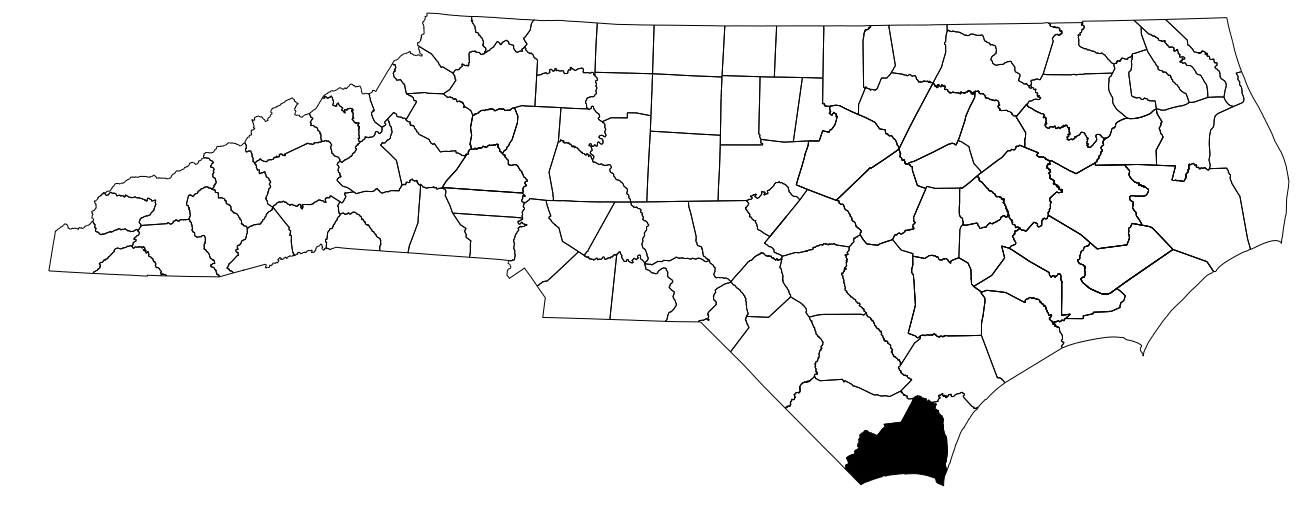
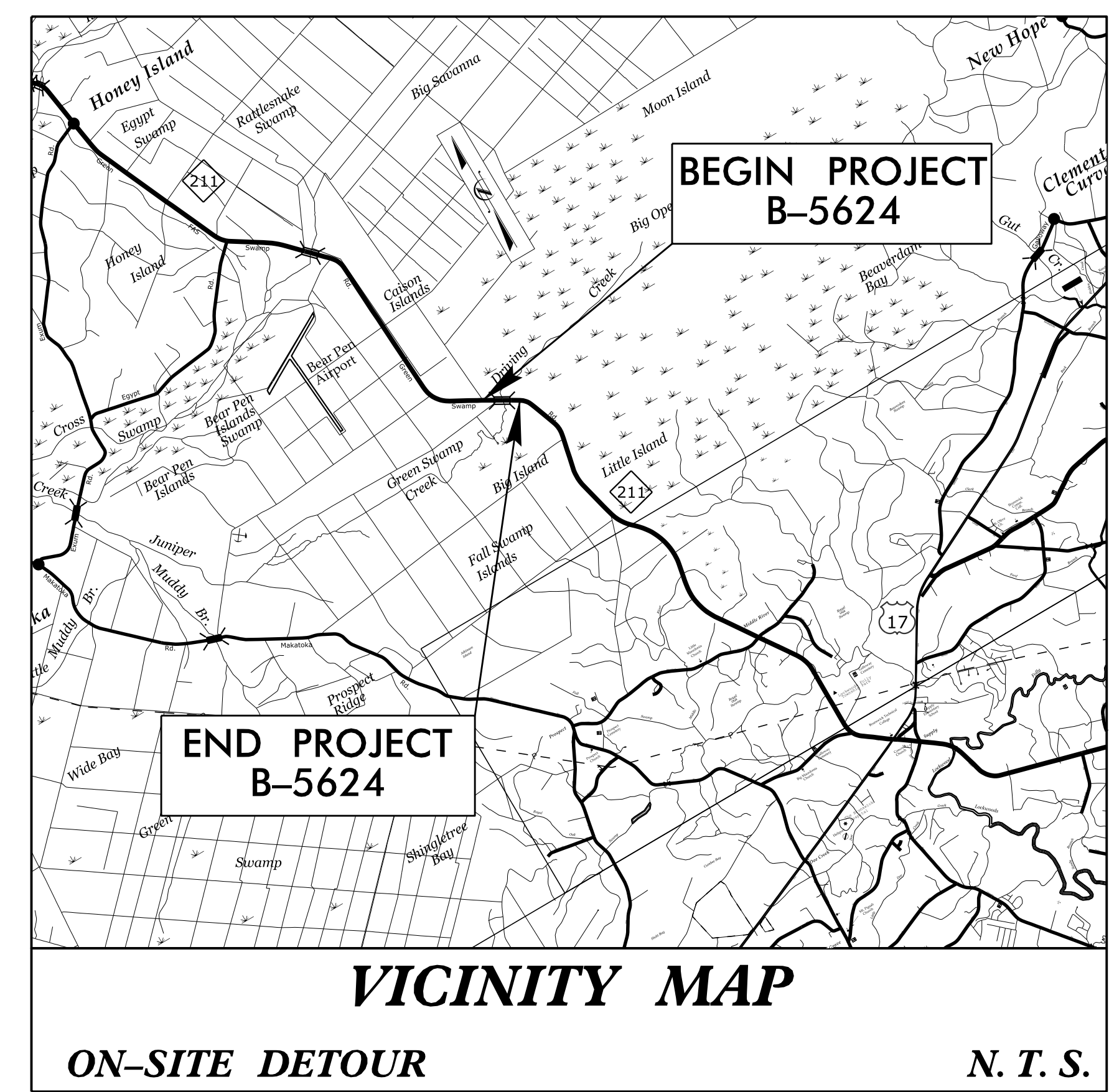


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN
BRUNSWICK COUNTY



**LOCATION: REPLACE BRIDGE NO. 57 OVER DRIVING CREEK
ON NC 211 (GREEN SWAMP ROAD NW)**

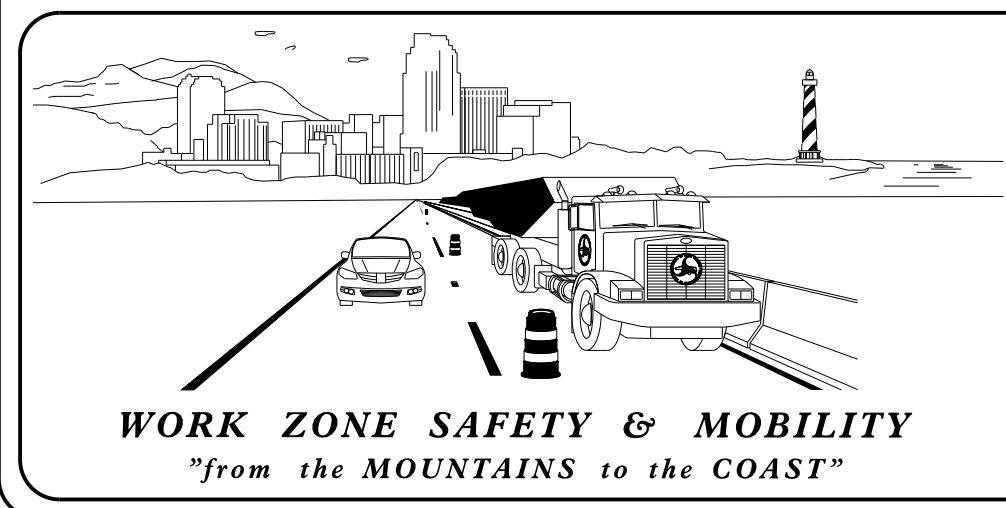


INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES AND GENERAL NOTES)
TMP-1C	TRANSPORTATION OPERATIONS PLAN: (GENERAL NOTES AND PHASING NOTES)
TMP-2	TEMPORARY SHORING NOTES
TMP-3 to TMP-4	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-5 to TMP-6	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL
TMP-7	TEMPORARY TRAFFIC CONTROL TYPICAL SECTIONS

