

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

BLADEN COUNTY



CONSTRUCTION SEQUENCE

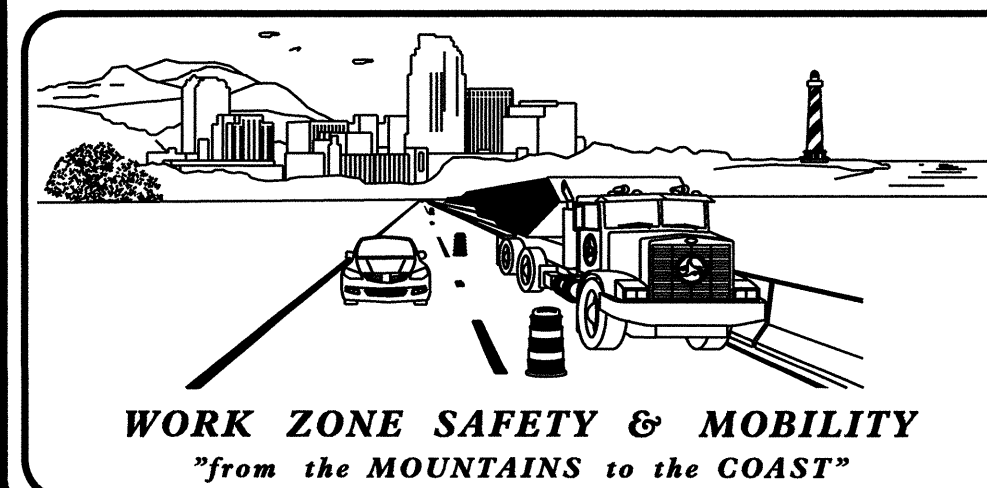
NOTE - BOTH INTERSECTIONS (-Y1- AND -Y2-) MAY BE CONSTRUCTED CONCURRENTLY.

- STEP 1 - INSTALL ALL ADVANCED WORK ZONE WARNING SIGNS. (SEE RSD 1101.01, SHEET 2)
- STEP 2 - USING RSD 1101.02, SHEET 5, CONSTRUCT OUTSIDE LANE IMPROVEMENTS OF -L- (NC 87) UP TO EDGE AND ELEVATION OF EXISTING PAVEMENT. (SEE TMP-4)
- STEP 3 - USING RSD 1101.03, SHEET 9 AND LAW ENFORCEMENT, PERFORM A LANE SWITCH (SEE RSD 1101.02, SHEET 5, NOTE 7) AND BEGIN CONSTRUCTION OF MEDIAN U-TURNS OF -L- (NC 87) INCLUDING MEDIAN DRAINAGE, GUARD RAIL, CONCRETE ISLANDS AND PAVING UP TO EDGE AND ELEVATION OF EXISTING PAVEMENT. (SEE TMP-5)
- INSTALL ALL NECESSARY GUIDE SIGNS FOR NEW PATTERN. SEE SIGNING PLANS.
- STEP 4 - ONCE NEW MEDIAN U-TURNS ARE COMPLETED, ALLOW TRAFFIC ACCESS.
- USING TCP-6, CLOSE EXISTING MEDIAN TO TRAFFIC.
 - BEHIND CLOSURE, COMPLETE CONSTRUCTION OF INSIDE LANE IMPROVEMENTS OF -L- (NC 87) INCLUDING MEDIAN DRAINAGE, GUARD RAIL, CONCRETE ISLANDS AND PAVING UP TO EDGE AND ELEVATION OF EXISTING PAVEMENT. (SEE TMP-6)
 - USE FLAGGERS TO CONSTRUCT CONCRETE ISLANDS ON -Y- LINES.
- STEP 5 - USING RSD 1101.02, SHEET 5, PLACE FINAL LAYER OF SURFACE COURSE ON NC 87.
- USING FLAGGERS, PLACE FINAL LAYER OF SURFACE COURSE ON -Y- LINES.
- STEP 6 - USING RSD 1101.02, SHEET 5, PLACE FINAL PAVEMENT MARKINGS AND MARKERS.
- USING FLAGGERS, PLACE FINAL PAVEMENT MARKINGS AND MARKERS ON -Y- LINES.

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, PHASING, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND TEMPORARY PAVEMENT MARKING
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (GENERAL NOTES AND MANAGEMENT STRATEGIES)
TMP-2	N/A
TMP-3	N/A
TMP-4	TEMPORARY TRAFFIC CONTROL STEP 2 DETAIL
TMP-5	TEMPORARY TRAFFIC CONTROL STEP 3 DETAIL
TMP-6	TEMPORARY TRAFFIC CONTROL STEP 4 DETAIL

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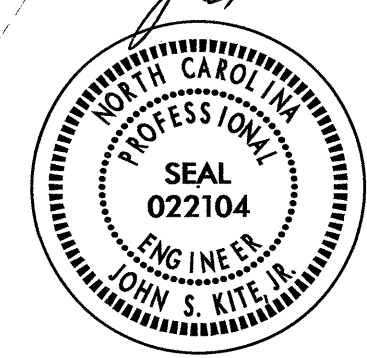
N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, PE STATE TRAFFIC MANAGEMENT ENGINEER
J. S. KITE, PE TRAFFIC CONTROL PROJECT ENGINEER
D. A. PARKER TRAFFIC CONTROL PROJECT DESIGN ENGINEER
D. E. RICHARDSON TRAFFIC CONTROL DESIGN ENGINEER



APPROVED: *John S. Kite, Jr.*
DATE: January 6, 2012

SEAL



SHEET NO.
TMP-1

W-5206C

TIP PROJECT:

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
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
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.

