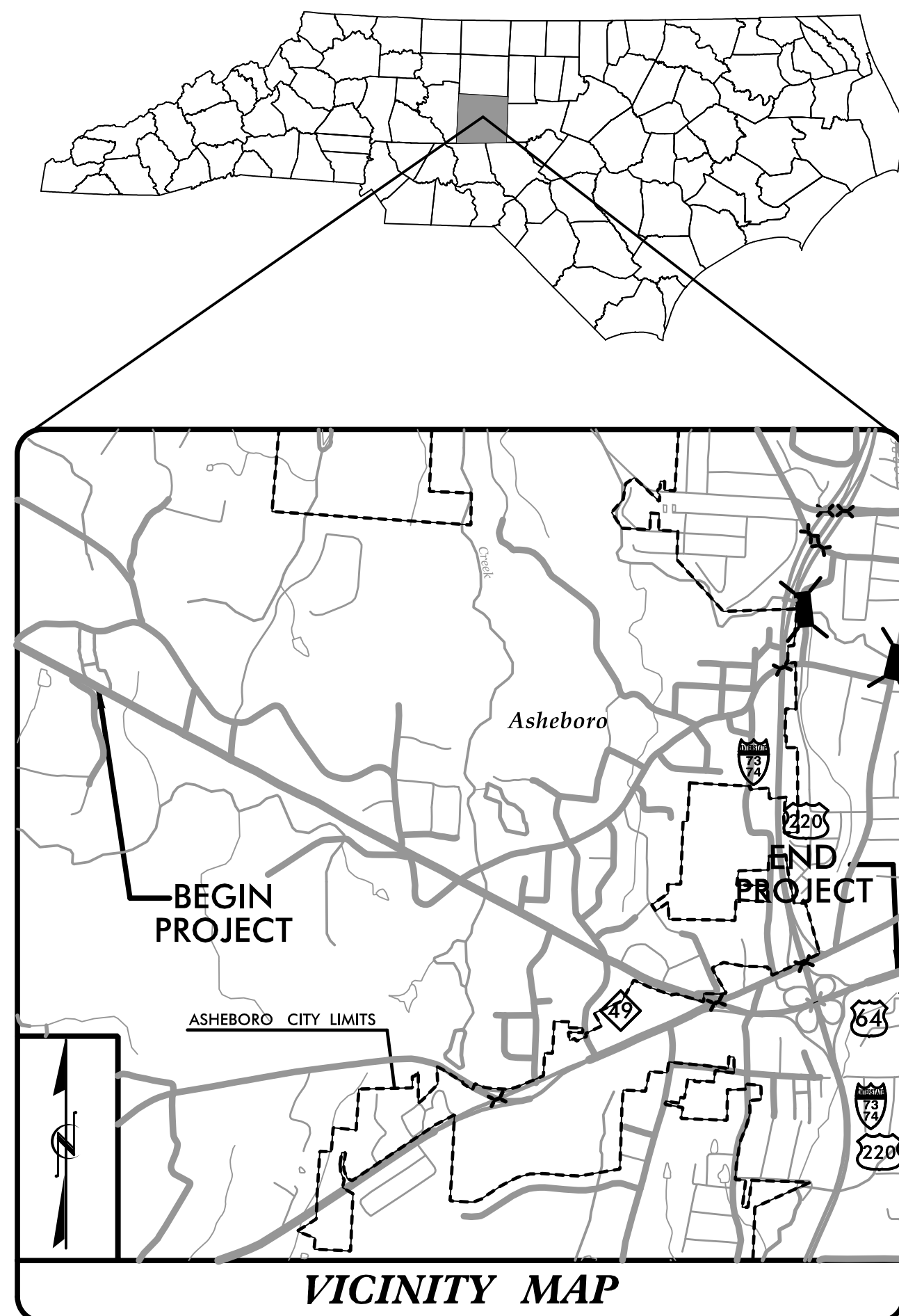


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

RANDOLPH COUNTY



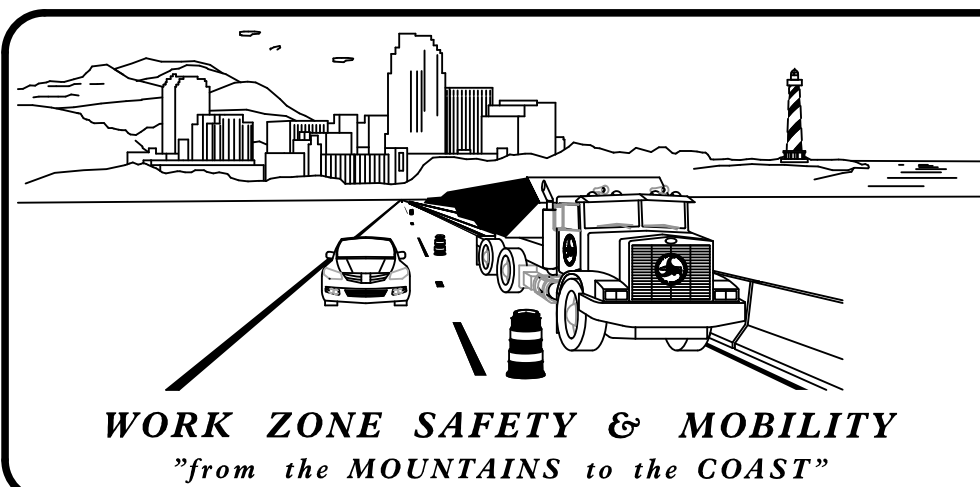
LOCATION: ASHEBORO BYPASS TO EAST OF I-73 /I-74 /US 220 IN ASHEBORO. WIDEN TO MULTILANES, RECONSTRUCT INTERCHANGE AT NC 49, MODIFY INTERCHANGE AT I-73 / I-74 /US 220 AND REPLACE BRIDGE 750171 OVER US 64 AND NC 49.

<u>SHEET NO.</u>	<u>TITLE</u>
TMP-1	TITLE SHEET, VICINITY MAP, INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND TEMPORARY PAVEMENT MARKING SCHEDULE
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES AND GENERAL NOTES)
TMP-1C	GENERAL NOTES
TMP-2	TEMPORARY SIGN DESIGNS
TMP-2A	PHASE IA DETOUR (-RPBC-)
TMP-2B	PHASE II DETOUR (-RPA_REV-)
TMP-2C	PHASE IIA DETOUR (-LPA-)
TMP-2D	PHASE III DETOUR (-LPC-)
TMP-2E	PHASE III DETOUR (-RPD_REV-)
TMP-2F	-Y7- WESTBURY DRIVE DETOUR
TMP-2G	-Y9- OAK LEAF ROAD DETOUR
TMP-2H	-Y_SLIP- DETOUR
TMP-2I	-Y6- ROOSEVELT ROAD DETOUR
TMP-2J	-Y19- BROOKWAY ROAD DETOUR
TMP-2K	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-2L AND 2M	TEMPORARY SHORING DATA
TMP-3 AND 3A	PHASING
TMP-4 THRU 4B	PHASE I AND 1A OVERVIEW
TMP-5 THRU 13	PHASE I DETAILS
TMP-14 THRU 17	PHASE 1A DETAILS
TMP-18 THRU 19A	PHASE I CUT SECTIONS
TMP-20 THRU 20B	PHASE II AND IIA OVERVIEW
TMP-21 THRU 34	PHASE II DETAILS
TMP-35 THRU 40	PHASE IIA DETAILS
TMP-41 THRU 42A	PHASE II CUT SECTIONS
TMP-43	PHASE III OVERVIEW
TMP-44 THRU 50	PHASE III DETAILS
TMP-51 THRU 53	PHASE IIIA DETAILS

U-5813

TIP PROJECT:

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PLANS PREPARED BY:

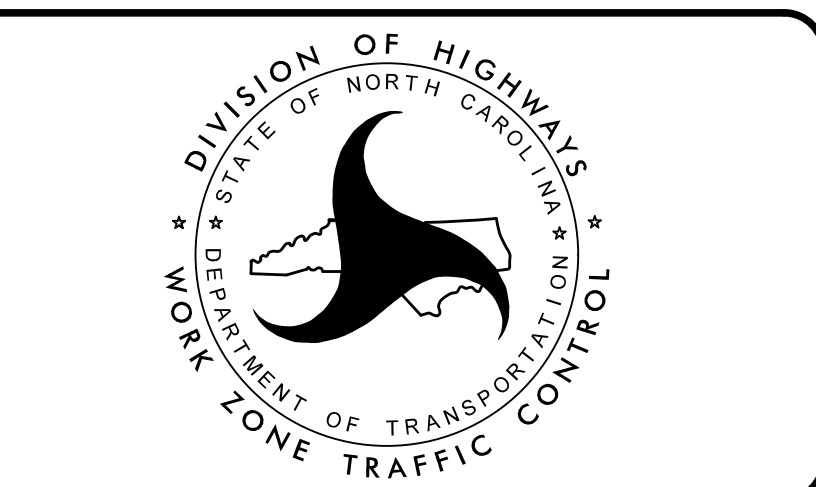
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DATE: 5/21/2024

SEAL

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 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	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	FLAGGERS
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXIT AND ENTRANCE RAMPS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
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
1205.15	PAVEMENT MARKINGS - SUPERSTREETS
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

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMPORARY PAVEMENT
- REMOVAL
- WORK AREA
- WEDGE/ WIDEN (LANE CLOSURE REQUIRED)
- ONGOING CONSTRUCTION
- TEMPORARY GRADE/ LEVELING COURSE
- INCIDENTAL STONE

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- PEDESTRIAN BARRICADE
- CONE
- DRUM
- SKINNY DRUM
- TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN
- FLASHING ARROW PANEL IN 'CAUTION MODE'
- PORTABLE CONCRETE BARRIER (PCB)
- TEMPORARY SHORING

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

PAVEMENT MARKING SYMBOLS

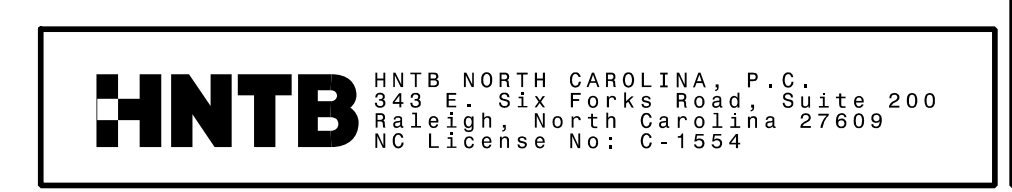
- PAVEMENT MARKING SYMBOLS
- EXISTING MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

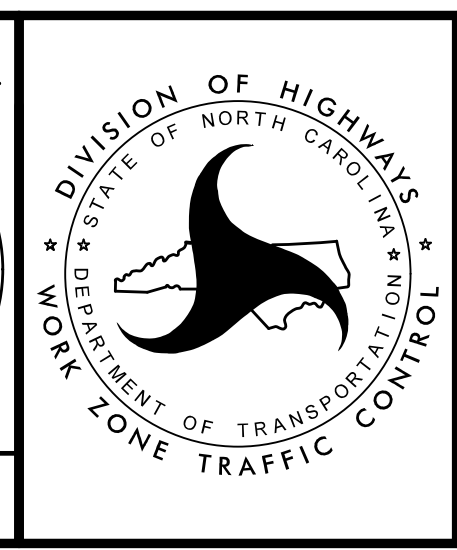
SYMBOL	DESCRIPTION	PAINT (4")
P1	WHITE EDGELINE	
P2	WHITE SOLID LANE LINE	
P3	10 FT. WHITE SKIP	
P4	3 FT. - 9 FT./SP WHITE MINISKIP	
P5	2 FT. - 6 FT./SP WHITE MINISKIP	
P10	YELLOW EDGELINE	
P11	YELLOW SINGLE CENTER	
P12	10FT. YELLOW SKIP	
P13	YELLOW DOUBLE CENTER	
P14	2 FT. - 6 FT./SP YELLOW MINISKIP	
WORK ZONE PERFORMANCE (6")		
Z20	WHITE EDGELINE	
PAINT (6")		
P20	WHITE EDGELINE	
P21	WHITE SOLID LANE LINE	
P22	10 FT. WHITE SKIP	
P23	3 FT. - 9 FT./SP WHITE MINISKIP	
P24	2 FT. - 6 FT./SP WHITE MINISKIP	
P30	YELLOW EDGELINE	
P33	YELLOW DOUBLE CENTER	
PAINT (8")		
P40	WHITE GORELINE	
P41	WHITE DIAGONAL	
P42	YELLOW DIAGONAL	
P43	WHITE SOLID LANE LINE	
P44	3 FT - 9FT/SP WHITE MINISKIP	
PAINT (12")		
P50	WHITE GORELINE	
P51	WHITE DIAGONAL	
P52	YELLOW DIAGONAL	
P53	WHITE SOLID LANE LINE	
P54	3 FT - 9FT/SP WHITE MINISKIP	
WORK ZONE PERFORMANCE (6")		
Z20	WHITE EDGE LINE	
WORK ZONE PERFORMANCE (12")		
Z50	WHITE GORELINE	
Z53	WHITE WIDE LANE LINE	
PAINT (24")		
P61	WHITE STOP BAR	
PAINT		
P70	LEFT TURN ARROW	
P71	RIGHT TURN ARROW	
P72	STRAIGHT ARROW	
P73	COMBO. LEFT/STRAIGHT ARROW	
P74	COMBO. RIGHT/STRAIGHT ARROW	
P77	U-TURN ARROW	
P79	MERGE ARROW	
P100	ALPHANUMERIC CHARACTER	
P102	12" YIELD LINE TRIANGLE	
P103	24" YIELD LINE TRIANGLE	
THERMOPLASTIC		
T79	MERGE ARROW	

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

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APPROVED: Helen Shyu
 DATE: 5/22/2024
 SEAL



TRANSPORTATION
MANAGEMENT PLAN

**ROADWAY STANDARD
DRAWINGS AND
LEGEND**

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

MANAGEMENT STRATEGIES

GENERAL NOTES

PROJ. REFERENCE NO.	SHEET NO.
U-5813	TMP-1B

PHASE I AND IA:

-L- (BEGINNING TO STA 83+30+/-) AND CULVERT: WEDGE AND WIDEN -L- (RT) FROM BEGIN OF PROJECT TO -L- STA 83+30+/- AS MUCH AS POSSIBLE WITH THE FOLLOWING ACTIONS:
 - CLOSE -Y3-, -Y7-, AND -Y9- AS NEEDED
 - SHIFT TRAFFIC AND PLACE PCB, SHORING, AND REPLACE PORTION OF CULVERT

BRIDGE OVER -L-:
 CONSTRUCT PROPOSED RAMP -Y_SLIP-, -SRV_REV-, AND -Y14-.
 CONSTRUCT SOUTHERN BRIDGE BENT AWAY FROM TRAFFIC.

INTERCHANGE WORK (WEST SIDE OF I-73/I-74/US 220):
 DETOUR -RPC_REV- TRAFFIC ONTO -TEMP_RPBC1- AT TEMPORARY SIGNALIZED INTERSECTION AND CONSTRUCT -RPC_REV- (SHORING AND TEMPORARY GUARDRAIL REQUIRED). ONCE -RPC_REV- IS COMPLETED, DETOUR EXISTING RAMP AND LOOP BC ONTO -RPC_REV- AND CONSTRUCT -RPBC-. USE LANE CLOSURE TO WEDGE -RPB_REV- AND TEMPORARY PAVEMENT AT -Y19-. AWAY FROM TRAFFIC CONSTRUCT -Y13- (TEMPORARY TIE-IN TO EXISTING), -Y17- AND -Y17A-.

PHASE II AND IIA:

-L- (BEGINNING TO STA 83+30+/-) AND CULVERT: SHIFT EB TRAFFIC ONTO WIDENED PAVEMENT. MAINTAIN 2 LANE 2 WAY, AT CULVERT SHIFT WB TRAFFIC TO PHASE II PATTERN. COMPLETE CULVERT AWAY FROM TRAFFIC. CLOSE AND DETOUR -Y6- AS NEEDED TO CONSTRUCT. CONSTRUCT MEDIAN ISLANDS AS MUCH AS POSSIBLE.

BRIDGE OVER -L- AND INTERCHANGE WORK:
 SHIFT -Y17- TO PROPOSED AND COMPLETE -Y17A-. ACTIVATE TEMP SIGNAL AT -RPB_REV- AND -Y-, AND OPEN -RPBC-. PERMANENTLY CLOSE EXISTING RAMP FROM -Y- TO -L- EB (TRAFFIC WILL UTILIZE -RPBC- OR -Y12- TO ACCESS -L-), CONSTRUCT BRIDGE OVER -L- AND BRIDGE APPROACH (SHORING AND TEMP GUARDRAIL REQUIRED.) USE ROLLING ROAD BLOCK TO HANG GIRDERS OVER -L-.

CLOSE -RPA_REV- AND DETOUR ONTO -RPBC- TO LOOP D. WEDGE AND WIDEN -Y-. AWAY FROM TRAFFIC CONSTRUCT -RPDA- AND -TEMP_RPDA-. CONSTRUCT -TEMP_RPD-. WHEN -RPA_REV- AND -TEMP_RPD- ARE COMPLETED, INSTALL TEMP SIGNALS, SHIFT TRAFFIC ONTO -TEMP_RPDA- AND OPEN -RPA_REV- AND -TEMP_RPD-. DETOUR EXISTING LOOP A ONTO -TEMP_RPD-, AND CONSTRUCT -LPA- AND REMAINING -RPDA-.

WHEN BRIDGE OVER -L- IS COMPLETE, INSTALL TEMP SIGNALS AND SHIFT TRAFFIC ONTO PROPOSED BRIDGE. CLOSE -Y19- AND COMPLETE -Y-. USING ROLLING ROAD BLOCK TO REMOVE OLD BRIDGE OVER -L-. ONCE OLD BRIDGE IS REMOVED, INSTALL TEMP SIGNAL AT -L- AND -Y11-/-Y12- AND WEDGE AND WIDEN -L- FROM STA 83+30+/- TO -Y19- (KEEP -L- ACCESS TO -Y19- OPEN).

PHASE III AND IIIA:

ONCE -LPA- AND -RPDA- IS COMPLETE, OPEN -LPA- AND SHIFT -L- TO PHASE III TRAFFIC PATTERN. CONSTRUCT MEDIAN ISLANDS ON -L- AS MUCH AS POSSIBLE. SHIFT EXISTING LOOP D TRAFFIC TO -RPDA- (TURN LEFT INSTEAD OF RIGHT) AND CLOSE LOOP D. DETOUR -RPD_REV- TO -LPA- (THEN -Y19- TO -RPBC-), THEN CONSTRUCT -RPD_REV-. DETOUR EXISTING LOOP C TRAFFIC TO -RPB_REV- AND -RPBC-, THEN CONSTRUCT -LPC-. USING NARROW LANES AND POLICE AS NEEDED, COMPLETE -RPDA- AND PAVEMENT MARKINGS. SHIFT TRAFFIC FROM EXISTING RAMP ONTO -RPDA-. WEDGE AND WIDEN -L- FROM -LPC- TO END OF -L-. AND PLACE PHASE III TEMP PAVEMENT MARKINGS. AFTER WIDENING, USE ROLLING ROAD BLOCK AS NEEDED TO CONSTRUCT OVERHEAD SIGN STRUCTURES.

ONCE -RPD_REV- IS COMPLETED OPEN TO TRAFFIC, THEN INSTALL TEMP SIGNAL AT -Y- AND -Y17-/-Y19- AND SHIFT -Y- TO FINAL PATTERN AS WELL AS OPEN -Y19- TO -Y-. CLOSE -Y19- ACCESS AT -L- AND CONSTRUCT PROPOSED CUL-DE-SAC AND COMPLETE -L-. AFTER WIDENING, USE ROLLING ROAD BLOCK AS NEEDED TO CONSTRUCT REMAINING OVERHEAD SIGN STRUCTURE.

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS, OR RESULT IN DUPLICATE, OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES, AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
-L- (US 64)	MONDAY THRU SUNDAY
-Y- (ALBEMARLE RD)	6:00 AM - 8:00 PM
-Y20- (I-73/I-74/US 220)	
ALL OTHER ROADS	MONDAY THRU FRIDAY 7:00 AM - 9:00 AM 4:00 PM - 6:00 PM

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

ROAD NAME	HOLIDAY
ALL ROADS	<ol style="list-style-type: none"> FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31ST TO 8:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN UNTIL 8:00 P.M. THE FOLLOWING TUESDAY. FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 8:00 P.M. MONDAY. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 8:00 P.M. TUESDAY. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 8:00 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 8:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 8:00 P.M. TUESDAY. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 8:00 P.M. MONDAY. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION OF OPERATION
-L- (US 64)	MONDAY THRU SUNDAY	30 MINUTES FOR GIRDER INSTALLATION AND/OR REMOVAL, SIGNAL MAST ARMS, OVERHEAD SIGNS AND STRUCTURES, AND TRAFFIC SHIFT
-Y- (ALBEMARLE RD)	5:00 A.M.-12:00 A.M. (MIDNIGHT)	
-Y20- (I-73/I-74/US 220)		

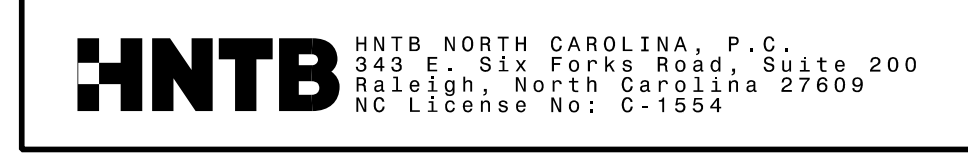
D) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

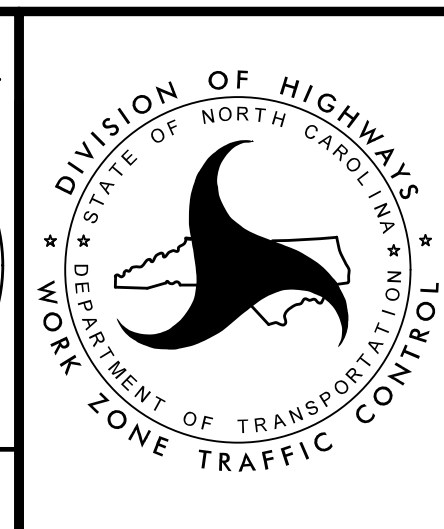
- E) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED, OR AS DIRECTED BY THE ENGINEER.
- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR LANE CLOSURE IS INSTALLED.
- G) 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 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.
- H) 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.
- I) 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.
- J) DO NOT INSTALL MORE THAN 2500 FT OF LANE CLOSURE ON -L- (US 64) AND -Y- (ALBEMARLE RD). MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- K) DO NOT INSTALL MORE THAN 2 SIMULTANEOUS LANE CLOSURES IN ANY ONE DIRECTION ON -L- (US 64) AND -Y- (ALBEMARLE RD).
- L) PROVIDE A MINIMUM OF 1 MILE BETWEEN LANE CLOSURES MEASURED FROM THE END OF ONE CLOSURE TO THE FIRST SIGN OF THE NEXT LANE CLOSURE.

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 11/28/2023



APPROVED: Helen Shyu
 DATE: 5/21/2024
 SEAL



TRANSPORTATION MANAGEMENT PLAN

MANAGEMENT STRATEGIES & GENERAL NOTES

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GENERAL NOTES

PAVEMENT EDGE DROP OFF REQUIREMENTS

- M) 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.
- N) 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) 350 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- P) 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.
- Q) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.
- R) PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.
- S) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.
- T) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- U) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 350 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

- V) 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.

- W) 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

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

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
-Y20- I-73/I-74/US 220	PERFORMANCE PAINT	TEMPORARY RAISED
ALL OTHER ROADS		TEMPORARY RAISED

- 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.
- FF) FOR REMOVAL OF PAINT PAVEMENT MARKING LINES ON BRIDGES, CONTRACTOR SHALL USE THE WATERBLASTING METHOD OR OTHER METHODS APPROVED BY THE ENGINEER.

MISCELLANEOUS

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

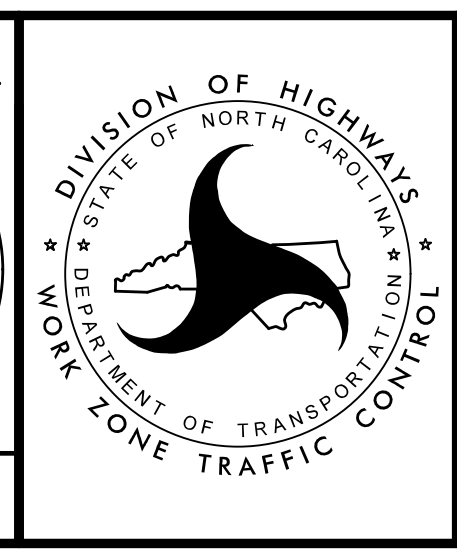
3:25:41PM
\\TCN\U5813_tc_TMP_OIBnotes.dgn
11/28/2023



APPROVED: *Helen Shyu*
DATE: 5/21/2024

SEAL

DocuSigned by:
Helen Shyu
OF 15875A85E44E



TRANSPORTATION
MANAGEMENT PLAN

GENERAL NOTES

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

SIGN NUMBER: SP-1 **BACKG COLOR:** Fluorescent Orange
TYPE: D **COPY COLOR:** Black
QUANTITY: 3
SIGN WIDTH: 3'-0" **HEIGHT:** 2'-0"
TOTAL AREA: 6.0 Sq.Ft.
BORDER TYPE: RECESSED
RECESS: 0.38"
WIDTH: 0.38"
RADII: 1.5"
MAT'L: 0.080" ALUMINUM
NO. Z BARS: N/A
LENGTH: N/A
DESIGN BY: TRT **CHECKED BY:** ADK
PROJECT ID: U-5813 **DIV:** 08 **DATE:** March 2022

NOTES:
 1. Legend and border shall be direct applied non-reflective sheeting.
 2. Background shall be Grade B, Fluorescent orange, reflective sheeting.
 3. To be mounted with Detour signing.

LETTER POSITIONS
 Letter spacings are to start of next letter

O	A	K	L	E	A	F	Series/Size			
3.7	3.9	4.3	3.4	3	3.5	3.3	4.3	3.1	3.7	C 2000
										28.7
R	O	A	D							C 2000
10.3	3.8	3.9	4.3	3.4	10.3					15.3

SIGN NUMBER: SP-2 **BACKG COLOR:** Fluorescent Orange
TYPE: D **COPY COLOR:** Black
QUANTITY: X
SIGN WIDTH: 3'-0" **HEIGHT:** 2'-0"
TOTAL AREA: 6.0 Sq.Ft.
BORDER TYPE: RECESSED
RECESS: 0.38"
WIDTH: 0.38"
RADII: 1.5"
MAT'L: 0.080" ALUMINUM
NO. Z BARS: N/A
LENGTH: N/A
DESIGN BY: TRT **CHECKED BY:** ADK
PROJECT ID: U-5813 **DIV:** 08 **DATE:** March 2022

NOTES:
 1. Legend and border shall be direct applied non-reflective sheeting.
 2. Background shall be Grade B, fluorescent orange, reflective sheeting.
 3. To be mounted with Detour signing.

LETTER POSITIONS
 Letter spacings are to start of next letter

W	E	S	T	D	U	R	Y	Series/Size			
2.6	5	3.4	3.6	3.5	3.9	4	3.6	3.8	2.6	C 2000	
										30.9	
D	R	I	V	E							C 2000
9.9	4	3.9	1.3	4.1	3.1	9.9				16.3	

SIGN NUMBER: SP-3 **BACKG COLOR:** Fluorescent Orange
TYPE: D **COPY COLOR:** Black
QUANTITY: 2
SIGN WIDTH: 3'-0" **HEIGHT:** 2'-0"
TOTAL AREA: 6.0 Sq.Ft.
BORDER TYPE: RECESSED
RECESS: 0.38"
WIDTH: 0.38"
RADII: 1.5"
MAT'L: 0.125" ALUMINUM
NO. Z BARS: N/A
LENGTH: N/A
DESIGN BY: TRT **CHECKED BY:** ADK
PROJECT ID: U-5813 **DIV:** 08 **DATE:** March 2022

NOTES:
 1. Legend and border shall be direct applied non-reflective sheeting.
 2. Background shall be Grade B, Fluorescent orange, reflective sheeting.
 3. To be mounted with Detour signing.

LETTER POSITIONS
 Letter spacings are to start of next letter

R	O	S	E	V	E	L	T	Series/Size		
3.8	3.4	3.7	3.5	2.8	3.7	3.2	2.6	2.3	3.6	B 2000
										28.7
R	O	A	D							B 2000
11.3	3.4	3.4	4.1	2.6	11.3					13.4

SIGN NUMBER: SP-4 **BACKG COLOR:** Black
TYPE: D **COPY COLOR:** Black
QUANTITY: X
SIGN WIDTH: 3'-0" **HEIGHT:** 2'-0"
TOTAL AREA: 6.0 Sq.Ft.
BORDER TYPE: RECESSED
RECESS: 0.38"
WIDTH: 0.38"
RADII: 1.5"
MAT'L: 0.125" ALUMINUM
NO. Z BARS: N/A
LENGTH: N/A
DESIGN BY: JAW **CHECKED BY:** ADK
PROJECT ID: U-5813 **DIV:** 08 **DATE:** June 2022

NOTES:
 1. Legend and border shall be direct applied non-reflective sheeting.
 2. Background shall be Grade B, fluorescent orange, reflective sheeting.
 3. To be mounted with Detour signing.

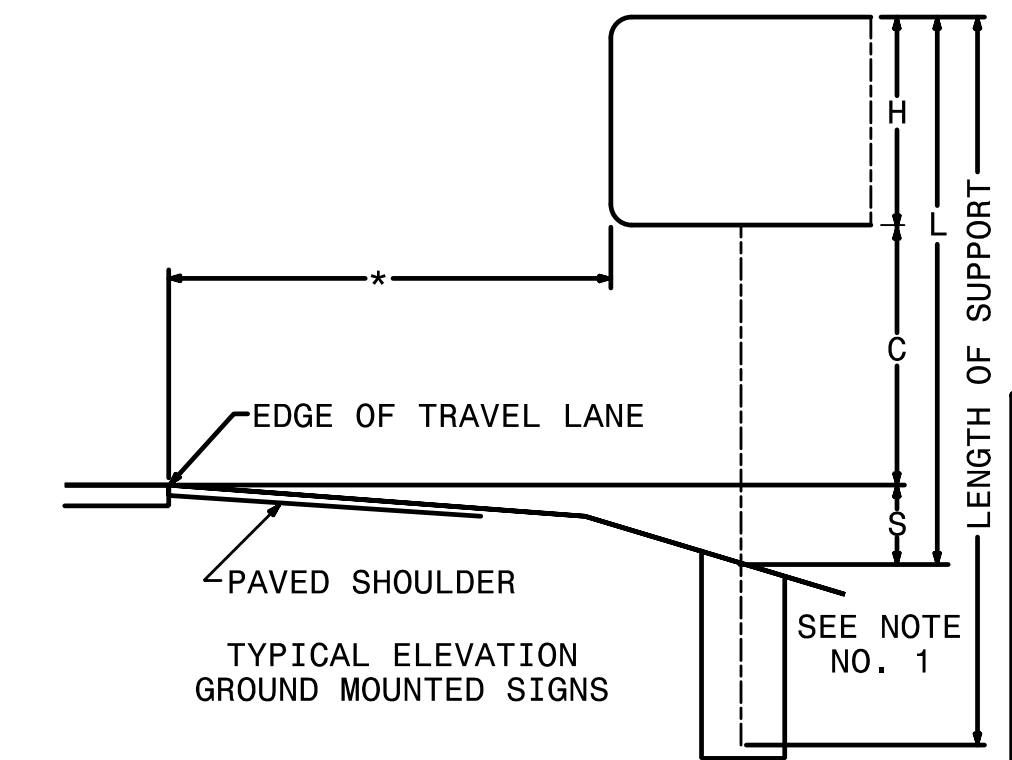
LETTER POSITIONS
 Letter spacings are to start of next letter

B	R	O	K	W	A	Y	Series/Size			
3.7	3.5	3.4	3.7	3.9	3.1	4.2	3.6	3.2	3.7	B 2000
										28.7
R	O	A	D							B 2000
11.3	3.4	3.4	4.1	2.6	11.3					13.4

TEMPORARY WOOD POST DESIGN

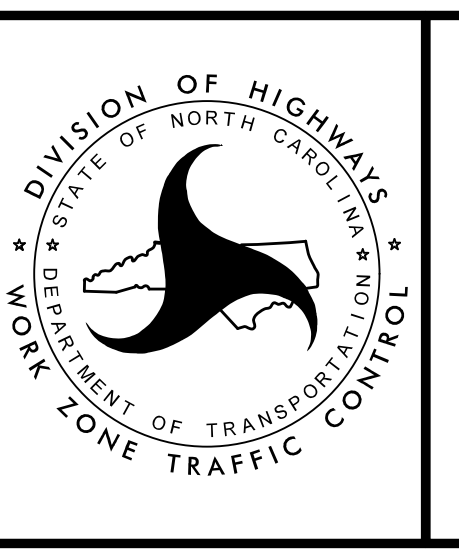
SIGN		SIZE (in.)		ROADWAY STATION	NUMBER OF SUPPORTS	BEAM SECTION	SUPPORT TYPE BA or S	ATTACHMENT METHOD	MOUNTING METHOD	HORIZONTAL CLEARANCE (ft.)	SUPPORT SPACING	LENGTH (ft)			LEFT SUPPORT (ft)			CENTER SUPPORT (ft)			RIGHT SUPPORT (ft)			WOOD SUPPORT (LF)	FIELD VERIFIED (mm/dd/yy)
NUMBER	TYPE	w	h									SNS HT	MTG HT	EMBED-MENT	S	L	LENGTH	S	L	LENGTH	S	L	LENGTH		
I-73/I-74/US 220 NB Exit 1/4 Mile	A	234	174	-L- STA 107+50	3	8in x 15in	S	N/A	N/A	15.00	6.92	14.50	7.00	6.50	3.00	24.50	31.00	4.00	25.50	32.00	5.00	26.50	33.00	96.00	

- 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.



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 343 E. Six Forks Road, Suite 200
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 NC License No: C-1554

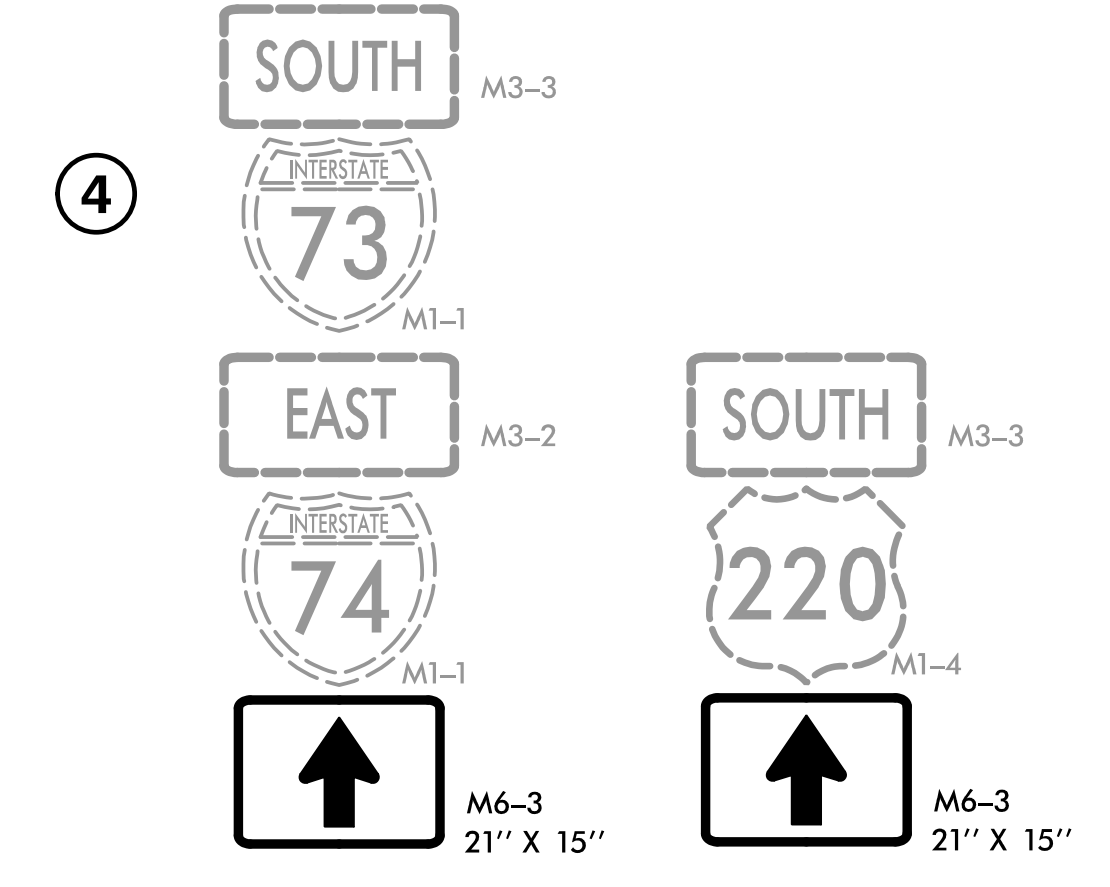
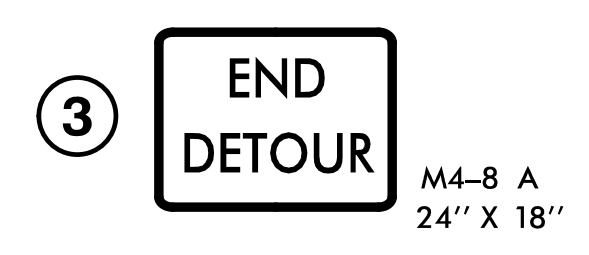
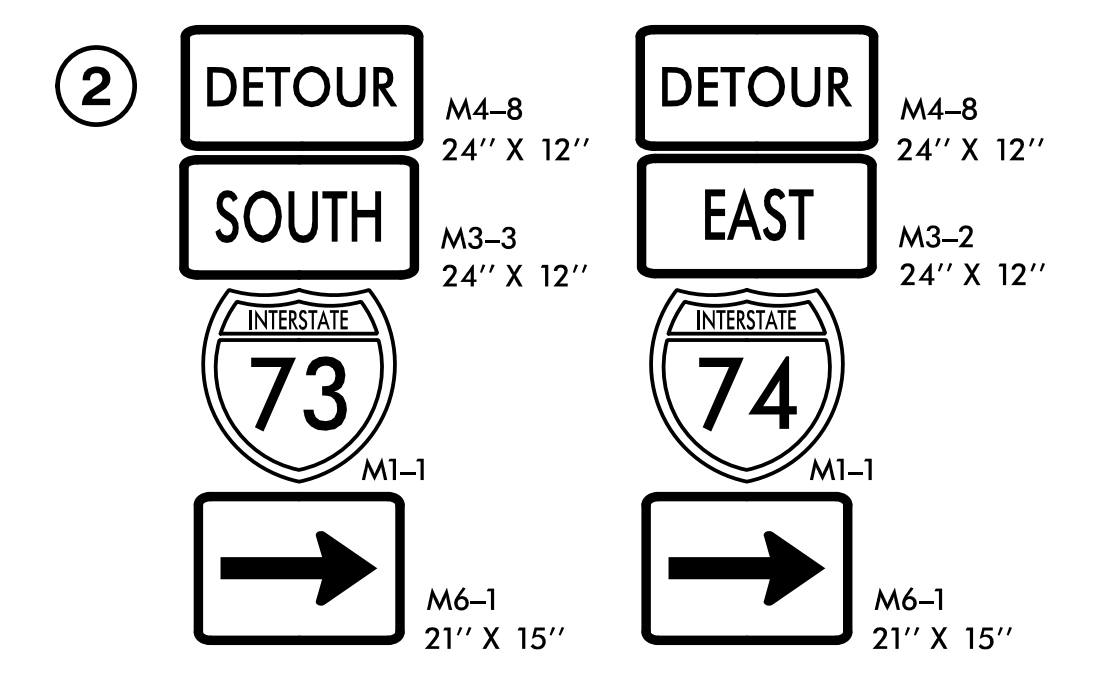
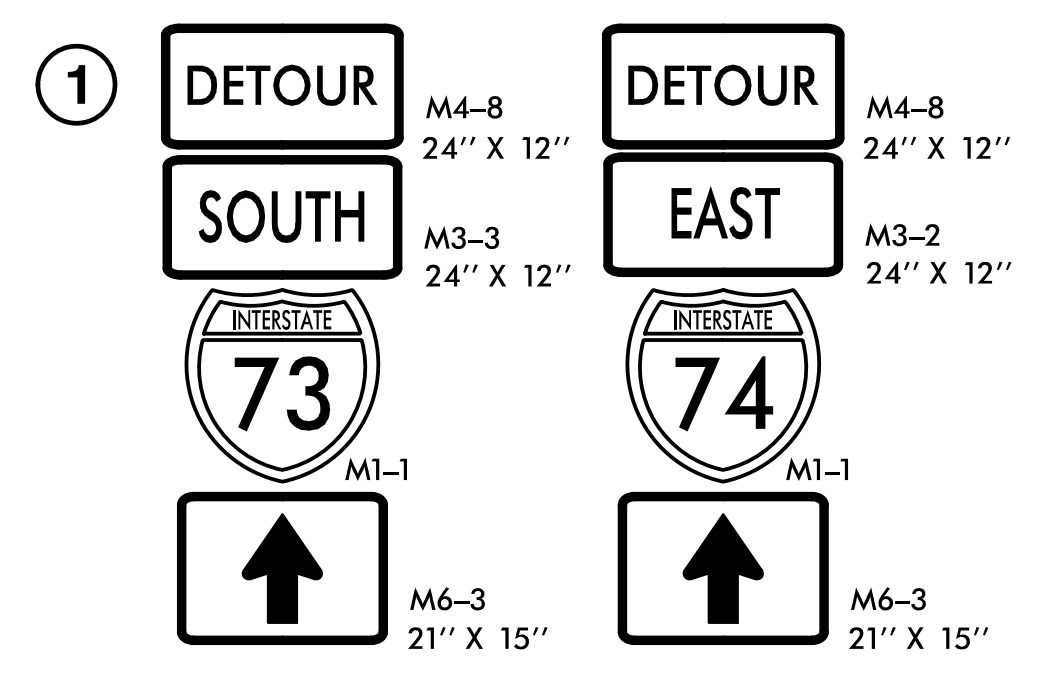
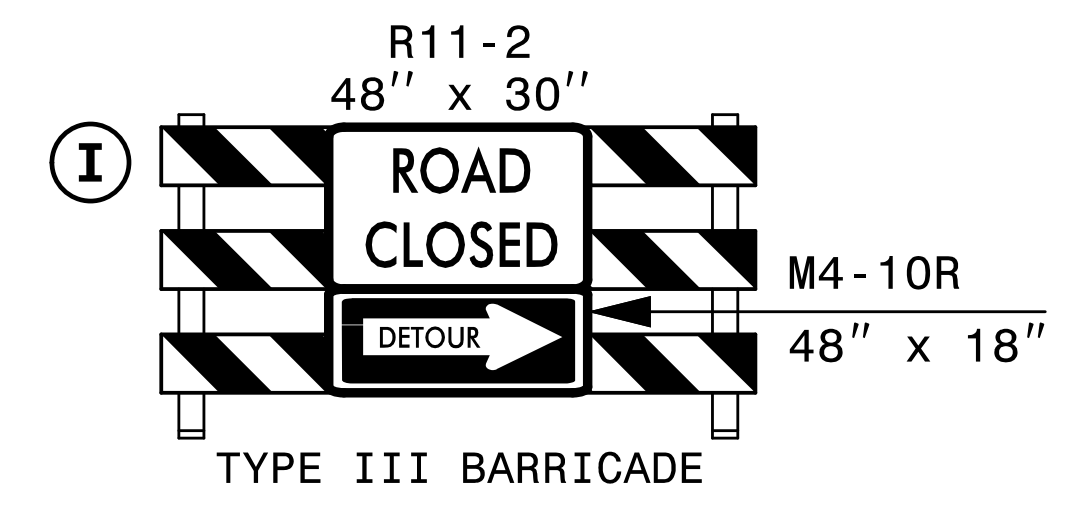
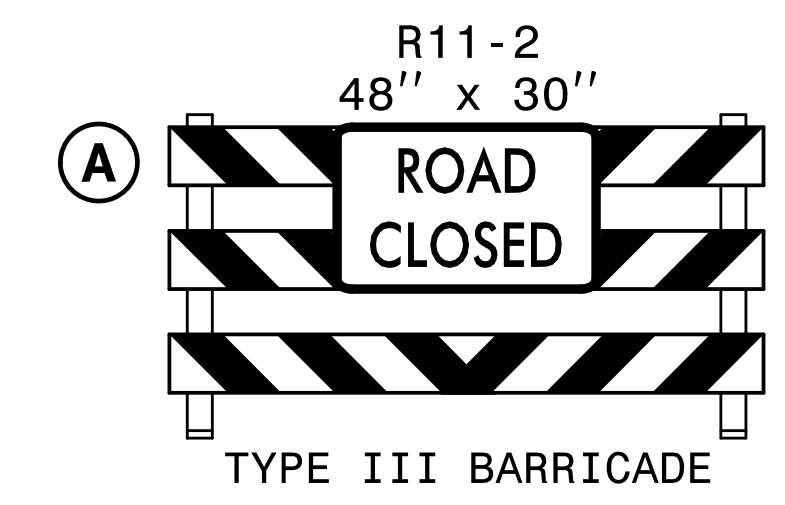
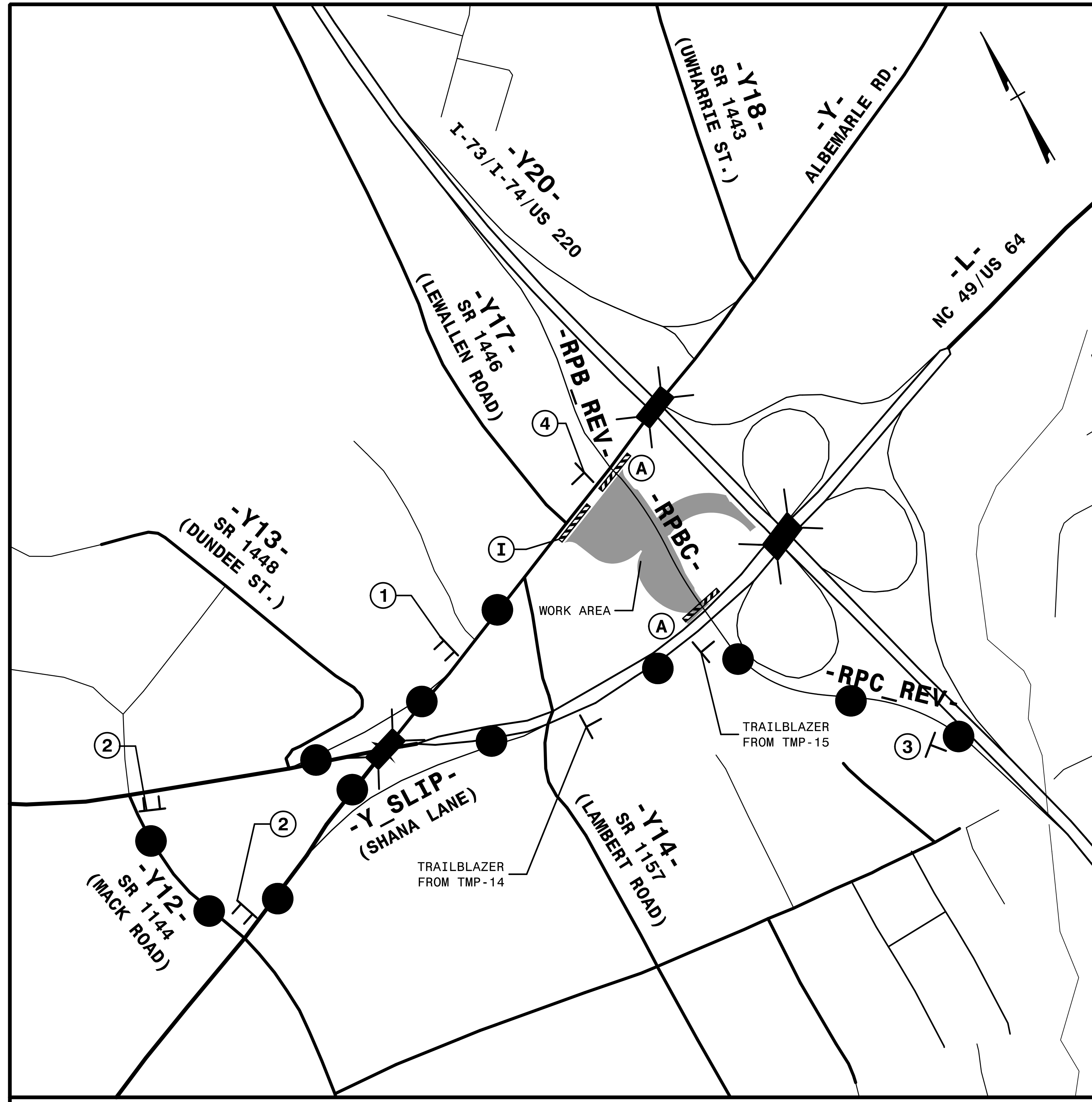
APPROVED: *Helen Shyu*
DATE: 5/21/2024
SEAL
 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



TRANSPORTATION MANAGEMENT PLAN
TEMPORARY SIGN DESIGNS
 DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL

3:25:42 PM
 \\TCPU5813_TCP_Detour_Sign.dgn
 11/28/2023

TOTAL 96.00
 USE: 97.00



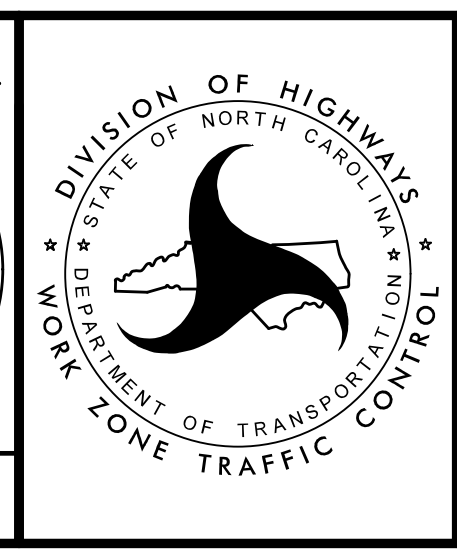
NOTE: SEE 1101.03 (SHEET 2 OF 9) FOR ADDITIONAL TRAFFIC CONTROL DEVICES.

