

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO. <b>B-4507</b>	SHEET NO. TCP-01
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**PLAN FOR PROPOSED  
TRAFFIC CONTROL, MARKING & DELINEATION  
FORSYTH COUNTY**

**B-4507**

**ROADWAY STANDARD DRAWINGS**

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS"- PROJECT SERVICES 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
1101.04	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
1115.01	FLASHING ARROW PANELS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
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 AND OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - INTERCHANGES
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - TEMPORARY AND PERMANENT

**INDEX OF SHEETS**

SHEET NO.	TITLE
TCP-01	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND INDEX OF SHEETS
TCP-02 & 02A	GENERAL NOTES
TCP-02B	LOCAL NOTES, AND TEMPORARY PAVEMENT MARKING/MARKER SCHEDULE
TCP-03	TRAFFIC CONTROL PHASING
TCP-04	TEMPORARY SHORING NOTES
TCP-05 & 06	TRAFFIC CONTROL DETAILS PHASE I
TCP-07 THRU TCP-09	TRAFFIC CONTROL DETAILS PHASE II
TCP-10	TRAFFIC CONTROL DETAILS PHASE III
TCP-11	ADVANCE WARNING SIGNS
PCB-1	TEMPORARY ANCHOR UNIT DETAIL

**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 SKINNY DRUM
- FLASHING ARROW PANEL (TYPE C)
- STATIONARY SIGN
- PORTABLE SIGN
- STATIONARY OR PORTABLE SIGN
- CRASH CUSHION
- CHANGEABLE MESSAGE SIGN
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- POLICE
- FLAGGER

**PAVEMENT MARKINGS**

- PAVEMENT MARKING SYMBOLS

**TIP PROJECT:**

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APPROVED: DATE: August 11, 2009	PLAN PREPARED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT
SEAL	STUART BOURNE, P.E. TRAFFIC CONTROL ENGINEER STEVE KITE, JR., P.E. TRAFFIC CONTROL PROJECT ENGINEER DON PARKER TRAFFIC CONTROL PROJECT DESIGN ENGINEER ASHVIN PATEL, P.E. TRAFFIC CONTROL DESIGN ENGINEER / TECHNICIAN





**LOCAL NOTES**

**LOCAL NOTE 1**

DURING PHASE I, STEP 5, THE CONTRACTOR SHALL WORK BEHIND LANE CLOSURES TO PERFORM GRADING AND SUBGRADE CONSTRUCTION AT THE FOUR TIE-IN LOCATIONS AS FOLLOWS:

- NBLDET- STA. 12+63 +/- TO 17+00 +/-
- NBLDET- STA. 30+50 +/- TO 35+24 +/-
- SBLDET- STA. 12+13 +/- TO 17+00 +/-
- SBLDET- STA. 32+00 +/- TO 36+18 +/-

AT THE END OF THE WORK PERIOD, RE-OPEN THE TRAVEL LANE IN ACCORDANCE WITH THE PAVEMENT EDGE DROP OFF NOTED ON TCP-02

**LOCAL NOTE 2**

CONTRACTOR SHALL SCHEDULE THE WORK OF PHASE II, STEP 4, SO THAT INCOMPLETE WORK IS BACKFILLED IN ACCORDANCE WITH THE PAVEMENT EDGE DROP OFF NOTES ON TCP-2 PRIOR TO RE-OPENING THE TRAVEL LANE. PROTECT THE EXPOSED END OF INCOMPLETE GUARDRAIL WITH A TMIA. REPLACE ANY DAMAGED PAVEMENT MARKINGS PRIOR TO RE-OPENING THE OUTSIDE TRAVEL LANE.

ONCE THE WORK OF STEP 4 BEGINS, THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER UNTIL IT IS COMPLETE; REMOVING AND RESETTING LANE CLOSURES IN ACCORDANCE WITH THE LANE CLOSURE RESTRICTIONS, OR AS DIRECTED BY THE ENGINEER.

**LOCAL NOTE 3**

CONTRACTOR SHALL SCHEDULE THE WORK OF PHASE III, STEP 2, SO THAT INCOMPLETE WORK IS BACKFILLED IN ACCORDANCE WITH THE PAVEMENT EDGE DROP OFF NOTES ON TCP-2 PRIOR TO RE-OPENING THE TRAVEL LANE. PROTECT THE EXPOSED END OF INCOMPLETE GUARDRAIL WITH A TMIA. REPLACE ANY DAMAGED PAVEMENT MARKINGS PRIOR TO RE-OPENING THE OUTSIDE TRAVEL LANE.

