STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO. B-4092

PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

CUMBERLAND COUNTY

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:

S	T	D	N	0	

TITLE TEMPORARY LANE CLOSURES 1101.02

TEMPORARY SHOULDER CLOSURES 1101.04 1101.05 WORK ZONE VEHICLE ACCESSES 1101.11 TRAFFIC CONTROL DESIGN TABLES

STATIONARY WORK ZONE SIGNS 1110.01 PORTABLE WORK ZONE SIGNS 1110.02

1130.01 DRUMS

1135.01 BARRICADES 1145.01

FLAGGERS 1150.01

1162.01 TRUCK MOUNTED IMPACT ATTENUATOR

PAVEMENT MARKINGS - LINE TYPES AND OFFSETS PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED ROADWAYS

PAVEMENT MARKINGS - BRIDGES 1205.12

1250.01 PAVEMENT MARKER SPACING

RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

GUARDRAIL AND BARRIER DELINEATOR SPACING

GUARDRAIL AND BARRIER DELINEATOR TYPES

1262.01 GUARDRAIL END DELINEATION

INDEX OF SHEETS

SHEET NO.

TCP-1

TITLE

LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, INDEX OF SHEETS, LEGEND, PAVEMENT MARKING SCHEDULE

TRAFFIC CONTROL PROJECT NOTES AND PHASING TCP-2 TCP-3 PHASE 1

PHASE 2 TCP-4 TCP-5 ADVANCE WARNING SIGNS

LEGEND

GENERAL

DIRECTION OF TRAFFIC FLOW

───── NORTH ARROW

PROPOSED PVMT.PROPOSED PVMT.

WORK AREA

REMOVAL OF EXISTING PAVEMENT

TRAFFIC CONTROL DEVICES

T TYPE I BARRICADE

∏ TYPE II 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

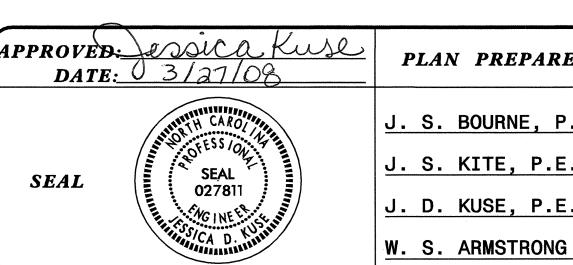
TRAFFIC CONTROL DESIGN ENGINEER / TECHNICIAN

YELLOW/YELLOW PAVEMENT MARKER

CRYSTAL/RED PAVEMENT MARKER

PAVEMENT MARKING SYMBOLS

		PAVEMENT MARKING SCHEDULE				
SYMBOL	DESCRIPTION		PAY ITE		TOTAL	
		FINAL				
		PAVEMENT MARKINGS PAINT(4")				
PA PI	WHITE EDGELINE (2X) YELLOW DOUBLE CENTER (2X)	.,,	5160 5160	LF LF TOTAL	10320	15
		MARKERS PERMANENT RAISED PAVEMENT MARKERS		TOTAL	10320	Lr
MA	YELLOW & YELLOW		16	EA TOTAL	16	EA
		TEMPORARY				
		PAVEMENT MARKINGS PAINT(4")				
PA PI	WHITE EDGELINE (2X) YELLOW DOUBLE CENTER (2X)		10372 10372	LF LF	00744	ır
		MARKERS TEMPORARY RAISED PAVEMENT MARKERS		TOTAL	20744	LF
MK	YELLOW		16	EA TOTAL	16	EA
		NT MARKING ITEM, 1X IMPLIES A SINGLE APPLICATIONS, AND 3X IMPLIES THREE APPL	ICATIONS.			



