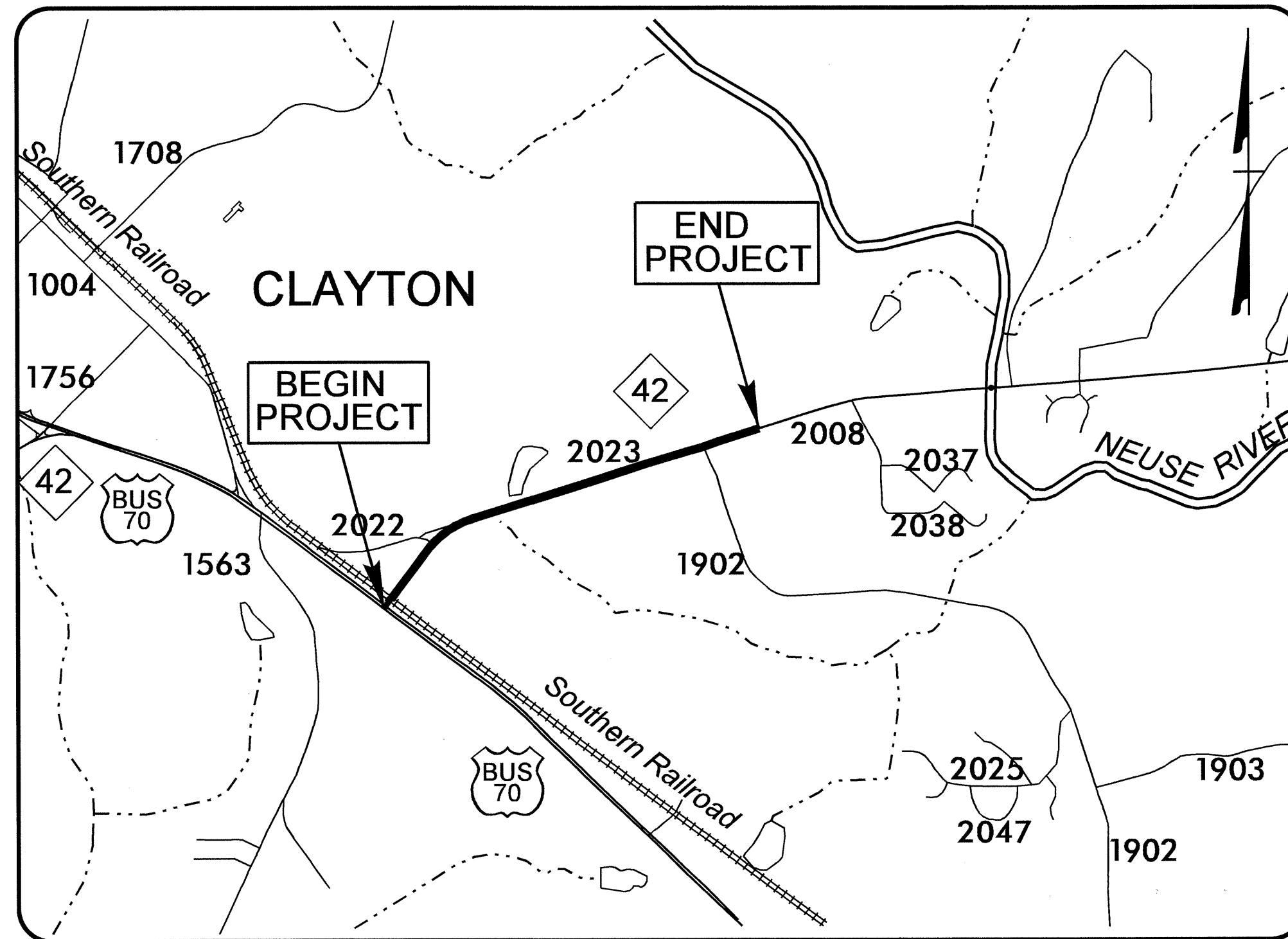
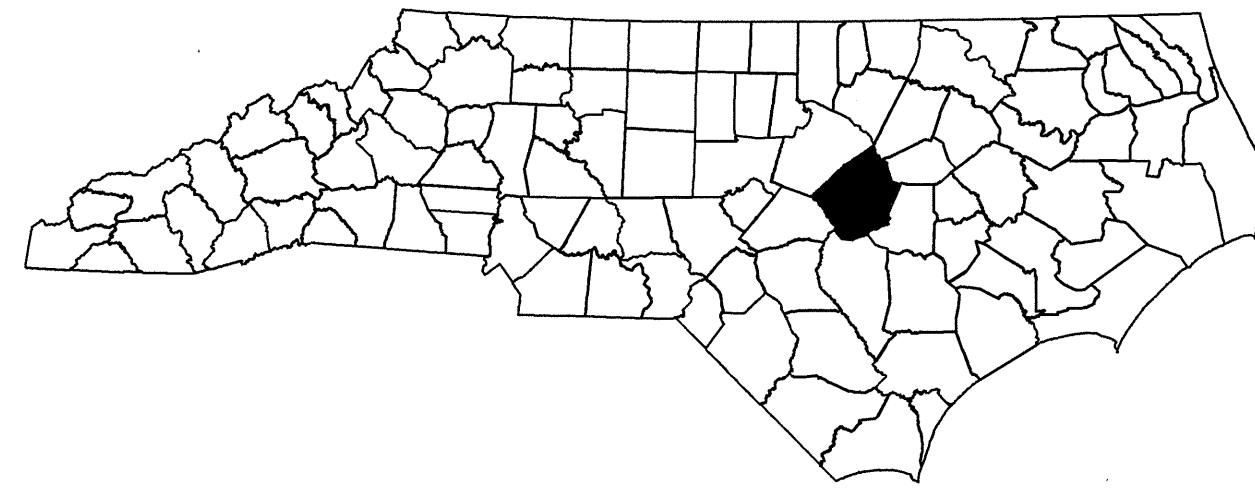


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

JOHNSTON COUNTY



**LOCATION: NC 42 FROM US 70 IN CLAYTON TO
0.31 MI EAST OF SR 1902 (GLEN LAUREL RD)**

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

INDEX OF SHEETS

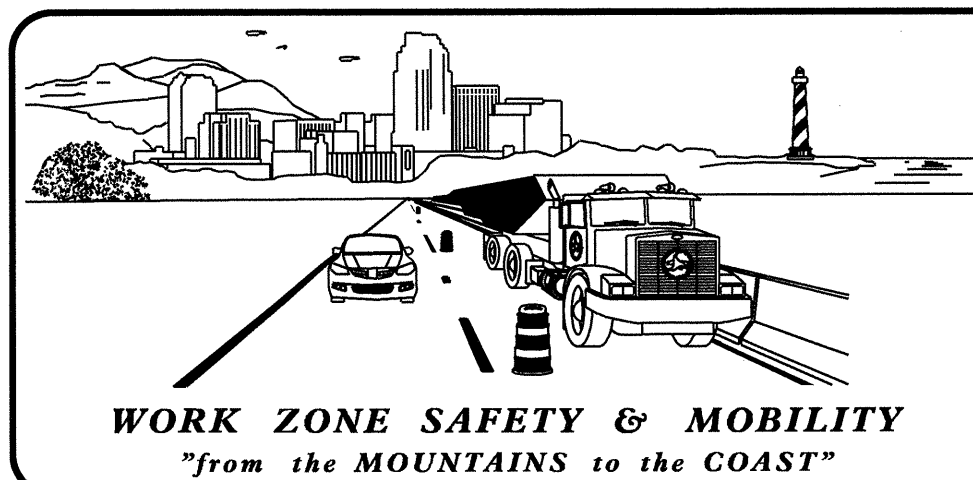
SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND TEMPORARY PAVEMENT MARKING SCHEDULE
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES AND GENERAL NOTES)
TMP-2A	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-2B	TEMPORARY SHORING DATA
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4-10	TEMPORARY TRAFFIC CONTROL PHASE I DETAILS
TMP-11-14	TEMPORARY TRAFFIC CONTROL PHASE II DETAILS
TMP-14A	RAILROAD CROSSING DETAIL
TMP-15-21	TEMPORARY TRAFFIC CONTROL PHASE III DETAILS

SHEET NO.
TMP-1

R-3825A

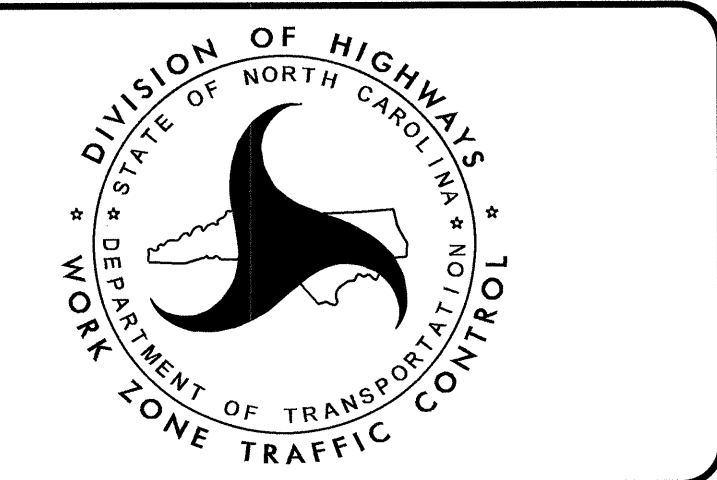
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N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER
J. S. KITE, P.E. TRAFFIC CONTROL PROJECT ENGINEER
D. W. BISSETTE, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER
S. D. MILLER, P.E. TRAFFIC CONTROL DESIGN ENGINEER



APPROVED: *[Signature]*
DATE: 12-6-11

SEAL

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 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 ACCESSSES
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
1135.01	CONES
1145.01	BARRICADES - TYPE III
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION - REFLECTIVE END TREATMENT
1165.01	TRUCK MOUNTED ATTENUATOR - DELINEATION
1170.01	POSITIVE PROTECTION - PORTABLE CONCRETE BARRIER
1180.01	SKINNY DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - THRU LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.11	PAVEMENT MARKINGS - RAILROAD CROSSINGS
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1261.01	GUARDRAIL AND BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS
1264.02	PLACEMENT OF OBJECT MARKERS

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.

- WORK AREA
- REMOVAL
- USER DEFINED (IF NEEDED)
- USER DEFINED (IF NEEDED)

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW PANEL (TYPE C)
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

PAVEMENT MARKERS

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

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING SCHEDULE

ITEM	SYMBOL	DESCRIPTION
	QI	WHITE CHARACTER
PAINT (4")	PA	WHITE EDGELINE
	PB	YELLOW EDGELINE
	PC	10 FT WHITE SKIP
	PD	2 FT WHITE MINISKIP
	PE	WHITE SOLID LANE LINE
	PI	YELLOW DOUBLE CENTER
PAINT (8")	PR	WHITE GORE
	PS	WHITE DIAGONAL
	PV	YELLOW DIAGONAL
PAINT (16")	P3	RAILROAD CROSSBUCK
PAINT (24")	P4	WHITE STOPBAR
PAINT MARKING SYMBOLS	QA	LEFT TURN ARROW
	QB	RIGHT TURN ARROW
	QC	STRAIGHT ARROW
	QE	COMBO STRAIGHT/RIGHT
TEMPORARY RAISED PAVEMENT MARKERS	MH	YELLOW & YELLOW
	MI	CRYSTAL & RED

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APPROVED: DATE: 12-6-11		
ROADWAY STANDARD DRAWINGS, LEGEND, & TEMPORARY PAVEMENT MARKING SCHEDULE		

MANAGEMENT STRATEGIES

- CONSTRUCTION WILL BE PHASED SO THAT NC 42 TRAFFIC WILL BE MAINTAINED.
- DRIVEWAYS AND -Y- LINES WILL BE MAINTAINED.
- DURING CONSTRUCTION OF THE PROJECT, THE DRIVEWAY TO CLAYTON FIRE STATION WILL BE KEPT OPEN AT ALL TIMES. NO EQUIPMENT OR MATERIALS WILL BE PARKED OR PLACED IN THE FIRE STATION DRIVEWAY AT ANY TIME.
- COORDINATION WITH NORFORK SOUTHERN CORPORATION IS REQUIRED WHEN WORKING WITHIN 15 FEET OF THE RAILROAD.

GENERAL NOTES

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

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

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
NC 42	MONDAY THROUGH FRIDAY FROM 6:00 A.M. TO 8:00 P.M.
US 70	MONDAY THROUGH FRIDAY FROM 6:00 A.M. TO 9:00 A.M.
US 70	MONDAY THROUGH FRIDAY FROM 4:00 P.M. TO 8:00 P.M.

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

ROAD NAME
NC 42
US 70

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 AM DECEMBER 31st TO 8:00 PM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 8:00 PM THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00 AM THURSDAY AND 8:00 PM MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY TO 8:00 PM TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 AM THE DAY BEFORE INDEPENDENCE DAY AND 8:00 PM THE DAY AFTER INDEPENDENCE DAY.

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

LANE AND SHOULDER CLOSURE REQUIREMENTS

- C) 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.
- D) 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.
- E) 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.

- F) 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.
- G) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- H) 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.

- I) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES.

TRAFFIC PATTERN ALTERATIONS

- J) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- K) INSTALL ADVANCE WORK ZONE WARNING SIGNS NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- L) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC BARRIER

- M) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRAFFIC CONTROL 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 TRAFFIC CONTROL 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 TRAFFIC CONTROL 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.

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

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

TRAFFIC CONTROL DEVICES

- O) 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.
- P) 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

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

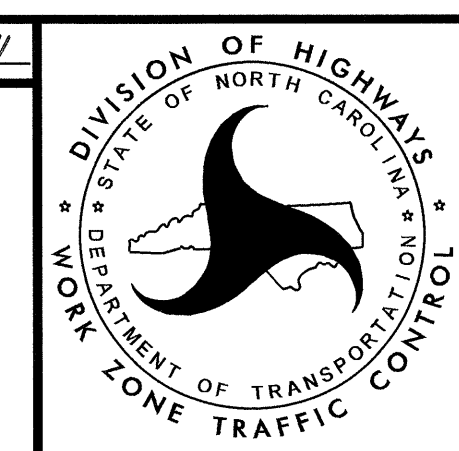
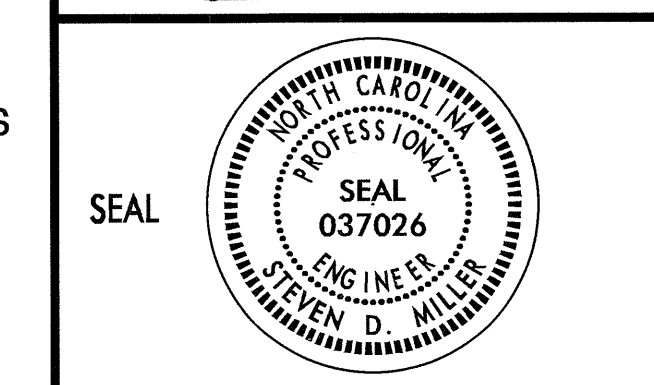
ROAD NAME	MARKING	MARKER
ALL ROADS	PAINT	TEMPORARY RAISED

- R) 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.
- S) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.
- T) TRACE THE PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO INSTALLATION. PLACE DRUMS TO DELINEATE ANY PROPOSED MONOLITHIC ISLANDS BEFORE INSTALLATION.

MISCELLANEOUS

- U) 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) IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

APPROVED: *[Signature]* DATE: 12-6-11



TRANSPORTATION OPERATIONS PLAN

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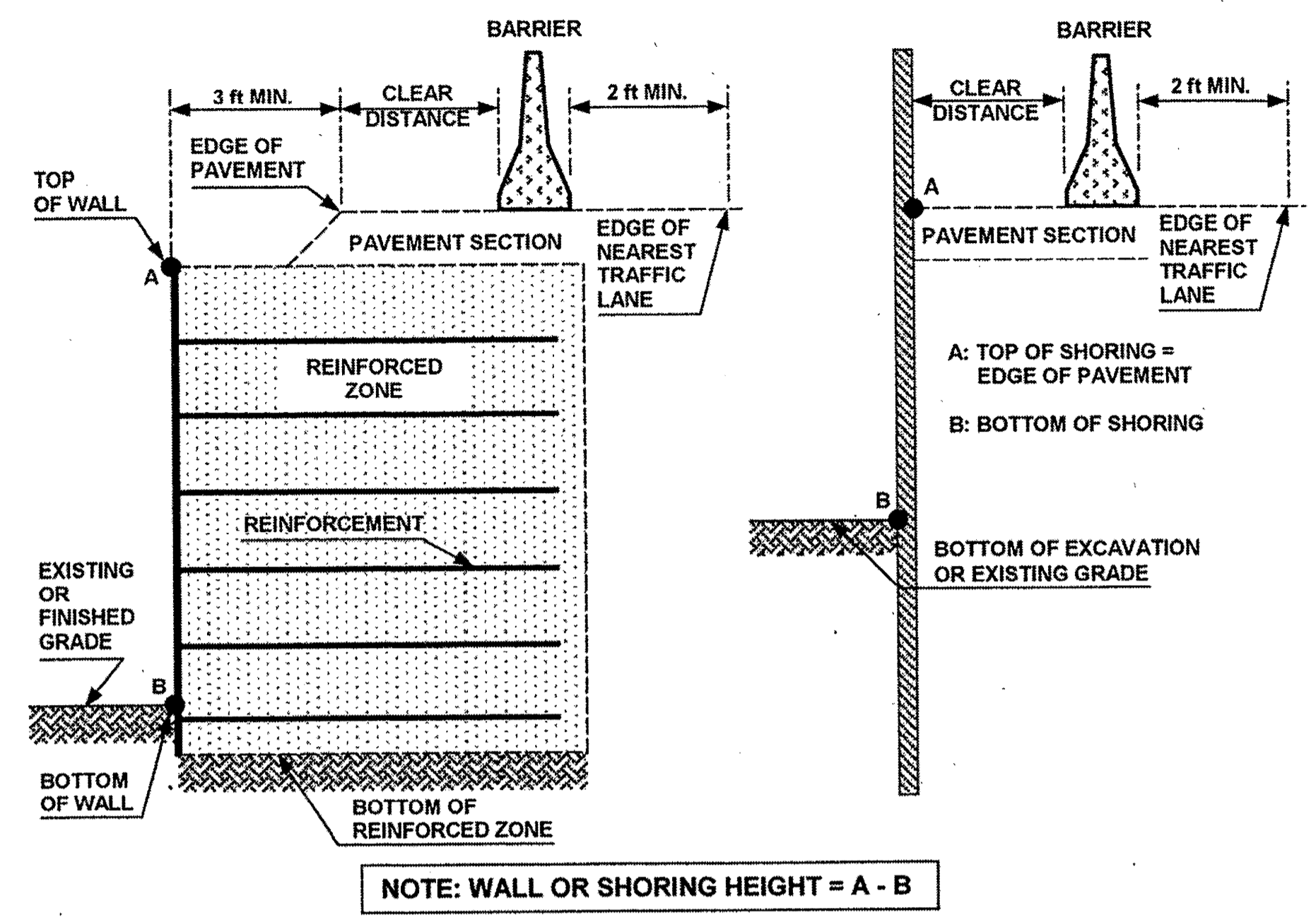


FIGURE A

NOTES

- 1- REFER TO THE TRAFFIC CONTROL PLANS FOR SHORING LOCATIONS AND SOIL PARAMETERS.
- 2- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR MORE INFORMATION ABOUT TEMPORARY SHORING, MEASUREMENT AND PAYMENT.
- 3- PROVIDE PORTABLE CONCRETE BARRIER TO PROTECT TEMPORARY SHORING IF SHORING IS LOCATED WITHIN THE CLEAR ZONE AS DEFINED IN THE AASHTO ROADSIDE DESIGN GUIDE. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).
- 4- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED PCB, ANCHORED PCB OR AN OREGON BARRIER FROM THE TABLE SHOWN IN FIGURE B. FOR TRAFFIC LANES AND PORTABLE CONCRETE BARRIER LOCATED ABOVE AND BEHIND TEMPORARY SHORING, THE FOLLOWING ARE DEFINED AS:

CLEAR DISTANCE - HORIZONTAL DISTANCE FROM THE BACK FACE OF THE BARRIER TO THE EDGE OF PAVEMENT FOR TEMPORARY MSE WALL OR TO THE FACE OF NON-ANCHORED TEMPORARY SHORING AS SHOWN IN FIGURE A.

OFFSET - HORIZONTAL DISTANCE FROM THE FRONT FACE OF THE BARRIER TO CENTERLINE OF THE FURTHEST TRAFFIC LANE AS SHOWN IN FIGURE B FOR 3 TRAFFIC LANES.
- 5- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET AN UNANCHORED PCB AGAINST THE TRAFFIC SIDE OF THE SHORING AND DESIGN SHORING FOR TRAFFIC IMPACT OR USE THE "SURCHARGE CASE WITH TRAFFIC IMPACT" FOR THE STANDARD TEMPORARY SHORING. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).
- 6- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- 7- USE OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH DETAIL DRAWING AND SPECIAL PROVISION OBTAINED FROM: WORK ZONE TRAFFIC CONTROL UNIT WEB PAGE.
- 8- UNLESS NOTED OTHERWISE ON THE PLANS, SET PORTABLE CONCRETE BARRIER WITH A MINIMUM DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A.
- 9- FOR PORTABLE CONCRETE BARRIER ABOVE AND BEHIND TEMPORARY MSE WALLS, PROVIDE A MINIMUM DISTANCE OF 3 FT BETWEEN THE EDGE OF PAVEMENT AND THE WALL FACE AS SHOWN IN FIGURE A. IF THESE MINIMUM REQUIRED DISTANCES ARE NOT AVAILABLE, CONTACT THE ENGINEER.
- 10- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS. BARRIER DEFLECTIONS AND RESULTING MINIMUM REQUIRED CLEAR DISTANCES MIGHT VARY SIGNIFICANTLY FOR LARGER HEAVIER VEHICLES, RUNS OF BARRIER LESS THAN 200' 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 or Oregon Barrier	Asphalt	All Offsets	24 for All Design Speeds					
Anchored PCB or Oregon Barrier	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

* See Figure Below

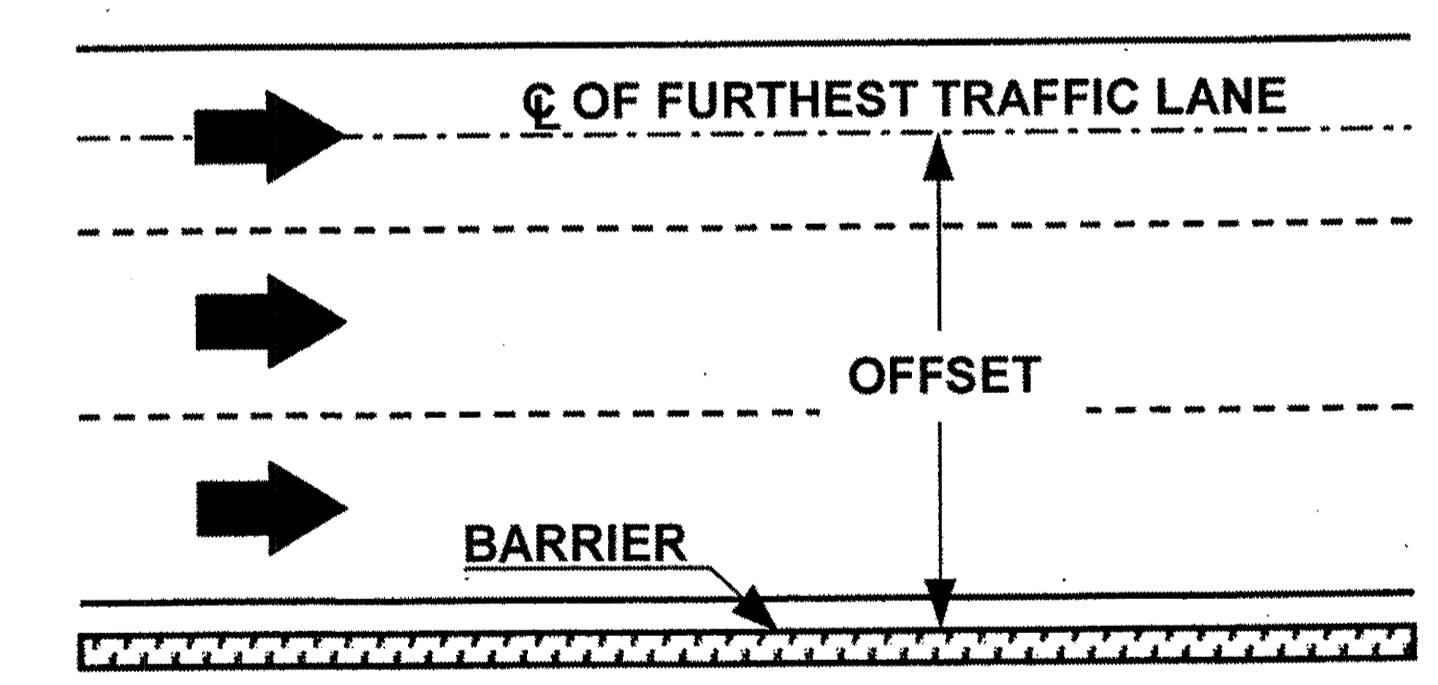


FIGURE B

<p>APPROVED: _____ DATE: _____</p> <p><i>Joseph [Signature]</i></p> <p>SEAL 028380 ENGINEER</p> <p>Sept 10, 2010</p>	<p style="text-align: center;">DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL</p>	<p>PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS</p>
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SHORING LOCATION NO. 1

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

TEMPORARY SHORING IS REQUIRED FOR THE PIPE INSTALLATION FROM STATION 35+60± -L-, 4.9 FT.± RIGHT, TO STATION 36+20± -L-, 7.0 FT.± RIGHT.

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 35+60± -L-, 4.9 FT.± RIGHT, TO STATION 36+20± -L-, 7.0 FT.± RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUND ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (ϕ) = 30 DEGREES
 COHESION (c) = 0 LB/SF

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 35+60± -L-, 4.9 FT.± RIGHT, TO STATION 36+20± -L-, 7.0 FT.± RIGHT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 35+60± -L-, 4.9 FT.± RIGHT, TO STATION 36+20± -L-, 7.0 FT.± RIGHT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 35+60± -L-, 4.9 FT.± RIGHT, TO STATION 36+20± -L-, 7.0 FT.± RIGHT. SEE STANDARD DRAWING 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.

TEMPORARY SHORING IS REQUIRED FOR THE PIPE INSTALLATION FROM STATION 35+60± -L-, 7.0 FT.± RIGHT, TO STATION 36+20± -L-, 7.0 FT.± RIGHT.

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 35+60± -L-, 7.0 FT.± RIGHT, TO STATION 36+20± -L-, 7.0 FT.± RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUND ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (ϕ) = 30 DEGREES
 COHESION (c) = 0 LB/SF

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 35+60± -L-, 7.0 FT.± RIGHT, TO STATION 36+20± -L-, 7.0 FT.± RIGHT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 35+60± -L-, 7.0 FT.± RIGHT, TO STATION 36+20± -L-, 7.0 FT.± RIGHT.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 35+60± -L-, 7.0 FT.± RIGHT, TO STATION 36+20± -L-, 7.0 FT.± RIGHT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

SHORING LOCATION NO. 3

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

TEMPORARY SHORING IS REQUIRED FOR THE PIPE INSTALLATION FROM STATION 39+72± -L-, 2.0 FT.± LEFT, TO STATION 40+32± -L-, 0.5 FT.± LEFT.

