

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 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
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

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 / WIDEN

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

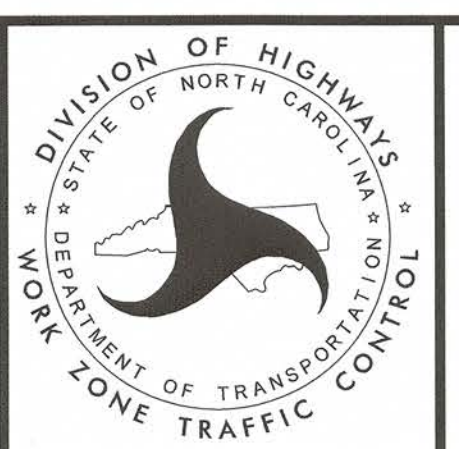
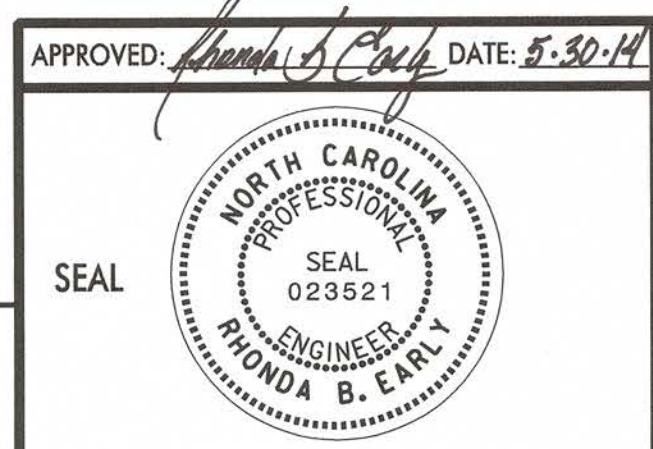
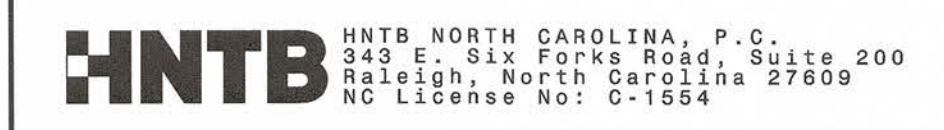
PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

SYMBOL	DESCRIPTION	PAY ITEM
PAVEMENT MARKING LINES		
		COLD APPLIED PLASTIC - TYPE IV (4")
CA	WHITE EDGELINE	
CB	YELLOW EDGELINE	
PAVEMENT MARKERS		
		TEMPORARY RAISED
MH	YELLOW / YELLOW	
MM	CRYSTAL / CRYSTAL	

8/17/99
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 CONCUR:
 REVISE:
 VERIFY:



TRANSPORTATION MANAGEMENT PLAN
 ROADWAY STANDARD DRAWINGS & LEGENDS

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 UNDESIRABLE 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 ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
-L- (US 70 WBL)	5:00 AM TO 11:00 PM

LANE AND SHOULDER CLOSURE REQUIREMENTS

- B) 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.
- C) 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.
- D) 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.
- E) 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.
- F) 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.
- G) DO NOT INSTALL MORE THAN ONE LANE CLOSURE, IN ANY ONE DIRECTION, ON -L- (US 70 WBL).

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- I) 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.
- J) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.
- K) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.
- 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 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

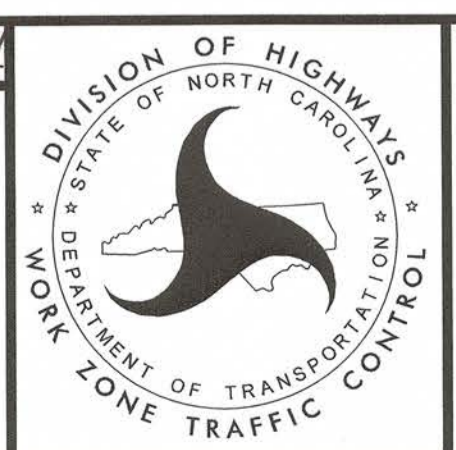
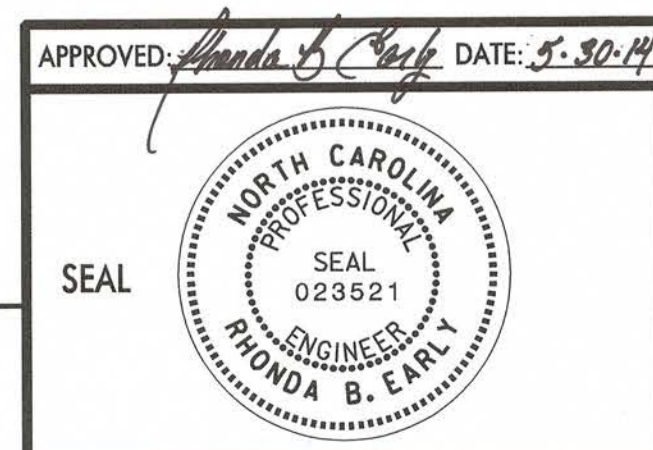
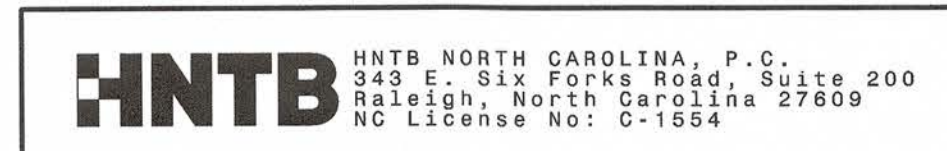
- N) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS),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

