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**WORK ZONE SAFETY & MOBILITY**  
"from the MOUNTAINS to the COAST"

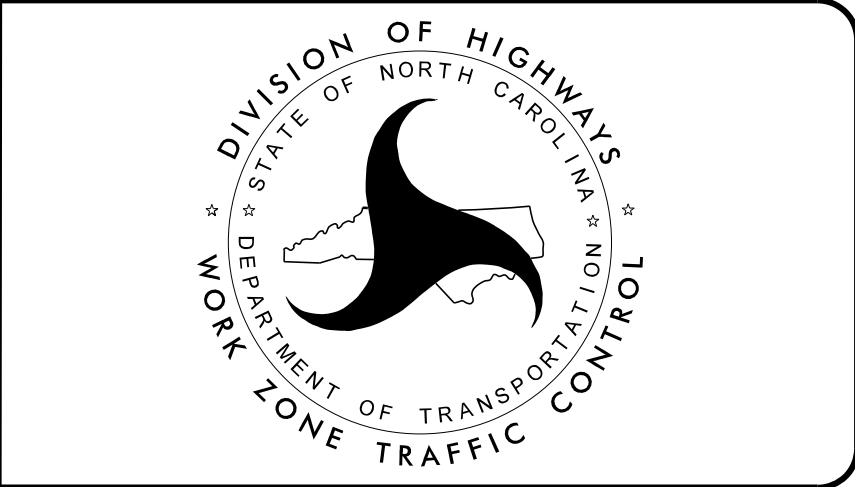
PLANS PREPARED BY:



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NC LICENSE NO.: F-0105

NCDOT CONTACTS:

LINDSAY CROCKER  
PROJECT MANAGER

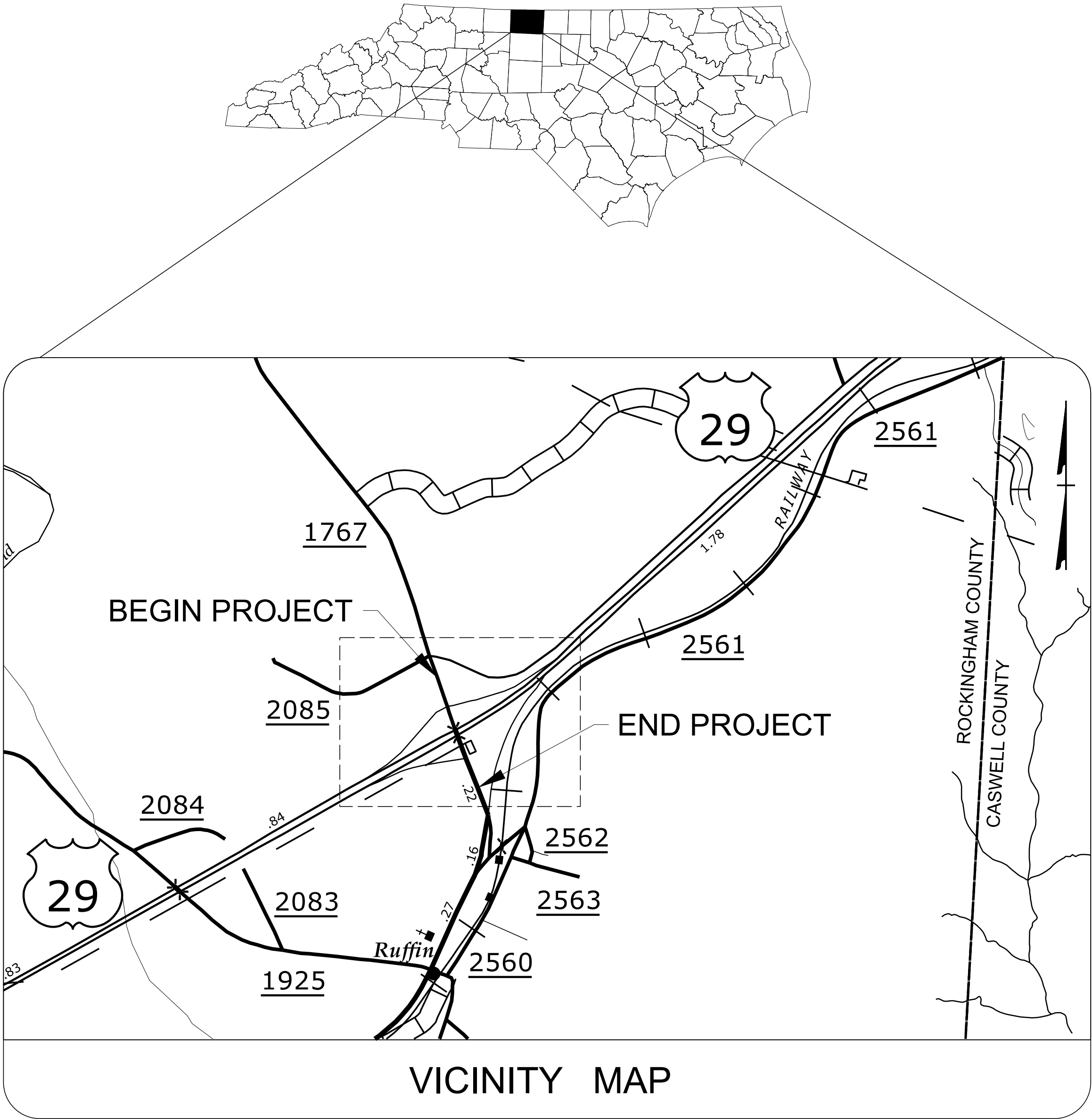


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

ROCKINGHAM COUNTY


LOCATION: BRIDGE #780183 ON US 29 (BUS) OVER US 29 BYPASS




INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B	GENERAL NOTES
TMP-1C	LOCAL NOTES AND PHASING
TMP-1D	WORK ZONE VARIABLE SPEED LIMIT REDUCTION
TMP-1E	VARIABLE SPEED ZONE AHEAD SIGN
TMP-2	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-02A	TEMPORARY SHORING NOTES
TMP-3	DETOUR SIGN DESIGN
TMP-3A THRU TMP-3B	TRANSPORTATION OPERATIONS PLAN
TMP-4	TEMPORARY TRAFFIC CONTROL PHASE 1 DETAIL
TMP-5	TEMPORARY TRAFFIC CONTROL PHASE 2 DETAIL
TMP-6	TEMPORARY TRAFFIC CONTROL PHASE 3 DETAIL
TMP-7	TEMPORARY TRAFFIC CONTROL PHASE 4 DETAIL

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APPROVED:   
DATE: 8/4/2025

SEAL



SHEET NO.  
TMP-1



BR-0098

TIP PROJECT:

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" -  
N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024  
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 ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUM
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1170.01	PORTABLE CONCRETE BARRIER
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

## GENERAL

 DIRECTION OF TRAFFIC FLOW  
 - - - - - EXIST. PVMT.  
 NORTH ARROW  
 ——— PROPOSED PVMT.  
 TEMP. SHORING (LOCATION PURPOSES ONLY)

 WORK AREA REMOVAL PAVEMENT WEDGING













## PAVEMENT MARKINGS

— EXISTING LINES  
— TEMPORARY LINES




## PAVEMENT MARKING SYMBOLS

# PAVEMENT MARKING SYMBOLS




## TRAFFIC CONTROL DEVICES

	BARRICADE (TYPE III)
	CONE
	DRUM
	SKINNY DRUM
	TUBULAR MARKER
	TEMPORARY CRASH CUSHION
	FLASHING ARROW BOARD
	FLAGGER
	LAW ENFORCEMENT
	TRUCK MOUNTED ATTENUATOR (TMA)
	CHANGEABLE MESSAGE SIGN
	TEMPORARY PORTABLE CONCRETE BARRIER

## TEMPORARY SIGNING

 PORTABLE SIGN  
 STATIONARY SIGN  
 STATIONARY OR PORTABLE SIGN

## PAVEMENT MARKERS

	CRYSTAL/CRYSTAL
	CRYSTAL/RED
	YELLOW/YELLOW

THE FOLLOWING LISTED WORK ZONE STRATEGIES ARE RECOMMENDED FOR INCLUSION WITHIN THIS TRANSPORTATION MANAGEMENT PLAN (TMP).