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 39+72± -L-, 2.0 FT.± LEFT, TO STATION 40+32± -L-, 0.5 FT.± LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUND ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (ϕ) = 30 DEGREES
 COHESION (c) = 0 LB/SF

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 39+72± -L-, 2.0 FT.± LEFT, TO STATION 40+32± -L-, 0.5 FT.± LEFT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 39+72± -L-, 2.0 FT.± LEFT, TO STATION 40+32± -L-, 0.5 FT.± LEFT.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 39+72± -L-, 2.0 FT.± LEFT, TO STATION 40+32± -L-, 0.5 FT.± LEFT. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

SHORING LOCATION NO. 4

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

TEMPORARY SHORING IS REQUIRED FOR THE PIPE INSTALLATION FROM STATION 39+72± -L-, 7.0 FT.± RIGHT, TO STATION 40+32± -L-, 7.0 FT.± RIGHT.

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 39+72± -L-, 7.0 FT.± RIGHT, TO STATION 40+32± -L-, 7.0 FT.± RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUND ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (ϕ) = 30 DEGREES
 COHESION (c) = 0 LB/SF

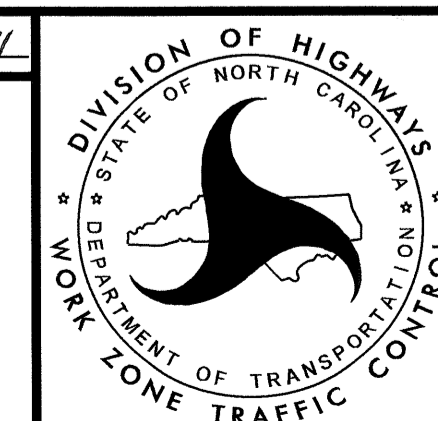
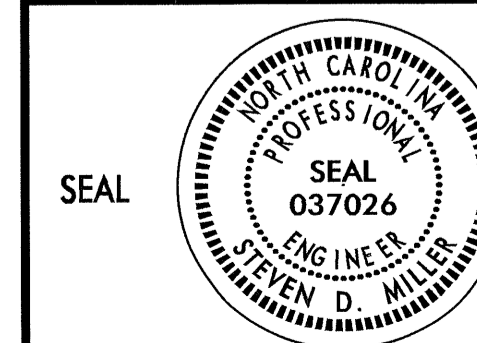
LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 39+72± -L-, 7.0 FT.± RIGHT, TO STATION 40+32± -L-, 7.0 FT.± RIGHT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 39+72± -L-, 7.0 FT.± RIGHT, TO STATION 40+32± -L-, 7.0 FT.± RIGHT.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 39+72± -L-, 7.0 FT.± RIGHT, TO STATION 40+32± -L-, 7.0 FT.± RIGHT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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 sdmiller1 AT TE248375

APPROVED: *[Signature]* DATE: 12-6-11



TEMPORARY SHORING DATA

PHASE I

STEP 1 INSTALL WORK ZONE ADVANCE WARNING SIGNS ON ALL ROADWAYS WITHIN THE PROJECT LIMITS IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 1101.01 SHEET 2 OF 3 AND SHEET 3 OF 3.

STEP 2 MAINTAINING LOCAL TRAFFIC, PLACE DRUMS AS SHOWN ON TMP-6 THROUGH TMP-10 AND BEGIN CONSTRUCTION OF THE LEFT SIDE OF -L- FROM STA 44+50 TO 90+40 UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER.

DO NOT CONSTRUCT MONOLITHIC MEDIAN WITHIN THE STATIONS:
 -L- STA 61+00 TO 66+00
 -L- STA 73+00 TO 79+00

STEP 3 MAINTAINING TRAFFIC ON THE EXISTING ROADWAY AND USING ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 15 AND ROADWAY STANDARD DRAWING 1101.04 SHEET 1 OF 1 AS NEEDED, PERFORM THE FOLLOWING AS SHOWN ON TMP-6:

CONSTRUCT TEMPORARY PAVEMENT ON THE LEFT SIDE OF -L- FROM STATION 38+50 TO 41+90. INSTALL ROAD NARROWS SIGNS AND PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-6. PLACE TEMPORARY PAVEMENT MARKERS ACCORDING TO ROADWAY STANDARD DRAWING 1250.01. SHIFT TRAFFIC TO A 2-LANE, 2-WAY PATTERN AT THIS LOCATION.

INSTALL TEMPORARY SHORING LOCATION #1 FROM -L- STA 35+60 (4.9' RIGHT) TO 36+20 (3.4' RIGHT) AND INSTALL TEMPORARY SHORING LOCATION #3 FROM -L- STA 39+72 (2.0' LEFT) TO 40+32 (0.5' LEFT). PLACE PORTABLE CONCRETE BARRIER FROM -L- STATION 35+00 TO 37+00 AND FROM -L- STATION 39+00 TO 41+00, INCLUDING TEMPORARY CRASH CUSHIONS AS SHOWN ON TMP-5 AND TMP-6.

STEP 4 PLACE DRUMS AS SHOWN ON TMP-4 THROUGH TMP-6. USING ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 15 AND ROADWAY STANDARD DRAWING 1101.04 SHEET 1 OF 1 AS NEEDED, CONSTRUCT THE RIGHT SIDE OF -L- FROM STA 9+82 TO 47+45 UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER.

DO NOT CONSTRUCT MONOLITHIC MEDIAN WITHIN THE STATIONS:
 -L- STA 11+00 TO 15+00
 -L- STA 21+00 TO 26+00
 -L- STA 32+00 TO 35+00

WORK WITHIN 15' OF THE RAILROAD (-L- STA 11+44 TO 11+79) MUST BE COORDINATED WITH NORFOLK SOUTHERN CORPORATION AND THE ENGINEER. BEGIN RAILROAD CROSSING CONSTRUCTION AS SHOWN ON TMP-14A.

UTILIZE SHORING LEFT IN PLACE FROM -L- STATION 35+60 (7' RIGHT) TO 36+20 (7' RIGHT) AND FROM -L- STATION 39+72 (7' RIGHT) TO 40+32 (7' RIGHT) FOR CONSTRUCTION OF THE ROADWAY AT THESE LOCATIONS. MAINTAIN DRAINAGE BETWEEN THE EXISTING AND PROPOSED SYSTEM.

STEP 5 MAINTAINING TRAFFIC ON THE EXISTING ROADWAY AND USING ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 15, SHEET 3 OF 15, AND ROADWAY STANDARD DRAWING 1101.04 SHEET 1 OF 1, PERFORM THE FOLLOWING IN A CONTINUOUS MANNER:

TIE THE EXISTING ROADWAY TO THE RIGHT SIDE OF -L- USING WEDGING AS NECESSARY FROM -L- STA 9+82 TO 47+45.

PLACE AND ANCHOR PORTABLE CONCRETE BARRIER FROM -L- STATION 35+00 TO 37+00 AND FROM -L- STATION 37+75 TO 40+75, INCLUDING TEMPORARY CRASH CUSHIONS AS SHOWN ON TMP-12 AND TMP-13.

PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-12 THROUGH TMP-14 AND IN ACCORDANCE WITH THE TEMPORARY PAVEMENT MARKING SCHEDULE ON TMP-1A. PLACE TEMPORARY PAVEMENT MARKERS ACCORDING TO ROADWAY STANDARD DRAWING 1250.01.

RELOCATE ROAD NARROWS SIGN AND PLACE DEVICES AS SHOWN ON TMP-11 THROUGH TMP-14.

SHIFT TRAFFIC TO A 2-WAY, 2-LANE PATTERN ON THE RIGHT SIDE OF -L- AS SHOWN ON TMP-12 AND TMP-13.

PHASE II

STEP 1 BEGIN WEDGING AND WIDENING OF -Y1- AND -Y2- UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER.

STEP 2 MAINTAINING TRAFFIC ON THE RIGHT SIDE OF -L- AND USING ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 15, SHEET 3 OF 15, AND ROADWAY STANDARD DRAWING 1101.04 SHEET 1 OF 1 AS NEEDED, CONSTRUCT THE LEFT SIDE OF -L- FROM STATION 10+50 TO STATION 44+50 AS SHOWN ON TMP-11 THROUGH TMP-13 UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER.

DO NOT CONSTRUCT MONOLITHIC MEDIAN WITHIN THE STATIONS:
 -L- STA 21+00 TO 26+00

WORK WITHIN 15' OF THE RAILROAD (-L- STA 11+44 TO 11+79) MUST BE COORDINATED WITH NORFOLK SOUTHERN CORPORATION AND THE ENGINEER. COMPLETE RAILROAD CROSSING CONSTRUCTION AS SHOWN ON TMP-14A.

REMOVE TEMPORARY SHORING LOCATIONS #1 & #3 AND COMPLETE INSTALLATION OF PIPE CULVERTS.

REMOVE PORTABLE CONCRETE BARRIER AND CRASH CUSHIONS ONCE A HAZARD NO LONGER EXISTS WITHIN THE CLEAR ZONE.

STEP 3 COMPLETE CONSTRUCTION OF THE LEFT SIDE OF -L- FROM STA 44+50 TO 90+40 UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER.

DO NOT CONSTRUCT MONOLITHIC MEDIAN WITHIN THE STATIONS:
 -L- STA 21+00 TO 26+00
 -L- STA 61+00 TO 66+00
 -L- STA 73+00 TO 79+00

COMPLETE WEDGING AND WIDENING OF -Y1- AND -Y2- UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER.

STEP 4 INSTALL TEMPORARY SIGNALS AND COVER ACCORDING TO THE SIGNAL PLANS.

STEP 5 MAINTAINING TRAFFIC ON THE RIGHT SIDE OF -L- AND USING ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 15, SHEET 3 OF 15, AND ROADWAY STANDARD DRAWING 1101.04 SHEET 1 OF 1, PERFORM THE FOLLOWING IN A CONTINUOUS MANNER:

TIE THE ROADWAY TO THE LEFT SIDE OF -L- USING WEDGING AS NECESSARY FROM -L- STA 10+50 TO 90+40.

PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-15 THROUGH TMP-21 AND IN ACCORDANCE WITH THE TEMPORARY PAVEMENT MARKING SCHEDULE ON TMP-1A. PLACE TEMPORARY PAVEMENT MARKERS ACCORDING TO ROADWAY STANDARD DRAWING 1250.01.

PLACE DRUMS AND BARRICADES AND SHIFT TRAFFIC TO THE LEFT SIDE OF -L- AS SHOWN ON TMP-15 THROUGH TMP-21.

UNCOVER AND ACTIVATE TEMPORARY SIGNALS.

MAINTAIN ACCESS AT -L- STA 51+70 AND 70+00 WITH INCIDENTAL STONE.

REMOVE ROAD NARROWS SIGNS.

PHASE III

STEP 1 MAINTAINING TRAFFIC ON THE LEFT SIDE OF -L- AND USING ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 15, SHEET 3 OF 15, AND ROADWAY STANDARD DRAWING 1101.04 SHEET 1 OF 1 AS NEEDED, CONSTRUCT THE REMAINING RIGHT SIDE OF -L- FROM STATION 20+40 TO STATION 90+40 AS SHOWN ON TMP-15 THROUGH TMP-21 UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER.

DO NOT CONSTRUCT MONOLITHIC MEDIAN WITHIN THE STATIONS:
 -L- STA 21+00 TO 24+00
 -L- STA 61+00 TO 64+50
 -L- STA 73+00 TO 77+50

CONSTRUCT -DR8-, -DR10-, AND -Y3- UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER. DO NOT CONSTRUCT THE MONOLITHIC CHANNELIZATION ISLAND AT -DR10-.

STEP 2 USING ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 15, SHEET 3 OF 15, AND ROADWAY STANDARD DRAWING 1101.04 SHEET 1 OF 1, PERFORM THE FOLLOWING IN A CONTINUOUS MANNER:

SHIFT TRAFFIC TO THE FINAL PATTERN AS SHOWN ON THE PAVEMENT MARKING PLANS, REMOVING TRAFFIC CONTROL DEVICES AS NECESSARY.


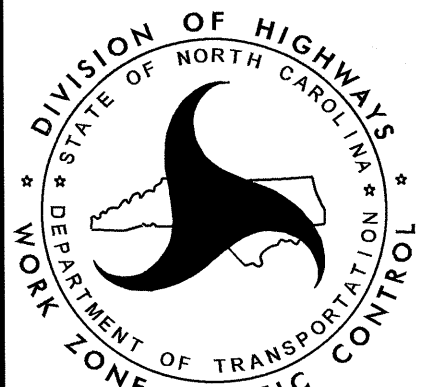
ACTIVATE FINAL SIGNALS ACCORDING TO THE SIGNAL PLANS.

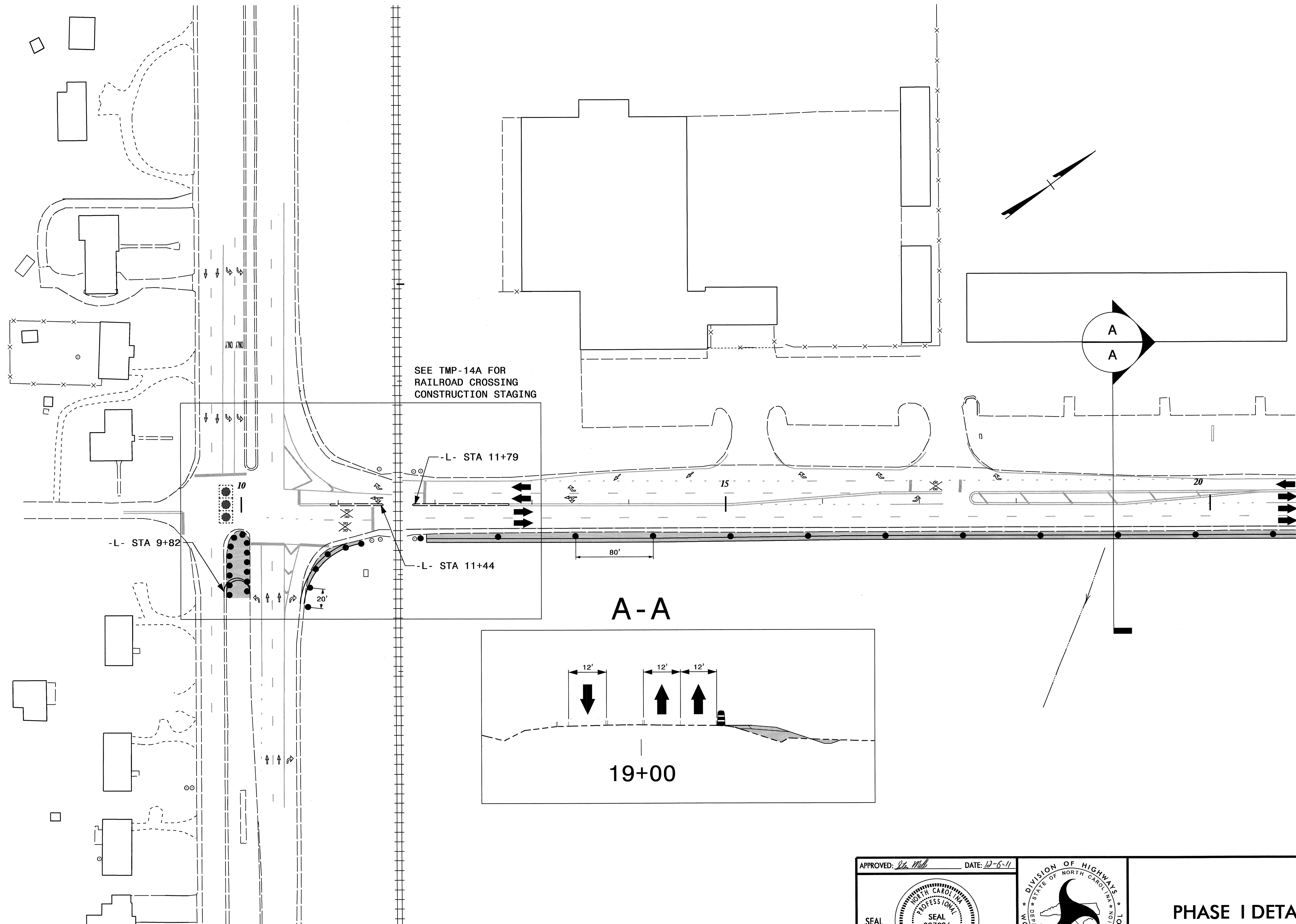
CONSTRUCT THE MONOLITHIC CHANNELIZATION ISLAND AT -DR10- AND COMPLETE THE MONOLITHIC MEDIAN CONSTRUCTION.

PLACE THE FINAL SURFACE LAYER AND FINAL PAVEMENT MARKINGS ACCORDING TO THE PAVEMENT MARKING PLANS.

STEP 3 REMOVE ALL TRAFFIC CONTROL DEVICES.

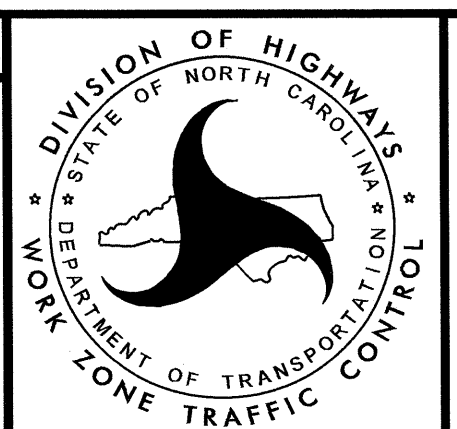
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 sdmiller AT TE248375

APPROVED: <i>St. Mills</i> DATE: <i>12-6-11</i> 		<h2>TEMPORARY TRAFFIC CONTROL PHASING</h2>
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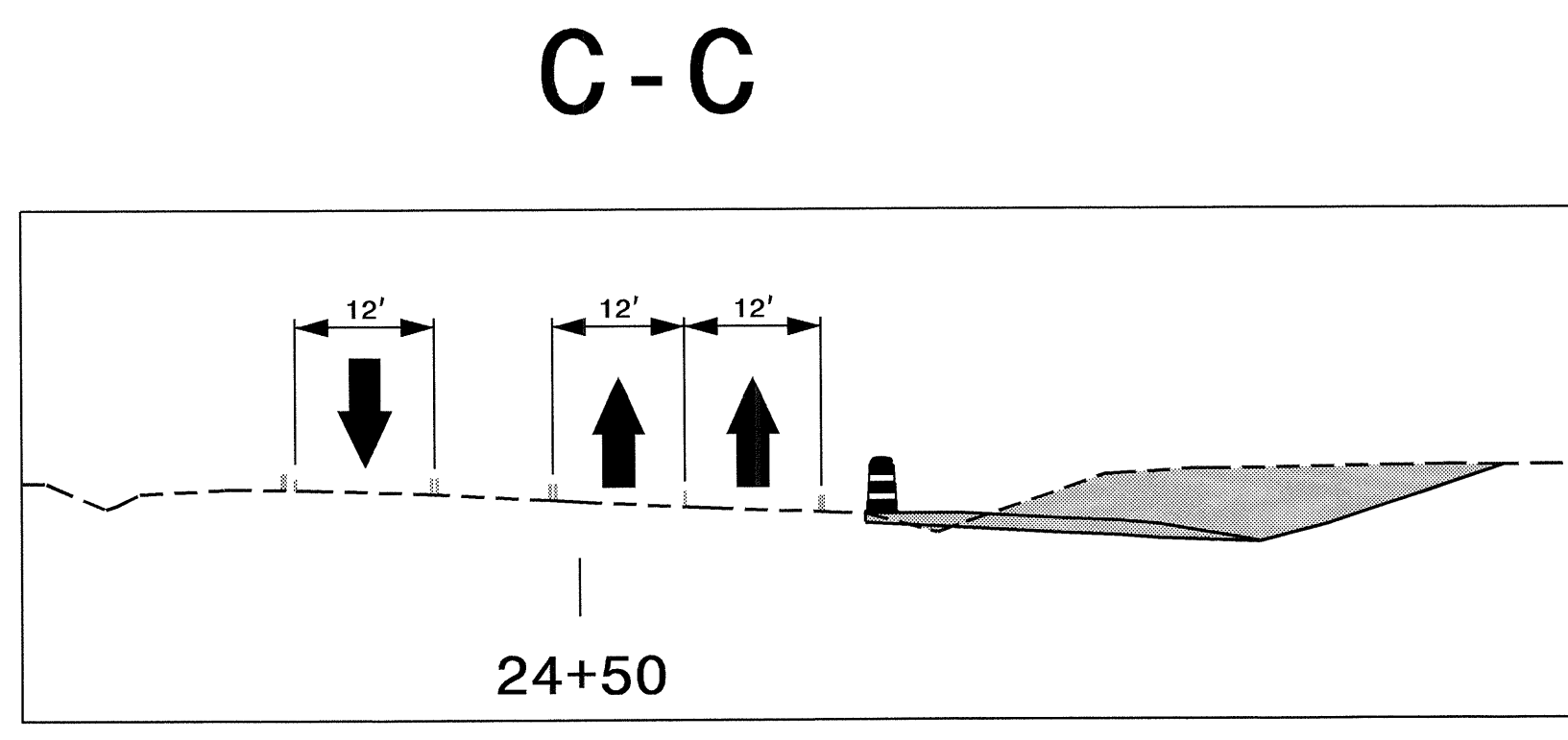
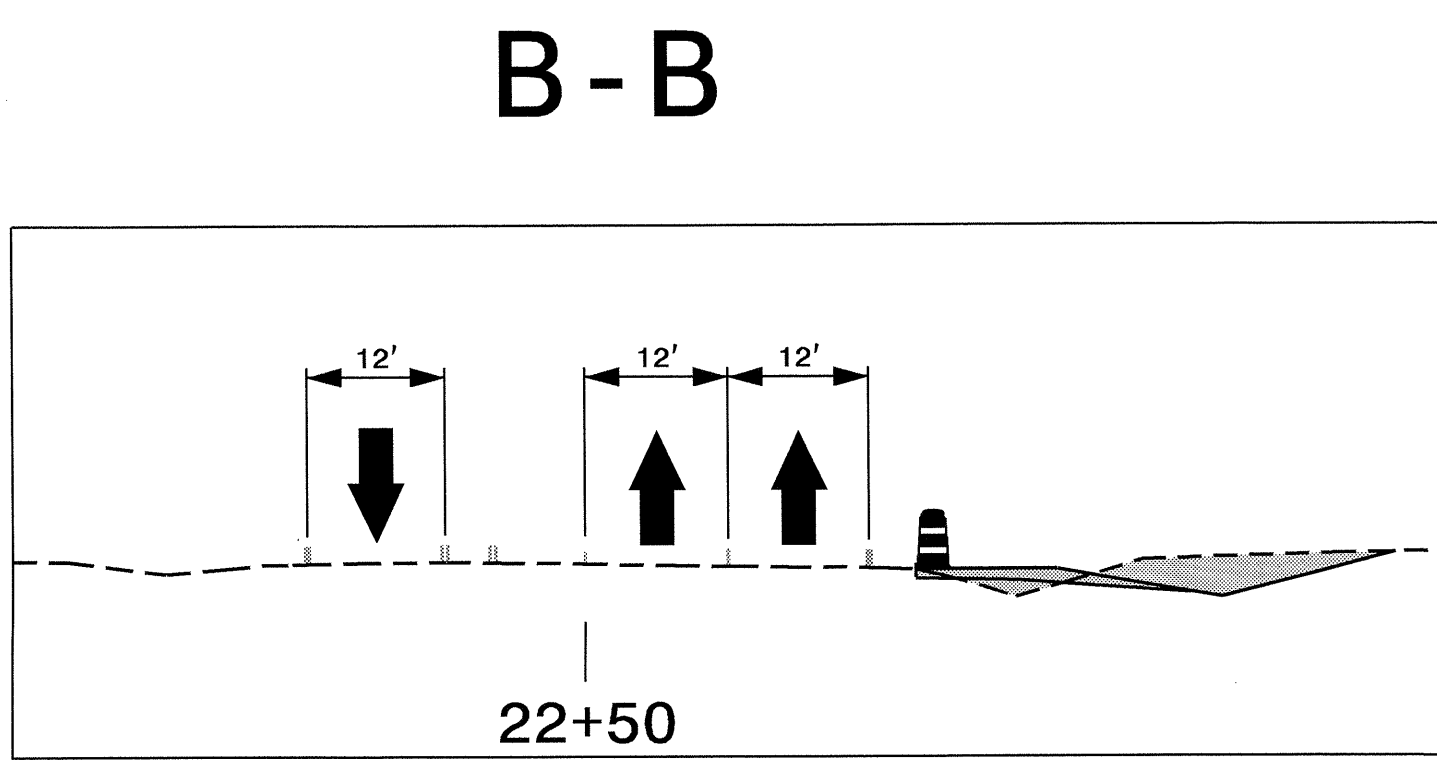
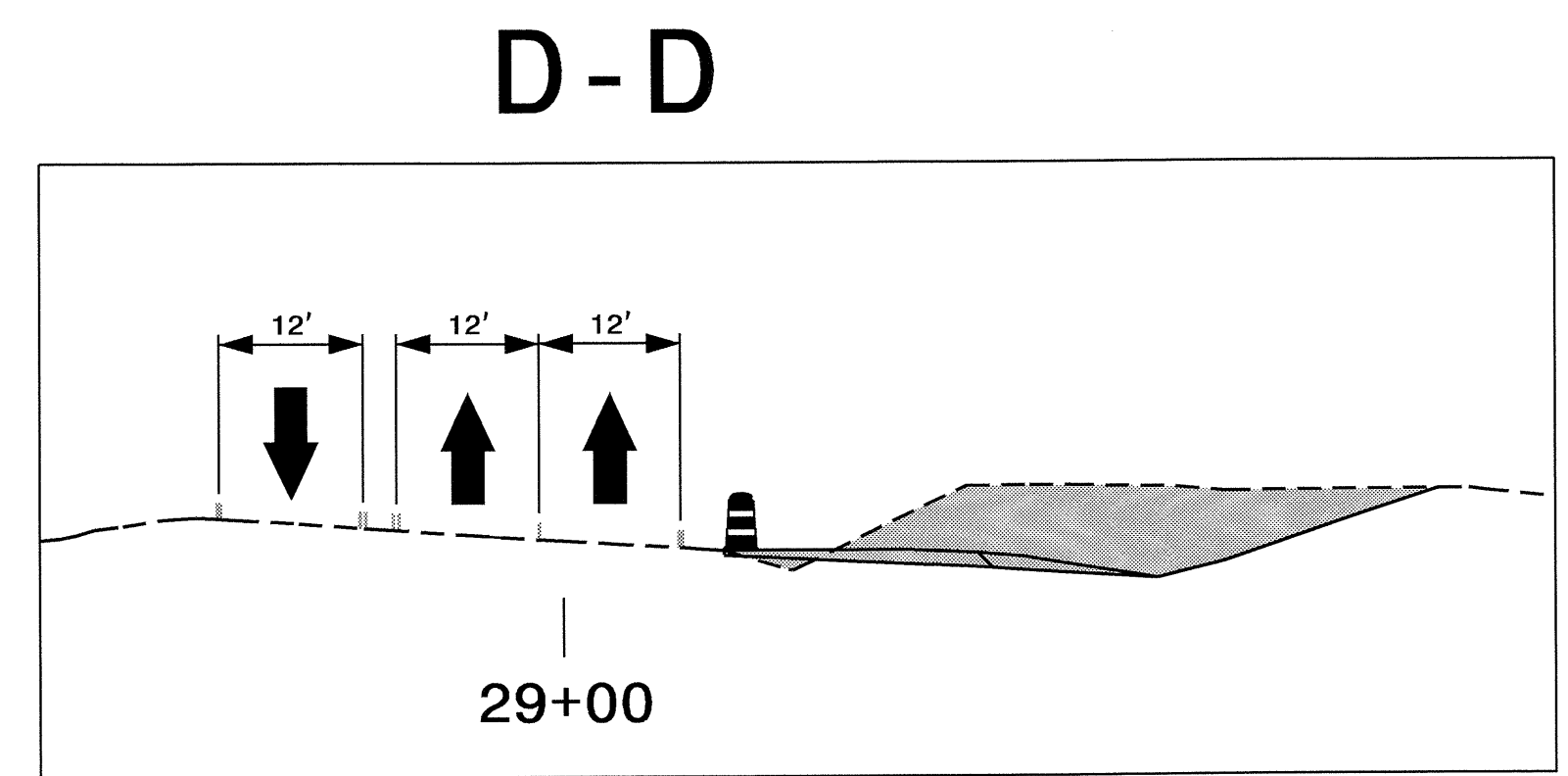
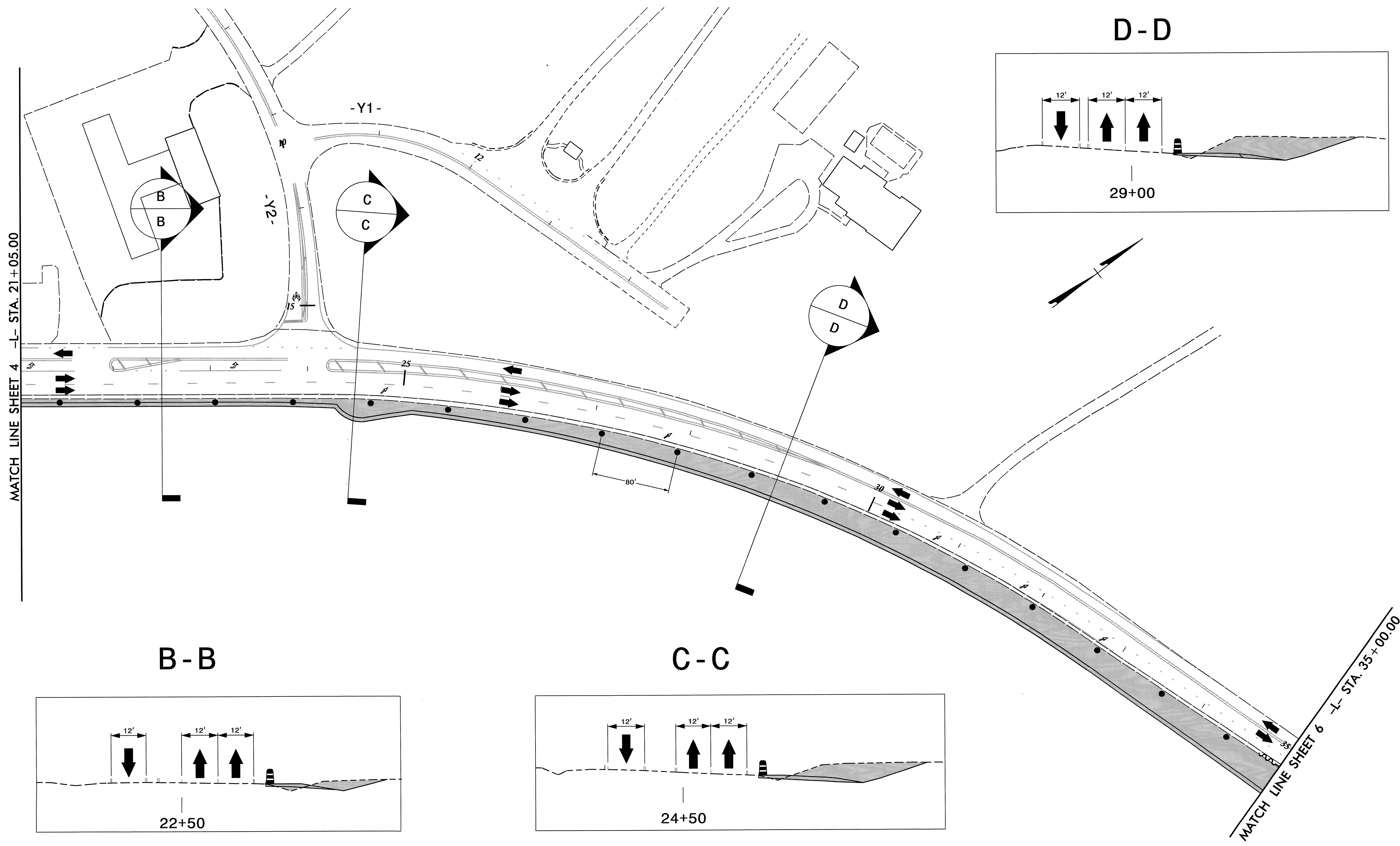


