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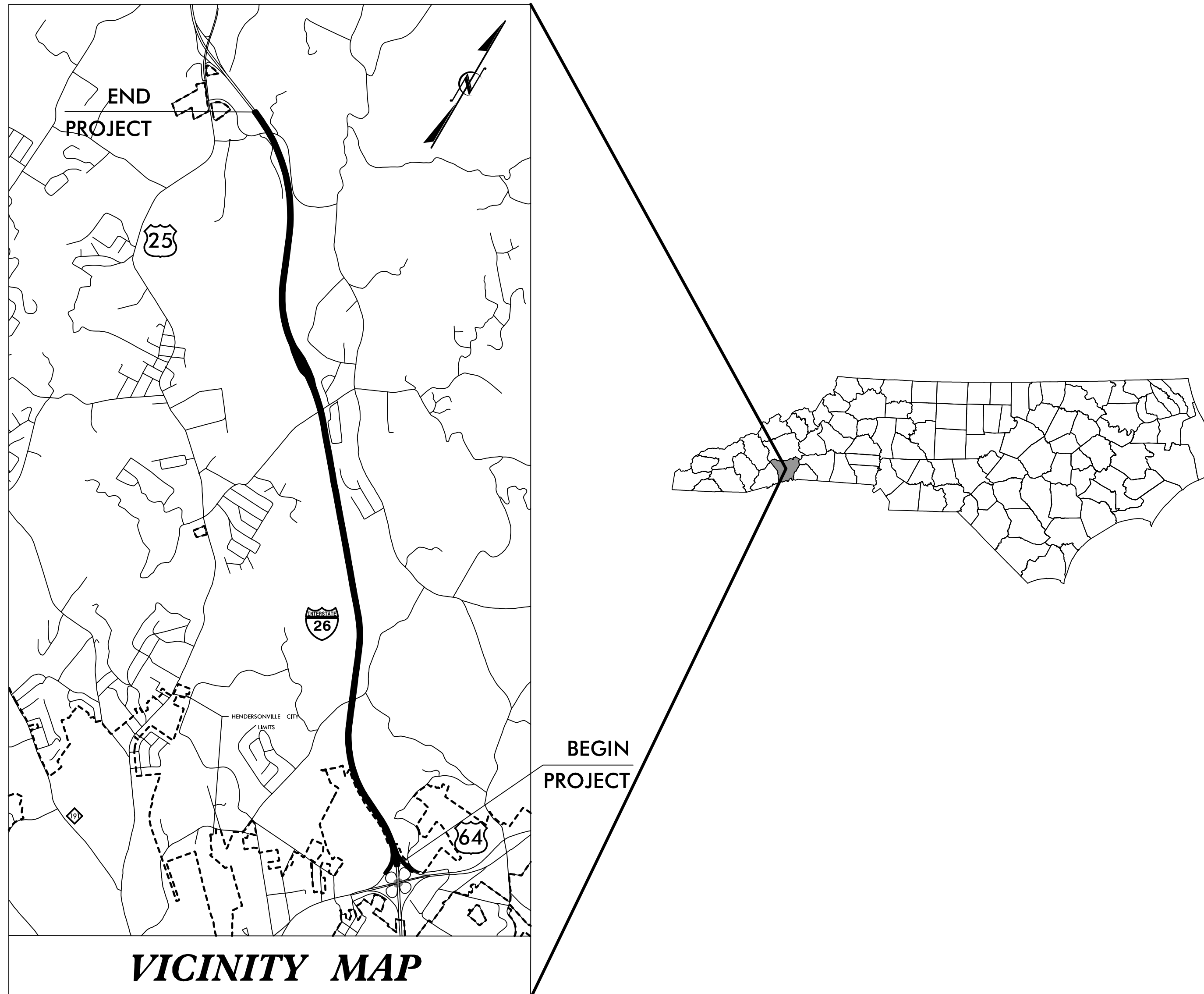
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

HENDERSON COUNTY



LOCATION: I-26 FROM 0.05MI NORTH OF US 64

TO 0.5MI SOUTH OF US 25 (ASHEVILLE HIGHWAY)

TYPE OF WORK: DRAINAGE, PAVING, GRADING, RETAINING WALLS, AND STRUCTURES

INDEX OF SHEETS

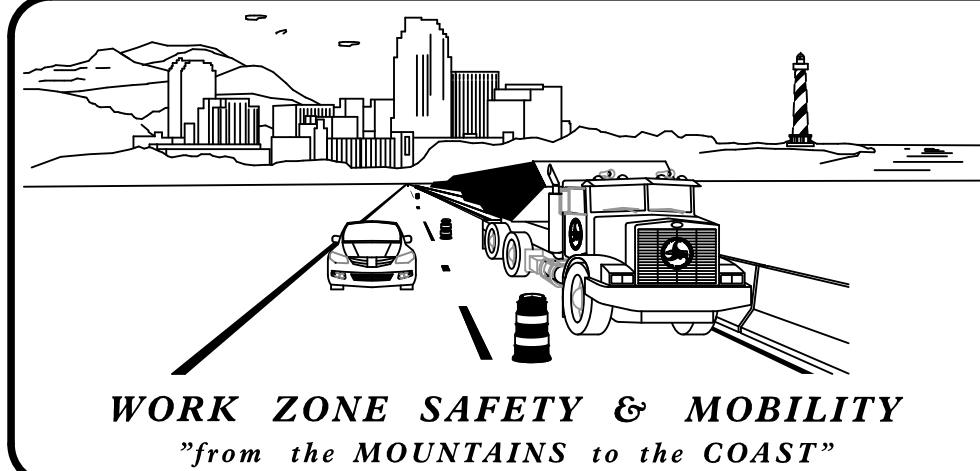
SHEET NO.	TITLE
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SHEET NO.
TMP-1

I-4400BB

TIP PROJECT:

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ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - CONTRACT STANDARDS AND DEVELOPMENT UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 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 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
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	POSITIVE PROTECTION - PORTABLE CONCRETE BARRIER
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
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (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.
- TEMPORARY PAVEMENT
- REMOVAL
- WORK AREA
- WEDGE/WIDEN
- ONGOING CONSTRUCTION
- TEMPORARY GRADE/LEVELING COURSE
- INCIDENTAL STONE

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
- FLASHING ARROW PANEL IN 'CAUTION MODE'

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS
- EXISTING MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

<u>SYMBOL</u>	<u>DESCRIPTION</u>
PAVEMENT MARKING LINES	
COLD APPLIED PLASTIC TYPE 4 (4")	
CA	WHITE EDGELINE
CI	YELLOW DOUBLE CENTER LINE
PAINT (4")	
P8	2 FT - 6 FT/SP WHITE MINISKIP
P9	2 FT - 6 FT/SP YELLOW MINISKIP
PA	WHITE EDGELINE
PB	YELLOW EDGELINE
PC	10FT. WHITE SKIP
PD	3FT - 9FT/SP WHITE MINISKIP
PE	WHITE SOLID LANE LINE
PF	10 FT. YELLOW SKIP
PH	YELLOW SINGLE CENTER
PI	YELLOW DOUBLE CENTER LINE
HIGH PERFORMANCE (6")	
Z6	WHITE EDGELINE
Z7	YELLOW EDGELINE
ZJ	10 FT. WHITE SKIP
ZK	3FT - 9FT/SP WHITE MINISKIP
ZL	WHITE SOLID LANE LINE
PAINT (8")	
P13	3 FT - 9FT/SP WHITE MINISKIP
PN	WHITE GORELINE
P0	WHITE DIAGONAL
PP	YELLOW DIAGONAL
PQ	WHITE CROSSWALK LINE
PR	WHITE SOLID LANE LINE
HIGH PERFORMANCE (12")	
Z10	3 FT - 9FT/SP WHITE MINISKIP
ZS	WHITE GORELINE
ZT	WHITE SOLID LANE LINE
PAINT (24")	
P2	WHITE STOP BAR

NOTE: FOR EACH PAINT PAVEMENT MARKING ITEM, REFER TO GENERAL NOTES FOR NUMBER OF APPLICATIONS.

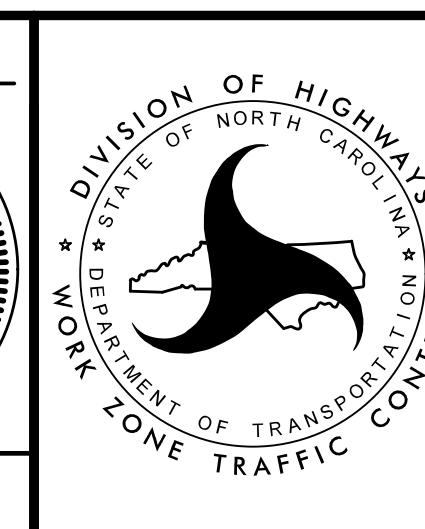
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DATE: 9/3/2019

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TRANSPORTATION
MANAGEMENT PLAN

**ROADWAY STANDARD
DRAWINGS AND
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 AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-26	MONDAY THRU FRIDAY
I-26 RAMPS	6:00 AM - 9:00 PM
US-64 RAMPS	SATURDAY AND SUNDAY
	9:00 AM - 9:00 PM

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

ROAD NAME
I-26, I-26 RAMPS, AND US-64 RAMPS

HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR CHRISTMAS AND NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 18TH TO 9:00 P.M. THE THIRD WEEKDAY FOLLOWING NEW YEAR'S DAY.
- FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 9:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 9:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY, THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY TO 9:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THANKSGIVING DAY AND 9:00 P.M. THE MONDAY FOLLOWING THANKSGIVING DAY.
- FOR THE CHRISTMAS RETAIL SEASON, THURSDAYS THROUGH SUNDAYS BETWEEN THE HOURS OF 9:00 P.M. THE THURSDAY FOLLOWING THANKSGIVING DAY TO 6:00 A.M. DECEMBER 18TH.
- FOR THE NORTH CAROLINA MOUNTAIN STATE FAIR (TYPICALLY HELD FOR 10 DAYS STARTING THE FRIDAY AFTER LABOR DAY), BETWEEN THE HOURS OF 6:00 A.M. ON THE FRIDAY FOLLOWING LABOR DAY AND 9:00 P.M. THE FOLLOWING MONDAY AFTER THE FAIR CONCLUDES.

C) DO NOT CLOSE ROADS AS FOLLOWS

ROAD NAME	DAY AND TIME RESTRICTIONS
I-26	MONDAY THRU FRIDAY
	5:00 AM - 11:00 PM

D) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
I-26 & I-26 RAMPS	MONDAY-SUNDAY 5:00AM - 11:00PM	30 MINUTES FOR EXISTING BRIDGE DEMO, GIRDER INSTALLATION, OVERHEAD SIGN STRUCTURE INSTALLATION, SIGNAL MAST ARMS AND TRAFFIC SHIFT

HAULING RESTRICTIONS

DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS AN APPROVED TEMPORARY TRAFFIC BARRIER OR GUARDRAIL SEPARATES THE TRAFFIC FROM THE HAULING OPERATION.

DO NOT HAUL DURING THE HOLIDAY AND SPECIAL EVENTS TIME RESTRICTIONS LISTED IN GENERAL NOTE "B", UNLESS THE HAULING OPERATION OCCURS COMPLETELY BEHIND TEMPORARY TRAFFIC BARRIER OR GUARDRAIL AND DOES NOT IMPACT TRAFFIC OPERATIONS.

INGRESS AND EGRESS TO AND FROM THE I-26 MEDIAN SHALL BE CONDUCTED IN ACCORDANCE WITH THE "TYPICAL MEDIAN ACCESS AREA" SPECIAL PROVISION, THIS IS NOT REQUIRED IF USING A LANE CLOSURE IN CONJUNCTION WITH RSD 1101.05, SHEET 2, WITHIN THE ALLOWABLE TIMES AS DESCRIBED IN GENERAL NOTE "A". PROVIDE THE NUMBER OF AND LOCATIONS TO THE ENGINEER AT PRE-CONSTRUCTION CONFERENCE.

HAUL VEHICLES SHALL NOT ENTER AND/OR EXIT AN OPEN TRAVEL LANE AT SPEEDS MORE THAN 10 MPH BELOW THE POSTED SPEED LIMIT.

HAULING OPERATIONS THAT PERPENDICULARLY CROSS A ROADWAY SHALL BE SUBJECT TO THE LANE, HOLIDAY AND SPECIAL EVENT TIME RESTRICTIONS DESCRIBED IN GENERAL NOTE "A".

EXCLUDING HAULING OPERATIONS THAT ARE CONDUCTED ENTIRELY BEHIND BARRIER OR GUARDRAIL, SINGLE AND MULTI-VEHICLE HAULING SHALL NOT BE ALLOWED INGRESS AND EGRESS FROM ANY TRAVELWAY DURING THE FOLLOWING TIME RESTRICTIONS:

E) DO NOT CONDUCT SINGLE VEHICLE HAULING AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-26	MONDAY-FRIDAY
I-26 RAMPS	6:00 AM - 9:00 AM
	4:00 PM - 7:00 PM

DO NOT CONDUCT MULTI-VEHICLE HAULING AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-26	MONDAY-FRIDAY
I-26 RAMPS	6:00 AM - 9:00 PM
	SATURDAY AND SUNDAY
	8:00 AM - 9:00 PM

LANE 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 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 REMAINS 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 TWO SIMULTANEOUS LANE CLOSURES IN ANY ONE DIRECTION ON I-26. PROVIDE A MINIMUM OF 2 MILES BETWEEN LANE CLOSURES, MEASURED FROM THE END OF ONE LANE CLOSURE TO THE FIRST SIGN OF THE NEXT LANE CLOSURE. THE MAXIMUM LENGTH OF EACH LANE CLOSURE SHALL BE 2 MILES FOR A SINGLE LANE CLOSURE AND 2.5 MILES FOR A DOUBLE LANE CLOSURE, MEASURED FROM THE BEGINNING OF THE FIRST MERGE TAPER TO THE END OF THE LANE CLOSURE.

PAVEMENT EDGE DROP OFF REQUIREMENTS

L) 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.

M) 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

N) NOTIFY THE ENGINEER THIRTY (30) 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 TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

Q) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

R) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

S) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500' IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

T) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION, PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE/RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW, BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW, BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

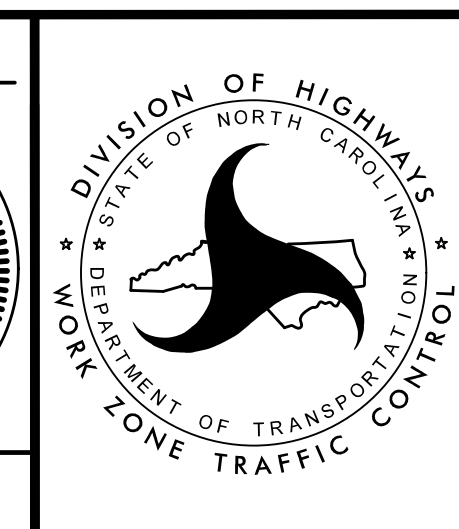
INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

DocuSigned by:
Rhonda B. Early
F34CAFAC8BFB4A
9/3/2019

APPROVED: _____
DATE: _____

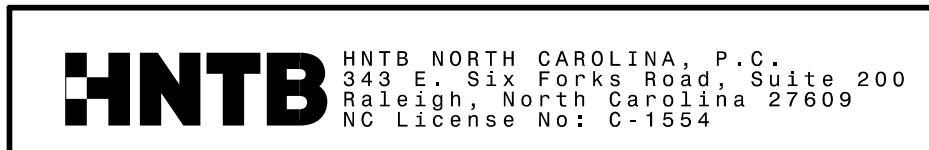
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TRANSPORTATION
MANAGEMENT PLAN

GENERAL NOTES



GENERAL NOTES

U) PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED IMPACT ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS:

POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	15 FT
45 - 50	20 FT
55	25 FT
60 MPH or HIGHER	30 FT

TRAFFIC CONTROL DEVICES

V) 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 OPENED 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.

W) REFER TO HIGH VISIBILITY DEVICES SPECIAL PROVISION FOR DRUMS, STATIONARY WORK ZONE SIGNS AND PORTABLE WORK ZONE SIGNS USED ON I-26, RAMPS AND LOOPS.

X) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

Y) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES (DRUMS) PERPENDICULAR TO THE EDGE OF THE TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

Z) PROVIDE AND OPERATE 6 ADDITIONAL CMS'S TO BE USED AS DIRECTED BY THE ENGINEER.

PAVEMENT MARKINGS AND MARKERS

AA) 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>
ALL Y-LINES I-26 ALL RAMPS	PAINT HIGH PERFORMANCE MARKINGS HIGH PERFORMANCE MARKINGS	TEMPORARY RAISED TEMPORARY RAISED TEMPORARY RAISED
FINAL CONCRETE SURFACES	COLD APPLIED PLASTIC (TYPE 4)	
BRIDGES	COLD APPLIED	

BB) 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.

CC) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

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

EE) TRACE THE PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO INSTALLATION. PLACE DRUMS TO DELINEATE ANY PROPOSED MONOLITHIC ISLANDS BEFORE INSTALLATION.

MISCELLANEOUS

FF) LAW ENFORCEMENT SHALL BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

GG) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAYS TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION, AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 500 FT AND 1000 FT RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

HH) ALL CURB RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.

II) CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS AT ALL TIMES AS STATED IN THE PHASING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY SIDEWALKS (CONCRETE, ASPHALT, OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER) AT ALL LOCATIONS WHERE THE OPEN PEDESTRIAN TRAVELWAY HAS BEEN REMOVED FOR CONSTRUCTION OPERATIONS (UTILITIES, DRAINAGE, ETC.).

JJ) THE TEMPORARY DRAINAGE DESIGN SHOWN ON THESE PLANS WAS PROVIDED BY VAUGHN & MELTON CONSULTING FIRM. CONTACT: JON FORD, PE. (JCFORD@VAUGHNMELTON.COM / (704)357-0488)

LOCAL NOTES

LN-1 PLACE TMA AS NEEDED TO PROTECT MOTORIST FROM UNFINISHED GUARDRAIL OR PCB INSTALLATION. (MAXIMUM 72 HOURS)

LN-2 COORDINATE ALL CONSTRUCTION ACTIVITIES INCLUDING BUT NOT LIMITED TO PAVEMENT MARKING, LANE SHIFTS, PCB INSTALLATION, LANE CLOSURES, DRUM PLACEMENT AND PAVING WITH I-4400C.

LN-3 TWO WEEKS PRIOR TO SHORT DURATION ROAD CLOSURE, PLACE CMS BOARDS (FOR EACH DIRECTION) AT CLOSURE POINT NOTIFYING THE PUBLIC OF SCHEDULED CLOSURES AND DELAYS. DURING CLOSURES, RELOCATE CMS BOARDS AND REVISE MESSAGE TO INDICATE DURATION OF OPERATION.

LN-4 UTILIZE ADDITIONAL CMS BOARDS TO PROVIDE ADVANCE WARNING AS DIRECTED BY THE ENGINEER.

LN-5 THE FOLLOWING APPLIES TO ALL TEMPORARY LANE CLOSURES ON I-26:
 1. REFER TO THE HIGH VISIBILITY DEVICES SPECIAL PROVISIONS FOR DRUMS AND PORTABLE WORK ZONE SIGNS.
 2. REFER TO THE CONNECTED LANE CLOSURE DEVICE SPECIAL PROVISION FOR THE PURPOSE OF TRANSMITTING THE LOCATION OF THE LANE CLOSURE TO NAVIGATION COMPANIES.
 3. REFER TO THE SEQUENTIAL FLASHING WARNING LIGHTS SPECIAL PROVISION FOR DRUMS USED IN MERGING TAPERS.
 4. REFER TO THE WORK ZONE PRESENCE LIGHTING SPECIAL PROVISION TO SUPPLEMENT CONSTRUCTION/TASK AND EQUIPMENT LIGHTING.

LN-6 CONSIDER FUTURE USE OF TEMPORARY PAVEMENT:
 1. IF TEMPORARY ELEVATION IS ABOVE PERMANENT, THEN CONSTRUCT PERMANENT AND WEDGE TO TEMPORARY ELEVATION.
 2. IF TEMPORARY ELEVATION IS BELOW PERMANENT INTERMEDIATE COURSE, THEN USE TEMPORARY PAVEMENT STRUCTURE.
 3. IF TEMPORARY ELEVATION IS ABOVE BETWEEN 1 & 2, THEN USE VARIABLE CROSS SLOPE TO TIE TO BINDER COURSE OR FIRST LAYER OF SURFACE COURSE AS DESIRED.

LN-7 INSTALL ITS POLES, CAMERAS, AND DMS ACCORDING TO ITS PLANS.

LN-8 PARTIALLY CONSTRUCT DRAINAGE STRUCTURE WITH STEEL PLATE TO MATCH TEMPORARY PAVEMENT OR TEMPORARY GRADING ELEVATION.

LN-9 PARTIALLY CONSTRUCT DRAINAGE STRUCTURE WITH TEMPORARY GRATE TOP TO MATCH TEMPORARY DITCH OR PAVEMENT ELEVATION.

LN-10 EXTEND PIPE TO DRAIN.

LN-11 USE STEEL PLATE ON END OF PIPE STUB OR USE STEEL PLATE TO BLOCK PIPE OPENING IN STRUCTURE.

LN-12 CONSTRUCT TEMPORARY INLET AND PIPE. CONNECT AND DRAIN TO NEAREST STRUCTURE.

LN-13 JACK & BORE PIPE INSTALLATION OR INSTALL IN SECTIONS UNDER TRAFFIC CONTROL.

MANAGEMENT STRATEGIES

THE GENERAL OVERVIEW OF THE ENTIRE PROJECT IS SUMMARIZED BY THE FOLLOWING PROCESS: REPLACE OVERHEAD BRIDGES, PLACE TEMPORARY WIDENING ALONG OUTSIDE WB SHOULDER, SHIFT WB TRAFFIC OUT AND PLACE TEMPORARY WIDENING ALONG MEDIAN, SHIFT EB TRAFFIC TO TEMPORARY PAVEMENT, CONSTRUCT EB LANES, SHIFT EB TO OUTERMOST EB LANES AND WB TO TEMPORARY MEDIAN PAVEMENT (PREVIOUSLY EB TRAFFIC), CONSTRUCT EB LANES, SHIFT WB TRAFFIC TO OUTERMOST LANES AND COMPLETE MEDIAN CONSTRUCTION. TO COMPLETE THIS WORK, THE PROJECT HAS BEEN DIVIDED INTO 5 PHASES.

SPECIAL CHARACTERISTICS OF THE PROJECT INCLUDE:
 * TEMPORARY CROWN OF MEDIAN PAVEMENT INCLUDING PROPOSED BRIDGES (ON TANGENT) THAT WILL NEED TO BE MILLED TO FINAL GRADE DURING PHASE IV.
 * WB SHOULDERS CONSTRUCTED DURING PHASE I MAY BE RETAINED AS PERMANENT IF (AND ONLY IF) WHAT REMAINS AFTER MILLED OR WEDGED TO FINAL GRADE IS AT LEAST FULL DEPTH SHOULDER PAVEMENT.

PHASE I INCLUDES CONSTRUCTING THE WB TEMPORARY PAVEMENT ALONG THE OUTSIDE SHOULDER (BEHIND BARRIER) INCLUDING PARTIAL CONSTRUCTION OF THE PROPOSED WB BRIDGE OVER CLEAR CREEK. DURING THIS PHASE, THE PROPOSED Y-LINES AND BRIDGES FOR Y2 (CLEAR CREEK RD), Y5 (BROOKSIDE CAMP RD) AND Y7 (NAPLES RD) ARE CONSTRUCTED, TRAFFIC SHIFTED TO NEW ALIGNMENT AND EXISTING BRIDGES REMOVED. SHORING IS NEEDED TO CONSTRUCT BRIDGES, ABUTMENTS AND FOOTINGS.

