

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS



STATE PROJECT REFERENCE NO.	SHEET NO.
B-1443	TCP-1

**PLAN FOR PROPOSED  
TRAFFIC CONTROL, MARKING & DELINEATION  
YANCEY/MITCHELL COUNTY**

B-1443

**ROADWAY STANDARD DRAWINGS**

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS"- ROADWAY DESIGN UNIT-N.C. DEPARTMENT OF TRANSPORTATION-RALEIGH, N.C., DATED JANUARY 2002 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.06	WARNING SIGNS FOR BLASTING ZONES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1135.01	CONES
1150.01	FLAGGERS
1160.01	TEMPORARY CRASH CUSHION
1170.01	PORTABLE CONCRETE BARRIER
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.11	PAVEMENT MARKINGS - RAILROAD CROSSINGS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1253.01	SNOWPLOWABLE RAISED PAVEMENT MARKERS
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

**INDEX OF SHEETS**

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TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, TEMPORARY PAVEMENT MARKING SCHEDULE, & INDEX OF SHEETS
TCP-2	PROJECT NOTES
TCP-3 THRU 7	PHASING DETAIL
TCP-8	REPLACEMENT DETAIL FOR RSD 1130.01
TCP-9	REPLACEMENT DETAIL FOR RSD 1145.01
PM-1	FINAL PAVEMENT MARKING SCHEDULE & FINAL PAVEMENT MARKING PLAN

**LEGEND**

- GENERAL**
- DIRECTION OF TRAFFIC FLOW
  - NORTH ARROW
  - PROPOSED PVMT. EXIST. PVMT.
  - WORK AREA
  - REMOVAL OF EXISTING PAVEMENT
- TRAFFIC CONTROL DEVICES**
- TYPE I BARRICADE
  - TYPE II BARRICADE
  - TYPE III BARRICADE
  - CONE
  - DRUM
  - FLASHING ARROW PANEL (TYPE C)
  - TYPE 'B' WARNING LIGHT
  - STATIONARY SIGN
  - PORTABLE SIGN
  - STATIONARY OR PORTABLE SIGN
  - WARNING FLAGS
  - CRASH CUSHION
  - CHANGEABLE MESSAGE SIGN
  - TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
  - POLICE
  - FLAGGER

**PAVEMENT MARKINGS**

- CRYSTAL/CRYSTAL PAVEMENT MARKER
- YELLOW/YELLOW PAVEMENT MARKER
- CRYSTAL/RED PAVEMENT MARKER
- PAVEMENT MARKING SYMBOLS

**TEMPORARY PAVEMENT MARKING SCHEDULE**

SYMBOL	DESCRIPTION	PAY ITEM QUANTITY BREAKDOWN		TOTAL QUANTITY
		TEMPORARY PAVEMENT MARKINGS		
PA PI	WHITE EDGELINE (2X) YELLOW DOUBLE CENTER (2X)	PAINT (100MM)	800 M	TOTAL 1600 M
		PAINT (400MM)	800 M	
P3	WHITE LINE, RR X (2X)	PAINT (600MM)	14 M	TOTAL 14 M
P4	WHITE STOPBAR (2X)	PAINT (600MM)	24 M	TOTAL 24 M
QI	ALPHANUMERIC CHAR. (2X)	PAINT MARKING CHARACTERS	4 EA	TOTAL 4 EA
		MARKERS		
MH	YELLOW & YELLOW	TEMPORARY RAISED PAVEMENT MARKERS	20 EA	TOTAL 20 EA

APPROVED:	PLAN PREPARED BY: N.C.D.O.T. TRAFFIC CONTROL, MARKING & DELINEATION SECTION
DATE: 12/17/2004	J. S. BOURNE, P.E. TRAFFIC CONTROL ENGINEER
SEAL 	J. S. KITE, P.E. TRAFFIC CONTROL PROJECT ENGINEER
	J. D. KUSE, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER
	D. A. HAYES, E.I. TRAFFIC CONTROL DESIGN ENGINEER / TECHNICIAN

TIP PROJECT:



PROJ. REFERENCE NO.	SHEET NO.
B-1443	TCP-2

## GENERAL NOTES

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

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 STOP TRAFFIC OR CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
1. NC 197	6 A.M. MONDAY THRU 7 P.M. FRIDAY

### LANE AND SHOULDER CLOSURE REQUIREMENTS

- B) 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.
- C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT (1.5m) 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) DO NOT WORK SIMULTANEOUSLY, ON BOTH SIDES OF AN OPEN TRAVELWAY, WITHIN THE SAME LOCATION, ON A TWO-LANE, TWO-WAY ROAD.
- F) DO NOT INSTALL MORE THAN 500' (150 M) OF LANE CLOSURE ON NC 197, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- G) DO NOT INSTALL MORE THAN ONE LANE CLOSURE, IN ANY ONE DIRECTION, ON NC 197.

### PAVEMENT EDGE DROP OFF REQUIREMENTS

H) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS A DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES (50mm) ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES (75mm) ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

I) DO NOT EXCEED A DIFFERENCE OF 1.5 inches (40mm) IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT (150m) IN ADVANCE AND A MINIMUM OF ONCE EVERY MILE THROUGHOUT THE UNEVEN AREA.

### TRAFFIC PATTERN ALTERATIONS

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

### SIGNING

- K) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 100 FT (31m) FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- L) PROVIDE PERMANENT SIGNING.
- M) PROVIDE DETOUR SIGNING WITHIN AND/OR OFF THE PROJECT LIMITS.
- N) COVER OR REMOVE ALL DETOUR SIGNS WITHIN AND/OR OFF THE PROJECT LIMITS WHEN A DETOUR IS NOT IN OPERATION.
- O) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

### TRAFFIC CONTROL DEVICES

- P) WHEN USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 7, DRUMS MAY BE USED IN LIEU OF CONES ON NC 197.
- Q) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT (3m) ON-CENTER IN RADII, AND 3 FT (1m) OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT.
- R) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY. STAGGER OR OVERLAP BARRICADES TO ALLOW FOR INGRESS OR EGRESS.

### PAVEMENT MARKINGS AND MARKERS

S) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
1. NC 197	THERMOPLASTIC	SNOWPLOWABLE

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

ROAD NAME	MARKING	MARKER
1. NC 197	PAINT	RAISED

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

V) PLACE AT LEAST TWO APPLICATIONS OF PAINT ON NEW ASPHALT WITH TEMPORARY TRAFFIC PATTERNS WHICH WILL REMAIN IN PLACE OVER THREE (3) MONTHS. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON SUFFICIENT DRYING TIME, AS DETERMINED BY THE ENGINEER.

## LOCAL NOTES

- 1) COORDINATE WITH THE ENGINEER AND CSX PERONNEL SO THE RAILROAD WORK CAN BE CONSTRUCTED WHILE THE ROAD IS CLOSED IN PHASE II, STEPS 2 AND 3.
- 2) INSTALL CHANGEABLE MESSAGE BOARDS WITH MESSAGE STATING "ROAD CLOSED" (MESSAGE #1) "MM/DD 7PM THRU MM/DD 6AM" (MESSAGE #2) AT LEAST 3 DAYS PRIOR TO CLOSING NC 197.
- 3) USE HEATED IN PLACE THERMOPLASTIC PAVEMENT MARKING CHARACTERS.
- 4) MAINTAIN DRIVEWAY ACCESS AS NEEDED WITH INCIDENTAL STONE.

APPROVED:	DATE: 5/3/00	<b>PROJECT NOTES</b>	
	SCALE: NONE		
	DATE: 12/03		
	DESIGN BY: DAH		
	REVIEWED BY: JDK		
		REVISIONS	





PROJ. REFERENCE NO.	SHEET NO.
B-1443	TCP-3

# PHASE I

**STEP 1)**  
INSTALL THE ADVANCE WORK ZONE WARNING SIGNS NO MORE THAN THREE DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION. IF WORK IS NOT PURSUED WITHIN ONE WEEK OF SIGN INSTALLATION, THE SIGNS SHALL BE REMOVED OR COVERED IN A METHOD APPROVED BY THE ENGINEER ACCORDING TO STANDARD SPECIFICATIONS SECTION 1110, AT NO COST TO THE DEPARTMENT (SEE TCP-3).

**STEP 2)**  
USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 7, AS NEEDED, COMPLETE THE FOLLOWING:  
- INSTALL PIPES AWAY FROM EXISTING NC 197.  
- INSTALL THE TEMPORARY 450 CSP.  
- INSTALL THE TEMPORARY DROP INLET (SEE RSD 840.15) AS SHOWN ON TCP-3.  
- AWAY FROM TRAFFIC CONSTRUCT DRIVEWAY -D-.

**STEP 3)**  
USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 7, PLACE TRAFFIC IN A ONE LANE TWO WAY PATTERN AND INSTALL THE TEMPORARY GUARDRAIL FROM STA. 13+47 +/- -L- TO STA. 13+55 -L- AS SHOWN ON TCP-3, INSET 1. RETURN TRAFFIC TO A TWO LANE, TWO WAY PATTERN BY THE END OF THE WORKDAY.

BEHIND TEMPORARY GUARDRAIL, INSTALL TEMPORARY SHORING FROM STA. 13+46 -L- TO STA. 13+51 -L- AND ALONG STA. 13+51 -L- TO CONSTRUCT ENDBENT #2.

AWAY FROM TRAFFIC, CONSTRUCT THE FOLLOWING:  
- THE BRIDGE STRUCTURE AND ENDBENTS (REMOVE TEMPORARY SHORING AFTER ENDBENT #2 IS COMPLETED).  
- -L- FROM STA. 12+32 +/- -L- TO STA. 12+40 -L- UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE.  
- -L- FROM STA. 13+48 +/- -L- TO STA. 13+67 +/- -L- (NOTE: DO NOT CONSTRUCT THE APPROACH SLAB AT ENDBENT #2 AT THIS TIME).

MAINTAINING TRAFFIC ON EXISTING -L- AND USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 7, AND BARRICADES, AS NEEDED, CONSTRUCT THE FOLLOWING UP TO THE EXISTING EDGE OF PAVEMENT (SEE TCP 4, SECTION A-A):  
- THE LEFT SIDE OF -L- FROM STA. 11+77 -L- TO STA. 12+20 +/- -L-.  
- THE RIGHT SIDE OF -L- FROM STA. 12+20 +/- -L- TO STA. 12+32 +/- -L-.

