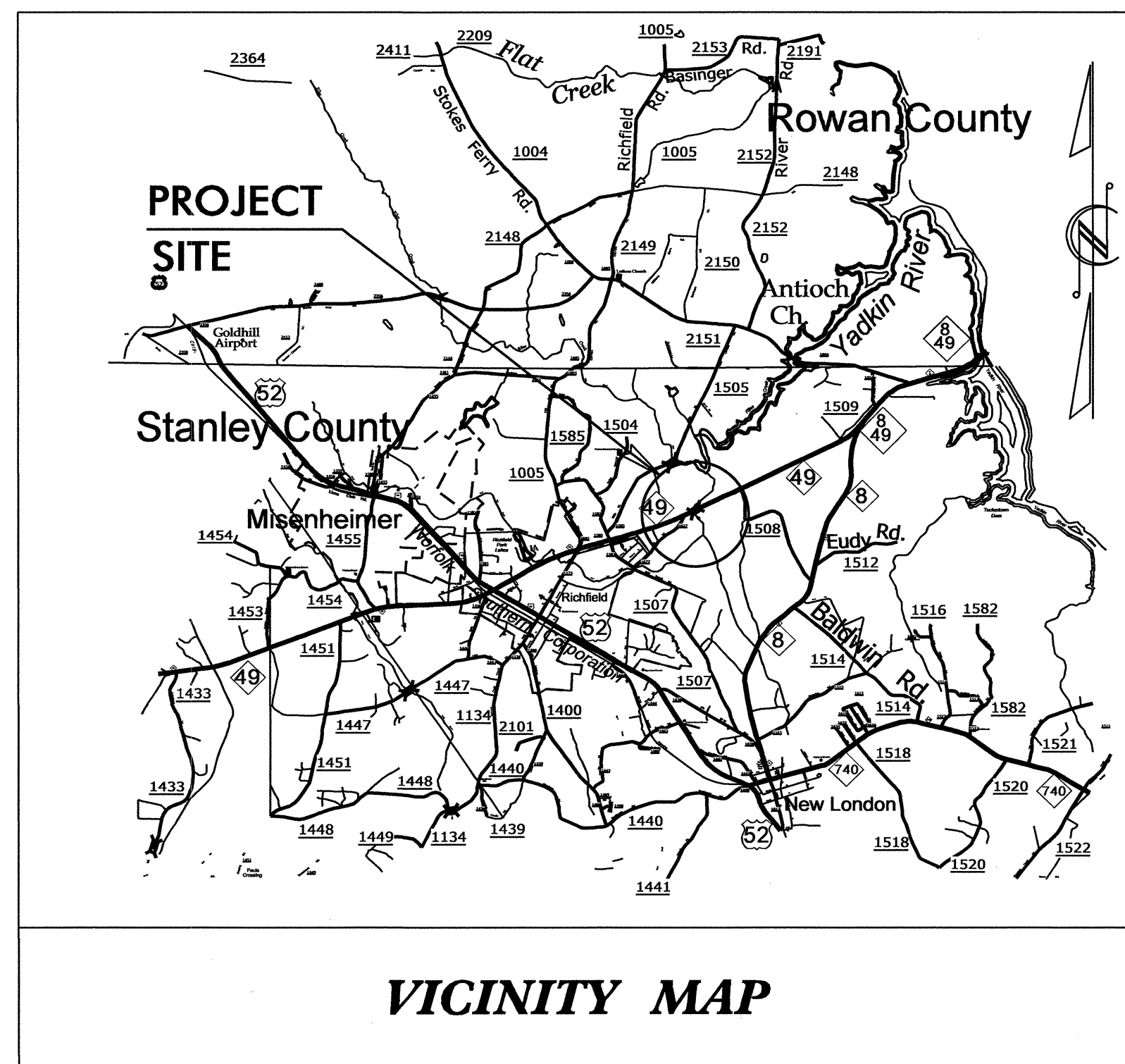
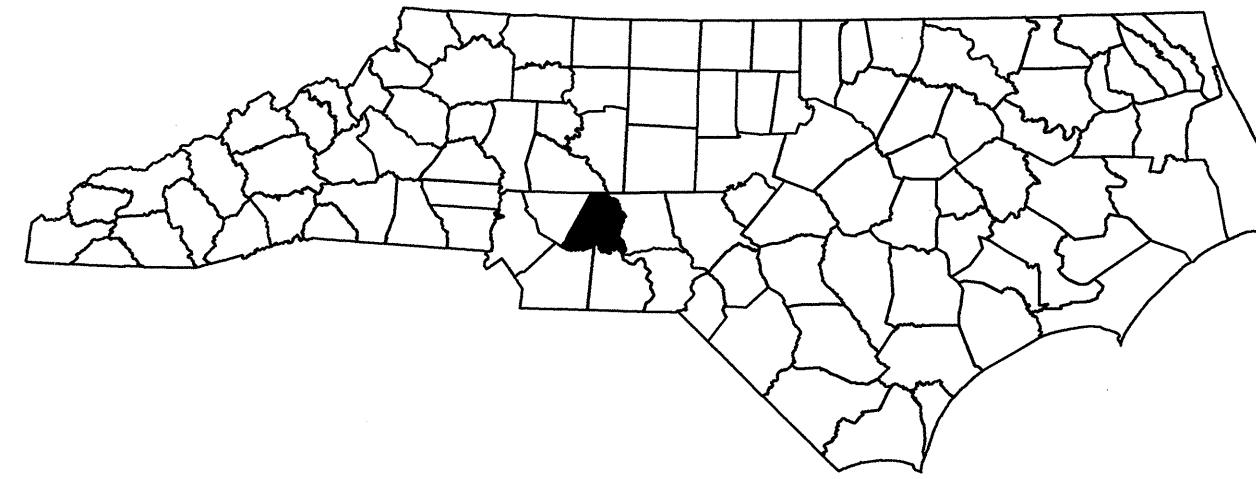


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**STANLY COUNTY**



LOCATION: BRIDGE 24 AND APPROACHES ON NC 49 OVER CURL TAIL CREEK.

**INDEX OF SHEETS**

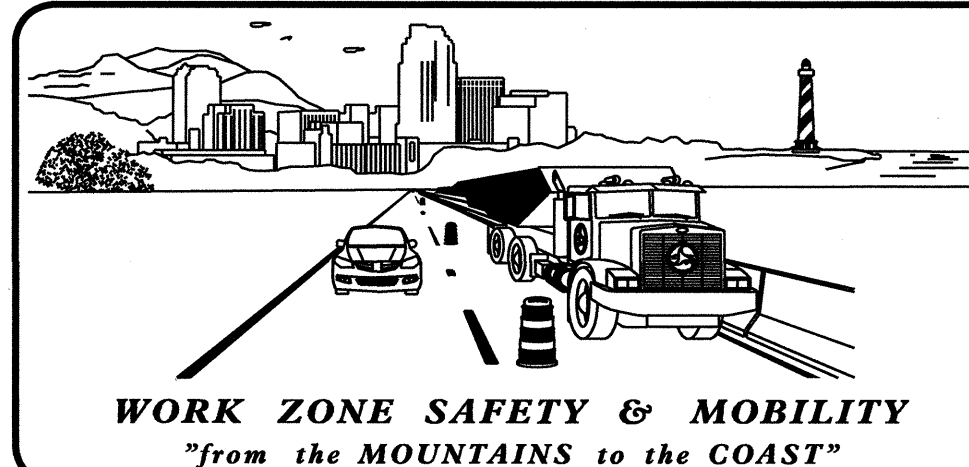
SHEET NO.	TITLE
TMP-01	TITLE SHEET, AND INDEX OF SHEETS
TMP-01A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND TEMPORARY PAVEMENT MARKING
TMP-01B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES AND LOCAL NOTES)
TMP-02	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-03	TEMPORARY SHORING DATA AND TEMPORARY TRAFFIC CONTROL PHASING
TMP-04 THRU 05	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-06 THRU 07	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL
TMP-08 THRU 18	TEMPORARY CUTSECTIONS

SHEET NO.  
TMP-01

**B-4643**

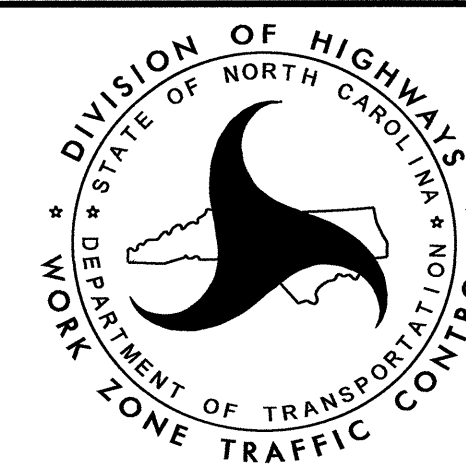
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**N.C.D.O.T. WORK ZONE TRAFFIC CONTROL**  
1561 MAIL SERVICE CENTER (MSC) RALIGH, NC 27699-1561  
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)  
PHONE: (919) 713-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER  
G. L. GETTIER, P.E. TRAFFIC CONTROL PROJECT ENGINEER  
J. W. WOOLARD, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER  
D. A. HAYES E.I. TRAFFIC CONTROL DESIGN ENGINEER



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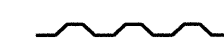
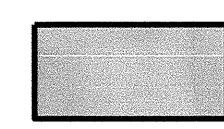
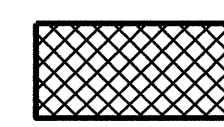
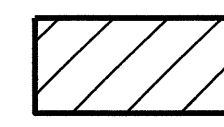
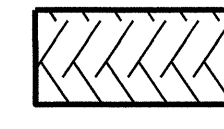

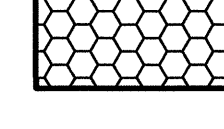

## ROADWAY STANDARD DRAWINGS

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:




<u>STD. NO.</u>	<u>TITLE</u>
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE 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	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	PORTABLE CONCRETE BARRIER
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
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
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

## LEGEND

### GENERAL

	DIRECTION OF TRAFFIC FLOW
	EXIST. PVMT.
	NORTH ARROW
	PROPOSED PVMT.
	TEMP. SHORING (LOCATION PURPOSES ONLY)
	WORK AREA
	REMOVAL
	WEDGING
	BASE COURSE
	BINDER COURSE
	TEMPORARY PAVEMENT
	TEMPORARY SLOPES ↓ DIRECTION OF DOWNWARD SLOPE

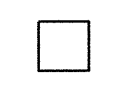
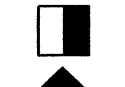

