

LETTING DATE

CONSTRUCTION PROJECT NO.

TRANSPORTATION CABINET DEPARTMENT OF HIGHWAYS

BRIDGE REPAIR PLANS FOR:

MUHLENBERG COUNTY

089B00093L / R

WESTERN KENTUCKY PARKWAY OVER GREEN RIVER

INDEX OF SHEETS

Sheet No.	Description
M1	Title Sheet
M2	General Notes
M3-M4	Layout Sheets
M5	Joint Seal Replacement Details
M6	Bearing Stiffener Repair Details
M7-M8	Floorbeam Repair Details
M9	Stringer End Repair Details
M10	CIF Retrofit Details
M11	Railing Retrofit Details
M12	Moveable Bearing Retrofit Details
M13-M18	Detour Plan Sheets

SPECIAL NOTES

- Special Note for Contract Completion Date and Penalties on Bridge Repair Contracts
- Special Note for Bridge Joint Seal Replacement
- Special Note for Bearing Stiffener Repair
- Special Note for Floorbeam Crack Repair
- Special Note for Stringer End Repair
- Special Note for CIF Retrofit
- Special Note for Bridge Railing Retrofit
- Special Note for Preventive Maintenance
- Special Note for Traffic Control
- Special Note for Queue Protection Vehicle
- Special Note for Portable Queue Warning Alert System
- Special Note for Painting Structural Steel Repairs
- Special Note for Moveable Bearing Retrofits

SPECIAL PROVISIONS

STANDARD DRAWINGS

BHS-010	Railing System 40 Inch Single Slope
TTC-115-04	Lane Closure Multi-Lane Highway Case I
TTC-160-02	Temporary Pavement Marker Arrangements for Lane Closures

SPECIFICATIONS

- 2019 Standard Specifications for Road and Bridge Construction
- 2020 AASHTO LRFD Bridge Design Specifications

ESTIMATE OF QUANTITIES

BID ITEM CODE	02562	02569	02650	02653	02671	02775	06515	06550	06551	08104	08151	08811	23386EC	24543EC	24879EC	24879EC	24879EC	24879EC	24879EC	24879EC	24879EC	24879EC	24981EC	24982EC	24983EC	26136EC	26137EC	26138EC
BID ITEM	TEMPORARY SIGNS	DEMOBILIZATION	MAINTAIN AND CONTROL TRAFFIC	LANE CLOSURE	PORTABLE CHANGEABLE MESSAGE SIGN	ARROW PANEL	PAVE STRIPING - PERM PAINT - 6 IN	PAVE STRIPING - TEMP REM TAPE - W	PAVE STRIPING - TEMP REM TAPE - Y	CONCRETE-CLASS AA	STEEL REINFORCEMENT-EPOXY COATED	REMOVE BRIDGE RAIL	JOINT SEAL REPLACEMENT	CLEAN	STEEL REPAIR (BEARING STIFFENER REPAIR)	STEEL REPAIR (FLOORBEAM CRACK REPAIR)	STEEL REPAIR (STRINGER END REPAIR)	STEEL REPAIR (LONG STIFFENER CIF RETROFIT)	STEEL REPAIR (BEARING STIFFENER CIF RETROFIT)	STEEL REPAIR (MOVEABLE BEARING RETROFIT)	STEEL REPAIR (LARGE MOVEABLE BEARING RETROFIT)	BRIDGE CLEANING	CONCRETE COATING	BEARING LUBRICATION	PORTABLE QUEUE WARNING ALERT SYSTEM	QUEUE WARNING PCMS	QUEUE WARNING PORTABLE RADAR SENSORS	
UNIT	S.F.	L.S.	L.S.	EACH	EACH	EACH	L.F.	L.F.	L.F.	C.Y.	LBS	L.F.	L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	L.S.	L.S.	EACH	MONTH	MONTH	MONTH	
089B00093L WESTERN KENTUCKY PARKWAY WESTBOUND	583		1	2	1	1	235	4030	4030	389.7	56,764	3600	600	120	1	141	14	544	24	11	1				8			
089B00093R WESTERN KENTUCKY PARKWAY EASTBOUND	617		1	2	1	1	235	4030	4030	389.7	56,764	3600	600	120	6	132	27	544	24	12				8				
ROADWAY ITEMS																									5	10	10	
BRIDGE TOTALS	1200	1	2	4	2	2	470	8060	8060	779.4	113,528	7200	1200	240	7	273	41	1088	48	23	1	1	1	16	5	10	10	

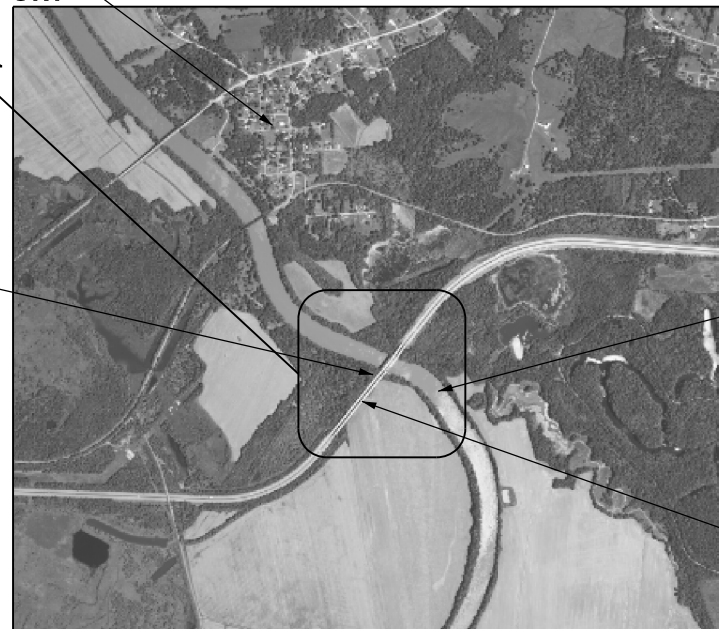
ROCKPORT

WK PARKWAY OVER GREEN RIVER

PROPOSED WORK: WK PARKWAY BRIDGES REPAIR PLANS



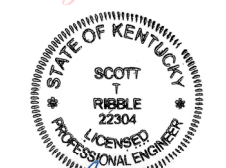
089B00093L WESTERN KENTUCKY PARKWAY WESTBOUND



GREEN RIVER

089B00093R WESTERN KENTUCKY PARKWAY EASTBOUND

Scott Ribble
Digitally signed by Scott Ribble
DN: cn=Scott Ribble, o=Burgess & Niple, ou, email=scott.ribble@burgessniple.com, c=US
Date: 2024.11.01 11:02:52 -0400



BY: *Scott Ribble*
DATE: November 1, 2024



REVISION	DATE

SPECIFICATION NOTES

SPECIFICATIONS: References to the specifications are to the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, including any current supplemental specifications. All references to the AASHTO Specifications are to the 9th edition-2020 of the AASHTO LRFD Bridge Design Specifications.

MATERIAL SPECIFICATION NOTES

MATERIALS: ASTM or AASHTO Specifications, current edition, as designated in the Special Notes and plan notes shall govern the materials furnished.

BONDING TO EXISTING CONCRETE USING STRUCTURAL ADHESIVES: Bond proposed plastic concrete to existing hardened concrete in all locations using a Type V Epoxy Resin or other approved Structural Adhesive as prescribed in Section 826 of the Specifications. Follow the manufacturer's recommended application instructions. This work and material is incidental to the unit price bid for the most applicable bid item.

REINFORCEMENT: Dimensions shown from the face of the concrete to bars are clear distances unless otherwise shown. Spacing of bars is from center to center of bars. Clear distance to the face of concrete is 2", unless otherwise noted. Bars designated with the suffix (E) shall be epoxy coated in accordance with Section 811.10 of the Standard Specifications. The cost for furnishing and installing reinforcement shall be incidental to the unit price bid for the most applicable bid item.

GENERAL SPECIFICATION NOTES

ON SITE INSPECTION: Each contractor submitting a bid for this work shall make a thorough inspection of the bridges, and the work site prior to submitting a bid and shall be thoroughly familiarized with existing conditions so that work can be expeditiously performed after a contract is awarded. A suitable method of performing the work described herein should be investigated. Submission of a bid will be considered evidence of this inspection having been made. Any claims from site conditions will not be honored by the Department of Highways.

INCIDENTAL ITEMS: The Contractor is required to complete the structure in accordance with the plans and specifications. Material or labor not otherwise specified are to be considered incidental to the contract.

COMPLETION OF THE STRUCTURE: The Contractor is required to complete the construction in accordance with the plans and specifications. Material, labor, or construction operations, not otherwise specified, are to be included in the bid item most appropriate to the work involved. This may include but not be limited to incidental materials, disposal of waste off the right-of-way, incidental labor, or anything else that may be required to complete the construction.

BRIDGE PLANS: A copy of the available existing bridge plans (Drawing Numbers 14879, 14965, 14974, and 15300), will be made available to the successful bidder upon his written request to the Division of Structural Design. The completeness of these drawings is not guaranteed, and no responsibility is assumed by the Department of Highways for their accuracy.

FIELD VERIFICATION: The Contractor shall verify elevations and dimensions, including thickness of components, cross slopes, and crown details with field measurement prior to ordering materials or fabricating steelwork. Any discrepancies shall be brought to the attention of the Engineer. New material that is unsuitable because of variations in the existing structure shall be replaced at the Contractor's expense.

DAMAGE TO THE STRUCTURE: The Contractor is responsible for any and all damage to the existing structure during the construction should damage result from the Contractor's actions. After the completion of construction, the structure and site shall receive a final cleaning up. The Contractor shall clear the right-of-way and all ground the Contractor occupies in connection with the work of all rubbish, equipment, and excess materials. Place rubbish and all waste of whatever nature, other than hazardous materials, on either public or private property in a location out of the view from the roadway and in a manner to the Department that does not present an unsightly appearance. Restore in an acceptable manner all property, both public and private, that was damaged in the prosecution of the work.

DIMENSIONS: Dimensions shown on these plans are taken from the drawings listed under "Bridge Plans" above and do not necessarily reflect revisions made during construction. All plan dimensions are for a normal temperature of 60°F. Layout dimensions are horizontal dimensions. Deck width is measured at the top of the concrete deck below the overlay.

SHOP DRAWINGS: The Contractor is to submit detailed shop drawings and material specifications for any details or materials that vary from these plans to the Department for approval in accordance with Section 607.03.01 of the Standard Specifications. When any changes are proposed by the fabricator or supplier, the shop drawings reflecting these changes shall be submitted to the Department through the Contractor.

MAINTAINING TRAFFIC: Traffic shall be maintained at all times in accordance with the Special Note for Traffic Control and the Standard Drawings.

UTILITY PROTECTION: If present, any active utility ducts and electrical conduit shall be adequately protected. Any damage to utilities caused by the Contractor shall be repaired at the Contractor's expense.

REMOVED MATERIALS: All existing steel, including bolts and other connection hardware, that is to be removed shall not be reused on the structure unless otherwise noted in the plans. The Contractor is to ensure that the remaining steel is not damaged during removal. All material removed shall become the property of the Contractor and shall be removed from the bridge site. The cost of removal shall be incidental to the most applicable bid items.

CONSTRUCTION SEQUENCE: The Contractor shall follow the construction and phasing sequences detailed in the plans and Special Notes. The Contractor may propose alternate construction sequences to the Engineer for approval no later than three working days prior to the start of work on a given work item.

SUPERSTRUCTURE NOTES

CLEANING EXISTING STEEL: All areas of existing steel that are to be in contact with new steel shall be cleaned of all dirt, rust, paint, and other foreign matter before installing the new steel. The cost of this cleaning is to be incidental to the unit price bid for the most appropriate bid item.

PROHIBITED FIELD WELDING: Except as noted in these plans and in the Special Notes, no welding of any nature shall be performed on the load carrying members of the bridges without the written consent of the Director, Division of Structural Design, and then only in the manner and at the locations designated in the authorization.

WELDING: No welding shall be permitted without written permission of the Engineer. All welding shall conform to Section 607.03.07 of the current Standard Specifications for Road and Bridge Construction. Modifications and additions as stated in the plans and Special Notes shall supersede the AASHTO/AWS Specifications. Welding procedures shall be submitted to the Engineer and approved prior to the start of fabrication and repairs. Work shall be completed by an AWS certified welder. The cost of the welding and welding materials is to be incidental to the unit price bid for the most appropriate bid items.

MILL TEST REPORTS: Notarized test reports shall be furnished in triplicate to the Department showing that all the materials used for their repairs conform to the requirements of the plans and specifications.

PAINT: See the Special Note for Painting Structural Steel Repairs.

RESIDUAL LEAD: Residual lead paint may still be on the structure. The Contractor is advised to take all necessary protective measures including worker safety and environmental regulations when performing all work specified in the contract. The Department will not consider any claims based on residual lead paint.



TOUCH-UP PAINTING: All areas of new or existing structural steel on which the paint has been damaged by the Contractor with weld burns or by other means during construction shall be touched up per the procedures listed for painting in the Special Notes. The cost for this work shall be incidental to the unit price bid for the most applicable bid items.

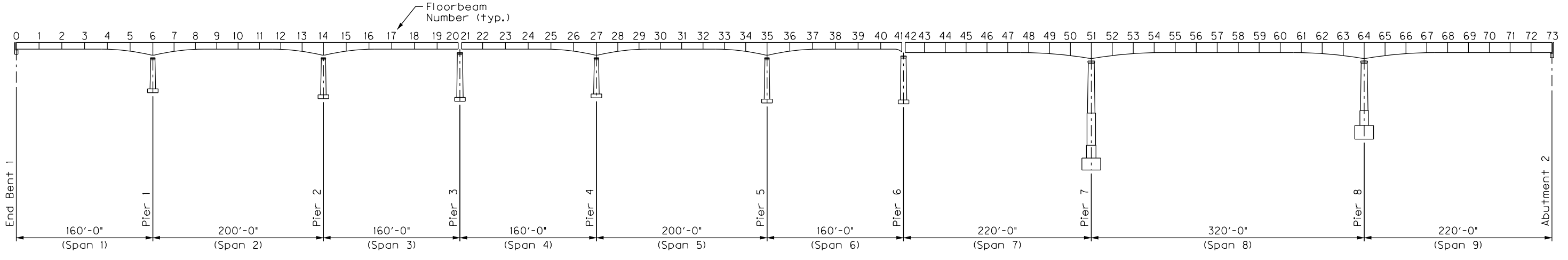
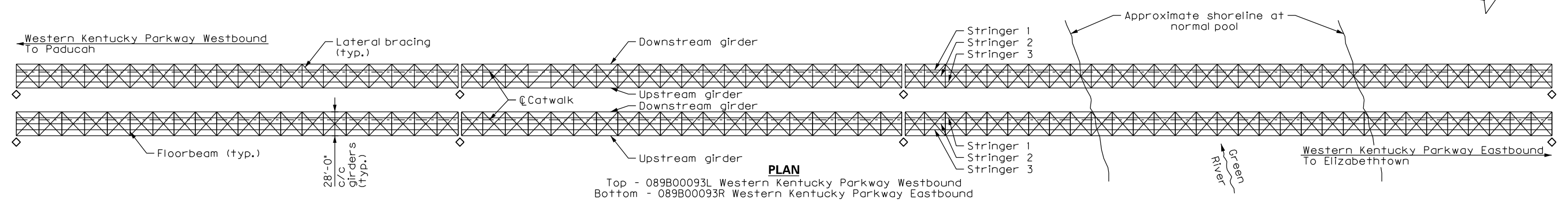
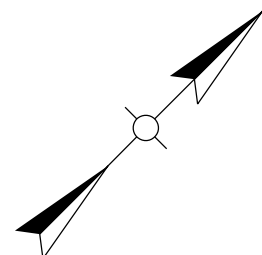
PAYMENT FOR STRUCTURAL STEEL REPAIRS: The unit price bid for all structural steel repair bid items listed in the estimate of quantities shall be full compensation for all access, removal, drilling, reaming, cutting, welding, removing deteriorated metal, and all new materials, labor, equipment, tools, and incidentals necessary to complete each item of work.

