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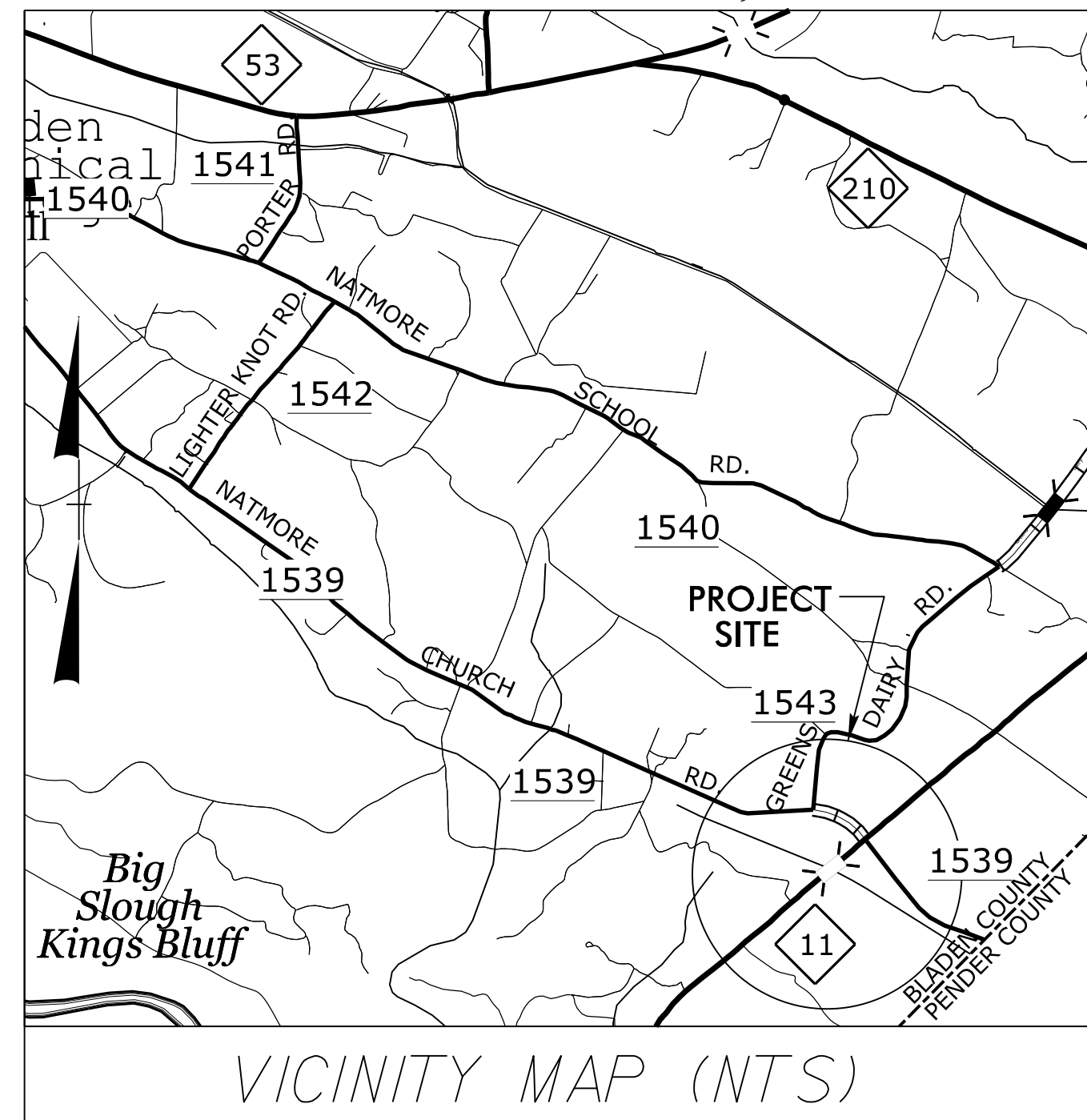
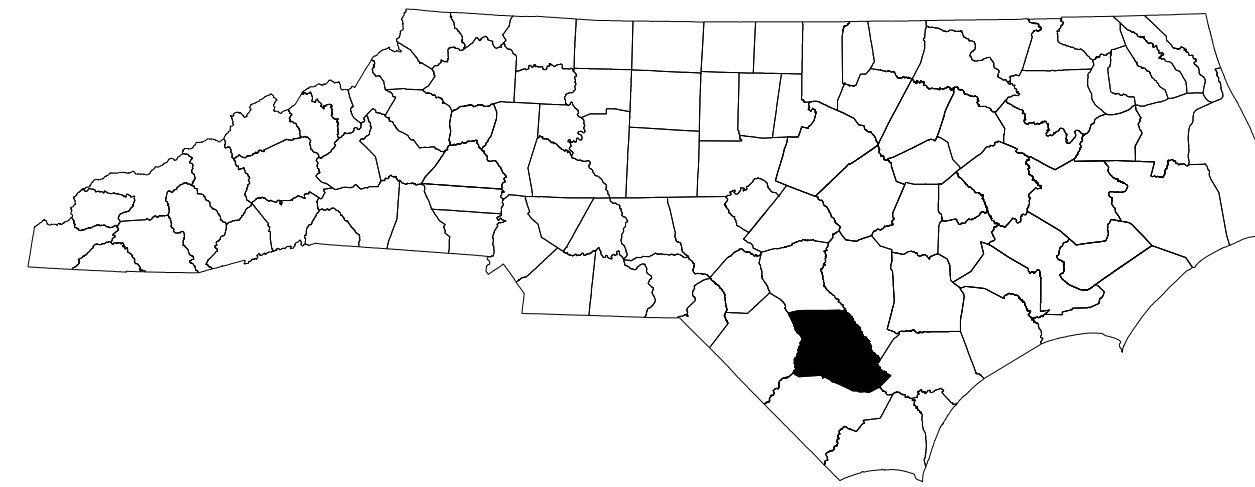
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

BLADEN COUNTY



BRIDGE NO. 51 OVER WHITE OAK CANAL ON NC 11

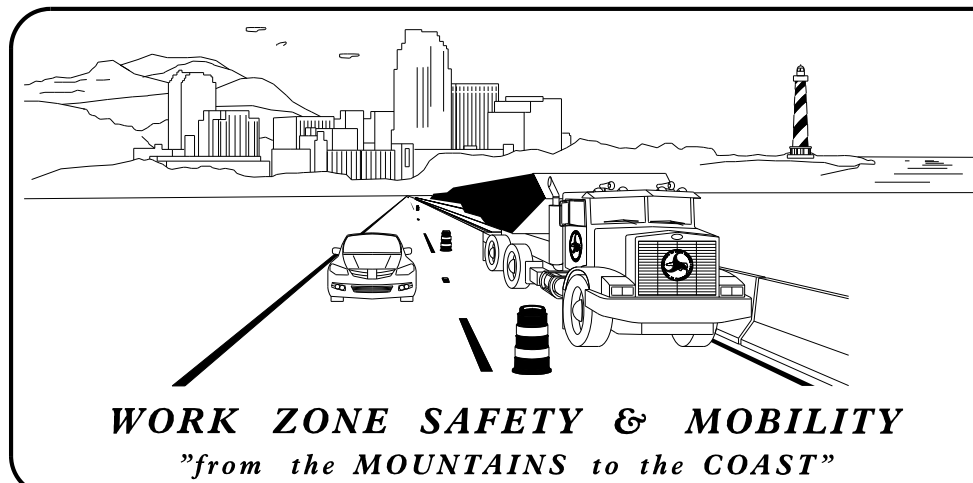
INDEX OF SHEETS

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SHEET NO.

TMP-1

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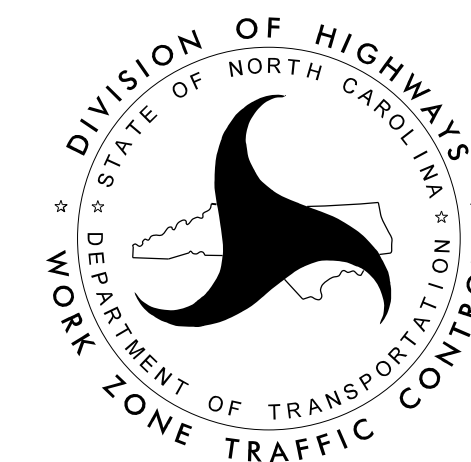
PLANS PREPARED BY:

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STRUCTURES MANAGEMENT UNIT



APPROVED: 

DATE: 4/4/2022

SEAL



TIP PROJECT: B-5694




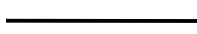


ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 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
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

LEGEND



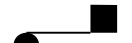
GENERAL

-  DIRECTION OF TRAFFIC FLOW
-  EXIST. PVMT.
-  NORTH ARROW
-  PROPOSED PVMT.
-  WORK AREA
-  REMOVAL




PAVEMENT MARKINGS

-  EXISTING LINES
-  TEMPORARY LINES




TRAFFIC CONTROL DEVICES

-  BARRICADE (TYPE III)
-  DRUM
-  FLAGGER

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 MARKINGS

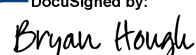

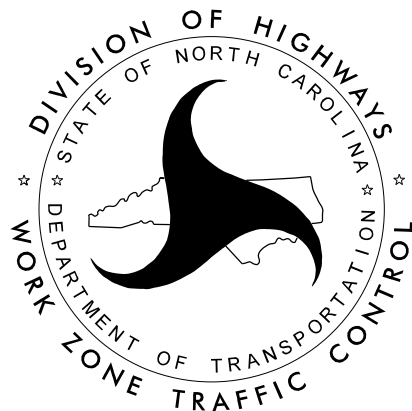
- P1 - WHITE EDGELINE - 4"
- P13 - YELLOW DOUBLE CENTER - 4"
- C13 - YELLOW DOUBLE CENTER - 4"

TEMPORARY PAVEMENT MARKERS

- MH - YELLOW & YELLOW TEMPORARY RAISED MARKERS

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APPROVED:  DATE: 4/4/2022	SEAL 		ROADWAY STANDARD DRAWINGS & LEGEND
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GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- A) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- B) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- E) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- F) 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.
- G) 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) 100 ft IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

- H) NOTIFY THE ENGINEER TWENTY ONE (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- I) 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.
- J) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- K) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 100 ft IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

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 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.

- 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

TRAFFIC CONTROL DEVICES

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

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

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
NC 11	PAINT	TEMPORARY RAISED

- 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 AND MARKERS BY THE END OF EACH DAY'S OPERATION.


