### STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS



STATE PROJECT REFERENCE NO. R-2518B TCP-1

# PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

# YANCEY COUNTY

### ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" HIGHWAY DESIGN BRANCH - 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
1101.05	WORK ZONE VEHICLE ACCESSES
1101.06	WARNING SIGNS FOR BLASTING ZONES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS - MOUNTING HEIGHT &
1110.01	LATERAL CLEARANCE
1110.02	PORTABLE WORK ZONE SIGNS - MOUNTING HEIGHT &
1110102	LATERAL CLEARANCE
1115.01	FLASHING ARROW PANELS
1130.01	DRUMS
1145.01	BARRICADES - TYPE III
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED
	ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - THRU LANE DROPS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
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	PERMANENT
1253.01	SNOWPLOWABLE RAISED PAVEMENT MARKERS
1261.01	GUARDRAIL AND BARRIER DELINEATOR SPACING
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1262.01	GUARDRAIL END DELINEATION

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### **LEGEND**

### **GENERAL**

■ DIRECTION OF TRAFFIC FLOW

NORTH ARROW PROPOSED PVMT. ----- EXIST. PVMT.

**WORK AREA** 

REMOVAL OF EXISTING PAVEMENT

### TRAFFIC CONTROL DEVICES

T TYPE I BARRICADE

TYPE III BARRICADE

CONE

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

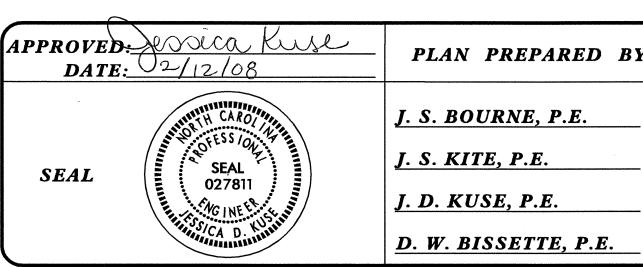
### PAVEMENT MARKINGS

CRYSTAL/CRYSTAL PAVEMENT MARKER

YELLOW/YELLOW PAVEMENT MARKER

CRYSTAL/RED PAVEMENT MARKER

PAVEMENT MARKING SYMBOLS



PLAN PREPARED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT

TRAFFIC CONTROL ENGINEER

TRAFFIC CONTROL PROJECT ENGINEER

TRAFFIC CONTROL PROJECT DESIGN ENGINEER D. W. BISSETTE, P.E. TRAFFIC CONTROL DESIGN ENGINEER / TECHNICIAN

### 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.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME

DAY AND TIME RESTRICTIONS

US 19

MONDAY THRU FRIDAY 6:00 AM TO 9:00 AM MONDAY THRU FRIDAY 4:00 PM TO 7:00 PM

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

US 19

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 7:00 P.M. DECEMBER 31st TO 6:00 A.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 6:00 A.M. THE FOLLOWING TUESDAY.
- 3. FOR EASTER, BETWEEN THE HOURS OF 7:00 P.M. THURSDAY AND 6:00 A.M. MONDAY.
- 4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 P.M. FRIDAY TO 6:00 A.M. TUESDAY.
- 5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 P.M. THE DAY BEFORE INDEPENDENCE DAY AND 6:00 A.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 7:00 P.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 6:00 A.M. THE TUESDAY AFTER INDEPENDENCE DAY.

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

C) DO NOT STOP TRAFFIC ON US 19 FOR MORE THAN 20 MINUTE INTERVALS FOR ANY OPRATION INCLUDING BUT, NOT LIMITED TO BLASTING AND TRAFFIC SHIFTS.

DEPLETE ALL QUEUES BEFORE STOPPING TRAFFIC AGAIN.

D) 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

- E) 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.
- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 1.5m OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- G) 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.
- H) DO NOT WORK SIMULTANEOUSLY WITHIN 5 M ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- I) DO NOT INSTALL MORE THAN 2 SIMULTANEOUS LANE CLOSURES, IN ANY ONE DIRECTION, ON US 19.
- J) PROVIDE A MINIMUM OF 2 KM BETWEEN LANE CLOSURES, MEASURED FROM THE END OF ONE CLOSURE TO THE FIRST SIGN OF THE NEXT LANE CLOSURE.

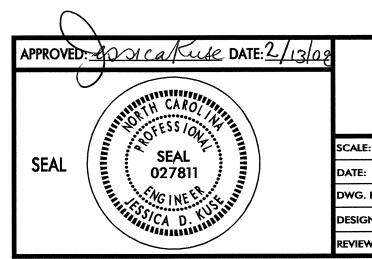
PAVEMENT EDGE DROP OFF REQUIREMENTS

K) 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 50mm ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

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

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



### PROJECT NOTES

	NONE	
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Y:	DWB	
BY:	DWB	
ED BY:	JDK	



REVISIONS

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# #ETRIC

MARKER

PROJ. REFERENCE NO. SHEET NO.

R-2518B
TCP-2A

### GENERAL NOTES

L) DO NOT EXCEED A DIFFERENCE OF 50mm IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 40mm. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 30 M IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

#### TRAFFIC PATTERN ALTERATIONS

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

#### SIGNING

- N) PROVIDE PERMANENT SIGNING.
- O) PROVIDE DETOUR SIGNING WITHIN AND OFF THE PROJECT LIMITS.
- P) COVER OR REMOVE ALL DETOUR SIGNS WITHIN AND OFF THE PROJECT LIMITS WHEN A DETOUR IS NOT IN OPERATION.
- Q) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- R) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 30 M IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

#### TRAFFIC BARRIER

S) 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.

T) PROTECT THE APPROACH END OF 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 PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION.

#### TRAFFIC CONTROL DEVICES

- U) SPACE CHANNELIZING DEVICES IN WORK AREAS EQUAL IN METERS TO 2/3rds THE POSTED SPEED LIMIT (MPH), EXCEPT 3m ON-CENTER IN RADII, AND 1m OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT.
- V) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- W) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES DRUMS PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 150m CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

#### PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME MARKING

US 19 POLYUREA SNOWPLOWABLE ALL -Y- LINES POLYUREA SNOWPLOWABLE

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

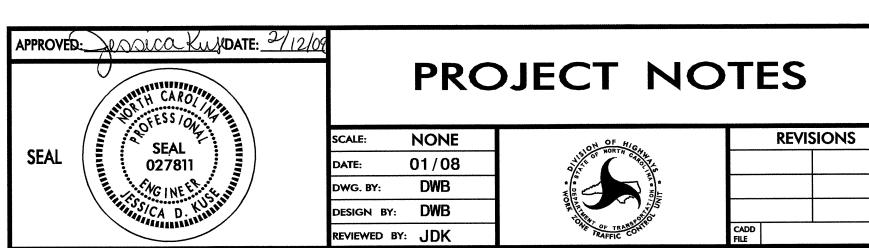
ROAD NAME MARKING MARKER

US 19 PAINT TEMPORARY RAISED
ALL -Y- LINES PAINT TEMPORARY RAISED

- Z) 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.
- AA) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- BB) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.
- CC) TRACE THE PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO INSTALLATION. PLACE DRUMS TO DELINEATE ANY PROPOSED MONLITHIC ISLANDS BEFORE INSTALLATION.

### MISCELLANEOUS

- CC) POLICE MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS, AS DIRECTED BY THE ENGINEER.
- DD) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAYS 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)152 M RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.



l OJSTOJ ENTLOJ VIJETI OJECI STRANZGJOBATI GLITICATI GLITICOTI II ONI OPAN ZGJOBET CETOL DOG OZERJANJA VZTC237500

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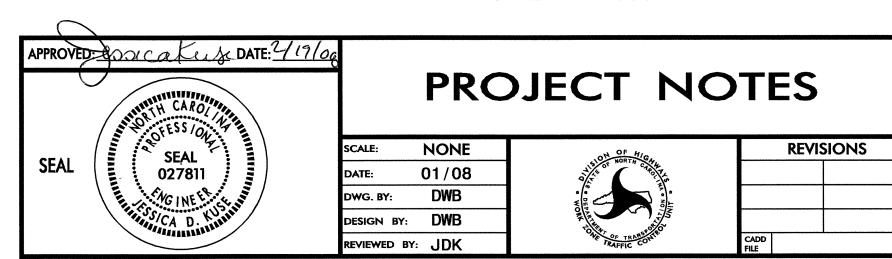
## LOCAL NOTES

- 1. ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- 2. MAINTAIN DRIVEWAY ACCESS WITHIN PROJECT LIMITS USING INCIDENTAL STONE.
- 3. THE CONTRACTOR IS TO FURNISH, INSTALL, MAINTAIN, RELOCATE AND REMOVE CHANGEABLE MESSAGE BOARDS DURING VARIOUS STAGES OF CONSTRUCTION AT THE DISCRETION OF THE ENGINEER TO ADEQUATELY INFORM MOTORISTS OF CHANGING WORK ZONE CONDITIONS.
- 4. PLACE ALL CHANGEABLE MESSAGE BOARDS AS NEEDED IN THE LOCATIONS AND WITH WORD MESSAGES AS SHOWN IN THE TCP OR AS DIRECTED BY THE ENGINEER TO PROVIDE ADVANCE WARNING TO THE PUBLIC DURING CONSTRUCTION.
- 5. COMPLETE ANY PROPOSED OR TEMPORARY WIDENING IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANE.
- 6. REMOVE TEMPORARY LANE CLOSURES AT THE END OF EACH WORKDAY AND RESTORE TRAFFIC TO EXISTING PATTERNS.
- 7. BLASTING OPERATIONS MAY NOT BE PERFORMED DURING THE TIME RESTRICTIONS LISTED IN THE GENERAL NOTES A, B, AND C ON TCP-2. PERFORM BLASTING OPERATIONS IN THE FOLLOWING SEQUENCE:
  - A. NOTIFY THE ENGINEER 10 BUSINESS DAYS PRIOR TO THE FIRST BLASTING OPERATION ON THE PROJECT. NOTIFY THE ENGINEER 2 BUSINESS DAYS PRIOR TO SUBSEQUENT BLASTING OPERATIONS.
  - B. ACTIVATE CHANGEABLE MESSAGES SIGNS ALONG US 19 AND ANY OTHER ROADWAYS IN ACCORDANCE WITH SHEET TCP-46 AND/OR AS DIRECTED BY THE ENGINEER.
  - C. CLOSE US 19 AND INTERSECTING -Y- LINES WITHIN THE BLASTING ZONE TO TRAFFIC IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 1101.06, SHEET 1 OF 1.
  - D. PERFORM BLASTING OPERATION AND DEBRIS REMOVAL. MULTIPLE BLASTING OPERATIONS AT MULTIPLE LOCATIONS ARE PERMITTED PROVIDED US 19 (-L-) AND ANY INTERSECTING -Y- LINES ARE REOPENED TO TRAFFIC WITHIN THE SAME TIME FRAMES LISTED IN NOTES A, B & C OF THE GENERAL NOTES.
  - E. OPEN US 19 (-L-) AND ANY INTERSECTING -Y- LINES WITHIN THE BLASTING ZONE TO TRAFFIC.
  - F. IMMEDIATELY DEACTIVATE THE CHANGEABLE MESSAGE SIGNS OR CHANGE MESSAGES AS INDICATED ON SHEET TCP-46 OR AS DIRECTED BY THE ENGINEER.
- 8. ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919)733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE INCLUDING THE FOLLOWING AREAS OF CONCERN:
  - A. ONGOING CLOSURES AND DELAYS DUE TO BLASTING OPERATIONS
  - B. AREAS OF CONSTRICTED HORIZONTAL CLEARANCES (NARROW LANES OR LANES BORDERED ALONG THE OUTSIDE IN BOTH DIRECTIONS WITH EITHER PCB OR GUARDRAIL)

- 9. USING ROADWAY STANDARD DRAWING 1101.03 SHEET 1 AND 2 OF 9, -Y4-AND -Y12- MAY BE CLOSED TO CONSTRUCT THE TIE INS WITH -L- AS DIRECTED BY THE ENGINEER. IF ROADS ARE CLOSED WORK MUST BE COMPLETED IN A CONTINUOUS MANNER.
- 10. INSTALL TEMPORARY GUARDRAIL AT THE TOP OF EXISTING FILL SLOPES IF THE REMOVAL OF VEGETATION OR OTHER NATURAL BARRIERS DURING CONSTRUCTION CREATES A SITUATION THAT MEETS THE WARRANTS FOR GUARDRAIL AS DESCRIBED IN THE ROADWAY DESIGN MANUAL OR AS DIRECTED BY THE ENGINEER.
- 11. MAINTAIN EXISTING GUARDRAIL UNTIL PROPOSED FILL SLOPES ARE COMPLETED TO THE POINT THAT THE ORIGINAL WARRANTS FOR GUARDRAIL AS DESCRIBED IN THE ROADWAY DESIGN MANUAL NO LONGER EXIST OR AS DIRECTED BY THE ENGINEER.
- 12. CONTACT WORK ZONE TRAFFIC CONTROL UNIT (919-250-4159) TWO MONTHS (60 DAYS) PRIOR TO BEGINNING PHASE III STEP 1 TO COORDINATE R-2518B FINAL PAVEMENT MARKING TIE IN TO R-2519A CONSTRUCTION SEQUENCING.

#### TEMPORARY PAVEMENT MARKINGS AND MARKERS SCHEDULE

SYMBOL	DESCRIPTION	BREAKDOWN	TOTAL	QUANTITY		
	PAINT(100MM)					
PA	WHITE EDGELINE (2X)	67920 M				
PA	WHITE EDGELINE (1X)	24731 M				
PB	YELLOW EDGELINE (1X)	346 M				
PC	3 M. WHITE SKIP (1X)	5526 M				
PD	0.5 M. WHITE MINISKIP (1X)	610 M				
PE	WHITE SOLID LANE LINE (1X)	3125 M				
PH	YELLOW SINGLE CENTER (1X)	144 M				
ΡI	YELLOW DOUBLE CENTER (2X)	84688 M				
ΡI	YELLOW DOUBLE CENTER (1X)	1884 M				
			TOTAL	188974 M		
	PAINT(200MM)					
PV	YELLOW DIAGONAL (2X)	126 M				
			TOTAL	126 M		
	PAINT(600MM)					
P4	WHITE STOPBAR (2X)	508 M				
			TOTAL	508 M		
PAINT MARKING SYMBOLS						
QA	LEFT TURN ARROW (1X)	115 EA				
QB	RIGHT TURN ARROW (1X)	24 EA				
QC	STRAIGHT ARROW (1X)	150 EA				
QD	COMBO.STRAIGHT/LEFT (1X)	2 EA				
QE	COMBO.STRAIGHT/RIGHT (1X)	4 EA				
			TOTAL	295 EA		
	TEMPORARY RAISED PAVEMEN	IT MARKERS				
MH	YELLOW & YELLOW	1000 EA				
			TOTAL	4000 54		



TOTAL

1000 EA

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# TEMPORARY SHORING DATA



PROJ. REFERENCE NO. SHEET NO.

R-2518B

TCP-2C

TEMPORARY SHORING NO. 1

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

USE A TEMPORARY MSE WALL FROM STATION 175+22.00, CENTERLINE -L-, TO STATION 175+32.00, CENTERLINE -L-. SEE TEMPORARY SHORING SPECIAL PROVISION AND STANDARD TEMPORARY MSE WALL DETAILS.

DO NOT USE STANDARD TEMPORARY SHORING FROM STATION 175+22.00, CENTERLINE -L-, TO STATION 175+32.00, CENTERLINE -L-.

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

WHEN USING CONTRACTOR DESIGNED SHORING, USE THE FOLLOWING SOIL PARAMETERS:

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

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING. 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.

TEMPORARY SHORING NO. 2

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

USE A TEMPORARY MSE WALL FROM STATION 175+73.00, CENTERLINE -L-, TO STATION 175+82.00, CENTERLINE -L-. SEE TEMPORARY SHORING SPECIAL PROVISION AND STANDARD TEMPORARY MSE WALL DETAILS.

DO NOT USE STANDARD TEMPORARY SHORING FROM STATION 175+73.00, CENTERLINE -L-, TO STATION 175+82.00, CENTERLINE -L-.

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

WHEN USING CONTRACTOR DESIGNED SHORING, USE THE FOLLOWING SOIL PARAMETERS:

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

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING. 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.

TEMPORARY SHORING NO. 3

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

USE A SHEETING PILE WALL FROM STATION 175+24.00, 0.8 M LEFT OF -L-, TO STATION 175+81.00, 0.8 M LEFT OF -L-.

DO NOT USE A TEMPORARY MSE WALL FROM STATION 175+24.00, 0.8 M LEFT OF -L-. TO STATION 175+81.00, 0.8 M LEFT OF -L-.

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

WHEN USING CONTRACTOR DESIGNED SHORING, 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. 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.

SEAL

SEAL

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DATE:

DATE:

DATE:

DATE:

DESIGN B

REVIEWED

TEMPORARY SHORING DATA

OF TRAIN

NONE 01/08 REVISIONS

REVISIONS

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# TEMPORARY SHORING DATA



PROJ. REFERENCE NO. SHEET NO. R-2518B TCP-2D

TEMPORARY SHORING NO. 4

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

USE A SHEETING PILE WALL FROM STATION 191+55.00, 0.3 M RIGHT OF -L, TO STATION 191+62.00, 0.3 M RIGHT OF -L-.

DO NOT USE A TEMPORARY MSE WALL FROM STATION 191+55.00, 0.3 M RIGHT OF -L, TO STATION 191+62.00, 0.3 M RIGHT OF -L-.

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

WHEN USING CONTRACTOR DESIGNED SHORING, 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. 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.

TEMPORARY SHORING NO. 5

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

USE A SHEETING PILE WALL FROM STATION 192+22.00, 0.3 M RIGHT OF -L, TO STATION 192+28.00, 0.3 M RIGHT OF -L-.

DO NOT USE A TEMPORARY MSE WALL FROM STATION 192+22.00, 0.3 M RIGHT OF -L, TO STATION 192+28.00, 0.3 M RIGHT OF -L-.

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

WHEN USING CONTRACTOR DESIGNED SHORING, 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. 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.

TEMPORARY SHORING NO. 6

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

USE A SHEETING PILE WALL FROM STATION 223+12.00, 1.9 M LEFT OF -L-, TO STATION 223.22.00, 1.9 M LEFT OF -L-.

DO NOT USE A TEMPORARY MSE WALL FROM STATION 223+12.00, 1.9 M LEFT OF -L-, TO STATION 223.22.00, 1.9 M LEFT OF -L-.

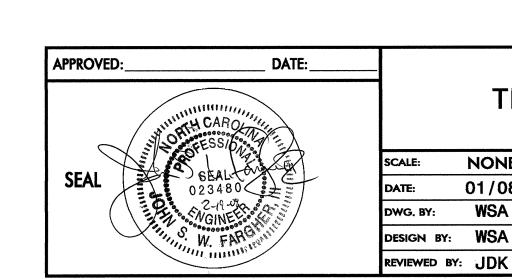
FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING, 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. 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.



TEMPORARY SHORING DATA

NONE 01/08

# TEMPORARY SHORING DATA



PROJ. REFERENCE NO. | SHEET NO. R-2518B TCP-2E

TEMPORARY SHORING NO. 7

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

USE A SHEETING PILE WALL FROM STATION 233+80.00, 1.9 M LEFT OF -L-, TO STATION 223+90.00, 1.9 M LEFT OF -L-.

DO NOT USE A TEMPORARY MSE WALL FROM STATION 233+80.00, 1.9 M LEFT OF -L-, TO STATION 223+90.00, 1.9 M LEFT OF -L-.

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

WHEN USING CONTRACTOR DESIGNED SHORING, 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. 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.

TEMPORARY SHORING NO. 8

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

USE A SHEETING PILE WALL FROM STATION 10+57.00, 7 M RIGHT OF -Y5- TO STATION 10+63.00, 7 M RIGHT OF -Y5-.

DO NOT USE A TEMPORARY MSE WALL FROM STATION 10+57.00, 7 M RIGHT OF -Y5- TO STATION 10+63.00, 7 M RIGHT OF -Y5-.

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

WHEN USING CONTRACTOR DESIGNED SHORING, 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. 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.

TEMPORARY SHORING NO. 9

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

USE A SHEETING PILE WALL FROM STATION 10+13.00, 8 M LEFT OF -Y6- TO STATION 10+18.00, 8 M LEFT OF -Y6-.

DO NOT USE A TEMPORARY MSE WALL FROM STATION 10+13.00, 8 M LEFT OF -Y6- TO STATION 10+18.00, 8 M LEFT OF -Y6-.

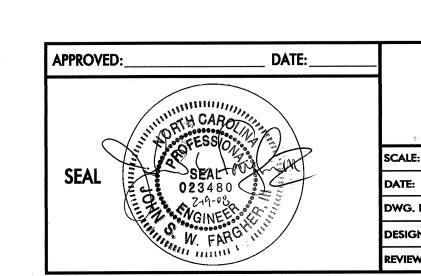
FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING, 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. 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.



TEMPORARY SHORING DATA

NONE 01/08 WSA

**REVISIONS** 

PHASE I

SEE LOCAL NOTES 1-11 ON SHEET TCP-2B

TRAFFIC SHALL BE MAINTAINED IN THE EXISTING TWO-LANE TWO-WAY PATTERN DURING PHASE I STEPS 1 THRU 7. (SEE SHEETS TCP-4 THRU TCP-12)

ENSURE CHANNEL CHANGE IS COMPLETE AND STABILIZED BEFORE DIVERTING FLOW INTO SAME.

