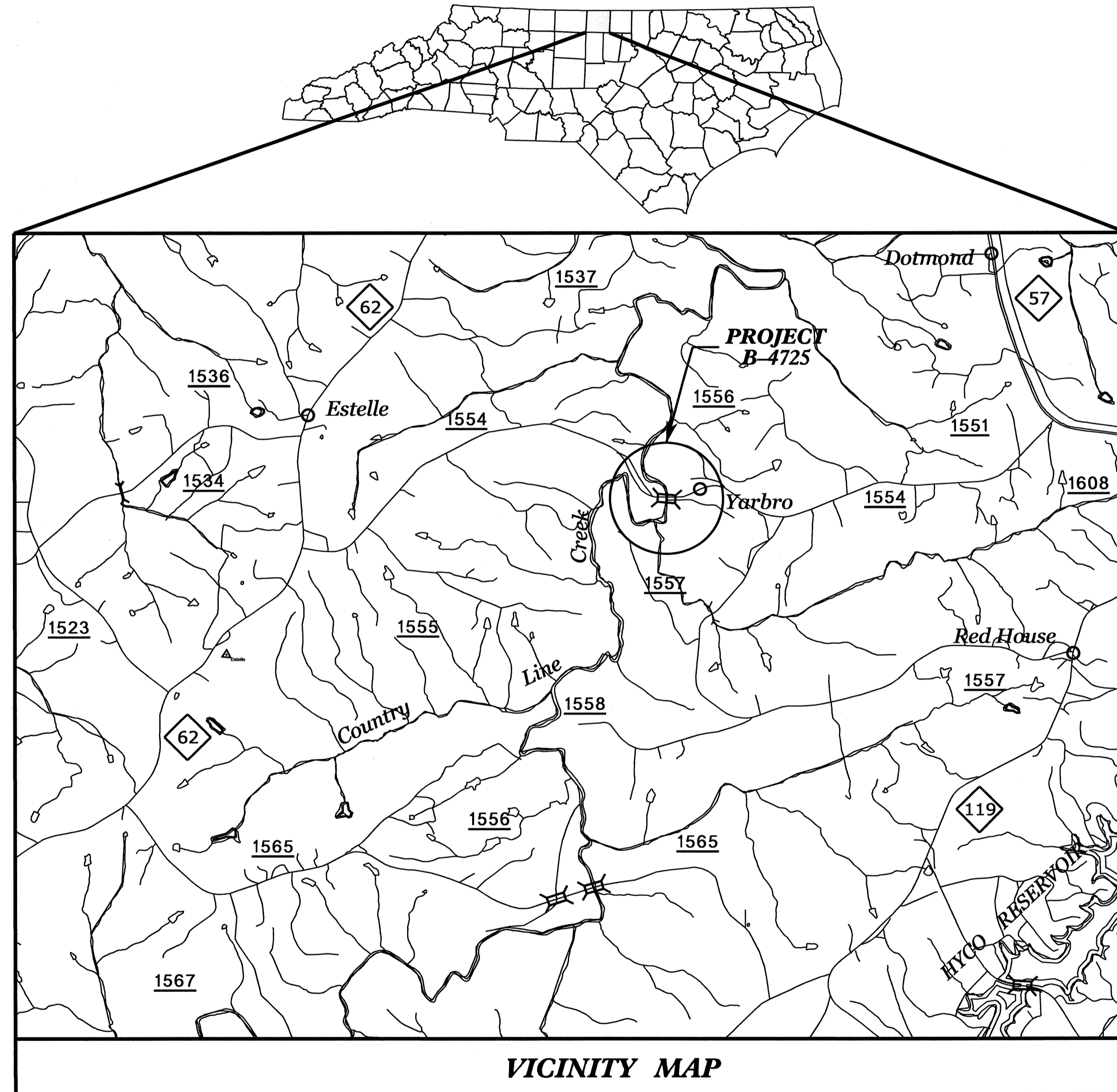


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

CASWELL COUNTY



VICINITY MAP

INDEX OF SHEETS

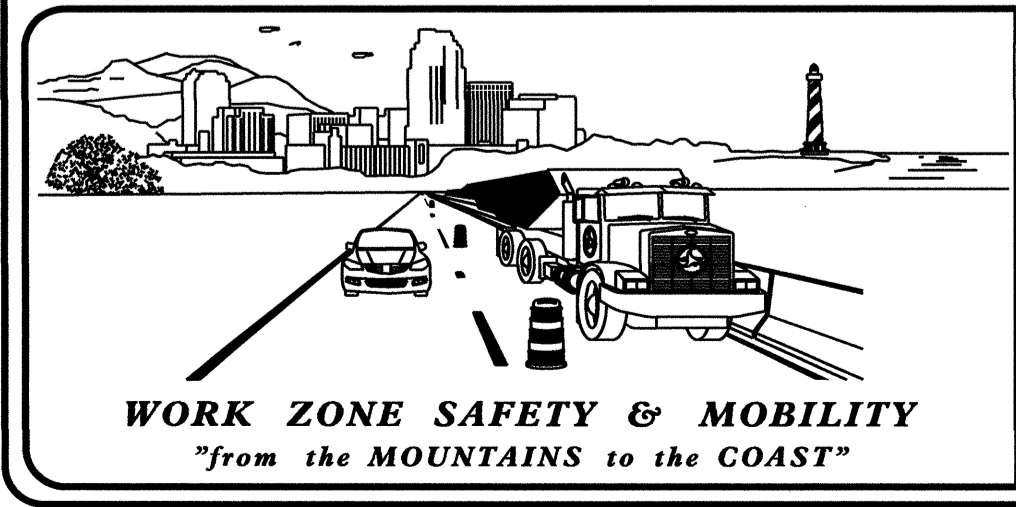
SHEET NO.	TITLE
TMP-1	TITLE SHEET AND INDEX OF SHEETS
TMP-2	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND TEMPORARY PAVEMENT MARKING
TMP-3	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES AND GENERAL NOTES) AND PHASING
TMP-4	DETAIL 1
TMP-5	DETAIL 2
TMP-6	DETAIL 3
TMP-7	DETAIL 4
TMP-8	OFF-SITE DETOUR ROUTE AND BARRICADE PLACEMENT
SD-1	SPECIAL SIGN DESIGN

