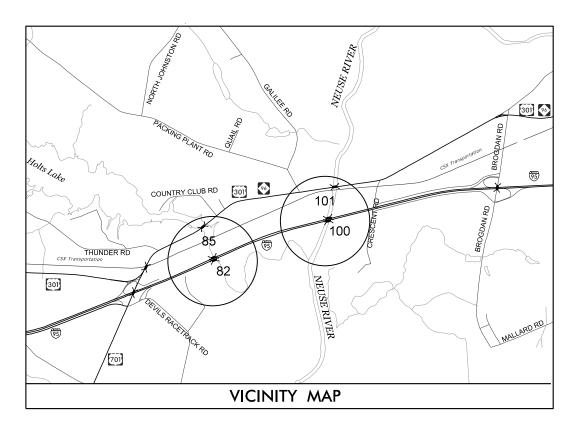


I-95 BRIDGE PRESERVATIONS



WORK ZONE SAFETY & MOBILITY

N.C.D.O.T. CONTACT: DIVISION 4 PROJECT MANAGER

MATT CLARKE, P.E. DIVISION PROJECT MANAGER



INDEX OF SHEETS

TITLE SHEET NO.

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

TMP-1B GENERAL NOTES

WORK ZONE "VARIABLE" SPEED LIMIT REDUCTION TYPICAL TMP-2

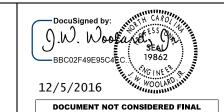
BRIDGE STAGING TYPICAL TMP-2A

TEMPORARY TRAFFIC CONTROL PHASING TMP-3

I 95 NB/SB BRIDGE 82/85 DETOUR ROUTE I 95 NB/SB BRIDGE 100/101 DETOUR ROUTE TMP-4

TMP-5 I 95 NB/SB DETOUR ROUTE SIGNS TMP-1





PROJ. REFERENCE NO. SHEET NO. I-5978 TMP-1A

LEGEND

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR 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	DRUMS
1135.01	CONES
1145,01	BARRICADES
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 - 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

GENERAL

DIRECTION OF TRAFFIC FLOW

— EXIST. PVMT.

PROPOSED PVMT.

NORTH ARROW

TEMP. SHORING (LOCATION PURPOSES ONLY)

WORK AREA

PREVIOUSLY STARTED / CONCURRENT CONSTRUCTION

PAVEMENT REMOVAL

TEMPORARY PAVEMENT

TEMPORARY PAVEMENT ASPHALT PAD

TEMPORARY PAVEMENT BREAKDOWN LANE

PAVEMENT MARKINGS

EXISTING LINES

TEMPORARY PREVIOUSLY MARKINGS PLACED

WHITE EDGE LINE
 YELLOW EDGE LINE
 BROKEN LANE LINES

MINISKIP LANE LINES

DOUBLE YELLOW LINES

GORELINE

PAVEMENT MARKING SYMBOLS

EXISTING PAVEMENT MARKING SYMBOLS (HOLLOW)

STOP BAR

TEMPORARY SYMBOLS PREVIOUSLY PLACED

154

PAVEMENT MARKING SYMBOLS

∩NY PAV

PAVEMENT MARKING ALPHANUMERIC CHARACTERS

TRAFFIC CONTROL DEVICES

TEMPORARY PREVIOUSLY PLACED

BARRICADE (TYPE III)

▲ CONE● DRUM

FLASHING ARROW BOARD

FLAGGER

LAW ENFORCEMENT

TRUCK MOUNTED ATTENUATOR (TMA)

CHANGEABLE MESSAGE SIGN

TEMPORARY CRASH CUSHION

TEMPORARY CRASH CUSHION RESET

PORTABLE CONCRETE BARRIER

PORTABLE CONCRETE BARRIER (RESET)

ANCHORED CONCRETE BARRIER

TEMPORARY

ANCHORED CONCRETE BARRIER (RESET)

SIGNALS

EXISTING

PROPOSED



TEMPORARY SIGNING

TEMPORARY PREVIOUSLY SIGNS PLACED

PORTABLE SIGN
STATIONARY SIGN
STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

CRYSTAL/CRYSTAL

CRYSTAL/RED

YELLOW/YELLOW



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ROADWAY STANDARD DRAWINGS, AND LEGEND

GENERAL NOTES

PROJ. REFERENCE NO. SHEET NO. I-5978 TMP-1B

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) THE CONTRACTOR SHALL BE ALLOWED TO CLOSE OR NARROW A LANE OF TRAFFIC ON I-95 AND RAMPS ONLY DURING THE FOLLOWING TIMES:

ROAD NAME DAY AND TIME RESTRICTIONS

I-95 MONDAY TO THURSDAY - 8:00 P.M. - 7:00 A.M. FRIDAY TO SUNDAY - 10:00 P.M. - 7:00 A.M.

