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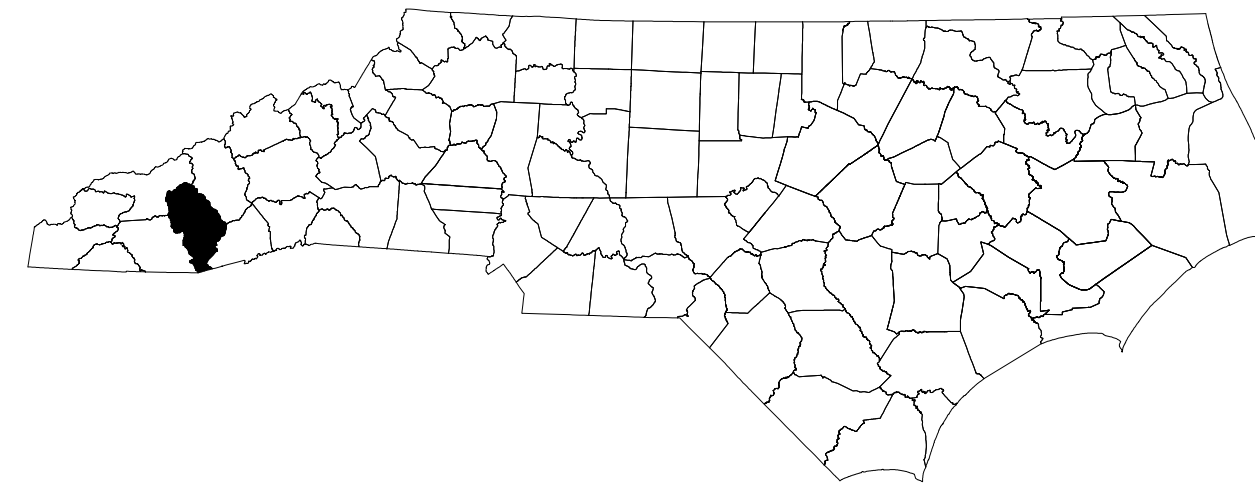
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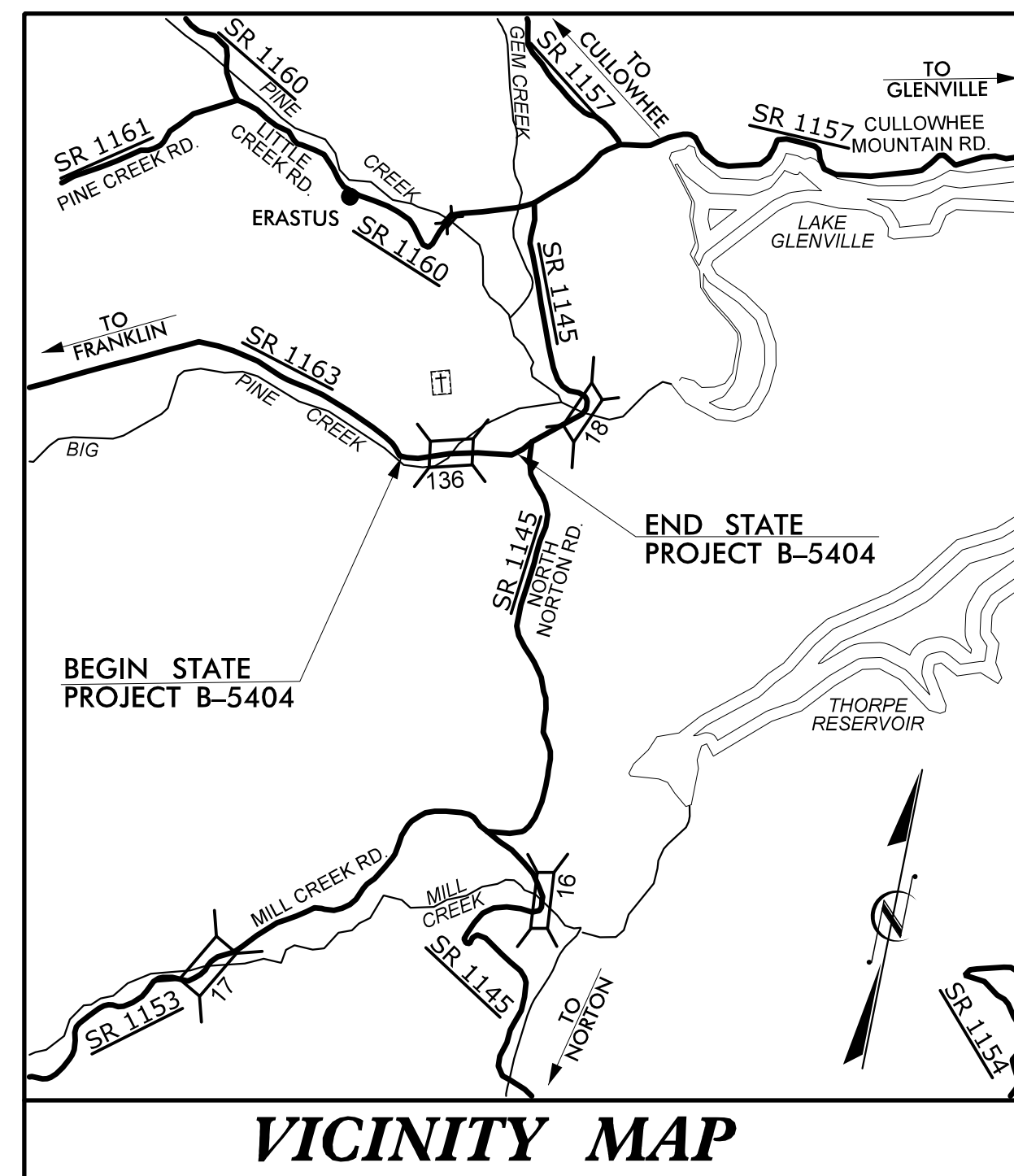
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**JACKSON COUNTY**