RIVER NAVIGATION: Continuous maintenance of safety of river navigation throughout the term of the project shall be a prime consideration. All work involving the installation or removal of structural elements beneath the bridge deck shall cease when there is approaching river traffic. This work shall not resume until the river traffic is clear of the bridge area.

The Contractor must advise the Coast Guard of the Contractor's proposed schedule of work at least 10 days prior to the commencement of any field operations.

Commander
2nd Coast Guard District
1430 Olive Street
St. Louis, Missouri 63103
(314) 425-4607

 COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS	 KENTUCKY TRANSPORTATION CABINET	REVISION	DATE	PREPARED BY BURGESS & NIPLE Engineers ■ Architects ■ Planners	DATE: November 1, 2024	CHECKED BY	GENERAL NOTES	ROUTE	ITEM NO.	COUNTY OF
						DESIGNED BY: S. Ribble		D. Richardson	CROSSING GREEN RIVER	WK PKWY
					DETAILED BY: D. Richardson	S. Ribble		M2		28704



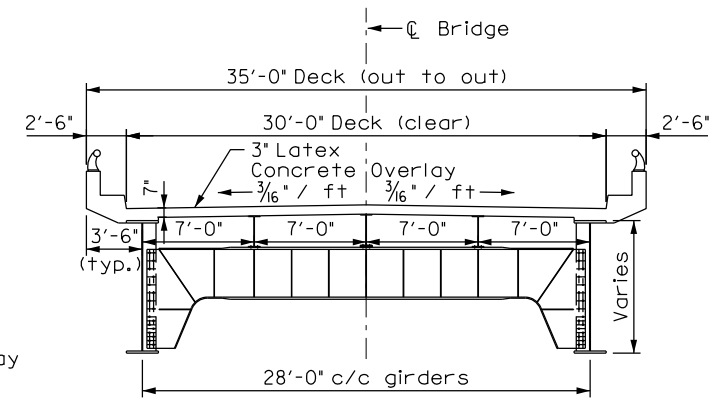
ELEVATION

LEGEND:

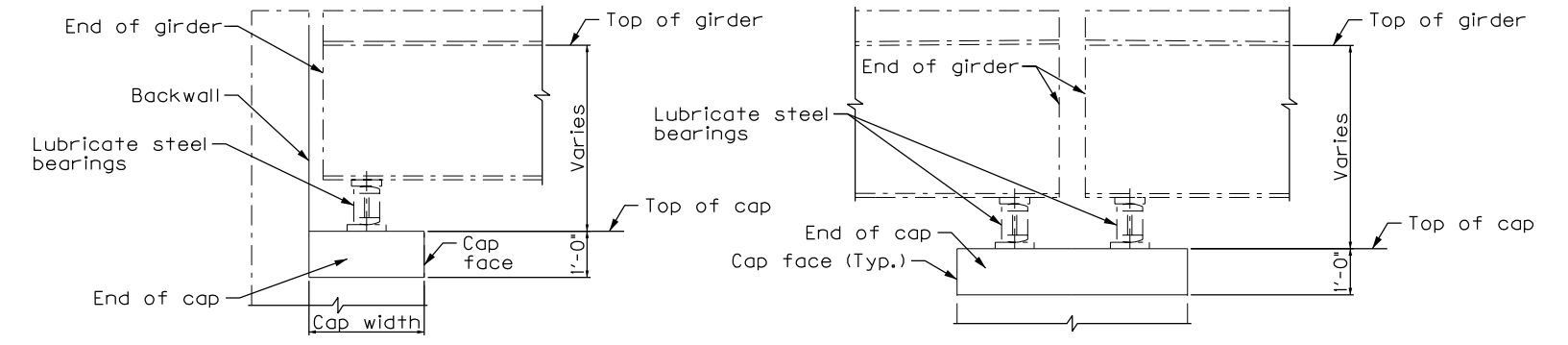
◇ = Pressure wash and seal abutment seats, backwalls, and pier caps. Lubricate steel bearings (2 bearings per abutment, Pier 3, and Pier 6 for each bridge). Approximate area of concrete coating 2,500 SF 089B00093L and 2,500 SF 089B00093R. At these locations, also remove debris from the strip seal joints (at the abutments) and the modular joints (at Piers 3 and 6).

NOTES:

- 1) See the general notes and Special Notes for additional material and construction specifications, construction procedures, and pay items.
- 2) The Contractor shall field verify all relevant existing dimensions.
- 3) See the Special Note for Preventive Maintenance for cleaning, concrete coating, and bearing lubrication details.
- 4) See the Special Note for Bridge Joint Seal Replacement for joint debris removal information.



TYPICAL SECTION
089B00093L &
089B00093R



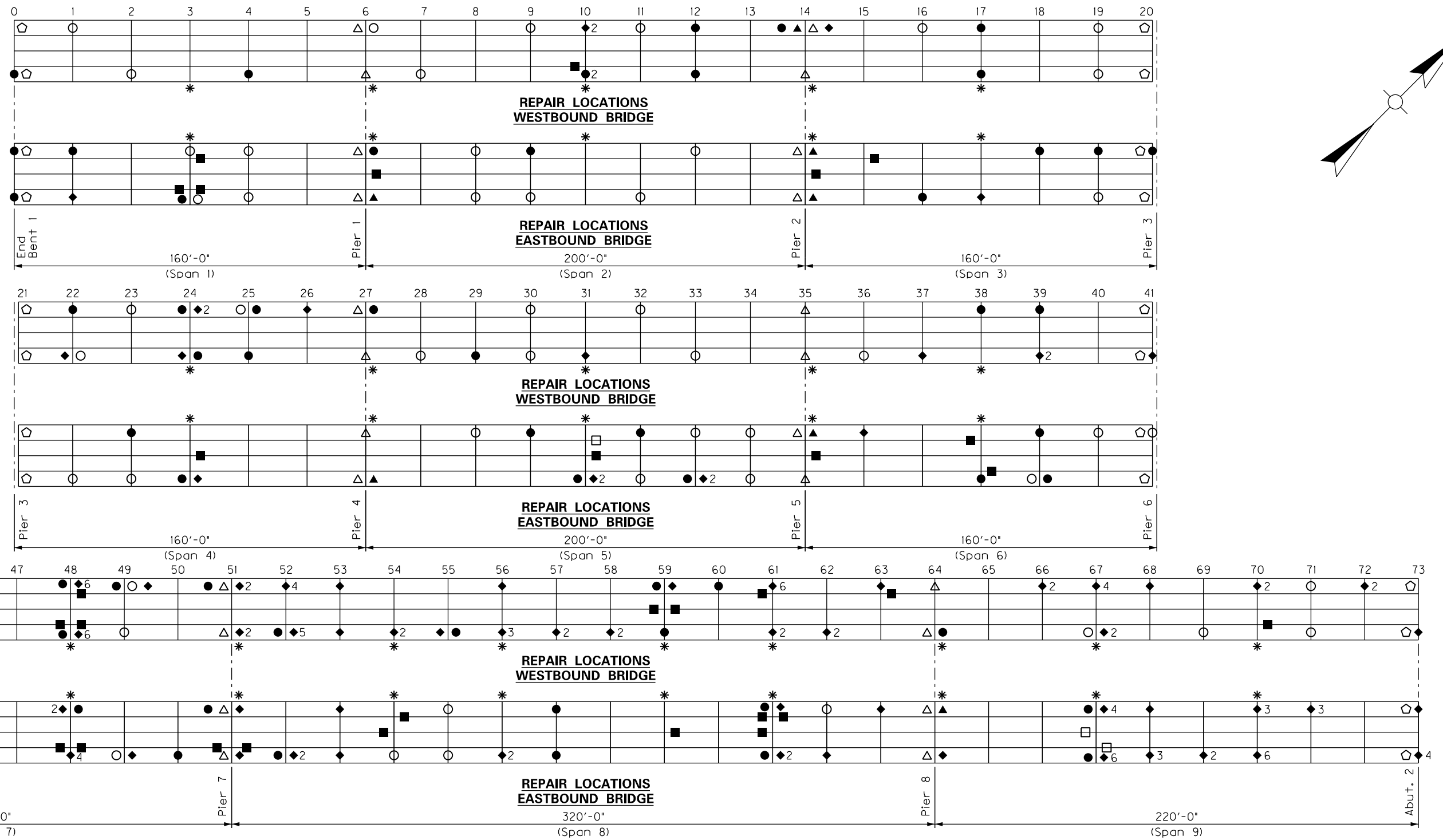
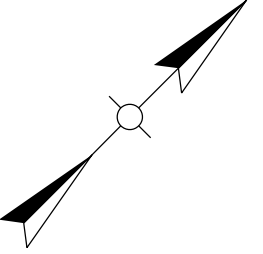
SECTION THROUGH ABUTMENT CAP AND BEAM END

SECTION THROUGH PIER CAP

PREVENTIVE MAINTENANCE

The front face of the abutment backwalls, the tops and the faces of the abutment and pier caps for the entire length of the caps, including cap ends, girder ends, and end diaphragms shall have debris removed with pressure washing and have concrete coating applied to all concrete surfaces as specified within the limits shown.

	REVISION	DATE	PREPARED BY	DATE: November 1, 2024	CHECKED BY	LAYOUT CROSSING GREEN RIVER	ROUTE	ITEM NO.	COUNTY OF
			BURGESS & NIPLE Engineers ■ Architects ■ Planners	DESIGNED BY: S. Ribble	D. Richardson		WK PKWY	M3	MUHLENBERG
MicroStation v8.11.9.919 USER: Bridwell		DATE PLOTTED: October 31, 2024		DETAILED BY: S. Ribble	D. Richardson			DRAWING NUMBER	
								28704	



NOTES:

- 1) See the general notes and Special Notes for additional material and construction specifications, construction procedures, and pay items.
- 2) The Contractor shall field verify all relevant existing dimensions.
- 3) See Sheet M5 and the Special Note for Bridge Joint Seal Replacement for seal replacement details.
- 4) See Sheet M6 and the Special Note for Bearing Stiffener Repair for repair details.
- 5) See Sheets M7-M8 and the Special Note for Floorbeam Crack Repair for repair details.
- 6) See Sheet M9 and the Special Note for Stringer End Repair for repair details.
- 7) See Sheet M10 and the Special Note for Constraint-Induced Fracture Retrofit for retrofit details.
- 8) See Sheet M12 and the Special Note for Moveable Bearing Retrofit for retrofit details.

REPAIRS PER BRIDGE:

WB	EB	Total
34	30	64
26	26	52
81	76	157
1	6	7
24	24	48

LEGEND:

- = Drill crack in floorbeam web at top cope
- = Drill cut in floorbeam web at top cope
- ◆ = Drill crack at floorbeam web at radial stiffener
- ▲ = Remove cracked weld at the top of a bearing stiffener
- △ = Drill hole in girder web on each side of bearing stiffener (See Bearing Stiffener CIF Retrofit on Sheet M10)
- = Install bolted repair at stringer end
- = Replace bolted repair at stringer end
- * = Replace compression joint seal
- ◊ = Install moveable bearing retrofit
- ◆ = Install large moveable bearing retrofit
- # = Indicates the number of like repairs if more than one

REPAIRS PER BRIDGE:

WB	EB	Total
14	24	38
0	3	3
20	20	40
11	12	23
1	0	1

LEGEND:

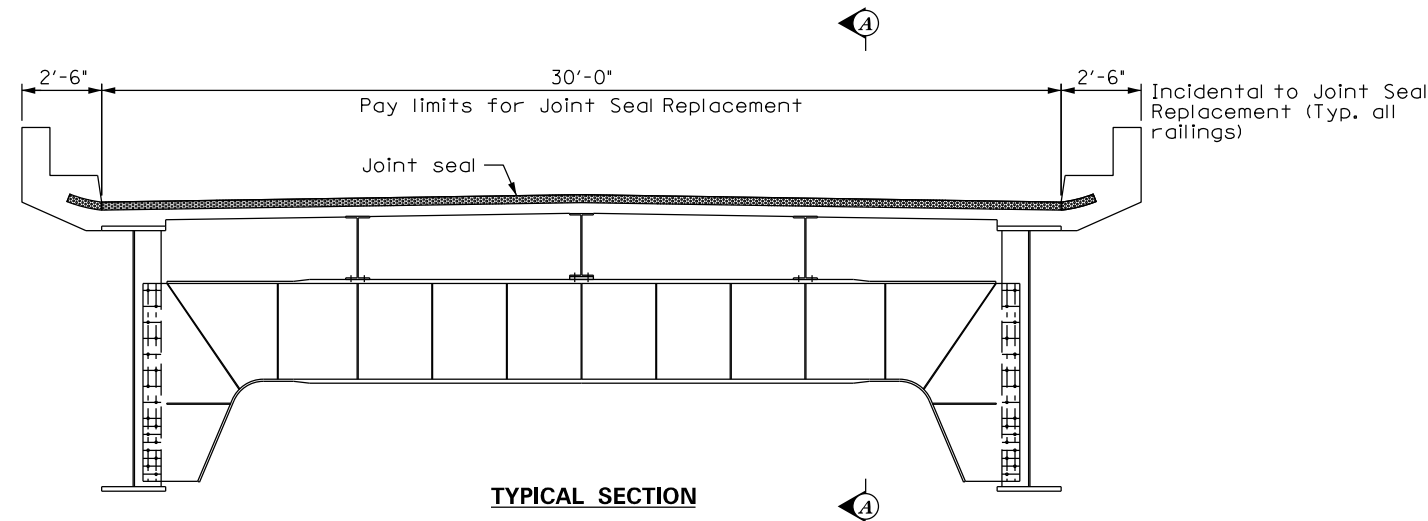
- = Install bolted repair at stringer end
- = Replace bolted repair at stringer end
- * = Replace compression joint seal
- ◊ = Install moveable bearing retrofit
- ◆ = Install large moveable bearing retrofit
- # = Indicates the number of like repairs if more than one



REVISION	DATE

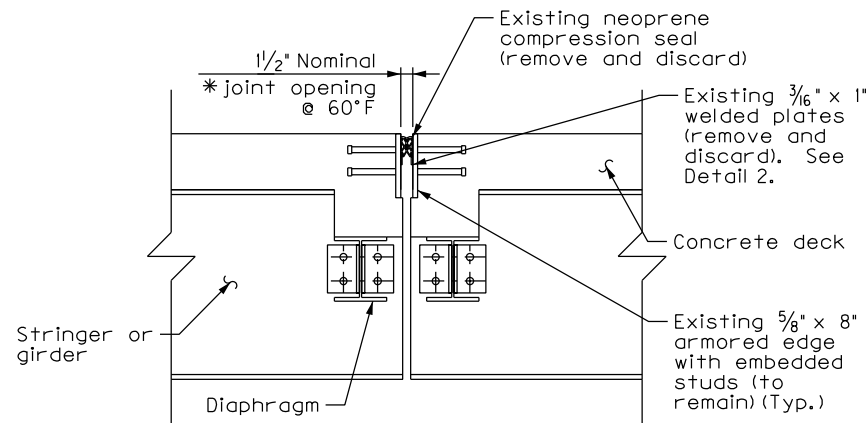
NOTES:

- 1) See the general notes and the Special Note for Bridge Joint Seal Replacement for additional material and construction specifications, construction procedures, and pay items.
- 2) The Contractor shall field verify all relevant existing dimensions and member sizes.
- 3) See Sheet M4 for the locations of the compression seal replacements.



