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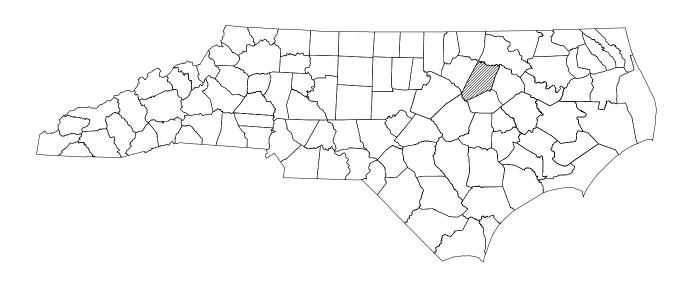
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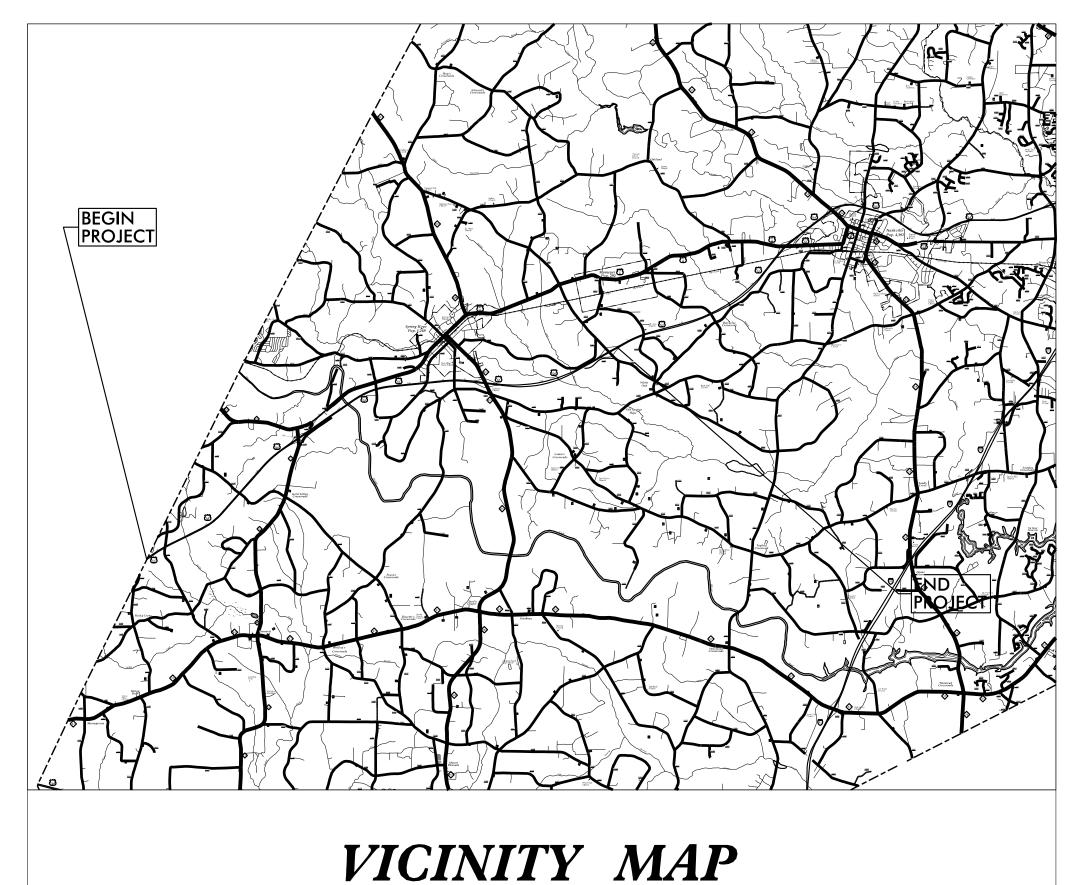
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## STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

# TRANSPORTATION MANAGEMENT PLAN

# NASH COUNTY





# WORK ZONE SAFETY & MOBILITY

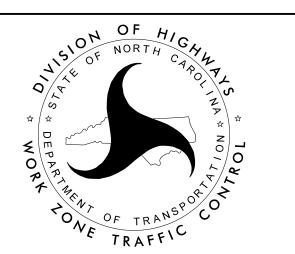
"from the MOUNTAINS to the COAST"

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, P.E. STATE TRAFFIC MANAGEMENT ENGINEER STEVE KITE, P.E. TRAFFIC CONTROL PROJECT ENGINEER

