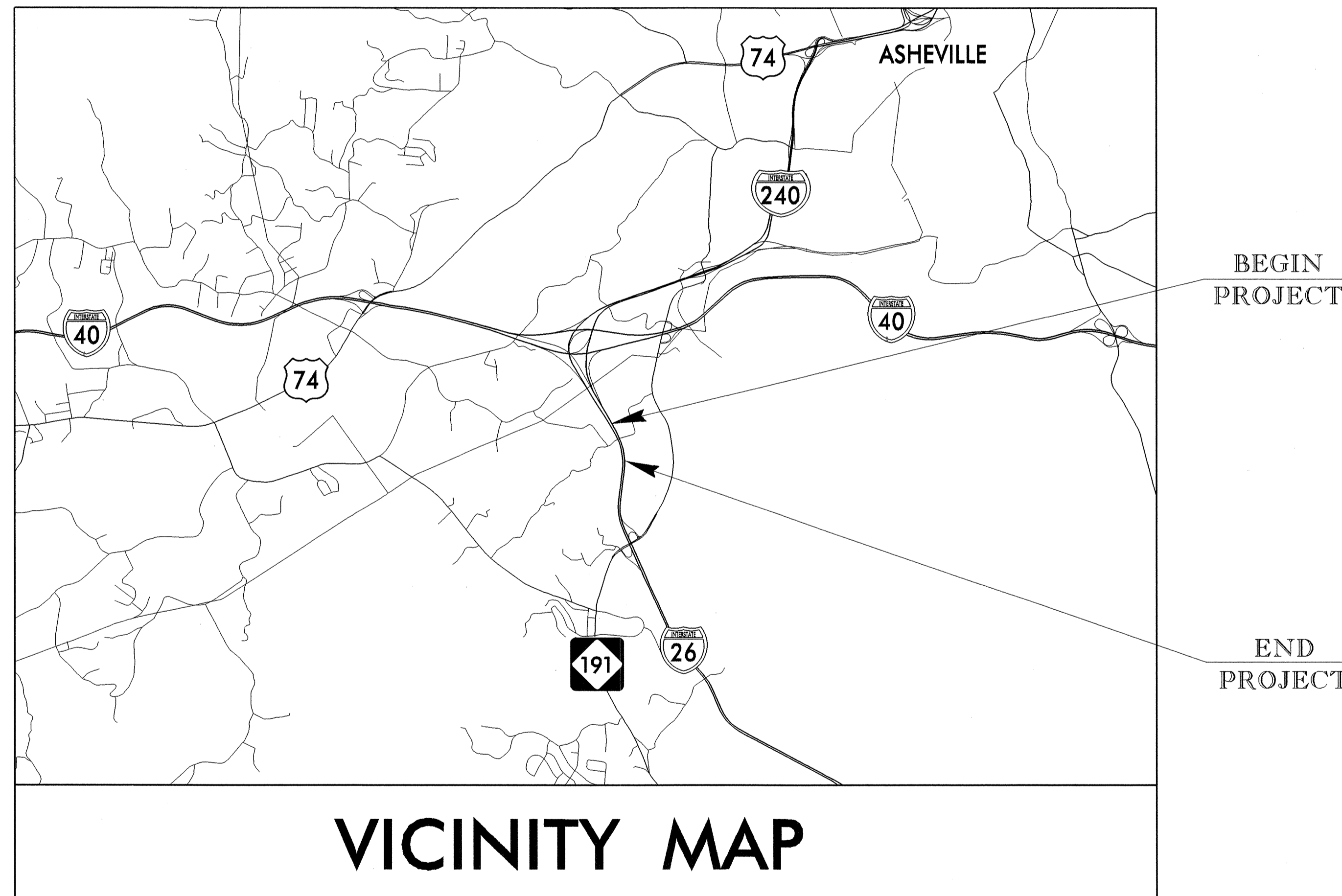


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

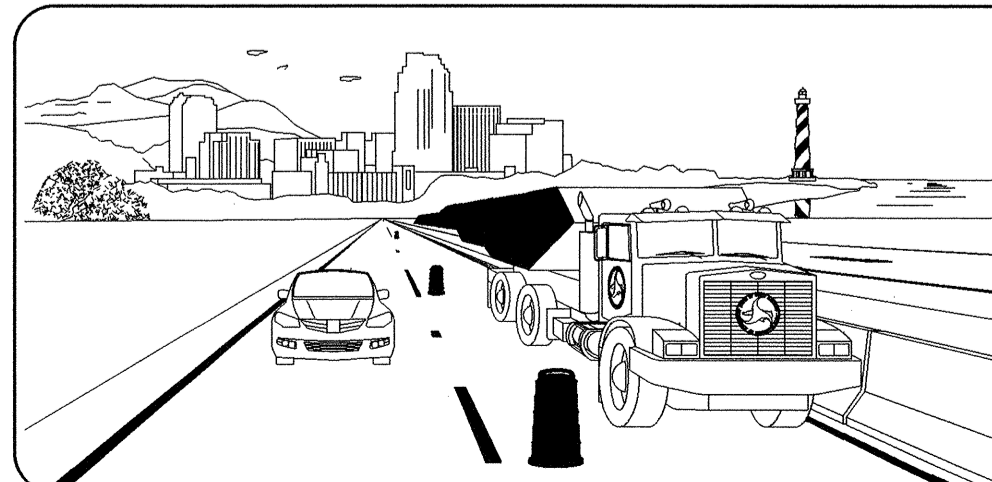
**TRANSPORTATION MANAGEMENT PLAN**  
**BUNCOMBE COUNTY**



**VICINITY MAP**

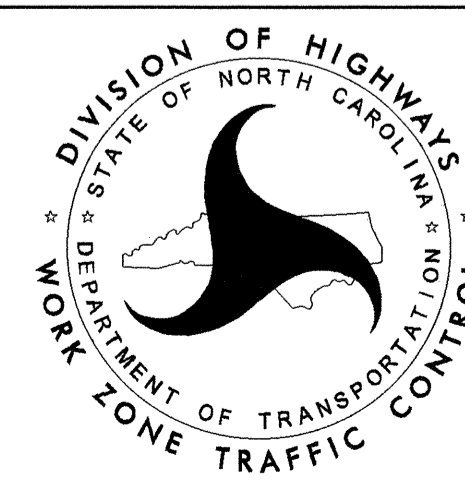
SHEET NO.	TITLE
TMP-1	TITLE SHEET, AND INDEX OF SHEETS
TMP-2	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND TEMPORARY PAVEMENT MARKING SCHEDULE
TMP-3	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, AND LOCAL NOTES)
TMP-6	SHORING DATA
TMP-7	PHASING NOTES
TMP-11	TEMPORARY TRAFFIC CONTROL PHASE I PHASING
TMP-20	TEMPORARY TRAFFIC CONTROL PHASE II PHASING
TMP-25	TEMPORARY TRAFFIC CONTROL PHASE III PHASING
TMP-31	TEMPORARY TRAFFIC CONTROL PHASE IV PHASING
TMP-36	WORK ZONE VEHICLE ACCESS TYPICAL DETAILS
TMP-38	TEMPORARY SIGNING DETAILS

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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. STUART BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER  
G. LAWRENCE GETTIER, P.E. TRAFFIC CONTROL PROJECT ENGINEER  
JAY WOOLARD, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER  
JAY WOOLARD, P.E. TRAFFIC CONTROL DESIGN ENGINEER



PLAN PREPARED FOR N.C.D.O.T. BY:  
**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326

J. TODD BROOKS, P.E.  
TRAFFIC CONTROL  
PROJECT ENGINEER  
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PROJECT DESIGN ENGINEER  
TRAFFIC CONTROL  
DESIGN ENGINEERS

APPROVED: *J. Todd Brooks*  
DATE: 6/6/12  
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 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
862.03	STRUCTURE ANCHOR UNIT
862.04	ANCHORING END OF GUARDRAIL
903.30	BARRIER SIGN SUPPORT ASSEMBLY
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 ACCESS
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGERS
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	POSITIVE PROTECTION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE & MULTI-LANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1250.01	PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - TEMPORARY AND PERMANENT
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING

## LEGEND

### GENERAL

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

- WORK AREA
- REMOVAL
- WEDGING/OVERLAY OF EXIST
- TEMPORARY PAVEMENT
- GRADING & EMBANKMENT UP TO EDGE AND ELEVATION OF EXISTING TRAVEL WAY

### 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 ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN
- PORTABLE CONCRETE BARRIER (P.C.B.)
- WATER FILLED BARRIER (W.F.B.)

### 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

(PA)	WHITE EDGE LINE	PAINT (4")	LF
(PB)	YELLOW EDGE LINE	PAINT (4")	LF
(PC)	10 FT. WHITE SKIP	PAINT (4")	LF
(PD)	2 FT. WHITE MINISKIP	PAINT (4")	LF
(PF)	YELLOW CENTER LINE	PAINT (4")	LF
(PI)	YELLOW DOUBLE CENTER LINE	PAINT (4")	LF
(MH)	YELLOW & YELLOW, TEMPORARY RAISED PAVEMENT MARKER		EA
(MI)	CRYSTAL & RED, TEMPORARY RAISED PAVEMENT MARKER		EA
(RA)	WHITE EDGE LINE	REMOVABLE TAPE (4")	LF
(RB)	YELLOW EDGE LINE	REMOVABLE TAPE (4")	LF
(RC)	10 FT. WHITE MINISKIP	REMOVABLE TAPE (4")	LF
(RE)	WHITE LANE LINE	REMOVABLE TAPE (4")	LF

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**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
 RALEIGH, NORTH CAROLINA 27609  
 (919) 876-6888 NCBEES #F-0326

APPROVED: DATE: 6/6/12

**ROADWAY STANDARD  
DRAWINGS & LEGEND**

# MANAGEMENT STRATEGIES

## I-26 CONSTRUCTION STRATEGY

THE FOLLOWING LISTED STRATEGIES DERIVE FROM ASSESSMENTS OF THE WORK ZONE IMPACTS CONDUCTED DURING THE DEVELOPMENTAL STAGES OF THIS TRANSPORTATION MANAGEMENT PLAN (TMP).

### RECOMMENDED MANAGEMENT STRATEGIES:

- STREET / INTERSECTION IMPROVEMENTS
- TEMPORARY TRAFFIC BARRIER
- CRASH CUSHIONS
- TEMPORARY SHORING
- COORDINATION WITH MEDIA
- LOCAL DETOUR ROUTES
- COOPERATIVE LAW ENFORCEMENT
- WORK ZONE SPEED LIMITS
- USE OF PORTABLE CHANGEABLE MESSAGE SIGNS

THE CONSTRUCTION OF THE NEW I-26 BRIDGE WILL BE PHASED SO THAT A MINIMUM OF TWO TRAFFIC LANES PER DIRECTION ON I-26 WILL BE MAINTAINED AT TIMES DURING CONSTRUCTION. THIS STAGED CONSTRUCTION REQUIRES CONSTRUCTION OF A TEMPORARY DETOUR ON-SITE DETOUR ROAD OF I-26 EB TRAFFIC AND TEMPORARY MEDIAN CROSSEOVERS, BOTH OF WHICH NECESSITATE A SPEED LIMIT REDUCTION DUE TO CONSTRAINED ENVIRONS. NO DAYTIME LANE CLOSURES WILL BE ALLOWED ON I-26 DUE TO HEAVY TRAFFIC VOLUMES. LANE CLOSURES, WHEN REQUIRED, WILL OCCUR AT NIGHT. HOWEVER, MOST THE WORK ALONG I-26 WILL BE DONE BEHIND BARRIER OR GUARDAIL.

POND ROAD WILL BE RECONSTRUCTED TO NEW, LOWER GRADE USING A TEMPORARY ROAD CLOSURE AND OFF-SITE DETOUR UNDER AN INTERMEDIATE CONTRACT TIME WITH LIQUIDATED DAMAGES TO EXPEDITE ITS RECONSTRUCTION.

## 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
I-26	MONDAY - SUNDAY, 6:00 AM - 7:00 PM

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

ROAD NAME	HOLIDAY
I-26	<ol style="list-style-type: none"> <li>1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.</li> <li>2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 AM DECEMBER 31st TO 7:00 PM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 PM THE FOLLOWING TUESDAY.</li> <li>3. FOR EASTER, BETWEEN THE HOURS OF 6:00 AM THURSDAY AND 7:00 PM MONDAY.</li> <li>4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY TO 7:00 PM TUESDAY.</li> <li>5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 AM THE DAY BEFORE INDEPENDENCE DAY AND 7:00 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 7:00 PM THE TUESDAY AFTER INDEPENDENCE DAY.</li> <li>6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY AND 7:00 PM TUESDAY.</li> <li>7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 AM TUESDAY TO 7:00 PM MONDAY.</li> <li>8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 AM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 PM THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.</li> </ol>

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-26	AT ANY TIME

D) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
I-26	MONDAY - SUNDAY 6:00 AM - 7:00 PM	15 MINUTES TRAFFIC PATTERN SWITCHES REMOVING & ERECTING SIGN STRUCTURES
POND ROAD	MONDAY - SUNDAY 6:00 AM - 7:00 PM	30 MINUTES BRIDGE DECK REMOVAL, REMOVING & SETTING BRIDGE GIRDERS

E) DO NOT USE ROLLING ROAD BLOCK AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-26	MONDAY - SUNDAY 6:00 AM - 7:00 PM

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

ROAD NAME	DAY AND TIME RESTRICTIONS
I-26	MON.- FRI. 6:00 AM TO 7:00 PM SATURDAY 8:00 AM TO 8:00 PM SUNDAY 10:00 AM TO 8:00 PM

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

ROAD NAME	DAY AND TIME RESTRICTIONS
I-26	MON.- FRI. 6:00 AM TO 7:00 PM SATURDAY 8:00 AM TO 8:00 PM SUNDAY 10:00 AM TO 8:00 PM

H) 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.

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# GENERAL NOTES CONTINUED

## LANE AND SHOULDER CLOSURE REQUIREMENTS

- I) 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.
- J) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE ON I-26 -L-, 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.
- K) 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.
- L) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRANSPORTATION MANAGEMENT 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.
- M) 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.
- N) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON I-26.

## PAVEMENT EDGE DROP OFF REQUIREMENTS

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

## TRAFFIC PATTERN ALTERATIONS

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

## SIGNING

- R) 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.
- S) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRANSPORTATION MANAGEMENT PLANS.
- PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRANSPORTATION MANAGEMENT PLANS.
- T) 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.
- U) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- V) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

## TRAFFIC BARRIER

- W) 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.

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

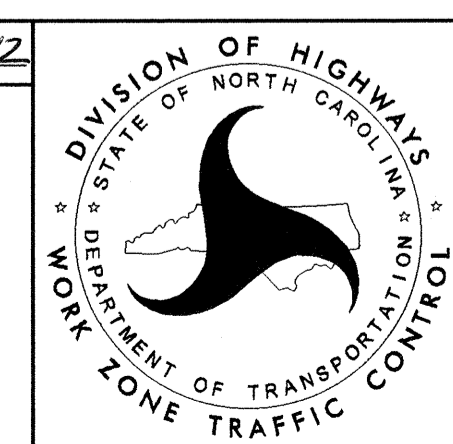
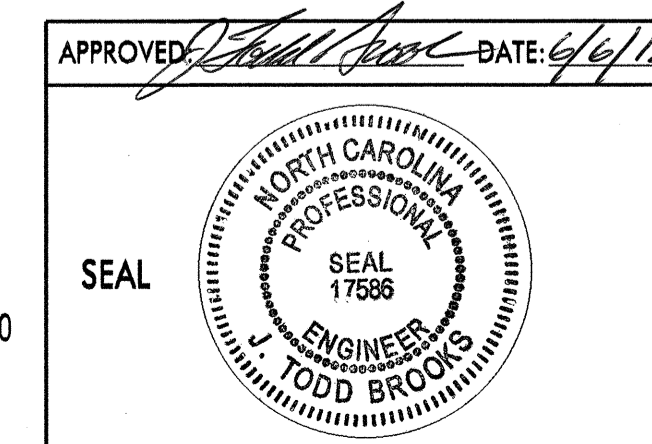
PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO 1101.05)

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

## TRAFFIC CONTROL DEVICES

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

ROAD NAME	MARKING	MARKER
I-26	PAINT	TEMPORARY RAISED
I-26 BRIDGES	COLD APPLIED PLASTIC TYPE 4 (REMOVABLE TAPE)	TEMPORARY RAISED
POND ROAD	PAINT	NONE



# GENERAL NOTES CONTINUED

- 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.

**MISCELLANEOUS**

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

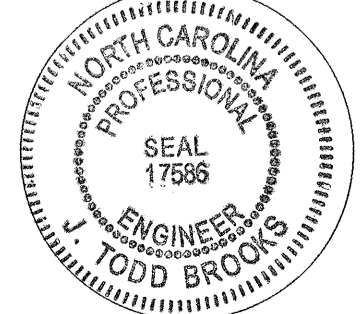
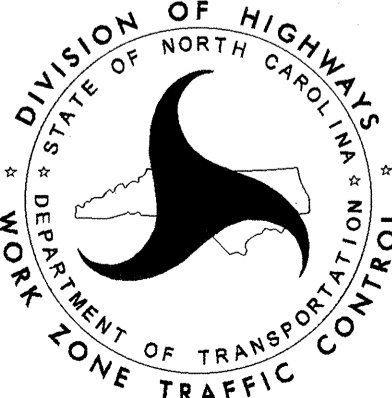
# LOCAL NOTES

- LN-1 COORDINATE WITH EMERGENCY SERVICES FOR TEMPORARY ROAD CLOSURES ON POND ROAD FOR RECONSTRUCTION OF PAVEMENT AT REVISED GRADE, FOR REMOVAL OF EXISTING I-26 BRIDGES AND ERECTION OF NEW BRIDGES OR ANY OTHER ACTIVITY WHICH WOULD PREVENT FIRE/EMS SERVICES FROM TRAVELING ON PROJECT ROADWAYS.
- LN-2 COORDINATE WITH BUSINESS OWNERS AND OPERATORS WITHIN CLOSED SECTION OF POND ROAD AND MAKE NECESSARY PROVISIONS FOR MAINTAINING VEHICULAR INGRESS AND EGRESS AT DRIVEWAYS WITHIN CLOSURE AT ALL TIMES DURING POND ROAD RECONSTRUCTION. MAINTAIN TRAFFIC USING INCIDENTAL STONE BASE UNTIL NEW PERMANENT PAVEMENT CAN BE CONSTRUCTED.
- LN-3 PROVIDE PORTABLE CONCRETE BARRIER SEGMENTS WITH DRAINAGE/LIFT SLOTS AT LOCATIONS DIRECTED BY ENGINEER TO PREVENT PONDING OF WATER RUNOFF ADJACENT TO BARRIER. (SEE RSD 1120.01, SHEET 1 OF 5)

PROJ. REFERENCE NO.	SHEET NO.
B-5178	TMP-05

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**ATKINS** 1816 EAST MILLBROOK ROAD, SUITE 310  
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 (919) 876-6888 NCBES #F-0326

APPROVED <i>[Signature]</i> DATE: 6/4/12 		<h2>TRANSPORTATION OPERATIONS PLAN</h2>
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# SHORING NOTES

PROJ. REFERENCE NO.	SHEET NO.
B-5178	TMP-06

## TEMPORARY SHORING 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.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 33+85.00± -L-, 50 FT. LEFT OF -L-, TO STATION 34+45.00±, 50 FT. LEFT OF -L-. SEE STANDARD DRAWING NO.1801.02 FOR STANDARD TEMPORARY WALLS.

DESIGN SHORING FROM STATION 33+85.00± -L-, 50 FT. LEFT OF -L-, TO STATION 34+45.00±, 50 FT. LEFT OF -L- FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT,  $\lambda$  = 120 PCF  
 FRICTION ANGLE,  $\phi$  = 30 DEGREES  
 COHESION,  $c$  = 0 PSF

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 33+85.00± -L-, 50 FT. LEFT OF -L-, TO STATION 34+45.00±, 50 FT. LEFT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 33+85.00± -L-, 50 FT. LEFT OF -L-, TO STATION 34+45.00±, 50 FT. LEFT OF -L- WILL NOT PENETRATE BELOW ELEVATION 2065.0 FT± DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

SEE SHEET TMP-15 FOR CORRESPONDING TRANSPORTATION MANAGEMENT PLAN SHEET

## TEMPORARY SHORING 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.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 37+35.00± -L-, 50 FT. LEFT OF -L-, TO STATION 37+70.00±, 50 FT. LEFT OF -L-. SEE STANDARD DRAWING NO.1801.02 FOR STANDARD TEMPORARY WALLS.

DESIGN SHORING FROM STATION 37+35.00± -L-, 50 FT. LEFT OF -L-, TO STATION 37+70.00±, 50 FT. LEFT OF -L- FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT,  $\lambda$  = 120 PCF  
 FRICTION ANGLE,  $\phi$  = 30 DEGREES  
 COHESION,  $c$  = 0 PSF

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 37+35.00± -L-, 50 FT. LEFT OF -L-, TO STATION 37+70.00±, 50 FT. LEFT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 37+35.00± -L-, 50 FT. LEFT OF -L-, TO STATION 37+70.00±, 50 FT. LEFT OF -L- WILL NOT PENETRATE BELOW ELEVATION 2047.0 FT± DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

SEE SHEET TMP-15 FOR CORRESPONDING TRANSPORTATION MANAGEMENT PLAN SHEET

## TEMPORARY SHORING NO.3

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

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

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 34+05.00± -L-, 16 FT. RIGHT OF -L-, TO STATION 35+00.00±, 16 FT. RIGHT OF -L-. SEE STANDARD DRAWING NO.1801.02 FOR STANDARD TEMPORARY WALLS.

DESIGN SHORING FROM STATION 34+05.00± -L-, 16 FT. RIGHT OF -L-, TO STATION 35+00.00±, 16 FT. RIGHT OF -L- FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT,  $\lambda$  = 120 PCF  
 FRICTION ANGLE,  $\phi$  = 30 DEGREES  
 COHESION,  $c$  = 0 PSF

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 34+05.00± -L-, 16 FT. RIGHT OF -L-, TO STATION 35+00.00±, 16 FT. RIGHT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 34+05.00± -L-, 16 FT. RIGHT OF -L-, TO STATION 35+00.00±, 16 FT. RIGHT OF -L- WILL NOT PENETRATE BELOW ELEVATION 2058.0 FT± DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

SEE SHEET TMP-21 FOR CORRESPONDING TRANSPORTATION MANAGEMENT PLAN SHEET

## TEMPORARY SHORING 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.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 37+30.00± -L-, 16 FT. RIGHT OF -L-, TO STATION 37+75.00±, 16 FT. RIGHT OF -L-. SEE STANDARD DRAWING NO.1801.02 FOR STANDARD TEMPORARY WALLS.

DESIGN SHORING FROM STATION 37+30.00± -L-, 16 FT. RIGHT OF -L-, TO STATION 37+75.00±, 16 FT. RIGHT OF -L- FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT,  $\lambda$  = 120 PCF  
 FRICTION ANGLE,  $\phi$  = 30 DEGREES  
 COHESION,  $c$  = 0 PSF

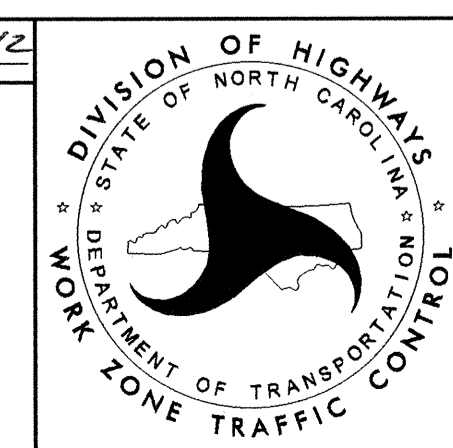
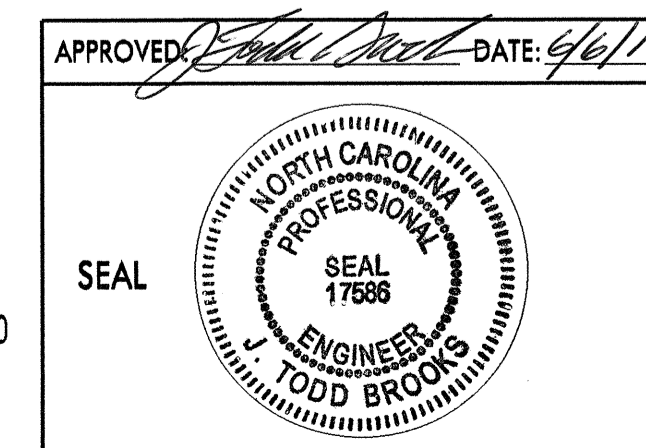
LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 37+30.00± -L-, 16 FT. RIGHT OF -L-, TO STATION 37+75.00±, 16 FT. RIGHT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 37+30.00± -L-, 16 FT. RIGHT OF -L-, TO STATION 37+75.00±, 16 FT. RIGHT OF -L- WILL NOT PENETRATE BELOW ELEVATION 2048.0 FT± DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

SEE SHEET TMP-21 FOR CORRESPONDING TRANSPORTATION MANAGEMENT PLAN SHEET

NOTE: THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO WZTC ON JUNE 1, 2012 AND SEALED BY A PROFESSIONAL ENGINEER, SHANE CLARK, P.E. 029869.

05-JUN-2012 18:06 \\Raffles07\Raleigh\_Share\Transportation\Traffic\Curr\00026387 I-26 at Pond Rd\CAD\B-5178-TMP-06.dgn 22:51 AT RAL8ZX5YH1



SHORING DATA

# PHASING

PROJ. REFERENCE NO.	SHEET NO.
B-5178	TMP-07

## PHASE I

### OBJECTIVES:

RECONSTRUCT POND ROAD TO NEW, LOWER GRADE TO ATTAIN VERTICAL CLEARANCE OVER POND ROAD NEEDED FOR INSTALLATION OF NEW I-26 BRIDGE GIRDERS. REHABILITATE THE EXISTING PAVED SHOULDER ON THE RIGHT SIDE OF I-26 WESTBOUND TO ACCOMMODATE INSTALLATION OF PORTABLE CONCRETE BARRIER (P.C.B.) DURING PHASE I AND DETOURED TRAFFIC IN PHASE II. CONSTRUCT SUFFICIENT WIDTH OF NEW I-26 BRIDGE AWAY FROM TRAFFIC ON WEST SIDE OF I-26 EASTBOUND ALONG WITH TEMPORARY ON-SITE DETOUR BEHIND P.C.B. TO FACILITATE SHIFT OF TWO EASTBOUND LANES IN NEXT PHASE.

STEP 1: INSTALL WARNING SIGNS AND DRUMS TO CLOSE THE RIGHT SHOULDER OF I-26 EB AS SHOWN ON TMP-11 THRU TMP-13.

DURING SUCCESSIVE OVERNIGHT PERIODS, USE RSD 1101.02, SHEET 4 TO TEMPORARILY CLOSE RIGHT LANE OF I-26 EB AND SEGMENTALLY RECONSTRUCT RIGHT SHOULDER FROM STA 28+00 +/- TO STA 34+00 +/- -L- AND FROM STA 38+85 +/- TO STA 46+00 +/- -L- AS FOLLOWS (SEE TMP-11 THRU TMP-13):

- REMOVE EXISTING PAVED SHOULDER (SEE SECTION A-A, STEP "A", ON TMP-13). DO NOT REMOVE MORE EXISTING PAVED SHOULDER THAN CAN BE REPLACED WITH 6 FEET OF NEW PAVEMENT UP TO EDGE AND ELEVATION OF EXISTING PAVEMENT BY THE END OF THE SAME OVERNIGHT WORK PERIOD.
- CONSTRUCT 6 FT OF NEW PAVEMENT UP TO EDGE AND ELEVATION OF EXISTING TRAVEL WAY (SEE SECTION A-A, STEP "B", ON TMP-13)
- MOVE DRUMS TO THE SHOULDER AND REOPEN ADJACENT RIGHT LANE OF I-26 EB (SEE SECTION A-A, STEP "C", ON TMP-13).

THE CONTRACTOR MAY PERFORM WORK IN PHASE I, STEP 2 CONCURRENTLY WITH WORK IN PHASE I, STEPS 3 THRU 7

STEP 2: USING RSD 1101.02, SHEET 4 TO TEMPORARILY CLOSE RIGHT LANE OF I-26 EB DURING OVERNIGHT PERIODS, INSTALL PORTABLE CONCRETE BARRIER (P.C.B.) WITH CRASH CUSHION ON THE APPROACH END ALONG THE RIGHT SHOULDER OF I-26 EB FROM STA 28+00 +/- TO STA 34+10 +/- -L- AND FROM STA 38+90 +/- TO STA 47+10 +/- -L-. AS SHOWN ON TMP-14 THRU TMP-16. (SEE SECTION B-B ON TMP-15). TIE P.C.B. TO EXISTING BRIDGE RAIL AT STA 34+15 +/- -L- (SEE TMP-39) AND TO EXISTING GUARDRAIL AT STA 38+90 +/- -L- (SEE RSD 862.03, SHEET 4 & RSD 862.04).

ONCE P.C.B. HAS BEEN COMPLETELY INSTALLED, BEGIN CONSTRUCTION OF THE FOLLOWING ON THE RIGHT SIDE OF I-26 EB LANES BEHIND P.C.B. AND EXISTING GUARDRAIL:

- TEMPORARY SHORING BETWEEN EXISTING AND PROPOSED END BENTS (SEE TMP-06 & TMP-15). AS FOLLOWS:
  - TEMPORARY SHORING NO.1 FROM STA 33+85 TO STA 34+45 -L-
  - TEMPORARY SHORING NO.2 FROM STA 37+35 TO STA 37+70 -L-
- PROPOSED CUT SLOPES, FILL EMBANKMENT AND GRADING UP TO EDGE AND ELEVATION OF EXISTING TRAVELWAY FROM STA 28+00 -L- TO SOUTH END OF PROPOSED BRIDGE AND FROM NORTH END OF PROPOSED BRIDGE TO STA 46+00 +/- -L- (SEE TMP-14 THRU TMP-16 AND SECTION B-B).
- PROPOSED RETAINING WALL BETWEEN STA 32+50 +/- AND STA 34+00 +/- -L- (SEE TMP-15).
- PROPOSED ONSITE DETOUR BETWEEN EXISTING I-26 EB PAVEMENT AND PROPOSED BRIDGE (SEE TMP-15 AND SECTION B-B; SEE ROADWAY PLANS).
- PROPOSED END BENTS AND BRIDGE PIERS AWAY FROM POND ROAD (-SR3431-) TRAFFIC.

