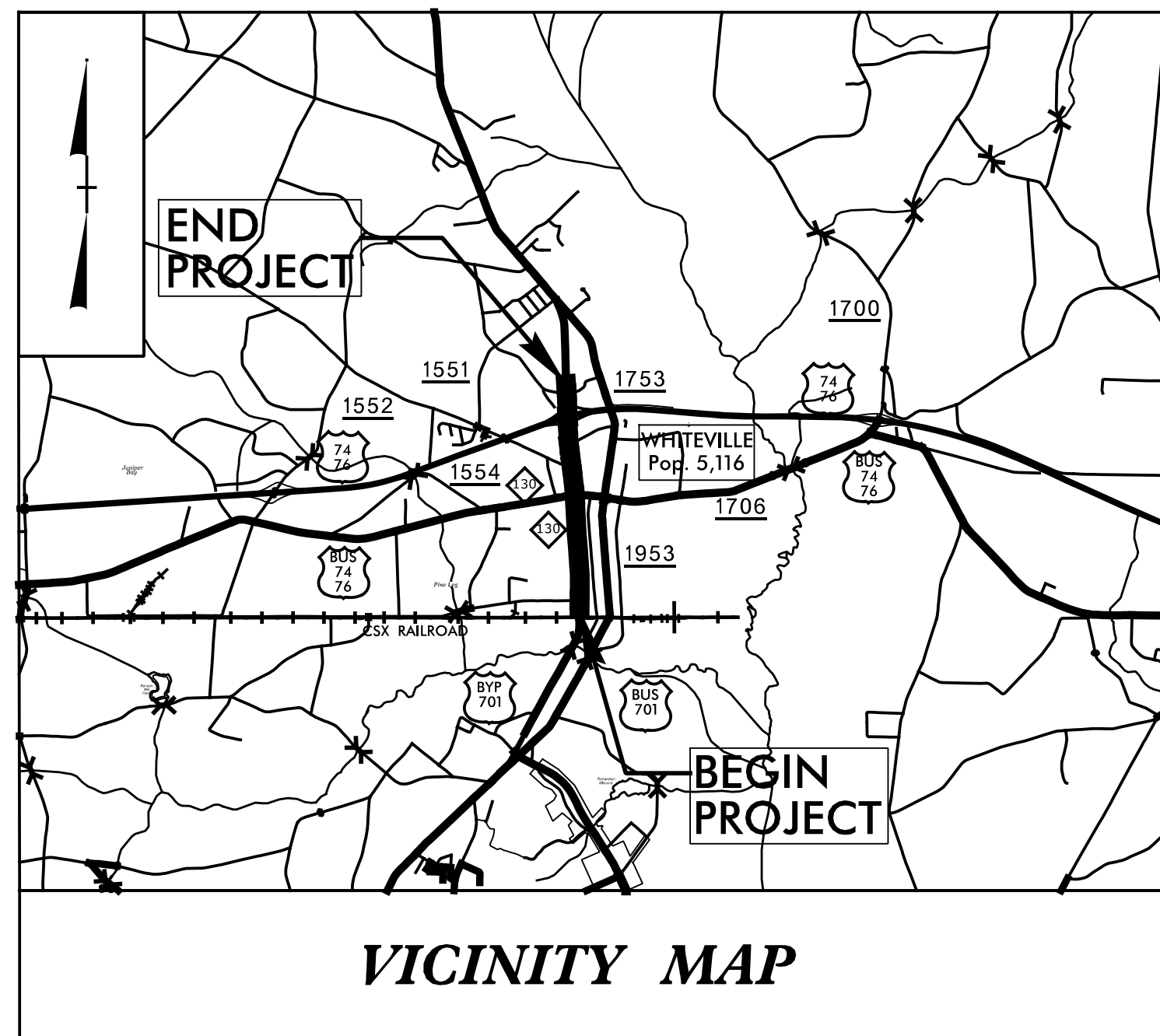
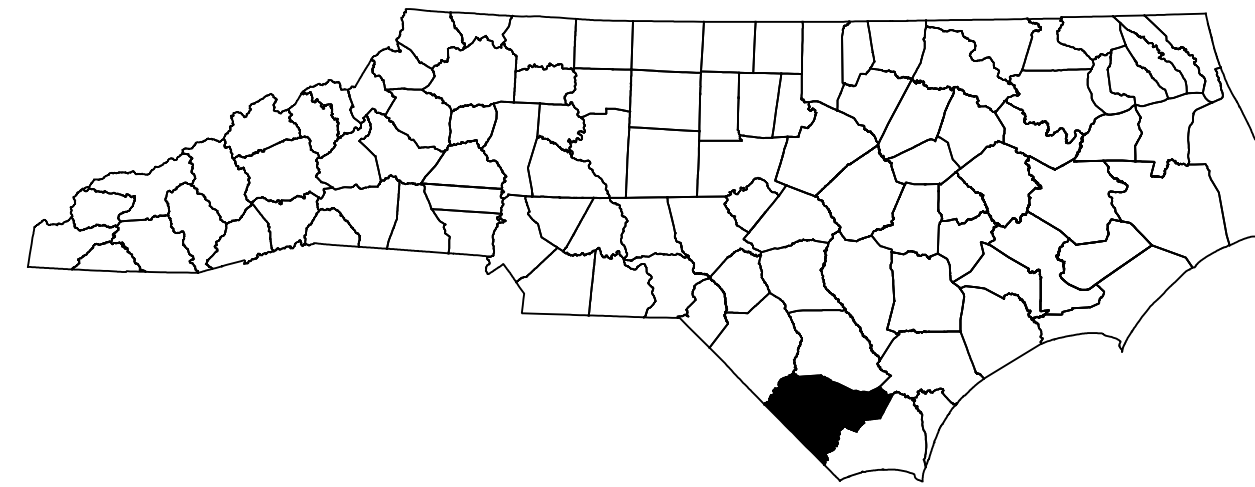


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

COLUMBUS COUNTY



LOCATION: US 701 BYPASS (MADISON STREET-JK POWELL BLVD.) FROM SR 1437 (VIRGIL AVENUE) TO US 74/76

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND SIGNALS

VICINITY MAP

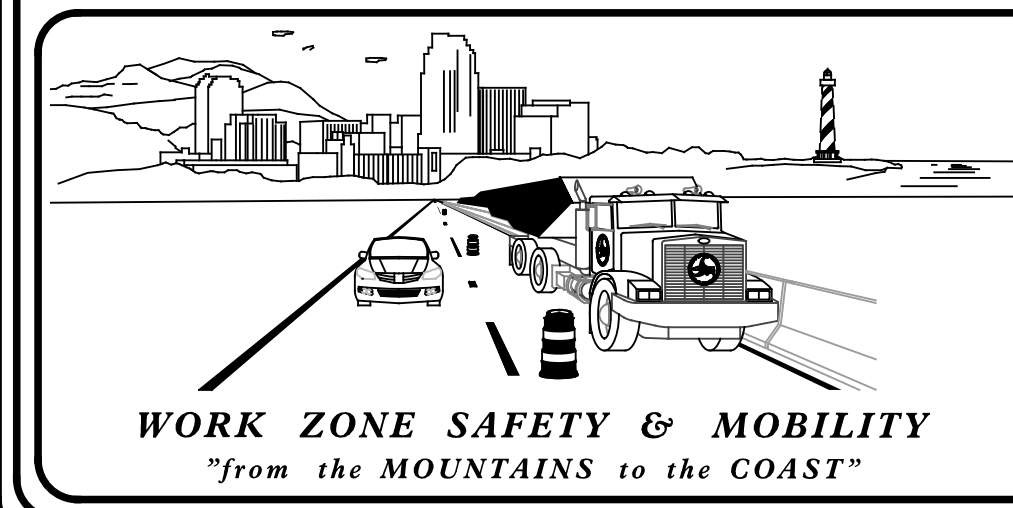
<u>SHEET NO.</u>	<u>TITLE</u>
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B THRU TMP-1C	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, AND LOCAL NOTES)
TMP-2	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-2A	PHASE I CUT SECTIONS
TMP-2B	PHASE IA CUT SECTIONS
TMP-2C	PHASE II CUT SECTIONS
TMP-2D THRU TMP-2D2	PEDESTRIAN DETOURS
TMP-2E THRU TMP-2H	OFF-SITE DETOURS
TMP-2I	SHORING DATA
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4 THRU TMP-4I	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-5 THRU TMP-5I	TEMPORARY TRAFFIC CONTROL PHASE IA DETAIL
TMP-6 THRU TMP6I	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

SHEET NO.
TMP-1

R-5020B

TIP PROJECT:

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PLANS PREPARED BY:

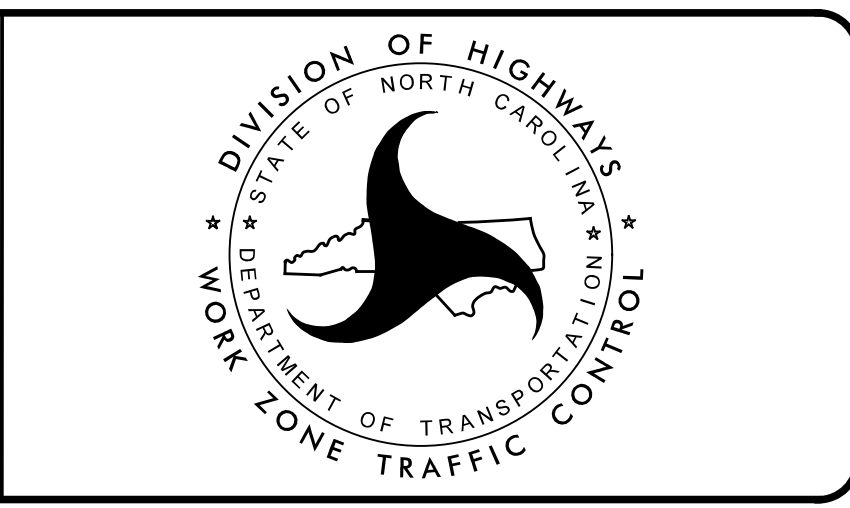
STEVE MILLER, P.E.

SHEENA GREEN

NCDOT CONTACTS:

J. S. KITE, P.E.
PROJECT ENGINEER

S. B. JENNINGS
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ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

<u>STD. NO.</u>	<u>TITLE</u>
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.06	WARNING SIGNS FOR BLASTING ZONES
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 - TYPE III
1150.01	FLAGGERS
1160.01	TEMPORARY CRASH CUSHION - REFLECTIVE END TREATMENT
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
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1205.11	PAVEMENT MARKINGS - RAILROAD CROSSINGS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1205.14	PAVEMENT MARKINGS - ROUNDABOUTS
1205.15	PAVEMENT MARKINGS - SUPERSTREETS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1266.01	FLEXIBLE DELINEATORS
1267.01	FLEXIBLE DELINEATORS - INSTALLATION

LEGEND

GENERAL

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

- WORK AREA
- REMOVAL
- CONSTRUCTION UNDER TRAFFIC

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

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

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
PAINT (4")			
P5	2 FT. - 6 FT./SP WHITE MINISKIP	P61	WHITE STOPBAR
P14	2 FT. - 6 FT./SP YELLOW MINISKIP	PAINT MARKING SYMBOLS	
P1	WHITE EDGELINE	P70	LEFT TURN ARROW
P3	10 FT. WHITE SKIP	P71	RIGHT TURN ARROW
P4	3 FT. - 9 FT./SP WHITE MINISKIP	P72	STRAIGHT ARROW
P2	WHITE SOLID LANE LINE	P73	COMBO. LEFT/STRAIGHT ARROW
P12	10FT. YELLOW SKIP	P74	COMBO. RIGHT/STRAIGHT ARROW
P11	YELLOW SINGLE CENTER	P75	COMBO. LEFT/RIGHT ARROW
P13	YELLOW DOUBLE CENTER	P76	COMBO. LEFT/RIGHT/STRAIGHT ARROW
PAINT (6")			
P20	WHITE EDGELINE	P103	24" YIELD LINE TRIANGLE
P30	YELLOW EDGELINE		
P22	10 FT. WHITE SKIP		
PAINT (8")			
P44	3 FT. - 9 FT./SP WHITE MINISKIP		
P45	3 FT. - 3 FT./SP WHITE MINISKIP (ROUNDABOUTS ONLY)		
P40	WHITE GORELINE		
P41	WHITE DIAGONAL		
P42	YELLOW DIAGONAL		
P46	WHITE CROSSWALK LINE		
P43	WHITE SOLID LANE LINE		

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ROADWAY STANDARD
 DRAWINGS, LEGEND &
 TEMPORARY PAVEMENT
 MARKING SCHEDULE

MANAGEMENT STRATEGIES

- LOCAL ACCESS TO ALL RESIDENCES AND BUSINESSES WILL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
- PROVIDE ONE MONTH NOTICE TO THE ENGINEER, CITY OF WHITEVILLE EMERGENCY SERVICES, AND CITY OF WHITEVILLE SCHOOL OFFICIALS PRIOR TO ANY ROAD CLOSURE.

PHASE I

1. PLACE WORK ZONE ADVANCE WARNING SIGNS.
2. BEGIN CONSTRUCTION AWAY FROM TRAFFIC, INCLUDING INCLUDING SIDEWALKS AND DRAINAGE.
3. PLACE TEMPORARY PAVEMENT MARKINGS FOR CROSSOVERS AND SHIFT TRAFFIC TO BEGIN CONSTRUCTION ON STAGE 1 OF PROPOSED DRAINAGE PIPES.

NOTE: WEDGE AS NEEDED TO MAINTAIN SMOOTH TRANSITION FROM PROPOSED TO EXISTING.

NOTE: ADJUST SIGNAL PATTERNS AS NEEDED WHERE TRAFFIC PATTERNS ARE AFFECTED BY CROSSOVERS.
4. UNDER A 5 DAY ICT, CONSTRUCT 48" CROSSPIPE AT -L- STA 198+25 +/-.
5. COMPLETE CONSTRUCTION AWAY FROM TRAFFIC NECESSARY FOR PHASE IA PATTERN. PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS AND SHIFT TRAFFIC TO PHASE IA PATTERN.

PHASE IA

1. CONTINUE CONSTRUCTION AWAY FROM TRAFFIC.
2. CONSTRUCT REMAINDER OF DRAINAGE CROSS PIPES.

NOTE: WEDGE AS NEEDED TO MAINTAIN SMOOTH TRANSITION FROM PROPOSED TO EXISTING.

NOTE: ADJUST SIGNAL PATTERNS AS NEEDED WHERE TRAFFIC PATTERNS ARE AFFECTED BY CROSSOVERS.
3. UTILIZE ROAD CLOSURES TO CONSTRUCT -Y- LINES WITH FULL DEPTH PAVING.

USING NIGHTLY LANE CLOSURES, CONSTRUCT 42" CROSS PIPE AT -Y28-.
4. UNDER AN ICT UTILIZE RAMP/LOOP CLOSURES TO CONSTRUCT LOOP A AND ROUNDABOUT TIE-INS.
5. COMPLETE CONSTRUCTION AWAY FROM TRAFFIC

NOTE: WEDGE AS NEEDED TO MAINTAIN SMOOTH TRANSITION FROM PROPOSED TO EXISTING

NOTE: USE TEMPORARY SLOPES WHERE NECESSARY

PHASE II

1. WEDGE, UP TO, AND INCLUDING THE FINAL LAYER OF SURFACE COURSE, PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS IN THE FINAL PATTERN.
2. USING LANE CLOSURES CONSTRUCT CONCRETE MEDIAN ISLANDS AND MEDIAN CURB & GUTTER.
3. PLACE FINAL PAVEMENT MARKINGS AND MARKINGS PER THE FINAL PAVEMENT MARKING PLAN.
4. REMOVE ALL TEMPORARY TRAFFIC CONTROL DEVICES.

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR 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 |
|---------------|-------------------------------------------------------------------------------------------------------------|
| ALL ROADS | SEPTEMBER 8 THRU APRIL 11
MONDAY THRU FRIDAY
6:00 AM TO 9:00 AM |
| | APRIL 12 THRU SEPTEMBER 7
MONDAY THRU FRIDAY
6:00 AM TO 9:00 AM
SATURDAY
9:00 AM TO 9:00PM |
| US-701 BYPASS | PHASE I, STEP #5
MONDAY THRU THURSDAY, 6:00 AM TO 9:00 PM
FROM FRIDAY AT 6:00 AM TO SUNDAY AT 9:00 PM |

- B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:
- | ROAD NAME | HOLIDAY |
|-----------|---------|
| ALL ROADS | |

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31ST TO 9:00 A.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 9:00 A.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 9:00 A.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 9:00 A.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 9:00 A.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 A.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 9:00 A.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 9:00 A.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 A.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

- C) DO NOT CLOSE ROADS AS FOLLOWS:
- | ROAD NAME | DAY AND TIME RESTRICTIONS |
|-----------------------------|---------------------------|
| -Y24- (W. BURKHEAD ST), | MONDAY THRU FRIDAY |
| -Y32- (FLOWERS-PRIDGEN DR), | 6:00 AM TO 7:00 PM |

LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

- H) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- I) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON US 701 BYP.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- J) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:
- BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.
- BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.
- BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.
- K) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) (350 FEET) IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

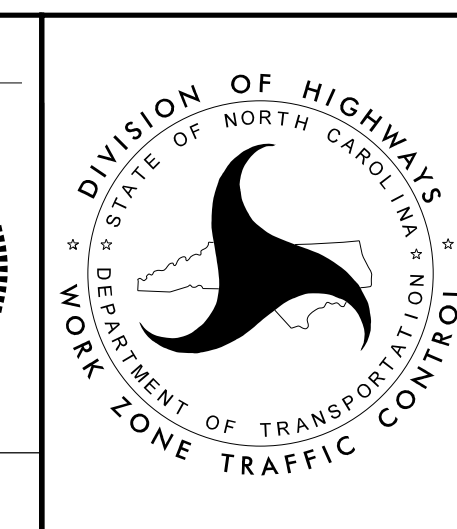
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GENERAL NOTES CONT.

SIGNING

M) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

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

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

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

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

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

TRAFFIC BARRIER

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

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

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

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

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

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

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO 1101.05)

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

TRAFFIC CONTROL DEVICES

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

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

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

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
ALL ROADS	PAINT	N/A

W) 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.

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

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

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

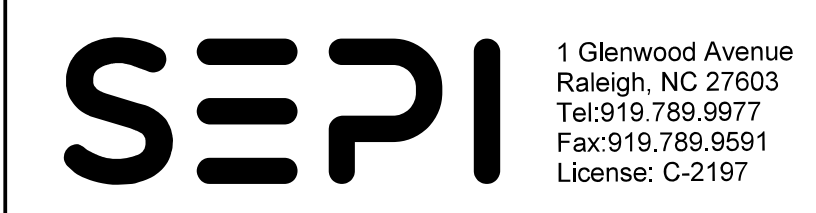
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AA) LAW ENFORCEMENT SHALL BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

BB) 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.

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

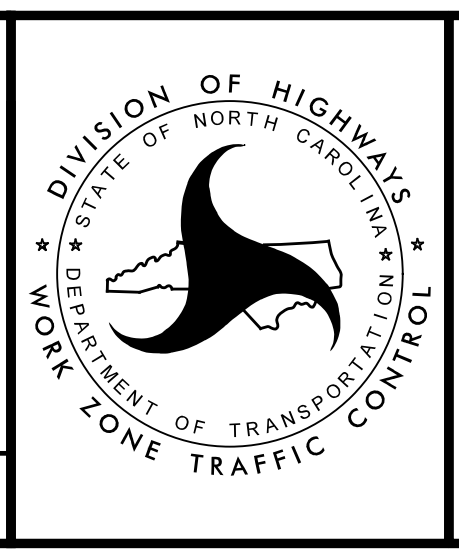
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**TRANSPORTATION
OPERATIONS
PLAN**

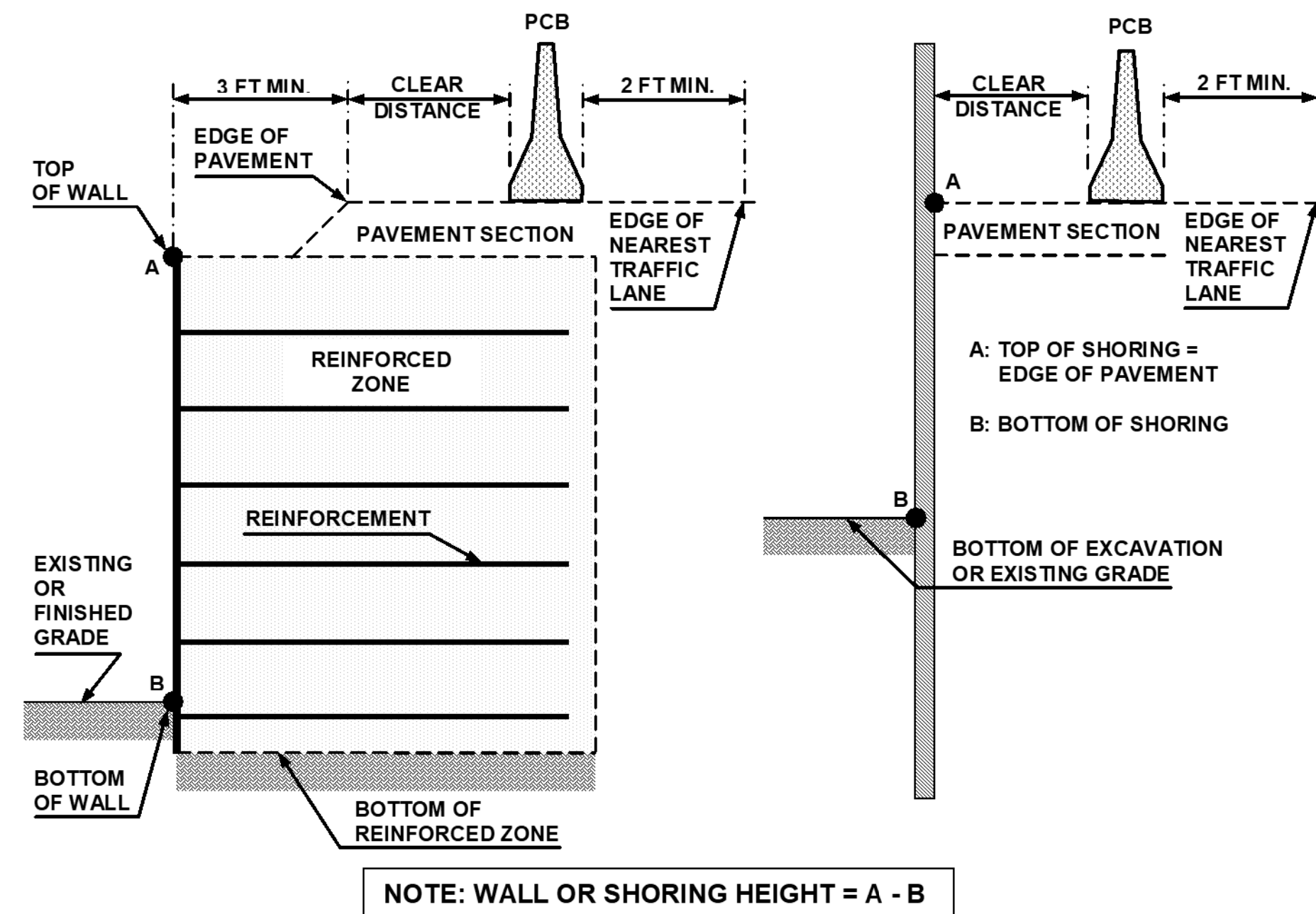


FIGURE A

NOTES

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

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

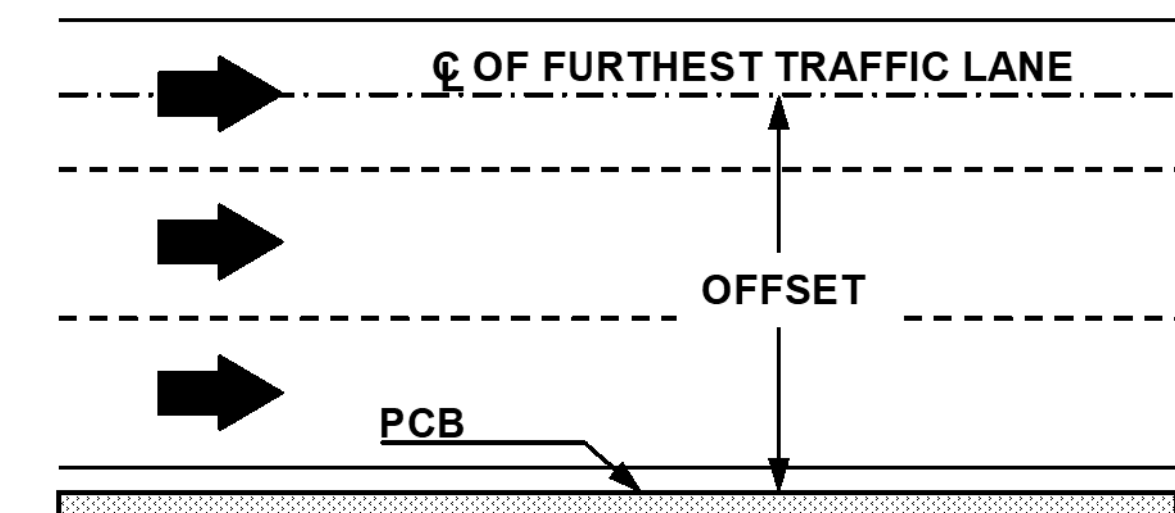
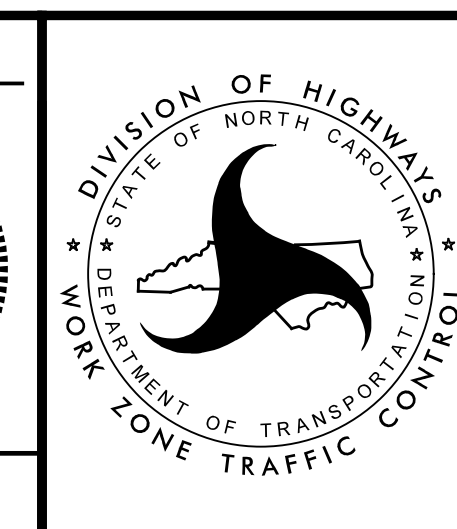


FIGURE B

4/14/2020 X:\2017\SET\135-00 R-5020B\TP\TrafficControl\TMP\R-5020B.TC.TMP-02.dgn Screen

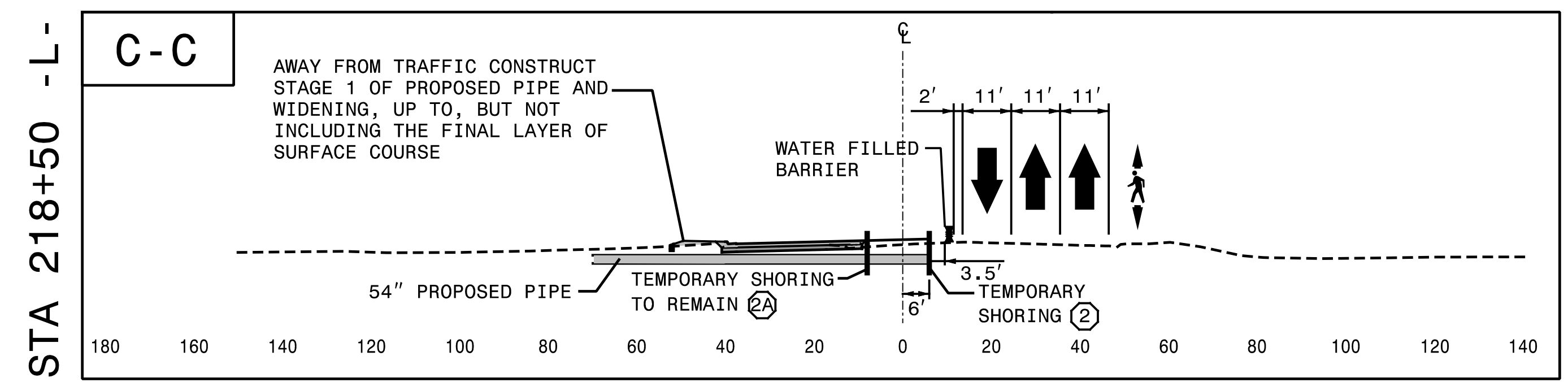
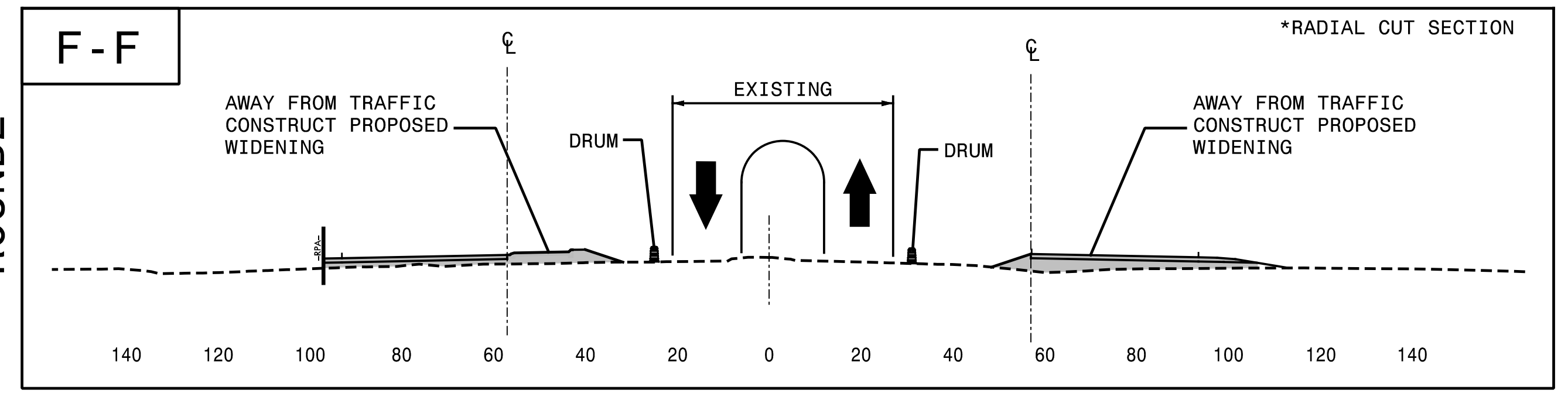
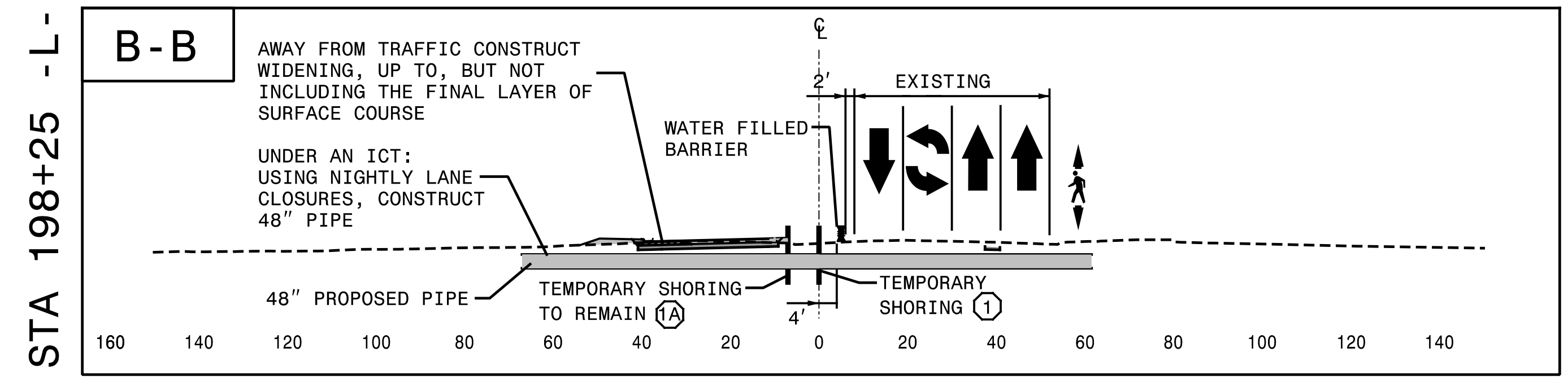
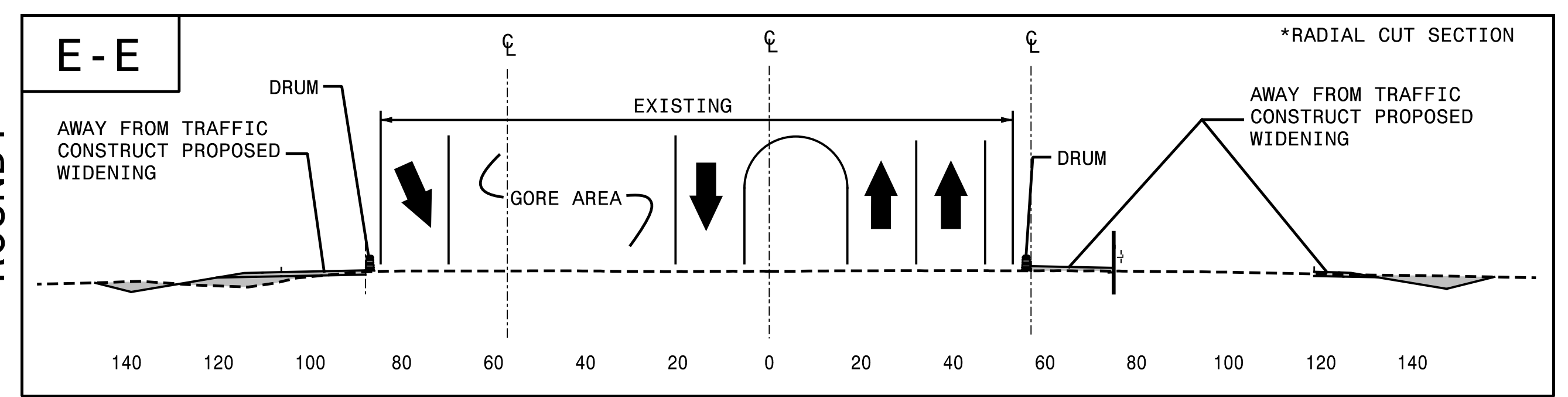
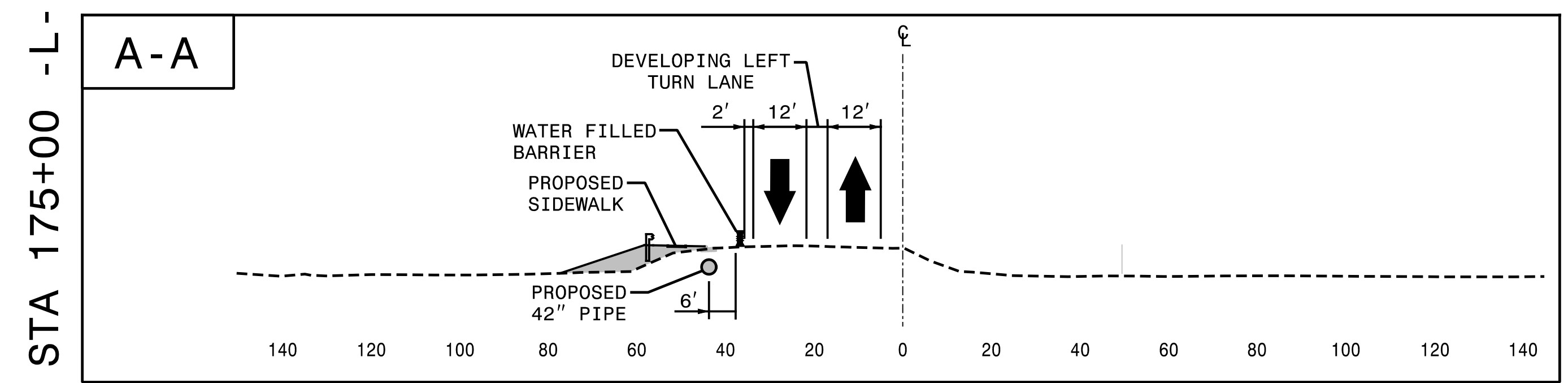
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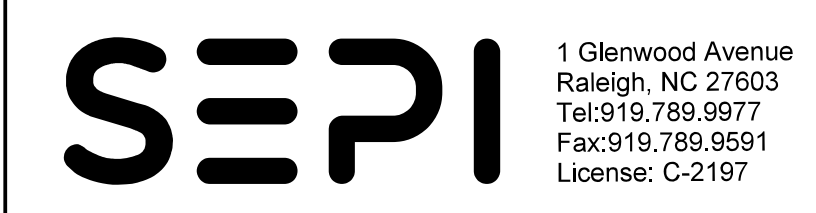


