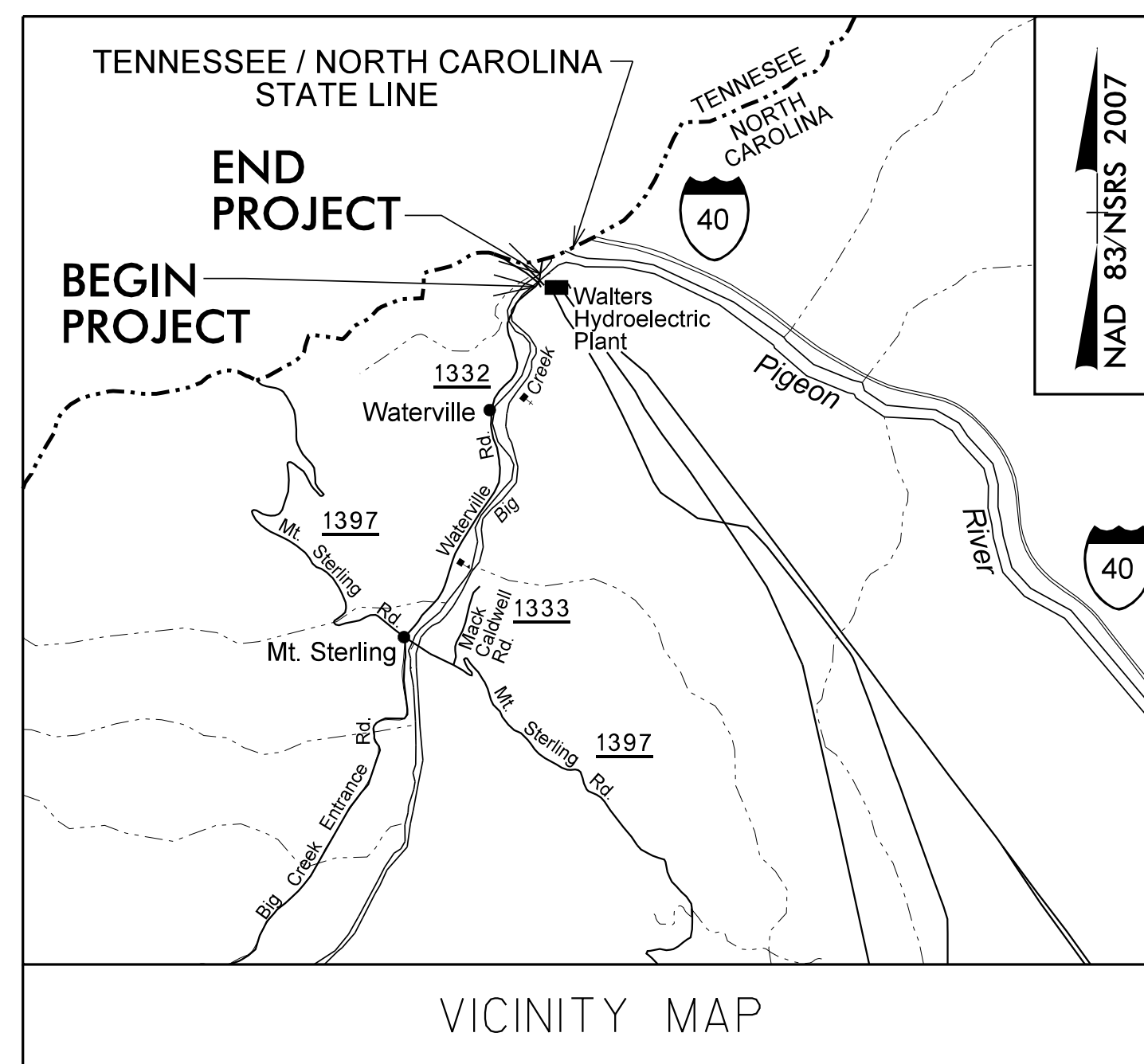
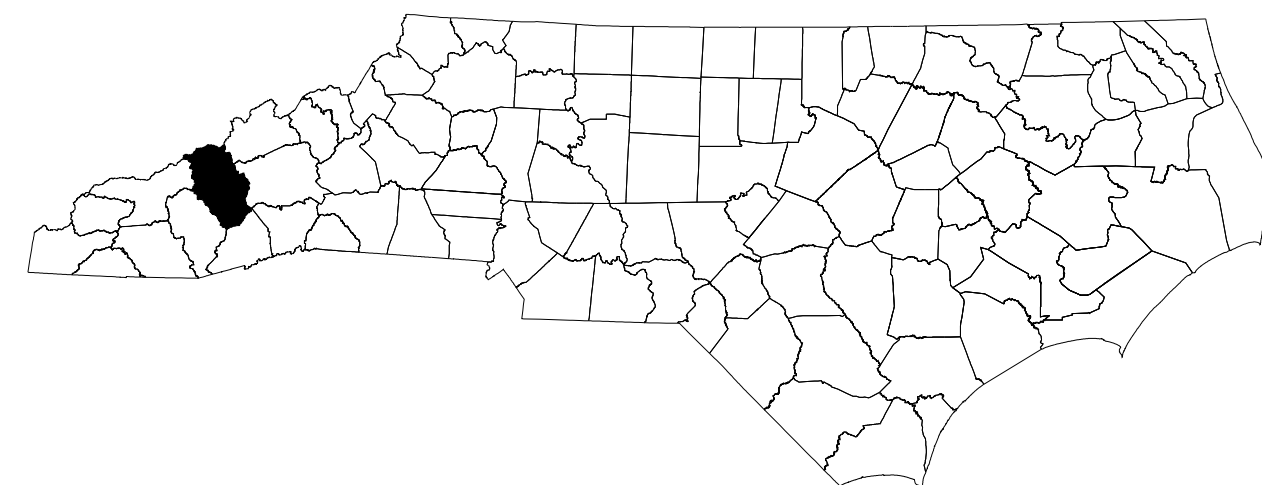


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**HAYWOOD COUNTY**  
**DIVISION 14**



**LOCATION: BRIDGE NO. 430175 OVER BIG CREEK ON SR 1332 (WATERVILLE RD.)**

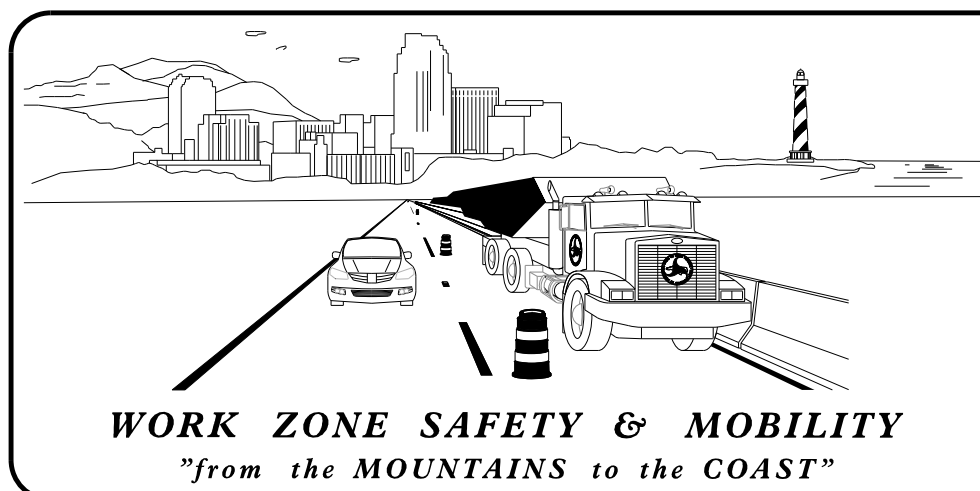
**INDEX OF SHEETS**

<u>SHEET NO.</u>	<u>TITLE</u>
TMP-1	TITLE SHEET, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES AND LOCAL NOTES)
TMP-2	TEMPORARY TRAFFIC CONTROL PHASING
TMP-2A	TEMPORARY SHORING NOTES
TMP-3	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-4	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL
TMP-5	TEMPORARY TRAFFIC CONTROL PHASE III DETAIL
TMP-6	TEMPORARY TRAFFIC CONTROL PHASE IV DETAIL
SIG-1	TEMPORARY PORTABLE TRAFFIC SIGNAL DESIGN

SHEET NO.  
TMP-1

**14SP.20441.1**

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**



**PLANS PREPARED BY:**

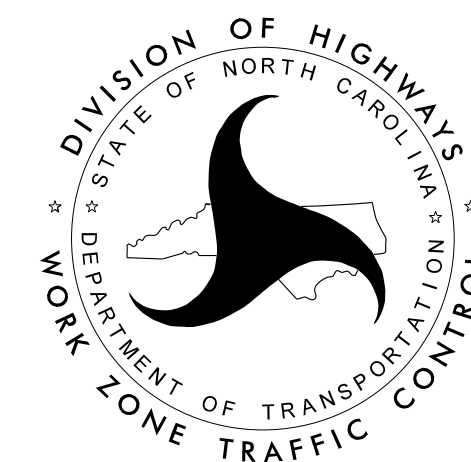
LLOYD DEWAYNE BROWN, PE, PLS  
**PROJECT ENGINEER**

CHRISTIAN GONZALEZ-MARTELL  
**PROJECT DESIGN ENGINEER**

**NCDOT CONTACTS:**

ZACHARY CLARK, PE  
**WESTERN WZTC ENGINEER**

ZACHARY T. SHULER, PE  
**DIV. 14 BRIDGE PROGRAM MANAGER**



Prepared in the Office of:  
**JOHNSON, MIRMIRAN, & THOMPSON, INC.**  
1318 Patton Avenue, Suite F,  
Asheville NC, 28806

**APPROVED:** 

**SEAL**

**DATE:** 12/15/2023



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**PROJECT:**

# ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
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
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

# LEGEND

## GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)

- WORK AREA
- TEMPORARY PAVEMENT
- PAVEMENT REMOVAL

## SIGNALS

- EXISTING
- PROPOSED
- PORTABLE
- DRIVEWAY SIGNAL
- PORTABLE TRAFFIC SIGNAL

## PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

## TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM
- SKINNY DRUM
- TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

## TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

## PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

## PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

## TEMPORARY PAVEMENT MARKING

SYMBOL	DESCRIPTION
	4" PAINT WHITE EDGELINE
	24" PAINT WHITE STOPBAR

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APPROVED: DATE: 12/15/2023 SEAL			ROADWAY STANDARD DRAWINGS & LEGEND
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>			

# GENERAL NOTES / LOCAL NOTES

PROJ. REFERENCE NO.	SHEET NO.
14SP.20441.1	TMP-1B

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 STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
SR 1332 WATERVILLE RD	MON-SUN 9 A.M. TO 4 P.M.	≤30 MINUTES
	MON-SUN 4 P.M. TO 9 A.M. (THE FOLLOWING MORNING)	DO NOT STOP

NOTE: OPERATIONS CONSIST OF TIE-INS, PM PLACEMENT, DRAINAGE AND UTILITY (OPEN-CUT), RETAINING WALL CONSTRUCTION, AND TRAFFIC SHIFTS

SR 1332 WATERVILLE RD	MON-SUN 9 A.M. TO 4 P.M.	<45 MINUTES ROCK BLASTING
	MON-SUN 4 P.M. TO 9 A.M. (THE FOLLOWING MORNING)	DO NOT STOP

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 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.
- E) 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.

H) 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) 200' IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

I) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

J) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

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

TRAFFIC BARRIER

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

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

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE/RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZZARD, 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.

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

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO 1101.05)

POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	15 FT
45 - 50	20 FT
55	25 FT
60 MPH OR HIGHER	30 FT

- LOCAL NOTES:
- 1) EMERGENCY VEHICLE ACCESS MUST BE MAINTAINED AT ALL TIMES.
  - 2) NOTIFY THE HAYWOOD COUNTY SCHOOL BOARD (828-456-2421) AND RIVER CONTROL OFFICER 30 DAYS BEFORE ANY LANE CLOSURES.
  - 3) PLACE "BRIDGE CONSTRUCTION AHEAD" (W21-81) WARNING SIGNS ALONG THE EDGE OF CREEK AND RIVER AS DIRECTED BY THE ENGINEER TO ALERT POSSIBLE RIVER USERS OF WORK BEING DONE.
  - 4) THE CONTRACTOR SHALL BE AWARE OF RIVER USERS, USING THE RIVER AND WILL HALT WORK IF SOMEONE IS SEEN APPROACHING THE BRIDGE AND SUSPEND ALL OVERHEAD WORK UNTIL RIVER USERS SAFELY LEAVE THE AREA.

TRAFFIC CONTROL DEVICES

N) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN 40 FEET FOR POSTED SPEED LIMITS LESS THAN 45 (MPH) AND NO GREATER THAN 80 FEET FOR POSTED SPEED LIMITS GREATER THAN OR EQUAL TO 45 (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

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

PAVEMENT MARKINGS

P) INSTALL TEMPORARY PAVEMENT MARKINGS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
SR 1332 (WATERVILLE ROAD)	PAINT	NONE

Q) 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.