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
1. -L- (US 70 WBL)	COLD APPLIED PLASTIC (TYPE 4)	TEMPORARY RAISED
- R) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- S) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

13'x42" DWG TO: TMP_01BC notes.dgn
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 CONCUR:
 REVISE:
 VERIFY:



TRANSPORTATION
 MANAGEMENT PLAN

**OPERATIONS PLAN:
 GENERAL NOTES**

PHASING

NOTES:

REPLACE MARKINGS AND RETURN TRAFFIC TO THE CURRENT TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

MAINTAIN VEHICULAR ACCESS TO ALL RESIDENCES AND BUSINESSES DURING THE LIFE OF THE CONTRACT UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

COMPLETE ANY PROPOSED MILLING & PAVING IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANE.

THE TERM "RSD" DENOTES ROADWAY STANDARD DRAWING.

PHASE I

*** REFER TO SHEETS TMP-2 THRU TMP-4 FOR DETAILS ***

THE FOLLOWING PHASING INDICATES THAT STAGE 1 (RIGHT LANE BRIDGE PRESERVATION WORK) IS TO BE COMPLETED FOLLOWED BY STAGE 2 (LEFT LANE BRIDGE PRESERVATION WORK). THE CONTRACTOR MAY ELECT TO REVERSE THE SEQUENCE, BUT MUST MAINTAIN THE DIMENSIONS OF THE WORK ZONE, CLEAR ROADWAY AREAS AND THE LOCATIONS OF THE SKINNY DRUMS SHALL MATCH THE TYPICAL SECTIONS PROVIDED ON SHEET TMP-5.

- STEP 1: INSTALL AND COVER DETOUR SIGNS AS SHOWN ON TMP-2.
- STEP 2: USING RSD 1101.02 (SHEET 3 OF 15), CLOSE RIGHT LANE FOR STAGE 1 BRIDGE PRESERVATION WORK. LANE CLOSURE IS CAN IN PLACE UNTIL STAGE 1 IS COMPLETE.
- STEP 3: UNCOVER DETOUR SIGNS, CLOSE WBL AND COMPLETE STAGE 1 BRIDGE PRESERVATION WORK. REOPEN WBL EACH DAY AND COVER DETOUR SIGNS.
- STEP 4: UPON COMPLETION OF STAGE 1 BRIDGE PRESERVATION WORK, PLACE TEMPORARY PAVEMENT MARKING AND OPEN STAGE 1 TO TRAFFIC.
- STEP 5: USING RSD 1101.02 (SHEET 3 OF 15), CLOSE LEFT LANE FOR STAGE 2 BRIDGE PRESERVATION WORK. LANE CLOSURE CAN STAY IN PLACE UNTIL STAGE 2 IS COMPLETE.
- STEP 6: UNCOVER DETOUR SIGNS, CLOSE ENTIRE WBL AND COMPLETE STAGE 2 BRIDGE PRESERVATION WORK. REOPEN WBL EACH DAY AND COVER DETOUR SIGNS.
- STEP 7: UPON COMPLETION OF STAGE 2 BRIDGE PRESERVATION WORK, PLACE TEMPORARY PAVEMENT MARKING AND OPEN STAGE 2 TO TRAFFIC.
- STEP 8: USING RSD 1101.02 (SHEET 12 OF 15), PLACE FINAL PAVEMENT MARKING AND MARKERS AND OPEN ALL LANES TO TRAFFIC. REMOVE TEMPORARY DEVICES AND SIGNING.

MANAGEMENT STRATEGIES

THE OBJECTIVE OF THIS PROJECT IS TO COMPLETE THE BRIDGE PRESERVATION FOR THE BRIDGE #2 ON US 70 OVER NEUSE RIVER AND BRIDGE #5 ON US 70 OVER NEUSE RIVER OVERFLOW IN JOHNSTON COUNTY.

THESE BRIDGES ARE IN CLOSE PROXIMITY TO EACH OTHER WITH NO ACCESS POINTS BETWEEN THEM. THEY CAN BE COMPLETED USING THE SAME OFF-SITE DETOUR ROUTE.

NOTE: IN ADDITION TO CONTINUOUS LANE CLOSURES THAT MAY BE USED 24 HOURS A DAY, TEMPORARY ROAD CLOSURES ARE ALLOWED AT NIGHT USING AN OFF-SITE DETOUR BETWEEN 11:00 PM AND 5:00 AM.