RECOMMENDED STRATEGIES:

TRAFFIC MANAGEMENT STRATEGIES:  
FULL ROADWAY CLOSURES  
LANE SHIFTS OR CLOSURES  
SHOULDER CLOSURES  
ONE-LANE, TWO WAY OPERATION (FLAGGING)  
NIGHT WORK  
WEEKEND WORK  
WORK HOUR RESTRICTIONS FOR PEAK TRAVEL

WORK ZONE SAFETY & MOBILITY STRATEGIES:  
SPEED LIMIT REDUCTION  
TRAFFIC / INCIDENT MANAGEMENT & SPEED ENFORCEMENT STRATEGIES:  
INCREASED PENALTIES FOR WORK ZONE VIOLATIONS  
CONTRACTING & INNOVATIVE CONSTRUCTION STRATEGIES:  
INTERMEDIATE CONTRACT TIMES / LIQUIDATED DAMAGES

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DocuSigned by:  
APPROVED: Trent E. Huffman  
850048770170449

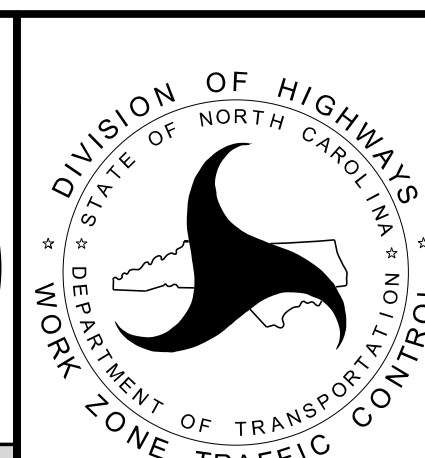
DATE: 6/30/2025

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23912  
Trent E. Huffman

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# ROADWAY STANDARD DRAWINGS, LEGEND & TRAFFIC MANAGEMENT STRATEGY



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PROJ. REFERENCE NO.	SHEET NO.
BR-0098	TMP-1B

## 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
SR 1767 MAYFIELD RD (-L-)	MON. THRU FRI. 7:00 A.M. - 9:00 A.M.
SR 1767 MAYFIELD RD (-L-)	MON. THRU FRI. 4:00 P.M. - 6:00 P.M.
US 29 (-Y2-)	MON. THRU FRI. 7:00 A.M. - 9:00 A.M.
US 29 (-Y2-)	MON. THRU FRI. 4:00 P.M. - 6:00 P.M.
RAMP A, B AND C	MON. THRU FRI. 7:00 A.M. - 9:00 A.M.
RAMP A, B AND C	MON. THRU FRI. 4:00 P.M. - 6:00 P.M.

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

##### ROAD NAME

SR 1767 MAYFIELD RD (-L-)  
US 29 (-Y2-)  
RAMP A, B, AND C

##### HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 7:00 A.M. DECEMBER 31st TO 6:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 6:00 P.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 7:00 A.M. THURSDAY AND 6:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY TO 6:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 6:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 7:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 6:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.

- FOR LABOR DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY AND 6:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 7:00 A.M. TUESDAY TO 6:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 7:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

#### C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
US 29 (-Y2-)	MONDAY THRU SUNDAY 5:00 A.M. - 12:00 A.M.	30 MINUTES FOR GIRDER PLACEMENT AND REMOVAL

### LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 5 FT OF AN OPEN TRAVEL LANE ON AN UNDIVIDED FACILITY, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 10 FT OF AN OPEN TRAVEL LANE ON A DIVIDED FACILITY, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

- H) 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.

### PAVEMENT EDGE DROP OFF REQUIREMENTS

- I) 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.

- J) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

### TRAFFIC PATTERN ALTERATIONS

- K) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

### SIGNING

- L) 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.

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

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

- N) 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.

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

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

### TRAFFIC BARRIER

- Q) 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.

- R) 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 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: (SEE ALSO 1101.05)

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

- S) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

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

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

### PAVEMENT MARKINGS AND MARKERS

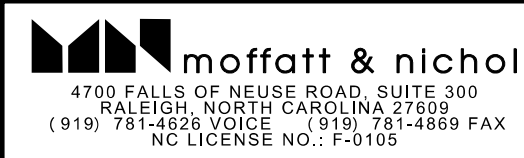
- V) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

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

### MISCELLANEOUS

- X) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S 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 500 FT RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

- Y) UTILITY SERVICES SHALL BE MAINTAINED TO ALL FACILITIES DURING CONSTRUCTION.



APPROVED: <i>Trinit E. Huffman</i> 850048770170449..	
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## GENERAL NOTES



LOCAL NOTES

PROVIDE ONE MONTH NOTICE TO THE ENGINEER, ROCKINGHAM COUNTY EMERGENCY SERVICES, AND ROCKINGHAM COUNTY SCHOOL OFFICIALS PRIOR TO CONSTRUCTION.

PHASING

PHASE I

STEP 1

USING RSD 1101.02 (4 OF 9) PLACE WARNING SIGNS AND CLOSE THE INSIDE LANE ON -Y2- (US 29) ON BOTH SIDES.

STEP 2

CONSTRUCT TEMPORARY PAVEMENT ON -Y2- STA 14+98 +/- TO -Y2- STA 18+26 +/- LT INSIDE SHOULDER.  
CONSTRUCT TEMPORARY PAVEMENT ON -Y2- STA 14+03 +/- TO -Y2- STA 17+30 +/- RT INSIDE SHOULDER.

PHASE II

STEP 1

INSTALL OFFSITE DETOUR SIGNING ON -L- (SR 1767 MAYFIELD ROAD), RAMP A, B AND C, US 29, US 29 BUS, LAW ROAD. MAINTAIN -L- OFFSITE DETOUR FOR DURATION OF PROJECT.

STEP 2

INSTALL ALL ADVANCE WARNING SIGNS ON -L- (SR 1767 MAYFIELD ROAD), RAMP A, B, AND C PER RSD 1101.01 (1 & 2 OF 3) AND RSD 1101.03 (2 OF 9). INSTALL ALL ADVANCE WARNING SIGNS ON -Y2- (US 29) PER RSD 1101.01 (1 OF 3).

STEP 3

USING RSD 1101.04 ( 1 OF 2) PLACE WARNING SIGNS AND INSTALL PORTABLE CONCRETE BARRIER TO CLOSE THE INSIDE SHOULDERS ON -Y2-. CONSTRUCT TEMPORARY SHORING ALONG -Y2-.

STEP 4

REMOVE EXISTING STRUCTURE ON -L- (SR 1767 MAYFIELD ROAD).

STEP 5

CONSTRUCT THE INTERIOR BENT AND GUARDRAIL.

PHASE III

STEP 1

MAINTAIN -L- OFFSITE DETOUR. USING RSD 1101.04 (1 OF 2) PLACE WARNING SIGNS AND RESET PORTABLE CONCRETE BARRIER TO CLOSE THE OUTSIDE SHOULDERS ON -Y2- (US 29). CONSTRUCT THE NEW BRIDGE. CONSTRUCT -Y2- STA 14+98 TO STA 17+54 LT OUTSIDE SHOULDER AND -Y2- STA 14+96 TO STA 17+13 +/- RT OUTSIDE SHOULDER.

STEP 2

CONSTRUCT -L- STA 17+95 +/- TO -L- STA 24+55 +/- UP TO FINAL PAVEMENT LAYER.

PHASE IV

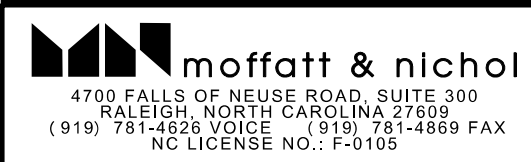
STEP 1

MAINTAIN -L- OFFSITE DETOUR. USING RSD 1101.02 ( 3 OF 19) CONSTRUCT -L- ( SR 1767 MAYFIELD ROAD) STA 14+00 +/- TO STA 17+95 +/-, STA 24+55 +/- TO STA 27+00 +/-, AND CONSTRUCT RAMP A, B, AND C AS SHOWN. USING FLAGGERS AND SHIFTING TRAFFIC AS NECESSARY. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND PROPOSED PAVEMENT. PLACE FINAL PAVEMENT LAYER, PAVEMENT MARKINGS AND GUARDRAIL ON PROPOSED -L-.

STEP 2

REMOVE ALL OFFSITE DETOUR SIGNS.  
REMOVE ALL TRAFFIC CONTROL DEVICES.

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Trist E. Huffman  
852046770170449

DATE: 6/30/2025

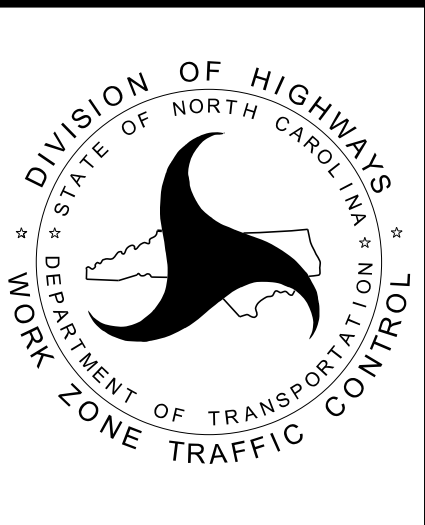
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SEAL 23912