NAD 83/NSRS 2007

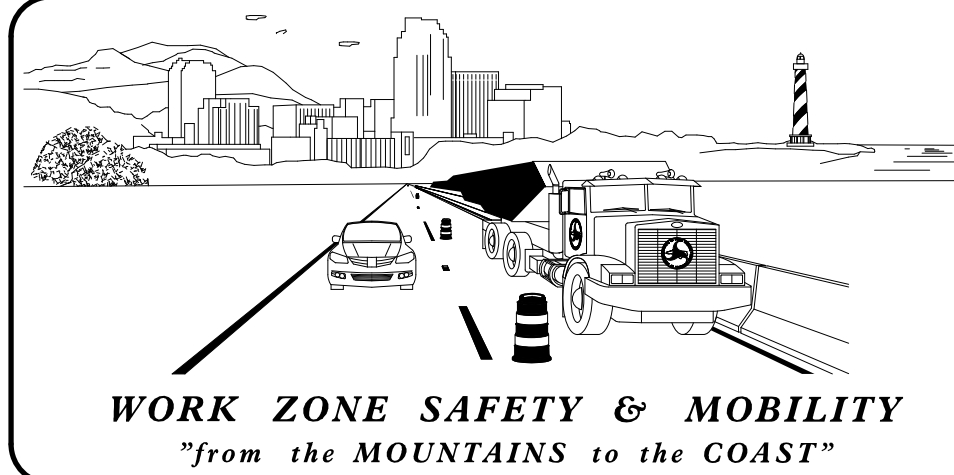


**VICINITY MAP**

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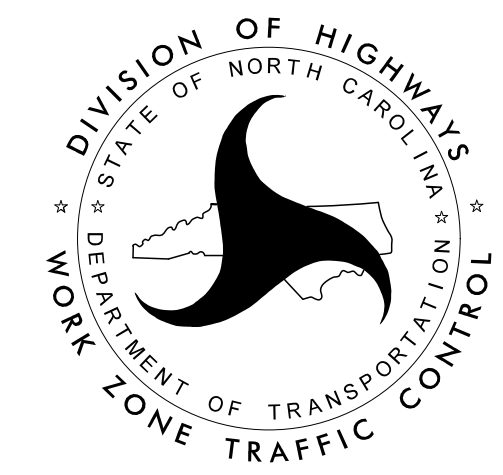
SHEET NO.  
TMP-1

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APPROVED: Claudette M. K. Roque  
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9/14/2015  
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User: croque

**TIP PROJECT: B-5404**

# 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:

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.06	WARNING SIGNS FOR BLASTING ZONES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

# 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
- WEDGING
- UNDERCUT

## 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

## TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

## PAVEMENT MARKERS

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

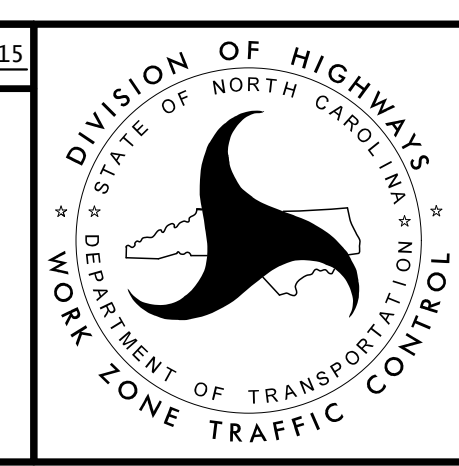
## PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

## TEMPORARY PAVEMENT MARKING

PA	WHITE EDGELINE	PAINT (4")	4320 LF
PI	DOUBLE YELLOW CENTERLINE	PAINT (4")	4320 LF

APPROVED: *Claudette M. E. Ragan* DATE: 9/18/2015  
 SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 SEAL 17306  
 CLAUDETTE M. E. RAGAN



ROADWAY STANDARD DRAWINGS & LEGEND

# MANAGEMENT STRATEGIES

- CONSTRUCT PROPOSED BRIDGE AND NEW ROADWAY USING TEMPORARY SIGNING, LANE CLOSURES AND FLAGGERS, AND TEMPORARY PORTABLE CONCRETE BARRIER WITH CRASH CUSHIONS AND TEMPORARY SHORING FOR THE MAINTENANCE OF TRAFFIC ON THE EXISTING ROADWAY.
- SHIFT TRAFFIC TO NEW ROADWAY.
- REMOVE OLD ROADWAY AND BRIDGE.

## GENERAL NOTES

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

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

### TIME RESTRICTIONS

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

#### ROAD NAME

-L- SR 1163 (PINE CREEK RD)

#### HOLIDAY AND HOLIDAY WEEKEND

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR CHRISTMAS AND NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 18th AND 10:00 P.M. JANUARY 4th.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 10:00 P.M. TUESDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 10:00 P.M. TUESDAY.
5. IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 10:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.  
  
IF INDEPENDENCE DAY IS ON A TUESDAY, WEDNESDAY OR THURSDAY THEN BETWEEN THE HOURS OF 12:00 P.M. (NOON) THE FRIDAY BEFORE INDEPENDENCE DAY AND 8:00 A.M. THE MONDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. THE TUESDAY BEFORE LABOR DAY AND 10:00 P.M. THE TUESDAY AFTER LABOR DAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY AND 10:00 P.M. MONDAY.

HOLIDAYS AND HOLIDAY WEEKENDS SHALL INCLUDE NEW YEAR'S, EASTER, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING, AND CHRISTMAS. THE CONTRACTOR SHALL SCHEDULE HIS WORK SO THAT LANE CLOSURES WILL NOT BE REQUIRED DURING THESE PERIODS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

- B) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

### LANE AND SHOULDER CLOSURE REQUIREMENTS

- C) 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.

- D) 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.
- E) 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.
- F) 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.
- G) 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.
- H) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

### PAVEMENT EDGE DROP OFF REQUIREMENTS

- I) 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.
- J) 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 (W8-1) 200 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

### TRAFFIC PATTERN ALTERATIONS

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

### SIGNING

- L) 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.
- M) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.
- N) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.
- O) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- P) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 200 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

### TRAFFIC BARRIER

- Q) 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.