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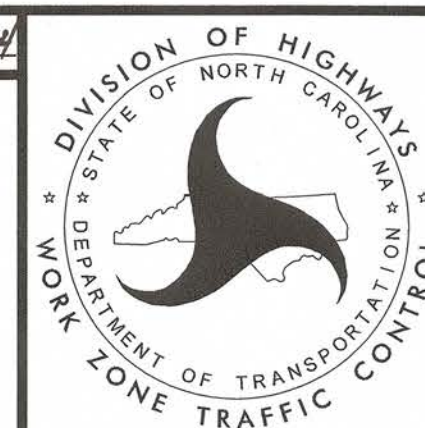
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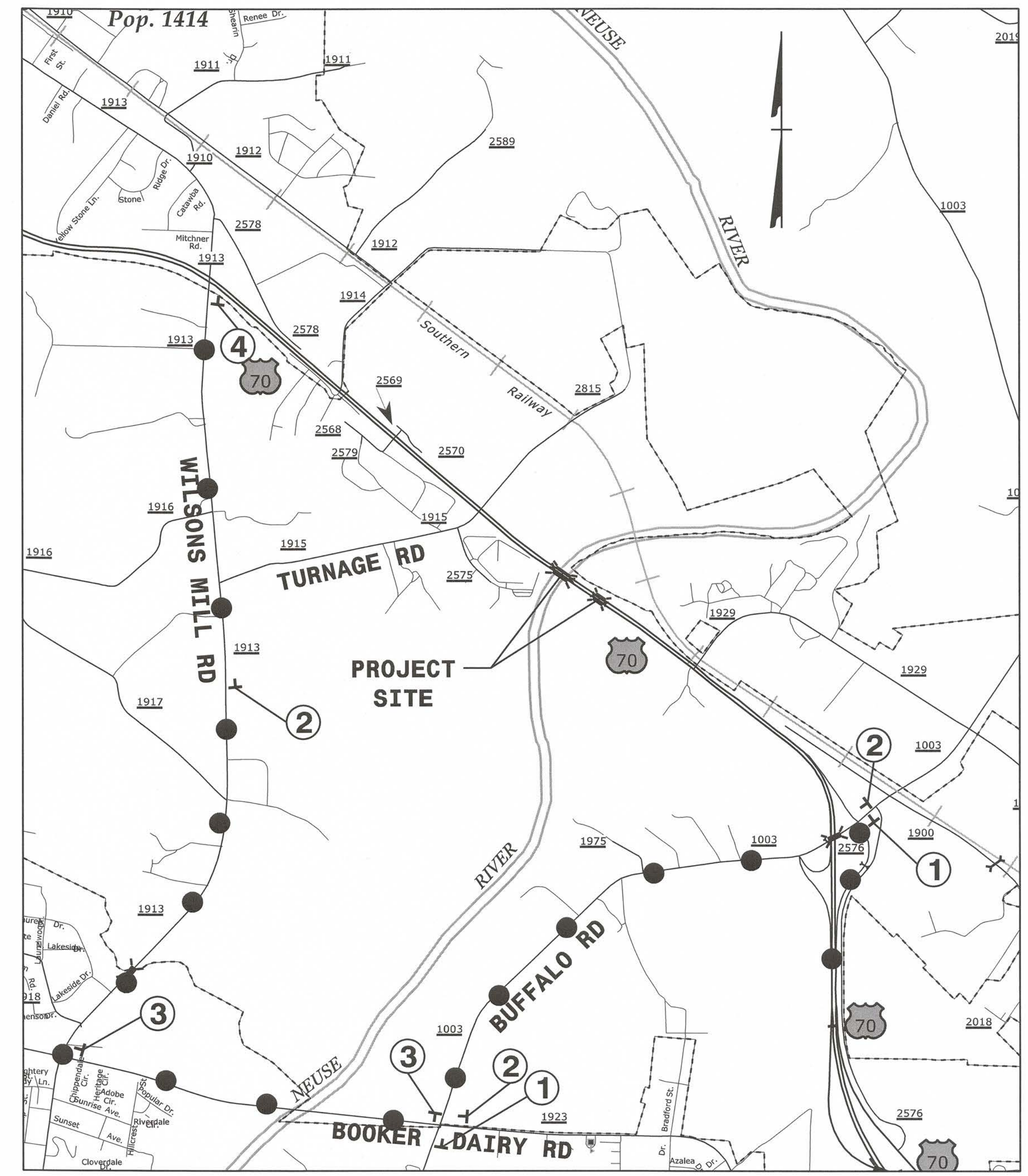
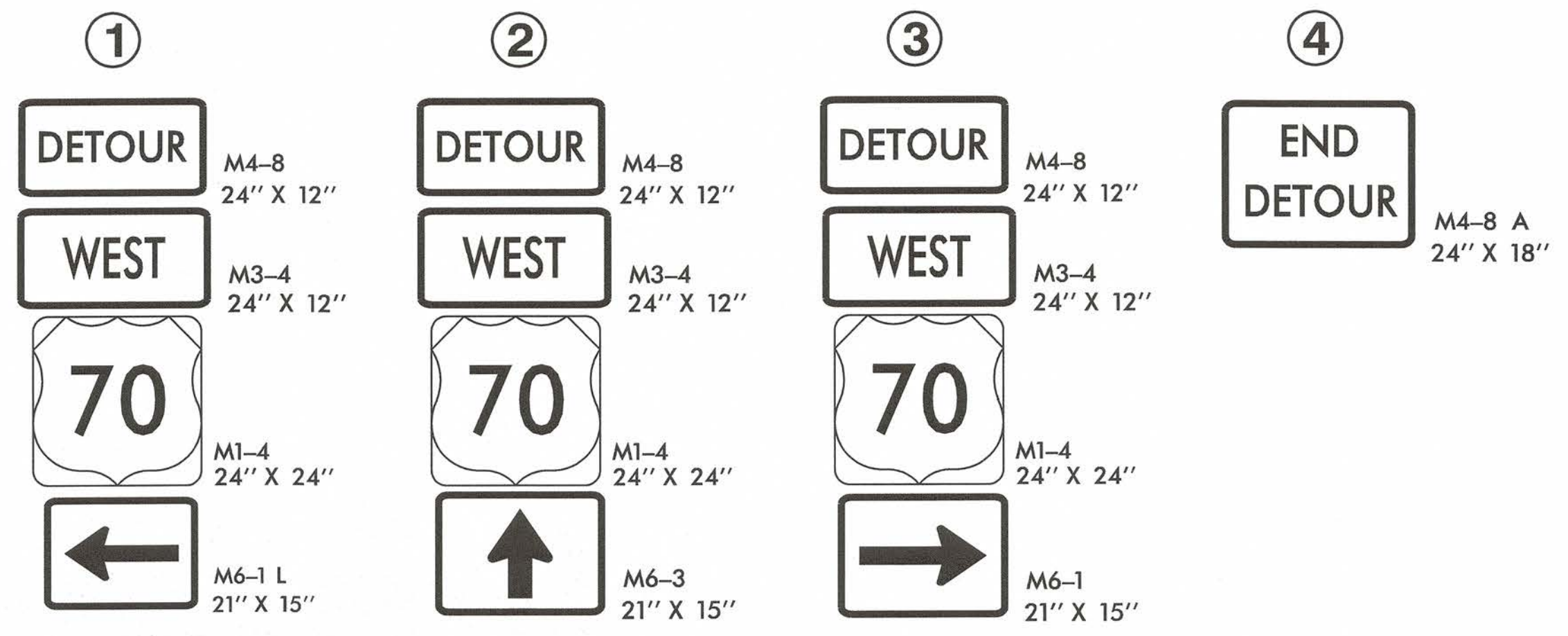
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 343 E. SIX FORKS ROAD, SUITE 200
 RALEIGH, NORTH CAROLINA 27609
 NC LICENSE NO: C-1554

