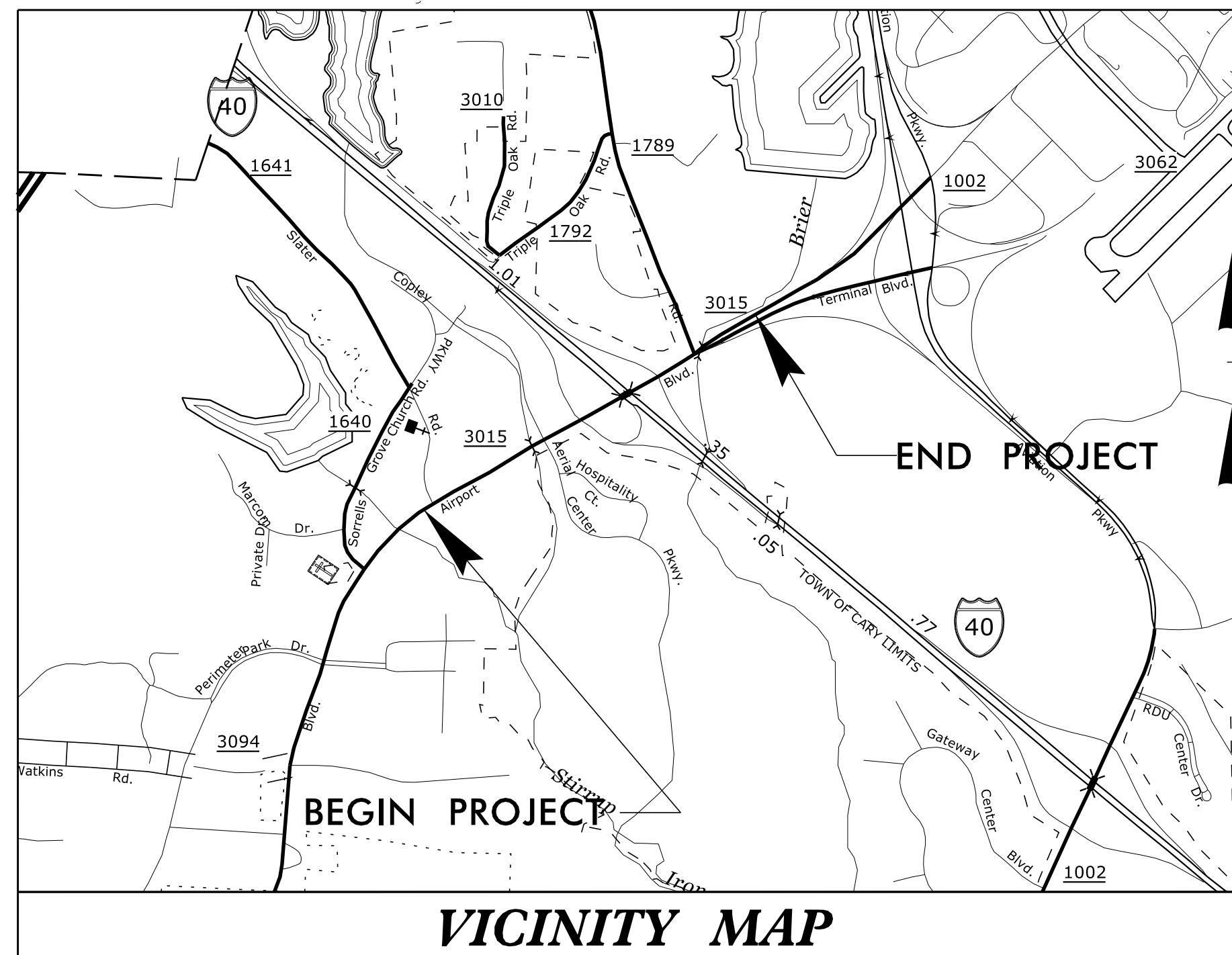
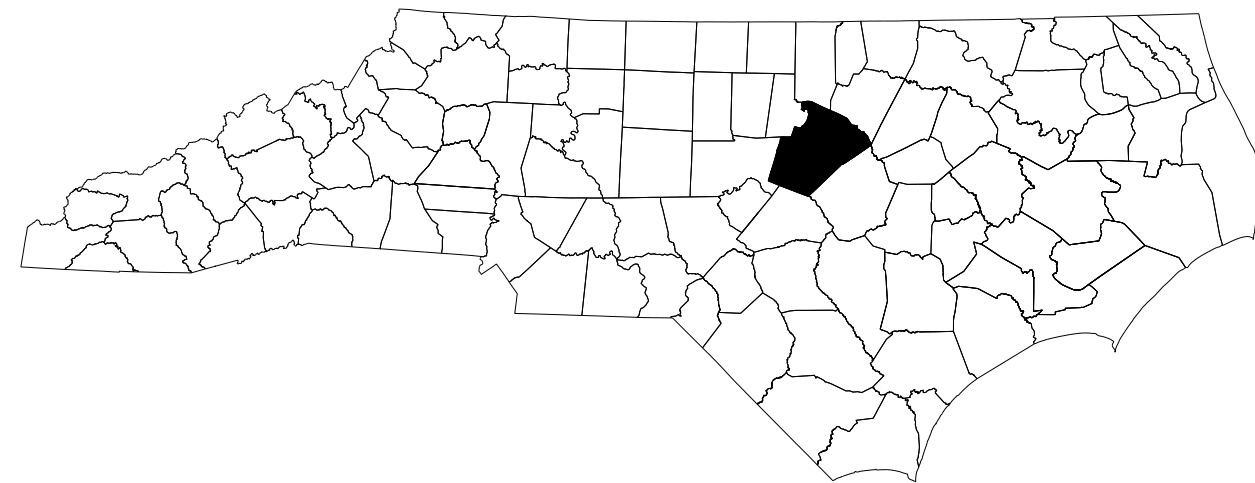


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

WAKE COUNTY



LOCATION: I-40 AND SR 3015 (AIRPORT BLVD.), REVISE INTERCHANGE AND CONSTRUCT AUXILIARY LANE ON I-40 WESTBOUND FROM SR 3015 (AIRPORT BLVD.) TO I-540.

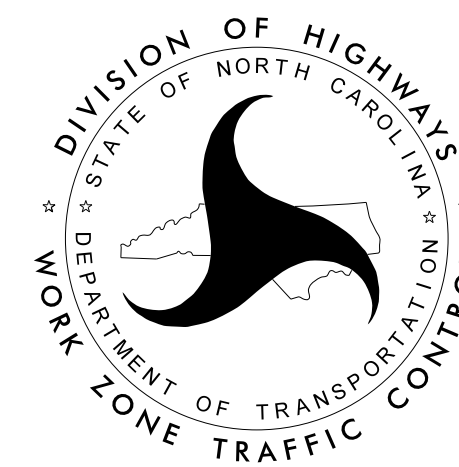
INDEX OF SHEETS

SHEET NO.	TITLE
TMP-01	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-01A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-01B & 01C	TRANSPORTATION OPERATIONS PLAN: (PROJECT NOTES)
TMP-02	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-02A	TEMPORARY SHORING DATA
TMP-02B	TEMPORARY SHORING LOCATIONS
TMP-02C	I-40 DETOUR FOR GIRDER INSTALLATION
TMP-02D & 02E	-Y2-, -Y5-, AND DRV OFFSITE DETOURS
TMP-02F - 02H	-RPB- AND -RPC- OFFSITE DETOURS
TMP-02I - 02J	-RPA- AND -RPD- OFFSITE DETOURS
TMP-02K - 02L	AIRPORT BLVD OFFSITE DETOURS FOR LEFT TURN AND THRU MOVEMENTS
TMP-02M	DYNAMIC MESSAGE BOARD PLAN
TMP-02N	WORK ZONE "VARIABLE" SPEED LIMIT REDUCTION USING DIGITAL SPEED LIMIT SIGNS
TMP-02O - 02Q	SPECIAL SIGN DESIGN(S)
TMP-02R - 02U	TEMPORARY ALIGNMENT LAYOUT
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TMP-28 - 43	PHASE III DETAIL
TMP-44 - 49	PHASE IV DETAIL
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PLANS PREPARED BY:
D. A. HAYES, E.I.

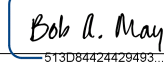
NCDOT CONTACTS:
KENNETH C. THORNEWELL, P.E.
PROJECT ENGINEER
MICHAEL STEELMAN
PROJECT DESIGN ENGINEER




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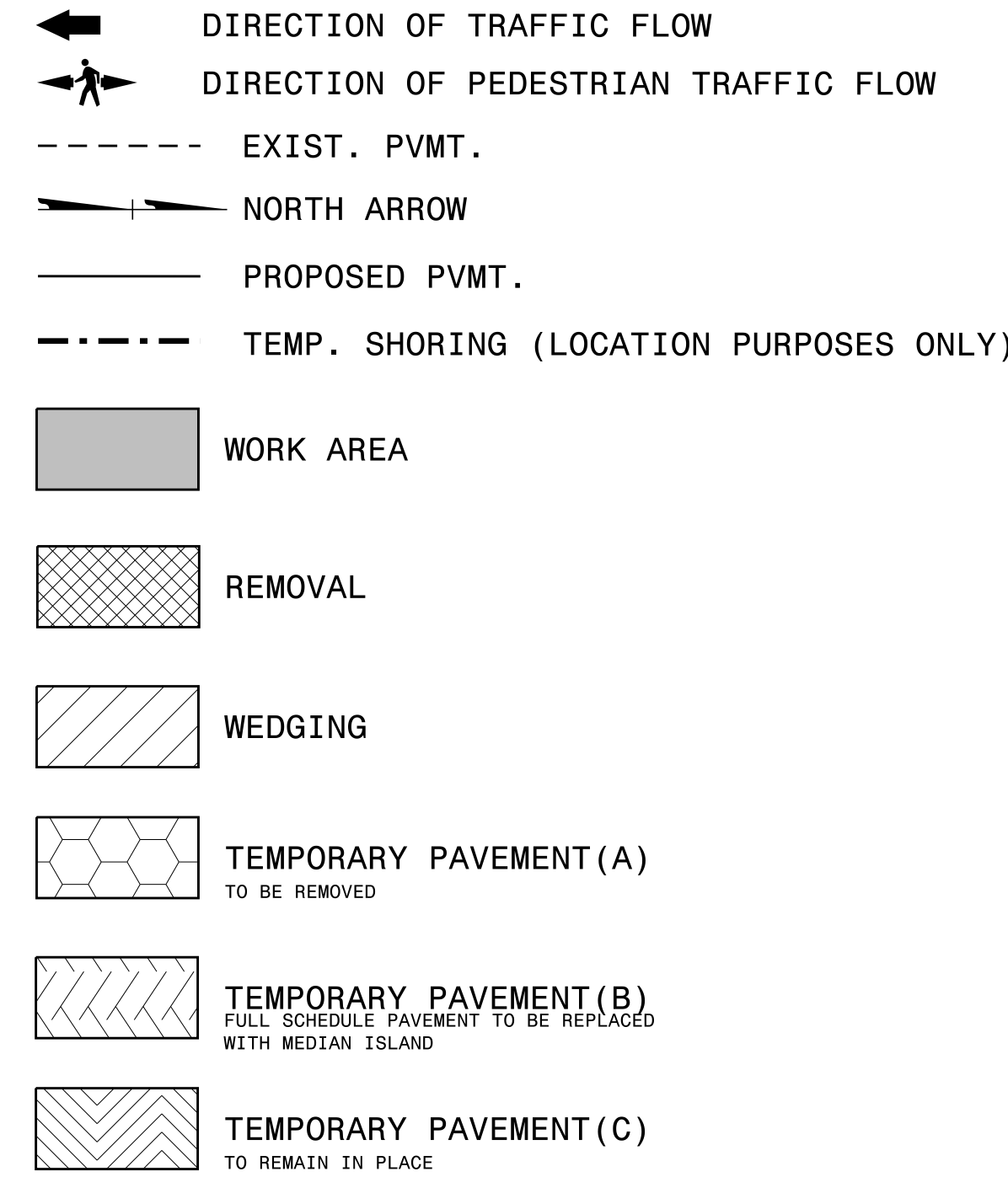
ROADWAY STANDARD DRAWINGS

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:

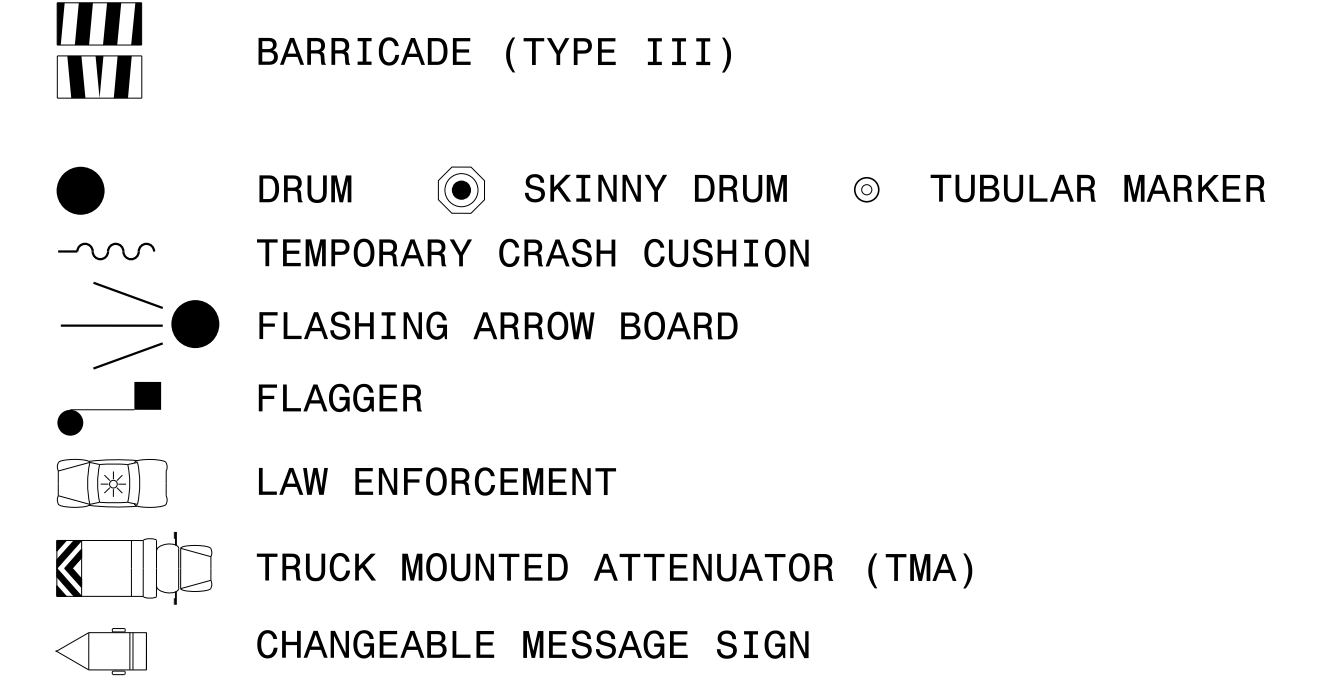
STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.06	WARNING SIGNS FOR BLASTING ZONES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUM
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	POSITIVE PROTECTION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS 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
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

LEGEND

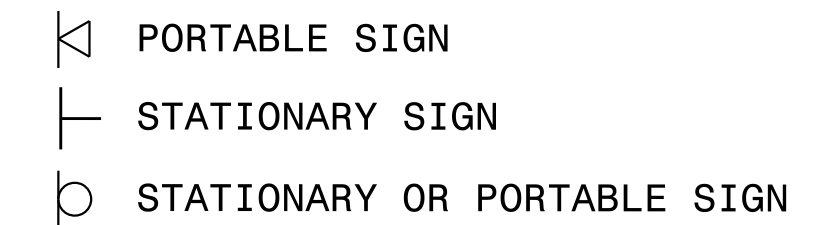
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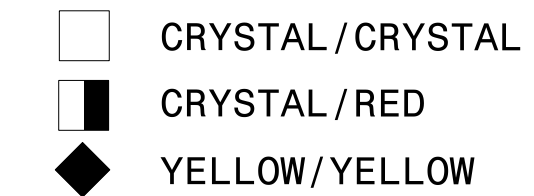
TRAFFIC CONTROL DEVICES



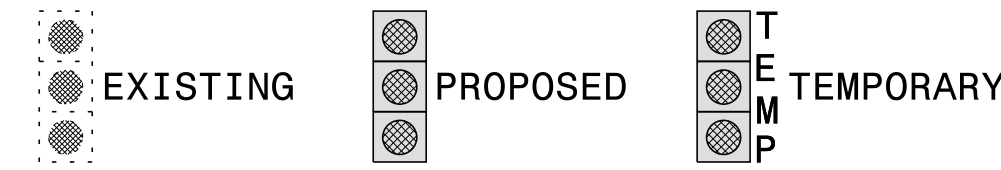
TEMPORARY SIGNING



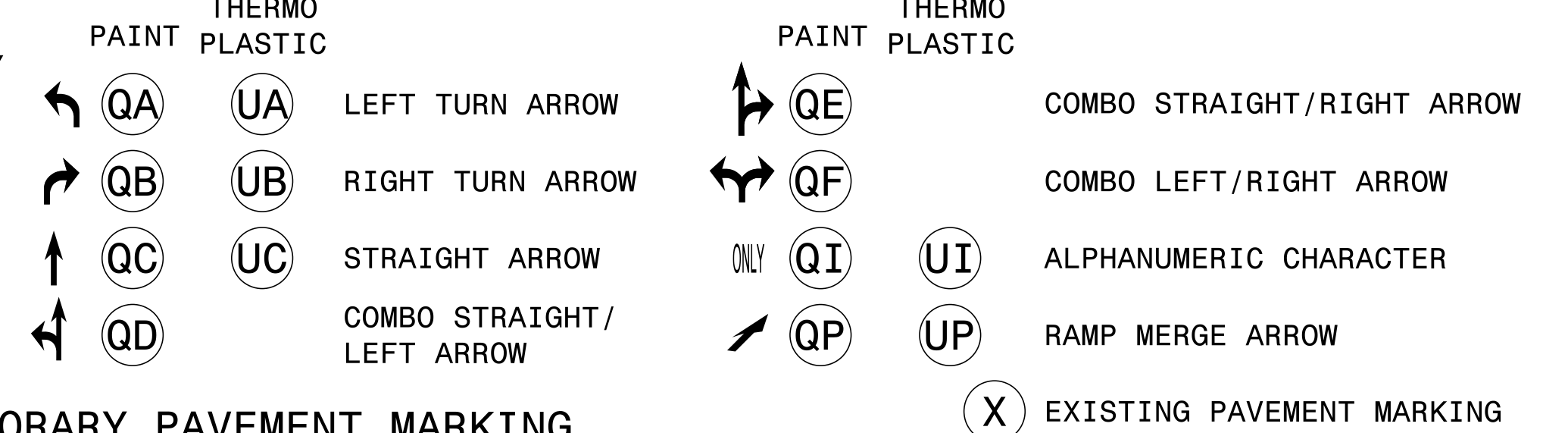
PAVEMENT MARKERS



SIGNALS



PAVEMENT MARKING SYMBOLS AND CHARACTERS



PAVEMENT MARKINGS



TEMPORARY PAVEMENT MARKING

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	COLD APPLIED PLASTIC (4") Type4 - Removable Tape		PAINT(4") 10 FT. WHITE SKIP		TEMPORARY RAISED PAVEMENT MARKERS YELLOW & YELLOW
CA	WHITE EDGELINE	PC	3 FT. - 9 FT./SP WHITE MINISKIP	MH	CRYSTAL & RED
CC	10 FT. WHITE SKIP	PD	10 FT. YELLOW SKIP		
CD	3 FT. - 9 FT./SP WHITE MINISKIP	PF	YELLOW DOUBLE CENTER		
CH	YELLOW SINGLE CENTER	PI		Z6	WORK ZONE PERFORMANCE(6") 3 FT. - 9 FT./SP WHITE MINISKIP
CI	YELLOW DOUBLE CENTER	P13	PAINT(8") 3 FT. - 9 FT./SP WHITE MINISKIP	Z7	10 FT. WHITE SKIP
				Z8	WHITE EDGELINE
P8	PAINT(4") 2 FT. - 6 FT./SP WHITE MINISKIP			Z9	YELLOW EDGELINE
P9	2 FT. - 6 FT./SP YELLOW MINISKIP				
PA	WHITE EDGELINE AND LANELINE	PN	PAINT(12") WHITE GORELINE		
PB	YELLOW EDGELINE AND LANELINE	PV	YELLOW DIAGONAL	Z11	WORK ZONE PERFORMANCE(12") WHITE GORELINE
		P2	PAINT(24") WHITE STOPBAR		
		P3	WHITE CROSSWALK LINE	T2	THERMOPLASTIC (24", 90 MILS) WHITE STOPBAR



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

ROADWAY STANDARD DRAWINGS & LEGEND

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRABLE 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
1. -L- NB (SR 1035 AIRPORT BLVD) NORTH OF I-40 WESTBOUND RAMP	6:00 A.M. - 8:00 P.M. MONDAY - FRIDAY 11:00 A.M. - 7:00 P.M. SATURDAY - SUNDAY
2. -L- SB (SR 1035 AIRPORT BLVD) NORTH OF I-40 WESTBOUND RAMP (ONE LANE)	7:00 A.M. - 10:00 A.M. 3:00 P.M. - 5:00 P.M. MONDAY - FRIDAY
3. -L- SB (SR 1035 AIRPORT BLVD) NORTH OF I-40 WESTBOUND RAMP (TWO LANES)	6:00 A.M. - 8:00 P.M. MONDAY - FRIDAY 11:00 A.M. - 7:00 P.M. SATURDAY - SUNDAY
4. -L- (SR 1035 AIRPORT BLVD) SOUTH OF I-40 WESTBOUND RAMP	6:00 A.M. - 8:00 P.M. MONDAY - FRIDAY 11:00 A.M. - 7:00 P.M. SATURDAY - SUNDAY
5. -Y- (I-40) (ONE LANE) TO INCLUDE ALL RAMP AND LOOPS	6:00 A.M. - 8:00 P.M. MONDAY - FRIDAY 10:00 A.M. - 7:00 P.M. SATURDAY - SUNDAY
6. -Y- (I-40) (TWO LANES)	6:00 A.M. - 10:00 P.M. MONDAY - FRIDAY 7:00 A.M. - 9:00 P.M. SATURDAY - SUNDAY
7. -Y- (I-40) (THREE LANES)	5:00 A.M. - 12:00 A.M. MONDAY - FRIDAY 6:00 A.M. - 1:00 A.M. SATURDAY - SUNDAY
8. -Y1- (AERIAL CENTER PKWY), -Y5- (SLATER RD), & -Y2- (FACTORY SHOPS RD)	7:00 A.M. - 10:00 A.M. 4:00 P.M. - 6:00 P.M. MONDAY - FRIDAY

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

ROAD NAME	HOLIDAY
1. -L- (SR 1035 AIRPORT BLVD)	<p>1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.</p> <p>2. 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.</p> <p>3. FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 8:00 P.M. MONDAY.</p> <p>4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 8:00 P.M. TUESDAY.</p> <p>5. 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.</p> <p>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.</p> <p>6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 8:00 P.M. TUESDAY.</p> <p>7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 8:00 P.M. MONDAY.</p>

- 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.
- FOR GRADUATION EVENTS OCCURRING AT NC STATE UNIVERSITY, DUKE UNIVERSITY, AND THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL BETWEEN THE HOURS OF 4:00 A.M. THE THURSDAY OF THE WEEK OF THE GRADUATION EVENT AND 12:00 A.M. THE FOLLOWING MONDAY AFTER THE WEEK OF THE GRADUATION EVENT.

ROAD NAME

- Y- (I-40) INCLUDING ALL RAMP AND LOOPS

HOLIDAY

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

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 5:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 1:00 A.M. THE WEDNESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 5:00 A.M. FRIDAY AND 1:00 A.M. WEDNESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 5:00 A.M. TUESDAY TO 1:00 A.M. TUESDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 5:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 1:00 A.M. THE FOLLOWING WEDNESDAY AFTER THE WEEK OF CHRISTMAS.
- FOR GRADUATION EVENTS OCCURRING AT NC STATE UNIVERSITY, DUKE UNIVERSITY, AND THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL BETWEEN THE HOURS OF 4:00 A.M. THE THURSDAY OF THE WEEK OF THE GRADUATION EVENT AND 12:00 A.M. THE FOLLOWING MONDAY AFTER THE WEEK OF THE GRADUATION EVENT.

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	OPERATION
1. -Y- (I-40)	5:00 A.M. - 12:00 A.M. MONDAY - FRIDAY 6:00 A.M. - 1:00 A.M. SATURDAY - SUNDAY	USING RAMP, GIRDER INSTALLATION/ DECK REMOVAL/SIGN INSTALLATION AS NEEDED (SEE TMP-02C)

D) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
1. -L- NB (SR 1035 AIRPORT BLVD) NORTH OF I-40 WESTBOUND RAMP	6:00 A.M. - 8:00 P.M. MONDAY - FRIDAY 11:00 A.M. - 7:00 P.M. SATURDAY - SUNDAY	15 MINUTES TRAFFIC OPERATIONS
2. -L- SB (SR 1035 AIRPORT BLVD) NORTH OF I-40 WESTBOUND RAMP (ONE LANE)	7:00 A.M. - 10:00 P.M. 3:00 P.M. - 5:00 P.M. MONDAY - FRIDAY	15 MINUTES TRAFFIC OPERATIONS
3. -L- SB (SR 1035 AIRPORT BLVD) NORTH OF I-40 WESTBOUND RAMP (TWO LANES)	6:00 A.M. - 8:00 P.M. MONDAY - FRIDAY 11:00 A.M. - 7:00 P.M. SATURDAY - SUNDAY	15 MINUTES TRAFFIC OPERATIONS

4. -L- (SR 1035 AIRPORT BLVD) SOUTH OF I-40 WESTBOUND RAMP	6:00 A.M. - 8:00 P.M. MONDAY - FRIDAY 11:00 A.M. - 7:00 P.M. SATURDAY - SUNDAY	15 MINUTE TRAFFIC OPERATIONS
5. -L- (SR 1035 AIRPORT BLVD)	3:30 A.M. - 10:00 P.M. MONDAY - SUNDAY	30 MINUTES, OVERHEAD SIGN REMOVAL AND INSTALLATION
6. -Y- (I-40)	5:00 A.M. - 12:00 A.M. MONDAY - FRIDAY 6:00 A.M. - 1:00 A.M. SATURDAY - SUNDAY	30 MINUTES, OVERHEAD SIGN REMOVAL AND INSTALLATION
7. -Y- (I-40)	10:30 A.M. - 2:00 P.M. 2:30 P.M. - 10:00 A.M. MONDAY - THURSDAY	30 MINUTES, BLASTING

NOTE: NO BLASTING FROM 2:30 P.M. THURSDAY TO 10:00 A.M. MONDAY.

NOTE: SEE LOCAL NOTE 1 FOR BLASTING PLAN.

E) DO NOT CONDUCT SINGLE VEHICLE HAULING AS FOLLOWS; INGRESS AND EGRESS FROM RAMP WILL BE ALLOWED:

ROAD NAME	DAY AND TIME RESTRICTIONS
1. -L- (SR 1035 AIRPORT BLVD)	6:00 A.M. - 8:00 P.M. MONDAY - FRIDAY 11:00 A.M. - 7:00 P.M. SATURDAY - SUNDAY
2. -Y- (I-40) INCLUDING RAMP AND LOOPS	6:00 A.M. - 8:00 P.M. MONDAY - FRIDAY 10:00 A.M. - 7:00 P.M. SATURDAY - SUNDAY

F) DO NOT CONDUCT MULTI-VEHICLE HAULING AS FOLLOWS; INGRESS AND EGRESS FROM RAMP WILL BE ALLOWED:

ROAD NAME	DAY AND TIME RESTRICTIONS
1. -L- (SR 1035 AIRPORT BLVD)	6:00 A.M. - 8:00 P.M. MONDAY - FRIDAY 11:00 A.M. - 7:00 P.M. SATURDAY - SUNDAY
2. -Y- (I-40) INCLUDING RAMP AND LOOPS	6:00 A.M. - 8:00 P.M. MONDAY - FRIDAY 10:00 A.M. - 7:00 P.M. SATURDAY - SUNDAY

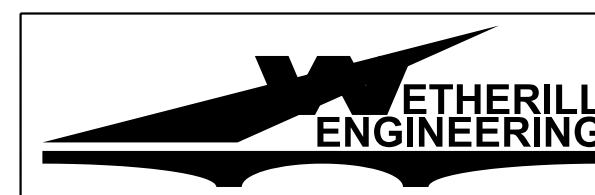
G) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- 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.
- 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.
- 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.

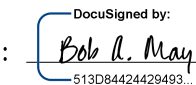
WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

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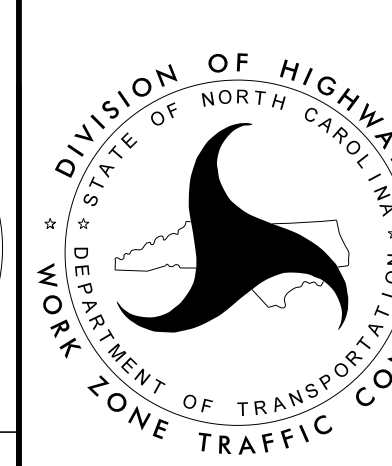
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DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

PROJECT NOTES

GENERAL NOTES (continued)

- K) 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.
- L) 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.
- M) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON -L- AIRPORT BLVD AND -Y- I-40.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- N) 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.

- O) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT (ON -L-) IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 1000 FT (ON -Y-) IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- Q) 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.
- R) 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.
- S) 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.
- 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) 500 FT (ON -L-) IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 1000 FT (ON -Y-) 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 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

- X) THE CONTRACTOR SHALL ANCHOR PORTABLE CONCRETE BARRIER IF THE EDGE OF THE BARRIER IS LESS THAN TWO (2) FEET FROM A DROP-OFF OR PER THE ENGINEER'S DISCRETION. IF THE BARRIER FLARE IS ANCHORED, REFER TO ROADWAY STANDARD DRAWING 1101.11 FOR THE APPROPRIATE BARRIER FLARE RATES.

TRAFFIC CONTROL DEVICES

- Y) 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.

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

- AA) 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

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

ROAD NAME	MARKING	MARKER
1. -Y- (I-40)	WORK ZONE "PERFORMANCE" PAVEMENT MARKINGS	TEMPORARY RAISED
2. ALL OTHER ROADS	PAINT	TEMPORARY RAISED
3. BRIDGE STRUCTURE	COLD APPLIED TYPE IV	TEMPORARY RAISED

- CC) 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.

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

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

- FF) TRACE THE EXISTING AND PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO REMOVAL AND INSTALLATION. PLACE DRUMS TO DELINEATE ANY EXISTING AND PROPOSED MONOLITHIC ISLANDS AFTER REMOVAL AND BEFORE INSTALLATION.

MISCELLANEOUS

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

- HH) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 500 FT (ON -L-) AND 500 FT (ON -L-) RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS.

PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 1000 FT (ON -Y-) AND 1000 FT (ON -Y-) RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

- II) 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.

- JJ) 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.).

- KK) CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OTHERS TO DEVELOP A PLAN FOR ENDING BUS SERVICE ON SHOULDER WITHIN THE CONSTRUCTION AREA, INCLUDING COVERING 'BUSES ON SHOULDER' SIGNS.

- LL) ALL LANE WIDTHS IN TEMPORARY PATTERNS SHALL BE 11 FT UNLESS OTHERWISE NOTED IN THE PLAN SHEET.

- MM) CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OTHERS TO PROVIDE SHUTTLE ACCESS TO PEDESTRIANS WHEN A PEDESTRIAN DETOUR IS NOT POSSIBLE DUE TO CONSTRUCTION OPERATIONS.

LOCAL NOTES

- 1) CLOSE I-40 TO BOTH EASTBOUND AND WESTBOUND TRAFFIC AND ANY INTERSECTING RAMPS DURING ALL BLASTING OPERATIONS INCLUDING THE REMOVAL OF DEBRIS FROM THE ROADWAY CREATED BY THE BLAST. THE DAYS AND TIMES THAT I-40 MAY BE CLOSED FOR BLASTING OPERATIONS AND DEBRIS REMOVAL ARE LISTED IN GENERAL NOTE D6.

NOTE: THE TIMES AND DAYS LISTED IN GENERAL NOTE D6 SHALL ONLY BE UTILIZED FOR BLASTING OPERATIONS AND DEBRIS REMOVAL FROM THAT OPERATION.

NOTE: AS DIRECTED BY THE ENGINEER BLASTING OPERATIONS MAY BE CONDUCTED OUTSIDED THE TIME FRAMES LISTED IN GENERAL NOTE D6 ONLY IF THE SPECIFIC BLASTING OPERATION WILL NOT IMPACT TRAFFIC ON I-40 AND ANY INTERSECTING RAMP.

PERFORM BLASTING OPERATIONS IN THE FOLLOWING SEQUENCE:

- A. NOTIFY THE ENGINEER 10 BUSINESS DAYS PRIOR TO THE FIRST BLASTING OPERATION ON THE PROJECT. NOTIFY THE ENGINEER 2 BUSINESS DAYS PRIOR TO SUBSEQUENT BLASTING OPERATIONS.
- B. STAGE TRUCKS 3 MILES IN ADVANCE OF THE EDGE OF THE BLASTING ZONE ALONG THE SHOULDER OF I-40. INSTALL SIGNING AS SHOWN ON ROADWAY STANDARD DRAWING 1101.06 FOR I-40. STAGE LAW ENFORCEMENT AT SHOULDERS OF RAMP TERMINALS, AND INSTALL CMS '1' AND PORTABLE SIGNS 'A' AND 'B' AS SHOWN ON SHEET TMP-02C.
- C. ACTIVATE CHANGEABLE MESSAGE SIGNS AND DYNAMIC MESSAGE SIGNS ALONG I-40 AND AIRPORT BLVD.
- D. TRUCKS SHALL 'CLOSE' ALL LANES OF I-40 WITHIN 2 MILES OF THE EDGE OF THE BLASTING ZONE IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 1101.03. TRUCKS SHALL MAINTAIN A MINIMUM SPEED OF 3 MPH. CLOSE INTERSECTING RAMPS WITHIN THE BLASTING ZONE WITH LAW ENFORCEMENT.
- E. PERFORM BLASTING OPERATION AND DEBRIS REMOVAL.
- F. OPEN I-40 AND INTERSECTING RAMPS TO TRAFFIC.
- G. IMMEDIATELY DEACTIVATE THE CHANGEABLE MESSAGE SIGNS AND DYNAMIC MESSAGE SIGNS.