PCB AT TEMPORARY SHORING LOCATIONS

PHASE I



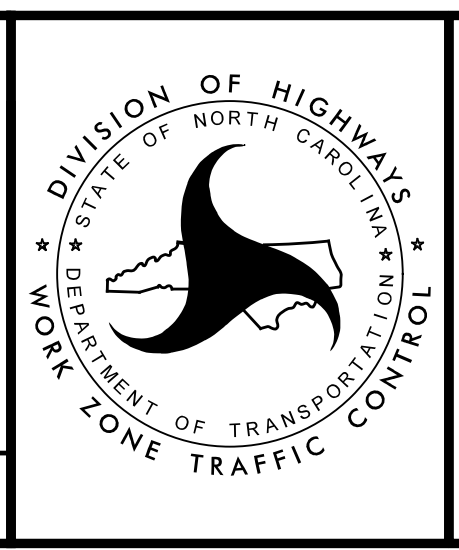
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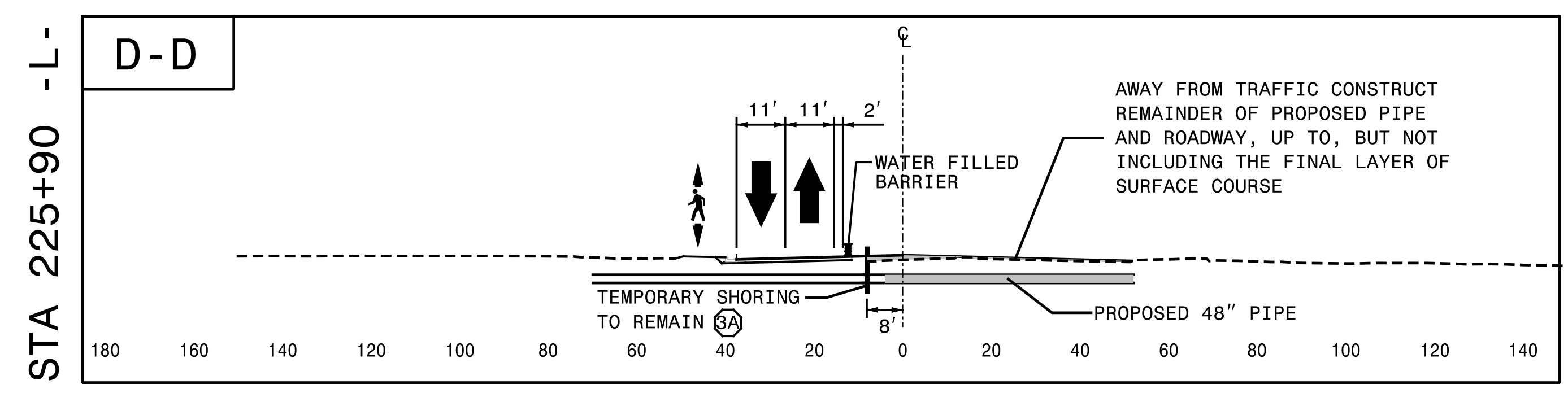
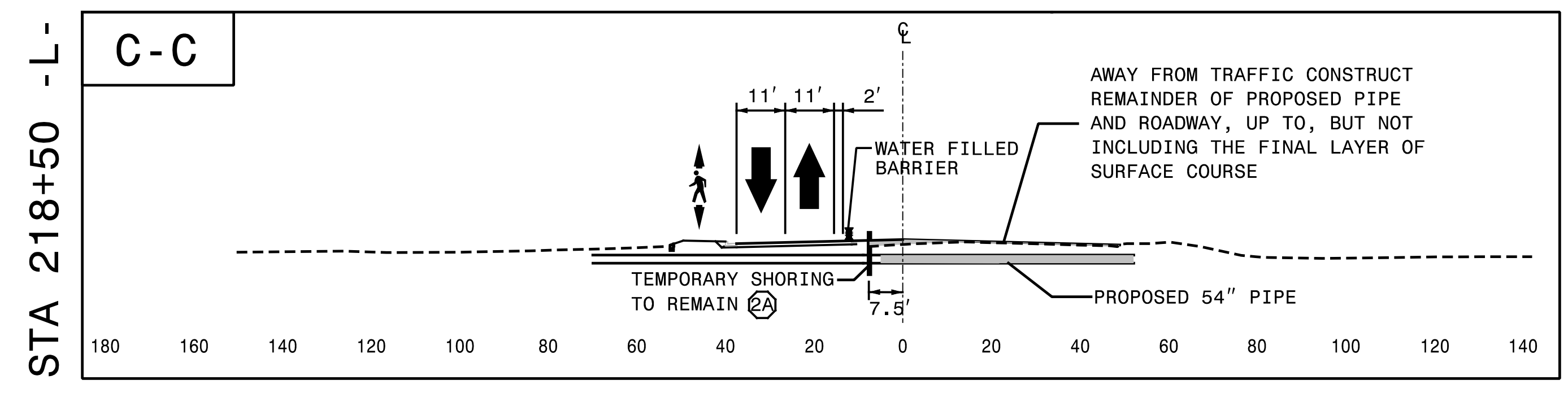
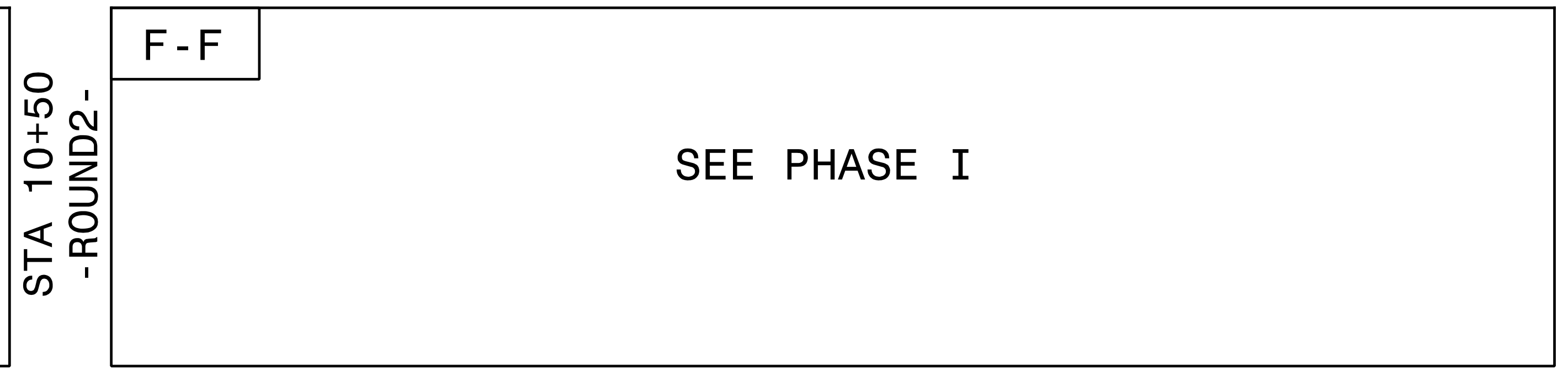
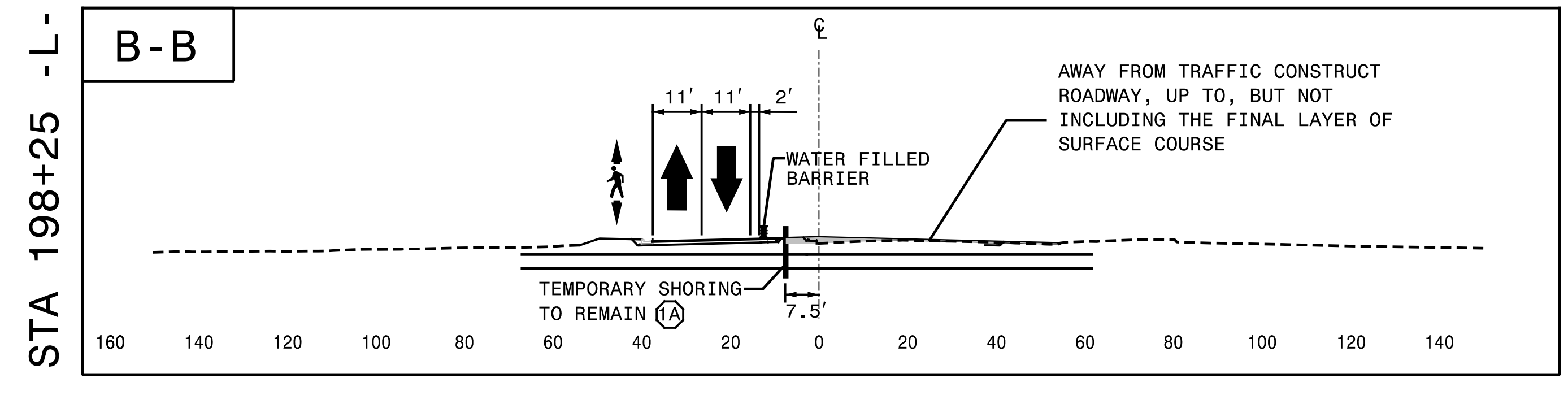
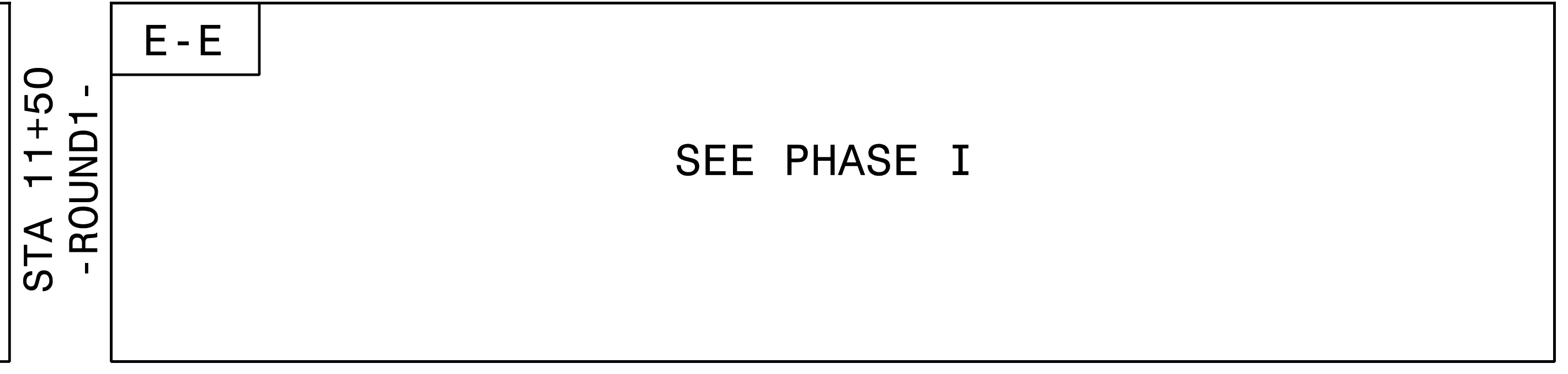
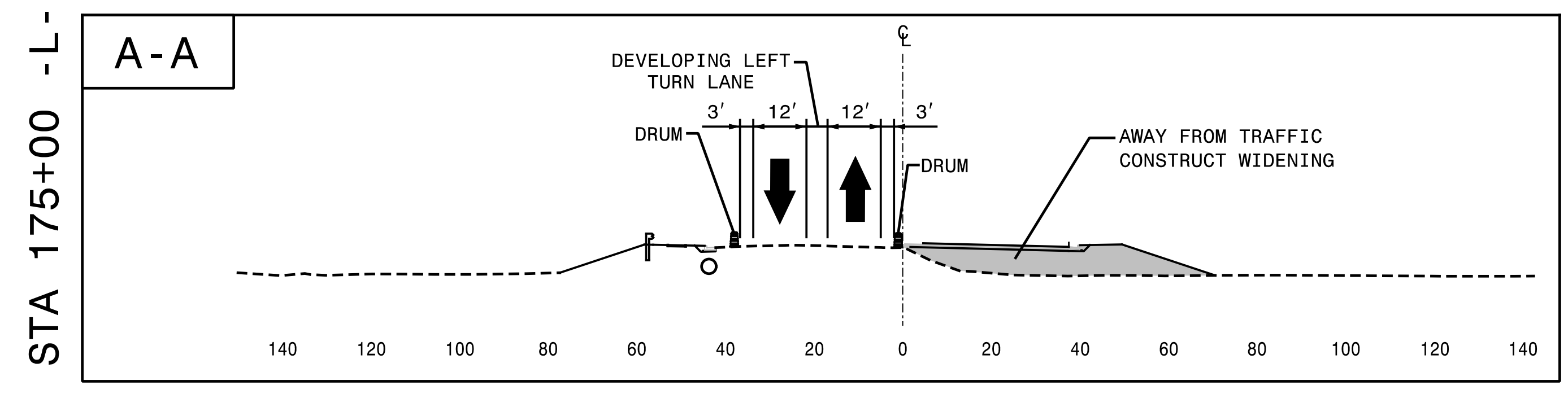
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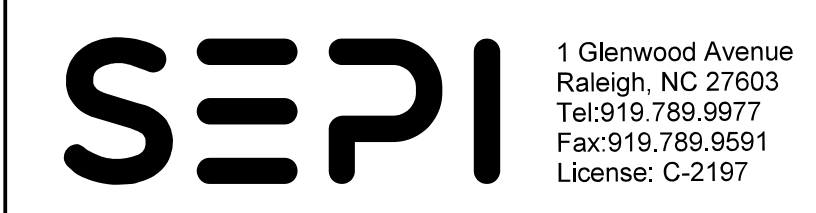


**TEMPORARY
TRAFFIC CONTROL
PHASE I
CUT SECTIONS**

PHASE IA



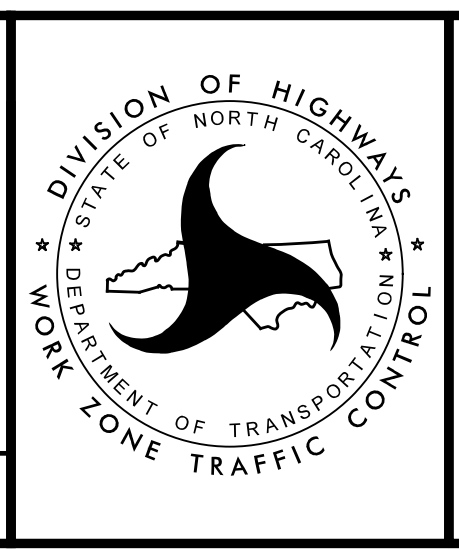
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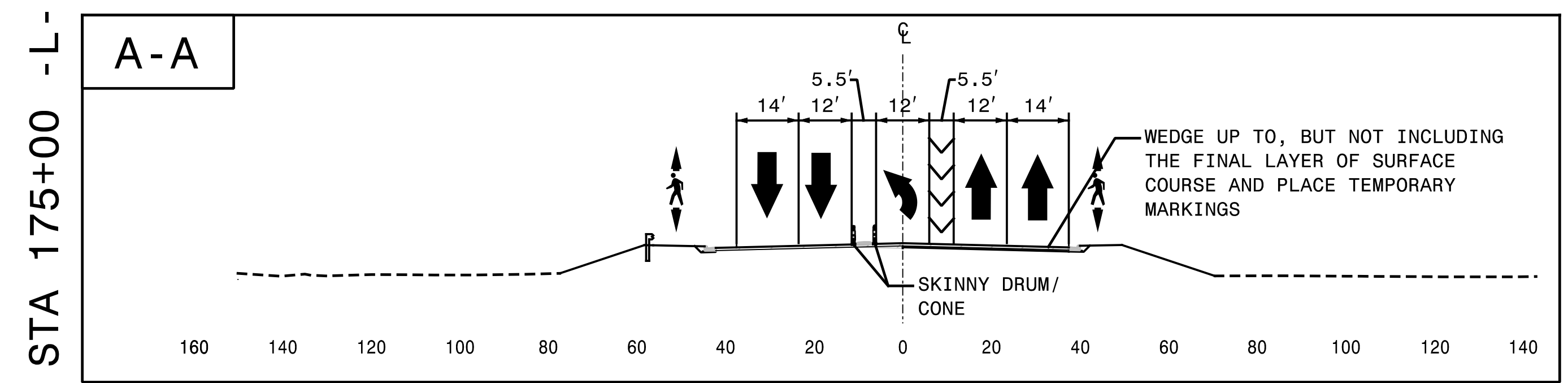
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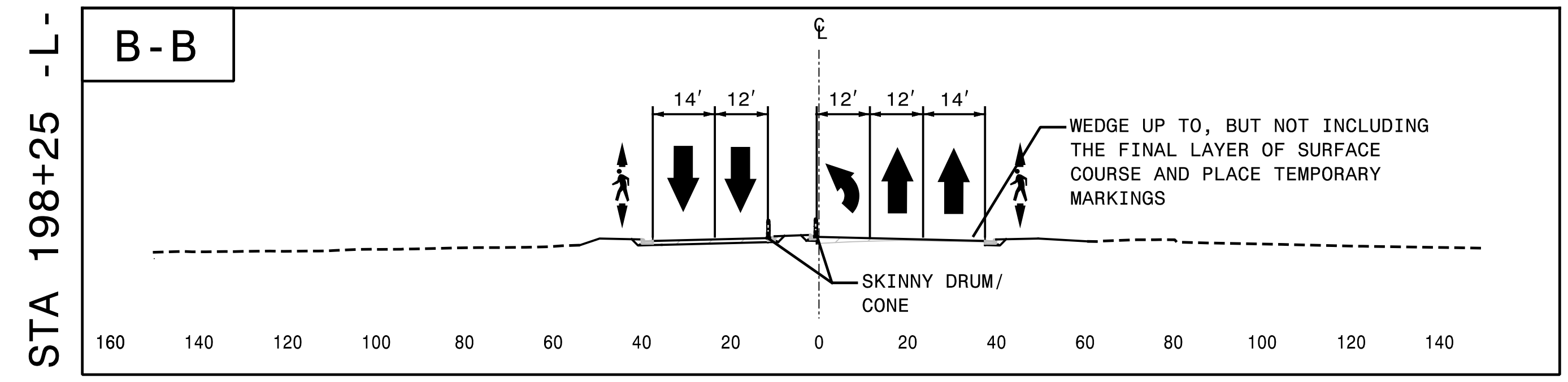
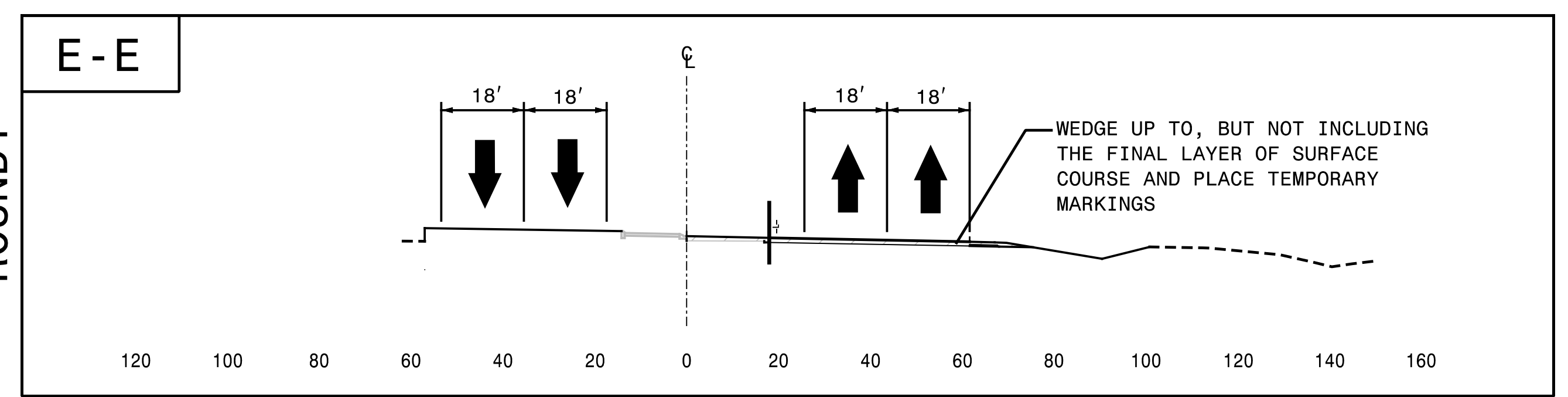


TEMPORARY TRAFFIC CONTROL PHASE IA CUT SECTIONS

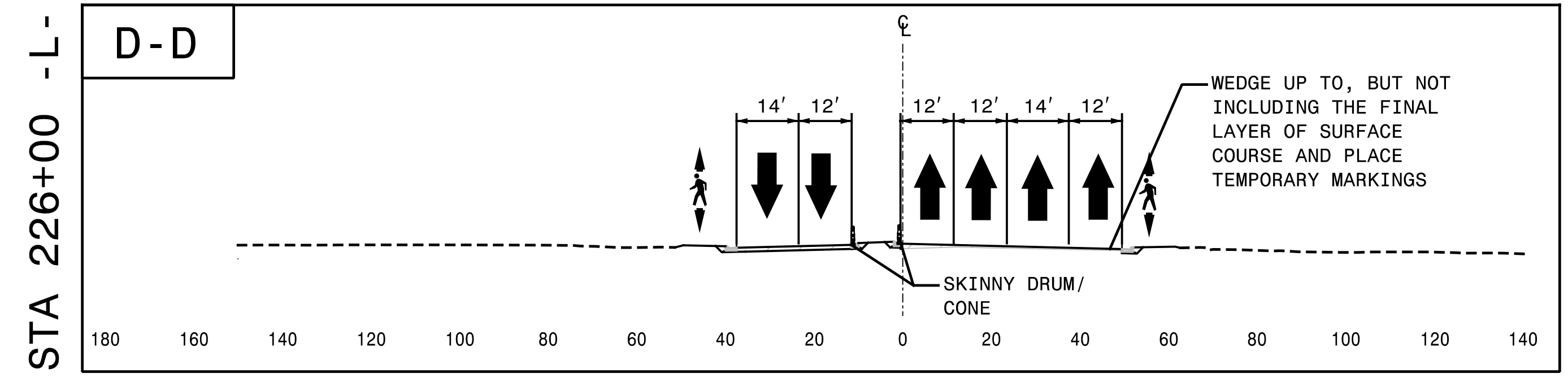
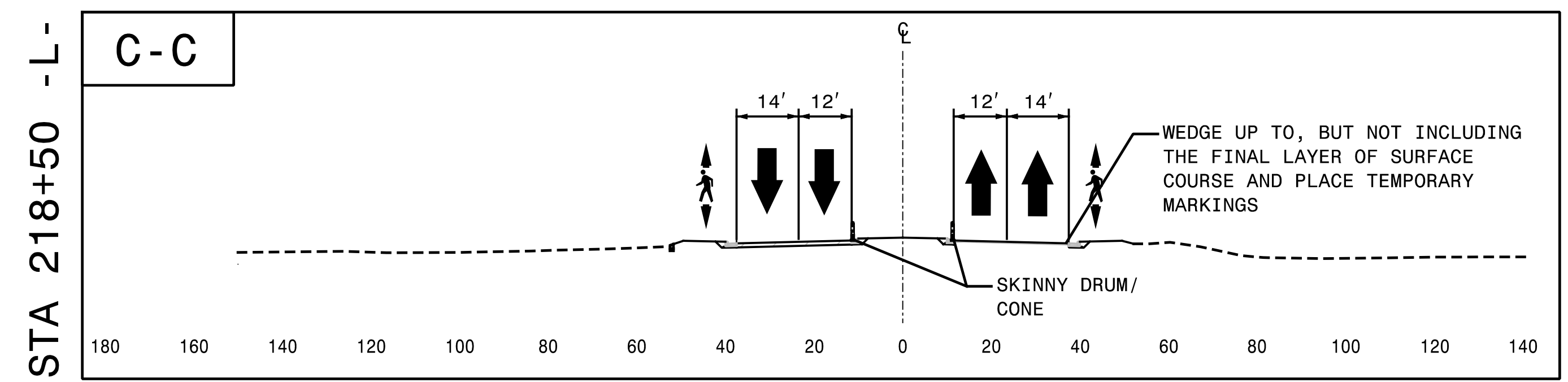
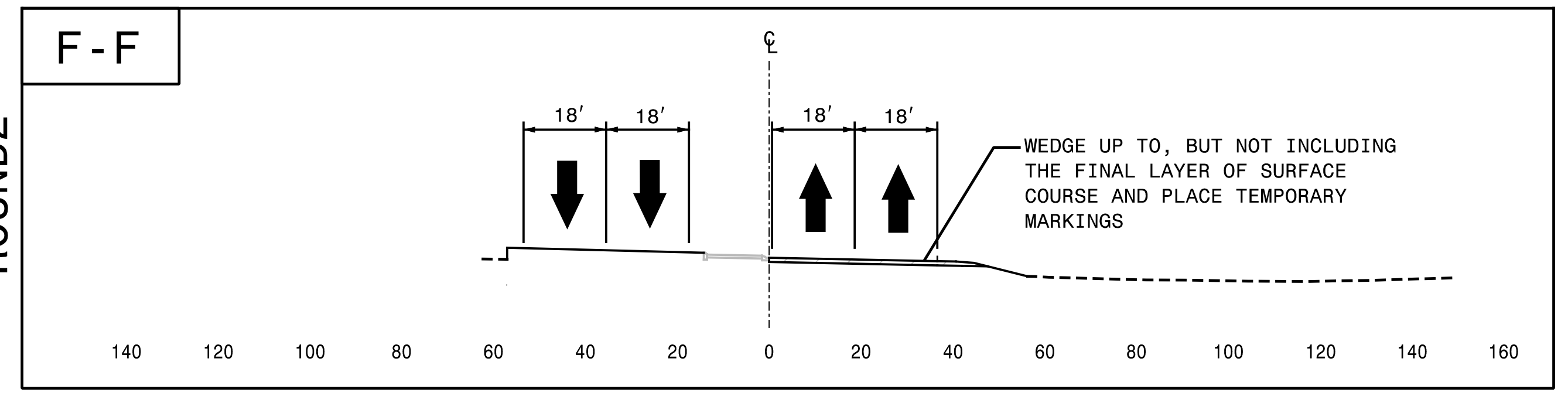
PHASE II



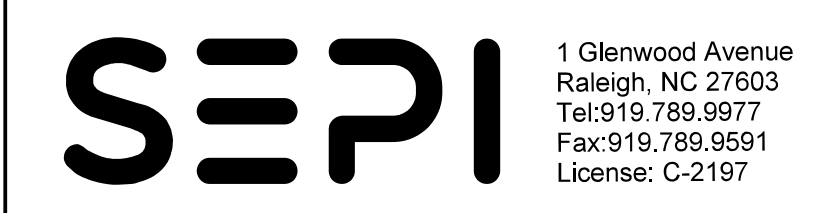
STA 11+50
- ROUND1 -



STA 10+50
- ROUND2 -



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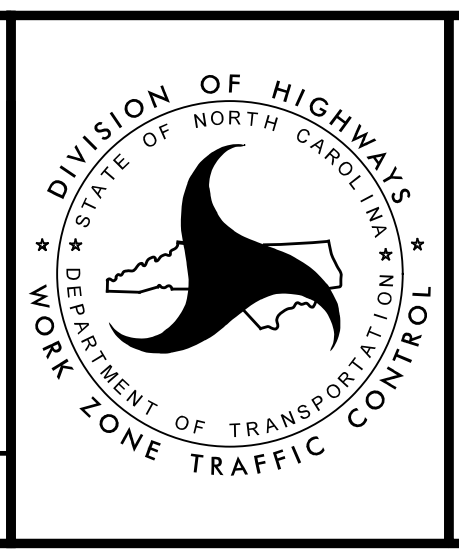


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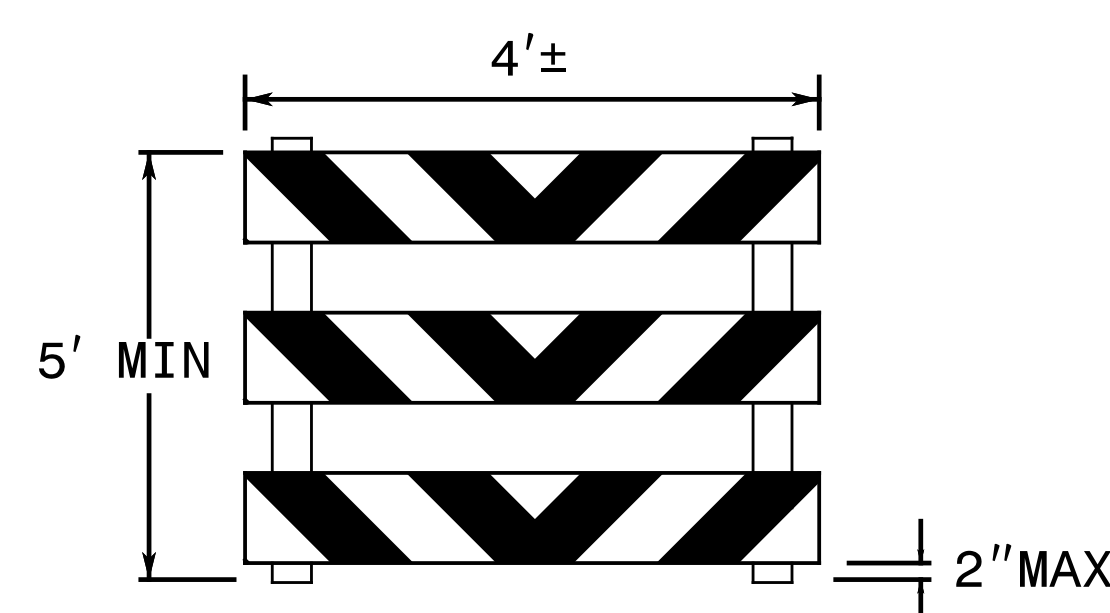
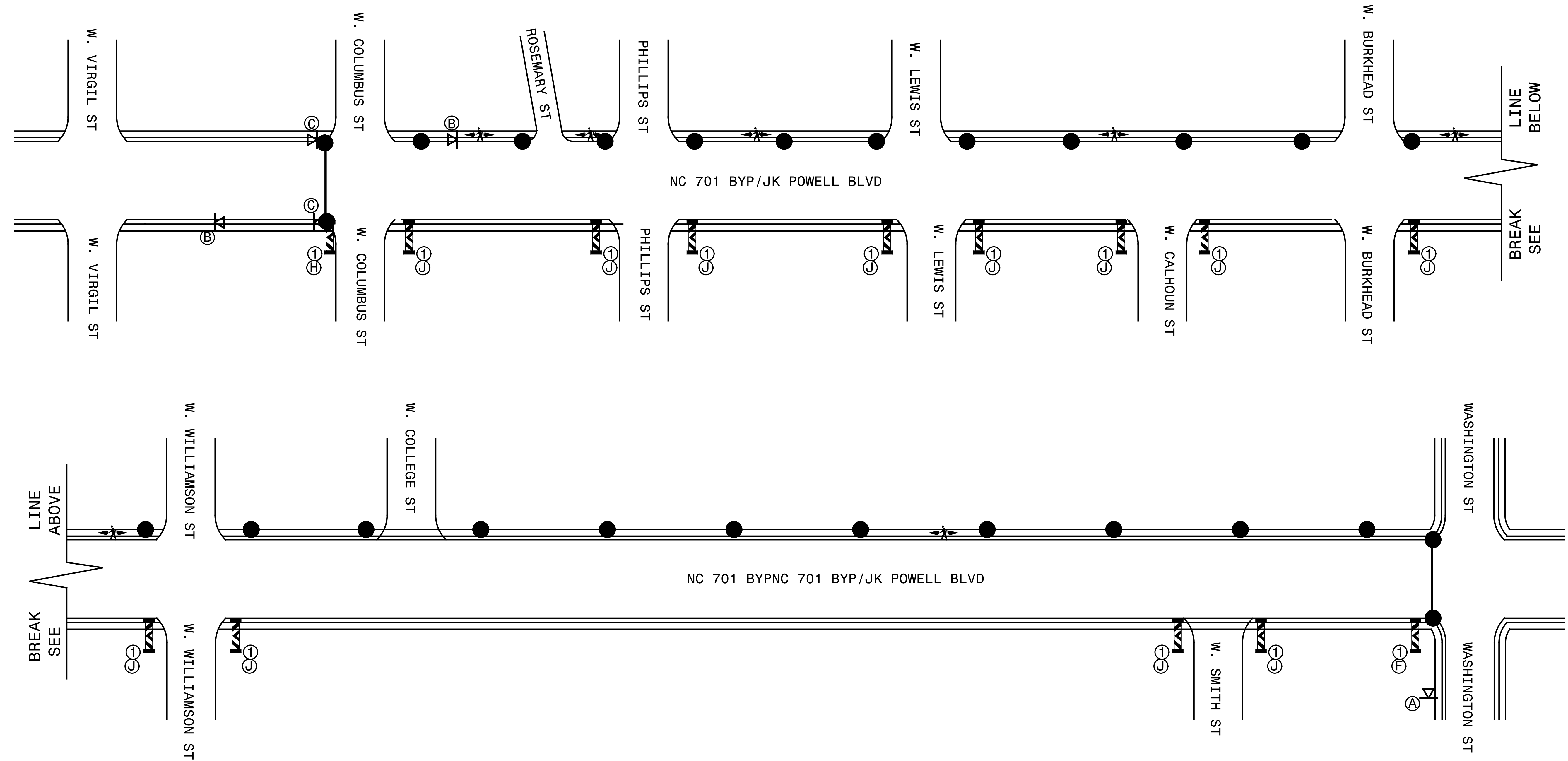
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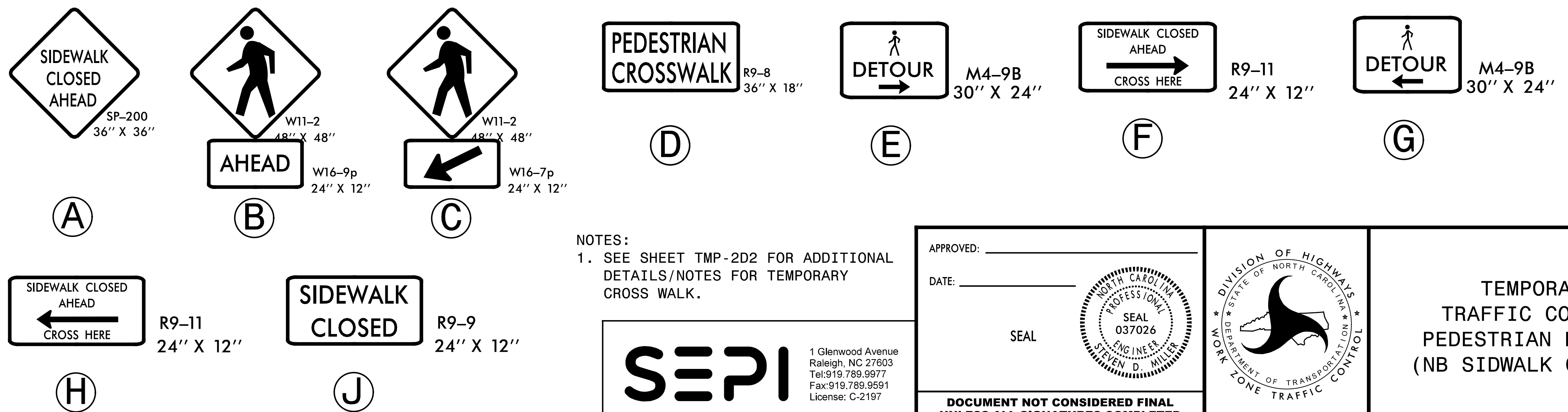


**TEMPORARY
TRAFFIC CONTROL
PHASE II
CUT SECTIONS**



PEDESTRIAN BARRICADE
MUST BE ADA-COMPLIANT

1



NOTES:
1. SEE SHEET TMP-2D2 FOR ADDITIONAL DETAILS/NOTES FOR TEMPORARY CROSS WALK.