ONCE THE WORK OF STEP 2 BEGINS, THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER UNTIL IT IS COMPLETE; REMOVING AND RESETTING LANE CLOSURES IN ACCORDANCE WITH THE LANE CLOSURE RESTRICTIONS, OR AS DIRECTED BY THE ENGINEER.

**TEMPORARY PAVEMENT MARKING/MARKER SCHEDULE**

DESCRIPTION	QUANTITY BREAKDOWN	TOTAL QUANTITY
<b>THERMOPLASTIC (4", 90 MILS)</b>		
TA WHITE EDGELINE	4500 LF	9000 LF
TB YELLOW EDGELINE	4500 LF	
<b>THERMOPLASTIC (4", 120 MILS)</b>		
TC 10 FT. WHITE SKIPLINE	450 LF	3560 LF
TD 2 FT. WHITE MINI SKIPLINE	110 LF	
TE WHITE LANE LINE	3000 LF	
<b>THERMOPLASTIC (8", 90 MILS)</b>		
TP WHITE GORELINE	350 LF	350 LF
<b>THERMOPLASTIC SYMBOLS</b>		
UC STRAIGHT ARROW	3 EA	3 EA
<b>COLD APPLIED PLASTIC -REMOVABLE TAPE (4")</b>		
CA WHITE EDGELINE	900 LF	2100 LF
CB YELLOW EDGELINE	900 LF	
CC 10 FT. WHITE SKIPLINE	300 LF	
<b>TEMP. RAISED PAVEMENT MARKERS</b>		
MI CRYSTAL & RED	225 EA	225 EA
<b>PAINT (4")</b>		
PA WHITE EDGELINE (1X)	5000 LF	11400 LF
PB YELLOW EDGELINE (1X)	5000 LF	
PC 10 FT. WHITE SKIPLINE (1X)	1250 LF	
PD 2 FT. WHITE MINI SKIPLINE (1X)	150 LF	
<b>PAINT (4")</b>		
QC STRAIGHT ARROW	3 EA	3 EA

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APPROVED: 	DATE: 2/11/09	<b>LOCAL NOTES, AND TEMP. PAVEMENT MARKING/MARKER SCHEDULE</b>	
	SCALE: NONE		REVISIONS
	DATE: 08/08		
	DWG. BY: AKP		
	DESIGN BY: AKP		
REVIEWED BY: DAP			

# TRAFFIC CONTROL – PHASING

NOTE: TRAFFIC CONTROL PHASING FOR BOTH DIRECTIONS IS COMBINED. HOWEVER, THE CONTRACTOR MAY PROCEED THROUGH THE PHASING WITH EACH DIRECTION OF TRAVEL INDEPENDENT OF THE OTHER DIRECTION.

## PHASE I

- STEP 1 -- INSTALL ADVANCED WORK ZONE WARNING SIGNS (SEE TCP-11).
- STEP 2 -- USE LANE CLOSURES TO INSTALL PCB (DRAINAGE) AND CRASH CUSHIONS(SEE RSD 1101.02, SHEET 3 AND TCP-5 AND 6):
- STEP 3 -- BEHIND BARRIER, OR BY USING LANE CLOSURES (AS DIRECTED BY THE ENGINEER) INSTALL TEMPORARY SHORING ADJACENT TO PROPOSED END BENTS. (SEE RSD 1101.01, SHEET 2 AND TCP-4, AND TCP-6)
- NOTE: STEPS 4 AND 5 MAY BE PERFORMED CONCURRENTLY
- STEP 4 -- BEHIND BARRIER, CONSTRUCT PROPOSED STAGE 1 BRIDGE AND ON-SITE DETOUR APPROACHES UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE IN THE FOLLOWING LOCATIONS: (SEE TCP-5 AND 6)
- -NBLDET- STA. 17+00 +/- TO STA. 30+50 +/-  
-- -SBLDET- STA. 17+00 +/- TO STA. 32+00 +/-
- STEP 5 -- USING LANE CLOSURES AS NECESSARY, BEGIN GRADING AND SUBGRADE CONSTRUCTION AT THE TIE IN LOCATIONS. (SEE RSD 1101.02, SHEET 1, TCP 5 AND 6, AND LOCAL NOTE NO. 1 ON TCP-2B)

