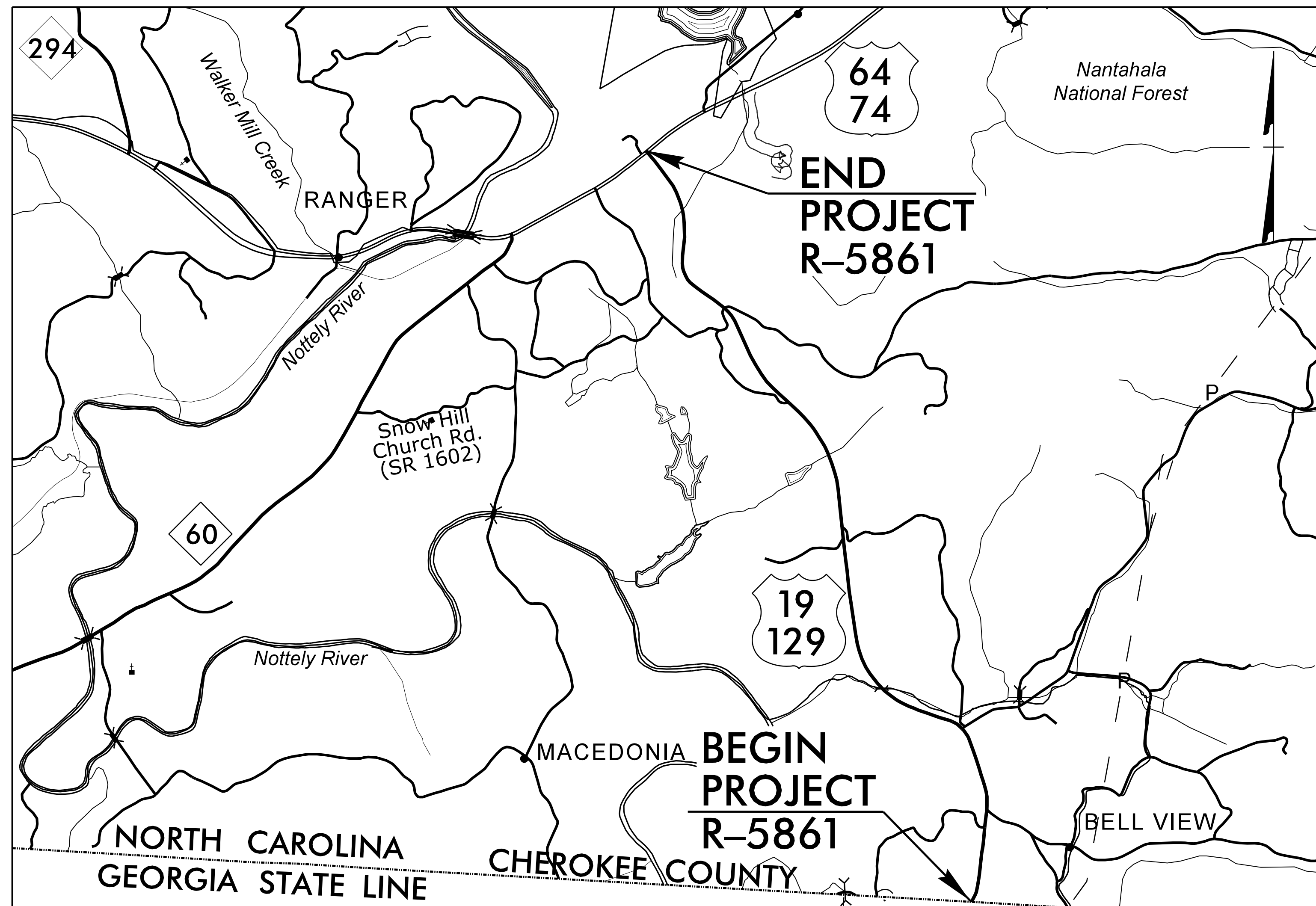
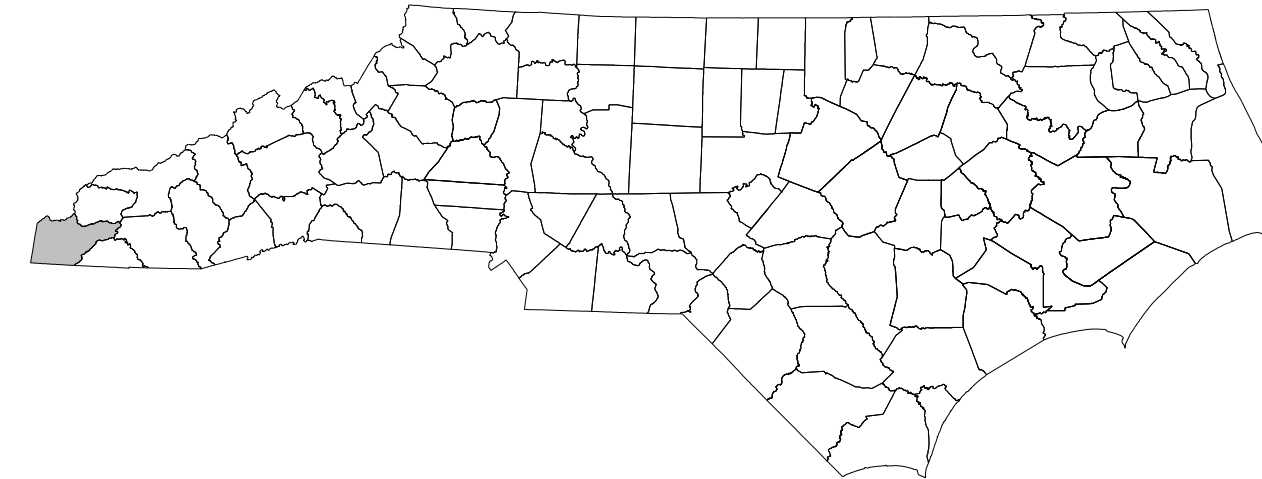


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

CHEROKEE COUNTY

LOCATION: WIDENING US 19 /129 FROM THE GEORGIA STATE LINE TO US 64 /74.



INDEX OF SHEETS

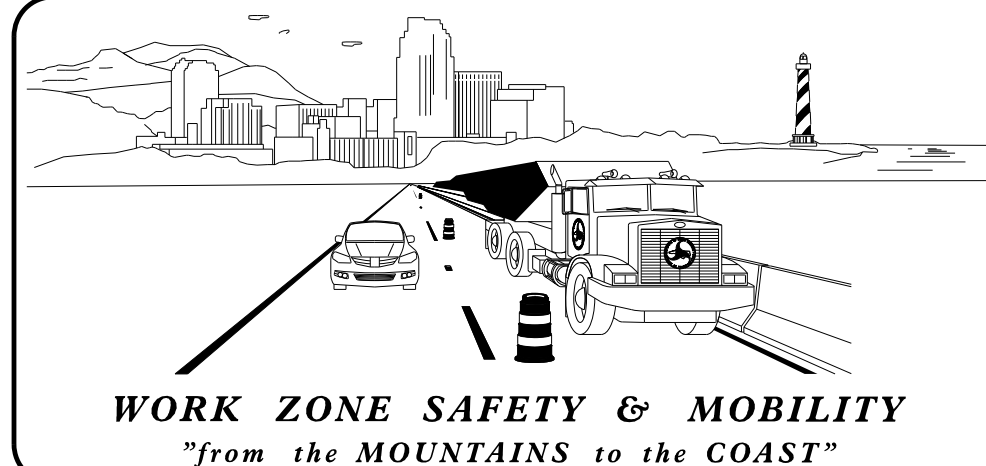
SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND AND TEMPORARY PAVEMENT MARKING SCHEDULE
TMP-1B AND 1C	TRANSPORTATION OPERATIONS PLAN: (GENERAL NOTES)
TMP-2	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-2A AND TMP-2B	TEMPORARY SHORING INFORMATION
TMP-2C	TEMPORARY BARRIER APPROACH END TREATMENT
TMP-2D THRU TMP-2I	OFFSITE DETOUR DETAILS
TMP-2J AND TMP-2K	SPECIAL SIGN DESIGNS
TMP-3 AND 3A	TRANSPORTATION MANAGEMENT PHASING
TMP-4 THRU TMP-21E	PHASE I DETAILS
TMP-22 THRU TMP-36	PHASE II DETAILS
TMP-37 THRU TMP-60	PHASE III DETAILS

SHEET NO.
TMP-1

R-5861

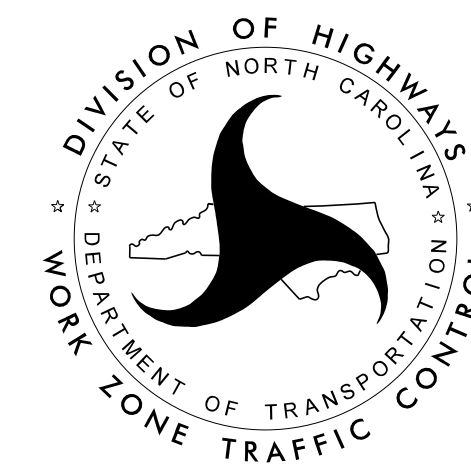
TIP PROJECT:

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

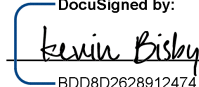
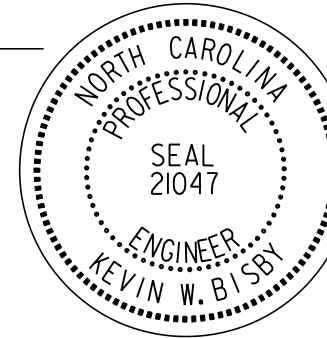


PLANS PREPARED BY:
C. B. HOLDEN, PE
TRANSPORTATION PROJECT MANAGER
KEVIN BISBY, PE
TECHNICAL MANAGER

HIGHWAY DIVISION 14
NCDOT CONTACTS:
KENNETH MCDOWELL
ASSISTANT DESIGN
CONSTRUCTION ENGINEER
STEVE BUCHANAN
DIVISION TRAFFIC ENGINEER



RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

APPROVED: 
DATE: 10/18/2023
SEAL


10/18/2023
R5861.TC-1.cp01.dgn
KBISBY

LEGEND

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
1101.06	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
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
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

GENERAL

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

- WORK AREA
- REMOVAL
- TEMPORARY PAVEMENT
- WEDGING
- ONGOING CONSTRUCTION
- ONGOING CONSTRUCTION

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TEMPORARY PAVEMENT MARKING SCHEDULE

PAINT	
P1	WHITE EDGELINE (4")
P4	3 FT. - 9 FT./SP WHITE MINISKIP (4")
P5	2 FT. - 6 FT./SP WHITE MINISKIP (4")
P13	YELLOW DOUBLE CENTER (4")
P20	WHITE EDGELINE (6")
P21	WHITE SOLID LANE LINE (6")
P22	10 FT WHITE SKIP (6")
P23	3 FT. - 9 FT./SP WHITE MINISKIP (6")
P24	2 FT. - 6 FT./SP WHITE MINISKIP (6")
P30	YELLOW EDGELINE (6")
P33	YELLOW DOUBLE CENTER (6")
P50	WHITE GORELINE (12")
P52	YELLOW DIAGONAL (12")
P61	WHITE STOPBAR (24")
P70	LEFT TURN ARROW
P71	RIGHT TURN ARROW
P72	STRAIGHT ARROW
P73	COMBO. LEFT/STRAIGHT ARROW
P103	24" YIELD LINE TRIANGLE

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
- PORTABLE CONCRETE BARRIER

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS
- EXISTING PAVEMENT MARKING SYMBOLS

PAVEMENT MARKINGS

- MH TEMPORARY RAISED, YELLOW/YELLOW
- MI TEMPORARY RAISED, CRYSTAL/RED

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED:
 DATE: 10/18/2023
 SEAL
 DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

ROADWAY STANDARD
DRAWINGS & LEGEND

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 / 129 US 64 / 74	MONDAY THROUGH FRIDAY 6:00 AM TO 8:00 AM 4:00 PM TO 6:00 PM

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

ROAD NAME

-ALL-

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 6:00 AM DECEMBER 31ST TO 6:00 PM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY, THEN UNTIL 6:00 PM THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00 AM THURSDAY AND 6:00 PM MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY TO 6:00 PM TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 AM THE DAY BEFORE INDEPENDENCE DAY AND 6:00 PM THE DAY AFTER INDEPENDENCE DAY. IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY, THEN BETWEEN THE HOURS OF 6:00 AM THE THURSDAY BEFORE INDEPENDENCE DAY AND 6:00 PM THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY TO 6:00 PM TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 AM TUESDAY AND 6:00 PM MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 AM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00 PM THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
US 19 / 129 US 64 / 74	MONDAY THROUGH FRIDAY 6:00 AM TO 8:00 AM 4:00 PM TO 6:00 PM	15 MINUTES FOR TRAFFIC SHIFTS



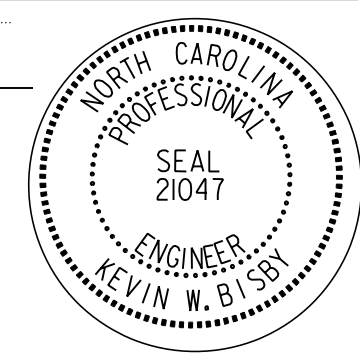

D) DO NOT CONDUCT ANY HAULING OPERATION AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVEL WAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL, OR AS DIRECTED BY THE ENGINEER.

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 OR EQUIPMENT ARE WORKING WITHIN 15 FT. OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING RDWY. STD. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL, OR A LANE CLOSURE IS INSTALLED.
- G) WHEN PERSONNEL 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 LAND USING RDWY. STD. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- WHEN PERSONNEL 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 RDWY. STD. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- H) WHEN PERSONNEL OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED 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 EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- I) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT. ON BOTH SIDES OF AN OPEN TRAVEL WAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP-OFF REQUIREMENTS

- J) 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.
- K) 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' IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

 <p>P: (919) 878-9560 8601 Six Forks Road, Forum 1, Suite 700 Raleigh, North Carolina 27615-3960 NC License No. F-0112</p> <p>Engineers Construction Managers Planners Scientists www.rkk.com</p> <p>Responsive People Creative Solutions</p>	<p>APPROVED: </p> <p>DATE: 10/18/2023</p> <p style="text-align: center;">SEAL</p> 		<p>TRANSPORTATION OPERATIONS PLAN</p> <p>GENERAL NOTES</p>
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			

GENERAL NOTES, CONTINUED

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- M) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT. FROM THE EDGE OF TRAVEL LANE NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- N) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.
- O) PROVIDE SIGNING REQUIRED FOR THE OFFSITE DETOUR ROUTES AS SHOWN THE TRAFFIC CONTROL PLANS.
- P) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.
- Q) COVER OR REMOVE ALL SIGNS REQUIRED FOR OFF-SITE DETOURS WHEN DETOUR IS NOT IN OPERATION.
- R) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- S) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) OR "BUMP" SIGNS (W8-1) 500' IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

- T) 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.

- U) 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 (mph)	MINIMUM OFFSET (ft.)
< 40	15
45 - 50	20
55	25
> 60	30

TRAFFIC CONTROL DEVICES

- V) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREA 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 TRAVEL WAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTION 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- W) PLACE TYPE III BARRICADES WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE THE ENTIRE ROADWAY.
- X) PLACE ADDITIONAL SETS OF CHANELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500-FOOT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
US 19 / 129, US 64 / 74	PAINT	TEMPORARY RAISED
ALL OTHER ROADS	PAINT	NONE

- Z) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX 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 MONOLITHIC ISLAND LOCATIONS WITH THE PROPER COLOR PAVEMENT MARKINGS PRIOR TO INSTALLATION. PLACE DRUMS TO DELINEATE ANY REMOVED MONOLITHIC ISLANDS.

TEMPORARY SHORING

- DD) TEMPORARY SHORING IS REQUIRED TO MAINTAIN TRAFFIC WHEN A 2:1 (H:V) SLOPE FROM THE TOP OF AN EMBANKMENT OR BOTTOM OF AN EXCAVATION WILL INTERSECT THE EXISTING GROUND LINE LESS THAN 5 FT FROM THE EDGE OF PAVEMENT OF AN OPEN TRAVELWAY. THIS PROVISION DOES NOT APPLY TO PIPE, INLET OR UTILITY INSTALLATION UNLESS NOTED OTHERWISE IN THE PLANS. (SEE PROJECT SPECIAL PROVISIONS)

MISCELLANEOUS

- EE) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND INTERSECTIONS AS DIRECTED BY THE ENGINEER.

MANAGEMENT STRATEGIES

THE FOLLOWING LISTED WORK ZONE STRATEGIES ARE RECOMMENDED FOR INCLUSION WITHIN THIS TRANSPORTATION MANAGEMENT PLAN (TMP).


TRAFFIC MANAGEMENT STRATEGIES:	WORK ZONE SAFETY & MOBILITY STRATEGIES:
FULL ROADWAY CLOSURES	TEMPORARY TRAFFIC SIGNALS
LANE SHIFTS OR CLOSURES	
SHOULDER CLOSURES	
ONE-LANE, TWO WAY OPERATION (FLAGGING)	
OFF-SITE DETOURS / USE OF ALTERNATIVE ROUTES	
ON-SITE DETOURS	



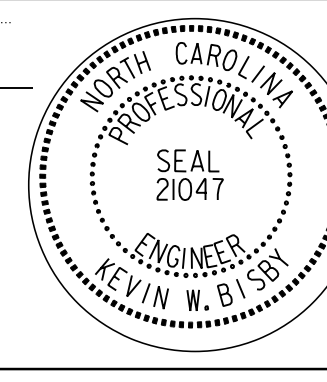
P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112

Engineers | Construction Managers | Planners | Scientists
www.rkk.com

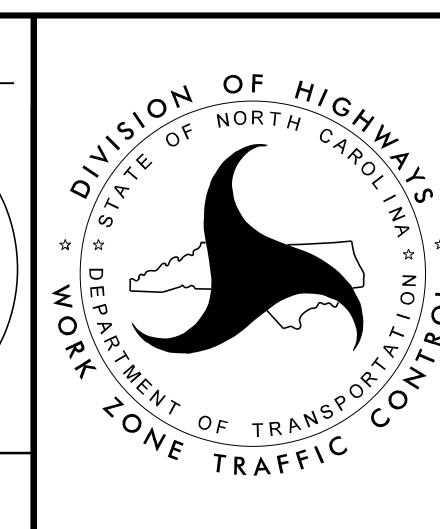
Responsive People | Creative Solutions

APPROVED: 
DATE: 10/18/2023

SEAL



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



TRANSPORTATION
OPERATIONS PLAN

GENERAL NOTES

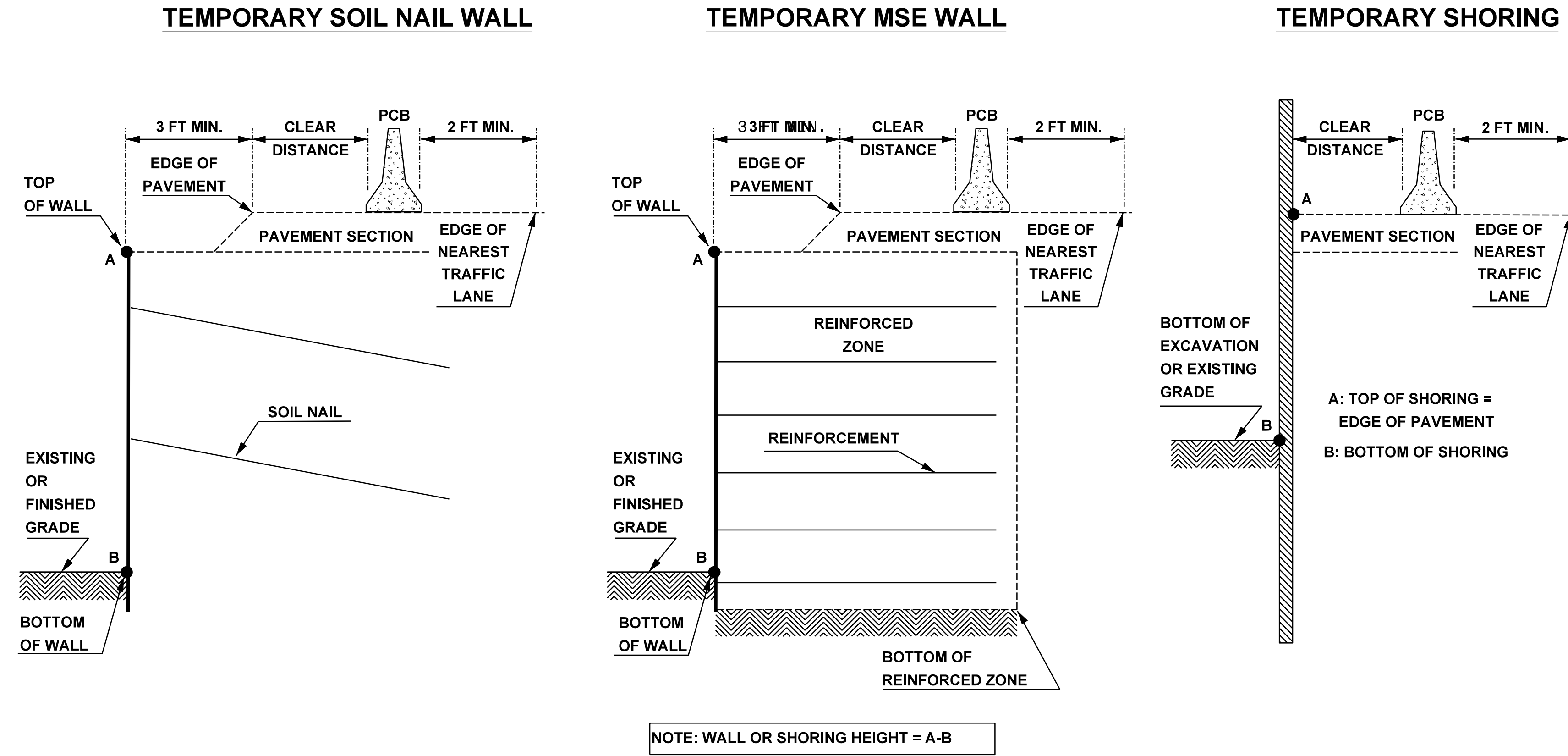


FIGURE A

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	
		<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	
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

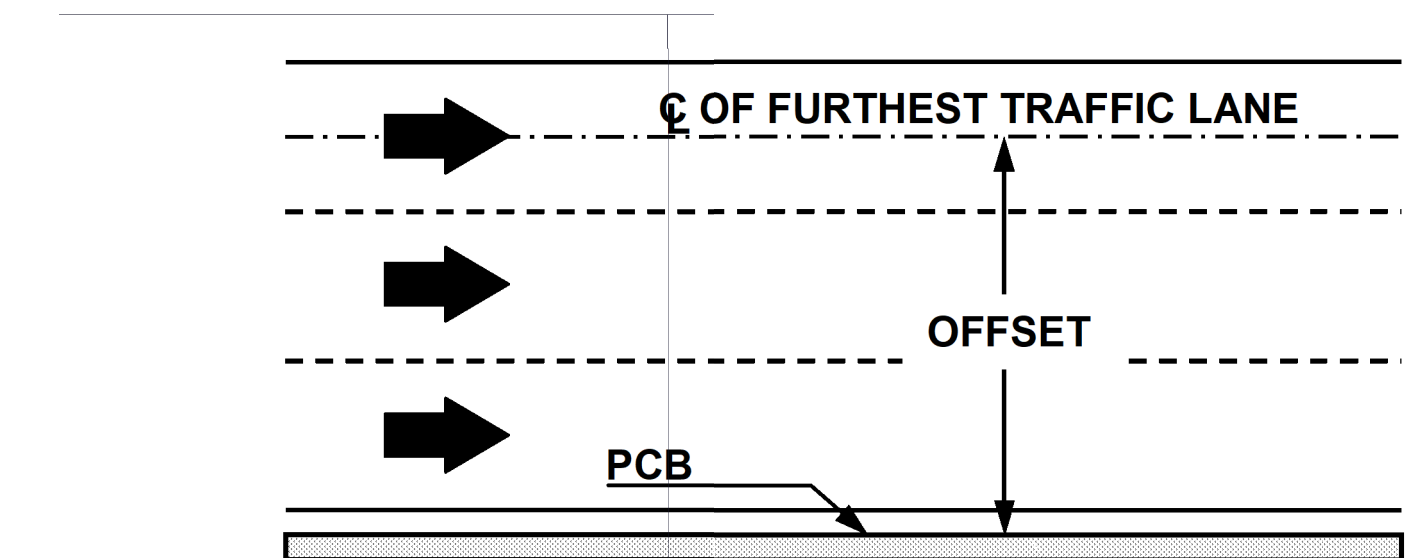

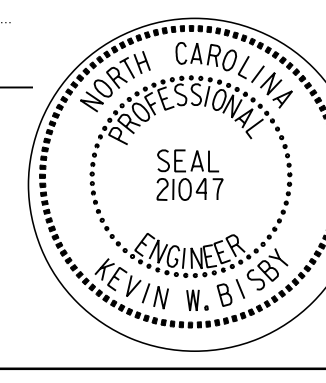
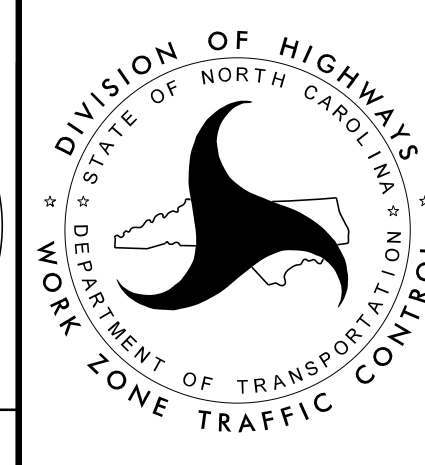


FIGURE B

APPROVED:  DATE: 10/18/2023 SEAL		 <p style="text-align: center;">PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS</p>
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>		

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 FOR THE LOCATIONS LISTED IN THE TABLE, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

WHERE THE STANDARD TEMPORARY SHORING DETAILS DO NOT APPLY, DESIGN TEMPORARY SHORING FROM STATION -L_DET1- STA 19+73.82±, 22.0 FT RT TO STATION -L_DET1- STA 25+92.76±, 22.0 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ): 120 PCF
 FRICTION ANGLE (φ): 30 DEGREES
 COHESION (c): 0 PSF
 GROUNDWATER ELEVATION: VARIES, ASSUMED ELEVATION EQUIVALENT TO BOTTOM OF SHORING ELEVATION.

AT THE CONTRACTOR'S OPTION AND AS APPLICABLE, USE STANDARD TEMPORARY SHORING OR A TEMPORARY WALL FOR THE TEMPORARY SHORING FROM -L_DET1- STA 19+73.82±, 22.0 FT RT TO STATION -L_DET1- STA 25+92.76±, 22.0 FT RT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING. SEE STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L_DET1- STA 19+73.82±, 22.0 FT RT TO STATION -L_DET1- STA 25+92.76±, 22.0 FT RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. THE SUBSURFACE INFORMATION THAT IS AVAILABLE CAN BE FOUND IN THE ROADWAY SUBSURFACE INVENTORY REPORT.

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 FOR THE LOCATIONS LISTED IN THE TABLE, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

WHERE THE STANDARD TEMPORARY SHORING DETAILS DO NOT APPLY, DESIGN TEMPORARY SHORING FROM STATION -L- STA 26+00±, 30.6 FT LT TO STATION -L- STA 30+50±, 34.7 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ): 120 PCF
 FRICTION ANGLE (φ): 30 DEGREES
 COHESION (c): 0 PSF
 GROUNDWATER ELEVATION: VARIES, ASSUMED ELEVATION EQUIVALENT TO BOTTOM OF SHORING ELEVATION.

AT THE CONTRACTOR'S OPTION AND AS APPLICABLE, USE STANDARD TEMPORARY SHORING FOR THE TEMPORARY SHORING FROM STATION -L- STA 26+00±, 30.6 FT LT TO STATION -L- STA 30+50±, 34.7 FT LT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- STA 26+00±, 30.6 FT LT TO STATION -L- STA 30+50±, 34.7 FT LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. THE SUBSURFACE INFORMATION THAT IS AVAILABLE CAN BE FOUND IN THE ROADWAY SUBSURFACE INVENTORY REPORT.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -L- STA 26+00±, 30.6 FT LT TO STATION -L- STA 30+50±, 34.7 FT LT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

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 FOR THE LOCATIONS LISTED IN THE TABLE, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.


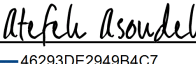
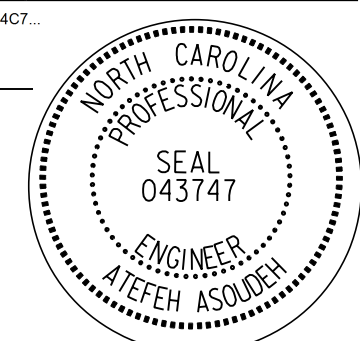

WHERE THE STANDARD TEMPORARY SHORING DETAILS DO NOT APPLY, DESIGN TEMPORARY SHORING FROM STATION -L_DET2- STA 16+17.91±, 15 FT LT TO STATION -L_DET2- STA 21+69.85±, 15 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ): 120 PCF
 FRICTION ANGLE (φ): 30 DEGREES
 COHESION (c): 0 PSF
 GROUNDWATER ELEVATION: VARIES, ASSUMED ELEVATION EQUIVALENT TO BOTTOM OF SHORING ELEVATION.

AT THE CONTRACTOR'S OPTION AND AS APPLICABLE, USE STANDARD TEMPORARY SHORING FOR THE TEMPORARY SHORING FROM STATION -L_DET2- STA 16+17.91±, 15 FT LT TO STATION -L_DET2- STA 21+69.85±, 15 FT LT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L_DET2- STA 16+17.91±, 15 FT LT TO STATION -L_DET2- STA 21+69.85±, 15 FT LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. THE SUBSURFACE INFORMATION THAT IS AVAILABLE CAN BE FOUND IN THE ROADWAY SUBSURFACE INVENTORY REPORT.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -L_DET2- STA 16+17.91±, 15 FT LT TO STATION -L_DET2- STA 21+69.85±, 15 FT LT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

 P: (919) 878-9560 8601 Six Forks Road, Forum 1, Suite 700 Raleigh, North Carolina 27615-3960 NC License No. F-0112 Engineers Construction Managers Planners Scientists www.rkk.com Responsive People Creative Solutions	APPROVED:  DATE: 10/18/2023 SEAL			TEMPORARY SHORING INFORMATION
	DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

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 FOR THE LOCATIONS LISTED IN THE TABLE, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

WHERE THE STANDARD TEMPORARY SHORING DETAILS DO NOT APPLY, DESIGN TEMPORARY SHORING FROM STATION -L- STA 110+00±, 20.9 FT RT TO STATION -L- STA 120+00±, 39.8 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ): 120 PCF
 FRICTION ANGLE (ϕ): 30 DEGREES
 COHESION (c): 0 PSF
 GROUNDWATER ELEVATION: VARIES, ASSUMED ELEVATION EQUIVALENT TO BOTTOM OF SHORING ELEVATION.

AT THE CONTRACTOR'S OPTION AND AS APPLICABLE, USE STANDARD TEMPORARY SHORING FOR THE TEMPORARY SHORING FROM STATION -L- STA 110+00±, 20.9 FT RT TO STATION -L- STA 120+00±, 39.8 FT RT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- STA 110+00±, 20.9 FT RT TO STATION -L- STA 120+00±, 39.8 FT RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. THE SUBSURFACE INFORMATION THAT IS AVAILABLE CAN BE FOUND IN THE ROADWAY SUBSURFACE INVENTORY REPORT.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -L- STA 110+00±, 20.9 FT RT TO STATION -L- STA 120+00±, 39.8 FT RT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION -L- STA 110+00±, 20.9 FT RT TO STATION -L- STA 120+00±, 39.8 FT RT, MAY NOT PENETRATE TO THE MINIMUM TIP ELEVATION DUE TO OBSTRUCTIONS, VERY DENSE SOIL, BOULDERS, WEATHERED ROCK OR HARD ROCK.

Shoring Location No. 5:

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

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

WHERE THE STANDARD TEMPORARY SHORING DETAILS DO NOT APPLY, DESIGN TEMPORARY SHORING FROM STATION -L- DET3- STA 15+29±, 20.0 FT LT TO STATION -L- DET3- STA 16+60±, 20.0 FT LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ): 120 PCF
 FRICTION ANGLE (ϕ): 30 DEGREES
 COHESION (c): 0 PSF
 GROUNDWATER ELEVATION: VARIES, ASSUMED ELEVATION EQUIVALENT TO BOTTOM OF SHORING ELEVATION.

AT THE CONTRACTOR'S OPTION AND AS APPLICABLE, USE STANDARD TEMPORARY SHORING FOR THE TEMPORARY SHORING FROM STATION -L- DET3- STA 15+29±, 20.0 FT LT TO STATION -L- DET3- STA 16+60±, 20.0 FT LT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- DET3- STA 15+29±, 20.0 FT LT TO STATION -L- DET3- STA 16+60±, 20.0 FT LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. THE SUBSURFACE INFORMATION THAT IS AVAILABLE CAN BE FOUND IN THE ROADWAY SUBSURFACE INVENTORY REPORT.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -L- DET3- STA 15+29±, 20.0 FT LT TO STATION -L- DET3- STA 16+60±, 20.0 FT LT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

Shoring Location No. 6:

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


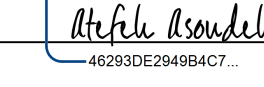
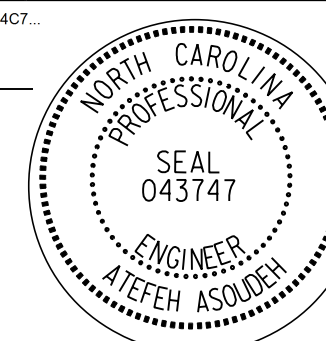

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION FOR THE LOCATIONS LISTED IN THE TABLE, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

WHERE THE STANDARD TEMPORARY SHORING DETAILS DO NOT APPLY, DESIGN TEMPORARY SHORING FROM STATION -L- STA 126+95±, 20.0 FT RT TO STATION -L- STA 128+35±, 20.0 FT RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ): 120 PCF
 FRICTION ANGLE (ϕ): 30 DEGREES
 COHESION (c): 0 PSF
 GROUNDWATER ELEVATION: VARIES, ASSUMED ELEVATION EQUIVALENT TO BOTTOM OF SHORING ELEVATION.

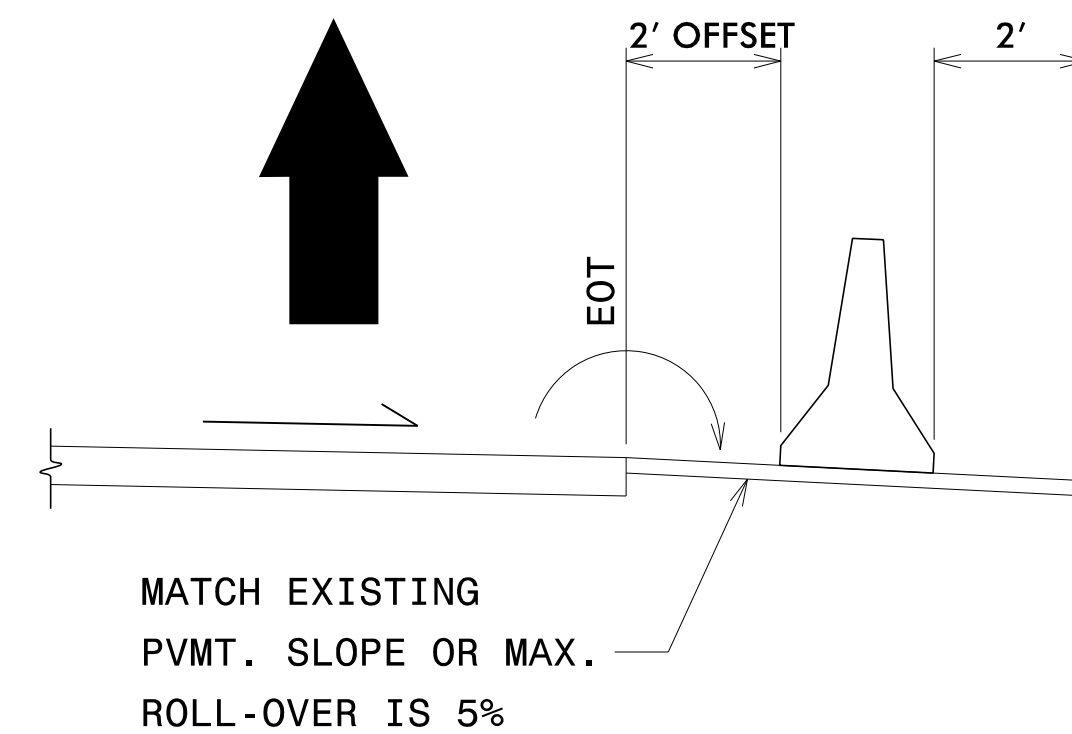
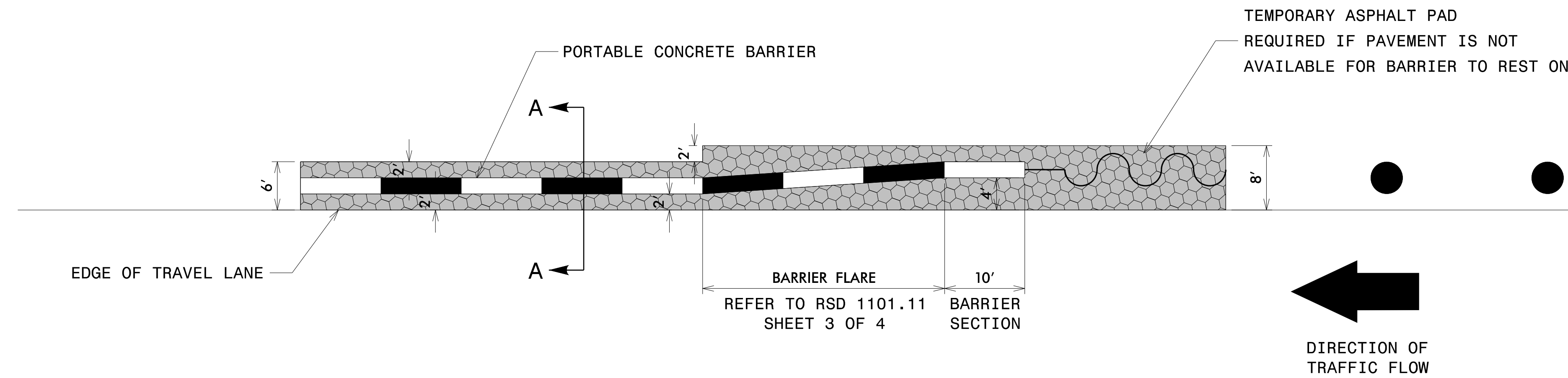
AT THE CONTRACTOR'S OPTION AND AS APPLICABLE, USE STANDARD TEMPORARY SHORING OR A TEMPORARY WALL FOR THE TEMPORARY SHORING FROM STATION -L- STA 126+95±, 20.0 FT RT TO STATION -L- STA 128+35±, 20.0 FT RT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING. SEE STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- STA 126+95±, 20.0 FT RT TO STATION -L- STA 128+35±, 20.0 FT RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. THE SUBSURFACE INFORMATION THAT IS AVAILABLE CAN BE FOUND IN THE ROADWAY SUBSURFACE INVENTORY REPORT.

 P: (919) 878-9560 8601 Six Forks Road, Forum 1, Suite 700 Raleigh, North Carolina 27615-3960 NC License No. F-0112	APPROVED:  DATE: 10/18/2023 SEAL 		TEMPORARY SHORING INFORMATION
Engineers Construction Managers Planners Scientists www.rkk.com Responsive People Creative Solutions DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

TEMPORARY BARRIER APPROACH END TREATMENT

PLAN VIEW



NOTES:

1. INSTALL TEMPORARY BARRIER OFFSET 2' FROM THE ADJACENT EDGE OF TRAVEL. OFFSET THE APPROACH END AND CRASH CUSHION 4' (PREFERRED) FROM THE EDGE OF A TRAVEL LANE. IN THE EVENT A 4' OFFSET CANNOT BE ACHIEVED A LESSER OFFSET OF NOT LESS THAN 2' MAY BE USED.
2. TEMPORARY BARRIER MUST REST ON AN ASPHALT OR CONCRETE SURFACE. PROVIDE 2' OF ASPHALT PAD BEHIND THE BARRIER IF IT IS UNANCHORED.
3. FURNISH MATERIAL AND INSTALL TEMPORARY ASPHALT PAD FOR BARRIER TO REST ON. ASPHALT PAD SHALL BE PAVED AT A MINIMUM OF 1" LAYER OF SURFACE COURSE OR AS APPROVED BY THE ENGINEER.
4. CONSTRUCT TEMPORARY ASPHALT PAD TO MATCH THE CROSS-SLOPE OF THE PAVEMENT THE PAD IS BEING PAVED UP TO, OR PROVIDE FOR MAXIMUM ROLL-OVER OF 5%. PAVE SUFFICIENT ASPHALT SUCH THAT THE ENTIRE BASE OF THE TEMPORARY BARRIER RESTS ON ASPHALT.
5. DO NOT PLACE TEMPORARY BARRIER ON A SURFACE WITH A SLOPE STEEPER THAN 6:1.
6. THE COST OF THE TEMPORARY ASPHALT PAD WILL BE CONSIDERED INCIDENTAL TO THE COST OF BARRIER. NO SEPARATE PAYMENT WILL BE MADE FOR THE TEMPORARY ASPHALT PAD.
7. PLAN VIEW SHOWN FOR DIVIDED ROADWAY. FOR UNDIVIDED ROADWAYS INSTALL CRASH CUSHION ON TRAILING (DOWNSTREAM) END OF BARRIER.

10/18/2023
R5861.Tc - cp02C.dgn
Kb1sby

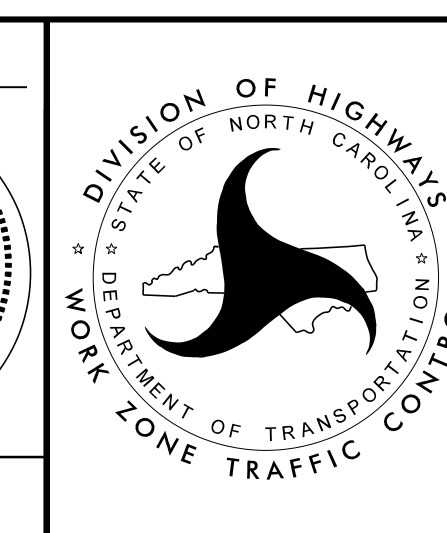
RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Blisby*
800802628912472
 DATE: 10/18/2023

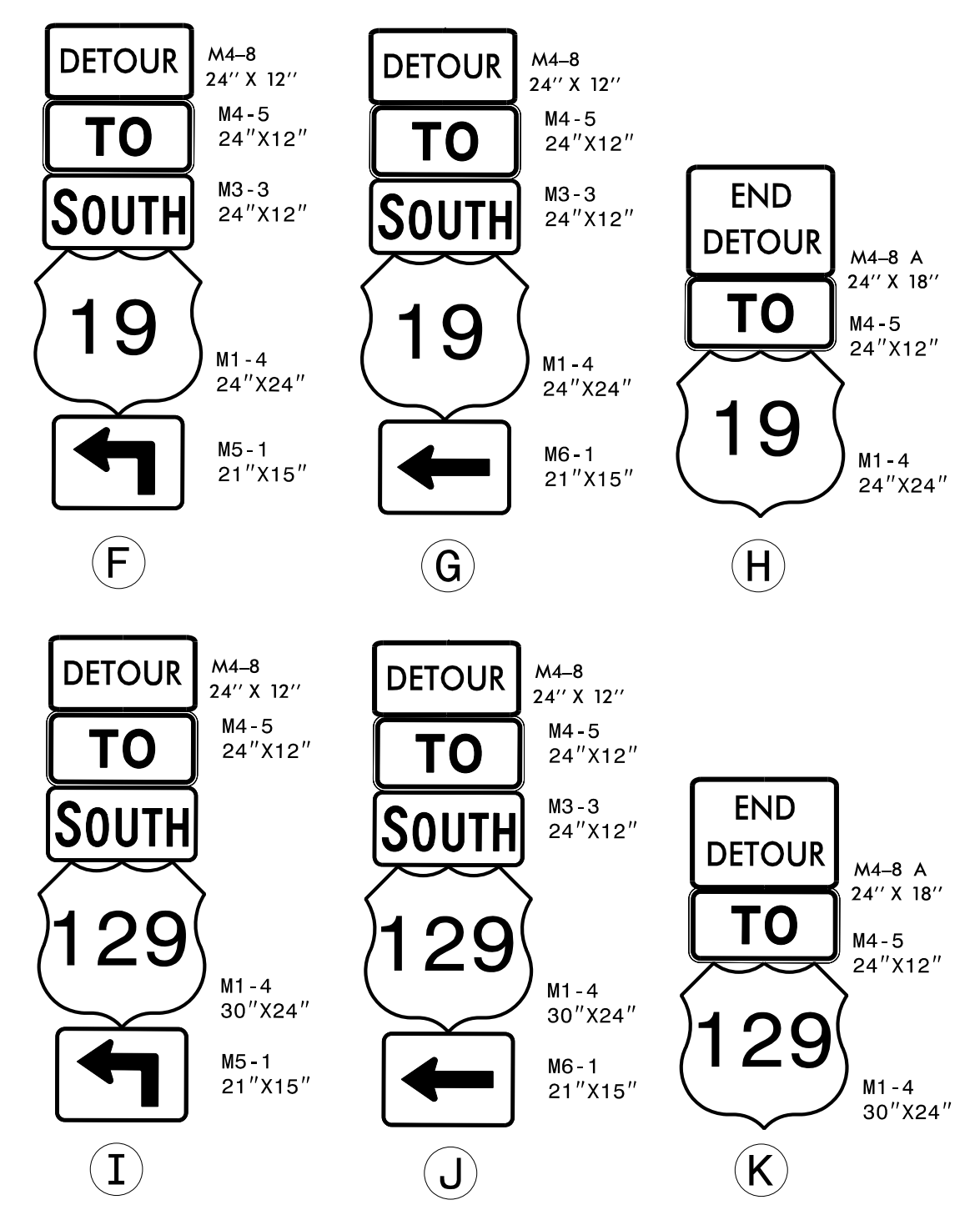
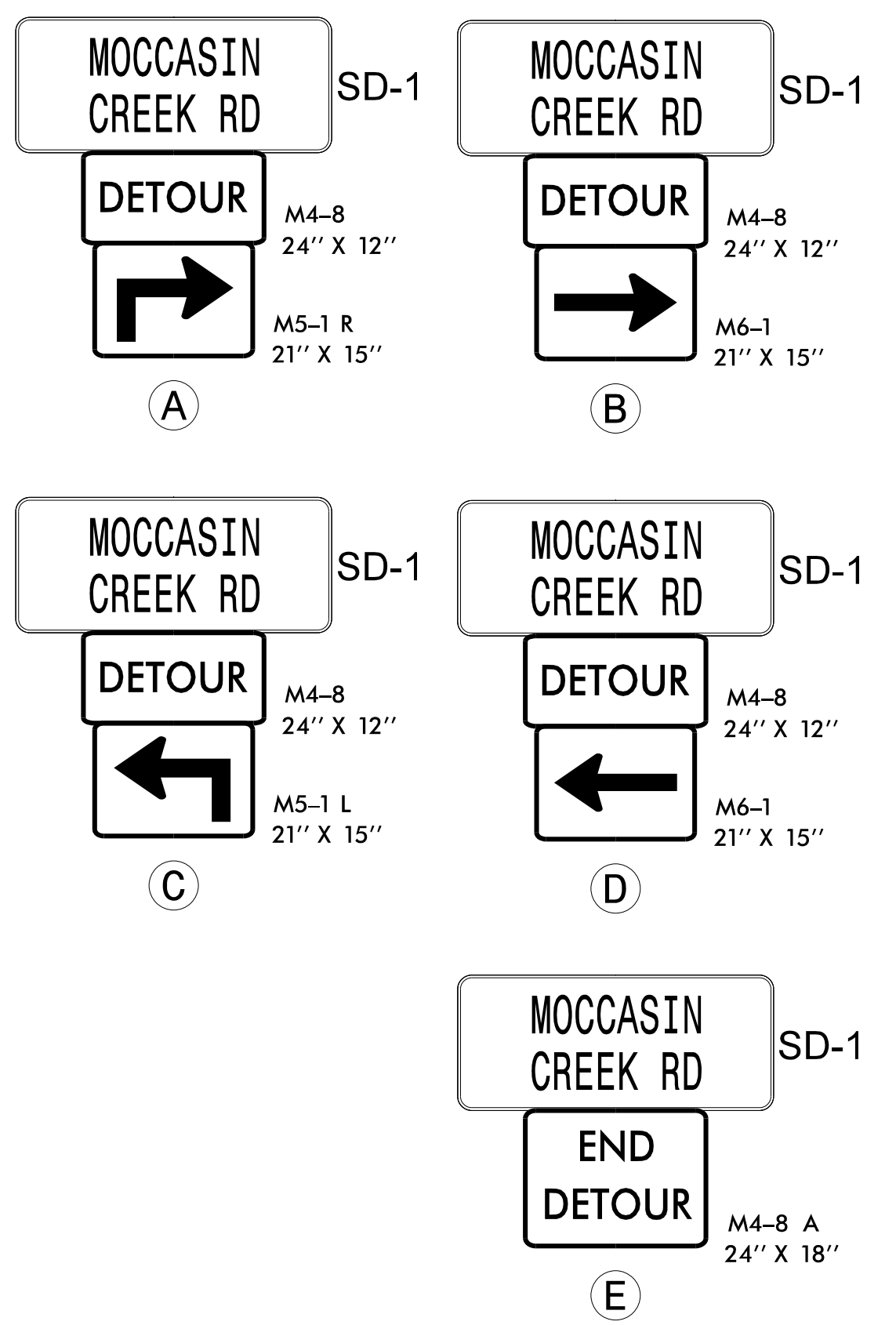
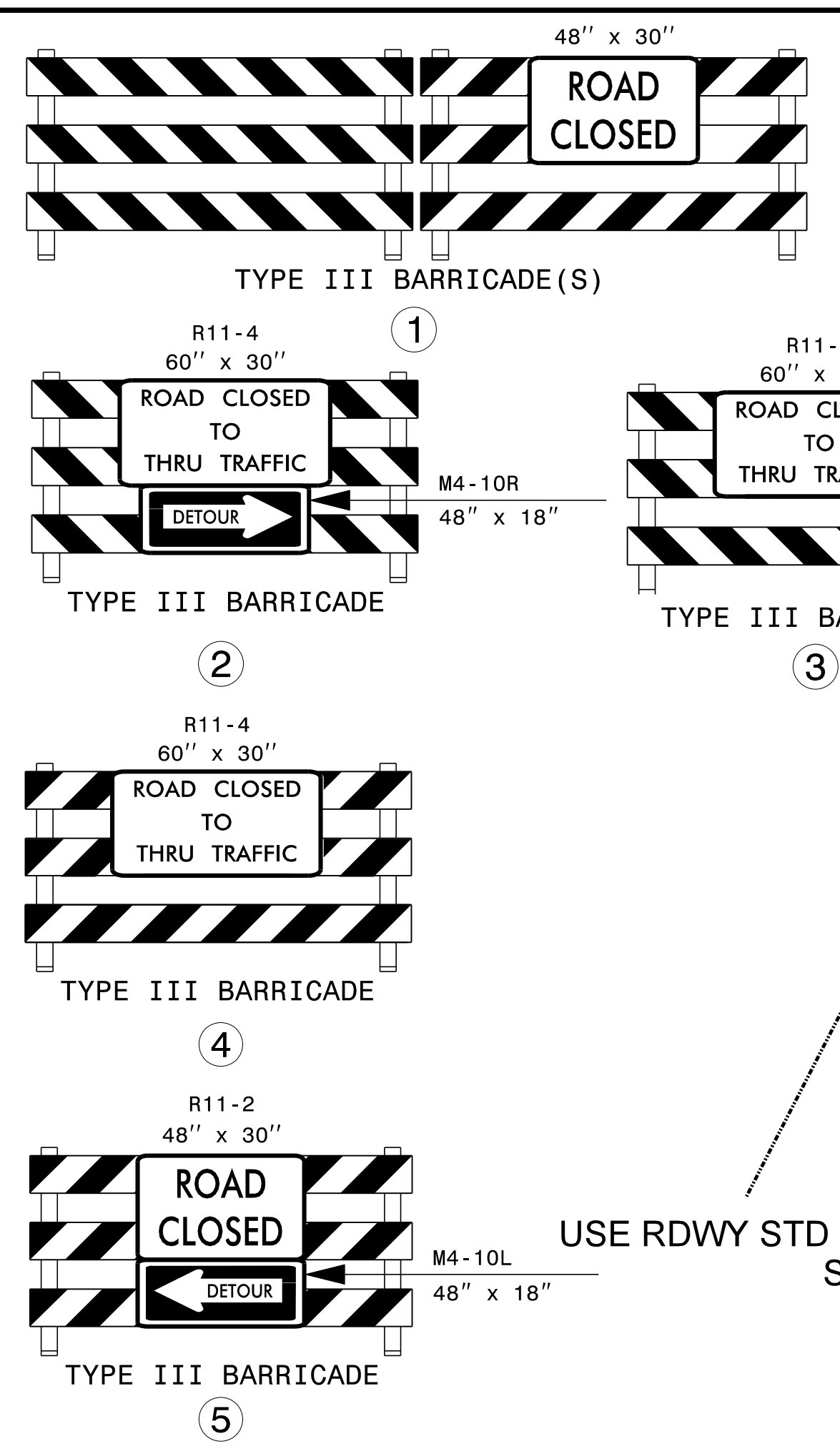
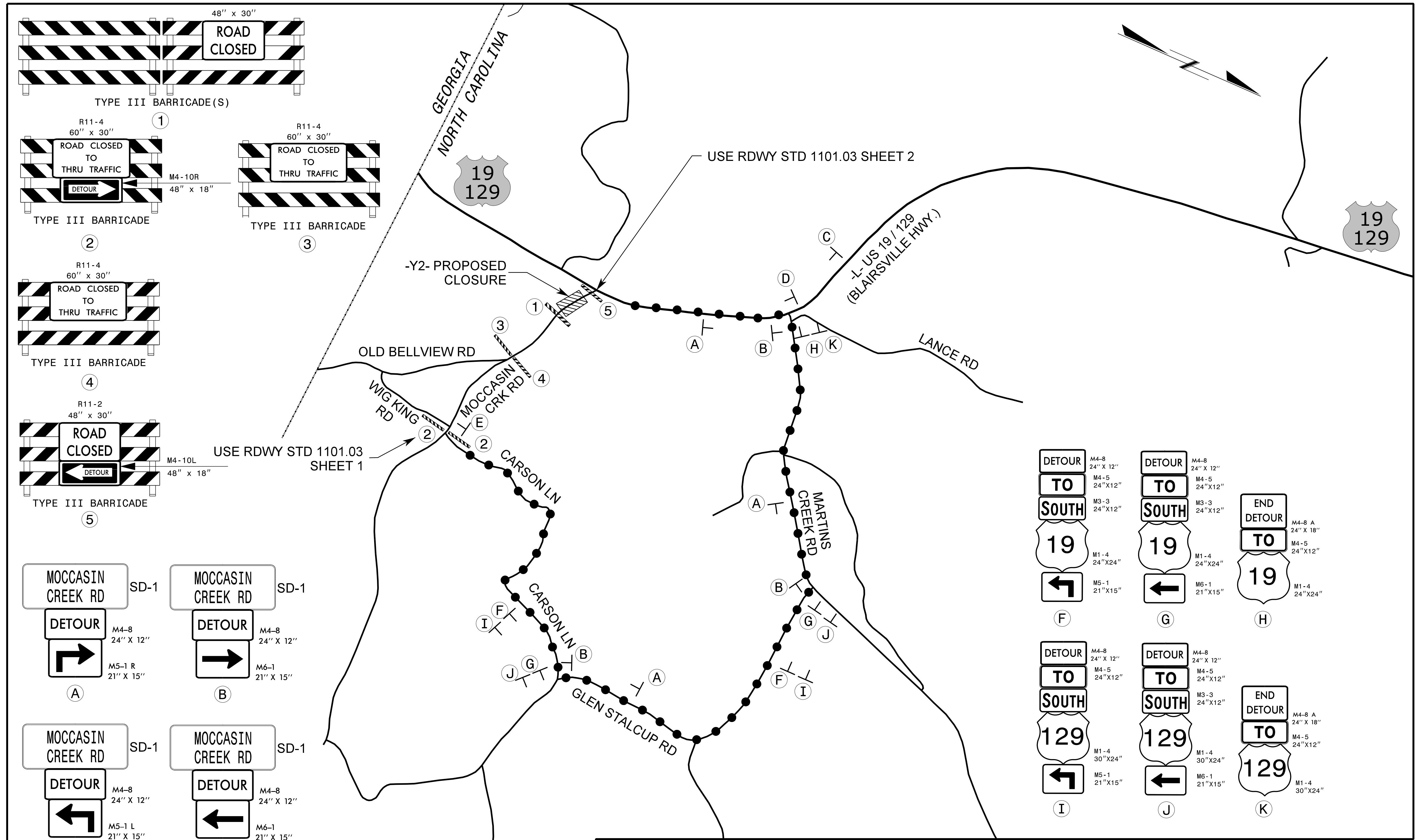
SEAL