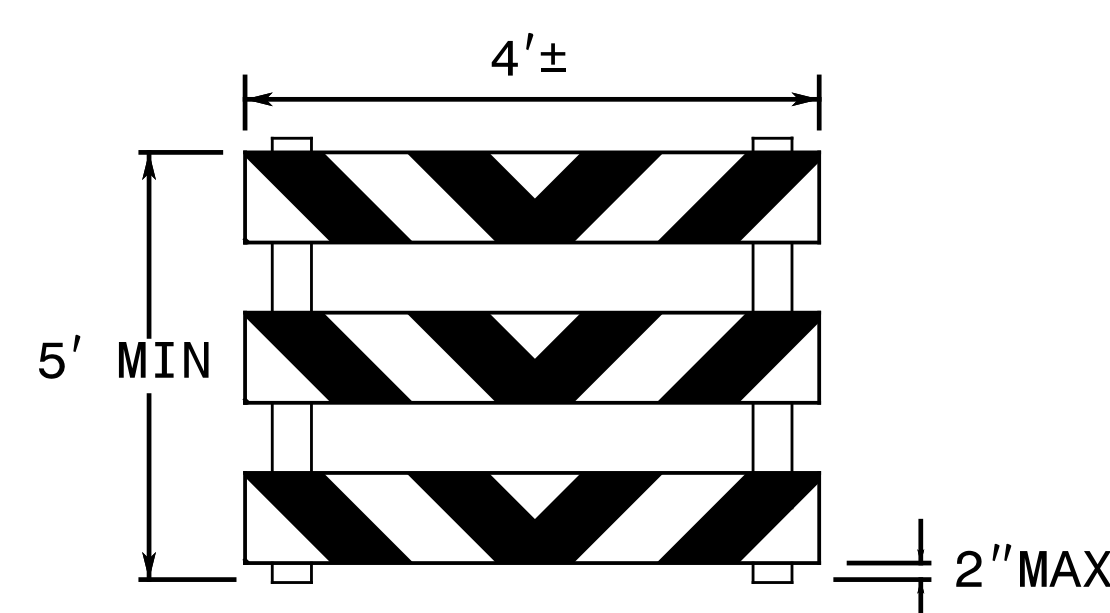
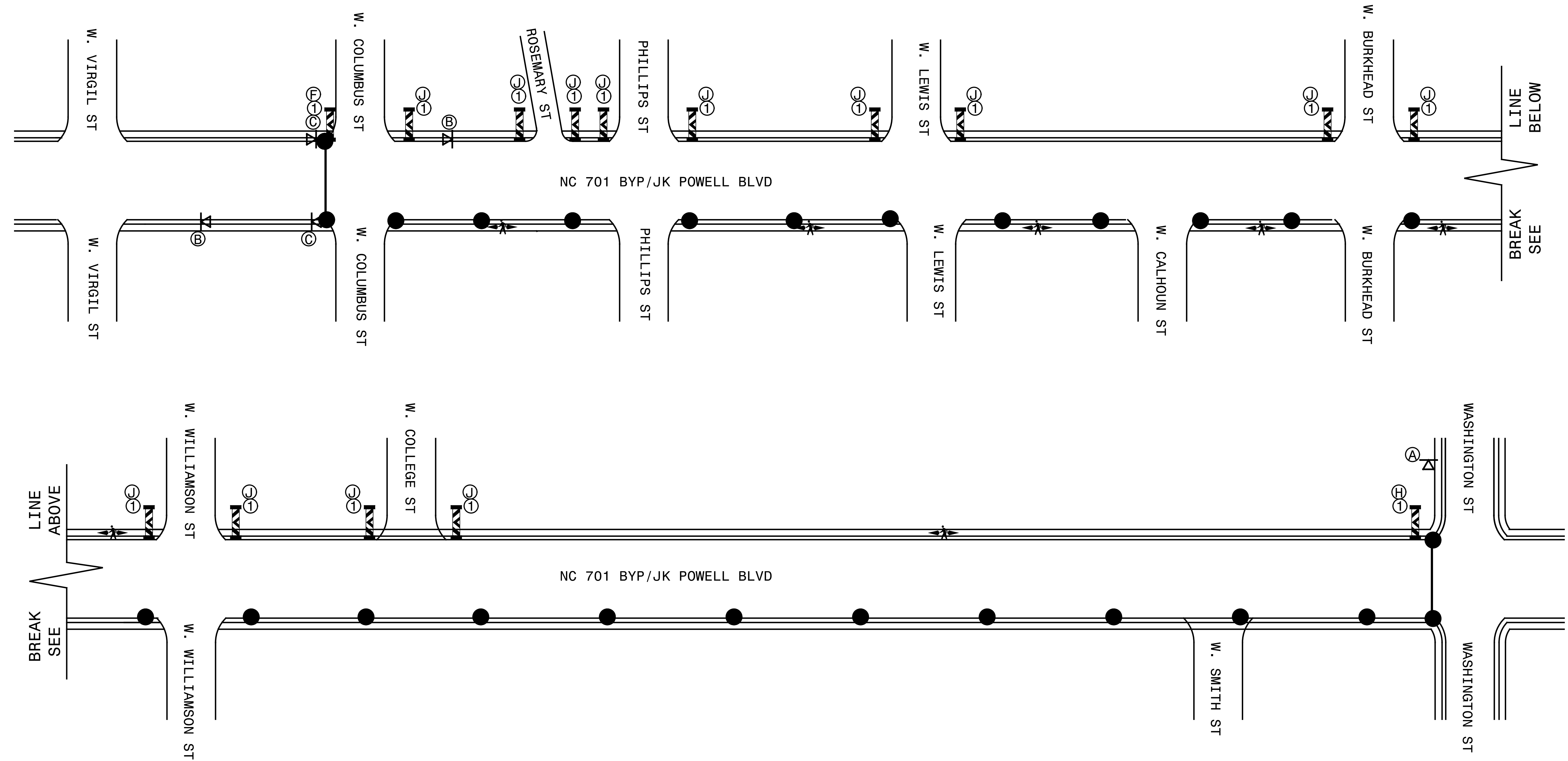
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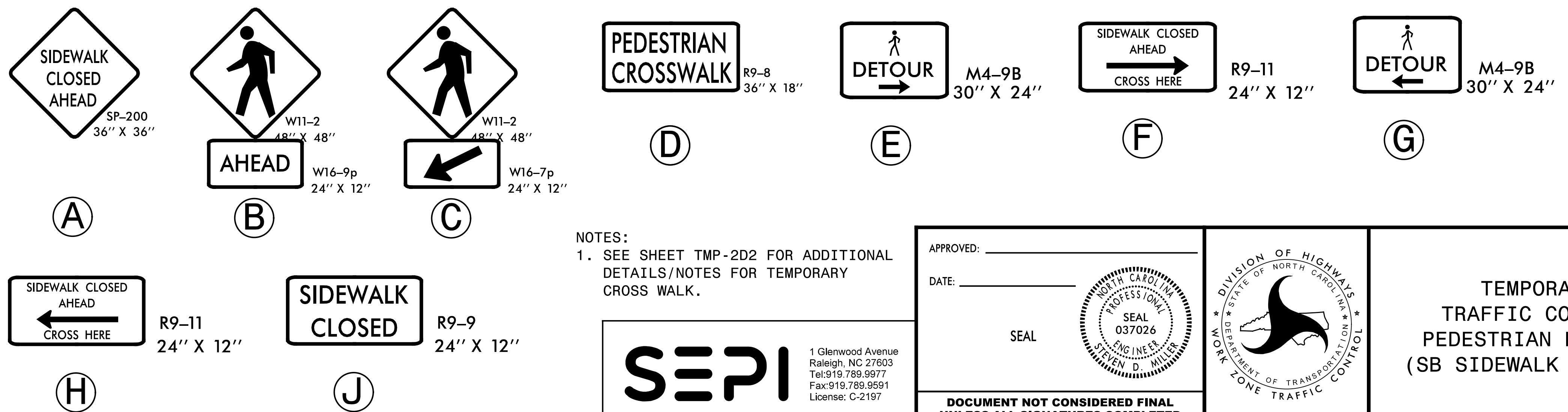
TEMPORARY TRAFFIC CONTROL PEDESTRIAN DETOURS (NB SIDEWALK CLOSURE)

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PEDESTRIAN BARRICADE
MUST BE ADA-COMPLIANT

1



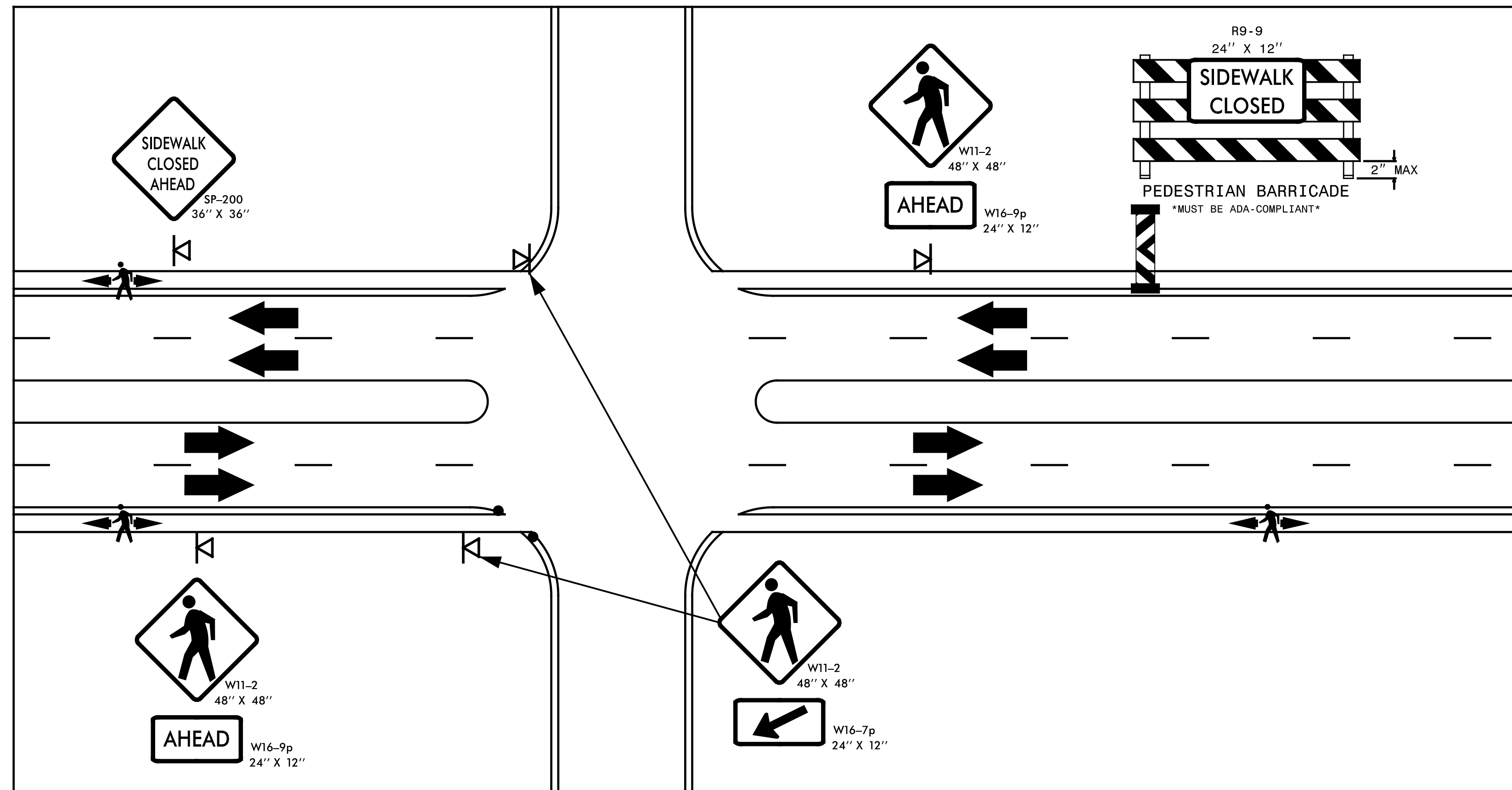
NOTES:
1. SEE SHEET TMP-2D2 FOR ADDITIONAL DETAILS/NOTES FOR TEMPORARY CROSS WALK.

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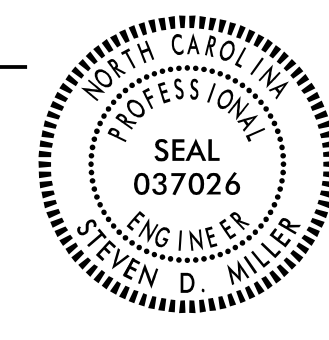
**TEMPORARY TRAFFIC CONTROL
PEDESTRIAN DETOURS
(SB SIDEWALK CLOSURE)**

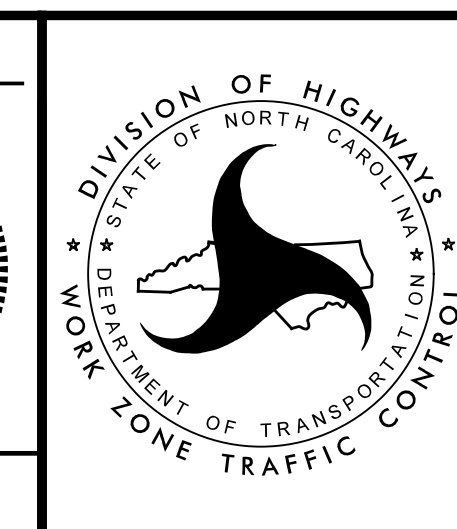
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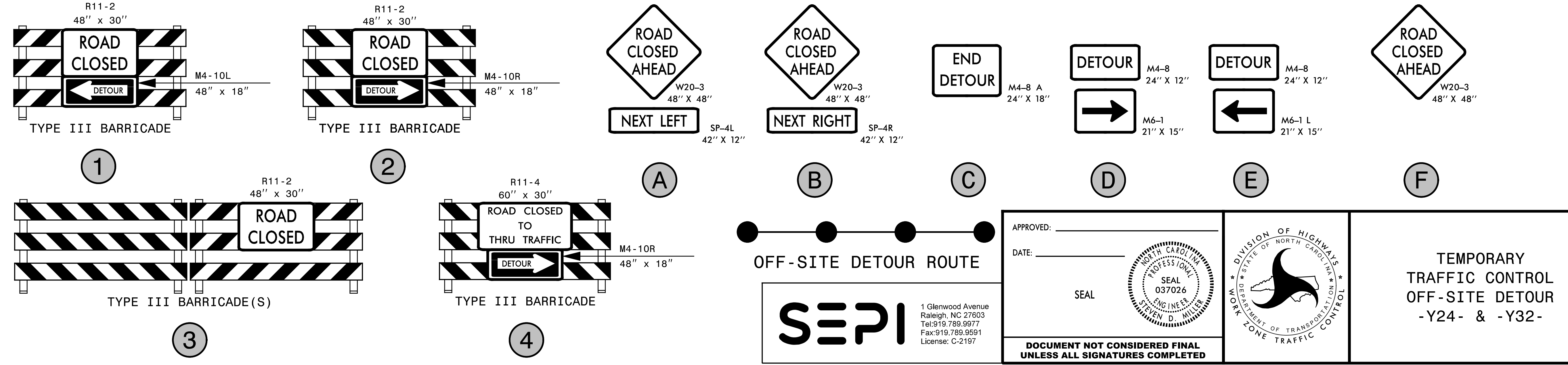
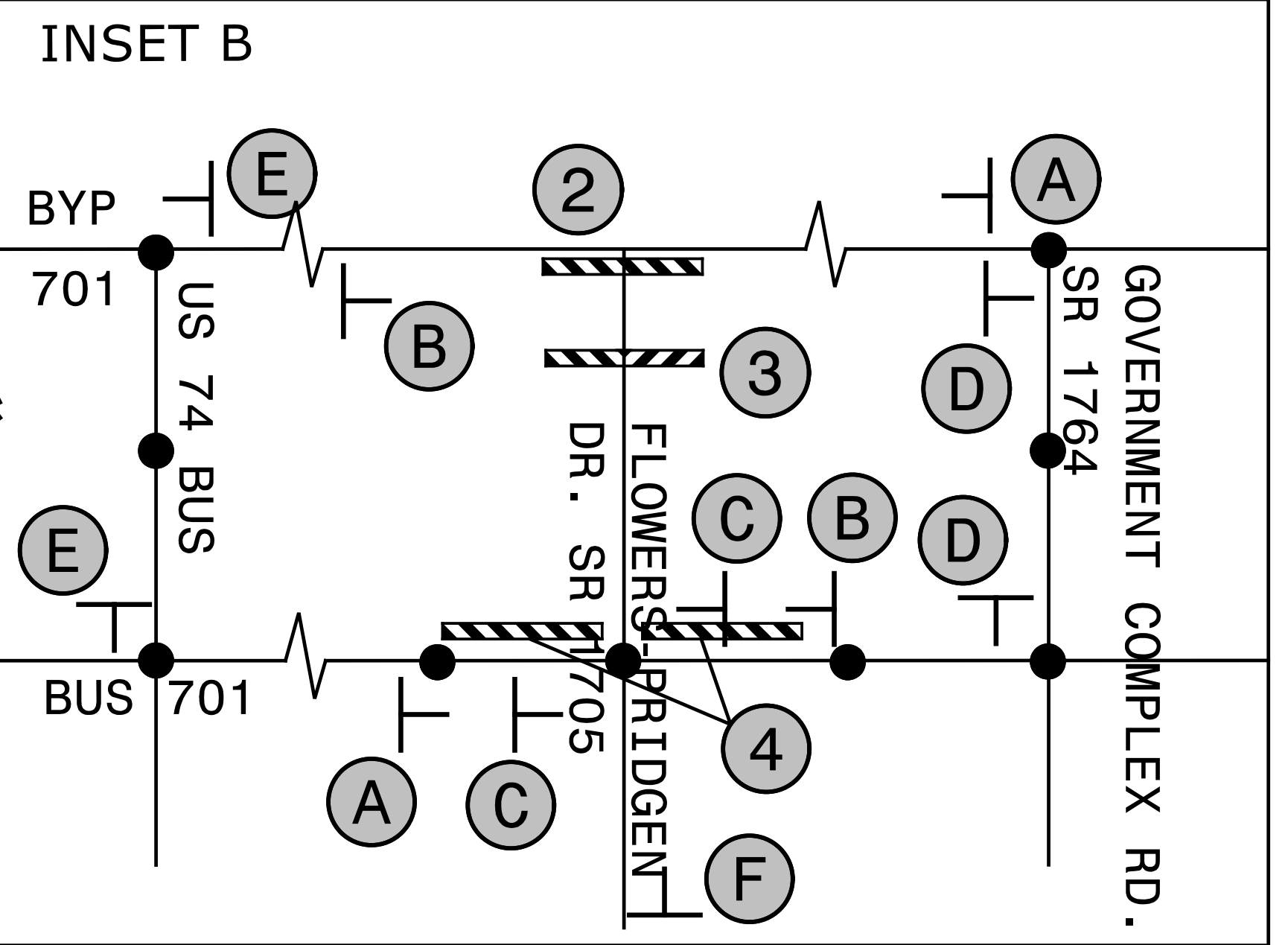
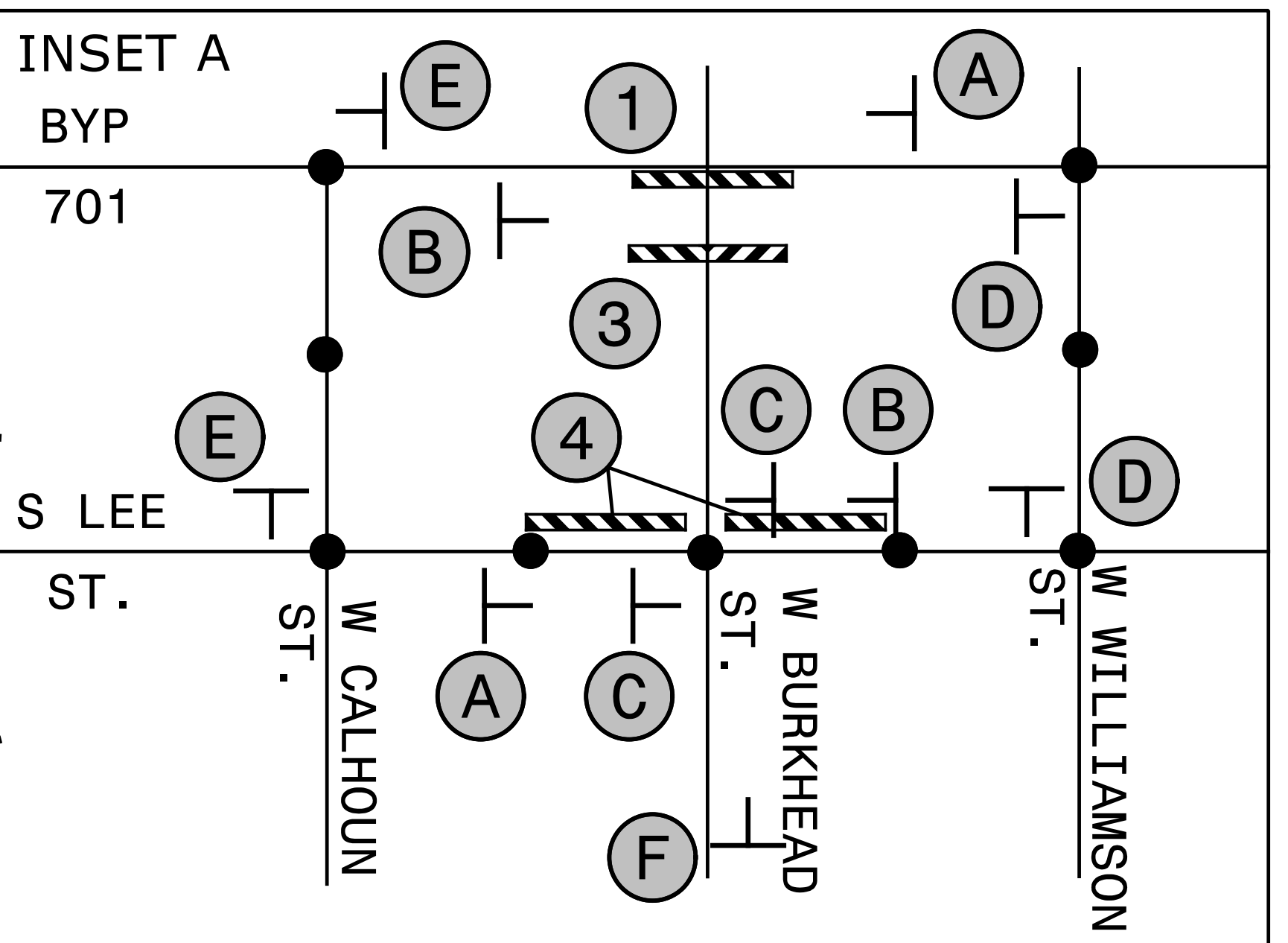
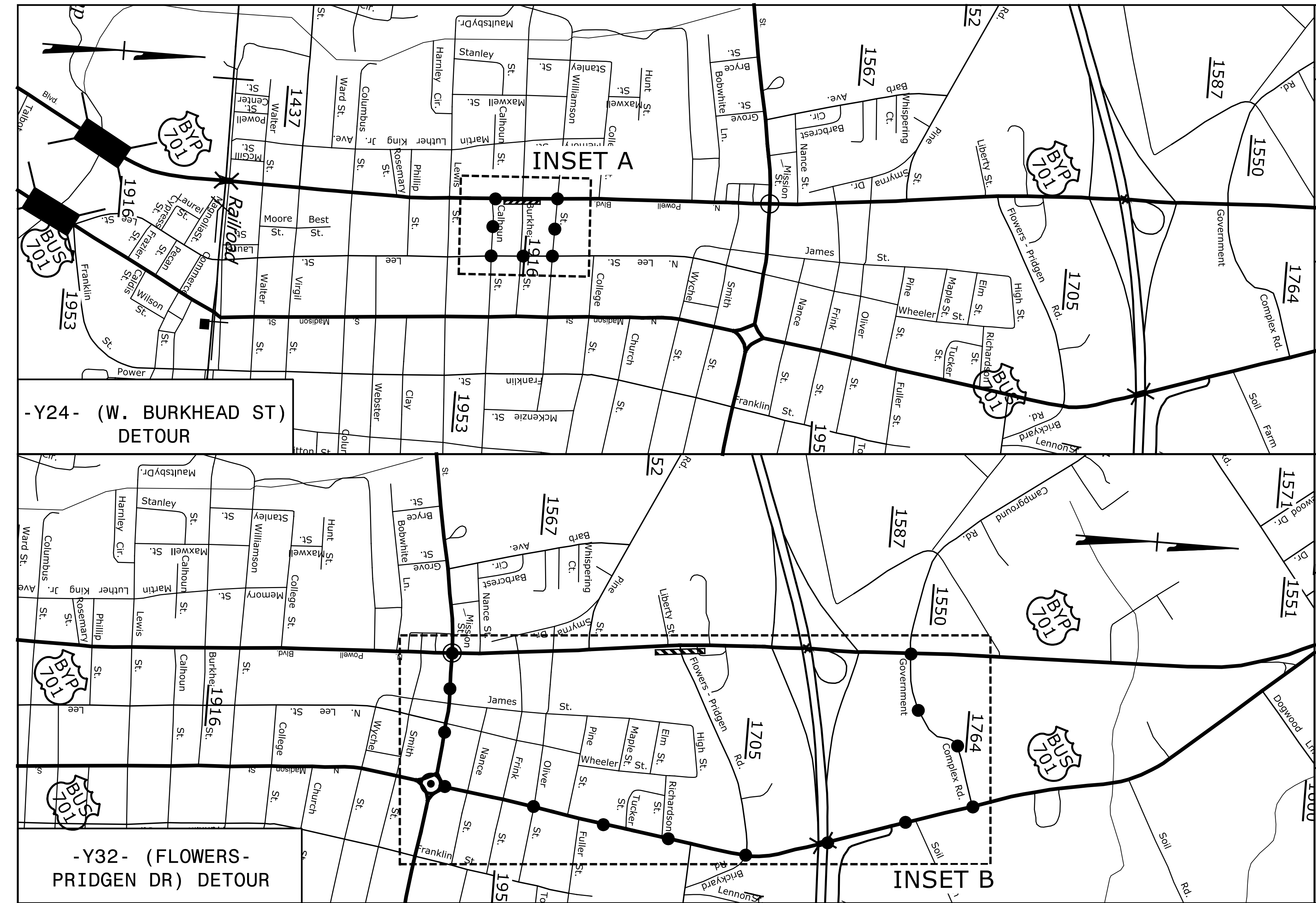
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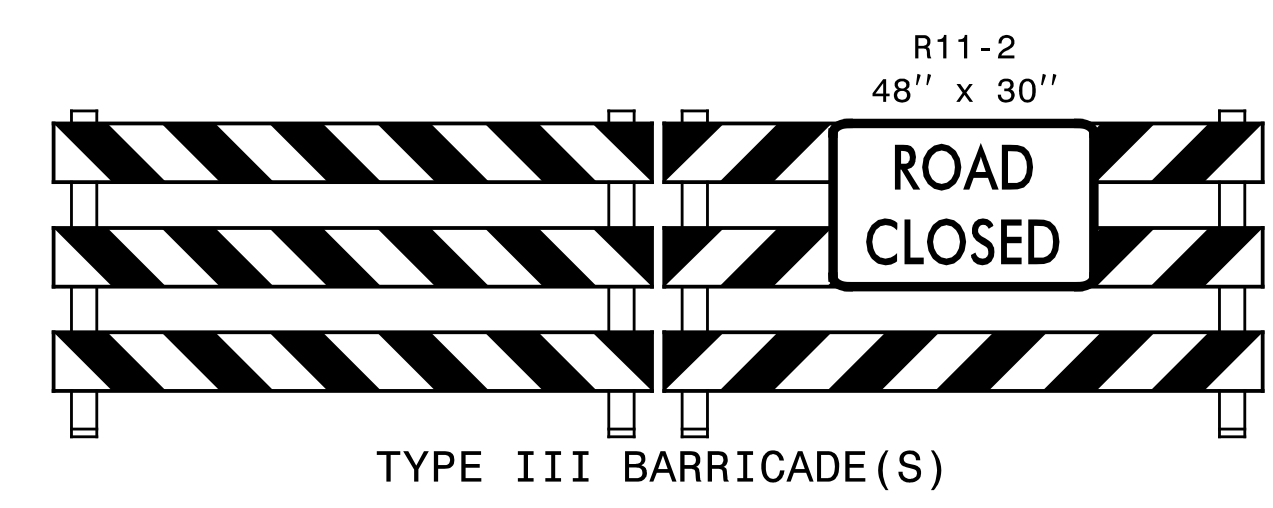
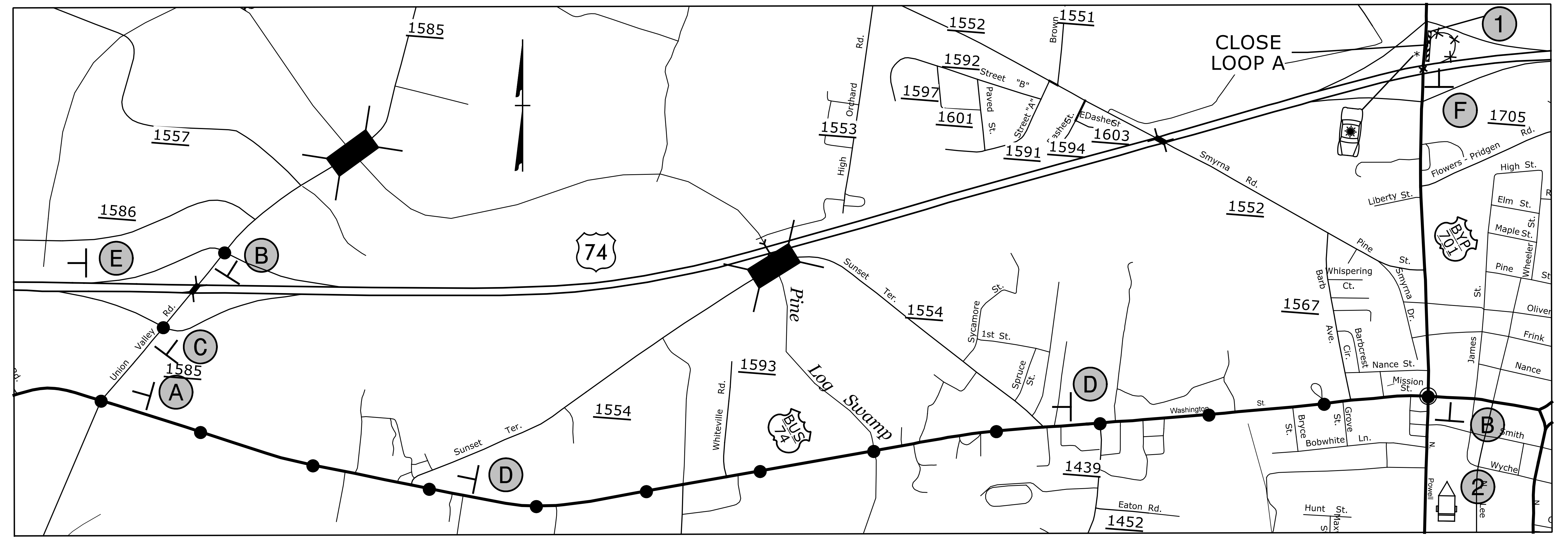
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**TEMPORARY
 PEDESTRIAN CROSSWALK**



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TYPE III BARRICADE(S)

1

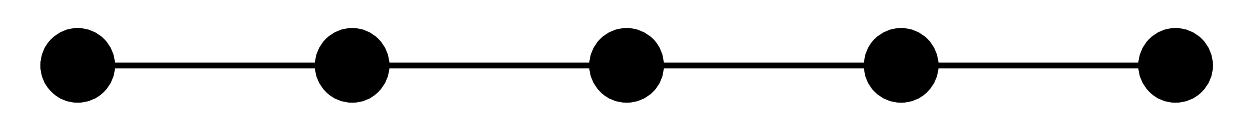
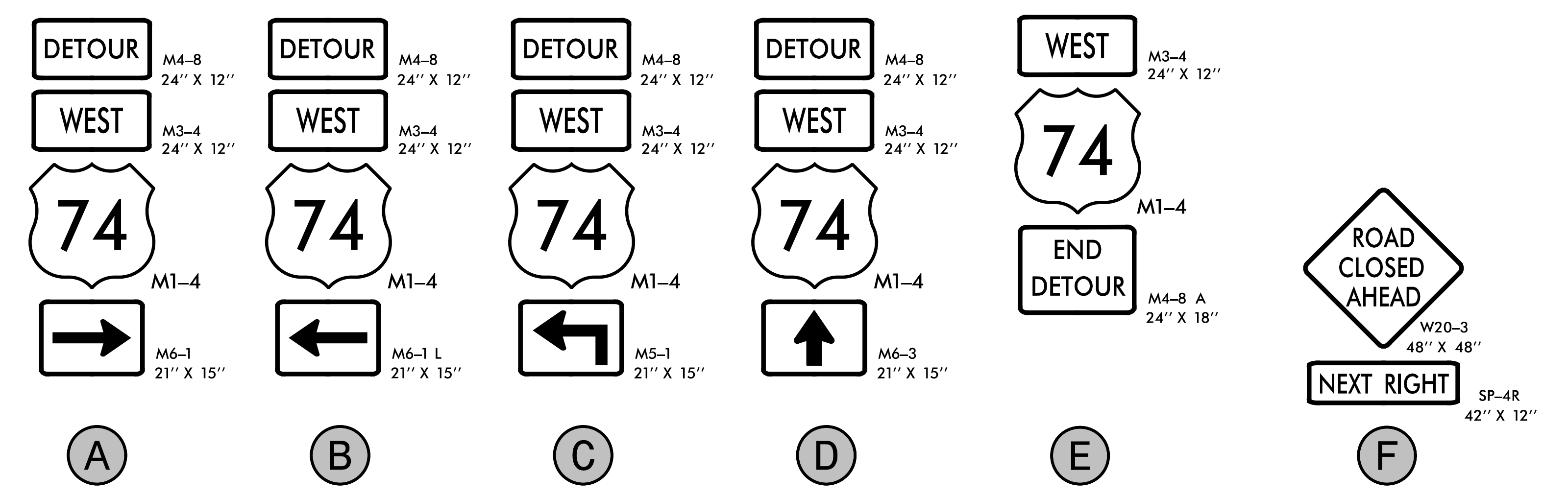
MESSAGE NO. 1	MESSAGE NO. 2	MESSAGE NO. 1	MESSAGE NO. 2
US 74WB LOOP CLOSURE	XX/XX/XX TO XX/XX/XX	US 74WB LOOP CLOSED	DETOUR US74 BUS NXT LFT

CHANGEABLE MESSAGE SIGN

CHANGEABLE MESSAGE SIGN

* USE 2 WEEKS PRIOR TO LOOP CLOSURE

2



OFF-SITE DETOUR ROUTE

* UTILIZE LAW ENFORCEMENT DURING LOOP CLOSURE.

