

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO.	SHEET NO.
B-3611	TCP-1

**PLAN FOR PROPOSED  
TRAFFIC CONTROL, MARKING & DELINEATION  
BEAUFORT COUNTY**

B-3611

**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 JULY 2006 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
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
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
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.11	PAVEMENT MARKINGS - RAILROAD CROSSINGS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - (TEMPORARY)

**INDEX OF SHEETS**

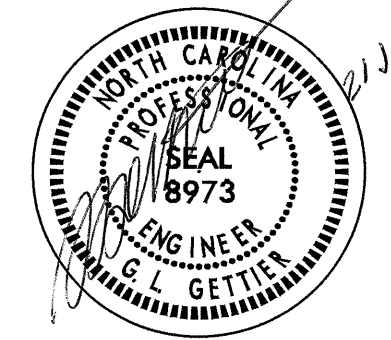
SHEET NO.	TITLE
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND INDEX OF SHEETS
TCP-2	PROJECT NOTES
TCP-3	PHASING
TCP-4	PHASE I DETAILS - -DET- LINE - TEMPORARY SHORING NOTES
TCP-5	PHASE I - -DET- LINE - TEMPORARY SLOPES
TCP-6	PHASE I - -DET- LINE - TEMPORARY SLOPES
TCP-7	PHASE I - -DET- LINE - TEMPORARY PAVEMENT MARKINGS
TCP-8	PHASE II DETAILS - -L- LINE - TEMPORARY PAVEMENT MARKINGS
TCP-9	PHASE II DETAILS - -L- LINE - TEMPORARY PAVEMENT MARKINGS
TCP-10	PHASE II - -L- LINE - TEMPORARY SLOPES
TCP-11	PHASE II - -L- LINE - TEMPORARY SLOPES
TCP-12	PHASE III - OFF-SITE DETOUR
TCP-13	PHASE III DETAILS - -L- LINE - TEMPORARY PAVEMENT MARKINGS
TCP-14	PHASE III DETAILS - -L- LINE - TEMPORARY PAVEMENT MARKINGS
TCP-15	ADVANCE WORK ZONE WARNING SIGNS
TCP-16	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

**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

TIP PROJECT:

21-JAN-2010 11:56 \\dot\dfs\o01\Pro\TIP\Projects-B\B3611\Traffic\TrafficControl\TCP\B3611\_TC\_gen\_tcp01.dgn scotts AT WZTC237457

APPROVED: _____ DATE: _____	PLAN PREPARED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT
SEAL 	J. S. BOURNE, P.E. TRAFFIC CONTROL ENGINEER
	G. L. GETTIER, P.E. TRAFFIC CONTROL PROJECT ENGINEER
	J. W. GILSTRAP TRAFFIC CONTROL PROJECT DESIGN ENGINEER
	S. B. COATS TRAFFIC CONTROL DESIGN ENGINEER

# PROJECT NOTES

PROJ. REFERENCE NO.	SHEET NO.
B-3611	TCP-2

## 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 DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

NC 99 (-L-)

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 4:00 P.M. DECEMBER 31st TO 9:00 A.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 9:00 A.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 4:00 P.M. THURSDAY AND 9:00 A.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 4:00 P.M. FRIDAY TO 9:00 A.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 4:00 P.M. THE DAY BEFORE INDEPENDENCE DAY AND 9:00 A.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 4:00 P.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 A.M. THE TUESDAY AFTER INDEPENDENCE DAY.

6. FOR LABOR DAY, BETWEEN THE HOURS OF 4:00 P.M. FRIDAY AND 9:00 A.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 4:00 P.M. TUESDAY TO 9:00 A.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 4:00 P.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 A.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

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

LANE AND SHOULDER CLOSURE REQUIREMENTS

- C) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED, OR AS DIRECTED BY THE ENGINEER.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.  
WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

- G) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- H) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

I) 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.

J) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 350 FT. IN ADVANCE AND EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

L) 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.

M) PROVIDE PERMANENT SIGNING.

N) 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.

O) 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.

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

TRAFFIC BARRIER

Q) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRAFFIC CONTROL PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION, PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE/RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW, BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW, BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

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

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

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

S) 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, WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED, REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.

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

PAVEMENT MARKINGS AND MARKERS

U) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS SHOWN IN THE PAVEMENT MARKING PLAN.

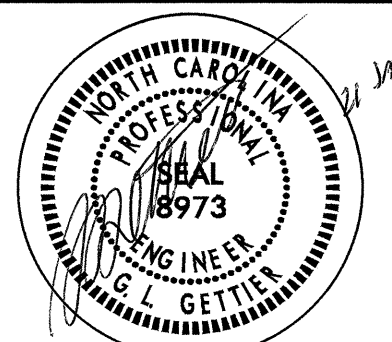

V) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
NC 99	PAINT	TEMPORARY
PROPOSED	COLD APPLIED PLASTIC	TEMPORARY
STRUCTURE	TYPE IV (TAPE)	

W) 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.

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

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

APPROVED: _____ DATE: _____  	<h2 style="margin: 0;">PROJECT NOTES</h2>	<table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <tr> <th colspan="2" style="text-align: center;">REVISIONS</th> </tr> <tr> <td style="width: 50%; height: 20px;"> </td> <td style="width: 50%;"> </td> </tr> <tr> <td style="width: 50%; height: 20px;"> </td> <td style="width: 50%;"> </td> </tr> </table>	REVISIONS					
REVISIONS								
SCALE: NONE DATE: 12-29-09 DWG. BY: SBC DESIGN BY: SBC REVIEWED BY: JWG		CAD: _____ PLS: _____						

21-JAN-2010 11:57  
 \\dot\dfs\scott\proj\TIP\Projects-B\B3611\TrafficControl\TCP\B3611\_TC-gen-tcp02.dgn  
 scotts - AT 12/23/09

# PHASING

PROJ. REFERENCE NO. <b>B-3611</b>	SHEET NO. <b>TCP-3</b>
--------------------------------------	---------------------------

## PHASE I

- STEP 1. INSTALL ALL ADVANCE WORK ZONE SIGNS ON NC 99, US 64 BYPASS, AND US 264, SEE TCP-15.
- STEP 2. USING RSD NO. 1101.02 (SHEET 1 OF 9), CONSTRUCT -DET- LINE, INCLUDING TEMPORARY DRAINAGE AND TEMPORARY SHORING, UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE AS FOLLOWS (SEE CONSTRUCTION PLANS AND TCP-4 THRU TCP-6):
- STA. 19+75+/- -DET- TO STA. 31+13+/- -DET-
  - USING RSD NO. 1101.02 (SHEET 1 OF 9), CONSTRUCT -DET- LINE, UP TO EXISTING EDGE OF PAVEMENT ELEVATIONS AS FOLLOWS (SEE CONSTRUCTION PLANS AND TCP-4 THRU TCP-6):
  - STA. 12+50+/- -L- TO STA. 15+50+/- -DET-
  - STA. 15+50+/- -DET- TO STA. 19+75+/- -DET-
  - STA. 31+13+/- -DET- TO STA. 35+00+/- -DET-
  - AWAY FROM TRAFFIC, PLACE PORTABLE CONCRETE BARRIER AS FOLLOWS (SEE TCP-4 AND TCP-16):
  - STA. 25+03+/- -DET- TO STA. 28+64+/- -DET-
  - AWAY FROM TRAFFIC, CONTRACTOR MAY BEGIN CLEARING AND GRUBBING, ROADWAY AND PROPOSED BRIDGE CONSTRUCTION (SEE CONSTRUCTION PLANS).
- STEP 3. USING RSD NO. 1101.02 (SHEET 1 OF 9), PAVE/WEDGE -DET- LINE AS FOLLOWS (SEE CONSTRUCTION PLANS):
- STA. 15+25+/- -DET- TO STA. 19+75+/- -DET-
  - STA. 31+13+/- -DET- TO STA. 35+00+/- -DET-
  - USING RSD NO. 1101.02 (SHEET 1 OF 9), PLACE TEMPORARY (PAINT) MARKINGS AND MARKERS ON -DET- LINE AND SHIFT TWO-LANE, TWO-WAY TRAFFIC ONTO -DET- LINE AS FOLLOWS (SEE TCP-7):
  - STA. 15+25+/- -DET- TO STA. 35+00+/- -DET-

## PHASE II

- STEP 1. USING RSD NO. 1101.02 (SHEET 1 OF 9), WIDEN -L- LINE UP TO EXISTING EDGE OF PAVEMENT ELEVATIONS AS FOLLOWS (SEE CONSTRUCTION PLANS, TCP-8, AND TCP-9):
- STA. 12+50+/- -L- TO STA. 20+75+/- -L- (LEFT)
  - STA. 63+50+/- -L- TO STA. 72+33+/- -L- (LEFT)
  - STA. 66+00+/- -L- TO STA. 72+33+/- -L- (RIGHT)
  - USING RSD NO. 1101.02 (SHEET 1 OF 9), CONSTRUCT -L- LINE UP TO EXISTING EDGE OF PAVED SHOULDER ELEVATIONS AS FOLLOWS (SEE CONSTRUCTION PLANS AND TCP-8):
  - STA. 20+75+/- -L- TO STA. 25+25+/- -L- (LEFT)
  - USING RSD NO. 1101.02 (SHEET 1 OF 9), CONSTRUCT -L- LINE UP TO FINAL LAYER OF INTERMEDIATE BASE COURSE ELEVATIONS AS FOLLOWS (SEE CONSTRUCTION PLANS AND TCP-9 THRU TCP-11):
  - STA. 62+50+/- -L- TO STA. 63+50+/- -L-
  - AWAY FROM TRAFFIC, CONSTRUCT PROPOSED BRIDGE, APPROACHES, DRIVEWAY, AND PARTIAL DRAINAGE UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE AS FOLLOWS (SEE CONSTRUCTION PLANS AND TCP-8 THRU TCP-11):
  - STA. 25+25+/- -L- TO STA. 62+50+/- -L-
  - AWAY FROM TRAFFIC, PLACE TEMPORARY (REMOVABLE TAPE) PAVEMENT MARKINGS AND MARKERS AS FOLLOWS (SEE TCP-8 AND TCP-9):
  - STA. 26+49+/- -L- TO STA. 60+01+/- -L-
  - USING RSD NO. 1101.02 (SHEET 1 OF 9), REMOVE PAVEMENT AND INSTALL GUARDRAIL AS SHOWN ON CONSTRUCTION PLANS, TCP-8 AND TCP-9.

## PHASE III

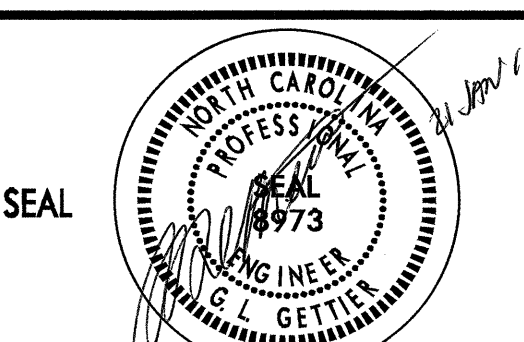
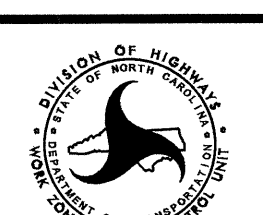
- STEP 1. USING RSD 1101.03 (SHEET 1 OF 9), IN CONJUNCTION WITH TCP-12, INSTALL ALL OFF-SITE DETOUR SIGNING.
- NOTE: CONTRACTOR SHALL COORDINATE OFF-SITE DETOUR SIGNING WITH B-3809, AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED OF PHASE III, STEPS 2 THRU 3 FROM FRIDAY AT 6:00 P.M. TO THE FOLLOWING MONDAY AT 7:00 A.M.. (SEE INTERMEDIATE CONTRACT AND LIQUIDATED DAMAGES).

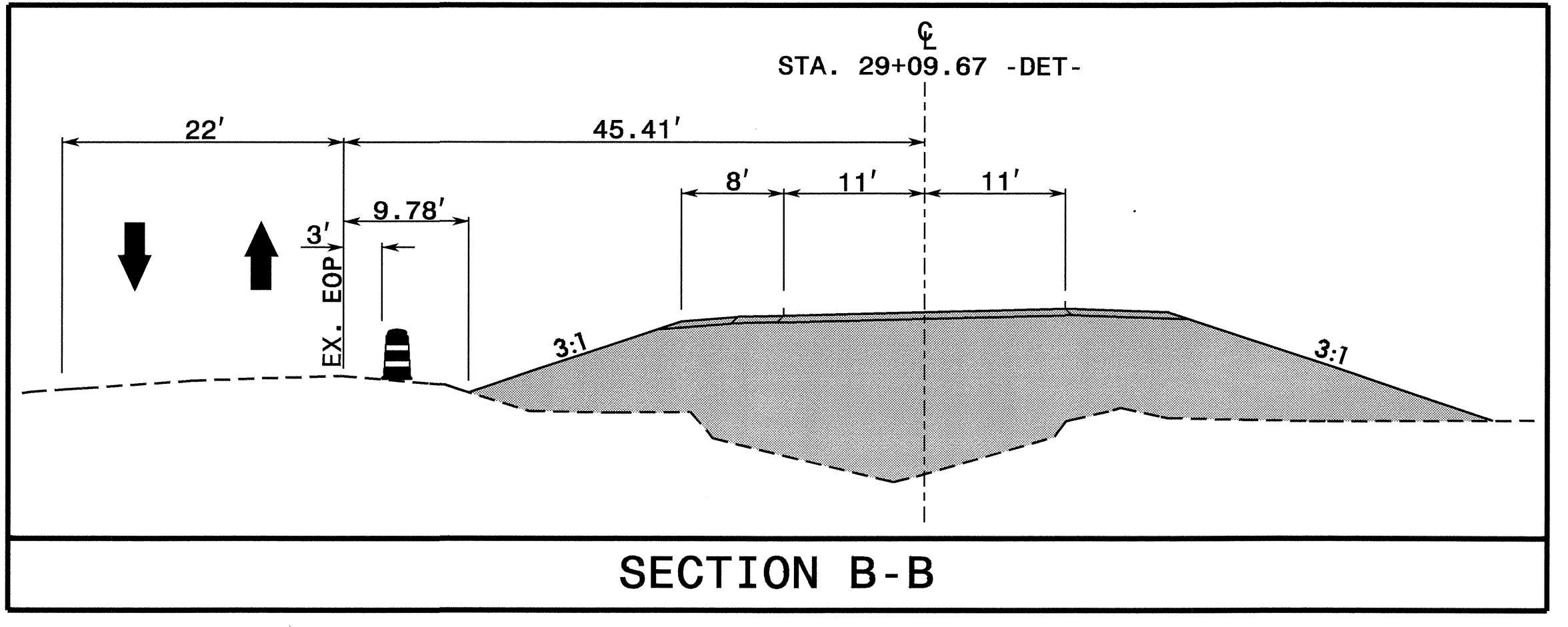
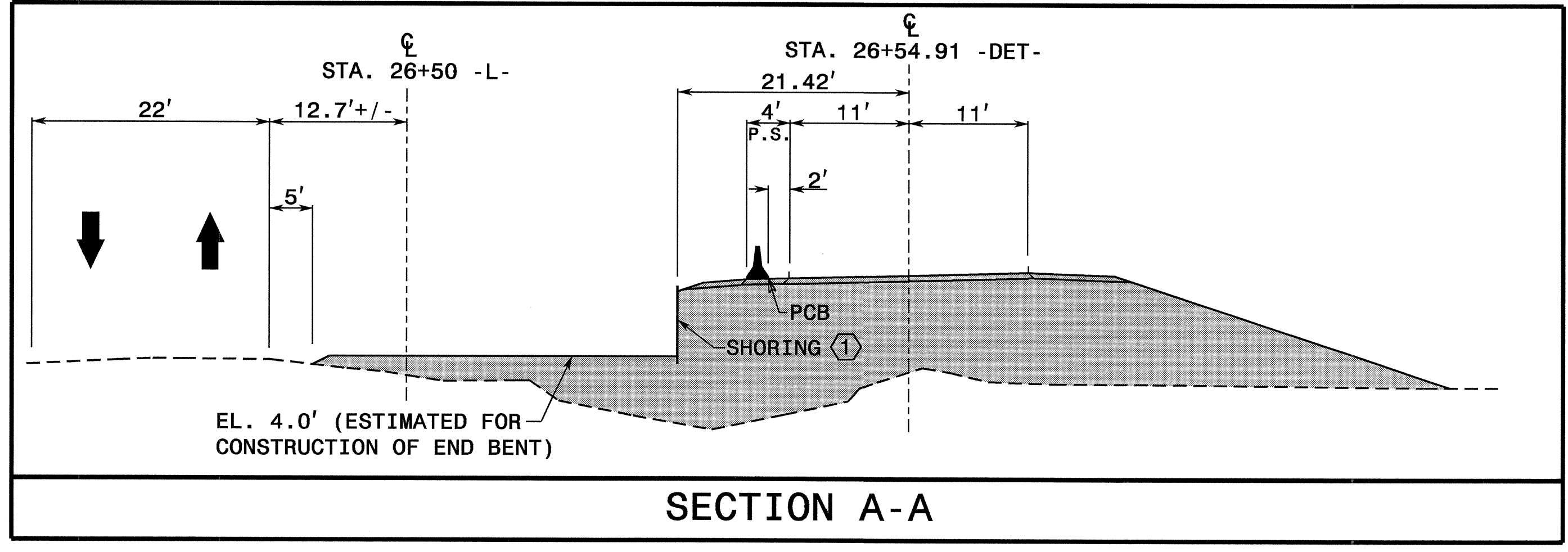
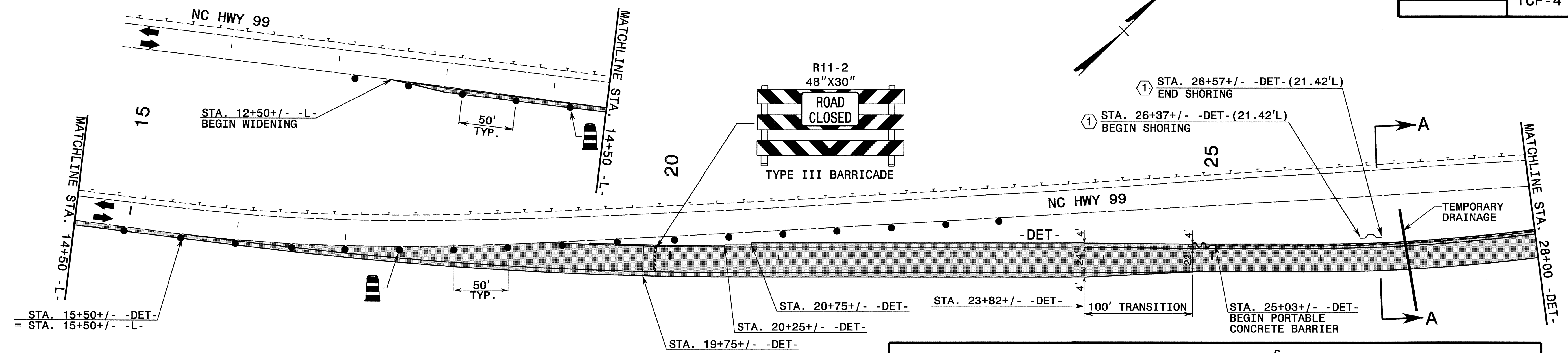
- STEP 2. CONSTRUCT -L- LINE UP TO FINAL LAYER OF INTERMEDIATE BASE COURSE AS FOLLOWS (SEE CONSTRUCTION PLANS AND TCP-14):
- STA. 62+50+/- -L- TO STA. 63+50+/- -L-
  - CONSTRUCT -L- LINE SHOULDER AND AS FOLLOWS (SEE CONSTRUCTION PLANS AND TCP-14):
  - STA. 61+75+/- -L- TO STA. 66+00+/- -L- (RIGHT)
  - NOTE: REMOVE PORTABLE CONCRETE BARRIER AS REQUIRED FOR CONSTRUCTION.
  - PAVE/WEDGE -L- LINE UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS (SEE CONSTRUCTION PLANS, TCP-13 AND TCP-14):
  - STA. 11+50+/- -L- TO STA. 25+25+/- -L-
  - STA. 62+50+/- -L- TO STA. 72+33+/- -L-
  - PLACE TEMPORARY (PAINT) PAVEMENT MARKINGS AND MARKERS ON -L- LINE AS FOLLOWS (SEE TCP-13 AND TCP-14):
  - STA. 11+50+/- -L- TO STA. 26+49+/- -L-
  - STA. 60+01+/- -L- TO STA. 72+40+/- -L-
- STEP 3. REMOVE ALL TYPE III BARRICADES AND DETOUR SIGNING. REOPEN NC 99 TO A TWO-LANE, TWO-WAY TRAFFIC PATTERN. PLACE DRUMS AS SHOWN ON TCP-13 AND TCP-14.