AFTER CONSTRUCTION OF STEP 3 IS COMPLETED INSTALL OFFSITE DETOUR SIGNS ALONG DETOUR ROUTES. IF WORK IS NOT PURSUED IMMEDIATELY AFTER SIGN INSTALLATION IS COMPLETED, THE SIGNS SHALL BE COVERED IN A METHOD APPROVED BY THE ENGINEER ACCORDING TO STANDARD SPECIFICATIONS, SECTION 1110, AT NO COST TO THE DEPARTMENT (SEE LOCAL NOTE 2 AND TCP-6&7 FOR OFFSITE DETOURS AND SIGN DESIGN).

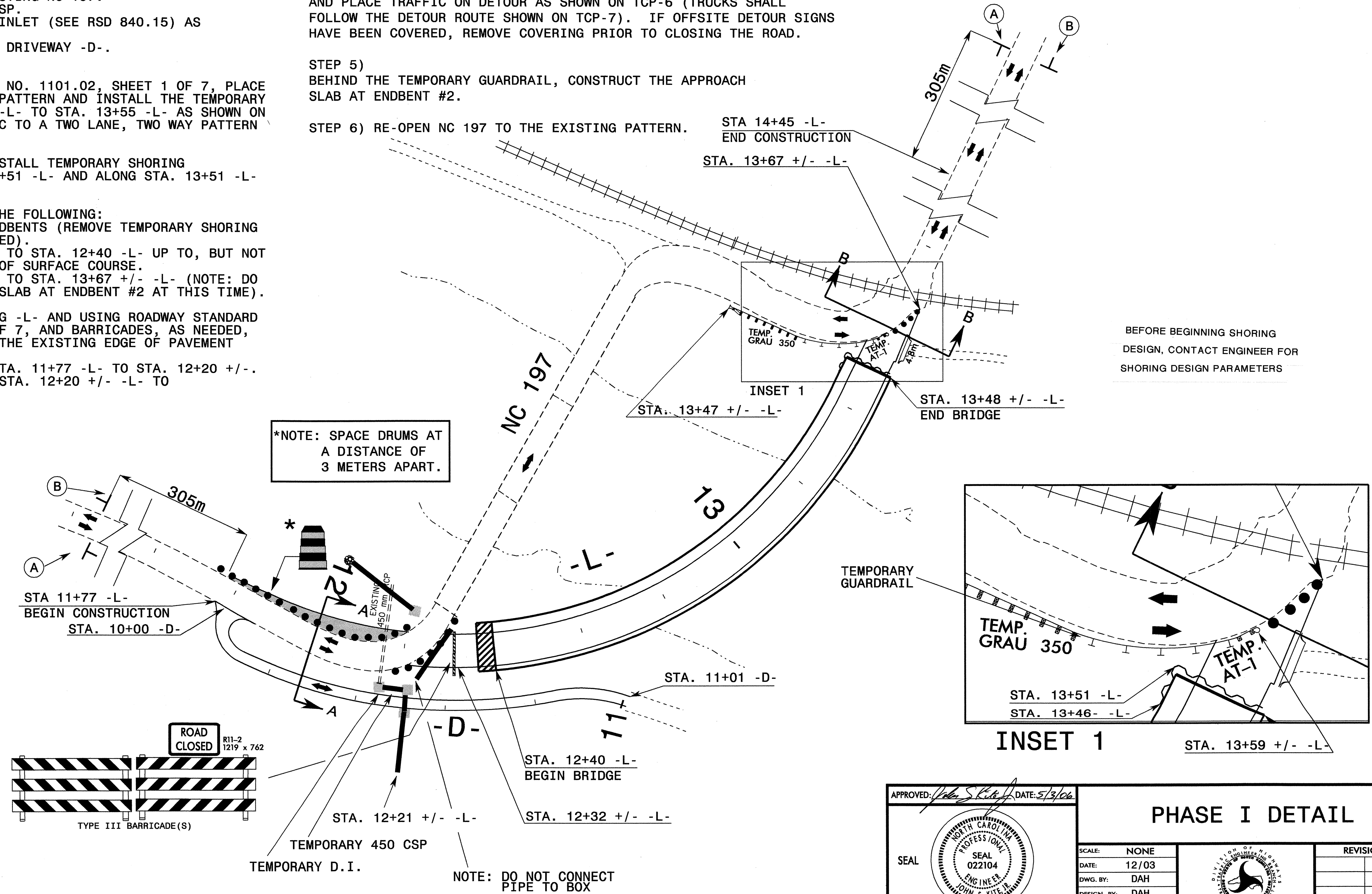
COMPLETE THE WORK REQUIRED IN PHASE I, STEP 4-6 FROM FRIDAY 7 P.M. TO MONDAY 6 A.M. (SEE SPECIAL PROVISIONS).

**STEP 4)**  
USING ROADWAY STANDARD DRAWING 1101.03, SHEET 1 OF 9, CLOSE NC 197 AND PLACE TRAFFIC ON DETOUR AS SHOWN ON TCP-6 (TRUCKS SHALL FOLLOW THE DETOUR ROUTE SHOWN ON TCP-7). IF OFFSITE DETOUR SIGNS HAVE BEEN COVERED, REMOVE COVERING PRIOR TO CLOSING THE ROAD.

**STEP 5)**  
BEHIND THE TEMPORARY GUARDRAIL, CONSTRUCT THE APPROACH SLAB AT ENDBENT #2.

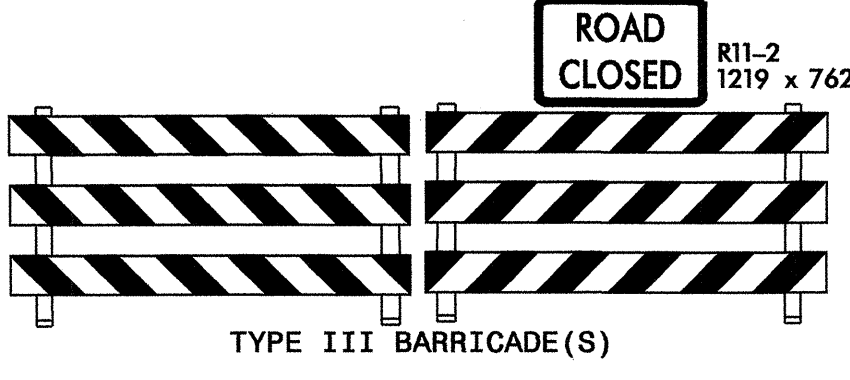
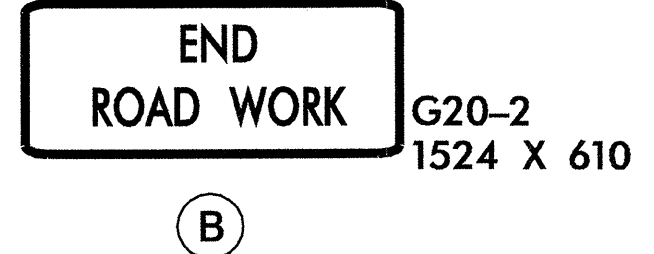
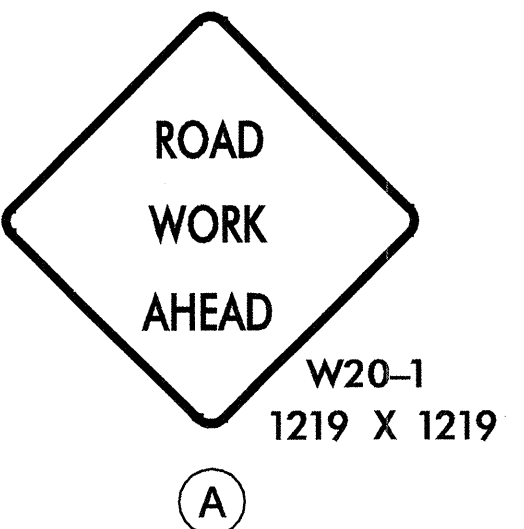
**STEP 6)** RE-OPEN NC 197 TO THE EXISTING PATTERN.

\* TIE TO EXISTING MARKINGS



\*NOTE: SPACE DRUMS AT A DISTANCE OF 3 METERS APART.

BEFORE BEGINNING SHORING DESIGN, CONTACT ENGINEER FOR SHORING DESIGN PARAMETERS



APPROVED: *John S. Kitter* DATE: 5/3/06

SEAL  
 PROFESSIONAL ENGINEER  
 JOHN S. KITTER  
 022104

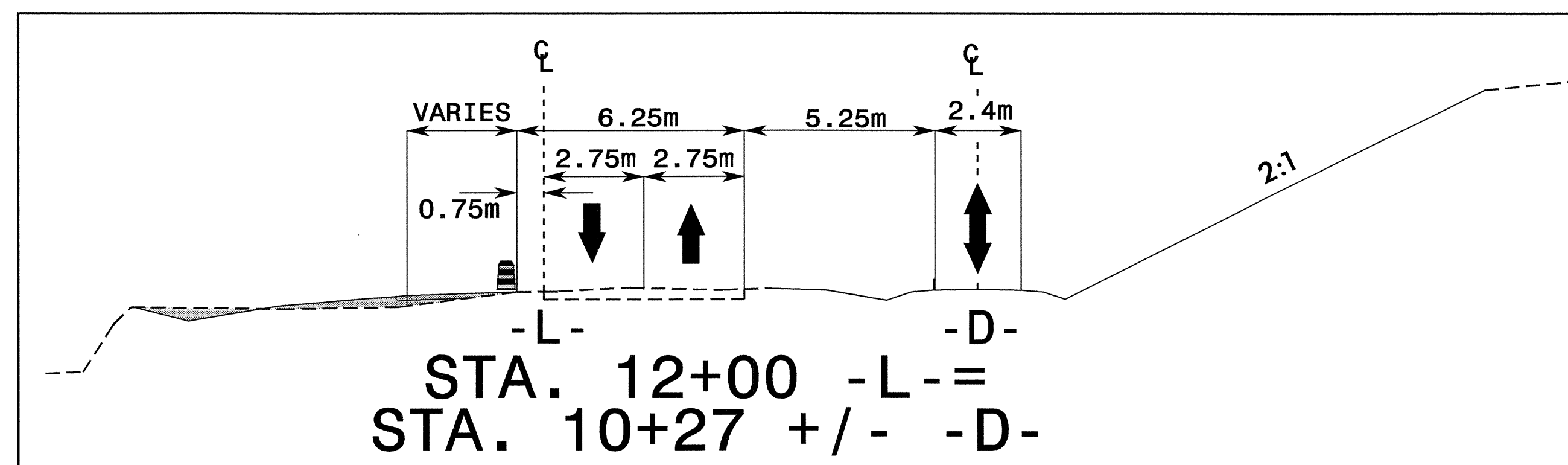
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DESIGN BY: DAH		
REVIEWED BY: JDK		

