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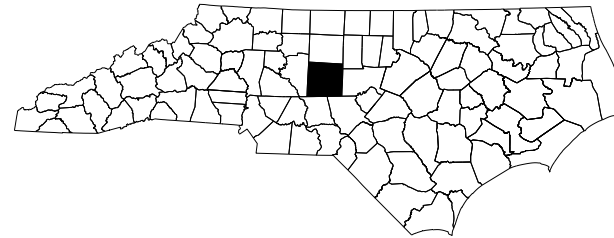
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

RANDOLPH COUNTY



RANDOLPH CO. BRIDGE #231 – US 220 /I-73 /I-74 NB OVER SR 1950 (ACADEMY ST.)

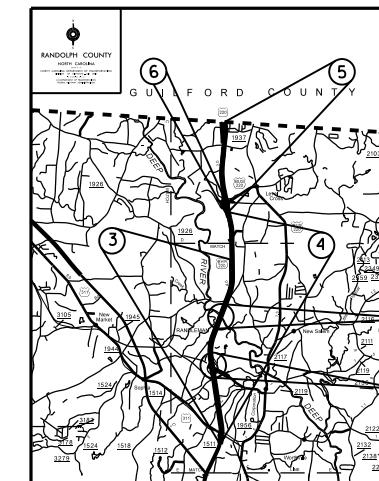
RANDOLPH CO. BRIDGE #233 – US 220 /I-73 /I-74 SB OVER SR 1950 (ACADEMY ST.)

RANDOLPH CO. BRIDGE #235 – US 220 /I-73 /I-74 NB OVER RANDLEMAN LAKE

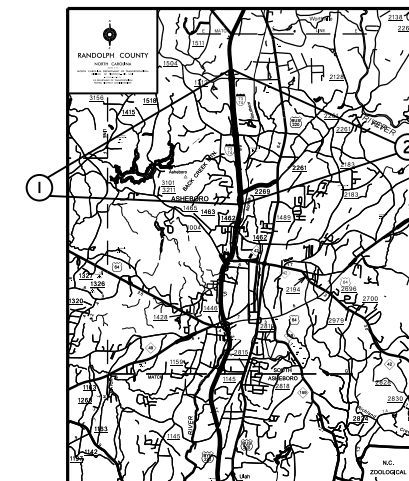
RANDOLPH CO. BRIDGE #236 – US 220 /I-73 /I-74 SB OVER RANDLEMAN LAKE

INDEX OF SHEETS

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TMP-6	BRIDGE #235 & #236 TRAFFIC MANAGEMENT PLAN

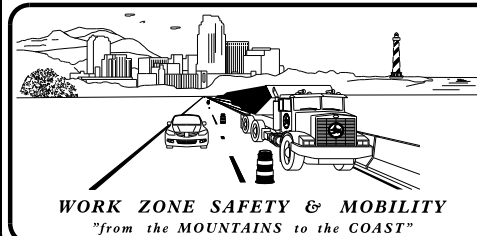


BRIDGES #235, #236
BRIDGES #231, #233



VICINITY MAPS

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 gsdavis AT DSCAD 270410



Prepared in the Office of:
DIVISION OF HIGHWAYS
DIVISION 8 DESIGN & CONSTRUCT UNIT
902 N. SANDHILLS BLVD.
ABERDEEN NC 28315



APPROVED: Greg S. Davis
DATE: 11/12/15

SEAL



SHEET NO.