WEEK AFTER LABOR DAY TO WEEK BEFORE MEMORIAL DAY
ROAD NAME OPERATION DAY AND TIME RESTRICTIONS

I-95 LMC OVERLAY ONLY SUNDAY MIDNIGHT TO NOON FRIDAY

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

ROAD NAME ALL ROADS

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 7:00 A.M. DECEMBER 31ST TO 8:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY. OR MONDAY THEN UNTIL 8:00 P.M. THE FOLLOWING TUESDAY.
- 3) FOR EASTER, BETWEEN THE HOURS OF 7:00 A.M. THURSDAY AND 8:00 P.M. TUFSDAY
- 4) FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY TO 8:00 P.M. WEDNESDAY.
- 5) FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 A.M. THE FRIDAY BEFORE THE WEEK OF INDEPENDENCE DAY AND 8:00 P.M. THE FOLLOWING MONDAY AFTER THE WEEK OF INDEPENDENCE DAY.
- 6) FOR LABOR DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY AND 8:00 P.M.
- 7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 7:00 A.M. TUESDAY TO 8:00 P.M. MONDAY.
- 8) FOR CHRISTMAS, BETWEEN THE HOURS OF 7:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
- C) THE CONTRACTOR <u>SHALL BE ALLOWED</u> TO CLOSE I-95, ONLY DURING THE FOLLOWING TIME RESTRICTIONS:

ROAD NAME DAY AND TIME RESTRICTIONS

I-95 MONDAY TO THURSDAY - 11:00 P.M. TO 5:00 A.M.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) 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.
- E) 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.
- F) 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 GUARDRAII

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.

- 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.
-) 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.
- I) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON I-95.
- J) FOR DAY TIME LANE CLOSURES, PLACE CMS BOARDS 1,2,3,4,5, AND 7 MILES IN ADVANCE OF THE LANE CLOSURE TAPER AS DIRECTED BY THE ENGINEER. USE A MESSAGE SIMILAR TO "RIGHT LANE CLOSED / XX MILES" AS DIRECTED BY THE ENGINEER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

K) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPEN TRAVEL LANE THAT HAS A 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.

L) 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 ONCE EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

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

- S) PLACE TYPE III BARRICADES WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- T) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES (DRUMS, CONES OR SKINNY DRUMS) PERPENDICULAR TO THE EDGE OF TRAVELWAY ON (250 FT) CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

U) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS AS FOLLOWS:

ROAD NAMEMARKINGMARKERI-95POLYUREASNOW PLOWABLEBRIDGESPOLYUREAPERMANENT RAISED

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

MISCELLANEOUS

X) OPERATE EQUIPMENT AND CONDUCT OPERATIONS IN THE SAME DIRECTION AS THE FLOW OF TRAFFIC.