CLOSE COORESPONDING RIGHT TURN LANE FOR LOOP DURING LOOP CLOSURE

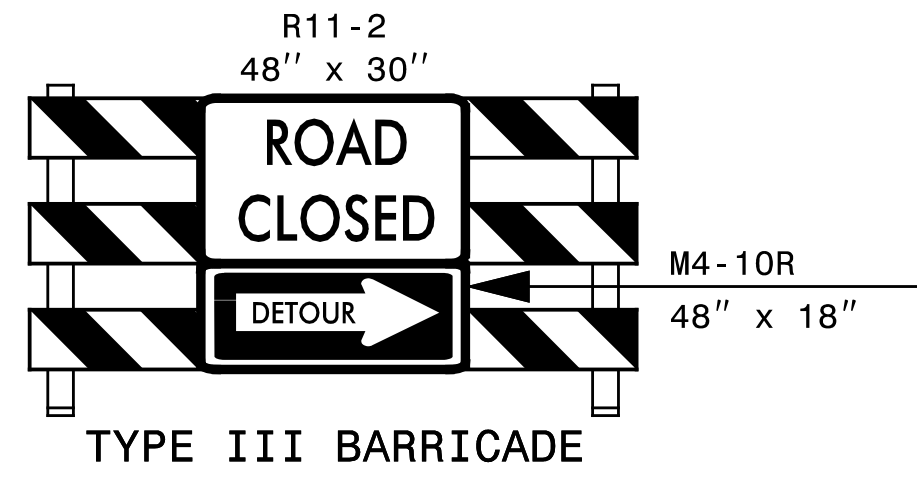
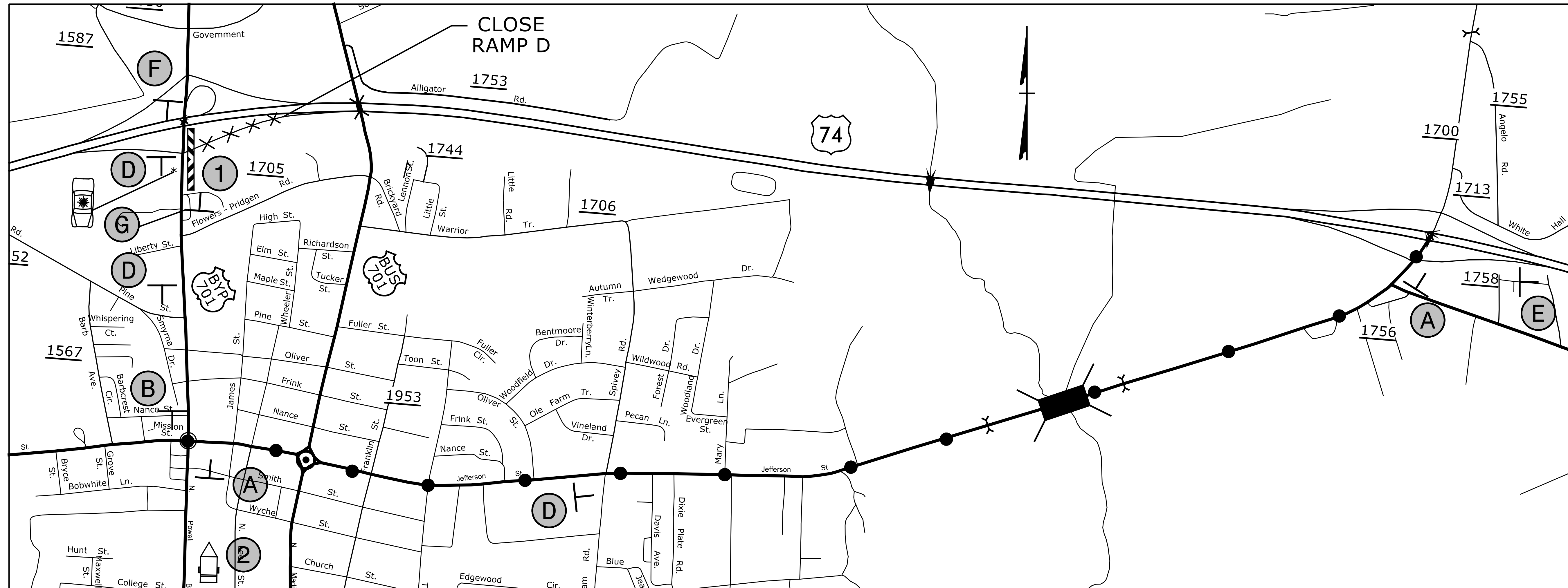
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WORK ZONE TRAFFIC CONTROL

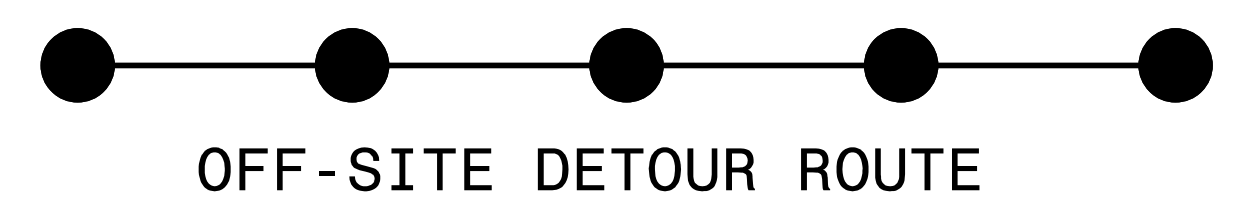
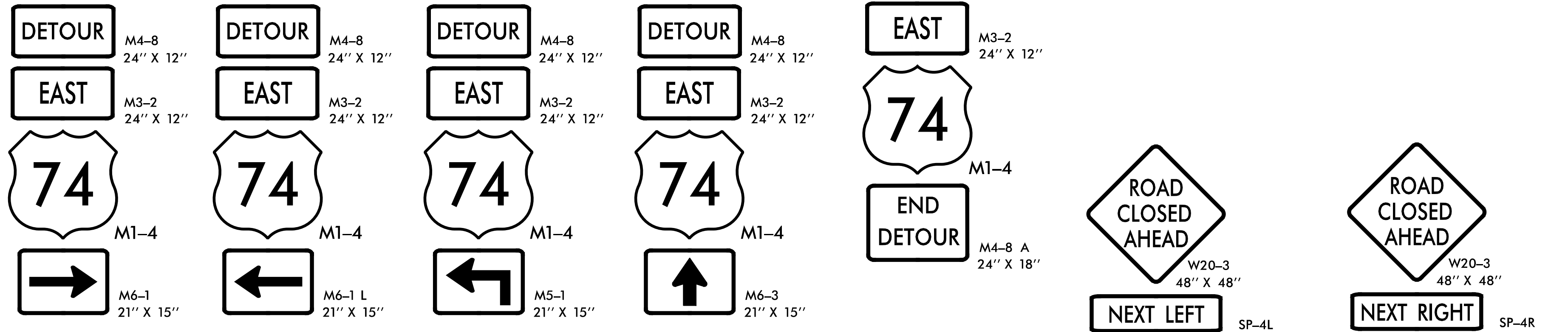
TEMPORARY TRAFFIC CONTROL OFF-SITE DETOUR LOOP A



MESSAGE NO. 1	MESSAGE NO. 2	MESSAGE NO. 1	MESSAGE NO. 2
US 74EB RAMP CLOSURE	XX/XX/XX TO XX/XX/XX	US 74EB RAMP CLOSED	DETOUR US74 BUS NXT RHT

CHANGEABLE MESSAGE SIGN

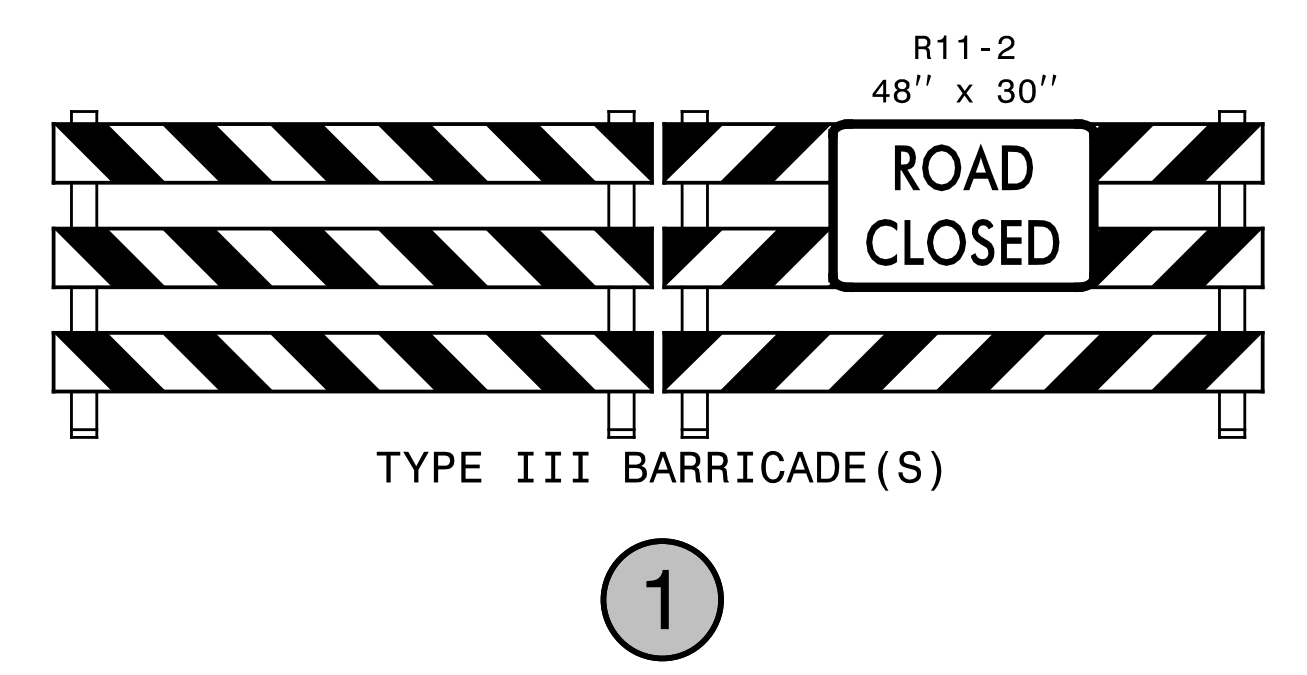
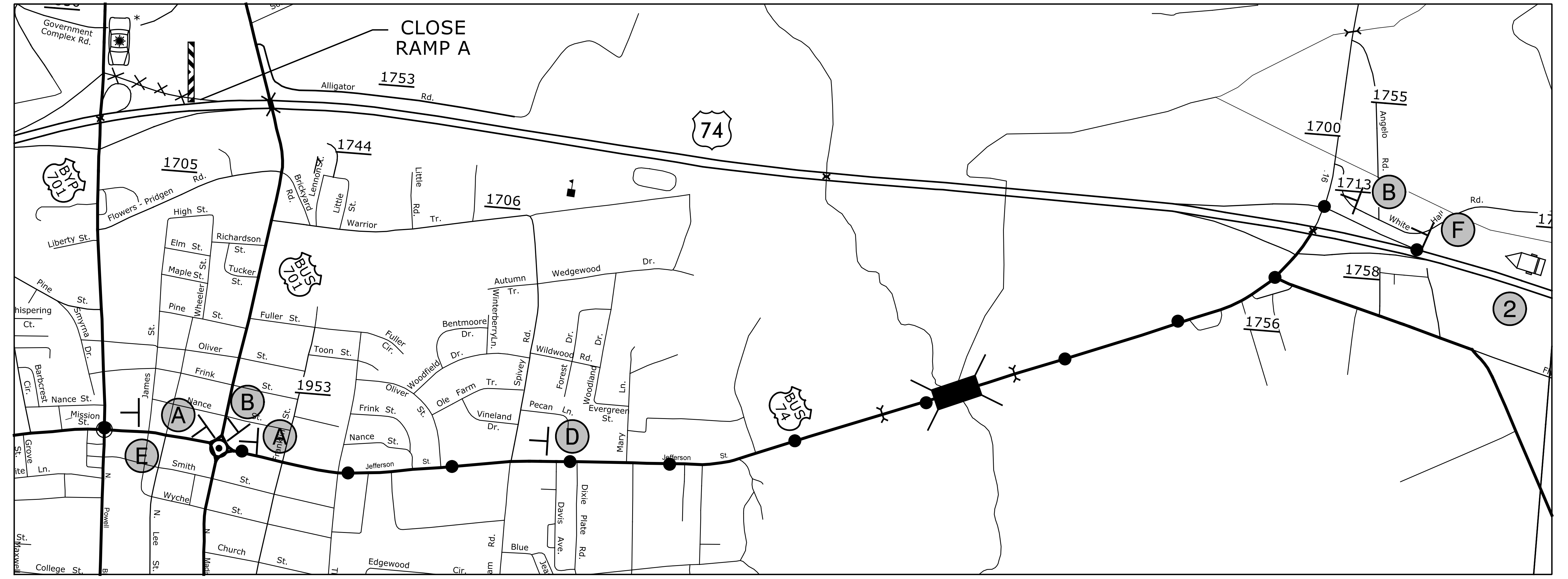
*USE 2 WEEKS PRIOR TO LOOP CLOSURE



* UTILIZE LAW ENFORCEMENT DURING RAMP CLOSURE.

APPROVED: _____ DATE: _____ SEAL			<p>TEMPORARY TRAFFIC CONTROL OFF-SITE DETOUR RAMP D</p>
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

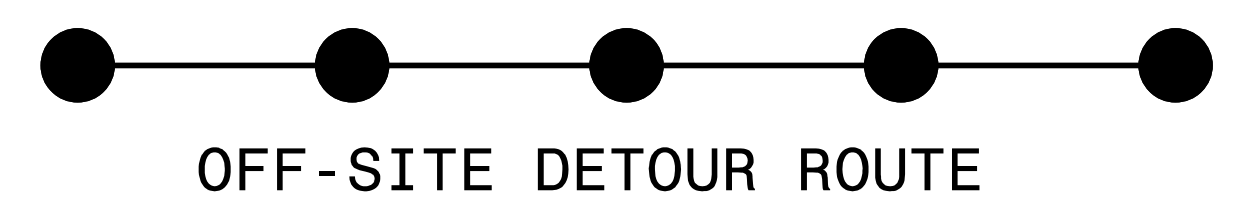
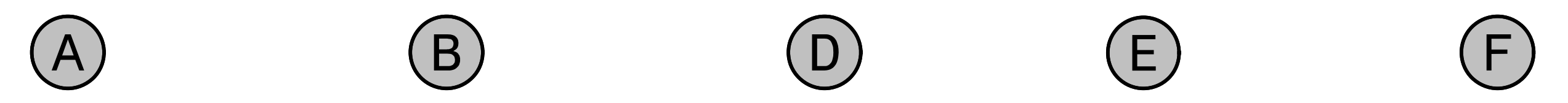
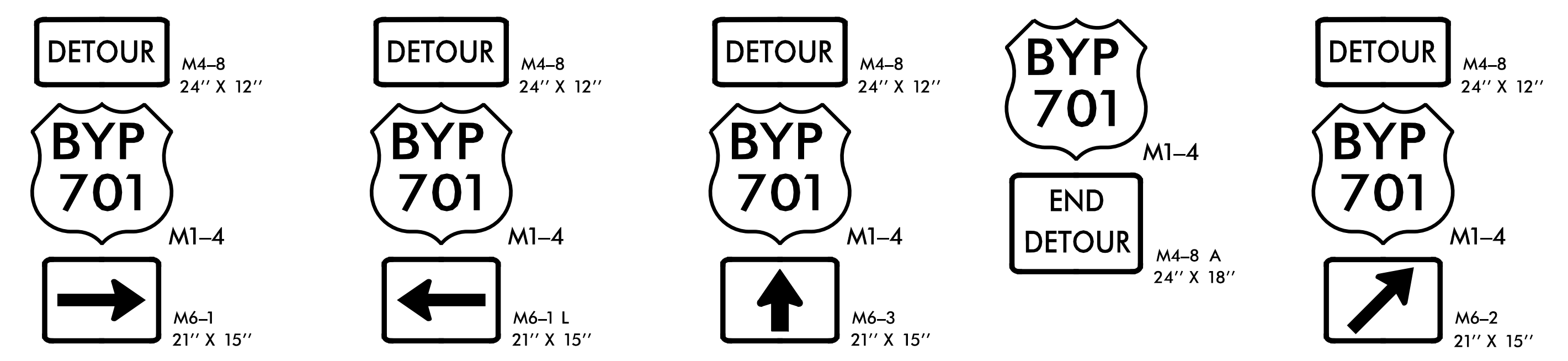
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MESSAGE NO. 1	MESSAGE NO. 2	MESSAGE NO. 1	MESSAGE NO. 2
701 BYP RAMP CLOSURE	XX/XX/XX TO XX/XX/XX	701 BYP RAMP CLOSED	DETOUR US74 BUS NXT EXIT

CHANGEABLE MESSAGE SIGN

*USE 2 WEEKS PRIOR TO LOOP CLOSURE



* UTILIZE LAW ENFORCEMENT DURING RAMP CLOSURE.

4/14/2020 X:\2017\SET\135-00 R-5020B\TP\TrafficControl\TMP\R-5020B_TC_TMP-02H.dgn Screen

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TEMPORARY TRAFFIC CONTROL OFF-SITE DETOUR RAMP A

SHORING LOCATION NO. 1

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

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

DESIGN TEMPORARY SHORING FROM STATION -L- 198+10±, 0.4' LT, TO STATION -L- 198+50±, 0.4' LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT (γ) = 120 LB/CF
- FRICTION ANGLE (ϕ) = 29 DEGREES
- COHESION (c) = 0 LB/SF
- GROUNDWATER ELEVATION = 67.0 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 198+10±, 0.4' LT, TO STATION -L- 198+50±, 0.4' LT.

AT THE CONTRACTOR'S OPTION AND WHEN APPLICABLE, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 198+10±, 0.4' LT, TO STATION -L- 198+50±, 0.4' LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

SHORING LOCATION NO. 2

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

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

DESIGN TEMPORARY SHORING FROM STATION -L- 218+43±, 6.3' RT, TO STATION -L- 218+73±, 6.3' RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT (γ) = 120 LB/CF
- FRICTION ANGLE (ϕ) = 30 DEGREES
- COHESION (c) = 0 LB/SF
- GROUNDWATER ELEVATION = 64.0 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 218+43±, 6.3' RT, TO STATION -L- 218+73±, 6.3' RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 218+43±, 6.3' RT, TO STATION -L- 218+73±, 6.3' RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

SHORING LOCATION NO. 3

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

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

DESIGN TEMPORARY SHORING FROM STATION -L- 225+65±, 6.5' RT, TO STATION -L- 226+15±, 6.5' RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT (γ) = 120 LB/CF
- FRICTION ANGLE (ϕ) = 30 DEGREES
- COHESION (c) = 0 LB/SF
- GROUNDWATER ELEVATION = 68.0 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 225+65±, 6.5' RT, TO STATION -L- 226+15±, 6.5' RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -L- 225+65±, 6.5' RT, TO STATION -L- 226+15±, 6.5' RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

SHORING LOCATION NO. 1A

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

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

DESIGN TEMPORARY SHORING FROM STATION -L- 198+10±, 7.5' LT, TO STATION -L- 198+50±, 7.5' LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT (γ) = 120 LB/CF
- FRICTION ANGLE (ϕ) = 30 DEGREES
- COHESION (c) = 0 LB/SF
- GROUNDWATER ELEVATION = 67.0 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 198+10±, 7.5' LT, TO STATION -L- 198+50±, 7.5' LT.

AT THE CONTRACTOR'S OPTION AND WHEN APPLICABLE, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 198+10±, 7.5' LT, TO STATION -L- 198+50±, 7.5' LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

SHORING LOCATION NO. 2A

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

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

DESIGN TEMPORARY SHORING FROM STATION -L- 218+33±, 7.5' LT, TO STATION -L- 218+73±, 7.5' LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT (γ) = 120 LB/CF
- FRICTION ANGLE (ϕ) = 30 DEGREES
- COHESION (c) = 0 LB/SF
- GROUNDWATER ELEVATION = 64.0 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 218+33±, 7.5' LT, TO STATION -L- 218+73±, 7.5' LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 218+33±, 7.5' LT, TO STATION -L- 218+73±, 7.5' LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

SHORING LOCATION NO. 3A

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

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

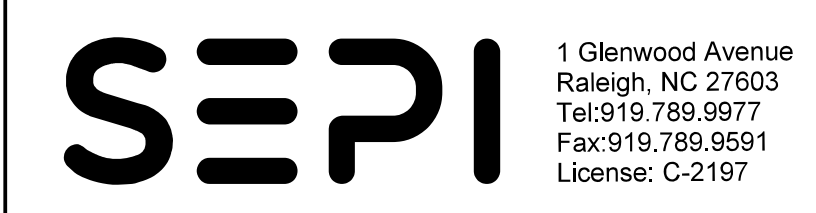
DESIGN TEMPORARY SHORING FROM STATION -L- 225+65±, 8.0' LT, TO STATION -L- 226+15±, 8.0' LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT (γ) = 120 LB/CF
- FRICTION ANGLE (ϕ) = 30 DEGREES
- COHESION (c) = 0 LB/SF
- GROUNDWATER ELEVATION = 68.0 FT ±

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 225+65±, 8.0' LT, TO STATION -L- 226+15±, 8.0' LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 225+65±, 8.0' LT, TO STATION -L- 226+15±, 8.0' LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

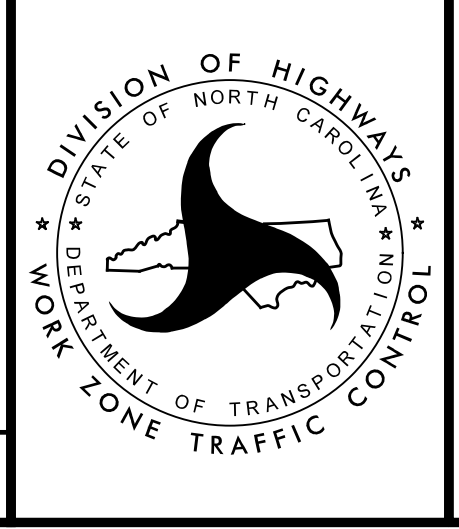
THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE DIVISION 6 ENGINEER ON FEBRUARY 25TH, 2020 AND SEALED BY A PROFESSIONAL ENGINEER, JINYOUNG PARK, PH.D., P.E., LICENSE # 032171



APPROVED: _____
 DATE: _____

SEAL

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SHORING DATA

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PHASING

PHASE I SEE SHEETS TMP-4 THRU TMP-4I

- STEP 1: - USING RSD 1101.01, SHEETS 2 & 3 OF 3, PLACE WORK ZONE ADVANCE WARNING SIGNS.
- STEP 2: - INSTALL FLASHING "BE PREPARED TO STOP" WARNING SIGN PRIOR TO BRIDGE AS PER SIGNAL DESIGN PLANS.
- WORKING IN A CONTINUOUS MANNER PERFORM THE FOLLOWING:
- INSTALL TEMPORARY SIGNAL AT THE INTERSECTION OF -L- (US 701 BYP) AND -Y18- (W COLUMBUS ST).
 - PLACE FLEXIBLE DELINEATORS ALONG -L- (US 701 BYP) THRU THE INTERSECTION WITH -Y17- (W VIRGIL ST)
 - CLOSE THE THRU AND LEFT TURN MOVEMENTS ON -Y17- (W VIRGIL ST) AT THE INTERSECTION WITH -L- (US 701 BYP)
 - PLACE TEMPORARY PAVEMENT MARKINGS
 - ACTIVATE TEMPORARY SIGNAL.
- STEP 3: - CLOSE SIDEWALK TO THE LEFT AND DETOUR PEDESTRIAN TRAFFIC TO THE OPPOSITE SIDE. (SEE SHEETS TMP-2D THRU TMP-2D2).
- AWAY FROM TRAFFIC AND USING LANE CLOSURES AS NEEDED, BEGIN WIDENING, INCLUDING CURB & GUTTER, SIDEWALKS, DRAINAGE AND DRAINAGE CROSS PIPES.

NOTE: STEPS 4 THRU 5 ARE CONCURRENT

- STEP 4: - USING RSD 1101.02, SHEET 3, 5 & 6 OF 14, PLACE TEMPORARY PAVEMENT MARKINGS FOR CROSSOVERS AND SHIFT TRAFFIC TO BEGIN CONSTRUCTION ON STAGE 1 OF PROPOSED DRAINAGE PIPES.

NOTE: WEDGE AS NEEDED TO MAINTAIN SMOOTH TRANSITION FROM PROPOSED TO EXISTING.

NOTE: ADJUST SIGNAL PATTERNS AS NEEDED WHERE TRAFFIC PATTERNS ARE AFFECTED BY CROSSOVERS.

THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED OF PHASE I, STEP #5 AS SHOWN ON SHEETS TMP-2A, TMP-3 AND TMP-4A. PHASE I, STEP #5 SHALL BE COMPLETED IN FIVE (5) CONSECUTIVE NIGHTS OF THE CONTRACTOR'S CHOOSING BEGINNING AT 9:00 P.M. AND ENDING THE FOLLOWING MORNING AT 6:00 A.M. FOR EACH NIGHT.

- STEP 5: - USING NIGHTLY LANE CLOSURES, CONSTRUCT 48" DRAINAGE CROSS PIPE AT -L- STA 198+25 +/-.
- STEP 6: - COMPLETE CONSTRUCTION AWAY FROM TRAFFIC NECESSARY FOR PHASE IA PATTERN, INCLUDING SIDEWALKS.
- USING RSD 1101.02, SHEET 3, 5 & 6 OF 14, PLACE TEMPORARY PAVEMENT MARKINGS & MARKERS AND SHIFT TRAFFIC TO PHASE IA PATTERN.

PHASE IA SEE SHEETS TMP-5 THRU TMP-5H

- STEP 1: - CONTINUE CONSTRUCTION AWAY FROM TRAFFIC.
- CLOSE SIDEWALK TO THE RIGHT AND DETOUR PEDESTRIAN TRAFFIC TO THE OPPOSITE SIDE. (SEE SHEETS TMP-2 THRU TMP -2D2).
- CONSTRUCT PEDESTRIAN CULVERT EXTENSION.

PHASE IA SEE SHEETS TMP-5 THRU TMP-5I

- STEP 2: - USING RSD 1101.02, SHEETS 3, 5 & 6 OF 14 AND 1101.02, COMPLETE CONSTRUCTION OF REMAINDER OF DRAINAGE CROSS PIPES.
- NOTE: WEDGE AS NEEDED TO MAINTAIN SMOOTH TRANSITION FROM PROPOSED TO EXISTING.
- NOTE: ADJUST SIGNAL PATTERNS AS NEEDED WHERE TRAFFIC PATTERNS ARE AFFECTED BY CROSSOVERS.
- STEP 3: - INSTALL OFF-SITE DETOUR ROUTE SIGNS AND ASSEMBLIES FOR THE CLOSING OF -Y21-, -Y24-, -Y30- AND -Y32-.
- NOTE: -Y- LINES SHALL BE CLOSED INDEPENDENT OF EACH OTHER.
- CLOSE -Y21-, -Y24-, -Y30- AND -Y32- INDEPENDENT OF EACH OTHER AND DETOUR TRAFFIC DURING CONSTRUCTION. CONSTRUCT ROADWAY UP TO THE EDGE AND ELEVATION OF EXISTING, PLACE TEMPORARY PAVEMENT MARKINGS & MARKERS AND OPEN TO TRAFFIC. (SEE SHEETS TMP-2D & TMP-2E).
- NOTE: ONLY ONE -Y- LINE SHALL BE CLOSED AT ANY TIME, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- USING NIGHTLY LANE CLOSURES, CONSTRUCT 42" CROSS PIPES AT -Y28-.

NOTE: STEPS 4A THRU 5 ARE CONCURRENT

STEPS 4A AND 4B MAY BE PERFORMED INTERCHANGABLY.

THE CONTRACTOR SHALL PERFORM PHASE IA, STEP 4A, IN 5 CONSECUTIVE DAYS, SEE INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES.

- STEP 4A: - INSTALL OFF-SITE DETOUR ROUTE SIGNS AND ASSEMBLIES FOR THE CLOSING OF RAMP A AND LOOP A.
- USING RSD 1101.03, SHEET 2 OF 9 AND 1101.02, SHEET 3 OF 14, AS NEEDED, CLOSE RAMP A AND LOOP A, INSTALL WATER FILLED BARRIER AND DETOUR TRAFFIC. (SEE SHEETS TMP-5H, TMP-5H1, TMP-2F & TMP-2H).
- CONSTRUCT PORTION OF PROPOSED ROUNDABOUT, -RPA- AND TIE-IN. (SEE SHEETS TMP-5H AND TMP-5H1).

THE CONTRACTOR SHALL PERFORM PHASE IA, STEP 4B, IN 5 CONSECUTIVE DAYS, SEE INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES.

- STEP 4B: - INSTALL OFF-SITE DETOUR ROUTE SIGNS AND ASSEMBLIES FOR THE CLOSING OF RAMP D.
- USING RSD 1101.03, SHEET 2 OF 9 AND 1101.02, SHEET 3 OF 14, AS NEEDED, CLOSE RAMP D, INSTALL WATER FILLED BARRIER AND DETOUR TRAFFIC. (SEE SHEETS TMP-5G, TMP-5G1 & TMP-2G).
- CONSTRUCT PORTION OF PROPOSED ROUNDABOUT, -RPD-, TIE-IN AND CROSSLINE PIPE. (SEE SHEETS TMP-5G AND TMP-5G1).

- STEP 5: - COMPLETE CONSTRUCTION AWAY FROM TRAFFIC STARTED IN PHASE I AND IA, UP TO THE EDGE AND ELEVATION OF EXISTING.

NOTE: WEDGE AS NEEDED TO MAINTAIN SMOOTH TRANSITION FROM PROPOSED TO EXISTING

NOTE: USE TEMPORARY SLOPES WHERE NECESSARY

- USING LANE CLOSURES, PLACE TEMPORARY PAVEMENT MARKINGS IN THE PHASE II PATTERN AND SHIFT TRAFFIC TO PHASE II.

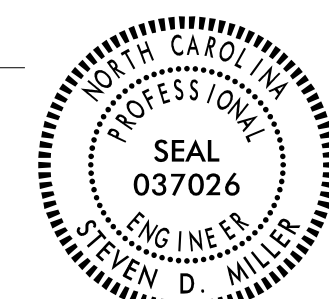
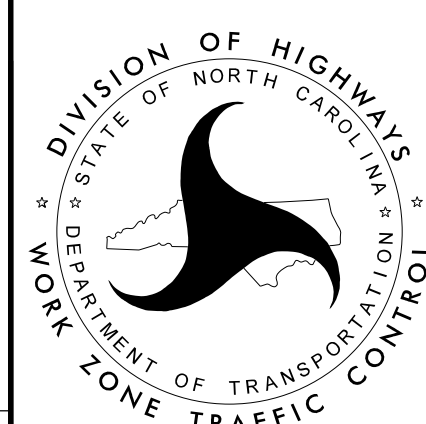
NOTE: USE DRUMS AS NEEDED, IN ADDITION TO PAVEMENT MARKINGS TO DELINEATE ROUND-ABOUT CONCRETE APRONS OR AS DIRECTED BY THE ENGINEER

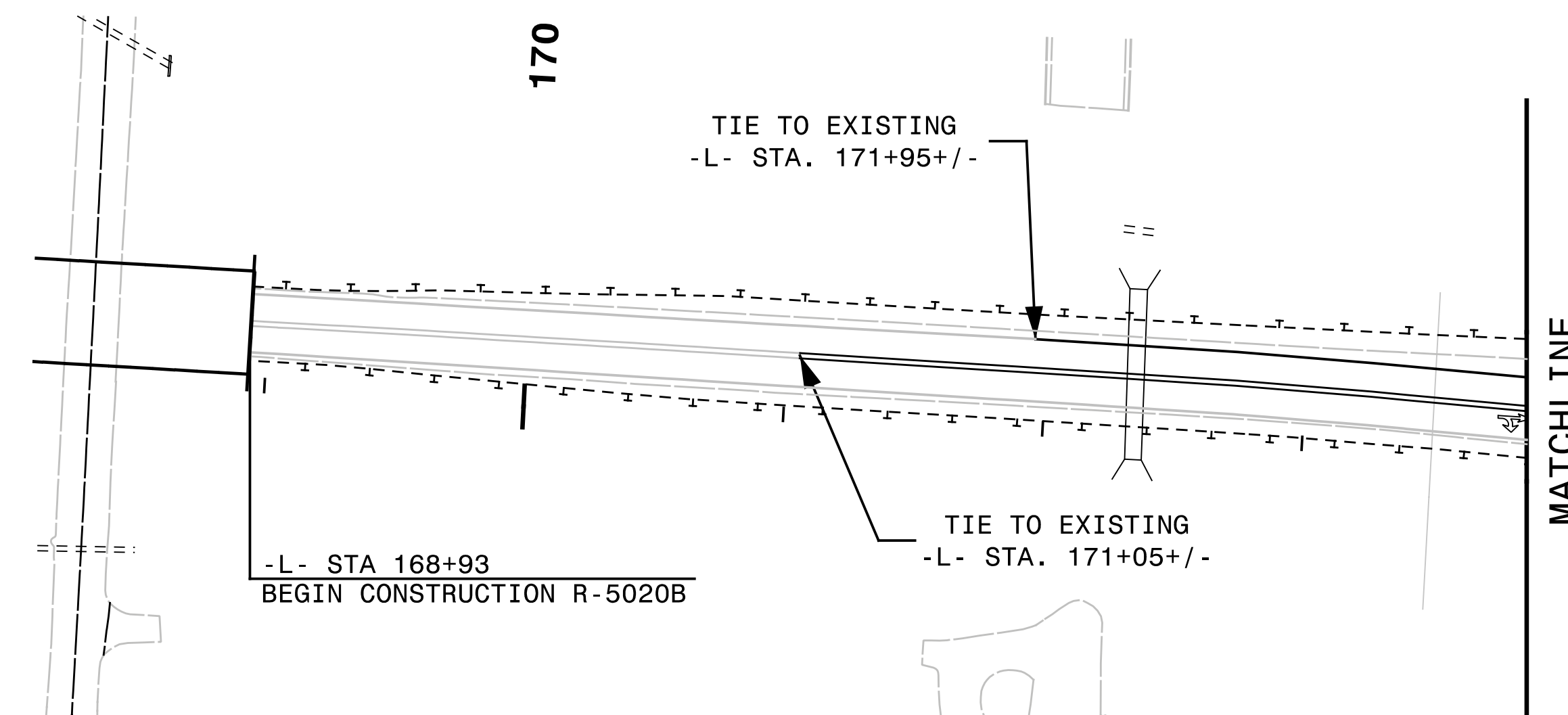
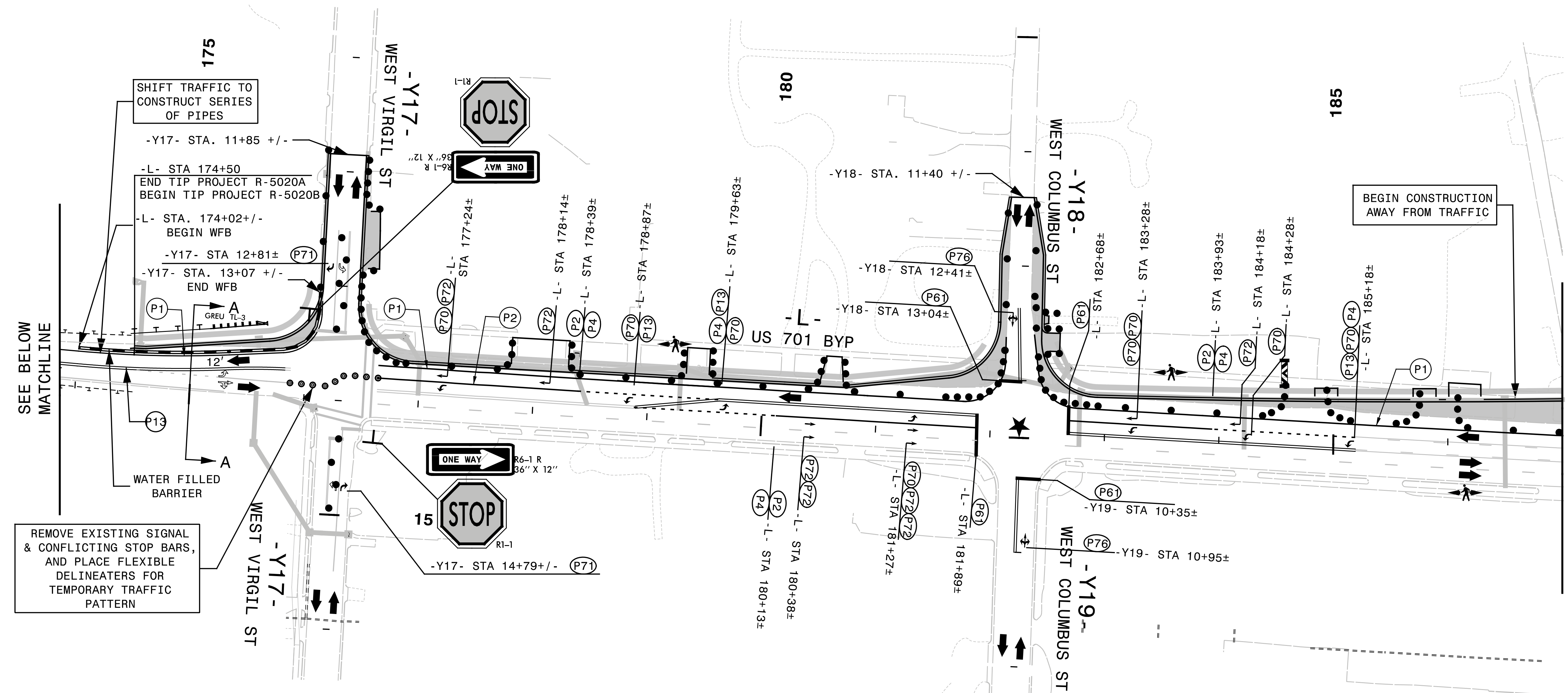
PHASE II SEE SHEETS TMP-6 THRU TMP-6I

- STEP 1: - USING LANE CLOSURES, COMPLETE REMAINDER OF WIDENING (INCLUDING DRAINAGE, CURB & GUTTER AND SIDEWALK) ALONG -L- (US 701 BYP).
- STEP 2: - USING RSD 1101.02, SHEET 3 OF 14, WEDGE, UP TO, AND INCLUDING THE FINAL LAYER OF SURFACE COURSE AND PLACE TEMPORARY PAVEMENT MARKINGS & MARKERS IN THE FINAL PATTERN.
- STEP 3: - USING LANE CLOSURES AND FLAGGERS AS NEEDED, PERFORM THE FOLLOWING, PLACE FINAL PAVEMENT MARKINGS & MARKERS PER THE FINAL PAVEMENT MARKING PLAN:
- SHIFT TRAFFIC TO OUTSIDE LANE AND CONSTRUCT CONCRETE MEDIAN ISLANDS AND MEDIAN CURB & GUTTER.
 - CONSTRUCT CONCRETE APRONS ON ROUND-ABOUTS.
- STEP 4: - REMOVE ALL TEMPORARY TRAFFIC CONTROL DEVICES.