SHEET NO.
TMP-1

6/4/2021
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User: CONRADAM



PLANS PREPARED BY:

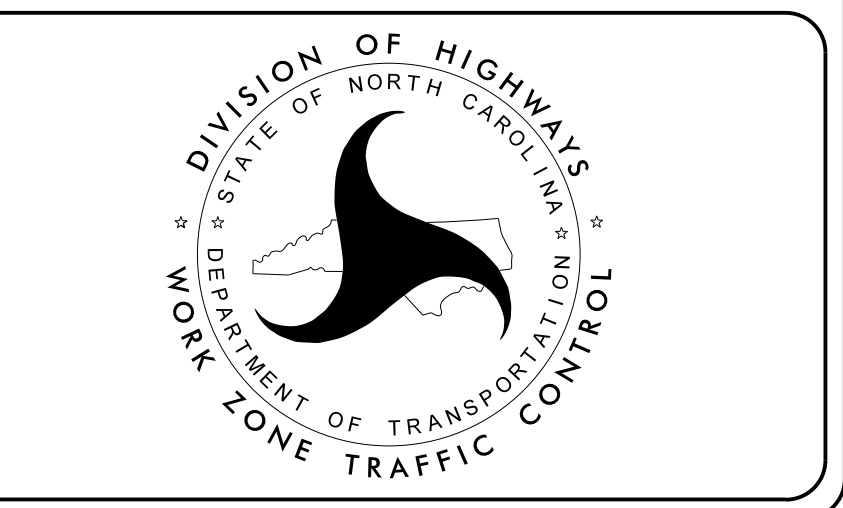
ADAM M. CONRAD, P.E.
PROJECT ENGINEER

MONIQUE N. GYANT, E.I.
PROJECT DESIGN ENGINEER

NCDOT CONTACTS:

KEN THORNEWELL, P.E.
PROJECT ENGINEER

MIKE STEELMAN
PROJECT DESIGN ENGINEER



CDM Smith
CDM Smith Inc.
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3228
NC COA No. F-1255

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APPROVED: *Adam M. Conrad, P.E., P.H.P.*
DATE: 6/4/2021

SEAL

TIP PROJECT: B-5624

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:

<u>STD. NO.</u>	<u>TITLE</u>
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE 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
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGERS
1160.01	TEMPORARY CRASH CUSHION
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY - DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
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
- WEDGE AND/OR WIDEN (USING FLAGGERS)

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

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

PAVEMENT MARKING - PAINT (4")

- PA WHITE EDGE LINE
- PI YELLOW DOUBLE CENTER

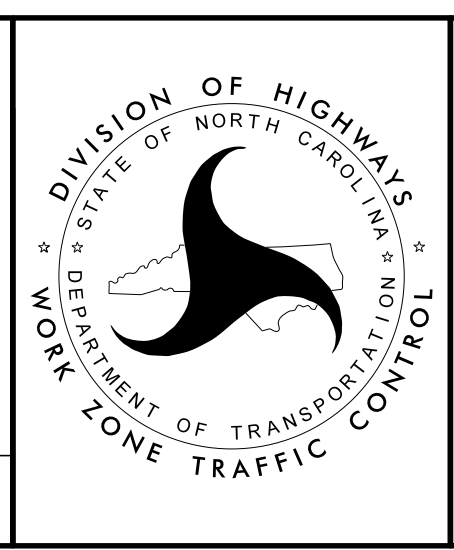
MARKERS - TEMPORARY RAISED PAVEMENT MARKERS

- MH YELLOW AND YELLOW

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APPROVED: *Adam M. Conrad, PE, PMP*
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 DATE: 6/4/2021



**ROADWAY STANDARD
DRAWINGS & LEGEND**

**DOCUMENT NOT CONSIDERED FINAL
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MANAGEMENT STRATEGIES

MAINTENANCE OF TRAFFIC FOR THIS PROJECT HAS BEEN DIVIDED INTO THREE PHASES USING A STAGED CONSTRUCTION METHOD WITH NC 211 TRAFFIC BEING MAINTAINED ON THE EXISTING ROADWAY UNTIL THE PROPOSED DETOUR BRIDGE IS CONSTRUCTED. NC 211 TRAFFIC WILL THEN BE SHIFTED TO THE TEMPORARY ON-SITE DETOUR TO FACILITATE THE CONSTRUCTION OF THE PERMANENT PROPOSED BRIDGE. TEMPORARY LANE CLOSURES, WITH THE USE OF FLAGGERS, WILL BE UTILIZED DURING TIE-IN AND WEDGING OPERATIONS.

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- NC 211

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 4:00 P.M. DECEMBER 31ST TO 9:00 A.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 9:00 A.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 4:00 P.M. THURSDAY AND 9:00 A.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 4:00 P.M. FRIDAY TO 9:00 A.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 4:00 P.M. THE DAY BEFORE INDEPENDENCE DAY AND 9:00 A.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 4:00 P.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 A.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 4:00 P.M. FRIDAY AND 9:00 A.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 4:00 P.M. TUESDAY TO 9:00 A.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 4:00 P.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 A.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

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.

PAVEMENT EDGE DROP OFF REQUIREMENTS

H) 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.

I) 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) IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

K) 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.

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

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

TRAFFIC BARRIER

N) 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.

O) 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

P) 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.

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

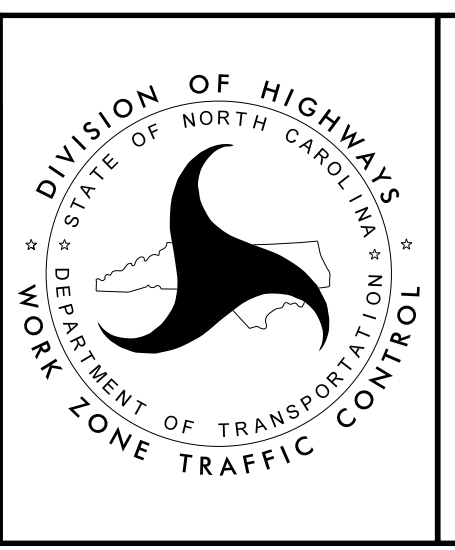


CDM Smith Inc.
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3228
NC COA No. F-1255

APPROVED: *Adam M. Conrad, P.E., PMP*
DATE: 6/4/2021

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043767
ENGINEER
ADAM M. CONRAD

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TRANSPORTATION
OPERATIONS
PLAN

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GENERAL NOTES

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
NC 211 -LDET-	PAINT	TEMPORARY RAISED
NC 211 -L-	PAINT	TEMPORARY RAISED

- S) 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.
- T) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- U) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

PHASING

NOTES: COMPLETE ANY PROPOSED WIDENING IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANE. THIS MAY REQUIRE A COMBINATION OF INSTALLATION OF PROPOSED PIPES, TEMPORARY PIPES, STEEL PLATES, AND TEMPORARY DITCHES.

ALL REFERENCES TO CONSTRUCTION INCLUDE PAVING UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE UNLESS SPECIFICALLY CALLED FOR.