PROFESSIONAL ENGINEER

Trist E. Huffman

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LOCAL NOTES AND PHASING

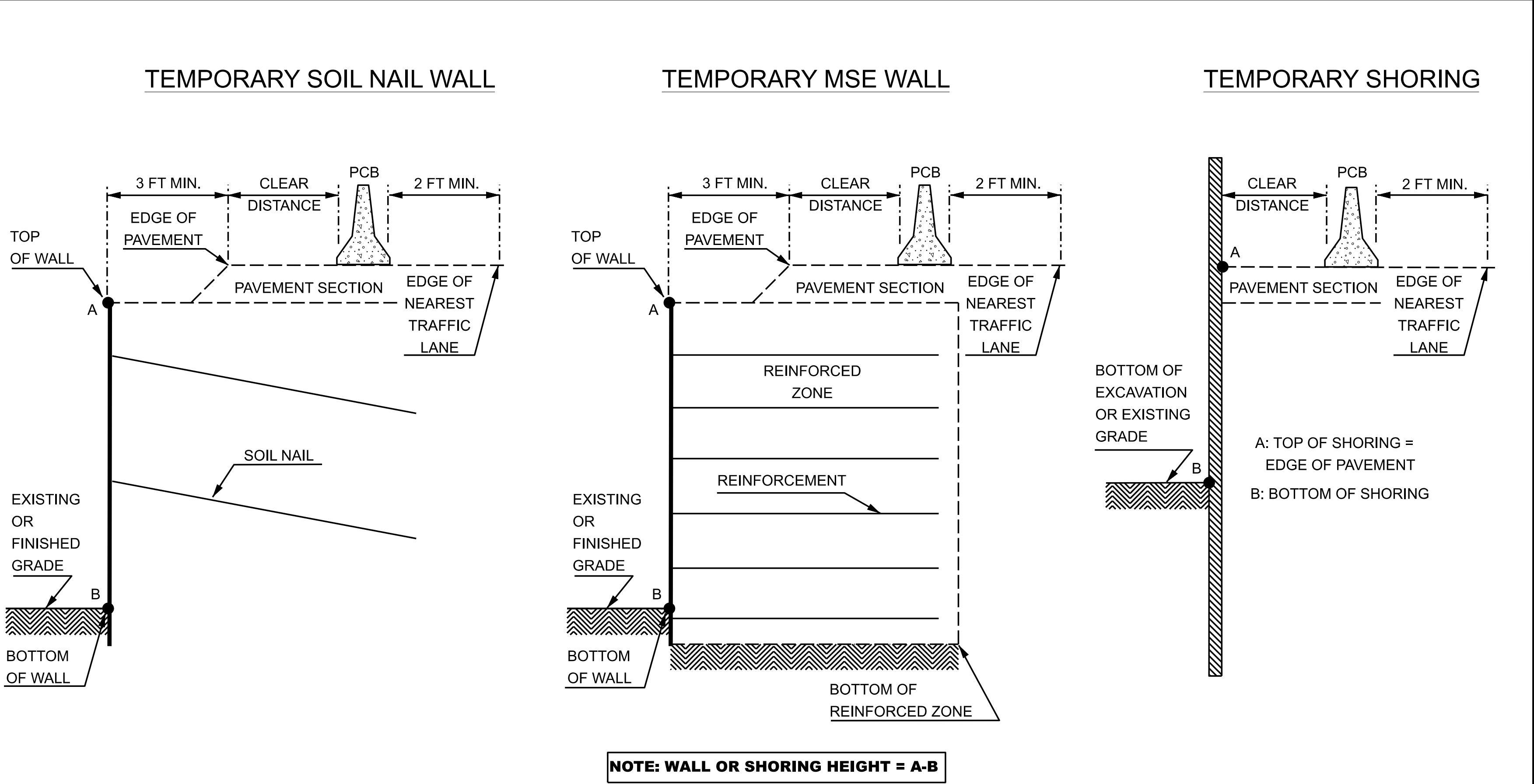


FIGURE A

NOTES

- 1- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.
- 2- REFER TO THE "TEMPORARY SHORING" STANDARD PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PCB).
- 3- PCB IS REQUIRED IF TEMPORARY SHORING/WALL 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 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/WALLS 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- 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 OR APPROVED BY THE ENGINEER.
- 8- 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 THIS MINIMUM REQUIRED DISTANCE IS NOT AVAILABLE, CONTACT THE ENGINEER.
- 9- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS.

PROJ. REFERENCE NO.	SHEET NO.
BR-0098	TMP-02

MINIMUM REQUIRED CLEAR DISTANCE, inches								
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

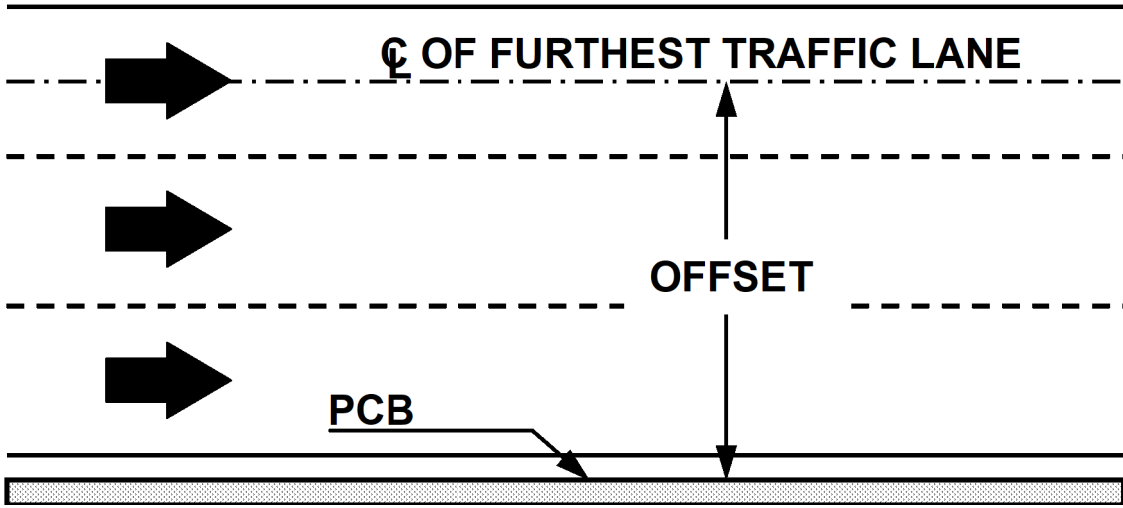
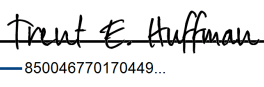



FIGURE B



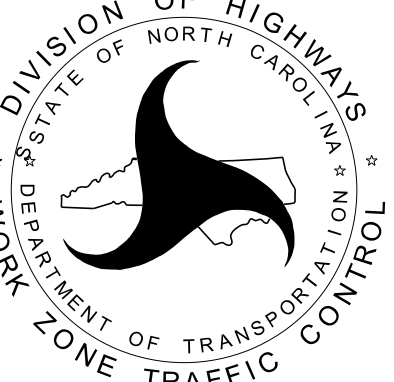
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DATE: 6/30/2025

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PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

PROJ. REFERENCE NO.	SHEET NO.
BR-0098	TMP-02A

TEMPORARY SHORING NOTES 1

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

DESIGN TEMPORARY SHORING FROM STATION 16+50.12 +/- -Y2-, 8.5 FT. LT. TO STATION 15+83.62 +/- -Y2-, 8.5 FT. LT., FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT ( $\gamma$ ) = 120 PCF  
FRICTION ANGLE ( $\phi$ ) = 30 DEGREES  
COHESION ( $c$ ) = 0 PSF  
GROUNDWATER ELEVATION = 663 FT

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

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 16+50.12 +/- -Y2-, 8.5 FT. LT. TO STATION 15+83.62 +/- -Y2-, 8.5 FT. LT., SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 16+50.12 +/- -Y2-, 8.5 FT. LT. TO STATION 15+83.62 +/- -Y2-, 8.5 FT. LT., THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NOTES 2

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

DESIGN TEMPORARY SHORING FROM STATION 16+50.51 +/- -Y2-, 8.5 FT. RT. TO STATION 15+84.12 +/- -Y2-, 8.5 FT. RT., FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT ( $\gamma$ ) = 120 PCF  
FRICTION ANGLE ( $\phi$ ) = 30 DEGREES  
COHESION ( $c$ ) = 0 PSF  
GROUNDWATER ELEVATION = 663 FT

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

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 16+50.51 +/- -Y2-, 8.5 FT. RT. TO STATION 15+84.12 +/- -Y2-, 8.5 FT. RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 16+50.51 +/- -Y2-, 8.5 FT. RT. TO STATION 15+84.12 +/- -Y2-, 8.5 FT. RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

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APPROVED: 

Discussed by:

Trout E. Huffman

8500467710170449...