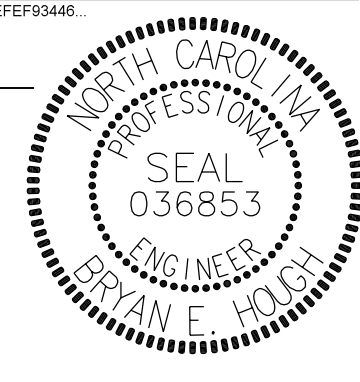

MISCELLANEOUS

- 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.

MANAGEMENT STRATEGIES

TRAFFIC WILL BE MAINTAINED VIA AN ON-SITE DETOUR DURING CONSTRUCTION OF THE PROPOSED BRIDGE

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APPROVED:  DATE: 4/4/2022			<h3 style="margin: 0;">TRANSPORTATION OPERATIONS PLAN</h3>
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PROJ. REFERENCE NO.	SHEET NO.
B-5694	TMP-2A

TEMPORARY SHORING NOTES

SHORING LOCATION NO.1

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING,SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION,SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -DET- 19+80'±,21 FT.LEFT,TO STATION -DET- 20+42'±,21 FT.LEFT,FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (φ) = 30 DEGREES
 COHESION (c) = 0 LB/SF
 GROUNDWATER ELEVATION = 8.0 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -DET- 19+80'±,21 FT.LEFT,TO STATION -DET- 20+42'±,21 FT.LEFT.

SHORING LOCATION NO.2

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING,SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION,SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -DET- 19+80'±,21 FT.RIGHT,TO STATION -DET- 20+42'±,21 FT.RIGHT,FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (φ) = 30 DEGREES
 COHESION (c) = 0 LB/SF
 GROUNDWATER ELEVATION = 8.0 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -DET- 19+80'±,21 FT.RIGHT,TO STATION -DET- 20+42'±,21 FT.RIGHT.

AT THE CONTRACTOR'S OPTION AND WHEN APPLICABLE,USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -DET- 19+80'±,21 FT.RIGHT,TO STATION -DET- 20+42'±,21 FT.RIGHT.SEE GEOTECHNICAL STANDARD DETAIL NO.1801.01 FOR STANDARD TEMPORARY SHORING.

SHORING LOCATION NO.3

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING,SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION,SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -DET- 21+33'±,21 FT.LEFT,TO STATION -DET- 22+00'±,21 FT.LEFT,FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (φ) = 30 DEGREES
 COHESION (c) = 0 LB/SF
 GROUNDWATER ELEVATION = 8.0 FT ±

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -DET- 21+33'±,21 FT.LEFT,TO STATION -DET- 22+00'±,21 FT.LEFT.

SHORING LOCATION NO.4

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING,SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION,SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -DET- 21+33'±,21 FT.RIGHT,TO STATION -DET- 24+33'±,44 FT.RIGHT,FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

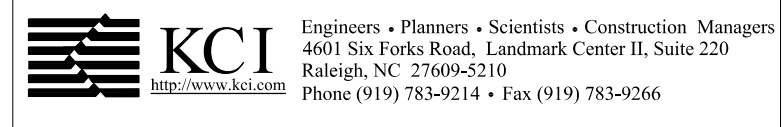
UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (φ) = 30 DEGREES
 COHESION (c) = 0 LB/SF
 GROUNDWATER ELEVATION = 8.0 FT ±

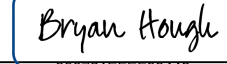
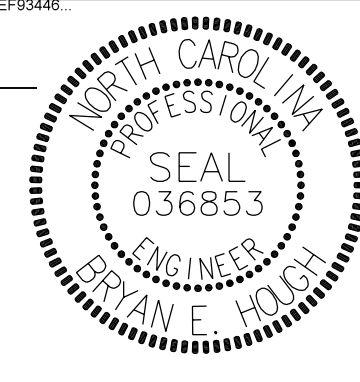
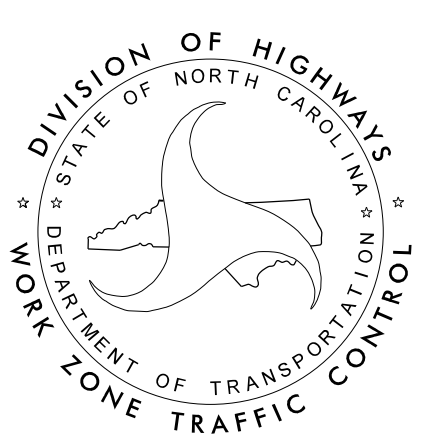
DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -DET- 21+33'±,21 FT.RIGHT,TO STATION -DET- 24+33'±,44 FT RIGHT.

AT THE CONTRACTOR'S OPTION AND WHEN APPLICABLE,USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -DET- 21+33'±,21 FT.RIGHT,TO STATION -DET- 24+33'±,44 FT RIGHT.SEE GEOTECHNICAL STANDARD DETAIL NO.1801.01 FOR STANDARD TEMPORARY SHORING.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEER,THE DOCUMENT WAS SUBMITTED TO NCDOT STRUCTURES MANAGEMENT UNIT ON MARCH 10,2022 AND SEALED BY A PROFESSIONAL ENGINEER,JINYOUNG PARK,LICENSE # 032171.

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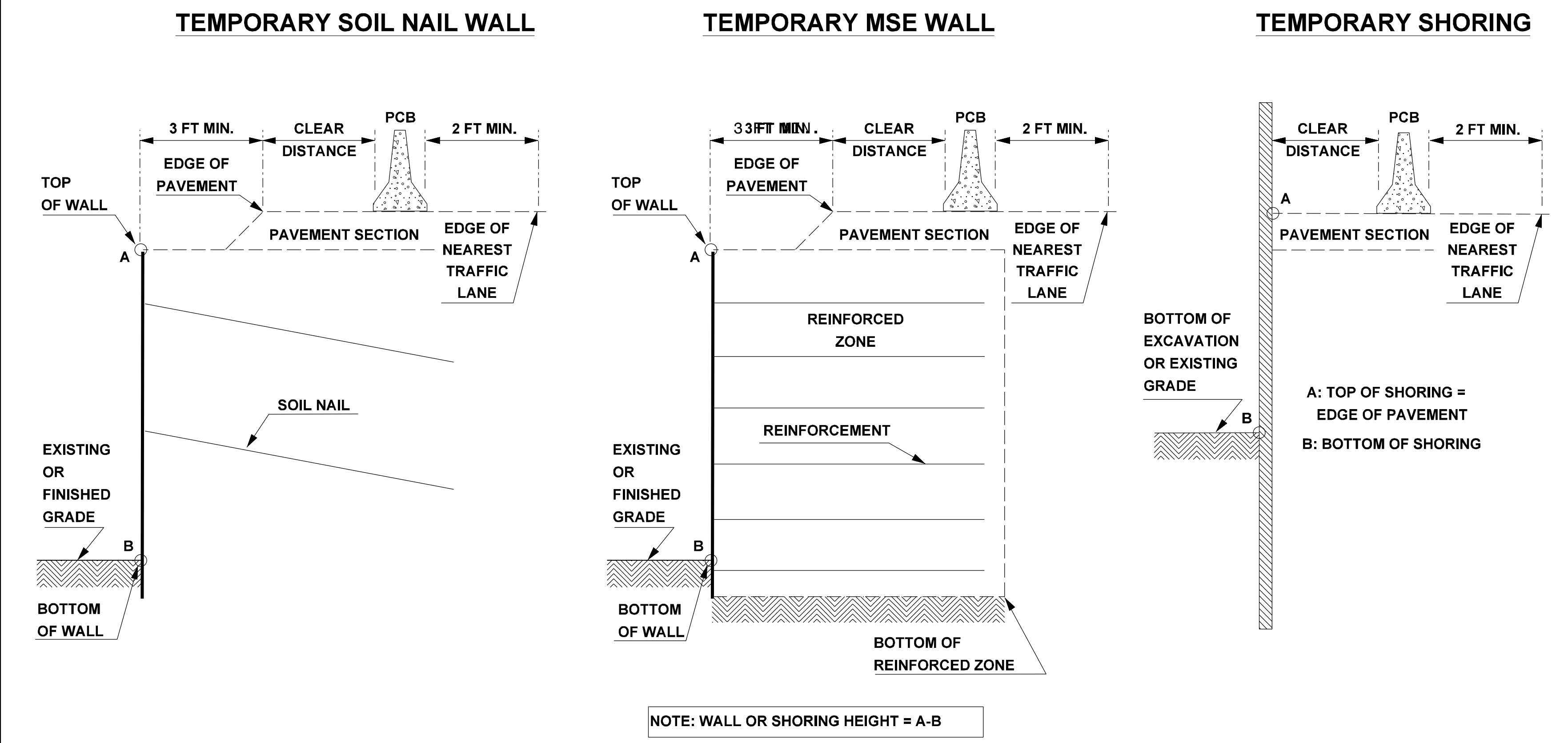


FIGURE A

NOTES

- 1- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.
- 2- REFER TO THE "TEMPORARY SHORING" STANDARD PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PCB).
- 3- PCB IS REQUIRED IF TEMPORARY SHORING/WALL IS LOCATED WITHIN THE CLEAR ZONE IN ACCORDANCE WITH THE AASHTO ROADSIDE DESIGN GUIDE. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT FOR APPLICABLE PAVEMENT DESIGN).
- 4- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED OR ANCHORED PCB FROM THE TABLE SHOWN IN FIGURE B. CLEAR DISTANCE IS DEFINED AS SHOWN IN FIGURE A AND OFFSET IS DEFINED AS SHOWN IN FIGURE B.
- 5- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET PCB NEXT TO AND UP AGAINST THE TRAFFIC SIDE OF THE TEMPORARY SHORING/WALLS EXCEPT FOR BARRIER ABOVE TEMPORARY WALLS. PCB WITH THE MINIMUM REQUIRED CLEAR DISTANCE IS REQUIRED ABOVE TEMPORARY WALLS.
- 6- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- 7- SET PCB WITH A MINIMUM HORIZONTAL DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A UNLESS OTHERWISE SHOWN IN THE PLANS OR APPROVED BY THE ENGINEER.
- 8- FOR PCB ABOVE AND BEHIND TEMPORARY WALLS, PROVIDE A MINIMUM DISTANCE OF 3 FT BETWEEN THE EDGE OF PAVEMENT AND THE WALL FACE AS SHOWN IN FIGURE A. IF THIS MINIMUM REQUIRED DISTANCE IS NOT AVAILABLE, CONTACT THE ENGINEER.
- 9- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS.