ONCE THE OUTSIDE SHOULDER CONSTRUCTION IS COMPLETED, WB TRAFFIC IS SHIFTED TO THE RIGHT IN 11' LANES. WB WEIGH STATION IS CLOSED. AT THIS TIME THE MEDIAN TEMPORARY PAVEMENT CONSTRUCTED IN PREPARATION OF RECEIVING THE EB LANES INCLUDING THE REMAINDER OF THE BRIDGE OVER CLEAR CREEK. AS THE EB TRAFFIC IS SHIFTED TO THE TEMPORARY MEDIAN PATTERN (PHASE II), Y1RPA (TO US 64) IS CLOSED TO TRAFFIC AND RECONSTRUCTED USING AN OFFSITE DETOUR. EB WEIGH STATION IS CLOSED.

PHASE II INCLUDES CONSTRUCTION OF THE EB LANES INCLUDING THE EB BRIDGE OVER CLEAR CREEK. STAGED CONSTRUCTION OF Y1RPA IS REQUIRED INCLUDING AN TEMPORARY ON-SITE DETOUR.

STAGE III BEGINS WITH THE EB LANES SHIFTED TO THE OUTERMOST LANES OF THE NEW PAVEMENT. REDUCED SHOULDERS ARE REQUIRED UNDER THE BRIDGES. THE REMAINDER OF THE EB LANES ARE CONSTRUCTED WITH ADDITIONAL TEMPORARY PAVEMENT IN PREPARATION OF RECEIVING THE WB LANES. OPEN EB WEIGH STATION.

DURING PHASE IV, WB TRAFFIC IS SHIFTED TO TEMPORARY MEDIAN PATTERN WHILE THE PROPOSED WB LANES ARE CONSTRUCTED. Y1RPD REQUIRES CLOSINGS TO CONSTRUCT AND AGAIN TO SHIFT.

PHASE V SHIFTS WB TRAFFIC TO THE PROPOSED OUTERMOST WB LANES AND BEHIND BARRIER THE TEMPORARY MEDIAN PAVEMENT IS REMOVED / MILLED AND THE PROPOSED MEDIAN INCLUDING PERMANENT BARRIER IS CONSTRUCTED. USING LANE CLOSURES AND TRAFFIC SHIFTS, THE NEW CONCRETE PAVEMENT IS TO BE DIAMOND GROUND AND FINAL MARKINGS APPLIED.

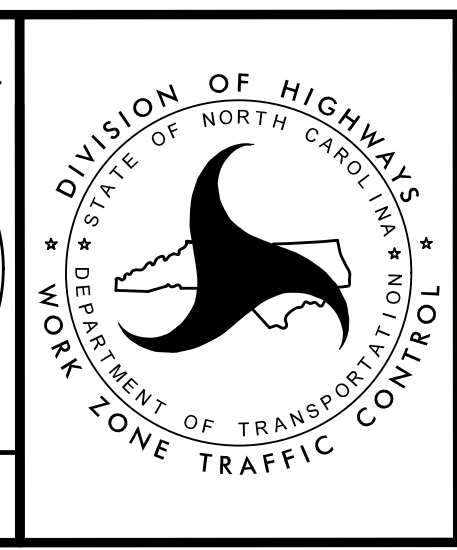
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APPROVED: Rhonda B. Early
 DATE: 9/3/2019

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TRANSPORTATION
MANAGEMENT PLAN

GENERAL NOTES,
LOCAL NOTES &
MANAGEMENT
STRATEGIES

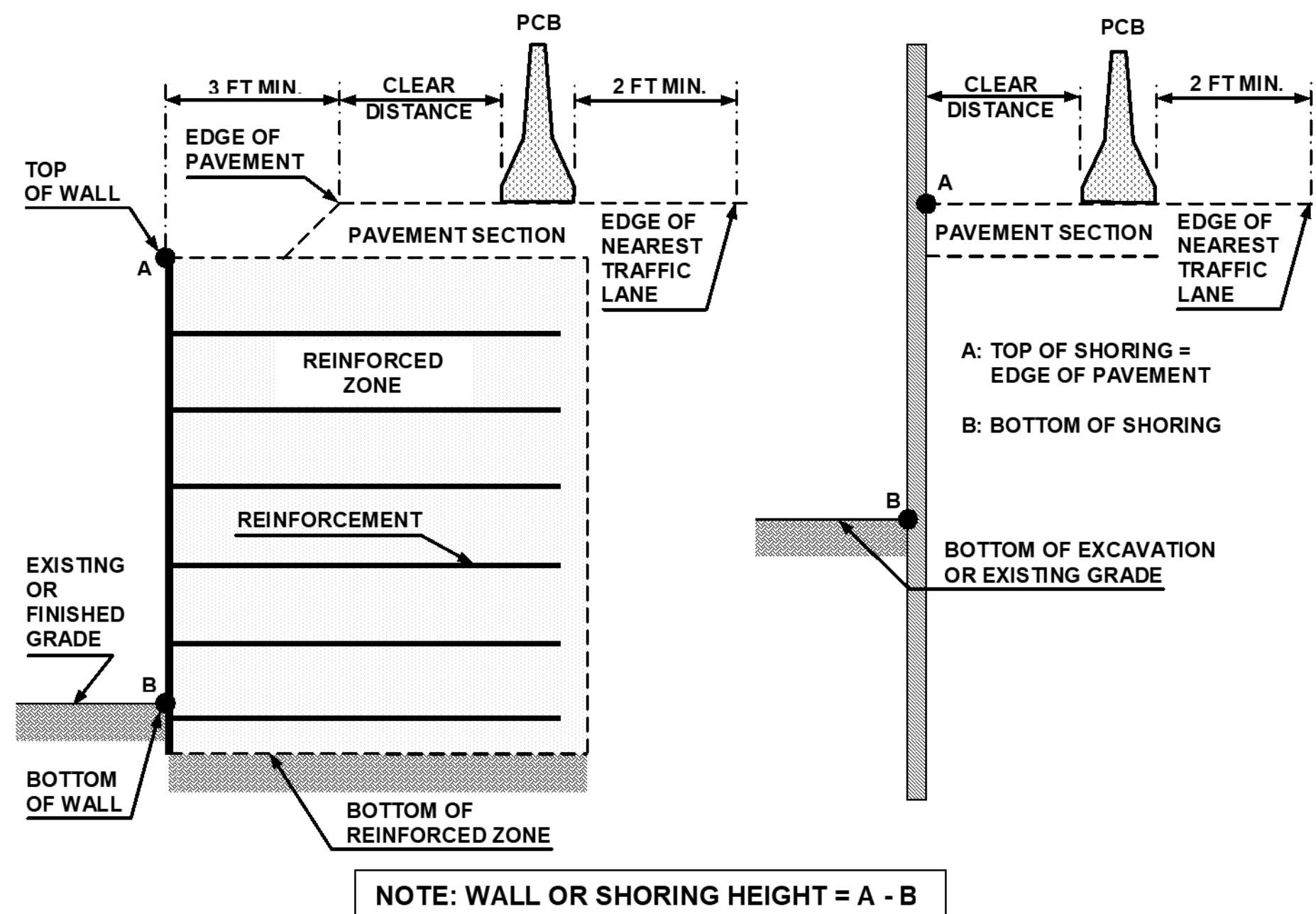


FIGURE A

NOTES

- 1- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.
- 2- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PCB).
- 3- PCB IS REQUIRED IF TEMPORARY SHORING IS LOCATED WITHIN THE CLEAR ZONE IN ACCORDANCE WITH THE AASHTO ROADSIDE DESIGN GUIDE. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).
- 4- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED OR ANCHORED PCB FROM THE TABLE SHOWN IN FIGURE B. CLEAR DISTANCE IS DEFINED AS SHOWN IN FIGURE A AND OFFSET IS DEFINED AS SHOWN IN FIGURE B.
- 5- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET PCB NEXT TO AND UP AGAINST THE TRAFFIC SIDE OF THE TEMPORARY SHORING EXCEPT FOR BARRIER ABOVE TEMPORARY WALLS. PCB WITH THE MINIMUM REQUIRED CLEAR DISTANCE IS REQUIRED ABOVE TEMPORARY WALLS.
- 6- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- 7- PCB REQUIREMENTS FOR TEMPORARY WALLS APPLY TO TEMPORARY MECHANICALLY STABILIZED EARTH (MSE) WALLS AND TEMPORARY SOIL NAIL WALLS.
- 8- SET PCB WITH A MINIMUM HORIZONTAL DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A UNLESS OTHERWISE SHOWN IN THE PLANS AND OR AS APPROVED BY THE ENGINEER.
- 9- FOR PCB ABOVE AND BEHIND TEMPORARY WALLS, PROVIDE A MINIMUM DISTANCE OF 3 FT BETWEEN THE EDGE OF PAVEMENT AND THE WALL FACE AS SHOWN IN FIGURE A. IF THESE MINIMUM REQUIRED DISTANCES ARE NOT AVAILABLE, CONTACT THE ENGINEER.
- 10- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS. BARRIER DEFLECTIONS AND RESULTING MINIMUM REQUIRED CLEAR DISTANCES MIGHT VARY SIGNIFICANTLY FOR LARGER HEAVIER VEHICLES, RUNS OF BARRIER LESS THAN 200 FT IN LENGTH AND WET OR DRY PAVEMENT.

Barrier Type	Pavement Type	Offset * ft	Design Speed, mph					
			<30	31-40	41-50	51-60	61-70	71-80
Unanchored PCB	Asphalt	<8	24	26	29	32	36	40
		8-14	26	28	31	35	38	42
		14-20	27	29	34	36	39	43
		20-26	28	31	35	38	40	44
		26-32	29	32	36	39	42	45
		32-38	30	34	38	41	43	46
		38-44	31	34	41	43	45	48
		44-50	31	35	41	43	46	49
		50-56	32	36	42	44	47	50
	>56	32	36	42	45	47	51	
	Concrete	<8	17	18	21	22	25	26
		8-14	19	20	23	25	26	29
		14-20	22	22	24	26	28	31
		20-26	23	24	26	27	30	34
		26-32	24	25	27	28	32	35
		32-38	24	26	27	30	33	36
		38-44	25	26	28	30	34	37
		44-50	26	26	28	32	35	37
50-56		26	26	28	32	35	38	
>56	26	27	29	32	36	38		
Anchored PCB	Asphalt	All Offsets	24 for All Design Speeds					
Anchored PCB	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

* See Figure Below

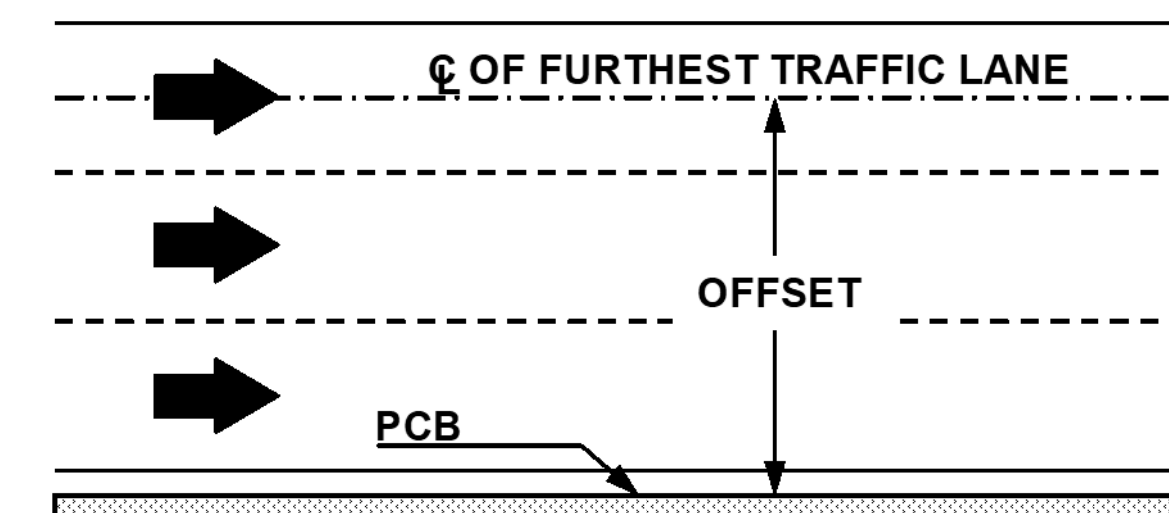


FIGURE B

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APPROVED: *Rhonda B. Early*
DATE: 9/3/2019

PROFESSIONAL ENGINEER
SEAL
023521
RHONDA B. EARLY

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DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN

PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

SHORING NOTES

TEMPORARY SHORING NO. 1

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE BENT AND WALL INSTALLATION FROM STATION -Y2- 20+05±, 30± LT TO STATION -Y2- 20+70±, 29± LT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -Y2- 20+05±, 30± LT TO STATION -Y2- 20+70±, 29± LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT γ = 120 LB/CF
 FRICTION ANGLE ϕ = 30 DEGREES
 COHESION c = 0 LB/SF
 GROUNDWATER ELEVATION = 2110 FT ±

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -Y2- 20+05±, 30± LT TO STATION -Y2- 20+70±, 29± LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y2- 20+05±, 30± LT TO STATION -Y2- 20+70±, 29± LT.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -Y2- 20+05±, 30± LT TO STATION -Y2- 20+70±, 29± LT FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

TEMPORARY SHORING NO. 2

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE BENT AND WALL INSTALLATION FROM STATION -Y2- 22+30±, 28± LT TO STATION -Y2- 22+85±, 27± LT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION Y2- 22+30±, 28± LT TO STATION -Y2- 22+85±, 27± LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT γ = 120 LB/CF
 FRICTION ANGLE ϕ = 30 DEGREES
 COHESION c = 0 LB/SF
 GROUNDWATER ELEVATION = 2110 FT ±

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION Y2- 22+30±, 28± LT TO STATION -Y2- 22+85±, 27± LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y2- 22+30±, 28± LT TO STATION -Y2- 22+85±, 27± LT.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -Y2- 22+30±, 28± LT TO STATION -Y2- 22+85±, 27± LT FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

TEMPORARY SHORING NO. 3

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE BENT INSTALLATION FROM STATION -L- 438+69±, 10± LT TO STATION -L- 439+50±, 10± LT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -L- 438+69±, 10± LT TO STATION -L- 439+50±, 10± LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT γ = 120 LB/CF
 FRICTION ANGLE ϕ = 30 DEGREES
 COHESION c = 0 LB/SF
 GROUNDWATER ELEVATION = 2110 FT ±

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 438+69±, 10± LT TO STATION -L- 439+50±, 10± LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 438+69±, 10± LT TO STATION -L- 439+50±, 10± LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY WALLS.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -L- 438+69±, 10± LT TO STATION -L- 439+50±, 10± LT FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

TEMPORARY SHORING NO. 4

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE BENT INSTALLATION FROM STATION -L- 438+69±, 10± RT TO STATION -L- 439+50±, 10± RT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -L- 438+69±, 10± RT TO STATION -L- 439+50±, 10± RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT γ = 120 LB/CF
 FRICTION ANGLE ϕ = 30 DEGREES
 COHESION c = 0 LB/SF
 GROUNDWATER ELEVATION = 2110 FT ±

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 438+69±, 10± RT TO STATION -L- 439+50±, 10± RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 438+69±, 10± RT TO STATION -L- 439+50±, 10± RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY WALLS.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -L- 438+69±, 10± RT TO STATION -L- 439+50±, 10± RT FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

TEMPORARY SHORING NO. 5

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE BENT INSTALLATION FROM STATION -L- 439+50±, 10± LT/RT TO STATION -L- 439+50±, 10± LT/RT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -L- 439+50±, 10± LT/RT TO STATION -L- 439+50±, 10± LT/RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT γ = 120 LB/CF
 FRICTION ANGLE ϕ = 30 DEGREES
 COHESION c = 0 LB/SF
 GROUNDWATER ELEVATION = 2100 FT ±

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 439+50±, 10± LT/RT TO STATION -L- 439+50±, 10± LT/RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 439+50±, 10± LT/RT TO STATION -L- 439+50±, 10± LT/RT.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 439+50±, 10± LT/RT TO STATION -L- 439+50±, 10± LT/RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY WALLS.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -L- 438+69±, 10± LT/RT TO STATION -L- 439+50±, 10± LT/RT FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

TEMPORARY SHORING NO. 6

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE BENT INSTALLATION AND WALL INSTALLATION FROM STATION -Y5- 18+09+/-, 37.0+/- TO STATION -Y5- 18+57+/-, 39.0+/- LT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -Y5- 18+09+/-, 37.0+/- TO STATION -Y5- 18+57+/-, 39.0+/- LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT γ = 120 LB/CF
 FRICTION ANGLE ϕ = 30 DEGREES
 COHESION c = 0 LB/SF
 GROUNDWATER ELEVATION = 2075 FT ±

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -Y5- 18+09+/-, 37.0+/- TO STATION -Y5- 18+57+/-, 39.0+/- LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

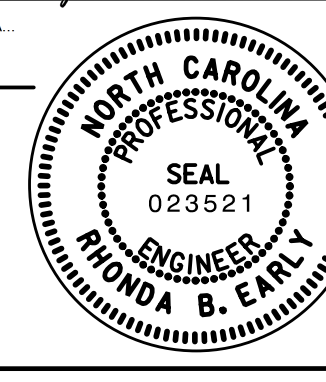
DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y5- 18+09+/-, 37.0+/- TO STATION -Y5- 18+57+/-, 39.0+/- LT.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y5- 18+09+/-, 37.0+/- TO STATION -Y5- 18+57+/-, 39.0+/- LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY WALLS.

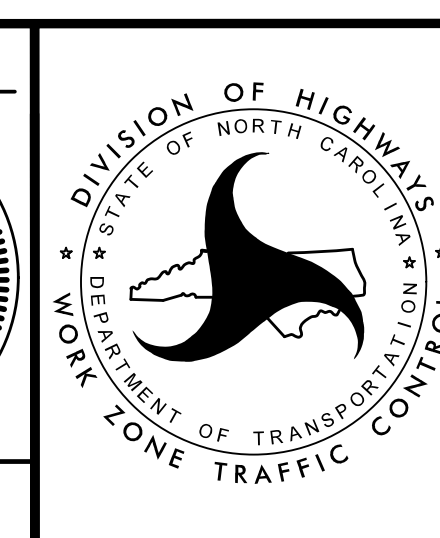
IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -Y5- 18+09+/-, 37.0+/- TO STATION -Y5- 18+57+/-, 39.0+/- LT FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH SEALED DOCUMENTS FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENTS WERE SUBMITTED TO DIVISION 14 ON MAY 30, 2019 BY PROFESSIONAL ENGINEER SHANE C CLARK, P.E. LICENSE #029869

APPROVED: *Rhonda B. Early*
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 DATE: 9/3/2019




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TRANSPORTATION
MANAGEMENT PLAN

TEMPORARY SHORING
DATA



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 Raleigh, North Carolina 27609
 NC License No: C-1554

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 9/3/2019

SHORING NOTES

TEMPORARY SHORING NO. 7

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE BENT AND WALL INSTALLATION FROM STATION -Y5- 20+03+/-, 39.0+/- LT TO STATION -Y5- 20+55+/-, 37.0+/- LT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -Y5- 20+03+/-, 39.0+/- LT TO STATION -Y5- 20+55+/-, 37.0+/- LT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT $\gamma = 120$ LB/CF
 FRICTION ANGLE $\phi = 30$ DEGREES
 COHESION $c = 0$ LB/SF
 GROUNDWATER ELEVATION = 2078 FT \pm

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -Y5- 20+03+/-, 39.0+/- LT TO STATION -Y5- 20+55+/-, 37.0+/- LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y5- 20+03+/-, 39.0+/- LT TO STATION -Y5- 20+55+/-, 37.0+/- LT.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y5- 20+03+/-, 39.0+/- LT TO STATION -Y5- 20+55+/-, 37.0+/- LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY WALLS.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -Y5- 20+03+/-, 39.0+/- LT TO STATION -Y5- 20+55+/-, 37.0+/- LT FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

TEMPORARY SHORING NO. 8

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE BENT INSTALLATION FROM STATION -L- 539+52 \pm , 10.0 \pm LT TO STATION -L- 540+42 \pm , 10.0 \pm LT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -L- 539+52 \pm , 10.0 \pm LT TO STATION -L- 540+42 \pm , 10.0 \pm LT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT $\gamma = 120$ LB/CF
 FRICTION ANGLE $\phi = 30$ DEGREES
 COHESION $c = 0$ LB/SF
 GROUNDWATER ELEVATION = 2078 FT \pm

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 539+52 \pm , 10.0 \pm LT TO STATION -L- 540+42 \pm , 10.0 \pm LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 539+52 \pm , 10.0 \pm LT TO STATION -L- 540+42 \pm , 10.0 \pm LT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING NO. 9

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE BENT INSTALLATION FROM STATION -L- 539+52 \pm , 10.0 \pm RT TO STATION -L- 540+42 \pm , 10.0 \pm RT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -L- 539+52 \pm , 10.0 \pm RT TO STATION -L- 540+42 \pm , 10.0 \pm RT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT $\gamma = 120$ LB/CF
 FRICTION ANGLE $\phi = 30$ DEGREES
 COHESION $c = 0$ LB/SF
 GROUNDWATER ELEVATION = 2078 FT \pm

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 539+52 \pm , 10.0 \pm RT TO STATION -L- 540+42 \pm , 10.0 \pm RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 539+52 \pm , 10.0 \pm RT TO STATION -L- 540+42 \pm , 10.0 \pm RT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING NO. 10

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE BENT AND WALL INSTALLATION FROM STATION -Y7- 15+45+/-, 38.0+/- LT TO STATION -Y7- 15+93+/-, 43.0+/- LT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -Y7- 15+45+/-, 38.0+/- LT TO STATION -Y7- 15+93+/-, 43.0+/- LT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT $\gamma = 120$ LB/CF
 FRICTION ANGLE $\phi = 30$ DEGREES
 COHESION $c = 0$ LB/SF
 GROUNDWATER ELEVATION = 2128 FT \pm

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -Y7- 15+45+/-, 38.0+/- LT TO STATION -Y7- 15+93+/-, 43.0+/- LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y7- 15+45+/-, 38.0+/- LT TO STATION -Y7- 15+93+/-, 43.0+/- LT.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y7- 15+45+/-, 38.0+/- LT TO STATION -Y7- 15+93+/-, 43.0+/- LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY WALLS.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -Y7- 15+45+/-, 38.0+/- LT TO STATION -Y7- 15+93+/-, 43.0+/- LT FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

TEMPORARY SHORING NO. 11

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE BENT AND WALL INSTALLATION FROM STATION -Y7- 17+62+/-, 45.0+/- LT TO STATION -Y7- 18+35+/-, 57.0+/- LT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -Y7- 17+62+/-, 45.0+/- LT TO STATION -Y7- 18+35+/-, 57.0+/- LT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT $\gamma = 120$ LB/CF
 FRICTION ANGLE $\phi = 30$ DEGREES
 COHESION $c = 0$ LB/SF
 GROUNDWATER ELEVATION = 2148 FT \pm

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -Y7- 17+62+/-, 45.0+/- LT TO STATION -Y7- 18+35+/-, 57.0+/- LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y7- 17+62+/-, 45.0+/- LT TO STATION -Y7- 18+35+/-, 57.0+/- LT.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y7- 17+62+/-, 45.0+/- LT TO STATION -Y7- 18+35+/-, 57.0+/- LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY WALLS.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -Y7- 17+62+/-, 45.0+/- LT TO STATION -Y7- 18+35+/-, 57.0+/- LT FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

TEMPORARY SHORING NO. 12

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE BENT INSTALLATION FROM STATION -L- 638+71 \pm , 10.0 \pm LT TO STATION -L- 639+77 \pm , 10.0 \pm LT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

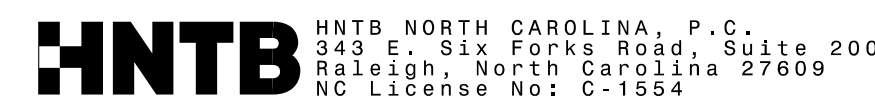
DESIGN TEMPORARY SHORING FROM STATION -L- 638+71 \pm , 10.0 \pm LT TO STATION -L- 639+77 \pm , 10.0 \pm LT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT $\gamma = 120$ LB/CF
 FRICTION ANGLE $\phi = 30$ DEGREES
 COHESION $c = 0$ LB/SF
 GROUNDWATER ELEVATION = 2108 FT \pm

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 638+71 \pm , 10.0 \pm LT TO STATION -L- 639+77 \pm , 10.0 \pm LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 638+71 \pm , 10.0 \pm LT TO STATION -L- 639+77 \pm , 10.0 \pm LT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH SEALED DOCUMENTS FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENTS WERE SUBMITTED TO DIVISION 14 ON MAY 30, 2019 BY PROFESSIONAL ENGINEER SHANE C CLARK, P.E. LICENSE #029869

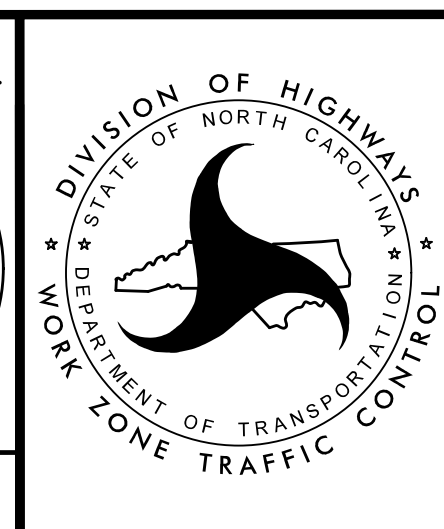


APPROVED: *Rhonda B. Early*
 DATE: 9/3/2019

DocuSigned by:
 Rhonda B. Early
 F34CAFAC08F48A...