3/4/2021 X:\2017\SET\135-00 R-5020B\TP\TrafficControl\TMP\R-5020B.TC.TMP-03.dgn User:SMiller

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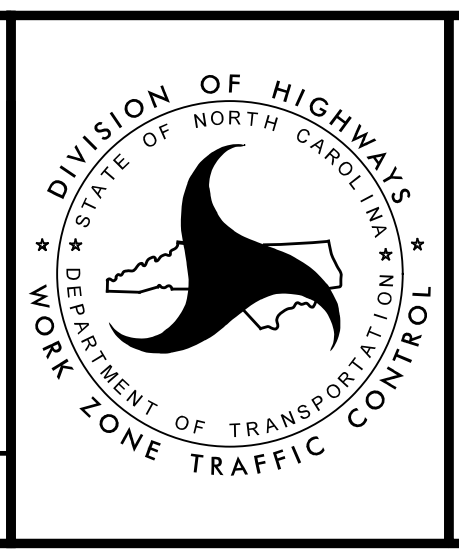
SEE BELOW
MATCHLINE

MATCHLINE
STATION 187+00
SEE SHEET TMP-4A

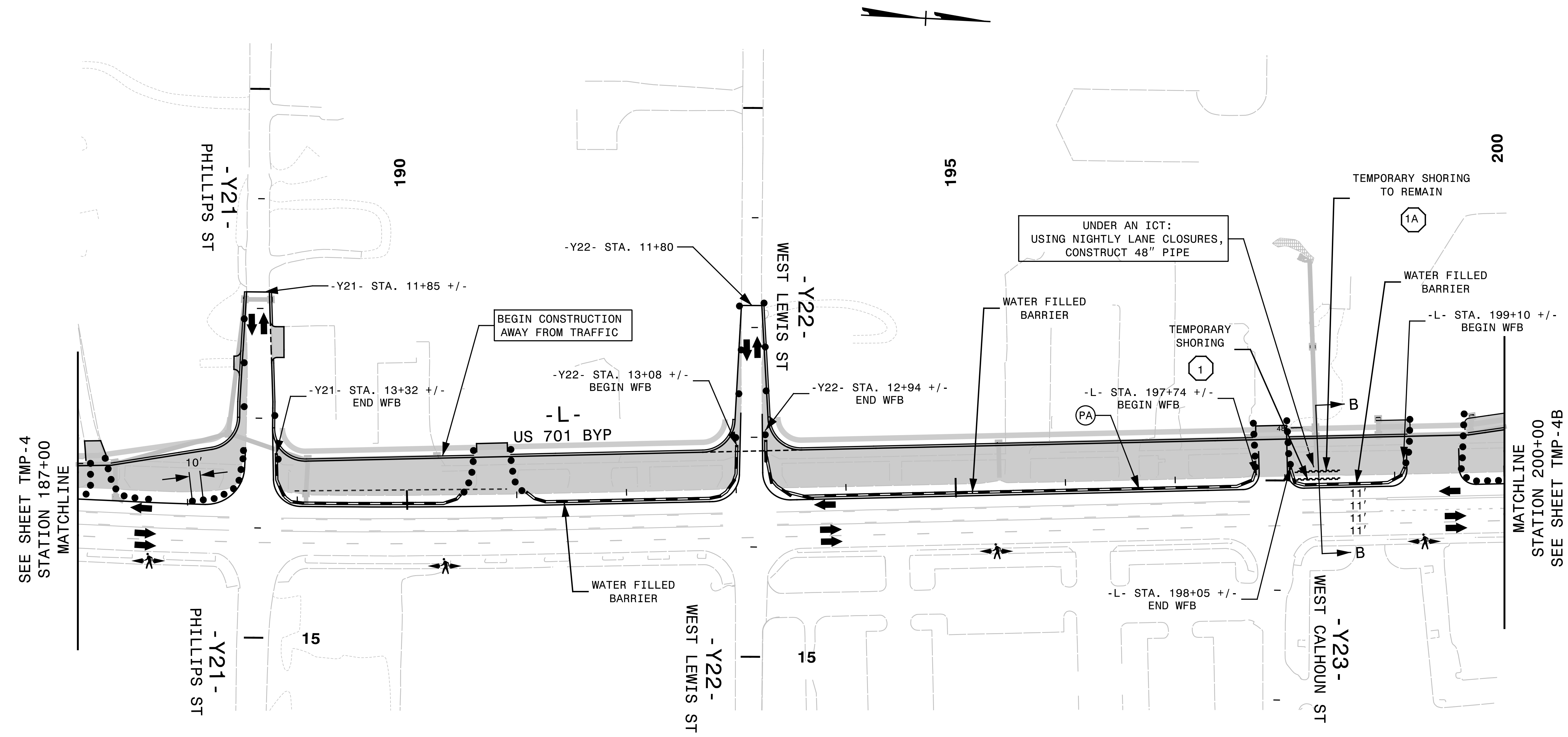
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**TEMPORARY
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PHASE I DETAIL**



SEE SHEET TMP-4
STATION 187+00
MATCHLINE

MATCHLINE
STATION 200+00
SEE SHEET TMP-4B

1 QUANTITY = 280SF
TEMPORARY SHORING
FROM STA. 198+10 +/-, 0.4 L
TO STA. 198+50 +/-, 0.4 L

(SEE SHEET TMP-2I FOR
TEMPORARY SHORING NOTES)

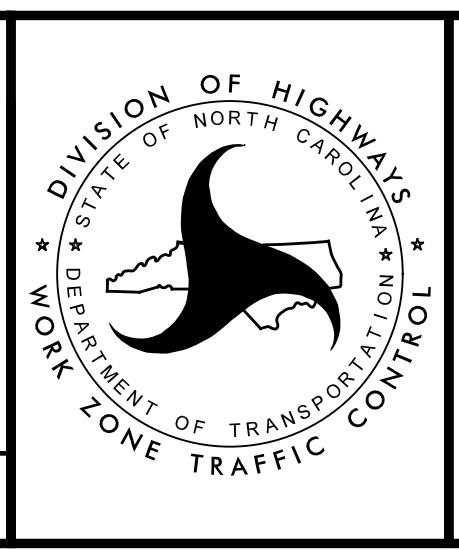
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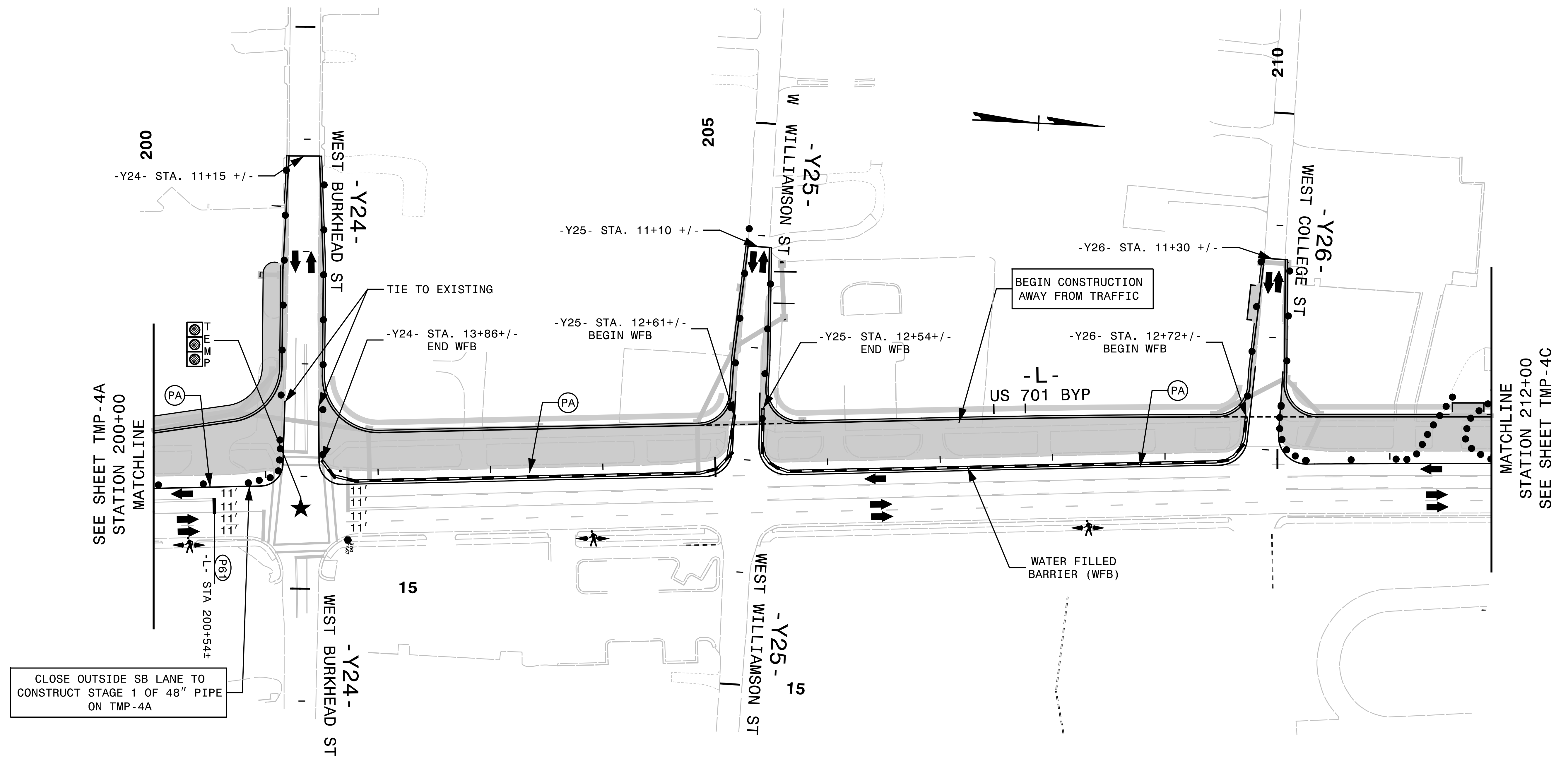
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**TEMPORARY
TRAFFIC CONTROL
PHASE I DETAIL**



CLOSE OUTSIDE SB LANE TO CONSTRUCT STAGE 1 OF 48" PIPE ON TMP-4A

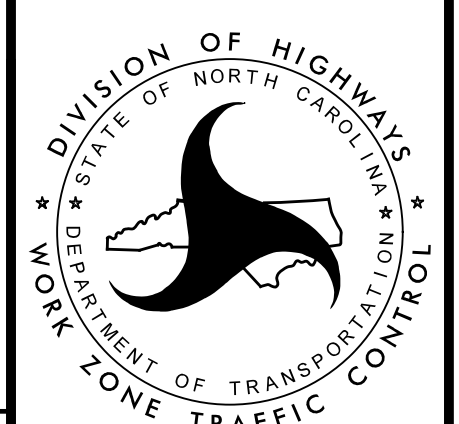
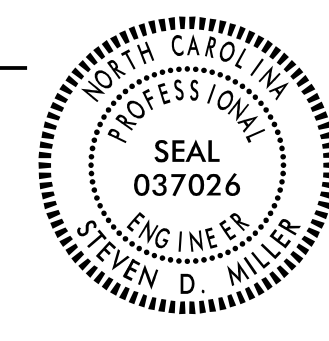
SEE SHEET TMP-4A STATION 200+00 MATCHLINE

MATCHLINE STATION 212+00 SEE SHEET TMP-4C

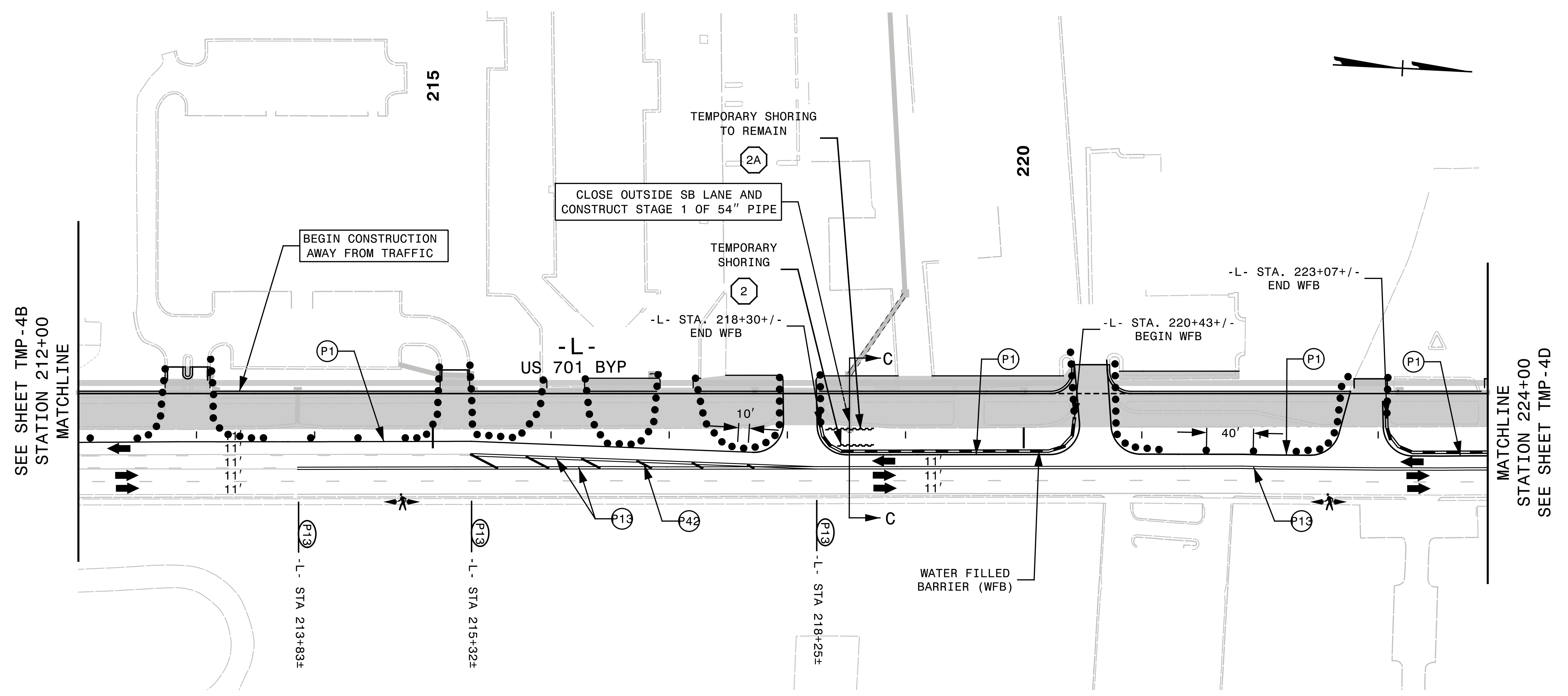
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TEMPORARY TRAFFIC CONTROL PHASE I DETAIL

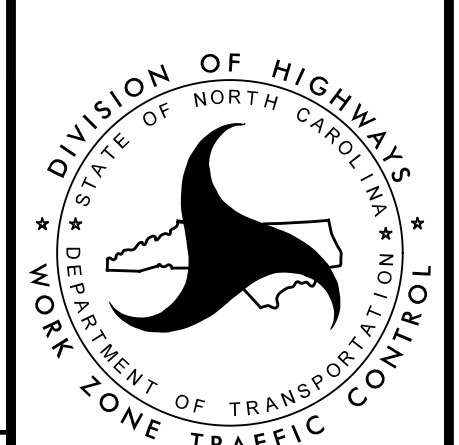
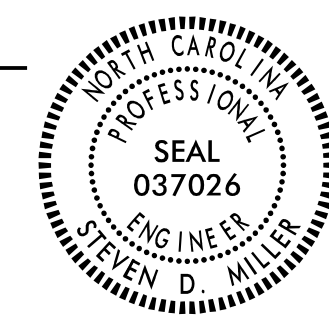


2 QUANTITY = 210 SF
 TEMPORARY SHORING
 FROM STA. 218+43 +/-, 6.3' R
 TO STA. 218+73 +/-, 6.3' R
 (SEE SHEET TMP-2I FOR
 TEMPORARY SHORING NOTES)

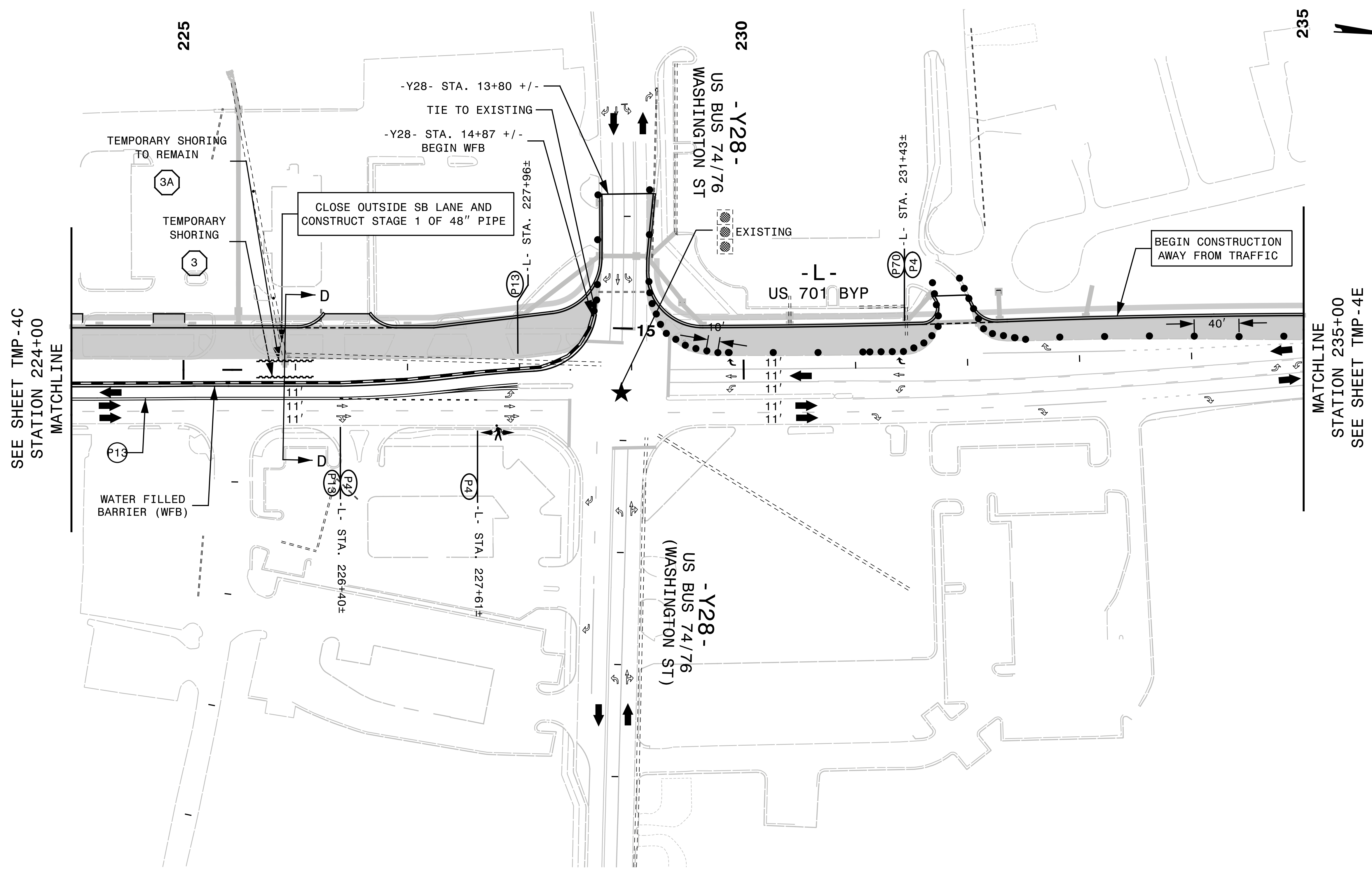
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TEMPORARY
 TRAFFIC CONTROL
 PHASE I DETAIL



SEE SHEET TMP-4C
STATION 224+00
MATCHLINE

MATCHLINE
STATION 235+00
SEE SHEET TMP-4E

3 QUANTITY = 325 SF
TEMPORARY SHORING
FROM STA. 225+65 +/-, 6.5' R
TO STA. 226+15 +/-, 6.5' R

(SEE SHEET TMP-2I FOR
TEMPORARY SHORING NOTES)

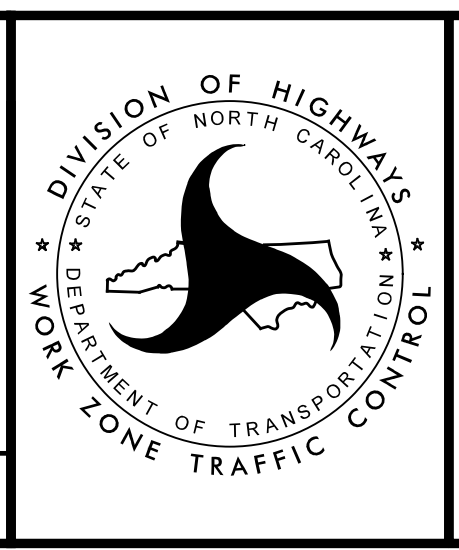
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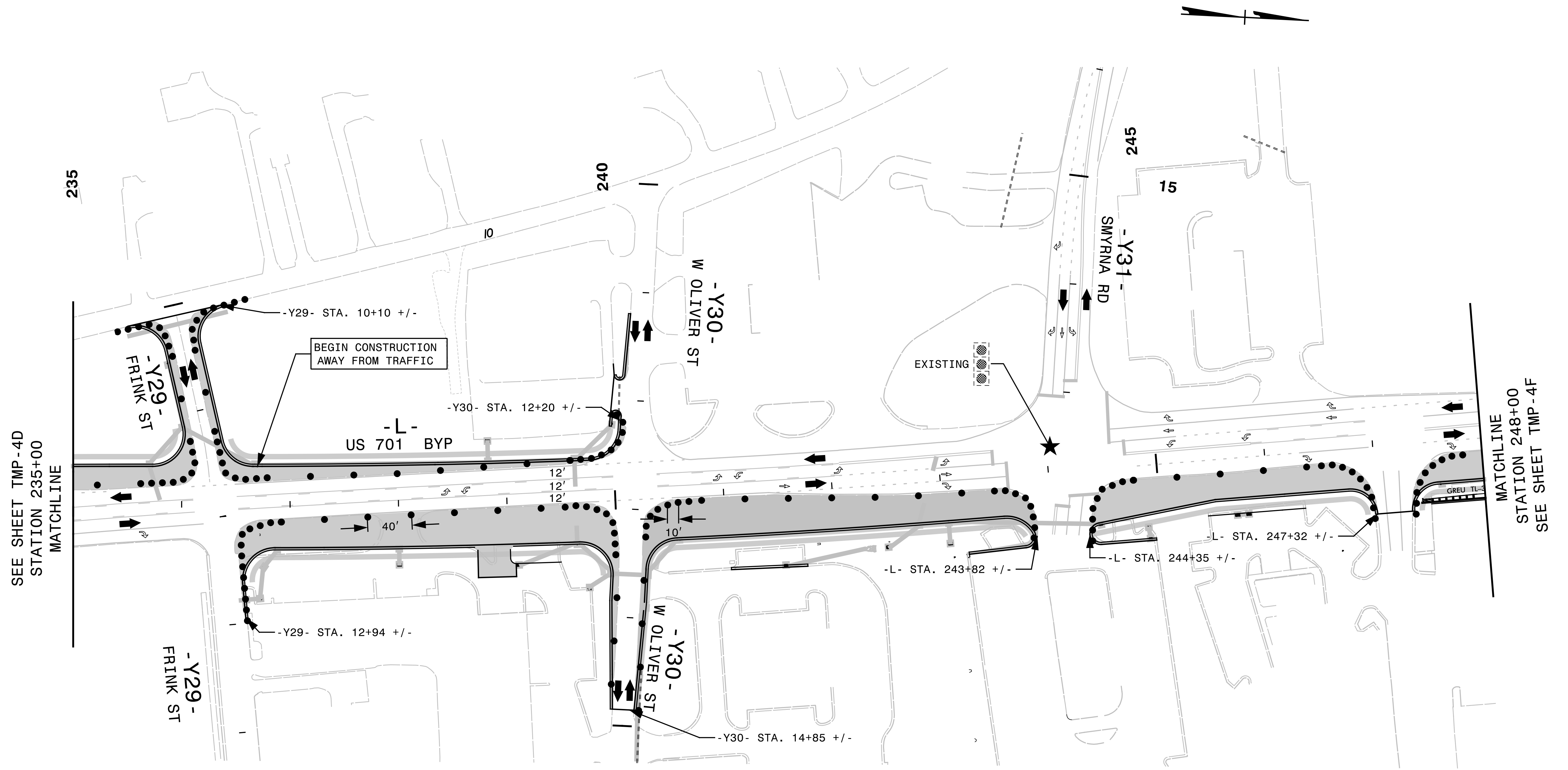
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**TEMPORARY
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PHASE I DETAIL**



SEE SHEET TMP-4D
STATION 235+00
MATCHLINE

MATCHLINE
STATION 248+00
SEE SHEET TMP-4F

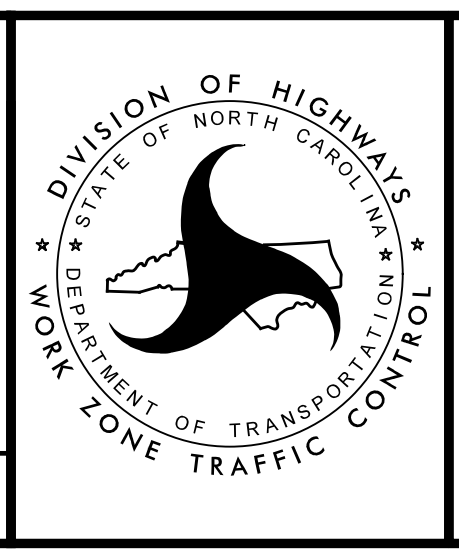
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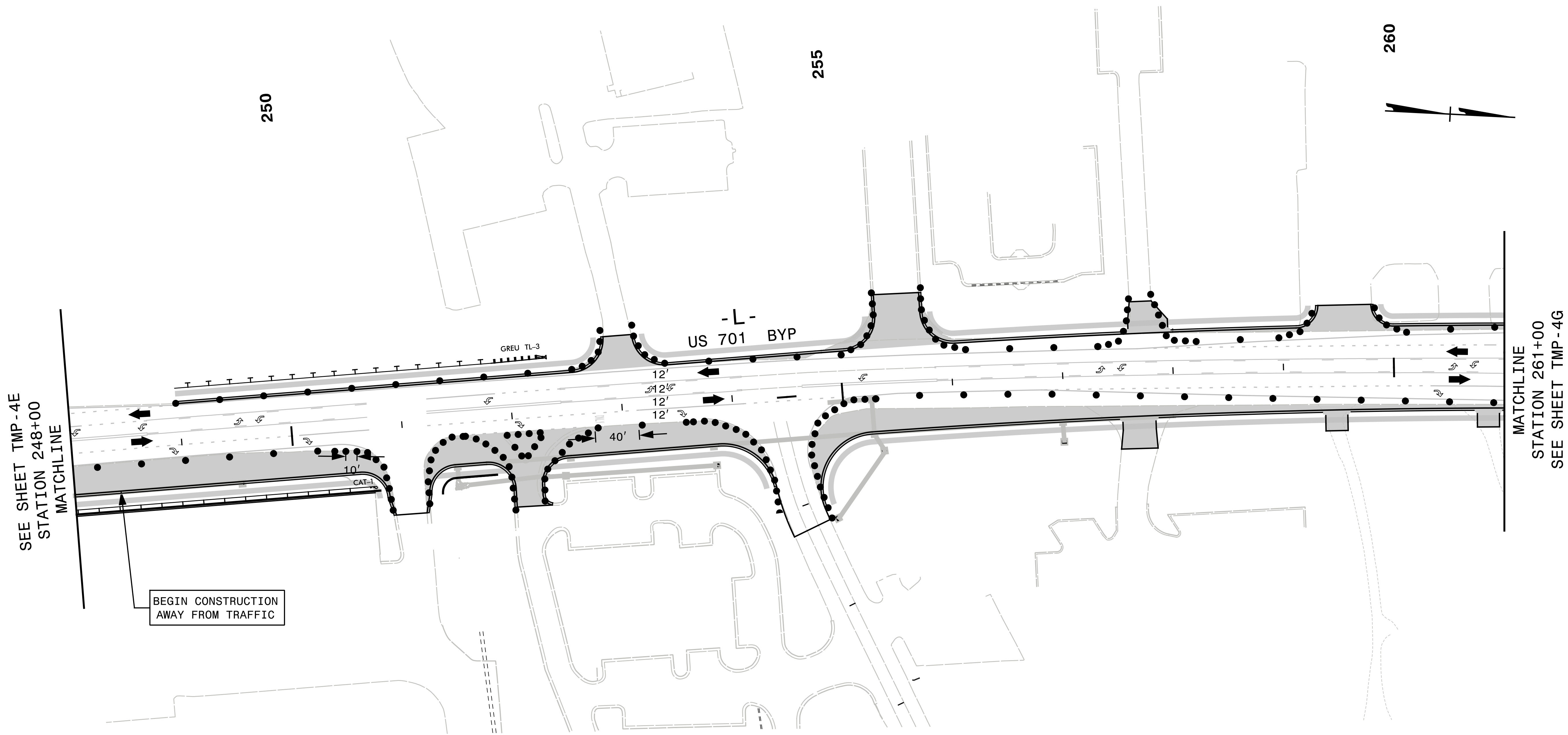
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**TEMPORARY
TRAFFIC CONTROL
PHASE I DETAIL**



SEE SHEET TMP-4E
STATION 248+00
MATCHLINE

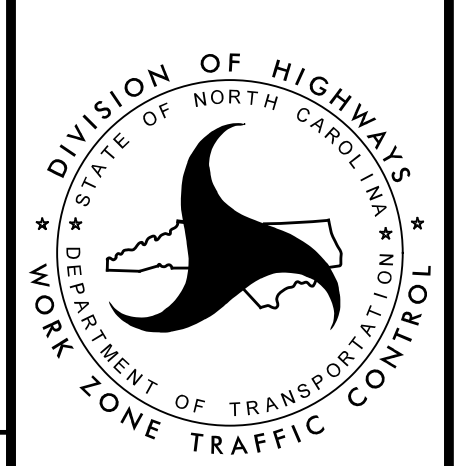
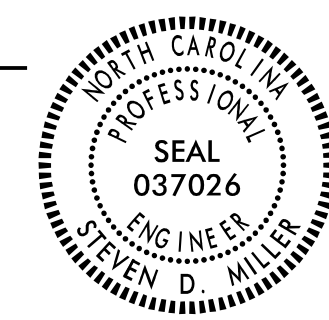
BEGIN CONSTRUCTION
AWAY FROM TRAFFIC

MATCHLINE
STATION 261+00
SEE SHEET TMP-4G

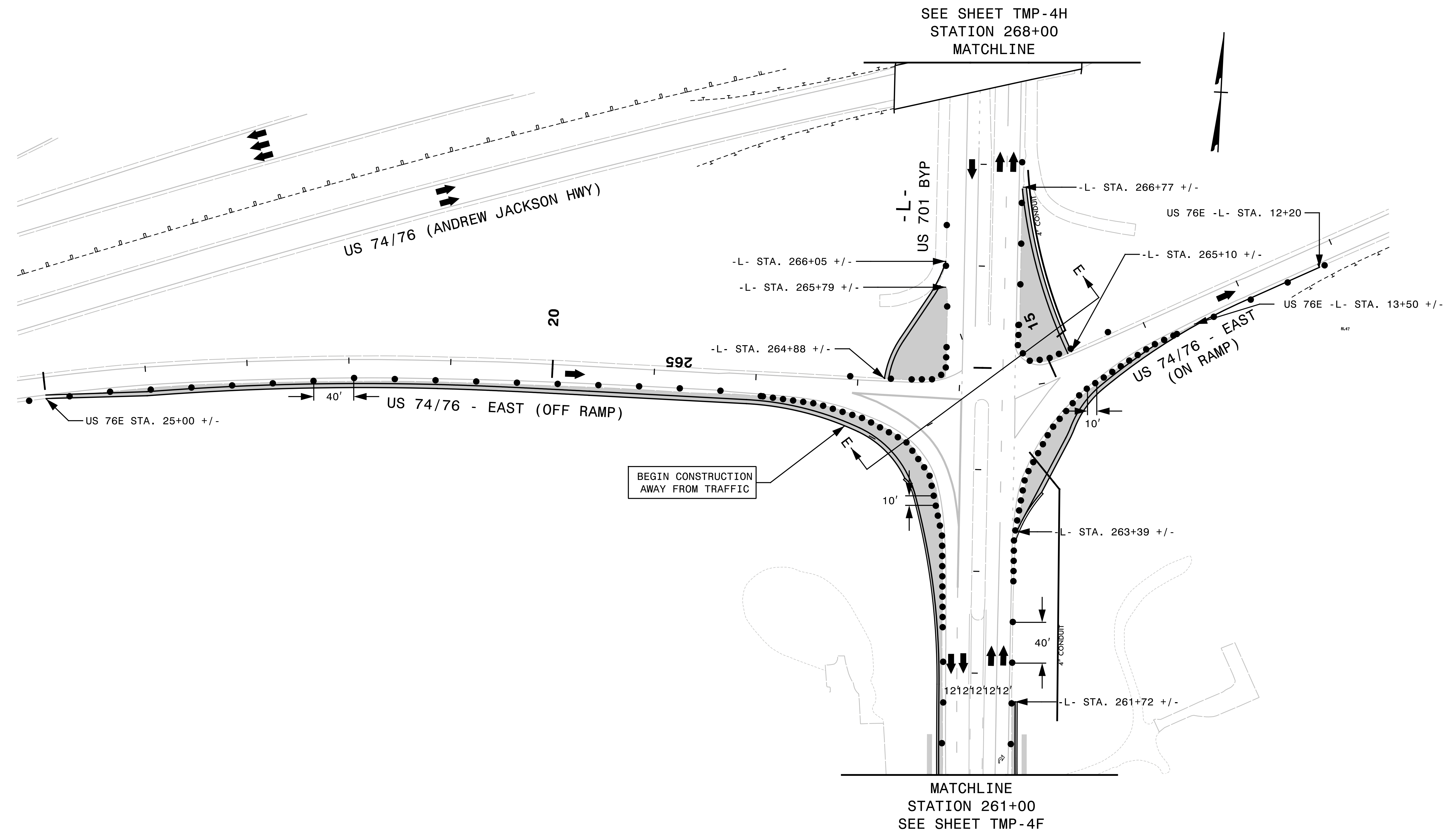
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**TEMPORARY
TRAFFIC CONTROL
PHASE I DETAIL**



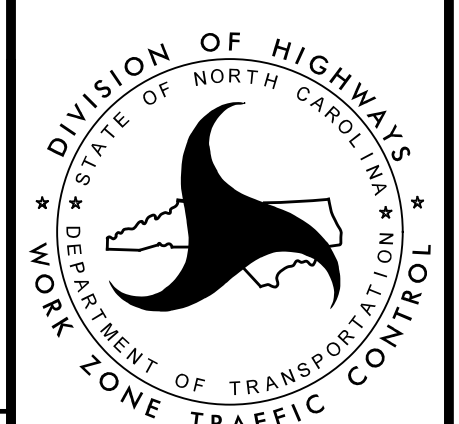
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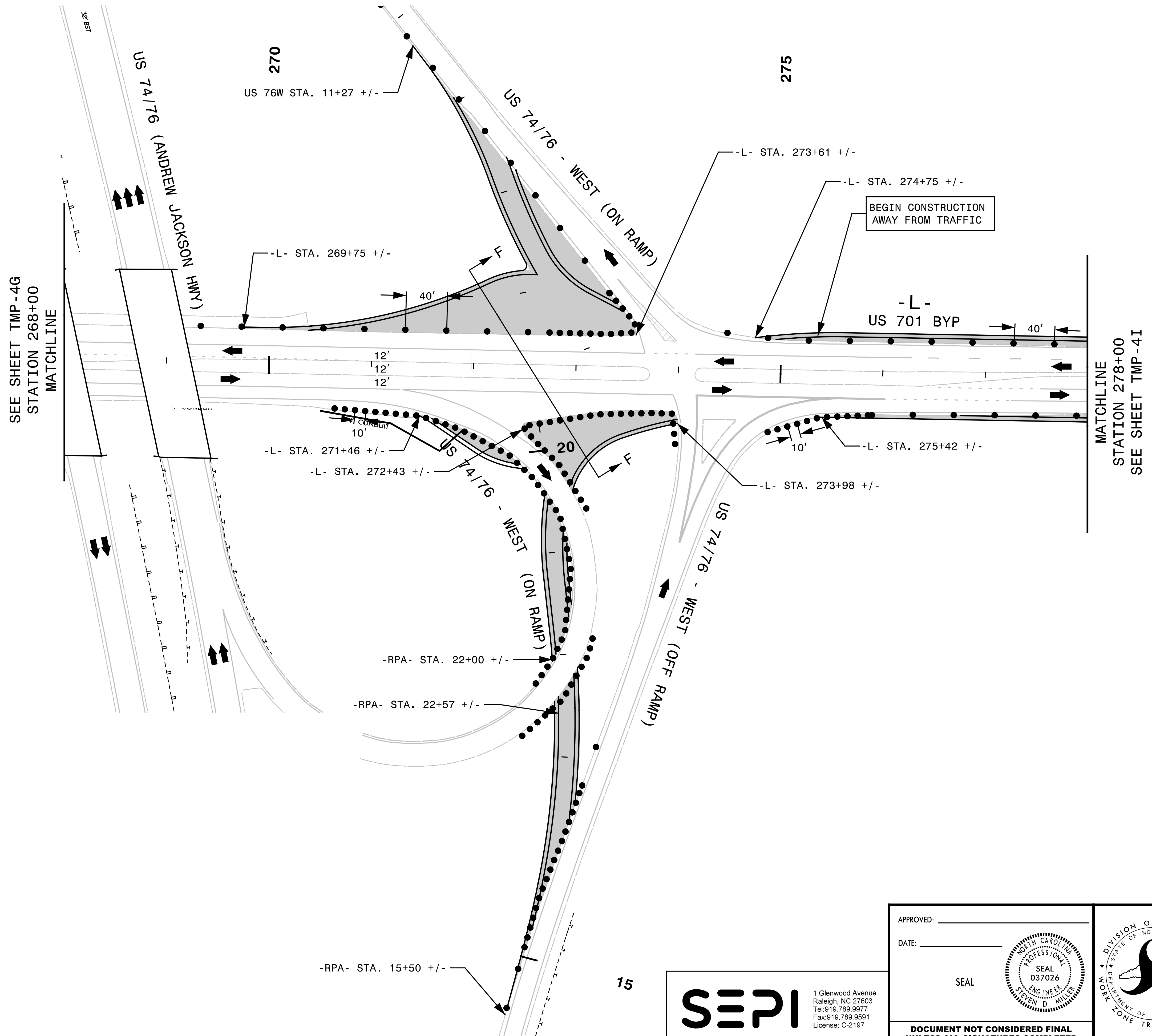
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**TEMPORARY
 TRAFFIC CONTROL
 PHASE I DETAIL**