### TRAFFIC CONTROL DEVICES

	BARRICADE (TYPE III)
	DRUM
	TEMPORARY CRASH CUSHION

### PAVEMENT MARKINGS

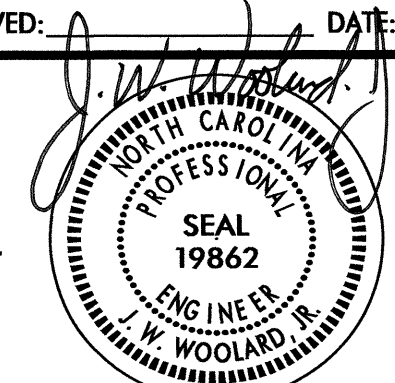
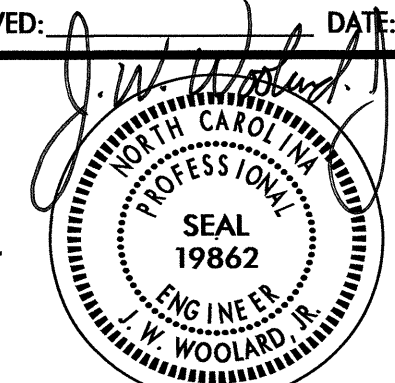

	EXISTING LINES
	TEMPORARY LINES

### PAVEMENT MARKERS

	CRYSTAL/CRYSTAL
	CRYSTAL/RED
	YELLOW/YELLOW

### TEMPORARY PAVEMENT MARKING

SYMBOL	DESCRIPTION
	TEMPORARY PAVEMENT MARKINGS PAINT (4")
PA	WHITE EDGELINE
PI	YELLOW DOUBLE CENTER
	MARKERS
MH	TEMPORARY RAISED PAVEMENT MARKERS YELLOW & YELLOW

APPROVED:  DATE: 2/12/13 SEAL 		<b>ROADWAY STANDARD DRAWINGS &amp; LEGEND</b>
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## 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.
- 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 WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- F) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON -L- (NC 49).
- G) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

### PAVEMENT EDGE DROP OFF REQUIREMENTS

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

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

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

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

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

- 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 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- L) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- M) 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

- N) 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.

- O) 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

- P) 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.
- Q) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- R) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

### PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
1. NC 49	PAINT	TEMPORARY RAISED

- T) 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.
- U) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- V) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

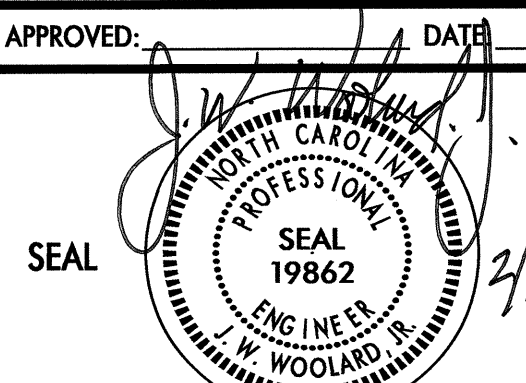
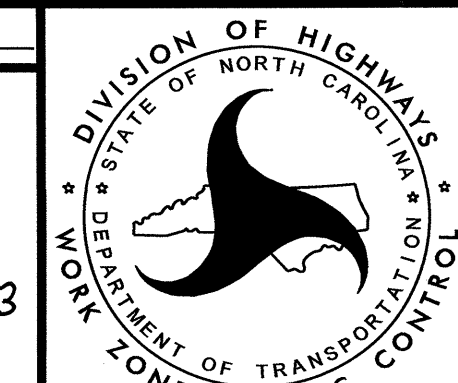
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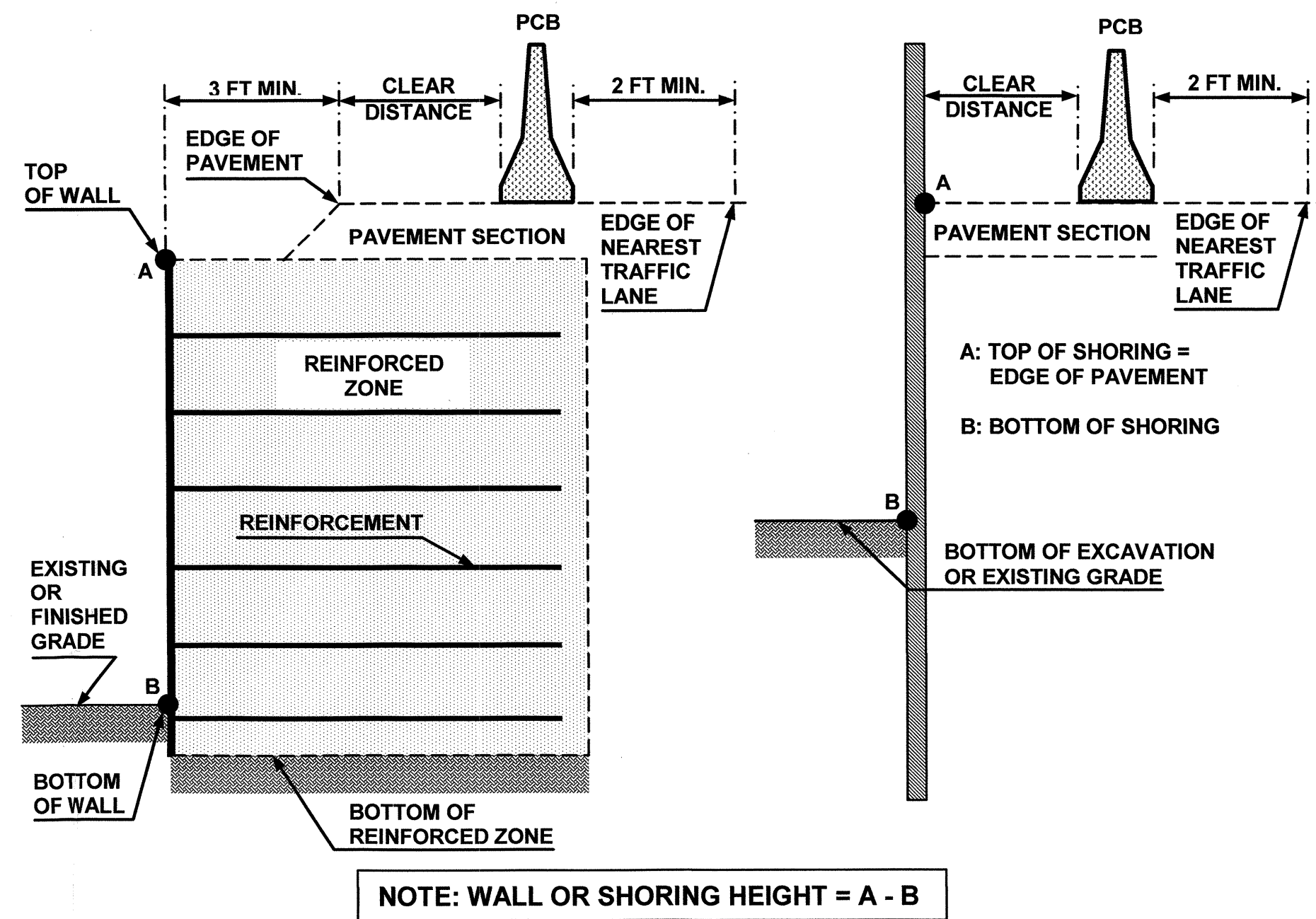
- W) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) AND RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

## MANAGEMENT STRATEGIES

TRAFFIC ON NC 49 WILL BE MAINTAINED ON EXISTING DURING CONSTRUCTION.

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APPROVED:  DATE: 2/12/13		<b>TRANSPORTATION OPERATIONS: MANAGEMENT STRATEGIES AND GENERAL NOTES</b>
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**FIGURE A**

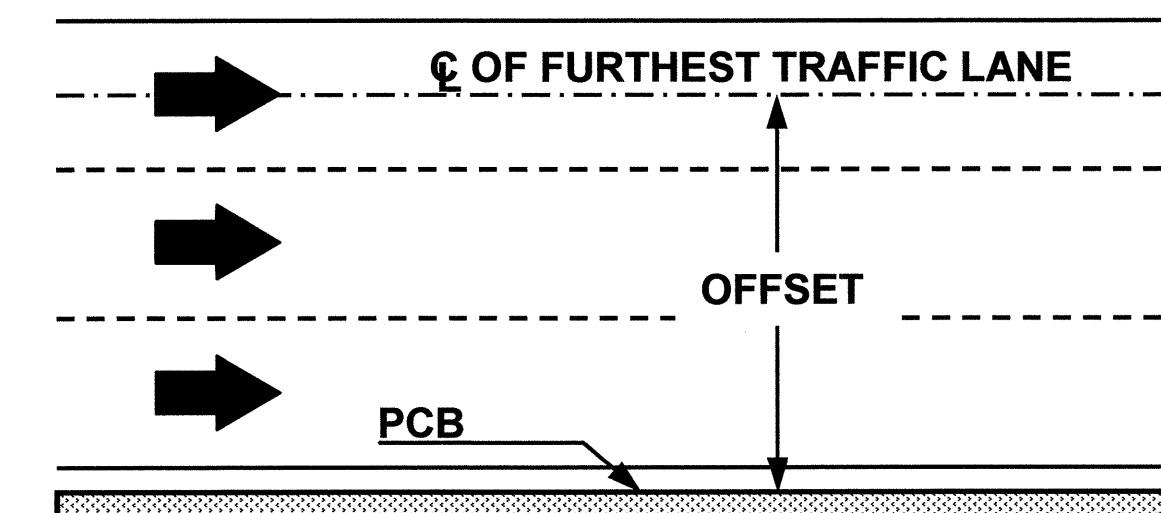
**NOTES**

- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.
- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PC).
- PCB IS REQUIRED IF TEMPORARY SHORING IS LOCATED WITHIN THE CLEAR ZONE IN ACCORDANCE WITH 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 OR ANCHORED PCB FROM THE TABLE SHOWN IN FIGURE B. CLEAR DISTANCE IS DEFINED AS SHOWN IN FIGURE A AND OFFSET IS DEFINED AS SHOWN IN FIGURE B.
- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET PCB NEXT TO AND UP AGAINST THE TRAFFIC SIDE OF THE TEMPORARY SHORING EXCEPT FOR BARRIER ABOVE TEMPORARY WALLS. PCB WITH THE MINIMUM REQUIRED CLEAR DISTANCE IS REQUIRED ABOVE TEMPORARY WALLS.
- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- PCB REQUIREMENTS FOR TEMPORARY WALLS APPLY TO TEMPORARY MECHANICALLY STABILIZED EARTH (MSE) WALLS AND TEMPORARY SOIL NAIL WALLS.
- SET PCB WITH A MINIMUM HORIZONTAL DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A UNLESS OTHERWISE SHOWN IN THE PLANS AND OR AS APPROVED BY THE ENGINEER.
- FOR PCB ABOVE AND BEHIND TEMPORARY 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, RIS OF BARRIER LESS THAN 200 FT IN LENGTH AND WET OR DRY PAVEMENT.