SEAL
 023521
 NORTH CAROLINA
 PROFESSIONAL ENGINEER
 RHONDA B. EARLY

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**



TRANSPORTATION
 MANAGEMENT PLAN

**SHORING NOTES
 TEMPORARY SHORING
 DATA**

SHORING NOTES

TEMPORARY SHORING NO. 13

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE BENT AND WALL INSTALLATION FROM STATION -L- 638+71+/-, 10.0'+/- RT TO STATION -L- 639+77+/-, 10.0'+/- RT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -L- 638+71+/-, 10.0'+/- RT TO STATION -L- 639+77+/-, 10.0'+/- RT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT γ = 120 LB/CF
 FRICTION ANGLE ϕ = 30 DEGREES
 COHESION c = 0 LB/SF
 GROUNDWATER ELEVATION = 2107 FT \pm

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 638+71+/-, 10.0'+/- RT TO STATION -L- 639+77+/-, 10.0'+/- RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 638+71+/-, 10.0'+/- RT TO STATION -L- 639+77+/-, 10.0'+/- RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY WALLS.

TEMPORARY SHORING NO. 15

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE BENT AND WALL INSTALLATION FROM STATION -L- 422+70+/-, 37.0'+/- RT TO STATION -L- 423+14+/-, 37.0'+/- RT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -L- 422+70+/-, 37.0'+/- RT TO STATION -L- 423+14+/-, 37.0'+/- RT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT γ = 120 LB/CF
 FRICTION ANGLE ϕ = 30 DEGREES
 COHESION c = 0 LB/SF
 GROUNDWATER ELEVATION = 2070 FT \pm

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 422+70+/-, 37.0'+/- RT TO STATION -L- 423+14+/-, 37.0'+/- RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 422+70+/-, 37.0'+/- RT TO STATION -L- 423+14+/-, 37.0'+/- RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY WALLS.

TEMPORARY SHORING NO. 17

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE ROADWAY CONSTRUCTION FROM STATION -L- 422+90 \pm , 0.0' \pm RT/LT TO STATION -L- 423+20 \pm , 0.0' \pm RT/LT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -L- 422+90 \pm , 0.0' \pm RT/LT TO STATION -L- 423+20 \pm , 0.0' \pm RT/LT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT γ = 120 LB/CF
 FRICTION ANGLE ϕ = 30 DEGREES
 COHESION c = 0 LB/SF
 GROUNDWATER ELEVATION = 2070 FT \pm

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 422+90 \pm , 0.0' \pm RT/LT TO STATION -L- 423+20 \pm , 0.0' \pm RT/LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 422+90 \pm , 0.0' \pm RT/LT TO STATION -L- 423+20 \pm , 0.0' \pm RT/LT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING NO. 16

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE ROADWAY CONSTRUCTION FROM STATION -L- 420+31 \pm , 0.0' \pm RT/LT TO STATION -L- 420+60 \pm , 0.0' \pm RT/LT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -L- 420+31 \pm , 0.0' \pm RT/LT TO STATION -L- 420+60 \pm , 0.0' \pm RT/LT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT γ = 120 LB/CF
 FRICTION ANGLE ϕ = 30 DEGREES
 COHESION c = 0 LB/SF
 GROUNDWATER ELEVATION = 2070 FT \pm

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 420+31 \pm , 0.0' \pm RT/LT TO STATION -L- 420+60 \pm , 0.0' \pm RT/LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 420+31 \pm , 0.0' \pm RT/LT TO STATION -L- 420+60 \pm , 0.0' \pm RT/LT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING NO. 14

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE BENT AND WALL INSTALLATION FROM STATION -L- 420+30+/-, 37.0'+/- RT TO STATION -L- 420+83+/-, 37.0'+/- RT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

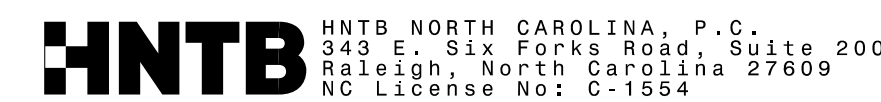
DESIGN TEMPORARY SHORING FROM STATION -L- 420+30+/-, 37.0'+/- RT TO STATION -L- 420+83+/-, 37.0'+/- RT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT γ = 120 LB/CF
 FRICTION ANGLE ϕ = 30 DEGREES
 COHESION c = 0 LB/SF
 GROUNDWATER ELEVATION = 2070 FT \pm

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 420+30+/-, 37.0'+/- RT TO STATION -L- 420+83+/-, 37.0'+/- RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 420+30+/-, 37.0'+/- RT TO STATION -L- 420+83+/-, 37.0'+/- RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY WALLS.

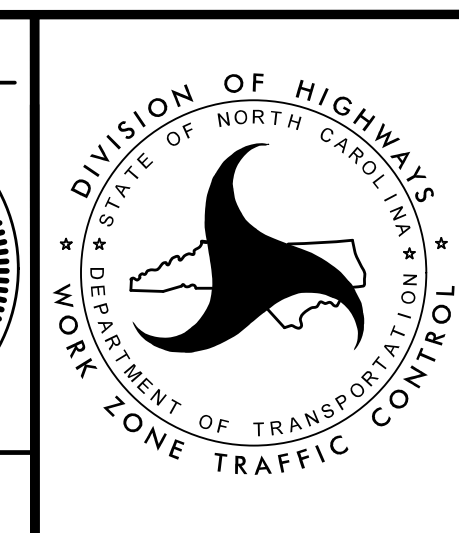
THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH SEALED DOCUMENTS FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENTS WERE SUBMITTED TO DIVISION 14 ON MAY 30, 2019 BY PROFESSIONAL ENGINEER SHANE C CLARK, P.E. LICENSE #029869



APPROVED: *Rhonda B. Early*
DocuSigned by:
 Rhonda B. Early
 F34CAFAC08BF48A
 9/3/2019

DATE: _____

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**



TRANSPORTATION
 MANAGEMENT PLAN

TEMPORARY SHORING
 DATA

SIGN NUMBER: SP-1 TYPE: E QUANTITY: X SIGN WIDTH: 4'-0" HEIGHT: 5'-0" TOTAL AREA: 20.0 Sq.Ft. BORDER TYPE: RECESSED RECESS: 0.75" WIDTH: 1.25" RADII: 3" NO. Z BARS: N/A LENGTH: N/A	BACKG COLOR: White COPY COLOR: Black SYMBOL	DESIGN BY: TRT PROJECT ID: I-4400C	CHECKED BY: ADK DIV: 14	DATE: March 2019
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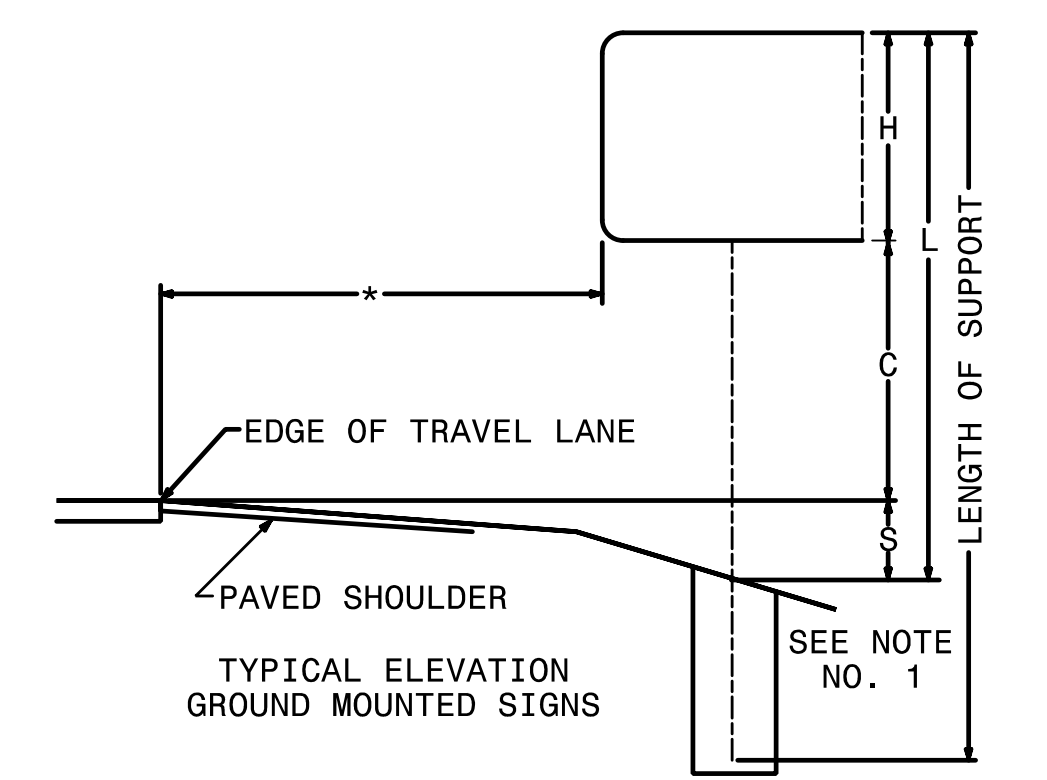
BORDER R=3" TH=1.25" IN=0.75" Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS												
Letter spacing's are to start of next letter												
	S	T	A	Y								Series/Size Text Length
	8	7.6	6.8	9.1	8.6	8						D 2000 32.1
	I	N										D 2000 10.8
	18.6	4	6.8	18.6								D 2000 32.2
	L	A	N	E								
	7.9	6.8	10	9.2	6.2	7.9						

Version: 3.1 Posted: 6/2/2017

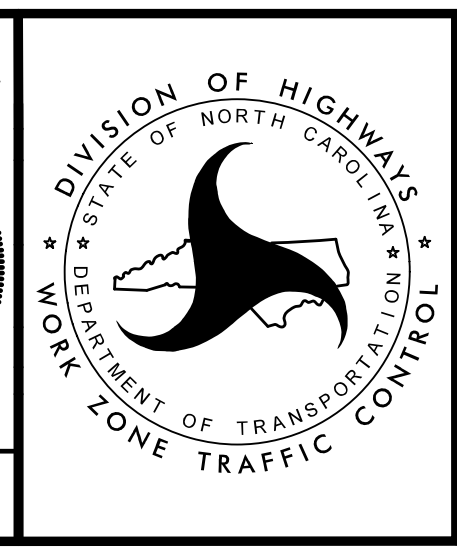
SIGN NUMBER	SIGN TYPE	SIGN SIZE (in.)			ROADWAY STATION	NUMBER OF SUPPORTS	BEAM SECTION	SUPPORT TYPE BA or S	ATTACHMENT METHOD	MOUNTING METHOD	HORIZONTAL CLEARANCE* (ft.)	SUPPORT SPACING	LENGTH (ft)			LEFT SUPPORT (ft)			CENTER SUPPORT (ft)			RIGHT SUPPORT (ft)			WOOD SUPPORT (LF)	FIELD VERIFIED (mm/dd/yy)
		w	x	h									SNS HT	MTG HT	EMBED-MENT	S	L	LENGTH	S	L	LENGTH	S	L	LENGTH		
Exit 49B ED Phase 1	B A	120 258	x x	30 90	-L- 391+79 LT +/-	3	8in x 15in	S	1-R N/A	N/A N/A	40.00	7.63	7.50	7.00	6.50	3.00	17.50	24.00	4.00	18.50	25.00	5.00	19.50	26.00	75.00	_____
Exit 49B ED Phase 2 Step 2	B A	120 258	x x	30 90	-L- 392+00 LT +/-	3	8in x 15in	S	1-R N/A	N/A N/A	40.00	7.63	7.50	7.00	6.50	3.00	17.50	24.00	4.00	18.50	25.00	5.00	19.50	26.00	75.00	_____
Exit 49B ED Phase 3	B A	120 258	x x	30 90	-L- 393+00 LT +/-	3	8in x 15in	S	1-R N/A	N/A N/A	40.00	7.63	7.50	7.00	6.50	3.00	17.50	24.00	4.00	18.50	25.00	5.00	19.50	26.00	75.00	_____
Exit 49A 1/4 Mile Advance Phase 1	B A	120 138	x x	30 108	-L- 380+25 LT +/-	2	8in x 15in	S	1-R N/A	N/A N/A	30.00	6.74	9.00	7.00	6.50	3.00	19.00	25.50	0.00	0.00	0.00	5.00	21.00	27.50	53.00	_____
TOTAL																							278.00			
USE:																							279.00			

- NOTES:
- DIMENSION "S" REPRESENTS AN INCREASE (+), OR A DECREASE (-) IN POLE LENGTH, RELATIVE TO THE ELEVATION OF THE EDGE OF TRAVEL LANE. DIMENSION "S" TO BE CONFIRMED IN THE FIELD.
 - FIELD VERIFICATIONS SHALL BE REQUIRED FOR ALL SUPPORTS, SEE (*) ARTICLE 903-3. FABRICATORS SHALL BE AISC CERTIFIED IN CATEGORY 1, SEE (*) ARTICLE 1072-1. (*) = N.C.D.O.T. STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
 - REFER TO ROADWAY STANDARD DRAWING 903.20 FOR SUPPORT SPACING AND INSTALLATION OF GROUND MOUNTED SIGNS ON WOOD POSTS.
 - PLAN LOCATIONS FOR EXISTING UTILITIES ARE BASED ON THE BEST AVAILABLE INFORMATION AND, THEREFORE MAY NOT BE PRECISELY ACCURATE. THEREFORE, IT IS INCUMBENT UPON THE CONTRACTOR TO DETERMINE THE EXACT LOCATION OF UTILITIES BEFORE BEGINNING WORK IN A LOCATION.
 - LOCATE SIGNS BEHIND BARRIER OR GUARDRAIL SO THAT THE POST CANNOT BE HIT BY TRAFFIC.



HNTB
 HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554

APPROVED: *Andrew Klinski*
 DATE: 9/3/2019
 SEAL 40311
 ENGINEER
 ANDREW D. KLINSIEK



TRANSPORTATION MANAGEMENT PLAN
TEMPORARY SIGN DESIGN

12:30:56 PM
 N:\CPN\4400BB_Detour_Signs.dgn
 9/3/2019

***INSTALL 2 WEEKS PRIOR TO CLOSURE**

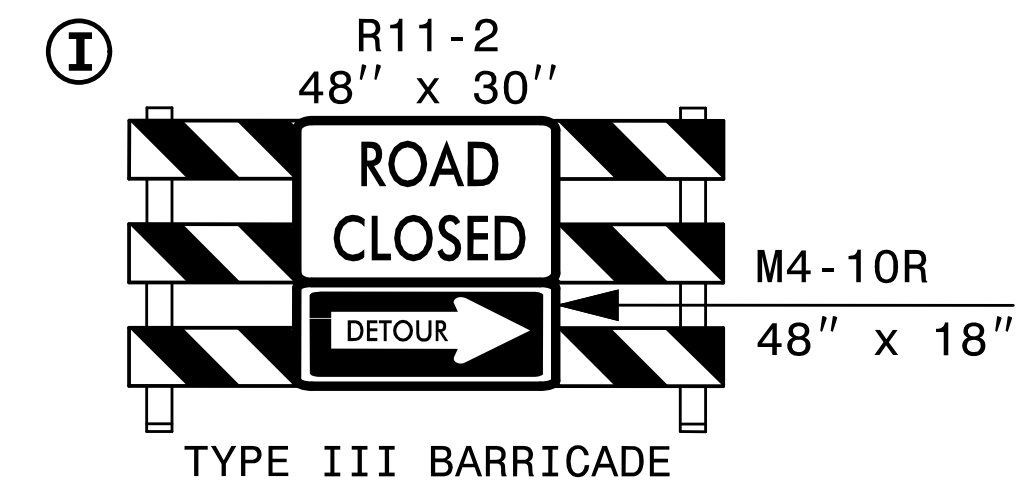
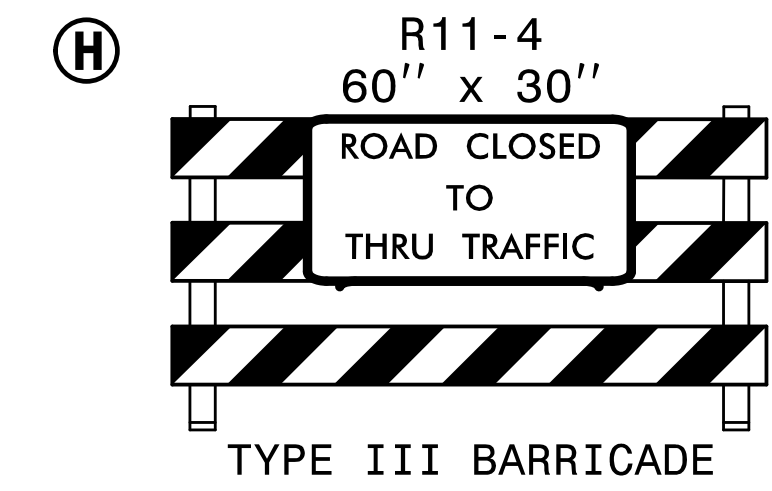
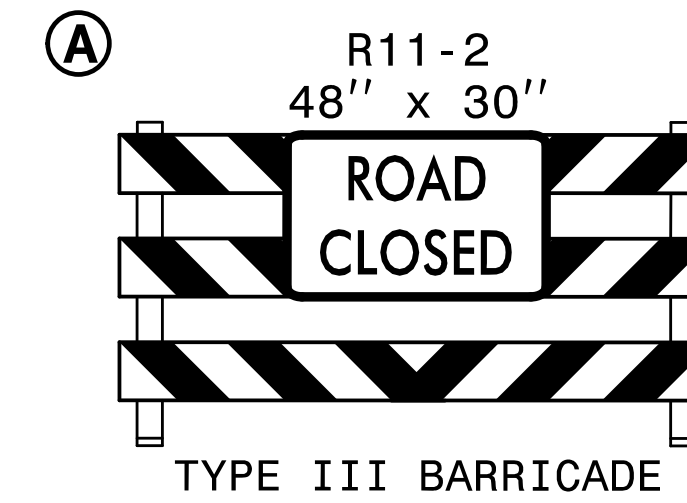
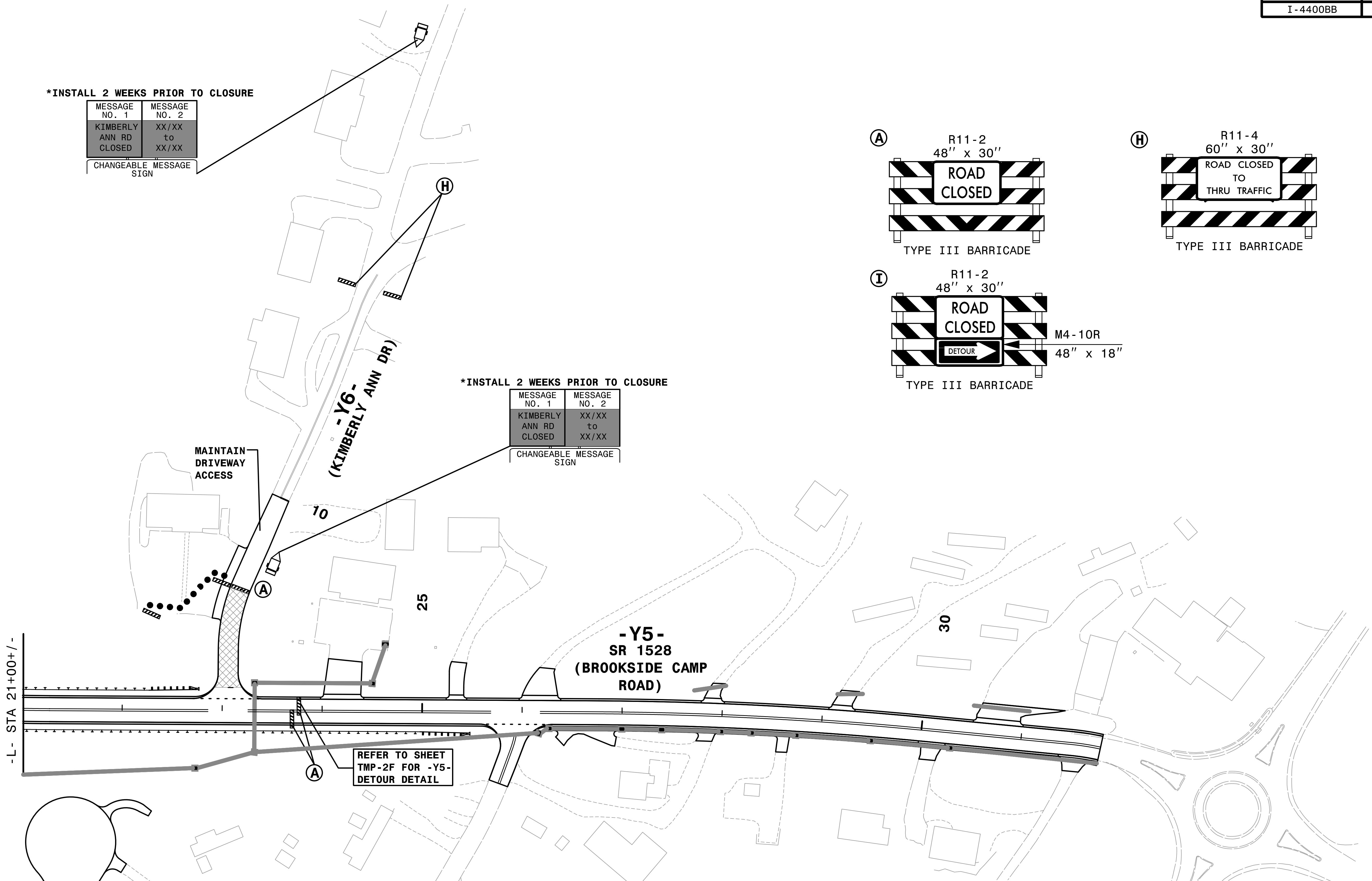
MESSAGE NO. 1	MESSAGE NO. 2
KIMBERLY ANN RD CLOSED	XX/XX to XX/XX