SHEET NO.
TMP-1

B-4725

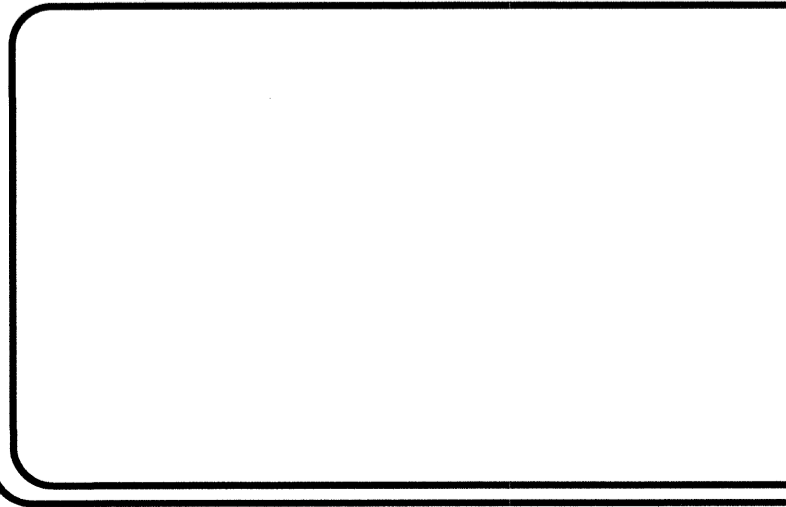
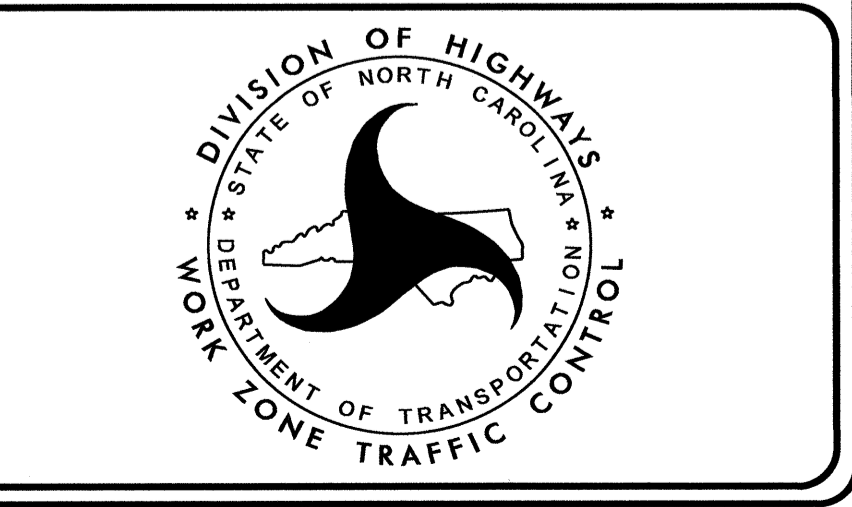
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alyudmi AT 12/24/12



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

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER
JOSEPH ISHAK, P.E. TRAFFIC CONTROL PROJECT ENGINEER
BEN SCHOENBAUER, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER
ALLA LYUDMIRSKAYA TRAFFIC CONTROL DESIGN ENGINEER



APPROVED: *Ben Schoenbauer*
DATE: *September 13, 2012*

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

LEGEND

GENERAL

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

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

TEMPORARY PAVEMENT MARKING

- PA - WHITE EDGELINE
- PI - YELLOW DOUBLE CENTER

TRAFFIC CONTROL DEVICES

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

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

SIGNALS

- EXISTING PROPOSED TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

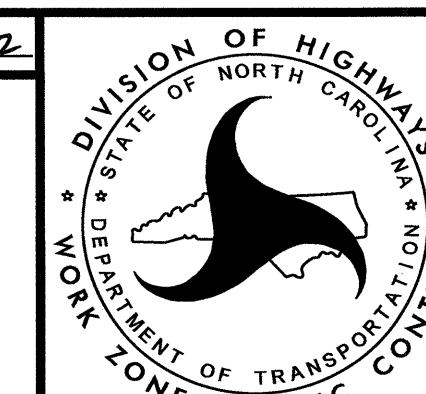
PAVEMENT MARKERS

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

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

APPROVED: *Ben Schenkman* DATE: 9/13/12



ROADWAY STANDARD
DRAWINGS & LEGEND

MANAGEMENT STRATEGIES

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

RECOMMENDED MANAGEMENT STRATEGIES RELATIVE TO THIS TMP ARE AS FOLLOWS:

- ON-SITE DETOUR:
TRAFFIC TO BE MAINTAINED ON THE TEMPORARY ON-SITE DETOUR IN 2L2W PATTERN DURING CONSTRUCTION OF PROPOSED STRUCTURE AND APPROACHES.

- FULL ROAD CLOSURE:
TRAFFIC TO BE MAINTAINED VIA THE FOLLOWING OFF-SITE DETOUR ROUTE UNDER INTERMEDIATE CONTRACT TIME, DURING CONSTRUCTION OF TIE IN WORK:
FROM SR 1554 (YARBOROUGH MILL RD.) TO NC 62 TO NC 57 BACK TO SR 1554.

- ONE-LANE, TWO-WAY TRAFFIC:
TRAFFIC TO BE MAINTAINED ON SR 1554 (YARBOROUGH MILL RD.) UTILIZING FLAGGER OPERATIONS AS NECESSARY.

GENERAL NOTES

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

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

LANE AND SHOULDER CLOSURE REQUIREMENTS

- A) 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.
- B) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- C) 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.

D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

E) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

G) 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.

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

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

I) 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.

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

TRAFFIC CONTROL DEVICES

K) 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.

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

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

ROAD NAME	MARKING	MARKER
SR 1554 (YARBOROUGH HILL RD.)	PAINT	TEMP. RAISED

N) 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.

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

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

PHASING

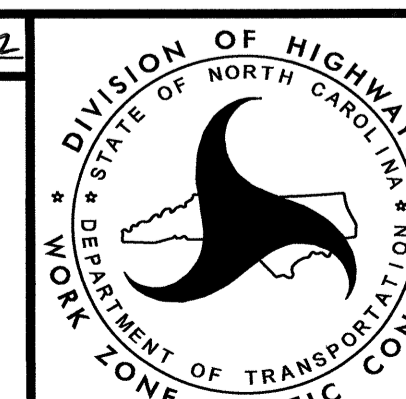
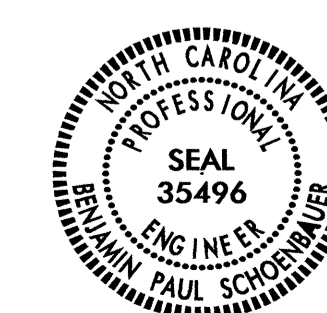
MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES UNLESS OTHERWISE NOTED IN THE PHASING

- STEP 1: USING RSD 1101.01, SHEET 3 OF 3, INSTALL WORK ZONE ADVANCE WARNING SIGNS ON SR 1554 (YARBOROUGH MILL RD.).
- STEP 2: - AWAY FROM TRAFFIC AND USING FLAGGING OPERATIONS (RSD 1101.02, SHEET 1 OF 15), AS NECESSARY, PERFORM THE FOLLOWING:
(SEE ROADWAY AND STRUCTURE PLANS, AND SHEET TMP-4).
* CONSTRUCT PROPOSED -DRV- FROM STA.10+10+/- TO STA.12+86+/-, TIE IN TO EXISTING SR 1554 AND EXISTING DRIVEWAY.
CLOSE EXISTING DRIVEWAY AND PLACE THE DRIVEWAY TRAFFIC ON NEWLY CONSTRUCTED -DRV-.
* BEGIN CONSTRUCTION OF TEMPORARY ON-SITE DETOUR FROM -LDET- STA.11+72+/- TO -LDET- STA.17+40+/-, INCLUDING THE TEMPORARY STRUCTURE.
- USING FLAGGING OPERATIONS (RSD 1101.02, SHEET 1 OF 15), AS NECESSARY, BEGIN CONSTRUCTION OF PROPOSED -DRV1- AND -DRV2- THAT ARE NOT IN CONFLICT WITH EXISTING OR PROPOSED TRAFFIC PATTERN.
- STEP 3: USING FLAGGING OPERATIONS (RSD 1101.02, SHEET 1 OF 15), COMPLETE CONSTRUCTION OF TEMPORARY ON-SITE DETOUR, INCLUDING THE TEMPORARY STRUCTURE. CONSTRUCT TIE IN WITH EXISTING YARBOROUGH MILL RD., PLACE PAVEMENT MARKINGS AND MARKERS. SHIFT TRAFFIC ONTO TEMPORARY ON-SITE DETOUR FROM -LDET- STA.10+00+/- TO -LDET- STA.19+15+/- IN TWO-LANE, TWO-WAY PATTERN. (SEE ROADWAY PLANS AND SHEET TMP-5).
- STEP 4: PERFORM THE FOLLOWING:
- AWAY FROM TRAFFIC, REMOVE EXISTING BRIDGE AND CONSTRUCT PROPOSED STRUCTURE AND APPROACHES UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM -L- STA.17+00+/- TO -L- STA.22+40+/- (SEE ROADWAY AND STRUCTURE PLANS).
- INSTALL AND COVER OFF-SITE DETOUR SIGNS AND TEMPORARY ROAD CLOSURE SIGNS NECESSARY TO IMPLEMENT OFF-SITE DETOUR AS SHOWN IN STEP 5 (SEE RSD 1101.03, SHEET 1 OF 9, AND SHEET TMP-8).