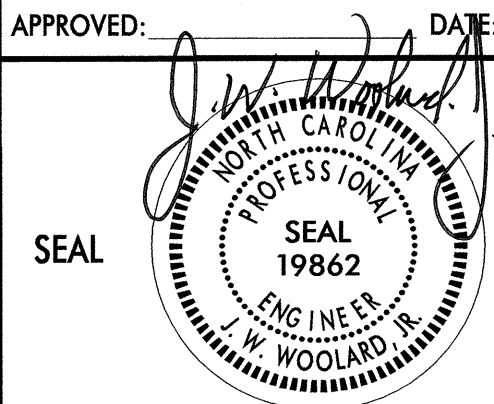

**MINIMUM REQUIRED CLEAR DISTANCE, inches**

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	Asphalt	All Offsets	24 for All Design Speeds					
Anchored PCB	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

\* See Figure Below



**FIGURE B**

APPROVED:  DATE: 2/12/13		PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
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THE GEOTECHNICAL ENGINEERING UNIT RECOMMENDS PLACING THE FOLLOWING NOTES ON TRAFFIC CONTROL PLANS FOR THE REFERENCED PROJECT.

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.

DO NOT USE A TEMPORARY WALL FOR SHORING FROM STATION 32+40.00-L-, 30.4 FT. RIGHT OF -CL-, TO STATION 33+27.00, 26 FT. RIGHT OF -CL-.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 32+40.00-L-, 30.4 FT. RIGHT OF -CL-, TO STATION 33+27.00, 26 FT. RIGHT OF -CL-. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

DESIGN SHORING FROM STATION 32+40.00-L-, 30.4 FT. RIGHT OF -CL-, TO STATION 33+27.00, 26 FT. RIGHT OF -CL- FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:  
 UNIT WEIGHT ( $\gamma$ ) = 120 PCF  
 FRICTION ANGLE,  $\phi$  = 30 DEGREES  
 COHESION, C = 0 PSF

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM 32+40.00-L-, 30.4 FT. RIGHT OF -CL-, TO STATION 33+27.00, 26 FT. RIGHT OF -CL-. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

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.

DO NOT USE A TEMPORARY WALL FOR SHORING FROM STATION 33+69.00-L-, 25.6 FT. RIGHT OF -CL-, TO STATION 35+50.00, 26.2 FT. RIGHT OF -CL-.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 33+69.00-L-, 25.6 FT. RIGHT OF -CL-, TO STATION 35+50.00, 26.2 FT. RIGHT OF -CL-. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

DESIGN SHORING FROM 33+69.00-L-, 25.6 FT. RIGHT OF -CL-, TO STATION 35+50.00, 26.2 FT. RIGHT OF -CL-. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:  
 UNIT WEIGHT ( $\gamma$ ) = 120 PCF  
 FRICTION ANGLE,  $\phi$  = 30 DEGREES  
 COHESION, C = 0 PSF

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM 33+69.00-L-, 25.6 FT. RIGHT OF -CL-, TO STATION 35+50.00, 26.2 FT. RIGHT OF -CL-. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

## PHASE I

STEP 1) INSTALL ALL ADVANCE WARNING SIGNS.

STEP 2A) USING ROADWAY STANDARD DRAWING (RSD) 1101.02, CONSTRUCT -L- LEFT FROM STA. 22+00 -L- TO STA. 28+50 -L- AND FROM STA. 38+30 -L- TO STA. 43+50 -L- UP TO THE EXISTING EDGE AND WITHIN 2" OF THE EXISTING ELEVATION. ONLY INSTALL ONE LIFT OF BASE COURSE FROM STA. 27+25 +/- -L- TO STA. 27+75 +/- -L- TO ALLOW FOR TEMPORARY DRAINAGE (SEE SHEETS TMP-04 AND 05).

USING ROADWAY STANDARD DRAWING (RSD) 1101.02, INSTALL TEMPORARY PAVEMENT FROM STA. 31+39 -L- TO STA. 32+70 -L- AND FROM STA. STA. 34+10 -L- TO STA. 38+44 -L-, PORTABLE CONCRETE BARRIER (PCB) FROM STA. 31+70 -L- TO THE EXISTING BRIDGE AND FROM THE EXISTING BRIDGE TO STA. 38+00 -L-, AND TEMPORARY SHORING FROM STA. 32+40 -L- TO STA. 33+37 -L- AND FROM STA. 33+69 -L- TO STA. 35+50 -L-. BEHIND BARRIER AND AWAY FROM TRAFFIC CONSTRUCT -L- FROM STA. 28+50 -L- TO STA. 38+30 -L- UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE INCLUDING THE BRIDGE AND APPROACHES, USING TEMPORARY SLOPES AND TEMPORARY SHORING AS NEEDED (SEE SHEETS TMP-04 AND 05).

STEP 2B) AWAY FROM TRAFFIC INSTALL TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -L- FROM STA. 29+00 -L- TO STA. 37+80 -L-. INSTALL PCB ON -L- FROM STA. 30+50 -L- TO STA. 32+79 -L- AND FROM STA. 35+44 -L- TO STA. 38+00 -L- (SEE SHEETS TMP-06 AND 07).

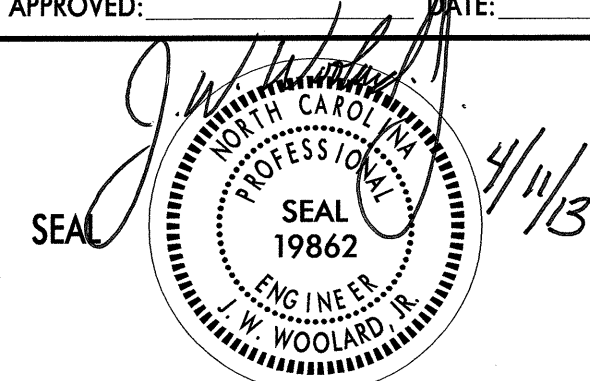
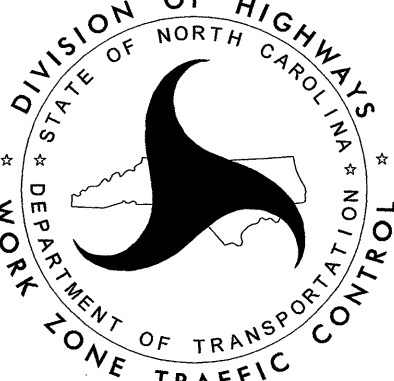
## PHASE II

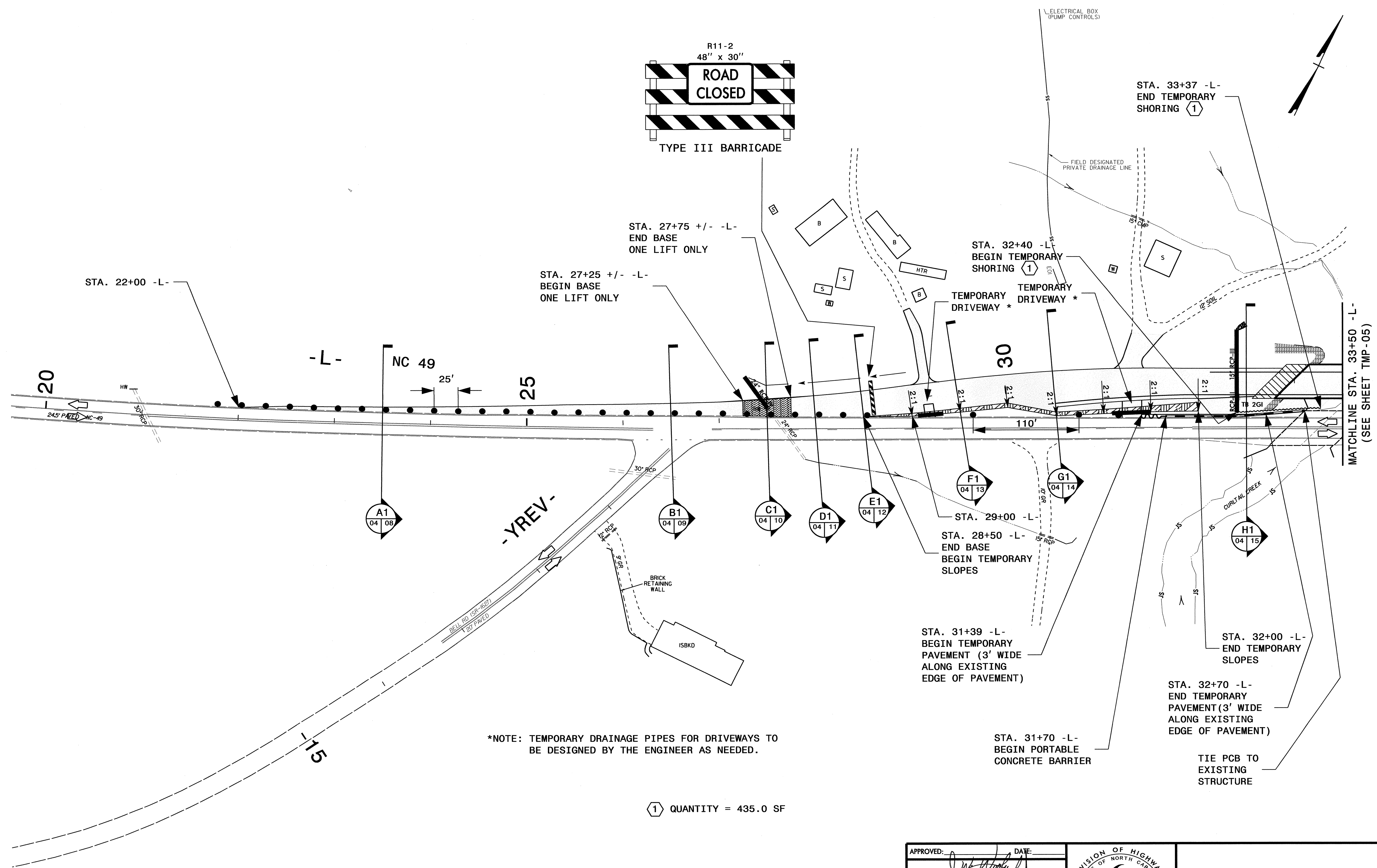
STEP 1) USING RSD 1101.02 WEDGE UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE, INSTALL TEMPORARY PAVEMENT MARKINGS, AND TEMPORARY PAVEMENT MARKERS ON -L- LEFT FROM STA. 22+00 -L- TO STA. 28+50 -L- AND FROM STA. 38+30 -L- TO STA. 43+50 -L-. UPON COMPLETION OF PAVEMENT MARKING AND MARKER OPERATIONS SHIFT TRAFFIC ONTO -L- LEFT (SEE SHEETS TMP-06 AND 07).