WORK AREA

REMOVAL

USER DEFINED (IF NEEDED)

USER DEFINED (IF NEEDED)

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

TEMPORARY PAVEMENT MARKING

4" PAINT

- PA WHITE EDGE LINE
- PB YELLOW EDGE LINE
- PD 2 FT WHITE MINI SKIP LINE
- PE WHITE SOLID LANE LINE

8" PAINT

- PR WHITE GORE LINE

PAINT SYMBOLS

- QT U TURN ARROW

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APPROVED: DATE: 1/6/12 	 DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL	<h3>ROADWAY STANDARD DRAWINGS & LEGEND</h3>
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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 OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

-L- NC 87

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 6:00 AM DECEMBER 31st TO 7:00 PM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 PM THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00 AM THURSDAY AND 7:00 PM MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY TO 7:00 PM TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 AM THE DAY BEFORE INDEPENDENCE DAY AND 7:00 PM THE DAY AFTER INDEPENDENCE DAY.

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

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.

LANE AND SHOULDER CLOSURE REQUIREMENTS (CONT'D)

- 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- NC 87.

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

TRAFFIC PATTERN ALTERATIONS

- J) NOTIFY THE ENGINEER TWENTY ONE (21) 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.

TRAFFIC CONTROL DEVICES

- M) 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.
- N) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- O) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES DRUMS PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

TRAFFIC CONTROL DEVICES (CONT'D)

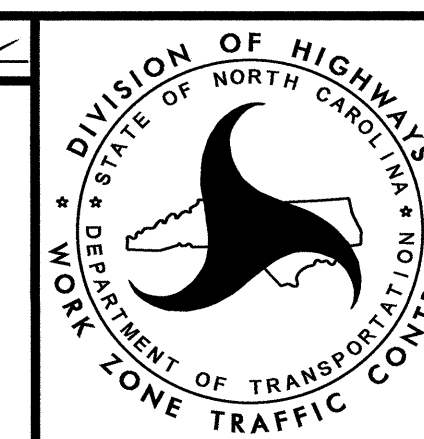
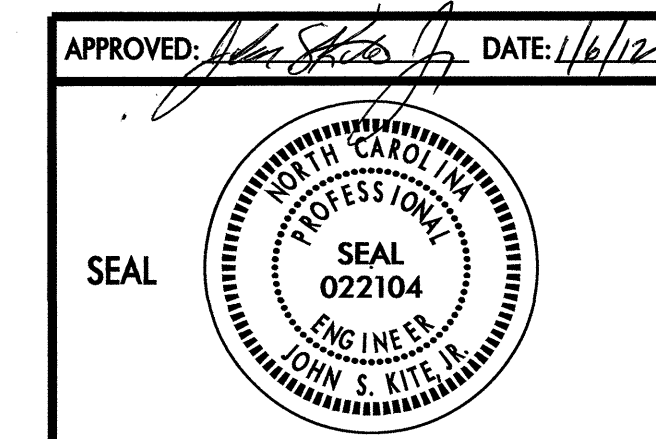
- P) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

<u>ROAD NAME</u>	<u>MARKING</u>	<u>MARKER</u>
NC 87	PAINT	TEMP RAISED

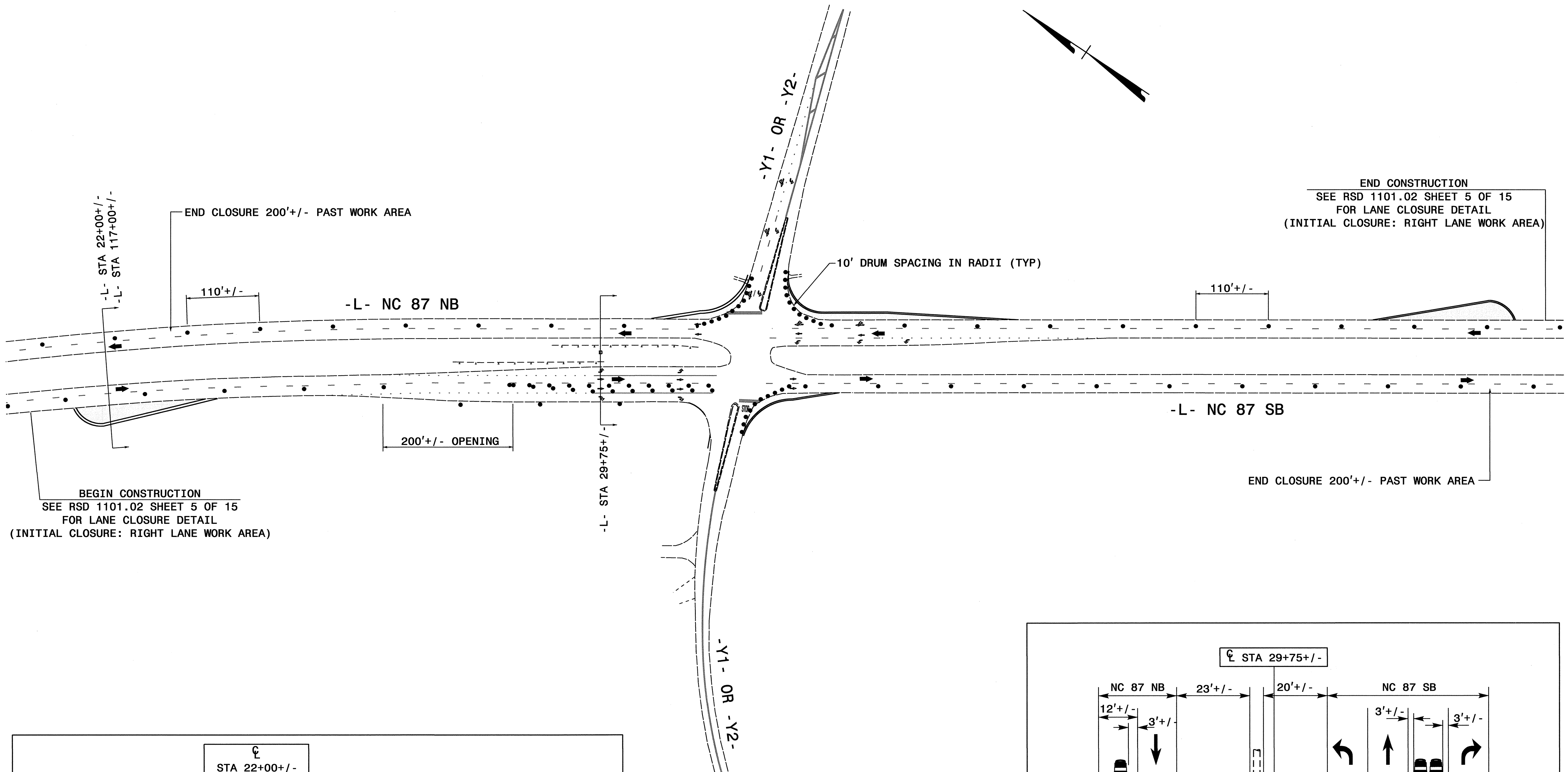
- Q) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.
- R) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- S) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.
- T) TRACE THE PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO INSTALLATION. PLACE DRUMS OR CONES TO DELINEATE ANY PROPOSED MONOLITHIC ISLANDS BEFORE INSTALLATION.

