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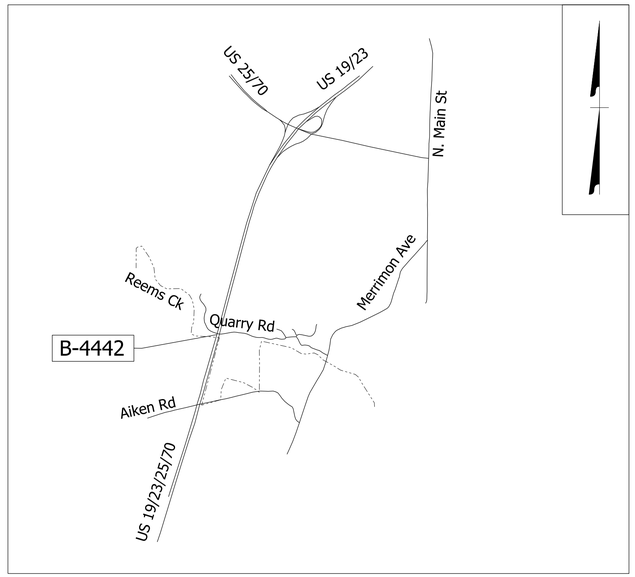
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

BUNCOMBE COUNTY

DIVISION 13



LOCATION: REPLACE US–19, US–23, US–25, US–70, FUTURE I–26
BRIDGES OVER REEMS CREEK– STRUCTURES NO. 370 and 373

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

PLANS PREPARED BY:

JAY WOOLARD, PE
SENIOR TRANSPORTATION ENGINEER

DONNIE RICHARDSON
TRANSPORTATION DESIGNER

NCDOT CONTACTS:

ZACHARY CLARK, PE
PROJECT ENGINEER

SHEENA GREEN
PROJECT DESIGN ENGINEER

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

INDEX OF SHEETS

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NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR.

DocuSigned by: J. W. Woolard, Jr. 7/28/2022
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SHEET NO.
TMP-1

TIP PROJECT: B–4442

7/28/2022
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dorichardson

PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-1A

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
DIVISION 11 - WORK ZONE TRAFFIC CONTROL	
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1145.01	BARRICADES
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
DIVISION 12 - PAVEMENT MARKINGS, MARKERS AND DELINEATORS	
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1261.01	GUARDRAIL AND BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS TYPES
1262.01	GUARDRAIL END DELINEATION
1266.01	RAISED PAVEMENT MARKERS

TEMPORARY PAVEMENT MARKING

SYMBOL	DESCRIPTION
	WORK ZONE PERFORMANCE MARKING LINES (6")
Z7	10 FT. WHITE SKIP
Z8	WHITE EDGELINE
Z9	YELLOW EDGELINE
Z21	WHITE LANE LINE
	COLD APPLIED PLASTIC PAVEMENT MARKING LINES-TYPE 4 (6")
C6	WHITE EDGELINE
C7	YELLOW EDGELINE
CJ	10 FT. WHITE SKIP

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- EXIST. PVMT.
- PROPOSED PVMT.
- NORTH ARROW
- TEMP. SHORING (LOCATION PURPOSES ONLY)
- WORK AREA
- PREVIOUSLY STARTED / CONCURRENT CONSTRUCTION
- PAVEMENT REMOVAL
- TEMPORARY PAVEMENT

TRAFFIC CONTROL DEVICES

TEMPORARY DEVICES — PREVIOUSLY PLACED

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

PAVEMENT MARKINGS

- EXISTING LINES

TEMPORARY MARKINGS — PREVIOUSLY PLACED

- WHITE EDGE LINE
- YELLOW EDGE LINE
- BROKEN LANE LINES
- MINISKIP LANE LINES
- DOUBLE YELLOW LINES
- GORELINE
- STOP BAR

PAVEMENT MARKING SYMBOLS

- EXISTING PAVEMENT MARKING SYMBOLS (HOLLOW)

TEMPORARY SYMBOLS — PREVIOUSLY PLACED

- PAVEMENT MARKING SYMBOLS
- ONLY — ONLY — PAVEMENT MARKING ALPHANUMERIC CHARACTERS

SIGNALS

EXISTING — PROPOSED — TEMPORARY (T E M P)

TEMPORARY SIGNING

TEMPORARY SIGNS — PREVIOUSLY PLACED

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

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

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7/19/2022

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

ROADWAY STANDARD DRAWINGS, AND 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
-L- (US 19/23/25/70/FUTURE I-26)	6:00 A.M.-7:00 P.M. MONDAY THRU SUNDAY

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

ROAD NAME
-L- (US 19/23/25/70/FUTURE I-26)

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 A.M. DECEMBER 31ST TO 7:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY.

3) FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.

4) FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY.

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

6) FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.

7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY.

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

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION OPERATION
-L- (US 19/23/25/70/ FUTURE I-26)	MONDAY THROUGH SUNDAY 5:00 A.M. TO 10:00P.M.	30 MINUTES OVERHEAD SIGN INSTALLATION

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

LANE AND SHOULDER CLOSURE REQUIREMENTS

E) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

LANE AND SHOULDER CLOSURE REQUIREMENTS (CONT'D)

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

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

H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

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

J) DO NOT INSTALL MORE THAN (1 MILE) OF LANE CLOSURE ON -L- (US 19/23/25/70/ FUTURE I-26) MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.

K) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON -L- (US 19/23/25/70/FUTURE I-26).

PAVEMENT EDGE DROP OFF REQUIREMENTS

L) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPEN TRAVEL LANE THAT HAS A 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.

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

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

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

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

Q) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

R) 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.

S) 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:

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

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7/19/2022

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

GENERAL NOTES

PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-1C

GENERAL NOTES (CONT'D)

TRAFFIC CONTROL DEVICES

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

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

V) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES (DRUMS OR CONES) PERPENDICULAR TO THE EDGE OF TRAVELWAY ON (120 FT) CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

W) REFER TO HIGH VISIBILITY DEVICES SPECIAL PROVISION FOR DRUMS, STATIONARY WORK ZONE SIGNS, AND PORTABLE WORK ZONE SIGNS USED ON -L-.

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
-L- (US 19/23/25/70/ FUTURE I-26)	WORK ZONE PERFORMANCE MARKINGS (SEE SPECIAL PROVISION)	TEMPORARY RAISED
BRIDGES	COLD APPLIED PLASTIC (IV)	TEMPORARY RAISED

Y) PLACE TWO APPLICATIONS OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A THIRD APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

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

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

MISCELLANEOUS

BB) USE LAW ENFORCEMENT TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND OR INTERSECTIONS AS SHOWN IN PLANS OR DIRECTED BY THE ENGINEER.

CC) ALL DIMENSIONS AND STATIONS IN THE TRANSPORTATION MANAGEMENT PLAN AND PHASING ARE APPROXIMATE (+/-); FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.

DD) COMPLETE ANY PROPOSED OR TEMPORARY WIDENING IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANE.

EE) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 814-3700 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.

FF) MAINTAIN EXISTING GUARDRAIL UNTIL PROPOSED FILL SLOPES ARE COMPLETED TO THE POINT THAT FIELD CONDITIONS NO LONGER MEET GUARDRAIL WARRANTS AS DIRECTED BY THE ENGINEER.

GG) MAINTAIN ALL EXISTING SIGNING ON PROJECT (WARNING, REGULATORY AND GUIDE SIGNS). WHERE CONSTRUCTION AFFECTS THE LOCATION OF A SIGN, RELOCATE AS NECESSARY, OR INSTALL REPLACEMENT SUCH THAT THE FUNCTION OF THE SIGN IS MAINTAINED AT ALL TIMES. DURING RELOCATION OF STOP SIGNS PROVIDE FLAGGERS WITH "FLAGGER AHEAD" (W20-7a) AND "BE PREPARED TO STOP" (W3-4) SIGNS AS NECESSARY TO MAINTAIN INTERSECTION TRAFFIC.

MANAGEMENT STRATEGIES

B-4442 IS A BRIDGE REPLACEMENT ON US 19, US 23, US 25, US 70, FUTURE I-26 OVER REEMS CREEK.

FIRST, AWAY FROM TRAFFIC, CONSTRUCT STAGE 1 OF THE PROPOSED BRIDGE ON THE NORTH SIDE OF EXISTING ALONG WITH ENOUGH OF THE APPROACHES TO SHIFT EB LANES USING LANE CLOSURES WHERE NECESSARY.

ONCE EB TRAFFIC IS SHIFTED TO A TEMPORARY ALIGNMENT, BEHIND BARRIER, REMOVE THE EXISTING EB BRIDGE AND CONSTRUCT STAGE 2 OF THE PROPOSED BRIDGE ALONG WITH APPROACHES FOR THE WB TRAFFIC USING LANE CLOSURES WHERE NECESSARY.

ONCE WB TRAFFIC IS SHIFTED TO A TEMPORARY ALIGNMENT, BEHIND BARRIER, REMOVE THE EXISTING WB BRIDGE AND CONSTRUCT STAGE 3 OF THE PROPOSED BRIDGE ALONG WITH THE REMAINING APPROACHES USING LANE CLOSURES WHERE NECESSARY.

SHIFT WB AND EB TRAFFIC SPLIT, CONSTRUCT PROPOSED MEDIAN BARRIER USING LANE CLOSURES WHERE NECESSARY.

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7/19/2022

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

GENERAL NOTES

6/15/2022
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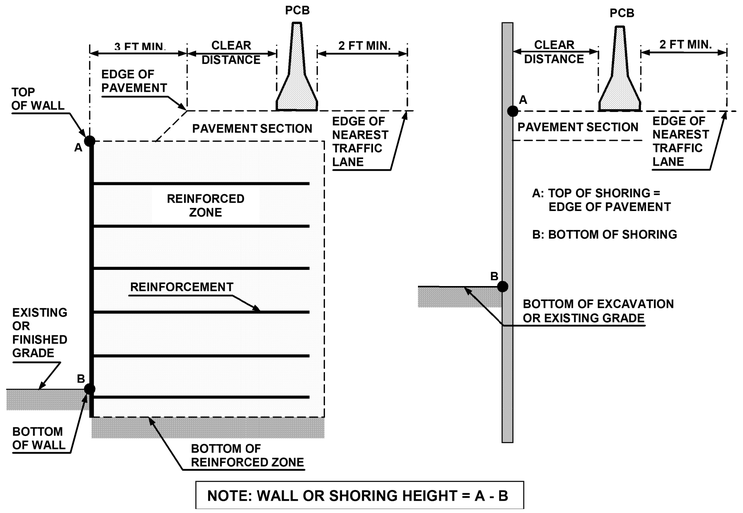

NOTE: WALL OR SHORING HEIGHT = A - B

FIGURE A

NOTES

1- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.

2- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PCB).

3- PCB IS REQUIRED IF TEMPORARY SHORING 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 UNIT 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 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- PCB REQUIREMENTS FOR TEMPORARY WALLS APPLY TO TEMPORARY MECHANICALLY STABILIZED EARTH (MSE) WALLS AND TEMPORARY SOIL NAIL WALLS.

8- 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 AND OR AS APPROVED BY THE ENGINEER.

9- 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 THESE MINIMUM REQUIRED DISTANCES ARE NOT AVAILABLE, CONTACT THE ENGINEER.

10- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS. BARRIER DEFLECTIONS AND RESULTING MINIMUM REQUIRED CLEAR DISTANCES MIGHT VARY SIGNIFICANTLY FOR LARGER HEAVIER VEHICLES, RUNS OF BARRIER LESS THAN 200 FT IN LENGTH AND WET OR DRY PAVEMENT.

MINIMUM REQUIRED CLEAR DISTANCE, inches

Barrier Type	Pavement Type	Offset * ft	Design Speed, mph					
			<30	31-40	41-50	51-60	61-70	71-80
Unanchored PCB	Asphalt	<8	24	26	29	32	36	40
		8-14	26	28	31	35	38	42
		14-20	27	29	34	36	39	43
		20-26	28	31	35	38	40	44
		26-32	29	32	36	39	42	45
		32-38	30	34	38	41	43	46
		38-44	31	34	41	43	45	48
		44-50	31	35	41	43	46	49
		50-56	32	36	42	44	47	50
		>56	32	36	42	45	47	51
	Concrete	<8	17	18	21	22	25	26
		8-14	19	20	23	25	26	29
		14-20	22	22	24	26	28	31
		20-26	23	24	26	27	30	34
		26-32	24	25	27	28	32	35
		32-38	24	26	27	30	33	36
		38-44	25	26	28	30	34	37
		44-50	26	26	28	32	35	37
		50-56	26	26	28	32	35	38
		>56	26	27	29	32	36	38
Anchored PCB	Asphalt	All Offsets	24 for All Design Speeds					
Anchored PCB	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

* See Figure Below

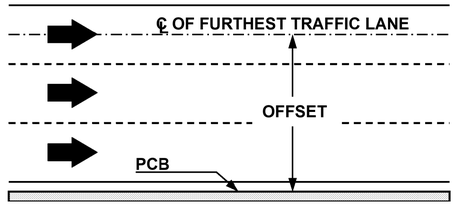

FIGURE B

DETAIL PROVIDED BY NCDOT

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

PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-2A

TEMPORARY SHORING LOCATION NO. 1 — SEE SHEET TMP-5 — ESTIMATED QUANTITY = 4315.5 SF

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

TEMPORARY SHORING IS REQUIRED FOR ROADWAY CONSTRUCTION FROM STATION 307+00± -EBL DET-, 20.2′ RT, TO STATION 313+85± -EBL DET-, 19.2′ RT.

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

DESIGN TEMPORARY SHORING FROM STATION 307+00± -EBL DET-, 20.2′ RT, TO STATION 313+85± -EBL DET-, 19.2′ RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
UNIT WEIGHT (γ)= 120 LB/CF
FRICTION ANGLE (ϕ)= 30 DEGREES
COHESION (c) = 0 LB/SF
GROUNDWATER ELEVATION = 2020 FT

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 307+00± -EBL DET-, 20.2′ RT, TO STATION 313+85± -EBL DET-, 19.2′ RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

TEMPORARY SHORING LOCATION NO. 3 — SEE SHEET TMP-5 — ESTIMATED QUANTITY = 25 SF

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

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE END BENT CONSTRUCTION FROM STATION 313+75± -EBL DET-, 21.2′ RT, TO STATION 313+85± -EBL DET-, 21.2′ RT.

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

DESIGN TEMPORARY SHORING FROM STATION 313+75± -EBL DET-, 21.2′ RT, TO STATION 313+85± -EBL DET-, 21.2′ RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (c) = 0 LB/SF
GROUNDWATER ELEVATION = 2020 FT

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 313+75± -EBL DET-, 21.2′ RT, TO STATION 313+85± -EBL DET-, 21.2′ RT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 313+75± -EBL DET-, 21.2′ RT, TO STATION 313+85± -EBL DET-, 21.2′ RT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING LOCATION NO. 5 — SEE SHEET TMP-9 — ESTIMATED QUANTITY = 371 SF

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

TEMPORARY SHORING IS REQUIRED FOR ROADWAY CONSTRUCTION FROM STATION 324+46± -WBL DET-, 33′ RT, TO STATION 325+52± -WBL DET-, 27′ RT.