- F. COMPLETE THE PLACEMENT OF THERMOPLASTIC PAVEMENT MARKINGS AND MARKERS FOR THE PHASE II TRAFFIC PATTERN INCLUDING YELLOW EDGE LINE FOR THE INSIDE TRAVEL LANE (SEE TCP-7 THROUGH 9)
- G. REMOVE THE LANE CLOSURE AND OPEN TO THE PHASE II TRAFFIC PATTERN.
- STEP 2 -- BEHIND BARRIER, PERFORM THE FOLLOWING:
- REMOVE THE EXISTING BRIDGE
- CONSTRUCT STAGE II BRIDGE
- CONSTRUCT THE INSIDE PAVED SHOULDERS AND WEDGE BOTH PROPOSED INSIDE TRAVEL LANES UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM FROM -L- STA. 21+00 +/- TO 31+50 +/- . TIE THIS WEDGING DOWN AT A 100:1 TAPER TO MATCH EXISTING PAVEMENT AT -L- STA. 20+00 +/- AND 32+50 +/-
- STEP 3 -- CLOSE THE INSIDE TRAVEL LANE OF THE DETOUR AND CONSTRUCT THE INSIDE PAVED SHOULDER UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN THE FOLLOWING LOCATIONS. ALSO, INSTALL PROPOSED GUARDRAIL ADJACENT TO THE INSIDE SHOULDER IN SAME LOCATION. (SEE RSD 1101.02, SHEET 3, LOCAL NOTE NO. 2 ON TCP-2B AND TCP-10):
- -L- STA. 10+00 +/- TO STA. 21+00 +/-  
-- -L- STA. 31+50 +/- TO STA. 45+50 +/-
- RETURN TRAFFIC TO THE PHASE II PATTERN AT THE CONCLUSION OF EACH WORK PERIOD.

- B. PLACE TEMPORARY PAINT PAVEMENT MARKINGS (YELLOW EDGE LINE AND WHITE SKIP LINE FOR THE PHASE III TRAFFIC PATTERN (UTILIZES THE PROPOSED TWO INSIDE TRAVEL LANES) FROM -L- STA. 10+00 +/- TO STA. 45+50 +/- . (SEE TCP-10)
- C. USING A ROLLING ROAD BLOCK WITH POLICE ASSISTANCE, SHIFT TRAFFIC FROM THE OUTSIDE LANE TO THE INSIDE LANE OF THE PHASE III PATTERN. (SEE RSD 1101.03, SHEET 9 AND TCP-10)
- D. PLACE TEMPORARY PAINT PAVEMENT MARKINGS (WHITE EDGE LINE FOR THE PHASE III TRAFFIC PATTERN FROM -L- STA. 10+00 +/- TO STA. 45+50 +/- . (SEE TCP-10)
- E. OPEN TO THE PHASE III PATTERN (SEE TCP-10 AND RSD 1101.02, SHEET 6.)
- STEP 2 -- CLOSE THE OUTSIDE TRAVEL LANE AND CONSTRUCT THE OUTSIDE PAVED SHOULDER UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT, INCLUDING REMOVAL OF TURF SHOULDER AND REMOVAL AND REPLACEMENT OF THE TEMPORARY ASPHALT SHOULDER BERM GUTTER. (SEE RSD 1101.02, SHEET 3, LOCAL NOTE NO. 3 ON TCP-2B AND TCP-10)
- STEP 3 -- USING LANE CLOSURES, PLACE TEMPORARY PAINT PAVEMENT MARKINGS AND MARKERS IN THE FINAL PATTERN THROUGHOUT THE PROJECT LIMITS. (SEE RSD 1101.02, SHEET 3 AND FINAL PAVEMENT MARKING PLANS)
- STEP 4 -- OPEN THE PROJECT TO THE FINAL TRAFFIC PATTERN
- STEP 5 -- USING LANE CLOSURES, COMPLETE THE PAVING, INCLUDING THE FINAL LAYER OF SURFACE COURSE AND PLACE FINAL PAVEMENT MARKINGS AND MARKERS THROUGHOUT THE PROJECT LIMITS. BEGIN PAVING AT THE GRADE POINT AND WORK OUTWARDS, OR AS DIRECTED BY THE ENGINEER.
- STEP 6 -- REMOVE ALL TRAFFIC CONTROL DEVICES.