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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

APPROVED: *Bob A. May*
 DATE: 10/2/2019

SEAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

PROJECT NOTES

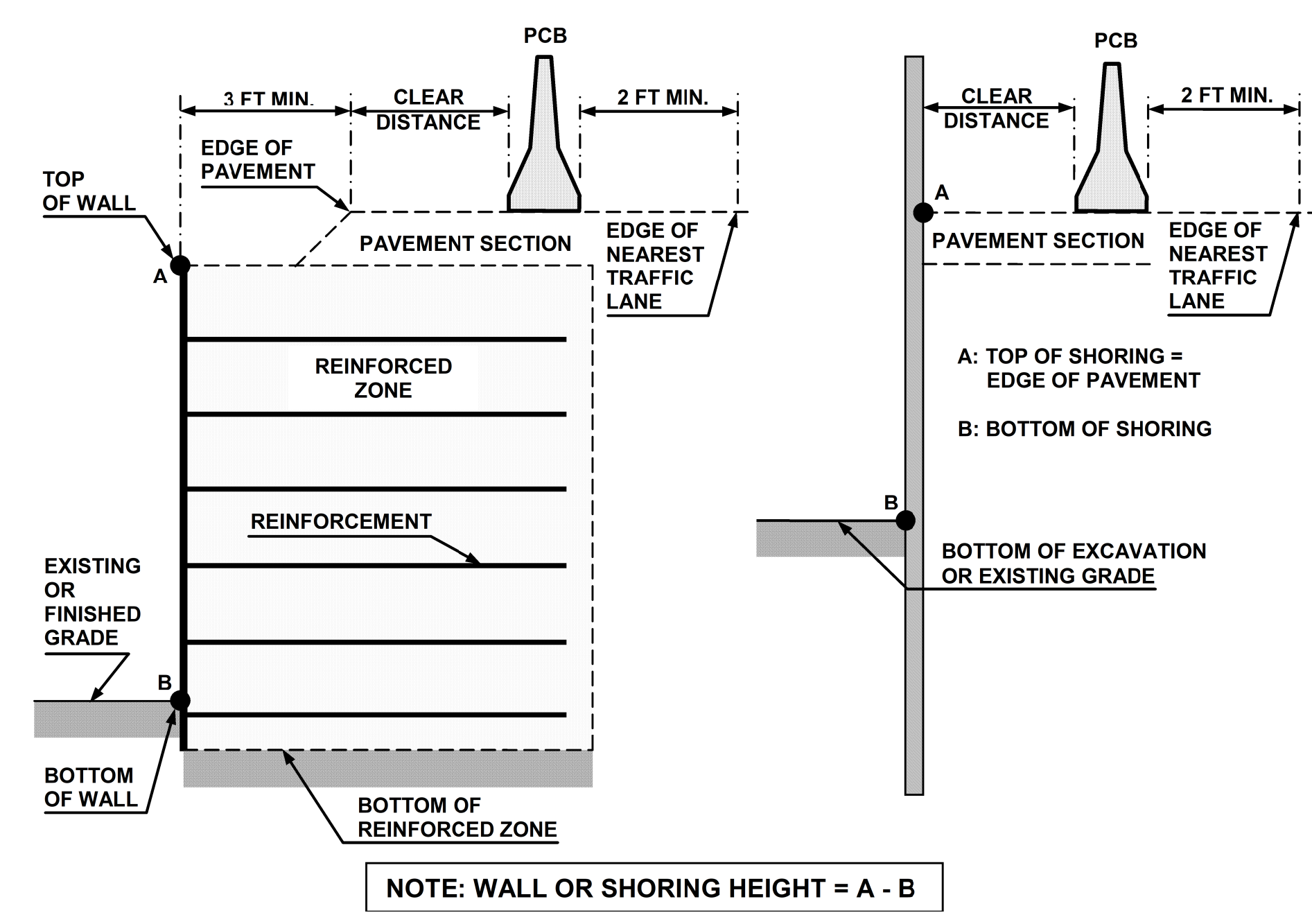


FIGURE A

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

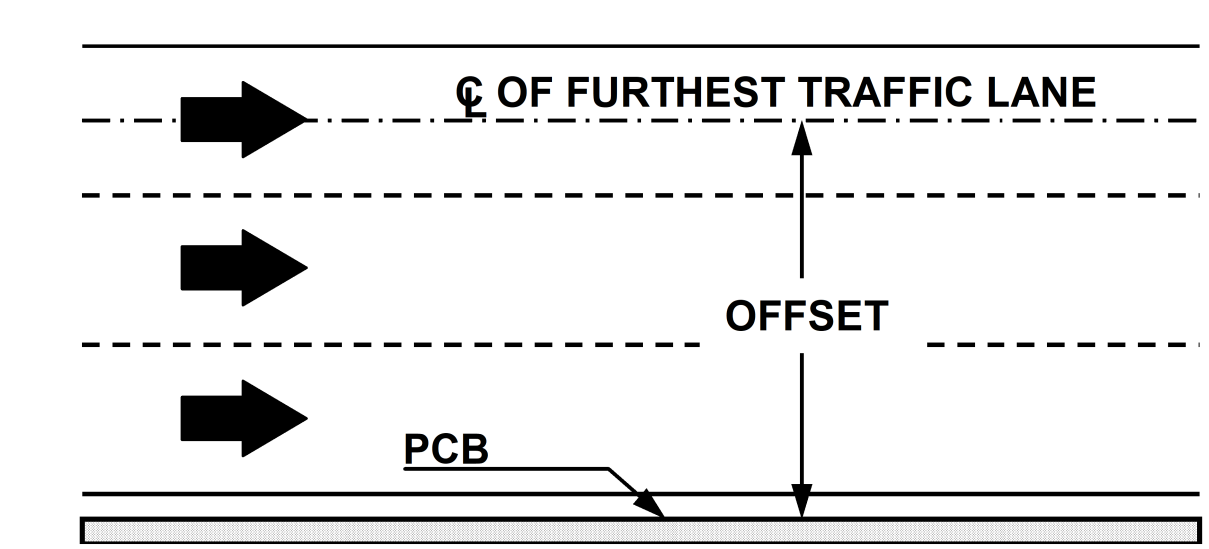


FIGURE B

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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

APPROVED: *Bob A. May* DATE: 10/2/2019

SEAL

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

**PORTABLE CONCRETE BARRIER
AT
TEMPORARY SHORING LOCATIONS**

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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 42+74± -L-, 11 FT, LEFT, TO STATION 43+39± -L-, 11 FT, LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

FOR SOIL ABOVE ELEVATION 310 FT;
UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (φ) = 30 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = N/A

FOR SOIL BETWEEN ELEVATION 303 FT & 310 FT;
UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (φ) = 38 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = N/A

FOR SOIL BELOW ELEVATION 303 FT;
UNIT WEIGHT (γ) = 140 PCF
FRICTION ANGLE (φ) = 42 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = N/A

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 42+74± -L-, 11 FT, LEFT, TO STATION 43+39± -L-, 11 FT, LEFT. 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 42+74± -L-, 11 FT, LEFT, TO STATION 43+39± -L-, 11 FT, LEFT, MAY NOT PENETRATE BELOW ELEVATION 303 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 42+74± -L-, 11 FT, LEFT, TO STATION 43+39± -L-, 11 FT, LEFT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 42+74± -L-, 11 FT, LEFT, TO STATION 43+39± -L-, 11 FT, LEFT. 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 45+24± -L-, 11 FT, LEFT, TO STATION 45+95± -L-, 11 FT, LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

FOR SOIL ABOVE ELEVATION 319 FT;
UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (φ) = 30 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = N/A

FOR SOIL BELOW ELEVATION 319 FT;
UNIT WEIGHT (γ) = 140 PCF
FRICTION ANGLE (φ) = 42 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = N/A

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 45+24± -L-, 11 FT, LEFT, TO STATION 45+95± -L-, LEFT. 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 45+24± -L-, 11 FT, LEFT, TO STATION 45+95± -L-, LEFT, MAY NOT PENETRATE BELOW ELEVATION 319 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 45+24± -L-, 11 FT, LEFT, TO STATION 45+95± -L-, LEFT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 45+24± -L-, 11 FT, LEFT, TO STATION 45+95± -L-, LEFT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION 45+24± -L-, 11 FT, LEFT, TO STATION 45+95± -L-, LEFT, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

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 42+00± -L-, 16 FT, LEFT, TO STATION 43+13± -L-, 16 FT, LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (φ) = 30 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = N/A

DO NOT USE CANTILEVER, BRACED OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 42+00± -L-, 16 FT, LEFT, TO STATION 43+13± -L-, 16 FT, LEFT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 42+00± -L-, 16 FT, LEFT, TO STATION 43+13± -L-, 16 FT, LEFT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

Shoring Location No. ④

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 45+47± -L-, 16 FT, LEFT, TO STATION 46+28± -L-, 16 FT, LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

FOR SOIL ABOVE ELEVATION 319 FT;
UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (φ) = 30 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = N/A

FOR SOIL BELOW ELEVATION 319 FT;
UNIT WEIGHT (γ) = 140 PCF
FRICTION ANGLE (φ) = 42 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = N/A

DO NOT USE CANTILEVER, BRACED OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 45+47± -L-, 16 FT, LEFT, TO STATION 46+28± -L-, 16 FT, LEFT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 45+47± -L-, 16 FT, LEFT, TO STATION 46+28± -L-, 16 FT, LEFT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

Shoring Location No. ⑤

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 65+63± -Y-, 72 FT, RIGHT, TO STATION 66+23± -Y-, 72 FT, RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

FOR SOIL ABOVE ELEVATION 298 FT;
UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (φ) = 30 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = N/A

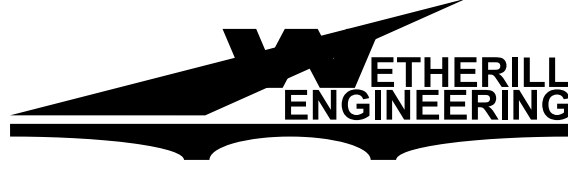
FOR SOIL BELOW ELEVATION 298 FT;
UNIT WEIGHT (γ) = 140 PCF
FRICTION ANGLE (φ) = 42 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = N/A

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 65+63± -Y-, 72 FT, RIGHT, TO STATION 66+23± -Y-, 72 FT, RIGHT. 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 65+63± -Y-, 72 FT, RIGHT, TO STATION 66+23± -Y-, 72 FT, RIGHT, MAY NOT PENETRATE BELOW ELEVATION 298 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 65+63± -Y-, 72 FT, RIGHT, TO STATION 66+23± -Y-, 72 FT, RIGHT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 65+63± -Y-, 72 FT, RIGHT, TO STATION 66+23± -Y-, 72 FT, RIGHT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.



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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

Shoring Location No. ⑥

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 65+89± -Y-, 7 FT, RIGHT, TO STATION 66+63± -Y-, 7 FT, RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

FOR SOIL ABOVE ELEVATION 300 FT;
UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (φ) = 30 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = N/A

FOR SOIL BELOW ELEVATION 300 FT;
UNIT WEIGHT (γ) = 140 PCF
FRICTION ANGLE (φ) = 42 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = N/A

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 65+89± -Y-, 7 FT, RIGHT, TO STATION 66+63± -Y-, 7 FT, RIGHT. 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 65+89± -Y-, 7 FT, RIGHT, TO STATION 66+63± -Y-, 7 FT, RIGHT, MAY NOT PENETRATE BELOW ELEVATION 302 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 65+89± -Y-, 7 FT, RIGHT, TO STATION 66+63± -Y-, 7 FT, RIGHT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 65+89± -Y-, 7 FT, RIGHT, TO STATION 66+63± -Y-, 7 FT, RIGHT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

Shoring Location No. ⑦

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 65+89± -Y-, 7 FT, LEFT, TO STATION 66+63± -Y-, 7 FT, LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

FOR SOIL ABOVE ELEVATION 300 FT;
UNIT WEIGHT (γ) = 120 PCF
FRICTION ANGLE (φ) = 30 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = N/A

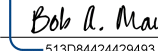
FOR SOIL BELOW ELEVATION 300 FT;
UNIT WEIGHT (γ) = 140 PCF
FRICTION ANGLE (φ) = 42 DEGREES
COHESION (c) = 0 PSF
GROUNDWATER ELEVATION = N/A

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 65+89± -Y-, 7 FT, LEFT, TO STATION 66+63± -Y-, 7 FT, LEFT. 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 65+89± -Y-, 7 FT, LEFT, TO STATION 66+63± -Y-, 7 FT, LEFT, MAY NOT PENETRATE BELOW ELEVATION 302 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.


DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 65+89± -Y-, 7 FT, LEFT, TO STATION 66+63± -Y-, 7 FT, LEFT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 65+89± -Y-, 7 FT, LEFT, TO STATION 66+63± -Y-, 7 FT, LEFT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

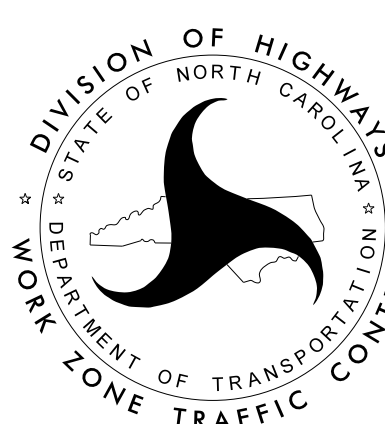
APPROVED:  10/2/2019

DATE: 10/2/2019

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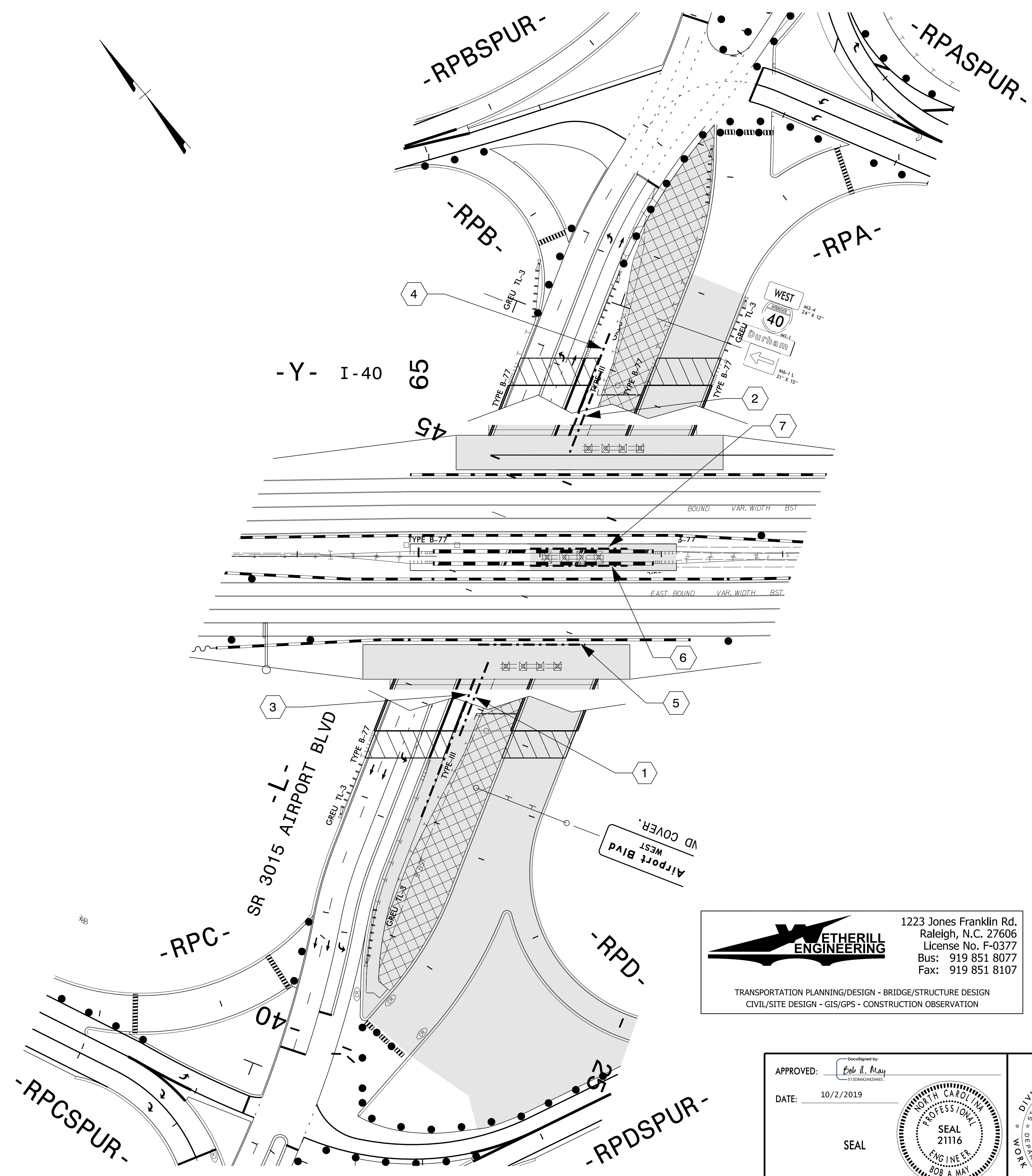


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SHORING DATA

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- 1 QUANTITY = 136.3 SF
TEMPORARY SHORING
FROM STA. 42+74+/- -L-, 11'LT CL
TO STA. 43+39+/- -L-, 11'LT CL

(SEE SHEET TMP-02A FOR
TEMPORARY SHORING NOTES)
- 2 QUANTITY = 386.4 SF
TEMPORARY SHORING
FROM STA. 45+24+/- -L-, 11'LT CL
TO STA. 45+95+/- -L-, 11'LT CL

(SEE SHEET TMP-02A FOR
TEMPORARY SHORING NOTES)
- 3 QUANTITY = 491.6 SF
TEMPORARY SHORING
FROM STA. 42+00+/- -L-, 16'LT CL
TO STA. 43+13+/- -L-, 16'LT CL

(SEE SHEET TMP-02A FOR
TEMPORARY SHORING NOTES)
- 4 QUANTITY = 637.2 SF
TEMPORARY SHORING
FROM STA. 45+47+/- -L-, 16'LT CL
TO STA. 46+28+/- -L-, 16'LT CL

(SEE SHEET TMP-02A FOR
TEMPORARY SHORING NOTES)
- 5 QUANTITY = 156.6 SF
TEMPORARY SHORING
FROM STA. 65+63+/- -Y-, 72'RT CL
TO STA. 66+23+/- -Y-, 72'RT CL

(SEE SHEET TMP-02A FOR
TEMPORARY SHORING NOTES)
- 6 QUANTITY = 403.2 SF
TEMPORARY SHORING
FROM STA. 65+89+/- -Y-, 7' RT CL
TO STA. 66+63+/- -Y-, 7' RT CL

(SEE SHEET TMP-02A FOR
TEMPORARY SHORING NOTES)
- 7 QUANTITY = 403.2 SF
TEMPORARY SHORING
FROM STA. 65+89+/- -Y-, 7' LT CL
TO STA. 66+63+/- -Y-, 7' LT CL

(SEE SHEET TMP-02A FOR
TEMPORARY SHORING NOTES)

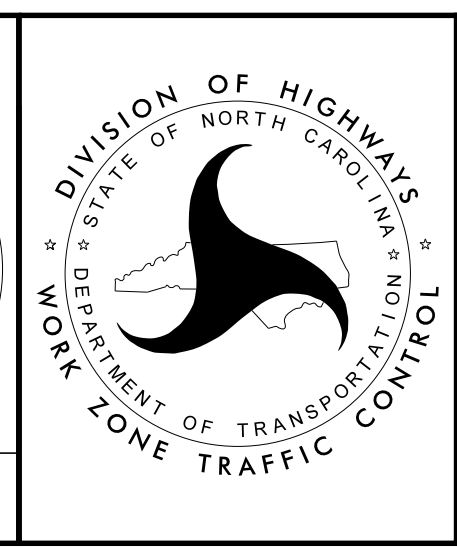
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 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

APPROVED: *Bob A. May*
 DATE: 10/2/2019

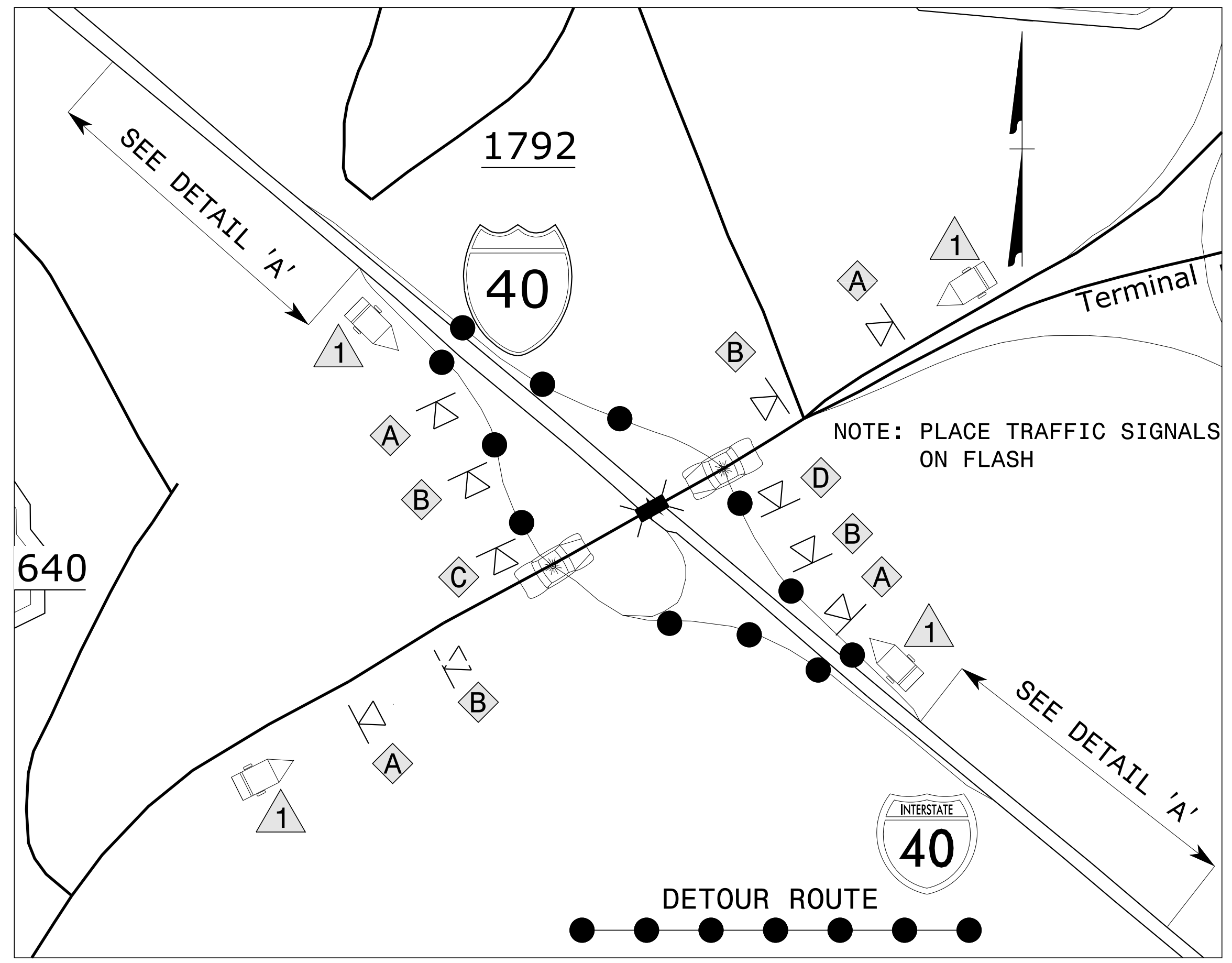
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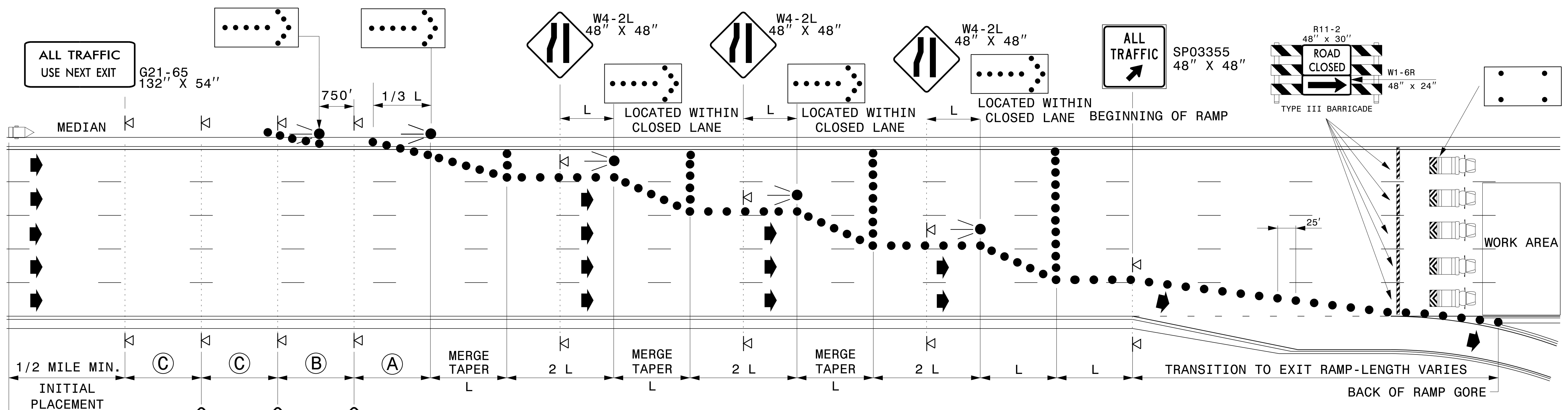
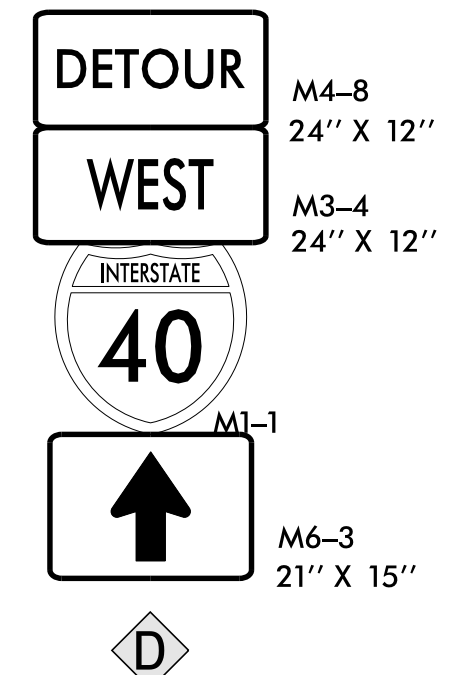
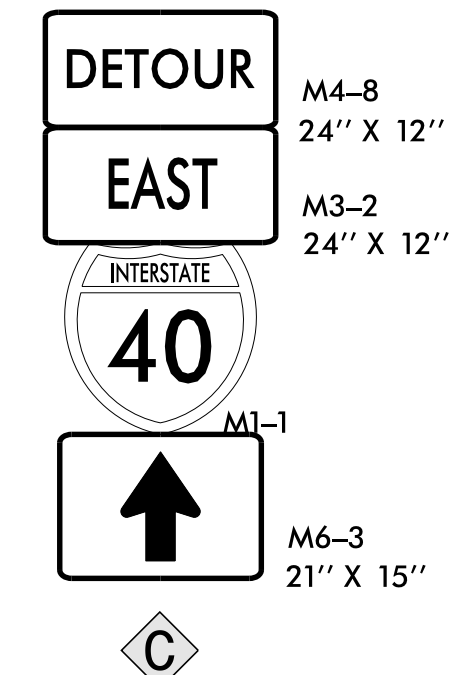
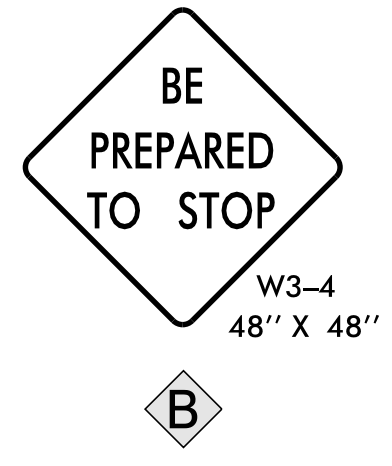
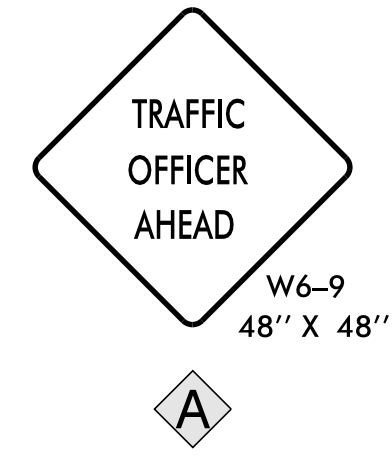
**TEMPORARY SHORING
 LOCATIONS**

10/2/2019
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 User: AHayes



NOTES: - SEE SHEET TMP-01B, GENERAL NOTE 'C' FOR TIME RESTRICTIONS.
 - COORDINATE WITH THE SPECIALTY FUNCTIONS AND SUPPORT SERVICES GROUP WITHIN THE ROADWAY DESIGN UNIT TO PROVIDE LIGHTING FOR NIGHT OPERATIONS.

MESSAGE NO. 1	MESSAGE NO. 2
TRAFFIC OFFICER AHEAD	BE PREPARED TO STOP
CHANGEABLE MESSAGE SIGN	



MESSAGE NO. 1	MESSAGE NO. 2
ROAD CLOSED AHEAD	ALL TRAFFIC EXIT
CHANGEABLE MESSAGE SIGN	

NOTE: REFER TO RSD 1101.02, SHEET 8 OF 15 AND RSD 1101.03, SHEET 7 OF 9 FOR GENERAL NOTES.

DETAIL 'A'

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APPROVED: *Bob A. May*
 DATE: 10/2/2019

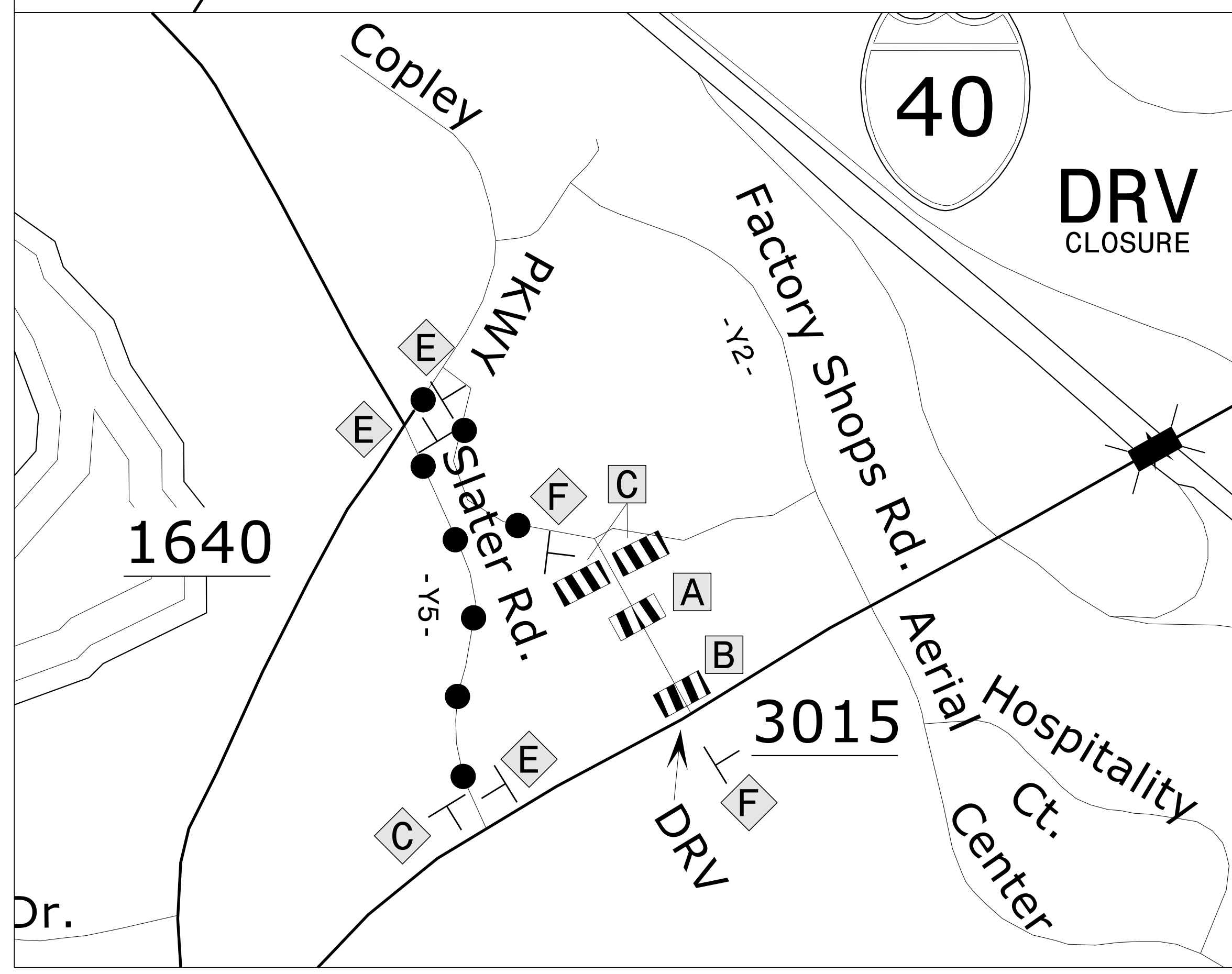
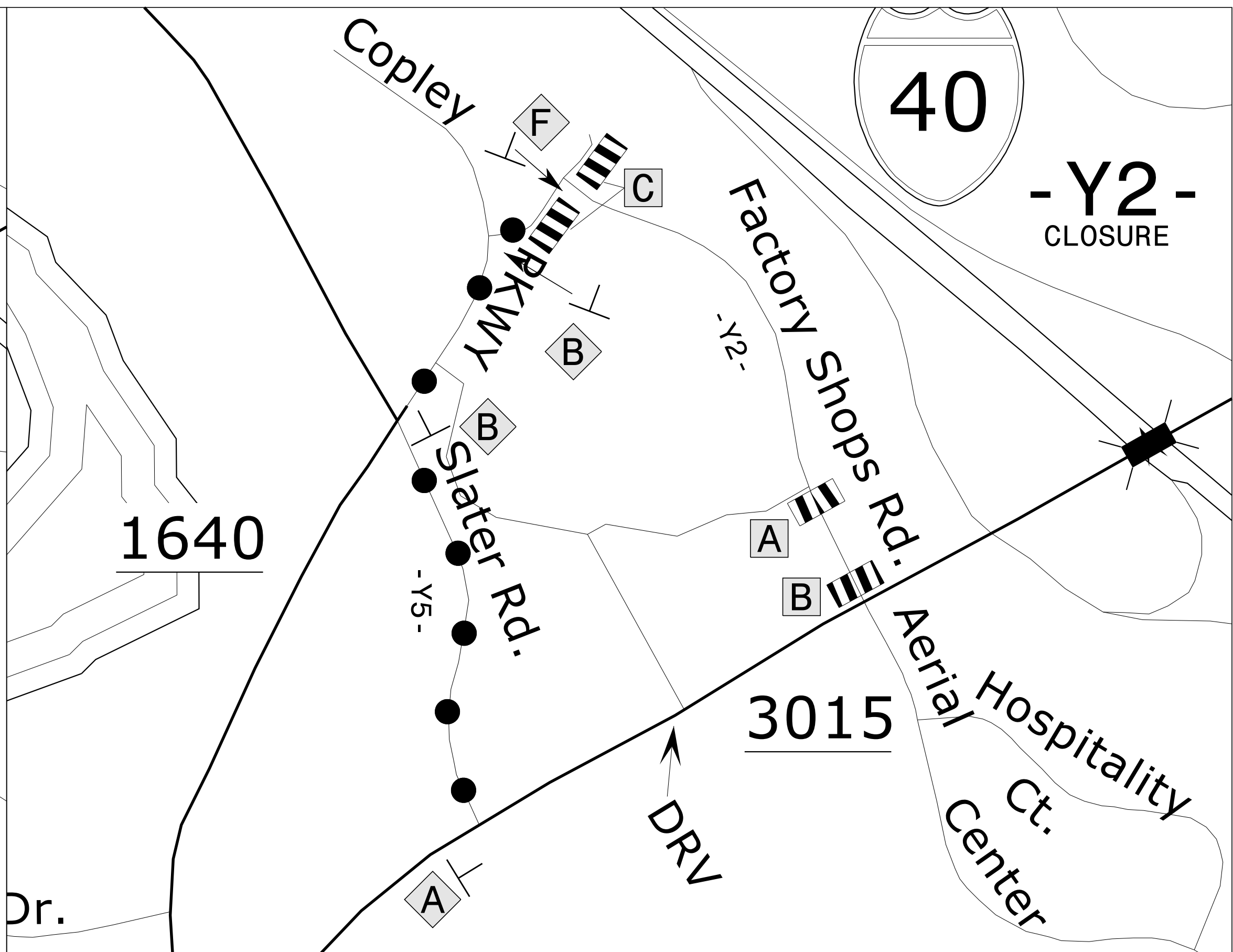
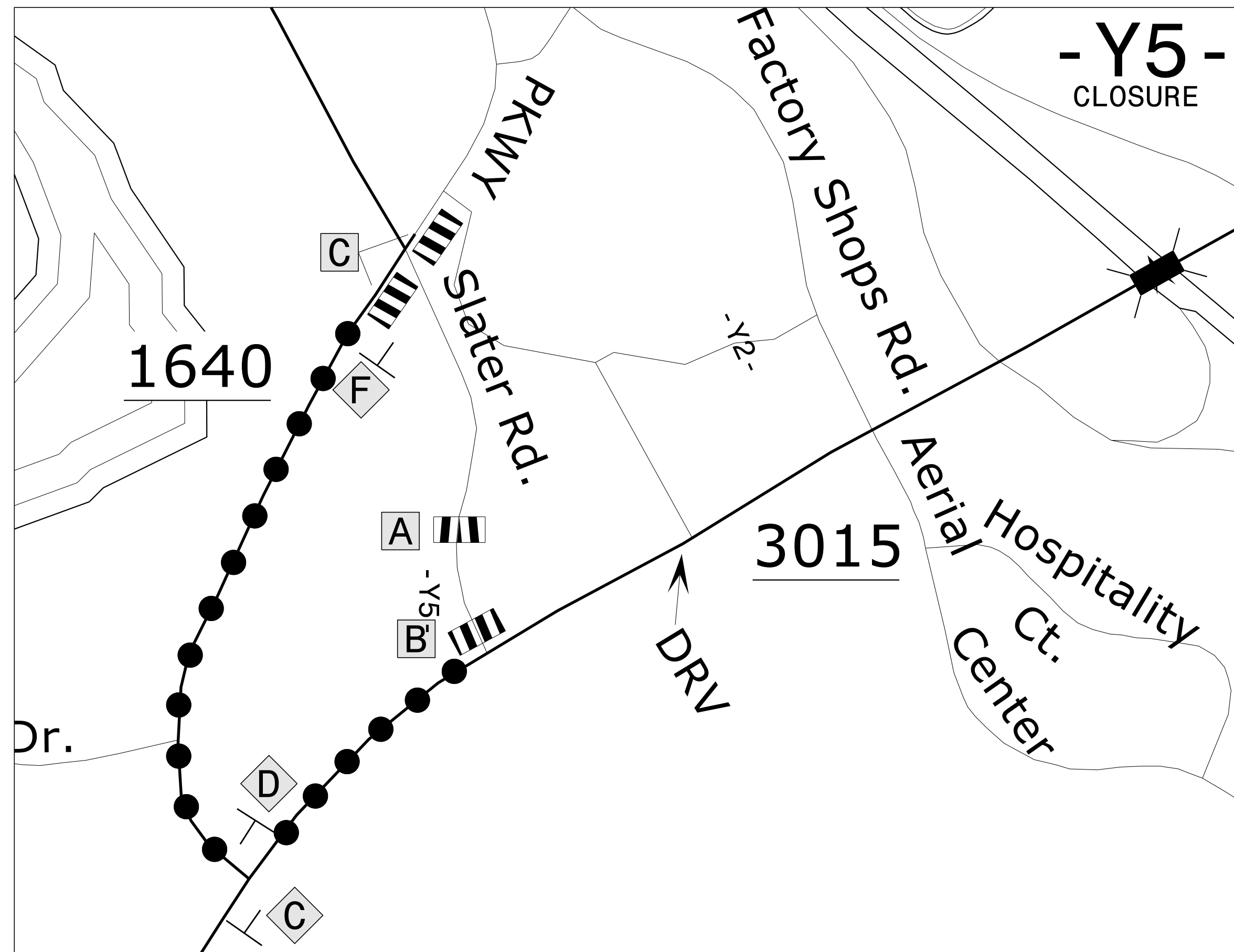
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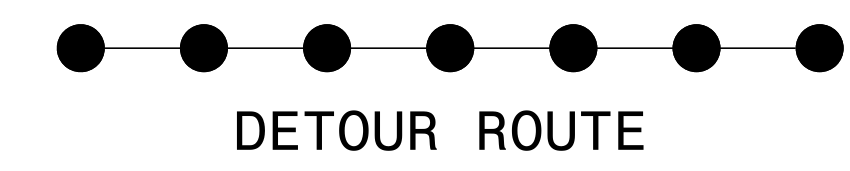
DIVISION OF HIGHWAYS
 NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL

I-40 DETOUR FOR
 GIRDER INSTALLATION

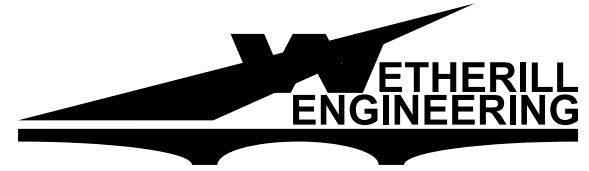
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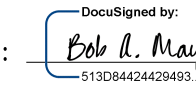
NOTES: - SEE SHEET TMP-02E FOR SIGNING.
 - REFER TO ROADWAY STANDARD DRAWING 1101.03, SHEET 1 OF 9 FOR ROAD CLOSURE SIGNS AND APPLICABLE NOTES.





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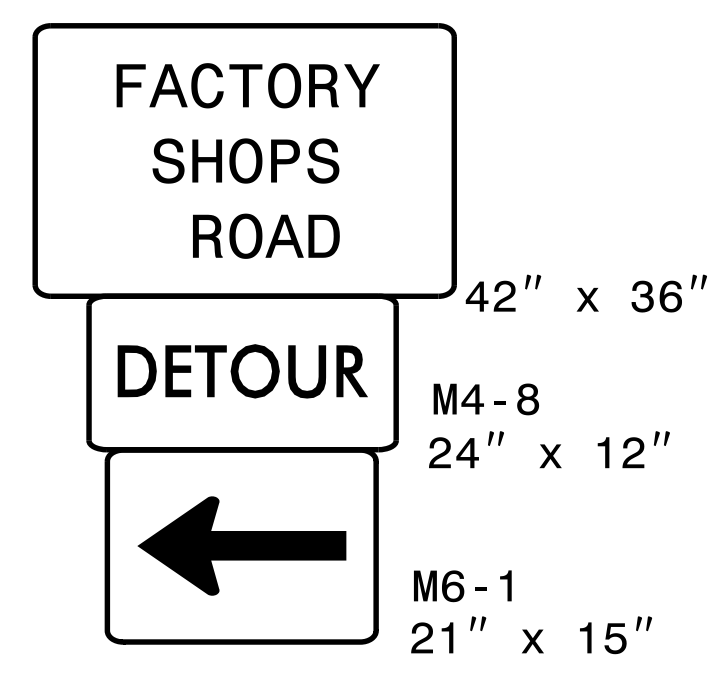

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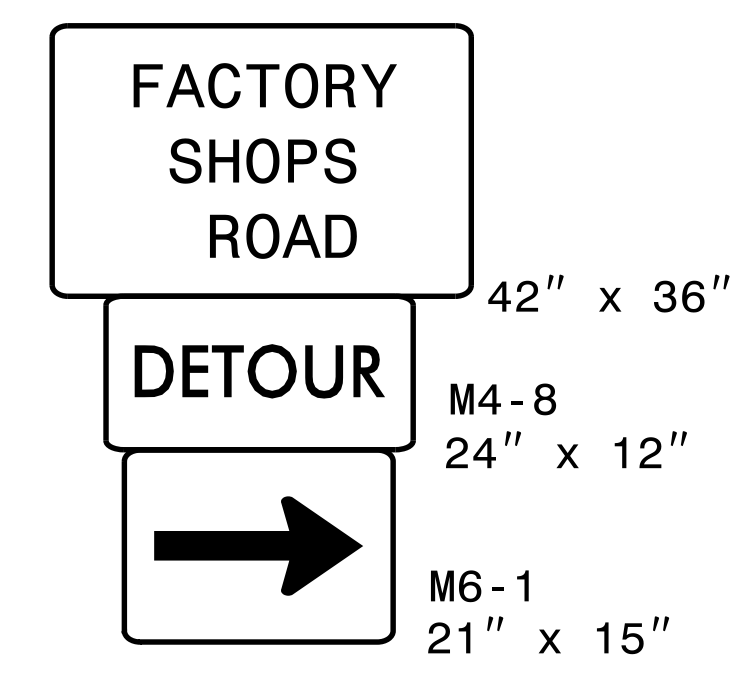
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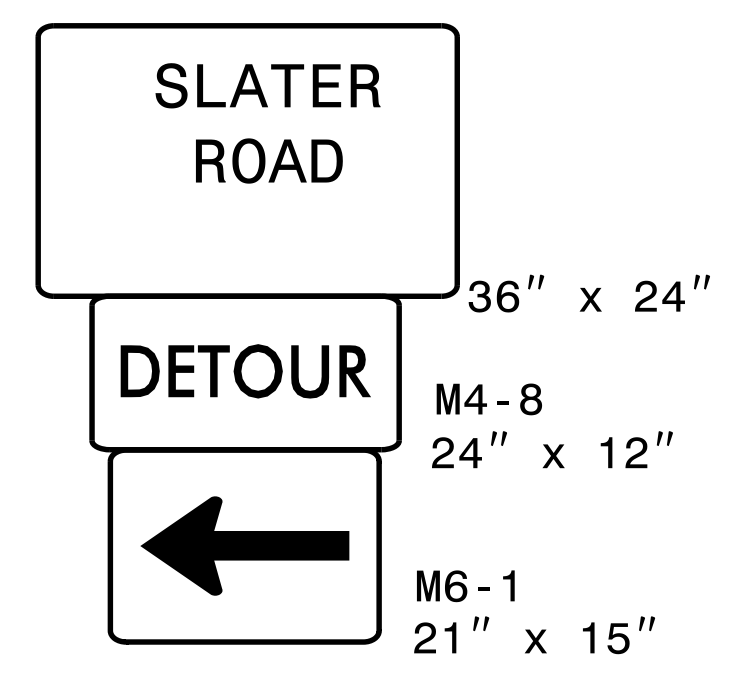
-Y2-, -Y5-, AND DRV
OFFSITE DETOURS



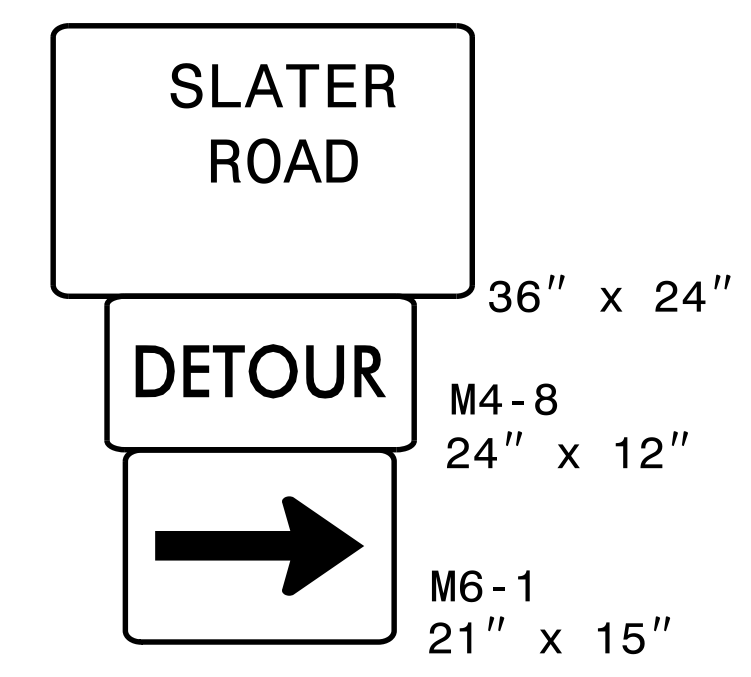
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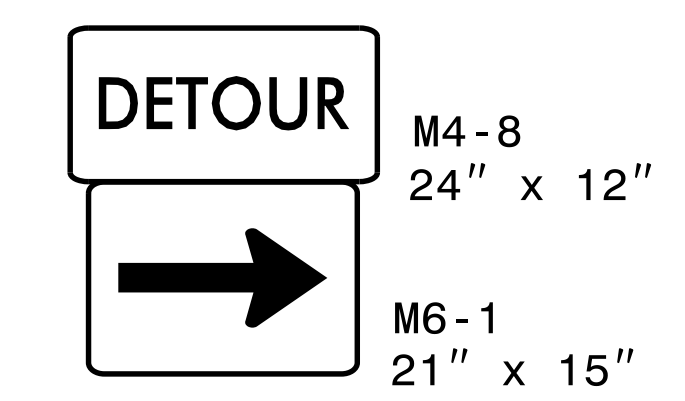
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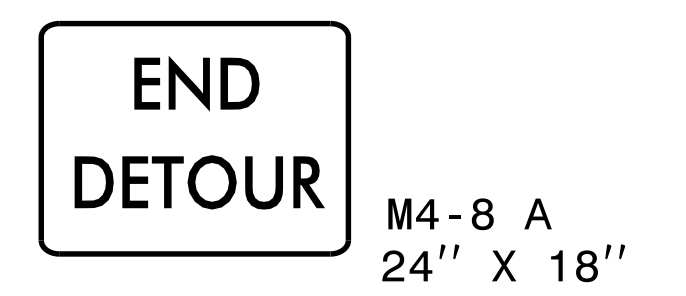
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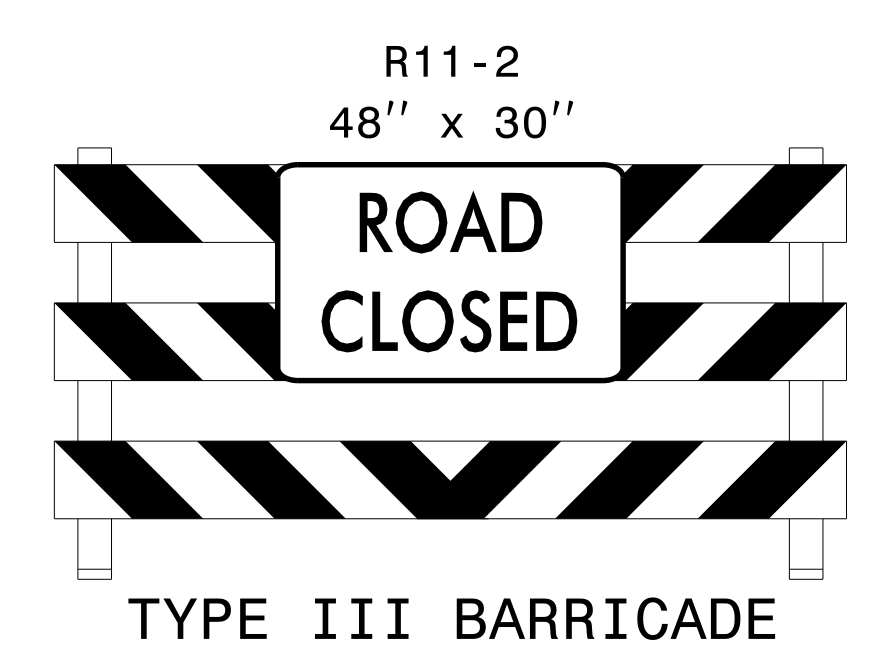
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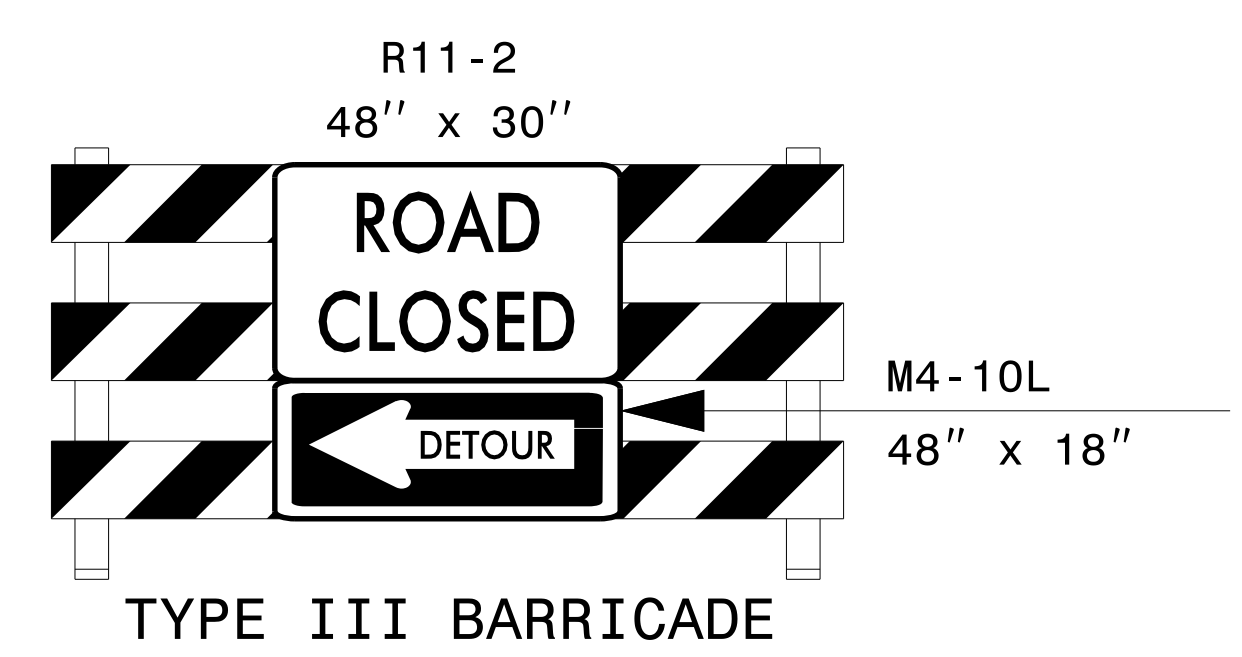
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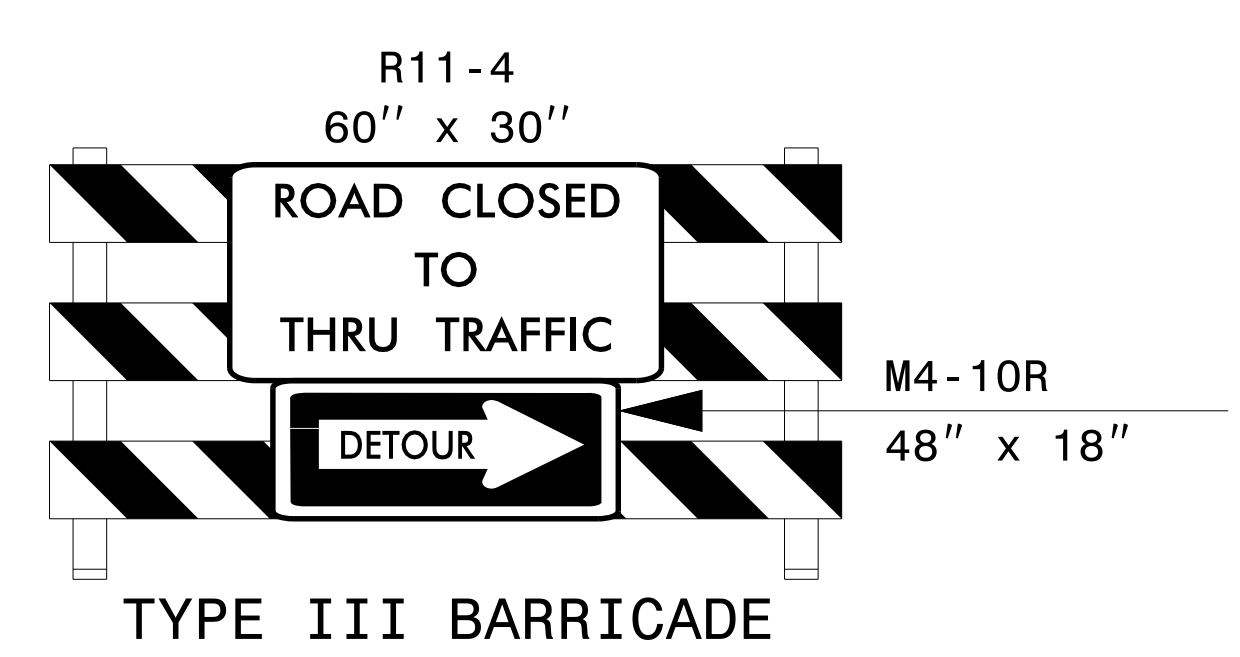
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A

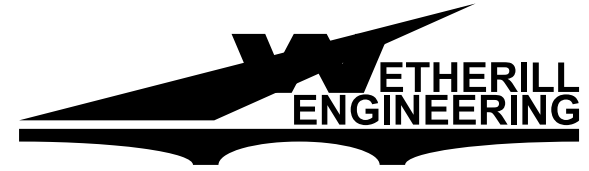


B



C

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 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION


APPROVED: *Bob A. May*
DocuSigned by:
Bob A. May
51036442429493

DATE: 10/2/2019

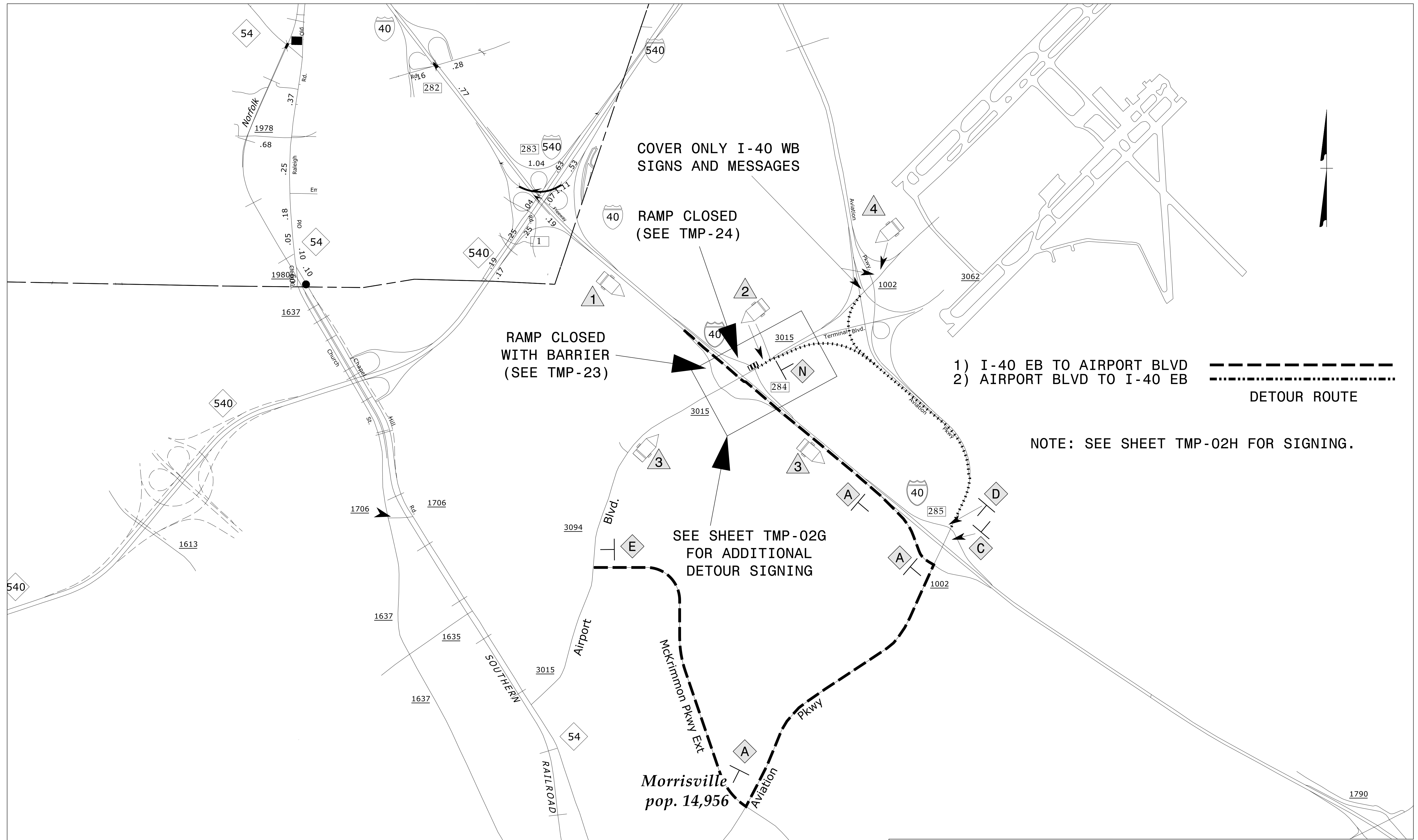
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-Y2-, -Y5-, AND DRV
OFFSITE DETOURS

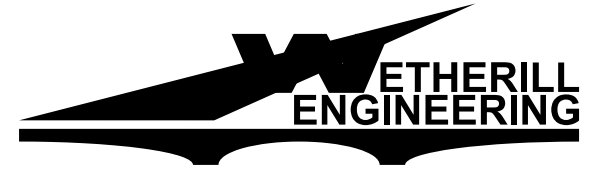


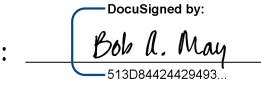

- 1) I-40 EB TO AIRPORT BLVD
- 2) AIRPORT BLVD TO I-40 EB




NOTE: SEE SHEET TMP-02H FOR SIGNING.

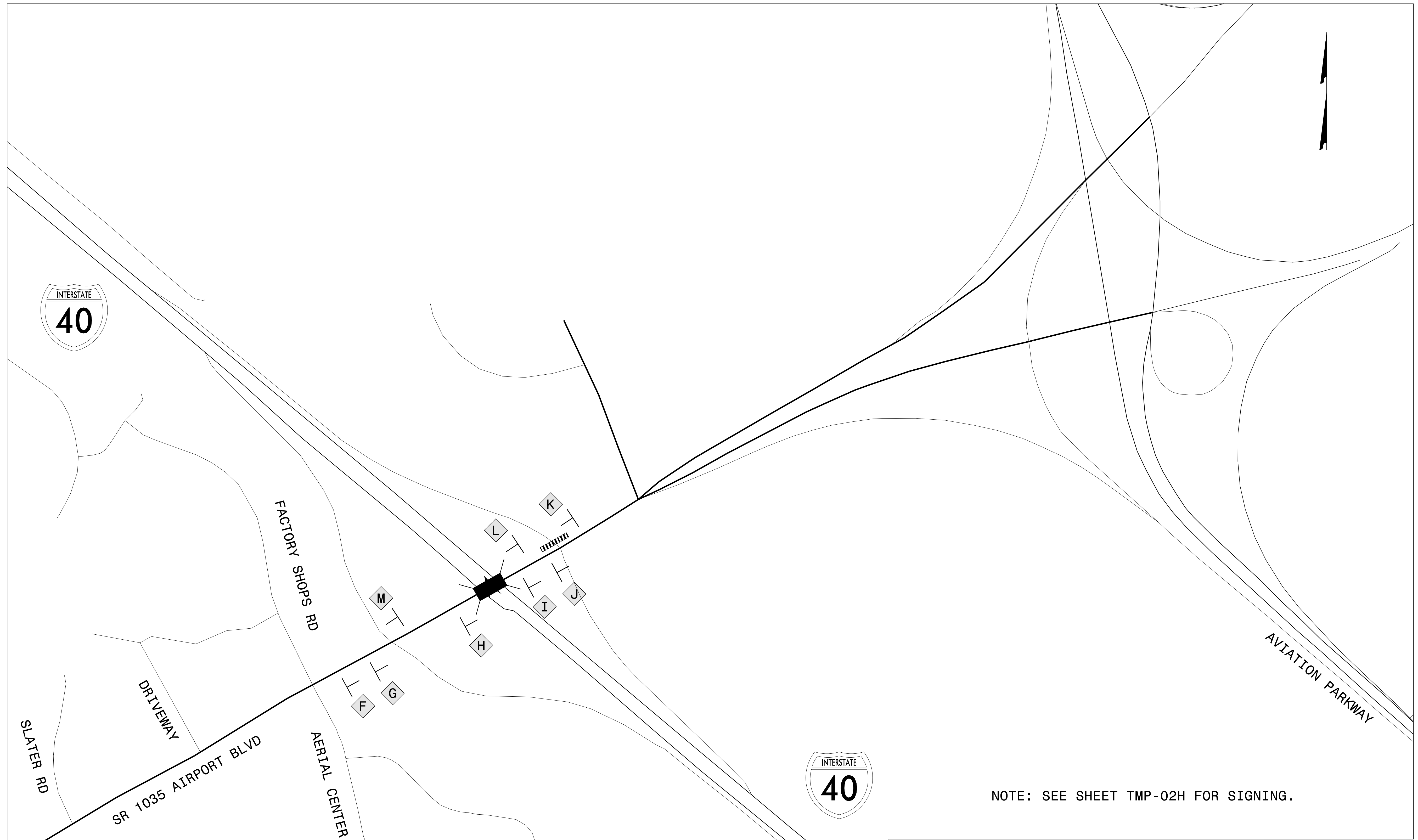
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 User: AHayes


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-RPB- AND -RPC- OFFSITE DETOURS

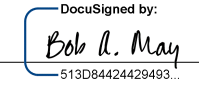


NOTE: SEE SHEET TMP-02H FOR SIGNING.

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APPROVED: 
DocuSigned by:
Bob A. May
51306426429493

DATE: 10/2/2019

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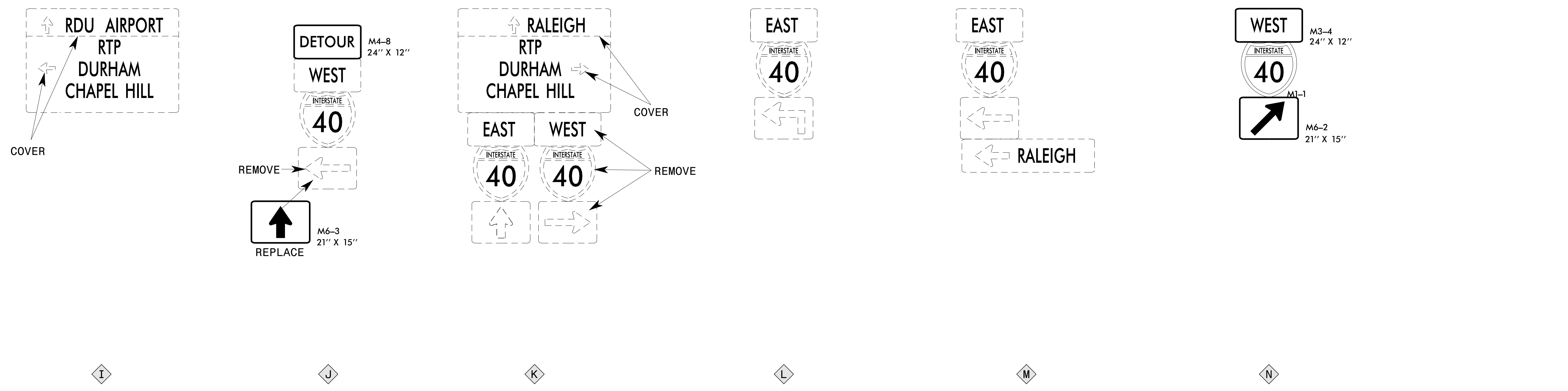
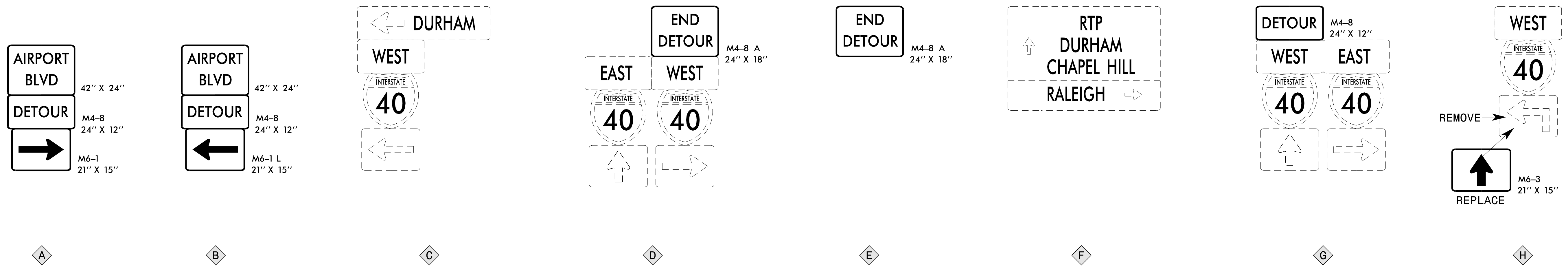
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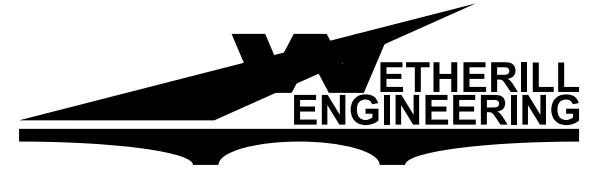
DIVISION OF HIGHWAYS
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 STATE OF NORTH CAROLINA
 WORK ZONE TRAFFIC CONTROL

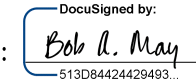

-RPB- AND -RPC-
OFFSITE DETOURS


MESSAGE NO. 1 EXIT 284 CLOSED	MESSAGE NO. 2 FOLLOW DETOUR EXIT 285	MESSAGE NO. 1 RAMP TO I-40 WB CLOSED	MESSAGE NO. 2 FOLLOW DETOUR AHEAD	MESSAGE NO. 1 I-40 WB DETOUR	MESSAGE NO. 2 USE AVIATION PARKWAY	MESSAGE NO. 1 ALL I-40 TRAFFIC	MESSAGE NO. 2 EXIT LEFT TO AVIATION
CHANGEABLE MESSAGE SIGN		CHANGEABLE MESSAGE SIGN		CHANGEABLE MESSAGE SIGN		CHANGEABLE MESSAGE SIGN	
1		2		3		4	



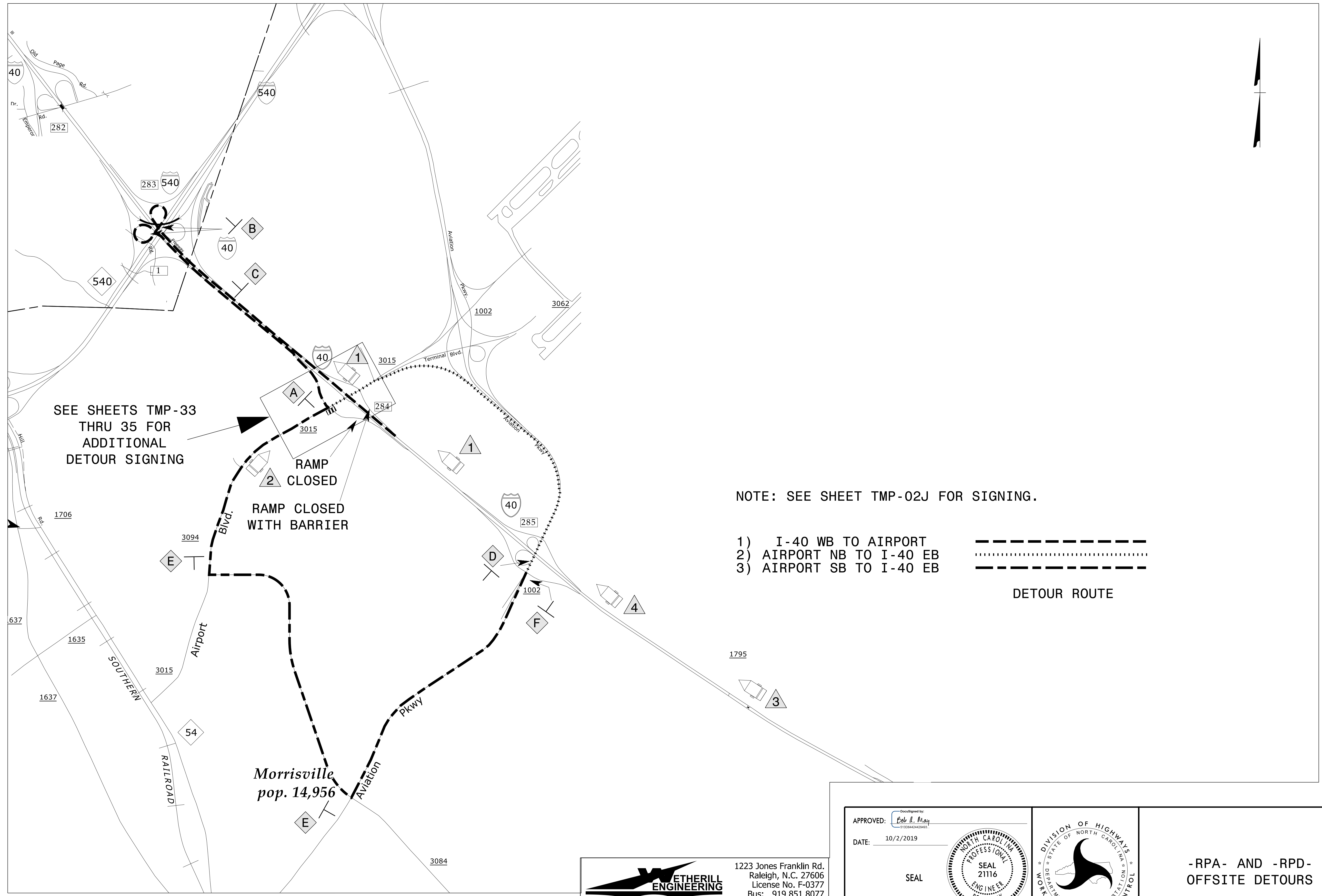
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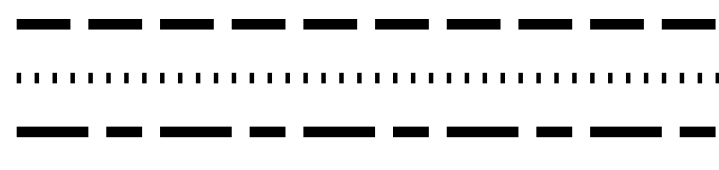
-RPB- AND -RPC- OFFSITE DETOURS



SEE SHEETS TMP-33
THRU 35 FOR
ADDITIONAL
DETOUR SIGNING

NOTE: SEE SHEET TMP-02J FOR SIGNING.