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

DESIGN TEMPORARY SHORING FROM STATION 324+46± -WBL DET-, 33′ RT, TO STATION 325+52± -WBL DET-, 27′ RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
UNIT WEIGHT (γ)= 120 LB/CF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (c) = 0 LB/SF
GROUNDWATER ELEVATION = 2010 FT

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 324+46± -WBL DET-, 33′ RT, TO STATION 325+52± -WBL DET-, 27′ RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

TEMPORARY SHORING LOCATION NO. 2 — SEE SHEET TMP-5 AND 6 — ESTIMATED QUANTITY = 5400 SF

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

TEMPORARY SHORING IS REQUIRED FOR ROADWAY CONSTRUCTION FROM STATION 316+50± -EBL DET-, 19.2′ RT, TO STATION 324+00± -EBL DET-, 18′ RT.

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

DESIGN TEMPORARY SHORING FROM STATION 316+50± -EBL DET-, 19.2′ RT, TO STATION 324+00± -EBL DET-, 18′ RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (c) = 0 LB/SF
GROUNDWATER ELEVATION = 2000 FT

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 316+50± -EBL DET-, 19.2′ RT, TO STATION 324+00± -EBL DET-, 18′ RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

TEMPORARY SHORING LOCATION NO. 4 — SEE SHEET TMP-7 — ESTIMATED QUANTITY = 194.4 SF

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

TEMPORARY SHORING IS REQUIRED FOR ROADWAY CONSTRUCTION FROM STATION 304+58± -WBL DET-, 19′ RT, TO STATION 305+66± -WBL DET-, 28′ RT.

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

DESIGN TEMPORARY SHORING FROM STATION 304+58± -WBL DET-, 19′ RT, TO STATION 305+66± -WBL DET-, 28′ RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (c) = 0 LB/SF
GROUNDWATER ELEVATION = 2010 FT

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 304+58± -WBL DET-, 19′ RT, TO STATION 305+66± -WBL DET-, 28′ RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEER. THE DOCUMENT WAS SUBMITTED TO THE WZTC SECTION STANTEC CONSULTING ON MAY 3, 2022 AND SEALED BY A PROFESSIONAL ENGINEER, SHIPING YANG, PhD, PE, LICENSE NUMBER 031361.

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

TEMPORARY SHORING NOTES

6/5/2022
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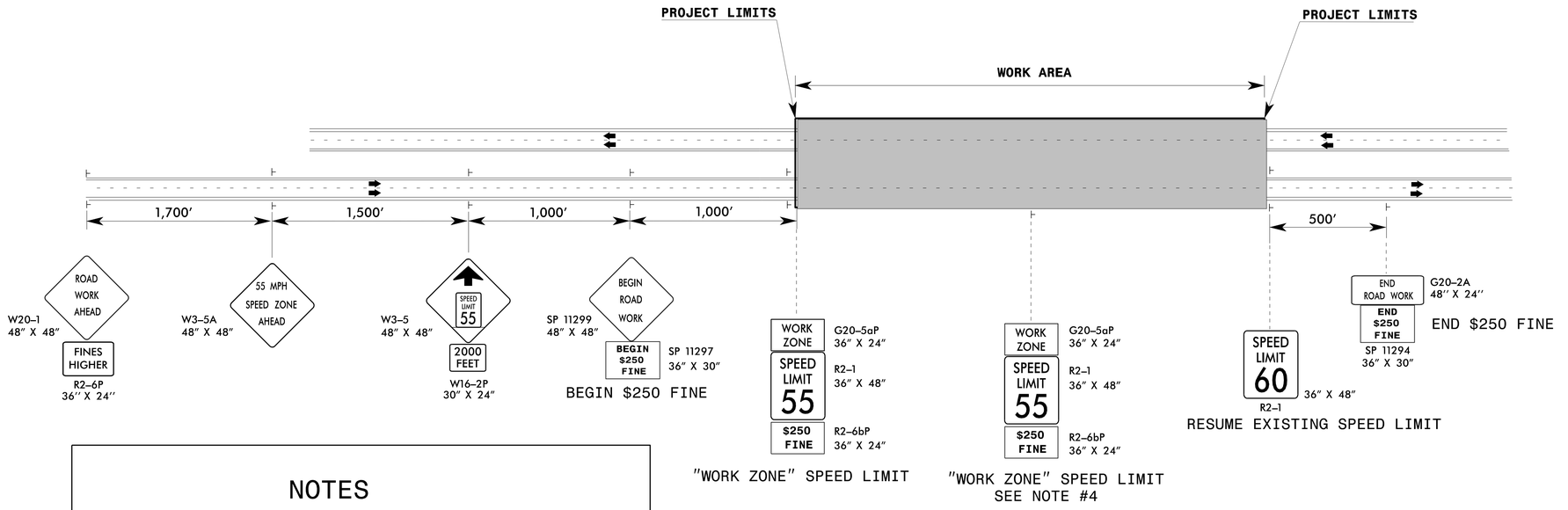
PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-2B



NOTES

1) THE WORK ZONE SPEED LIMIT WILL BE ESTABLISHED IN COLLABORATON BETWEEN THE REGIONAL TRAFFIC ENGINEER, THE DIVISION AND THE WORK ZONE TRAFFIC CONTROL SECTION. THIS DRAWING SHOWS THE TYPICAL APPLICATION OF REDUCING THE "WORK ZONE SPEED LIMIT" TO 55 MPH.

2) IF THE "WORK ZONE SPEED LIMIT" ONLY APPLIES TO A SPECIFIC PORTION AND NOT THE ENTIRE PROJECT, THE EXISTING SPEED LIMIT IS TO BE REESTABLISHED INSIDE THE PROJECT LIMITS. THE EXISTING SPEED LIMIT SIGNS AND THE "END $250 FINE" SIGNS ARE TO BE INSTALLED AT THE LOCATION WHERE THE EXISTING SPEED LIMIT IS TO RESUME. (SEE GUIDELINE- D)

3) IF THE WORK ZONE SPEED LIMIT REDUCTION IS INSIDE THE WORK AREA, SIGNS W3-5A, W3-5, AND THE R2-1'S ALONG WITH THE SPEEDING FINE SIGNS ARE TO BE INSTALLED AT THE DISTANCE SHOWN ABOVE IN ADVANCE OF WHERE THE SPEED LIMIT IS REDUCED.

4) THE WORK ZONE SPEED LIMIT SIGNS ARE TO BE MOUNTED FROM 7′ ABOVE EDGE OF PAVEMENT ELEVATION.

5) WHEN TEMPORARY LANE CLOSURES ARE INSTALLED EITHER PRIOR TO OR AT THE BEGINNING OF THE PROJECT LIMITS, THE PORTABLE LANE CLOSURE SIGNS ARE TO BE ADJUSTED TO AVOID SIGN OVERLAP/CLUTTER

6) THE NEED AND LOCATION OF ADDITIONAL POSTED "WORK ZONE SPEED LIMIT" SIGNS WITHIN THE WORK AREA IS TO BE DETERMINED BY THE REGIONAL TRAFFIC ENGINEER.

GUIDELINES

A) THIS DRAWING IS FOR USE ONLY AFTER AN ENGINEERING INVESTIGATION AND CRITERIA REVIEW HAS BEEN PERFORMED BY THE REGIONAL TRAFFIC ENGINEER AND THE WORK ZONE TRAFFIC CONTROL SECTION. THE WORK ZONE SPEED LIMIT REDUCTION IS INTENDED FOR USE ON FREEWAYS WITH SPEED LIMITS 65 MPH OR GREATER. SEE WORK ZONE SPEED LIMIT GUIDELINES FOR CRITERIA.

B) THE STATE TRAFFIC ENGINEER HAS TO ORDINANCE THE SPEED LIMIT REDUCTION IN ORDER FOR THE REDUCTION TO BE VALID AND ENFORCEABLE. NO SPEED LIMIT SIGNS SHALL BE INSTALLED PRIOR TO RECEIVING A SIGNED ORDINANCE. IN ADDITION, THE $250 SPEEDING FINE ALSO REQUIRES A SEPARATE SIGNED ORDINANCE BY THE STATE TRAFFIC ENGINEER.

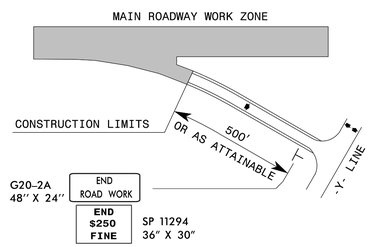
C) EACH DIRECTION OF THE PROJECT IS TO BE EVALUATED FOR THE "WORK ZONE" SPEED LIMIT REDUCTION. THIS DRAWING INTENTIONALLY HAS 1 DIRECTION SIGNED AS A REMINDER TO CAREFULLY CONSIDER WHETHER BOTH DIRECTIONS OF THE PROJECT NEED TO HAVE THE SPEED LIMIT REDUCED.

D) FOR PROJECTS THAT EXCEED 2 MILES IN LENGTH, AN EVALUATION IS TO BE MADE TO DETERMINE IF THE "WORK ZONE" SPEED LIMIT REDUCTION APPLIES TO THE ENTIRE PROJECT LENGTH OR IF ONLY A PORTION OF THE PROJECT LENGTH. THE "WORK ZONE" SPEED LIMIT REDUCTION MAY TERMINATE BEFORE THE END OF THE PROJECT LIMITS. THE DRAWING IS TO BE MODIFIED AS NEEDED TO REFLECT THESE CONDITIONS.

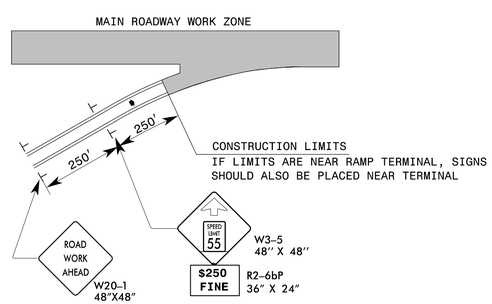
E) THE $250 SPEEDING FINE APPLIES FOR ALL PROJECTS THAT QUALIFY FOR A "WORK ZONE" SPEED LIMIT REDUCTION.

F) ALL "WORK ZONE" SPEED LIMIT REDUCTION SIGNAGE SHALL BE REMOVED WHEN THE CONDITION/S THAT WARRANTED THE REDUCTION AND FINE IS REMOVED. THE REGIONAL TRAFFIC ENGINEER WILL BE NOTIFIED BY THE RESIDENT ENGINEER AT THIS TIME TO RESCIND THE ORDINANCES AND RETURN THE EXISTING POSTED SPEED LIMIT. THIS SHOULD TAKE PLACE BEFORE THE PROJECT IS 100% COMPLETE AND ACCEPTED FOR MAINTENANCE.

EXIT RAMPS



ENTRANCE RAMPS



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NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD JR.

DocuSigned by: J. W. Woolard Jr. BBC02F49E06C4EC 7/28/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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"WORK ZONE" SPEED LIMIT REDUCTION

7/28/2022
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PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-3

PHASING

PHASE I

STEP 1
USING RSD 1101.01, INSTALL ALL WORK ZONE ADVANCE WARNING SIGNS ON -L-.

STEP 2
USING RSD 1101.02, SHEET 4 OF 14, INSTALL PCB TO LOCATION SHOWN ON TMP-5 AND 6.

STEP 3
BEHIND PCB AND USING RSD 1101.02, SHEET 4 OF 14 AS NECESSARY, INSTALL TS LOC 1 AND 2 AND CONSTRUCT -EBL_DET- FROM 297+00± TO 332+10± UP TO, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. SEE TMP-4 THRU TMP-6.

NOTE - CONTRACTOR SHALL COORDINATE ALL OVERHEAD WORK FOR QUARRY RD (WHICH REQUIRES THE NIGHT TIME CLOSURE OF QUARRY RD) WITH THE ENGINEER.

STEP 4
USING RSD 1101.02, SHEET 4 OF 14, CONSTRUCT THE FOLLOWING IN ORDER:
A - WEDGE AND RESURFACE THE EB LANES AS SHOWN ON TMP-4 AND 6.
B - INSTALL TEMPORARY PAVEMENT MARKINGS AND MARKERS. SEE TMP-7 THRU TMP-9.
C - INSTALL PCB NECESSARY FOR EBL SHIFT. SEE TMP-8 AND TMP-9
D - INSTALL SPEED LIMIT REDUCTION DEVICES SHOWN ON TMP-2B
E - SHIFT EB TRAFFIC TO NEWLY CONSTRUCTED DETOUR LANES. SEE TMP-7 THRU TMP-9.

PHASE II

STEP 1
USING RSD 1101.02, SHEET 4 OF 14, INSTALL REMAINING PCB AS SHOWN ON TMP-7 THRU TMP-9 ON -WBL_DET- AND REMOVE EXISTING GUARD RAIL AS DIRECTED BY THE ENGINEER.

USING RSD 1101.02, SHEET 4 OF 14, INSTALL SINGLE LAYER OF SURFACE COURSE AS FOLLOWS:
-L- 303+33± TO 305+65± SEE TMP-4
-L- 323+18± TO 325+47± SEE TMP-6

STEP 2
BEHIND PCB AND USING RSD 1101.02, SHEET 4 OF 14 AS NECESSARY, INSTALL PERMANENT BARRIER AS SHOWN ON TMP-8.

USING RSD 1101.02, SHEET 4 OF 14 AS NECESSARY, INSTALL TS LOC 3 AND 4 AND CONSTRUCT -WBL_DET- FROM 297+00± TO 333+04± UP TO, BUT NOT INCLUDING, FINAL LAYER OF SURFACE COURSE. SEE TMP-7 THRU TMP-9.

NOTE - CONTRACTOR SHALL COORDINATE ALL OVERHEAD WORK FOR QUARRY RD (WHICH REQUIRES THE NIGHT TIME CLOSURE OF QUARRY RD) WITH THE ENGINEER.

STEP 3
USING RSD 1101.02, SHEET 4 OF 14, CONSTRUCT THE FOLLOWING IN ORDER:
A - WEDGE AND RESURFACE WB LANES AS SHOWN ON TMP-7 AND TMP-9.
B - INSTALL TEMPORARY PAVEMENT MARKINGS AND MARKERS. SEE TMP- 10 THRU TMP-12.
C - INSTALL PCB FOR WB SHIFT. SEE TMP-10 THRU TMP-12.
D - INSTALL SPEED LIMIT REDUCTION DEVICES SHOWN ON TMP-2B
E - SHIFT WB TRAFFIC TO NEWLY CONSTRUCTED DETOUR LANES. SEE TMP-10 THRU TMP-12.

PHASE III

STEP 1
USING RSD 1101.02, SHEET 4 OF 14, AS NECESSARY, CONSTRUCT -L- FROM 297+00± TO 332+10± UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE. SEE TMP-10 THRU TMP-12.

NOTE - CONTRACTOR SHALL COORDINATE ALL OVERHEAD WORK FOR QUARRY RD (WHICH REQUIRES THE NIGHT TIME CLOSURE OF QUARRY RD) WITH THE ENGINEER.

STEP 2
USING RSD 1101.02, SHEET 4 OF 14, INSTALL TEMPORARY PAVEMENT MARKINGS AND MARKERS TO WB LANES. SEE TMP-13 THRU TMP-15 AND PM PLANS.

STEP 3
USING RSD 1101.02, SHEET 4 OF 14, SHIFT WB TRAFFIC TO FINAL PATTERN. SEE TMP-13 THRU TMP-15.

NOTE - PLACE/INSTALL TMA OR TCC TO PROTECT EXPOSED END OF PERMANENT BARRIER AS NEEDED AND AS DIRECTED BY THE ENGINEER. SEE TMP-14.