PHASE I:

- STEP 1: INSTALL ADVANCE WORK ZONE WARNING SIGNS ACCORDING TO ROADWAY STANDARD DRAWING (RSD) 1101.01 (SHEET 3 OF 3). AWAY FROM TRAFFIC, CONSTRUCT DETOUR BRIDGE AND ROADWAY FROM -LDET- STA 13+78+/- TO -LDET- STA 20+17+/- (SEE SHEET TMP-3).
- STEP 2: USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS, CONSTRUCT DETOUR TIE-INS FROM -LDET- STA 10+51+/- TO -LDET- STA 13+78+/- AND FROM -LDET- STA 20+17+/- TO -LDET- STA 23+95+/- (SEE SHEET TMP-3 AND TMP-4).

PHASE II:

- STEP 1: AWAY FROM TRAFFIC AND/OR USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS, AS NEEDED, PLACE THE FINAL LAYER OF ASPHALT AND INSTALL TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -LDET-. USING RSD 1101.03 (SHEET 3 OF 9) SHIFT TRAFFIC ONTO THE DETOUR AS SHOWN ON SHEETS TMP-5 AND TMP-6.
- STEP 2: AWAY FROM TRAFFIC AND/OR USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS, AS NEEDED, REMOVE EXISTING BRIDGE (REFER TO STRUCTURE PLANS) AND CONSTRUCT -L- FROM -L- STA 14+00+/- TO -L- STA 21+04+/- (INCLUDING THE PROPOSED BRIDGE) UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE (SEE TMP-5).
- STEP 3: USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS, CONSTRUCT AS MUCH OF THE WIDENING/WEDGING AS POSSIBLE FROM -L- STA 10+44+/- TO -L- STA 14+00+/- AND FROM -L- STA 21+04+/- TO -L- STA 24+47+/- UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. INSTALL ANCHORED/UNANCHORED PORTABLE CONCRETE BARRIER USING RSD 1170.01 FROM -L- STA 14+00+/- TO -L- STA 21+00+/- . PLACE TEMPORARY PAINT PAVEMENT MARKINGS IN THE PROPOSED FINAL TRAFFIC PATTERN (SEE TMP-5 AND TMP-6).
- USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS, WEDGE -LDET- AS NEEDED TO ALLOW FOR A SMOOTH PAVEMENT TRANSITION FOR THE PHASE III TRAFFIC SHIFT AT EACH TIE IN LOCATION.

PHASE III (NOT SHOWN)

- STEP 1: SHIFT DETOUR TRAFFIC BACK TO -L- IN THE FINAL TRAFFIC PATTERN. USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS, CONSTRUCT REMAINING WIDENING/WEDGING/RESURFACING ON -L- FROM -L- STA 10+44+/- TO -L- STA 14+00+/- AND FROM -L- STA 21+04+/- TO -L- STA 24+47+/- . ALSO, CONSTRUCT REMAINING PAVED SHOULDER, GUARDRAIL AND FILL SLOPES PROTECTED BY THE ANCHORED/UNANCHORED PORTABLE CONCRETE BARRIER FROM -L- STA 14+00+/- TO -L- STA 21+00+/- .
- STEP 2: USING RSD 1101.02 (SHEET 1 OF 14) AND/OR AWAY FROM TRAFFIC, REMOVE DETOUR ROADWAY AND BRIDGE.
- STEP 3: USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS, PLACE FINAL LAYER OF SURFACE COURSE ON -L- FROM -L- STA 10+44+/- TO -L- STA 24+47+/- . PLACE FINAL PAVEMENT MARKINGS/MARKERS IN FINAL TRAFFIC PATTERN.
- STEP 4: REMOVE ALL WORK ZONE TRAFFIC CONTROL DEVICES.

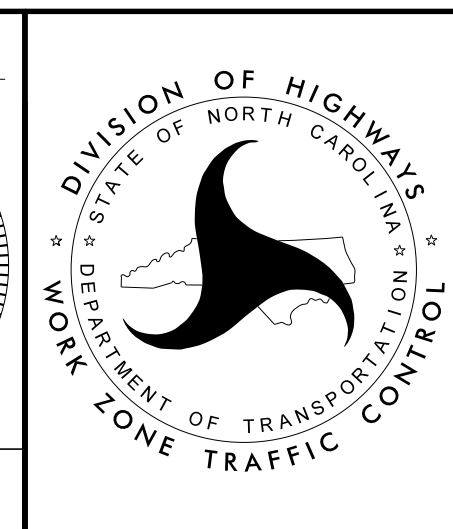
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APPROVED: *Adam M. Conrad, P.E., P.H.P.*
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 DATE: 6/7/2021

SEAL
 043767
 ENGINEER
 ADAM M. CONRAD

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TRANSPORTATION OPERATIONS PLAN

PROJ. REFERENCE NO.	SHEET NO.
B-5624	TMP-2

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 16+84 -L-, 28 FT RIGHT,
 TO STATION 17+16 -L-, 28 FT RIGHT, FOR THE FOLLOWING ASSUMED
 SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT (γ) = 120 PCF
- FRICTION ANGLE (ϕ) = 30 DEGREES
- COHESION (c) = 0 PSF
- GROUNDWATER ELEVATION = 59 FT

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY
 SHORING FOR TEMPORARY SHORING FROM STATION 16+84 -L-, 28 FT
 RIGHT, TO STATION 17+16 -L-, 28 FT RIGHT. SEE GEOTECHNICAL
 STANDARD DETAIL NO. 1801.01 (SHEET 2G-1) FOR STANDARD
 TEMPORARY SHORING.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM
 STATION 16+84 -L-, 28 FT RIGHT, TO STATION 17+16 -L-, 28 FT RIGHT.

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 17+76 -L-, 28 FT RIGHT,
 TO STATION 18+08 -L-, 28 FT RIGHT, FOR THE FOLLOWING ASSUMED
 SOIL PARAMETERS AND GROUNDWATER ELEVATION:

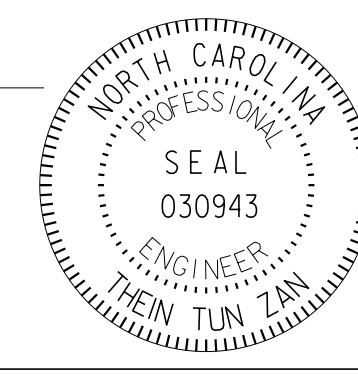
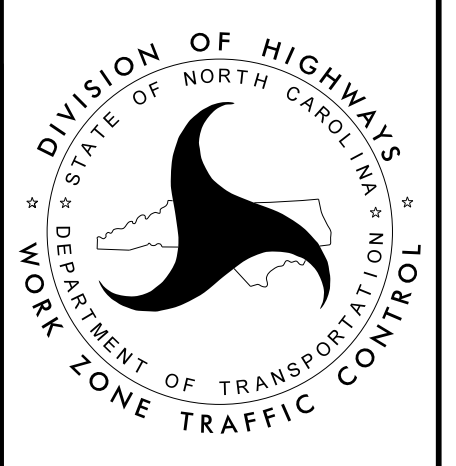
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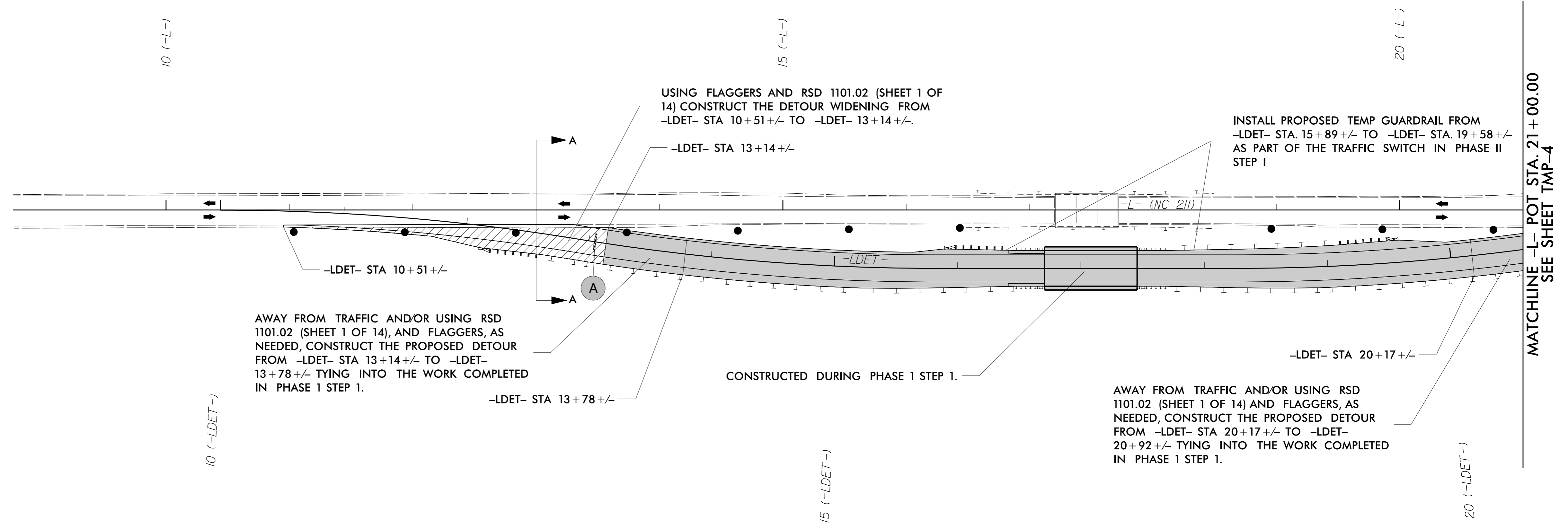
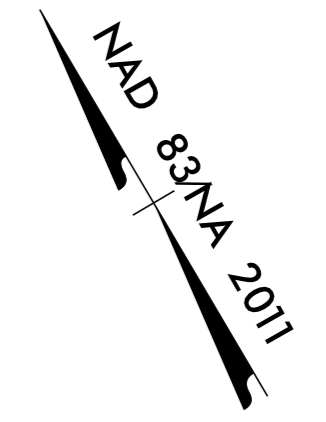
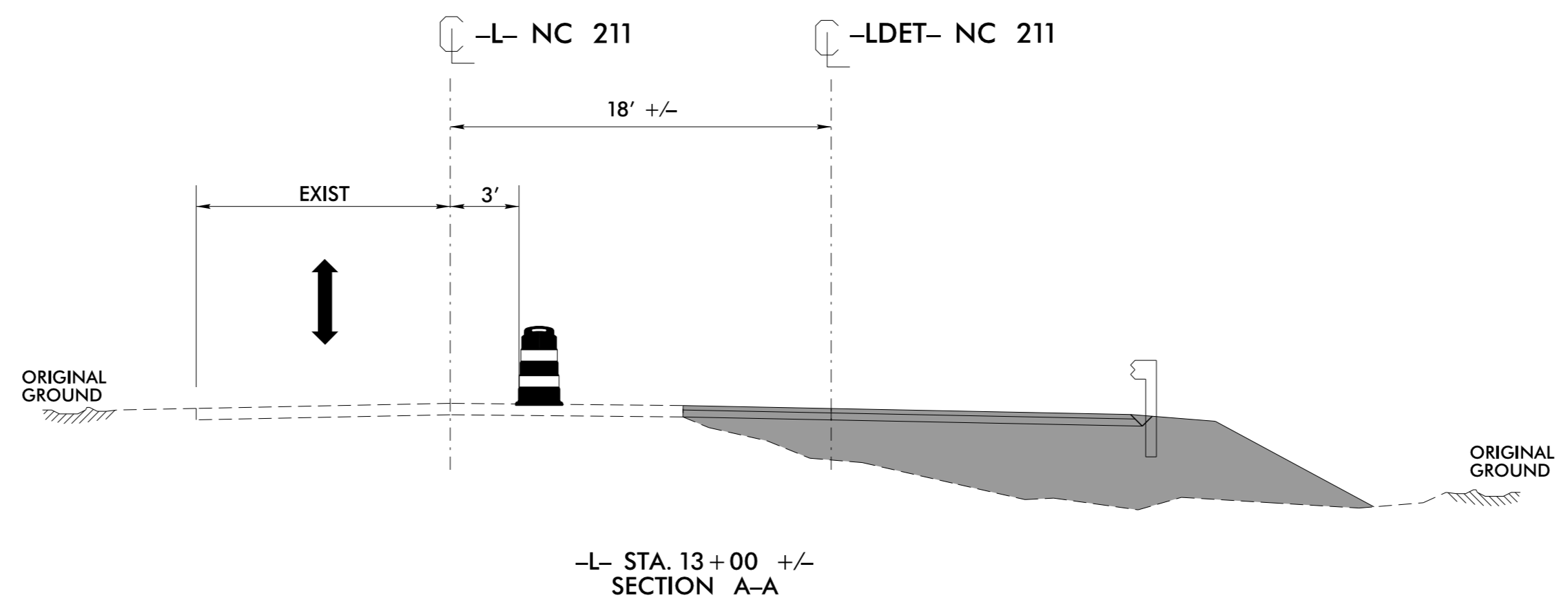
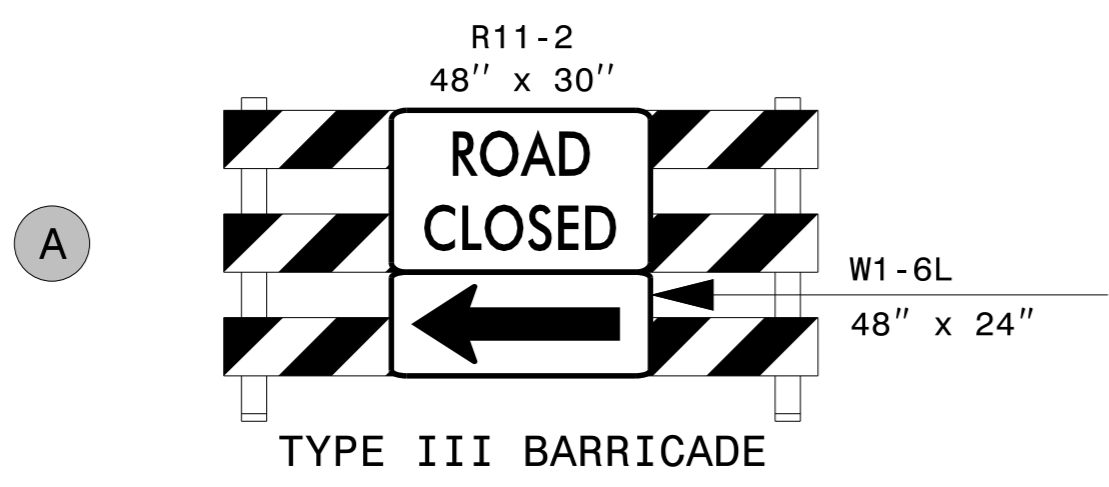
DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM
 STATION 17+76 -L-, 28 FT RIGHT, TO STATION 18+08 -L-, 28 FT RIGHT.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED
 THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING
 UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTC SECTION ON APRIL 15, 2021
 AND SEALED BY A PROFESSIONAL ENGINEER, THEIN TUN ZAN, PE.