TMP-1

TIP PROJECT: 2016CPT.08.08.10761, I-5763, I-5737, W-5601AJ

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 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 - TYPE III
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED ROADWAYS
1205.03	PAVEMENT MARKINGS - INTERCHANGES
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1253.01	SNOWPLOWABLE RAISED PAVEMENT MARKERS

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
- USER DEFINED (IF NEEDED)
- USER DEFINED (IF NEEDED)

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

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11/12/2015

APPROVED: <i>Greg S. Davis</i>	DATE:		
SEAL		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 UNDESIRE 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 (RESURFACING/PAINTING)AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTION
US 220 / I-73 / I-74	MONDAY THRU FRIDAY 7:00 AM - 9:00 AM 4:00 PM - 6:00 PM
SR 1950 (ACADEMY ST)	MONDAY THRU FRIDAY 7:00 AM - 9:00 AM

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

ROAD NAME
US 220 / I-73 / I-74 & SR 1950 (ACADEMY ST)

HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 7:00 A.M. DECEMBER 31st TO 6:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 6:00 P.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 7:00 A.M. THURSDAY AND 6:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY TO 6:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 6:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

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

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTION	DURATION / OPERATION
US 220 / I-73 / I-74	MONDAY THRU SUNDAY (EVERY DAY) 7:00 AM - 7:00 PM	12 HOUR ALLOWABLE CLOSURE WITH "ALL TRAFFIC EXIT" CONDITION FOR LMC OVERLAY OF BRIDGES #231 & #233 WITH ONLY ONE DIRECTION OF US 220/I-73/I-74 CLOSED AT ONE TIME.

D) DO NOT CLOSE OR NARROW LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTION	DURATION / OPERATION
US 220 / I-73 / I-74	MONDAY THRU SUNDAY (EVERY DAY) 7:00 AM - 7:00 PM	12 HOUR ALLOWABLE LANE CLOSURE FOR LMC OVERLAY OF BRIDGES #235 & #236 WITH ONLY ONE DIRECTION OF US 220/I-73/I-74 CLOSED AT ONE TIME.

E) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW 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

- F) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED, OR AS DIRECTED BY THE ENGINEER.
- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN 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.
- H) 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.
- I) 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.
- J) 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.
- K) DO NOT INSTALL MORE THAN 2 SIMULATANEOUS LANE CLOSURES IN ANY ONE DIRECTION ON US 220 / I-73 / I-74.
- L) PROVIDE A MINIMUM OF 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

- M) 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

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

SIGNING

- O) 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.
- P) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRANSPORTATION MANAGEMENT PLAN.
- Q) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.
- R) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

- S) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED, REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.
- T) PLACE TYPE III BARRICADES WITH ROAD CLOSED SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- U) PLACE ADDITIONAL SET OF THREE CHANNELIZING DEVICES (DRUMS, CONES, OR SKINNY DRUMS) PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
US 220 - I-73 - I-74	PAINT	NONE

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

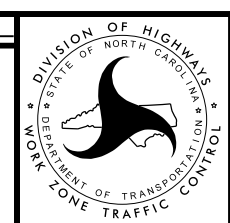
MISCELLANEOUS

Z) POLICE MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR AS DIRECTED BY THE ENGINEER.

11/12/2015

APPROVED: Greg S. Davis DATE: _____

SEAL



TRANSPORTATION
OPERATIONS
PLAN

GENERAL NOTES

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PHASING

MANAGEMENT STRATEGIES

USING DAILY LANE CLOSURES ON US 2204-734-74 NB & SB, CONTRACTOR SHALL MILL AND RESURFACE EACH MAP AS OUTLINED ON MAPS AND TYPICALS.

USING DAILY LANE CLOSURES ON SR 1950 (ACADEMY ST), CONTRACTOR SHALL SET UP CONTAINMENT FOR THE PAINTING OF BRIDGE #231 AND #233.

ONCE THE CONTRACTOR ELECTS TO BEGIN LATEX MODIFIED CONCRETE OVERLAY (LMC OVERLAY):

ON BRIDGES #231 AND #233, THE CONTRACTOR SHALL CLOSE ROADWAY IN ONE DIRECTION ONLY DURING THE INTERMEDIATE CONTRACT TIME OF 7:00 PM TO 7:00 AM AND OVERLAY EXISTING BRIDGES AND PROVIDE FINAL PAVEMENT MARKINGS.