## PHASE IV

- STEP 1. USING RSD NO. 1101.02 (SHEET 1 OF 9), REMOVE EXISTING BRIDGE, PAVEMENT, CAUSEWAY, AND COMPLETE REMAINDER OF -L- TO INCLUDE GUARDRAIL INSTALLATION (SEE CONSTRUCTION PLANS).
- STEP 2. USING RSD NO. 1101.02 (SHEET 1 OF 9), PAVE THE FINAL LAYER OF SURFACE COURSE AND PLACE FINAL PAVEMENT MARKINGS AND MARKERS AS FOLLOWS (SEE ROADWAY PLANS AND FINAL PAVEMENT MARKING PLANS):
- STA. 11+50+/- -L- TO STA. 25+25+/- -L-
  - STA. 62+50+/- -L- TO STA. 72+33+/- -L-
- STEP 3. REMOVE ALL ADVANCE WORK ZONE WARNING SIGNS.

APPROVED: _____	DATE: _____	<b>PHASING</b>	
	SCALE: NONE		
	DATE: 12-29-09		
	DWG. BY: SBC		
	DESIGN BY: SBC		
REVIEWED BY: JWG		REVISIONS	

21-JAN-2010 11:57  
 \dot\dfsroot\p\proj\TrafficControl\TCP\B3611\TrafficControl\TCP\B3611.TC.gen\_tcp03.dgn  
 scodis AT 12/23/09



**TEMPORARY SHORING NOTES**

TEMPORARY SHORING NO. (1)

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

DO NOT USE STANDARD TEMPORARY SHORING FROM STA. 26+37 +/- -DET- TO STA. 26+57 +/- -DET-, 21.42 FT. LEFT.

USE A TEMPORARY MSE WALL FROM STA. 26+37 +/- -DET- TO STA. 26+57 +/- -DET-, 21.42 FT. LEFT.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STA. 26+37 +/- -DET- TO STA. 26+57 +/- -DET-, 21.42 FT. LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

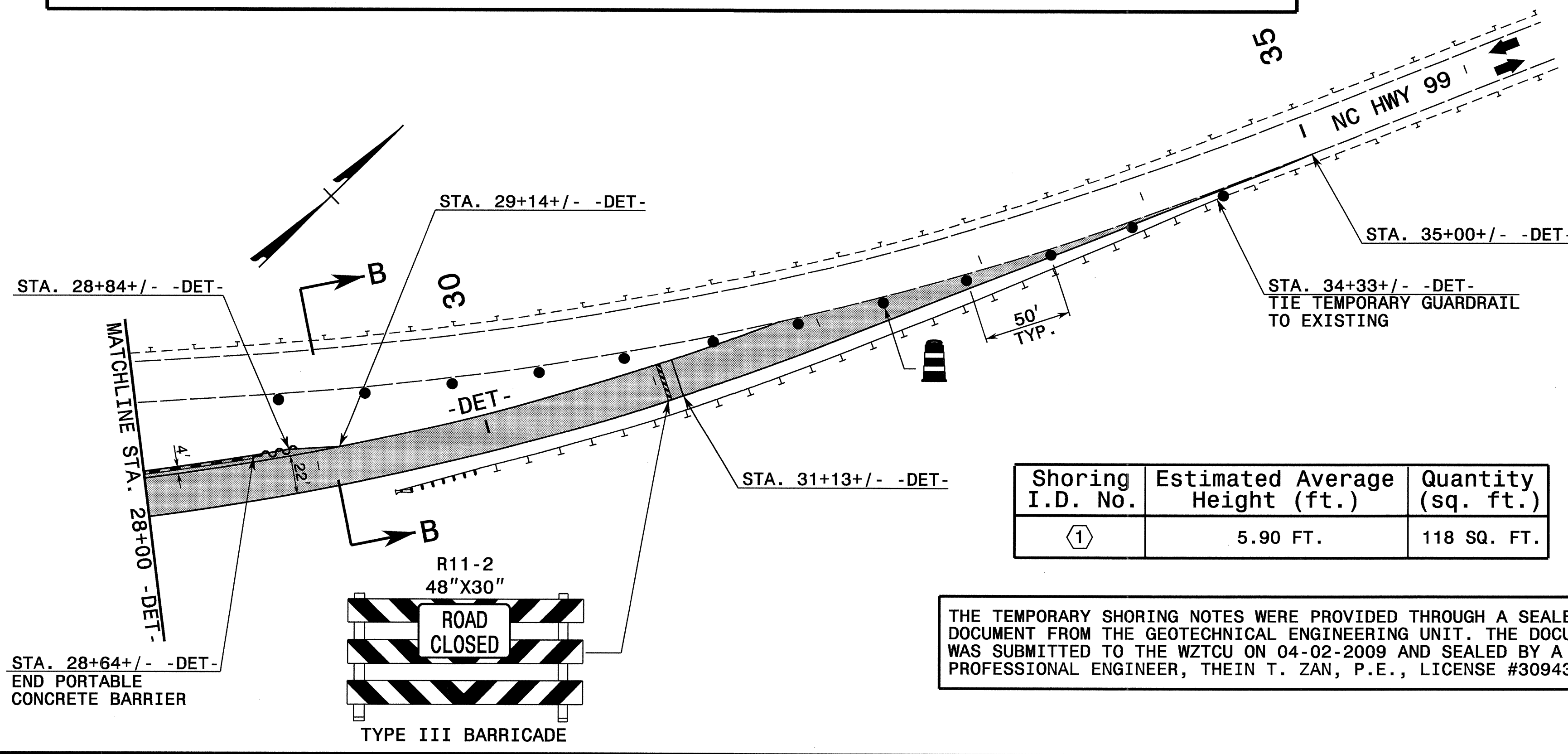
UNIT WEGHT OF SOIL ABOVE WATER TABLE,  $\gamma = 120$  PCF  
 UNIT WEGHT OF SOIL BELOW WATER TABLE,  $\gamma' = 60$  PCF  
 FRICTION ANGLE,  $\phi = 30^\circ$   
 COHESION,  $c = 0$  PCF

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE A NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

Shoring I.D. No.	Estimated Average Height (ft.)	Quantity (sq. ft.)
(1)	5.90 FT.	118 SQ. FT.

THE TEMPORARY SHORING NOTES WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON 04-02-2009 AND SEALED BY A PROFESSIONAL ENGINEER, THEIN T. ZAN, P.E., LICENSE #30943.