STEP 2) USING RSD 1101.02 AS NEEDED INSTALL PCB FROM STA. 27+50 -L- TO STA. 29+50 -L- AND FROM STA. 39+00 -L- TO STA. 43+00 -L-. BEHIND PCB CONSTRUCT -L- RIGHT AND -YREV- UP TO BUT NOT INCLUDING THE FINAL LIFT OF SURFACE COURSE. CONSTRUCT SHOULDER WORK FROM STA. 22+00 -L- TO STA. 32+00 -L- AND FROM STA. 36+00 -L- TO STA. 43+50 -L-. REMOVE PCB WHEN CONSTRUCTION GRADE IS WITHIN 2" OF EXISTING GRADE. REMOVE EXISTING ROADWAY, TEMPORARY SHORING, AND ANY REMAINING TEMPORARY PAVEMENT AS SHOWN ON SHEETS TMP-06 AND 07.

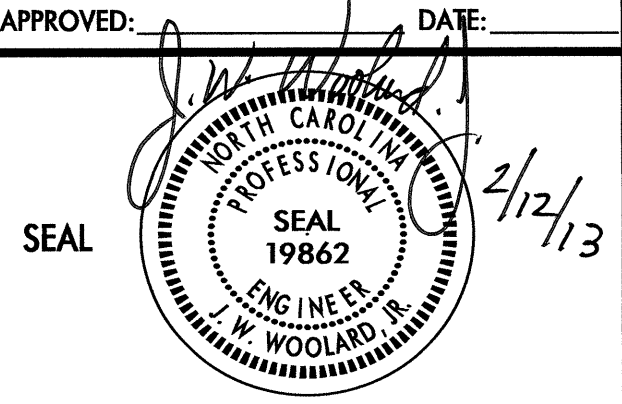
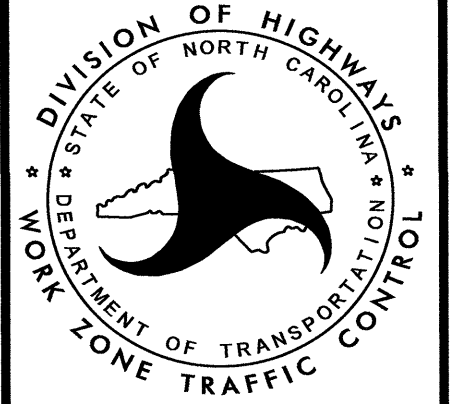
## PHASE III

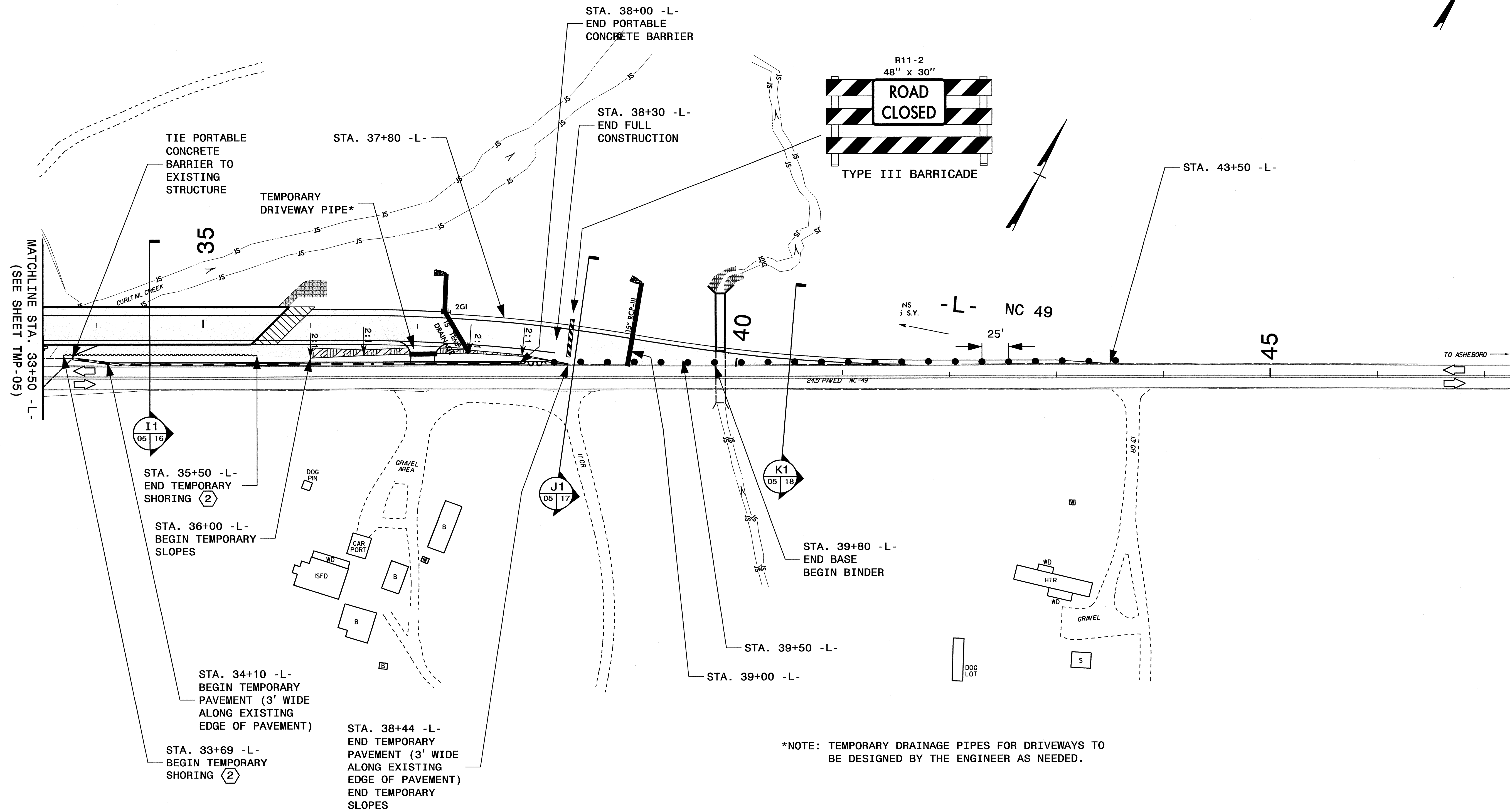
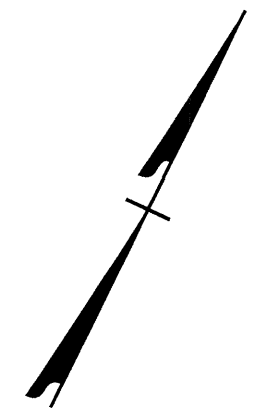
STEP 1) USING RSD 1101.02 INSTALL THE FINAL LIFT OF SURFACE COURSE, FINAL PAVEMENT MARKINGS, AND FINAL PAVMENT MARKERS ON ENTIRE PROJECT (SEE FINAL PAVEMENT MARKING PLANS). REMOVE ALL TRAFFIC CONTROL DEVICES AND SIGNING ON ENTIRE PROJECT AND SHIFT TRAFFIC ONTO FINAL PATTERN.

APPROVED: 	DATE: 4/11/13		<p>TEMPORARY SHORING DATA AND TEMPORARY TRAFFIC CONTROL PHASING</p>



I:\FEB-2013 09:05  
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 anayes AT 1E26580

APPROVED:  DATE: 2/12/13 SEAL		PHASE I
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\*NOTE: TEMPORARY DRAINAGE PIPES FOR DRIVEWAYS TO BE DESIGNED BY THE ENGINEER AS NEEDED.

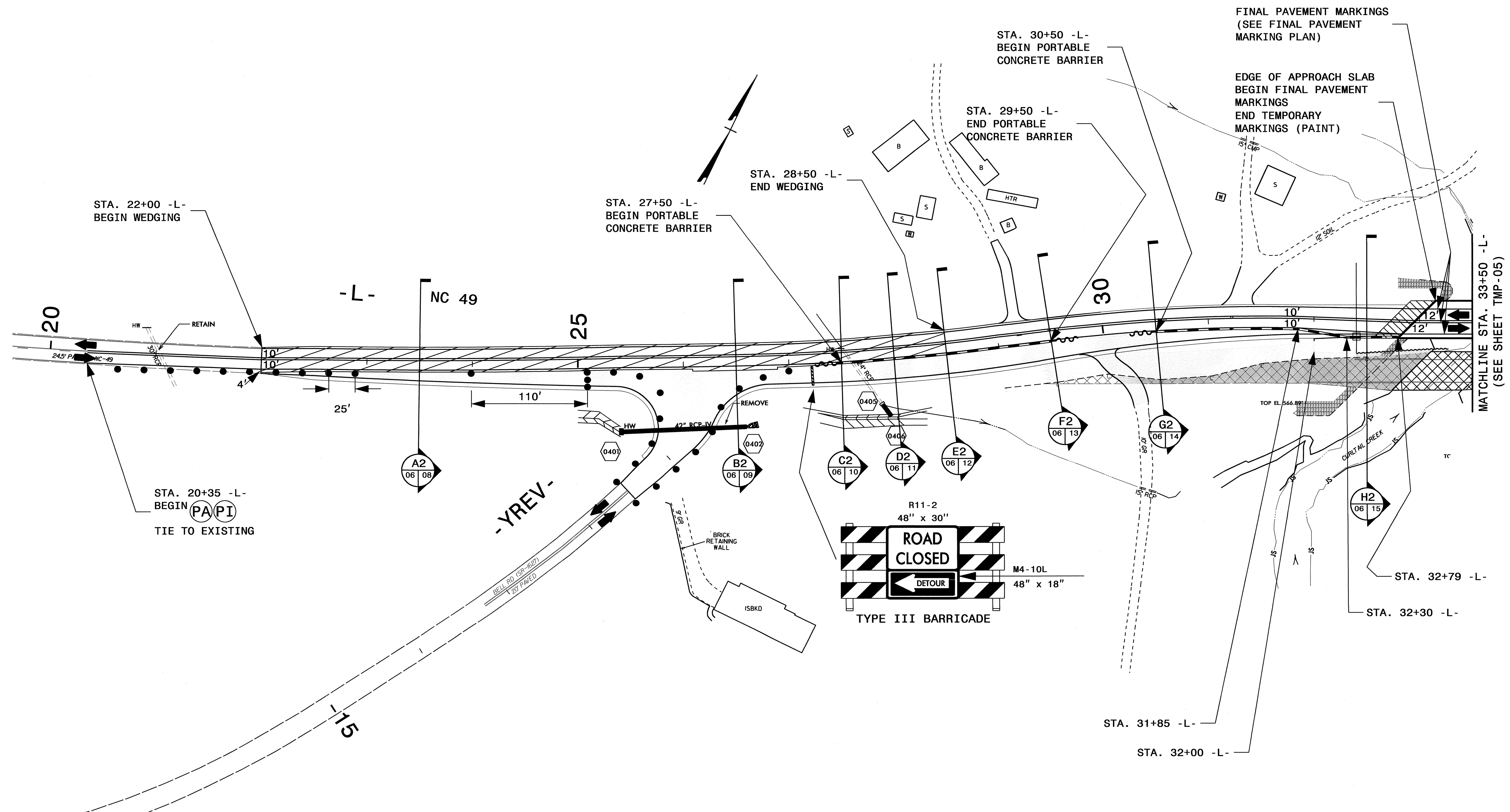
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APPROVED:	DATE:
	2/12/13
SEAL	