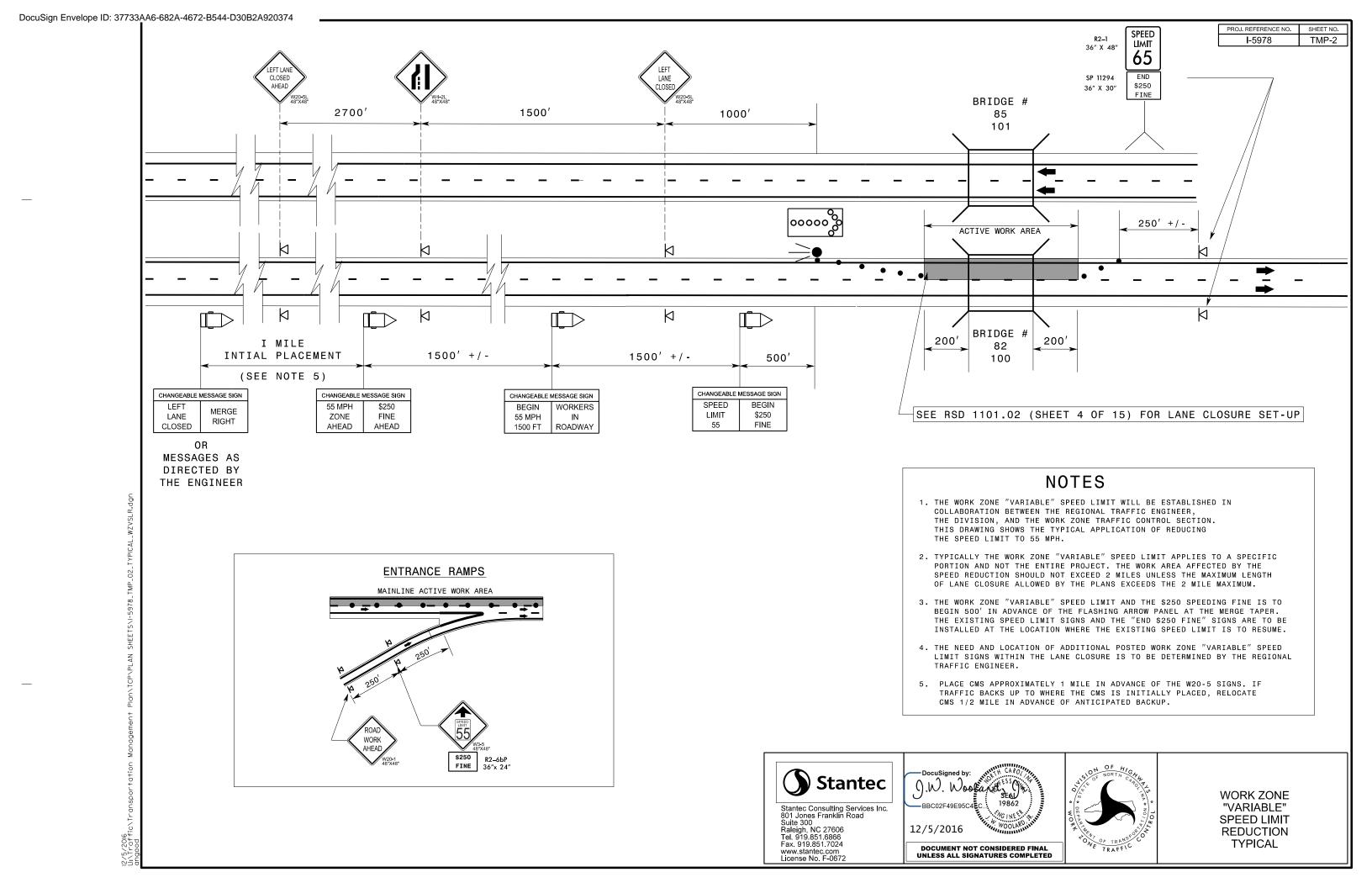
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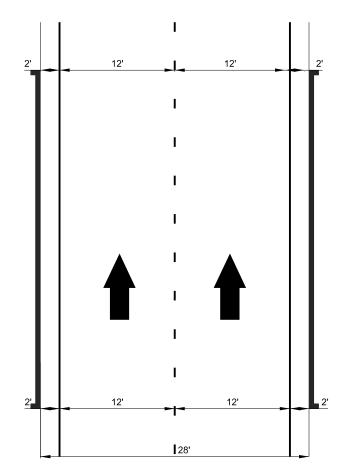


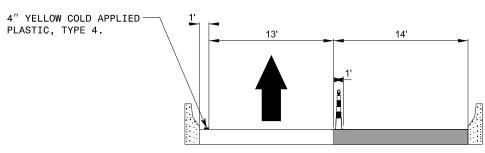
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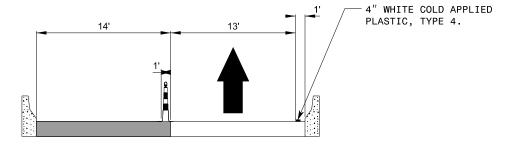
GENERAL NOTES







NOTE: SKINNY DRUM MAY BE MOVED OFF OVERLAYED SURFACE DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.



NOTE: CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO NOTIFY THE OVERSIZE/OVERWEIGHT UNIT TO MAKE THEM AWARE OF NARROWED LANES
DURING LANE CLOSURE OPERATIONS AND TO RESTRICT OVERSIZED/OVERWEIGHT VEHICLES DURING ROAD CLOSURE OPERATIONS.



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BRIDGE STAGING TYPICAL

PHASING

PROJ. REFERENCE NO.	SHEET NO.
I-5978	TMP-3

NOTE: CONTRACTOR MAY WORK ON THE BRIDGES IN ANY ORDER. THE CONTRACTOR MAY WORK ON TWO BRIDGES IN THE SAME DIRECTION IN THE SAME LANE AT THE SAME TIME. ONLY ONE OFF SITE DETOUR ON I-95 WILL BE ALLOWED AT ANY ONE TIME.