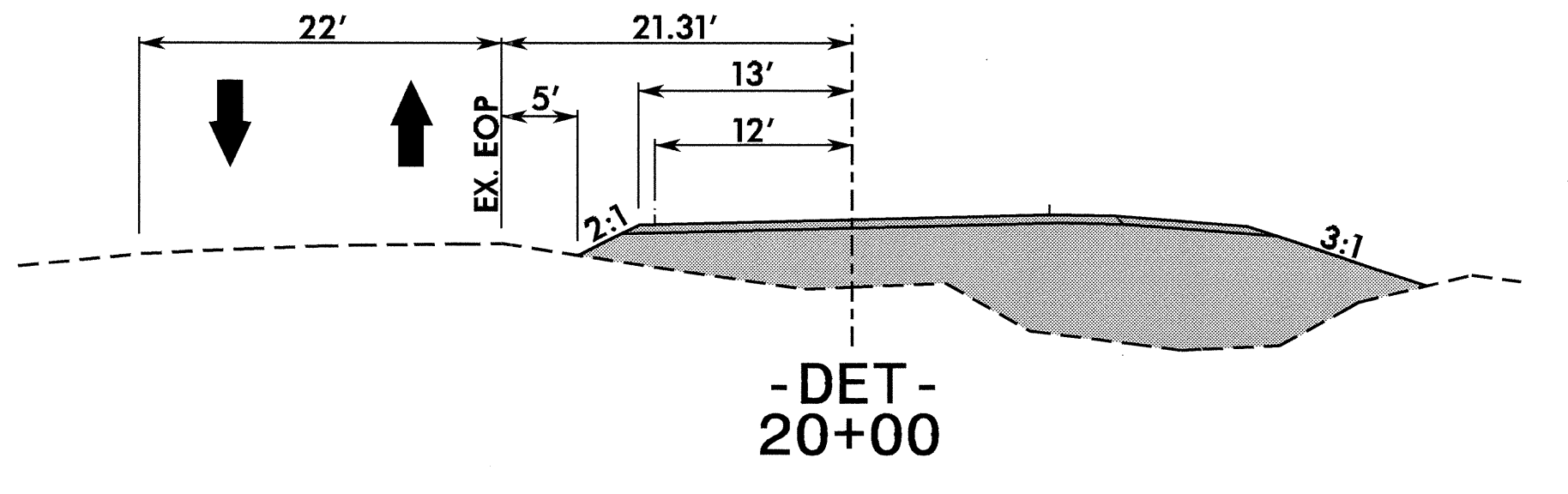
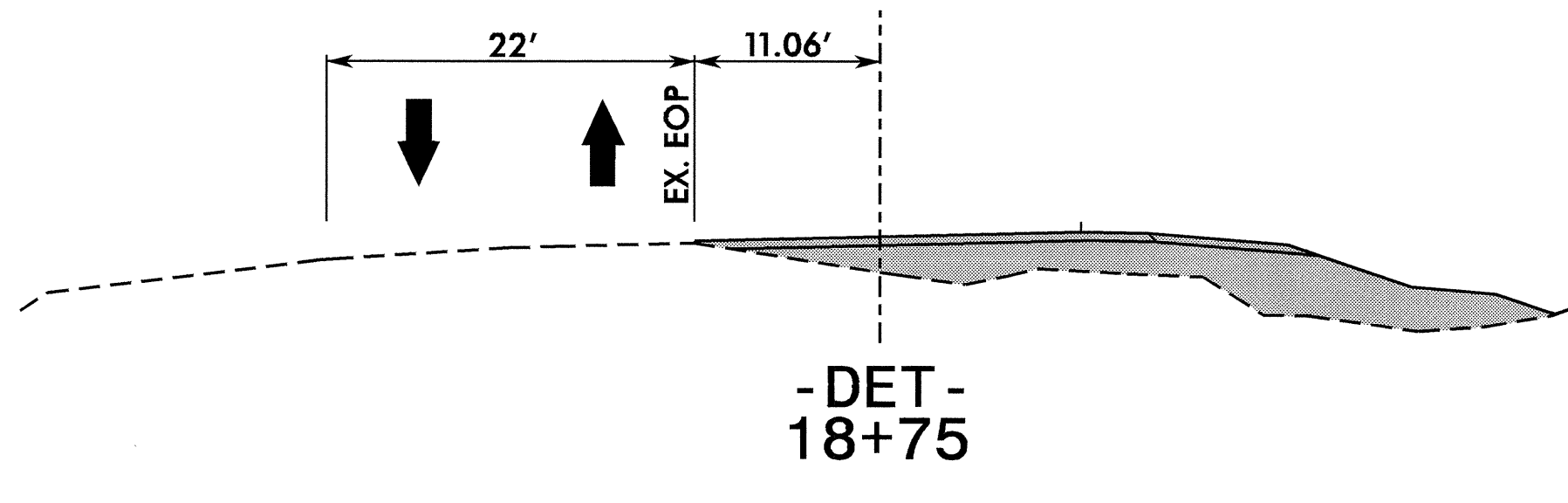
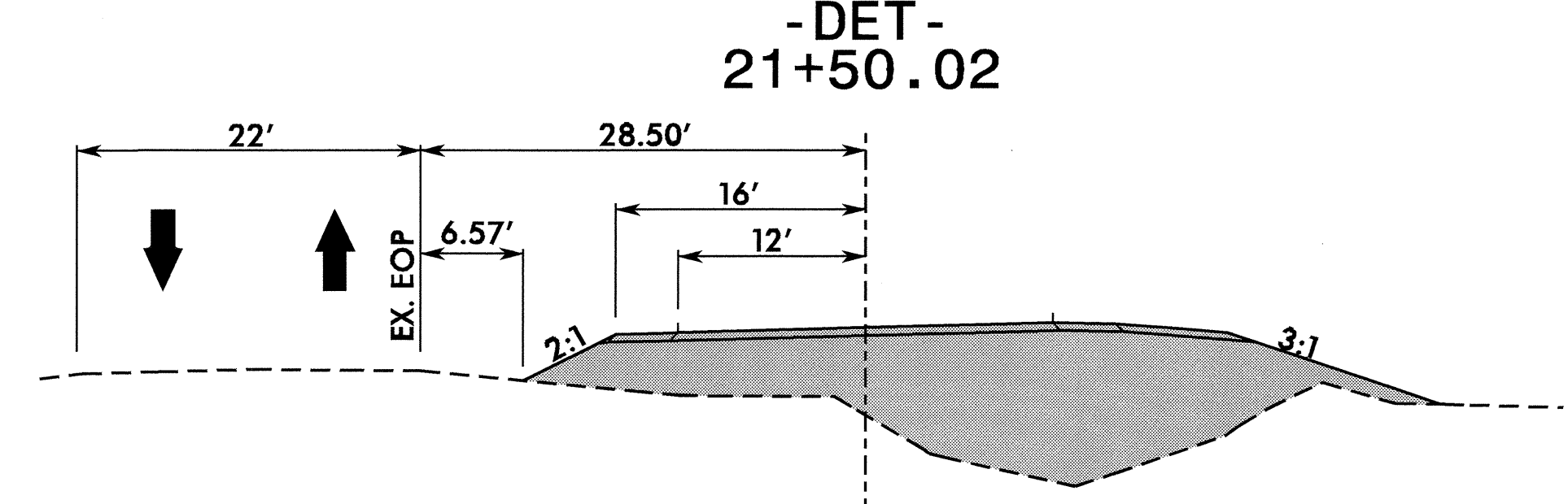
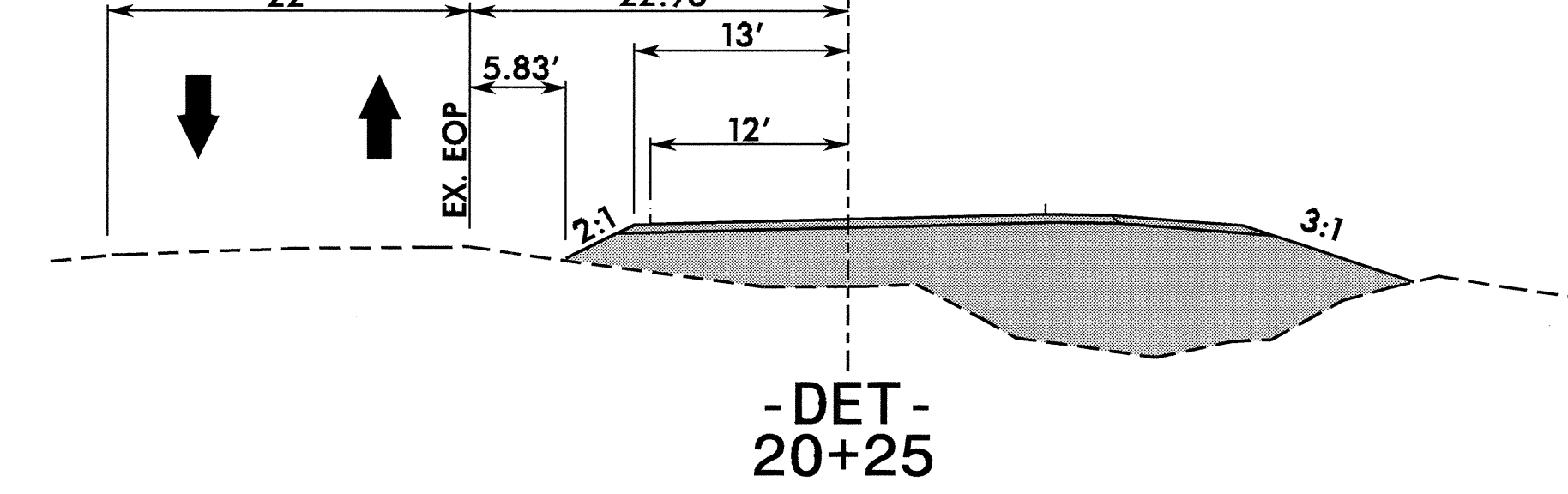
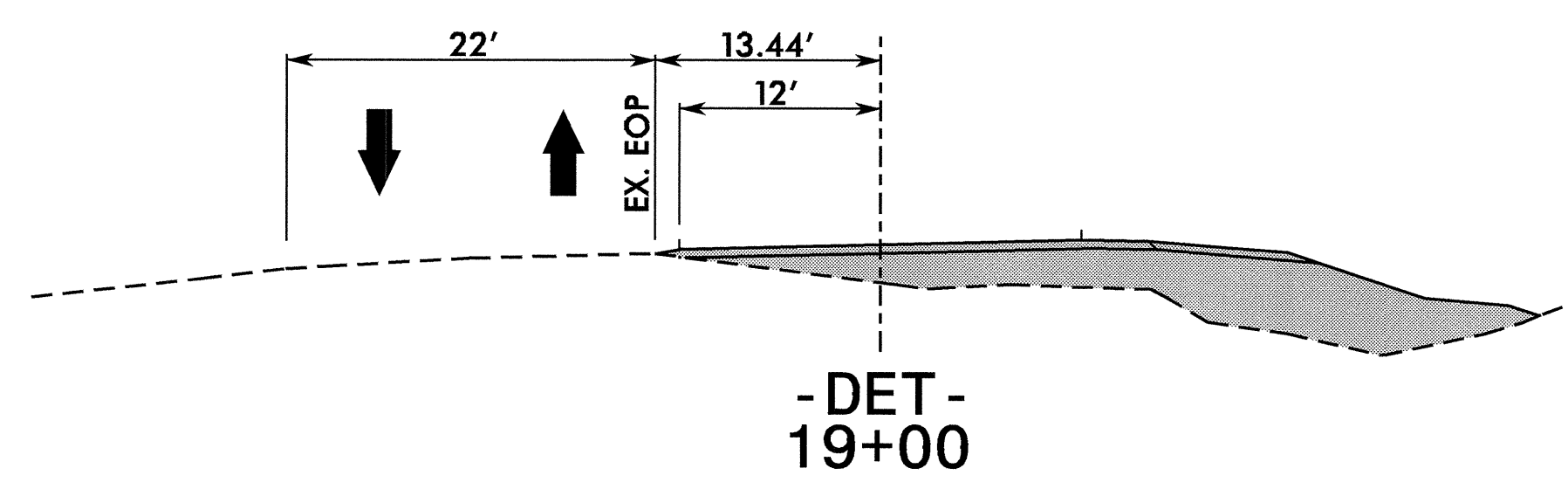
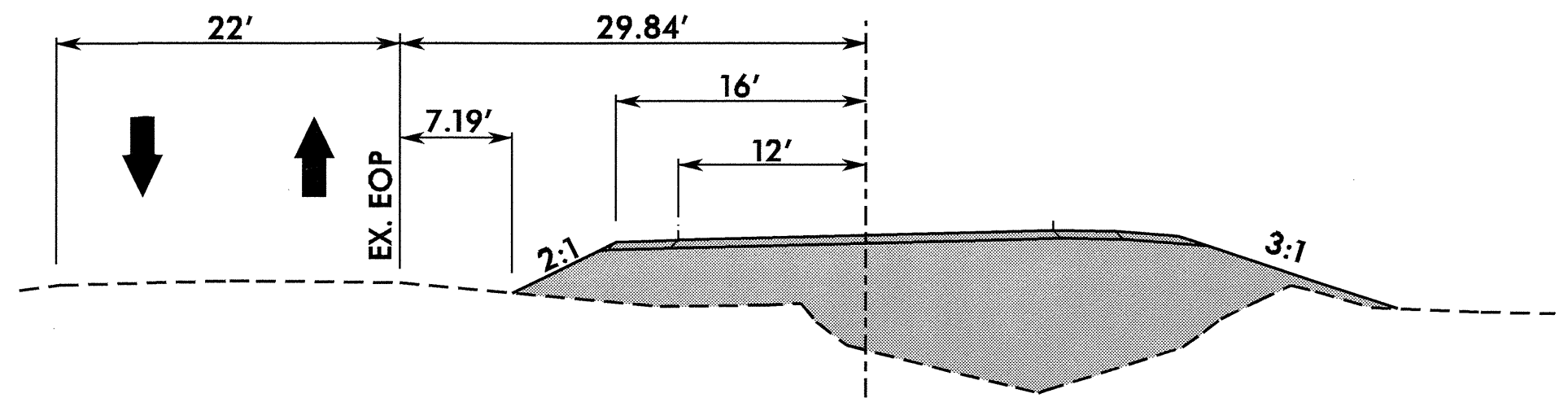
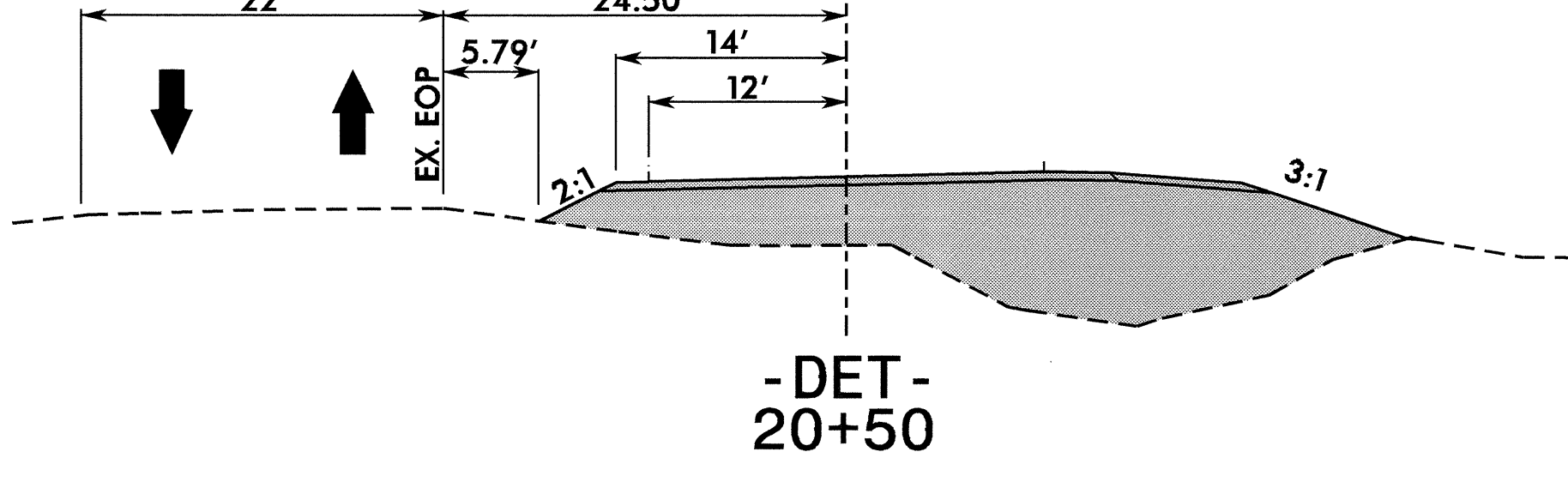
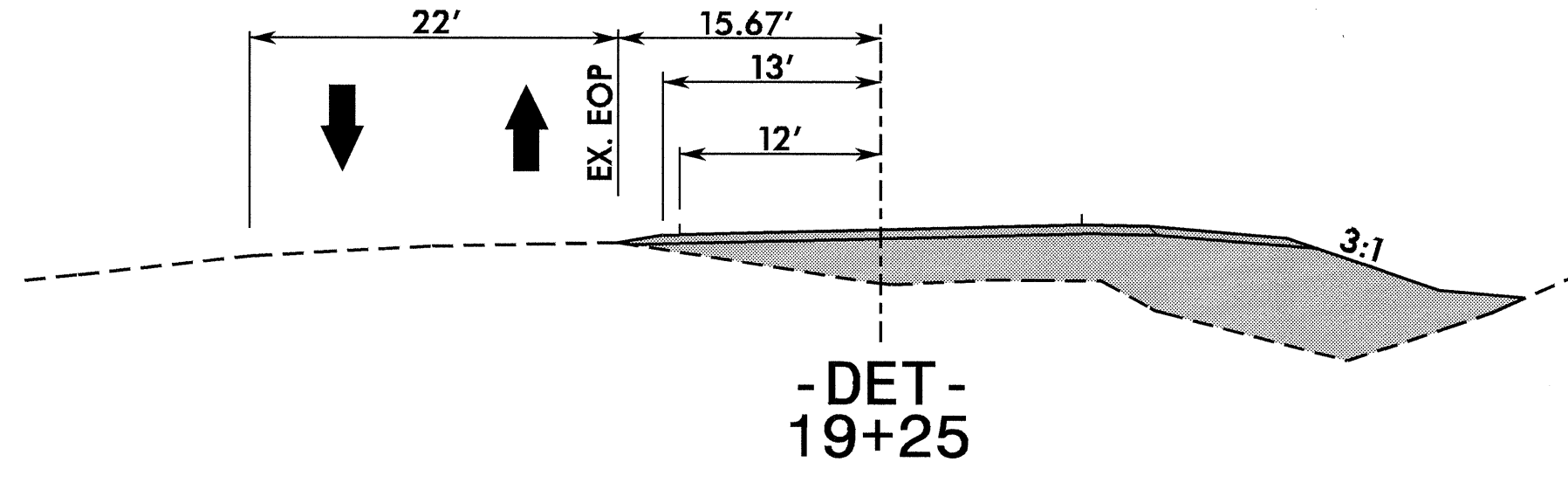
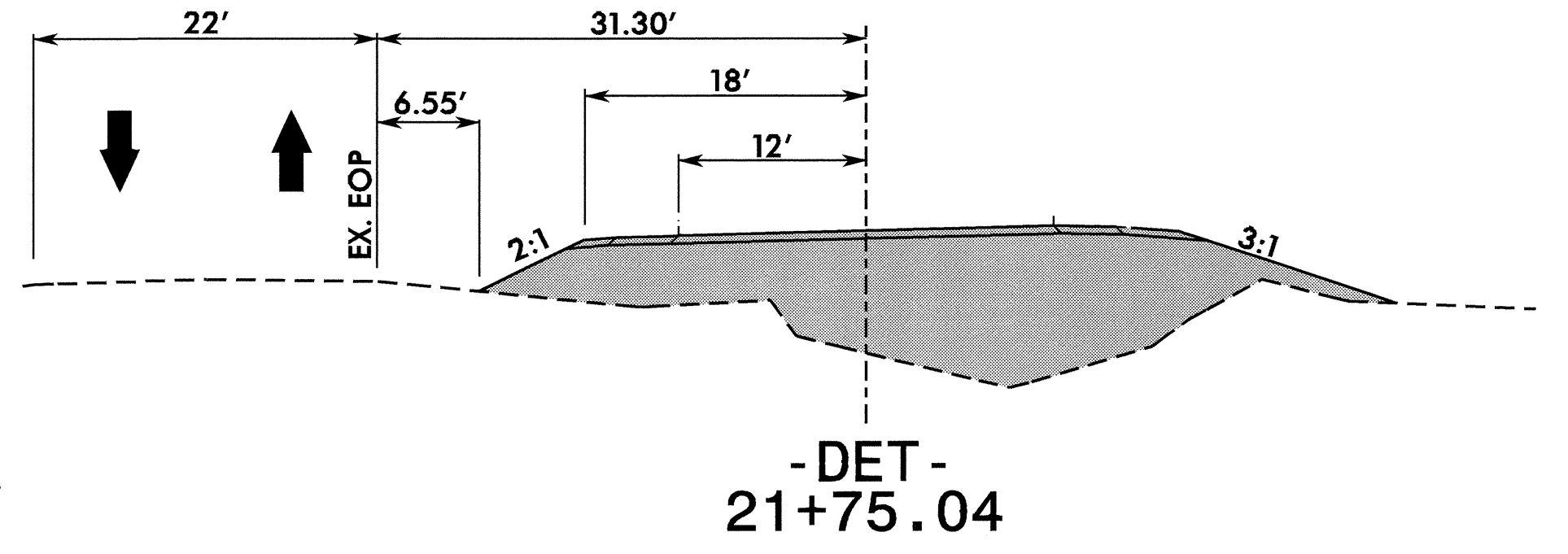
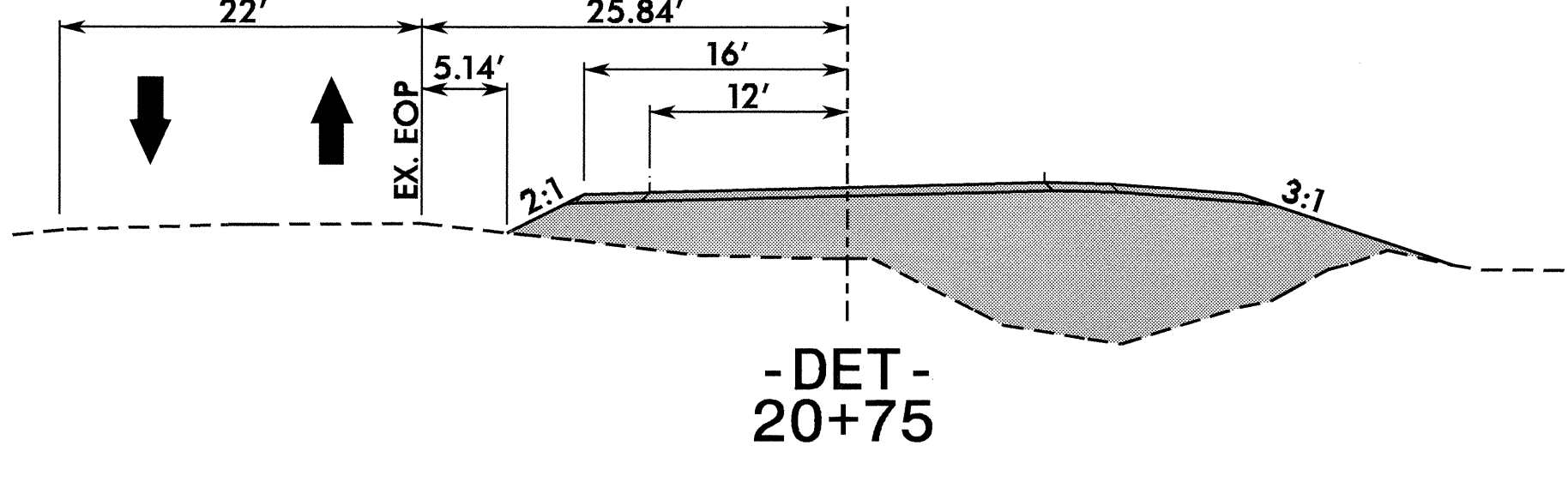
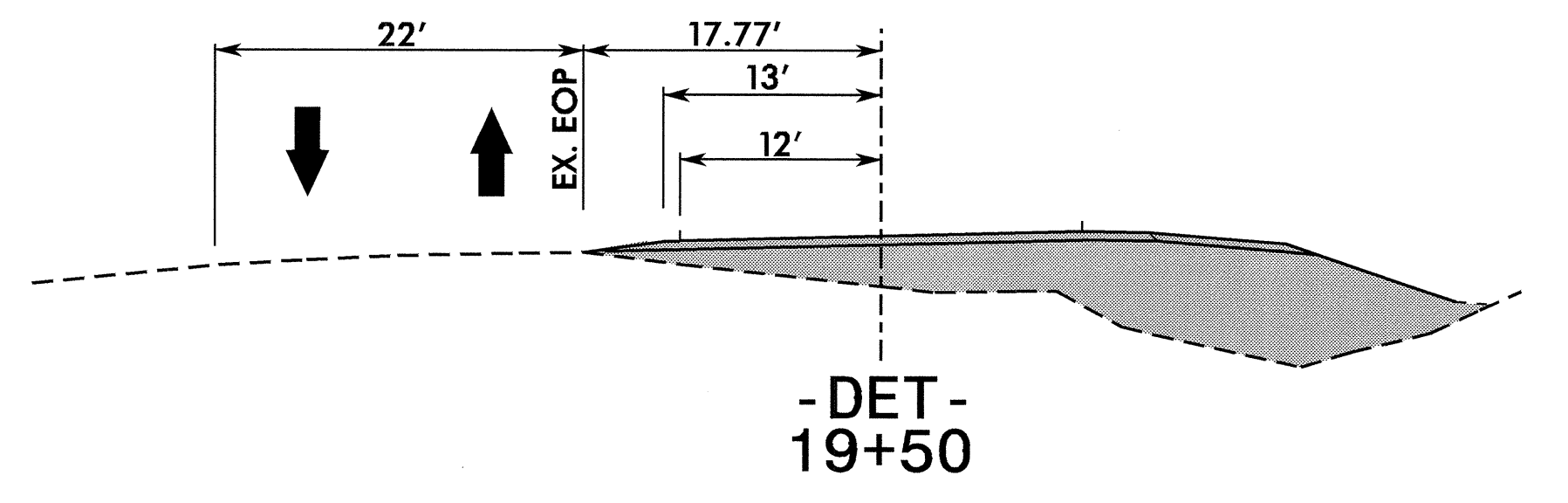
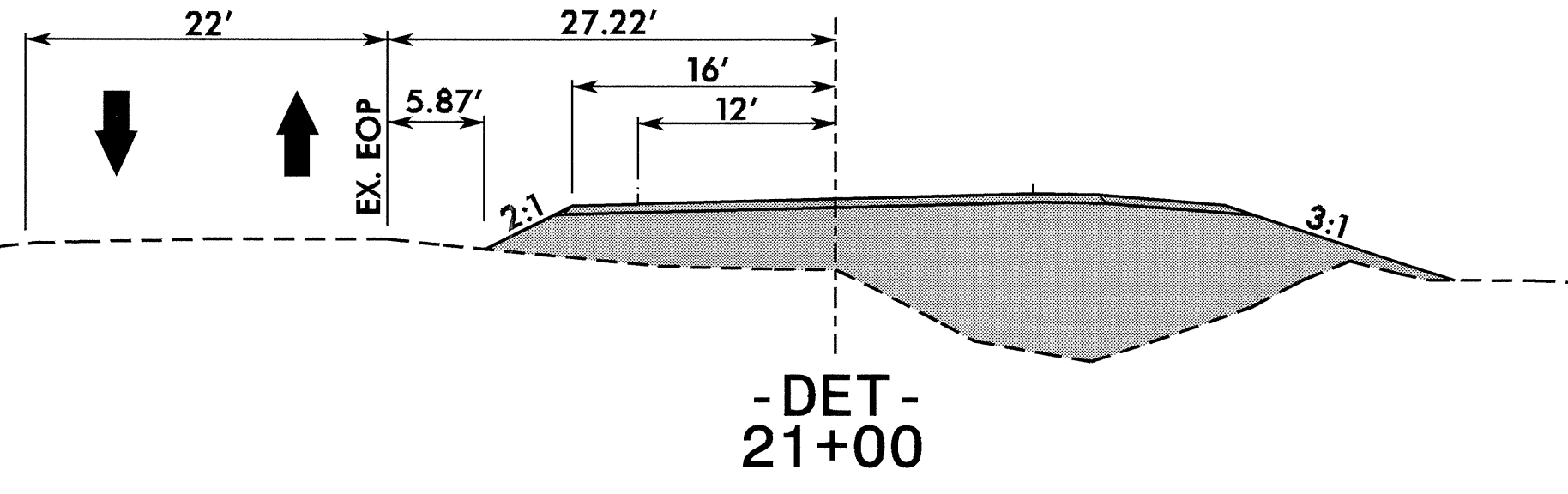
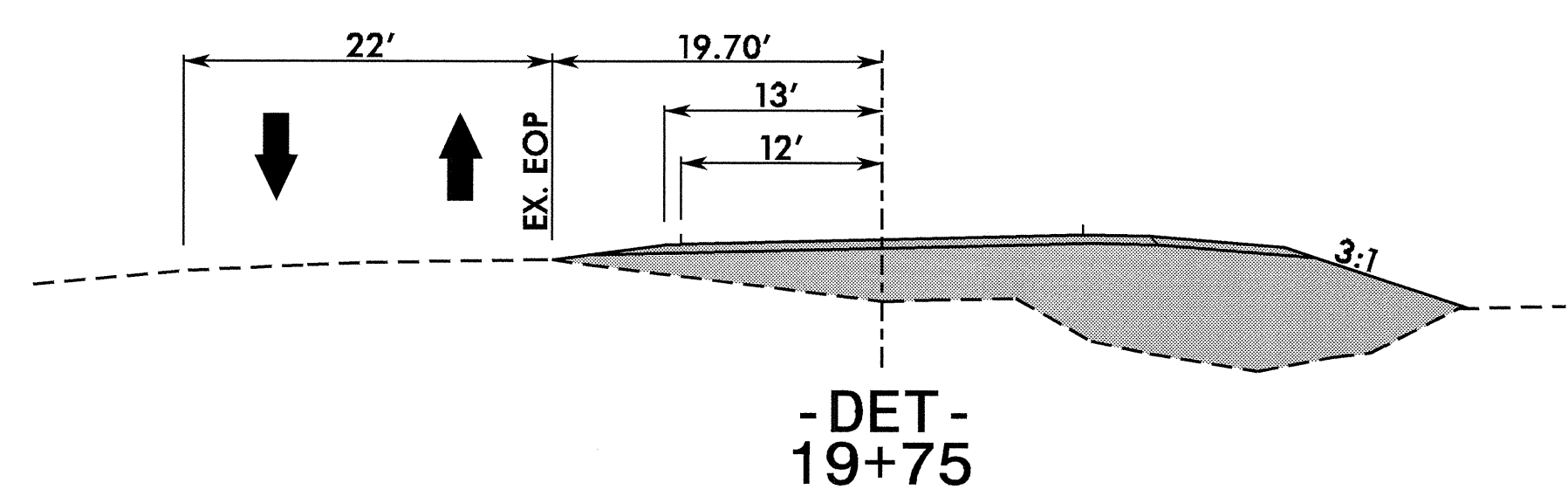
APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

**PHASE I DETAILS**  
**-DET- LINE**  
**TEMPORARY SHORING NOTES**

SCALE: 1"=50'  
 DATE: 12-29-09  
 DWG. BY: SBC  
 DESIGN BY: SBC  
 REVIEWED BY: JWG

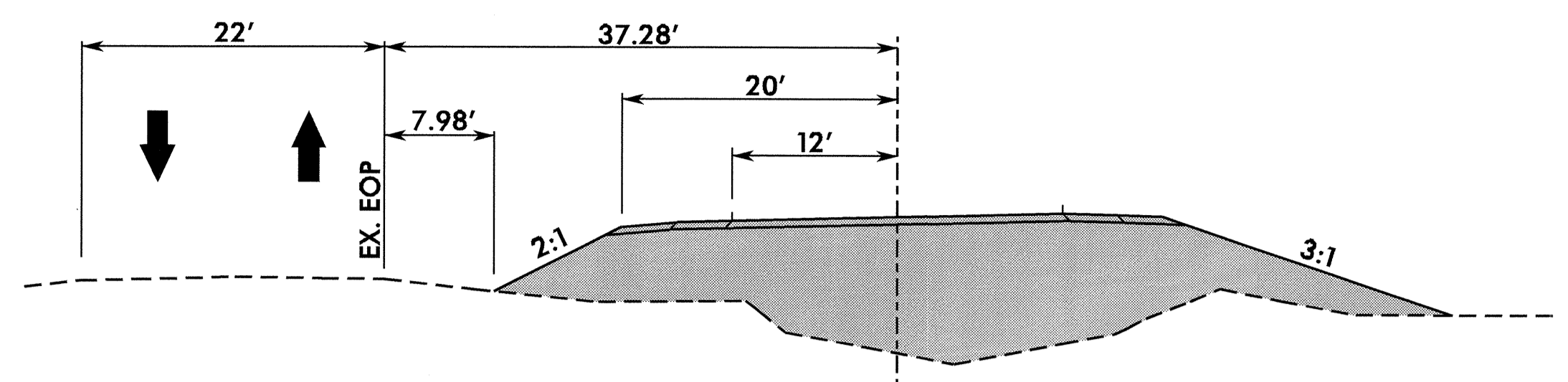
REVISIONS

21-JAN-2010 11:57 \\dot\dfs\dot\on\Proj\TIP\Projects-B\B3611\Traffic\TrafficControl\TCP\B3611\_TC\_tcp.dgn