NORTH CAROLINA
 PROFESSIONAL
 SEAL
 21047
 ENGINEER
 KEVIN W. BLISBY

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



**TEMPORARY BARRIER
 APPROACH END TREATMENT**



NOTE: SEE SHEET TMP-2J FOR SPECIAL SIGN DESIGN

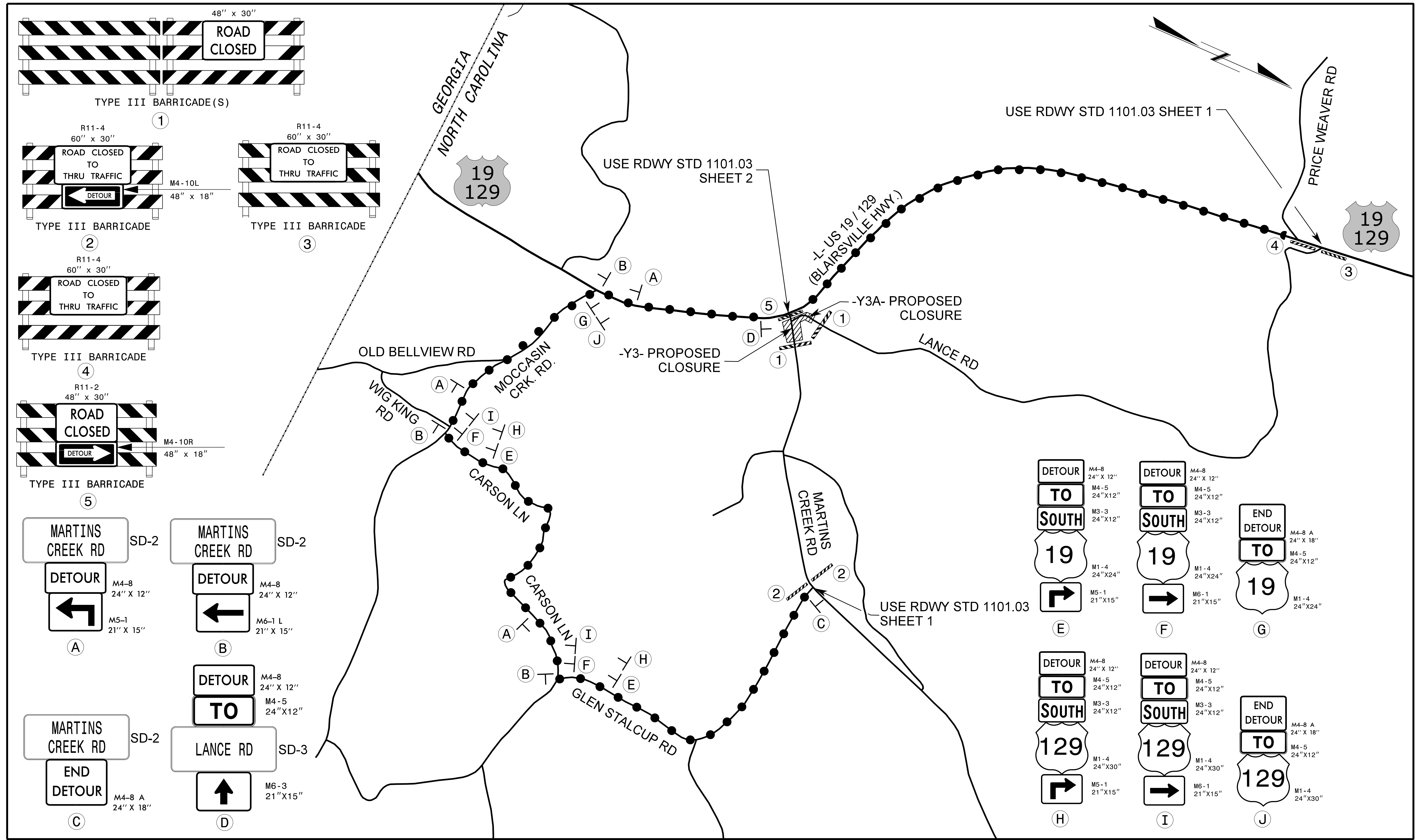
10/18/2023
 R5861.LTC_Tmp2D.dgn
 kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin B. Bly*
 DATE: 10/18/2023
 SEAL
 DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED



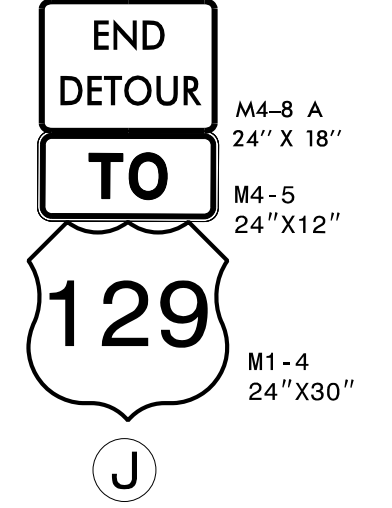
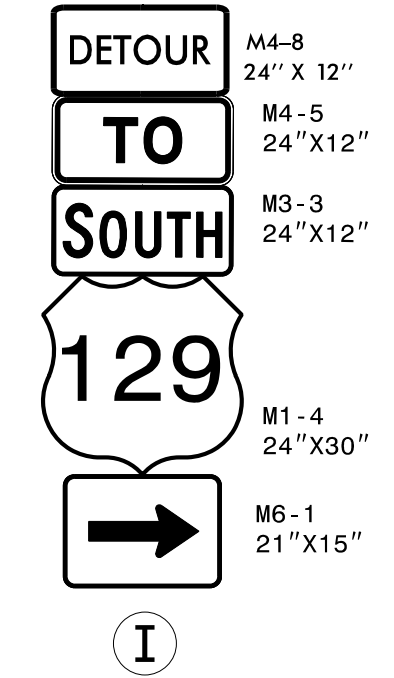
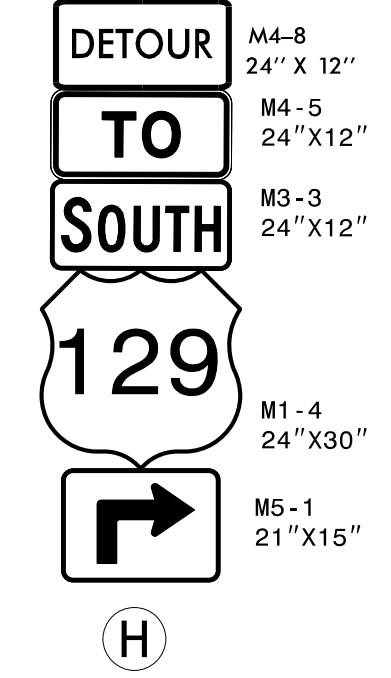
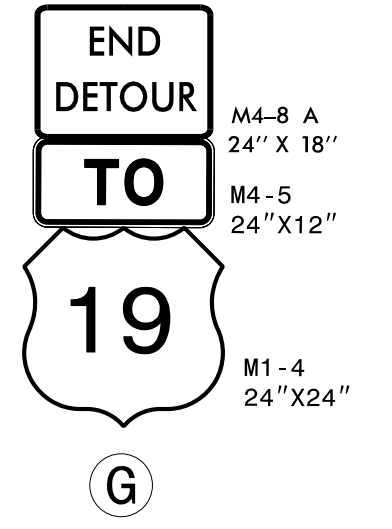
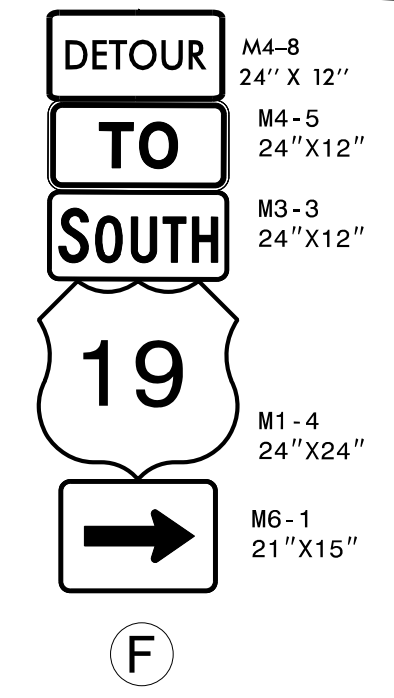
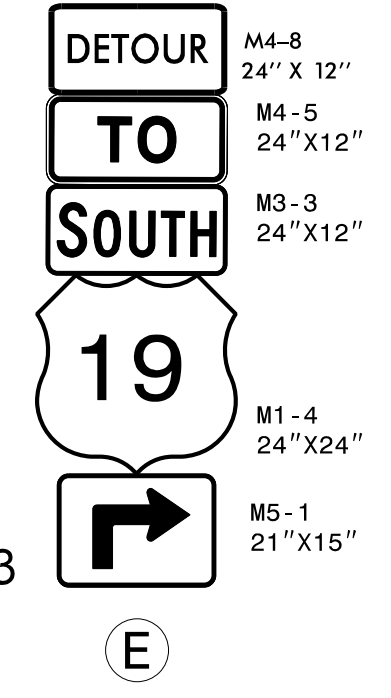
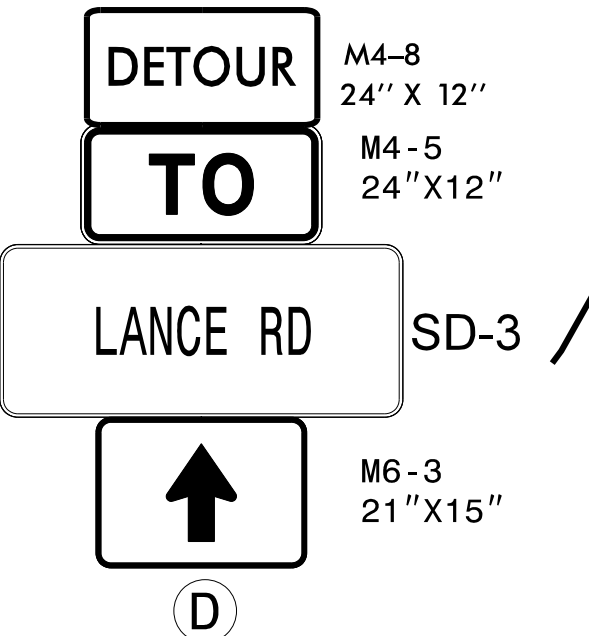
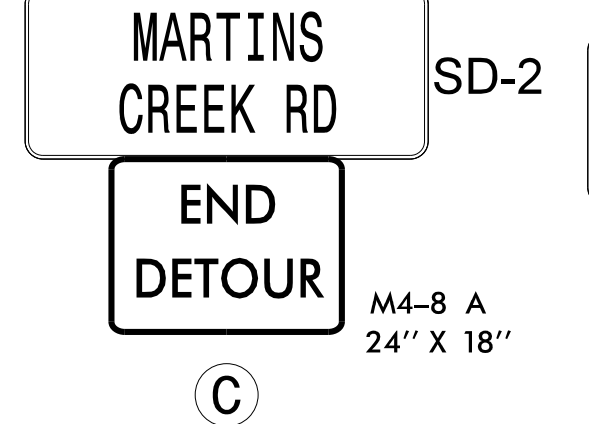
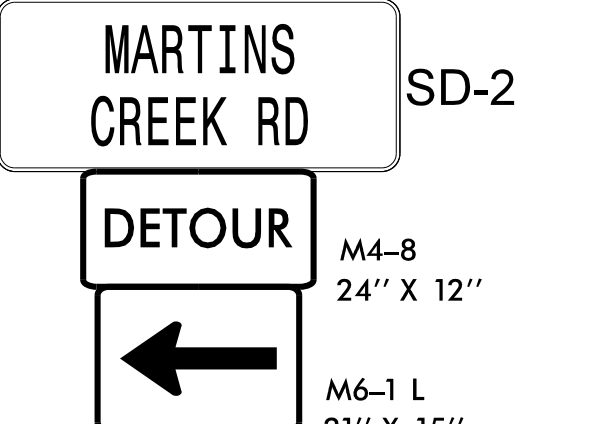
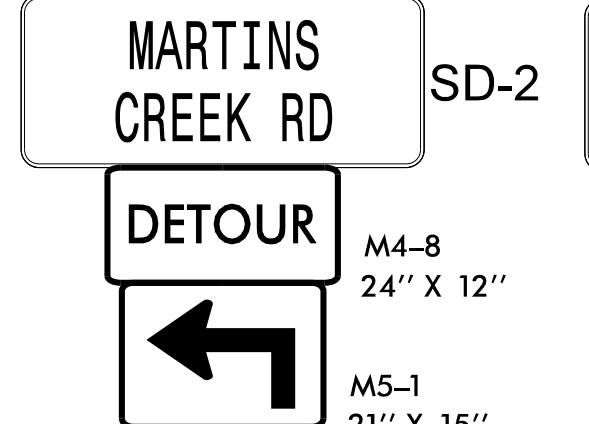
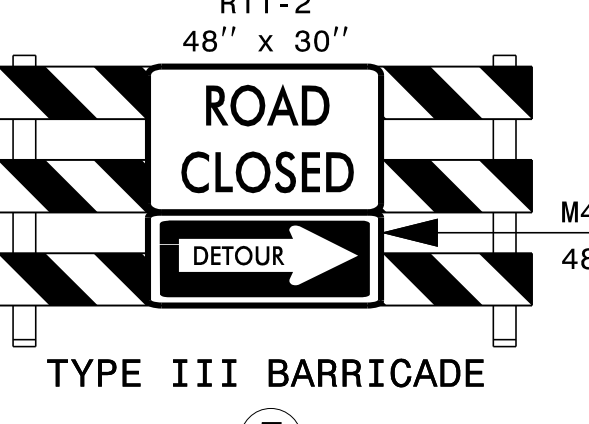
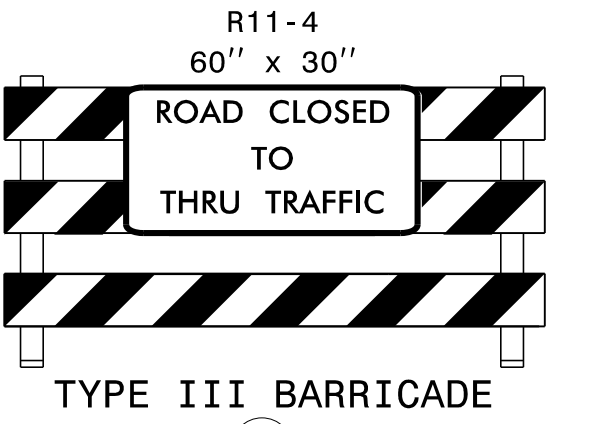
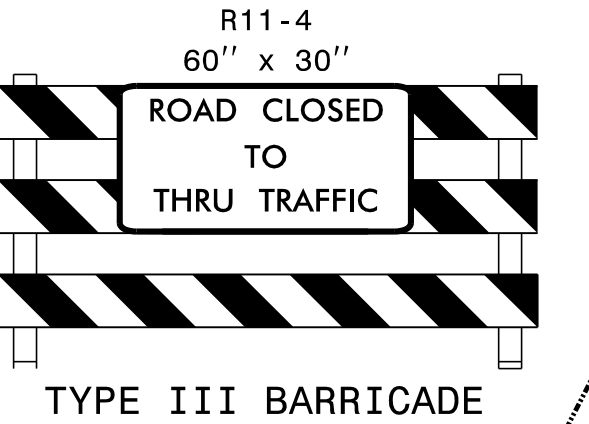
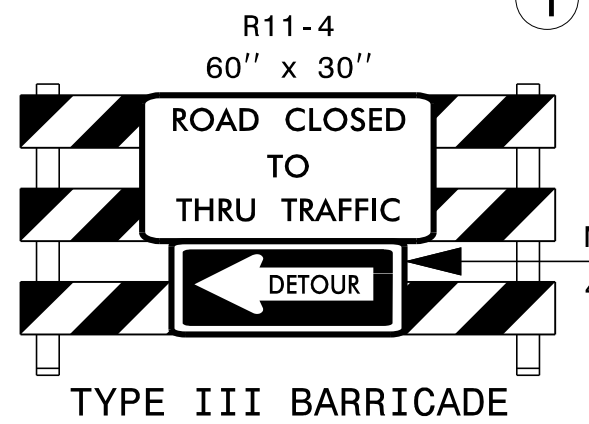
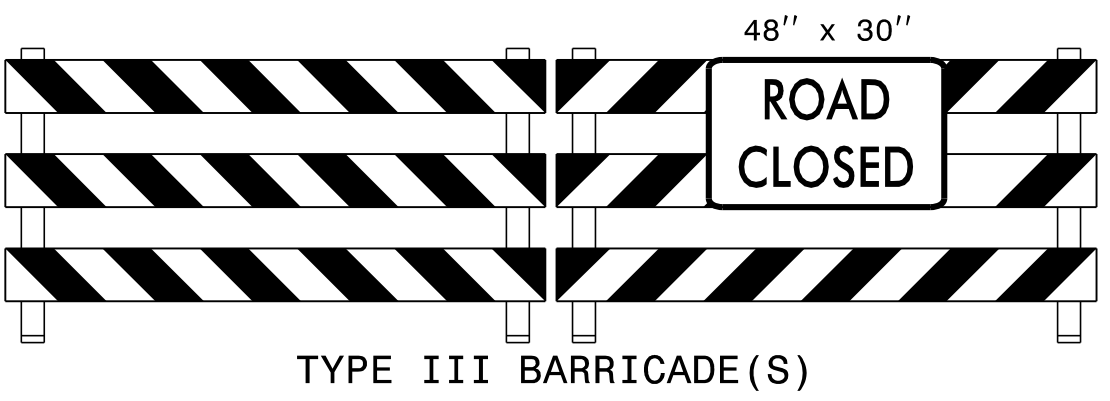
**-Y2- MOCCASIN CRK. RD.
 OFFSITE DETOUR**



USE RDWY STD 1101.03 SHEET 1

USE RDWY STD 1101.03 SHEET 2

USE RDWY STD 1101.03 SHEET 1



NOTE: SEE SHEET TMP-2J FOR SPECIAL SIGN DESIGNS

10/18/2023
R5861.Tc_Tmp2E.dgn
Kb1sby

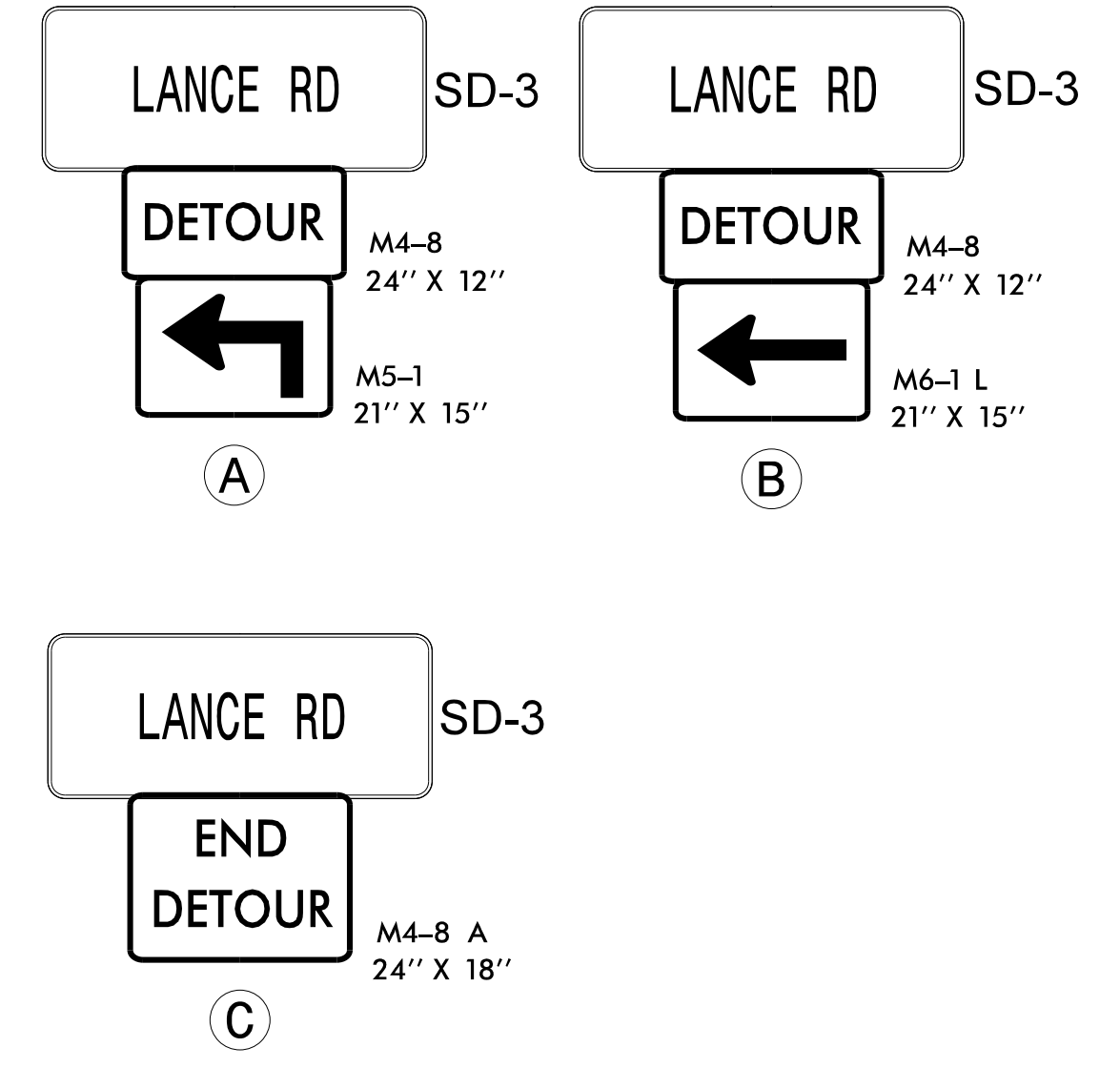
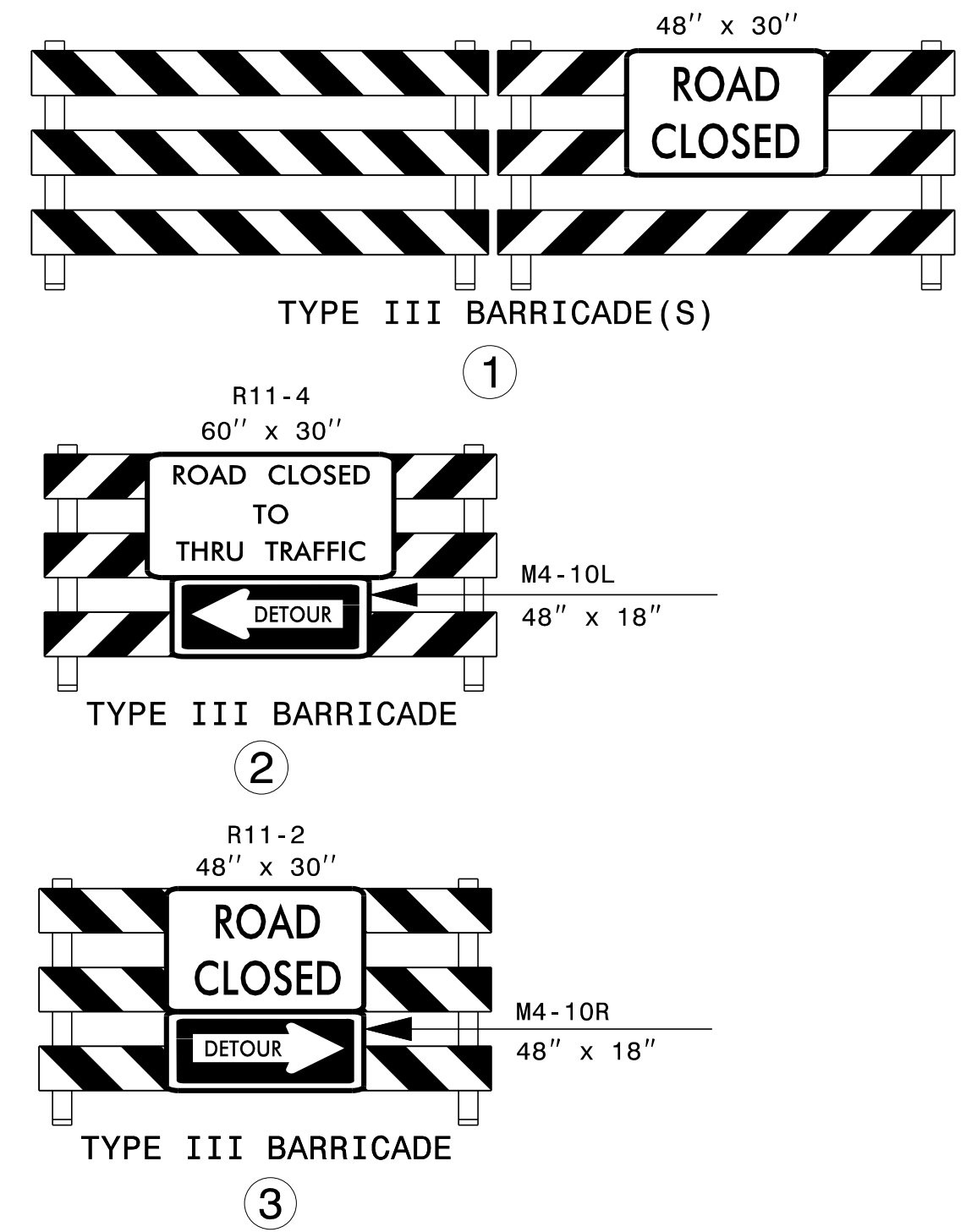
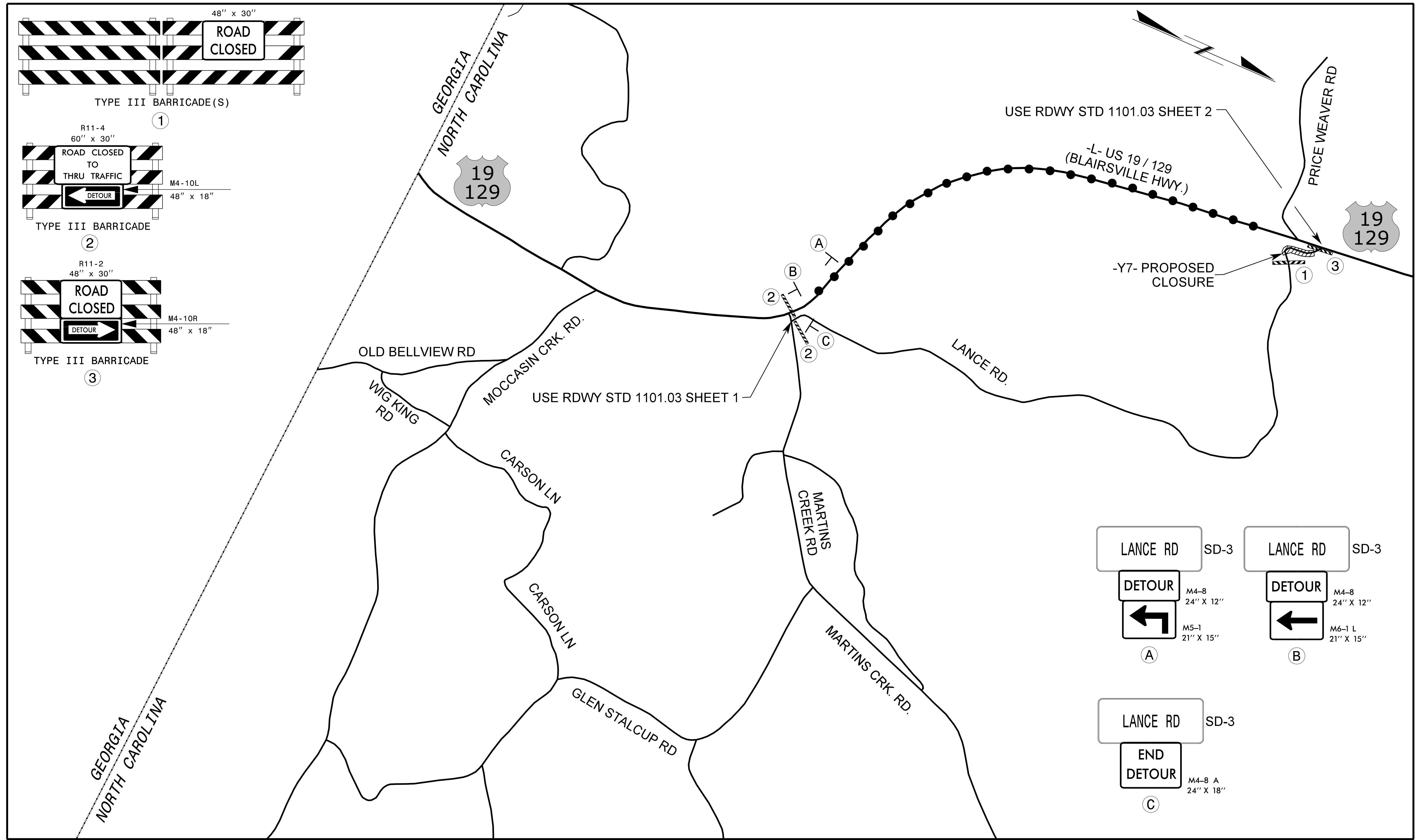
RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bly*
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 21047
 KEVIN W. BLY



**-Y3- MARTINS CREEK RD
 AND -Y3A- LANCE RD
 OFFSITE DETOURS**

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



NOTE: SEE SHEET TMP-2J FOR SPECIAL SIGN DESIGN

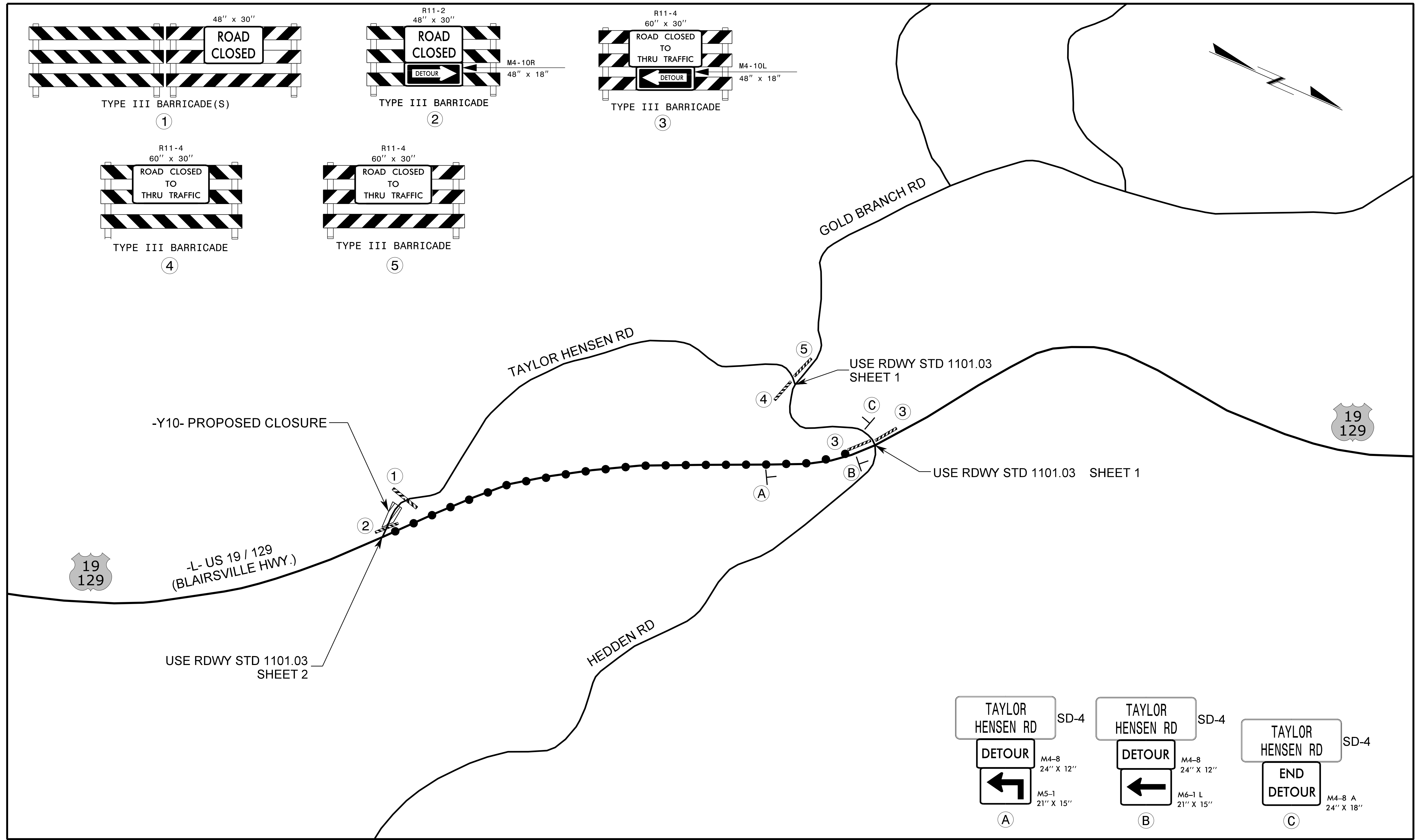
10/18/2023
R5861.Tc_Tmp2F.dgn
Kb1sby

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

APPROVED: *Kevin W. Blisby*
DATE: 10/18/2023
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 21047
KEVIN W. BLISBY



**-Y7- LANCE RD.
OFFSITE DETOUR**



NOTE: SEE SHEET TMP-2J FOR SPECIAL SIGN DESIGN

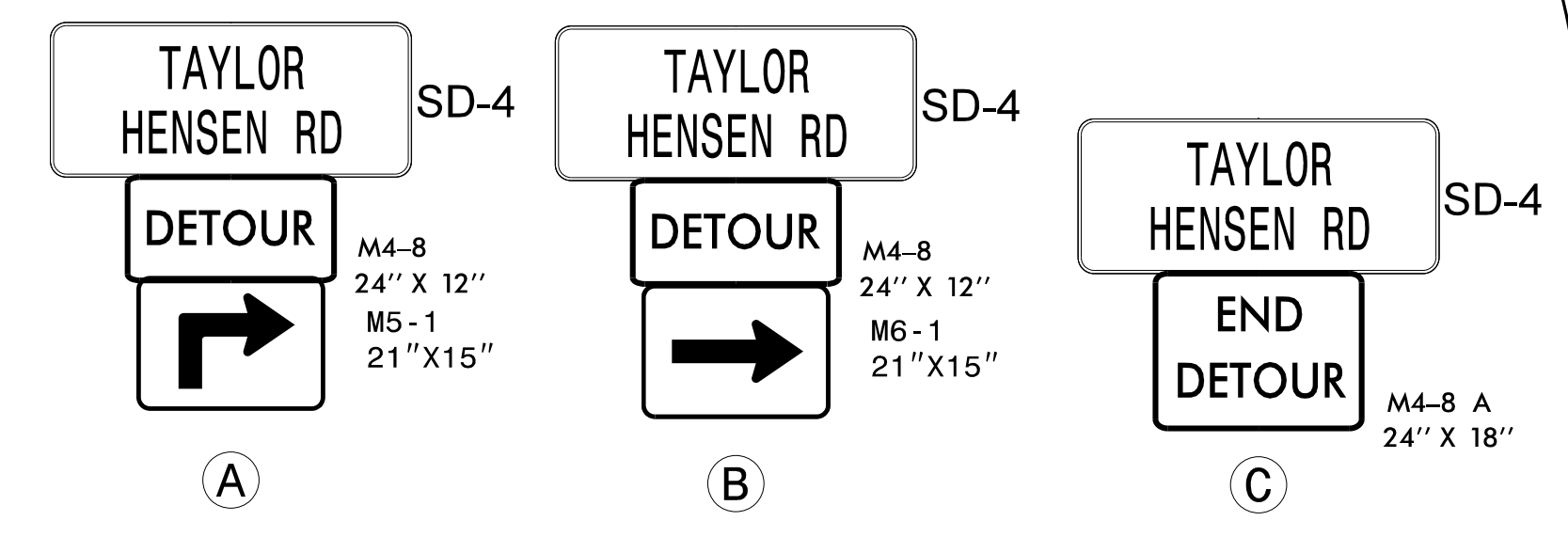
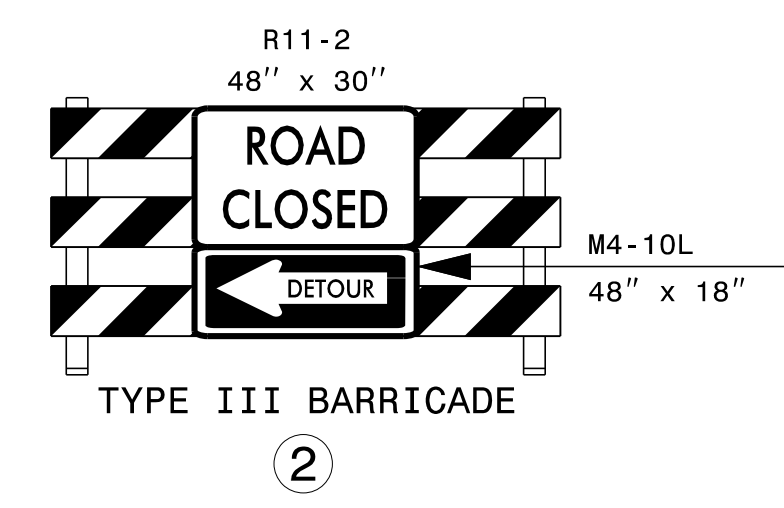
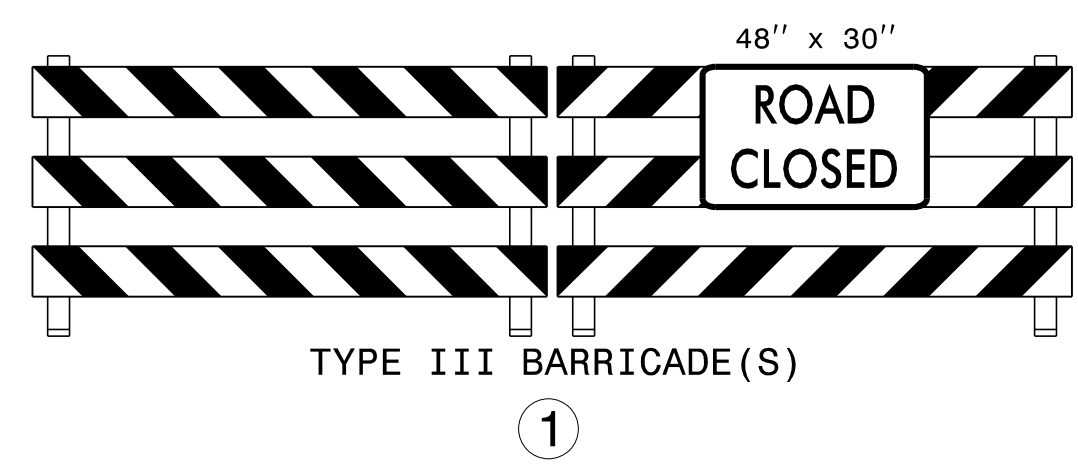
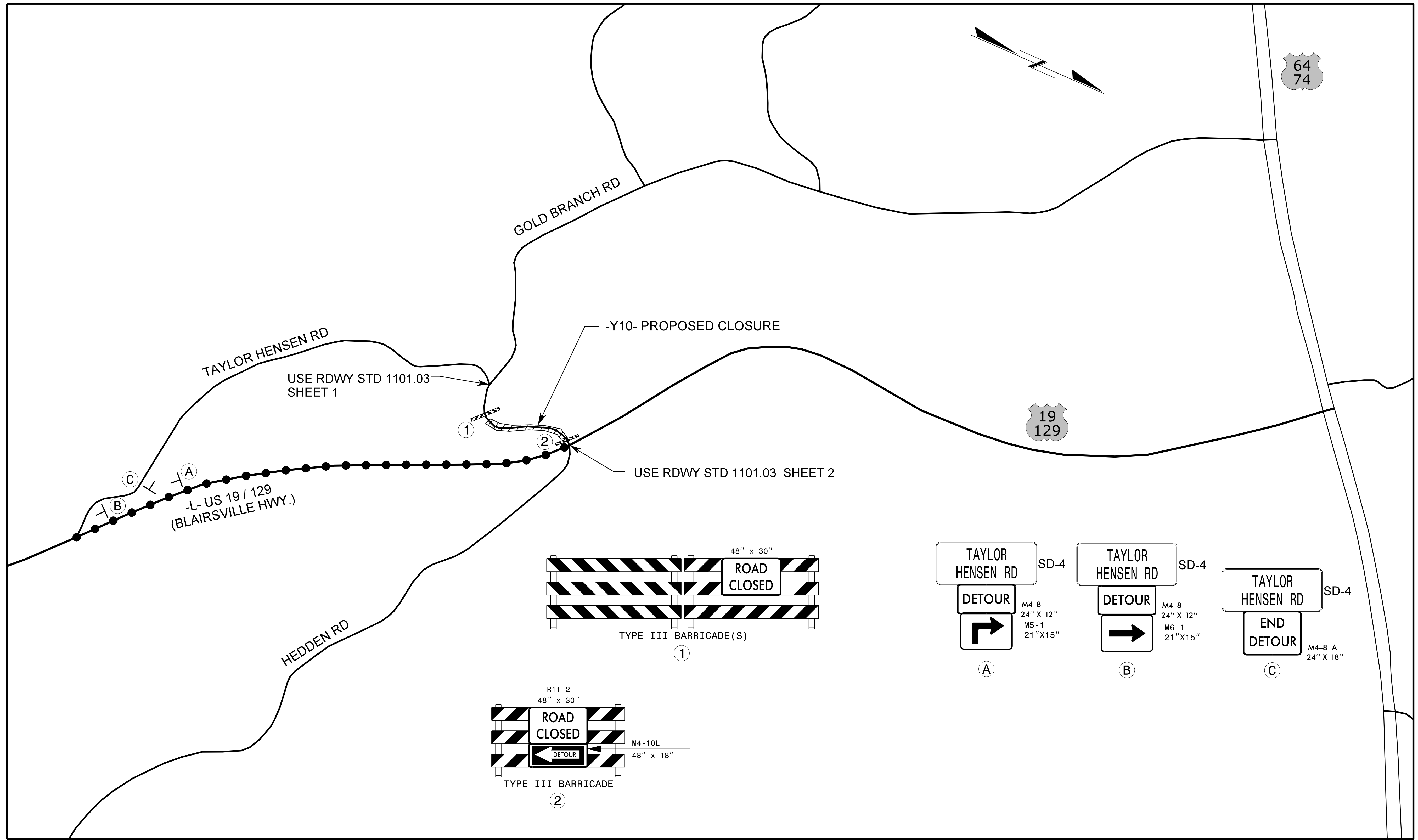
10/18/2023
 R5861.LTC_Tmp2G.dgn
 kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Blisby*
SD0802628912472
 DATE: 10/18/2023
 SEAL