LEGEND:

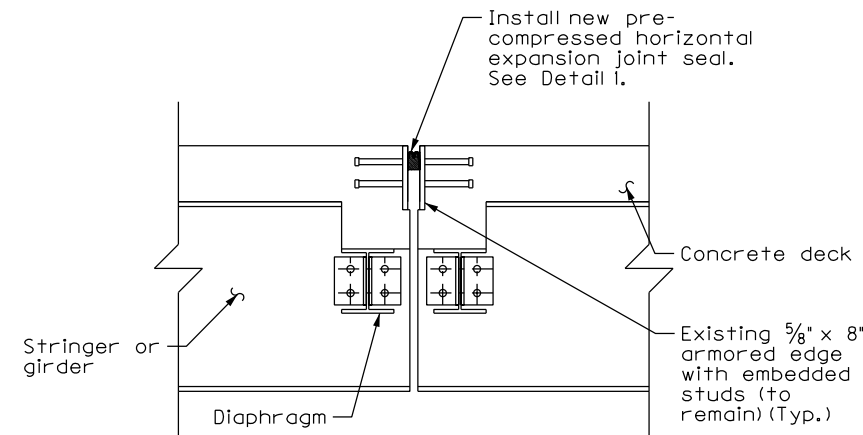
- = Joint seal
- * = The nominal joint openings are per the rehabilitation plans. The Contractor shall measure the actual joint openings and record the temperature at the time the measurements were taken. The width and depth of the replacement joint seals shall be per manufacturer's recommendations based upon this information. See the Special Note for Compression Joint Seal Replacement.



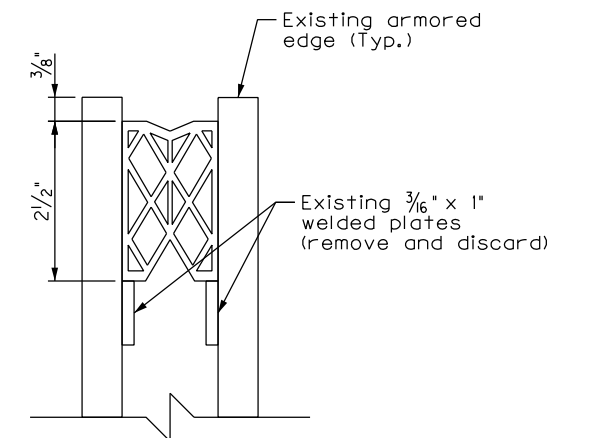
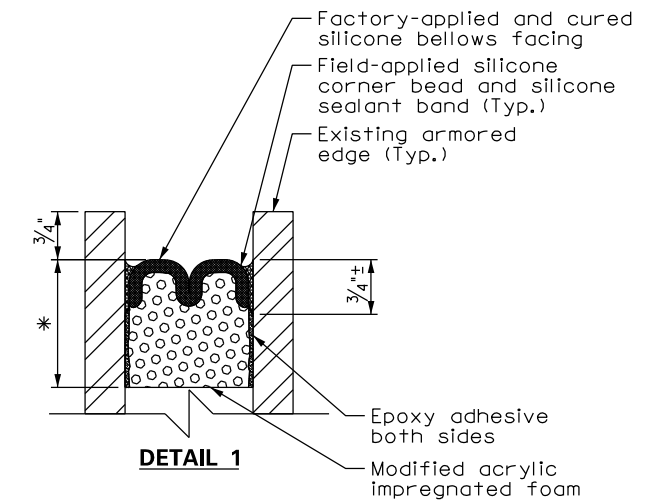
SECTION A - A - REMOVAL
At Compression Joints



COMPRESSION JOINT AT FLOORBEAM 10
089B00093L
(Typ. of compression joints)



SECTION A - A - SEAL REPLACEMENT
At Compression Joints



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



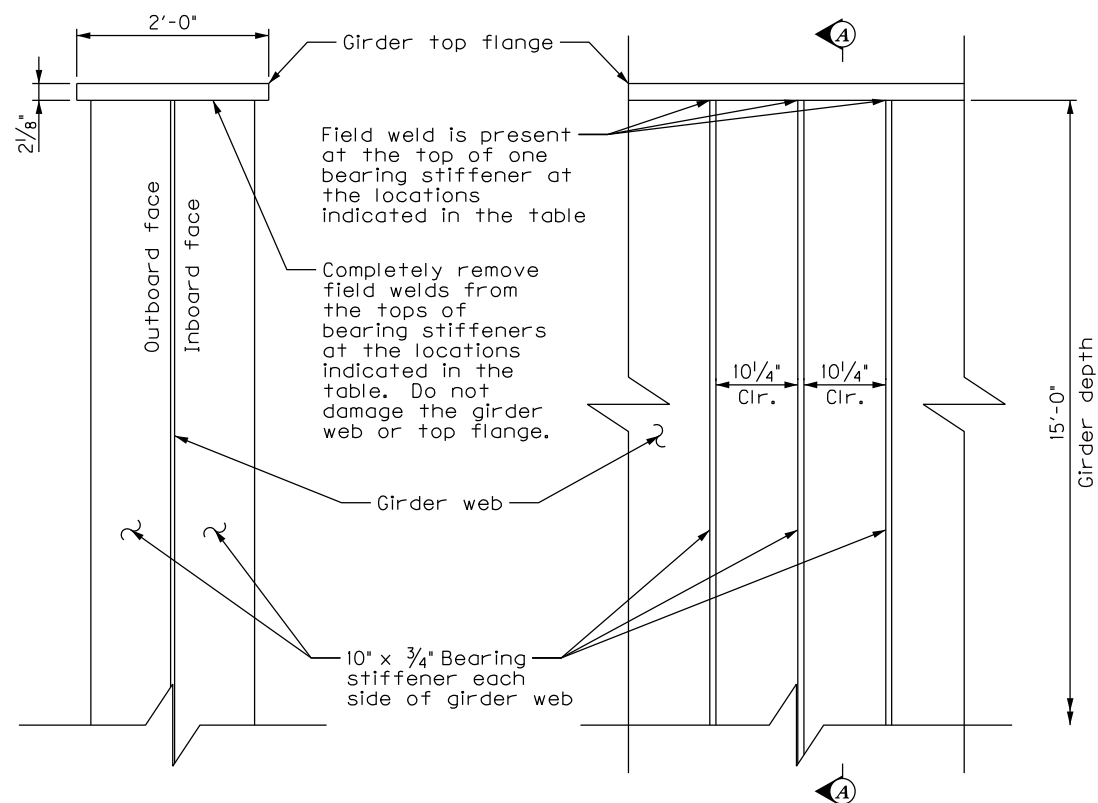
REVISION	DATE

PREPARED BY
BURGESS & NIPLÉ
Engineers ■ Architects ■ Planners

DATE: November 1, 2024	CHECKED BY:
DESIGNED BY: S. Ribble	D. Richardson
DETAILED BY: D. Richardson	S. Ribble

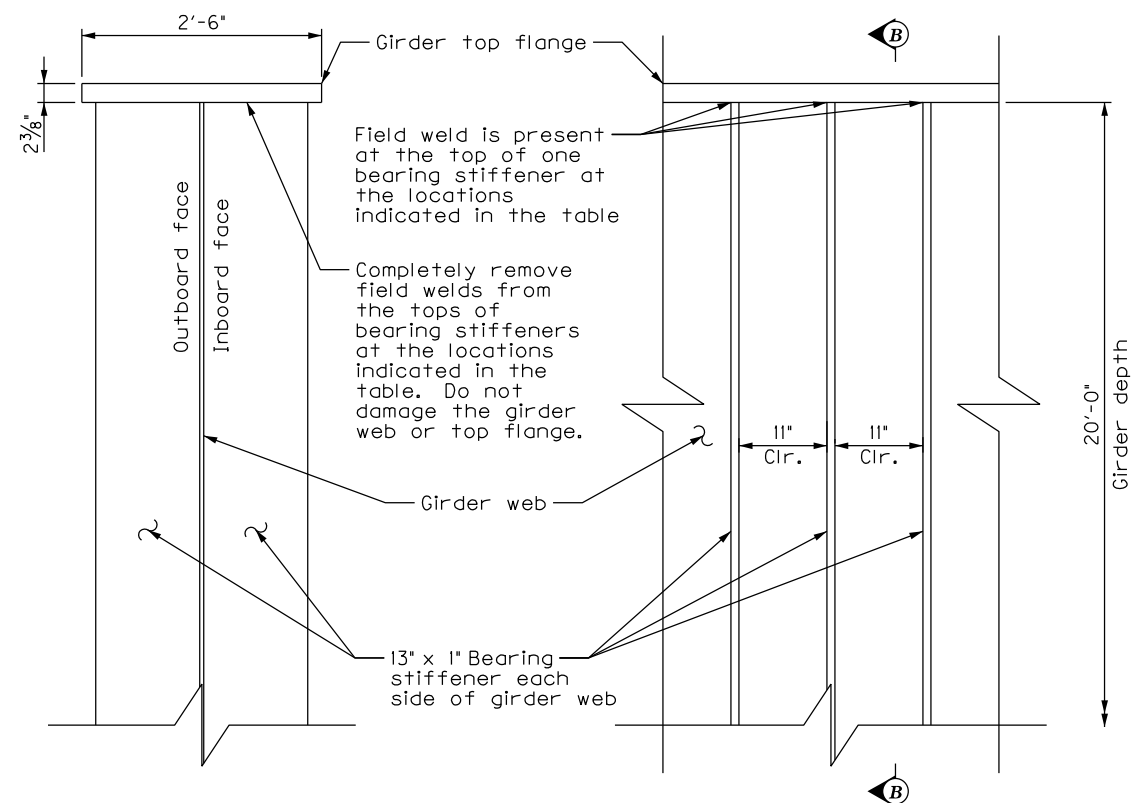
JOINT SEAL REPLACEMENT DETAILS
CROSSING
GREEN RIVER

ROUTE	ITEM NO.	COUNTY OF
WK PKWY	M5	MUHENBERG
	DRAWING NUMBER	
	28704	



SECTION A-A
(At Piers 1, 2, 4, and 5)

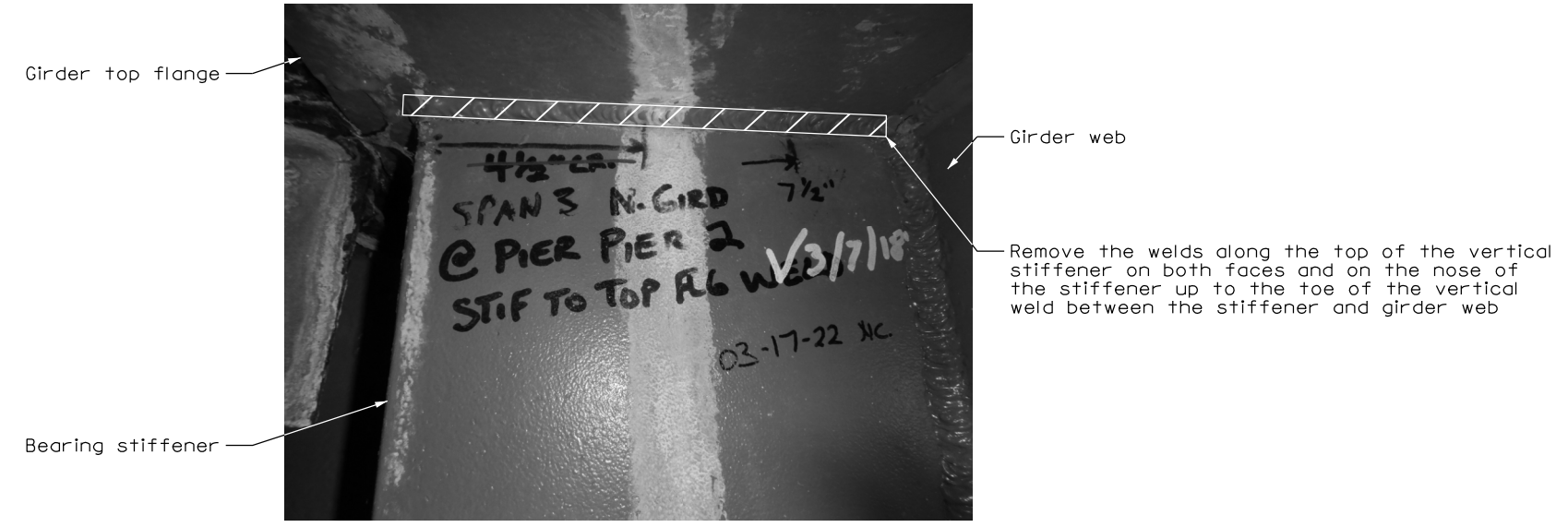
BEARING STIFFENER ELEVATION
(At Piers 1, 2, 4, and 5)



SECTION B-B
(At Piers 7 and 8)

BEARING STIFFENER ELEVATION
(At Piers 7 and 8)

- NOTES:**
- 1) See the general notes, the Special Note for Bearing Stiffener Repair, and the Special Note for Painting Structural Steel Repairs for additional material and construction specifications, construction procedures, and pay items.
 - 2) See Sheet M4 for the locations of the bearing stiffener repair details.
 - 3) The Contractor shall field verify all relevant existing dimensions and member sizes and the growth of cracks with non-destructive testing methods.