PLAN PREPARED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT J. S. BOURNE, P.E. TRAFFIC CONTROL ENGINEER J. S. KITE, P.E. TRAFFIC CONTROL PROJECT ENGINEER J. D. KUSE, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER

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

SR 1108 (LAKEWOOD DR) SR 1108 (LAKEWOOD DR) MON-FRI MON-FRI

7AM-9AM 5PM-7PM

LANE AND SHOULDER CLOSURE REQUIREMENTS

- B) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED, OR AS DIRECTED BY THE ENGINEER.
- C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE. CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

- 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.
- F) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

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

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

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

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

DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- J) INSTALL ADVANCE WORK ZONE WARNING SIGNS NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- PROVIDE PERMANENT SIGNING
- ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN
- INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 250 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

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

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME

MARKING

MARKER

SR 1108(LAKEWOOD DR)

PAINT

RAISED TEMPORARY

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

ROAD NAME

MARKING

MARKER

SR 1108 (LAKEWOOD DR) PAINT

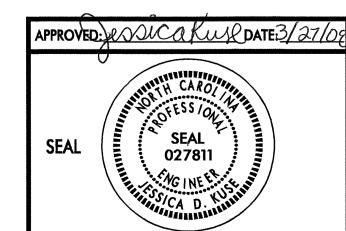
- Q) PLACE TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE. PLACE THE SECOND APPLICATION OF PAINT UPON SUFFICIENT DRYING TIME OF THE FIRST.
- PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.
- S) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

MISCELLANEOUS

T) 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) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 500 FT AND 250 FT RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

LOCAL NOTES

- 1. ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED
- 2. MAINTAIN DRIVEWAY ACCESS WITHIN PROJECT LIMITS
- 3. NOTIFY CUMBERLAND COUNTY SCHOOLS AND EMERGENCY SERVICES OF ANY ROAD CLOSINGS OR FLAGGING OPERATIONS
- 4. REAPPLY PAVEMENT MARKINGS UP TO 100' BEYOND CONSTRUCTION LIMITS IF NEEDED TO REPAIR DAMAGE AND/OR TRACKING FROM CONSTRUCTION



TRAFFIC CONTROL PROJECT NOTES

NONE 02/08 WSA DESIGN BY: WSA EVIEWED BY: JDK

SCALE:

DWG. BY:

REVISIONS

PROJ. REFERENCE NO. SHEET NO.

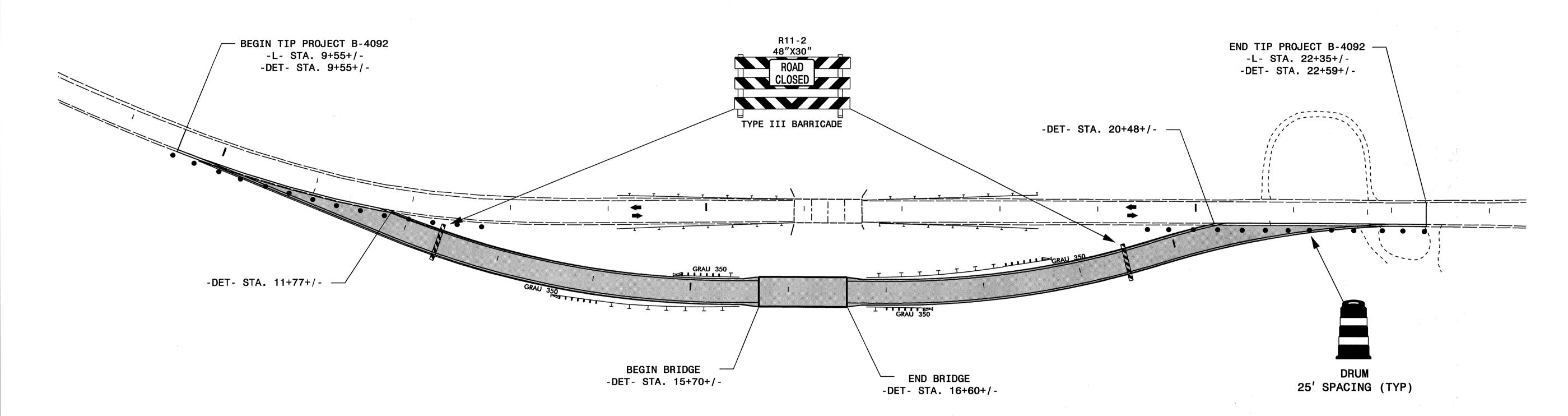
B-4092
TCP-3

1

10

15

20



PHASE 1

STEP 1: INSTALL ADVANCE WARNING SIGNS ON SR 1108 (LAKEWOOD DR) AS SHOWN ON SHEET TCP-5. (SEE LOCAL NOTE 1)