PHASE I

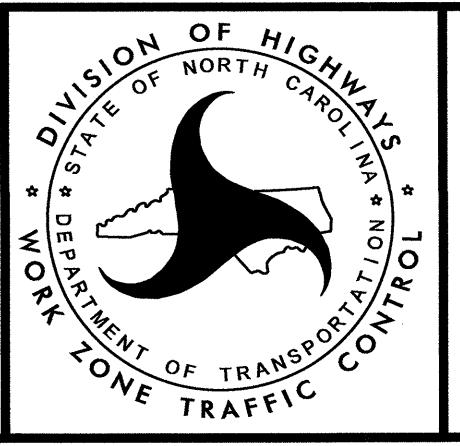


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 anayes AT 1226580

APPROVED: *[Signature]* DATE: 2/12/13

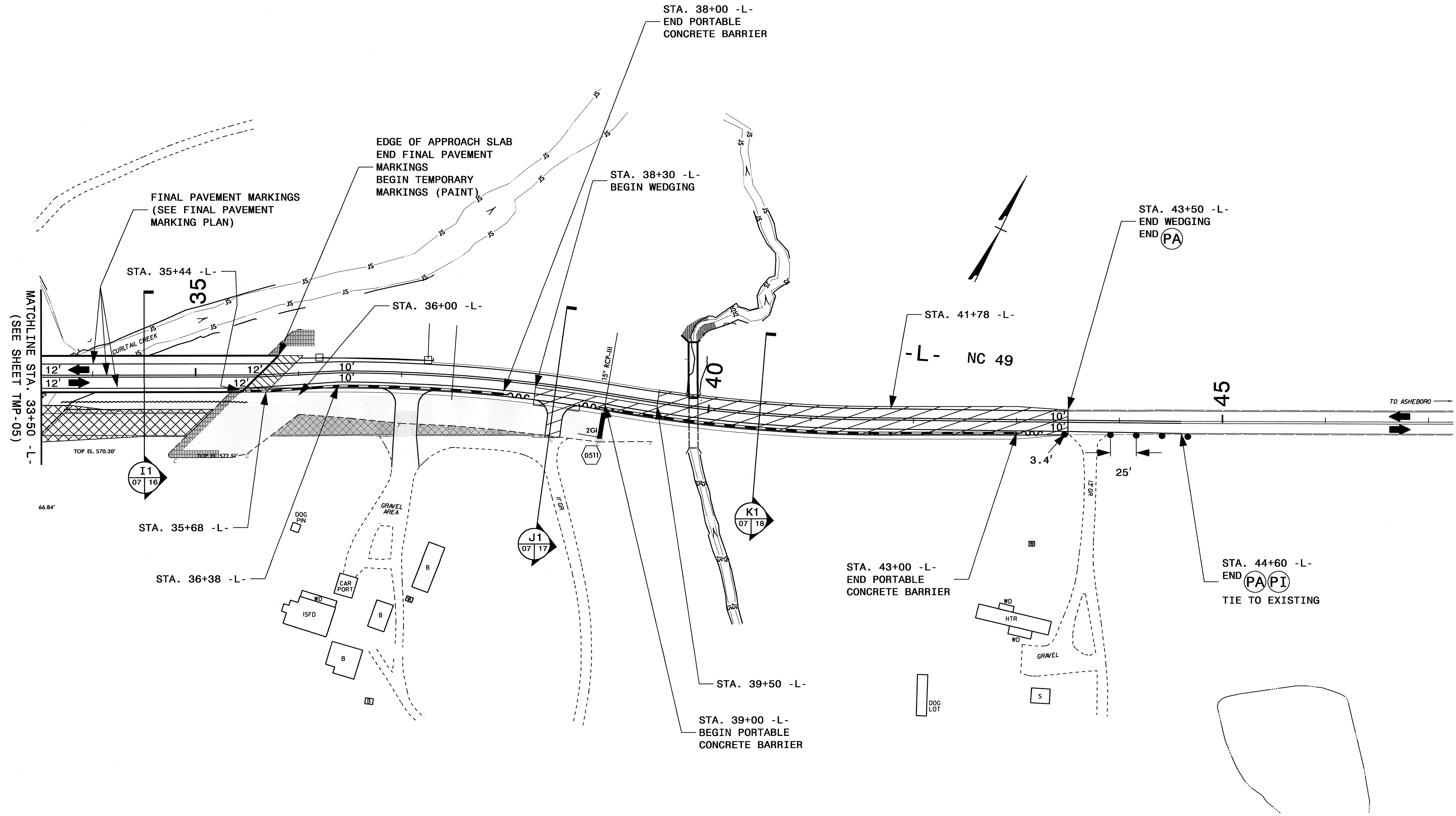
SEAL

PROFESSIONAL ENGINEER  
 SEAL 19862  
 J. W. WOOLARD, INC.



PHASE II



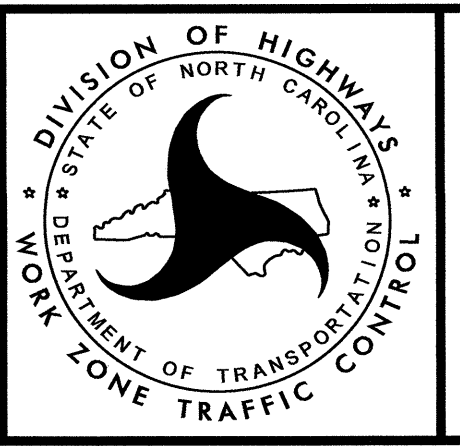


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 anayes AT 1226580

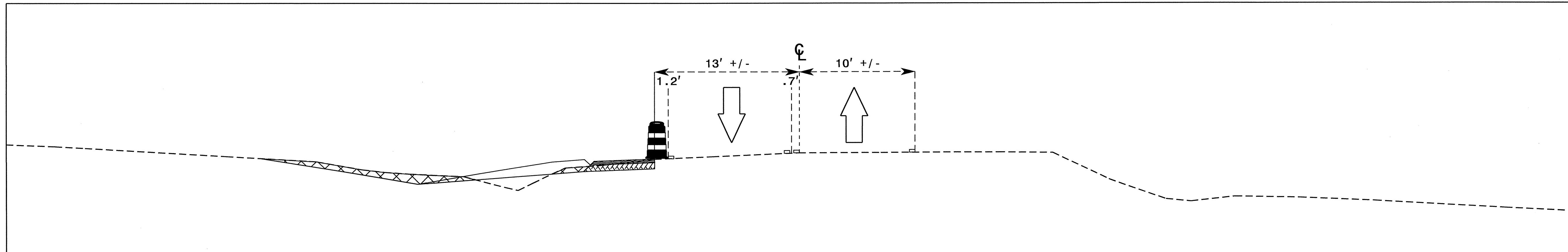
APPROVED: \_\_\_\_\_ DATE: 2/12/13

SEAL

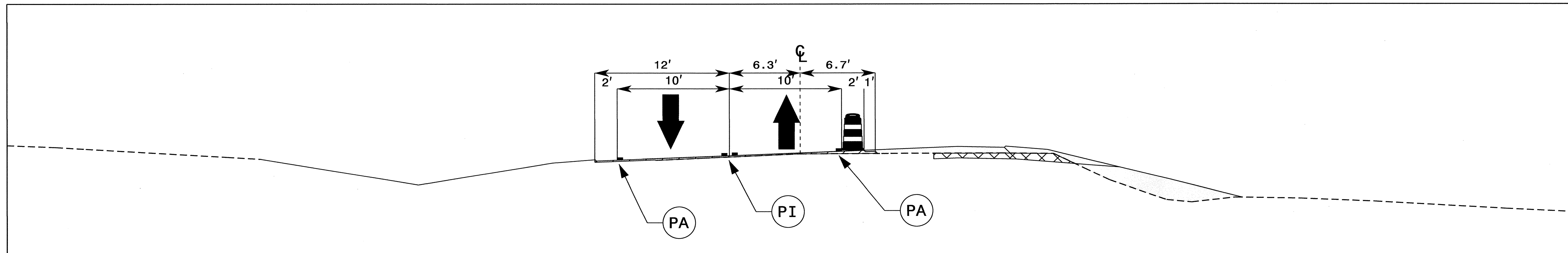
PROFESSIONAL SEAL  
 19862  
 ENGINEER  
 J. W. WOOLARD JR.



PHASE II

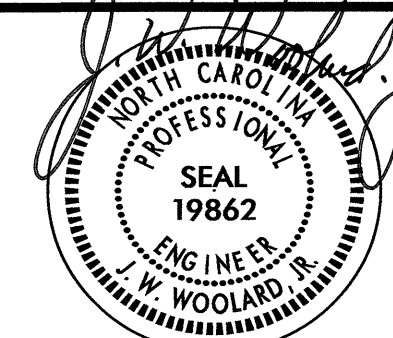


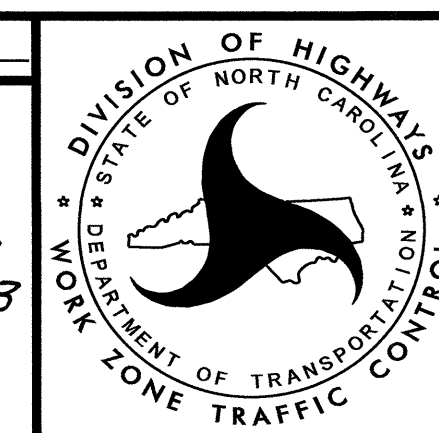
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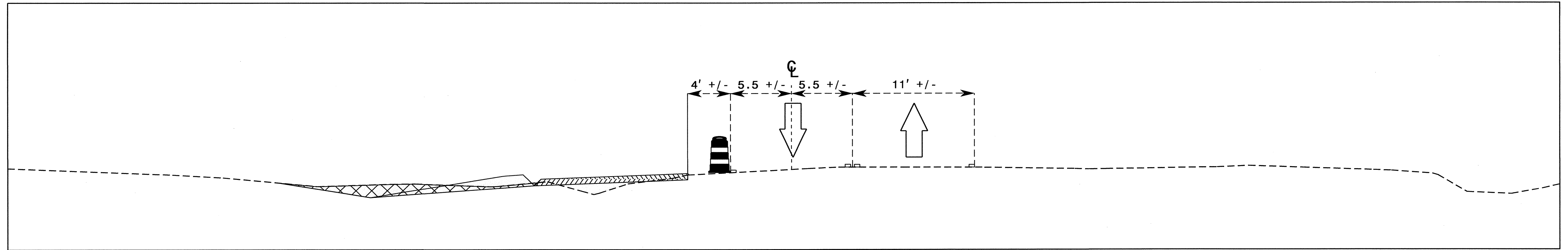
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 ghoyes AT TE26580