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

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

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

### TRAFFIC CONTROL DEVICES

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

### PAVEMENT MARKINGS AND MARKERS

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


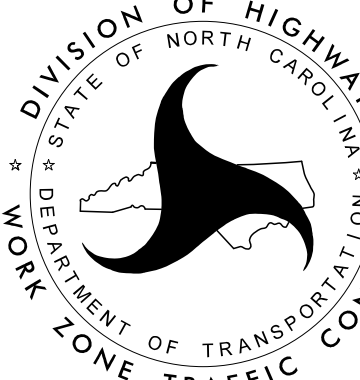
ROAD NAME	MARKING	MARKER
-L- SR 1163 (PINE CREEK RD)	PAINT	NONE

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

PROJ. REFERENCE NO. B-5404	SHEET NO. TMP-1B
 <b>RAMEY KEMP ASSOCIATES, INC.</b> Transportation Engineers 5808 Faringdon Place, Suite 100 Raleigh, North Carolina 27609 919-872-5115 Tel. 919-878-5416 Fax. www.rameykemp.com NC License No. C-9910	

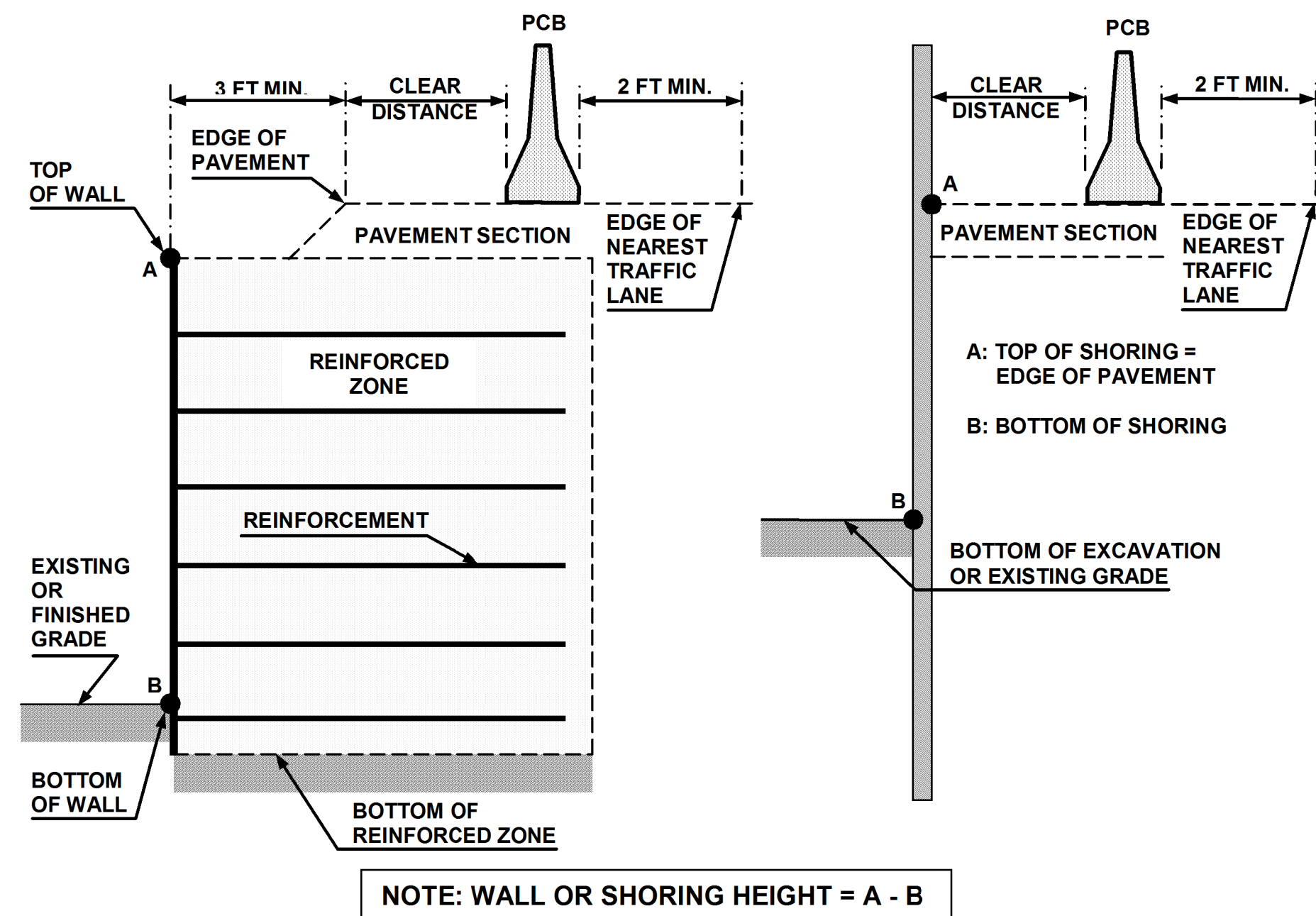
APPROVED *Claudette M. K. Rogue* DATE: 9/18/2015

SEAL

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

TRANSPORTATION  
OPERATIONS  
PLAN



**FIGURE A**

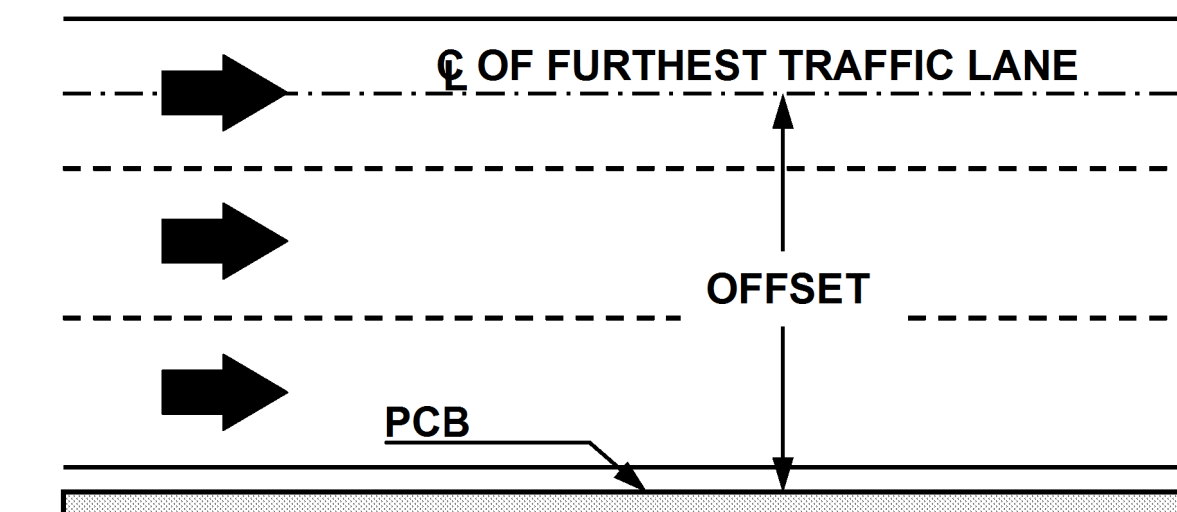
**NOTES**

- 1- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.
- 2- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PCB).
- 3- PCB IS REQUIRED IF TEMPORARY SHORING 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 UNIT 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 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- PCB REQUIREMENTS FOR TEMPORARY WALLS APPLY TO TEMPORARY MECHANICALLY STABILIZED EARTH (MSE) WALLS AND TEMPORARY SOIL NAIL WALLS.
- 8- 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 AND OR AS APPROVED BY THE ENGINEER.
- 9- 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 THESE MINIMUM REQUIRED DISTANCES ARE NOT AVAILABLE, CONTACT THE ENGINEER.
- 10- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS. BARRIER DEFLECTIONS AND RESULTING MINIMUM REQUIRED CLEAR DISTANCES MIGHT VARY SIGNIFICANTLY FOR LARGER HEAVIER VEHICLES, RUNS OF BARRIER LESS THAN 200 FT IN LENGTH AND WET OR DRY PAVEMENT.