STEP 2: - INSTALL DRUMS AND BARRICADES AS SHOWN ON SHEET TCP-3

- USING ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 9 AS NEEDED, CONSTRUCT: (SEE LOCAL NOTES 2 AND 3)

- THE DETOUR UP TO THE EDGE AND ELEVATION FROM -DET- STA. 9+55+/TO -DET- STA. 11+77+/- AND FROM -DET- STA. 20+48+/-

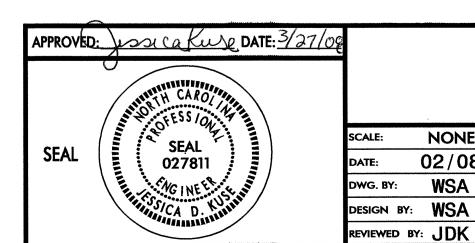
TO -DET- STA. 22+59+/-

- THE DETOUR UP TO BUT NOT INCLUDING THE FINAL LAYER FROM -DET- STA. 11+77+/- TO -DET- STA. 20+48+/- INCLUDING THE TEMPORARY STRUCTURE OVER ROCKFISH CREEK

STEP 3: USING ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 9 AS NEEDED, COMPLETE THE FOLLOWING:

- THE DETOUR TIE-INS FROM -DET- STA. 9+55+/- TO -DET- STA. 11+77+/AND FROM -DET- STA. 20+48+/- TO -DET- STA. 22+59+/-
- INSTALL THE FINAL SURFACE COURSE FROM -DET- STA. 9+55+/TO -DET- STA. 22+59+/-
- INSTALL TEMPORARY PAVEMENT MARKING AND TEMPORARY RAISED PAVEMENT MARKERS FROM -DET- STA. 9+55+/- TO -DET STA. 22+59+/-

STEP 4: USING FLAGGERS AND ROADWAY STANDARD DRAWING 1101.03 SHEET 3 OF 9, SHIFT TRAFFIC TO -DET- AND CLOSE THE EXISTING ROAD WITH DRUMS AND BARRICADES AS SHOWN ON TCP-4.