TRAFFIC CONTROL PROJECT DESIGN ENGINEER

TRAFFIC CONTROL DESIGN ENGINEER



#### INDEX OF SHEETS

SHEET NO. TITLE

TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS TMP - 1 LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND TMP-1A

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"WORK ZONE" SPEED LIMIT REDUCTION TMP-2 TMP-3 TEMPORARY TRAFFIC CONTROL PHASING

OFFSITE DETOUR DETAILS TMP-4-9

TMP - 10 SIGN DESIGNS



4000 WestChase Boulevard, Suite 530 Raleigh, NC 27607 NC License No. C-3705

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JOSEPH LEWIS, PE TRAFFIC CONTROL PROJECT ENGINEER

A. MATTHEW THIGPEN, PE TRAFFIC CONTROL PROJECT DESIGN ENGINEER

APPROVED: DATE:

SEAL



TMP-1

1064

.04.07.

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. N	١٥.	TITLE
1101.0	)1	WORK ZONE ADVANCE WARNING SIGNS
1101.0	2	TEMPORARY LANE CLOSURES
1101.0	3	TEMPORARY ROAD CLOSURES
1101.0	)4	TEMPORARY SHOULDER CLOSURES
1101.0	)5	WORK ZONE VEHICLE ACCESSES
1101.1	1	TRAFFIC CONTROL DESIGN TABLES
1110.0	1	STATIONARY WORK ZONE SIGNS
1110.0	2	PORTABLE WORK ZONE SIGNS
1115.0	)1	FLASHING ARROW BOARDS
1130.0	1	DRUM
1135.0	)1	CONES
1145.0	)1	BARRICADES
1165.0	)1	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1180.0	1	SKINNY-DRUM
1205.0	1	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.0	2	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.0	3	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMPS
1250.0	)1	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.0	)1	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

PROJ. REFERENCE NO. SHEET NO. 2017CPT.04.07.10641 TMP-1A

#### **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

#### PAVEMENT MARKINGS

——EXISTING LINES ——TEMPORARY LINES

#### TRAFFIC CONTROL DEVICES

BARRICADE (TYPE III)

DRUM SKINNY DRUM O TUBULAR MARKER

TEMPORARY CRASH CUSHION

FLASHING ARROW BOARD

LAW ENFORCEMENT

FLAGGER

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

DOCUMENT NOT CONSIDERED FINAL

**UNLESS ALL SIGNATURES COMPLETED** 



ROADWAY STANDARD DRAWINGS & LEGEND

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 AS FOLLOWS:

ROAD NAME

DAY AND TIME RESTRICTIONS

US-64

FRANKLIN/NASH CO. LINE TO SR 1603 (OLD CARRIAGE ROAD) MONDAY TO FRIDAY 7:00 A.M. TO 9:00 A.M.

SR 1603 TO US 64 ALT. (MP 472) MONDAY TO FRIDAY 7:00 A.M. TO 9 A.M. AND 4:00 P.M. TO 6:00 P.M. MAXIMUM LENGTH OF LANE CLOSURE IS 3 MILES

US 64 ALT. (MP 472) TO EDGECOMBE/MARTIN CO. LINE NO TIME RESTRICTIONS

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

ROAD NAME US-64

#### HOLIDAY

- 1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- 2. FOR NEW YEAR'S DAY, 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.
- 3. FOR EASTER, BETWEEN THE HOURS OF 7:00 A.M. THURSDAY AND 6:00 P.M. TUESDAY.
- 4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY TO 6:00 P.M. TUESDAY.
- 5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 A.M. THE FRIDAY BEFORE THE WEEK OF INDEPENDENCE DAY AND 6:00 P.M. THE FOLLOWING MONDAY AFTER THE WEEK OF INDEPENDENCE DAY.
- 6. FOR LABOR DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY TO 6:00 P.M. TUESDAY.
- 7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 7:00 A.M. TUESDAY AND 6:00 P.M. MONDAY.