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

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

MISCELLANEOUS


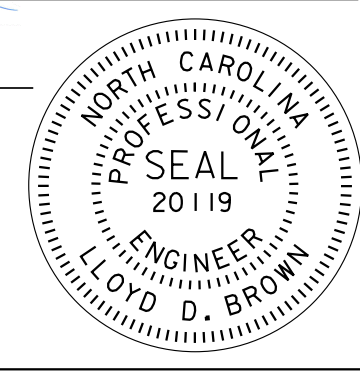

T) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 100 FT AND 200 FT RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

U) CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OTHERS TO PROVIDE A PEDESTRIAN TRANSPORT SERVICE THROUGH AND/OR AROUND THE PROJECT AS NEEDED. AT MINIMUM, THE PEDESTRIAN TRANSPORT SERVICE SHALL BE ON CALL BETWEEN THE HOURS OF 7:00 AM TO 8:00 PM MONDAY THROUGH SUNDAY. (SEE SPECIAL PROVISIONS)

## MANAGEMENT STRATEGIES

PHASE 1 DEPICTS TRAFFIC TO BE MAINTAINED ON THE EXISTING ROAD, BUT REDUCED TO ONE-LANE TWO-WAY PATTERN USING TEMPORARY PORTABLE SIGNALS AND PAVEMENT MARKINGS WHILE THE SB PROPOSED ROADWAY IS CONSTRUCTED, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.

PHASE 2 DEPICTS TRAFFIC SHIFTED TO THE PARTIALLY CONSTRUCTED ROADWAY ON A ONE-LANE TWO-WAY PATTERN USING TEMPORARY PORTABLE SIGNALS AND PAVEMENT MARKINGS WHILE THE NB PROPOSED ROADWAY IS CONSTRUCTED, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. A FLAGGING OPERATION WILL BE USED TO CONSTRUCT THE NEW TIE-INS.

APPROVED:  DATE: 5/9/2024 SEAL			TRANSPORTATION OPERATIONS PLAN
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

# PROJECT PHASING

PROJ. REFERENCE NO.	SHEET NO.
14SP.20441.1	TMP-2

## PLEASE NOTE: PROJECT SEQUENCING

(BRIDGES 174 & 175 WILL BE LET AS ONE PACKAGE)

- STEP 1: - CONSTRUCTION OF BRIDGE 175 IS FROM DATE OF AVAILABILITY AS SHOWN IN THE CONTRACT AND SHALL BE COMPLETED AS SHOWN ON THE PLANS.
- STEP 2: - NO CONSTRUCTION ACTIVITIES SHALL BE ALLOWED BETWEEN MAY 15TH AND SEPTEMBER 15TH FOR WORK ON BRIDGE 174, APPROACHES TO BRIDGE 174, OR ON THE ROCK NAIL WALL DUE TO RAFTING ACTIVITIES DURING THE SUMMER MONTHS ADJACENT TO BRIDGE 174. CONSTRUCTION OF THE ROCK NAIL WALL AND BRIDGE 174 SHALL BE COMPLETED AS SHOWN IN THE PLANS.

NOTE TO CONTRACTOR: SEE CONTRACT FOR ICT'S, LIQUIDATED DAMAGES, AND CONTRACT PROVISIONS FOR HAYWOOD 175.

### PHASE I

- STEP 1: - ERECT WORK ZONE ADVANCED WARNING SIGNS USING DETAIL DRAWINGS FOR WORK ZONE SIGNS USING ROADWAY STANDARD DRAWINGS NO. 1101.01, SHEET 3 OF 3
- STEP 2: USING ROADWAY STANDARD DRAWINGS NO. 1101.02, SHEET 1 OF 19, AND FLAGGERS AS NECESSARY, PERFORM THE FOLLOWING ON SR 1332:
- CLOSE PEDESTRIAN ACCESS TO PROJECT NEAR -L- STA.10+80, -Y- STA.10+72, AND -L- STA.17+00. PEDESTRIAN ACCESS SHALL REMAIN CLOSED FOR THE DURATION OF CONSTRUCTION. WHEN NECESSARY, PEDESTRIANS SHALL BE DETOURED USING A PEDESTRIAN TRANSPORT SERVICE. (SEE SHEET TMP-4)
  - DEPLOY WORK ZONE TRAFFIC CHANNELIZATION DEVICES PER SHEET TMP-3 AND ROADWAY STANDARD DRAWINGS NO. 1130.01 AND NO. 1145.01
  - CONSTRUCT TEMPORARY PAVEMENT FOR ON-SITE DETOUR FROM -L- STA. 11+60 +/- TO -L- STA. 12+95 +/- (SEE SHEET TMP-3)
  - INSTALL TEMPORARY PAVEMENT MARKINGS ALONG DETOUR ROUTE (SEE SHEET TMP-3)

NOTE: AS NECESSARY, USE ROADWAY STANDARD DRAWING NO. 1101.06, SHEET 1 OF 1, FOR PLACEMENT OF ADVANCED WARNING SIGNS FOR BLASTING ZONE.

### PHASE II


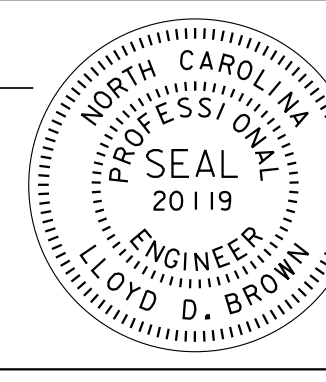
- STEP 1: - USING ROADWAY STANDARD DRAWINGS NO. 1101.02, SHEET 17 OF 19, INSTALL PORTABLE TRAFFIC SIGNALS AS REQUIRED IN THE SIGNAL PLANS (SEE SHEET SIG-1)
- NOTE: AS NECESSARY, SET ALL SIGNALS TO RED FOR OPERATIONS REQUIRING STOPPING OF TRAFFIC.
- NOTE: STEP 2 SHALL BE COMPLETED IN A CONTINUOUS OPERATION. MAINTAIN SIDEWALK CLOSURES, AND PEDESTRIAN TRANSPORT SERVICE, AS PLACED IN PHASE I.
- STEP 2: USING ROADWAY STANDARD DRAWINGS NO. 1101.02, SHEET 1 OF 19, AND FLAGGERS AS NECESSARY, PERFORM THE FOLLOWING ON SR 1332:
- REMOVE, AS NECESSARY, EXISTING PAVEMENT MARKINGS, AND PLACE TEMPORARY PAVEMENT MARKINGS (PAINT), (SEE SHEET TMP-4)
  - DEPLOY WORK ZONE TRAFFIC CHANNELIZATION DEVICES PER SHEET TMP-4 AND ROADWAY STANDARD DRAWINGS NO. 1130.01 AND NO. 1145.01
  - ACTIVATE PORTABLE TRAFFIC SIGNALS AND DIRECT -L- SR 1332 (WATERVILLE ROAD) TRAFFIC INTO A ONE-LANE TWO-WAY PATTERN ALONG -DET- AND EXISTING SOUTHBOUND LANE OF SR 1332 (WATERVILLE ROAD) (SEE SHEET TMP-4)
- STEP 3: USING ROADWAY STANDARD DRAWINGS NO. 1101.02, SHEETS 1 & 17 OF 19, AND 1101.03, SHEETS 3 & 8 OF 9, AND FLAGGERS AS NECESSARY, PERFORM THE FOLLOWING ON -L- SR 1332 (WATERVILLE ROAD):
- BEGIN UTILITY AND DRAINAGE CONSTRUCTION AS SHOWN ON CONSTRUCTION PLANS
  - INSTALL WATER LINES AS SHOWN ON UTILITY CONSTRUCTION (UC) PLANS
  - INSTALL TEMPORARY GUARDRAIL FROM -L- STA. 12+55 +/- TO -L- STA. 12+90 +/-, AND FROM -L- STA. 13+75 +/- TO -L- STA. 14+30 +/- (SEE SHEET TMP-4)
  - INSTALL TEMPORARY SHORING NO. 1 FROM -L- STA. 12+55 +/- TO -L- STA. 12+90 +/-, AND TEMPORARY SHORING NO. 2 FROM -L- STA. 13+75 +/- TO -L- STA. 14+14 +/- (SEE SHEET TMP-4)
- STEP 4: USING ROADWAY STANDARD DRAWINGS NO. 1101.02, SHEET 1 & 17 OF 19, AND 1101.03, SHEET 3 OF 9, AND FLAGGERS AS NECESSARY, PERFORM THE FOLLOWING ON -L- SR 1332 (WATERVILLE ROAD):
- REMOVE PEDESTIAN WALKWAY ATTACHED TO THE EXISTING BRIDGE 175 AND A PORTION OF THE EXISTING WINGWALLS.
  - CONSTRUCT BRIDGE STRUCTURE NO.430175 PER STAGE 1 OF THE STRUCTURE PLANS, AND INSTALL TEMPORARY GUARDRAIL ON LEFT SIDE OF PROPOSED BRIDGE (STAGE 1) FROM -L- STA. 12+39 +/- TO -L- STA. 14+14 +/-
  - CONSTRUCT -L- SR 1332 (WATERVILLE ROAD) FROM STA 11+00 +/- TO STA 16+30 +/- NORTHBOUND LANE (RIGHT SIDE), BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE EXCLUDING BRIDGE DECK, AND PLACE TEMPORARY PAVEMENT AS SHOWN ON PLANS (SEE SHEET TMP-4)
  - INSTALL TRAFFIC RATED STEEL PLATE AT INTERIOR BENT JOINT ON STAGE I OF THE NEW STRUCTURE. STEEL PLATE SHALL BE ANCHORED UTILIZING THE 12 THREADED INSERTS, ADJACENT TO JOINT, PROVIDED FOR FUTURE SIDEWALK. STEEL PLATE TO BE REMOVED IN PHASE IV (SEE DETAIL 1, TMP-4)

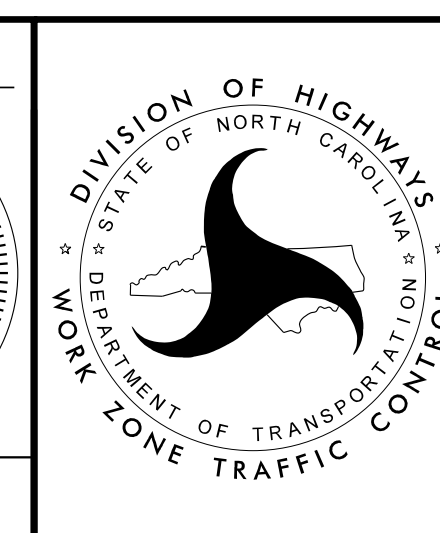
### PHASE III

- NOTE: STEP 1 SHALL BE COMPLETED IN A CONTINUOUS OPERATION. MAINTAIN SIDEWALK CLOSURES, AND PEDESTRIAN TRANSPORT SERVICE, AS PLACED IN PHASE I.
- STEP 1: USING ROADWAY STANDARD DRAWINGS NO. 1101.02, SHEET 1 OF 19, AND FLAGGERS AS NECESSARY, PERFORM THE FOLLOWING ON -L- SR 1332 (WATERVILLE ROAD):
- REMOVE, AS NECESSARY, EXISTING PAVEMENT MARKINGS, AND PLACE TEMPORARY PAVEMENT MARKINGS (PAINT), (SEE SHEET TMP-5)
  - DEPLOY WORK ZONE TRAFFIC CHANNELIZATION DEVICES PER SHEET TMP-5 AND ROADWAY STANDARD DRAWINGS NO. 1130.01 AND NO. 1145.01
  - ACTIVATE PORTABLE TRAFFIC SIGNALS AND DIRECT -L- SR 1332 (WATERVILLE ROAD) TRAFFIC INTO A ONE-LANE TWO-WAY PATTERN IN THE NORTHBOUND LANE OF -L- SR 1332 (WATERVILLE ROAD) (SEE SHEET TMP-5)
- STEP 2: USING ROADWAY STANDARD DRAWINGS NO. 1101.02, SHEETS 1 & 17 OF 19, AND NO. 1101.03, SHEET 8 OF 9, AND FLAGGERS AS NECESSARY, PERFORM THE FOLLOWING ON -L- SR 1332 (WATERVILLE ROAD):
- RELOCATE WATER LINES INSTALLED IN PHASE II, STEP 3, AS SHOWN ON UTILITY CONSTRUCTION (UC) PLANS
  - REMOVE EXISTING STRUCTURE NO. 430175 (SEE STRUCTURE PLANS), AND REMOVE ALL TEMPORARY SHORING PLACED IN STEP 3, PHASE II
- STEP 3: - AWAY FROM TRAFFIC, CONSTRUCT BRIDGE STRUCTURE NO. 430175 PER STAGE 2 OF THE STRUCTURE PLANS, INSTALL PROPOSED SOUTHBOUND GUARDRAIL, AND CONSTRUCT RETAINING WALLS WITH ANCHOR RODS PER WALL PLANS FROM -L- STA. 12+19 +/- TO -L- STA. 12+49 +/- AND -L- STA. 14+00 +/- TO -L- STA. 14+25 +/- (DO NOT STOP TRAFFIC FOR LONGER THAN ALLOWED ON SHEET TMP-3B)
- USING ROADWAY STANDARD DRAWINGS NO. 1101.02, SHEETS 1 & 17 OF 19, AND FLAGGERS AS NECESSARY, CONSTRUCT -L- SR 1332 (WATERVILLE ROAD) FROM STA 11+00 +/- TO STA 16+30 +/- OF SOUTHBOUND LANE (LEFT SIDE), BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE (SEE SHEET TMP-5)
  - REMOVE TEMPORARY PAVEMENT USED FOR ON-SITE DETOUR INSTALLED IN PHASE I