STEP 3: INSTALL AND COVER ROAD CLOSURE AND DETOUR SIGNING IN PREPARATION FOR UPCOMING TEMPORARY CLOSURE OF POND ROAD AS SHOWN ON TMP-17 AND TMP-19.

ONE WEEK PRIOR TO CLOSURE OF POND ROAD IN PHASE I, STEP 4, INSTALL AND ACTIVATE PORTABLE CHANGEABLE MESSAGE SIGNS (C.M.S.) ON POND ROAD WITH MESSAGE ADVISING MOTORISTS OF UPCOMING CLOSURE AND DETOUR (SEE TMP-17 AND TMP-19 FOR PORTABLE C.M.S. LOCATIONS AND MESSAGES; SEE LOCAL NOTES LN-1 & LN-2).

THE CONTRACTOR SHALL COMPLETE ALL WORK IN PHASE I, STEPS 4 THROUGH 7, WITHIN 90 CALENDAR DAYS [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES].

STEP 4: TEMPORARILY CLOSE POND ROAD (-SR3431-) TO THROUGH TRAFFIC BETWEEN MCINTOSH ROAD AND EAST OF THE I-26 OVERPASS AND DETOUR TRAFFIC VIA SARDIS ROAD AND BREVARD ROAD AS FOLLOWS [SEE TMP-17, TMP-19 AND LOCAL NOTES LN-1 & LN-2]:

- UNCOVER PREVIOUSLY INSTALLED ROAD CLOSURE AND DETOUR SIGNS.
- REVISE MESSAGE ON C.M.S. #2 PREVIOUSLY INSTALLED ON POND ROAD. DEACTIVATE C.M.S. #1.
- INSTALL TYPE III BARRICADES TO TEMPORARILY CLOSE POND ROAD TO THROUGH TRAFFIC WHILE MAINTAINING LOCAL TRAFFIC ACCESS TO BUSINESSES WITHIN WORK ZONE. (SEE LOCAL NOTE LN-2)

STEP 5: WITH POND ROAD (-SR3431-) CLOSED TO THROUGH TRAFFIC, PERFORM THE FOLLOWING AS SHOWN ON TMP-17:

- COORDINATE WITH THE BUSINESSES WITHIN THE CONSTRUCTION LIMITS AND MAKE NECESSARY PROVISIONS TO MAINTAIN VEHICULAR INGRESS TO AND EGRESS FROM THEIR DRIVEWAYS CONTINUOUSLY THROUGHOUT RECONSTRUCTION OF POND ROAD. (SEE LOCAL NOTE LN-2)
- UNDERCUT EXISTING PAVEMENT TO LOWER POND ROAD TO PROPOSED NEW GRADE BETWEEN STA 11+25 AND STA 20+50 -SR3431-.
- CONSTRUCT NEW POND ROAD PAVEMENT UP TO BUT NOT INCLUDING FINAL SURFACE LAYER BETWEEN STA 11+25 AND STA 20+50 -SR3431- AS FOLLOWS:

- CONSTRUCT FULL WIDTH FROM STA 11+25 TO STA 15+60 AND FROM STA 16+70 TO STA 20+50.
- CONSTRUCT CURBED ISLANDS BETWEEN DRIVEWAYS AND SEPERATING ABUTTING PARKING AREAS FROM POND ROAD.
- CONSTRUCT 28 FT OF PROPOSED PAVEMENT EXCLUDING 4 FT PAVED SHOULDER ALONG SOUTH SIDE OF POND ROAD BENEATH BRIDGES FROM BETWEEN STA 15+60 AND STA 16+70. CONSTRUCT 4 FT OF TEMPORARY WIDENING IN LIEU OF PERMANENT SHOULDER ALONG SOUTH SIDE OF POND ROAD FROM STA 15+60 TO STA 16+70. (SEE SECTION C-C ON TMP-17)
- WIDEN, WEDGE AND RESURFACE EXISTING POND ROAD UP TO BUT NOT INCLUDING FINAL SURFACE LAYER FROM STA 12+00 +/- TO STA 11+25 AND FROM STA 20+50 TO STA 22+25 +/--. USE RSD 1101.02, SHEET 1, WHEN WORKING WITHIN OR IMMEDIATELY ADJACENT TO THE INTERSECTION OF POND ROAD AND MCINTOSH ROAD.

STEP 6: INSTALL P.C.B. WITH CRASH CUSHION ON TEMPORARY PAVED SHOULDER ALONG SOUTH SIDE OF POND ROAD FROM STA 15+10 TO STA 17+20 AND PLACE AS SHOWN ON TMP-18.

STEP 7: USING RSD 1101.01, SHEET 2, REOPEN POND ROAD (-SR3431-) TO THROUGH TRAFFIC AS FOLLOWS:

- PLACE TEMPORARY PAVEMENT MARKINGS ON POND ROAD FROM STA 10+00 TO STA 22+25 AS SHOWN ON TMP-18.
- REMOVE BARRICADES, COVER ROAD CLOSURE AND DETOUR SIGNS.
- DEACTIVATE C.M.S. ON POND ROAD BUT RETAIN FOR LATER USE WHEN INTERMITTENTLY CLOSING POND ROAD WHILE DEMOLISHING EXISTING BRIDGES AND ERECTING GIRDERS FOR NEW I-26 BRIDGE OVER POND ROAD.

THE CONTRACTOR MAY, SUBJECT TO ENGINEER'S APPROVAL, PERFORM WORK IN PHASE I, STEP 8, CONCURRENTLY WITH PHASE I, STEPS 5 THRU 7.

STEP 8: USING RSD 1101.03, SHEET 9 TO TEMPORARILY STOP TRAFFIC ON POND ROAD (-SR3431-) ON EACH SIDE OF I-26 OVERPASSES, ERECT GIRDERS FOR WESTERN PORTION OF THE NEW I-26 BRIDGE. AT LEAST THREE DAYS PRIOR TO GIRDER ERECTION AND AS DIRECTED BY THE ENGINEER, ACTIVATE PREVIOUSLY INSTALLED PORTABLE C.M.S. ON POND ROAD WITH MESSAGE ADVISING MOTORISTS OF UPCOMING INTERMITTENT ROAD CLOSURES FOR GIRDER ERECTION (SEE TMP-17 AND TMP-19 FOR PORTABLE C.M.S. LOCATIONS).

BEHIND P.C.B. AND EXISTING GUARDRAIL, COMPLETE CONSTRUCTION OF THE FOLLOWING ALONG THE WEST SIDE OF I-26 BEGUN IN PHASE I, STEP 2:

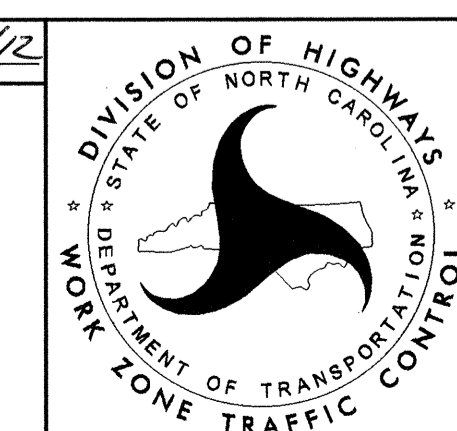
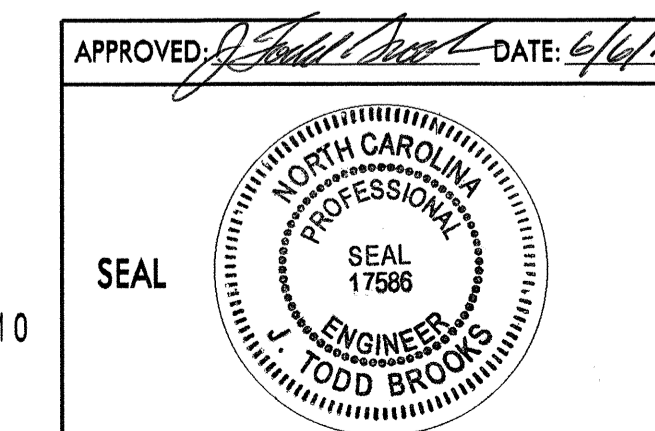
- PHASE I OF NEW BRIDGE
- RETAINING WALL
- EMBANKMENT UP TO EDGE AND ELEVATION OF EXISTING TRAVEL WAY.
- TEMPORARY I-26 EB DETOUR ROADWAY.

INSTALL COMBINATION PROPOSED AND TEMPORARY GUARDRAIL ON APPROACH AND TRAILING ENDS ON WEST SIDE OF NEW BRIDGE. (SEE ROADWAY PLANS AND TMP-15)

IN PREPARATION FOR SHIFT TO PHASE II TRAFFIC PATTERN ON I-26 EB:

- PLACE TEMPORARY MARKINGS, DRUMS AND SIGNS AS MUCH AS POSSIBLE ALONG I-26 EB DETOUR AND PHASE I OF NEW I-26 BRIDGE.
- INSTALL ANCHORED P.C.B. ON NEW BRIDGE (SEE SECTION F-F ON TMP-22)
- INSTALL AND COVER SIGNS AND PLACE PORTABLE C.M.S.'S ON I-26 EB, ON RAMPS FROM I-40 TO I-26 EB, AND ON I-240 EB APPROACHING PROJECT LIMITS.

(SEE TMP-20 THRU TMP-24 FOR PHASE II MARKINGS, SIGNS AND DEVICES).



**PHASING  
PHASE I**

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-8888 NCBEES #F-0326

PHASE II

OBJECTIVES:

SHIFT TWO LANES OF I-26 EASTBOUND TRAFFIC TO PORTION OF NEW BRIDGE CONSTRUCTED IN PHASE I USING TEMPORARY ON-SITE DETOURS CONSTRUCTED IN PHASE I. DEMOLISH EXISTING I-26 EASTBOUND BRIDGE. CONTINUE BUILDING EASTBOUND HALF OF NEW BRIDGE, PART OF NEW EASTBOUND PAVEMENT AND TEMPORARY MEDIAN CROSSEOVERS TO ENABLE SHIFTING OF TWO LANES OF I-26 WESTBOUND TRAFFIC TO NEW BRIDGE IN NEXT PHASE.

THE CONTRACTOR SHALL COMPLETE ALL WORK REQUIRED IN PHASE II, STEP 1, WITHIN A SINGLE OVERNIGHT WORK PERIOD.

STEP 1: SHIFT I-26 EB TRAFFIC FROM EXISTING PATTERN TO PHASE II TEMPORARY PATTERN SHOWN ON TMP-20 THRU TMP-24 AS FOLLOWS:

- A. USING RSD 1101.02, SHEET 4:
  - i) REMOVE P.C.B. AND CRASH CUSHION FROM RIGHT SHOULDER OF I-26 EB (TO BE RESET ALONG LEFT SIDE OF I-26 EB DETOUR ONCE TRAFFIC HAS BEEN REROUTED ONTO DETOUR)
  - ii) TO TEMPORARILY CLOSE RIGHT LANE ON I-26 EB COMPLETE TIE-IN OF PHASE II TEMPORARY MARKINGS FOR RIGHT-MOST EB LANE (CLOSED LANE) AT EACH END OF THE DETOUR ROADWAY.
- B. USING RSD 1101.03, SHEET 9 TO TEMPORARILY SLOW OR STOP I-26 EB TRAFFIC, REDIRECT SINGLE LANE OF I-26 EB TRAFFIC ONTO RIGHT-MOST LANE OF DETOUR ROAD AND CLOSE LEFT LANE OF I-26 EB (SEE RSD 1101.02, SHEET 4 FOR LEFT LANE CLOSURE).
- C. COMPLETE TIE-IN OF MARKINGS FOR LEFT LANE AT EACH END OF DETOUR ROADWAY.
- D. COMPLETE INSTALLATION OF P.C.B. ALONG LEFT LANE LANE OF I-26 EB. (SEE SECTIONS F-F AND G-G ON TMP-22).
- E. UNCOVER SIGNS AND ACTIVATE PORTABLE C.M.S.'S ON I-26 EB, RAMPS FROM I-40 AND I-240 APPROACHING WORK ZONE (SEE TMP-23 & TMP-24). OPEN LEFT LANE OF I-26 EB TO PHASE II TEMPORARY TRAFFIC PATTERN.

STEP 2: USING RSD 1101.01, SHEET 4 TO TEMPORARILY CLOSE LEFT LANE OF I-26 WB, INSTALL THE FOLLOWING ALONG THE LEFT SIDE (MEDIAN SIDE) OF I-26 WB:

- P.C.B. WITH CRASH CUSHION ON APPROACH END ALONG LEFT SHOULDER OF I-26 WB FROM STA 28+40 TO STA 30+80 (SEE TMP-20 AND TMP-21 AND SECTION E-E ON TMP-22).
- P.C.B. ALONG LEFT SHOULDER OF I-26 WB FROM STA 39+70 +/- TO STA 47+80 +/-, TIEING P.C.B. TO END OF EXISTING GUARDRAIL ON TRAILING END OF I-26 WB BRIDGE AT STA 39+70 +/- (SEE TMP-21 & TMP-23).
- WARNING SIGNS AND DRUMS TO CLOSE THE LEFT SHOULDER OF I-26 WB AS SHOWN ON TMP-20.
- INSTALL TEMPORARY SHORING ALONG LEFT SIDE OF I-26 WB BETWEEN END BENTS OF EXISTING AND PROPOSED BRIDGES AS SHOWN ON TMP-21:
  - TEMPORARY SHORING NO.3 FROM STA 34+05 TO STA 35+00 -L-
  - TEMPORARY SHORING NO.4 FROM STA 37+30 TO STA 37+75 -L-

STEP 3: BEHIND BARRIER AND EXISTING MEDIAN GUARDRAIL, BEGIN CONSTRUCTION OF THE FOLLOWING:

- TEMPORARY MEDIAN CROSSEOVERS BETWEEN EXISTING I-26 WB PAVEMENT AND PROPOSED I-26 EB PAVEMENT (SEE SECTION G-G ON TMP-22 AND TMP-20 THRU TMP-23).
- PROPOSED I-26 EB PAVEMENT UP TO BUT NOT INCLUDING FINAL SURFACE LAYER FROM STA 28+00 +/- TO STA 34+20 +/- AND FROM STA 37+50 +/- TO STA 46+00. (SEE TMP-20 THRU TMP-23)

USING RSD 1101.03, SHEET 9 TO TEMPORARILY STOP TRAFFIC ON POND ROAD ON EACH SIDE OF I-26 OVERPASS, DEMOLISH EXISTING I-26 EB BRIDGE OVER POND ROAD (-SR3431-) AND HOMINY CREEK. AT LEAST THREE DAYS PRIOR TO BRIDGE DEMOLITION AND AS DIRECTED BY THE ENGINEER, ACTIVATE PORTABLE C.M.S.'S IN EACH DIRECTION ON POND ROAD INSTALLED DURING PHASE I WITH MESSAGE ADVISING MOTORISTS OF UPCOMING INTERMITTENT ROAD CLOSURES (SEE TMP-17 AND TMP-19 FOR PORTABLE C.M.S. LOCATIONS USED IN PHASE I).

STEP 4: CONSTRUCT PHASE II OF NEW I-26 BRIDGE OVER POND ROAD (-SR3431-) AND HOMINY CREEK. USE RSD 1101.03, SHEET 9 TO TEMPORARILY STOP TRAFFIC ON POND ROAD ON EACH SIDE OF I-26 OVERPASS WHEN ERECTING BRIDGE GIRDERS OVER POND ROAD. AT LEAST THREE DAYS PRIOR TO GIRDER ERECTION AND AS DIRECTED BY THE ENGINEER, ACTIVATE PORTABLE C.M.S.'S IN EACH DIRECTION ON POND ROAD WITH MESSAGE ADVISING MOTORISTS OF UPCOMING INTERMITTENT ROAD CLOSURES (SEE TMP-17 AND TMP-19 FOR PORTABLE C.M.S. LOCATIONS USED DURING PHASE I).

WORKING BEHIND P.C.B. AND EXISTING GUARDRAIL, COMPLETE CONSTRUCTION OF PROPOSED I-26 EB PAVEMENT AND MEDIAN CROSSEOVERS BEGUN IN PREVIOUS STEP. (SEE TMP-20 THRU TMP-23)

CONSTRUCT PROPOSED CONCRETE MEDIAN BARRIER FROM STA 33+68 +/- TO STA 39+00 +/- -L- (SEE TMP-21 AND SECTION G-G ON TMP-22)


STEP 5: IN PREPARATION FOR SHIFT TO PHASE III TRAFFIC PATTERN ON I-26 WB:

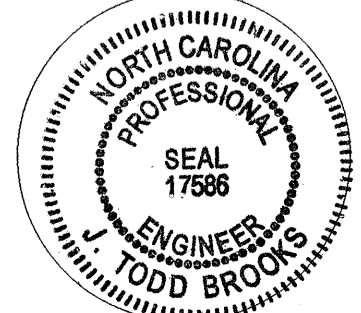
- PLACE TEMPORARY MARKINGS, DRUMS AND SIGNS ALONG MEDIAN CROSSEOVERS, NEW I-26 EB PAVEMENT AND PHASE II OF NEW BRIDGE AS MUCH AS POSSIBLE AWAY FROM TRAFFIC.
- USING RSD 1101.02, SHEET 4, TO TEMPORARILY CLOSE LEFT LANE OF I-26 EB:
  - RESET ANCHORED P.C.B. ON BRIDGE FROM STA 33+30 +/- TO STA 38+00 +/- -L- (SEE TMP-27 AND SECTION I-I ON TMP-28)
  - RESET P.C.B. ALONG LEFT SIDE OF I-26 EB TO PHASE III POSITION (P.C.B. 3C) PRIOR TO STA 33+30 +/- AND AFTER STA 38+00 +/- -L- (SEE TMP-27 AND SECTION J-J ON TMP-28)

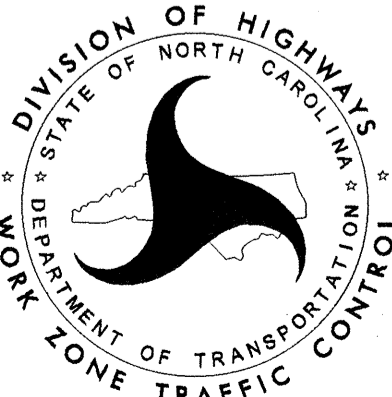
- USING RSD 1101.02, SHEET 4, TO TEMPORARILY CLOSE LEFT LANE OF I-26 WB, RESET BARRIER FROM LEFT SHOULDER OF EXISTING I-26 WB TO LEFT SIDE OF I-26 WB MEDIAN CROSSEOVERS (P.C.B. 3B), AND TIE PHASE III P.C.B. TO PHASE II P.C.B. AS SHOWN IN DETAIL 1 ON TMP-27. REPLACE P.C.B. ON LEFT SHOULDER OF EXISTING I-26 WB WITH DRUMS SPACED 50 FEET C-C.
- AWAY FROM TRAFFIC, INSTALL PART OF P.C.B. ALONG RIGHT SIDE OF PHASE III WB LANES (P.C.B. 3A) BETWEEN STA 31+00 +/- TO STA 40+00 +/- -L-
- INSTALL AND COVER SIGNS AND PLACE PORTABLE C.M.S. ON I-26 WB APPROACHING PROJECT LIMITS. (SEE TMP-25 AND TMP-26)

(SEE TMP-25 THRU TMP-29 FOR PHASE III TEMPORARY MARKINGS, SIGNS AND DEVICES).

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22511 AT RALBZXSYH

APPROVED:  DATE: 6/6/12

SEAL: 



**PHASING  
PHASE II**



**PHASE III**

**OBJECTIVES:**

SHIFT TWO LANES OF I-26 WESTBOUND TRAFFIC ONTO EASTBOUND SIDE OF NEW BRIDGE CONSTRUCTED IN PHASE II USING TEMPORARY MEDIAN CROSSOVERS. DEMOLISH EXISTING I-26 WB BRIDGE. CONSTRUCT REMAINING WESTBOUND HALF OF NEW BRIDGE AND CONSTRUCT PROPOSED WIDENING ALONG EAST SIDE OF I-26 AS MUCH AS POSSIBLE BEHIND BARRIER. ONCE I-26 WB BRIDGE IS DEMOLISHED COMPLETE CONSTRUCTION ON POND ROAD EXCEPT FOR FINAL SURFACE LAYER AND FINAL MARKINGS. (I.E., CONSTRUCT PERMANENT PAVED SHOULDER ON SOUTH SIDE OF POND ROAD BENEATH I-26 OVERPASS).

THE CONTRACTOR SHALL COMPLETE ALL WORK REQUIRED IN PHASE III, STEP 1, WITHIN A SINGLE OVERNIGHT WORK PERIOD.

STEP 1: SHIFT I-26 WB TRAFFIC FROM EXISTING PATTERN TO PHASE III TEMPORARY PATTERN SHOWN ON TMP-25 THRU TMP-29 AS FOLLOWS:

- A. USING RSD 1101.02, SHEET 4, TO CLOSE LEFT LANE OF I-26 WB COMPLETE TIE-IN OF PHASE III TEMPORARY MARKINGS FOR LEFT LANE (CLOSED LANE) AT EACH END OF THE MEDIAN CROSSOVERS.
- B. COMPLETE INSTALLATION OF P.C.B. 3B ALONG LEFT LANE OF I-26 WB. (SEE TMP-26 THRU TMP-29)
- C. USING RSD 1101.03, SHEET 9 TO TEMPORARILY SLOW OR STOP I-26 WB TRAFFIC, REDIRECT SINGLE LANE OF I-26 WB TRAFFIC ONTO LEFT LANE OF MEDIAN CROSSOVERS AND CLOSE RIGHT LANE OF I-26 WB (SEE RSD 1101.02, SHEET 4 FOR RIGHT LANE CLOSURE).
- D. COMPLETE TIE-IN OF MARKINGS FOR I-26 WB RIGHT LANE (CLOSED LANE) AT EACH END OF MEDIAN CROSSOVERS.
- E. COMPLETE INSTALLATION OF P.C.B. 3A WITH APPROACH END CRASH CUSHION ALONG RIGHT LANE OF I-26 WB AT EACH END OF THE I-26 WB DETOUR. (SEE SECTIONS H-H, I-I AND J-J ON TMP-28 AND SEE TMP-26 THRU TMP-29)
- F. UNCOVER SIGNS AND ACTIVATE PORTABLE C.M.S. ON I-26 WB APPROACHING WORK ZONE. OPEN RIGHT LANE OF I-26 WB TO PHASE III TEMPORARY TRAFFIC PATTERN.
- G. RELOCATE, MODIFY AND REMOVE EXISTING GUIDE SIGNS ON I-26 WB WITHIN PROJECT LIMITS AS SHOWN ON TMP-26 THRU TMP-29.

STEP 2: BEHIND BARRIER AND EXISTING GUARDRAIL, BEGIN CONSTRUCTION OF THE FOLLOWING:

- PROPOSED DRAINAGE IN MEDIAN AND DRAINAGE PIPES BENEATH PROPOSED I-26 WB PAVEMENT. (SEE TMP-27)
- PROPOSED I-26 WB PAVEMENT UP TO BUT NOT INCLUDING FINAL SURFACE LAYER FROM STA 28+00 +/- TO STA 34+20 +/- -L- (SOUTH END OF BRIDGE). AND FROM STA 37+50 +/- (NORTH END OF BRIDGE) TO STA 46+00 +/- -L-. (SEE SECTION H-H AND J-J ON TMP-28 AND SEE TMP-26 THRU TMP-29)

NOTIFY DIVISION 13 TO REMOVE EXISTING I.T.S. EQUIPMENT ON I-26 WB SOUTH OF POND ROAD AS SHOWN ON TMP-26. (SEE I.T.S. PLANS)

USING RSD 1101.03, SHEET 9 TO TEMPORARILY STOP TRAFFIC ON POND ROAD ON EACH SIDE OF I-26 OVERPASS, DEMOLISH EXISTING I-26 WB BRIDGE OVER POND ROAD (-SR3431-) AND HOMINY CREEK. AT LEAST THREE DAYS PRIOR TO BRIDGE DEMOLITION AND AS DIRECTED BY THE ENGINEER, ACTIVATE PORTABLE C.M.S.'S ON POND ROAD WITH MESSAGE ADVISING MOTORISTS OF UPCOMING INTERMITTENT ROAD CLOSURES (SEE TMP-17 AND TMP-19 FOR PORTABLE C.M.S. LOCATIONS USED IN PHASE I).

AWAY FROM TRAFFIC, REMOVE EXISTING OVERHEAD SIGN ASSEMBLY OVER EXISTING I-26 WB AT STA 33+40 +/- . (SEE TMP-27 AND SIGNING PLANS)

STEP 3: BEGIN CONSTRUCTING PHASE III (I.E., REMAINDER) OF NEW I-26 BRIDGE OVER POND ROAD (-SR3431-) AND HOMINY CREEK (SEE SECTION I-I ON TMP-28 AND SEE TMP-27). USE RSD 1101.03, SHEET 9 TO TEMPORARILY STOP TRAFFIC ON POND ROAD ON EACH SIDE OF I-26 OVERPASS WHEN ERECTING BRIDGE GIRDERS OVER POND ROAD. AT LEAST THREE DAYS PRIOR TO GIRDER ERECTION AND AS DIRECTED BY THE ENGINEER, ACTIVATE PORTABLE C.M.S. ON POND ROAD WITH MESSAGE ADVISING MOTORISTS OF UPCOMING INTERMITTENT ROAD CLOSURES (SEE TMP-17 AND TMP-19 FOR PORTABLE C.M.S. LOCATIONS USED DURING PHASE I).

USING RSD 1101.02, SHEET 2, REMOVE P.C.B. FROM SOUTH SIDE OF POND ROAD (-SR3431-) BENEATH I-26 OVERPASS AND REPLACE P.C.B. WITH DRUMS SPACED 20 FEET C-C. PRIOR TO REMOVING P.C.B., BACKFILL PAVEMENT EDGE TO ELIMINATE ANY PAVEMENT EDGE DROPOFF. ONCE P.C.B. HAS BEEN REMOVED, REMOVE TEMPORARY PAVED SHOULDER, CONSTRUCT PERMANENT PAVED SHOULDER AND INSTALL SINGLE-FACE BARRIER AND GUARDRAIL ALONG SOUTH SIDE OF POND ROAD UP TO BUT NOT INCLUDING FINAL SURFACE LAYER BETWEEN STA 15+60 +/- AND STA 16+70 +/- -SR3431-. (SEE TMP-30).

STEP 4: BEHIND BARRIER BEGIN RELOCATION OF EXISTING I.T.S. ASSEMBLY

A. CONSTRUCT NEW FOUNDATION FOR CCTV METAL POLE ON RIGHT SIDE OF I-26 WB AT STA 33+00 +/- -L- TO PREPARE FOR RELOCATION OF EXISTING CCTV CAMERA ASSEMBLY CURRENTLY LOCATED AT NORTH END OF EXISTING I-26 WB BRIDGE. SET NEW SERVICE POLE AND INSTALL NEW ELECTRICAL SERVICE FOR CCTV CAMERA ASSEMBLY AT NEW LOCATION. (SEE TMP-27 AND I.T.S. PLANS)

THE CONTRACTOR SHALL COMPLETE ALL WORK REQUIRED IN PHASE III, STEPS 4B THROUGH 4F WITHIN 24 HOURS. [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES]

- B. DEACTIVATE THE EXISTING CCTV CAMERA, WIRELESS COMMUNICATIONS EQUIPMENT AND MICROWAVE VEHICLE DETECTORS (MVDs) MOUNTED ON CCTV METAL POLE AT NORTH END OF EXISTING I-26 WB BRIDGE OVER POND ROAD/HOMINY CREEK.
- C. REMOVE CCTV CAMERA, ANTENNAS AND EQUIPMENT CABINET FROM EXISTING CCTV METAL POLE.
- D. REMOVE EXISTING METAL POLE FROM IT'S EXISTING FOUNDATION AND RE-ERECT THE METAL POLE ON THE NEW FOUNDATION AT STA 33+00 +/- -L-. (SEE TMP-27 AND I.T.S. PLANS)
- E. REINSTALL CCTV CAMERA, ANTENNAS AND EQUIPMENT CABINET ON RELOCATED CCTV METAL POLE. TEMPORARILY STORE MVD UNITS FOR INSTALLATION ON NEW OVERHEAD SIGN STRUCTURE IN LATER STEP. (SEE I.T.S. PLANS)
- F. RESTORE CCTV CAMERA OPERATIONS AT NEW LOCATION AND RE-ESTABLISH WIRELESS COMMUNICATIONS BETWEEN DIVISION 13 OFFICE AND RELOCATED CCTV CAMERA ASSEMBLY.

STEP 5: WORKING BEHIND P.C.B. AND EXISTING GUARDRAIL, COMPLETE CONSTRUCTION OF PROPOSED WB PAVEMENT BEGUN IN PREVIOUS STEP. COMPLETE CONSTRUCTION OF NEW I-26 BRIDGE OVER POND RD (-SR3431-) AND HOMINY CREEK. (SEE TMP-26 THRU TMP-29)

CONSTRUCT PROPOSED CONCRETE MEDIAN BARRIER FROM STA 32+00 +/- TO STA 33+68 +/- -L- AND FROM STA 39+00 +/- TO STA 39+70 +/- -L- (SEE TMP-27 AND SECTIONS I-I AND J-J ON TMP-28)

AWAY FROM TRAFFIC, ERECT NEW OVERHEAD SIGN ASSEMBLY AT STA 33+00 -L- ON I-26 WB INSTALL EXISTING M.V.D. UNITS FROM RELOCATED CCTV METAL POLE ON NEW OVERHEAD SIGN ASSEMBLY AT STA 33+00 +/- -L-. (SEE TMP-27 AND SIGNING PLANS).