PROJ. REFERENCE NO. SHEET NO. TMP-1B 2017CPT .04 .07 .1064 <sup>-</sup>

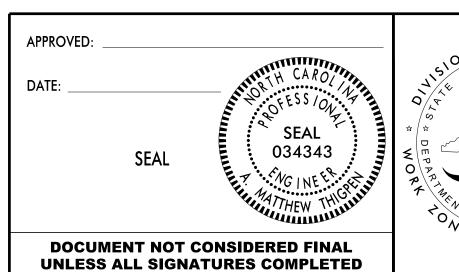
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 7:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

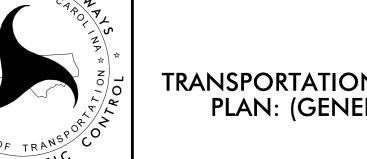
#### LANE AND SHOULDER CLOSURE REQUIREMENTS

- 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 TRANSPORTATION MANAGEMENT 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) DO NOT INSTALL MORE THAN 3 MILES OF LANE CLOSURE ON US-64 MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- I) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON US-64.





TRANSPORTATION OPERATIONS PLAN: (GENERAL NOTES)

#### GENERAL NOTES CONTINUED

#### PAVEMENT EDGE DROP OFF REQUIREMENTS

J) 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.

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

#### TRAFFIC PATTERN ALTERATIONS

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

#### SIGNING

- M) 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.
- N) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- O) 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.

PROJ. REFERENCE NO. SHEET NO. 2017CPT.04.07.10641 TMP-1C

#### TRAFFIC CONTROL DEVICES

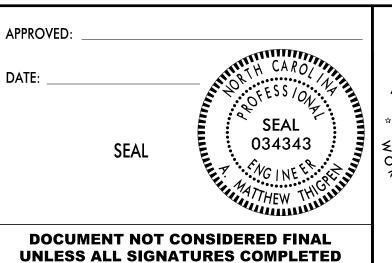
- P) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 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.
- R) 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.