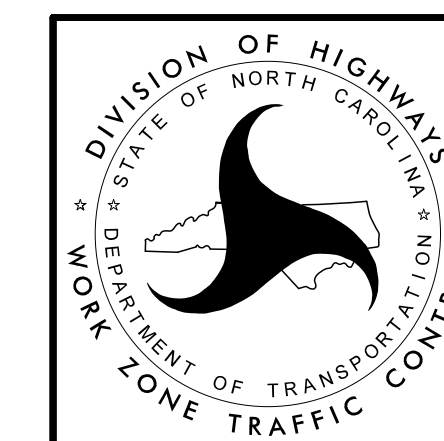
**MINIMUM REQUIRED CLEAR DISTANCE, inches**

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		
		Anchored PCB	Concrete (including bridge approach slabs)	All Offsets	24 for All Design Speeds					
				All Offsets	12 for All Design Speeds					

\* See Figure Below



**FIGURE B**



PORTABLE CONCRETE BARRIER  
AT  
TEMPORARY SHORING LOCATIONS

## TEMPORARY SHORING NOTES

SHORING LOCATION NO. ① (SEE SHEET TMP-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 16+52 -L-, 19 FT RT., TO STATION 16+90-L-, 18.8 FT 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

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 16+52 -L-, 19 FT RT., TO STATION 16+90-L-, 18.8 FT RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE STANDARD SHORING FOR TEMPORARY SHORING FROM STATION 16+52 -L-, 19 FT RT., TO STATION 16+90-L-, 18.8 FT RT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

SHORING LOCATION NO. ② (SEE SHEET TMP-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.

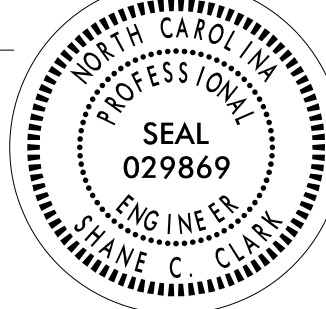

DESIGN TEMPORARY SHORING FROM STATION 17+17 -L-, 18.7 FT RT., TO STATION 19+25-L-, 13.1 FT RT., FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

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

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 17+17 -L-, 18.7 FT RT., TO STATION 19+25-L-, 13.1 FT RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 17+17 -L-, 18.7 FT RT., TO STATION 19+25-L-, 13.1 FT RT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

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APPROVED: <u>Shane C. Clark</u> <small>1F4E27E0R0AD4EA</small> DATE: 9/14/2015			<h3>TEMPORARY SHORING NOTES</h3>
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## PHASING NOTES

SR 1163 (PINE CREEK RD.) IS A TWO-LANE ROADWAY THROUGH THE LIMITS OF THE PROJECT. THERE ARE FOUR(4) PRIVATE DRIVEWAYS INTERSECTING WITH THIS PROJECT THAT WILL REQUIRE ACCESS DURING CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL EXISTING DRIVEWAYS AS DIRECTED BY THE ENGINEER. ALL WORK WILL BE IN ACCORDANCE WITH NCDOT STANDARD DRAWINGS FOR LANE CLOSURES AND DEVICE/SIGNAGE PLACEMENT.

NOTE: WHEN REFERENCING THE USE OF FLAGGERS, SEE RSD 1101.02, SHEET 1 OF 15 AND RSD 1101.06 WHEN NECESSARY FOR ROCK EXCAVATION.

PHASE I (SEE SHEET TMP-4)

STEP 1: INSTALL WORK ZONE ADVANCE WARNING SIGNS. (SEE RSD 1101.01)

STEP 2: WHILE MAINTAINING EXISTING TRAFFIC PATTERN, AWAY FROM TRAFFIC AND USING FLAGGER CONTROL AS NECESSARY, INSTALL TRAFFIC CONTROL DEVICES.

STEP 3: USING FLAGGERS AS NEEDED, CONSTRUCT AND OPEN -DR1- USING TEMP. TIE TO EXISTING ROADWAY INCLUDING TEMP. 15" CSP. BEGIN CONSTRUCTION OF PROPOSED ROADWAY AWAY FROM EXISTING DRIVEWAY -L- STA. 16+60 +/- LT.

STEP 4: AWAY FROM TRAFFIC AND USING FLAGGER CONTROL AS NECESSARY, INSTALL PORTABLE CONCRETE BARRIER, CRASH CUSHIONS AND TEMP. SHORING.

STEP 5: USING FLAGGERS AS NEEDED, COMPLETE CONSTRUCTION OF ALL WORK ON THE NEW ALIGNMENT CONSISTING OF THE FOLLOWING:

- NEW BRIDGE FROM -L- STA. 16+84 +/- TO STA. 17+56 +/-
- ROADWAY INCLUDING WEDGING OF EXISTING PAVEMENT UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE OF THE NEW ROADWAY.
- REMOVE TEMP. SHORING FROM -L- STA. 17+65 +/- TO STA. 19+25 +/- AND PORTABLE CONCRETE BARRIER FROM -L- STA. 18+31 +/- TO STA. 20+45 +/- AND RESET CRASH CUSHION TO -L- STA. 18+31 +/- ONCE THE UNDERCUT EXCAVATION AND ROADWAY ARE CONSTRUCTED TO WHERE THE TEMP. SHORING AND PORTABLE CONCRETE BARRIER ARE NO LONGER NEEDED IN THIS AREA IN ORDER TO COMPLETE CONSTRUCTION OF THE TIE-IN AND THE DRIVEWAYS AT -L- STA. 18+70 +/- AND -L- STA. 19+65 +/-.