CHANGEABLE MESSAGE SIGN

***INSTALL 2 WEEKS PRIOR TO CLOSURE**

MESSAGE NO. 1	MESSAGE NO. 2
KIMBERLY ANN RD CLOSED	XX/XX to XX/XX

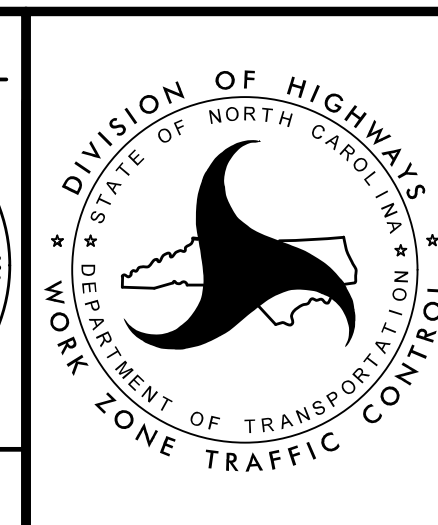
CHANGEABLE MESSAGE SIGN



12:31:44 PM
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9/3/2019

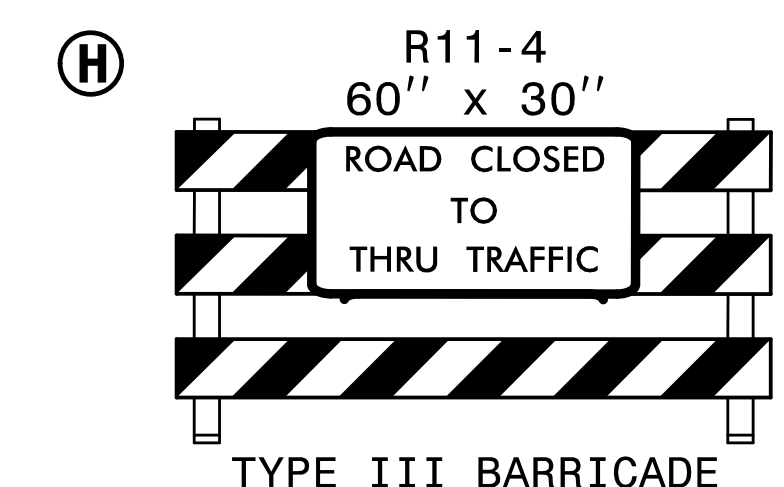
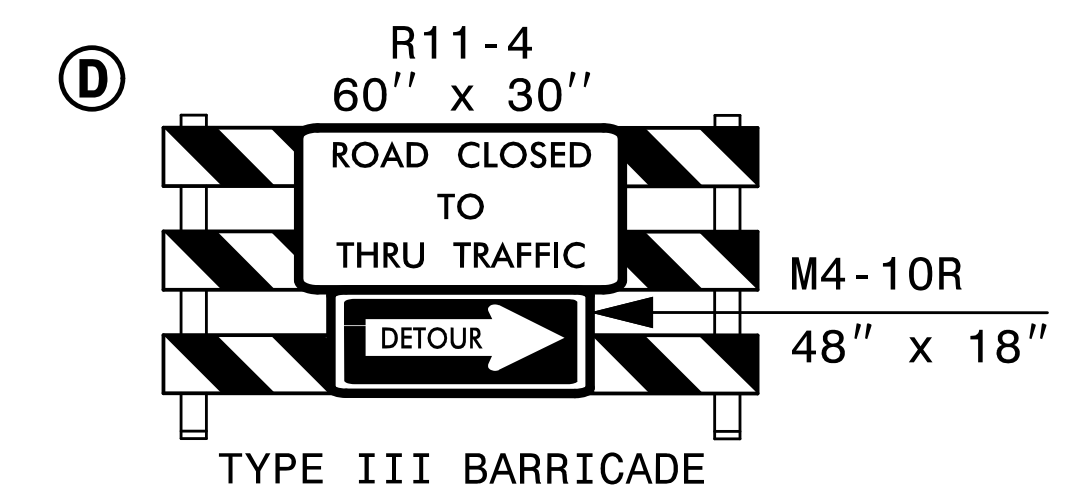
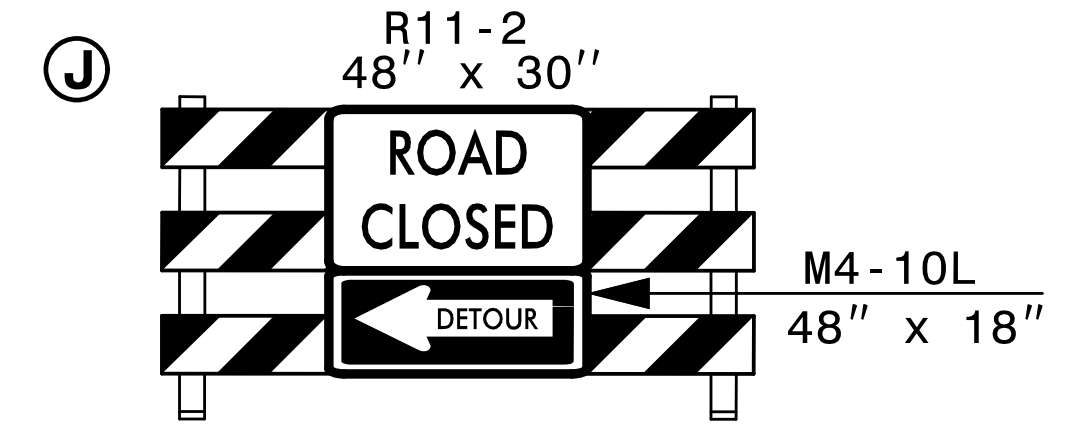
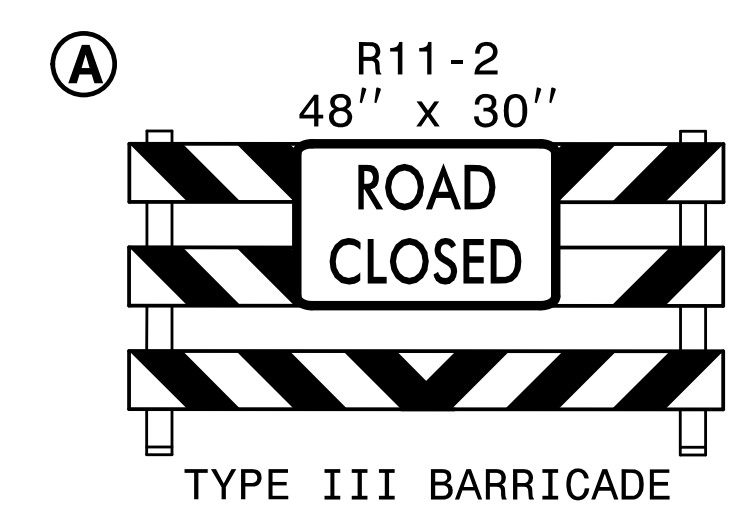
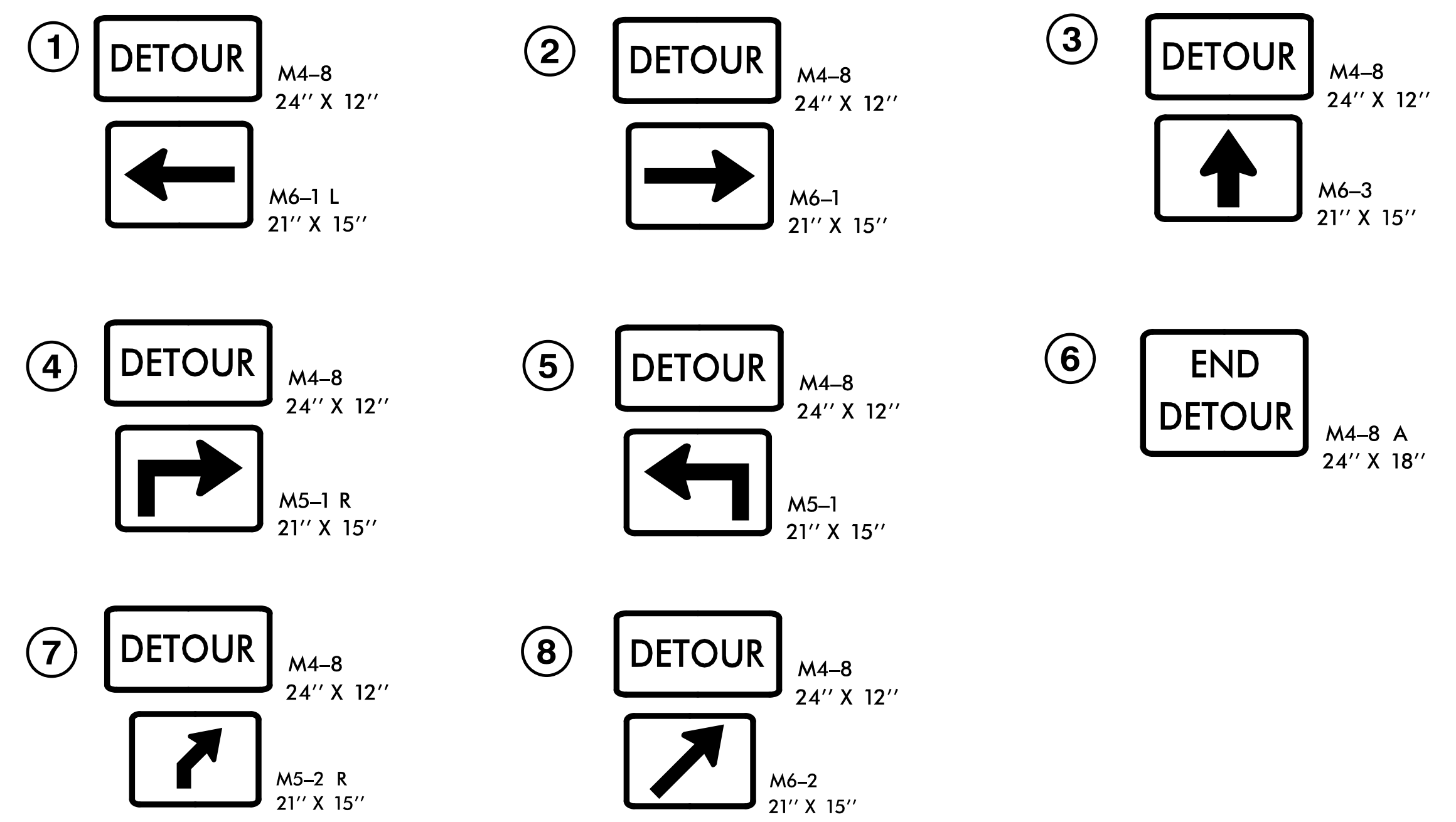
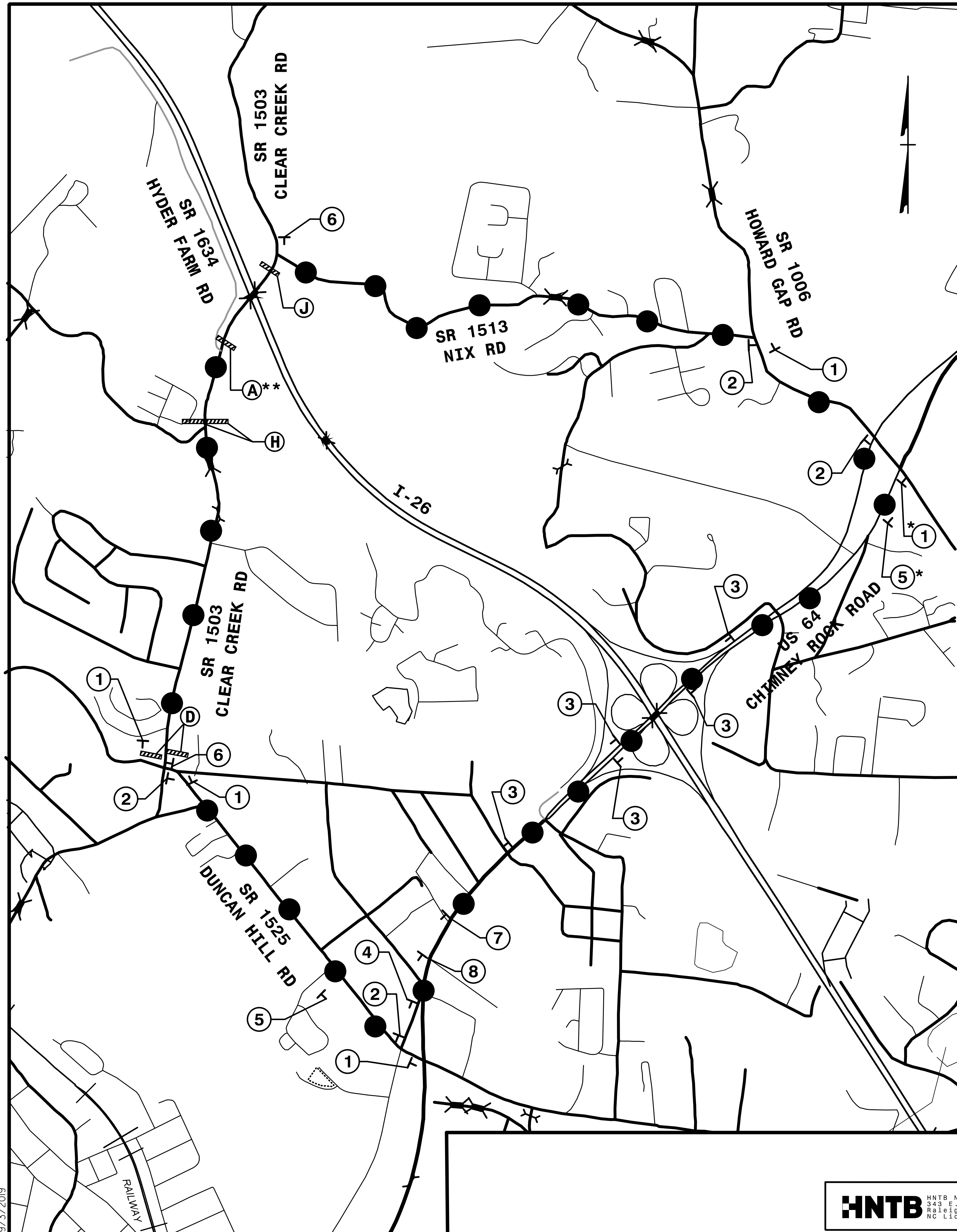
HNTB HNTB NORTH CAROLINA, P.C.
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APPROVED: *Rhonda B. Early*
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NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 023521
RHONDA B. EARLY



TRANSPORTATION MANAGEMENT PLAN
KIMBERLY ANN DR DETOUR DETAIL

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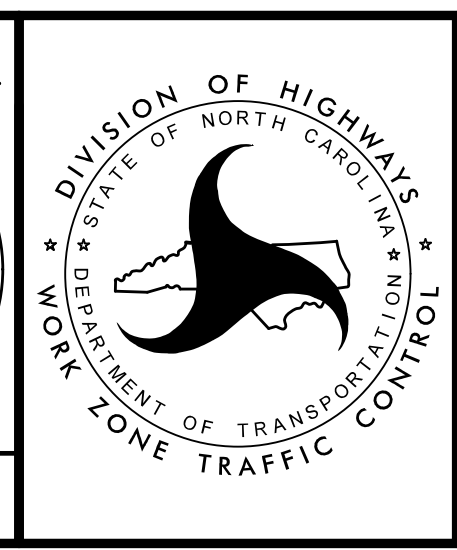
* PLACE SIGNS ON LEFT AND RIGHT SHOULDERS.
 ** SEE DETAILS FOR PLACEMENT OF BARRICADE AT CLOSURE.

USE RSD 1101.03 (SHEET 1 OF 9)
 FOR ADDITIONAL ADVANCE WARNING SIGNS

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 9/3/2019

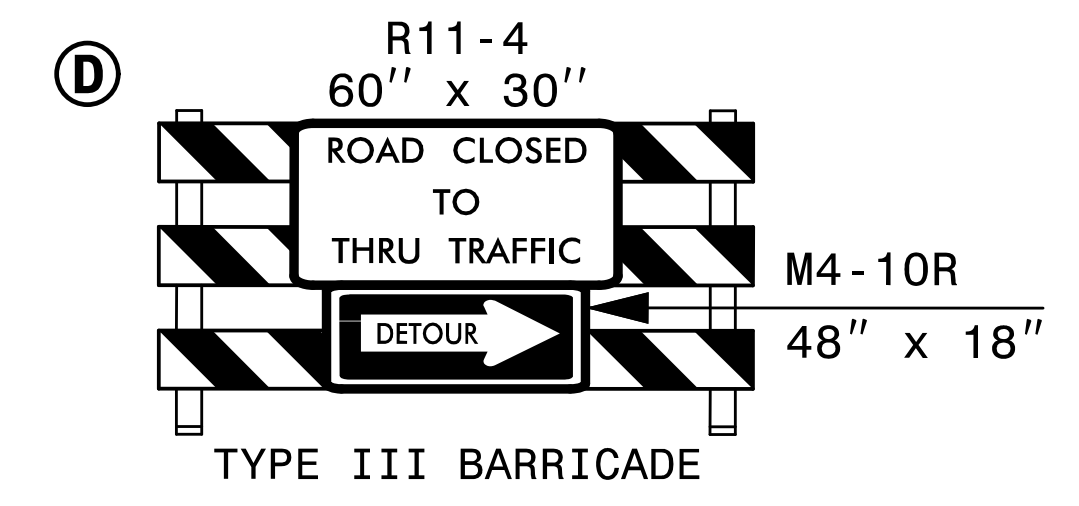
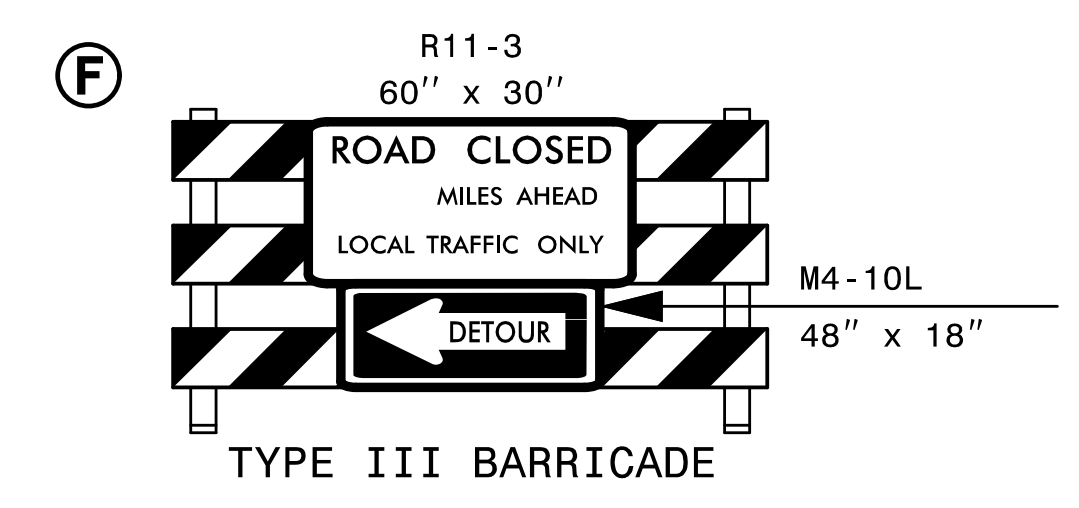
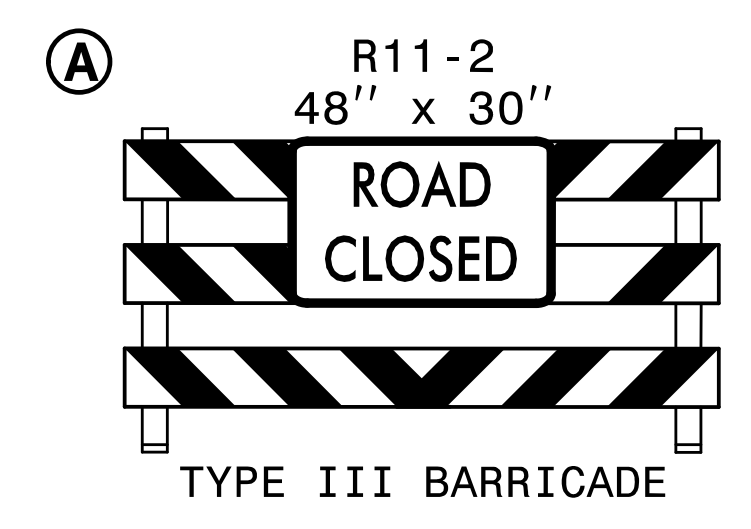
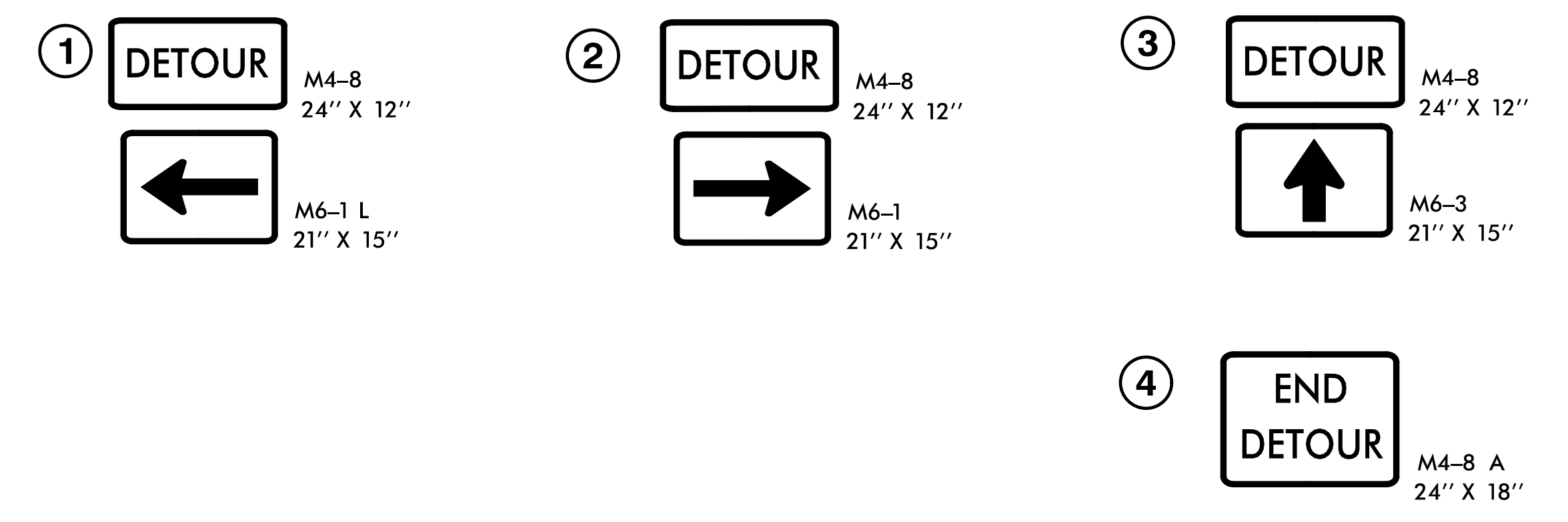
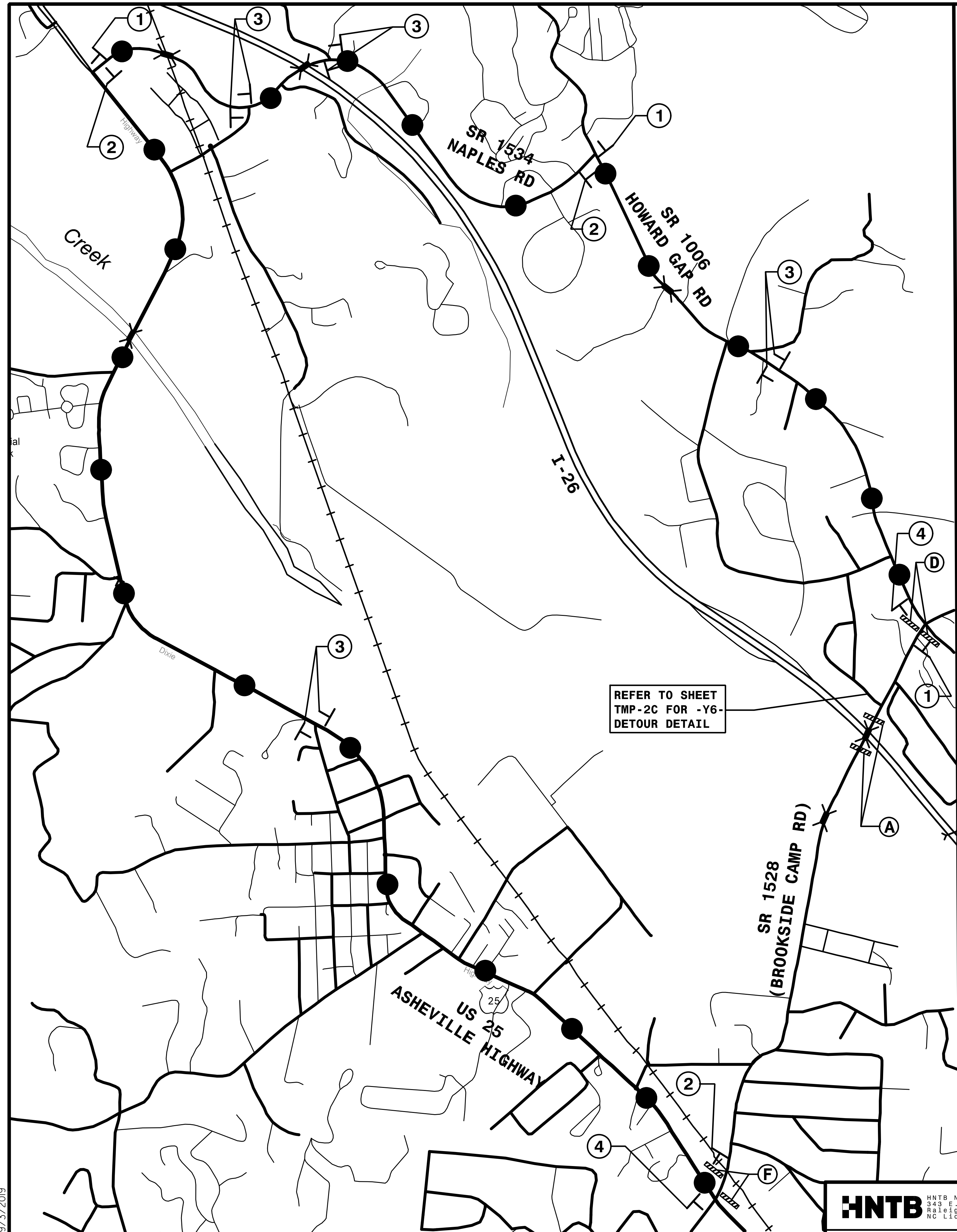
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TRANSPORTATION
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**CLEAR CREEK RD
 DETOUR
 DETAIL**