#### PAVEMENT MARKINGS AND MARKERS

S) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

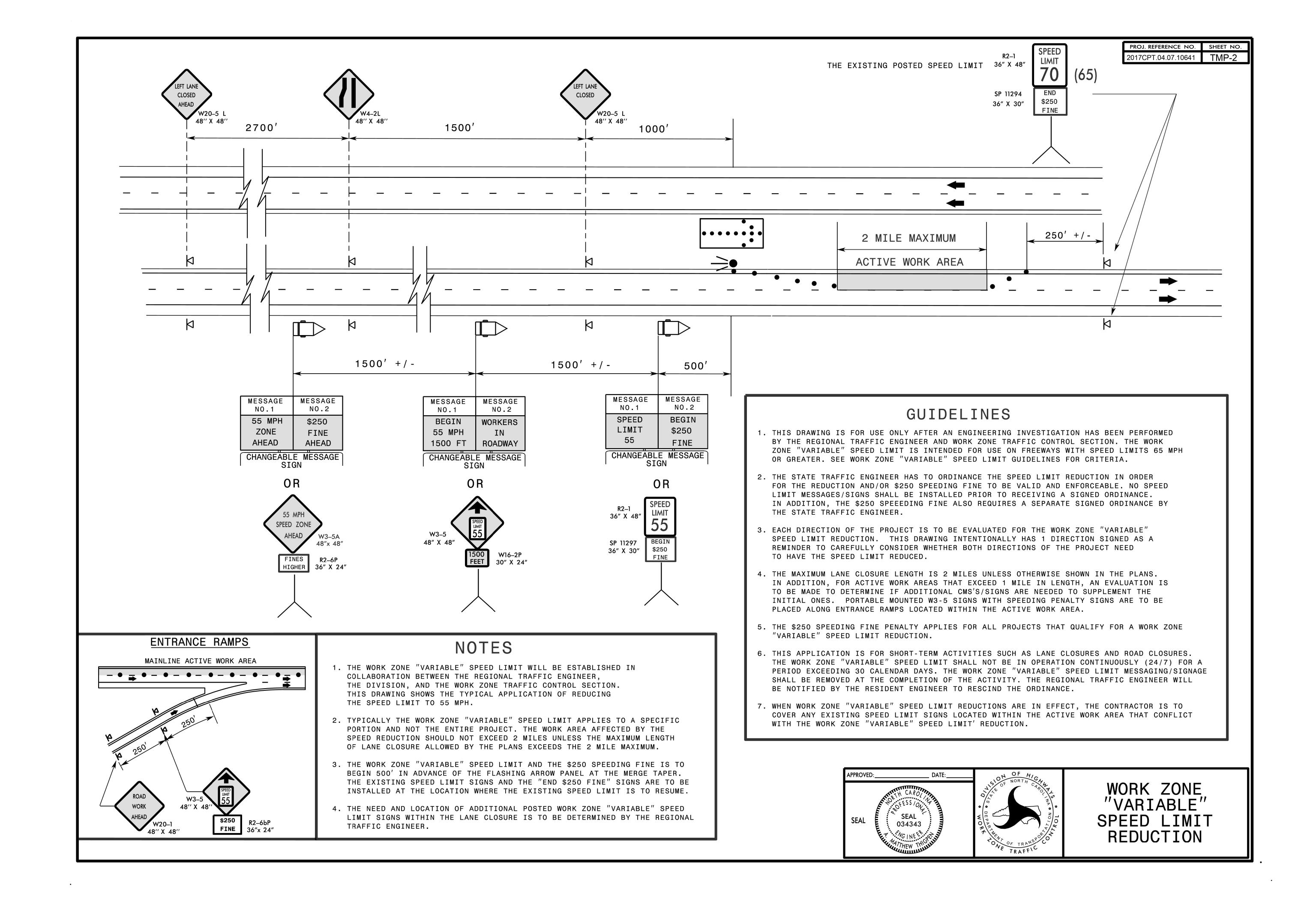
#### LOCAL NOTES

- LN-1) THE FOLLOWING OPTIONS ARE AVAILABLE DURING RESURFACING AND MILLING OPERATIONS ON MULTI-LANE FACILITIES WHEN ALL LANES OR A SINGLE LANE IN ONE DIRECTION ARE TO BE MILLED:
  - (A) MILL A SINGLE LANE AND PAVE BACK BY THE END OF EACH WORK DAY.





TRANSPORTATION OPERATIONS PLAN: (GENERAL NOTES)



PROJ. REFERENCE NO. SHEET NO. 2017CPT.04.07.10641 TMP-3

### PHASING

#### STEP 1

INSTALL WORK ZONE ADVANCE WARNING SIGNS. SEE RSD 1101.02.

INSTALL AND COVER THE OFF SITE DETOUR SIGNING SHOWN ON SHEETS TMP-04 THRU TMP-10.

STEP 2

USING RSD 1101.02, SHEET 4 OF 15, MILL (2.25") AND RESURFACE (1.5" OF SURFACE COURSE) THE EXISTING PAVEMENT ON US-64 FROM THE FRANKLIN COUNTY LINE TO MILEMARKER 453 AND PLACE TEMPORARY PAVEMENT MARKINGS IN THE EXISTING PATTERN (SEE LOCAL NOTE LN-1).

STEP 3

USING RSD 1101.02, SHEET 4 OF 15, PERFORM THE FOLLOWING:

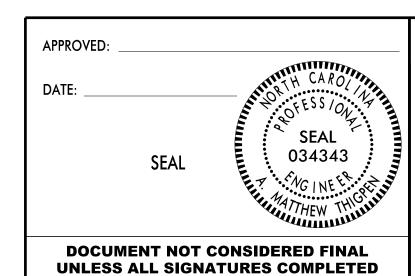
- PLACE FINAL LAYER OF OPEN GRADED FRICTION COURSE ON ALL LANES.
- PLACE TEMPORARY MARKINGS ON ALL LANES IN THE FINAL TRAFFIC PATTERN.
- REMOVE ALL ROAD CLOSURE AND DETOUR SIGNING, REMOVE ALL ROAD CLOSURE BARRICADES AND OPEN ALL LANES TO TRAFFIC.

STEP 4

USING RSD 1101.02, SHEET 4 OF 15, INSTALL FINAL PAVEMENT MARKINGS AND MARKERS.