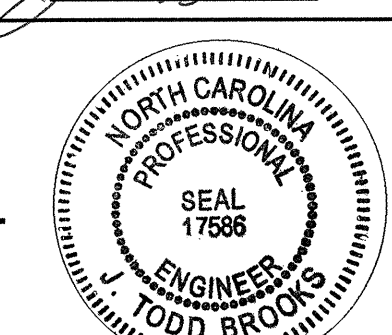

IN PREPARATION FOR SHIFT TO PHASE IV TRAFFIC PATTERN ON I-26 WB:

- PLACE TEMPORARY MARKINGS ON NEW I-26 EB PAVEMENT AND PHASE III OF NEW BRIDGE AS MUCH AS POSSIBLE AWAY FROM TRAFFIC.
- AWAY FROM TRAFFIC, PARTIALLY INSTALL PHASE IV P.C.B. ALONG LEFT SIDE OF I-26 WB AS FOLLOWS (SEE TMP-32):
  - STA 30+50 +/- TO STA 32+00 +/- -L- (SEE P.C.B. 4A ON TMP-32)
  - STA 38+70 +/- TO STA 41+20 +/- -L-, INCLUDING APPROACH END CRASH CUSHION AT STA 38+70 +/- . (SEE P.C.B. 4B ON TMP-32)
- INSTALL AND COVER PERMANENT SIGNS ALONG I-26 WB AS MUCH AS POSSIBLE (SEE SIGNING PLANS). ALONG WITH TEMPORARY AND WARNING SIGNS FOR PHASE IV.

(SEE TMP-31 THRU TMP-35 FOR PHASE IV TEMPORARY MARKINGS, SIGNS AND DEVICES).

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APPROVED: <i>[Signature]</i> DATE: 6/6/12			<p><b>PHASING PHASE III</b></p>
SEAL			

PHASE IV

**OBJECTIVES:**  
DISCONTINUE ON-SITE DETOURS AND SHIFT I-26 EASTBOUND AND WESTBOUND INTO TEMPORARY PATTERN IN THE FINAL ALIGNMENT ON THEIR RESPECTIVE SIDES OF THE MEDIAN. REMOVE MEDIAN CROSSOVERS AND COMPLETE CONSTRUCTION IN I-26 MEDIAN. REMOVE TEMPORARY DETOUR ON I-26 EASTBOUND AND COMPLETE I-26 EB WIDENING. ERECT NEW OVERHEAD SIGN ASSEMBLIES ON I-26 WB. PLACE FINAL LAYER OF SURFACE COURSE, FINAL MARKINGS AND FINAL SIGNS ON I-26 AND POND ROAD.

THE CONTRACTOR SHALL COMPLETE ALL WORK REQUIRED IN PHASE IV, STEP 1, WITHIN A SINGLE OVERNIGHT WORK PERIOD.

STEP 1: SHIFT I-26 WB TRAFFIC FROM PHASE III TEMPORARY PATTERN TO PHASE IV TEMPORARY PATTERN ON NEW WB PAVEMENT SHOWN ON TMP-31 THRU TMP-34 AS FOLLOWS:

- A. USING RSD 1101.02, SHEET 4 TO TEMPORARILY CLOSE RIGHT LANE OF I-26 WB:
- i) REMOVE PART OF PHASE III P.C.B. 3A AND APPROACH END CRASH CUSHION ALONG RIGHT SIDE OF I-26 WB FROM STA 28+30 +/- TO STA 32+00 +/- -L- AND FROM STA 39+60 +/- TO STA 44+30 +/- -L-. (TO BE RESET TO COMPLETE PHASE IV P.C.B. 4A AND P.C.B. 4B IN STEP 1D BELOW)
  - ii) COMPLETE TIE-IN OF PHASE IV TEMPORARY MARKINGS FOR RIGHT LANE (CLOSED LANE) AT EACH END OF THE WORK ZONE.
- B. USING RSD 1101.03, SHEET 9 TO TEMPORARILY SLOW OR STOP I-26 WB TRAFFIC, REDIRECT SINGLE LANE OF I-26 WB TRAFFIC ONTO NEWLY CONSTRUCTED WB PAVEMENT AND CLOSE LEFT LANE OF I-26 WB (SEE RSD 1101.02, SHEET 4 FOR LEFT LANE CLOSURE).
- C. COMPLETE TIE-IN OF MARKINGS FOR LEFT WB LANE AT EACH END OF THE WORK ZONE.
- D. RESET P.C.B. WITH APPROACH END CRASH CUSHION (REMOVED FROM P.C.B. 3A IN STEP 1A ABOVE) ALONG LEFT SIDE OF I-26 WB TO COMPLETE P.C.B. 4A FROM STA 28+40 TO STA 30+50 AND P.C.B. 4B FROM STA 41+20 TO STA 47+50 SHOWN ON TMP-31 THRU TMP-34. (SEE SECTIONS L-L AND N-N ON TMP-33 AND SEE TMP-31 THRU TMP-34)
- E. UNCOVER APPLICABLE PERMANENT SIGNS ON I-26 WB AS DIRECTED BY THE ENGINEER. COVER AND REMOVE PREVIOUSLY INSTALLED PHASE III TRAFFIC SHIFT WARNING SIGNS ON I-26 WB. OPEN LEFT LANE OF I-26 WB TO PHASE IV TEMPORARY TRAFFIC PATTERN.
- F. RELOCATE, MODIFY AND REMOVE EXISTING GUIDE SIGNS ON I-26 WB WITHIN PROJECT LIMITS AS SHOWN ON TMP-31 THRU TMP-34.

STEP 2: AWAY FROM TRAFFIC, REVISE MARKINGS AND MARKERS ON I-26 EB TO PHASE IV PATTERN AS MUCH AS POSSIBLE BETWEEN STA 33+30 +/- AND STA 38+00 +/- -L- (SEE TMP-32)

AWAY FROM TRAFFIC, REMOVE REMAINDER OF PHASE III P.C.B. 3A (STA 32+00 +/- TO STA 39+60 +/-) FROM RIGHT SIDE OF FORMER WB LANES AND REMOVE PHASE III P.C.B. 3B (STA 39+50 +/- TO STA 43+50 +/- -L-) FROM LEFT SIDE OF FORMER WB LANES (SEE TMP-27 AND TMP-29 FOR PHASE III P.C.B.). PARTIALLY INSTALL PHASE IV P.C.B. 4C FROM STA 30+00 +/- TO STA 32+90 +/- -L- AND P.C.B. 4D FROM STA 39+50 +/- TO STA 42+00 +/- -L- BY RESETTING SECTIONS FROM PHASE III P.C.B. 3A AND P.C.B. 3C (SEE TMP-32). INSTALL CRASH CUSHION ON APPROACH END OF P.C.B. 4C AT STA 32+90 +/- -L-.

RESET THE REMAINDER OF PHASE III P.C.B. 3A AND P.C.B. 3B TO COMPLETE PHASE IV P.C.B. 4C AND P.C.B. 4D IN CONJUNCTION WITH SHIFT OF I-26 EB TRAFFIC INTO PHASE IV PATTERN IN NEXT STEP.

THE CONTRACTOR SHALL COMPLETE ALL WORK REQUIRED IN PHASE IV, STEP 3, WITHIN A SINGLE OVERNIGHT WORK PERIOD.

STEP 3: SHIFT I-26 EB TRAFFIC FROM PHASE III TEMPORARY PATTERN TO PHASE IV TEMPORARY PATTERN ON NEW EB PAVEMENT SHOWN ON TMP-31 THRU TMP-34 AS FOLLOWS:

- A. USING RSD 1101.01, SHEET 4, TEMPORARILY CLOSE LEFT LANE OF I-26 EB AND PERFORM THE FOLLOWING:
- i) WITH LEFT LANE OF I-26 EB CLOSED, REMOVE PORTIONS OF PHASE III P.C.B. 3C THAT CONFLICT WITH PHASE IV EB TRAFFIC PATTERN (STA 28+00 +/- TO STA 32+00 +/- -L- AND STA 39+40 +/- -L- TO STA 43+00 +/- -L-). REMOVED SEGMENTS OF P.C.B. 3C WILL BE RESET IN LATER STEP TO FORM PHASE IV P.C.B. 4E.
  - ii) COMPLETE TIE-IN OF PHASE IV TEMPORARY MARKINGS FOR WB LEFT LANE (CLOSED LANE) AT EACH END OF THE WORK ZONE.
  - iii) COMPLETE INSTALLATION OF PHASE IV P.C.B. 4C FROM STA 28+00 +/- TO STA 30+00 +/- -L- AND P.C.B. 4D FROM STA 42+00 +/- TO STA 45+20 +/- ALONG LEFT SIDE OF WB LANES BY RESETTING SEGMENTS OF PREVIOUSLY REMOVED PHASE III P.C.B. 3A AND P.C.B. 3B AND BY RESETTING P.C.B. 3C AND ASSOCIATED CRASH CUSHION.
- B. USING RSD 1101.03, SHEET 9 TO TEMPORARILY SLOW OR STOP I-26 EB TRAFFIC, REDIRECT SINGLE LANE OF I-26 EB TRAFFIC ONTO PERMANENT EB PAVEMENT AND CLOSE RIGHT LANE OF I-26 EB (SEE RSD 1101.02, SHEET 4 FOR RIGHT LANE CLOSURE).
- C. COMPLETE TIE-IN OF MARKINGS FOR RIGHT EB LANE AT EACH END OF THE WORK ZONE.
- D. PLACE DRUMS 50 FT C-C IN LIEU OF YET-TO-BE COMPLETED SEGMENTS OF PHASE IV P.C.B. 4E ALONG RIGHT SIDE OF NEW EB PAVEMENT AND PLACE TRUCK MOUNTED ATTENUATOR (TMA) AT EXPOSED END OF PHASE IV P.C.B. 4E AT STA 39+40 +/- -L- UNTIL P.C.B. 4E CAN BE COMPLETED IN LATER STEP.
- E. UNCOVER APPLICABLE PERMANENT SIGNS AS DIRECTED BY THE ENGINEER. COVER AND REMOVE PREVIOUSLY INSTALLED PHASE III TRAFFIC SHIFT WARNING SIGNS. OPEN RIGHT LANE OF I-26 EB TO PHASE IV TEMPORARY TRAFFIC PATTERN.

STEP 4: USING RSD 1101.01, SHEET 4 TO TEMPORARILY CLOSE RIGHT LANE OF I-26 EB, COMPLETE INSTALLATION OF PHASE IV P.C.B. 4E ALONG RIGHT SIDE OF I-26 EB BY RESETTING REMAINING SEGMENTS OF PHASE III P.C.B. 3C REMOVED IN PRECEDING STEP ALONG WITH P.C.B. PREVIOUSLY USED ON POND ROAD IN PRIOR PHASE. INSTALL CRASH CUSHION ON APPROACH END OF P.C.B. 4E AT STA 47+10 +/- -L-. (SEE TMP-31 THRU TMP-34).

ONCE P.C.B. 4E HAS BEEN COMPLETED ALONG RIGHT SIDE OF I-26 EB, CONSTRUCT THE FOLLOWING BEHIND THE P.C.B.:

- REMOVE EB TEMPORARY DETOUR CONSTRUCTED DURING PHASE I.
- CONSTRUCT REMAINDER OF PROPOSED WIDENING ALONG WEST SIDE OF I-26 EB UP TO BUT NOT INCLUDING FINAL SURFACE LAYER FROM STA 28+00 TO STA 46+00 (SEE TMP-31 THRU TMP-34 AND SECTIONS L-L AND N-N ON TMP-33).
- REMOVE TEMPORARY GUARDRAIL INSTALLED DURING PHASE I ALONG WEST SIDE OF I-26 EB AND COMPLETE INSTALLATION OF PERMANENT GUARDRAIL (SEE TMP-31 THRU TMP-34).

WORKING BEHIND P.C.B. IN MEDIAN OF I-26, CONSTRUCT THE FOLLOWING (SEE TMP-31 THRU TMP-34 AND SECTIONS L-L AND N-N ON TMP-33):

- REMOVE MEDIAN CROSSOVER PAVEMENT CONSTRUCTED IN PHASE II.
- CONSTRUCT REMAINING PERMANENT PAVEMENT IN MEDIAN UP TO BUT NOT INCLUDING FINAL SURFACE LAYER.
- CONSTRUCT REMAINDER OF CONCRETE MEDIAN BARRIER FROM STA 30+00 +/- TO STA 32+00 +/- -L- AND FROM STA 39+70 +/- TO STA 47+50 +/- -L-, INCLUDING INTEGRAL FOUNDATION FOR NEW OVERHEAD SIGN ASSEMBLY AT STA 46+00. (SEE SIGNING PLANS)

STEP 5: USING RSD 1101.03, SHEET 9, DURING AN OVERNIGHT PERIOD:

- INSTALL NEW OVERHEAD SIGN ASSEMBLY AT STA 46+00 ON I-26 WB. (SEE SIGNING PLANS)
- ONCE NEW OVERHEAD SIGN ASSEMBLY HAS BEEN INSTALLED, REMOVE EXISTING OVERHEAD SIGN ASSEMBLY AT STA 46+35 ON I-26 WB. (SEE TMP-34 AND SIGNING PLANS)

USING RSD 1101.02, SHEET 8 TO TEMPORARILY CLOSE TWO LEFT-MOST LANES OF I-26 WB, REMOVE LEFT-MOST EXISTING O.H. SIGN PANEL FROM EXISTING OVERHEAD SIGN STRUCTURE AND INSTALL PROPOSED NEW O.H. SIGN PANEL ON EXISTING STRUCTURE. (SEE TMP-35 AND SIGNING PLANS).

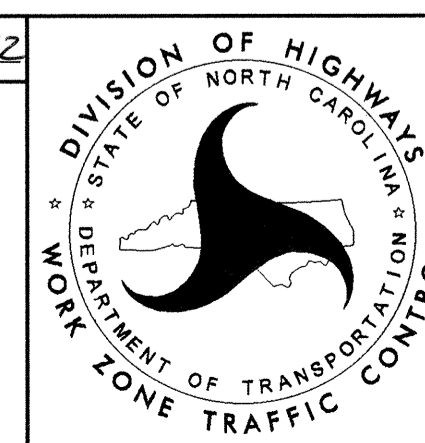
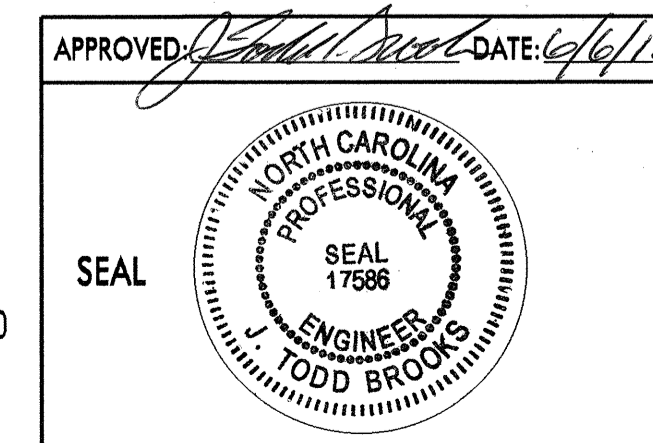
USING RSD 1101.02, SHEET 4 TO TEMPORARILY CLOSE RIGHT LANE OF I-26 EB, REMOVE P.C.B. ALONG RIGHT SIDE OF I-26 WB AND REPLACE P.C.B. WITH DRUMS SPACED 50 FT C-C.

USING RSD 1101.02, SHEET 4 TO TEMPORARILY CLOSE LEFT LANE OF I-26, REMOVE P.C.B. ALONG LEFT SIDE (MEDIAN SIDE) OF I-26 EB AND I-26 WB AND REPLACE P.C.B. WITH DRUMS SPACED 50 FT C-C.

STEP 6: USING RSD 1101.02, SHEETS 4 AND 8, PLACE FINAL LAYER OF SURFACE COURSE AND FINAL MARKINGS ON I-26. (SEE PAVEMENT MARKING PLANS).

USING RSD 1101.02, SHEET 2, PLACE FINAL LAYER OF SURFACE COURSE AND FINAL MARKINGS ON POND ROAD (-SR3431-). (SEE PAVEMENT MARKING PLANS)

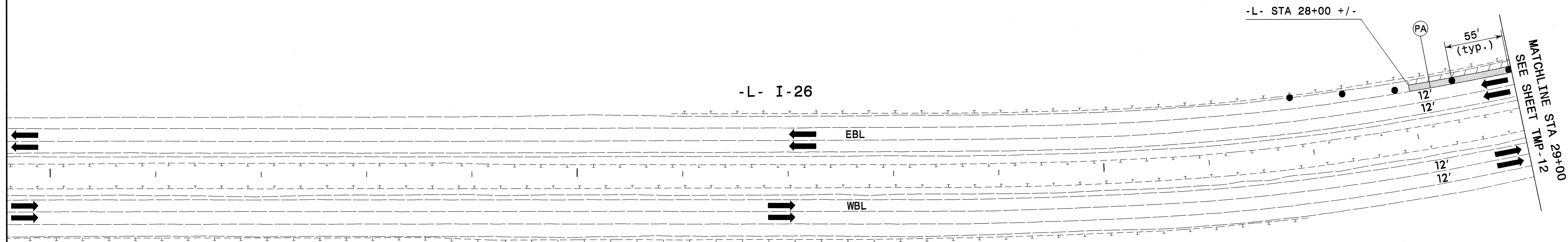
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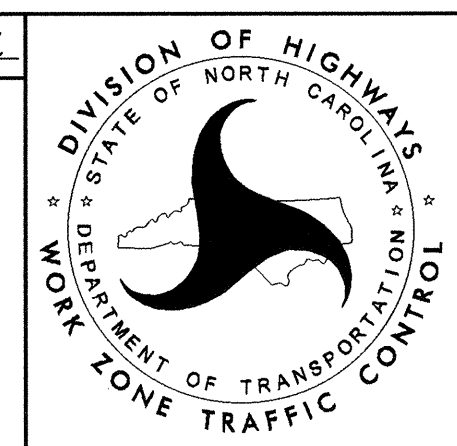
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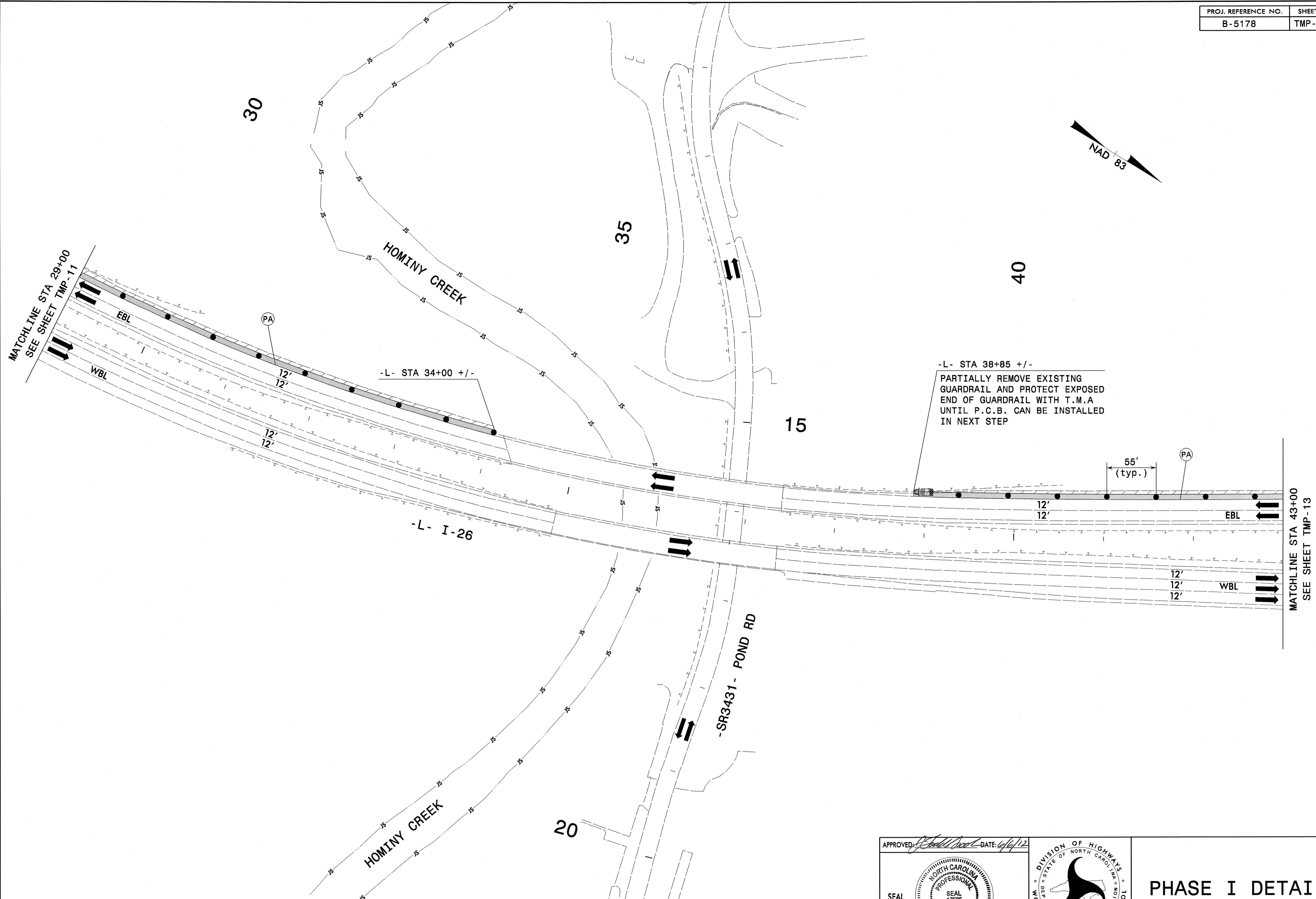
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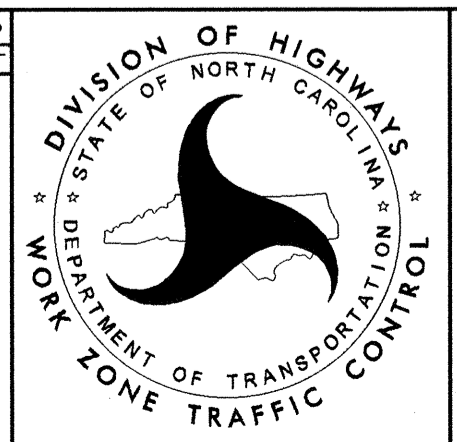
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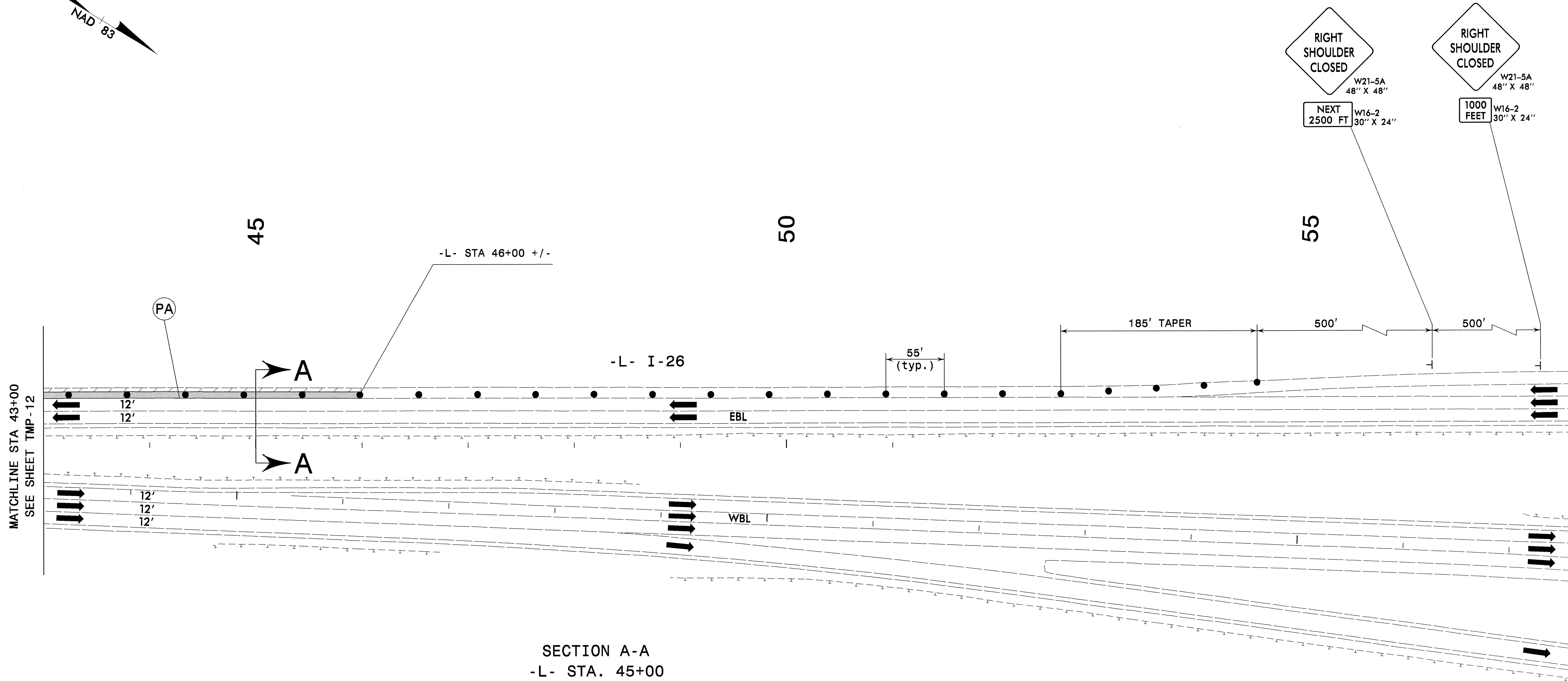
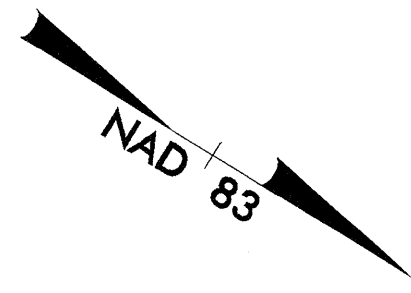
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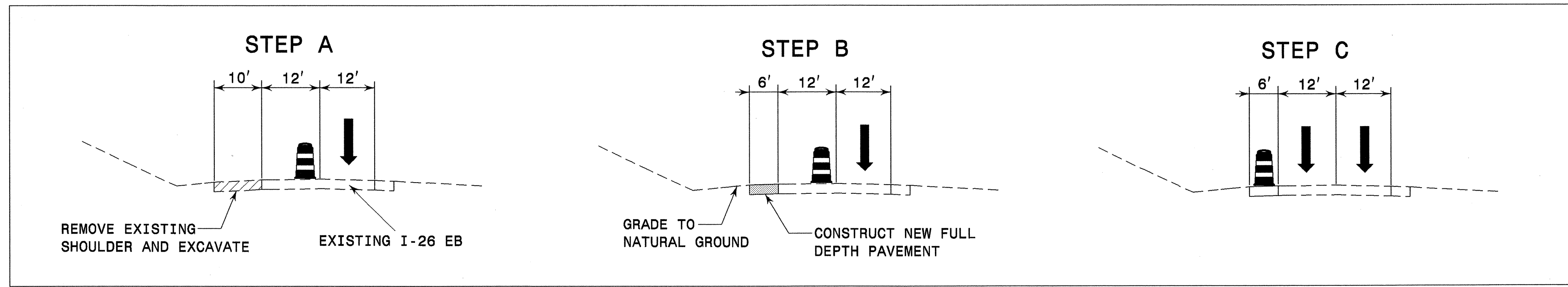
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 SEAL 17686



**PHASE I DETAIL**



SECTION A-A  
-L- STA. 45+00

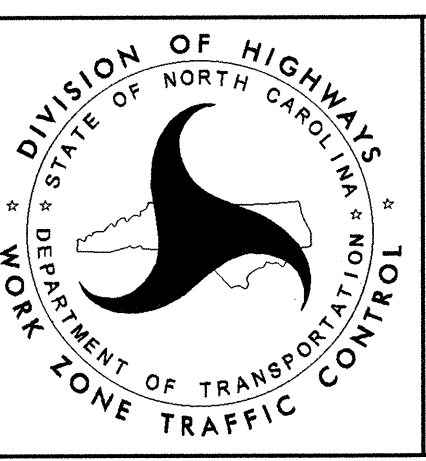


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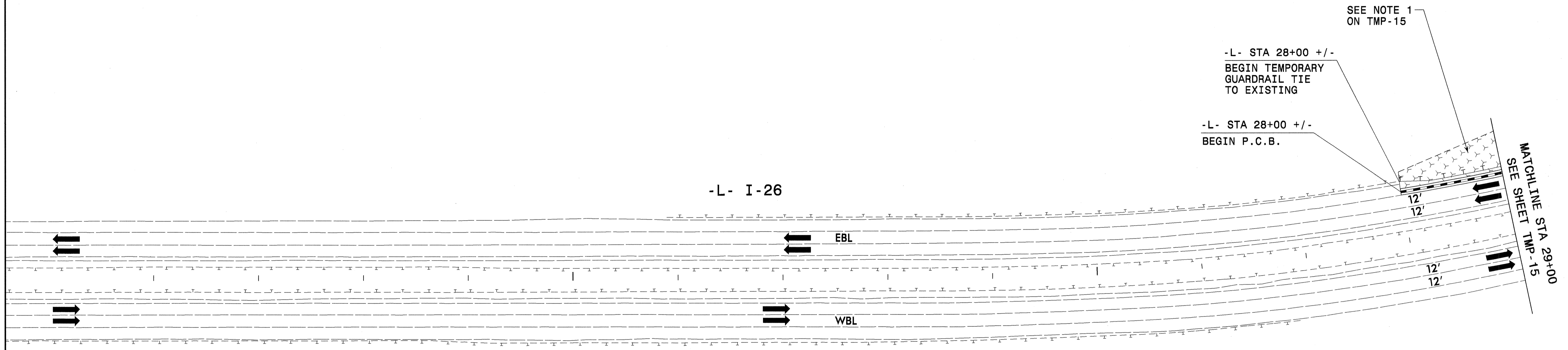