6/22/2021 11:02:02 - pw.bentley.com\FW_Plan\Documents\17240\235233\0 Transportation\04 Client Folder Structure\B5624\TrafficControl\TCP\B5624_TC_TMP_02.dgn User:CONRADAM

<p>APPROVED: <i>Thein Tun Zan</i> <small>A43688C08C19472</small></p> <p>DATE: 6/23/2021</p> 		<p style="text-align: center; font-weight: bold;">TEMPORARY SHORING NOTES</p>
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>		

PROJ. REFERENCE NO.	SHEET NO.
B-5624	TMP-3



AWAY FROM TRAFFIC AND/OR USING RSD 1101.02 (SHEET 1 OF 14), AND FLAGGERS, AS NEEDED, CONSTRUCT THE PROPOSED DETOUR FROM -LDET- STA 13+14+/- TO -LDET- 13+78+/- TYING INTO THE WORK COMPLETED IN PHASE 1 STEP 1.

USING FLAGGERS AND RSD 1101.02 (SHEET 1 OF 14) CONSTRUCT THE DETOUR WIDENING FROM -LDET- STA 10+51+/- TO -LDET- 13+14+/-.

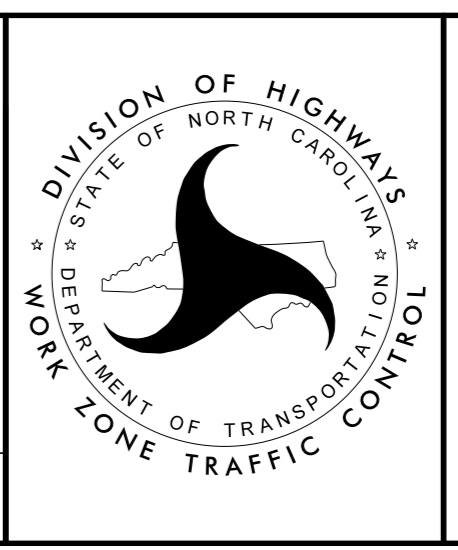
INSTALL PROPOSED TEMP GUARDRAIL FROM -LDET- STA. 15+89+/- TO -LDET- STA. 19+58+/- AS PART OF THE TRAFFIC SWITCH IN PHASE II STEP I

AWAY FROM TRAFFIC AND/OR USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS, AS NEEDED, CONSTRUCT THE PROPOSED DETOUR FROM -LDET- STA 20+17+/- TO -LDET- 20+92+/- TYING INTO THE WORK COMPLETED IN PHASE 1 STEP 1.

6/4/2021 pw:\cdmsmith-az02-pw.bentley.com:PW_PLN\Documents\17240\235233\10 Transportation\04 Client Folder Structure\B5624\TrafficControl\TCP\B5624_TC_TMP_03.dgn User:ICONRADAM

CDM Smith
 CDM Smith Inc.
 5400 Glenwood Avenue
 Suite 400
 Raleigh, NC 27612-3228
 NC COA No. F-1255

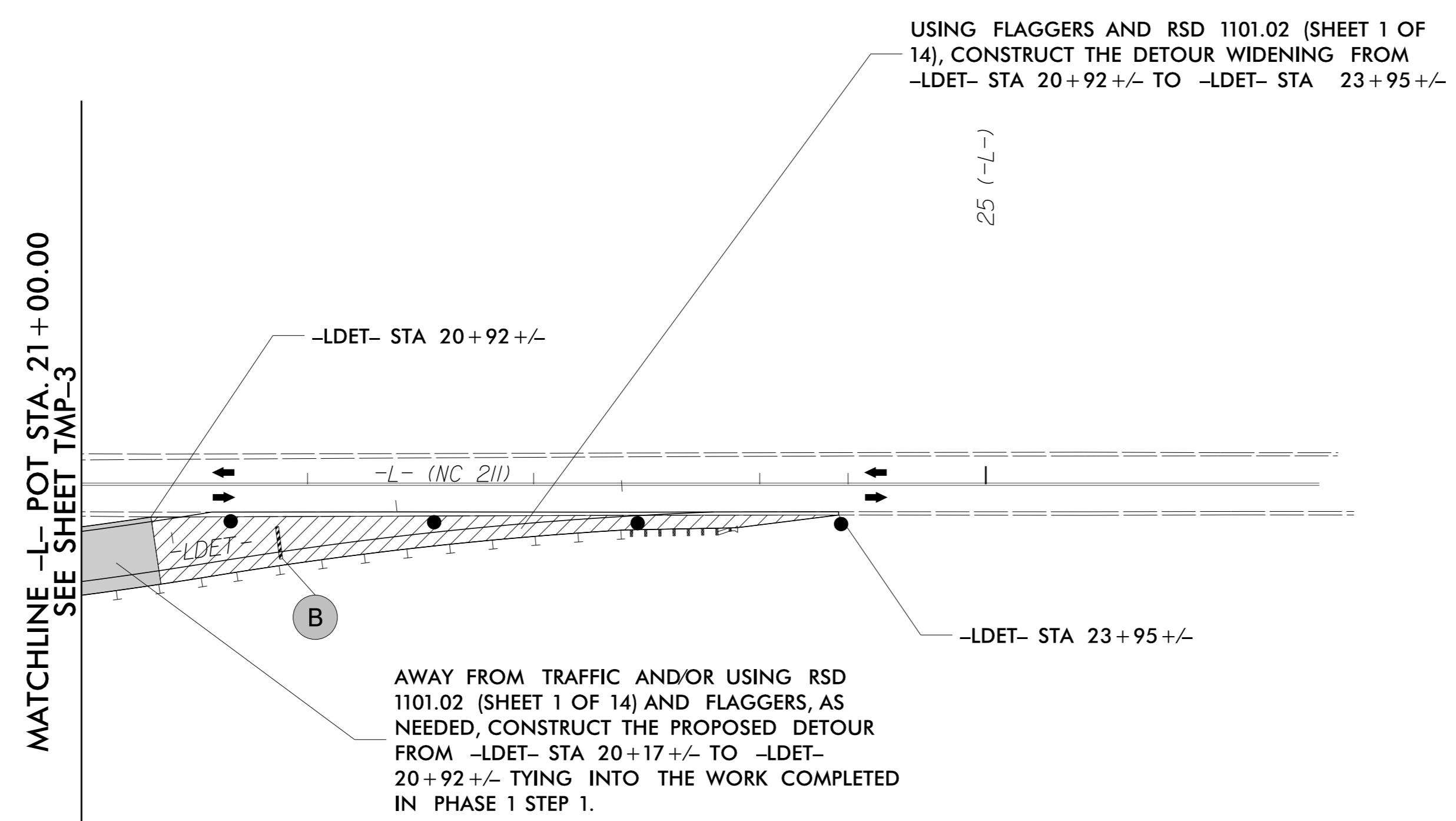
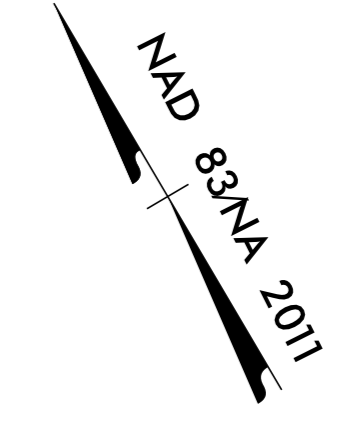
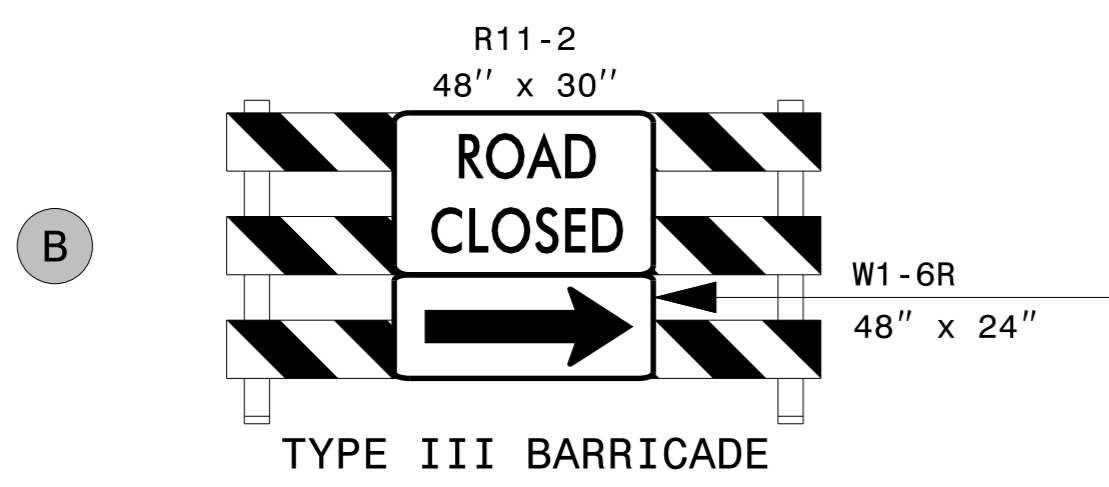
APPROVED: *Adam M. Conrad, P.E., PMP*
 DATE: 6/4/2021
 NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043767
 ADAM M. CONRAD