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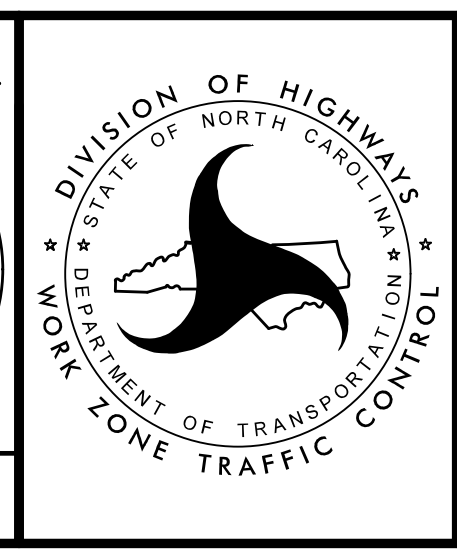
** SEE DETAILS FOR PLACEMENT OF BARRICADE.

USE RSD 1101.03 (SHEET 1 OF 9) FOR ADDITIONAL ADVANCE WARNING SIGNS

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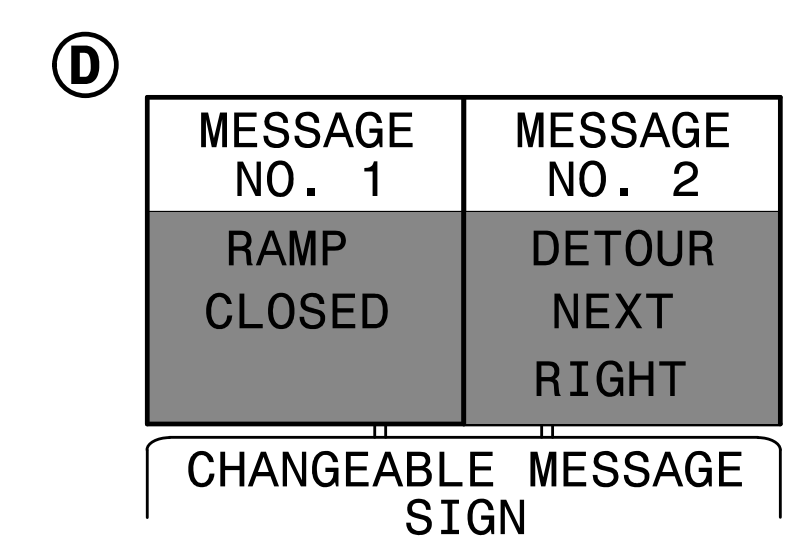
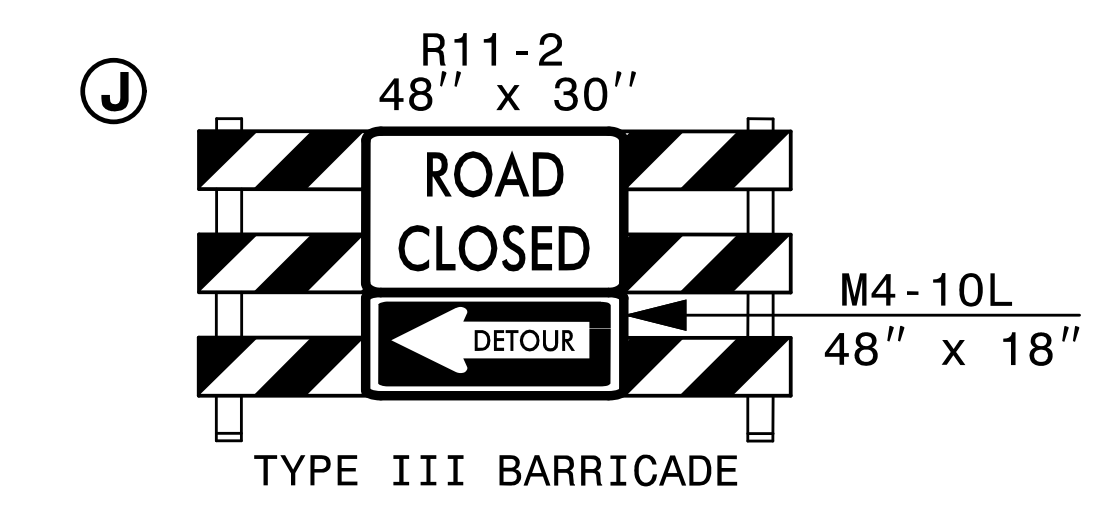
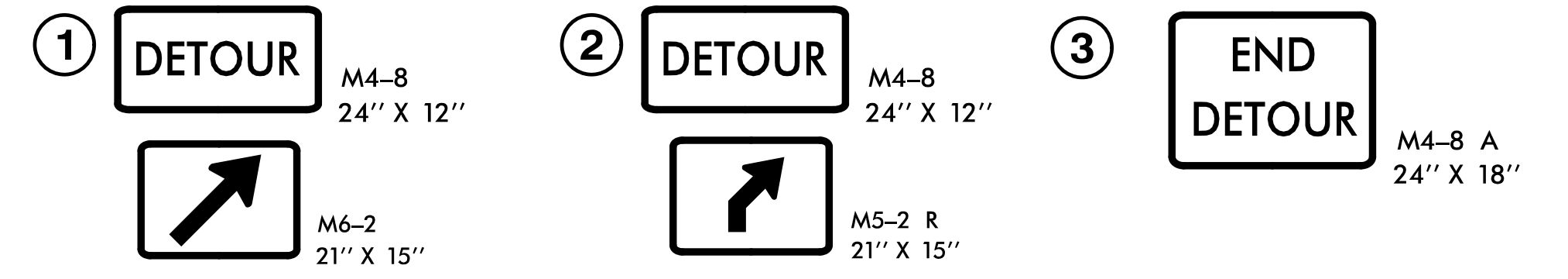
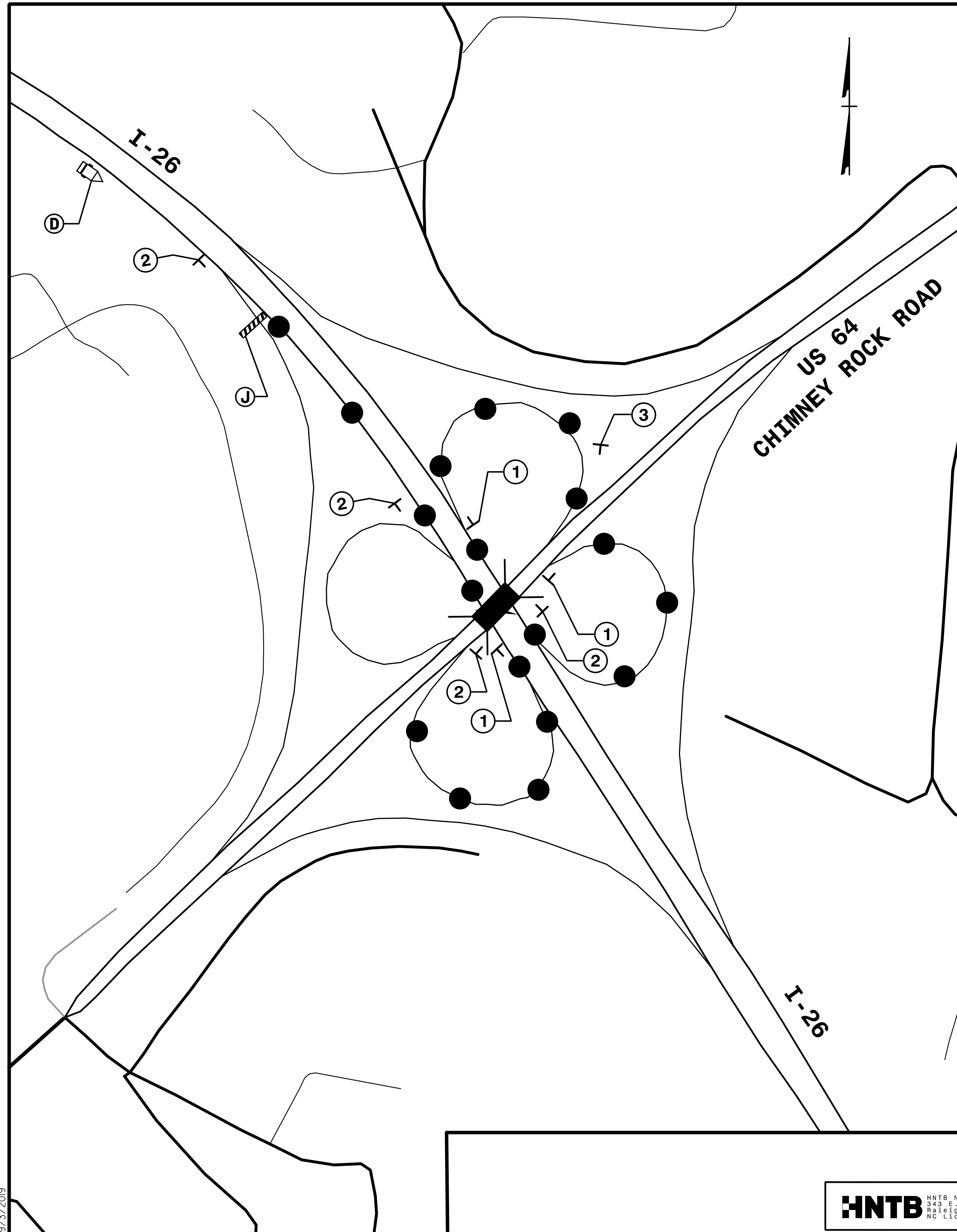
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TRANSPORTATION
 MANAGEMENT PLAN

 BROOKSIDE
 CAMP RD
 DETOUR

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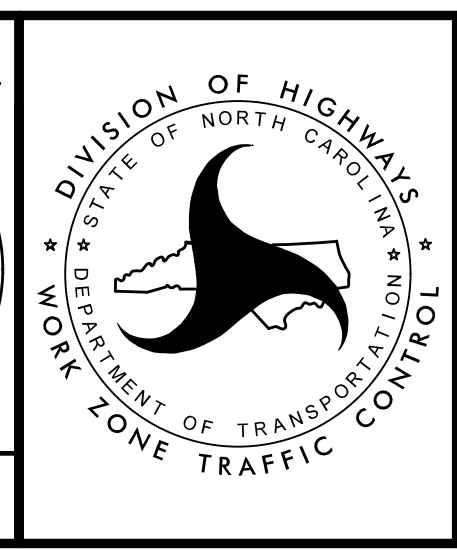
PLACE SIGNS ON BOTH SIDES OF DIVIDED HIGHWAYS.

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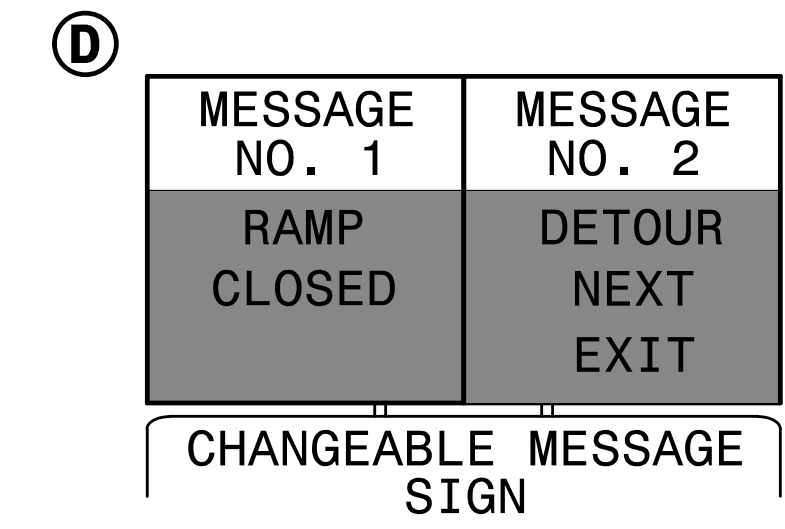
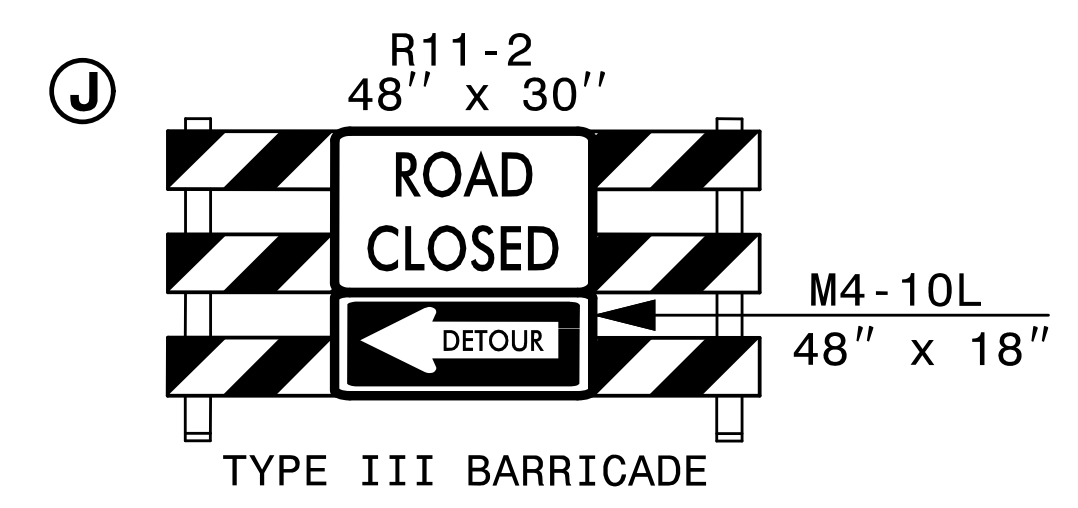
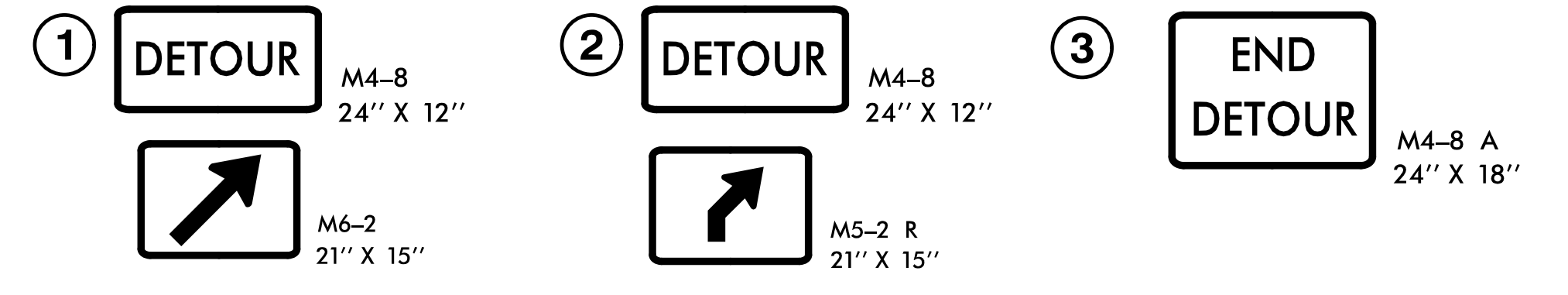
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SEAL 023521
RHONDA B. EARLY



TRANSPORTATION MANAGEMENT PLAN

I-26 RAMP A
DETOUR
DETAIL

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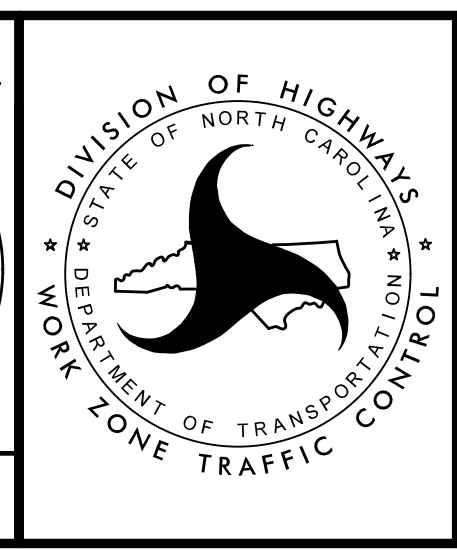
PLACE SIGNS ON BOTH SIDES OF ROADS

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 SEAL 023521
 RHONDA B. EARLY

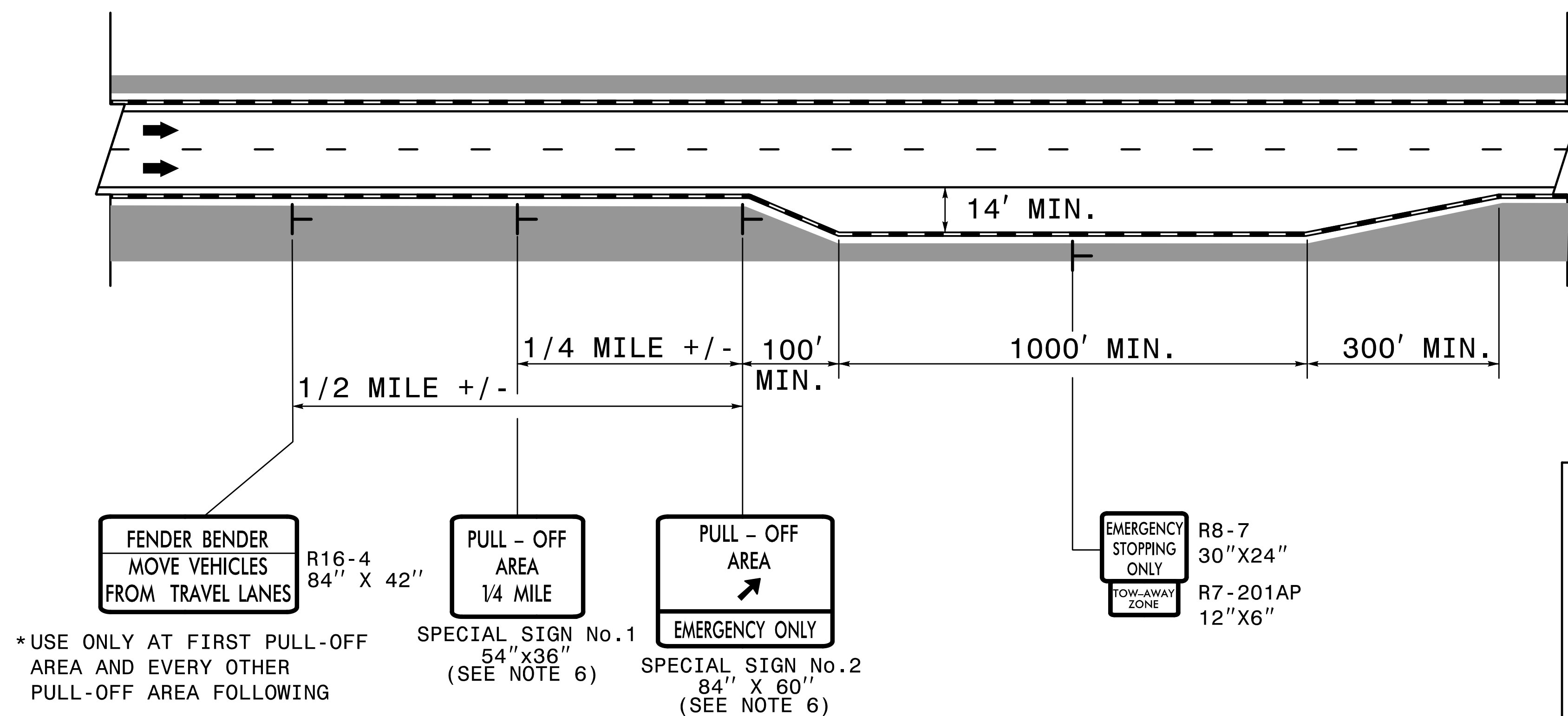
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TRANSPORTATION
 MANAGEMENT PLAN

**I-26 RAMP D
 DETOUR
 DETAIL**

EMERGENCY PULL-OFF AREA DETAIL



SEE OVERVIEWS FOR PULL-OFF AREA APPROXIMATE LOCATIONS

PHASE I (STEP 5.1-5.3): -L- STA 433+00+/- (PROVIDE WIDTH FOR PHASE II AND III; -L- STA 485+00+/-, -L- STA 532+50+/-, AND -L- STA 614+00+/- (WB).