ON BRIDGES #235 AND #236 THE CONTRACTOR SHALL CLOSE ONE LANE OF TRAFFIC IN EACH DIRECTION DURING THE INTERMEDIATE CONTRACT TIME OF 7:00 PM TO 7:00 AM AND OVERLAY EXISTING BRIDGES AND PROVIDE FINAL PAVEMENT MARKINGS

STEP 1:
INSTALL WZ ADVANCE WARNING SIGNS (RSD 1101.01)

STEP 2:
CONTRACTOR MAY BEGIN WITH RESURFACING AS OUTLINED IN MAPS AND TYPICALS USING RSD 1101.02, SHT 4 OR 6 OF 15.

STEP 3:
INSTALL ROAD CLOSURE SIGNING ACCORDING TO TMP-4 AND TMP-5 AND RSD 1101.03 SHEET 7 OF 9, AND COVER SIGNS AS APPROPRIATE.

COMPLETE STEP 4, 5, AND 6 IN ONE WORK PERIOD.

STEP 4:
IN ONE CONTINUOUS WORK PERIOD, UNCOVER ROAD CLOSURE SIGNING, FOR ONE DIRECTION ONLY AND INSTALL DEVICES TO CLOSE US 220 /I-73 /I-74 AND IMPLEMENT "ALL TRAFFIC EXIT" CONDITION PER SHEET TMP-4 OR TMP-5 AND RSD 1101.03 SHEET 7 OF 9, FOR BRIDGE #231 OR #233

STEP 5:
WITH US 2204-734-74 (IN ONE DIRECTION) CLOSED TO TRAFFIC, PERFORM LMC OVERLAY AND REPLACE PAVEMENT MARKINGS AND MARKERS FOR A PORTION OF THE BRIDGE THAT CAN BE COMPLETED IN ONE OVERNIGHT PERIOD.

STEP 6:
REMOVE THE DEVICES AND COVER OR REMOVE SIGNS CLOSING US 2204-734-74 AND REOPEN BRIDGE TO TRAFFIC.

STEP 7:
REPEAT STEPS 4, 5, AND 6 TO COMPLETE LMC OVERLAY OF THE ENTIRE BRIDGES #231 AND #233.



STEPS 8 AND 9 MAY BE PERFORMED SIMULTANEOUSLY.