MINIMUM REQUIRED CLEAR DISTANCE, inches

Barrier Type	Pavement Type	Offset * ft	Design Speed, mph					
			<30	31-40	41-50	51-60	61-70	71-80
Unanchored PCB	Asphalt	<8	24	26	29	32	36	40
		8-14	26	28	31	35	38	42
		14-20	27	29	34	36	39	43
		20-26	28	31	35	38	40	44
		26-32	29	32	36	39	42	45
		32-38	30	34	38	41	43	46
		38-44	31	34	41	43	45	48
		44-50	31	35	41	43	46	49
	50-56	32	36	42	44	47	50	
	>56	32	36	42	45	47	51	
	Concrete	<8	17	18	21	22	25	26
		8-14	19	20	23	25	26	29
		14-20	22	22	24	26	28	31
		20-26	23	24	26	27	30	34
26-32		24	25	27	28	32	35	
32-38		24	26	27	30	33	36	
Anchored PCB	Asphalt	All Offsets	24 for All Design Speeds					
		Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds				

* See Figure Below

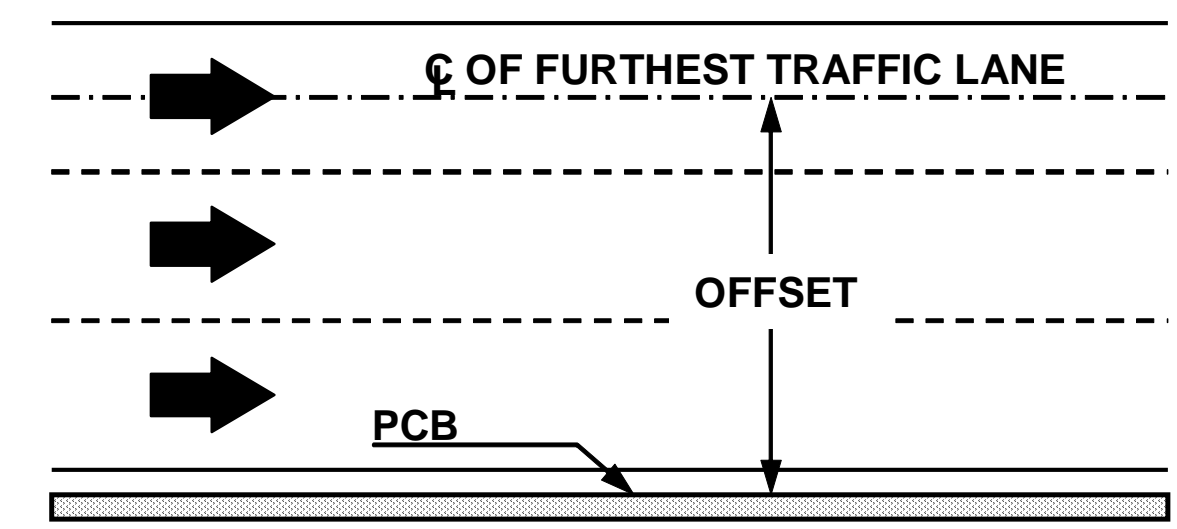


FIGURE B

APPROVED: <i>Bryan Hough</i> DATE: 4/4/2022 SEAL NORTH CAROLINA PROFESSIONAL SEAL 036853 ENGINEER BRYAN E. HOUGH	DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

PHASING

NOTE: MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.

PHASE 1

- STEP 1: USING RSD 1101.01, SHEET 3 OF 3. INSTALL WORK ZONE ADVANCE WARNING SIGNS
- STEP 2: USING RSD 1101.02, SHEET 1 OF 14, CONSTRUCT -DET-.

PHASE 2

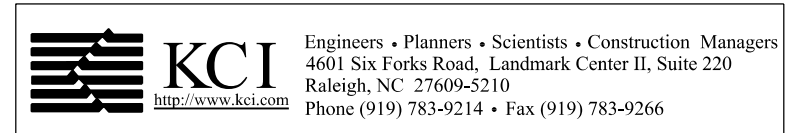
- STEP 1: USING RSD 1101.02, SHEET 1 OF 14, WEDGE TIE-INS OF -DET-, PLACE TEMPORARY PAVEMENT MARKINGS AND TRAFFIC CONTROL DEVICES USING RSD 1101.03, SHEET 3 OF 9. SHIFT 2 LANE, 2 WAY TRAFFIC ONTO DETOUR.
- STEP 2: CONSTRUCT -L- (NC 11) UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM STA 17+00± TO STA 28+25±.

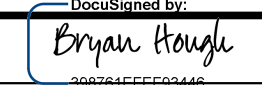
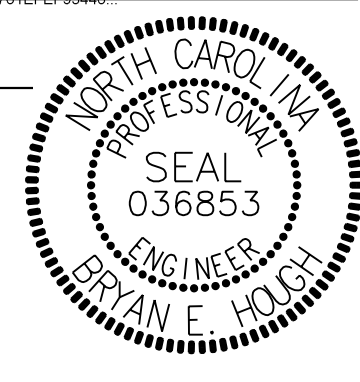
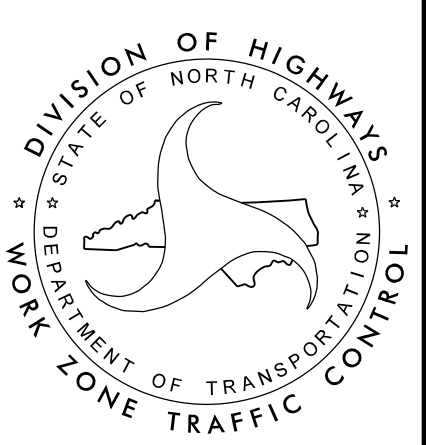
PHASE 3