**-Y10A- TAYLOR HENSEN RD.
 OFFSITE DETOUR
 (PHASE I)**



NOTE: SEE SHEET TMP-2J FOR SPECIAL SIGN DESIGN

10/18/2023
 R5861.LTC_Tmp2GA.dgn
 kbisby

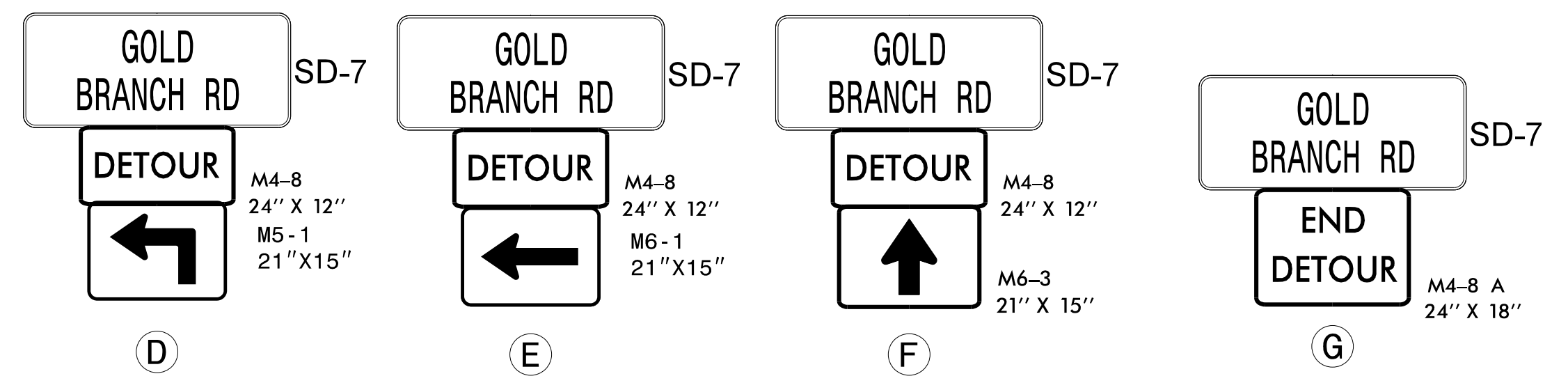
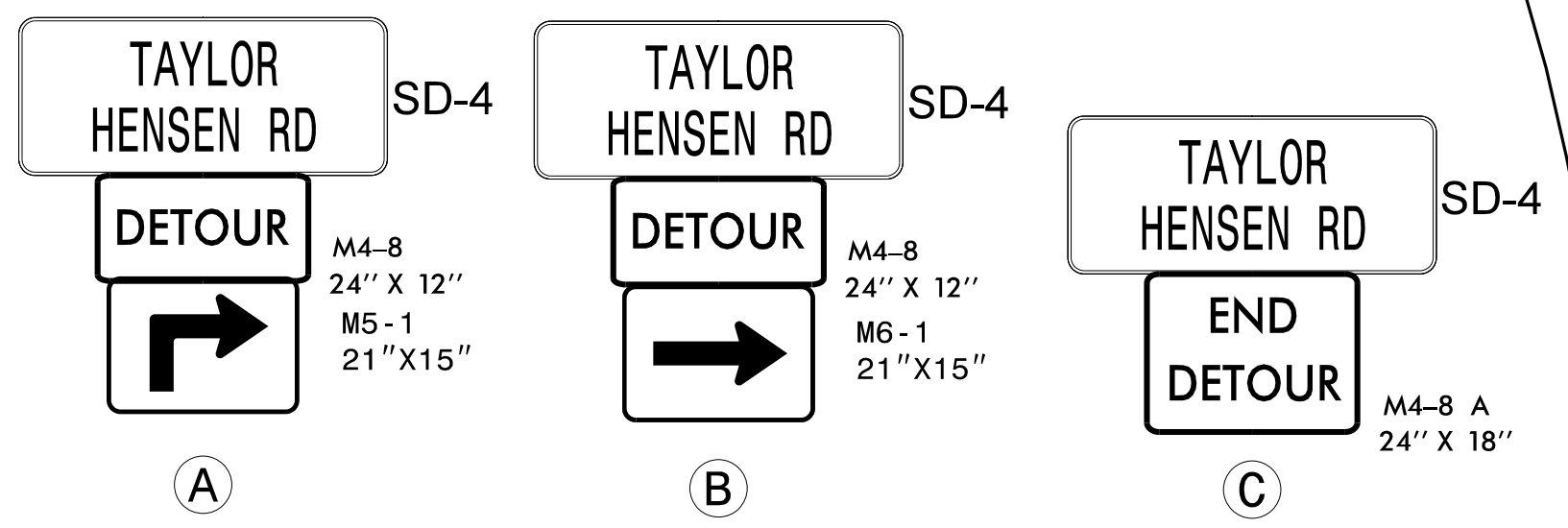
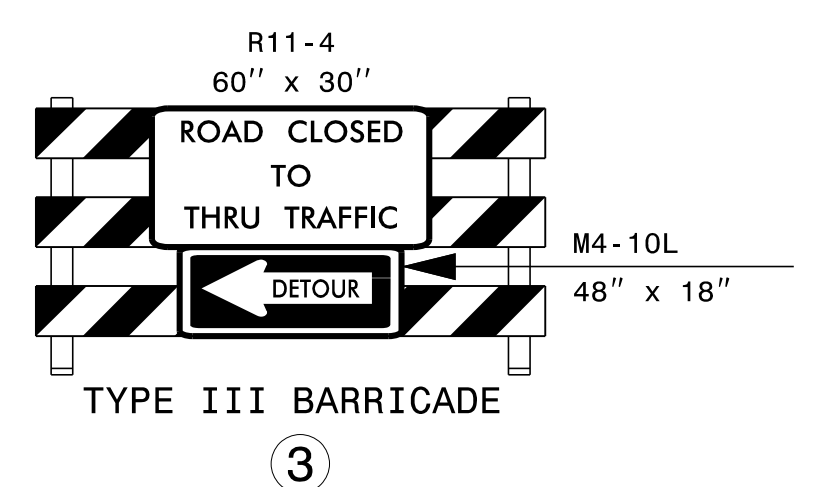
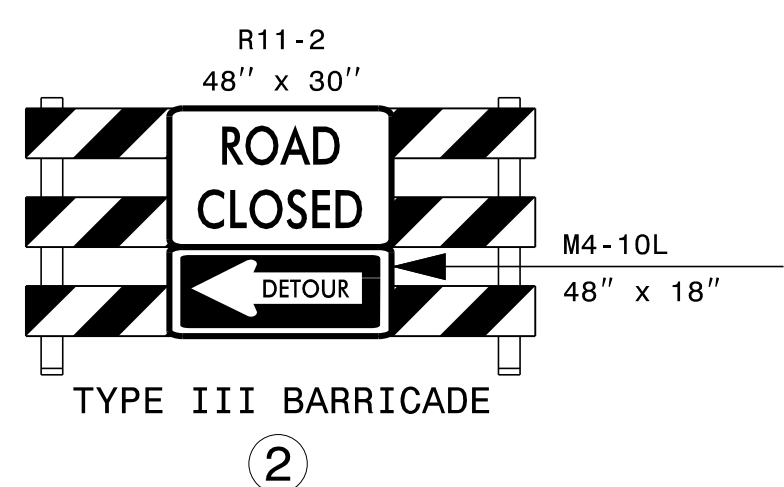
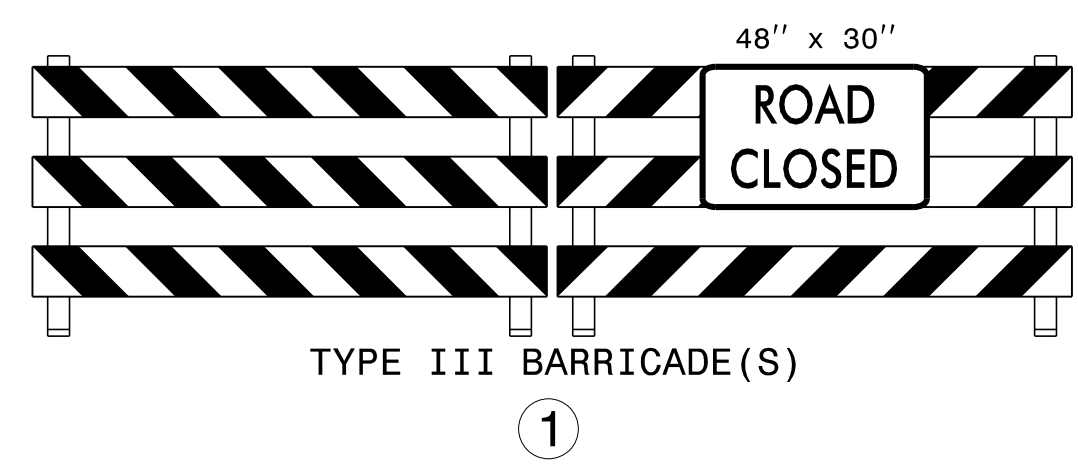
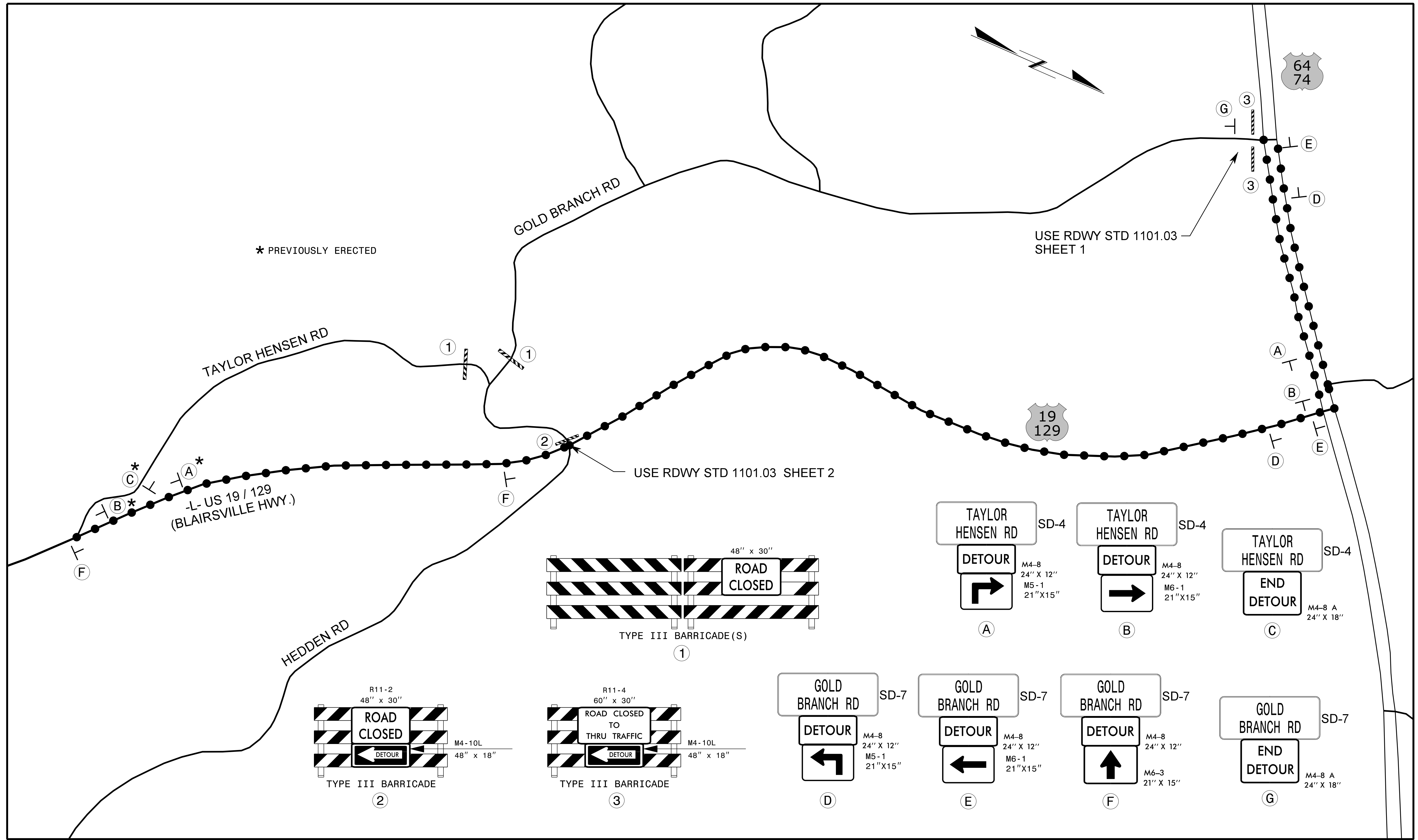
RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bisby*
DESIGNED BY: Kevin Bisby, B00802628912472
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 KEVIN W. BISBY
 21047



**-Y10B- TAYLOR HENSEN RD.
 OFFSITE DETOUR
 (PHASE III)**

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



NOTE: SEE SHEET TMP-2J AND 2K FOR SPECIAL SIGN DESIGN

10/18/2023
 R5861.LTC_Tmp2GB.dgn
 kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bisy*
8008262891247

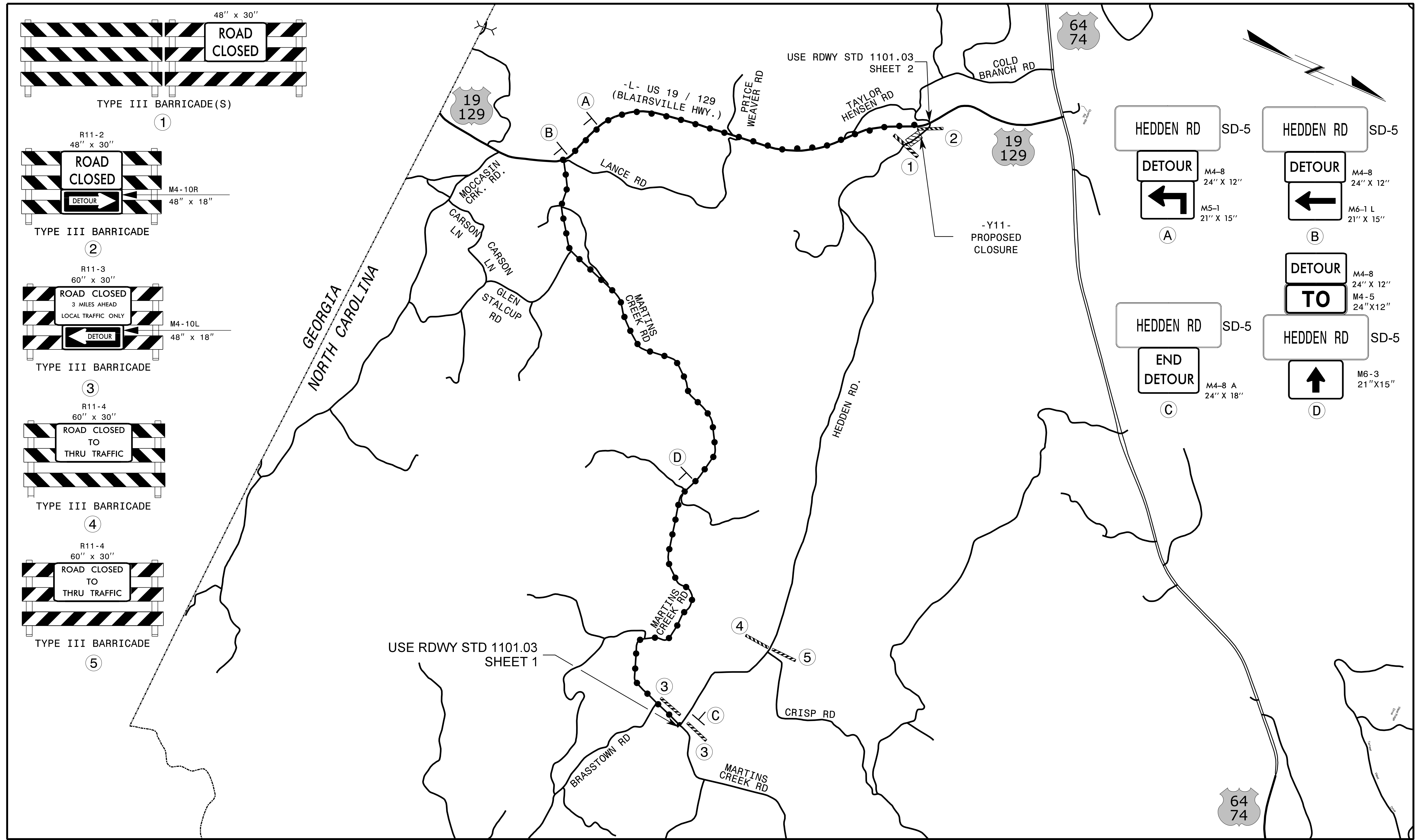
DATE: 10/18/2023

SEAL

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



**-Y13- GOLD BRANCH RD
 OFFSITE DETOUR**



NOTE: SEE SHEET TMP-2K FOR SPECIAL SIGN DESIGN

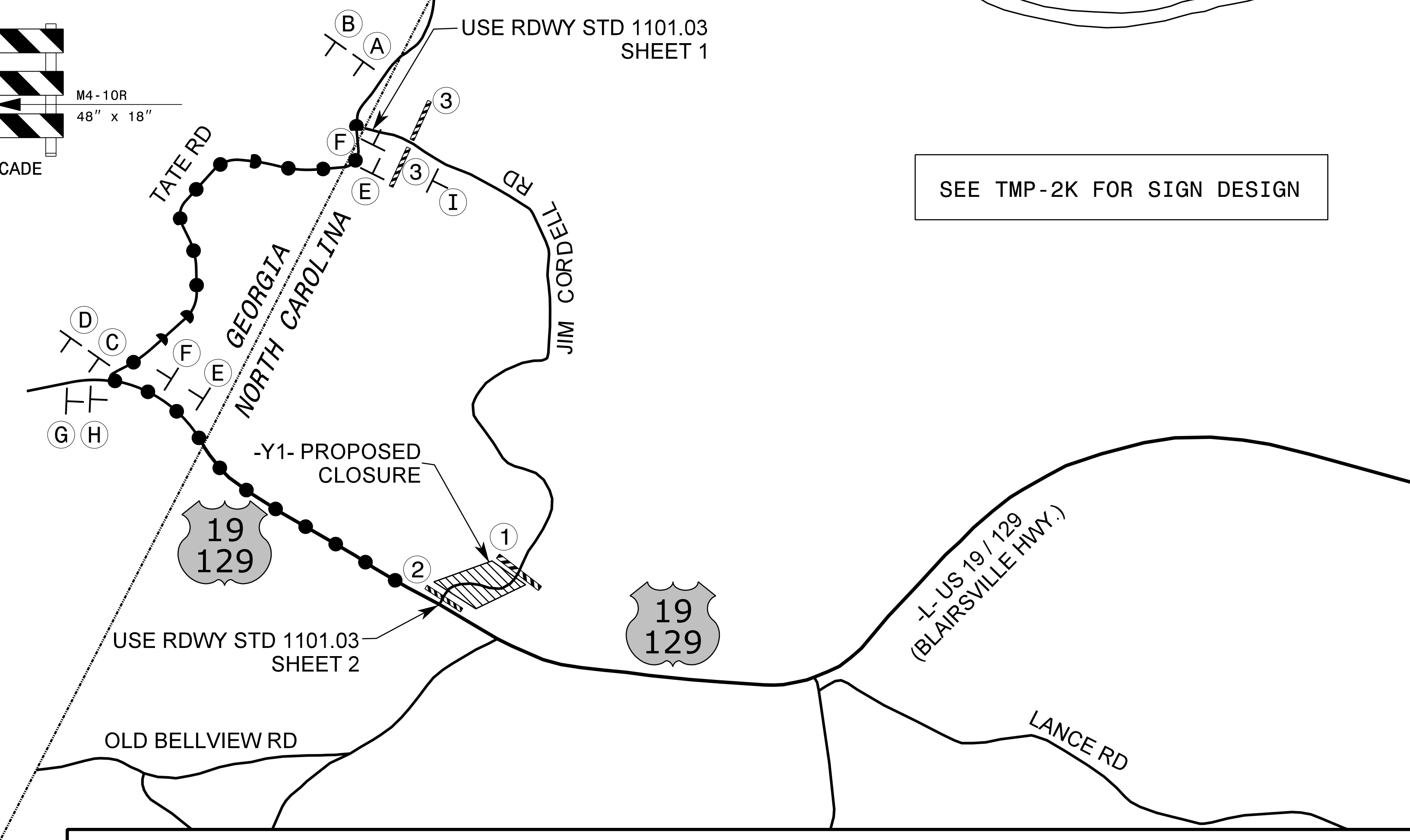
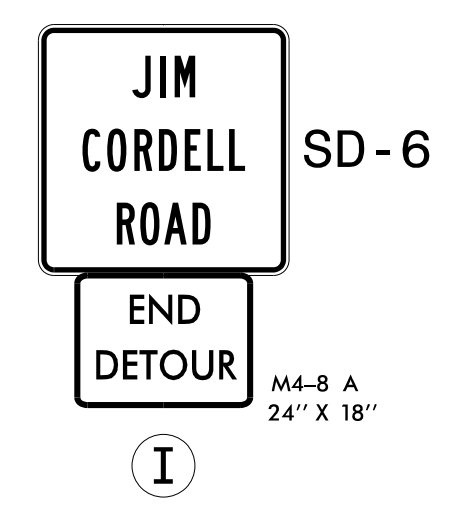
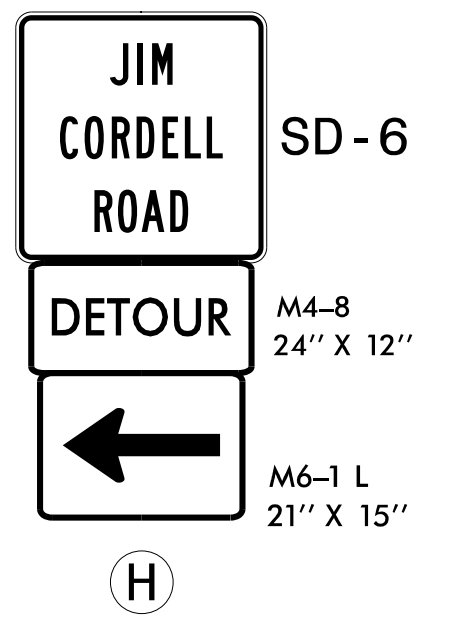
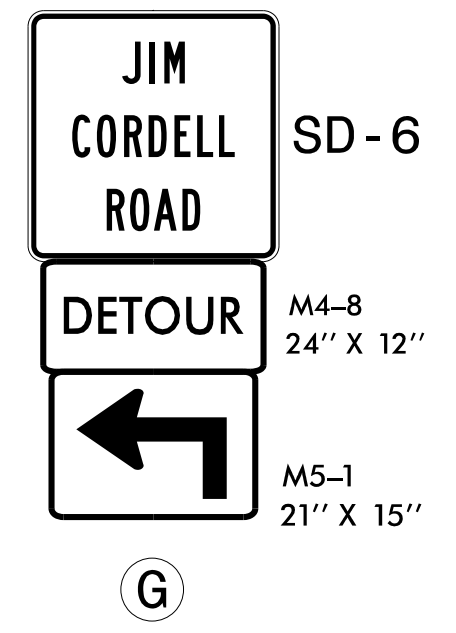
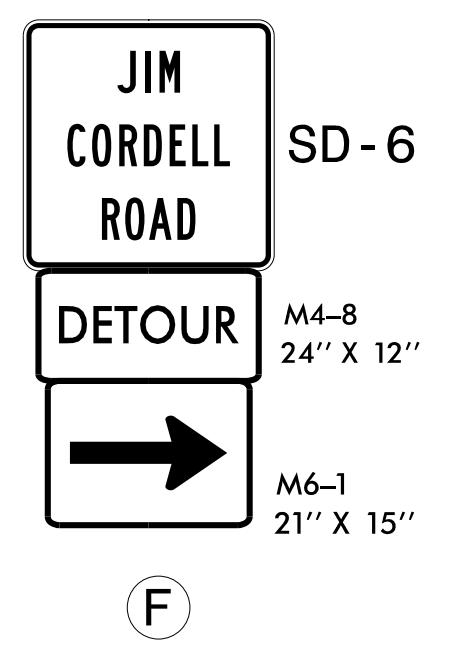
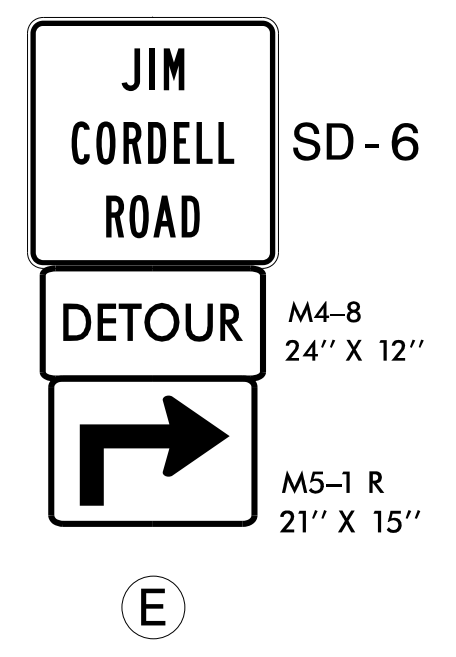
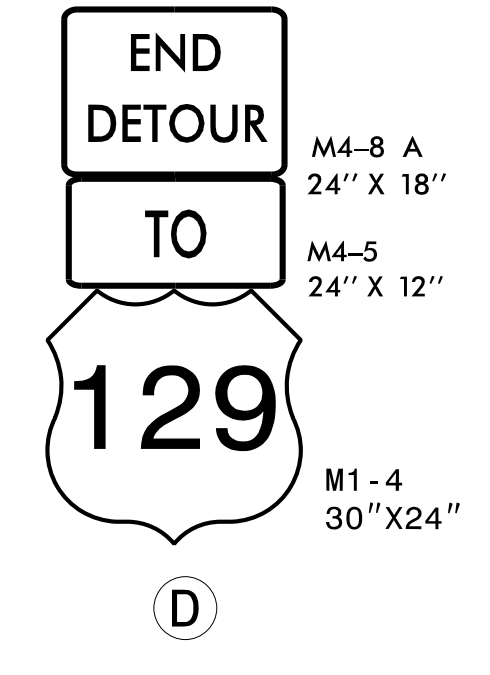
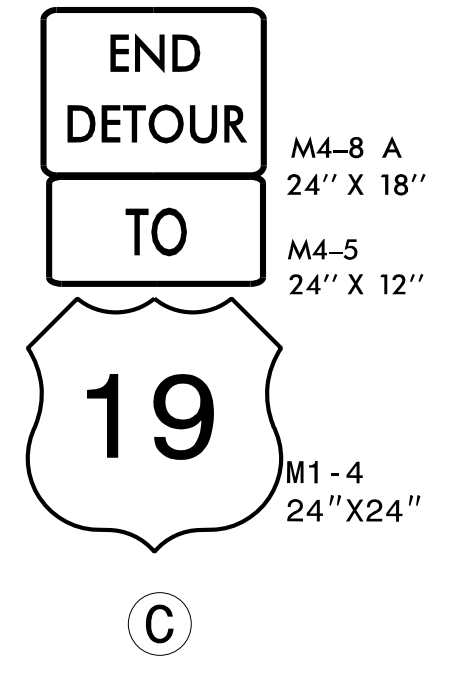
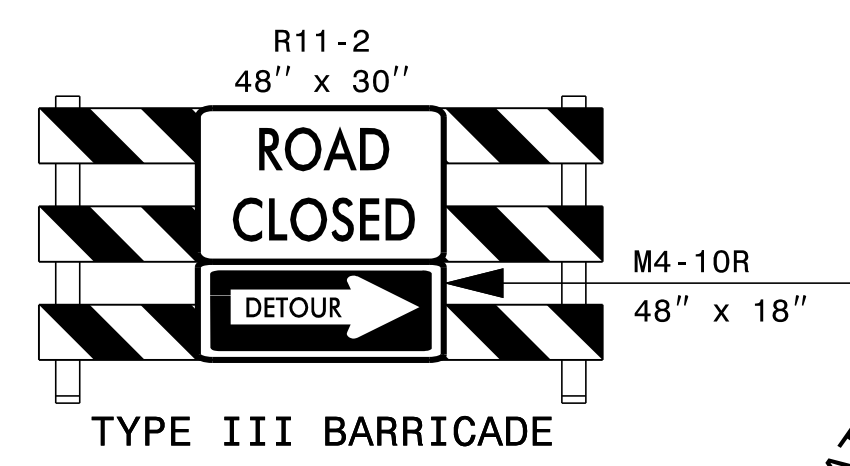
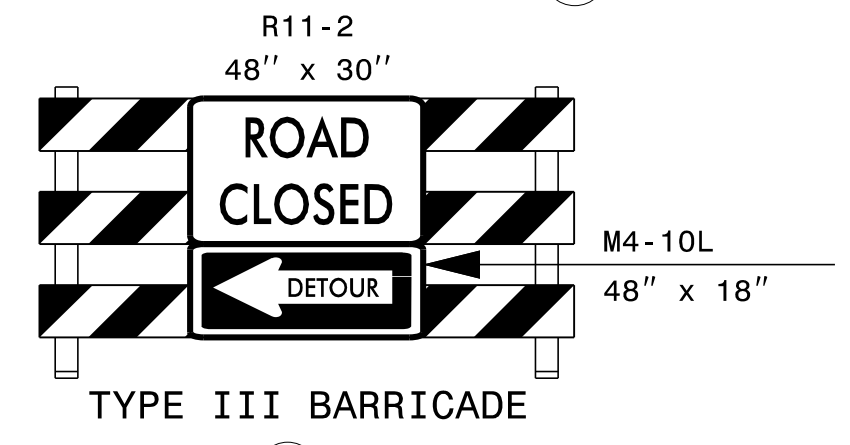
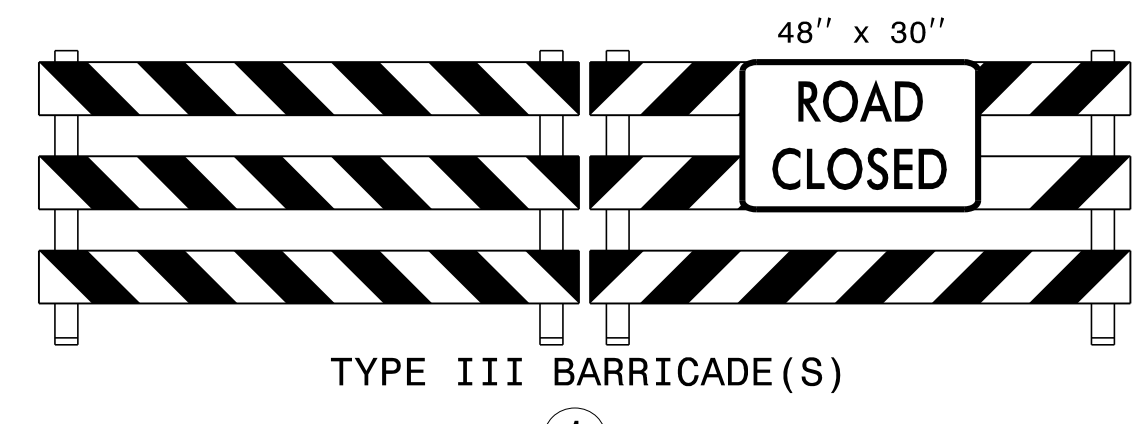
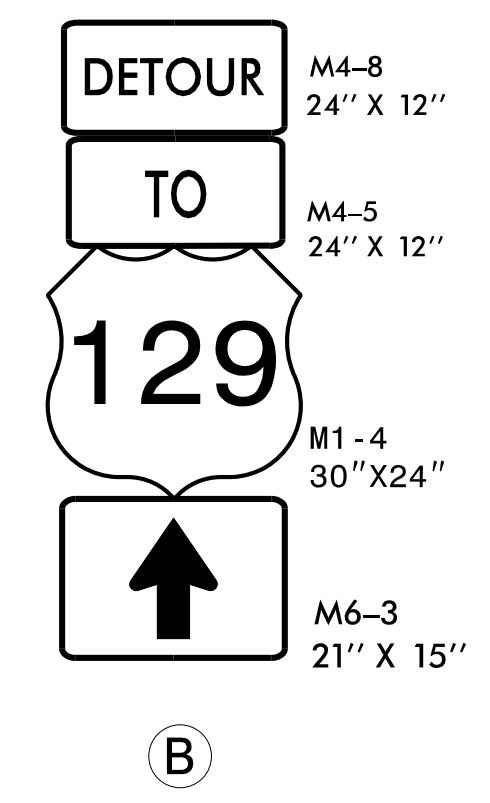
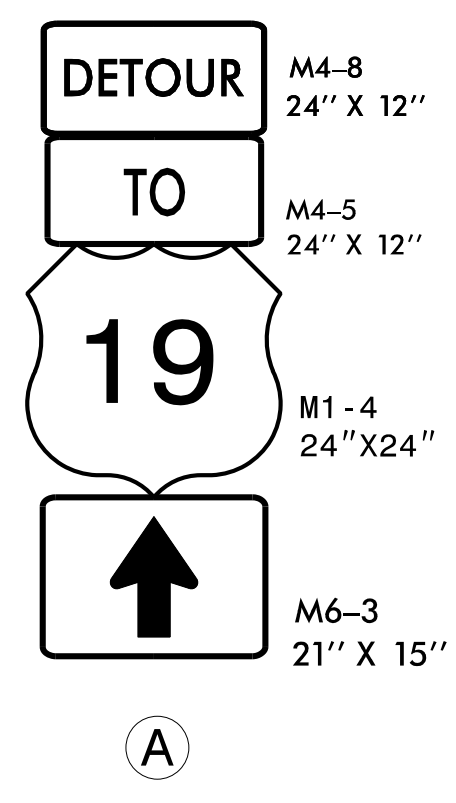
10/18/2023
R5861.Tc_Tmp2H.dgn
kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin B. Bly*
 DATE: 10/18/2023
 SEAL
 DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED



**-Y11A- HEDDEN RD.
OFFSITE DETOUR**



10/18/2023
 R5861.Lc_Tmp2I.dgn
 kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bisby*
 DATE: 10/18/2023

SEAL

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED



**-Y1- JIM CORDELL RD.
 OFFSITE DETOUR**

SIGN NUMBER: SD-1 TYPE: D QUANTITY: SEE PLANS SIGN WIDTH: 2'-6" HEIGHT: 1'-6" TOTAL AREA: 3.8 Sq.Ft. BORDER TYPE: INSET RECESS: 0.38" WIDTH: 0.63" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Fluorescent Orange COPY COLOR: Black SYMBOL	DESIGN BY: D. SEARS PROJECT ID: R-5861 CHECKED BY: LOCATION: VARIES Dec 03, 2021 DIV: 14
---	--	---

USE NOTES: 1,2
1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

Letter positions													Series/Size Text Length
Letter spacings are to start of next letter													
M	o	c	c	a	s	i	n						B 2000 17.6
6.2	3.2	2.3	2.2	2.1	2.3	2.1	1.4	1.8	6.2				
C	r	e	e	k	R	d							B 2000 19.8
5.1	2.9	1.6	2.2	2.4	2	4	2.6	1.9	5.1				

FILENAME: R5861_tc_SIGN_DESIGNS NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SD-3 TYPE: D QUANTITY: SEE PLANS SIGN WIDTH: 2'-6" HEIGHT: 1'-0" TOTAL AREA: 2.5 Sq.Ft. BORDER TYPE: INSET RECESS: 0.38" WIDTH: 0.44" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Fluorescent Orange COPY COLOR: Black SYMBOL	DESIGN BY: D. SEARS PROJECT ID: R-5861 CHECKED BY: LOCATION: VARIES Nov 23, 2021 DIV: 14
---	--	---

USE NOTES: 1,2
1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

Letter positions													Series/Size Text Length
Letter spacings are to start of next letter													
L	a	n	c	e	R	d							B 2000 19.8
5.1	2.2	2.6	2.4	2.2	1.9	4	2.7	1.9	5.1				

FILENAME: R5861_tc_SIGN_DESIGNS NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SD-2 TYPE: D QUANTITY: SEE PLANS SIGN WIDTH: 2'-6" HEIGHT: 1'-6" TOTAL AREA: 3.8 Sq.Ft. BORDER TYPE: INSET RECESS: 0.38" WIDTH: 0.63" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Fluorescent Orange COPY COLOR: Black SYMBOL	DESIGN BY: D. SEARS PROJECT ID: R-5861 CHECKED BY: LOCATION: VARIES Nov 23, 2021 DIV: 14
---	--	---

USE NOTES: 1,2
1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

Letter positions													Series/Size Text Length
Letter spacings are to start of next letter													
M	a	r	t	i	n	s							B 2000 14.4
7.8	3.1	2.6	1.4	1.9	1.5	2.3	1.6	7.8					
C	r	e	e	k	R	d							B 2000 19.8
5.1	2.9	1.6	2.3	2.4	2	4	2.6	1.9	5.1				

FILENAME: R5861_tc_SIGN_DESIGNS NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SD-4 TYPE: D QUANTITY: SEE PLANS SIGN WIDTH: 2'-6" HEIGHT: 1'-6" TOTAL AREA: 3.8 Sq.Ft. BORDER TYPE: INSET RECESS: 0.38" WIDTH: 0.63" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Fluorescent Orange COPY COLOR: Black SYMBOL	DESIGN BY: D. SEARS PROJECT ID: R-5861 CHECKED BY: LOCATION: VARIES Nov 23, 2021 DIV: 14
---	--	---

USE NOTES: 1,2
1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

Letter positions													Series/Size Text Length
Letter spacings are to start of next letter													
T	a	y	l	o	r								B 2000 12.4
8.8	2.2	2.3	2.8	1.3	2.5	1.3	8.8						
H	e	n	s	e	n	R	d						B 2000 22.3
3.9	2.9	2.4	2.3	2	2.4	1.8	4	2.6	1.9	3.9			

FILENAME: R5861_tc_SIGN_DESIGNS NORTH CAROLINA D.O.T. SIGN DETAIL

10/18/2023
R-5861-TC-Top02.dgn
kbisby

<p>P: (919) 878-9560 8601 Six Forks Road, Forum 1, Suite 700 Raleigh, North Carolina 27615-3960 NC License No. F-0112 Engineers Construction Managers Planners Scientists www.rkk.com Responsive People Creative Solutions</p>	<p>APPROVED: </p> <p>DATE: 10/18/2023</p> <p>SEAL</p>			<p>SPECIAL SIGN DESIGNS</p>
	<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			

SIGN NUMBER: SD-5 TYPE: D QUANTITY: SEE PLANS SIGN WIDTH: 2'-6" HEIGHT: 1'-0" TOTAL AREA: 2.5 Sq.Ft. BORDER TYPE: INSET RECESS: 0.38" WIDTH: 0.44" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Fluorescent Orange COPY COLOR: Black SYMBOL	DESIGN BY: D. SEARS PROJECT ID: R-5861	CHECKED BY: LOCATION: VARIES	Nov 23, 2021 DIV: 14
---	--	---	---------------------------------	-------------------------

USE NOTES: 1,2
1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

Letter positions													Series/Size											
Letter spacings are to start of next letter													Text Length											
													H	e	d	d	e	n	R	d	B 2000			
													3.6	2.9	2.2	2.5	2.5	2.4	1.8	4	2.6	1.9	3.5	22.9

FILENAME: R5861_tc_SIGN_DESIGNS NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SD-6 TYPE: STATIONARY QUANTITY: SEE PLANS SIGN WIDTH: 2'-6" HEIGHT: 2'-6" TOTAL AREA: 6.3 Sq.Ft. BORDER TYPE: INSET RECESS: 0.38" WIDTH: 0.63" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Fluorescent Orange COPY COLOR: Black SYMBOL	DESIGN BY: K. BISBY PROJECT ID: R-5861	CHECKED BY: B. HOLDEN LOCATION: SEE PLAN	Mar 15, 2023 DIV: 14
--	--	---	---	-------------------------

USE NOTES: 1,2
1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

Letter positions													Series/Size									
Letter spacings are to start of next letter													Text Length									
													J	I	M	B 2000						
													11.2	3.3	1.7	2.5	11.3	7.5				
													C	O	R	D	E	L	L	B 2000		
													5.3	3	3.3	2.9	3.1	2.7	2.6	1.9	5.3	19.5
													R	O	A	D	B 2000					
													9.4	2.8	2.8	3.4	2.1	9.4	11.2			

FILENAME: R5861_tc_SIGN_DESIGNS NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SD-7 TYPE: STATIONARY QUANTITY: SEE PLANS SIGN WIDTH: 2'-6" HEIGHT: 1'-6" TOTAL AREA: 3.8 Sq.Ft. BORDER TYPE: INSET RECESS: 0.38" WIDTH: 0.63" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Fluorescent Orange COPY COLOR: Black SYMBOL	DESIGN BY: K. BISBY PROJECT ID: R-5861	CHECKED BY: B. HOLDEN LOCATION: SEE PLAN	Jul 24, 2023 DIV: 14
--	--	---	---	-------------------------

USE NOTES: 1,2
1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

Spacing Factor is 1 unless specified otherwise

Letter positions													Series/Size											
Letter spacings are to start of next letter													Text Length											
													G	o	l	d	B 2000							
													10.8	2.8	2.5	1.3	1.9	10.8	8.5					
													B	r	a	n	c	h	R	d	B 2000			
													3.5	2.8	1.6	2.6	2.4	2.4	1.8	5	2.6	1.9	3.5	23

FILENAME: R-5861_tc_tcp02K NORTH CAROLINA D.O.T. SIGN DETAIL

10/18/2023
R-5861_tc_tcp02k.dgn
kbisby

 P: (919) 878-9560 8601 Six Forks Road, Forum 1, Suite 700 Raleigh, North Carolina 27615-3960 NC License No. F-0112 Engineers Construction Managers Planners Scientists www.rkk.com Responsive People Creative Solutions	APPROVED: DATE: 10/18/2023 SEAL	 	SPECIAL SIGN DESIGNS
	DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

TRAFFIC CONTROL PHASING

PHASE I

STEP 0:
USING ROADWAY STANDARD DRAWING 1101.02 TO MAINTAIN TRAFFIC ERECT ADVANCED WORK ZONE SIGNS ON -L- US 19/129 AND ALL -Y- LINES IN ACCORDANCE WITH RDWY STD 1101.01.

STEP 1:
USING ROADWAY STANDARD DRAWING 1101.02 TO MAINTAIN TRAFFIC, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

- L_DET1- STA 10+00± TO STA 24+50± AND STA 26+00± TO STA 40+11±, TEMPORARY GUARDRAIL AND WEDGING -L- STA 37+27± TO STA 40+00± (TMP-4, 4A AND 5)
- DR7- (TMP-5 AND 6)

USING ROADWAY STANDARD DRAWING 1101.02 TO MAINTAIN TRAFFIC, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

- TEMPORARY ON-SITE DETOURS -L_DET2-, -L_DET3- AND WEDGING AT -L- TIE-INS AS SHOWN (TMP-8 THROUGH TMP-12)
- WEDGING AND WIDENING -L- STA 54+37± TO STA 63+21± (TMP-6 AND 7)
- L- STA 101+50± TO 107+00± PARTIAL-WIDTH (TMP-10)
- L- STA 105+45± TO STA 108+87± TEMPORARY WIDENING LT (TMP-10)
- L- STA 110+25± TO STA 122+75± TEMPORARY WIDENING REQUIRED FOR PHASE II PORTABLE CONCRETE BARRIER (TMP-10, TMP-11)
- Y12- LT TURN LANE EXTENSION WIDENING STA 18+67± TO STA 25+31± (TMP-17)
- Y12- LT TURN LANE EXTENSION WIDENING STA 29+81± TO STA 35+00± (TMP-17)

USING RDWY STD 1101.02 AND 1101.03 CLOSE -Y10- TAYLOR HENSEN RD AND CONSTRUCT -L_DET4-. (SEE TMP-13 THROUGH 15)

USING ROADWAY STANDARD DRAWING 1101.02 TO MAINTAIN TRAFFIC INSTALL -L- TEMPORARY GUARDRAIL RT AND LT. CONSTRUCT TRENCHLESS INSTALLATION OF CULVERT PIPE AND BOX CULVERT EXTENSION RT AND LT (TMP-7)

USING ROADWAY STANDARD DRAWING 1101.02 TO MAINTAIN TRAFFIC REMOVE -L- STA 206+90 TO STA 209+36 RAISED ISLANDS AND PAVE TO MATCH EXISTING ELEVATION. APPLY PAVEMENT MARKINGS AND SHIFT TRAFFIC AS SHOWN (TMP-16 AND TMP-17)

USING ROADWAY STANDARD DRAWING 1101.02 TO MAINTAIN TRAFFIC CONSTRUCT:

- L- STA 197+00 TO STA 203+50 DRAINAGE LT AND RT (TMP-16)
- L- STA 207+50 TO 209+15 DRAINAGE RT (TMP-17)

COMPLETE STEP 2 WITHIN 90 CALENDAR DAYS. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 2:
USING RDWY STD 1101.03, CLOSE -Y3- MARTINS CREEK RD AND -Y3A- LANCE RD. CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (SEE TMP-2E, 2J AND 6)

- MARTINS CREEK RD FROM US 19/129 TO -Y3- STA 12+58±
- LANCE RD FROM MARTINS CREEK RD TO -Y3A- STA 12+40±
- WEDGING -L- STA 49+00± TO STA 54+37±
- L- STA 49+50± TO STA 54+37± RT
- L- STA 51+77± TO STA 54+37± LT

UPON COMPLETION USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS AND OPEN -Y3- MARTINS CREEK RD AND -Y3A- LANCE RD TO TRAFFIC. (SEE TMP-20 AND 21)

COMPLETE STEPS 3 THROUGH 5 WITHIN 270 CALENDAR DAYS. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 3:
USING RDWY STD 1101.03, CLOSE -Y1- JIM CORDELL RD AND CONSTRUCT -DET_Y1- AND -L_DET1- FROM STA 24+50± TO STA 26+00±. (SEE TMP-2I, 2K, AND 18)

UPON COMPLETION USING RDWY STD 1101.02, SET PORTABLE CONCRETE BARRIER, TIE IN -L_DET1-, APPLY PAVEMENT MARKINGS AS SHOWN, DIRECT US 19/129 TRAFFIC ONTO -L_DET1- AND OPEN -DET_Y1- TO TRAFFIC. SIMULTANEOUSLY CLOSE -Y2- MOCCASIN CREEK RD USING RDWY STD 1101.03. (SEE TMP-2D, 2J, AND TMP-18A THROUGH 20)

STEP 4:
CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS: (SEE TMP-18A THROUGH TMP-21)

- L- STA 10+25 TO STA 49+50±
- Y2- STA 10+00± TO STA 14+70±

UPON COMPLETION USING RDWY STD 1101.02, TIE IN -L-, APPLY PAVEMENT MARKINGS FROM AS SHOWN, DIRECT US 19/129 TRAFFIC ONTO -L- AND OPEN -Y2- MOCCASIN CREEK RD TO TRAFFIC. SIMULTANEOUSLY CLOSE -Y1- JIM CORDELL RD USING RDWY STD 1101.03. (SEE TMP-2I, 2K, AND TMP-21A THROUGH 21D)

STEP 5:
CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS: (SEE TMP-21B)

- L- STA 25+00± TO STA 30+00± LT
- Y1- STA 10+30± TO US 19/129

UPON COMPLETION USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS AS SHOWN AND OPEN -Y1- JIM CORDELL RD TO TRAFFIC. (SEE TMP-21E)

PHASE II

STEP 1:
USING RDWY STD 1101.02, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS: (SEE TMP-27 THROUGH 29)

- L- STA 137+29± TO STA 143+22± TEMPORARY PAVEMENT LT
- L- STA 151+78± TO STA 157+64± WEDGING

UPON COMPLETION USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS AND SHIFT TRAFFIC ONTO -L_DET4-.

USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS AND SHIFT TRAFFIC ONTO -L_DET3-. (SEE TMP-26 AND 27)

STEP 2:
USING ROADWAY STANDARD DRAWING 1101.02 TO MAINTAIN TRAFFIC CONSTRUCT:

- L- STA 85+00± TO STA 87+45± (TMP-23)
- L- STA 101+50± TO STA 104+68± RT (TMP-25)
- L- STA 106+16± TO STA 107+00± (TMP-25)
- L- STA 108+29± TO STA 110+96± (TMP-25)
- L- STA 129+44± TO STA 133+82± (TMP-27)
- L- STA 142+67± TO STA 145+00± (TMP-28)
- L- STA 149+00± TO STA 151+78± (TMP-28)
- Y8- AZALEA LN (TMP-27)
- L- NB RT TURN ISLAND AT US 64/74 (TMP-33)

USING ROADWAY STANDARD DRAWING 1101.02 TO MAINTAIN TRAFFIC CONSTRUCT WEDGING AND WIDENING AT THE FOLLOWING LOCATIONS:

- L- STA 63+21± TO STA 85+00± RT AND LT (TMP-22 AND TMP-23)
- Y5- MOUNTAIN WILLOW LN -L- TO STA 11+40± (TMP-23)
- Y6- STA 11+30± TO STA 13+40± (TMP-25)
- UPON COMPLETION OF -Y6-, APPLY PAVEMENT MARKINGS, OPEN THE NEW ALIGNMENT TO TRAFFIC AND CONSTRUCT -L- STA 107+00± TO STA 108+29± (TMP-25A)
- L- STA 199+50± TO STA -L- STA 209+49± RT (TMP-32 AND TMP-33)
- Y12- FROM -L- STA 209+49± TO -Y12- STA 35+00± RT (TMP-33 AND TMP-34)

RKK P: (919) 878-9560 8601 Six Forks Road, Forum 1, Suite 700 Raleigh, North Carolina 27615-3960 NC License No. F-0112 Engineers Construction Managers Planners Scientists www.rkk.com Responsive People Creative Solutions	APPROVED: <small>DocuSigned by: Kevin Blisby 8D0802E28912472</small> DATE: 10/18/2023 <div style="text-align: center; margin-top: 10px;"> </div>		<h2 style="margin: 0;">TRANSPORTATION MANAGEMENT PHASING</h2>
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

TRAFFIC CONTROL PHASING, CONTINUED

BEHIND BARRIER OR AWAY FROM TRAFFIC CONSTRUCT:

- -L- STA 87+45± TO 101+50± PARTIAL AND FULL WIDTH (TMP-23 THROUGH 25)
- -Y6- STA 13+40± TO -L- (TMP-25)
- -L- STA 110+96± TO STA 129+44± (TMP-25 THROUGH 27)
- -L- PROPOSED BOX CULVERT AND TEMPORARY CULVERT PIPE LT AT STA 127+60± (TMP-27)
- -L- STA 145+00± TO STA 149+00± (TMP-28)
- -L- STA 174+00± TO STA 183+25± (TMP-30 AND 31)
- TEMPORARY ON-SITE DETOUR -L_DET6- (TMP-31 AND 32)

STEP 3:

USING ROADWAY STANDARD DRAWING 1101.02 TO MAINTAIN TRAFFIC CONSTRUCT WEDGING FROM -L- STA 138+61± TO -L_DET4- STA 11+32± (TMP-35)

STEP 4:

USING ROADWAY STANDARD DRAWING 1101.02 TO MAINTAIN TRAFFIC CONSTRUCT -L- STA 139+60± TO STA 142+01± RT (TMP-35)

STEP 5:

USING ROADWAY STANDARD DRAWING 1101.02 TO MAINTAIN TRAFFIC APPLY PAVEMENT MARKINGS AND SHIFT NB TRAFFIC ONTO THE PROPOSED NB LANE. SB TRAFFIC SHALL REMAIN ON -L_DET4-. (TMP-35 AND TMP-36)

STEP 6:

USING RDWY STD 1101.02, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE -L- STA 142+001± TO STA 145+00± LT. (SEE TMP-35)

STEP 7:

USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS AND DIRECT US19/129 SOUTHBOUND TRAFFIC ONTO THE PROPOSED ALIGNMENT. (SEE TMP-36A AND 36B)

STEP 8:

USING RDWY STD 1101.02, CONSTRUCT -L- STA 142+00± TO STA 151+78± LT, -Y10A- AND -DR17- EXCLUDING THE FINAL LAYER OF SURFACE COURSE. UPON COMPLETION APPLY PAVEMENT MARKINGS AND OPEN -Y10A- TO TRAFFIC. (SEE TMP-36A AND 36C)

PHASE III

COMPLETE STEP 1 WITHIN 75 CALENDAR DAYS. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 1:

USING RDWY STD 1101.03, CLOSE -Y7- LANCE RD, APPLY PAVEMENT MARKINGS AND SHIFT US 19/129 TRAFFIC ONTO THE NEW ALIGNMENT AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE: (SEE TMP-2F, 2J AND 42 THROUGH 47)

- -L- STA 107+00± TO STA 114+00±
- -Y7- FROM -L- TO STA 13+10±

UPON COMPLETION USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS AND OPEN -Y7- LANCE RD TO TRAFFIC. (SEE TMP-44A)

COMPLETE STEP 2 AND 3 WITHIN 210 CALENDAR DAYS. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 2:

USING RDWY STD 1101.02 APPLY PAVEMENT MARKINGS AND SHIFT US 19/129 TRAFFIC ONTO -L_DET4-. SIMULTANEOUSLY CLOSE -Y11A- HEDDON RD USING RDWY STD 1101.03. (SEE TMP-2H, 2K AND 47 THROUGH 49)

STEP 3:

CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS: (SEE TMP-48 AND 49)

- -L- STA 157+00± TO STA 174+00±
- -Y11- FROM US 19/129 TO -Y11- STA 14+48±
- -Y11A- FROM -Y11- TO -Y11A- STA 14+37±

UPON COMPLETION USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS FROM -L- STA 150+96± TO US 64/74 AND OPEN -Y11- HEDDON RD AND -Y11A- TO TRAFFIC. SIMULTANEOUSLY CLOSE -Y10B- TAYLOR HENSEN RD USING RDWY STD 1101.03. (SEE TMP-2GA, 2K, 50 THROUGH 54, AND 56)

STEP 4:

USING ROADWAY STANDARD DRAWING 1101.02 TO MAINTAIN TRAFFIC CONSTRUCT:

- -L- STA 10+25± TO STA 25+00± LT (TMP-37 AND 38)
- -L- STA 30+00± TO STA 38+60± LT (TMP-38 AND 39)
- -L- STA 80+00± TO STA 92+11± LT (TMP-42 AND 43)
- -Y4- BOBCAT LN STA 12+72± TO -L- (TMP-42)
- -L- STA 95+98± TO STA 101+50± LT (TMP-43 AND 44)
- -L- STA 114+00± TO STA 124+68± RT (TMP-44 AND 45)
- -L- STA 129+15± TO STA 131+50± RT (TMP-46)
- -Y9- FROM -L- TO STA 13+50± (TMP-46)
- -L- STA 131+50± TO STA 139+60± (TMP-46 AND 47)
- -L- STA 183+25± TO STA 197+00± (TMP-52 AND 53)
- -L- STA 199+30± TO STA 208+83± LT (TMP-53 AND TMP-54)
- -L- MEDIAN AND TURN LANE ISLANDS (TMP-54)
- -Y12- STA 18+68± TO STA 35+00± LT (TMP-54 AND TMP-55)

BEHIND BARRIER OR AWAY FROM TRAFFIC CONSTRUCT:

- -L- STA 124+68± TO STA 129+15± RT (TMP-45 AND 46)
- -L- PROPOSED BOX CULVERT RT AT STA 127+60± (TMP-46)

USING RDWY STD 1101.02, CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS: (SEE TMP-50, 51 AND 56)

- -L- STA 150+96± TO STA 172+50± LT
- -Y10B- FROM STA 13+98± TO US 19/129

COMPLETE STEP 5 WITHIN 60 CALENDAR DAYS.