PHASE IV

STEP 1
USING RSD 1101.02, SHEET 4 OF 14, CONDUCT THE FOLLOWING OPERATIONS IN ORDER:
A - CONSTRUCT ALL REMAINING PERMANENT BARRIER BEGINNING AT -L- STA 299+10± AND WORKING NORTHWARD. SEE TMP-13 THRU TMP-15.

B - INSTALL TEMPORARY PAVEMENT MARKINGS AND MARKERS TO EB LANES IN FINAL PATTERN. SEE PM PLANS.

STEP 2
REMOVE ALL SPEED LIMIT REDUCTION DEVICES AND USING RSD 1101.02, SHEET 4 OF 14, SHIFT EB TRAFFIC TO FINAL PATTERN. SEE ROADWAY PLANS.

PHASE V

STEP 1
USING RSD 1101.02, SHEET 4 OF 14, CONDUCT THE FOLLOWING OPERATIONS IN ORDER:
A - INSTALL PCB AS SHOWN ON TMP-16.
B - BEHIND BARRIER, CONSTRUCT BRIDGE RAIL AS SHOWN ON TMP-16.
C - REMOVE PCB.

STEP 2
USING RSD 1101.02, SHEET 4 OF 14, CONDUCT THE FOLLOWING OPERATIONS IN ORDER:
A - INSTALL FINAL LAYER OF SURFACE COURSE TO ALL LANES.
B - INSTALL FINAL PAVEMENT MARKINGS AND MARKERS TO ALL LANES. SEE PM PLANS.

STEP 3
REMOVE ALL REMAINING WORK ZONE DEVICES.

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8/22/2022

NORTH CAROLINA PROFESSIONAL SEAL 19862 ENGINEER J. W. WOOLARD, JR.

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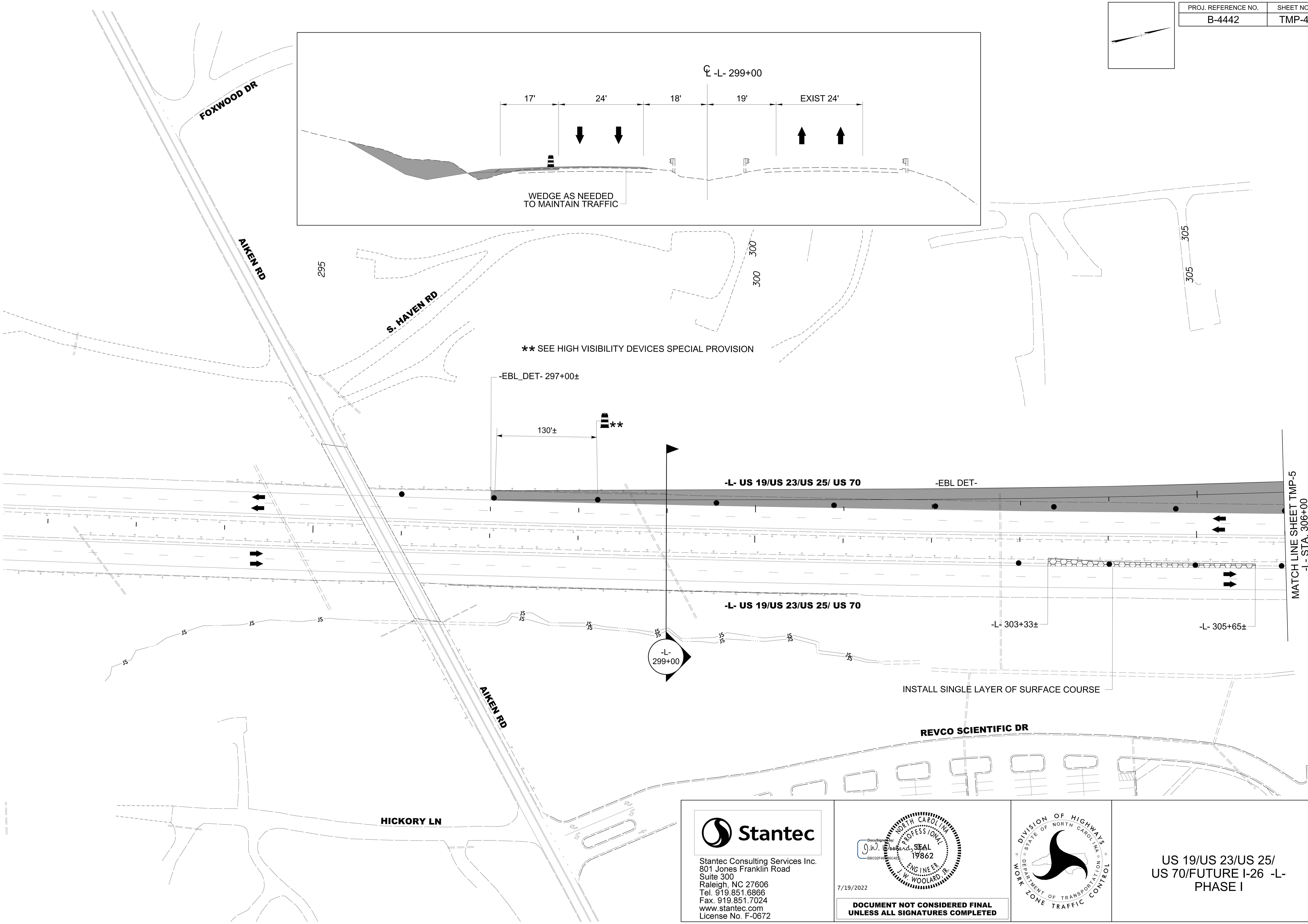
PHASING

PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-4



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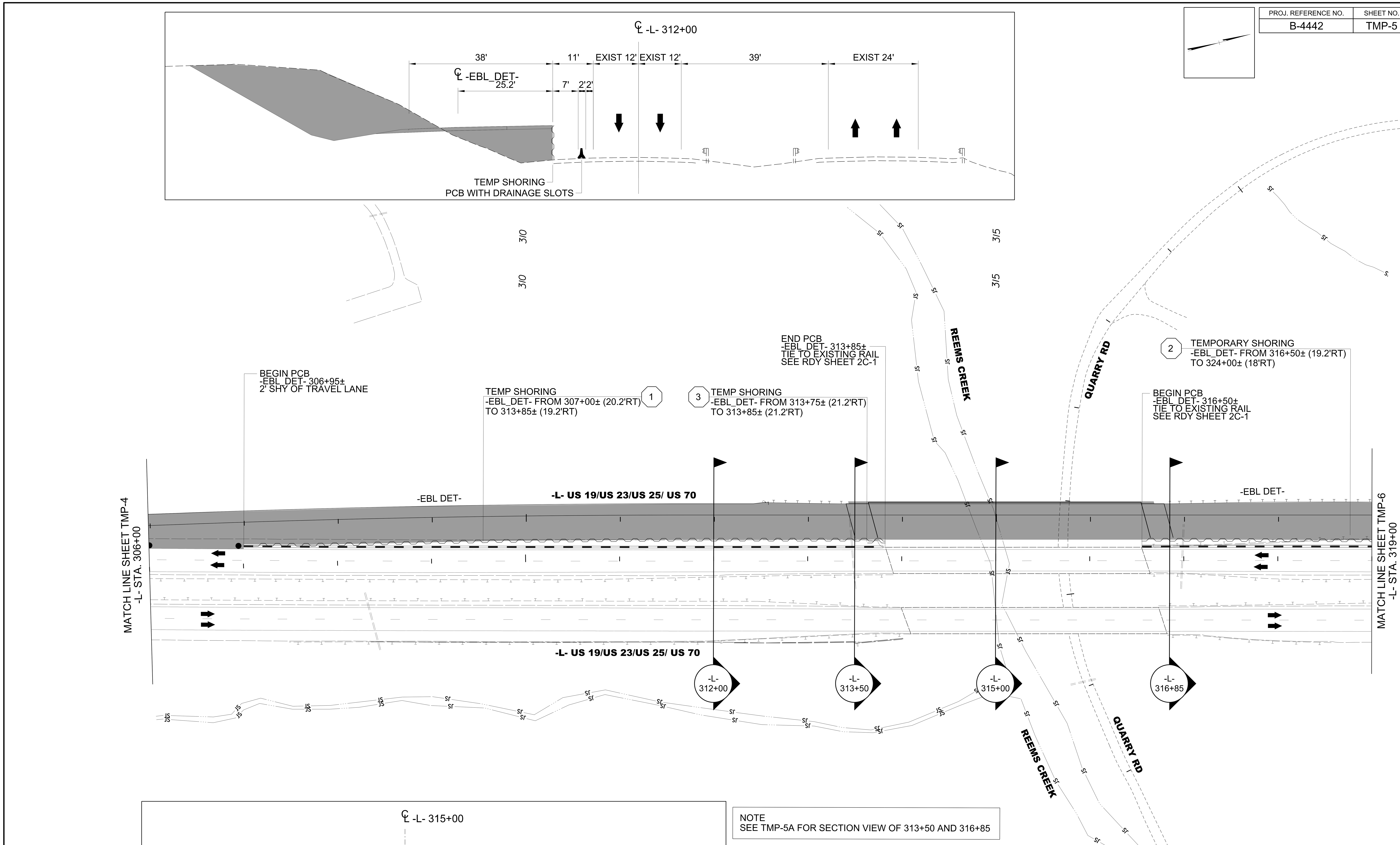

NOTE
SEE TMP-5A FOR SECTION VIEW OF 313+50 AND 316+85

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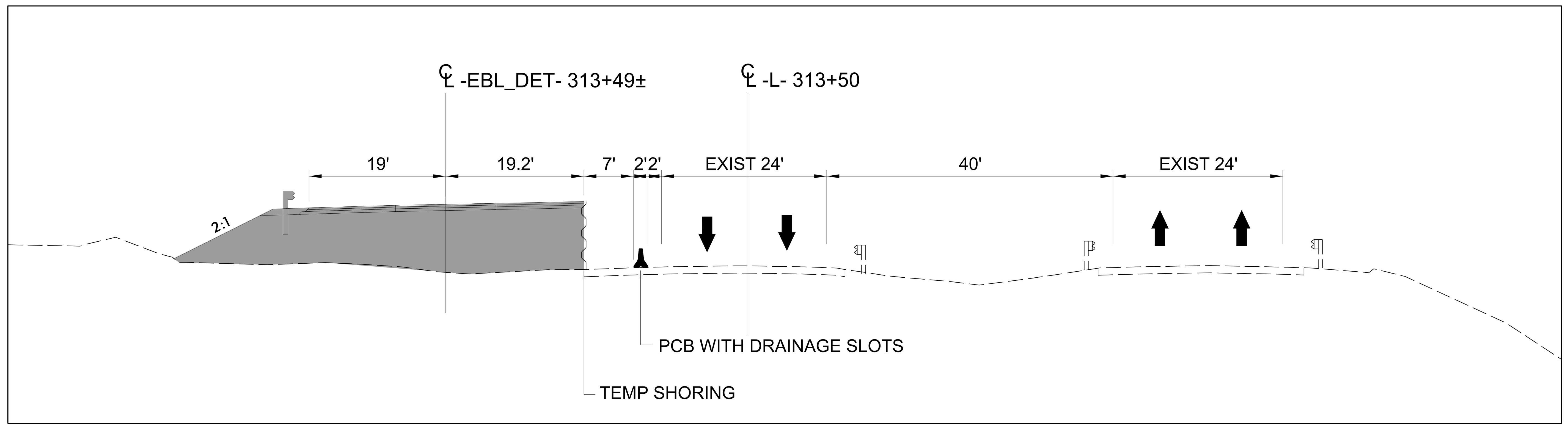

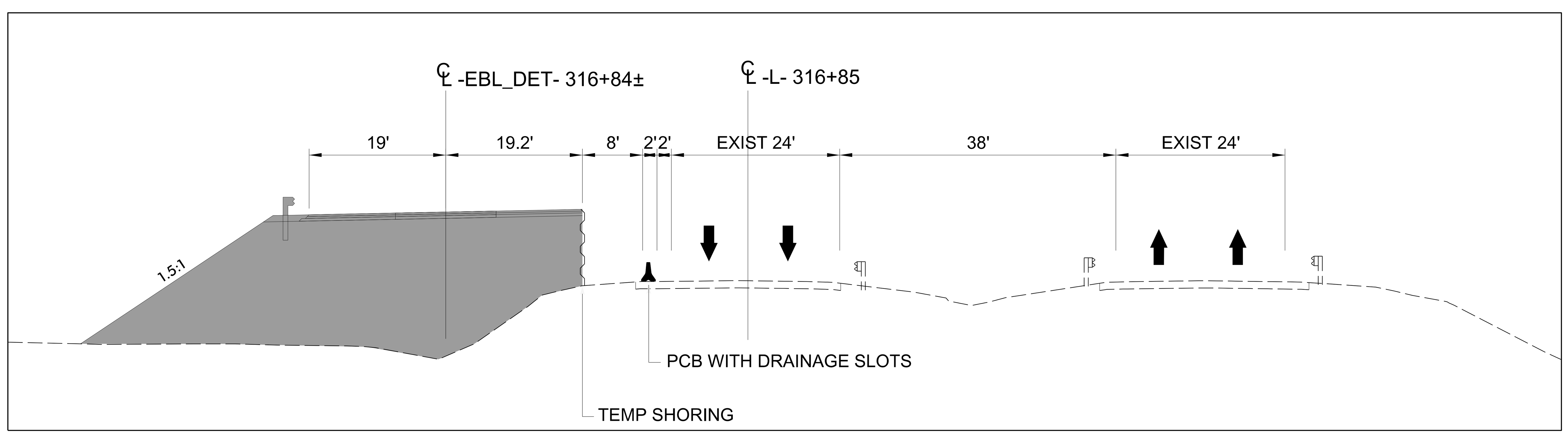

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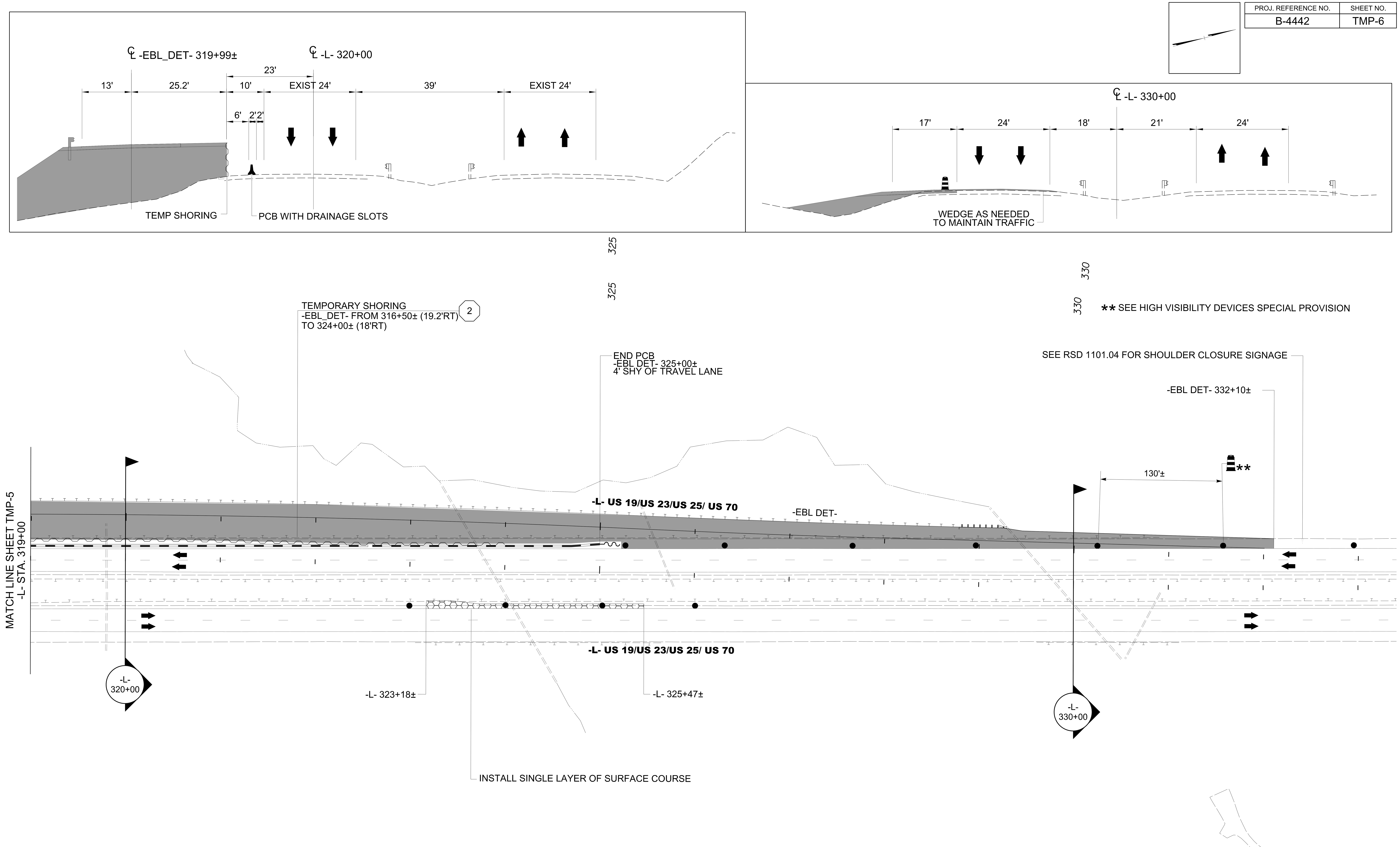
PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-6