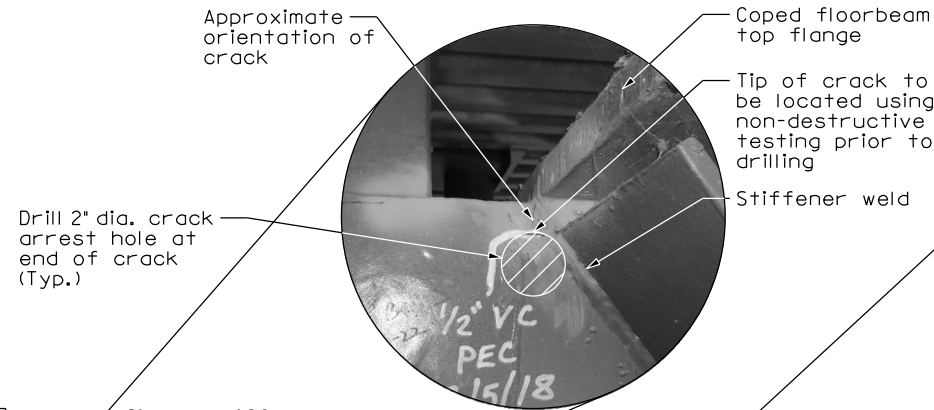


TYPICAL BEARING STIFFENER FIELD WELD
(Between top of bearing stiffener and girder top flange)

LOCATIONS		
Bridge	Pier	Girder
Westbound	2	North
		1 South
Eastbound	2	North
		South
	4	South
	5	North
	8	North

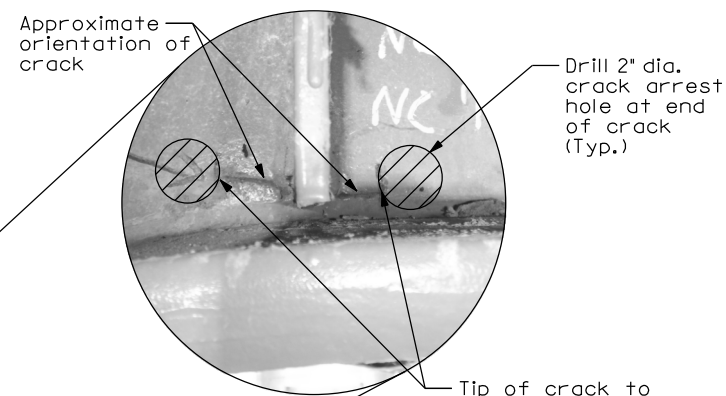
CLOSEUP OF COPE CRACK REPAIR

(Field verify crack location and dimensions)



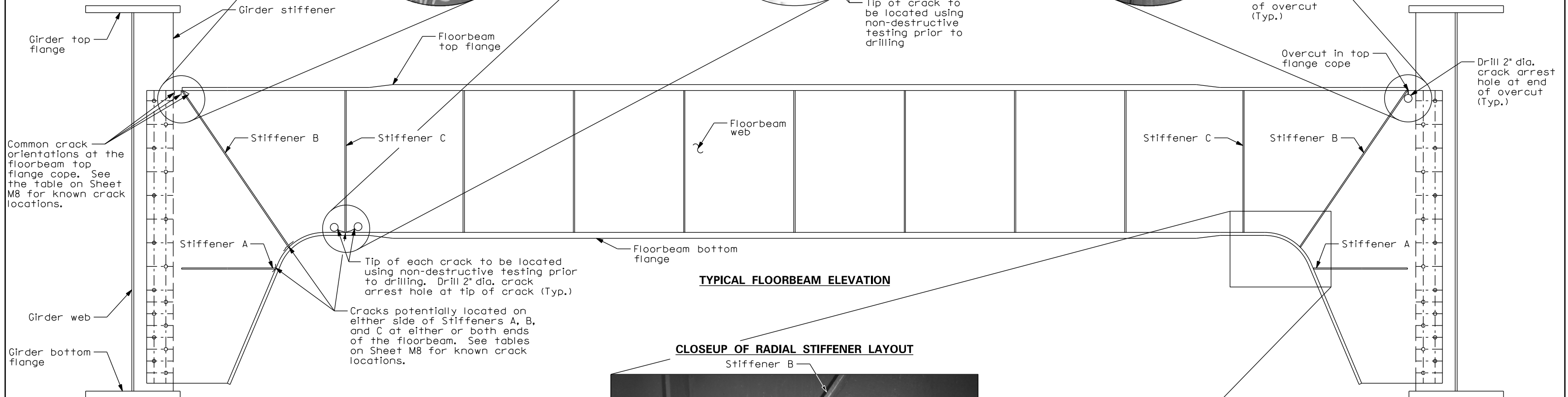
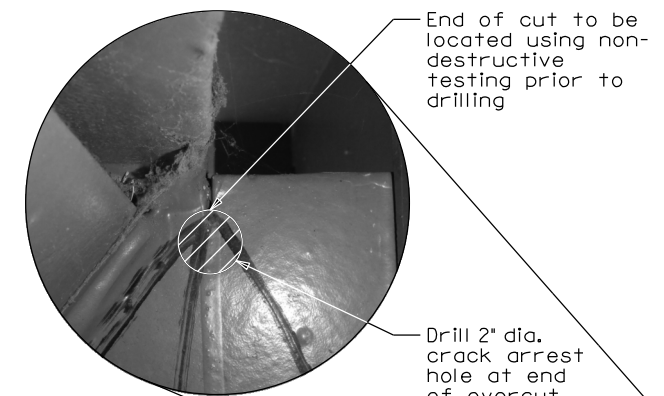
CLOSEUP OF RADIAL STIFFENER CRACK REPAIR

(Field verify crack location and dimensions)



CLOSEUP OF COPE OVERCUT REPAIR

(Field verify cut location and dimensions)



CLOSEUP OF RADIAL STIFFENER LAYOUT



NOTES:

- 1) See the general notes, the Special Note for Floorbeam Crack Repair, and the Special Note for Painting Structural Steel Repairs for additional material and construction specifications, construction procedures, and pay items.
- 2) See Sheet M4 for the locations of the floorbeam repairs.
- 3) The Contractor shall field verify all relevant existing dimensions and member sizes and the growth of cracks with non-destructive testing methods.

		REVISION	DATE	PREPARED BY	DATE: November 1, 2024	CHECKED BY	FLOORBEAM REPAIR DETAILS CROSSING GREEN RIVER	ROUTE	ITEM NO.	COUNTY OF
					BURGESS & NIPLE Engineers ■ Architects ■ Planners	DESIGNED BY: S. Ribble		D. Richardson	WK PKWY	
					DETAILED BY: D. Richardson	S. Ribble			SHEET NO.	DRAWING NUMBER
									M7	28704

FLOORBEAM RADIAL STIFFENER REPAIR LOCATIONS (As of 2024 inspection. Contractor to verify and update as needed.)						
BRIDGE	FB END	FLOORBEAM	STIFFENER A CRACK LENGTH	STIFFENER B CRACK LENGTH	STIFFENER C CRACK LENGTH	
Westbound	North	10	-	5/16" & 5/16"	-	
		14	-	3/8"	-	
		24	-	3/8" & 1/8"	-	
		26	1/16"	-	-	-
		48	1/2" & 1/4"	1/2" & 1/2"	3/16" & 1/2"	-
		49	-	-	3/8"	-
		51	-	3/8"	1/8"	-
		52	-	1/2" & 3/8"	3/8" & 1/4"	-
		53	-	-	3/8"	-
		56	-	1/2"	-	-
		59	-	-	5/8"	-
		61	1" & 1/2"	7/8" & 1"	1/2" & 3/4"	-
		63	-	5/16"	-	-
		66	-	1/4" & 3/8"	-	-
	67	3/8" & 3/8"	1/4" & 5/8"	-	-	
	68	-	3/16"	-	-	
	70	-	3/8" & 1/4"	-	-	
	72	-	3/8"	1/8"	-	
	22	-	1/8"	-	-	
	24	-	3/4"	-	-	
	31	-	1/4"	-	-	
	37	-	3/8"	-	-	
	39	-	3/8" & 7/16"	-	-	
	41	-	1/2"	-	-	
	45	3/8"	5/16" & 3/8"	3/8"	-	
	48	3/8" & 3/8"	5/8" & 3/8"	3/8" & 3/8"	-	
	51	-	1/4" & 3/8"	-	-	
	52	5/16"	1/2" & 1/2"	3/8" & 1/2"	-	
53	1/2"	-	-	-		
54	-	3/8" & 1/4"	-	-		
55	-	-	3/8"	-		
56	-	3/8" & 3/8"	1/4"	-		
57	-	3/8"	5/16"	-		
58	-	3/8"	1/4"	-		
61	3/8"	1/2"	-	-		
62	-	1/2" & 3/8"	-	-		
67	-	5/8" & 1/2"	-	-		
73	-	1/4"	-	-		

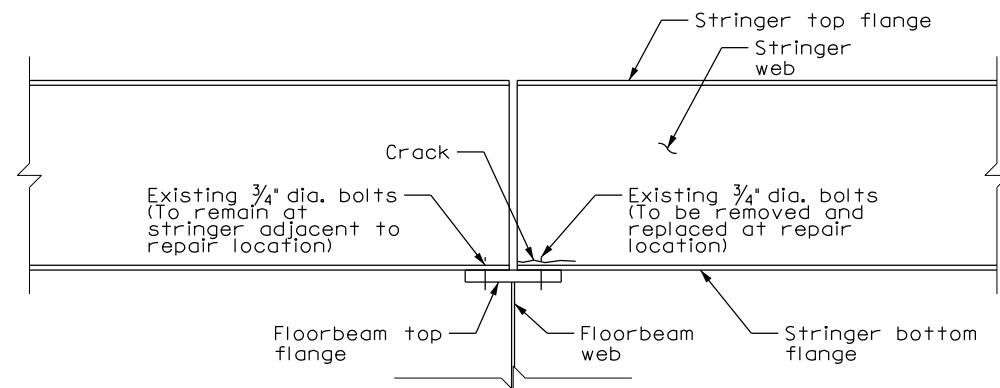
FLOORBEAM RADIAL STIFFENER REPAIR LOCATIONS (As of 2024 inspection. Contractor to verify and update as needed.)						
BRIDGE	FB END	FLOORBEAM	STIFFENER A CRACK LENGTH	STIFFENER B CRACK LENGTH	STIFFENER C CRACK LENGTH	
Eastbound	North	36	-	3/8"	-	
		43	3/4" & 3/8"	5/8" & 1/2"	1/2" & 1/2"	
		44	-	1/2"	-	-
		45	-	3/8" & 1/4"	-	-
		48	-	1/4" & 1/8"	-	-
		51	1/2"	-	-	-
		53	-	5/16"	-	-
		61	-	-	-	3/8"
		63	4 7/8"	-	-	-
		67	3/8"	3/8" & 3/8"	3/8"	-
		68	-	3/8"	-	-
		70	3/8"	3/8"	3/8"	-
		71	1/4"	3/8" & 3/8"	-	-
		73	7/8"	-	-	-
	1	-	3/8"	-	-	
	17	-	1/4"	-	-	
	24	-	3/8"	-	-	
	31	-	15/8" & 3/8"	-	-	
	33	-	1/2" & 1/2"	-	-	
	45	1/4"	3/8" & 3/8"	1/4" & 1/2"	-	
	48	-	1/2" & 1/2"	1/4" & 1/2"	-	
	49	-	-	1/2"	-	
	51	-	1/8"	-	-	
	52	-	3/8" & 3/4"	-	-	
	53	-	-	1/4"	-	
	56	-	1/4" & 1/4"	-	-	
	61	-	5/8" & 5/8"	-	-	
	62	-	3/8"	-	-	
64	1"	-	-	-		
67	15/8" & 1 3/4"	15/8" & 1 1/2"	1/2" & 1/2"	-		
68	3/8" & 3/8"	3/8"	-	-		
69	-	1/4" & 1/4"	-	-		
70	1 1/2" & 1 1/2"	1" & 1 1/4"	1" & 2"	-		
73	3/8"	1/2"	1/4" & 1/2"	-		

FLOORBEAM COPE REPAIR LOCATIONS (As of 2024 inspection. Contractor to verify and update as needed.)					
BRIDGE	FB END	FLOORBEAM	CRACK LENGTH	CUT LENGTH	
Westbound	North	1	-	1/8"	
		6	-	3/8"	
		9	-	1/8"	
		11	-	1/4"	
		12	2"	-	-
		14	5/16"	-	-
		16	-	1/4"	-
		17	5/8"	-	-
		19	-	1/2"	-
		22	1/2"	-	-
		23	-	1/8"	-
		24	1"	-	-
		25	1/8"	1/4"	-
		27	3/4"	-	-
	30	-	1/2"	-	
	32	-	1/8"	-	
	38	5/8"	-	-	
	39	1/4"	-	-	
	42	1/2"	-	-	
	44	-	7/8"	-	
	46	1"	-	-	
	48	7/8"	-	-	
	49	1/16"	1/4"	-	
	51	15/8"	-	-	
	59	5/8"	-	-	
	60	1/8"	-	-	
	71	-	1/4"	-	
	0	1/4"	-	-	
2	-	3/4"	-		
4	1"	-	-		
7	-	1/2"	-		
10	1/2" & 3/4"	-	-		
12	1/8"	-	-		
17	1"	-	-		
19	-	1/4"	-		
22	-	1/8"	-		
24	1/2"	-	-		
25	1/4"	-	-		
28	-	1/8"	-		
29	3/8"	-	-		
30	-	1/4"	-		
33	-	1/4"	-		
36	-	3/4"	-		
42	-	1"	-		
44	5/8"	-	-		
45	7/8", 1 1/4", & 2"	-	-		
48	1/16"	-	-		
49	-	5/8"	-		
52	3/4"	-	-		
55	3/8"	-	-		
59	1/16"	-	-		
64	1"	-	-		
67	-	1/8"	-		
69	-	1/8"	-		
71	-	3/8"	-		

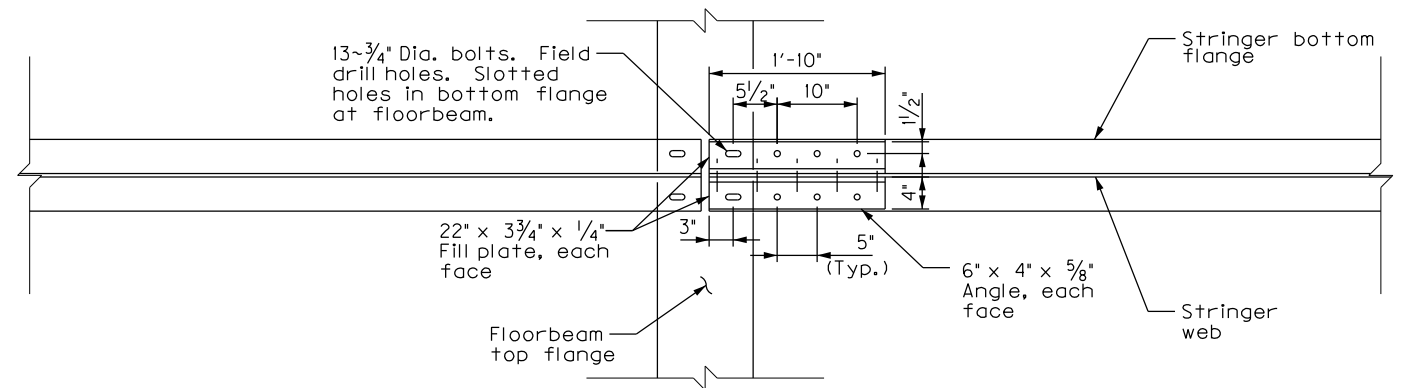
FLOORBEAM COPE REPAIR LOCATIONS (As of 2024 inspection. Contractor to verify and update as needed.)				
BRIDGE	FB END	FLOORBEAM	CRACK LENGTH	CUT LENGTH
Eastbound	North	0	1 1/2"	-
		1	3/8"	-
		3	-	7/8"
		4	-	1/4"
		6	5/16"	-
		8	-	3/8"
		9	7/8"	-
		12	-	1/4"
		18	3/8"	-
		19	3/4"	-
		20	1/8"	-
		23	1"	-
		29	-	1/8"
		30	5/8"	-
	32	3/4"	-	
	33	-	3/16"	
	34	-	3/16"	
	39	15/16"	-	
	40	-	3/8"	
	41	-	1/2"	
	46	-	1/8"	
	48	3/8"	-	
	51	1 3/8"	-	
	55	-	1/2"	
	57	7/8"	-	
	61	1/2"	-	
	62	-	1/4"	
	67	5/8"	-	
0	1 1/16"	-		
3	1/2"	3/8"		
4	-	1/2"		
8	-	3/4"		
9	-	1/4"		
11	-	1/8"		
16	3/4"	-		
19	-	1/4"		
22	-	5/16"		
23	-	5/8"		
24	3/8"	-		
31	1/2"	-		
32	-	1/2"		
33	5/8"	-		
34	-	3/8"		
38	5/8"	-		
39	5/16"	9/16"		
45	3/8"	-		
49	-	1/4"		
50	3/8"	-		
52	1/2"	-		
54	-	1/4"		
55	-	9/16"		
57	1/8"	-		
61	1/2"	-		
67	1 1/4"	-		

- NOTES:**
- See the general notes, the Special Note for Floorbeam Crack Repair, and the Special Note for Painting Structural Steel Repairs for additional material and construction specifications, construction procedures, and pay items.
 - See Sheet M4 for the locations of the floorbeam repairs.
 - The Contractor shall field verify all relevant existing dimensions and member sizes and the growth of cracks with non-destructive testing methods. When a crack or cut exists on both faces of the floorbeam, the longest length was reported in these tables. The length of the crack or cut is to be verified on both faces via non-destructive testing methods and is to be drilled at the furthest extents of the crack or cut.