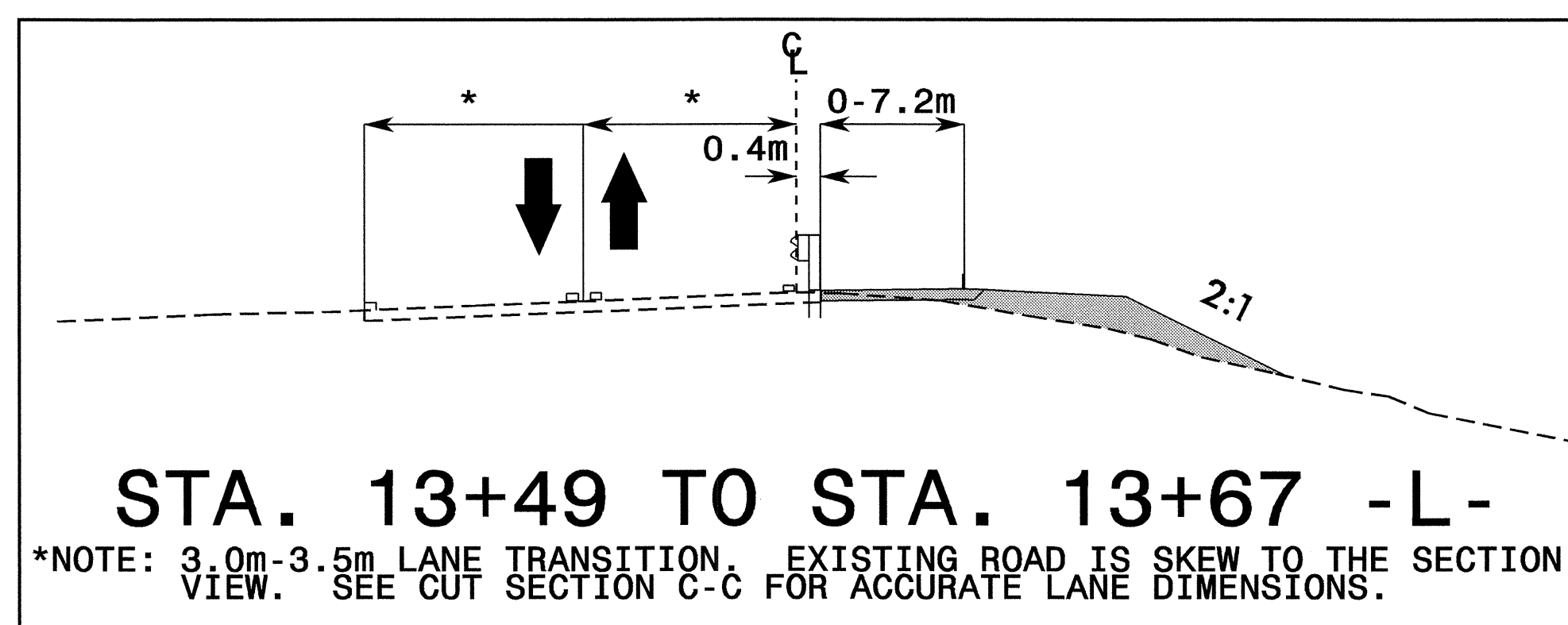
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PROJ. REFERENCE NO.	SHEET NO.
B-1443	TCP-4



**SECTION A-A**



**SECTION B-B**

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REVISIONS							



PROJ. REFERENCE NO.	SHEET NO.
B-1443	TCP-5



## PHASE II

STEP 1)  
UPON THE PROPER CURING TIME FOR THE APPROACH SLAB AT ENDBENT #2 NC 197 IS TO BE RE-CLOSED ACCORDING TO STEP 2 (SEE LOCAL NOTES 1 & 2 AND TCP-6 FOR OFFSITE DETOURS AND SIGN DESIGN).

COMPLETE THE WORK REQUIRED IN PHASE II, STEPS 2 AND 3 FROM 7 P.M. FRIDAY TO 6 A.M. MONDAY (SEE SPECIAL PROVISIONS).

STEP 2)  
USING ROADWAY STANDARD DRAWING (RSD) 1101.03, SHEET 1 OF 9, CLOSE NC 197 AND PLACE TRAFFIC ON DETOUR AS SHOWN ON TCP-6 (TRUCKS SHALL FOLLOW THE DETOUR ROUTE SHOWN ON TCP-7). IF OFFSITE DETOUR SIGNS HAVE BEEN COVERED, REMOVE COVERING PRIOR TO CLOSING THE ROAD.

STEP 3)  
INSTALL THE REMAINING PROPOSED DRAINAGE INLET AND CROSSPIPE AT STA. 12+21 +/- -L- AND REMOVE THE TEMPORARY DRAINAGE SYSTEM.

COMPLETE CONSTRUCTION OF -L- FROM STA. 11+77 -L- TO STA. 12+40 -L- AND FROM STA. 13+48 +/- -L- TO STA. 13+67 +/- -L- UP TO, BUT NOT INCLUDING, THE FINAL SURFACE COURSE.

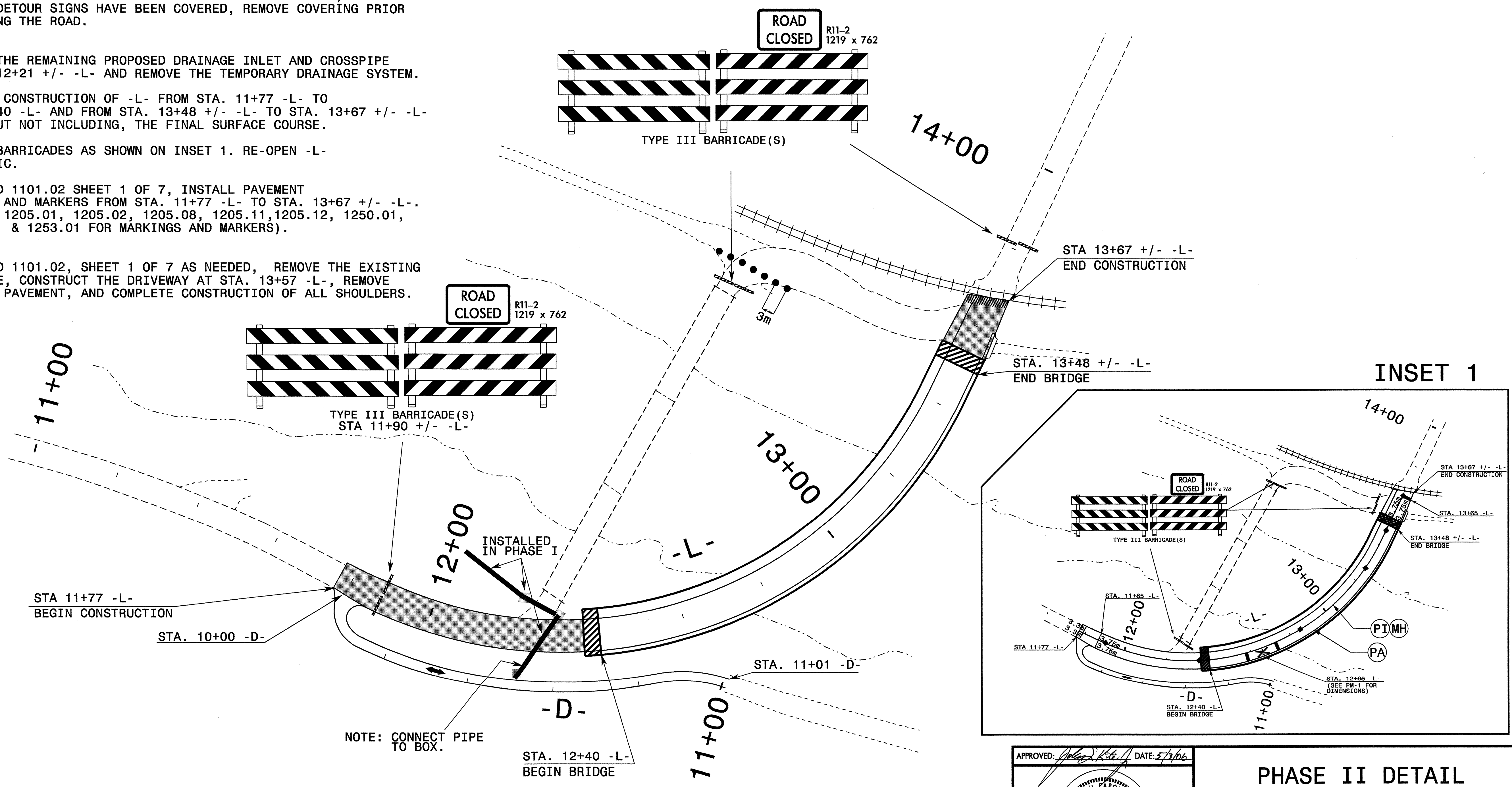
INSTALL BARRICADES AS SHOWN ON INSET 1. RE-OPEN -L- TO TRAFFIC.

USING RSD 1101.02 SHEET 1 OF 7, INSTALL PAVEMENT MARKINGS AND MARKERS FROM STA. 11+77 -L- TO STA. 13+67 +/- -L-. (SEE RSD 1205.01, 1205.02, 1205.08, 1205.11, 1205.12, 1250.01, 1251.01, & 1253.01 FOR MARKINGS AND MARKERS).

STEP 4)  
USING RSD 1101.02, SHEET 1 OF 7 AS NEEDED, REMOVE THE EXISTING STRUCTURE, CONSTRUCT THE DRIVEWAY AT STA. 13+57 -L-, REMOVE EXISTING PAVEMENT, AND COMPLETE CONSTRUCTION OF ALL SHOULDERS.