- STEP 1. INSTALL WORK ZONE ADVANCE WARNING SIGNS ON -L- AND ALL -Y-LINES AS SHOWN ON SHEET TCP-45.
- STEP 2. USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS, BEGIN CONSTRUCTION OF 1.2m WIDE TEMPORARY PAVEMENT ALONG -L- IN THE FOLLOWING LOCATIONS AND AS SHOWN ON SHEETS TCP-23 AND TCP-24. (SEE ROADWAY PLANS FOR TEMPORARY PAVEMENT TYPICAL SECTION.):

```
-L- LT. STA. 174+04+/- TO STA. 176+96+/- (RT. OF EXISTING)
-L- LT. STA. 190+15+/- TO STA. 191+65+/- (RT. OF EXISTING)
-L- LT. STA. 192+20+/- TO STA. 193+38+/- (RT. OF EXISTING)
-L- RT. STA. 224+58+/- TO STA. 224+81+/- (LT. OF EXISTING)
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- STEP 3. USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS, INSTALL PORTABLE CONCRETE BARRIER, CRASH CUSHIONS, AND TEMPORARY SHORING IN THE FOLLOWING LOCATIONS AND AS SHOWN ON SHEETS TCP-8, TCP-9, TCP-12, TCP-23, TCP-24 AND TCP-25. CONSTRUCT THE PROPOSED STRUCTURE AT EACH LOCATION. (COMPLETE THE WORK DESCRIBED IN PHASE I STEP 2 FOR EACH LOCATION BEFORE PROCEEDING WITH THE WORK IN PHASE I STEP 3 AT THAT LOCATION. FOR CONSTRUCTION PHASING SEE STRUCTURE PLANS.):
  - -L- RT. STA. 174+04+/- TO STA. 176+96+/--L- RT. STA. 190+15+/- TO STA. 193+38+/--L- LT. STA. 222+93+/- TO STA. 224+81+/-
  - USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS. INSTALL TEMPORARY SHORING IN THE FOLLOWING LOCATIONS AND AS SHOWN ON SHEETS TCP-6 AND TCP-22. USE THE EXISTING WING WALLS AS ADDITIONAL SHORING. CONSTRUCT THE PROPOSED CULVERT EXTENSION BEHIND THE EXISTING GUARDRAIL AT EACH LOCATIONS. (SEE EROSION CONTROL PLANS FOR CULVERT DIVERSION DETAILS. SEE CULVERT PLANS FOR CONSTRUCTION PHASING.):
  - -L- LT. STA. 137+62+/- TO STA. 138+22+/--L- RT. STA. 137+94+/- TO STA. 138+54+/-
  - USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS CONSTRUCT THE PROPOSED CULVERT EXTENSIONS BEHIND THE EXISTING GUARDRAIL IN THE FOLLOWING LOCATIONS AND AS SHOWN ON SHEETS TCP-5 AND TCP-7. USE THE EXISTING WING WALLS AS SHORING. (SEE EROSION CONTROL PLANS FOR CULVERT DIVERSION DETAILS. SEE CULVERT PLANS FOR CONSTRUCTION PHASING.):
  - -L- LT. STA. 134+69+/- TO STA. 134+92+/--L- LT. STA. 156+45+/- TO STA. 156+57+/--L- RT. STA. 156+69+/- TO STA. 156+84+/-
  - USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS CONSTRUCT THE PROPOSED ROADWAY SECTIONS UP TO BUT, NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE IN THE FOLLOWING LOCATIONS AS SHOWN ON SHEETS TCP-4 THRU TCP-12 AND TCP-22 THRU TCP-31:



PROJ. REFERENCE NO. SHEET NO. R-2518B TCP-3

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-L- LT. STA. 115+06+/- TO STA. 128+32+/-
-L- RT. STA. 126+55+/- TO STA. 134+57+/-
-L- LT. STA. 132+98+/- TO STA. 174+54+/-
-L- RT. STA. 171+62+/- TO STA. 211+65+/-
-L- LT. STA. 209+01+/- TO STA. 226+26+/-
-Y2- STA. 10+20+/- TO STA. 10+30+/-
-Y5- STA. 10+00+/- TO STA. 10+52+/-
-Y7- STA. 10+20+/- TO STA. 10+24+/-
-Y8- STA. 10+20+/- TO STA. 10+68+/-
-Y10- STA. 10+10+/- TO STA. 10+32+/-
-Y11- STA. 10+40+/- TO STA. 10+51+/-
-Y15- STA. 10+92+/- TO STA. 11+18+/-
-Y16- STA. 11+27+/- TO STA. 11+35+/-
-Y17- STA. 12+40+/- TO STA. 12+65+/-
-Y19- STA. 10+70+/- TO STA. 10+90+/-
-Y21- STA. 10+10+/- TO STA. 12+43+/-
-DR3- STA. 10+00+/- TO STA. 10+25+/-
-DR4- STA. 10+10+/- TO STA. 10+97+/-
-DR4- STA. 11+02+/- TO STA. 11+85+/-
-DR7- STA. 10+00+/- TO STA. 10+83+/-
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NOTE: DO NOT CONSTRUCT THE FOLLOWING MEDIAN MONOLITHIC CONCRETE ISLANDS AT THIS TIME:

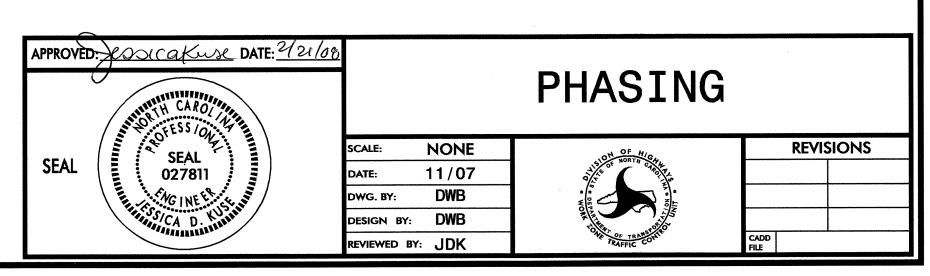
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-L- STA. 122+54+/- TO STA. 124+16+/-
-L- STA. 124+40+/- TO STA. 126+01+/-
-L- STA. 131+74+/- TO STA. 133+36+/-
-L- STA. 133+62+/- TO STA. 135+23+/-
-L- STA. 170+86+/- TO STA. 172+48+/-
-L- STA. 172+76+/- TO STA. 174+37+/-
-L- STA. 209+22+/- TO STA. 211+38+/-
-L- STA. 224+20+/- TO STA. 224+70+/-
-L- STA. 225+00+/- TO STA. 226+25+/-