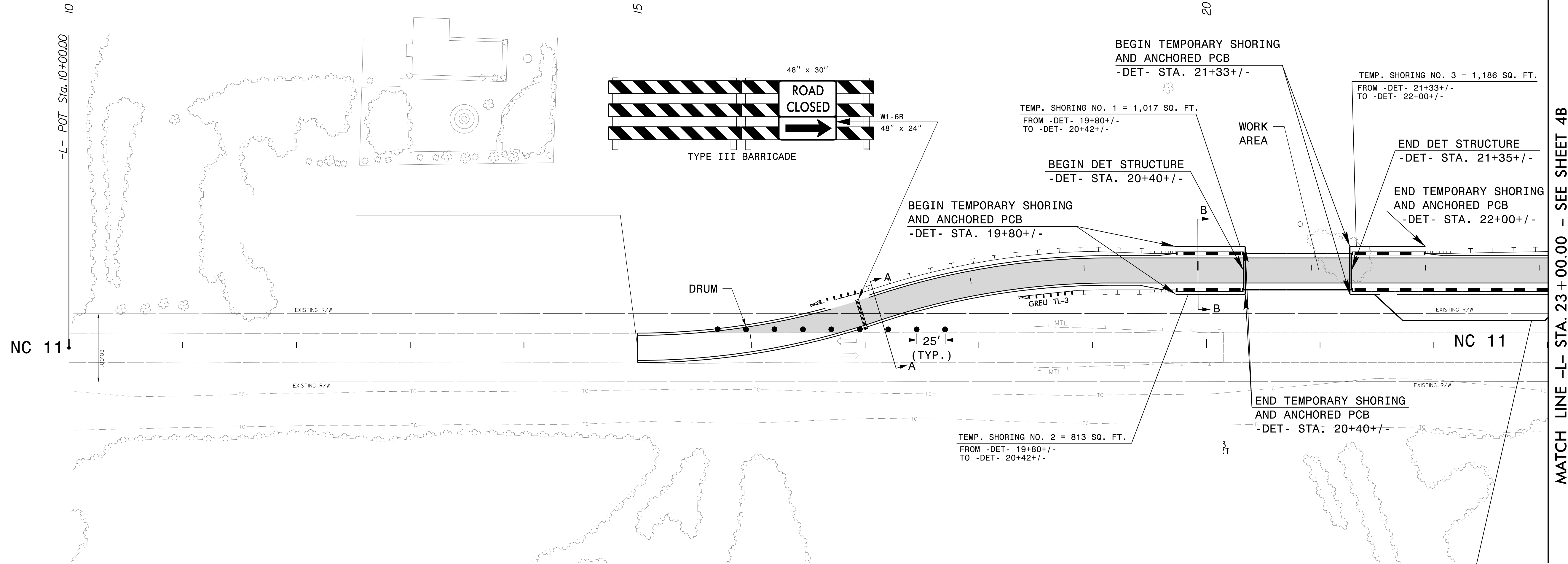
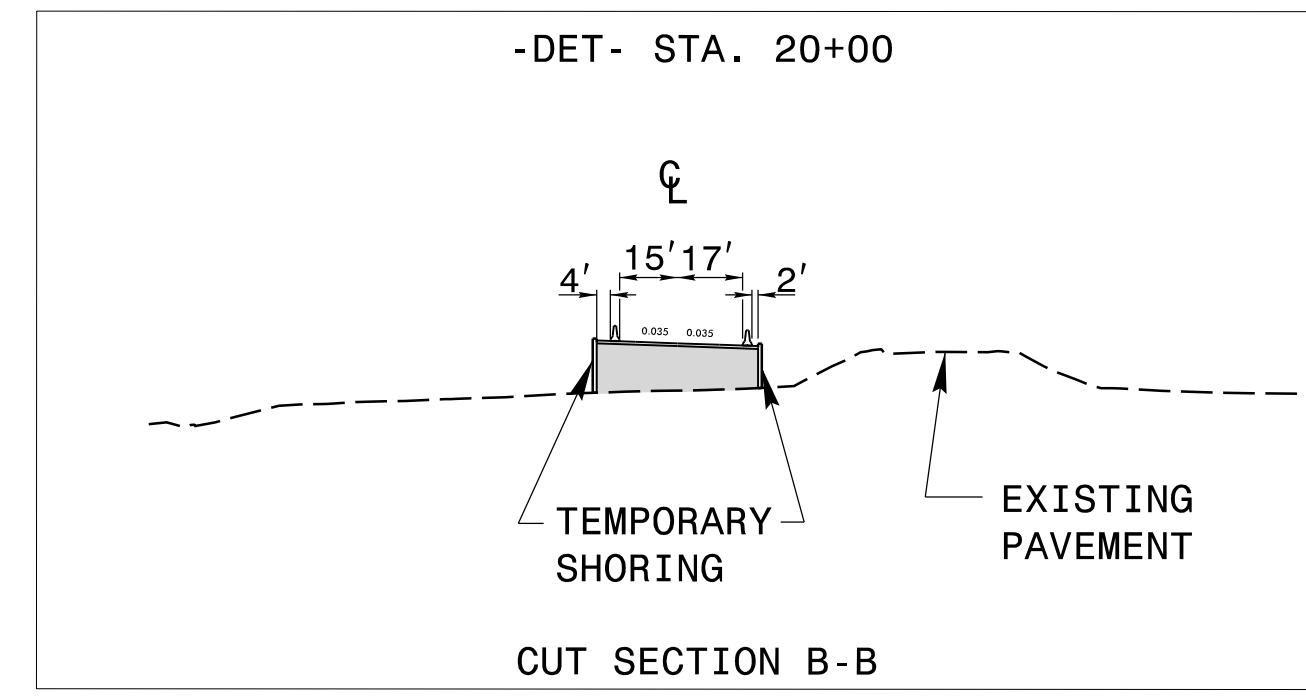
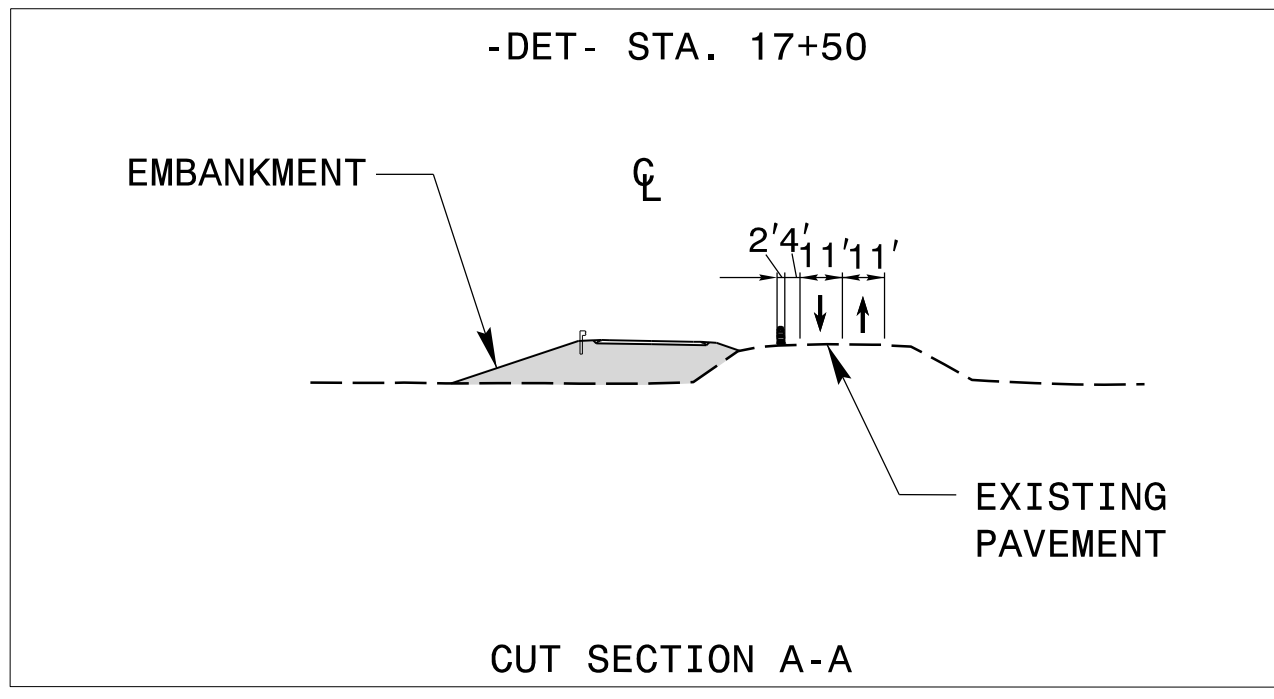
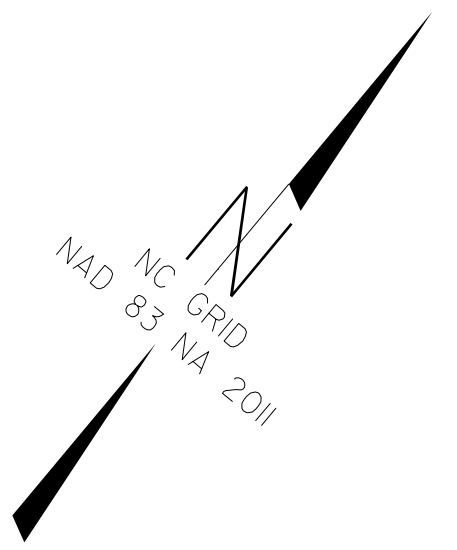
- STEP 1: CONSTRUCT -L- (NC 11) UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM STA. 15+00± TO STA. 17+00± AND STA. 28+25± TO STA. 30+05.22± USING RSD 1101.02, SHEET 1 OF 14.
- STEP 2: USING RSD 1101.02, SHEET 1 OF 14 PLACE TEMPORARY PAVEMENT MARKINGS ON -L- FROM STA. 15+00.00. TO STA 30+05.22.

SWITCH TRAFFIC ONTO PROPOSED -L- IN A 2 LANE, 2 WAY TRAFFIC PATTERN.
- STEP 3: PLACE TYPE III BARRICADES AND DRUMS ON DETOUR (REFER TO TMP-4 FOR SETUP). REMOVE DETOUR AND TEMPORARY GUARDRAIL.
- STEP 4: USING RSD 1101.02, SHEET 1 OF 14, PLACE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS ON -L-.
- STEP 5: REMOVE ALL TRAFFIC CONTROL DEVICES.

\$\$\$\$\$SYSTEMTIME\$\$\$\$\$
\$\$\$\$\$DGN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$



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Shoring Location No.	Begin Station & Offset	End Station & Offset	Estimated Average Height	Estimated Maximum Height	Shoring Location Type
No. 1	-DET- 19+80±, 21 ft. Left	-DET- 20+42±, 21 ft. Left	16.4 FT	16.4 FT	Roadway
No. 2	-DET- 19+80±, 21 ft. Right	-DET- 20+42±, 21 ft. Right	12.3 FT	13.1 FT	Roadway
No. 3	-DET- 21+33±, 21 ft. Left	-DET- 22+00±, 21 ft. Left	17.7 FT	17.7 FT	Roadway
No. 4	-DET- 21+33±, 21 ft. Right	-DET- 24+33±, 44 ft. Right	14.2 FT	18.2 FT	Roadway