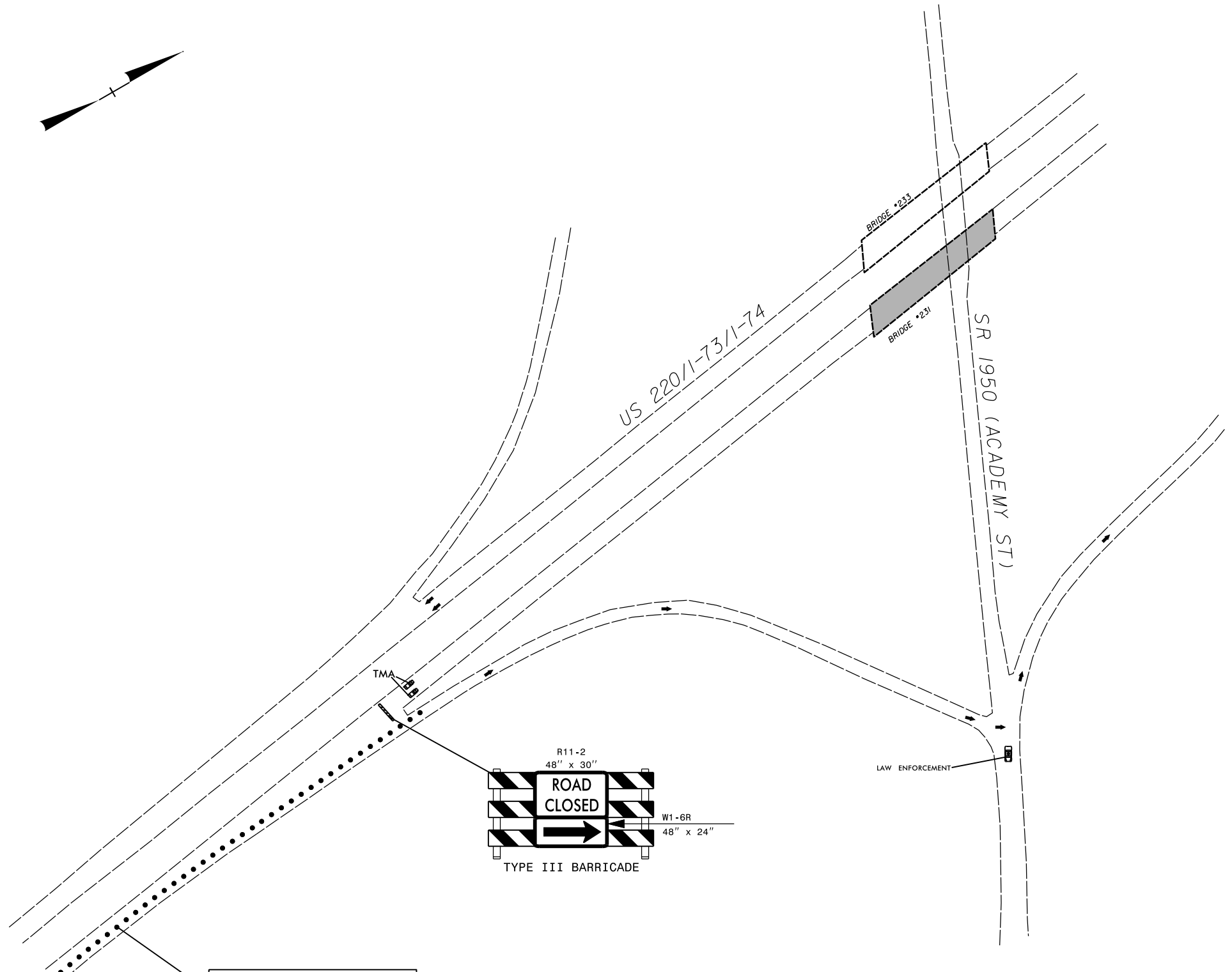
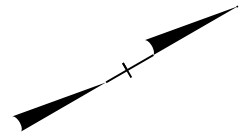
STEP 8:
INSTALL CONTAINMENT ON BRIDGE #231 AND #233. USING A FLAGGING OPERATION ON SR 1950 (ACADEMY ST) PER RSD 1101.02 SHEET 1 OF 15, COMPLETE BRIDGE PAINTING ON BOTH BRIDGES.

STEP 9:
ON BRIDGES #235 AND #236. USING LANE CLOSURES PER RSD 1101.02 SHEETS, 4, AND/OR 6 OF 15, (SEE TMP-6) PERFORM LMC OVERLAY AND REPLACE PAVEMENT MARKINGS AND MARKERS FOR A PORTION OF THE BRIDGE THAT CAN BE COMPLETED IN ONE OVERNIGHT PERIOD. (7:00 PM TO 7:00 AM)

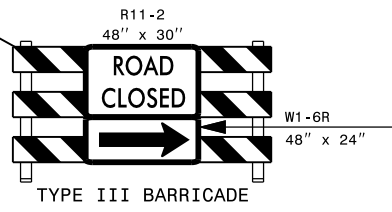
STEP 10:
ONCE BRIDGES #235 AND #236 ARE COMPLETE, CONTRACTOR SHALL COMPLETE RESURFACING AND PLACE PAVEMENT MARKINGS AND MARKERS AS OUTLINED IN MAPS AND TYPICALS. REMOVE ALL SIGNS AND DEVICES AND OPEN TRAFFIC TO ALL ALL LANES.