PHASE II: -L- STA 450+00+/-, -L- STA 497+50+/-, -L- STA 550+00+/-, -L- STA 600+00+/- (EB) (KEEP -L- STA 433+00+/- FROM PHASE I FOR WB THROUGH PHASE III)

PHASE IV: -L- STA 447+50+/-, -L- STA 500+00+/-, -L- STA 555+00+/-, AND -L- STA 600+00+/-

GENERAL NOTES FOR EMERGENCY PULL-OFF AREAS

1. PULL-OFF AREAS SHALL BE PROVIDED IN WORK ZONES ALONG FULL CONTROL OF ACCESS HIGHWAYS WHERE INSUFFICIENT SHOULDERS EXIST FOR TWO MILES OR GREATER. INSUFFICIENT SHOULDERS EXIST WHEN 10' OF PAVED RIGHT SHOULDER IS NOT CONSISTENTLY AVAILABLE FOR MOTORIST USE.
2. THE APPROXIMATE LOCATIONS OF PULL-OFF AREAS ARE SHOWN ON THE APPLICABLE TMP DETAIL SHEETS. LOCATIONS CAN BE ADJUSTED WITH APPROVAL FROM THE ENGINEER. APPROXIMATE SPACING OF THE PULL-OFF AREAS IS BASED ON THE FOLLOWING GUIDELINES:
 - FOR AREAS WITH INSUFFICIENT SHOULDERS UP TO 3.0 MILES IN LENGTH, ONE PULL-OFF AREA APPROXIMATELY CENTERED IN THE WORK ZONE.
 - FOR AREAS WITH INSUFFICIENT SHOULDERS GREATER THAN 3.0 MILES IN LENGTH, ONE PULL-OFF AREA EVERY MILE.
3. PULL-OFF AREAS SHALL BE A MINIMUM OF 1000' LONG. THE WIDTH OF PULL-OFF AREAS SHALL BE 14' AND SHALL CONSIST OF A PAVED SURFACE.
4. PORTABLE CONCRETE BARRIER SHALL ONLY BE USED IF WARRANTED BY FIELD CONDITIONS.
5. REFER TO NEXT SHEET FOR SPECIAL SIGN DESIGNS.

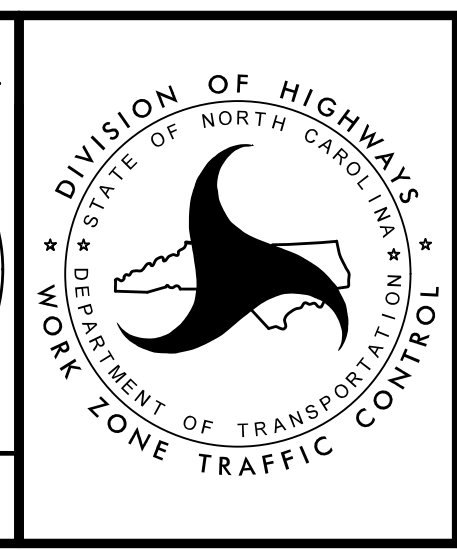
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9/3/2019



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DATE: 9/3/2019

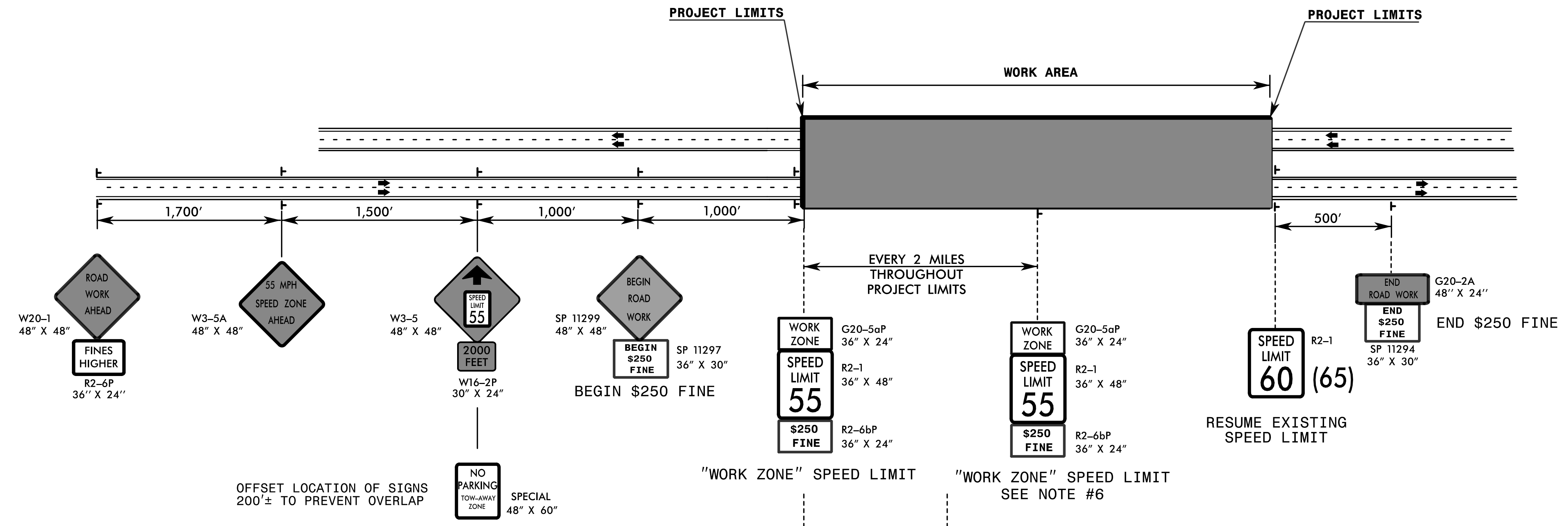
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023521

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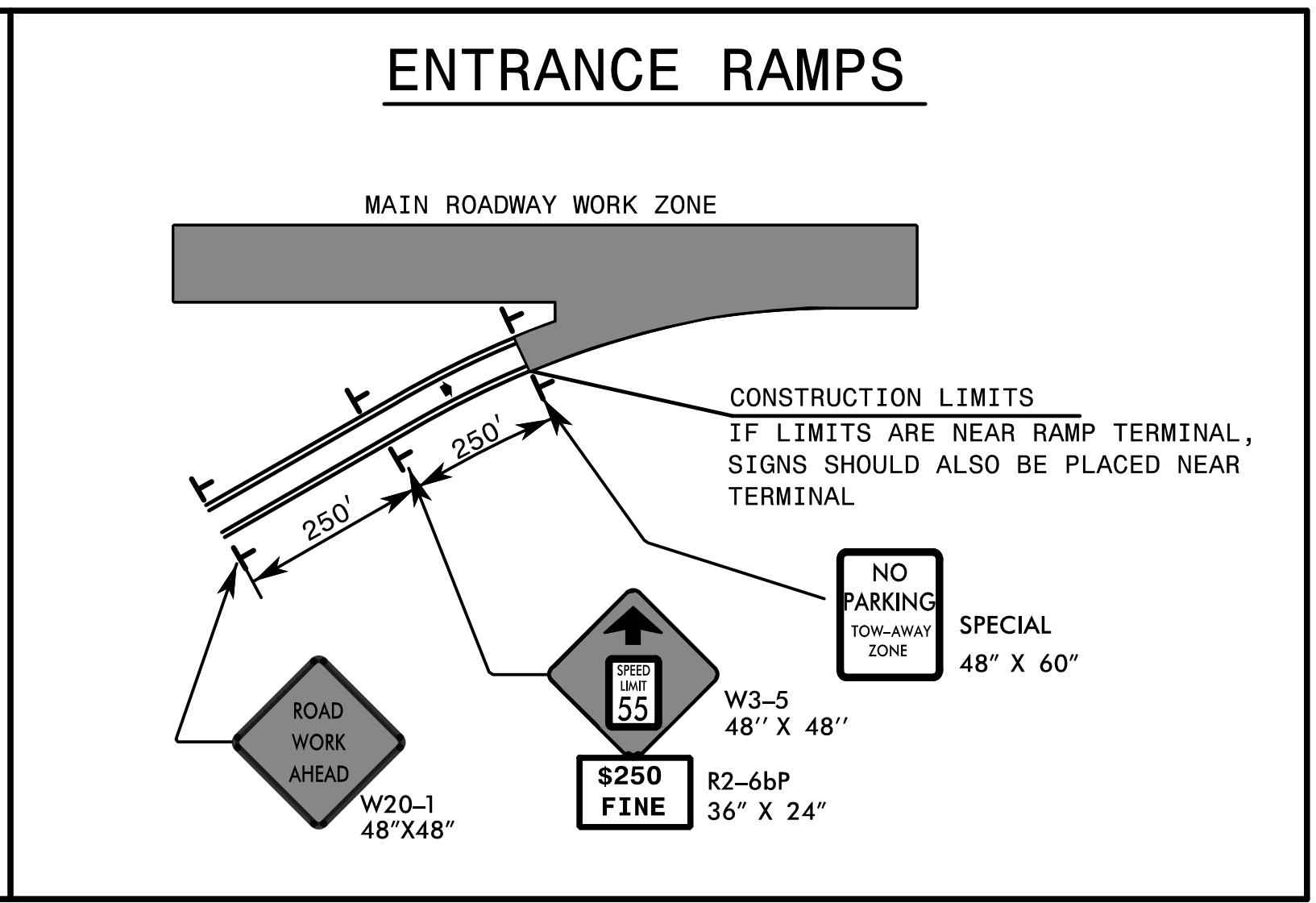
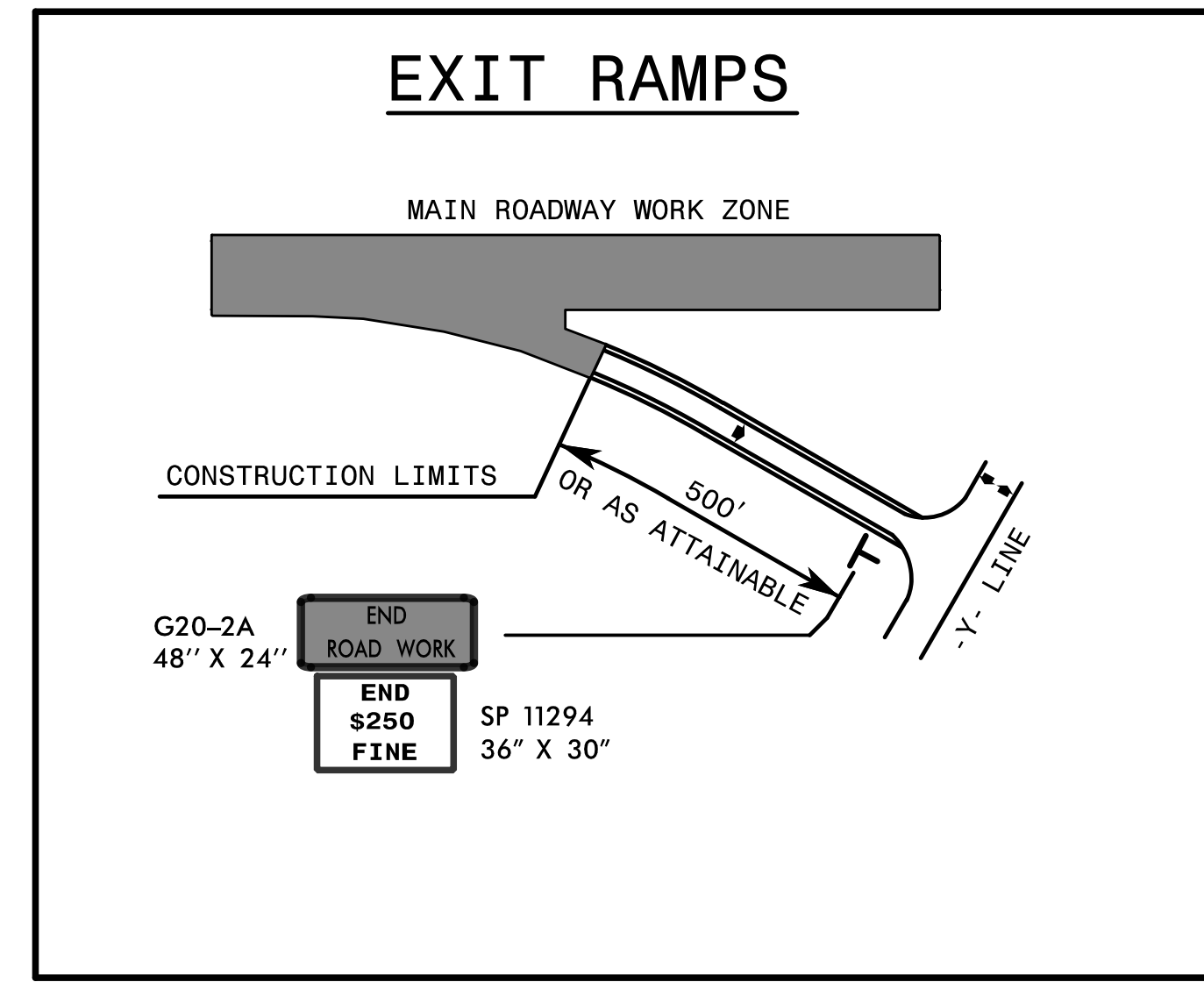
TRANSPORTATION
MANAGEMENT PLAN

EMERGENCY
PULL-OFF
AREA



- ### NOTES
- 1) IF THE "WORK ZONE SPEED LIMIT" ONLY APPLIES TO A SPECIFIC PORTION AND NOT THE ENTIRE PROJECT, THE EXISTING SPEED LIMIT IS TO BE REESTABLISHED INSIDE THE PROJECT LIMITS. THE EXISTING SPEED LIMIT SIGNS AND THE "END \$250 FINE" SIGNS ARE TO BE INSTALLED AT THE LOCATION WHERE THE EXISTING SPEED LIMIT IS TO RESUME.
 - 2) IF THE WORK ZONE SPEED LIMIT REDUCTION IS INSIDE THE WORK AREA, SIGNS W3-5A, W3-5, AND THE R2-1'S ALONG WITH THE SPEEDING FINE SIGNS ARE TO BE INSTALLED AT THE DISTANCE SHOWN ABOVE IN ADVANCE OF WHERE THE SPEED LIMIT IS REDUCED.
 - 3) THE WORK ZONE SPEED LIMIT SIGNS ARE TO BE MOUNTED FROM 7' ABOVE EDGE OF PAVEMENT ELEVATION.
 - 4) WHEN TEMPORARY LANE CLOSURES ARE INSTALLED AT THE BEGINNING OF THE PROJECT LIMITS, THE PORTABLE LANE CLOSURE SIGNS ARE TO BE ADJUSTED TO AVOID SIGN OVERLAP/CLUTTER.
 - 5) THE NEED AND LOCATION OF ADDITIONAL POSTED "WORK ZONE SPEED LIMIT" SIGNS WITHIN THE WORK AREA IS TO BE DETERMINED BY THE REGIONAL TRAFFIC ENGINEER.

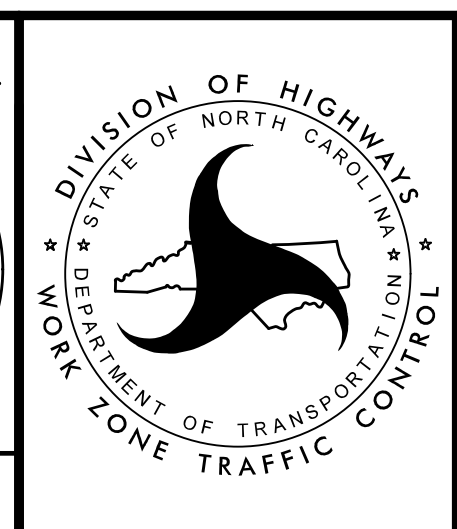
- ### GUIDELINES
- A) THIS DRAWING IS FOR USE ONLY AFTER AN ENGINEERING INVESTIGATION AND CRITERIA REVIEW HAS BEEN PERFORMED BY THE REGIONAL TRAFFIC ENGINEER AND THE WORK ZONE TRAFFIC CONTROL SECTION. THE WORK ZONE SPEED LIMIT REDUCTION IS INTENDED FOR USE ON FREEWAYS WITH SPEED LIMITS 65 MPH OR GREATER. SEE WORK ZONE SPEED LIMIT GUIDELINES FOR CRITERIA.
 - B) THE STATE TRAFFIC ENGINEER HAS TO ORDINANCE THE SPEED LIMIT REDUCTION IN ORDER FOR THE REDUCTION TO BE VALID AND ENFORCEABLE. NO SPEED LIMIT SIGNS SHALL BE INSTALLED PRIOR TO RECEIVING A SIGNED ORDINANCE. IN ADDITION, THE \$250 SPEEDING FINE ALSO REQUIRES A SEPARATE SIGNED ORDINANCE BY THE STATE TRAFFIC ENGINEER.
 - C) THIS DRAWING APPLIES TO BOTH DIRECTIONS OF TRAVEL.
 - D) ALL "WORK ZONE" SPEED LIMIT REDUCTION SIGNAGE SHALL BE REMOVED WHEN THE CONDITION/S THAT WARRANTED THE REDUCTION AND FINE IS REMOVED. THE REGIONAL TRAFFIC ENGINEER WILL BE NOTIFIED BY THE RESIDENT ENGINEER AT THIS TIME TO RESCIND THE ORDINANCES AND RETURN THE EXISTING POSTED SPEED LIMIT. THIS SHOULD TAKE PLACE BEFORE THE PROJECT IS 100% COMPLETE AND ACCEPTED FOR MAINTENANCE.



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9/3/2019

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TRANSPORTATION
MANAGEMENT PLAN
WORK ZONE SPEED
LIMIT REDUCTION
AND NO PARKING
SIGNS DETAIL

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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 WIDENING IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANE. THIS MAY REQUIRE A COMBINATION OF INSTALLATION OF PROPOSED PIPES, TEMPORARY PIPES, STEEL PLATES, AND TEMPORARY DITCHES.

PAVE PROPOSED CONSTRUCTION, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE, IN ALL PHASES UNTIL STATED TO INSTALL FINAL LAYER IN THE PHASING.

THE TERM RSD DENOTES "ROADWAY STANDARD DRAWINGS".

PHASE I (SEE TMP-4 THRU TMP-4D FOR OVERVIEWS)

*** REFER TO SHEETS TMP-6 THRU TMP-30 FOR DETAILS ***

STEP 1: USING RSD 1101.01 (SHEET 2 AND 3), INSTALL WORK ZONE ADVANCE WARNING SIGNS ON -L- AND ALL Y-LINES.

NOTE: Y-LINE BRIDGES (3) MUST BE COMPLETED AND EXISTING BRIDGES REMOVED BEFORE -L- TEMPORARY PAVEMENT CAN BE COMPLETED.

NOTE: STEPS 2 THRU 5 MAY BE COMPLETED SIMULTANEOUSLY AND IN ANY ORDER.

STEP 2: COMPLETE STEPS 2.1 THRU 2.9. (REFER TO TMP-6 THRU TMP-9.)

2.1: AWAY FROM TRAFFIC, BEGIN END BENTS AND APPROACHES FOR -Y2-. (SHORING #1 & #2 REQUIRED.) (TMP-7)

USING RSD 1101.02 (SHEET 4 OF 14), CONSTRUCT MEDIAN CROSSOVERS AT -L- STA 436+50+/- AND 443+00+/-, INSTALL PCB ALONG THE MEDIAN SHOULDER OF THE EBL & WBL FROM STA 437+35+/- TO STA 442+00+/- . BEHIND BARRIER INSTALL SHORING #3, #4 & #5 AND CONSTRUCT MEDIAN PIER. REMOVE MEDIAN SHORING WHEN NO LONGER NEEDED. (LN-1)

2.2: AWAY FROM TRAFFIC CONSTRUCT -Y2- FROM STA 18+50+/- TO STA 25+50+/- INCLUDING BRIDGE. WHEN INSTALLING GIRDERS, USE RSD 1101.03 (SHEET 6 OF 9) FOR I-26 NIGHT-TIME MEDIAN CROSSOVERS. (LN-3,4)

USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS AS NEEDED, CONSTRUCT -Y2- FROM STA 27+50+/- TO STA 33+10+/- . (TEMPORARY WEDGING REQUIRED.)

INSTALL AND COVER -Y2- DETOUR SIGNS AS SHOWN ON SHEETS TMP-2D. (LN-3)

USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS, CONSTRUCT TEMPORARY ACCESS (STONE) FOR -Y3- (FROM EXISTING TO EXISTING -Y2-) ALONG PROPOSED -Y3- ALIGNMENT. (TMP-6)

COMPLETE THE REQUIREMENTS OF PHASE I, STEPS 2.3 THRU 2.8 IN TWENTY-ONE (21) CALENDAR DAYS (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

2.3: USING OFFSITE DETOUR (TMP-2D), UNCOVER DETOUR SIGNS AND CLOSE -Y2- AS SHOWN ON SHEET TMP-9. (LN-3,4)

2.4: AWAY FROM TRAFFIC, CONSTRUCT -Y2- FROM STA 10+00+/- TO STA 16+00+/- . (SEE TMP-9)

2.5: USING OFFSITE DETOUR (TMP-2E), RELOCATE -Y2- CLOSURE AS SHOWN ON SHEETS TMP-10 AND TMP-11.

2.6: USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS, CONSTRUCT TEMPORARY (STONE) ACCESS FOR -Y3- TO -Y2- (PROPOSED). CONTINUE TO ADJUST GRADE AS NEEDED TO MAINTAIN ACCESS DURING STEP 2.7.

2.7: AWAY FROM TRAFFIC, CONSTRUCT THE FOLLOWING:
 * -Y2- FROM STA 16+82+/- TO STA 18+50+/- (TMP-10)
 * -Y2- FROM STA 25+50+/- TO STA 28+72+/- (TMP-11)
 * -Y4- FROM STA 10+00+/- TO -Y2- (TMP-11)

USING FLAGGERS AS NEEDED, CONSTRUCT -Y2- FROM STA 16+00+/- TO STA 16+82+/- AND -Y3- .

2.8: PLACE PAVEMENT MARKING IN FINAL PATTERN. OPEN -Y2-, -Y3- & -Y4- TO TRAFFIC AND COVER / REMOVE DETOUR SIGNS. (NOT SHOWN)

2.9: USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS AS NEEDED, REMOVE ABANDONED -Y2- . (TMP-10 & TMP-11)

USING RSD 1101.03 (SHEET 6 OF 9) FOR NIGHT-TIME MEDIAN CROSSOVERS, REMOVE ORIGINAL -Y2- BRIDGE. COMPLETE -Y2- BRIDGE ABUTMENTS AND REMOVE SHORING. (NOT SHOWN) (LN-3,4)

PHASE I (CONTINUED) (SEE TMP-4 THRU TMP-4D FOR OVERVIEWS)

*** REFER TO SHEETS TMP-6 THRU TMP-30 FOR DETAILS ***

STEP 3: COMPLETE STEPS 3.1 THRU 3.6. (REFER TO TMP-12 THRU TMP-15.)