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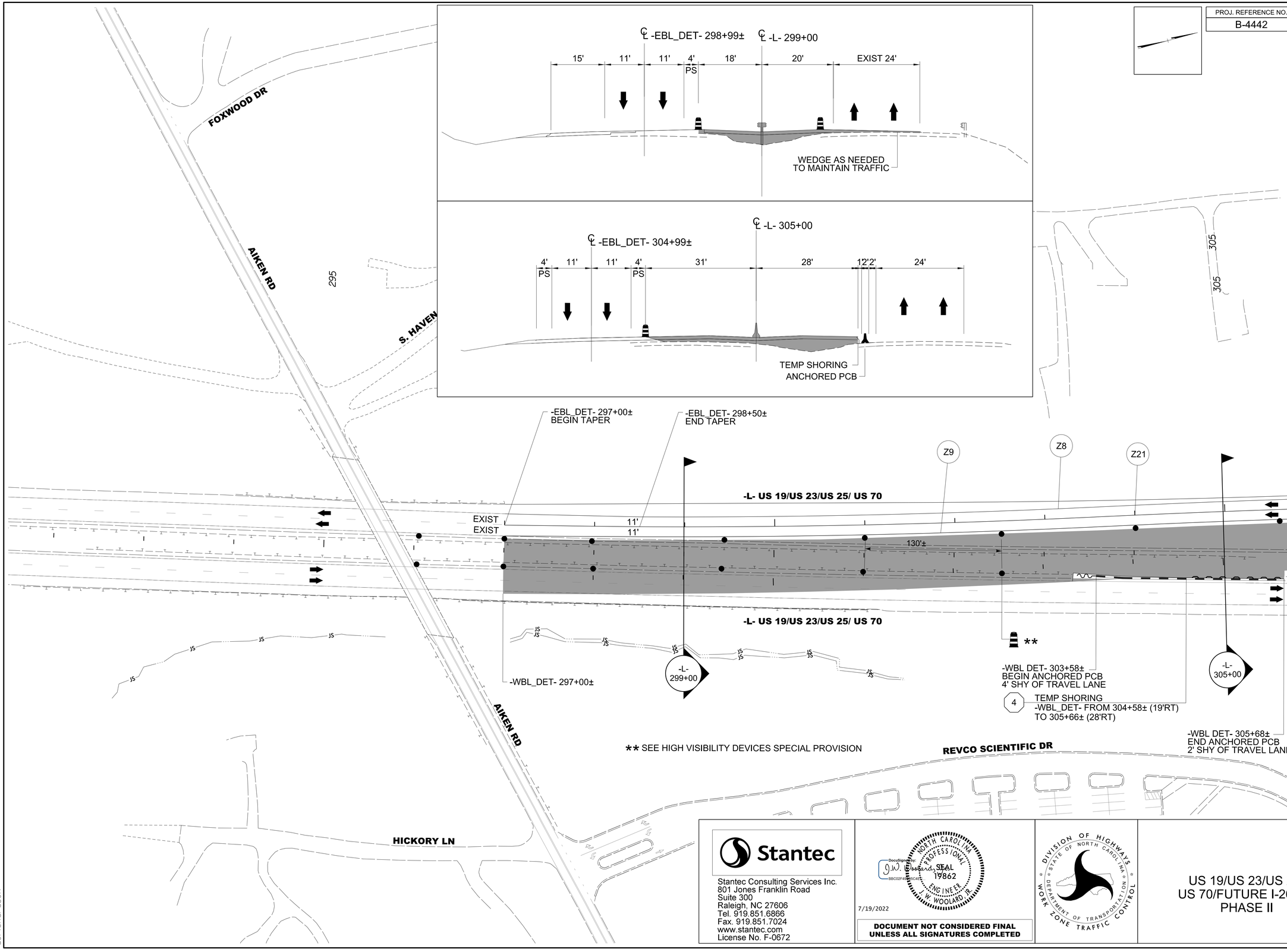
B-4442	TMP-7



** SEE HIGH VISIBILITY DEVICES SPECIAL PROVISION

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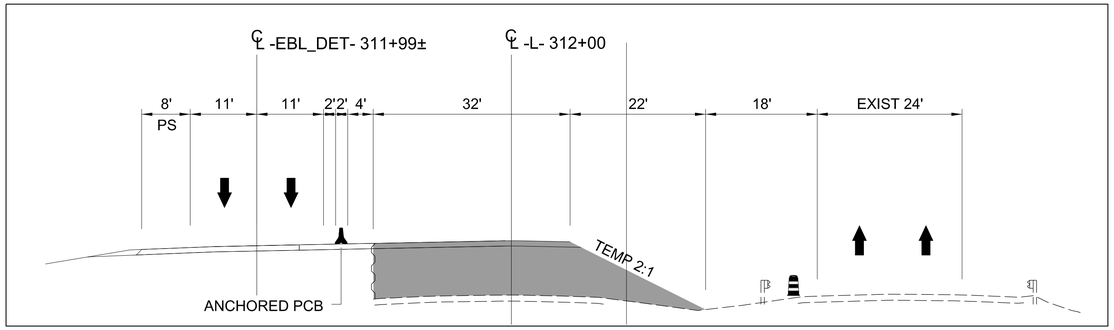
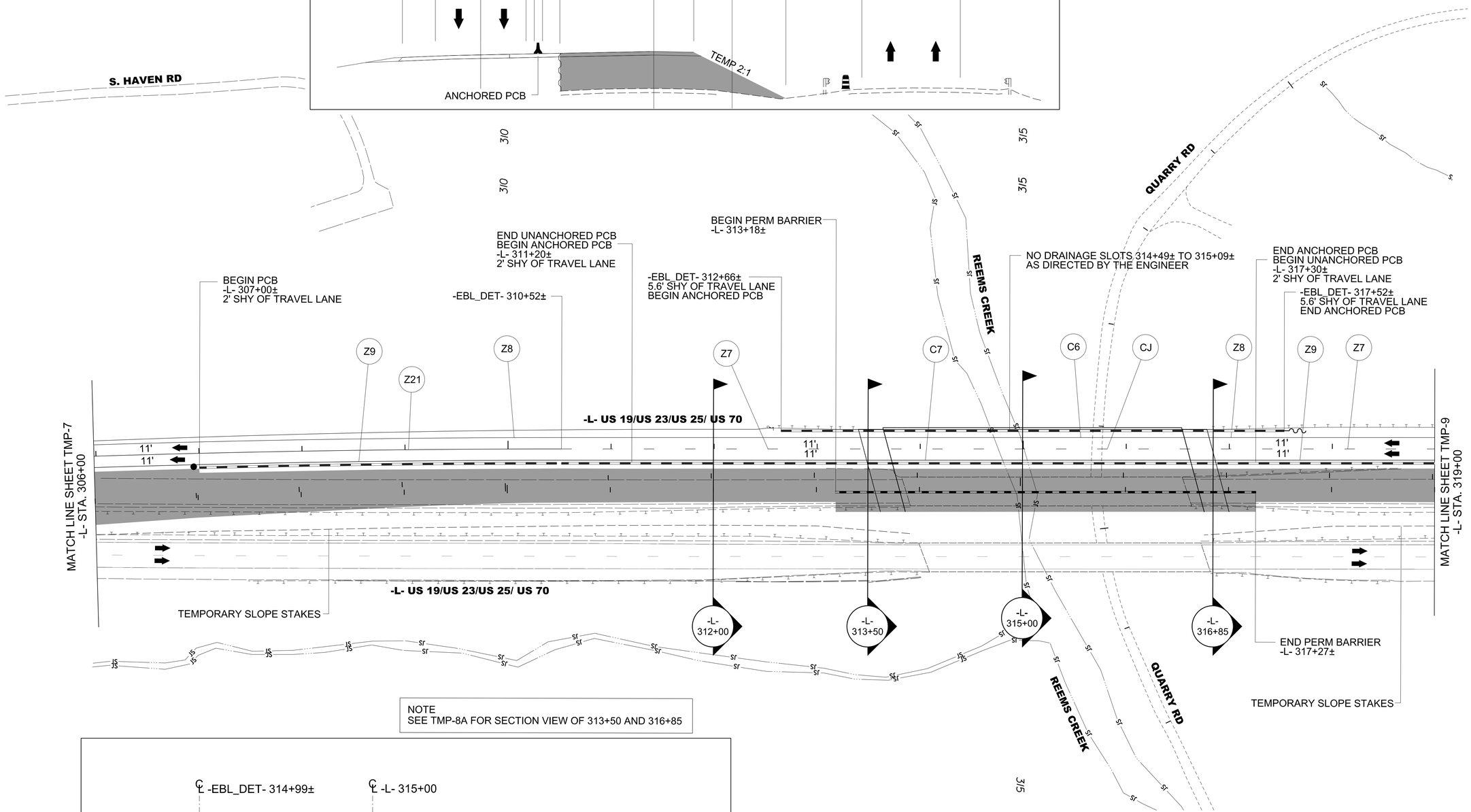
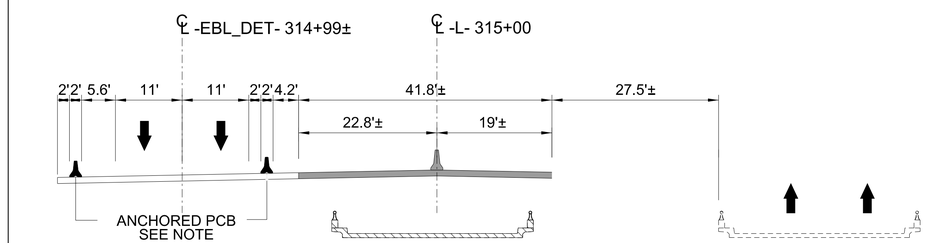
PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-8





NOTE
SEE TMP-8A FOR SECTION VIEW OF 313+50 AND 316+85



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DocuSigned by: J.W. Woolard, Jr.
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US 19/US 23/US 25/ US 70/FUTURE I-26 -L- PHASE II

6/15/2022
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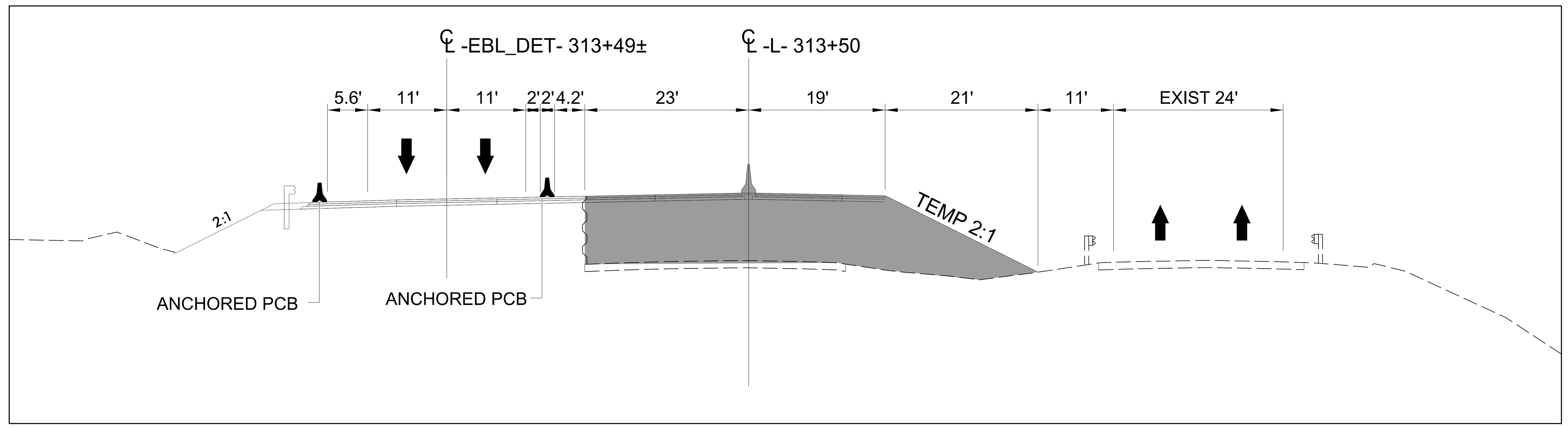
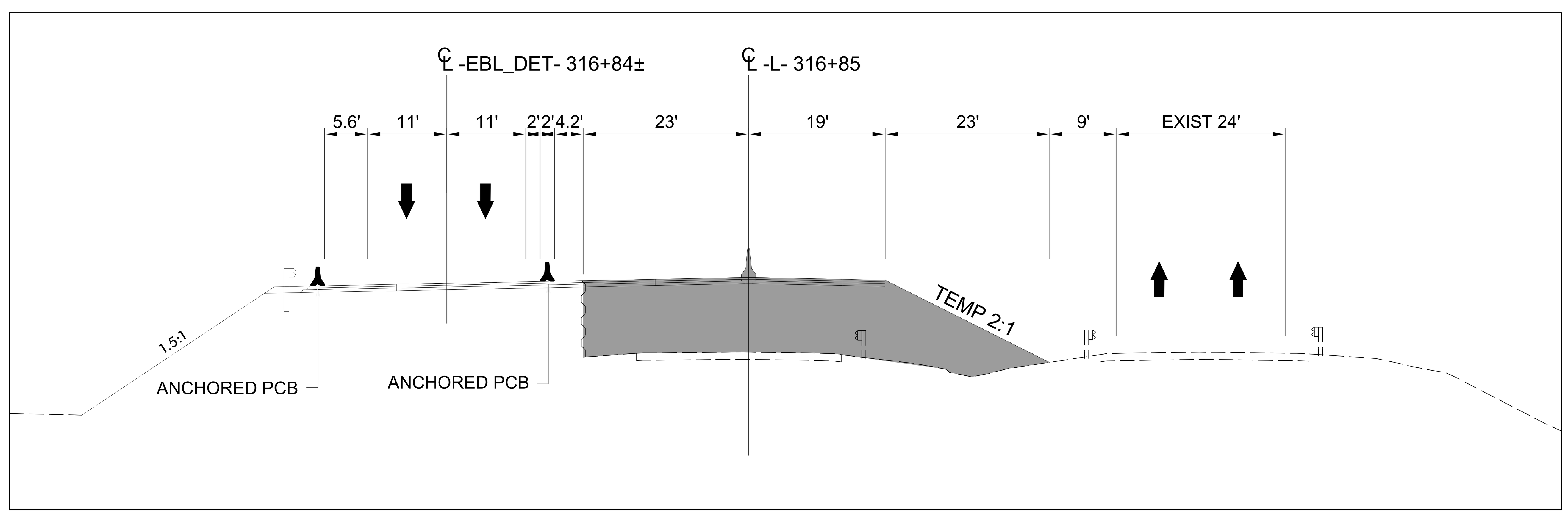
PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-8A