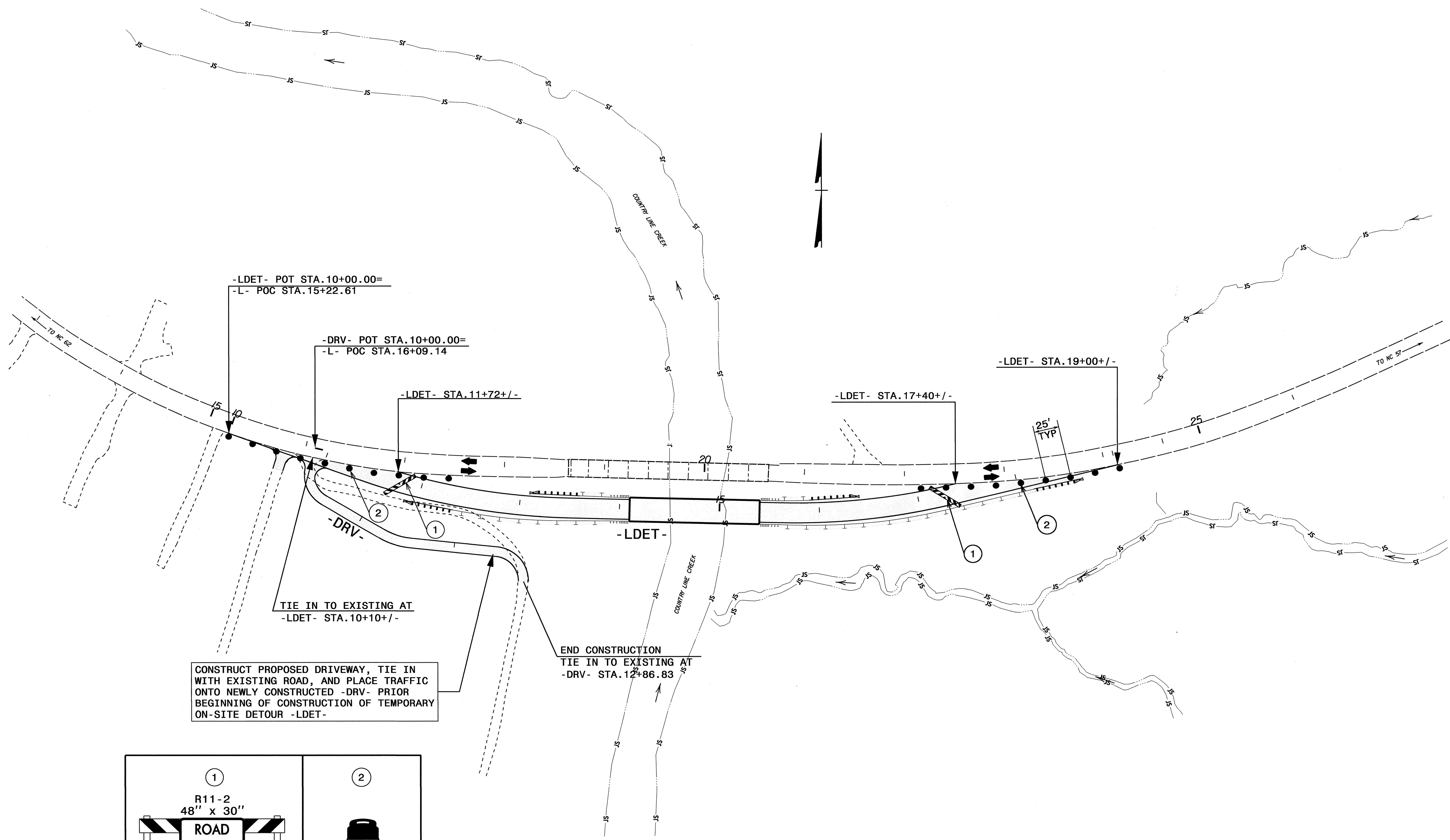
COMPLETE THE WORK, REQUIRED IN STEP 5, FROM FRIDAY AT 7:00 P.M. TO THE FOLLOWING MONDAY AT 7:00 A.M. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

- STEP 5: PERFORM THE FOLLOWING:
(SEE ROADWAY PLANS).
A) UNCOVER OFF-SITE DETOUR SIGNS INSTALLED IN STEP 4, PLACE TYPE III BARRICADES AND CLOSE YARBOROUGH MILL RD. TO THROUGH TRAFFIC. PLACE THE YARBOROUGH MILL RD. TRAFFIC ONTO OFF-SITE DETOUR AS SHOWN ON SHEET TMP-8.
B) AWAY FROM TRAFFIC, CONSTRUCT TIE IN WORK FROM -L- STA.15+25+/- TO -L- STA.17+00+/- AND FROM -L- STA.22+40+/- TO -L- STA.24+55+/- . PLACE TEMPORARY PAVEMENT MARKING AND MARKERS ONTO NEWLY CONSTRUCTED -L- FROM STA.15+25+/- TO STA.24+55+/- (SEE SHEET TMP-6).
C) COVER OFF-SITE DETOUR SIGNS, REMOVE TYPE III BARRICADES, AND SHIFT WB TRAFFIC ONTO PROPOSED -L- (YARBOROUGH MILL RD.). PLACE EB TRAFFIC BACK ON THE TEMPORARY ON-SITE DETOUR -LDET- (SEE SHEET TMP-7).
- STEP 6: AWAY FROM TRAFFIC COMPLETE CONSTRUCTION OF THE PROPOSED ABUTMENT AND SLOPE AT THE END-BENTS. PLACE TRAFFIC ON PROPOSED -L- IN TWO-LANE, TWO-WAY PATTERN.
- STEP 7: - USING FLAGGING OPERATIONS (RSD 1101.02, SHEET 1 OF 15), PERFORM THE FOLLOWING:
* COMPLETE CONSTRUCTION OF PROPOSED -DRV1- AND -DRV2- ,
* PLACE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS AND MARKERS FROM -L- STA.15+22+/- TO -L- STA.24+55+/- .
- AWAY FROM TRAFFIC, REMOVE TEMPORARY STRUCTURE.
- STEP 8: REMOVE ALL TEMPORARY WORK ZONE SIGNS AND TRAFFIC CONTROL DEVICES.