STEP 5)  
USING RSD 1101.02, SHEET 1 OF 7, INSTALL THE FINAL LAYER OF SURFACE COURSE, PAVEMENT MARKINGS, AND PAVEMENT MARKERS FROM STA. 11+77 -L- TO STA. 14+45 -L- (SEE PM-1 FOR PAVEMENT MARKINGS AND MARKERS). REFER TO RSD 1205.01, 1205.02, 1205.08, 1205.11, 1205.12, 1250.01, & 1253.01.

STEP 6)  
REMOVE ALL TRAFFIC CONTROL DEVICES AND ADVANCE WARNING SIGNS.



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AT WZTC2402  
dwblissette

APPROVED: *[Signature]* DATE: 5/3/06

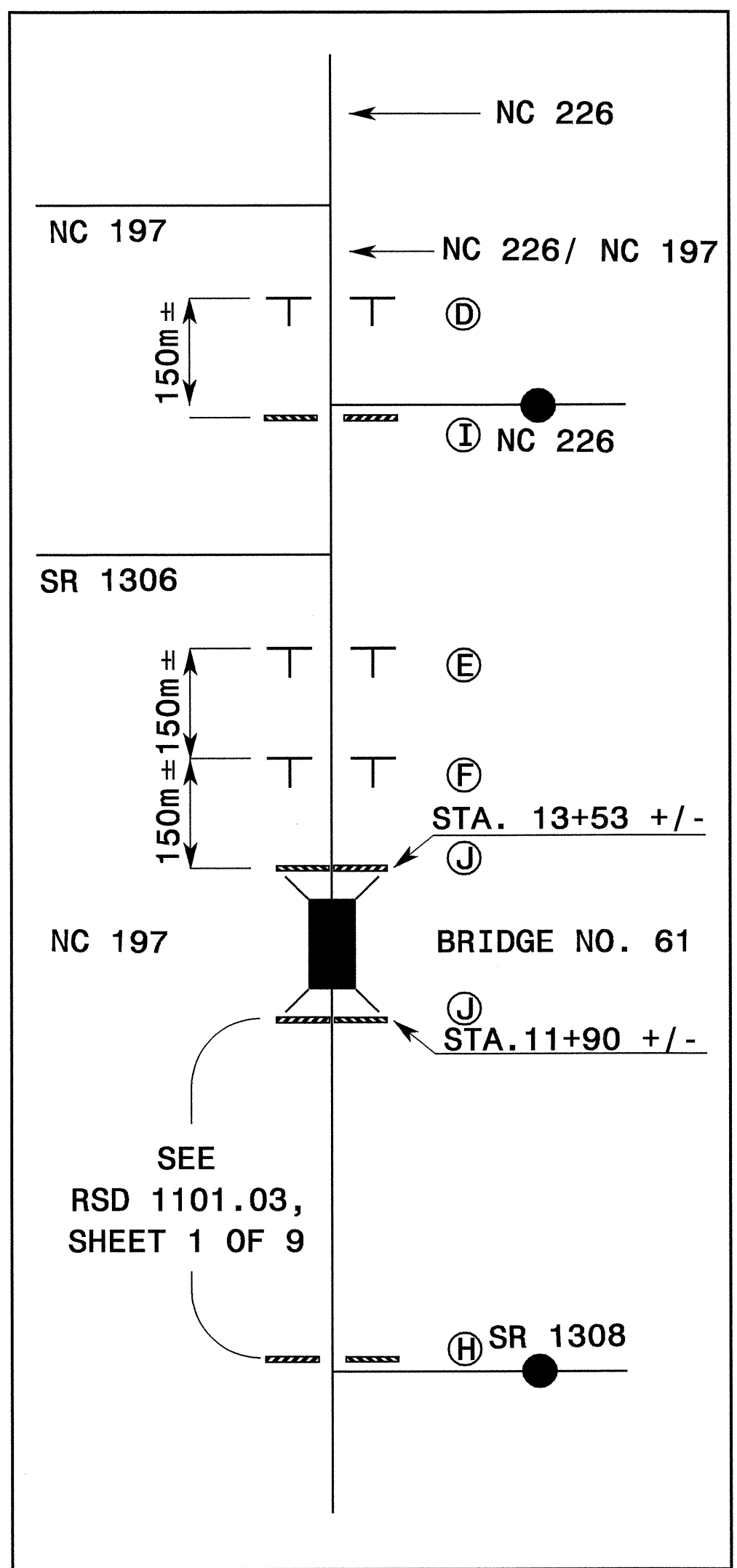
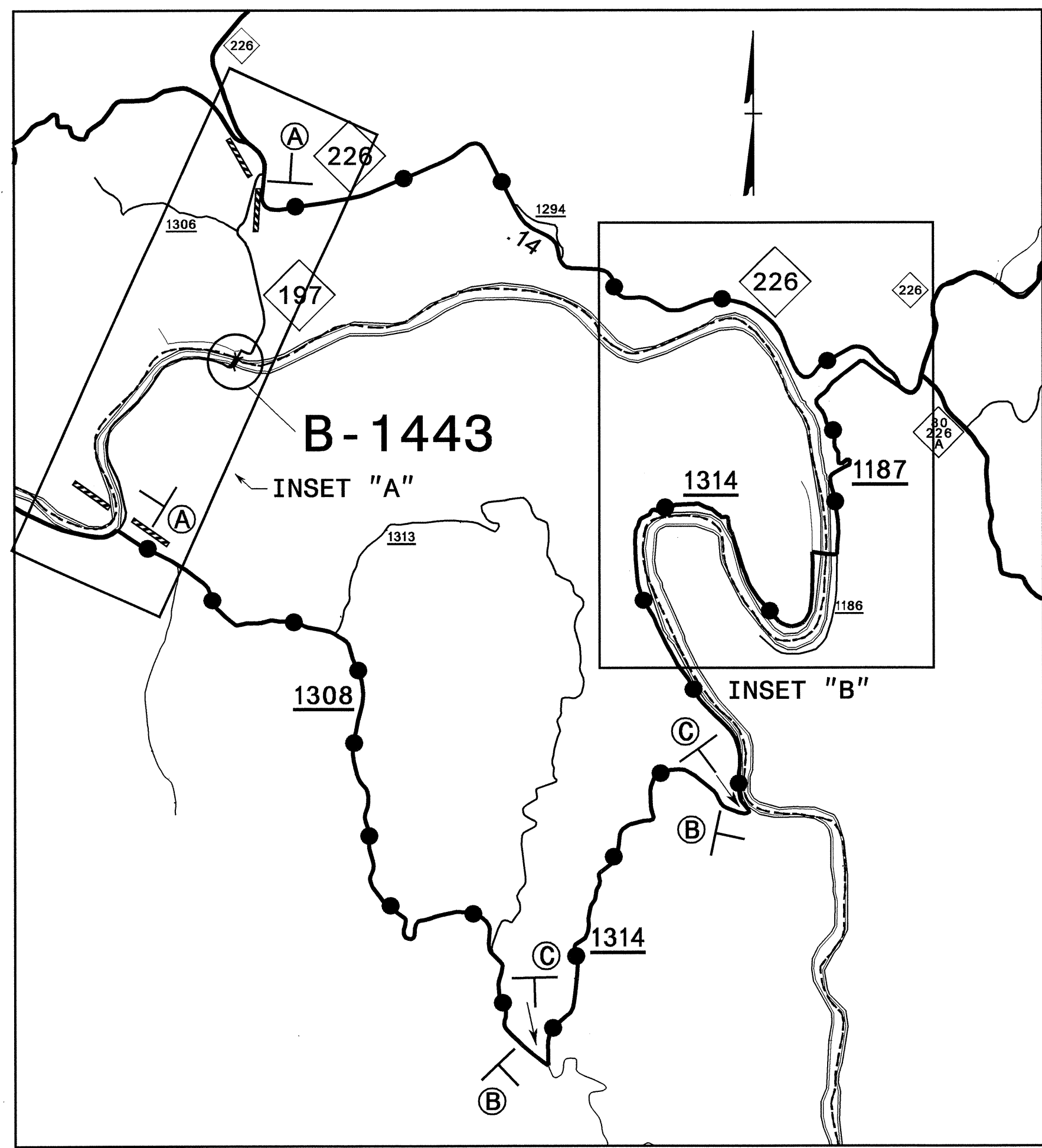
SEAL