3.1: AWAY FROM TRAFFIC, BEGIN END BENTS AND APPROACHES FOR -Y5-. (SHORING #6 & #7 REQUIRED.) EXTEND EXISTING GUARDRAIL WITH TEMPORARY GUARDRAIL ALONG EB & WB OUTSIDE SHOULDERS. CONSTRUCT RETAINING WALL TO POINT WHERE IT TRANSITIONS FROM FILL TO CUT. (STA 539+03+/- LT) (TMP-12)

USING RSD 1101.02 (SHEET 4 OF 14), CONSTRUCT MEDIAN CROSSOVERS AT STA 535+25+/- AND 544+50+/-, INSTALL PCB ALONG THE MEDIAN SHOULDER OF THE WBL FROM -L- STA 536+72+/- TO STA 542+00+/- AND ALONG THE EBL FROM -L- STA 539+00+/- TO STA 543+09+/- . BEHIND BARRIER INSTALL SHORING #8 & #9 AND CONSTRUCT MEDIAN PIER. REMOVE SHORING WHEN NO LONGER NEEDED. (LN-1)

PLACE ROAD CLOSED SIGNS FOR SR 1645 (CAROLINA CIRCLE) AND USING FLAGGERS AS NEEDED, REMOVE EXISTING ROAD AND CONSTRUCT CULDESAC. (LN-3)

3.2: AWAY FROM TRAFFIC CONSTRUCT -Y5- FROM STA 16+00+/- TO STA 25+00+/- INCLUDING BRIDGE. USE RSD 1101.03 (SHEET 6 OF 9) FOR I-26 NIGHT-TIME MEDIAN CROSSOVERS. (TMP-12 & TMP-13) (LN-3,4)

USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS AS NEEDED, CONSTRUCT -Y5- FROM STA 25+00+/- TO STA 31+80+/- . (TEMPORARY WEDGING REQUIRED.)

INSTALL AND COVER -Y5- DETOUR SIGNS AS SHOWN ON SHEETS TMP-2C & TMP-2F. (TMP-2C & LN-3)

COMPLETE THE REQUIREMENTS OF PHASE I, STEPS 3.3 THRU 3.5 IN FOURTEEN (14) CALENDAR DAYS (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

3.3: USING OFFSITE DETOUR (TMP-2C & TMP-2F), UNCOVER DETOUR SIGNS AND CLOSE -Y5- & -Y6- AS SHOWN ON SHEETS TMP-14 AND TMP-15. (LN-3,4)

3.4: SHIFT -Y5- TRAFFIC TO NEW ALIGNMENT FROM STA 25+00+/- TO STA 31+80+/- AND PLACE MARKING IN FINAL PATTERN WHERE POSSIBLE. (TMP-15)

USING FLAGGERS TO MAINTAIN ACCESS, CONSTRUCT THE FOLLOWING:
 * -Y5- FROM STA 10+00+/- TO STA 16+00+/- (TMP-14)
 * -Y6- FROM STA 10+00+/- TO -Y5- (TMP-15)

USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS, COMPLETE CONSTRUCTION OF LEFT SIDE OF -Y5- FROM STA 25+00+/- TO STA 29+00+/- . (TMP-15)

3.5: PLACE REMAINING PAVEMENT MARKING IN FINAL PATTERN. OPEN -Y5- & -Y6- TO TRAFFIC AND COVER / REMOVE DETOUR SIGNS.

3.6: USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS AS NEEDED, REMOVE ABANDONED -Y5- . (TMP-14 & TMP-15)

USING RSD 1101.03 (SHEET 6 OF 9) FOR NIGHT-TIME MEDIAN CROSSOVERS, REMOVE ORIGINAL -Y5- BRIDGE. COMPLETE -Y5- BRIDGE ABUTMENTS AND REMOVE SHORING. (NOT SHOWN) (LN-3,4)

STEP 4: COMPLETE STEPS 4.1 THRU 4.5.

4.1: INSTALL TEMP GUARDRAIL ALONG OUTSIDE SHOULDER OF WBL FROM -L- STA 634+48+/- TO EXISTING GUARDRAIL (638+85+/-). BEGIN END BENTS AND APPROACHES FOR -Y7- (SHORING #10 & #11 REQUIRED). (TMP-16 & TMP-17)

USING RSD 1101.02 (SHEET 4 OF 14), CONSTRUCT MEDIAN CROSSOVERS AT STA 634+50+/- AND 643+75+/-, INSTALL PCB ALONG THE MEDIAN SHOULDER OF THE WBL FROM -L- STA 635+00+/- TO STA 641+00+/- AND ALONG THE EBL FROM -L- STA 638+00+/- TO STA 641+41+/- . BEHIND BARRIER INSTALL SHORING #12 & #13 AND CONSTRUCT MEDIAN PIER. REMOVE SHORING WHEN NO LONGER NEEDED. (TMP-16 & TMP-17) (LN-1)

4.2: AWAY FROM TRAFFIC CONSTRUCT -Y7- FROM STA 13+90+/- TO STA 24+50+/- INCLUDING BRIDGE. USE RSD 1101.03 (SHEET 6 OF 9) FOR I-26 NIGHT-TIME MEDIAN CROSSOVERS. (TMP-16 & TMP-17) (LN-3,4)

USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS AS NEEDED, CONSTRUCT THE FOLLOWING (TMP-16 & TMP-17):
 * -Y7- FROM STA 10+00+/- TO STA 13+90+/-
 * -Y7- FROM STA 24+50+/- TO STA 30+43+/- . (TEMPORARY WEDGING REQUIRED)
 * -Y8- FROM -Y7- TO STA 11+53+/-

4.3: SHIFT -Y7- TRAFFIC TO NEW ALIGNMENT AND PLACE MARKING IN FINAL PATTERN. PROVIDE TEMPORARY ACCESS USING CONNECTOR LEFT OF STA 21+00+/- . (NOT SHOWN)

4.4: USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS TO MAINTAIN ACCESS, CONSTRUCT -Y9- FROM STA 10+00+/- TO STA 13+00+/- . EXISTING ROAD IS BEING UNDERCUT AND ACCESS MAY BE PROVIDED USING STONE / GRAVEL DURING RECONSTRUCTION. (NOT SHOWN)

USING RSD 1101.02 (SHEET 1 OF 14) AND FLAGGERS, COMPLETE CONSTRUCTION OF LEFT SIDE OF -Y7- FROM STA 11+00+/- TO STA 13+90+/- AND FROM STA 24+50+/- TO STA 27+00+/- INCLUDING PAVEMENT REMOVAL (NOT SHOWN).

4.5: PLACE REMAINING PAVEMENT MARKING IN FINAL PATTERN. OPEN -Y7-, -Y8- & -Y9- TO TRAFFIC. (NOT SHOWN)

PHASE I (CONTINUED) (SEE TMP-4 THRU TMP-4D FOR OVERVIEWS)

*** REFER TO SHEETS TMP-6 THRU TMP-30 FOR DETAILS ***

STEP 5: COMPLETE STEPS 5.1 THRU 5.5

5.1: INSTALL SHORING #14 & #15 AT CLEAR CREEK BRIDGE AND BEGIN CONSTRUCTION OF -L- BRIDGE AND APPROACHES. (422+00+/-)

AWAY FROM TRAFFIC, BEGIN CULVERT EXTENSIONS LEFT AND RIGHT OF -L- STA 526+00+/- AND STA 588+10+/- . (NOTE: RIGHT SIDE MUST BE COMPLETE BEFORE STEP 5.4.) (TMP-21)

AS REQUIRED, USE RSD 1101.02 (SHEET 4 OF 14) TO REMOVE AND REPLACE OUTSIDE RIGHT SHOULDER (WBL) FROM -L- STA 395+00+/- TO STA 650+50+/- . (LN-2,6) (NOT SHOWN)

5.2: USING RSD 1101.02 (SHEET 4 OF 14), INSTALL PCB ALONG THE RIGHT OUTSIDE SHOULDER (WBL) FROM -L- STA 394+50+/- TO STA 650+50+/- AS SHOWN ON SHEETS TMP-18 THRU TMP-24. (NOTE: THE AREAS BENEATH -Y2-, -Y5- AND -Y7- CANNOT BE COMPLETED UNTIL THE EXISTING BRIDGES HAVE BEEN REMOVED IN STEPS 2, 3 & 4.) (LN-1,2,6)

5.3: BEHIND BARRIER CONSTRUCT TEMPORARY PAVEMENT TO PROPOSED EDGE OF SHOULDER LIMITS MATCHING EXISTING EDGE, ELEVATION AND SLOPE ALONG WB OUTSIDE IN THE FOLLOWING LOCATIONS:
 * -L- FROM STA 396+50+/- TO STA 420+23 (BRIDGE)
 * -L- FROM STA 423+17+/- (BRIDGE) TO STA 549+00+/-
 * -L- FROM STA 565+22+/- TO STA 650+50+/- (LN-2,6)

NOTE:
 * FROM -L- STA 396+50+/- TO STA 401+29+/- CONSTRUCT PROPOSED GUARDRAIL AND SHOULDER BERM GUTTER. USE UNPAVED AREA BETWEEN TEMPORARY PAVEMENT AND SHOULDER BERM GUTTER FOR TEMPORARY SLOPES.
 * FROM -L- STA 401+29+/- TO STA 650+50+/-, CONSTRUCT PROPOSED GUARDRAIL AND SHOULDER BERM GUTTER ALONG RIGHT SIDE. (LN-2,6)
 * CONSTRUCT PROPOSED WALLS ALONG RIGHT SIDE.
 * WHEN CONSTRUCTING PROPOSED SHOULDER, CONSTRUCT IN A MANNER TO ALLOW MILLING / WEDGING AND RESURFACING TO THE FINAL ELEVATION AND RETAIN A MINIMUM OF FULL DEPTH SHOULDER FOR THE FINAL PRODUCT. (LN-2)

5.4: CLOSE WB WEIGH STATION. USING RSD 1101.02 (SHEET 4 OF 14) AS NEEDED, CONSTRUCT TEMPORARY WIDENING OF OUTSIDE WB LANE FROM STA 549+28+/- TO STA 565+22+/- .

5.5: USING RSD 1101.02 (SHEET 4 OF 14) REMOVE PCB FROM WBL OUTSIDE SHOULDER, (STA 394+50+/- TO 650+50+/-) REVISE PAVEMENT MARKING AS SHOWN ON SHEET TMP-24 AND INSTALL PCB ALONG RIGHT AND LEFT INSIDE SHOULDERS (WBL & EBL) FROM -L- STA 645+75+/- TO STA 650+50+/- . (MATCH TO I-4400C PHASE I). (LN-2)

CLOSE WEIGH STATION AND PLACE PAVEMENT MARKING IN TEMPORARY PATTERN ON WBL FROM -L- STA 396+29+/- TO STA 432+47+/- AND SHIFT TRAFFIC TO NEW PATTERN. (TMP-26 THRU TMP-29)

STEP 6: PLACE YELLOW EDGELINE ALONG INSIDE WBL PROVIDING AN 11' INSIDE LANE FROM -L- STA 432+47+/- TO STA 650+50+/- . (TMP-29 THRU TMP-30) (LN-2)

USING RSD 1101.02 (SHEET 4 OF 14), PLACE PCB ALONG INSIDE SHOULDER OF WBL AND EBL AS SHOWN ON SHEETS TMP-4 THRU TMP-4D AND TMP-25 THRU TMP-30. ADJUST YELLOW EDGELINE ALONG EBL AS NEEDED TO MAINTAIN A MINIMUM 11' LANE AND 2' BUFFER TO PCB. (LN-1,2)

STEP 7: REMOVE EXISTING WBL BRIDGE OVER CANE CREEK AND CONSTRUCT REMAINDER OF PROPOSED WBL BRIDGE (-L- STA 422+00+/-) . (SHORING #16 & #17 REQUIRED.) SEE TMP-28 & TMP-29.

STEP 8: AWAY FROM TRAFFIC, CONSTRUCT THE TEMPORARY PAVEMENT IN THE FOLLOWING LOCATIONS AS SHOWN ON TMP-25 THRU TMP-30:

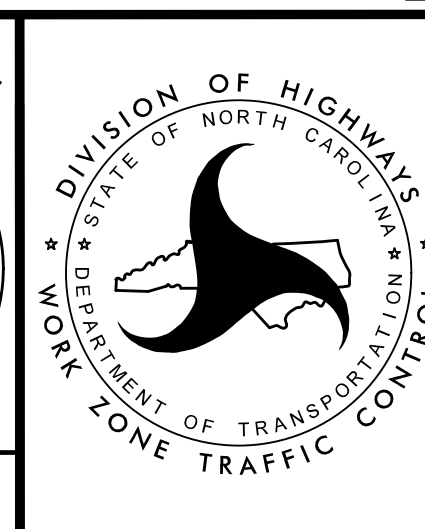
- * -DETOUR 1-
- * -L- WBL MEDIAN STA 380+44+/- TO STA 409+55+/- (MATCH EXISTING WBL EDGE AND ELEVATION)
- * -L- WBL STA 417+50+/- TO STA 420+28+/- (TRANSITION GRADE FROM EXISTING TO NEW BRIDGE)
- * -L- WBL STA 423+26+/- TO STA 425+00+/- (TRANSITION GRADE FROM NEW BRIDGE TO EXISTING)
- * -L- WBL MEDIAN STA 425+00+/- TO STA 640+60+/- (MATCH EXISTING EDGE AND ELEVATION)

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**TRANSPORTATION
 MANAGEMENT PLAN**

PHASING

PHASING

PHASE I (SEE TMP-4 THRU TMP-4D FOR OVERVIEWS)

*** REFER TO SHEETS TMP-6 THRU TMP-30 FOR DETAILS ***

STEP 9: AS MUCH AS POSSIBLE WITHOUT DISTURBING EXISTING TRAFFIC, PLACE PCB AND TEMPORARY PAVEMENT MARKING AS SHOWN ON SHEETS TMP-33 THRU TMP-38 IN PHASE II. (MATCH TO I-4400C PHASE II.) (LN-1,2)

INSTALL AND COVER -Y1RPA- DETOUR SIGNS AS SHOWN ON SHEET TMP-2G. (LN-3)

CLOSE EBL WEIGH STATION.

STEP 10: COMPLETE STEPS 10.1 THRU 10.3.

COMPLETE THE REQUIREMENTS OF PHASE I, STEPS 10.1 THRU 10.3 IN ONE (1) WEEKEND, FROM FRIDAY AT 9:00 PM TO THE FOLLOWING MONDAY AT 6:00 AM. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

10.1: USING OFFSITE DETOUR UNCOVER SIGNS PLACED IN PHASE I, STEP 9 CLOSE -Y1RPA- TO TRAFFIC AND BEGIN CONSTRUCTION OF PROPOSED RAMP FROM STA 13+85+/- TO STA 21+79+/- . PLACE PCB AND DRUMS AT -Y1RPA- AS SHOWN ON SHEETS TMP-25 & TMP-26. (LN-1,3,4)

SHIFT EB LANES TO NEW PATTERN. PLACE REMAINING PAVEMENT MARKING AS SHOWN IN PHASE II.

10.2: AWAY FROM TRAFFIC, COMPLETE CONSTRUCTION OF -Y1RPA- AND CONSTRUCT THE FOLLOWING:

- * TEMPORARY PAVEMENT AT -Y1RPA- GORE FROM 12+00+/- TO 13+85+/- (TMP-25 & TMP-26)
- * TEMPORARY PAVEMENT ALONG -L- MEDIAN FROM STA 384+37+/- TO STA 391+79+/- (TMP-33 & TMP-34)

10.3: USING RSD 1101.02 (SHEET 4 OF 14) AS NEEDED, PLACE, REMOVE AND RESET BARRIER AS SHOWN ON SHEET TMP-33 & TMP-34. PLACE TEMPORARY MARKING AND OPEN -Y1RPA- TO TRAFFIC. COVER (BUT DO NOT REMOVE) TEMPORARY DETOUR SIGNS. (LN-1)

PHASE II (SEE TMP-31 THRU TMP-31D FOR OVERVIEWS)

*** REFER TO SHEETS TMP-33 THRU TMP-42 FOR DETAILS ***

STEP 1: AS MUCH AS POSSIBLE AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF THE FOLLOWING:

- * -L- PROPOSED EBL AND OUTSIDE SHOULDER FROM 380+44+/- TO STA 647+00+/- AS SHOWN ON SHEETS TMP-33 THRU TMP-38 INCLUDING REMOVAL OF EXISTING EBL BRIDGE AND CONSTRUCTION OF PROPOSED BRIDGE OVER CANE CREEK (STA 422+00 LT).
- * TEMPORARY ONSITE DETOUR FOR -Y1RPA- (TMP-33)

STEP 2: DURING I-4400C PHASE IIB, STEP 4, AND BEHIND BARRIER CONSTRUCT:

- * PROPOSED L EBL FROM STA 645+89+/- TO STA 650+50+/- (TMP-42)
- * L EBL MEDIAN TEMPORARY PAVEMENT FROM STA 645+54+/- TO STA 650+50+/- (TMP-42) (LN-2)
- * -L- EBL FROM STA 643+00+/- TO STA 645+54+/- (TMP-42)

STEP 3: AS MUCH AS POSSIBLE WITHOUT DISTURBING EXISTING TRAFFIC, PLACE PCB AND PAVEMENT MARKING AS SHOWN IN PHASE III. USE DRUMS AT 20' SPACING TO CHANNELIZE -Y1RPA- DURING MARKING AND UNTIL TRAFFIC IS SHIFTED. (SEE SHEETS TMP-45 THRU TMP-56.)

COMPLETE THE REQUIREMENTS OF PHASE II, STEPS 4 THRU 6 IN TEN (10) CONSECUTIVE CALENDAR DAYS. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

STEP 4: USING OFFSITE DETOUR UNCOVER SIGNS PLACED IN PHASE I, STEP 9 (TMP-2G) AND CLOSE -Y1RPA- TO TRAFFIC.

STEP 5: BEHIND BARRIER, CONSTRUCT REMAINDER OF -L- EBL FROM STA 382+24+/- TO STA 392+00+/- . (TMP-39 & TMP-40)

STEP 6: SHIFT -L- EB LANES TO PHASE III PATTERN. (SHIFT COINCIDES WITH I-4400C PHASE 2A, STEP 1) AND OPEN -Y1RPA- TO TRAFFIC. COVER/REMOVE DETOUR SIGNS. USING RSD 1101.02 (SHEET 4 OF 14), INSTALL REMAINING PCB AND PAVEMENT MARKING FOR EB LANES. OPEN EBL WEIGH STATION. (LN-1,2)

PHASE III (SEE TMP-43 THRU TMP-43D FOR OVERVIEWS)

*** REFER TO SHEETS TMP-45 THRU TMP-56 FOR DETAILS ***

STEP 1: USING RSD 1101.02 (SHEET 10 OF 14), REMOVE TEMPORARY ONSITE DETOUR FOR -Y1RPA- AND COMPLETE OUTSIDE SHOULDER AND GUARDRAIL INSTALLATION. (LN-1)

USING RSD 1101.02 (SHEET 4 OF 14), RELOCATE AND EXTEND PCB ALONG WBL FROM -L- STA 374+25+/- TO STA 380+50+/- . (LN-1)

STEP 2: BEHIND BARRIER, CONSTRUCT THE FOLLOWING:

- * TEMPORARY TRANSITION GRADE FROM EXISTING WBL TO PROPOSED EDGE AND ELEVATION OF EBL FROM FROM -L- STA 374+50+/- TO STA 380+00+/- .
- * TEMPORARY PAVEMENT MATCHING EBL EDGE AND ELEVATION FROM -L- STA 380+00+/- TO STA 650+50+/- .

STEP 3: AS MUCH AS POSSIBLE AWAY FROM TRAFFIC, PLACE PCB AND TEMPORARY PAVEMENT MARKING AS SHOWN IN PHASE IV. (LN-1)

INSTALL AND COVER -Y1RPD- DETOUR SIGNING AS SHOWN ON TMP-2D. (LN-3)

PHASE IV (SEE TMP-57 THRU TMP-57D FOR OVERVIEWS)

*** REFER TO SHEETS TMP-59 THRU TMP-71 FOR DETAILS ***

COMPLETE THE REQUIREMENTS OF PHASE IV, STEPS 1 THRU 5 IN ONE (1) WEEKEND, FROM FRIDAY AT 9:00 PM TO THE FOLLOWING MONDAY AT 6:00 AM. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

STEP 1: UNCOVER DETOUR SIGNING PLACED IN PHASE III, STEP 3 AND CLOSE -Y1RPD- TO TRAFFIC. (LN-3,4)

STEP 2: USING RSD 1101.02 (SHEET 4 OF 14) AS NEEDED, SHIFT WBL TO NEW PATTERN AND COMPLETE TEMPORARY MARKING AND PCB PLACEMENT. (LN-1)

STEP 3: AWAY FROM TRAFFIC, CONSTRUCT TEMPORARY -Y1RPD- . (TMP-59)

STEP 4: USING RSD 1101.02 (SHEET 1 OF 14) AS NEEDED, RELOCATE AND EXTEND PCB AND PLACE TEMPORARY MARKING FOR -Y1RPD- AS SHOWN ON SHEETS TMP-60 THRU 62. (LN-1)

STEP 5: OPEN -Y1RPD- TO TRAFFIC AND COVER (DO NOT REMOVE) DETOUR SIGNS.

STEP 6: AWAY FROM TRAFFIC REMOVE PCB AND CONSTRUCT -L- WBL AS SHOWN ON SHEETS TMP-60 THRU TMP-68. MATCH TO I-4400C PHASE IV.) (LN-2)

STEP 7: AS MUCH AS POSSIBLE AWAY FROM TRAFFIC, PLACE PCB AND TEMPORARY PAVEMENT MARKING ON -L- WBL AS SHOWN IN PHASE V. (LN-1,2)

STEP 8: COMPLETE STEPS 8.1 THRU 8.4 (TMP-69 & TMP 70)

COMPLETE THE REQUIREMENTS OF PHASE IV, STEPS 8.1 THRU 8.4 IN FOURTEEN (14) CALENDAR DAYS (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

8.1: UNCOVER DETOUR SIGNING PLACED IN PHASE III, STEP 3 AND CLOSE -Y1RPD- TO TRAFFIC. (TMP-69) (LN-3,4)

8.2: AWAY FROM TRAFFIC CONSTRUCT THE FOLLOWING:
* -L- WBL AND SHOULDERS FROM STA 380+44+/- TO STA 399+70+/-
* -Y1RPD-

8.3: AS MUCH AS POSSIBLE AWAY FROM TRAFFIC, COMPLETE INSTALLATION OF PHASE V PCB AND MARKINGS. (TMP-73 THRU TMP-75) (LN-1,2)

8.4: USING RSD 1101.02 (SHEET 4 OF 14) AS NEEDED, SHIFT WB -L- TO PHASE V PATTERN, OPEN -Y1RPD- TO TRAFFIC. COVER/REMOVE DETOUR SIGNING. OPEN WB WEIGH STATION TO TRAFFIC. (LN-1,2)

NOTE: MARKINGS FOR WBL TO BE PLACED IN FINAL PATTERN FOR OUTSIDE TWO THRU LANES WITH TEMPORARY YELLOW EDGELINE ADJACENT TO BARRIER.

STEP 9: USING RSD 1101.02 (SHEET 4 OF 14), COMPLETE PCB PLACEMENT FOR PHASE V PATTERN FOR WBL AND EBL FROM 374+39+/- TO 380+44+/- . (LN-1)

PHASE V (SEE TMP-72 THRU TMP-72D FOR OVERVIEWS)

*** REFER TO SHEETS TMP-73 THRU TMP-75 FOR DETAILS ***

STEP 1: AWAY FROM TRAFFIC BEGIN THE FOLLOWING:
* REMOVE TEMPORARY MEDIAN PAVEMENT FROM -L- STA 376+50+/- TO STA 380+44+/- . (ENGINEER MAY ELECT TO KEEP THIS PAVEMENT FOR CONSTRUCTION OF FUTURE I-4400BA AND USE PCB / GUARDRAIL TO REMAIN IN PLACE AFTER THE PROJECT IS COMPLETE.)
* REMOVE / MILL / WEDGE TEMPORARY MEDIAN PAVEMENT AS NEEDED FROM -L- STA 380+44+/- TO STA 650+50+/- AND CONSTRUCT PERMANENT MEDIAN BARRIER.