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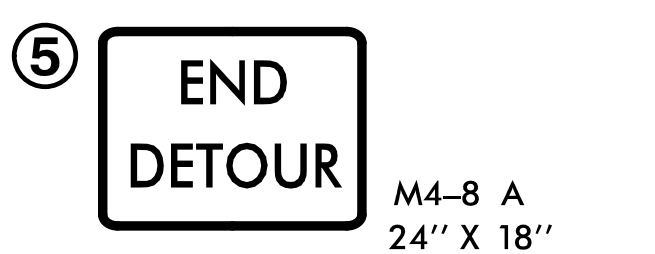
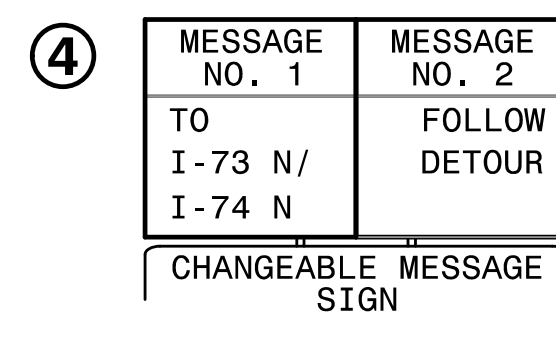
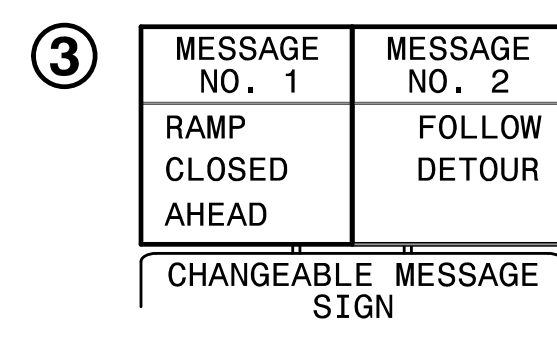
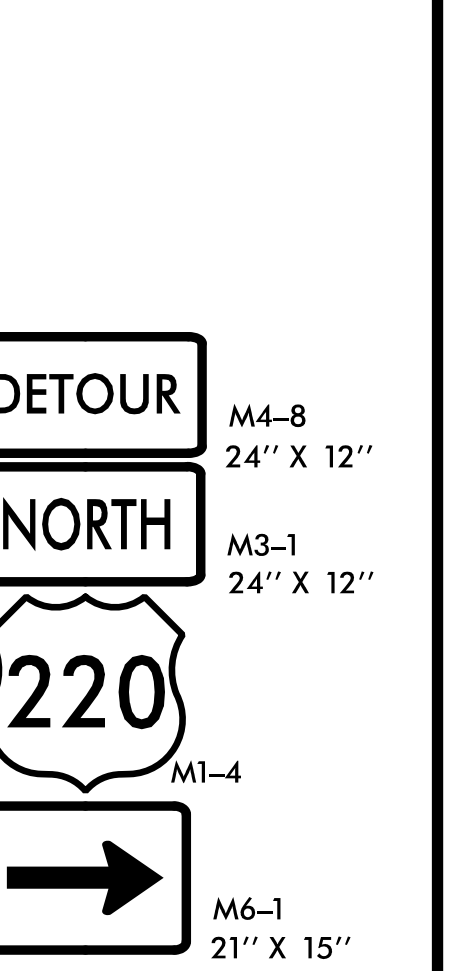
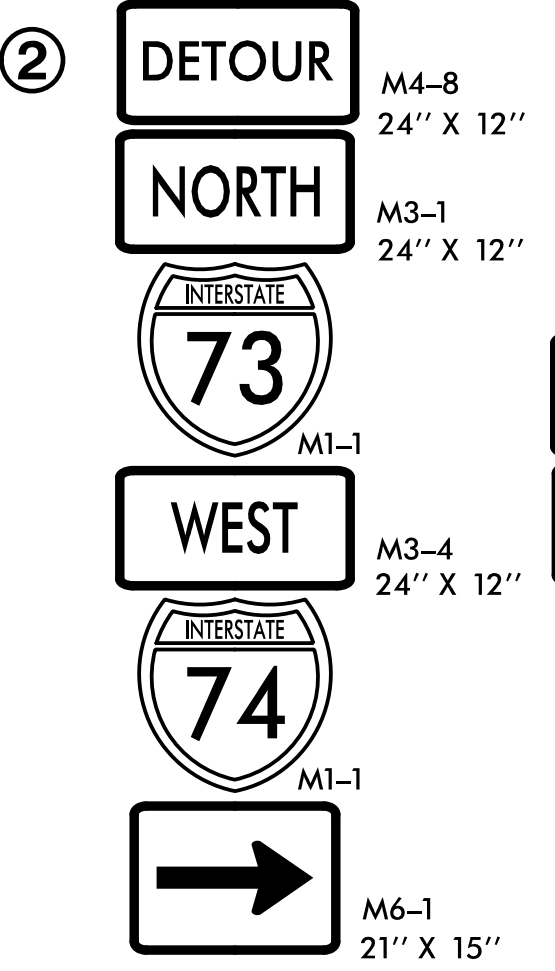
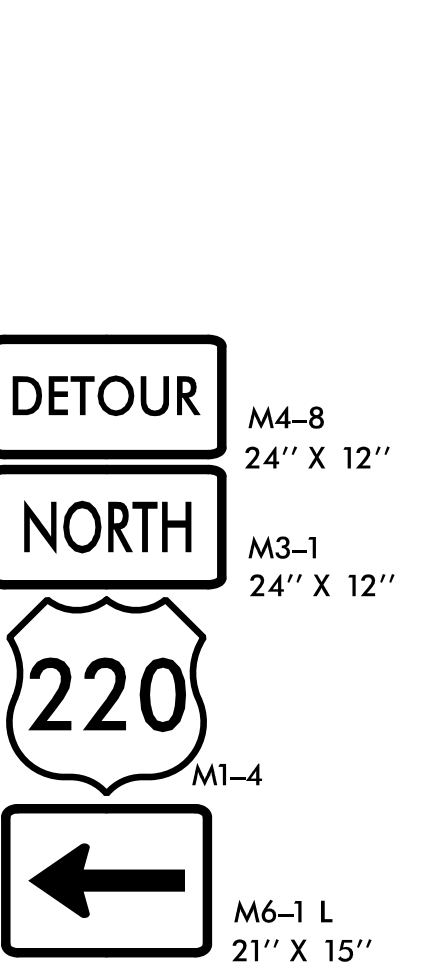
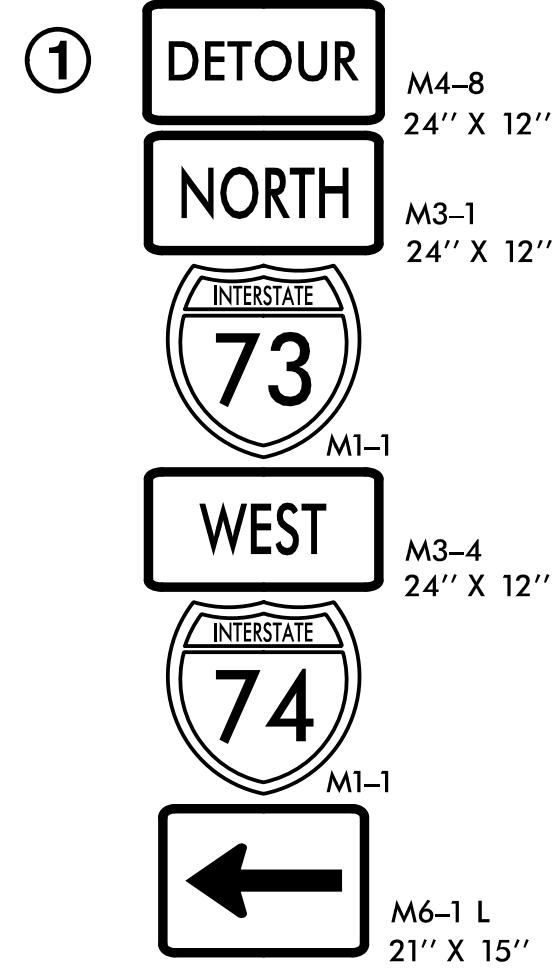
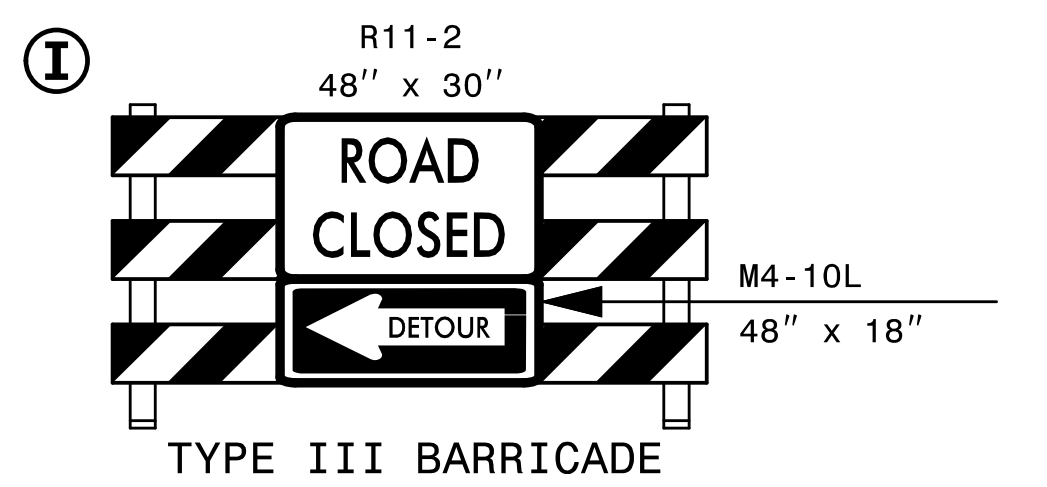
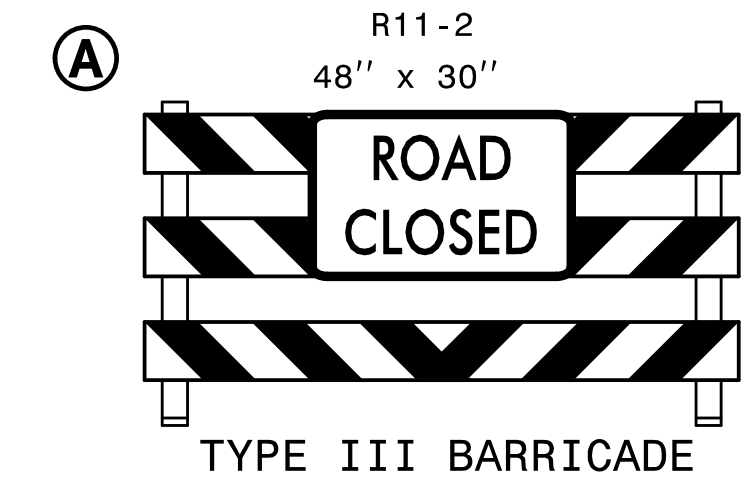
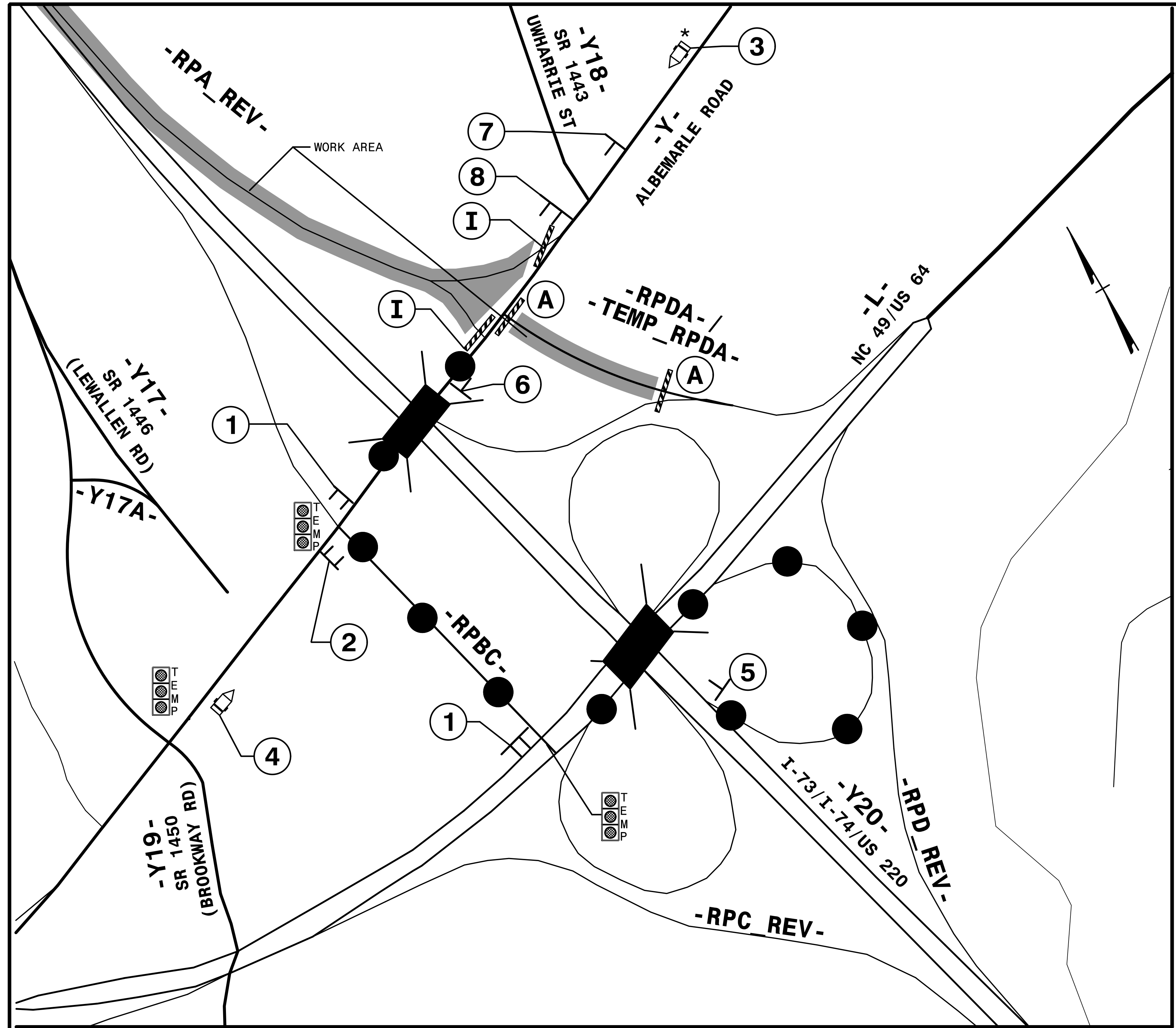
APPROVED: Helen Shyu
 DATE: 5/21/2024
 SEAL

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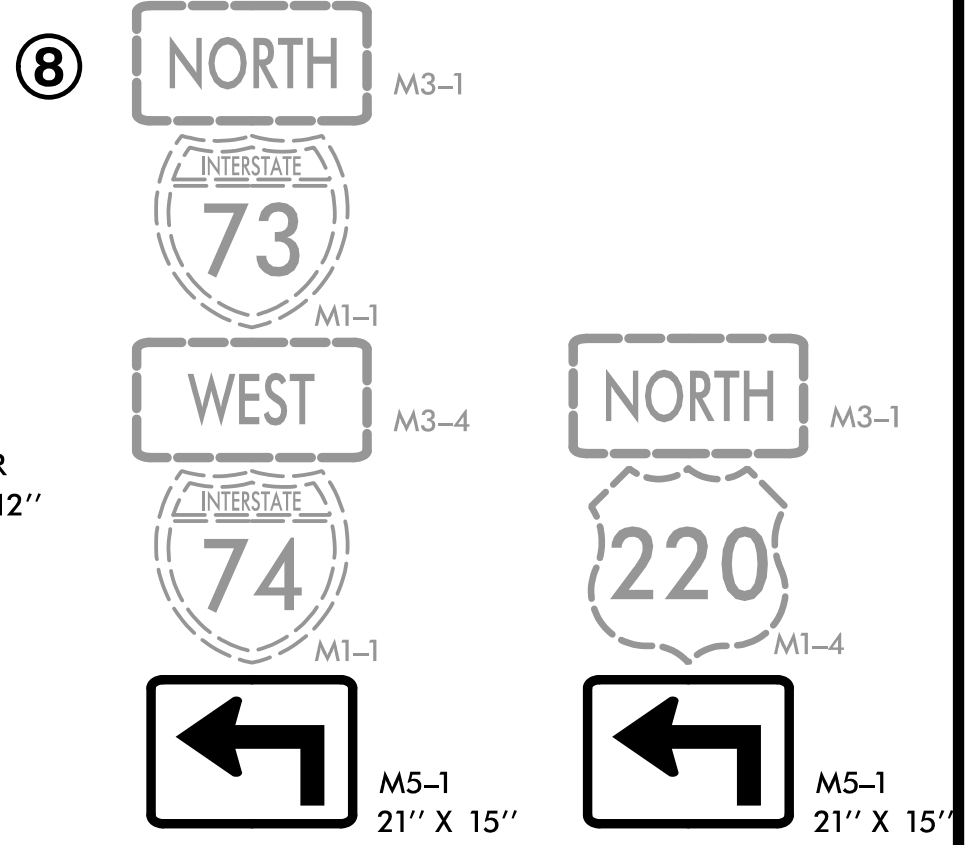
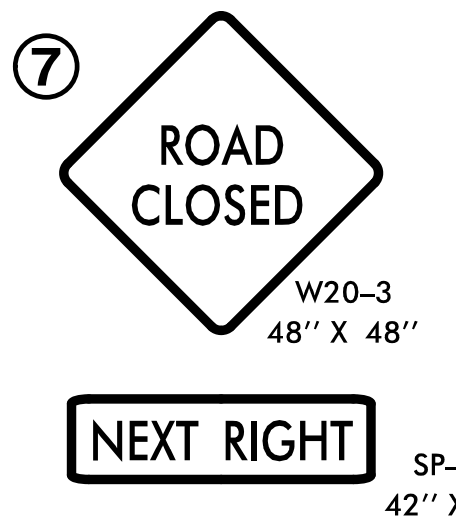
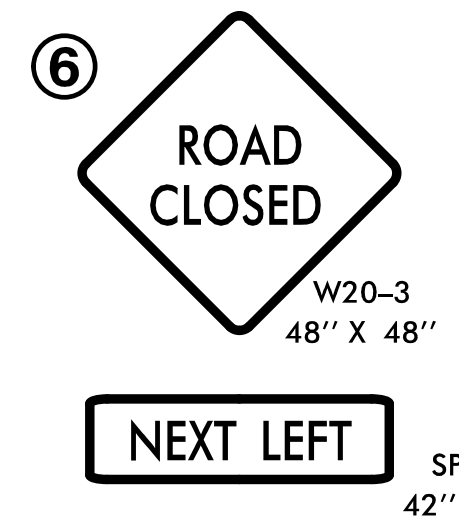


TRANSPORTATION MANAGEMENT PLAN

PHASE IA
 DETOUR
 -RPC-



* PLACE CMS 1/4 MILE FROM EXIT 72B



NOTE: SEE 1101.03 (SHEET 2 OF 9) FOR ADDITIONAL TRAFFIC CONTROL DEVICES.

3:25:46 PM
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11/28/2023



APPROVED: Helen Shyu
DATE: 5/21/2024

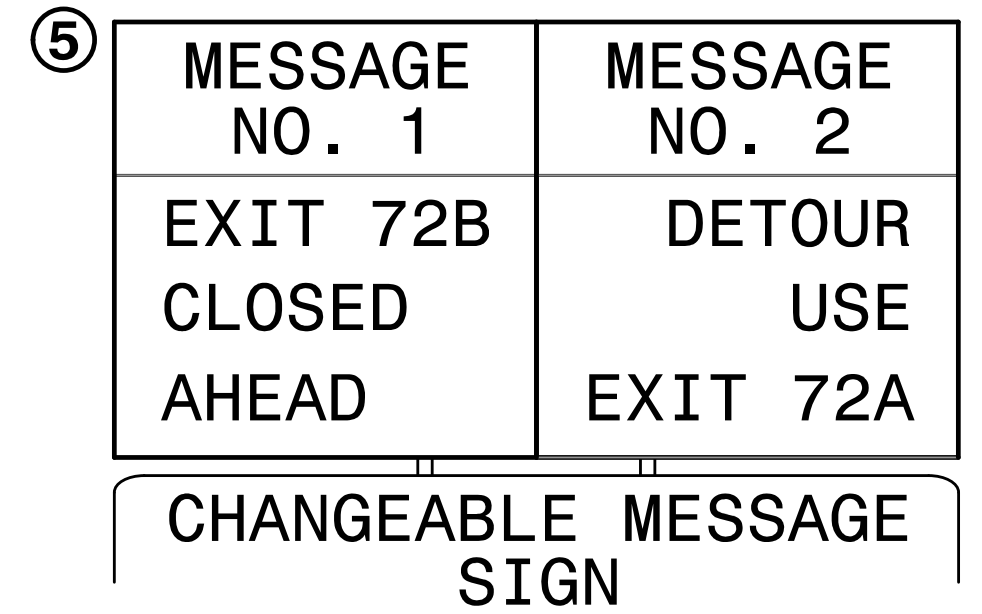
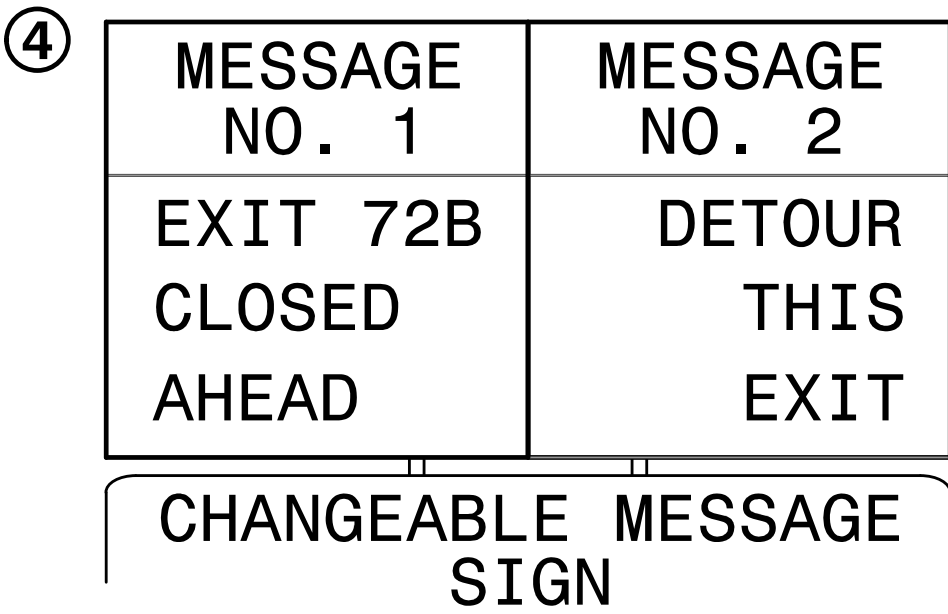
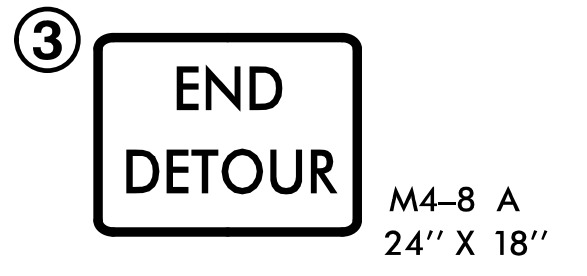
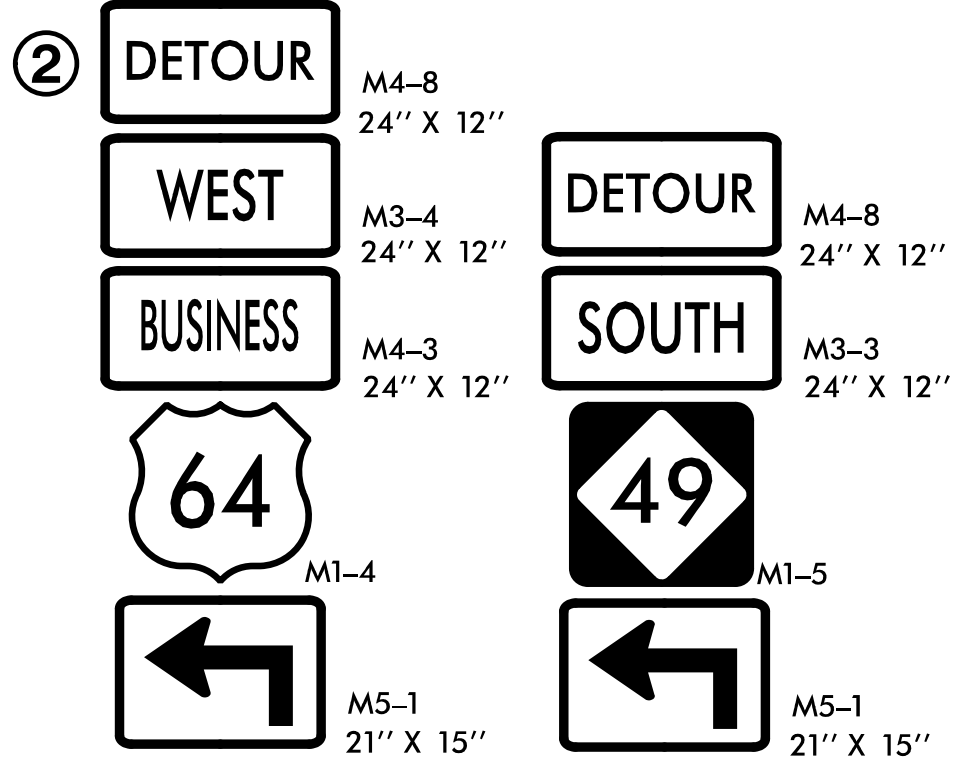
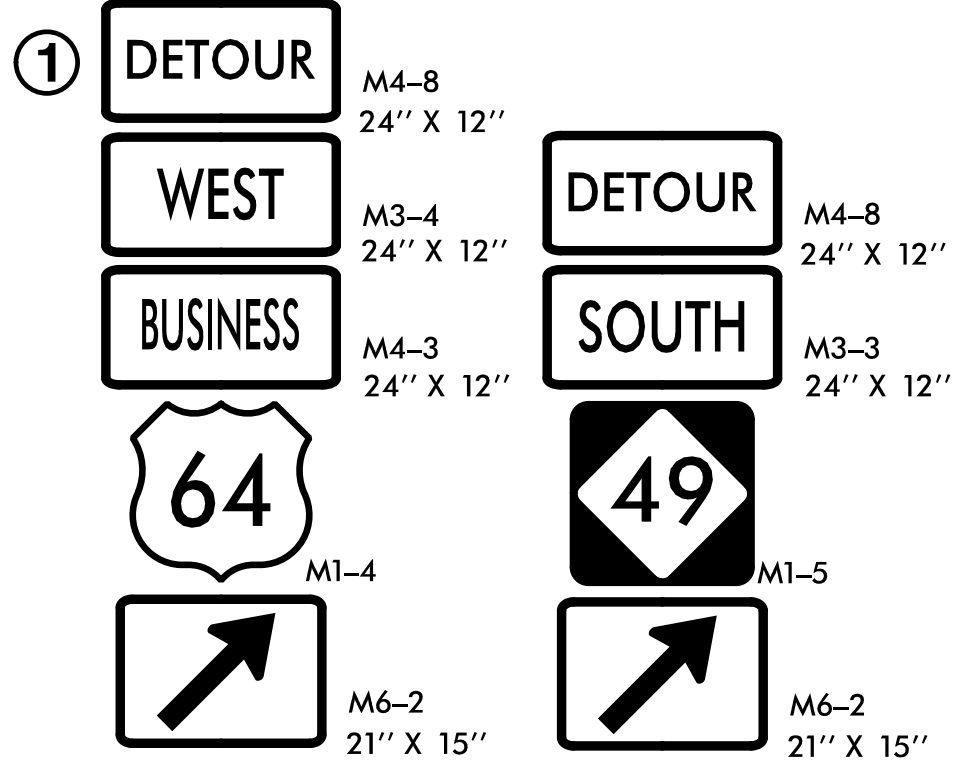
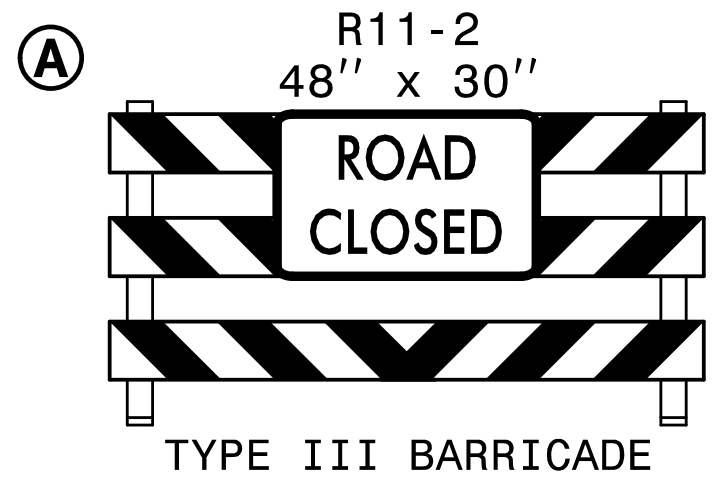
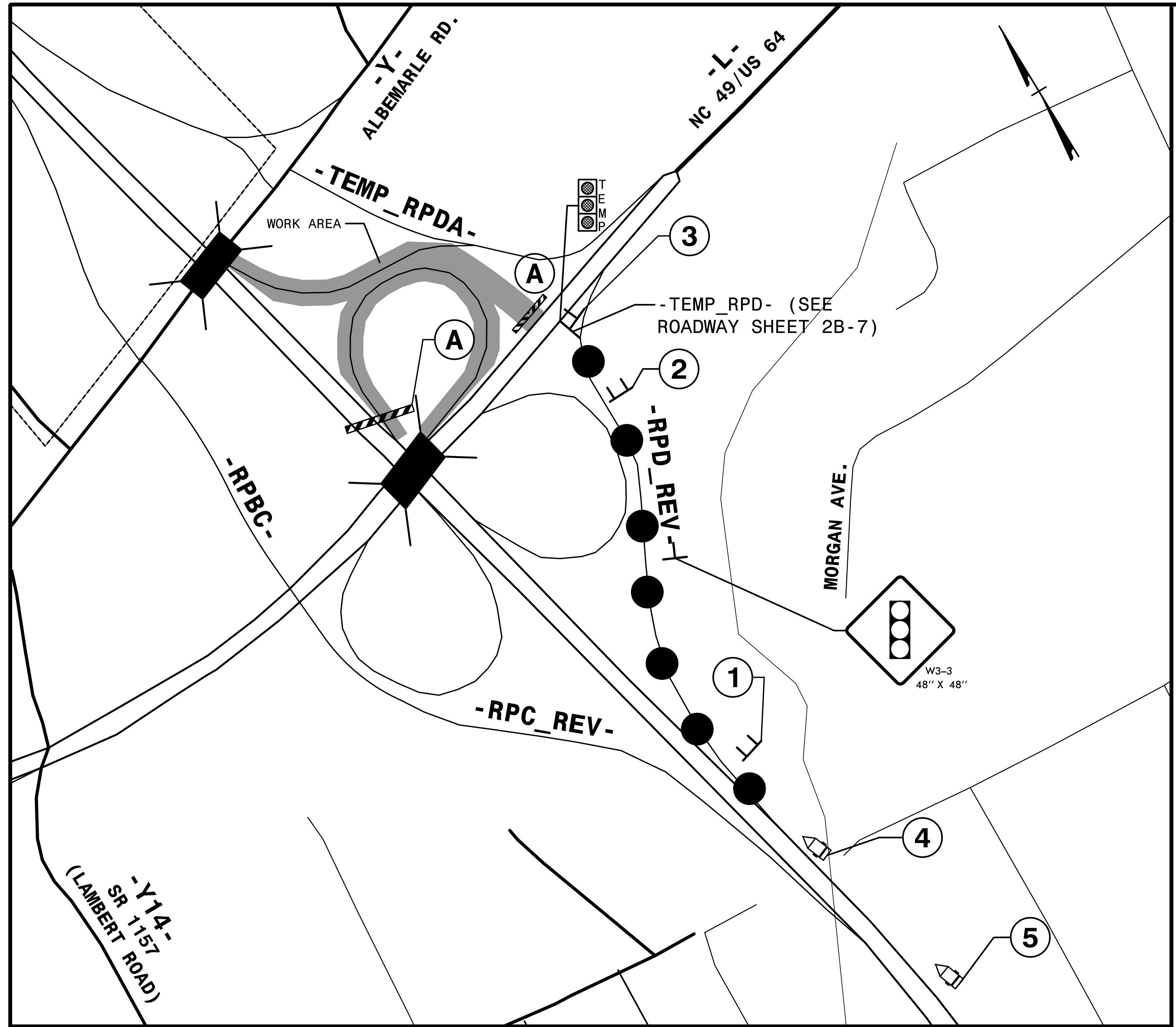
SEAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



TRANSPORTATION MANAGEMENT PLAN

PHASE II
DETOUR
-RPA_REV-



NOTE: SEE RSD 1101.02 (SHEET 12 OF 19) AND 1101.03 (SHEET 2 OF 9) FOR ADDITIONAL TRAFFIC CONTROL DEVICES.