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IF THE DRAINAGE STRUCTURES IN THE MONOLITHIC ISLANDS LISTED ABOVE (INCLUDING STR. NO. 47, 49, 50, 52, 54, 55, 56, 62, 93, 95, 96, 101, 104, 106, 108, 236, 239, 241, 244, 245, 249, 397, 400, 401, 402, 407 AND 410) ARE CONSTRUCTED AT THIS POINT DO NOT INSTALL THE GRATES AND FRAMES. TEMPORARILY COVER THEM WITH A 1.2 M X 2.4 M TRAFFIC BEARING STEEL PLATE SHOWN IN THE ROADWAY DETAIL SHEET AND PAVE OVER THEM TO FACILITATE THE TRAFFIC SHIFTS IN PHASE II STEPS 4 AND 8.

- USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS CONSTRUCT PROPOSED WIDENING RT. OF -Y1- STA. 10+00+/- TO STA. 10+79+/- UP TO BUT, NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE WHILE MAINTAINING TRAFFIC ON THE EXISTING. SEE SHEET TCP-4 AND SECTION B1-B1' ON SHEET TCP-27.

WEDGE EXISTING UP TO BUT, NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AND SWITCH TRAFFIC TO PROPOSED IN A TWO-LANE TWO-WAY PATTERN. SEE SECTION B2-B2' ON SHEET TCP-27.

COMPLETE WIDENING AND WEDGING LT OF -Y1- STA. 10+00+/- TO STA. 10+79+/- UP TO BUT, NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.



- USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS CONSTRUCT PROPOSED WIDENING AND WEDGING LT. AND RT. OF -Y4- STA. 10+25+/- TO STA. 10+50+/- UP TO BUT, NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE WHILE MAINTAINING TRAFFIC ON THE EXISTING. SEE SHEET TCP-5.

USING ROADWAY STANDARD DRAWING 1101.03, SHEETS 1 AND 2 OF 9 CLOSE -Y4- (SR 1202) AND DETOUR TRAFFIC TO -Y3- (SR 1202). REMOVE EXISTING PAVEMENT AND CONSTRUCT PROPOSED ROADWAY SECTION -Y4- TIE IN TO -L- UP TO BUT, NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.

- USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS CONSTRUCT PROPOSED WIDENING AND WEDGING LT. AND RT. OF -Y12- STA. 10+40+/- TO STA. 10+80+/- UP TO BUT, NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE WHILE MAINTAINING TRAFFIC ON THE EXISTING. SEE SHEET TCP-8.

USING ROADWAY STANDARD DRAWING 1101.3, SHEETS 1 AND 2 OF 9 CLOSE -Y12- (SR 1453) AND DETOUR TRAFFIC TO -Y11- (SR 1391). REMOVE EXISTING PAVEMENT AND CONSTRUCT PROPOSED ROADWAY SECTION -Y12- TIE IN TO -L- UP TO BUT, NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.

- USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS CONSTRUCT PROPOSED WIDENING LT. OF -Y14- STA. 10+45+/- TO STA. 10+90+/- UP TO BUT, NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE WHILE MAINTAINING TRAFFIC ON THE EXISTING. SEE SHEET TCP-9 AND SECTION L1-L1' ON SHEET TCP-29.

WEDGE EXISTING -Y14- STA. 10+45+/- TO STA. 10+90+/- UP TO BUT, NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AND SWITCH TRAFFIC TO PROPOSED IN A TWO-LANE TWO-WAY PATTERN. SEE SECTION L2-L2' ON SHEET TCP-30.

COMPLETE WIDENING AND WEDGING RT OF -Y14- STA. 10+45+/TO STA. 10+90+/- UP TO BUT, NOT INCLUDING THE FINAL LAYER
OF SURFACE COURSE.

- USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS CONSTRUCT THE FOLLOWING WHILE MAINTAINING ACCESS WITH INCIDENTAL STONE:

-DR1- STA. 10+50+/- TO STA. 11+19+/-DR2- STA. 10+10+/- TO STA. 10+80+/-DR7- STA. 10+00+/- TO STA. 10+83+/-

STEP 4. USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS WEDGE A TRANSITION BETWEEN THE PROPOSED AND THE EXISTING UP TO BUT, NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE IN THE FOLLOWING LOCATIONS WHILE MAINTAINING TRAFFIC ON EXISTING:

-L- LT. STA. 119+50+/- TO STA. 121+30+/-L- LT. STA. 127+00+/- TO STA. 128+32+/-L- LT. STA. 132+98+/- TO STA. 134+23+/-L- LT. STA. 155+58+/- TO STA. 159+00+/-L- LT. STA. 172+46+/- TO STA. 174+54+/-L- LT. STA. 209+01+/- TO STA. 210+94+/-

CONSTRUCT A MINIMUM OF TWO THROUGH LANES TO FACILITATE TRAFFIC SWITCH.

STEP 5. USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS PLACE TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS IN A TWO-LANE TWO-WAY PATTERN ON THE TWO PROPOSED WEST BOUND THRU LANES AS SHOWN ON TCP-14 THRU TCP-21 AT THE FOLLOWING LOCATIONS OUTSIDE OF THE EXISTING TRAVEL LANES:

-L- LT. STA. 115+06+/- TO STA. 127+00+/-L- LT. STA. 134+23+/- TO STA. 172+46+/-L- LT. STA. 210+94+/- TO STA. 226+25+/-