TEMPORARY TRAFFIC CONTROL PHASE I DETAIL

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PROJ. REFERENCE NO.	SHEET NO.
B-5624	TMP-4



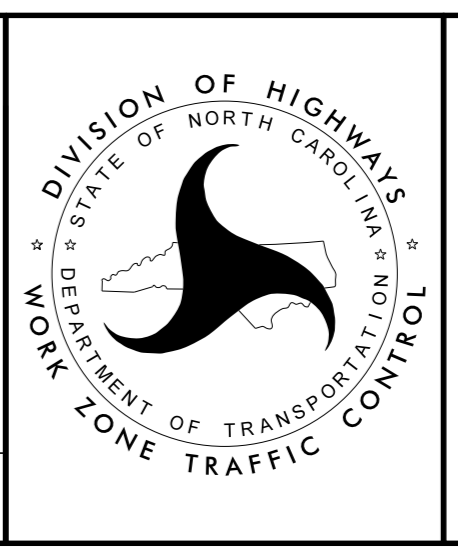
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Raleigh, NC 27612-3228
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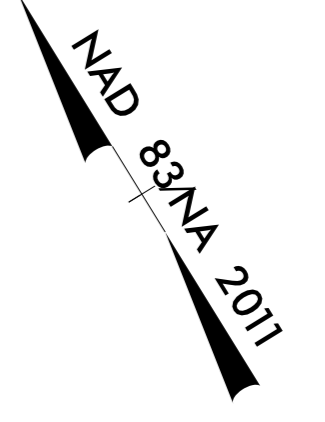
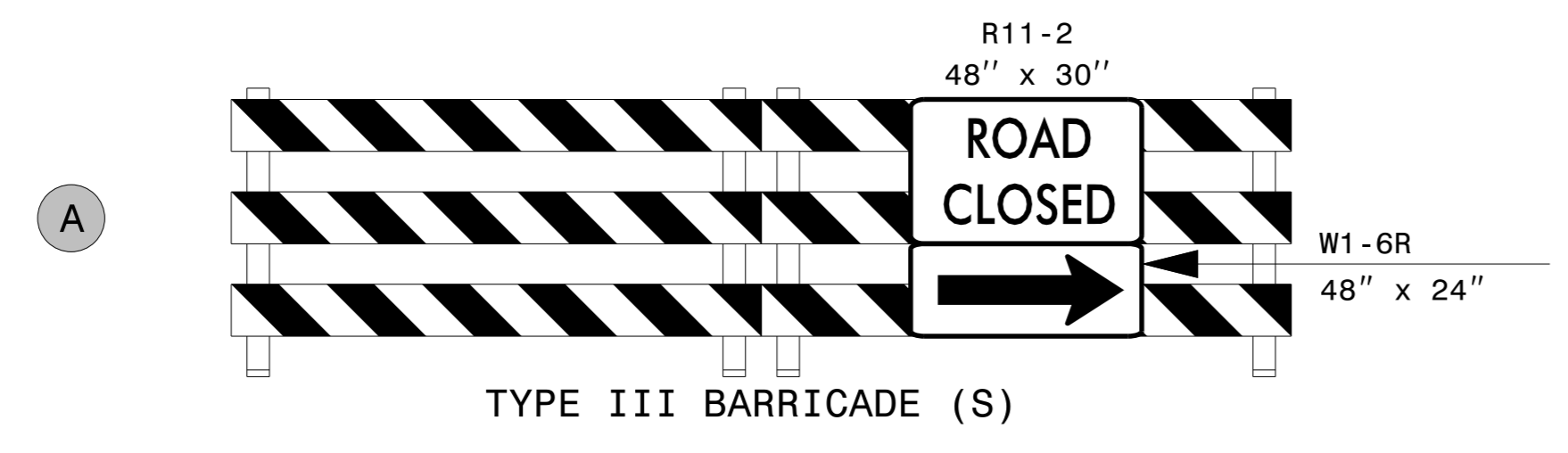
APPROVED: *Adam M. Conrad, P.E., P.T.P.*
DATE: 6/4/2021

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**TEMPORARY
TRAFFIC CONTROL
PHASE I DETAIL**



01 QUANTITY = 130 SQ. FT.
TEMPORARY SHORING
FROM -L- STA. 16+84.00, 28.00' RT
TO -L- STA. 17+16.00, 28.00' RT

(SEE SHEET TMP-2A FOR
TEMPORARY SHORING NOTES)

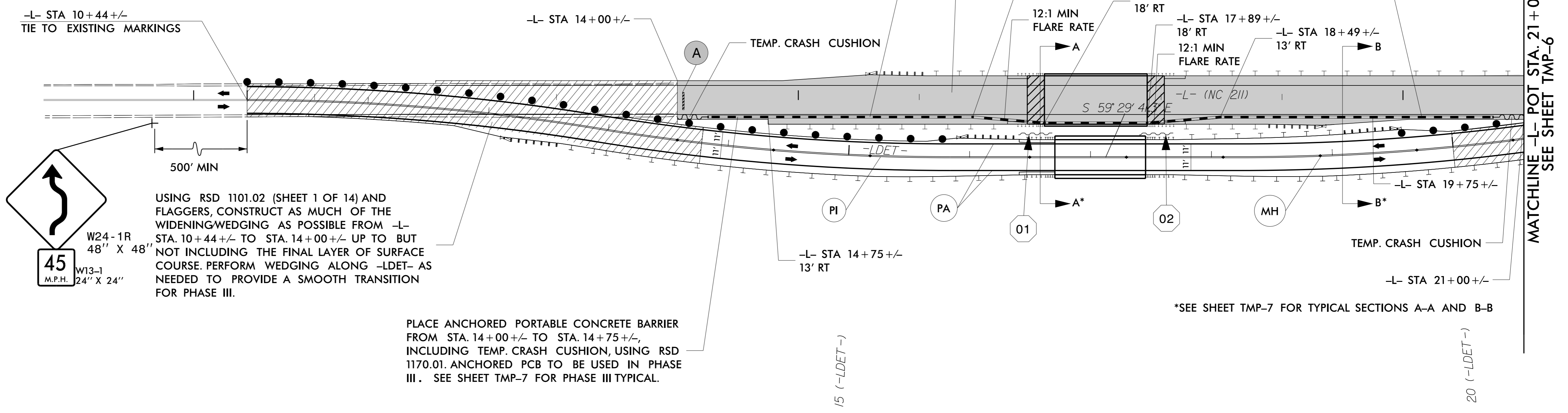
02 QUANTITY = 130 SQ. FT.
TEMPORARY SHORING
FROM -L- STA. 17+76.00, 28.00' RT
TO -L- STA. 18+08.00, 28.00' RT

(SEE SHEET TMP-2A FOR
TEMPORARY SHORING NOTES)

PLACE UNANCHORED PORTABLE CONCRETE BARRIER FROM STA. 14+75+/- TO STA. 19+75+/- USING RSD 1170.01. UNANCHORED PCB TO BE USED IN PHASE III. SEE SHEET TMP-7 FOR PHASE III TYPICAL.