MANAGEMENT STRATEGIES

- CONSTRUCTION OF EACH INTERSECTION MAY BE DONE SEPARATELY OR CONCURRENTLY.
- THE STANDARD SET UP FOR LANE CLOSURE SWITCHES (RSD 1101.02, SHEET 5) WILL BE USED TO ALTERNATE BETWEEN RIGHT LANE CLOSURES AND LEFT LANE CLOSURES.
- THE OUTSIDE "BULB OUT" AND AUXILIARY LANES WILL BE CONSTRUCTED WITH NC 87 TRAFFIC IN INSIDE LANES.
- THE INSIDE MEDIAN U-TURNS WILL BE CONSTRUCTED WITH NC 87 TRAFFIC IN OUTSIDE LANES.
- THE INSIDE MEDIAN IMPROVEMENTS WILL BE CONSTRUCTED WITH NC 87 TRAFFIC IN OUTSIDE LANES AND ALL -Y- LINE TRAFFIC DEFLECTED TO MEDIAN CROSSOVERS.

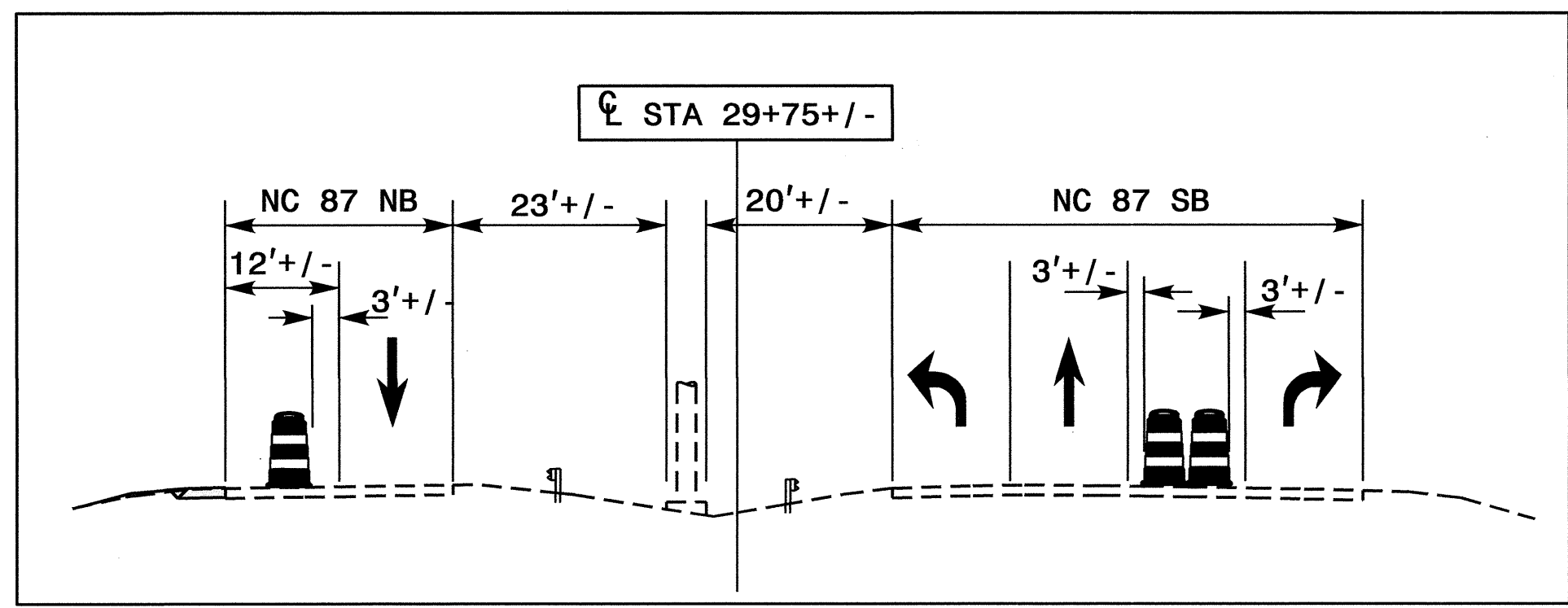
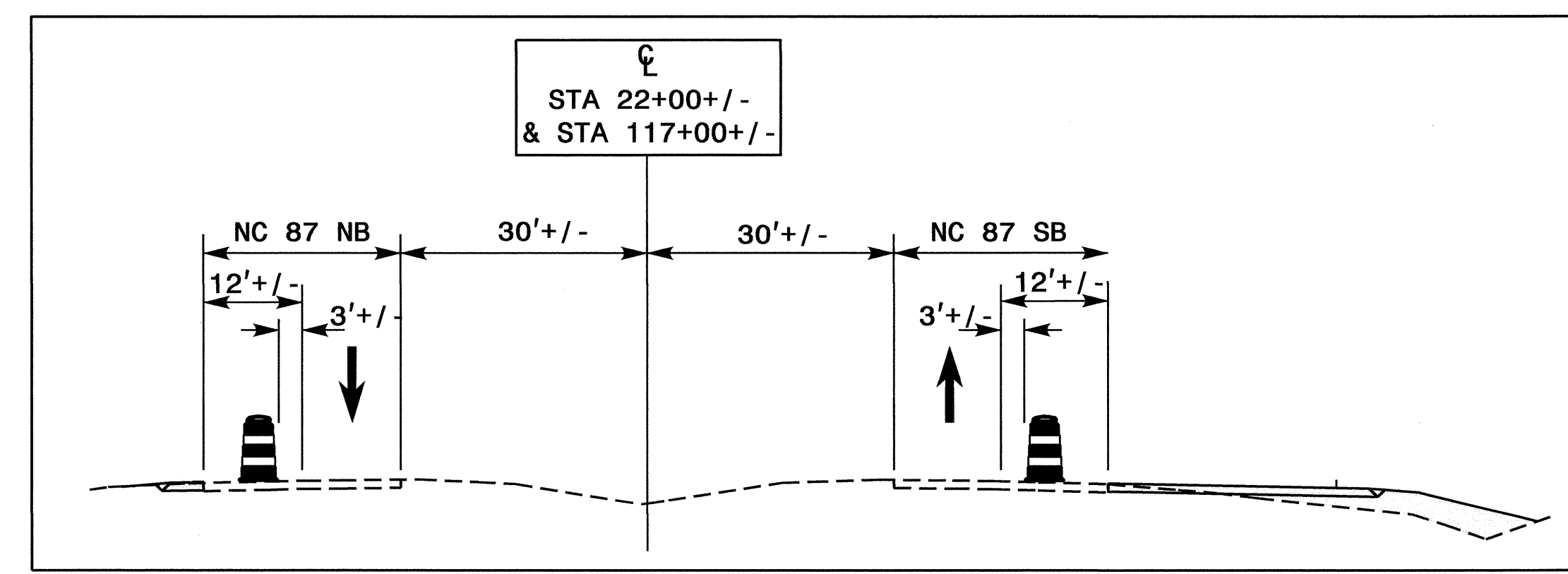


**TRANSPORTATION
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PLAN**

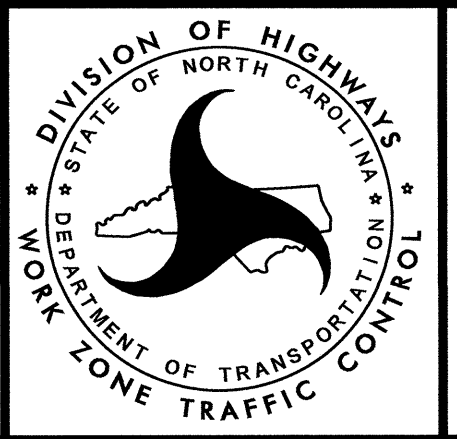
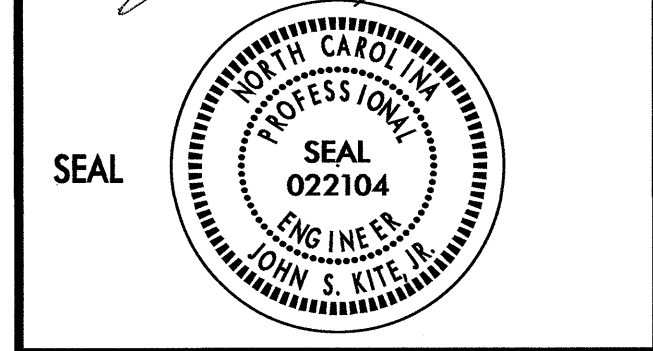


END CONSTRUCTION
SEE RSD 1101.02 SHEET 5 OF 15
FOR LANE CLOSURE DETAIL
(INITIAL CLOSURE: RIGHT LANE WORK AREA)

BEGIN CONSTRUCTION
SEE RSD 1101.02 SHEET 5 OF 15
FOR LANE CLOSURE DETAIL
(INITIAL CLOSURE: RIGHT LANE WORK AREA)