APPROVED: *Paul S. Johnson* DATE: 9/17/12



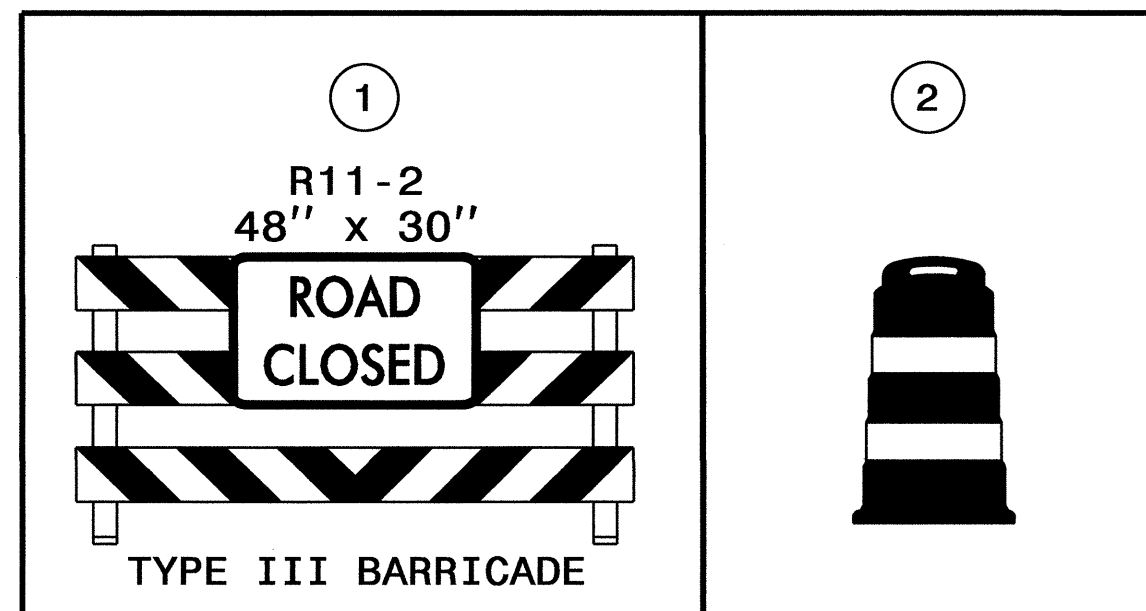
TRANSPORTATION
OPERATION PLAN
AND PHASING



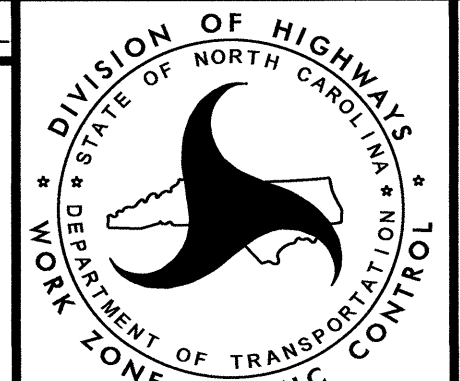
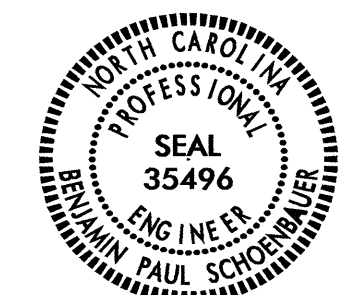
CONSTRUCT PROPOSED DRIVEWAY, TIE IN WITH EXISTING ROAD, AND PLACE TRAFFIC ONTO NEWLY CONSTRUCTED -DRV- PRIOR BEGINNING OF CONSTRUCTION OF TEMPORARY ON-SITE DETOUR -LDET-

TIE IN TO EXISTING AT -LDET- STA. 10+10+/-

END CONSTRUCTION TIE IN TO EXISTING AT -DRV- STA. 12+86.83

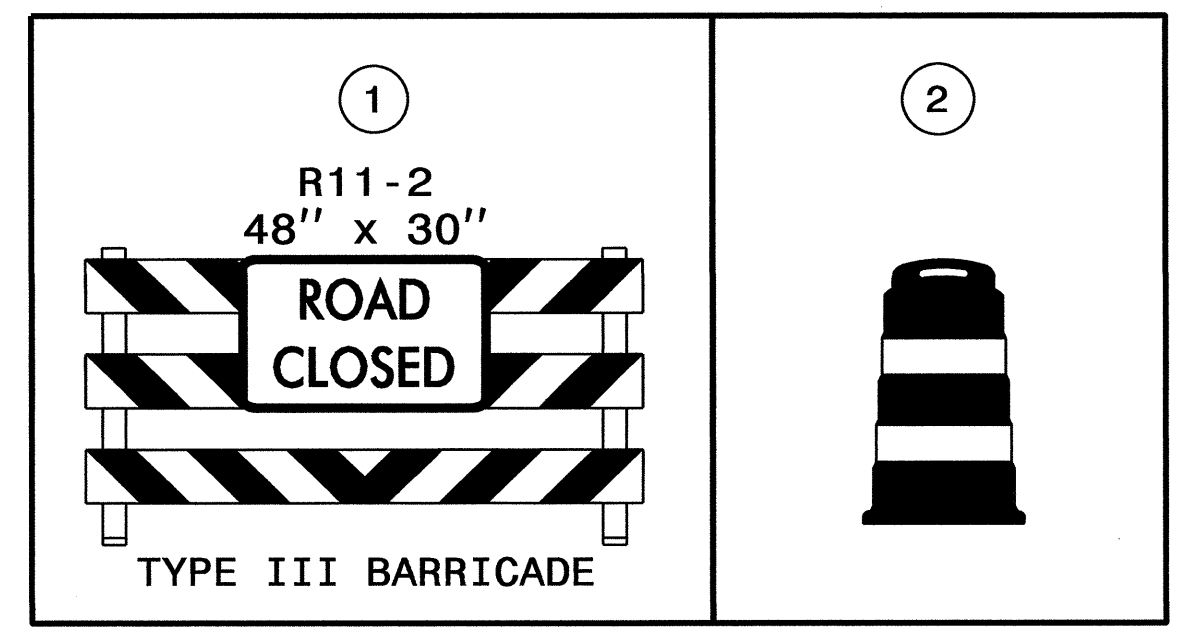
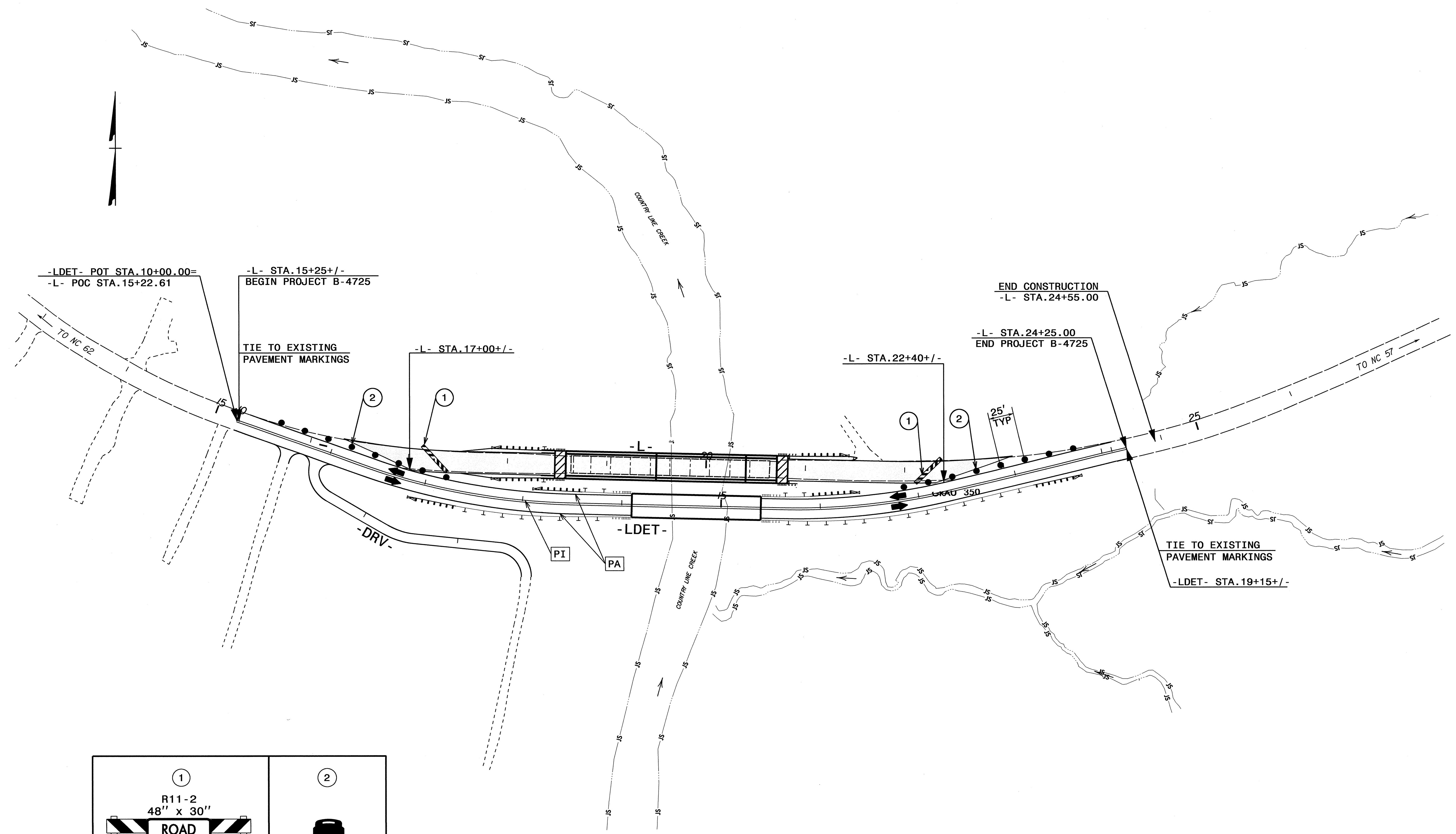