*PLACE THIS CMS BOARD 1/2 MILE IN ADVANCE OF EXIT 72A

3:25:47 PM 11/28/2023 \\U5813_te_Phase2_step2_detour_tmp_2c.dgn



APPROVED: Helen Shyu
DATE: 5/21/2024

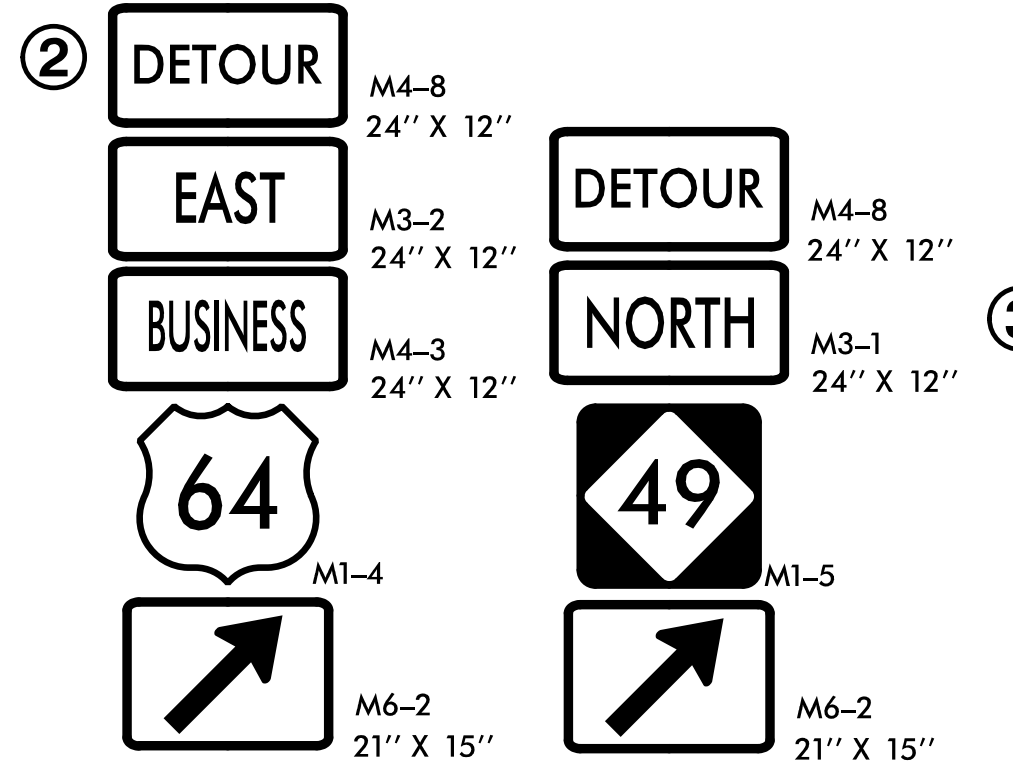
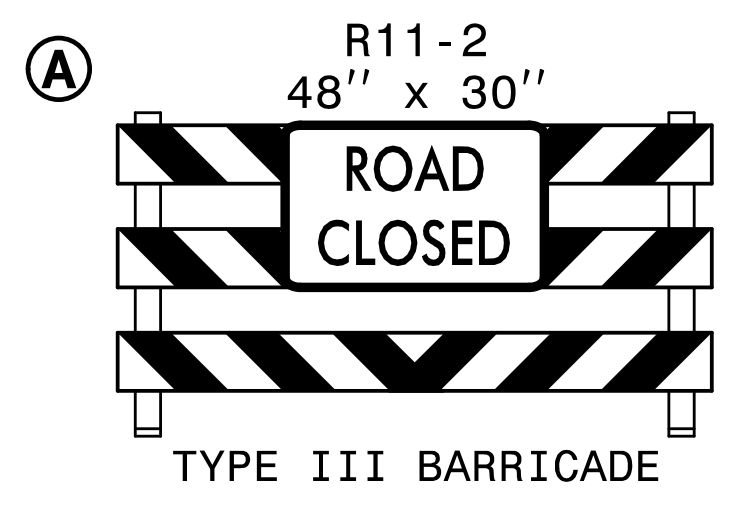
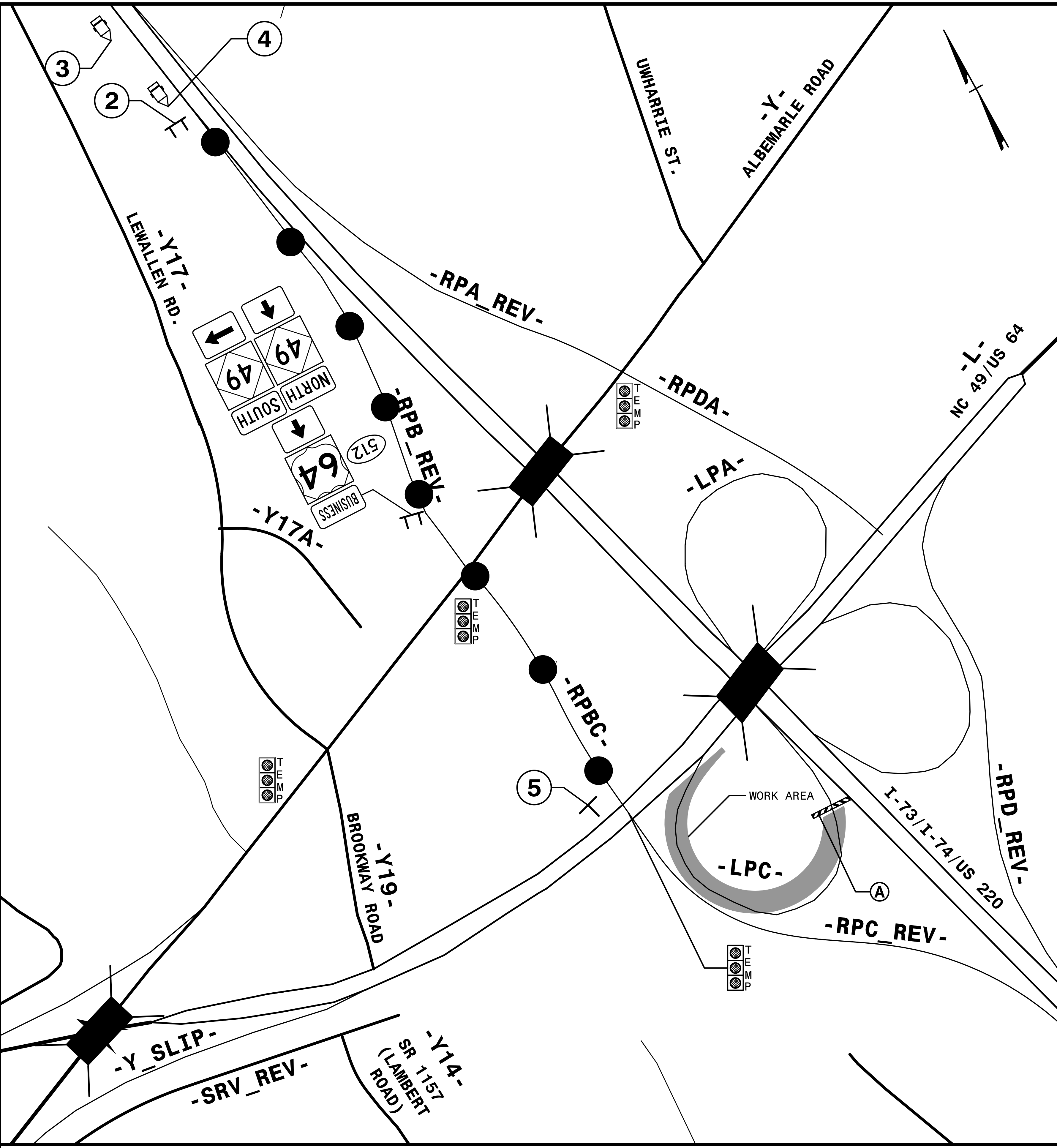
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TRANSPORTATION MANAGEMENT PLAN

PHASE IIA
DETOUR
-LPA-

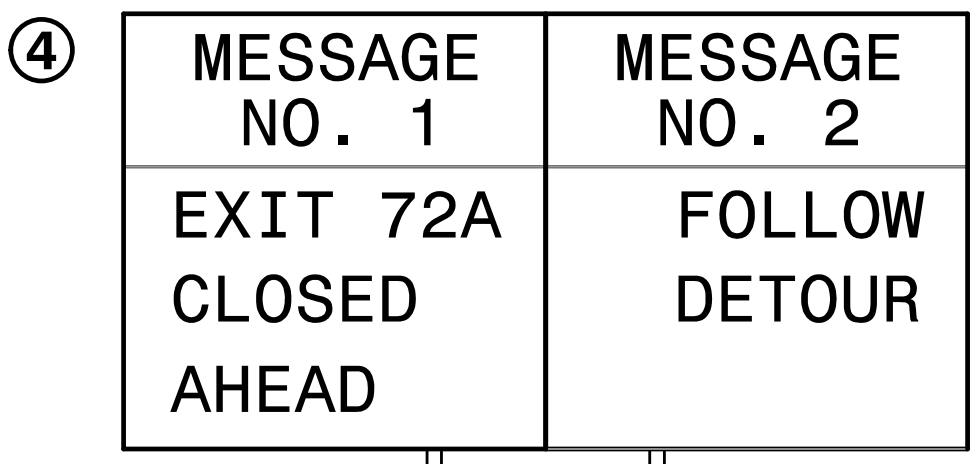
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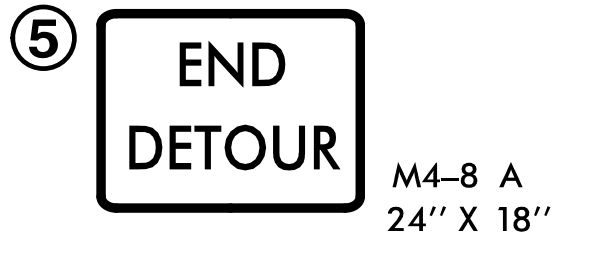
MESSAGE NO. 1	MESSAGE NO. 2
EXIT 72A CLOSED AHEAD	64E/49N DETOUR EXIT 72B

CHANGEABLE MESSAGE SIGN

* PLACE CMS 1.5 MILES FROM EXIT 72B



CHANGEABLE MESSAGE SIGN

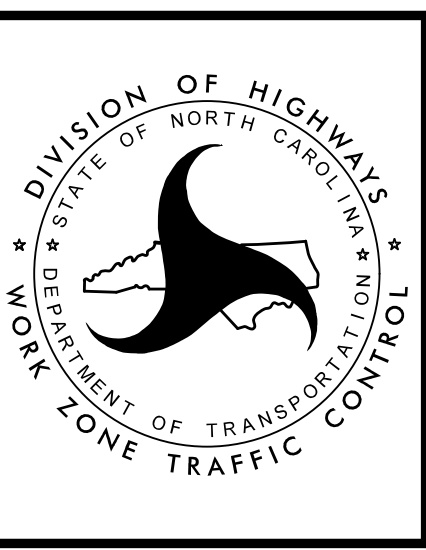


NOTE: SEE RSD 1101.02 (SHEET 12 OF 19) FOR ADDITIONAL TRAFFIC CONTROL DEVICES.

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11/28/2023

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

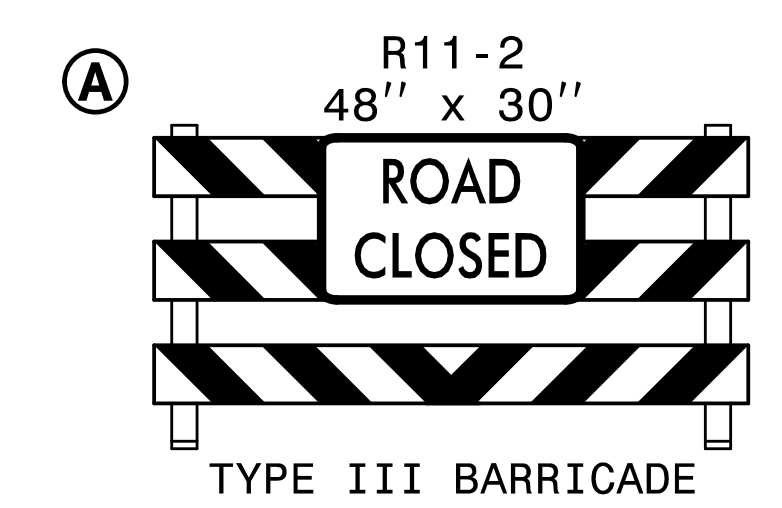
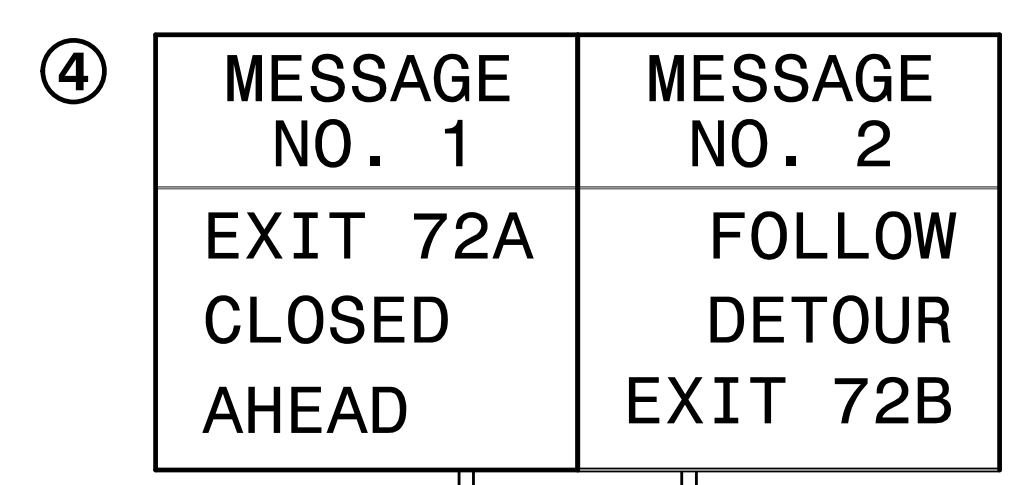
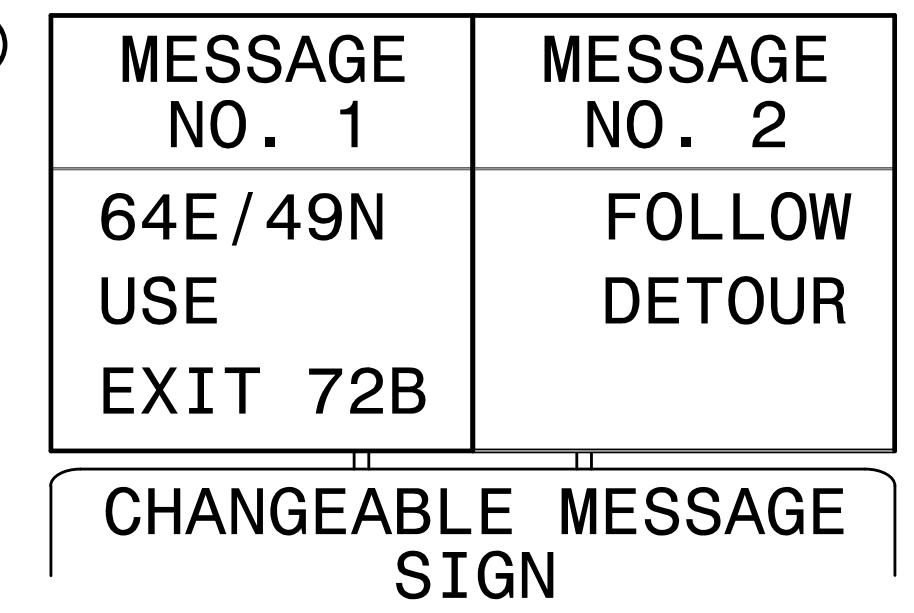
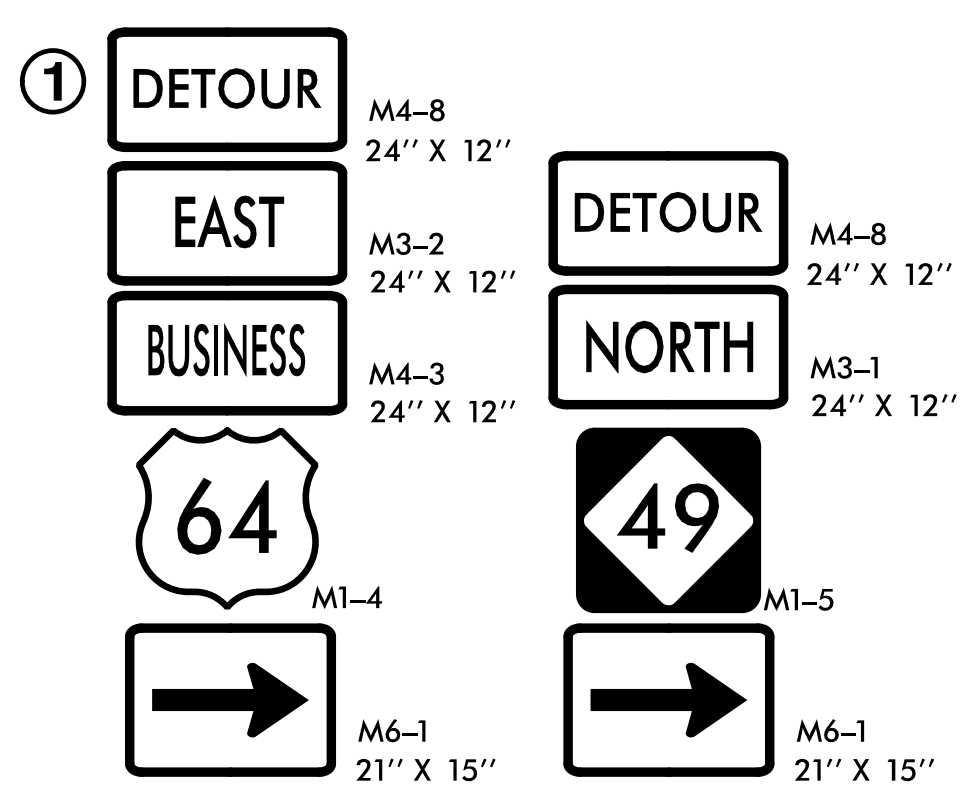
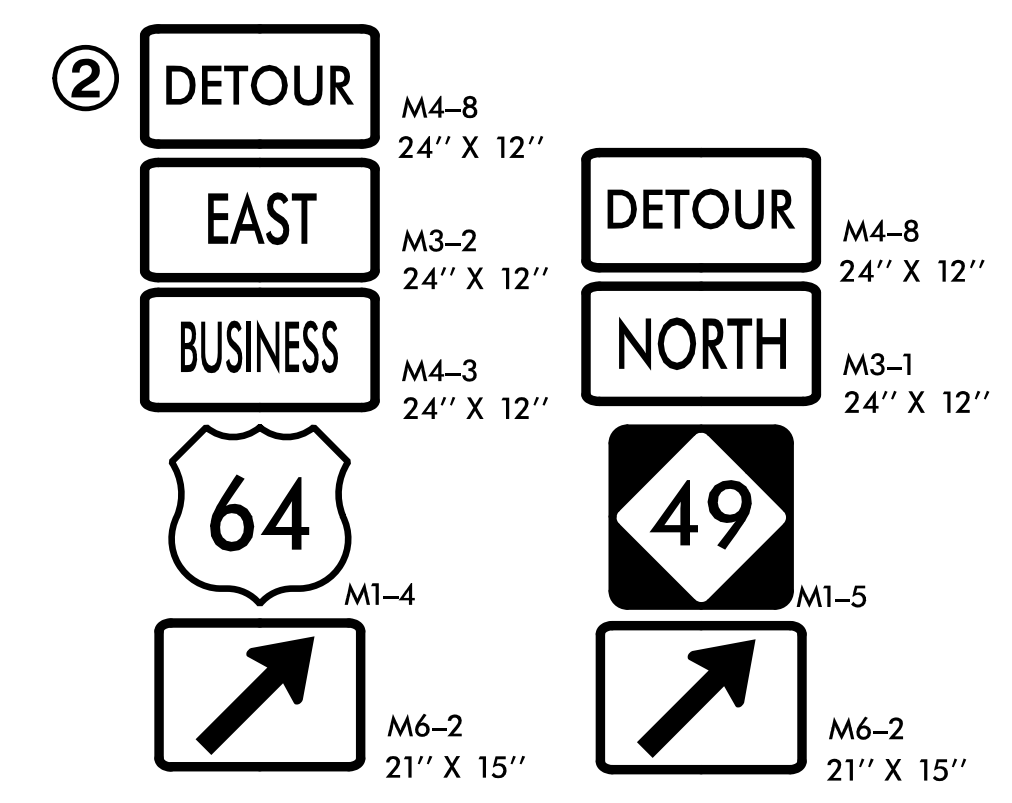
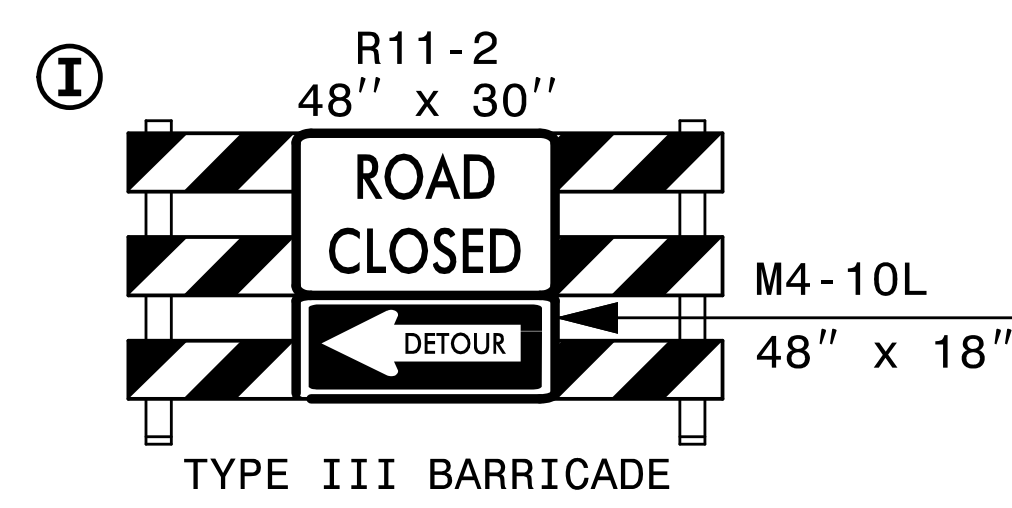
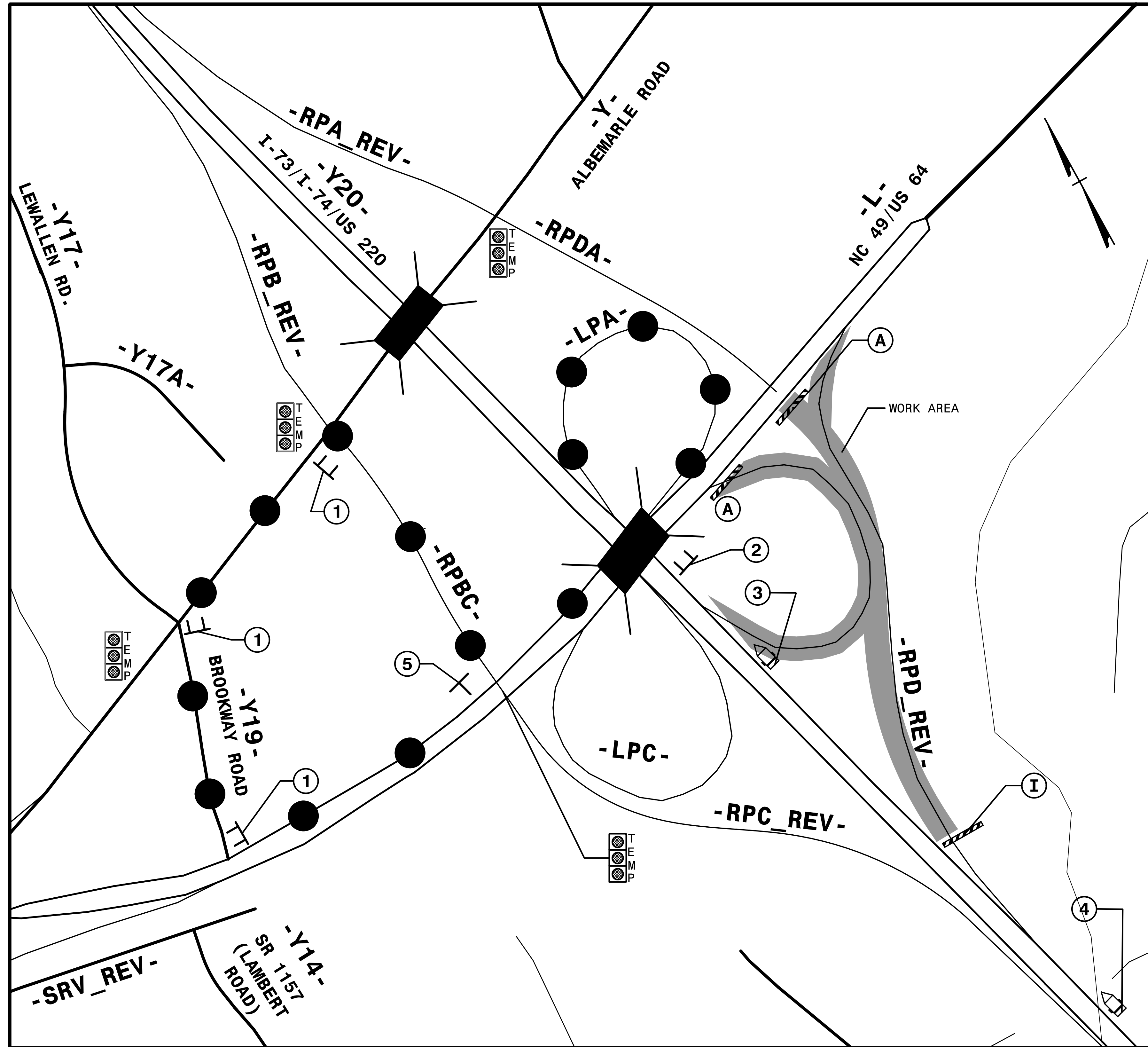
APPROVED: Helen Shyu
DATE: 5/21/2024
SEAL



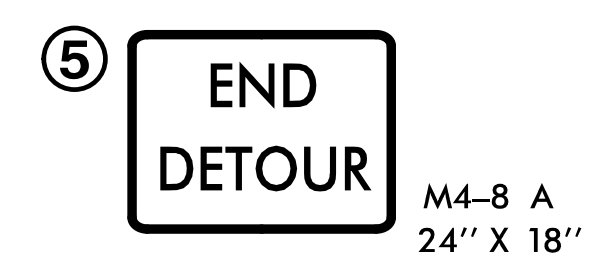
TRANSPORTATION
MANAGEMENT PLAN

PHASE III
DETOUR
-LPC-

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



* PLACE CMS 1.5 MILES FROM EXIT 72B



NOTE: SEE RSD 1101.02 (SHEET 12 OF 19) AND 1101.03 (SHEET 2 OF 9) FOR ADDITIONAL TRAFFIC CONTROL DEVICES.

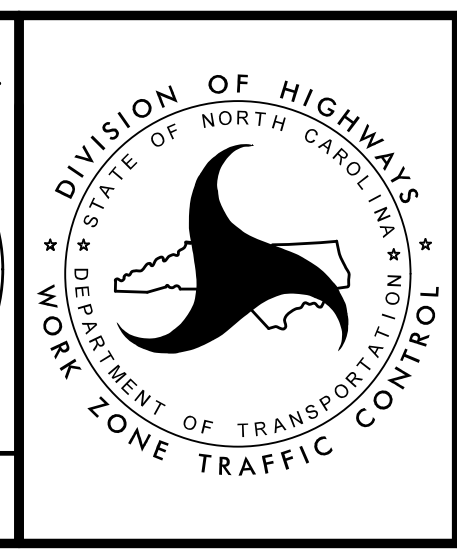
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APPROVED: Helen Shyu
DATE: 5/21/2024

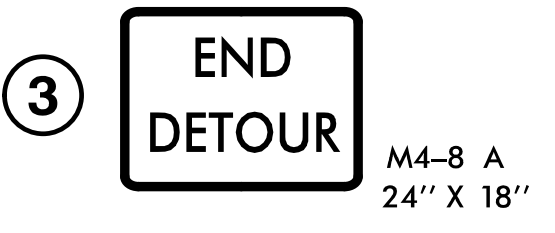
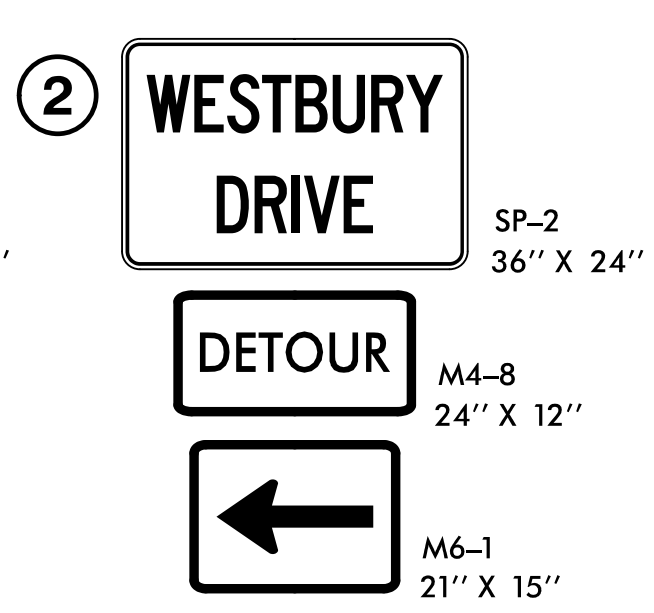
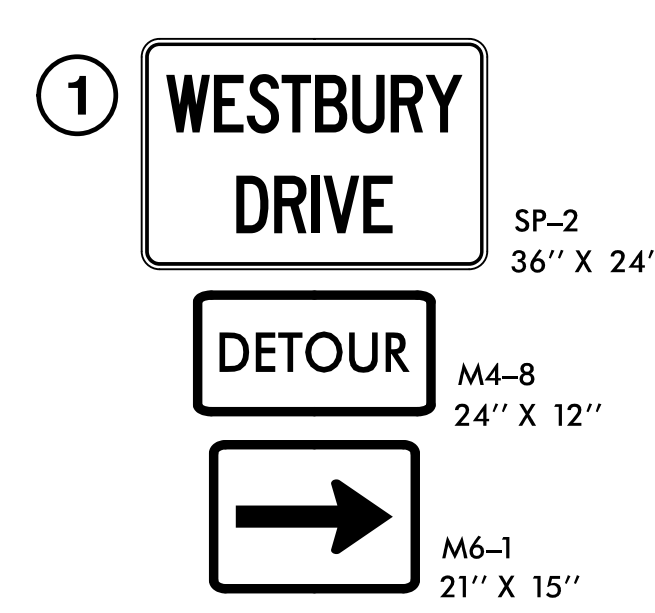
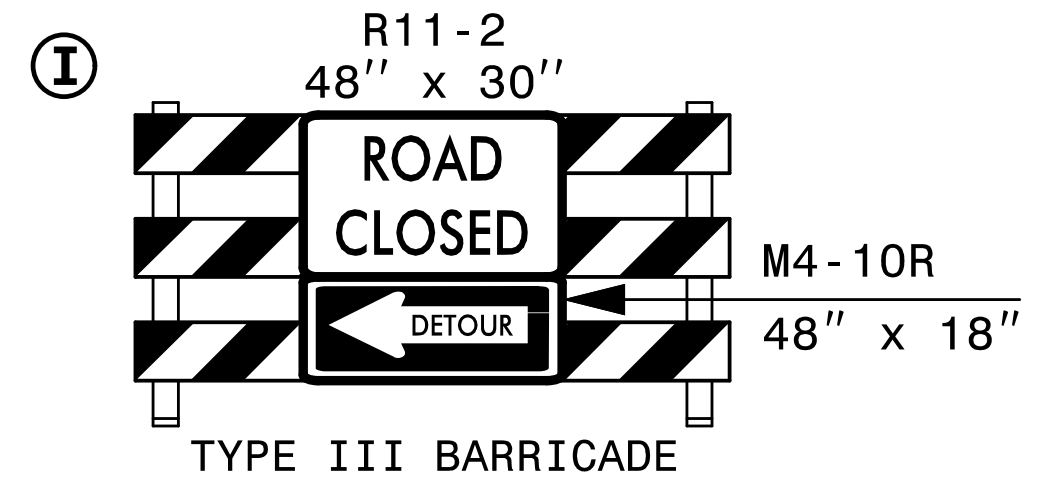
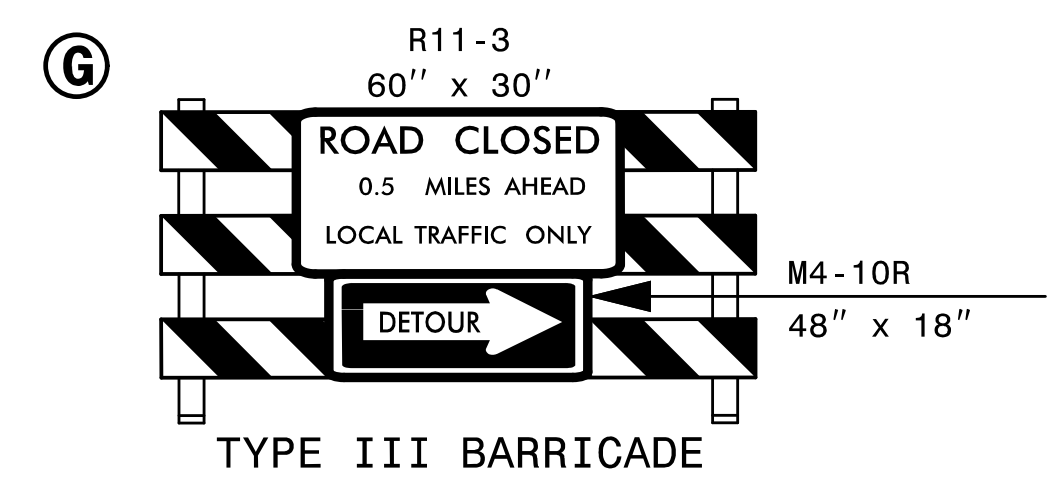
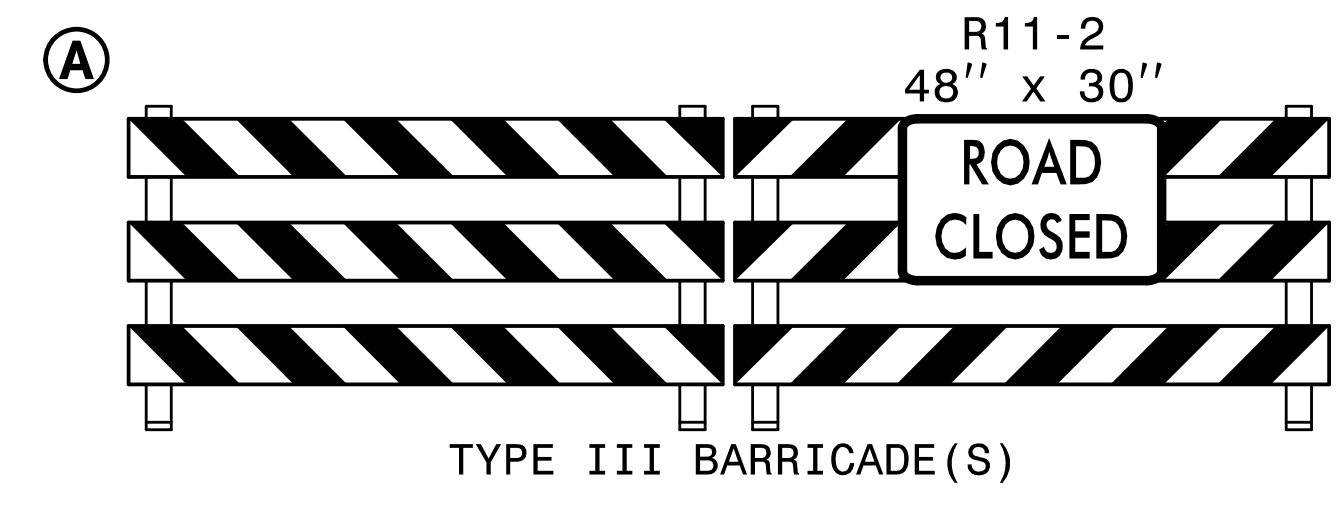
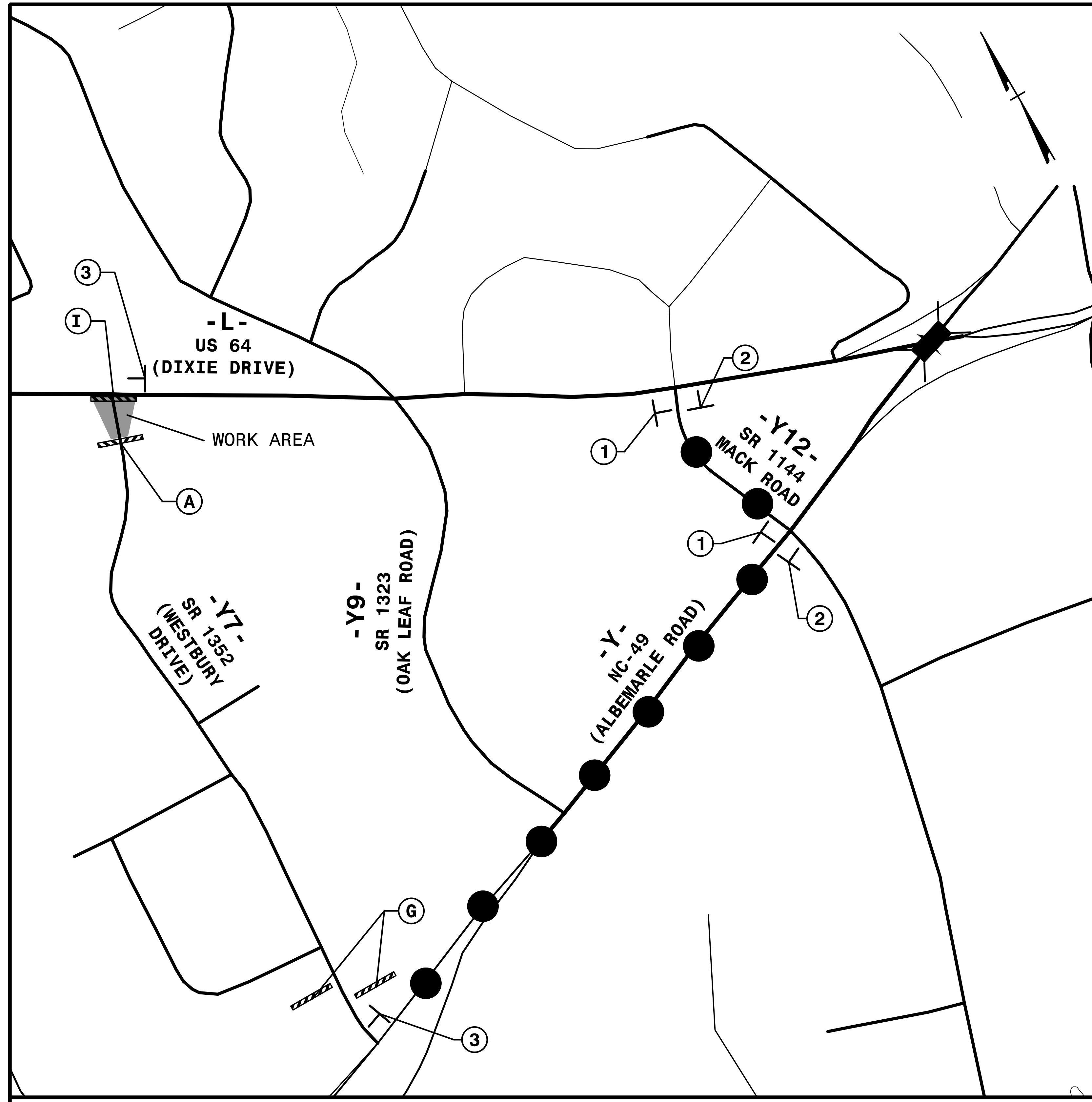
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TRANSPORTATION MANAGEMENT PLAN

PHASE III
DETOUR
-RPD_REV-

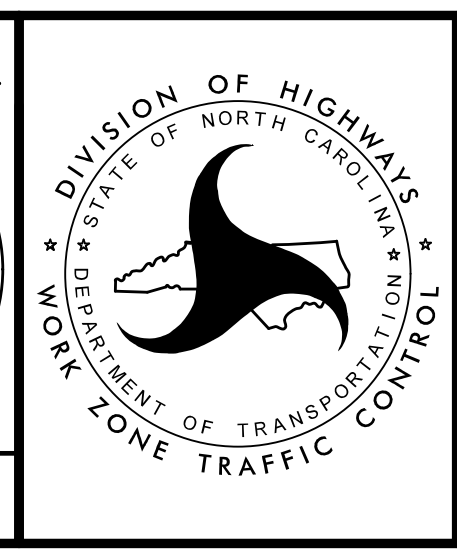


SEE RSD 1101.03 (SHEETS 1 AND 2 OF 9) FOR ADDITIONAL DEVICES.

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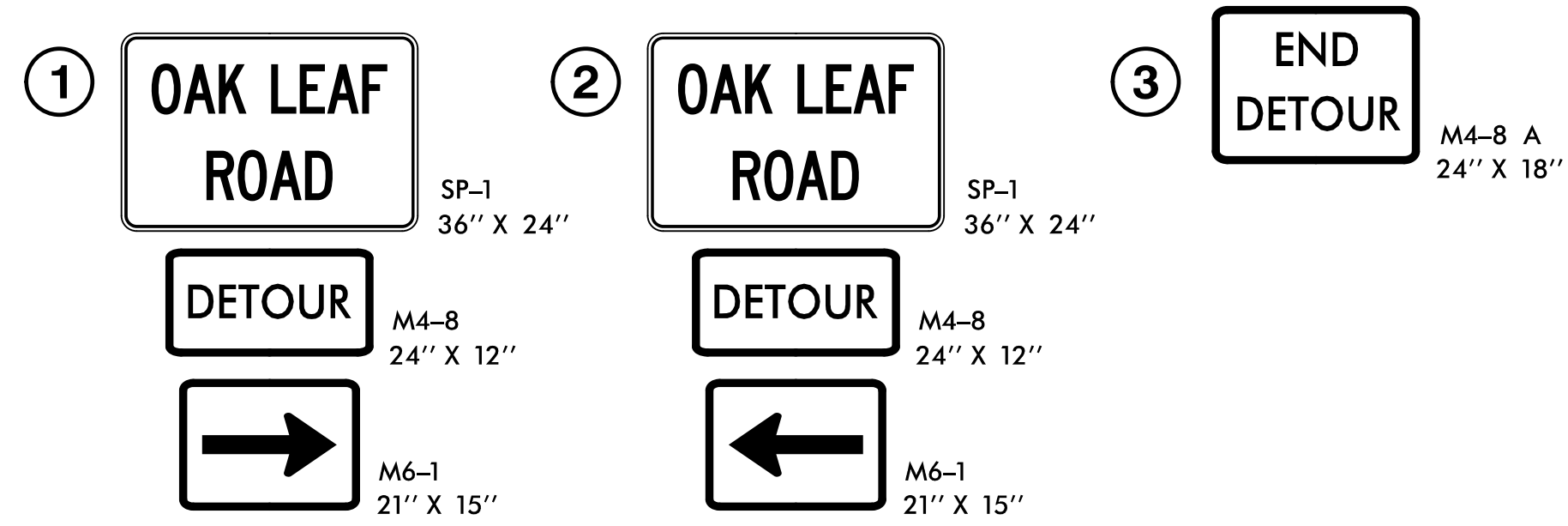
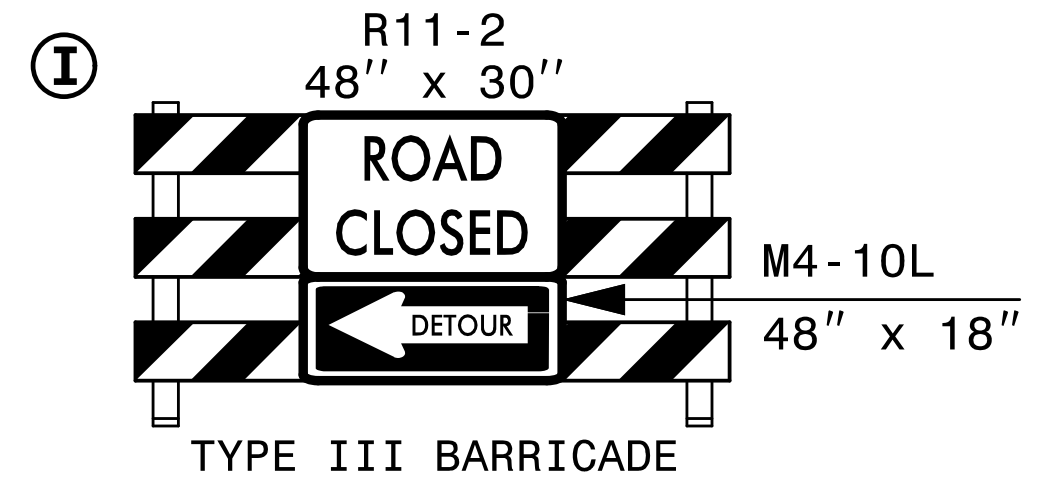
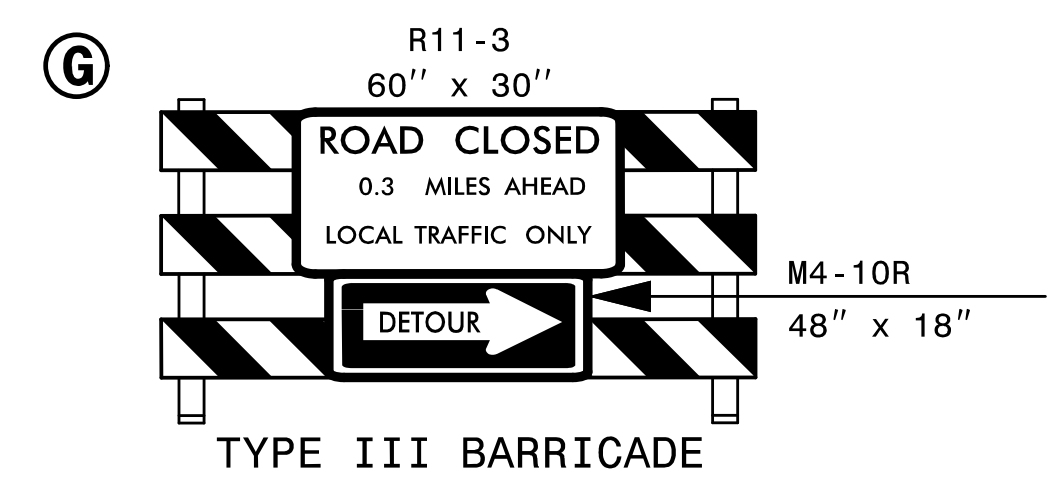
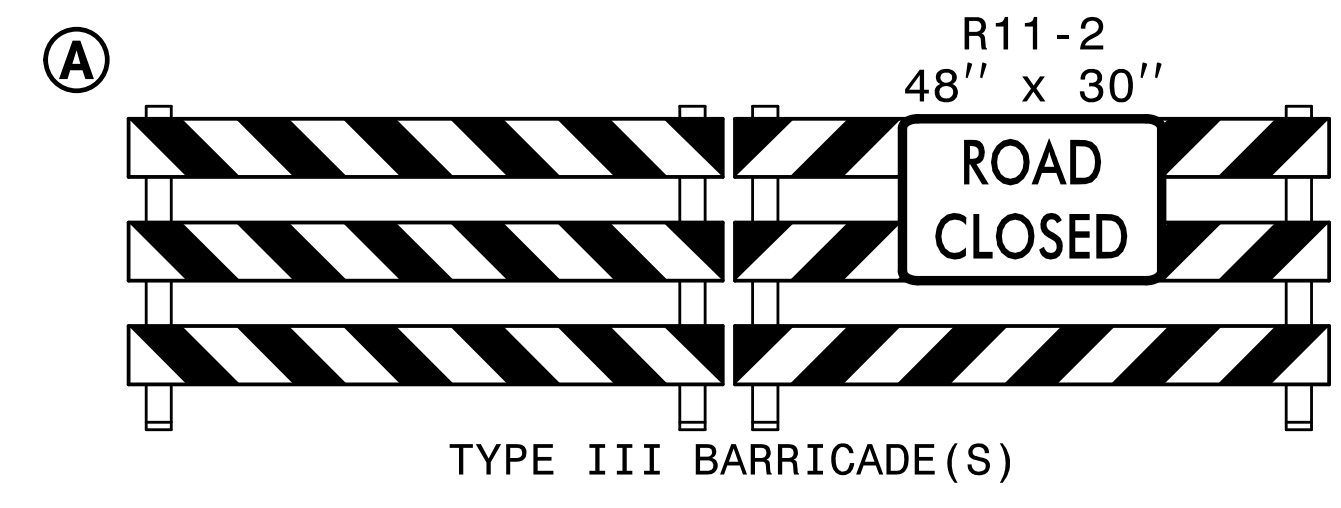
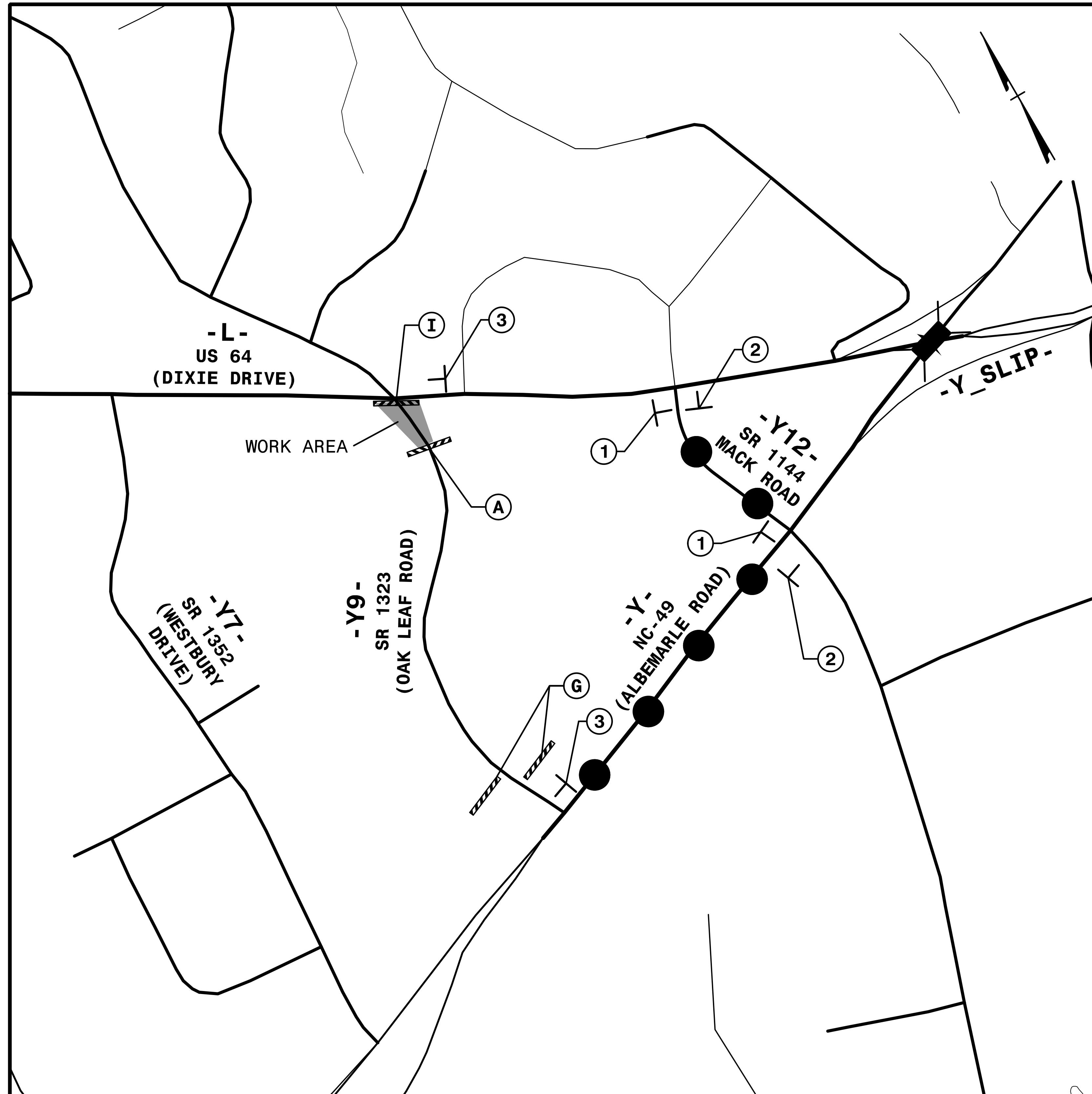
APPROVED: *Helen Shyu*
DATE: 5/21/2024
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 042517 ENGINEER HELEN SHYU



TRANSPORTATION MANAGEMENT PLAN

-Y7- WESTBURY DRIVE DETOUR

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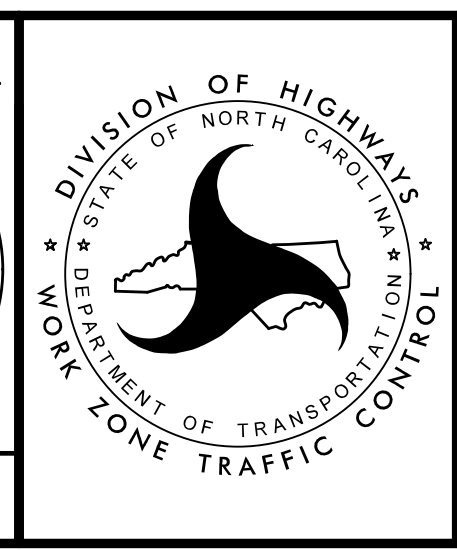


SEE RSD 1101.03 (SHEETS 1 AND 2 OF 9) FOR ADDITIONAL DEVICES.