APPROVED: *Rhonda B. Early* DATE: 5-20-14
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 023521
 RHONDA B. EARLY



TRANSPORTATION
 MANAGEMENT PLAN
 OPERATIONS PLAN:
 PHASING &
 MANAGEMENT STRATEGY



NOTES:
 * SEE SHEET TMP-3 & TMP-4 FOR PLACEMENT OF TYPE III BARRICADES AND LANE CLOSURES.
 * SEE RSD 1101.03 (SHEETS 1 OF 9) FOR ADDITIONAL SIGNS & DEVICES.

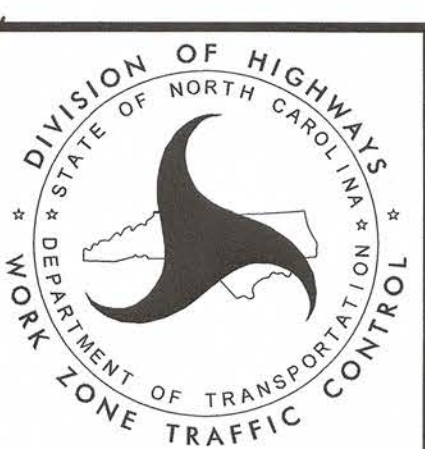
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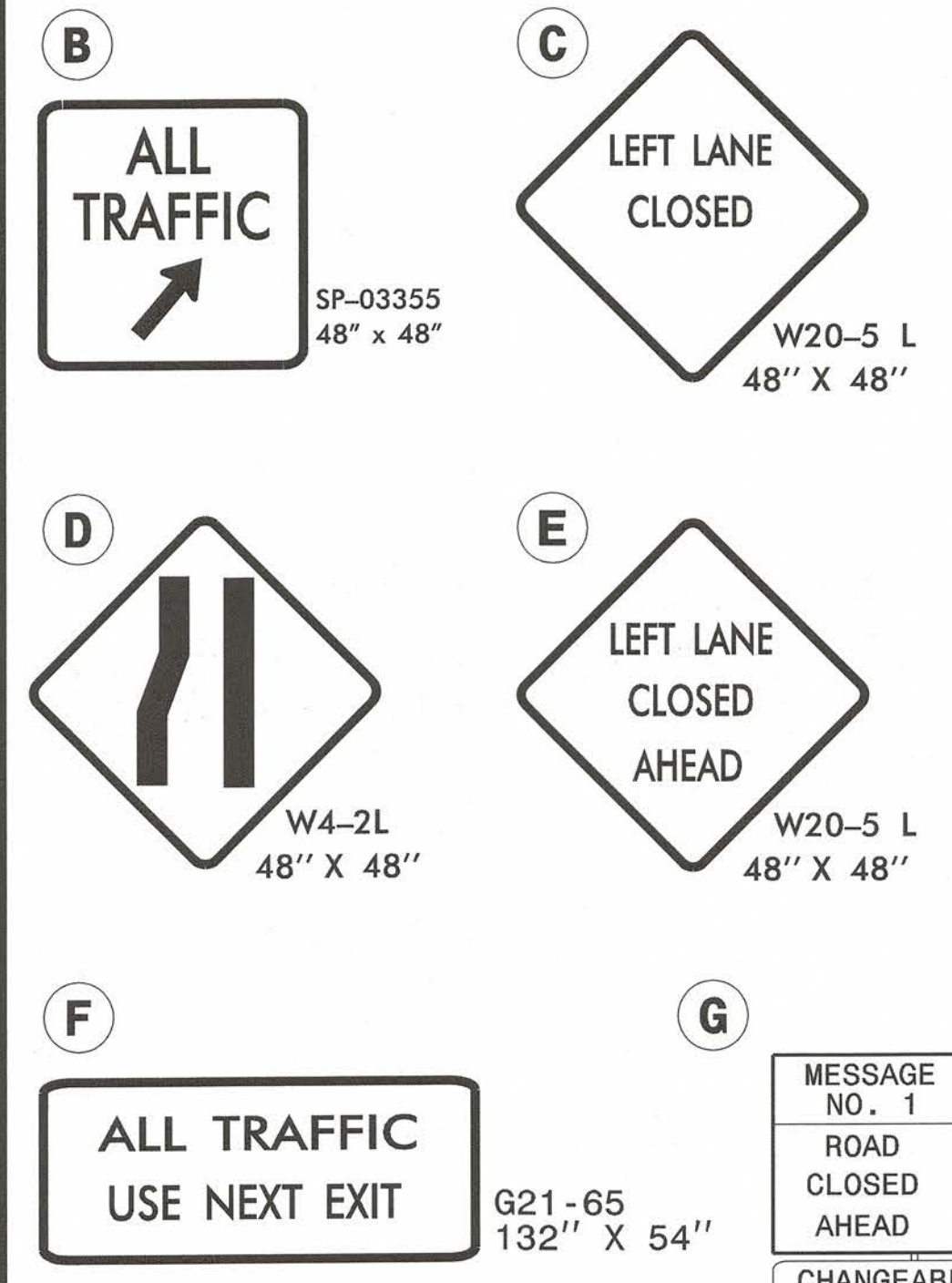
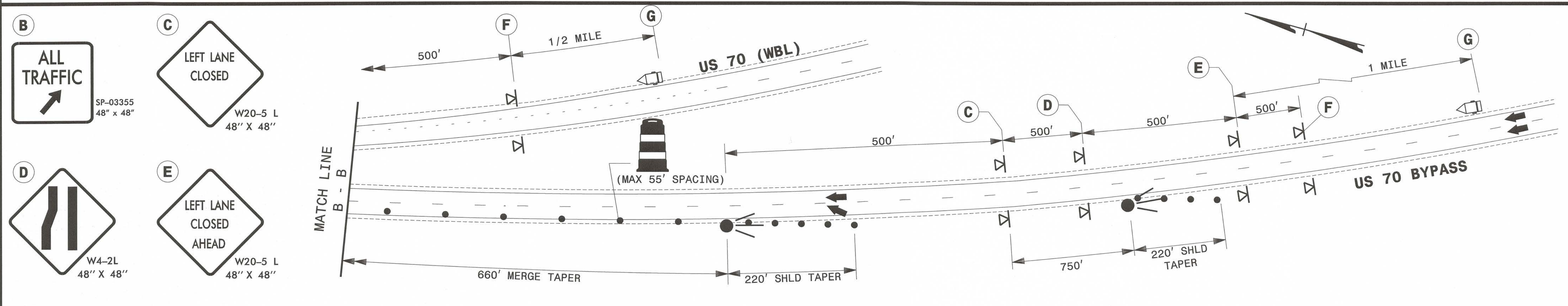
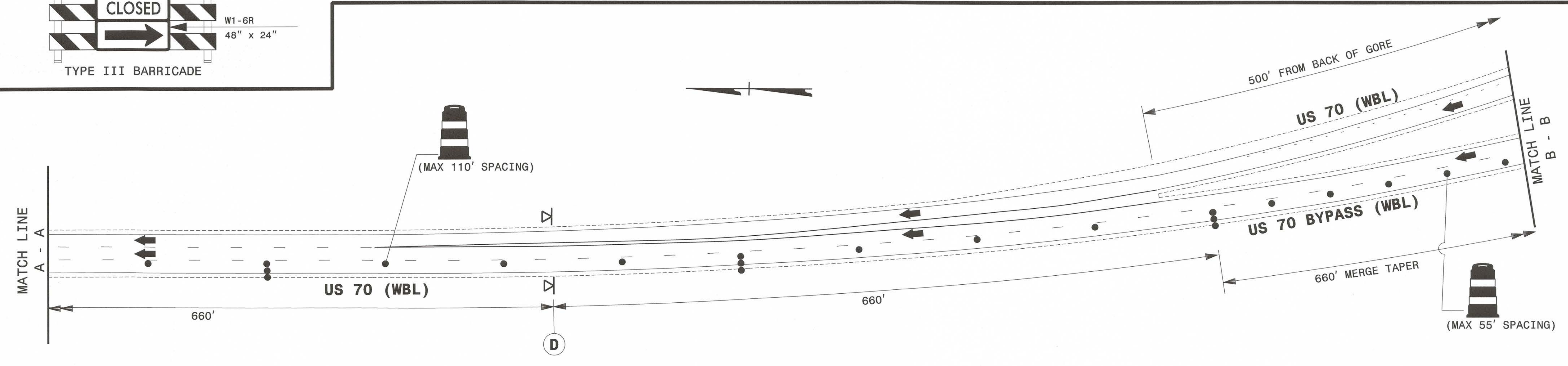
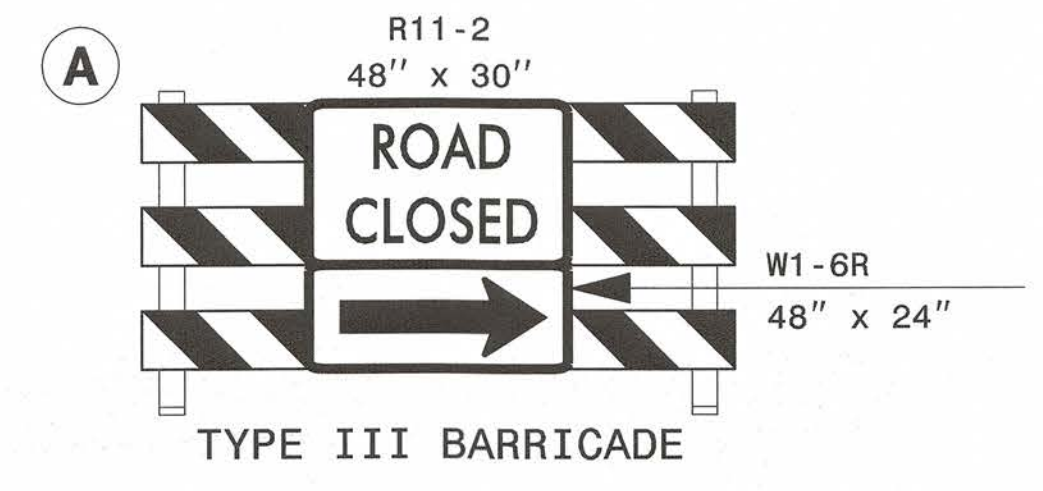
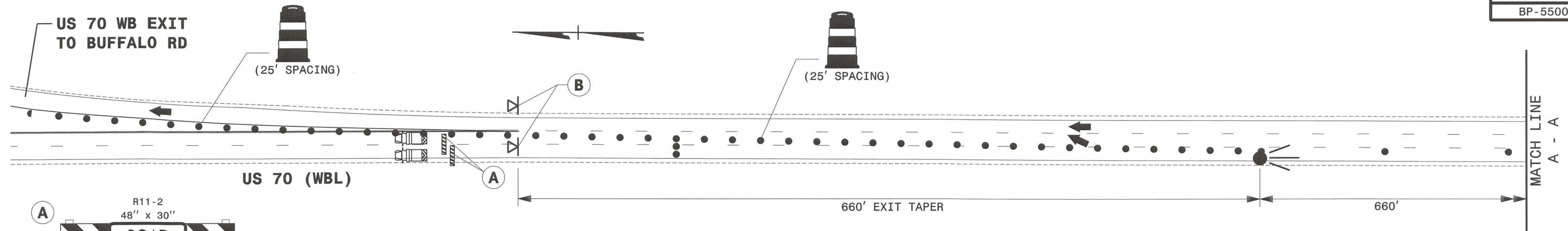
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 RALEIGH, NORTH CAROLINA 27609
 NC LICENSE NO.: C-1654