- 1) I-40 WB TO AIRPORT
- 2) AIRPORT NB TO I-40 EB
- 3) AIRPORT SB TO I-40 EB



DETOUR ROUTE

10/2/2019
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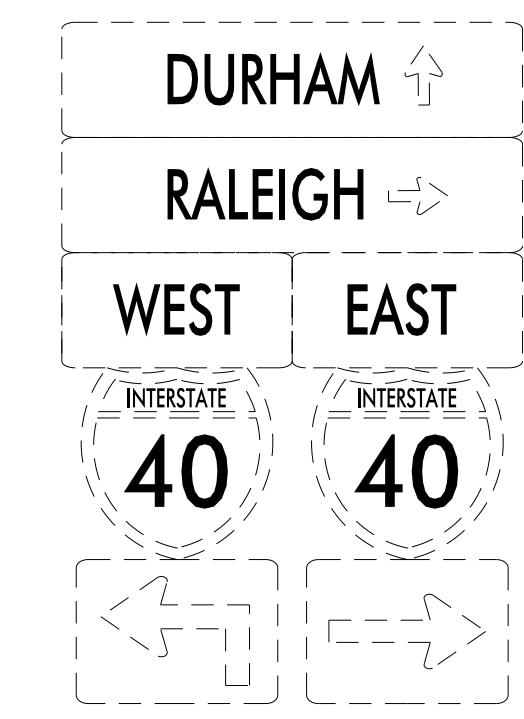
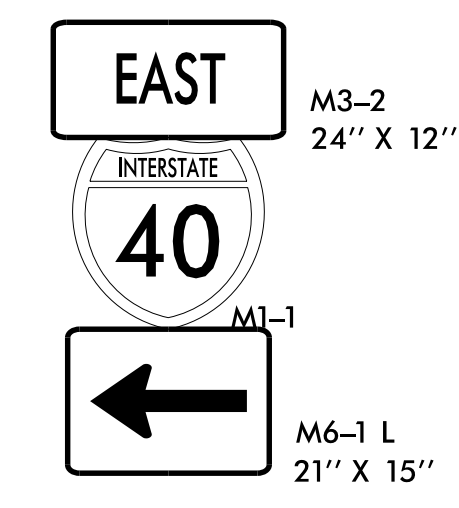
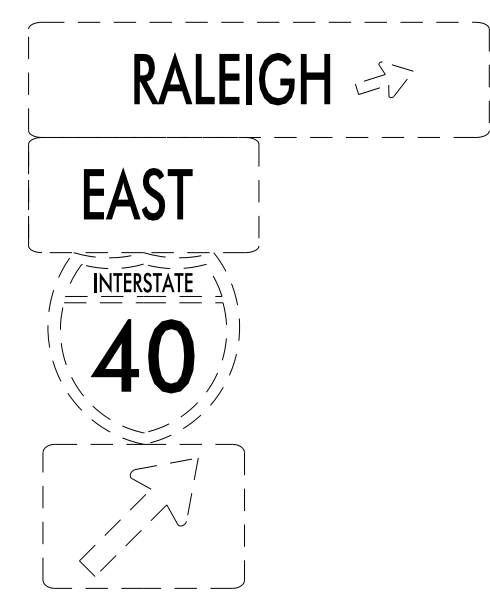
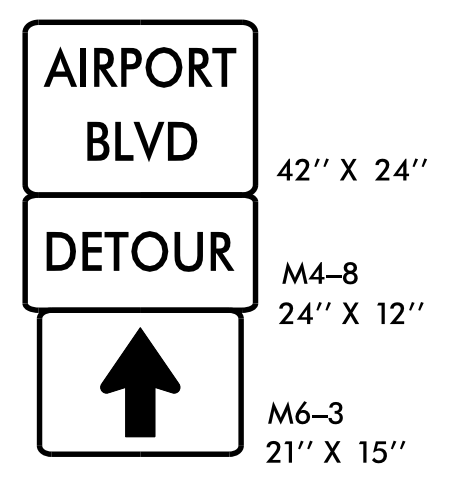
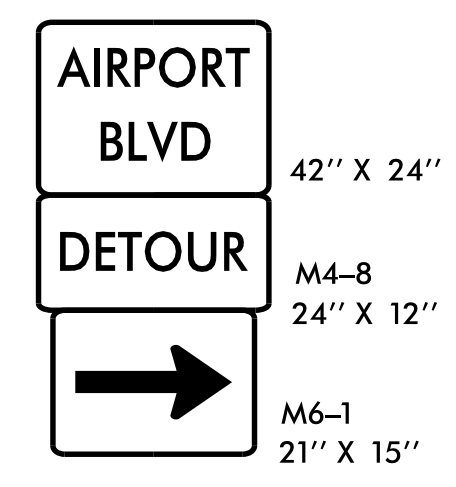
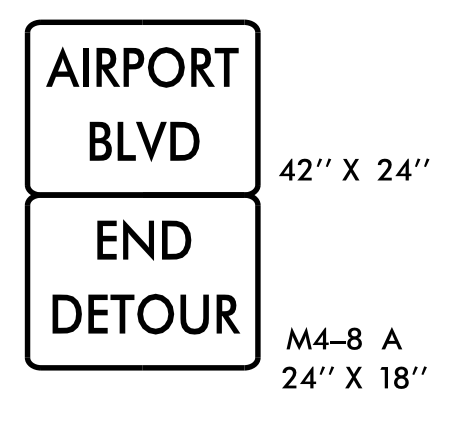
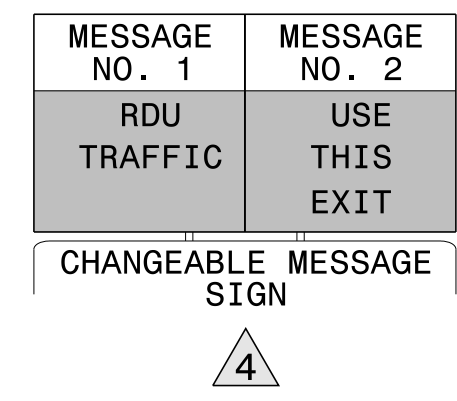
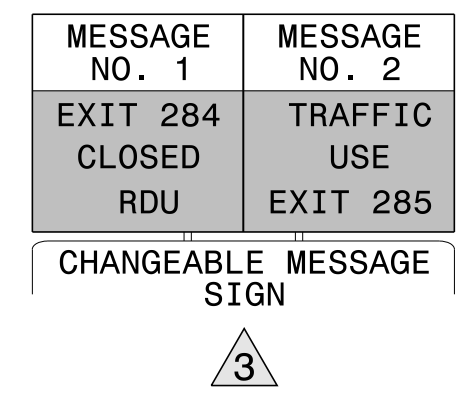
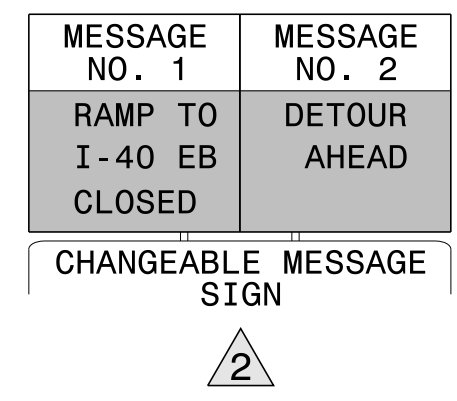
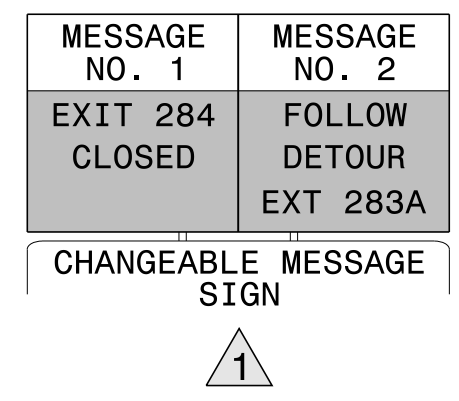
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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

APPROVED: *Bob A. May*
 DATE: 10/2/2019
 SEAL

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

-RPA- AND -RPD-
OFFSITE DETOURS



A

B

C

D

E

F

10/2/2019 P:\2018\18104.01\I-5700\Traffic\WZTC\TMP-New\IND\DET\2018_18104.01\I-5700_Traffic_WZTC_TMP_DTL_DET_02J.RPA&J.OSD.dgn User:AHayes

ETHERILL ENGINEERING

1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

APPROVED:

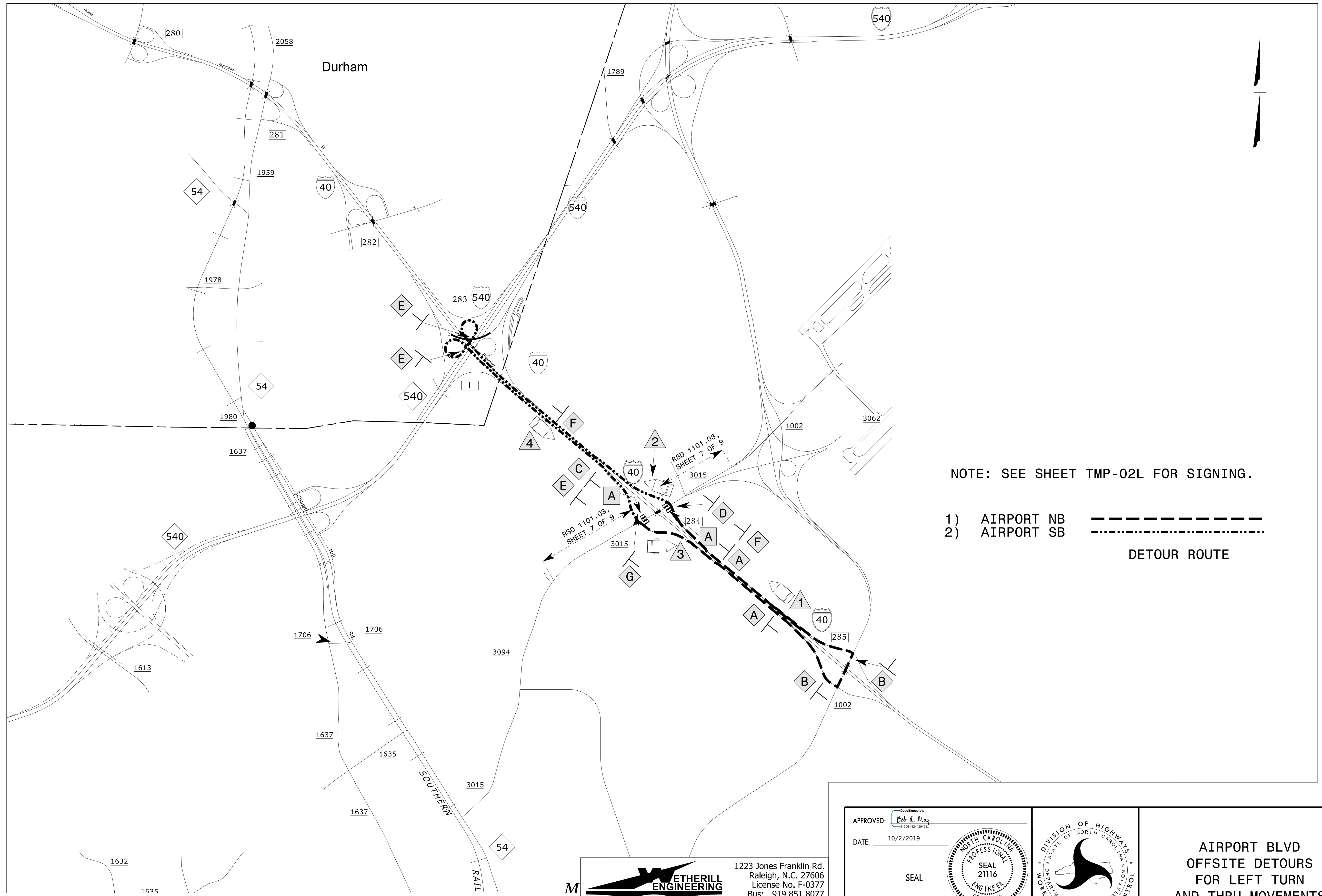
DATE: 10/2/2019

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

-RPA- AND -RPD- OFFSITE DETOURS



NOTE: SEE SHEET TMP-02L FOR SIGNING.

- 1) AIRPORT NB
 - 2) AIRPORT SB
- DETOUR ROUTE

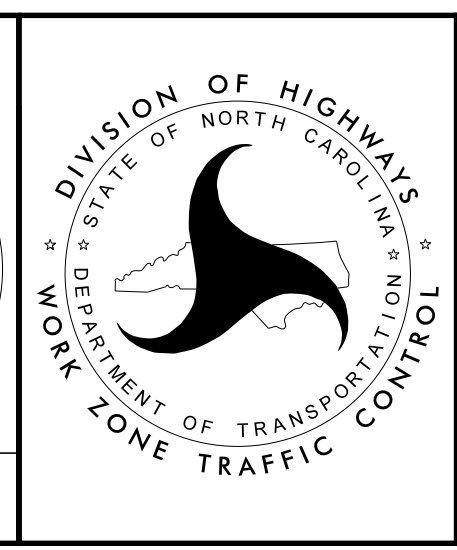
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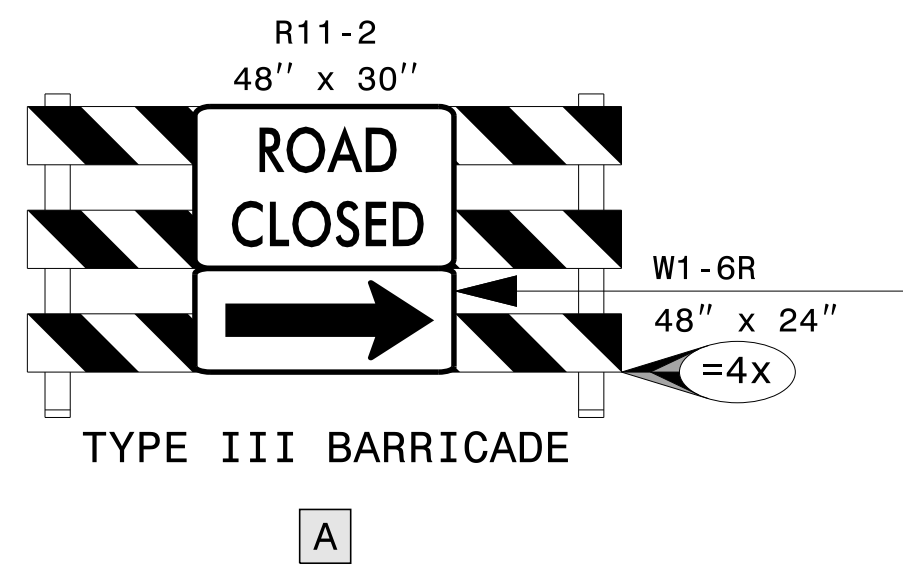
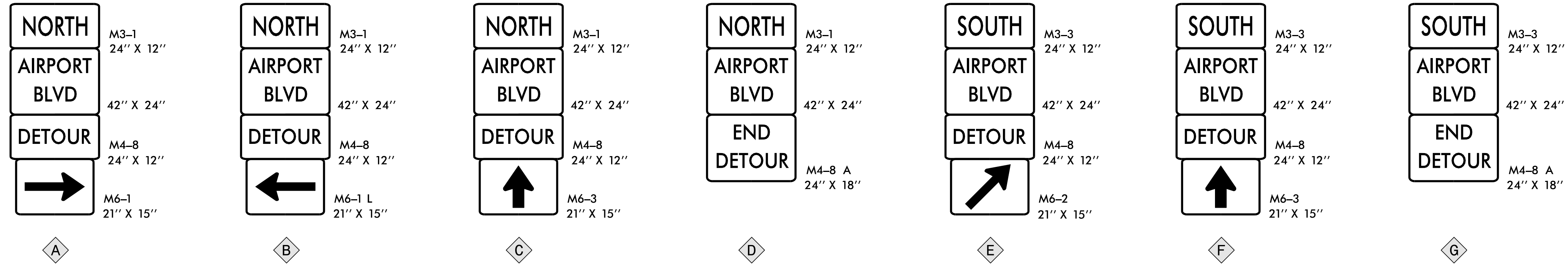
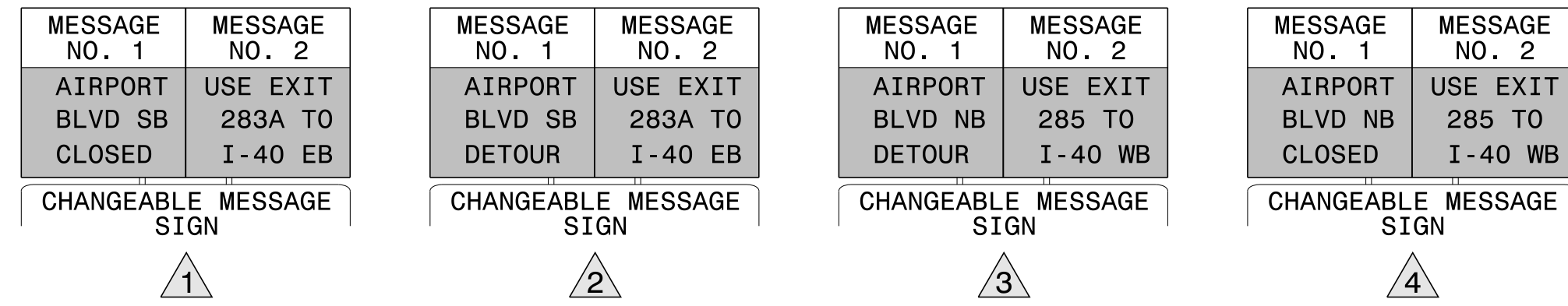
APPROVED:
 DATE: 10/2/2019

SEAL



**AIRPORT BLVD
 OFFSITE DETOURS
 FOR LEFT TURN
 AND THRU MOVEMENTS**

**DOCUMENT NOT CONSIDERED FINAL
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10/2/2019 P:\2018\18104.01\I-5700\Traffic\WZTC\TMP-New\IND\DET\2018_18104.01\I-5700_Traffic_WZTC_TMP_DTL_DET_02L_INTERC.OSD.dgn User:AHayes

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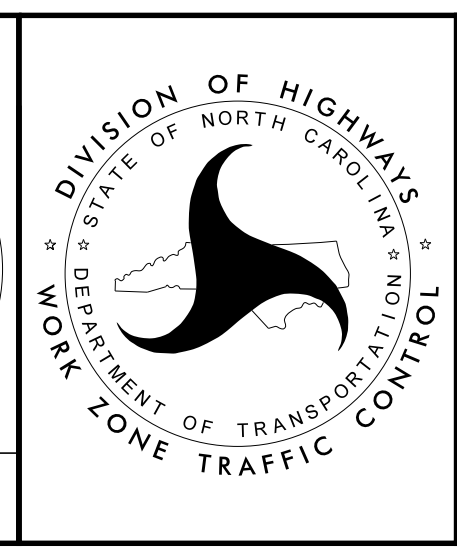
APPROVED: *Bob A. May*

DATE: 10/2/2019

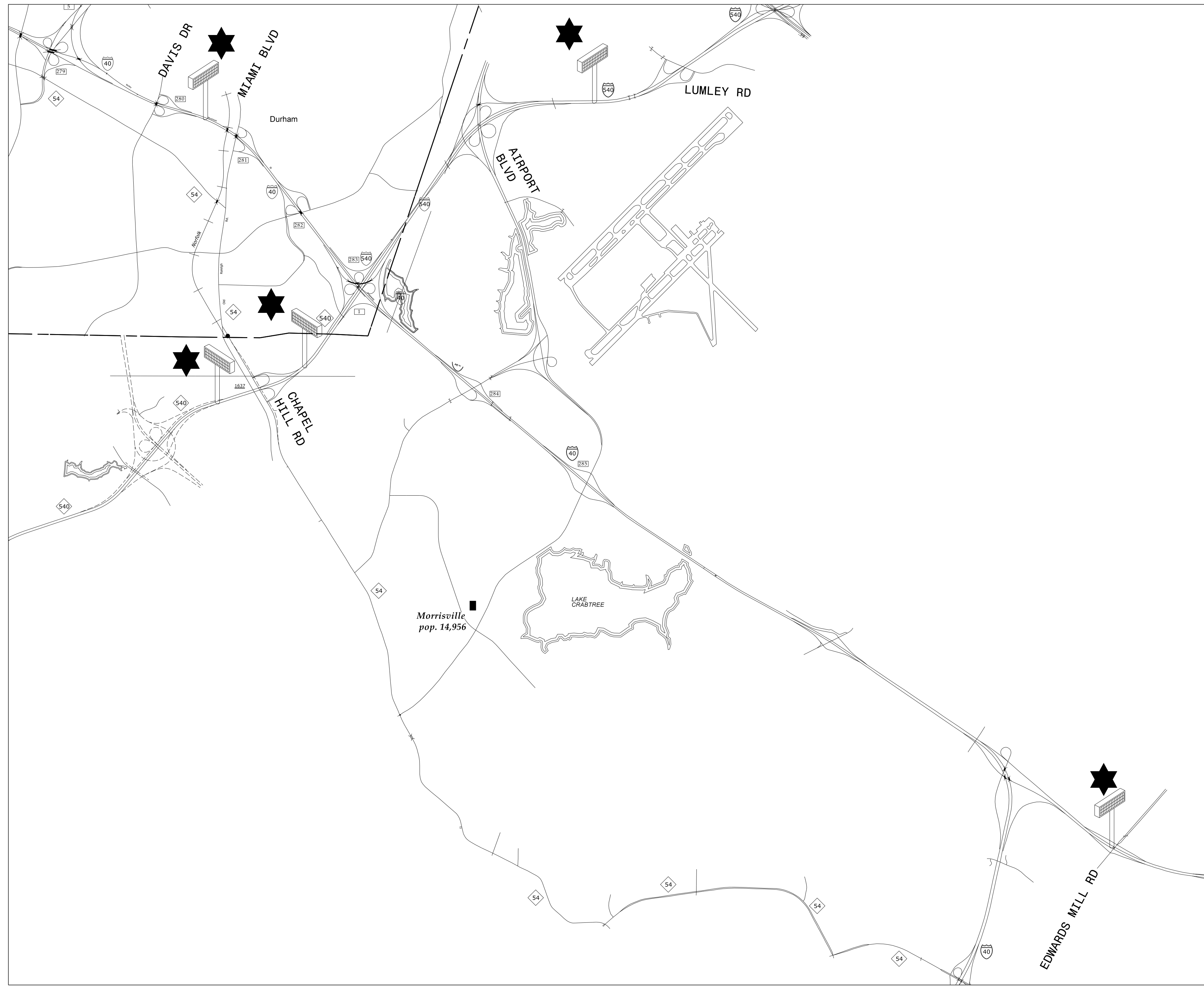
SEAL

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
21116
BOB A. MAY

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AIRPORT BLVD OFFSITE DETOURS FOR LEFT TURN AND THRU MOVEMENTS



DYNAMIC MESSAGE SIGN

ROAD WORK ON AIRPORT BLVD DELAYS POSSIBLE

PANEL 1

DYNAMIC MESSAGE SIGN

FOR ALTERNATE ROUTE EXIT 285 AVIATION PKWY
--

PANEL 2

NOTE: CONTACT THE NCDOT STATE TRAFFIC OPERATIONS CENTER AT 919-825-2617 TO COORDINATE MESSAGES.

NOTE: MESSAGES ARE NOT TO BE DISPLAYED DURING THE 105 DAY ICT BEGINNING IN PHASE II, STEP 3, OR THE 120 DAY ICT BEGINNING IN PHASE III, STEP 2.

10/2/2019 P:\2018\18104.01\I-5700\Traffic\WZTC\TMP-New\IND\DET\2018_18104.01\I-5700_Traffic_WZTC_TMP_DTL_DET_02M_AHRoute.L.dgn User:AHayes

WETHERILL ENGINEERING
 1223 Jones Franklin Rd.
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 Fax: 919 851 8107

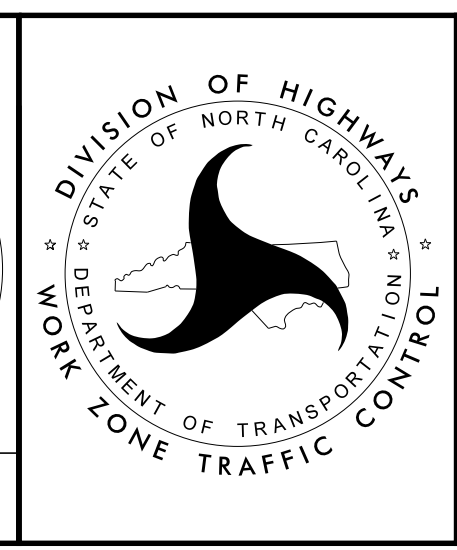
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

APPROVED: *Bob A. May*
51308424629493

DATE: 10/2/2019

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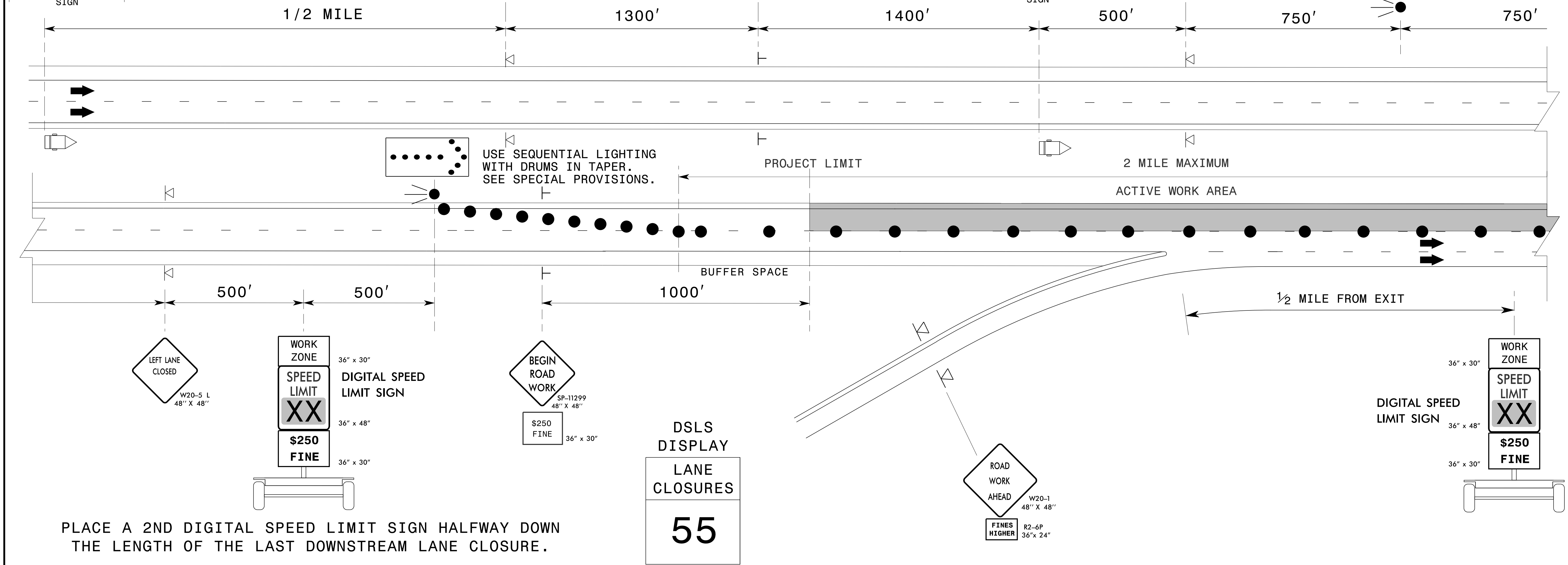
DYNAMIC MESSAGE BOARD PLAN

MESSAGE NO. 1	MESSAGE NO. 2
MPH ZONE AHEAD	\$250 FINE AHEAD

CHANGEABLE MESSAGE SIGN

MESSAGE NO. 1	MESSAGE NO. 2
BEGIN MPH 2500 FT	\$250 FINE AHEAD

CHANGEABLE MESSAGE SIGN



PLACE A 2ND DIGITAL SPEED LIMIT SIGN HALFWAY DOWN THE LENGTH OF THE LAST DOWNSTREAM LANE CLOSURE.

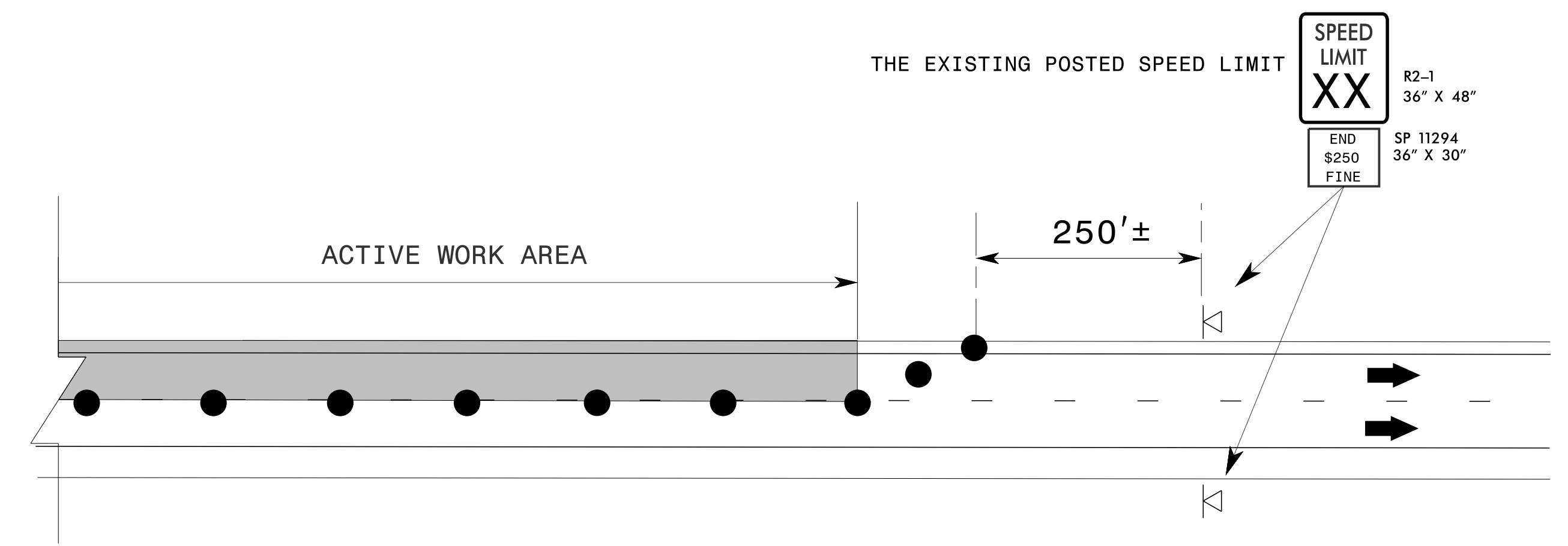
NOTES

1. ALL ORIGINAL SPEED LIMIT SIGNS SHALL BE COVERED OR REMOVED. THE DIGITAL SPEED LIMIT SIGNS WILL TAKE THE PLACE OF ALL ORIGINAL STATIONARY SPEED LIMIT SIGNS. THE DIGITAL SPEED LIMIT SIGNS SHALL BE TRAILER MOUNTED.
2. THE STATE TRAFFIC ENGINEER HAS TO ORDINANCE THE "WZVSLR" IN ORDER FOR THE REDUCTION AND/OR \$250 SPEEDING FINE TO BE VALID AND ENFORCEABLE. NO SPEED LIMIT MESSAGES/SIGNS SHALL BE INSTALLED PRIOR TO RECEIVING A SIGNED ORDINANCE. IN ADDITION, THE \$250 SPEEDING FINE ALSO REQUIRES A SEPARATE SIGNED ORDINANCE BY THE STATE TRAFFIC ENGINEER.
3. EACH DIRECTION OF THE PROJECT IS TO BE EVALUATED FOR THE "WZVSLR". THIS DRAWING INTENTIONALLY HAS 1 DIRECTION SIGNED AS A REMINDER TO CAREFULLY CONSIDER WHETHER BOTH DIRECTIONS OF THE PROJECT NEED TO HAVE THE SPEED LIMIT REDUCED.
4. FOR DOUBLE LANE CLOSURES, REFER TO RSD 1101.02, SHEET 8 OF 15. APPLY THE SAME PRINCIPLES FOR TRIPLE LANE CLOSURES.
5. FOR DOUBLE AND TRIPLE LANE CLOSURES, ADD ONE ADDITIONAL CMS ONE MILE IN ADVANCE OF 1" CMS SHOWN ON DRAWING TO WARN/NOTIFY MOTORISTS OF UPCOMING SPEED LIMIT REDUCTION/LANE CLOSURE.