DATE: 6/30/2025

SEAL

SEAL

23912

Trout E. Huffman

PROFESSIONAL ENGINEER

NORTH CAROLINA

DIVISION OF HIGHWAYS

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

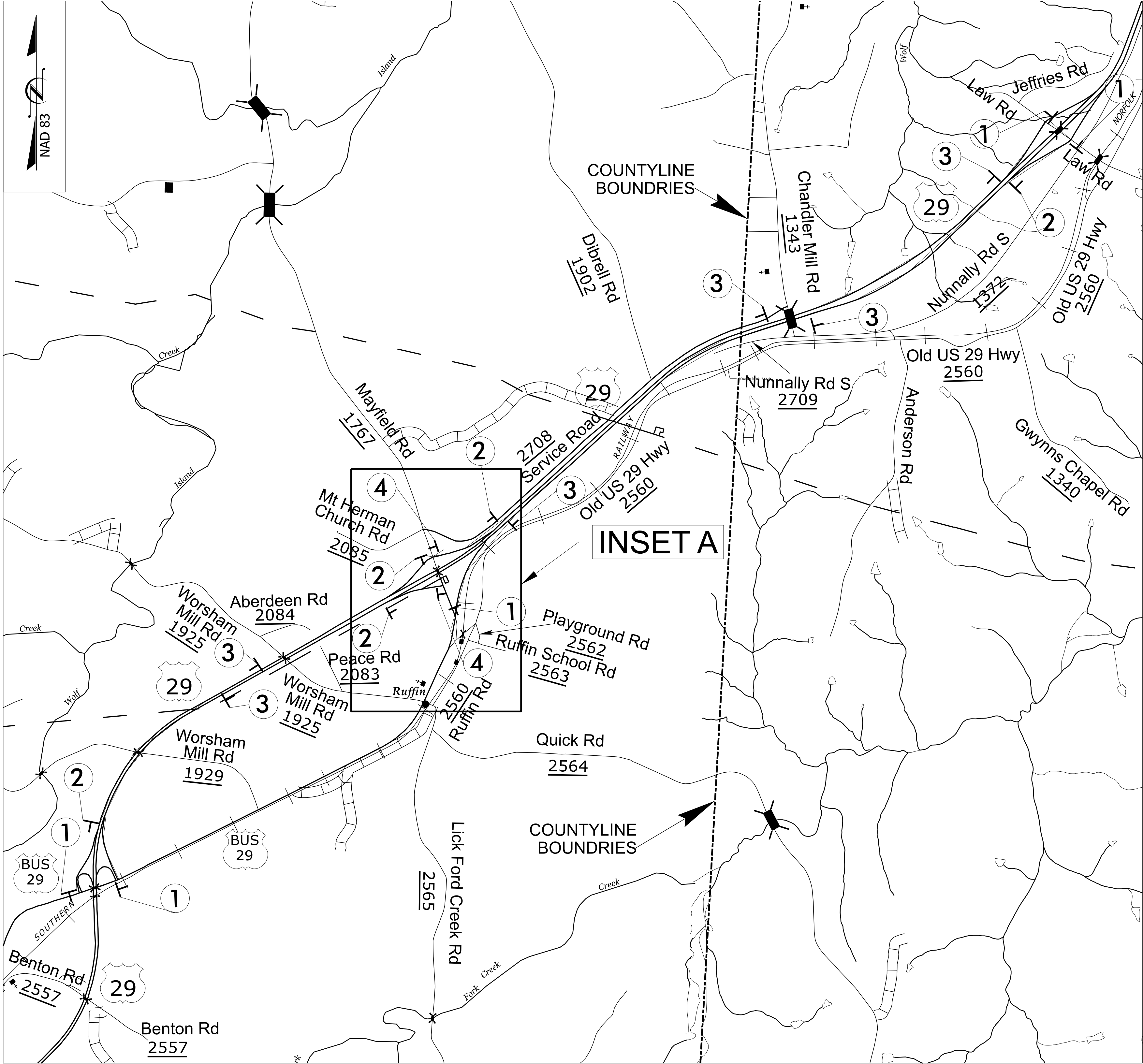
WORK ZONE TRAFFIC CONTROL

TEMPORARY SHORING NOTES

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PROPOSED DETOUR

DETOUR ROUTE

DETOUR LENGTH7.3 MI.

MAYFIELD RD42" X 18"

1DETOURM4-824" X 12"

M6-1 L21" X 15"

MAYFIELD RD42" X 18"

3DETOURM4-824" X 12"

M6-321" X 15"

MAYFIELD RD42" X 18"

2DETOURM4-824" X 12"

M6-121" X 15"

MAYFIELD RD42" X 18"

4END DETOURM4-8 A24" X 18"

FOR INSET A SEE SHEET TMP-03B

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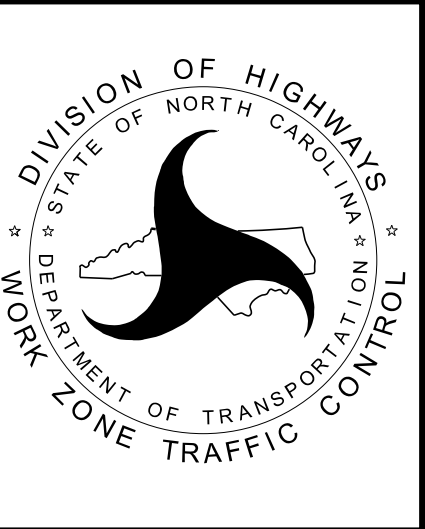
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PROFESSIONAL  
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23912  
ENGINEER  
Trent E. Huffman