STEP 5:

USING RDWY STD 1101.03 CLOSE -Y13- GOLD BRANCH RD AND CONSTRUCT EXCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS: (SEE TMP-2GB, 2K AND 57)

- -Y10B- STA 11+86± TO STA 13+98±
- -Y13- FROM -Y10B- TO STA 12+75±

UPON COMPLETION USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS AND OPEN -Y10B- TAYLOR HENSEN RD AND -Y13- GOLD BRANCH RD TO TRAFFIC. (SEE TMP-57A)

STEP 6:

USING RDWY STD 1101.02, APPLY PAVEMENT MARKINGS AND SHIFT TRAFFIC AS SHOWN. (SEE TMP-58 THROUGH 60)

STEP 7:

USING RDWY STD 1101.02, CONSTRUCT WEDGING AND WIDENING FROM -L- STA 197+00± TO STA 199+50±. (SEE TMP-60)

PHASE IV: (NOT ILLUSTRATED)

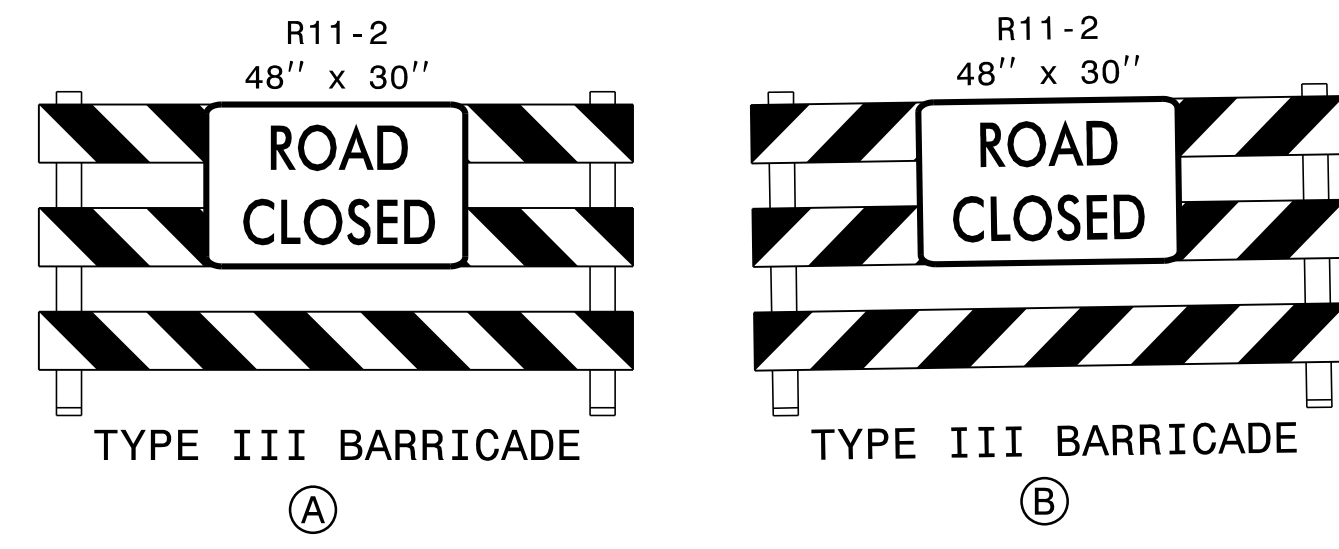
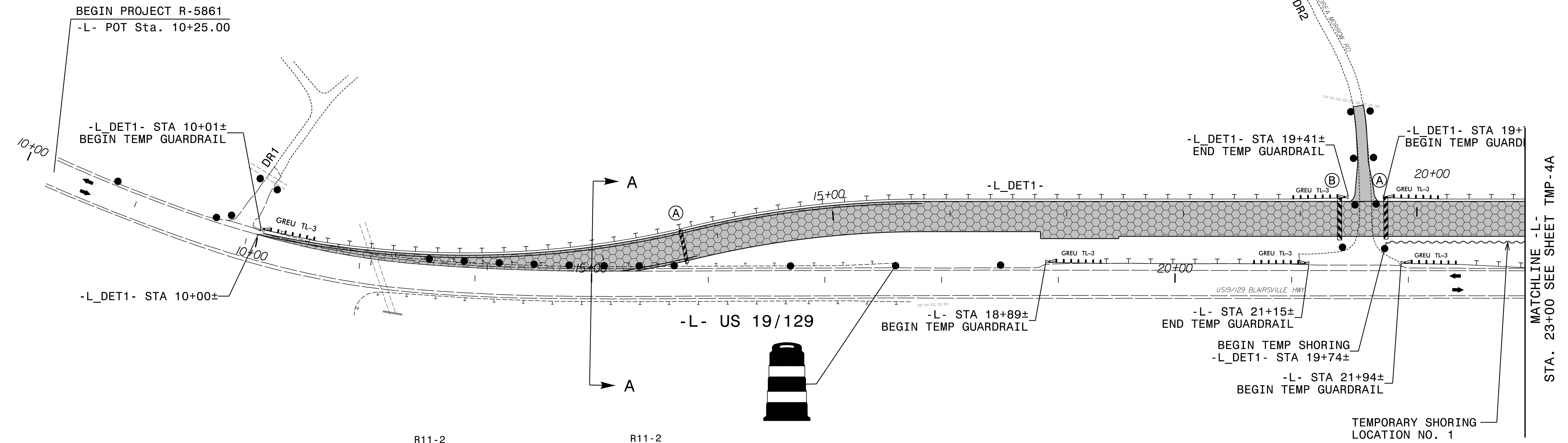
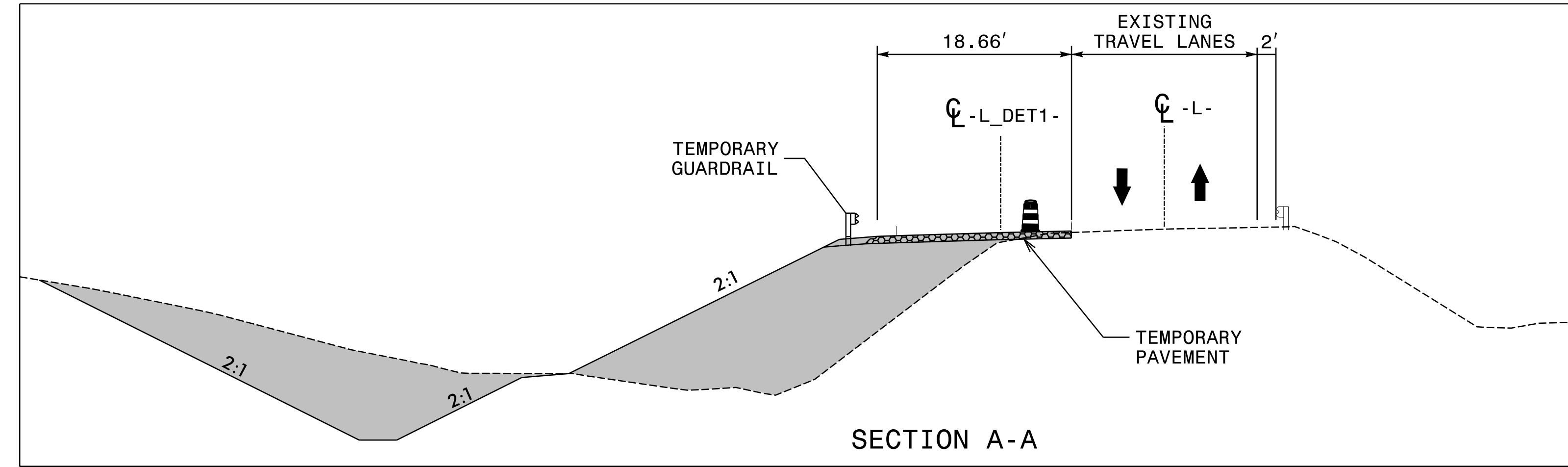
STEP 1

USING ROADWAY STANDARD DRAWING 1101.02 TO MAINTAIN TRAFFIC (ALTERNATING LANE CLOSURES), PLACE THE FINAL LAYER OF SURFACE COURSE, FINAL PAVEMENT MARKINGS AND MARKERS ON -L- US 19/129 AS DETAILED IN THE PAVEMENT MARKING PLANS. DRIVEWAYS AND -Y- LINES WITHIN THE STATION RANGES INDICATED SHALL ALSO BE PAVED IN CONJUNCTION WITH THE MAINLINE PAVING.

STEP 2:

USING ROADWAY STANDARD DRAWING 1101.02, REMOVE TRAFFIC CONTROL DEVICES AND OPEN ALL ROADS TO TRAFFIC IN THE FINAL PATTERN.

<p>P: (919) 878-9560 8601 Six Forks Road, Forum 1, Suite 700 Raleigh, North Carolina 27615-3960 NC License No. F-0112</p> <p>Engineers Construction Managers Planners Scientists www.rkk.com</p> <p>Responsive People Creative Solutions</p>	<p>APPROVED: <small>DocuSigned by: Kevin W. Blisby 800802028912474</small></p> <p>DATE: 11/6/2023</p> <p style="text-align: center;">SEAL</p>		<h2 style="margin: 0;">TRANSPORTATION MANAGEMENT PHASING</h2>
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			



SHORING I.D.	BEGIN/OFFSET	END/OFFSET	ESTIMATED AVERAGE HEIGHT (ft)	ESTIMATED MAXIMUM HEIGHT (ft)		
1	-L_DET1- STA 19+74 +/-	22.0' RT	-L_DET1- STA 25+93 +/-	22.0' RT	11.0	15.0

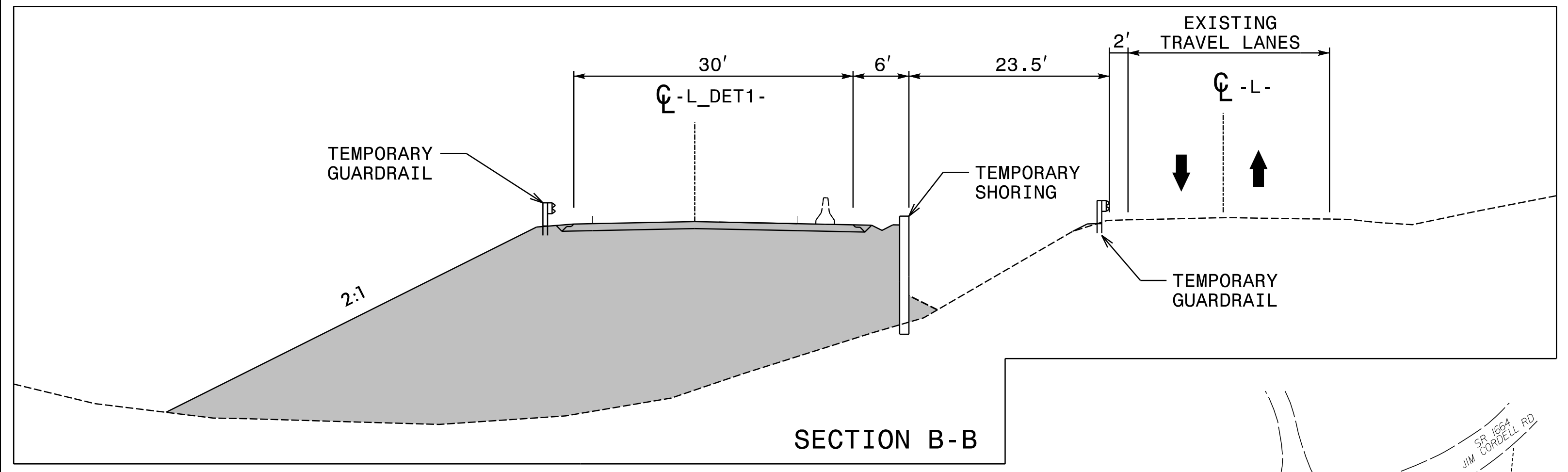
10/18/2023
 R5861.Tc_Tmp04.dgn
 kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bisby*
BD0802628912472
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 21047
 KEVIN W. BISBY

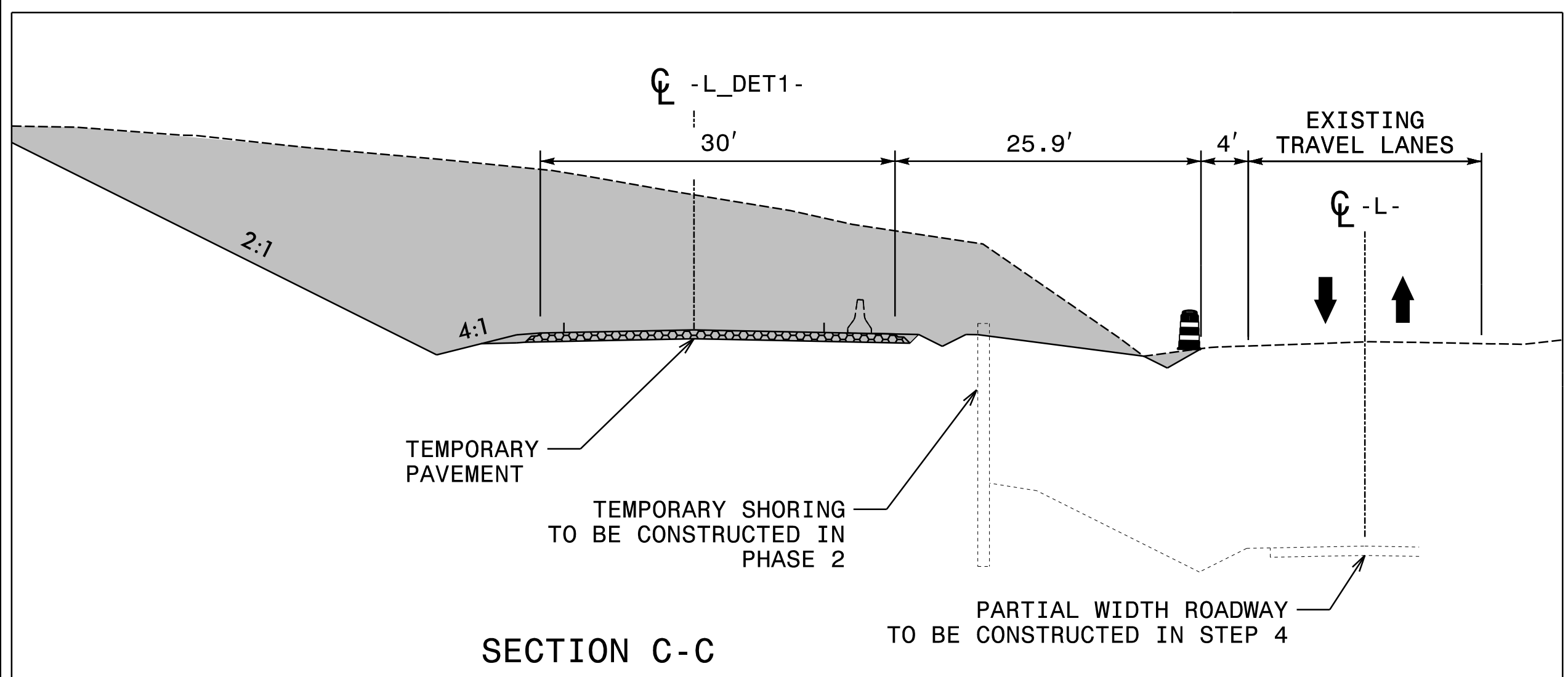
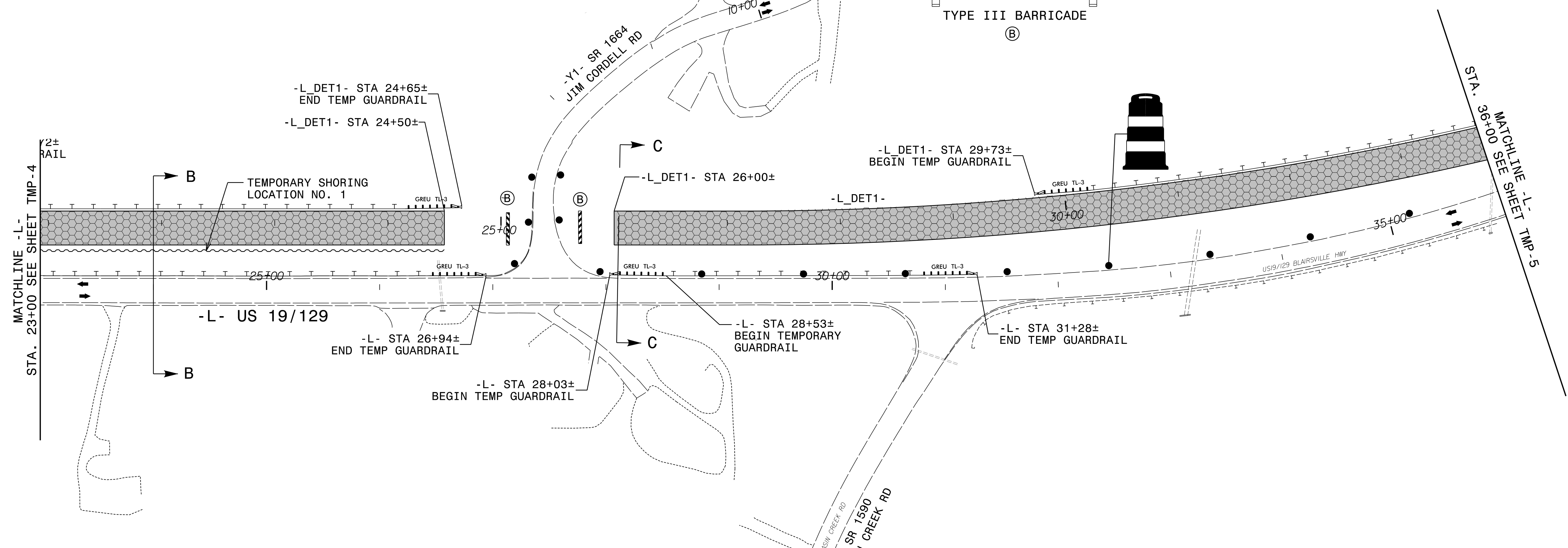
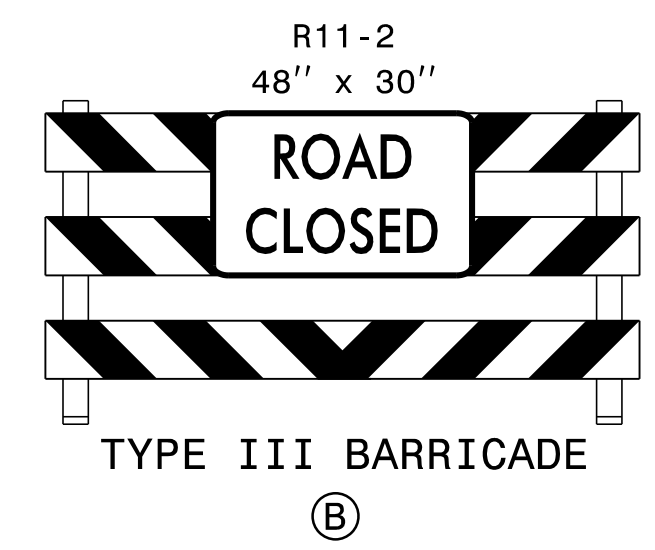


PHASE I - STEP 1



NOTE:
SEE TMP-2I FOR OFF-SITE DETOUR DETAIL.

NAD 83/2011



10/18/2023
R5861.LTC_Tmp04A.dgn
KBISBY

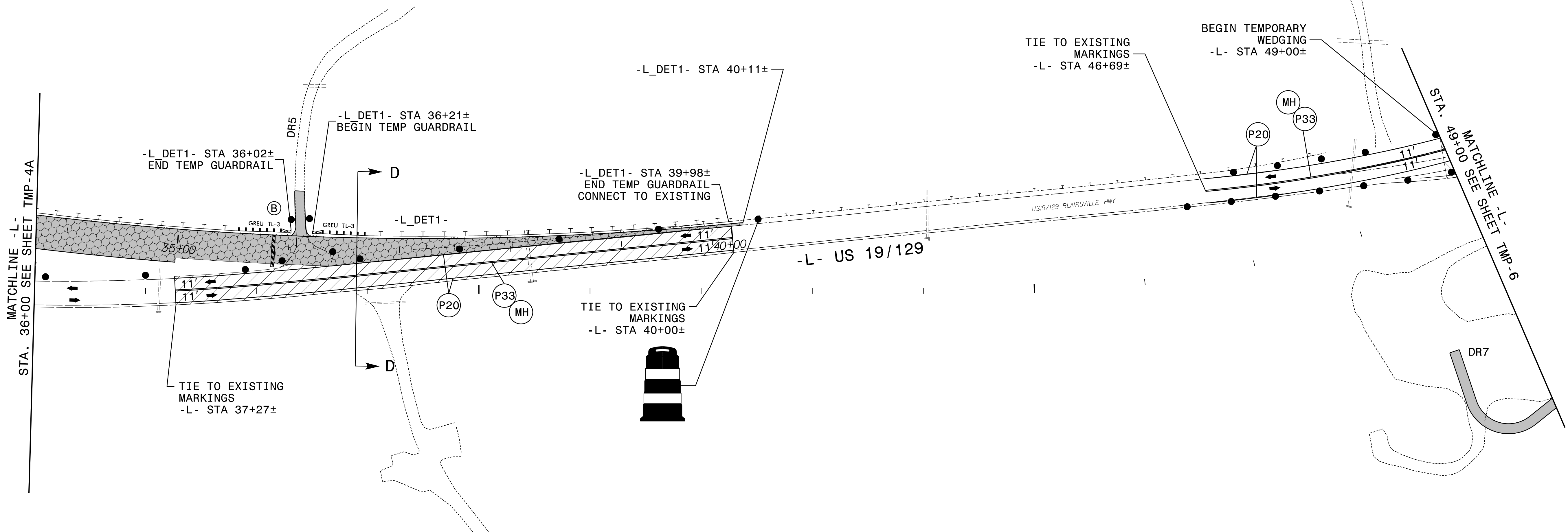
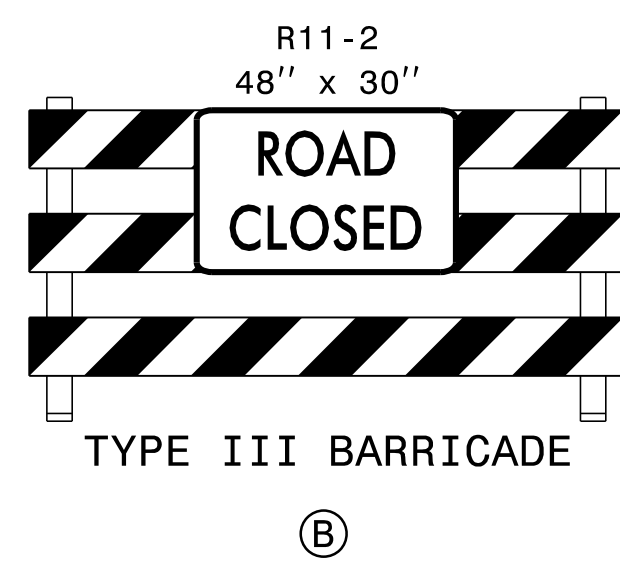
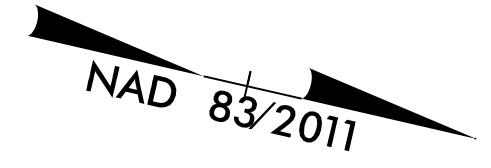
RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bisy*
800802628912472
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 KEVIN W. BISI
 21047



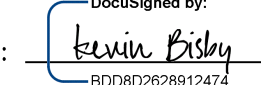
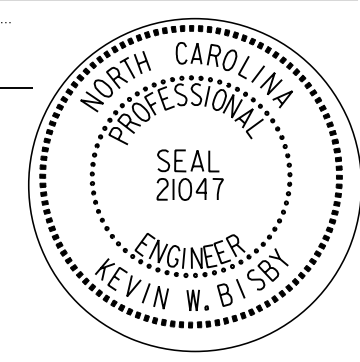
PHASE I - STEP 1

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



10/18/2023
 R5861.LTC_Tmp05.dgn
 kbisby

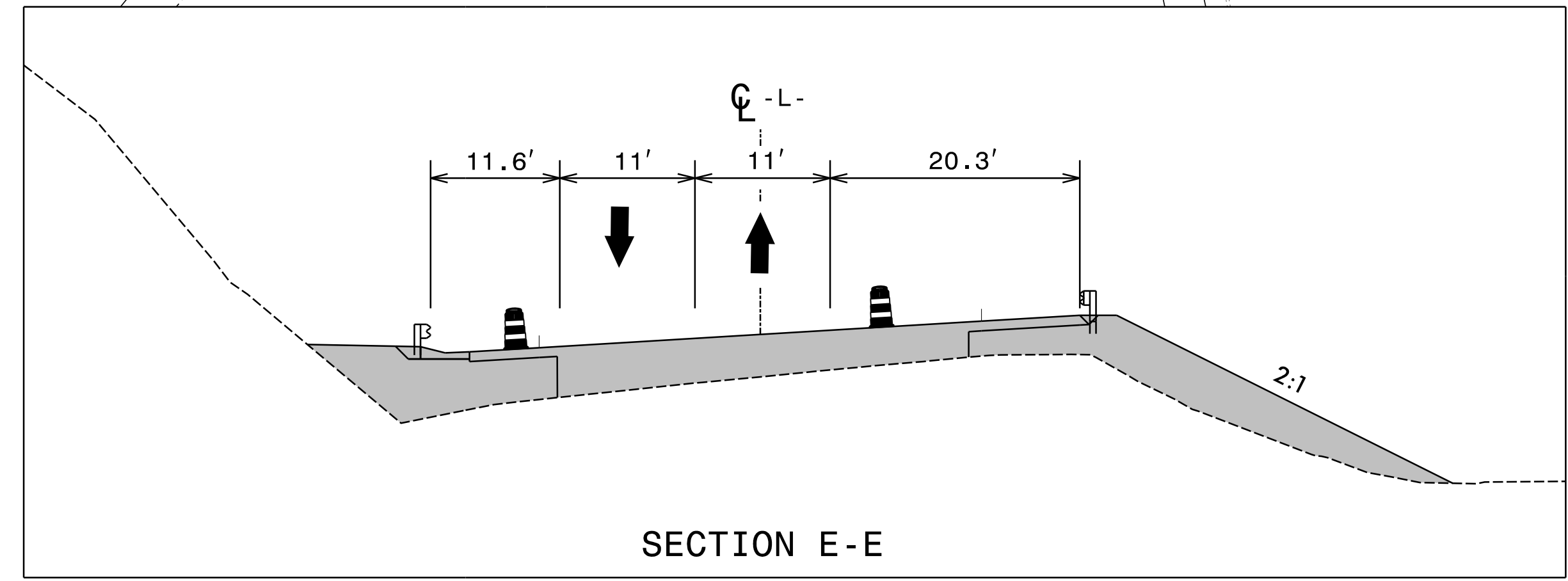
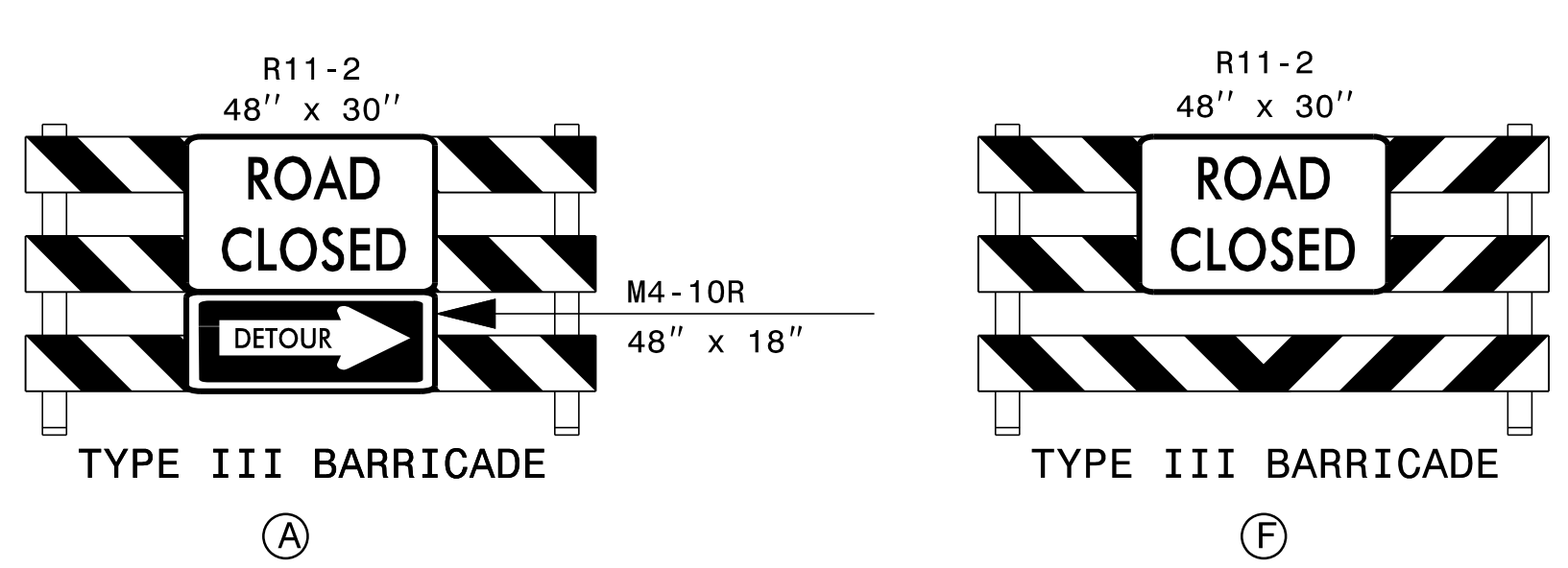
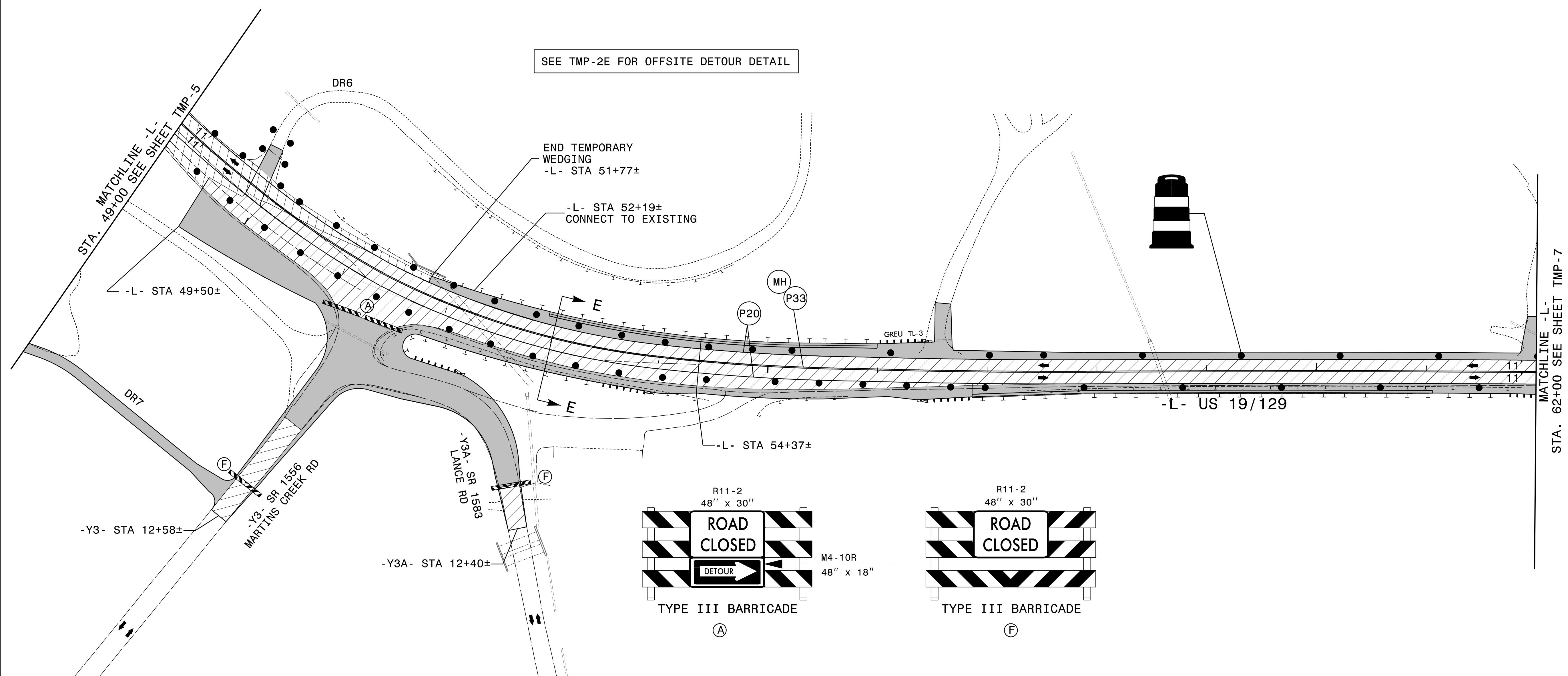
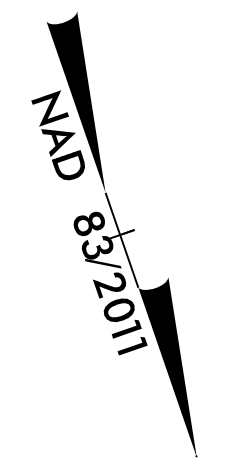
RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: 
 DATE: 10/18/2023
 SEAL




PHASE I - STEP 1

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



10/18/2023
 R5861.Tc_Tmp06.dgn
 kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

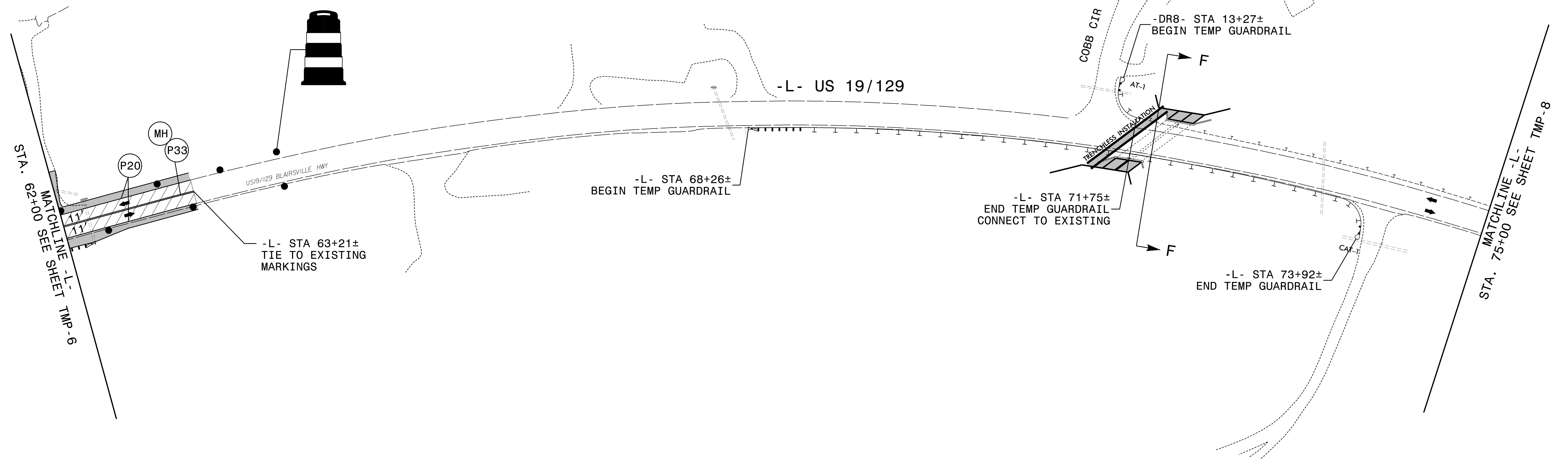
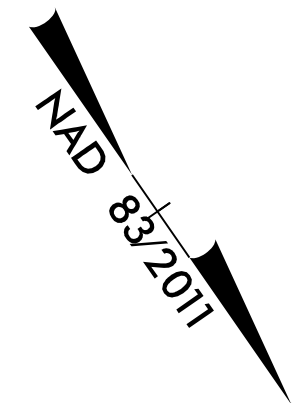
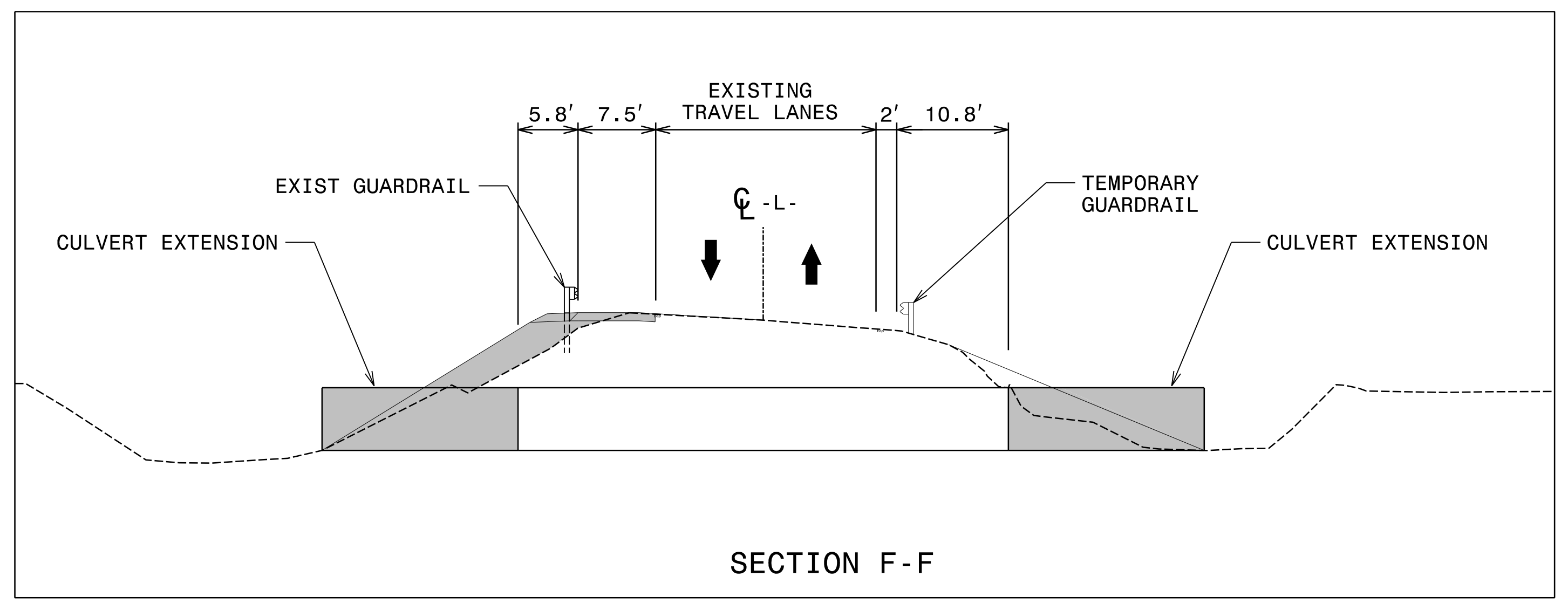
APPROVED: *Kevin Bisby*
800802628912472
 DATE: 10/18/2023

SEAL

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

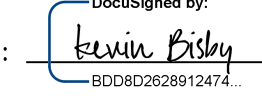
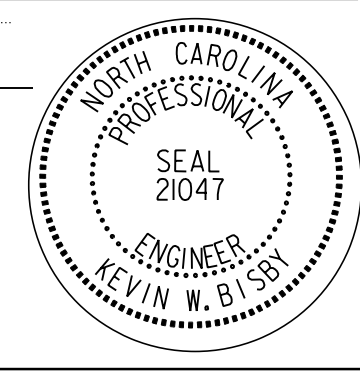


PHASE I - STEPS 1 AND 2



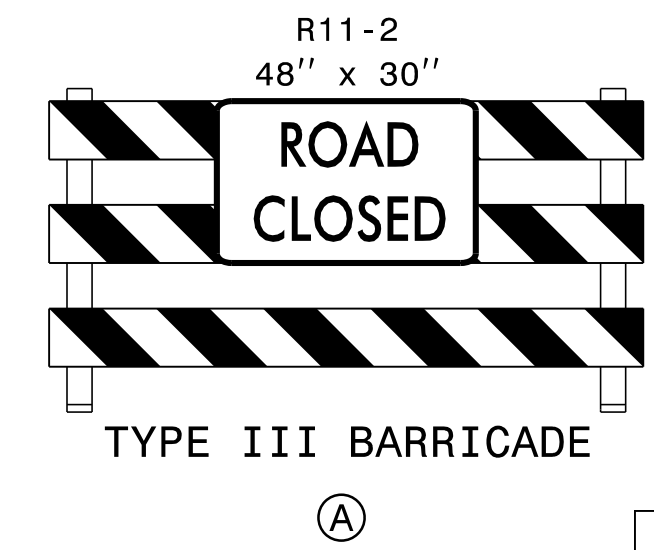
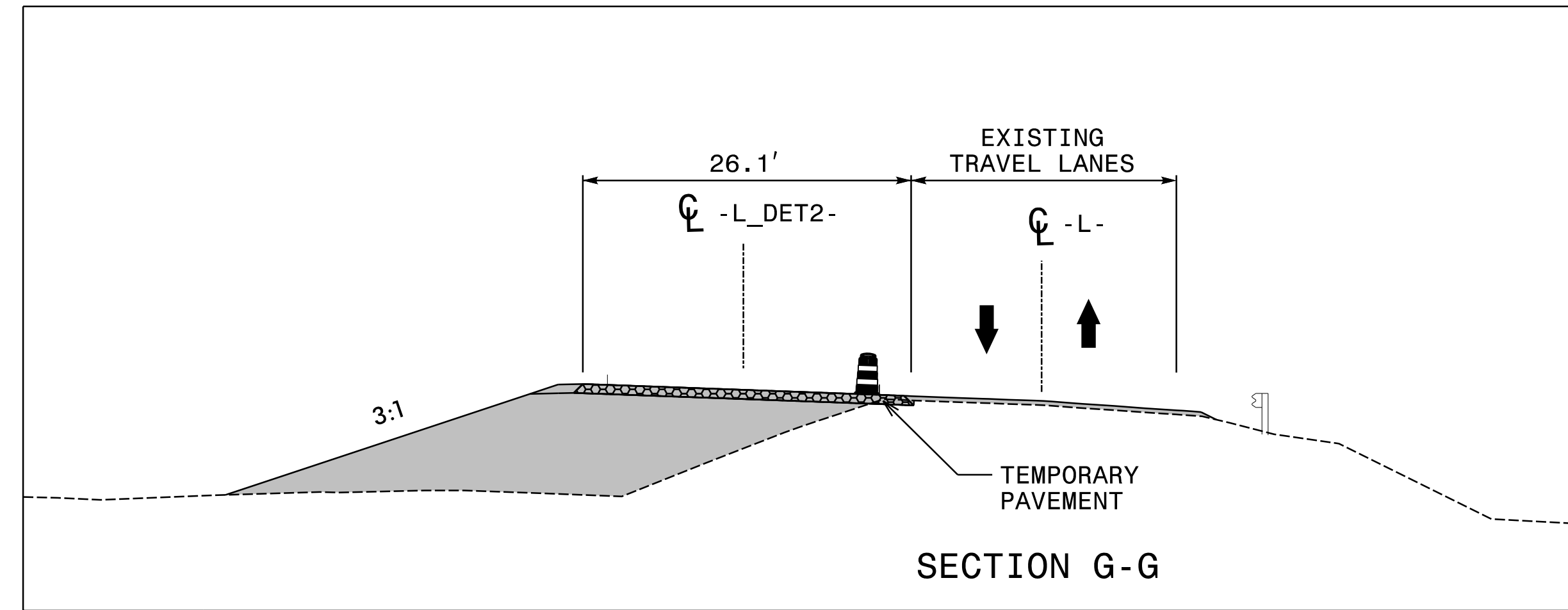
10/18/2023
 R5861.Lc_Tmp07.dgn
 kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

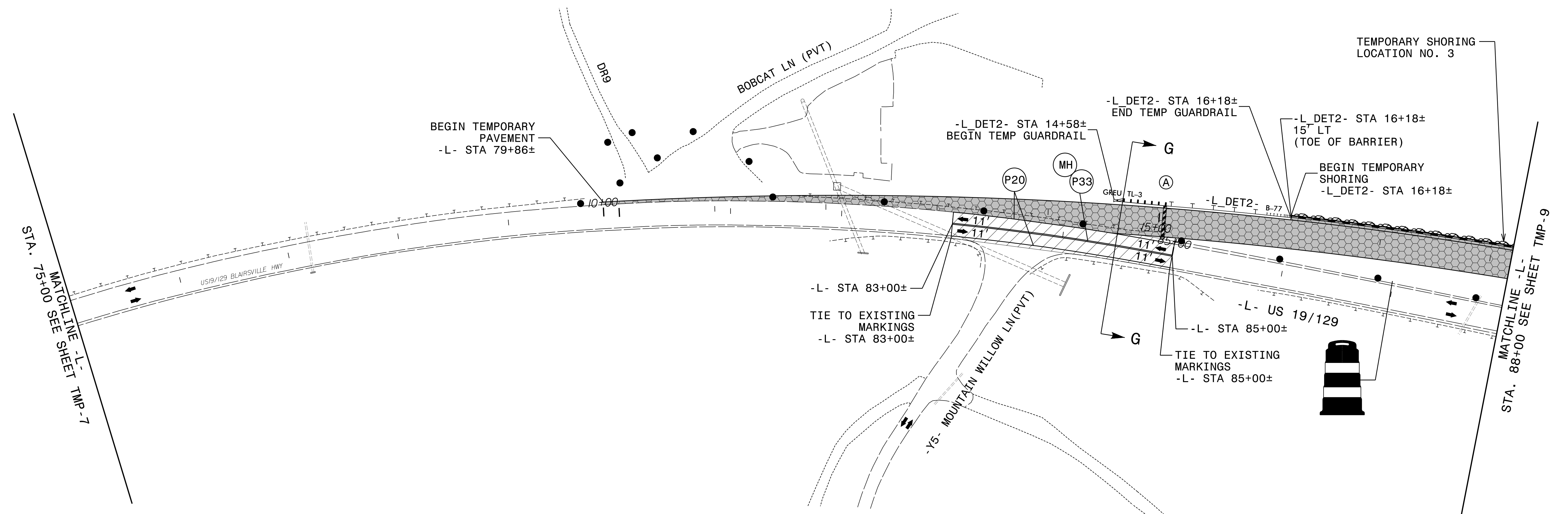
APPROVED: 
800802628912472
 DATE: 10/18/2023
 SEAL

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



PHASE I - STEP 1

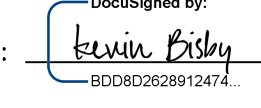
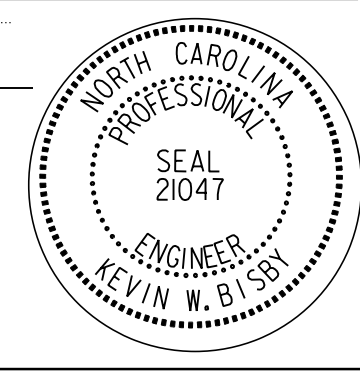


TEMPORARY SHORING TABLE						
SHORING I.D.	BEGIN/OFFSET	END/OFFSET	ESTIMATED AVERAGE HEIGHT (ft)	ESTIMATED MAXIMUM HEIGHT (ft)		
3	-L_DET2- STA 16+18 +/-	15.0' LT	-L_DET2- STA 21+70 +/-	15.0' LT	10.0	13.7



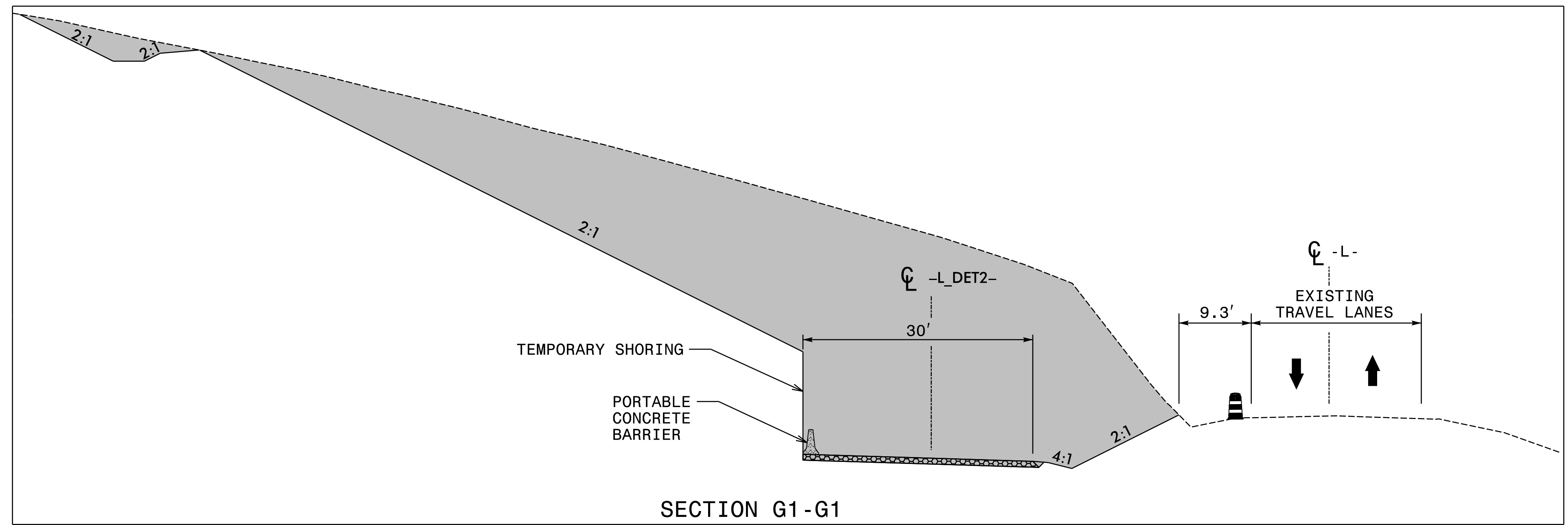
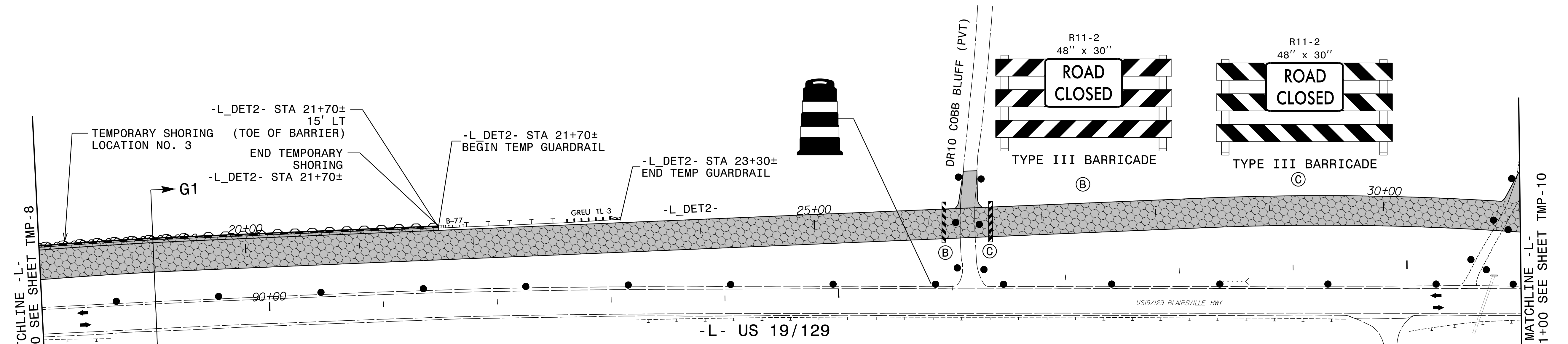
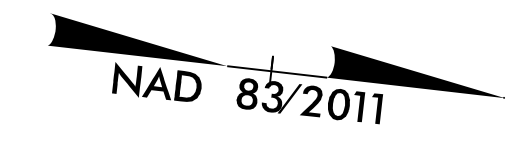
10/18/2023
 R5861.LTC_Tmp08.dgn
 kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: 
 DATE: 10/18/2023
 SEAL