### PHASE IV

- NOTE: STEP 1 SHALL BE COMPLETED IN A CONTINUOUS OPERATION. MAINTAIN SIDEWALK CLOSURES, AND PEDESTRIAN TRANSPORT SERVICE, AS PLACED IN PHASE I.
- STEP 1: USING ROADWAY STANDARD DRAWINGS NO. 1101.02, SHEET 1 OF 19, AND FLAGGERS AS NECESSARY, PERFORM THE FOLLOWING ON SR 1332:
- REMOVE, AS NECESSARY, EXISTING PAVEMENT MARKINGS, AND PLACE TEMPORARY PAVEMENT MARKINGS (PAINT), (SEE SHEET TMP-6)
  - DEPLOY WORK ZONE TRAFFIC CHANNELIZATION DEVICES PER SHEET TMP-6 AND ROADWAY STANDARD DRAWINGS NO. 1130.01 AND NO. 1145.01
  - ACTIVATE PORTABLE TRAFFIC SIGNALS AND DIRECT -L- SR 1332 (WATERVILLE ROAD) TRAFFIC INTO A ONE-LANE TWO-WAY PATTERN ALONG THE NEWLY CONSTRUCTED SOUTHBOUND LANE OF SR 1332 (WATERVILLE ROAD) (SEE SHEET TMP-6)
- STEP 2: USING ROADWAY STANDARD DRAWINGS NO. 1101.02, SHEETS 1 & 17 OF 19, AND NO. 1101.03, SHEET 8 OF 9, AND FLAGGERS AS NECESSARY, REMOVE TEMPORARY PAVEMENT AS SHOWN ON PLANS, CONSTRUCT THE SIDEWALK, AND CURB AND GUTTER ALONG RIGHT SIDE PER STAGE 3 OF THE STRUCTURE PLANS, COMPLETE UTILITY AND DRAINAGE WORK BEGUN DURING PHASE II STEP 3, AND REMOVE TEMPORARY GUARDRAIL (SEE SHEET TMP-6)
- STEP 3: USING ROADWAY STANDARD DRAWINGS NO. 1101.02, SHEETS 1 & 17 OF 19, AND FLAGGERS AS NECESSARY, DEACTIVATE PORTABLE TRAFFIC SIGNALS AND REMOVE TEMPORARY PAVEMENT MARKINGS PLACED OUTSIDE THE PROJECT LIMITS
- STEP 4: USING ROADWAY STANDARD DRAWINGS NO. 1101.02, SHEET 1 OF 19 AND FLAGGERS AS NECESSARY, PLACE THE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS (PAINT) ON THE ENTIRE PROJECT (SEE SHEET PMP-2)
- STEP 5: ONCE ALL REMAINING CONSTRUCTION IS COMPLETE, REMOVE ALL TEMPORARY TRAFFIC CONTROL DEVICES AND PLACE TRAFFIC IN ITS FINAL TRAFFIC PATTERN

APPROVED:   
 DATE: 12/15/2023  
 SEAL  
  
 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



# PHASING

TEMPORARY SHORING LOCATION NO. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">01</span>	SEE SHEET TMP-4 ESTIMATED QUANTITY = 210 SF
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-L- STA. 12+55 ± TO -L- STA. 12+90 ±  
 LENGTH = 35' AVERAGE HEIGHT = 6'


1. "FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE SHEETS 2G-1 THRU 2G-4 IN ROADWAY PLANS AND TEMPORARY SHORING PROVISION."
2. "BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS."
3. "DESIGN TEMPORARY SHORING FROM -L- STATION 12+55 ± TO STATION 12+90 ±, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUND WATER ELEVATIONS:
  - 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
  - GROUNDWATER ELEVATION = 1419 FEET"
4. "LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM -L- STATION 12+55 ± TO STATION 12+90 ±. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION."
5. "IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR THE TEMPORARY SHORING FROM -L- STATION 12+55 ± TO STATION 12+90 ±. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISIONS."
6. AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM -L- STATION 12+55 ± TO STATION 12+90 ±. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.
7. AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM -L- STATION 12+55 ± TO STATION 12+90 ±. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

TEMPORARY SHORING LOCATION NO. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">02</span>	SEE SHEET TMP-4 ESTIMATED QUANTITY = 234 SF
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-L- STA. 13+75 ± TO -L- STA. 14+14 ±  
 LENGTH = 39' AVERAGE HEIGHT = 6'

1. "FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE SHEETS 2G-1 THRU 2G-4 IN ROADWAY PLANS AND TEMPORARY SHORING PROVISION."
2. "BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS."
3. "DESIGN TEMPORARY SHORING FROM -L- STATION 13+75 ± TO STATION 14+14 ±, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUND WATER ELEVATIONS:
  - 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
  - GROUNDWATER ELEVATION = 1419 FEET"
4. "LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM -L- STATION 13+75 ± TO STATION 14+14 ±. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION."
5. "IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR THE TEMPORARY SHORING FROM -L- STATION 13+75 ± TO STATION 14+14 ±. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISIONS."
6. AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM -L- STATION 13+75 ± TO STATION 14+14 ±. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.
7. AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM -L- STATION 13+75 ± TO STATION 14+14 ±. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING ENGINEER. THE DOCUMENT WAS SUBMITTED TO JMT ON (JULY 22, 2019) AND SEALED BY A PROFESSIONAL ENGINEER, (WILLIAM F. EDELEN, JR), LICENSE #11058. SEE STANDARD TEMPORARY SHORING AND STANDARD TEMPORARY WALL SHEETS (2G-1 THRU 2G-4 IN ROADWAY PLANS).


	TEMPORARY SHORING NOTES
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 User:scm1ddle




W20-4  
48" X 48"

(A)



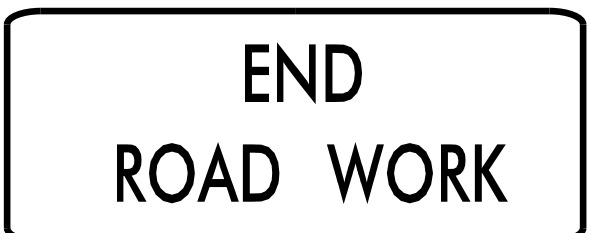
W3-4  
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(B)



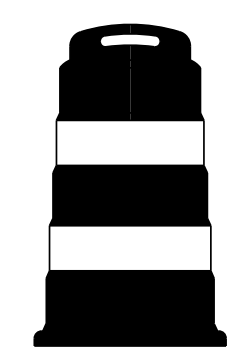
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48" X 48"

(C)



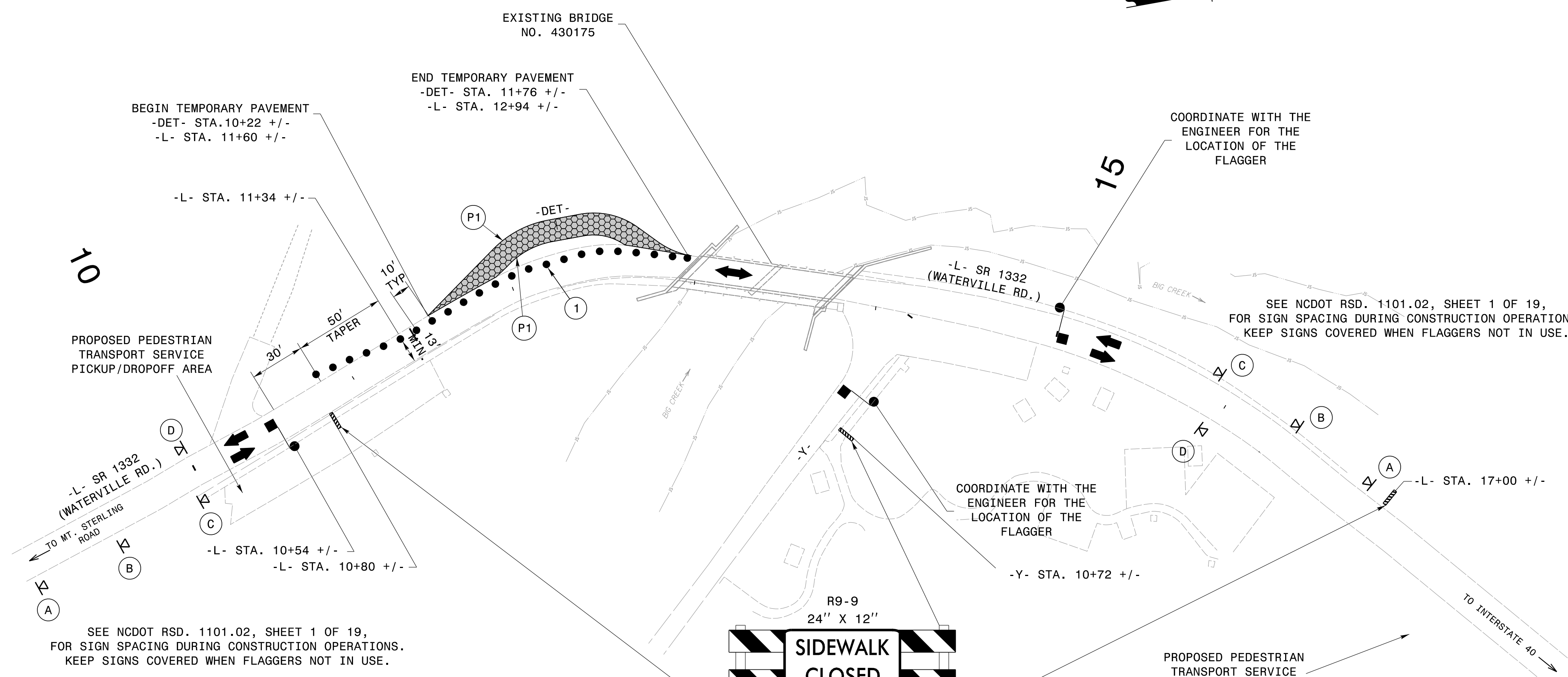
G20-2 A  
48" X 24"

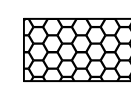
(D)




(1)

TEMPORARY PAVEMENT MARKINGS:  
PLACE 250 LF OF 4" WHITE EDGE LINE (P1)  
(STEP 2, PHASE I)



 DENOTES TEMPORARY PAVEMENT

 DENOTES WORK AREA

SET CMS BOARD ON  
SR 1332 (WATERVILLE RD.)  
JUST NORTH OF THE INTERSECTION OF  
SR 1332 AND SR 1397 (MT. STERLING RD.)

MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK AHEAD	3/4 MILE USE CAUTION

CHANGEABLE MESSAGE SIGN

SET CMS BOARD ON  
SR 1332 (WATERVILLE RD.)  
APPROXIMATELY ONE MILE FROM  
THE NORTH END OF PROJECT LIMITS

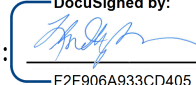
MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK AHEAD	1 MILE USE CAUTION

CHANGEABLE MESSAGE SIGN

NOTE: USE CMS BOARDS TO ALERT MOTORIST DURING BLASTING OPERATION OR AS NEEDED AS DIRECTED BY THE ENGINEER.