APPROVED: *Rhonda B. Early* DATE: 5-30-14
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 PROFESSIONAL
 ENGINEER
 RHMonda B. EARLY



TRANSPORTATION
 MANAGEMENT PLAN
 DETOUR DETAIL

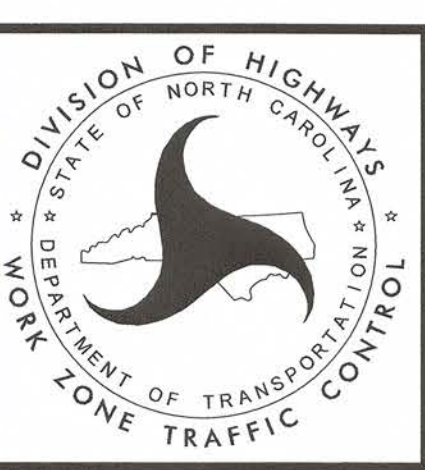
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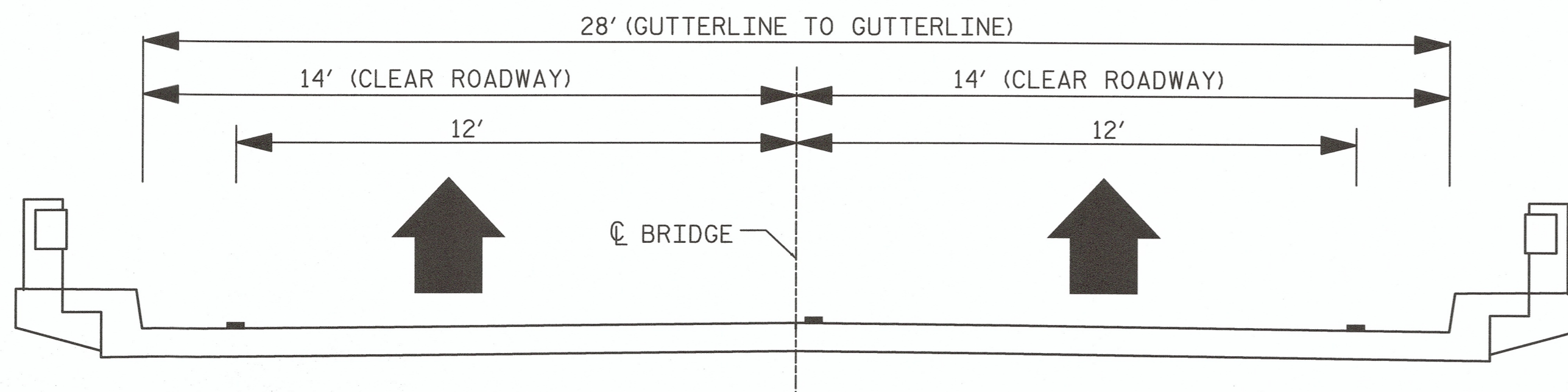