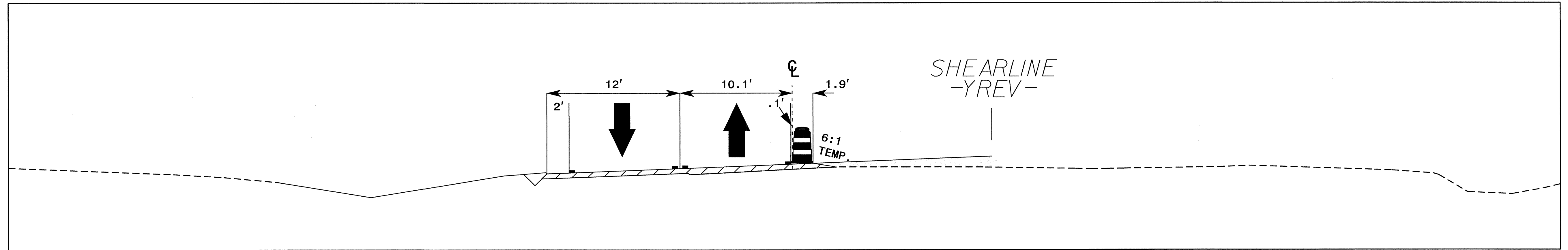
APPROVED:  DATE: 2/2/13



TEMPORARY CUT SECTION A  
STA. 23+50 -L-



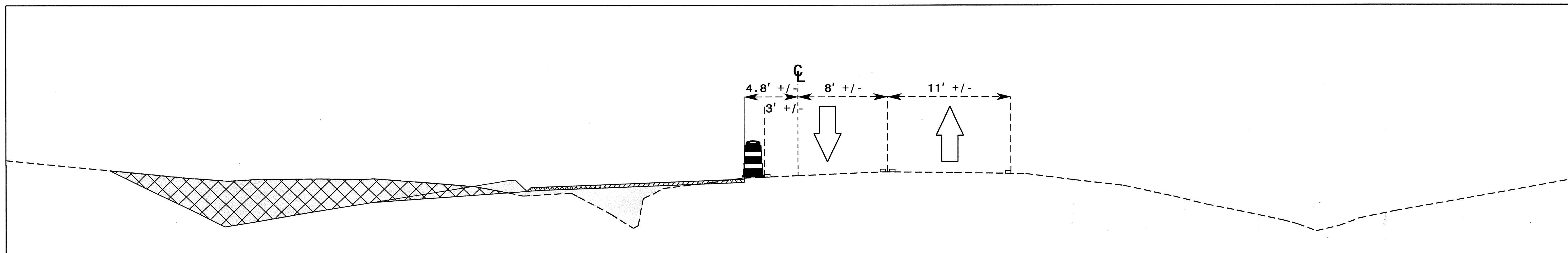
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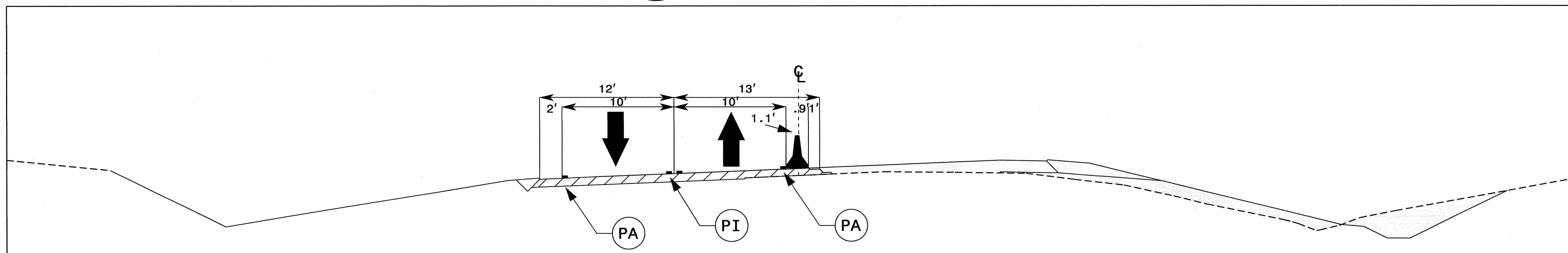
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 ahoyes AT 1E265810

APPROVED:	DATE:		<b>TEMPORARY CUT SECTION B</b> STA. 26+50 -L-
	2/12/13		



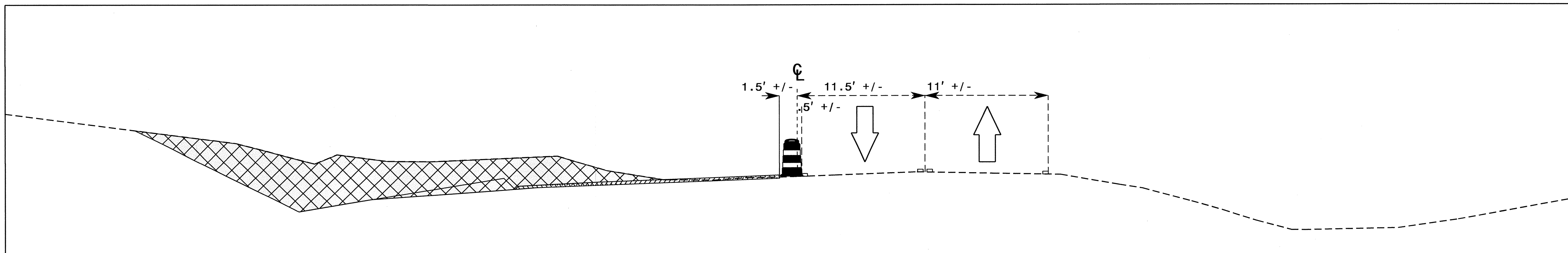
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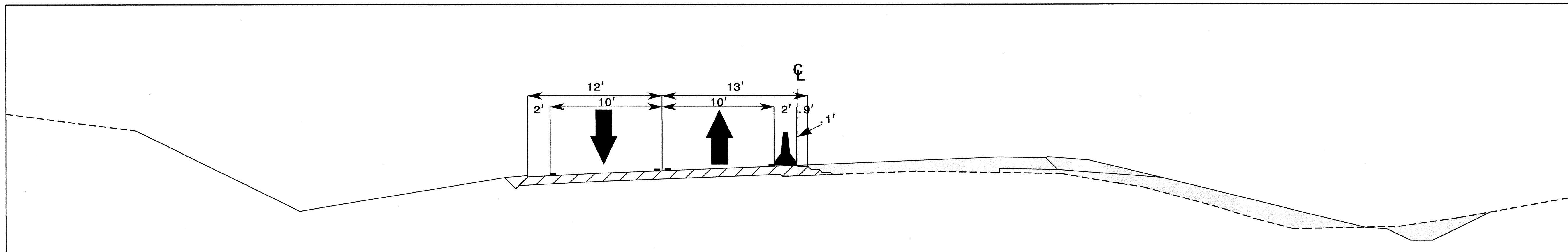
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 adayes AI TE28580

APPROVED:	DATE:		TEMPORARY CUT SECTION C STA. 27+50 -L-
	2/2/13		



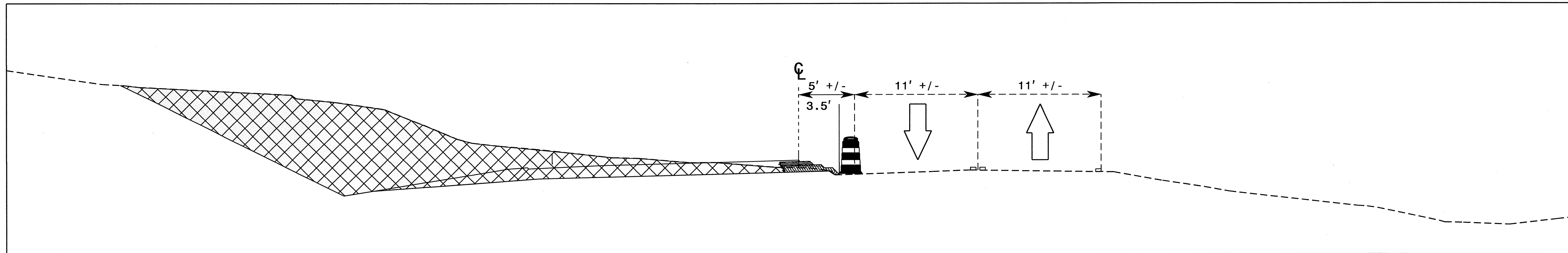
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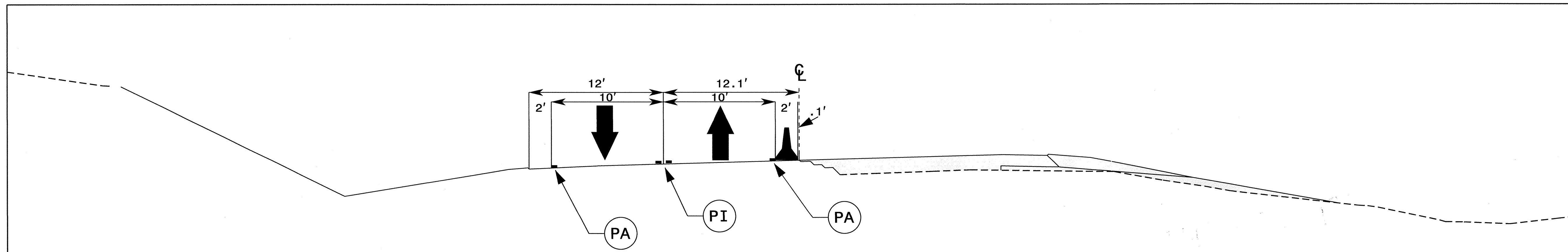
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 ahoyes - A1 TE28580