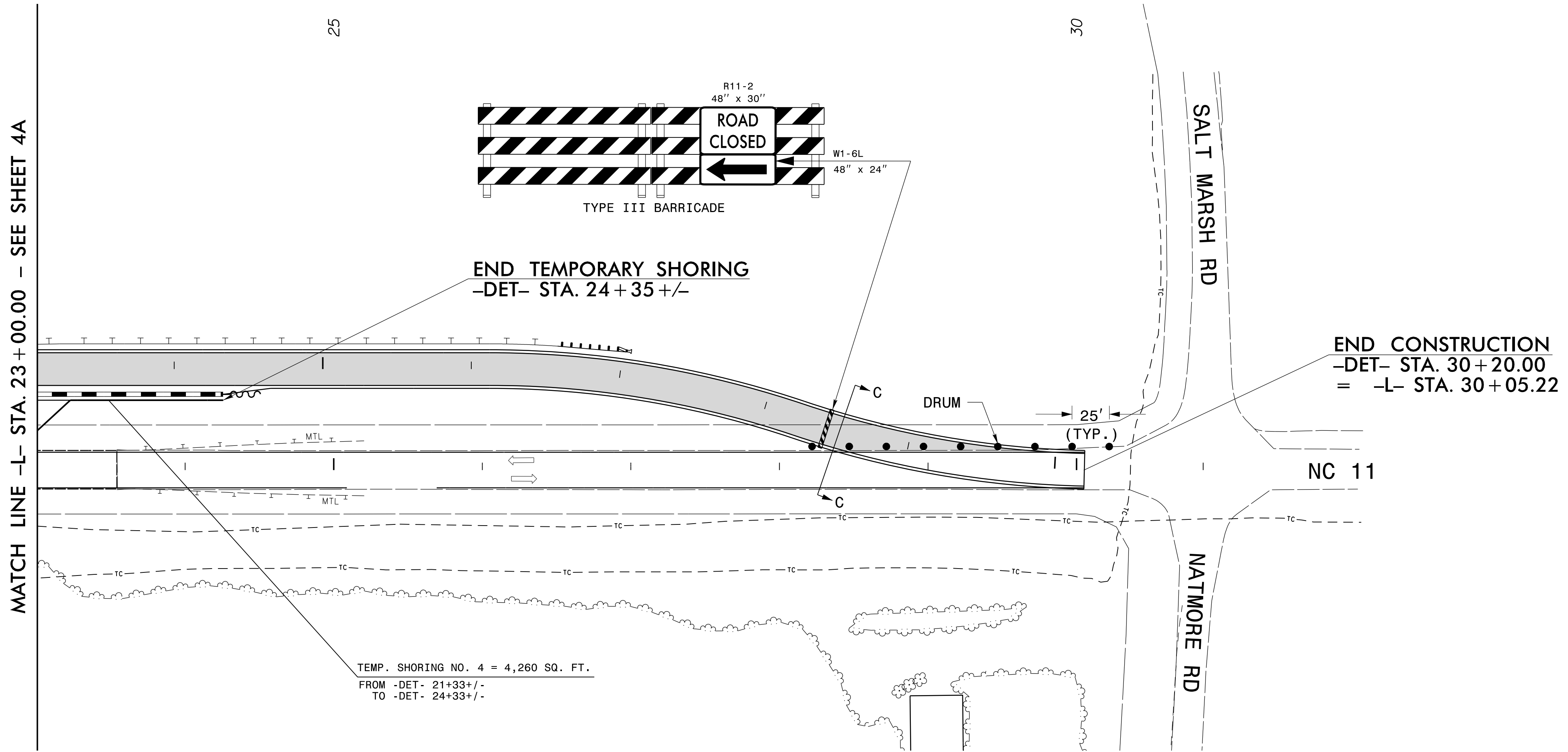
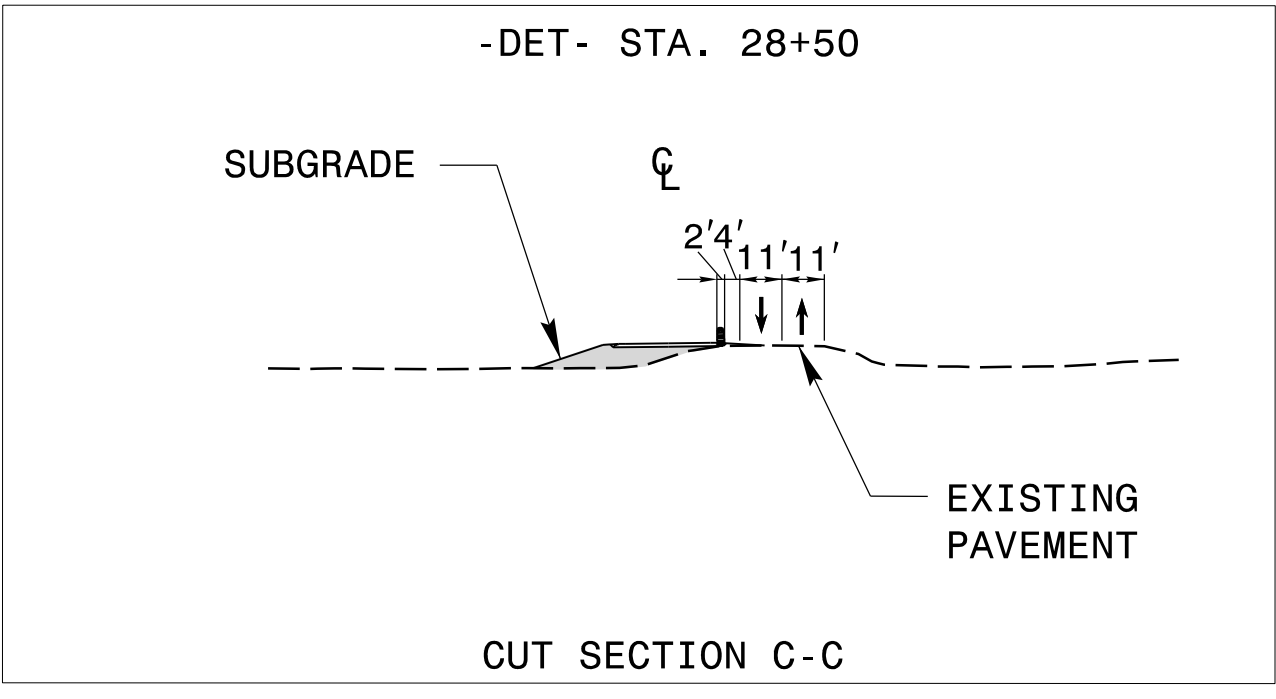
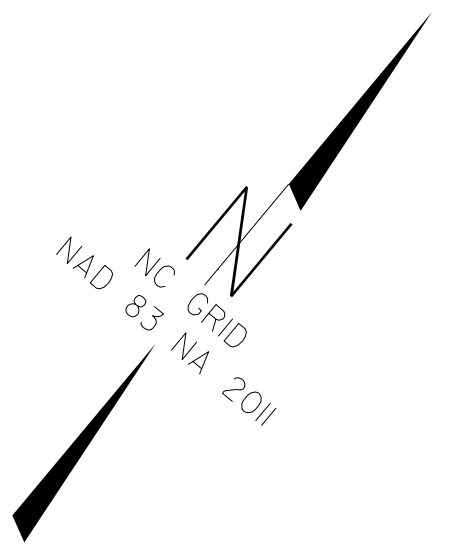
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TEMPORARY TRAFFIC CONTROL PHASE 1 DETAIL



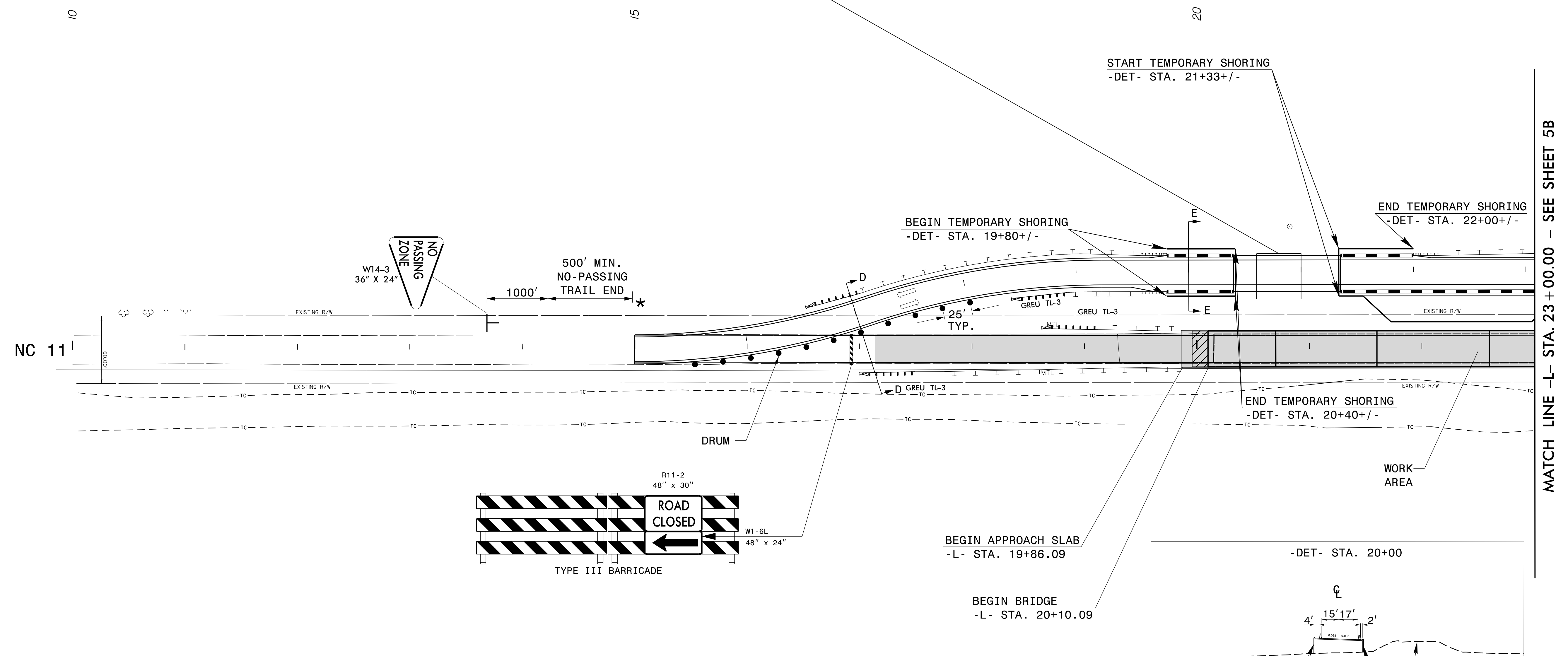
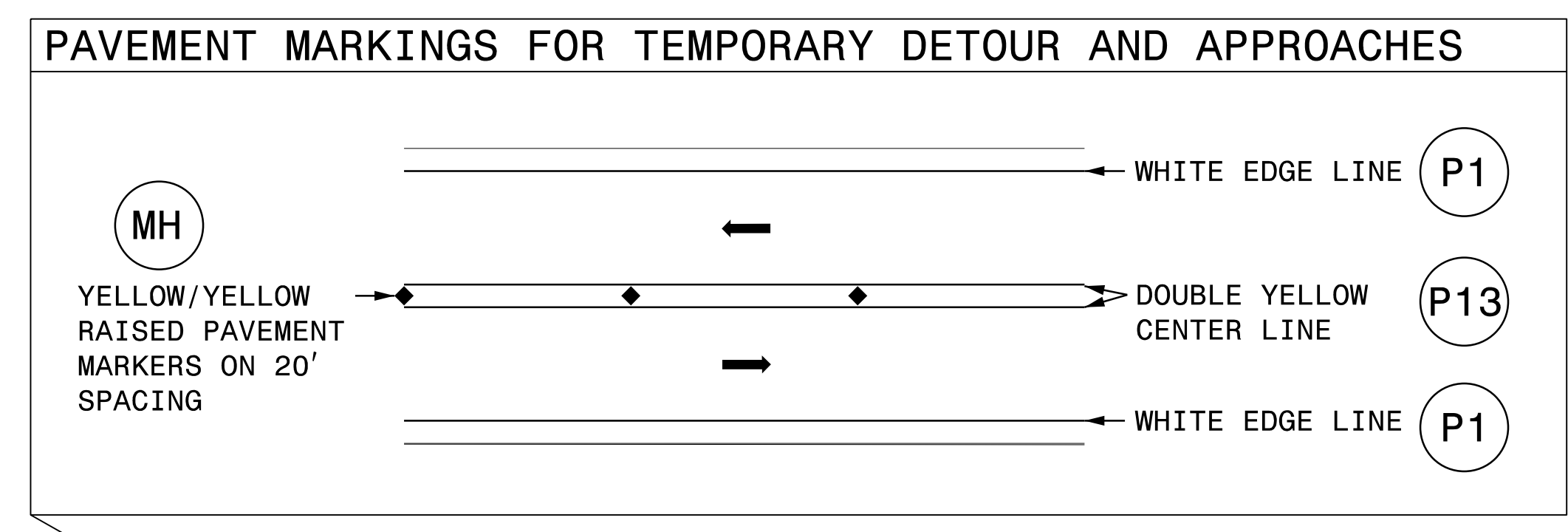
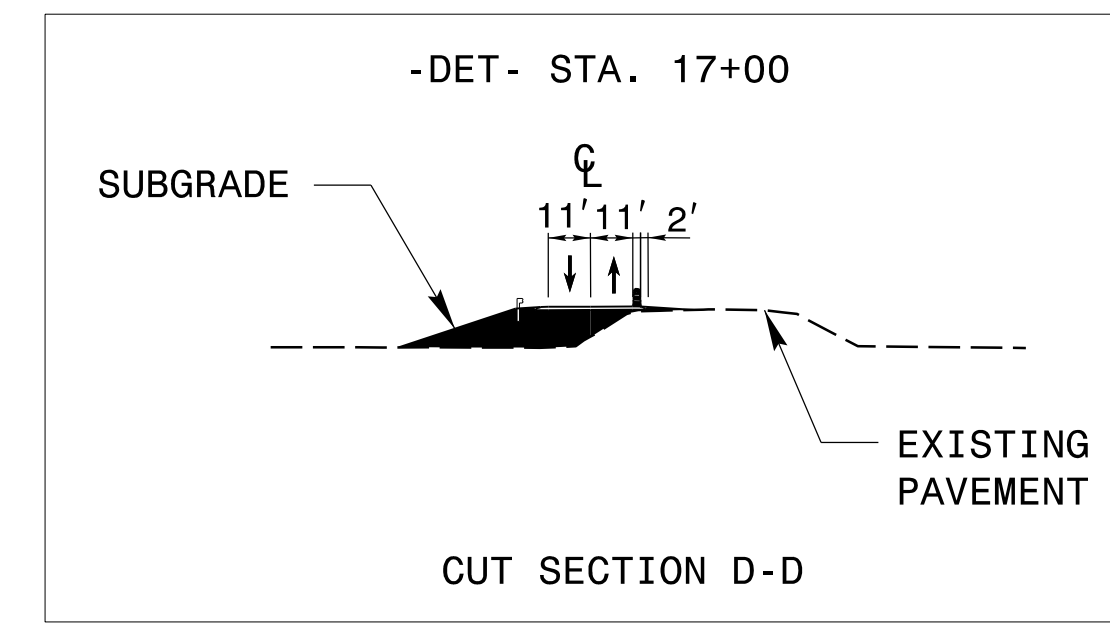
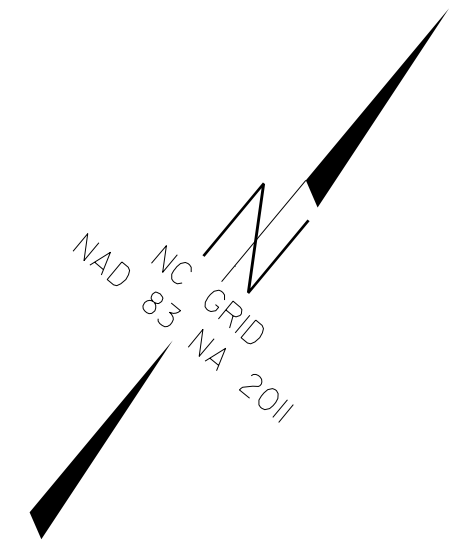
Shoring Location No.	Begin Station & Offset	End Station & Offset	Estimated Average Height	Estimated Maximum Height	Shoring Location Type
No. 1	-DET- 19+80±, 21 ft. Left	-DET- 20+42±, 21 ft. Left	16.4 FT	16.4 FT	Roadway
No. 2	-DET- 19+80±, 21 ft. Right	-DET- 20+42±, 21 ft. Right	12.3 FT	13.1 FT	Roadway
No. 3	-DET- 21+33±, 21 ft. Left	-DET- 22+00±, 21 ft. Left	17.7 FT	17.7 FT	Roadway
No. 4	-DET- 21+33±, 21 ft. Right	-DET- 24+33±, 44 ft. Right	14.2 FT	18.2 FT	Roadway