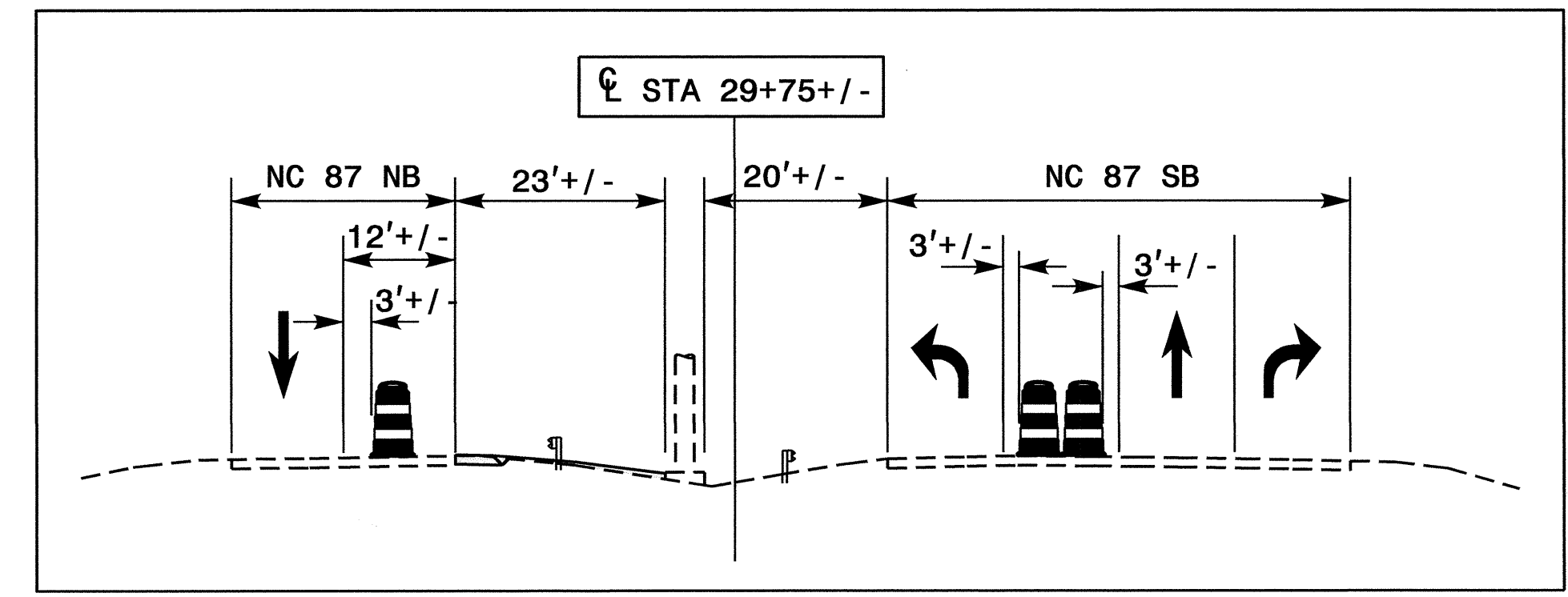
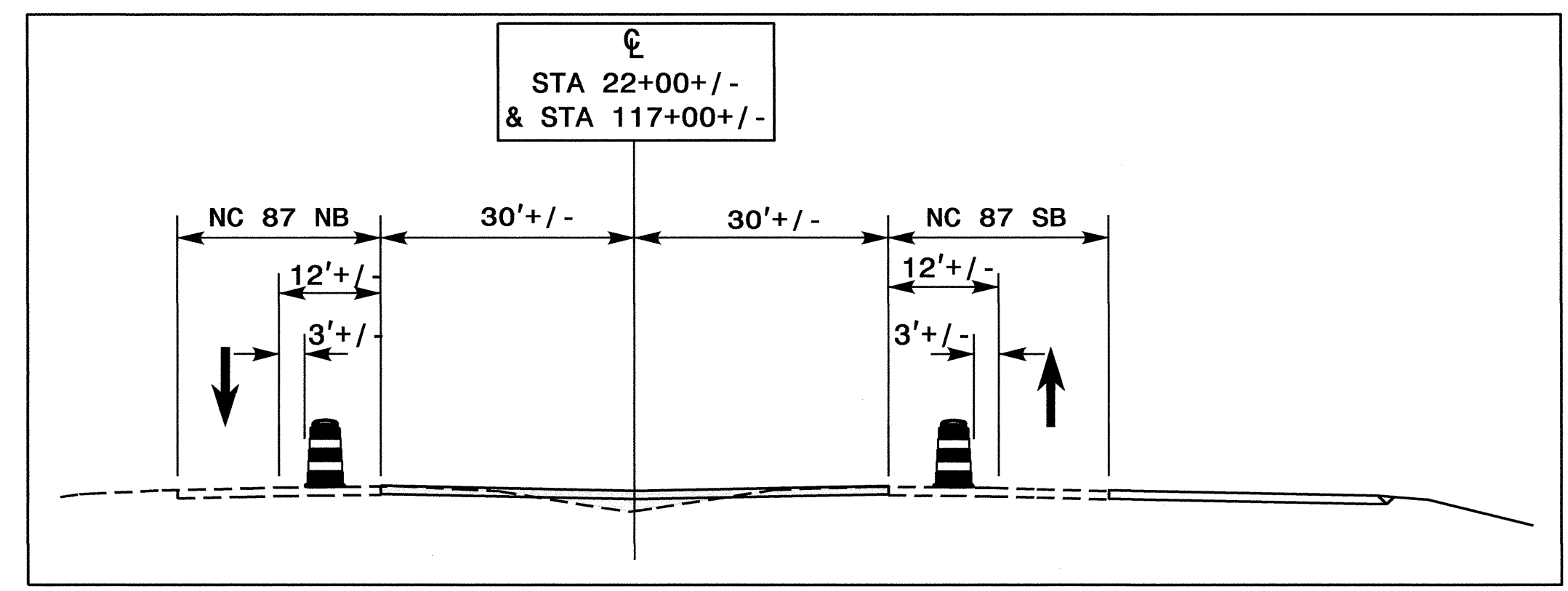