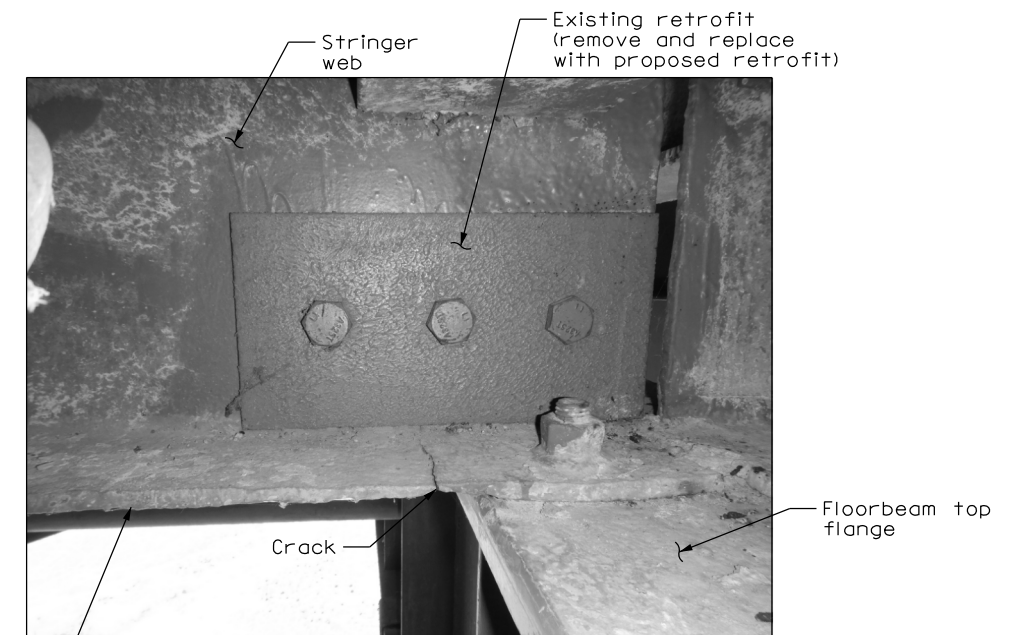
	REVISION	DATE	PREPARED BY	DATE: November 1, 2024	CHECKED BY	FLOORBEAM REPAIR DETAILS CROSSING GREEN RIVER	ROUTE	ITEM NO.	COUNTY OF
				BURGESS & NIPLE Engineers ■ Architects ■ Planners	DESIGNED BY: D. Richardson		L. Bridwell	WK PKWY	SHEET NO. M8
MicroStation v8.11.9.919	USER: Richardson	DATE PLOTTED: October 29, 2024		DETAILED BY: D. Richardson	L. Bridwell				DRAWING NUMBER 28704



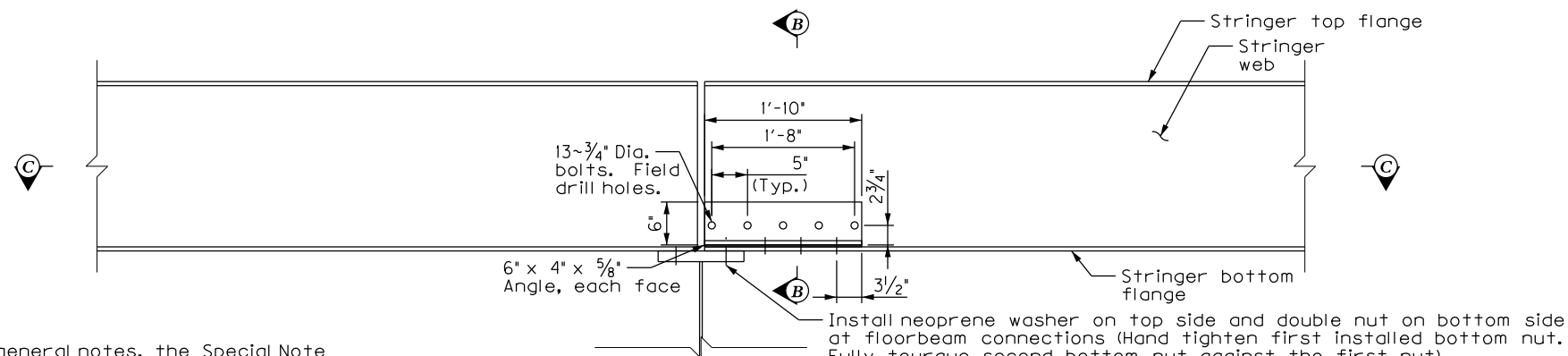
SECTION A-A - EXISTING CONDITION
(Location without a previous retrofit)



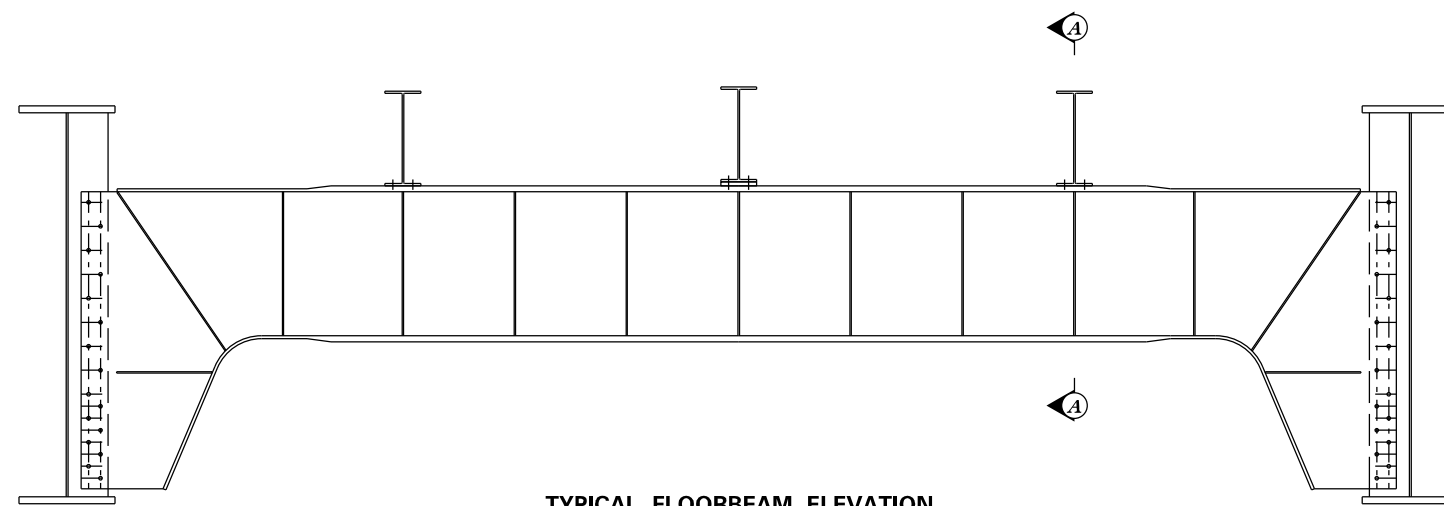
SECTION C-C - PROPOSED CONDITION



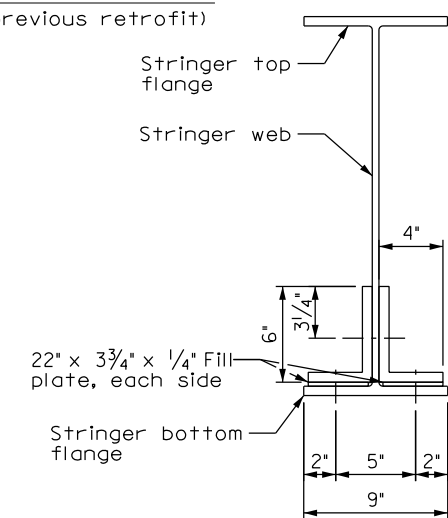
SECTION A-A - EXISTING CONDITION
(Location with a previous retrofit)



SECTION A-A - PROPOSED CONDITION



TYPICAL FLOORBEAM ELEVATION

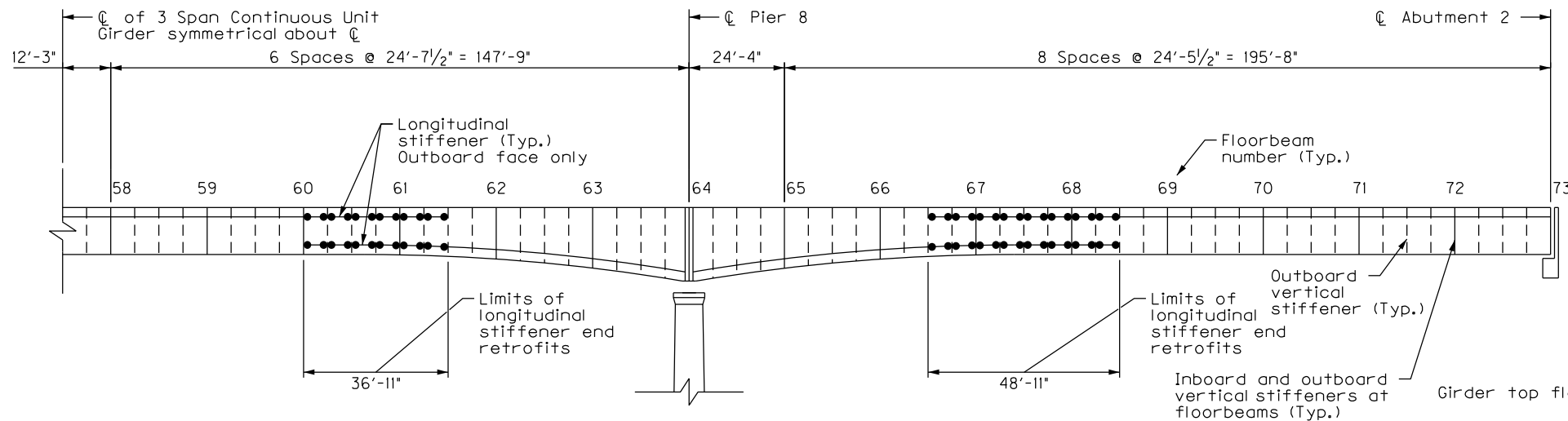


SECTION B-B - PROPOSED CONDITION

NOTES:

- 1) See the general notes, the Special Note for Stringer End Repair, and the Special Note for Painting Structural Steel Repairs for additional material and construction specifications, construction procedures, and pay items.
- 2) See Sheet M4 for the locations of the stringer end repairs.
- 3) The Contractor shall field verify all relevant existing dimensions and member sizes, including the size and spacing of existing bolts, and the growth of cracks with non-destructive testing methods since measurements were taken in March 2024. Repair plates shall reuse the middle existing bolt hole at existing retrofits, and the bolt diameter shall match the diameter of the existing bolts. Field drill new holes only where indicated.
- 4) If it is necessary to adjust the layout of bolts due to the geometry of members, the minimum spacing between bolts shall not be less than 2 1/4 inches, and the maximum spacing between bolts shall not be greater than 6 1/2 inches. Spacing is measured center to center of bolts. No bolt shall be placed closer than 1 inch to the edge of a plate or to a crack. This measurement is from the center of bolt to the edge or crack.
- 5) Hole diameter shall be 1/16 inch larger than the diameter of the bolt.