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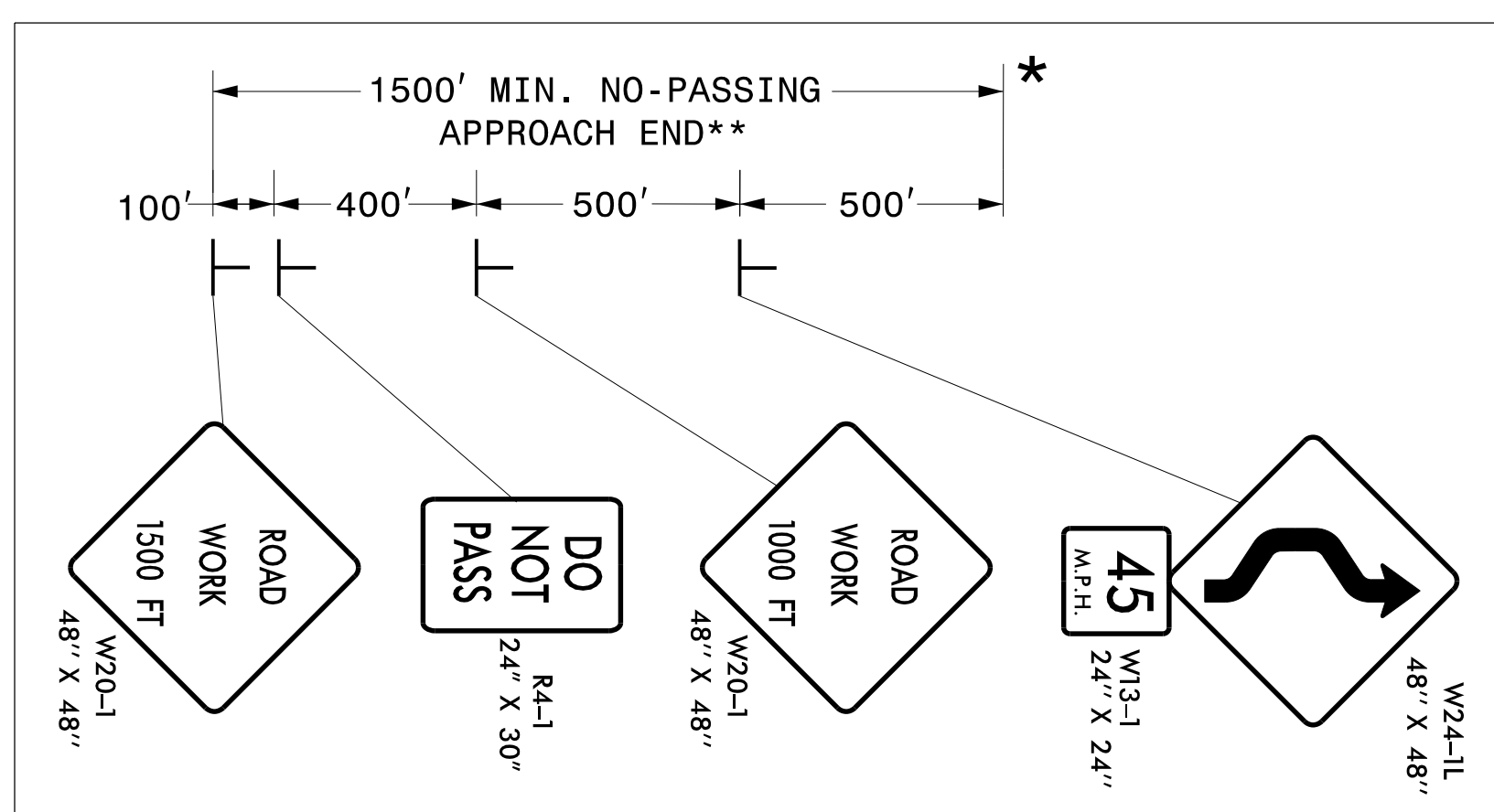
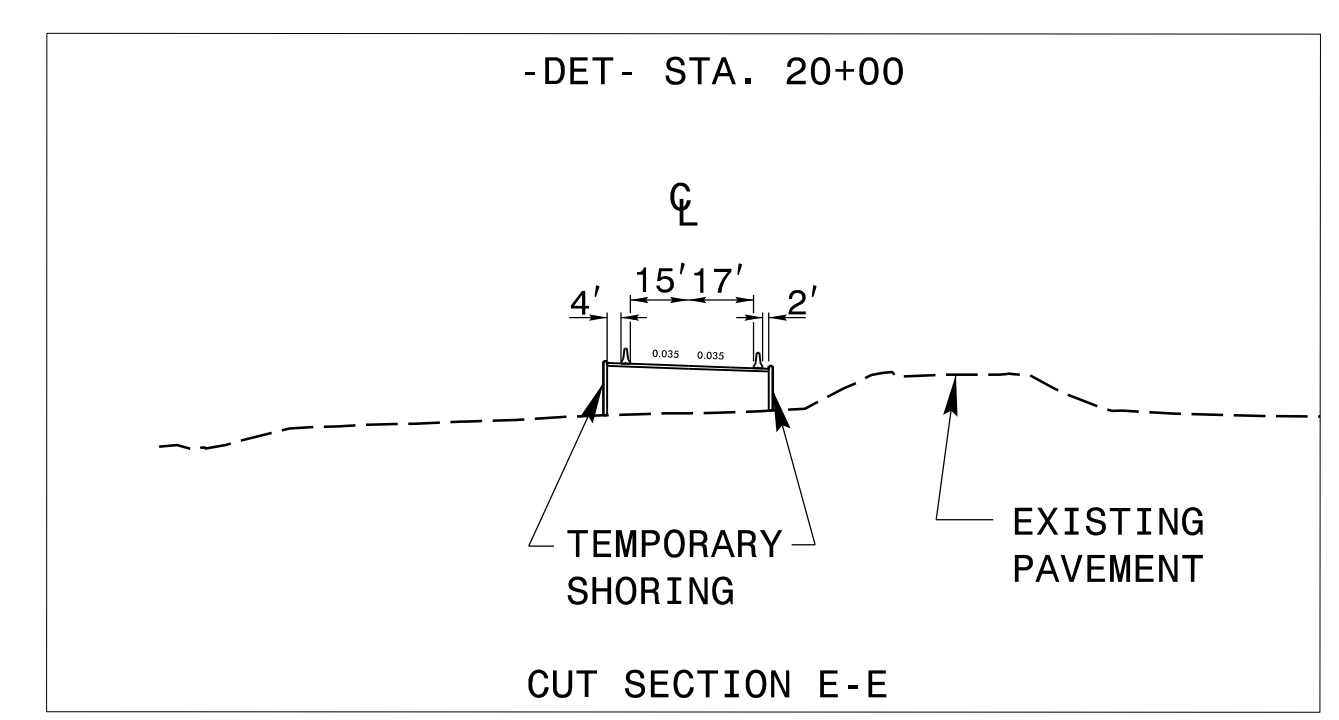
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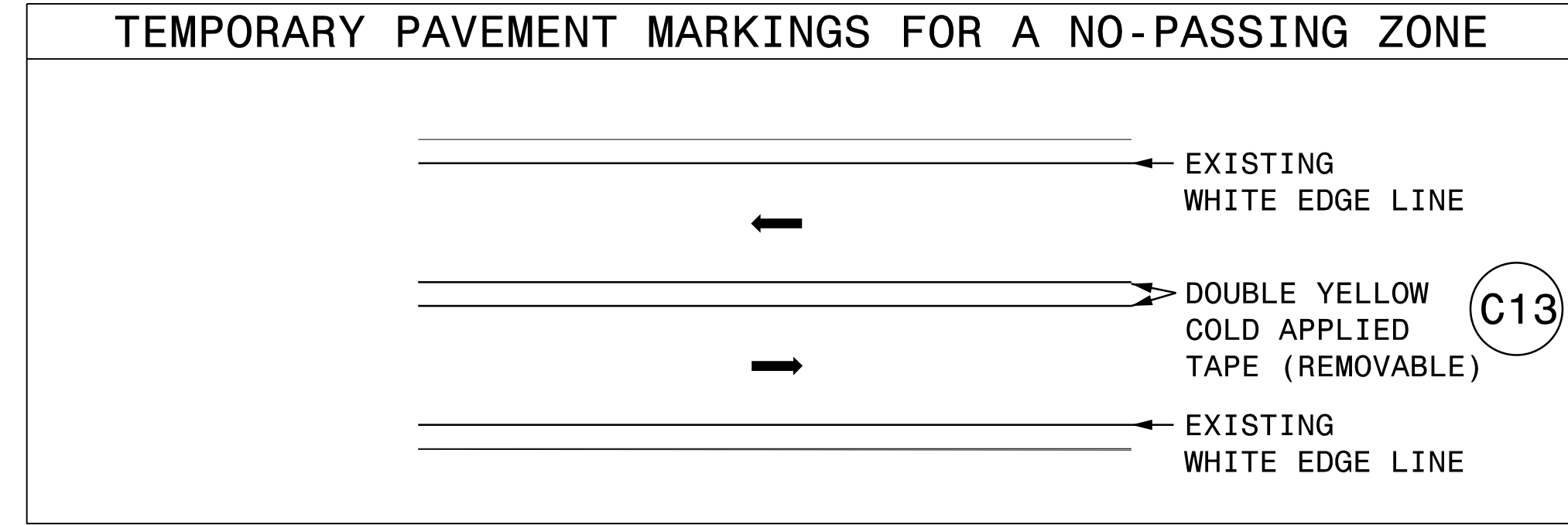
TEMPORARY TRAFFIC CONTROL PHASE 1 DETAIL