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 scmillier1 AT TE248375

APPROVED: *St. Miller* DATE: 12-6-11

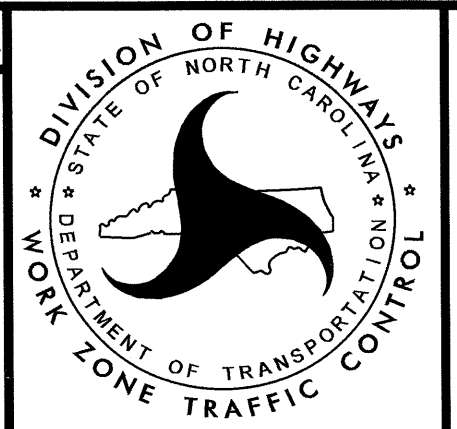
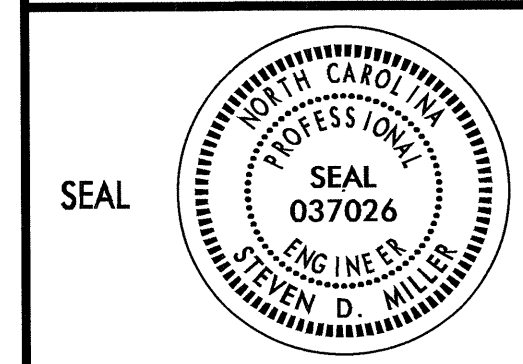


PHASE I DETAIL



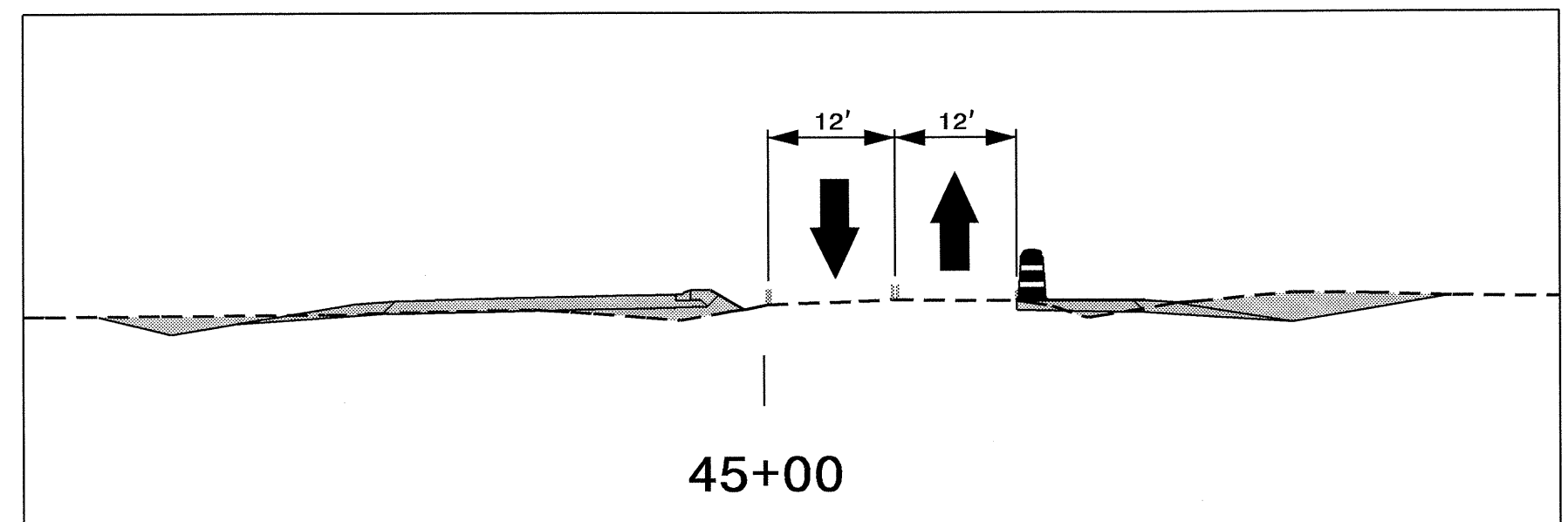
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APPROVED: *[Signature]* DATE: 12-6-11



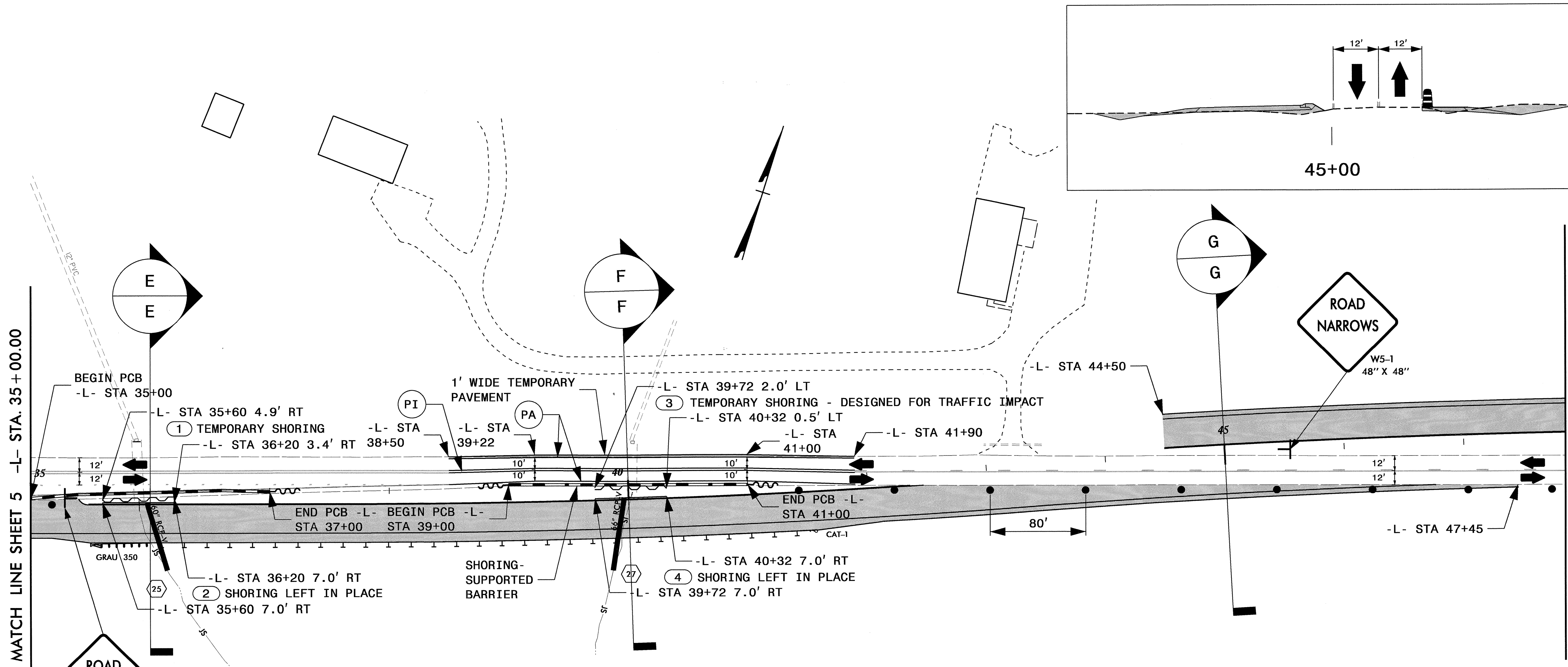
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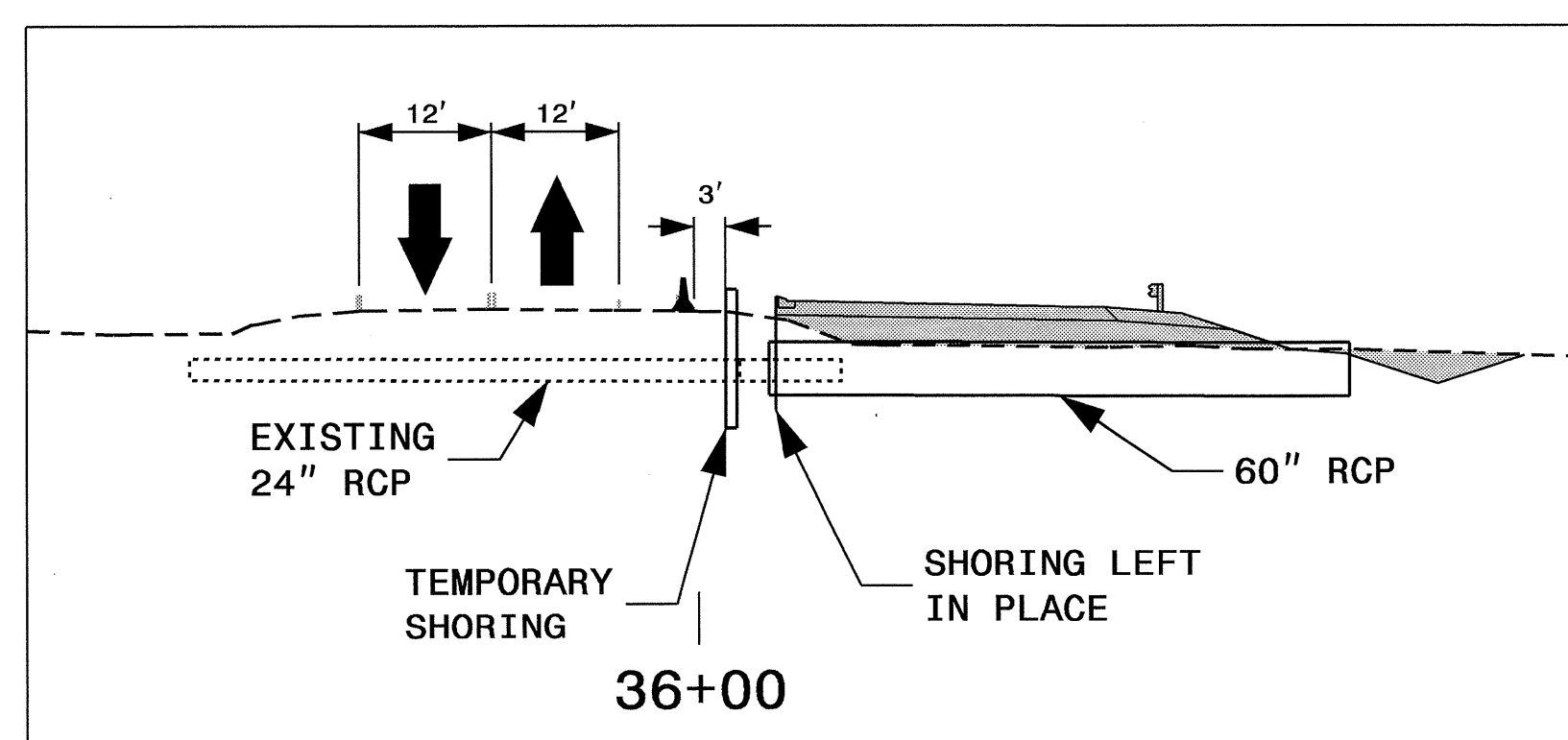


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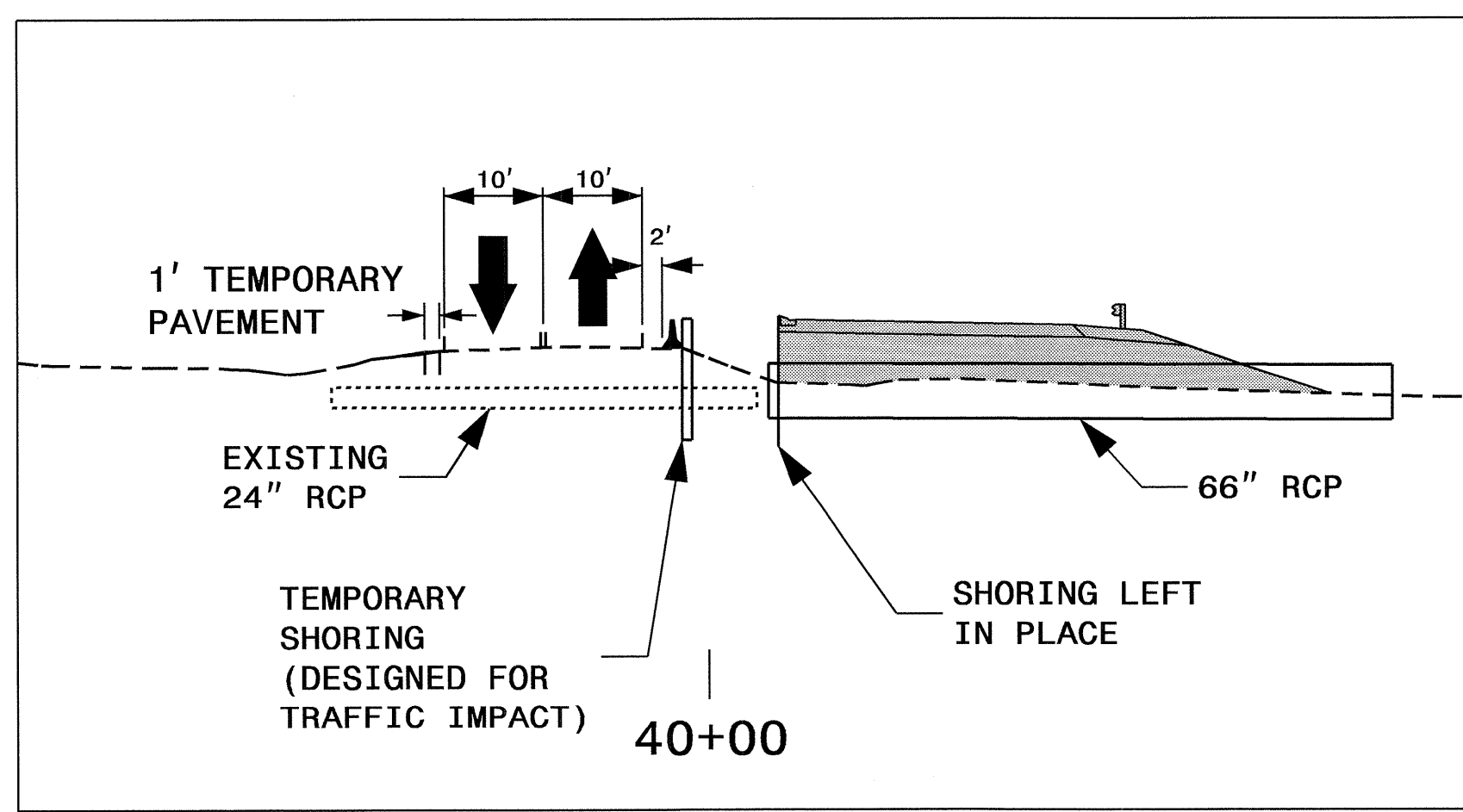
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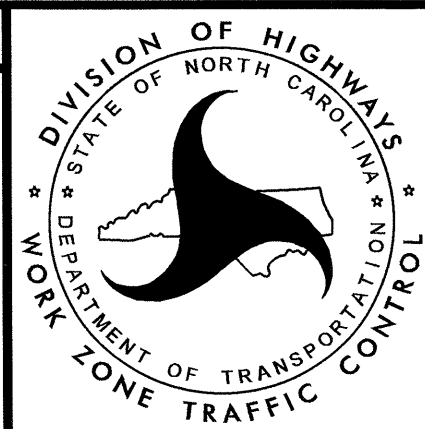
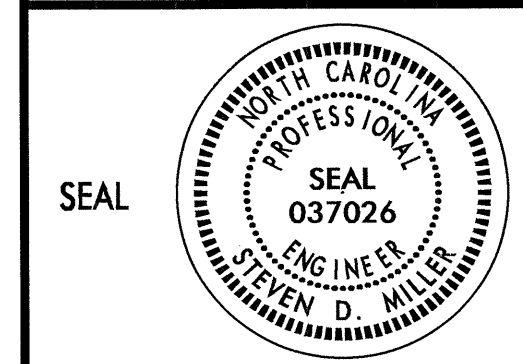
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APPROVED: *Steve Miller* DATE: 12-6-11

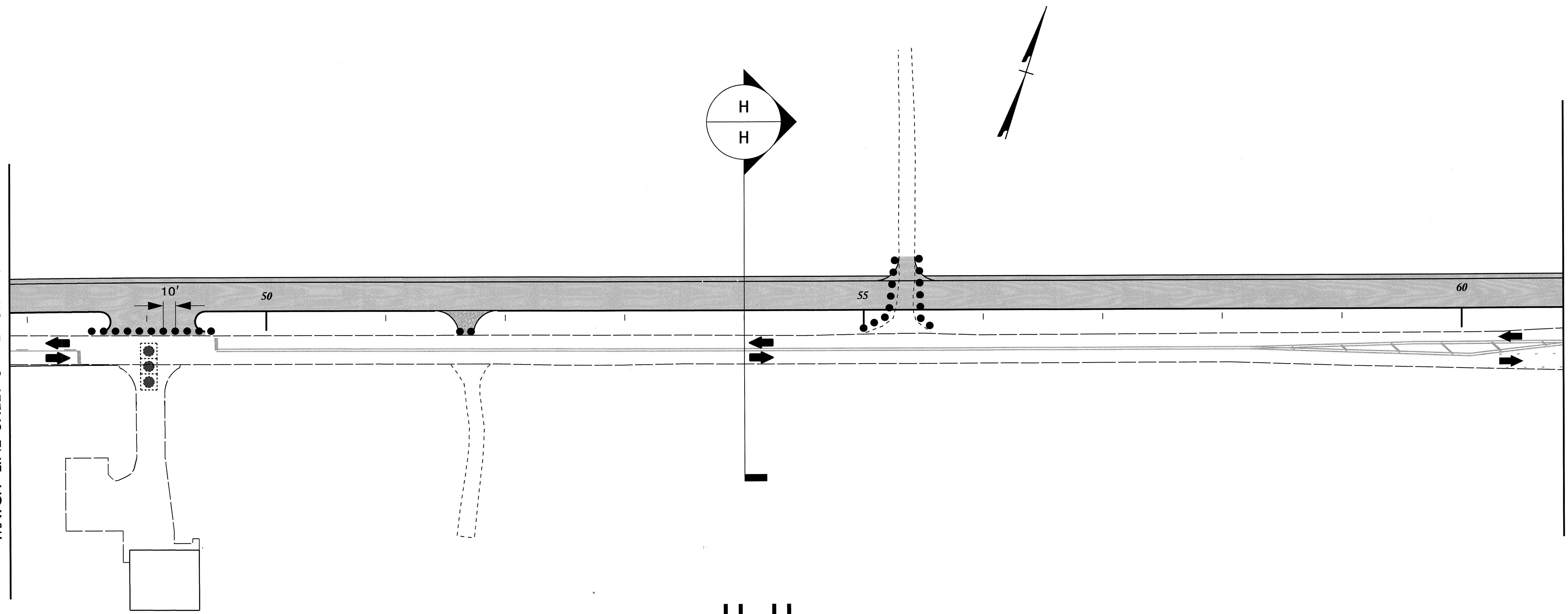


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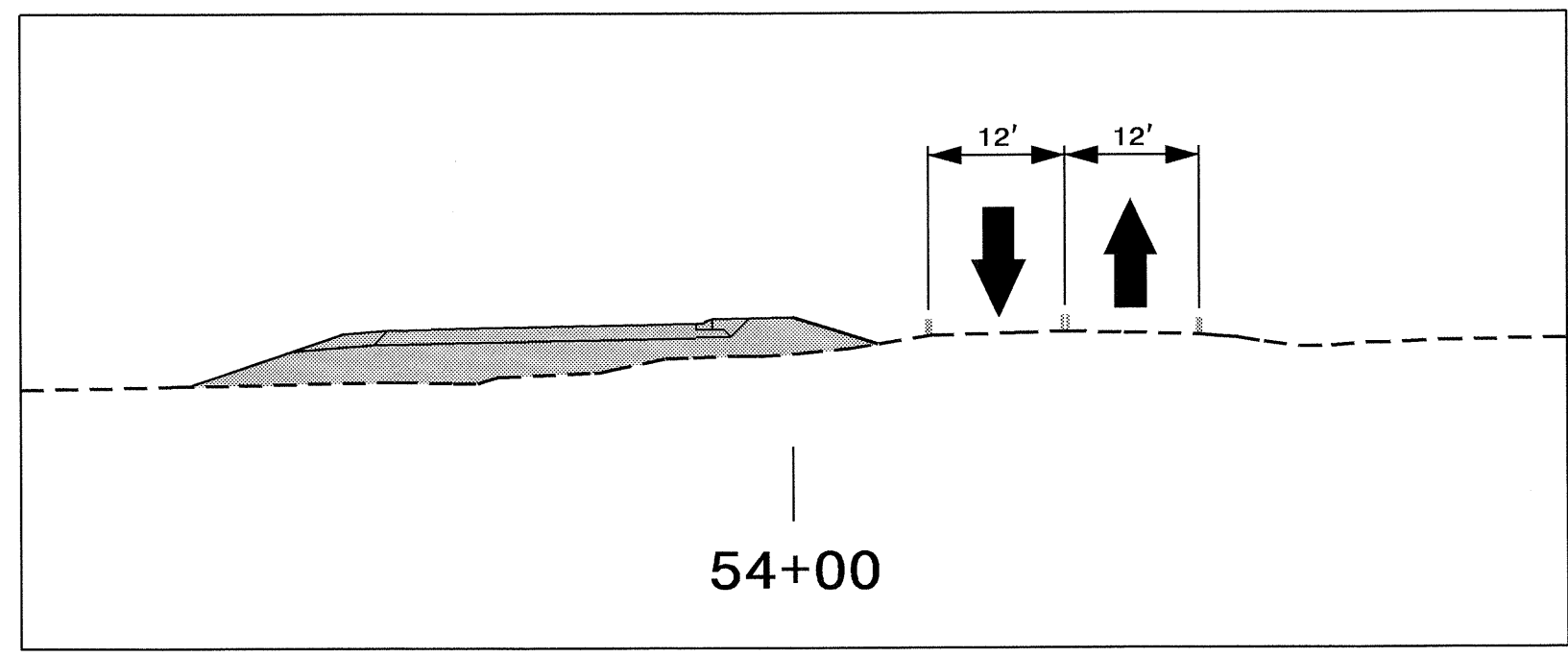
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MATCH LINE SHEET 6 -L- STA. 47+85.00