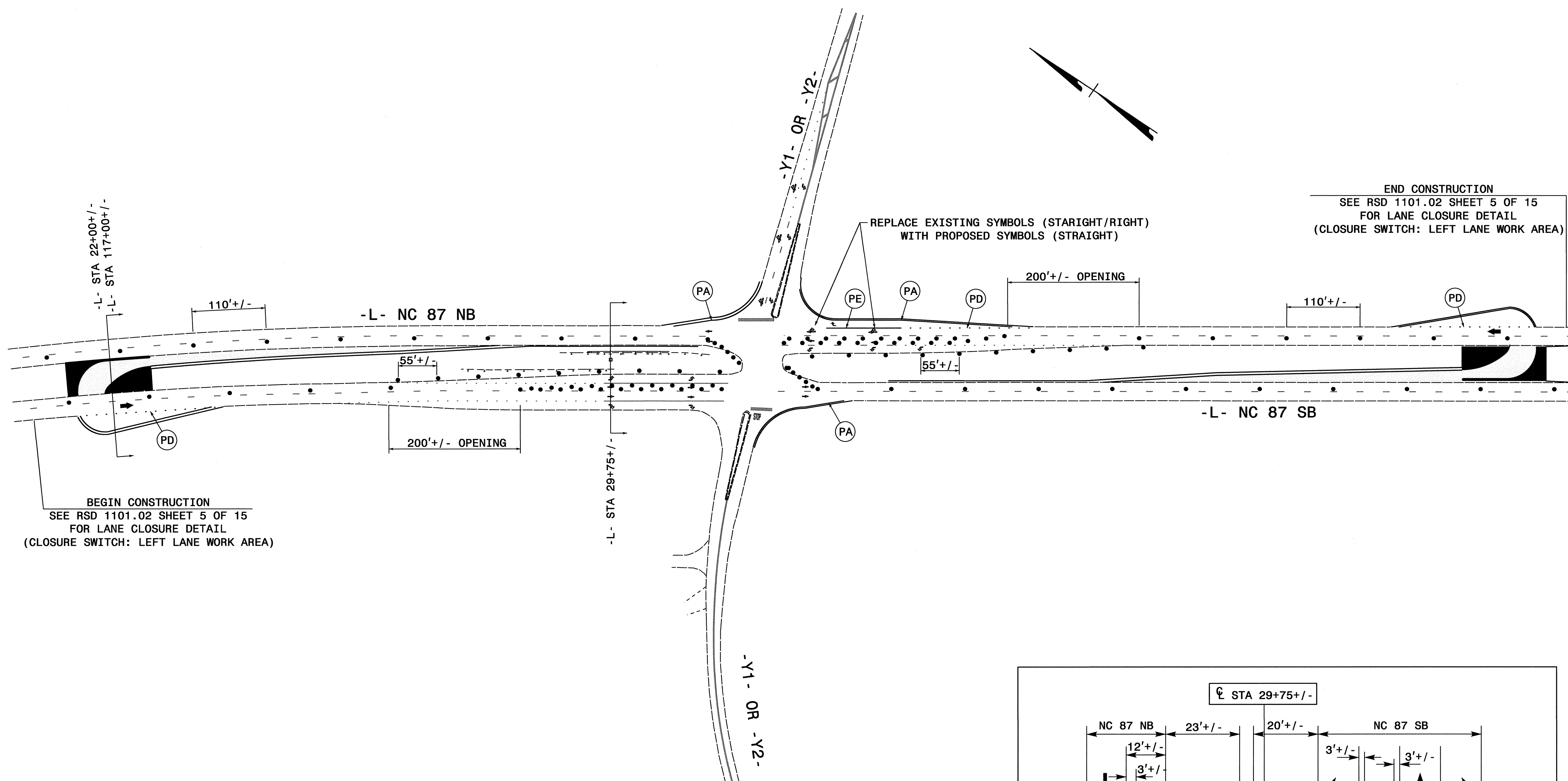