STEP 6. USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS REMOVE THE EXISTING PAVEMENT MARKINGS, PLACE TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS AND TRANSITION BETWEEN THE EXISTING PAVEMENT MARKINGS AND THE TEMPORARY TWO-LANE TWO-WAY PATTERN ON THE TWO PROPOSED WEST BOUND THRU LANES AS SHOWN ON TCP-14 THRU TCP-21 AT THE FOLLOWING LOCATIONS:

-L- LT. STA. 113+00+/- TO STA. 115+06+/-L- LT. STA. 127+00+/- TO STA. 128+32+/-L- LT. STA. 132+98+/- TO STA. 134+23+/-L- LT. STA. 172+46+/- TO STA. 174+54+/-L- LT. STA. 209+01+/- TO STA. 210+94+/-

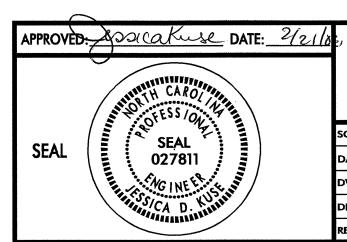
STEP 7. INSTALL ALL TRAFFIC CONTROL DEVICES AND SWITCH ALL TRAFFIC TO A TWO-LANE TWO-WAY PATTERN LEFT OF -L- AS SHOWN ON TCP-13 THRU TCP-21 AND TCP-47 AND TCP-48.

### PHASE II

SEE LOCAL NOTES 1-11 ON SHEET TCP-2B

- STEP 1. BEGIN AND OR CONTINUE ALL WORK RIGHT OF -L- STATION 115+06+/- TO STATION 226+25+/- INCLUDING STRUCTURE NUMBER 4 AND ALL ROADWAY SECTIONS UP TO BUT, NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS SHOWN ON TCP-15 THRU TCP-21.
- STEP 2. BEGIN INSTALLATION OF TRAFFIC SIGNALS AT THE INTERSECTION OF -L-, -Y17- AND -Y18- AND THE INTERSECTION OF -L- AND -Y21-.
- STEP 3. USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS CONSTRUCT THE FOLLOWING PROPOSED ROADWAY SECTIONS UP TO BUT, NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AND NOT INCLUDING THE MONOLITHIC ISLANDS:

-L- RT. STA. 170+86+/- TO STA. 174+37+/--L- RT. STA. 209+22+/- TO STA. 211+38+/-



### PHASING

DATE: 11/07

DWG. BY: DWB

DESIGN BY: DWB

REVIEWED BY: JDK

REVISIONS

OF HIGH

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STEP 4. USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS AS SHOWN ON TCP-36 AND TCP-39 AND ROADWAY PLAN SHEET 2-N BETWEEN -L- STATION 170+86+/- AND -L- STATION 211+38+/-. SWITCH TRAFFIC FROM THE TWO-LANE TWO-WAY TEMPORARY PATTERN LEFT OF -L- TO A TWO-LANE TWO-WAY TEMPORARY PATTERN RIGHT OF -L- FROM STATION 174+37+/- TO

STATION 209+22 CROSSING THE TRAFFIC OVER FROM STATION

170+86+/- TO STATION 174+37+/- AND BACK FROM STATION

STEP 5. USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS INSTALL TEMPORARY SHORING BEHIND PROPOSED GUARDRAIL AT THE FOLLOWING LOCATIONS AS SHOWN ON TCP-41:
-LOCATION 1 -L- CL STA. 175+22+/- TO STA. 175+32+/-LOCATION 2 -L- CL STA. 175+73+/- TO STA. 175+82+/-

209+22+/- TO STATION 211+38+/-.

- STEP 6. BEGIN AND OR CONTINUE ALL WORK LEFT OF -L- FROM STATION 170+86+/- TO STATION 211+38+/- INCLUDING STRUCTURE NUMBER 1 AND ALL ROADWAY SECTIONS UP TO BUT, NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS SHOWN ON TCP-36 THRU TCP-39 AND TCP-41.
- STEP 7. USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS CONSTRUCT THE FOLLOWING PROPOSED ROADWAY SECTIONS UP TO BUT, NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AND THE MONOLITHIC ISLANDS:

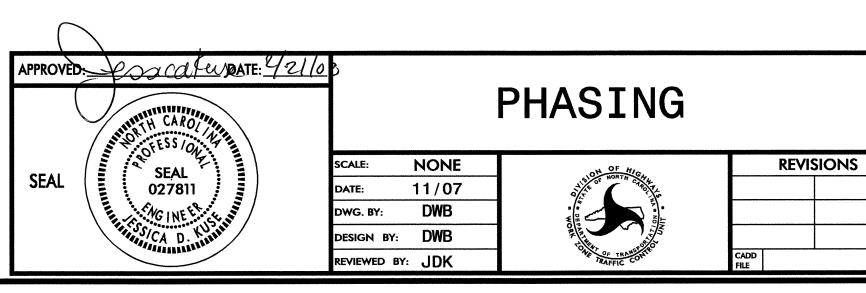
  -L- RT. STA. 122+54+/- TO STA. 126+01+/-L- RT. STA. 131+75+/- TO STA. 135+23+/-
- STEP 8. USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS AS SHOWN ON TCP-32 AND TCP-33 AND ROADWAY PLAN SHEET 2-M BETWEEN -L- STATION 122+54+/- AND -L- STATION 135+23+/-. SWITCH TRAFFIC FROM THE TWO-LANE TWO-WAY TEMPORARY PATTERN LEFT OF -L- TO A TWO-LANE TWO-WAY TEMPORARY PATTERN RIGHT OF -L- FROM STATION 126+01+/- TO STATION 131+75 CROSSING THE TRAFFIC OVER FROM STATION 122+54+/- TO STATION 126+01+/- AND BACK FROM STATION 131+75+/- TO STATION 135+23+/-.
- STEP 9. BEGIN AND OR CONTINUE ALL WORK LEFT OF -L- FROM STATION 122+54+/- TO STATION 135+23+/- AS SHOWN ON TCP-32 AND TCP-33.
- STEP 10. USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS, COMPLETE THE FOLLOWING:
  - CONSTRUCTION OF STRUCTURES DESCRIBED IN STEP 1 AND STEP 5 AND REMOVE ANY TEMPORARY SHORING, TEMPORARY PAVEMENT, TEMPORARY GUARDRAIL AND PORTABLE CONCRETE BARRIER STILL IN PLACE.
  - CONSTRUCTION OF ALL MAINLINE AND Y-LINE ROADWAY SECTIONS UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AND EXCLUDING THE FOLLOWING MEDIAN MONOLITHIC CONCRETE ISLANDS AND ANY MEDIAN CONCRETE WORK THAT CAN NOT BE COMPLETED DUE TO PROXIMITY TO ADJACENT TRAFFIC:

-L- STA. 122+54+/- TO STA. 124+16+/-L- STA. 124+40+/- TO STA. 126+01+/-L- STA. 131+74+/- TO STA. 133+36+/-L- STA. 133+62+/- TO STA. 135+23+/-L- STA. 170+86+/- TO STA. 172+48+/-L- STA. 172+76+/- TO STA. 174+37+/-L- STA. 224+20+/- TO STA. 224+70+/-L- STA. 225+00+/- TO STA. 226+25+/-

### PHASE III

SEE LOCAL NOTES 1-4, 6, 8 AND 12 ON SHEET TCP-2B

- STEP 1. USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS COMPLETE THE FOLLOWING:
  - INSTALLATION AND ACTIVATION OF TRAFFIC SIGNALS AT THE INTERSECTION OF -L-, -Y17- AND -Y18- AND THE INTERSECTION OF -L- AND -Y21-.
  - PLACE TEMPORARY PAVEMENT MARKINGS IN THE FINAL PATTERN AND PLACE TRAFFIC IN THE FINAL PATTERN.
- STEP 2. USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS, COMPLETE THE FOLLOWING:
  - COMPLETE ALL STRUCTURE WORK.
  - CONSTRUCTION OF ALL -L- AND -Y- LINE ROADWAY SECTIONS AND ALL DRIVEWAYS UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.
  - COMPLETE ALL MONOLITHIC CONCRETE ISLANDS AND ANY MEDIAN CONCRETE WORK THAT COULD NOT BE COMPLETED EARLIER DUE TO PROXIMITY TO ADJACENT TRAFFIC OR CROSS OVERS.
- STEP 3. USING ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 9 AND FLAGGERS PLACE FINAL LAYER OF SURFACE COURSE ON ALL -L-AND -Y- LINE ROADWAY SECTIONS AND ALL DRIVEWAYS.
- STEP 4. PLACE FINAL PAVEMENT MARKINGS AND FINAL PAVEMENT MARKERS ON ALL LINES AS SHOWN ON SHEETS PM-1 THRU PM-18.
- STEP 5. REMOVE ALL TRAFFIC CONTROL SIGNS AND DEVICES AND OPEN -L-AND ALL -Y- LINES AND DRIVEWAYS TO THE FINAL TRAFFIC PATTERN.

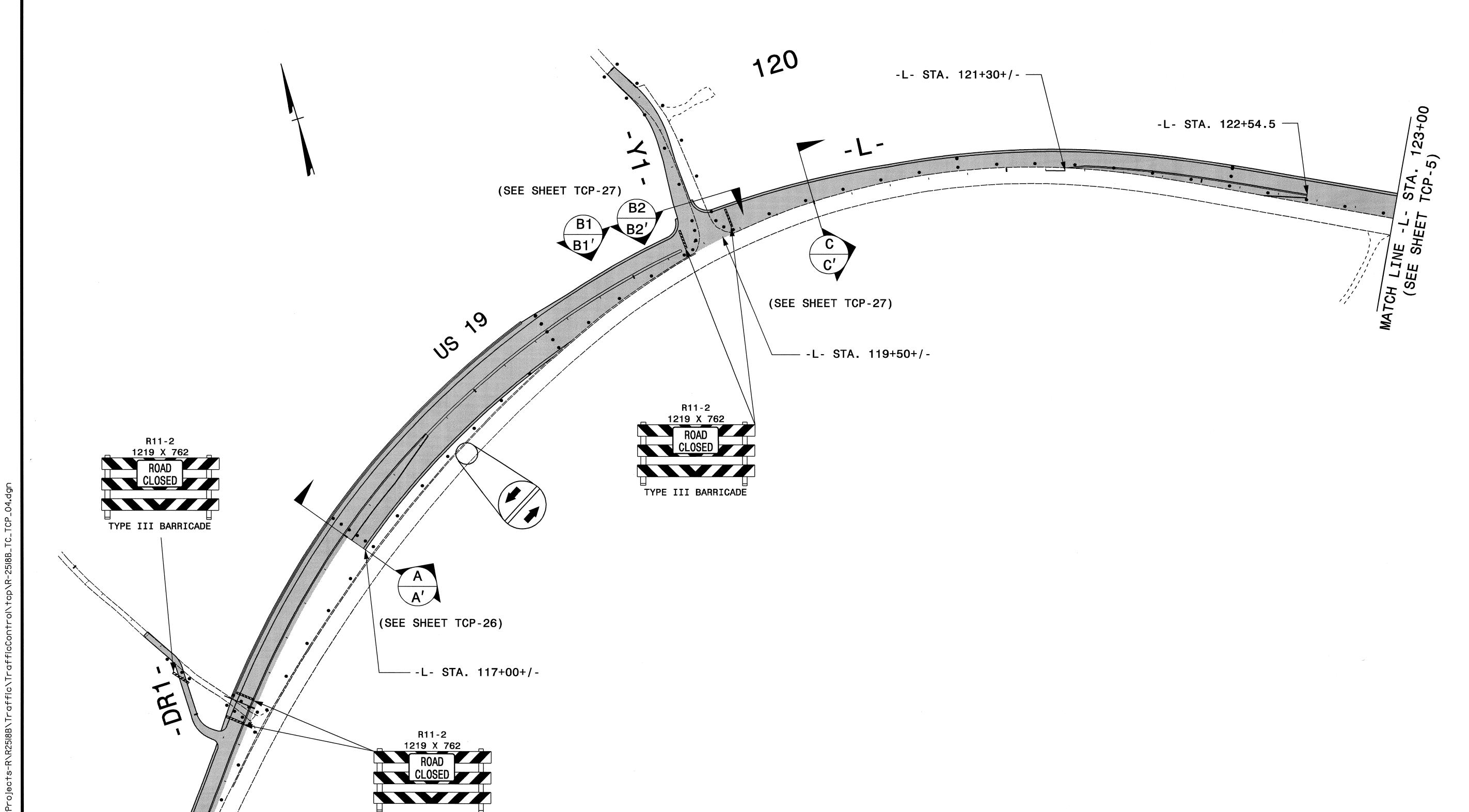


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PROJ. REFERENCE NO. SHEET NO.

R-2518B
TCP-4



WEGIN TIP PROJECT R-2518F

AT WITC237500

BEGIN TIP PROJECT R-2518F

T- STA. 115+06.55

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NOTES:

TYPE III BARRICADE

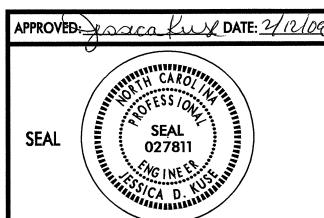
R-2518B

- MARKINGS SHOWN ARE APPROXIMATE

- SPACE DRUMS NO MORE THAN 20m APART

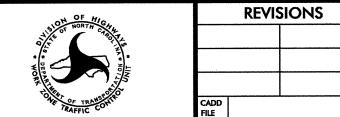
- SPACE DRUMS NO MORE THAN 5m APART IN RADII
- SPACE DRUMS NO MORE THAN 5m APART AT DRIVEWAY ENTRANCES

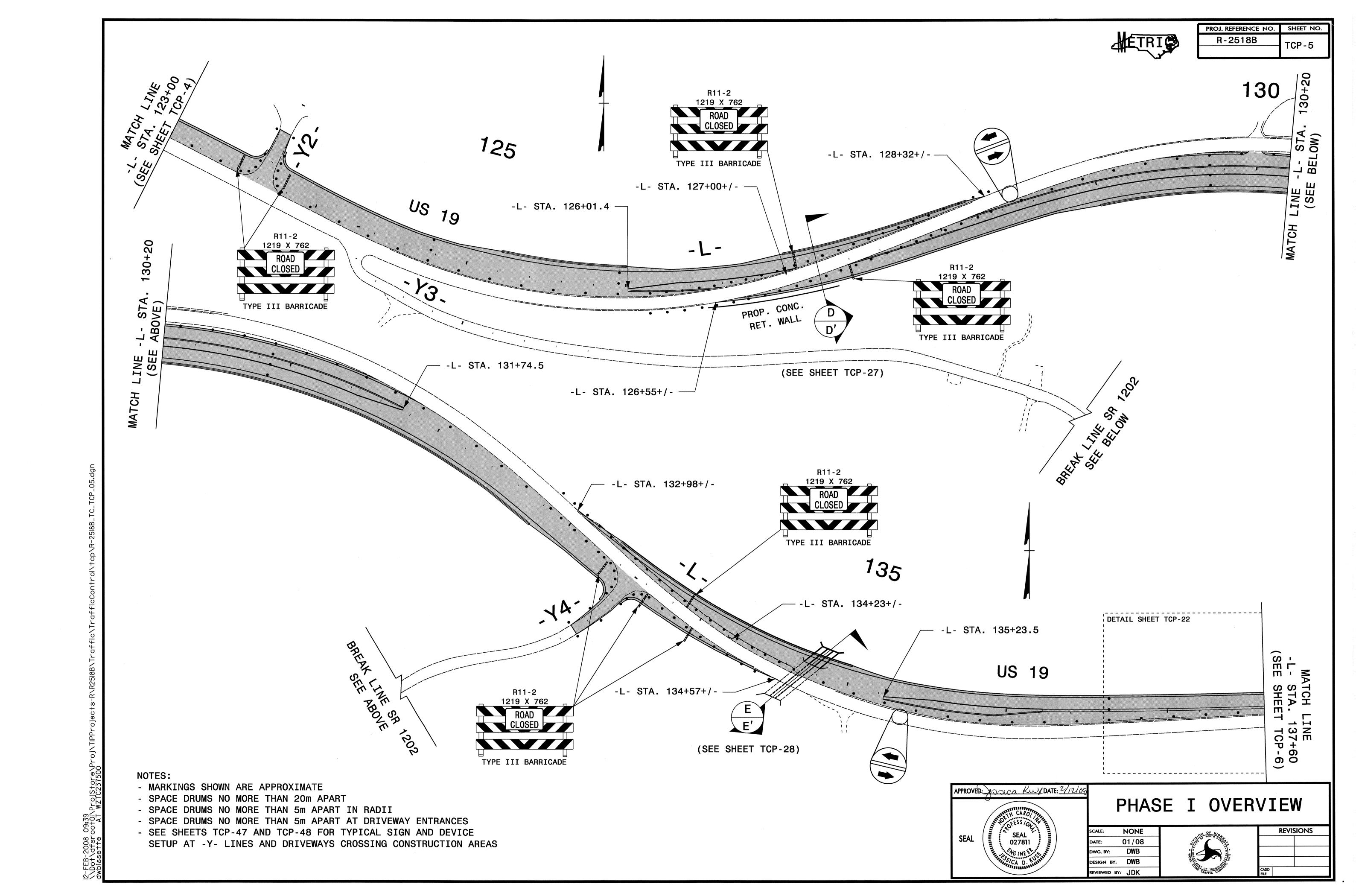
- SEE SHEETS TCP-47 AND TCP-48 FOR TYPICAL SIGN AND DEVICE SETUP AT -Y- LINES AND DRIVEWAYS CROSSING CONSTRUCTION AREAS

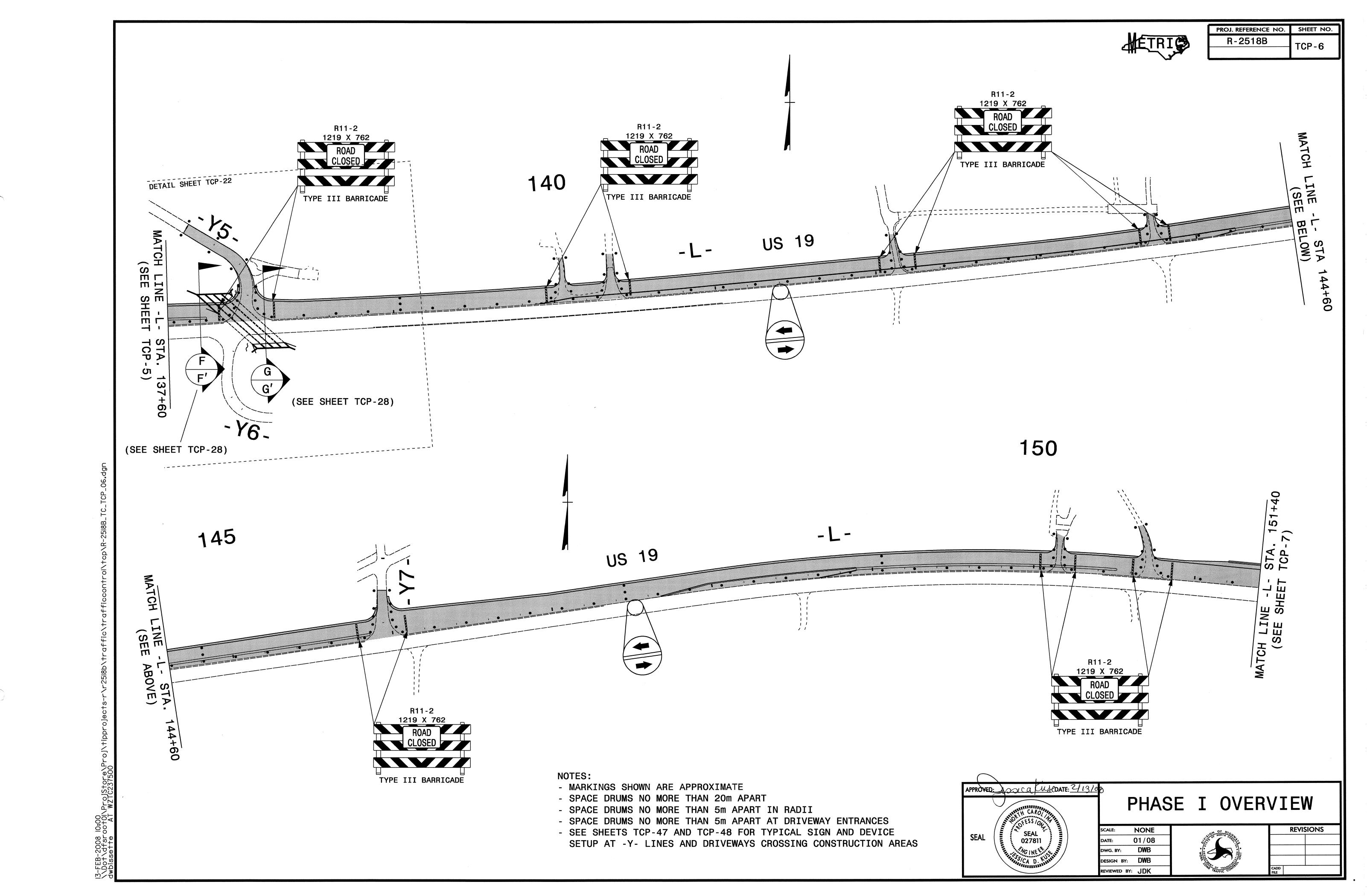


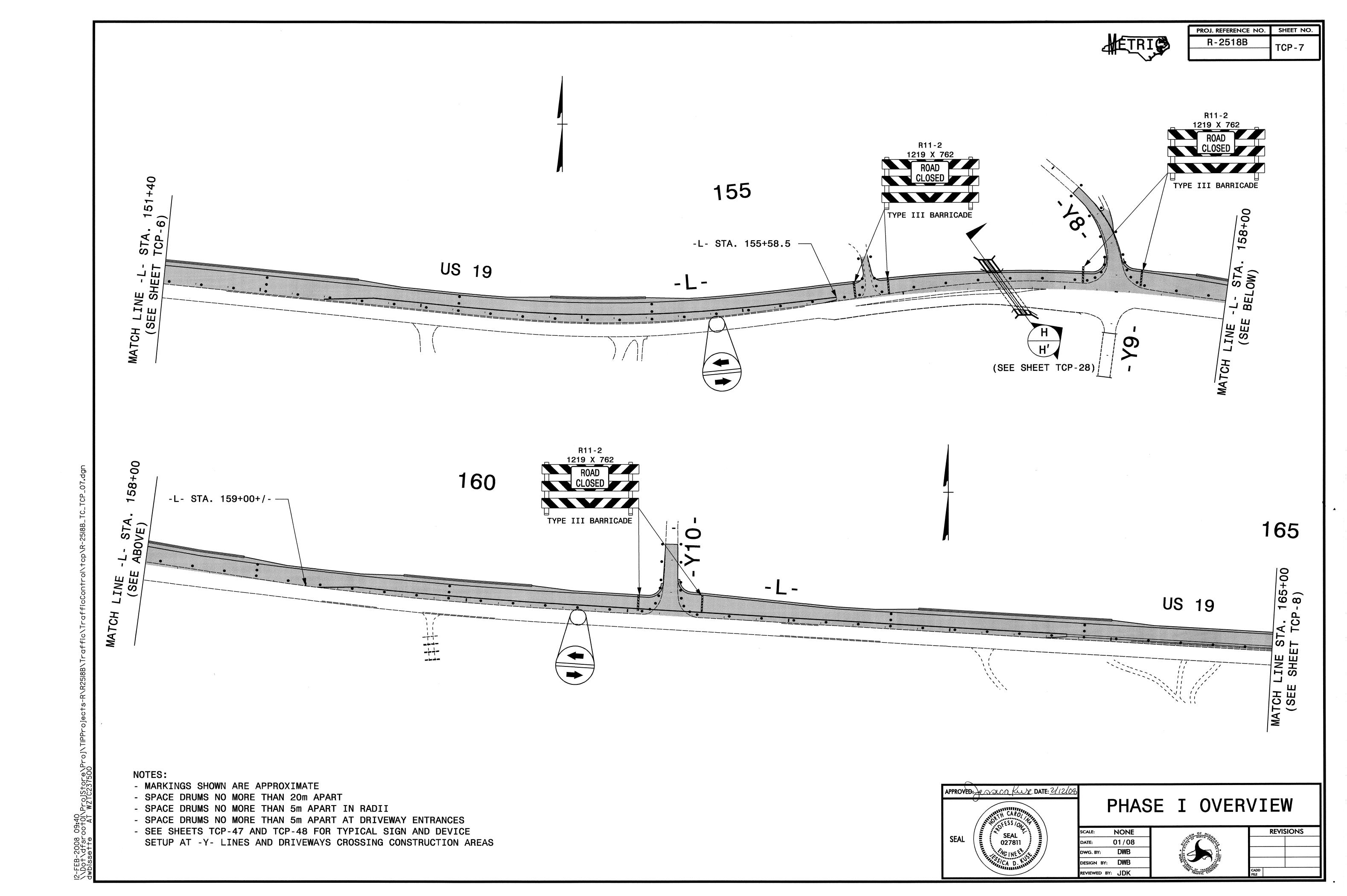
### PHASE I OVERVIEW

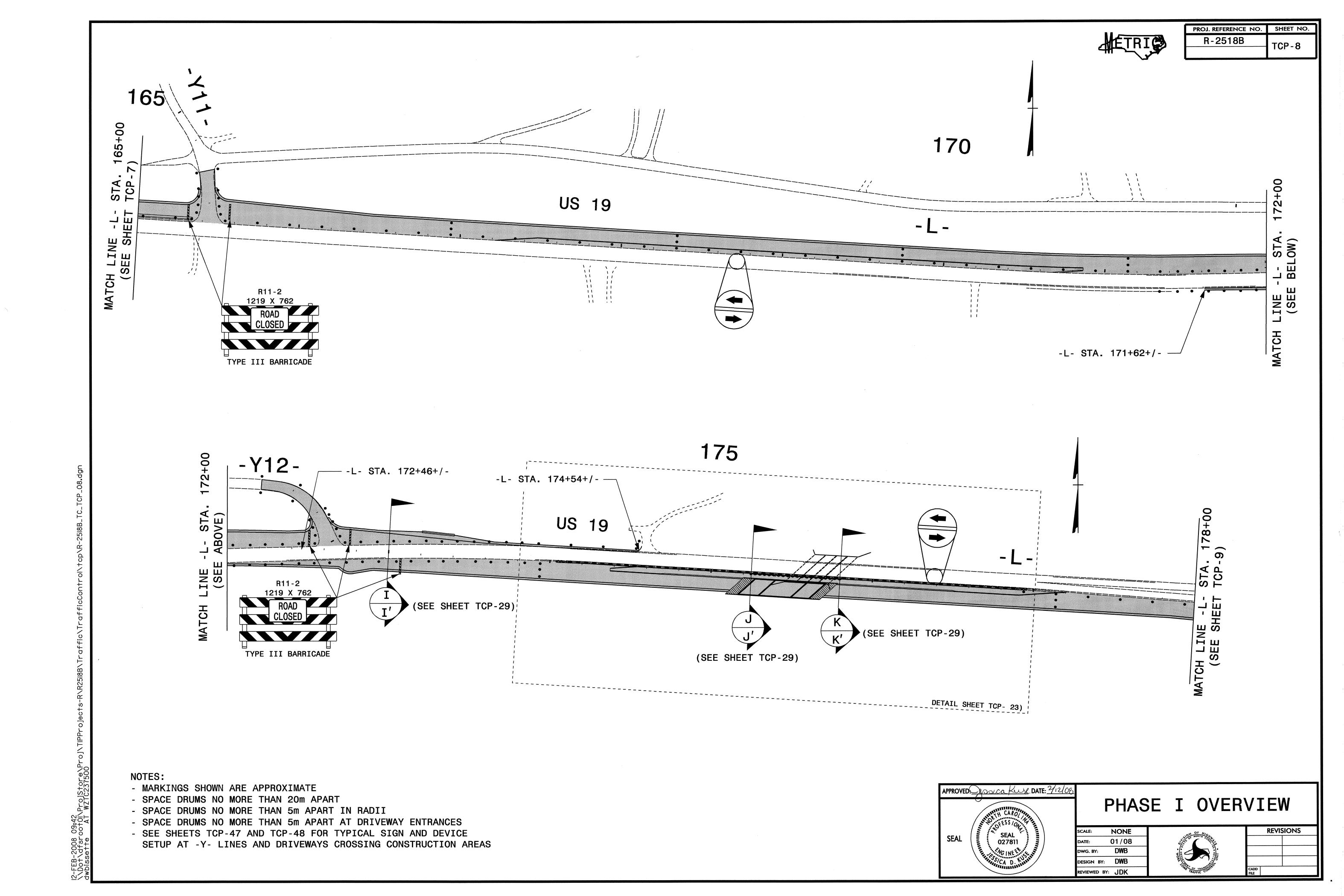
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DWG. BY:	DWB
DESIGN BY:	DWB
REVIEWED RY	IDK

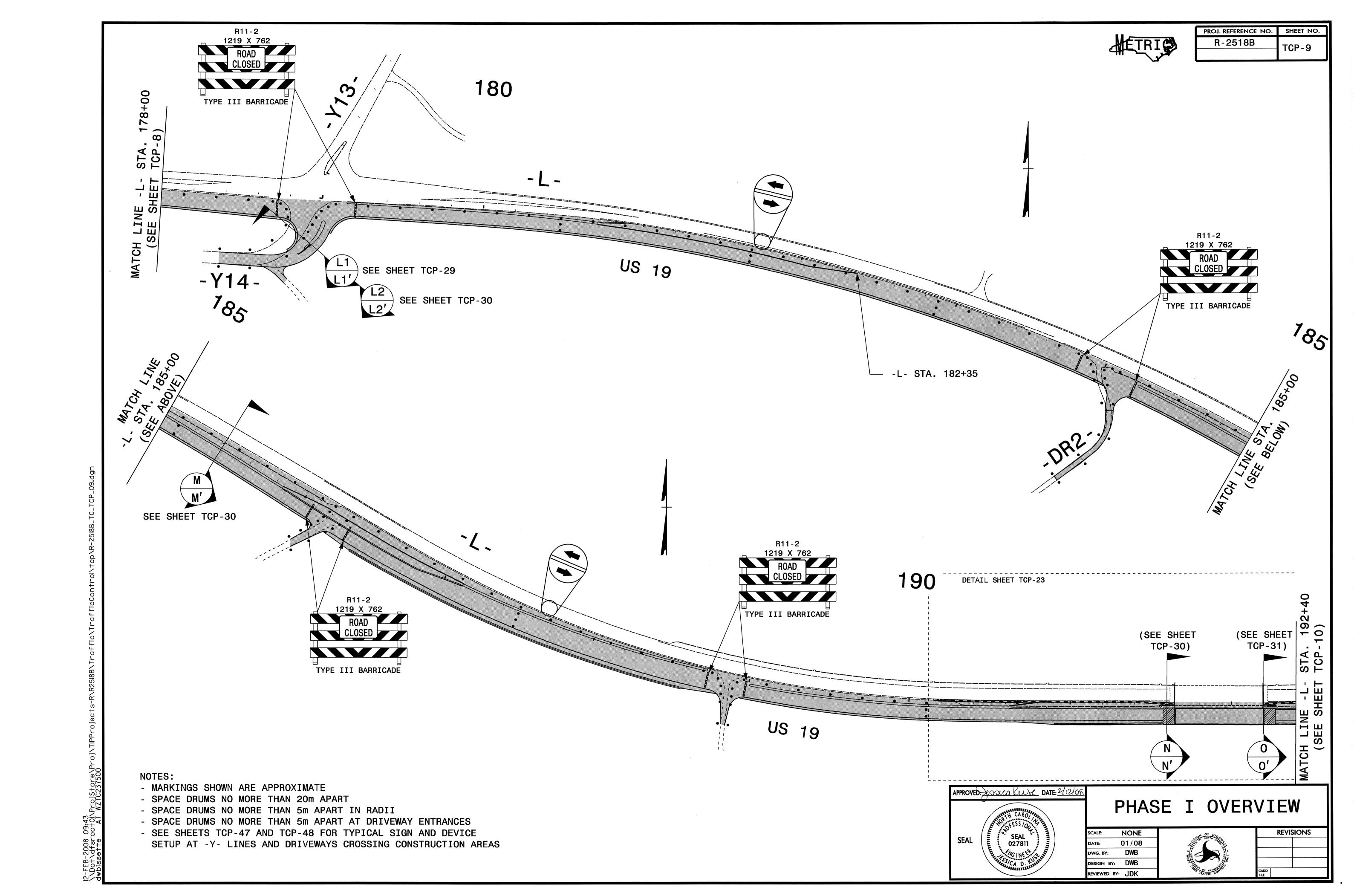


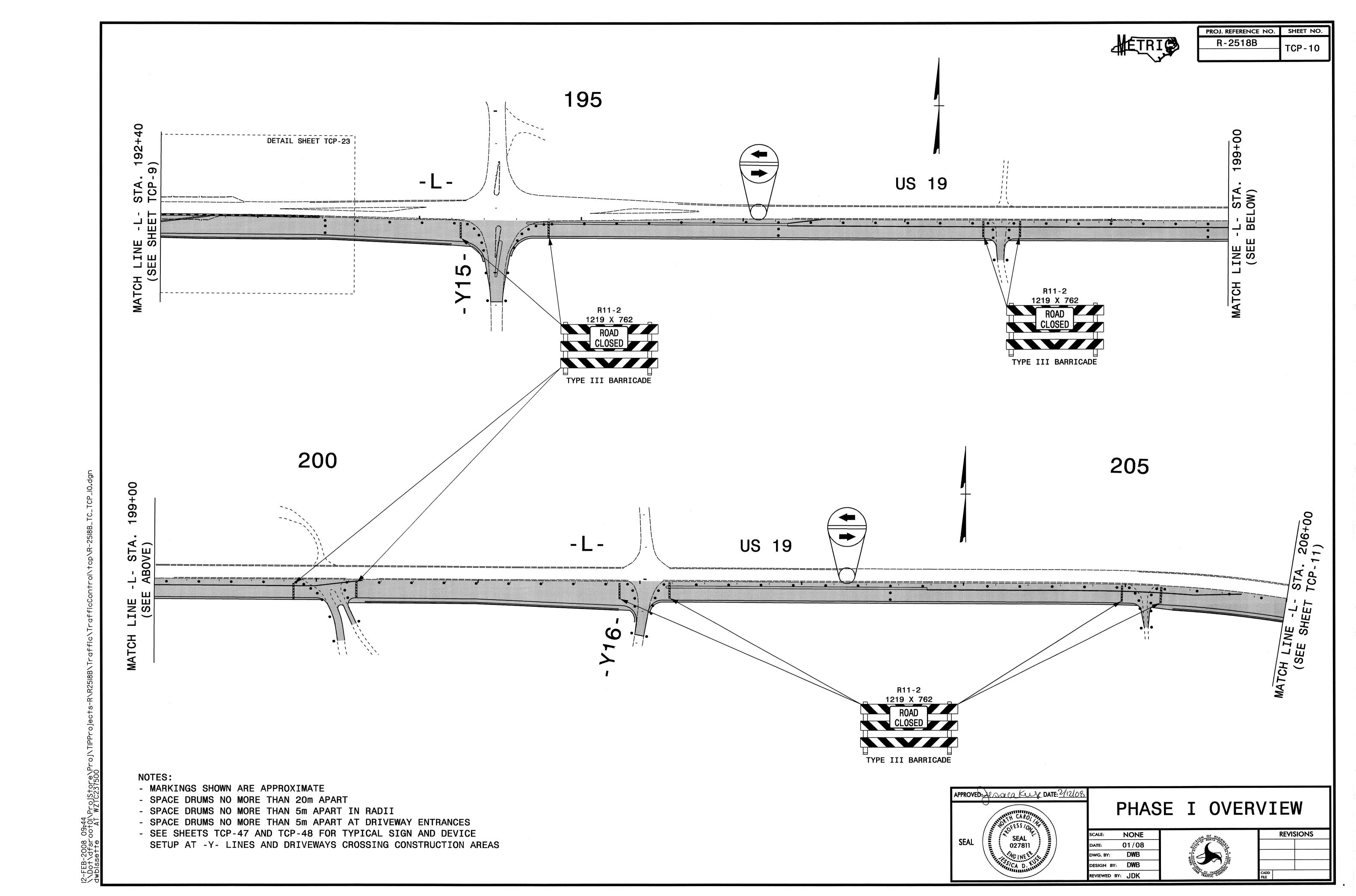


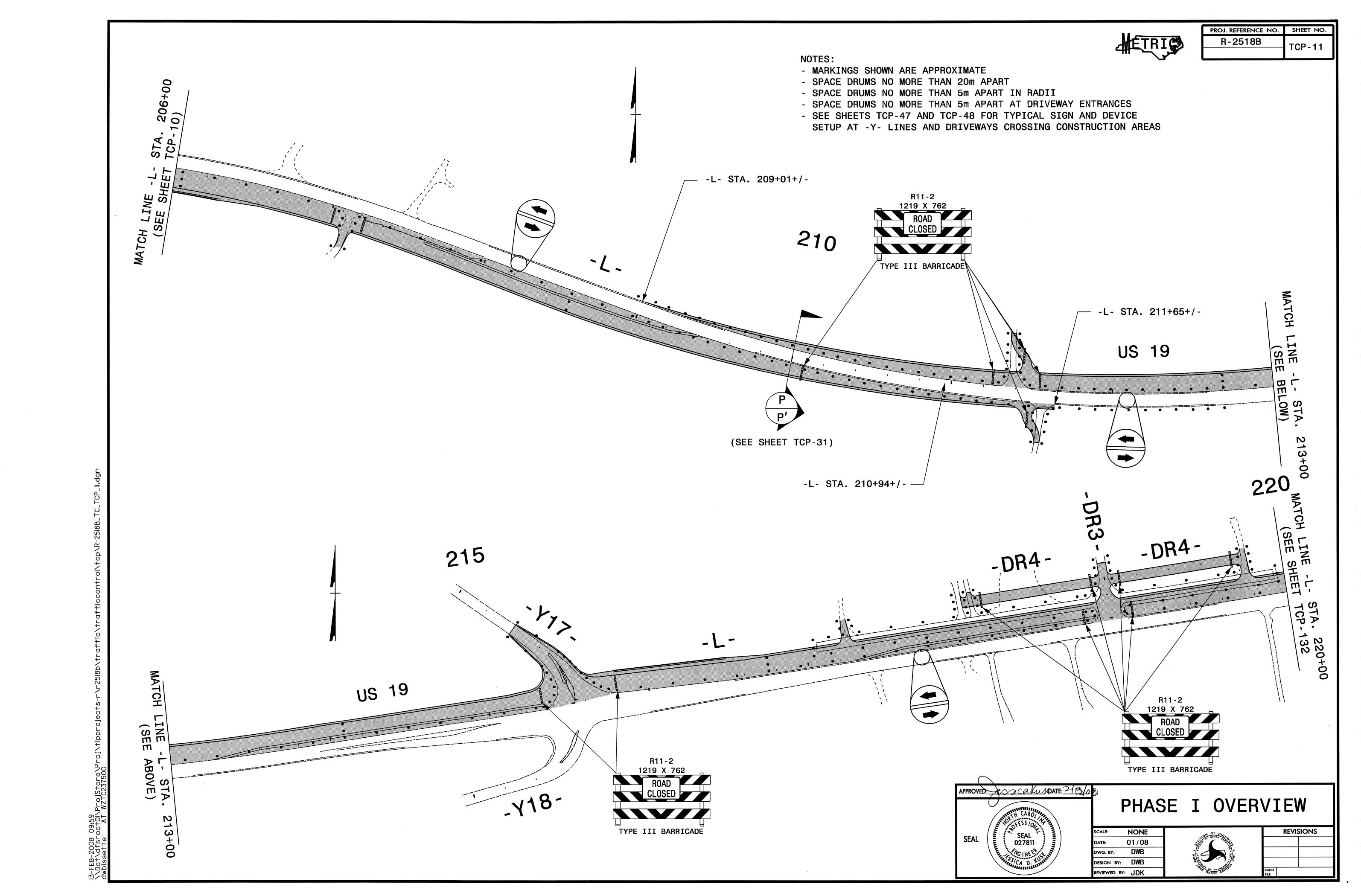


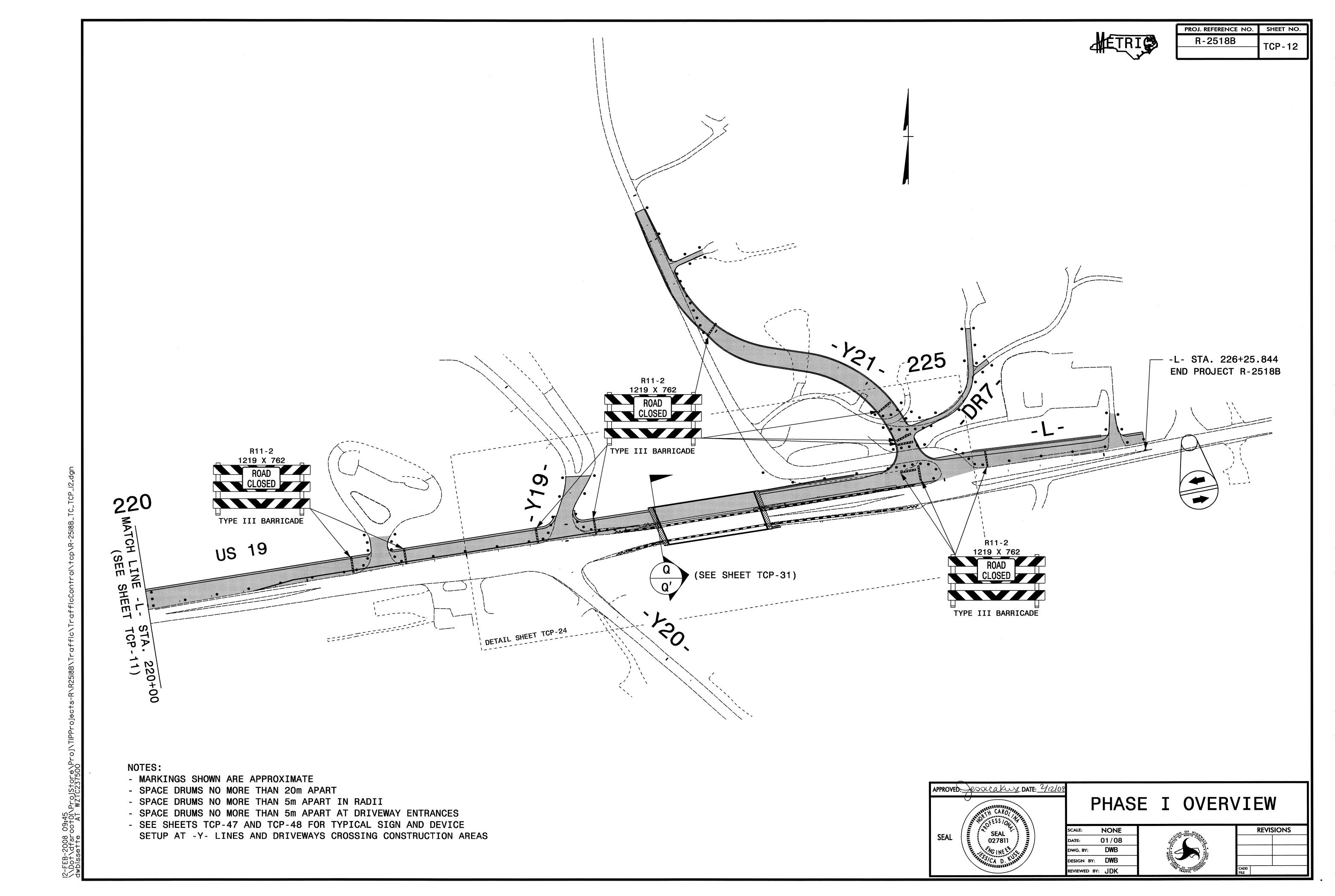






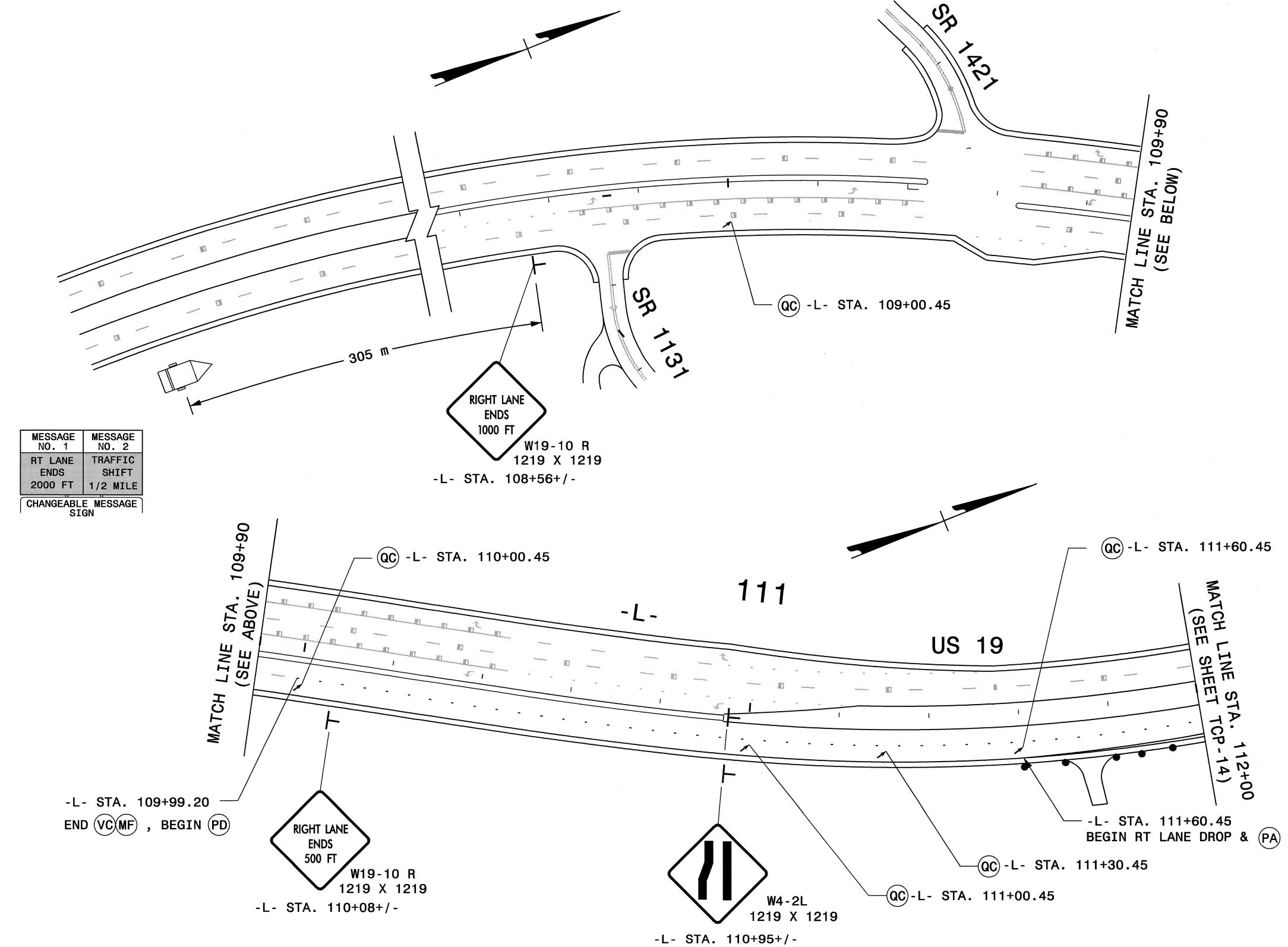






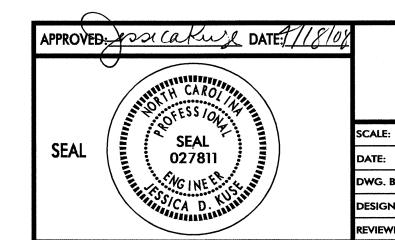


PROJ. REFERENCE NO. R-2518B TCP-13



#### NOTES:

- MARKINGS SHOWN ARE APPROXIMATE
- PLACE PAVEMENT MARKINGS AND PAVEMENT MARKERS IN ACCORDANCE WITH THE ROADWAY STANDARD DRAWINGS
- ALL PAVEMENT MARKING LINES ARE 100 mm PAINT UNLESS OTHERWISE INDICATED
- SPACE DRUMS NO MORE THAN 20m APART
- SPACE DRUMS NO MORE THAN 10m APART IN CROSS OVERS AND TRANSITIONS
- SPACE DRUMS NO MORE THAN 5m APART IN RADII
- SPACE DRUMS NO MORE THAN 5m APART AT DRIVEWAY ENTRANCES
- SEE SHEETS TCP-47 AND TCP-48 FOR TYPICAL SIGN AND DEVICE SETUP AT -Y-LINES AND DRIVEWAYS CROSSING CONSTRUCTION AREAS



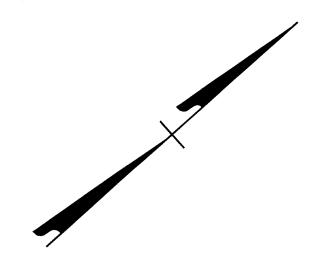
### PHASE I STEPS 5-7

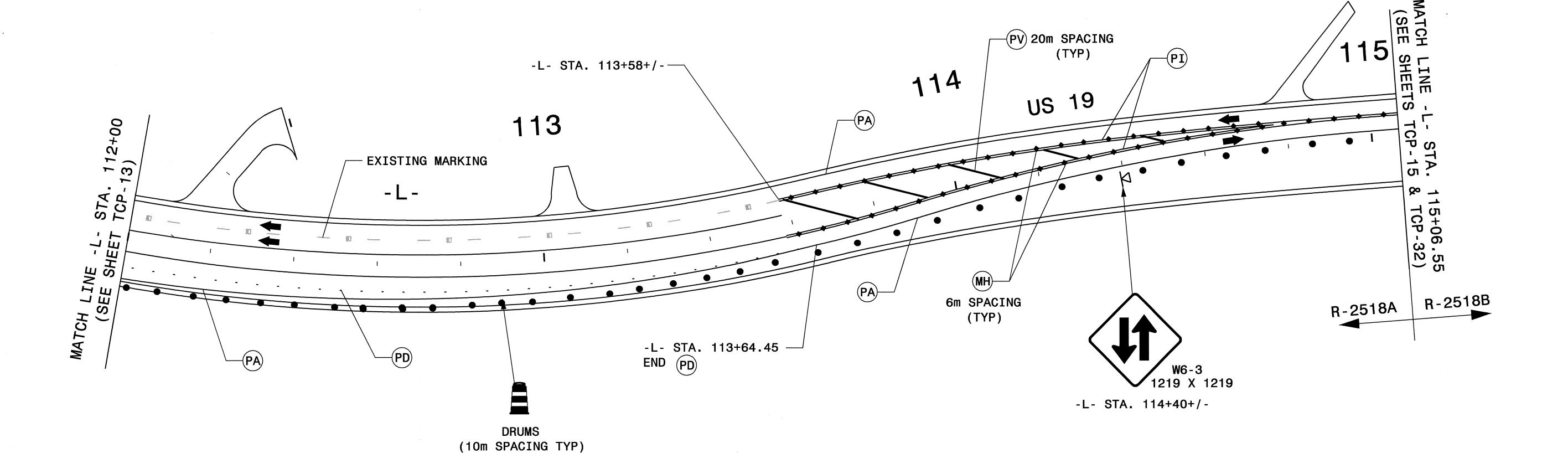
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REVISIONS

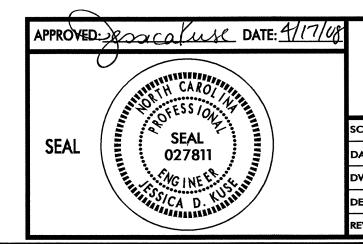






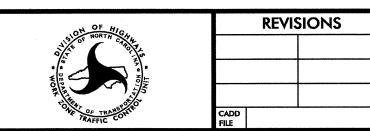
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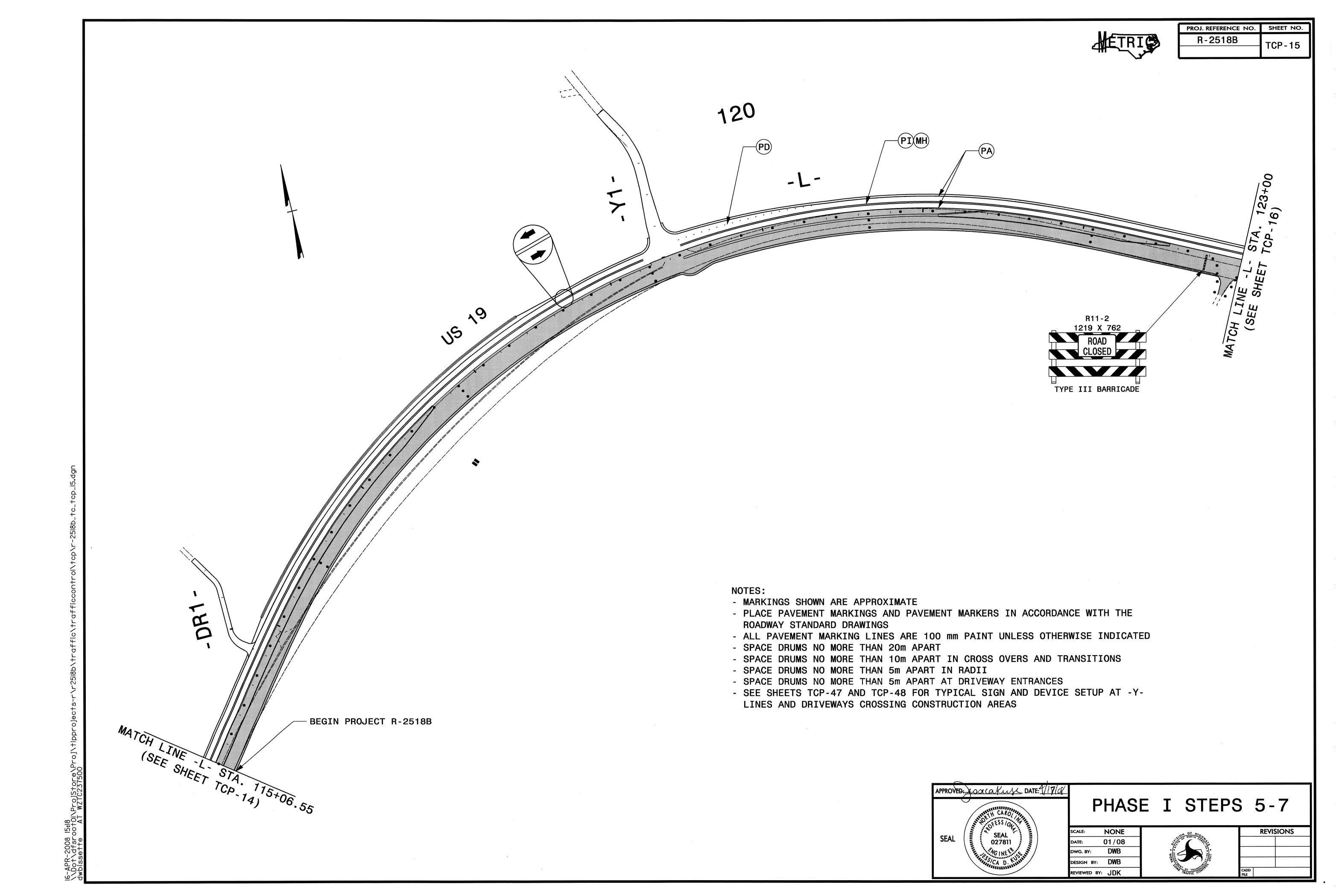
- MARKINGS SHOWN ARE APPROXIMATE
- PLACE PAVEMENT MARKINGS AND PAVEMENT MARKERS IN ACCORDANCE WITH THE ROADWAY STANDARD DRAWINGS
- ALL PAVEMENT MARKING LINES ARE 100 mm PAINT UNLESS OTHERWISE INDICATED
- SPACE DRUMS NO MORE THAN 20m APART
- SPACE DRUMS NO MORE THAN 10m APART IN CROSS OVERS AND TRANSITIONS
- SPACE DRUMS NO MORE THAN 5m APART IN RADII
- SPACE DRUMS NO MORE THAN 5m APART AT DRIVEWAY ENTRANCES