STEP 5

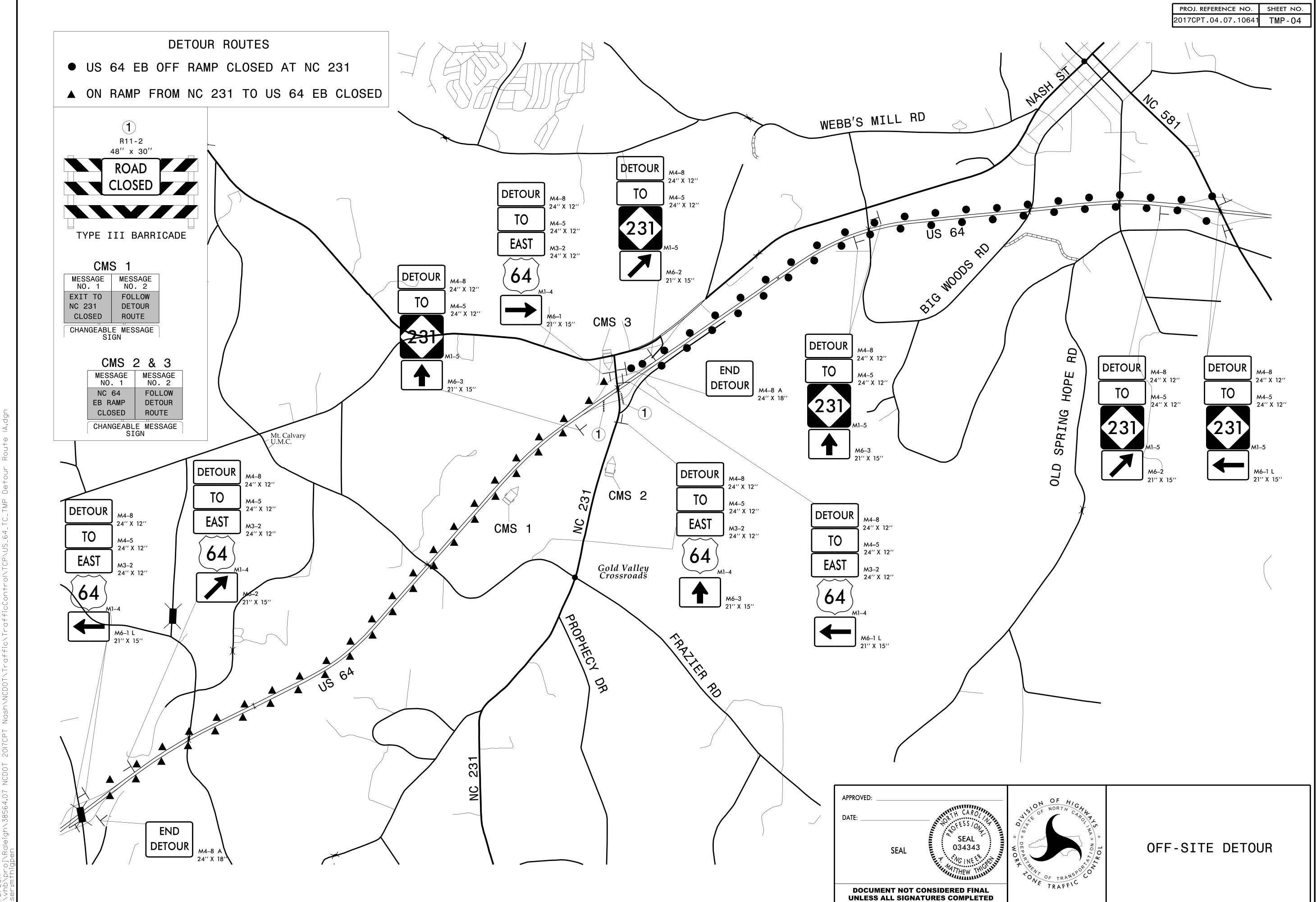
REMOVE ALL REMANING TRAFFIC CONTROL DEVICES.