STEP 6: USING FLAGGERS, PERFORM THE FOLLOWING:

- REMOVE ANY CONFLICTING PAVEMENT MARKINGS.
- PLACE TEMP. PAVEMENT MARKINGS TO MATCH FINAL PATTERN AS SHOWN ON FINAL PAVEMENT MARKING PLANS.
- SHIFT TRAFFIC TO -L- IN TWO LANE, TWO-WAY PATTERN AND CLOSE OLD ROADWAY TO TRAFFIC AS SHOWN ON TMP-5.

PHASE II (SEE SHEET TMP-5)



STEP 1: AWAY FROM TRAFFIC AND USING FLAGGERS AS NECESSARY, PERFORM THE FOLLOWING:

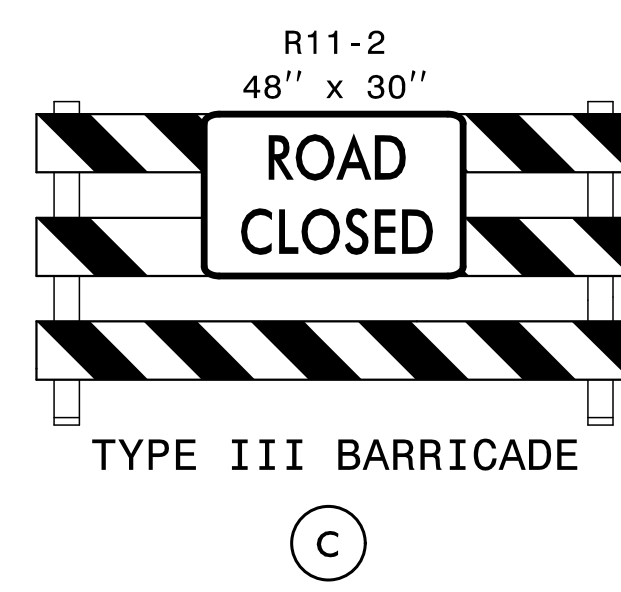