- SEE SHEETS TCP-47 AND TCP-48 FOR TYPICAL SIGN AND DEVICE SETUP AT -Y-LINES AND DRIVEWAYS CROSSING CONSTRUCTION AREAS

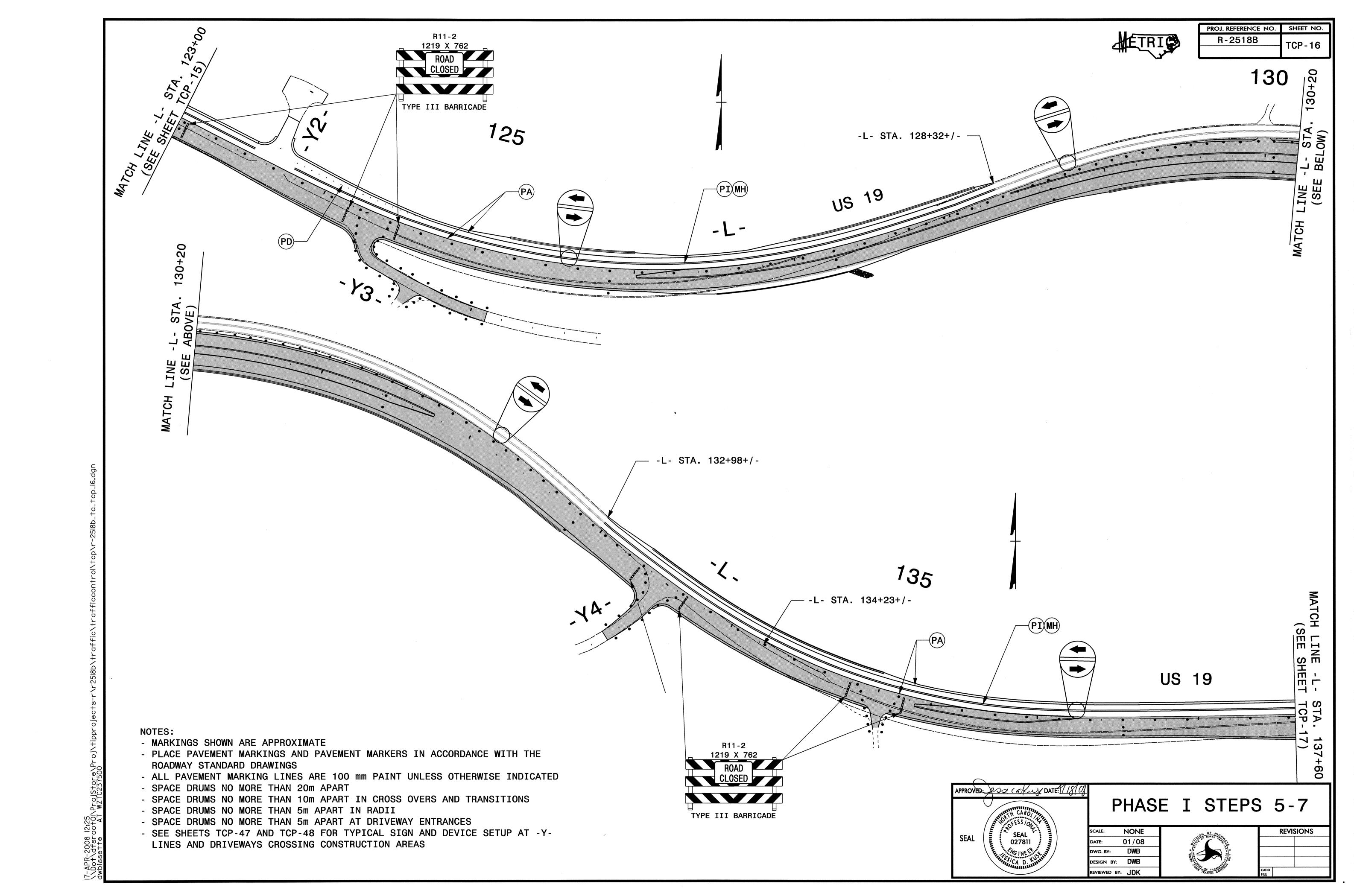


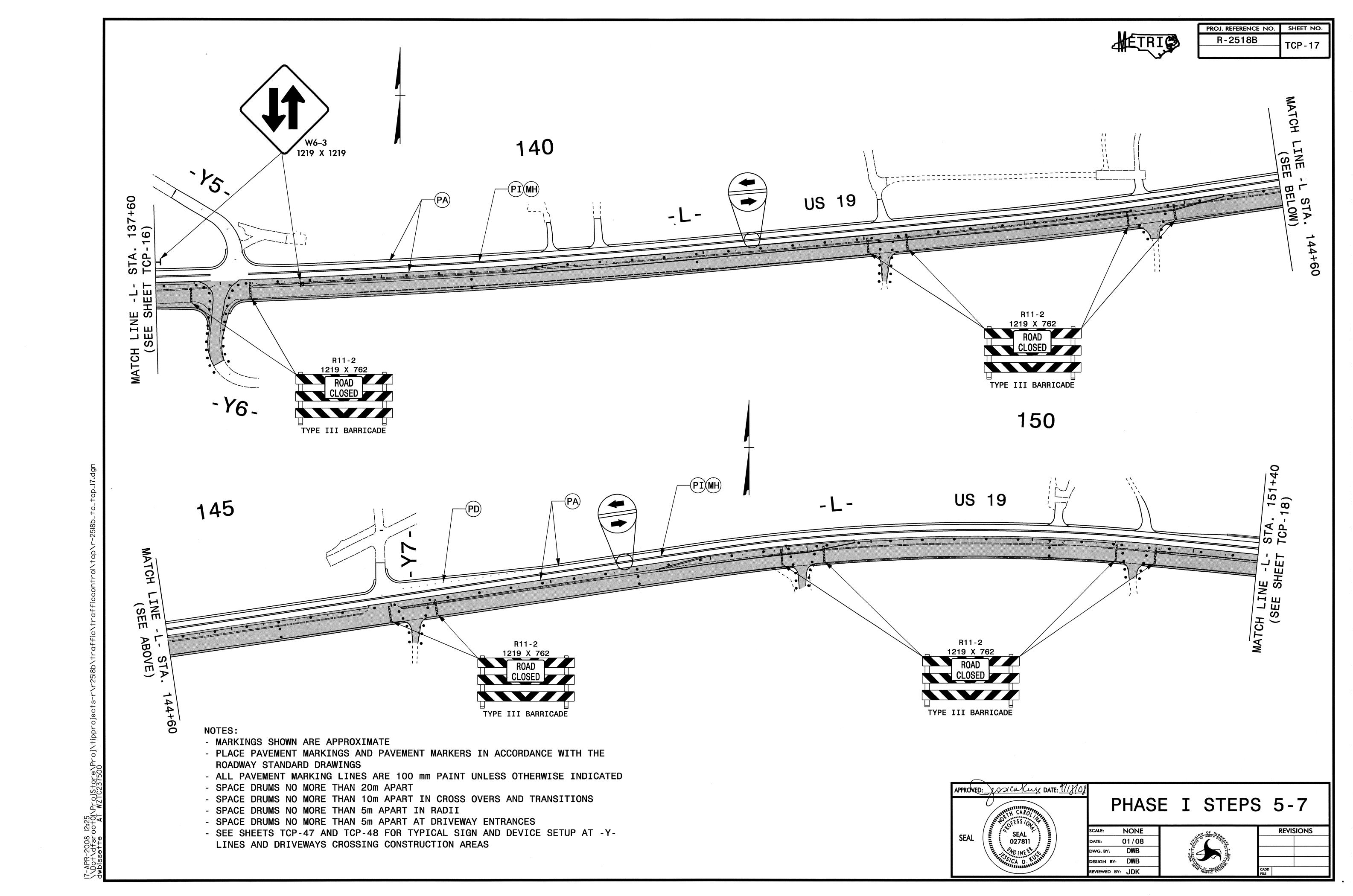
# PHASE I STEPS 5-7

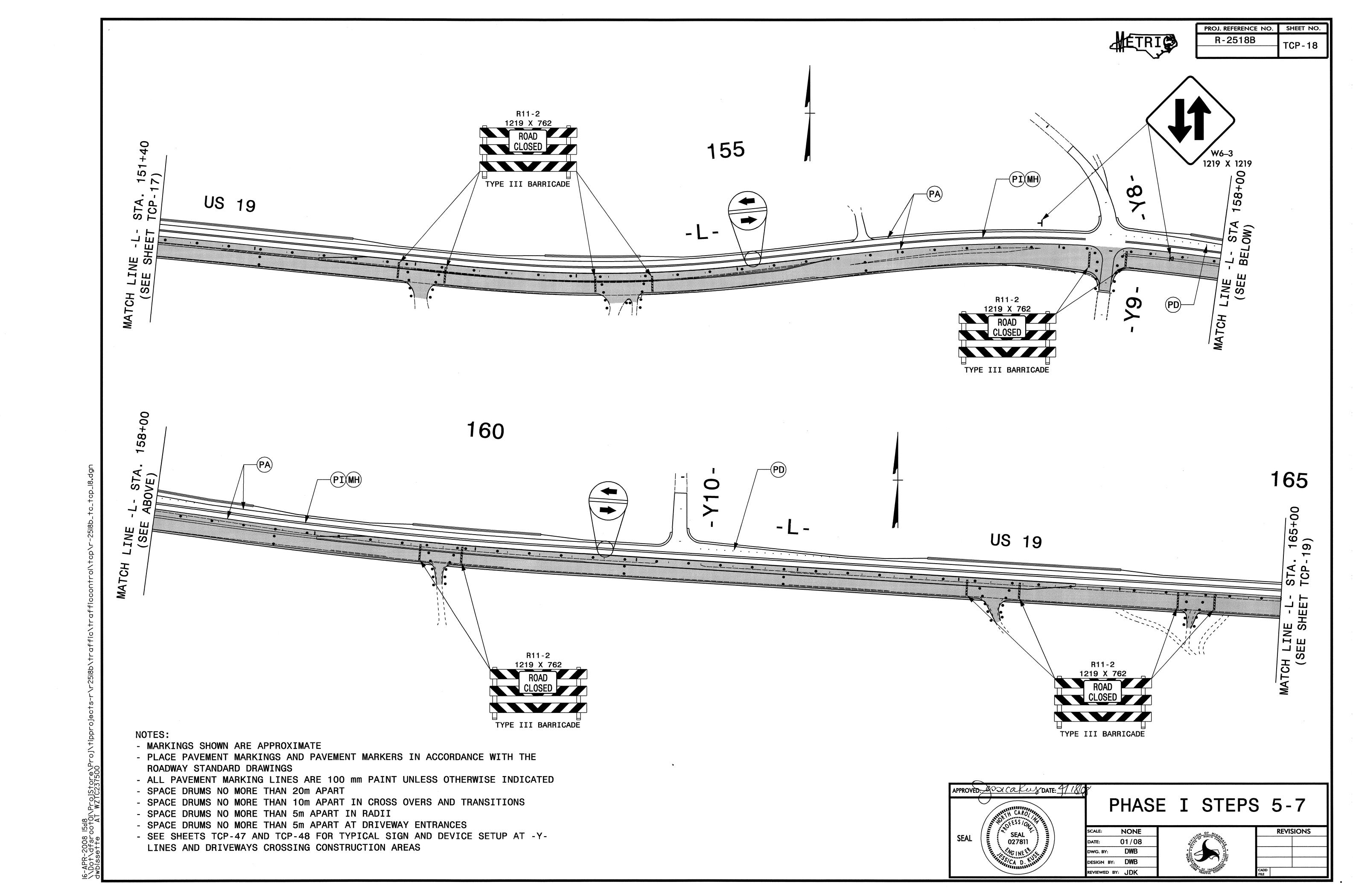
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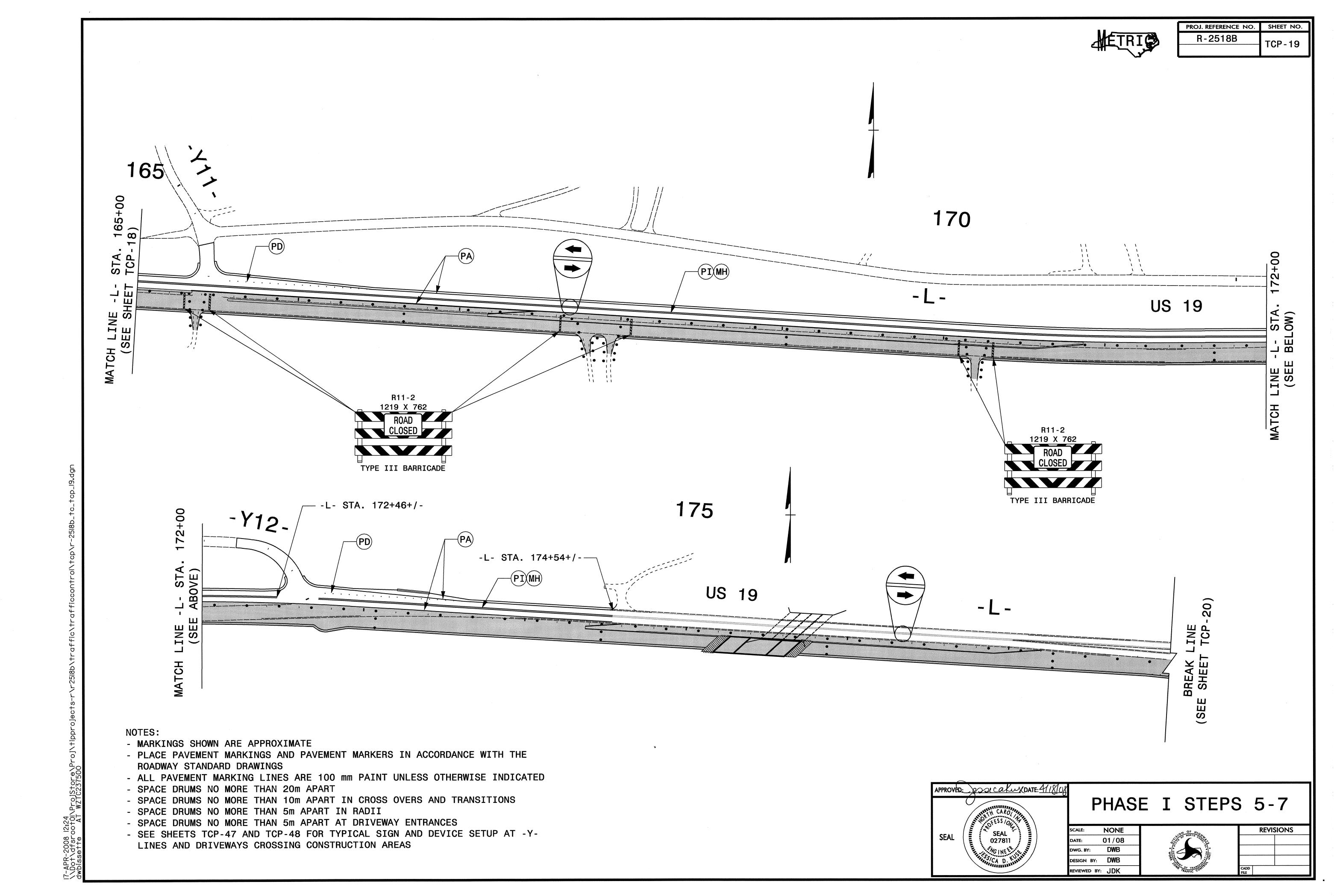


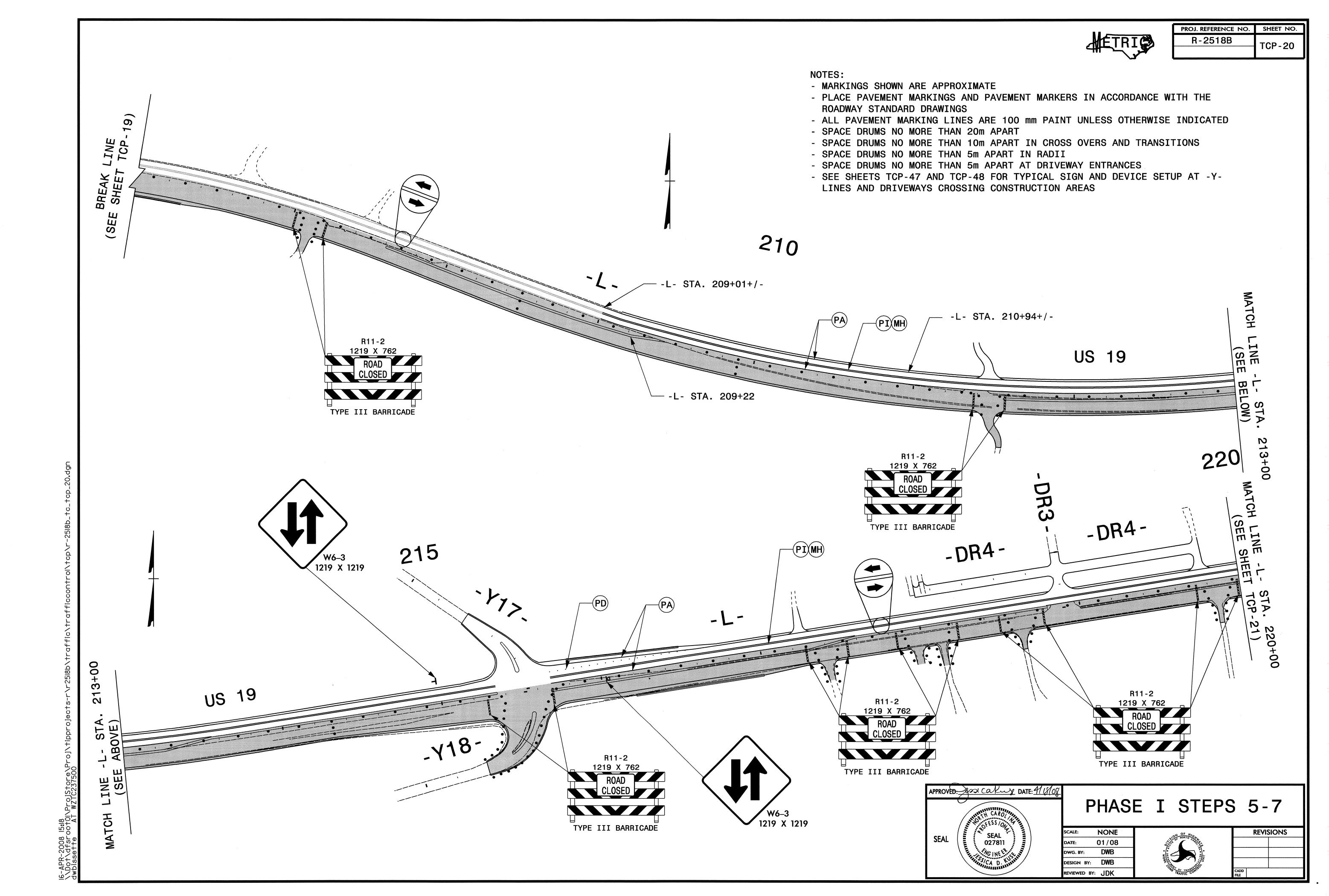








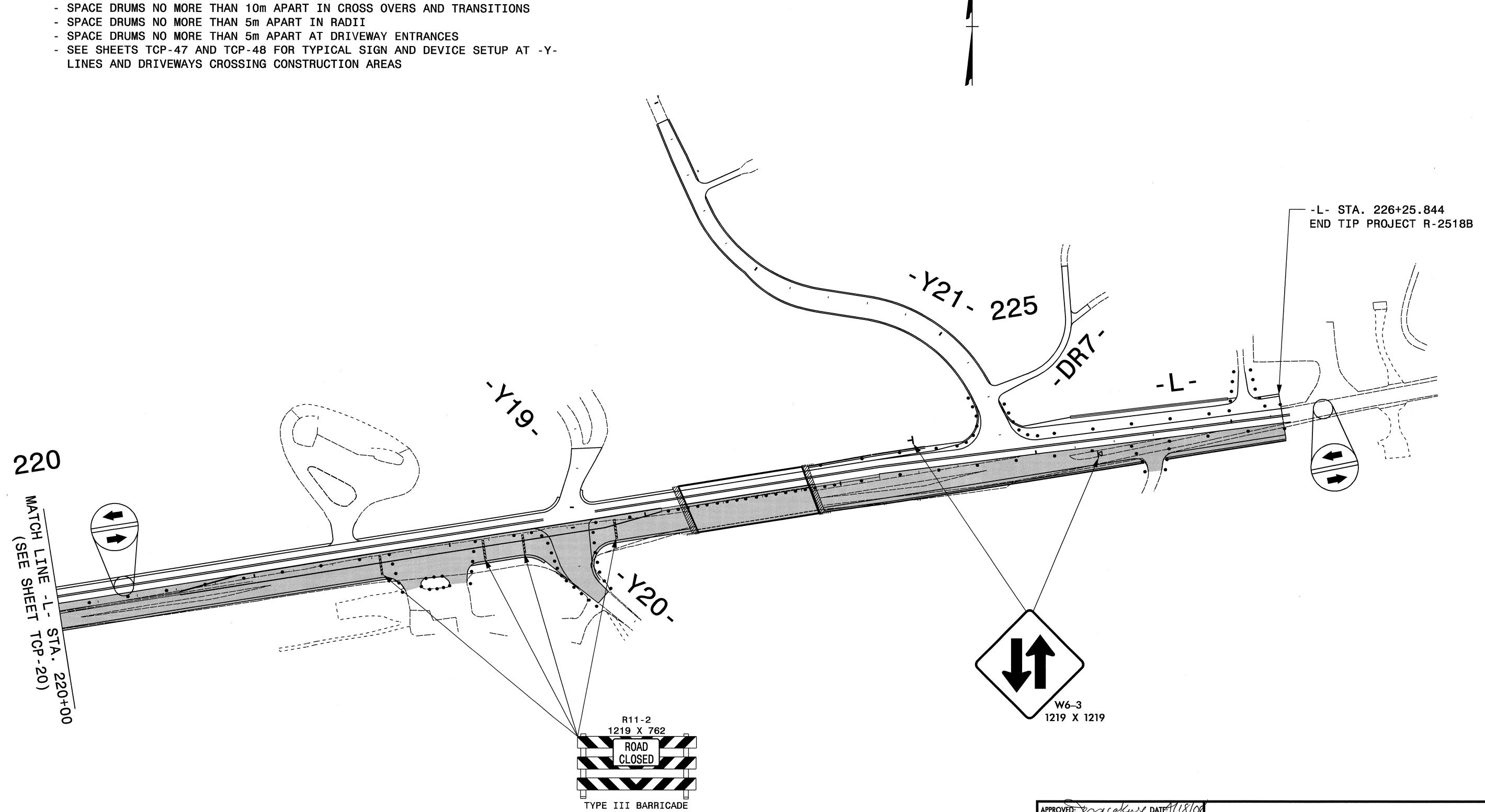






### NOTES:

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- ALL PAVEMENT MARKING LINES ARE 100 mm PAINT UNLESS OTHERWISE INDICATED
- SPACE DRUMS NO MORE THAN 20m APART



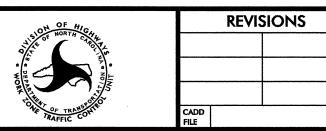
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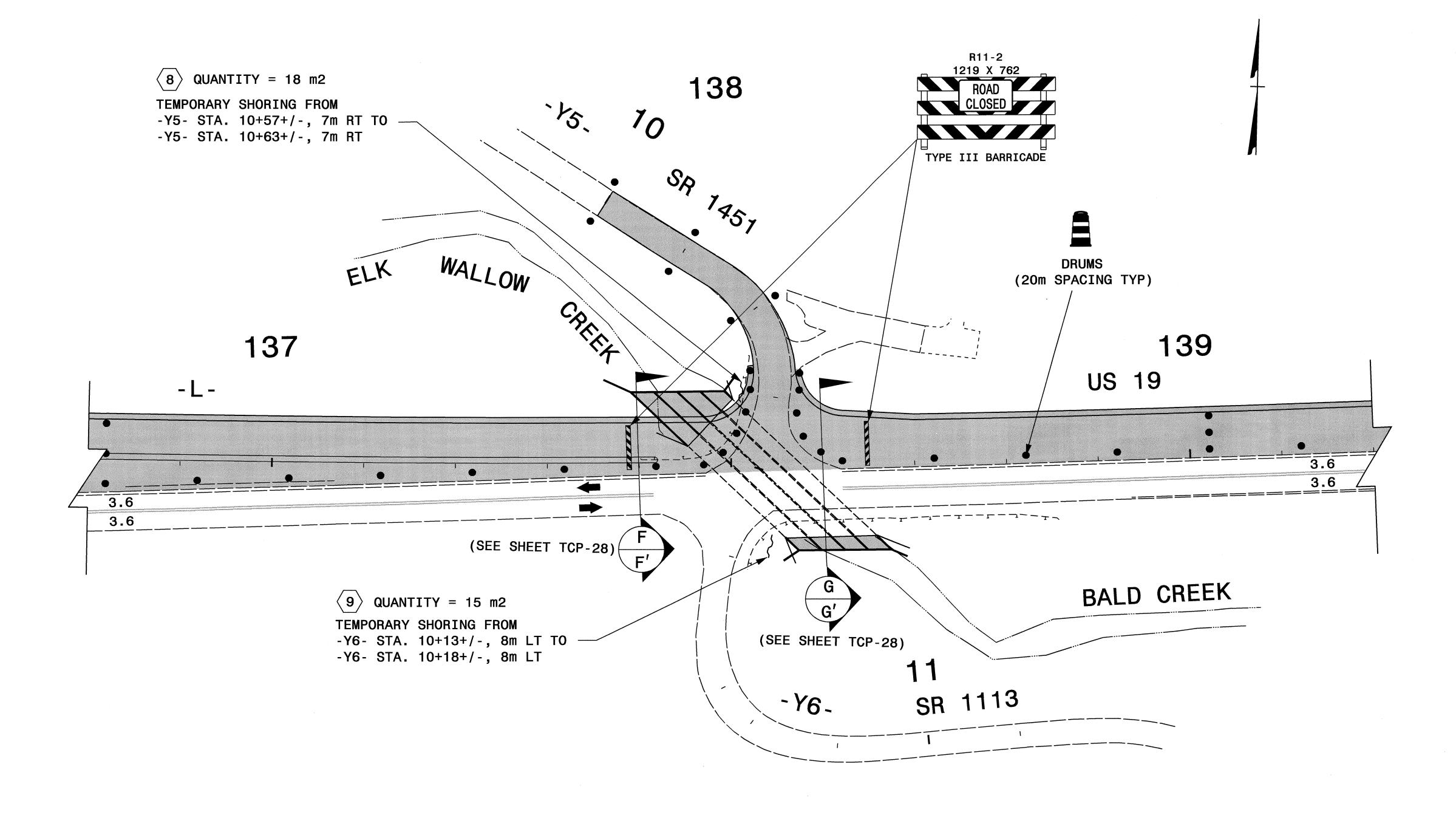
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PHASE I STEPS 5-7

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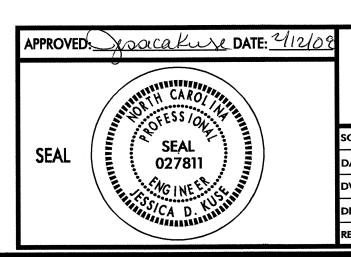






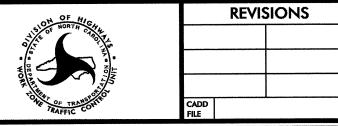
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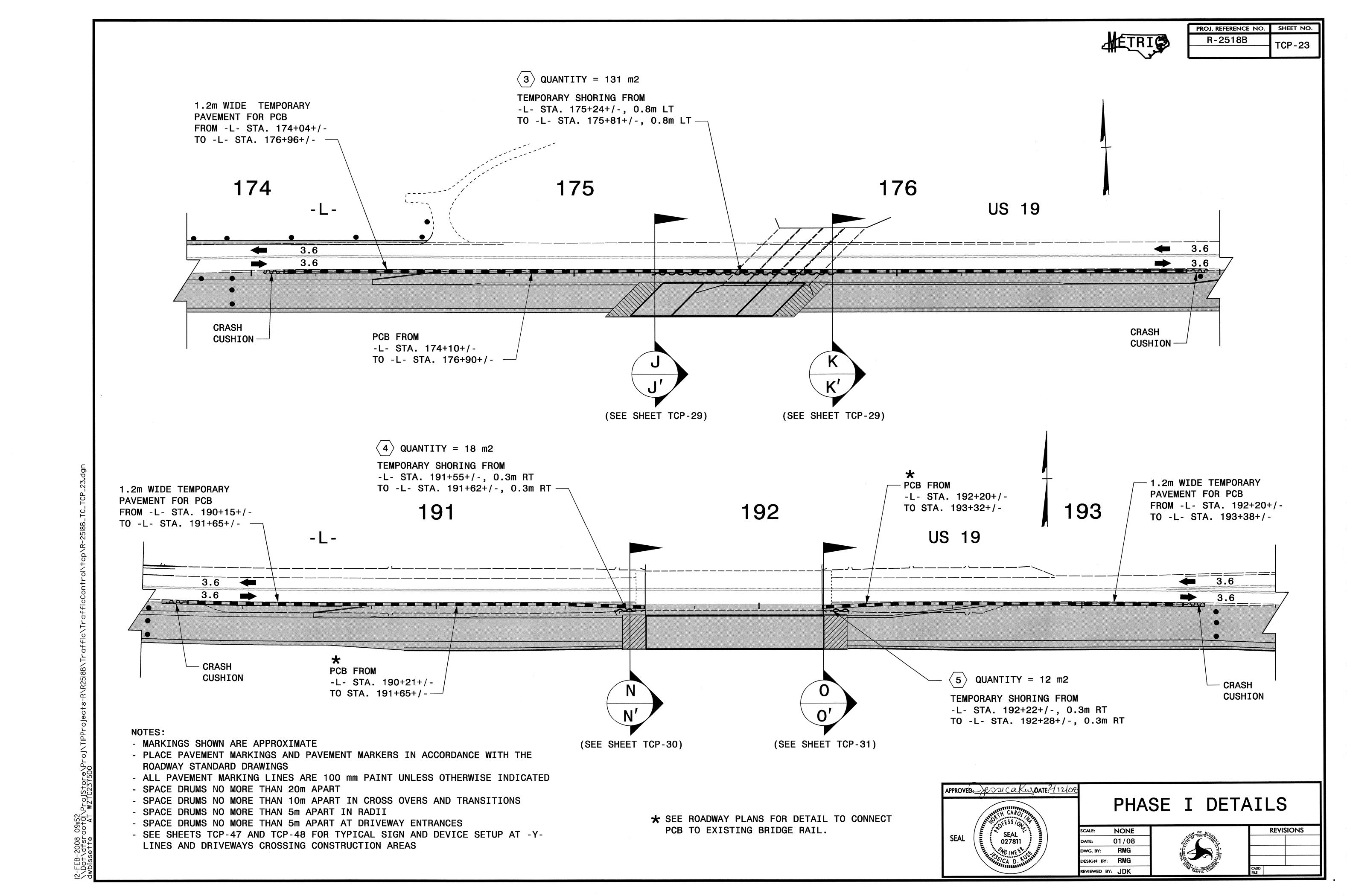
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- SEE SHEETS TCP-47 AND TCP-48 FOR TYPICAL SIGN AND DEVICE SETUP AT -Y-LINES AND DRIVEWAYS CROSSING CONSTRUCTION AREAS

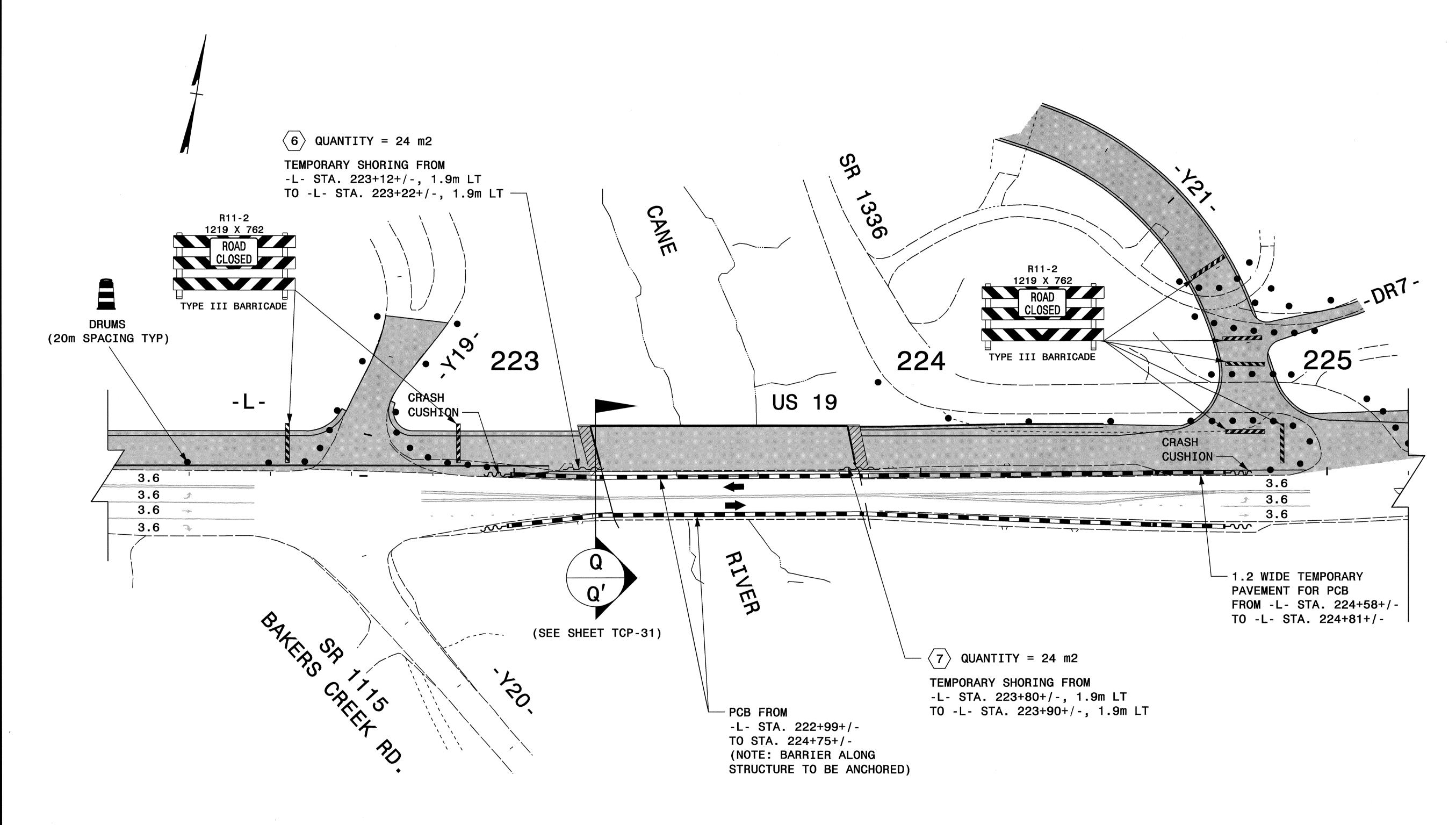


### PHASE I DETAILS

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DWG. BY:	RMG	
DESIGN BY:	RMG	
REVIEWED BY	: JDK	



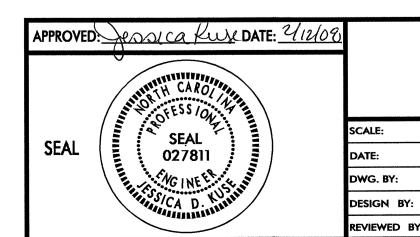




#### **NOTES:**

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- SPACE DRUMS NO MORE THAN 5m APART IN RADII
- SPACE DRUMS NO MORE THAN 5m APART AT DRIVEWAY ENTRANCES
- SEE SHEETS TCP-47 AND TCP-48 FOR TYPICAL SIGN AND DEVICE SETUP AT -Y-LINES AND DRIVEWAYS CROSSING CONSTRUCTION AREAS

NOTE: SEE SHEET TCP- 25 FOR CONSTRUCTION SEQUENCE AND BARRIER PLACEMENTS ALONG THE EXISTING STRUCTURE.

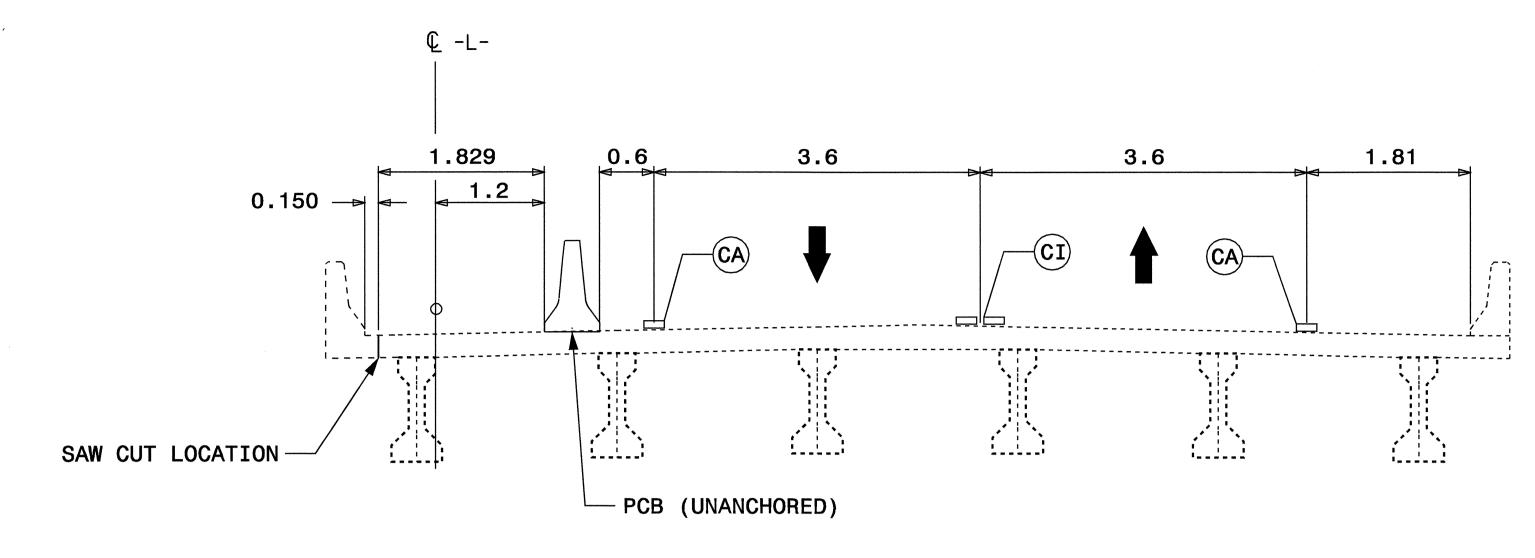


### PHASE I DETAILS

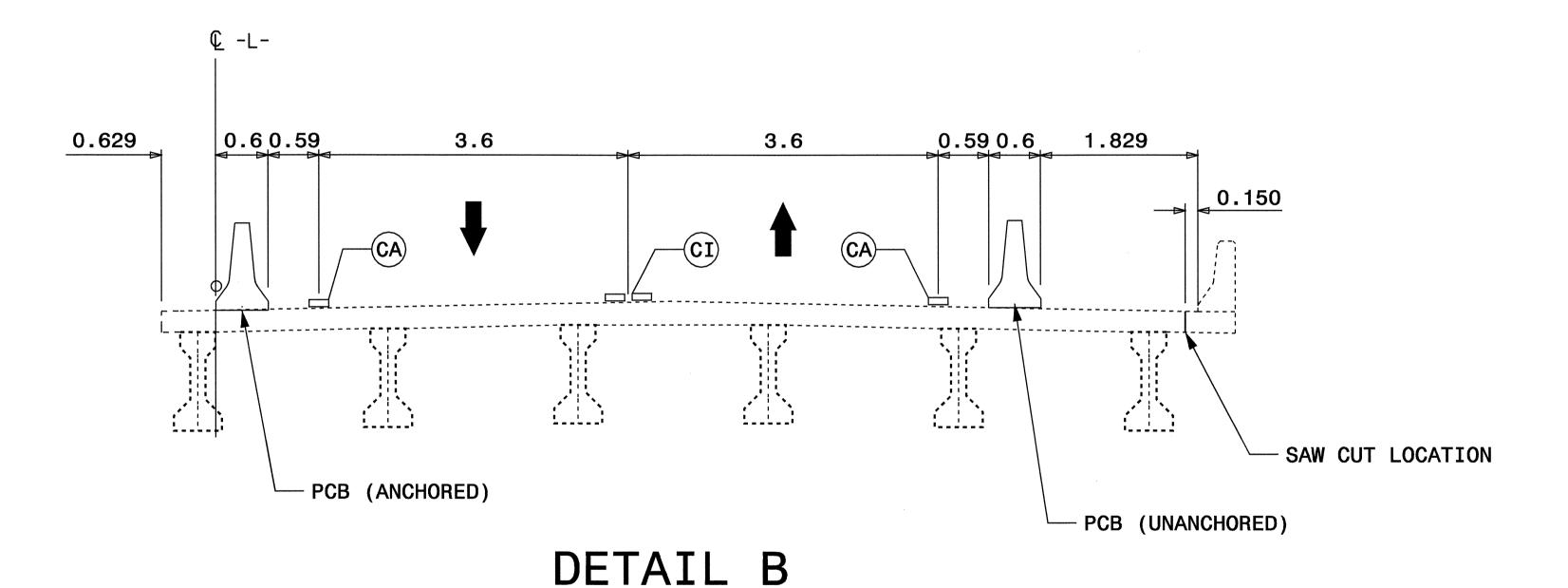
**REVISIONS** 

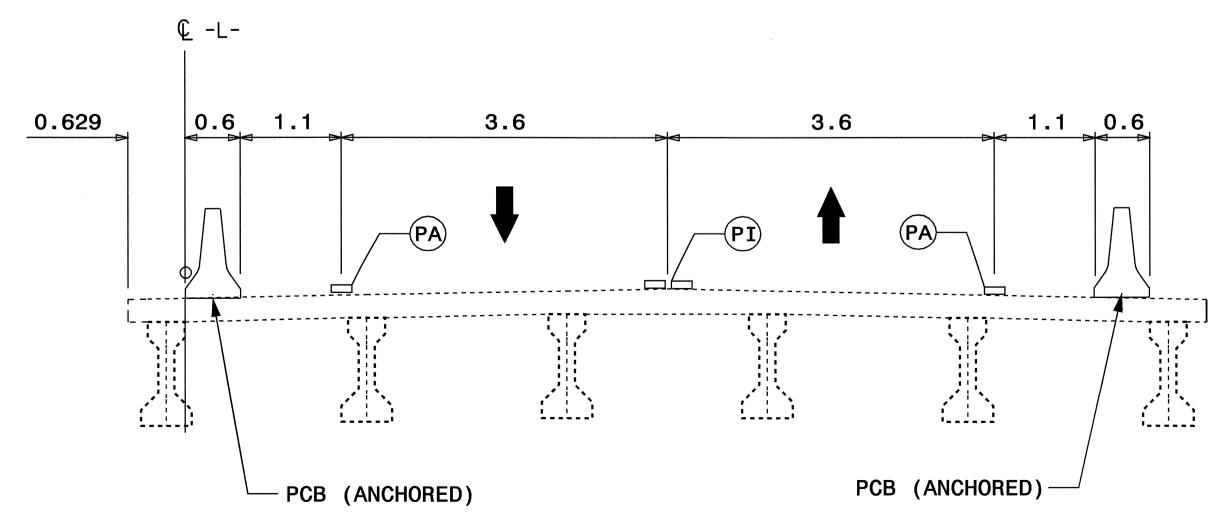
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### DETAIL A





### DETAIL C

### CONSTRUCTION SEQUENCE

(SEE PHASE I STEP 3)

#### STEP 1

- INSTALL CHANGEABLE MESSAGE SIGNS 300M +/- IN ADVANCE OF EACH APPROACH OF STRUCTURE NO. 4. ACTIVATE WITH THE MESSAGE 'MAX. SAFE SPEED 45 MPH'
- REMOVE AND REPLACE EXISTING PAVEMENT MARKINGS WITH REMOVABLE TAPE BETWEEN -L- STA. 222+80+/- AND -L- STA. 224+95+/-.
- PLACE PCB (UNANCHORED) AND SAW CUT EXISTING STRUCTURE.

(SEE DETAIL A FOR LOCATIONS AND LANE CONFIGURATIONS)

### STEP 2

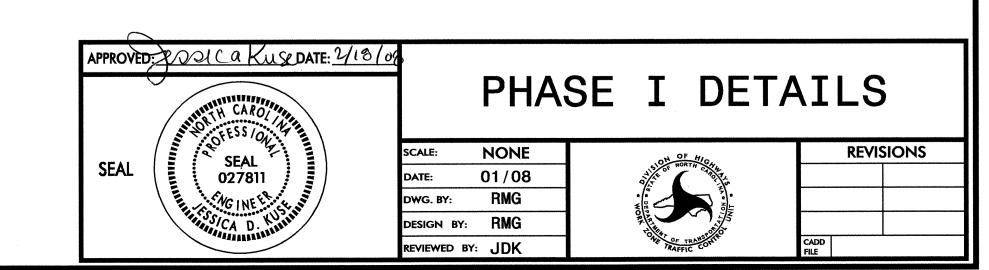
- PLACE PCB (ANCHORED) PRIOR TO RELOCATING PCB (UNANCHORED) TO THE OPPOSITE SIDE OF THE BRIDGE.
- RELOCATE PCB (UNANCHORED).
- REMOVE EXISTING PAVEMENT MARKINGS PLACED DURING STEP 1 AND REPLACE WITH REMOVABLE TAPE BETWEEN -L- STA. 222+8=+/- AND -L- STA. 224+95+/-.
- SAW CUT EXISTING BRIDGE.

(SEE DETAIL B FOR LOCATIONS AND LANE CONFIGURATIONS)

### STEP 3

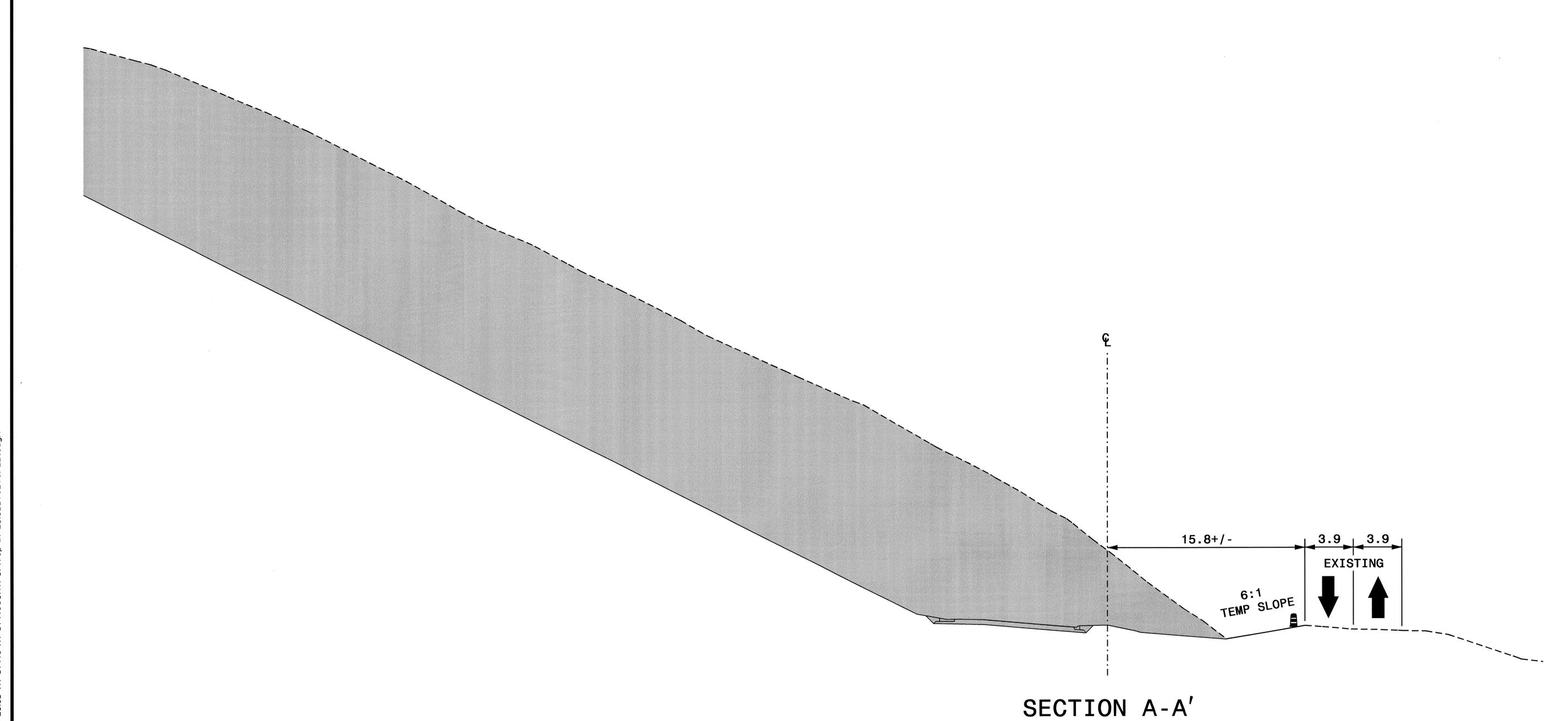
- PLACE PCB (ANCHORED) PRIOR TO REMOVING PCB (UNANCHORED).
- REMOVE THE PCB (UNANCHORED).
- REMOVE EXISTING PAVEMENT MARKINGS PLACED DURING STEP 2 AND REPLACE WITH PAINT BETWEEN -L- STA. 222+80+/- AND -L- STA. 224+95+/-.

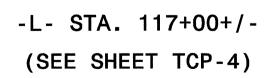
(SEE DETAIL C FOR LOCATIONS AND LANE CONFIGURATIONS)

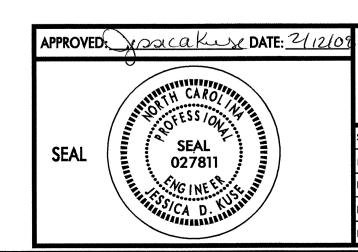


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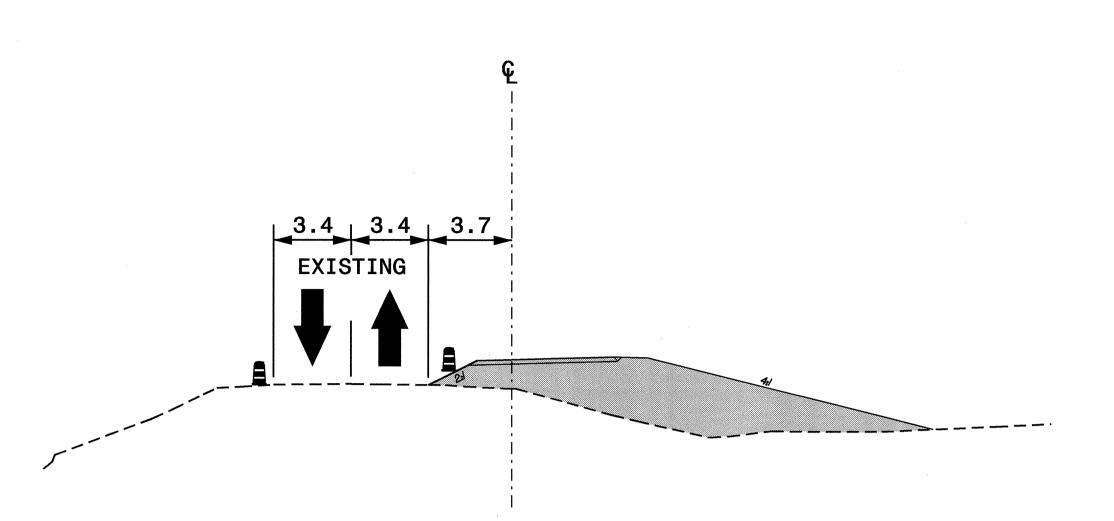


# PHASE I SECTIONS

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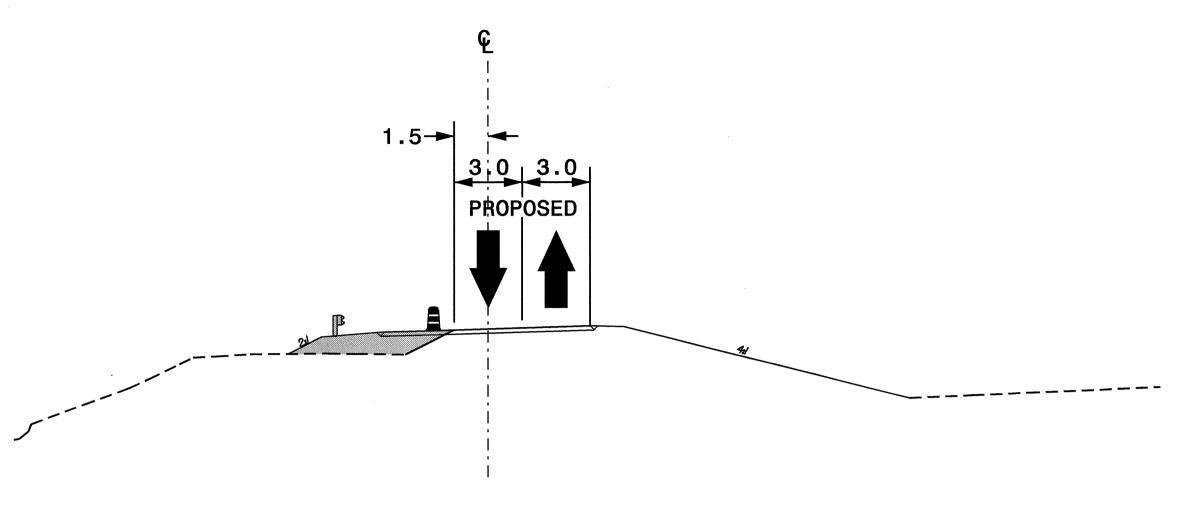
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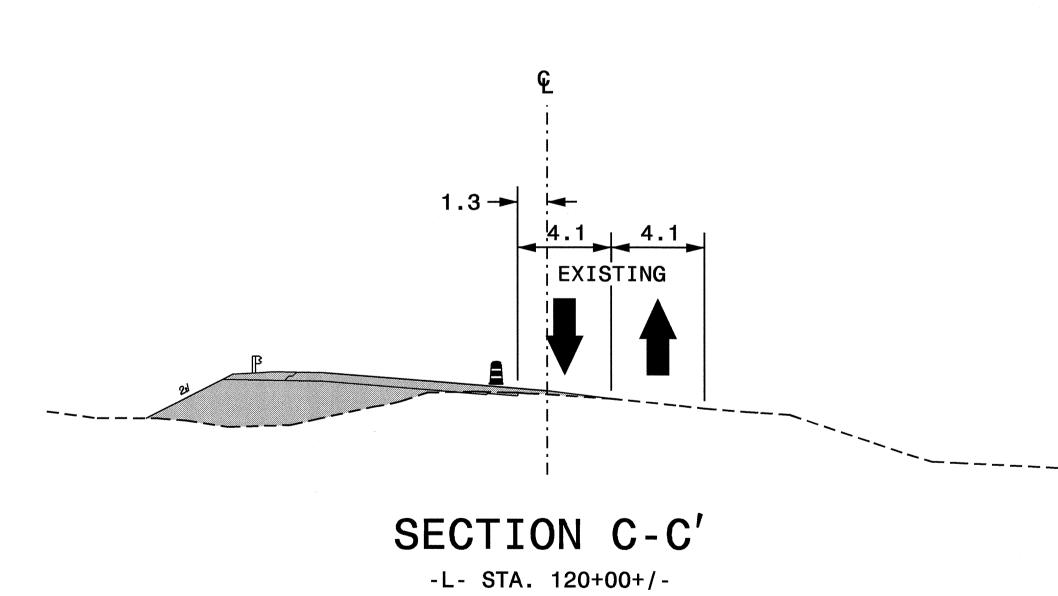
### SECTION B1-B1'

-Y1- STA. 10+80+/-(SEE SHEET TCP-4)



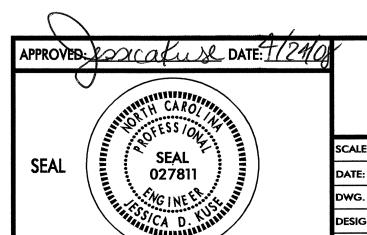
# SECTION B2-B2'

-Y1- STA. 10+80+/-(SEE SHEET TCP-4)



(SEE SHEET TCP-4)

SECTION D-D'



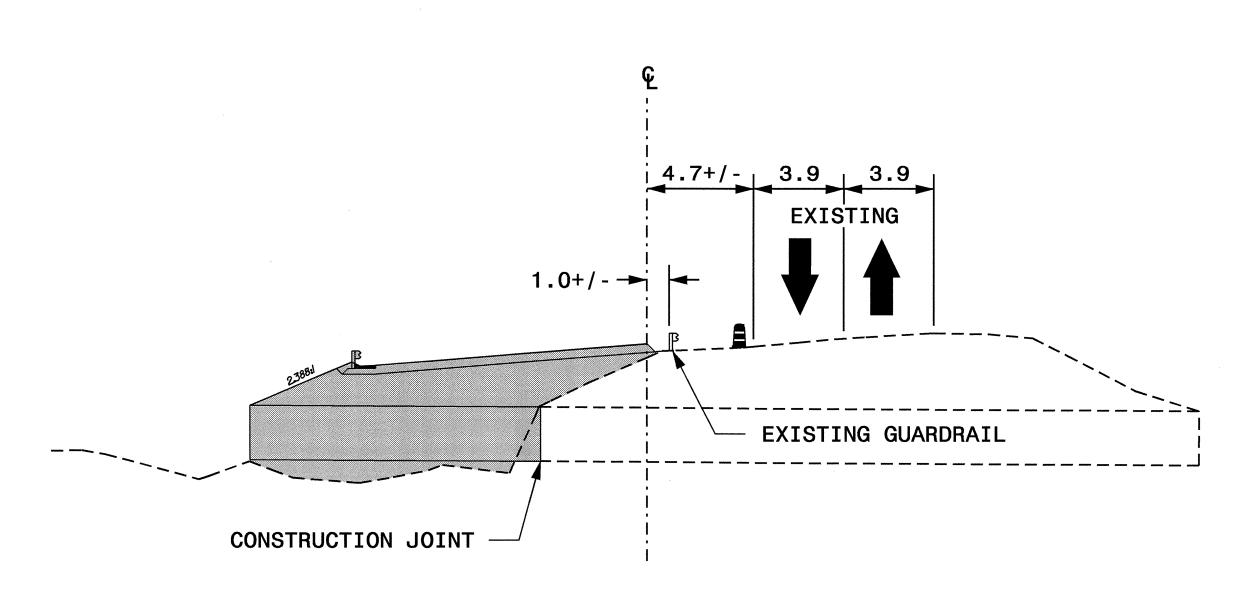
-L- STA. 127+20+/-

(SEE SHEET TCP-5)

# PHASE I SECTIONS

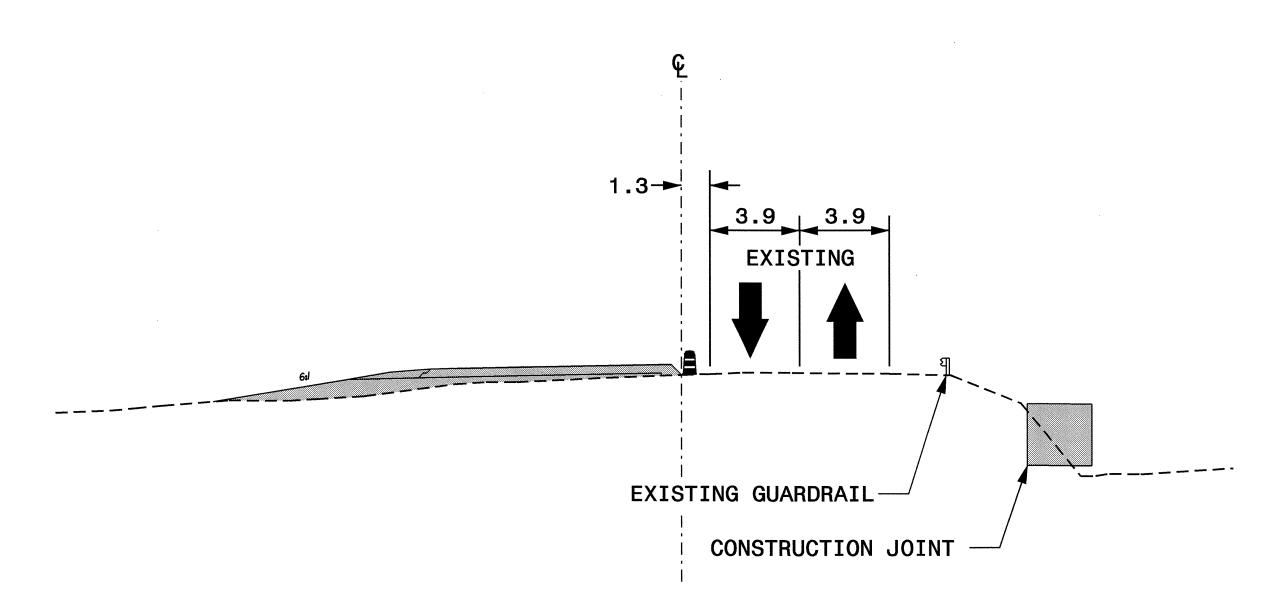
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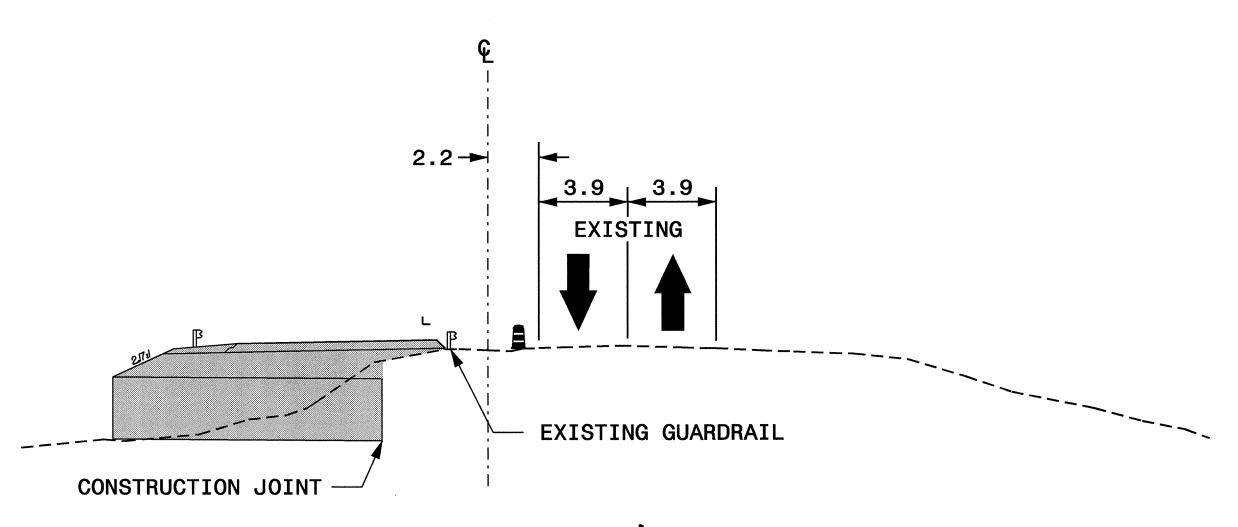