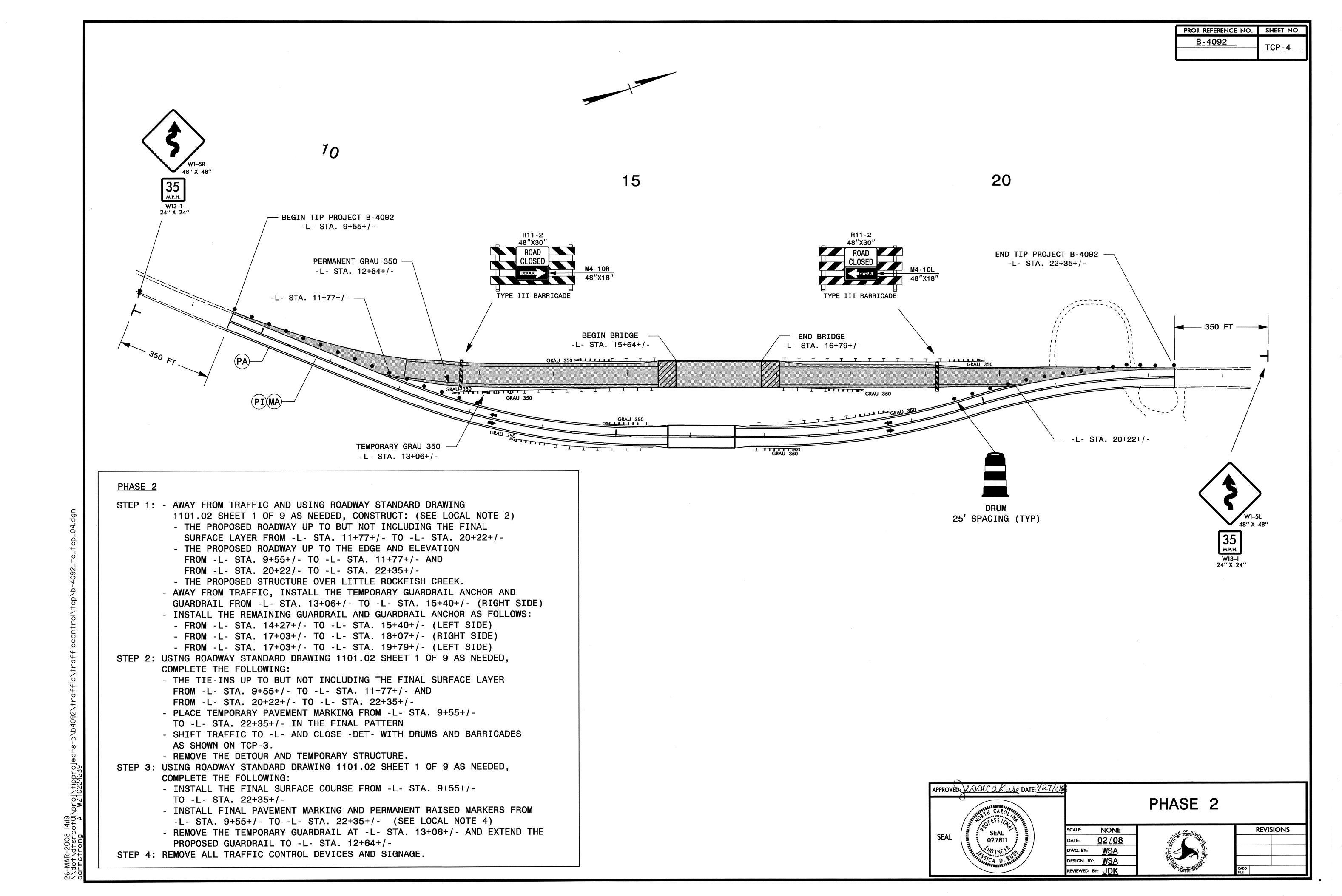
PHASE 1

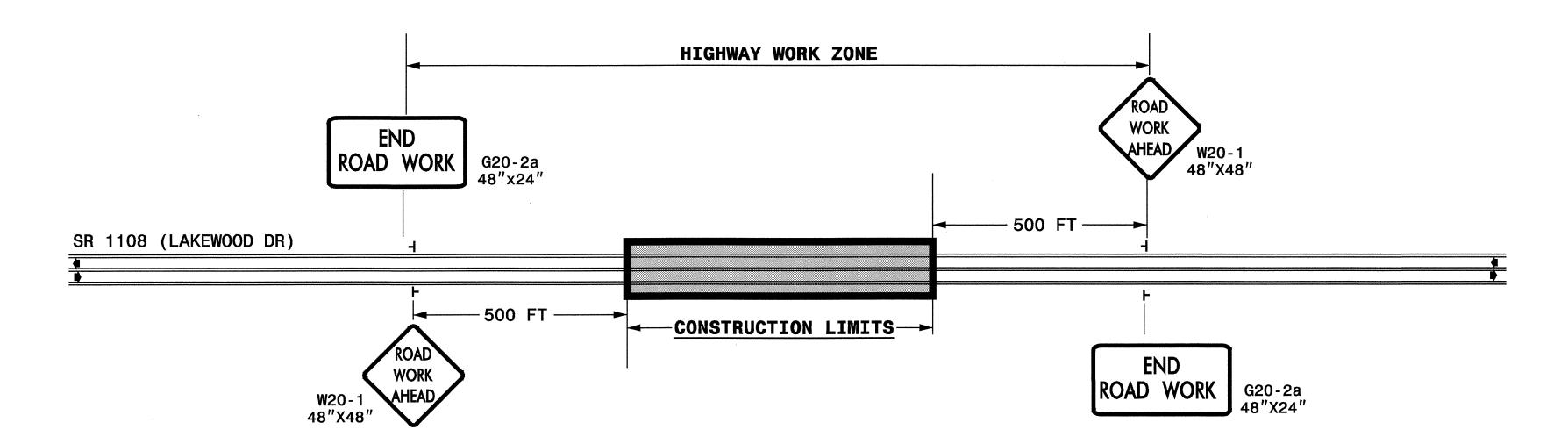
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REVISIONS

REVISIONS

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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 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.



ADVANCE WARNING SIGNS

SCALE: NONE	OH OF HIG.	REVISIONS
DATE: 02/08	NORTH CARD	
DWG. BY: WSA		
design by: WSA		
REVIEWED BY: JDK	TRAFFIC CONTE	CADD FILE