MATCH LINE SHEET 8 -L- STA. 60+85

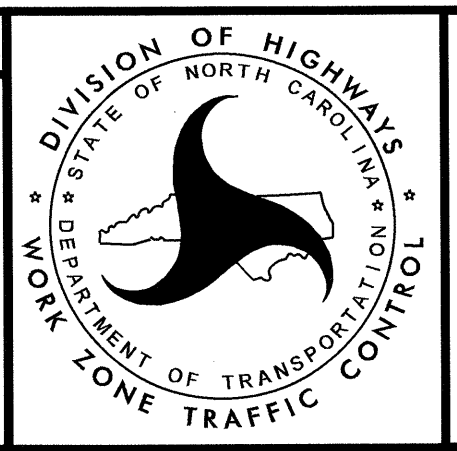
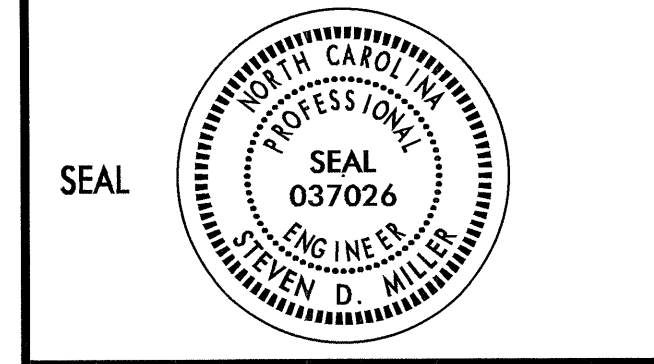


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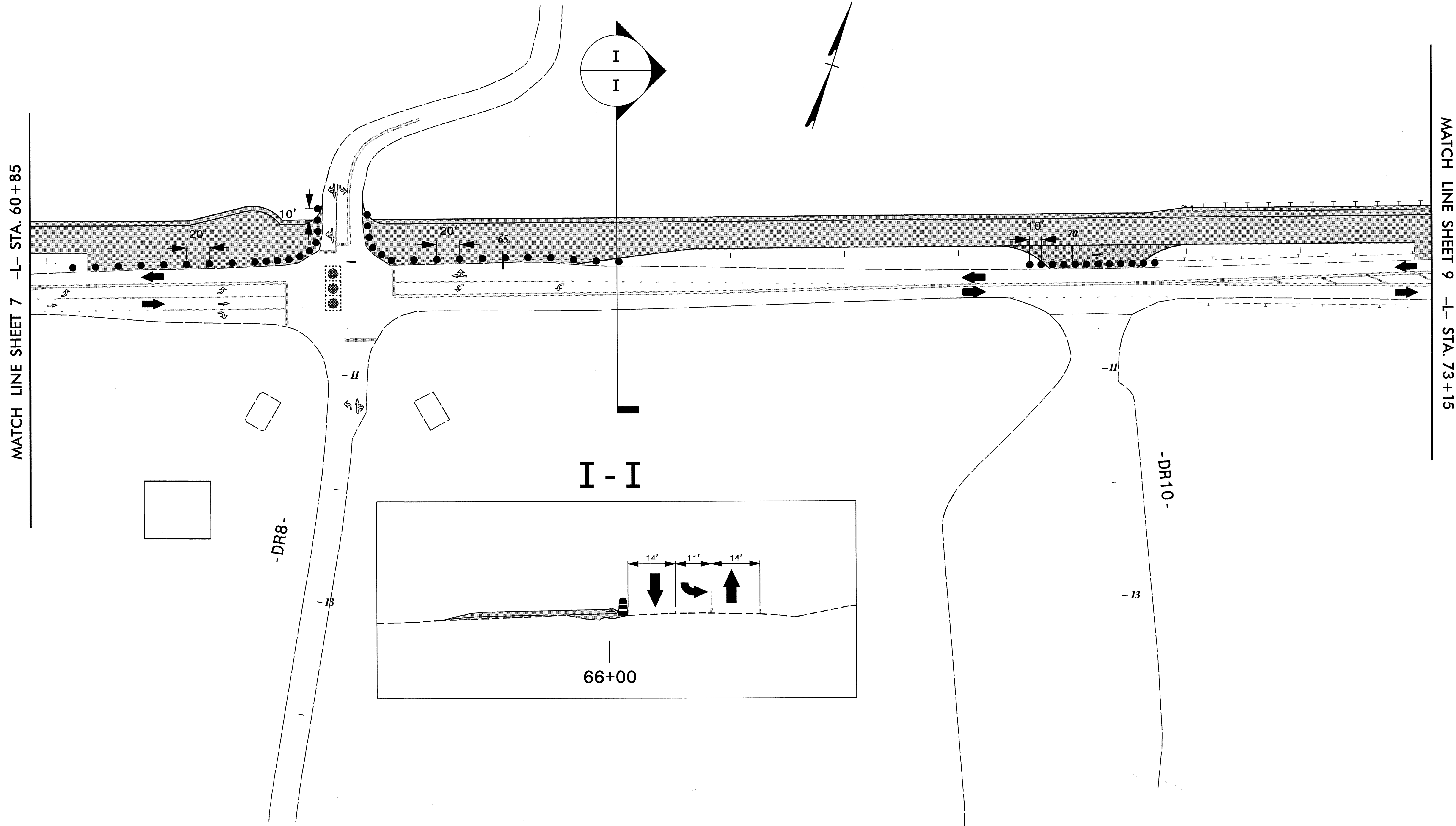


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APPROVED: *St. Miller* DATE: 12-6-11

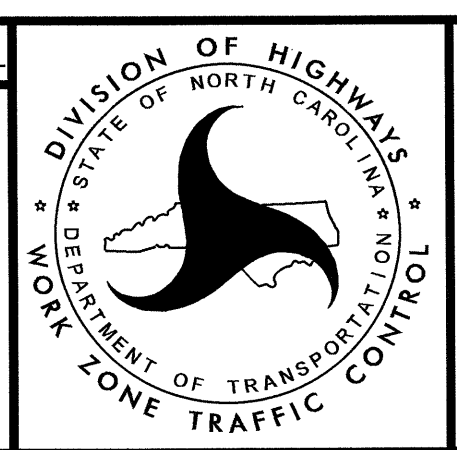
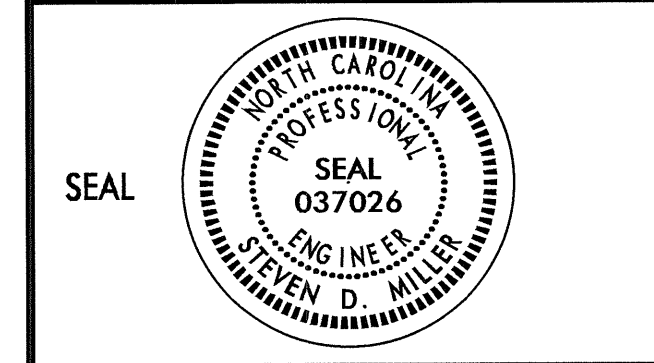


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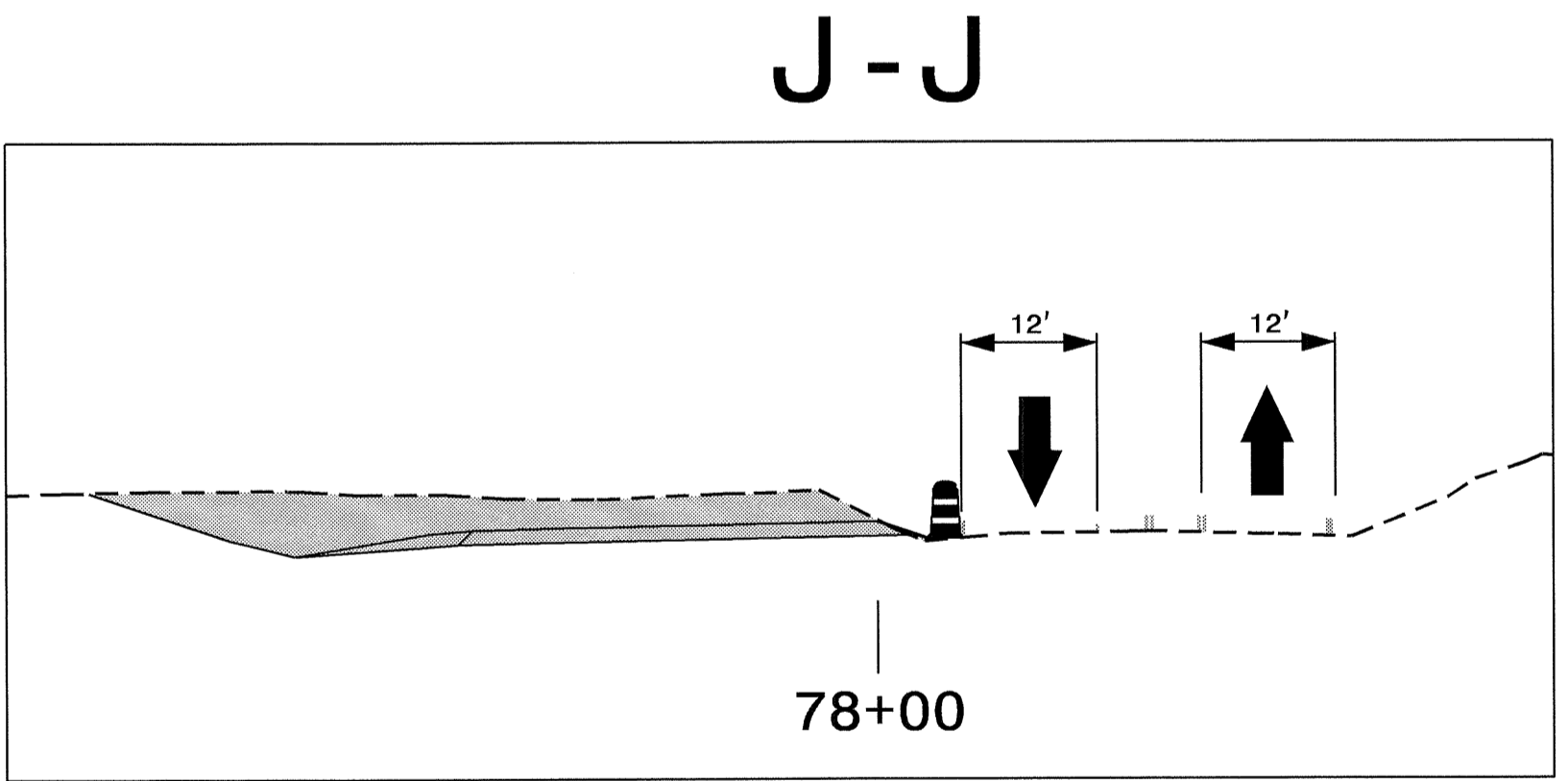
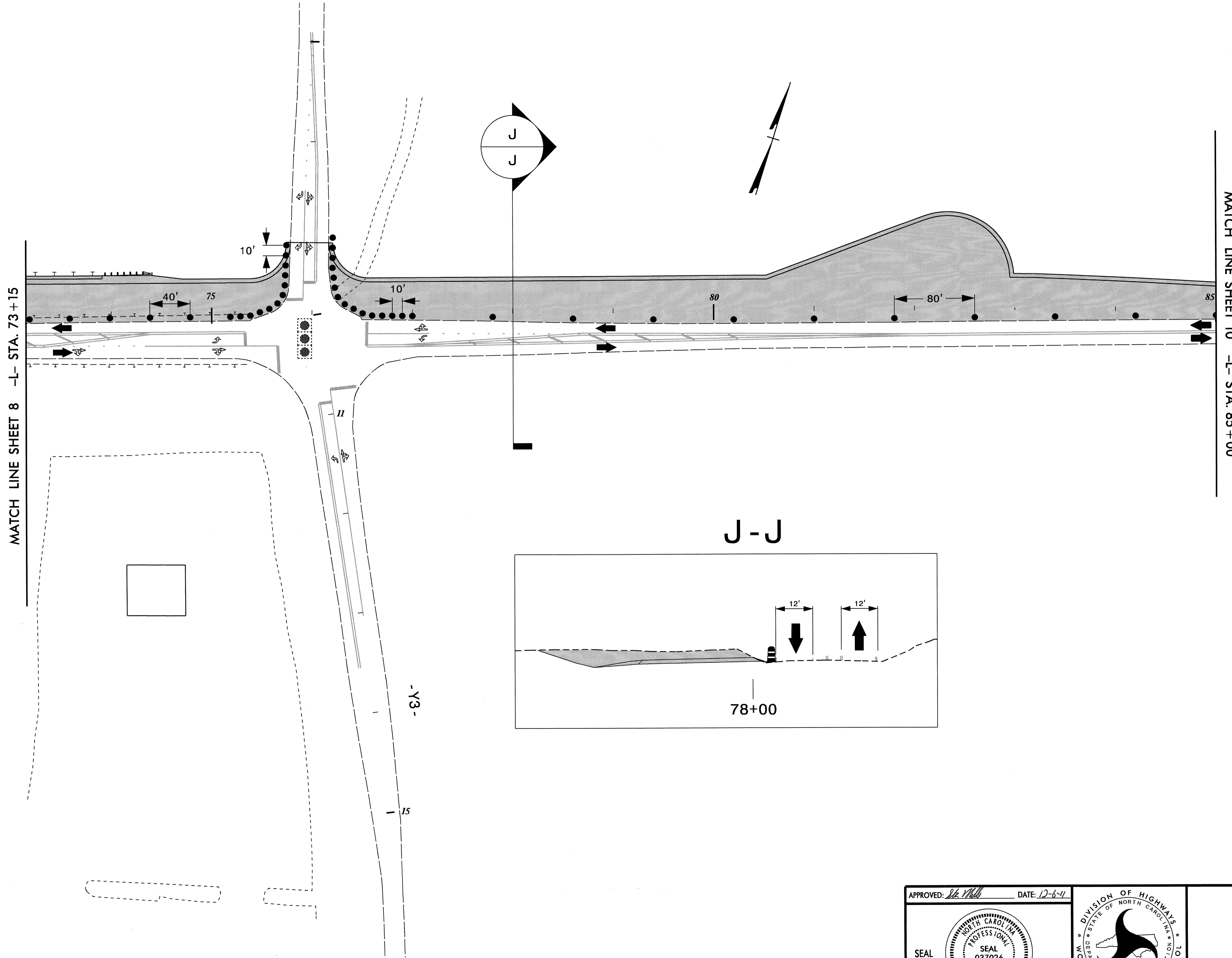


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APPROVED: *[Signature]* DATE: 12-6-11

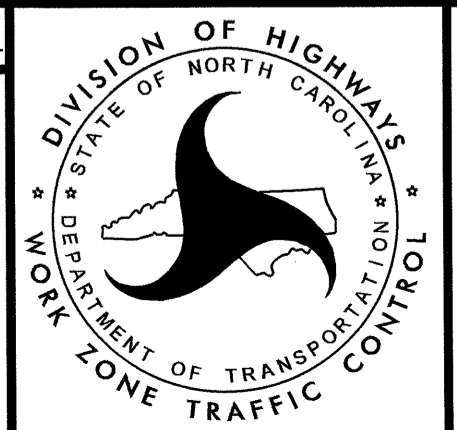


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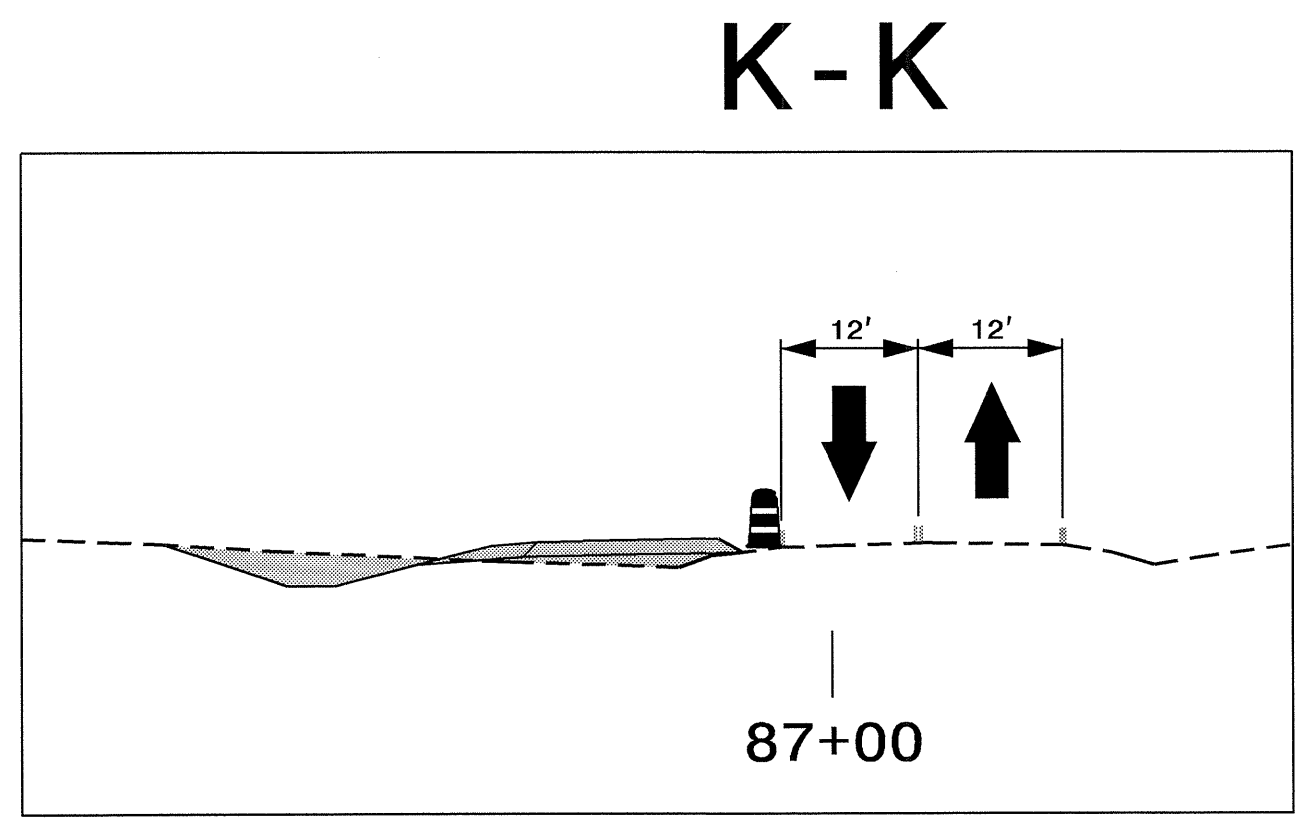
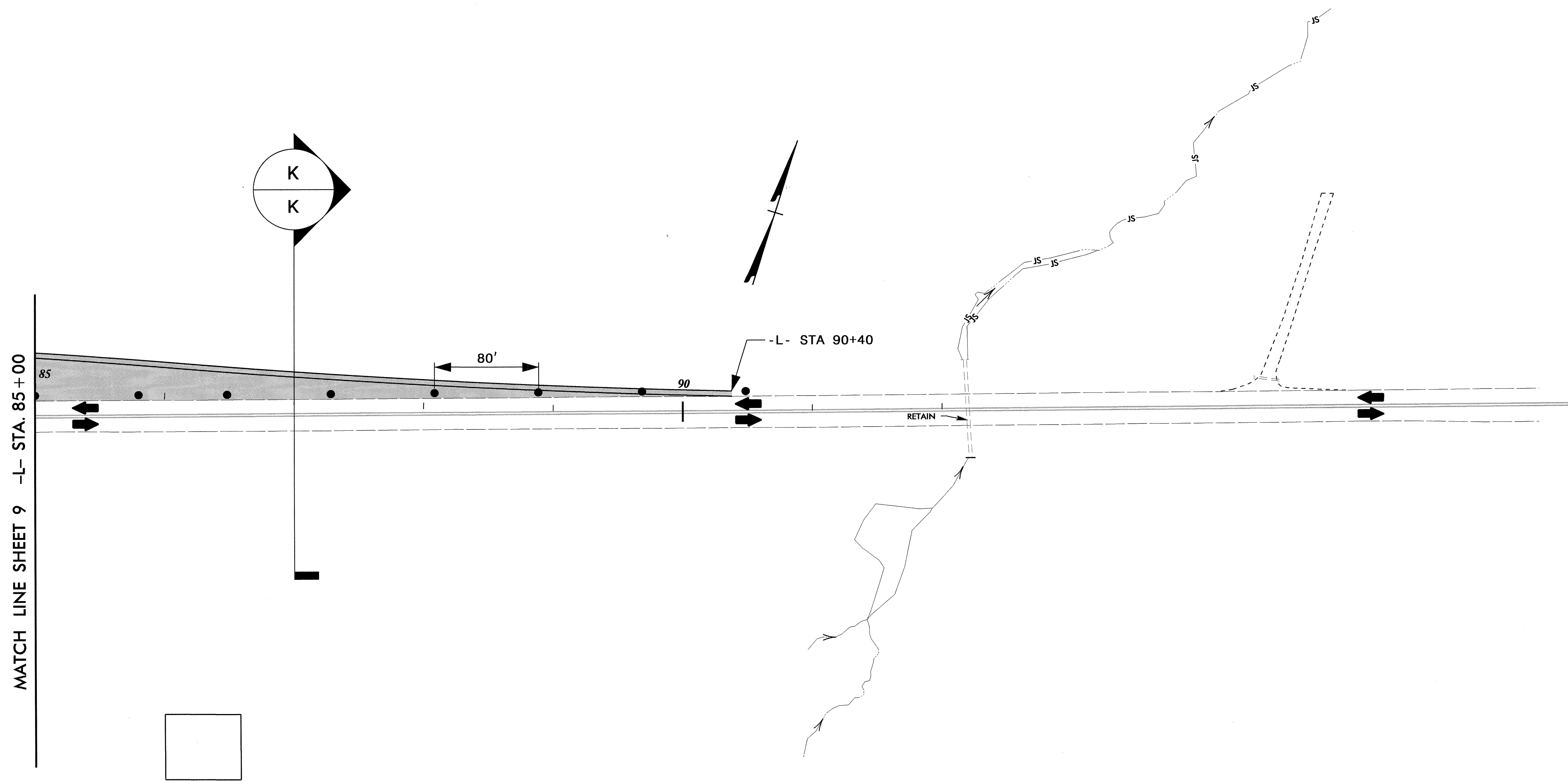


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PHASE I DETAIL



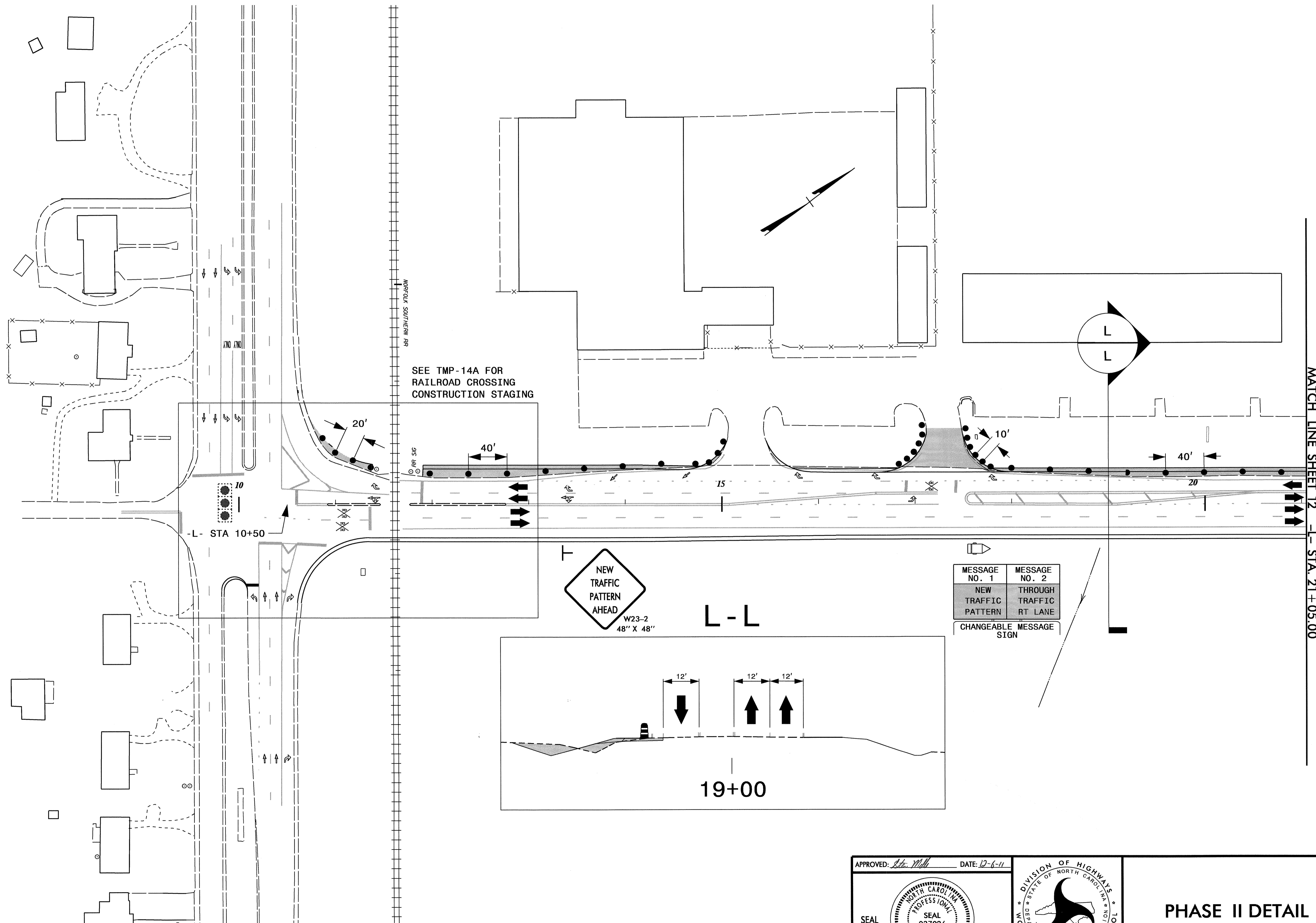
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APPROVED: *Steve Miller* DATE: 12-6-11