### SECTION E-E'

-L- STA. 134+80+/-(SEE SHEET TCP-5)



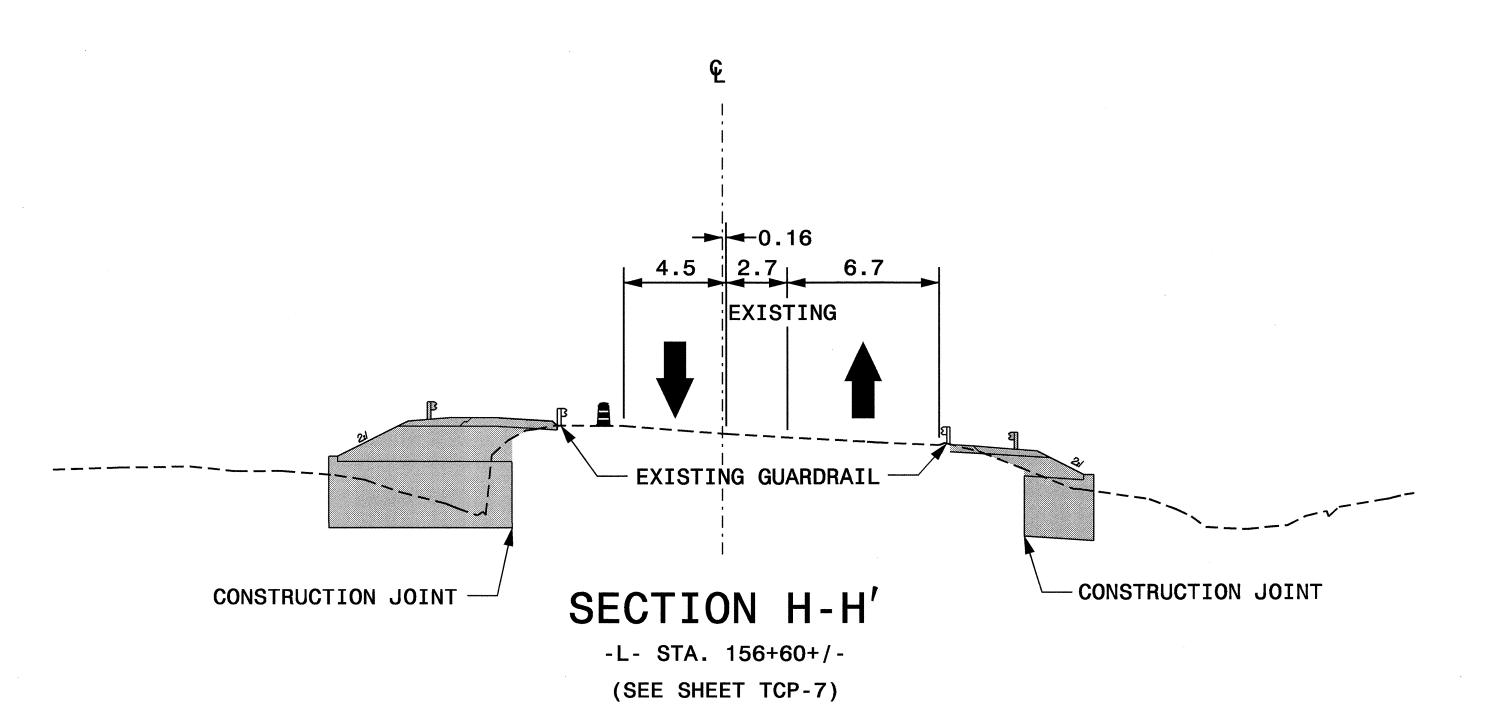
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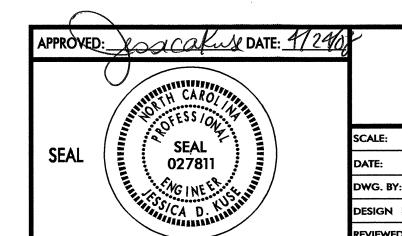
-L- STA. 138+20+/(SEE SHEET TCP-6 & TCP-22)



### SECTION F-F'

-L- STA. 137+80+/-(SEE SHEET TCP-6 & TCP-22)





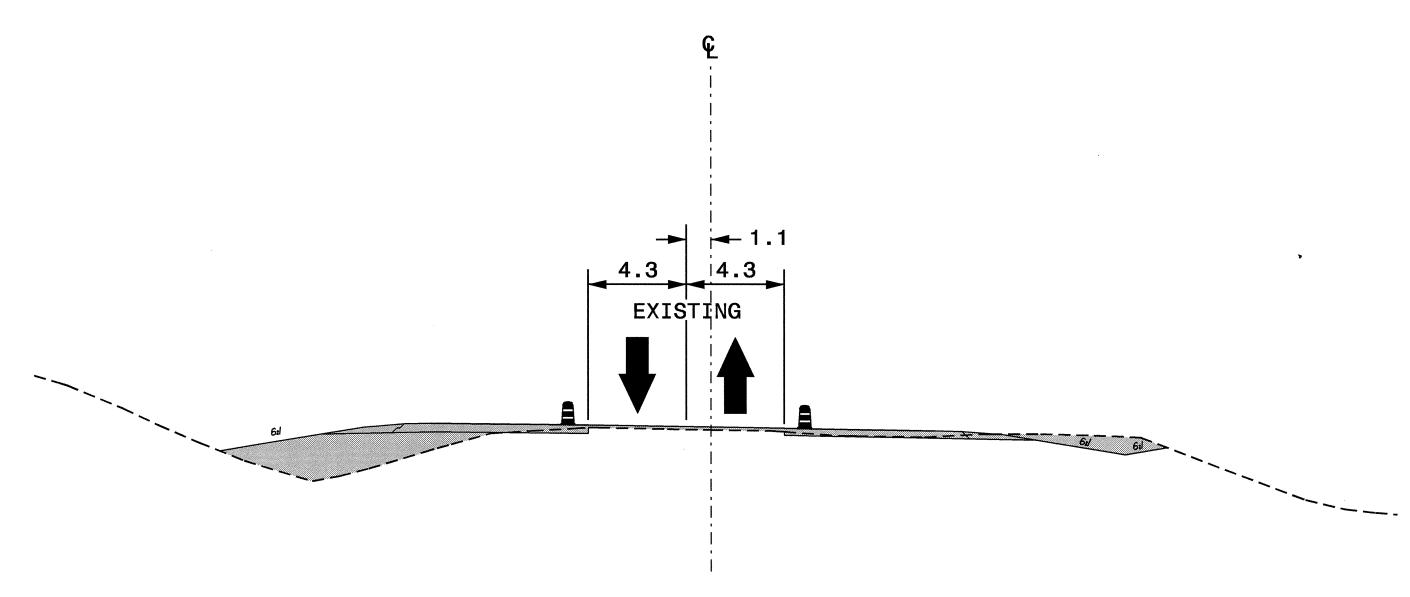
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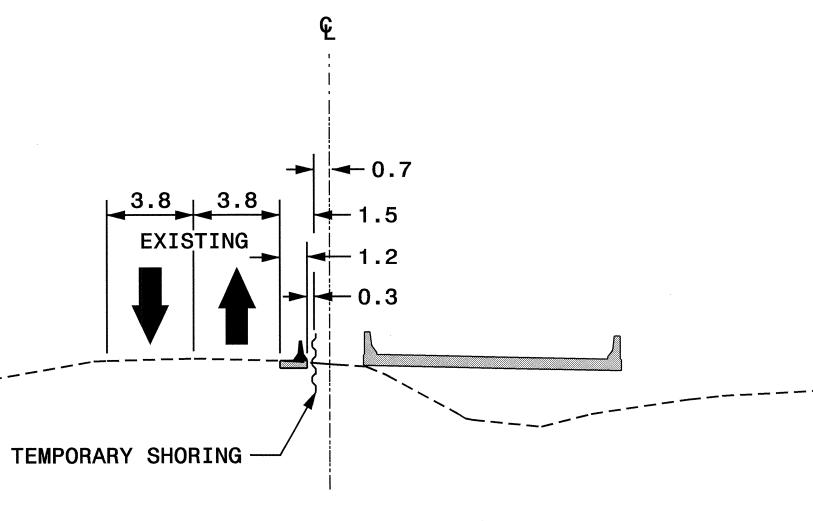
REVISIONS





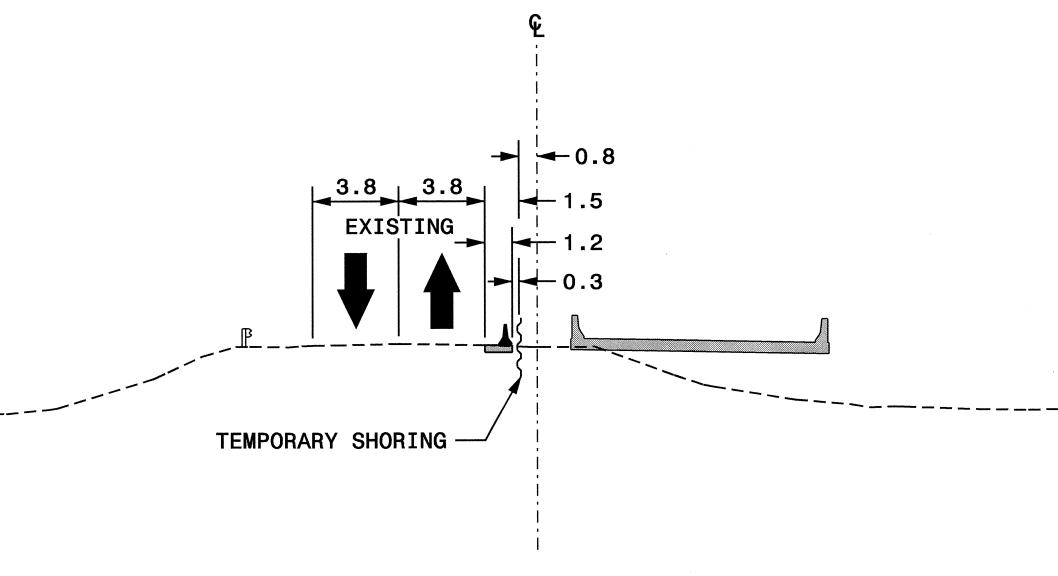
# SECTION I-I'

-L- STA. 173+00+/-(SEE SHEET TCP-8)



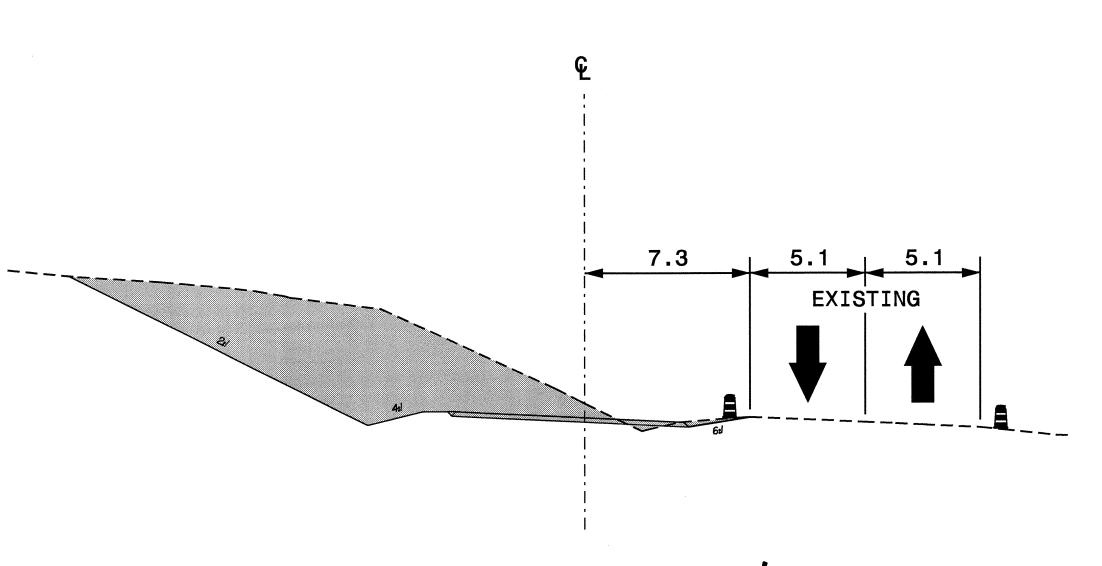
### SECTION K-K'

-L- STA. 175+80+/-(SEE SHEET TCP-8 & TCP-23)



# SECTION J-J'

-L- STA. 175+25+/-(SEE SHEET TCP-8 & TCP-23)



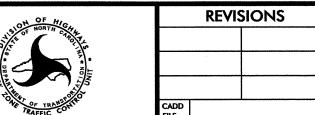
# SECTION L1-L1'

-Y14- STA. 10+30+/-(SEE SHEET TCP-9)

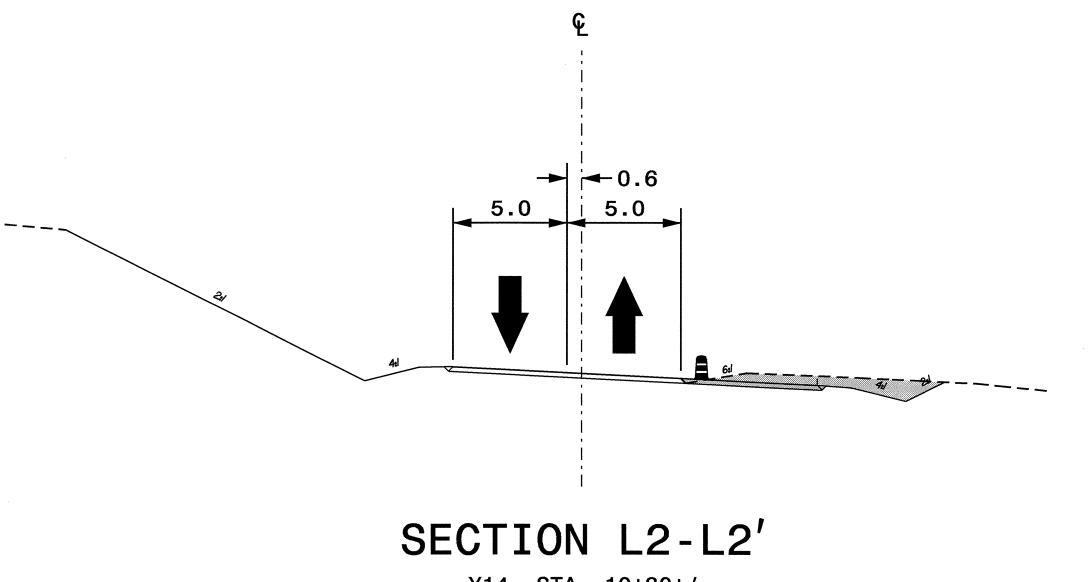


# PHASE I SECTIONS

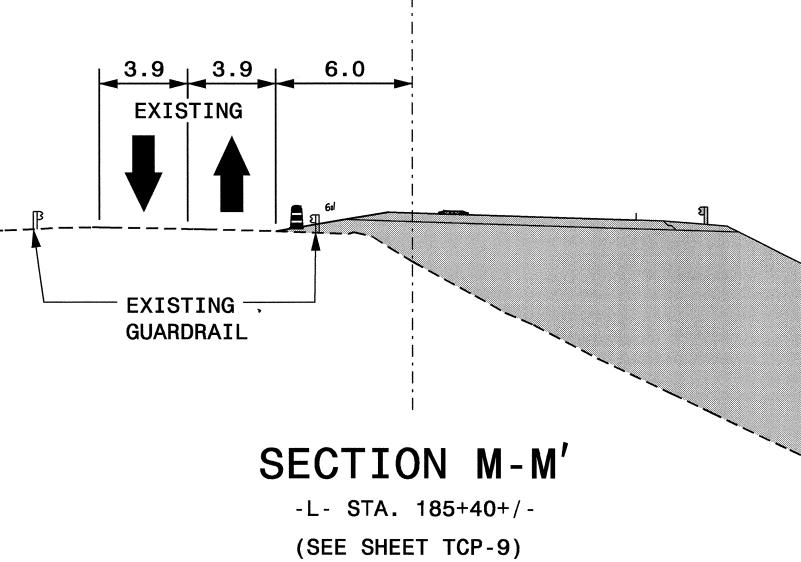
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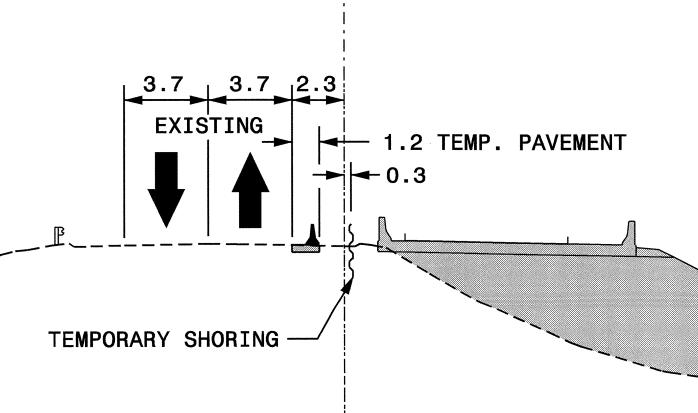






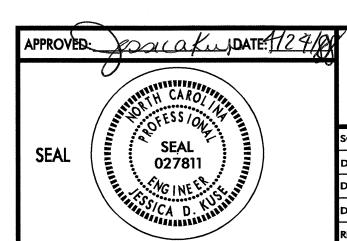
-Y14- STA. 10+30+/-(SEE SHEET TCP-9)





### SECTION N-N'

-L- STA. 191+60+/(SEE SHEET TCP-9 & TCP-23)



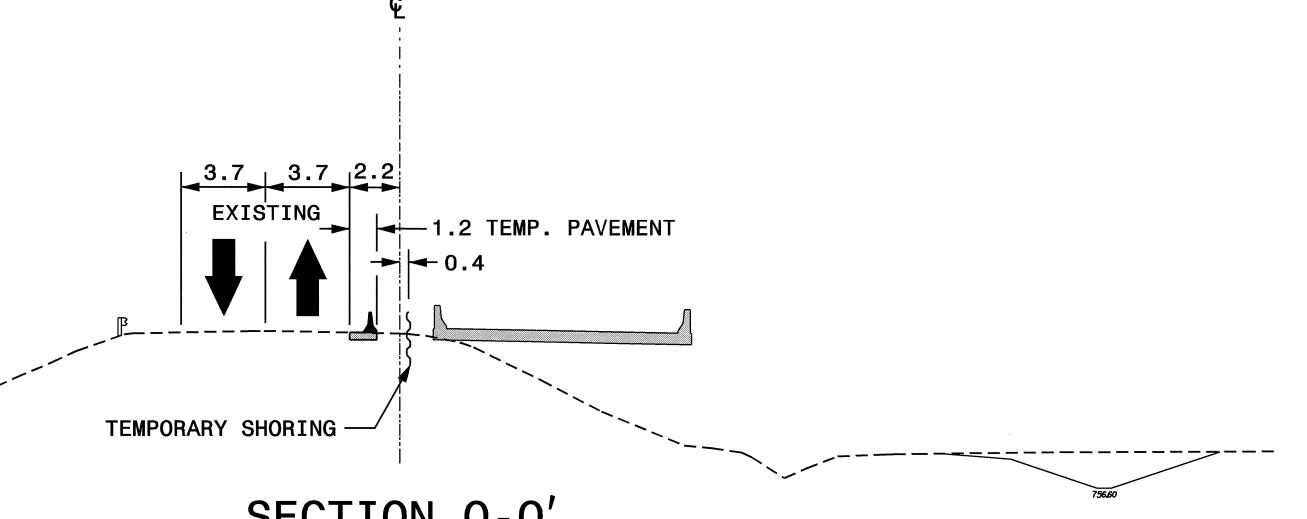
## PHASE I SECTIONS

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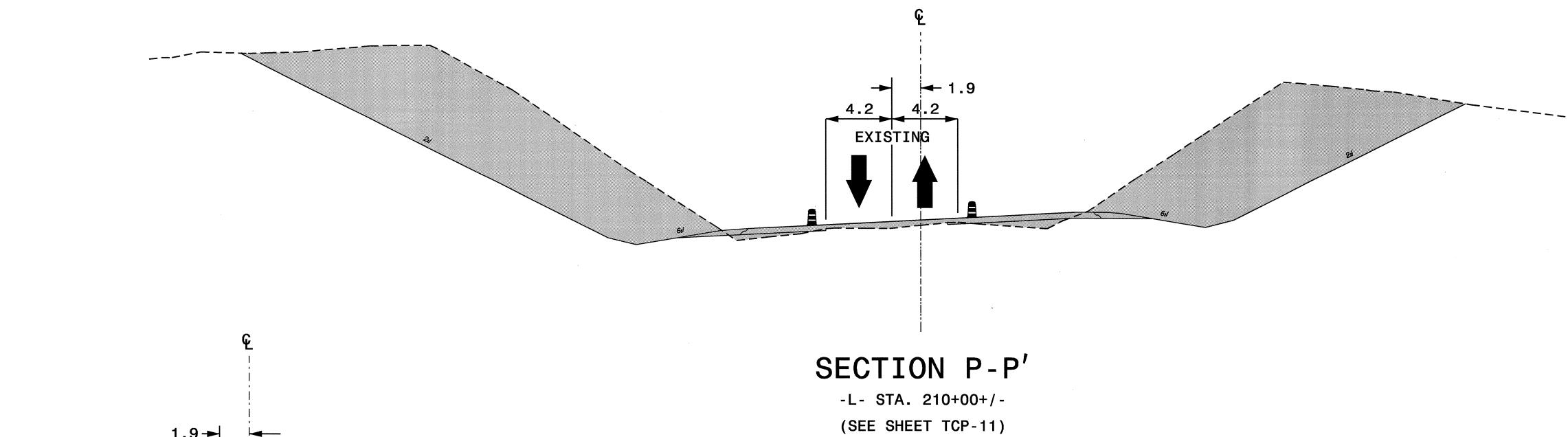


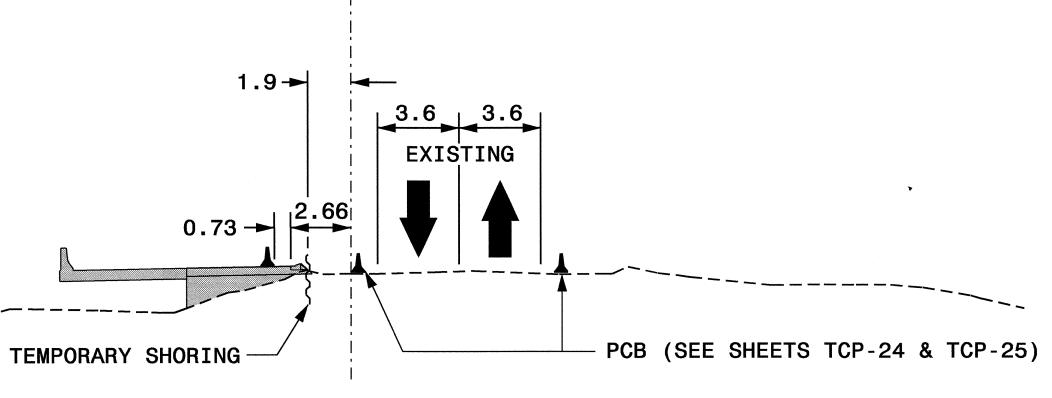
PROJ. REFERENCE NO. R-2518B TCP-31



SECTION 0-0'

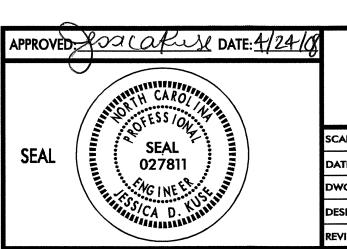
-L- STA. 192+20+/-(SEE SHEET TCP-9 & TCP-23)





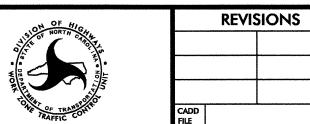
SECTION Q-Q'

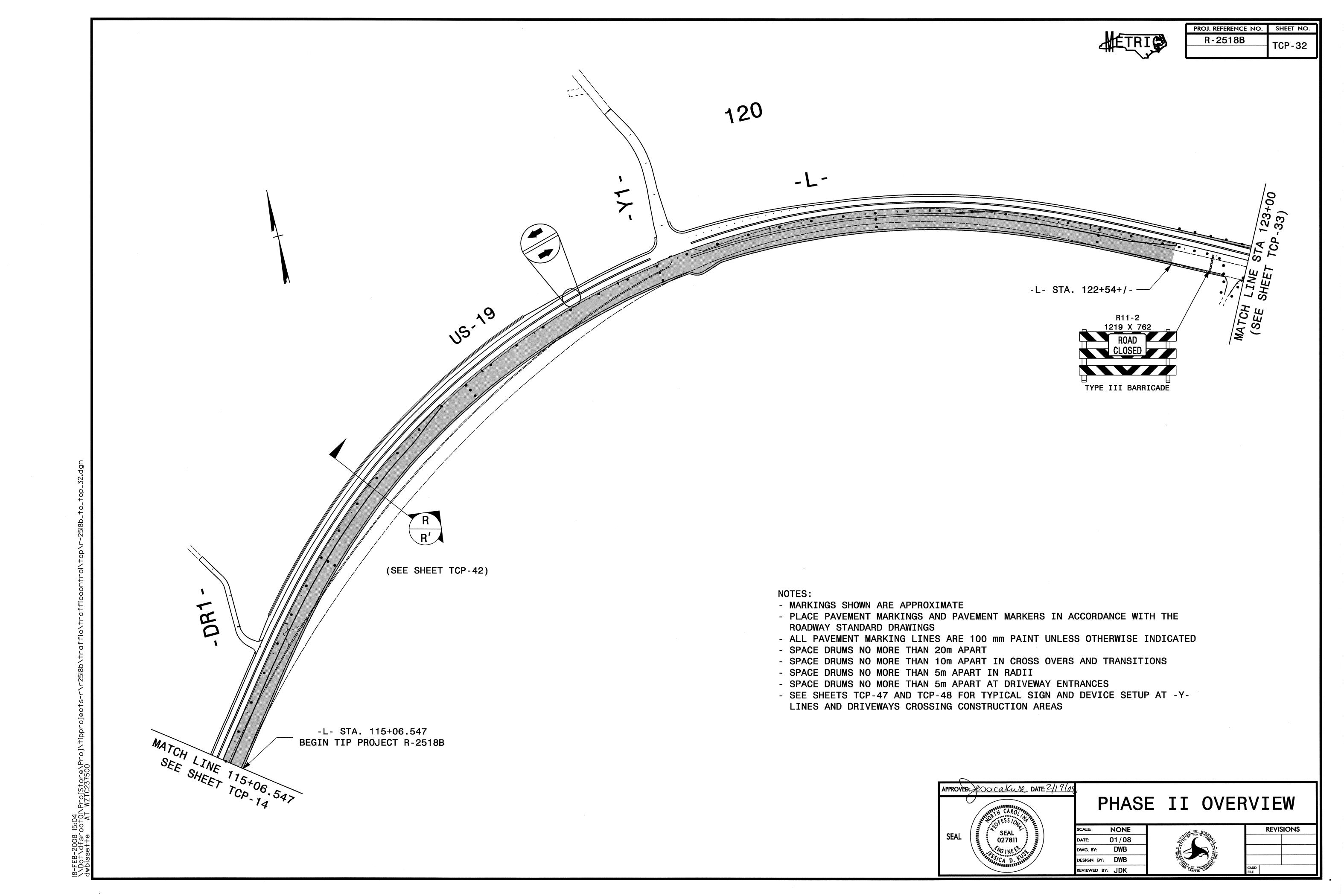
-L- STA. 223+20+/-(SEE SHEETS TCP-12, TCP-24 & TCP-25)

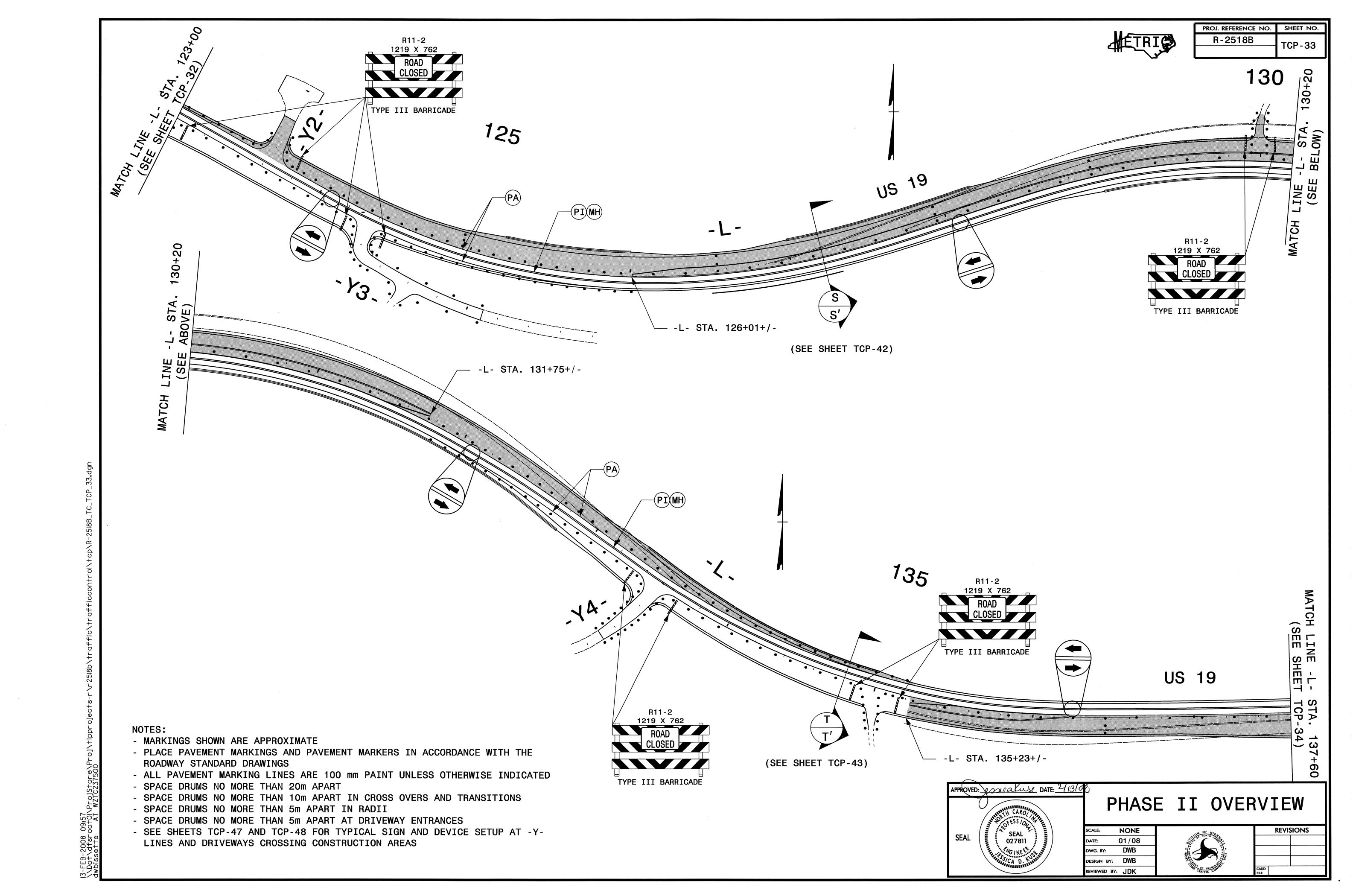


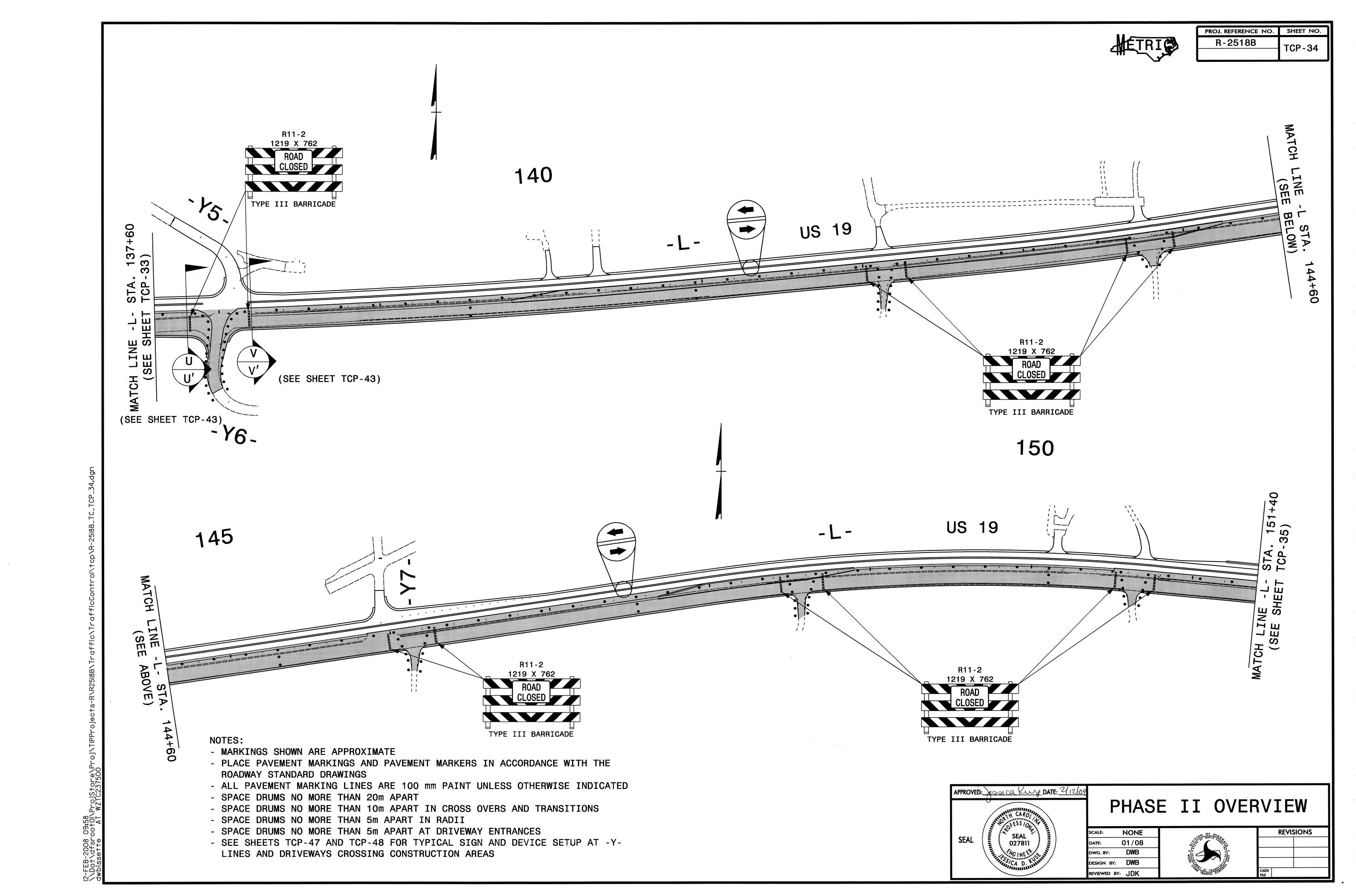
### PHASE I SECTIONS

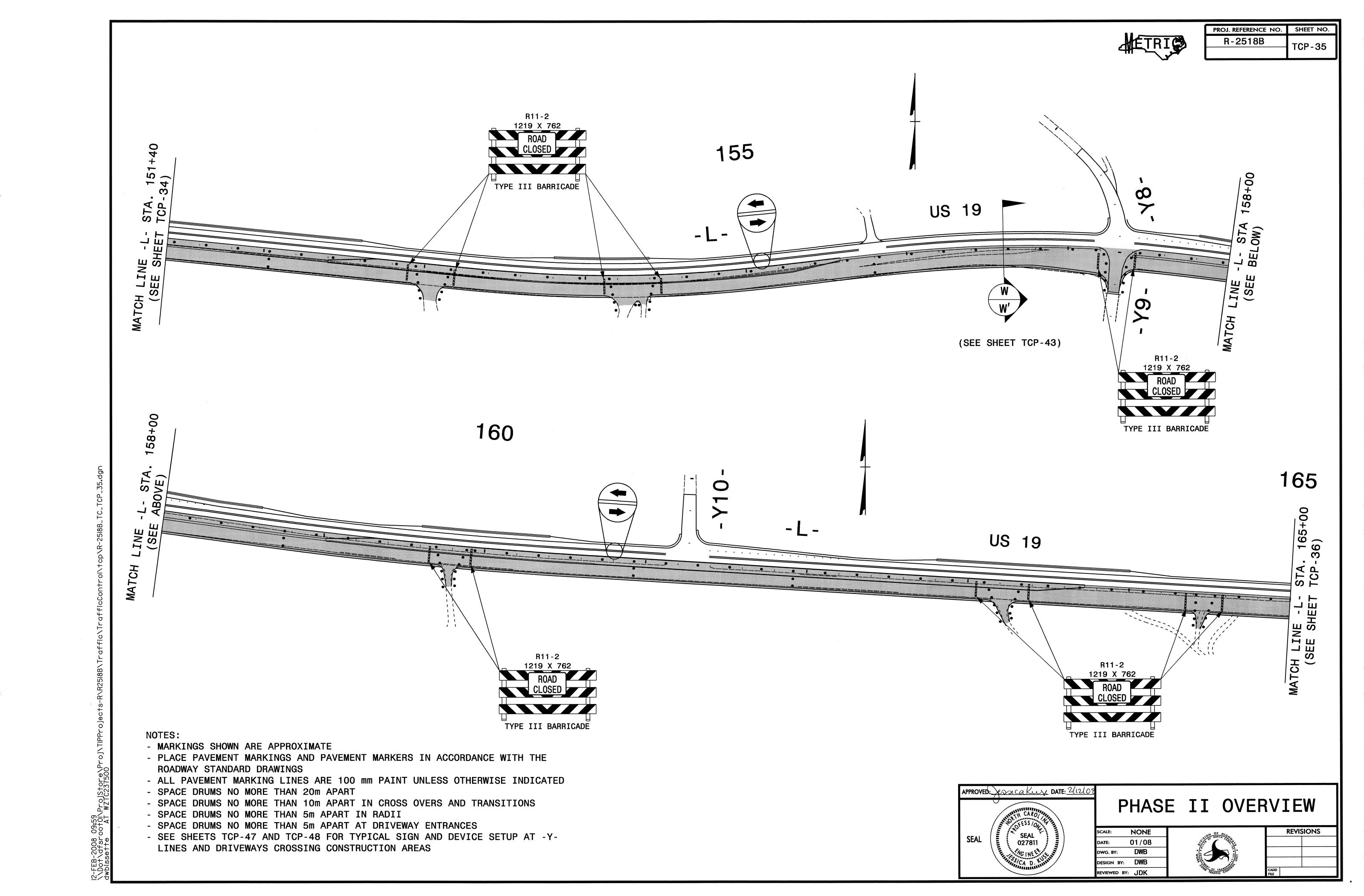
	NONE	
	01/08	
BY:	DWB	
N BY:	DWB	
VED BY:	JDK	

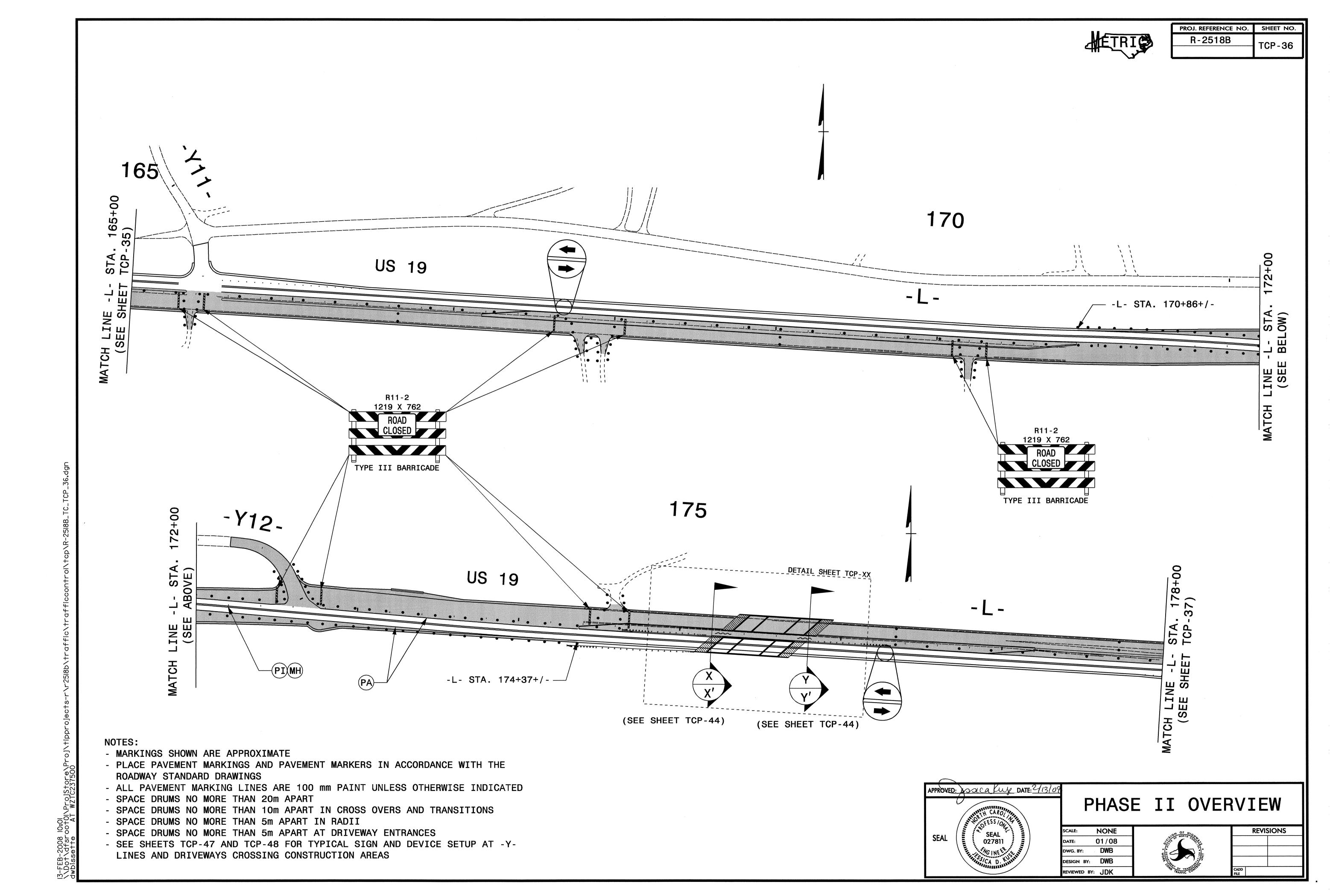


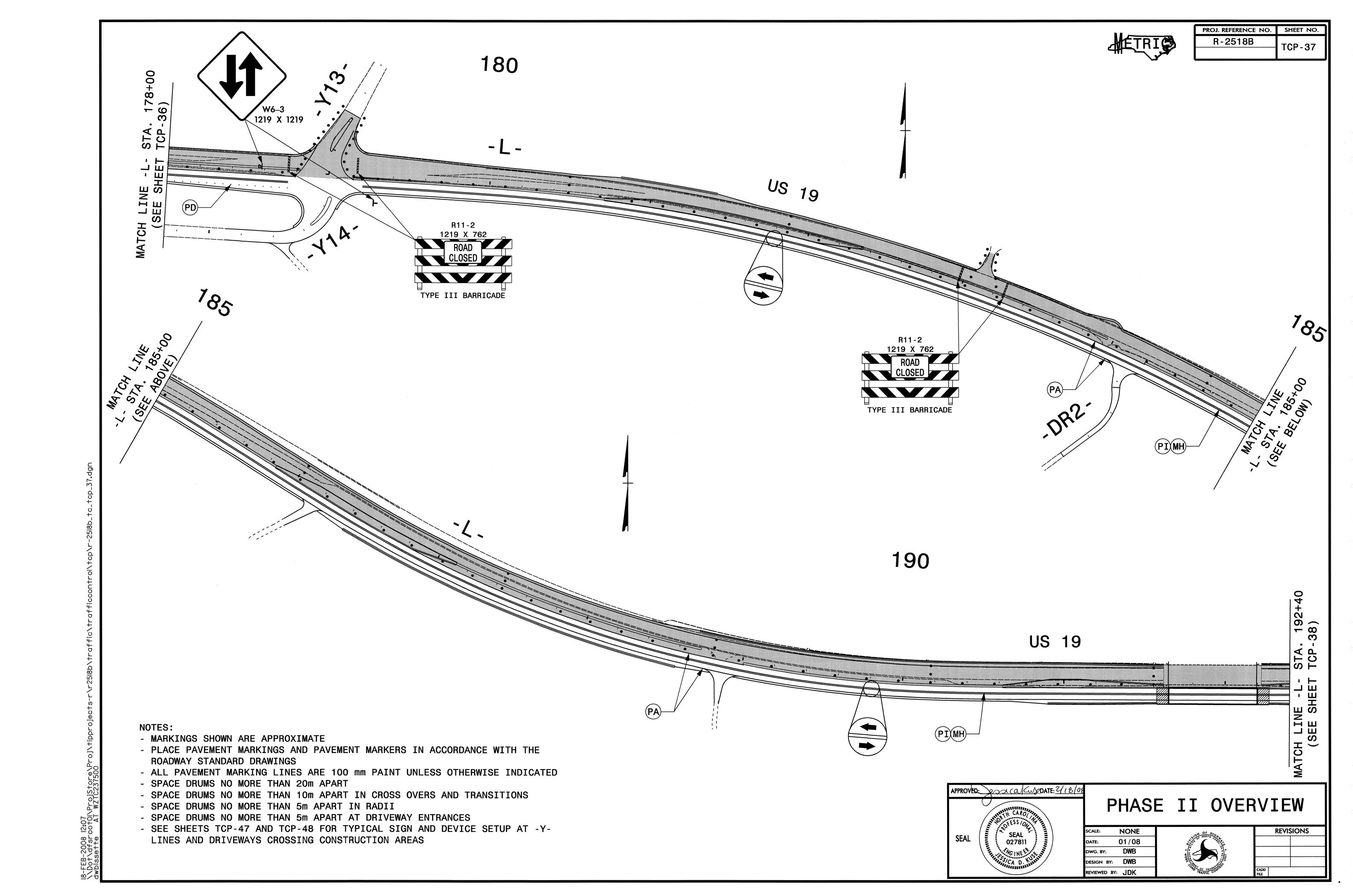


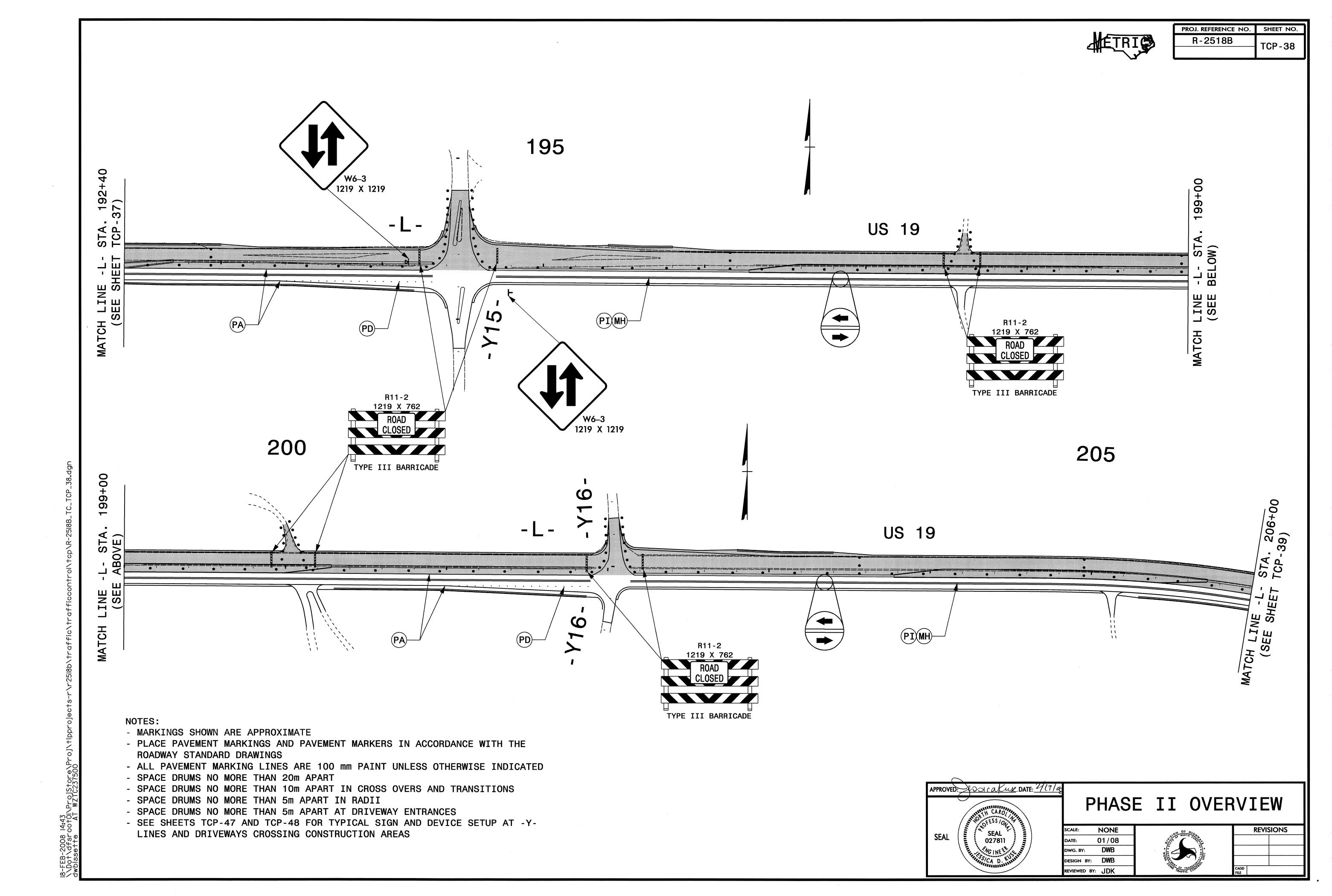


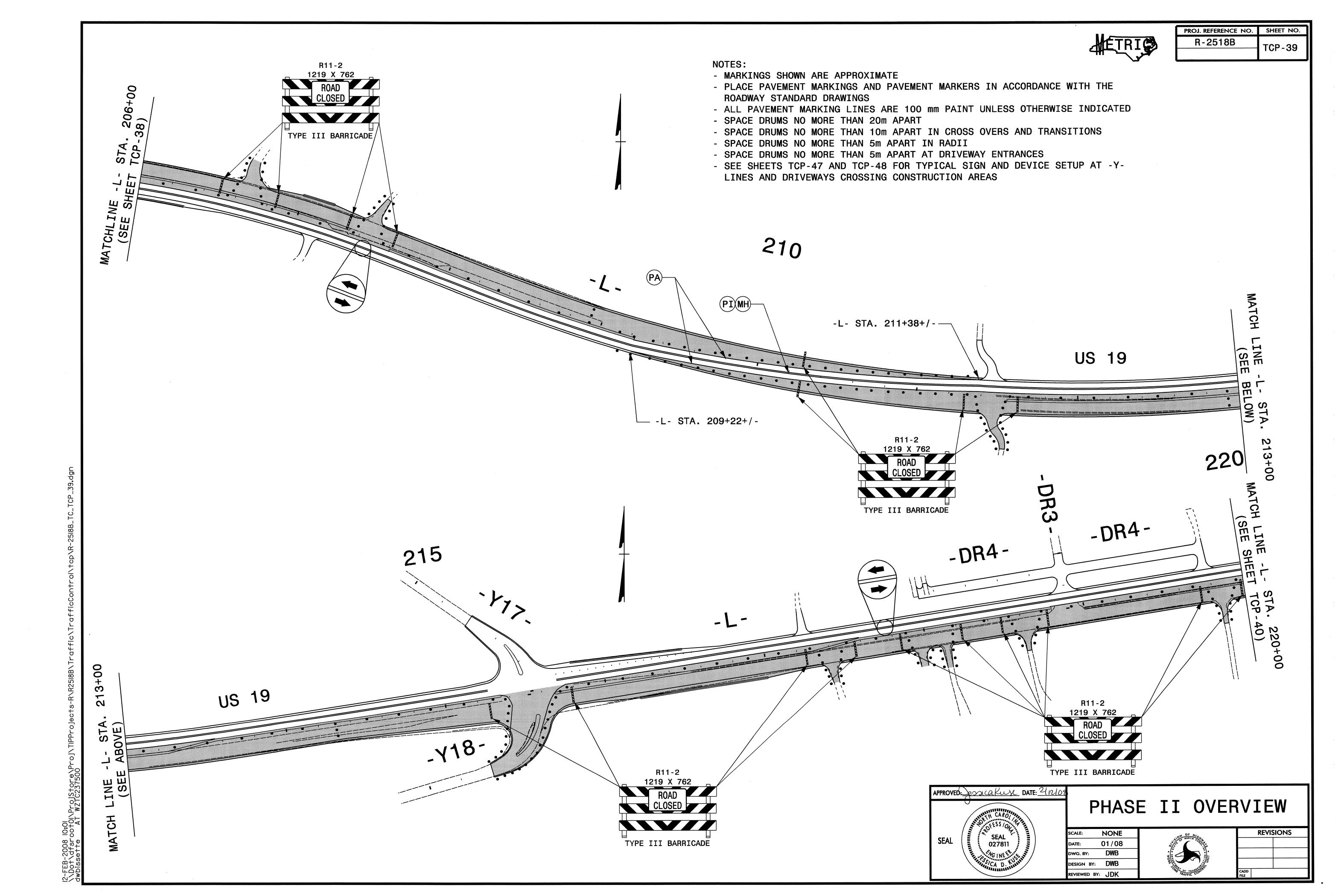












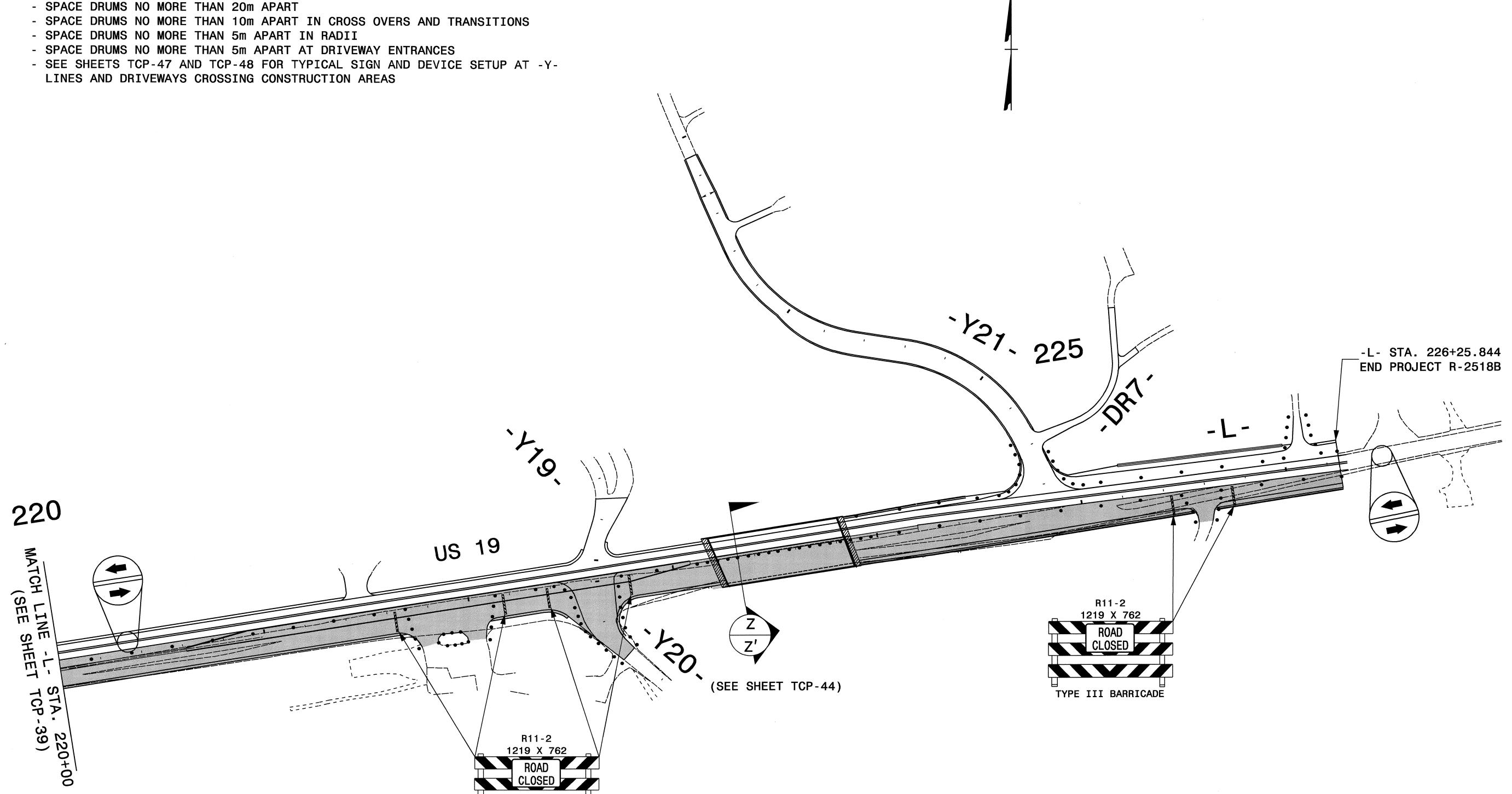
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PROJ. REFERENCE NO. SHEET NO.

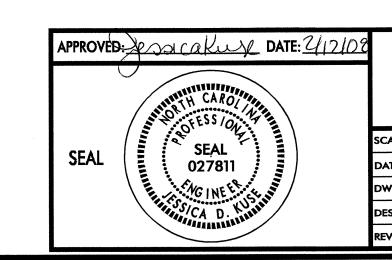
R-2518B
TCP-40

NOTES:

- MARKINGS SHOWN ARE APPROXIMATE
- PLACE PAVEMENT MARKINGS AND PAVEMENT MARKERS IN ACCORDANCE WITH THE ROADWAY STANDARD DRAWINGS
- ALL PAVEMENT MARKING LINES ARE 100 mm PAINT UNLESS OTHERWISE INDICATED

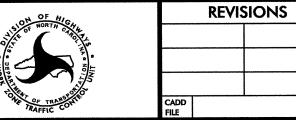


TYPE III BARRICADE



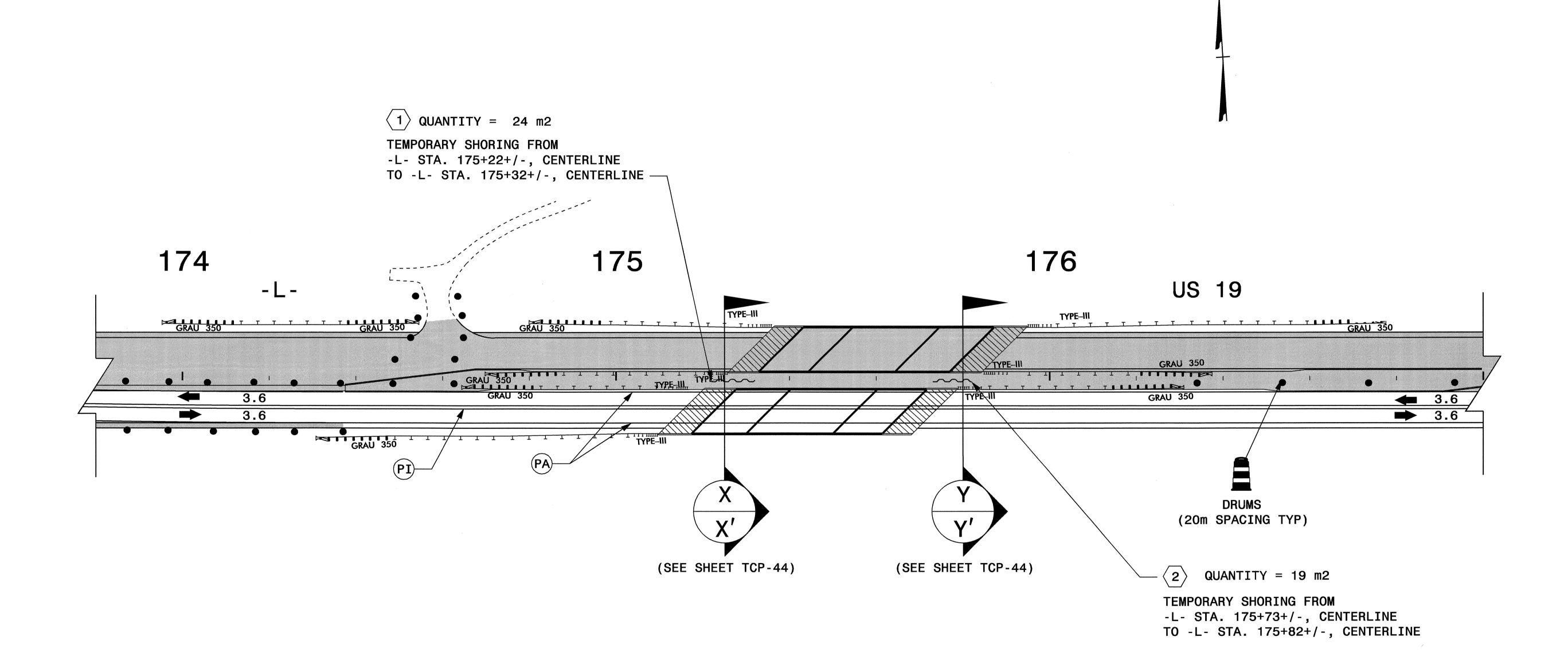
## PHASE II OVERVIEW

SCALE: NONE	OH OF HIGH
DATE: 01/08	
DWG. BY: DWB	D D NO
design by: DWB	
REVIEWED BY: JDK	TRAFFIC CONTRA



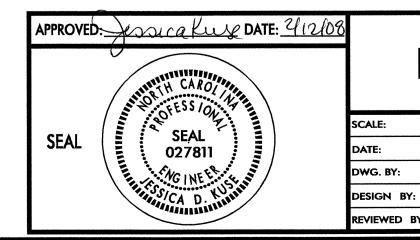


PROJ. REFERENCE NO. R-2518B TCP-41



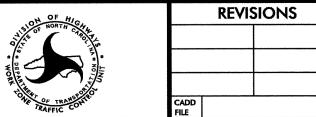
#### NOTES:

- MARKINGS SHOWN ARE APPROXIMATE
- PLACE PAVEMENT MARKINGS AND PAVEMENT MARKERS IN ACCORDANCE WITH THE
- ROADWAY STANDARD DRAWINGS
- ALL PAVEMENT MARKING LINES ARE 100 mm PAINT UNLESS OTHERWISE INDICATED
- SPACE DRUMS NO MORE THAN 20m APART
- SPACE DRUMS NO MORE THAN 10m APART IN CROSS OVERS AND TRANSITIONS
- SPACE DRUMS NO MORE THAN 5m APART IN RADII
- SPACE DRUMS NO MORE THAN 5m APART AT DRIVEWAY ENTRANCES
- SEE SHEETS TCP-47 AND TCP-48 FOR TYPICAL SIGN AND DEVICE SETUP AT -Y-LINES AND DRIVEWAYS CROSSING CONSTRUCTION AREAS

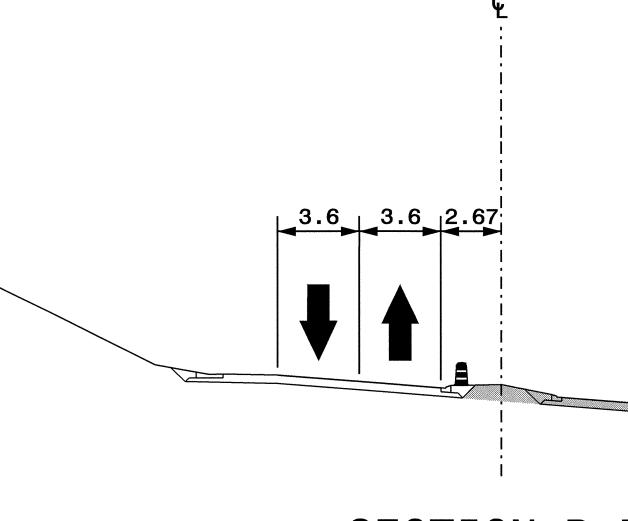


### PHASE II DETAILS

NONE	ON
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RMG	*(°
r: RMG	
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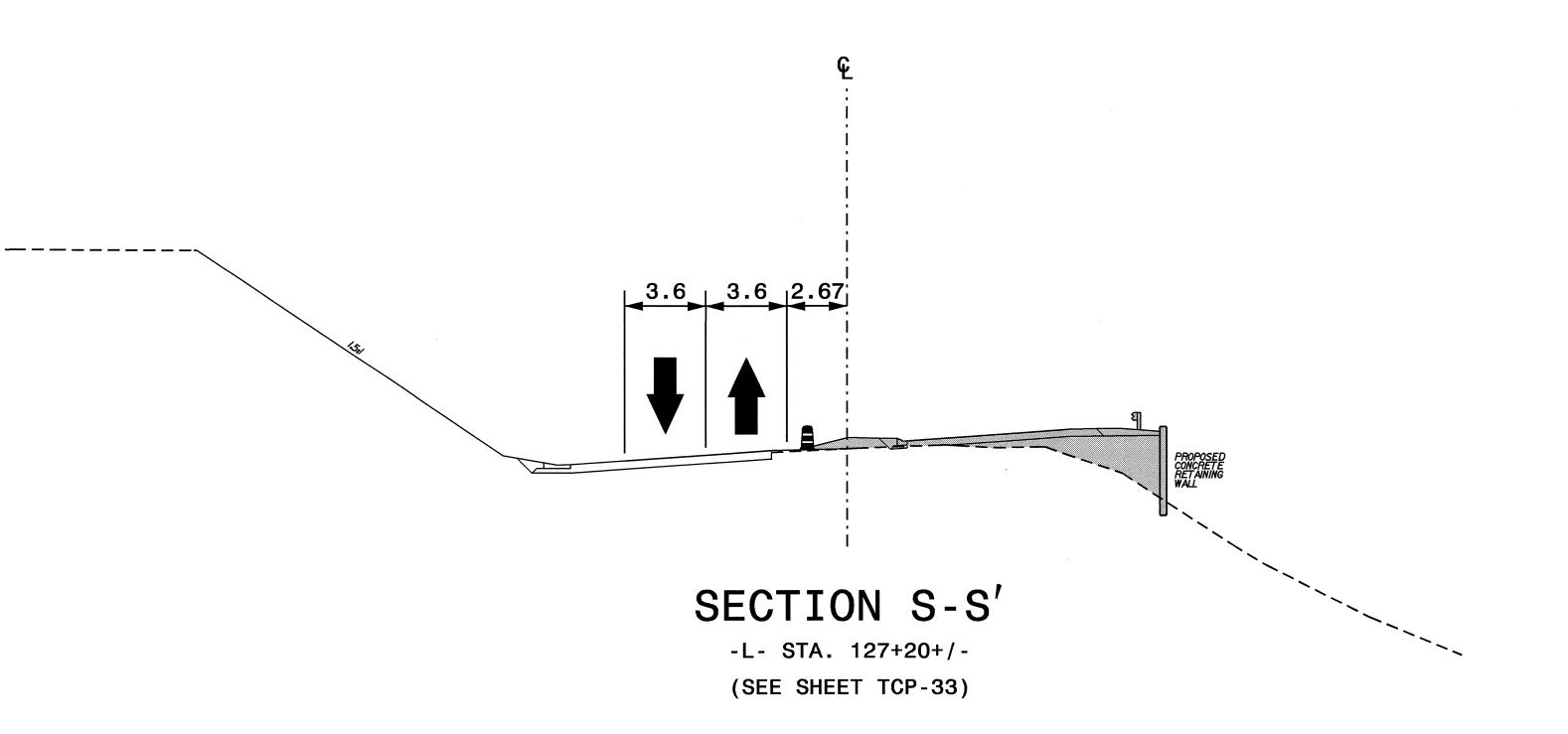


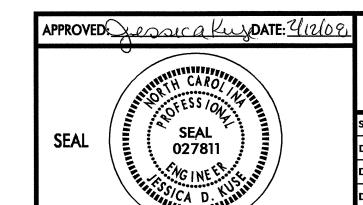




## SECTION R-R'

-L- STA. 117+00+/-(SEE SHEET TCP-32)

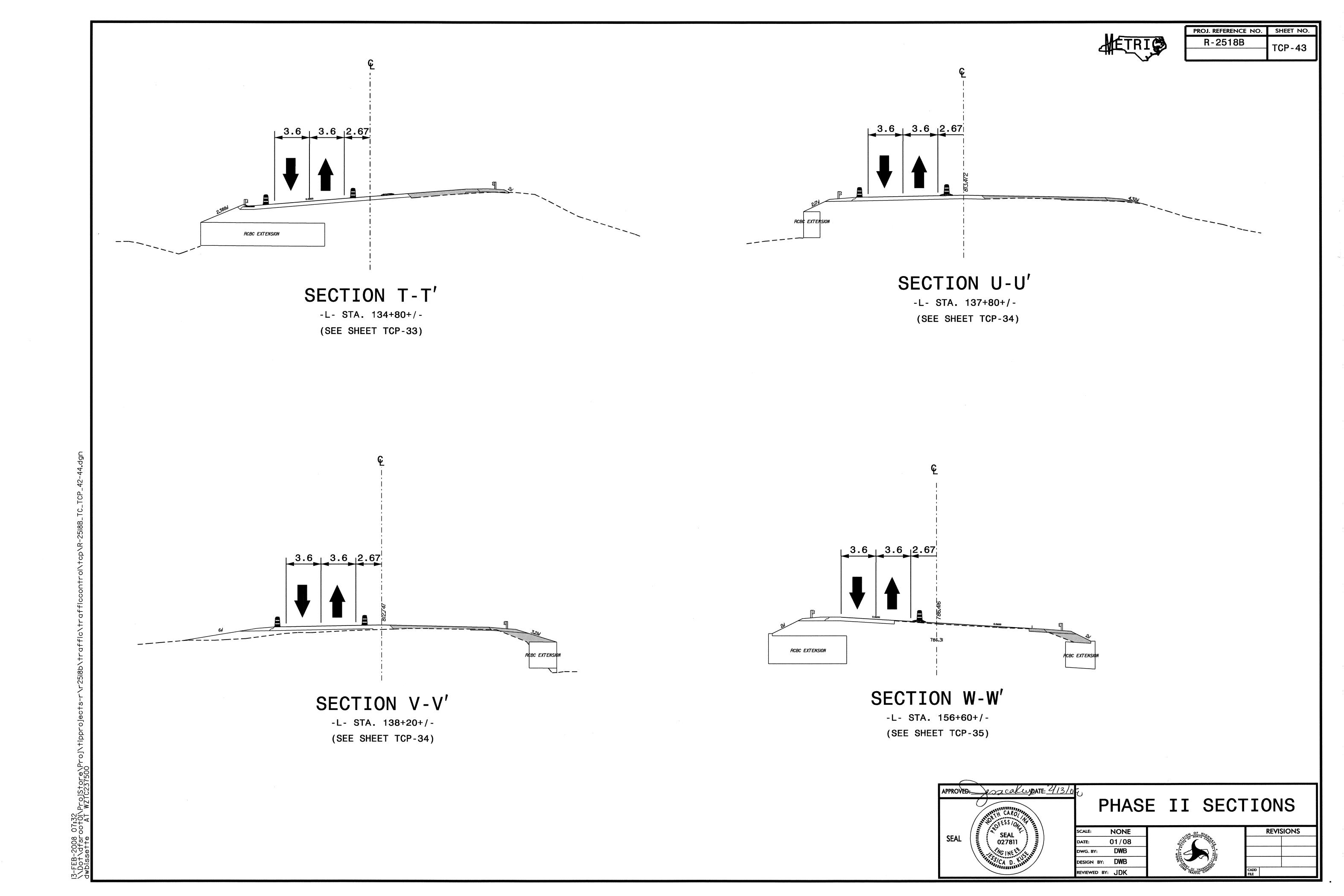




## PHASE II SECTIONS

SCALE:	NONE	
DATE:	01/08	
DWG. BY:	DWB	
DESIGN BY:	DWB	
REVIEWED BY:	JDK	

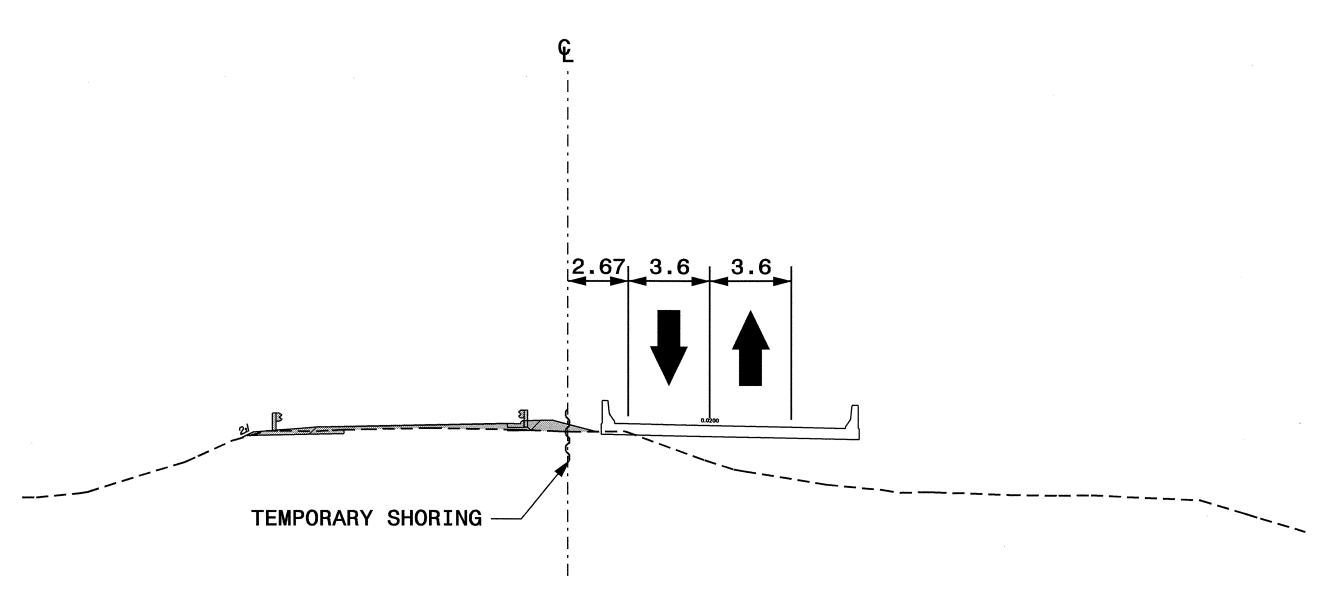
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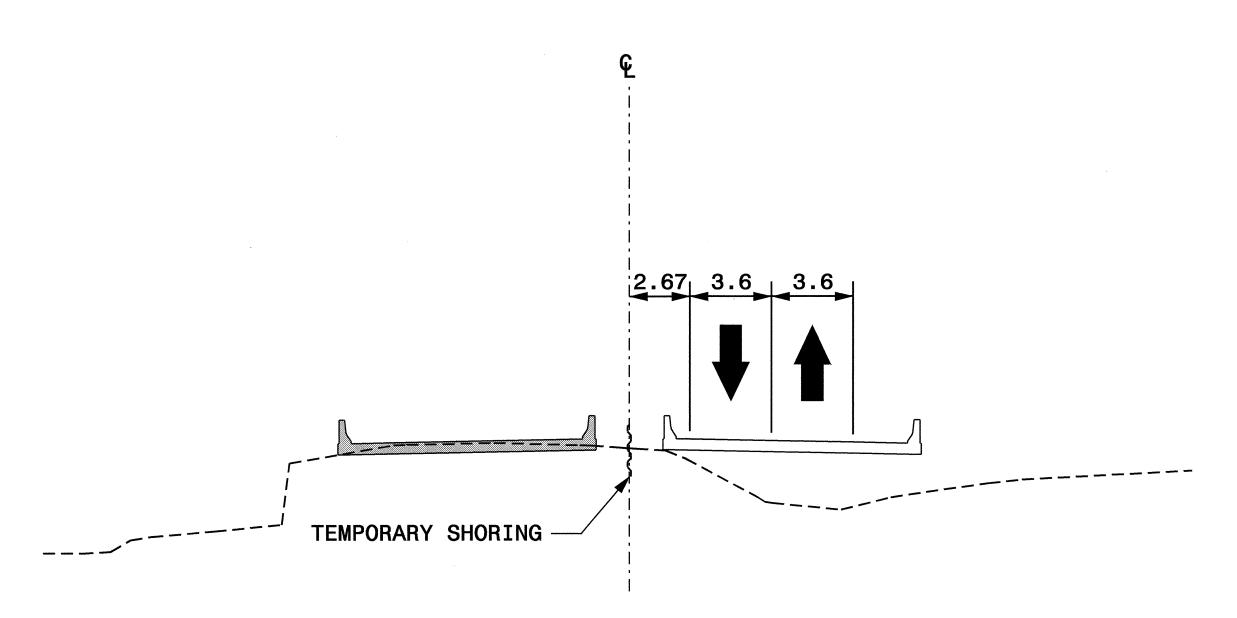
PROJ. REFERENCE NO. R-2518B TCP-44

REVISIONS



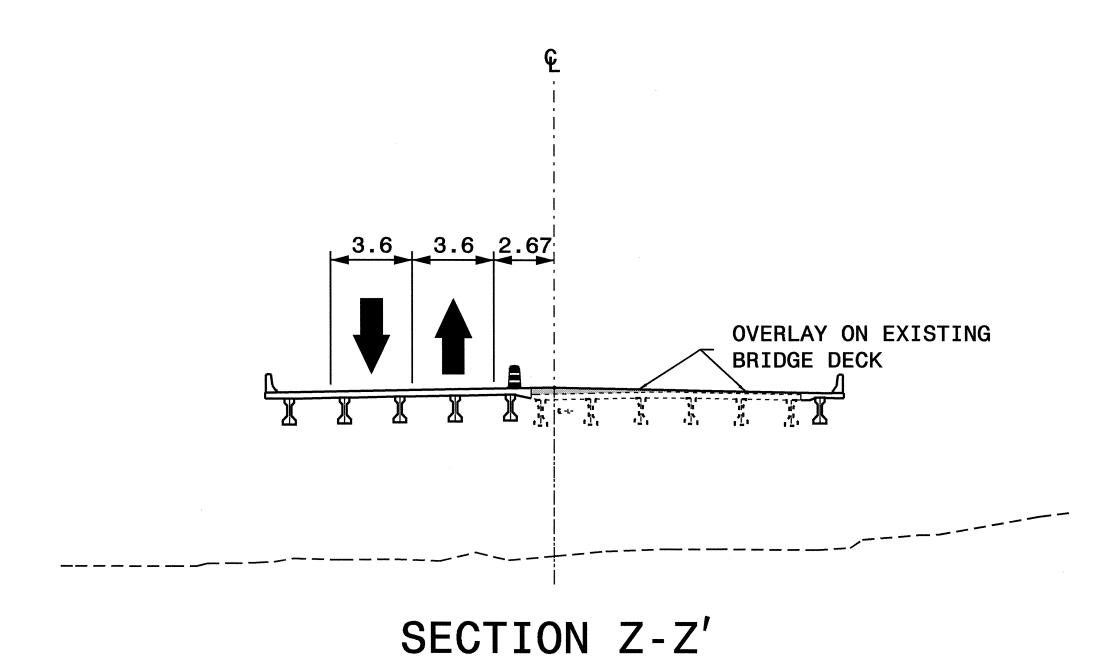