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



PHASE I - STEP 1



SECTION G1-G1

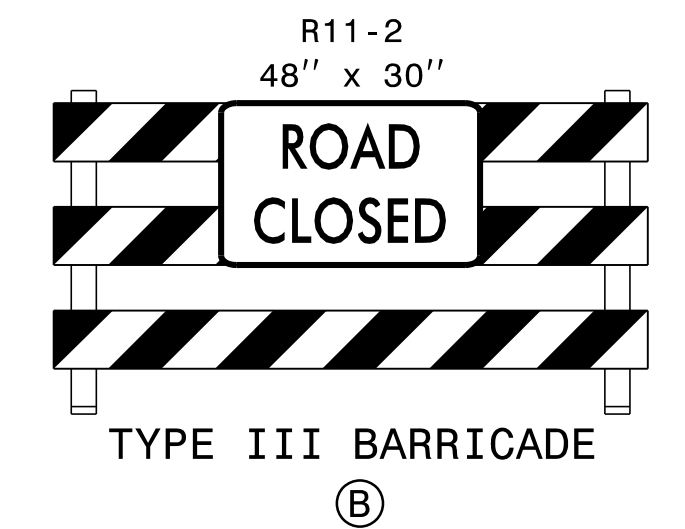
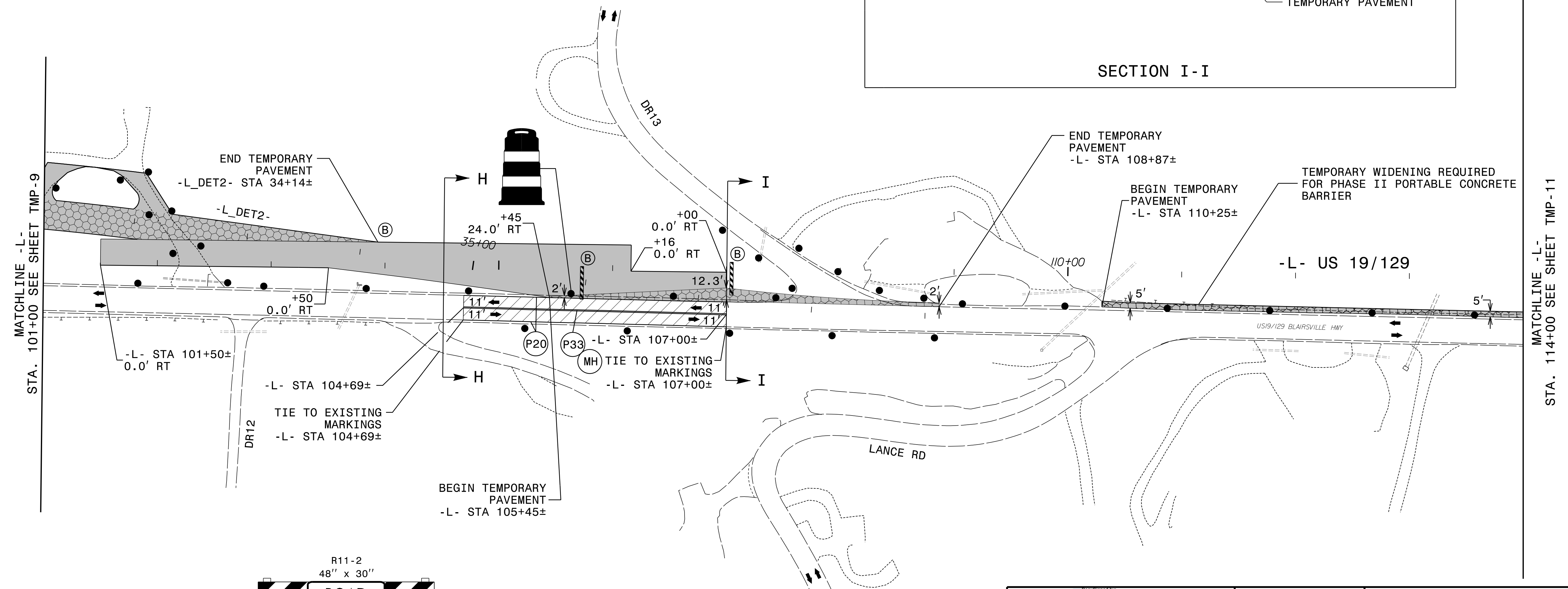
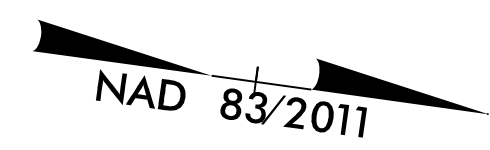
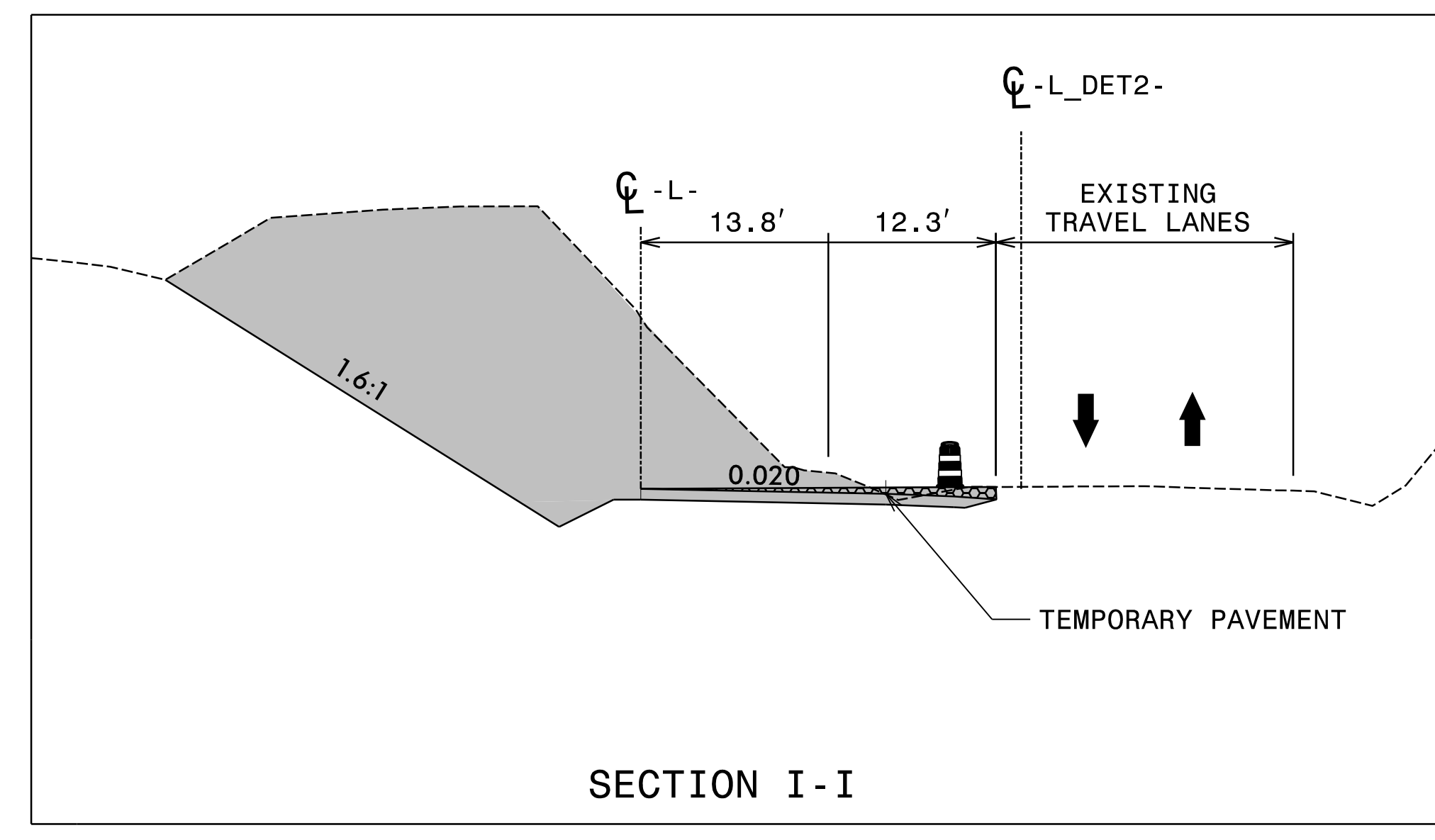
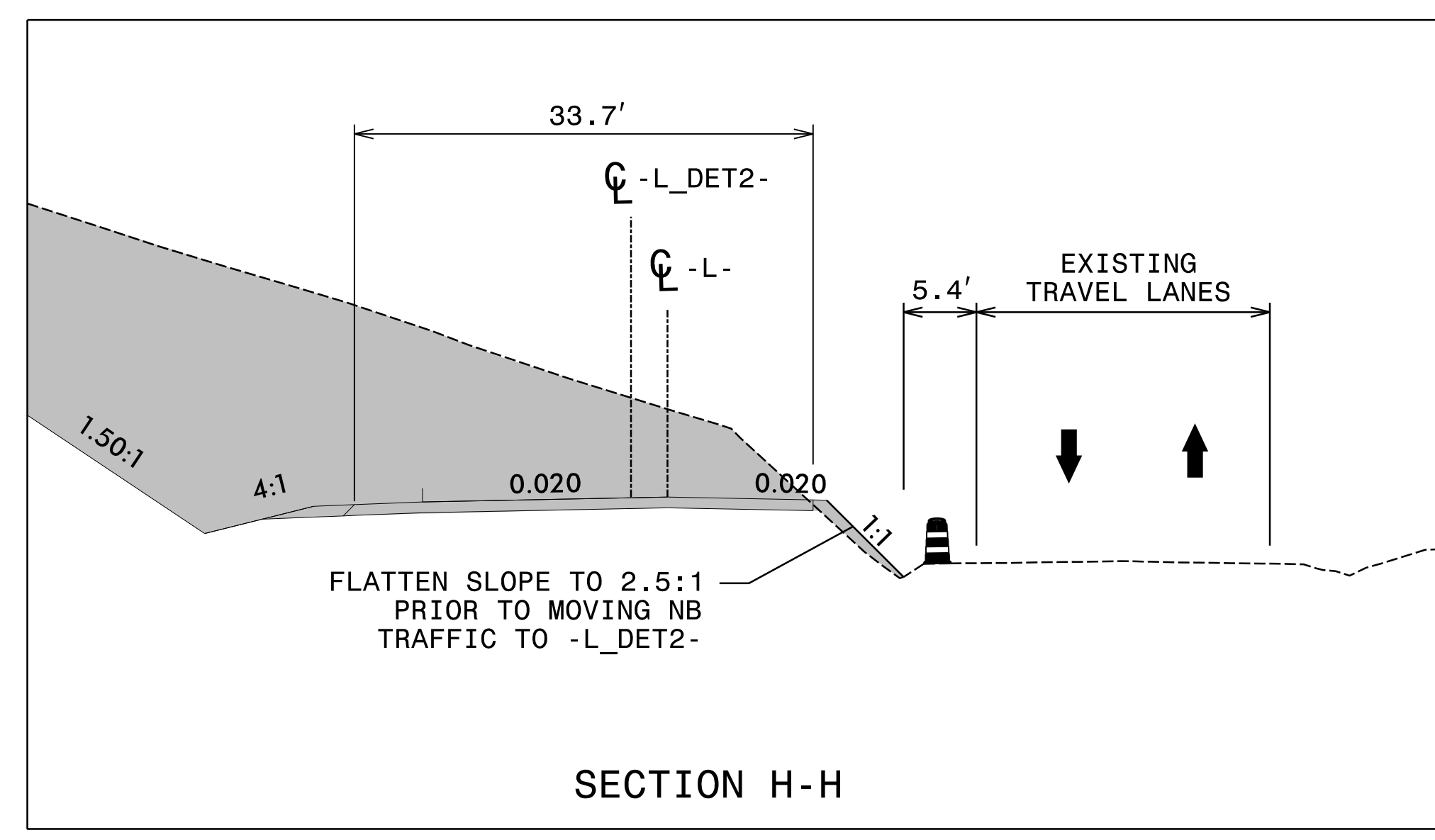
10/18/2023
 R5861.LTC_Tmp09.dgn
 kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bisy*
800802628912472
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 21047
 KEVIN W. BISHOP

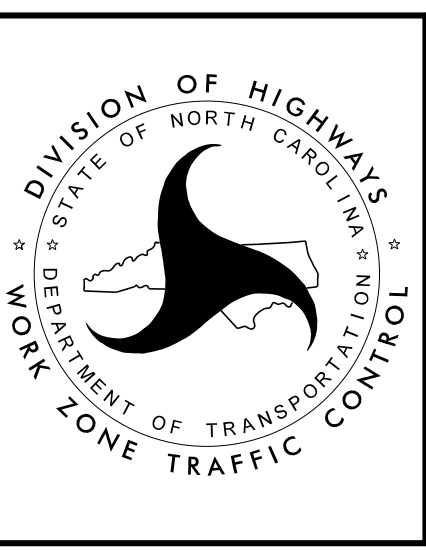


PHASE I - STEP 1



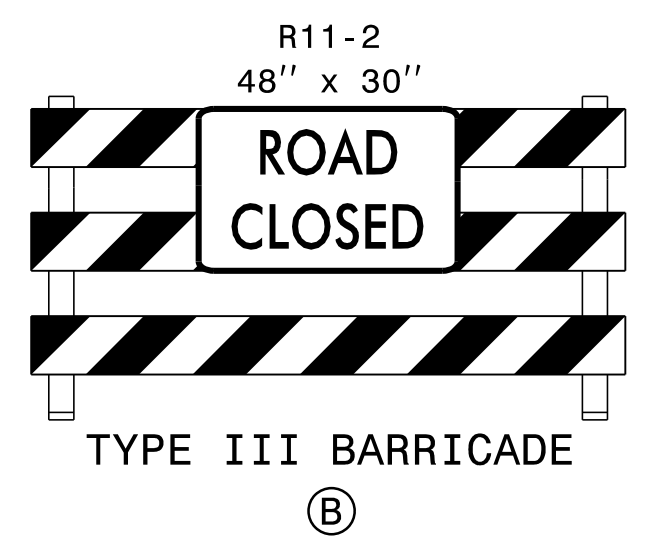
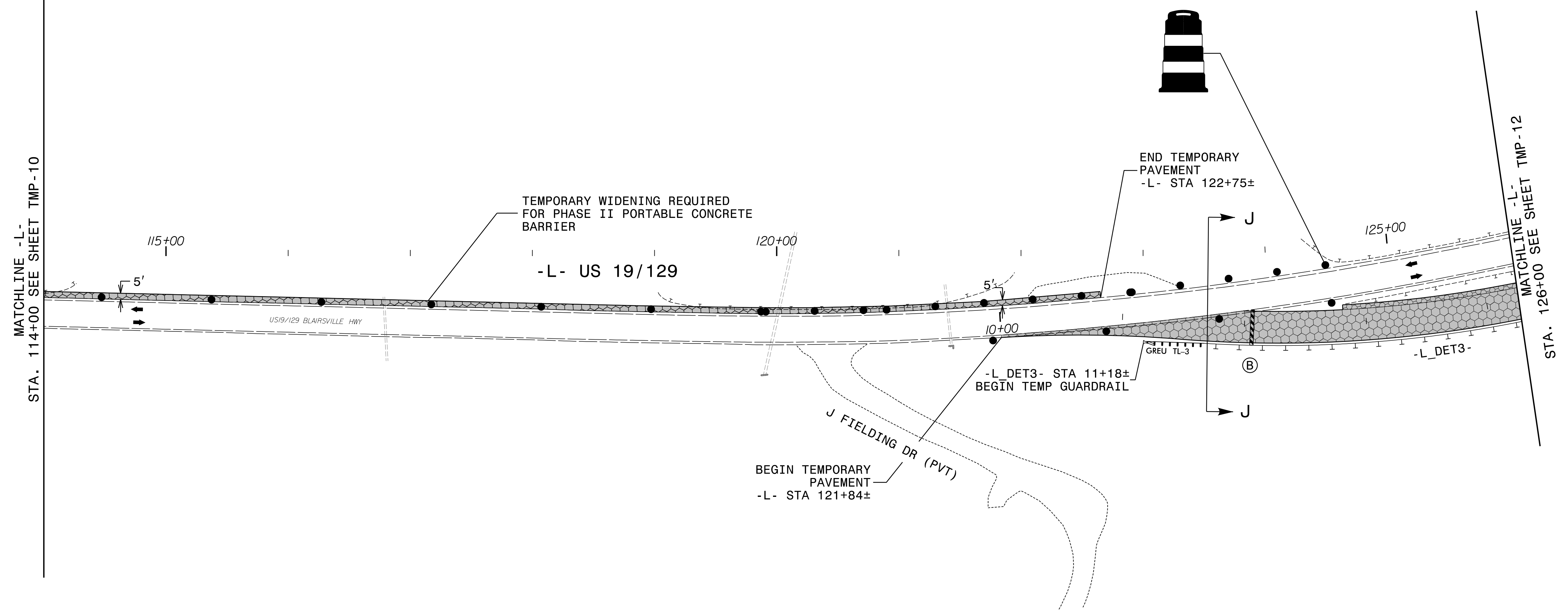
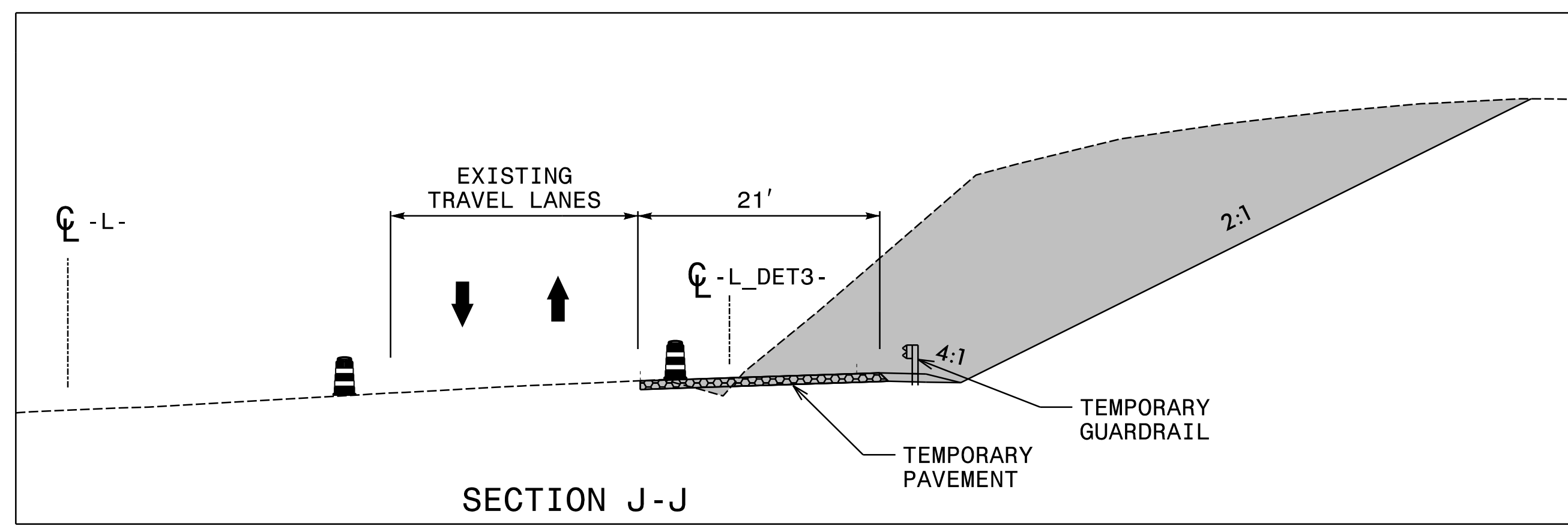
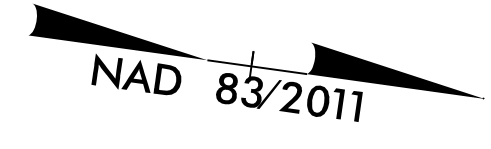
RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bisy*
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 21047
 KEVIN W. BISHOP



PHASE I - STEP 1

10/18/2023
 R5861.Tc_Tmp10.dgn
 kbisby



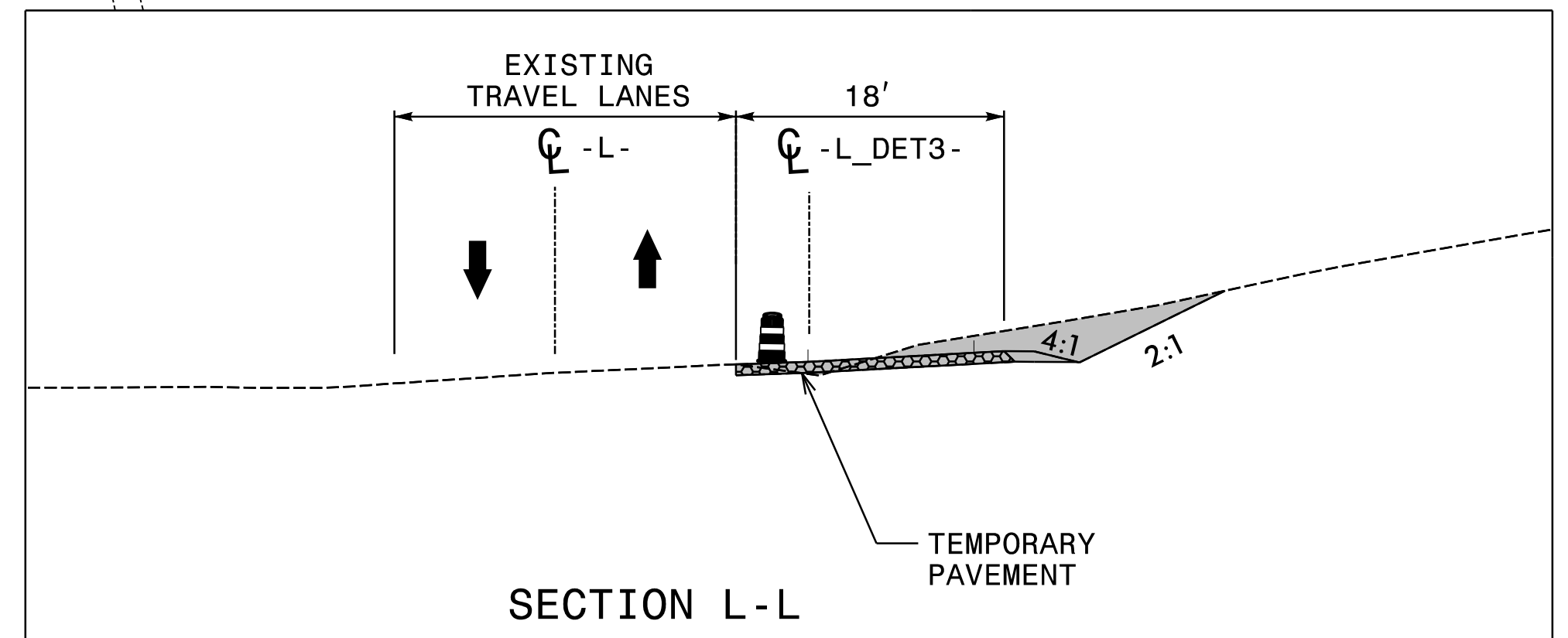
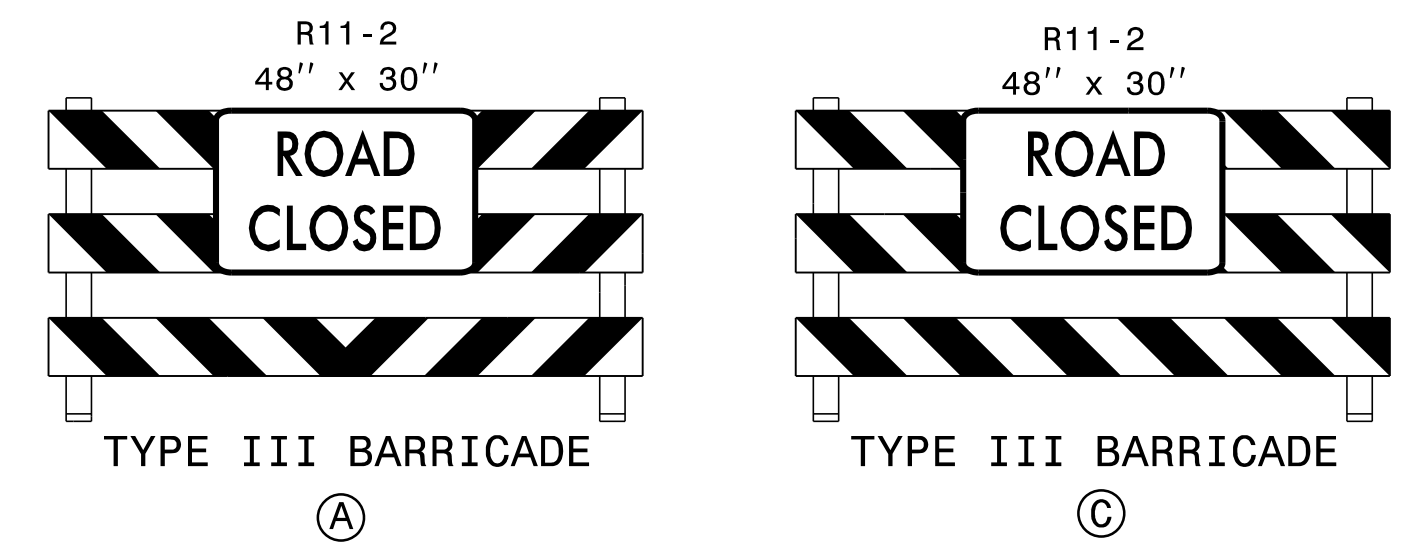
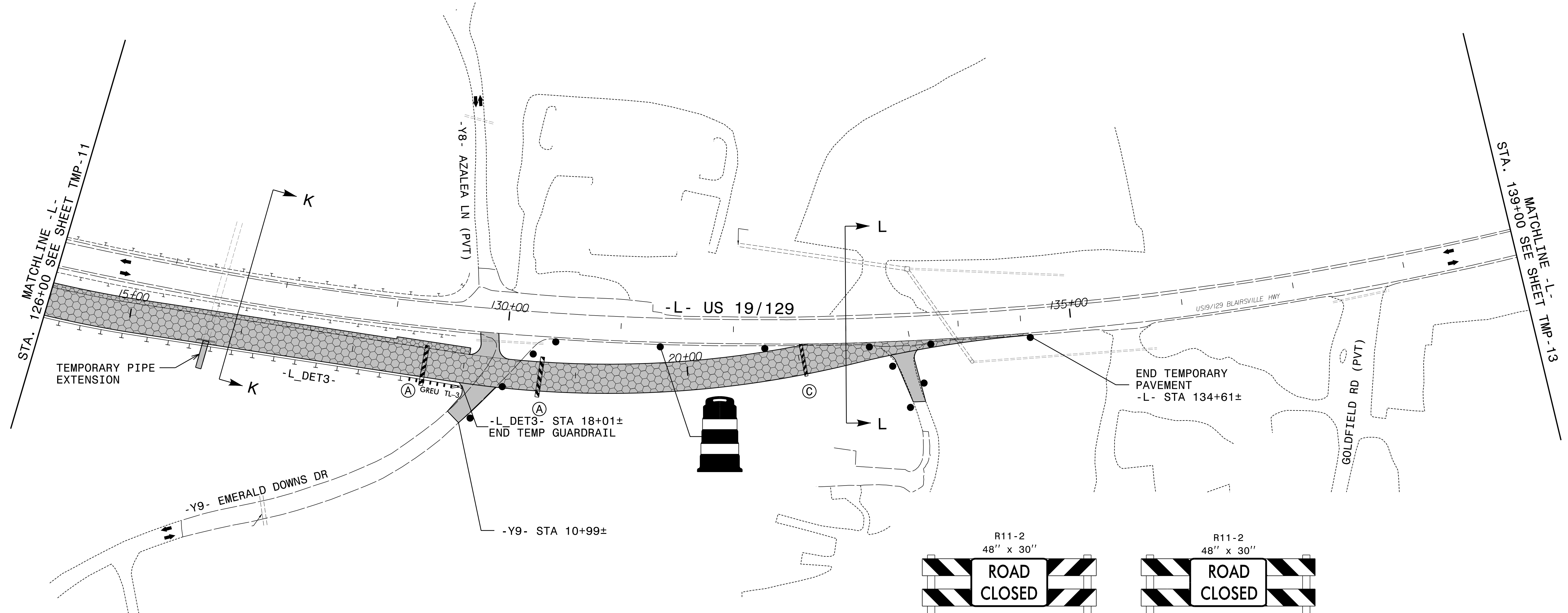
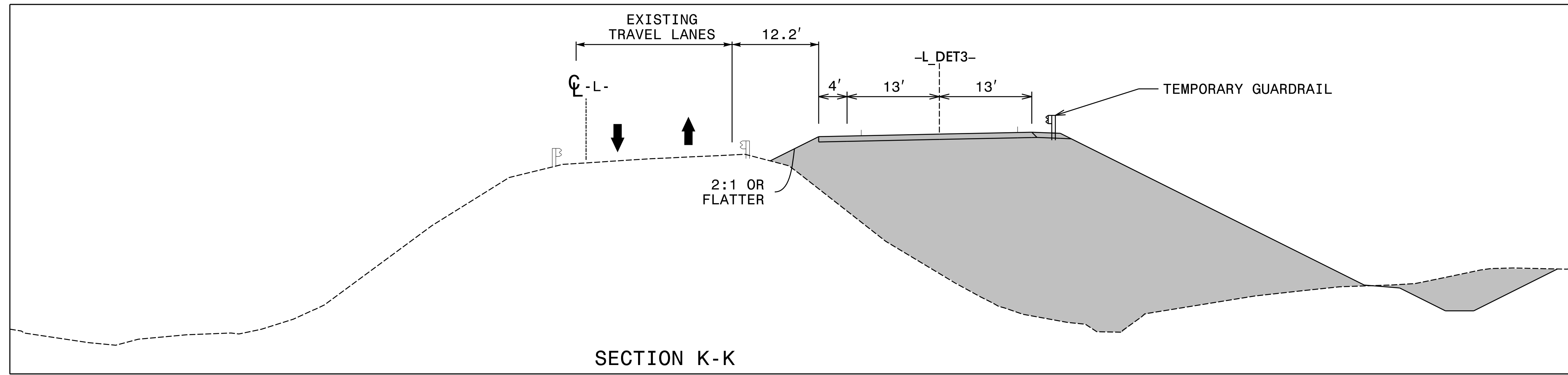
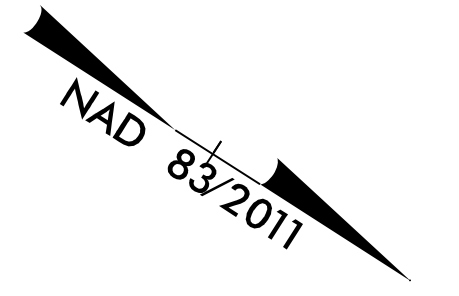
RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bisby*
800802628912472
 DATE: 10/18/2023
 SEAL



PHASE I - STEP 1

10/18/2023
 R5861.Tc_Tmpl.dgn
 kbisby



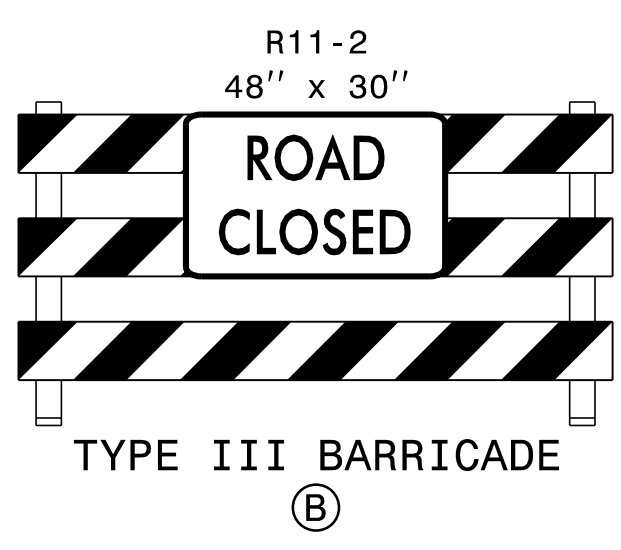
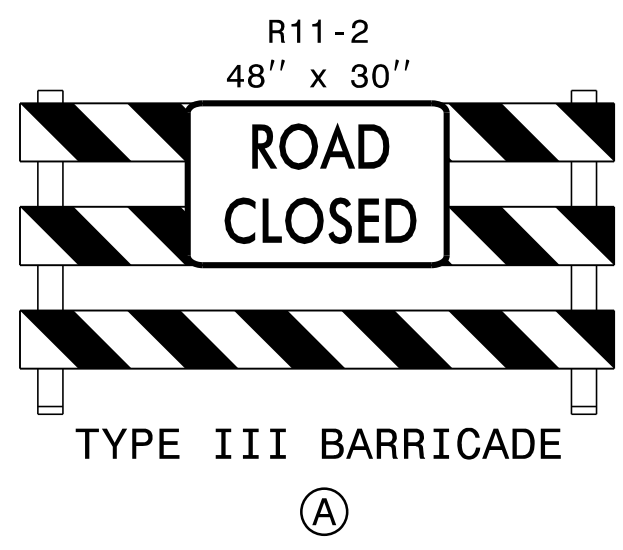
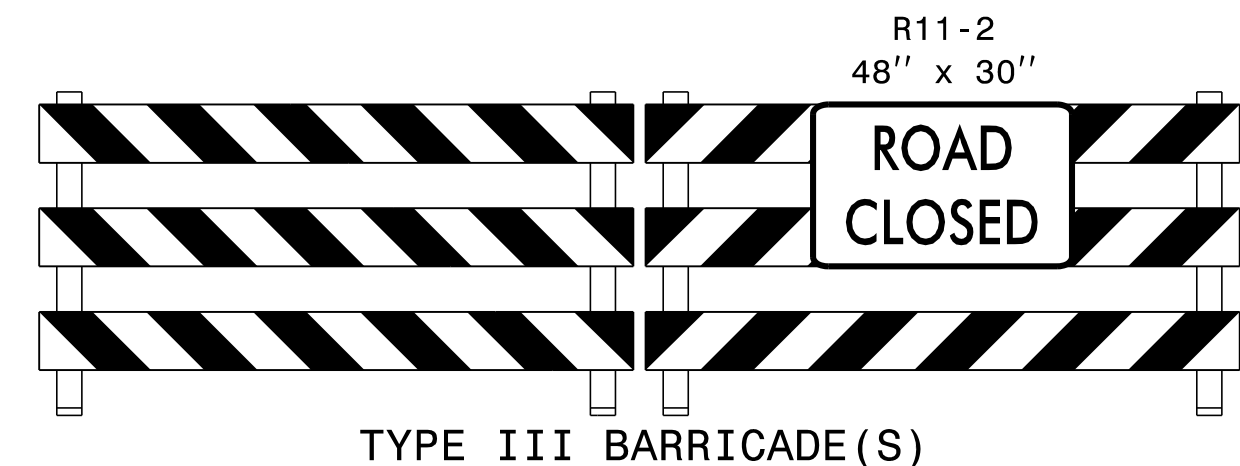
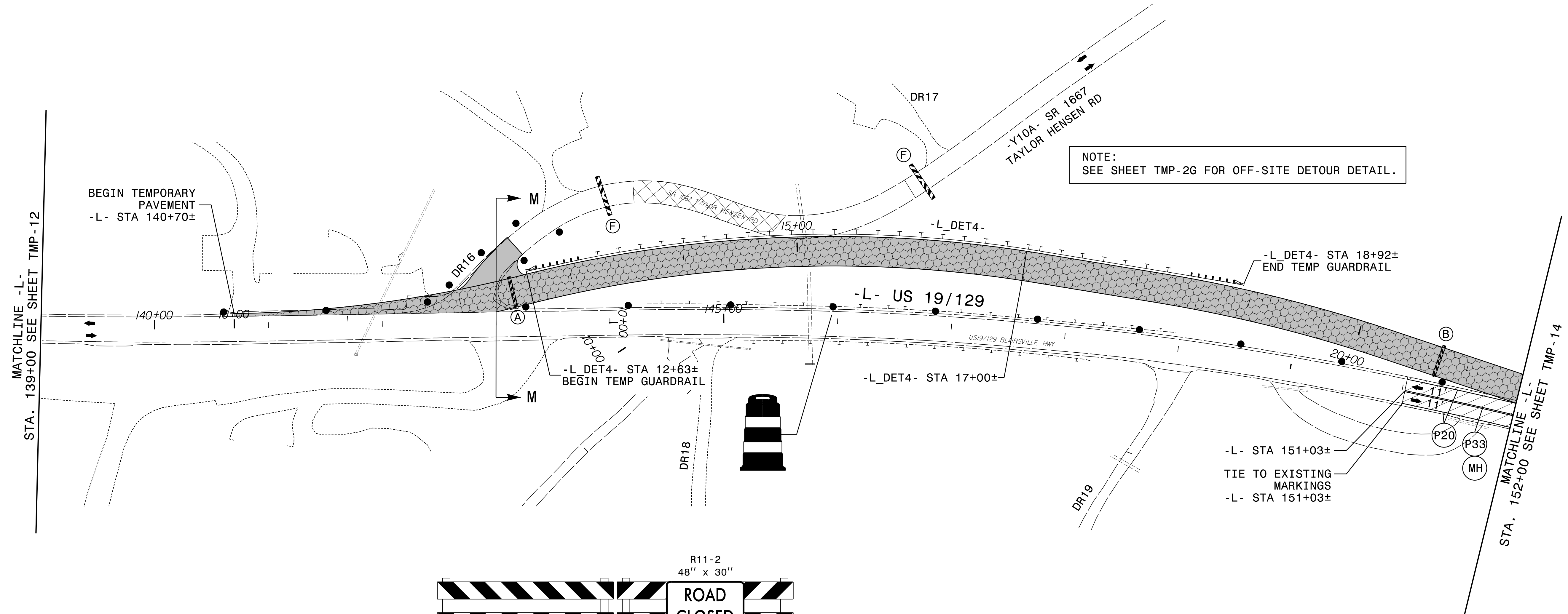
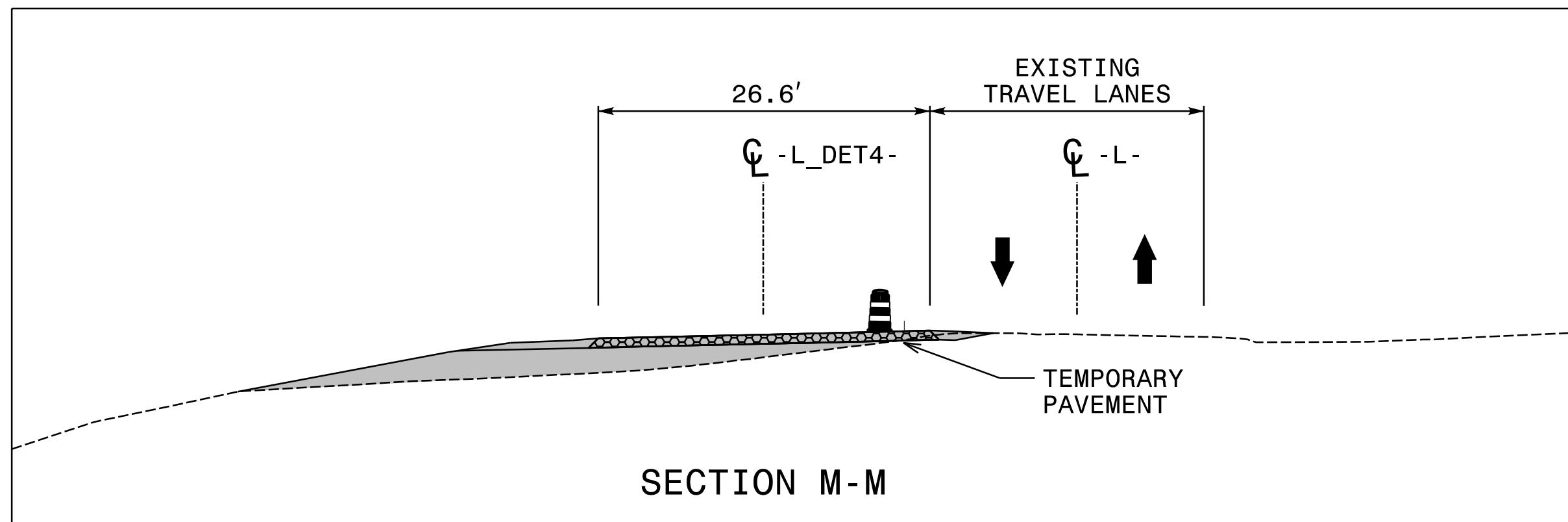
RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

APPROVED: *Kevin Bishy*
800802628912472
DATE: 10/18/2023
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 21047
ENGINEER KEVIN W. BISHY



PHASE I - STEP 1

10/18/2023
R5861.LTC_Tmp12.dgn
kbisby



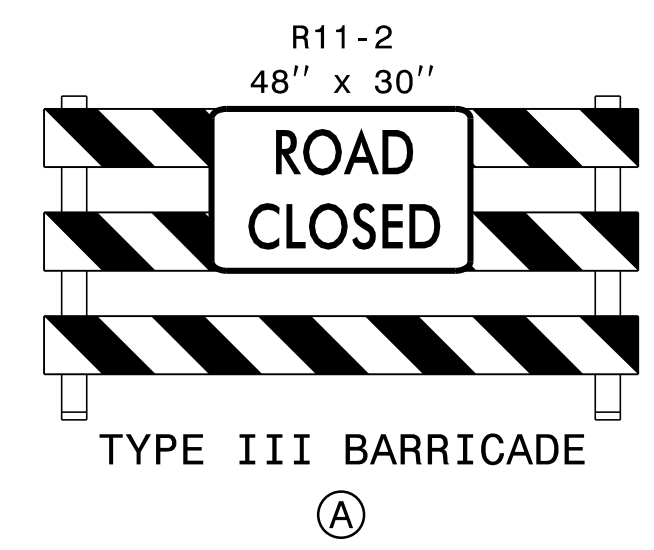
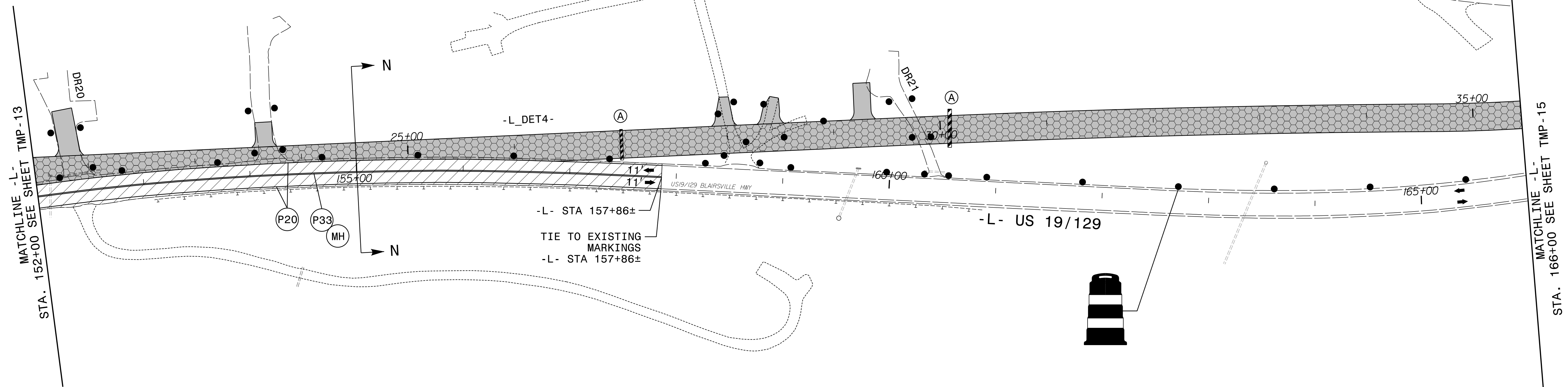
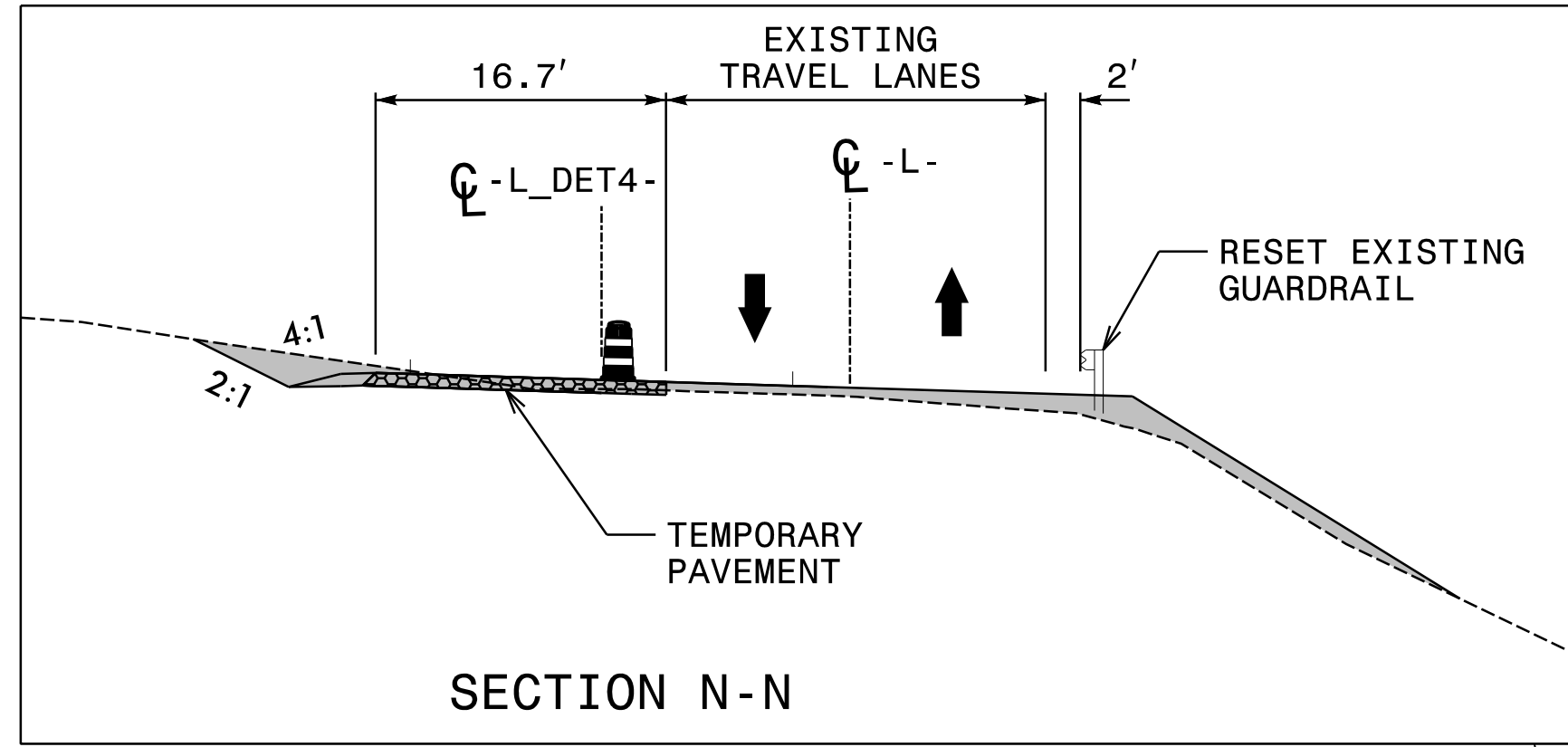
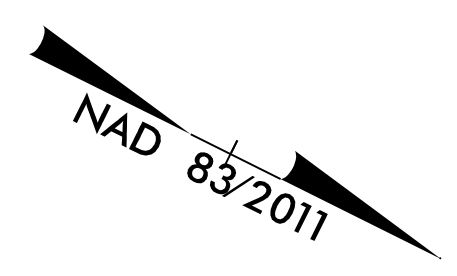
RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bisby*
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 21047
 ENGINEER KEVIN W. BISBY



PHASE I - STEP 1

10/18/2023
 R5861.LTC_Tmp13.dgn
 kbisby

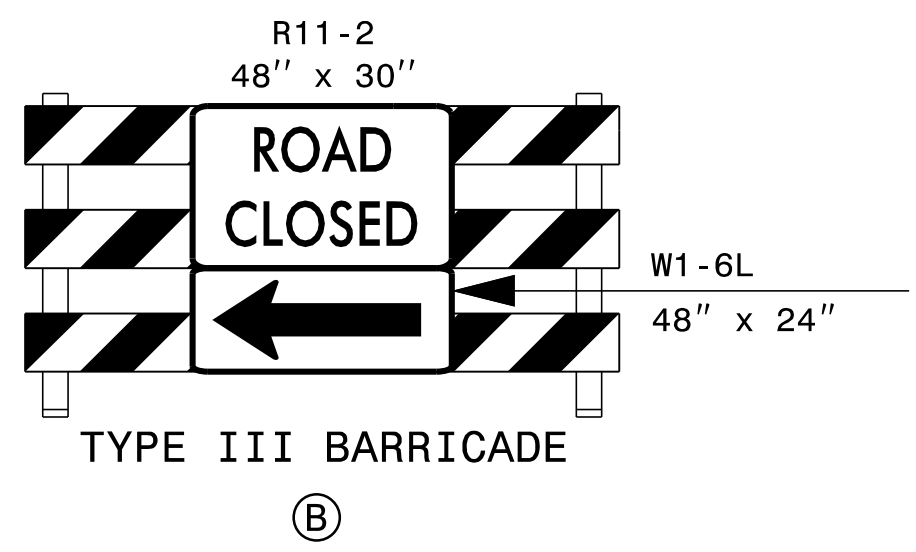
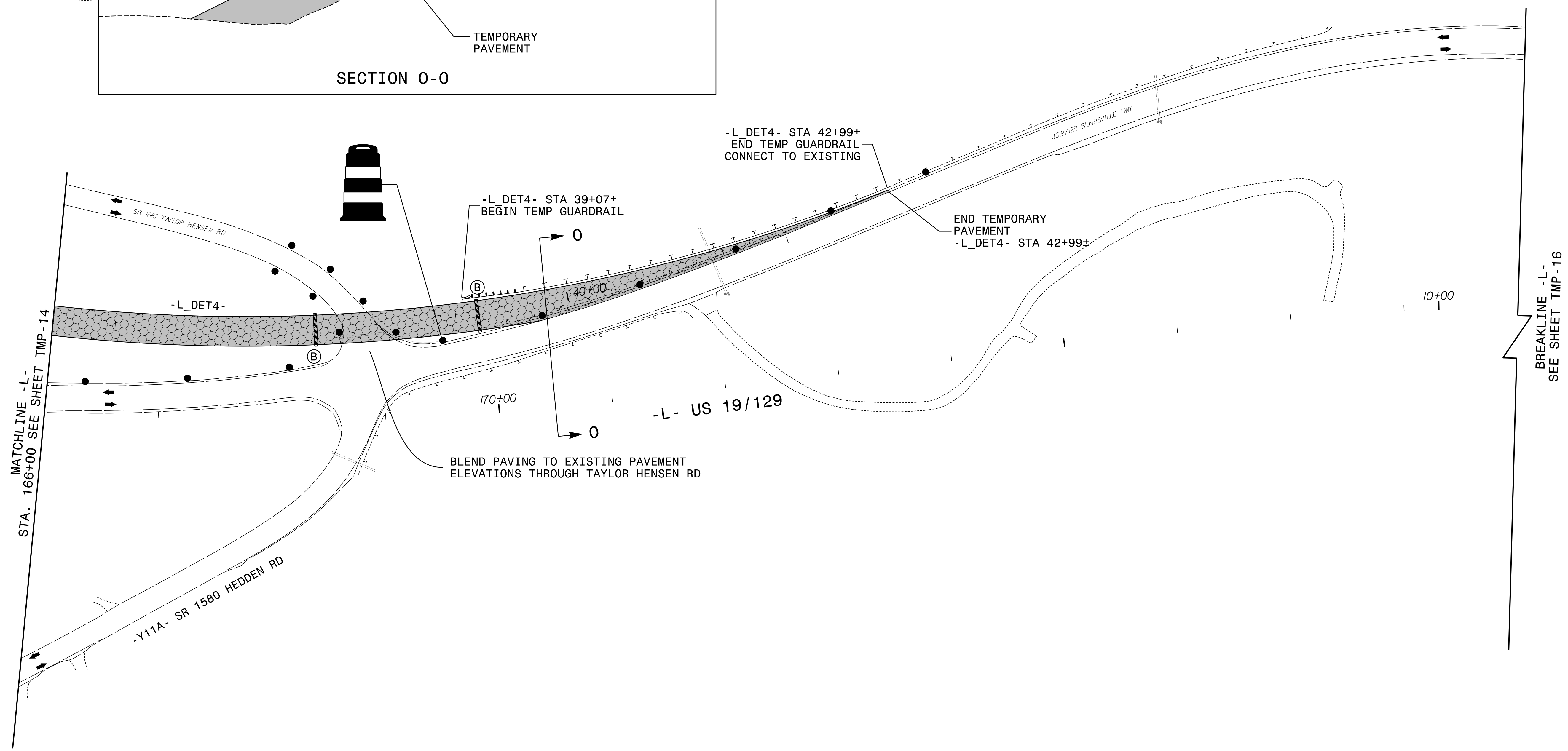
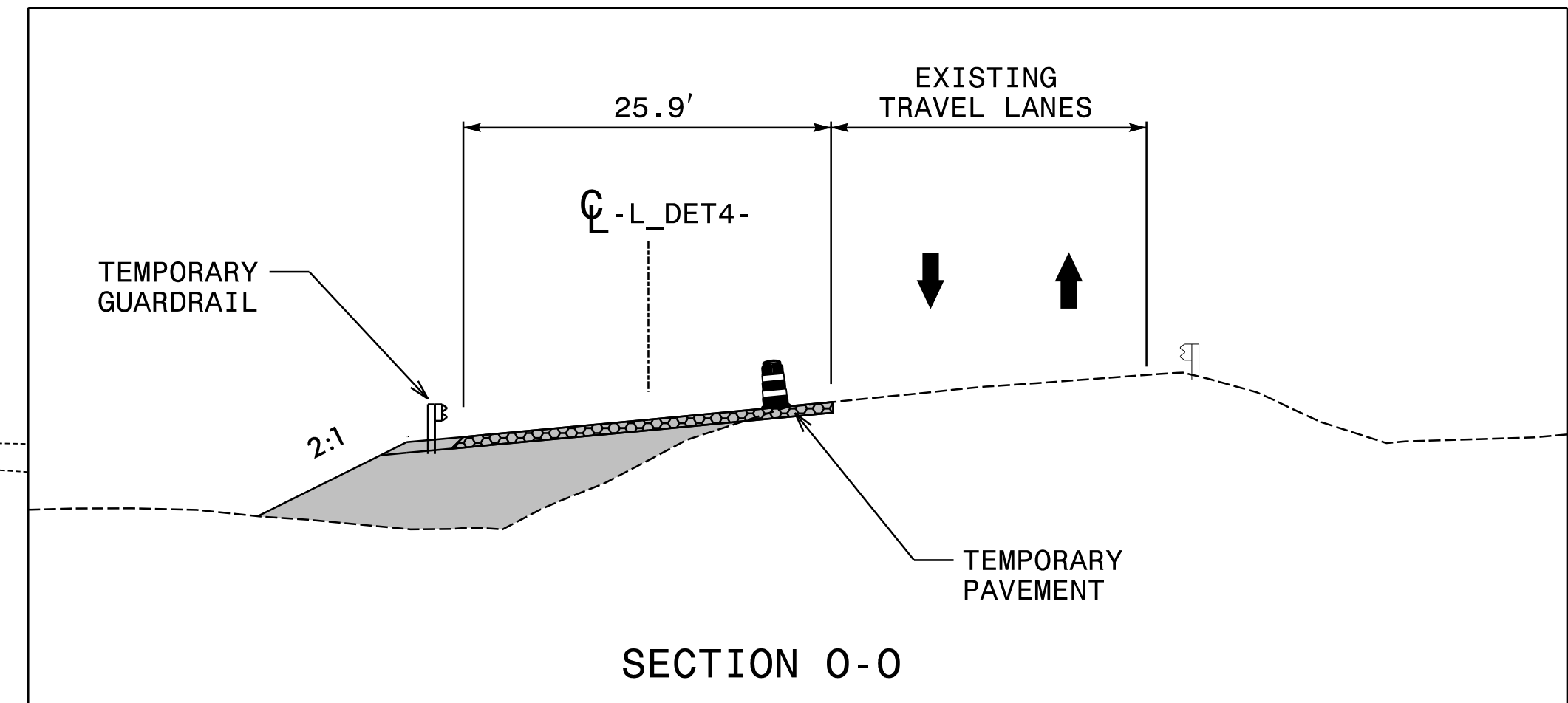


RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

APPROVED: *Kevin W. Blisby*
BD0802628912472
DATE: 10/18/2023
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 21047
KEVIN W. BLISBY



PHASE I - STEP 1



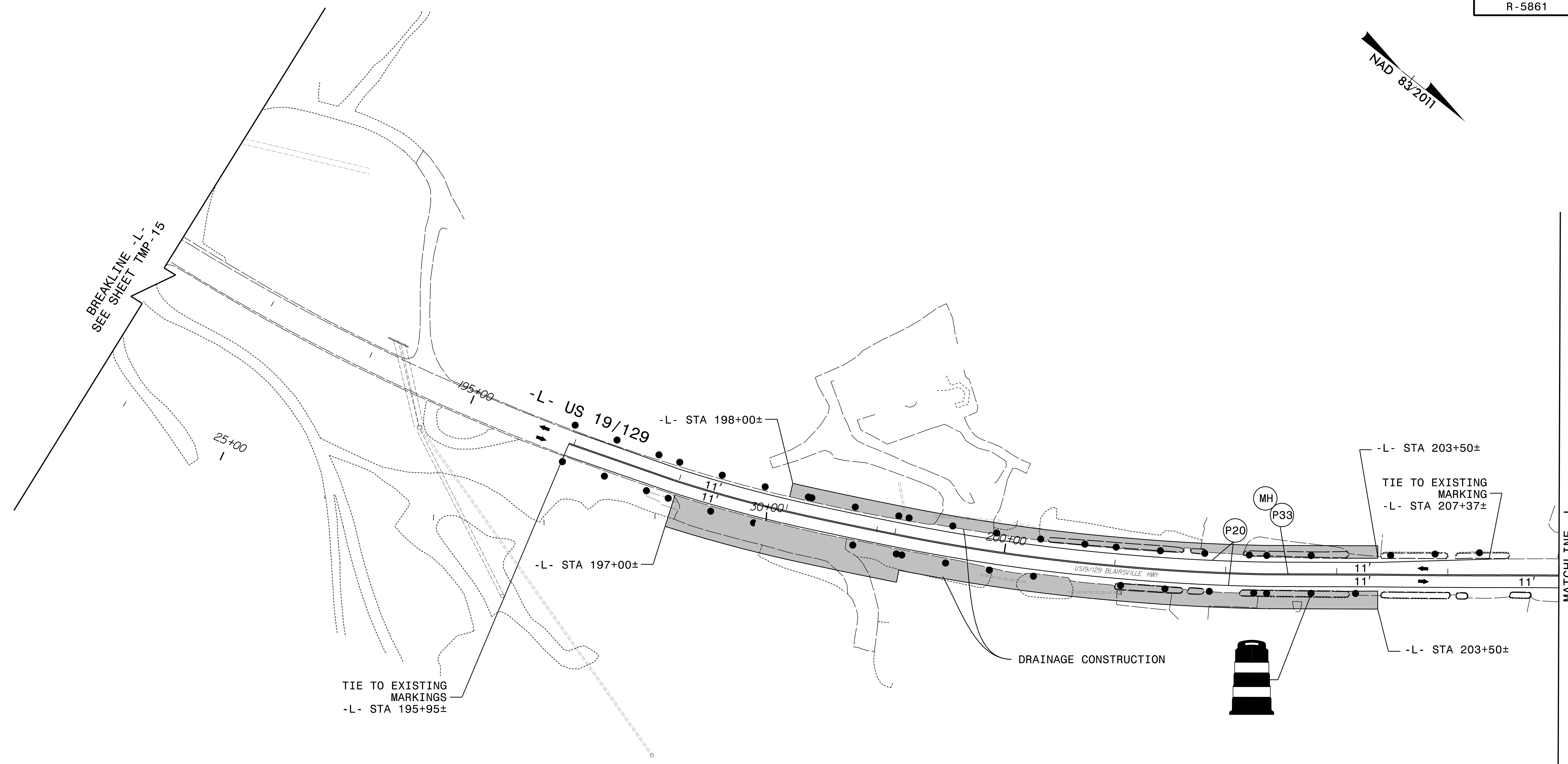
10/18/2023
 R5861.Lc_Tmp15.dgn
 kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions


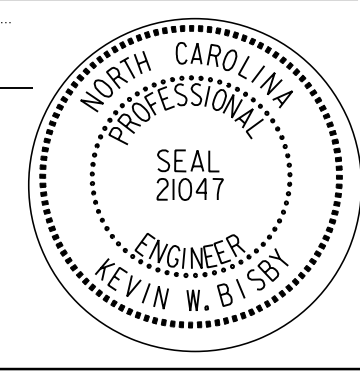

APPROVED: *Kevin W. Blisby*
800802628912472
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 KEVIN W. BLISBY
 21047

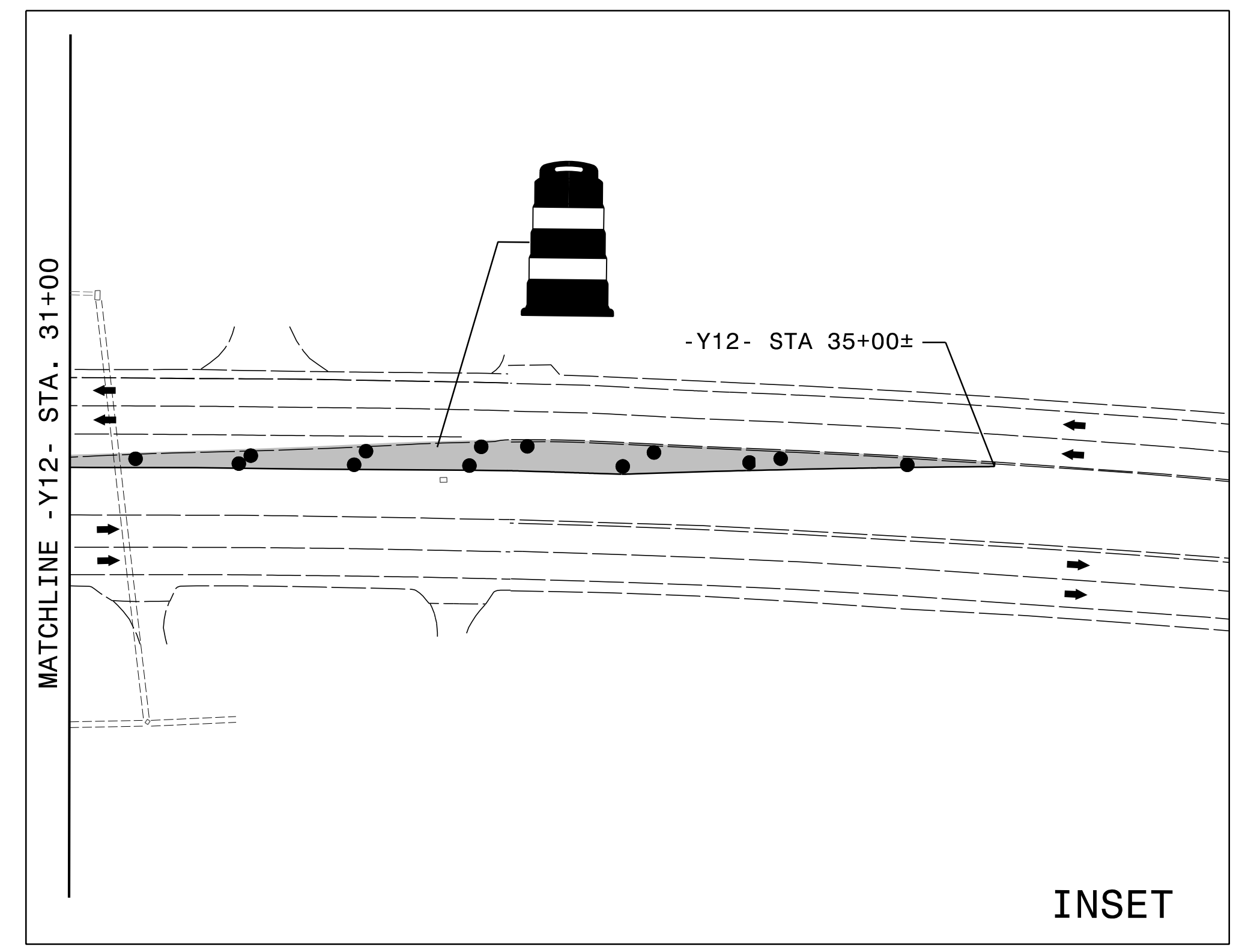
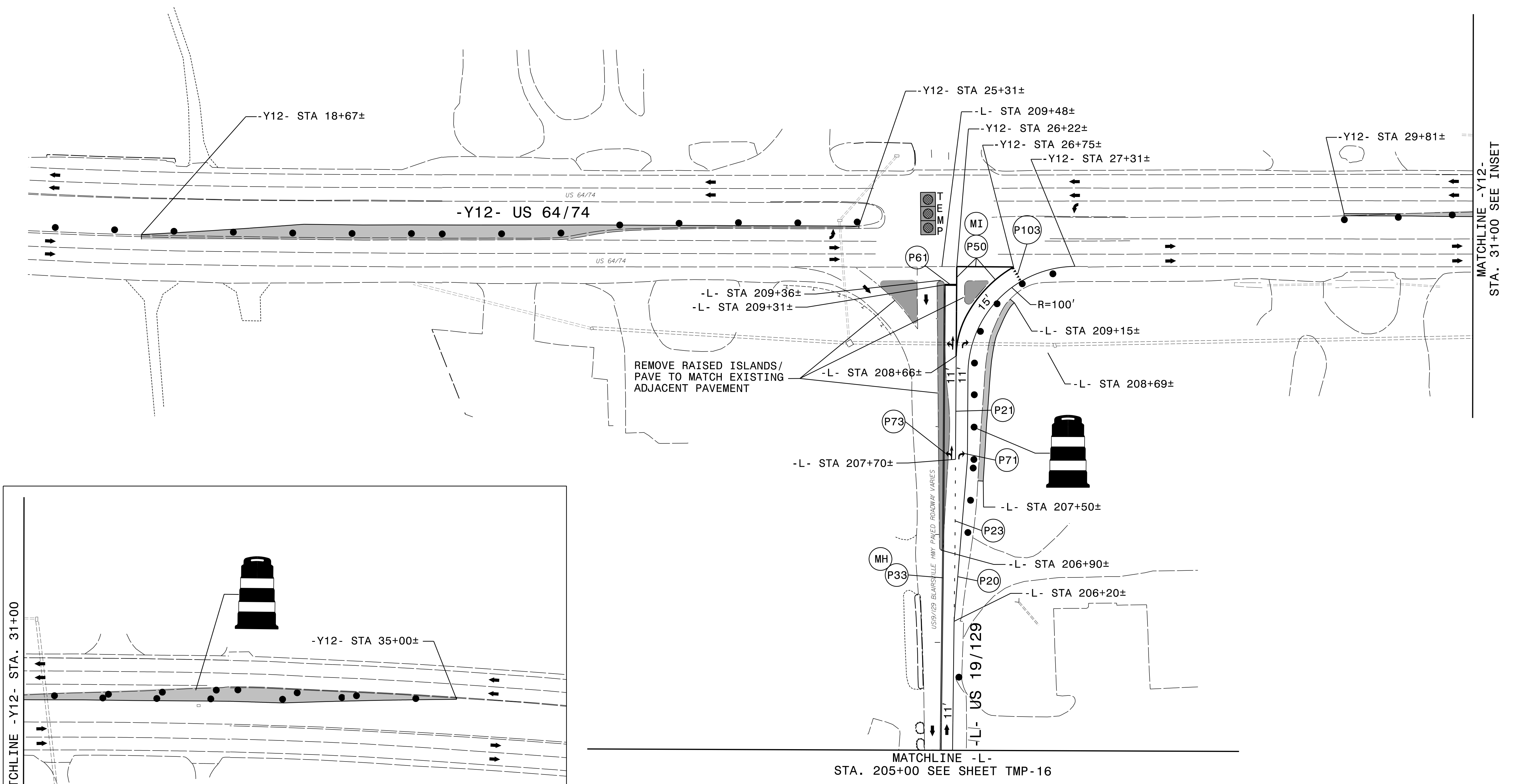
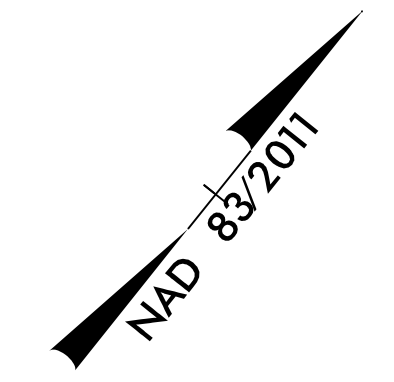


PHASE I - STEP 1



10/18/2023
 R5861.Lc_Tmp16.dgn
 kbisby

<p>RK&K P: (919) 878-9560 8601 Six Forks Road, Forum 1, Suite 700 Raleigh, North Carolina 27615-3960 NC License No. F-0112 Engineers Construction Managers Planners Scientists www.rkk.com Responsive People Creative Solutions</p>	<p>APPROVED:  <small>800802628912472</small> DATE: 10/18/2023 SEAL  DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>		<p style="text-align: center; font-size: 24pt;">PHASE I - STEP 1</p>
---	--	---	---



INSET

10/18/2023
 R5861.Lc_Tmp17.dgn
 kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

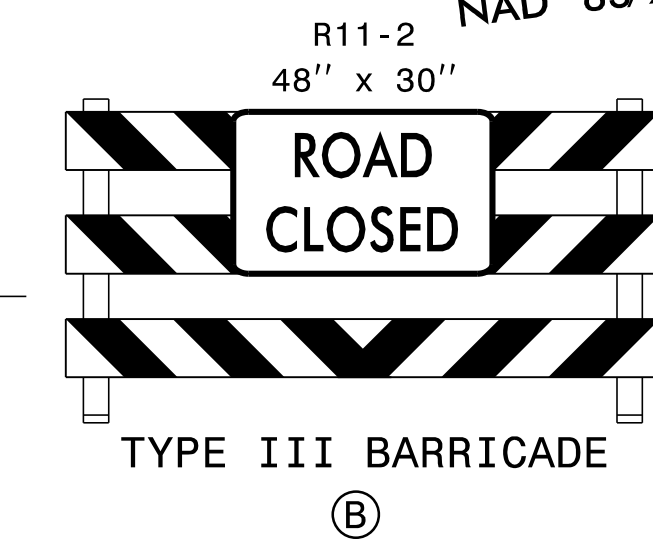
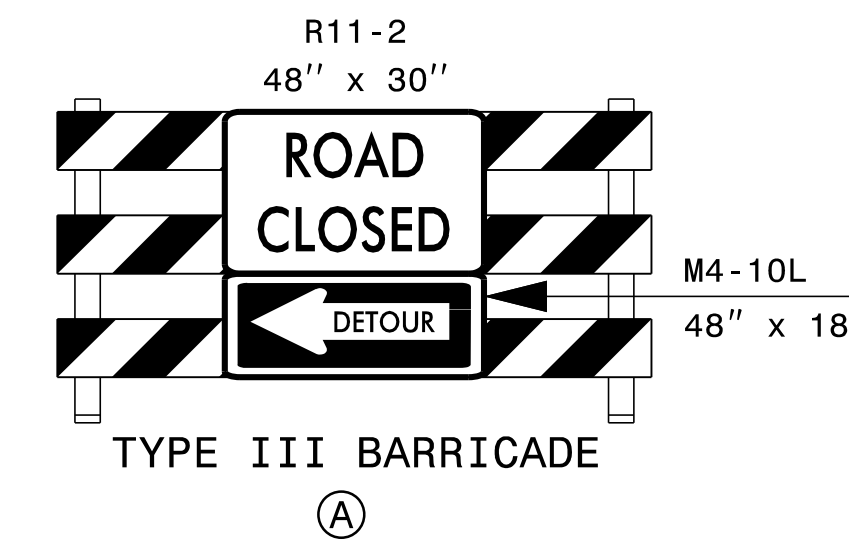
APPROVED: *Kevin Bisby*
800802628912472
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 21047
 ENGINEER
 KEVIN W. BISBY



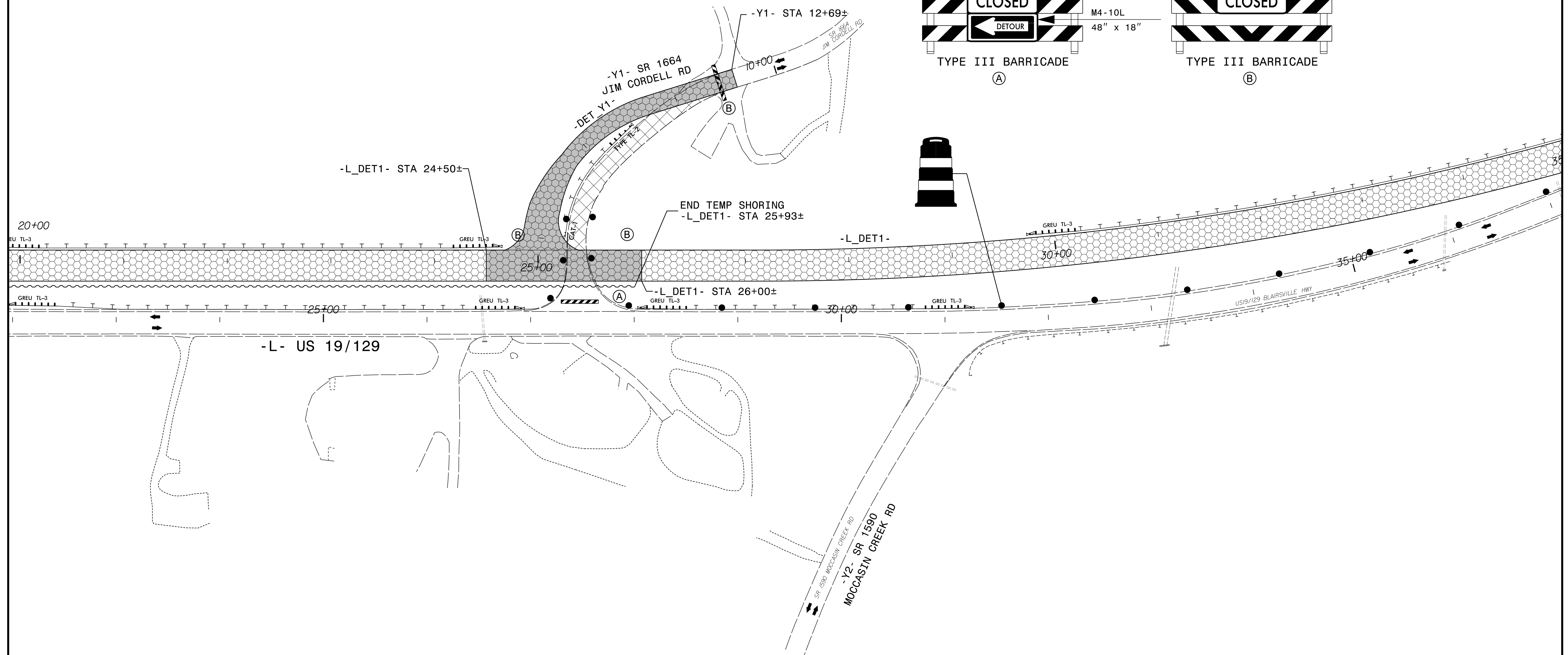
PHASE I - STEP 1

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

NOTE:
SEE TMP-2I FOR OFF-SITE DETOUR DETAIL.



NAD 83/2011



10/18/2023
R5861.Tc_Tmp18.dgn
KBISBY

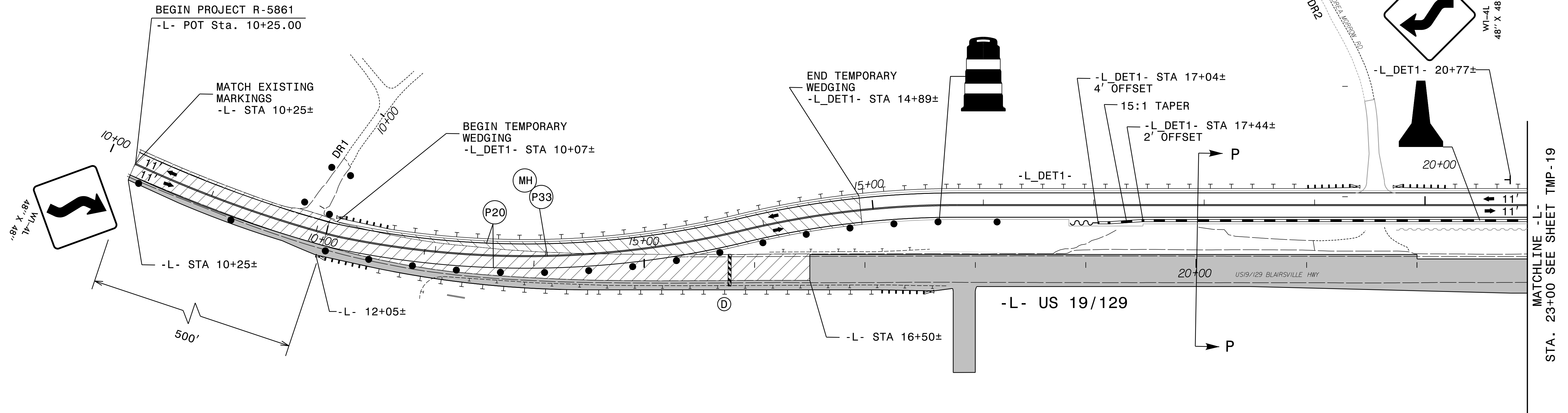
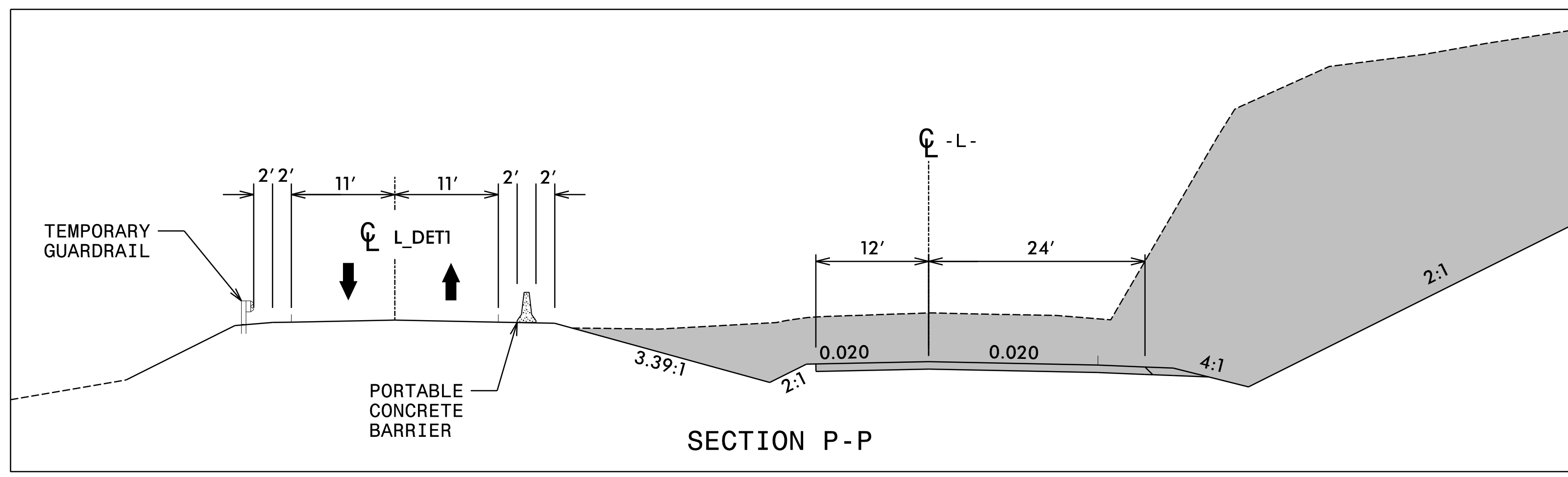
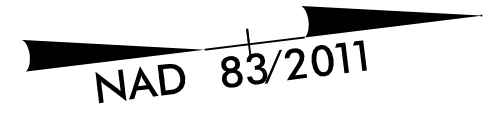
RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Blisby*
BD0802628912472
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL SEAL 21047 ENGINEER KEVIN W. BLISBY

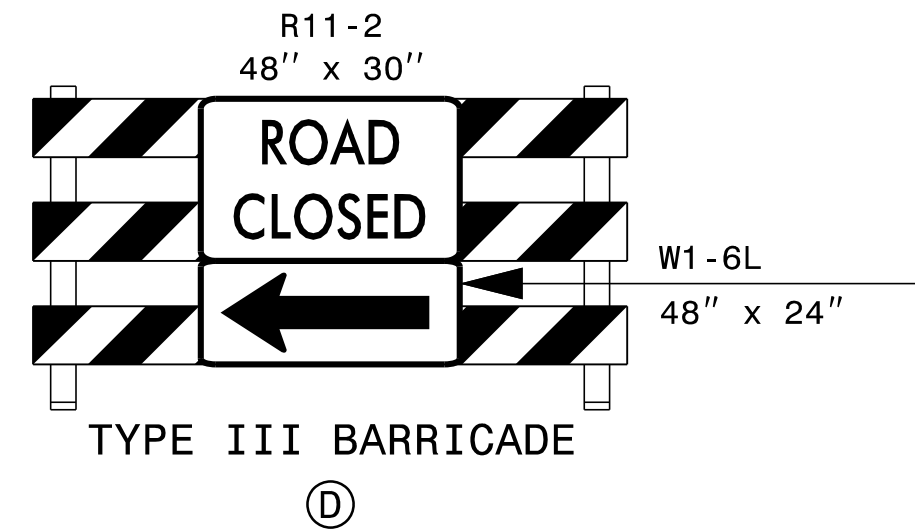


PHASE I - STEP 3

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



MATCHLINE -L- STA. 23+00 SEE SHEET TMP-19



PROVIDE ACCESS TO PROPERTIES USING INCIDENTAL STONE OR OTHER METHODS A APPROVED BY THE ENGINEER.

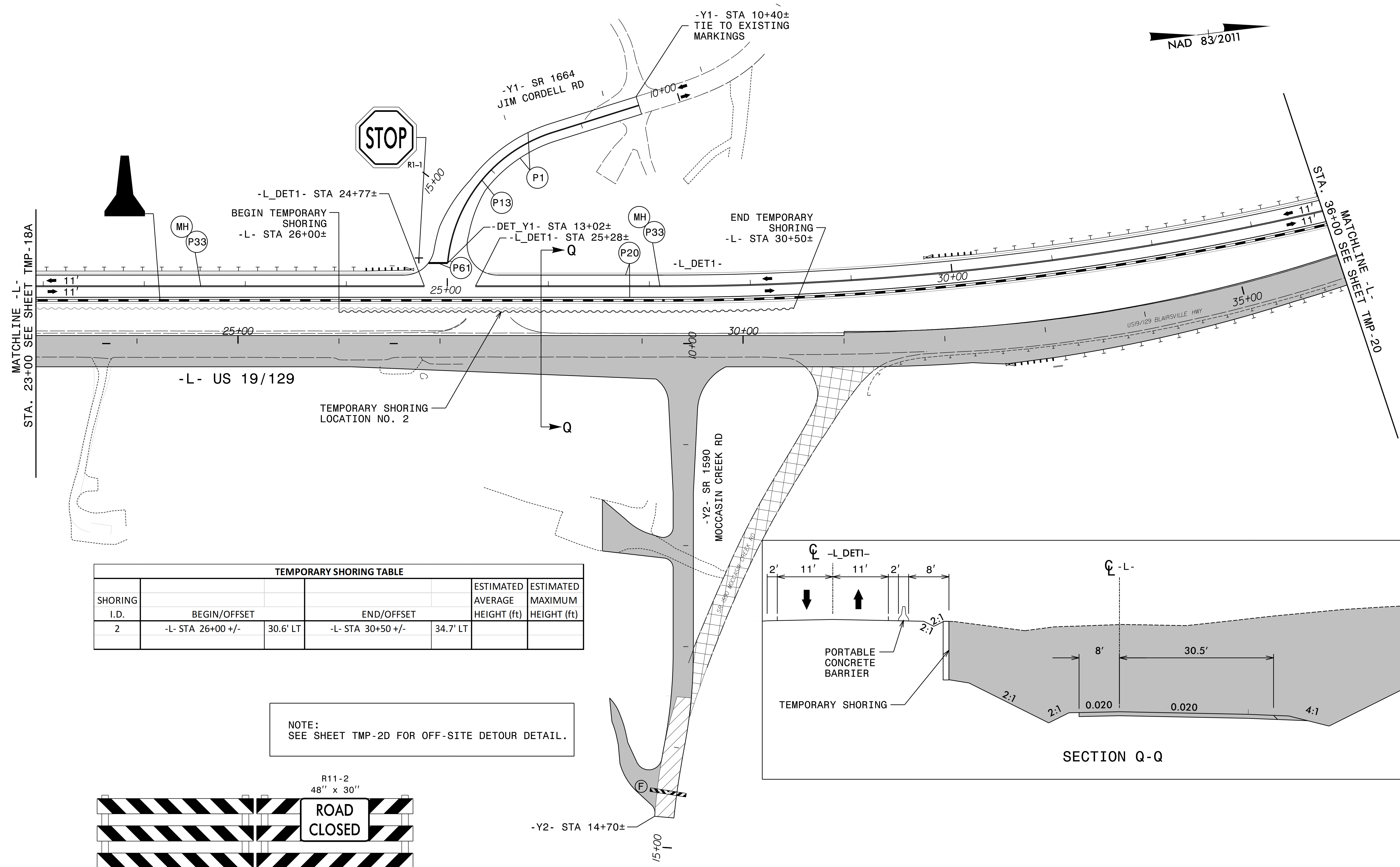
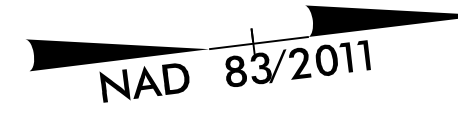
10/18/2023
R5861.Tc_Tmp18A.dgn
Kb1sby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bishy*
BD0802628912472
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 KEVIN W. BISHY
 SEAL 21047
 DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

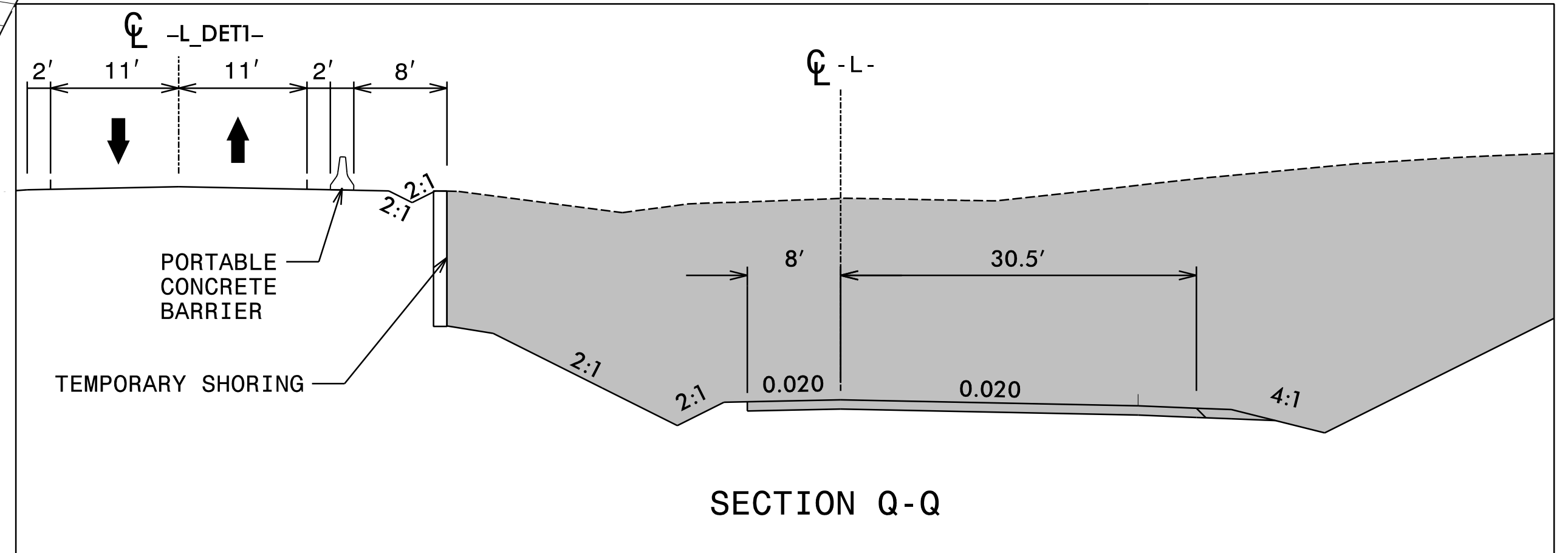
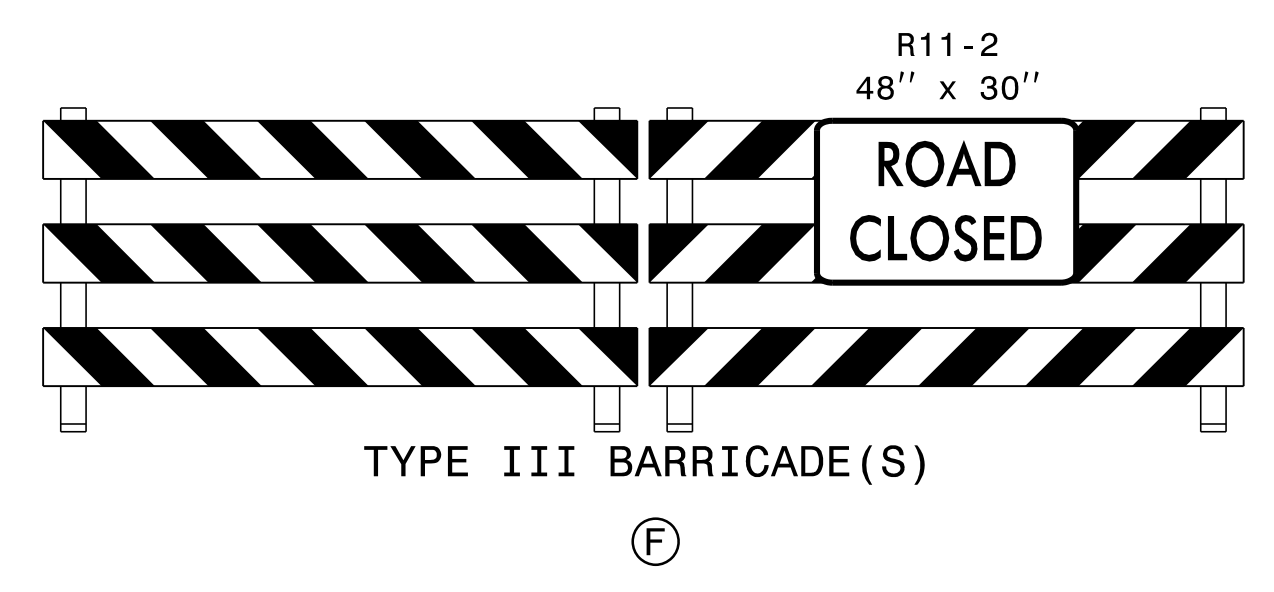


PHASE I - STEPS 3 AND 4



TEMPORARY SHORING TABLE						
SHORING I.D.	BEGIN/OFFSET		END/OFFSET		ESTIMATED AVERAGE HEIGHT (ft)	ESTIMATED MAXIMUM HEIGHT (ft)
2	-L- STA 26+00 +/-	30.6' LT	-L- STA 30+50 +/-	34.7' LT		

NOTE:
SEE SHEET TMP-2D FOR OFF-SITE DETOUR DETAIL.

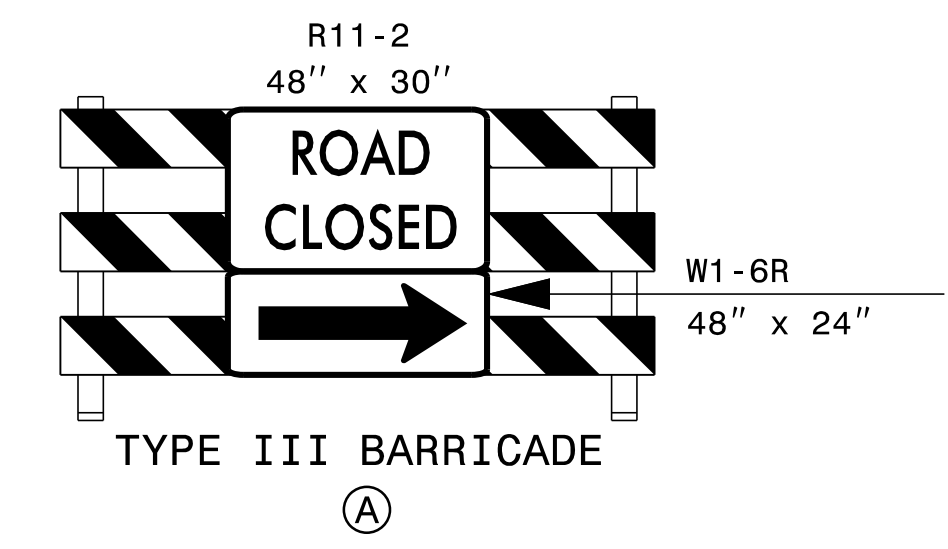
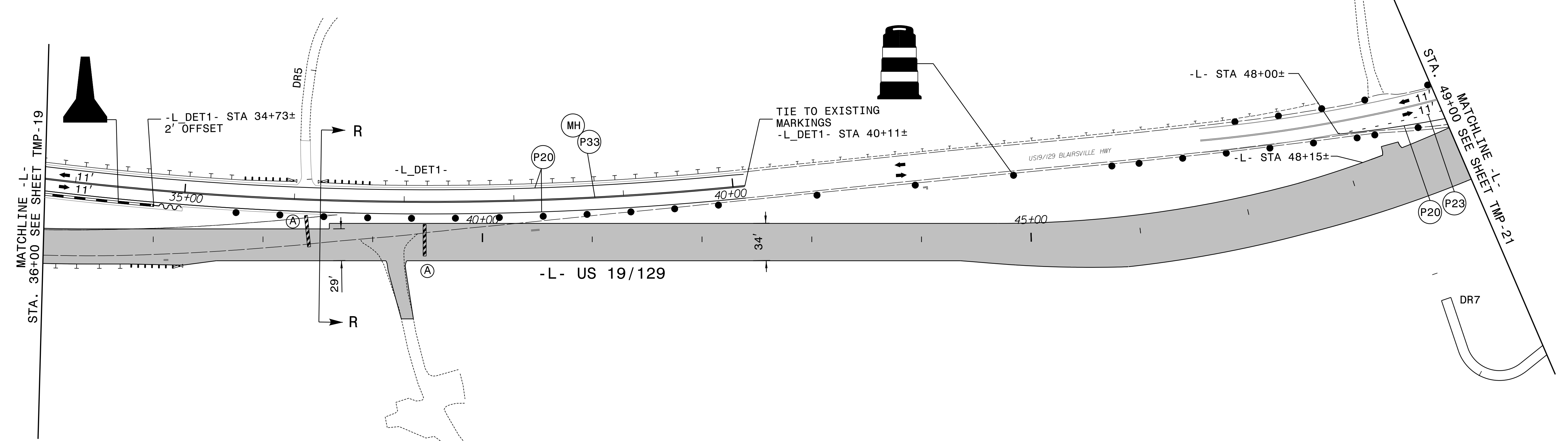
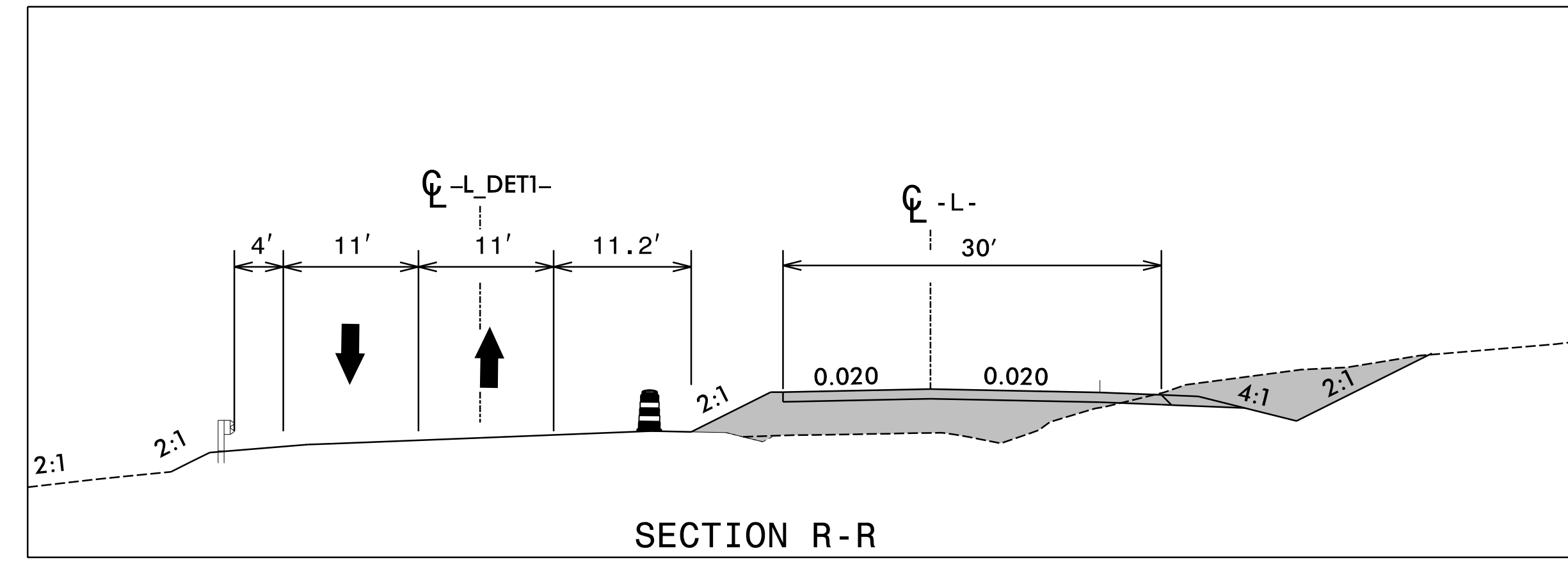
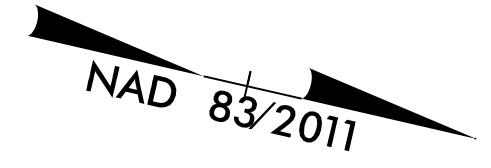


RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bisby*
800802628912472
 DATE: 10/18/2023
 SEAL



PHASE I - STEPS 3 AND 4



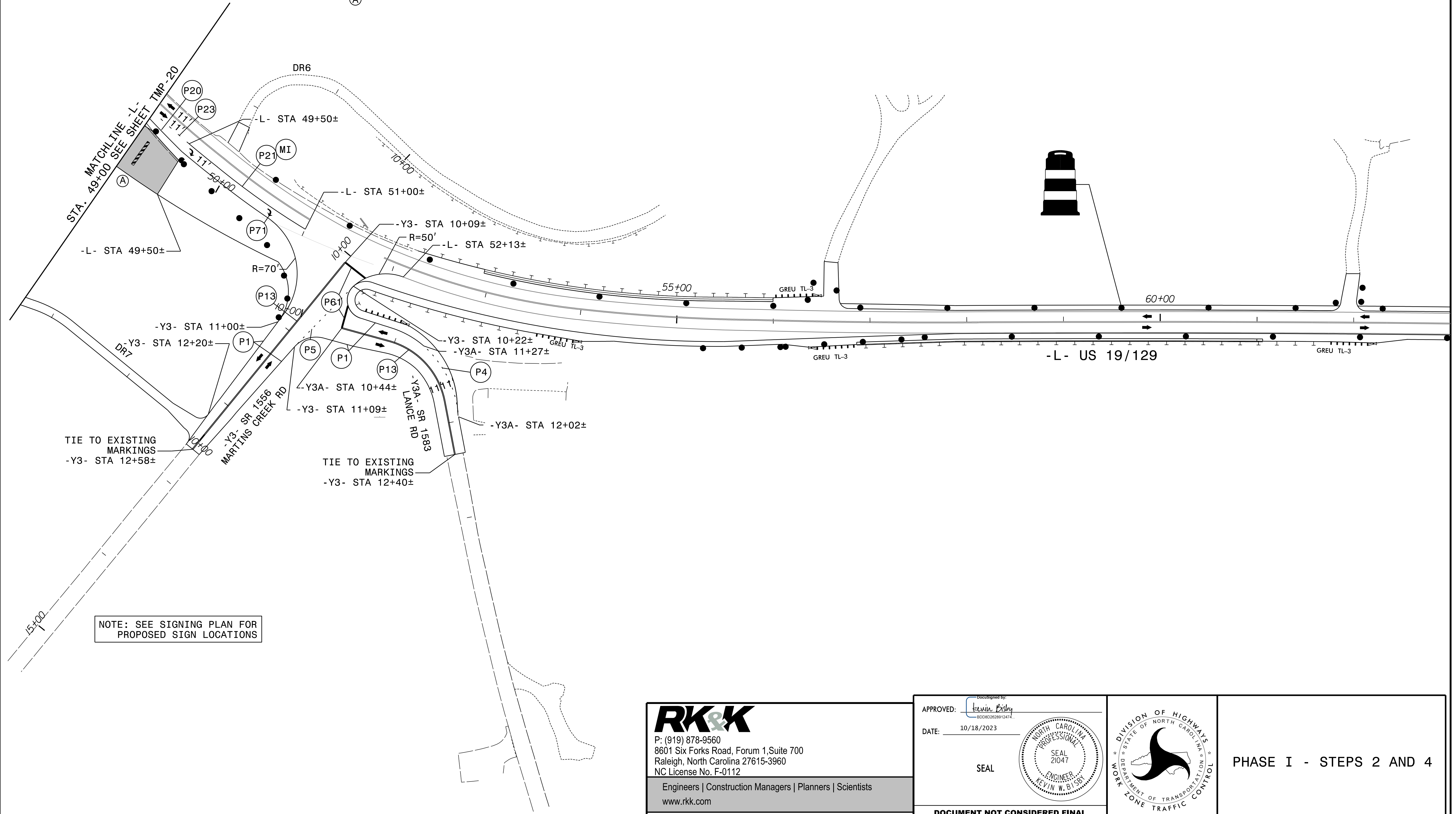
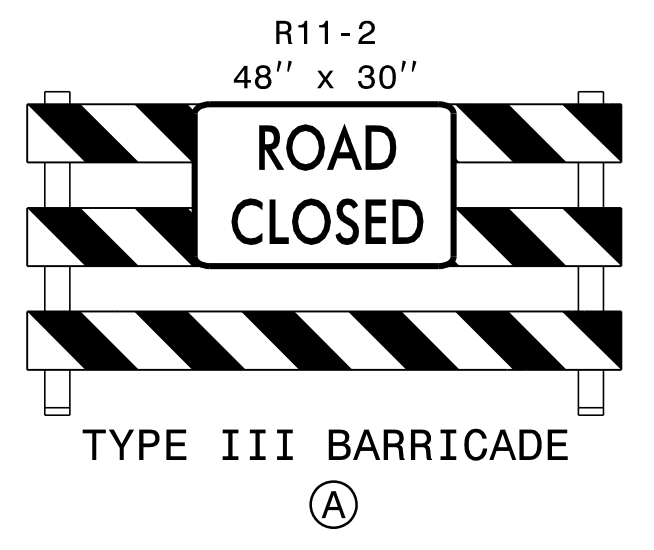
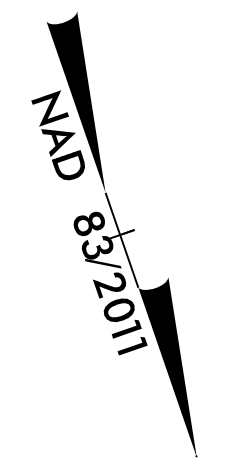
10/18/2023
 R5861.Tc_Tmp20.dgn
 kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Blisby*
800802628912472
 DATE: 10/18/2023
 SEAL



PHASE I
STEPS 2 THROUGH 4



NOTE: SEE SIGNING PLAN FOR PROPOSED SIGN LOCATIONS

10/18/2023
 R5861.Tc_Tmp2.dgn
 kbisby

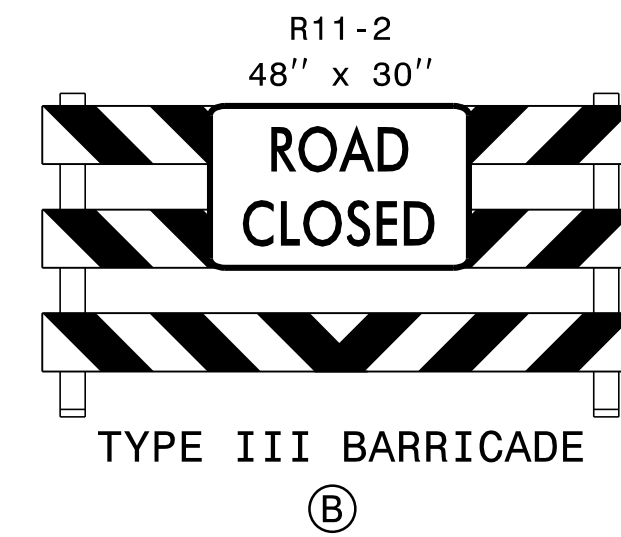
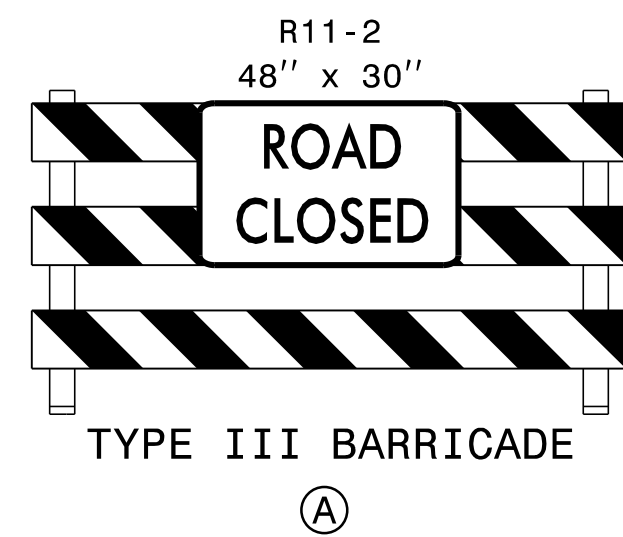
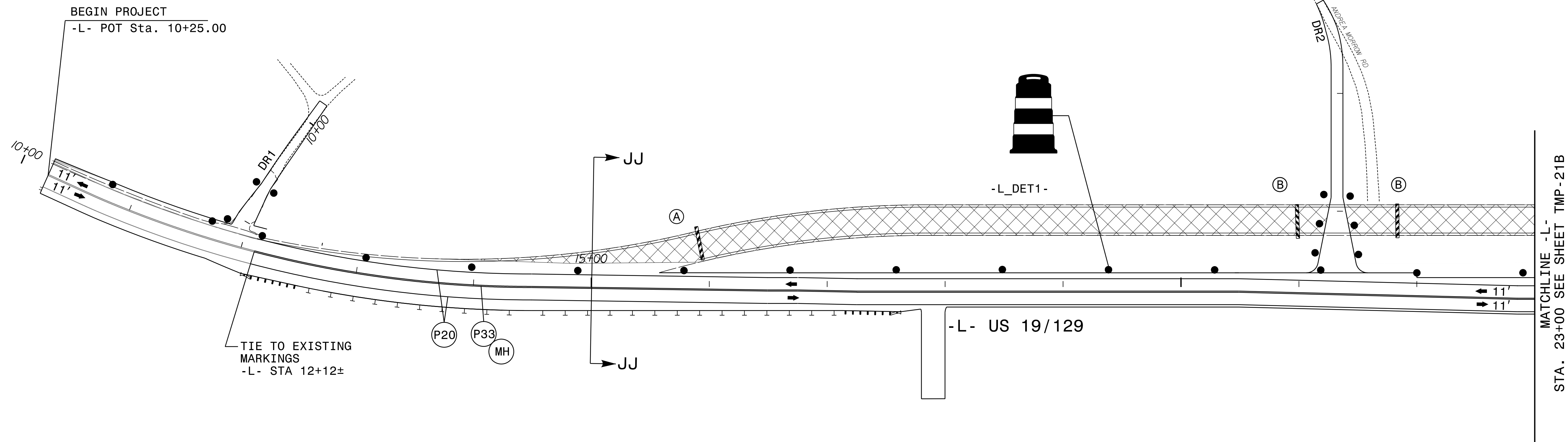
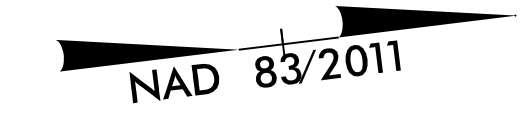
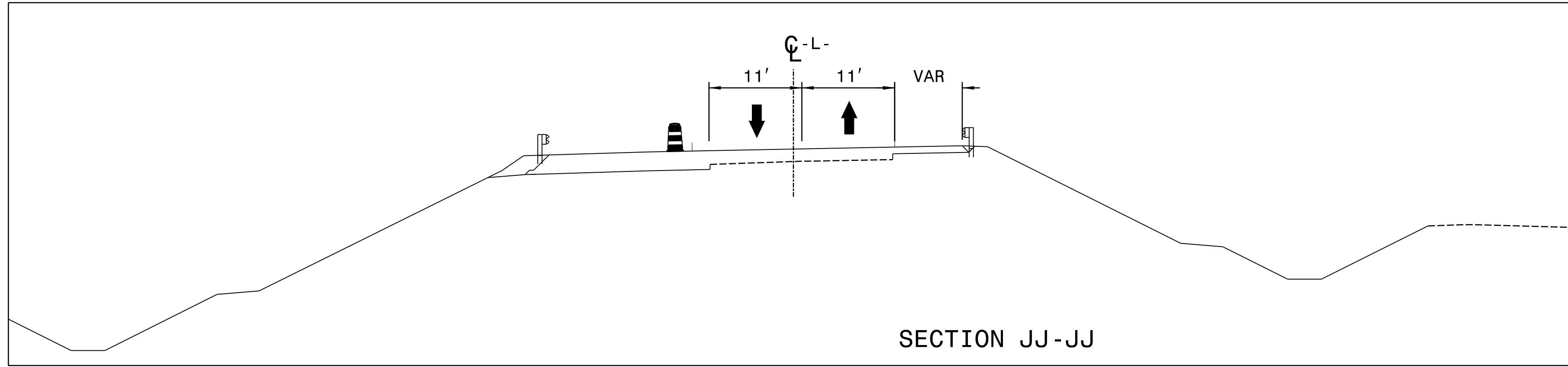
RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin W. Blisby*
800802628912472
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 KEVIN W. BLISBY
 21047