## PHASE II

WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK OF STEP 1 IN A SINGLE WEEKEND PER DIRECTION. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES

- STEP 1 -- COMPLETE THE TIE INS AND SHIFT TRAFFIC TO THE DETOUR (PHASE II TRAFFIC PATTERN) IN THE FOLLOWING SEQUENCE:
- A. CLOSE THE OUTSIDE TRAVEL LANE USING RSD 1101.02, SHEET 3 AND 6
- B. RESET THE PCB AND CRASH CUSHIONS TO THE PHASE II LOCATION (SEE TCP-7 AND TCP-8)
- C. COMPLETE THE PAVING OF THE TIE INS UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN THE FOLLOWING LOCATIONS:
- -NBLDET- STA. 12+63 +/- TO STA. 19+01 +/-  
-- -NBLDET- STA. 30+50 +/- TO STA. 35+24 +/-  
-- -SBLDET- STA. 12+13 +/- TO STA. 18+00 +/-  
-- -SBLDET- STA. 29+50 +/- TO STA. 36+18 +/-
- D. PLACE TEMPORARY THERMOPLASTIC PAVEMENT MARKINGS AND MARKERS FOR THE PHASE II TRAFFIC PATTERN INCLUDING THE WHITE EDGELINE FOR THE OUTSIDE LANE AND THE CENTER SKIP AND SOLID LANE LANE (SEE TCP-7 THROUGH 9)
- E. USING A ROLLING ROAD BLOCK AND POLICE ASSISTANCE, ADJUST THE LANE CLOSURE AND SHIFT TRAFFIC TO THE OUTSIDE LANE OF THE PROPOSED DETOUR (SEE RSD 1101.03, SHEET 9)

## PHASE III

- NOTE: STEPS 1 AND 2 DESCRIBE THE SEQUENCE FOR SHIFTING TRAFFIC TO THE PHASE III TRAFFIC PATTERN
- STEP 1 -- CLOSE THE INSIDE TRAVEL LANE OF THE PHASE II TRAFFIC PATTERN (SEE RSD 1101.02, SHEET 3 AND 1101.02, SHEET 6)
- REMOVE THE PCB AND CRASH CUSHIONS; REPLACE WITH DRUMS
- WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK OF STEP 2 IN A SINGLE WEEKEND PER DIRECTION. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES
- STEP 2 --COMPLETE THE TRAFFIC SHIFT TO THE PHASE III TRAFFIC PATTERN IN THE FOLLOWING SEQUENCE
- A. CLOSE THE INSIDE TRAVEL LANE OF THE PHASE II TRAFFIC PATTERN (SEE RSD 1101.02, SHEET 3 AND 1101.02, SHEET 6)

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PROJ. REFERENCE NO.	SHEET NO.
B-4507	TCP-04
FORSYTH	

# TEMPORARY SHORING NOTES

## Temporary Shoring No. 1

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

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

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 26+50.00 -L-, 48 FT. LEFT OF -L-, TO STATION 27+00.00 -L-, 48 FT. LEFT OF -L-, USE THE FOLLOWING SOIL PARAMETERS:

- UNIT WEIGHT OF SOIL ABOVE WATER TABLE,  $\gamma = 120$  PCF
- UNIT WEIGHT OF SOIL BELOW WATER TABLE,  $\gamma = 60$  PCF
- FRICTION ANGLE,  $\phi = 30$  DEGREES
- COHESION,  $c = 0$  PSF

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 26+50.00 -L-, 48 FT. LEFT OF -L-, TO STATION 27+00.00 -L-, 48 FT. LEFT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

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

QUANTITY = 250 SF

## Temporary Shoring No. 2

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

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

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 26+60.00 -L-, 48 FT. RIGHT OF -L-, TO STATION 27+10.00 -L-, 48 FT. RIGHT OF -L-, USE THE FOLLOWING SOIL PARAMETERS:

- UNIT WEIGHT OF SOIL ABOVE WATER TABLE,  $\gamma = 120$  PCF
- UNIT WEIGHT OF SOIL BELOW WATER TABLE,  $\gamma = 60$  PCF
- FRICTION ANGLE,  $\phi = 30$  DEGREES
- COHESION,  $c = 0$  PSF

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 26+60.00 -L-, 48 FT. RIGHT OF -L-, TO STATION 27+10.00 -L-, 48 FT. RIGHT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

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

QUANTITY = 250 SF

## Temporary Shoring No. 3

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

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

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 28+80.00 -L-, 48 FT. LEFT OF -L-, TO STATION 29+30.00 -L-, 48 FT. LEFT OF -L-, USE THE FOLLOWING SOIL PARAMETERS:

- UNIT WEIGHT OF SOIL ABOVE WATER TABLE,  $\gamma = 120$  PCF
- UNIT WEIGHT OF SOIL BELOW WATER TABLE,  $\gamma = 60$  PCF
- FRICTION ANGLE,  $\phi = 30$  DEGREES
- COHESION,  $c = 0$  PSF

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 28+80.00 -L-, 48 FT. LEFT OF -L-, TO STATION 29+30.00 -L-, 48 FT. LEFT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

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

QUANTITY = 250 SF

## Temporary Shoring No. 4

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

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

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 28+90.00 -L-, 48 FT. RIGHT OF -L-, TO STATION 29+40.00 -L-, 48 FT. RIGHT OF -L-, USE THE FOLLOWING SOIL PARAMETERS:

- UNIT WEIGHT OF SOIL ABOVE WATER TABLE,  $\gamma = 120$  PCF
- UNIT WEIGHT OF SOIL BELOW WATER TABLE,  $\gamma = 60$  PCF
- FRICTION ANGLE,  $\phi = 30$  DEGREES
- COHESION,  $c = 0$  PSF

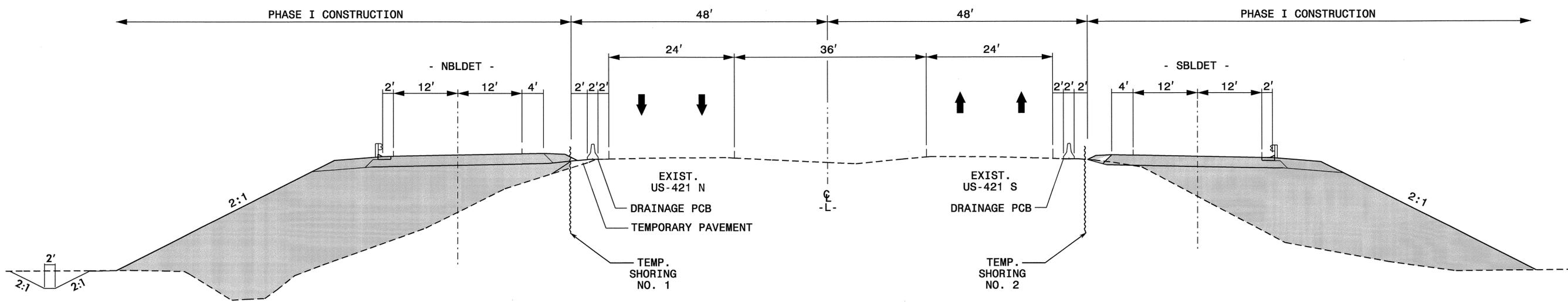
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FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