# SECTION X-X'

-L- STA. 175+20+/-(SEE SHEET TCP-36 AND TCP-41)



### SECTION Y-Y'

-L- STA. 175+80+/-(SEE SHEET TCP-36 AND TCP-41)



-L- STA. 223+40+/-

(SEE SHEETS TCP-40)

APPROVED: praca Kuse DATE:2/12/08 PHASE II SECTIONS 01/08

TRANSPORTATION

0F

DEPT

HIGHWAYS

**OF** 

FOR DED SIGNS

S H R

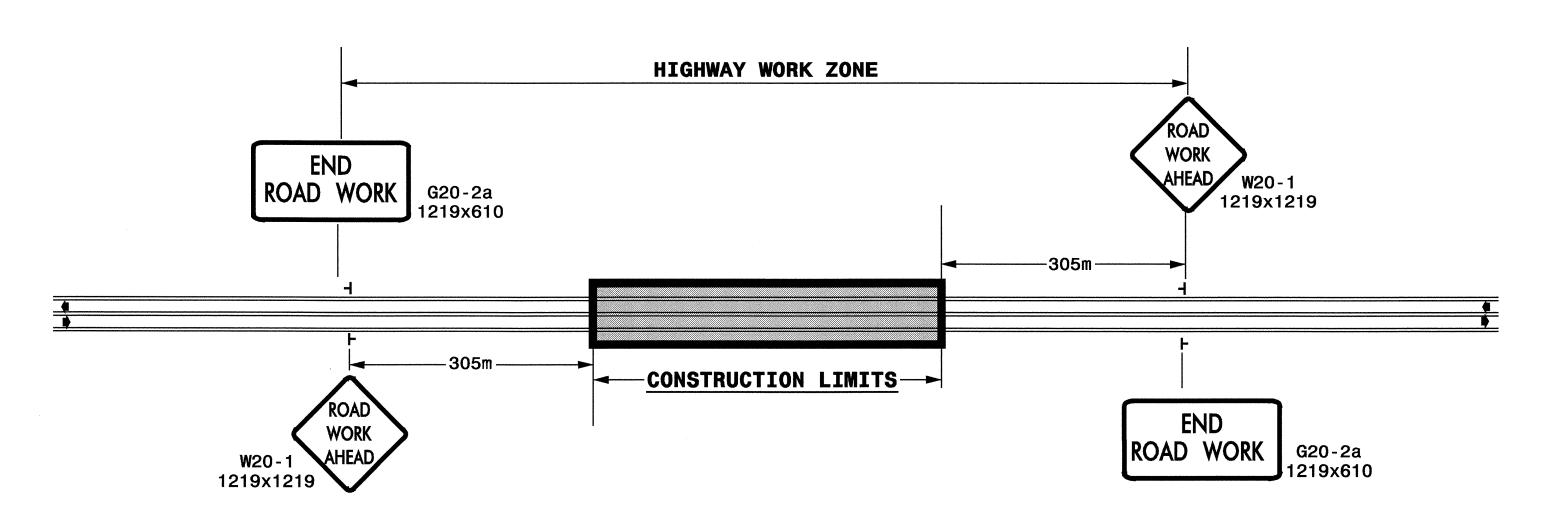
CAROLINA

NORTH

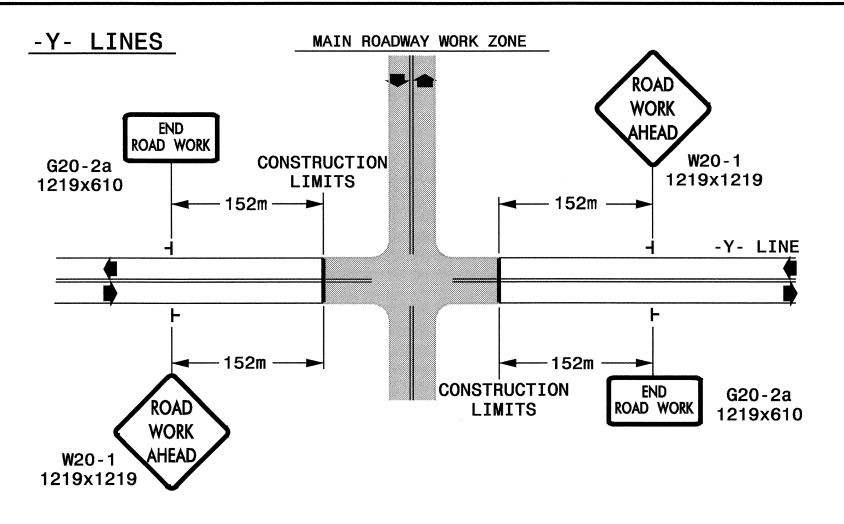
OF

STATE

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



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



#### **GENERAL NOTES**

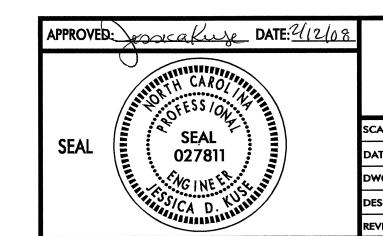
- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, 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 1.4Kg STEEL U-CHANNEL POST OR 90mm X 90mm WOOD POST FOR ALL WORK ZONE SIGNS. 1.4Kg 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 1.4Kg STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 1.4Kg 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

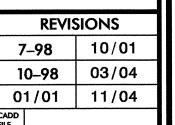
SHEET 1 OF 1

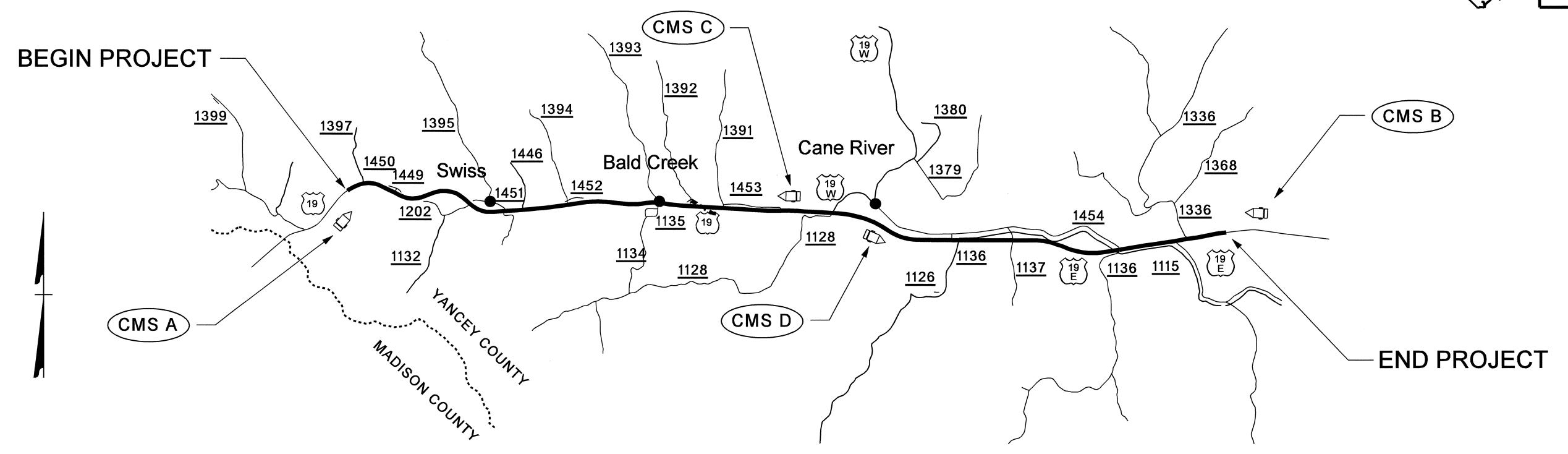


DETAIL	DRAW	ING F	OR	TWO-W	VAY
UNDIVIDE	D AN	ND UR	BAN	FREE	WAYS
ADVANCED \	WORK	ZONE	WAR	NING	SIGNS

LE:	NONE	
Œ:	08/07	
G. BY:	DWB	
IGN BY:	DWB	
IEWED BY	JDK	





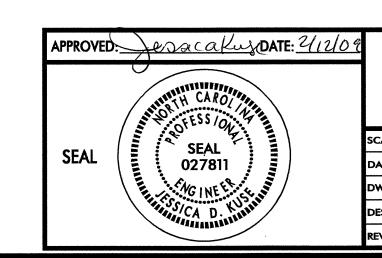


CHOOSE THE APPROPRIATE WORDING FOR CHANGEABLE MESSAGE SIGNS FROM THE FOLLOWING LIST, OR WORD THE SIGNS AS DIRECTED BY THE ENGINEER

CMSA	CMS B	CMSC	CMS D
MSG. NO. 1 MSG. NO. 2  US 19 DATE BLASTING TO ZONE DATE	MSG. NO. 1 MSG. NO. 2  US 19 DATE BLASTING TO ZONE DATE	MSG. NO. 1 MSG. NO. 2  US 19 PREPARE  BLASTING TO  ZONE STOP	MSG. NO. 1 MSG. NO. 2  US 19 PREPARE BLASTING TO ZONE STOP
MSG. NO. 1 MSG. NO. 2  US 19 BLASTING EXPECT ZONE DELAYS	MSG. NO. 1 MSG. NO. 2  US 19 BLASTING EXPECT ZONE DELAYS		

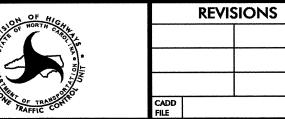
#### NOTES:

- 1) SEE RSD 1101.06 FOR ADDITIONAL WORKZONE SIGNS RELATIVE TO BLASTING OPERATIONS.
- 2) (CMS A) & (CMS B) ARE TO BE PLACED ALONG US 19 152 m IN ADVANCE OF PROJECT.
- 3) (CMS C) & (CMS D) ARE TO BE PLACED ALONG US 19 152 m IN ADVANCE OF EACH ACTIVE BLASTING ZONE
- 4) TWO ADDITIONAL CHANGEABLE MESSAGE SIGNS HAVE BEEN INCLUDED IN THE ESTIMATE TO BE USED AS DIRECTED BY THE ENGINEER OR FOR MULTIPLE BLASTING OPERATIONS.

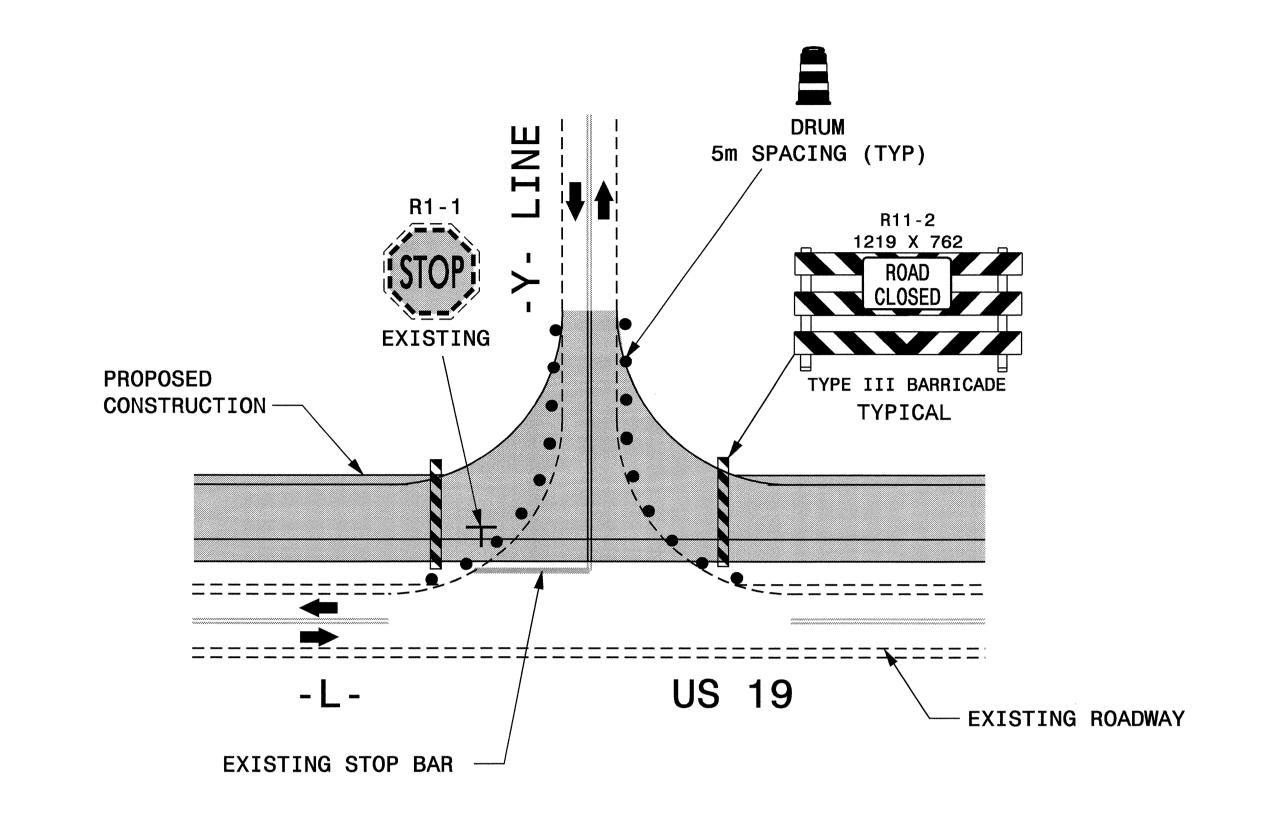


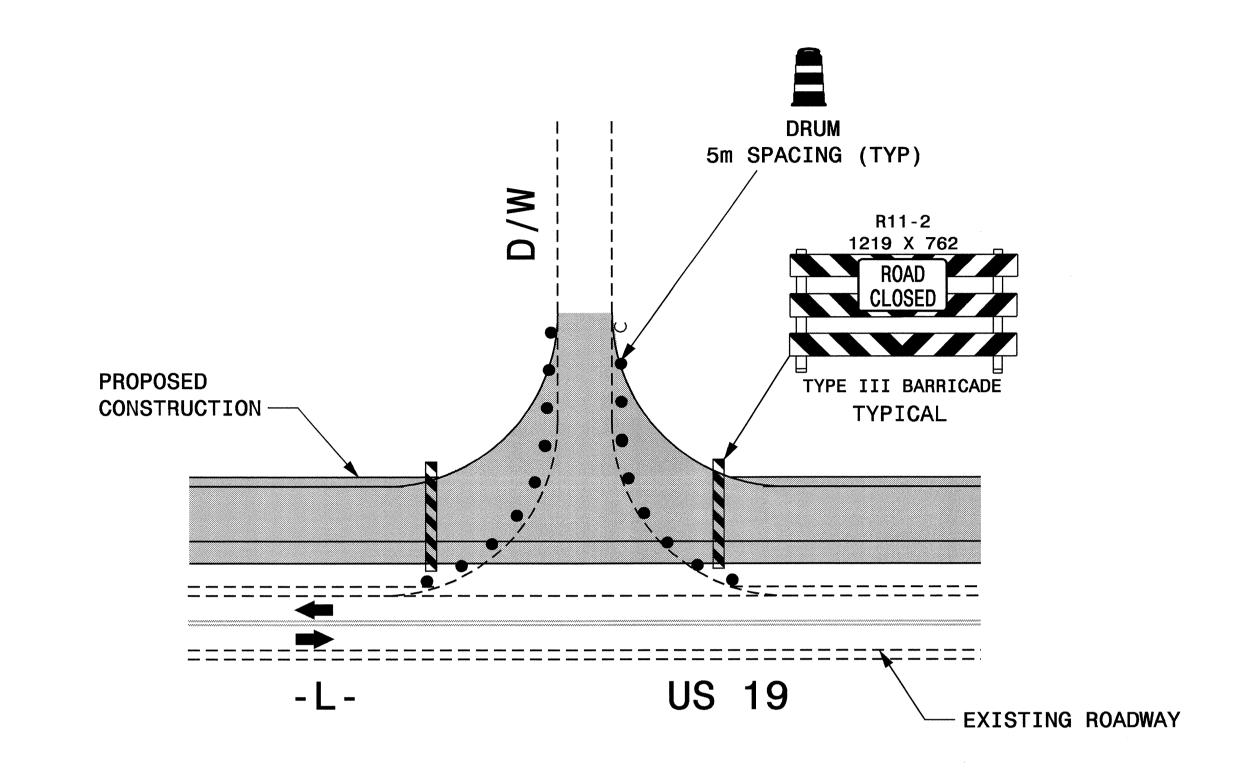
CMS MESSAGES AND LOCATIONS
DURING BLASTING OPERATIONS

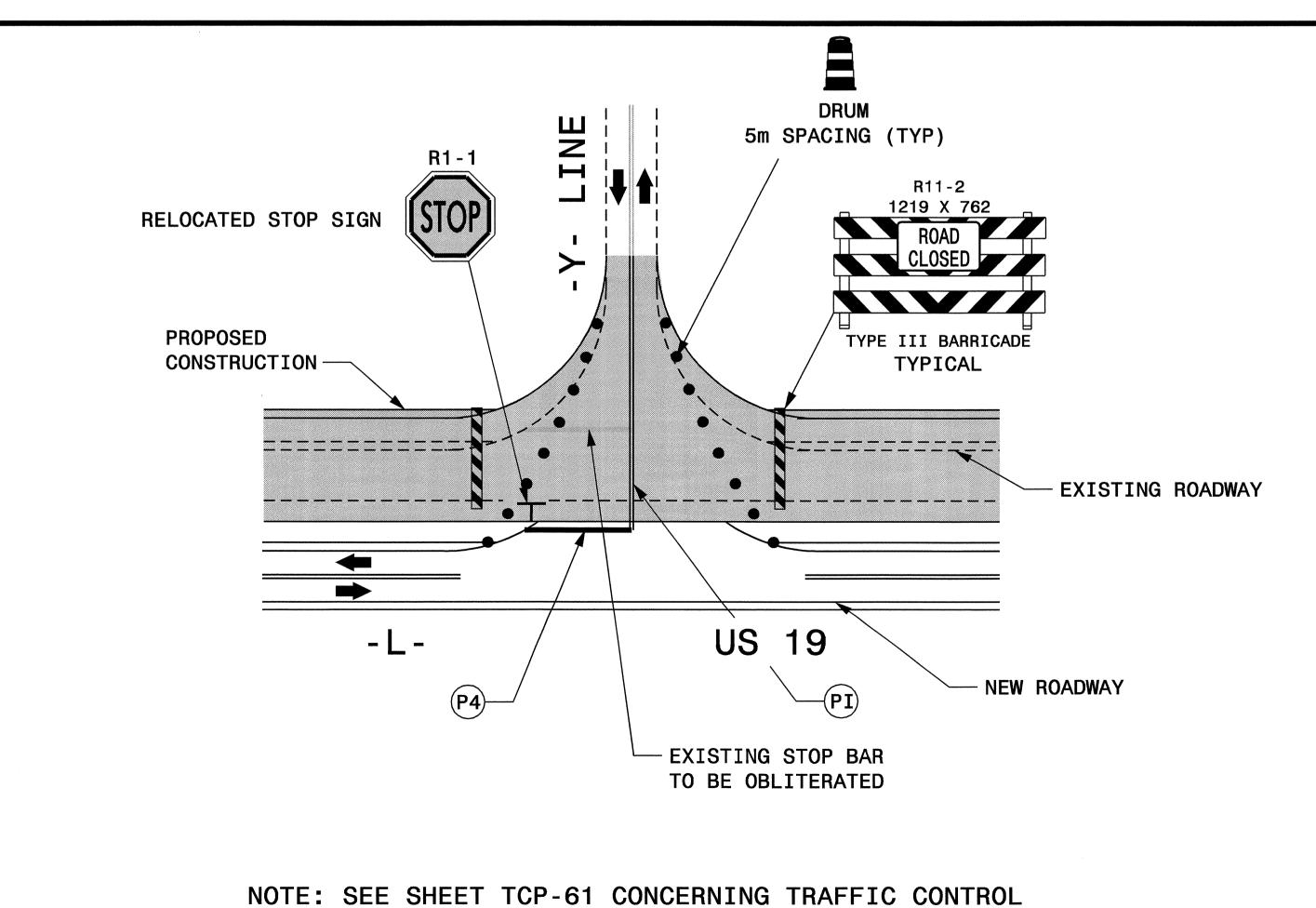
E:	NONE	
:	01/08	
. BY:	DWB	
SN BY:	DWB	
WED BY:	JDK	



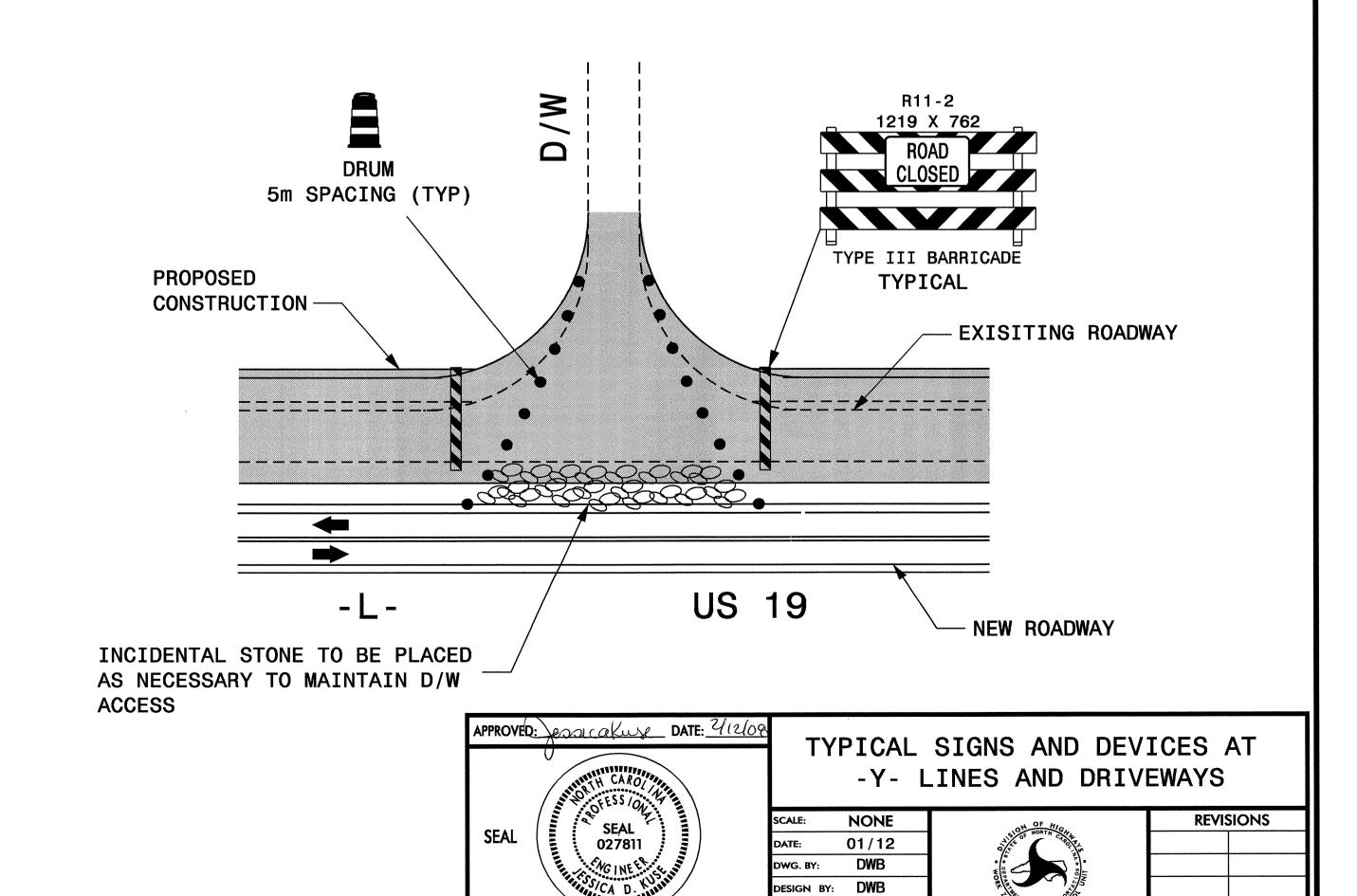


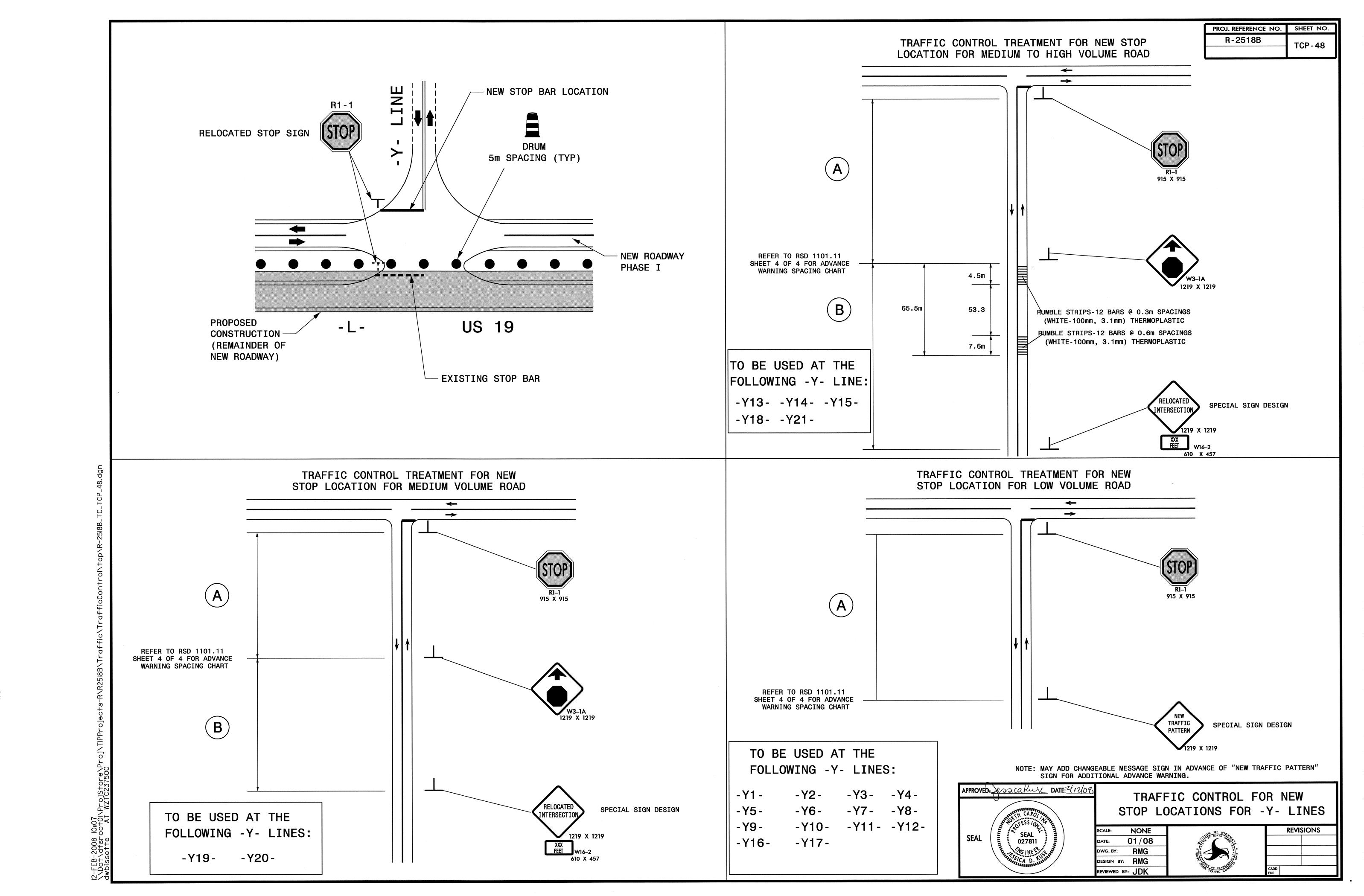






FOR NEW STOP LOCATIONS FOR -Y- LINES





# FIGURE A

#### **NOTES**

- 1- REFER TO THE TRAFFIC CONTROL PLANS FOR SHORING LOCATIONS AND SOIL PARAMETERS.
- 2- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR MORE INFORMATION ABOUT TEMPORARY SHORING, MEASUREMENT AND PAYMENT.
- 3- PROVIDE PORTABLE CONCRETE BARRIER TO PROTECT TEMPORARY SHORING IF SHORING IS LOCATED WITHIN THE CLEAR ZONE AS DEFINED IN THE AASHTO ROADSIDE DESIGN GUIDE.
- 4- 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.

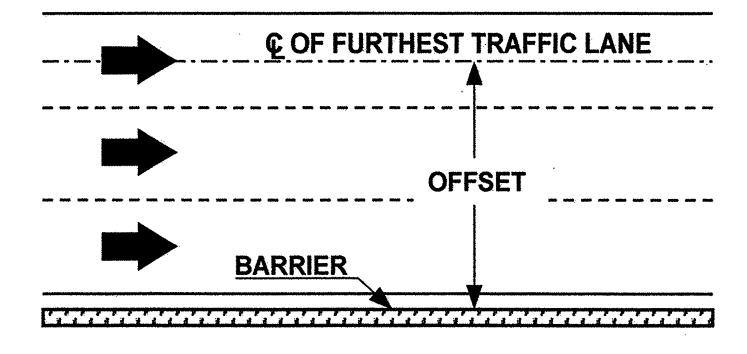
- 5- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET AN UNANCHORED PCB AGAINST THE TRAFFIC SIDE OF THE SHORING AND DESIGN SHORING FOR TRAFFIC IMPACT OR USE THE "SURCHARGE CASE WITH TRAFFIC IMPACT" FOR THE STANDARD TEMPORARY SHORING.
- 6- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- 7- USE OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH DETAIL DRAWING AND SPECIAL PROVISION OBTAINED FROM: HTTP://www.ncdot.org/doh/preconstruct/wztc/desres/english/desreseng.html
- 8- 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.
- 9- 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.
- 10- 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.

PROJ. REFERENCE	NO.	SHEET	NO.
R-2518B		TCP-	49

MINIMUM REQUIRED CLEAR DISTANCE, inches

Barrier	Pavement	Offset *	Design Speed, mph					
Type	Type	ft	<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					

<sup>\*</sup> See Figure Below



## FIGURE B