SCALE 1"=40'


MAINTAIN ACCESS TO DRIVEWAYS DURING CONSTRUCTION

APPROVED: 

DATE: 12/15/2023

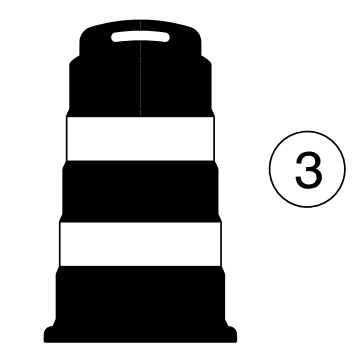
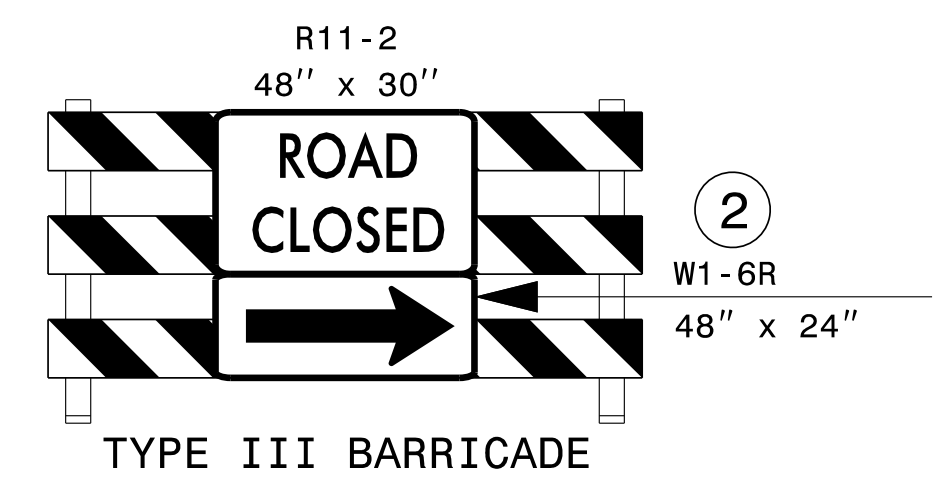
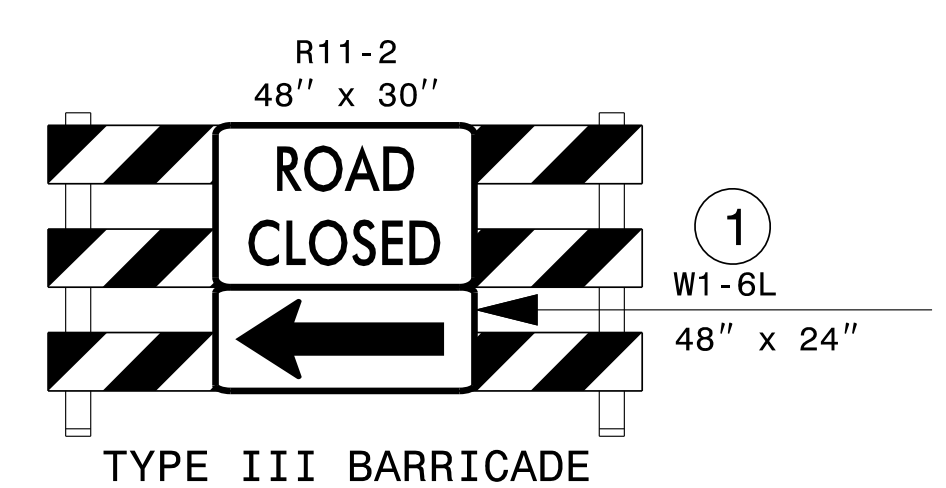
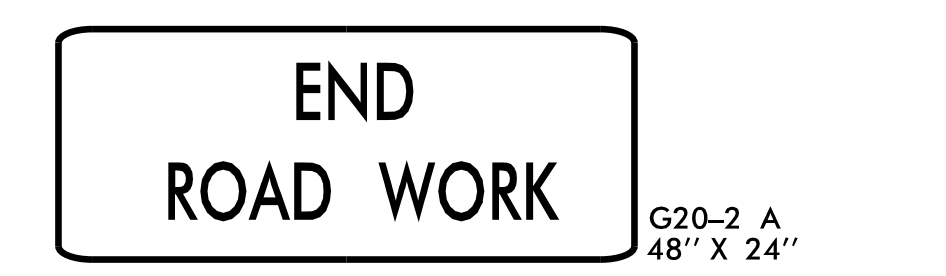
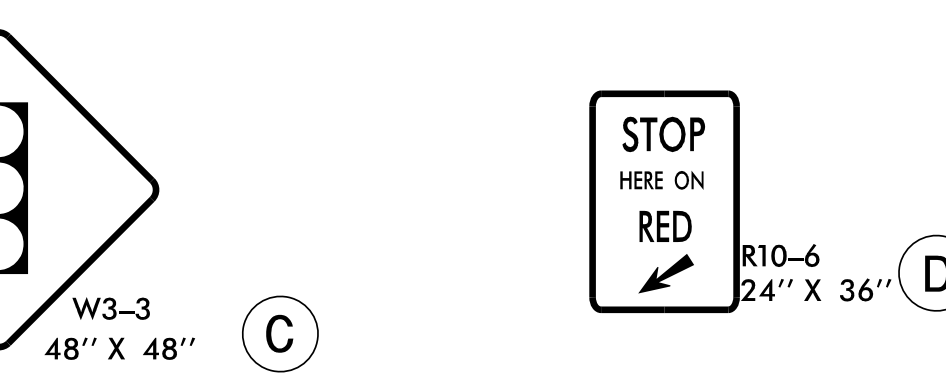
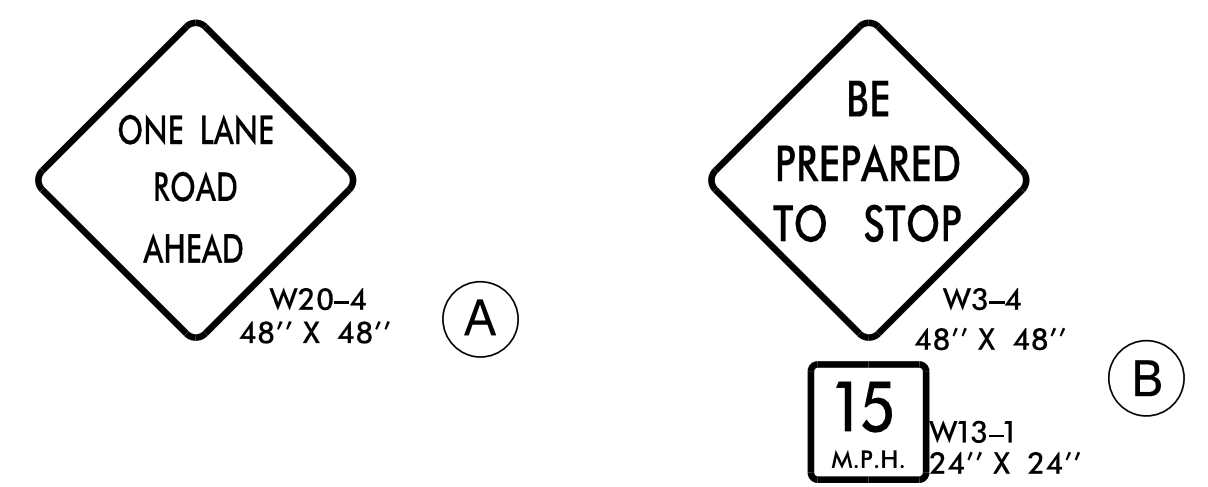
SEAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

**PHASE I**

PROJ. REFERENCE NO.	SHEET NO.
14SP.20441.1	TMP-4



SET CMS BOARD ON SR 1332 (WATERVILLE RD.) JUST NORTH OF THE INTERSECTION OF SR 1332 AND SR 1397 (MT. STERLING RD.)

MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK AHEAD	3/4 MILE USE CAUTION

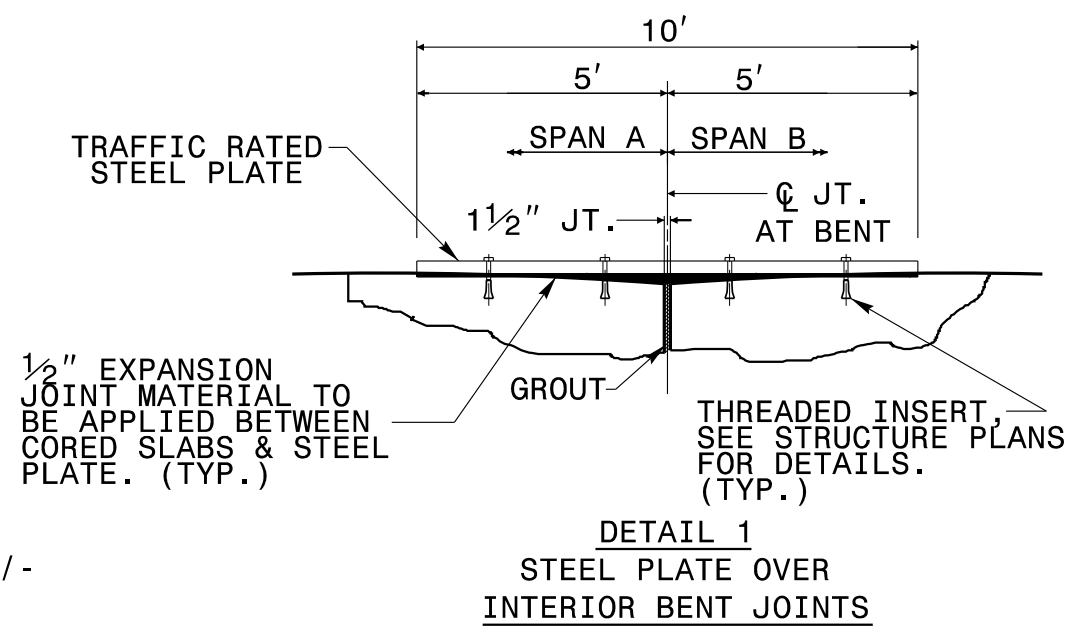
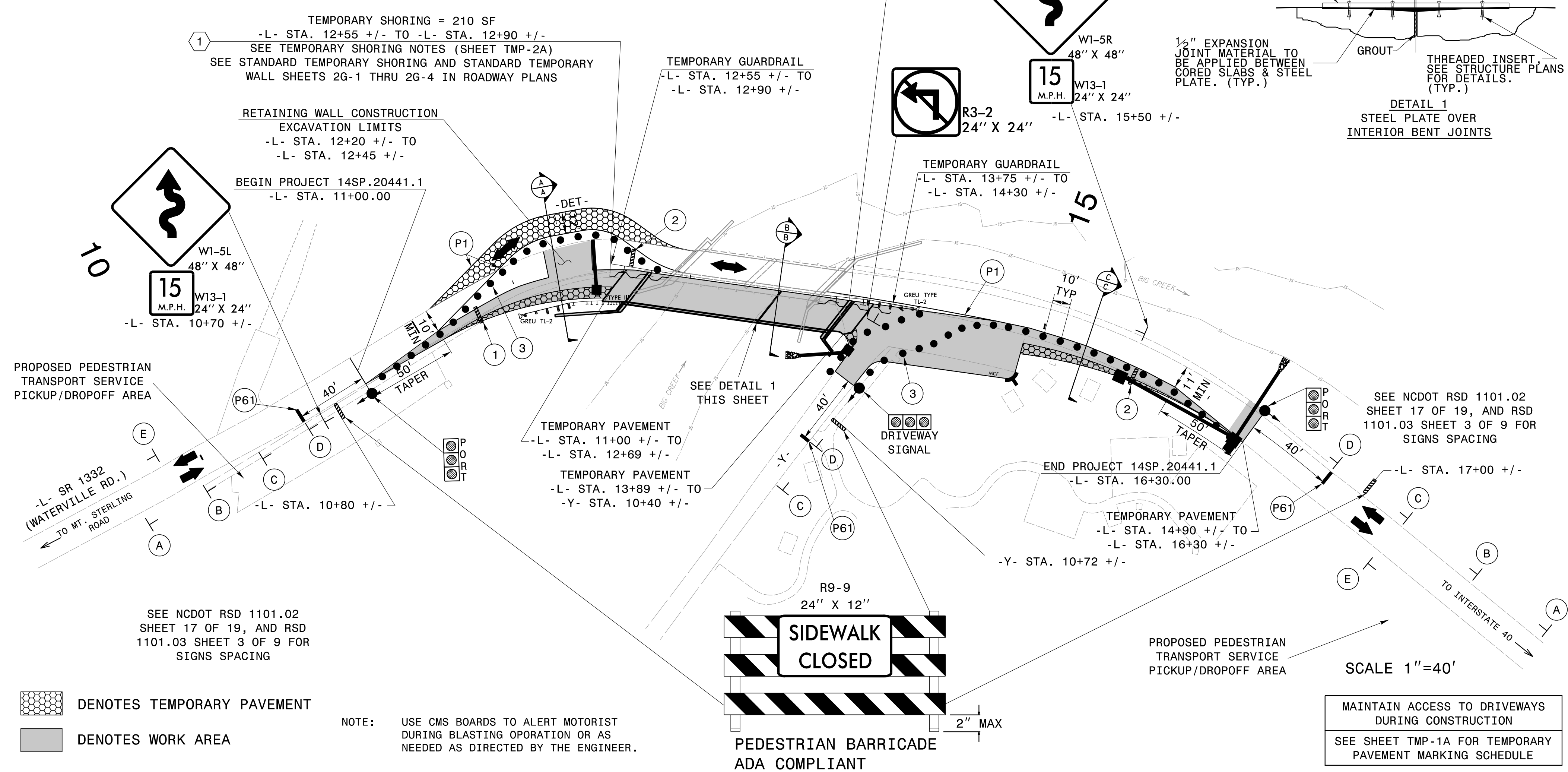
CHANGEABLE MESSAGE SIGN