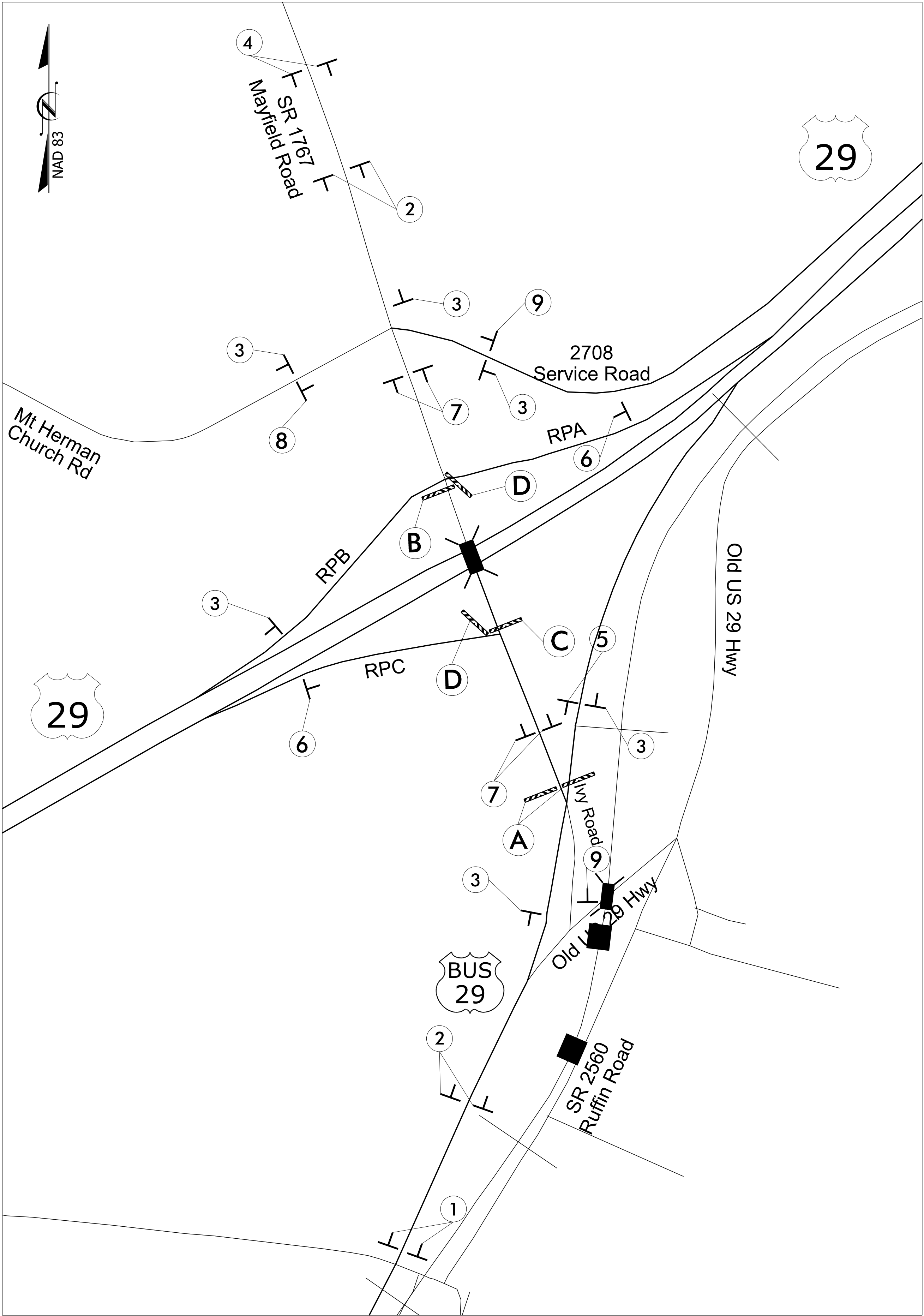
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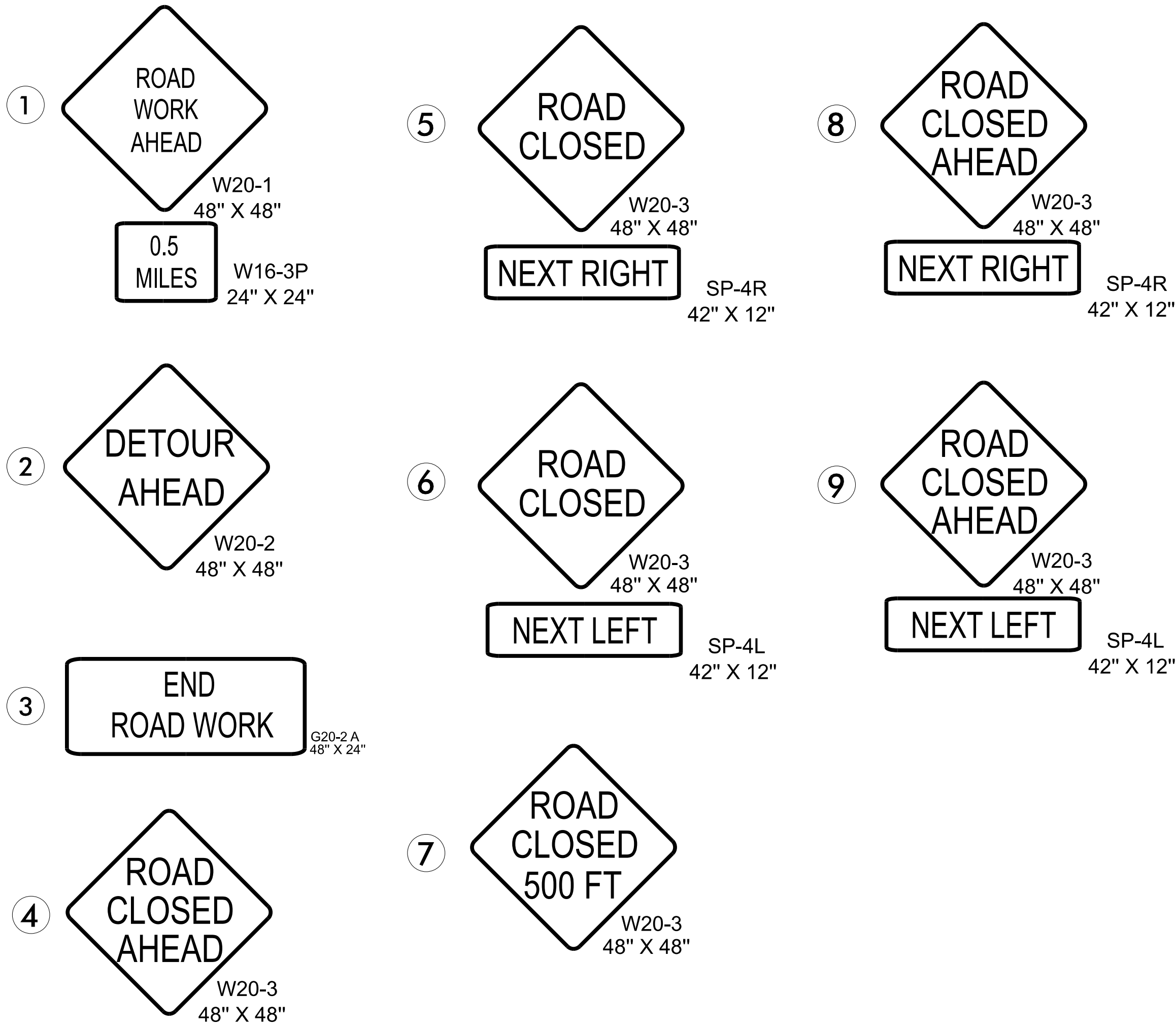
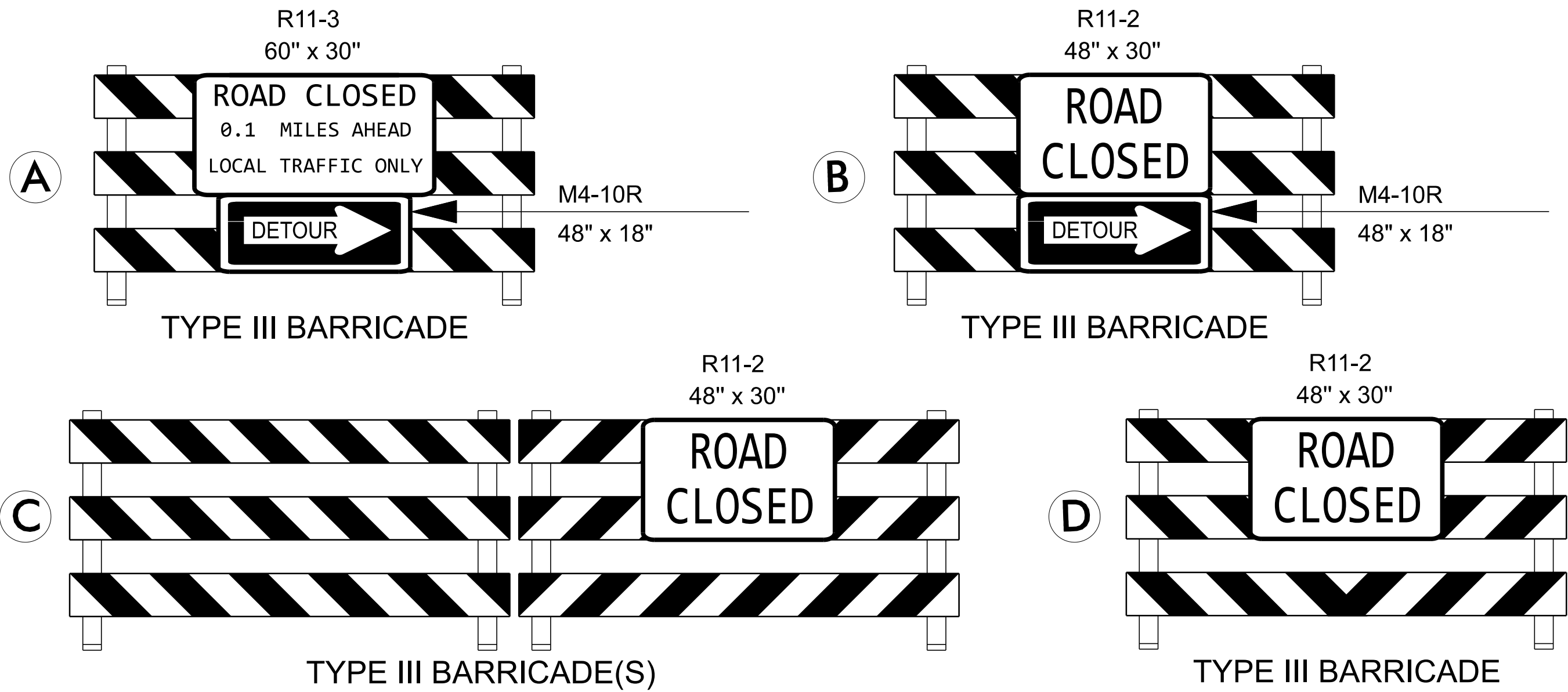
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OPERATIONS PLAN



INSET A DETAILS



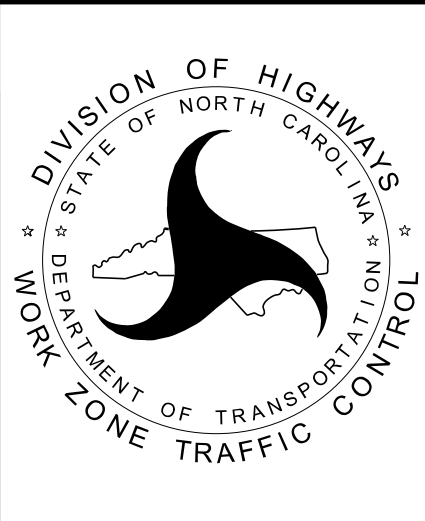
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BR-0098	TMP-03B