PHASE II DETAIL	
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DWG. BY: DAH	
DESIGN BY: DAH	
REVIEWED BY: JDK	
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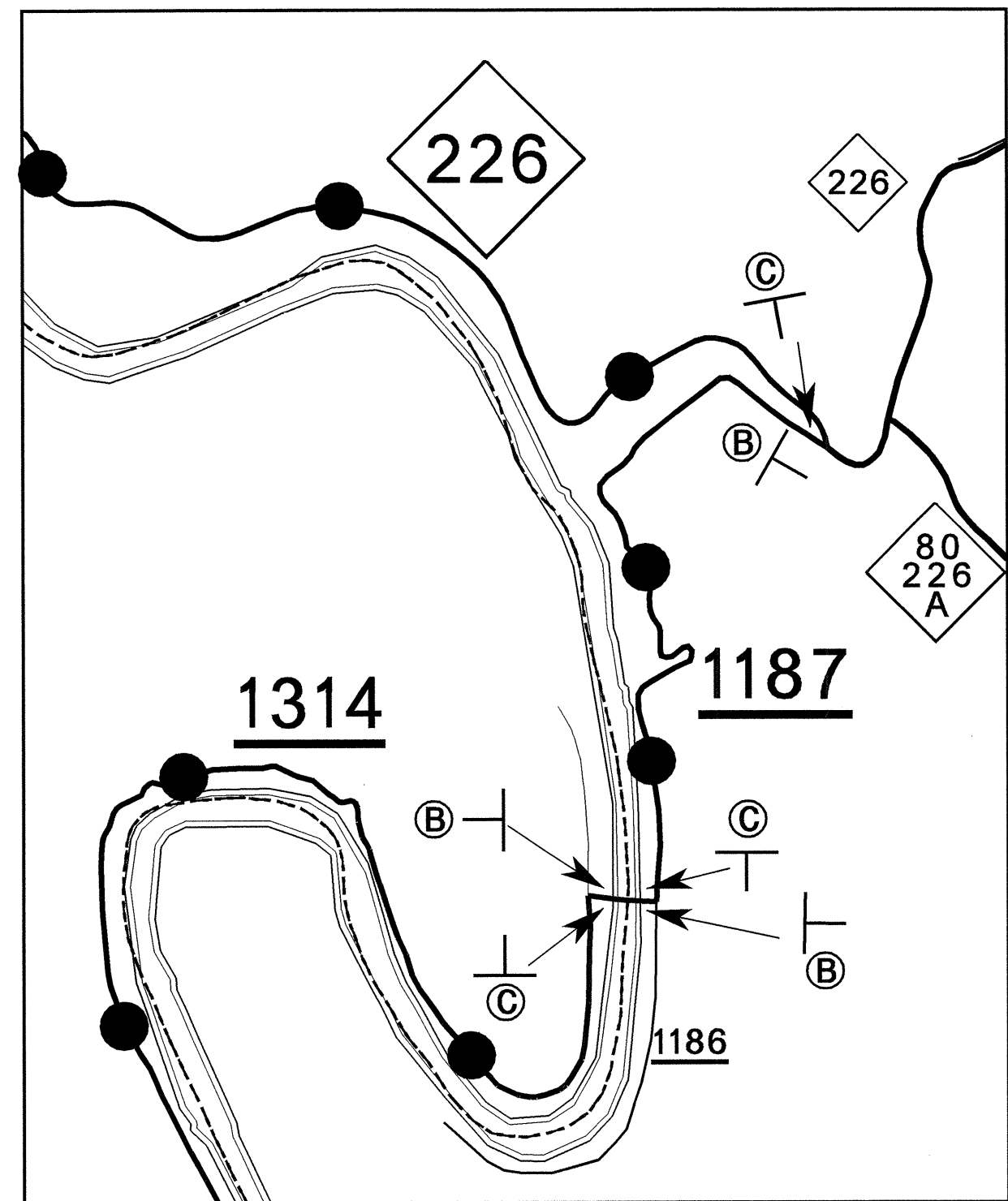


PROJ. REFERENCE NO.	SHEET NO.
B-1443	TCP-6

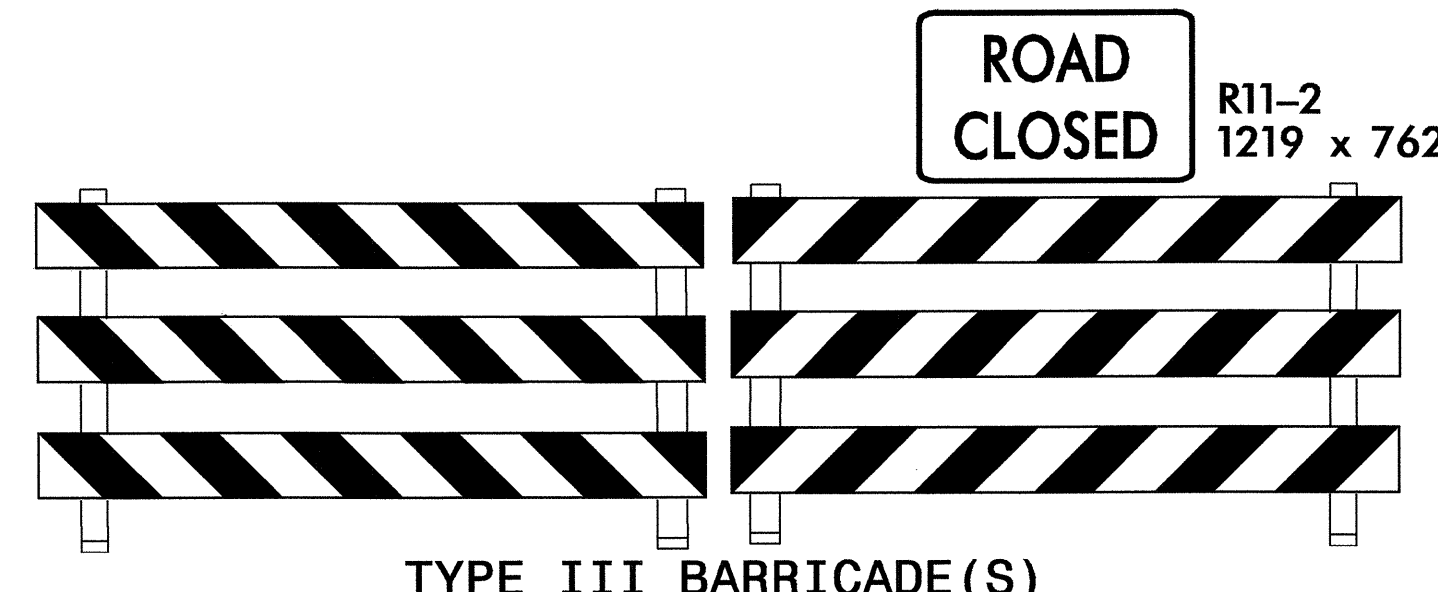


REFER TO ROADWAY STANDARD  
DRAWING 1101.03, SHEET 1 OF 9  
FOR APPLICABLE NOTES.

INSET "A"

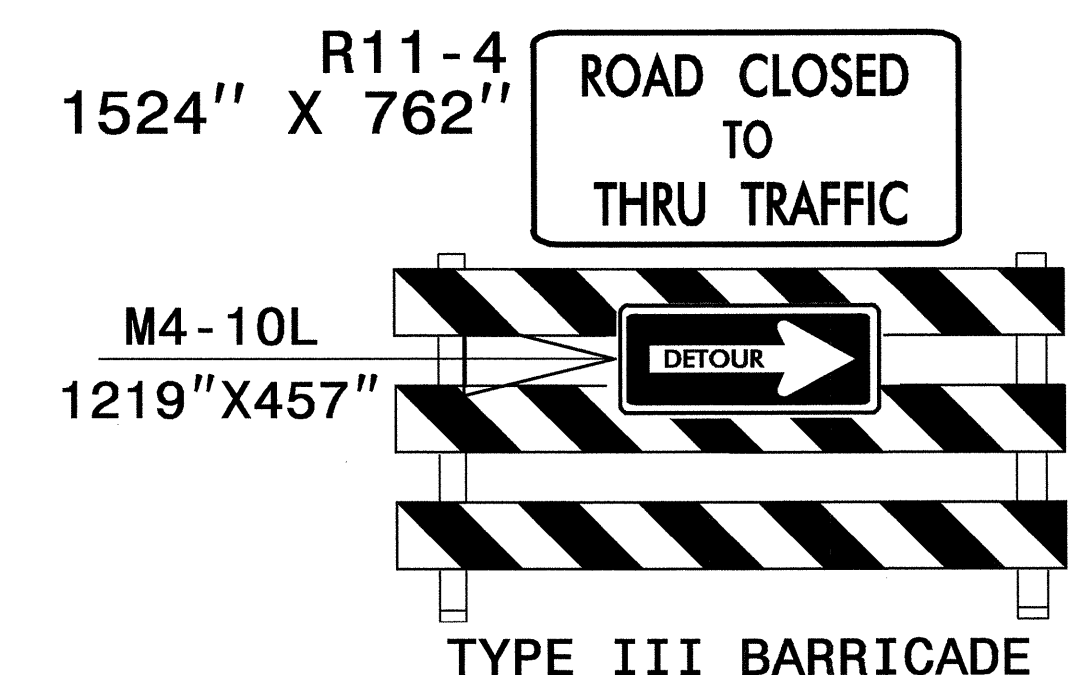
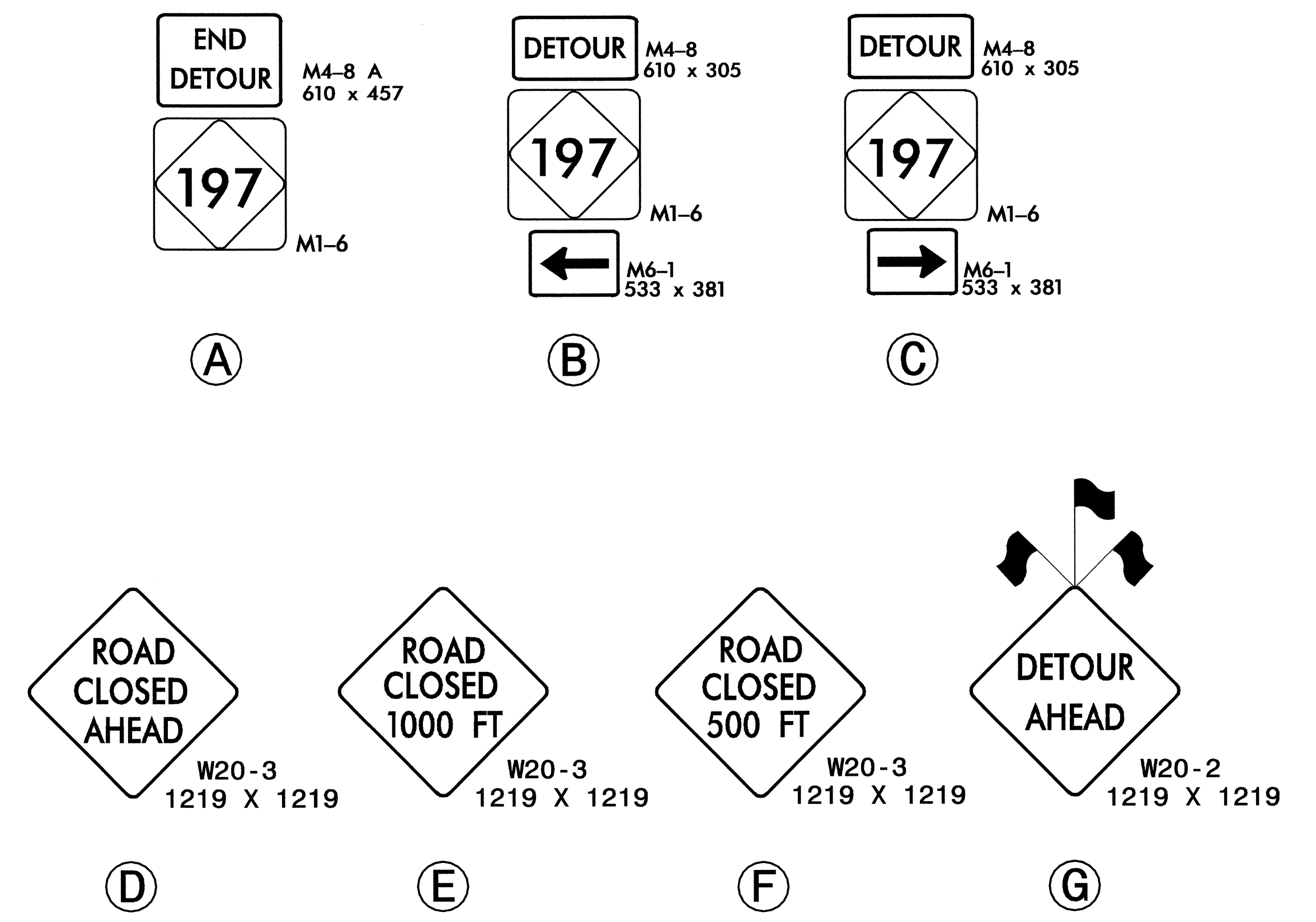