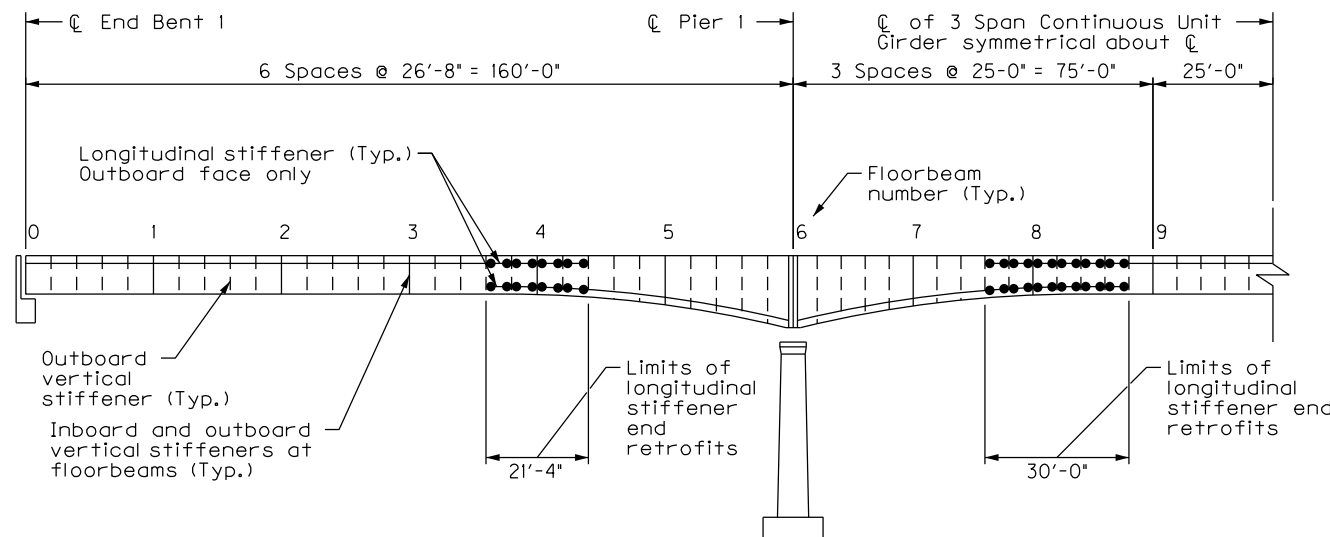
	REVISION	DATE	PREPARED BY	DATE: November 1, 2024	CHECKED BY	STRINGER END REPAIR DETAILS CROSSING GREEN RIVER	ROUTE	ITEM NO.	COUNTY OF
				BURGESS & NIPLE Engineers ■ Architects ■ Planners	DESIGNED BY: S. Ribble		D. Richardson	WK PKWY	M9
				DETAILED BY: D. Richardson	S. Ribble				DRAWING NUMBER
									28704



ELEVATION

(Half of 3 Span Continuous Unit Spans 7-9)

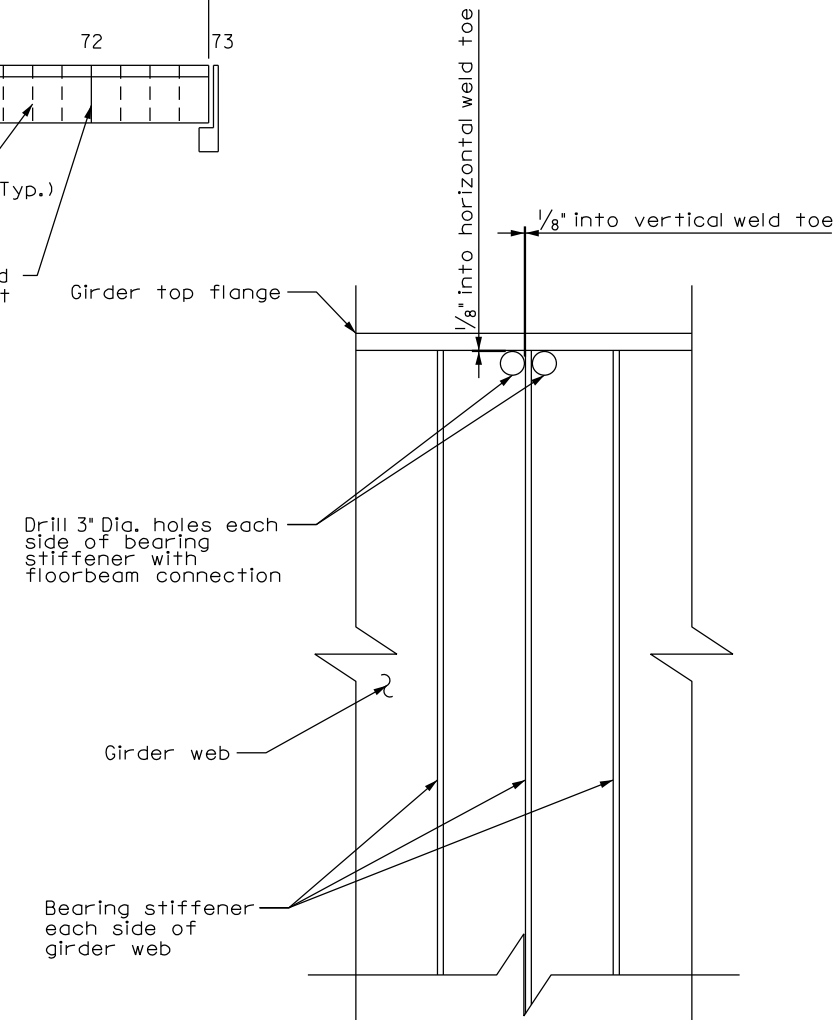
• Denotes each longitudinal stiffener end retrofit location



ELEVATION

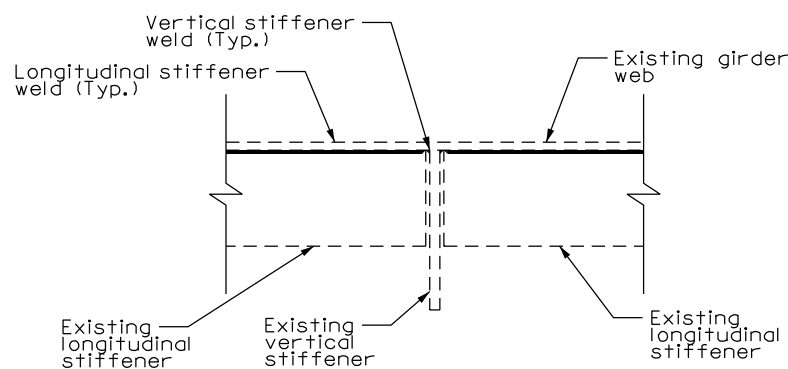
(Half of 3 Span Continuous Unit Spans 1-3 and Spans 4-6)

• Denotes each longitudinal stiffener end retrofit location

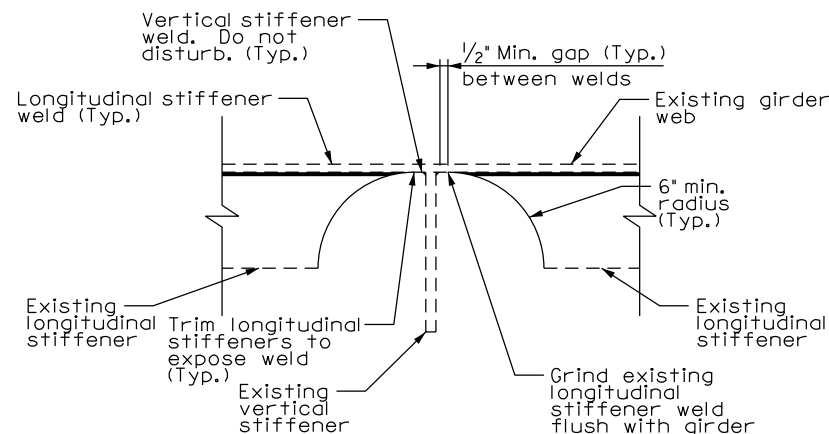


BEARING STIFFENER CIF RETROFIT DETAIL

(Typical at Piers 1, 2, 4, 5, 7, and 8)



EXISTING PLAN - LONGITUDINAL STIFFENER END RETROFIT



PROPOSED PLAN - LONGITUDINAL STIFFENER END RETROFIT

NOTES:

- 1) See the general notes, the Special Note for Constraint-Induced Fracture Retrofit, and the Special Note for Painting Structural Steel Repairs for additional material and construction specifications, construction procedures, and pay items.
- 2) See Sheet M4 for the locations of the bearing stiffener CIF retrofits.
- 3) The Contractor shall field verify all relevant existing dimensions and member sizes and the growth of cracks with non-destructive testing methods.



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: Richardson

REVISION	DATE

DATE PLOTTED: October 31, 2024

PREPARED BY
BURGESS & NIPLE
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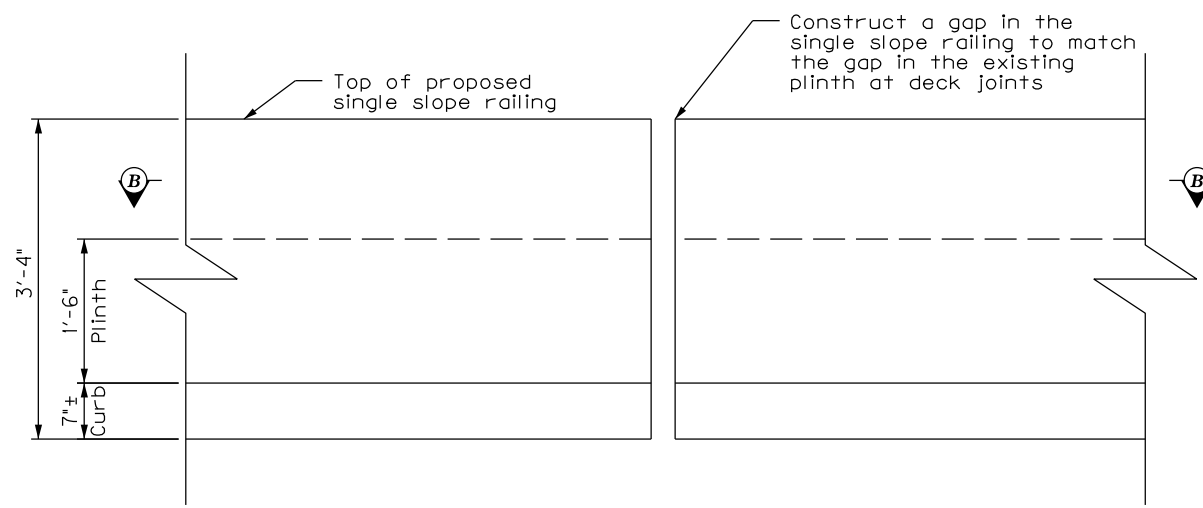
FILE NAME: P:\PR59281\CADD\SHEETS\MUHLENBERG CO\CIF REPAIR.DGN

DATE: November 1, 2024	CHECKED BY:
DESIGNED BY: D. Richardson	L. Bridwell
DETAILED BY: D. Richardson	L. Bridwell