PHASE I - STEPS 2 AND 4

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

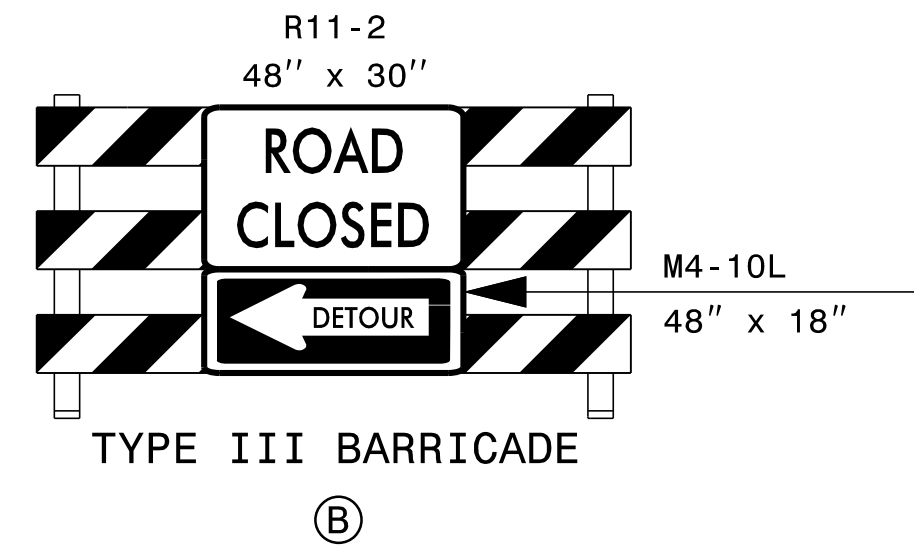
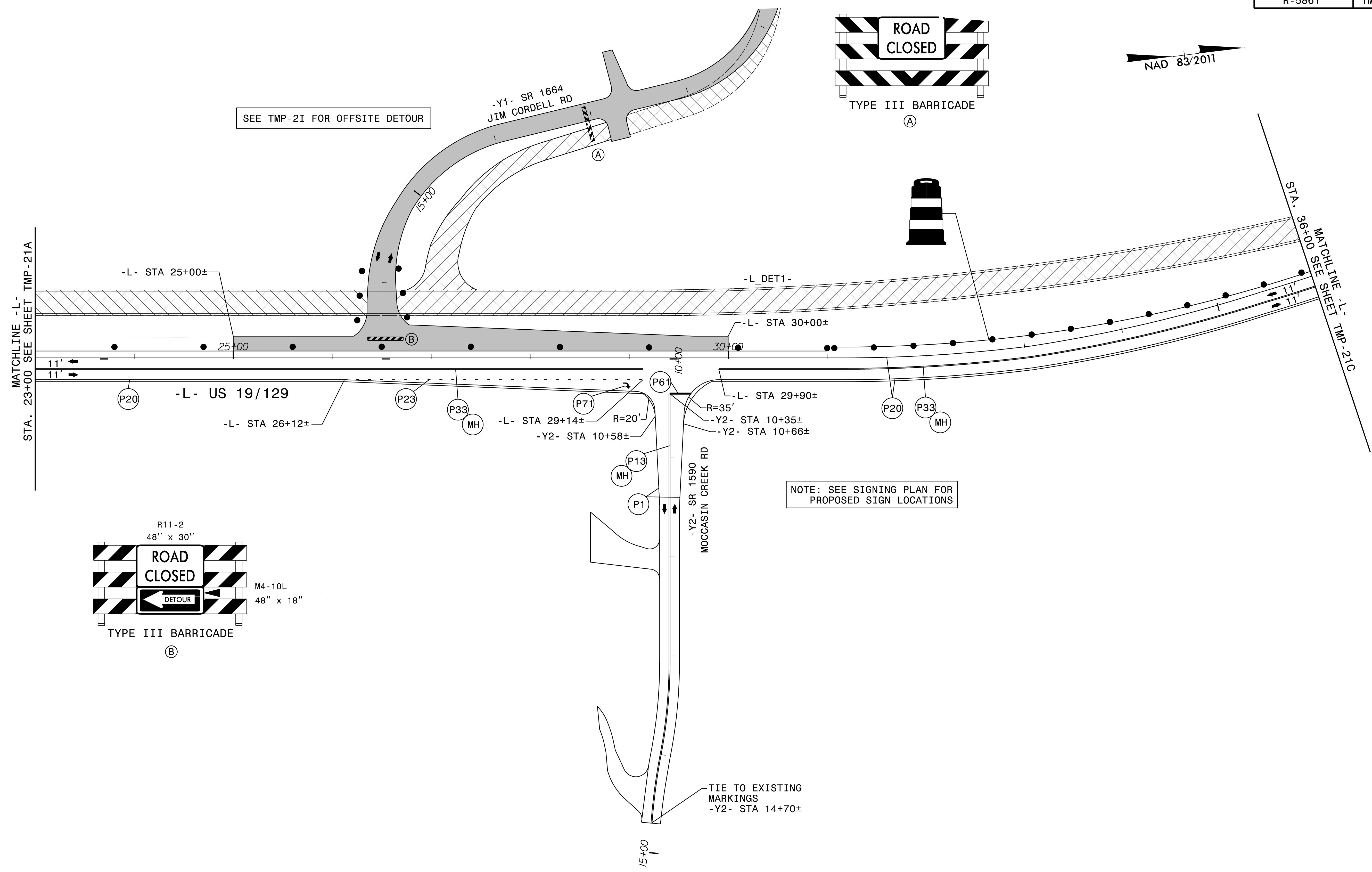


10/18/2023
 R5861.Lc_Tmp21A.dgn
 kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bisby*
800802628912472
 DATE: 10/18/2023
 SEAL

PHASE I - STEP 4



10/18/2023
 R5861.Lc_Tmp21B.dgn
 kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin W. Blisby*
800802628912472

DATE: 10/18/2023

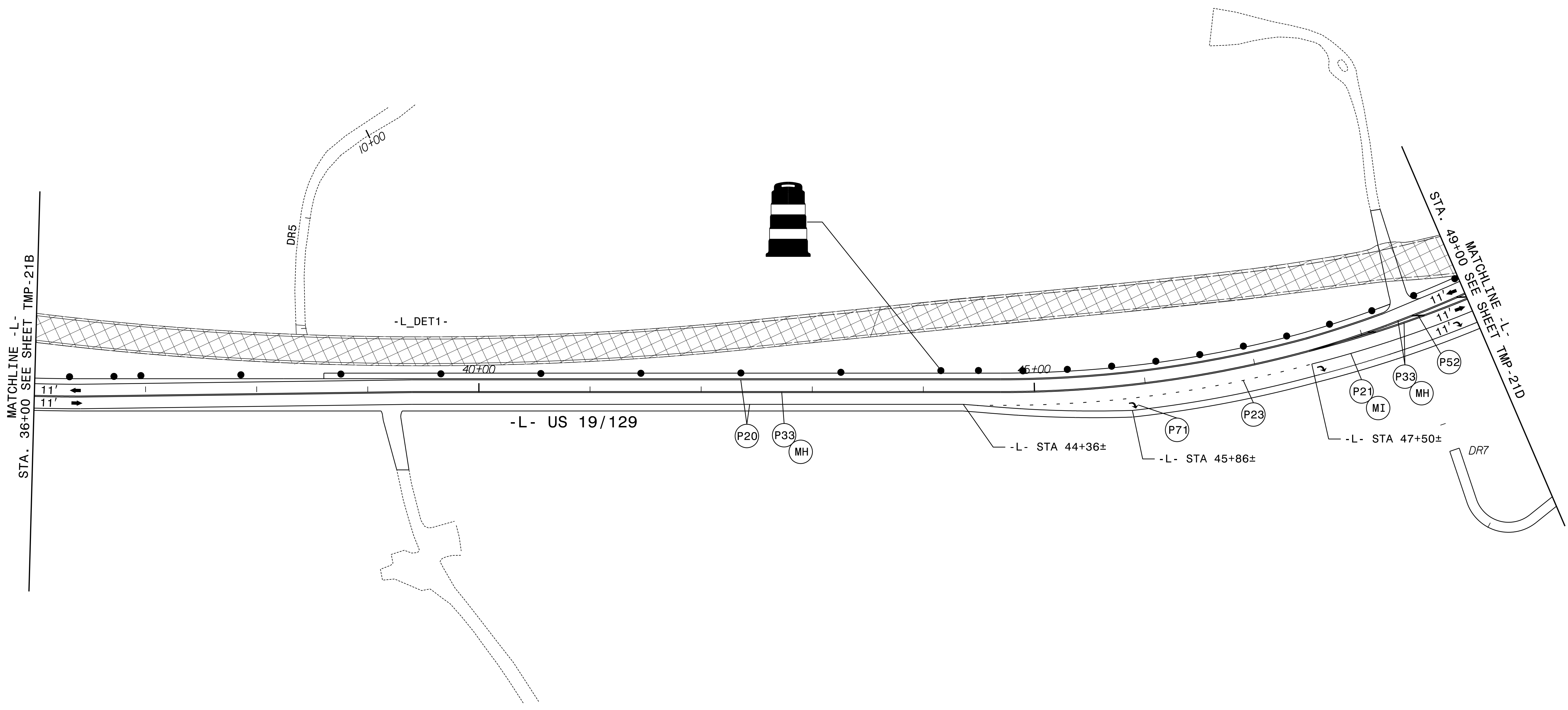
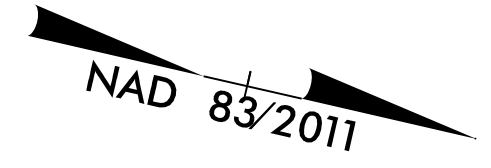
SEAL

SEAL
 NORTH CAROLINA
 PROFESSIONAL
 ENGINEER
 KEVIN W. BLISBY
 21047

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED



PHASE I - STEPS 4 AND 5

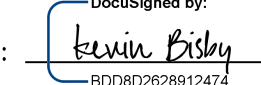


10/18/2023
 R5861.Tc_Tmp21C.dgn
 kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112

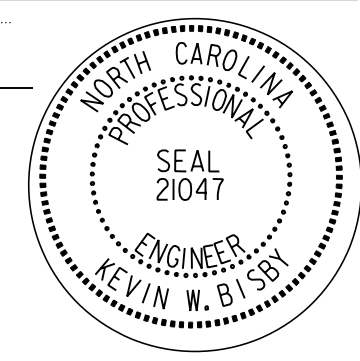
Engineers | Construction Managers | Planners | Scientists
 www.rkk.com

Responsive People | Creative Solutions

APPROVED: 
DocuSigned by:
Kevin Blisby
8D0802628912472

DATE: 10/18/2023

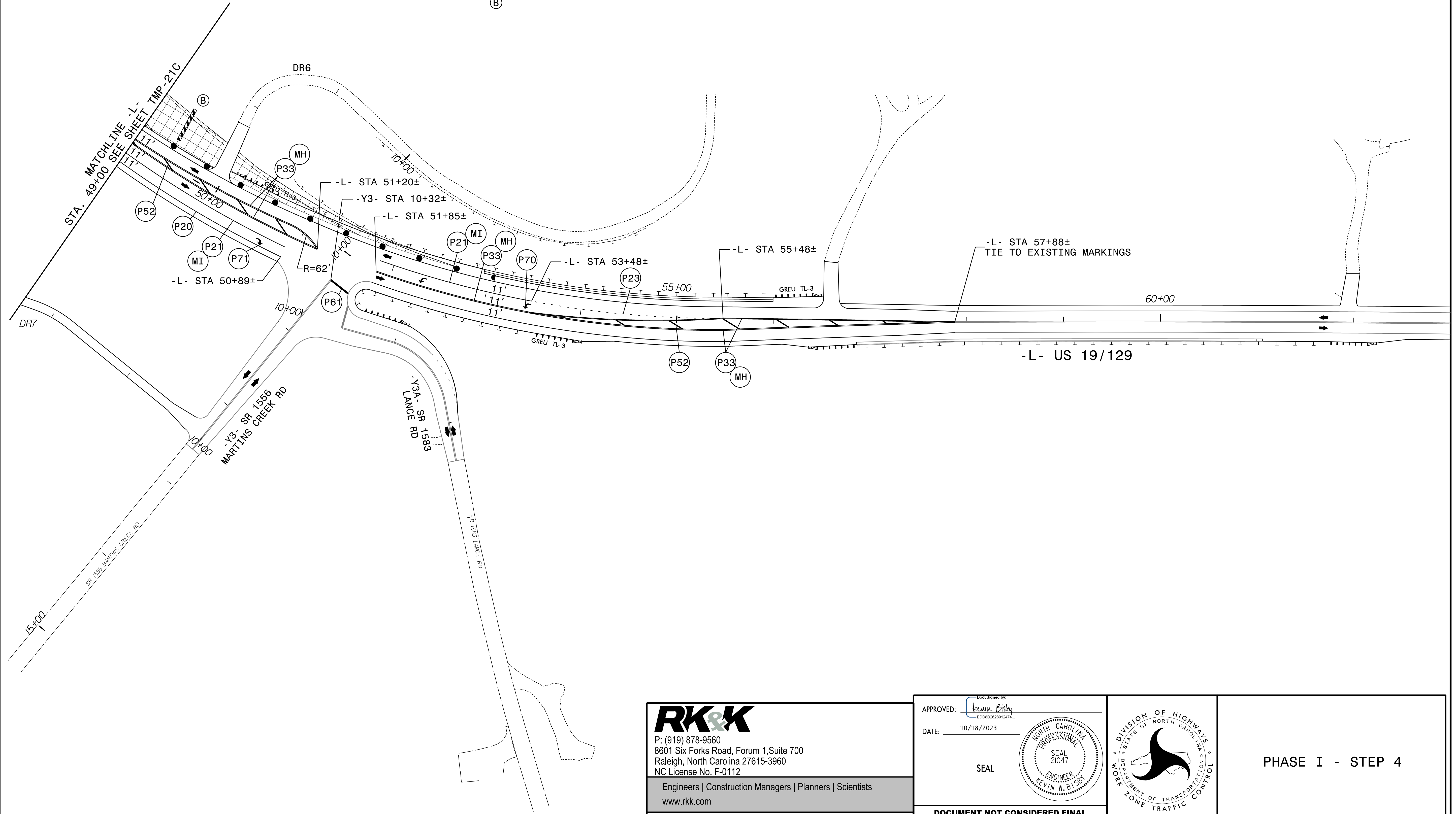
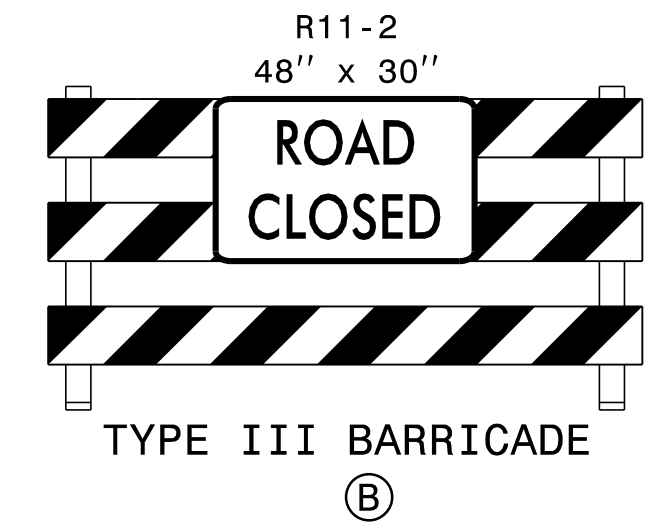
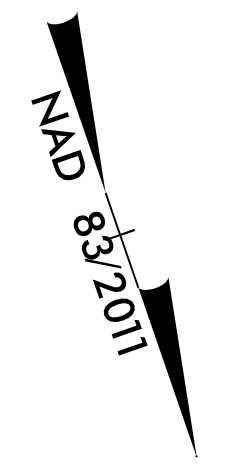
SEAL



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



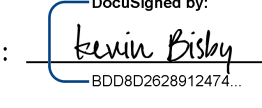
PHASE I - STEP 4



10/18/2023
 R5861.Lt_c_Tmp21D.dgn
 kbisby

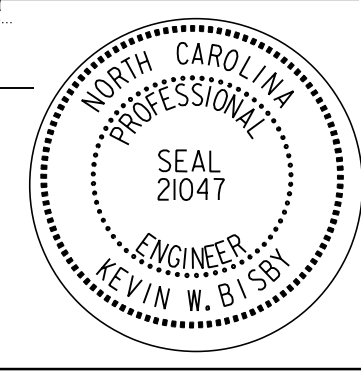
RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112

Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: 
800802628912472

DATE: 10/18/2023

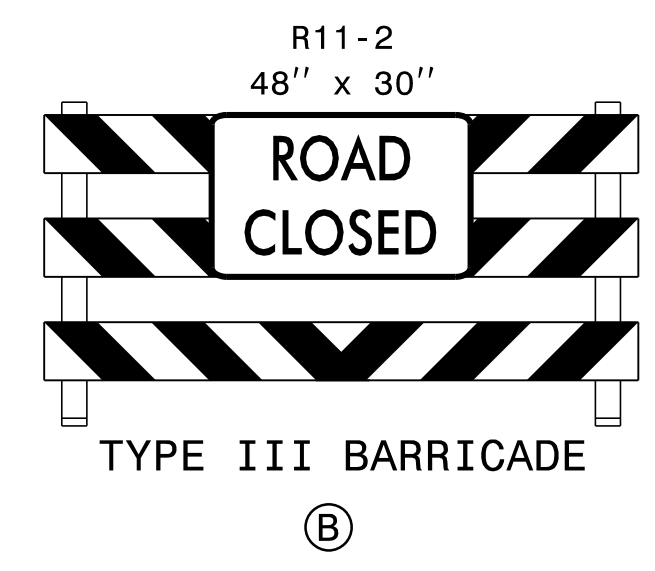
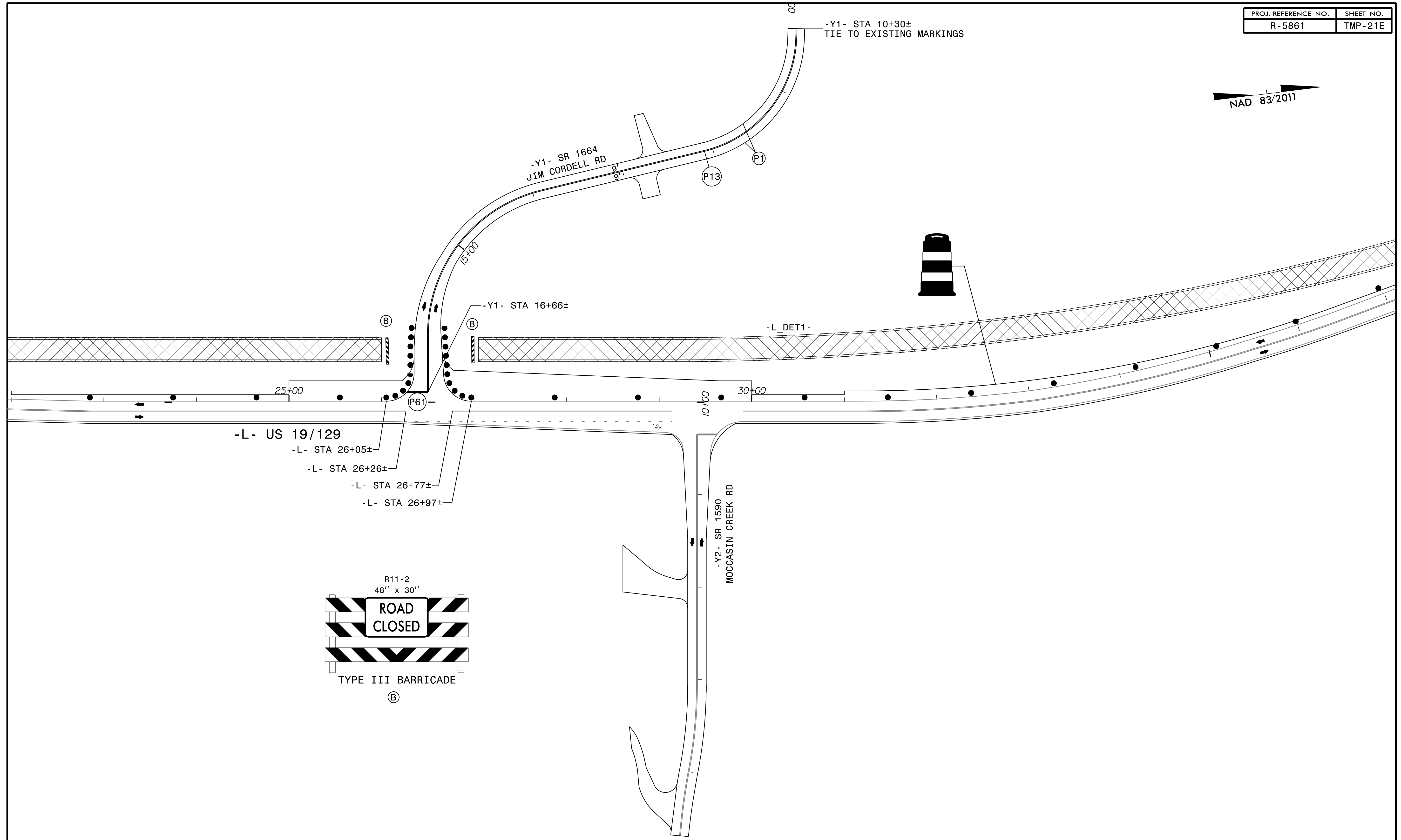
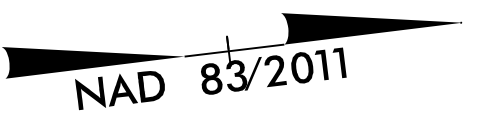
SEAL



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



PHASE I - STEP 4



10/18/2023
 R5861_Tc_Tmp21E.dgn
 kbisby

RK&K

P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112

Engineers | Construction Managers | Planners | Scientists
 www.rkk.com

Responsive People | Creative Solutions

APPROVED: *Kevin Blisby*
800802628912472

DATE: 10/18/2023

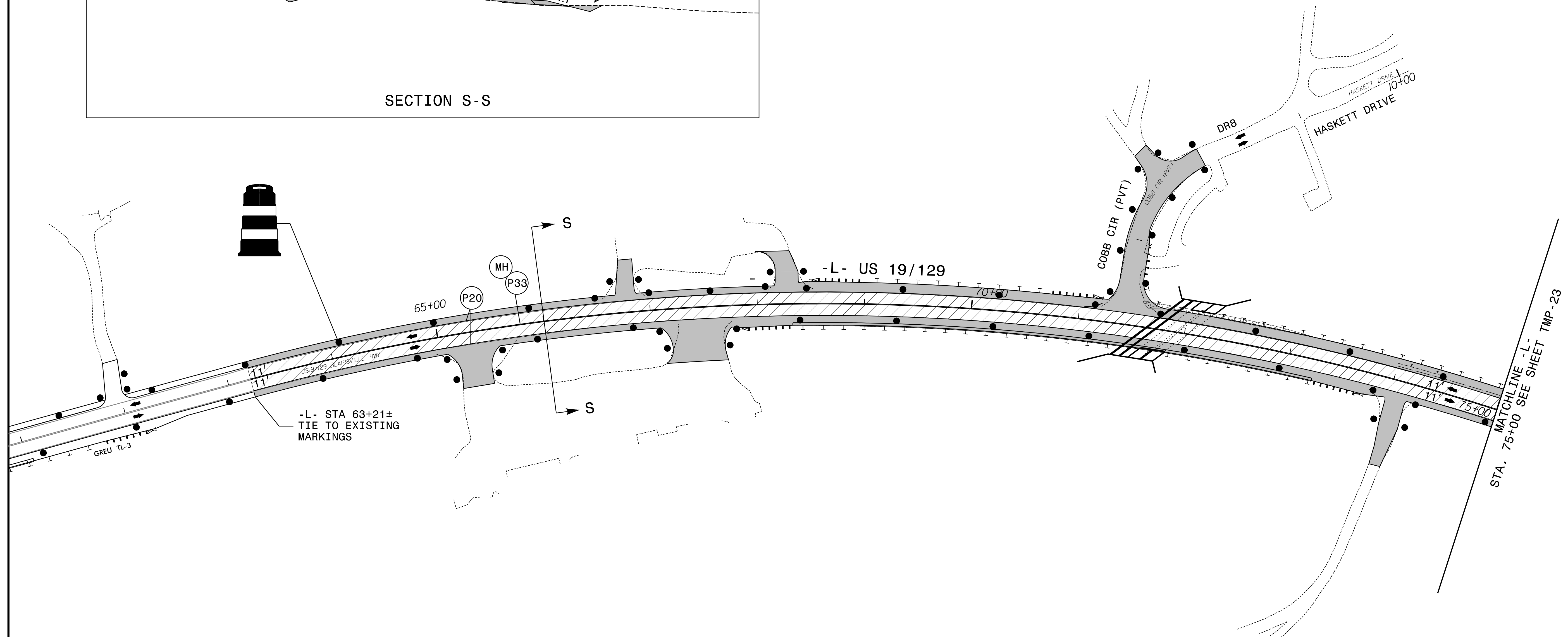
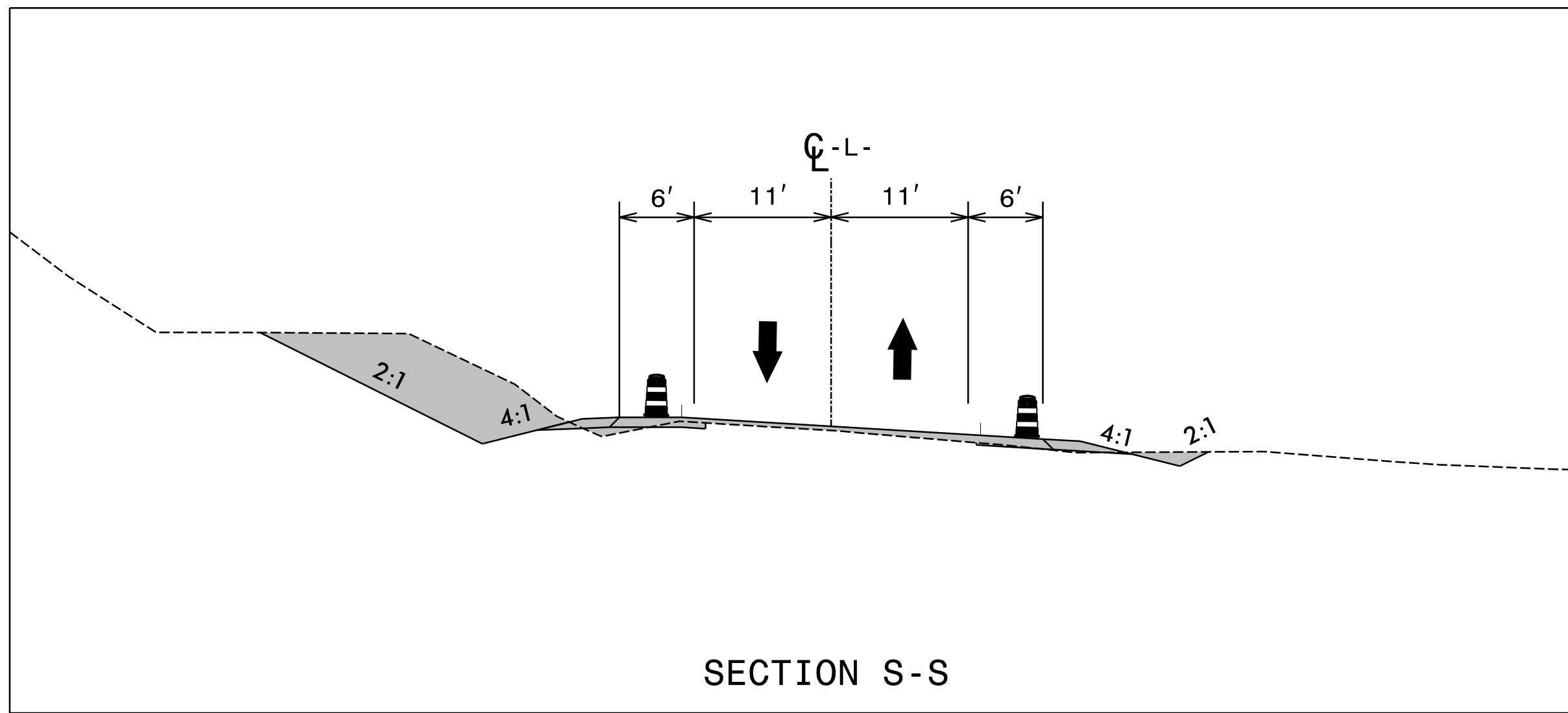
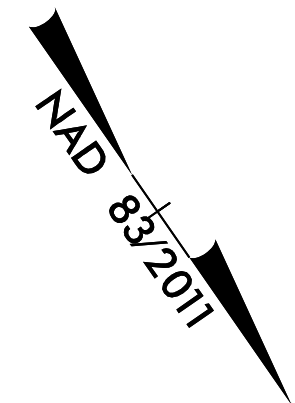
SEAL

SEAL
 21047
 ENGINEER
 KEVIN W. BLISBY

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

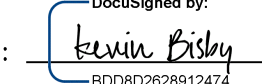
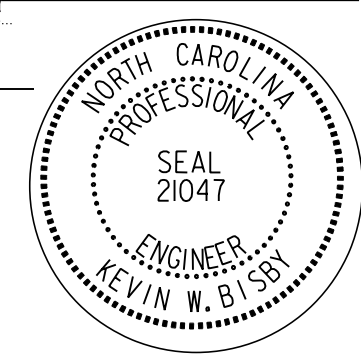


PHASE I - STEP 5



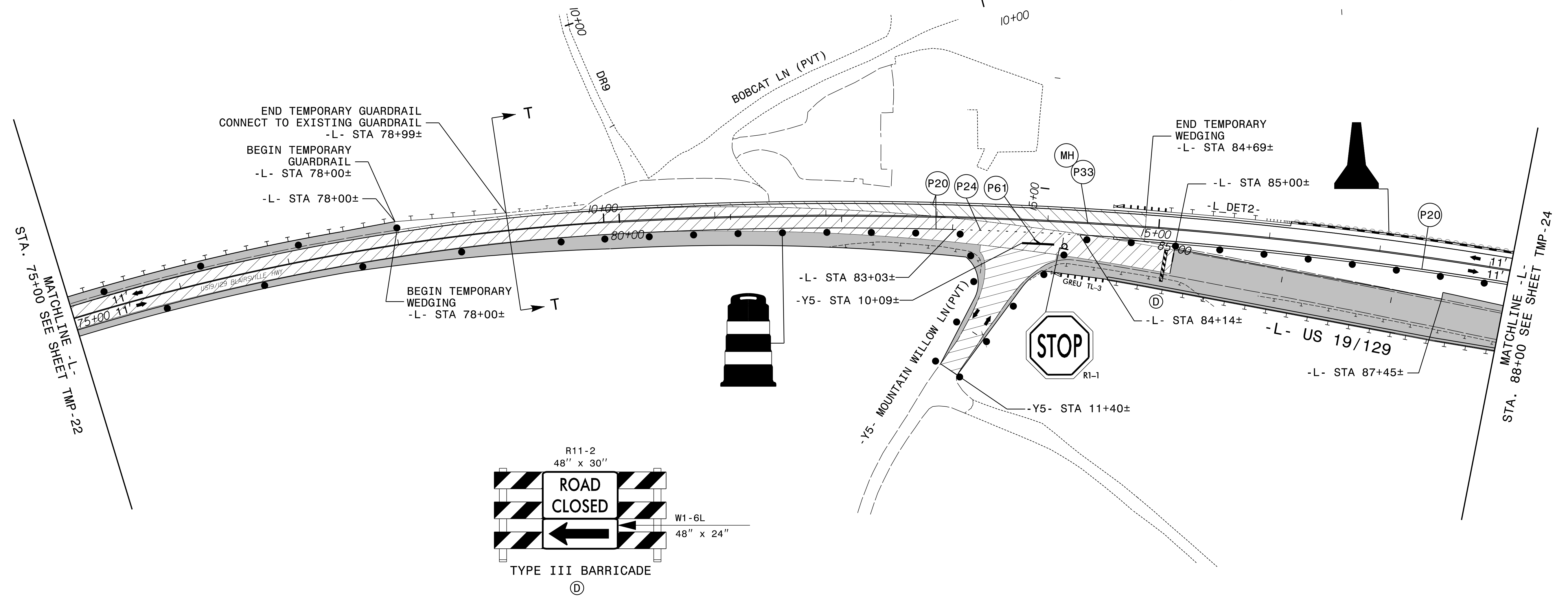
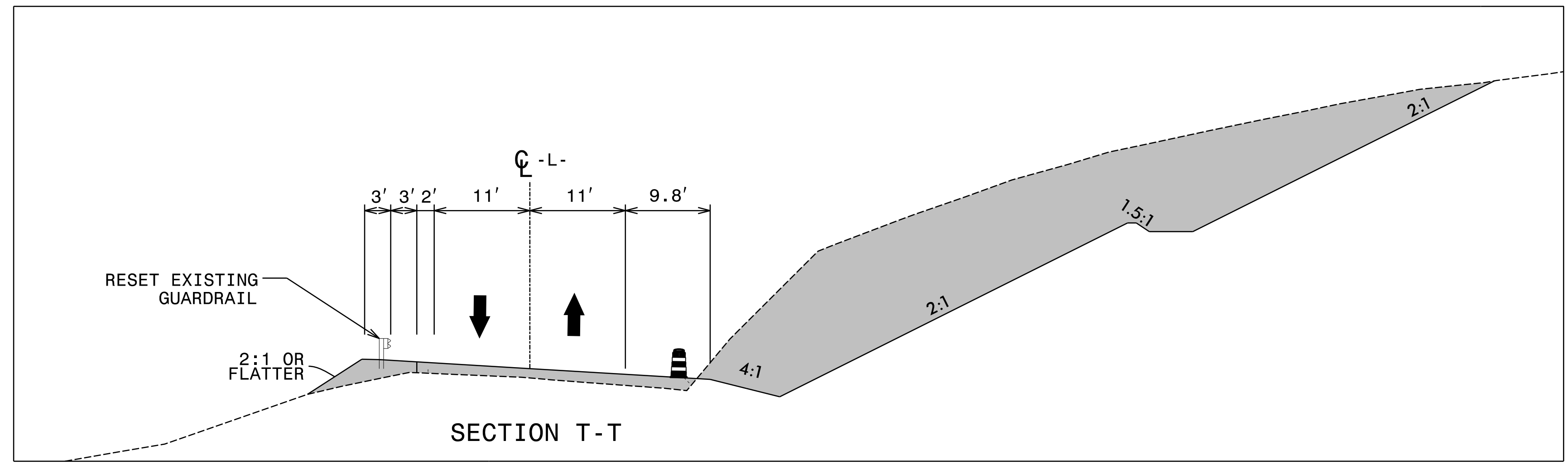
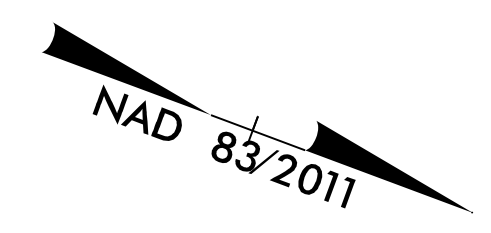
10/18/2023
 R5861.Loc_Tmp22.dgn
 kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: 
800802628912472
 DATE: 10/18/2023
 SEAL

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



PHASE II - STEP 2



10/18/2023
 R5861.Lc_Tmp23.dgn
 kbisby

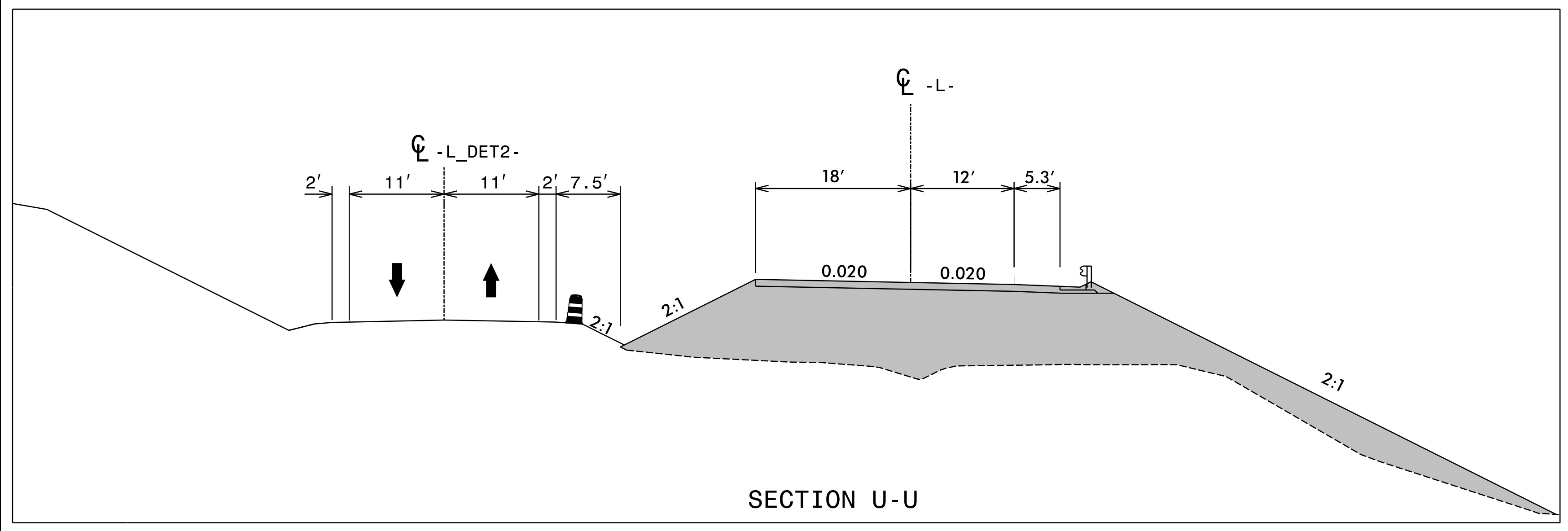
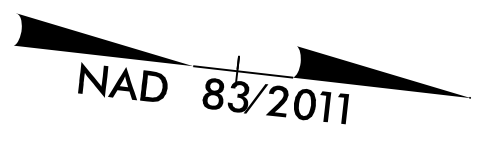
RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bisy*
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 21047
 KEVIN W. BISBY

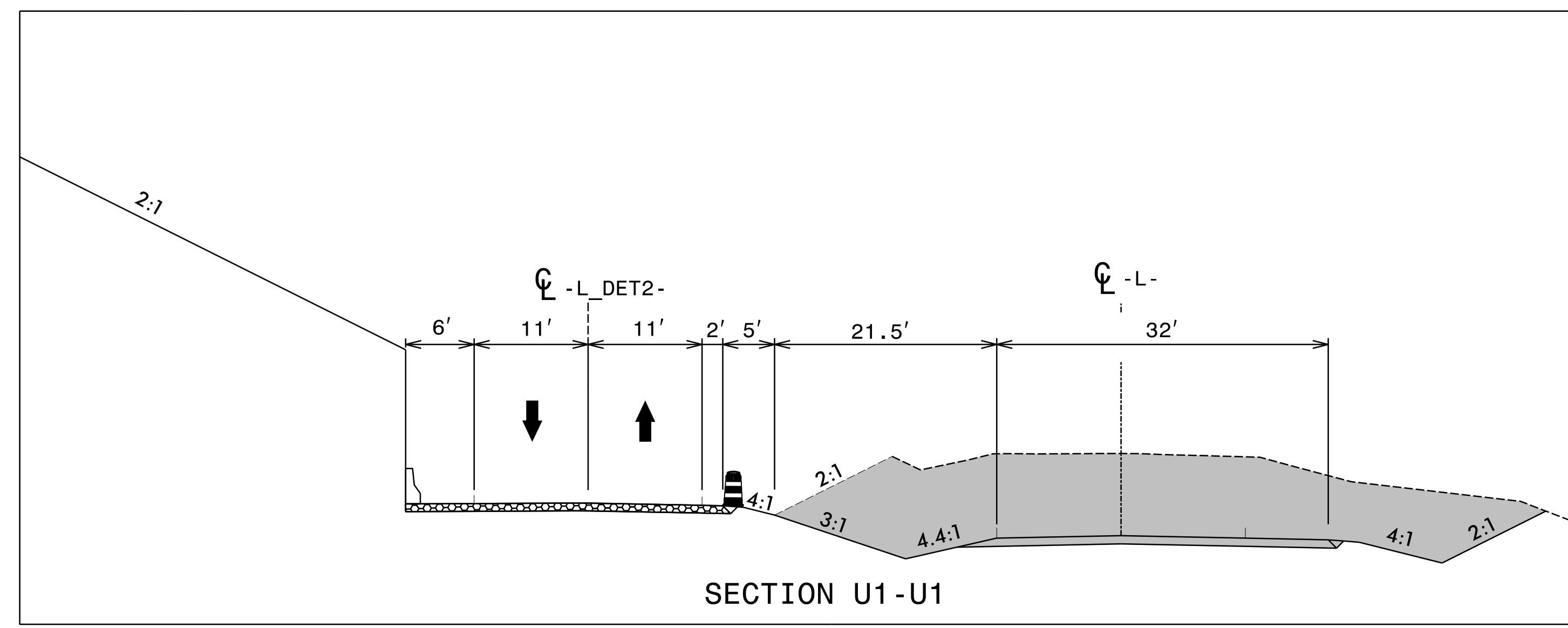
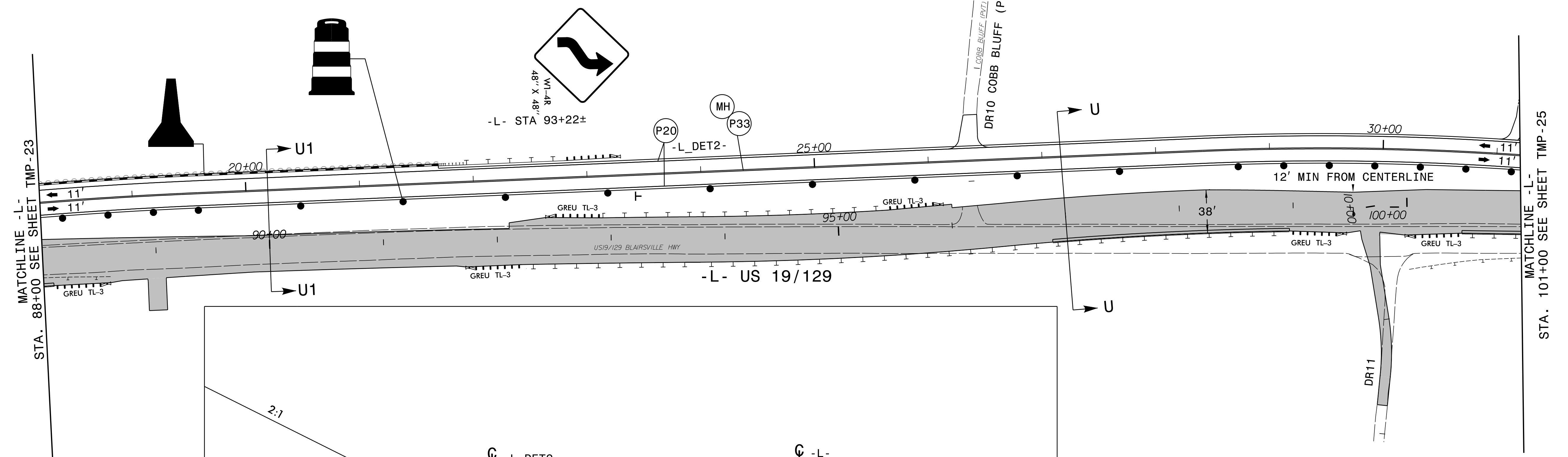


PHASE II - STEP 2

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



SECTION U-U



SECTION U1-U1

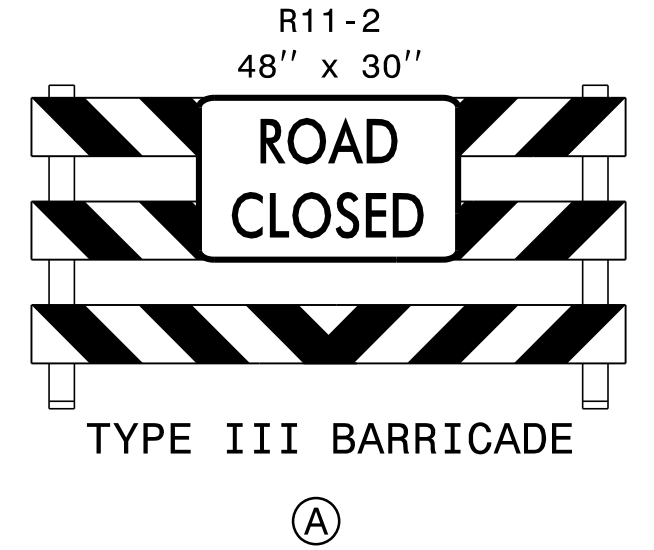
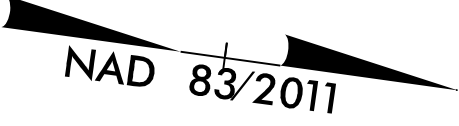
10/18/2023
 R5861.Lc_Tmp24.dgn
 kbisby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

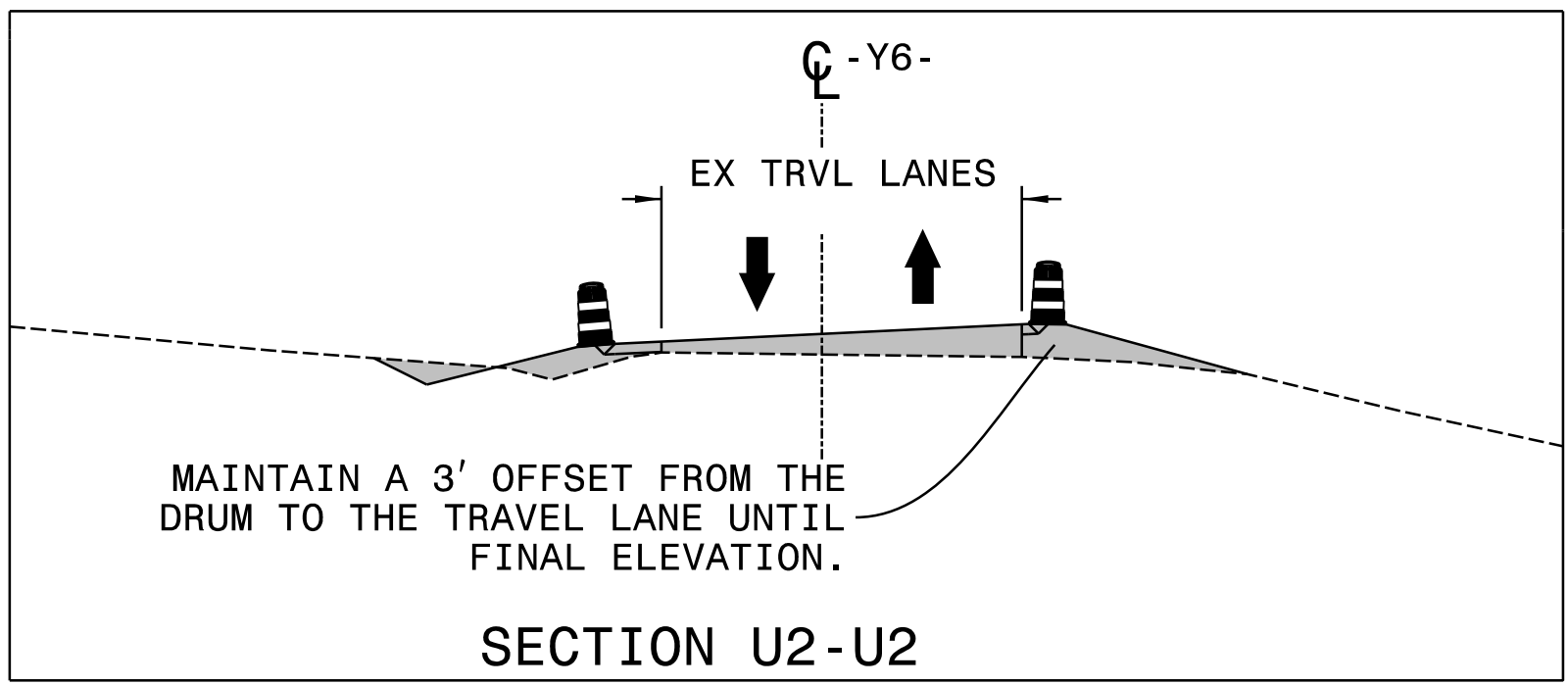
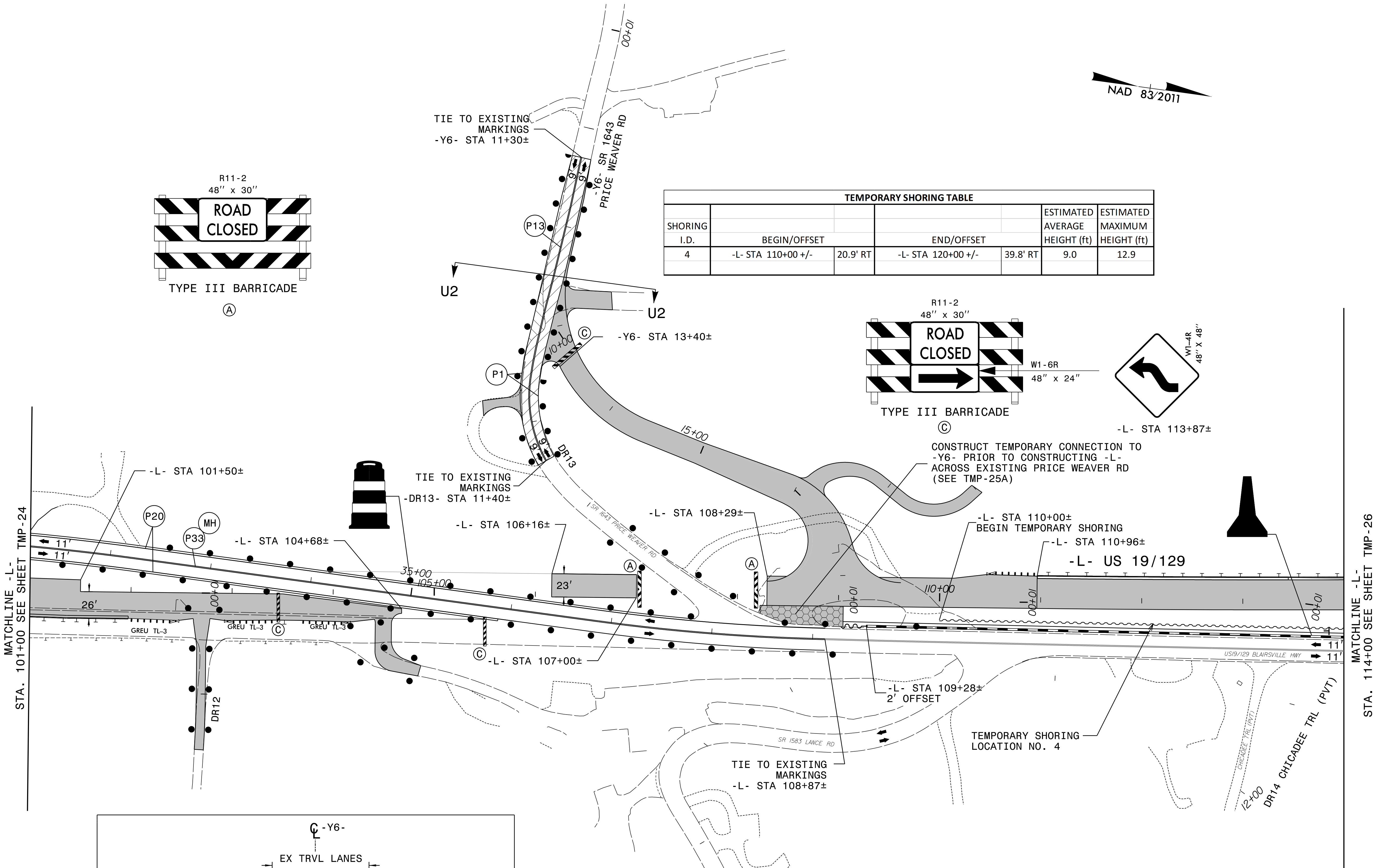
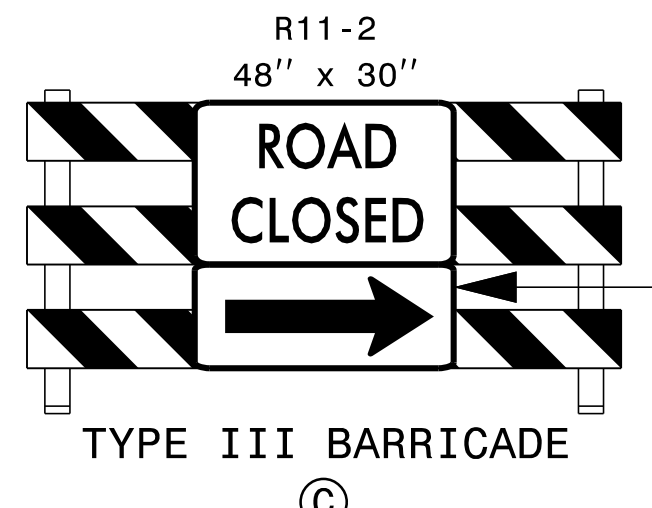
APPROVED: *Kevin Bisby*
800802628912472
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 KEVIN W. BISBY
 21047