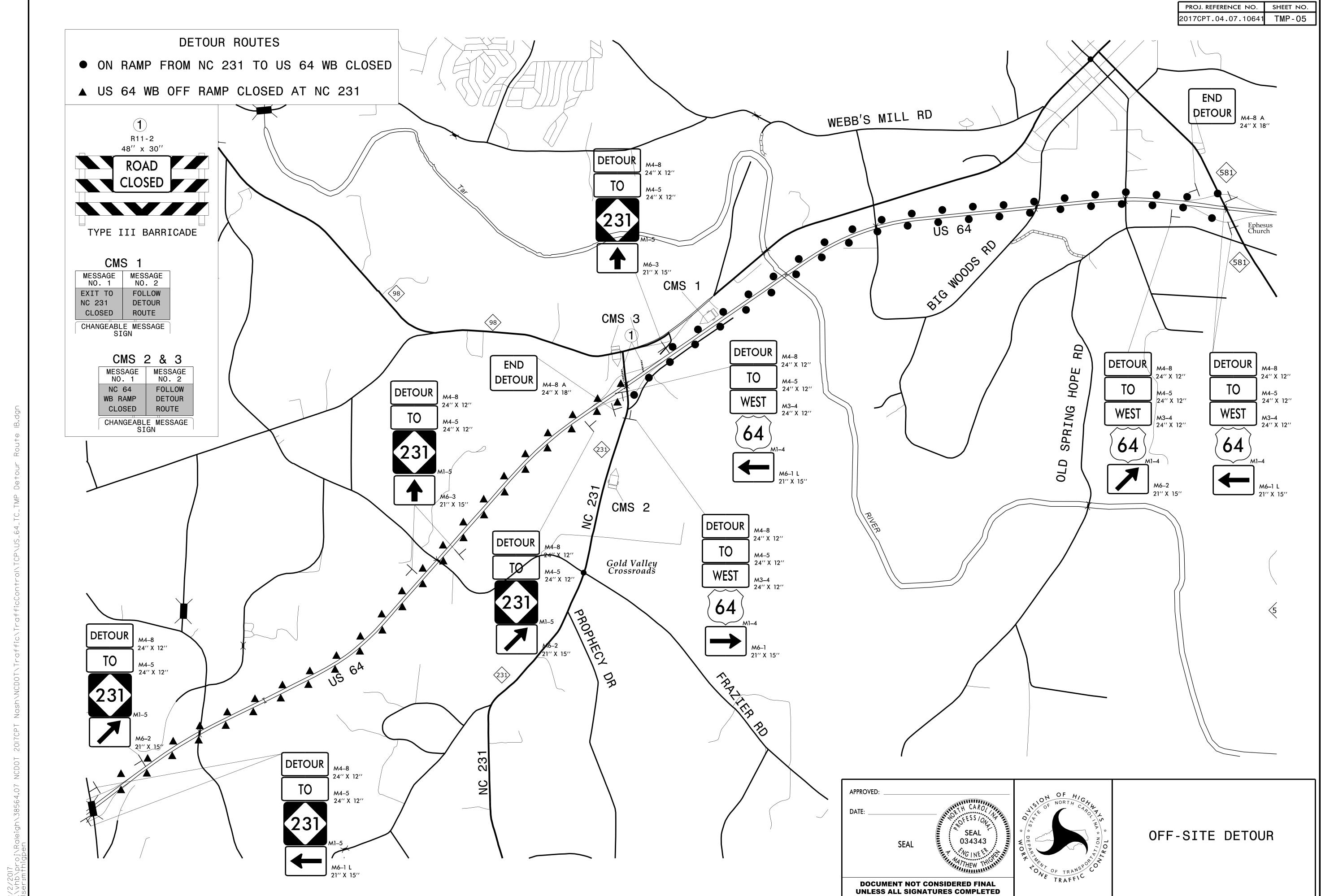


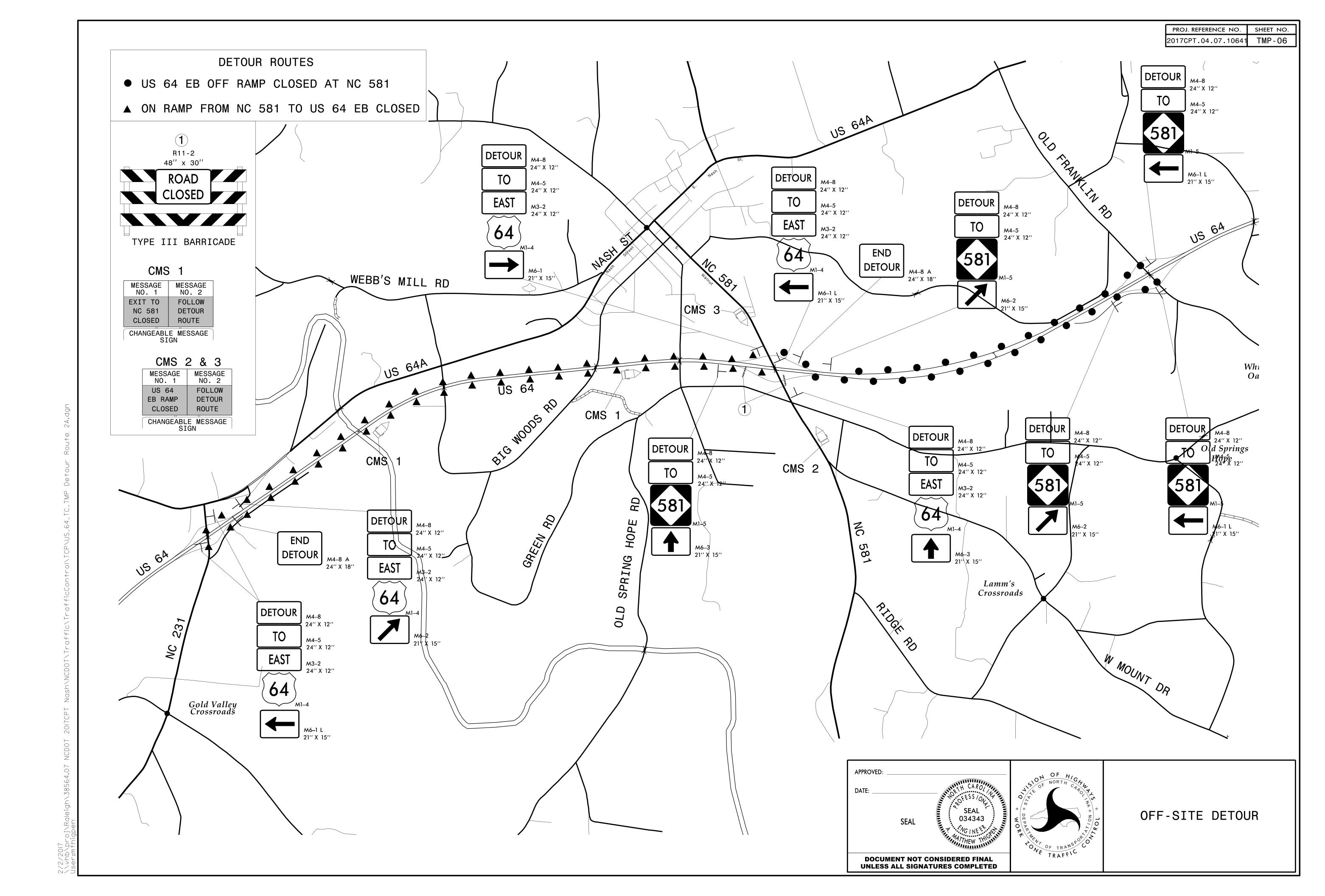
PHASING NOTES

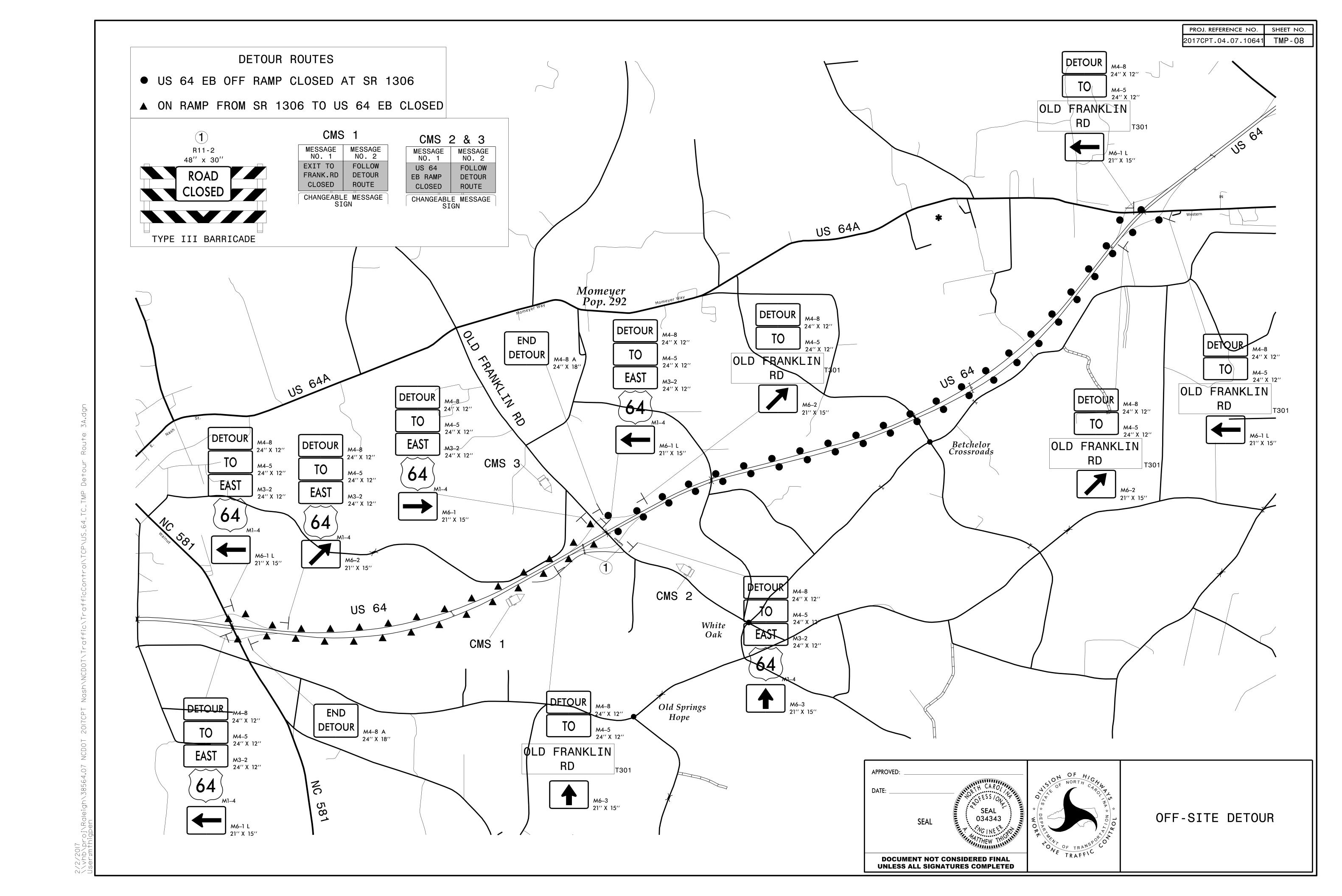