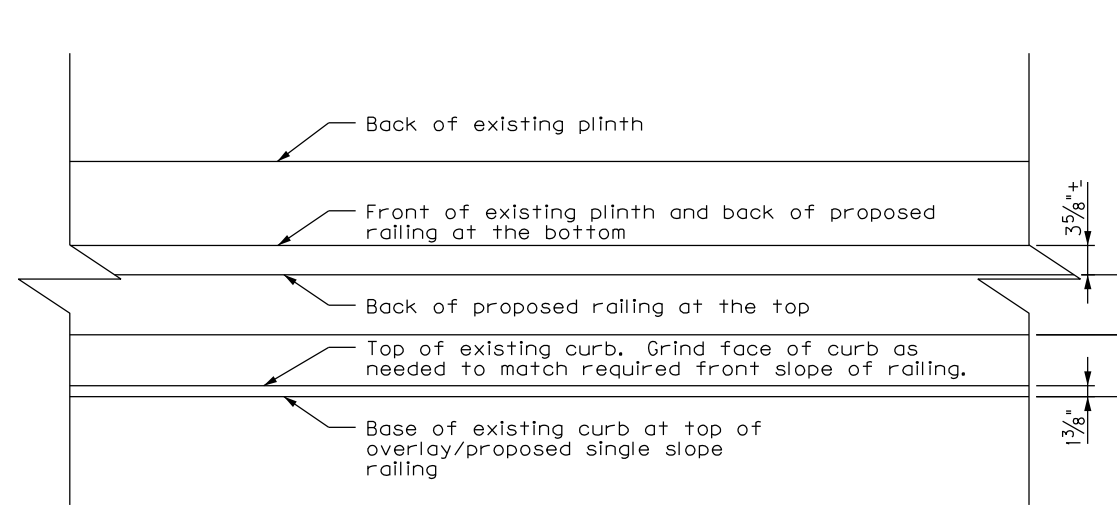
CIF RETROFIT DETAILS

CROSSING
GREEN RIVER

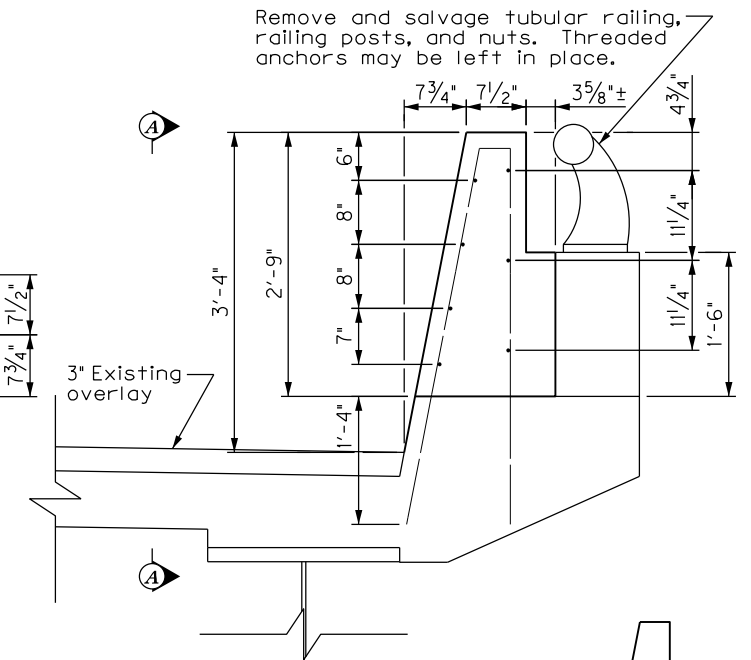
ROUTE	ITEM NO.	COUNTY OF
WK PKWY	M10	MUHLENBERG
	DRAWING NUMBER	
	28704	



SECTION A-A - PROPOSED CONDITION



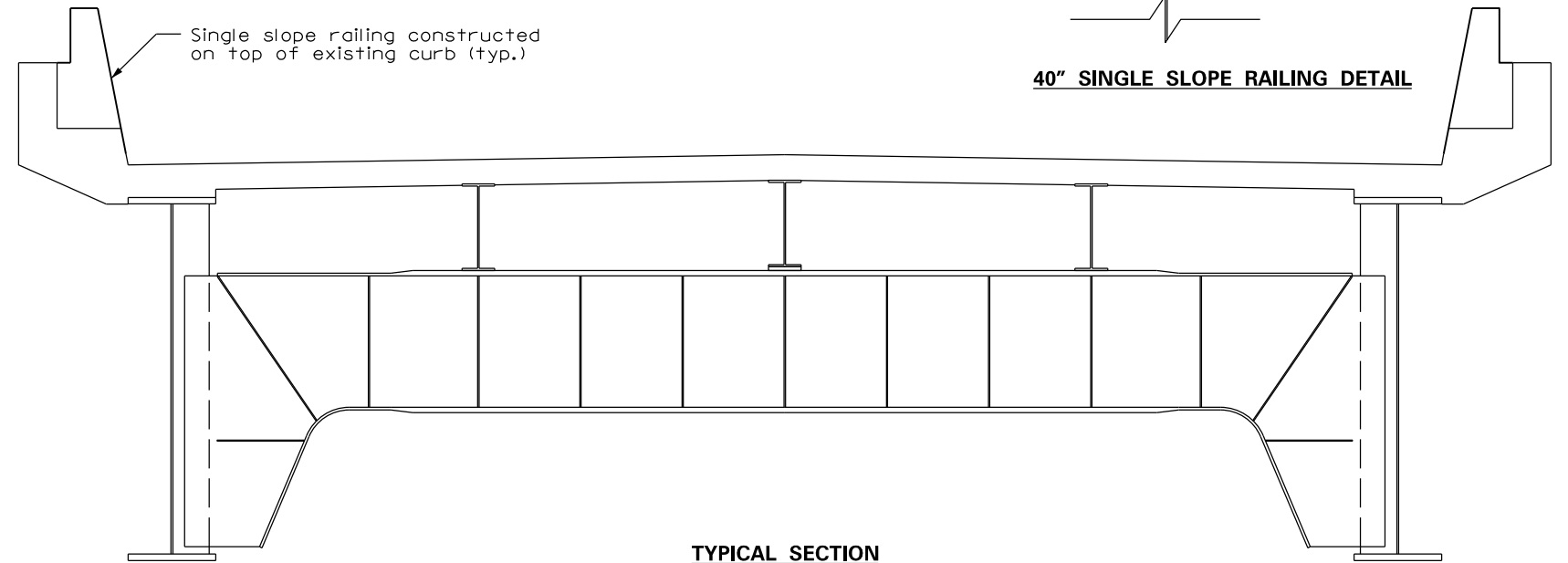
SECTION B-B - PROPOSED CONDITION



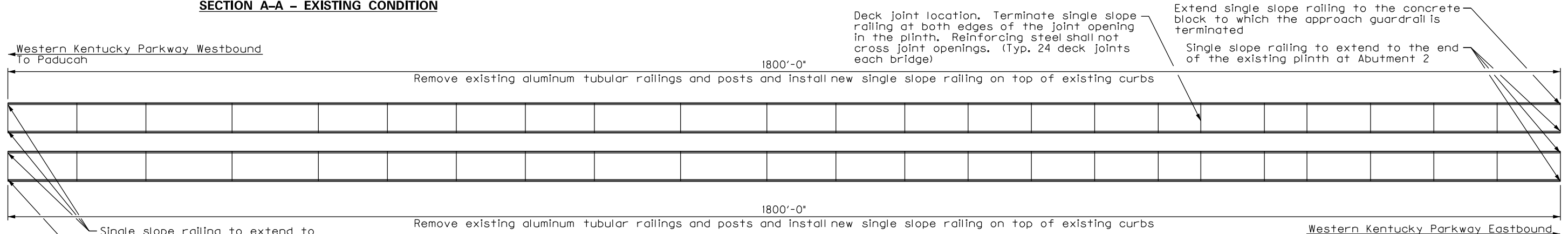
40" SINGLE SLOPE RAILING DETAIL



SECTION A-A - EXISTING CONDITION



TYPICAL SECTION

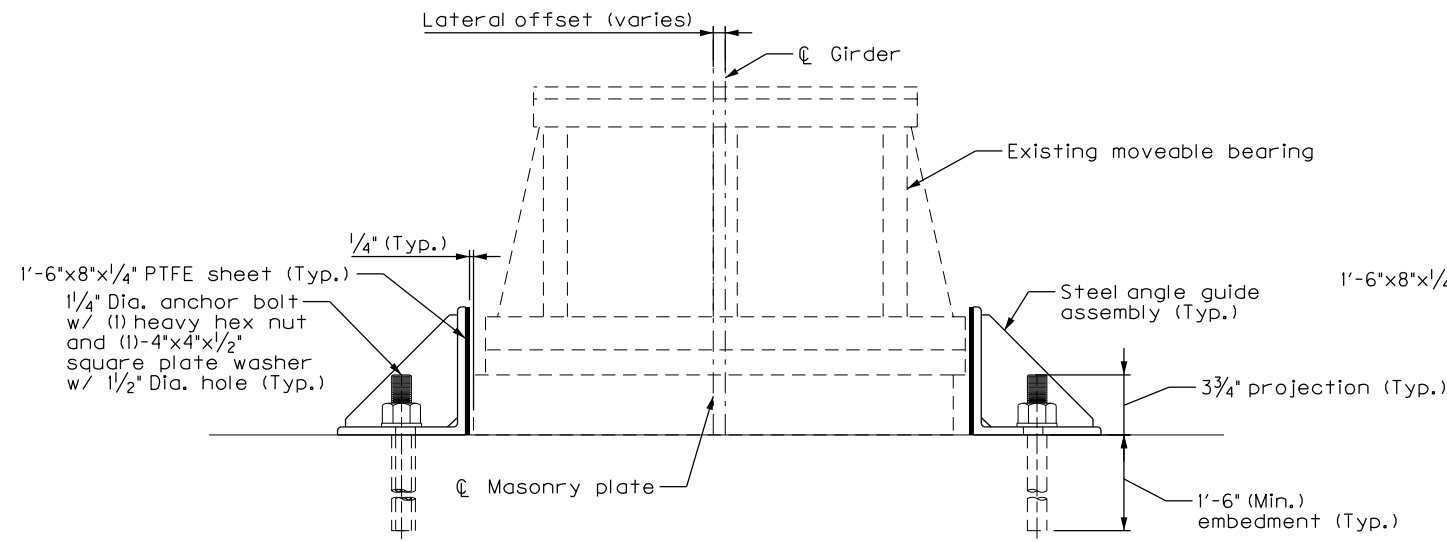


PLAN

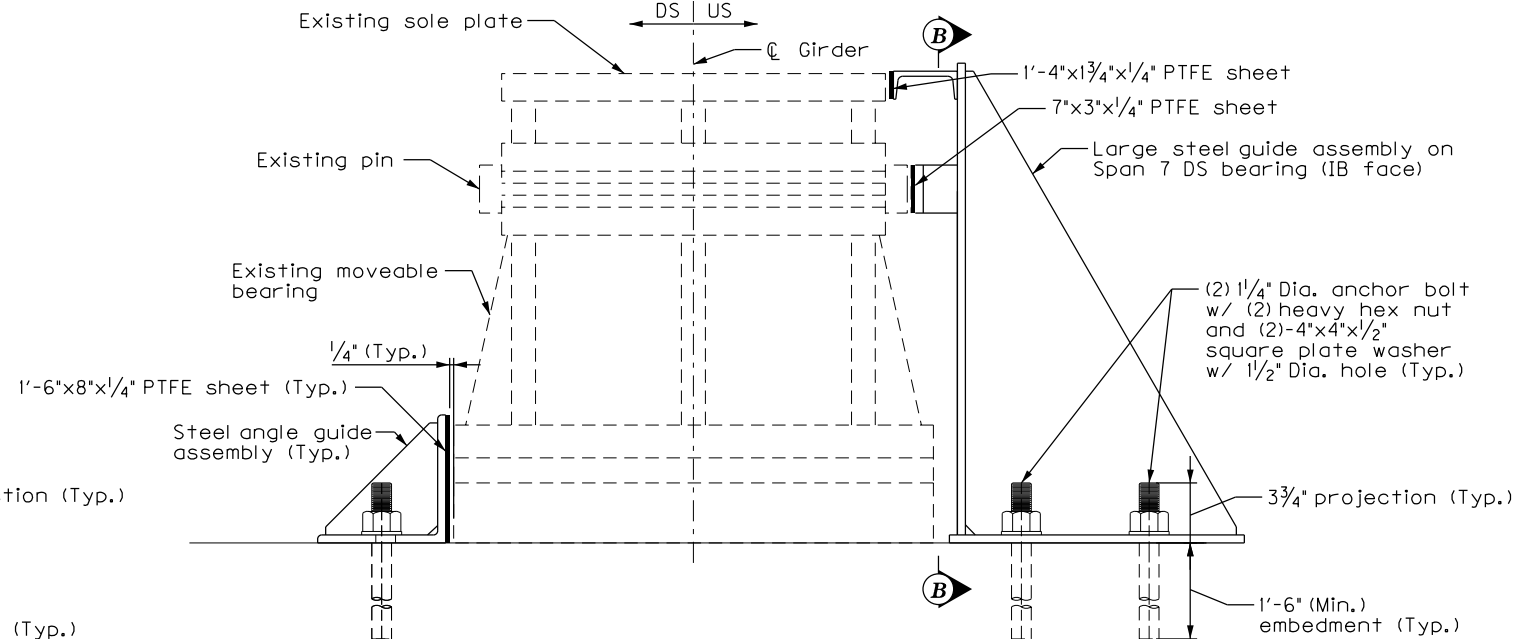
Top - 089B00093L Western Kentucky Parkway Westbound
 Bottom - 089B00093R Western Kentucky Parkway Eastbound

NOTES:

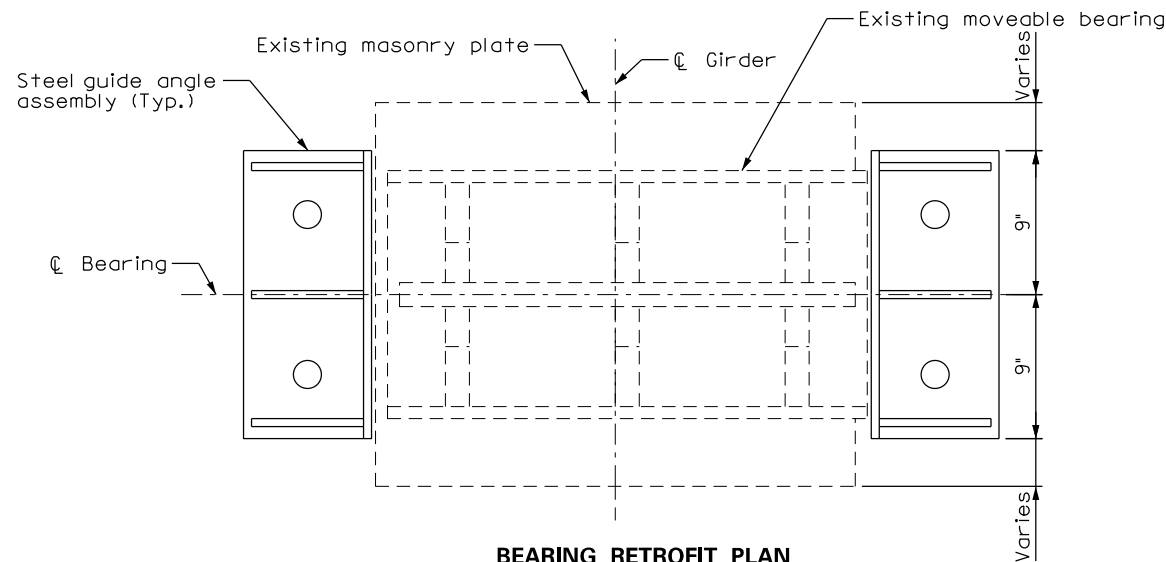
- 1) See the general notes, Standard Drawings, and the Special Note for Bridge Railing Retrofit for additional material and construction specifications, construction procedures, and pay items.
- 2) The Contractor shall field verify all relevant existing dimensions.



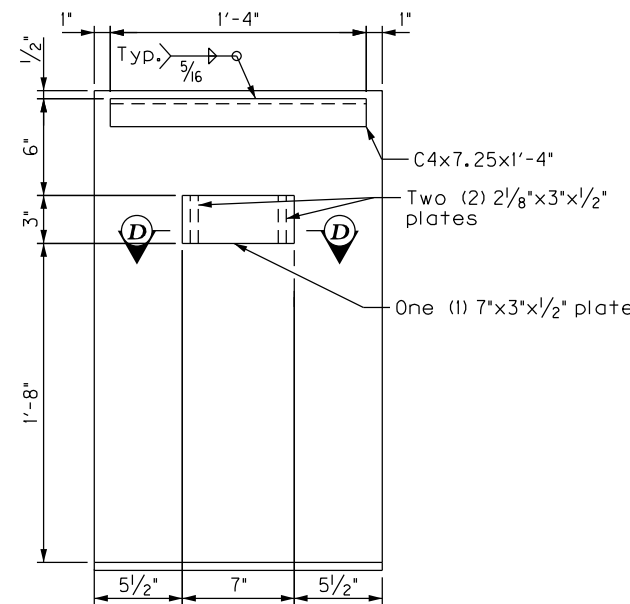
BEARING RETROFIT ELEVATION



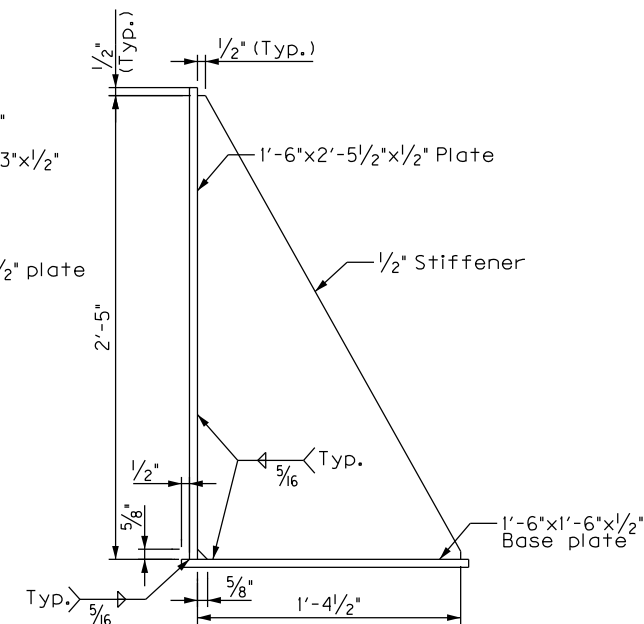
089B00093L (WESTBOUND) PIER 6 SPAN 7 DS BEARING RETROFIT ELEVATION



BEARING RETROFIT PLAN

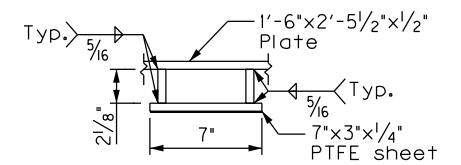


SECTION B-B



SECTION C-C

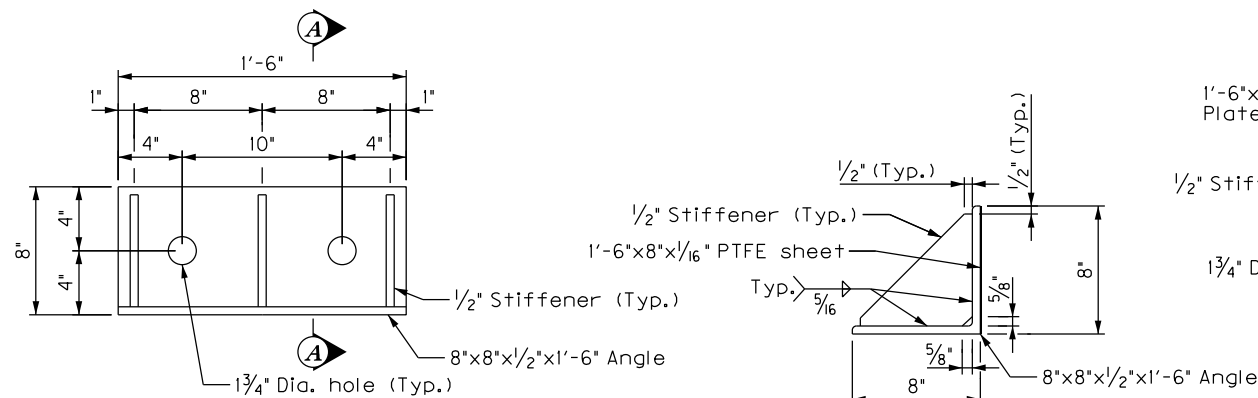
(Channel and plate assembly not shown)



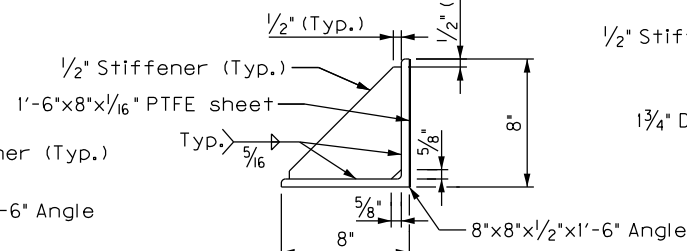
SECTION D-D

NOTES:

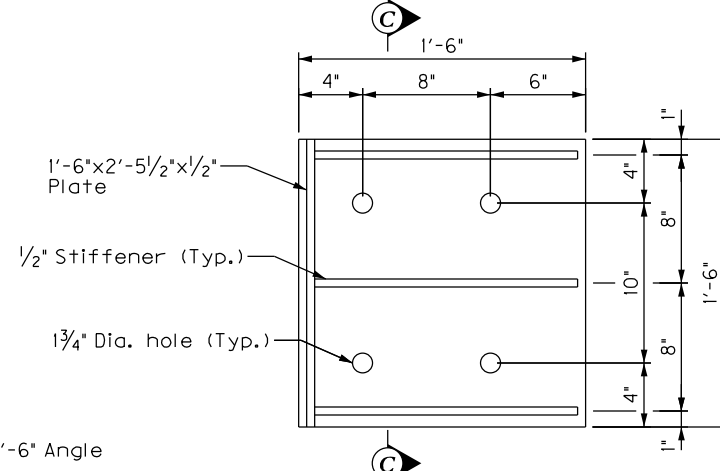
- 1) See the general notes, the Special Note for Moveable Bearing Retrofits, and the Special Note for Painting Structural Steel Repairs for additional material and construction specifications, construction procedures, and pay items.
- 2) See Sheet M4 for the locations of the moveable bearing retrofits.