SEAL



PHASE I DETAIL



MATCH LINE SHEET 12 -L- STA. 21+05.00

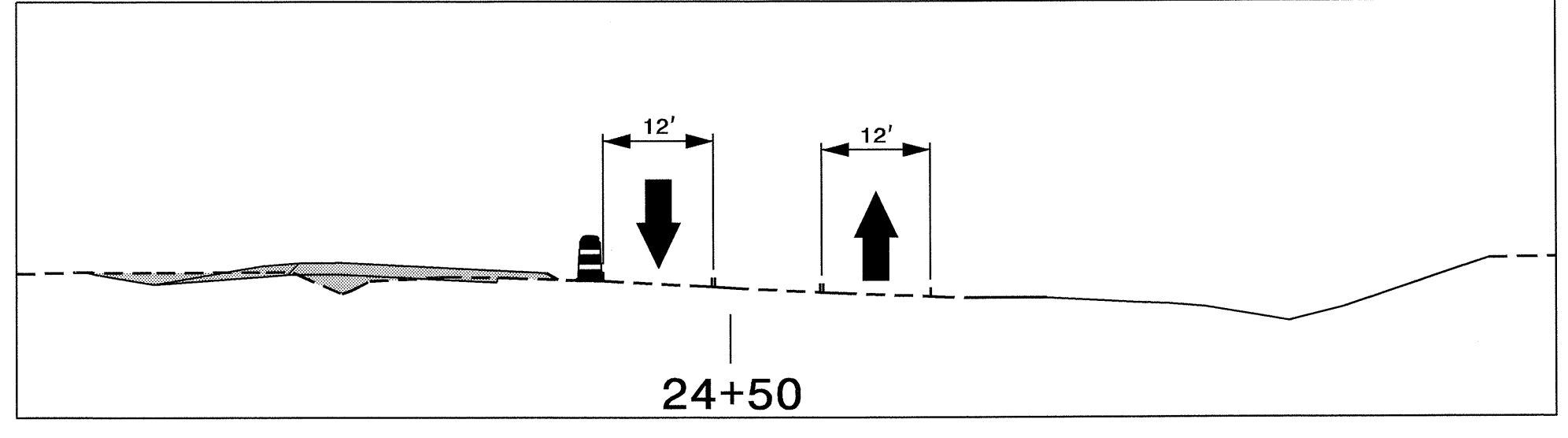
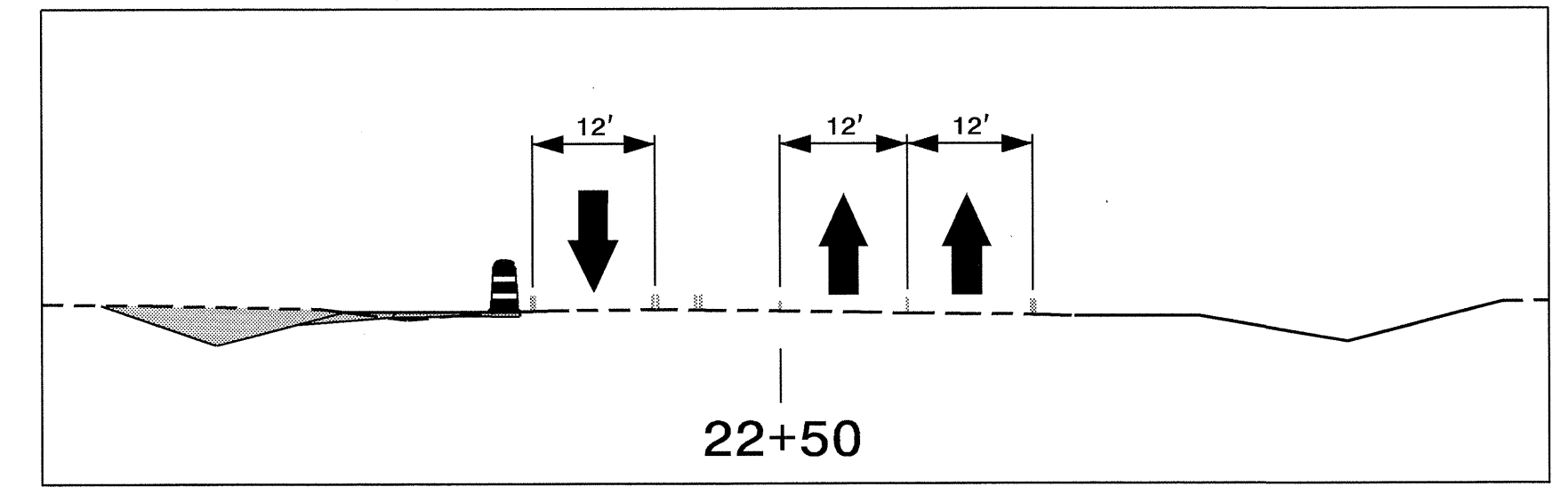
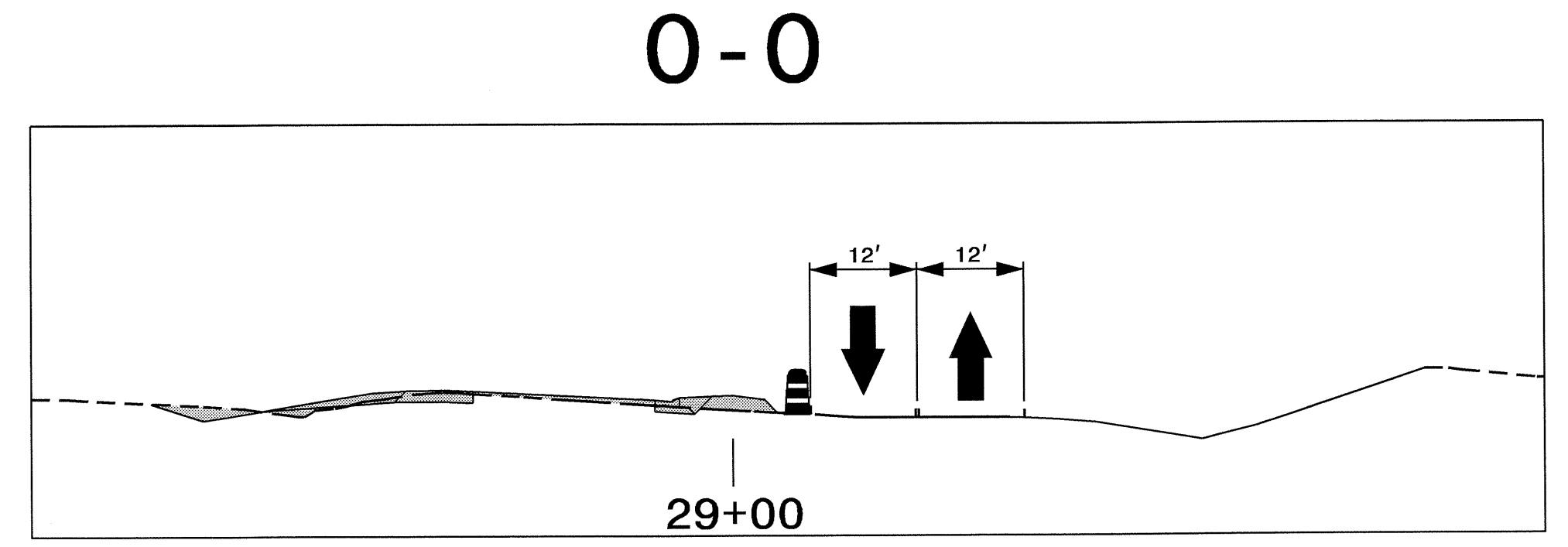
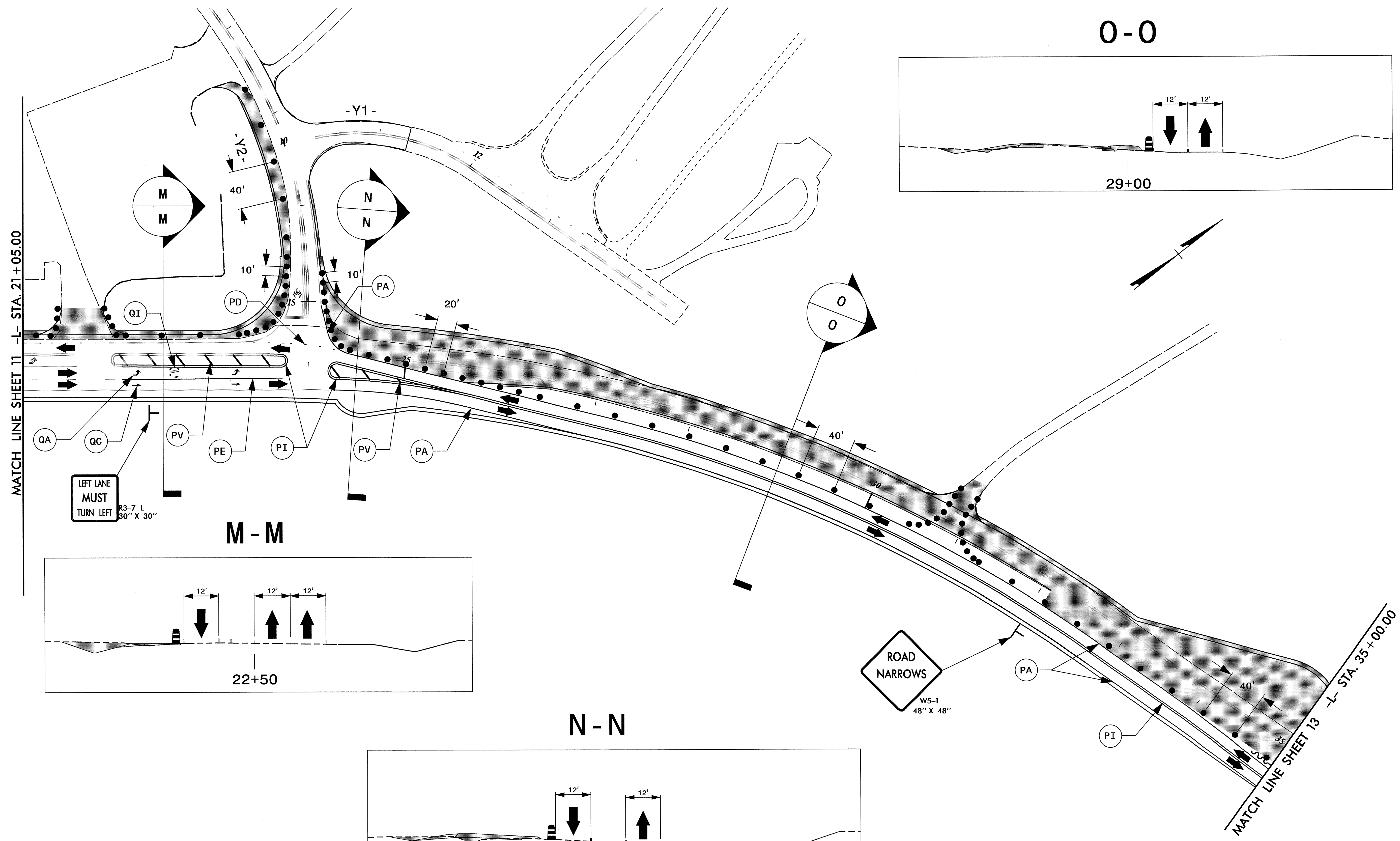
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APPROVED: *Steve Miller* DATE: 12-6-11

SEAL

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

PHASE II DETAIL



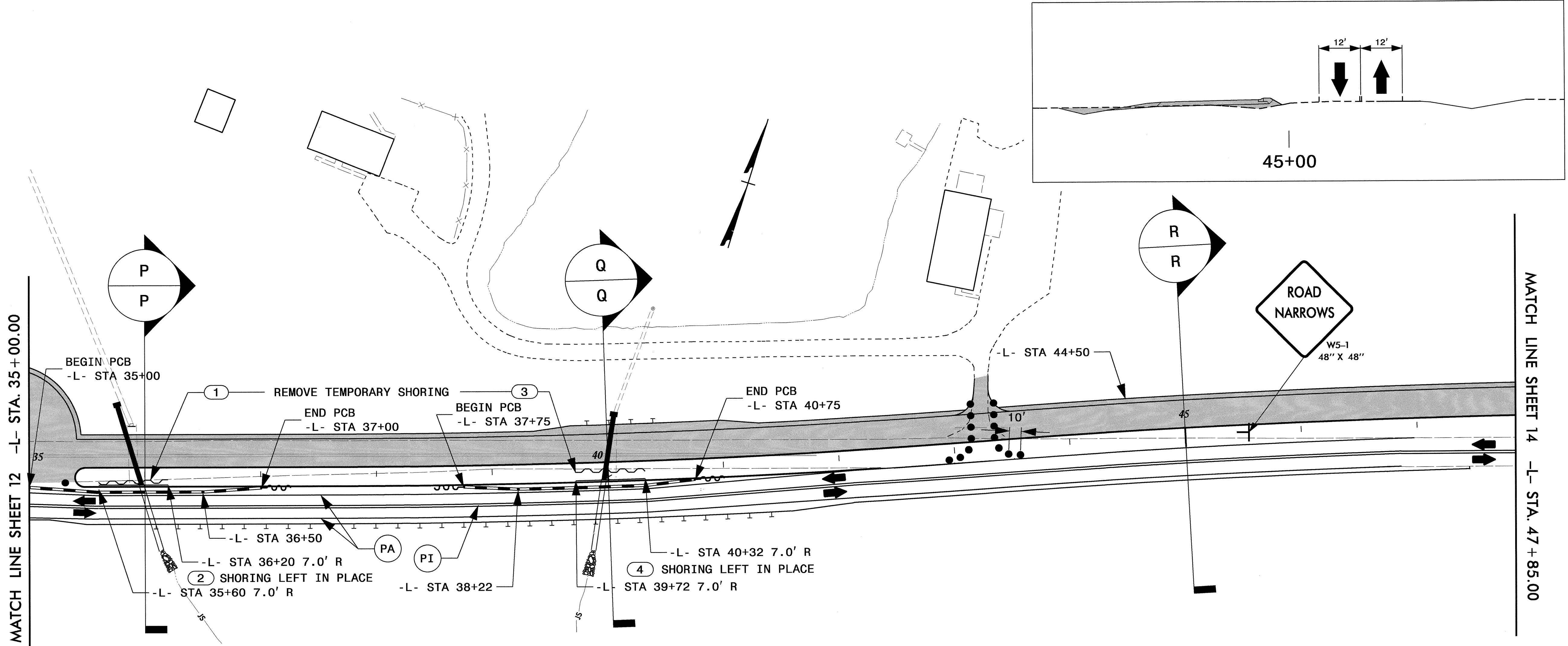
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APPROVED: *Steve Miller* DATE: 12-6-11

SEAL

PHASE II DETAIL

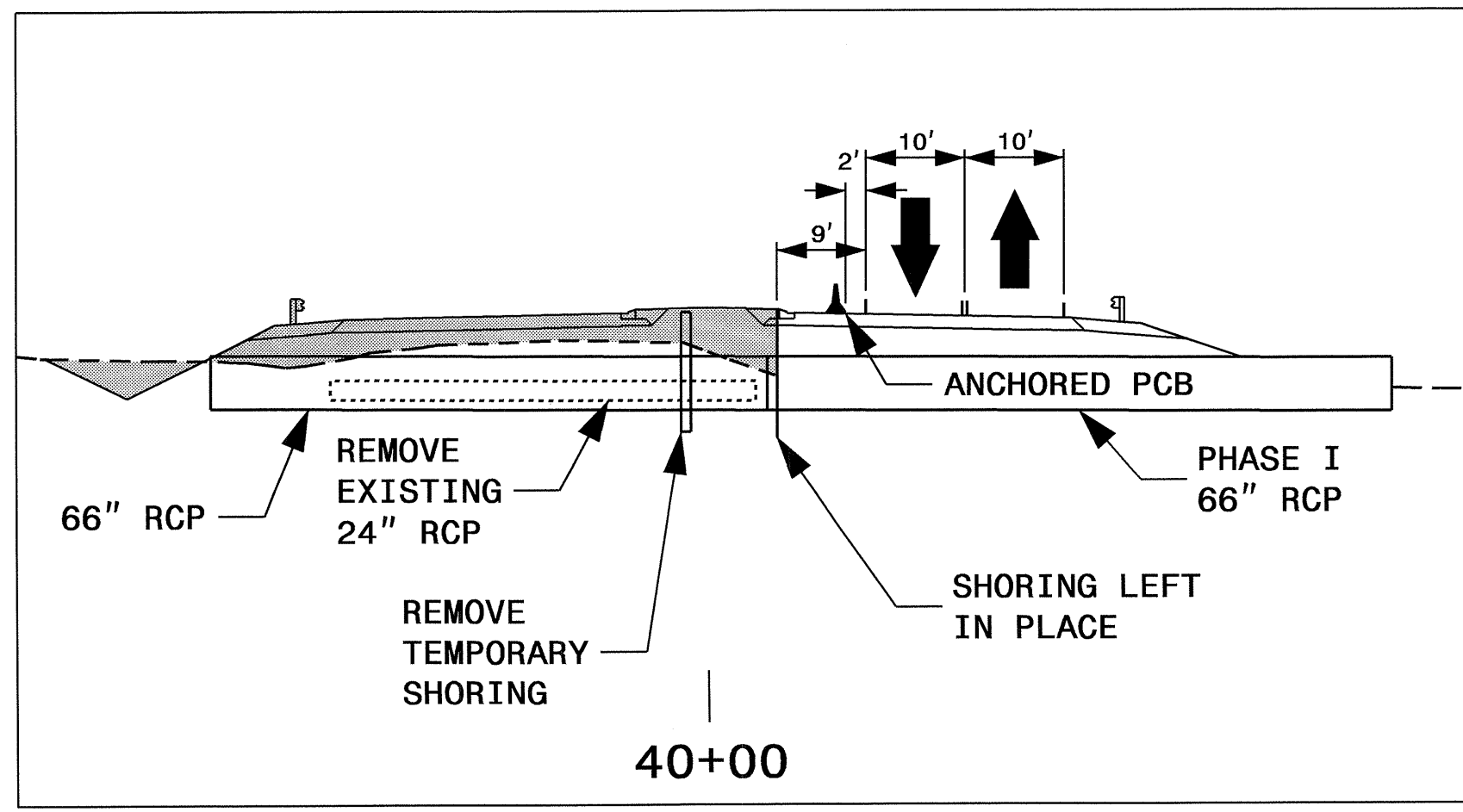
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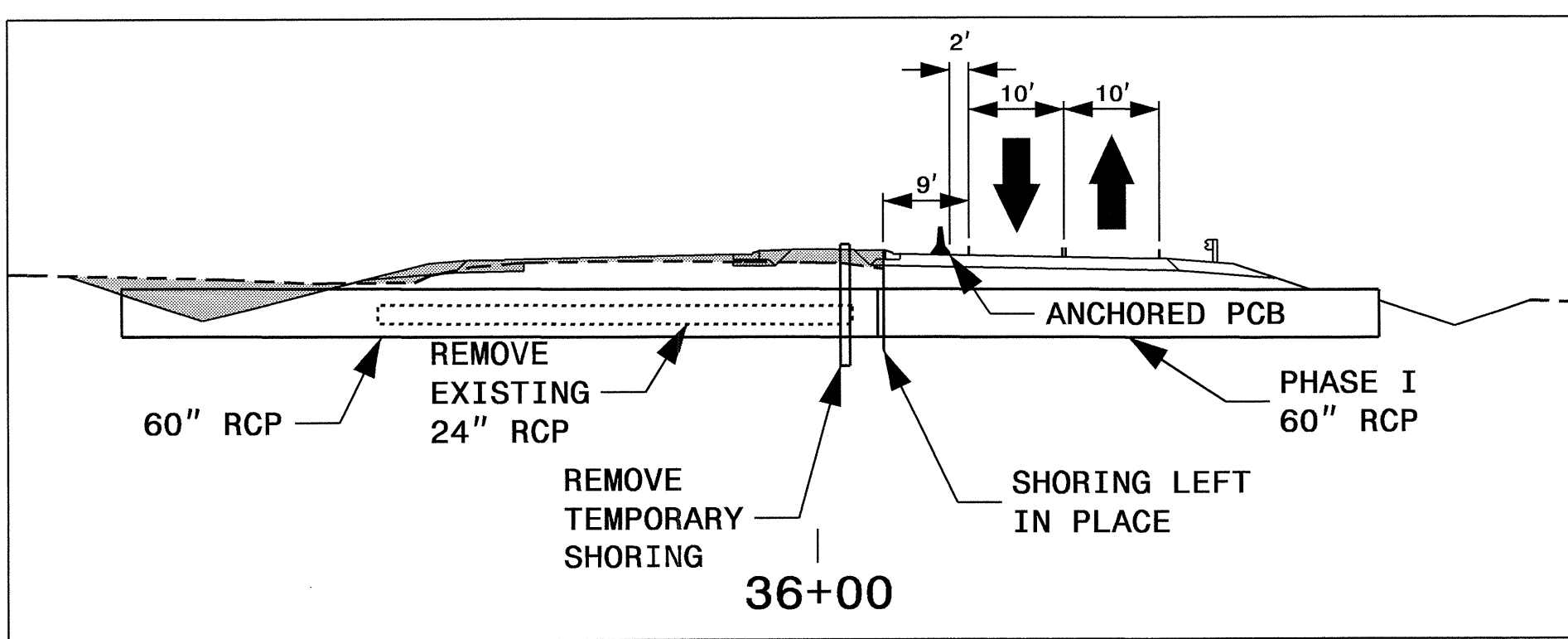
MATCH LINE SHEET 12 -L- STA. 35+00.00

MATCH LINE SHEET 14 -L- STA. 47+85.00

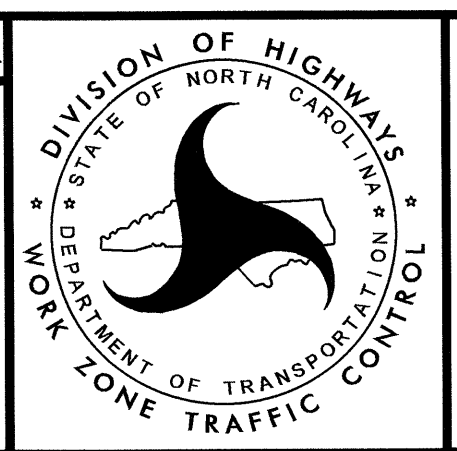
Q-Q



P-P



APPROVED: *[Signature]* DATE: 12-6-11

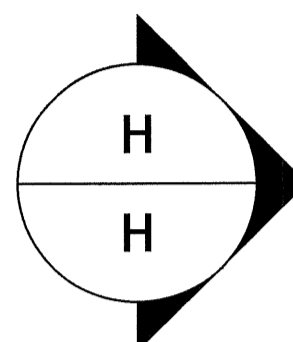
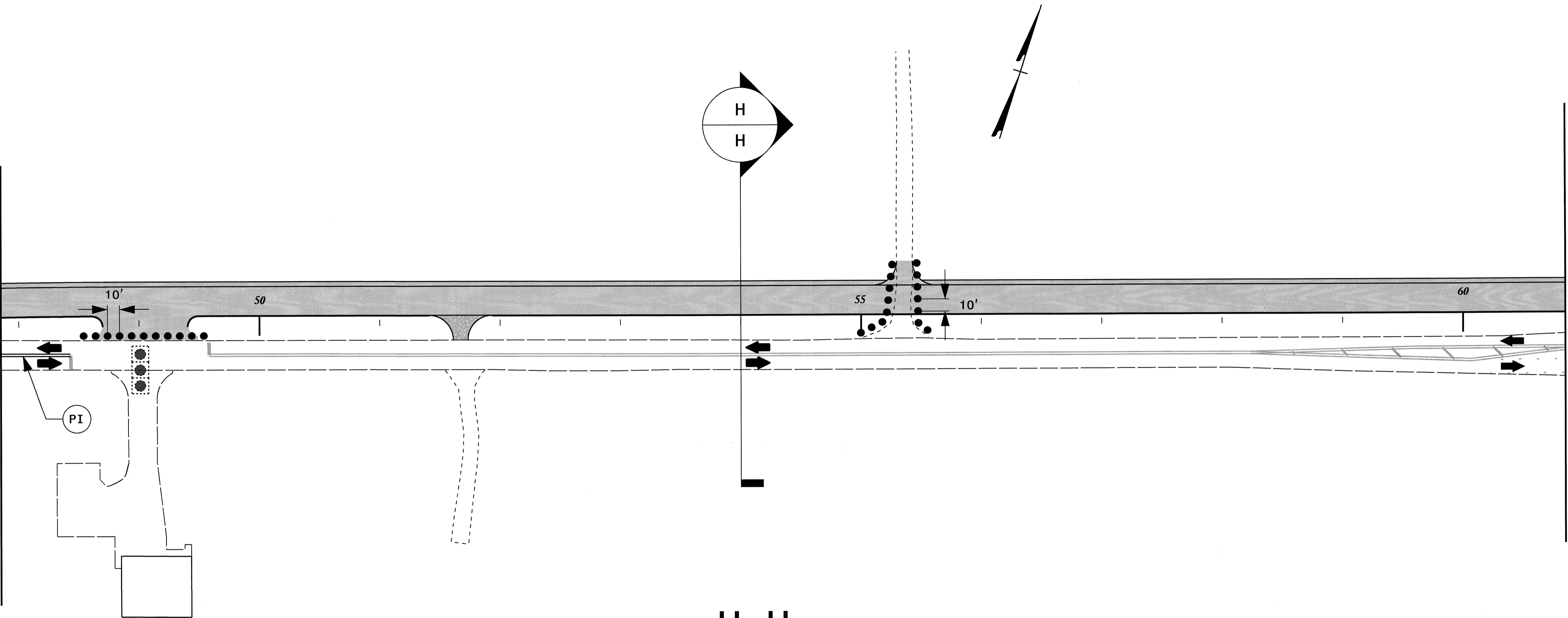