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PHASE II

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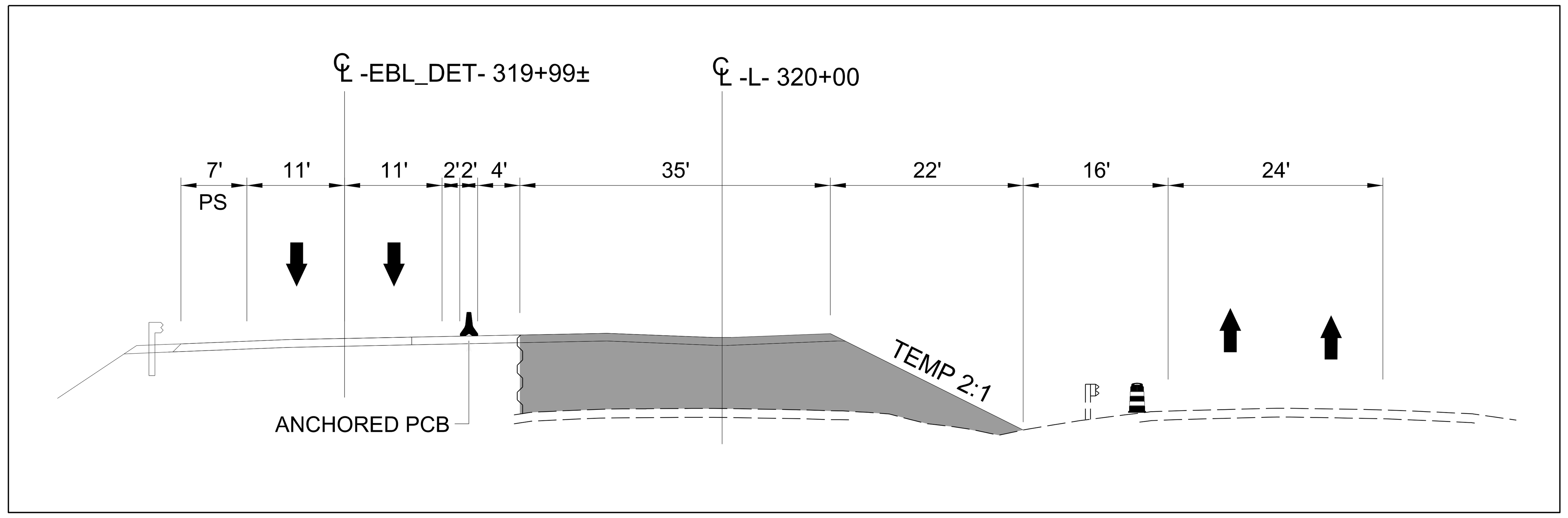
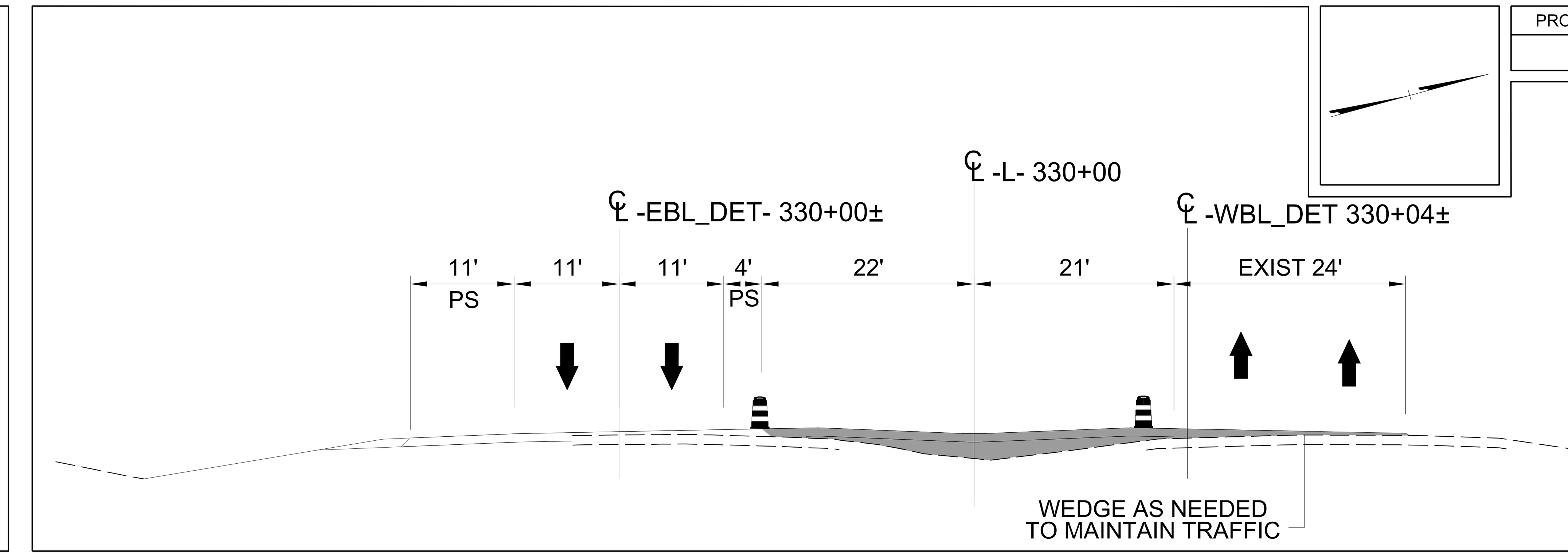
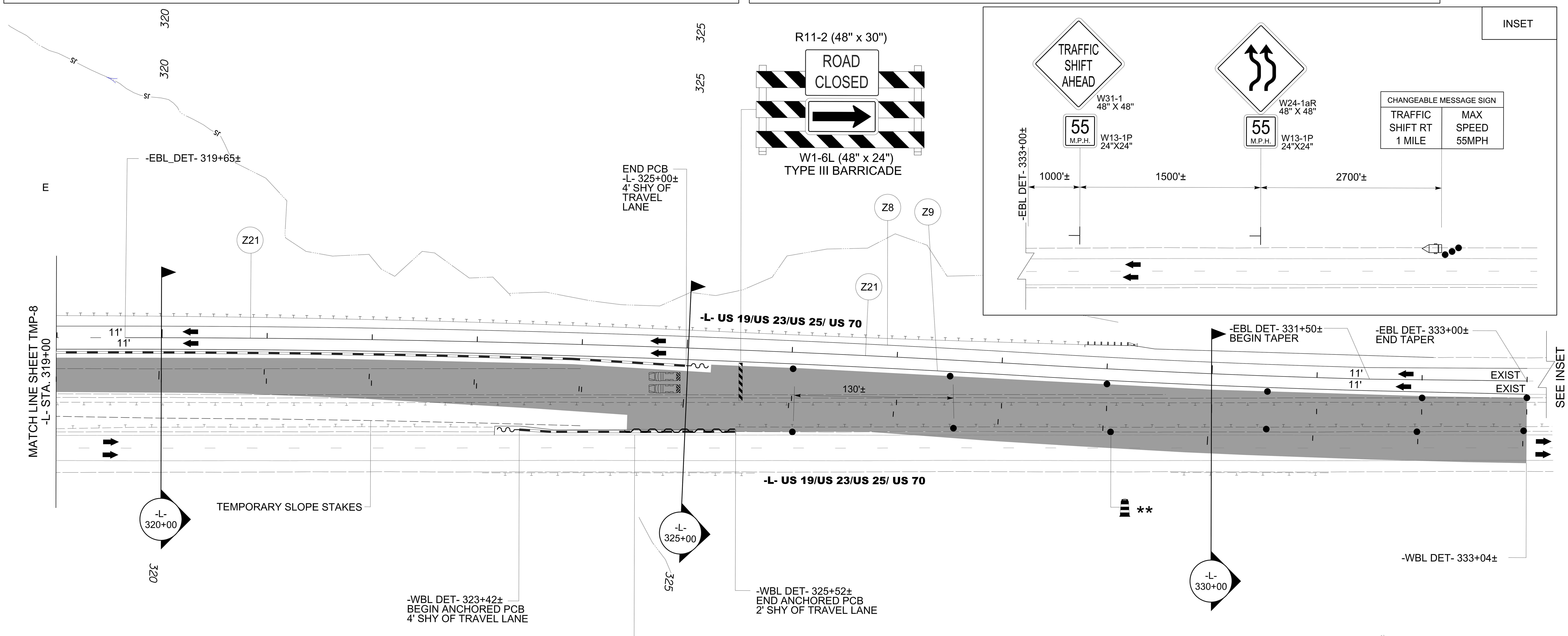
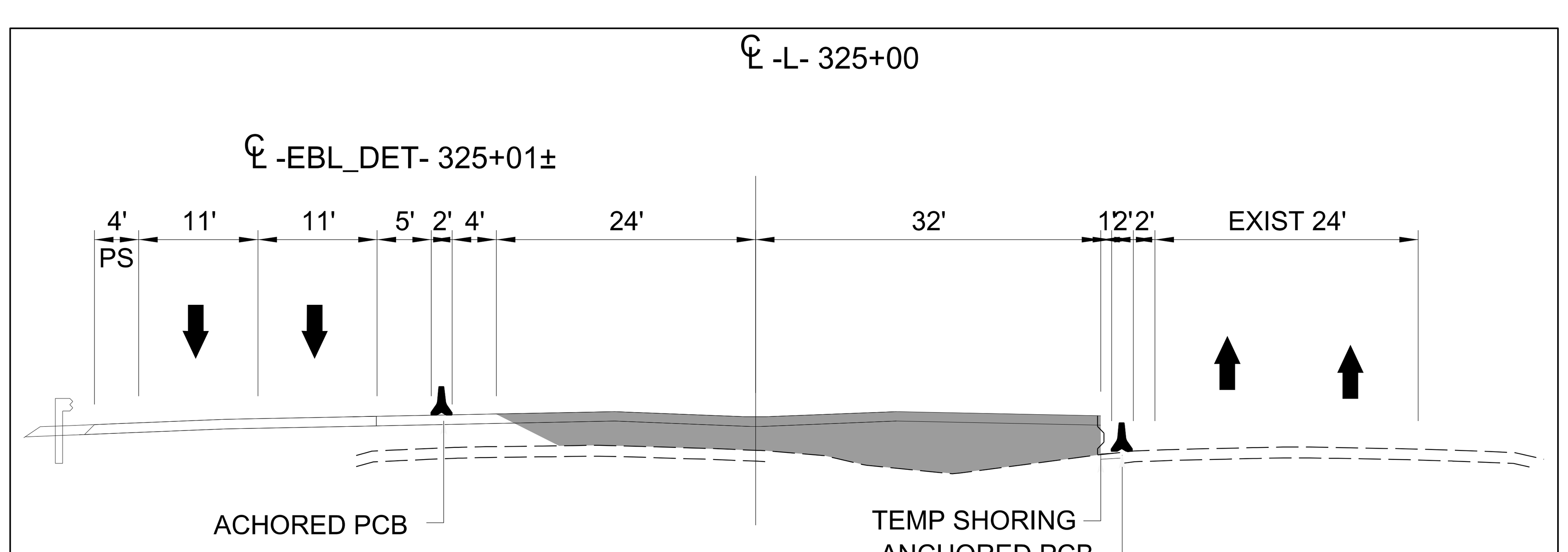
PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-9







** SEE HIGH VISIBILITY DEVICES SPECIAL PROVISION



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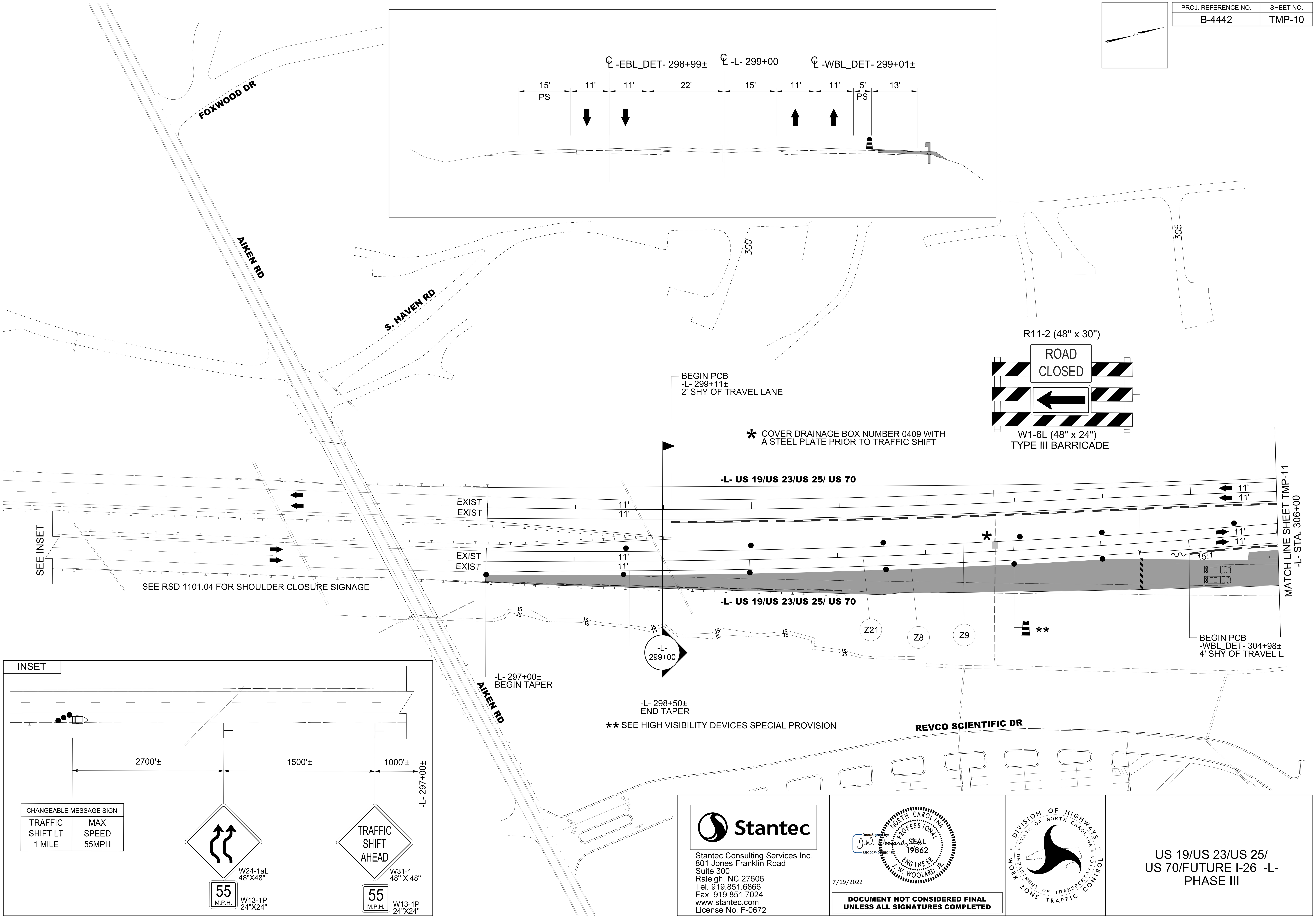
US 19/US 23/US 25/
US 70/FUTURE I-26 -L-
PHASE II

PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-10



℄ -EBL_DET- 298+99±
℄ -L- 299+00
℄ -WBL_DET- 299+01±
15' PS
11'
11'
22'
15'
11'
11'
5' PS
13'
FOXWOOD DR
AIKEN RD
S. HAVEN RD
300
305
R11-2 (48" x 30")
ROAD CLOSED
W1-6L (48" x 24")
TYPE III BARRICADE
BEGIN PCB
-L- 299+11±
2' SHY OF TRAVEL LANE
* COVER DRAINAGE BOX NUMBER 0409 WITH A STEEL PLATE PRIOR TO TRAFFIC SHIFT
-L- US 19/US 23/US 25/ US 70
EXIST
EXIST
11'
11'
EXIST
EXIST
11'
11'
SEE INSET
SEE RSD 1101.04 FOR SHOULDER CLOSURE SIGNAGE
-L- US 19/US 23/US 25/ US 70
MATCH LINE SHEET TMP-11
-L- STA. 306+00
15:1
Z21
Z8
Z9
**
-L- 299+00
BEGIN PCB
-WBL_DET- 304+98±
4' SHY OF TRAVEL L.
-L- 297+00±
BEGIN TAPER
-L- 298+50±
END TAPER
** SEE HIGH VISIBILITY DEVICES SPECIAL PROVISION
REVCO SCIENTIFIC DR
AIKEN RD
INSET
2700'±
1500'±
1000'±
-L- 297+00±
CHANGEABLE MESSAGE SIGN
TRAFFIC SHIFT LT 1 MILE
MAX SPEED 55MPH
W24-1aL 48"X48"
55 M.P.H.
W13-1P 24"X24"
TRAFFIC SHIFT AHEAD
W31-1 48" X 48"
55 M.P.H.
W13-1P 24"X24"

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

US 19/US 23/US 25/
US 70/FUTURE I-26 -L-
PHASE III

6/15/2022
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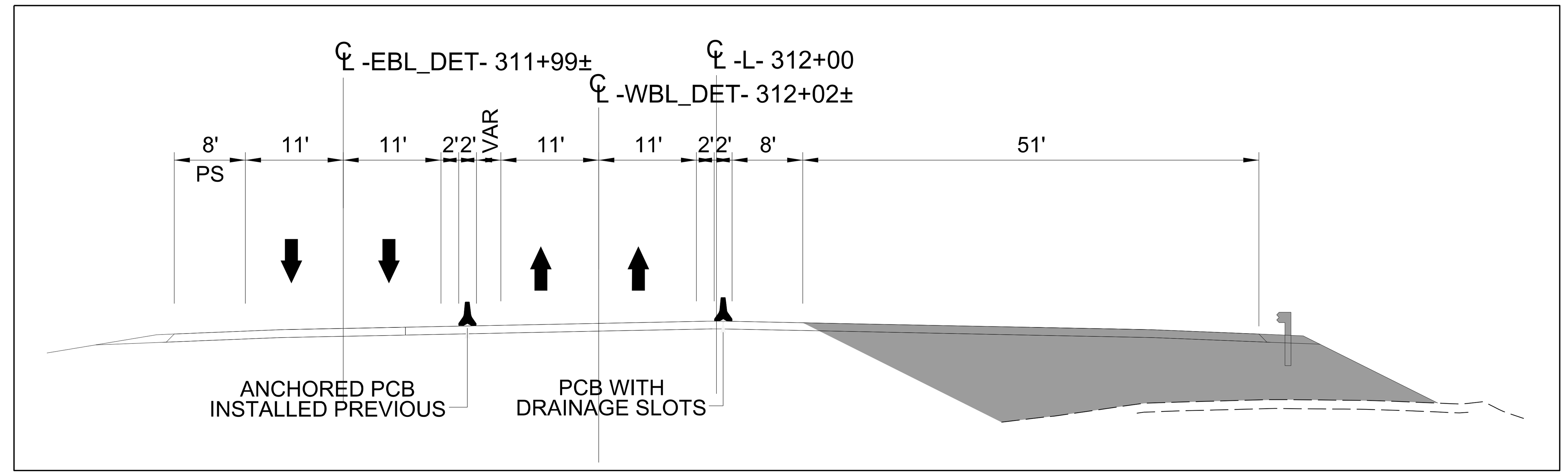
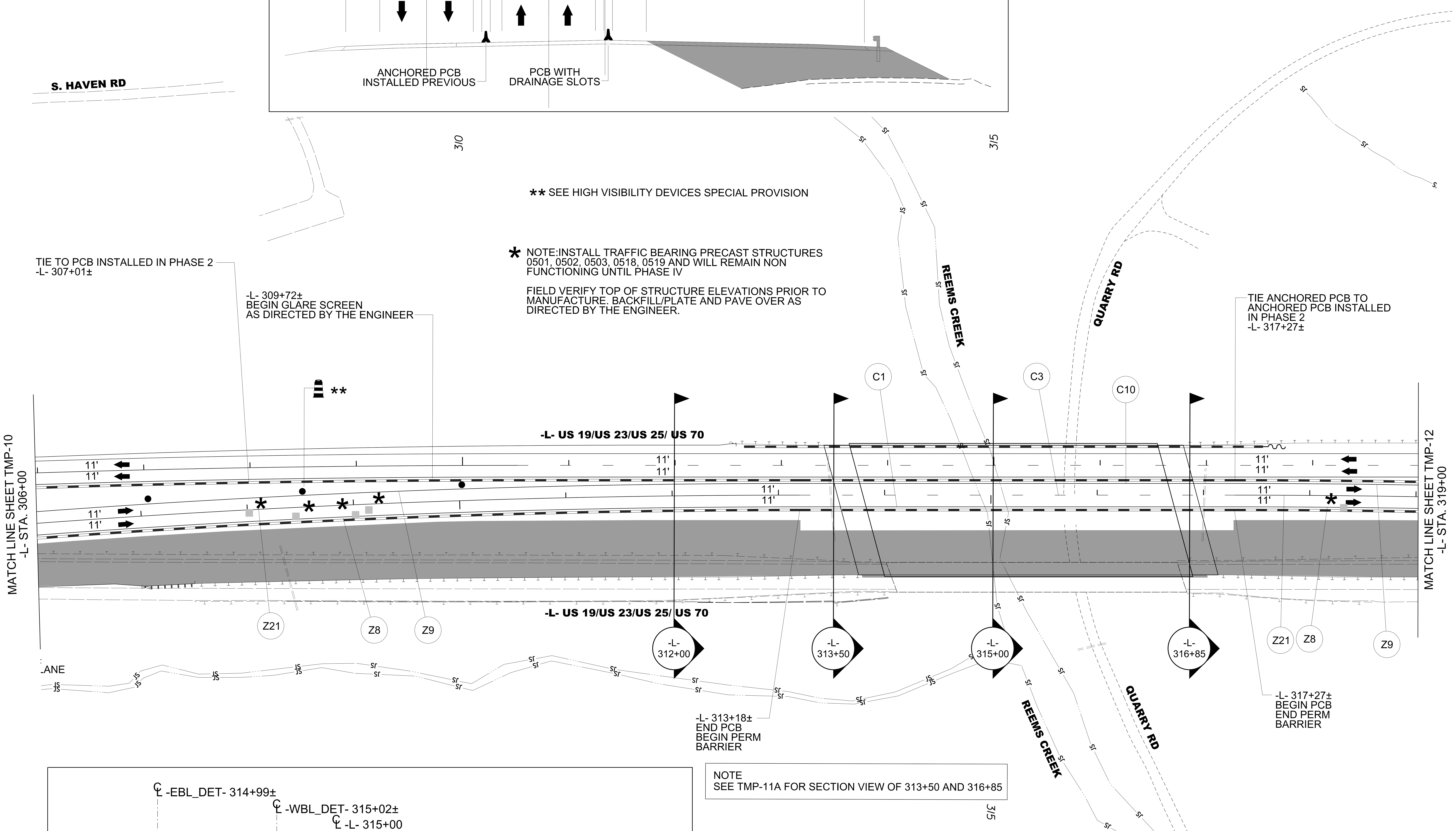
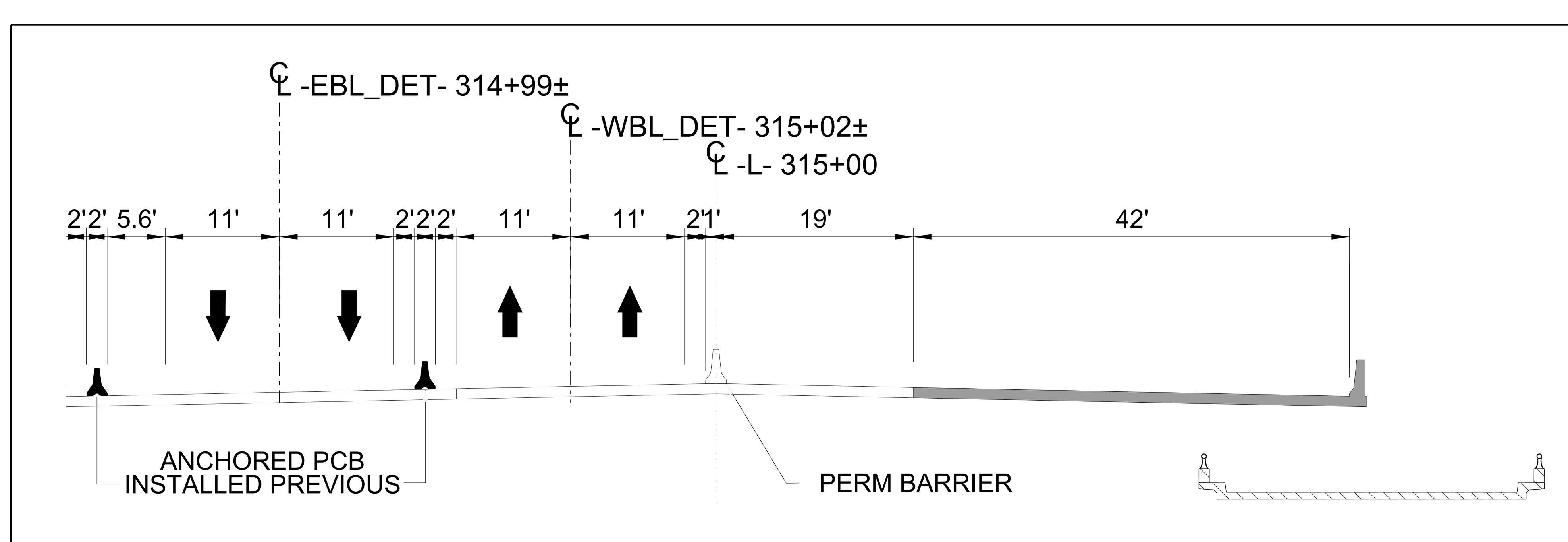
PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-11





S. HAVEN RD
** SEE HIGH VISIBILITY DEVICES SPECIAL PROVISION
* NOTE:INSTALL TRAFFIC BEARING PRECAST STRUCTURES 0501, 0502, 0503, 0518, 0519 AND WILL REMAIN NON FUNCTIONING UNTIL PHASE IV
FIELD VERIFY TOP OF STRUCTURE ELEVATIONS PRIOR TO MANUFACTURE. BACKFILL/PLATE AND PAVE OVER AS DIRECTED BY THE ENGINEER.
TIE TO PCB INSTALLED IN PHASE 2 -L- 307+01±
-L- 309+72± BEGIN GLARE SCREEN AS DIRECTED BY THE ENGINEER
REEMS CREEK
QUARRY RD
TIE ANCHORED PCB TO ANCHORED PCB INSTALLED IN PHASE 2 -L- 317+27±
MATCH LINE SHEET TMP-10 -L- STA. 306+00
MATCH LINE SHEET TMP-12 -L- STA. 319+00
-L- US 19/US 23/US 25/ US 70
C1 C3 C10
Z21 Z8 Z9
-L- 312+00
-L- 313+50
-L- 315+00
-L- 316+85
LANE
-L- 313+18± END PCB BEGIN PERM BARRIER
-L- 317+27± BEGIN PCB END PERM BARRIER

NOTE
SEE TMP-11A FOR SECTION VIEW OF 313+50 AND 316+85



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US 19/US 23/US 25/
US 70/FUTURE I-26 -L-
PHASE III