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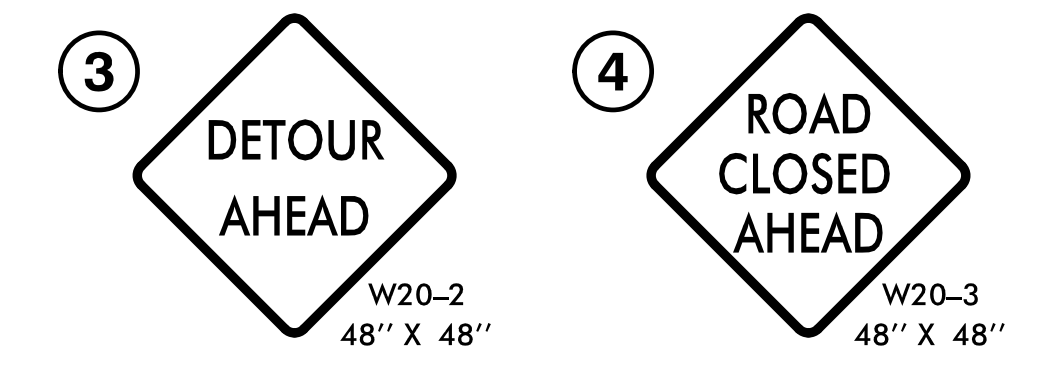
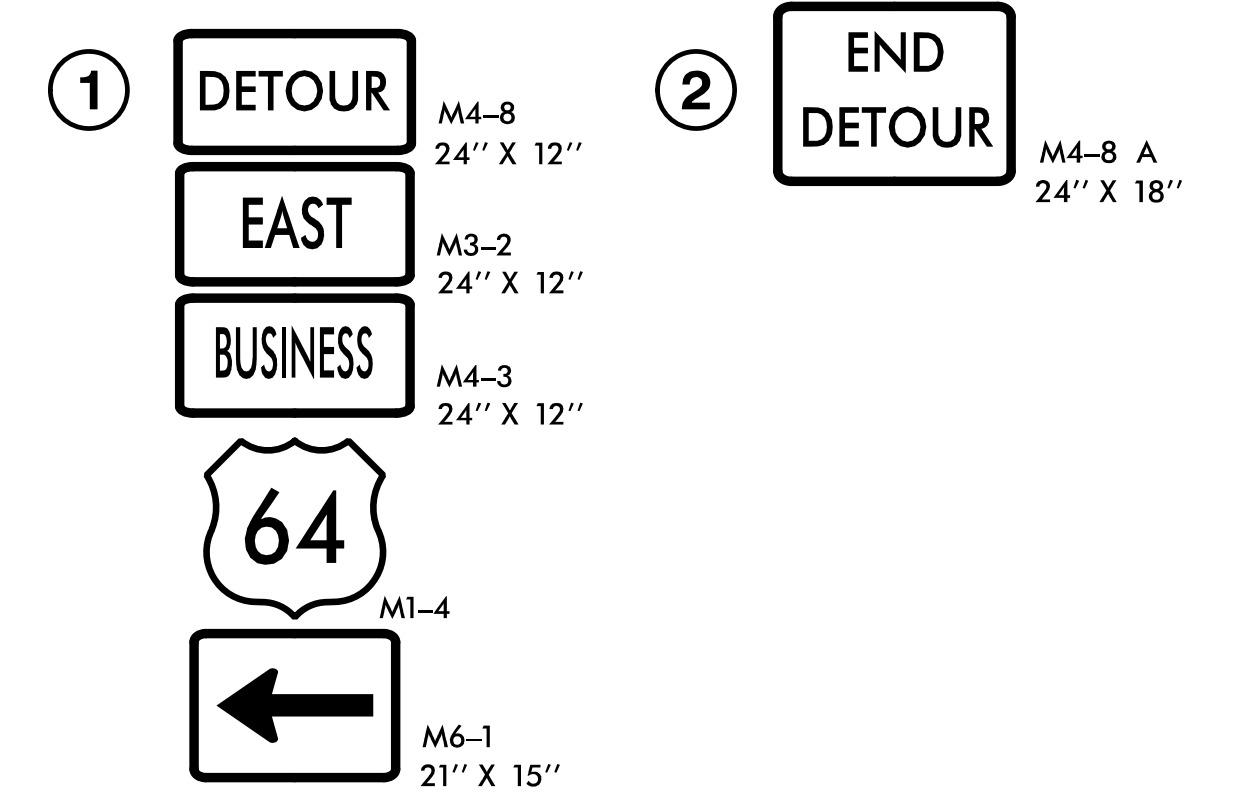
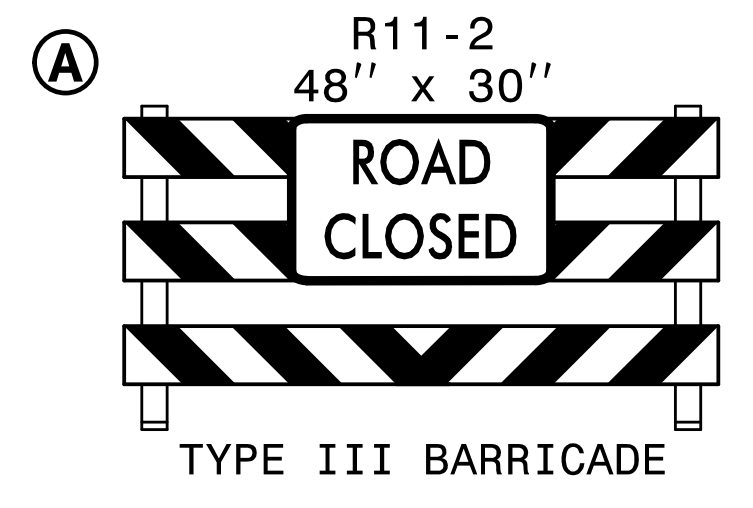
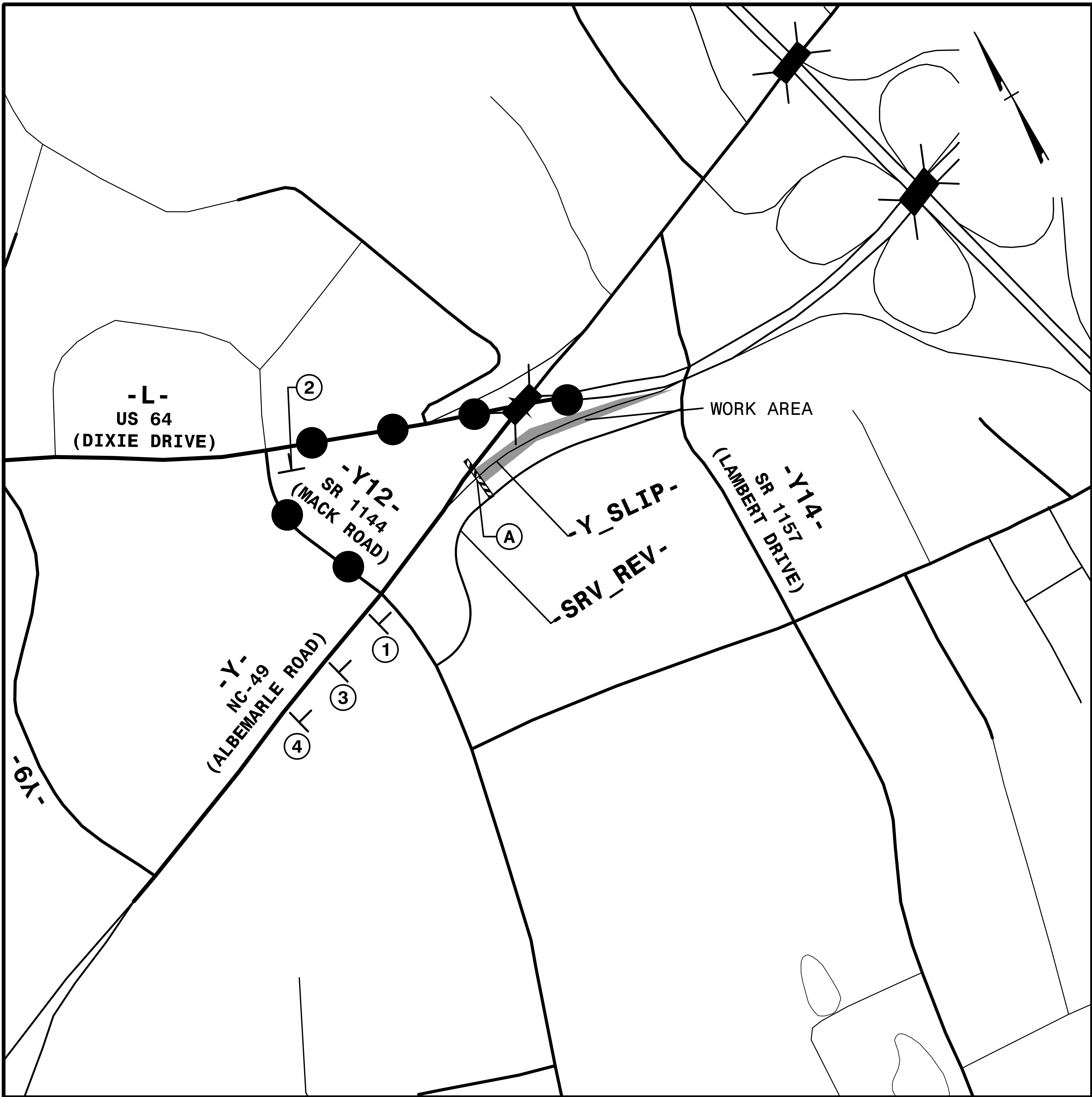
APPROVED: *Helen Shyu*
 DATE: 5/21/2024
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TRANSPORTATION
 MANAGEMENT PLAN

**-Y9-
 OAK LEAF ROAD
 DETOUR**

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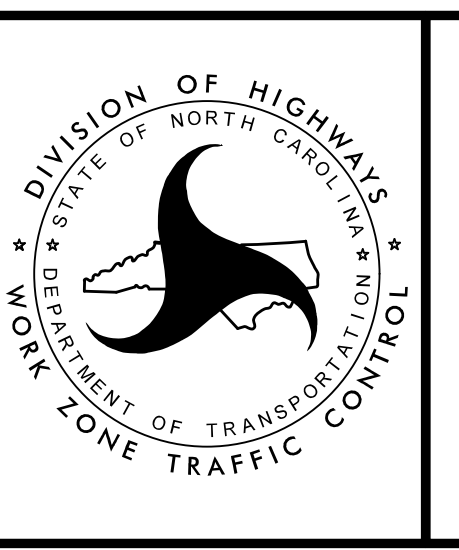


NOTE: SEE RSD 1101.03 (SHEET 2 OF 9) FOR ADDITIONAL TRAFFIC CONTROL DEVICES.

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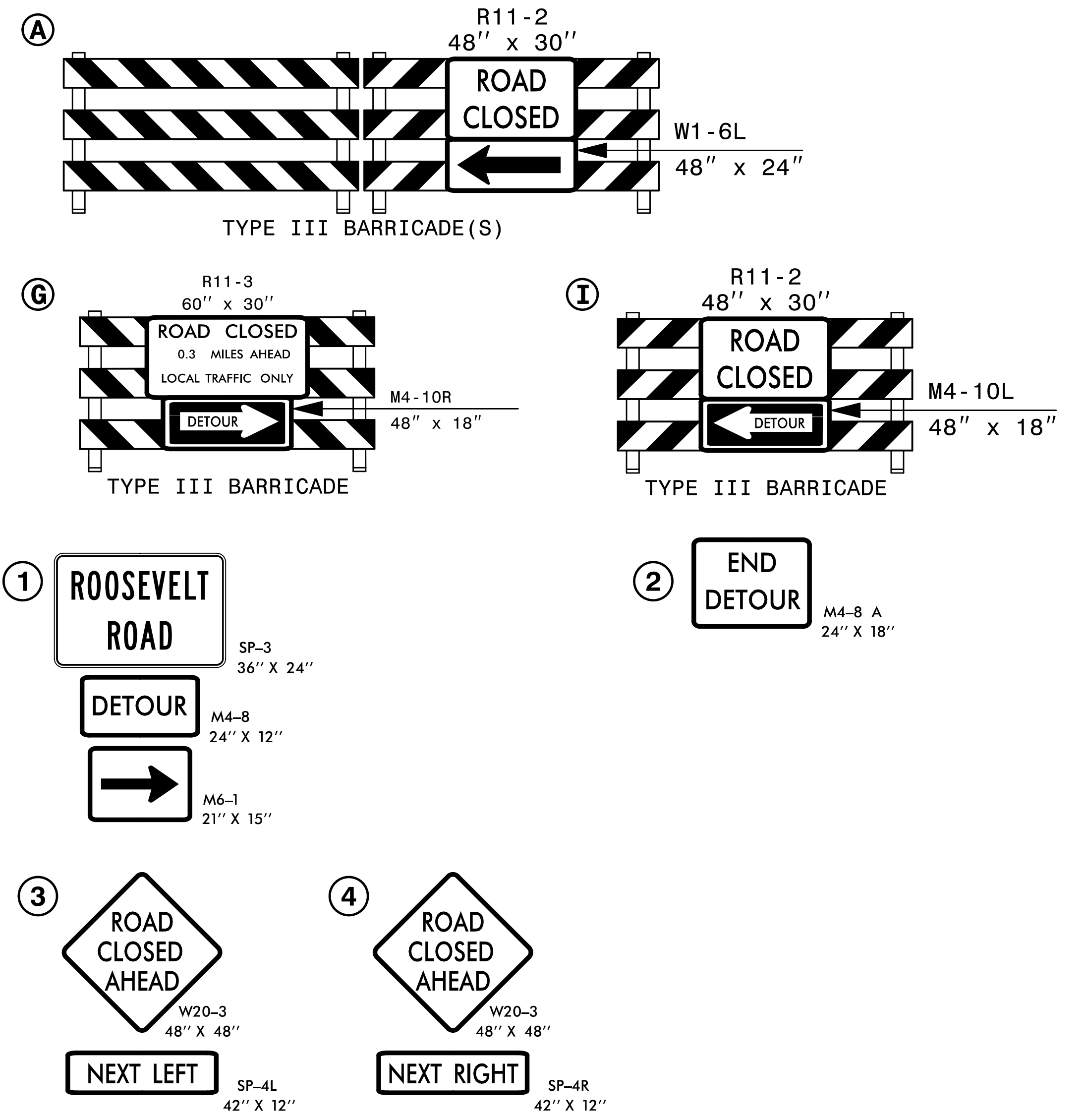
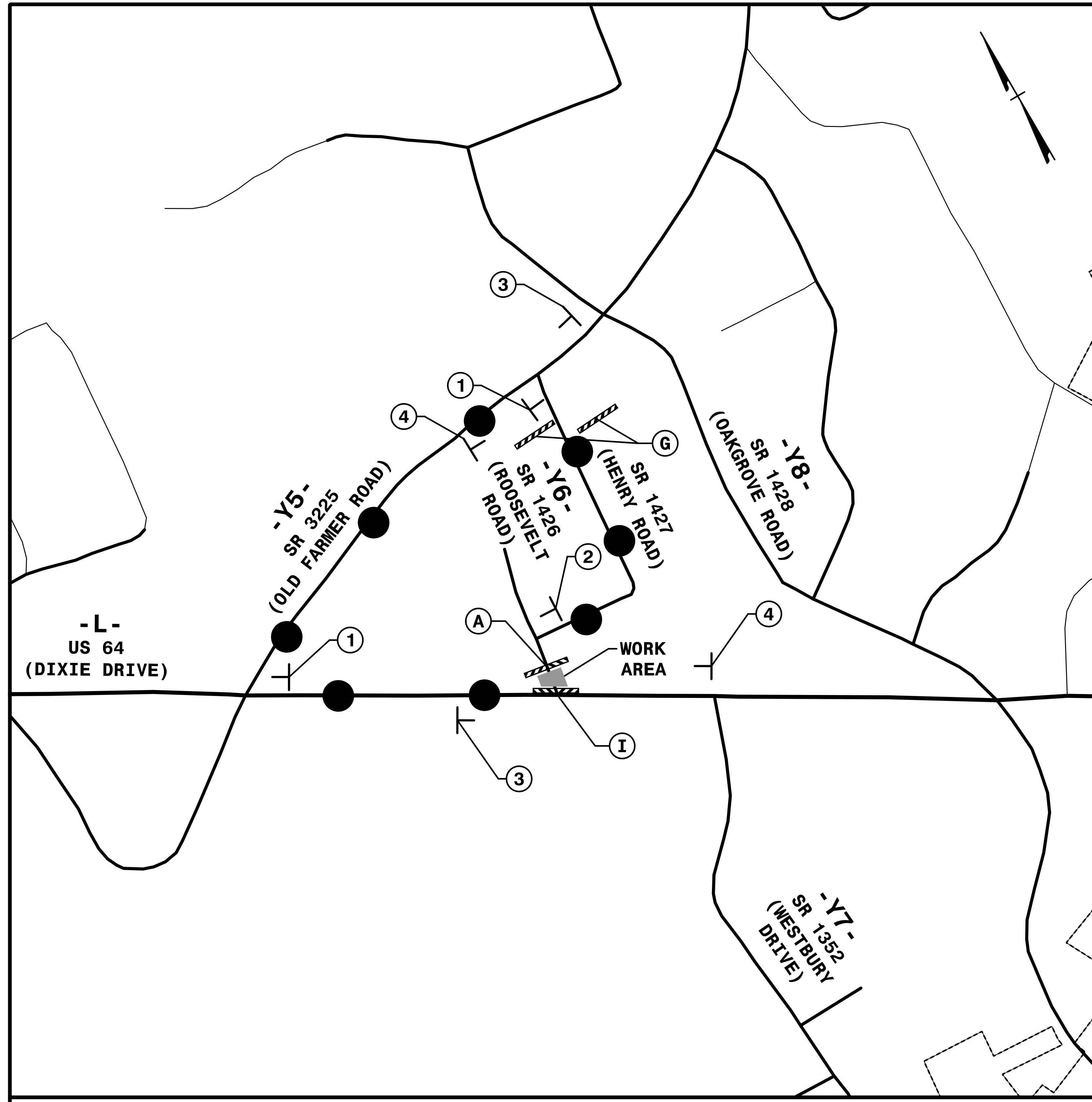
APPROVED: *Helen Shyu*
 DATE: 5/21/2024
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 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 042517
 HELEN SHYU



TRANSPORTATION MANAGEMENT PLAN

**-Y SLIP-
 DÉTOUR**

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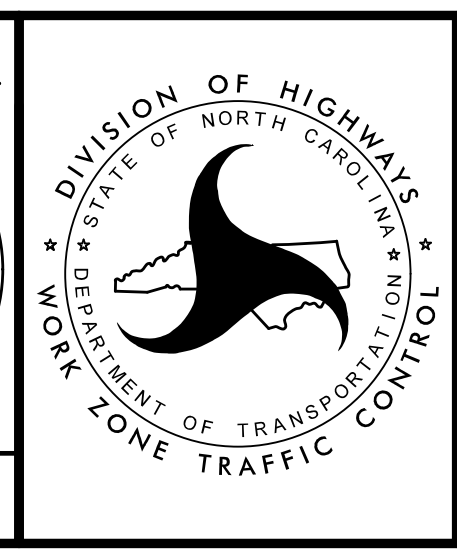


NOTE: SEE RSD 1101.03 (SHEET 1 OF 9) FOR ADDITIONAL TRAFFIC CONTROL DEVICES.

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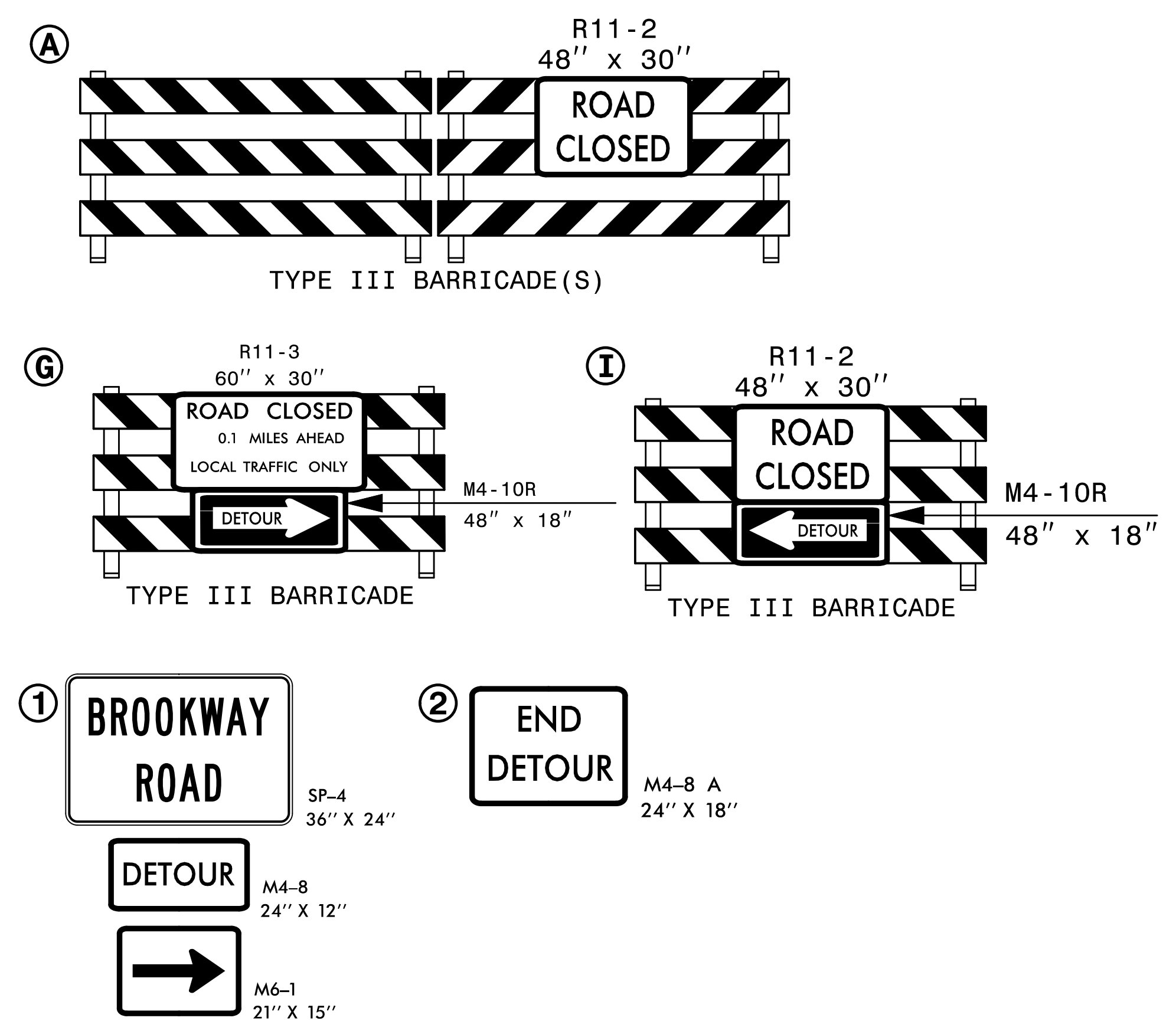
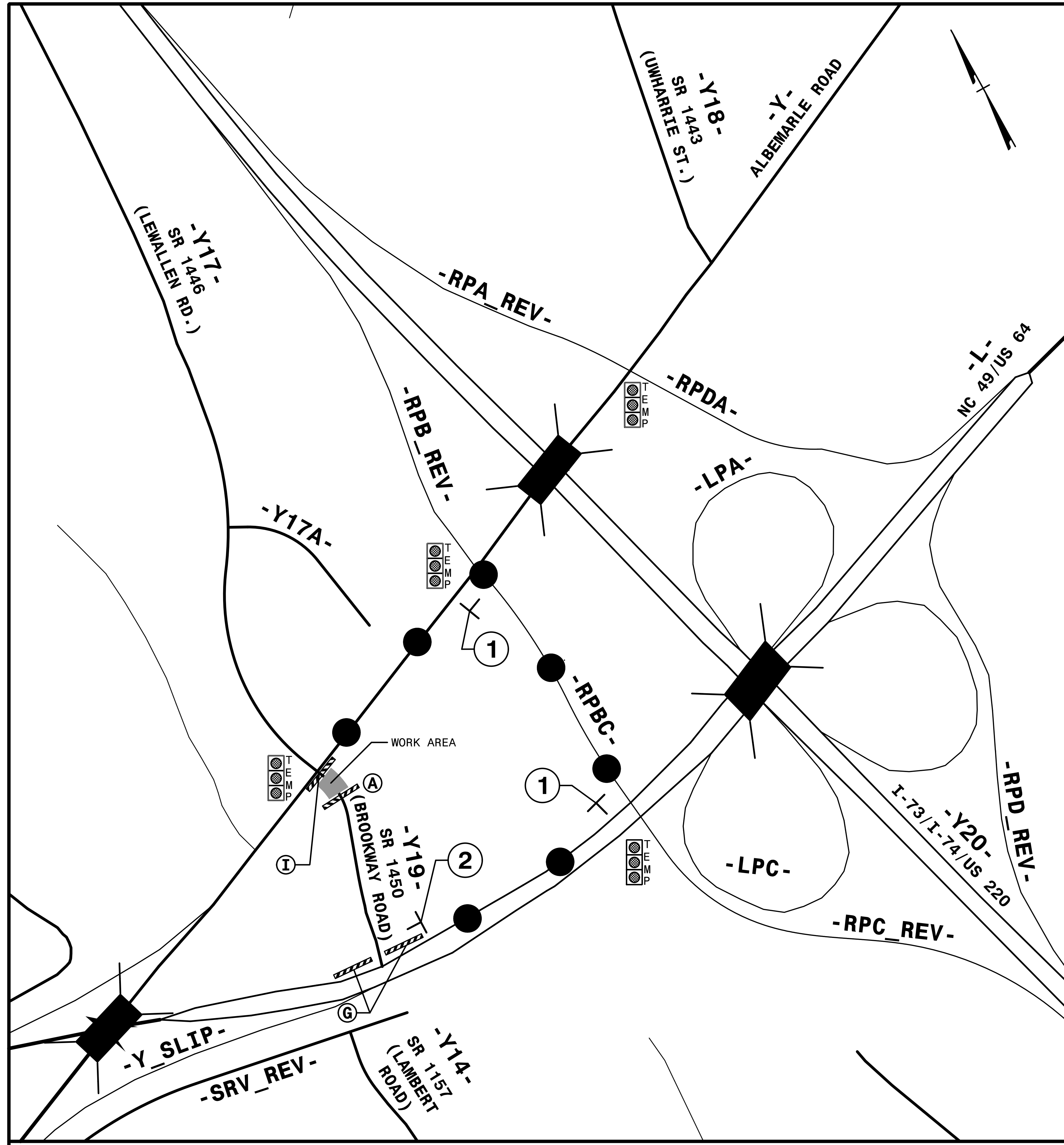
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TRANSPORTATION MANAGEMENT PLAN
-Y6- ROOSEVELT ROAD DETOUR

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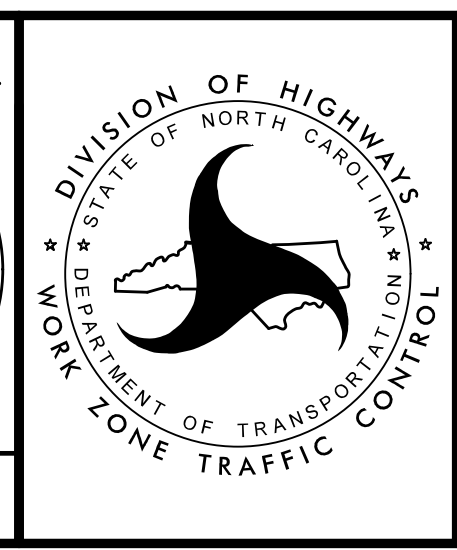
SEE RSD 1101.03 (SHEETS 1 AND 2 OF 9) FOR ADDITIONAL SIGNS.

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DATE: 5/21/2024
SEAL

DocuSigned by:
Helen Shyu
DN: cn=Helen Shyu, o=HNTB, ou=Professional Seal, email=hshyu@hntb.com



TRANSPORTATION
MANAGEMENT PLAN

**-Y19-
BROOKWAY ROAD
DETOUR**

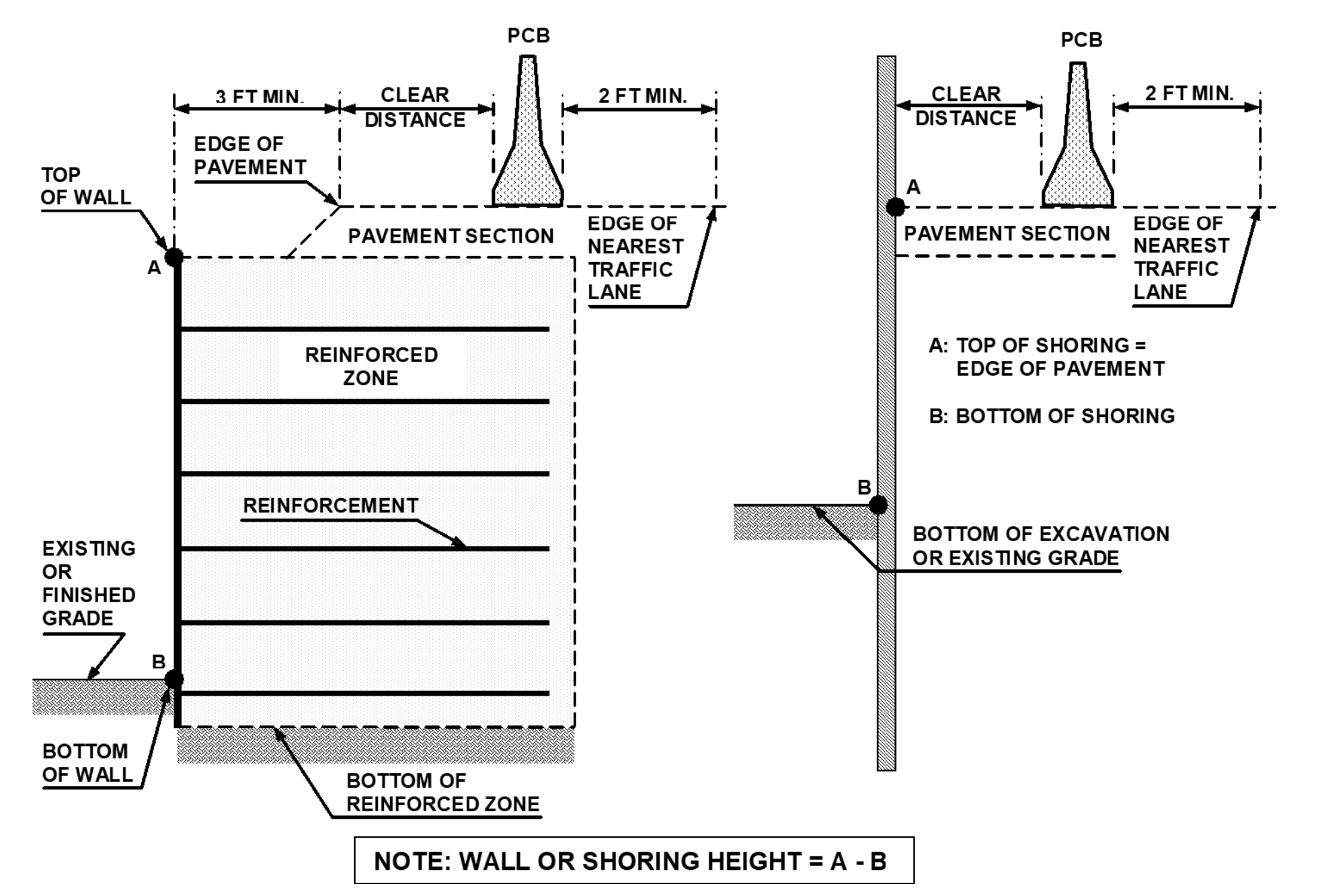


FIGURE A

NOTES

- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.
- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PCB).
- 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).
- 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.
- 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.
- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- PCB REQUIREMENTS FOR TEMPORARY WALLS APPLY TO TEMPORARY MECHANICALLY STABILIZED EARTH (MSE) WALLS AND TEMPORARY SOIL NAIL WALLS.
- 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.
- 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.
- 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.

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

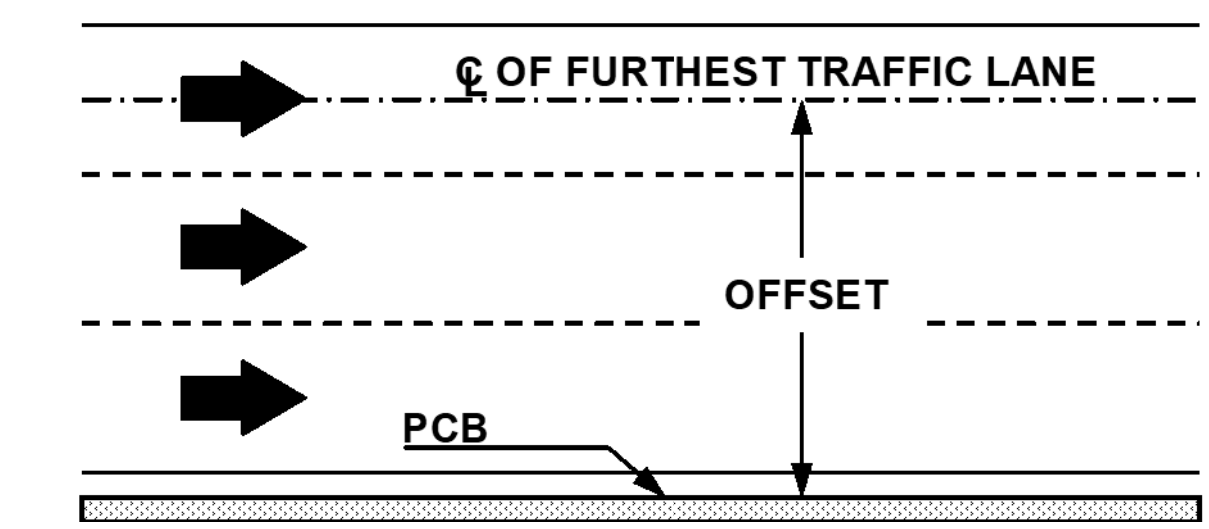
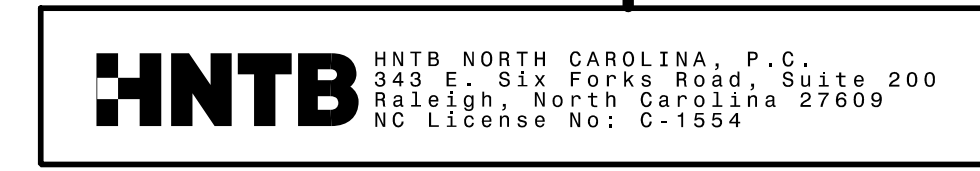
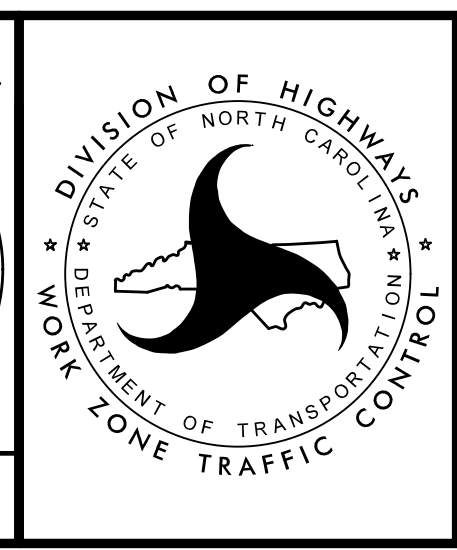


FIGURE B

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HELEN SHYU
042517



TRANSPORTATION MANAGEMENT PLAN

PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

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SHORING NOTES

TEMPORARY SHORING NO. 1

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

DESIGN TEMPORARY SHORING FROM STATION 53+22+/- -L-, 3.9 FT. LT. TO STATION 55+01+/- -L-, 3.9 FT. LT., FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
 FRICTION ANGLE, $\phi = 28$
 COHESIONS, $c = 0$ PSF
 GROUNDWATER ELEVATION = 752 FT

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

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 53+22+/- -L-, 3.9 FT. LT TO STATION 55+01+/- -L-, 3.9 FT. LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 53+22+/- -L-, 3.9 FT. LT. TO STATION 55+01+/- -L-, 3.9 FT. LT. MAY NOT PENETRATE BELOW ELEVATION 740 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM 53+22+/- -L-, 3.9 FT. LT. TO STATION 55+01+/- -L-, 3.9 FT. LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING NO. 2A

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

DESIGN TEMPORARY SHORING FROM STATION 53+16+/- -L-, 4.5 FT. RT. TO STATION 55+08+/- -L-, 4.5 FT. RT., FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
 FRICTION ANGLE, $\phi = 28$
 COHESIONS, $c = 0$ PSF
 GROUNDWATER ELEVATION = 752 FT

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

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 53+16+/- -L-, 4.5 FT. RT TO STATION 55+08+/- -L-, 4.5 FT. RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM 53+16+/- -L-, 4.5 FT. RT. TO STATION 55+08+/- -L-, 4.5 FT. RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALL.

TEMPORARY SHORING NO. 2B

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

DESIGN TEMPORARY SHORING FROM STATION 55+08+/- -L-, 4.5 FT. RT. TO STATION 57+00+/- -L-, 4.5 FT. RT., FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
 FRICTION ANGLE, $\phi = 28$
 COHESIONS, $c = 0$ PSF
 GROUNDWATER ELEVATION = 752 FT

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

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 55+08+/- -L-, 4.5 FT. RT. TO STATION 57+00+/- -L-, 4.5 FT. RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM 55+08+/- -L-, 4.5 FT. RT. TO STATION 57+00+/- -L-, 4.5 FT. RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALL.