COMPLETE THE FOLLOWING FOR BRIDGES 82, 85, 100 AND 101:

NOTE: ALL MILLED SURFACES AND HYDRO-DEMOLITIONED SURFACES MUST BE OVERLAYED WITH LMC OVERLAY WITHIN THE SAME CLOSURE PERIOD PRIOR TO OPENING THAT LANE TO TRAFFIC. TRAFFIC SHALL NOT RUN ON ANY MILLED OR HYDRO-DEMOLITIONED SURFACE ON I-95 IN ANY LANE CONFIGURATION.

NOTE: WHEN USING RSD 1101.02 (SHEET 4 OF 15), PLACE TRAFFIC CONTROL DEVICES FOR A WORK ZONE VARIABLE SPEED LIMIT REDUCTION AS SHOWN ON TMP-2 OR AS OTHERWISE SHOWN IN AN APPROVED WORK ZONE ORDINANCE. THE DETAILS OF TMP-2 AND AN APPROVED WORK ZONE ORDINANCE FOR "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION AND \$250 SPEEDING PENALTY SHALL BE ADHERED TO FOR ALL LANE CLOSURES. REMOVE OR COVER/TURN OFF THESE DEVICES WHENEVER THE LANE CLOSURE IS REMOVED.

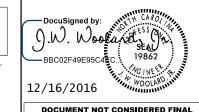
NOTE: ONCE A CONTRACTOR BEGINS WORK IN A LANE OF TRAFFIC, THE CONTRACTOR SHALL COMPLETE WORK IN THAT LANE BEFORE MOVING TO ANOTHER LANE.

- STEP 1: INSTALL AND COVER OFF-SITE DETOUR SIGNS AS SHOWN ON TMP-4 AND TMP-5.
- STEP 2: USING RSD 1101.02 (SHEET 4 OF 15), CLOSE A LANE ON I-95 AND BEGIN BRIDGE PRESERVATION WORK (SEE CONSTRUCTION PLANS AND SHEET TMP-2A). GO TO STEP 3 OR REOPEN LANE TO TRAFFIC.
- STEP 3: USING TIME RESTRICTIONS NOTED IN THE CONTRACT FOR I-95 ROAD CLOSURES, UNCOVER OFF-SITE DETOUR SIGNS, CLOSE ENTIRE BRIDGE, PLACE LMC OVERLAY AND COMPLETE PRESERVATION WORK (SEE CONSTRUCTION PLANS AND SHEET TMP-2A). REMOVE EXISTING EDGELINE 200 FT. ON EITHER SIDE OF THE BRIDGE. PLACE 4" COLD APPLIED PLASTIC, TYPE 4 AS SHOWN ON TMP-2A. REOPEN A MINIMUM OF ONE LANE OF I-95 BRIDGE TO TRAFFIC AT THE END OF THE ROAD CLOSURE PERIOD.
- STEP 4: REPEAT STEPS 2 THROUGH 3 UNTIL ALL BRIDGE PRESERVATION WORK IS COMPLETED.
- STEP 5: USING RSD 1101.02 (SHEET 4 OF 15), CLOSE A LANE ON I-95, PLACE FINAL PAVEMENT MARKINGS (PÓLYUREA) AND PAVEMENT MARKERS (SEE NOTE CC ON TMP-1B) ON THE NEWLY PLACED LMC OVERLAY. REOPEN LANE TO TRAFFIC.
- STEP 6: REMOVE ALL TRAFFIC CONTROL DEVICES AND OPEN I-95 TO THE FINAL TRAFFIC PATTERN.