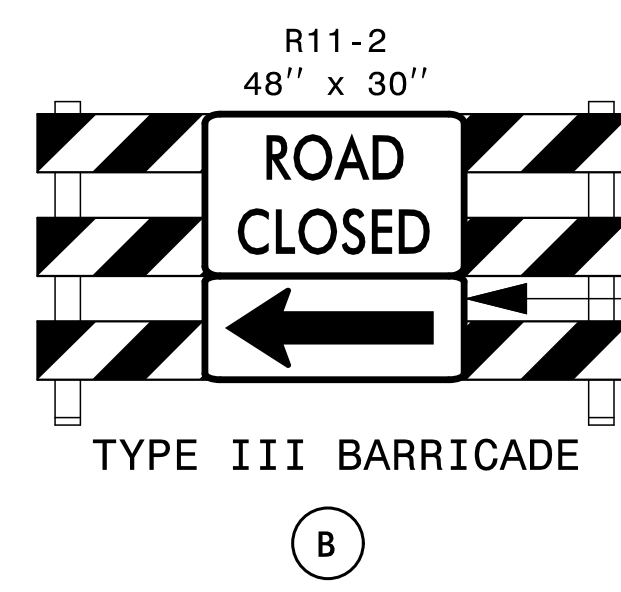
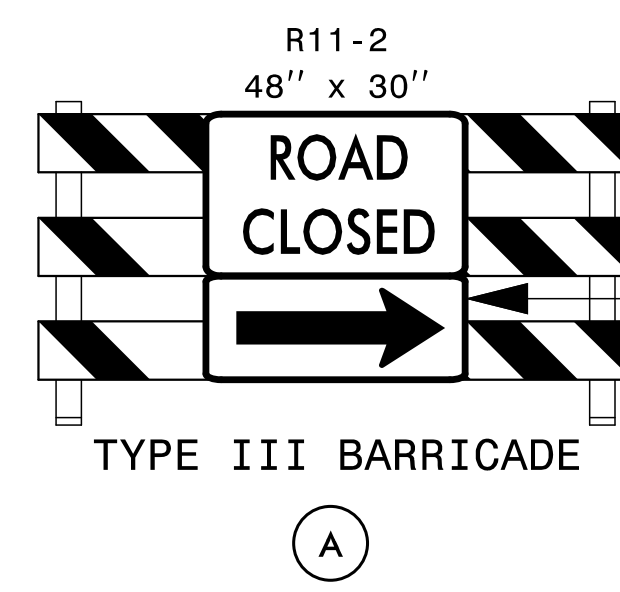
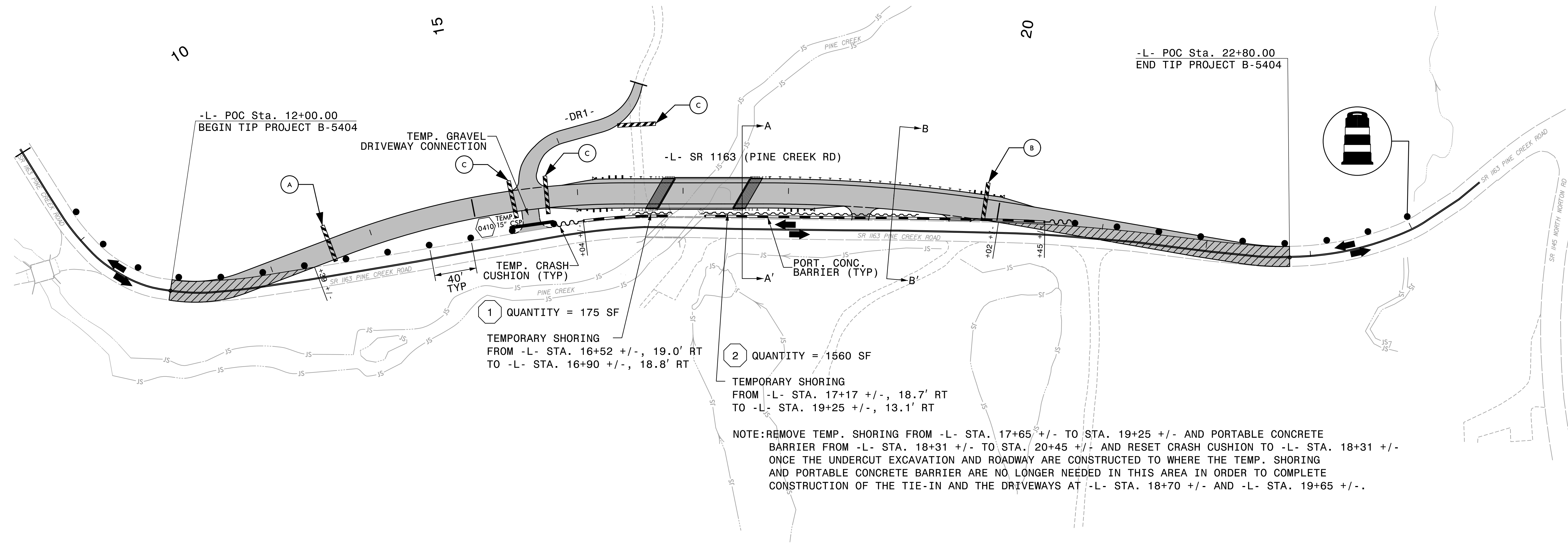
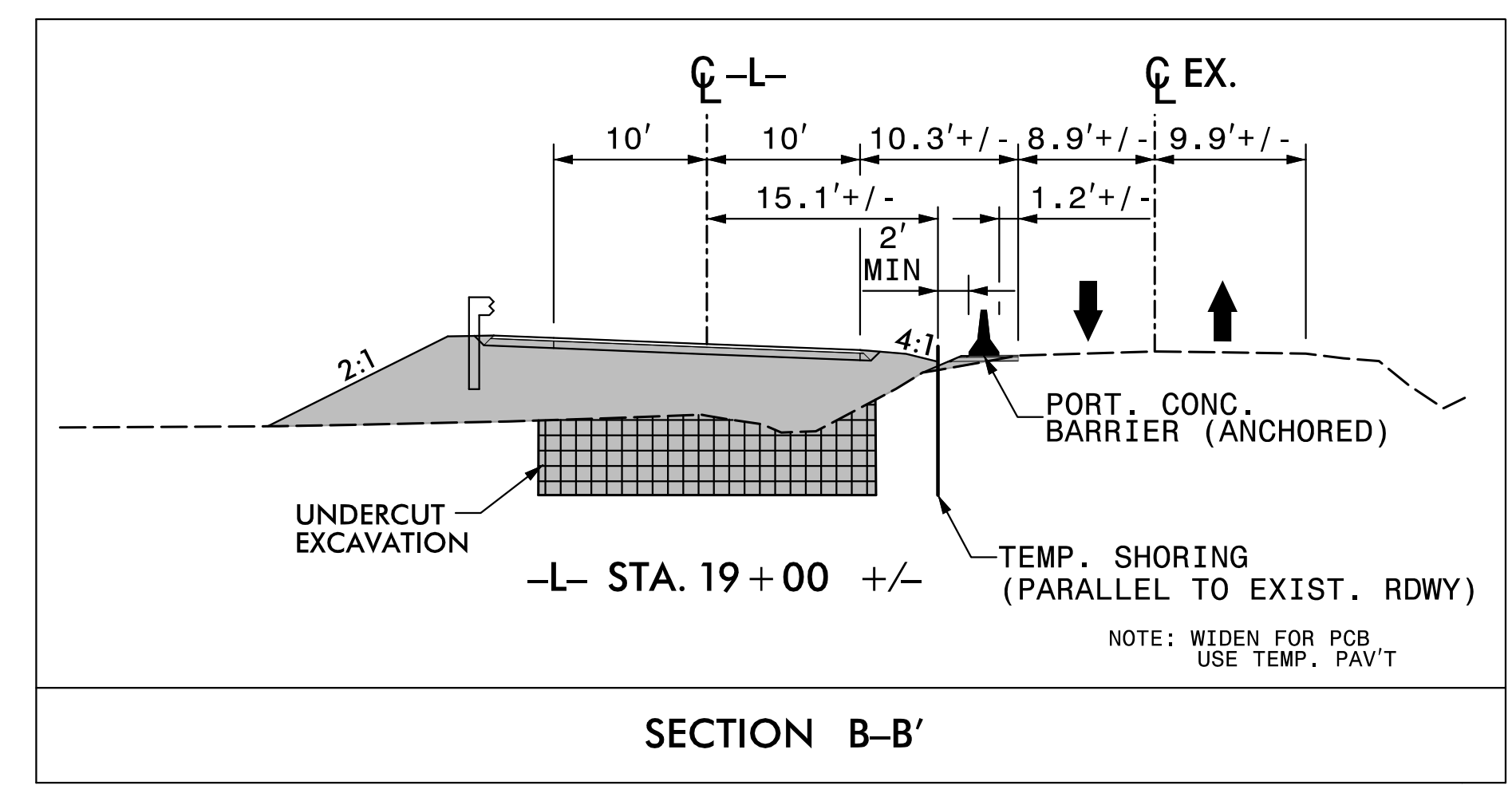
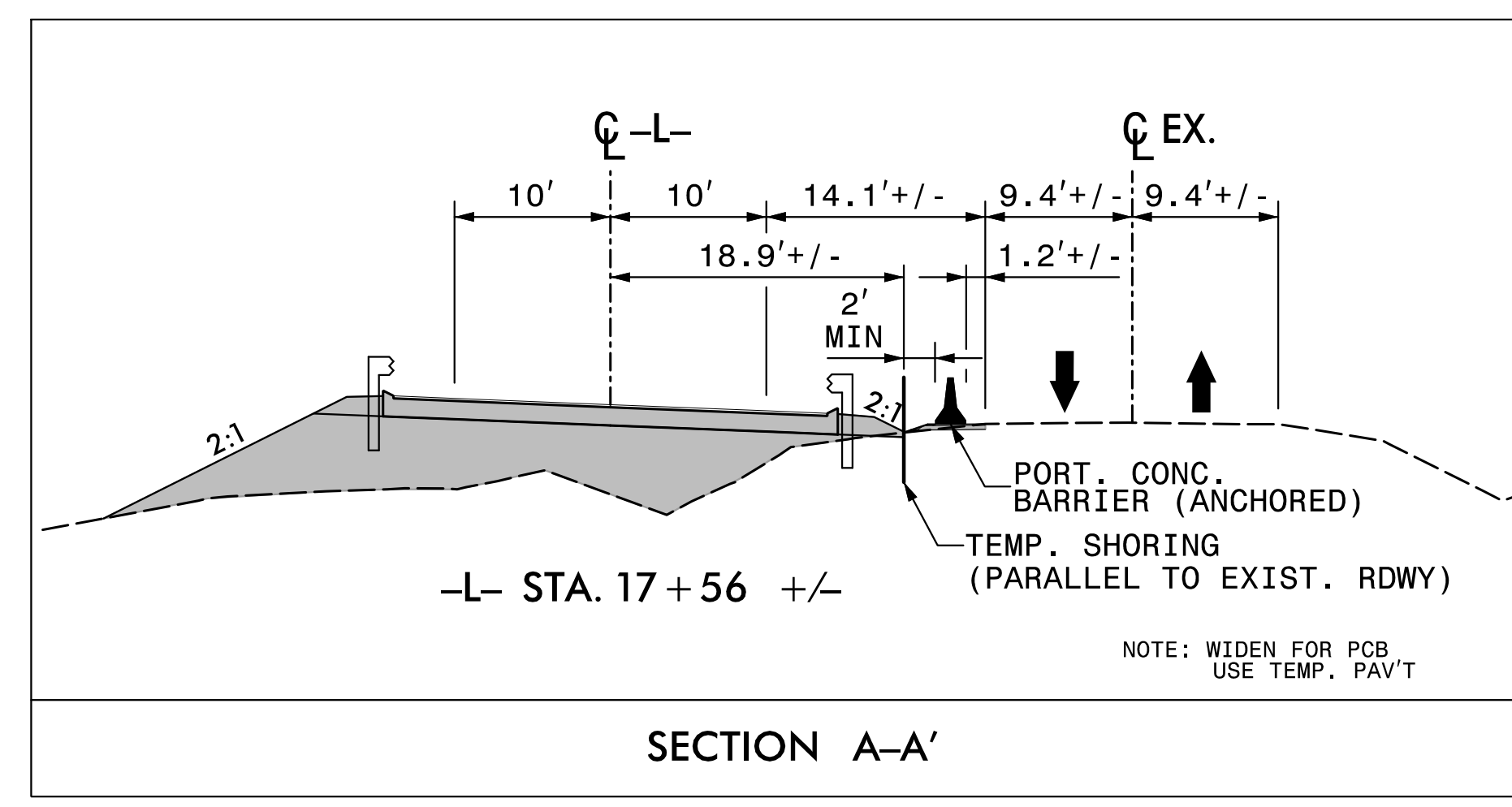
- COMPLETE DRIVEWAY TIE-INS.
- REMOVE OLD STRUCTURE AND PAVEMENT AND TEMP. -DR1- TIE-IN INCLUDING TEMP. PIPE.
- COMPLETE CONSTRUCTION OF NEW DITCH SECTIONS AND FILL SLOPES.
- REMOVE REMAINING PORTABLE CONCRETE BARRIER, CRASH CUSHIONS AND TEMP. SHORING.