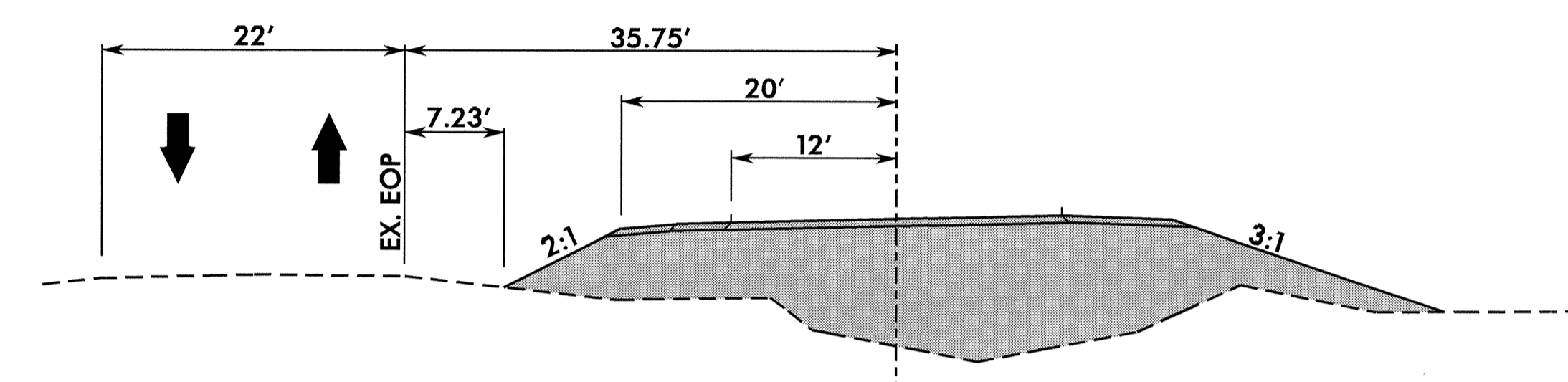


21-JAN-2010 11:58  
 \\dot\dfsroot\on\p\on\TIP\Projects-B\3611\Traffic\TrafficControl\TCP\3611.TC\_top\_pnl\_top05.dgn  
 SCOOT AT WZ1237457

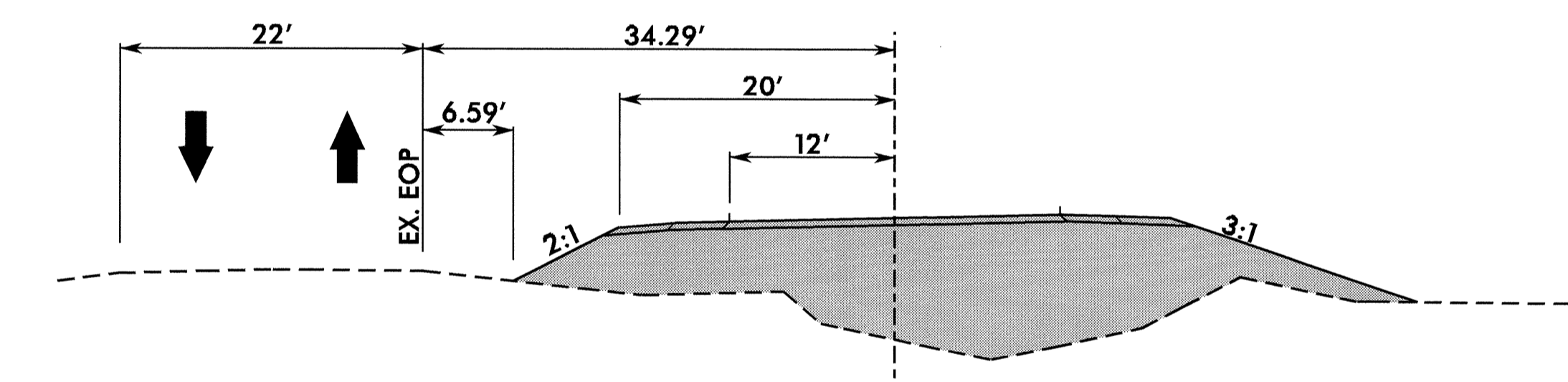
APPROVED:	DATE:	<b>PHASE I -DET- LINE TEMPORARY SLOPES</b>									
SCALE: 1"=10'	DATE: 12-29-09	<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>		REVISIONS							
REVISIONS											
DWG. BY: SBC	DESIGN BY: SBC	<table border="1"> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>									
REVIEWED BY: JWG		<table border="1"> <tr> <td> </td> <td> </td> </tr> </table>									