APPROVED: *Ben Schaubert* DATE: 9/13/12



DETAIL 1

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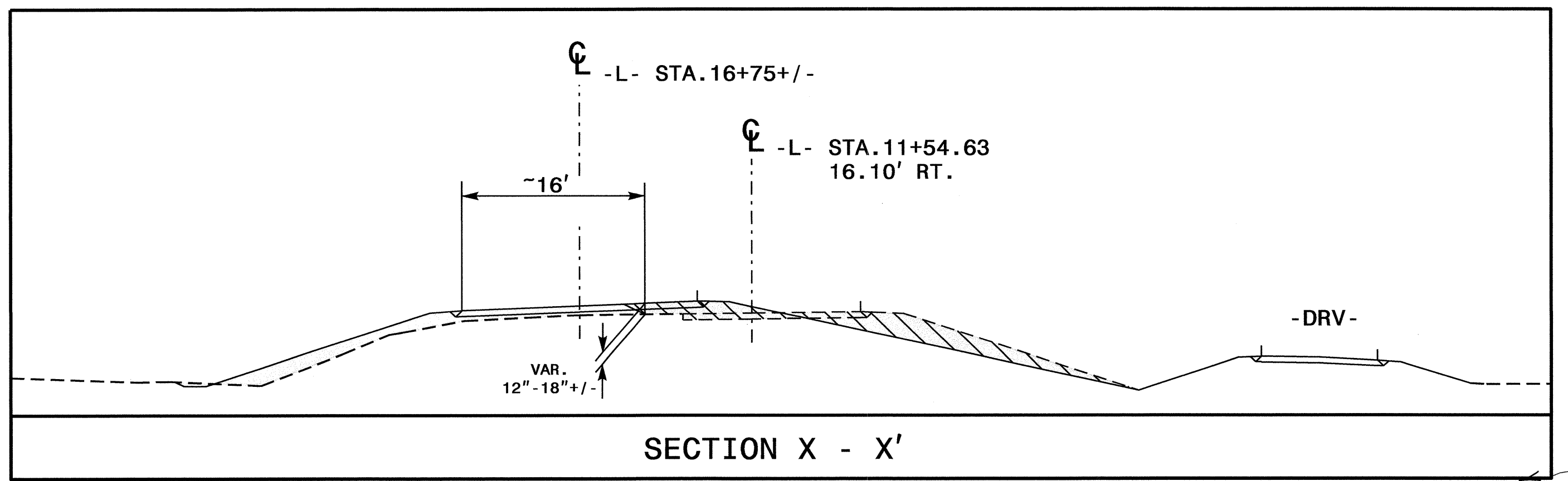
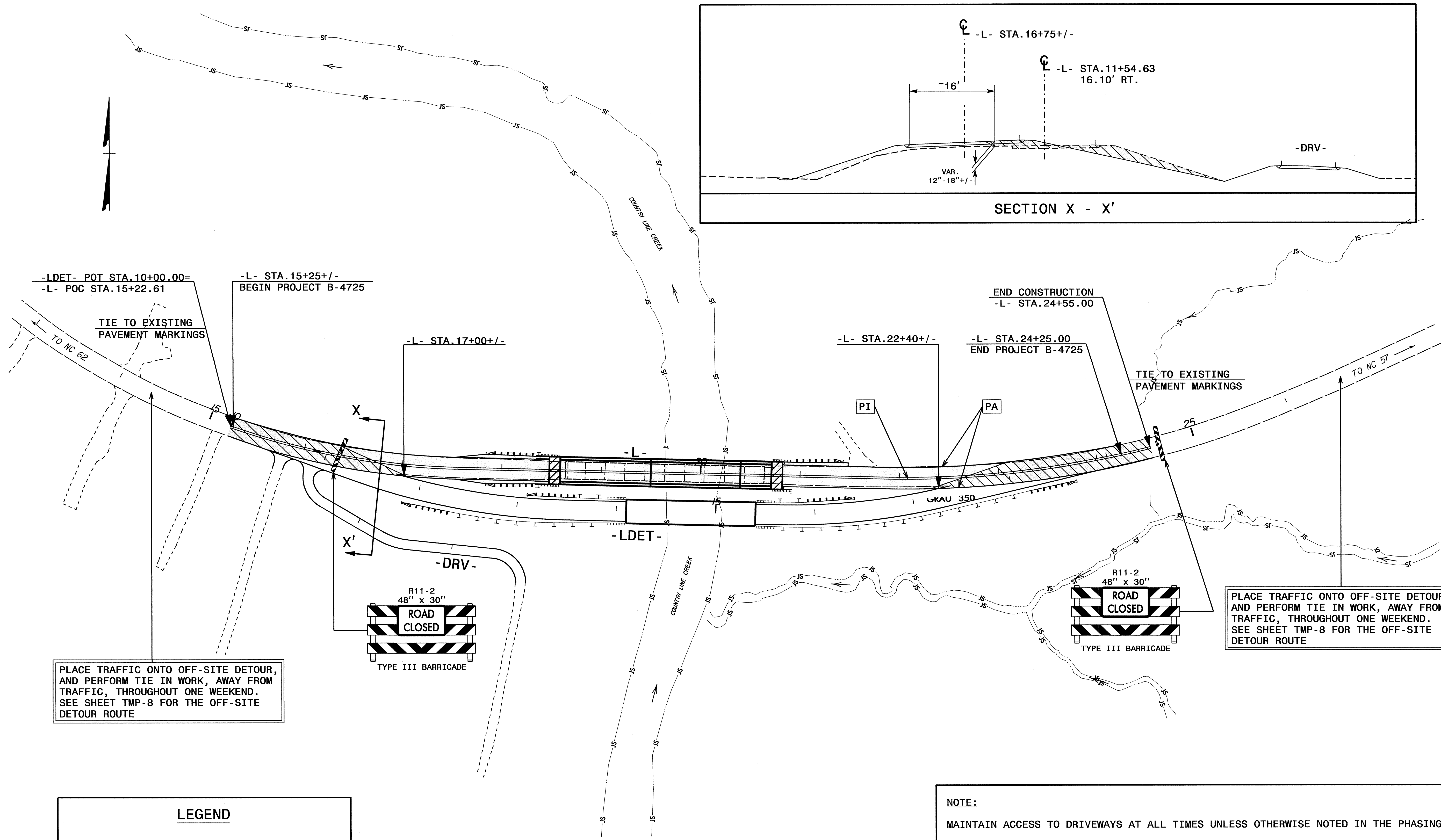