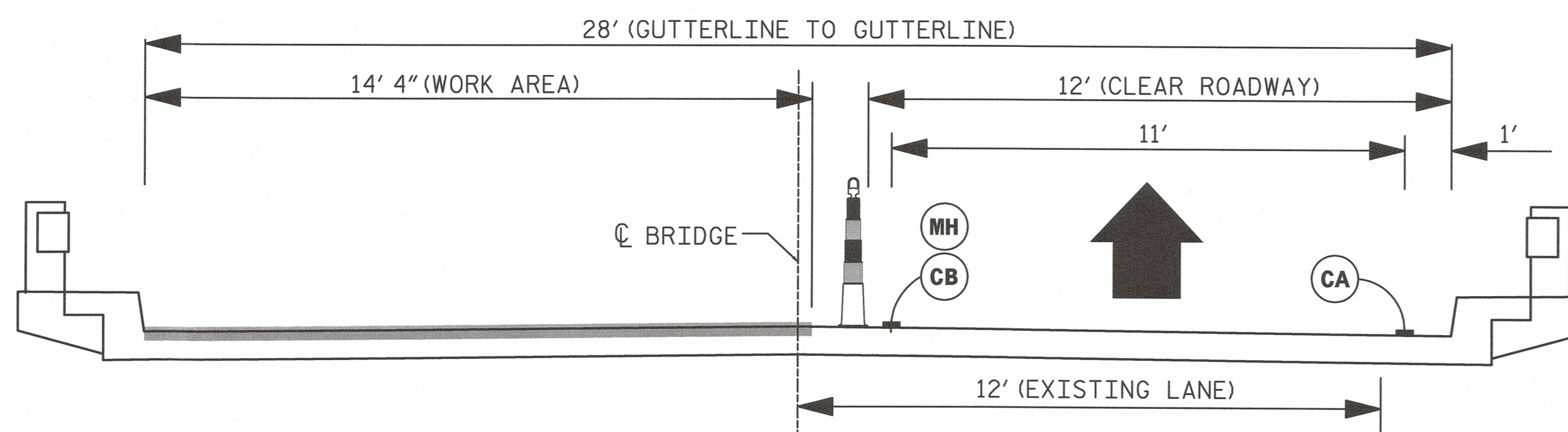
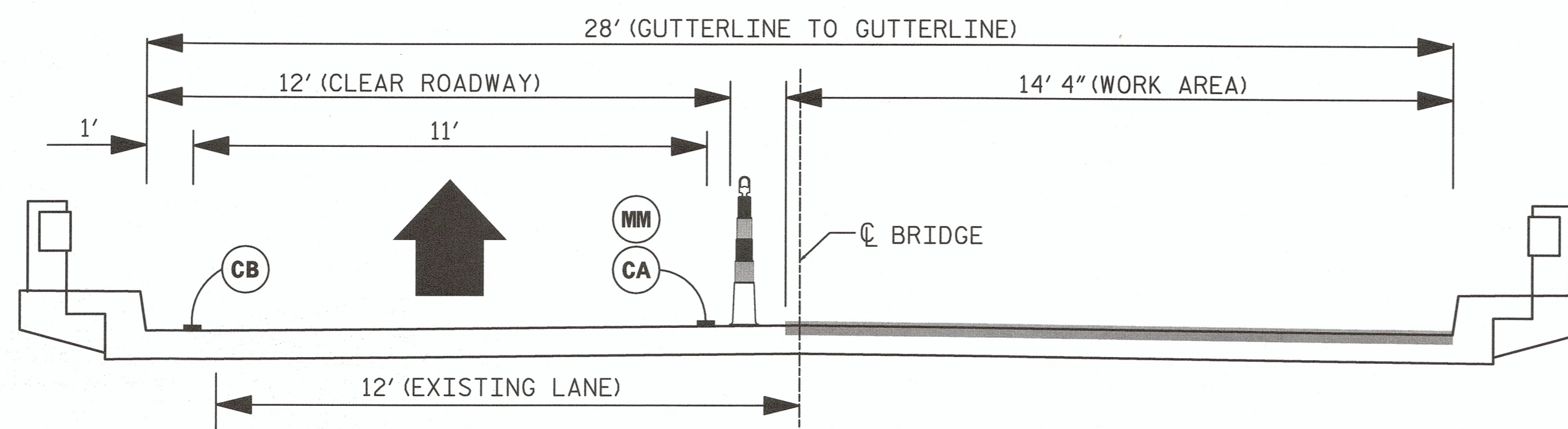
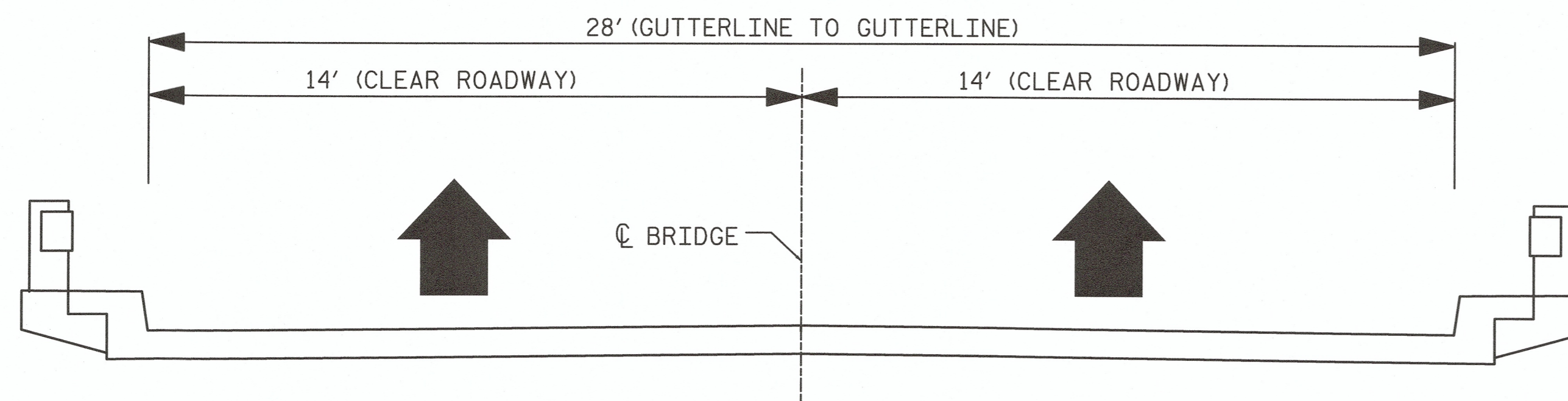
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QA/QC STAGE:
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RALEIGH, NORTH CAROLINA 27609
NC LICENSE NO: C-1554