MESSAGE NO. 1	MESSAGE NO. 2
(SIDE) # LANES CLOSED	REDUCE SPEED AHEAD

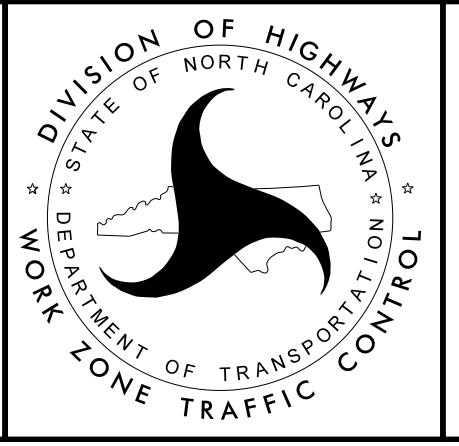
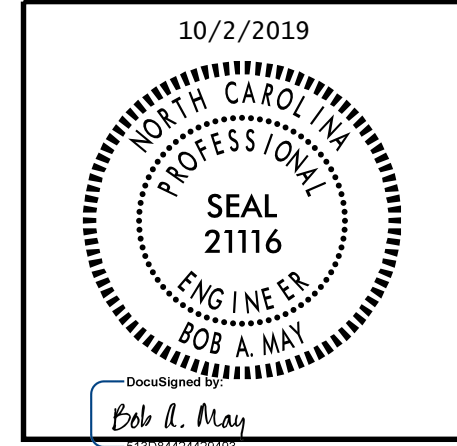
CHANGEABLE MESSAGE SIGN

WHERE (SIDE) IS EITHER LEFT OR RIGHT AND # IS EITHER 2 OR 3.



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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
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WORK ZONE "VARIABLE" SPEED LIMIT REDUCTION USING DIGITAL SPEED LIMIT SIGNS

SIGN NUMBER: name TYPE: STATIONARY QUANTITY: SEE PLANS SIGN WIDTH: 3'-6" HEIGHT: 3'-0" TOTAL AREA: 10.5 Sq.Ft. BORDER TYPE: INSET RECESS: 0.47" WIDTH: 0.63" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Fluorescent Orange COPY COLOR: Black SYMBOL X Y WID HT MAT'L: 0.080" (2.0 mm) ALUMINUM	DESIGN BY: DAH PROJECT ID: I-5700 CHECKED BY: DAH LOCATION: Feb 11, 2019 DIV: 5
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BORDER
R=1.5"
TH=0.63"
IN=0.47"

Spacing Factor is 1 unless specified otherwise

Letter locations are panel edge to lower left corner											Series/Size
											Text Length
F	A	C	T	O	R	Y					D 2000
6.6	10	14.9	18.9	22.7	27.3	31.1					28.9
S	H	O	P	S							D 2000
10.7	15	19.5	24.1	27.9							20.6
R	O	A	D								D 2000
12.6	16.8	21	26								16.8

FILENAME: 2018_18104_01_I-5700_Traffic_WZTC_TMP_REF_BSSD NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: name TYPE: STATIONARY QUANTITY: SEE PLANS SIGN WIDTH: 3'-0" HEIGHT: 2'-0" TOTAL AREA: 6.0 Sq.Ft. BORDER TYPE: INSET RECESS: 0.47" WIDTH: 0.63" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Fluorescent Orange COPY COLOR: Black SYMBOL X Y WID HT MAT'L: 0.080" (2.0 mm) ALUMINUM	DESIGN BY: DAH PROJECT ID: I-5700 CHECKED BY: DAH LOCATION: Feb 11, 2019 DIV: 5
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BORDER
R=1.5"
TH=0.63"
IN=0.47"

Spacing Factor is 1 unless specified otherwise

Letter locations are panel edge to lower left corner											Series/Size
											Text Length
S	L	A	T	E	R						D 2000
6.3	10.6	14	18.5	22.4	26.3						23.4
R	O	A	D								D 2000
9.6	13.8	18	23								16.8

FILENAME: 2018_18104_01_I-5700_Traffic_WZTC_TMP_REF_BSSD NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: name TYPE: STATIONARY QUANTITY: SEE PLANS SIGN WIDTH: 3'-6" HEIGHT: 2'-0" TOTAL AREA: 7.0 Sq.Ft. BORDER TYPE: INSET RECESS: 0.47" WIDTH: 0.63" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Fluorescent Orange COPY COLOR: Black SYMBOL X Y WID HT MAT'L: 0.080" (2.0 mm) ALUMINUM	DESIGN BY: DAH PROJECT ID: I-5700 CHECKED BY: DAH LOCATION: Feb 11, 2019 DIV: 5
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BORDER
R=1.5"
TH=0.63"
IN=0.47"

Spacing Factor is 1 unless specified otherwise

Letter locations are panel edge to lower left corner											Series/Size
											Text Length
A	I	R	P	O	R	T					D 2000
7.6	12.6	14.6	18.8	22.9	27.5	31.3					26.9
B	L	V	D								D 2000
13.2	17.5	20.9	25.4								15.6

FILENAME: 2018_18104_01_I-5700_Traffic_WZTC_TMP_REF_BSSD NORTH CAROLINA D.O.T. SIGN DETAIL

10/2/2019
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 User: AHayes

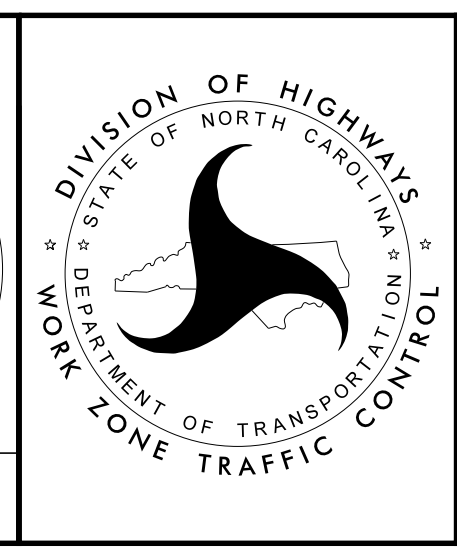
1223 Jones Franklin Rd.
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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
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APPROVED: *Bob A. May*
DATE: 10/2/2019

SEAL

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SPECIAL SIGN DESIGNS

<p>SIGN NUMBER: name TYPE: STATIONARY QUANTITY: SEE PLANS SIGN WIDTH: 4'-0" HEIGHT: 3'-0" TOTAL AREA: 12.0 Sq.Ft.</p> <p>BORDER TYPE: INSET RECESS: 0.47" WIDTH: 0.63" RADII: 1.5"</p> <p>NO. Z BARS: LENGTH:</p>	<p>BACKG COLOR: Fluorescent Orange COPY COLOR: Black</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table> <p>MAT'L: 0.080" (2.0 mm) ALUMINUM</p>	SYMBOL	X	Y	WID	HT																																																			<p>DESIGN BY: DAH PROJECT ID: I-5700</p> <p>CHECKED BY: DAH LOCATION:</p> <p style="text-align: right;">Mar 18, 2019 DIV: 5</p> <div style="text-align: center;"> </div> <p>BORDER R=1.5" TH=0.63" IN=0.47"</p> <p style="text-align: right;">Spacing Factor is 1 unless specified otherwise</p>
SYMBOL	X	Y	WID	HT																																																					

LETTER POSITIONS	
Letter locations are panel edge to lower left corner	
	Series/Size Text Length
A i r p o r t B l v d	D 2000 38.2
4.9 9.8 11.6 14.1 17.7 21.6 23.6 25.6 30.6 34.8 36.2 40.1	
E A S T	D 2000 15.1
16.5 20 24.6 28.4	
R D U A i r p o r t	D 2000 37.9
5.1 9.3 13.8 17.2 22.2 27.1 28.9 31.4 35 38.9 40.9	
FILENAME: 2018_18104_01_I-5700_Traffic_WZTC_TMP_REF_BSSD	
NORTH CAROLINA D.O.T. SIGN DETAIL	

<p>SIGN NUMBER: name TYPE: STATIONARY QUANTITY: SEE PLANS SIGN WIDTH: 4'-0" HEIGHT: 2'-0" TOTAL AREA: 8.0 Sq.Ft.</p> <p>BORDER TYPE: INSET RECESS: 0.47" WIDTH: 0.63" RADII: 1.5"</p> <p>NO. Z BARS: LENGTH:</p>	<p>BACKG COLOR: Fluorescent Orange COPY COLOR: Black</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table> <p>MAT'L: 0.080" (2.0 mm) ALUMINUM</p>	SYMBOL	X	Y	WID	HT																																																			<p>DESIGN BY: DAH PROJECT ID: I-5700</p> <p>CHECKED BY: DAH LOCATION:</p> <p style="text-align: right;">Mar 18, 2019 DIV: 5</p> <div style="text-align: center;"> </div> <p>BORDER R=1.5" TH=0.63" IN=0.47"</p> <p style="text-align: right;">Spacing Factor is 1 unless specified otherwise</p>
SYMBOL	X	Y	WID	HT																																																					

LETTER POSITIONS	
Letter locations are panel edge to lower left corner	
	Series/Size Text Length
A i r p o r t B l v d	D 2000 38.2
4.9 9.8 11.6 14.1 17.7 21.6 23.6 25.6 30.6 34.8 36.2 40.1	
E A S T	D 2000 15.7
16.2 21.4 25 28.8	
FILENAME: 2018_18104_01_I-5700_Traffic_WZTC_TMP_REF_BSSD	
NORTH CAROLINA D.O.T. SIGN DETAIL	

<p>SIGN NUMBER: name TYPE: STATIONARY QUANTITY: SEE PLANS SIGN WIDTH: 4'-0" HEIGHT: 3'-6" TOTAL AREA: 14.0 Sq.Ft.</p> <p>BORDER TYPE: INSET RECESS: 0.47" WIDTH: 0.63" RADII: 1.5"</p> <p>NO. Z BARS: LENGTH:</p>	<p>BACKG COLOR: Fluorescent Orange COPY COLOR: Black</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table> <p>MAT'L: 0.080" (2.0 mm) ALUMINUM</p>	SYMBOL	X	Y	WID	HT																																																			<p>DESIGN BY: DAH PROJECT ID: I-5700</p> <p>CHECKED BY: DAH LOCATION:</p> <p style="text-align: right;">Mar 19, 2019 DIV: 5</p> <div style="text-align: center;"> </div> <p>BORDER R=1.5" TH=0.63" IN=0.47"</p> <p style="text-align: right;">Spacing Factor is 1 unless specified otherwise</p>
SYMBOL	X	Y	WID	HT																																																					

LETTER POSITIONS	
Letter locations are panel edge to lower left corner	
	Series/Size Text Length
R a l e i g h	D 2000 21.5
12.4 16.3 20.1 21.7 25.3 26.9 30.9	
D u r h a m	D 2000 23.2
12.4 16.7 20.7 23.2 26.8 30.6	
I n t e r n a t i o n a l	D 2000 37.1
5.5 7.4 10.8 13.2 16.8 19.3 23 26.3 28.9 30.5 34.3 38 41.8	
A i r p o r t	D 2000 20.7
13.7 18.6 20.4 22.9 26.5 30.3 32.4	
FILENAME: 2018_18104_01_I-5700_Traffic_WZTC_TMP_REF_BSSD	
NORTH CAROLINA D.O.T. SIGN DETAIL	

10/2/2019
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 User: AHayes

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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
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<p>APPROVED: </p> <p>DATE: 10/2/2019</p> <p style="text-align: center;">SEAL</p>			<p style="font-size: large; font-weight: bold;">SPECIAL SIGN DESIGNS</p>
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

SIGN NUMBER: name TYPE: STATIONARY QUANTITY: SEE PLANS SIGN WIDTH: 3'-0" HEIGHT: 1'-6" TOTAL AREA: 4.5 Sq.-Ft. BORDER TYPE: INSET RECESS: 0.47" WIDTH: 0.63" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Fluorescent Orange COPY COLOR: Black	DESIGN BY: DAH PROJECT ID: I-5700	CHECKED BY: DAH LOCATION:	Mar 18, 2019 DIV: 5
	SYMBOL	X	Y	WID

BORDER
R=1.5"
TH=0.63"
IN=0.47"

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter locations are panel edge to lower left corner

Letter	Series	Size	Text Length
R	D	2000	21.5
a			
l			
e			
i			
g			
h			

FILENAME: 2018_18104_01_I-5700_Traffic_WZTC_TMP_REF_BSSD NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: name TYPE: STATIONARY QUANTITY: SEE PLANS SIGN WIDTH: 3'-0" HEIGHT: 1'-6" TOTAL AREA: 4.5 Sq.-Ft. BORDER TYPE: INSET RECESS: 0.47" WIDTH: 0.63" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Fluorescent Orange COPY COLOR: Black	DESIGN BY: DAH PROJECT ID: I-5700	CHECKED BY: DAH LOCATION:	Mar 18, 2019 DIV: 5
	SYMBOL	X	Y	WID

BORDER
R=1.5"
TH=0.63"
IN=0.47"

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter locations are panel edge to lower left corner

Letter	Series	Size	Text Length
D	D	2000	23.2
u			
r			
h			
a			
m			

FILENAME: 2018_18104_01_I-5700_Traffic_WZTC_TMP_REF_BSSD NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: name TYPE: STATIONARY QUANTITY: SEE PLANS SIGN WIDTH: 2'-0" HEIGHT: 1'-6" TOTAL AREA: 3.0 Sq.-Ft. BORDER TYPE: INSET RECESS: 0.47" WIDTH: 0.63" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Fluorescent Orange COPY COLOR: Black	DESIGN BY: DAH PROJECT ID: I-5700	CHECKED BY: DAH LOCATION:	Sep 23, 2019 DIV: 5
	SYMBOL	X	Y	WID

BORDER
R=1.5"
TH=0.63"
IN=0.47"

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter locations are panel edge to lower left corner

Letter	Series	Size	Text Length
C	D	2000	16.8
U			
R			
B			
L	D	2000	16.1
A			
N			
E			

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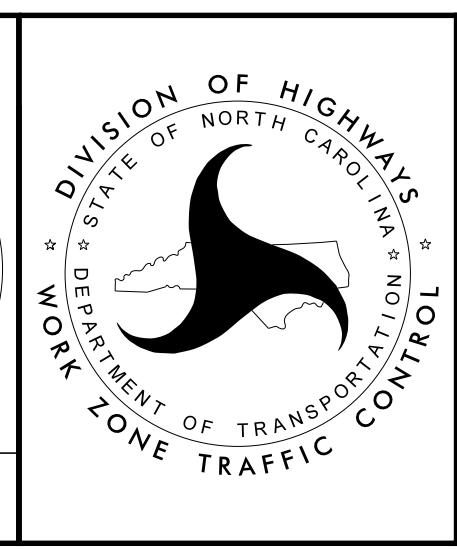
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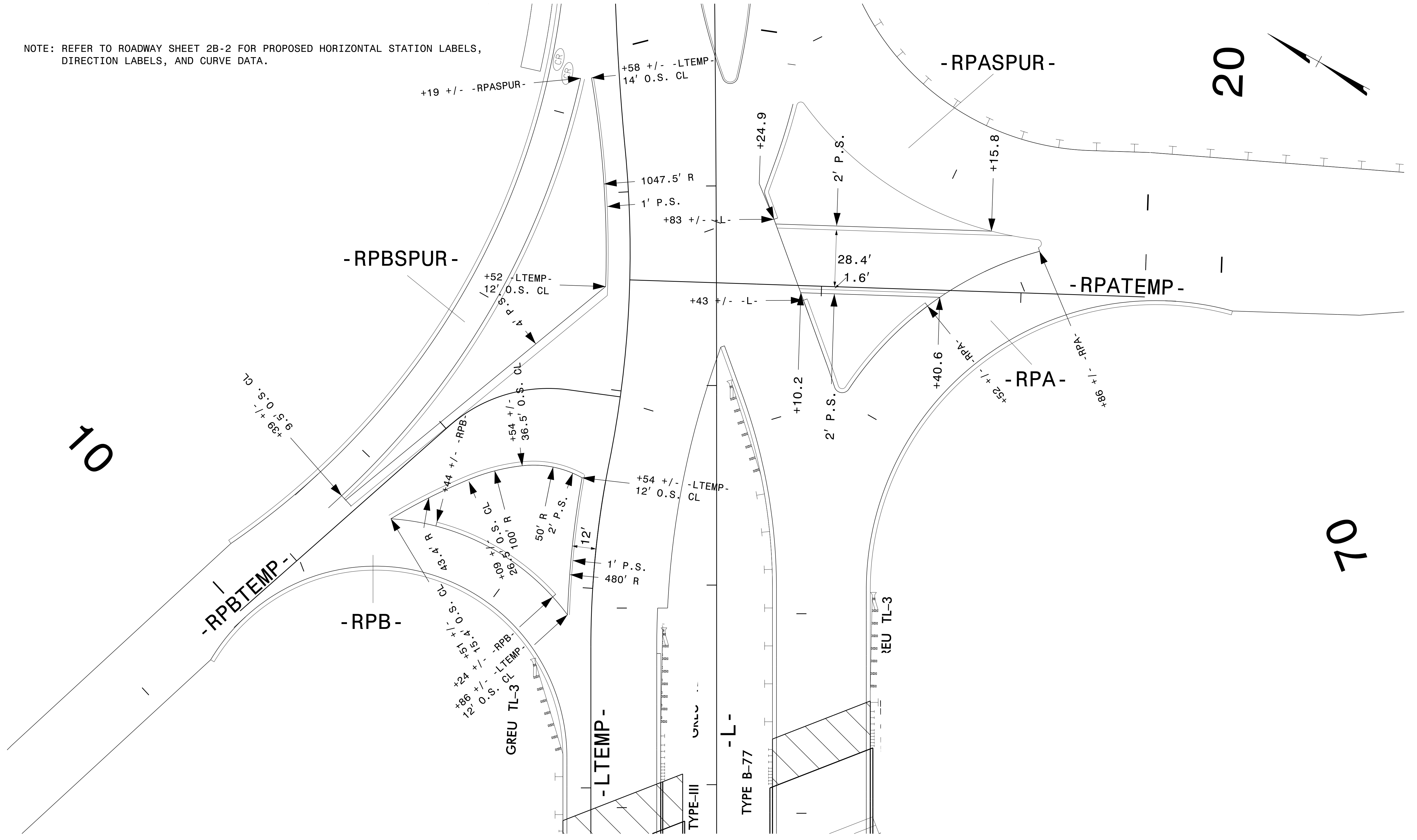
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SPECIAL SIGN DESIGNS

NOTE: REFER TO ROADWAY SHEET 2B-2 FOR PROPOSED HORIZONTAL STATION LABELS, DIRECTION LABELS, AND CURVE DATA.



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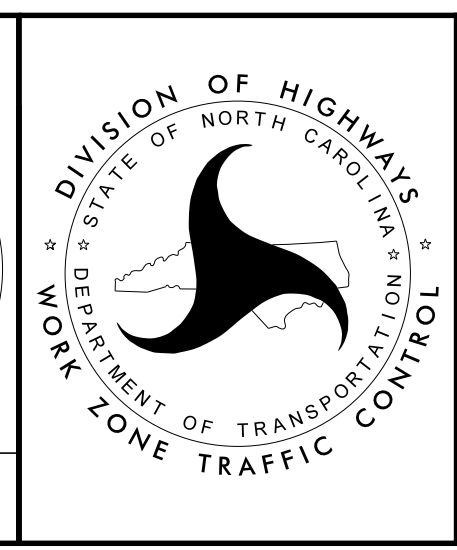
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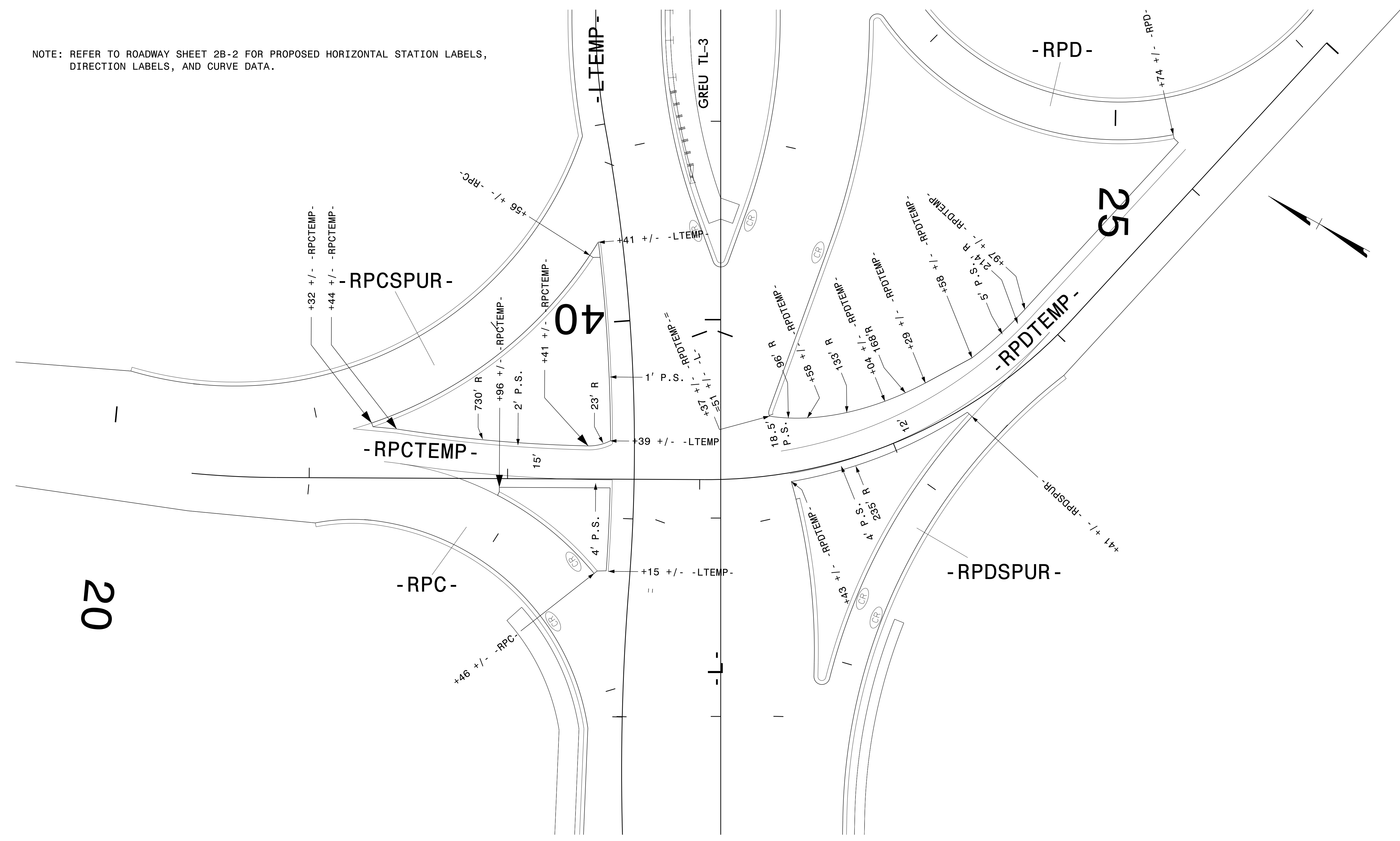
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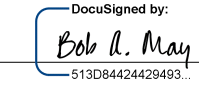
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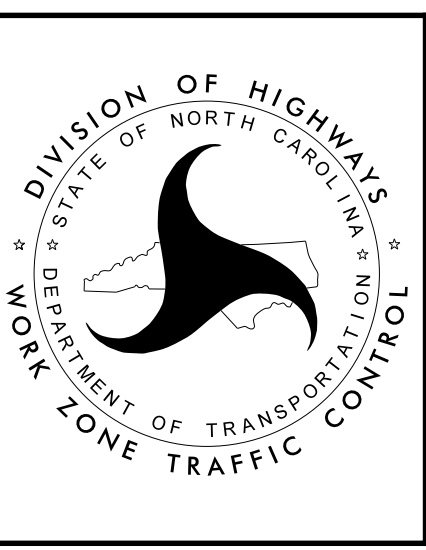
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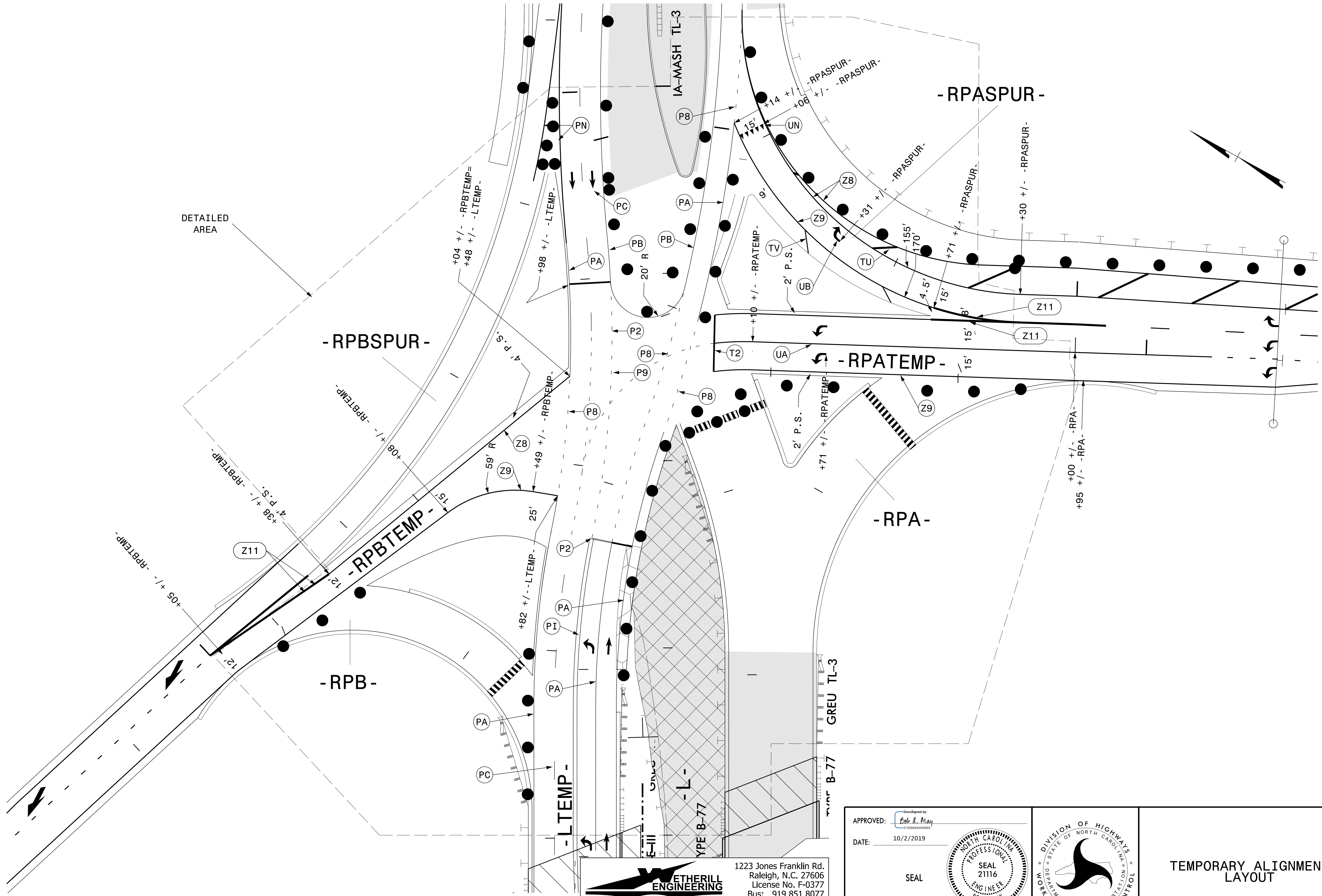
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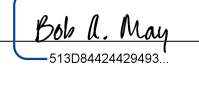

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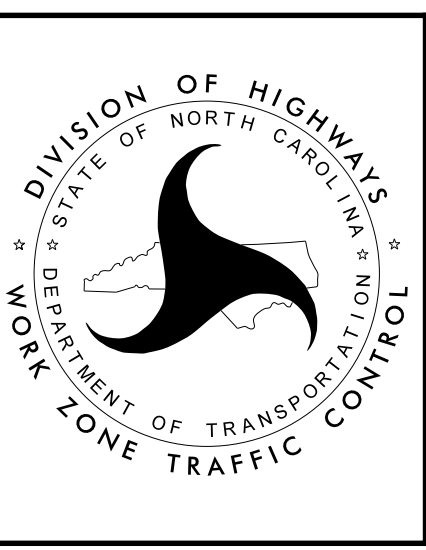
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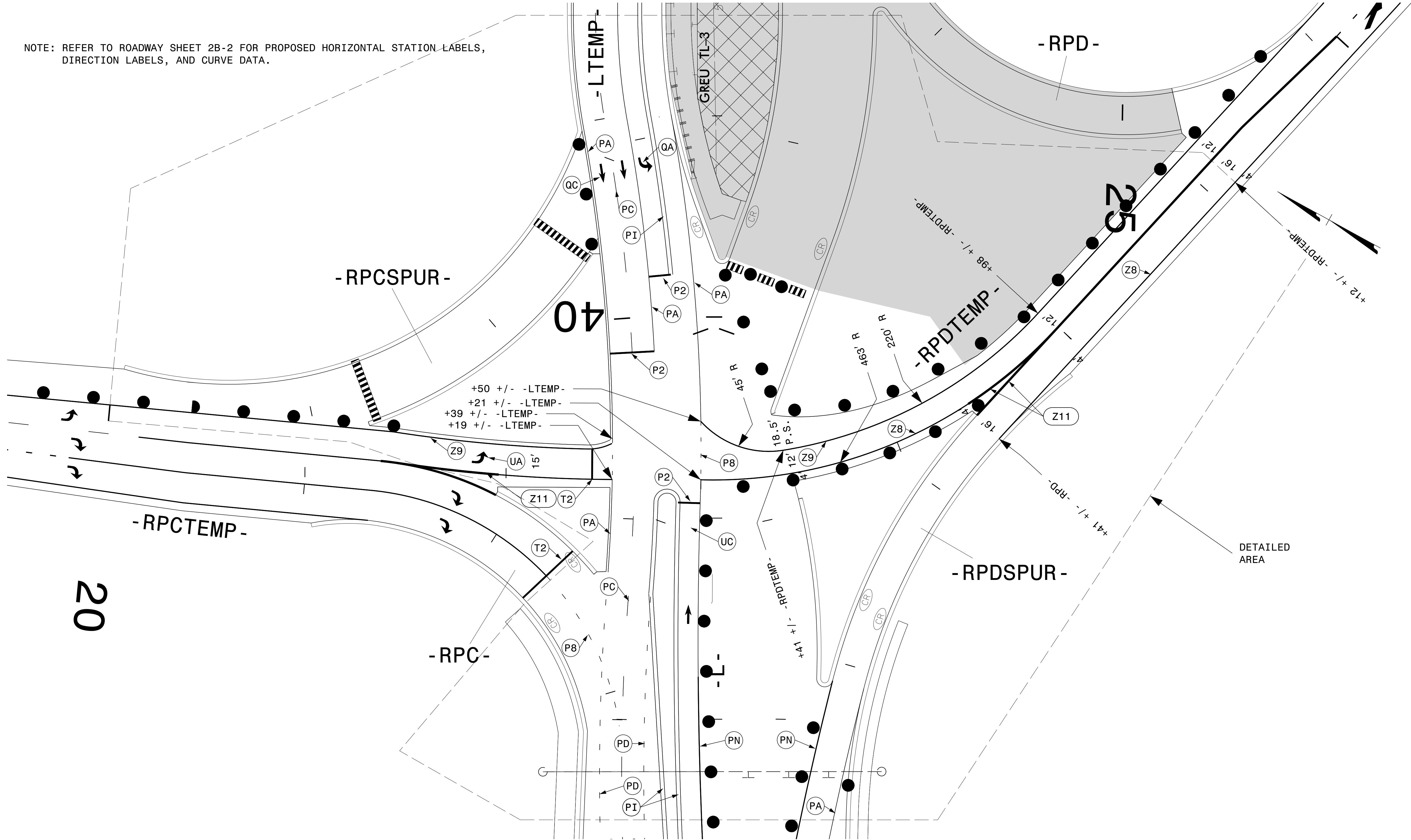
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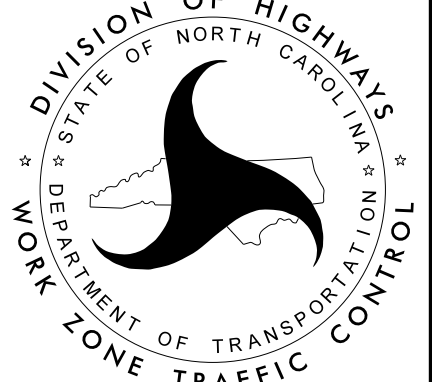
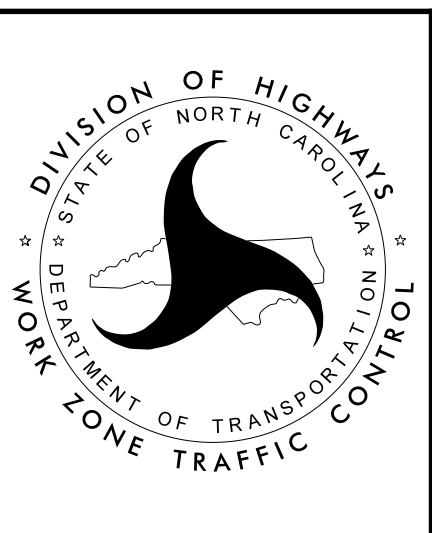


+50 +/- LTEMP
+21 +/- LTEMP
+39 +/- LTEMP
+19 +/- LTEMP

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TEMPORARY ALIGNMENT LAYOUT

PHASE I

STEP 1) INSTALL ALL ADVANCE WARNING SIGNS ON ENTIRE PROJECT (SEE SHEET TMP-01C, GENERAL NOTE Q).

STEP 2) USING RSD (ROADWAY STANDARD DRAWING) 1101.02 INSTALL TEMPORARY PAVEMENT (A)(C), MARKINGS, AND MARKERS ON EXISTING RAMP C. INSTALL/MODIFY (COVER)/REMOVE OVERHEAD SIGNING (AS SHOWN ON TMP-05 THRU 08) TO DIRECT EXISTING LOOP D TRAFFIC ONTO EXISTING RAMP C, AND INSTALL TEMPORARY SIGNAL AT THE -L/-RPC-/-RPD- INTERSECTION AND ACTIVATE. SHIFT EXISTING LOOP D TRAFFIC ONTO EXISTING RAMP C, CLOSE EXISTING LOOP D, AND REMOVE EXISTING LOOP D OVERHEAD SIGNING. [REFER TO SHEETS TMP-01A, 02N, & 13]

STEP 3) USING RSD 1101.02 INSTALL 3/4" ASPHALT OVERLAY OVER THE EXISTING PAVEMENT ALONG -Y- (I-40) WB (TIE BACK TO RAMPS AS NECESSARY). INSTALL TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -Y- WB, -RPA-, AND -RPB-. INSTALL LANE SHIFT SIGNING AND SHIFT TRAFFIC ONTO THE PHASE I PATTERN. USING RSD 1101.02 INSTALL PORTABLE CONCRETE BARRIER (PCB) AND DRUMS ON I-40 WB. BEHIND BARRIER BEGIN CONSTRUCTION OF -Y- 'LEFT' FROM BEGIN CONSTRUCTION LIMITS TO STA. 41+21 +/- -Y- AND CONSTRUCT -Y- 'LEFT' FROM STA. 56+43 +/- -Y- TO STA. 78+12 +/- -Y-. BEHIND BARRIER, RELOCATE GROUND MOUNTED SIGN AT STA. 33+00 +/- -Y-. [REFER TO SHEETS TMP-02N, 04 THRU 09, 12, 13, & ROADWAY PLANS]

USING RSD 1101.03 AND STOPPING TRAFFIC, INSTALL/REMOVE OVERHEAD STRUCTURES AS SHOWN ON TMP-09 (SEE GENERAL NOTES), OR THE CONTRACTOR MAY DETOUR TRAFFIC USING SHEET TMP-02C.