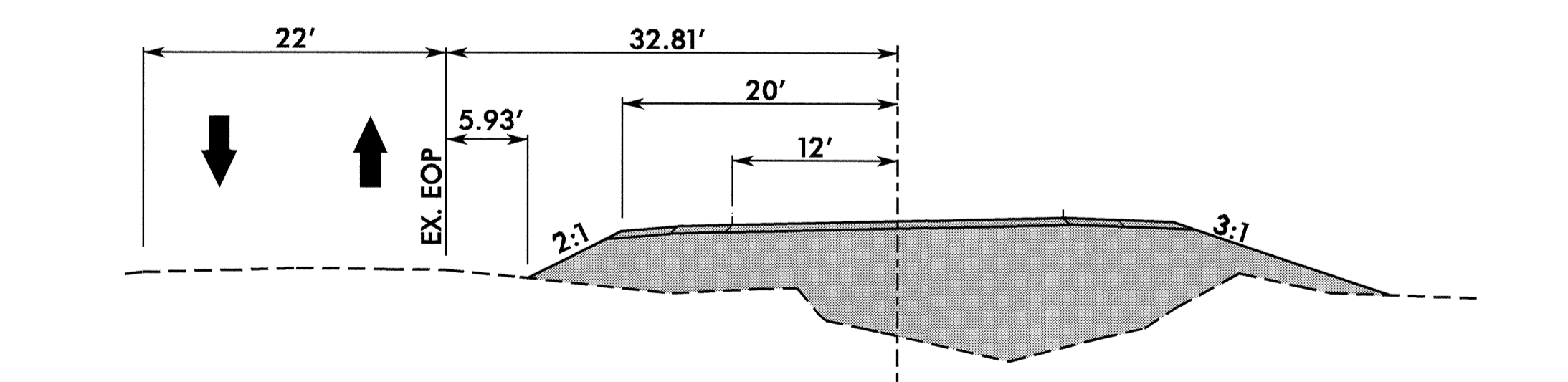
-DET-  
22+75.24



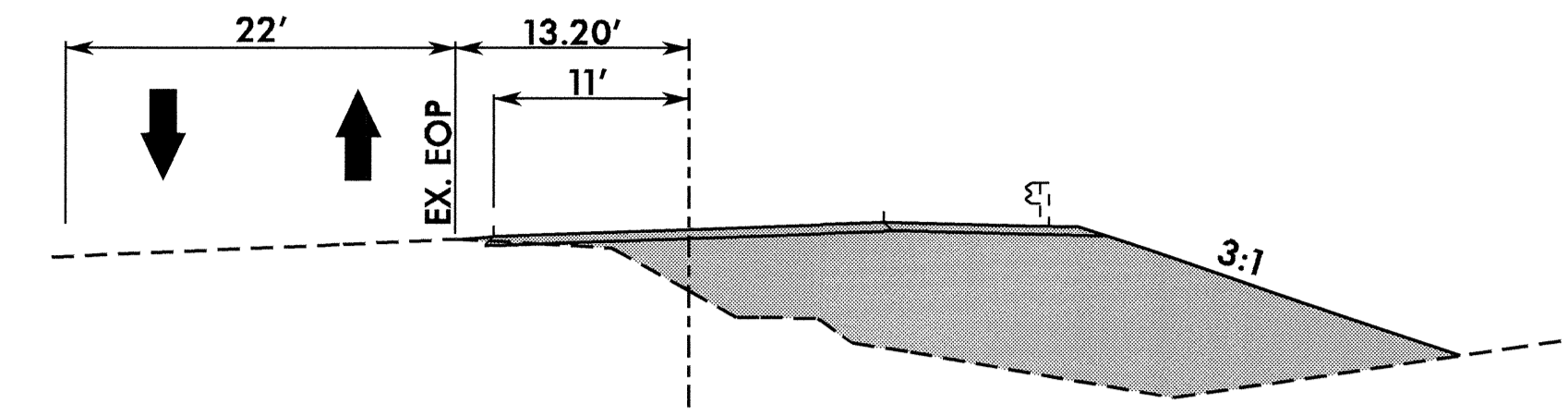
-DET-  
22+50.17



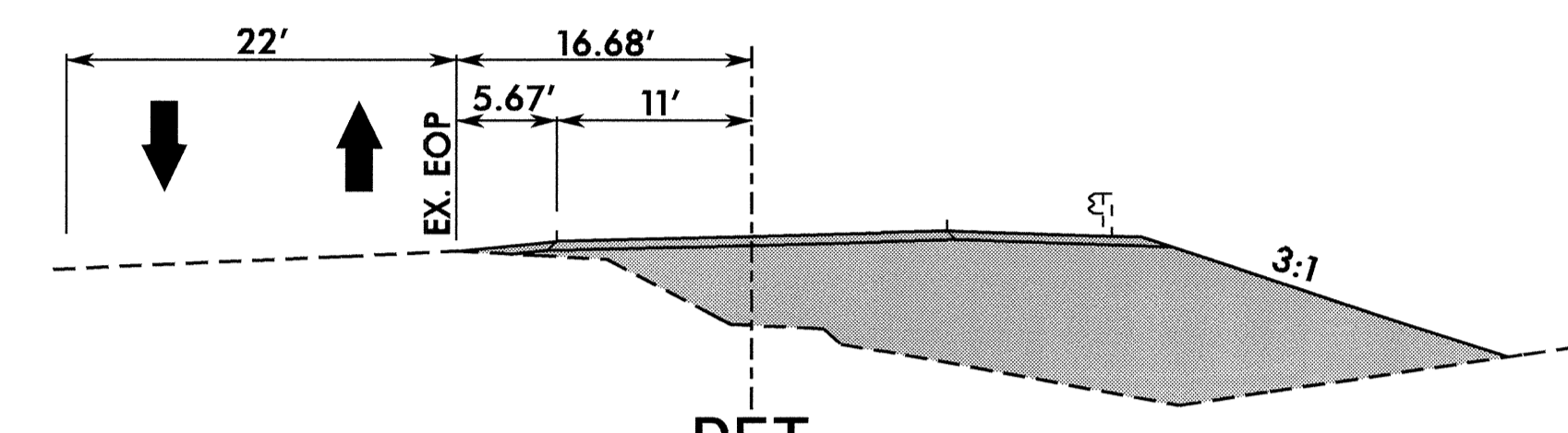
-DET-  
22+25.11



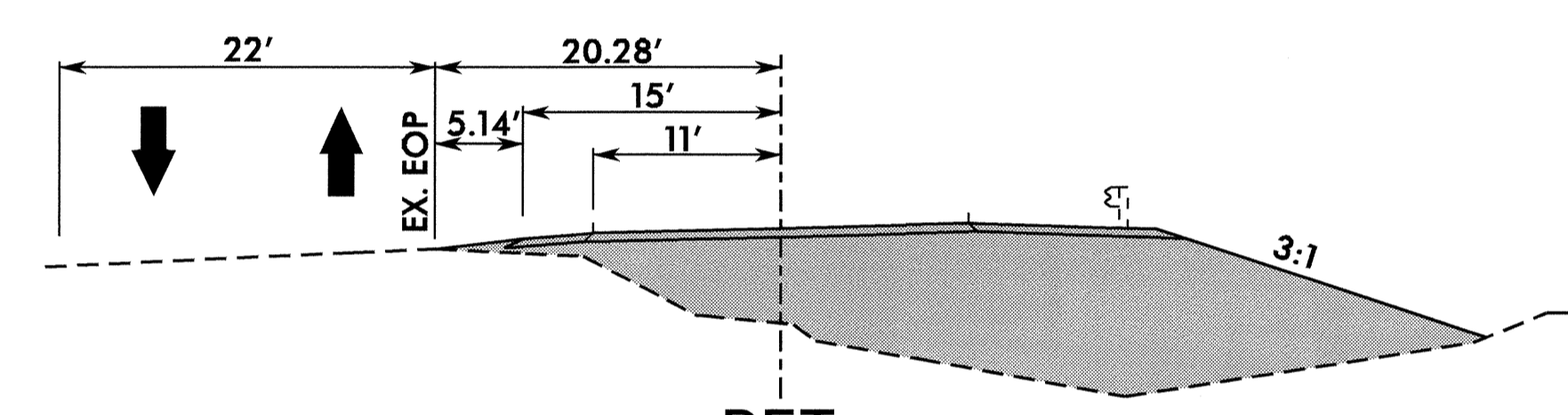
-DET-  
22+00.07



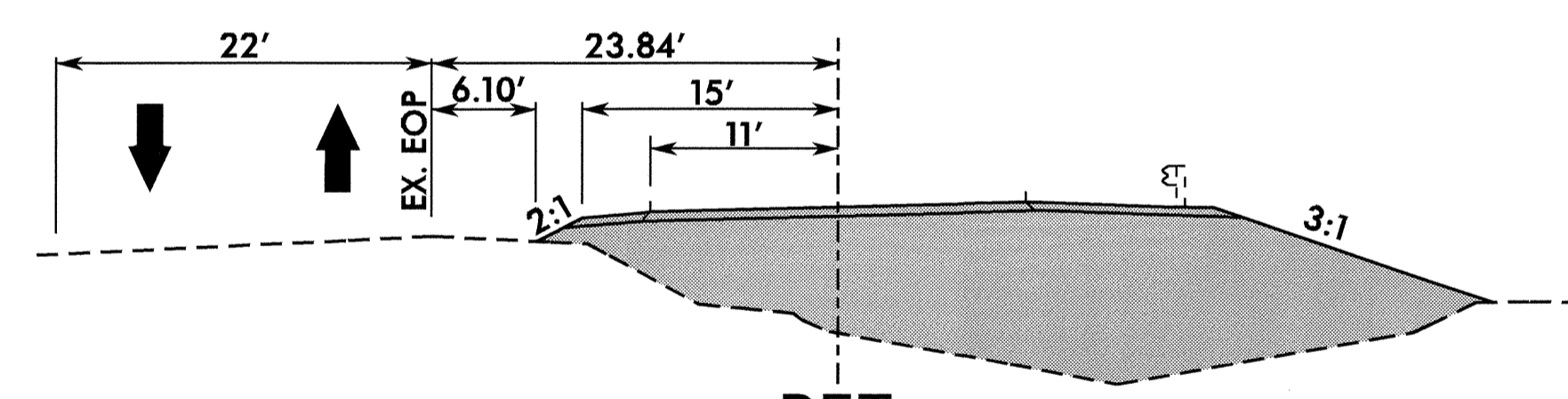
-DET-  
31+64.24



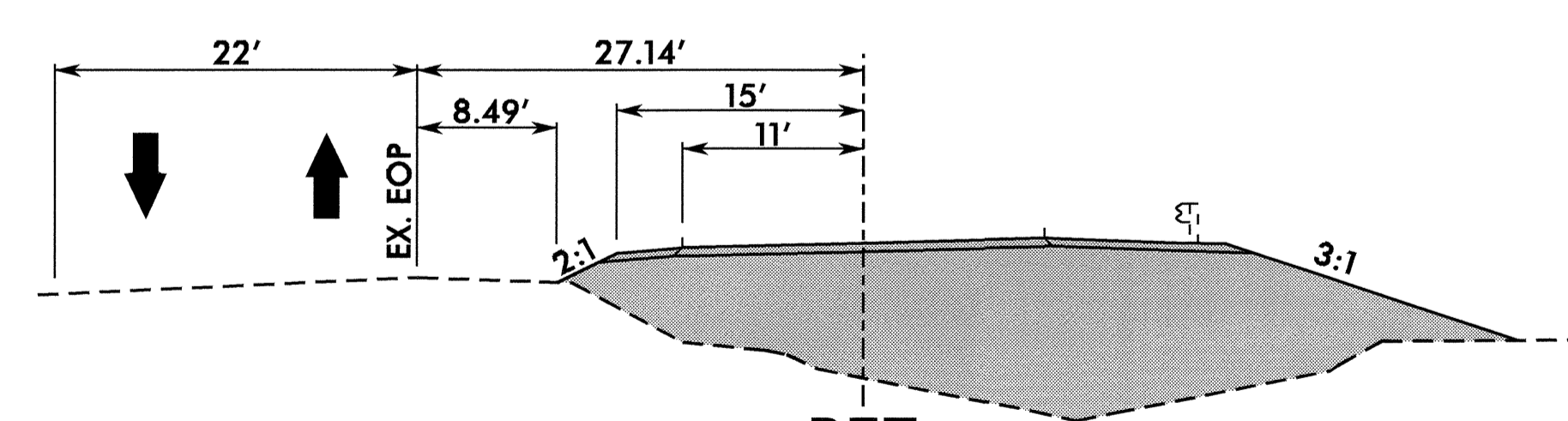
-DET-  
31+38.78



-DET-  
31+13.32



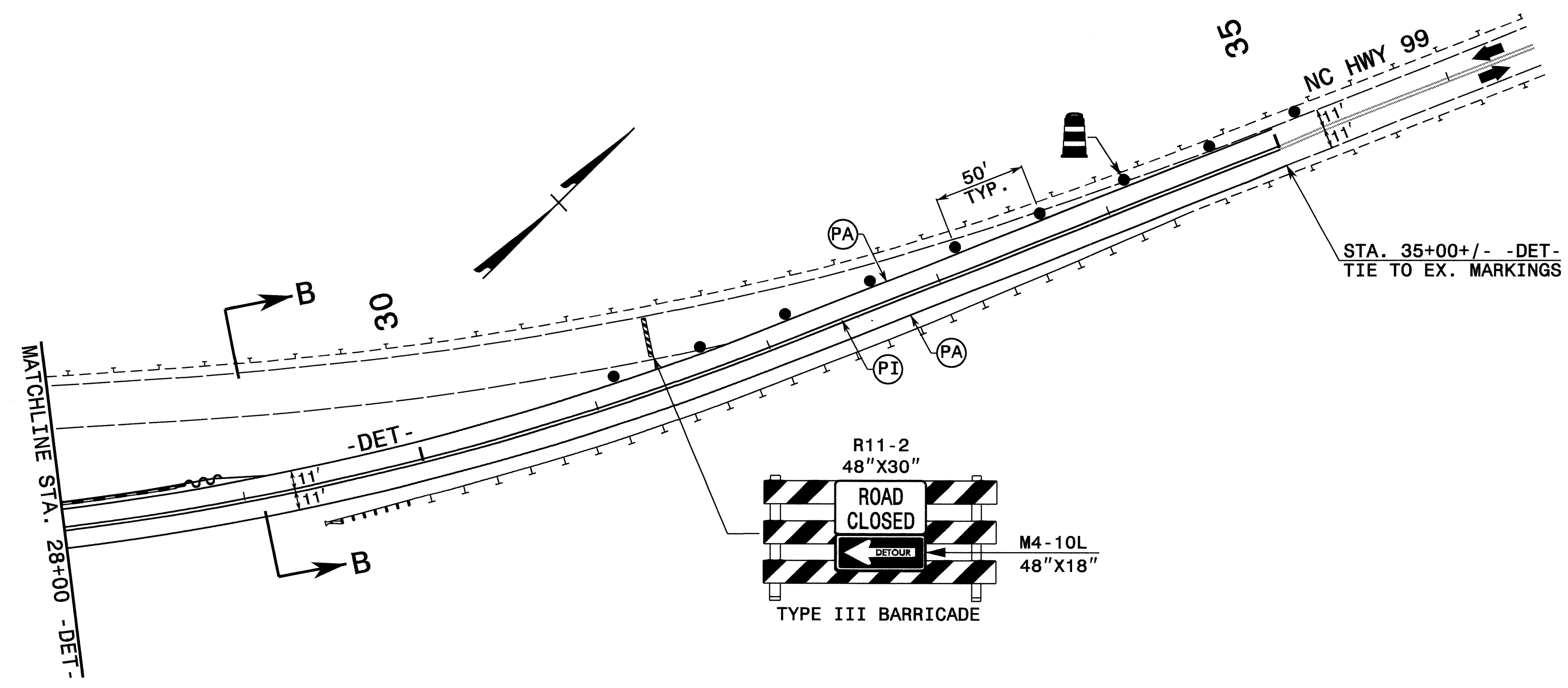
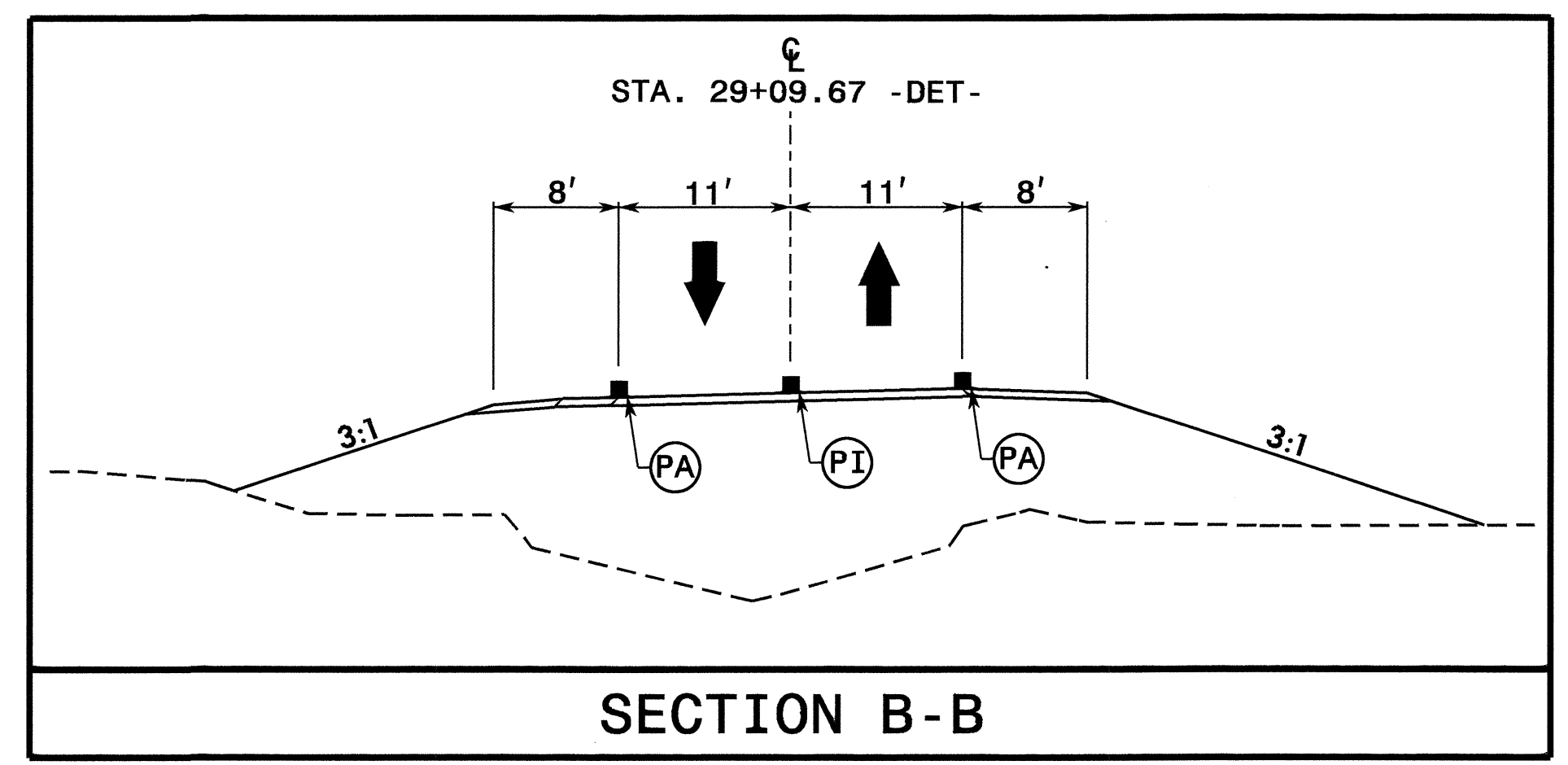
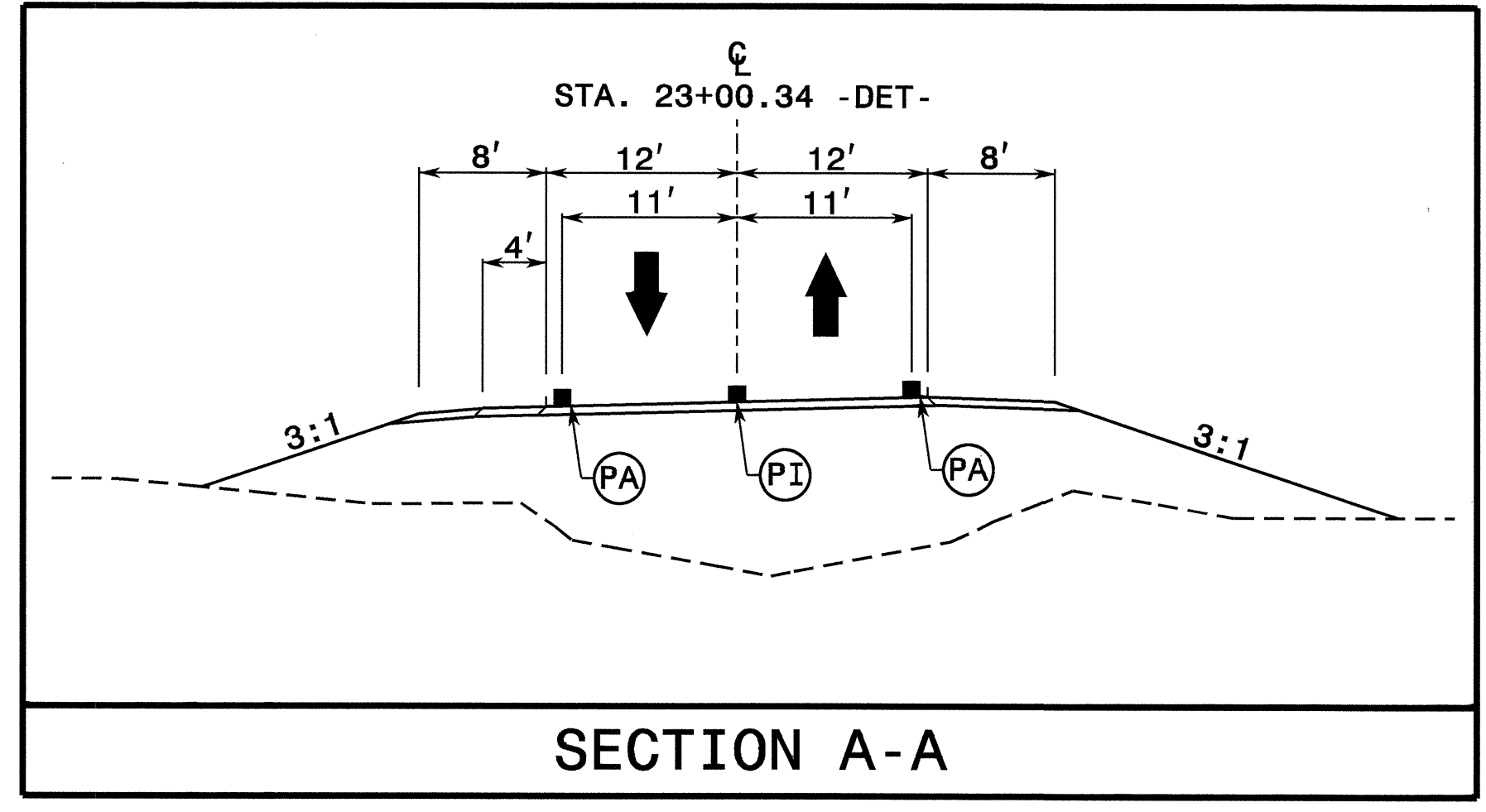
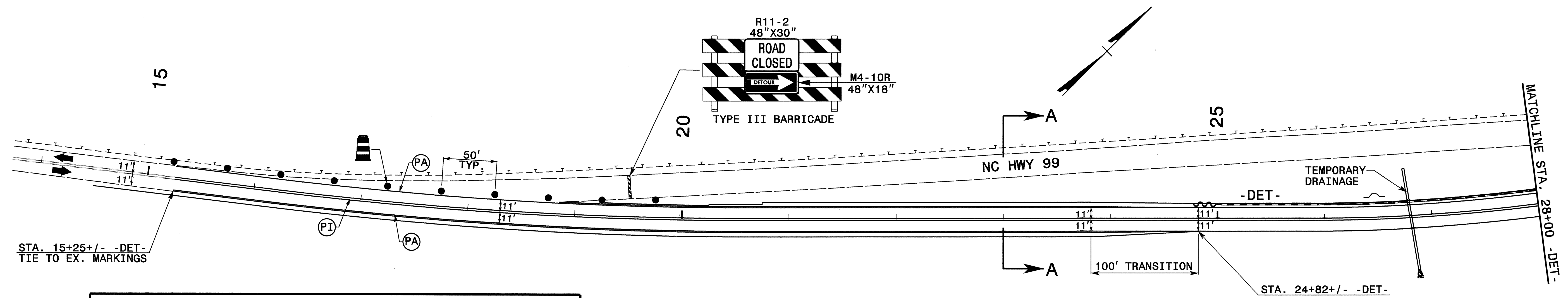
-DET-  
30+87.86



-DET-  
30+62.40

APPROVED: _____ DATE: _____	<p align="center"><b>PHASE I -DET- LINE TEMPORARY SLOPES</b></p>		REVISIONS							
			<p>SCALE: 1"=10'</p> <p>DATE: 12-29-09</p> <p>DWG. BY: SBC</p> <p>DESIGN BY: SBC</p> <p>REVIEWED BY: JWG</p>	<table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>						

21-JAN-2010 11:58  
 \\dot\dfsroot\Pro\TIP\Projects-B\3611\Traffic\TrafficControl\TCP\b3611\_TC\_tcp.dhl\_tcp06.dgn  
 scoats AT WZ TC237457



**TEMPORARY PAVEMENT MARKING LEGEND**

(PA)	PAINT - WHITE EDGELINE - (4")
(PI)	PAINT - YELLOW DOUBLE CENTER - (4")

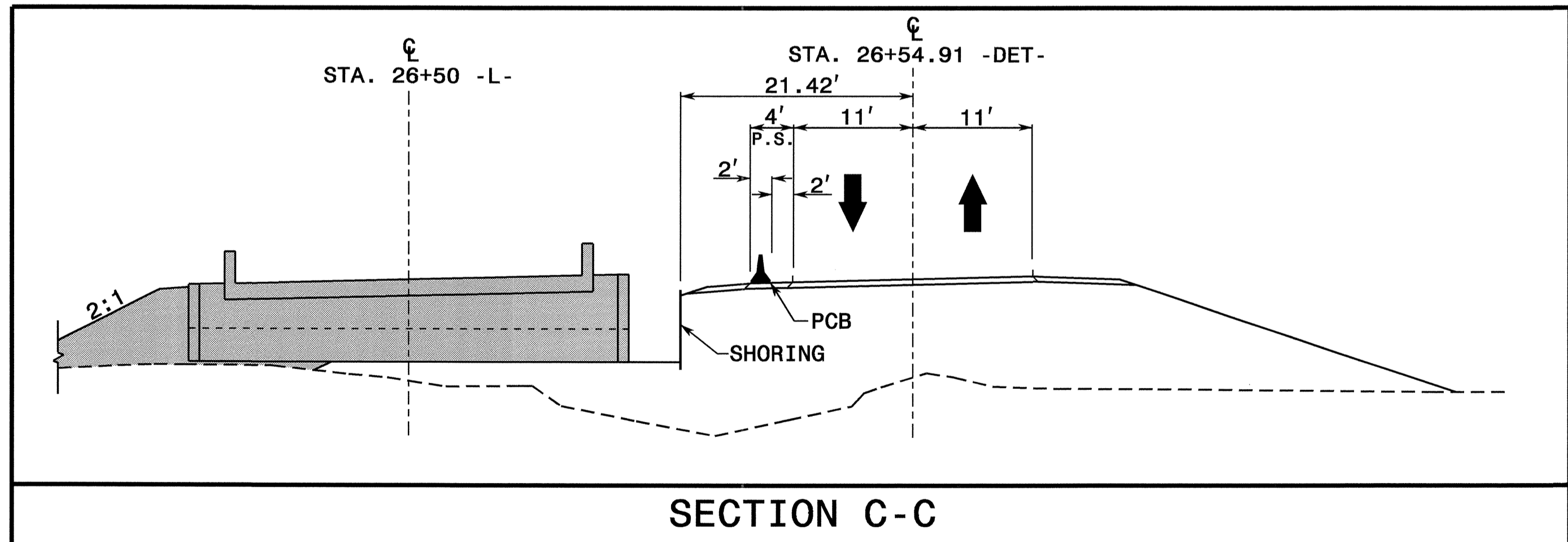
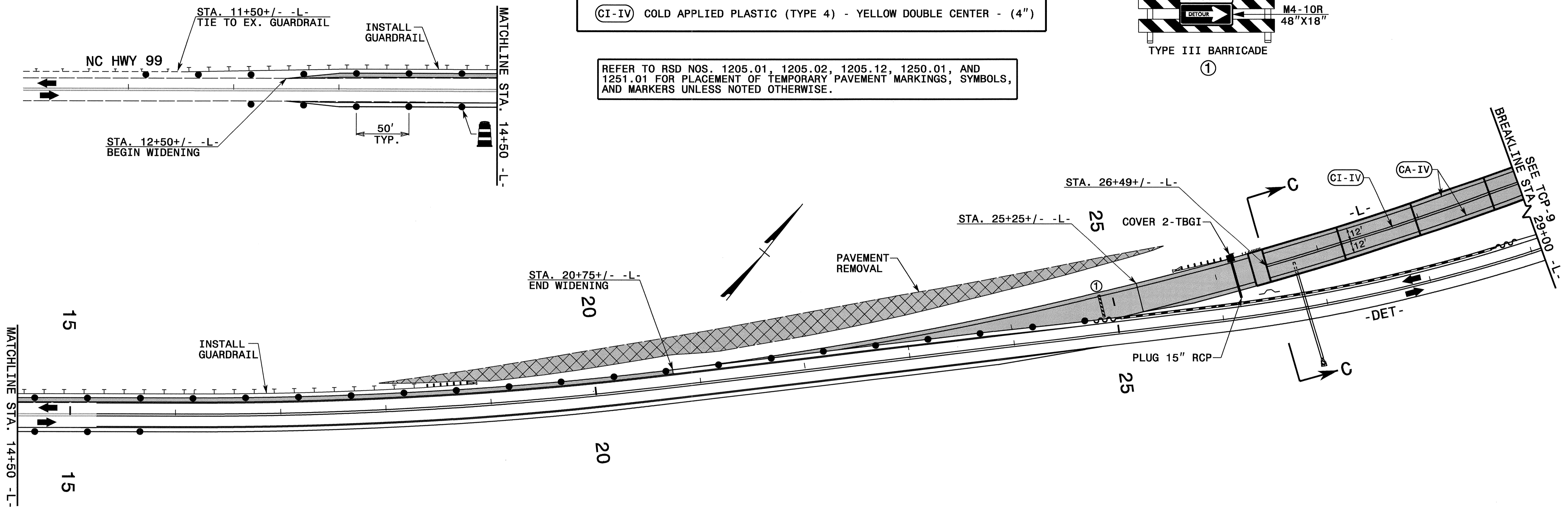
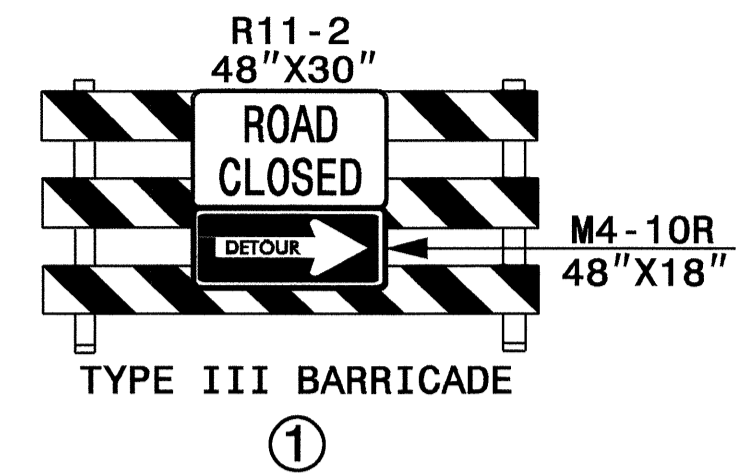
REFER TO RSD NOS. 1205.01, 1205.02, 1250.01, AND 1251.01 FOR PLACEMENT OF TEMPORARY PAVEMENT MARKINGS, SYMBOLS, AND MARKERS UNLESS NOTED OTHERWISE.

APPROVED: _____ DATE: _____	<p><b>PHASE I -DET- LINE TEMPORARY PAVEMENT MARKINGS</b></p>	REVISIONS					
		<table border="1"> <tr> <td>SCALE: 1"=50'</td> <td>DATE: 12-29-09</td> </tr> <tr> <td>DWG. BY: SBC</td> <td>DESIGN BY: SBC</td> </tr> <tr> <td>REVIEWED BY: JWG</td> <td></td> </tr> </table>	SCALE: 1"=50'	DATE: 12-29-09	DWG. BY: SBC	DESIGN BY: SBC	REVIEWED BY: JWG
SCALE: 1"=50'	DATE: 12-29-09						
DWG. BY: SBC	DESIGN BY: SBC						
REVIEWED BY: JWG							

21-JAN-2010 14:59  
 \\dot\dfsroot\01\Proj\TIP\Projects-B\B3611\TrafficControl\TCP\B3611.TC.tcp.phl.tcp07.dgn  
 scoots AT WZTC237457

TEMPORARY PAVEMENT MARKING LEGEND	
(CA-IV)	COLD APPLIED PLASTIC (TYPE 4) - WHITE EDGELINE - (4")
(CI-IV)	COLD APPLIED PLASTIC (TYPE 4) - YELLOW DOUBLE CENTER - (4")

REFER TO RSD NOS. 1205.01, 1205.02, 1205.12, 1250.01, AND 1251.01 FOR PLACEMENT OF TEMPORARY PAVEMENT MARKINGS, SYMBOLS, AND MARKERS UNLESS NOTED OTHERWISE.



SECTION C-C

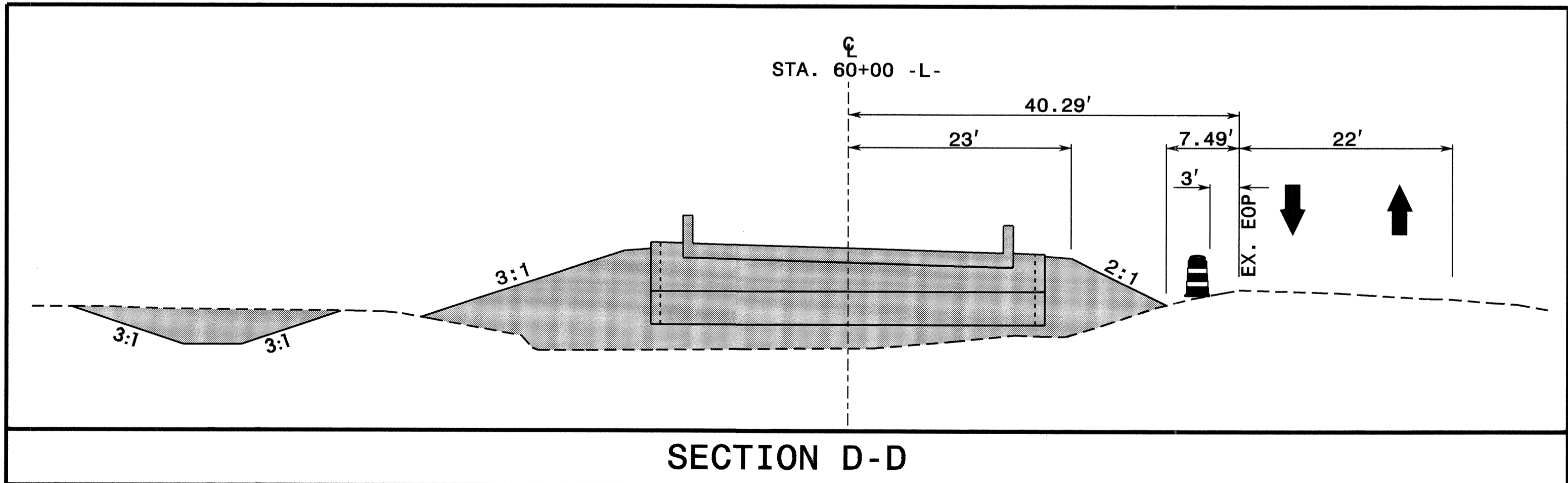
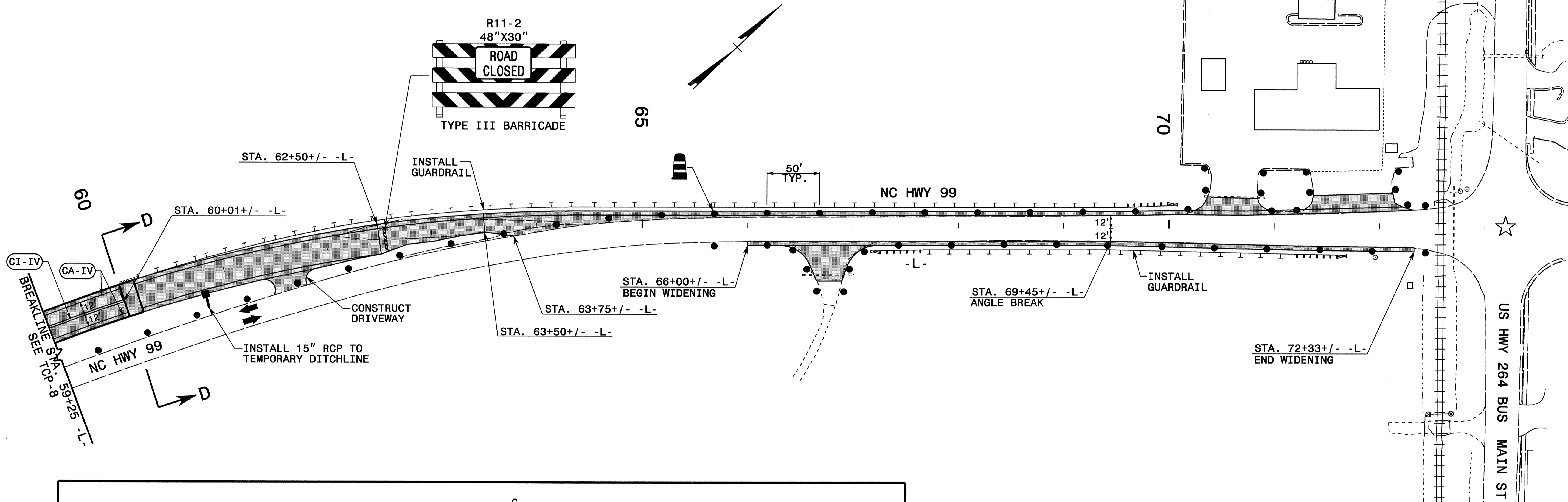
APPROVED: _____	DATE: _____	<b>PHASE II DETAILS</b> <b>-L- LINE</b> <b>TEMPORARY PAVEMENT MARKINGS</b>	
SCALE: 1"=50'	DATE: 12-29-09		REVISIONS
DWG. BY: SBC	DESIGN BY: SBC		
REVIEWED BY: JWG			