PHASE II DETAIL

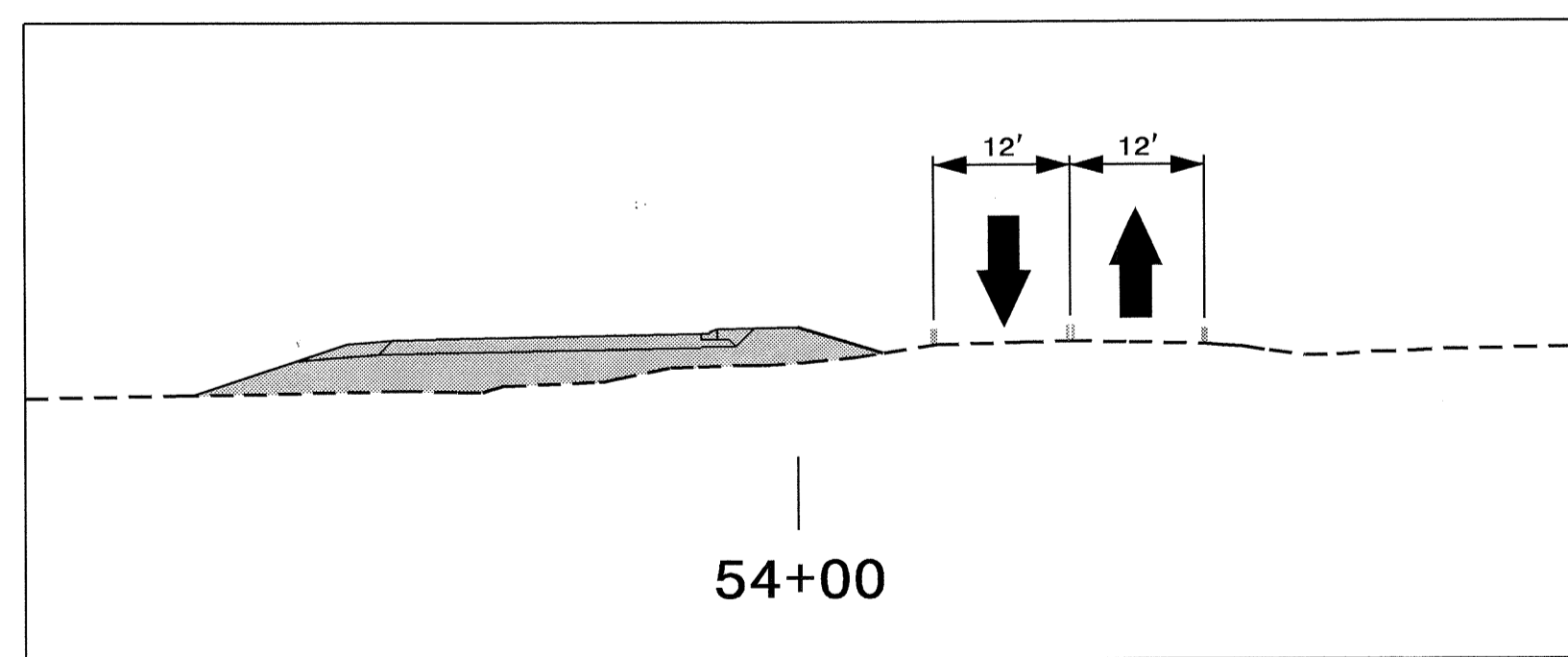
06-DEC-2011 14:38 \\dot\dfsroo\01\Proj\TIP\Projects-R\3825a\TrafficControl\TCPNR-3825A TMP-13.dgn sdmiller1 AT TE248375

MATCH LINE SHEET 13 -L- STA. 47+85.00

MATCH LINE SHEET 8 -L- STA. 60+85

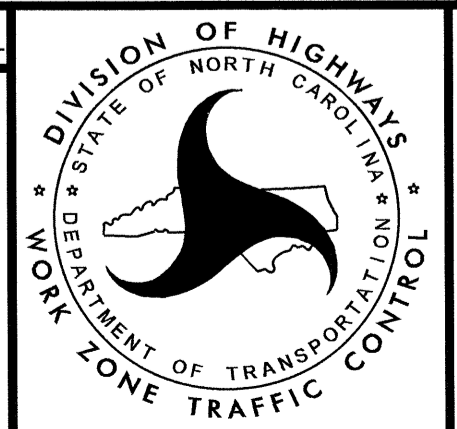
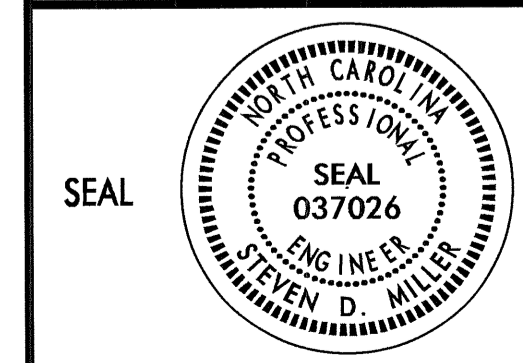


H-H

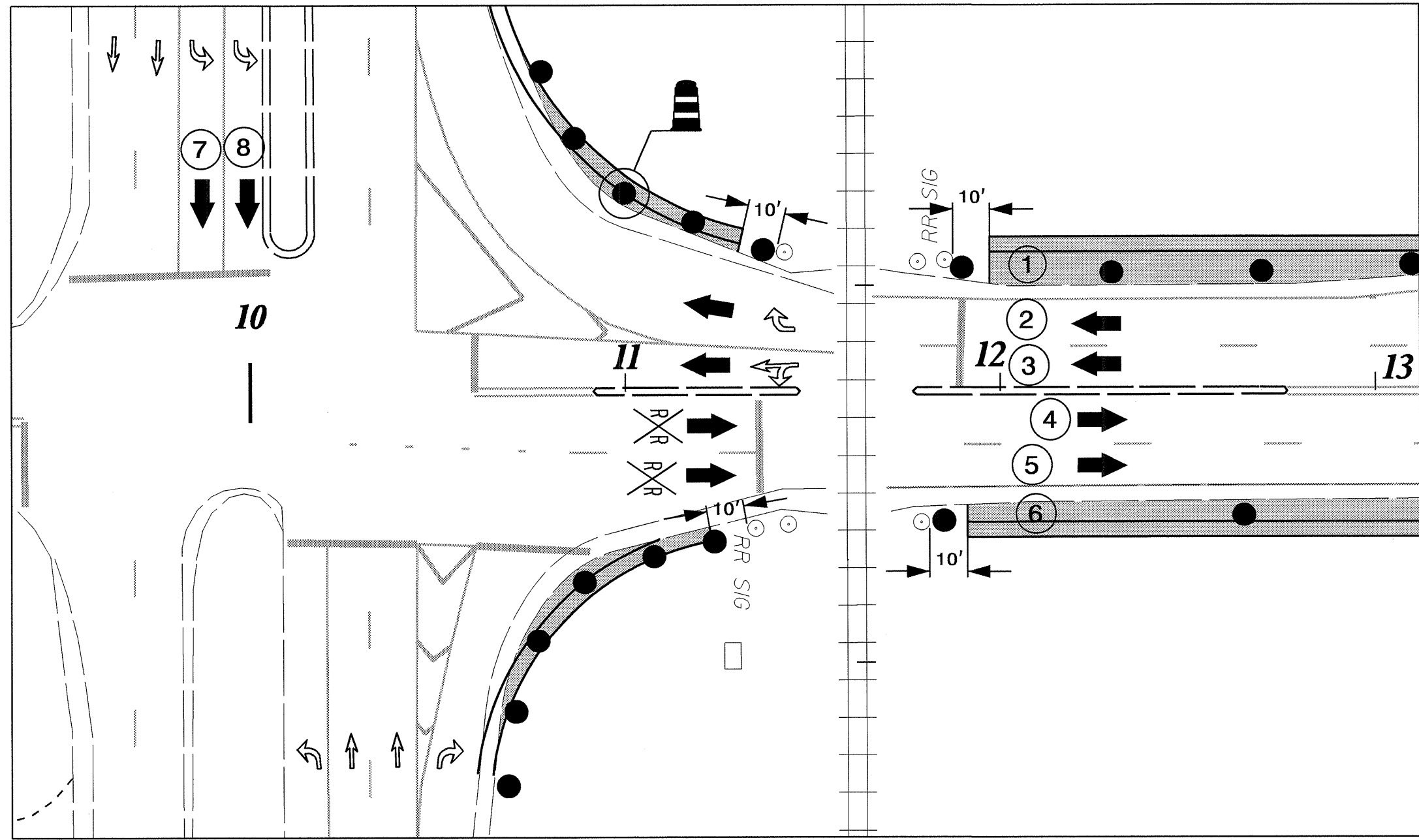


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APPROVED: *St. Mill* DATE: 12-6-11

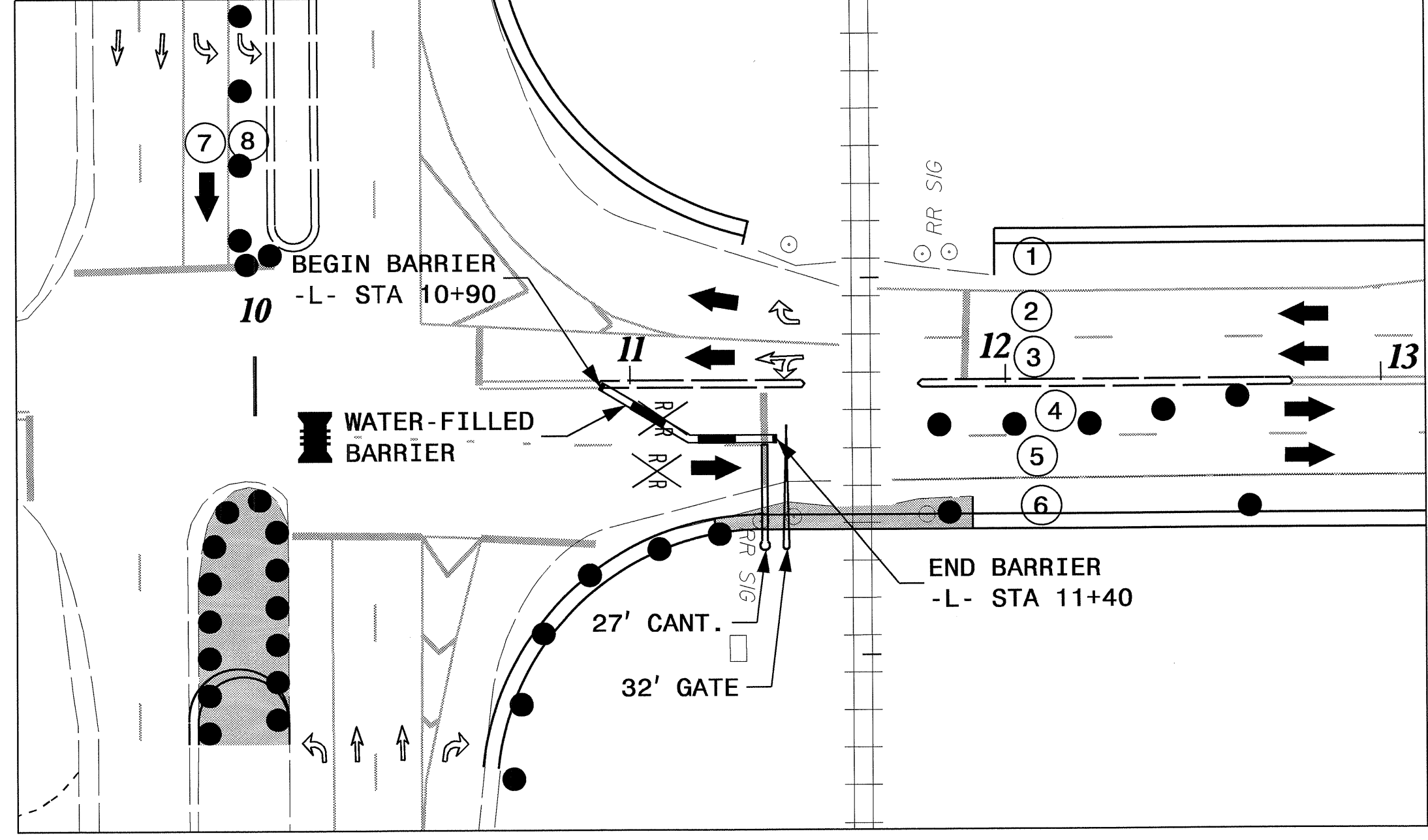


PHASE II DETAIL



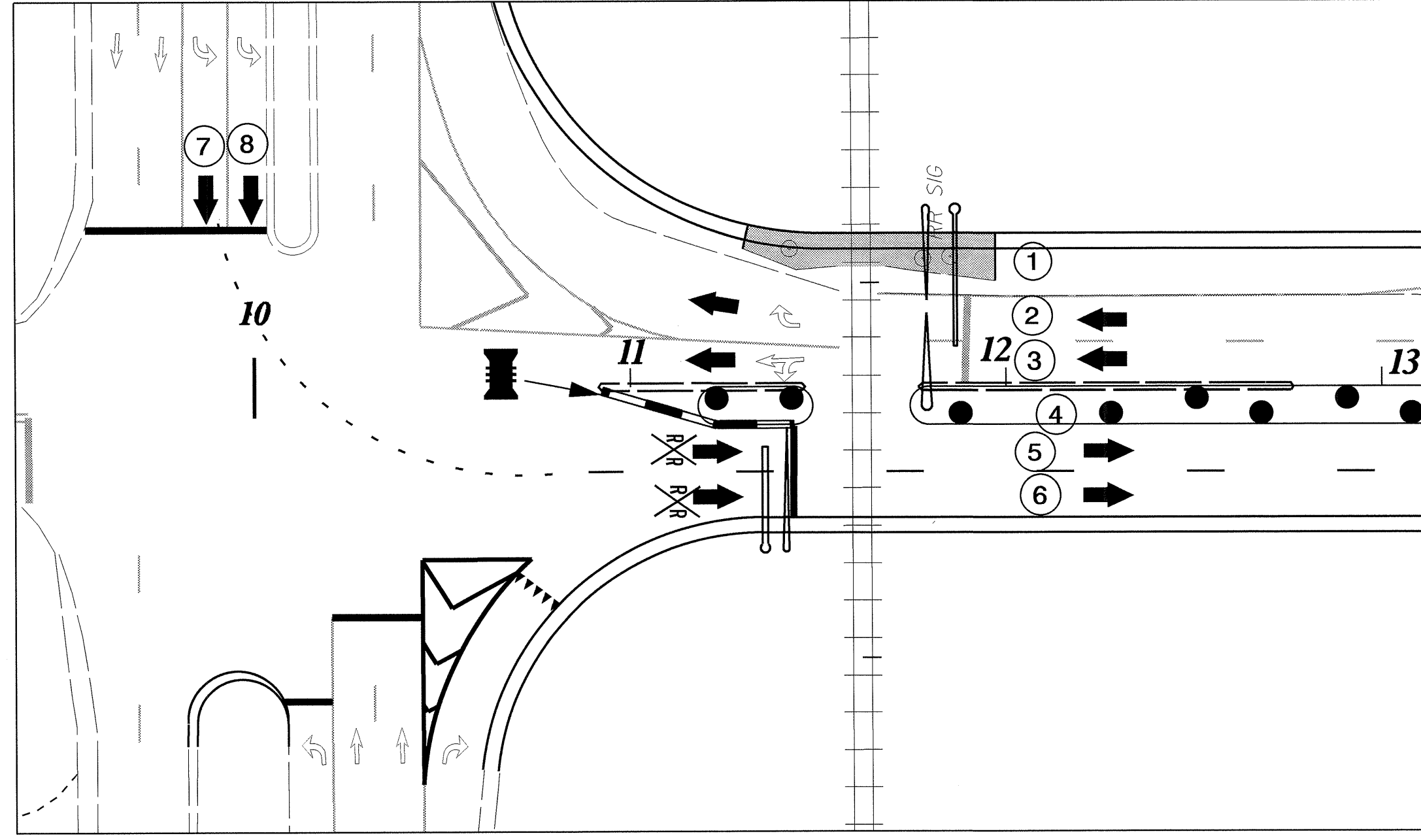
STAGE 1

MAINTAINING TRAFFIC AS SHOWN AND USING ROADWAY STANDARD DRAWING 1101.02 SHEET 3 OF 15 AND ROADWAY STANDARD DRAWING 1101.04 SHEET 1 OF 1 AS NEEDED, BEGIN WIDENING CONSTRUCTION ON THE LEFT AND RIGHT SIDE OF -L- FOR LANE 1 AND LANE 6 AS SHOWN UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER. NORFOLK SOUTHERN CORPORATION WILL INSTALL NEW DETECTION SYSTEM AND SHELTERS TO OPERATE THE EXISTING EQUIPMENT. COMPLETE WIDENING CONSTRUCTION ON THE RIGHT SIDE OF -L- FOR LANE 6 TO THE EXTENTS SHOWN UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER.



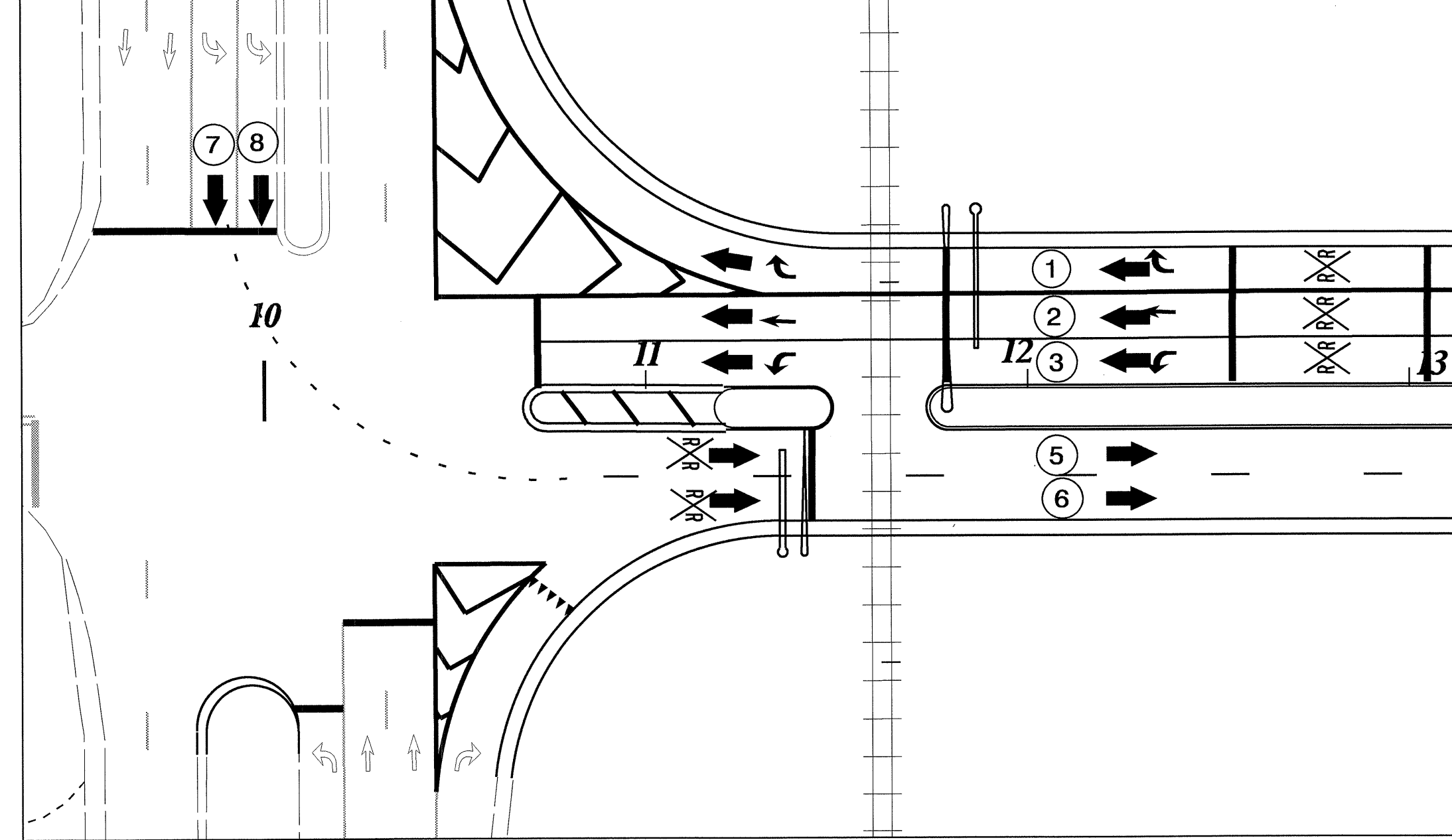
STAGE 2

CLOSE LANE 4 AND LANE 8 USING ROADWAY STANDARD DRAWING 1101.02 SHEET 3 OF 15. PLACE WATER-FILLED BARRIER FROM -L- STA 10+90 TO 11+40. NORFOLK SOUTHERN CORPORATION WILL REMOVE EXISTING RAILROAD SIGNALS AND FOUNDATIONS FROM THE RIGHT SIDE OF -L-. NORFOLK SOUTHERN CORPORATION WILL INSTALL AND ACTIVATE NEW RAILROAD SIGNALS ON THE RIGHT SIDE OF -L-. NORFOLK SOUTHERN CORPORATION WILL INSTALL RAIL SEALS ON THE RIGHT SIDE OF -L-. COMPLETE WIDENING FOR LANE 6 TO THE EXTENT SHOWN UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER. PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN IN STAGE 3. PLACE TEMPORARY PAVEMENT MARKERS ACCORDING TO ROADWAY STANDARD DRAWING 1250.01. OPEN LANE 6 AND LANE 8.



STAGE 3

USING ROADWAY STANDARD DRAWING 1101.02 SHEET 3 OF 15 AND ROADWAY STANDARD DRAWING 1101.04 SHEET 1 OF 1 AS NEEDED, PERFORM THE FOLLOWING: NORFOLK SOUTHERN CORPORATION WILL INSTALL FOUNDATION FOR MEDIAN GATE. CONSTRUCT MEDIAN TO THE EXTENTS SHOWN. COMPLETE WIDENING CONSTRUCTION ON THE LEFT SIDE OF -L- FOR LANE 1 TO THE EXTENTS SHOWN IN STAGE 1 UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER. NORFOLK SOUTHERN CORPORATION WILL REMOVE EXISTING RAILROAD SIGNALS AND FOUNDATIONS FROM THE LEFT SIDE OF -L-. NORFOLK SOUTHERN CORPORATION WILL INSTALL AND ACTIVATE NEW RAILROAD SIGNALS ON THE LEFT SIDE OF -L-, INCLUDING THE MEDIAN GATE. NORFOLK SOUTHERN CORPORATION WILL INSTALL RAIL SEALS ON THE LEFT SIDE OF -L-. COMPLETE WIDENING FOR LANE 1 TO THE EXTENT SHOWN UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER. PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN IN STAGE 4. PLACE TEMPORARY PAVEMENT MARKERS ACCORDING TO ROADWAY STANDARD DRAWING 1250.01. OPEN LANE 1.



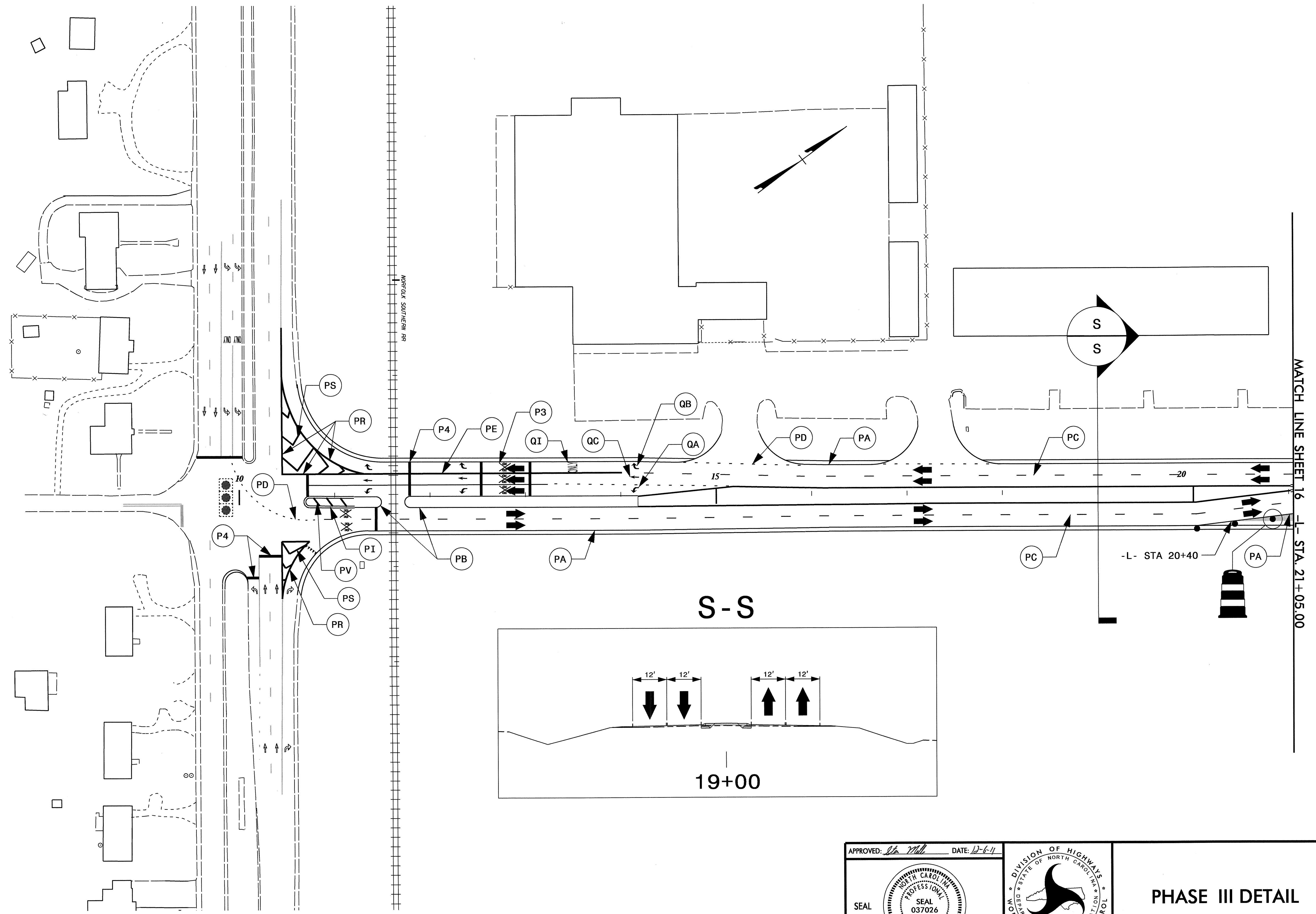
FINAL PATTERN

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APPROVED: *St. Miller* DATE: 12-6-11

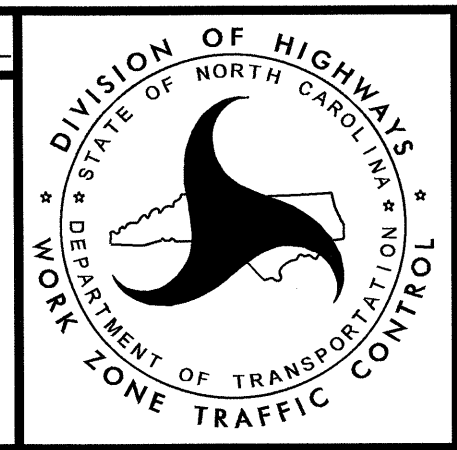
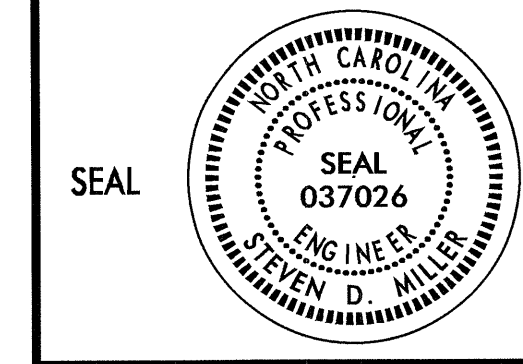
SEAL