STEP 2: USING RSD 1101.02 (SHEET 4 OF 14), REMOVE AND REPLACE PAVEMENT MARKING ON EB LANE FROM -L- STA 643+00+/- TO STA 650+50+/- FOR 8' SHOULDER AND 11' LANES AS SHOWN ON TMP-75. RELOCATE PCB TO PROVIDE A 2' BUFFER FOR THE EB LANE.

STEP 3: BEHIND BARRIER CONSTRUCT REMAINING -L- EB LANE (CONCRETE) FROM STATION 645+54+/- TO STA 650+50+/- . (TMP-75)

STEP:4 COMPLETE ASPHALT MEDIAN AND PERMANENT BARRIER BEGUN IN PHASE V, STEP 1.

STEP 5: USING RSD 1101.02 (SHEET 4 OF 14), REMOVE TEMPORARY PCB FROM EBL AND WBL AND REPLACE WITH DRUMS TO KEEP INSIDE LANES CLOSED. (LN-1) (NOT SHOWN)

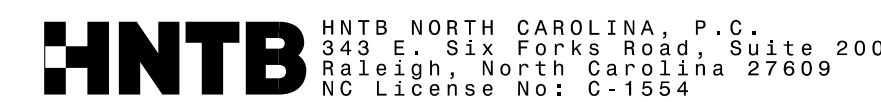
STEP 6: USING RSD 1101.02 (SHEET 4 OF 14), DIAMOND GRIND -L- EBL AND PLACE FINAL PAVEMENT MARKING AS SHOWN IN PMP PLANS.

USING RSD 1101.02 (SHEET 4 OF 14), DIAMOND GRIND -L- WBL AND PLACE FINAL PAVEMENT MARKING AS SHOWN IN PMP PLANS.

USING RSD 1101.02 (SHEET 1 OF 14), PLACE FINAL LAYER OF ASPHALT AND FINAL PAVEMENT MARKINGS AS SHOWN IN PMP PLANS ON ALL Y-LINES.

USING RSD 1101.02 (SHEETS 9 & 10 OF 14) CAP DRUMS TO NARROW LANES AND CHANNELIZE TRAFFIC AS NEEDED, PLACE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKING AS SHOWN IN PMP PLANS ON -Y1RPA- AND -Y1RPD- .

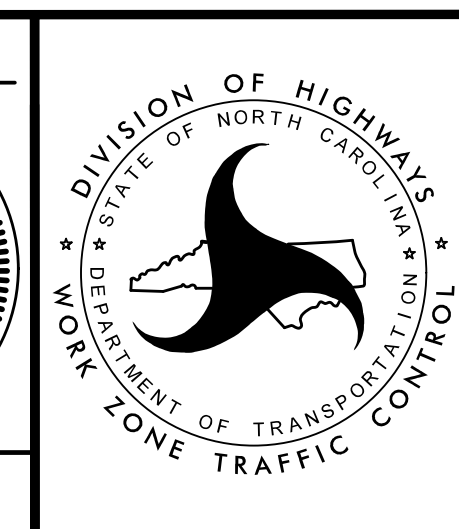
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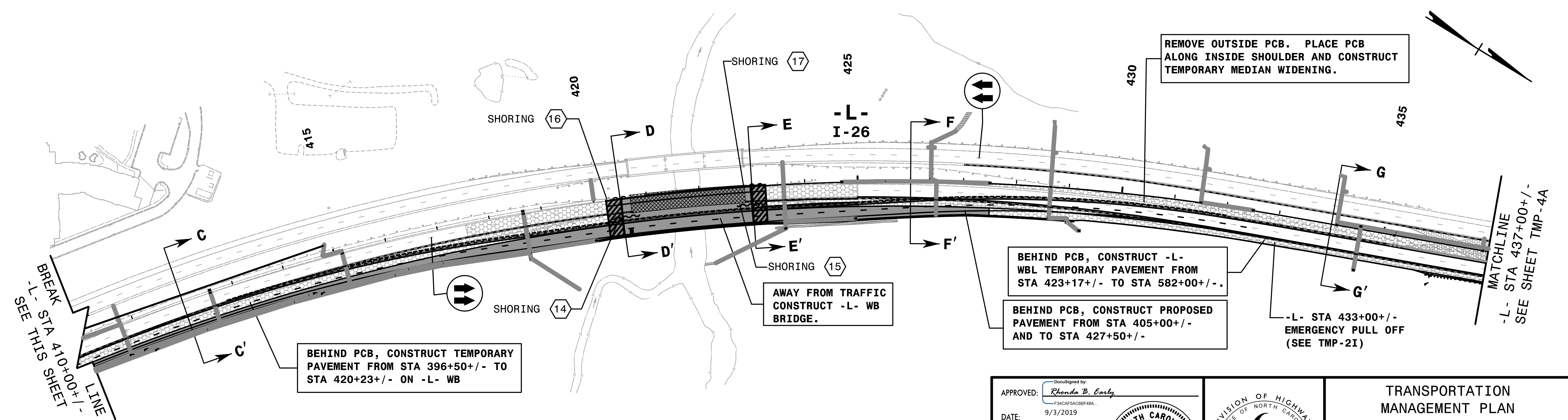
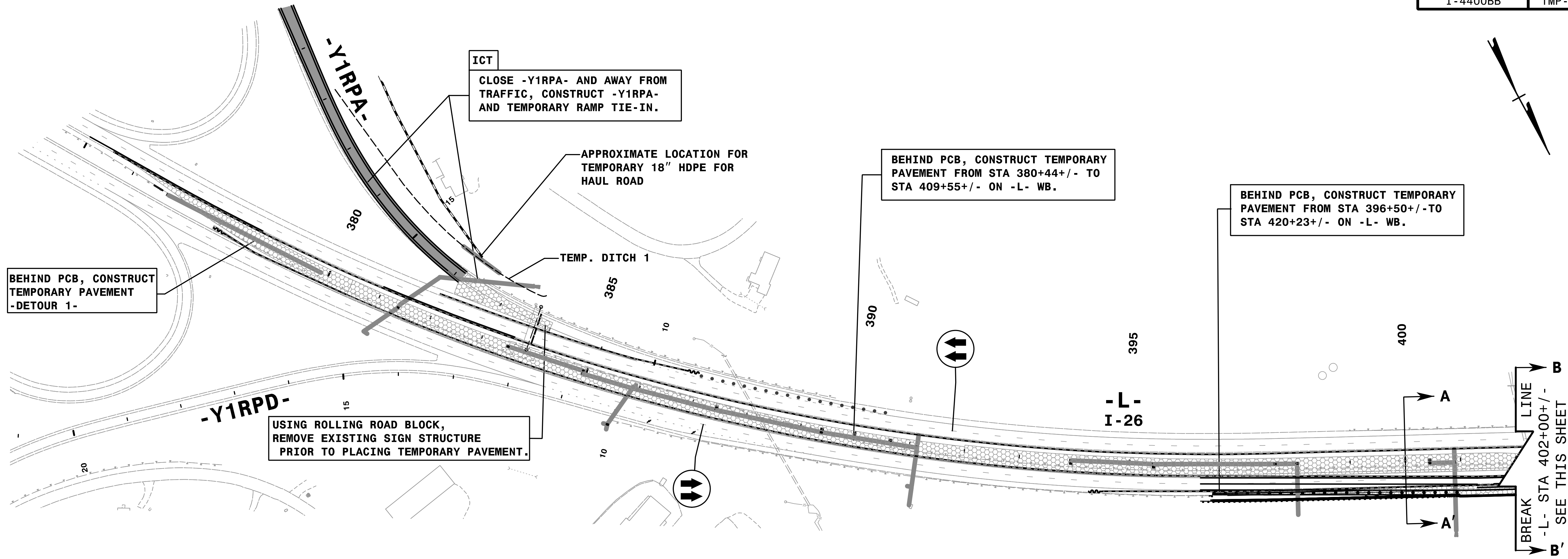
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TRANSPORTATION MANAGEMENT PLAN

PHASING

DEPARTMENT OF TRANSPORTATION
STATE OF NORTH CAROLINA
WORK ZONE TRAFFIC CONTROL



REFER TO SHEETS TMP-5A & TMP-5C FOR CUT SECTIONS.

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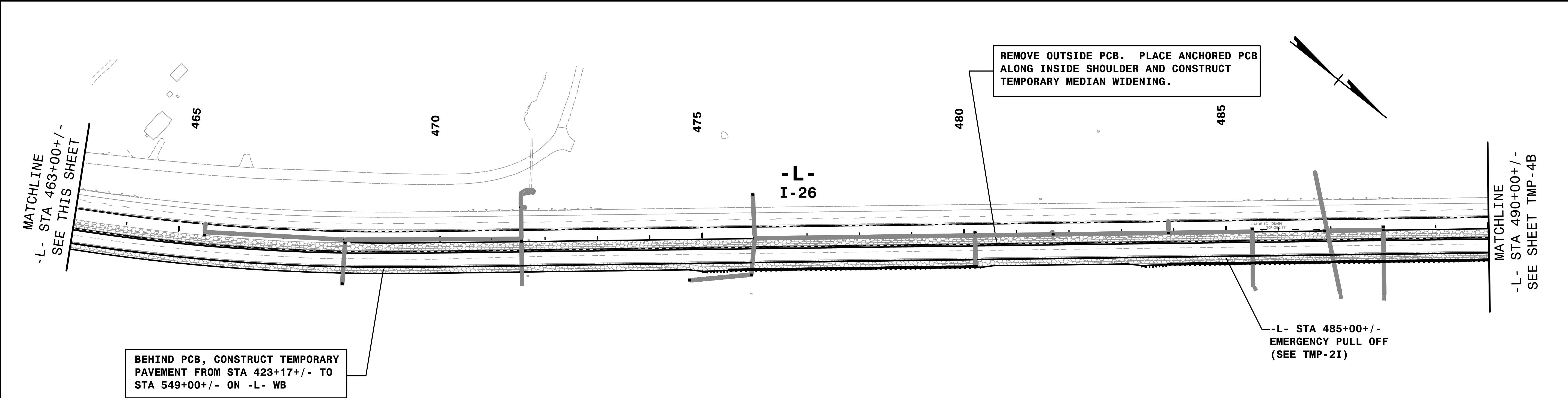
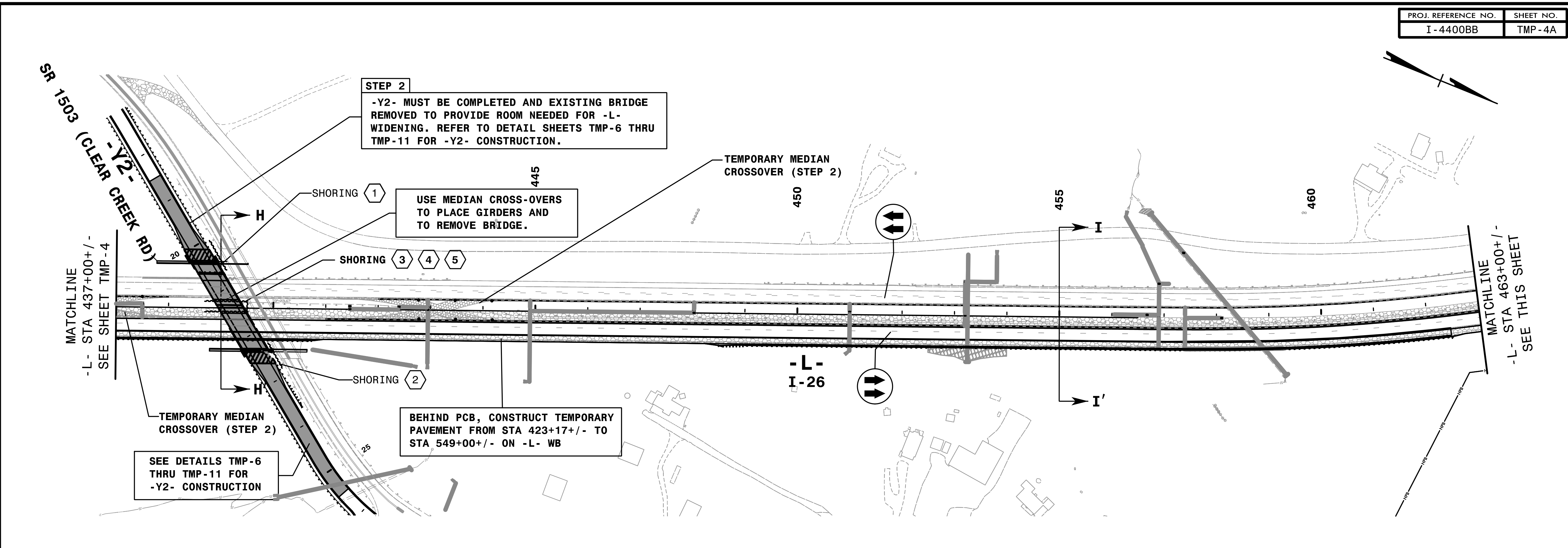
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TRANSPORTATION
MANAGEMENT PLAN

PHASE I
OVERVIEW

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REFER TO SHEETS TMP-5A, TMP-5B, & TMP-5C FOR CUT SECTIONS.

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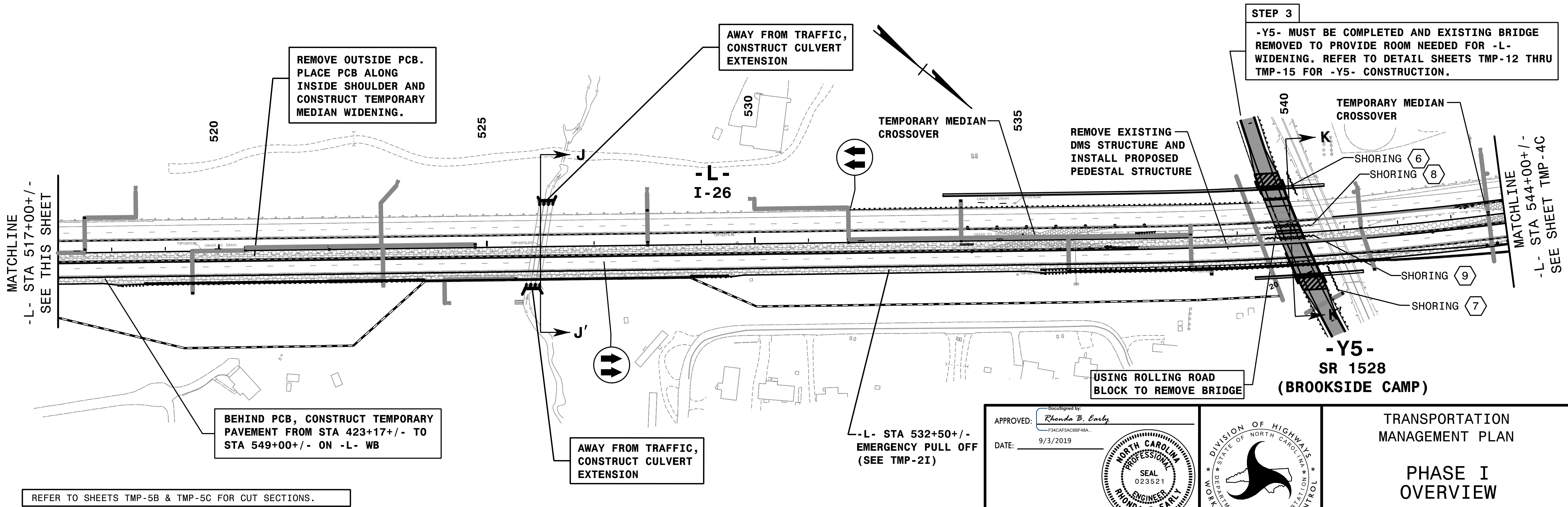
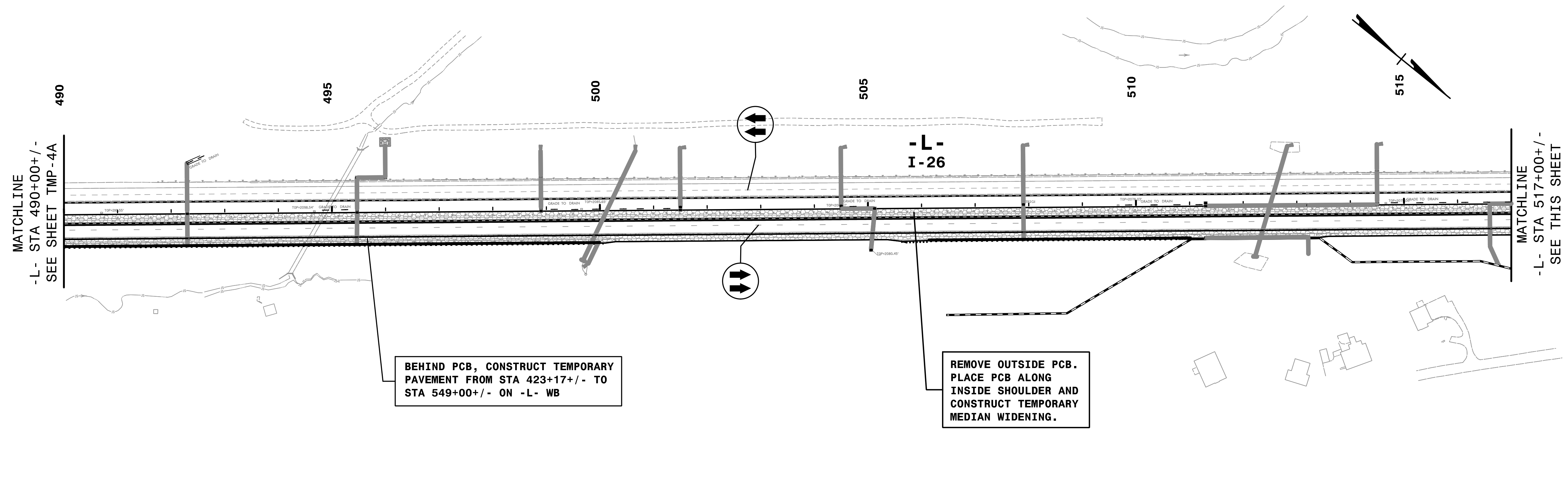
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TRANSPORTATION
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PHASE I
OVERVIEW



REFER TO SHEETS TMP-5B & TMP-5C FOR CUT SECTIONS.



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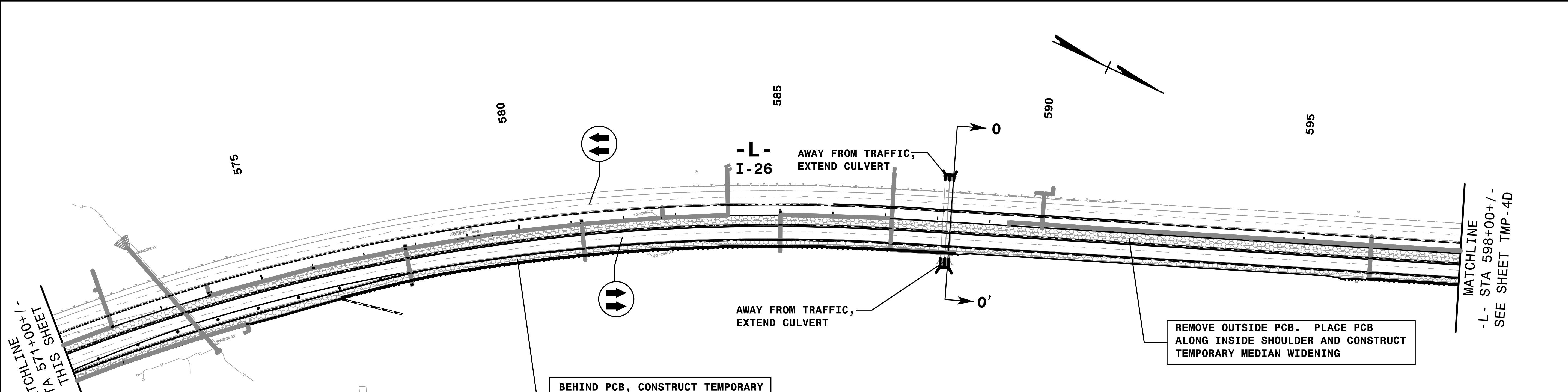
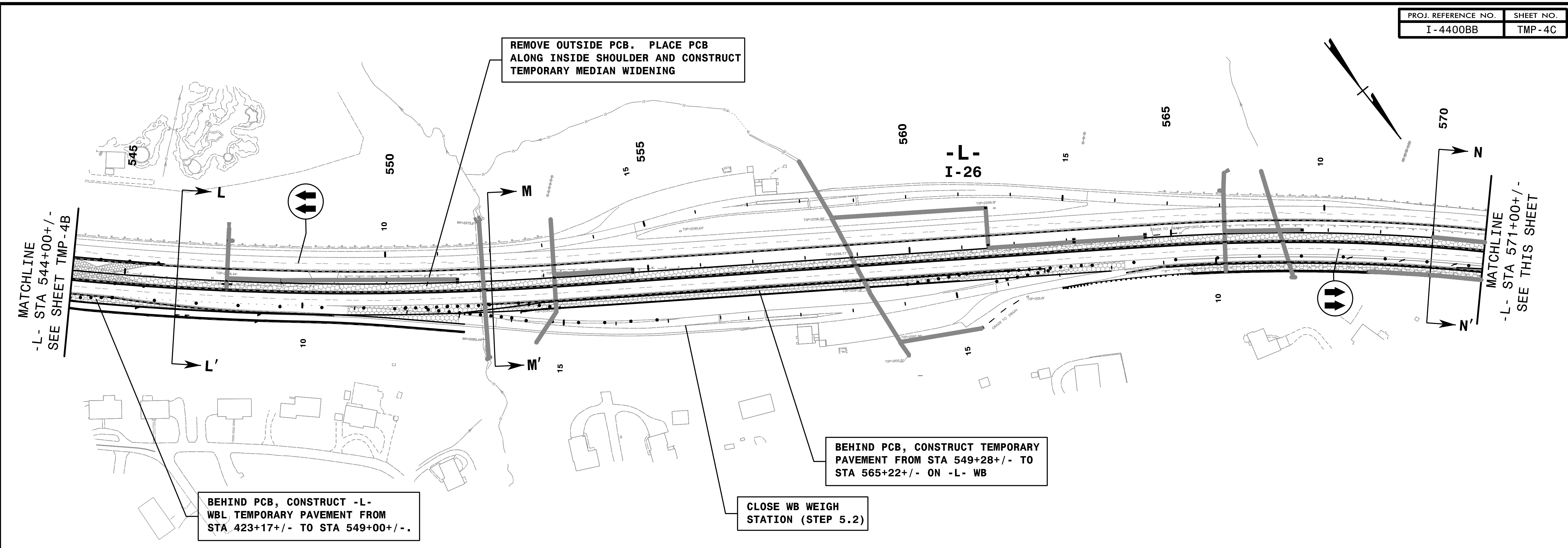
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PHASE I OVERVIEW

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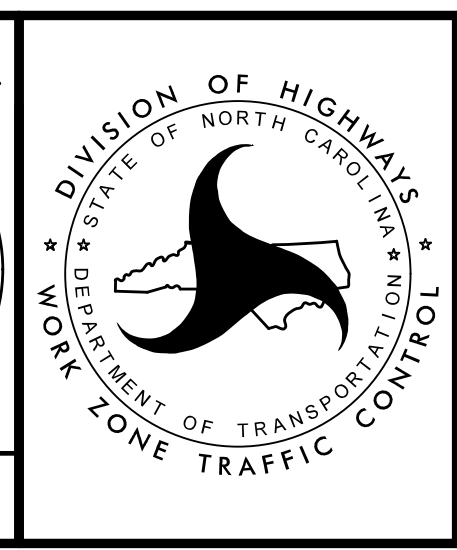
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TRANSPORTATION MANAGEMENT PLAN

PHASE I OVERVIEW