21-JAN-2010 11:59  
 \\dot\dfs\dot\p\proj\p\pp\projects-B\B3611\TrafficControl\TCP\B3611\_TC\_tcp\_ph2\_tcp08.dgn  
 scodys AT WZTC231457



TEMPORARY PAVEMENT MARKING LEGEND	
(CA-IV)	COLD APPLIED PLASTIC (TYPE 4) - WHITE EDGELINE - (4")
(CI-IV)	COLD APPLIED PLASTIC (TYPE 4) - YELLOW DOUBLE CENTER - (4")

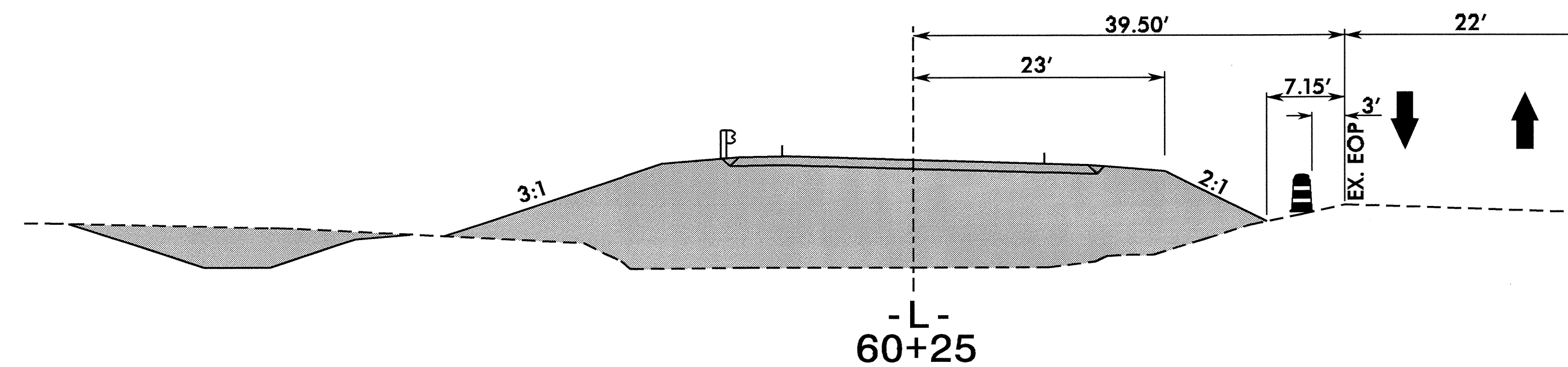
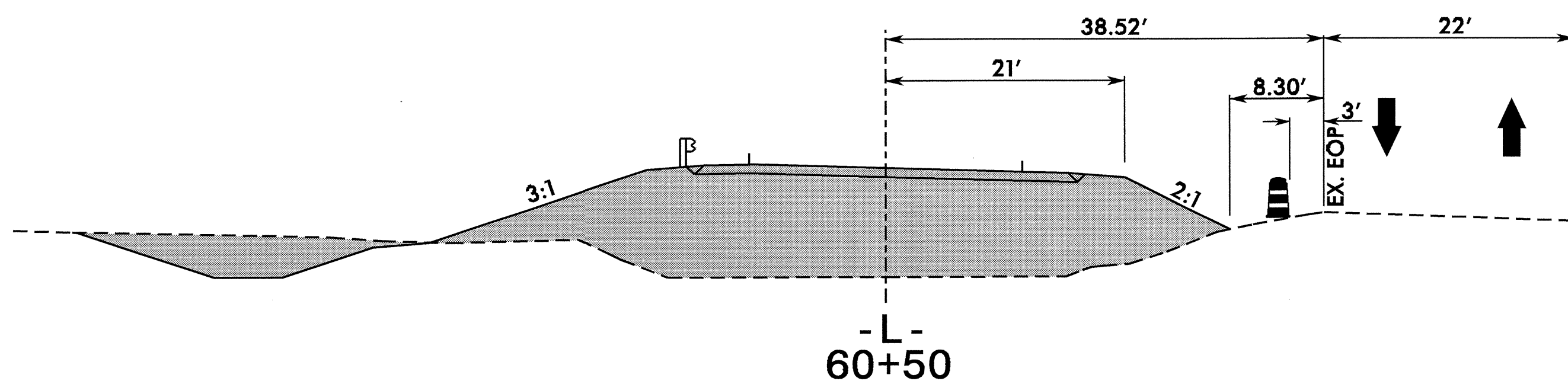
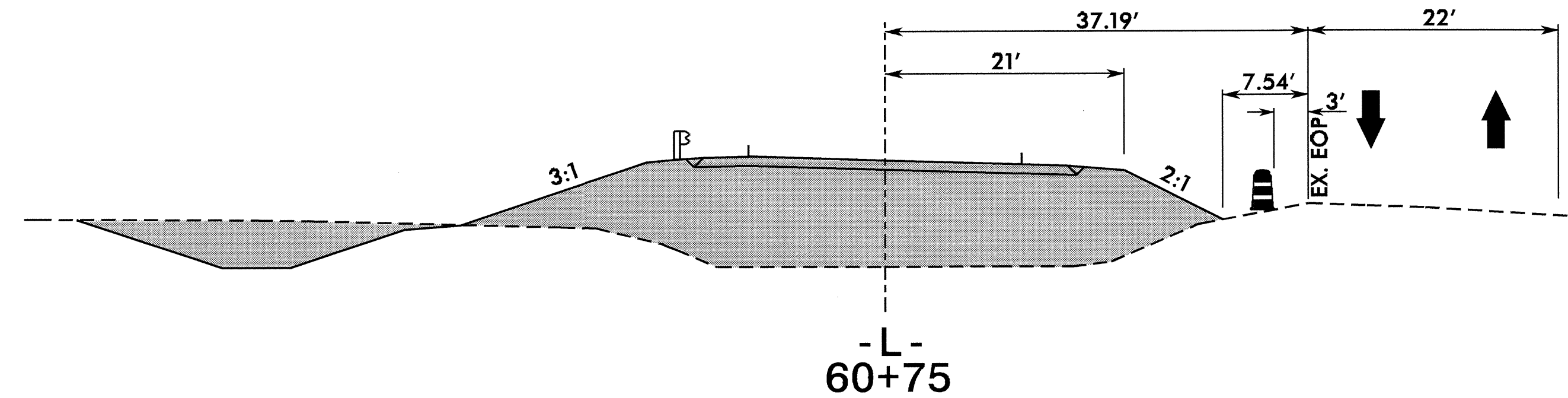
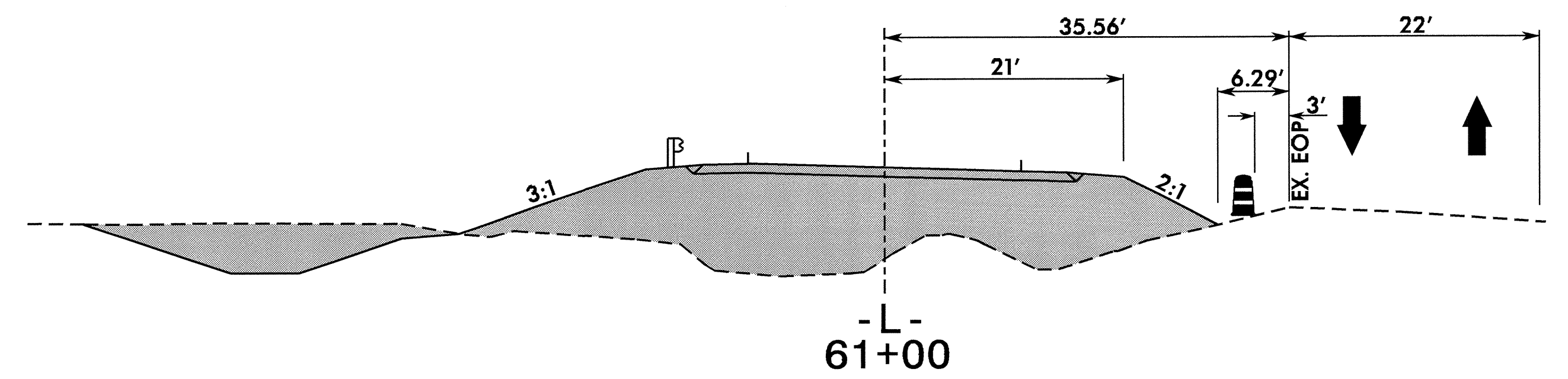
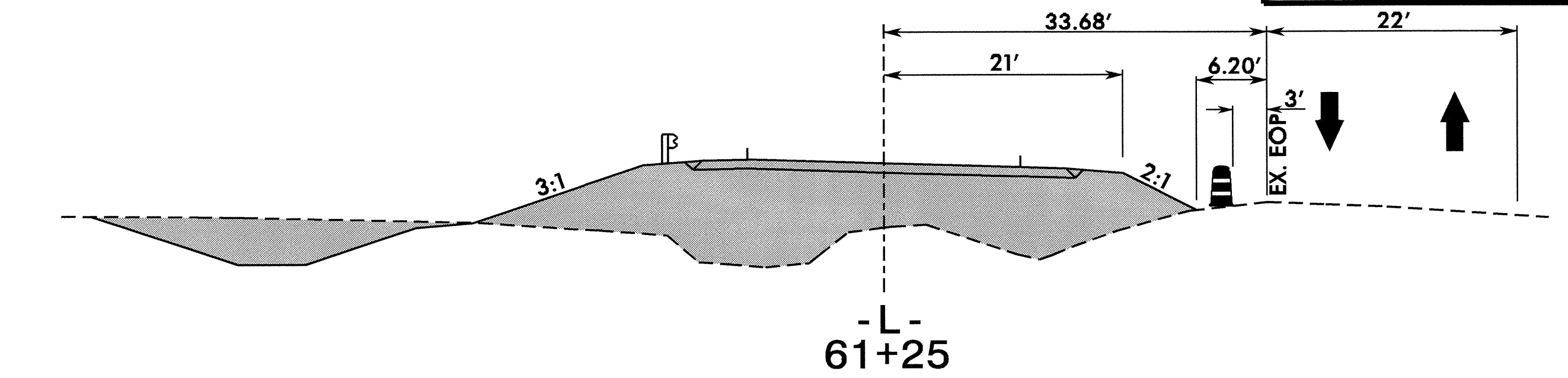
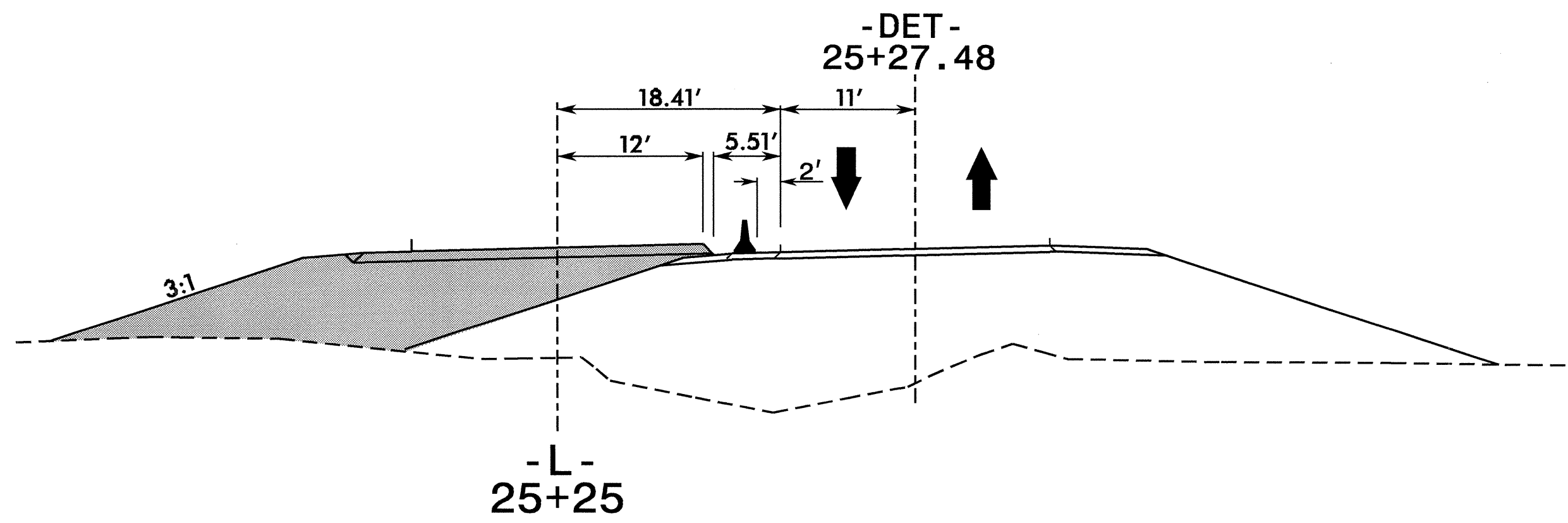
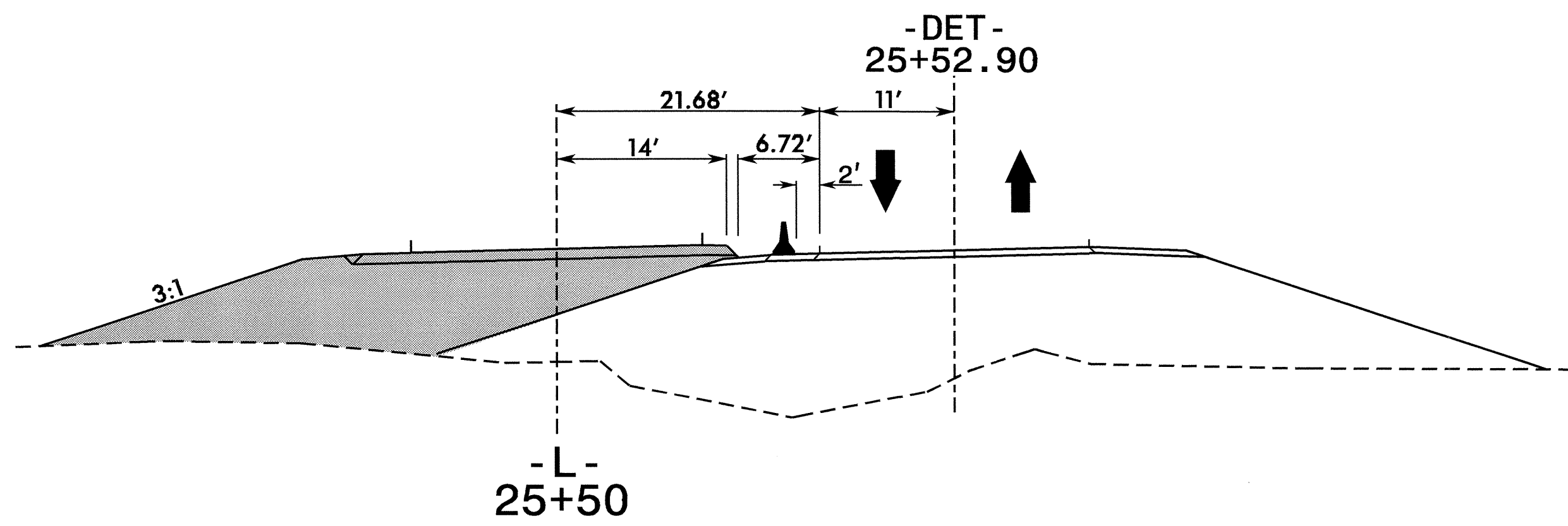
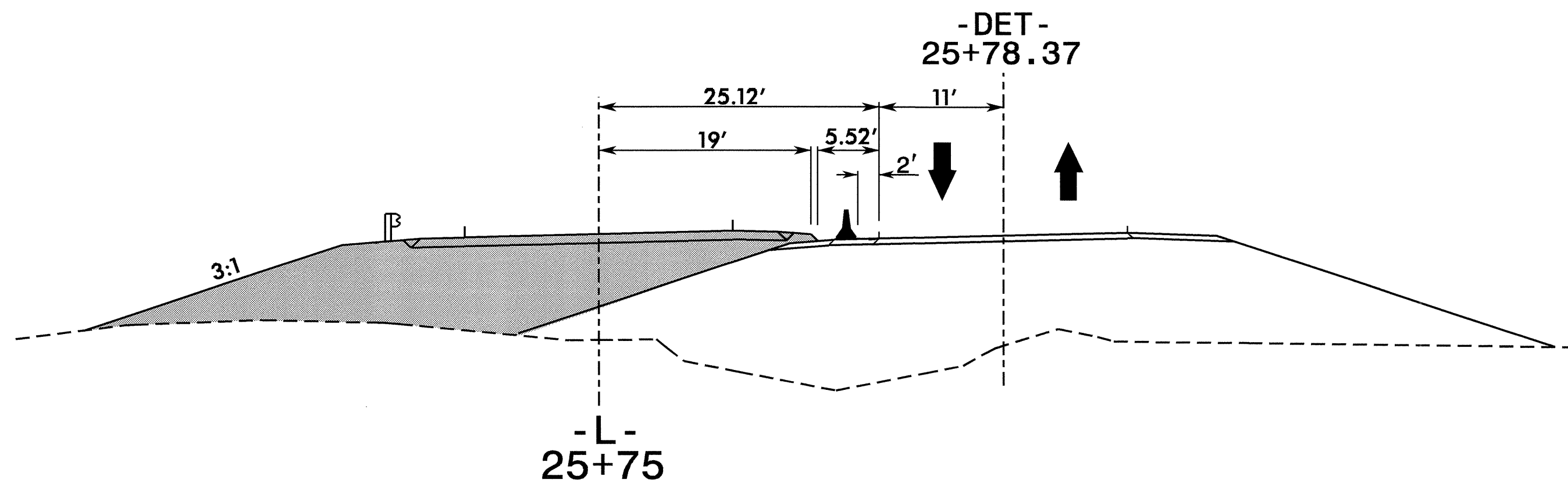
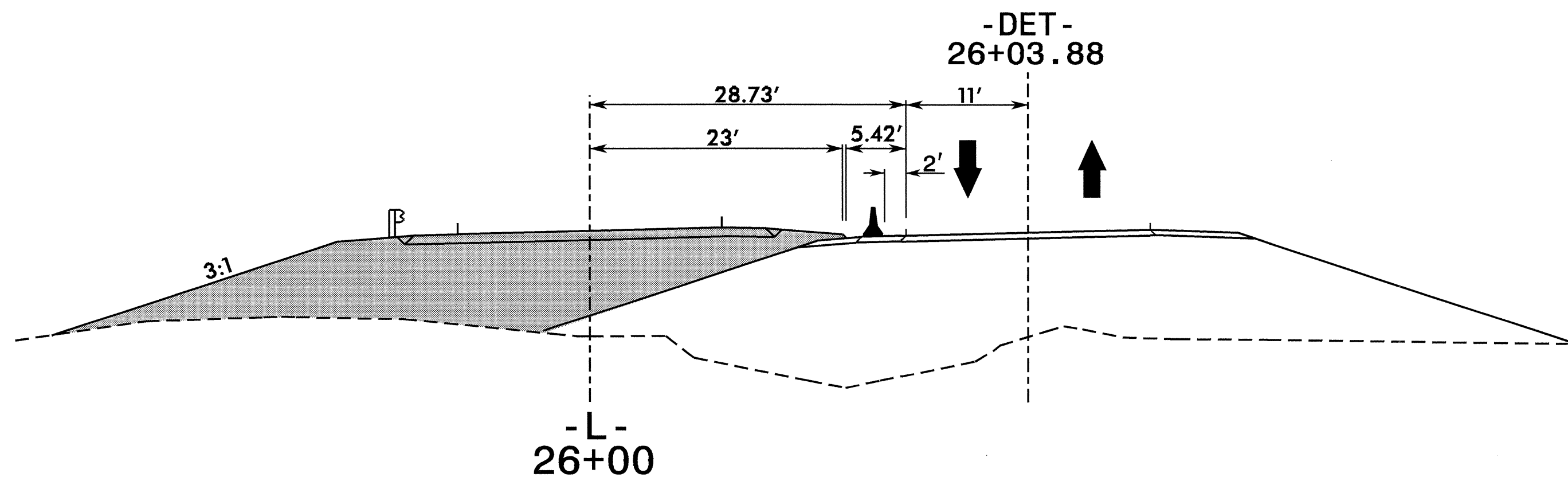
REFER TO RSD NOS. 1205.01, 1205.02, 1205.12, 1250.01, AND 1251.01 FOR PLACEMENT OF TEMPORARY PAVEMENT MARKINGS, SYMBOLS, AND MARKERS UNLESS NOTED OTHERWISE.