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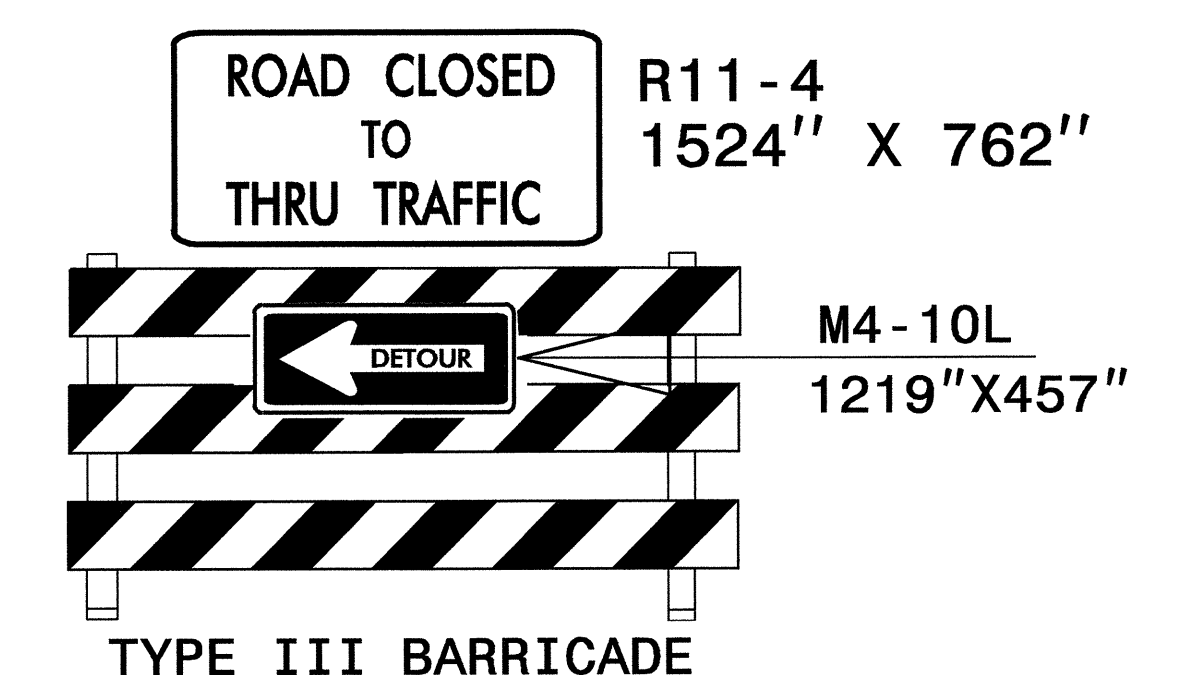
TYPE III BARRICADE(S)

J



TYPE III BARRICADE

H



TYPE III BARRICADE

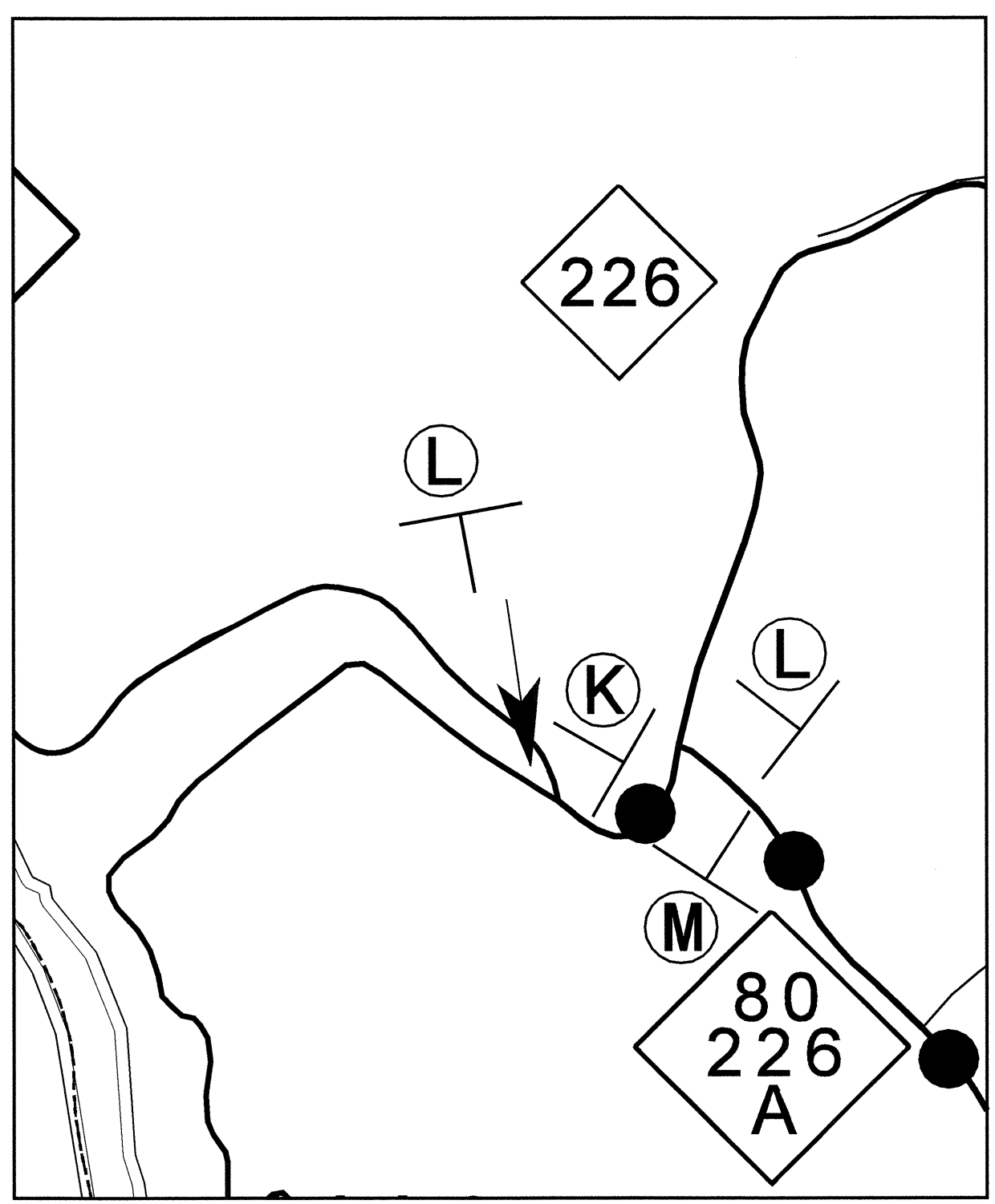
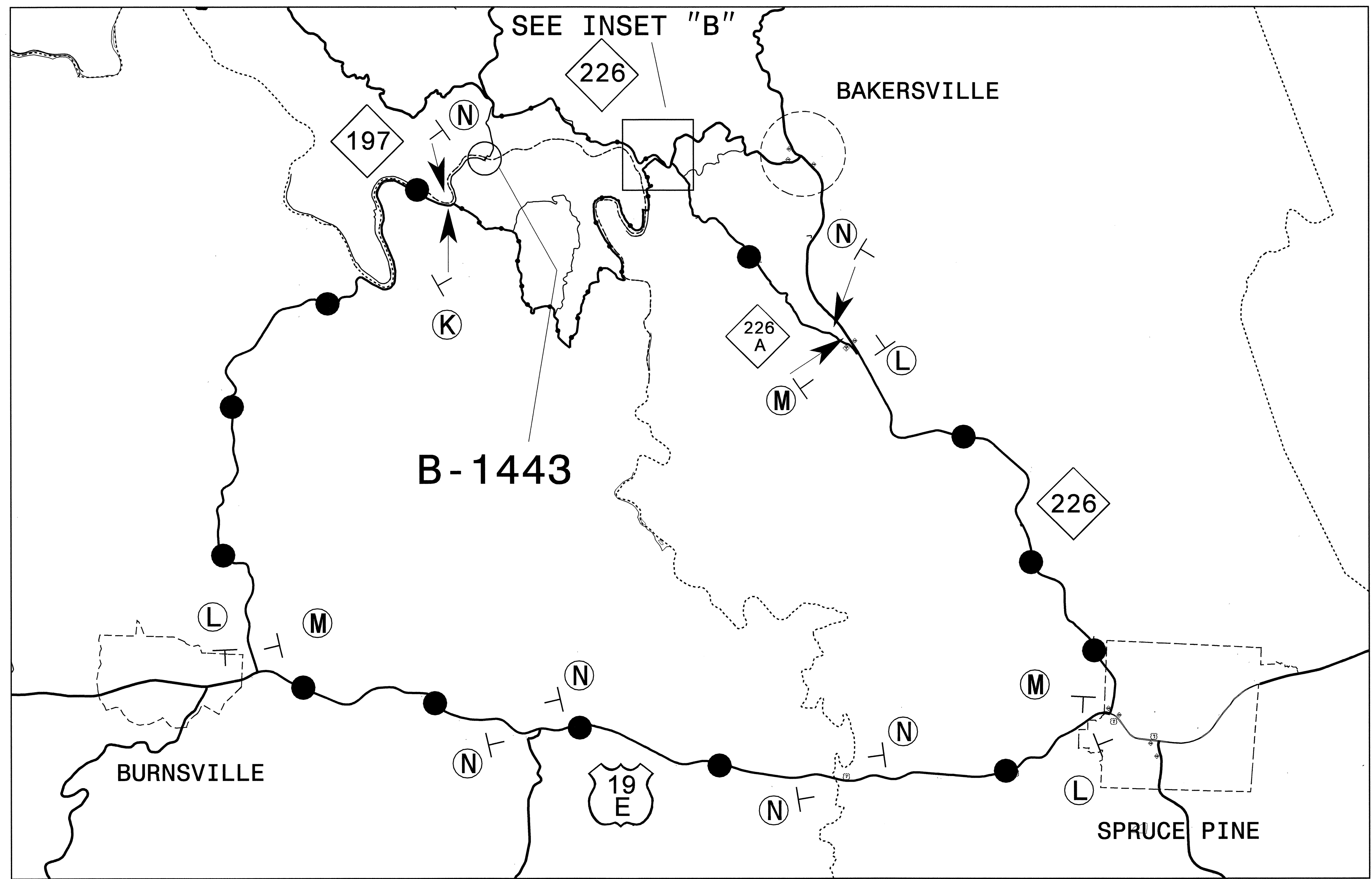
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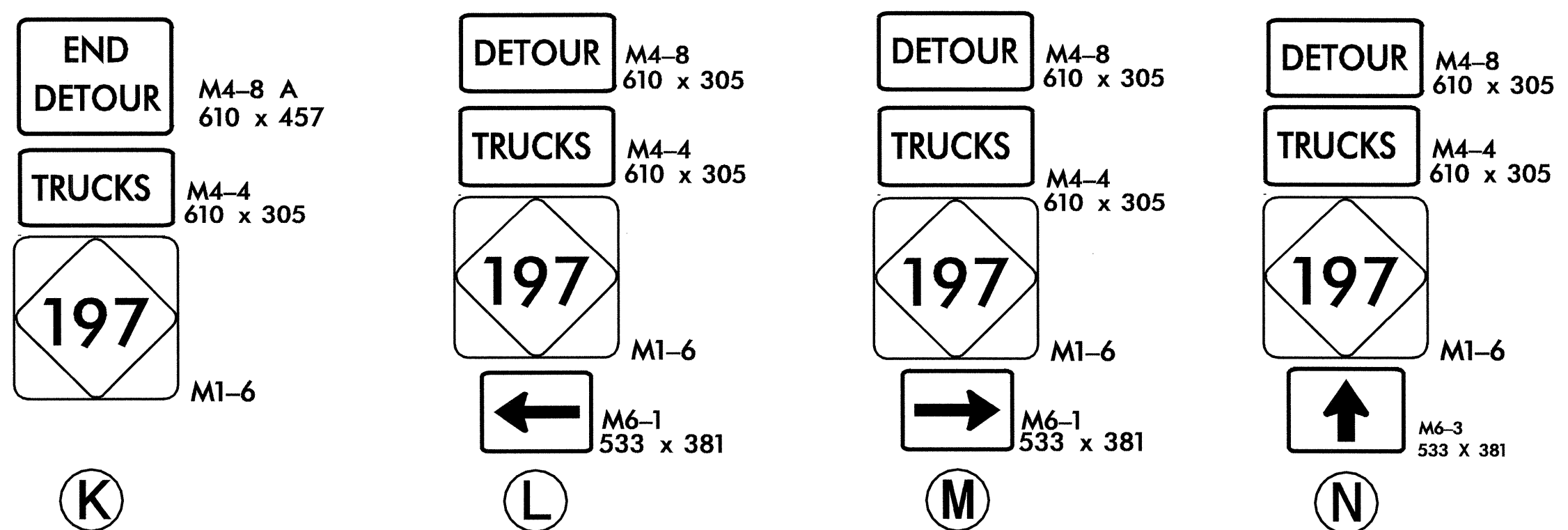
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PROJ. REFERENCE NO.	SHEET NO.
B-1443	TCP-7