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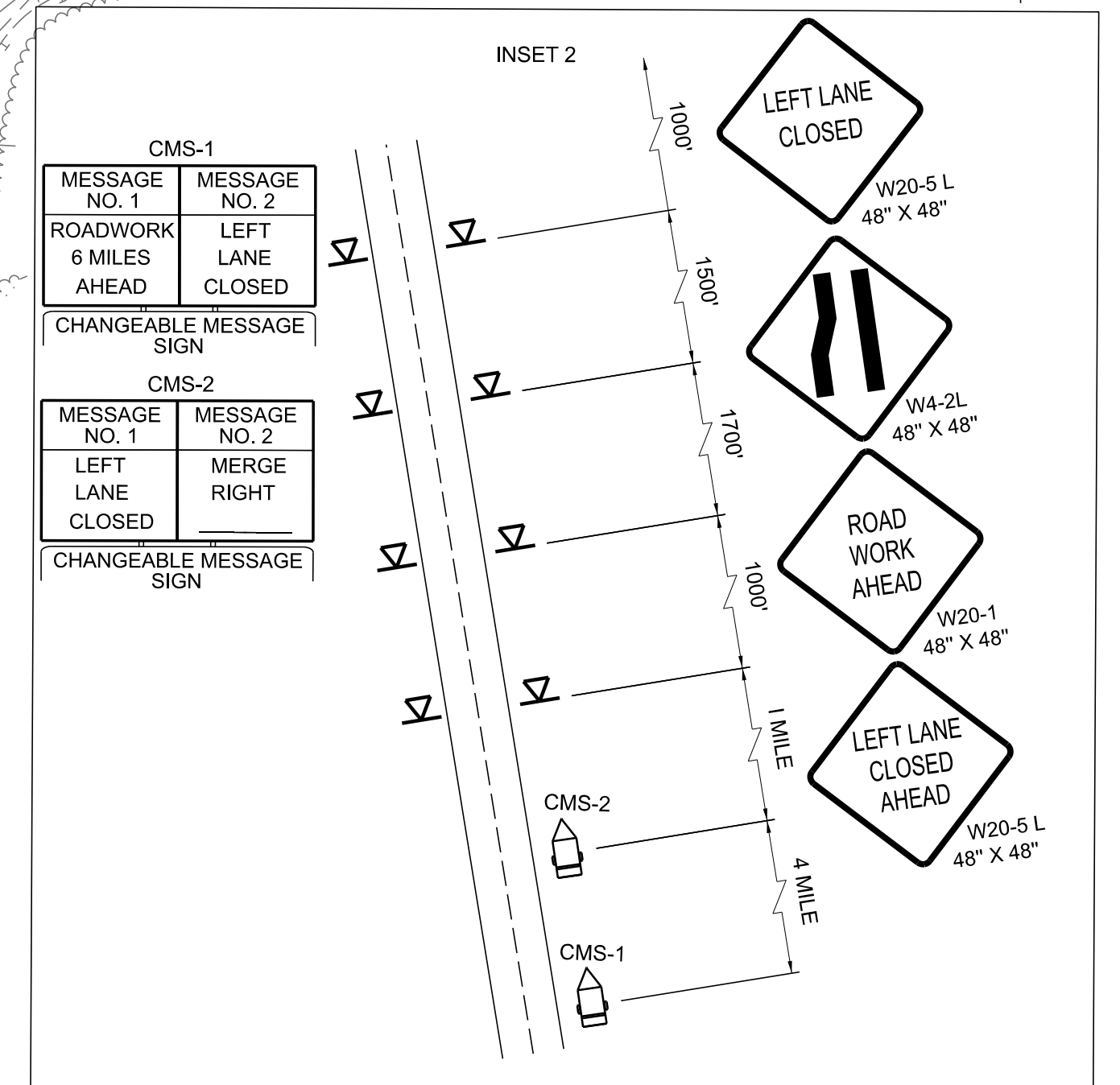
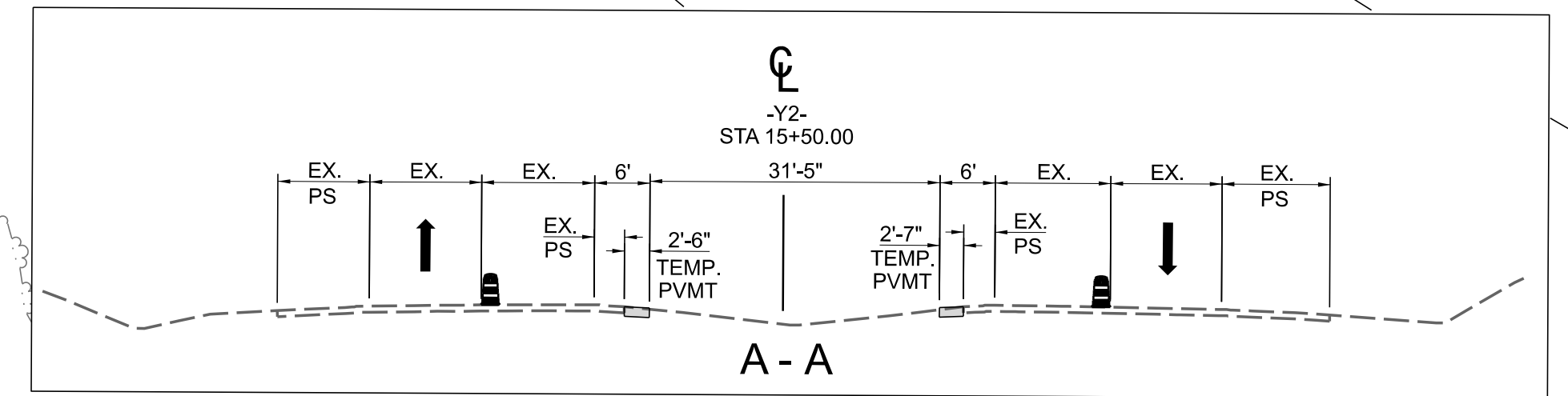
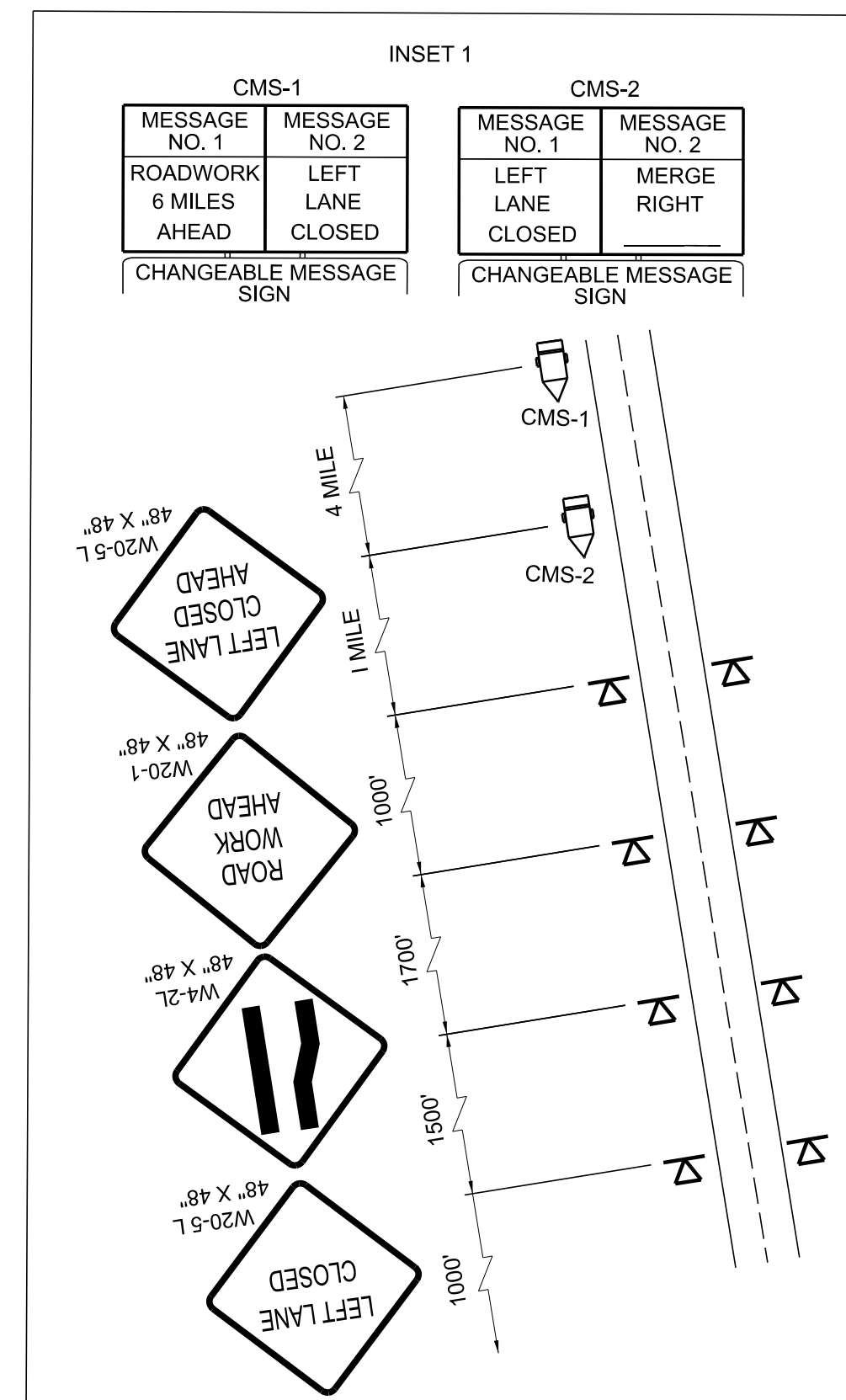
**moffatt & nichol**  
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TRANSPORTATION  
OPERATIONS PLAN





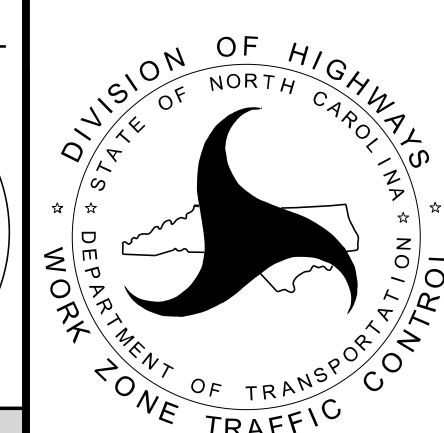
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DATE: 6/30/2025