★ INDICATES EXISTING SIGNALIZED INTERSECTION

APPROVED: _____ DATE: _____	<p><b>PHASE II DETAILS</b> -L- LINE <b>TEMPORARY PAVEMENT MARKINGS</b></p>	SCALE: 1"=50'		REVISIONS						
		DATE: 12-29-09		<table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>						
SEAL	DWG. BY: SBC	DESIGN BY: SBC	REVIEWED BY: JWC	<table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>						

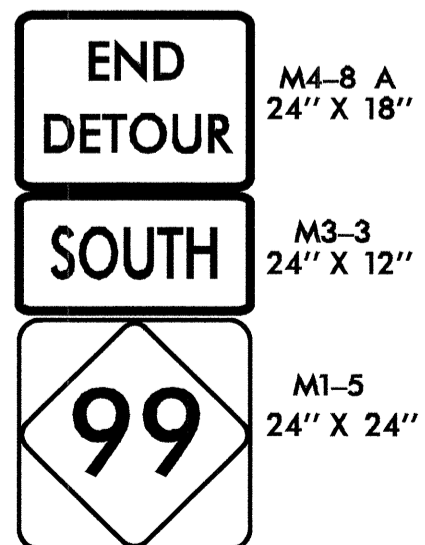
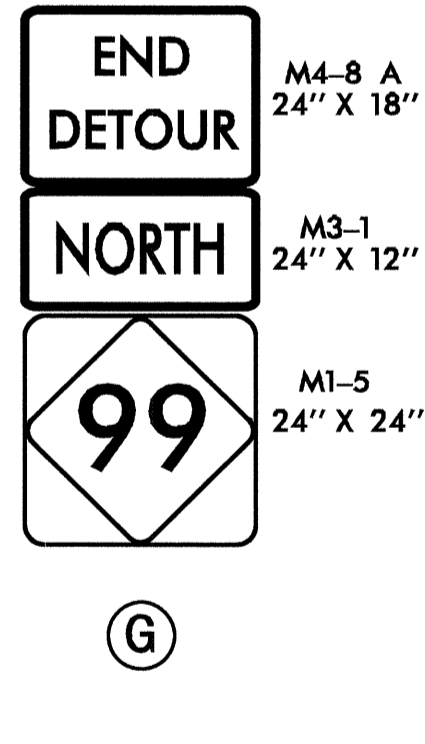
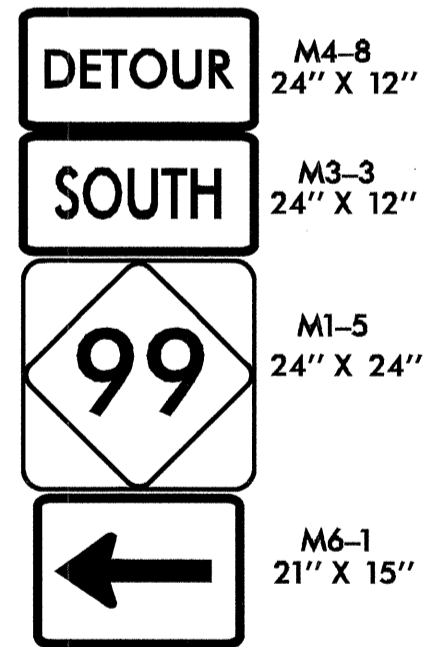
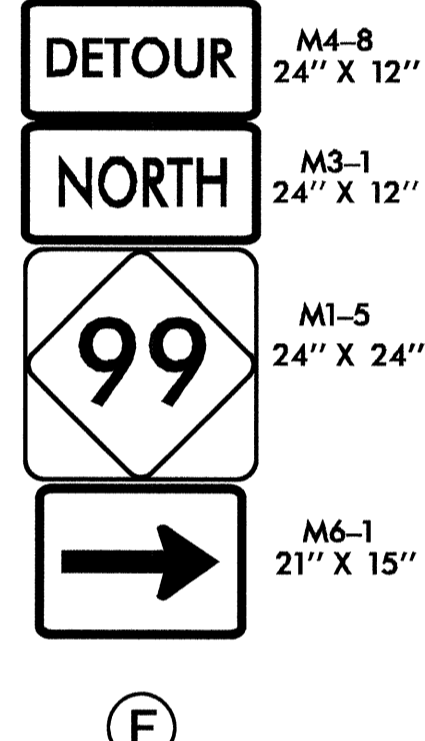
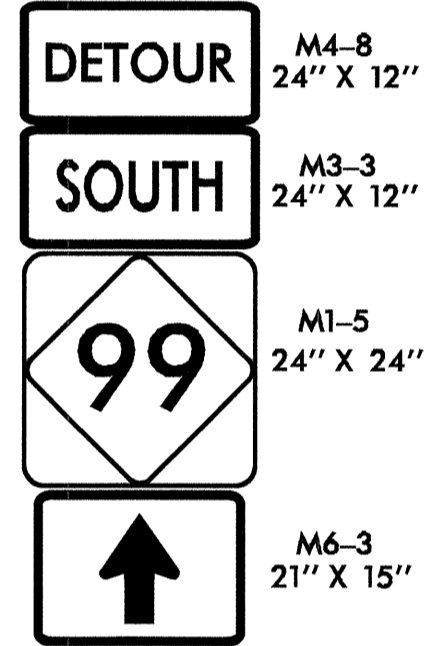
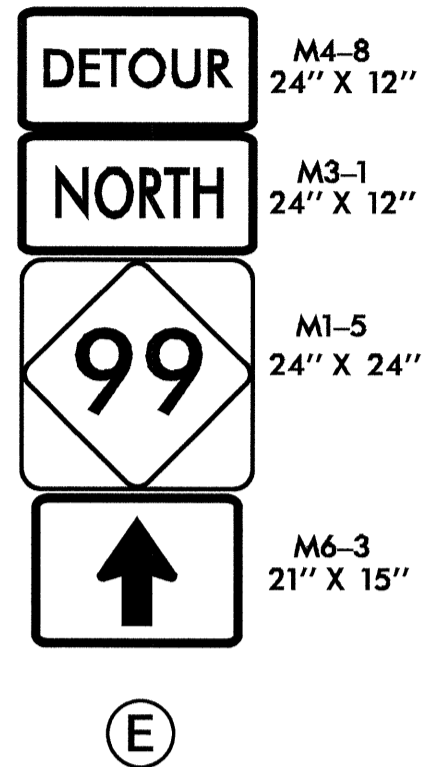
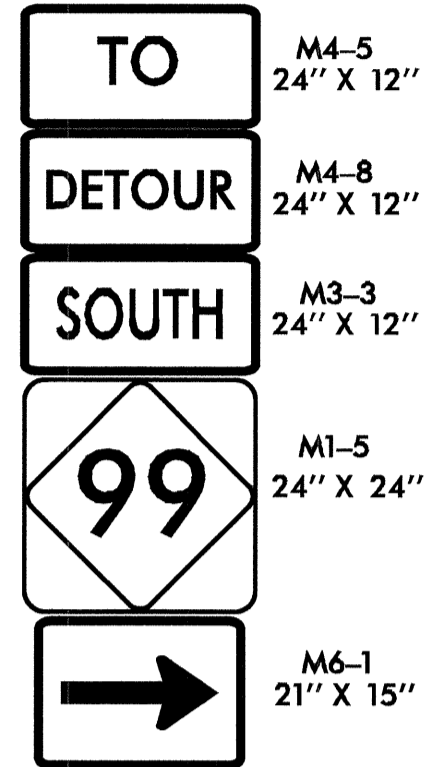
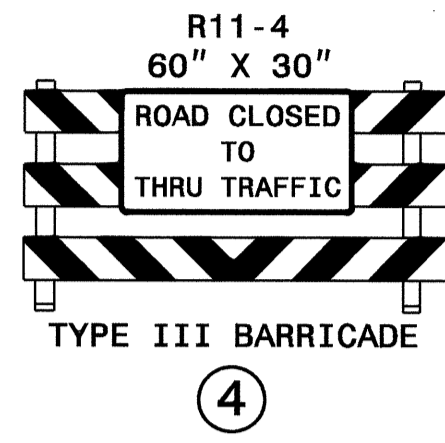
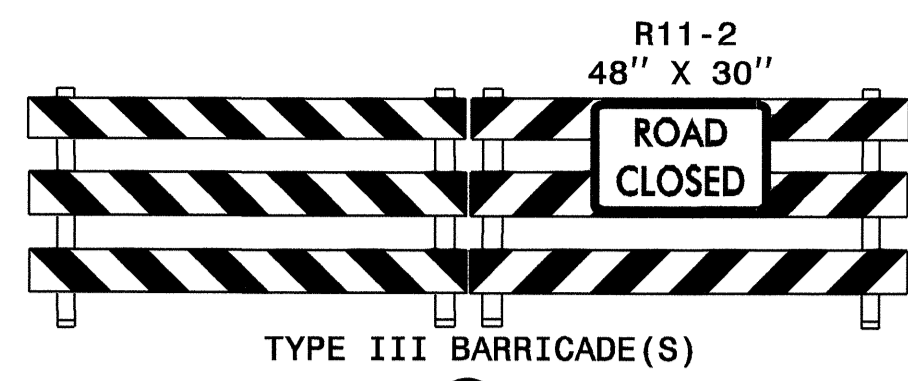
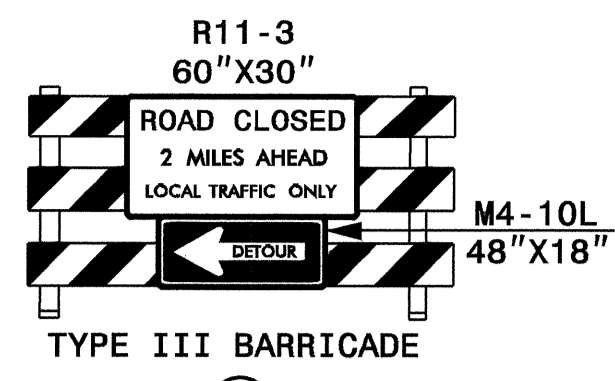
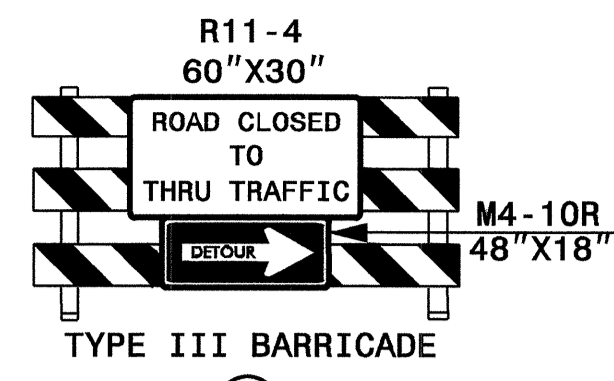
21-JAN-2010 11:59 AM \\dot\dfsroot\01\Proj\TIP\Projects-B\B3611\TrafficControl\TCP\B3611\_TC\_top.ph2.tcp09.dgn



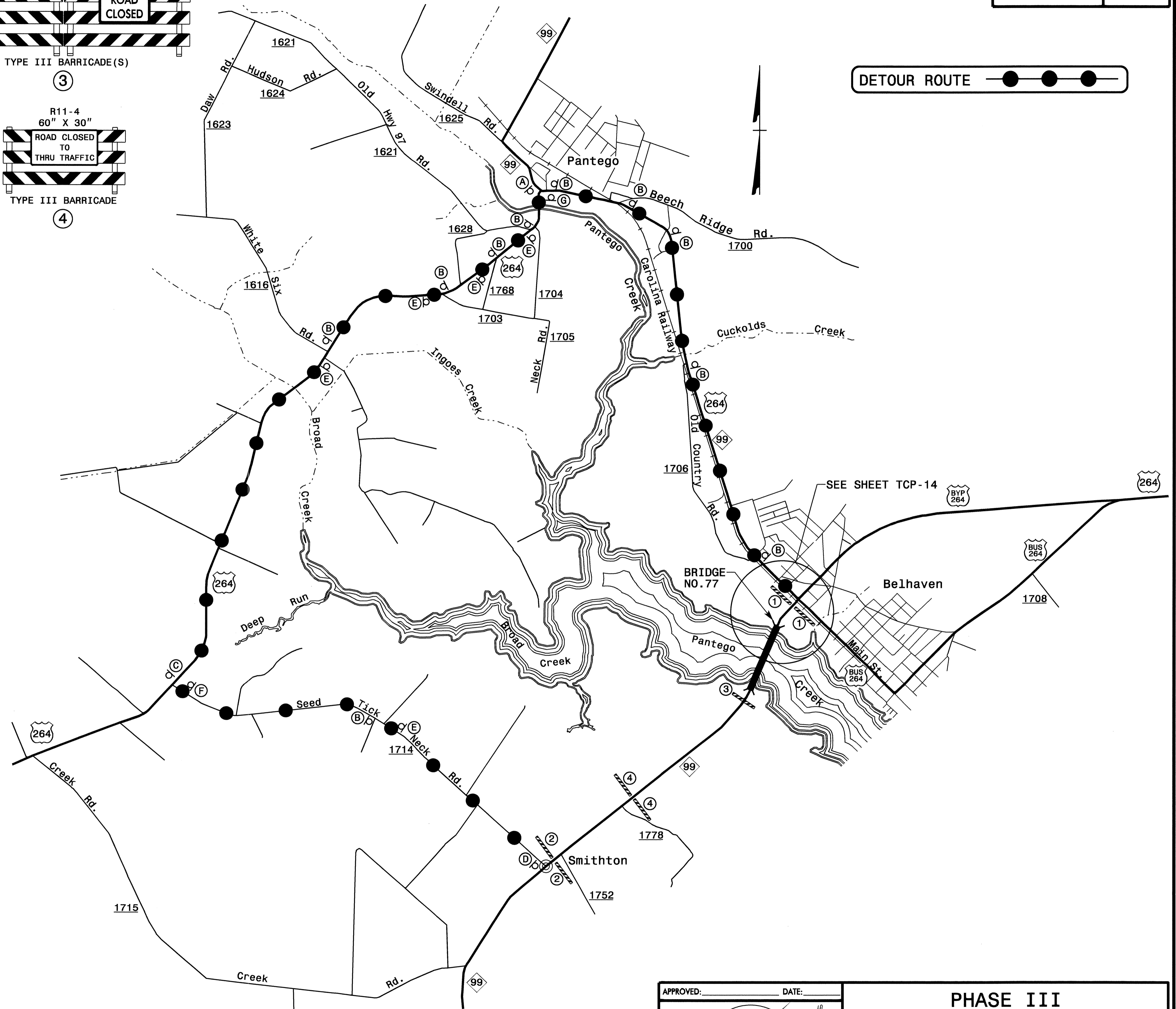
21-JAN-2010 12:00  
 \\dot\dfsroot\p\proj\TIP\Projects-B\B3611\Traffic\TrafficControl\TCP\b3611\_TC\_tcp\_ph2\_top10.dgn  
 scd01s AT WZTC237457

APPROVED:	DATE:	<b>PHASE II -L- LINE TEMPORARY SLOPES</b>							
SCALE: 1"=10'	DATE: 12-29-09	REVISIONS							
DWG. BY: SBC	DESIGN BY: SBC	<table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>							
REVIEWED BY: JWC	CADD FILE								

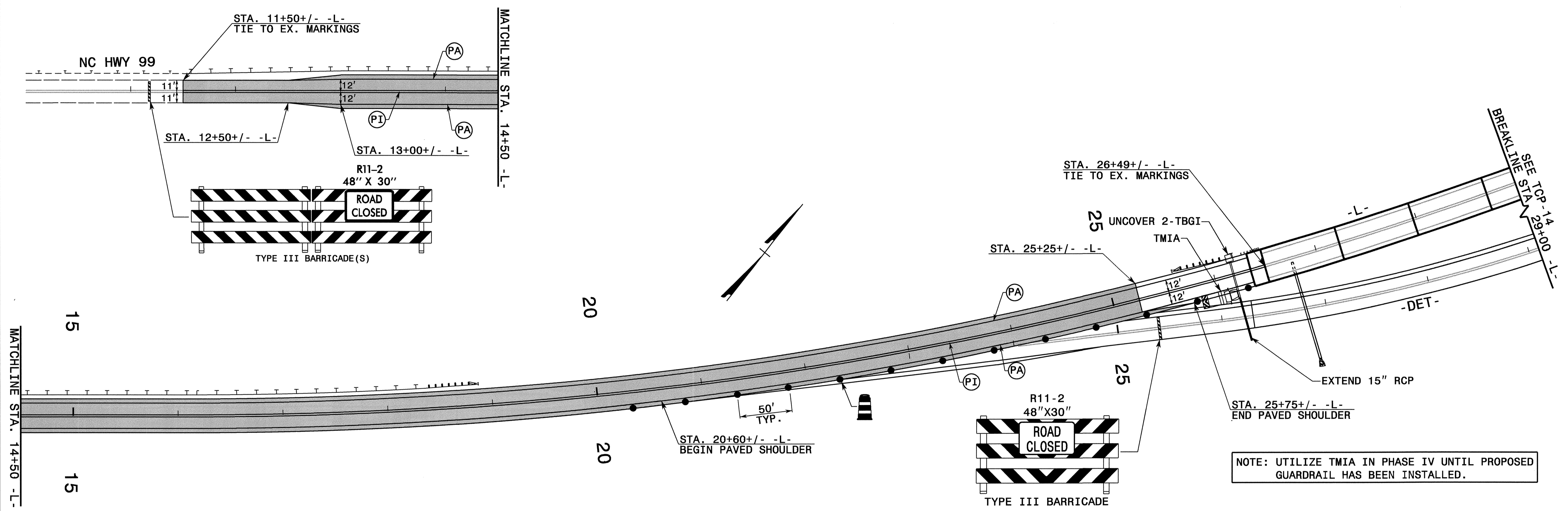




DETOUR ROUTE



APPROVED:	DATE:	<b>PHASE III OFF-SITE DETOUR</b>		REVISIONS	
	SCALE: 1" = 2000'				
	DATE: 12-29-09				
	DESIGN BY: SBC				



TEMPORARY PAVEMENT MARKING LEGEND	
(PA)	PAINT - WHITE EDGELINE - (4")
(PI)	PAINT - YELLOW DOUBLE CENTER - (4")

REFER TO RSD NOS. 1205.01, 1205.02, 1250.01, AND 1251.01 FOR PLACEMENT OF TEMPORARY PAVEMENT MARKINGS, SYMBOLS, AND MARKERS UNLESS NOTED OTHERWISE.

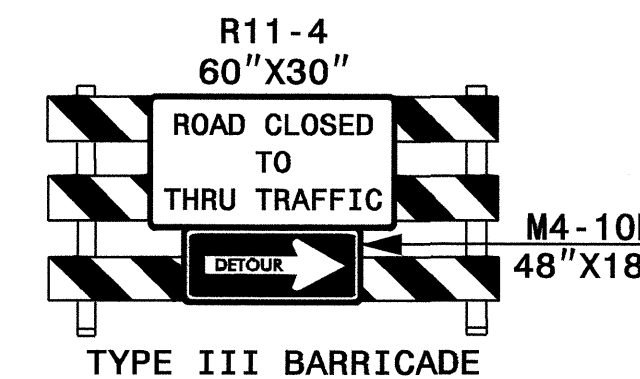
NOTE: UTILIZE TMIA IN PHASE IV UNTIL PROPOSED GUARDRAIL HAS BEEN INSTALLED.