SEE SHEET TMP-4G
STATION 268+00
MATCHLINE

MATCHLINE
STATION 278+00
SEE SHEET TMP-4I

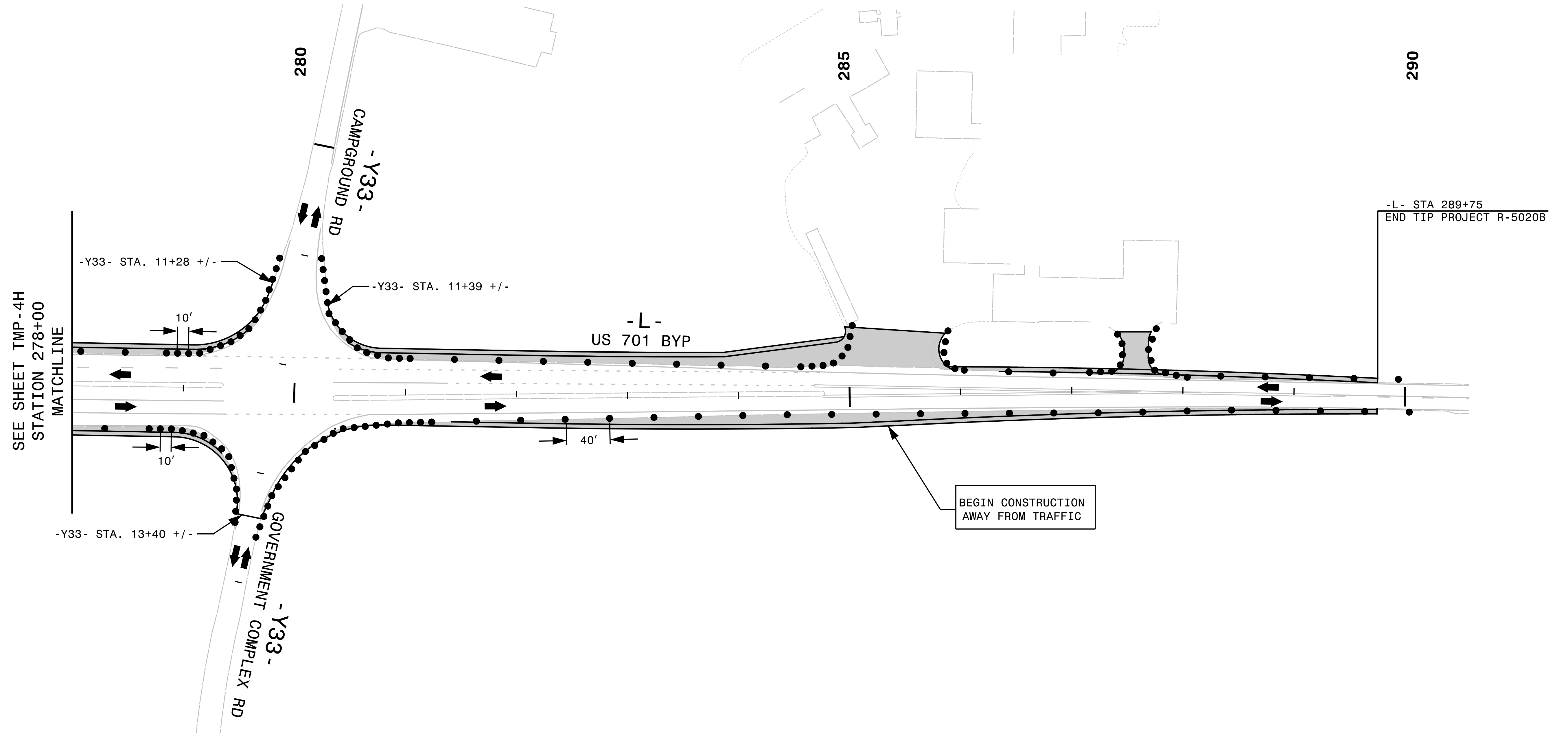
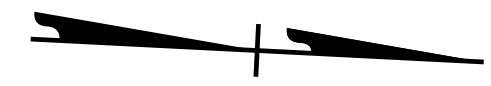
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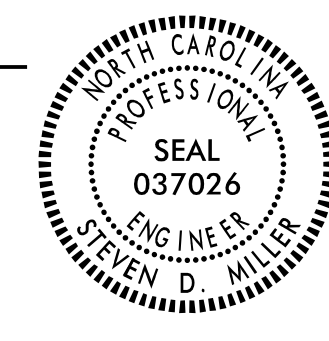
APPROVED: _____
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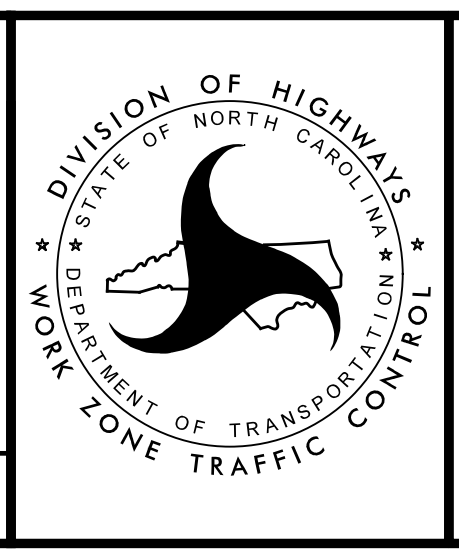


**TEMPORARY
TRAFFIC CONTROL
PHASE I DETAIL**

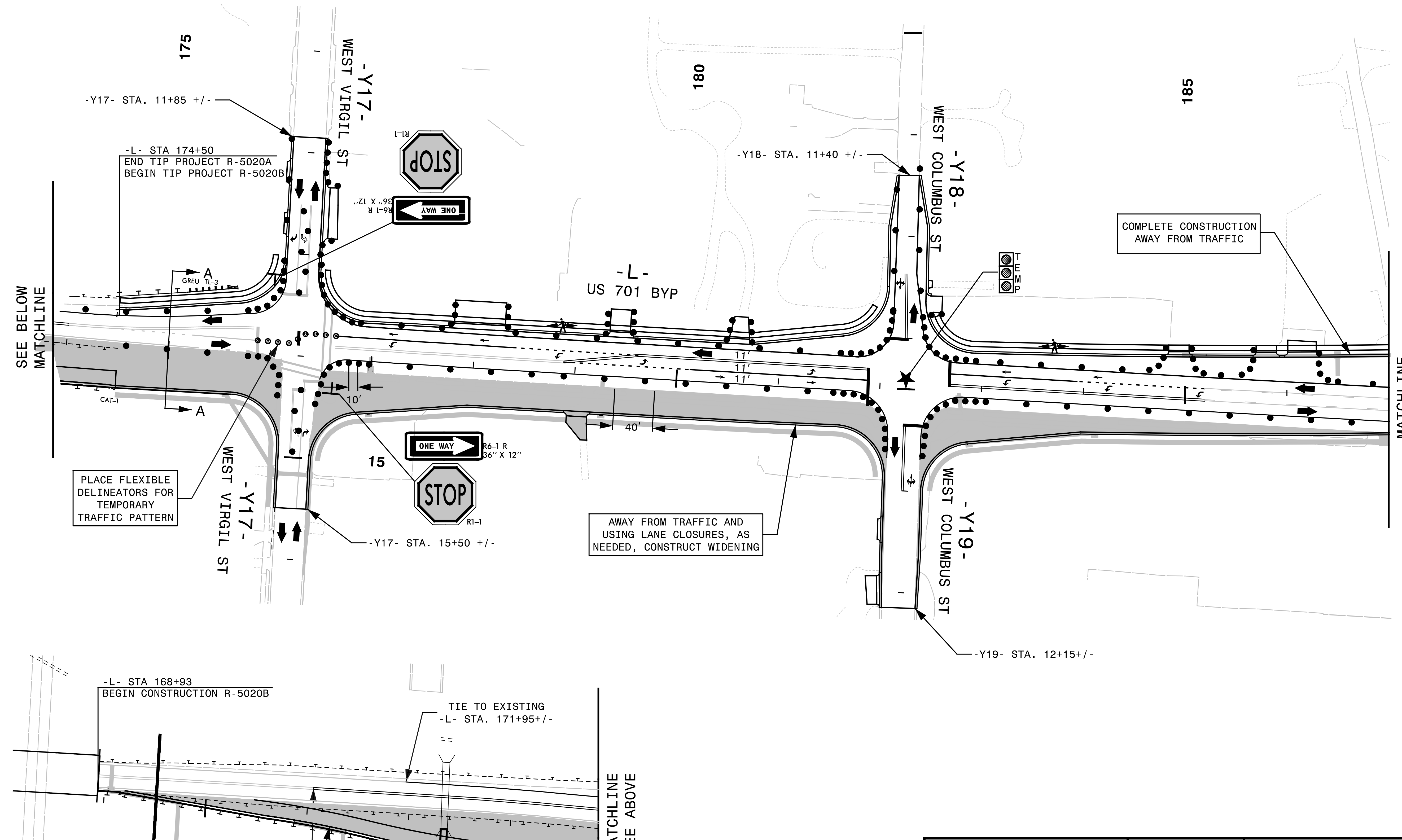


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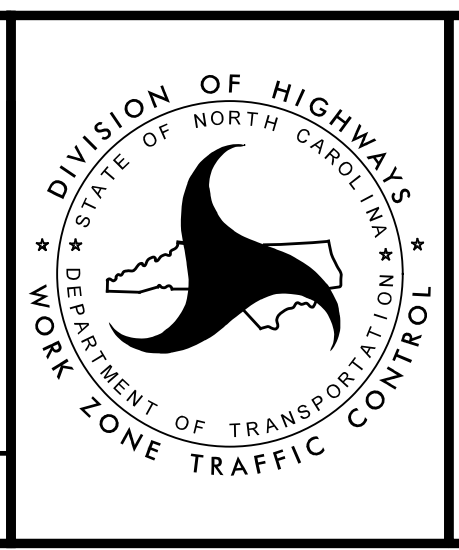
**TEMPORARY
 TRAFFIC CONTROL
 PHASE I DETAIL**



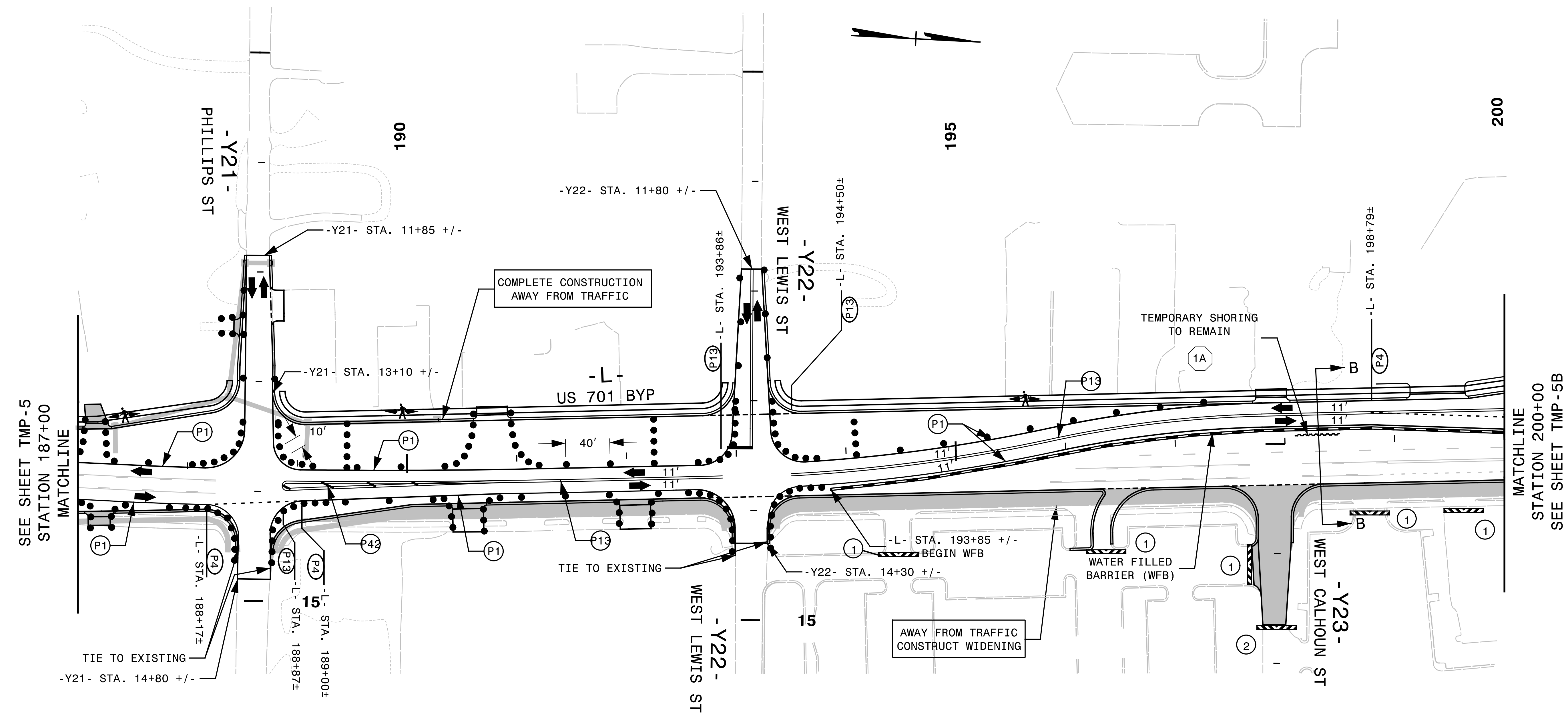
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 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 037026
 STEVEN D. MILLER

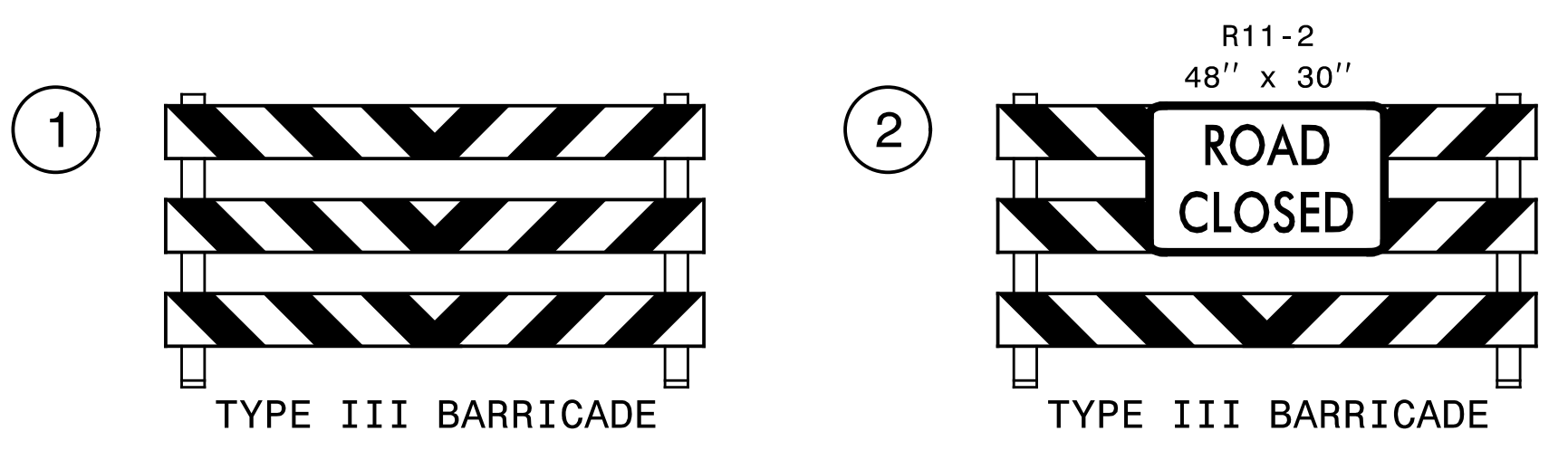
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**TEMPORARY
 TRAFFIC CONTROL
 PHASE IA DETAIL**



1A QUANTITY = 280 SF
 TEMPORARY SHORING
 FROM STA. 198+10 +/-, 7.5' L
 TO STA. 198+50 +/-, 7.5' L
 (SEE SHEET TMP-2I FOR
 TEMPORARY SHORING NOTES)



6/5/2020
 X:\2017\SET\135-00 R-5020B\TP\TrafficControl\TMP\R-5020B.TC.TMP-05A.dgn
 Screen

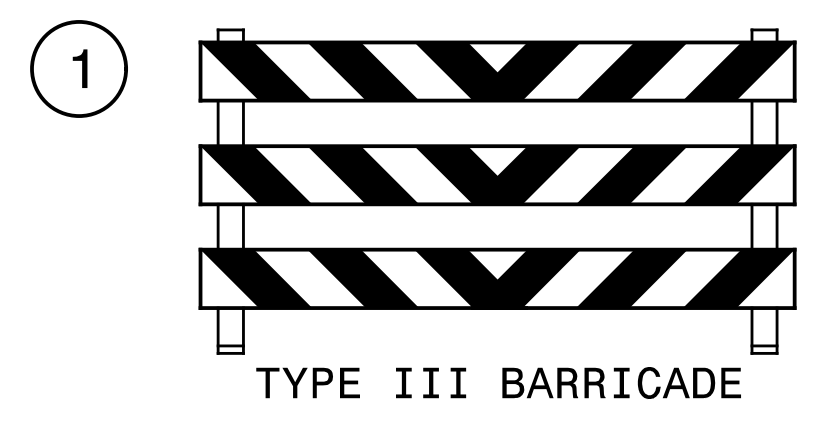
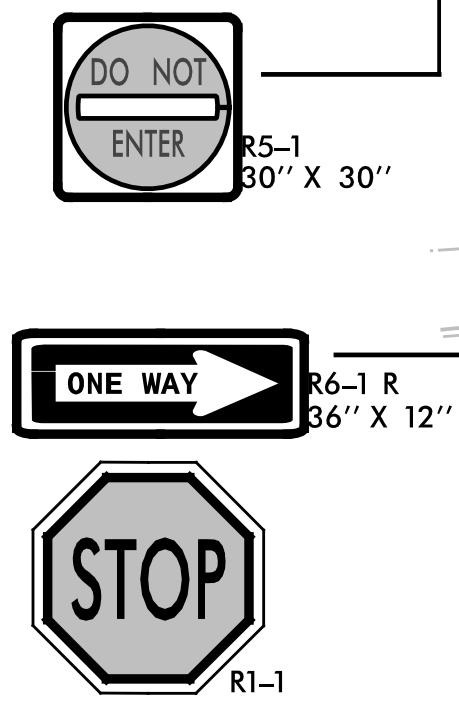
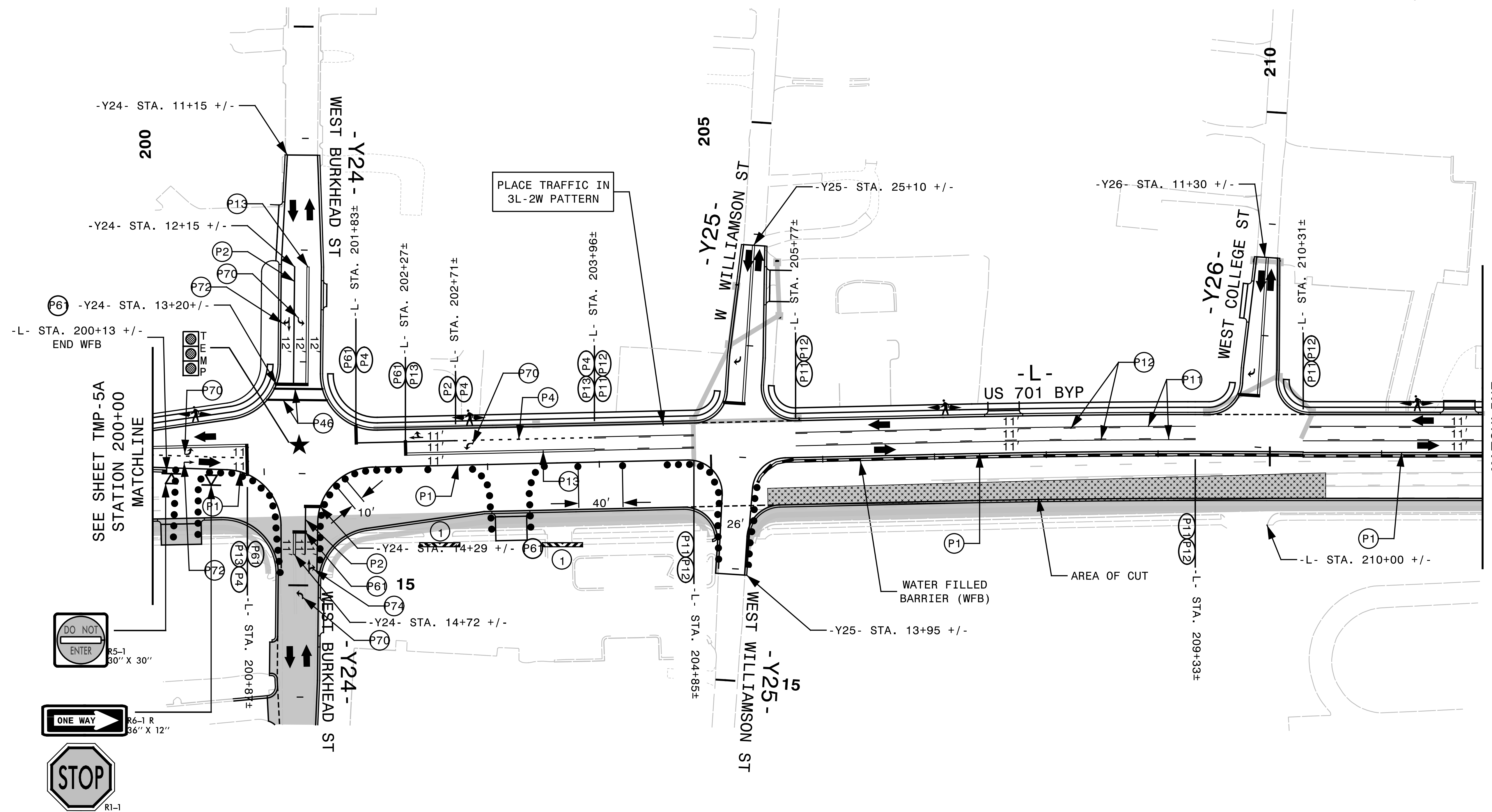
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DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL

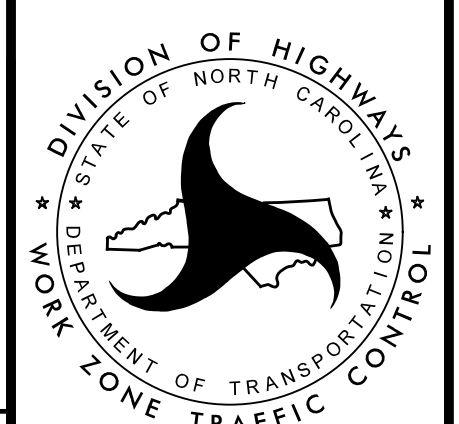
TEMPORARY
 TRAFFIC CONTROL
 PHASE IA DETAIL

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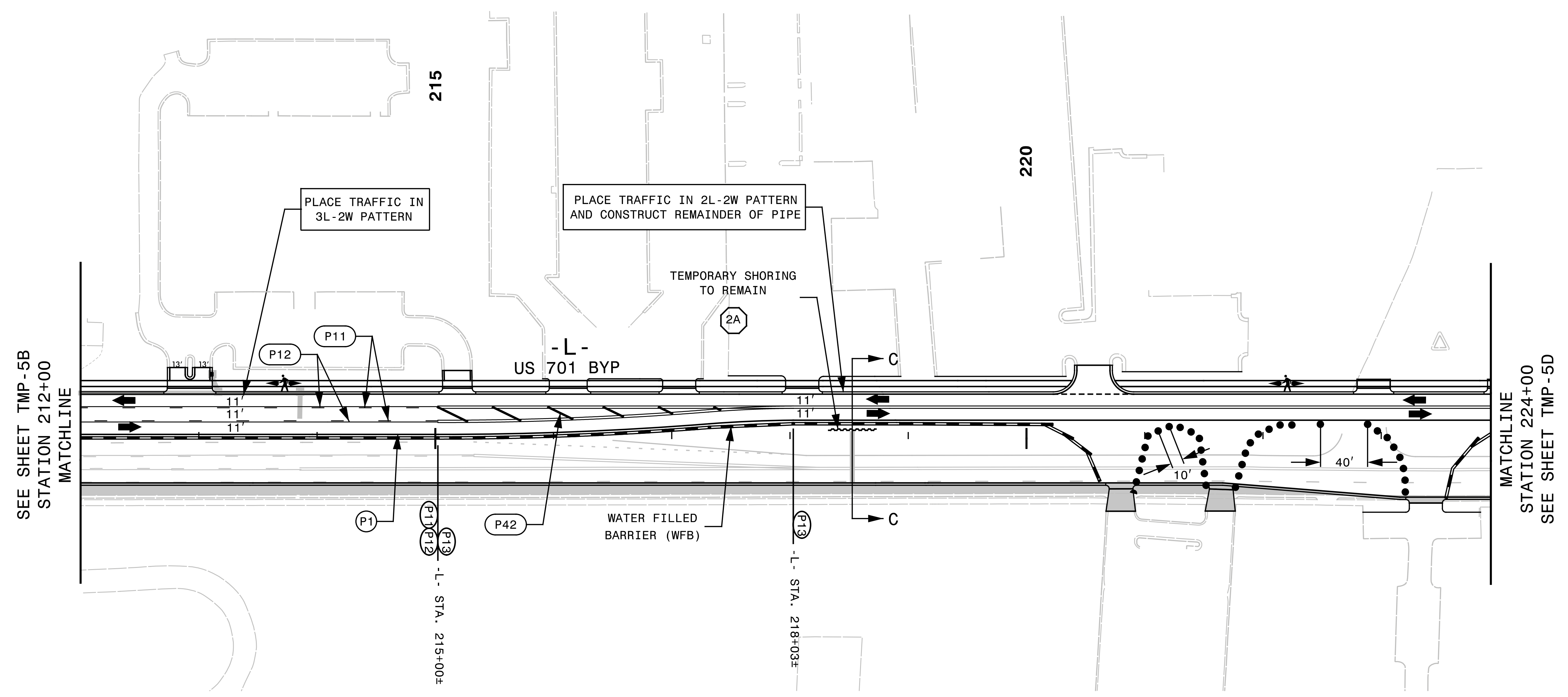
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 STEVEN D. MILLER



TEMPORARY TRAFFIC CONTROL PHASE IA DETAIL

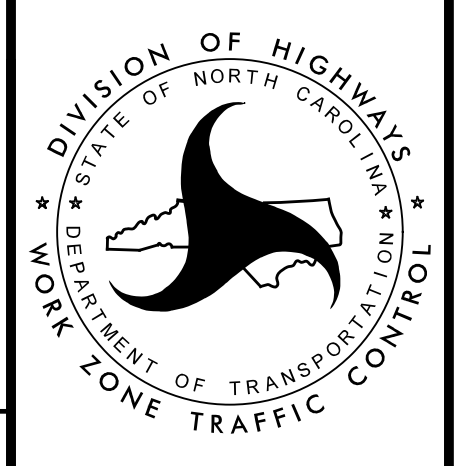
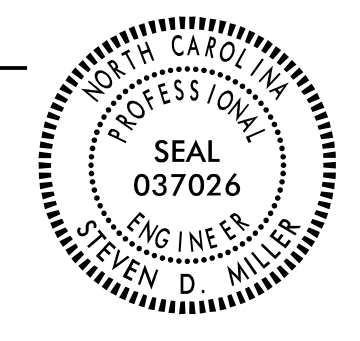
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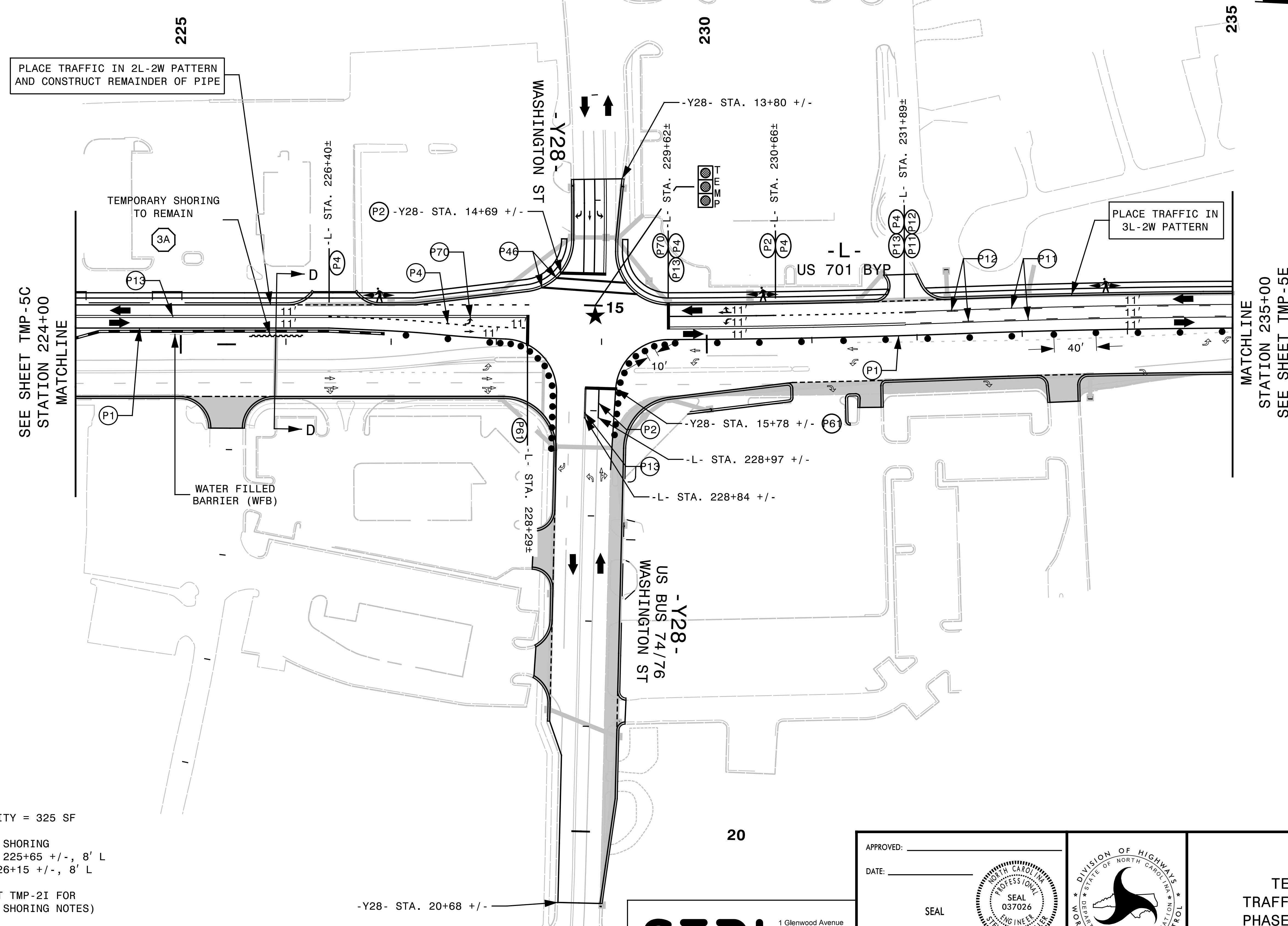
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 Screen

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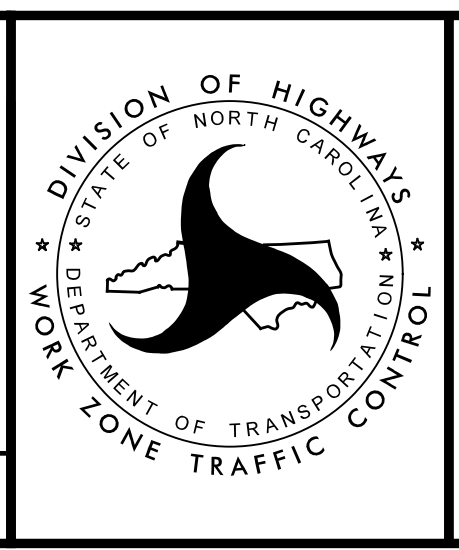
TEMPORARY
 TRAFFIC CONTROL
 PHASE IA DETAIL



3A QUANTITY = 325 SF
 TEMPORARY SHORING
 FROM STA. 225+65 +/-, 8' L
 TO STA. 226+15 +/-, 8' L
 (SEE SHEET TMP-2I FOR
 TEMPORARY SHORING NOTES)

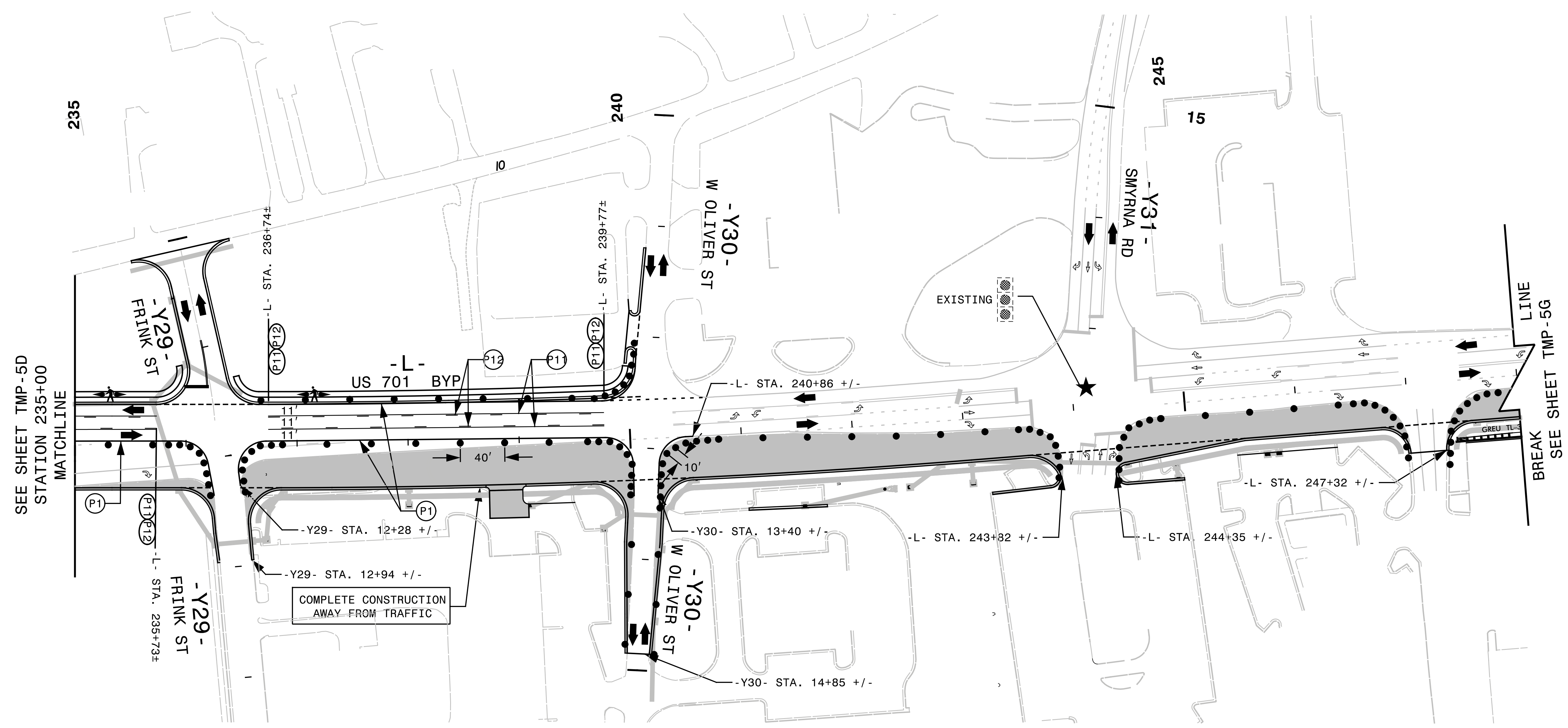
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TEMPORARY
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 PHASE IA DETAIL