TEMPORARY SHORING NO. 3

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

DESIGN TEMPORARY SHORING FROM STATION 55+19+/- -L-, 54.3 FT. RT. TO STATION 57+55+/- -L-, 54.3 FT. RT., FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
 FRICTION ANGLE, $\phi = 30$
 COHESIONS, $c = 0$ PSF
 GROUNDWATER ELEVATION = DRY

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

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 55+19+/- -L-, 54.3 FT. RT. TO STATION 57+55+/- -L-, 54.3 FT. 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 55+19+/- -L-, 54.3 FT. RT. TO STATION 57+55+/- -L-, 54.3 FT. RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALL.

TEMPORARY SHORING NO. 4

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

DESIGN TEMPORARY SHORING FROM STATION 20+88+/- -Y-, 45 FT. RT. TO STATION 21+73+/- -Y-, 45 FT. RT., FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
 FRICTION ANGLE, $\phi = 30$
 COHESIONS, $c = 0$ PSF
 GROUNDWATER ELEVATION = 856 FT

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

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 20+88+/- -Y-, 45 FT. RT. TO STATION 21+73+/- -Y-, 45 FT. RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 20+88+/- -Y-, 45 FT. RT. TO STATION 21+73+/- -Y-, 45 FT. RT. MAY NOT PENETRATE BELOW ELEVATION 845 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM 20+88+/- -Y-, 45 FT. RT. TO STATION 21+73+/- -Y-, 45 FT. RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING NO. 5

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

DESIGN TEMPORARY SHORING FROM STATION 18+00+/- -RPC-*, 11.5 FT. RT. TO STATION 20+00+/- -RPC-*, 11.5 FT. RT., FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
 FRICTION ANGLE, $\phi = 30$
 COHESIONS, $c = 0$ PSF
 GROUNDWATER ELEVATION = DRY

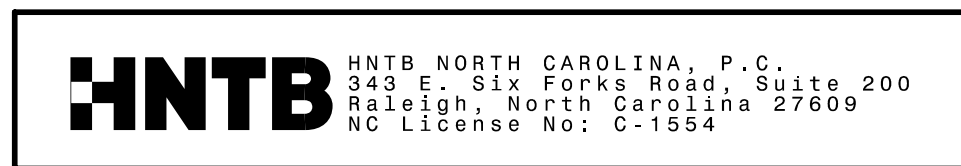
BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 18+00+/- -RPC-*, 11.5 FT. RT. TO STATION 20+00+/- -RPC-*, 11.5 FT. RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

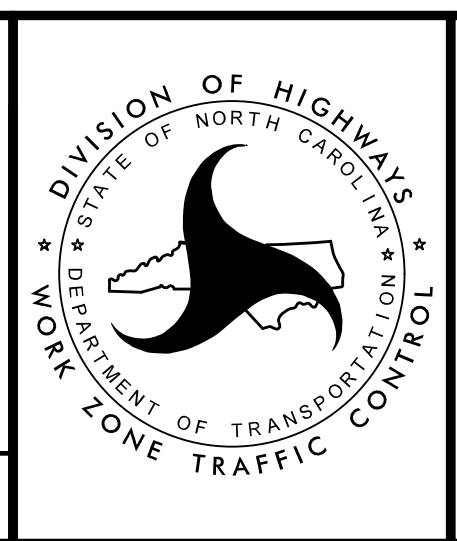
AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM 18+00+/- -RPC-*, 11.5 FT. RT. TO STATION 20+00+/- -RPC-*, 11.5 FT. RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALL.

NOTE: SHORING EVALUATED BY GEOTECH IS THE SAME ONE SHOWN IN TMP FROM -RPC_REV- STA 20+52+/- TO -RPC_REV- STA 22+52+/-.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTC SECTION ON AUGUST 19, 2022 AND SEALED BY A PROFESSIONAL ENGINEER, DANIEL P. GALLO, LICENSE #052028.



APPROVED: *Helen Shyu*
 DATE: 5/21/2024
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TRANSPORTATION
 MANAGEMENT PLAN

 TEMPORARY SHORING
 DATA

SHORING NOTES

TEMPORARY SHORING NO. **6**

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

DESIGN TEMPORARY SHORING FROM STATION 23+20+/- -Y-, 45 FT. RT. TO STATION 24+37+/- -Y-, 45 FT. RT., FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
- UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
- FRICITION ANGLE, $\phi = 30$
- COHESIONS, $c = 0$ PSF
- GROUNDWATER ELEVATION = DRY

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

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 23+20+/- -Y-, 45 FT. RT. TO STATION 24+37+/- -Y-, 45 FT. RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 23+20+/- -Y-, 45 FT. RT. TO STATION 24+37+/- -Y-, 45 FT. RT. MAY NOT PENETRATE BELOW ELEVATION 870 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM 23+20+/- -Y-, 45 FT. RT. TO STATION 24+37+/- -Y-, 45 FT. RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING NO. **7**

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

DESIGN TEMPORARY SHORING FROM STATION 23+41+/- -Y-, 55.7 FT. RT. TO STATION 27+50+/- -Y-, 22.4 FT. RT., FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
- UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
- FRICITION ANGLE, $\phi = 30$
- COHESIONS, $c = 0$ PSF
- GROUNDWATER ELEVATION = DRY

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

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 23+41+/- -Y-, 55.7 FT. RT. TO STATION 27+50+/- -Y-, 22.4 FT. RT., THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 23+41+/- -Y-, 55.7 FT. RT. TO STATION 27+50+/- -Y-, 22.4 FT. RT. MAY NOT PENETRATE BELOW ELEVATION 875 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM 23+41+/- -Y-, 55.7 FT. RT. TO STATION 27+50+/- -Y-, 22.4 FT. RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY SHORING.

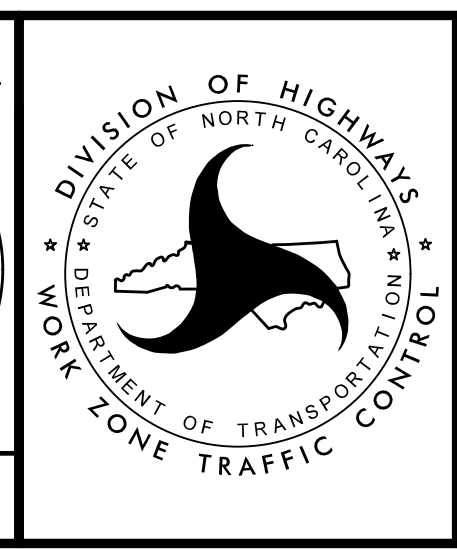
THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTC SECTION ON AUGUST 19, 2022 AND SEALED BY A PROFESSIONAL ENGINEER, DANIEL P. GALLO, LICENSE #052028.



APPROVED: *Helen Shyu*
DocuSigned by: Helen Shyu
OF 15875A85E44E
DATE: 5/21/2024

SEAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



TRANSPORTATION MANAGEMENT PLAN

TEMPORARY SHORING DATA

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PHASING

PROJ. REFERENCE NO.	SHEET NO.
U-5813	TMP-3

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.

CONSTRUCT 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 AND IA (SEE TMP-4 THRU TMP-4B FOR OVERVIEWS)

NOTE: AFTER STEP 1 IS COMPLETED, STEPS 2 THRU 7 MAY BE DONE SIMULTANEOUSLY AND COMPLETED IN ANY ORDER. (SEE STEP 3 FOR CULVERT WORK. SEE STEP 5 FOR BRIDGE WORK.)

STEP 1: USING RSD 1101.01 (SHEET 2 AND 3 OF 3), INSTALL WORK ZONE ADVANCE WARNING SIGNS ON -L-, -Y-, -Y17- (LEWALLEN RD), -LPA-, -RPA_REV-, -RPB_REV-, -LPC-, -RPC_REV-, AND -RPD_REV-.

STEP 2: -L- WIDENING (BEGIN OF PROJECT TO -Y4 REV-/-Y5-): COMPLETE STEPS 2A THRU 2C IN ORDER.

2A: USING RSD 1101.02 (SHEETS 1 AND 2 OF 19), BEGIN WEDGING AND WIDENING OF -L- FROM -L- STA 25+21.06+/- (TIE IN TO EXISTING PAVEMENT) TO -Y2-/-Y3- (INCLUDING -Y1-) AS MUCH AS POSSIBLE WHILE MAINTAINING -Y2- ACCESS. (SEE TMP-5 AND TMP-6) IF THE SUBBASE IS TO BE TREATED FOR STABILIZATION, STAGE CONSTRUCTION IN A MANNER THAT MAINTAINS DRIVEWAY ACCESS AND PLACED ANCHORED PCB ALONG -L- (RT). WHEN STABILIZATION IS DONE, USE A 6:1 OR FLATTER SLOPED WEDGE OF SUITABLE COMPACT MATERIAL ADJACENT TO TRAVEL WAY AND REMOVE PCB.

2B: COORDINATE TIMING WITH WEST SIDE FIRE DEPARTMENT, THEN USING RSD 1101.03 (SHEET 2 OF 9) CLOSE -Y3- AND COMPLETE -L- FROM -Y3- TO -L- STA 51+00+/- AS MUCH AS POSSIBLE. (SEE TMP-6 AND TMP-7)

2C: USING RSD 1101.02 (SHEETS 1 AND 2 OF 19), PLACE PAVEMENT MARKINGS ON -Y2- AND -Y3- AS SHOWN ON TMP-6A. SHIFT -Y2- AND -Y3- TO TEMPORARY PATTERN AS SHOWN ON TMP-6A. COMPLETE WIDENING OF -L- BETWEEN -Y2- AND -Y3-. AWAY FROM TRAFFIC, PLACE PHASE II PAVEMENT MARKINGS AS MUCH AS POSSIBLE AS SHOWN ON TMP-23.

STEP 3: -L- WIDENING AND CULVERT (-Y4 REV-/-Y5- TO -Y6-): COMPLETE STEPS 3A THRU 3C IN ORDER.

3A: AWAY FROM TRAFFIC, CONSTRUCT -TEMP_DRW1- AND UTILIZE TO MAINTAIN DRIVEWAY ACCESS DURING THE OPERATIONS BELOW AS NEEDED. (SEE TMP-7 AND 8)

3B: USING RSD 1101.02 (SHEETS 1 AND 2 OF 19), PLACE TEMPORARY PAVEMENT MARKINGS ON -L- AS SHOWN ON TMP-7 AND TMP-8. SHIFT -L- INTO TEMPORARY PATTERN, THEN USING RSD 1101.02 (SHEET 1 OF 19) IF NEEDED, PLACE PCB AND CRASH CUSHION FROM -L- STA 52+57+/- TO -L- STA 57+79+/- AS SHOWN ON TMP-7 AND TMP-8. AWAY FROM TRAFFIC PLACE SHORING #1, INSTALL PORTION OF PROPOSED CULVERT, AND REMOVE PORTION OF EXISTING CULVERT. COORDINATE TO REPLACE ADJACENT 60" RCP AT DRIVEWAY.

3C: INSTALL SHORING #2 AND CONSTRUCT -L- RT BETWEEN -L- STA 51+00+/- TO -L- STA 61+38+/-, - INCLUDING DRIVEWAYS. INSTALL SHORING #3 IF NEEDED TO MAINTAIN -TEMP_DRW1-. (SEE TMP-7 AND 8) AWAY FROM TRAFFIC, PLACE PHASE II PAVEMENT MARKINGS AS MUCH AS POSSIBLE AS SHOWN TMP-24 AND 25.

STEP 4: -L- WIDENING (-Y6- TO -L- STA 83+30+/-): USING RSD 1101.02 (SHEETS 1 AND 2 OF 19), WEDGE AND WIDEN -L- FROM -L- STA 61+38+/- TO -L- STA 83+30+/- AS MUCH AS POSSIBLE (INCLUDING -Y8- AND -Y10-). (SEE TMP-8 THRU 10). IF THE SUBBASE IS TO BE TREATED FOR STABILIZATION, STAGE CONSTRUCTION IN A MANNER THAT MAINTAINS DRIVEWAY ACCESS AND PLACED ANCHORED PCB ALONG -L- (RT). WHEN STABILIZATION IS DONE, USE A 6:1 OR FLATTER SLOPED WEDGE OF SUITABLE COMPACT MATERIAL ADJACENT TO TRAVEL WAY AND REMOVE PCB.

PHASE I AND IA (CONTINUED)

NOTE: COMPLETE STEPS 4A AND 4B IN NO PARTICULAR ORDER, BUT NOT SIMULTANEOUSLY:

4A: USING RSD 1101.03 (SHEETS 1 AND 2 OF 9) AND TMP-2F, CLOSE -Y7- AND COMPLETE -Y7-. MAINTAIN DRIVEWAY ACCESS WITH GRAVEL AS NEEDED. OPEN BACK UP TO TRAFFIC AS SOON AS POSSIBLE. (SEE TMP-8)

4B: USING RSD 1101.03 (SHEETS 1 AND 2 OF 9) AND TMP-2G, CLOSE -Y9- AND COMPLETE -Y9-. OPEN BACK UP TO TRAFFIC AS SOON AS POSSIBLE. (SEE TMP-9)

STEP 5: -Y- BRIDGE OVER -L-, -YSLIP-, -SRV REV-, -Y14- AND -RPC REV-: COMPLETE STEPS 5A THRU 5F. STEPS MAY BE DONE AT THE SAME TIME AND IN ANY ORDER UNLESS STATED OTHERWISE AND AS LONG AS IT IS DONE IN A MANNER THAT MAINTAINS DRAINAGE AND BUSINESS ACCESS IN THE AREA.

5A: USING RSD 1101.02 (SHEET 1 OF 19), INSTALL TEMPORARY GUARDRAIL AND ATTACH TO EXISTING BRIDGE. THEN AWAY FROM TRAFFIC, INSTALL SHORING #4 AND CONTRACTOR MAY BEGIN CONSTRUCTING -Y- FROM -DRW02- TO BRIDGE END BENT. (SEE TMP-11 AND 13)

5B: COORDINATE WITH LOCAL BUSINESSES REGARDING ACCESS (MAINLY VIA -Y12-, UTILIZING -Y14- ONLY DURING ACTIVE WORK), THEN USING RSD 1101.03 (SHEETS 1 AND 2 OF 9), CONSTRUCT -SRV_REV- AND -Y14-. USING NARROW LANE AND RSD 1101.02 (SHEET 3 OF 19), CONSTRUCT MEDIAN ISLAND ON -Y12-. (SEE TMP-11 AND 13) USING RSD 1101.02 (SHEET 1 AND 2 OF 19), PLACE TEMPORARY PAVEMENT MARKINGS AND OPEN -SRV_REV- AND -Y14- TO TRAFFIC. (SEE TMP-14 AND 16)

5C: USING RSD 1101.02 (SHEET 1, 2, AND 7 OF 19), WEDGE AND WIDEN -Y- (LT) FROM -Y12- TO -Y- STA 20+28+/-, INCLUDING -DRW02-, AND TEMPORARY TIE TO EXISTING PAVEMENT AT -Y- STA 21+32+/- (MAX 2% GRADE). INSTALL TEMPORARY SIGNAL AT -Y- AND -Y12-. THEN USING RSD 1101.02 (SHEET 1, 2, AND 7 OF 19), PLACE TEMPORARY PAVEMENT MARKINGS ON -Y- AS SHOWN ON TMP-11 AND 13 AND SHIFT -Y- TO TEMPORARY PATTERN. (SEE TMP-11 AND 13)

5D: COMPLETE STEP 5B AND 5C. USING RSD 1101.02 (SHEET 1, 2, AND 7 OF 19), CONSTRUCT -Y- (RT) FROM -Y12- TO -Y SLIP-. USING NARROW LANES AND NIGHT TIME DETOURS AS SHOWN ON TMP-2H AS NEEDED, COMPLETE -Y SLIP- AND THEN USE DRUMS TO KEEP -L- IN INSIDE LANE AND TEMPORARY TIE -Y_SLIP- TO EXISTING -L-. (SEE TMP-11, 13, AND 14)

5E: REMOVE EXISTING OVERHEAD SIGNS ON -L- NEAR -RPC_REV-, THEN INSTALL EXISTING OVERHEAD SIGN ON TEMPORARY WOODEN POSTS AND INSTALL TRAILBLAZERS ON U-POSTS. USING RSD 1101.02 (SHEETS 3 AND 7 OF 19) AND NARROW LANE, REMOVE EXISTING MEDIAN AND PLACE TEMPORARY PAVEMENT ON -L- AS SHOWN ON TMP-11 AND 12. SEE STRUCTURE PLANS FOR MEDIAN REMOVAL ON BRIDGE. USING NARROW LANES AND RSD 1101.02 (SHEET 3 OF 19), CONSTRUCT -TEMP_RPBC1- AS SHOWN ON TMP-12. INSTALL TEMPORARY SIGNAL AT -RPBC- AND -L-, USING RSD 1101.02 (SHEETS 3 AND 7 OF 19) TO PLACE TEMPORARY PAVEMENT MARKINGS, INSTALL TEMP SIGNS AS SHOWN ON TMP-11 AND 12, SHIFT TRAFFIC TO TEMPORARY INTERSECTION PATTERN AND CLOSE -RPC-. USING NARROW LANES ON -LPC- AS NEEDED, INSTALL SHORING #5 AND TEMPORARY GUARDRAIL. PLACE DRUMS ON -Y20- (I-72/I-74/US 220) AND AWAY FROM TRAFFIC CONSTRUCT -RPC_REV- AND SOUND BARRIER WALL. (SEE TMP-11 AND 12)

5F: ONCE -Y_SLIP- IS COMPLETE (IN STEP 5D) AND -RPC_REV- IS CLOSED TO TRAFFIC (IN STEP 5E), USE DRUMS TO KEEP -L- EB IN THE INSIDE LANE (AFTER GOING UNDER BRIDGE), USE RSD 1101.02 (SHEET 3 OF 19) TO WIDEN -L- (RT) FROM -Y_SLIP- TO -RPC_REV- AND GRADE -L- EB TO DRAIN. COORDINATE WITH LOCAL BUSINESS FOR ACCESS TO -SRV_REV- AND -Y14-. (SEE TMP-11 AND 12)

STEP 6: -RPC REV-, -RPBC-, -RPB REV-, -Y-, -Y17-, AND -Y17A-(PHASE IA): COMPLETE STEP 5E, THEN COMPLETE STEPS 6A THRU 6C. STEPS MAY BE DONE AT THE SAME TIME AND IN ANY ORDER. COORDINATE STEP 6A AND 6B CONSTRUCTION OF -RPBC- EXTENTS.

6A: COMPLETE PHASE I STEP 5F. USING RSD 1101.02 (SHEETS 3 AND 7 OF 19), REMOVE EXISTING MEDIAN ON -L- FROM -RPC_REV-/-RPBC- TO -L- STA 115+65+/- AND PLACE TEMPORARY PAVEMENT AS SHOWN ON TMP-15. INSTALL AND COVER TEMP SIGNS FOR I-73 SOUTH/I-74 EAST/US-220 SOUTH. USING RSD 1101.02 (SHEET 3 AND 7 OF 19), PLACE TEMPORARY PAVEMENT MARKINGS, INSTALL TEMPORARY SIGNAL, AND OPEN -RPC_REV- AND SHIFT TRAFFIC TO TEMPORARY PATTERN. CLOSE EXISTING -RPBC- LOOP AND -TEMP_RPBC1-. AWAY FROM TRAFFIC, REMOVE EXISTING RAMP/LOOP AND -TEMP_RPBC- AND THEN BEGIN CONSTRUCTING -RPBC-. (SEE TMP-15)

PHASE I AND IA (CONTINUED)

6B: INSTALL TEMP SIGNAL AT -Y- AND -Y17-. USING TMP-2A, CLOSE EXISTING -RPBC-. USING RSD 1101.02 (SHEET 2, 3, 7, AND 10 OF 19) AND NARROW LANES, WEDGE AND WIDEN -Y- FROM STA 32+74+/- TO THE EXISTING BRIDGE OVER I-73 / I-74 / US 220, -RPB REV-, AND CONSTRUCT -RPBC- TIE IN. (SEE TMP-17) MAY BEGIN REPLACING BRIDGE JOINTS USING RSD 1101.02 (SHEETS 3 AND 7 OF 9).

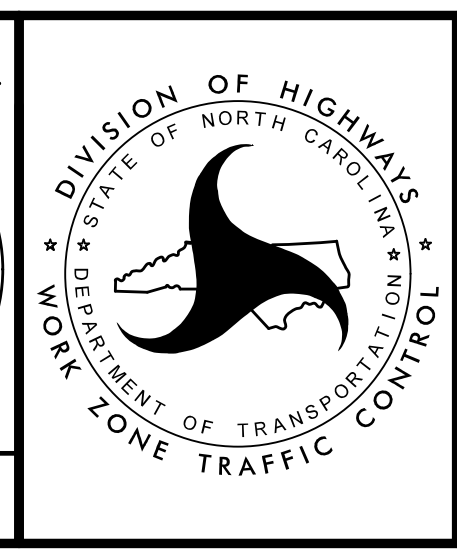
6C: USING RSD 1101.02 (SHEET 1, 2 AND 3 OF 19), CONSTRUCT -Y17- AND TEMP PAVEMENT AT -Y19- EXISTING ELEVATION AS SHOWN ON TMP-17. AWAY FROM TRAFFIC, PLACE PHASE II PAVEMENT MARKING ON -Y17- AS SHOWN ON TMP-32 AND CONSTRUCT -Y17A-.

STEP 7: -Y13- (DUNDEE STREET) (PHASE IA): USING RSD 1101.02 (SHEETS 1 AND 2 OF 19), CONSTRUCT -Y13- AND TEMP TIE IN TO EXISTING ROAD AT -Y13- STA 11+00+/- AS SHOWN ON TMP-14. AWAY FROM TRAFFIC, PLACE PHASE II TEMPORARY PAVEMENT MARKINGS AS MUCH AS POSSIBLE AS SHOWN ON TMP-28.

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11/28/2023



APPROVED: Helen Shyu
DATE: 5/21/2024
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TRANSPORTATION
MANAGEMENT PLAN

PHASING

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UNLESS ALL SIGNATURES COMPLETED**

PHASING

PHASE II AND IIA (SEE TMP-20 THRU TMP-20B FOR OVERVIEWS)

PHASE II AND IIA (CONTINUED)

PHASE III (SEE TMP-43 FOR OVERVIEW)

NOTE: PHASE II STEPS 1 THRU 3 MAY BE DONE SIMULTANEOUSLY AS PHASE I STEPS 2 THRU 7 AND COMPLETED IN ANY ORDER UNLESS OTHERWISE STATED. (SEE PHASE II STEP 2B AND 3A FOR BRIDGE CONSTRUCTION. SEE PHASE II STEP 3B FOR BRIDGE REMOVAL AND -L- WIDENING.)

STEP 1: **-L- WIDENING (BEGIN OF PROJECT TO -Y11-/-Y12-) AND CULVERT:** AFTER PHASE I STEPS 1 THRU 4 ARE COMPLETED, CONTRACTOR MAY THEN COMPLETE PHASE II STEP 1A. PHASE II STEPS 1B THRU 1D MAY BE DONE AT THE SAME TIME, AFTER PHASE II STEP 1A. (SEE PHASE II STEP 1C FOR CULVERT WORK)

1A: AWAY FROM TRAFFIC, INSTALL PHASE II PAVEMENT MARKINGS BETWEEN -L- STA 61+38+/- TO -L- STA 83+30+/- AS MUCH AS POSSIBLE AND INSTALL PCB FROM -L- STA 50+40+/- TO 57+59+/- . (SEE TMP-21 THRU 27)

USING RSD 1101.02 (SHEET 3 AND 7 OF 19), COMPLETE -L- EB PAVEMENT MARKINGS FROM -L- STA 17+86+/- TO STA 84+17+/-, INCLUDING -Y-LINES ON RIGHT SIDE OF -L-, AND SHIFT -L- EB INTO PHASE II PATTERN. THEN USING RSD 1101.02 (SHEET 3 AND 7 OF 19), COMPLETE -L- WB PAVEMENT MARKINGS FROM WHERE PAVEMENT MARKINGS TIE TO EXISTING IN PMP-3 TO -L- STA 86+28, INCLUDING -Y-LINES ON LEFT SIDE OF -L-, AND SHIFT -L- WB INTO PHASE II PATTERN. (SEE TMP-21 THRU 27)

1B: USING RSD 1101.02 (SHEET 1 AND 2 OF 19) AND FLAGGERS AS NEEDED, COMPLETE -Y1- STA 11+68+/- THRU -L- STA 41+82+/- CURB AND GUTTER AND CONSTRUCT MEDIAN ISLANDS ON -L- AS SHOWN ON TMP-21 THRU 27.

USING RSD 1101.02 (SHEET 1 AND 2 OF 19), PLACE PCB AS SHOWN ON TMP-23 AND 24 AND COMPLETE STABILIZATION OF PAVEMENT FROM -L- STA 43+75+/- TO 44+25+/- . WHEN COMPLETED, REMOVE PCB.

1C: **-TEMP-DRW1-** SHOULD NO LONGER BE NEEDED AND SHORING #3 MAY BE REMOVED TO COMPLETE SLOPE FOR -L-. AWAY FROM TRAFFIC, REMOVE PCB INSTALLED IN PHASE I, REMOVE SHORING #1, REMOVE THE REST OF THE EXISTING CULVERT, COMPLETE PROPOSED CULVERT, AND CONSTRUCT -L- WB FROM -L- STA 51+00+/- TO STA 57+00+/- . (SEE TMP-24 AND 25)

USING RSD 1101.02 (SHEET 1 AND 2 OF 19), PLACE PCB ALONG -Y5- AS SHOWN ON TMP-24. AWAY FROM TRAFFIC, COMPLETE STABILIZATION OF PAVEMENT FROM -L- STA 49+75+/- TO 50+25+/- . WHEN COMPLETED, REMOVE PCB ALONG -Y5-, REMOVE PCB PLACED IN PHASE II STEP 1A FROM -L- STA 50+40+/- TO STA 52+58+/- , AND RESET CRASH CUSHION.

1D: USING TMP-2I AND GRAVEL TO MAINTAIN DRIVEWAY ACCESS AS NEEDED, CONSTRUCT -Y6-. (SEE TMP-25)

STEP 2: **-RPBC-, -RPB REV-, -Y-, -Y13-, -Y17-, AND -Y17A-:** COMPLETE PHASE II STEPS 2A, THEN STEPS 2B THRU 2D MAY BE DONE AT THE SAME TIME AND IN ANY ORDER UNLESS STATED OTHERWISE.

2A: COMPLETE PHASE I STEP 6. USING RSD 1101.02 (SHEETS 1 AND 2 OF 19), SHIFT -Y17- TO NEW ALIGNMENT, CLOSE EXISTING INTERSECTION (REMOVE EXISTING SIGNAL AND STOP BARS) AND COMPLETE -Y17A-. USING RSD 1101.02 (SHEET 1, 2, 3 AND 7 OF 19), PLACE TEMP PAVEMENT MARKINGS ON -Y- FROM STA 24+70+/- TO BRIDGE OVER I-73 / I-74 / US 220. INSTALL TEMPORARY SIGNAL AT -Y- AND -RPB REV- / -RPBC- AND -Y17-/-Y19-, INSTALL TEMPORARY SIGNAL AT -L- AND -RPBC-/-RPC REV-, OPEN -RPBC- TO TRAFFIC AND SHIFT -Y- INTO NEW PATTERN, INCLUDING PERMENTLY CLOSING RAMP FROM -Y- TO -L- WB RAMP NEAR BRIDGE. (SEE TMP-28 AND 32)

2B: COMPLETE PHASE I STEP 7. USING RSD 1101.02 (SHEETS 1 AND 2 OF 19), INSTALL -Y13- TEMP PAVEMENT MARKINGS AND DEVICES AND SHIFT -Y13- TO PHASE II PATTERN. THEN USING RSD 1101.02 (SHEETS 1 AND 2 OF 19), INSTALL TEMPORARY GUARDAIL ON -Y- AT EXISTING BRIDGE OVER -L-. AWAY FROM TRAFFIC, CONSTRUCT END BENT 2, INSTALL SHORING #6 AND #7, CONSTRUCT -L- FROM BRIDGE TO -Y- STA 28+50+/-, AND USING RSD 1101.03 (SHEET 9 OF 9), HANG GIRDERS FOR PROPOSED BRIDGE OVER -L-. (SEE TMP-28 AND 32) AWAY FROM TRAFFIC, INSTALL PHASE IIA TEMPORARY PAVEMENT MARKINGS ON -Y- SHOWN ON TMP-35 AS MUCH AS POSSIBLE.

2C: USING RSD 1101.02 (SHEET 3 OF 19) AND NARROW LANE ON -RPD_REV- AS NEEDED, CONSTRUCT -TEMP_RPD-. (SEE TMP-30)

USING RSD 1101.02 (SHEET 7 OF 19), REMOVE MEDIAN BETWEEN -L- STA 115+06+/- TO STA 119+50+/- AND PLACE TEMP PAVEMENT. (SEE TMP-30)

2D: USING TMP-2B, CLOSE -RPA_REV- AND DETOUR TRAFFIC ONTO THE OPENED -RPBC- TO EXISTING LOOP D. THEN COMPLETE STEP 2E, 2F, AND 2G.

NOTE: PHASE II STEPS 2E THRU 2G MAY BE DONE AT THE SAME TIME AND COMPLETED IN ANY ORDER ONCE PHASE II STEP 2D IS COMPLETED.

COMPLETE THE REQUIREMENTS OF PHASE II STEP 2E IN TWO WEEKENDS FROM 8:00 PM FRIDAY TO 6:00 AM MONDAY (SEE INTERMEDIATE CONTRACT TIME FOR LIQUIDATED DAMAGES)

2E: USING RSD 1101.02 (SHEET 17 OF 19) AND PCB AS NEEDED, STABILIZE PART OF SUBGRADE BETWEEN STA 46+25+/- TO 50+75+/- . REPAIR PAVEMENT, REMOVE PCB, AND OPEN TRAFFIC BACK TO EXISTING PATTERN. COMPLETE STABILIZATION OF -Y- IN SECOND WEEKEND AND OPEN TRAFFIC BACK TO EXISTING PATTERN.

2F: COMPLETE PHASE II STEP 2C, THEN USING RSD 1101.02 (SHEETS 3 AND 7 OF 19), WEDGE AND WIDEN -Y- FROM BRIDGE OVER I-73 / I-74 / US 220 TO -Y- STA 50+78.21. COMPLETE BRIDGE JOINTS REPLACEMENT. (SEE STRUCTURE PLANS)

2G: COMPLETE AWAY FROM TRAFFIC, CONSTRUCT -RPA REV-, PART OF -RPDA-, AND -TEMP_RPDA-. (SEE TMP-30 AND 33) AWAY FROM TRAFFIC, INSTALL PHASE IIA TEMPORARY PAVEMENT MARKINGS ON -RPA_REV-, -RPDA-, AND -TEMP_RPDA- SHOWN ON TMP-39 AS MUCH AS POSSIBLE.

STEP 3: **-Y-, -Y13-, -Y19-, -RPA REV-, -RPDA-, AND -L- (PHASE IIA):** COMPLETE PHASE II STEPS 3A AND 3B IN ORDER. STEPS 3C AND 3D MAY BE DONE AT THE SAME TIME AND IN ANY ORDER, AFTER PHASE II STEPS 3A AND 3B ARE COMPLETED.

3A: COMPLETE PHASE II STEPS 2C AND 2D. USING NARROW LANES AND FLAGGERS AT NIGHT, CONSTRUCT -TEMP_RPDA- TIE IN TO EXISTING RAMP AT -L- AS SHOWN ON TMP-30. USING RSD 1101.02 (SHEETS 3 AND 7 OF 19), PLACE TEMPORARY PAVEMENT MARKINGS ON -Y- FROM BRIDGE OVER I-73 / I-74 / US 220 TO -Y- STA 50+78.21, INSTALL TEMP SIGNAL AT -Y- AND -RPA_REV- / -RPDA-, AND OPEN -RPA_REV- AND -TEMP_RPDA- TO TRAFFIC. (SEE TMP-36, 39 AND 40)

3B: COMPLETE PHASE I STEP 5A AND PHASE II STEP 2B. USING RSD 1101.02 (SHEETS 1, 2, AND 7 OF 19), INSTALL TEMPORARY PAVEMENT MARKINGS ON -Y- FROM -Y12- TO -Y- STA 35+34+/-, INSTALL TEMPORARY SIGNALS AT -Y- AND -Y12- AND -Y17-/-Y19-, USE TMP-2J TO CLOSE -Y19-, AND SHIFT -Y- TRAFFIC ONTO PROPOSED BRIDGE. USING RSD 1101.02 (SHEET 1, 2, 3, AND 7 OF 19) AS NEEDED, COMPLETE -Y- FROM STA 29+00+/- TO STA 34+68+/- (RT), INCLUDING -Y19- FROM INTERSECTION TO STA 11+19+/- . (SEE TMP-35, 37, AND 38)

3C: USING RSD 1101.03 (SHEET 9 OF 9), REMOVE EXISTING BRIDGE OVER -L- AND APPROACHES. USING RSD 1101.02 (SHEETS 1 AND 7 OF 19) AND NARROW LANES AS NEEDED, COMPLETE GORE AREA BETWEEN -Y- AND -Y SLIP-. INSTALL TEMP SIGNAL AT -L- AND -Y11-/-Y12-, THEN USING RSD 1101.02 (SHEETS 1, 2, AND 7 OF 19), WEDGE AND WIDEN -L- FROM STA 83+30+/- TO STA 103+14+/-, INCLUDING -Y12- AND -Y13-. (SEE TMP-27 AND 35)

3D: USING RSD 1101.02 (SHEET 7 OF 19), INSTALL TEMP PAVEMENT MARKINGS ON -L- AS SHOWN ON TMP-36. INSTALL TEMP SIGNAL AT -L- AND -TEMP_RPD- AND OPEN TO PHASE IIA PATTERN. USING TMP-2C, DETOUR -LPA- ONTO -TEMP_RPD-. USING RSD 1101.02 (SHEETS 3, 10, AND 13 OF 19) AND NARROW LANES AS NEEDED, CONSTRUCT -LPA- AND -RPDA- AS MUCH AS POSSIBLE. (SEE TMP-36). MAY BEGIN REPLACING BRIDGE JOINTS USING RSD 1101.02 (SHEETS 3 AND 7 OF 9). BRIDGE JOINTS MUST BE COMPLETED BEFORE PLACING PROPOSED MEDIAN ISLAND IN PHASE III.

STEP 1: **-L-, -LPC-, -RPDA-:** COMPLETE PHASE III STEPS 1A THRU 1C IN ORDER.

1A: COMPLETE PHASE II STEP 1, STEP 3C, AND 3D. USING RSD 1101.02 (SHEET 3 AND 7 OF 19), PLACE TEMPORARY PAVEMENT MARKINGS AS PROPOSED IN PMP FROM -L- STA 30+62.5+/- TO -RPC_REV-/-RPBC- (RT) AND -Y19- (LT), INSTALL TEMP SIGNAL AT -L- AND -Y11-/-Y12-, OPEN -LPA- AND SHIFT -L- TO PHASE III TRAFFIC PATTERN. COMPLETE BRIDGE JOINTS REPLACEMENT AND USING RSD 1101.02 (SHEETS 3 AND 7 OF 19), CONSTRUCT MEDIAN ISLANDS CURB AND GUTTER. (SEE TMP- 44 THRU 47)

1B: USING POLICE AND NARROW LANES, COMPLETE -RPDA- AND PAVEMENT MARKINGS, SHIFT TRAFFIC FROM EXISTING RAMP ONTO PROPOSED -RPDA-. USING RSD 1101.02 (SHEET 12 OF 19) AND TMP-2E, CLOSE EXISTING RPD AND -TEMP_RPD- AND DETOUR TRAFFIC ONTO -LPA-. (EXISTING LOOP D IS STILL OPEN) (SEE TMP-47 AND 50)

USING RSD 1101.02 (SHEET 12 OF 19) AND TMP-2D, CLOSE EXISTING -LPC- AND DETOUR TRAFFIC ONTO -RPB_REV- AND -RPBC-. USING NARROW LANES AND RSD 1101.02 (SHEET 3 OF 19) AS NEEDED, CONSTRUCT -LPC-. (SEE TMP-46)

USING RSD 1101.02 (SHEET 3 AND 7 OF 19), WEDGE AND WIDEN -L- FROM -RPDA- TO -L- STA 129+34.14 AND PLACE PHASE III TEMP PAVEMENT MARKINGS. INSTALL TEMPORARY SIGNAL AT -L- AND -RPDA- AND SHIFT TRAFFIC TO PHASE III TRAFFIC PATTERN. CLOSE EXISTING LOOP D (RAMP TRAFFIC WILL UTILIZE -RPDA- AS PROPOSED), THEN USING RSD 1101.02 (SHEET 3 OF 19), WEDGE AND WIDEN -L- FROM -LPC- TO -RPD_REV- (RT) AND REMOVE EXISTING LOOP, REMOVE -TEMP_RPD-, AND CONSTRUCT -RPD_REV-. (SEE TMP-46 THRU 48)

1C: USING RSD 1101.03 (SHEET 9 OF 9) AS NEEDED, CONSTRUCT OVERHEAD SIGN STRUCTURES ON -L-. (SEE TMP-46 AND 47)

STEP 2: **-L- AND -Y19- (PHASE IIIA):** COMPLETE PHASE III STEP 1, THEN PHASE III STEPS 2A AND 2B MAY BE COMPLETED AT THE SAME TIME OR IN ANY ORDER.

2A: USING FLAGGERS, CLOSE -Y19- TO THRU TRAFFIC AND CONSTRUCT PROPOSED CUL-DE-SAC WITH FLAGGERS. THEN USING RSD 1101.02 (SHEET 3 OF 19), WEDGE AND WIDEN -L- FROM -L- STA 103+14+/- TO -RPBC- AND PLACE TEMPORARY PAVEMENT MARKINGS. USING RSD 1101.03 (SHEET 9 OF 9) AS NEEDED, CONSTRUCT OVERHEAD SIGN STRUCTURE ON -L-. (SEE TMP-51 AND 52)

2B: USING RSD 1101.02 (SHEET 3 OF 19), COMPLETE PAVEMENT MARKINGS BETWEEN -LPC- AND -L- STA 129+34.14, INSTALL TEMPORARY SIGNALS AT -L- AND -RPBC-/-RPC_REV- AND -RPD_REV-/-RPDA-, AND OPEN -RPD_REV- AND -LPC- TO TRAFFIC. (SEE TMP-52 AND 53)

PHASE IV

STEP 1: COMPLETE ALL REMAINING WORK.

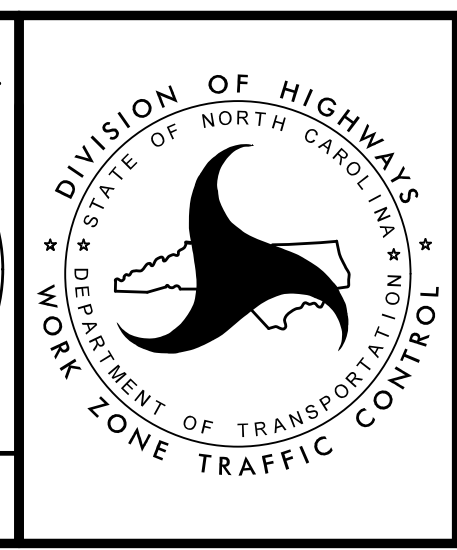
USING RSD 1101.02 (SHEETS 1, 2, 3, 4, 7, 10, AND 11 OF 19) AS NEEDED, COMPLETE RESURFACING OF -L- THEN PLACE FINAL LAYER OF SURFACE AND FINAL PAVEMENT MARKINGS AND MARKERS.

2: REMOVE ALL TRAFFIC CONTROL DEVICES.