USING RSD 1101.02 INSTALL 3/4" ASPHALT OVERLAY OVER THE EXISTING PAVEMENT ALONG -Y- (I-40) EB (TIE BACK TO RAMPS AS NECESSARY). REMOVE AND REPLACE PAVEMENT MARKINGS FROM STA. 3+72 +/- -Y- TO STA. 43+95 +/- -Y-. INSTALL LANE SHIFT SIGNING AND SHIFT TRAFFIC ONTO THE PHASE I PATTERN. INSTALL PCB ON I-40 EB. BEHIND BARRIER CONSTRUCT -Y- 'RIGHT' FROM STA. 53+98 +/- -Y- TO STA. 76+55 +/- -Y- AND BEGIN CONSTRUCTION OF -Y- 'RIGHT' FROM STA. 94+68 +/- -Y- TO END CONSTRUCTION LIMITS INCLUDING THE CULVERT EXTENSION AT STA. 87+50 +/- -Y-. REMOVE CANTILEVER SIGN AT STA. 64+00 +/- -Y- (USE RSD 1101.02 IF NEEDED). [REFER TO SHEETS TMP-02N, 04 THRU 09, 12 THRU 15, AND ROADWAY PLANS]

USING RSD 1101.02 AS NEEDED, BEGIN CONSTRUCTION OF THE FOLLOWING AS MUCH AS POSSIBLE UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE [REFER TO SHEETS TMP-01A, 02 THRU 02B, 08, 09, AND 12]:

- STOPPING TRAFFIC, INSTALL/REMOVE OVERHEAD SIGN NEAR STA. 55+50 -L- (SEE GENERAL NOTES)[SEE SHEET TMP-10]
- -RPA- FROM STA. 16+00 +/- -RPA- TO STA. 21+00 +/- -RPA-
- -RPASPUR- FROM STA. 10+00 +/- -RPASPUR- TO STA. 11+50 +/- -RPASPUR-
- -RPC- FROM STA. 17+00 +/- -RPC- TO STA. 22+00 +/- -RPC-
- -RPCSPUR- FROM -RPC- TO STA. 21+50 +/- -RPCSPUR-
- -RPD- FROM STA. 20+00 +/- -RPD- TO STA. 26+00 +/- -RPD-
- -RPDSPUR- FROM -RPD- TO STA. 11+00 +/- -RPDSPUR-

USING RSD 1101.02, WIDEN AND WEDGE -L- FROM STA. 54+00 +/- -L- TO THE END CONSTRUCTION LIMITS AND -NBLRPA- UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE. THE CONTRACTOR MAY CLOSE -NBLRPA- PER THE DISCRETION OF THE ENGINEER, BUT SHALL RE-OPEN IT AT THE END OF THE WORK PERIOD. [SEE SHEET TMP-10 AND RDWY PLANS]

USING RSD 1101.02 CONSTRUCT -Y3- FROM STA. 15+00 +/- -Y3- TO STA. 18+50 +/- -Y3- AND -Y8- FROM EXISTING -Y3- TO STA. 19+50 +/- -Y8- UP TO THE EXISTING EDGE AND ELEVATION. INSTALL THE SIGNAL AT -L-/-Y3- INTERSECTION. THE HEADS FOR THIS INTERSECTION SHALL BE COVERED AFTER INSTALLATION IS COMPLETE. [REFER TO SHEET TMP-11]

AWAY FROM TRAFFIC REMOVE EXISTING LOOP D. [REFER TO SHEET TMP-09]

AWAY FROM TRAFFIC CONSTRUCT -Y3- FROM STA. 18+50 TO -L- AND -Y8- FROM STA. 19+50 +/- -Y8- TO -Y3- UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE. [REFER TO SHEETS TMP-10 AND 11]

PHASE II

STEP 1) USING RSD 1101.02 WEDGE -Y3- TIE-IN FROM BEGIN CONSTRUCTION LIMITS (SEE RDWY PLANS) TO STA. 18+50 +/- -Y3-, SHIFT TRAFFIC ONTO THE PHASE II PATTERN, INSTALL REMAINING TEMPORARY PAVEMENT MARKINGS AND MARKERS, AND ACTIVATE TEMPORARY SIGNAL. WEDGE -Y8- FROM BEGIN CONSTRUCTION LIMITS TO STA. 19+50 +/- -Y8-, INSTALL TEMPORARY PAVEMENT MARKINGS AND MARKERS, AND SHIFT -Y8- TRAFFIC ONTO THE PHASE II PATTERN. INSTALL TYPE III BARRICADES AND BEGIN REMOVAL OF ABANDONED -Y3-. [REFER TO SHEETS TMP-25-26]

USING RSD 1101.02 RESET PCB ON -Y- WB OUTSIDE SHOULDER AND REMOVE/RESET PCB ON -Y- EB OUTSIDE SHOULDER AND RESET PCB ON -Y- EB OUTSIDE SHOULDER UNDER THE BRIDGE. USING RSD 1101.02, MILL 3-3/4" OF THE EXISTING PAVEMENT AND INSTALL THE FIRST LIFT OF RESURFACING (1-1/2"), TEMPORARY PAVEMENT MARKINGS, MARKERS, AND LANE SHIFT SIGNING ON I-40 WB. MILL 3-3/4" OF THE EXISTING PAVEMENT AND INSTALL THE FIRST LIFT OF RESURFACING (1-1/2"), TEMPORARY PAVEMENT MARKINGS, MARKERS, AND LANE SHIFT SIGNING ON I-40 EB. SHIFT I-40 TRAFFIC ONTO THE PHASE II PATTERN. [REFER TO SHEETS TMP-02N, 19, 24, AND 27]

NOTE: PHASE II, STEPS 2 AND 2A MAY BE CONSTRUCTED SIMULTANEOUSLY.

STEP 2) USING RSD 1101.02, INSTALL PCB WITHIN THE INTERCHANGE ON I-40 MEDIAN AND REMOVE THE EXISTING GUARDRAIL BEHIND THE PCB. BEHIND PCB CONSTRUCT -Y- STAGE 1 MEDIAN AND CENTER BENT. [REFER TO SHEETS TMP-19 AND 24]

USING RSD 1101.03 AND STOPPING TRAFFIC, INSTALL/REMOVE OVERHEAD SIGNING ON -Y- AS SHOWN ON TMP-18 (SEE GENERAL NOTES).

INSTALL PEDESTRIAN BARRICADES ALONG -L- 'LEFT', 'RIGHT', -Y5-, AND CLOSE SIDEWALKS. DETOUR PEDESTRIANS USING A SHUTTLE SERVICE. THEN USING RSD 1101.02 CONSTRUCT -L- RIGHT FROM BEGIN CONSTRUCTION LIMITS (SEE RDWY PLANS) TO STA. 21+12 -L-, TEMPORARY PAVEMENT(A), CURB AND GUTTER, AND SIDEWALK AT HAMPTON INN DRIVEWAY BETWEEN THE HAMPTON INN DRIVEWAY AND -Y1- (AERIAL CENTER PKWY). CONSTRUCT CURB & GUTTER AND MONOLITHIC ISLANDS ON -Y2-, -Y5-, AND DRIVEWAY [REFER TO SHEETS TMP-20 AND 21]

USING RSD 1101.02 AS NEEDED BEGIN CONSTRUCTION OF -L- 'LEFT' AND -LTEMP- FROM BEGIN CONSTRUCTION LIMITS TO STA. 37+93 +/- -L-, FROM STA. 39+50 +/- -L- TO STA. 47+00 +/- -L-, AND FROM STA. 49+03 +/- -L- TO STA. 54+00 +/- -L- INCLUDING END BENTS AND BRIDGE DECK, AND COMPLETE THE REMOVAL OF ABANDONED -Y3-. DETOUR I-40 TRAFFIC ALONG INTERCHANGE RAMPS DURING GIRDER INSTALLATION. [REFER TO SHEETS TMP-02C, 02N, 24 THRU 26]

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK IN PHASE II, STEP 2A FROM 6:00 P.M. FRIDAY TO 7:00 A.M. MONDAY. REPEAT WEEKEND WORK AS DIRECTED BY THE ENGINEER TO COMPLETE PHASE II, STEP 2A (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES).

STEP 2A) REMOVE PEDESTRIAN BARRICADES INSTALLED IN STEP 2 AND OPEN DETOUR TO PEDESTRIANS. CLOSE -L- 'LEFT', -Y5-, DRIVEWAY, AND -Y2- SIDEWALKS AND DETOUR PEDESTRIANS USING A SHUTTLE SERVICE. [REFER TO SHEETS TMP-22 AND 23]

COMPLETE THE FOLLOWING IN THIS ORDER, CLOSING THE ROADWAY AND DETOUR TRAFFIC, WEDGING UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE, TIEING THE WEDGING TO EXISTING -L-, INSTALL TEMPORARY PAVEMENT MARKINGS AND MARKERS, AND RE-OPENING THE ROADWAY TO THE PHASE II PATTERN. [REFER TO SHEETS TMP-02D, 02E, 02O, 22, & 23]

- -Y5- (DETOUR TO SORRELL GROVE CHURCH RD)
- DRIVEWAY (DETOUR TO -Y5-)
- -Y2- (DETOUR TO -Y5-).
- INSTALL THE TEMPORARY SIGNALS FOR PHASE III AND BAG HEADS.
- OPEN SIDEWALKS ON -Y5-, -Y2-, AND DRIVEWAY AND INSTALL PEDESTRIAN BARRICADES ON -L- AT EACH -Y- LINE.

THE CONTRACTOR SHALL COMPLETE PHASE II, STEP 3 THRU PHASE III, STEP 1 WITHIN 105 CONSECUTIVE CALENDAR DAYS. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 3) USING RSD 1101.02 INSTALL/RESET PCB ON -Y- EB OUTSIDE SHOULDER, REMOVE PCB ON -RPB- (PHASE I) TO I-40 WB, AND INSTALL/RESET PCB FROM PHASE I (INSTALLING ADDITIONAL PCB AS NEEDED) WITHIN THE INTERCHANGE ON I-40. USING RSD 1101.02 COVER GUIDE SIGNS FOR AIRPORT BLVD AND USE CMS AND DMS TO DETOUR AIRPORT BLVD TRAFFIC TO AVIATION PKWY. [REFER TO SHEETS TMP-02M, 02N, 18, 19, 24, AND 27]

USING RSD 1101.02 CLOSE THE OUTSIDE SB LANE OF -L-. THEN, AWAY FROM TRAFFIC AND IN A CONTINUOUS MANNER CONSTRUCT/COMPLETE CONSTRUCTION OF THE REMAINING PORTIONS OF -RPB-, -RPBSPUR-, -RPC-, AND -RPCSPUR- UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE, TEMPORARY PAVEMENT MARKINGS, AND OVERHEAD SIGNING. DETOUR TRAFFIC OFFSITE. [REFER TO SHEETS TMP-02F THRU 02H, 02P, 02Q, 19, AND 24]

BEHIND BARRIER CONSTRUCT -Y- 'RIGHT' FROM BEGIN CONSTRUCTION LIMITS TO STA. 56+15 +/- -Y- AND -Y- 'LEFT' FROM STA. 41+21 +/- -Y- TO STA. 56+43 +/- -Y-. [REFER TO SHEETS TMP-18 AND 19]

USING RSD 1101.02 AS NEEDED CONSTRUCT/COMPLETE CONSTRUCTION OF -L- AND -LTEMP- FROM BEGIN CONSTRUCTION LIMITS TO STA. 54+00 AND INSTALL TEMPORARY PAVEMENT(B) AS SHOWN ON SHEET TMP-24 INCLUDING -RPBTEMP- AND -RPCTEMP-. [REFER TO SHEETS TMP-01A, 02R THRU 02S, 22 THRU 25, AND ROADWAY PLANS]

PHASE III

STEP 1) USING RSD 1101.02, WEDGE -L- UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE AT A MINIMUM AS SHOWN ON THE DETAIL SHEETS. INSTALL TEMPORARY PAVEMENT MARKINGS, MARKERS, SIGNING, ACTIVATE PHASE III TEMPORARY SIGNALS, AND SHIFT -L- TRAFFIC ONTO THE PHASE III PATTERN. REMOVE PEDESTRIAN BARRICADES BETWEEN -Y5- AND -Y2- AND OPEN -L- 'LEFT' TO PEDESTRIANS. [REFER TO SHEETS TMP-02T, 02U, AND 32 THRU 35]

STOPPING TRAFFIC, INSTALL OVERHEAD SIGNING ON -L- AS SHOWN ON SHEET TMP-34 (SEE GENERAL NOTES).

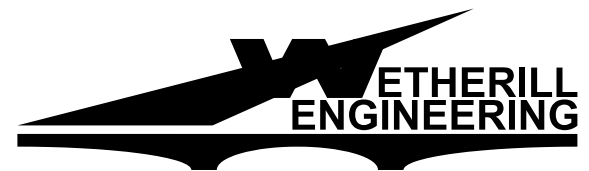
USING RSD 1101.02, REMOVE PCB ALONG I-40 WB OUTSIDE SHOULDER BETWEEN I-540 AND -L-. OPEN -RPB- BETWEEN -RPBSPUR- AND I-40, -RPBSPUR-, -RPC- BETWEEN -RPCSPUR- AND I-40, AND -RPCSPUR- AND USE TYPE III BARRICADES TO KEEP THE PORTIONS OF -RPB- AND -RPC- CLOSED. [REFER TO SHEETS TMP-02N, 28 THRU 31, AND 34]

THE CONTRACTOR SHALL COMPLETE PHASE III, STEP 2 WITHIN 120 CONSECUTIVE CALENDAR DAYS. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 2) USING RSD 1101.02, CLOSE EXISTING RAMPS A AND D AND DETOUR TRAFFIC OFFSITE ALONG AVIATION PKWY (SEE SHEET TMP-02I). USING RSD 1101.02 INSTALL /RESET PCB ON -Y- WB AND -Y- EB OUTSIDE SHOULDERS. AWAY FROM TRAFFIC, CONSTRUCT/COMPLETE CONSTRUCTION OF THE REMAINING PORTIONS OF -RPA-, -RPASPUR-, -RPD-, -RPDSPUR-, -RPATEMP-, -RPDTEMP-, AND -L- 'RIGHT' AT -RPA- AND -RPD- UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE, TEMPORARY MARKINGS, MARKERS, AND OVERHEAD SIGNING. [REFER TO SHEETS TMP-02I, 02J, 02P THRU 02U, 34, 36, AND 37]

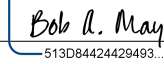
USING RSD 1101.02 AS NEEDED, INSTALL/REMOVE OVERHEAD SIGNING ON -Y- AS SHOWN ON SHEET TMP-37. [REFER TO SHEET TMP-02N]

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PHASING

PHASE III

AWAY FROM TRAFFIC REMOVE EXISTING -RPA- AND -RPD-.
[REFER TO SHEETS TMP-34 AND 36]

BEHIND BARRIER CONSTRUCT -Y- 'RIGHT' FROM STA. 76+55 -Y- TO STA. 94+68 -Y-, COMPLETE CONSTRUCTION OF -Y- 'RIGHT' BEGUN IN PHASE I, AND INSTALL TEMPORARY MARKINGS AND MARKERS AS SHOWN.
[REFER TO SHEETS TMP-36 AND 37]

UPON COMPLETION OF PHASE III, STEP 2 USE RSD 1101.02 TO REMOVE PCB AT -RPD- AND I-40 AND REMOVE/RESET PCB AT -RPA- AND I-40. OPEN -RPA- FROM -RPASPUR- TO I-40, -RPASPUR-, -RPD- FROM -RPDSPUR- TO I-40, AND -RPDSPUR- TO TRAFFIC.
[REFER TO SHEETS TMP-40, 42, AND 43]

STEP 3) USING RSD 1101.02 AS NEEDED CONSTRUCT AND WEDGE THE REMAINING PORTIONS OF -L- 'RIGHT' FROM STA. 20+68 +/- -L- TO STA. 34+50 +/- -L-, AND FROM STA. 40+21 +/- -L- TO STA. 54+00 +/- -L-, INCLUDING THE STAGE II BRIDGE DECK, END BENTS, OVERHEAD SIGNING, TEMPORARY SIGNING, TEMPORARY MARKINGS/MARKERS, AND -Y1-, UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE, REMOVING THE EXISTING BRIDGE DECK, END BENTS, AND FOOTINGS. DETOUR I-40 TRAFFIC ALONG THE RAMPS DURING GIRDER INSTALLATION (SEE SHEET TMP-02C). STOP TRAFFIC AS NEEDED TO INSTALL OVERHEAD SIGNING OVER -L- (SEE GENERAL NOTES). [REFER TO SHEETS TMP-38 THRU 41]

BEHIND REMAINING BARRIER CONSTRUCT THE REMAINING PORTIONS OF -Y- 'LEFT', -Y- 'RIGHT', AND THE MEDIAN UNDER THE BRIDGE DECKS UP TO AND INCLUDING THE EXISTING EDGE AND ELEVATION. INSTALL TEMPORARY SHORING TO REMOVE EXISTING BENTS.
[REFER TO SHEETS TMP-02 THRU 02B, 02N, 40, 42, AND 43]

INSTALL ALL PHASE IV TEMPORARY SIGNALS AND COVER.

PHASE IV

STEP 1) USING RSD 1101.02, INSTALL TEMPORARY PAVEMENT MARKINGS/MARKERS ON -L- NB FROM THE BEGIN PROJECT LIMITS TO THE STOP BAR AT -RPDSPUR-. PLACE -L- NB TRAFFIC ONTO THE PHASE IV PATTERN AND UNCOVER ANY OVERHEAD SIGNING STILL COVERED. AWAY FROM TRAFFIC, INSTALL TEMPORARY PAVEMENT MARKINGS ON -L- SB AS MUCH AS POSSIBLE, -RPA-, AND -RPD-.
[REFER TO SHEETS TMP-46 THRU 48]

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK IN PHASE IV, STEP 2 FROM 10:00 P.M. FRIDAY TO 5:00 A.M. MONDAY AS DIRECTED BY THE ENGINEER (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES).

STEP 2) USING SHEETS TMP-02K AND 02L, CLOSE THE INTERCHANGE ON -L- AND DETOUR TRAFFIC OFFSITE. INSTALL TEMPORARY PAVEMENT MARKINGS ON -RPB-, -RPC-, AND -L- NB BETWEEN RAMPS B AND C. OPEN THE INTERCHANGE AND PLACE TRAFFIC ONTO THE PHASE IV PATTERN. [REFER TO SHEET TMP-48]

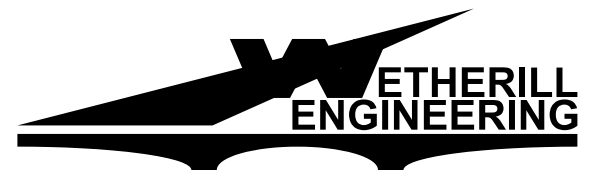
STEP 3) USING RSD 1101.02, CONSTRUCT AND REMAINING WORK IN MEDIAN, INCLUDING MONOLITHIC AND RAISED ISLANDS.
[REFER TO SHEETS TMP-46 THRU 48]

NOTE: ONLY ONE LANE MAY BE CLOSED ON MULTI-LANE RAMPS. RAMPS WITH ONLY ONE LANE MAY BE NARROWED TO NO LESS THAN 12 FEET.

PHASE V

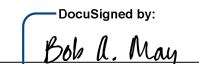
STEP 1) USING RSD 1101.02, INSTALL THE FINAL LIFT OF SURFACE COURSE, FINAL PAVEMENT MARKINGS AND MARKERS (SEE FINAL PAVEMENT MARKING PLAN), AND THE FINAL SIGNALS ON THE ENTIRE PROJECT. REMOVE ALL TEMPORARY TRAFFIC MANAGEMENT DEVICES, TEMPORARY SIGNING, AND PLACE TRAFFIC ON THE FINAL PATTERN ON THE ENTIRE PROJECT. [REFER TO SHEET TMP-02N]

10/2/2019
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Fax: 919 851 8107

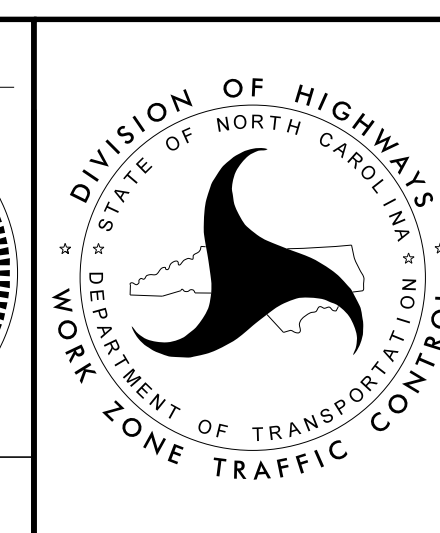
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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

APPROVED: 
DATE: 10/2/2019

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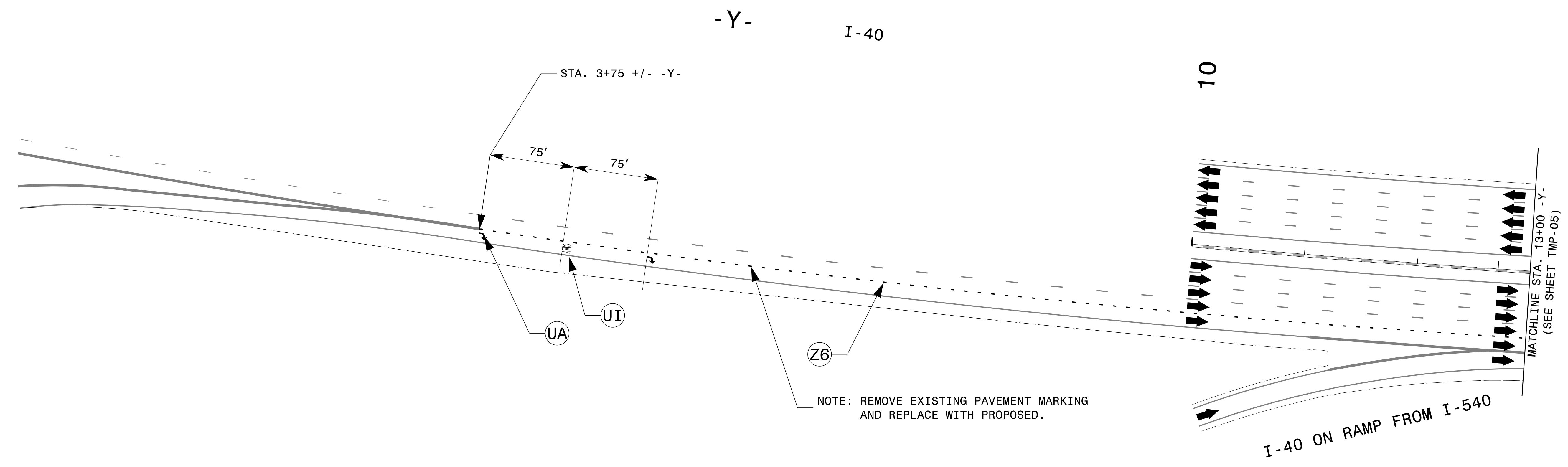
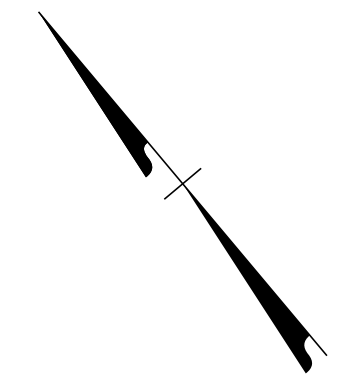


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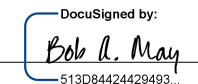

PHASING


PROJ. REFERENCE NO.	SHEET NO.
I-5700	TMP-04



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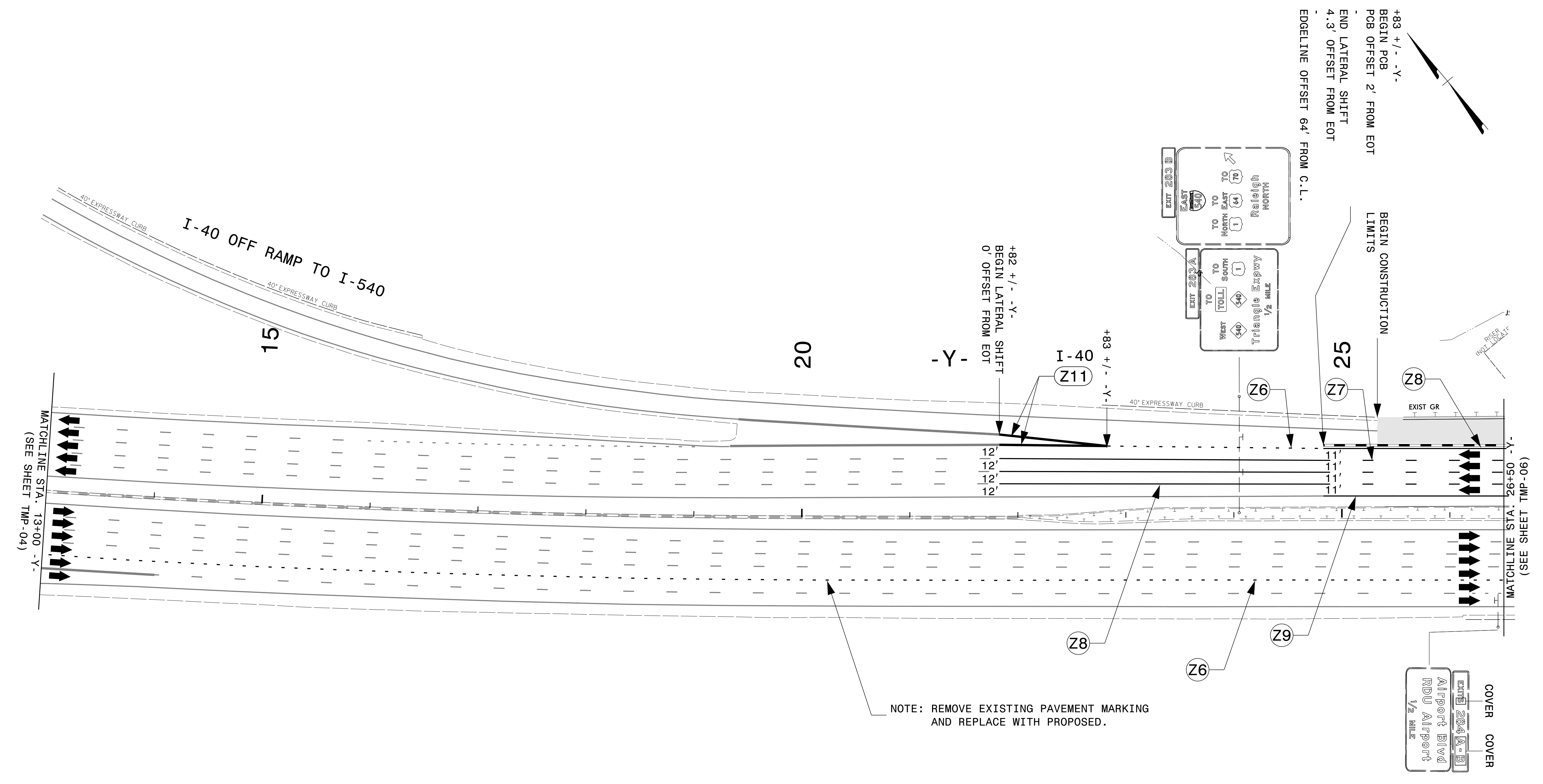

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APPROVED: 
DocuSigned by:
Bob A. May
51306423426493
 DATE: 10/2/2019
 SEAL


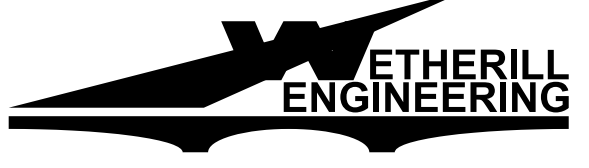

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 NORTH CAROLINA
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PHASE I DETAIL


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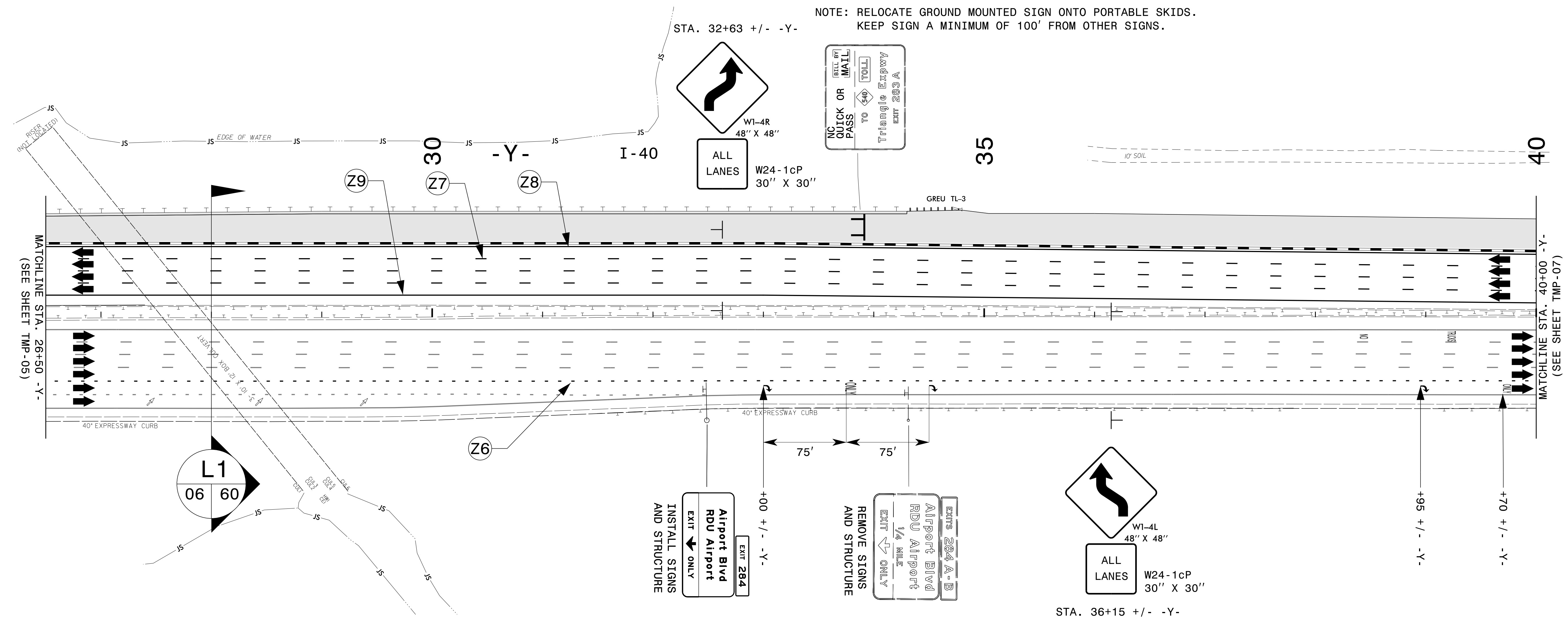
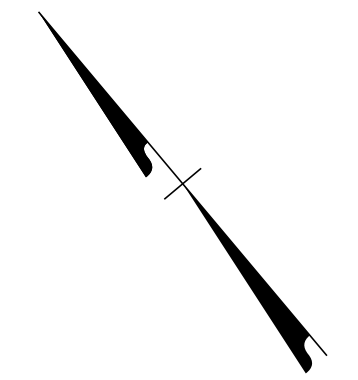
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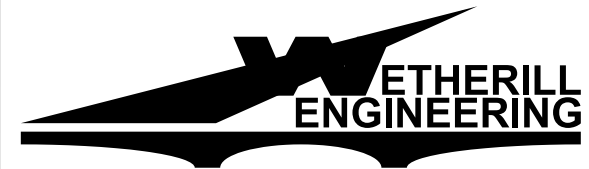
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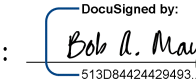


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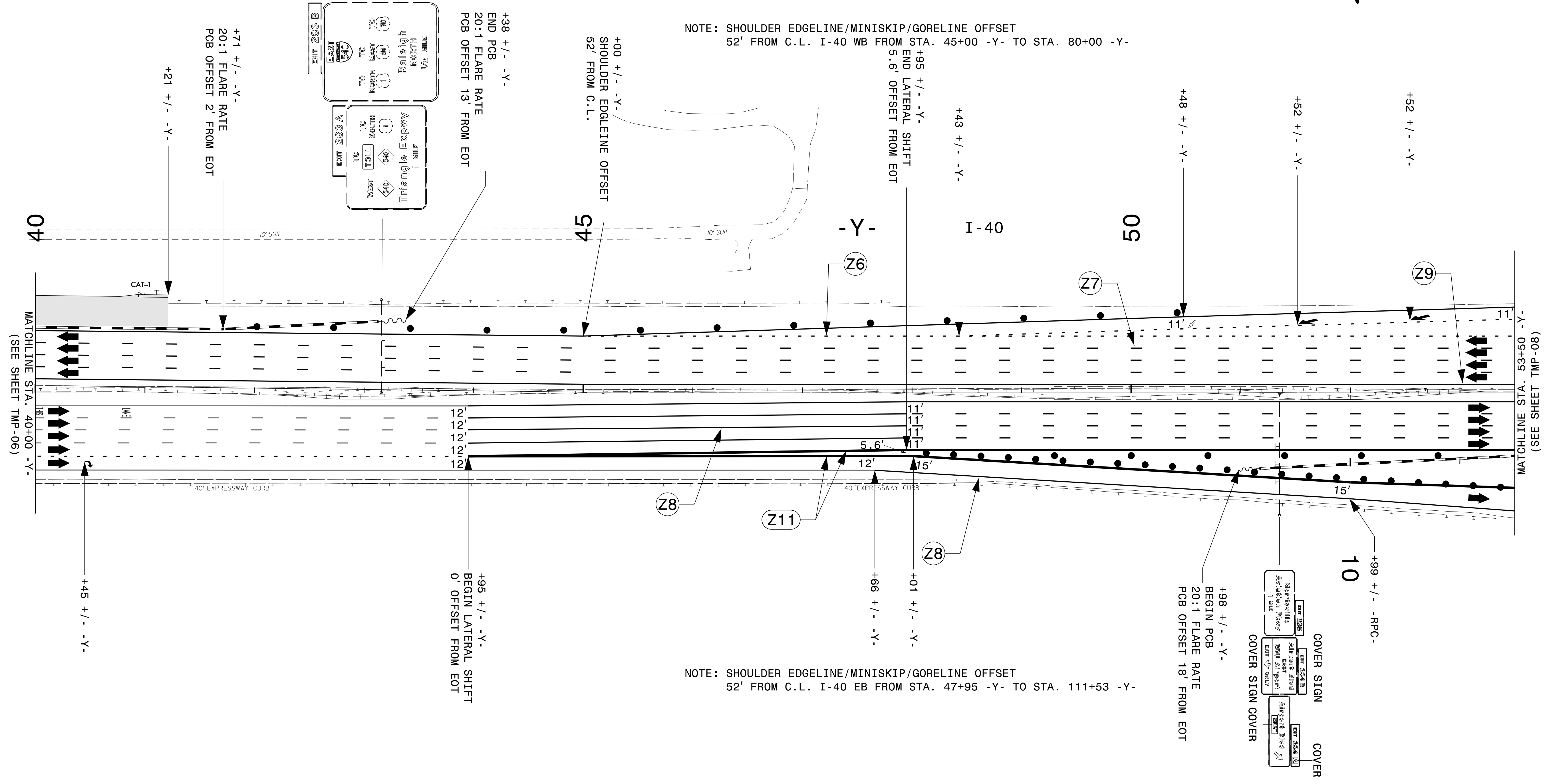
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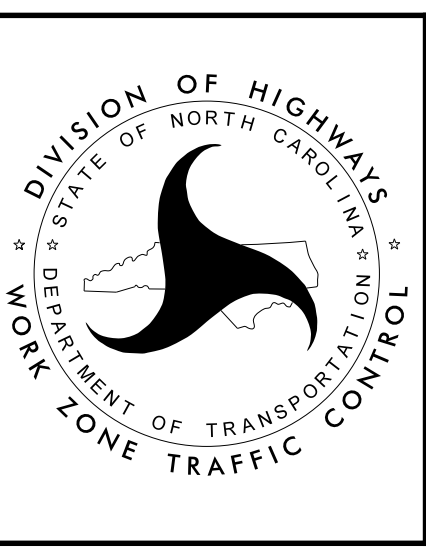
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APPROVED: *Bob A. May*
DATE: 10/2/2019