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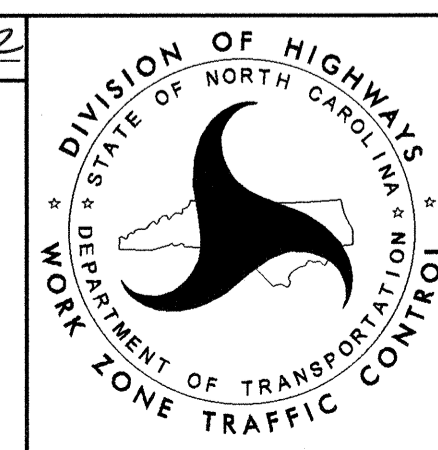


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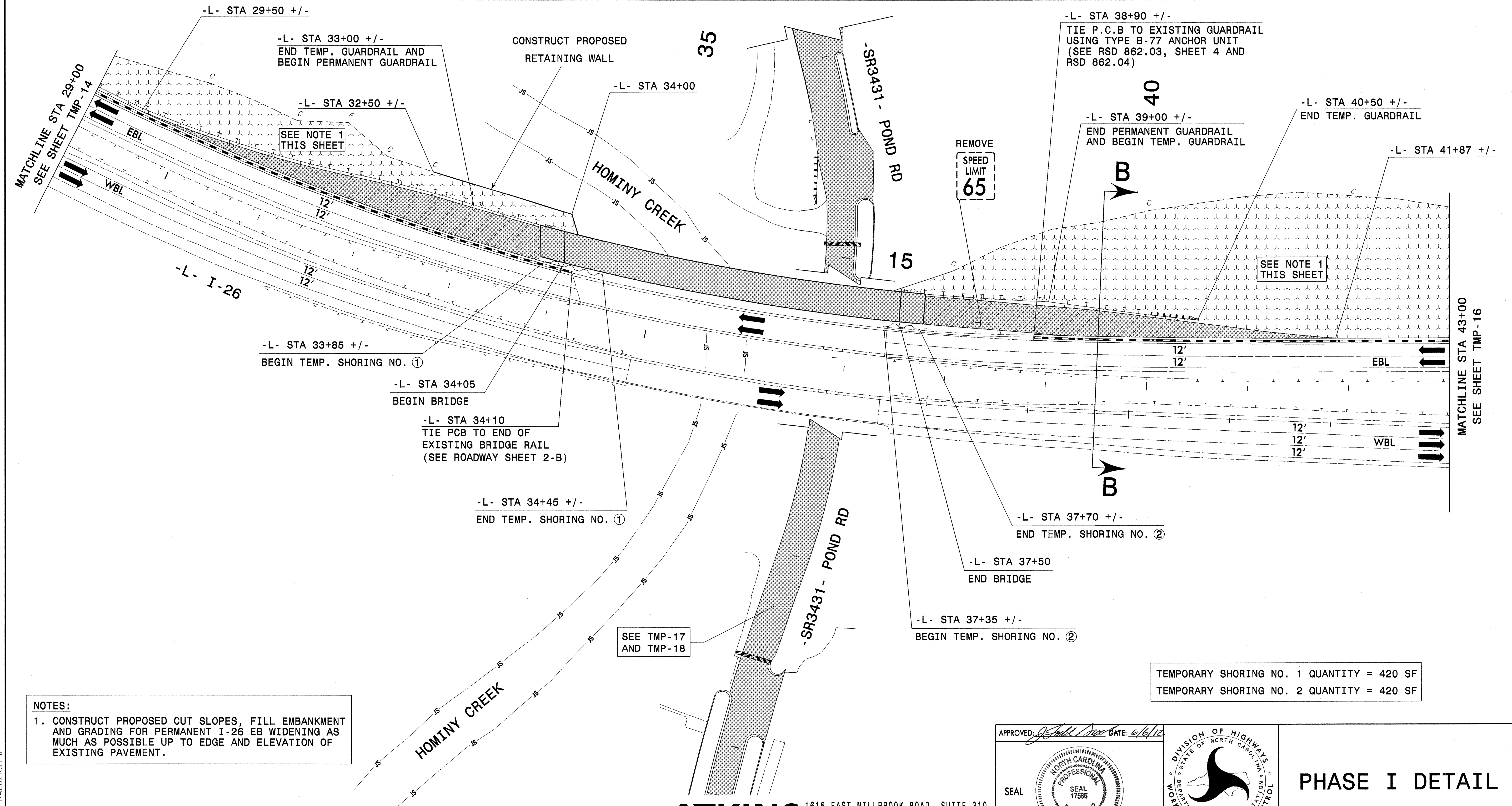
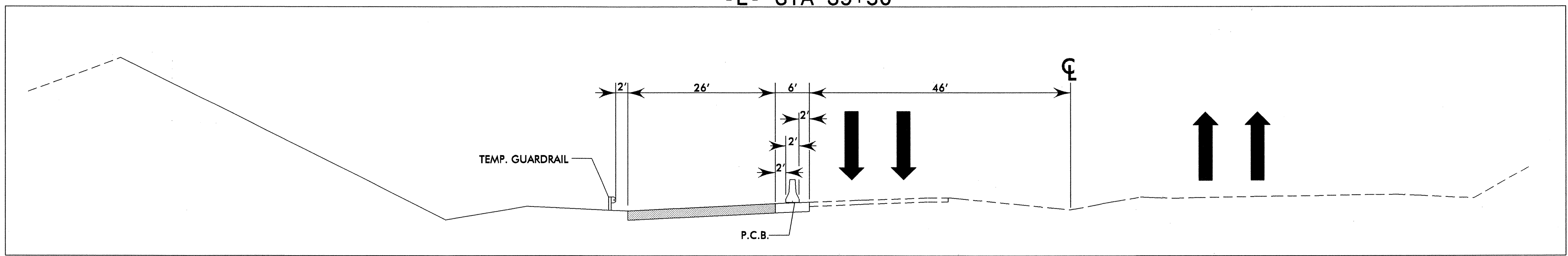
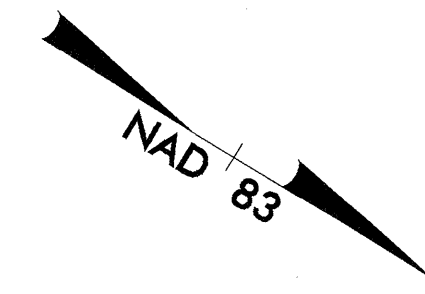
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**PHASE I DETAIL**

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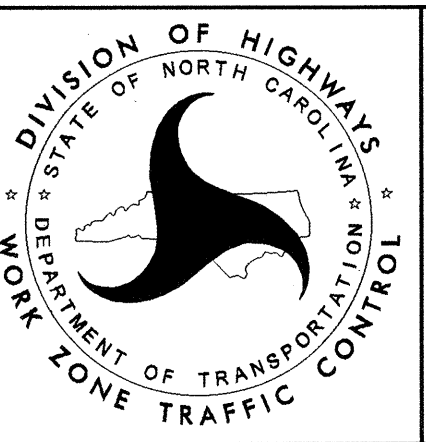


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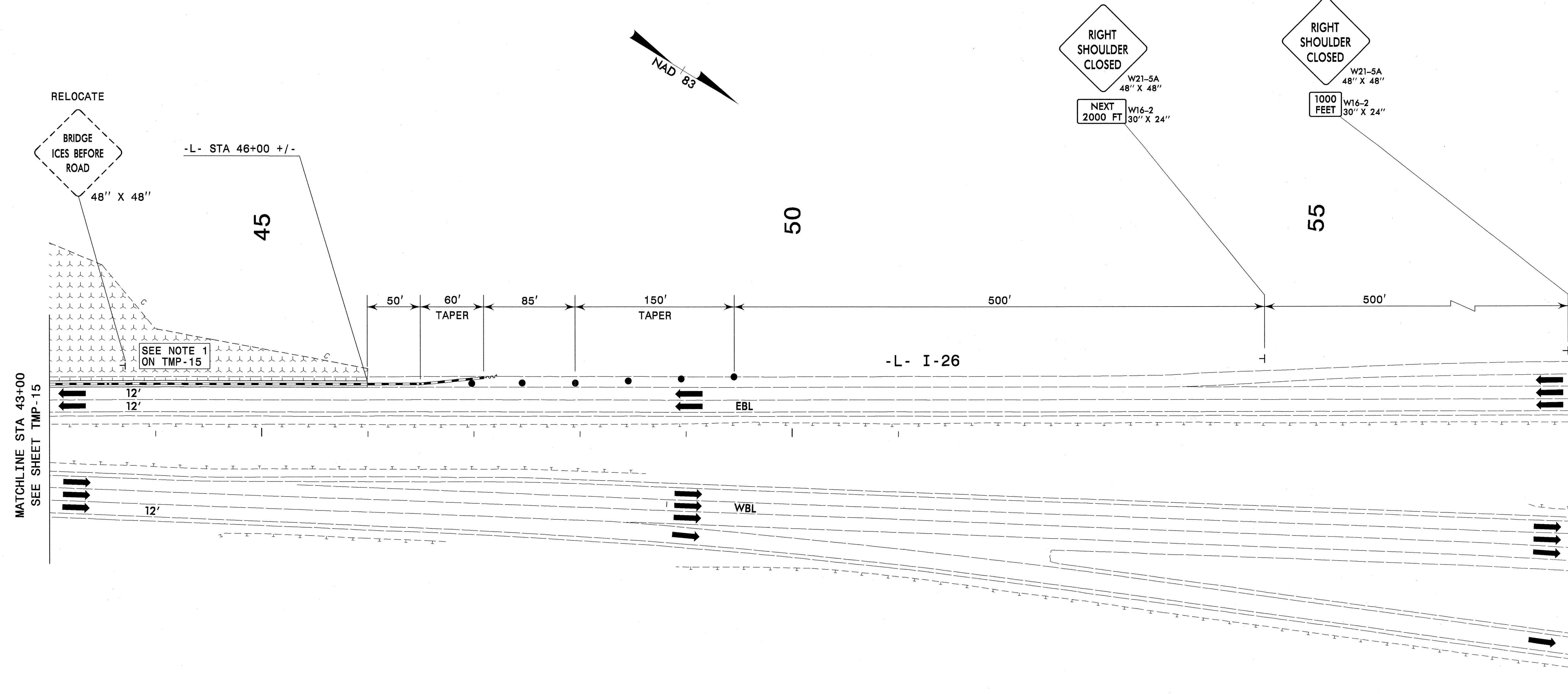
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J. TODD BROOKS  
SEAL 17585



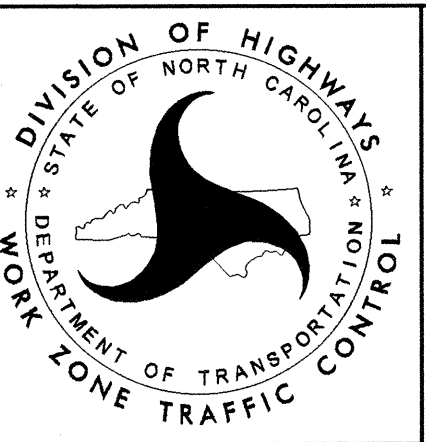
**PHASE I DETAIL**



05-JUN-2012 18:07 \\raif907\raif907\Share\Transportation\Traffic\Curr\100026387 I-26 at Pond Rd\CAD\B-5178\_TMP\_16.dgn 2251 AT RAL8ZXS7H

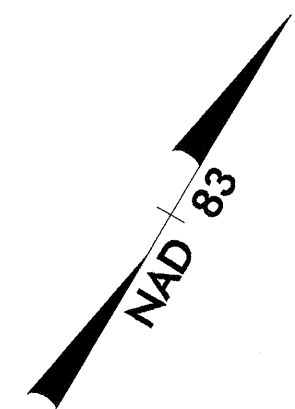
**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
 RALEIGH, NORTH CAROLINA 27609  
 (919) 876-6888 NCBEES #F-0326

APPROVED: *[Signature]* DATE: 6/6/12  
 SEAL  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 SEAL 17688  
 TODD BROOKS



**PHASE I DETAIL**

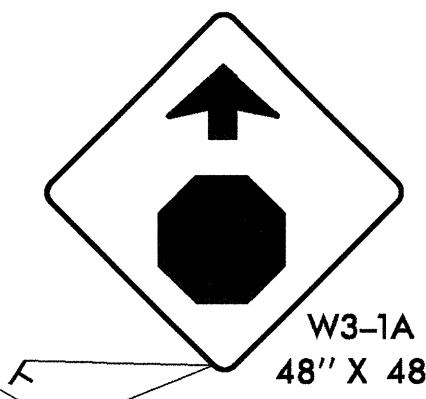




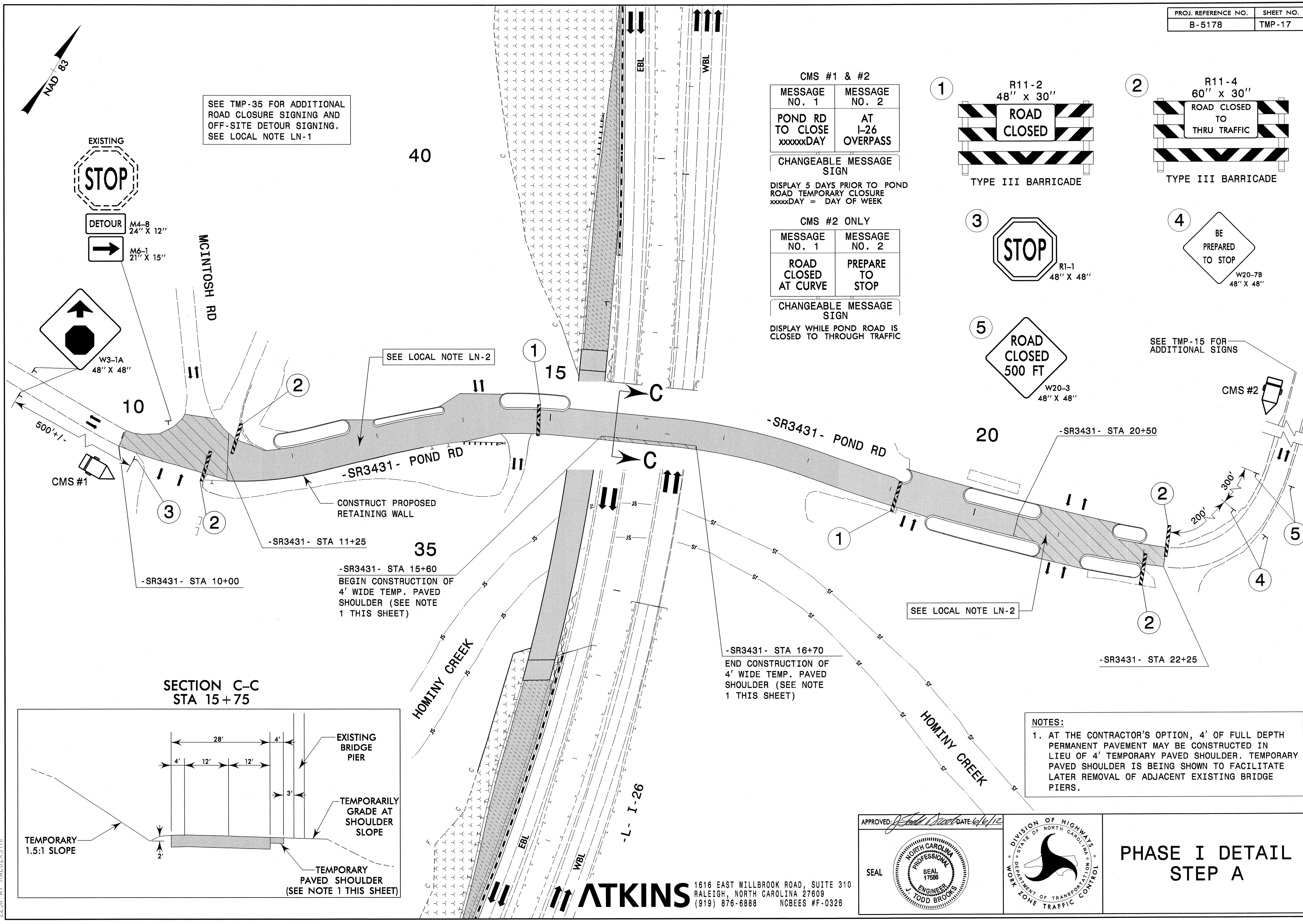
SEE TMP-35 FOR ADDITIONAL ROAD CLOSURE SIGNING AND OFF-SITE DETOUR SIGNING. SEE LOCAL NOTE LN-1



DETOUR  
M4-8  
24" X 12"  
M6-1  
21" X 15"



W3-1A  
48" X 48"



CMS #1 & #2

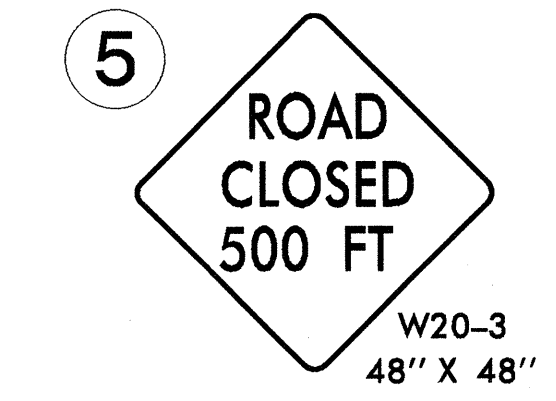
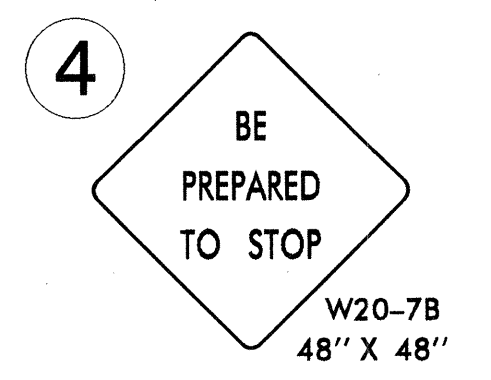
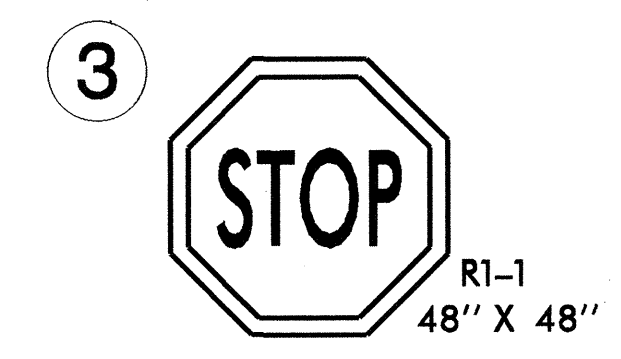
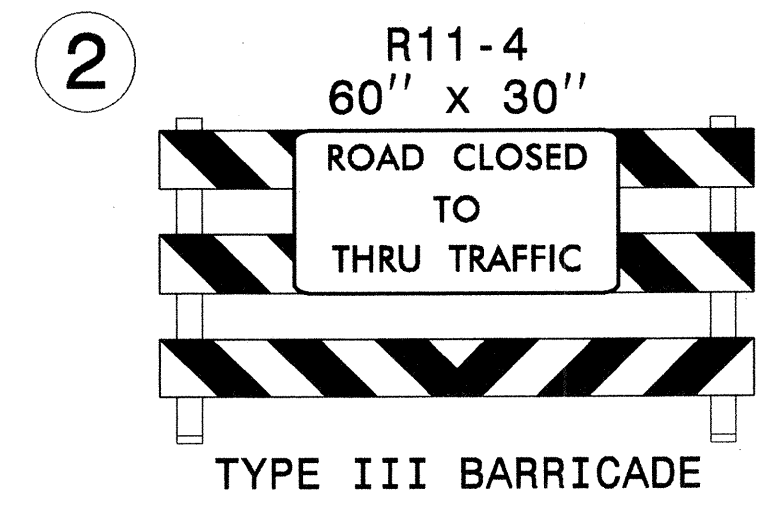
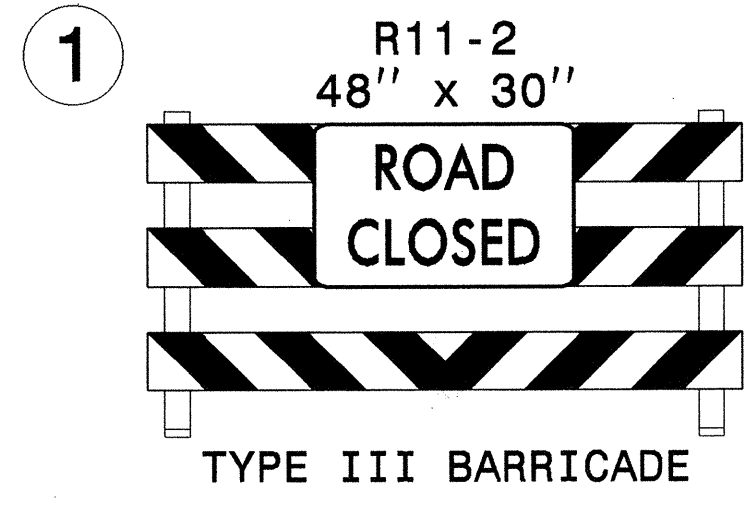
MESSAGE NO. 1	MESSAGE NO. 2
POND RD TO CLOSE xxxxxDAY	AT I-26 OVERPASS

CHANGEABLE MESSAGE SIGN  
DISPLAY 5 DAYS PRIOR TO POND ROAD TEMPORARY CLOSURE  
xxxxxDAY = DAY OF WEEK

CMS #2 ONLY

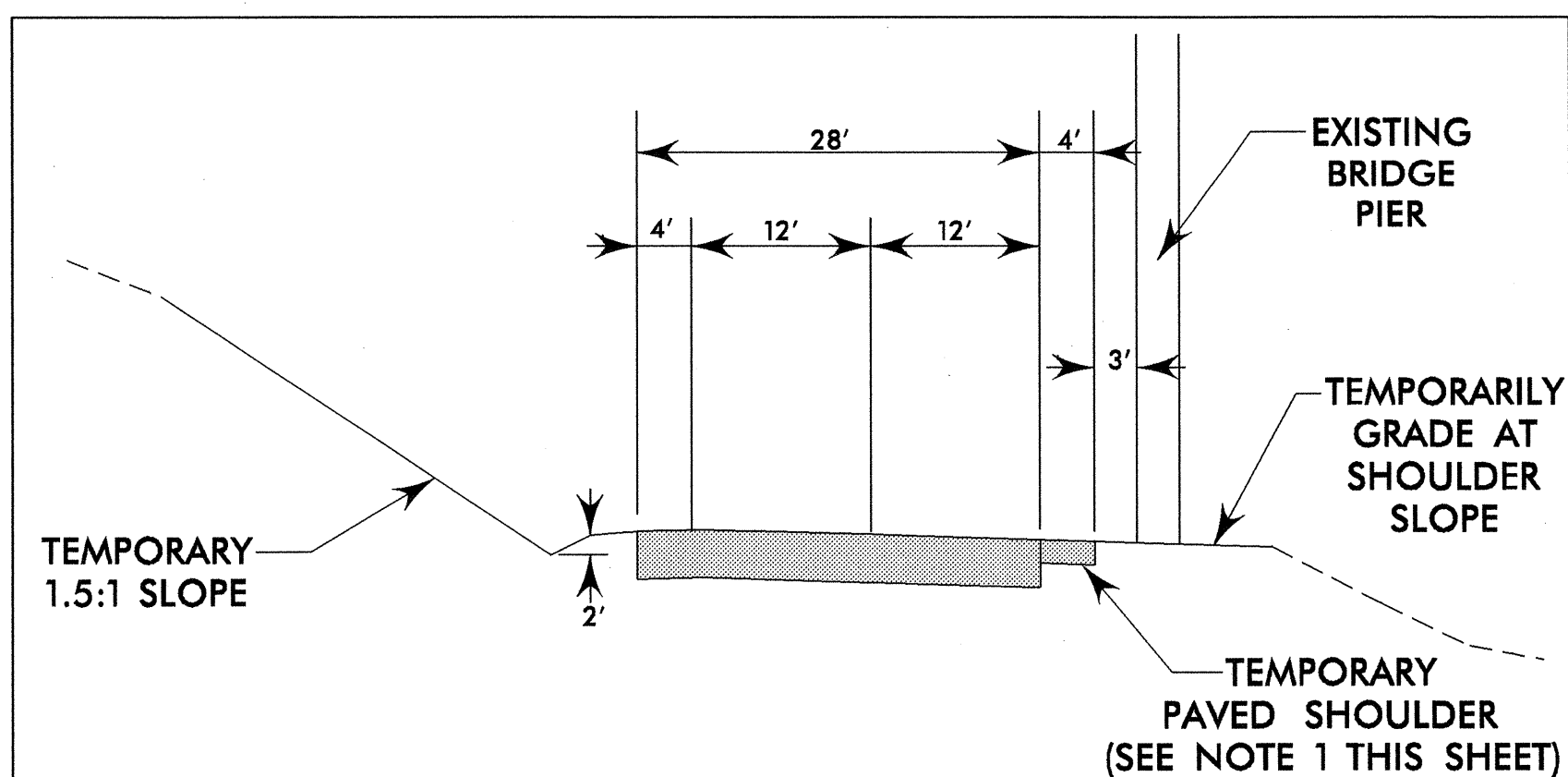
MESSAGE NO. 1	MESSAGE NO. 2
ROAD CLOSED AT CURVE	PREPARE TO STOP

CHANGEABLE MESSAGE SIGN  
DISPLAY WHILE POND ROAD IS CLOSED TO THROUGH TRAFFIC



SEE TMP-15 FOR ADDITIONAL SIGNS

SECTION C-C  
STA 15+75



NOTES:  
1. AT THE CONTRACTOR'S OPTION, 4' OF FULL DEPTH PERMANENT PAVEMENT MAY BE CONSTRUCTED IN LIEU OF 4' TEMPORARY PAVED SHOULDER. TEMPORARY PAVED SHOULDER IS BEING SHOWN TO FACILITATE LATER REMOVAL OF ADJACENT EXISTING BRIDGE PIERS.