SET CMS BOARD ON SR 1332 (WATERVILLE RD.) APPROXIMATELY ONE MILE FROM THE NORTH END OF PROJECT LIMITS

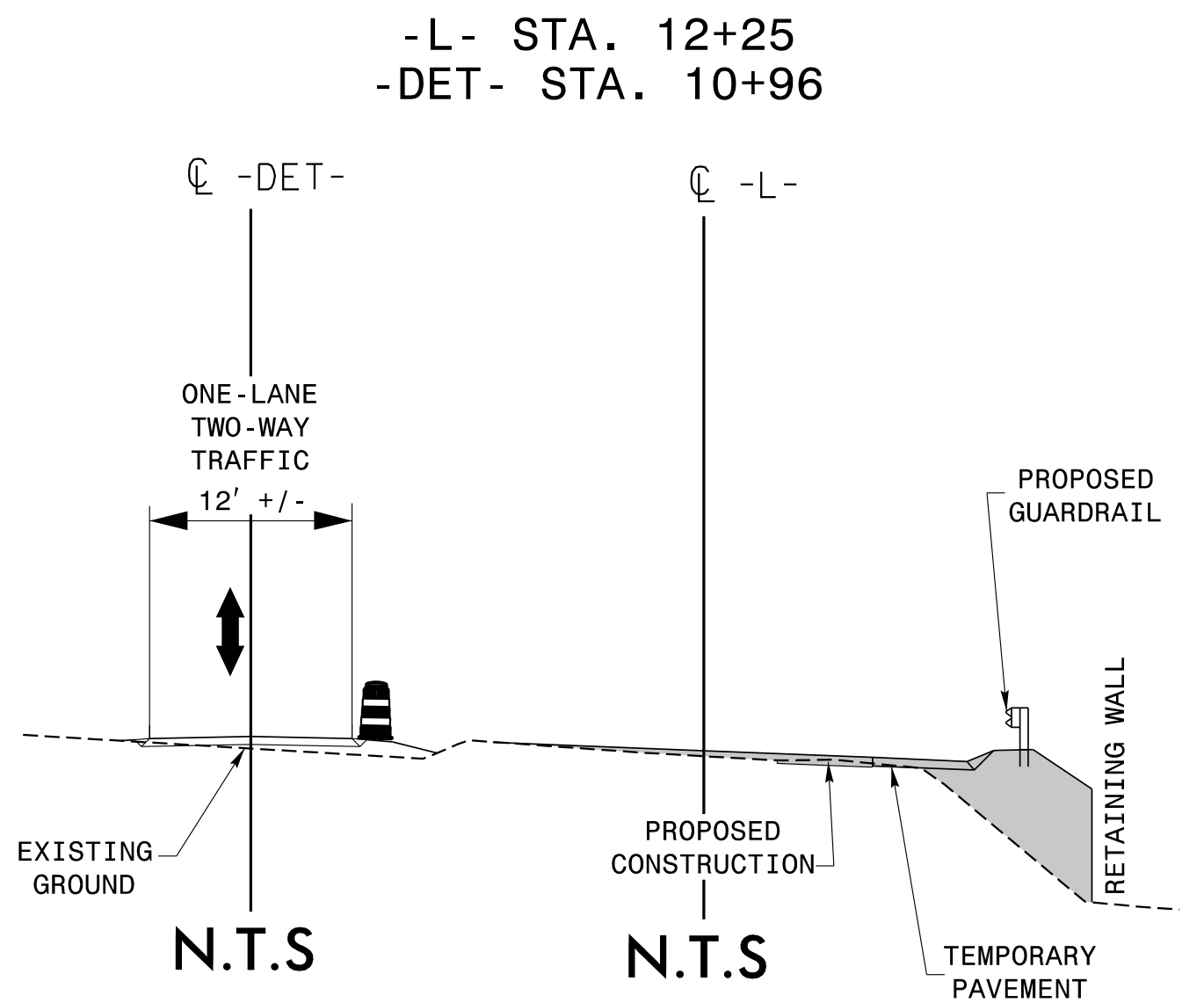
MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK AHEAD	1 MILE USE CAUTION

CHANGEABLE MESSAGE SIGN

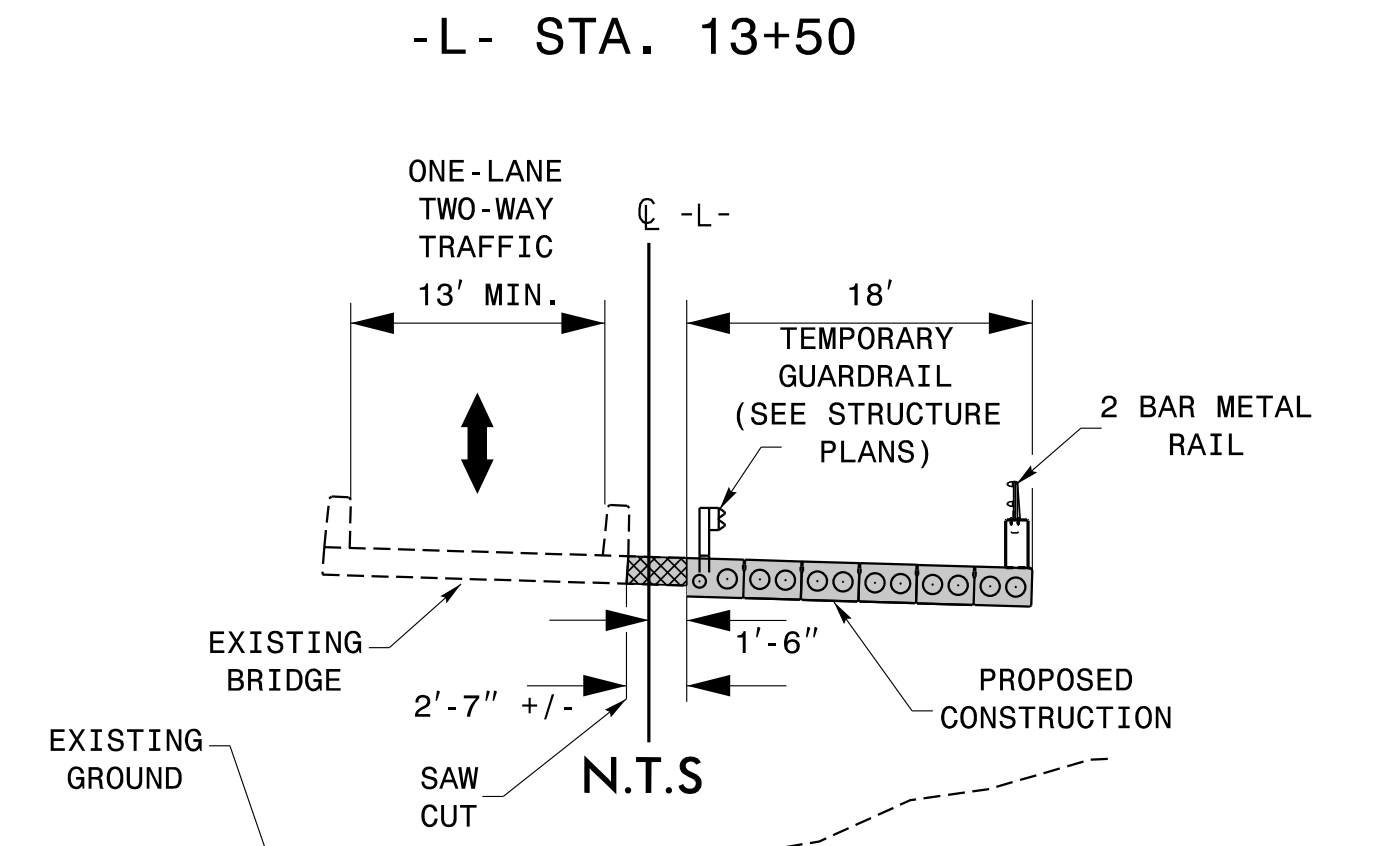
TEMPORARY PAVEMENT MARKINGS:  
PLACE 24 LF OF 24" WHITE STOPBAR (P61) (STEP 2, PHASE II)  
PLACE 392 LF OF 4" WHITE EDGE LINE (P1) (STEP 2, PHASE II)



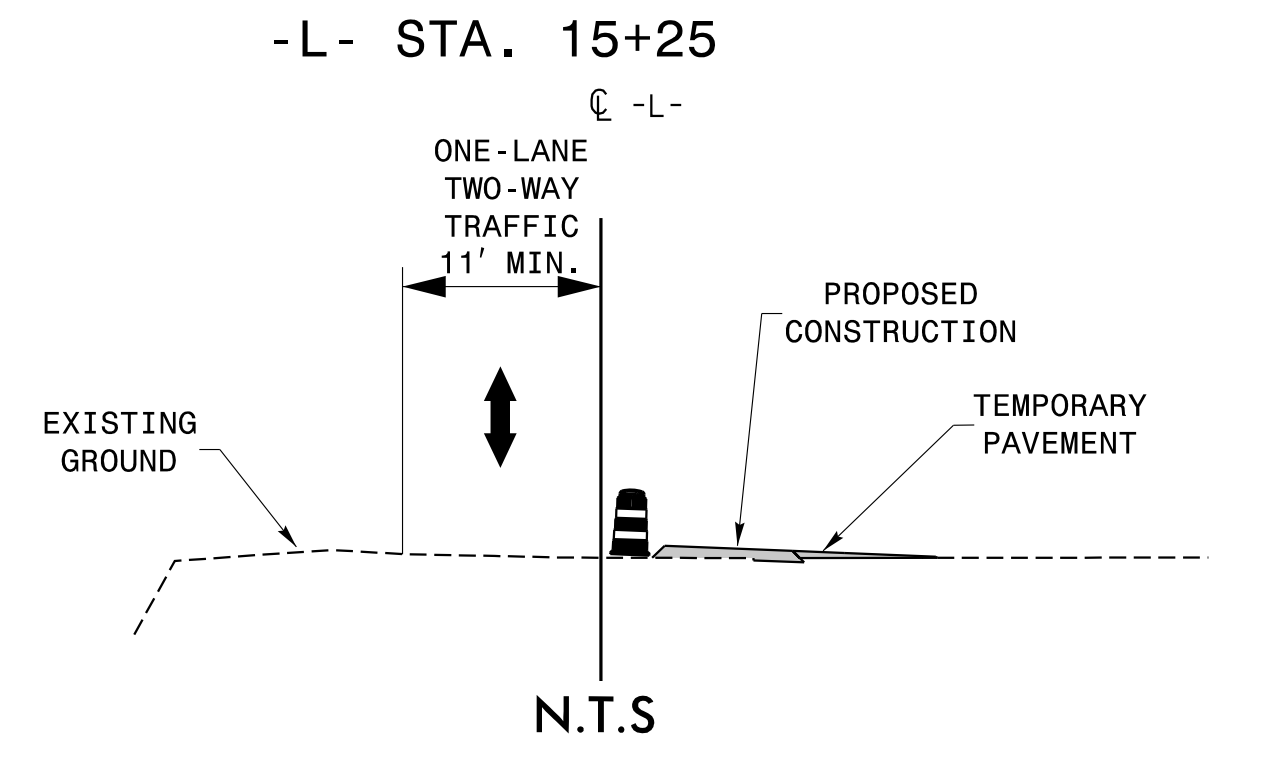
### SECTION A-A



### SECTION B-B



### SECTION C-C



APPROVED: [Signature]