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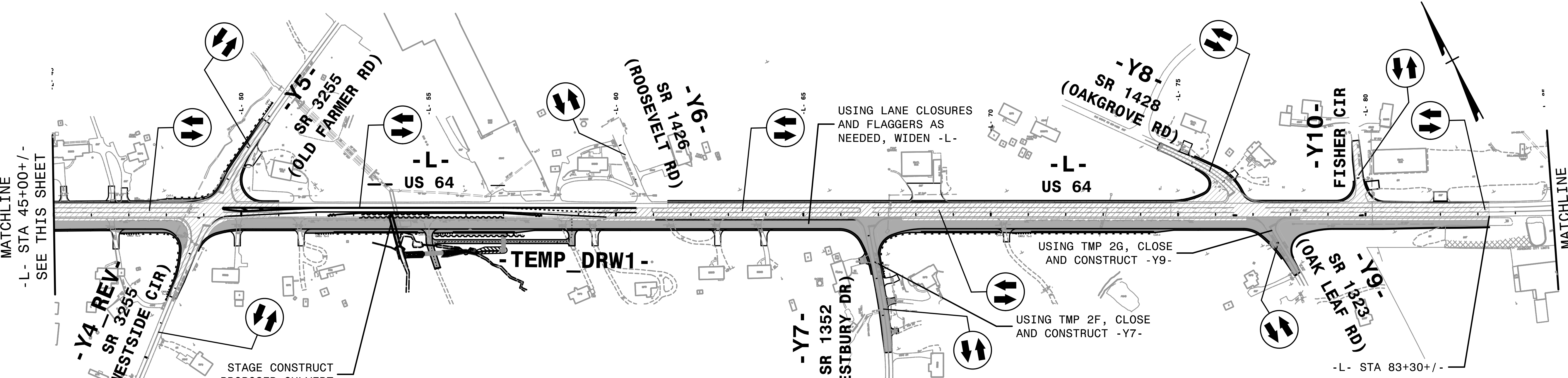
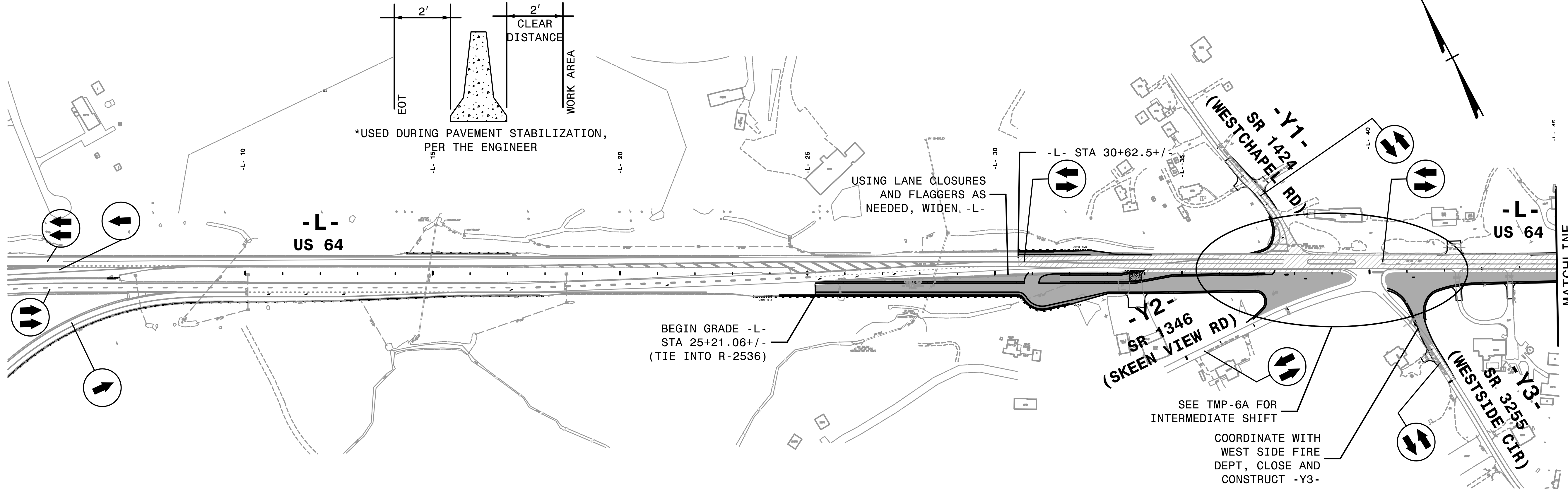


TRANSPORTATION MANAGEMENT PLAN

PHASING

ANCHORED PCB PLACEMENT TYPICAL

PROJ. REFERENCE NO.	SHEET NO.
U-5813	TMP-4



MATCHLINE
-L- STA 45+00+/-
SEE THIS SHEET

MATCHLINE
-L- STA 85+00+/-
SEE SHEET TMP-4A

SCALE 1" = 150'

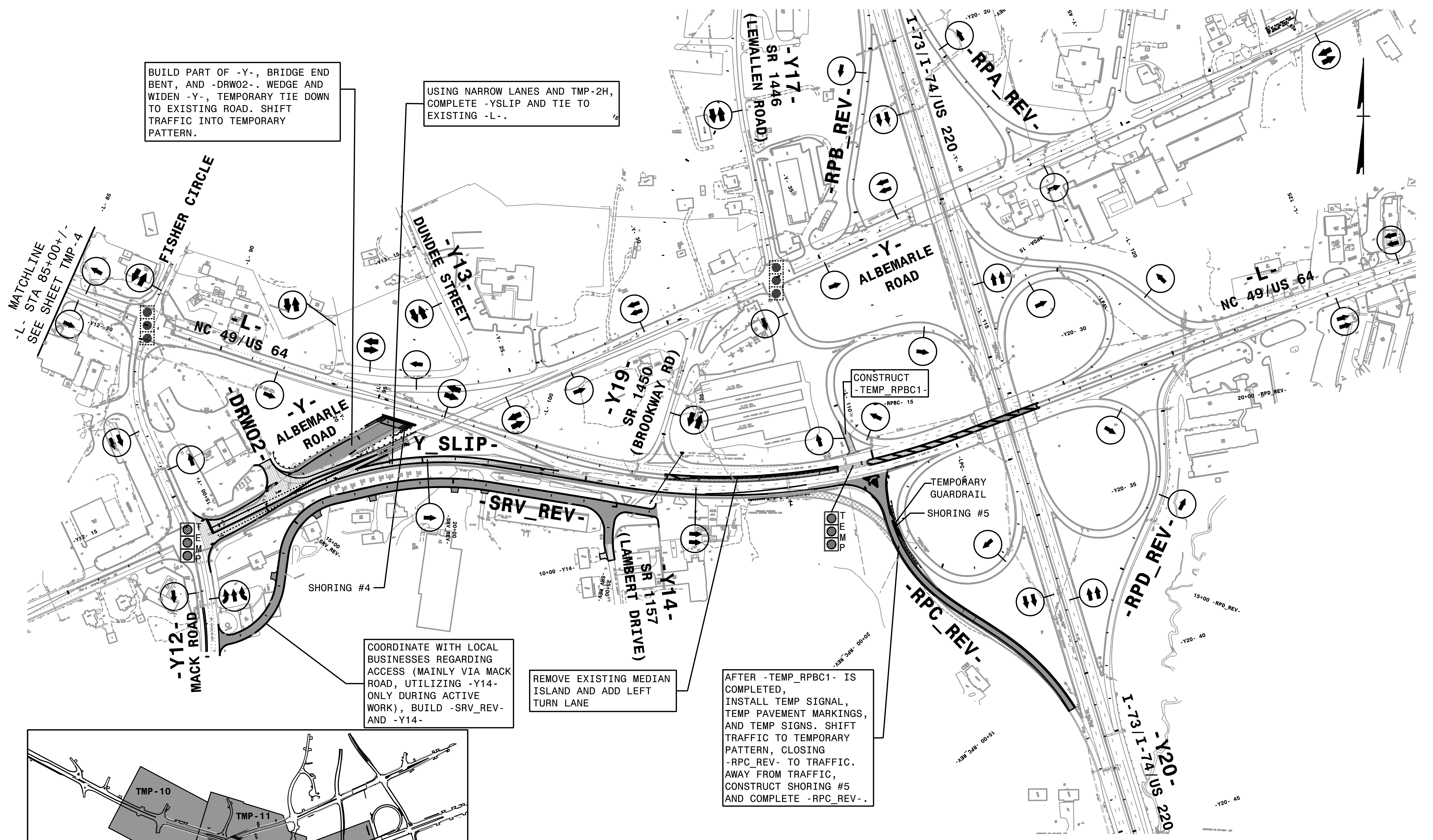
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NC License No: C-1554

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DATE: 5/21/2024
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 042517
HELEN SHYU

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
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TRANSPORTATION MANAGEMENT PLAN
PHASE I OVERVIEW

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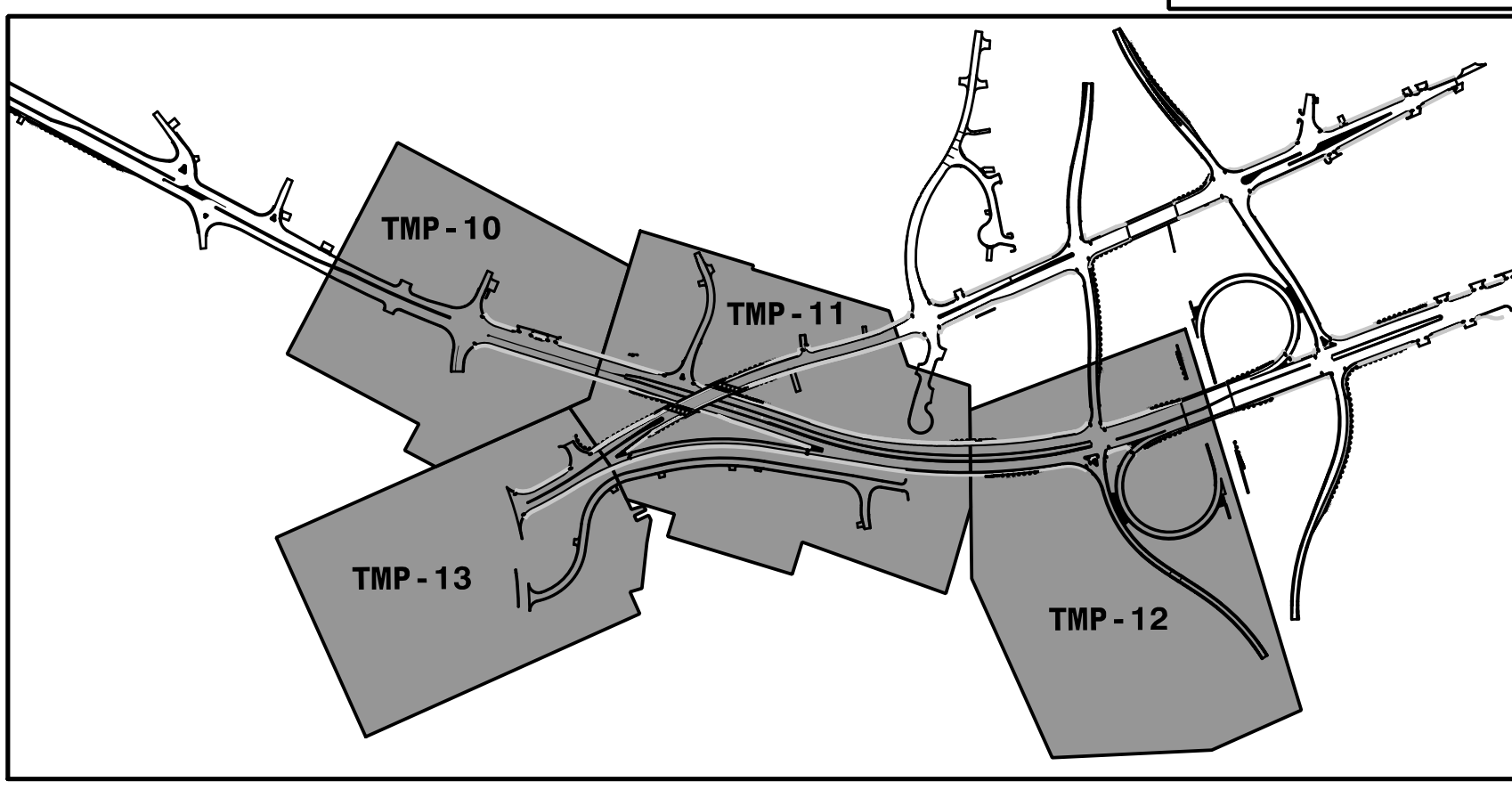
BUILD PART OF -Y-, BRIDGE END BENT, AND -DRW02-. WEDGE AND WIDEN -Y-, TEMPORARY TIE DOWN TO EXISTING ROAD. SHIFT TRAFFIC INTO TEMPORARY PATTERN.

USING NARROW LANES AND TMP-2H, COMPLETE -YSLIP AND TIE TO EXISTING -L-.

COORDINATE WITH LOCAL BUSINESSES REGARDING ACCESS (MAINLY VIA MACK ROAD, UTILIZING -Y14- ONLY DURING ACTIVE WORK), BUILD -SRV_REV- AND -Y14-

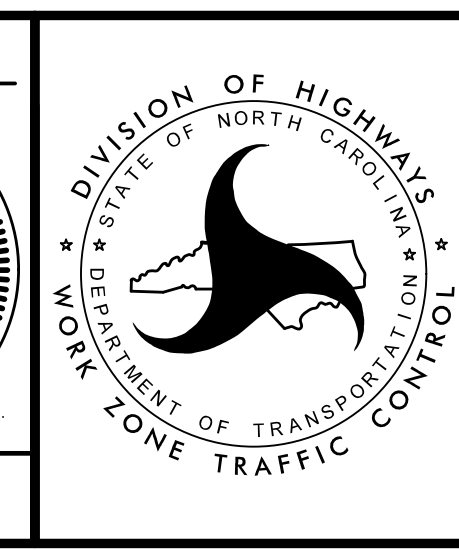
REMOVE EXISTING MEDIAN ISLAND AND ADD LEFT TURN LANE

AFTER -TEMP_RPBC1- IS COMPLETED, INSTALL TEMP SIGNAL, TEMP PAVEMENT MARKINGS, AND TEMP SIGNS. SHIFT TRAFFIC TO TEMPORARY PATTERN, CLOSING -RPC_REV- TO TRAFFIC. AWAY FROM TRAFFIC, CONSTRUCT SHORING #5 AND COMPLETE -RPC_REV-.



SCALE 1" = 150'

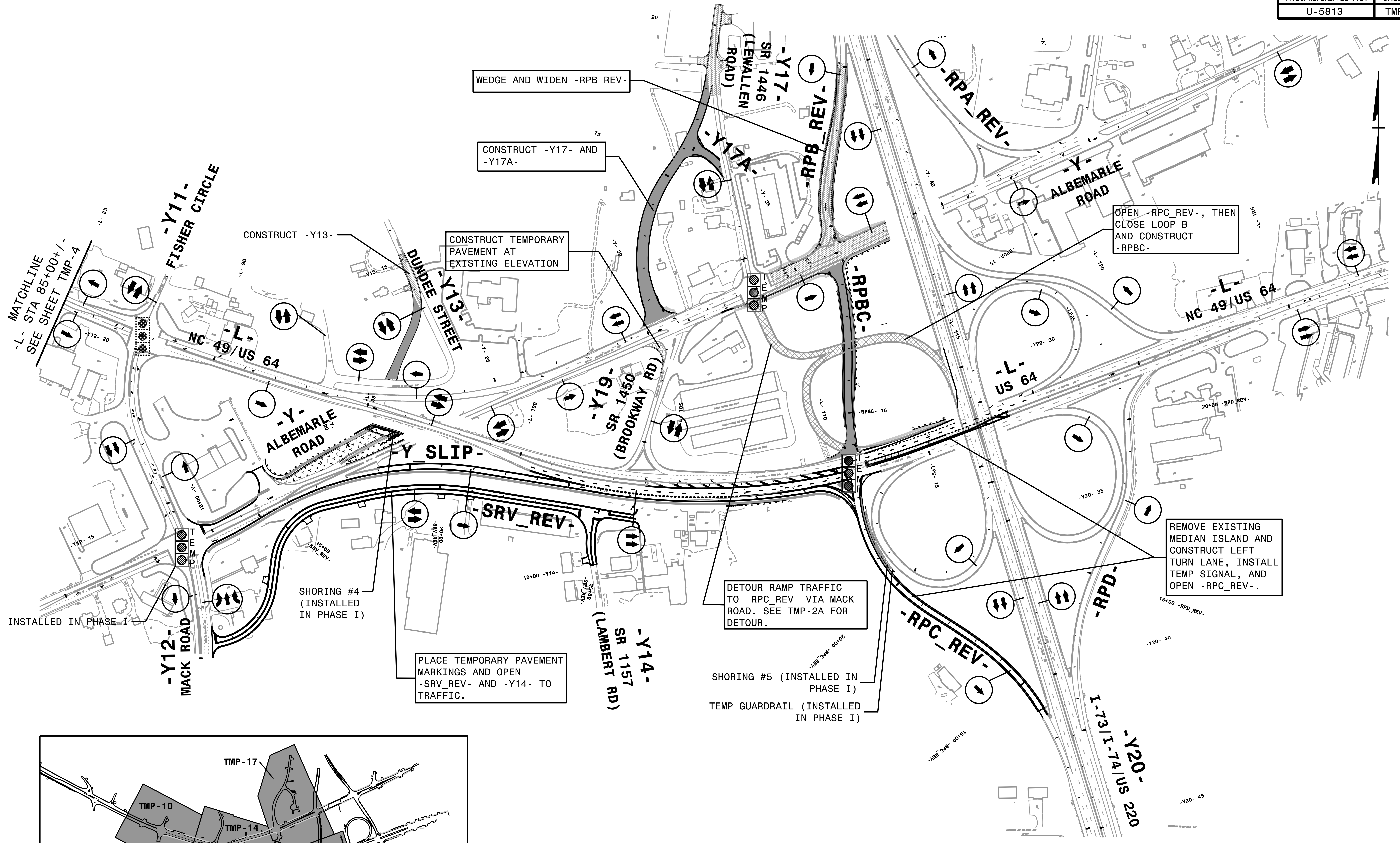
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 SEAL 042517
 HELEN SHYU



TRANSPORTATION MANAGEMENT PLAN
 BRIDGE AND INTERCHANGE PHASE I

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MATCHLINE
SEE SHEET TMP-4
-L- STA 85+00+/-

**-Y11-
FISHER CIRCLE**

CONSTRUCT -Y13-

CONSTRUCT TEMPORARY
PAVEMENT AT
EXISTING ELEVATION

WEDGE AND WIDEN -RPB_REV-

CONSTRUCT -Y17- AND
-Y17A-

DETOUR RAMP TRAFFIC
TO -RPC_REV- VIA MACK
ROAD. SEE TMP-2A FOR
DETOUR.

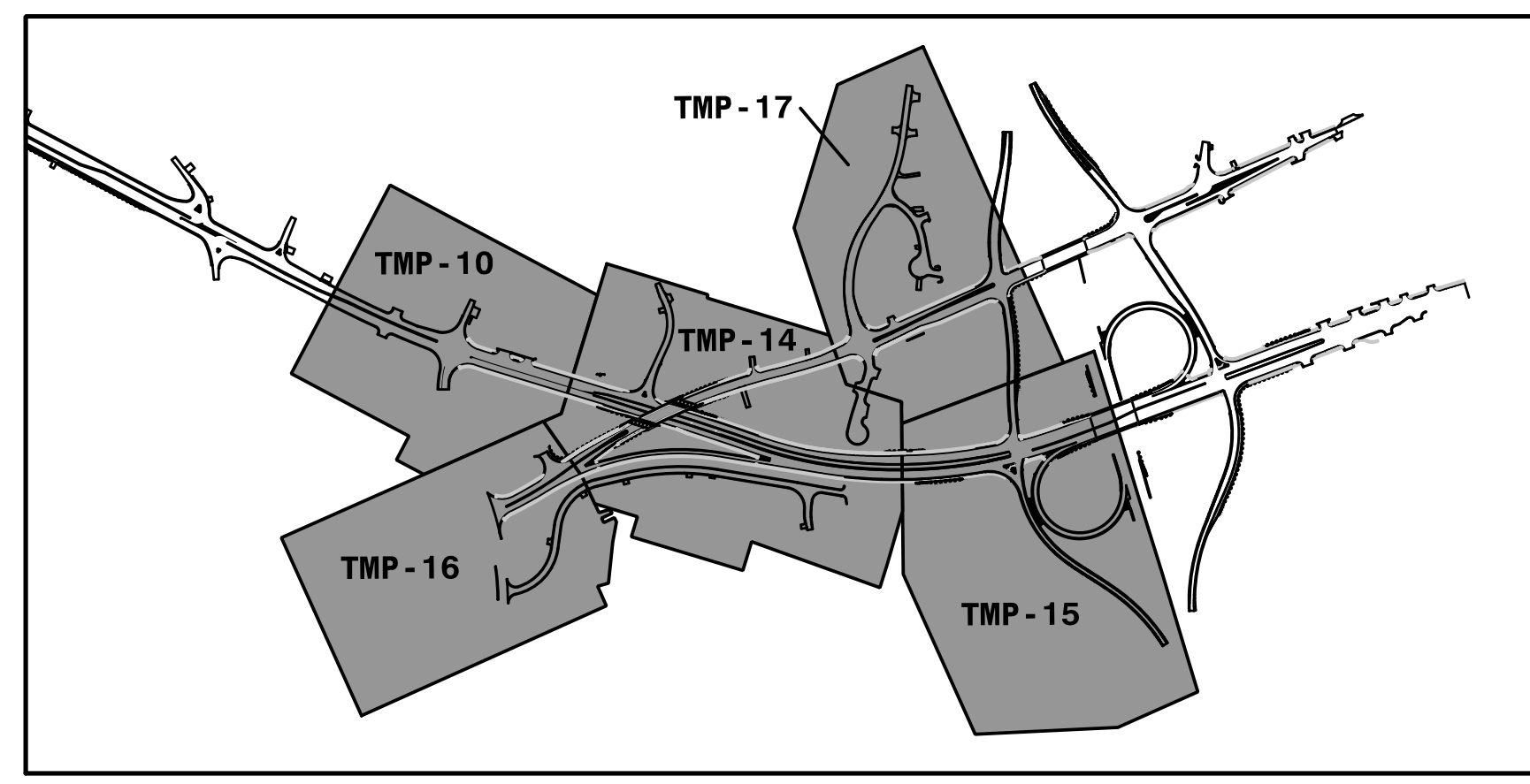
OPEN -RPC_REV-, THEN
CLOSE LOOP B
AND CONSTRUCT
-RPBC-

REMOVE EXISTING
MEDIAN ISLAND AND
CONSTRUCT LEFT
TURN LANE, INSTALL
TEMP SIGNAL, AND
OPEN -RPC_REV-.

SHORING #4
(INSTALLED
IN PHASE I)

SHORING #5 (INSTALLED IN
PHASE I)
TEMP GUARDRAIL (INSTALLED
IN PHASE I)

PLACE TEMPORARY PAVEMENT
MARKINGS AND OPEN
-SRV_REV- AND -Y14- TO
TRAFFIC.

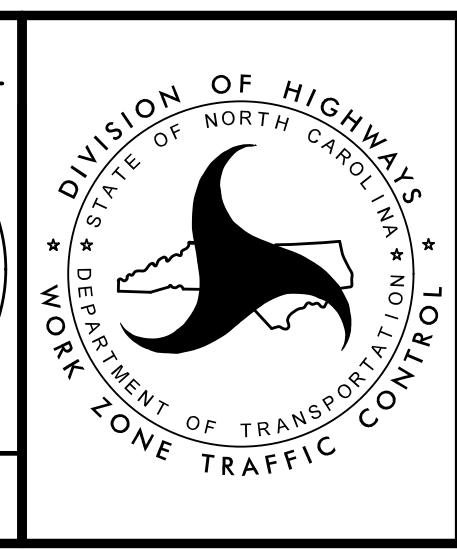


SCALE 1" = 150'

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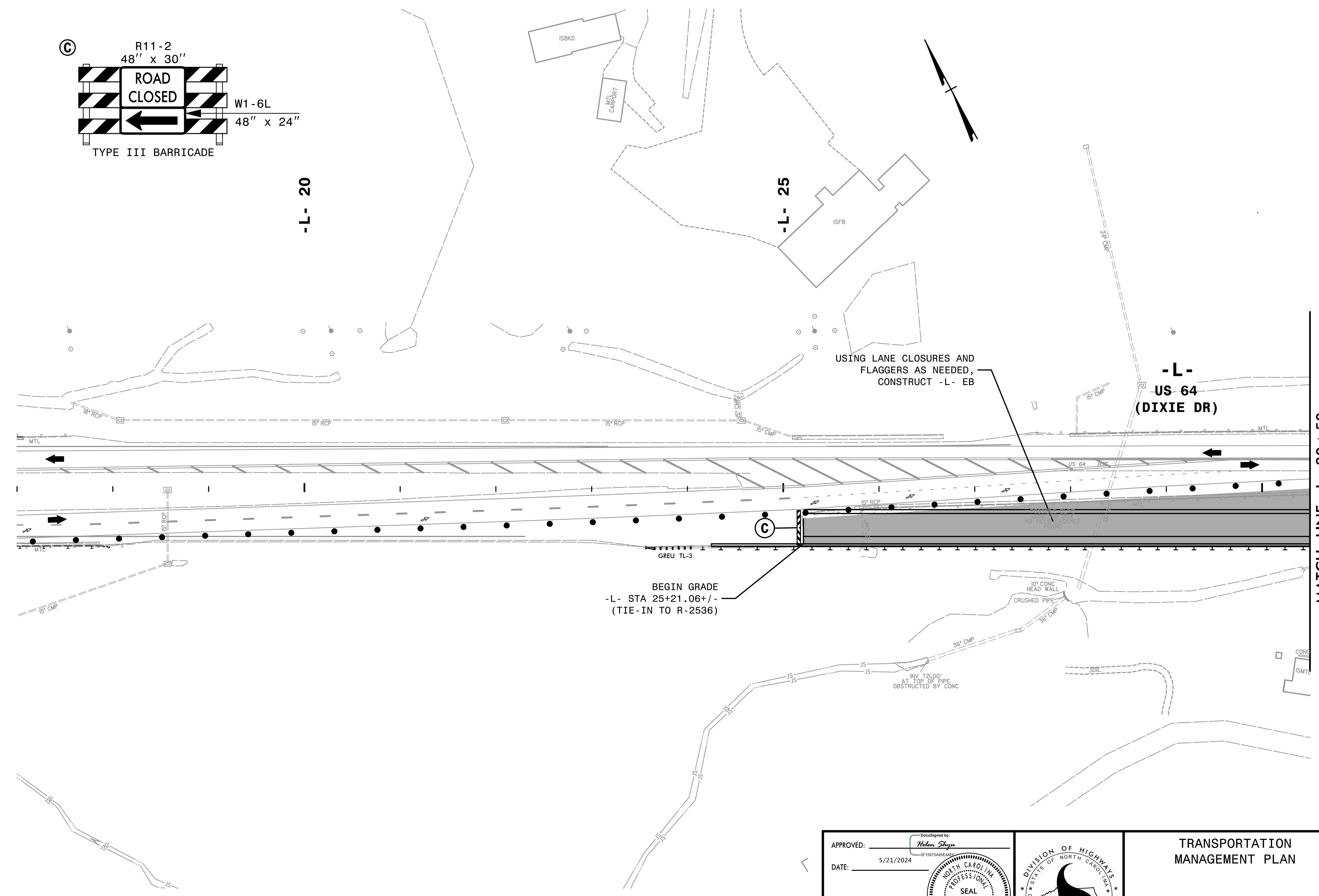
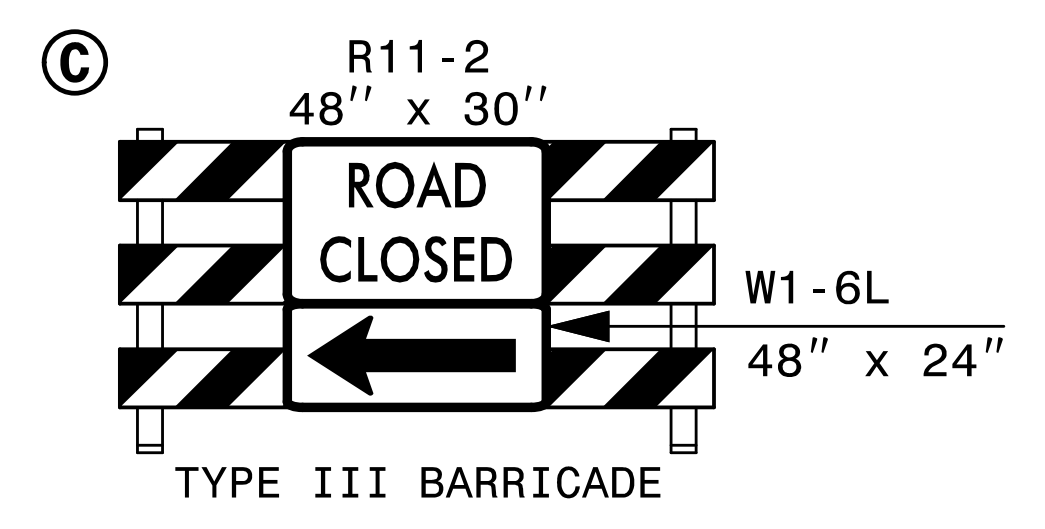
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TRANSPORTATION
MANAGEMENT PLAN

BRIDGE AND
INTERCHANGE
PHASE IA



BEGIN GRADE
-L- STA 25+21.06+/-
(TIE-IN TO R-2536)

MATCH LINE -L- 30+50
SEE SHEET TMP-6

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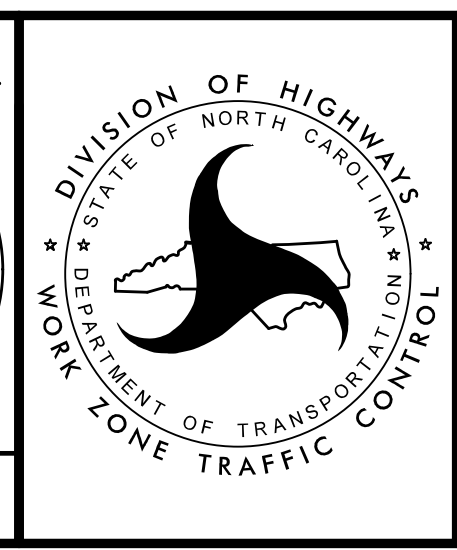
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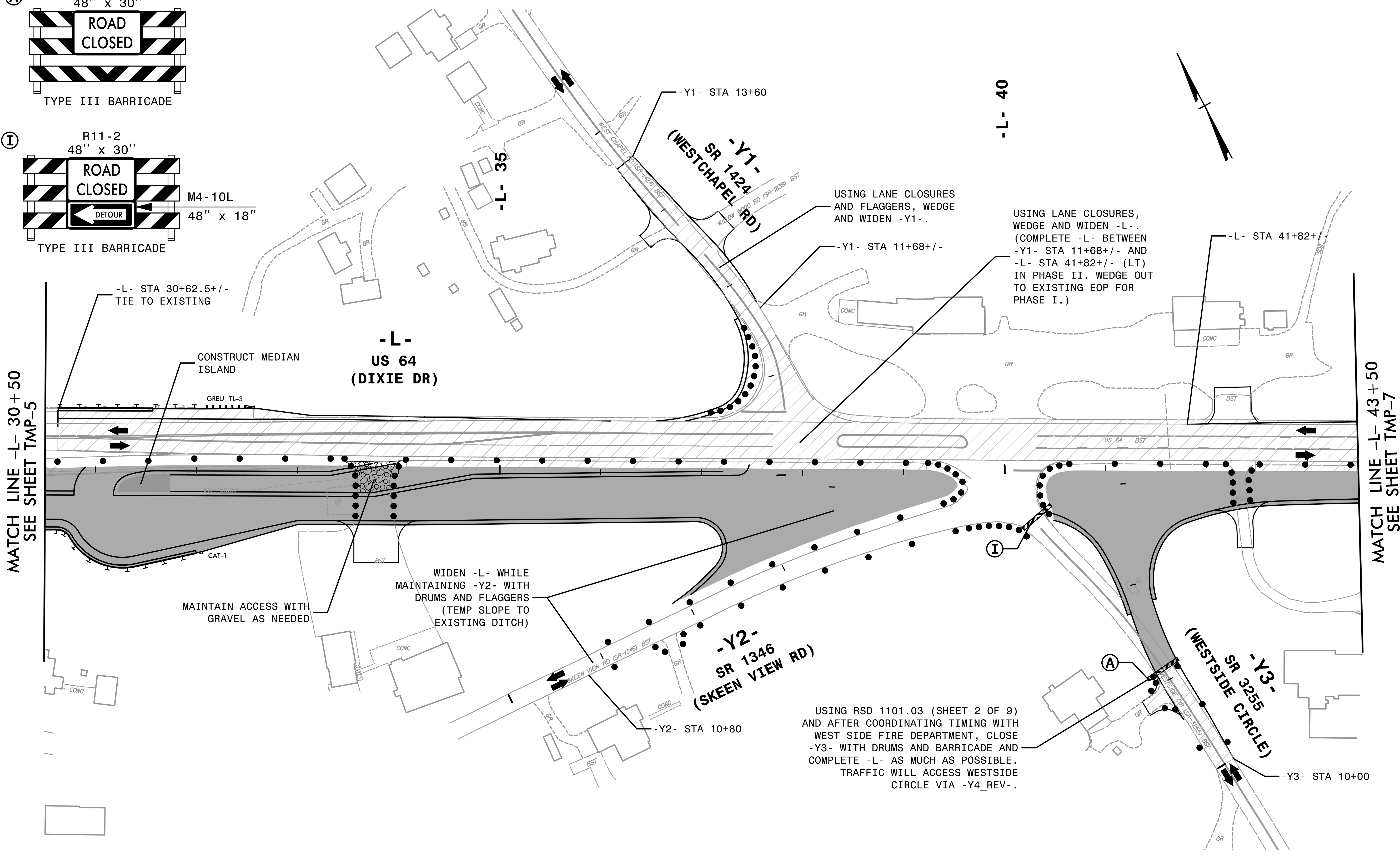
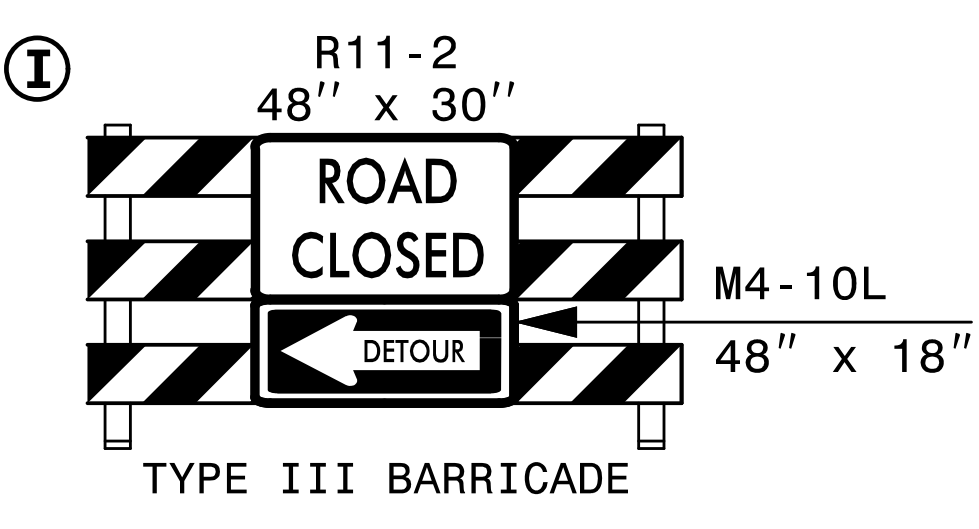
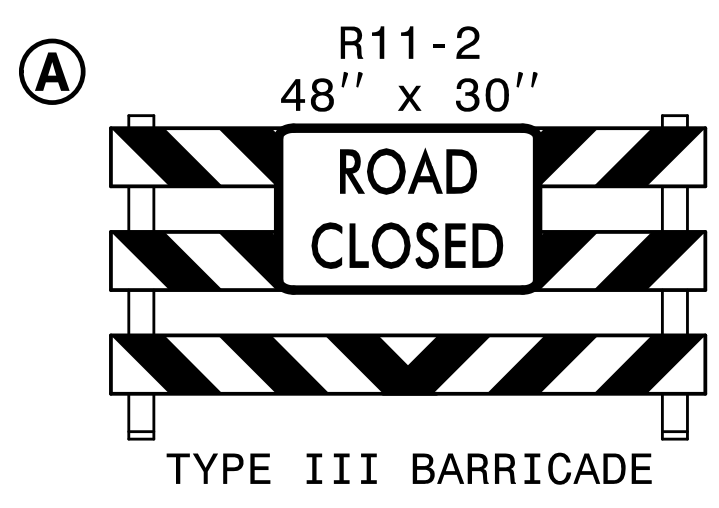
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Helen Shyu
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TRANSPORTATION
MANAGEMENT PLAN

PHASE I
DETAIL



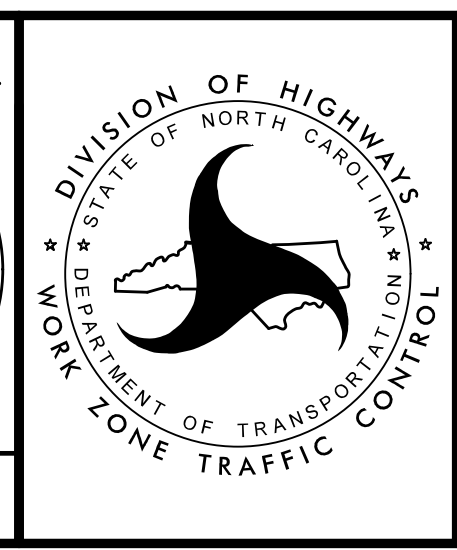
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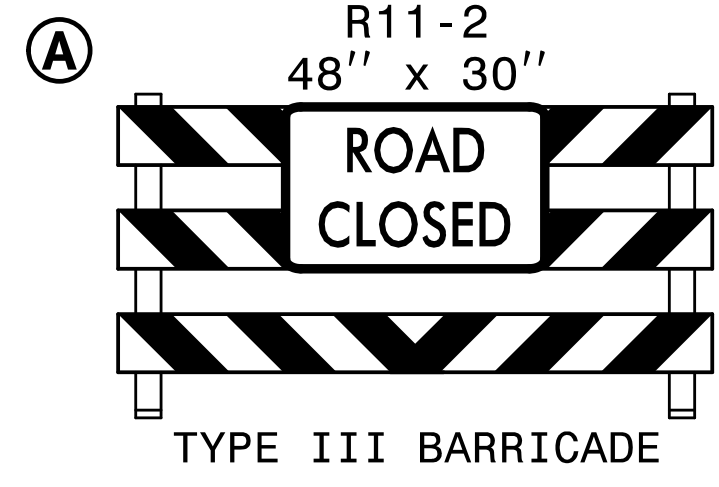
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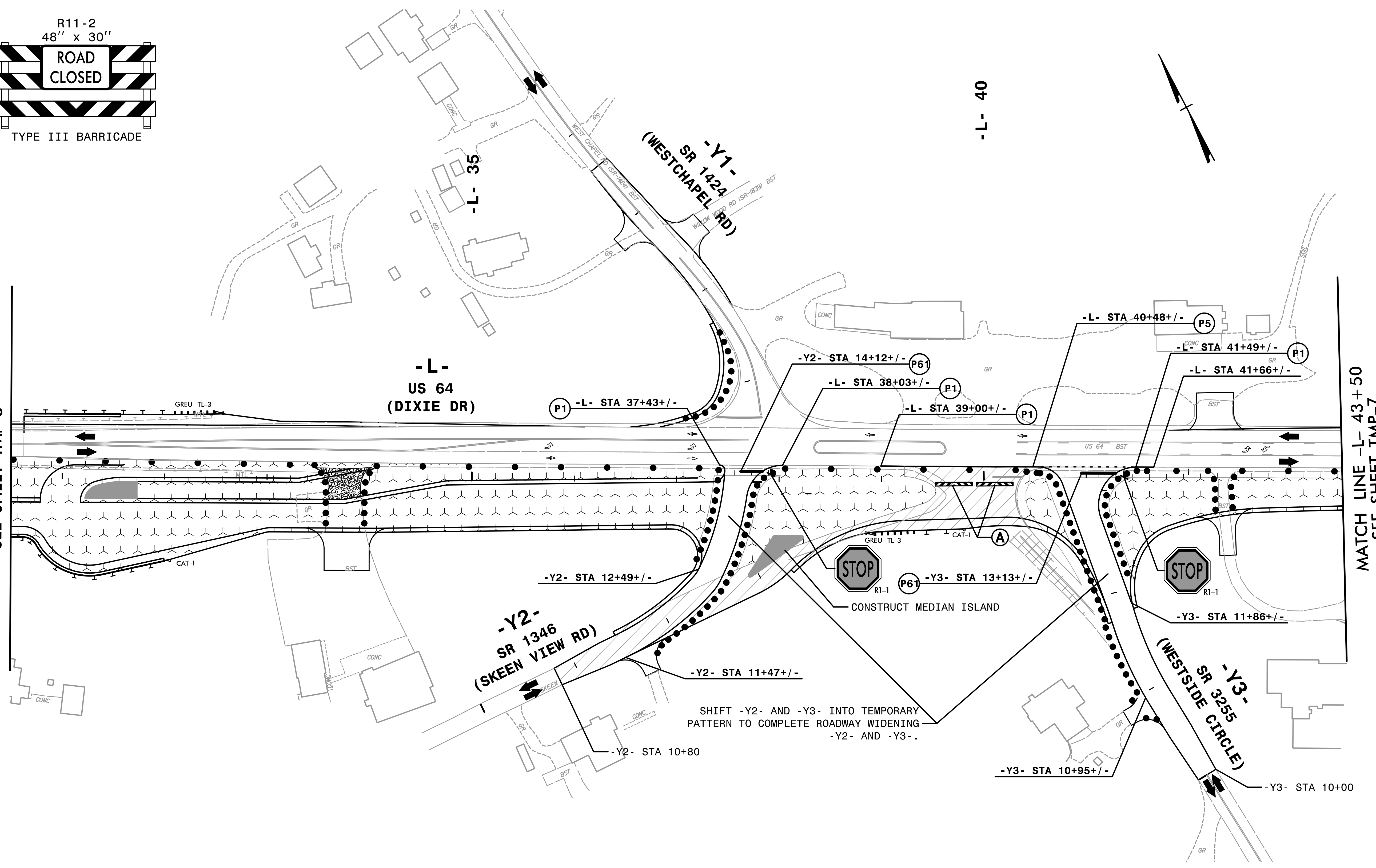


TRANSPORTATION MANAGEMENT PLAN

PHASE I DETAIL



MATCH LINE -L- 30+50
SEE SHEET TMP-5



MATCH LINE -L- 43+50
SEE SHEET TMP-7

SHIFT -Y2- AND -Y3- INTO TEMPORARY PATTERN TO COMPLETE ROADWAY WIDENING -Y2- AND -Y3-.

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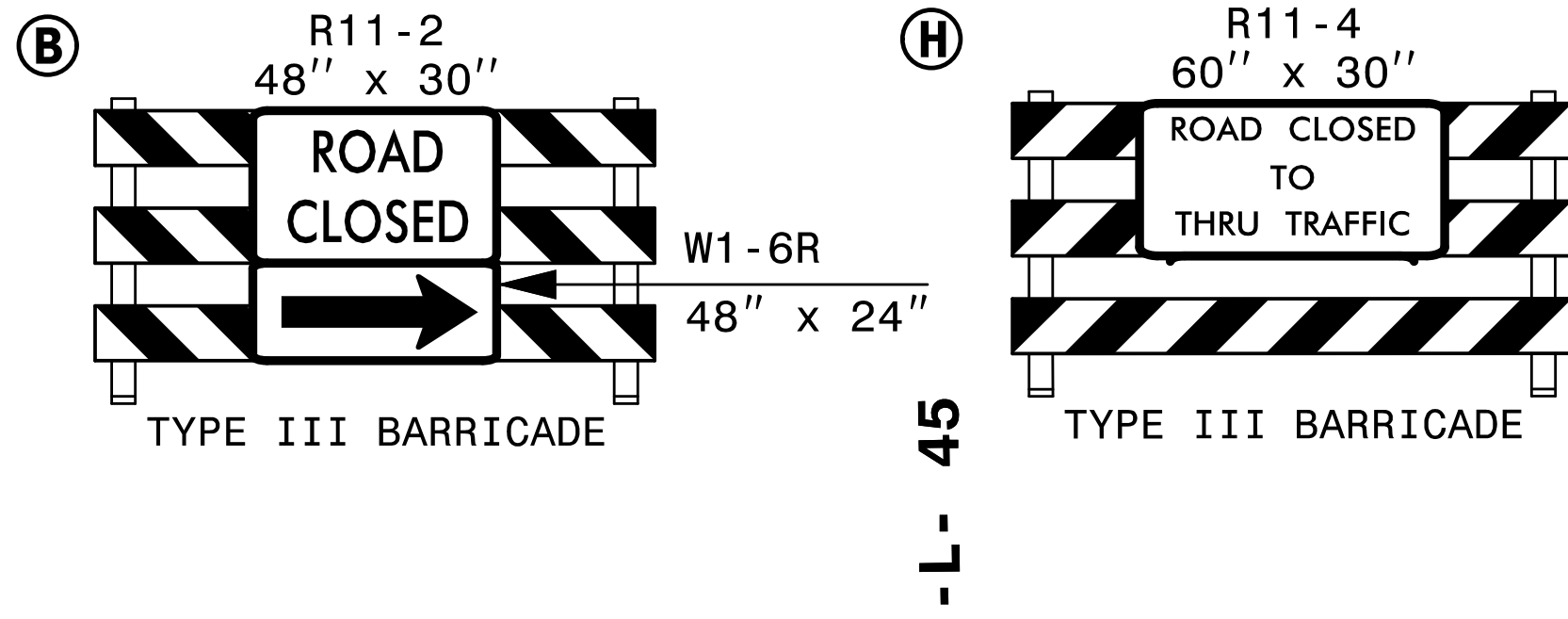
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DATE: 5/21/2024
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 042517
ENGINEER HELEN SHYU

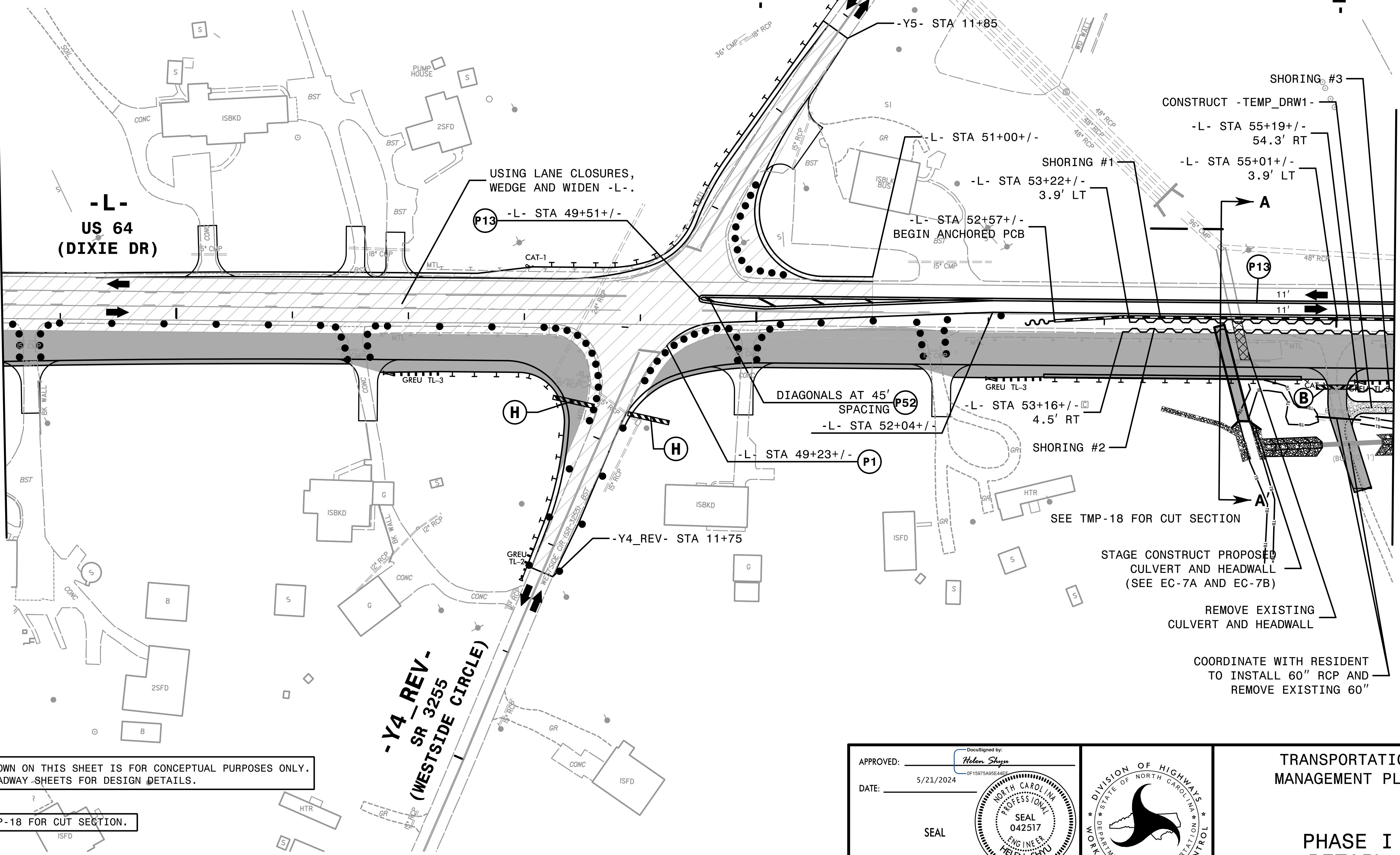
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DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN
PHASE IA DETAIL

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MATCH LINE -L- 43+50
SEE SHEET TMP-6



MATCH LINE -L- 55+50
SEE SHEET TMP-8

DRAINAGE SHOWN ON THIS SHEET IS FOR CONCEPTUAL PURPOSES ONLY. REFER TO ROADWAY SHEETS FOR DESIGN DETAILS.