AWAY FROM TRAFFIC, CONSTRUCT -L- FROM -L- STA 14+00+/- TO -L- STA 21+04+/- UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. TIE TO EXISTING PAVEMENT AND PLACE PAINT PAVEMENT MARKINGS

PLACE ANCHORED PORTABLE CONCRETE BARRIER FROM STA. 19+75+/- TO STA. 21+00+/-, INCLUDING TEMP. CRASH CUSHION, USING RSD 1170.01. ANCHORED PCB TO BE USED IN PHASE III. SEE SHEET TMP-7 FOR PHASE III TYPICAL.



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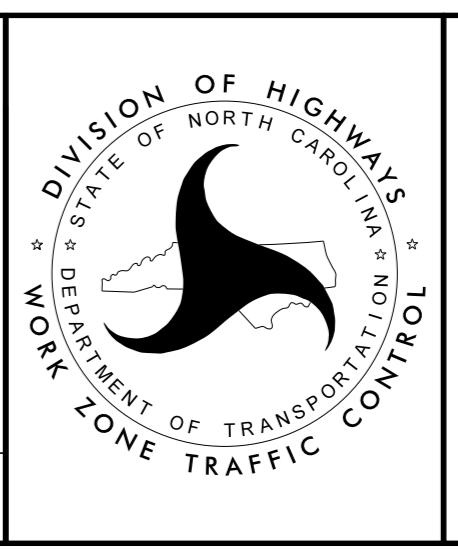
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CDM Smith Inc.
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Raleigh, NC 27612-3228
NC COA No. F-1255

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DATE: 6/4/2021

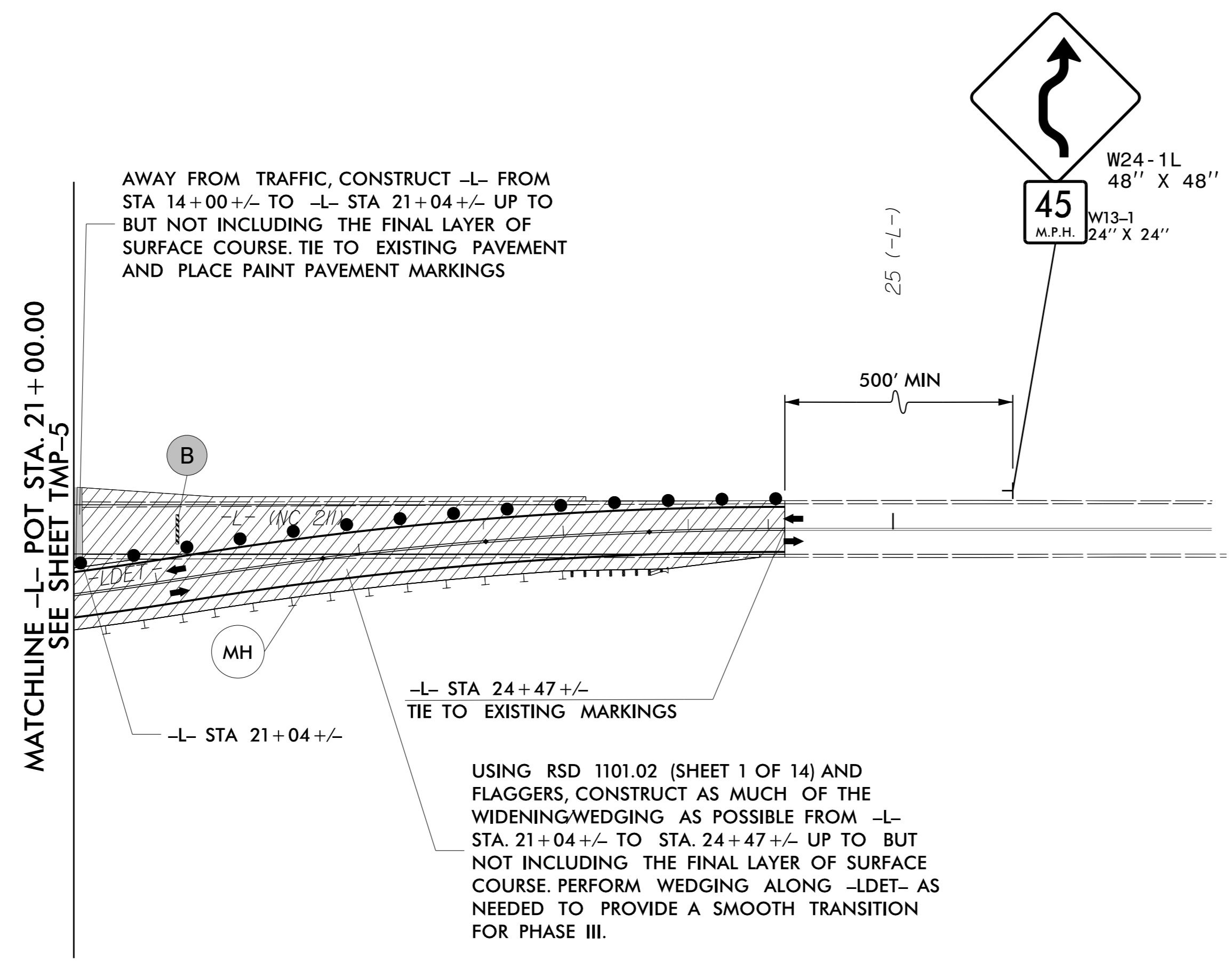
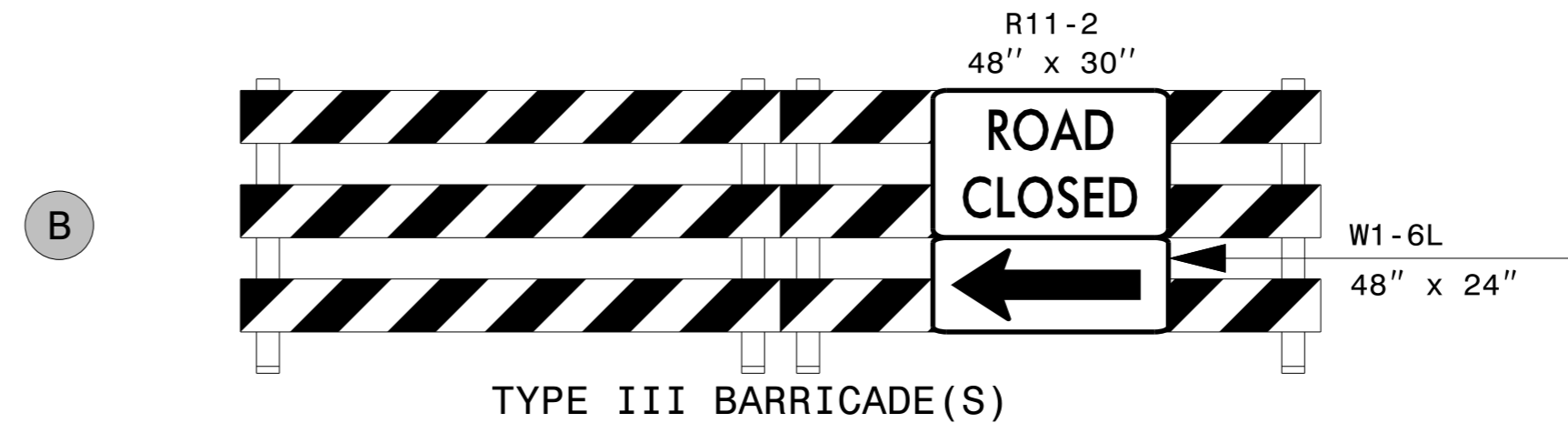
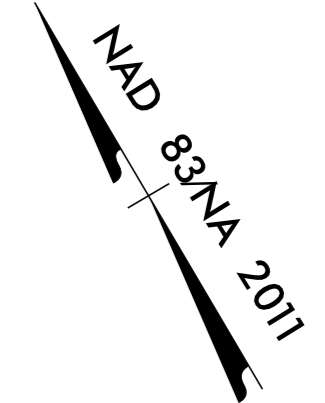
DESIGNED BY: *Adam M. Conrad, P.E., P.H.P.*
CHECKED BY: *Adam M. Conrad, P.E., P.H.P.*