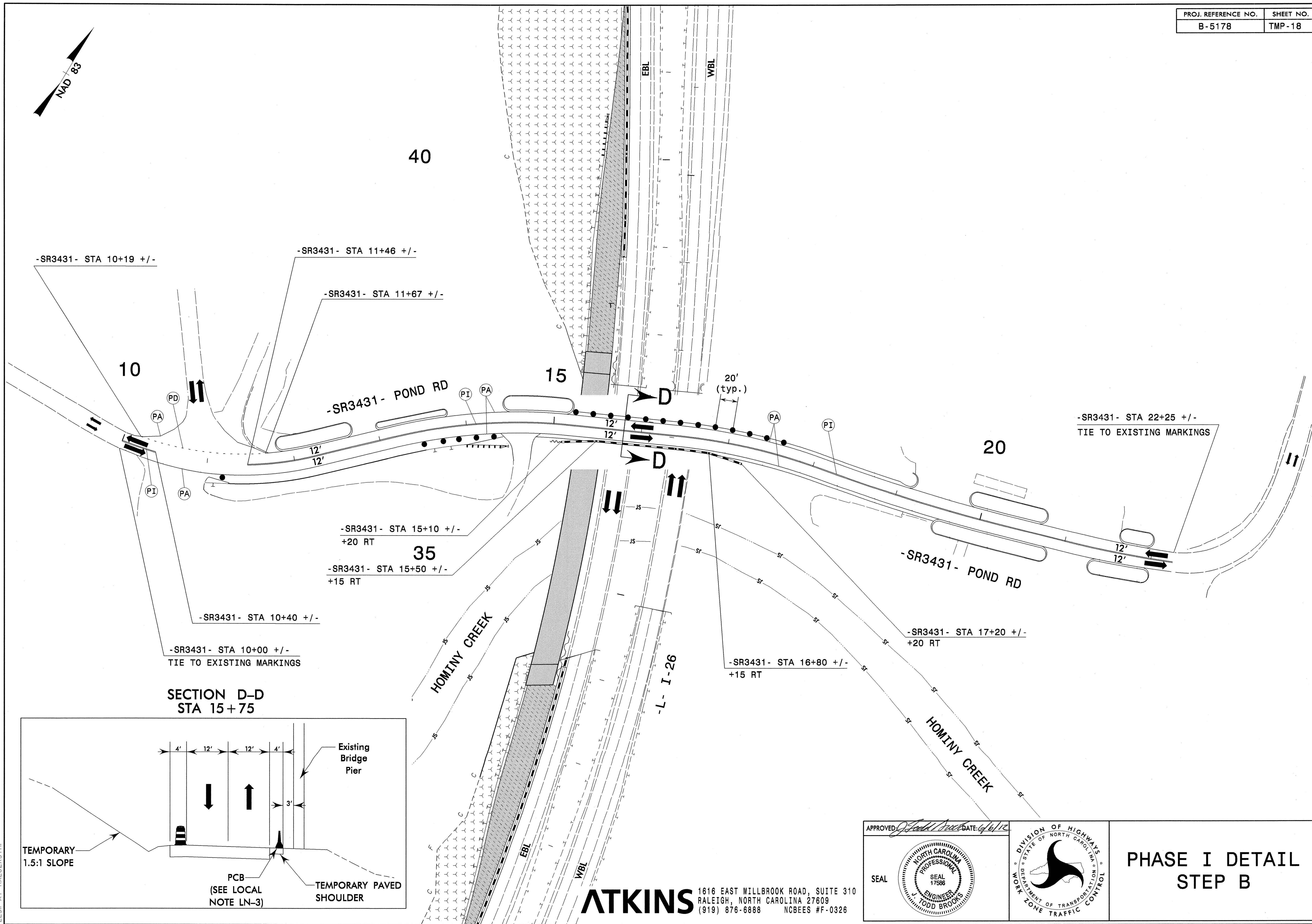
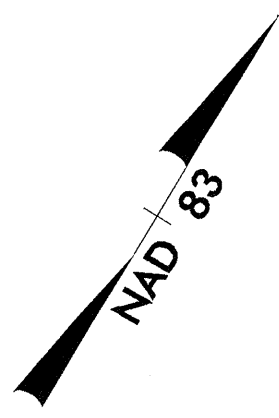
APPROVED: *[Signature]* DATE: 6/6/12

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

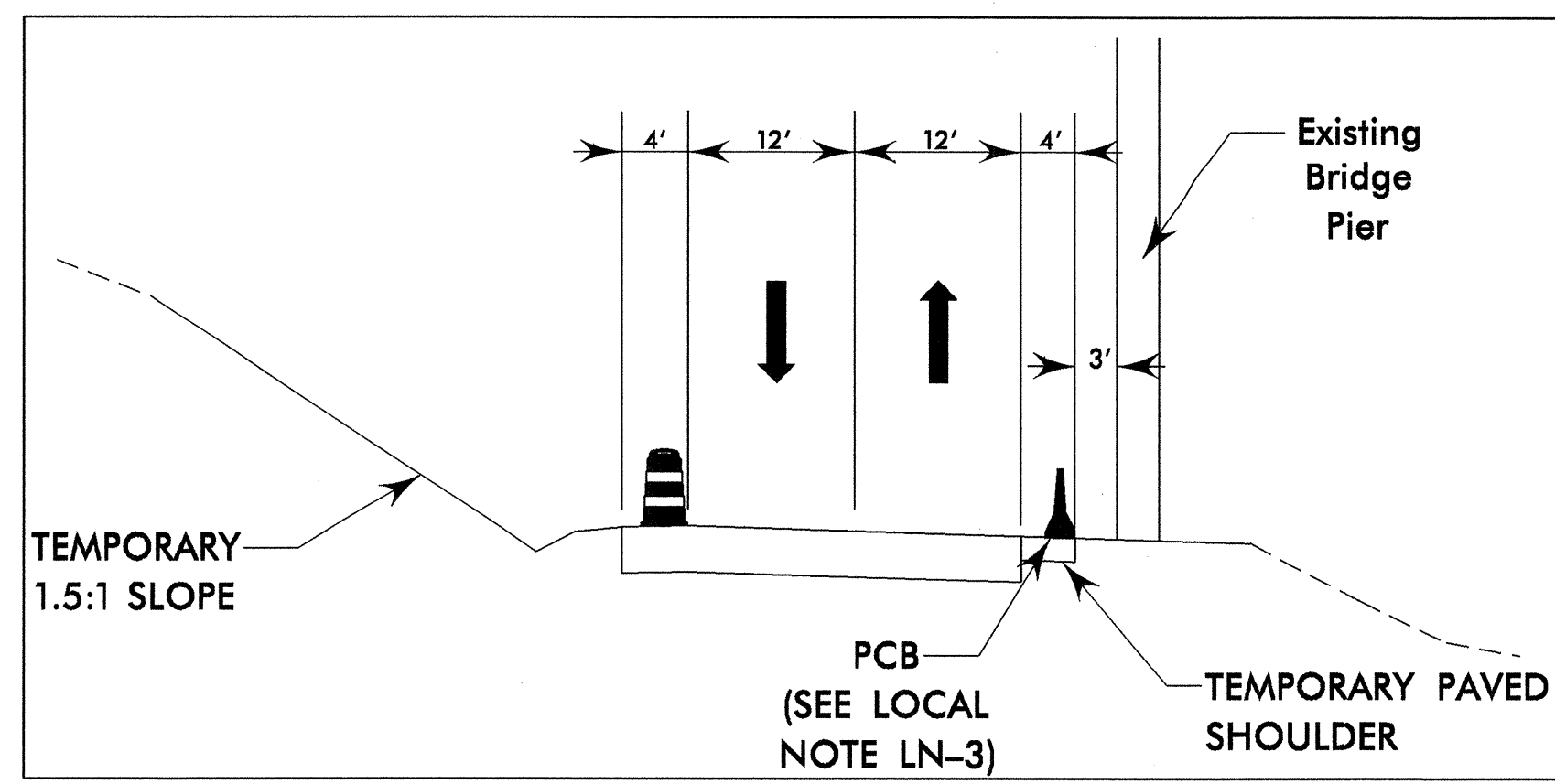
PHASE I DETAIL  
STEP A

**ATKINS**  
1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326

05-JUN-2012 18:07 \\raf507\raleigh\Share\Transportation\Traffic\Curr\100026387 I-26 at Pond Rd\CAD\B-5178\_TMP\_17.dgn 2251 AT RALBZSYH

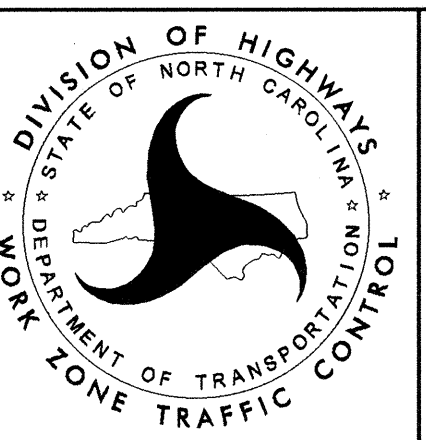


**SECTION D-D  
STA 15+75**



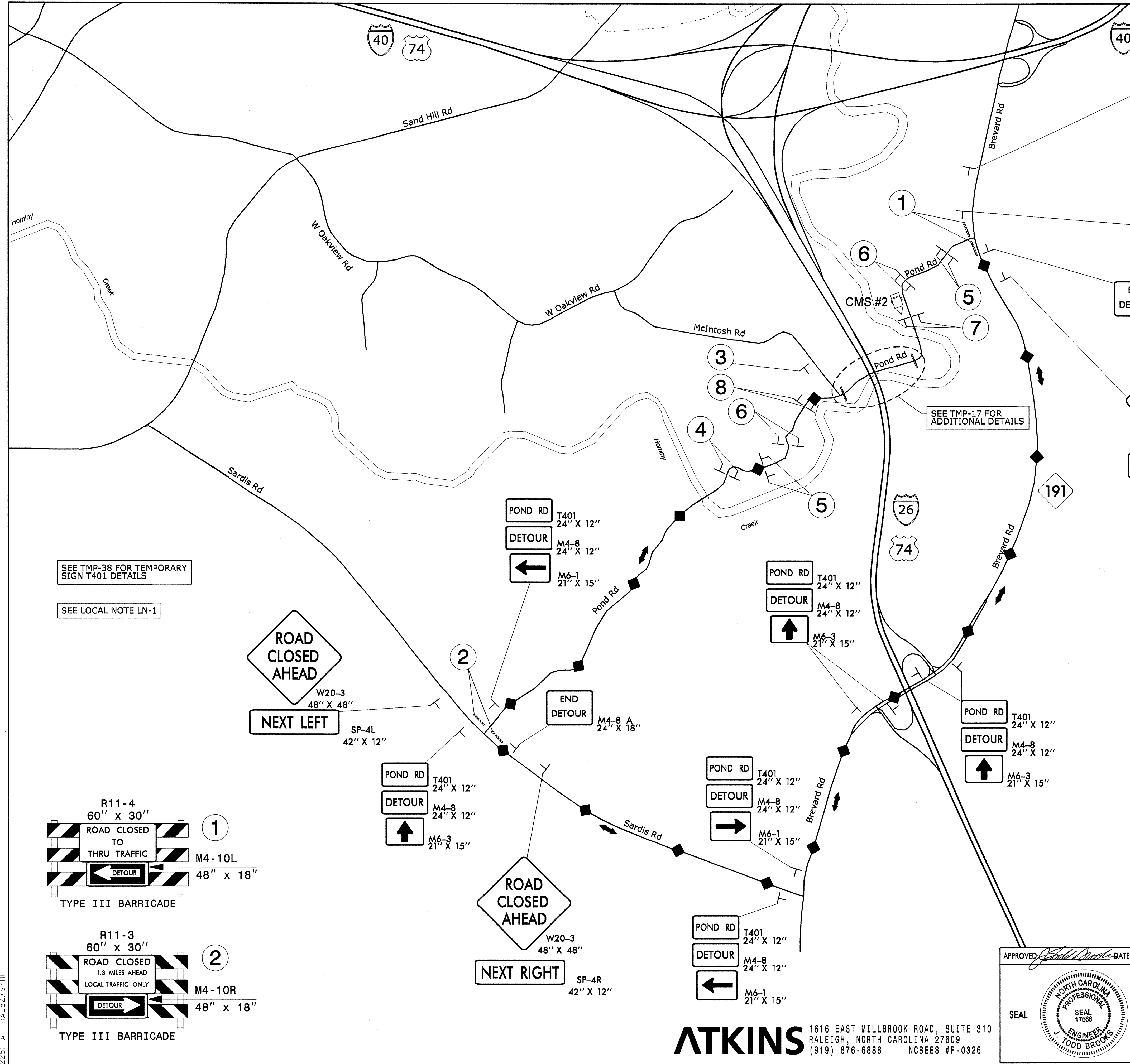
**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326

APPROVED *[Signature]* DATE: 6/6/12



**PHASE I DETAIL  
STEP B**

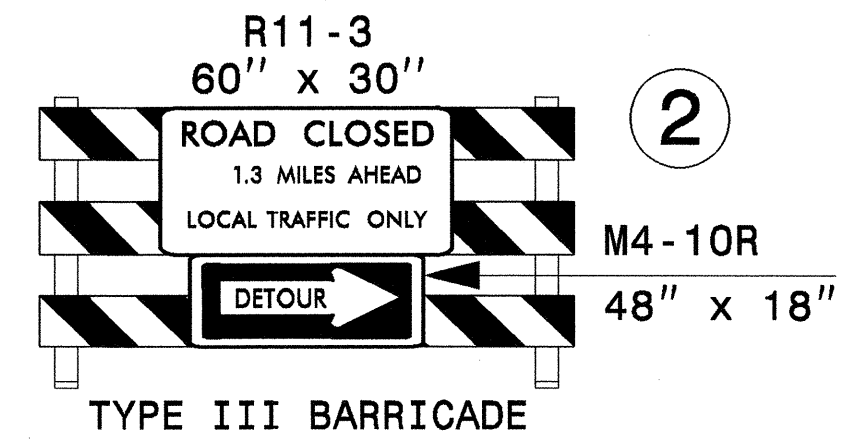
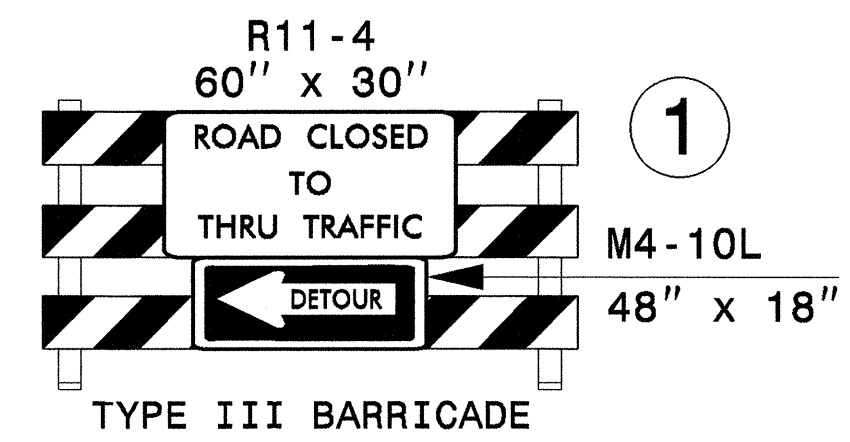
05-JUN-2012 18:07 \\Vralfs07\raleigh\Share\Transportation\Traffic\Curr\00026387 I-26 at Pond Rd\CAD\B-5178\_TMP\_18.dgn 22511 AT RAL8ZSYH1



SEE TMP-38 FOR TEMPORARY SIGN T401 DETAILS

SEE LOCAL NOTE LN-1

SEE TMP-17 FOR ADDITIONAL DETAILS



CMS #2

MESSAGE NO. 1	MESSAGE NO. 2
POND RD TO CLOSE xxxxxxDAY	AT I-26 OVERPASS
CHANGEABLE MESSAGE SIGN	
DISPLAY 5 DAYS PRIOR TO POND ROAD TEMPORARY CLOSURE	

CMS #2

MESSAGE NO. 1	MESSAGE NO. 2
ROAD CLOSED AT CURVE	PREPARE TO STOP
CHANGEABLE MESSAGE SIGN	
DISPLAY WHILE POND ROAD IS CLOSED TO THROUGH TRAFFIC	

APPROVED: *[Signature]* DATE: 4/16/12

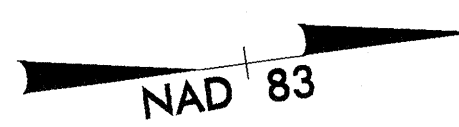
SEAL

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326

**-SR3431-  
POND ROAD  
DETOUR**

- ③ ROAD CLOSED AHEAD W20-3 48" X 48"  
NEXT RIGHT SP-4R 42" X 12"  
POND RD T401 24" X 12"  
DETOUR M4-8 24" X 12"  
↑ M6-3 21" X 15"  
END DETOUR M4-8 A 24" X 18"
- ④ ROAD CLOSED AHEAD W20-3 48" X 48"  
NEXT LEFT SP-4L 42" X 12"
- ⑤ ROAD CLOSED 1500 FT W20-3 48" X 48"
- ⑥ ROAD CLOSED 1000 FT W20-3 48" X 48"
- ⑦ ROAD CLOSED 500 FT W20-3 48" X 48"
- ⑧ ROAD CLOSED AT CURVE W3-1A 48" X 48"

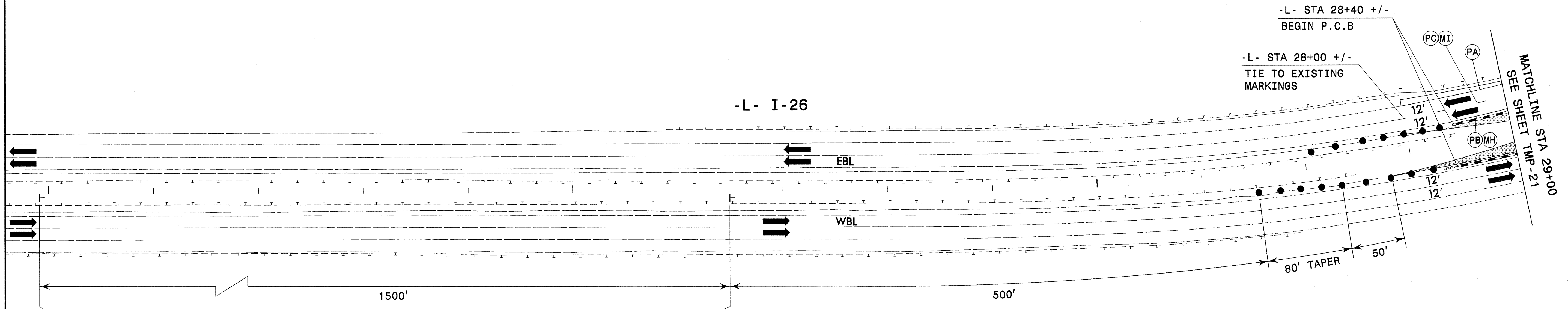
05-JUN-2012 18:07 \\raifs07\raifs07\Share\Transportation\Traffic\Curr\N00026387 1-26 at Pond Rd\CAD\B-5178-TMP-19.dgn 22511 AT RAL8ZSYH1



15

20

25



LEFT SHOULDER CLOSED  
W21-5A  
48" X 48"

1500 FEET  
W16-2  
30" X 24"

LEFT SHOULDER CLOSED  
W21-5A  
48" X 48"

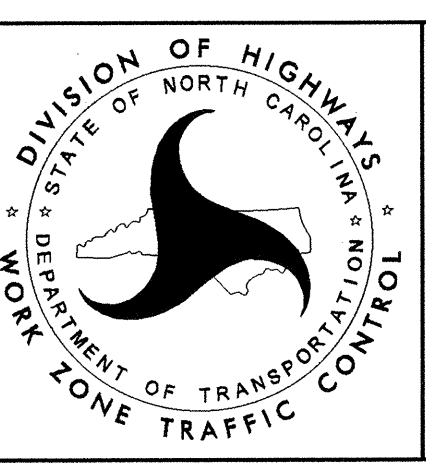
NEXT 2000 FT  
W16-2  
30" X 24"

05-JUN-2012 18:07 \\raff507\raff507\Share\Transportation\Traffic\Curr\100026337 I-26 at Pond Rd\CAD\B-5178\_TMP-20.dgn 2251 AT RAL8ZSYHI

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326

APPROVED: *[Signature]* DATE: 6/16/12

SEAL

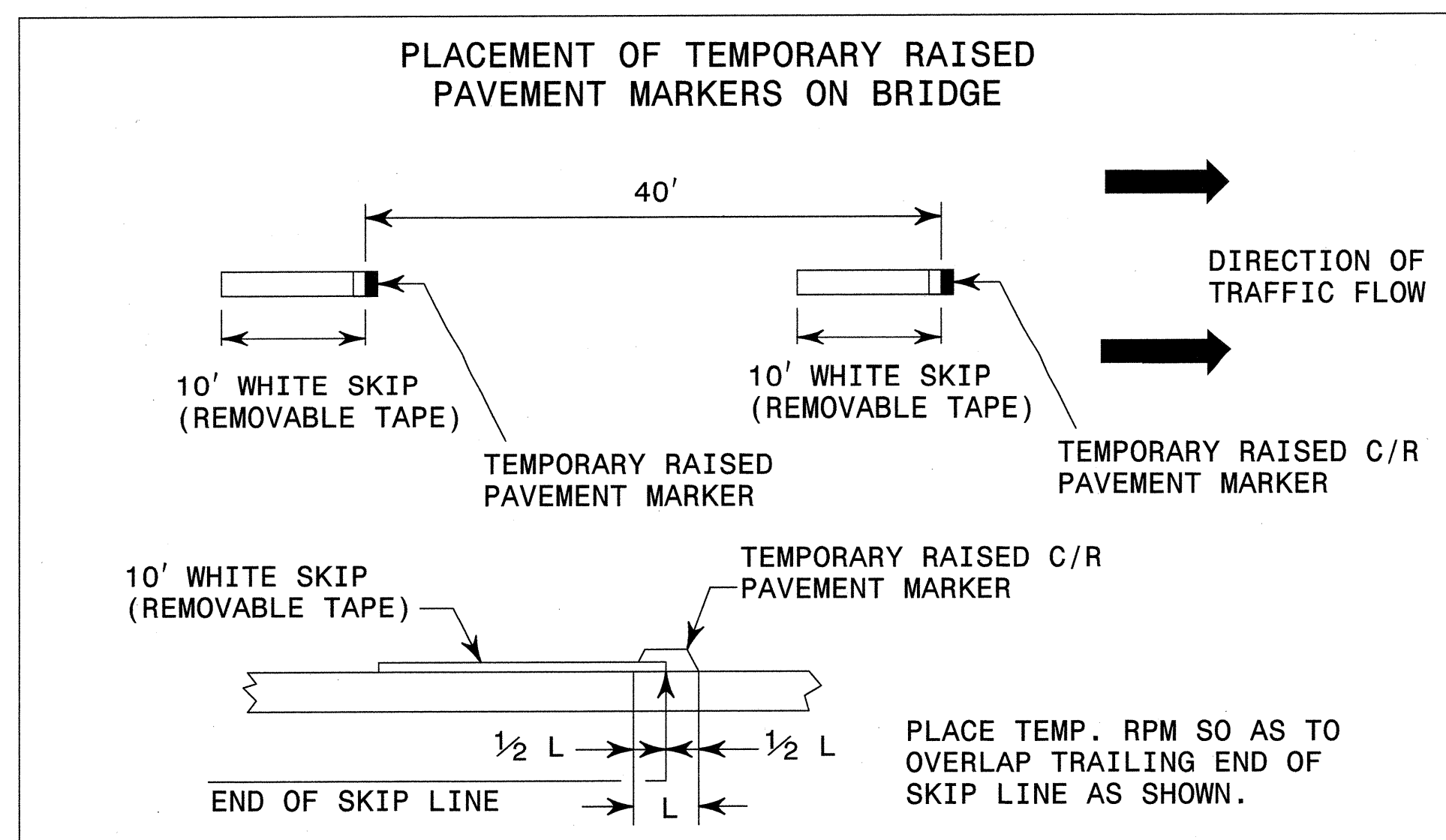
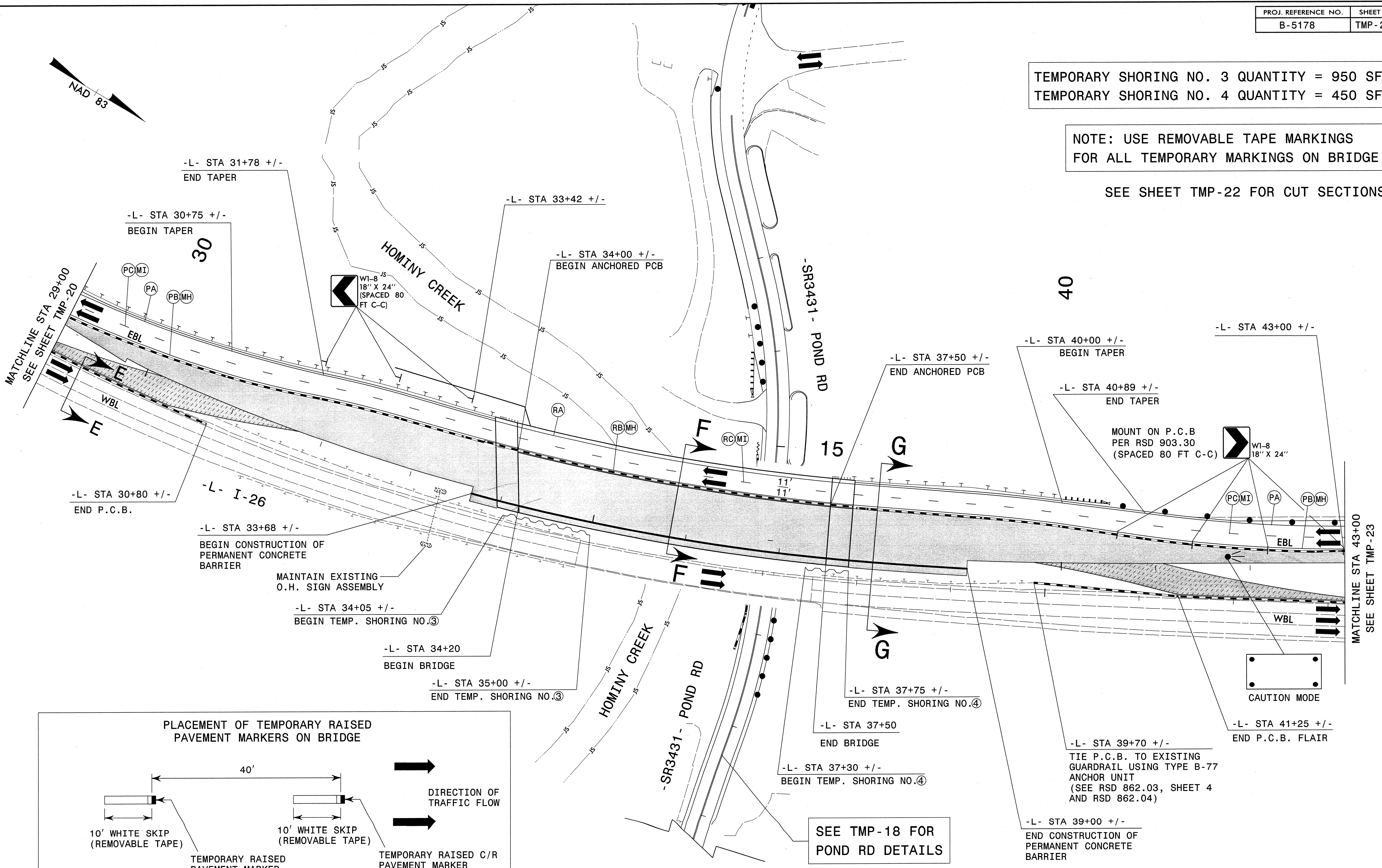


**PHASE II DETAIL**

TEMPORARY SHORING NO. 3 QUANTITY = 950 SF  
 TEMPORARY SHORING NO. 4 QUANTITY = 450 SF

NOTE: USE REMOVABLE TAPE MARKINGS  
 FOR ALL TEMPORARY MARKINGS ON BRIDGE

SEE SHEET TMP-22 FOR CUT SECTIONS

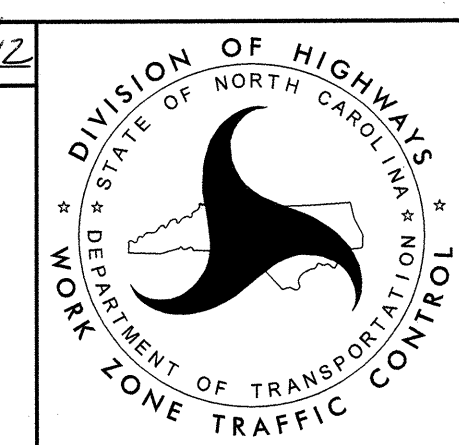


SEE TMP-18 FOR  
 POND RD DETAILS

APPROVED: *[Signature]* DATE: 7/9/12

SEAL

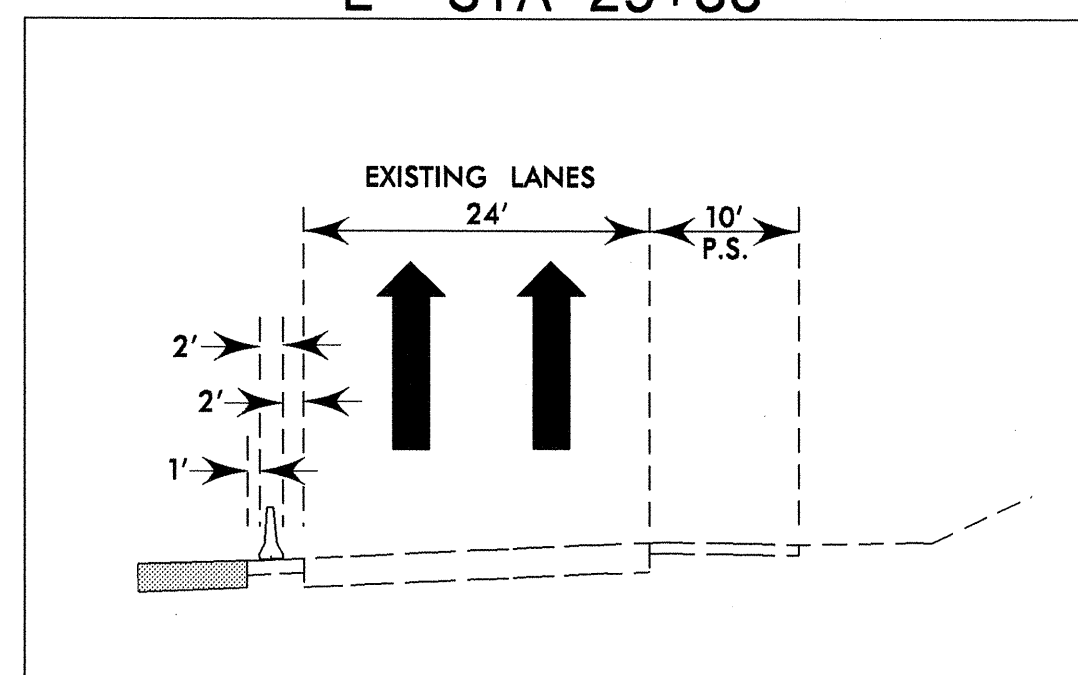
NORTH CAROLINA PROFESSIONAL ENGINEER  
 J. TODD BROOKS  
 SEAL 17586



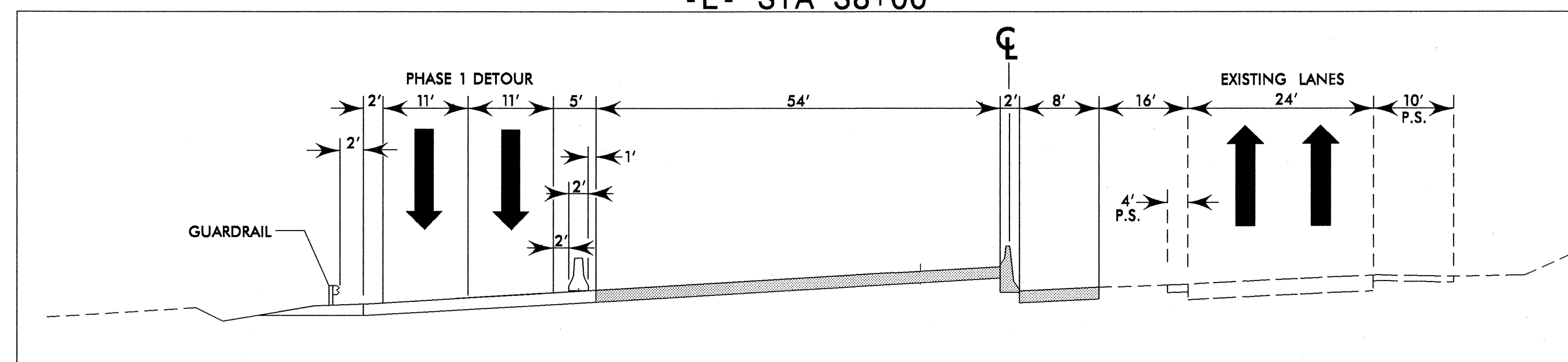
**PHASE II DETAIL**

09-JUL-2012 10:27  
 \\raif607\raif607\Share\Transportation\Traffic\Curr\100026387 1-26 at Pond Rd\CAD\B-5178\_TMP-21.dgn  
 22511 AT RALBZSYH