APPROVED: _____ DATE: _____			<b>TEMPORARY CUT SECTION D</b> STA. 28+00 -L-



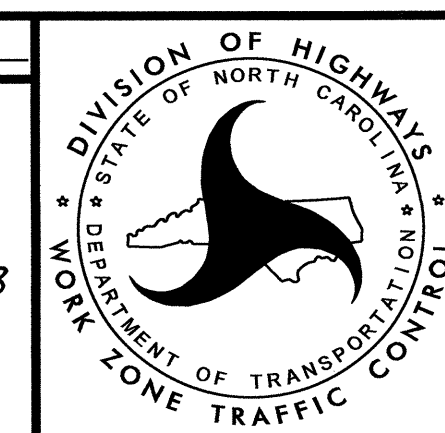
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04 | 12 STA. 28+50 -L-



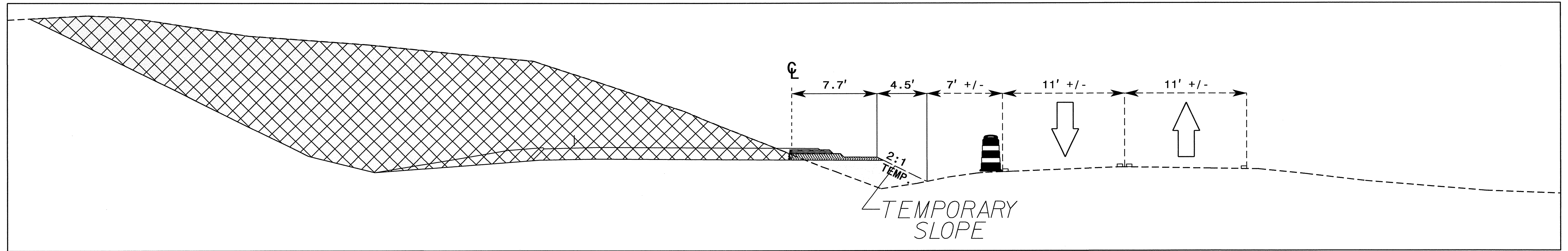
**E2** CUT SECTION  
05 | 12 STA. 28+50 -L-

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anayes AT 1226580

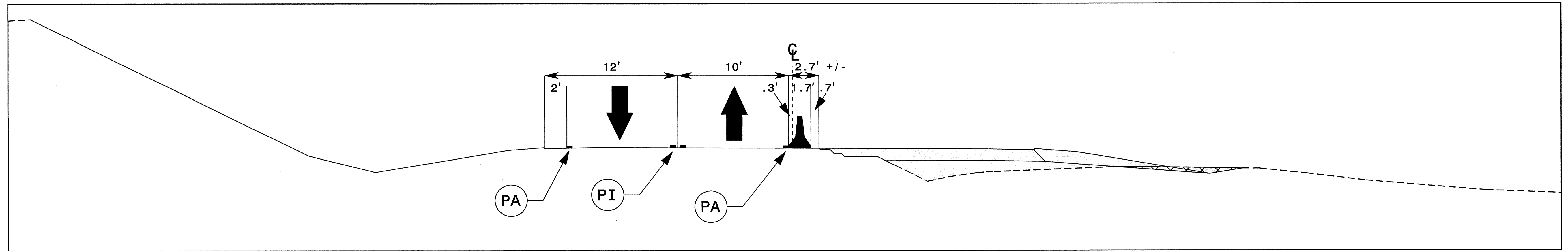
APPROVED: *[Signature]* DATE: 2/7/13  
SEAL  
PROFESSIONAL ENGINEER  
SEAL 19862  
J. W. WOOLARD, INC.



TEMPORARY CUTSECTION E  
STA. 28+50 -L-



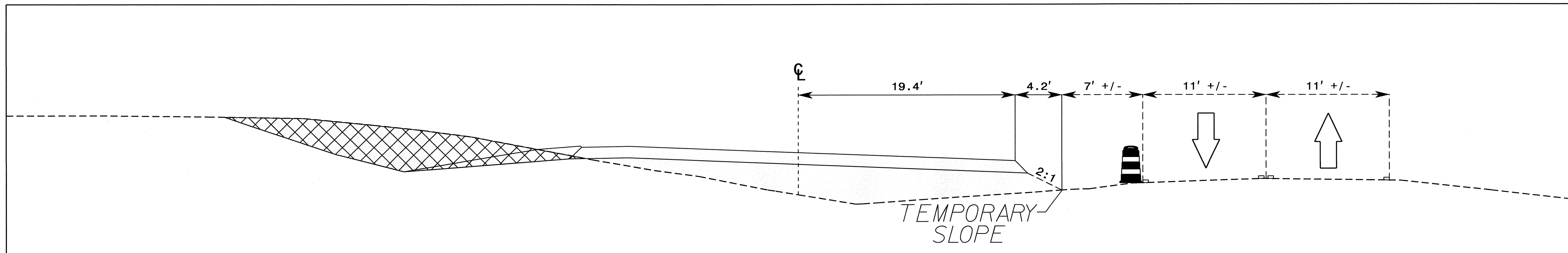
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04 | 13 STA. 29+50 -L-



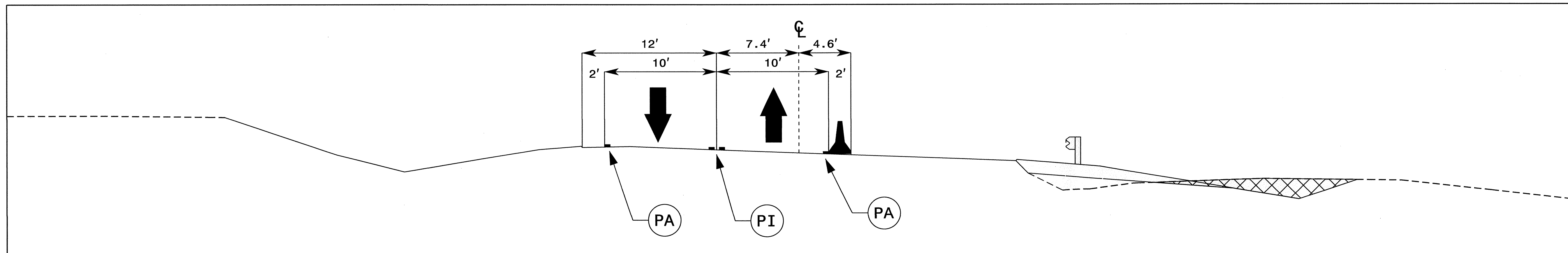
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06 | 13 STA. 29+50 -L-

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 ahoyes AT TE26580

APPROVED: SEAL 	DATE: 2/12/13 	TEMPORARY CUTSECTION F STA. 29+50 -L-
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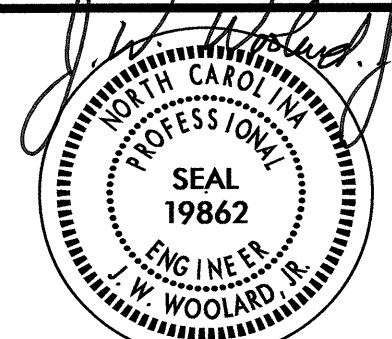
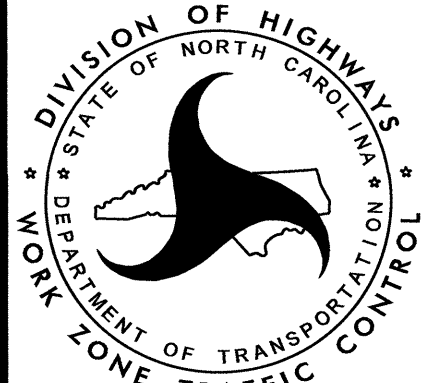


**G1** CUT SECTION  
 04 | 14 STA. 30+50 -L-

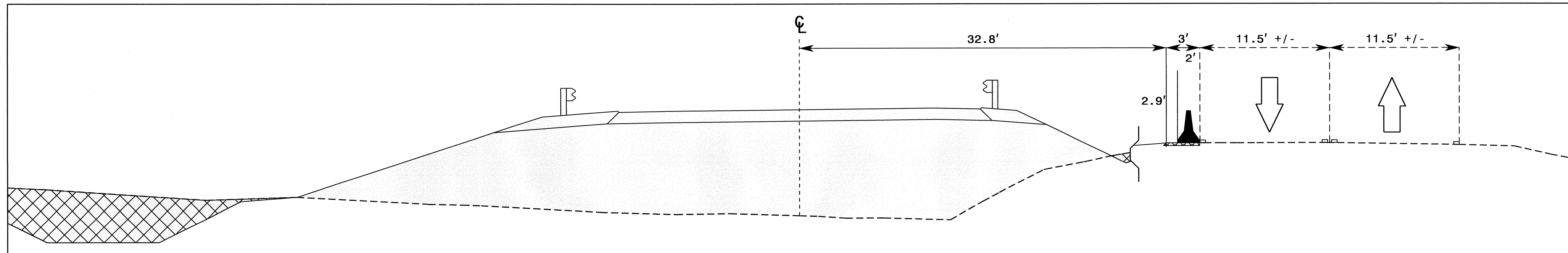


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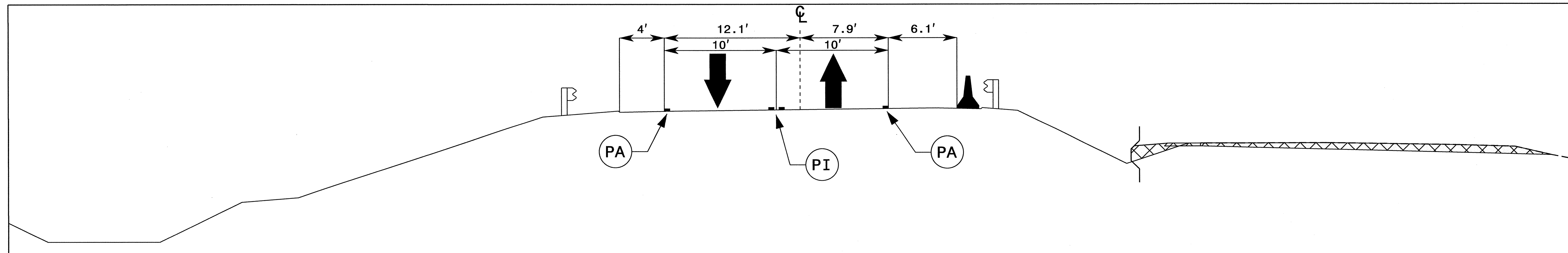
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 ahays AT 1E26580