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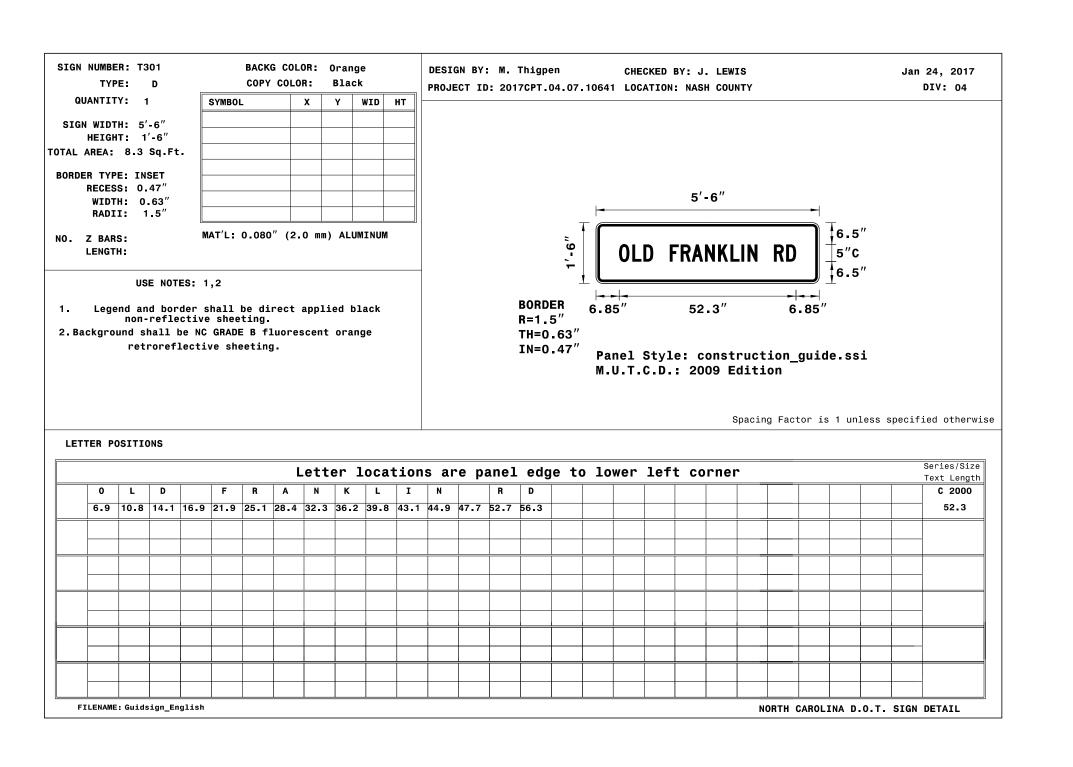
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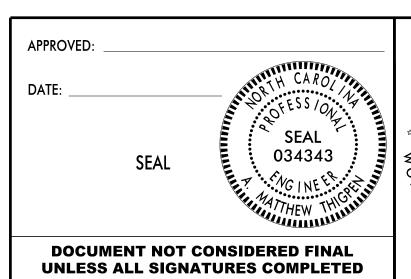






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OF HIGH NORTH CARPOLIZATION OF TRANSPOOL

SIGN DESIGN