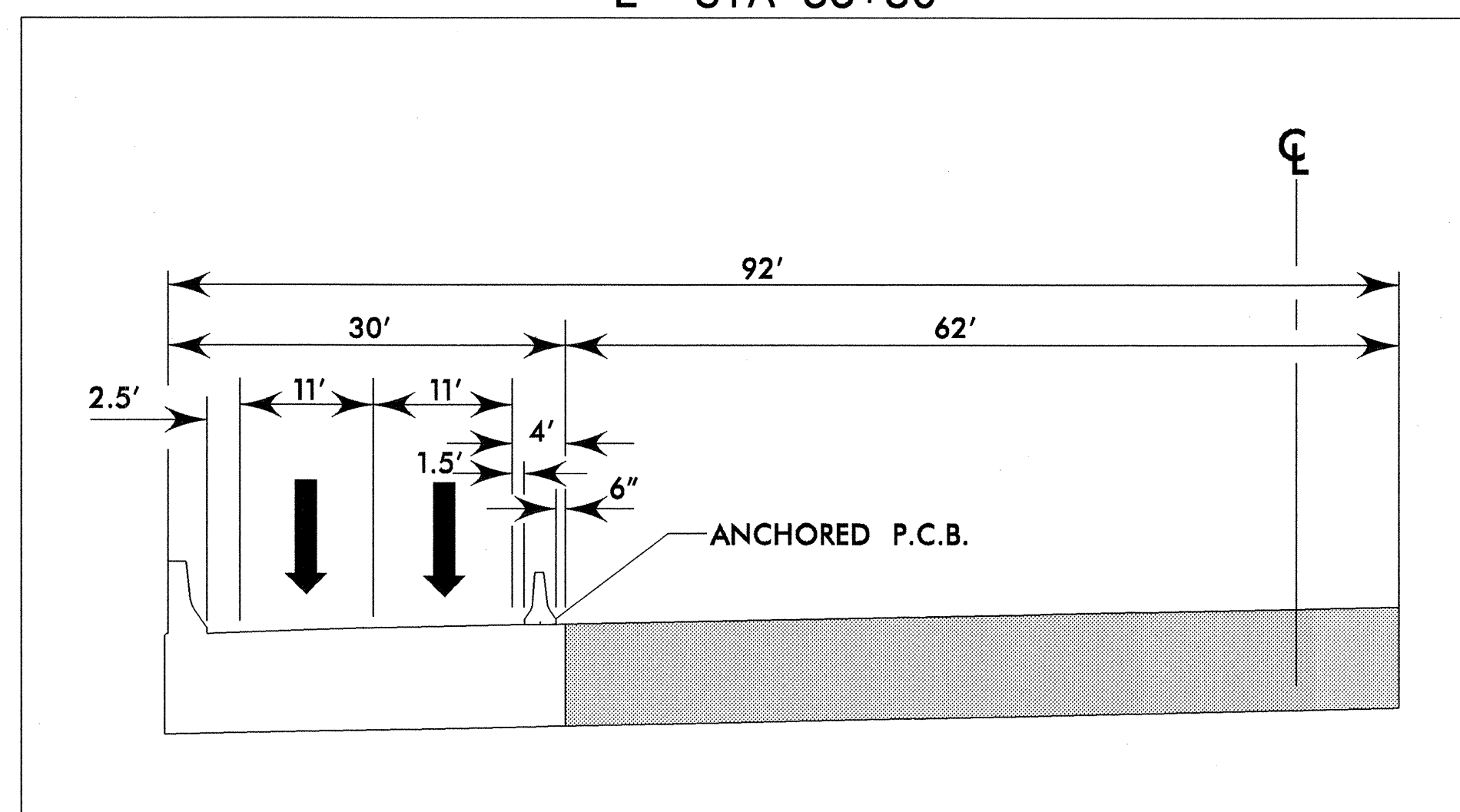
SECTION E-E  
-L- STA 29+35



SECTION G-G  
-L- STA 38+00

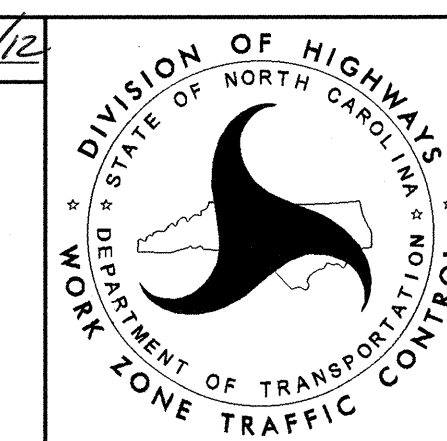
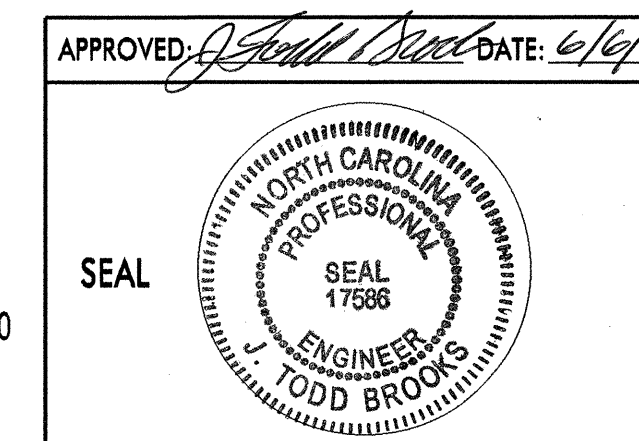


SECTION F-F  
-L- STA 35+80

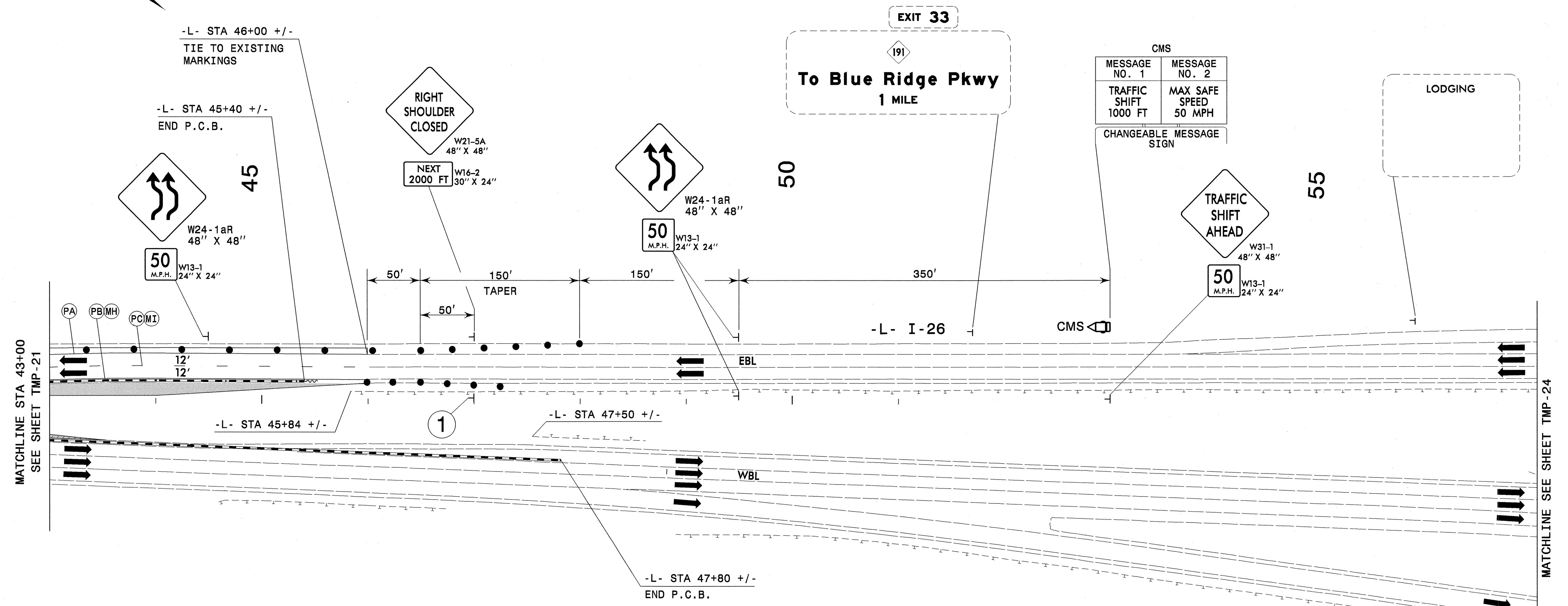
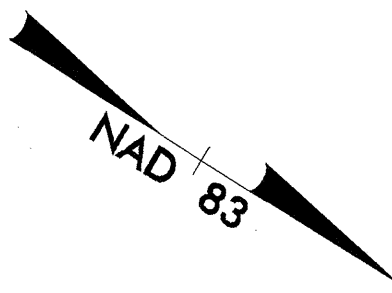


05-JUN-2012 18:07  
 \\rafso7\rafs07\Share\Transportation\Traffic\Curr\100026387 1-26 at Pond Rd\CAD\B-5178\_TMP-22.dgn  
 22511 AT RAL8ZKSTH

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
 RALEIGH, NORTH CAROLINA 27609  
 (919) 876-6888 NCBEES #F-0326

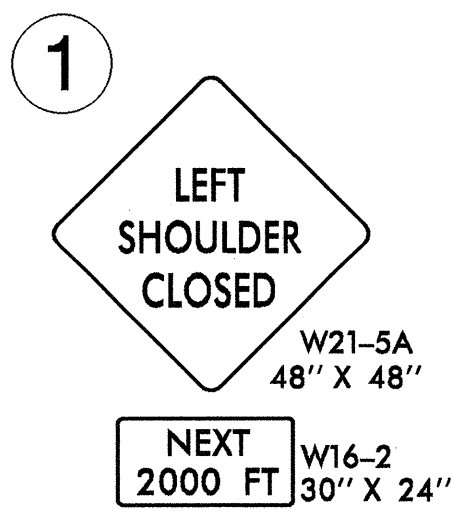


PHASE II DETAIL



MATCHLINE STA 43+00  
SEE SHEET TMP-21

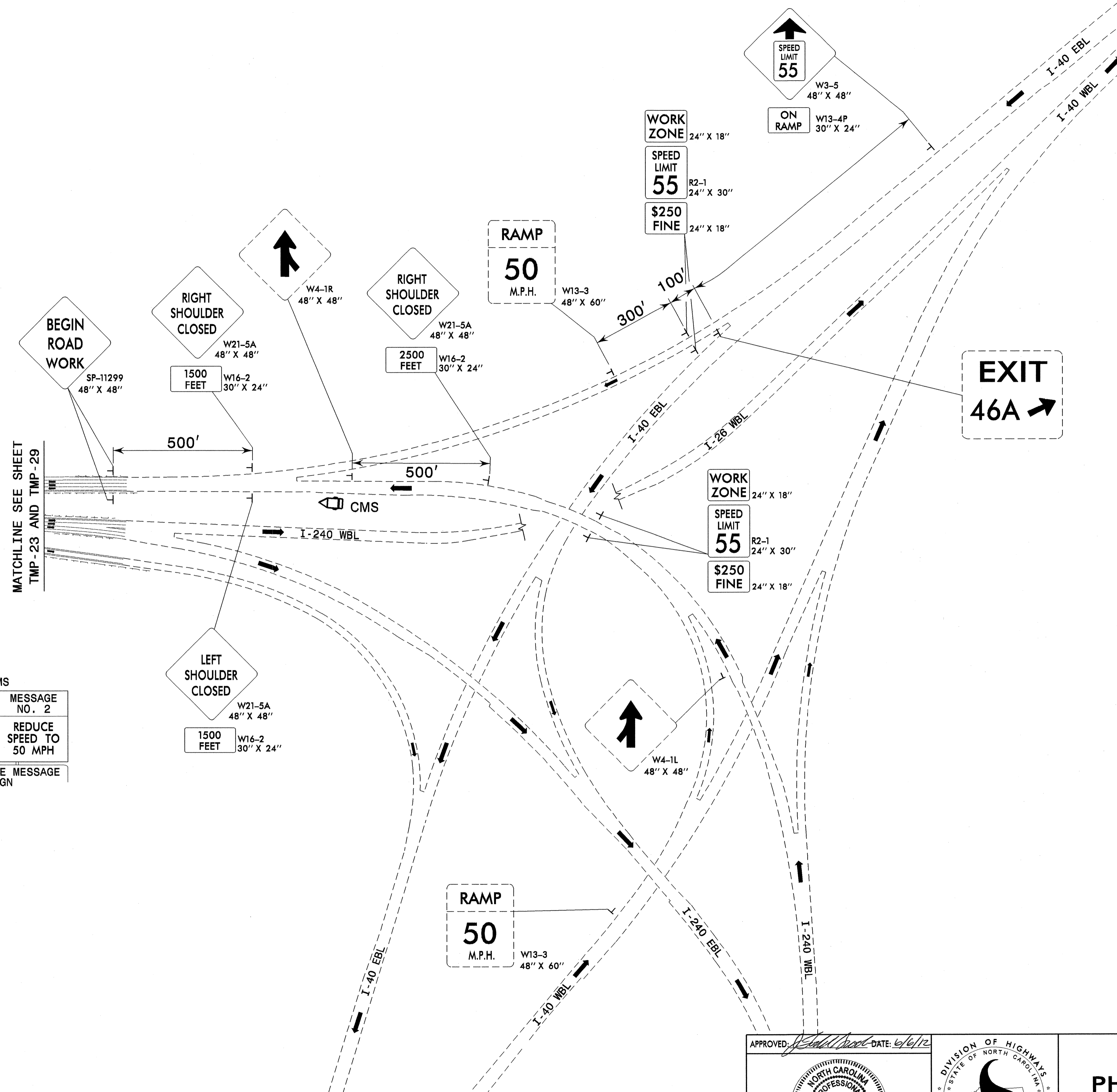
MATCHLINE SEE SHEET TMP-24



05-JUN-2012 18:07  
\\r01fs07\raleigh\_share\transportation\Traffic\Curr\00026387 1+26 at Pond Rd\CAD\B-5178\_TMP-23.dgn  
2251 AT RAL8ZSYH

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326

APPROVED: <i>J. Todd Brooks</i> DATE: 6/6/12			<p><b>PHASE II DETAIL</b></p>
SEAL			



CMS

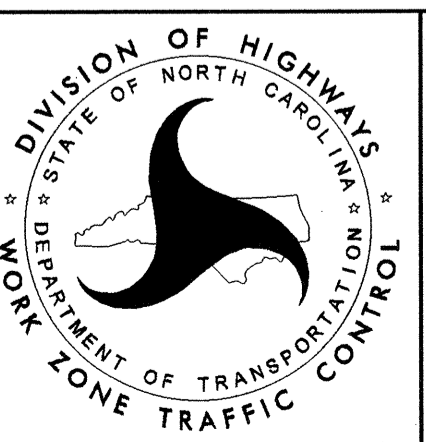
MESSAGE NO. 1	MESSAGE NO. 2
TRAFFIC SHIFT 2000 FT	REDUCE SPEED TO 50 MPH

CHANGEABLE MESSAGE SIGN

APPROVED: *[Signature]* DATE: 6/6/12

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 17686  
J. TODD BROOKS

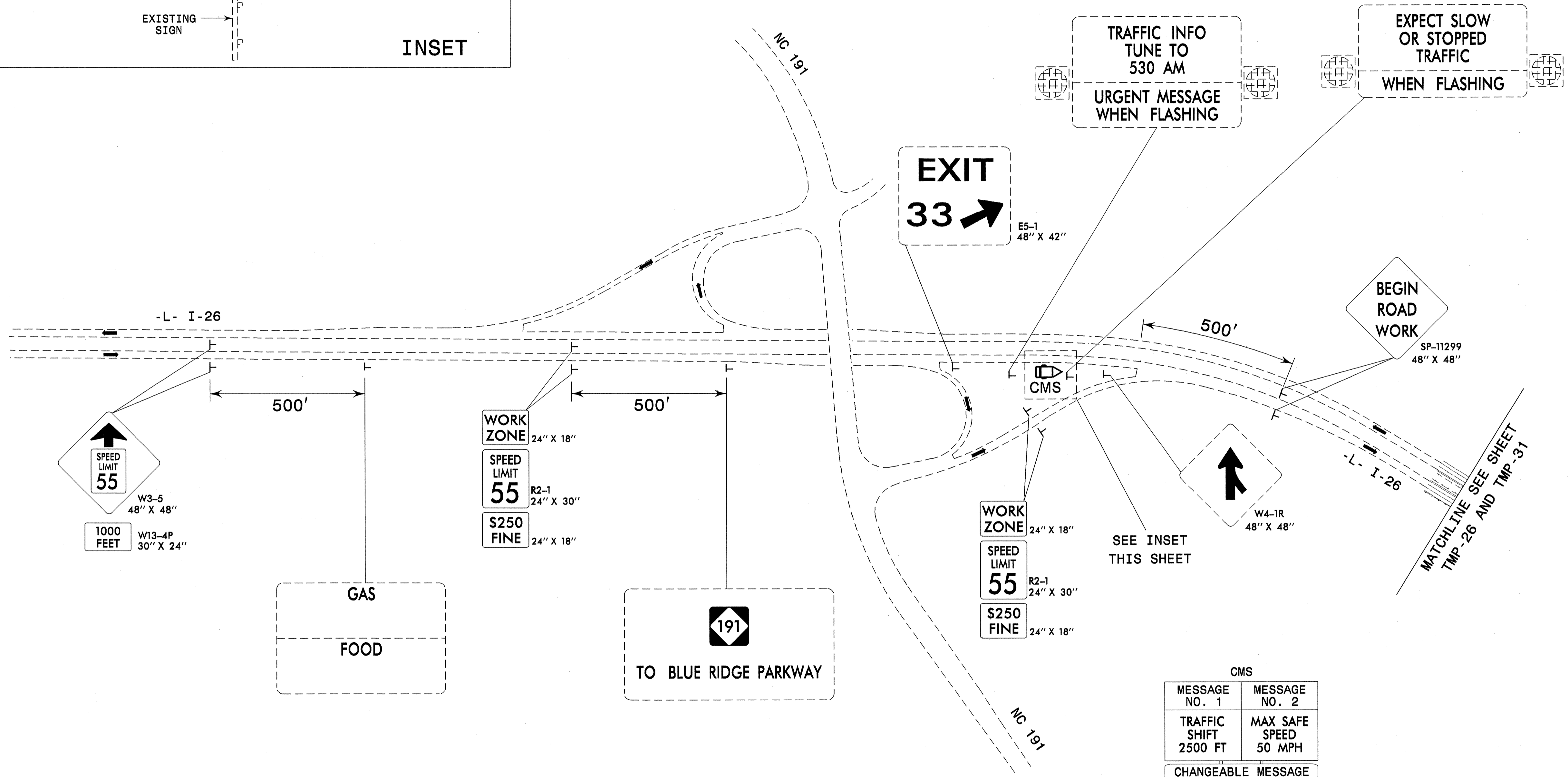
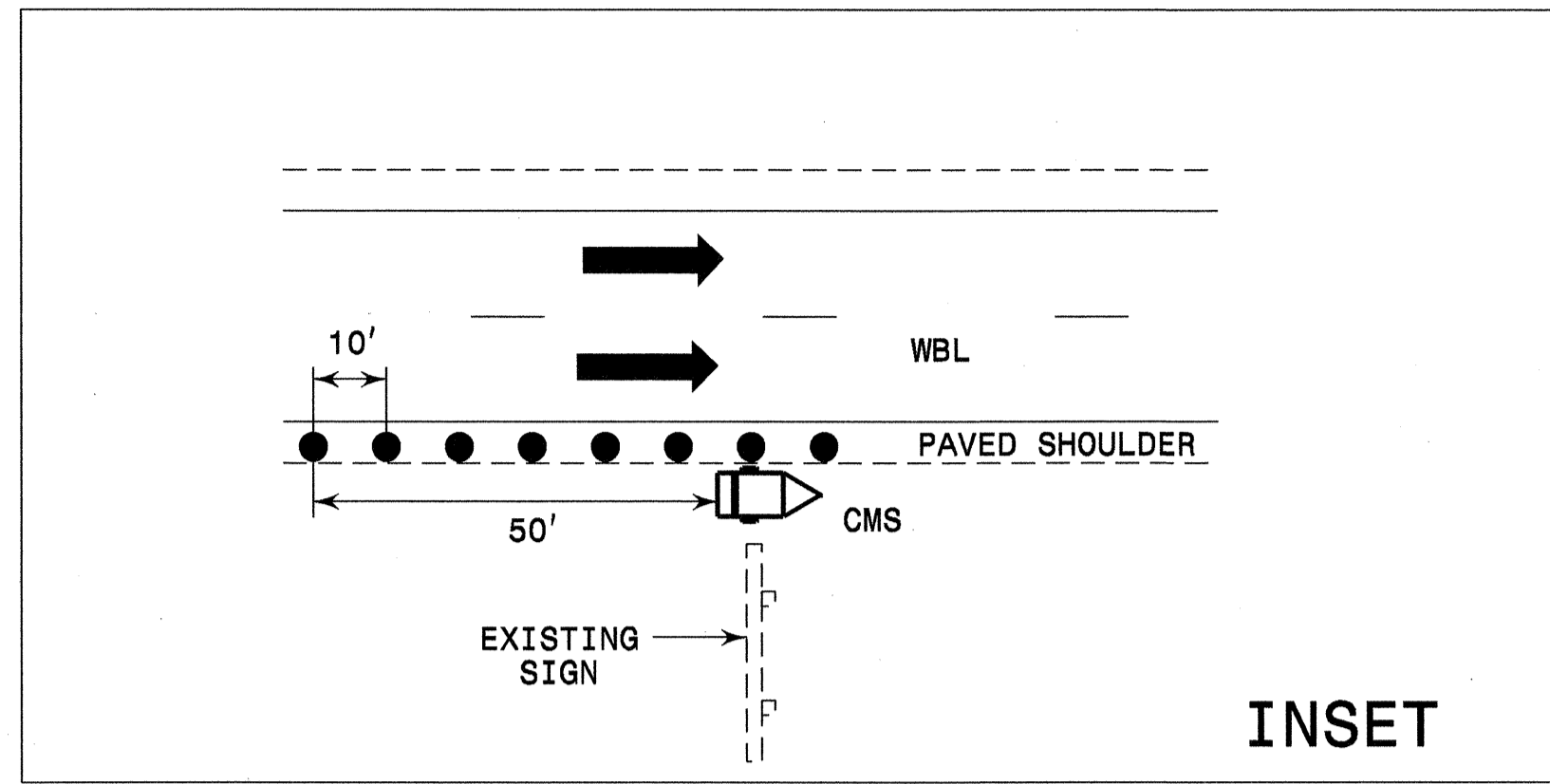


**PHASE II & III  
DETAIL**

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBES #F-0326

05-JUN-2012 18:07 \\raifs07\raifs07\Share\Transportation\Traffic\Curr\00026387 1-26 of Pond Rd\CAD\B-5178\_TMP-24.dgn 22:51 AT RAL8ZSYH





CMS

MESSAGE NO. 1	MESSAGE NO. 2
TRAFFIC SHIFT 2500 FT	MAX SAFE SPEED 50 MPH

CHANGEABLE MESSAGE SIGN

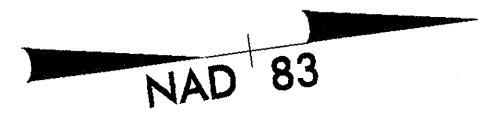
05-JUN-2012 18:07 \\frif507\raleigh\Share\Transportation\Traffic\Curr\00026387 I-26 at Pond Rd\CAD\B-5178\_TMP\_25.dgn 22511 AT RAL8ZSYHI

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326

APPROVED: *[Signature]* DATE: 6/12/12

SEAL

**PHASE III DETAIL**



15

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EXIT 31B

WEST WEST  
 INTERSTATE 40 INTERSTATE 74  
**Canton Knoxville**

LEFT LANE (T602)

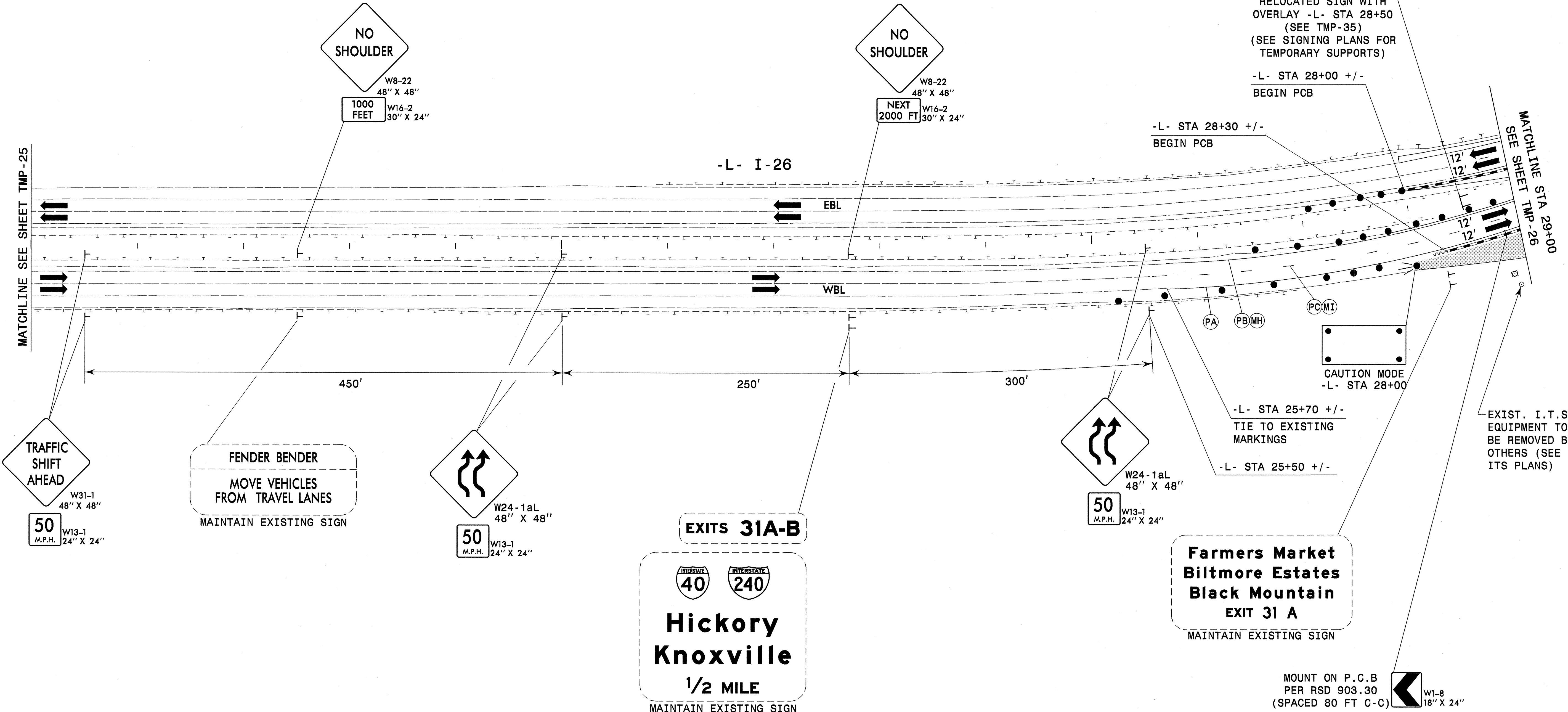
RELOCATED SIGN WITH OVERLAY -L- STA 28+50 (SEE TMP-35) (SEE SIGNING PLANS FOR TEMPORARY SUPPORTS)

-L- STA 28+00 +/- BEGIN PCB

-L- STA 28+30 +/- BEGIN PCB

MATCHLINE STA 29+00  
 SEE SHEET TMP-26

MATCHLINE SEE SHEET TMP-25



EXIST. I.T.S EQUIPMENT TO BE REMOVED BY OTHERS (SEE ITS PLANS)

CAUTION MODE  
 -L- STA 28+00

-L- STA 25+70 +/- TIE TO EXISTING MARKINGS

-L- STA 25+50 +/-

**Farmers Market Biltmore Estates Black Mountain**  
 EXIT 31 A  
 MAINTAIN EXISTING SIGN

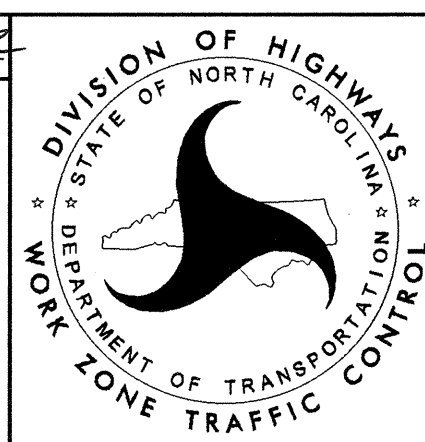
MOUNT ON P.C.B PER RSD 903.30 (SPACED 80 FT C-C) W1-8 18" X 24"

05-JUN-2012 18:07 \\raf907\rafeig\Share\Transportation\Traffic\Curr\00026387 I-26 at Pond Rd\CAD\B-5178\_TMP-26.dgn 2251 AT RAL8ZKSTH

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
 RALEIGH, NORTH CAROLINA 27609  
 (919) 876-6888 NCBES #F-0326