APPROVED:  DATE: 2/12/13		<b>TEMPORARY CUTSECTION G</b> STA. 30+50 -L-
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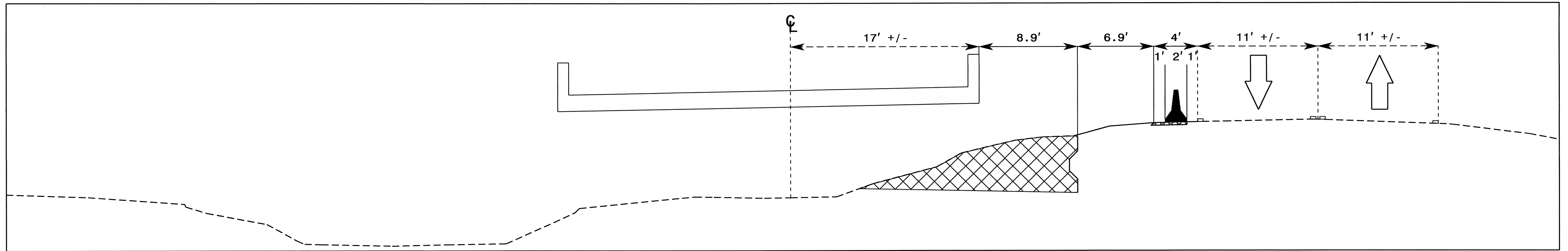
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04 | 15 STA. 32+50 -L-



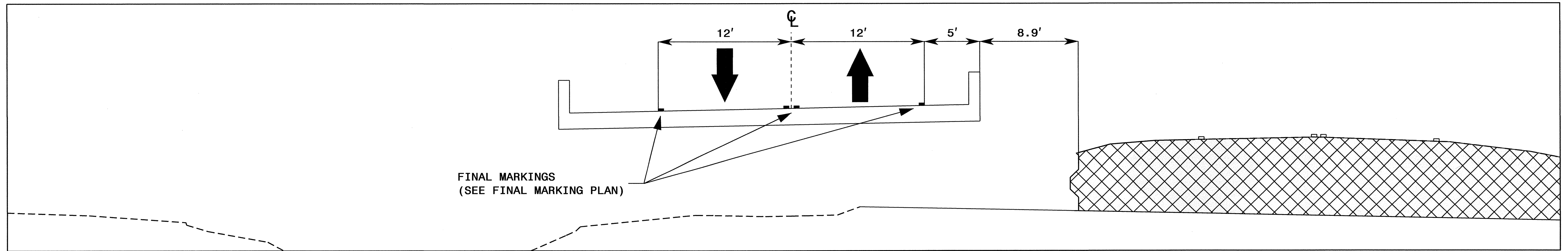
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06 | 15 STA. 32+50 -L-

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 ahoyes AT TE26580

APPROVED: SEAL 	DATE: 2/2/13 	<b>TEMPORARY CUTSECTION H</b> STA. 32+50 -L-
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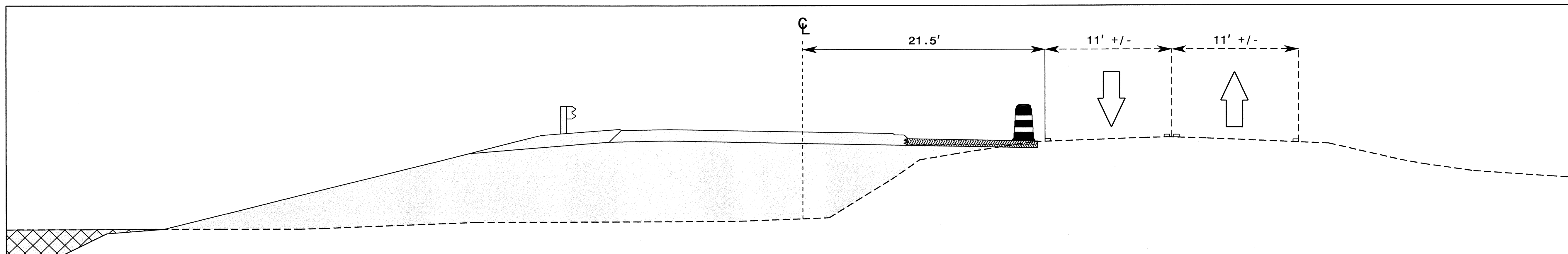
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 05 | 16 STA. 34+50 -L-



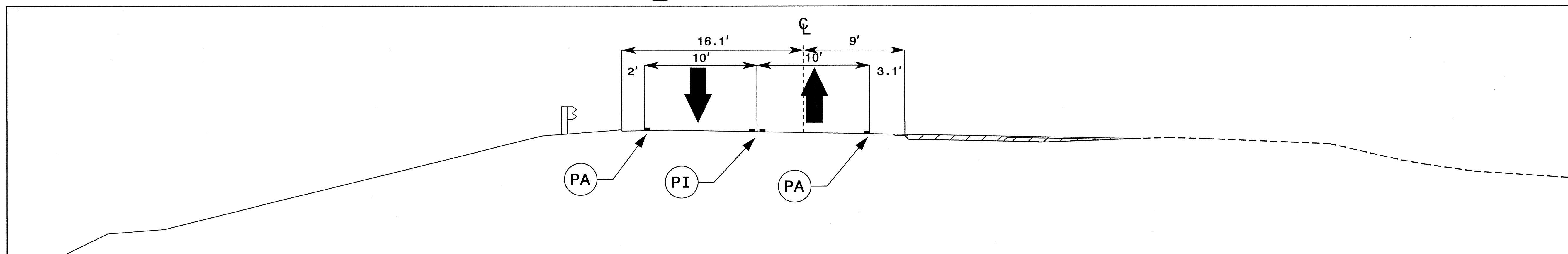
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 07 | 16 STA. 34+50 -L-

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 anayes AT 1E2658D

APPROVED: 	DATE: 2/12/13		TEMPORARY CUT SECTION I STATION 34+50 -L-
SEAL			



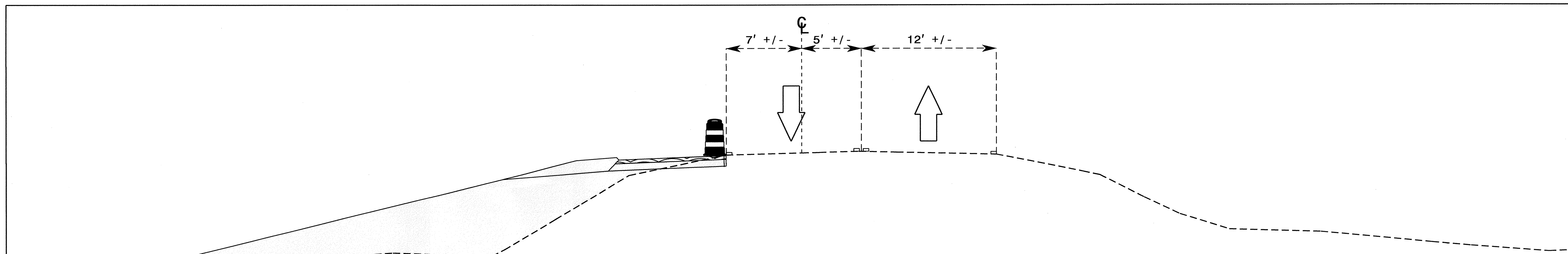
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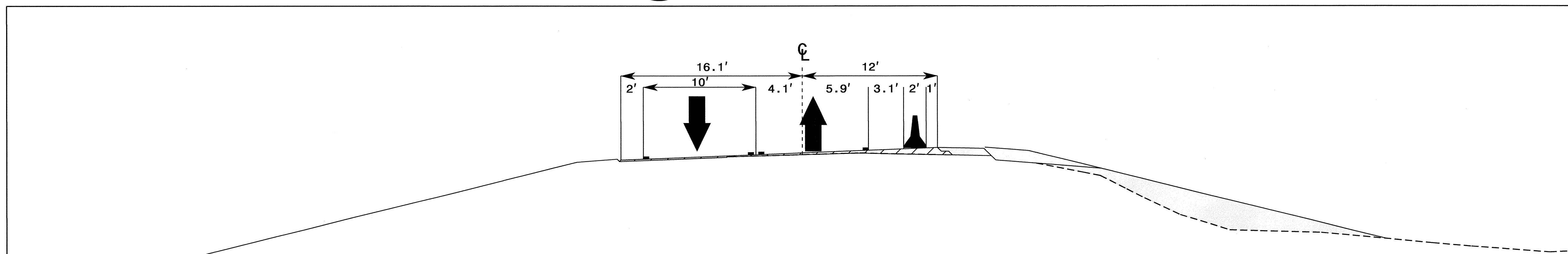
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 07 | 17 STA. 38+50 -L-

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APPROVED:	DATE		TEMPORARY CUT SECTION J STA. 34+50 -L-
	2/2/13		

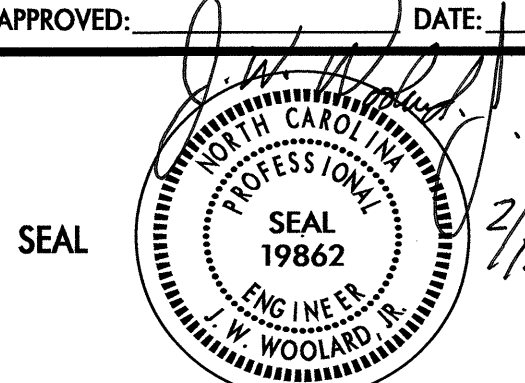
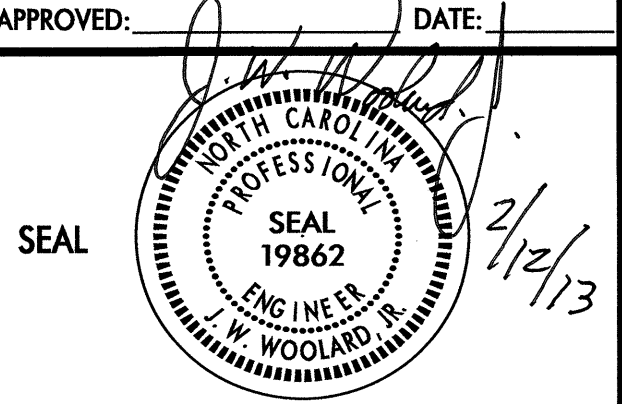
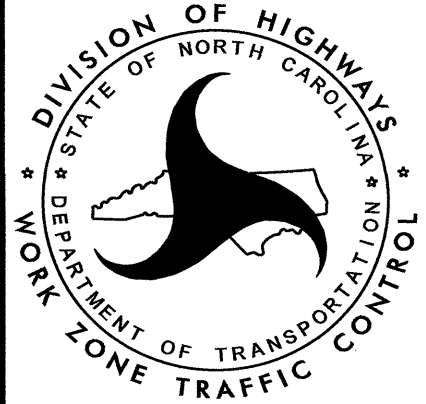


**K1** CUT SECTION  
 05 | 18 STA. 40+50 -L-



**K2** CUT SECTION  
 07 | 18 STA. 40+50 -L-

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APPROVED: 	DATE: 2/2/13			<b>TEMPORARY CUTSECTION K</b> STA. 40+50 -L-
SEAL				