RAILROAD CROSSING DETAIL

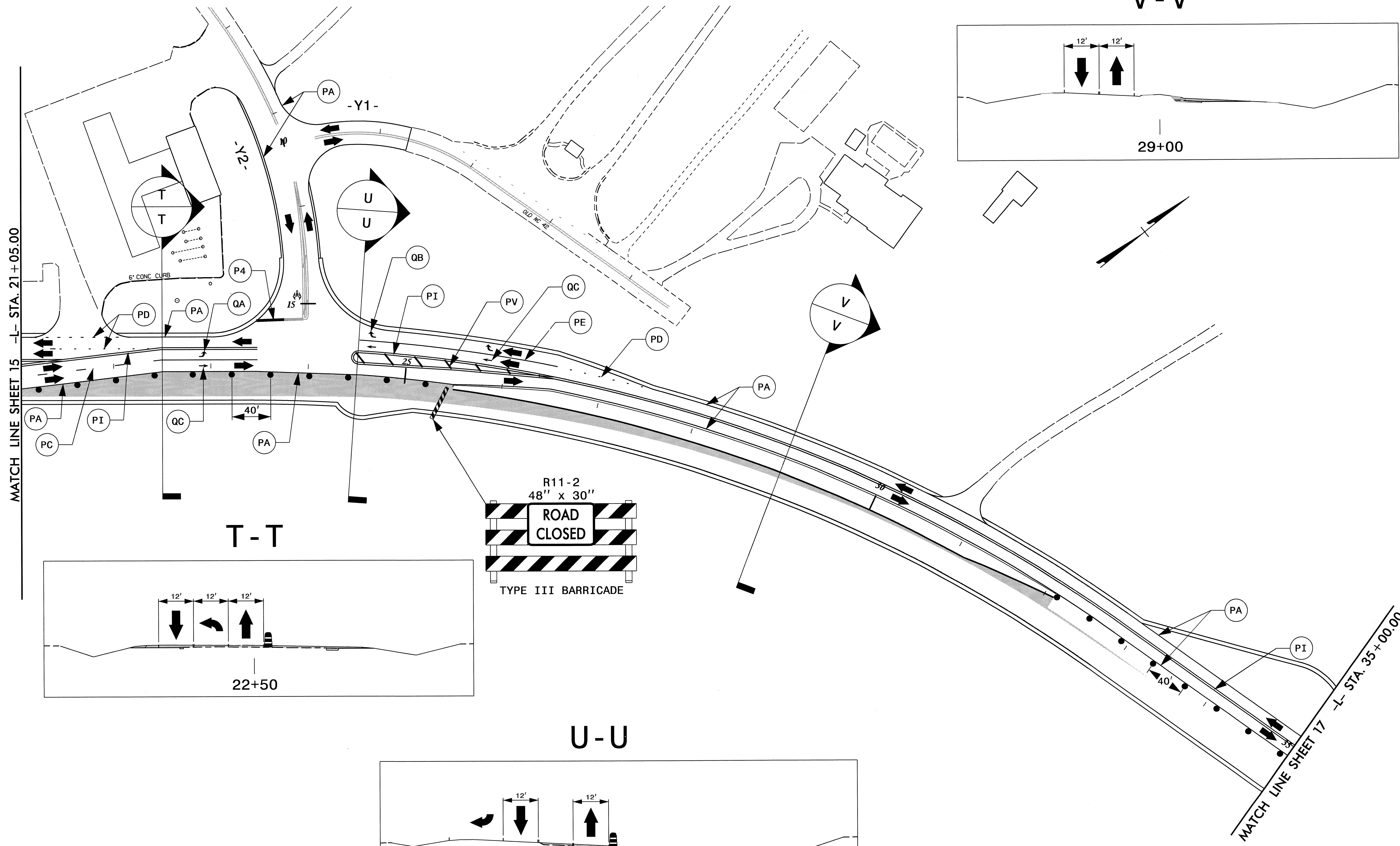


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 schiller AT TEL246375

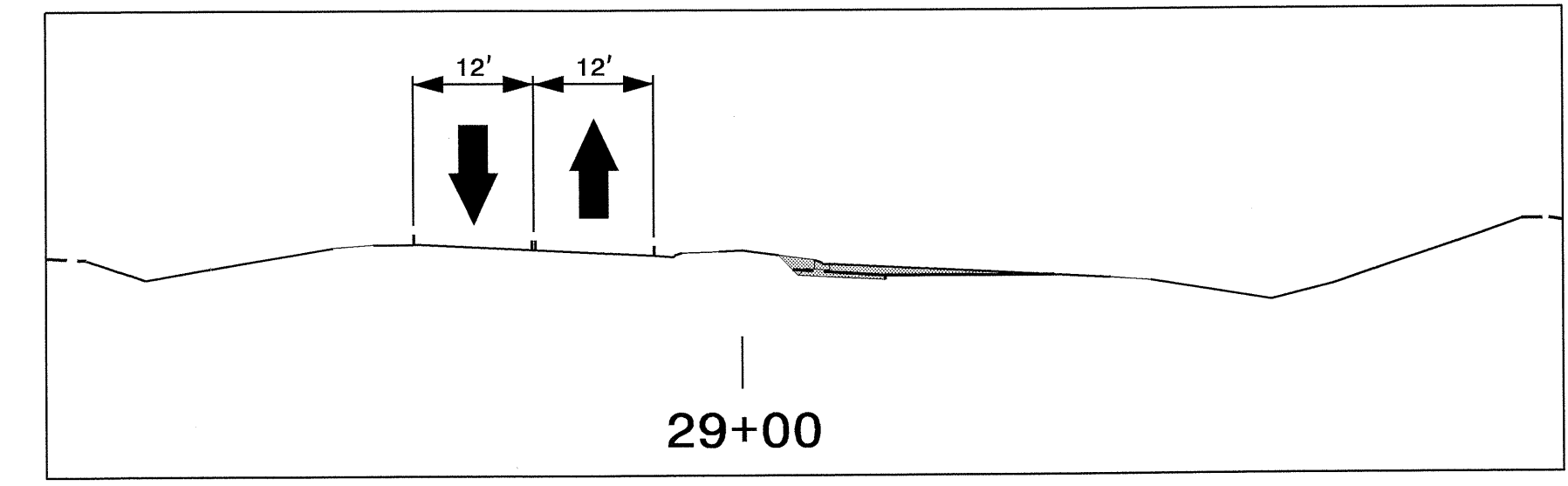
APPROVED: *[Signature]* DATE: 12-6-11



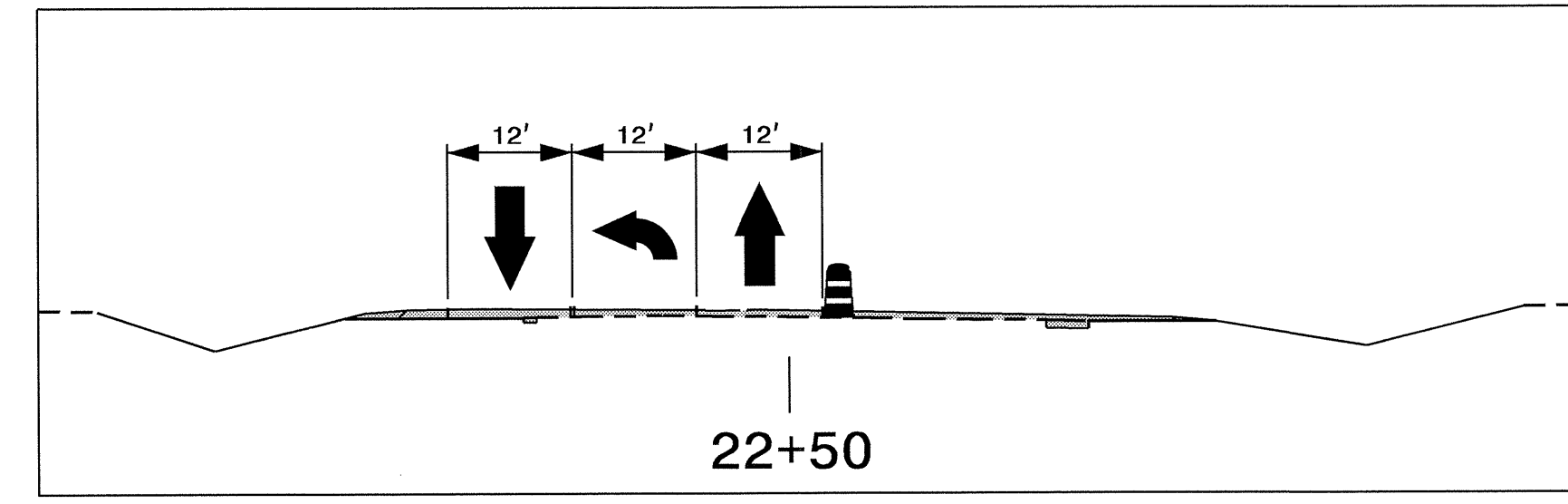
PHASE III DETAIL



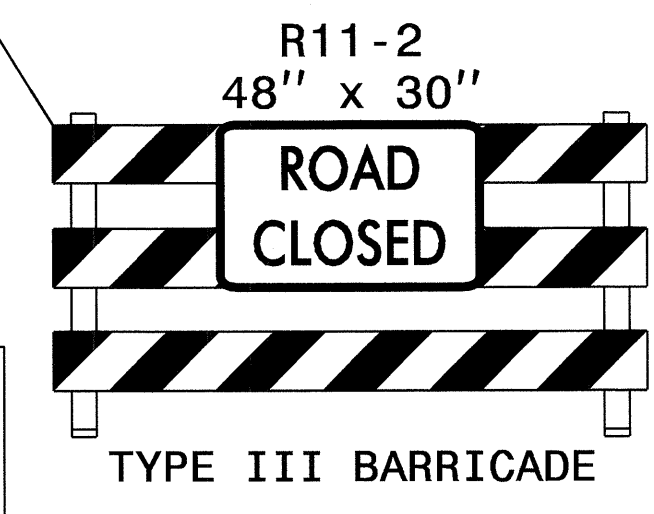
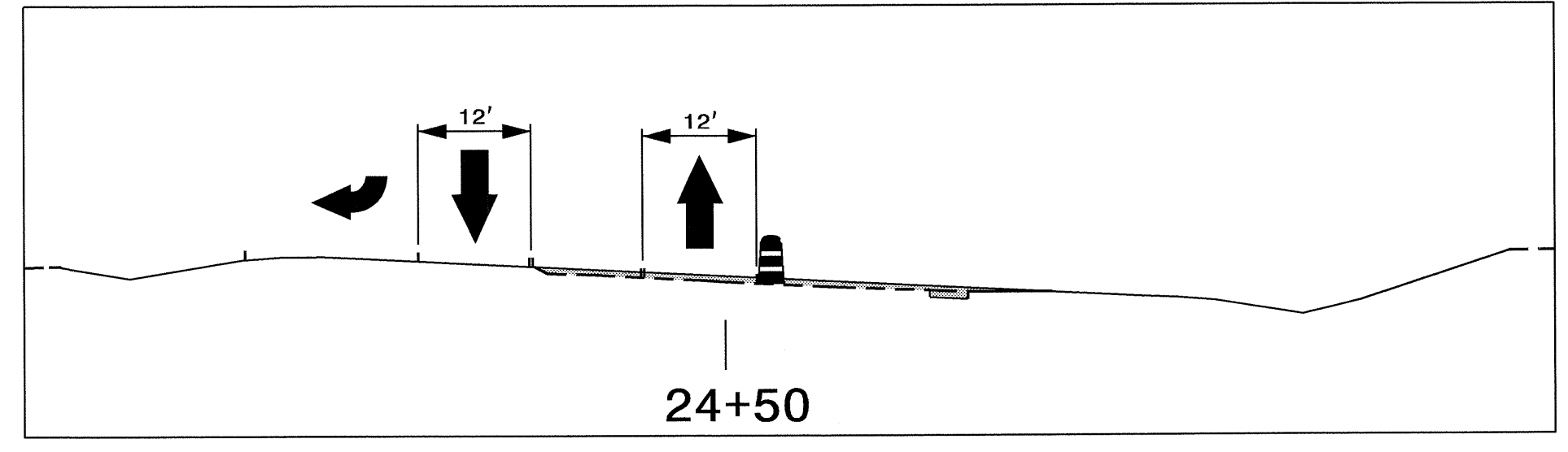
V-V



T-T



U-U



MATCH LINE SHEET 15 -L- STA. 21+05.00

MATCH LINE SHEET 17 -L- STA. 35+00.00

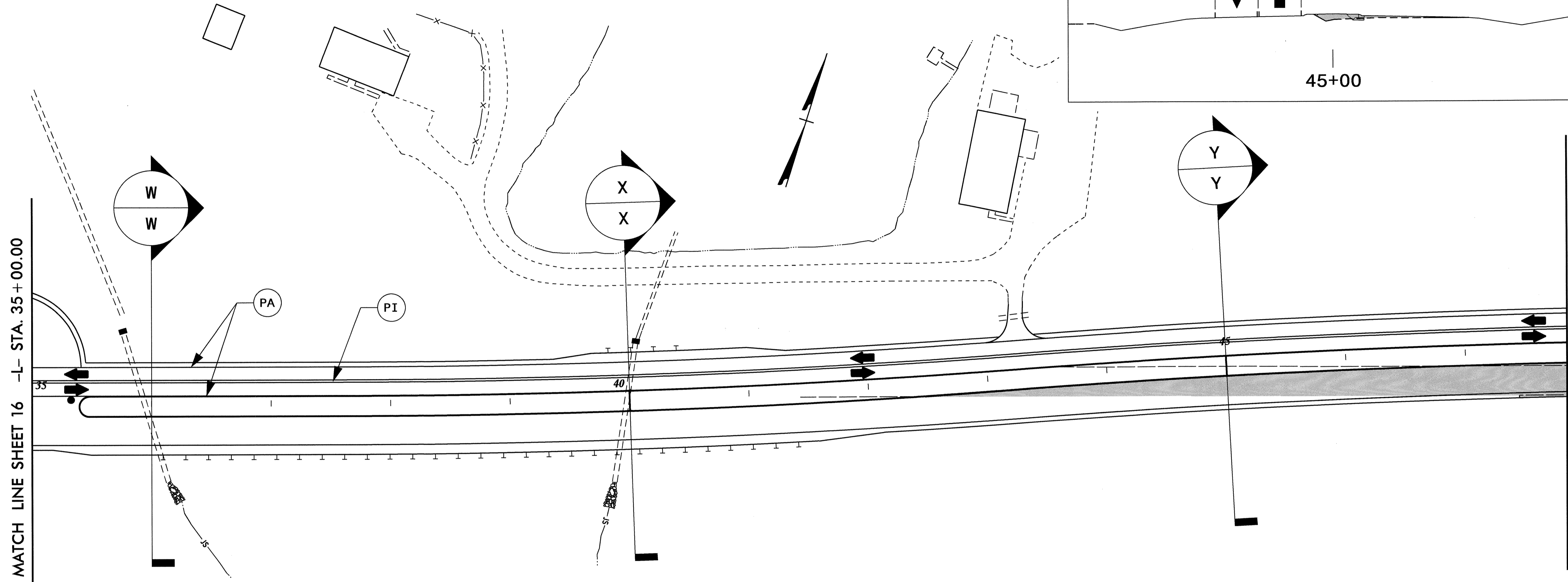
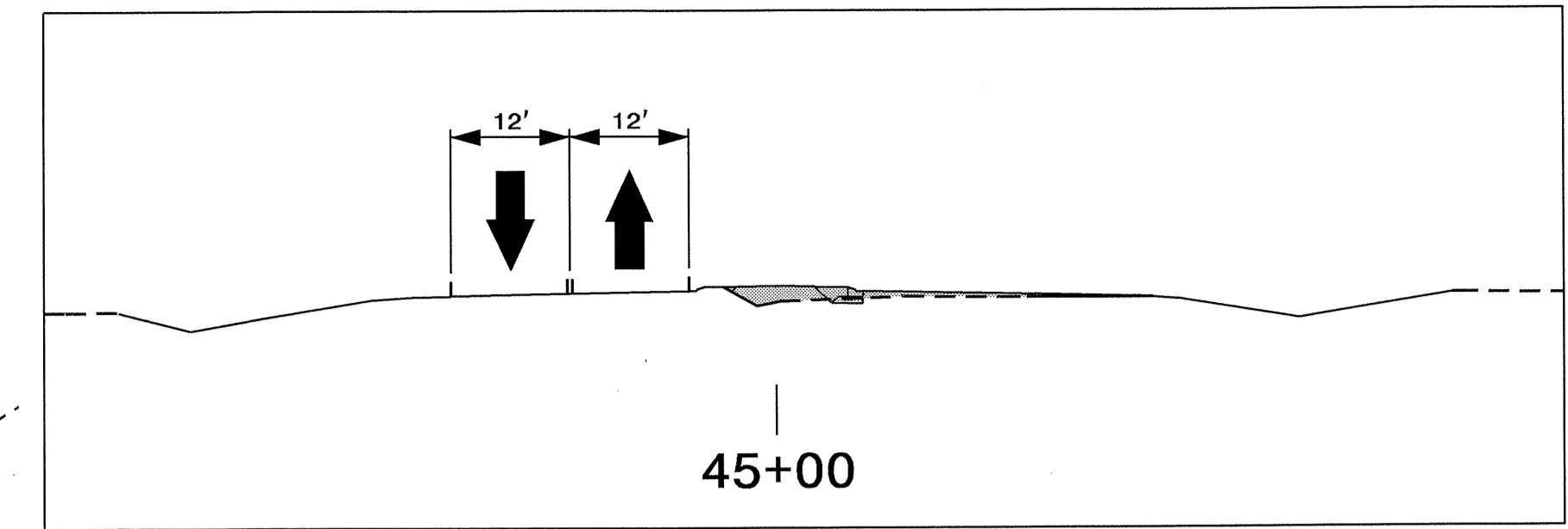
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APPROVED: *Stu. Miller* DATE: 12-6-11

SEAL

PHASE III DETAIL

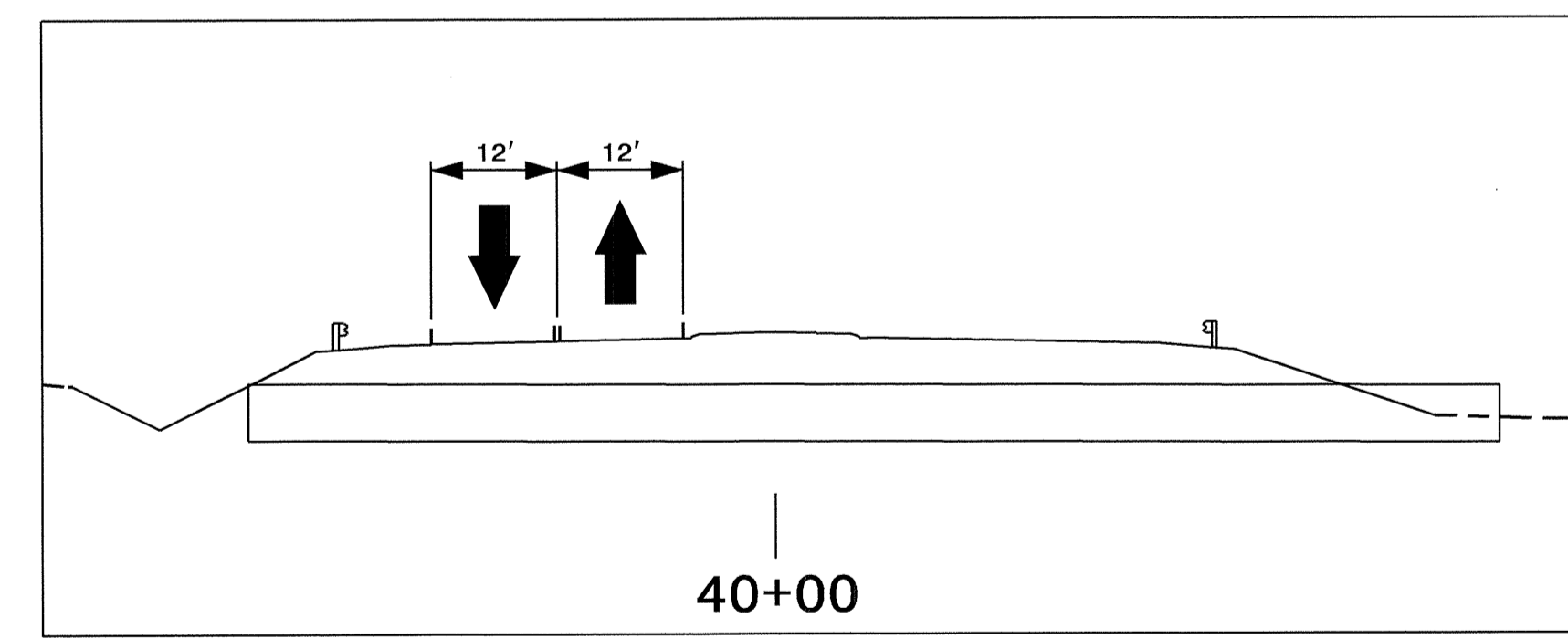
Y-Y



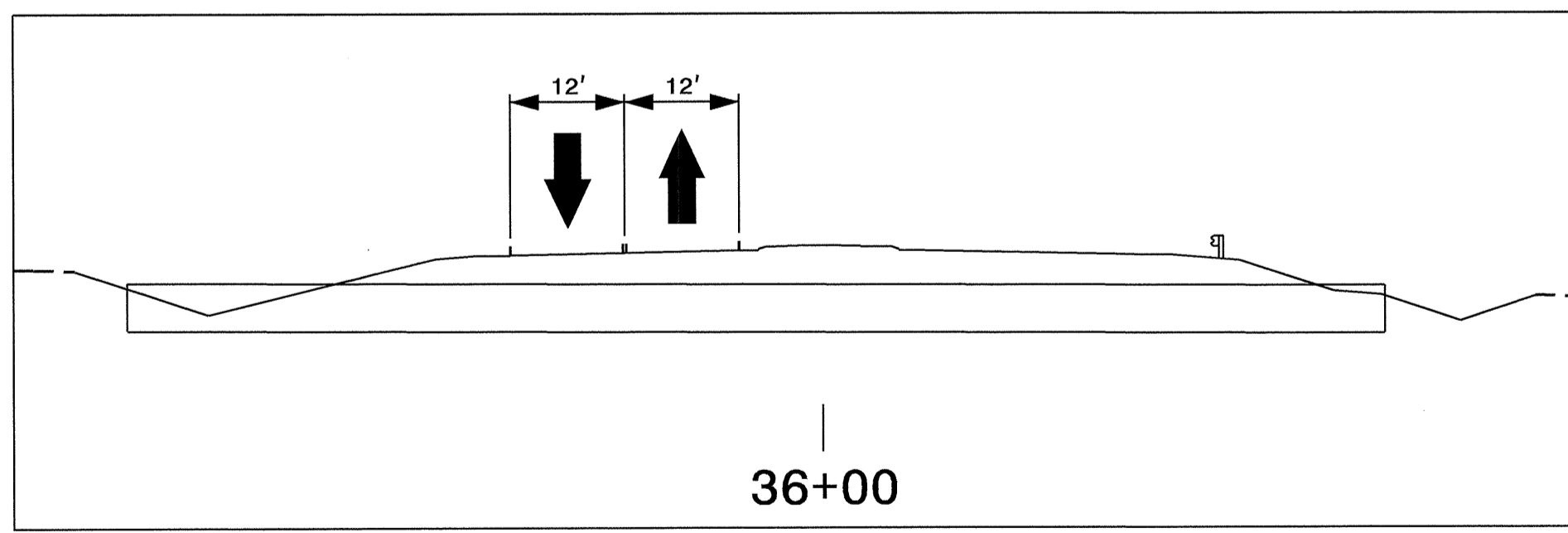
MATCH LINE SHEET 16 -L- STA. 35+00.00

MATCH LINE SHEET 18 -L- STA. 47+85.00

X-X

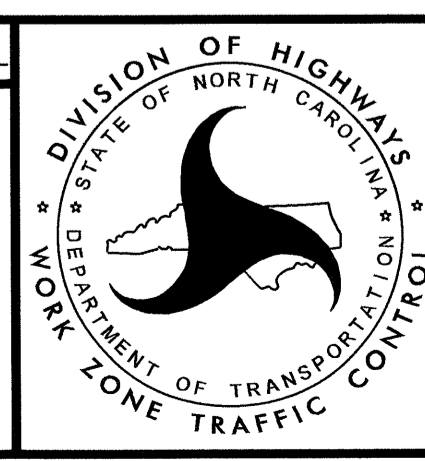


W-W



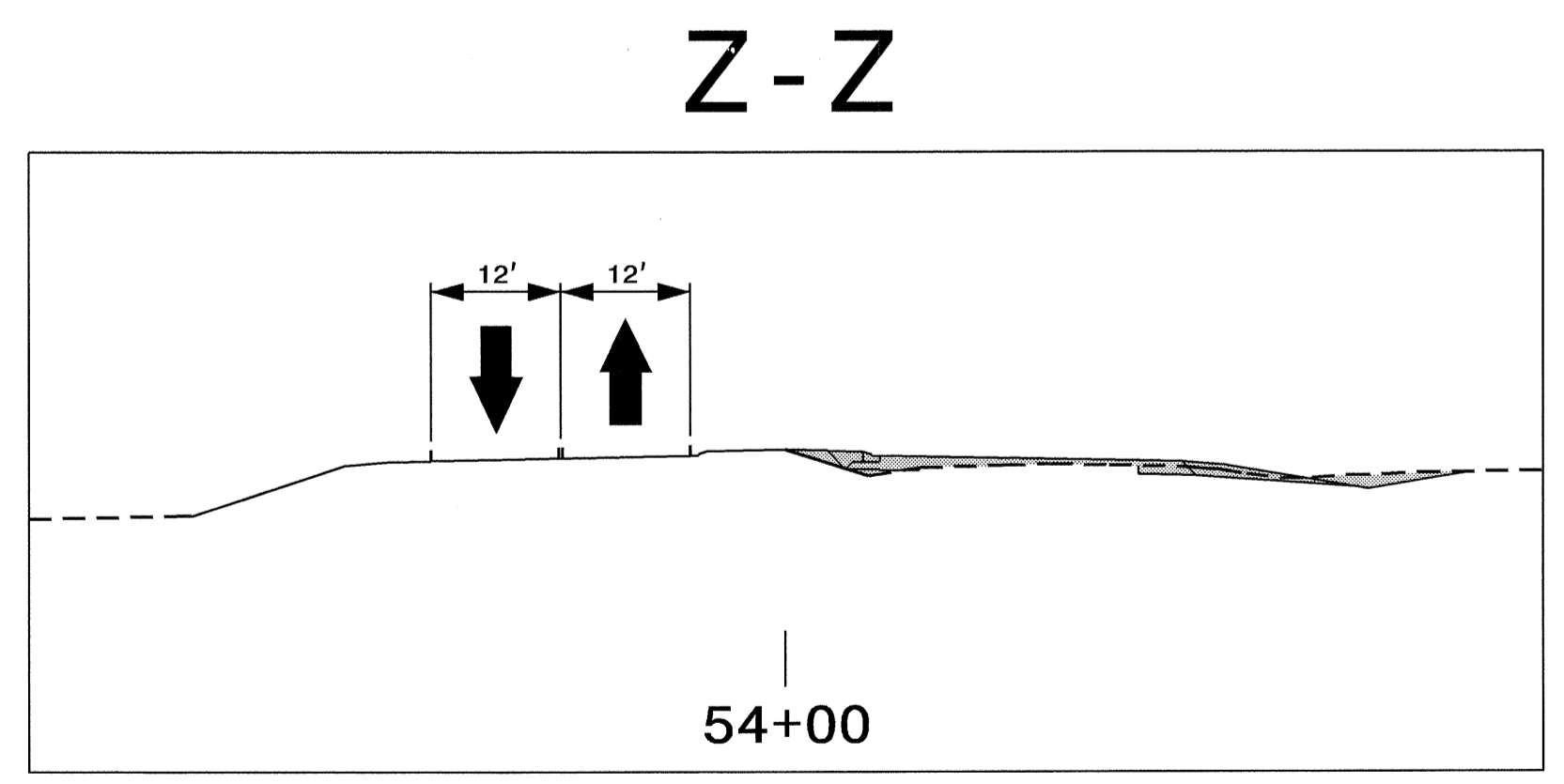
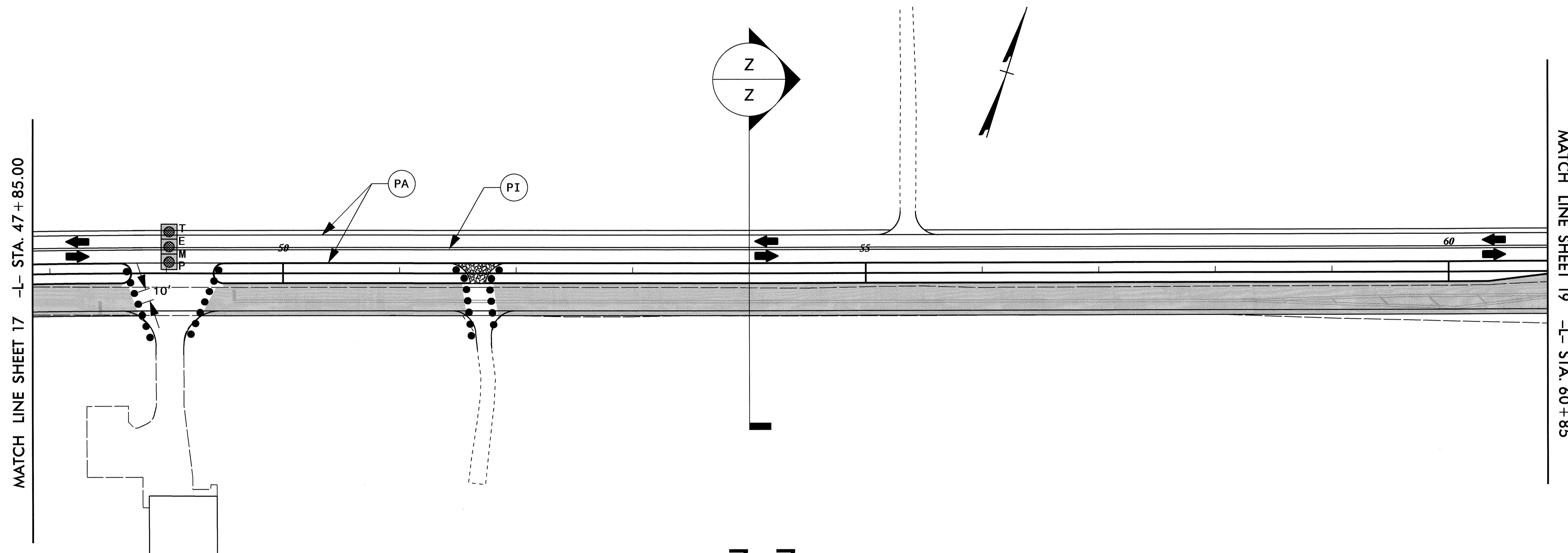
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SEAL