10-OCT-2012 08:32
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 aliyudmi AT TE26&002

APPROVED: *Paul Schornhauser* DATE: 10/11/12



DETAIL 2



-LDET- POT STA. 10+00.00=
-L- POC STA. 15+22.61

-L- STA. 15+25+/-
BEGIN PROJECT B-4725

END CONSTRUCTION
-L- STA. 24+55.00

-L- STA. 24+25.00
END PROJECT B-4725

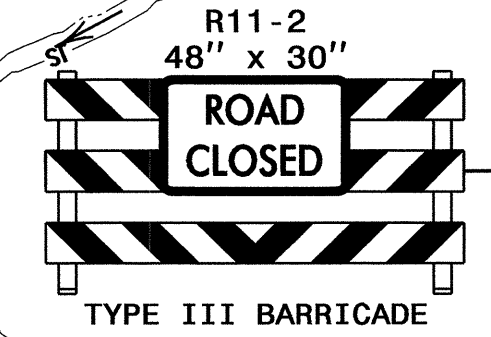
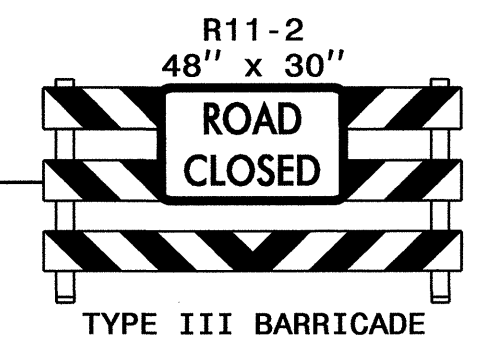
PLACE TRAFFIC ONTO OFF-SITE DETOUR,
AND PERFORM TIE IN WORK,
THROUGHOUT ONE WEEKEND.
SEE SHEET TMP-8 FOR THE OFF-SITE
DETOUR ROUTE

PLACE TRAFFIC ONTO OFF-SITE DETOUR,
AND PERFORM TIE IN WORK,
THROUGHOUT ONE WEEKEND.
SEE SHEET TMP-8 FOR THE OFF-SITE
DETOUR ROUTE

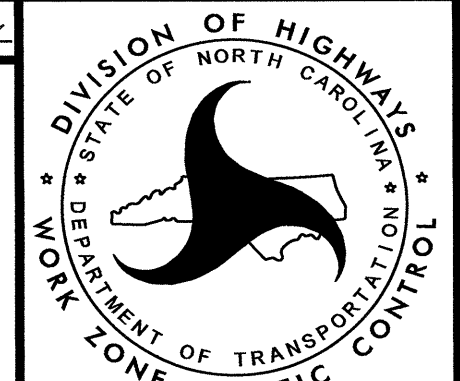
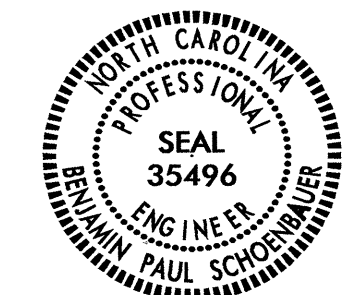
LEGEND

- CONSTRUCTION BEGUN IN STEP 4, NOT INCLUDED IN ICT
- CONSTRUCTION IN STEP 5, DURING ICT (ONE WEEKEND)

NOTE:
MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES UNLESS OTHERWISE NOTED IN THE PHASING.