INSET "B"



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APPROVED: DATE: 12/6/04

SEAL

### OFFSITE TRUCK DETOUR

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DATE: 12/03		
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DESIGN BY: DAH		
REVIEWED BY: JDK		

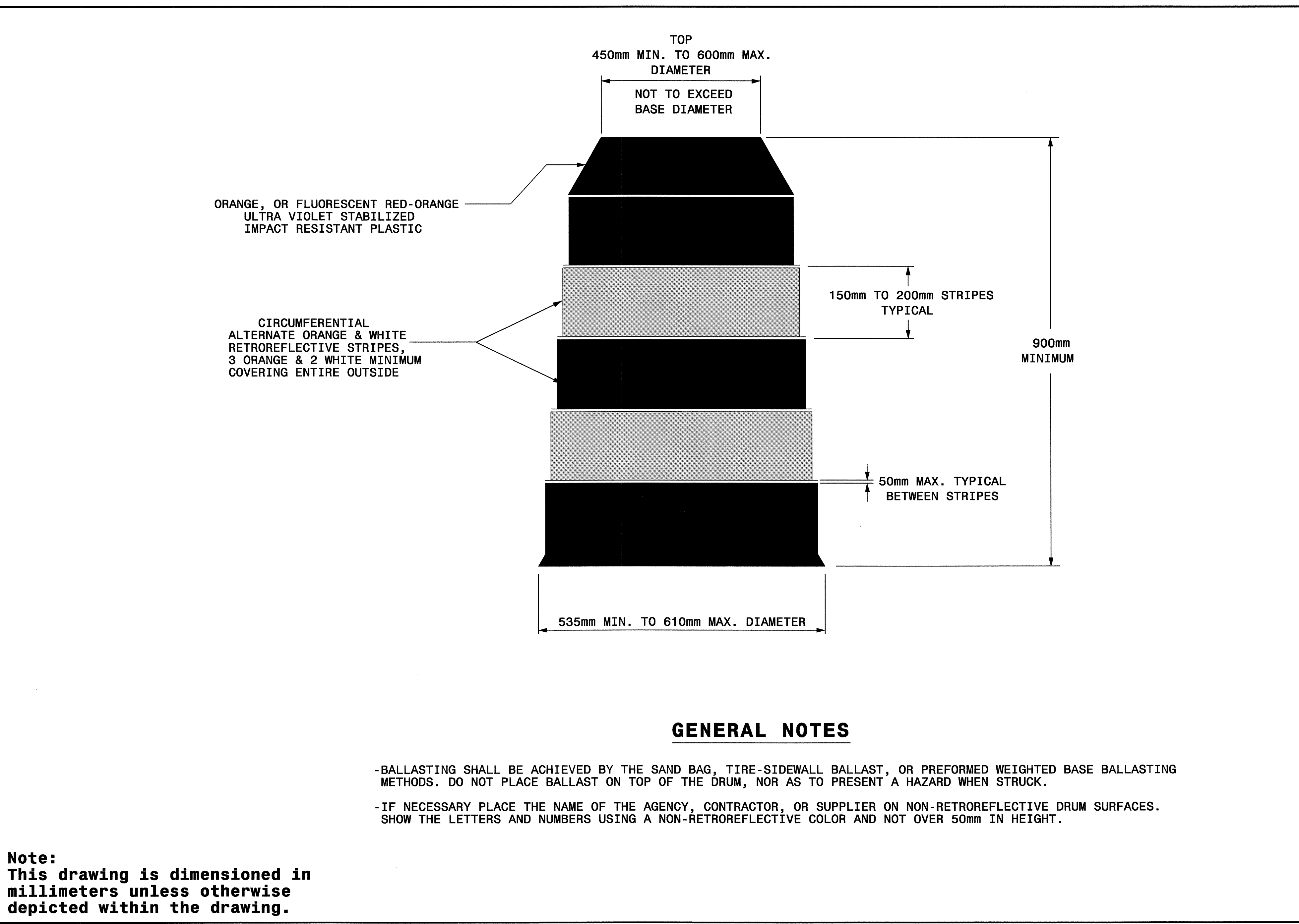


PROJ. REFERENCE NO.	SHEET NO.
B-1443	TCP-8

STATE OF NORTH CAROLINA  
 DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

1-02  
 METRIC STANDARD DRAWING FOR  
**DRUMS**

SHEET 1 OF 1  
**1130D01**



STATE OF NORTH CAROLINA  
 DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

1-02  
 METRIC STANDARD DRAWING FOR  
**DRUMS**

SHEET 1 OF 1  
**1130D01**

**GENERAL NOTES**

- BALLASTING SHALL BE ACHIEVED BY THE SAND BAG, TIRE-SIDEWALL BALLAST, OR PREFORMED WEIGHTED BASE BALLASTING METHODS. DO NOT PLACE BALLAST ON TOP OF THE DRUM, NOR AS TO PRESENT A HAZARD WHEN STRUCK.
- IF NECESSARY PLACE THE NAME OF THE AGENCY, CONTRACTOR, OR SUPPLIER ON NON-RETROREFLECTIVE DRUM SURFACES. SHOW THE LETTERS AND NUMBERS USING A NON-RETROREFLECTIVE COLOR AND NOT OVER 50mm IN HEIGHT.