REFER TO TMP-18 FOR CUT SECTION.

-Y4_REV-
SR 3255
(WESTSIDE CIRCLE)

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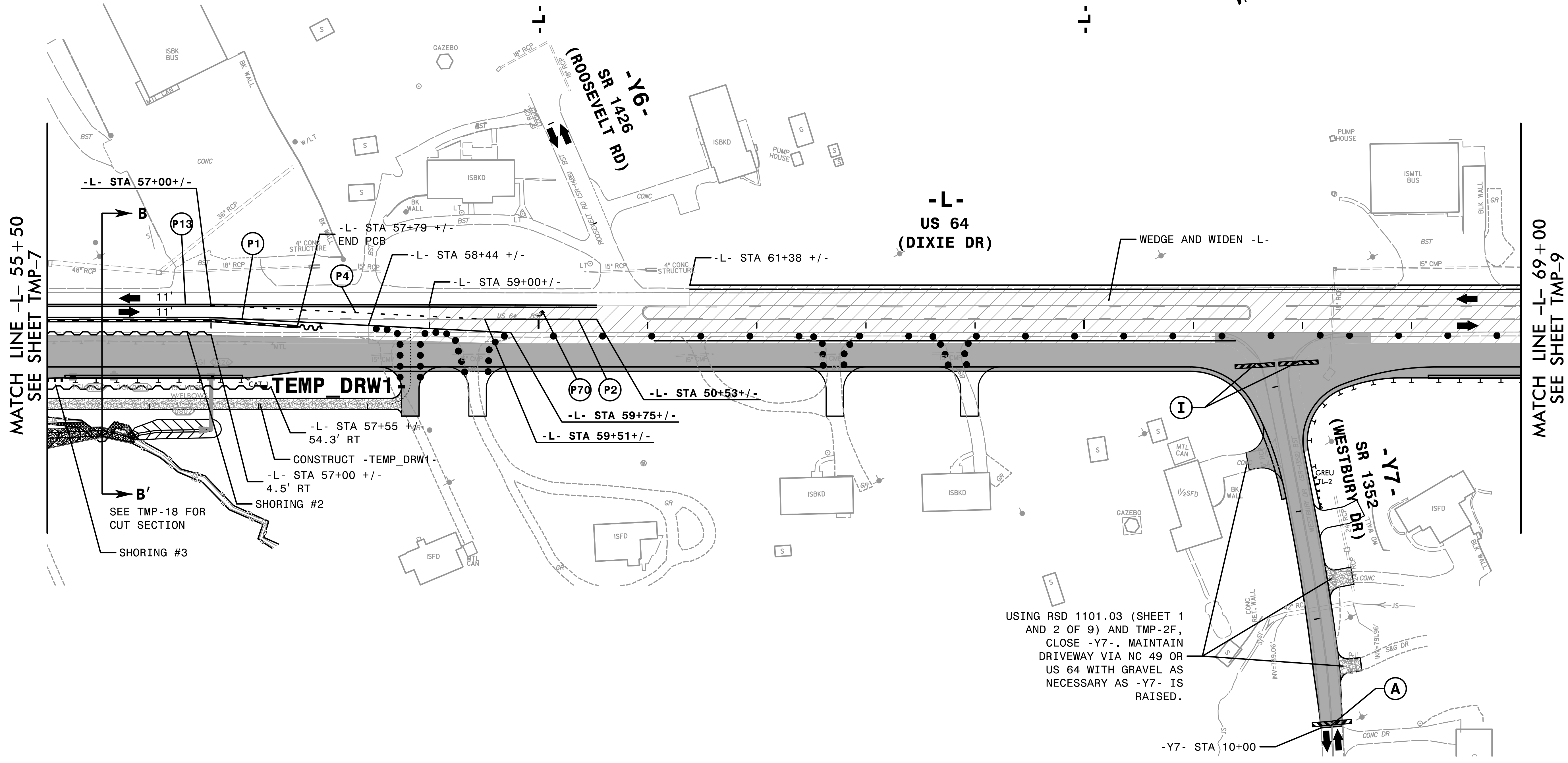
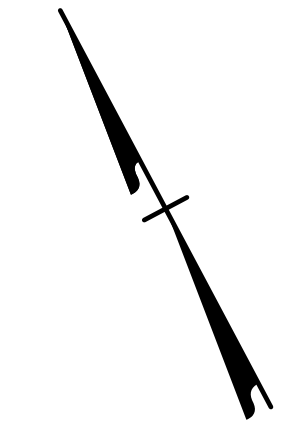
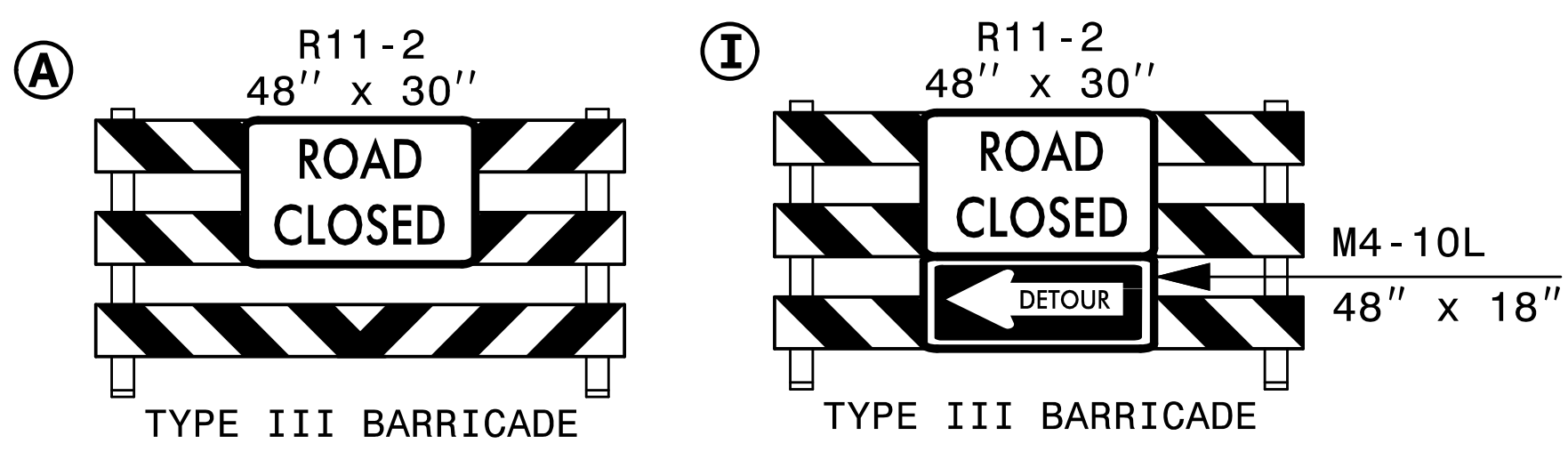
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TRANSPORTATION
MANAGEMENT PLAN

PHASE I
DETAIL

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11/28/2023



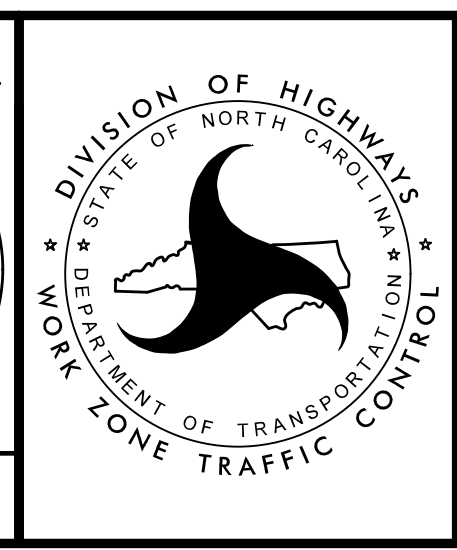
USING RSD 1101.03 (SHEET 1 AND 2 OF 9) AND TMP-2F, CLOSE -Y7-. MAINTAIN DRIVEWAY VIA NC 49 OR US 64 WITH GRAVEL AS NECESSARY AS -Y7- IS RAISED.

DRAINAGE SHOWN ON THIS SHEET IS FOR CONCEPTUAL PURPOSES ONLY. REFER TO ROADWAY SHEETS FOR DESIGN DETAILS.

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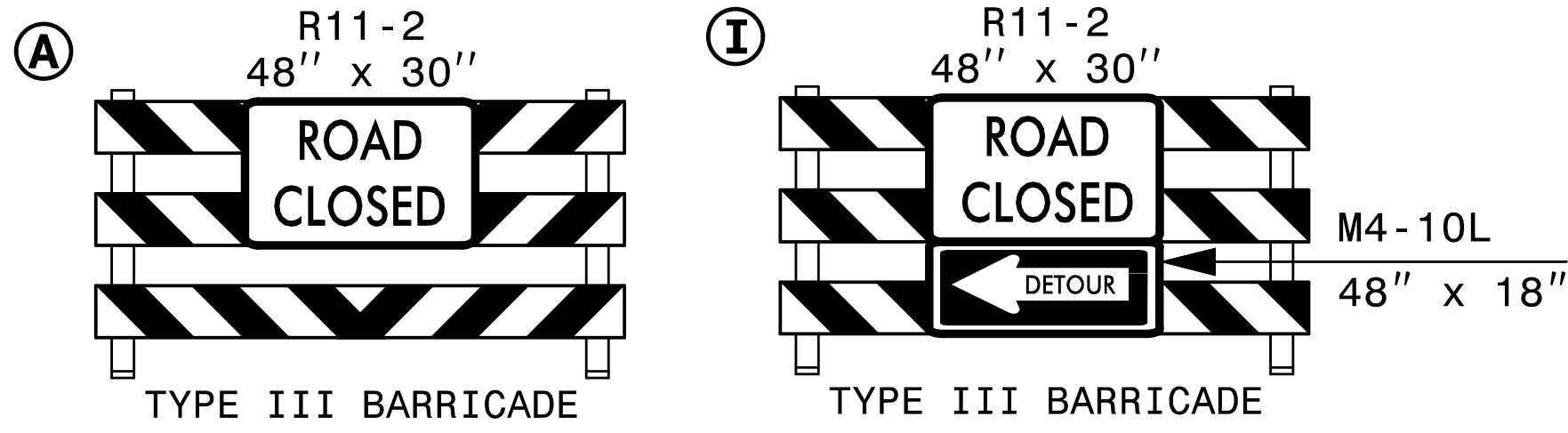
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 SEAL 042517
 HELEN SHYU

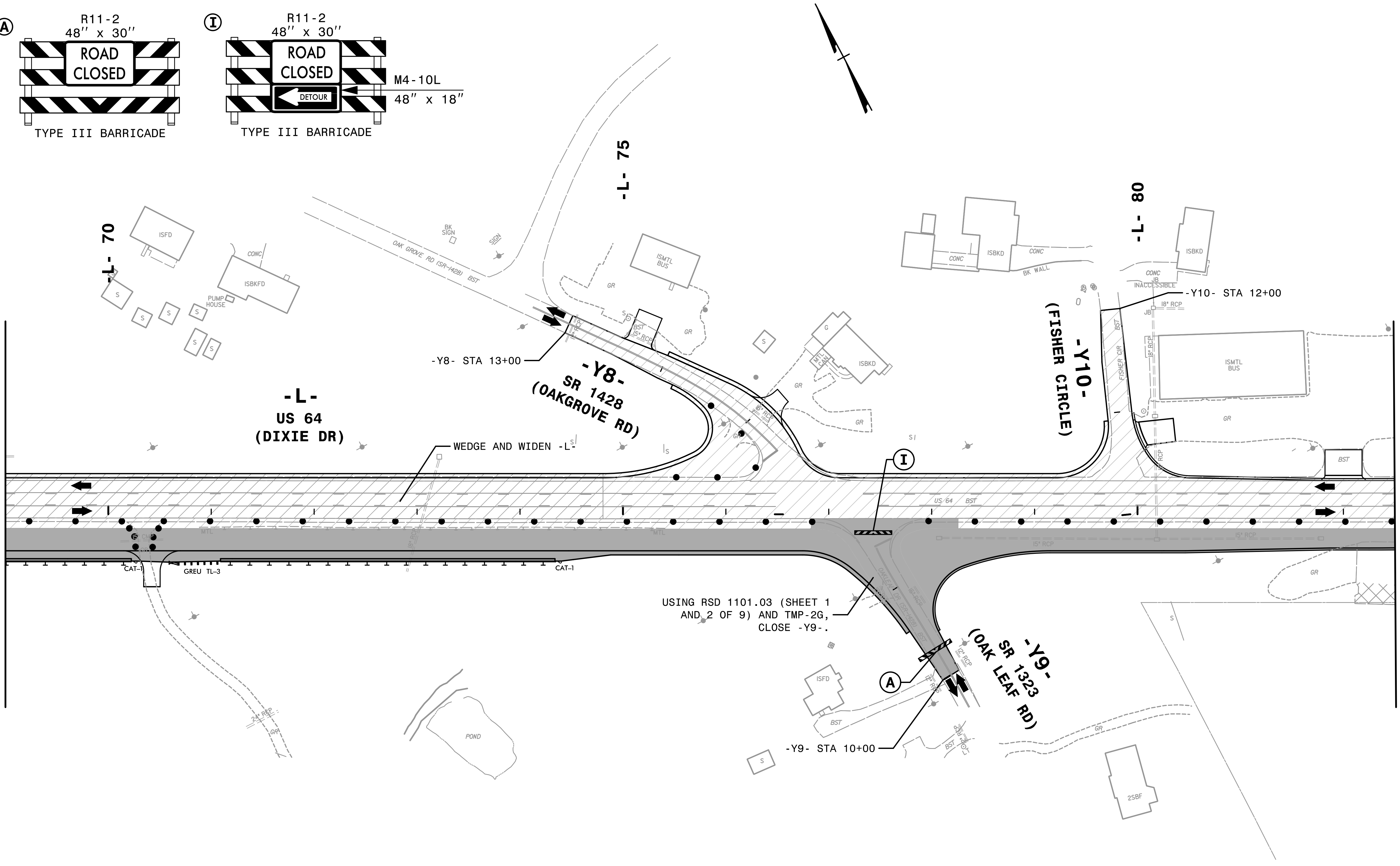


TRANSPORTATION MANAGEMENT PLAN
 PHASE I DETAIL

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MATCH LINE -L- 69+00
SEE SHEET TMP-8



MATCH LINE -L- 82+50
SEE SHEET TMP-10

USING RSD 1101.03 (SHEET 1 AND 2 OF 9) AND TMP-2G, CLOSE -Y9-

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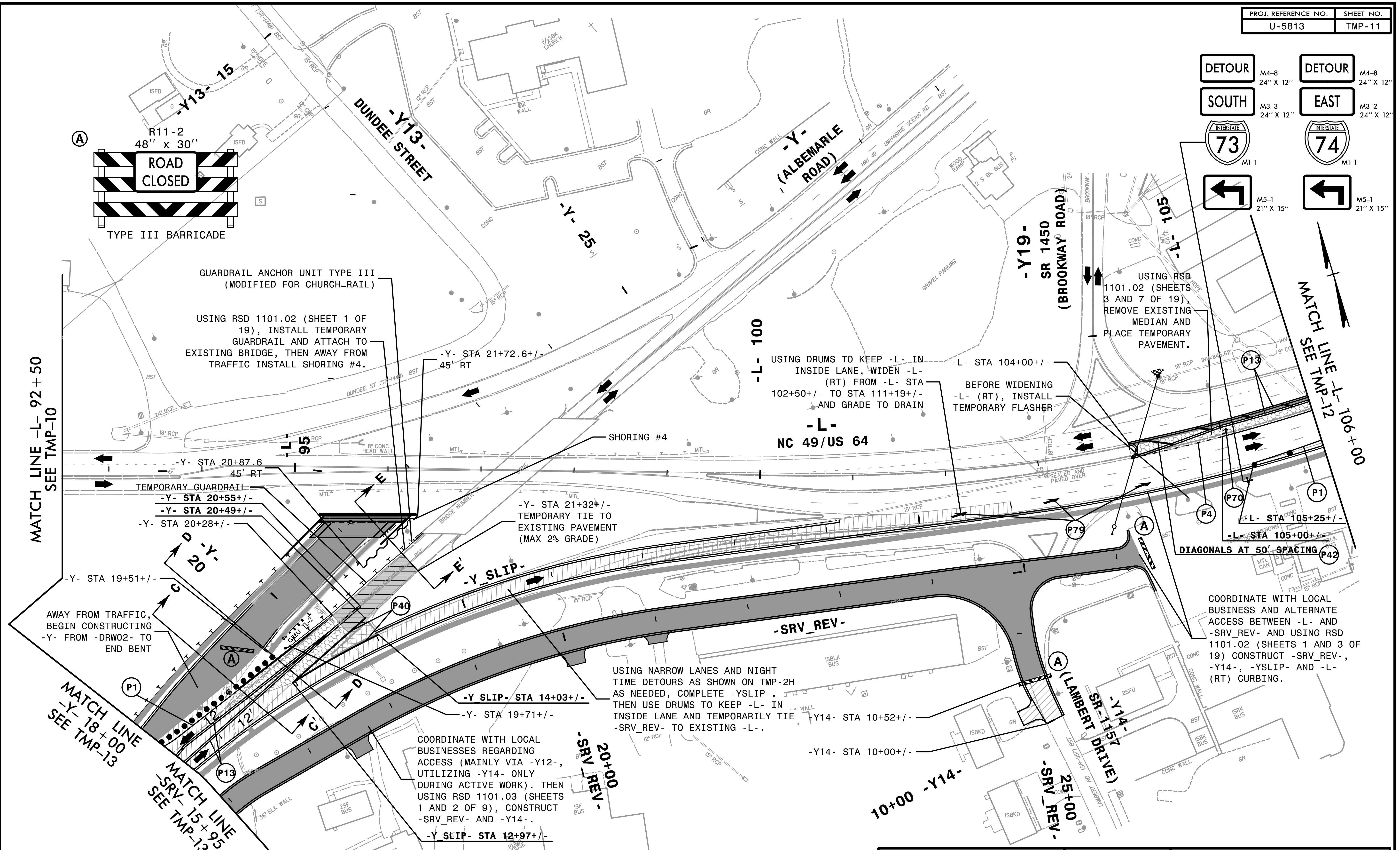
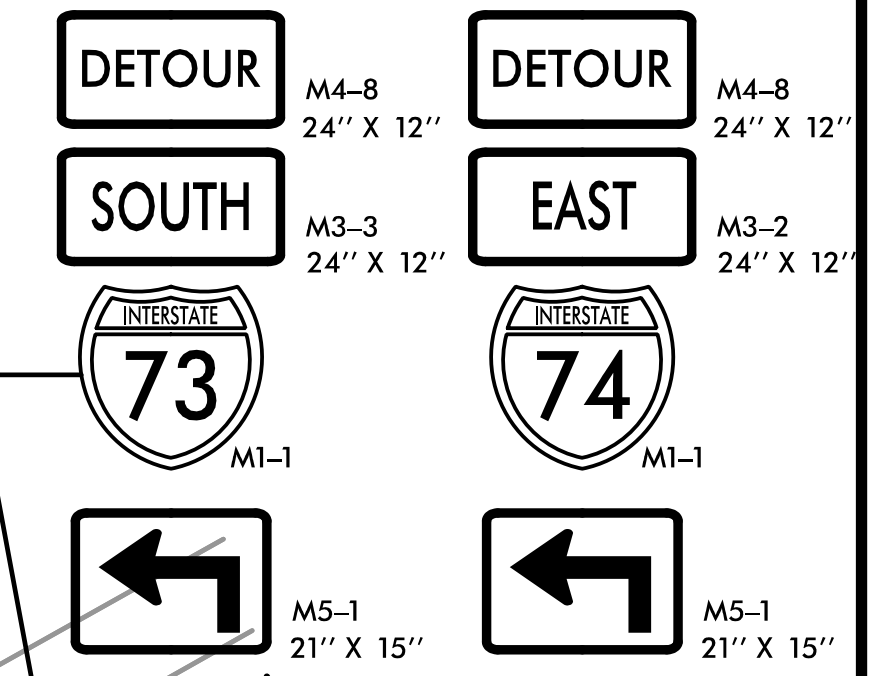
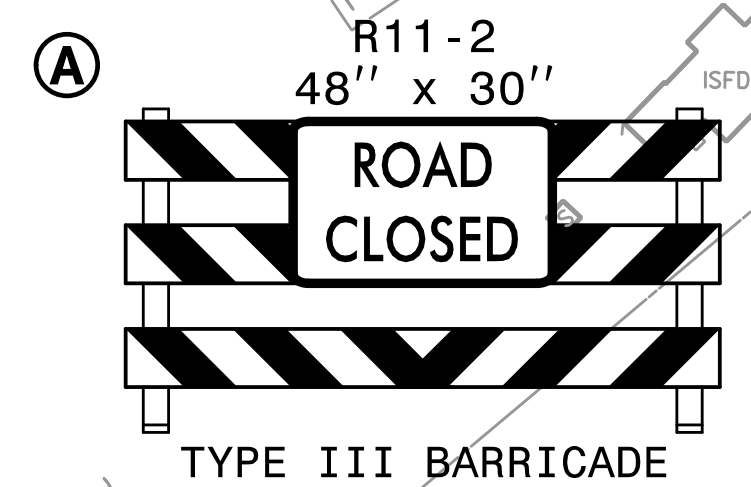
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TRANSPORTATION
MANAGEMENT PLAN

PHASE I
DETAIL



MATCH LINE -L- 92+50
SEE TMP-10

MATCH LINE -Y- 18+00
SEE TMP-13

MATCH LINE -SRV- 15+95
SEE TMP-13

MATCH LINE -L- 106+00
SEE TMP-12

FOR C-C', D-D', AND E-E', SEE TMP-19 FOR CUT SECTION.

COORDINATE WITH LOCAL BUSINESSES REGARDING ACCESS (MAINLY VIA -Y12-, UTILIZING -Y14- ONLY DURING ACTIVE WORK). THEN USING RSD 1101.03 (SHEETS 1 AND 2 OF 9), CONSTRUCT -SRV_REV- AND -Y14-.

USING NARROW LANES AND NIGHT TIME DETOURS AS SHOWN ON TMP-2H AS NEEDED, COMPLETE -YSLIP-. THEN USE DRUMS TO KEEP -L- IN INSIDE LANE AND TEMPORARILY TIE -SRV_REV- TO EXISTING -L-.

USING RSD 1101.02 (SHEETS 3 AND 7 OF 19), REMOVE EXISTING MEDIAN AND PLACE TEMPORARY PAVEMENT.

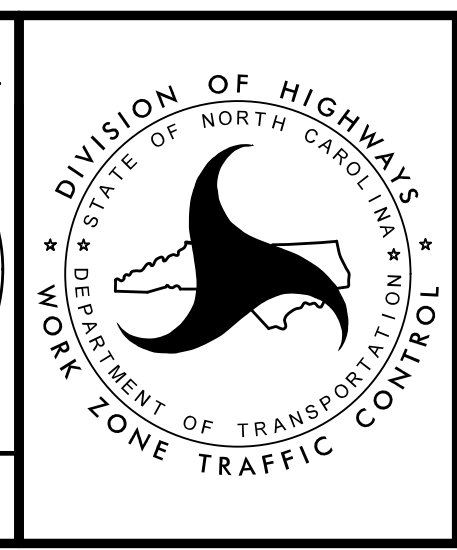
USING DRUMS TO KEEP -L- IN INSIDE LANE, WIDEN -L- (RT) FROM -L- STA 102+50+/- TO STA 111+19+/- AND GRADE TO DRAIN BEFORE WIDENING -L- (RT), INSTALL TEMPORARY FLASHER

COORDINATE WITH LOCAL BUSINESS AND ALTERNATE ACCESS BETWEEN -L- AND -SRV_REV- AND USING RSD 1101.02 (SHEETS 1 AND 3 OF 19) CONSTRUCT -SRV_REV-, -Y14-, -YSLIP- AND -L- (RT) CURBING.

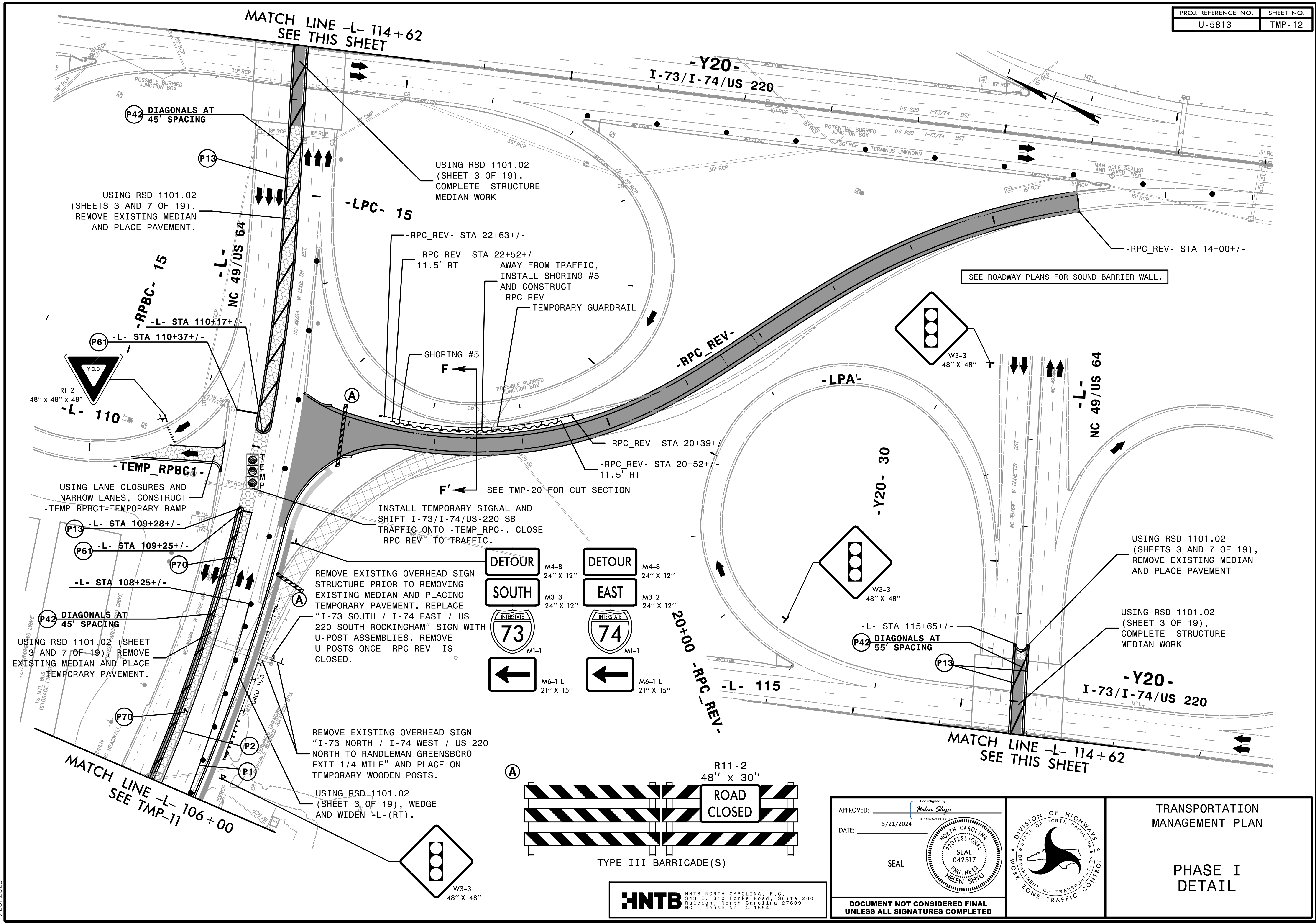
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11/28/2023

P42 DIAGONALS AT 45' SPACING

USING RSD 1101.02 (SHEET 3 AND 7 OF 19) REMOVE EXISTING MEDIAN AND PLACE TEMPORARY PAVEMENT.

USING RSD 1101.02 (SHEETS 3 AND 7 OF 19), REMOVE EXISTING MEDIAN AND PLACE PAVEMENT.

USING RSD 1101.02 (SHEET 3 OF 19), COMPLETE STRUCTURE MEDIAN WORK

-TEMP_RPBC1-

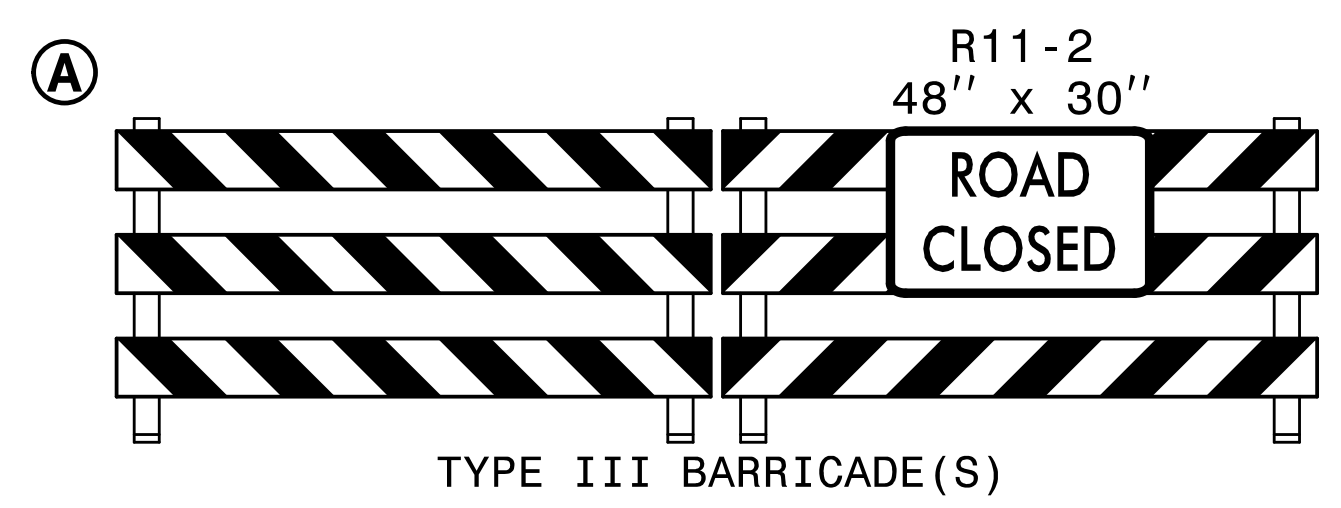
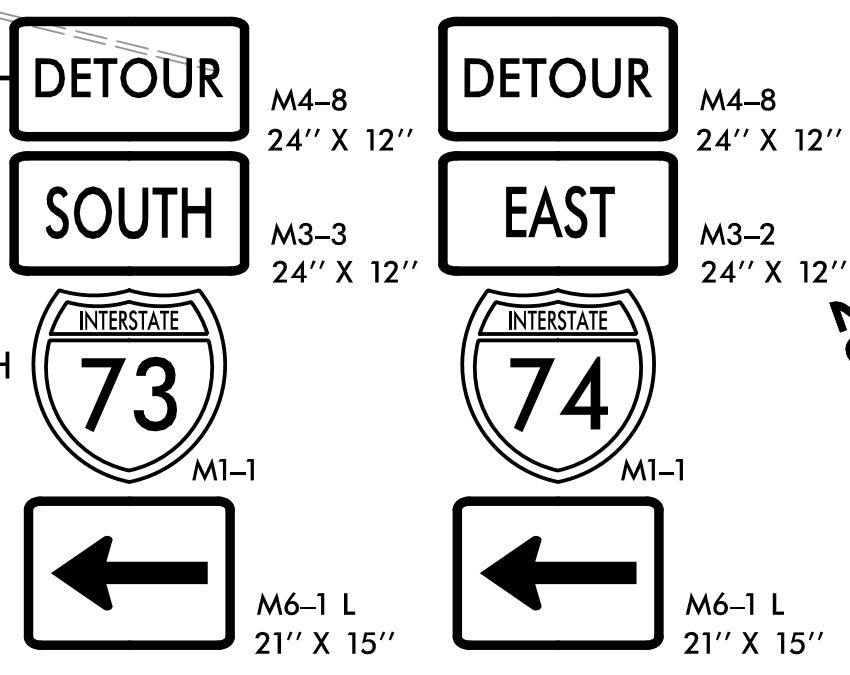
USING LANE CLOSURES AND NARROW LANES, CONSTRUCT -TEMP_RPBC1-TEMPORARY RAMP

INSTALL TEMPORARY SIGNAL AND SHIFT I-73/I-74/US-220 SB TRAFFIC ONTO -TEMP RPC-. CLOSE -RPC_REV- TO TRAFFIC.

REMOVE EXISTING OVERHEAD SIGN STRUCTURE PRIOR TO REMOVING EXISTING MEDIAN AND PLACING TEMPORARY PAVEMENT. REPLACE "I-73 SOUTH / I-74 EAST / US 220 SOUTH ROCKINGHAM" SIGN WITH U-POST ASSEMBLIES. REMOVE U-POSTS ONCE -RPC_REV- IS CLOSED.

REMOVE EXISTING OVERHEAD SIGN "I-73 NORTH / I-74 WEST / US 220 NORTH TO RANDLEMAN GREENSBORO EXIT 1/4 MILE" AND PLACE ON TEMPORARY WOODEN POSTS.

USING RSD 1101.02 (SHEET 3 OF 19), WEDGE AND WIDEN -L- (RT).

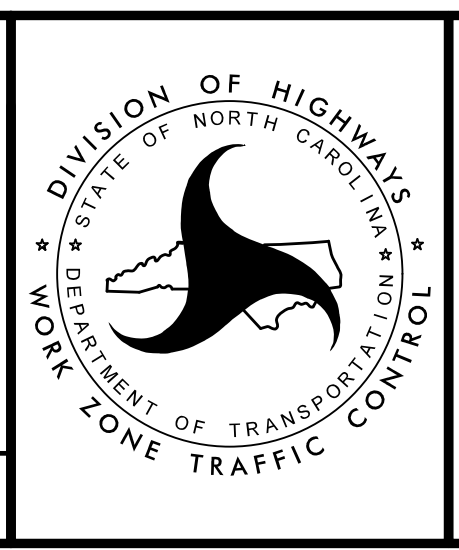


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DATE: 5/21/2024

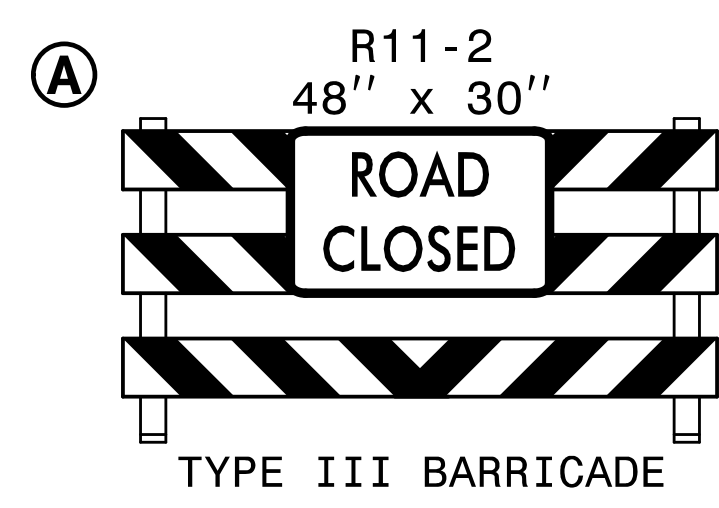
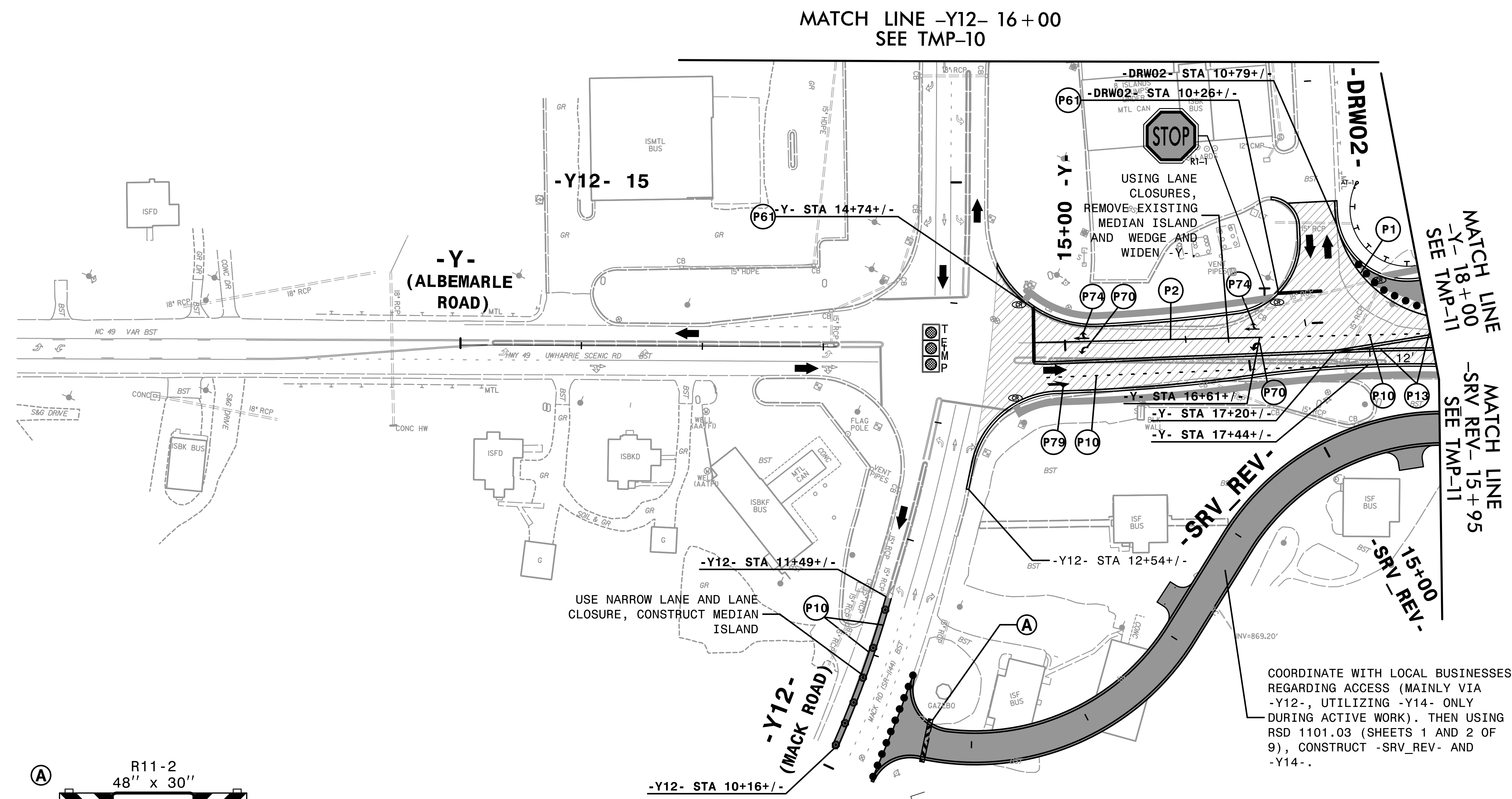
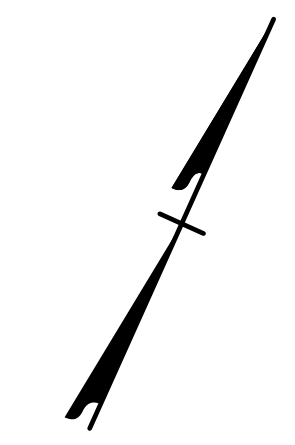
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 042517
HELEN SHYU

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TRANSPORTATION MANAGEMENT PLAN

PHASE I DETAIL



COORDINATE WITH LOCAL BUSINESSES REGARDING ACCESS (MAINLY VIA -Y12-, UTILIZING -Y14- ONLY DURING ACTIVE WORK). THEN USING RSD 1101.03 (SHEETS 1 AND 2 OF 9), CONSTRUCT -SRV_REV- AND -Y14-.