11/12/2015

APPROVED: <u>Greg S. Davis</u> DATE: _____ 		<h3>TEMPORARY TRAFFIC MANAGEMENT PHASING</h3>
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FOR ADVANCED SIGNING
REFER TO RSD 1101.03
SHEET 7 OF 9

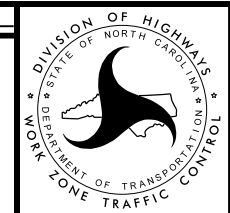


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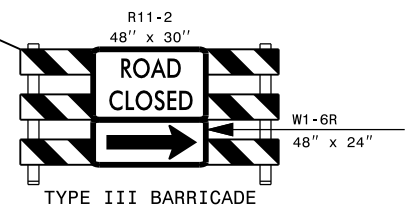
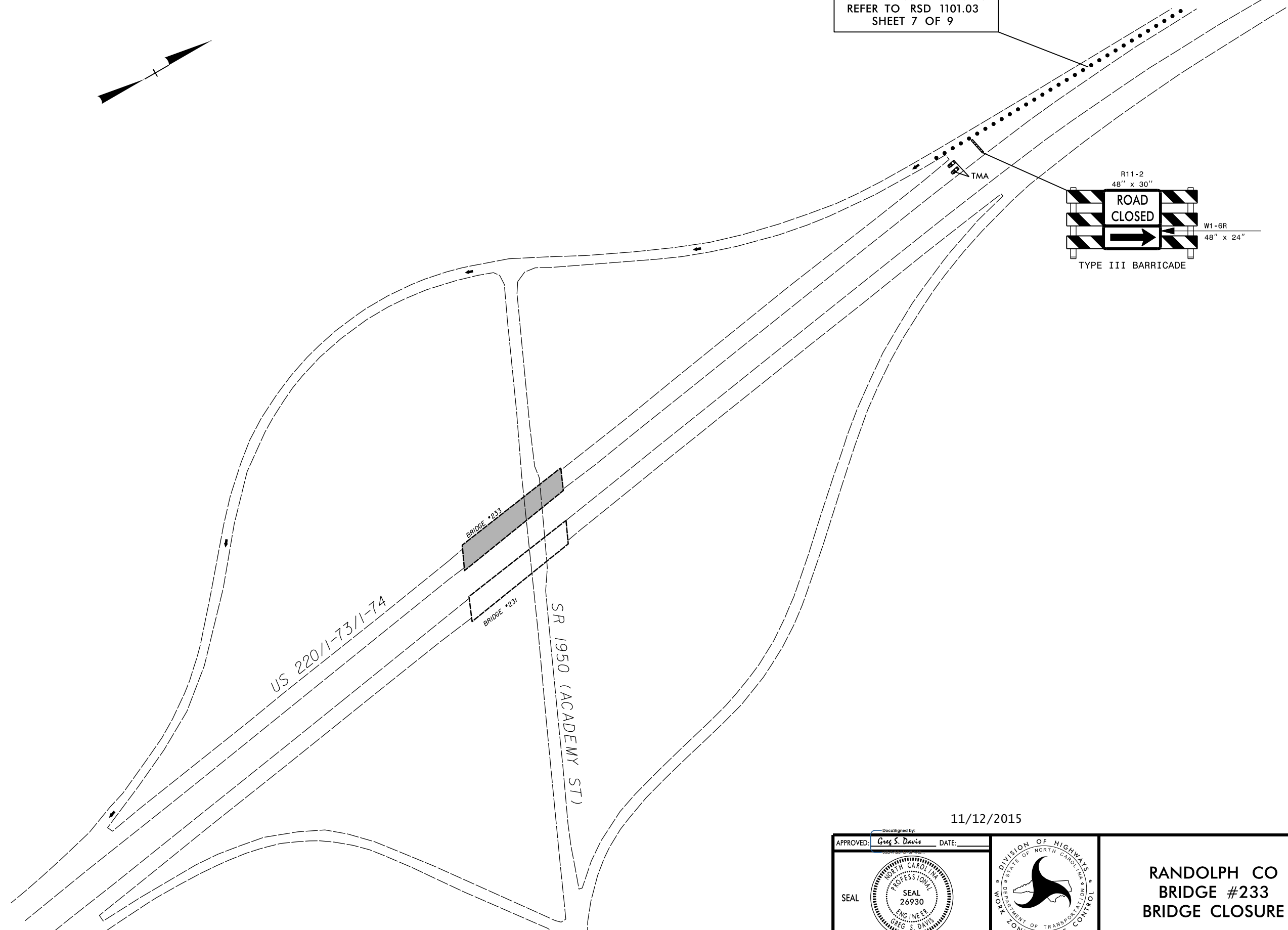
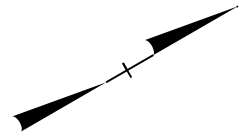
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**RANDOLPH CO
BRIDGE #231
BRIDGE CLOSURE**