**Note:**  
 This drawing is dimensioned in millimeters unless otherwise depicted within the drawing.

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APPROVED: SEAL 	DATE: 12/16/02	<b>REPLACEMENT DETAIL FOR          RSD 1130.01</b>				
SCALE: NONE DATE: 8/02 DWG. BY: MMM DESIGN BY: MMM REVIEWED BY: MMM		REVISIONS <table border="1" style="width: 100%; height: 40px;"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>				

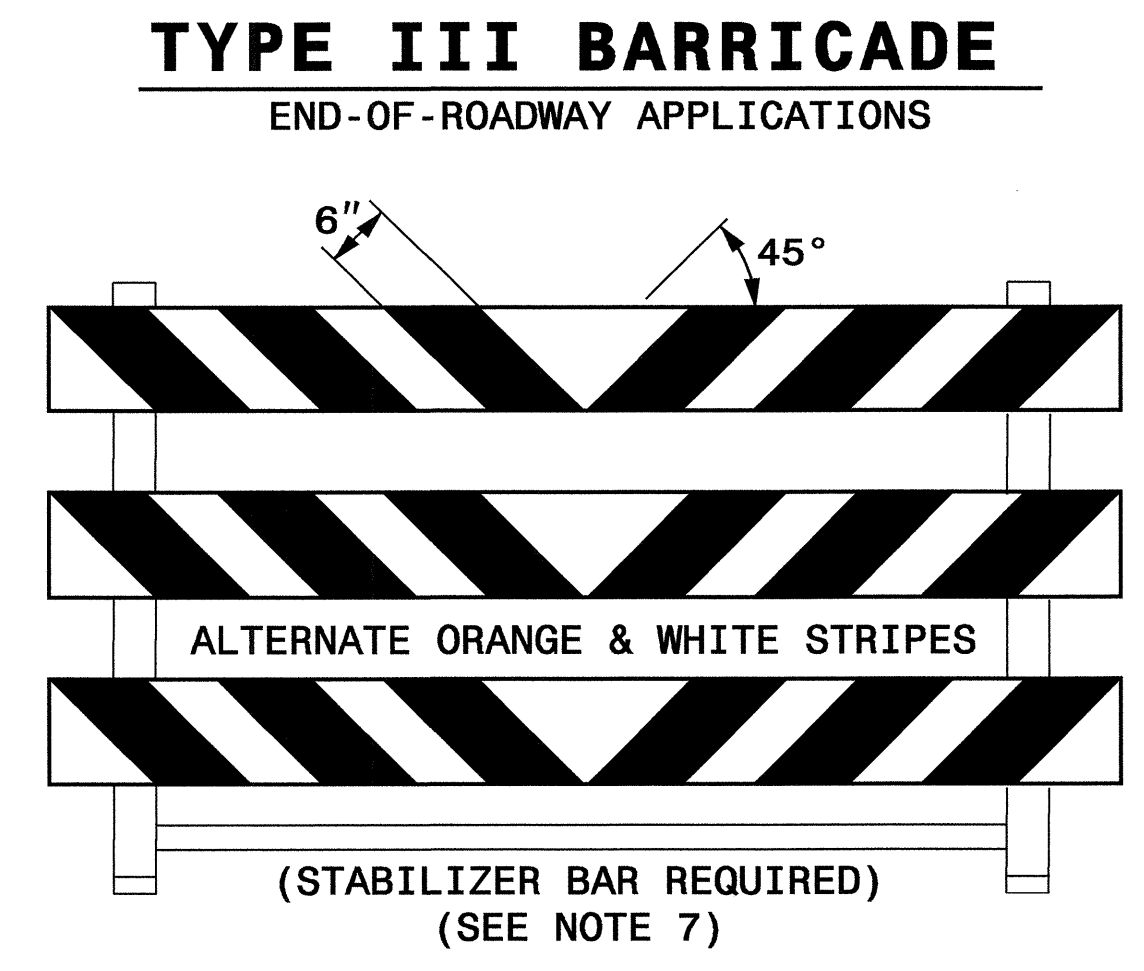
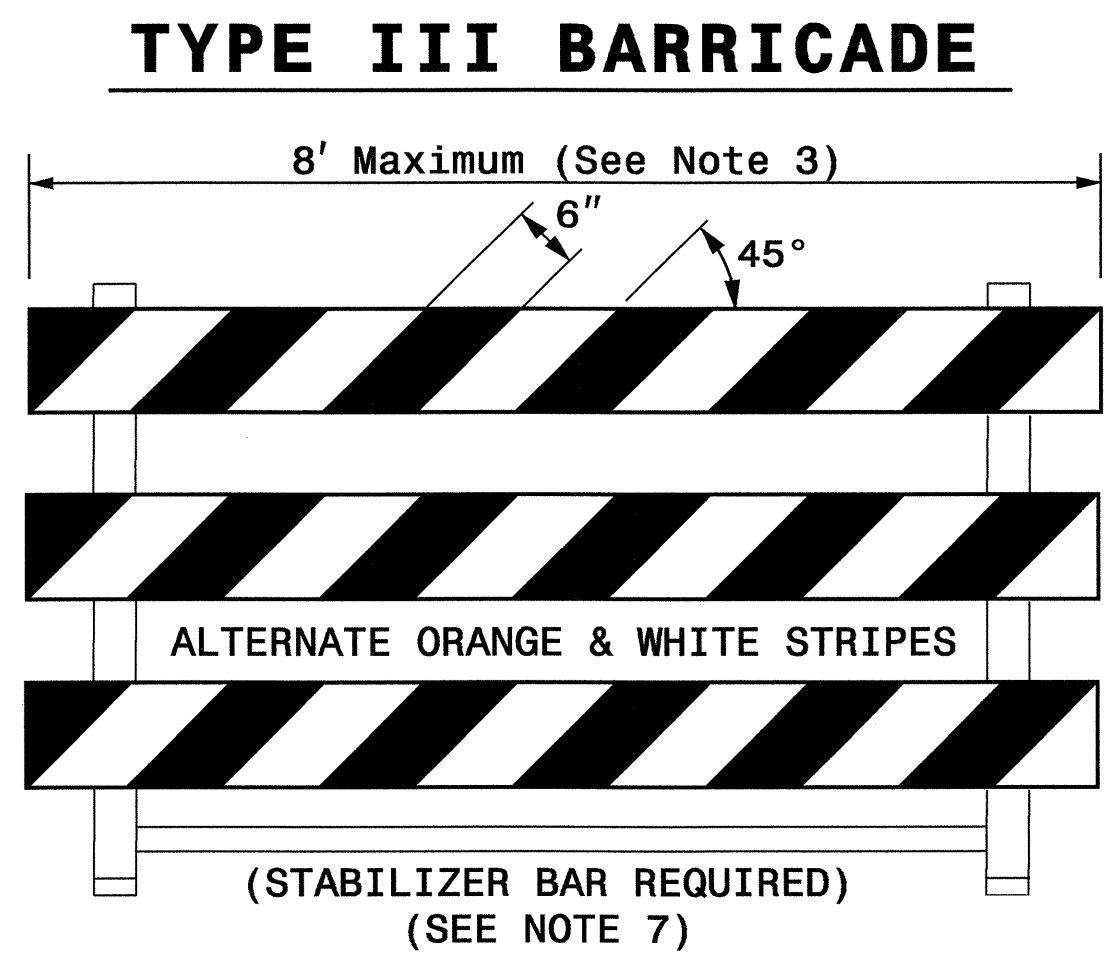


STATE OF NORTH CAROLINA  
 DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

1-05

ENGLISH STANDARD DRAWING FOR  
**BARRICADES**  
 TYPE-III

SHEET 1 OF 1  
**1145D01**



STATE OF NORTH CAROLINA  
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1-05

ENGLISH STANDARD DRAWING FOR  
**BARRICADES**  
 TYPE-III

SHEET 1 OF 1  
**1145D01**

**GENERAL NOTES**

- 1) HORIZONTAL RAILS FOR TYPE-III BARRICADES MAY BE HOLLOW/CORRUGATED EXTRUDED RIGID POLYOLEFIN, HIGH DENSITY POLYETHYLENE, OR OTHER NCDOT APPROVED RAILS. BARRICADE RAILS OF FRANGIBLE PLASTICS SUCH AS PVC MAY NOT BE USED. IF APPROVED PLASTIC TYPE RAILS ARE USED, THEY MUST BE FLAME TREATED BY THE MANUFACTURER SO THAT REFLECTIVE SHEETING MAY ADHERE PROPERLY.
- 2) BARRICADES AND BARRICADE RAILS ARE APPROVED AS A SINGLE UNIT.
- 3) BARRICADE SHALL BE LIMITED TO A MAXIMUM LENGTH OF 8 FT UNLESS NCHRP 350 CRASH TESTED AND NCDOT APPROVED.
- 4) ONLY NCDOT APPROVED COMPOSITE AND ROLL-UP SIGNS MAY BE MOUNTED ON THE BARRICADE.
- 5) SIGNS MOUNTED ON BARRICADES SHOULD NOT COVER MORE THAN 50 PERCENT OF THE TOP TWO RAILS OR 33 PERCENT OF THE TOTAL AREA OF THE THREE RAILS.
- 6) USE TYPE VII, VIII OR IX SHEETING ON BOTH SIDES OF THE RAILS.
- 7) BARRICADE MUST BE NCHRP 350 AND NCDOT APPROVED WITH STABILIZER BAR OR ADEQUATE LATERAL BRACING.
- 8) ASSEMBLY OF THE GENERIC BARRICADES MUST BE SELF CERTIFIED BY THE ASSEMBLER.
- 9) BARRICADES USED TO CLOSE A ROADWAY SHALL EXTEND ACROSS THE ENTIRE ROADWAY. WHERE LOCAL TRAFFIC MUST BE MAINTAINED, THEY MAY BE PLACED IN A STAGGERED PATTERN.
- 10) STRIPES ON WORK ZONE BARRICADE RAILS SHALL BE ALTERNATE ORANGE AND WHITE RETROREFLECTIVE STRIPES, SLOPED DOWNWARD TOWARDS THE SIDE WHICH TRAFFIC IS TO PASS OR TURN IN DETOURING. WHERE NO TURNS ARE INTENDED, THE STRIPES SHOULD SLOPE DOWNWARD TOWARD THE CENTER OF THE BARRICADE OR BARRICADES. USE RED AND WHITE STRIPES FOR PERMANENT BARRICADES.
- 11) SEE APPROVED PRODUCTS LIST FOR MANUFACTURERS OF APPROVED BARRICADES.
- 12) PLACE MANUFACTURER'S NAME AND FEDERAL HIGHWAY ADMINISTRATION'S NCHRP 350 APPROVAL LETTER NUMBER ON BARRICADE.
- 13) USE SANDBAGS PLACED ON THE LOWER PART OF THE FRAME FOR BALLASTING. DO NOT PLACE SANDBAGS ON TOP OF A STRIPED RAIL. DO NOT BALLAST BARRICADES BY HEAVY OBJECTS SUCH AS ROCKS, CHUNKS OF CONCRETE OR OTHER ITEMS THAT WOULD CAUSE DAMAGE IF THE BARRICADE IS STRUCK BY A VEHICLE.

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