MATCH LINE -L- STA. 23 + 00.00 - SEE SHEET 5B



** EXISTING 10'-30' SKIPS TO BE COVERED BY DOUBLE YELLOW COLD APPLIED TAPE (REMOVABLE) FOR A MINIMUM DISTANCE OF 1500' ON EITHER SIDE OF THE WORK ZONE. SEE DETAIL FOR TEMPORARY PAVEMENT MARKINGS FOR A NO-PASSING ZONE.

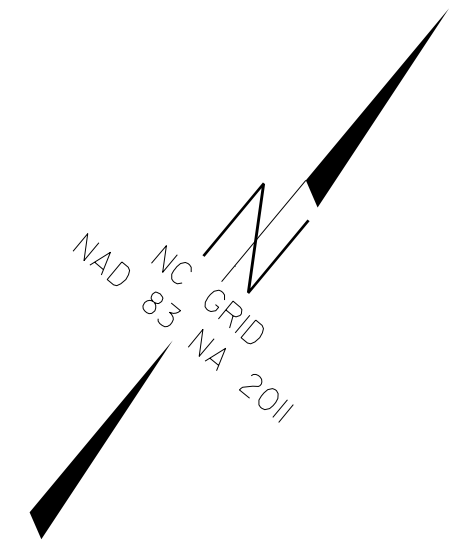


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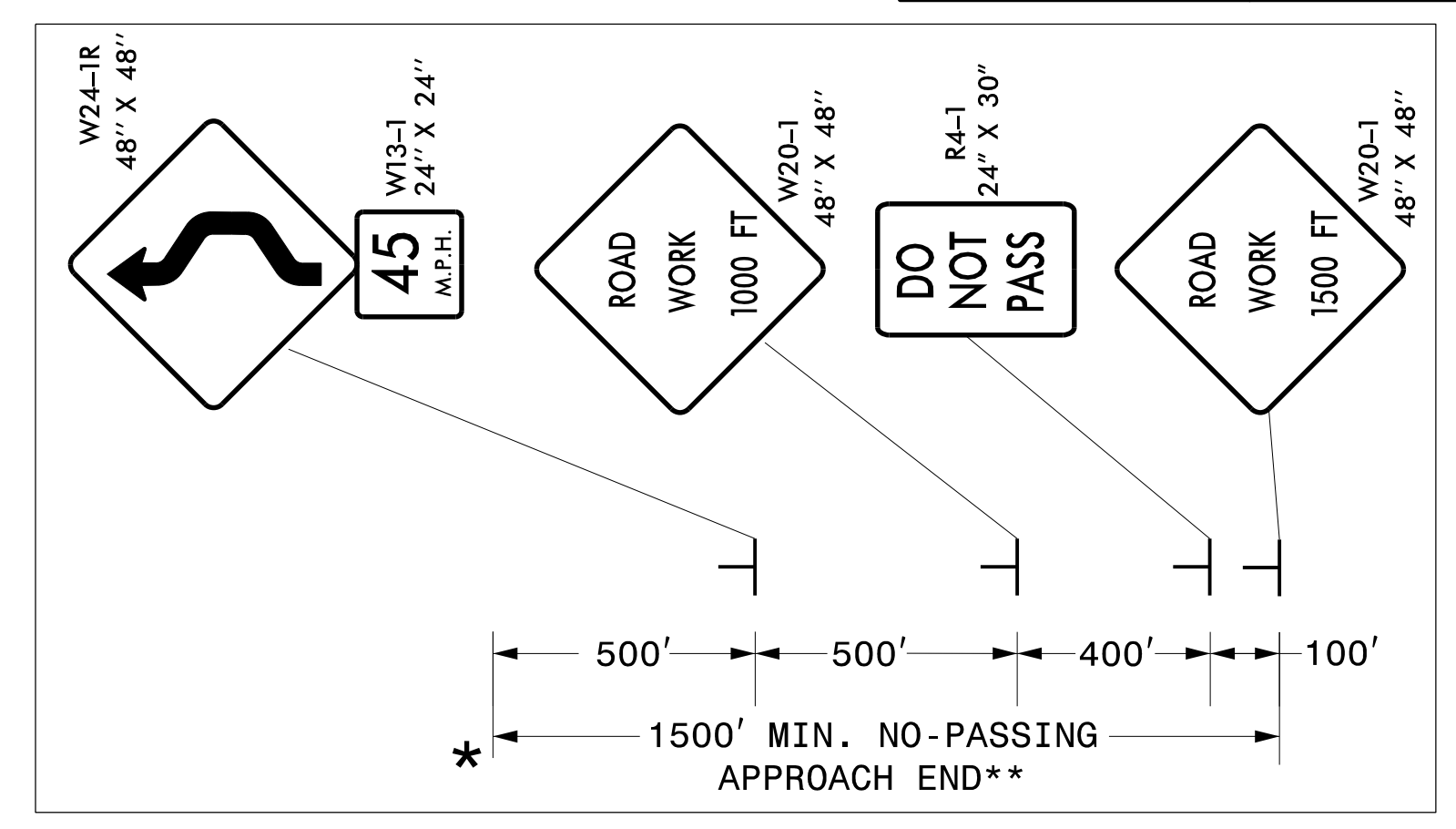
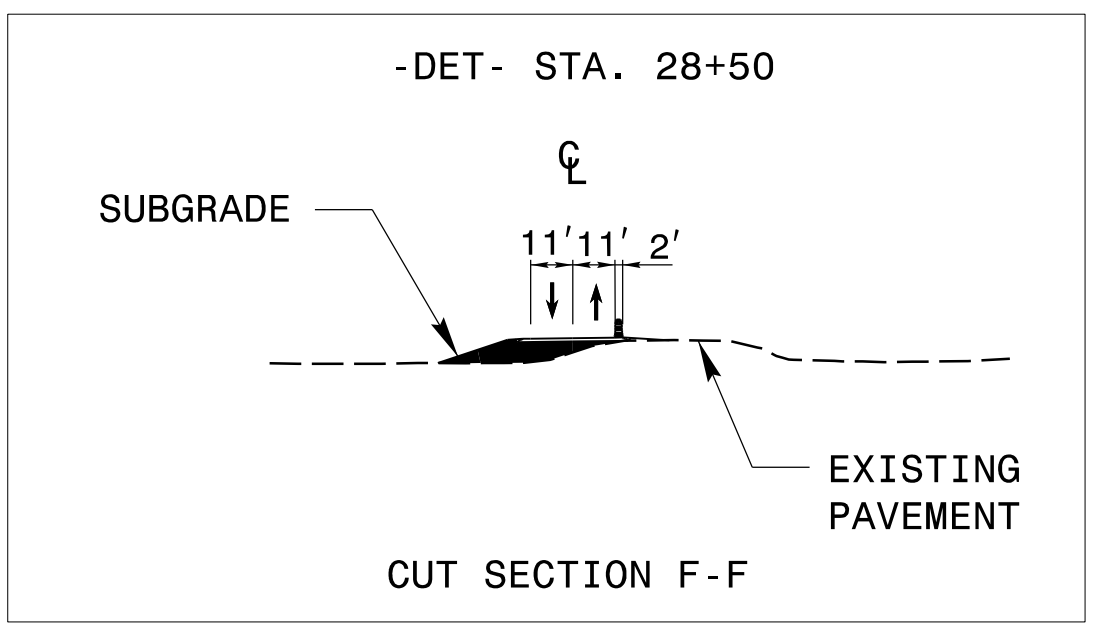
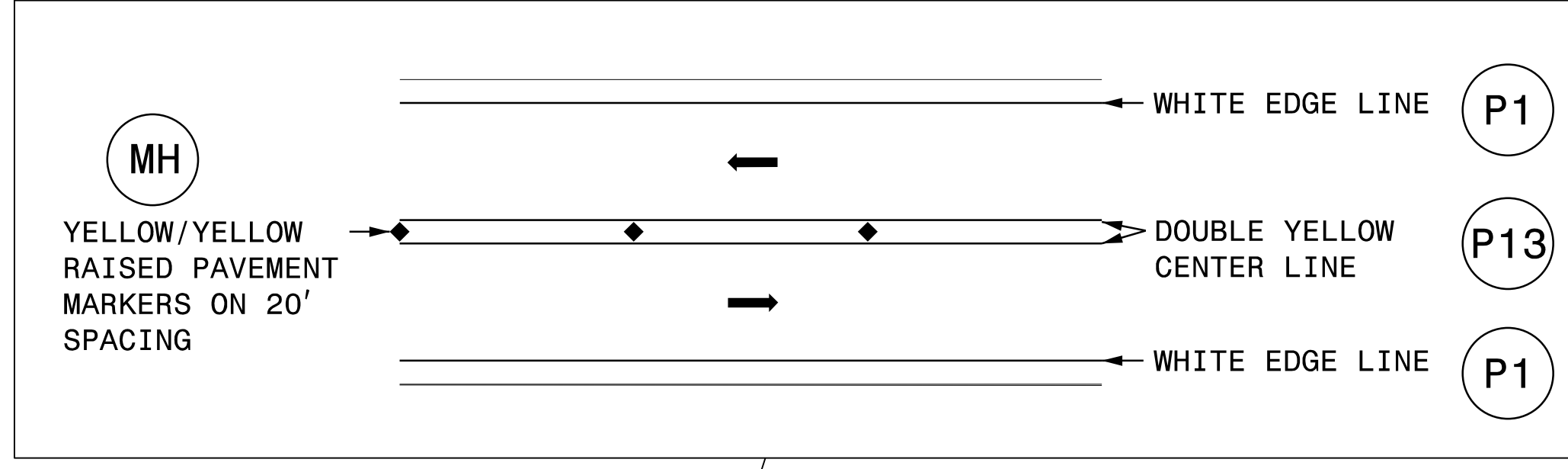
SEAL