PHASE II - STEP 2



TEMPORARY SHORING TABLE						
SHORING I.D.	BEGIN/OFFSET		END/OFFSET		ESTIMATED AVERAGE HEIGHT (ft)	ESTIMATED MAXIMUM HEIGHT (ft)
4	-L- STA 110+00 +/-	20.9' RT	-L- STA 120+00 +/-	39.8' RT	9.0	12.9



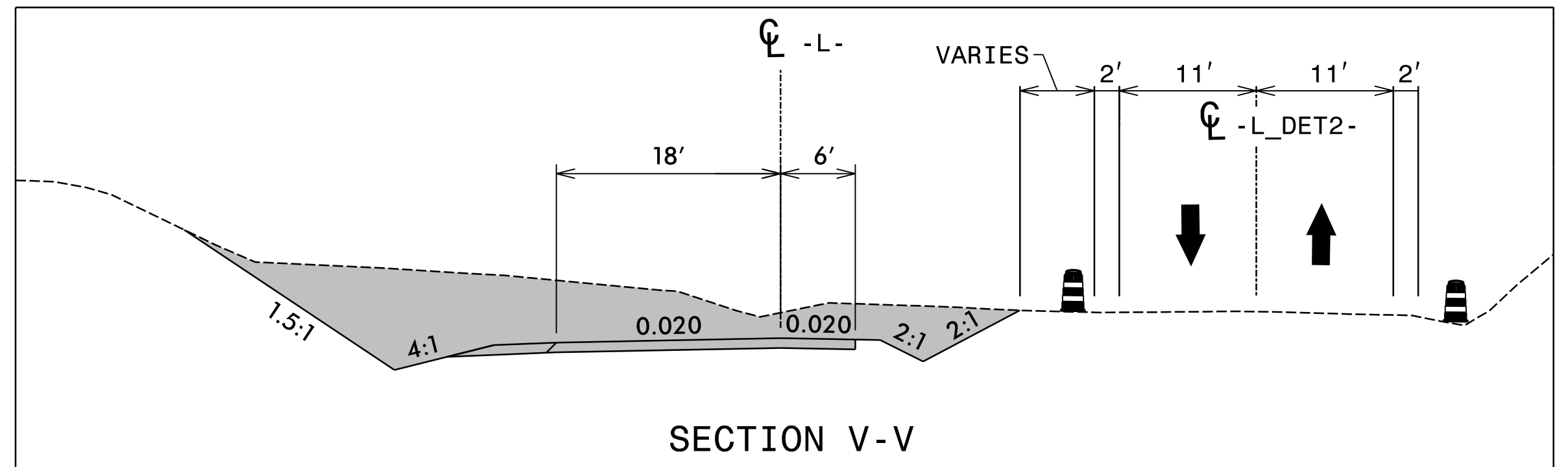
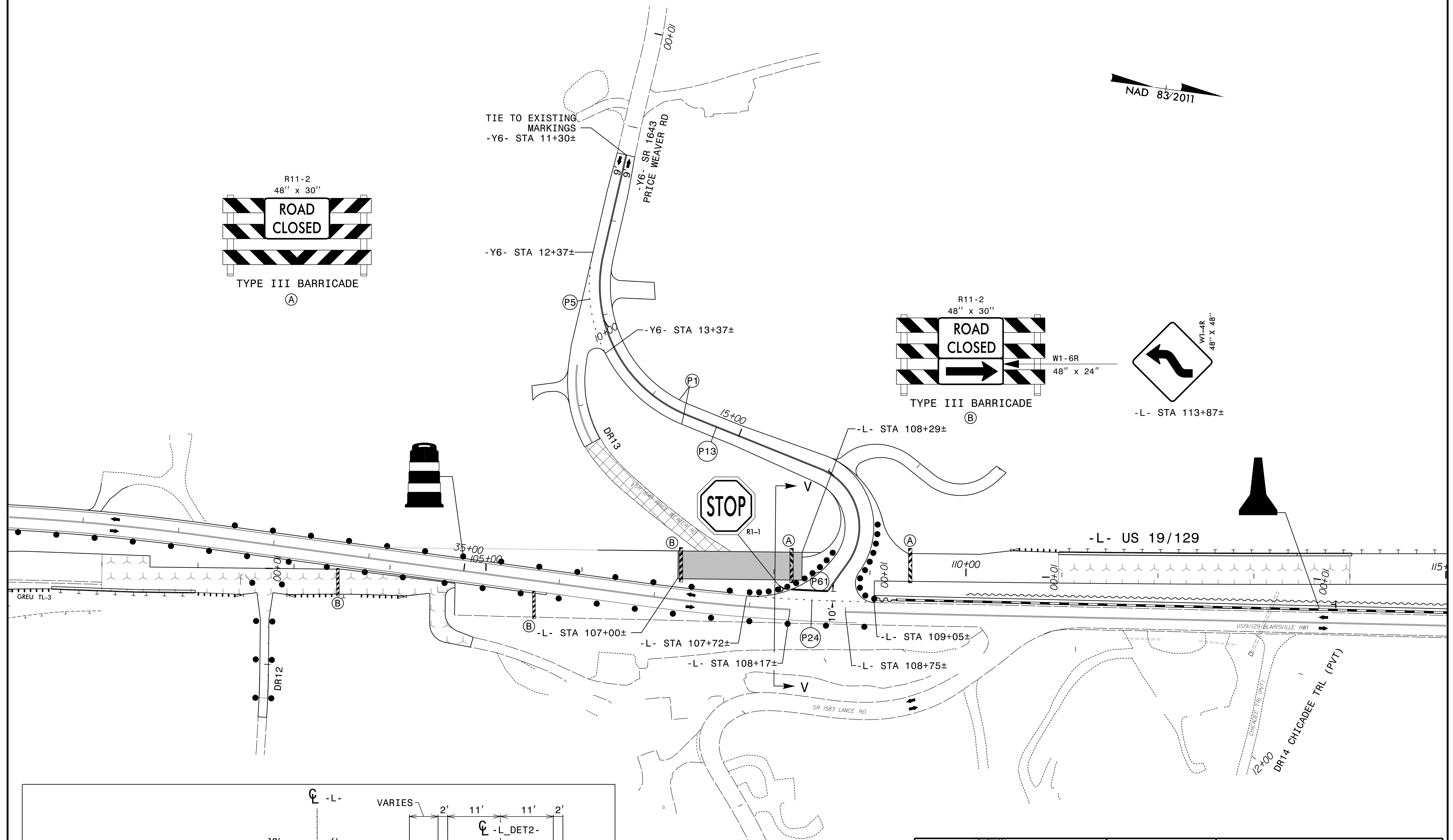
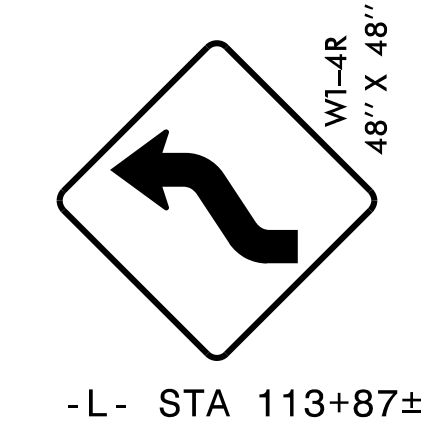
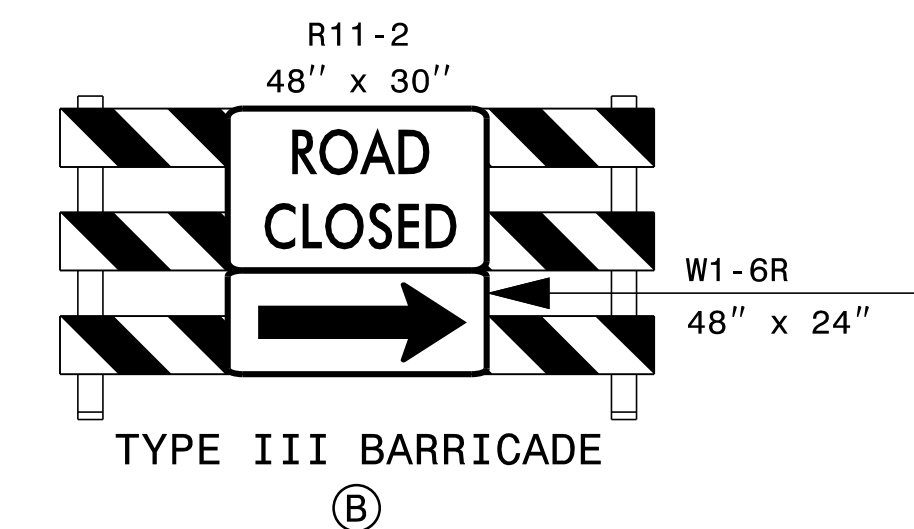
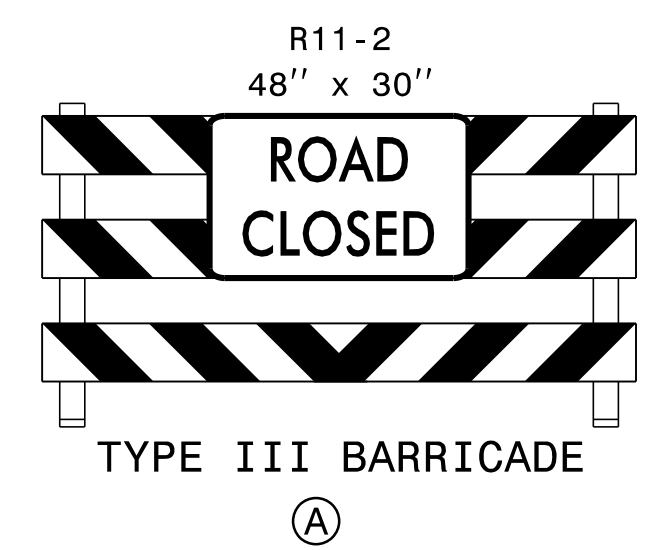
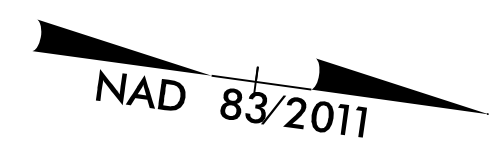
RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bisy*
 DATE: 10/18/2023
 SEAL
 DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL

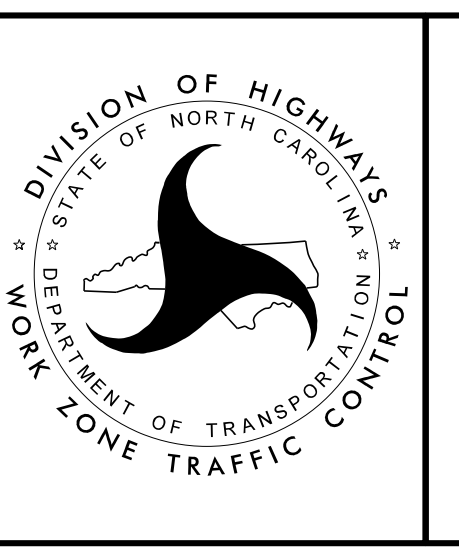
PHASE II - STEP 2

10/18/2023
 R5861.Tc_Tmp25.dgn
 kbisby



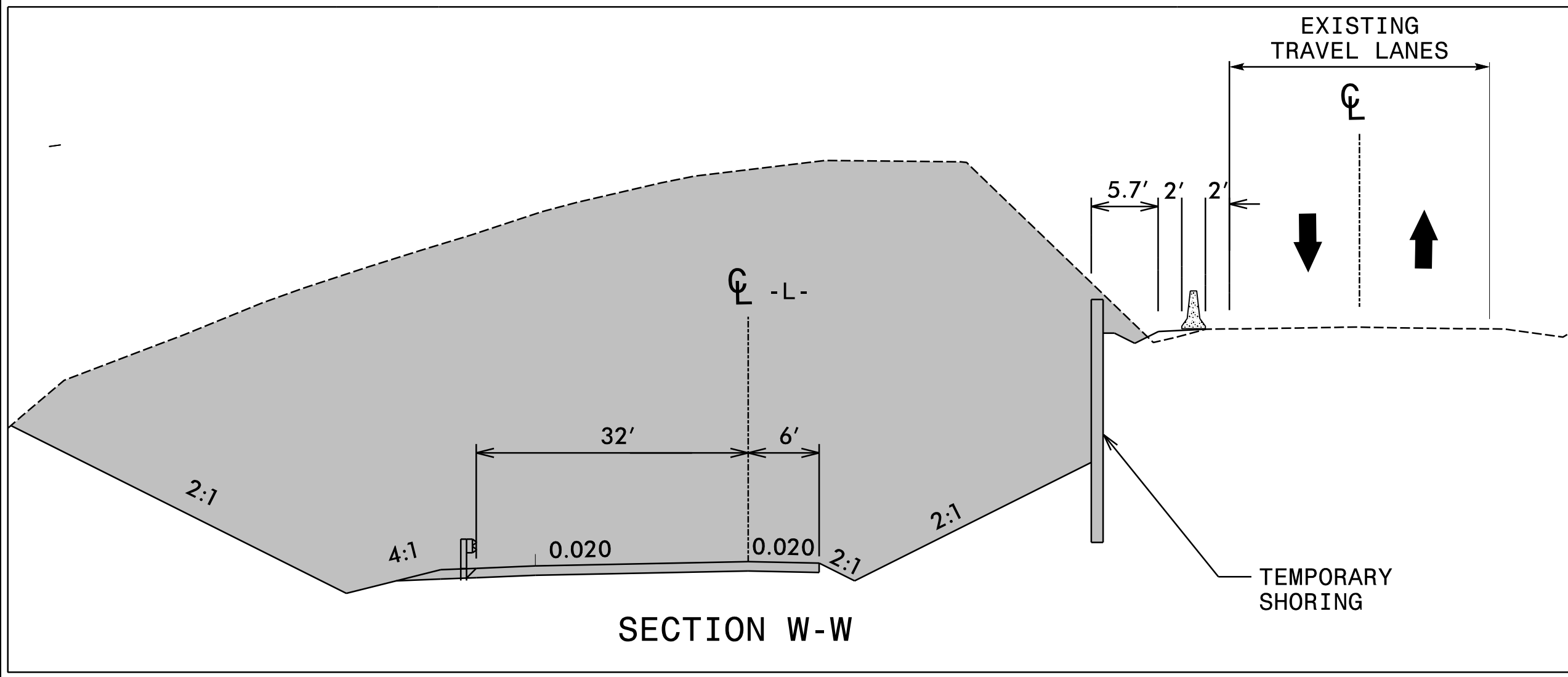
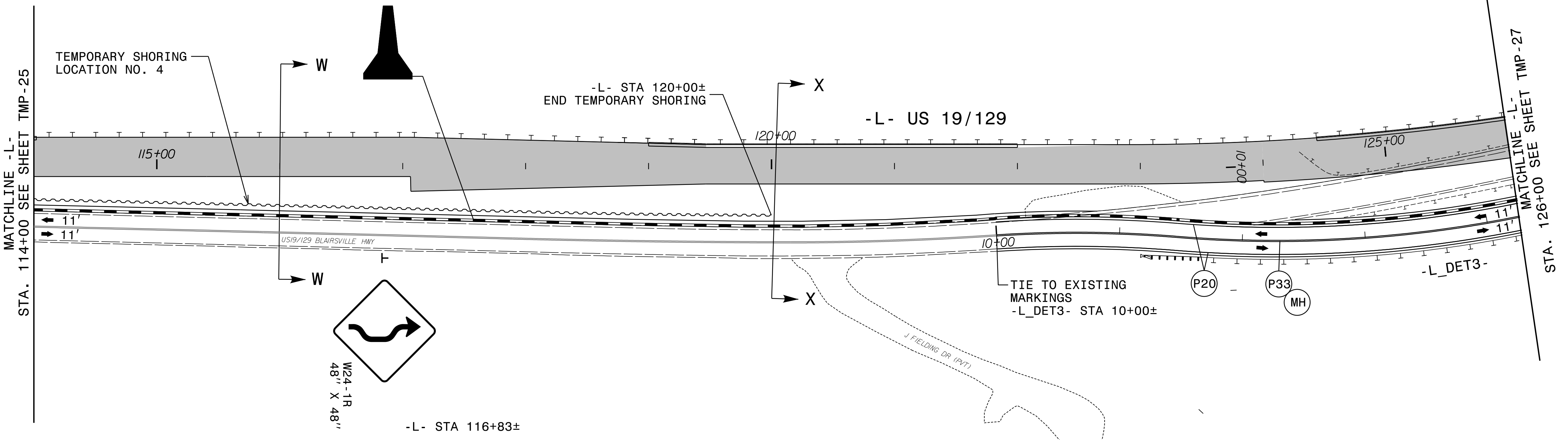
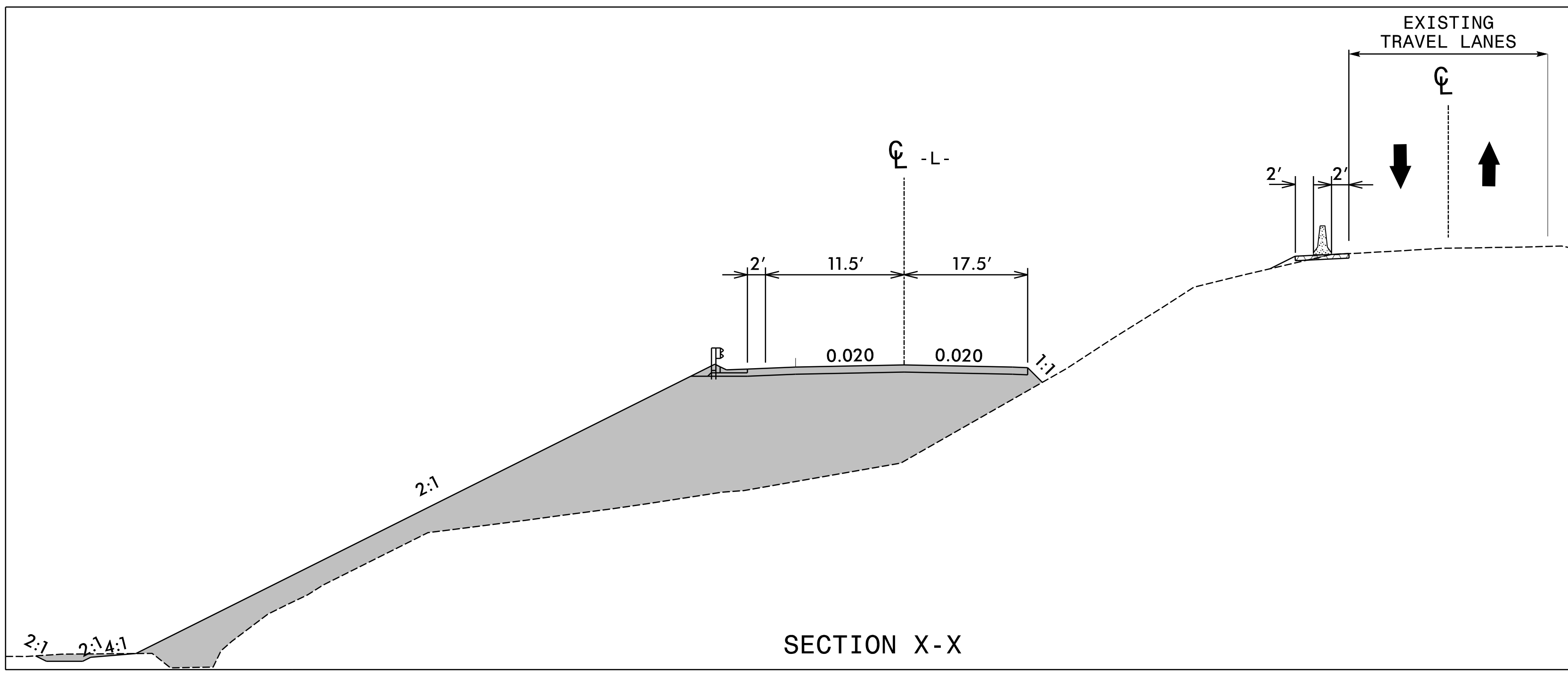
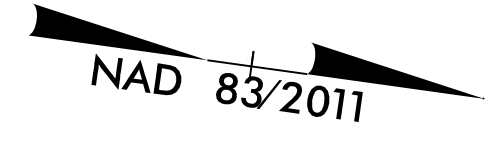
RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bisby*
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 KEVIN W. BISBY



PHASE II - STEP 2

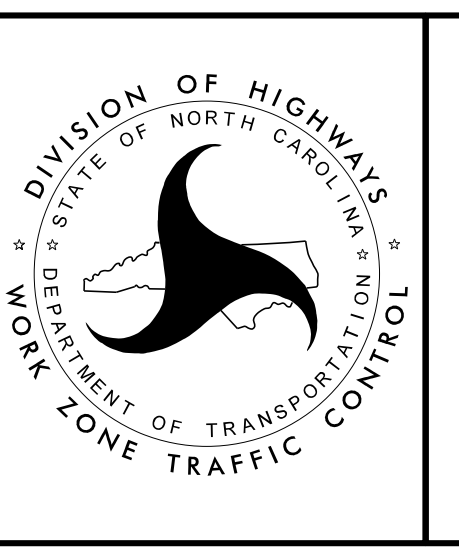
10/18/2023
 R5861.Tc_Tmp25A.dgn
 kbisby



10/18/2023
 R5861.LTC_Tmp26.dgn
 kbisby

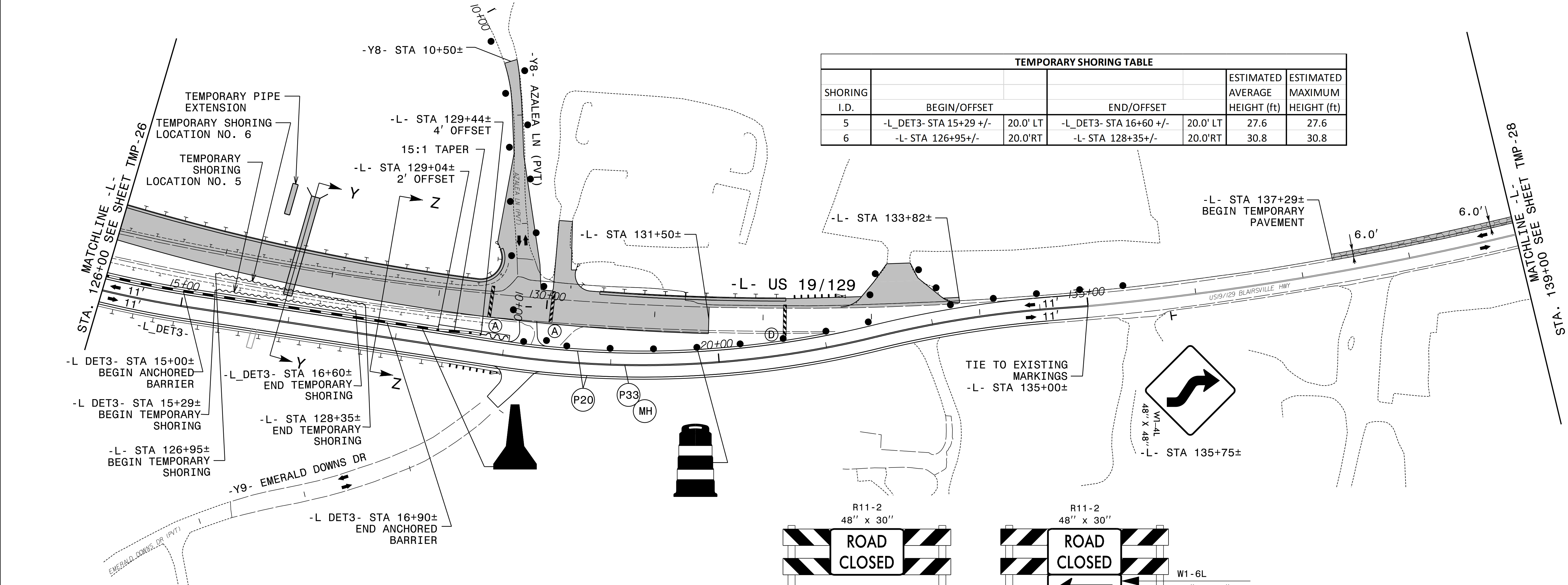
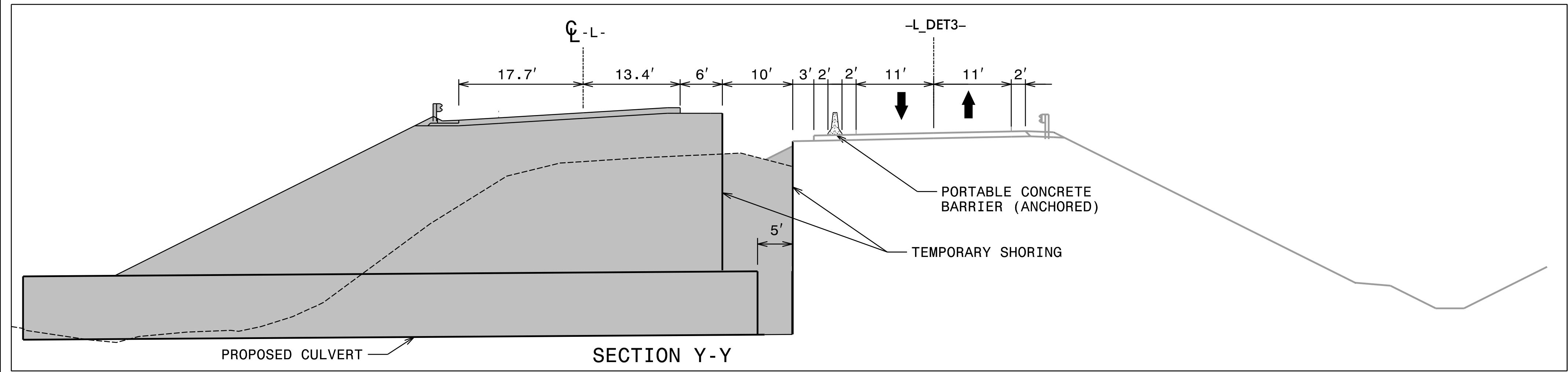
RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bisby*
800802628912472
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 KEVIN W. BISBY
 21047

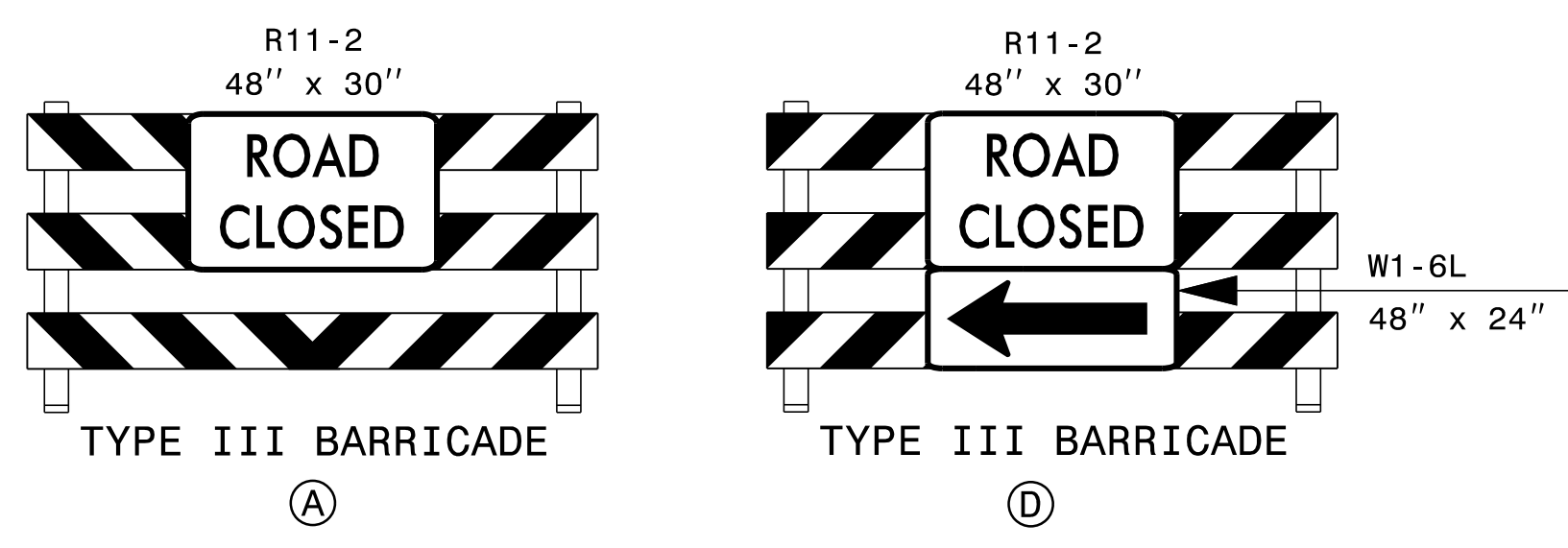
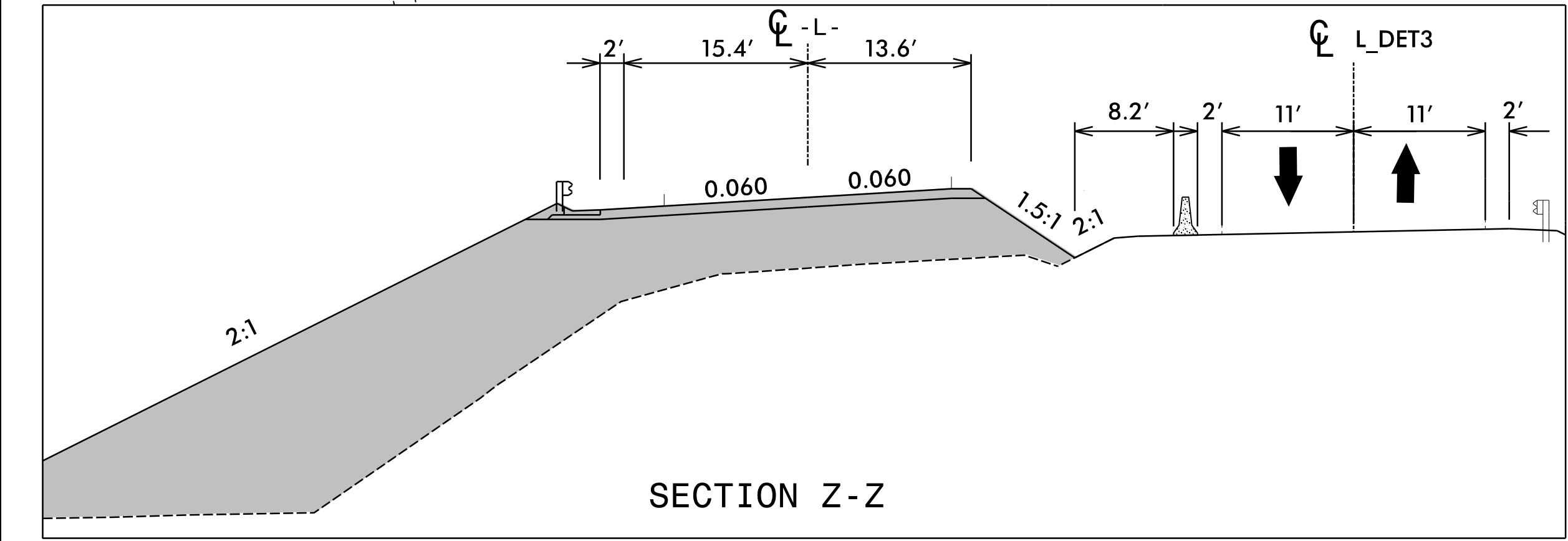


PHASE II - STEP 1
 PAVEMENT MARKINGS
 PHASE II - STEP 2

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



SHORING I.D.	BEGIN/OFFSET	END/OFFSET	ESTIMATED AVERAGE HEIGHT (ft)	ESTIMATED MAXIMUM HEIGHT (ft)
5	-L DET3- STA 15+29 +/- 20.0' LT	-L DET3- STA 16+60 +/- 20.0' LT	27.6	27.6
6	-L STA 126+95 +/- 20.0' RT	-L STA 128+35 +/- 20.0' RT	30.8	30.8



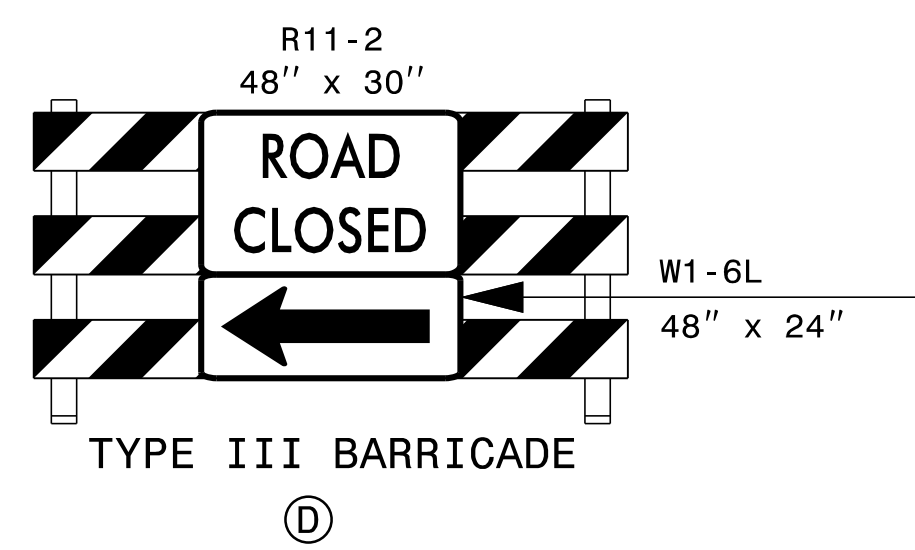
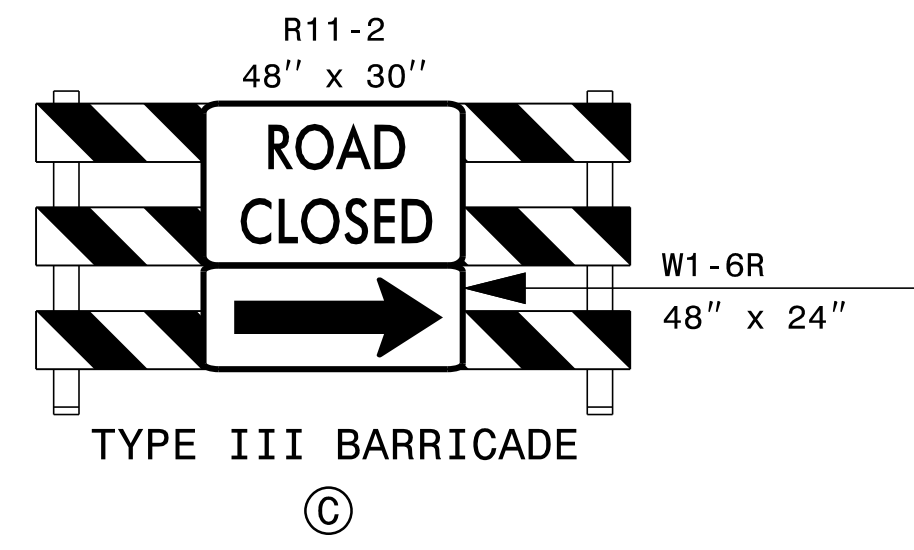
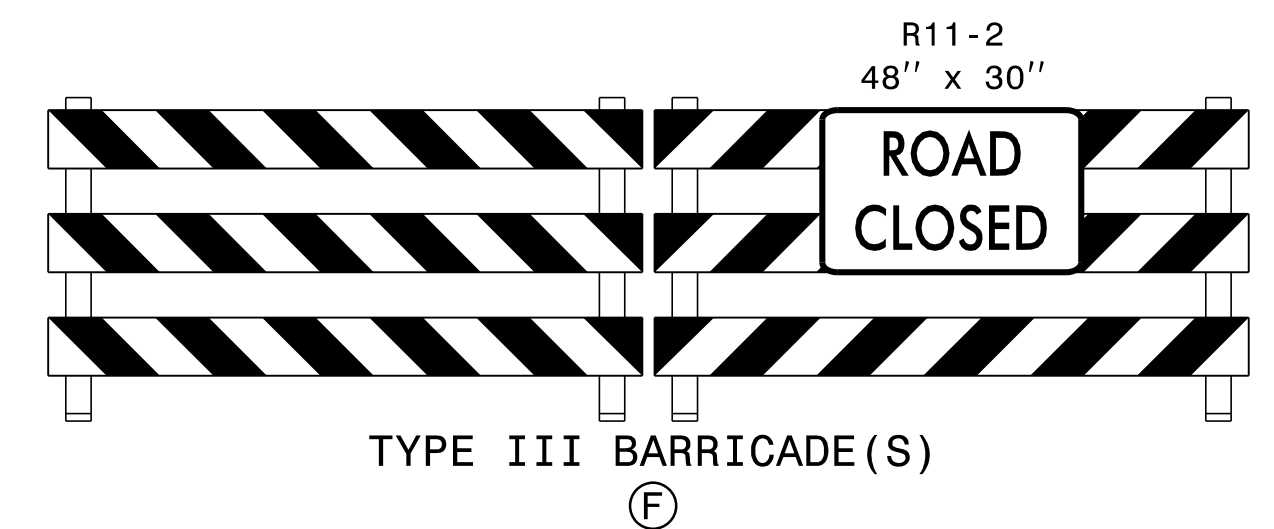
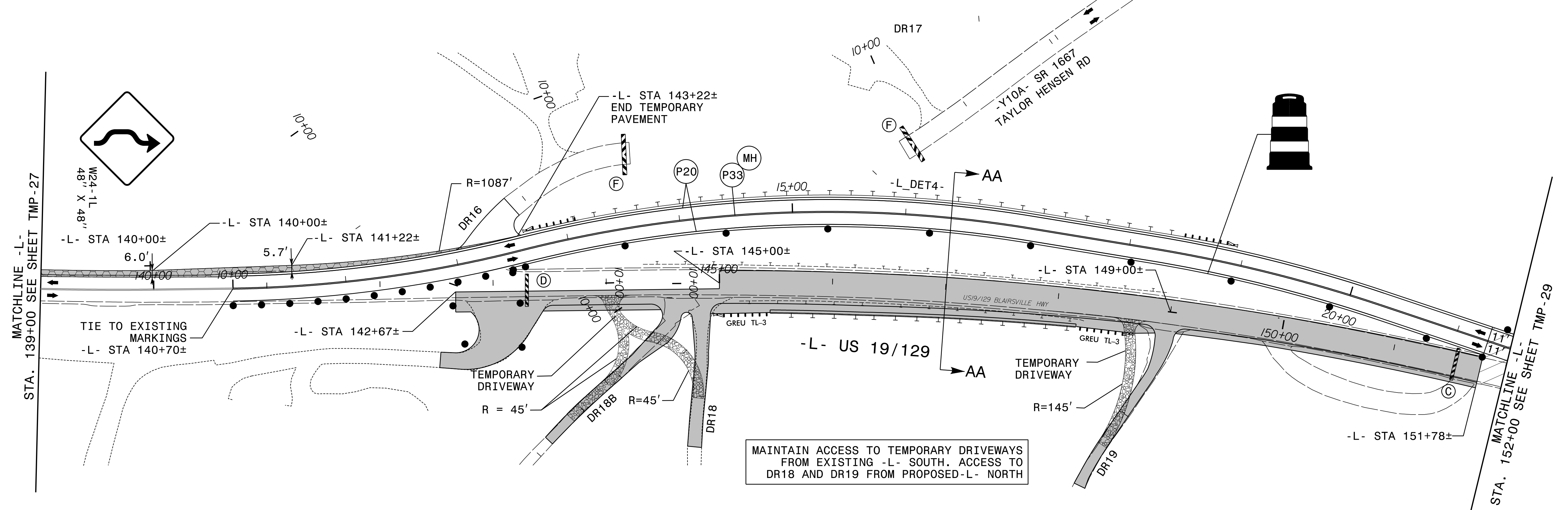
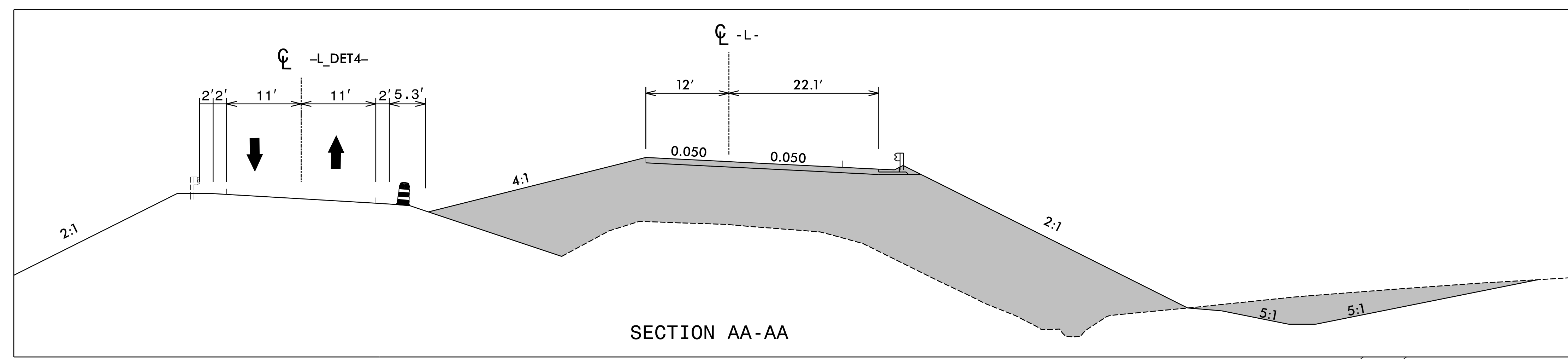
10/18/2023
R5861.Tc_Tmp27.dgn
Kb/sby

RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin B. Bly*
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 21047
 KEVIN W. BLY
 ENGINEER



PHASE II - STEP 1
 PAVEMENT MARKINGS
 PHASE II - STEP 2



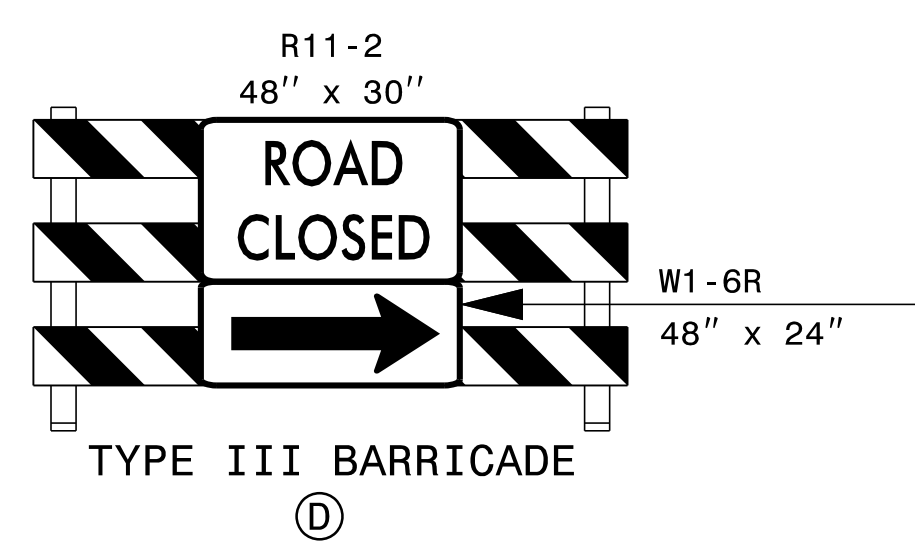
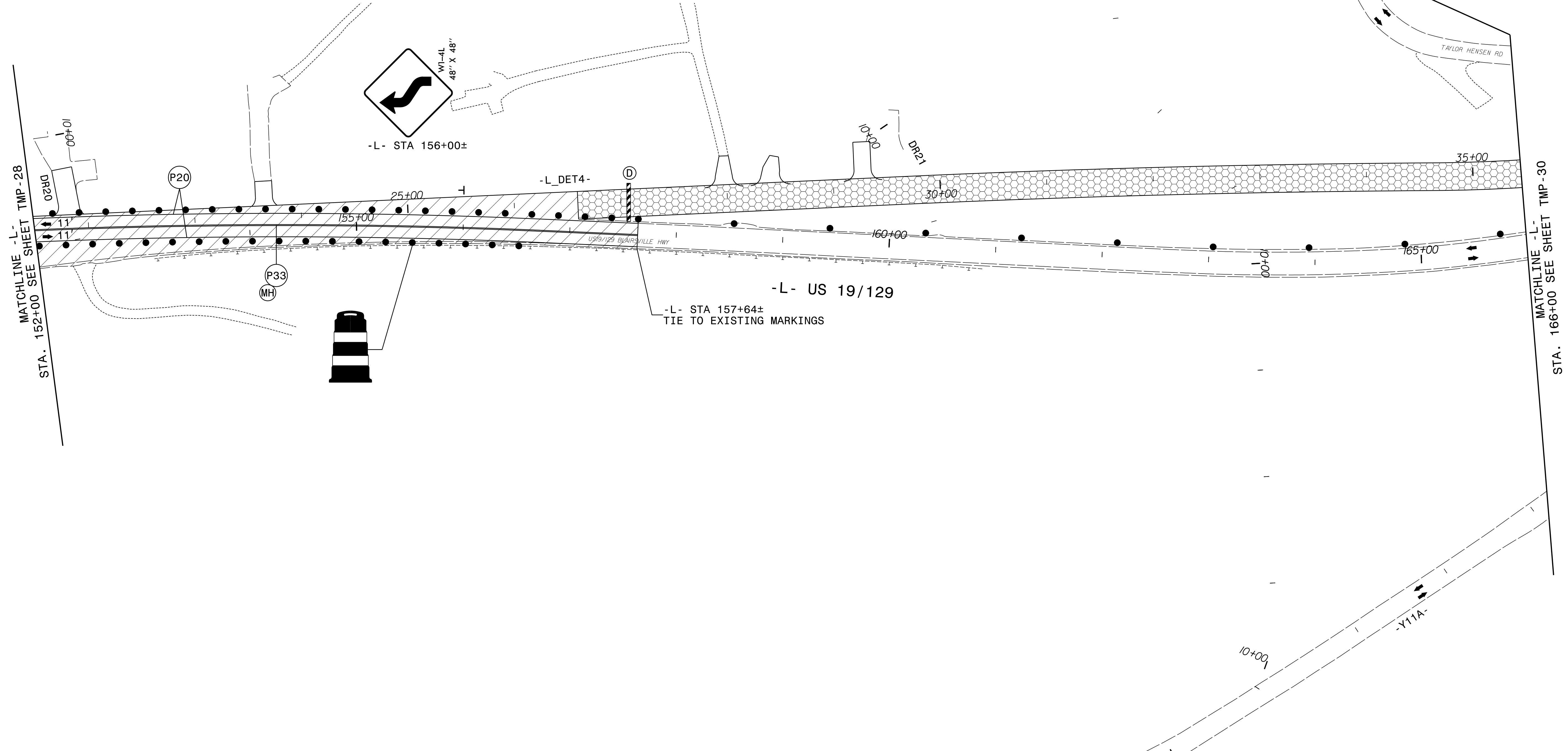
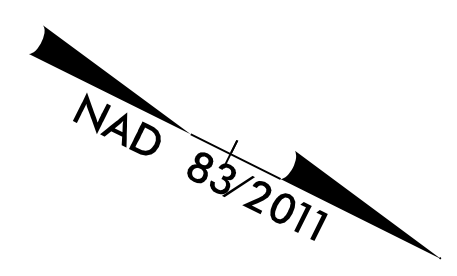
RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bisy*
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 21047
 ENGINEER KEVIN W. BISI SR



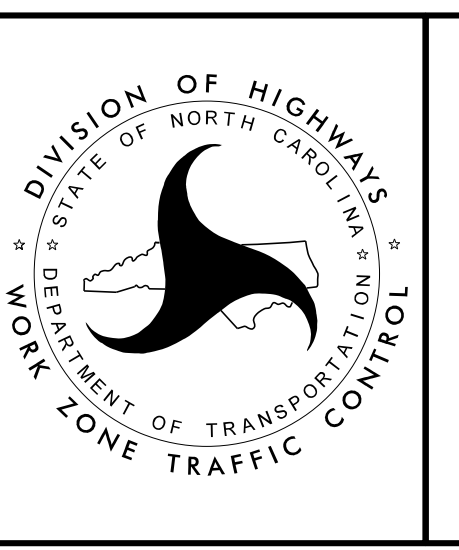
PHASE II - STEP 2

10/18/2023
 R5861.LTC_Tmp28.dgn
 kbisby



RK&K
 P: (919) 878-9560
 8601 Six Forks Road, Forum 1, Suite 700
 Raleigh, North Carolina 27615-3960
 NC License No. F-0112
 Engineers | Construction Managers | Planners | Scientists
 www.rkk.com
 Responsive People | Creative Solutions

APPROVED: *Kevin Bisby*
BD0802628912472
 DATE: 10/18/2023
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 KEVIN W. BISBY
 SEAL 21047



PHASE II - STEP 2

10/18/2023
 R5861.Ltc_Tmp29.dgn
 kbisby