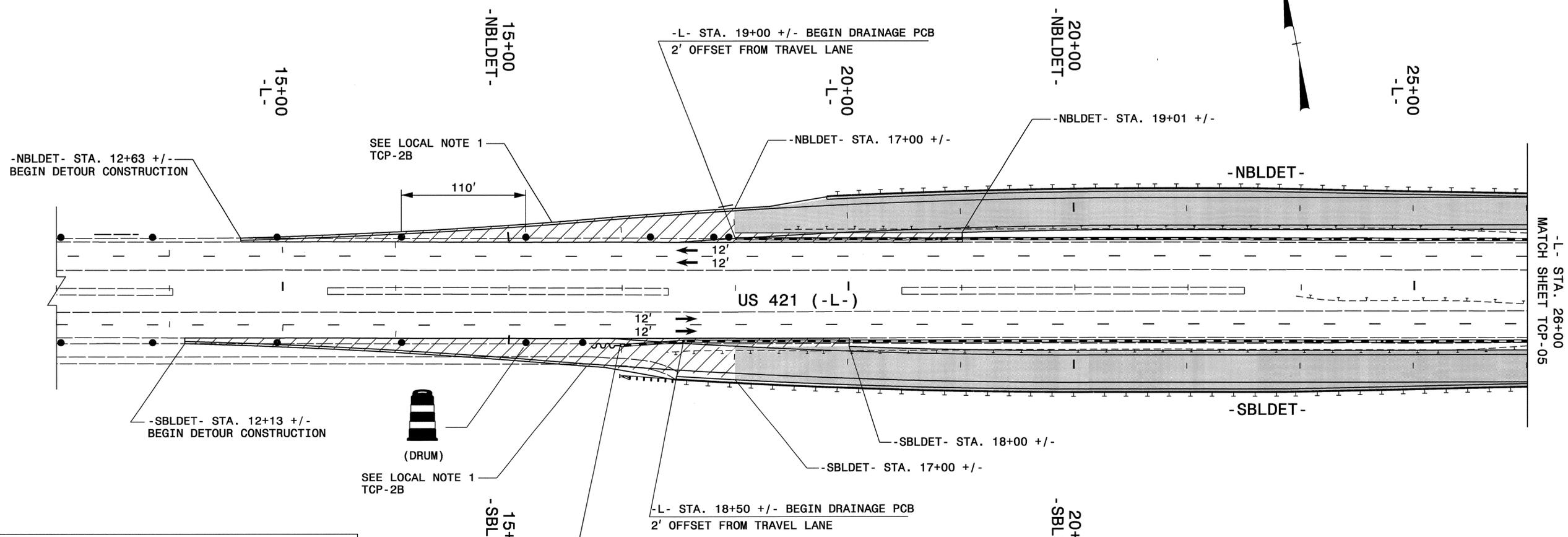
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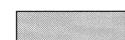
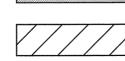
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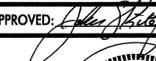


SECTION VIEW A-A AT STA. 26+50 +/- -L- (SEE TCP-06)  
**PHASE I, STEP 2 & 3 DETAIL**



NOTES: ALL PCB UNITS SHALL HAVE DRAINAGE/LIFT SLOTS (SEE RSD 1170.01)  
 FOR ATTACHING PCB TO EXISTING BRIDGE RAIL, SEE SHEET PCB-1  
 SEE TCP-11 FOR ADVANCE WARNING SIGNS