TEMPORARY TRAFFIC CONTROL PHASE 2 DETAIL

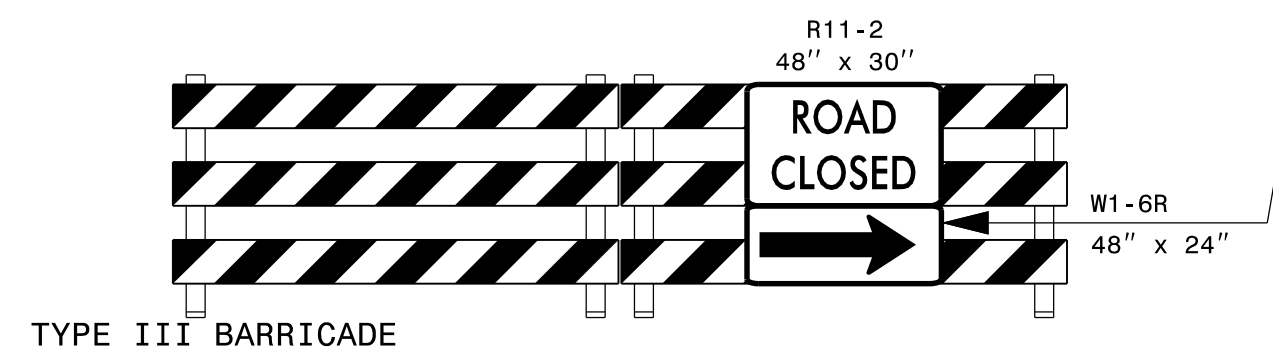
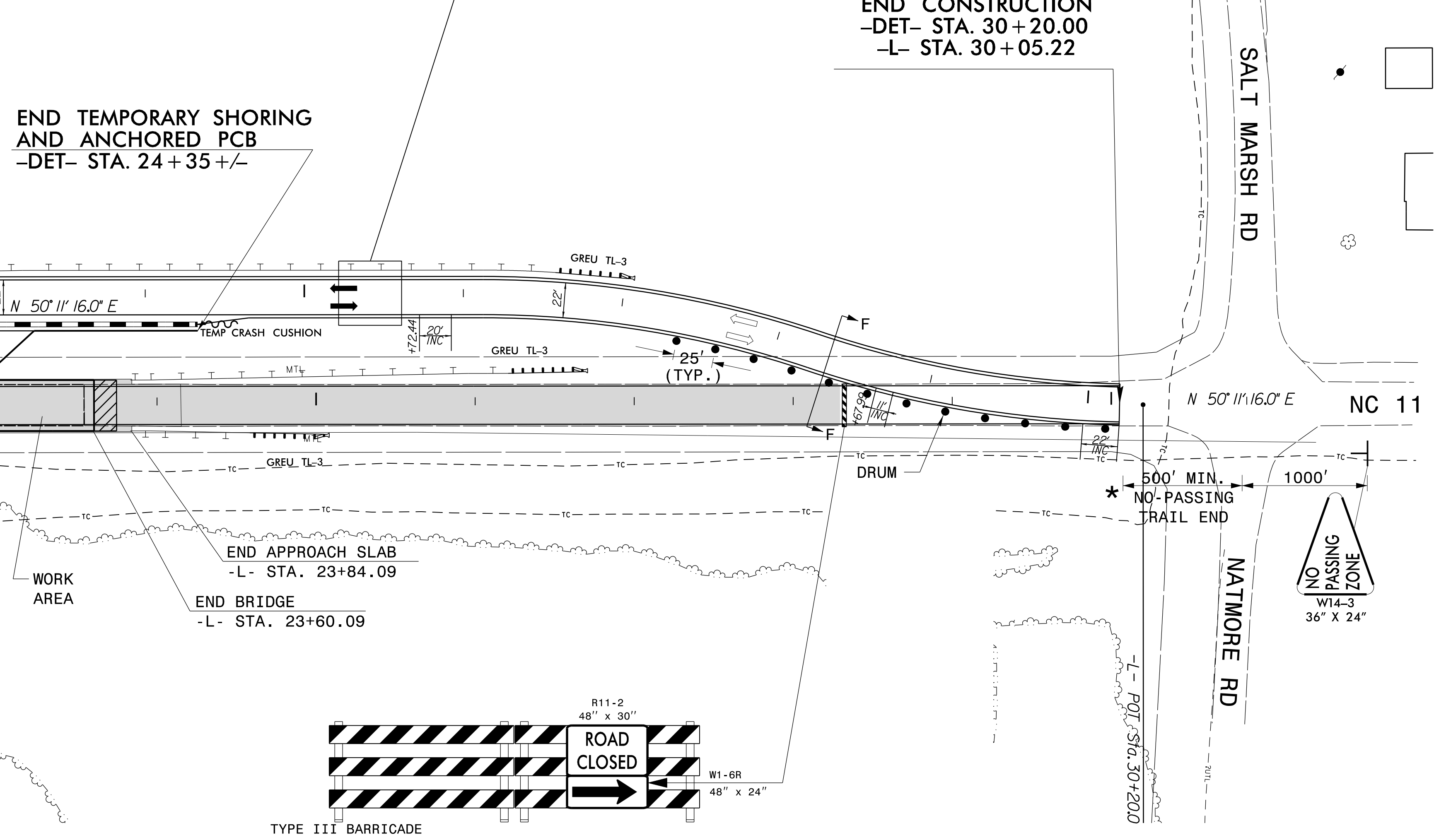
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PAVEMENT MARKINGS FOR TEMPORARY DETOUR AND APPROACHES

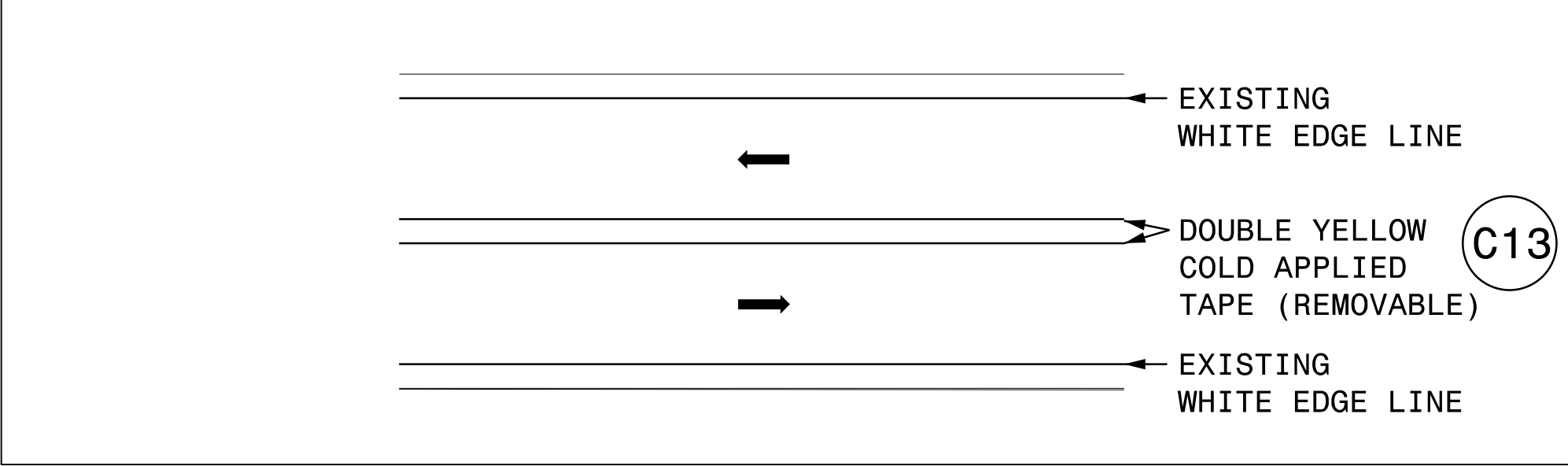


MATCH LINE -L- STA. 23+00.00 - SEE SHEET 5A



** EXISTING 10'-30' SKIPS TO BE COVERED BY DOUBLE YELLOW COLD APPLIED TAPE (REMOVABLE) FOR A MINIMUM DISTANCE OF 1500' ON EITHER SIDE OF THE WORK ZONE. SEE DETAIL FOR TEMPORARY PAVEMENT MARKINGS FOR A NO-PASSING ZONE.

TEMPORARY PAVEMENT MARKINGS FOR A NO-PASSING ZONE



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TEMPORARY TRAFFIC CONTROL PHASE 2 DETAIL