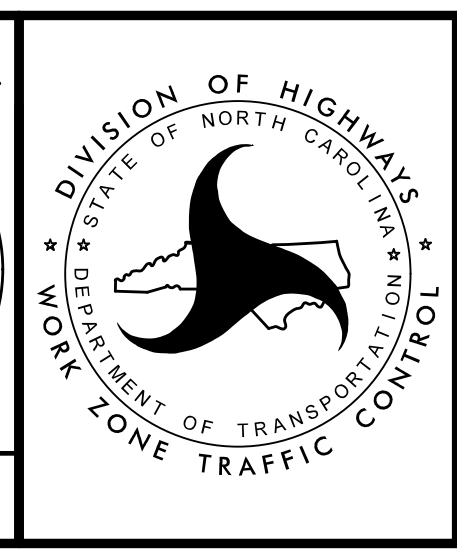
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\\TCPU5813...TCP_PL14.dgn
4/24/2024



APPROVED: Helen Shyu
DATE: 5/21/2024

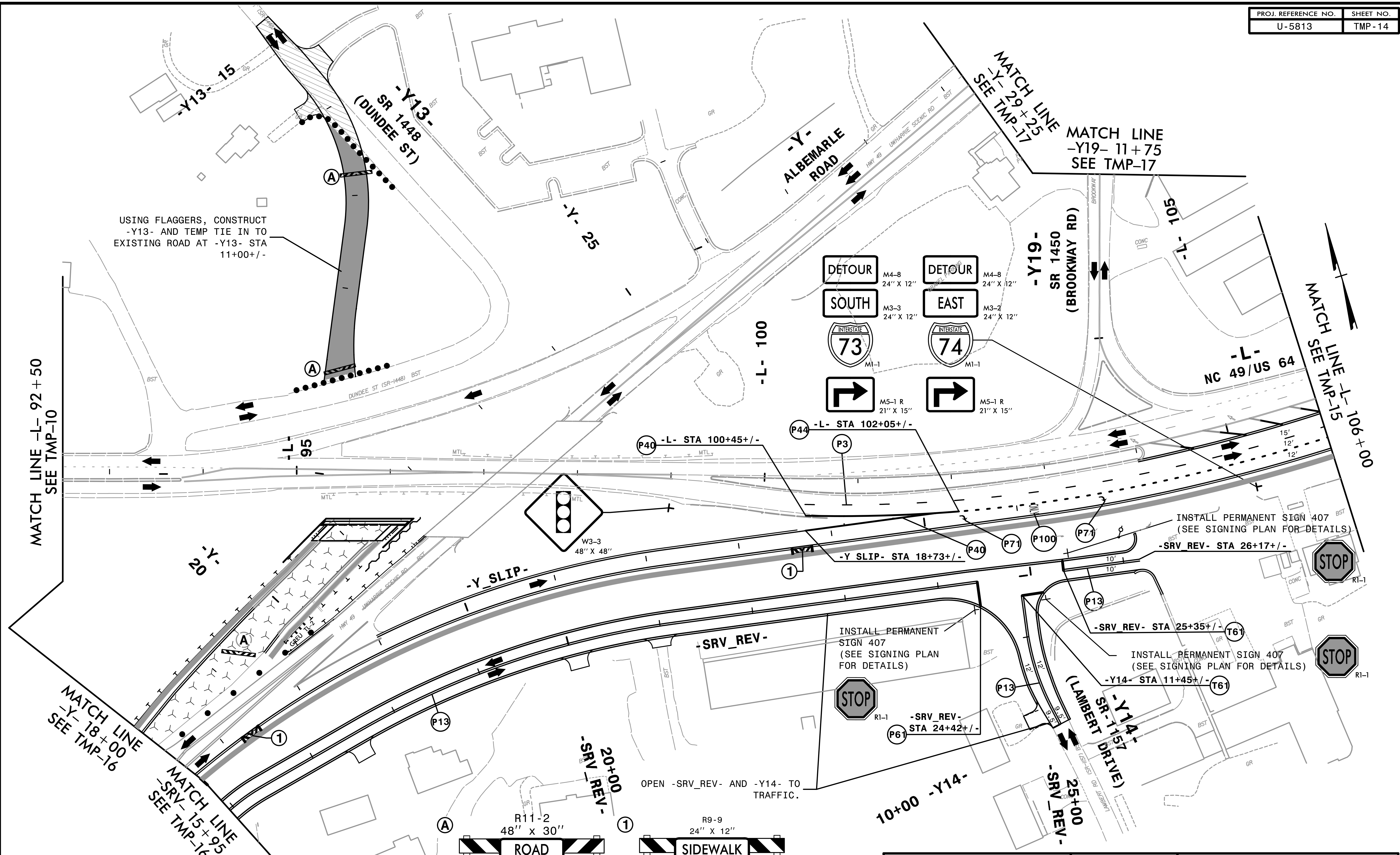
SEAL

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TRANSPORTATION MANAGEMENT PLAN

PHASE I DETAIL



USING FLAGGERS, CONSTRUCT
-Y13- AND TEMP TIE IN TO
EXISTING ROAD AT -Y13- STA
11+00+/-

MATCH LINE -L- 92+50
SEE TMP-10

MATCH LINE
-Y- 29+25
SEE TMP-17

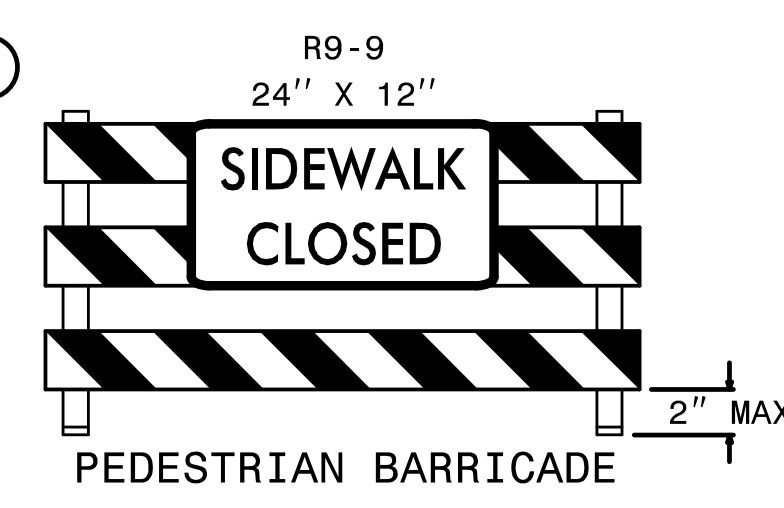
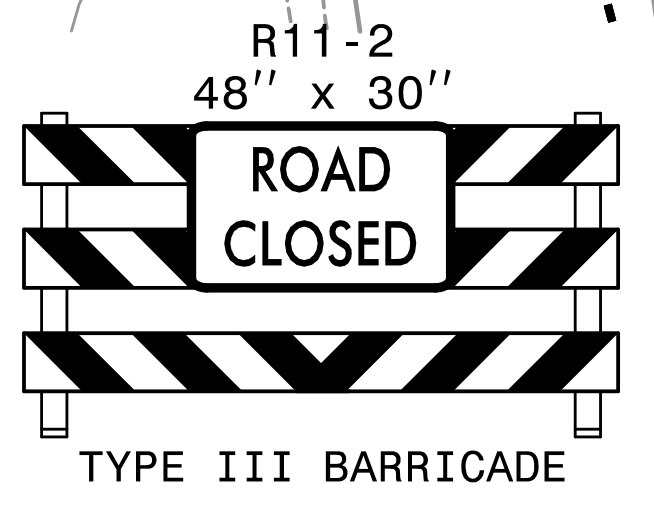
MATCH LINE
-Y19- 11+75
SEE TMP-17

MATCH LINE
-L- 106+00
SEE TMP-15

MATCH LINE
-Y- 18+00
SEE TMP-16

MATCH LINE
-SRV- 15+95
SEE TMP-16

SEE PMP FOR PAVEMENT
MARKING DETAILS.



OPEN -SRV_REV- AND -Y14- TO
TRAFFIC.

INSTALL PERMANENT
SIGN 407
(SEE SIGNING PLAN
FOR DETAILS)

STOP
R1-1
-SRV_REV-
STA 24+42+/-

INSTALL PERMANENT SIGN 407
(SEE SIGNING PLAN FOR DETAILS)

STOP
R1-1
-Y14- STA 11+45+/-

INSTALL PERMANENT SIGN 407
(SEE SIGNING PLAN FOR DETAILS)

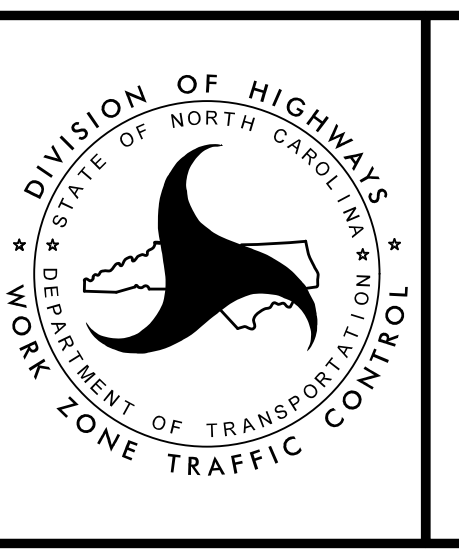
STOP
R1-1
-SRV_REV- STA 25+35+/-

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DATE: 5/21/2024

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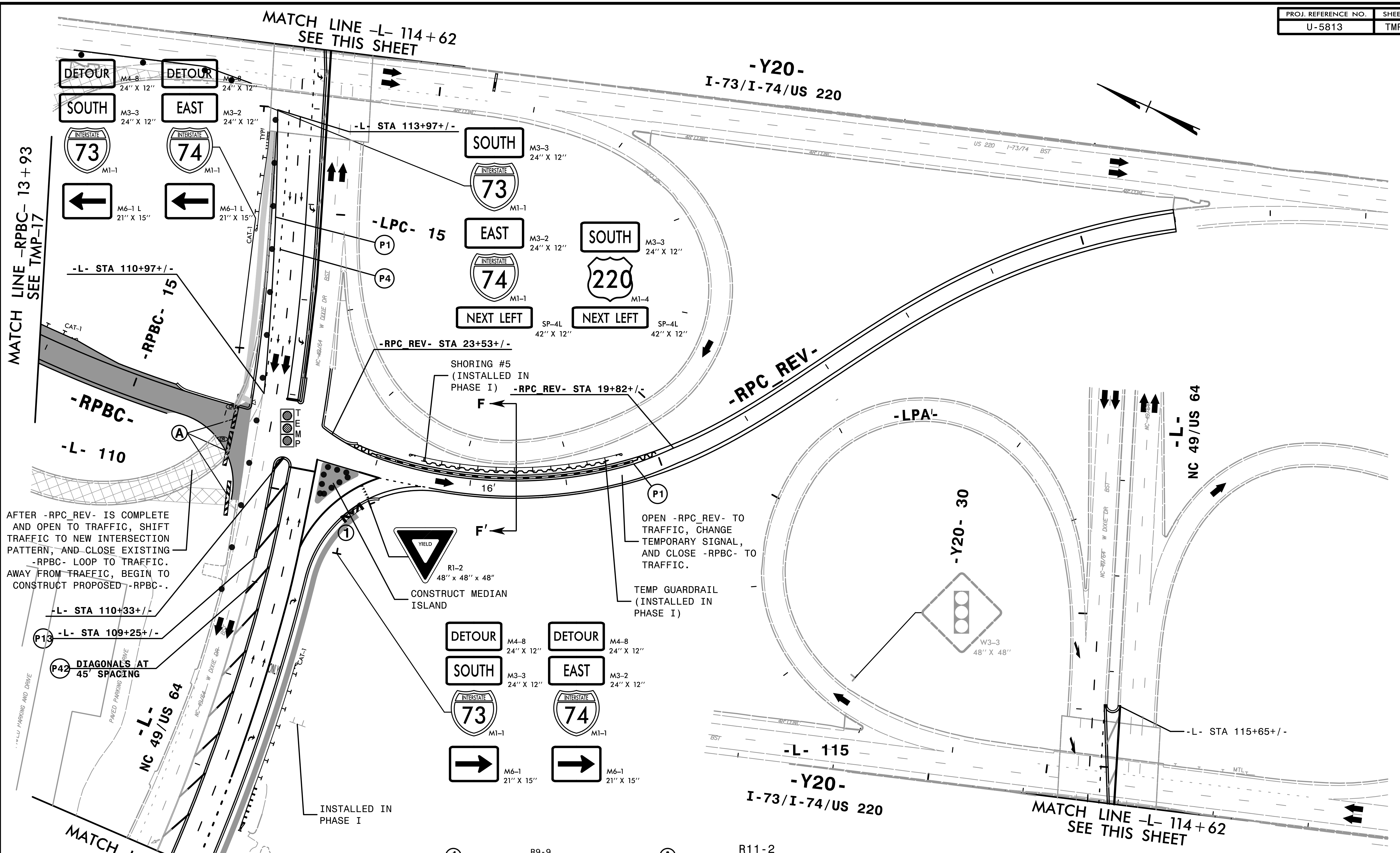
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ENGINEER
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042517

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TRANSPORTATION
MANAGEMENT PLAN

**PHASE IA
DETAIL**



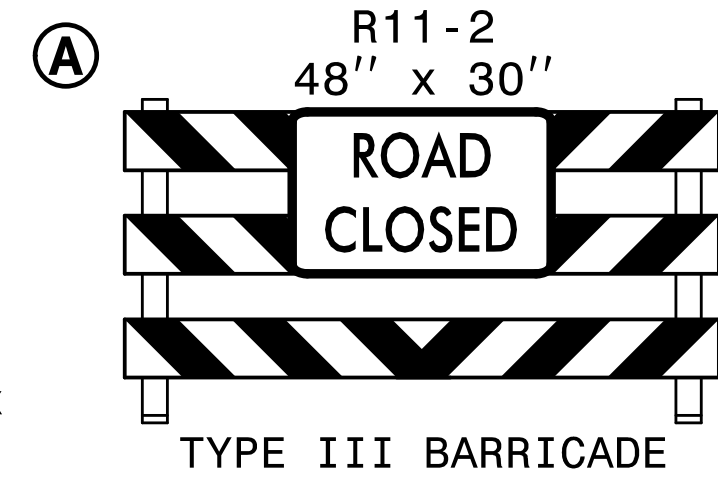
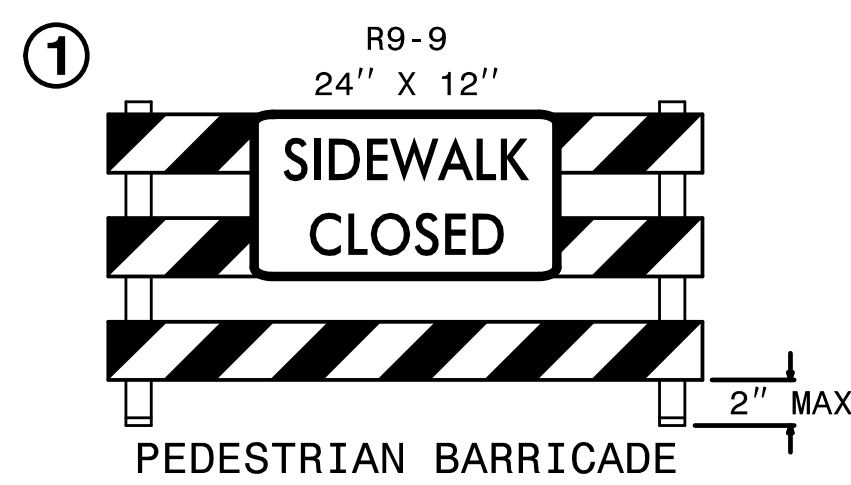
AFTER -RPC_REV- IS COMPLETE AND OPEN TO TRAFFIC, SHIFT TRAFFIC TO NEW INTERSECTION PATTERN, AND CLOSE EXISTING -RPBC- LOOP TO TRAFFIC. AWAY FROM TRAFFIC, BEGIN TO CONSTRUCT PROPOSED -RPBC-.

OPEN -RPC_REV- TO TRAFFIC, CHANGE TEMPORARY SIGNAL, AND CLOSE -RPBC- TO TRAFFIC.

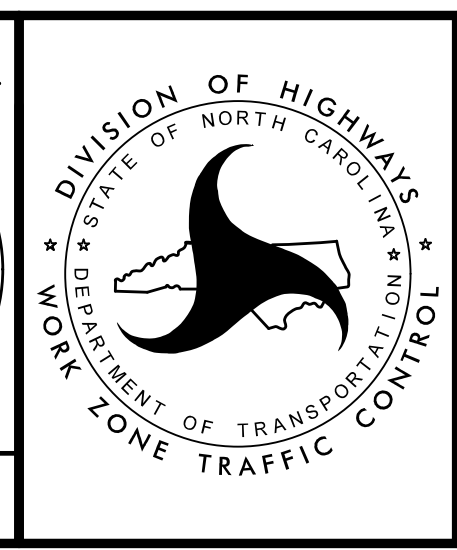
TEMP GUARDRAIL (INSTALLED IN PHASE I)

CONSTRUCT MEDIAN ISLAND

SEE PMP FOR PAVEMENT MARKING DETAILS.



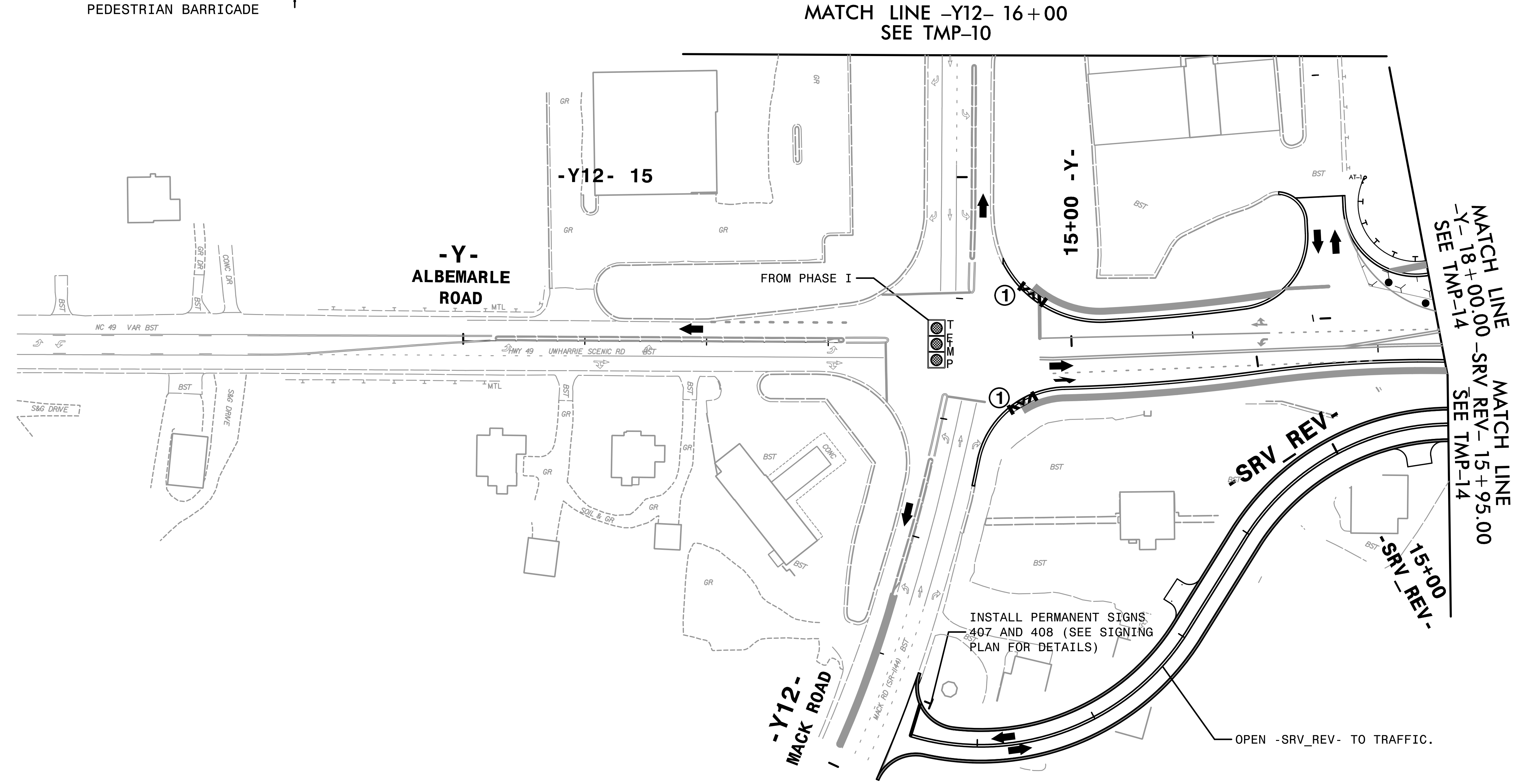
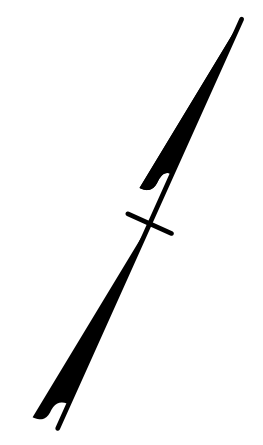
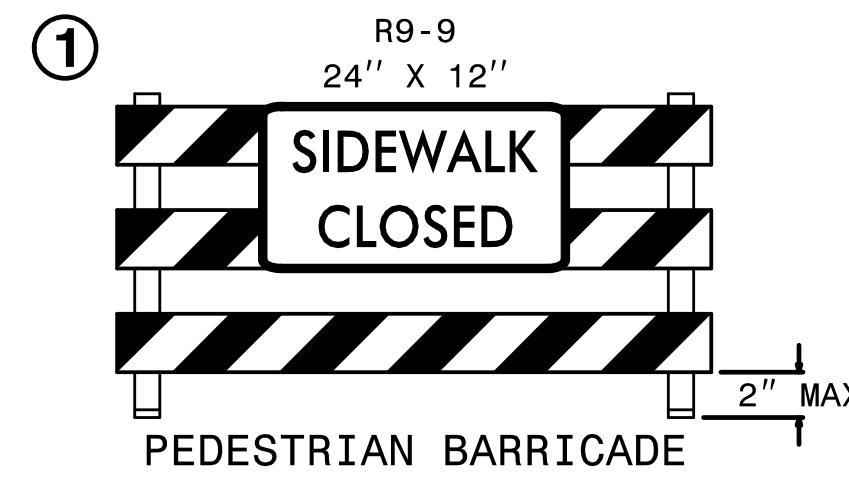
APPROVED: *Helen Shyu*
DATE: 5/21/2024
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SEAL 042517
HELEN SHYU



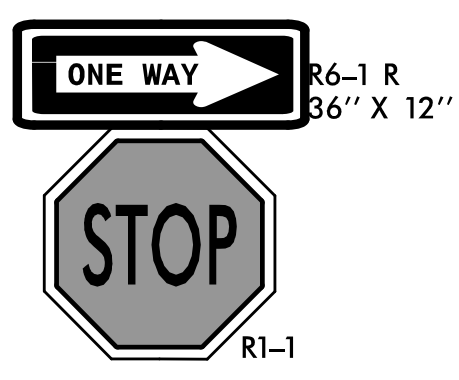
TRANSPORTATION MANAGEMENT PLAN
PHASE IA DETAIL

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

3:27:39 PM
TCP\US813_TCP_PIA_12C.dgn
11/28/2023



SEE PMP FOR PAVEMENT MARKING DETAILS.



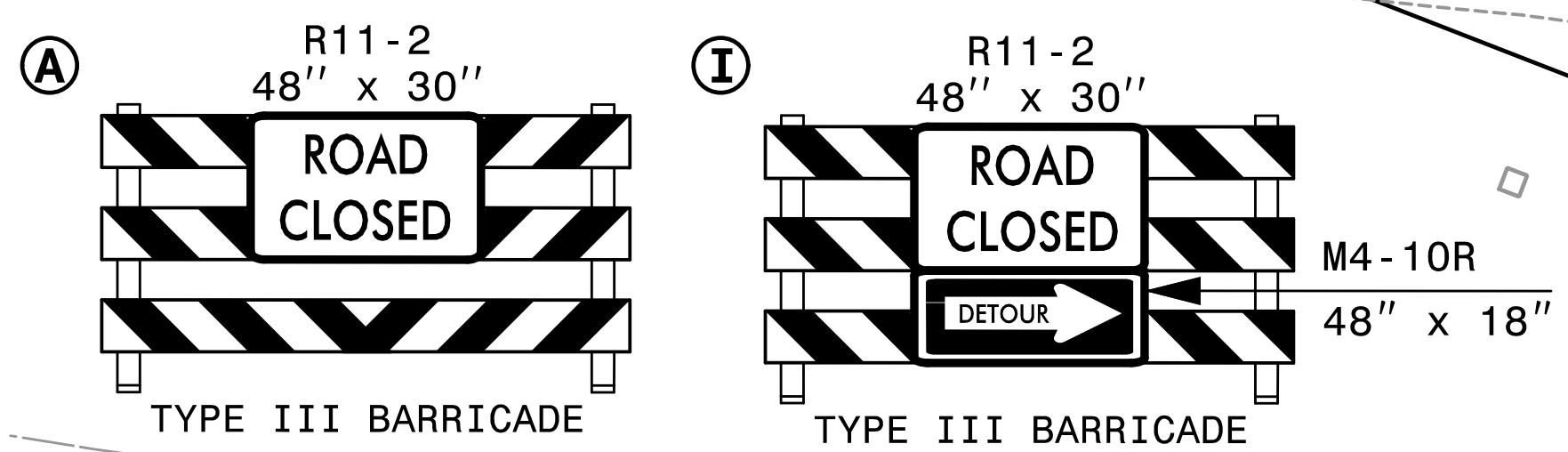
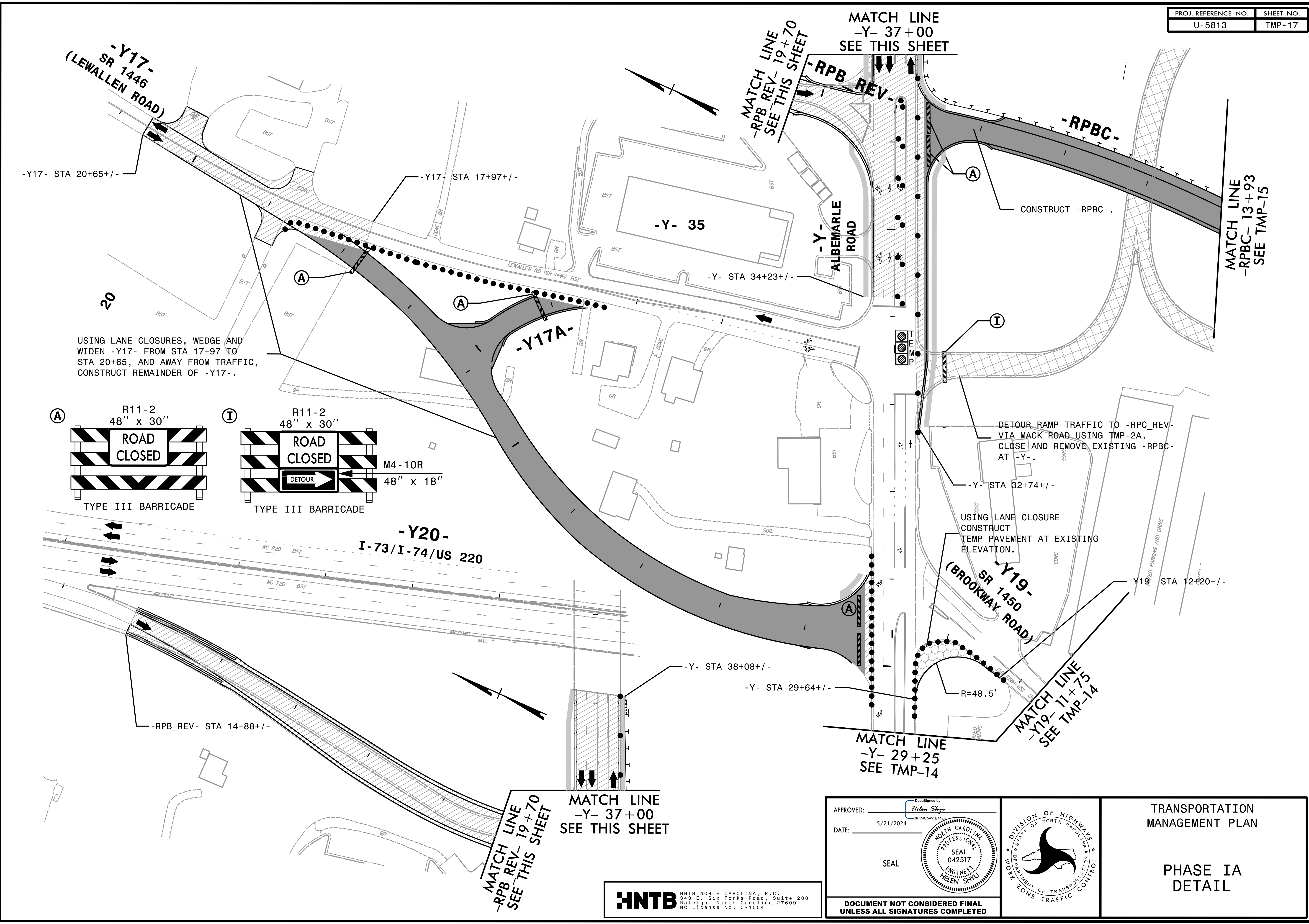
HNTB HNTB NORTH CAROLINA, P.C.
 348 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554

APPROVED: *Helen Shyu*
 DATE: 5/21/2024
 SEAL
 NORTH CAROLINA PROFESSIONAL SEAL
 042517
 ENGINEER HELEN SHYU



TRANSPORTATION MANAGEMENT PLAN
 PHASE IA DETAIL

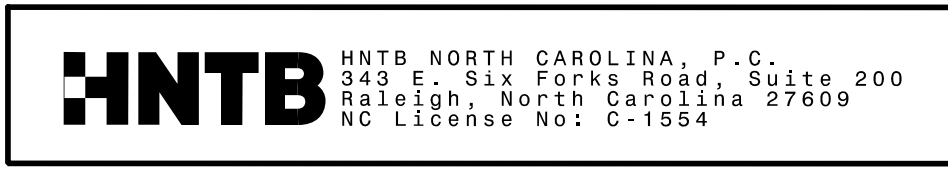
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 11/28/2023



3:27:49 PM
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 11/28/2023

MATCH LINE -RPB_REV- 19+70 SEE THIS SHEET

MATCH LINE -Y- 37+00 SEE THIS SHEET

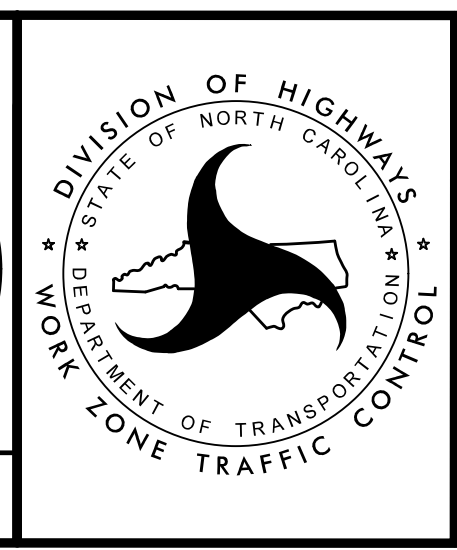


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 DATE: 5/21/2024

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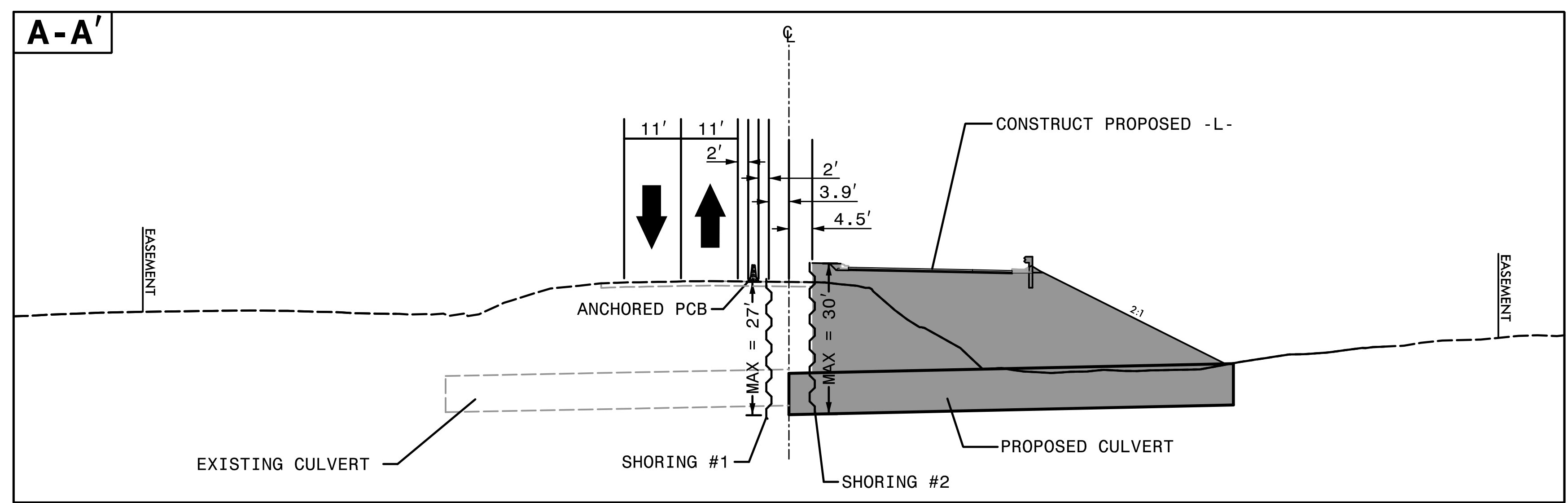
PROFESSIONAL SEAL
 042517
 HELEN SHYU
 ENGINEER

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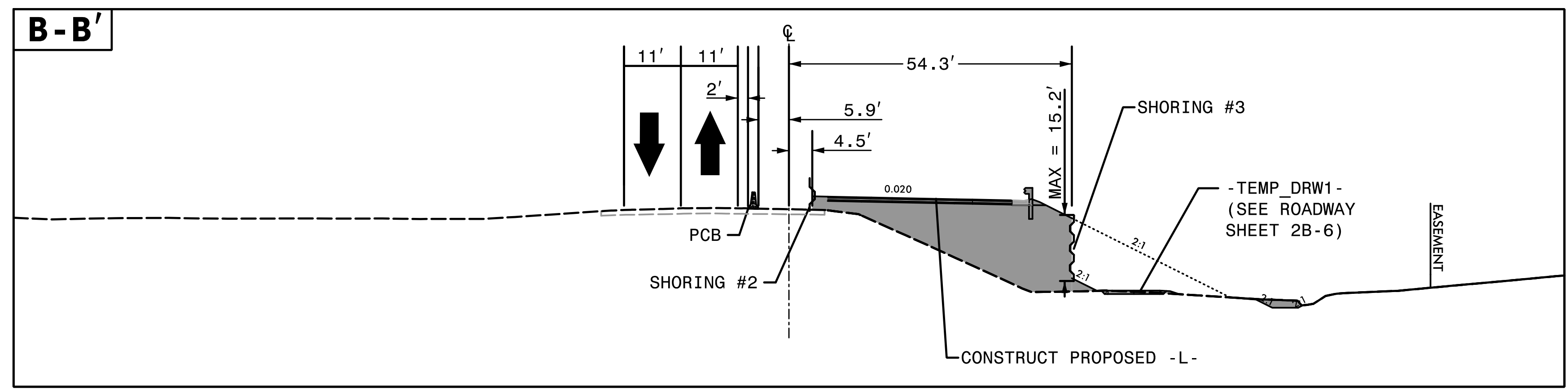


TRANSPORTATION MANAGEMENT PLAN

PHASE IA DETAIL



PHASE I
-L- 54+00



PHASE I
-L- 56+00

3:27:59 PM
TCP\J5813...te_PICUTS.dgn
11/28/2023



APPROVED: *Helen Shyu*
DATE: 5/21/2024

SEAL

DocuSigned by:
Helen Shyu
0F15875A85E44E

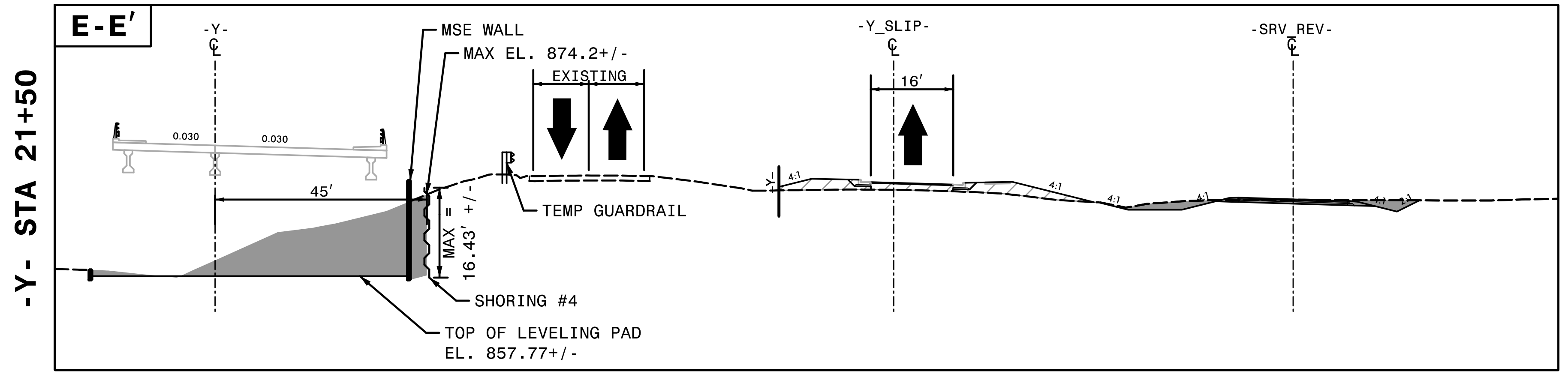
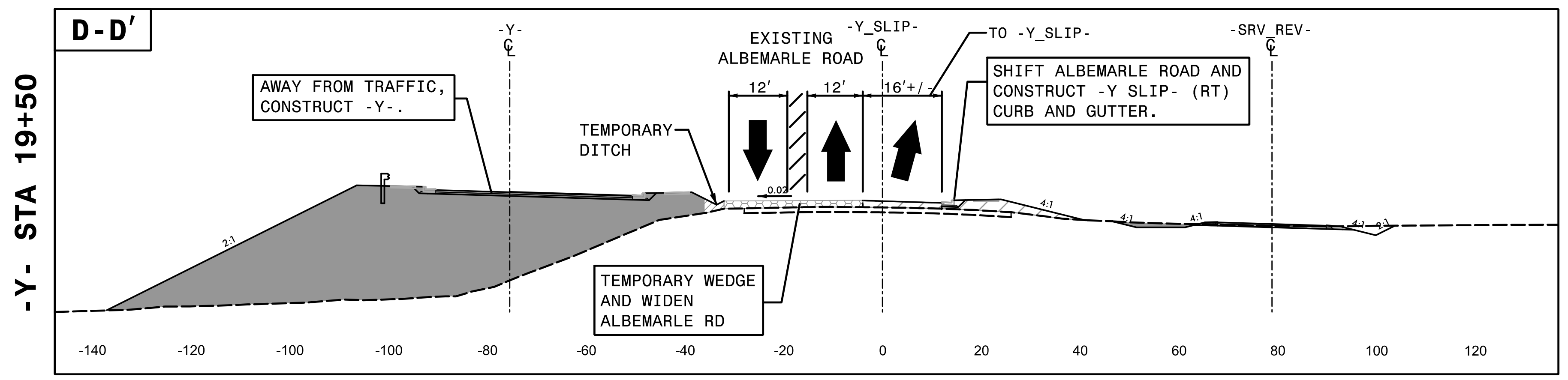
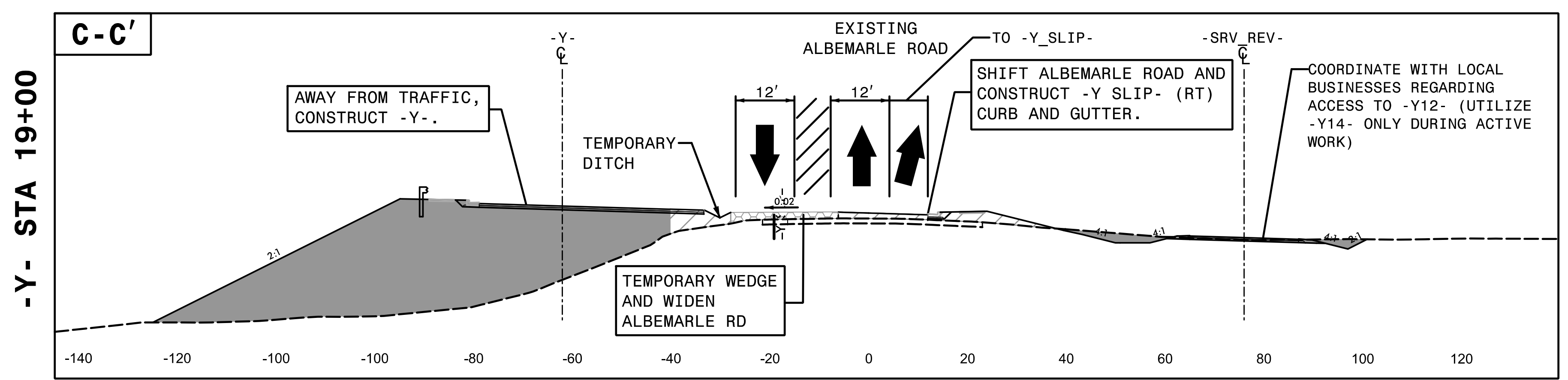
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SEAL
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HELEN SHYU

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TRANSPORTATION
MANAGEMENT PLAN

**PHASE I
CUT SECTIONS**



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 11/28/2023

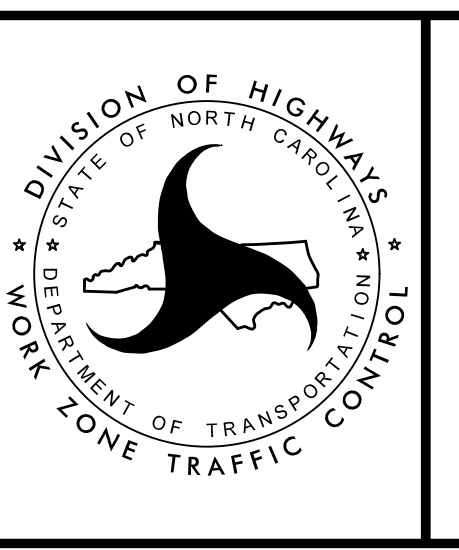


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 DATE: 5/21/2024

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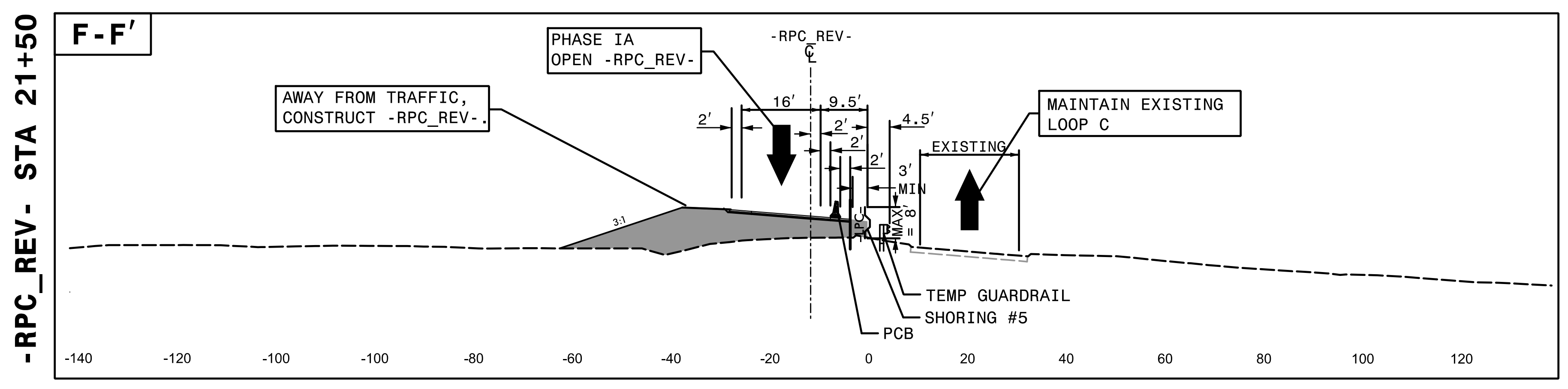
PROFESSIONAL SEAL
 NORTH CAROLINA
 ENGINEER
 HELEN SHYU
 042517

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TRANSPORTATION
 MANAGEMENT PLAN

PHASE I
 CUT SECTIONS



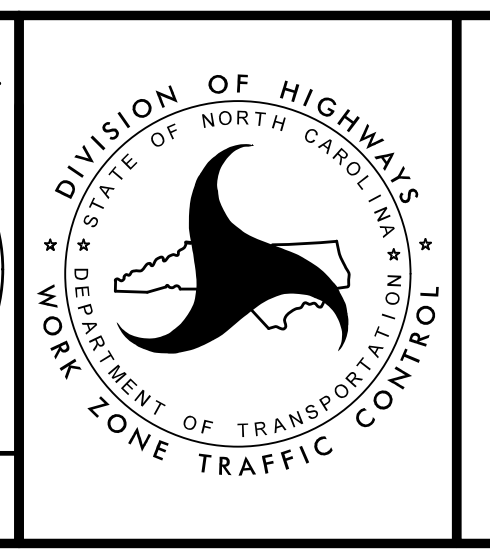
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 DATE: 5/21/2024

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TRANSPORTATION
MANAGEMENT PLAN

PHASE I AND IA
CUT SECTIONS