DATE: 12/15/2023

SEAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL

2019

ENGINEER

LYDD D. BROWN

DIVISION OF HIGHWAYS

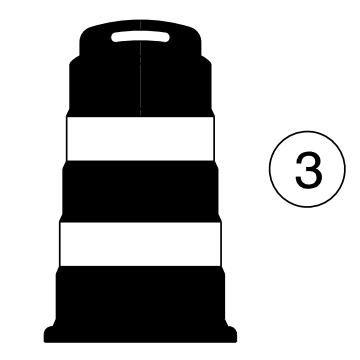
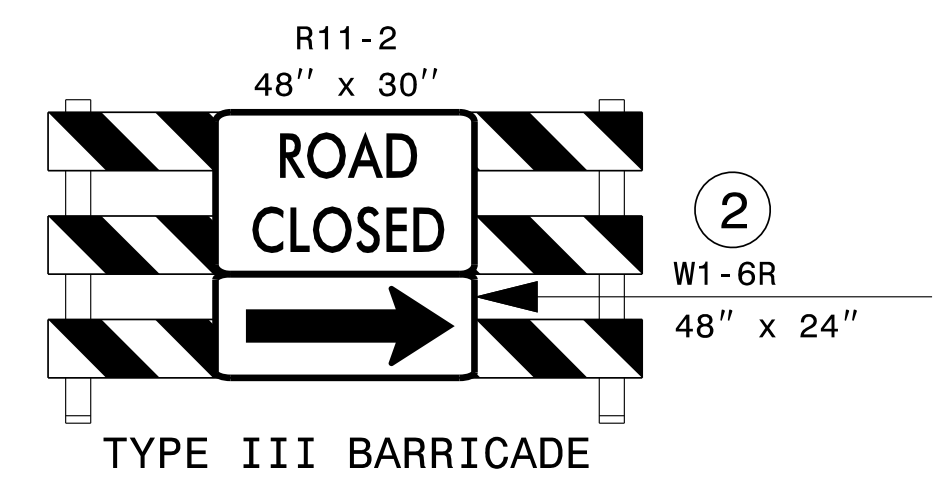
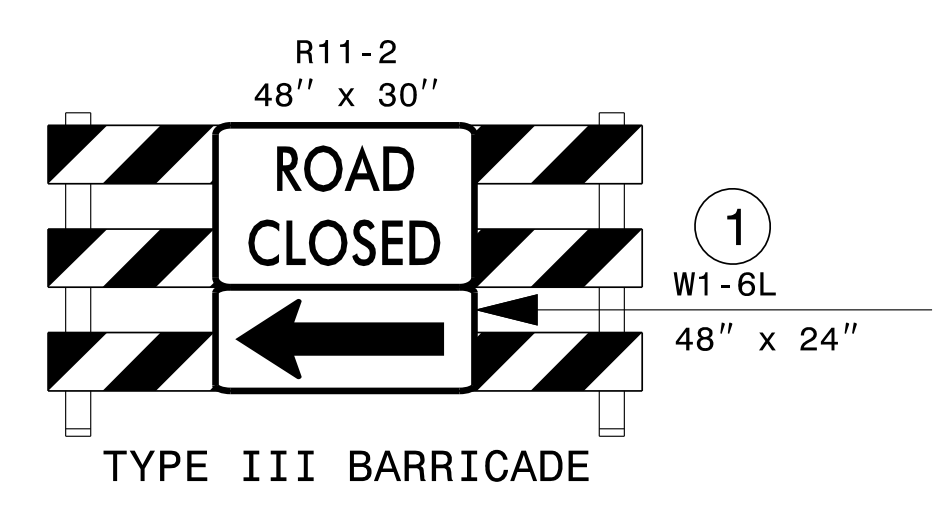
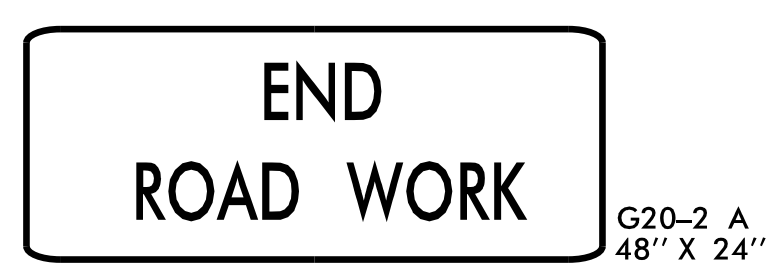
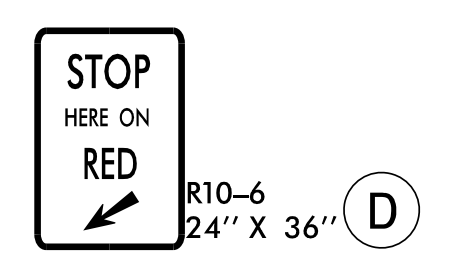
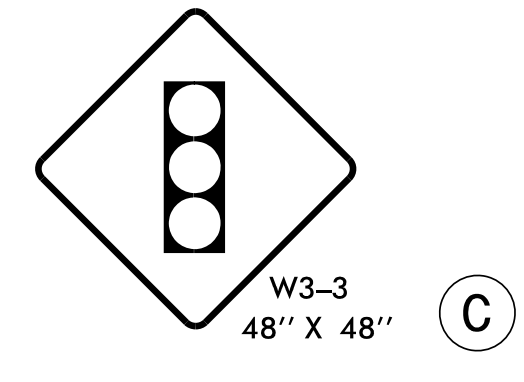
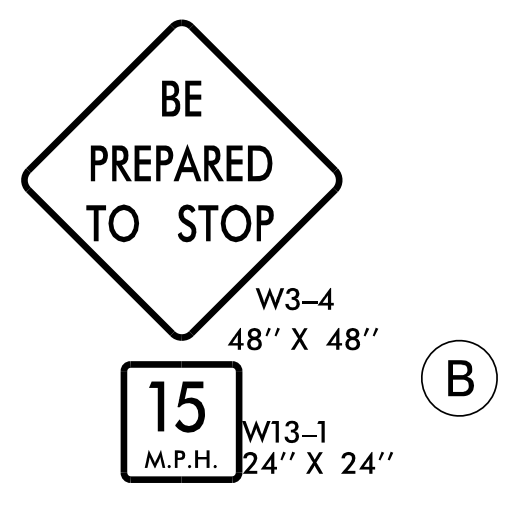
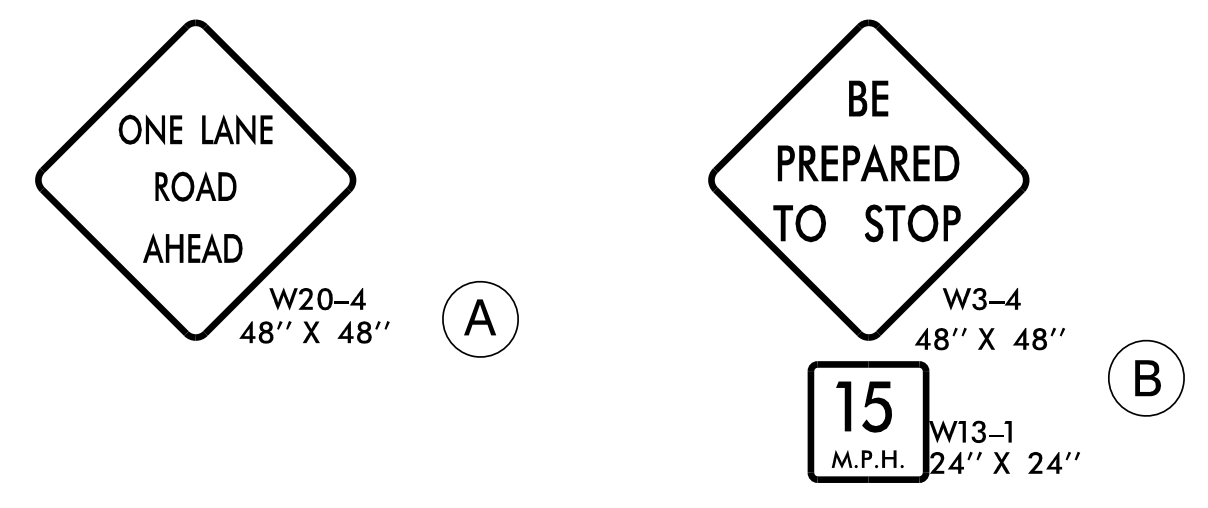
STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

WORK ZONE TRAFFIC CONTROL

# PHASE II

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SET CMS BOARD ON SR 1332 (WATERVILLE RD.) JUST NORTH OF THE INTERSECTION OF SR 1332 AND SR 1397 (MT. STERLING RD.)

MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK AHEAD	3/4 MILE USE CAUTION

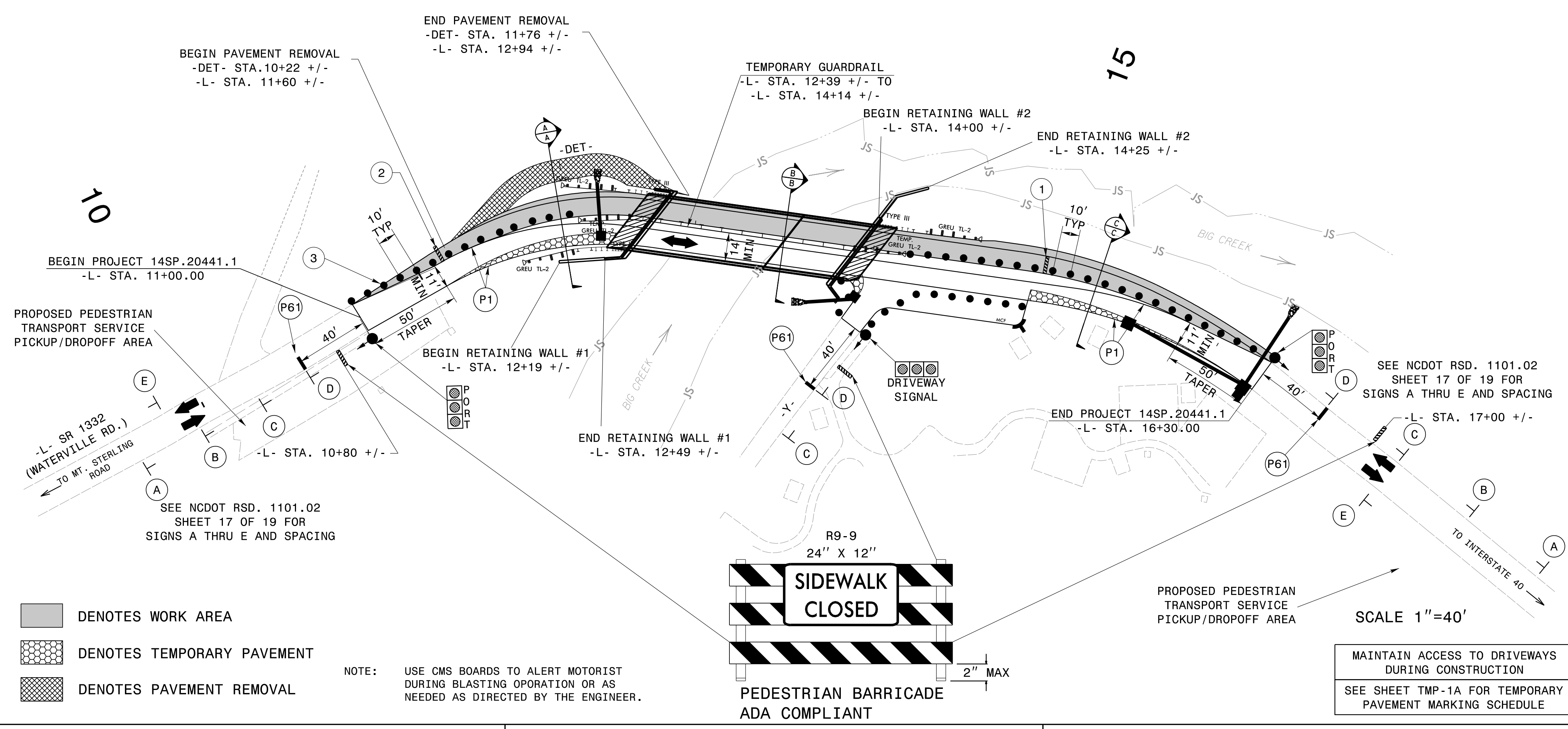
CHANGEABLE MESSAGE SIGN

SET CMS BOARD ON SR 1332 (WATERVILLE RD.) APPROXIMATELY ONE MILE FROM THE NORTH END OF PROJECT LIMITS

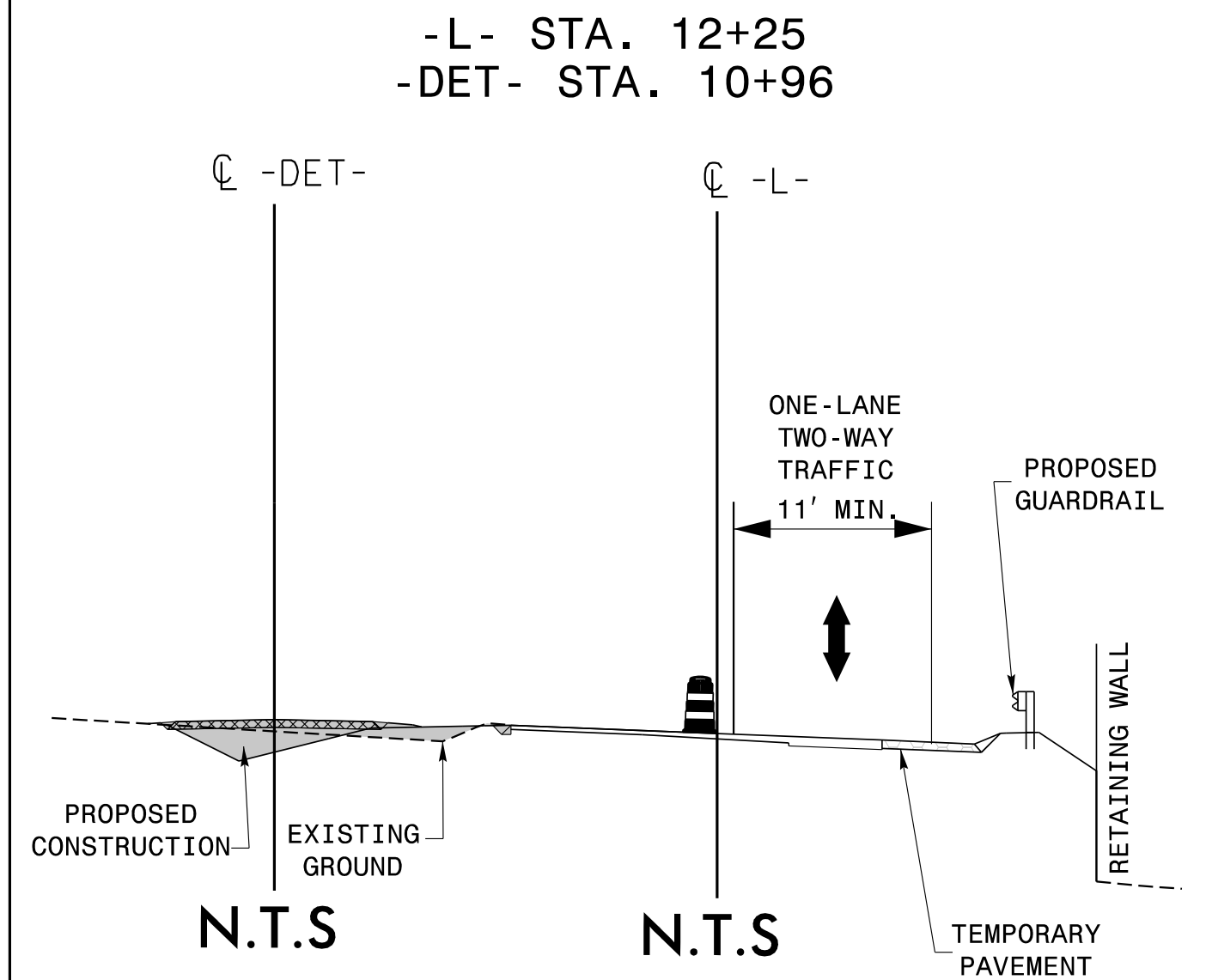
MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK AHEAD	1 MILE USE CAUTION

