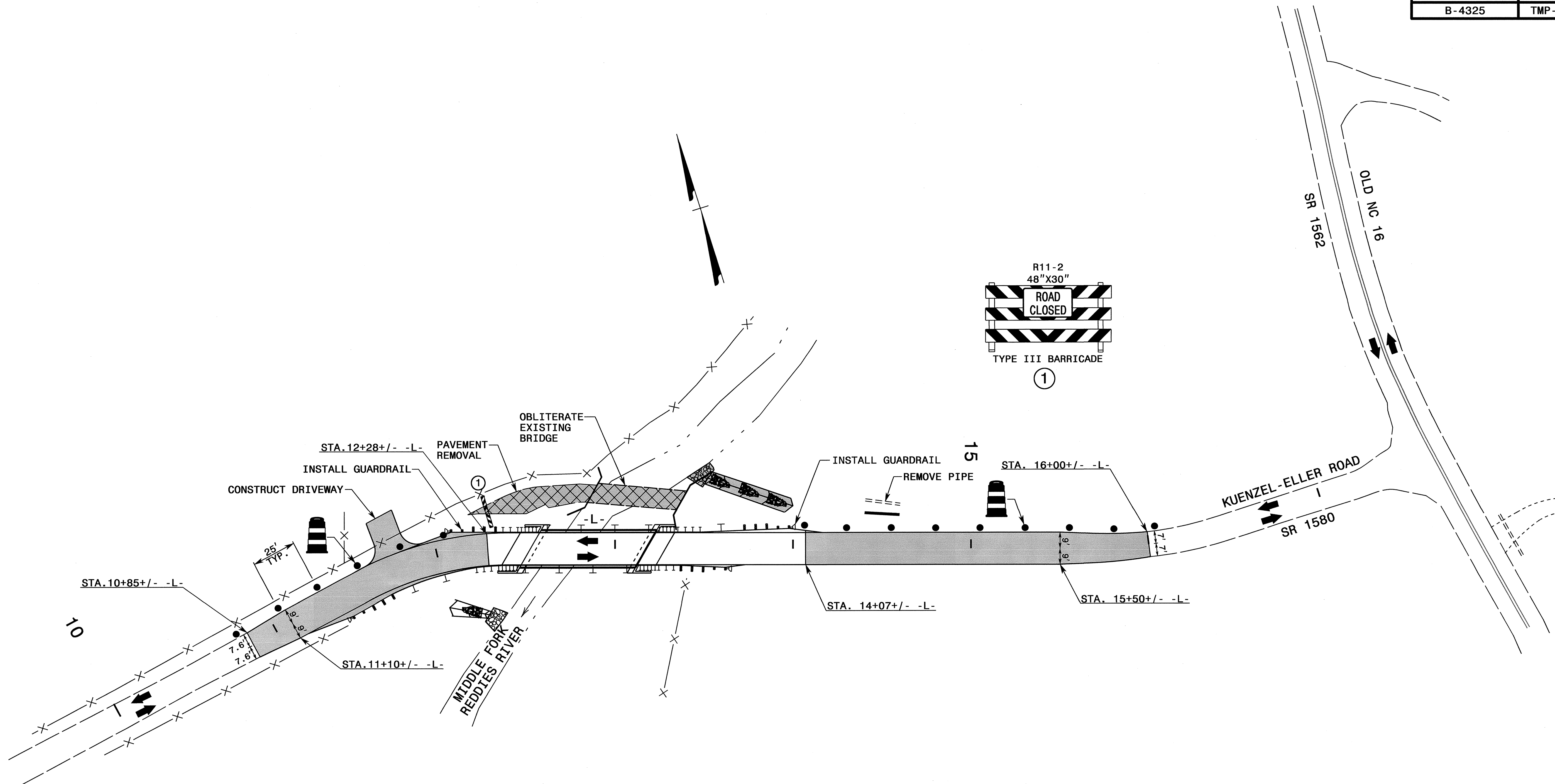


SECTION B-B

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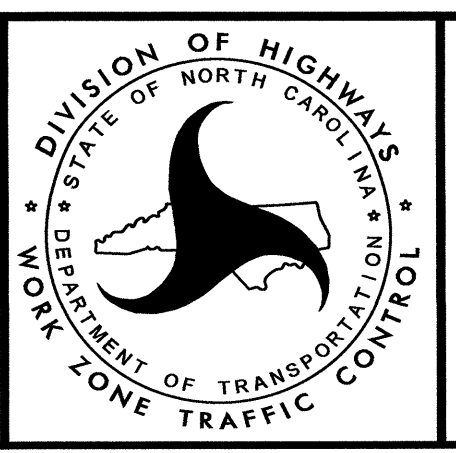


PHASING  
 AND  
 PHASE I DETAILS



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	10/26/12



PHASE II DETAILS