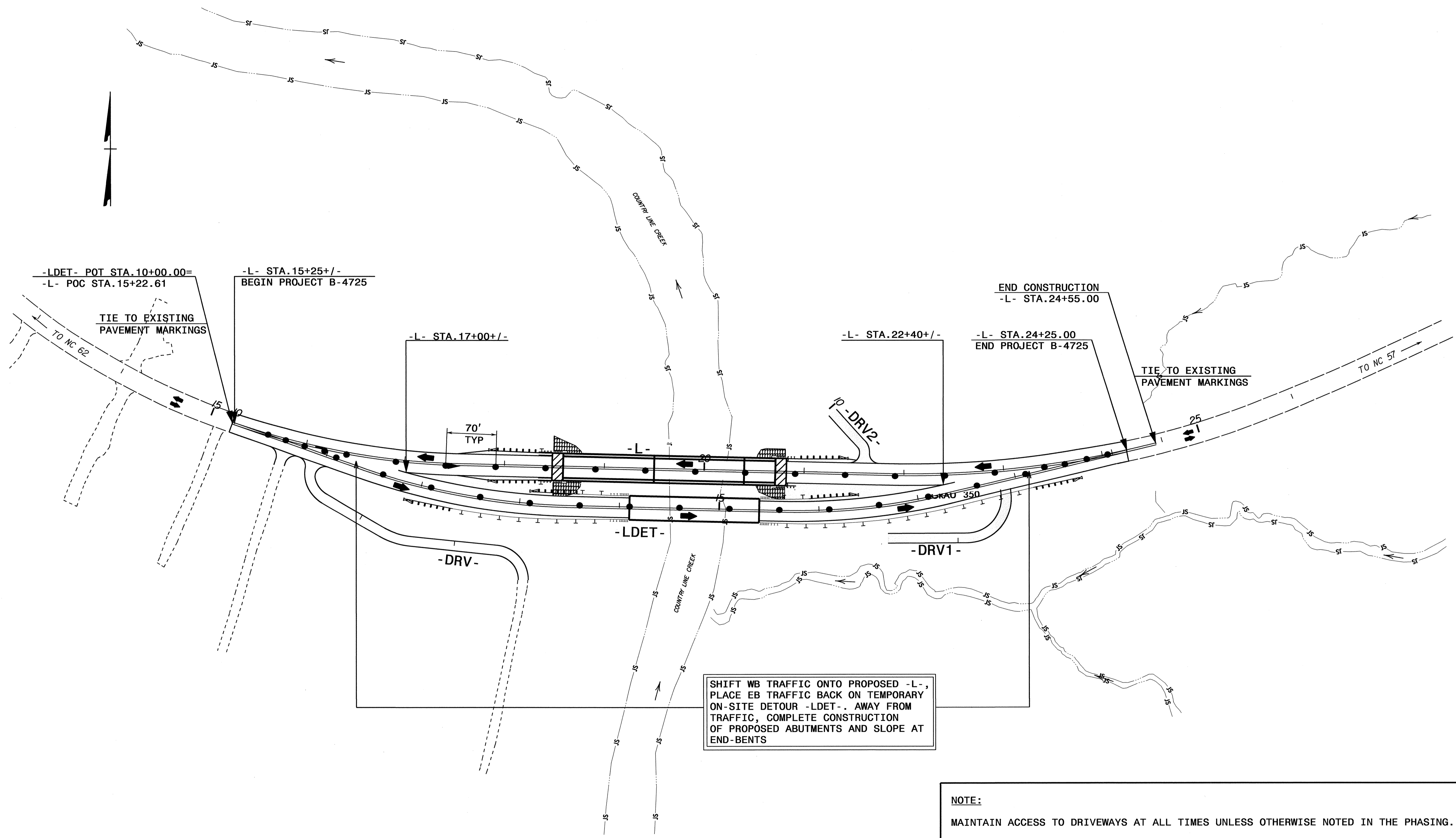


APPROVED: *Paul Scherbaum* DATE: 10/11/12



DETAIL 3

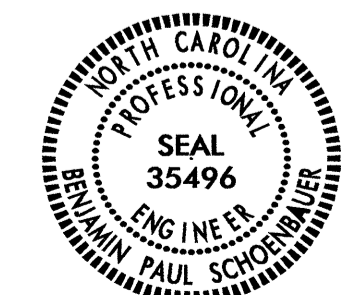
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SHIFT WB TRAFFIC ONTO PROPOSED -L-,
PLACE EB TRAFFIC BACK ON TEMPORARY
ON-SITE DETOUR -LDET-. AWAY FROM
TRAFFIC, COMPLETE CONSTRUCTION
OF PROPOSED ABUTMENTS AND SLOPE AT
END-BENTS

NOTE:
MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES UNLESS OTHERWISE NOTED IN THE PHASING.