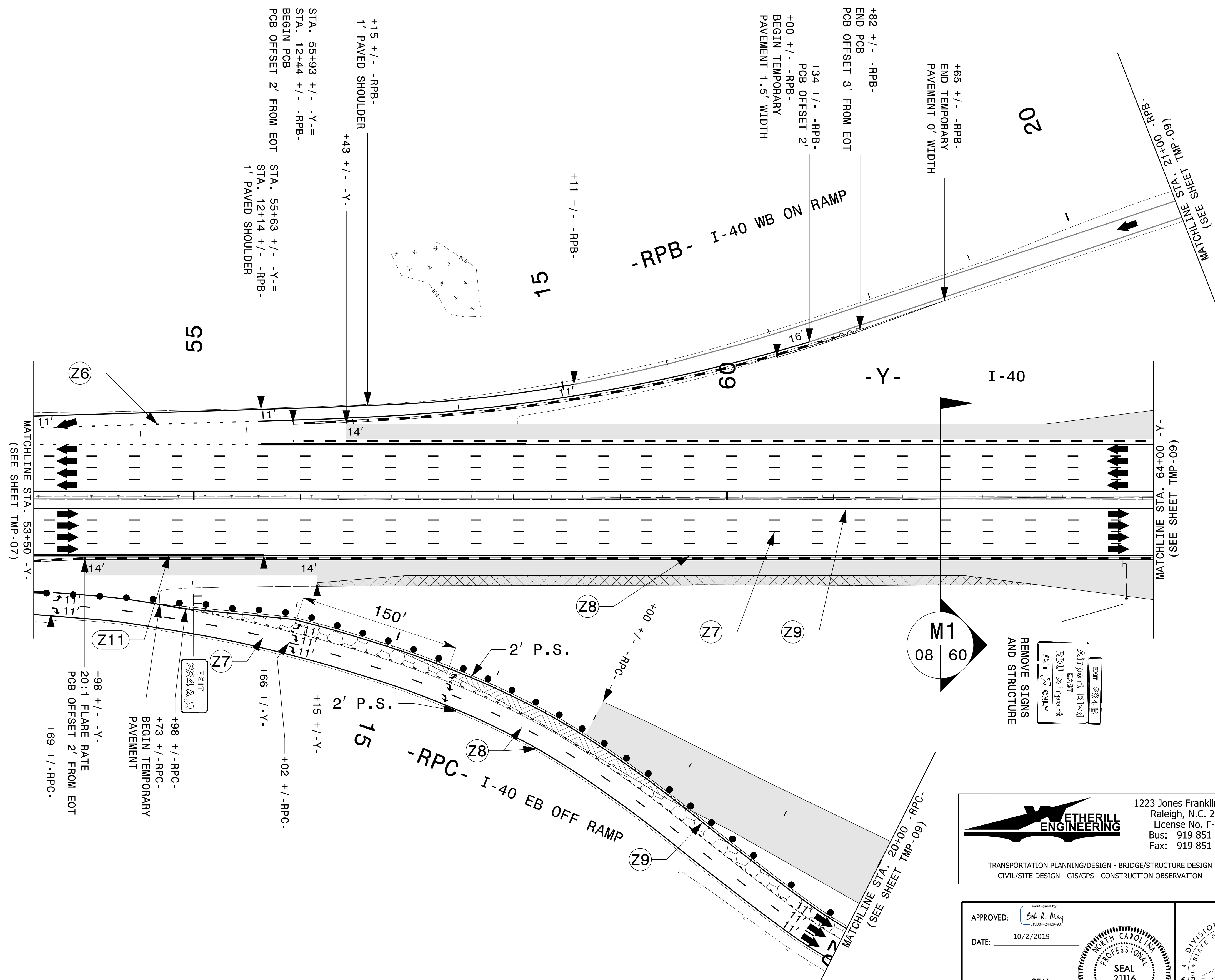
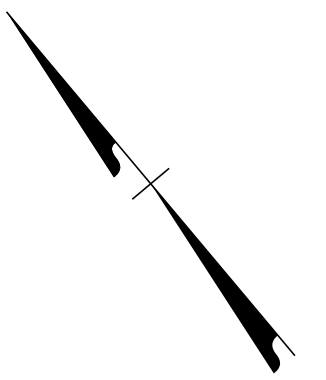
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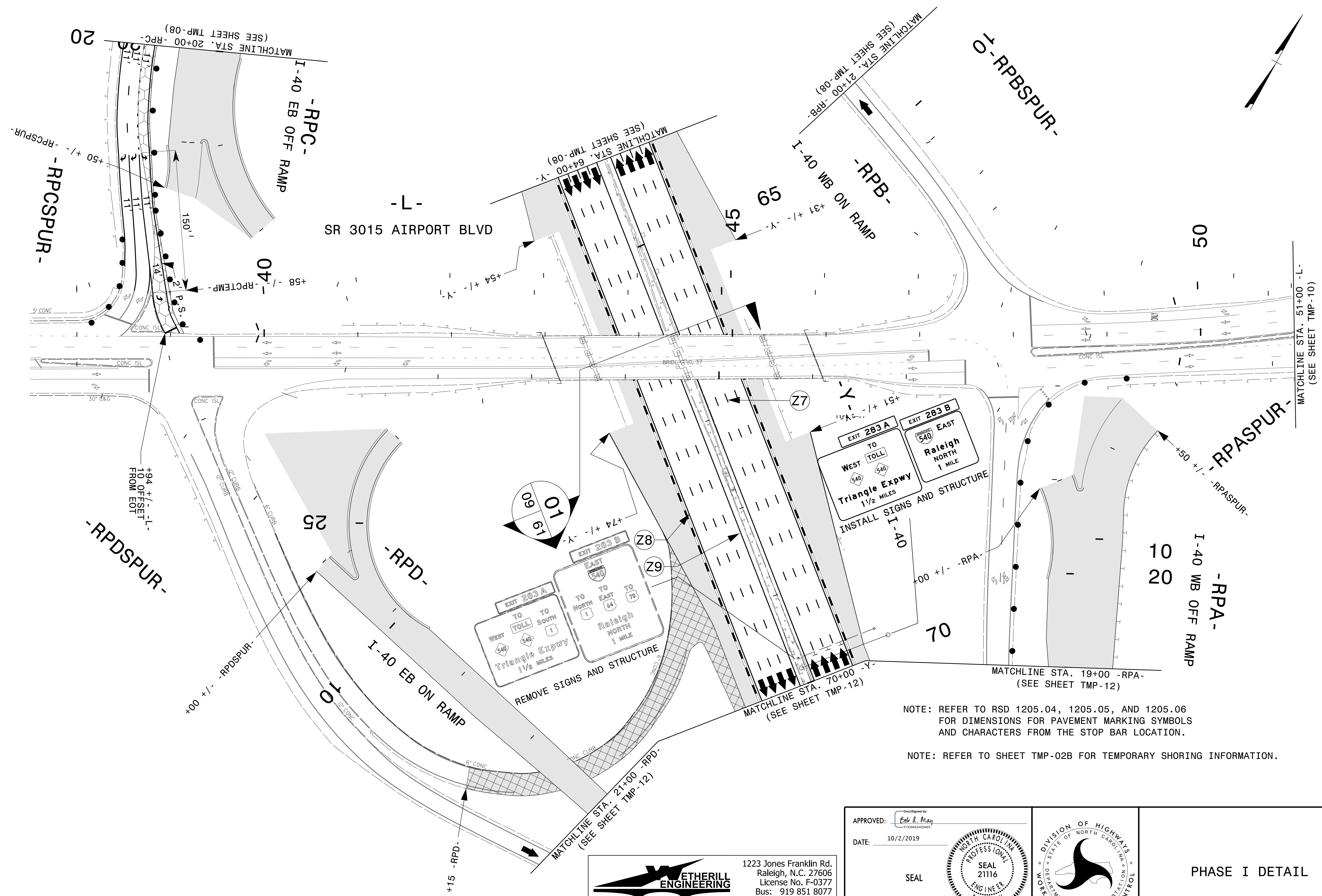
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APPROVED: *Bob A. May*

DATE: 10/2/2019

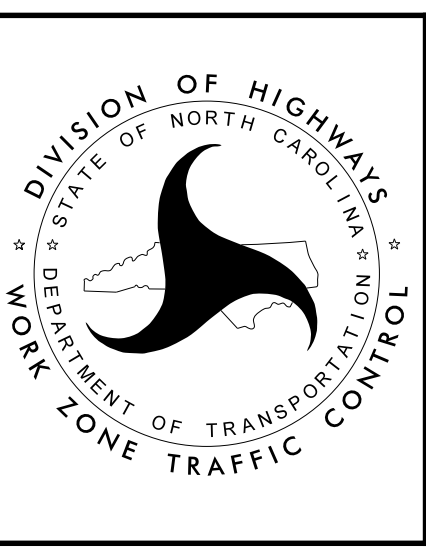
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SEAL 21116

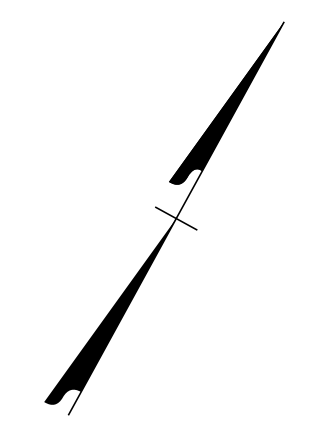
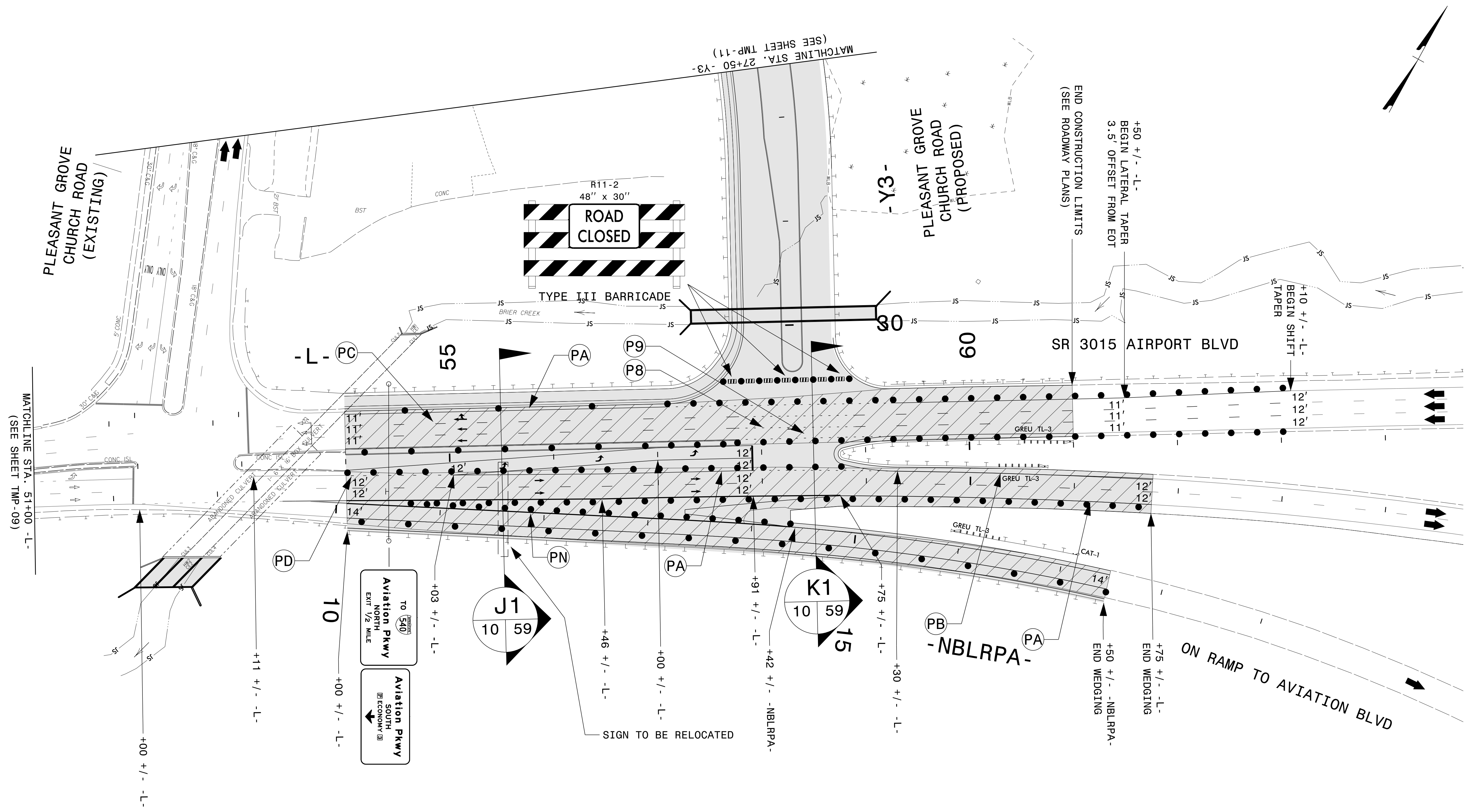
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BOB A. MAY

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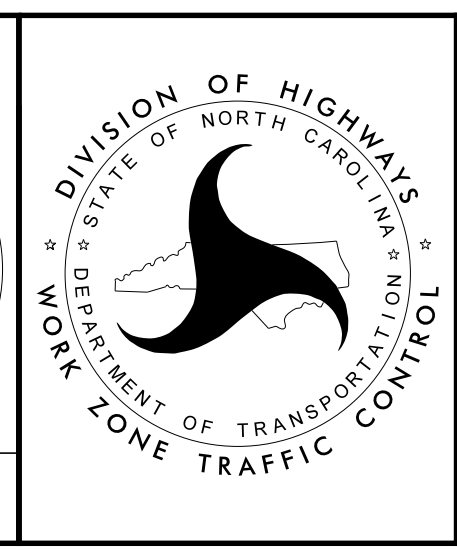
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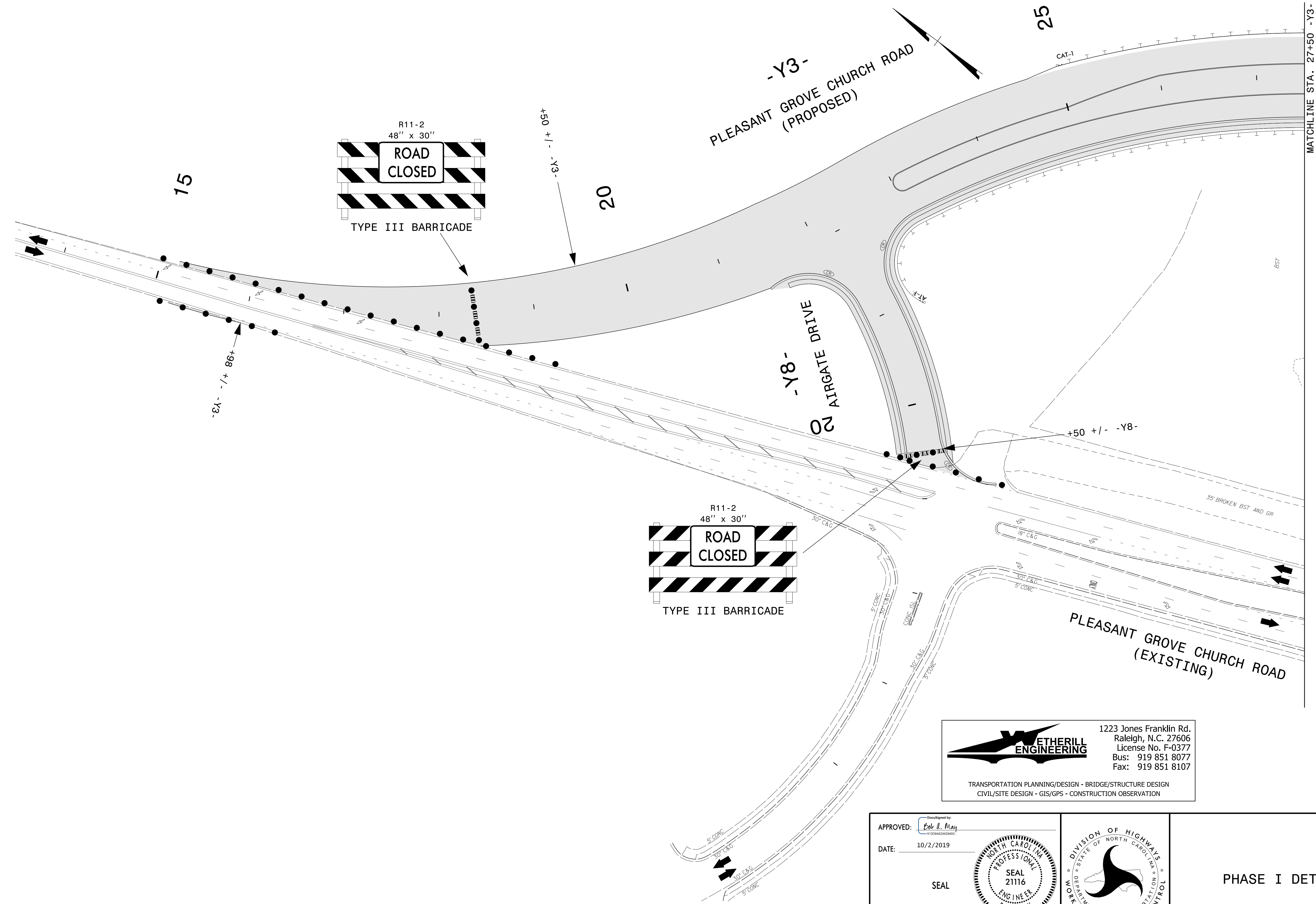
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 DATE: 10/2/2019
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 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 21116
 BOB A. MAY

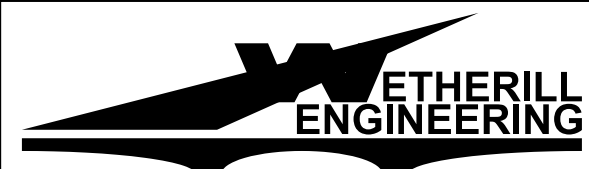


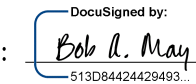

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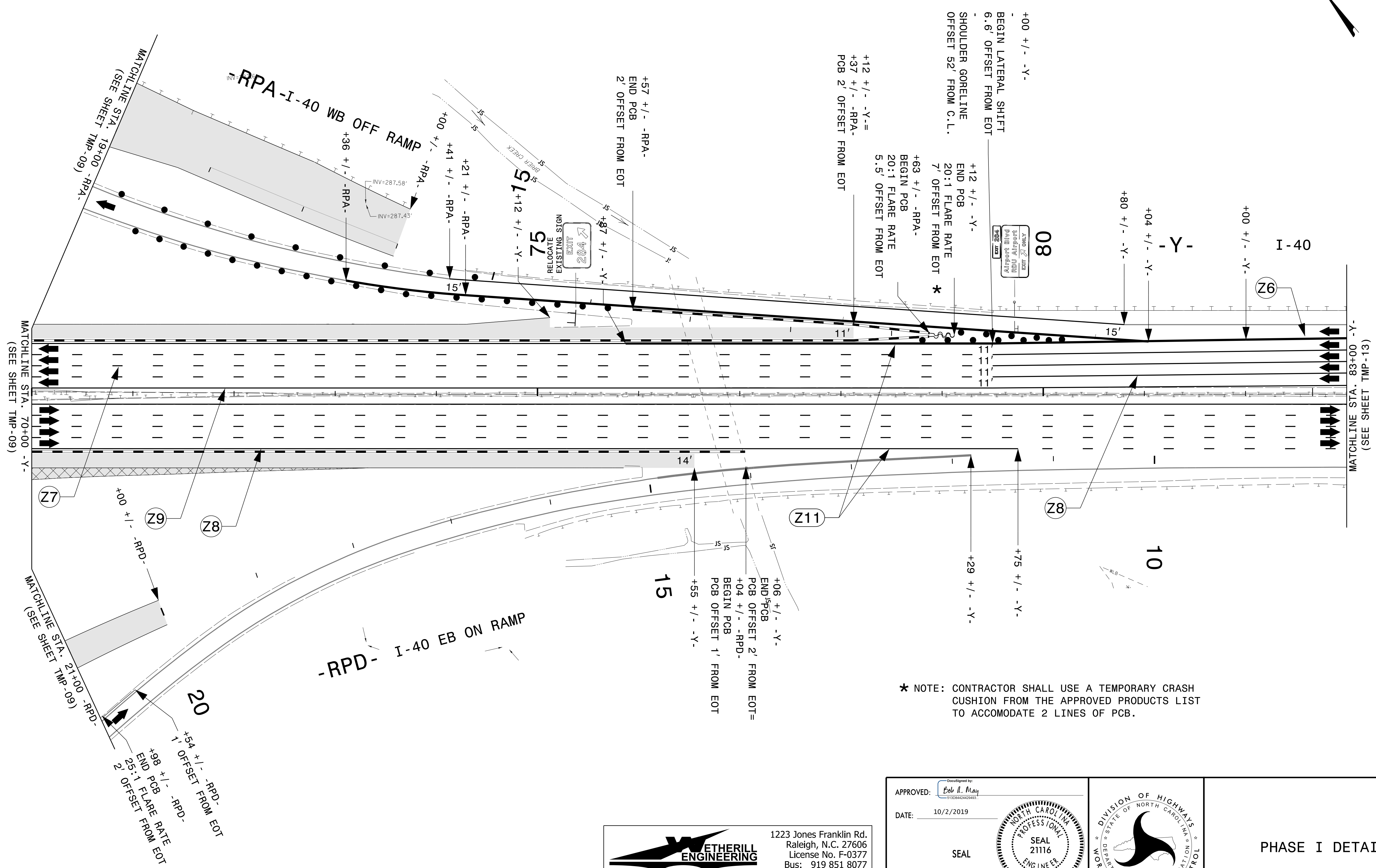
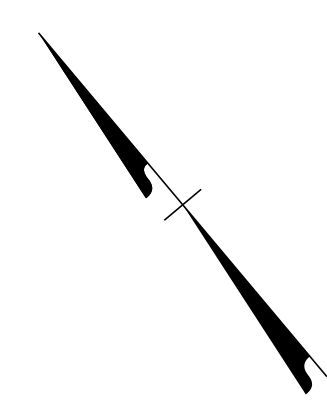

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* NOTE: CONTRACTOR SHALL USE A TEMPORARY CRASH CUSHION FROM THE APPROVED PRODUCTS LIST TO ACCOMMODATE 2 LINES OF PCB.

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APPROVED: *Bob A. May*
 DATE: 10/2/2019

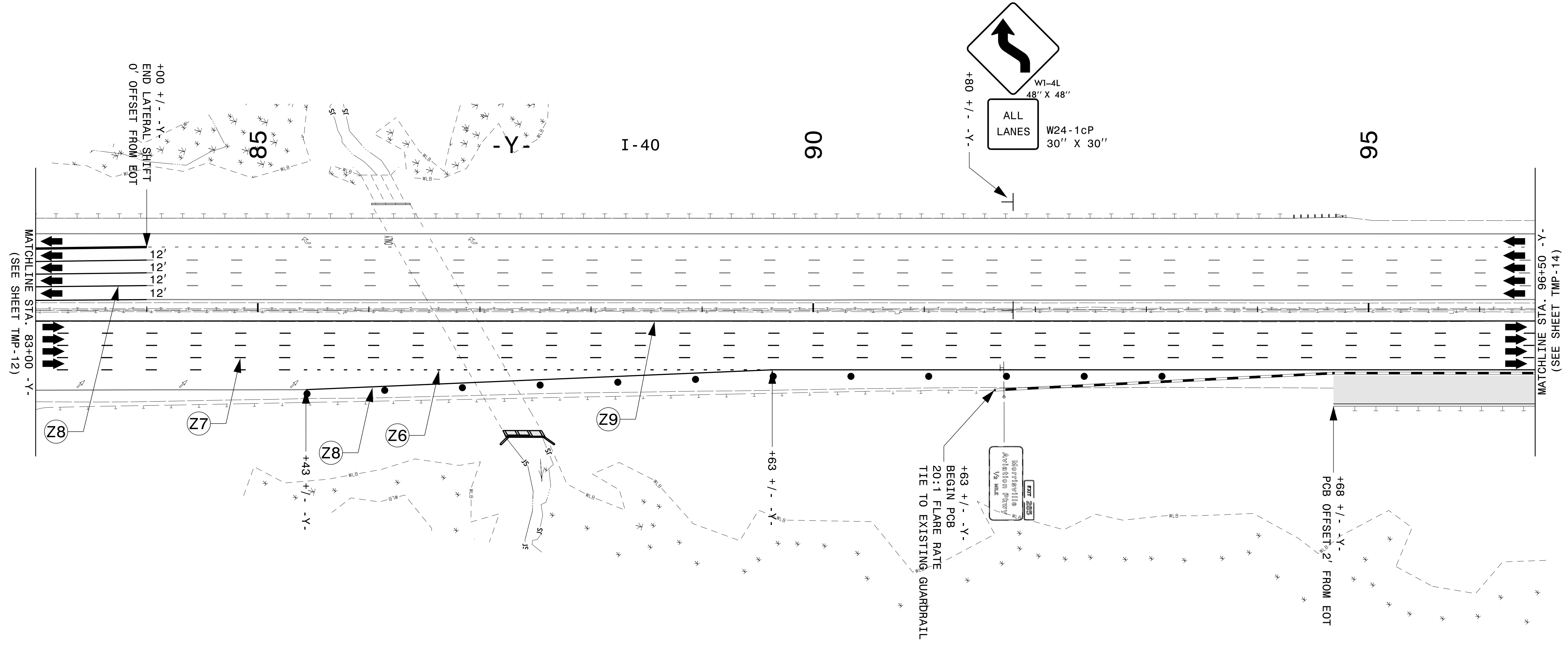
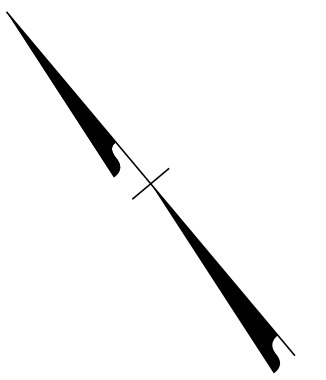
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PROFESSIONAL SEAL
 NORTH CAROLINA
 ENGINEER
 BOB A. MAY
 21116

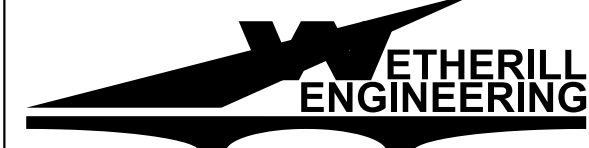
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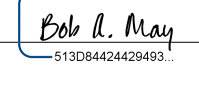

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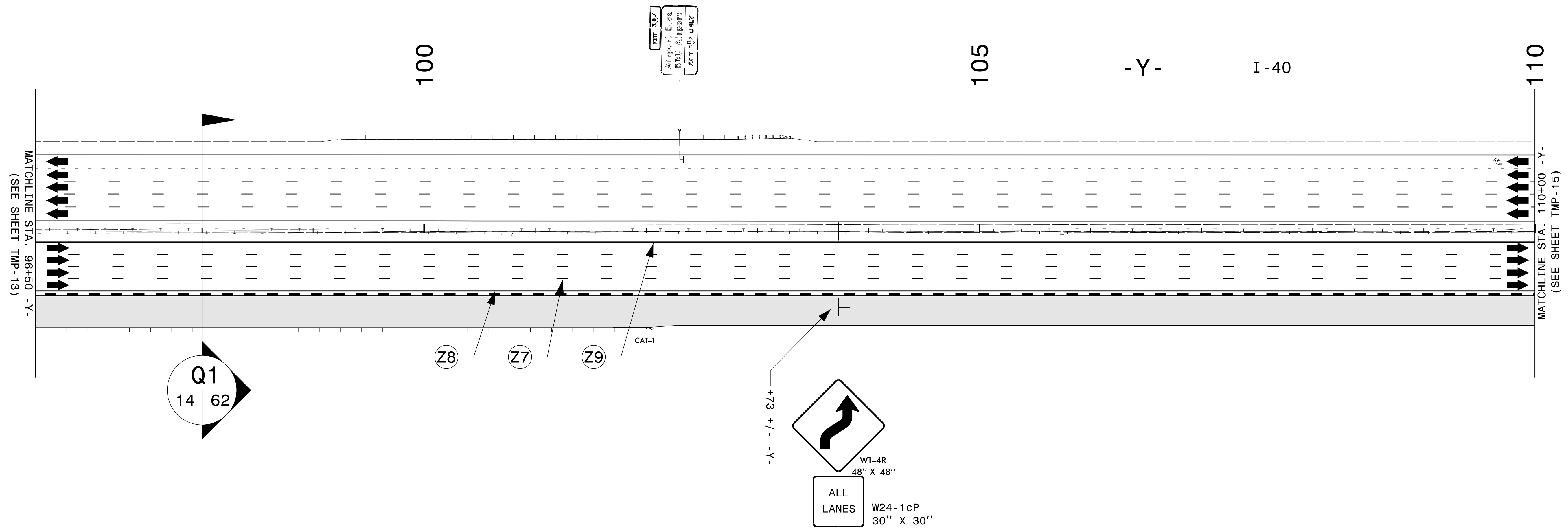
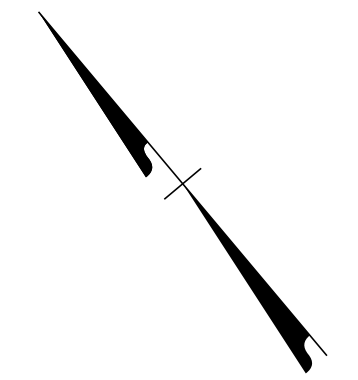
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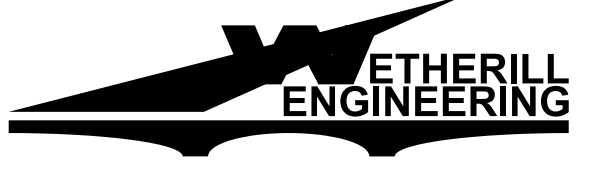
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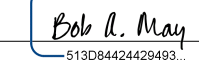
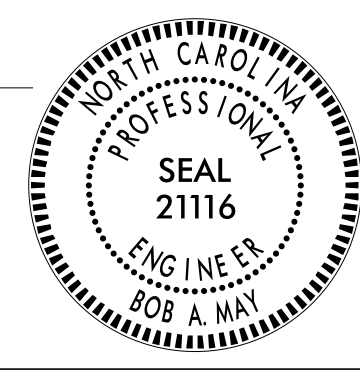