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 Screen



SEE SHEET TMP-5D
STATION 235+00
MATCHLINE

LINE
BREAK
SEE SHEET TMP-5G

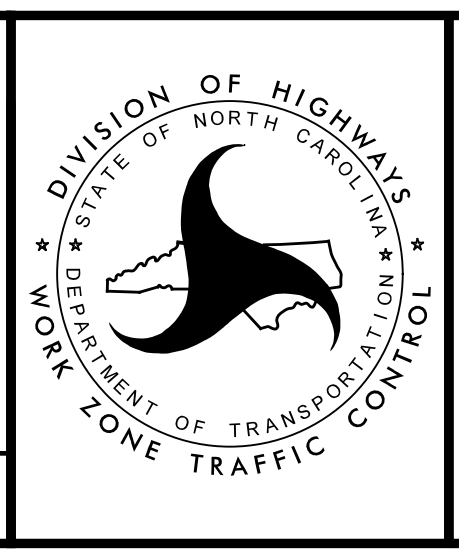
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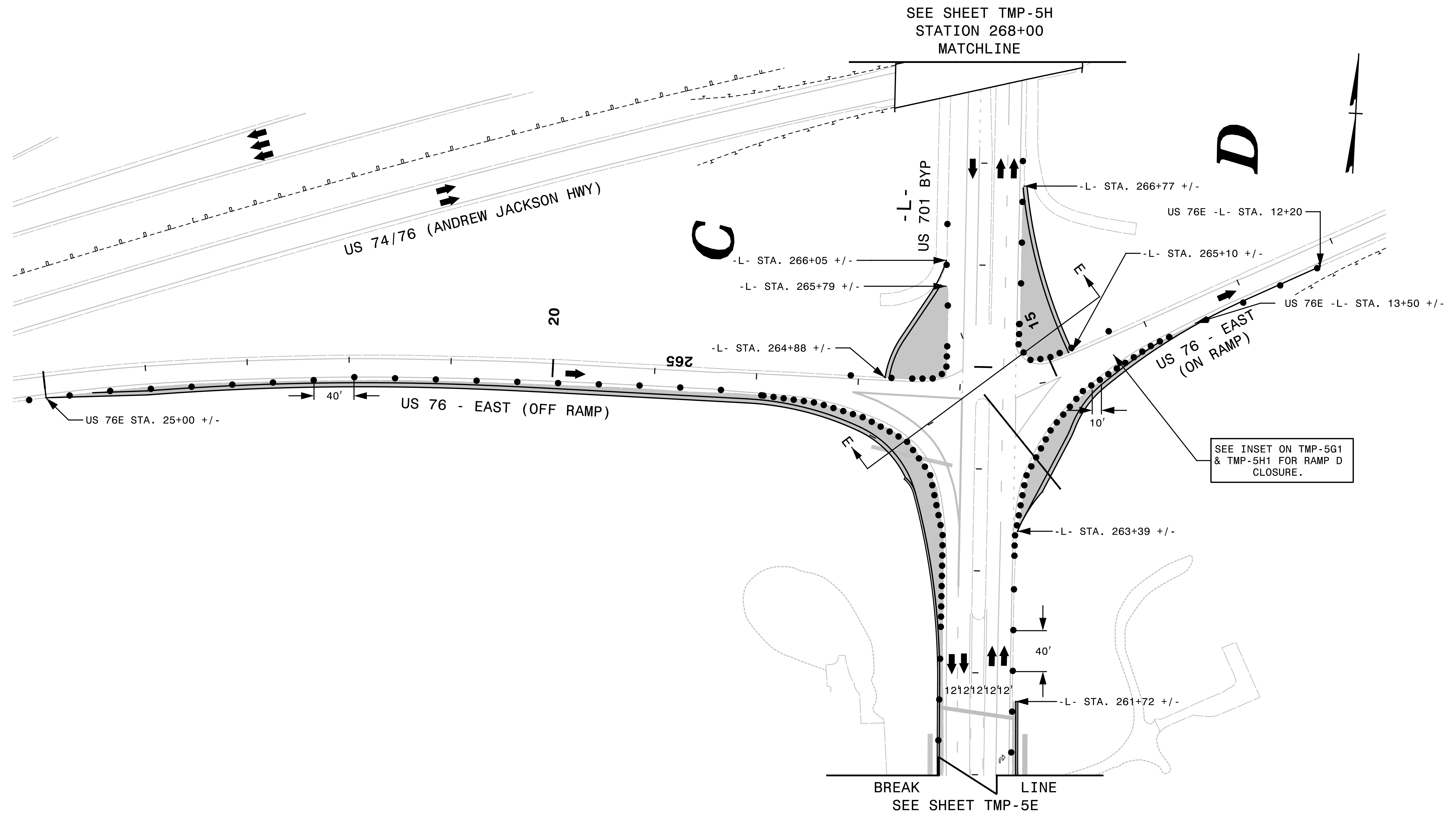
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**TEMPORARY
TRAFFIC CONTROL
PHASE IA DETAIL**



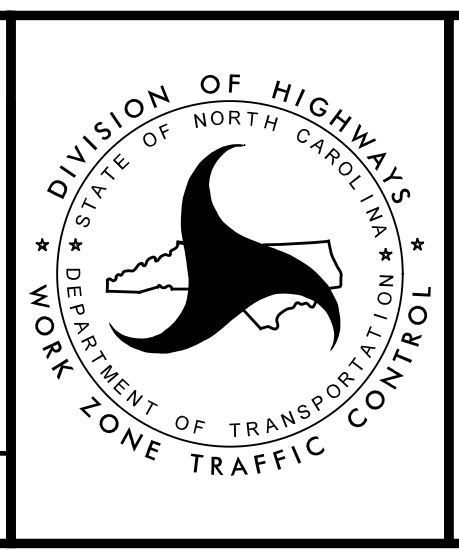
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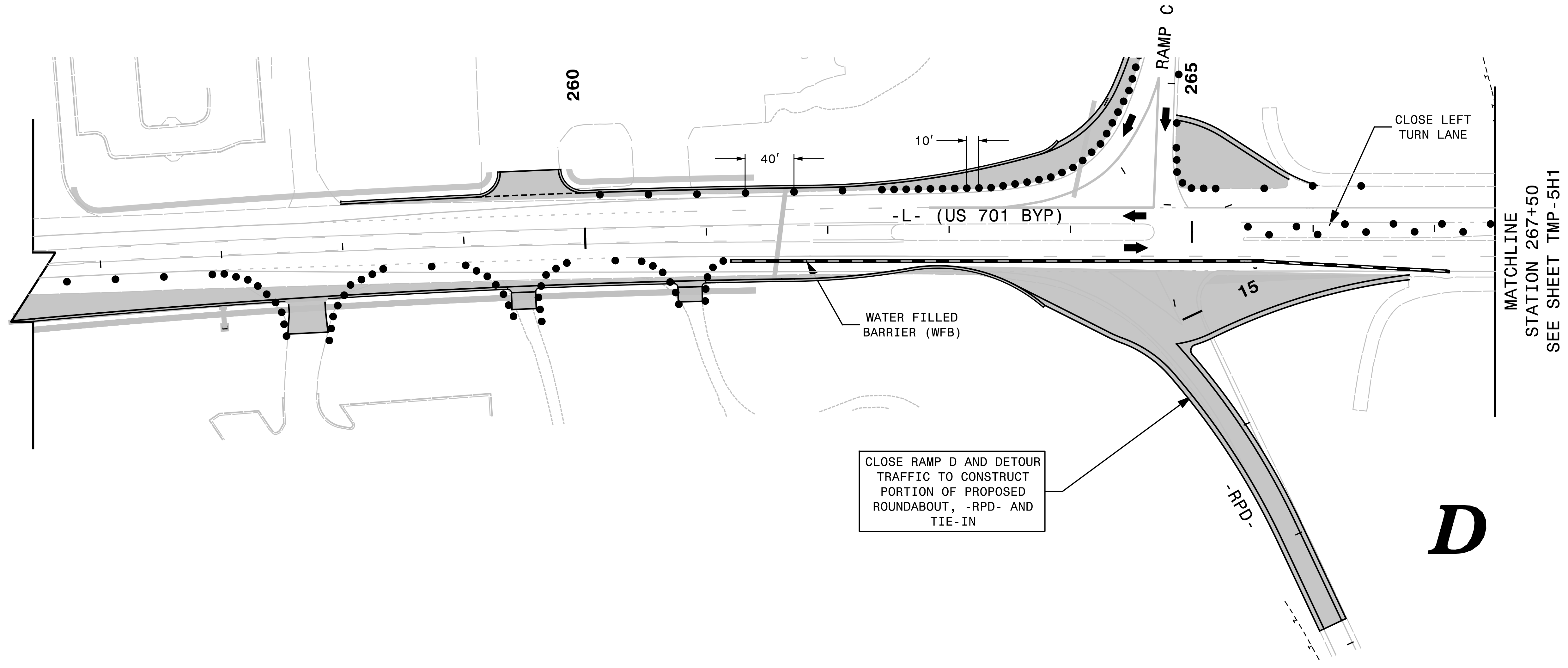
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**TEMPORARY
TRAFFIC CONTROL
PHASE IA DETAIL**

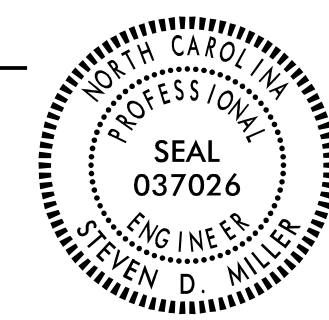


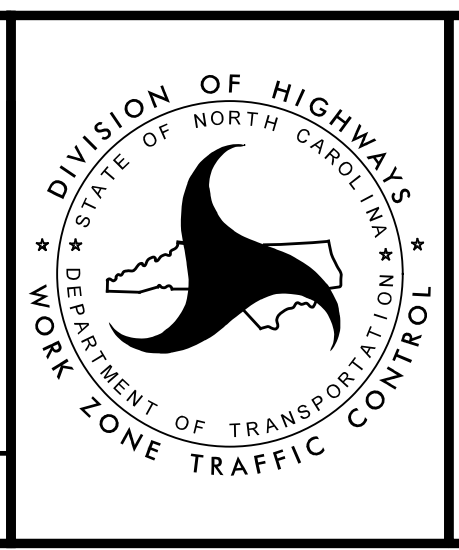
CLOSE RAMP D AND DETOUR TRAFFIC TO CONSTRUCT PORTION OF PROPOSED ROUNDABOUT, -RPD- AND TIE-IN

SEE SHEET TMP-2G FOR DETOUR AND DETOUR SIGN PLACEMENT

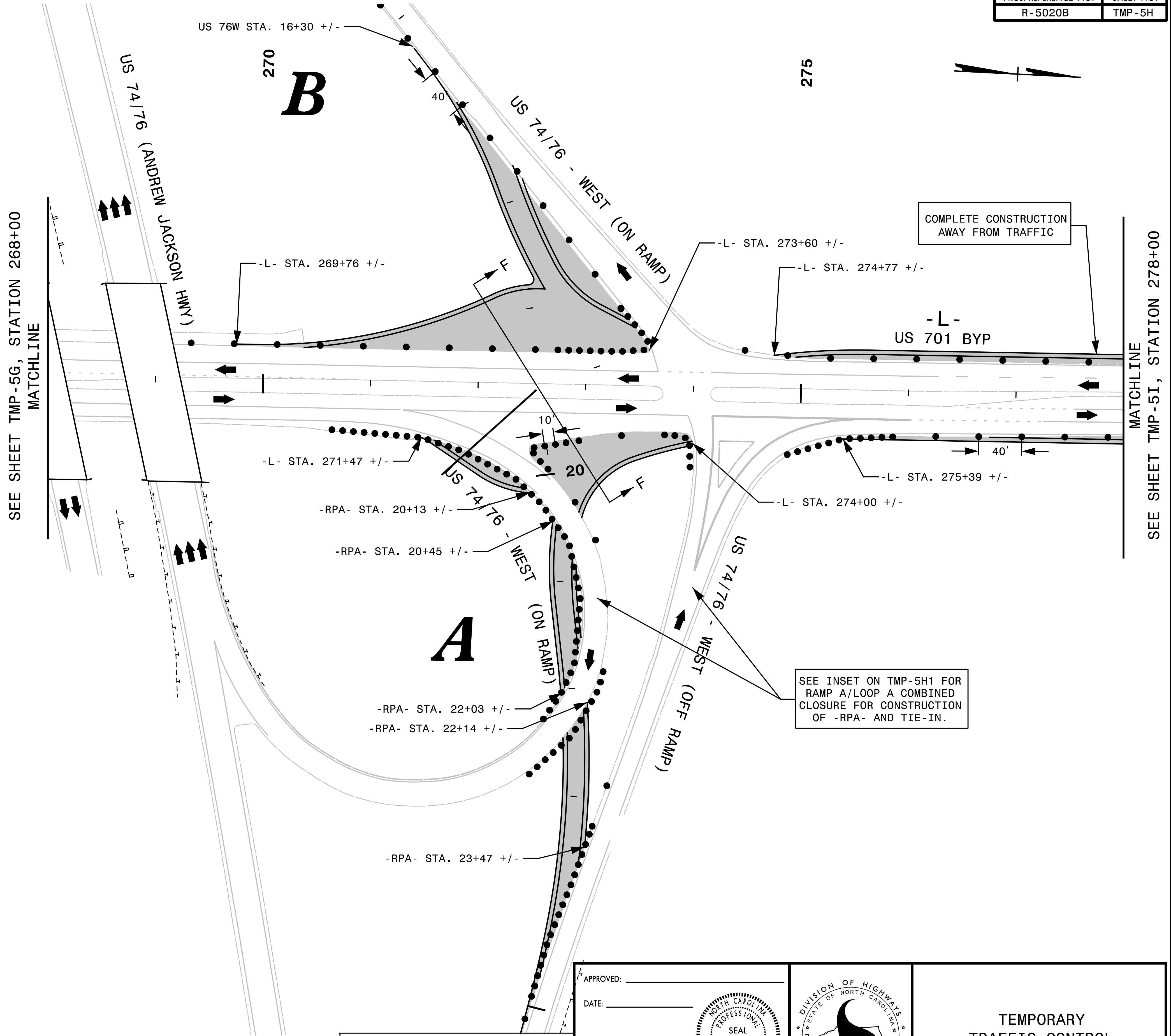
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TEMPORARY
 TRAFFIC CONTROL
 PHASE IA INSET



SEE SHEET TMP-5G, STATION 268+00
MATCHLINE

SEE SHEET TMP-5I, STATION 278+00
MATCHLINE

COMPLETE CONSTRUCTION
AWAY FROM TRAFFIC

SEE INSET ON TMP-5H1 FOR
RAMP A/LOOP A COMBINED
CLOSURE FOR CONSTRUCTION
OF -RPA- AND TIE-IN.

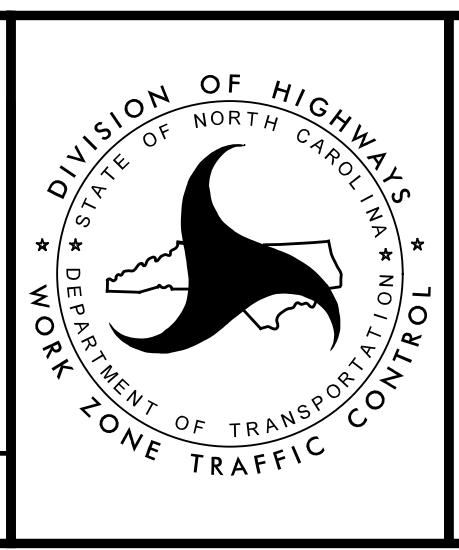
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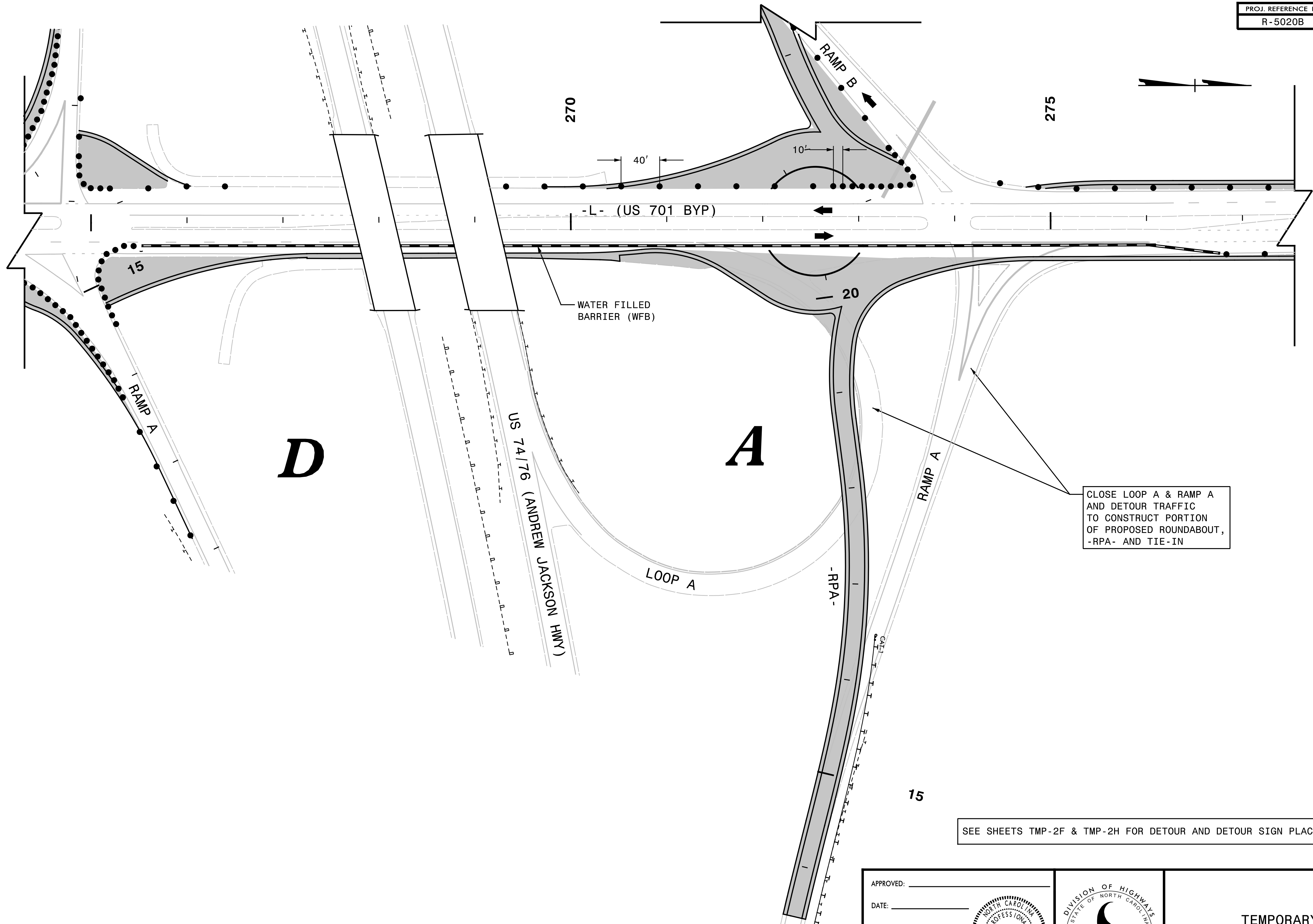
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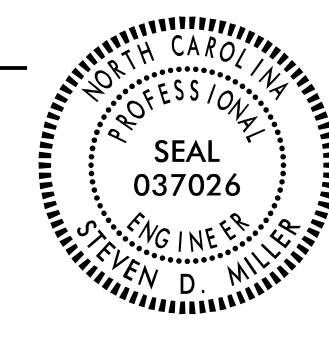


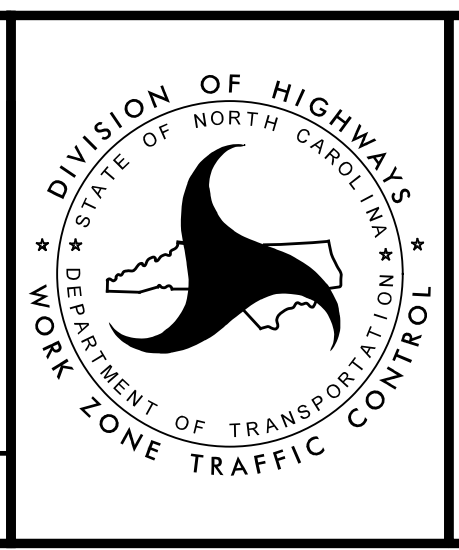
**TEMPORARY
TRAFFIC CONTROL
PHASE IA DETAIL**



4/17/2020
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 sgreen

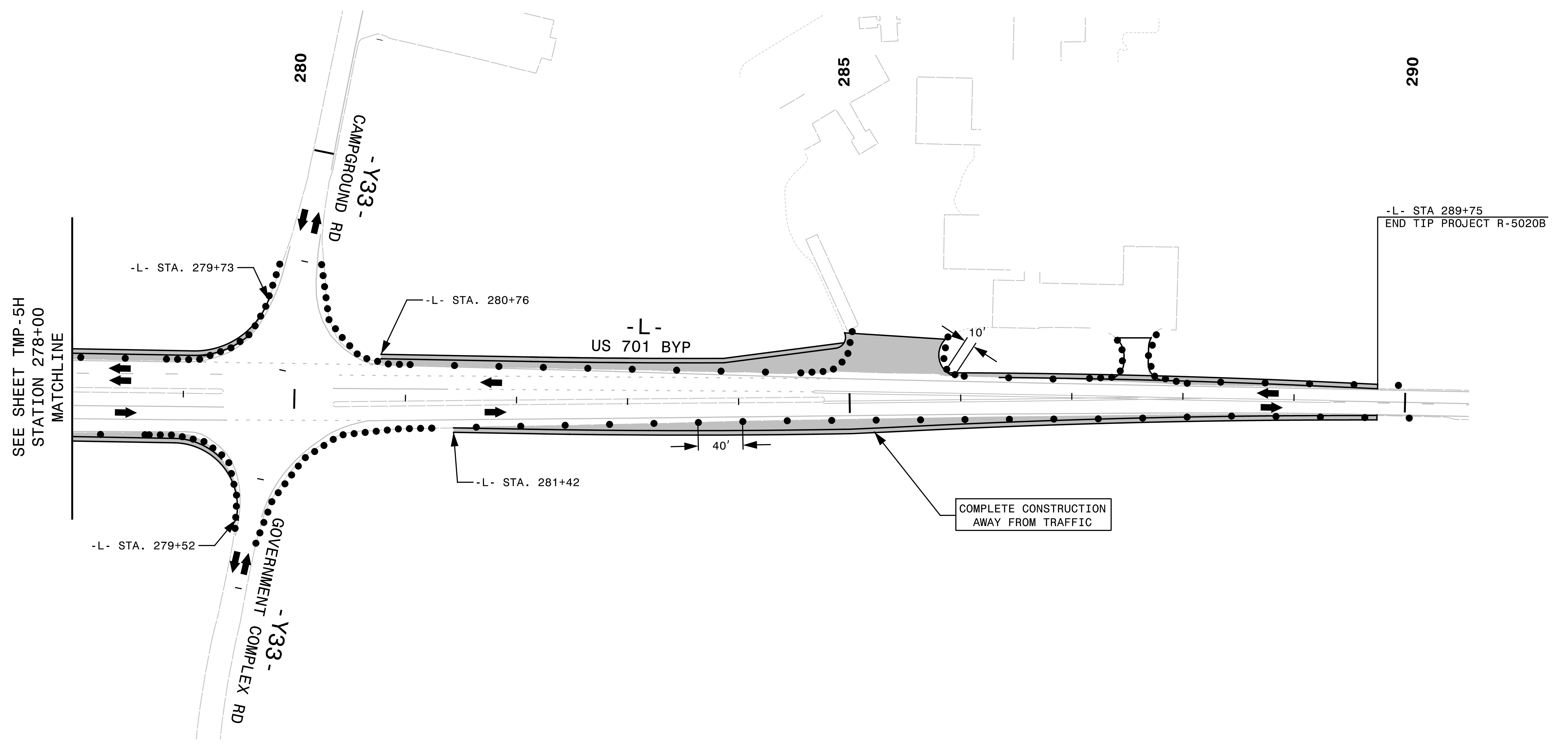
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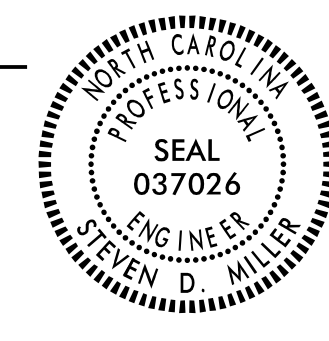


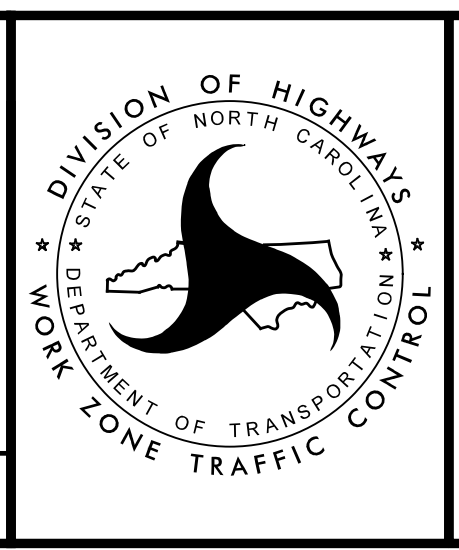
**TEMPORARY
 TRAFFIC CONTROL
 PHASE IA INSET**

SEE SHEETS TMP-2F & TMP-2H FOR DETOUR AND DETOUR SIGN PLACEMENT

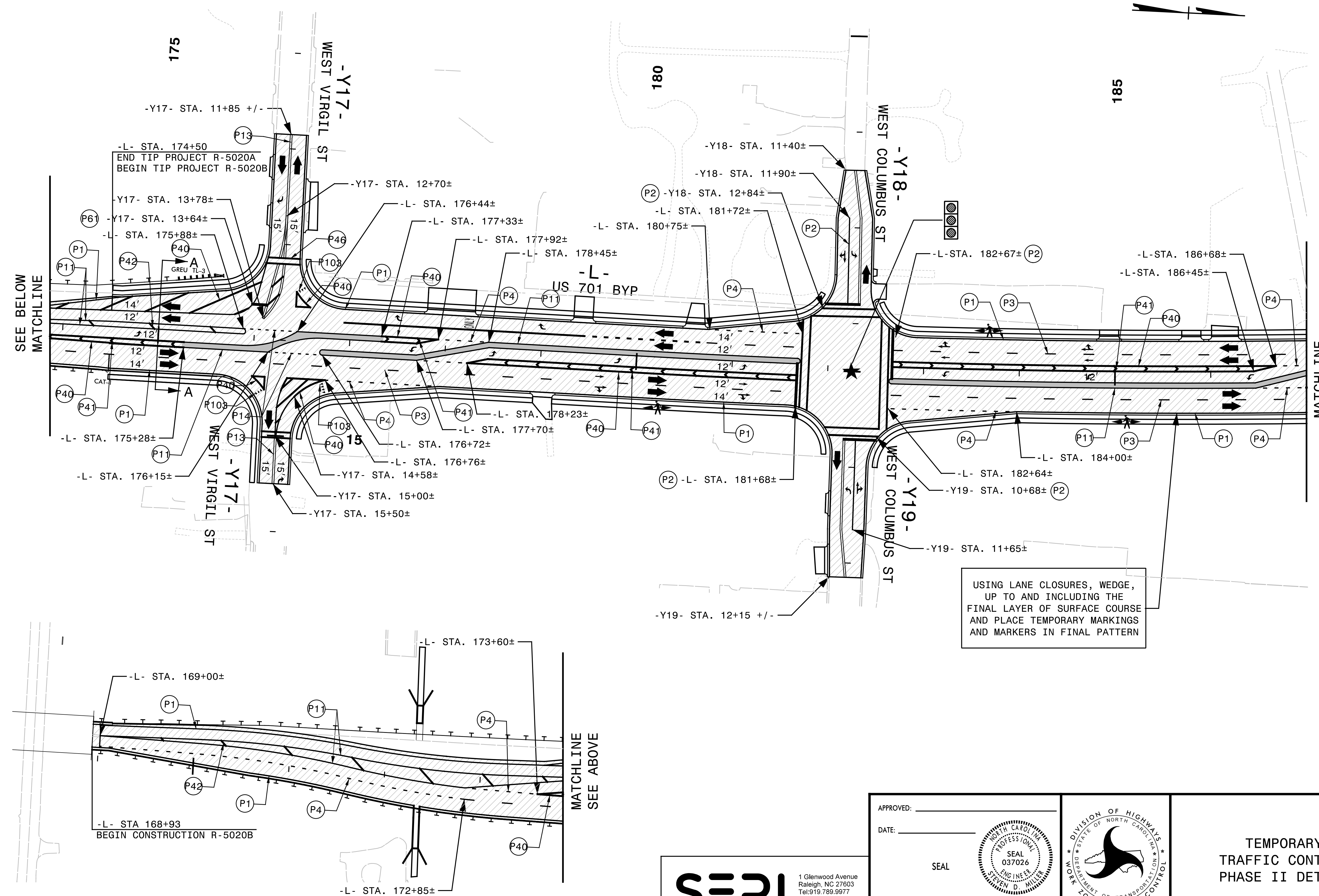


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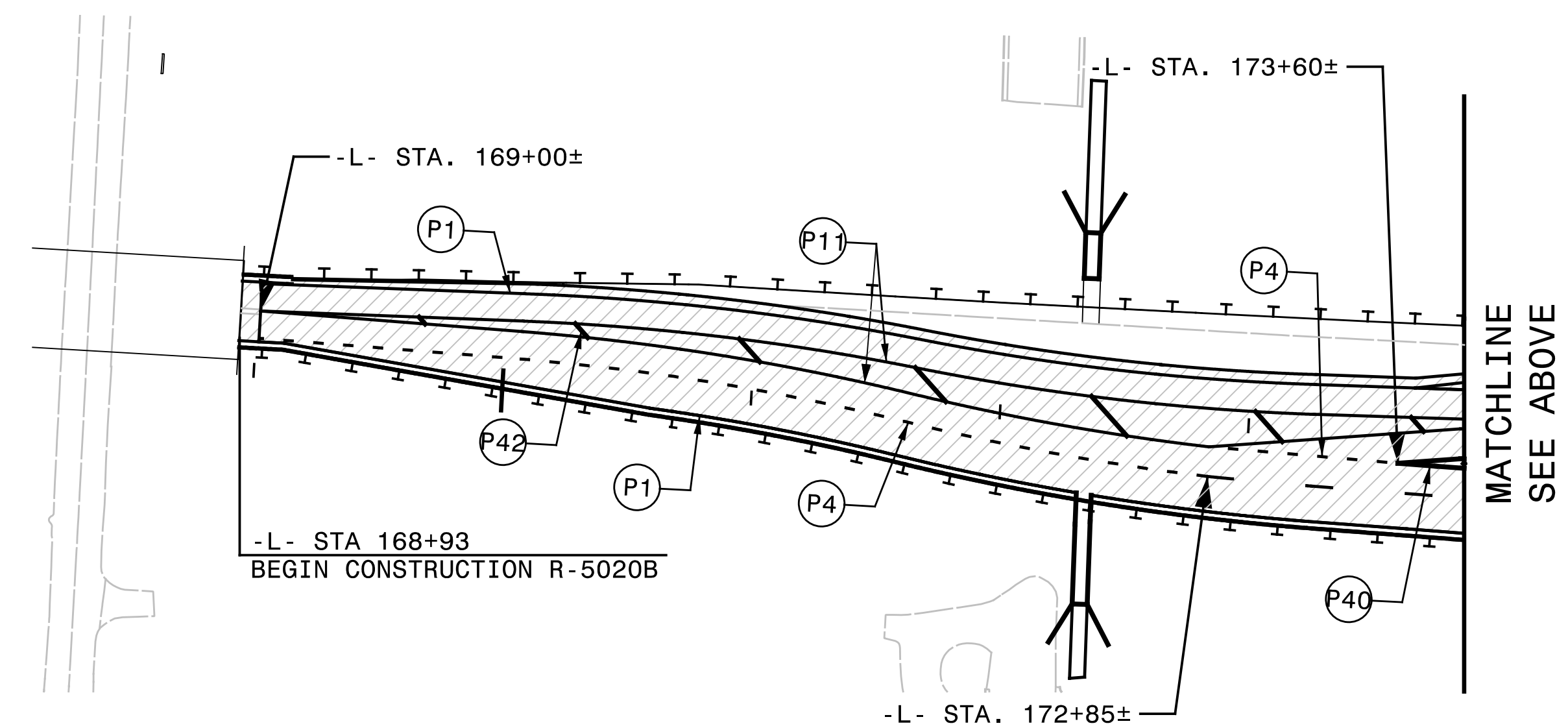
**TEMPORARY
 TRAFFIC CONTROL
 PHASE IA DETAIL**



SEE BELOW
MATCHLINE

MATCHLINE
STATION 187+00
SEE SHEET TMP-6A

USING LANE CLOSURES, WEDGE,
UP TO AND INCLUDING THE
FINAL LAYER OF SURFACE COURSE
AND PLACE TEMPORARY MARKINGS
AND MARKERS IN FINAL PATTERN



MATCHLINE
SEE ABOVE

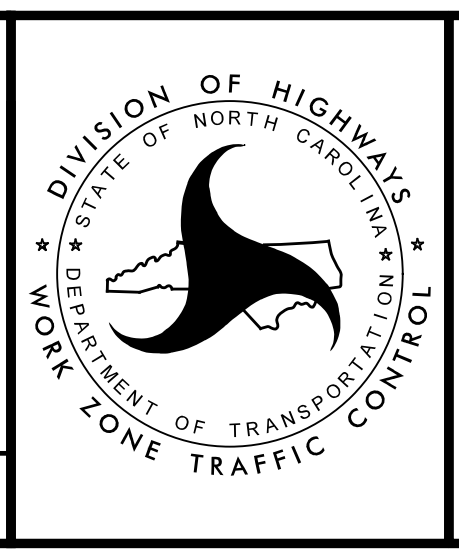
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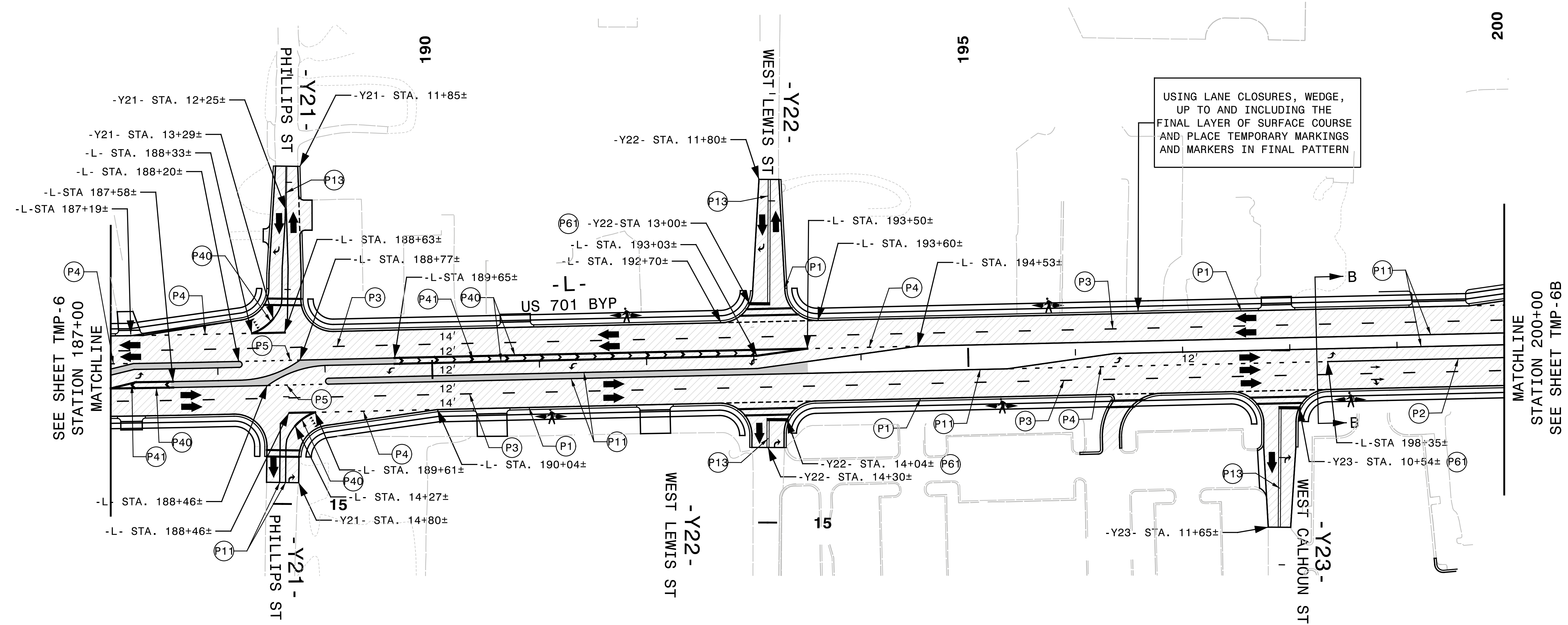
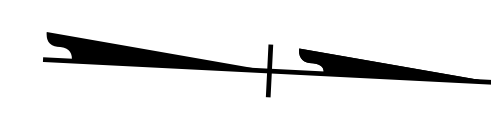
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**TEMPORARY
TRAFFIC CONTROL
PHASE II DETAIL**



USING LANE CLOSURES, WEDGE,
UP TO AND INCLUDING THE
FINAL LAYER OF SURFACE COURSE
AND PLACE TEMPORARY MARKINGS
AND MARKERS IN FINAL PATTERN