6/15/2022
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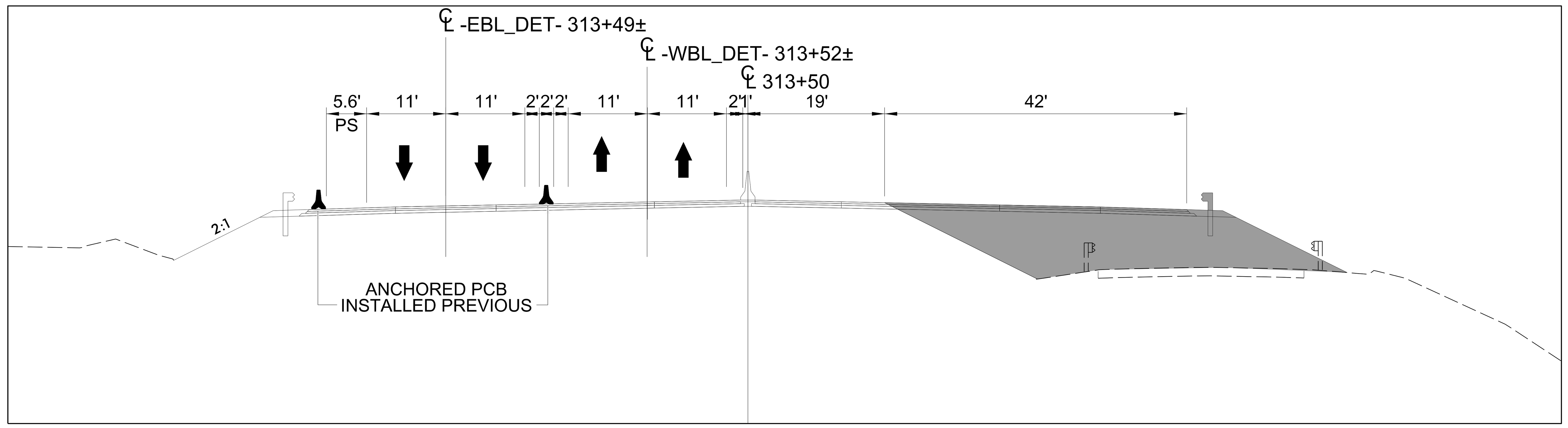
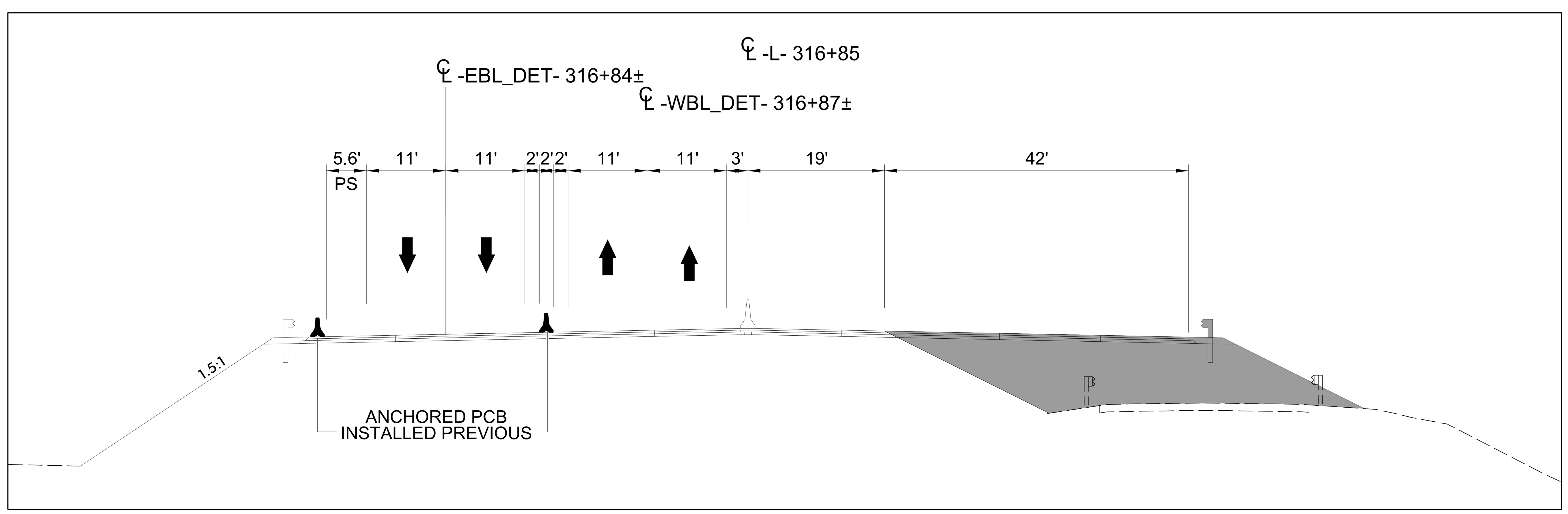
PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-11A





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PHASE III

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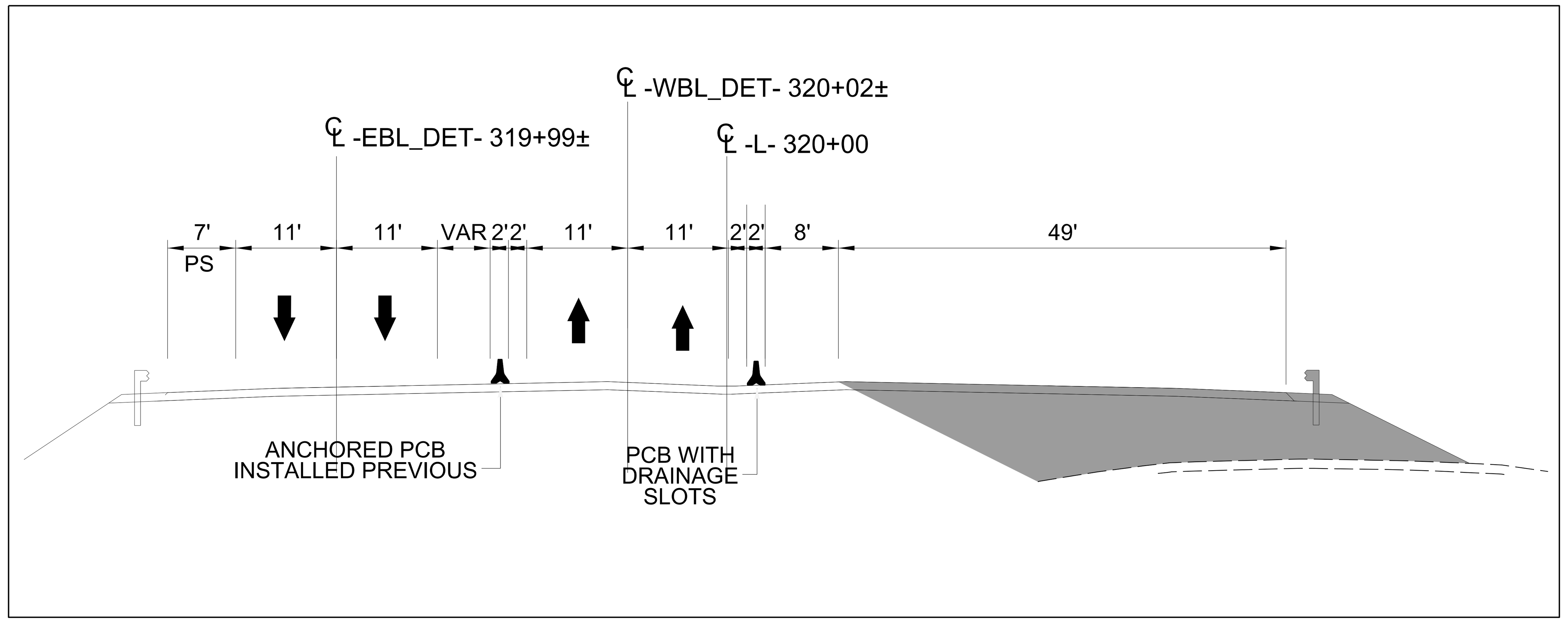
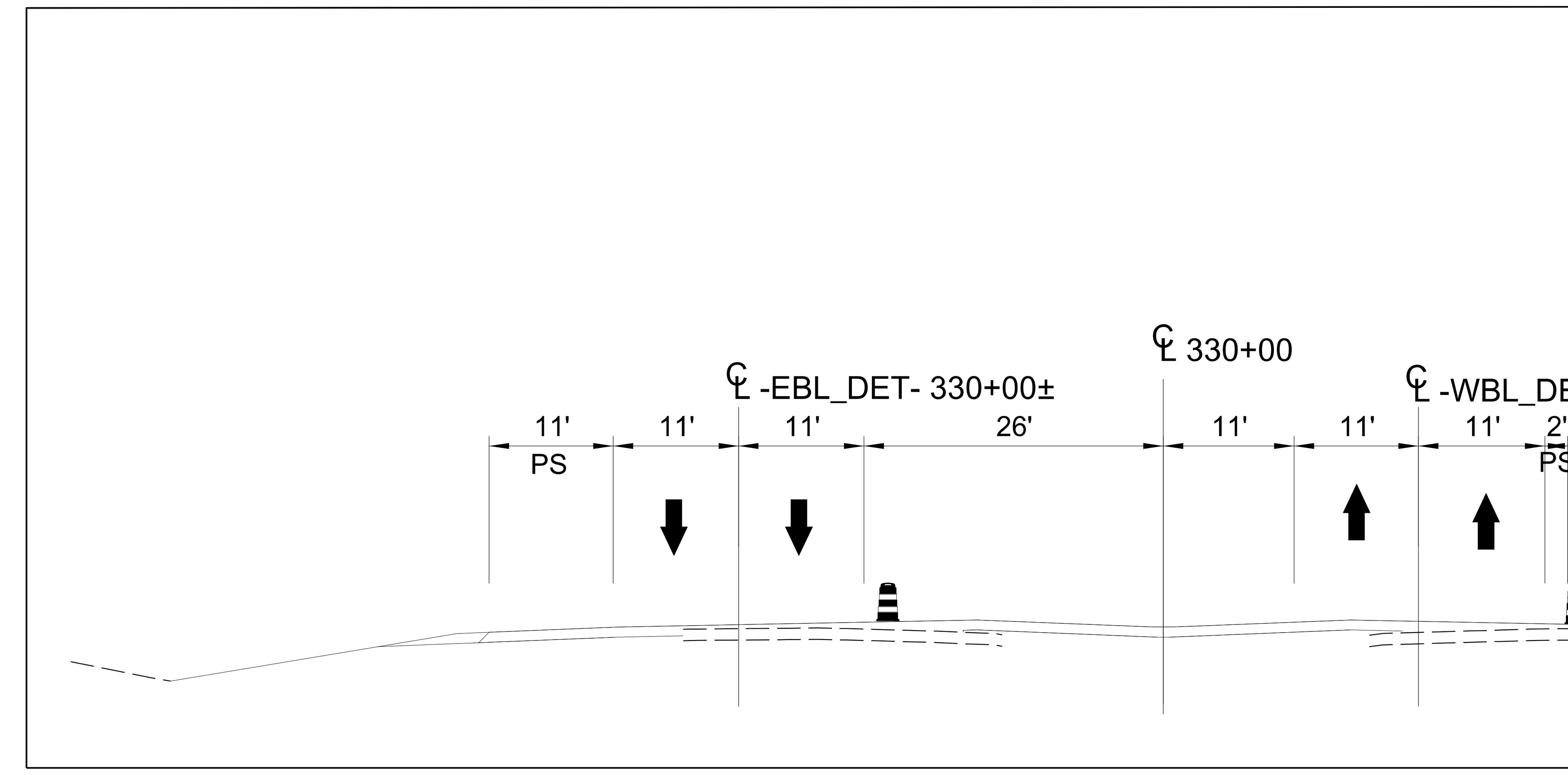
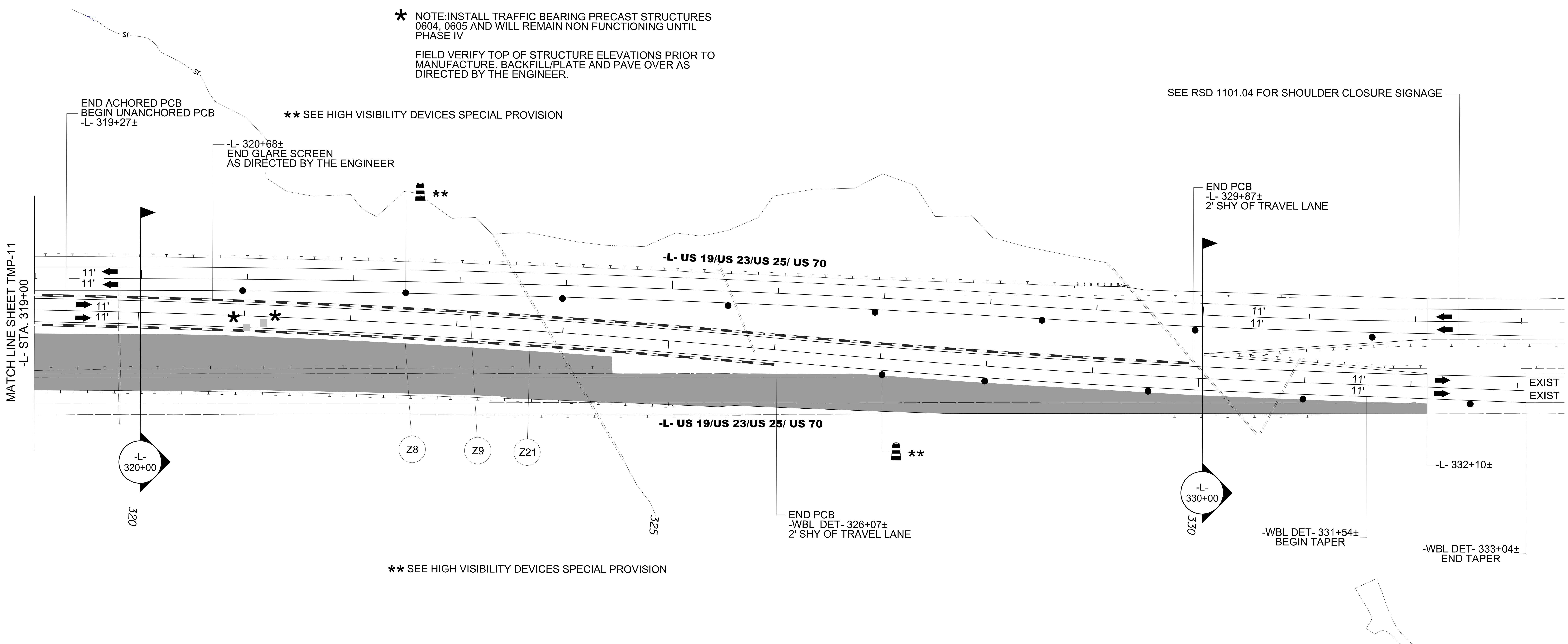
PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-12







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PHASE III

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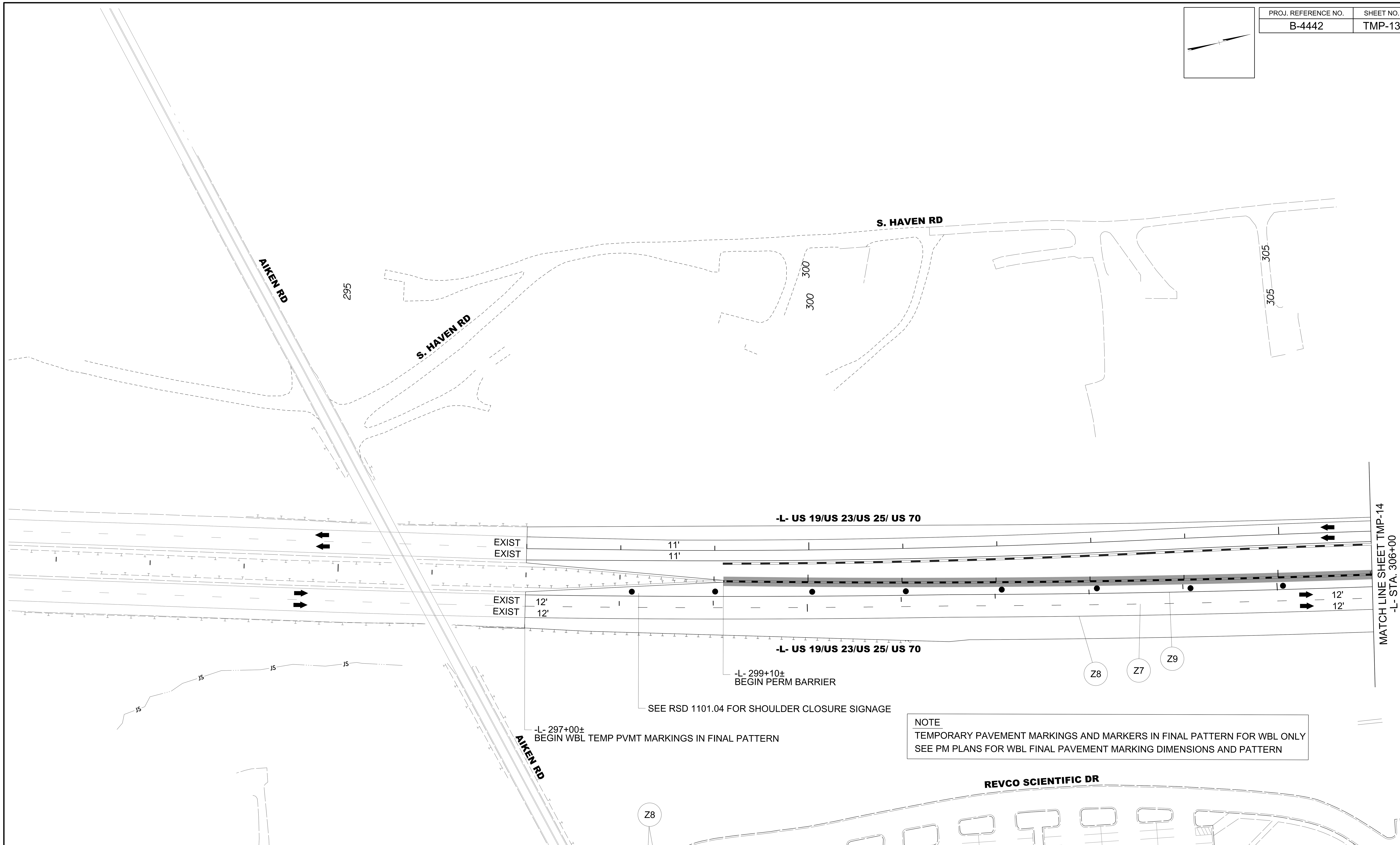
PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-13