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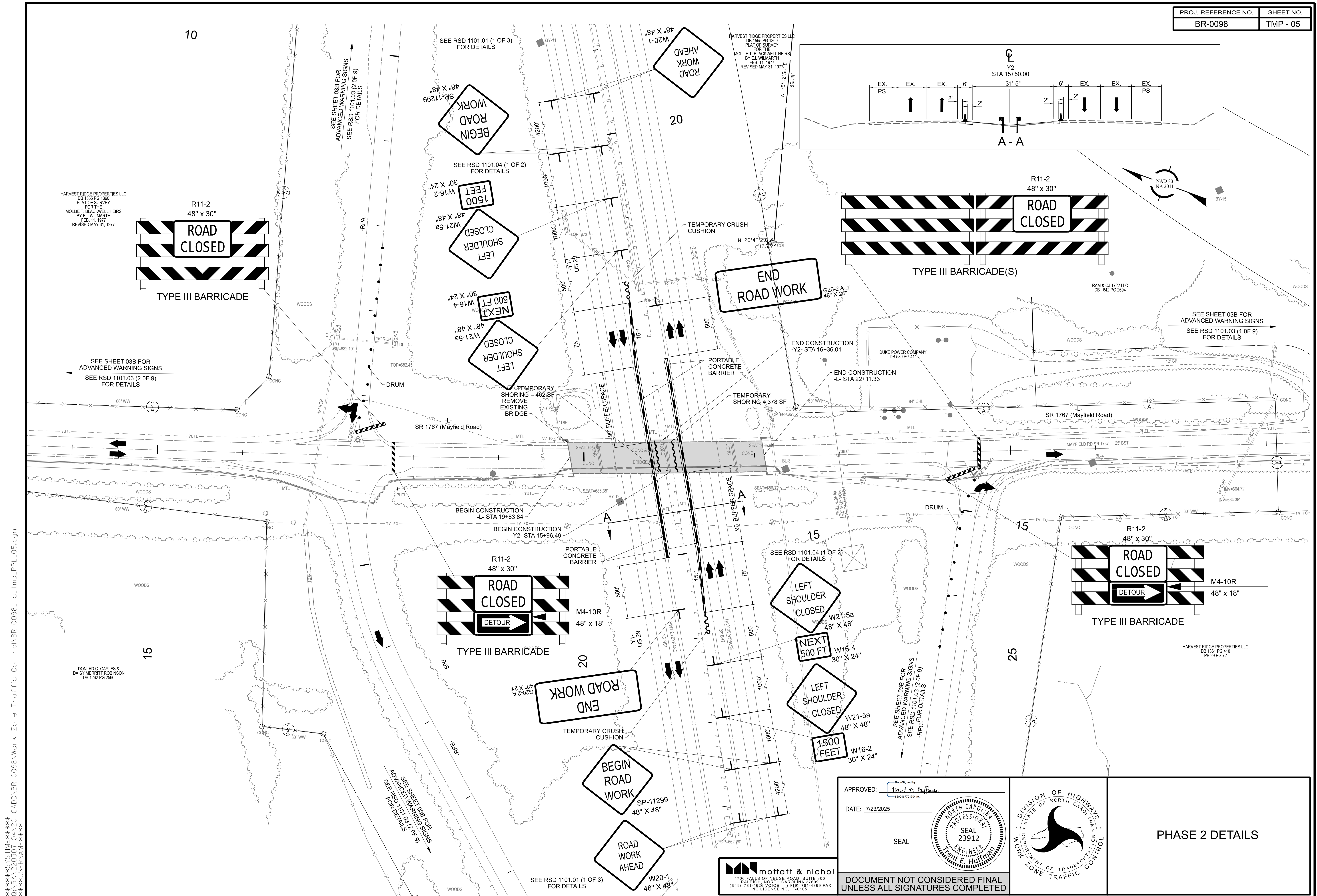
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## PHASE 1 DETAILS