FOR ADVANCED SIGNING
REFER TO RSD 1101.03
SHEET 7 OF 9

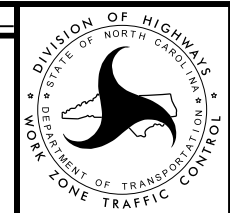


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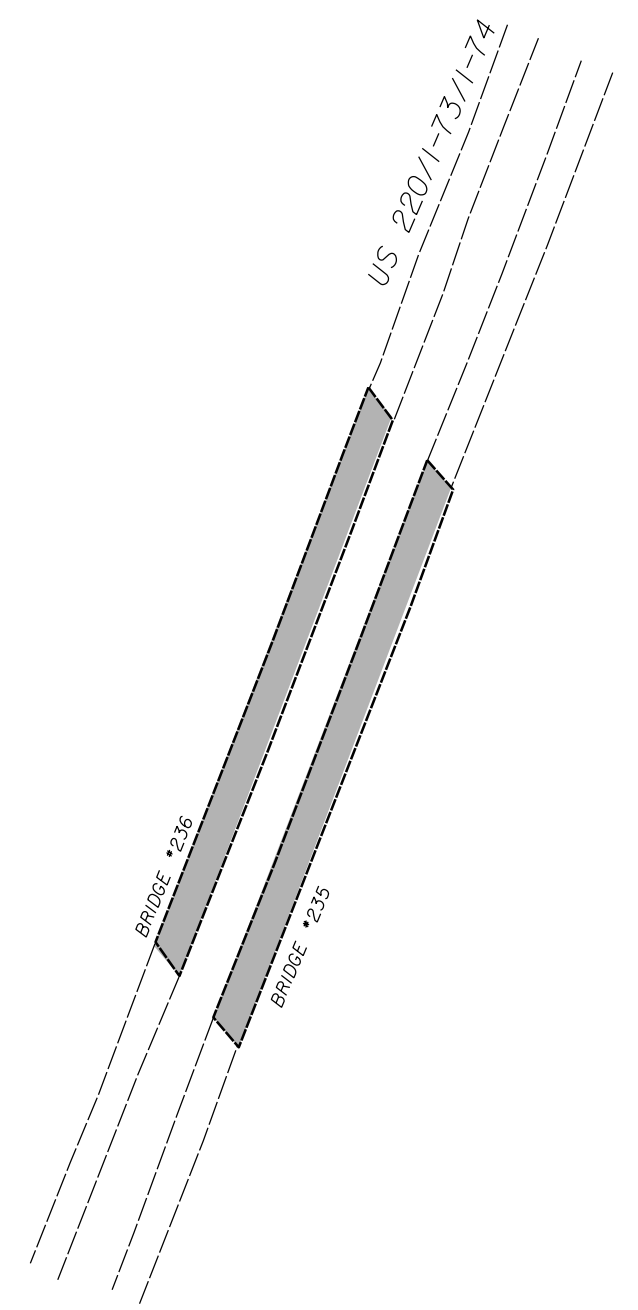
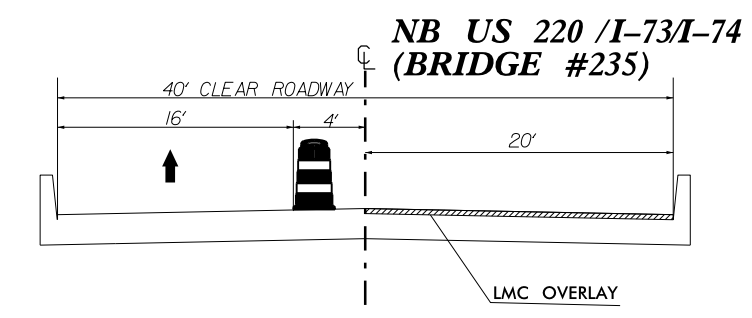
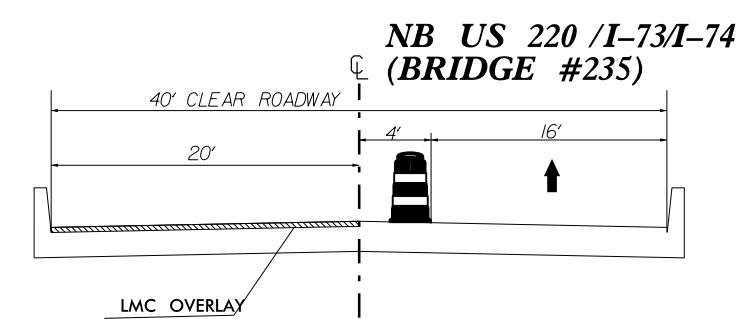
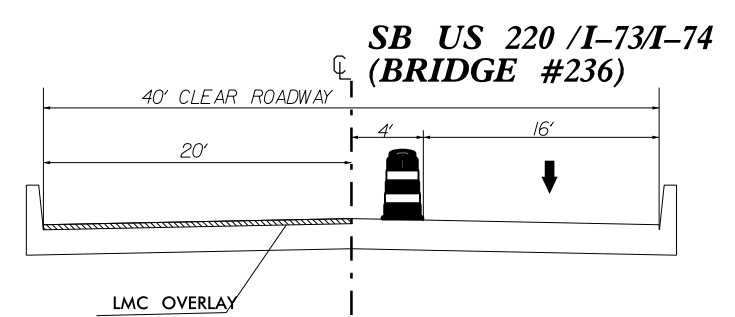
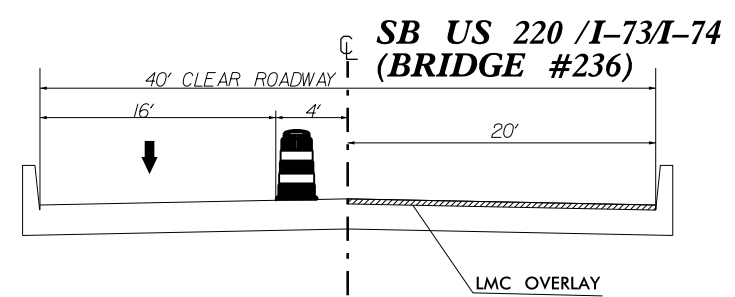
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Greg S. Davis



**RANDOLPH CO
BRIDGE #233
BRIDGE CLOSURE**

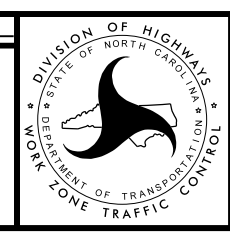


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APPROVED: Greg S. Davis DATE: _____

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SEAL



**RANDOLPH CO
BRIDGE #235 & #236
TRAFFIC MANAGEMENT PLAN**

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