NOTE
TEMPORARY PAVEMENT MARKINGS AND MARKERS IN FINAL PATTERN FOR WBL ONLY
SEE PM PLANS FOR WBL FINAL PAVEMENT MARKING DIMENSIONS AND PATTERN

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US 19/US 23/US 25/
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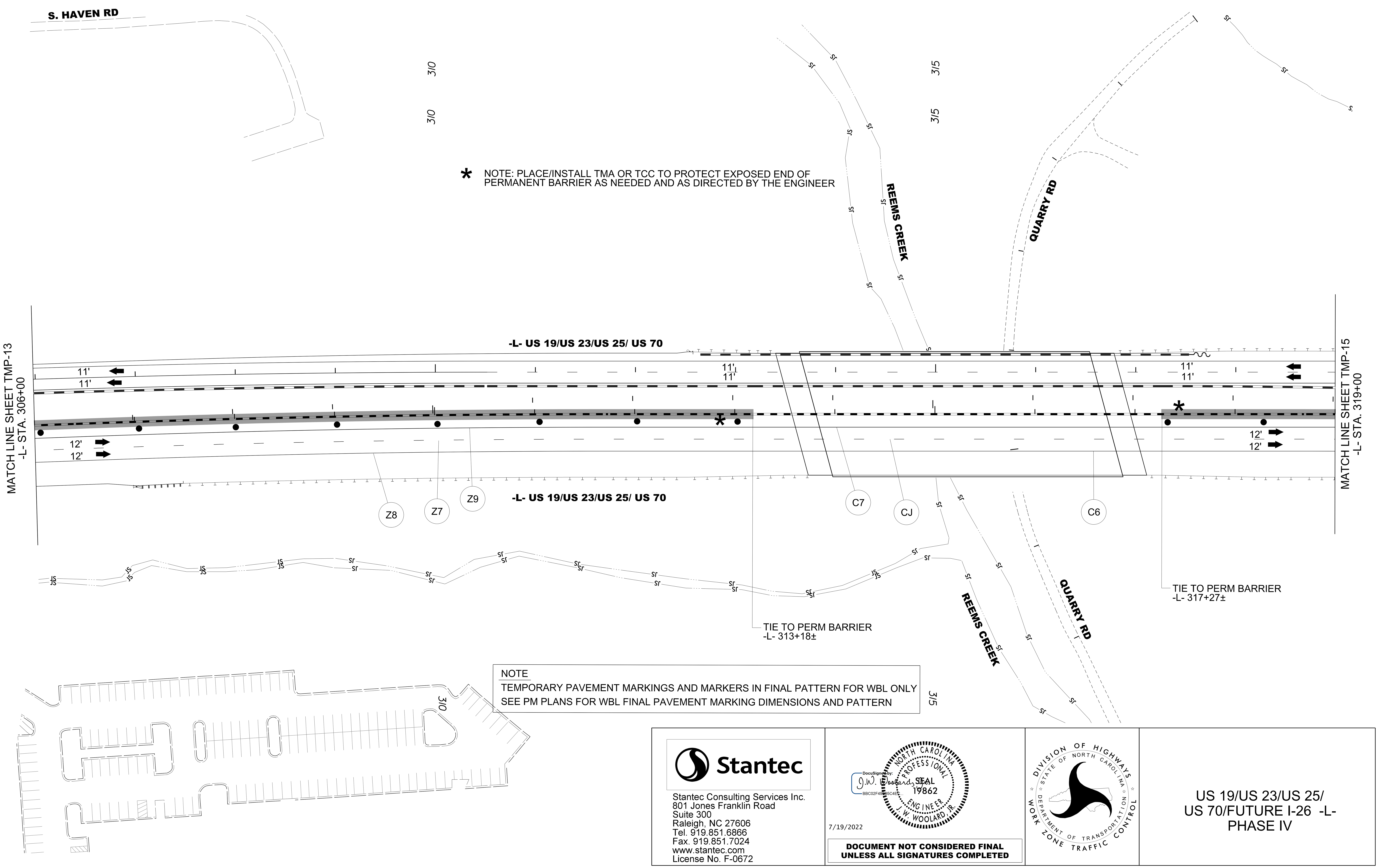
PHASE IV

PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-14



* NOTE: PLACE/INSTALL TMA OR TCC TO PROTECT EXPOSED END OF PERMANENT BARRIER AS NEEDED AND AS DIRECTED BY THE ENGINEER

NOTE

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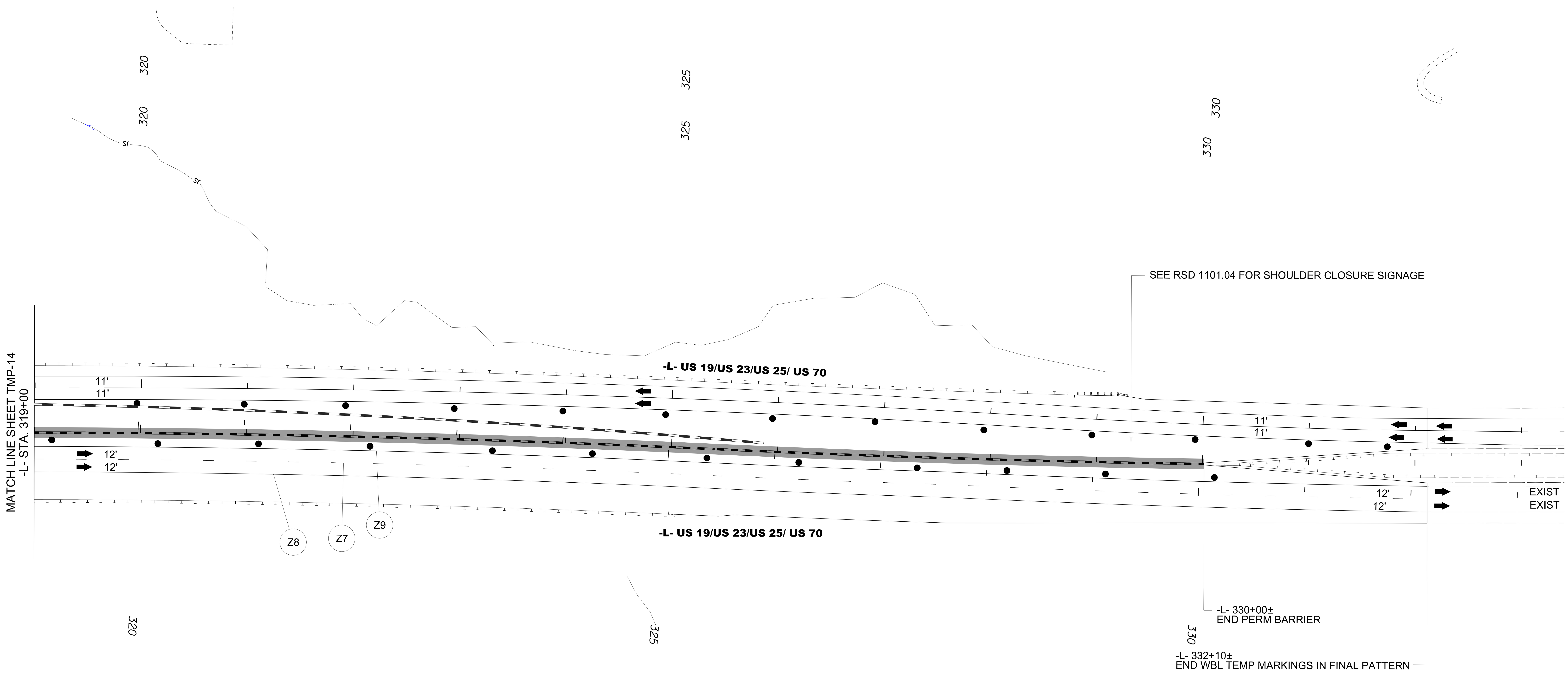
US 70/FUTURE I-26 -L-
PHASE IV

PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-15



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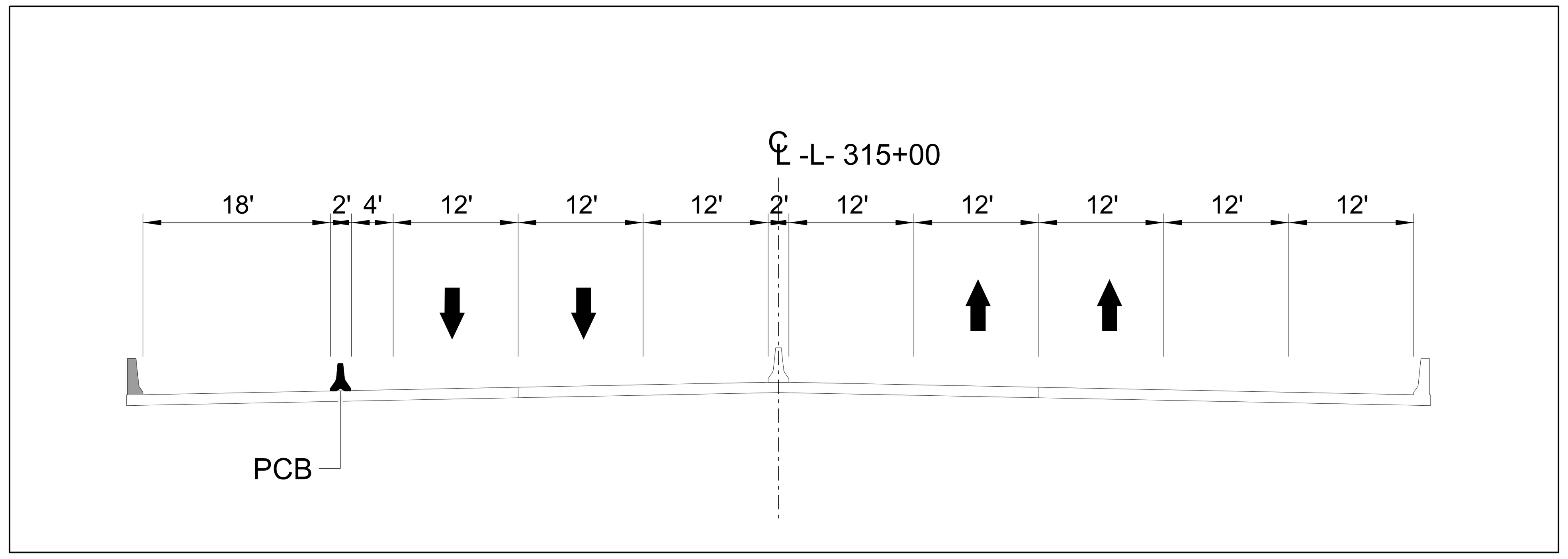
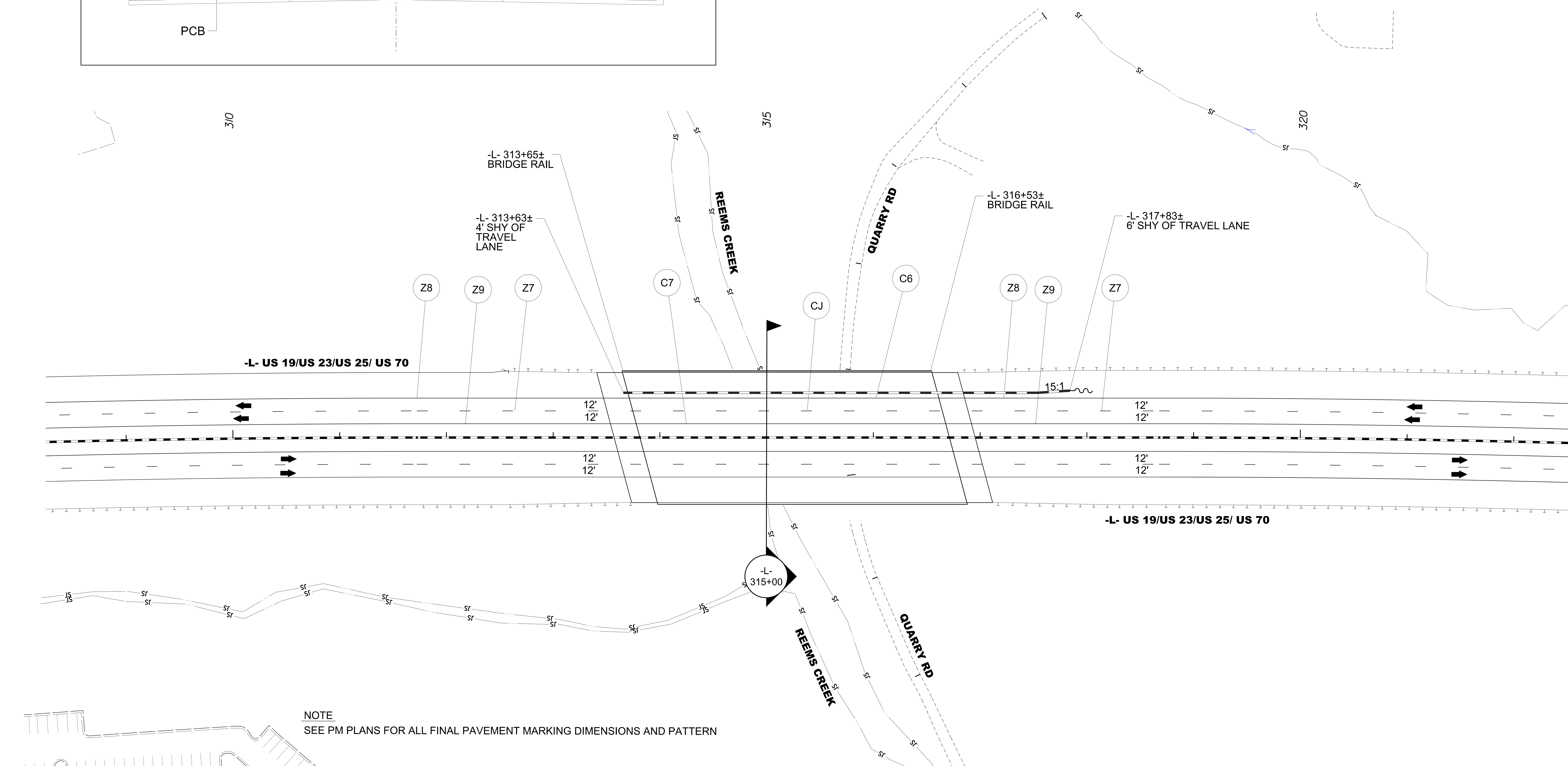
PHASE IV

PROJ. REFERENCE NO.	SHEET NO.
B-4442	TMP-16





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PHASE V

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