5/30/2025  
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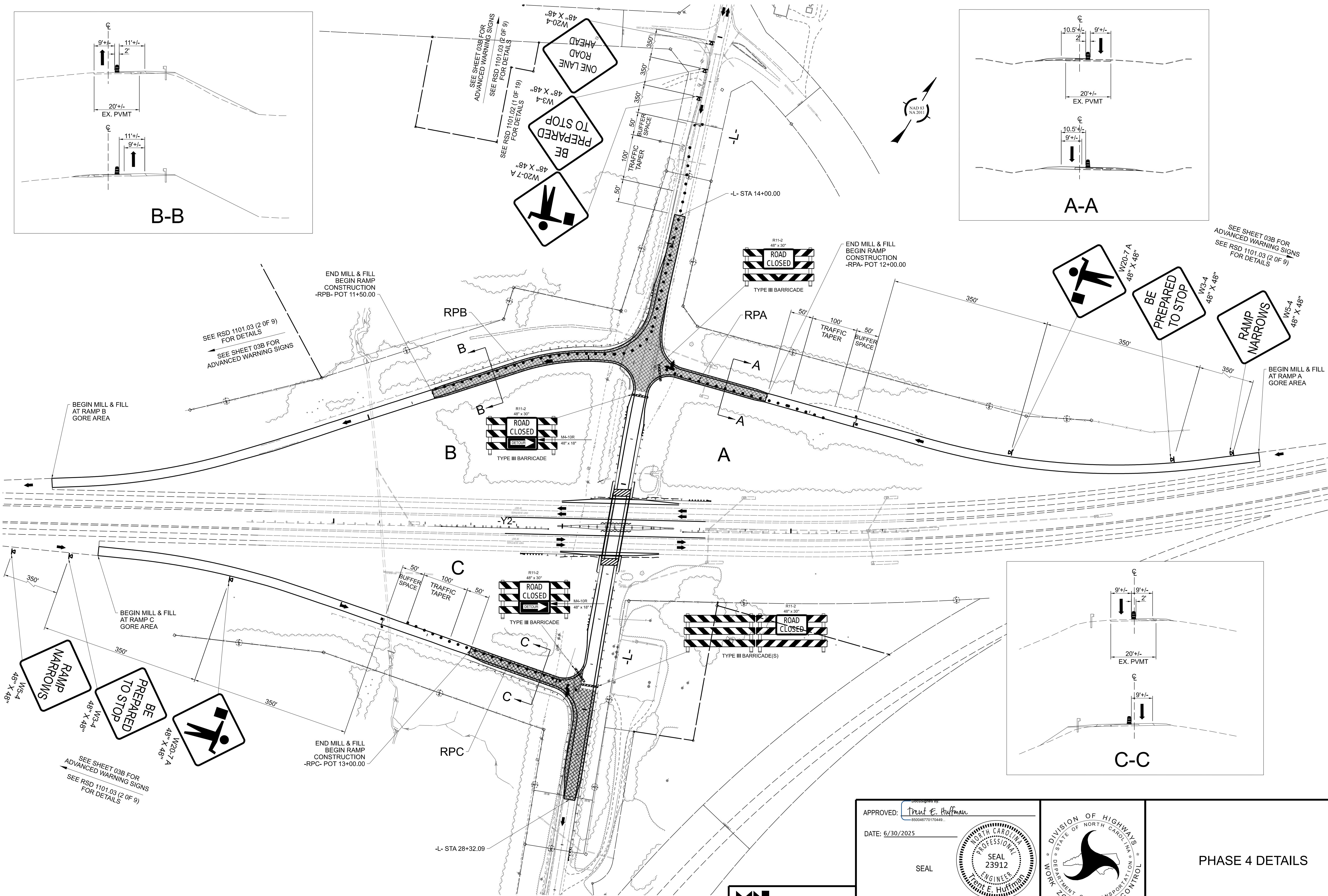
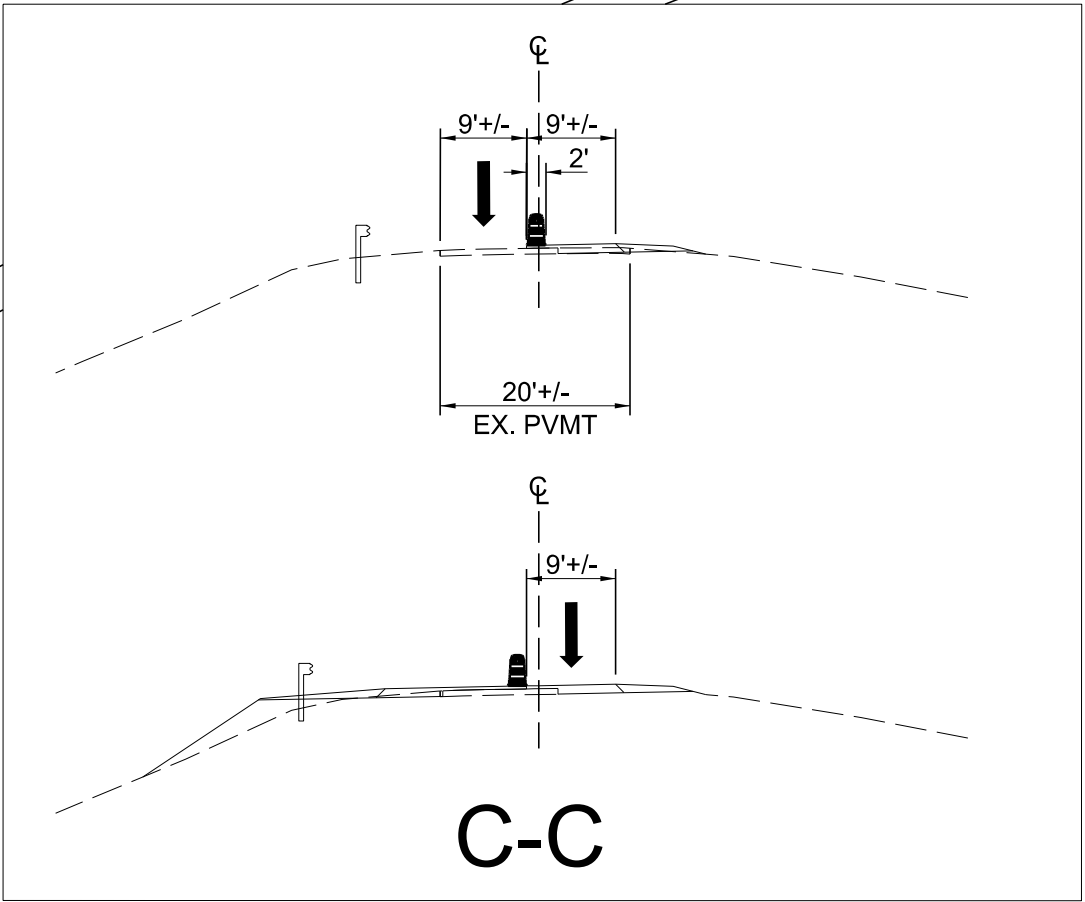
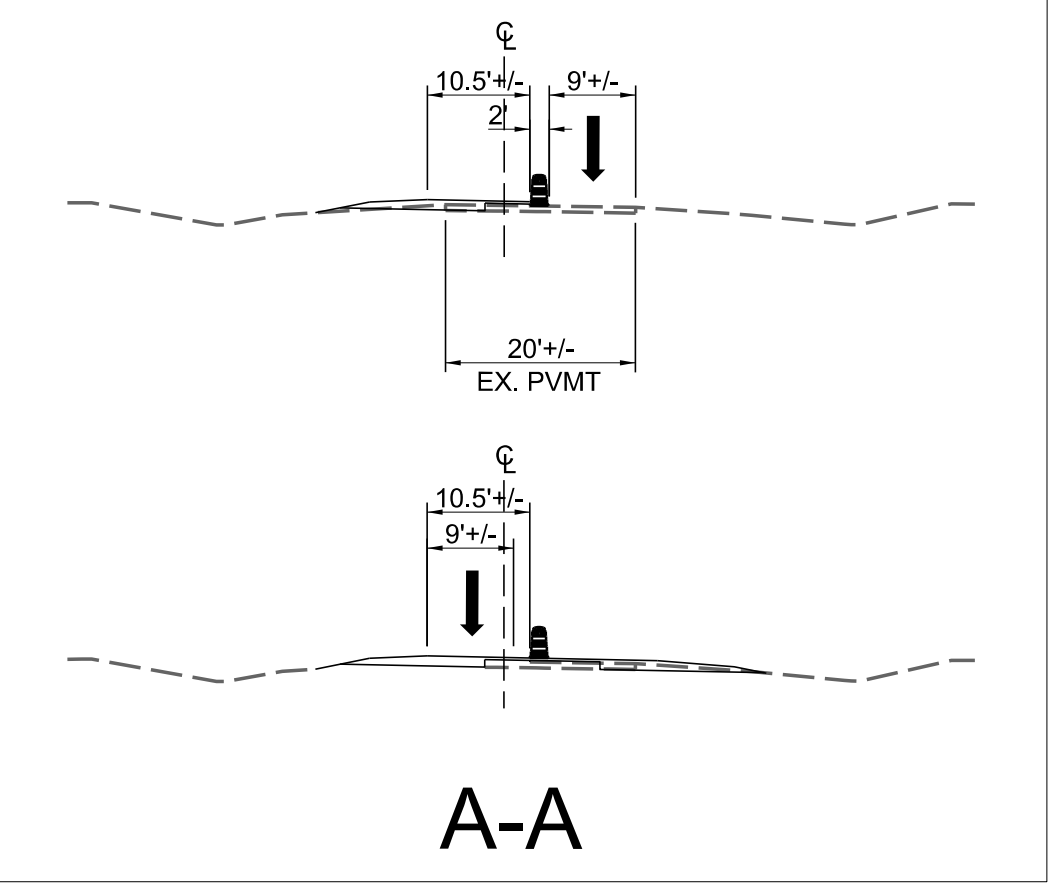
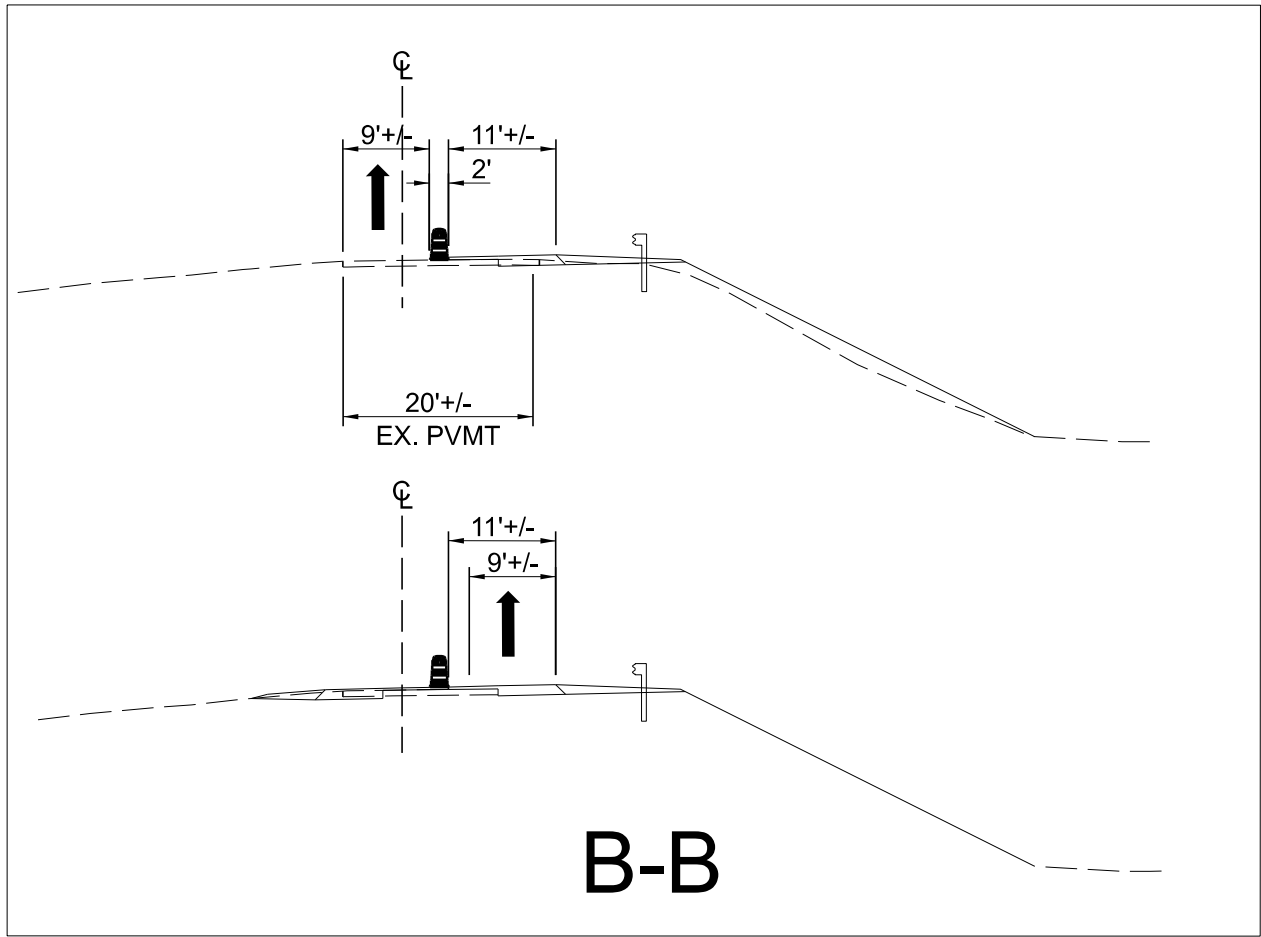




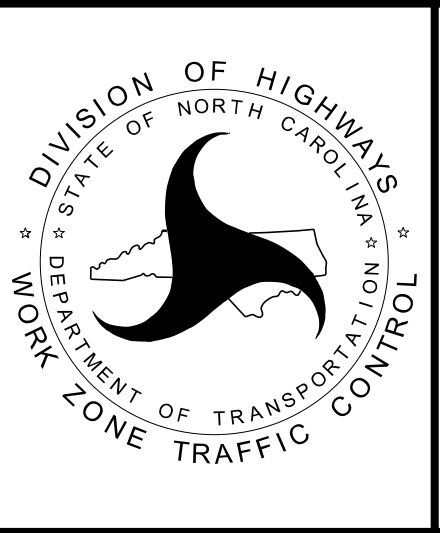








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PHASE 4 DETAILS

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