CHANGEABLE MESSAGE SIGN

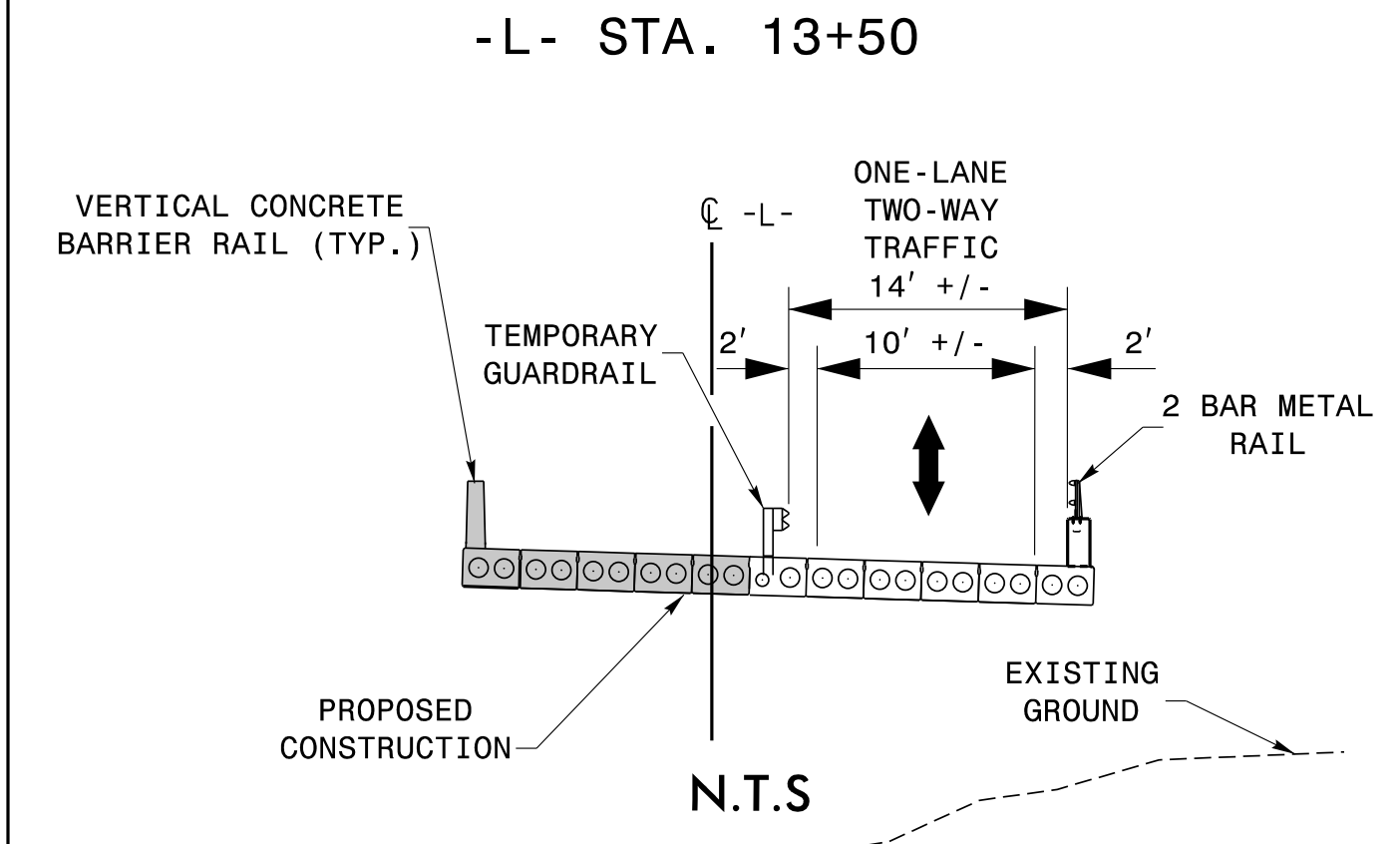
TEMPORARY PAVEMENT MARKINGS:  
 REMOVE 392 LF OF 4" WHITE EDGE LINE (P1) (STEP 1, PHASE III)  
 PLACE 1060 LF OF 4" WHITE EDGE LINE (P1) (STEP 1, PHASE III)



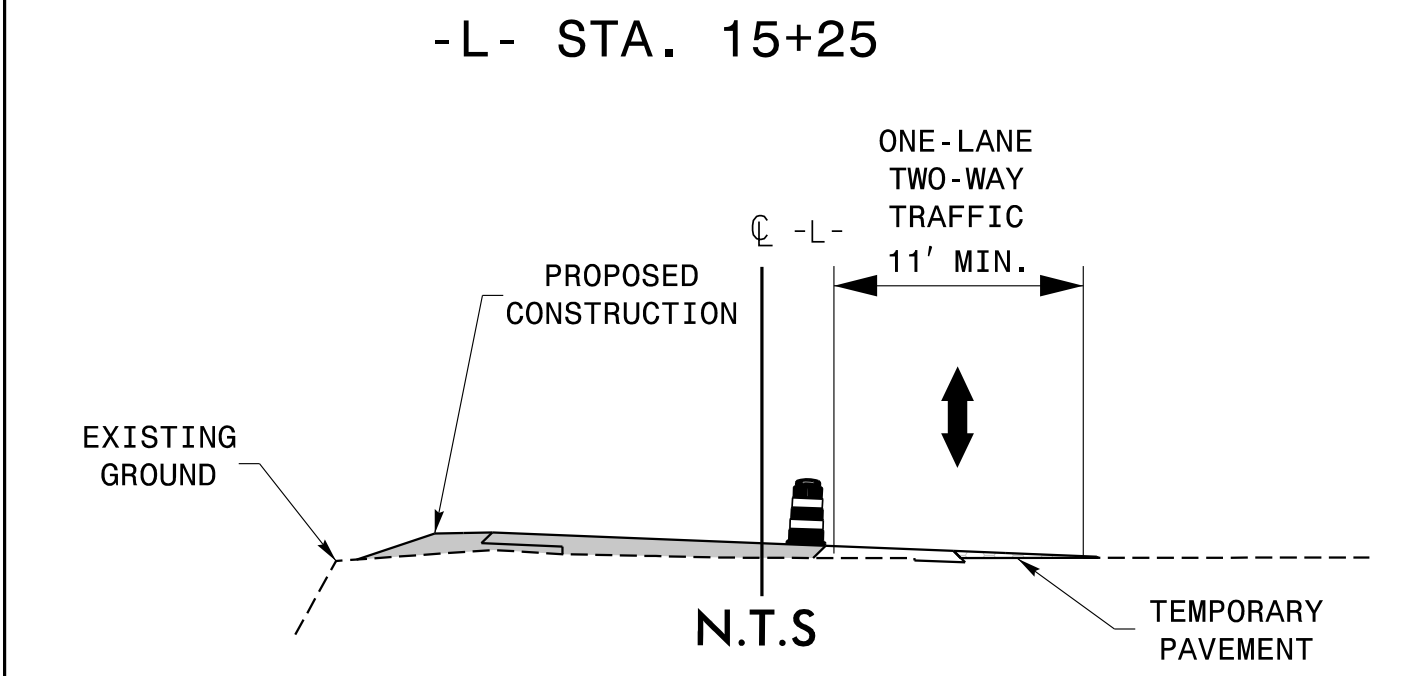
### SECTION A-A



### SECTION B-B



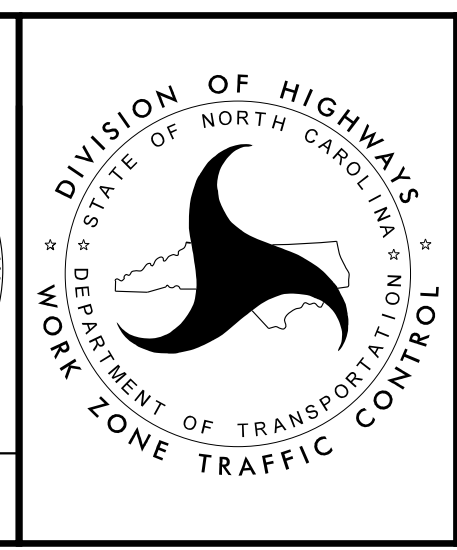
### SECTION C-C



APPROVED: [Signature]  
 DATE: 12/15/2023

SEAL

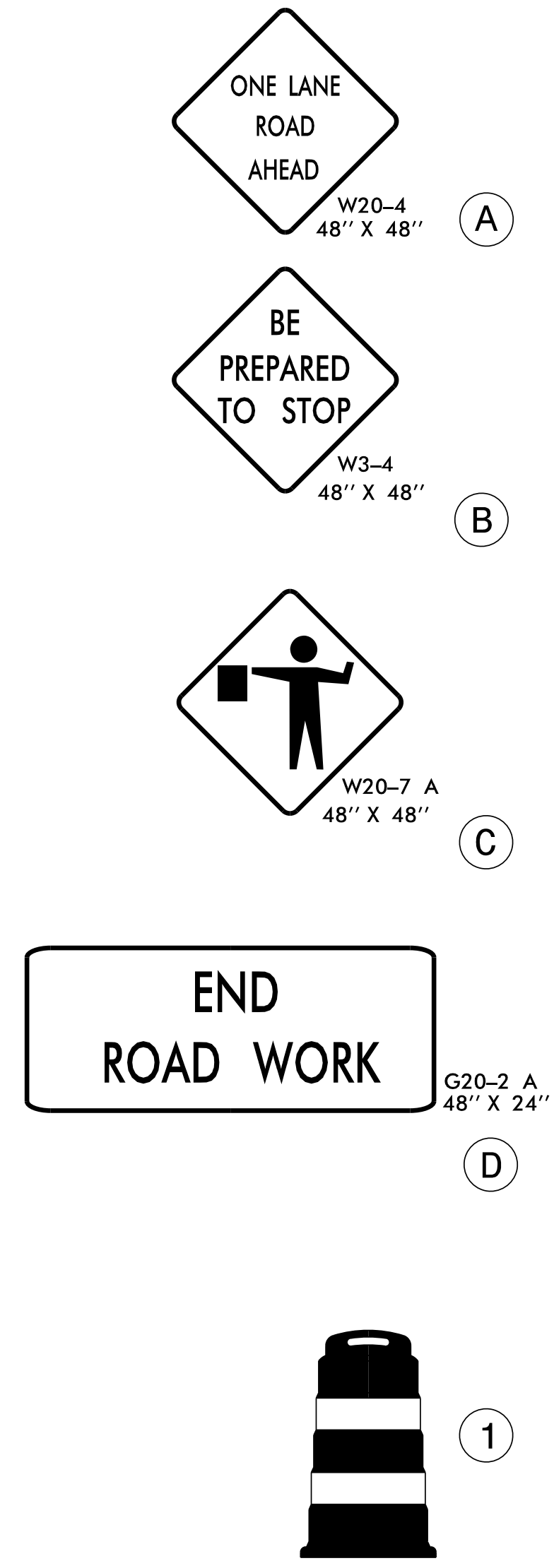
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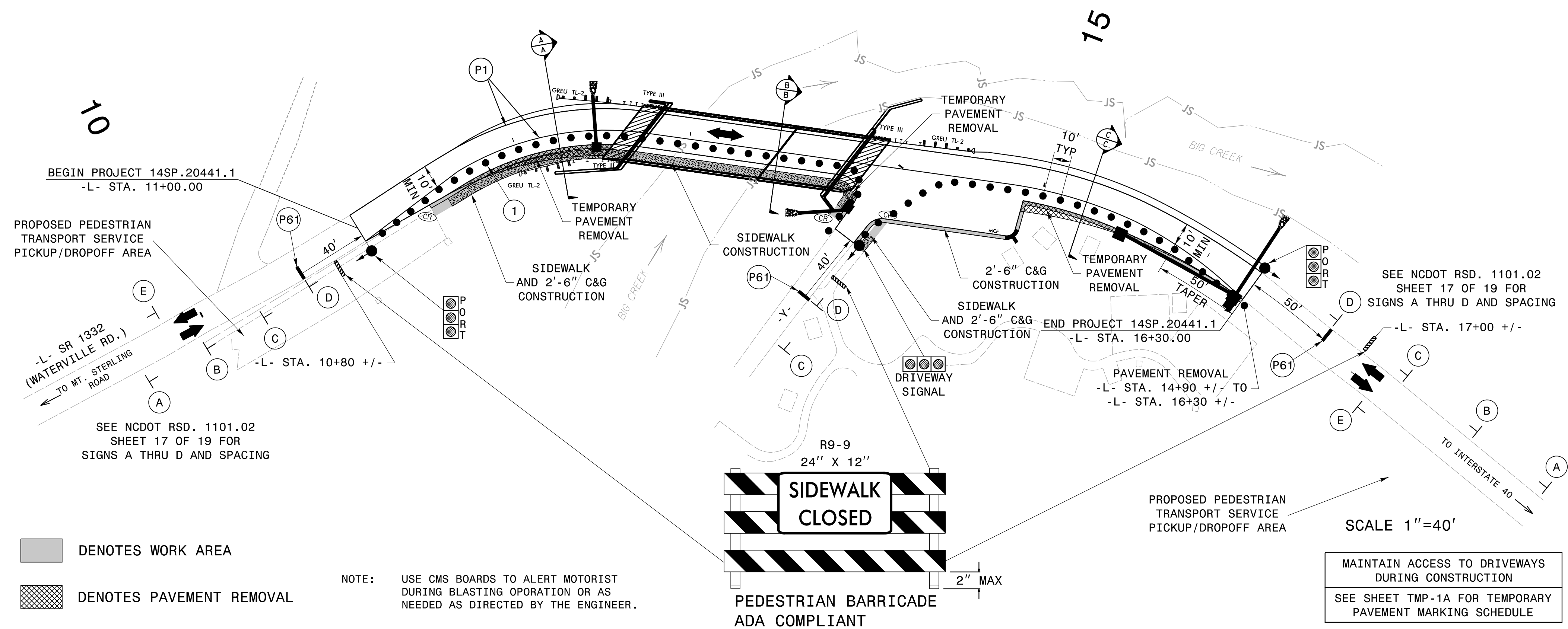
PHASE III

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TEMPORARY PAVEMENT MARKINGS:  
 REMOVE 1060 LF OF 4" WHITE EDGE LINE (P1) (STEP 1, PHASE IV)  
 PLACE 1060 LF OF 4" WHITE EDGE LINE (P1) (STEP 1, PHASE IV)  
 REMOVE 24 LF OF 24" WHITE STOPBAR (P61) (STEP 3, PHASE IV)



SET CMS BOARD ON SR 1332 (WATERVILLE RD.) JUST NORTH OF THE INTERSECTION OF SR 1332 AND SR 1397 (MT. STERLING RD.)

MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK AHEAD	3/4 MILE USE CAUTION

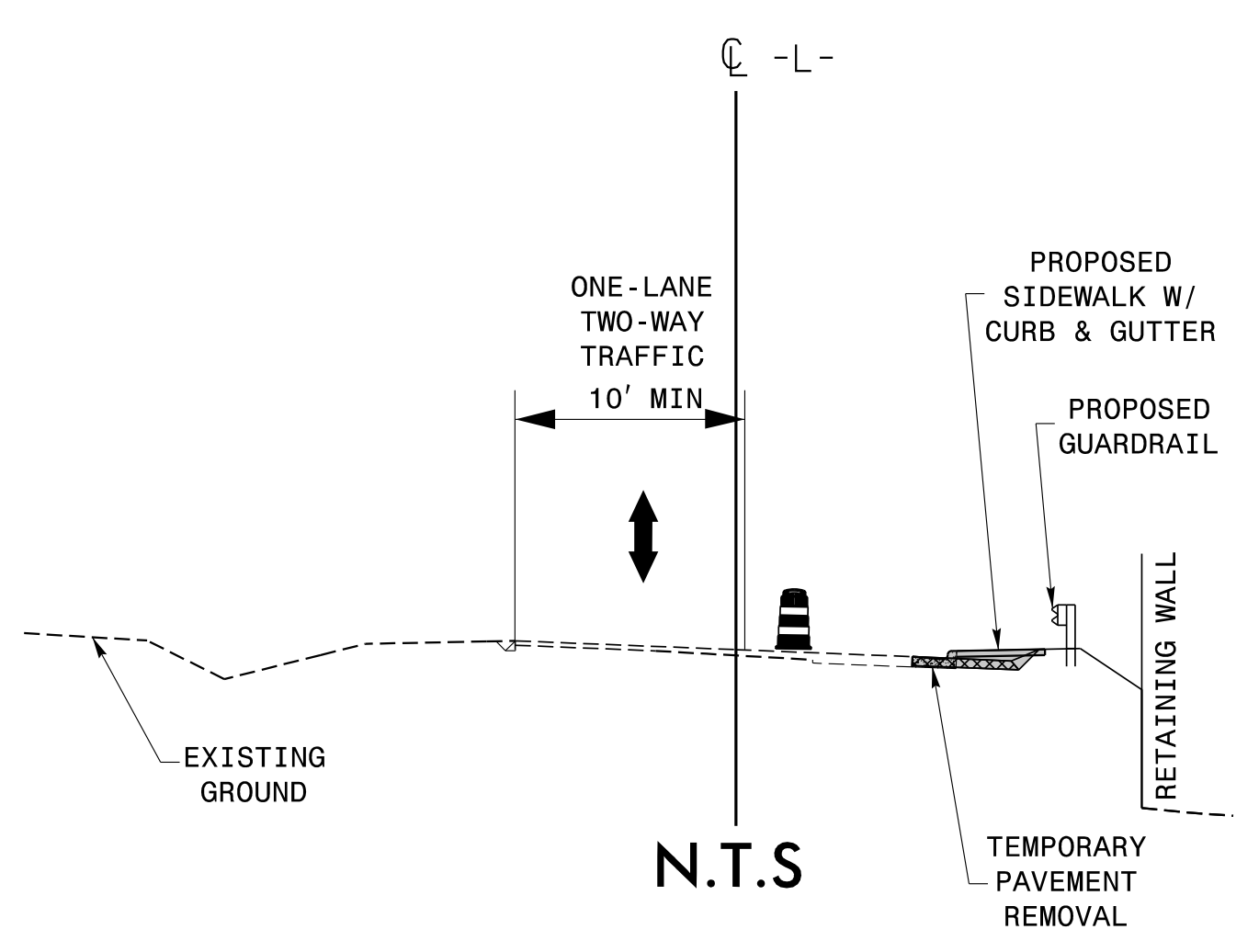
CHANGEABLE MESSAGE SIGN

SET CMS BOARD ON SR 1332 (WATERVILLE RD.) APPROXIMATELY ONE MILE FROM THE NORTH END OF PROJECT LIMITS

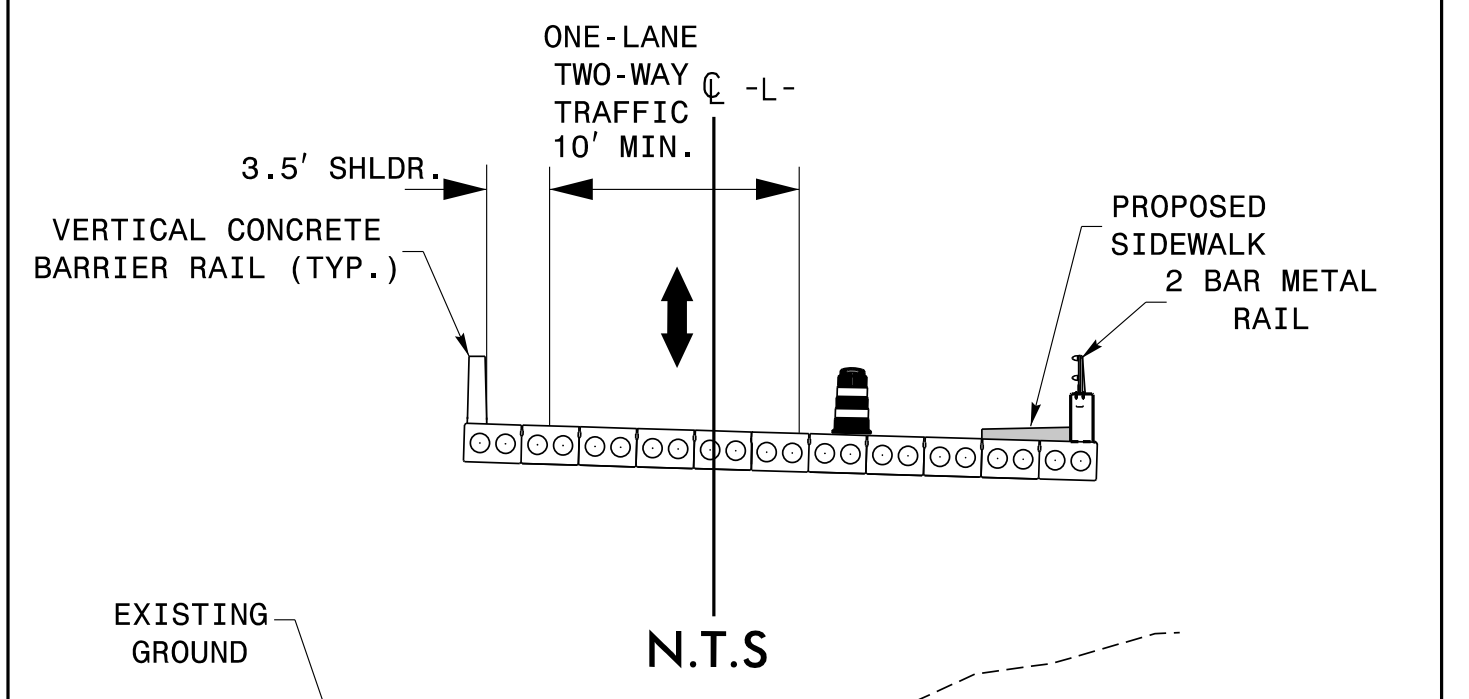
MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK AHEAD	1 MILE USE CAUTION

CHANGEABLE MESSAGE SIGN

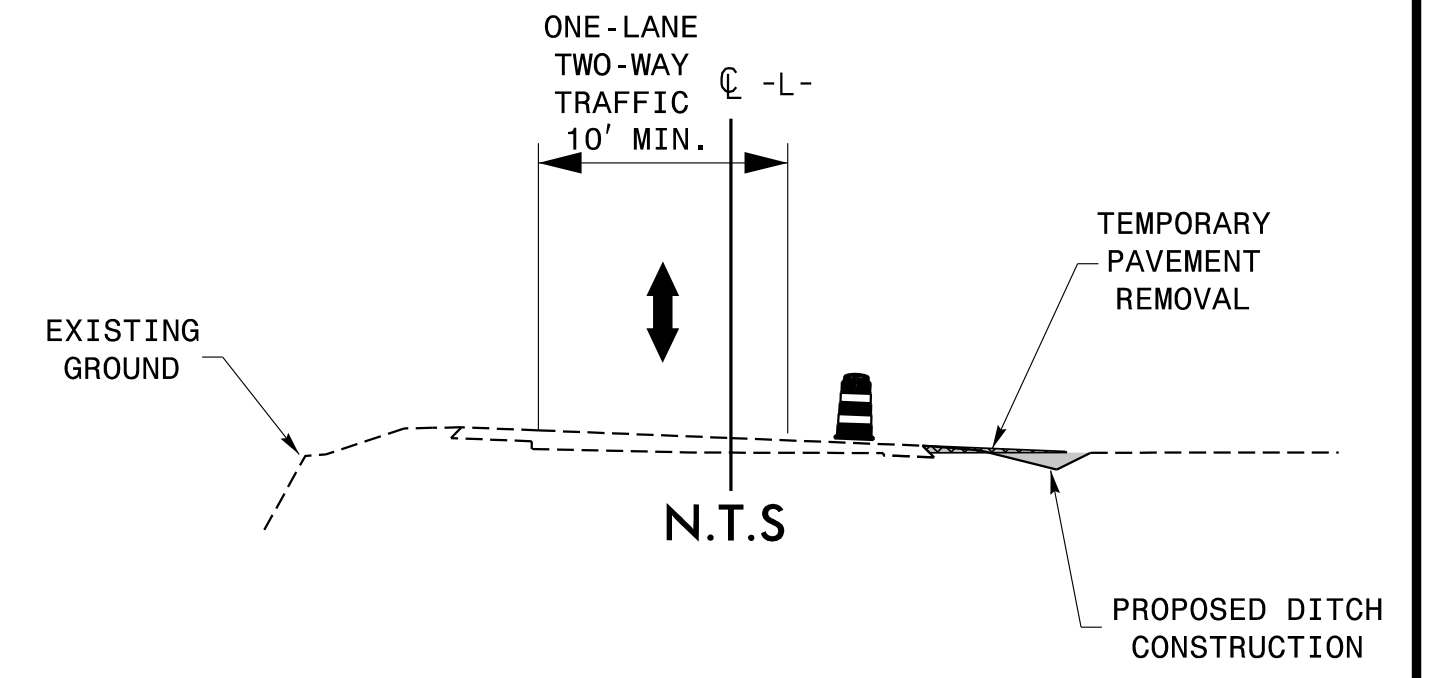
### SECTION A-A -L- STA. 12+25



### SECTION B-B -L- STA. 13+50



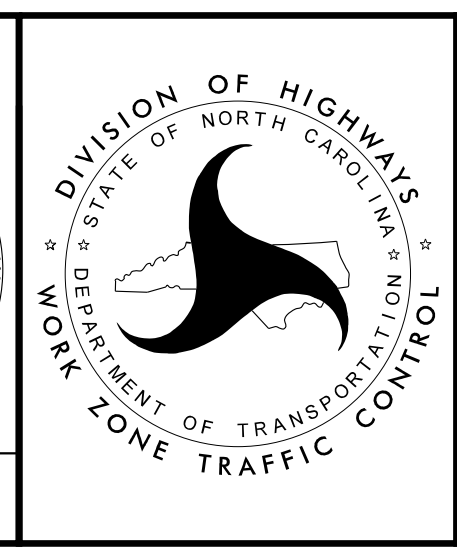
### SECTION C-C -L- STA. 15+25



APPROVED: [Signature]  
 DATE: 12/15/2023

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PHASE IV

DEPARTMENT OF TRANSPORTATION & WORK ZONE TRAFFIC CONTROL