APPROVED: *[Signature]* DATE: 6/1/12

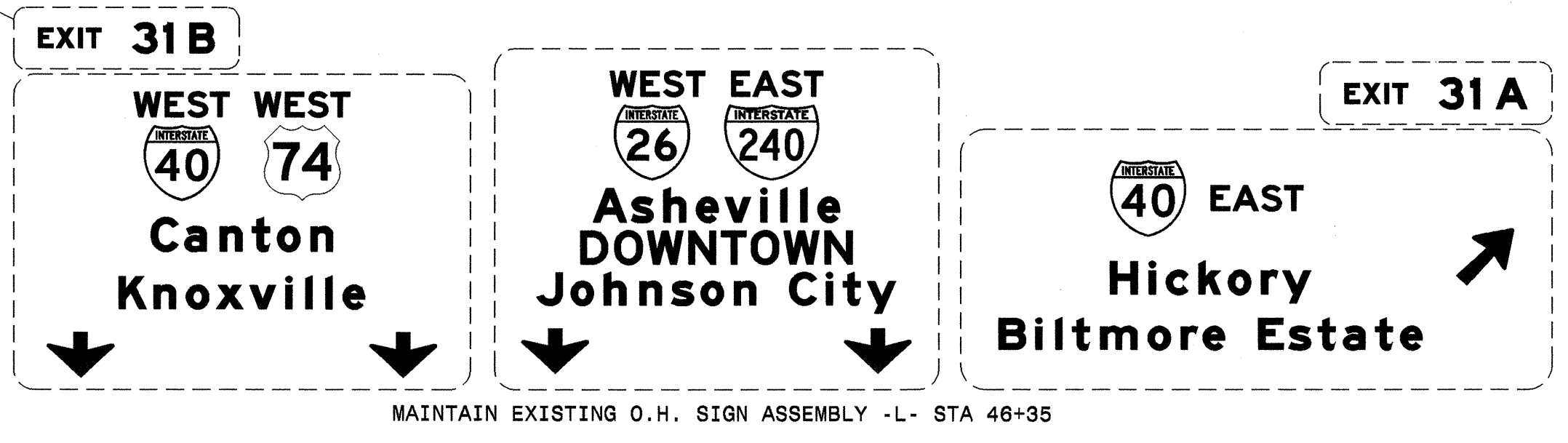
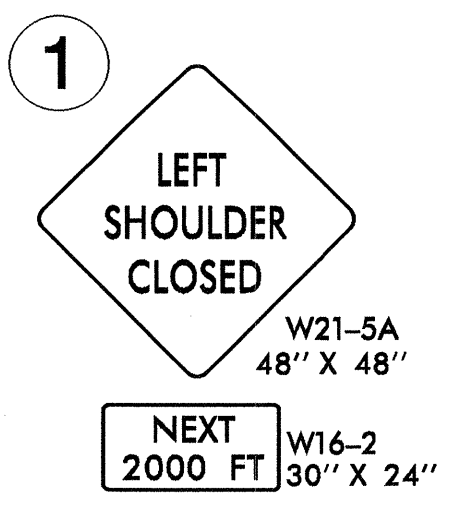
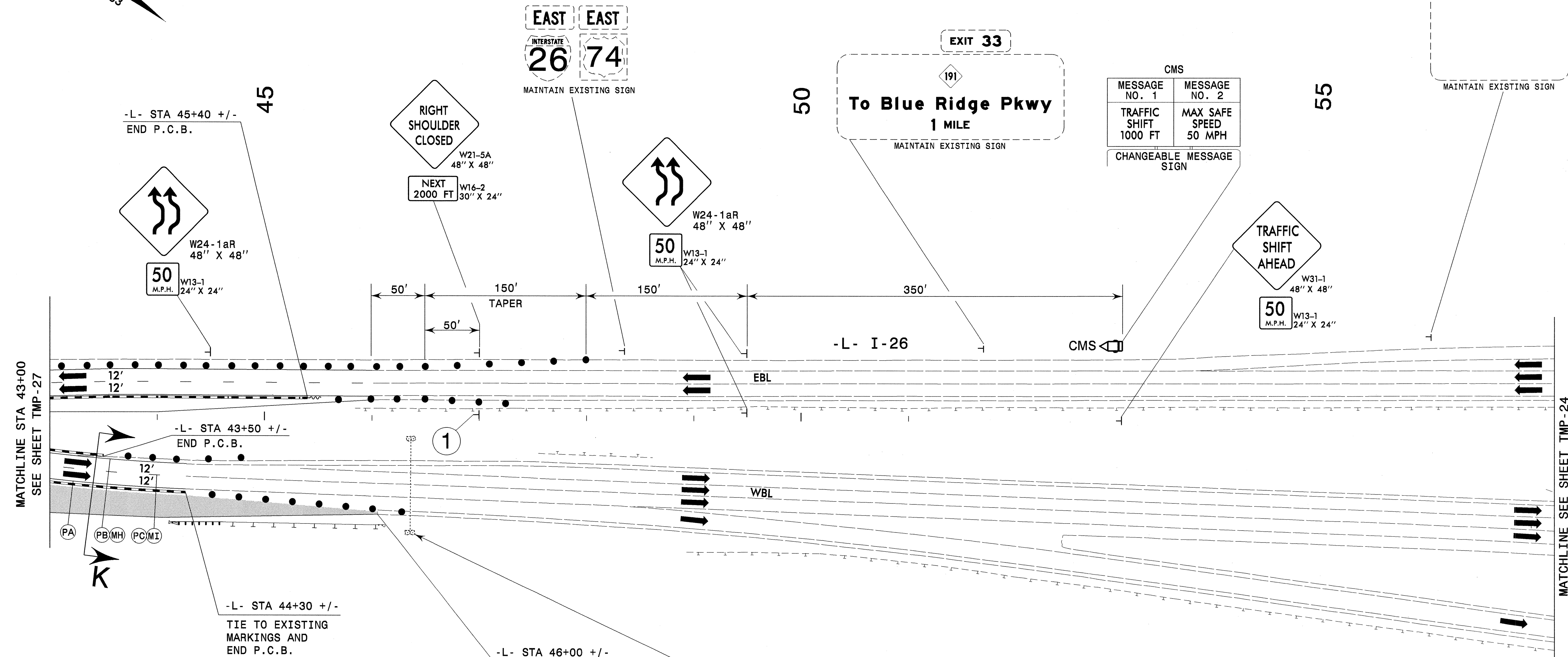
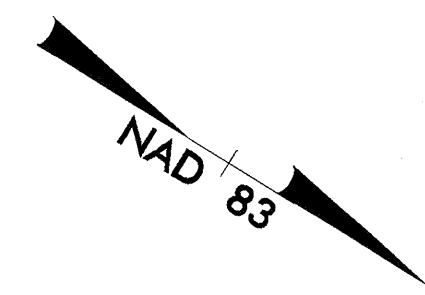
SEAL



**PHASE III DETAIL**







CMS

MESSAGE NO. 1	MESSAGE NO. 2
TRAFFIC SHIFT 1000 FT	MAX SAFE SPEED 50 MPH

CHANGEABLE MESSAGE SIGN

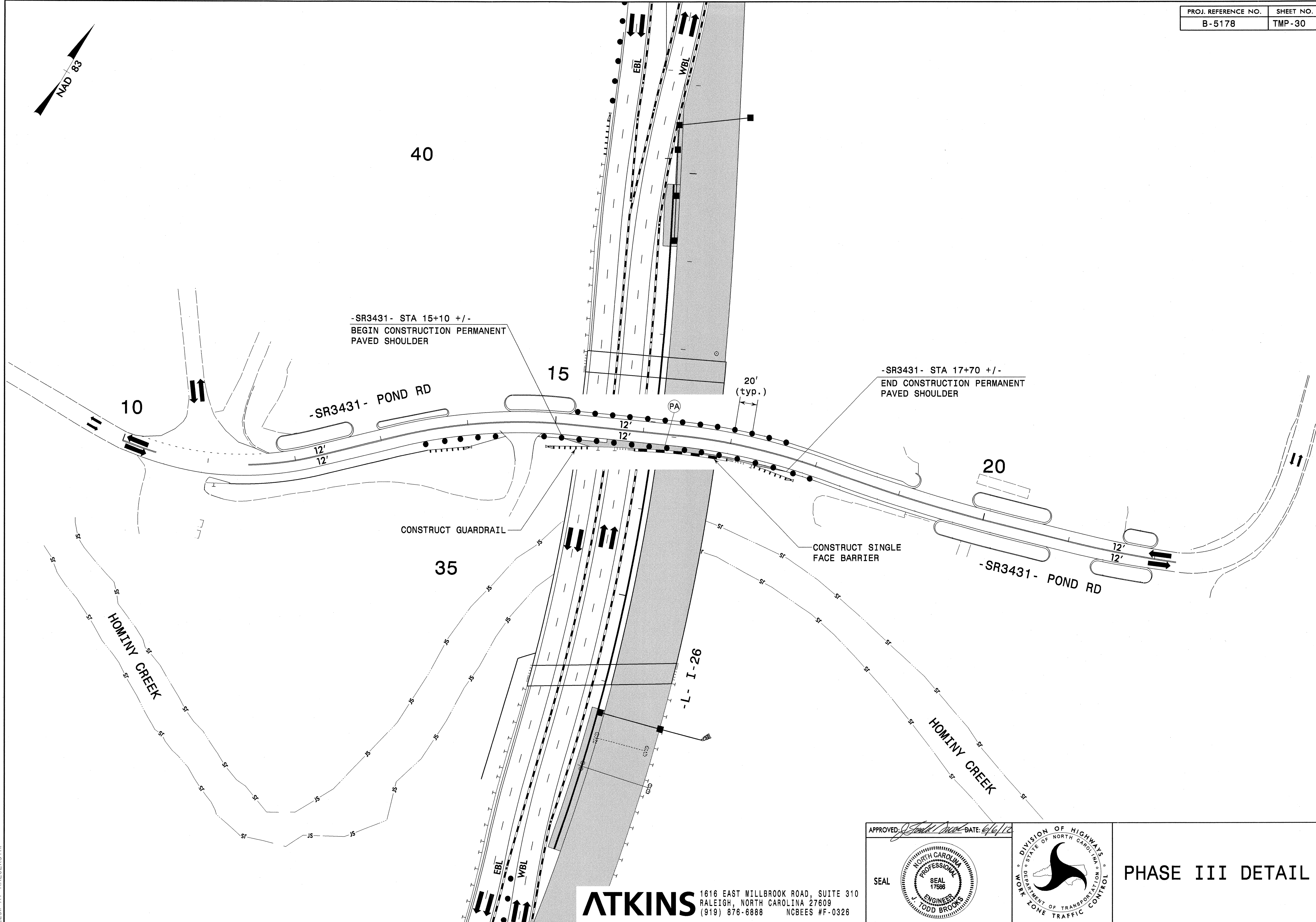
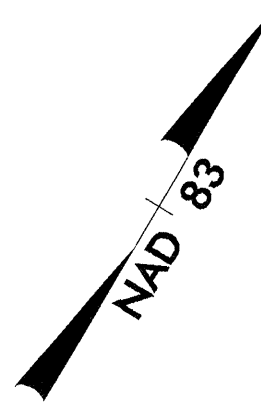
APPROVED: *[Signature]* DATE: 6/6/12

SEAL

PHASE III DETAIL

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
 RALEIGH, NORTH CAROLINA 27609  
 (919) 876-8888 NCBEES #F-0326

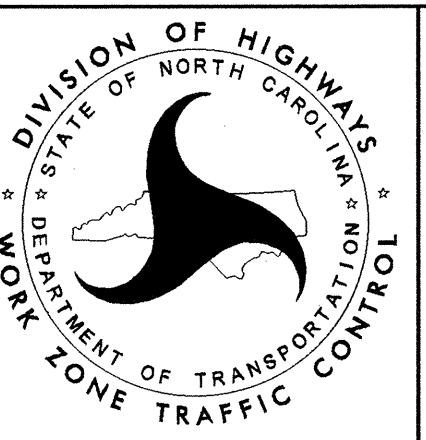
05-JUN-2012 18:16  
 \\fatfso1\raleg\Share\Transportation\Traffic\Curr\100026387 I-26 at Pond Rd\CAD\B-5178\_TMP-29.dgn  
 22511 AT RAL8ZKSYH1



05-JUN-2012 18:07  
 \\afs07\raleigh\Share\Transportation\Traffic\Curr\00026387 I-26 at Pond Rd\CAD\B-5178\_TMP\_30.dgn  
 2251 AT RAL8ZSYH1

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
 RALEIGH, NORTH CAROLINA 27609  
 (919) 876-6888 NCBEES #F-0326

APPROVED: *[Signature]* DATE: 6/6/12  
 SEAL



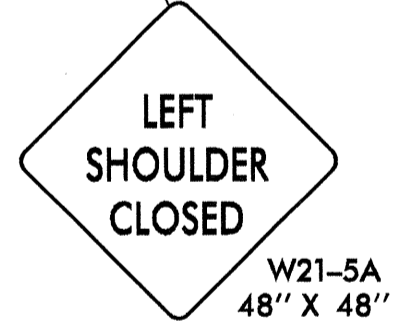
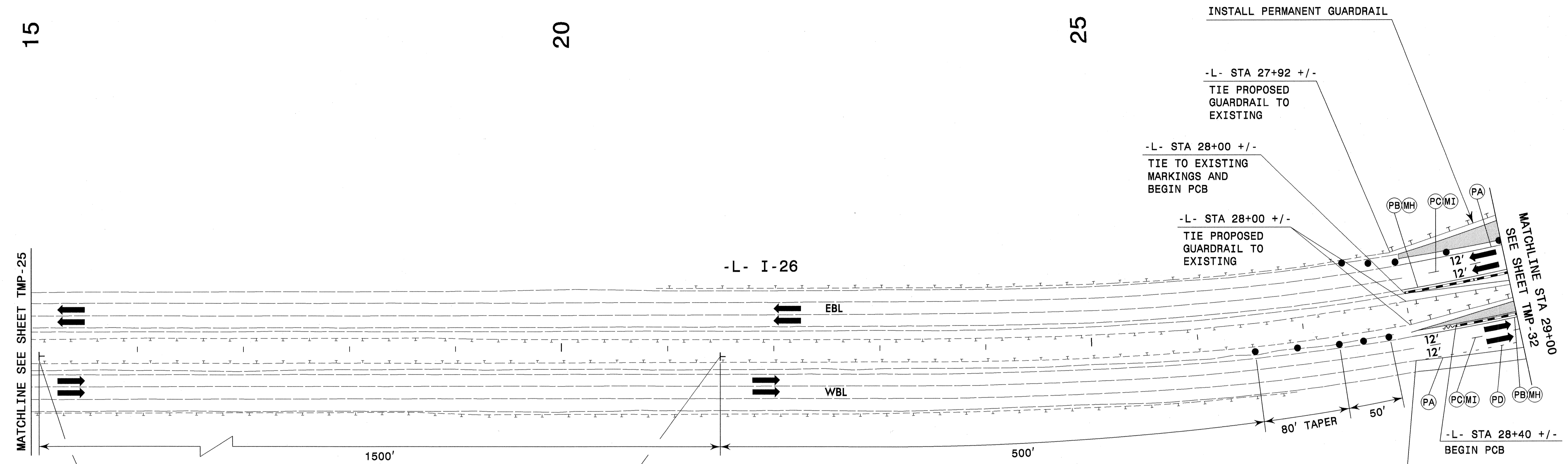
**PHASE III DETAIL**



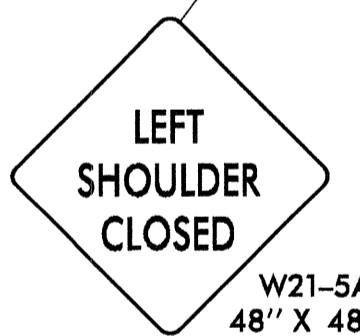
15

20

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1500 FEET W16-2 30" X 24"

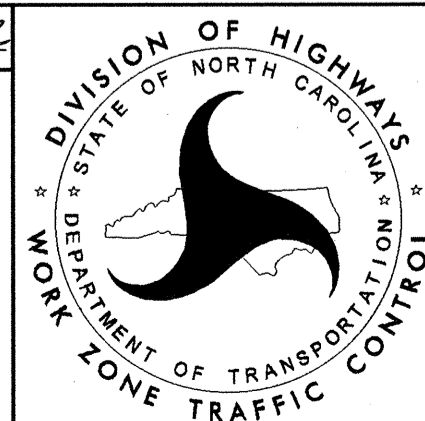
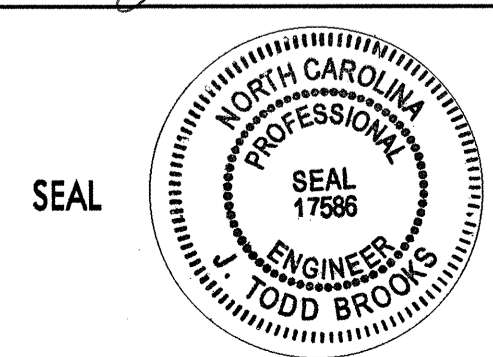


NEXT 2000 FT W16-2 30" X 24"

05-JUN-2012 18:07 \\rafso01\raleg\Share\Transportation\Traffic\Curr\100026387 I-26 at Pond Rd\CAD\B-5178\_TMP-31.dgn 2251 AT RAL8ZK54H

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326

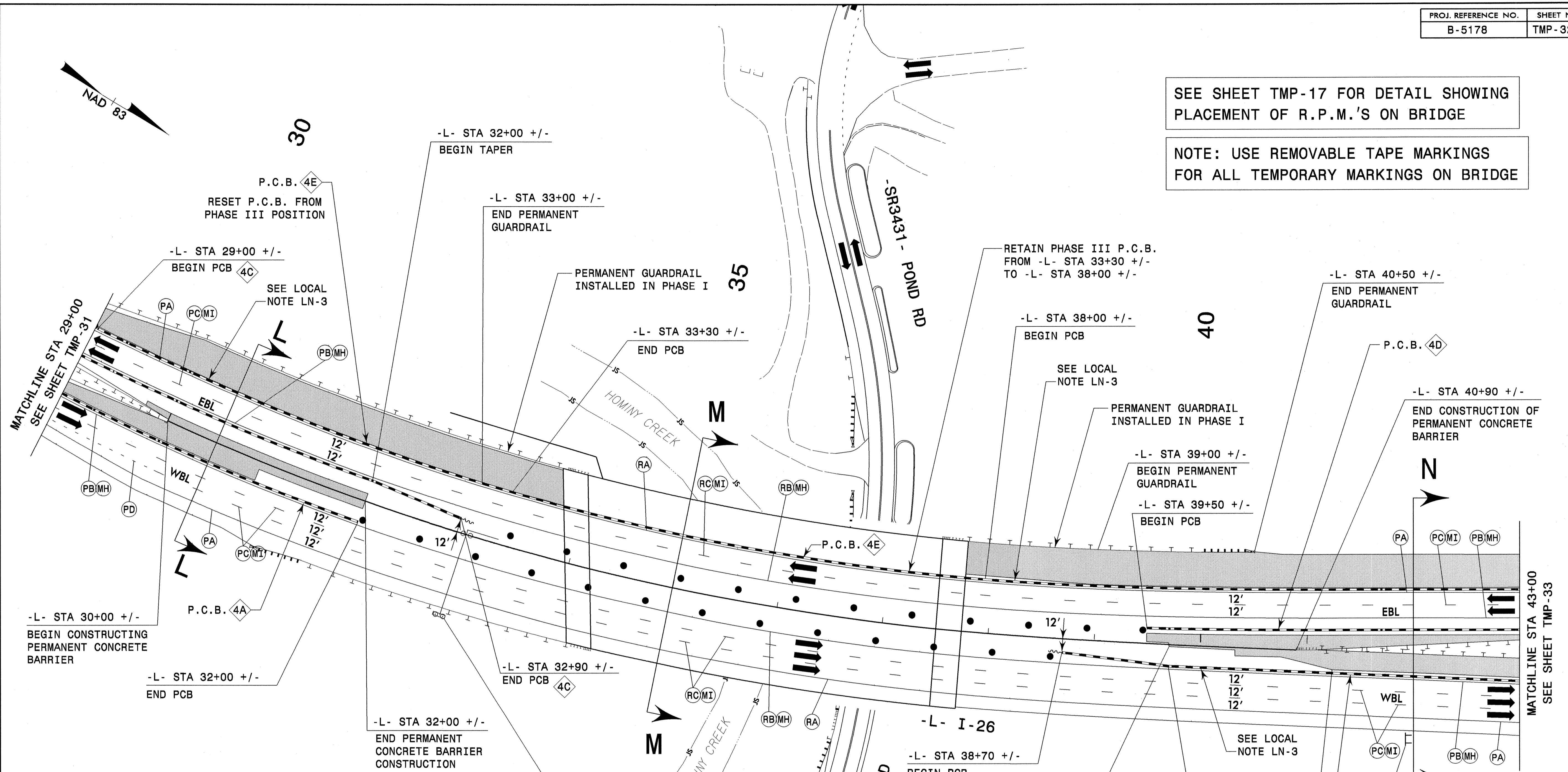
APPROVED: *[Signature]* DATE: 6/6/12



**PHASE IV DETAIL**

SEE SHEET TMP-17 FOR DETAIL SHOWING  
PLACEMENT OF R.P.M.'S ON BRIDGE

NOTE: USE REMOVABLE TAPE MARKINGS  
FOR ALL TEMPORARY MARKINGS ON BRIDGE



<b>LEFT EXIT 31B</b>		<b>EXIT 31A</b>	
WEST WEST 40 74 Knoxville Canton 1/2 MILE	WEST EAST 26 240 Asheville DOWNTOWN Johnson City	EAST 40 Hickory Biltmore Estate 1/4 MILE	
EXIT ONLY		EXIT ONLY	

TO NORTH 19  
TO NORTH 23  
TO WEST 70  
**UNC Asheville  
Mars Hill College**  
SECOND RIGHT  
RELOCATED SIGN  
WITH OVERLAY  
-L- STA 42+00

DO NOT ATTACH TO SIGN  
UNTIL P.C.B. HAS BEEN  
REMOVED AND LANE BELOW  
IS READY TO BE OPENED  
TO TRAFFIC

INSTALL OVERHEAD SIGN ASSEMBLY  
-L- STA. 33+00±  
(SEE SIGNING PLANS)

SEE SHEET TMP-33 FOR CUT SECTIONS

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBES #F-0326

APPROVED: [Signature] DATE: 6/1/12  
SEAL  
NORTH CAROLINA PROFESSIONAL ENGINEER  
J. TODD BROOKS  
SEAL 17588

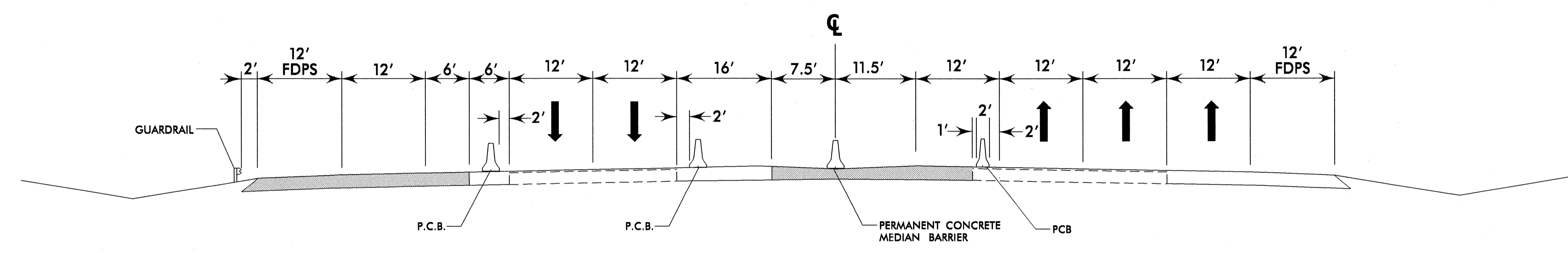
DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
WORK ZONE TRAFFIC CONTROL

**PHASE IV DETAIL**

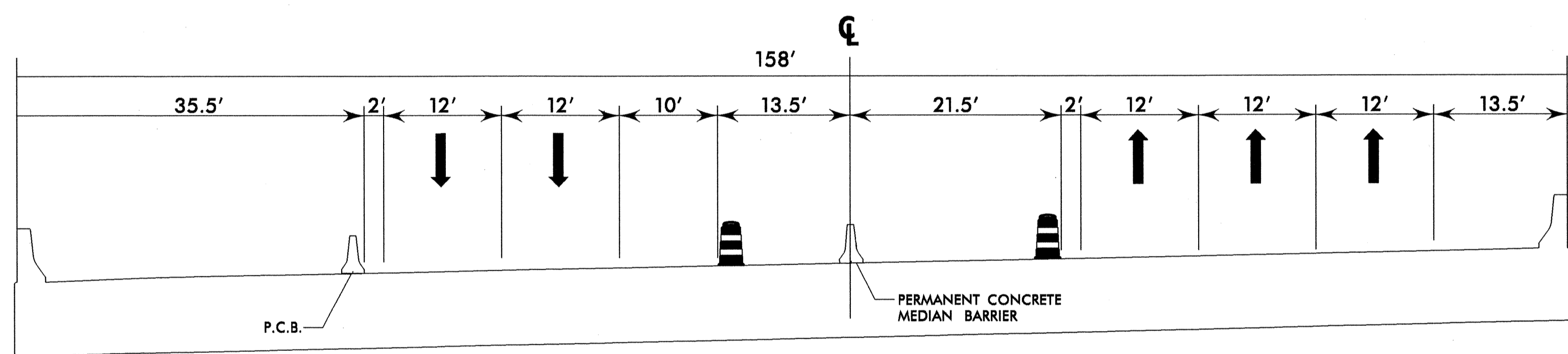
05-JUN-2012 18:07 \\raif907\raif907\Share\Transportation\Traffic\Curr\100026387 1-26 of Pond Rd\CAD\B-5178\_TMP\_32.dgn 22511 AT RAL8ZXS\H



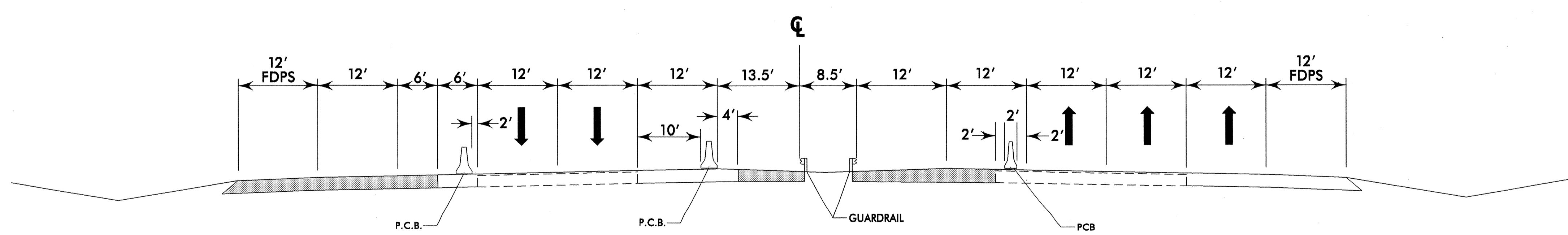
SECTION L-L  
-L- STA 30+50



SECTION M-M  
-L- STA 35+00



SECTION N-N  
-L- STA 42+00



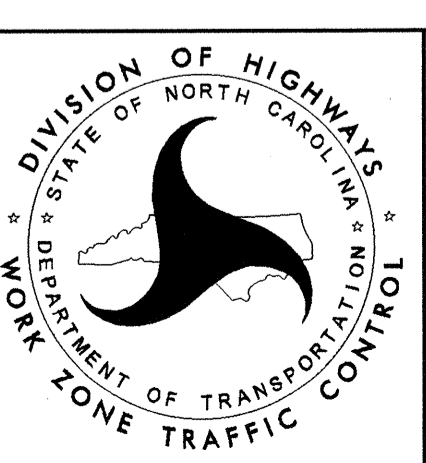
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\\raifs07\raleigh\Share\Transportation\Traffic\Curr\100026387 1-26 at Pond Rd\CAD\B-5178\_TMP\_33.dgn  
22511 AT RALBZXSYH