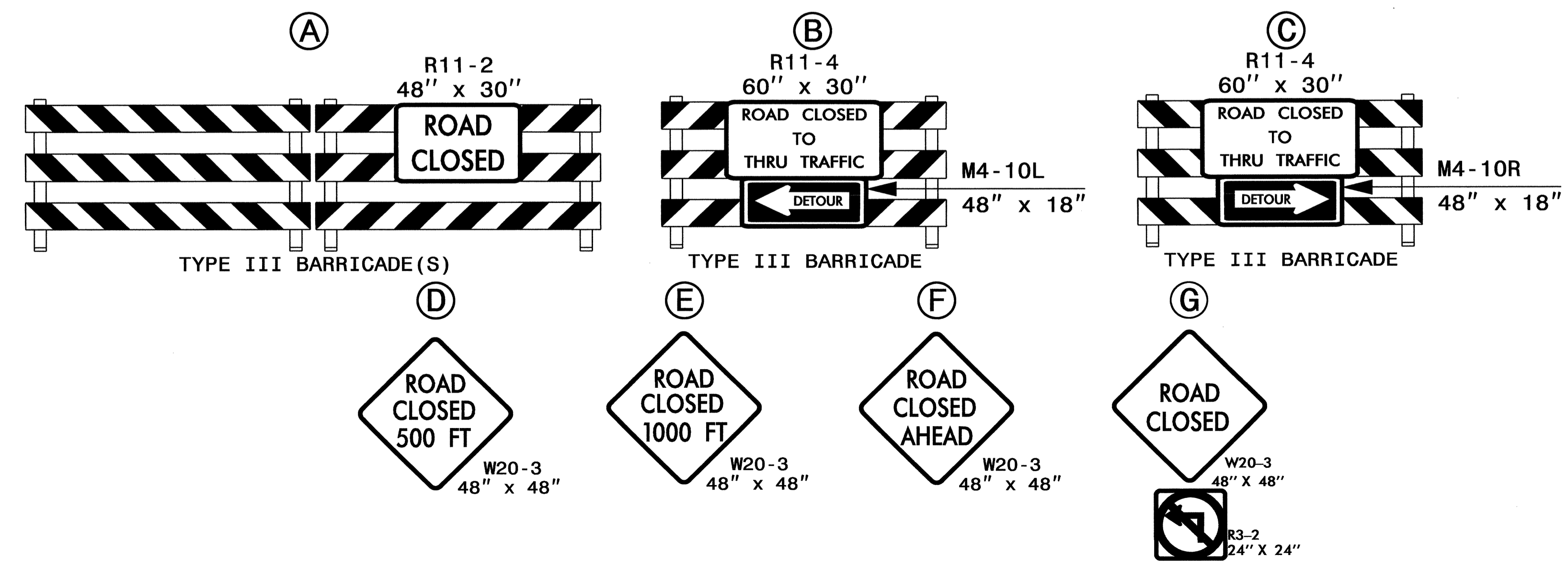
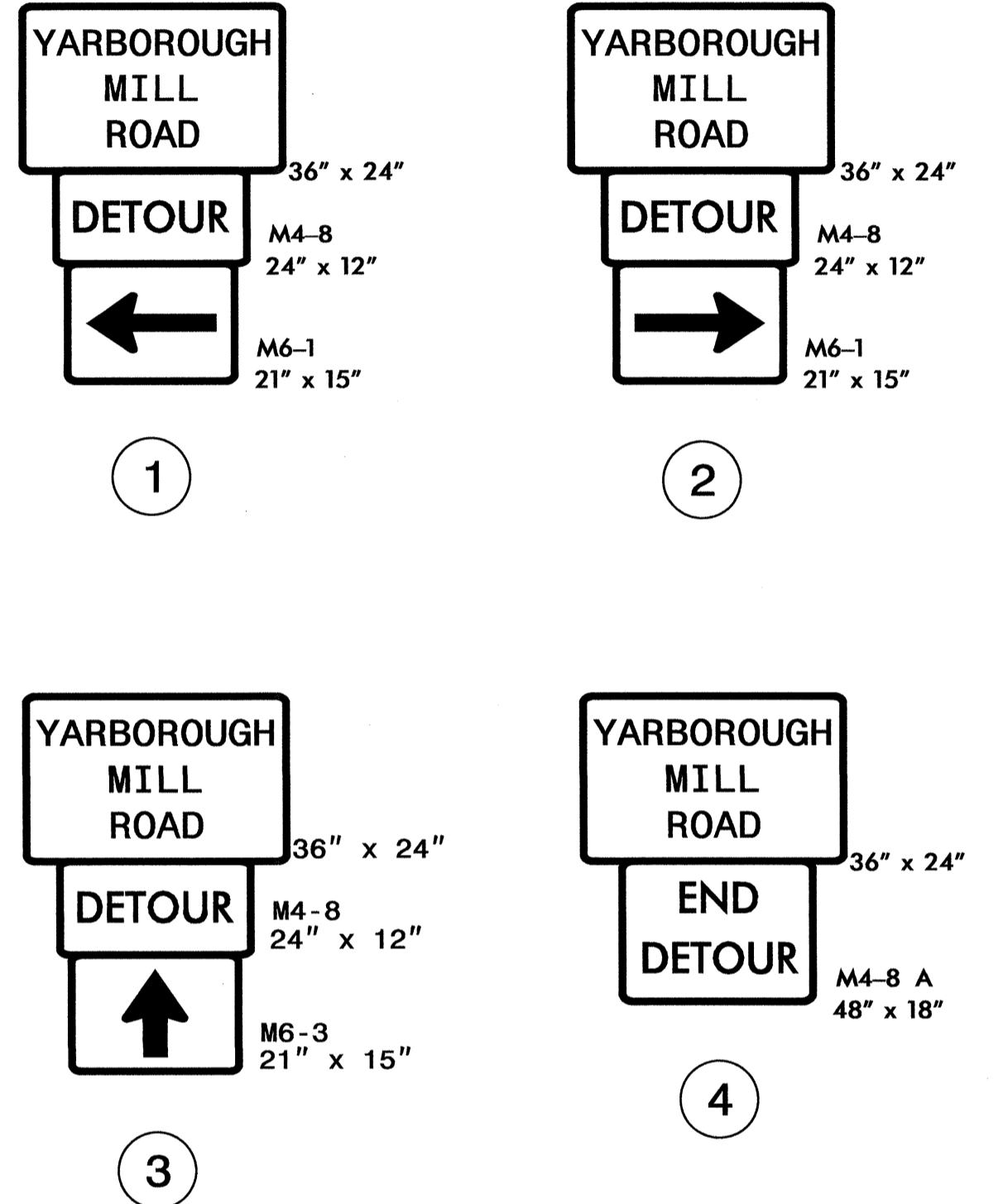
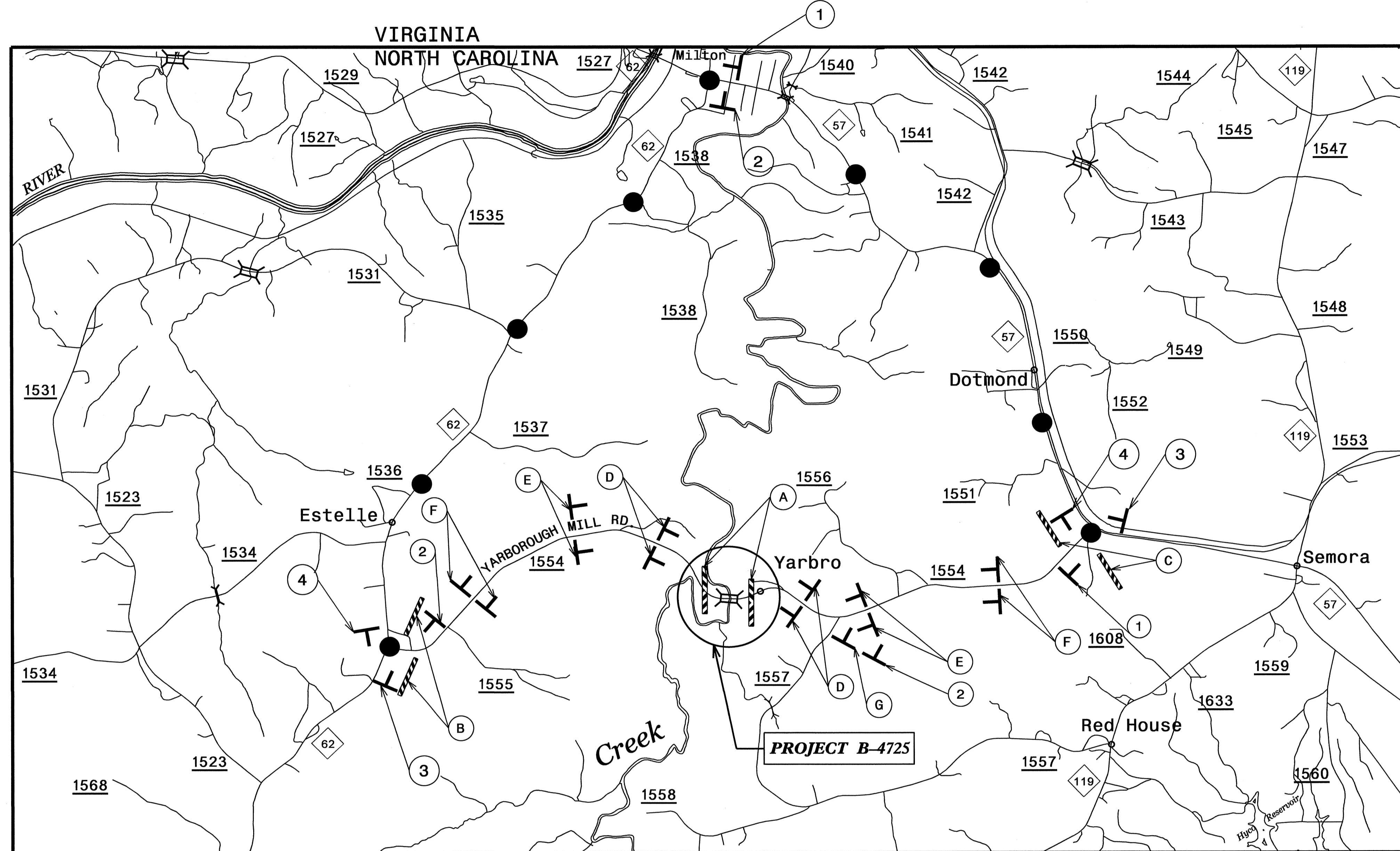
APPROVED: *for Schmitt* DATE: 10/5/12




DETAIL 4

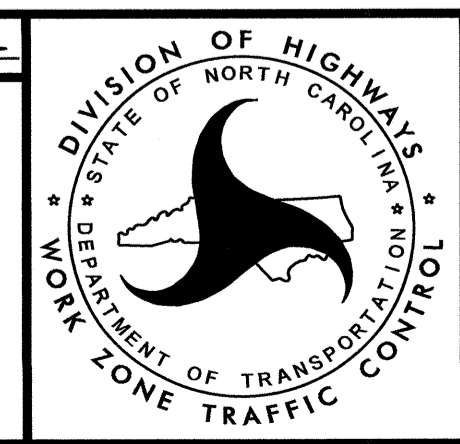
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dwg.dgn AT 12:26:00

VICINITY MAP: CASWELL COUNTY



NOTES:
 1. SEE SHEET SD-1 FOR SPECIAL SIGN DESIGN.
 2. REFER TO RSD 1101.03, SHEETS 1 AND 2 OF 9, FOR SIGN DISTANCES.
 3. ALL DETOUR SIGN LOCATIONS ARE APPROXIMATE.

APPROVED: *Paul Schoeninger* DATE: 1/13/12




OFF-SITE DETOUR ROUTE AND BARRICADE PLACEMENT

29-AUG-2012 08:15
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