PHASE III

STEP 1: USING FLAGGERS, PLACE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS AS SHOWN ON FINAL PAVEMENT MARKING PLANS.

STEP 2: REMOVE ALL REMAINING TRAFFIC CONTROL DEVICES AND WORK ZONE SIGNS.

APPROVED: <i>Claudette M. K. Rogers</i> DATE: 9/18/2015 	<h3 style="margin: 0;">TRAFFIC CONTROL PHASING NOTES</h3>								
SCALE: 1" = 50' DATE: DEVELOPED BY: REVIEWED BY: RKA PROJ. #:	Prepared For:  <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> </thead> <tbody> <tr> <td style="width: 50%;"> </td> <td style="width: 50%;"> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	REVISIONS							
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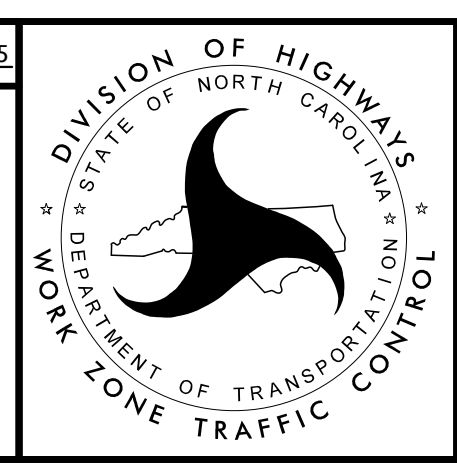


NOTE: SEE SHEET TMP-2A FOR TEMPORARY SHORING NOTES  
 NOTE: SEE ROADWAY PLANS FOR ATTACHMENT DETAIL OF PCB TO EXISTING BRIDGE.