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326

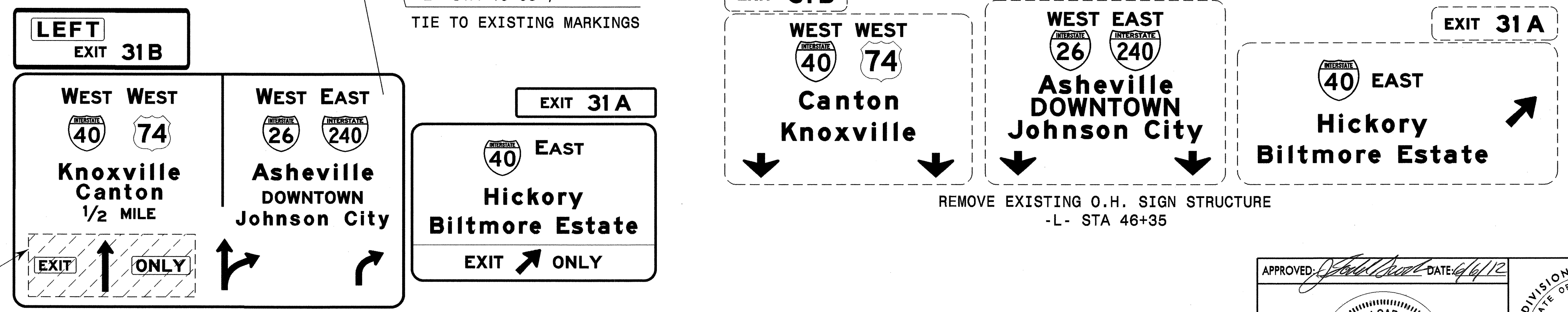
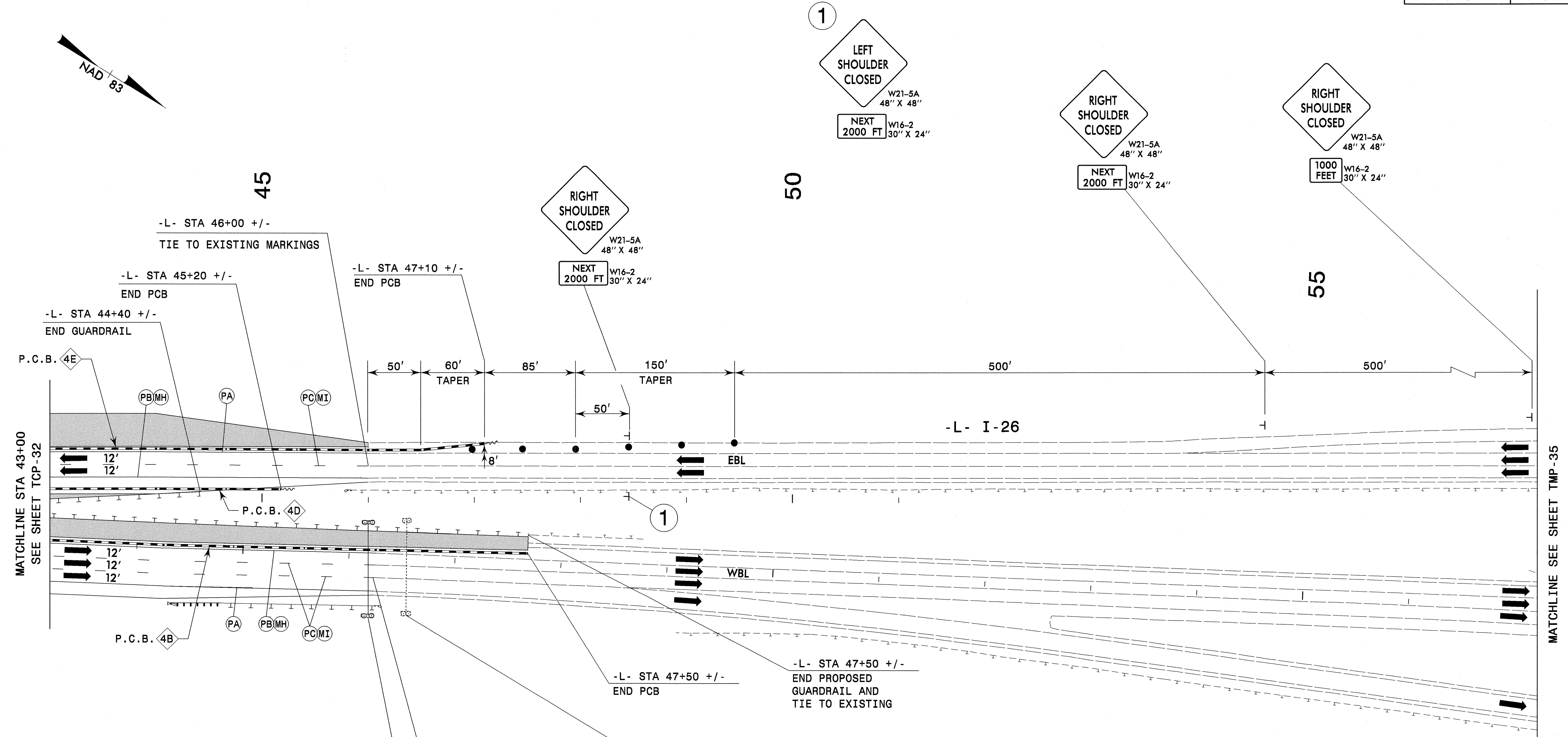
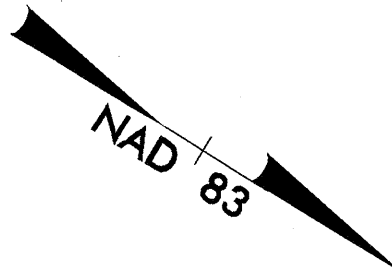
APPROVED: *[Signature]* DATE: 6/12/12

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER  
TODD BROOKS  
SEAL 17536



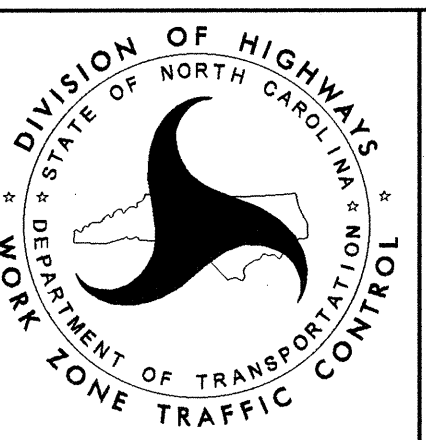
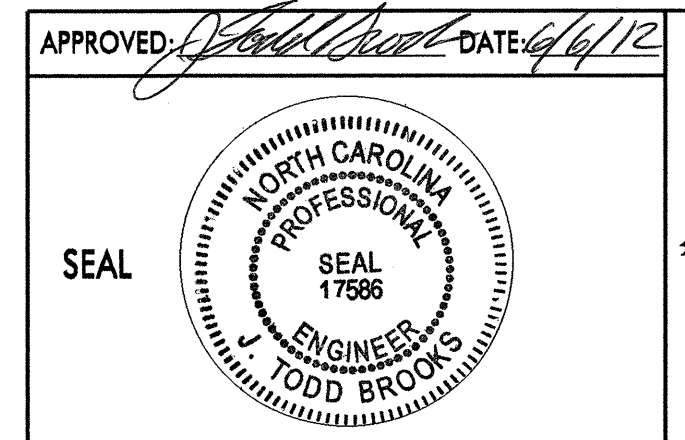
PHASE IV DETAIL



DO NOT ATTACH TO SIGN UNTIL P.C.B. HAS BEEN REMOVED AND LANE BELOW IS READY TO BE OPENED TO TRAFFIC

INSTALL O.H. SIGN ASSEMBLY  
-L- STA 46+00

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326

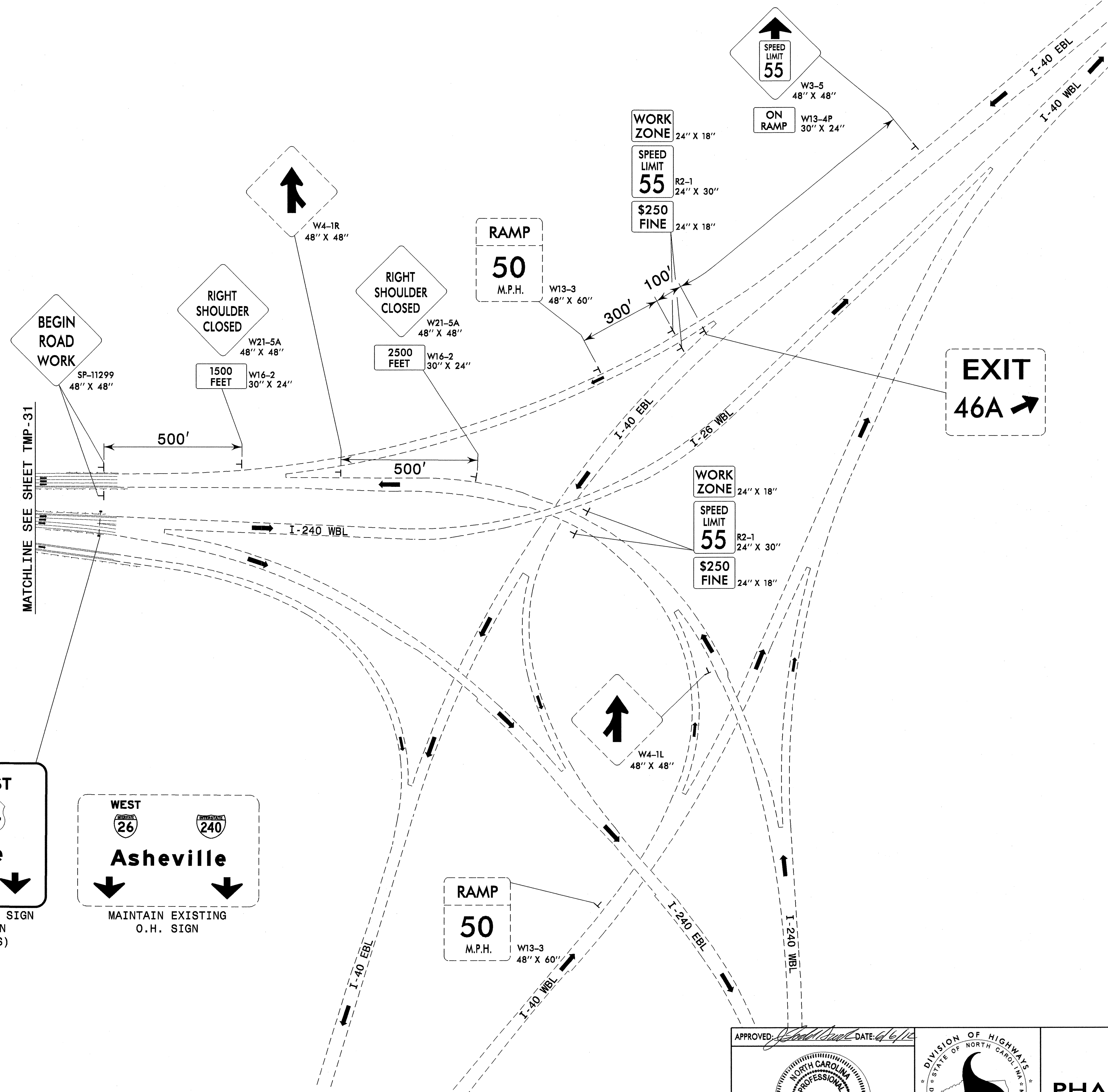


**PHASE IV DETAIL**

05-JUN-2012 18:47 \\jcifs07\raleigh\Share\Transportation\Traffic\Curr\100026387 I-26 at Pond Rd\CAD\B-5178\_TMP-34.dgn 2251 AT RAL8ZSYHI

MATCHLINE STA 43+00  
SEE SHEET TCP-32

MATCHLINE SEE SHEET TMP-35



**EXIT 31B**

WEST	WEST
<b>Knoxville</b>	
↓	↓

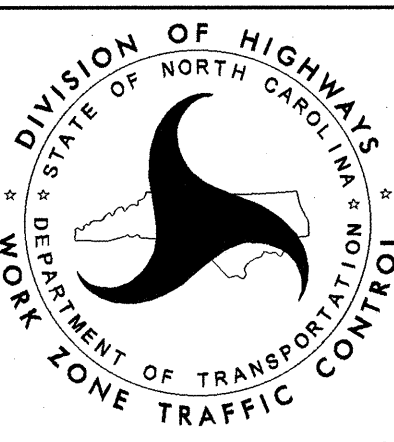
REPLACE EXISTING O.H. SIGN WITH NEW O.H. SIGN (SEE SIGNING PLANS)

WEST	
<b>Asheville</b>	
↓	↓

MAINTAIN EXISTING O.H. SIGN

APPROVED: *[Signature]* DATE: 6/6/12

SEAL



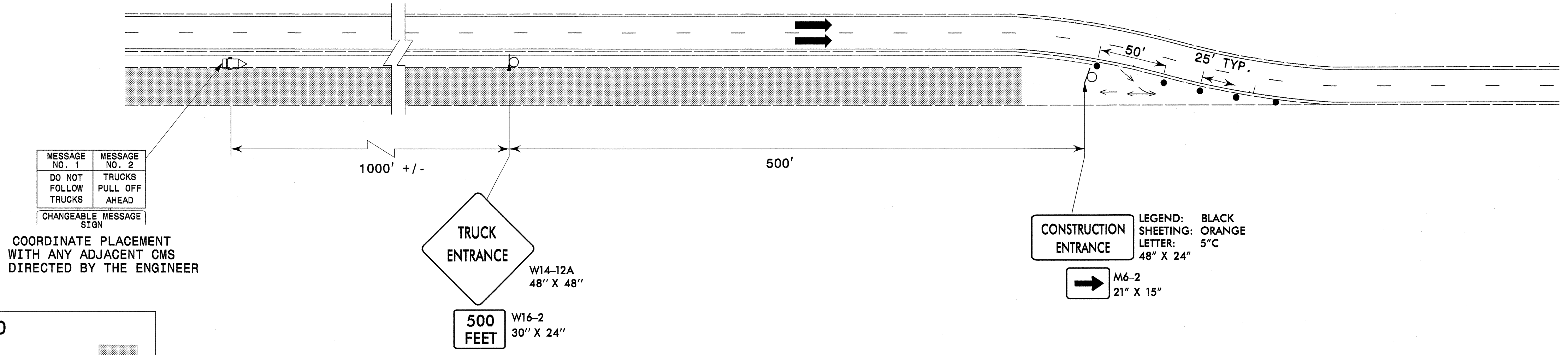
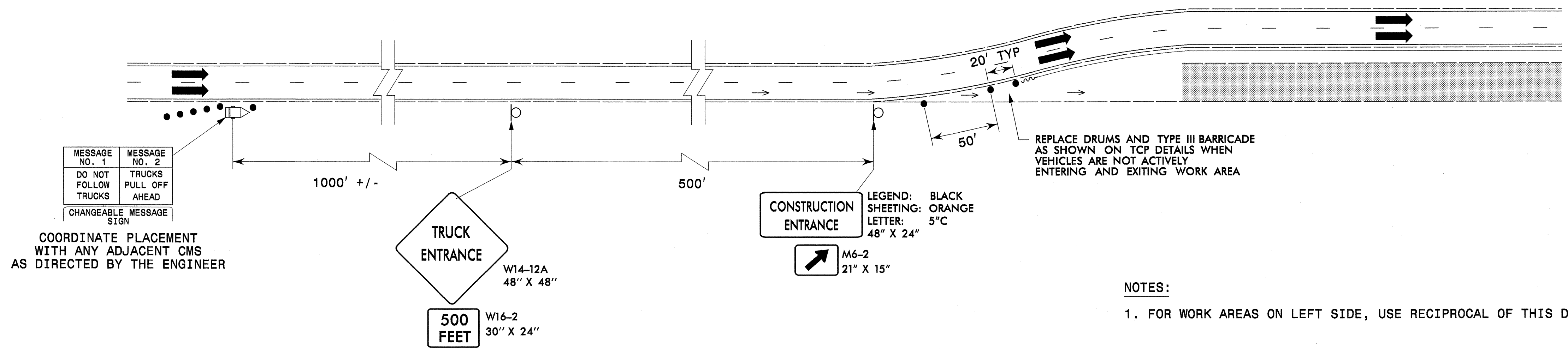
**PHASE IV DETAIL**

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
 RALEIGH, NORTH CAROLINA 27609  
 (919) 876-6888 NCBEES #F-0326

05-JUN-2012 18:07 \\raif507\raif507\Projects\Share\Transportation\Traffic\Curr\100026387 I-26 at Pond Rd\CAD\B-5178\_TMP\_35.dgn 22511 AT RALBZSYH

# WORK ZONE VEHICLE ACCESS TYPICAL DETAIL

FOR USE WHILE TRUCKS ARE ENTERING WORK AREA.



NOTES:  
1. FOR WORK AREAS ON LEFT SIDE, USE RECIPROCAL OF THIS DETAIL.

LEGEND	
Proposed Construction	
Portable Changeable Message Sign	
Truck - Pace Vehicle	
Portable Sign	
Stationary or Portable Sign	
Temporary Crash Cushion	
Traffic Flow	
Construction Vehicles	
Construction Drums	

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBES #F-0326

APPROVED: *[Signature]* DATE: 6/6/12  
SEAL  
NORTH CAROLINA PROFESSIONAL ENGINEER  
TODD BROOKS  
17888



**WORK ZONE  
VEHICLE ACCESS  
TYPICAL DETAIL**

05-JUN-2012 18:07  
\\F:\f907\raleigh\Share\Transportation\Traffic\Curr\00026387 1-26 of Pond Rd\CAD B-5178-TMP\_36.dgn  
22511 AT RALBZSYH

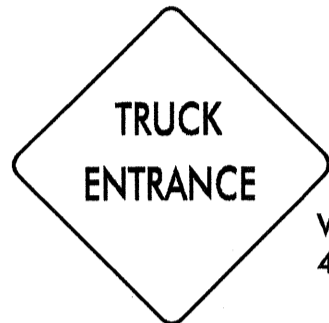
# WORK ZONE VEHICLE ACCESS - TYPICAL DETAIL

FOR USE WHILE TRUCKS ARE EXITING WORK AREA.

MESSAGE NO. 1 DO NOT FOLLOW TRUCKS	MESSAGE NO. 2 TRUCKS PULL OFF AHEAD
CHANGEABLE MESSAGE SIGN	

COORDINATE PLACEMENT WITH ANY ADJACENT CMS AS DIRECTED BY THE ENGINEER

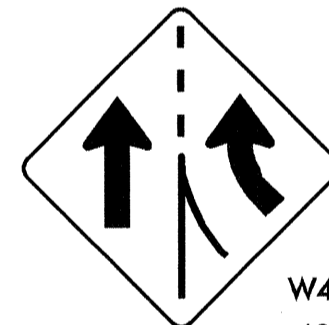
(A)



(B)



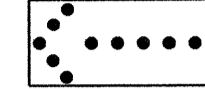
(C)



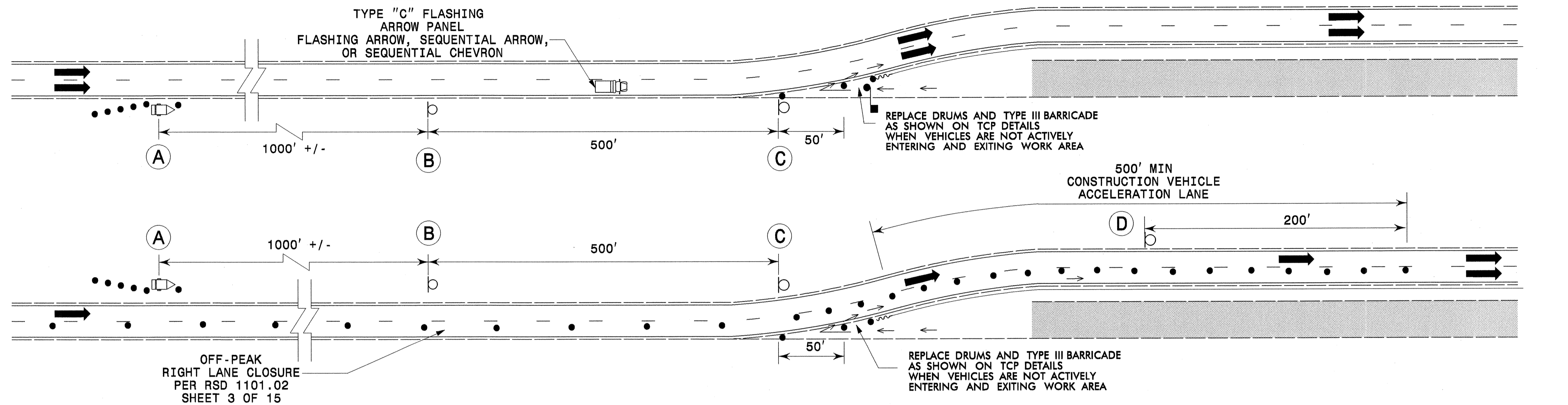
(D)

LEGEND	
Proposed Construction	
Portable Changeable Message Sign	
Truck - Pace Vehicle	
Portable Sign	
Stationary or Portable Sign	
Temporary Crash Cushion	
Traffic Flow	
Construction Vehicles	
Construction Drums	
Flagger	

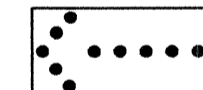
DETAIL OF SIGN MOUNTED ON REAR OF PACE VEHICLE



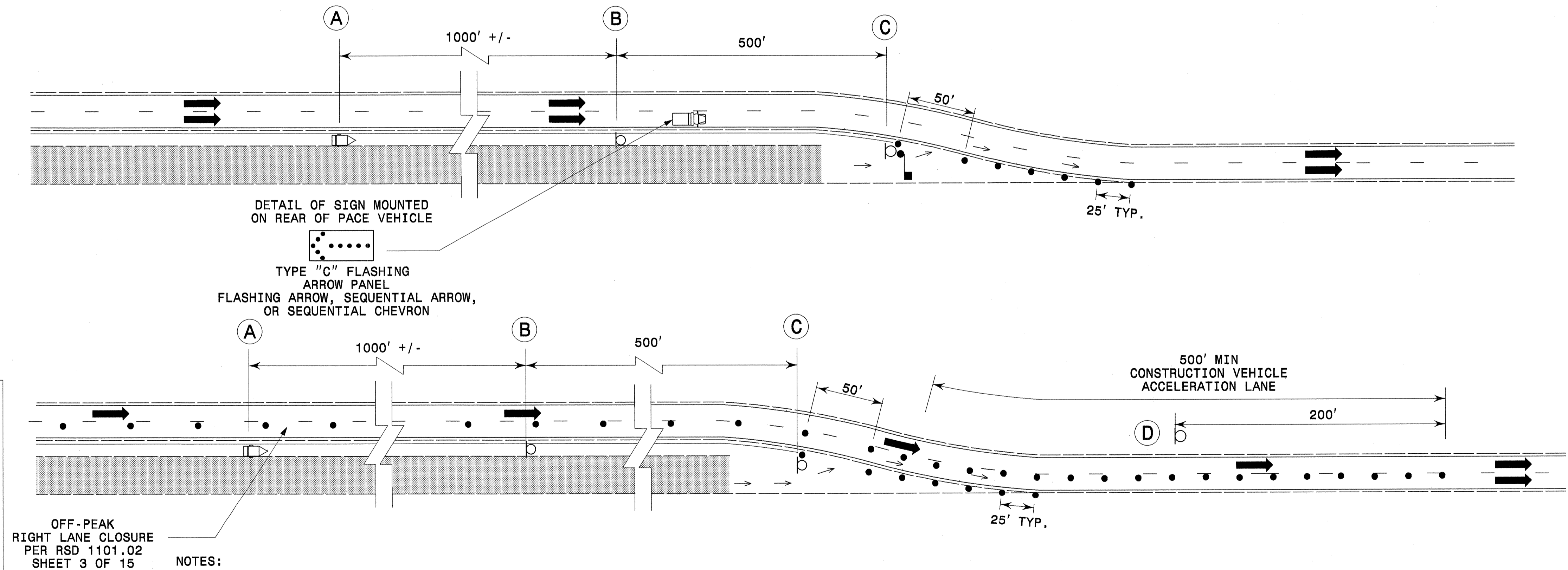
TYPE "C" FLASHING ARROW PANEL  
FLASHING ARROW, SEQUENTIAL ARROW,  
OR SEQUENTIAL CHEVRON



DETAIL OF SIGN MOUNTED ON REAR OF PACE VEHICLE



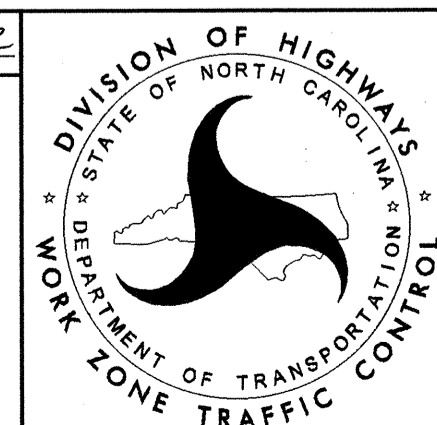
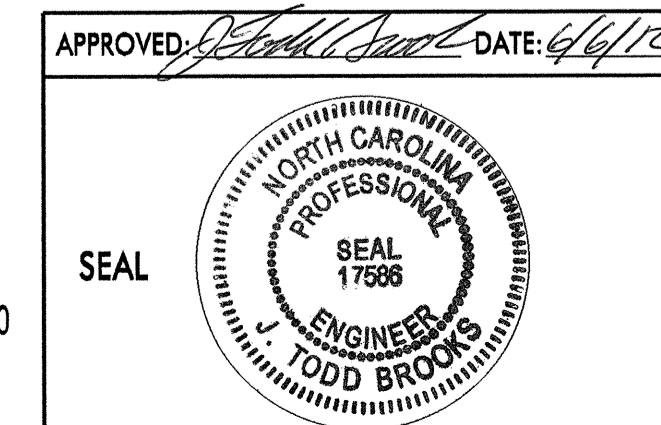
TYPE "C" FLASHING ARROW PANEL  
FLASHING ARROW, SEQUENTIAL ARROW,  
OR SEQUENTIAL CHEVRON



NOTES:

1. RADIO COMMUNICATION BETWEEN ALL VEHICLES AND GROUND CREWS IS REQUIRED.
2. PACE VEHICLE REQUIRED WHEN CONSTRUCTION VEHICLES MUST RE-ENTER TRAFFIC LANE FROM WORK AREA WHILE ADJACENT TRAFFIC LANE IS OPEN. PACE VEHICLE DOES NOT STOP TRAFFIC BUT MOVES AT REDUCED SPEED TO CREATE GAP IN TRAFFIC STREAM AND ALLOW CONSTRUCTION VEHICLE TO ENTER TRAFFIC AND ACCELERATE TO POSTED SPEED.
3. FOR WORK AREAS ON LEFT SIDE, USE RECIPROCAL OF THIS DETAIL.
4. PROVIDE FLAGGER TO CONTROL CONSTRUCTION VEHICLES EXITING WORK AREA WHILE ADJACENT TRAFFIC LANE IS OPEN. EQUIP FLAGGER WITH RADIO TO COMMUNICATE WITH APPROACHING PACE VEHICLE.

**ATKINS** 1616 EAST MILLBROOK ROAD, SUITE 310  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBEES #F-0326



WORK ZONE  
VEHICLE ACCESS  
TYPICAL DETAIL

SIGN NUMBER: T401 TYPE: E QUANTITY: 1 SIGN WIDTH: 2'-0" HEIGHT: 2'-0" TOTAL AREA: 4.0 Sq.Ft. BORDER TYPE: FLUSH 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: 0.063" (1.6 mm) ALUMINUM	DESIGN BY: none PROJECT ID: B-5178 CHECKED BY: DIV: 13 DATE: Apr 30, 2012
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USE NOTES: 1,2

- Legend and border shall be direct applied black non-reflective sheeting.
- Background shall be Grade B reflective sheeting.
- Shields; A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum and demountable.
- Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

LETTER POSITIONS										Series/Size
Letter spacings are to start of next letter										Text Length
P	O	N	D							C 2000
3.4	4.4	4.7	4.7	3.4	3.4					17.2
R	O	A	D							C 2000
3.7	4.3	4.3	4.7	3.4	3.7					16.6

FILENAME: B-5178\_Sgn\_Designs NORTH CAROLINA D.O.T. SIGN DETAIL

TEMPORARY SIGN NOTES:

- 1) SEE SIGNING PLANS FOR TEMPORARY GROUND-MOUNTED SUPPORT SIZES FOR RELOCATED GUIDE SIGNS. TEMPORARY SUPPORTS ARE MEASURED AND PAID FOR UNDER SIGNING PLANS.
- 2) OVERLAYS T601 AND T602 ARE MEASURED AND PAID FOR UNDER SIGNING PLANS.
- 3) SIGN T401 IS MEASURED AND PAID FOR AS "WORK ZONE SIGN (STATIONARY)".
- 4) RELOCATION OF EXISTING GUIDE SIGNS TO TEMPORARY SUPPORTS IS CONSIDERED INCIDENTAL TO THEIR ULTIMATE REMOVAL AND DISPOSAL IN ACCORDANCE WITH THE SIGNING PLANS.

SIGN NUMBER: T601 TYPE: B QUANTITY: 1 SIGN WIDTH: 10'-6" HEIGHT: 1'-6" TOTAL AREA: 15.8 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0" RADII: 0" NO. Z BARS: LENGTH:	BACKG COLOR: Green COPY COLOR: White SYMBOl X Y WID HT MAT'L: 0.063" (1.6 mm) ALUMINUM	DESIGN BY: none PROJECT ID: B-5178 CHECKED BY: DIV: 13 DATE: Apr 30, 2012
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------

USE NOTES: 1,2

- Legend and border(except those that are colored black) shall be direct applied Grade C sheeting.
- Background shall be Grade C reflective sheeting.
- Shields; A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum and demountable.
- Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

LETTER POSITIONS													Series/Size	
Letter spacings are to start of next letter													Text Length	
S	E	C	O	N	D	R	I	G	H	T			E 2000	
7.6	10.1	9.2	10.1	10.7	10.7	8.1	10	10.1	4.1	10.4	9.8	7.5	7.6	110.8

FILENAME: B-5178\_Sgn\_Designs NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: T602 TYPE: D QUANTITY: 1 SIGN WIDTH: 8'-0" HEIGHT: 1'-6" TOTAL AREA: 12.0 Sq.Ft. BORDER TYPE: none RECESS: 0" WIDTH: 0" RADII: 0" NO. Z BARS: LENGTH:	BACKG COLOR: Yellow COPY COLOR: Black SYMBOl X Y WID HT MAT'L: 0.063" (1.6 mm) ALUMINUM	DESIGN BY: none PROJECT ID: B-5178 CHECKED BY: DIV: 13 DATE: Apr 30, 2012
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USE NOTES: 1,2

- Legend shall be direct applied black non-reflective sheeting.
- Background shall be Grade C reflective sheeting.
- Shields; A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum and demountable.
- Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

LETTER POSITIONS											Series/Size
Letter spacings are to start of next letter											Text Length
L	E	F	T	L	A	N	E				E 2000
6.6	9.2	9.5	8.3	7.5	10	8.3	11.9	10.7	7.5	6.6	82.9

FILENAME: B-5178\_Sgn\_Designs NORTH CAROLINA D.O.T. SIGN DETAIL

05-JUN-2012 18:40 \\ralfs07\raleigh\Share\Transportation\Traffic\Curr\00026387 1-26 at Pond Rd\CAD\B-5178\_TMP\_38.dgn 2251 AT RAL8ZSYH1

APPROVED: <i>[Signature]</i> DATE: 6/6/12 SEAL 		<b>TEMPORARY SIGNING</b>
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