 — PHASE I, STEP 4  
 — PHASE I, STEP 5 SEE LOCAL NOTE 1

APPROVED:  DATE: 3/1/09

SEAL



**TRAFFIC CONTROL DETAILS**  
**PHASE I**

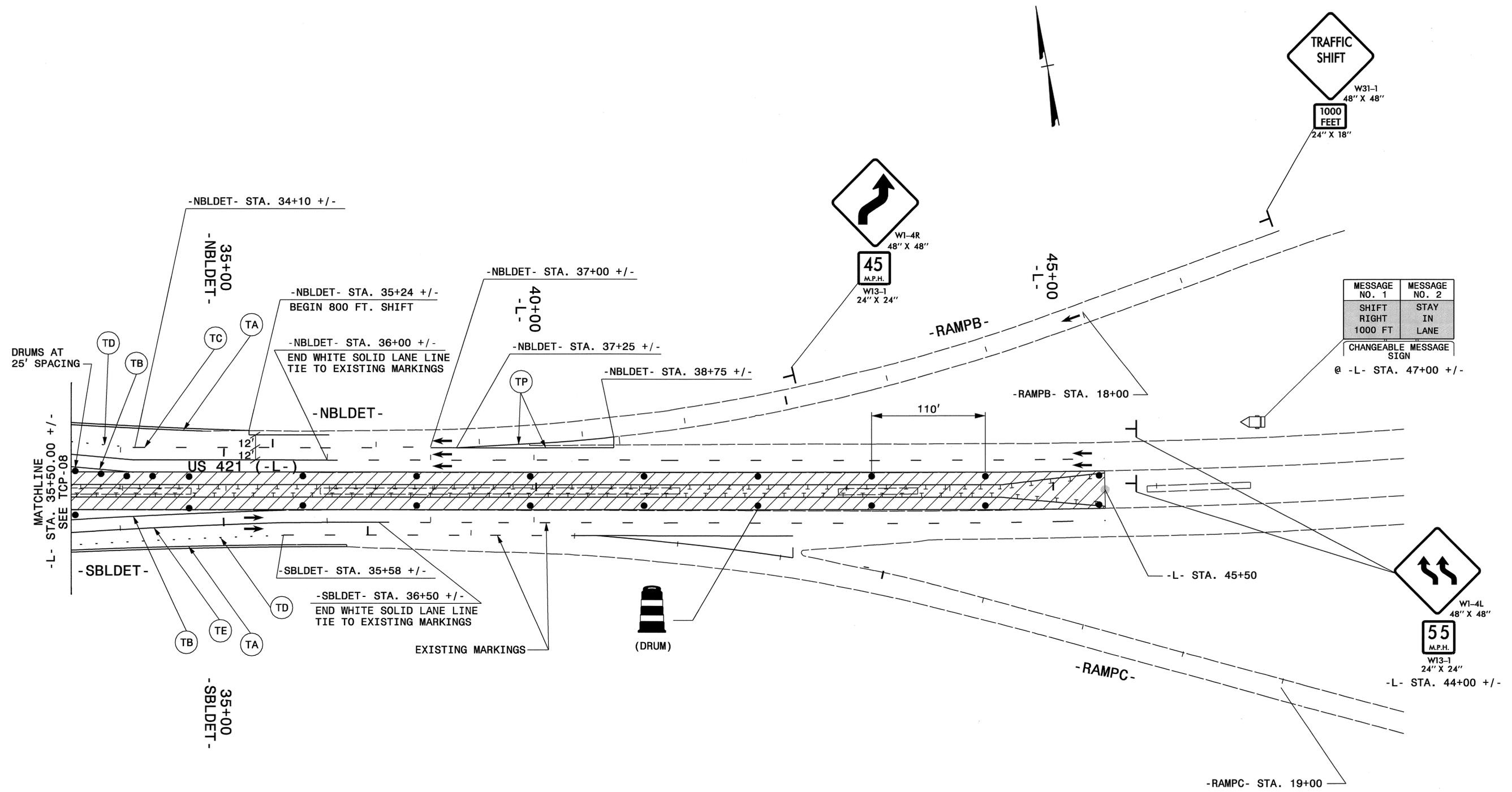
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DESIGN BY: AKP		
REVIEWED BY: DAP		

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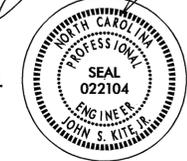