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**TEMPORARY
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PHASE II DETAIL**



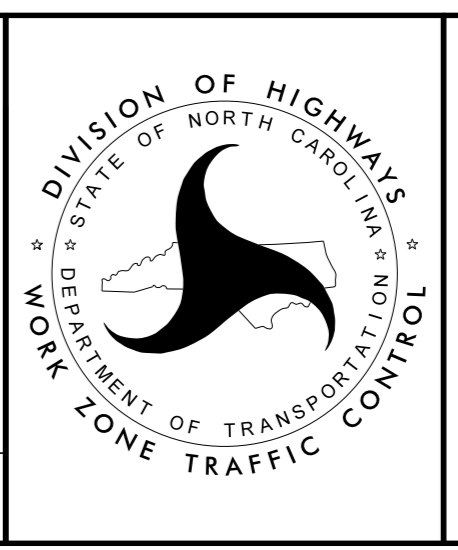
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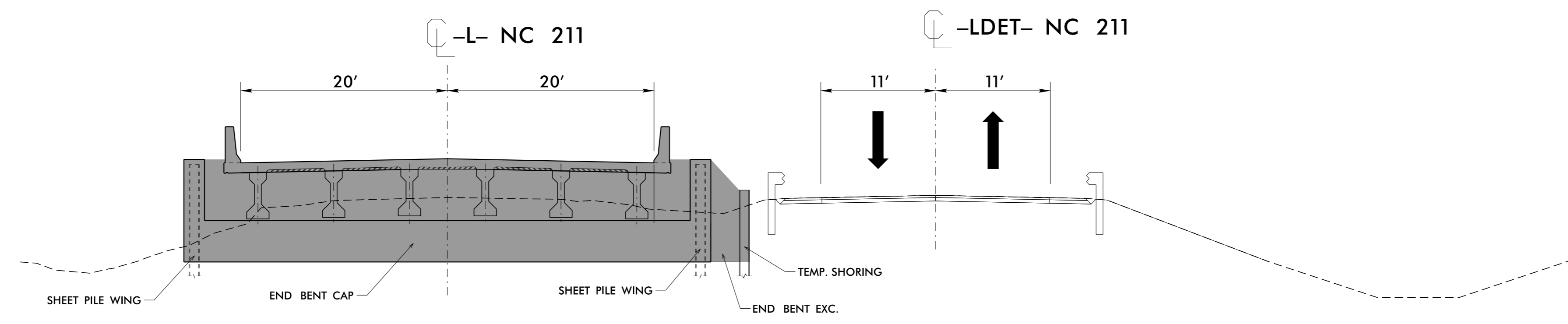
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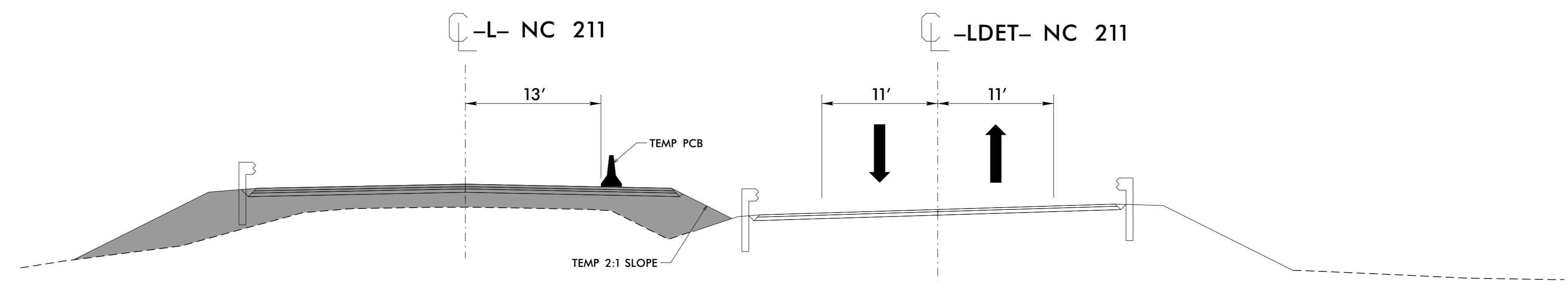
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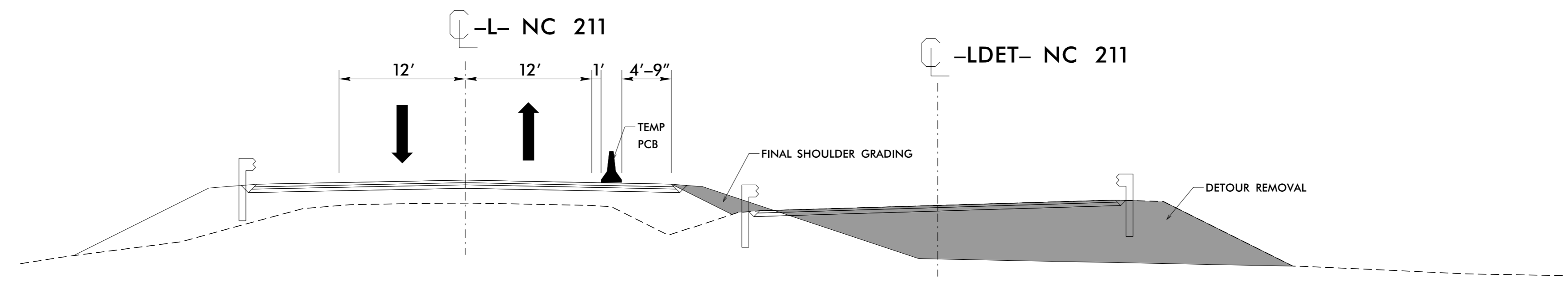
**TEMPORARY
 TRAFFIC CONTROL
 PHASE II DETAIL**



-L- STA 17+00 +/-
SECTION A-A



-L- STA 19+50 +/-
SECTION B-B

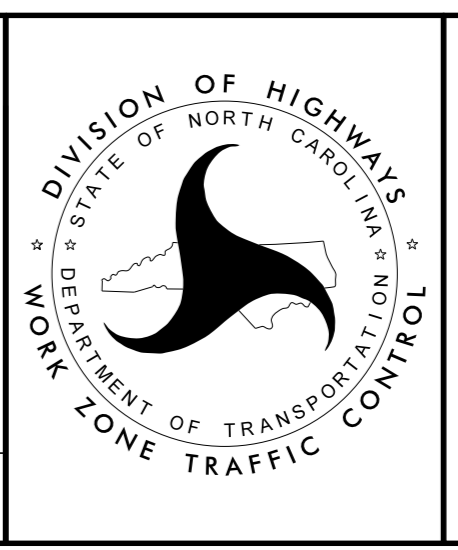


PHASE III
-L- STA 19+50 +/-

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5400 Glenwood Avenue
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Raleigh, NC 27612-3228
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TEMPORARY TRAFFIC CONTROL TYPICAL SECTIONS

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