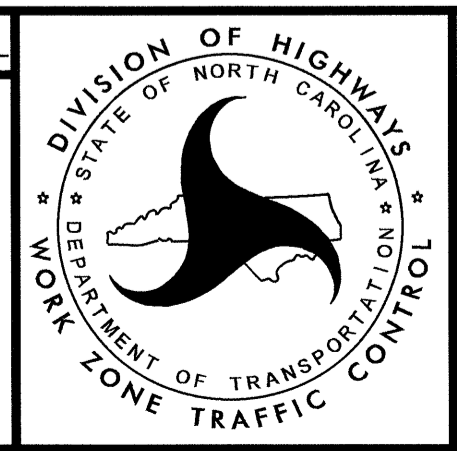
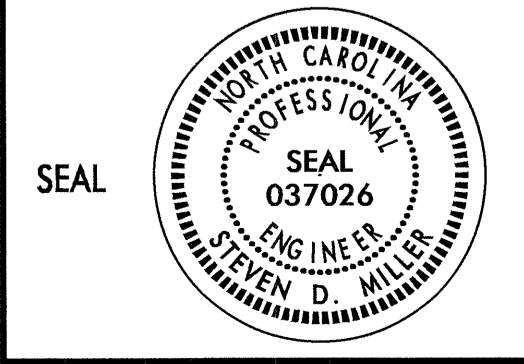
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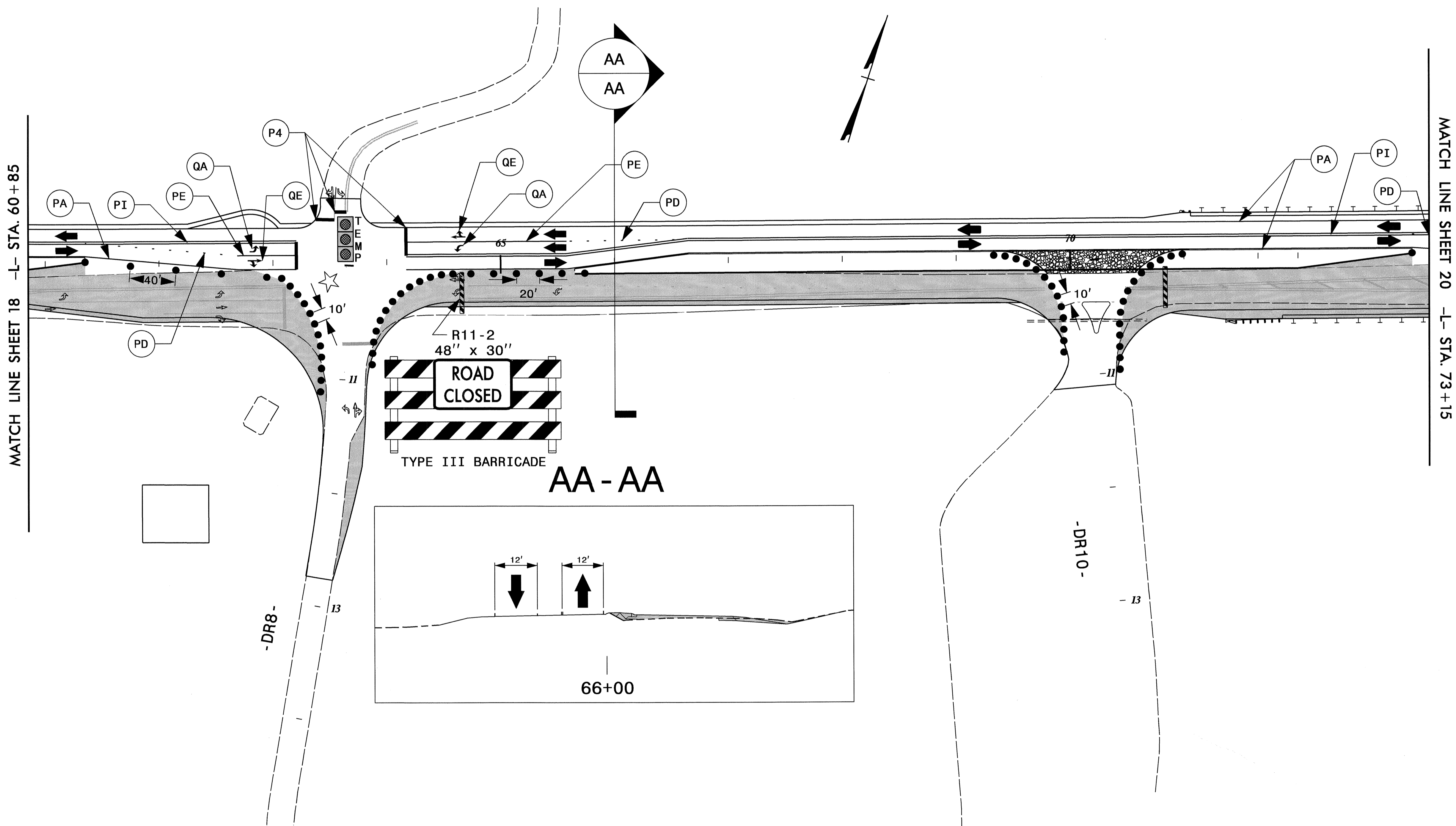


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APPROVED: *St. Miller* DATE: 12-6-11

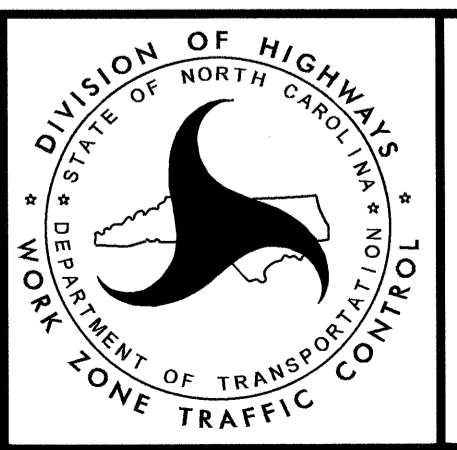
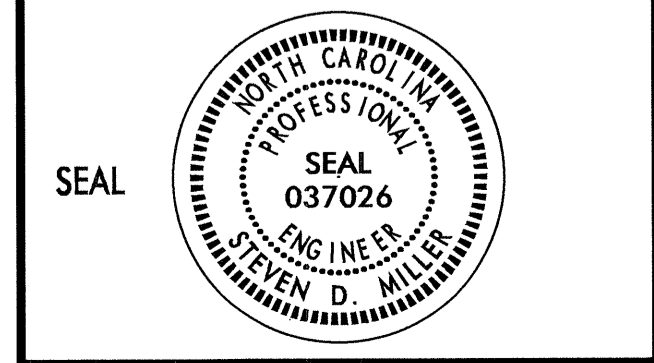


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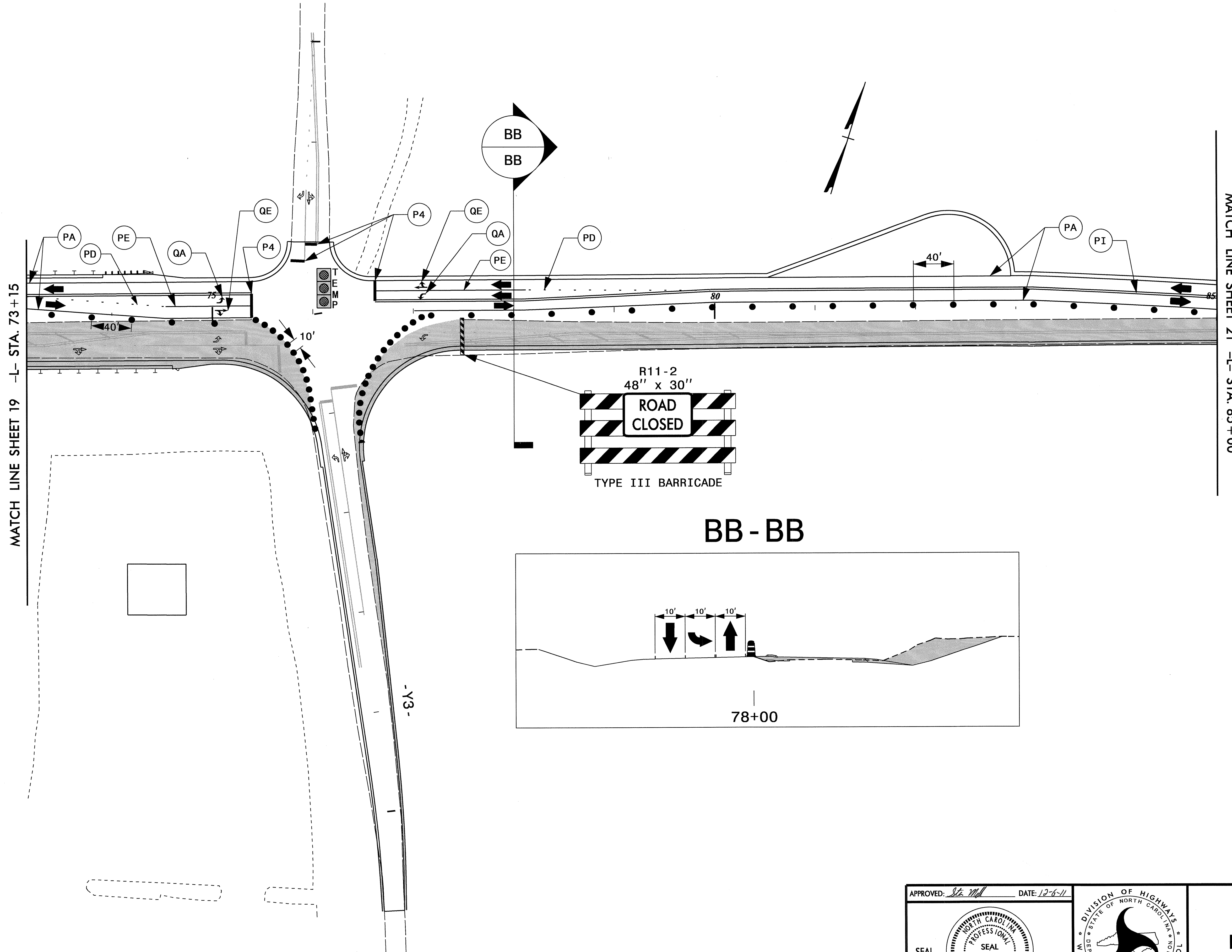


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APPROVED: *[Signature]* DATE: 12-6-11



PHASE III DETAIL

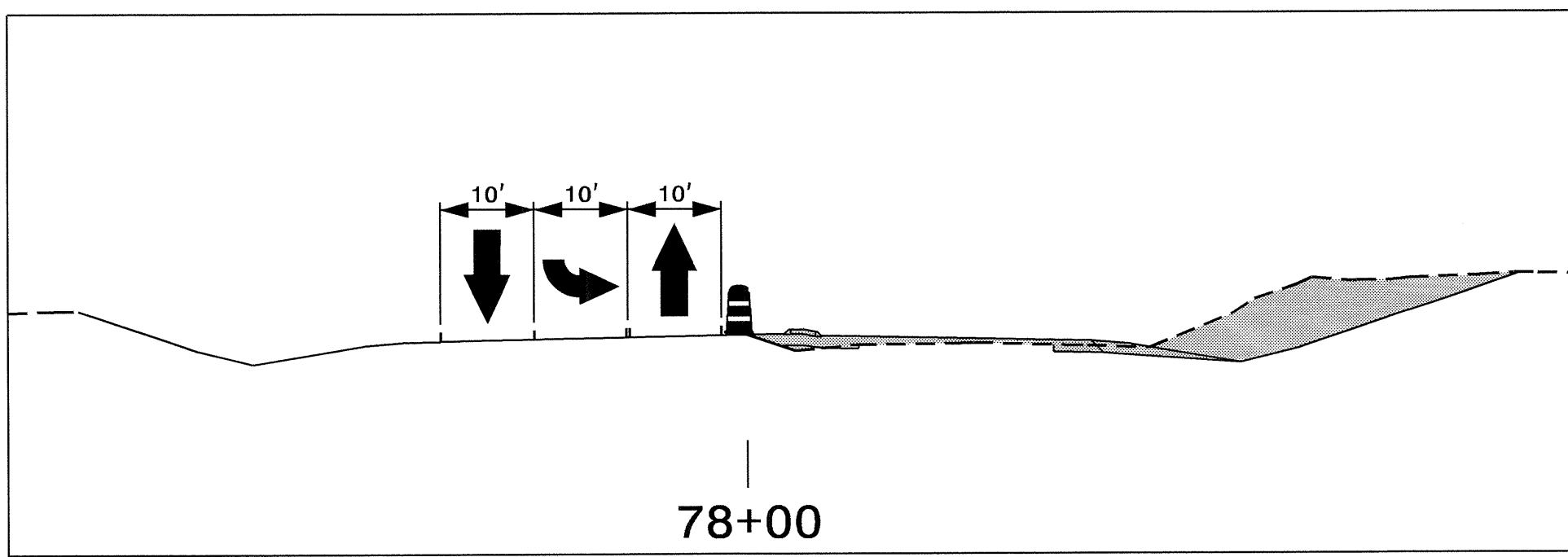


MATCH LINE SHEET 19 -L- STA. 73+15

MATCH LINE SHEET 21 -L- STA. 85+00

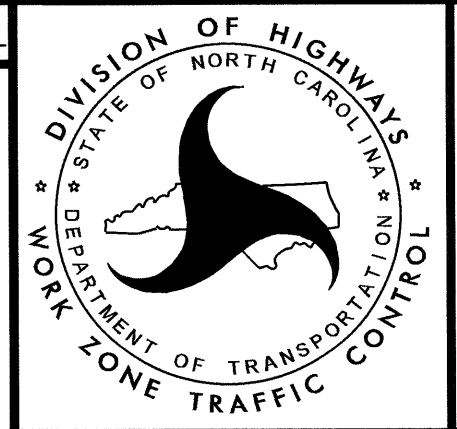
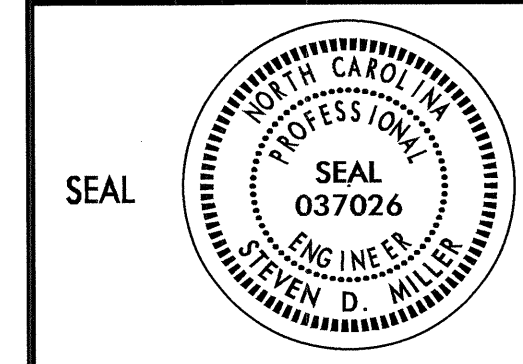
R11-2
48" x 30"
ROAD
CLOSED
TYPE III BARRICADE

BB - BB

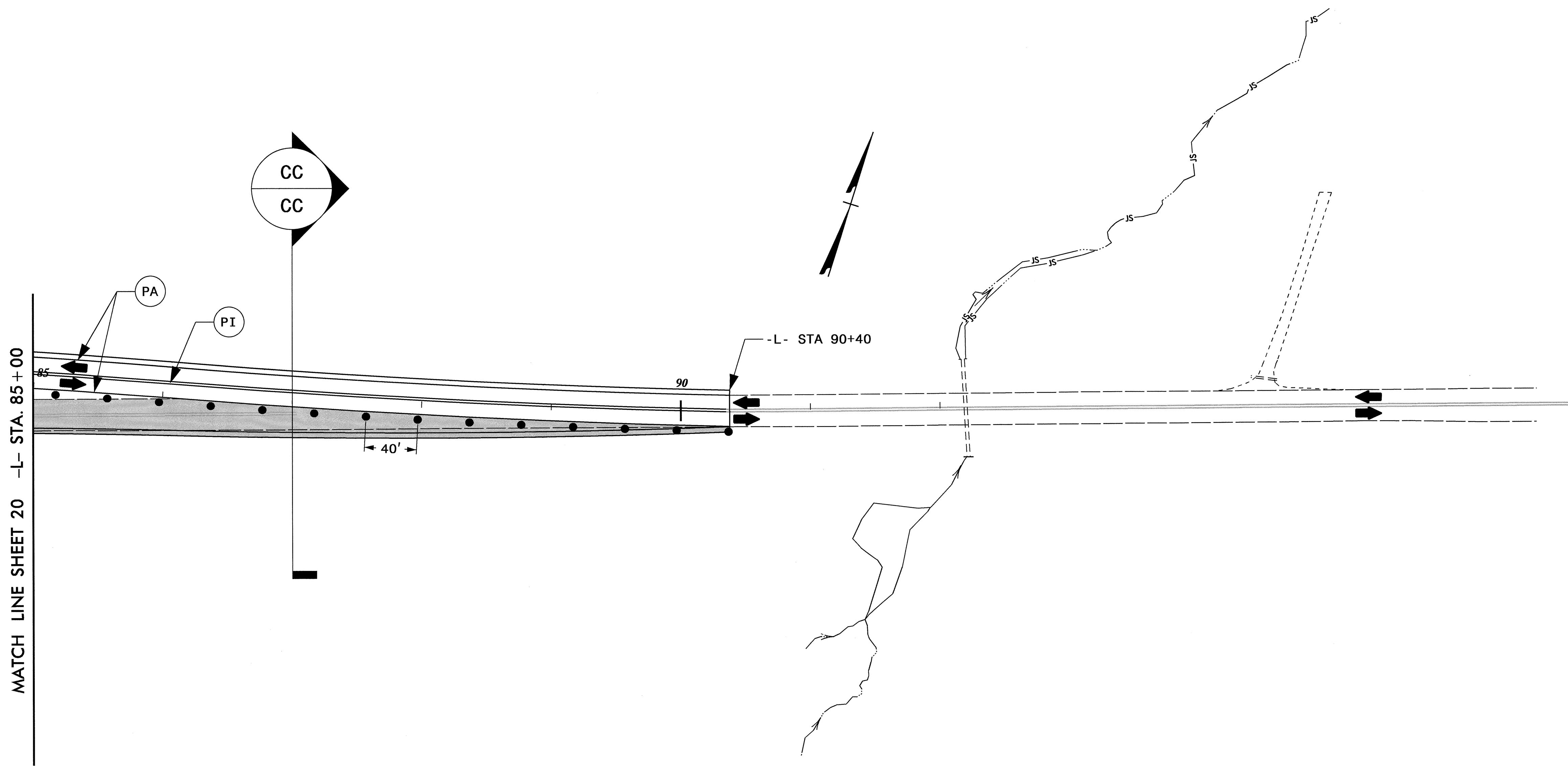


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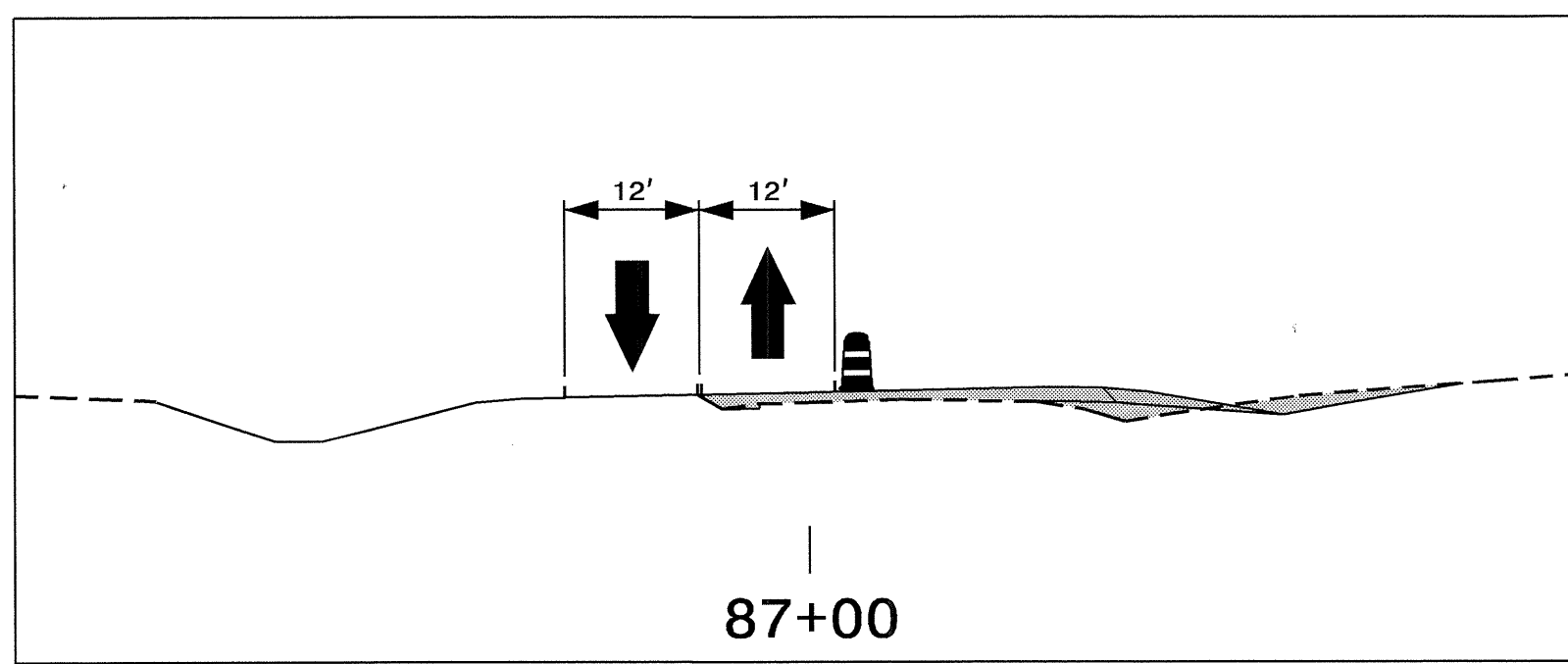
APPROVED: *St. Mill* DATE: 12-6-11



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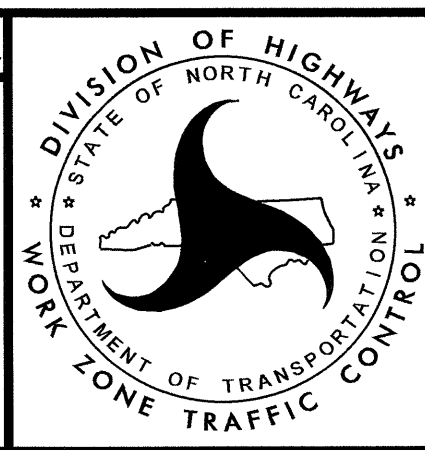
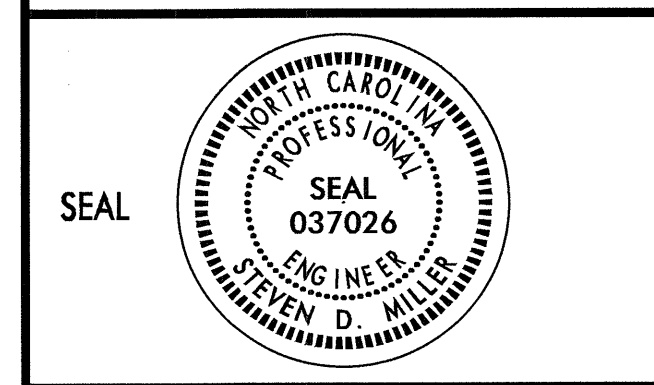


CC - CC



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APPROVED: *[Signature]* DATE: 12-6-11



PHASE III DETAIL