21-JAN-2010 13:42 \\dot\dfsroot\proj\TIP\Projects-B\83611\TrafficControl\TCP\B3611.TC.tcp-ph3.tcp13.dgn SCOTS AT WZTC237457

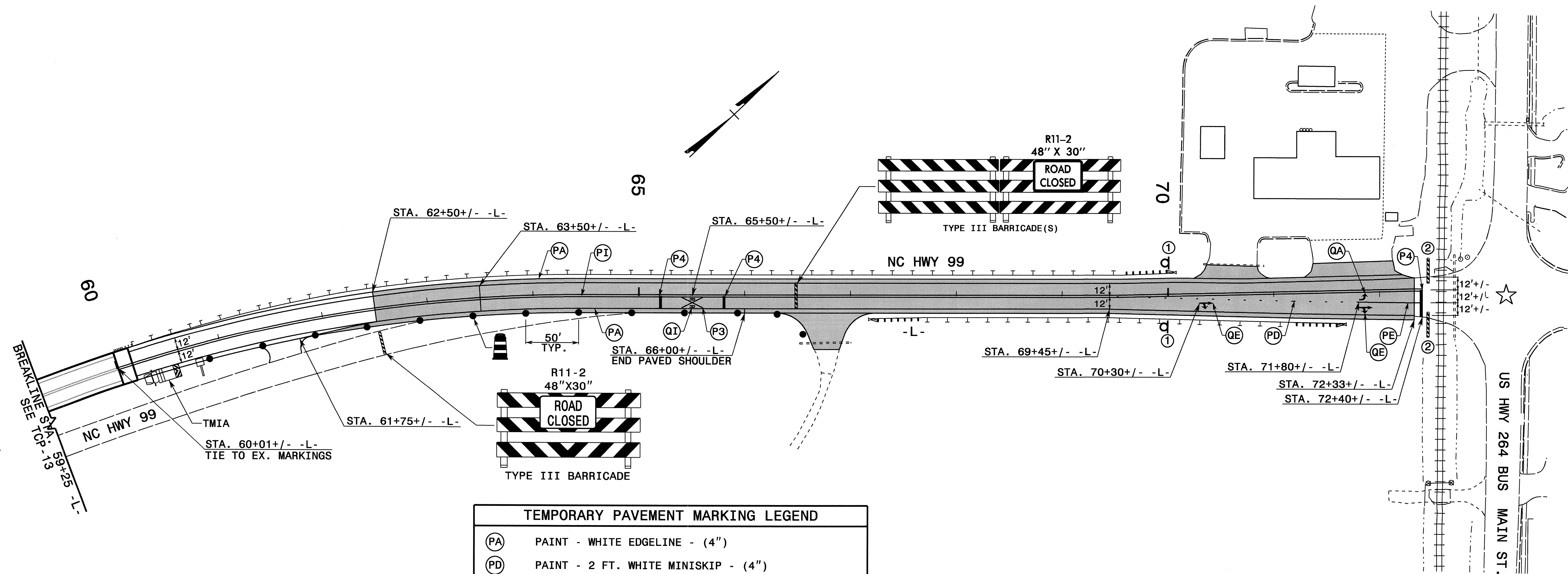
APPROVED: _____ DATE: _____	<p align="center"><b>PHASE III DETAILS</b> <b>-L- LINE</b> <b>TEMPORARY PAVEMENT MARKINGS</b></p>	SCALE: 1"=50'		REVISIONS						
		DATE: 12-29-09		<table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>						
DWG. BY: SBC	DESIGN BY: SBC	REVIEWED BY: JWG		<table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>						



①



②



TEMPORARY PAVEMENT MARKING LEGEND	
Ⓟ PA	PAINT - WHITE EDGELINE - (4")
Ⓟ PD	PAINT - 2 FT. WHITE MINISKIP - (4")
Ⓟ PE	PAINT - WHITE SOLID LANE LINE - (4")
Ⓟ PI	PAINT - YELLOW DOUBLE CENTER - (4")
Ⓟ P3	PAINT - WHITE LINE FOR RAILROAD CROSSBUCK - (16")
Ⓟ P4	PAINT - WHITE STOP BAR - (24")
Ⓟ QA	PAINT - LEFT TURN ARROW - ↵
Ⓟ QE	PAINT - COMBO. STRAIGHT/RIGHT ARROW - ➔
Ⓟ QI	PAINT - ALPHANUMERIC CHARACTER - R

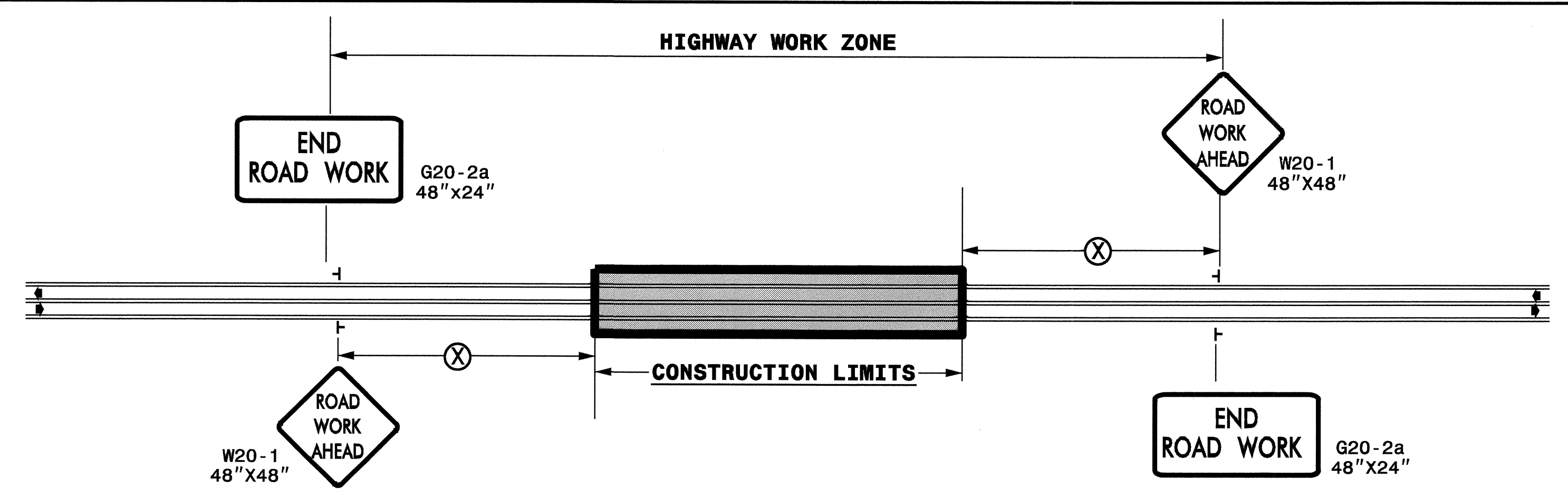
NOTE: UTILIZE TMIA IN PHASE IV UNTIL PROPOSED GUARDRAIL HAS BEEN INSTALLED.

☆ INDICATES EXISTING SIGNALIZED INTERSECTION

REFER TO RSD NOS. 1205.01, 1205.02, 1205.04, 1205.05, 1205.08, 1205.11, 1250.01, AND 1251.01 FOR PLACEMENT OF TEMPORARY PAVEMENT MARKINGS, SYMBOLS, AND MARKERS UNLESS NOTED OTHERWISE.

APPROVED: _____	DATE: _____	<b>PHASE III DETAILS</b> <b>-L- LINE</b> <b>TEMPORARY PAVEMENT MARKINGS</b>	
SCALE: 1"=50'	DATE: 12-29-09		REVISIONS
DWG. BY: SBC	DESIGN BY: SBC		
REVIEWED BY: JWG			

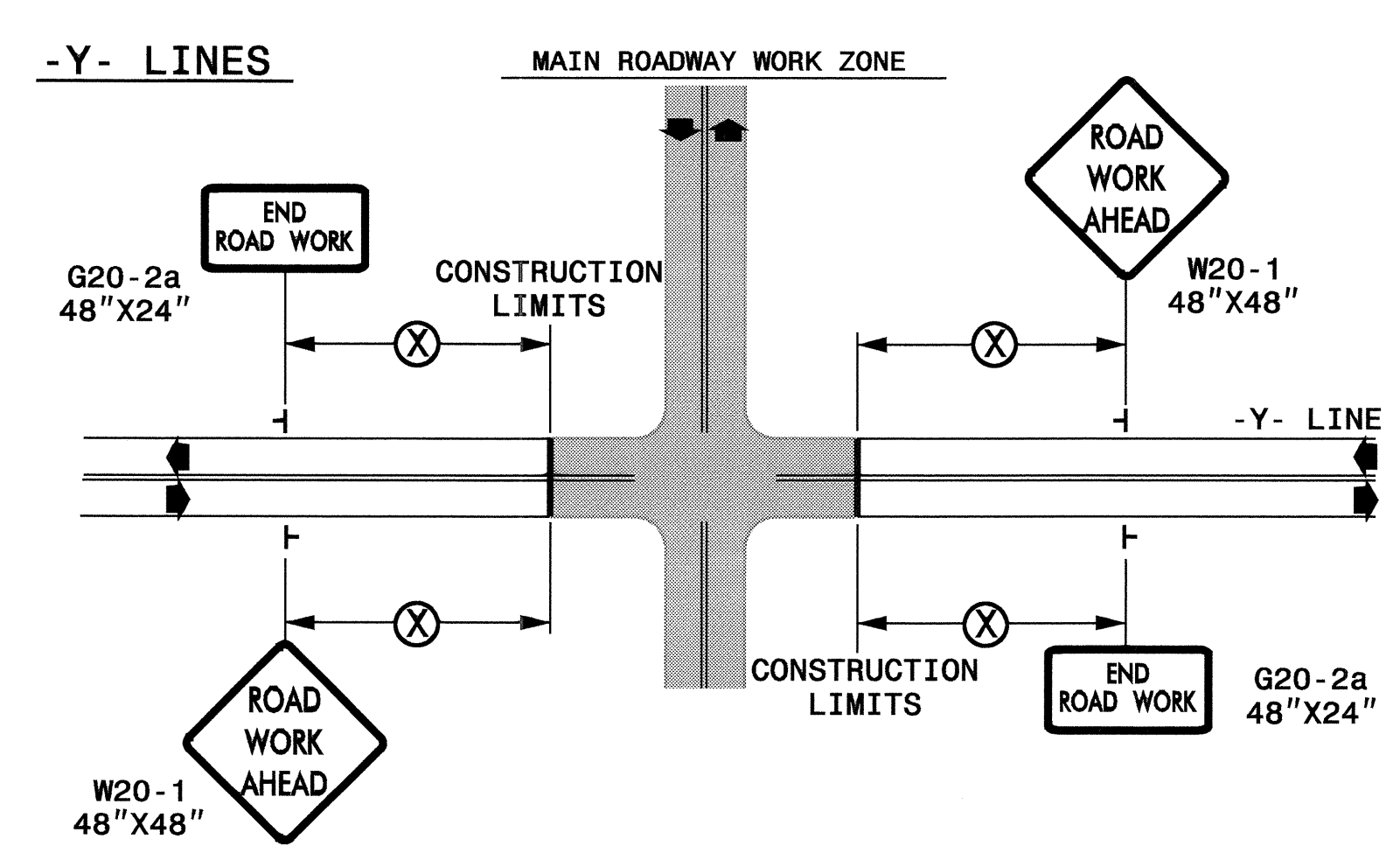
**TWO-WAY UNDIVIDED \*\* (L-LINES)**



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING
≤ 50	500'
≥ 55	1000'

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

**ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)**



DETAIL DRAWING FOR  
TWO-WAY UNDIVIDED  
WORK ZONE WARNING SIGNS

**GENERAL NOTES**

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCE WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.
- \*\* TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

**LEGEND**

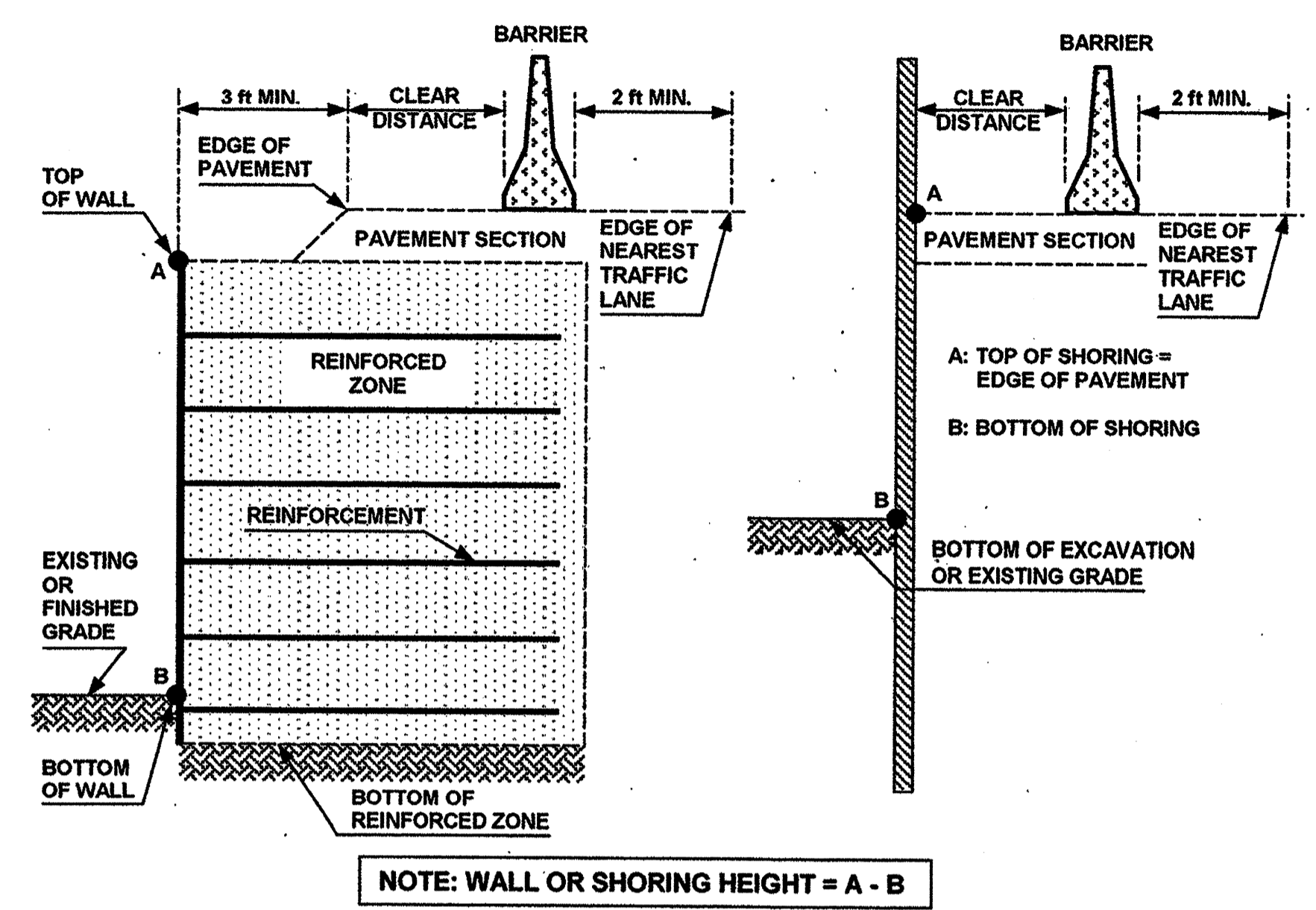
┆ STATIONARY SIGN

◀ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

APPROVED: _____	DATE: _____	DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCE WORK ZONE WARNING SIGNS	
	SCALE: NONE	REVISIONS	
	DATE: _____	7-98	10/01
	DWG. BY: _____	10-98	03/04
	DESIGN BY: _____	01/01	11/04
REVIEWED BY: _____			

21-JAN-2010 12:02  
 \\dot\adfrco\01\Projects\TIP\Projects-B\B3611\TrafficControl\TCP\B3611.TC.tcp\_std\_tcp15.dgn  
 scodts AT WZ1C237457



**FIGURE A**

**NOTES**

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

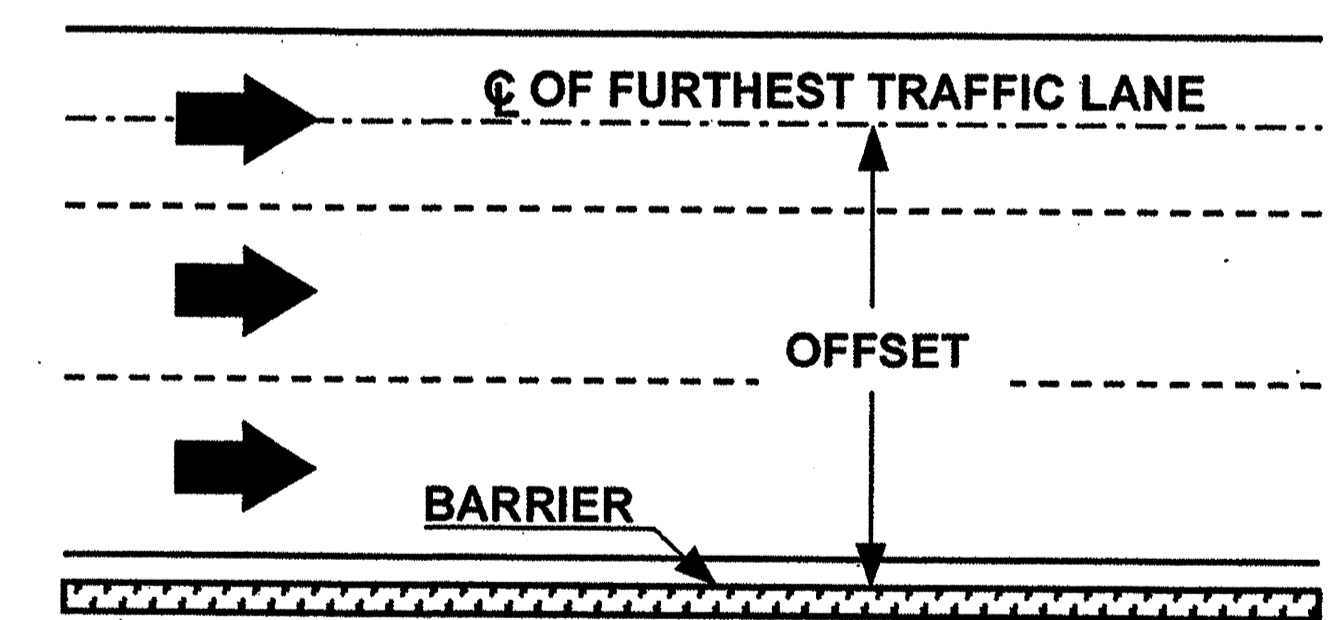
CLEAR DISTANCE - HORIZONTAL DISTANCE FROM THE BACK FACE OF THE BARRIER TO THE EDGE OF PAVEMENT FOR TEMPORARY MSE WALL OR TO THE FACE OF NON-ANCHORED TEMPORARY SHORING AS SHOWN IN FIGURE A.

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

**MINIMUM REQUIRED CLEAR DISTANCE, inches**

Barrier Type	Pavement Type	Offset * ft	Design Speed, mph					
			<30	31-40	41-50	51-60	61-70	71-80
Unanchored PCB	Asphalt	<8	24	26	29	32	36	40
		8-14	26	28	31	35	38	42
		14-20	27	29	34	36	39	43
		20-26	28	31	35	38	40	44
		26-32	29	32	36	39	42	45
		32-38	30	34	38	41	43	46
		38-44	31	34	41	43	45	48
		44-50	31	35	41	43	46	49
		50-56	32	36	42	44	47	50
	>56	32	36	42	45	47	51	
	Concrete	<8	17	18	21	22	25	26
		8-14	19	20	23	25	26	29
		14-20	22	22	24	26	28	31
		20-26	23	24	26	27	30	34
		26-32	24	25	27	28	32	35
		32-38	24	26	27	30	33	36
		38-44	25	26	28	30	34	37
		44-50	26	26	28	32	35	37
50-56		26	26	28	32	35	38	
>56	26	27	29	32	36	38		
Anchored PCB or Oregon Barrier	Asphalt	All Offsets	24 for All Design Speeds					
Anchored PCB or Oregon Barrier	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

\* See Figure Below



**FIGURE B**

APPROVED:	DATE:	<b>PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS</b>	
<i>[Signature]</i>			
SCALE: NONE	DATE: 3/07		REVISIONS
DWG. BY: JI	DESIGN BY: JI		12/08
REVIEWED BY: JI			

*See 12/2008*

12-DEC-2008 08:45 s:\shore\shoring\stds.in\progress\barrierstd.dgn rimgorrett AT WZTC24747