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STEP 2

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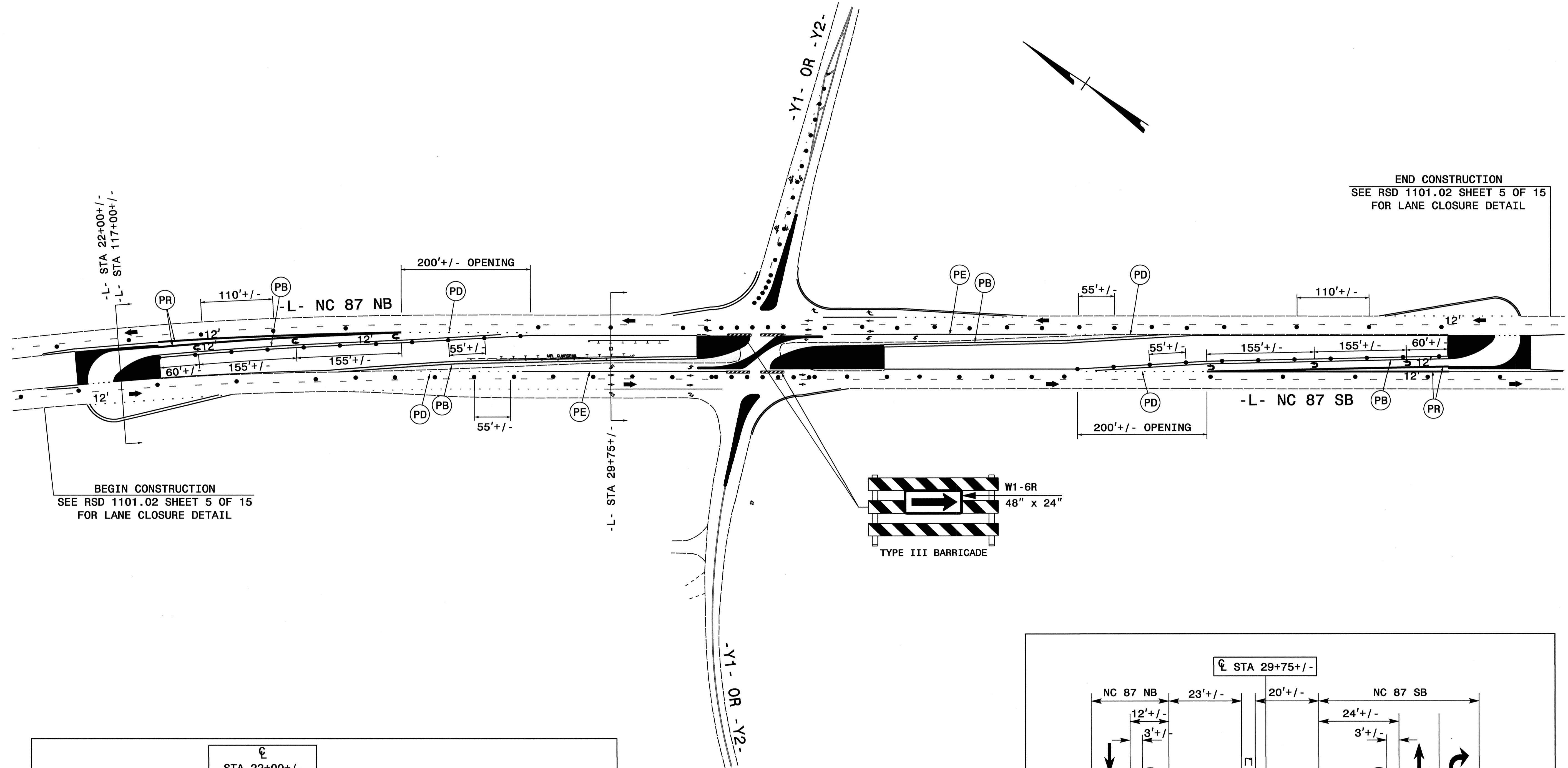