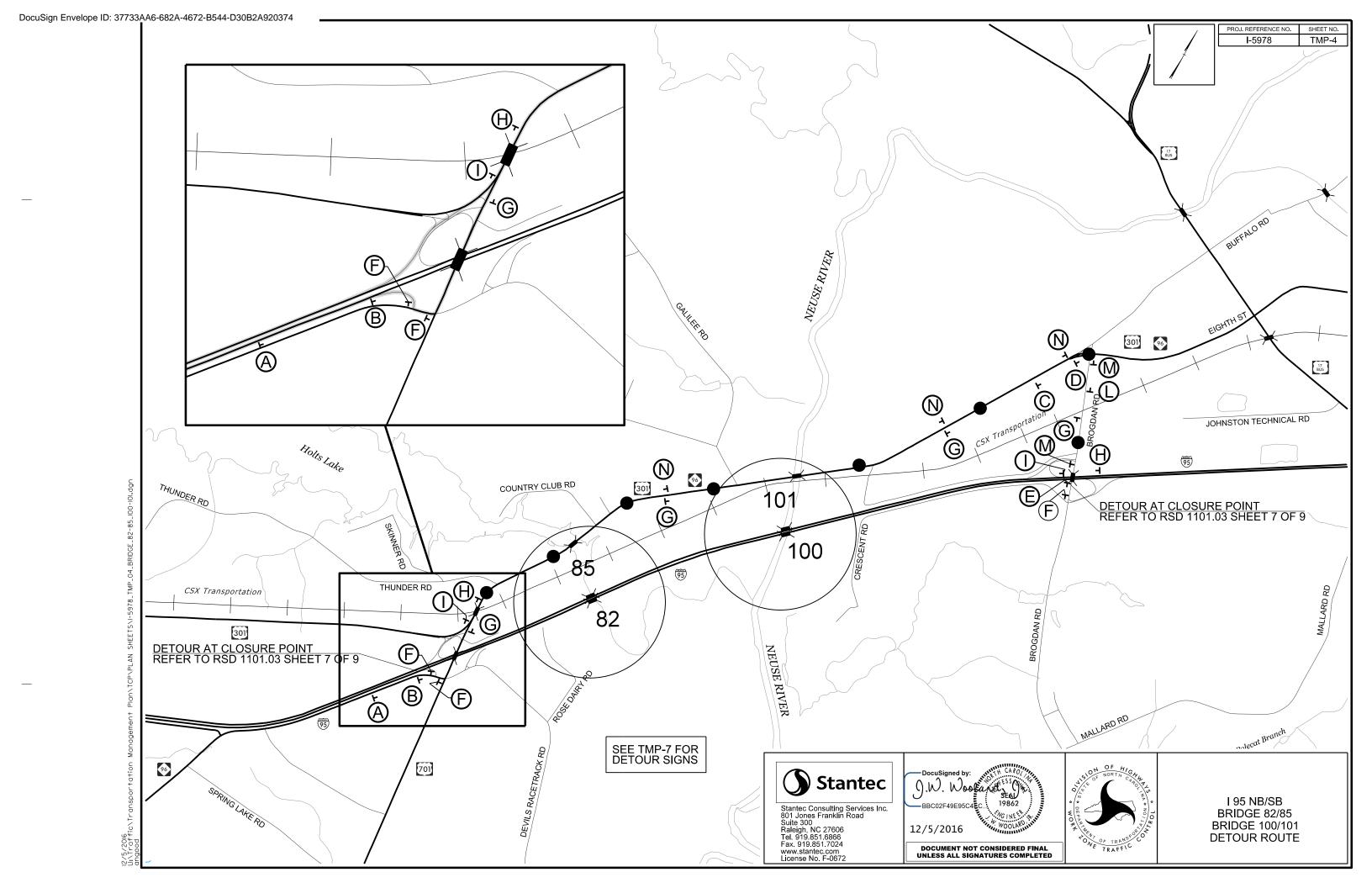


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PHASING



BRIDGE 82/85 AND 100/101 DETOUR ROUTE SIGNS

DETOUR M4-8

24"X12" NORTH M3-1 24"X12"





DETOUR M4-8 24"X12" NORTH M3-1 24"X12" INTERSTATE



© DETOUR M4-8 NORTH M3-1 INTERSTATE



DETOUR

|SOUTH|

INTERSTATE

M5-1R 21"x15"

M4-8

M3-3

24"X12"

24"X12"

24"X12"

24"X12"



DETOUR

INTERSTATE

DETOUR

NORTH

INTERSTATE

M6-1 21"x15"

M4-8

24"X12"

24"X12"

M4-8

M3-1

24"X12"

24"X12"





DETOUR

NORTH

INTERSTATE

M4-8

M3-1

M5-1 21"x15"

24"X12"

24"X12"









M4-8 24"X12" NORTH M3-1

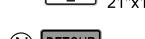




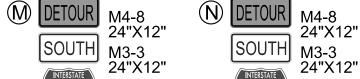


M4-8





DETOUR











M4-8 24"X12" SOUTH M3-3 24"X12"







24"X12" M3-3 24"X12" INTERSTATE

M6-2

21"x15"

M4-8











SOUTH M3-3











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