SEE SHEET TMP-6
STATION 187+00
MATCHLINE

MATCHLINE
STATION 200+00
SEE SHEET TMP-6A

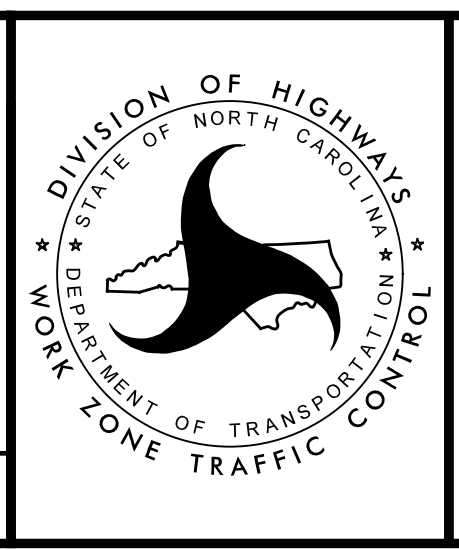
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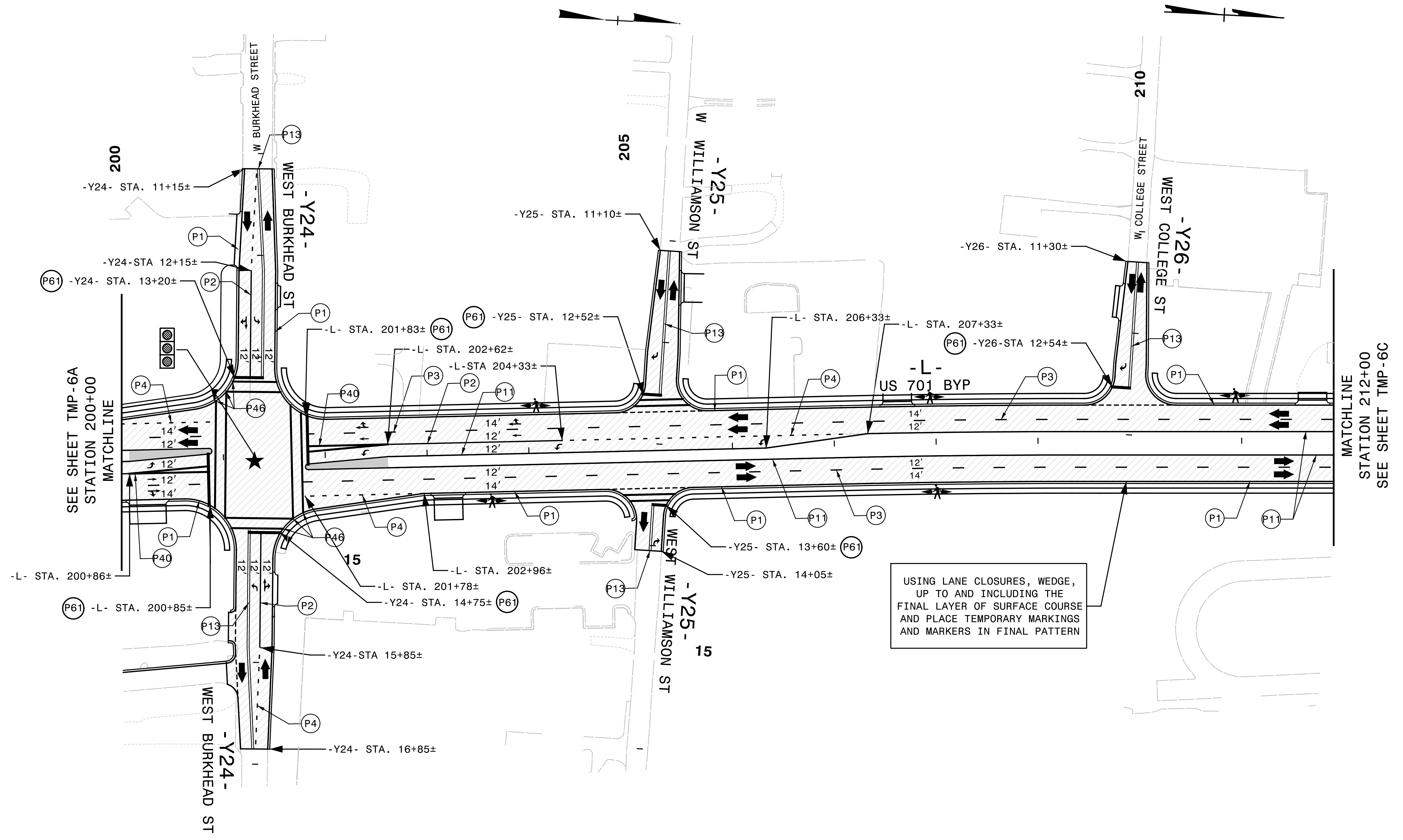
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**TEMPORARY
TRAFFIC CONTROL
PHASE II DETAIL**



SEE SHEET TMP-6A
STATION 200+00
MATCHLINE

MATCHLINE
STATION 212+00
SEE SHEET TMP-6C

USING LANE CLOSURES, WEDGE,
UP TO AND INCLUDING THE
FINAL LAYER OF SURFACE COURSE
AND PLACE TEMPORARY MARKINGS
AND MARKERS IN FINAL PATTERN

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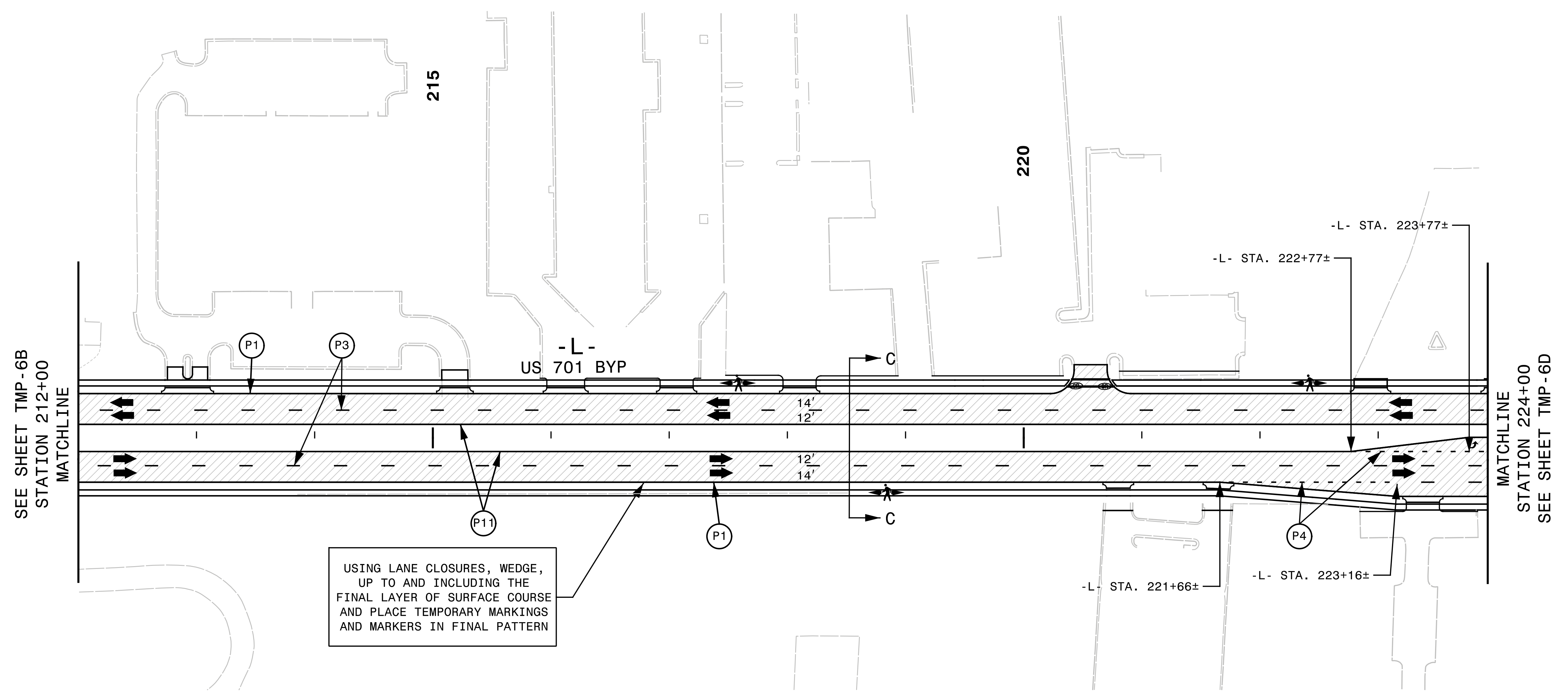
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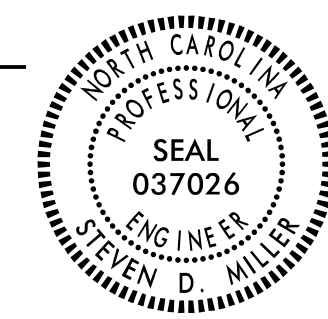
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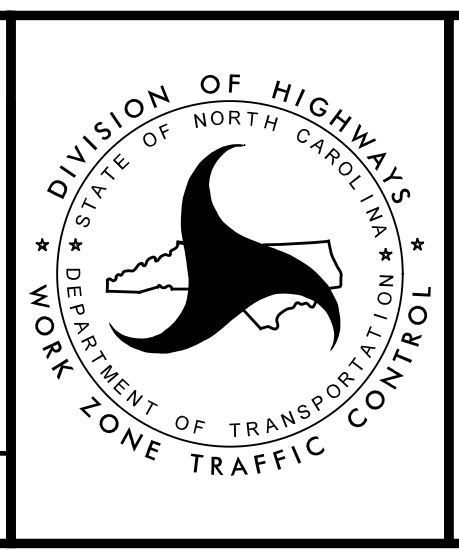
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**TEMPORARY
TRAFFIC CONTROL
PHASE II DETAIL**



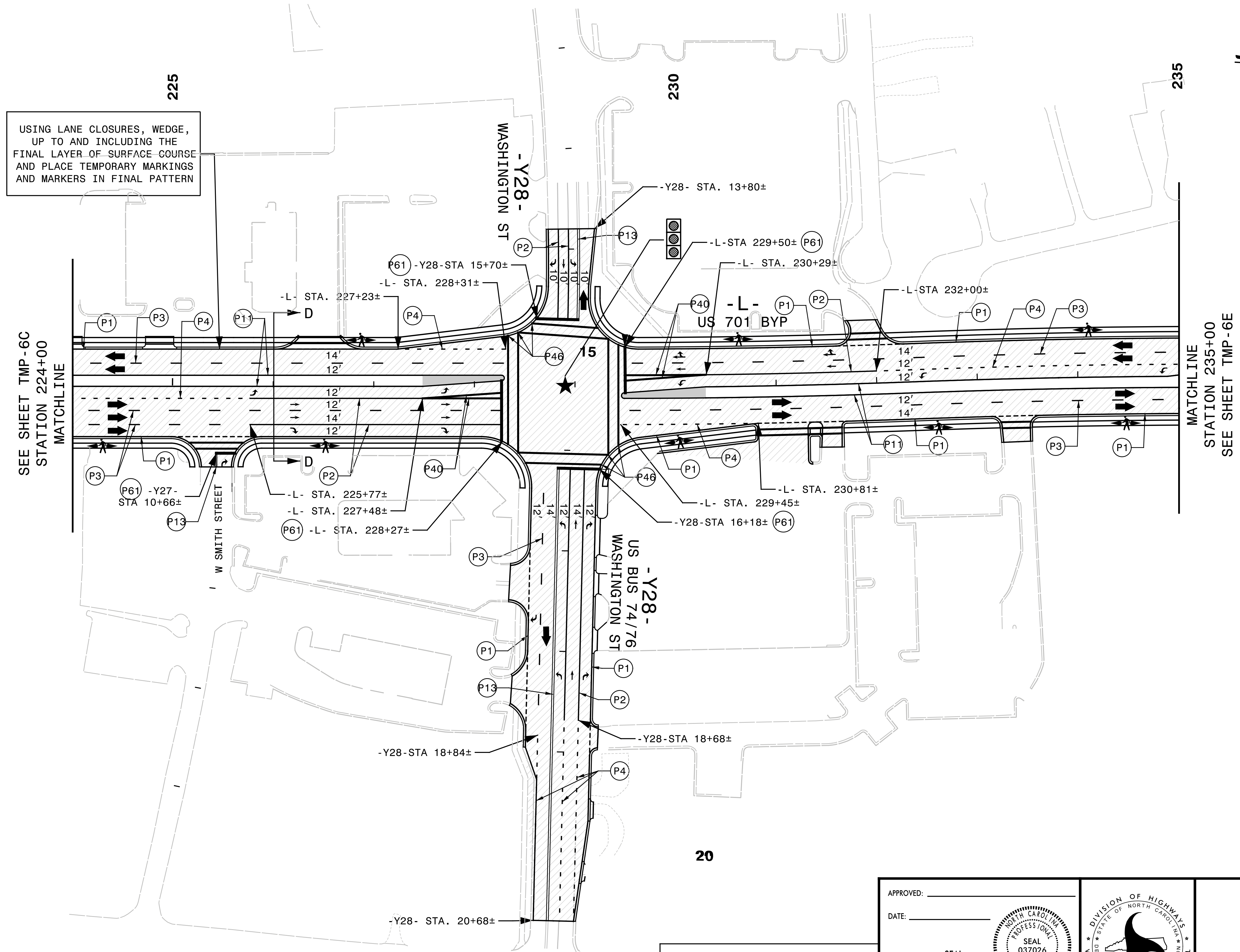
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**TEMPORARY
 TRAFFIC CONTROL
 PHASE II DETAIL**

USING LANE CLOSURES, WEDGE,
UP TO AND INCLUDING THE
FINAL LAYER OF SURFACE COURSE
AND PLACE TEMPORARY MARKINGS
AND MARKERS IN FINAL PATTERN



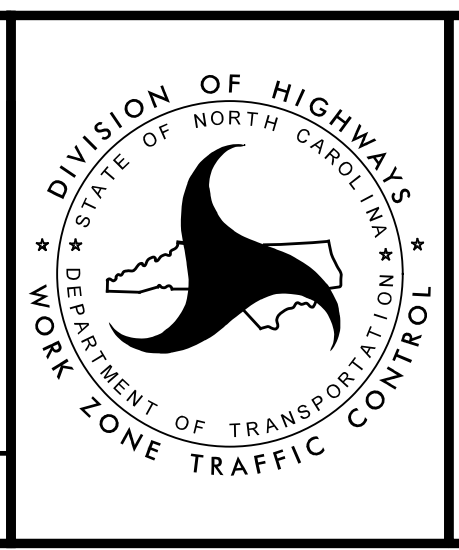
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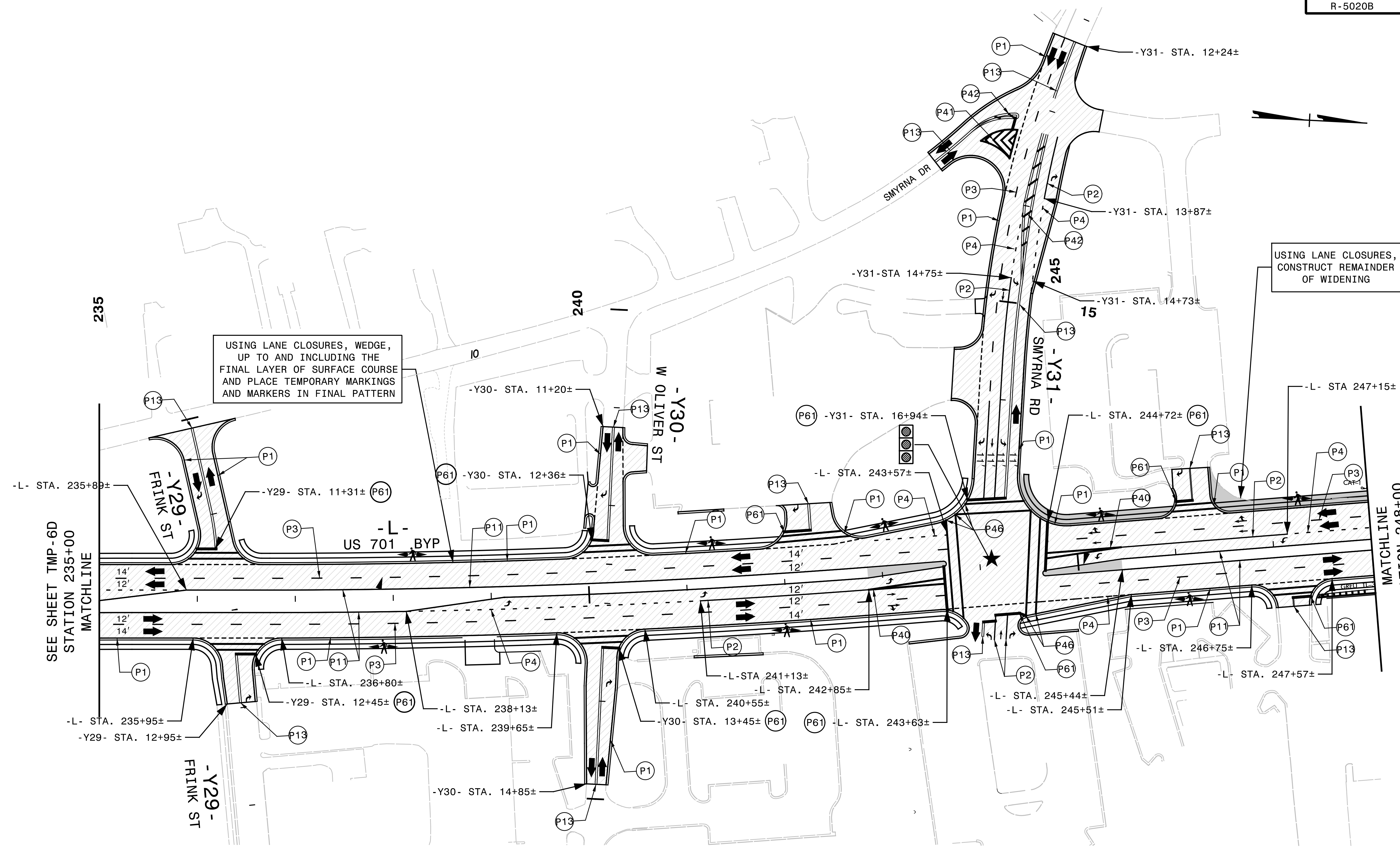
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**TEMPORARY
TRAFFIC CONTROL
PHASE II DETAIL**



SEE SHEET TMP-6D
STATION 235+00
MATCHLINE

MATCHLINE
STATION 248+00
SEE SHEET TMP-6F

4/28/2020 X:\2017\SET\135-00 R-5020B\TP\TrafficControl\TMP-R-5020B-TC-TMP-06E.dgn Screen

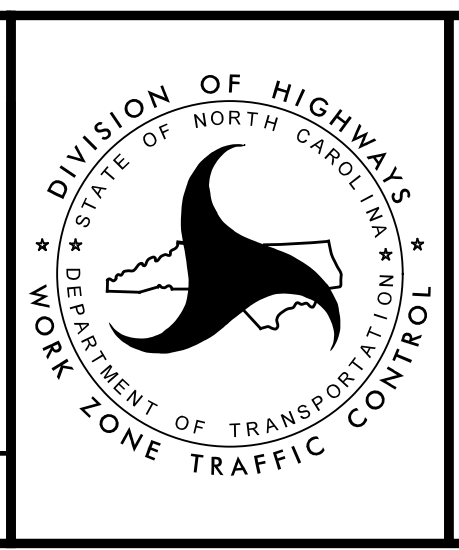
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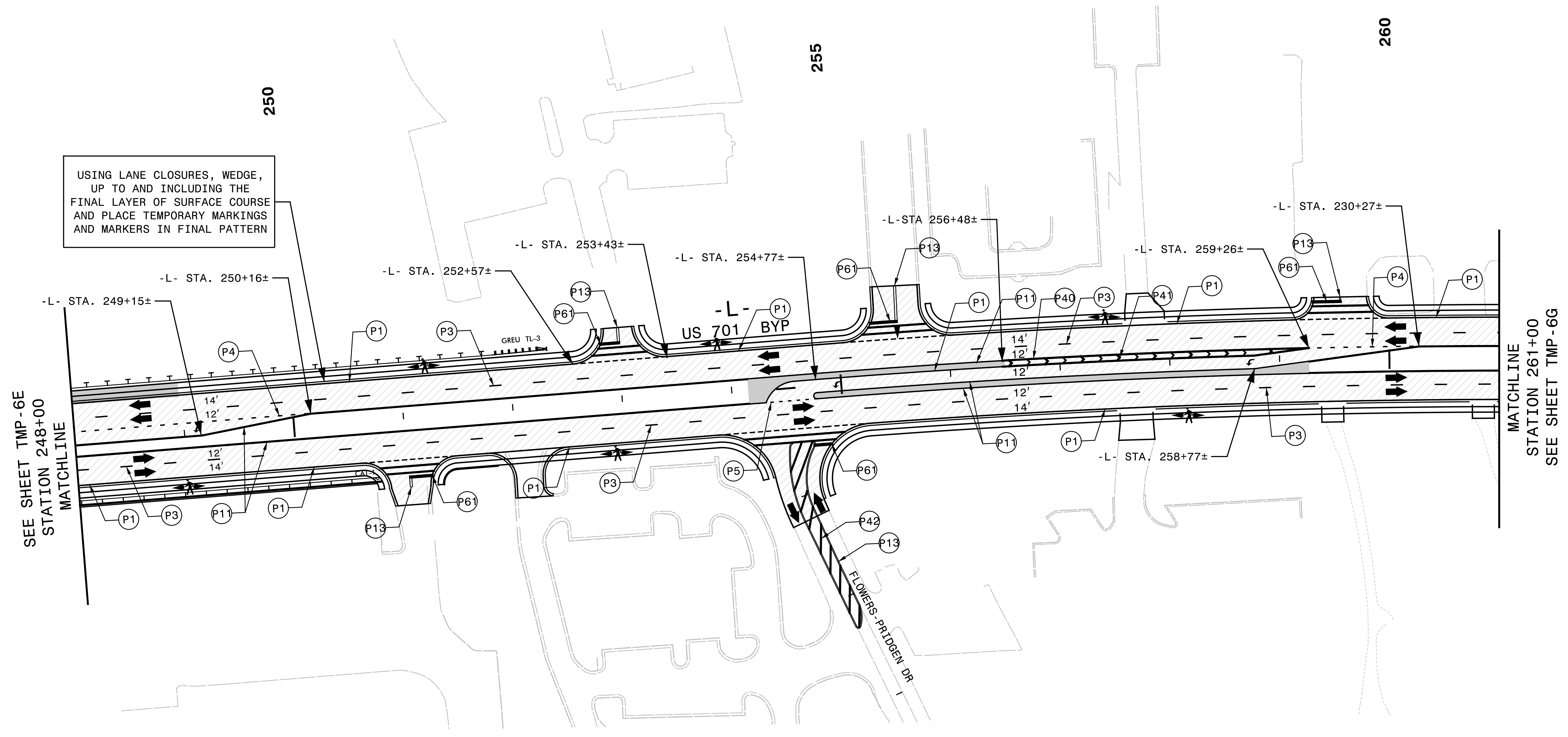
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**TEMPORARY
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PHASE II DETAIL**



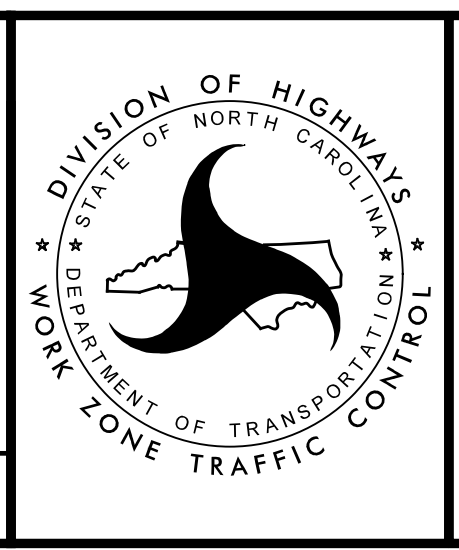
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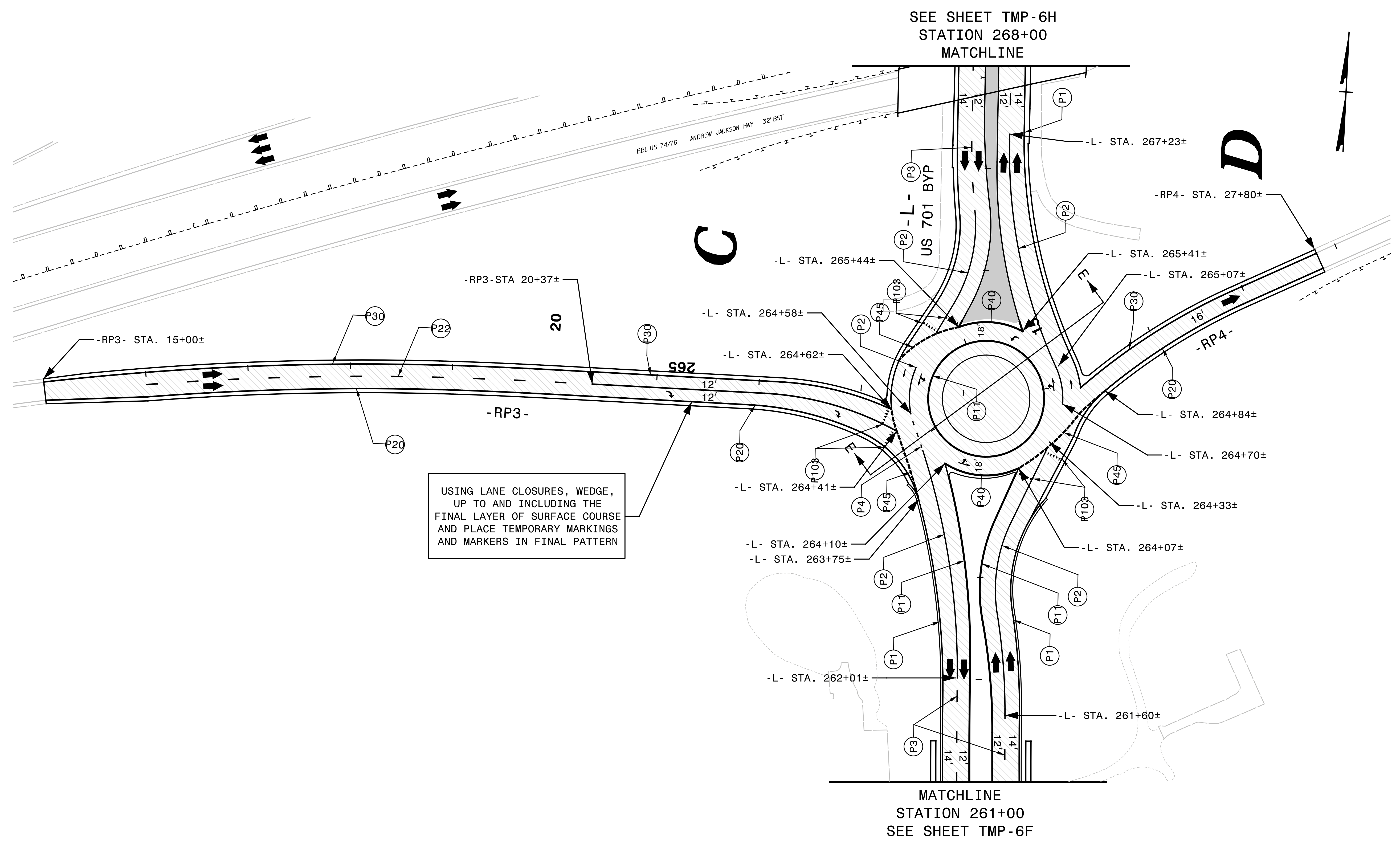
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**TEMPORARY
TRAFFIC CONTROL
PHASE II DETAIL**

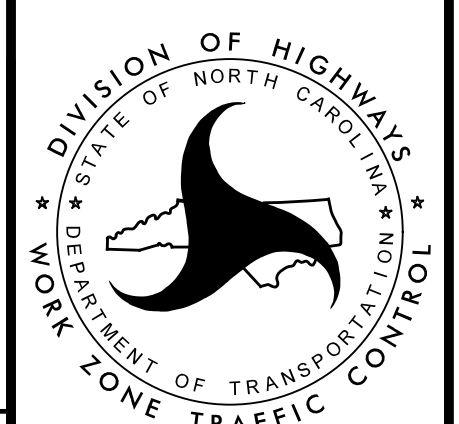


USING LANE CLOSURES, WEDGE,
UP TO AND INCLUDING THE
FINAL LAYER OF SURFACE COURSE
AND PLACE TEMPORARY MARKINGS
AND MARKERS IN FINAL PATTERN

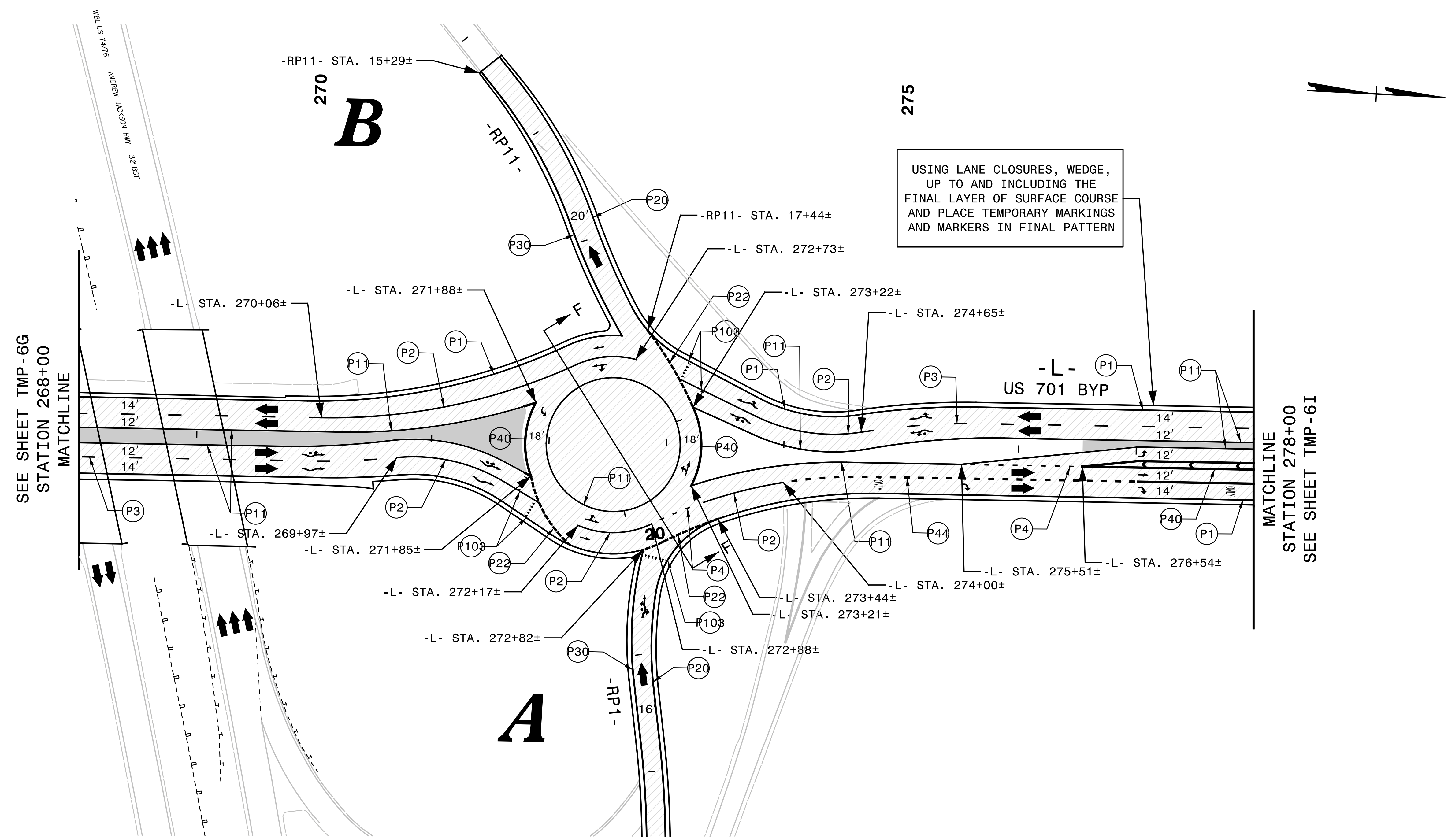
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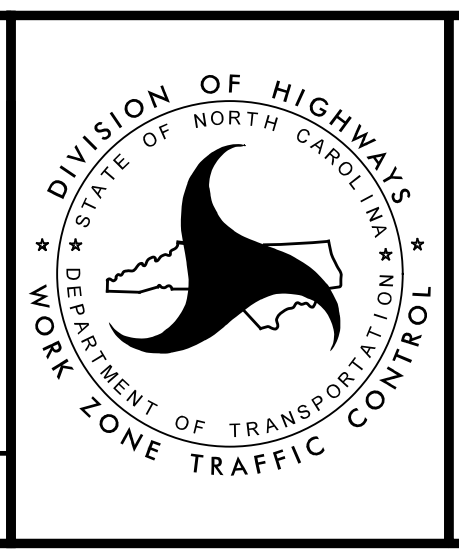
**TEMPORARY
TRAFFIC CONTROL
PHASE II DETAIL**



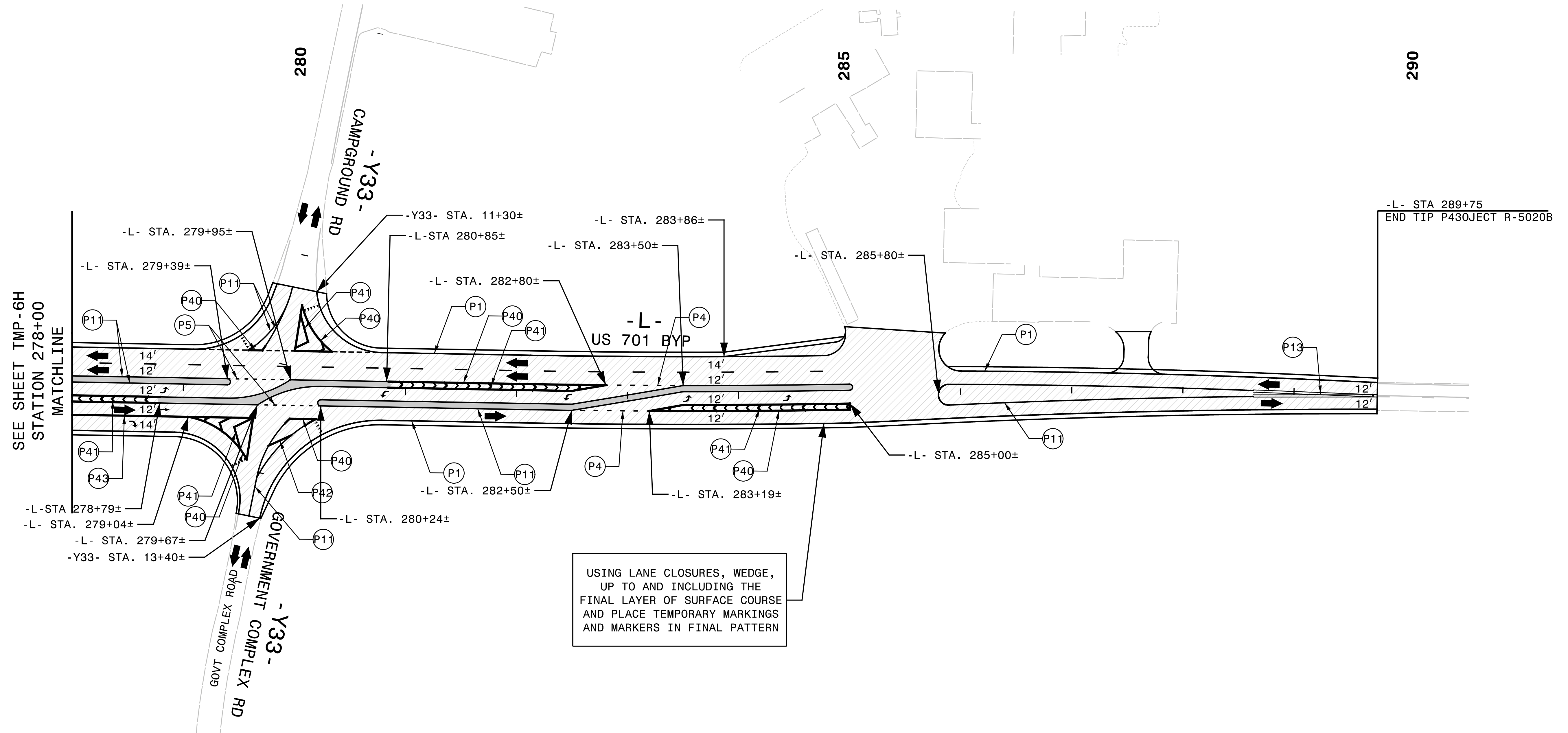
4/14/2020
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 Screen

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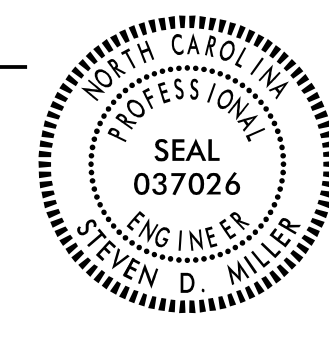


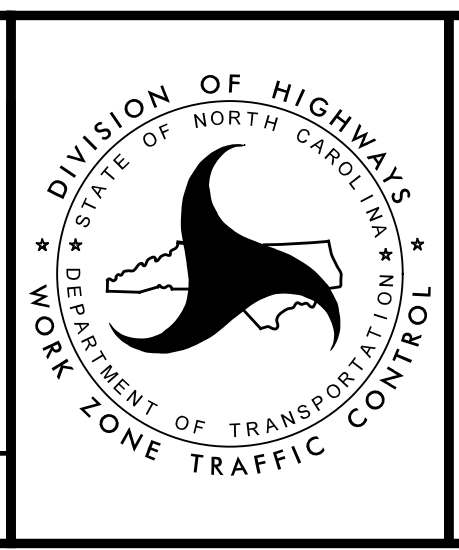
DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL
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 TRAFFIC CONTROL
 PHASE II DETAIL



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