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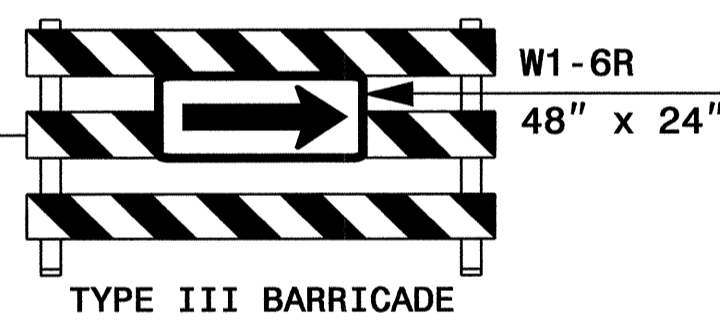
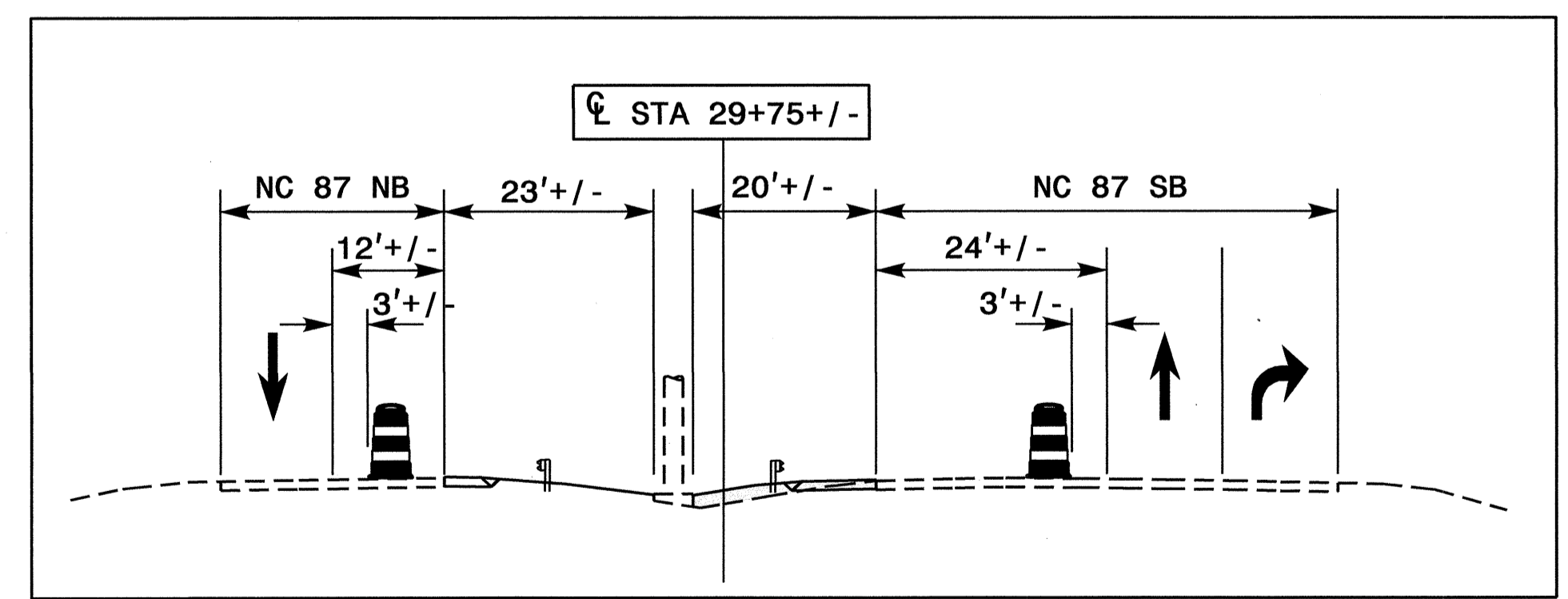
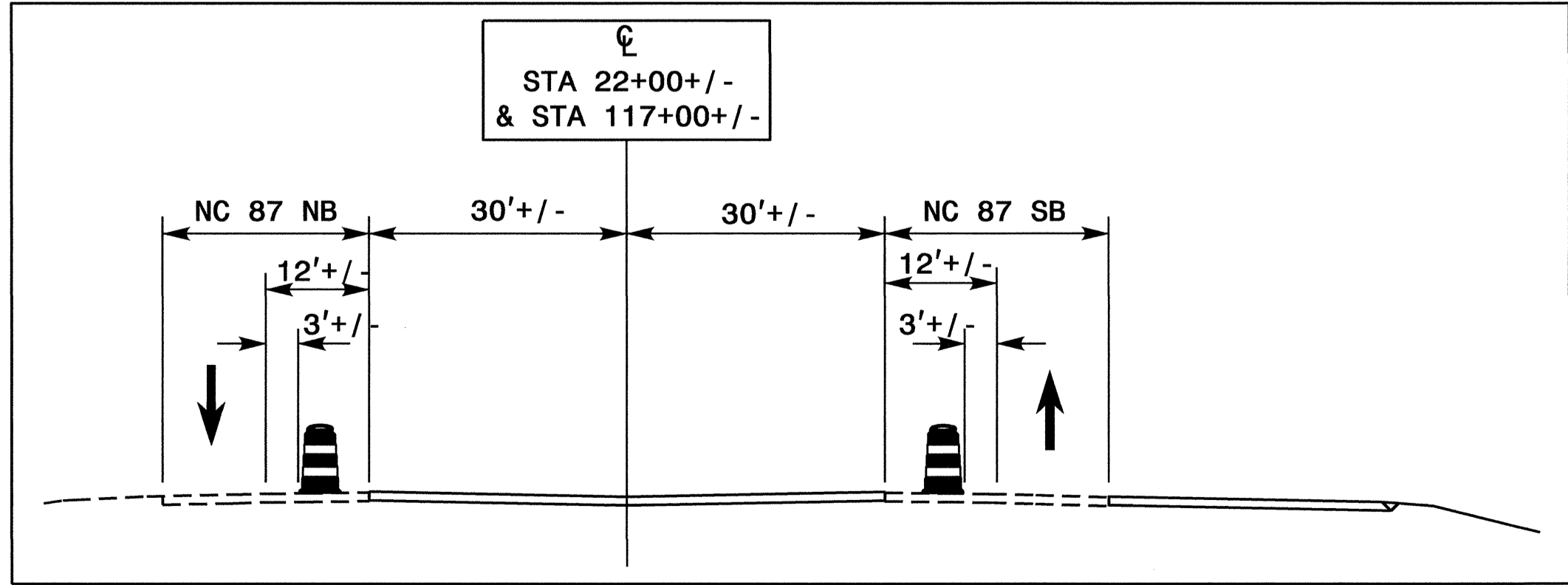
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NOTE - PROPOSED SIGNING SHALL BE INSTALLED IN ACCORDANCE WITH THE SIGNING PLANS OR AS DIRECTED BY THE ENGINEER PRIOR TO OPENING THE STEP 4 TRAFFIC PATTERN.

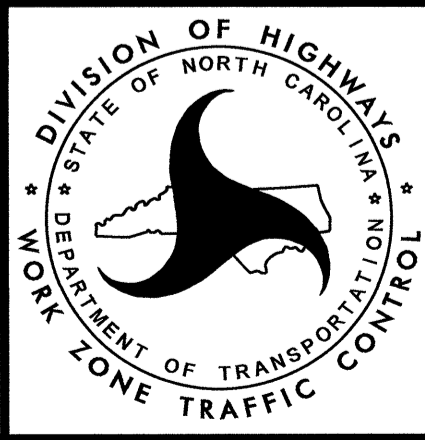
END CONSTRUCTION
SEE RSD 1101.02 SHEET 5 OF 15
FOR LANE CLOSURE DETAIL



BEGIN CONSTRUCTION
SEE RSD 1101.02 SHEET 5 OF 15
FOR LANE CLOSURE DETAIL



APPROVED: *John S. Kite* DATE: 11/6/12
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NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 022104
JOHN S. KITE



STEP 4

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