MESSAGE NO. 1	MESSAGE NO. 2
SHIFT RIGHT 1000 FT	STAY IN LANE

CHANGEABLE MESSAGE SIGN @ -L- STA. 47+00 +/-

 PHASE II, STEP 3  
SEE LOCAL NOTE 2  
ON TCP 2B

APPROVED: *John S. Kite* DATE: 8/11/09



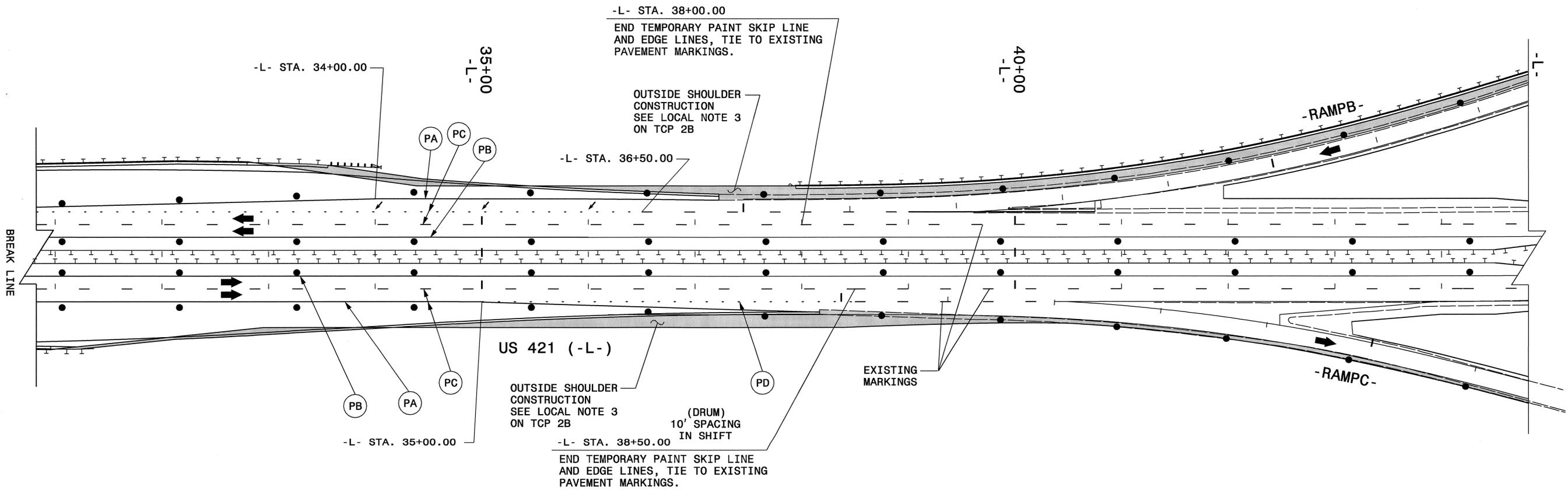
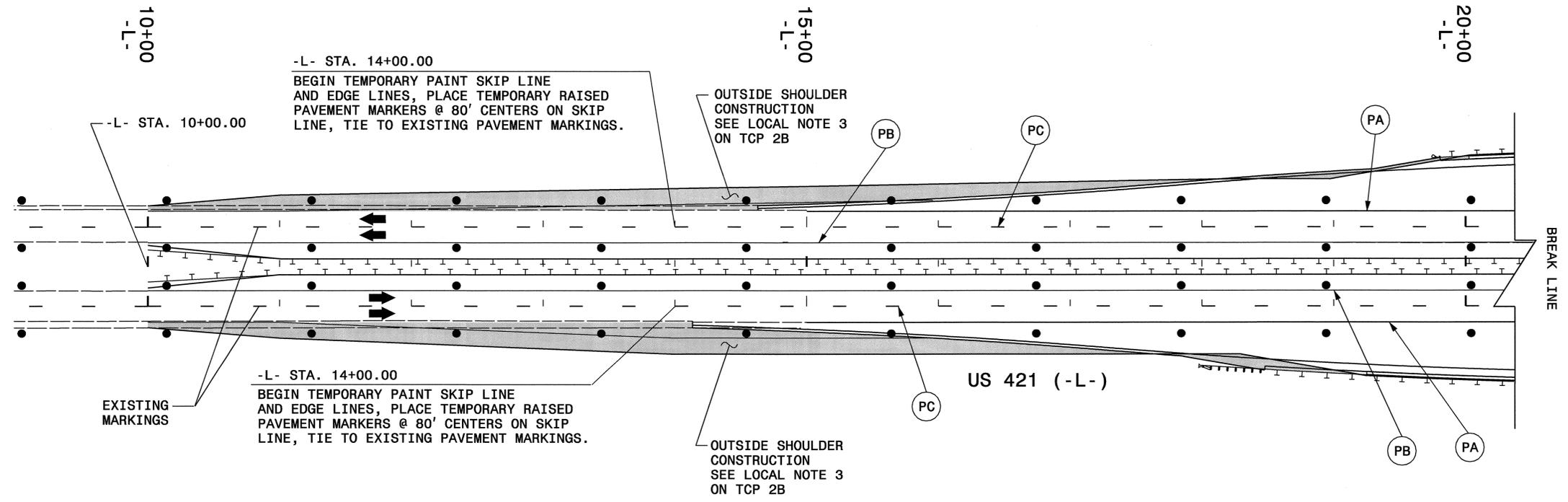
### TRAFFIC CONTROL DETAILS PHASE II

SCALE: NONE  
DATE: 06/08  
DWG. BY: AKP  
DESIGN BY: AKP  
REVIEWED BY: DAP



REVISIONS	

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 gspatel AT WZTC244748



APPROVED: <i>[Signature]</i> DATE: 8/11/09	<b>TRAFFIC CONTROL DETAILS PHASE III</b>	
SCALE: NONE	REVISIONS	
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DESIGN BY: AKP		
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