APPROVED *Claudette M. K. Rague* DATE: 9/18/2015

SEAL

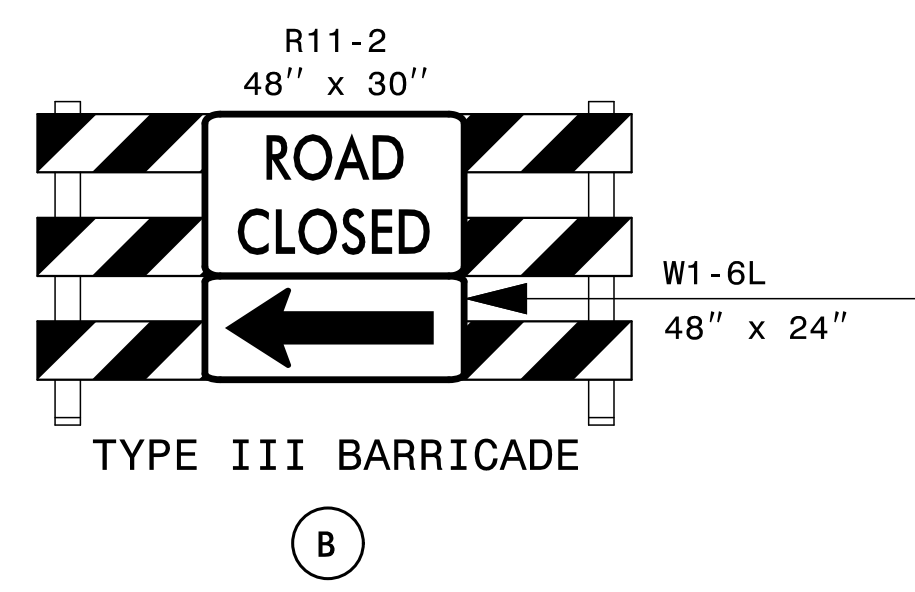
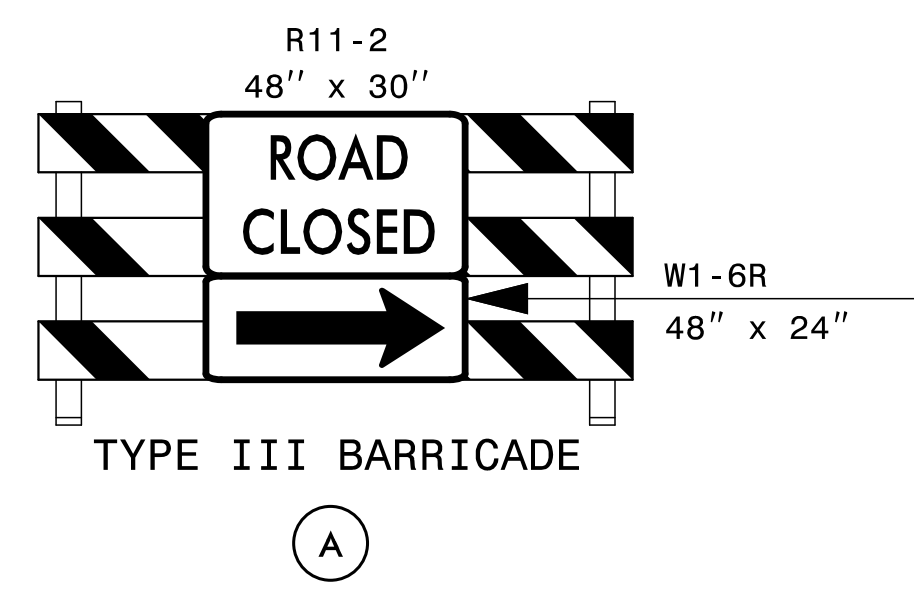
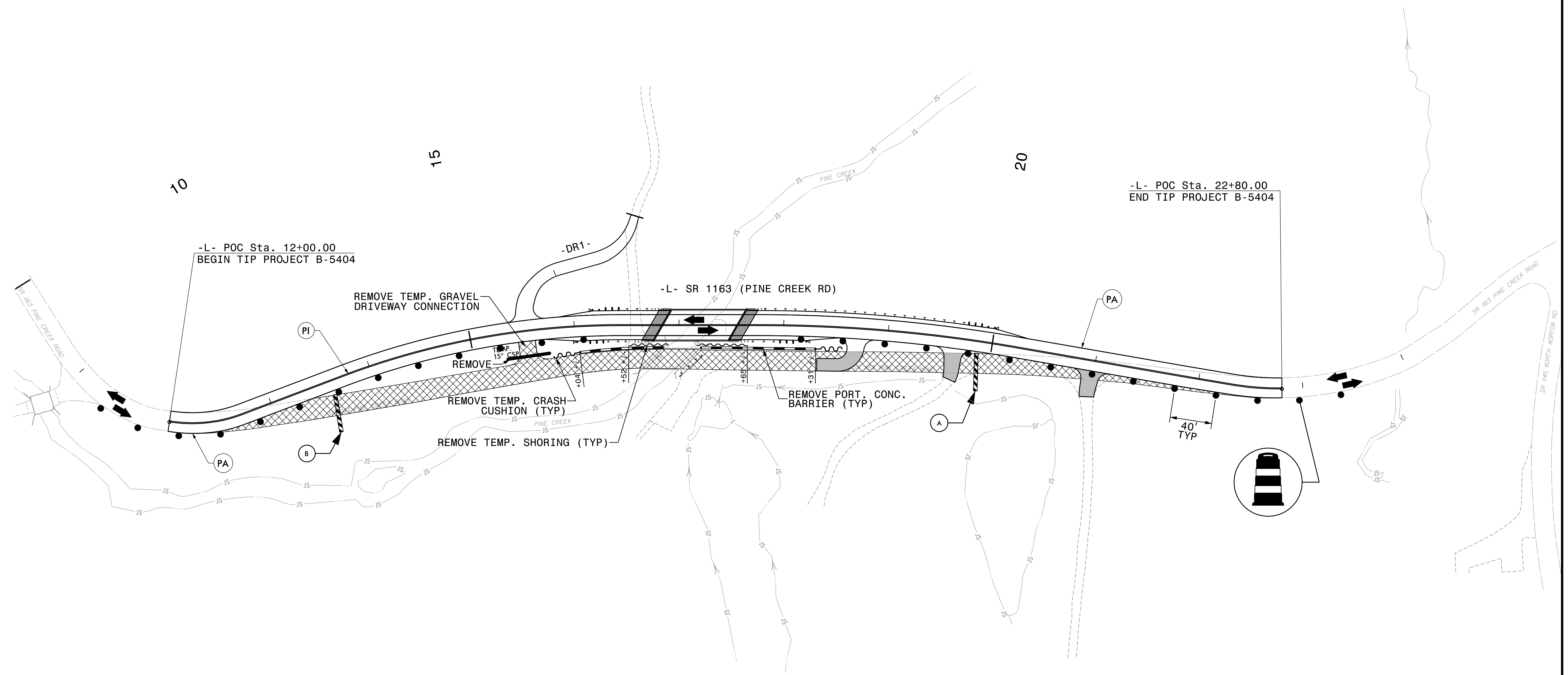
PROFESSIONAL ENGINEER  
 CLAUDETTE M. K. RAGUE  
 17306



**TEMPORARY TRAFFIC CONTROL PHASE I DETAIL**

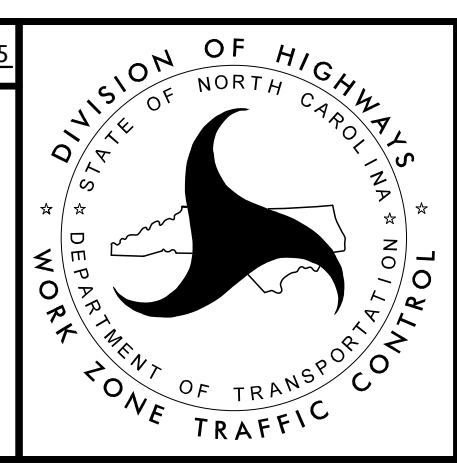


NAD 83/NSRS 2007



APPROVED: *Claudette M. K. Rogers* DATE: 9/18/2015

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**TEMPORARY TRAFFIC CONTROL PHASE II DETAIL**

9/14/2015  
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