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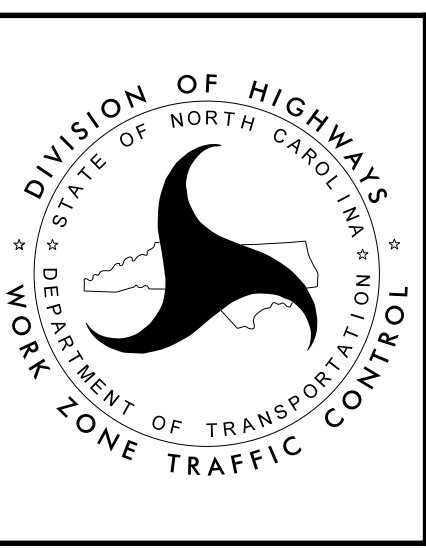
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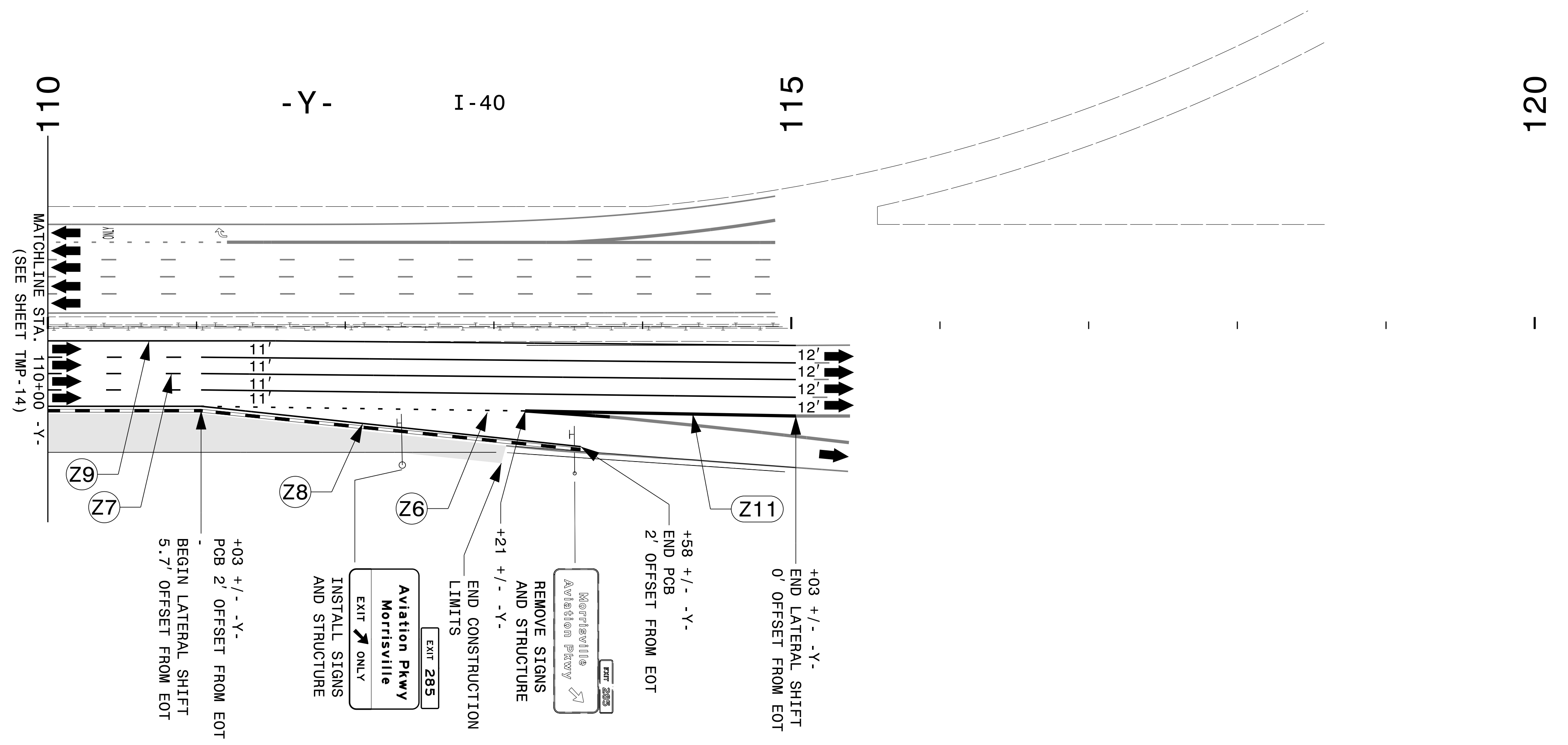
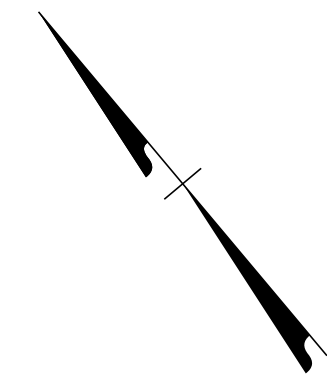
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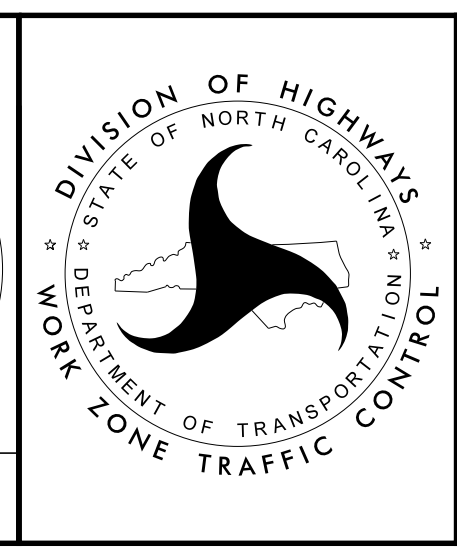
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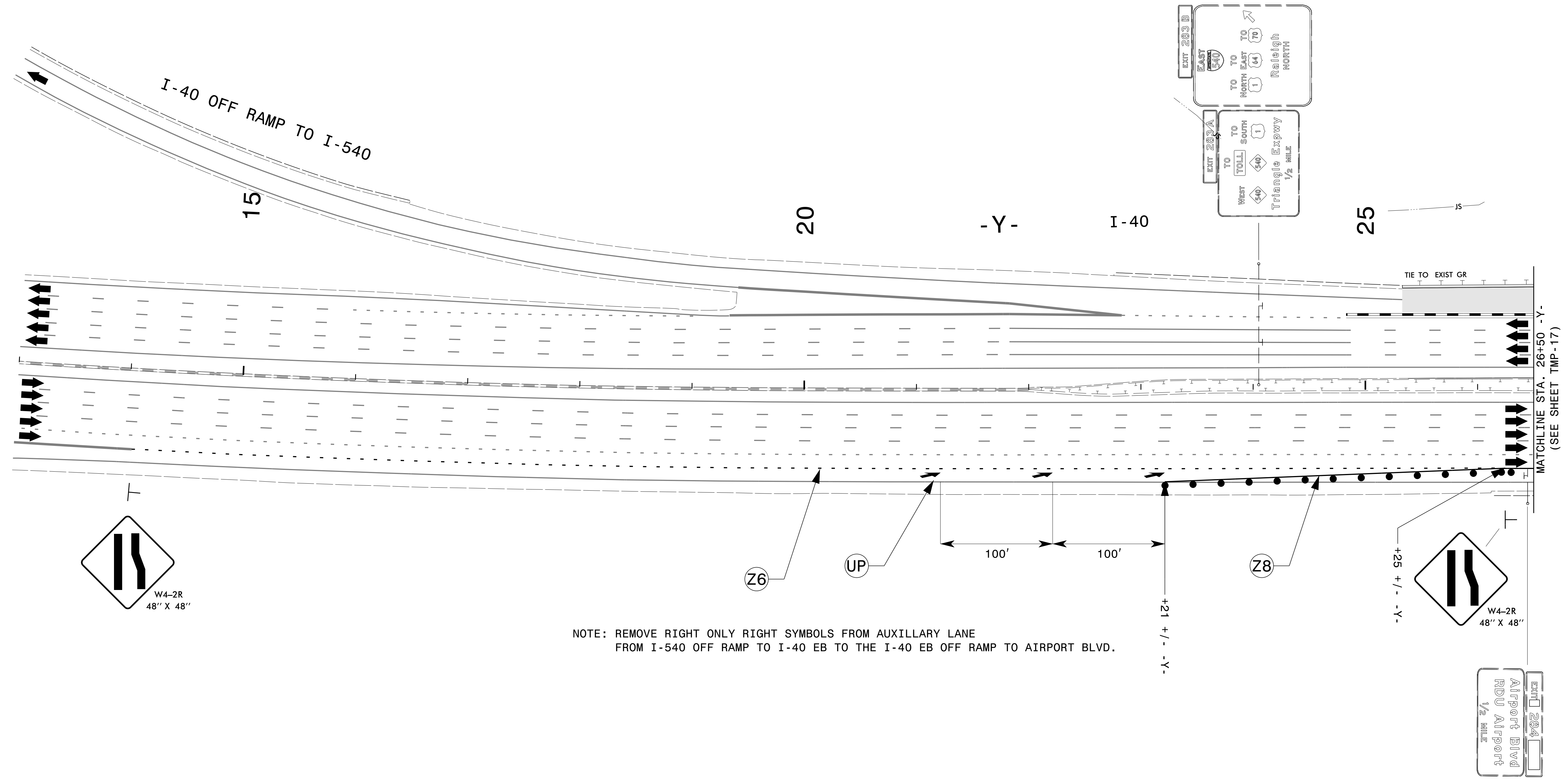
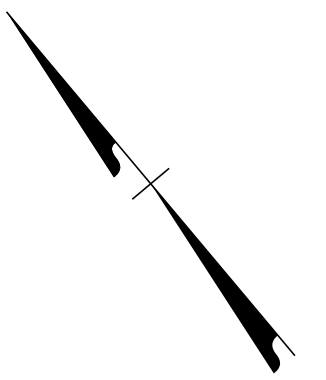
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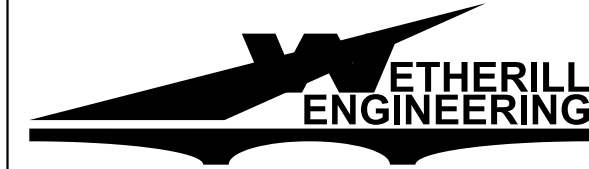


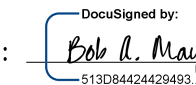

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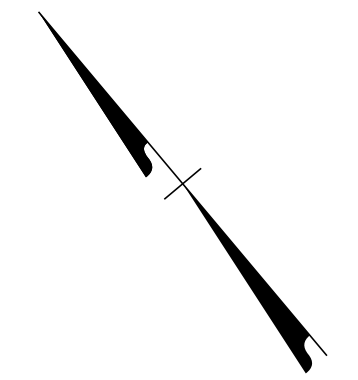
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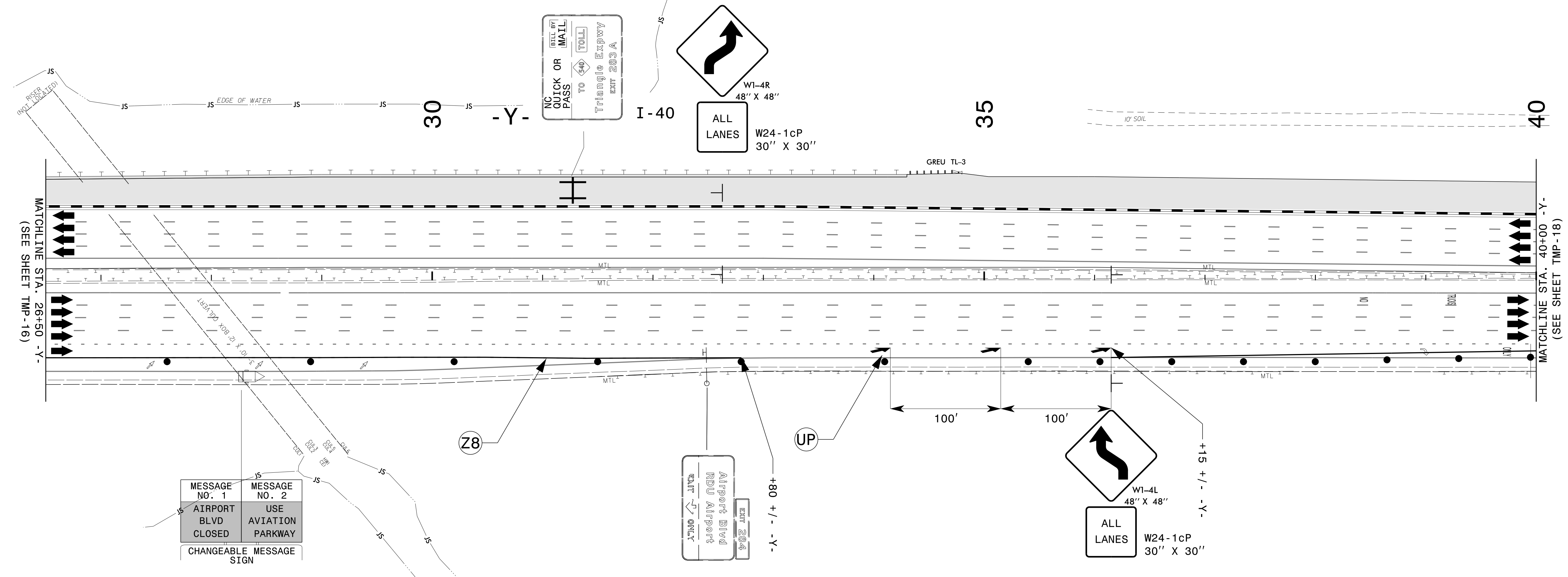
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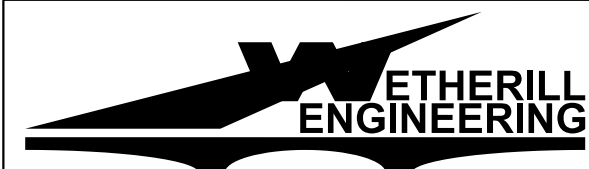
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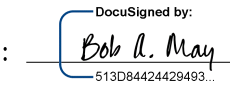




NOTE: RELOCATE GROUND MOUNTED SIGN ONTO PORTABLE SKIDS.
KEEP SIGN A MINIMUM OF 100' FROM OTHER SIGNS.



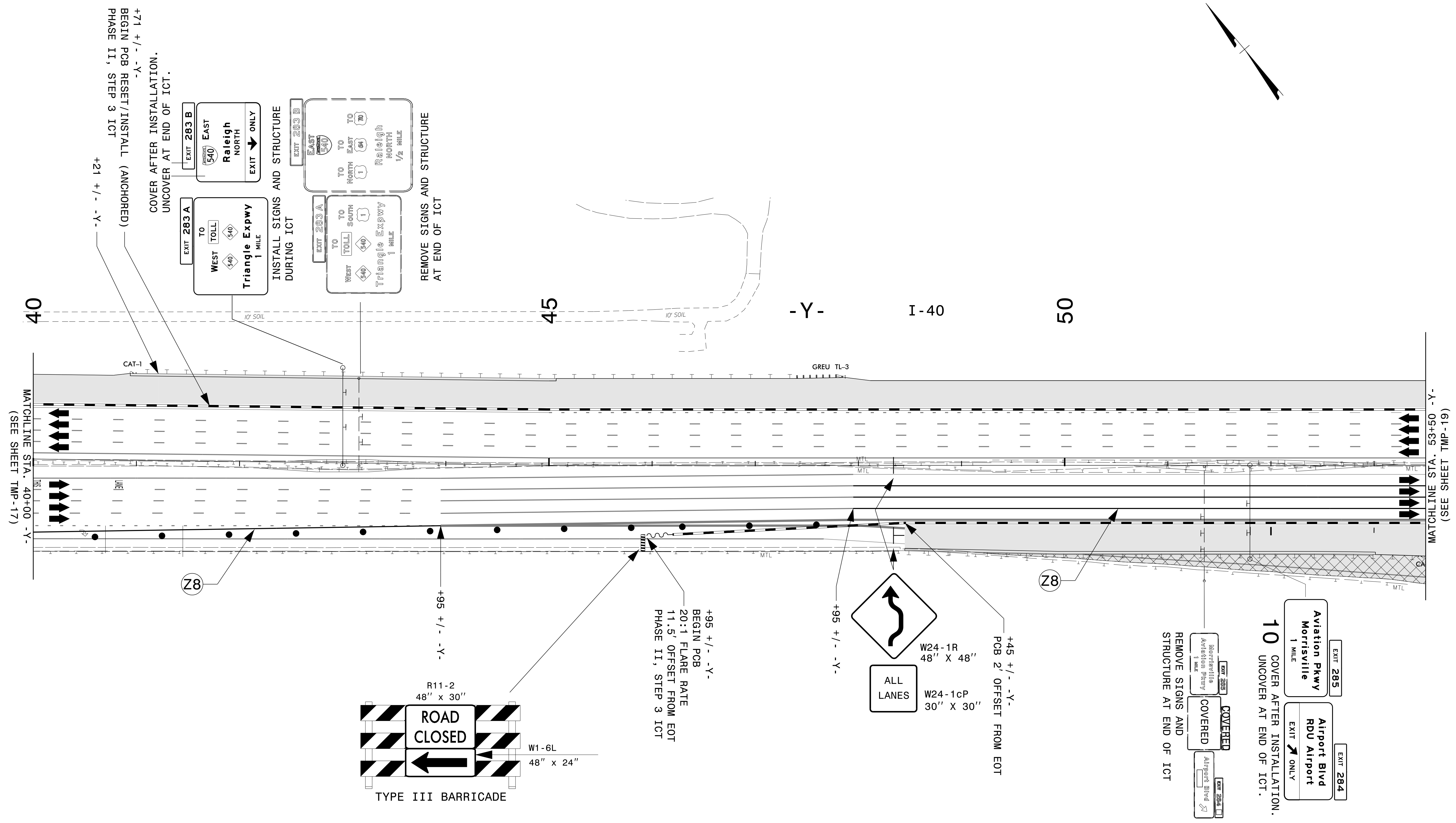
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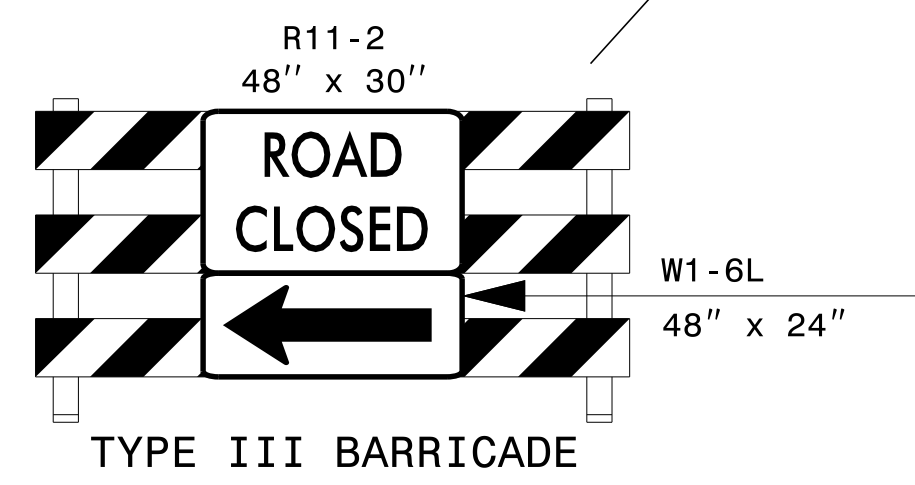
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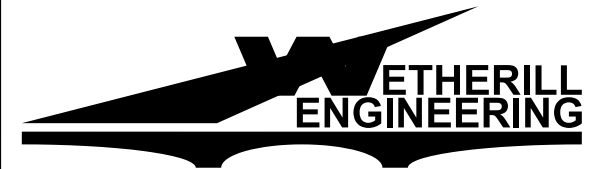

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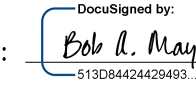

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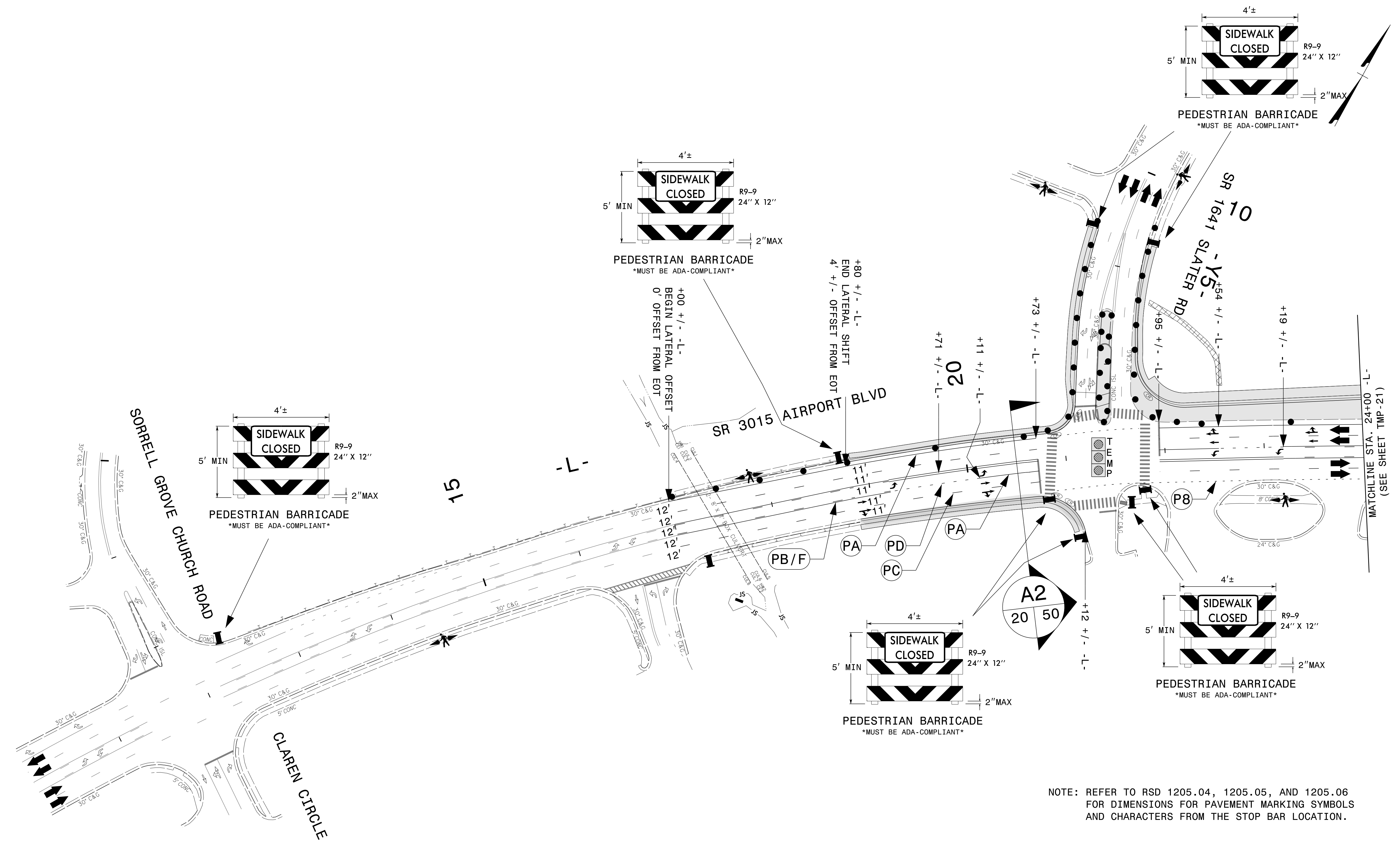



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NOTE: REFER TO RSD 1205.04, 1205.05, AND 1205.06 FOR DIMENSIONS FOR PAVEMENT MARKING SYMBOLS AND CHARACTERS FROM THE STOP BAR LOCATION.

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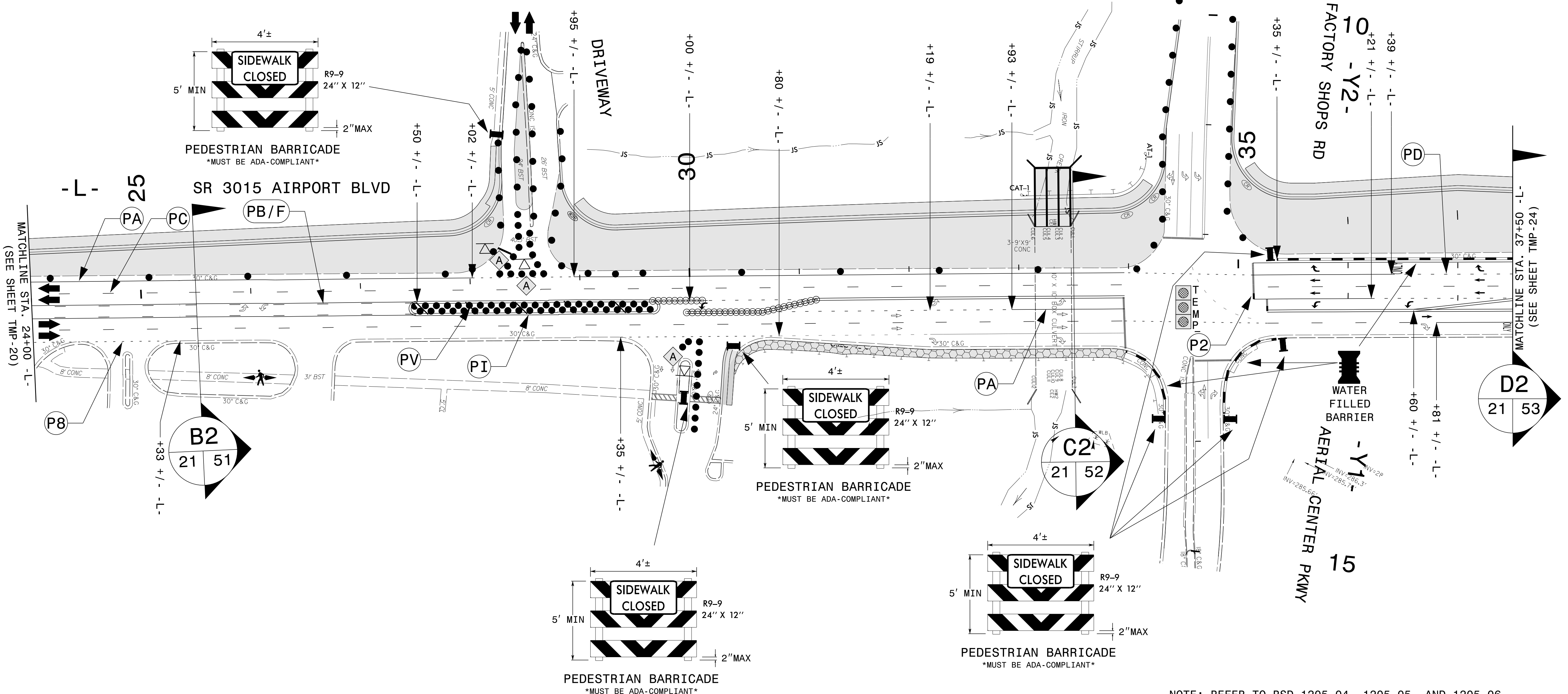
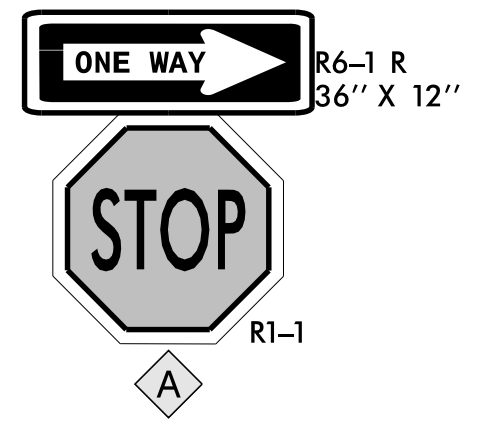
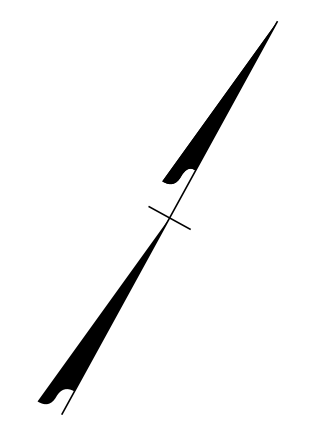
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**PHASE II DETAIL
 STEP 2**



NOTE: REFER TO RSD 1205.04, 1205.05, AND 1205.06 FOR DIMENSIONS FOR PAVEMENT MARKING SYMBOLS AND CHARACTERS FROM THE STOP BAR LOCATION.

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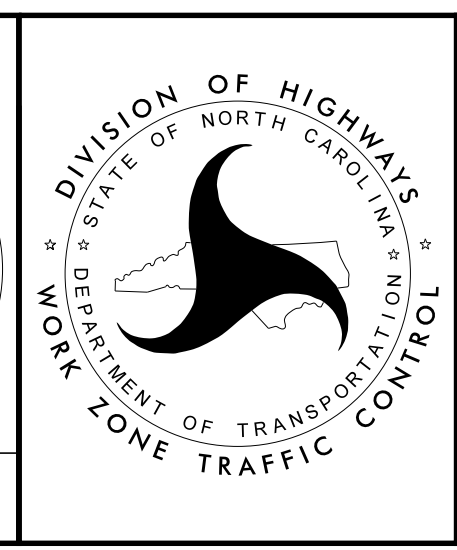
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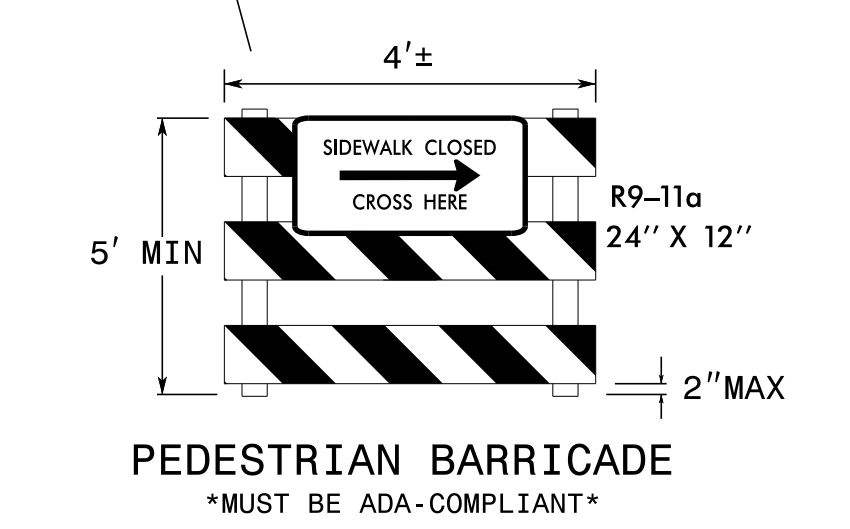
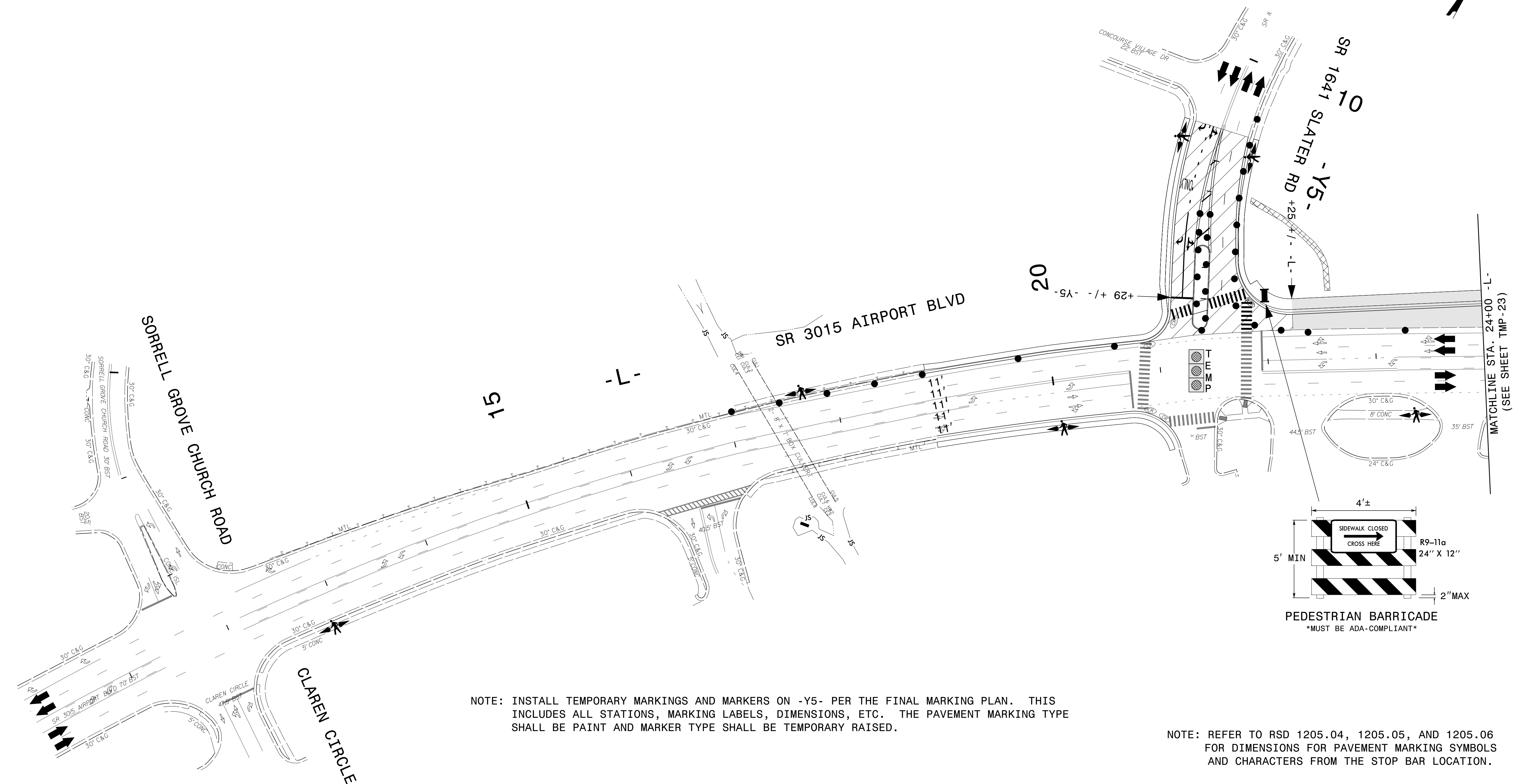
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**PHASE II DETAIL
STEP 2**



NOTE: INSTALL TEMPORARY MARKINGS AND MARKERS ON -Y5- PER THE FINAL MARKING PLAN. THIS INCLUDES ALL STATIONS, MARKING LABELS, DIMENSIONS, ETC. THE PAVEMENT MARKING TYPE SHALL BE PAINT AND MARKER TYPE SHALL BE TEMPORARY RAISED.

NOTE: REFER TO RSD 1205.04, 1205.05, AND 1205.06 FOR DIMENSIONS FOR PAVEMENT MARKING SYMBOLS AND CHARACTERS FROM THE STOP BAR LOCATION.

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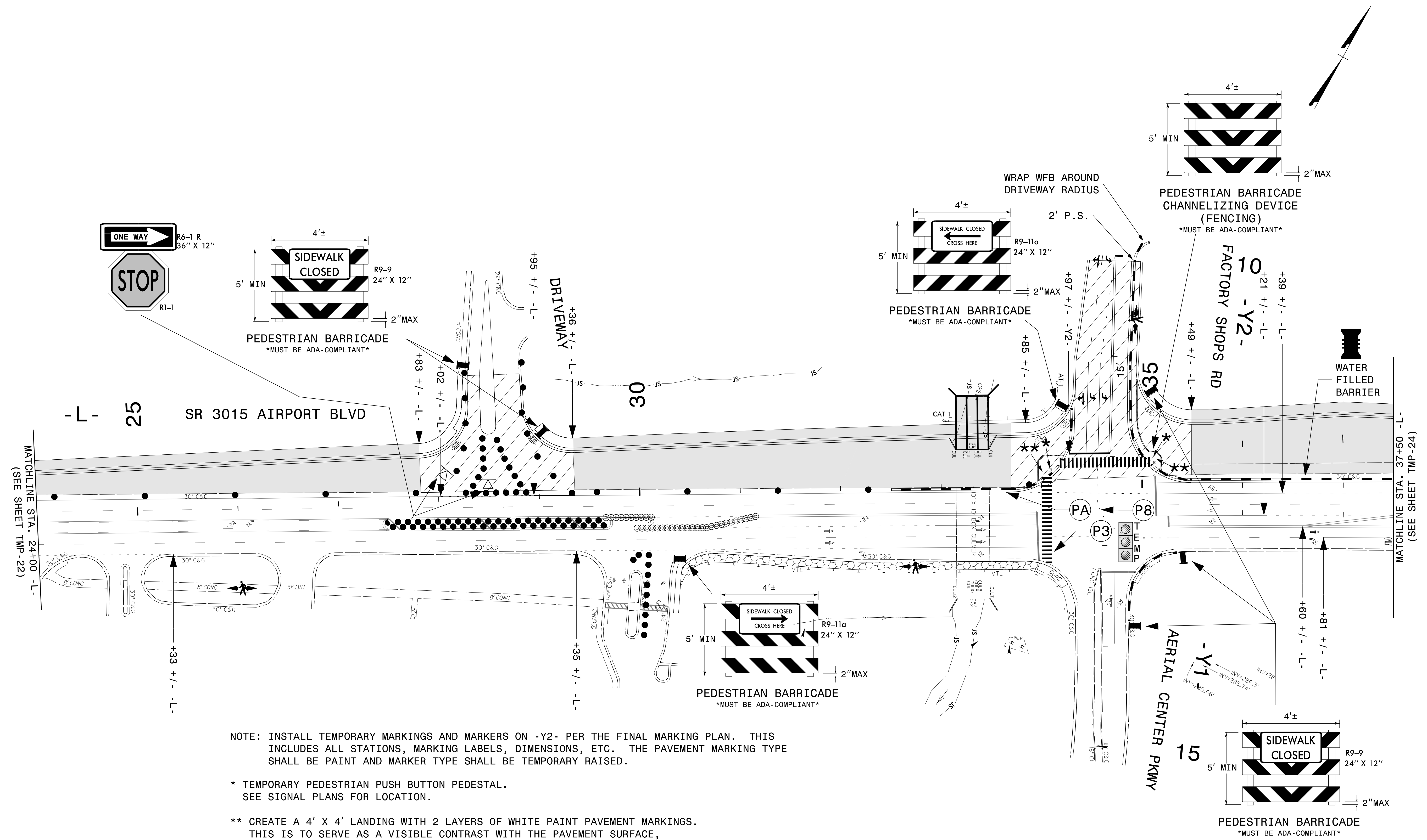
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PHASE II DETAIL
STEPS 2A & 3

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NOTE: INSTALL TEMPORARY MARKINGS AND MARKERS ON -Y2- PER THE FINAL MARKING PLAN. THIS INCLUDES ALL STATIONS, MARKING LABELS, DIMENSIONS, ETC. THE PAVEMENT MARKING TYPE SHALL BE PAINT AND MARKER TYPE SHALL BE TEMPORARY RAISED.

- * TEMPORARY PEDESTRIAN PUSH BUTTON PEDESTAL. SEE SIGNAL PLANS FOR LOCATION.
- ** CREATE A 4' X 4' LANDING WITH 2 LAYERS OF WHITE PAINT PAVEMENT MARKINGS. THIS IS TO SERVE AS A VISIBLE CONTRAST WITH THE PAVEMENT SURFACE, SERVING AS THE 'CURB RAMP' OF THE INTERSECTION. REFER TO RSD 848.05 AND 848.06.

NOTE: REFER TO RSD 1205.04, 1205.05, AND 1205.06 FOR DIMENSIONS FOR PAVEMENT MARKING SYMBOLS AND CHARACTERS FROM THE STOP BAR LOCATION.

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PHASE II DETAIL
 STEPS 2A & 3

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