APPROVED: *[Signature]* DATE: 5-30-14
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
PHONDA B. EARLY



TRANSPORTATION MANAGEMENT PLAN
PHASE I
DETAIL



NOTES:
1. MOVE DRUMS 2' FROM EDGE OF TRAVEL DURING PERIODS OF CONSTRUCTION INACTIVITY.
2. 28' (GUTTERLINE TO GUTTERLINE) DISTANCE IS THE SAME FOR BOTH BRIDGE SITES.

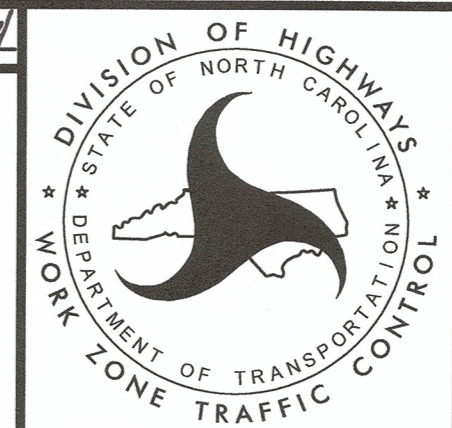
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HNTB NORTH CAROLINA, P.C.
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SEAL 023521



TRANSPORTATION
MANAGEMENT PLAN

TYPICAL SECTIONS