STEEL GUIDE ANGLE ASSEMBLY



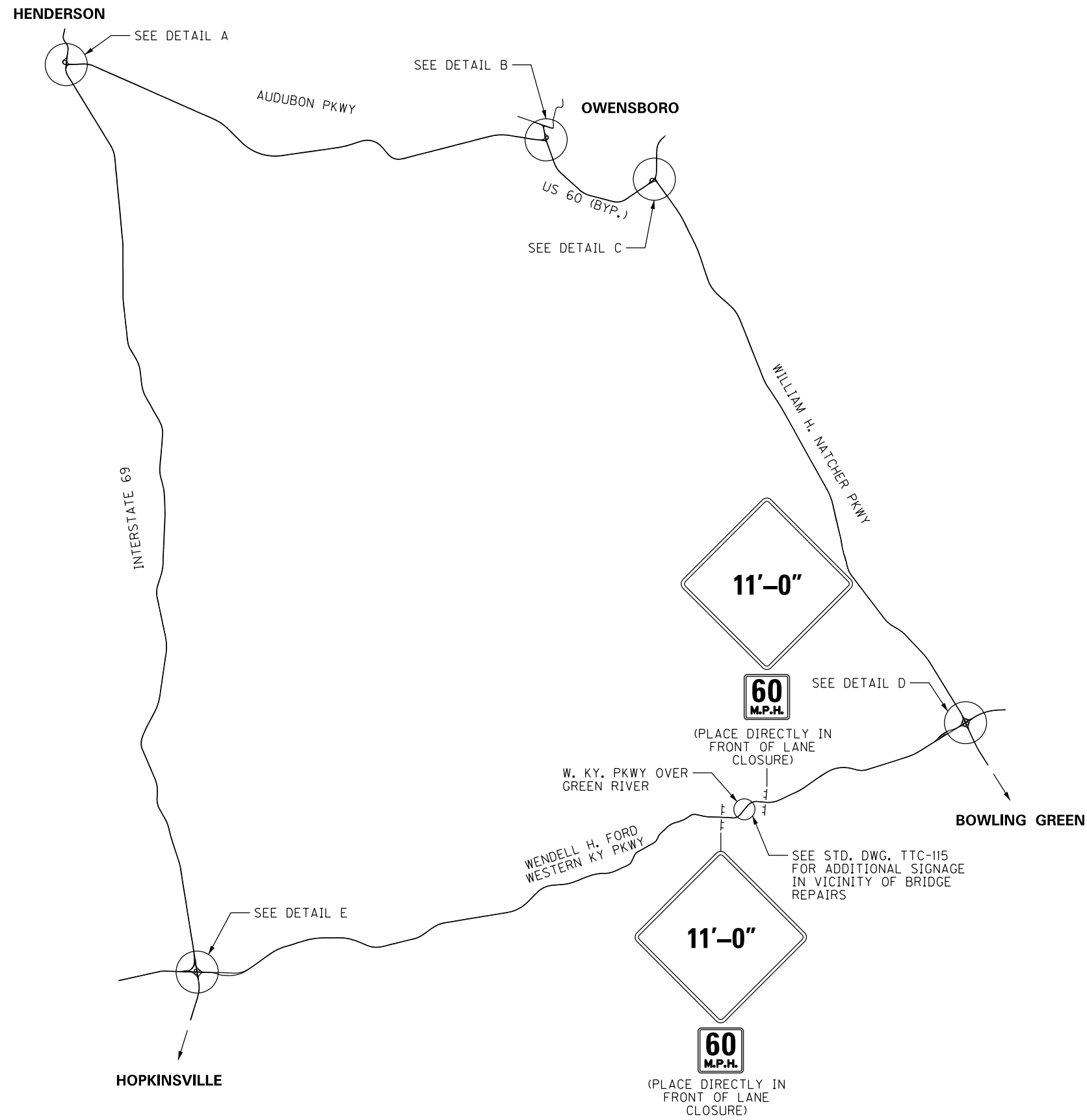
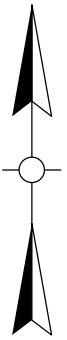
SECTION A-A



LARGE STEEL GUIDE ANGLE ASSEMBLY

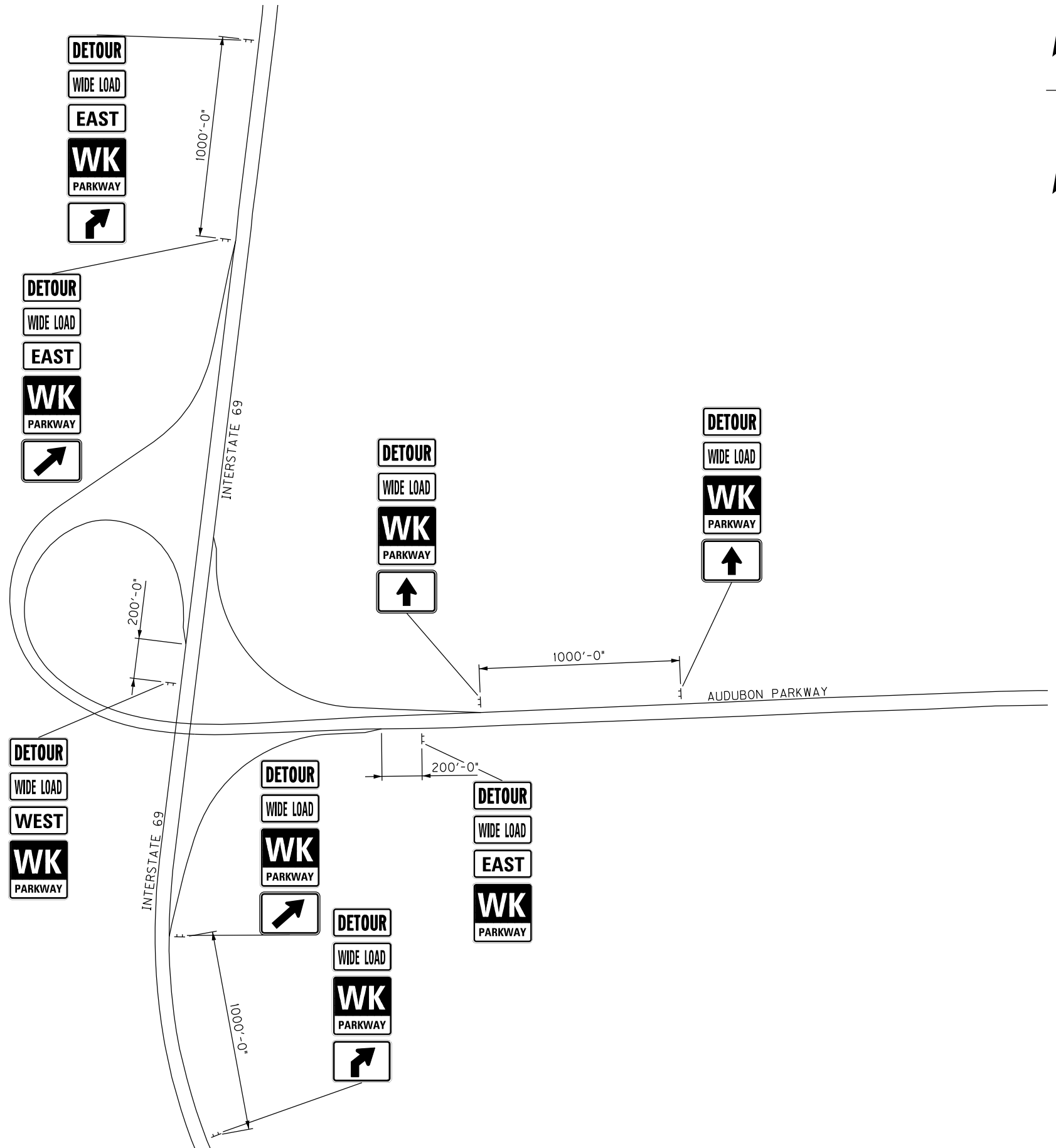
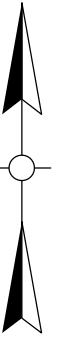
(Channel and plate assembly not shown)

	REVISION	DATE	PREPARED BY BURGESS & NIPLE Engineers ■ Architects ■ Planners	DATE: November 1, 2024	CHECKED BY	MOVEABLE BEARING RETROFIT CROSSING GREEN RIVER	ROUTE	ITEM NO.	COUNTY OF
				DESIGNED BY: L. Bridwell	M. Behrends		WK PKWY	SHEET NO.	MUHLENBERG
USER: Bridwell DATE PLOTTED: October 31, 2024				DETAILED BY: L. Bridwell	D. Richardson		M12	DRAWING NUMBER	28704

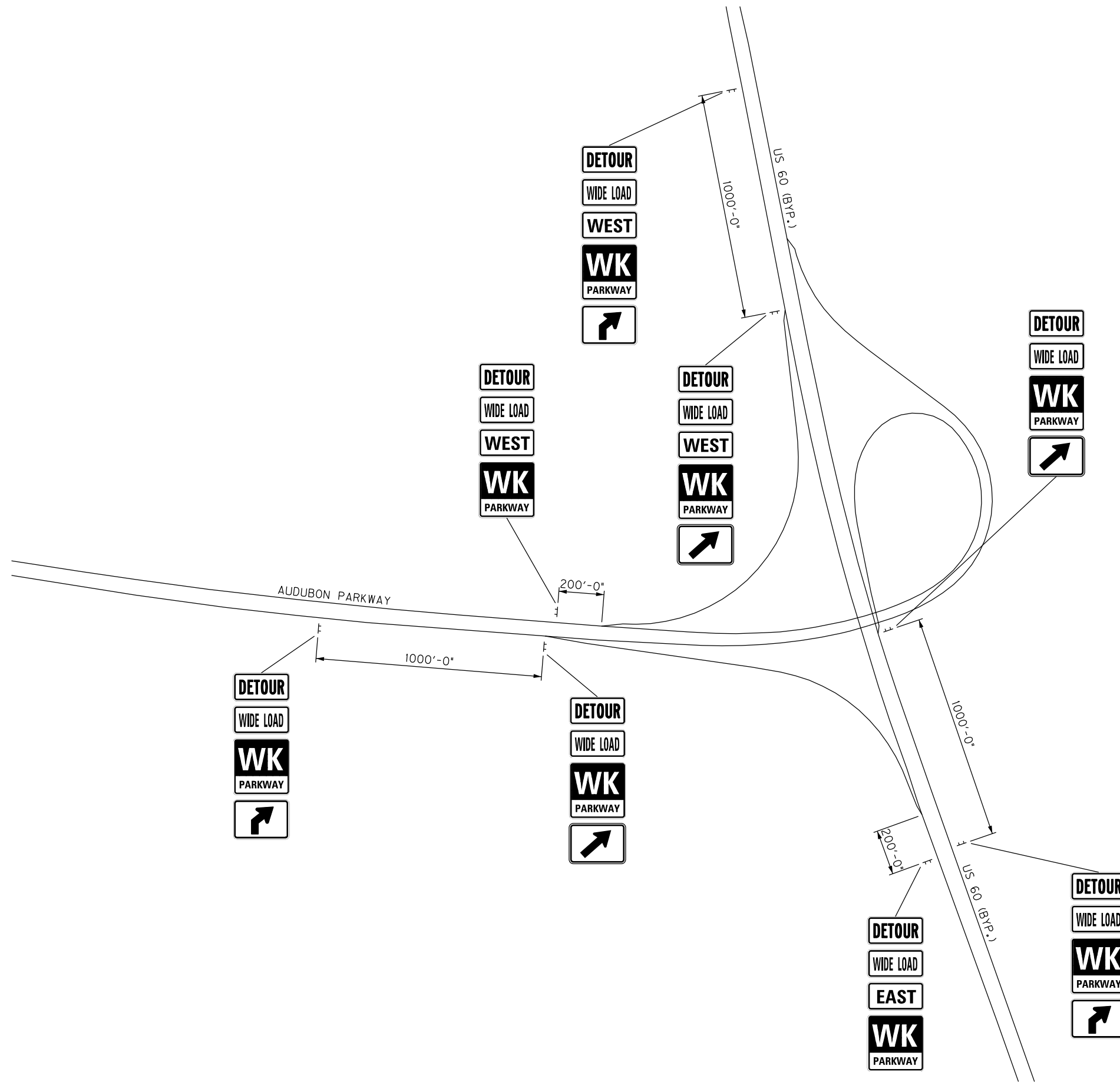
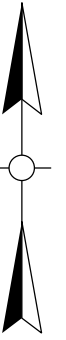


SIGN LEGEND		
	SIZE	COLOR
	24" X 24"	• SEE NOTE
	24" X 12"	ORANGE
	24" X 12"	WHITE
	24" X 12"	WHITE
	24" X 18"	BLACK
	VARIES	WHITE
	48" X 48"	ORANGE
	18" X 18"	ORANGE

• Contact the Engineer for the Wendell H. Ford Western Kentucky Parkway sign design.



	REVISION	DATE	PREPARED BY BURGESS & NIPLE Engineers ■ Architects ■ Planners	DATE: November 1, 2024	CHECKED BY	DETOUR PLAN - DETAIL A CROSSING GREEN RIVER	ROUTE	ITEM NO.	COUNTY OF
				DESIGNED BY: D. Richardson	C. Villier		WK PKWY	SHEET NO.	MUHENBERG
				DETAILED BY: D. Richardson	C. Villier		M14	DRAWING NUMBER	
								28704	



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



REVISION	DATE

PREPARED BY
BURGESS & NIPLE
Engineers ■ Architects ■ Planners

DATE: November 1, 2024	CHECKED BY:
DESIGNED BY: D. Richardson	C. Villier
DETAILED BY: D. Richardson	C. Villier

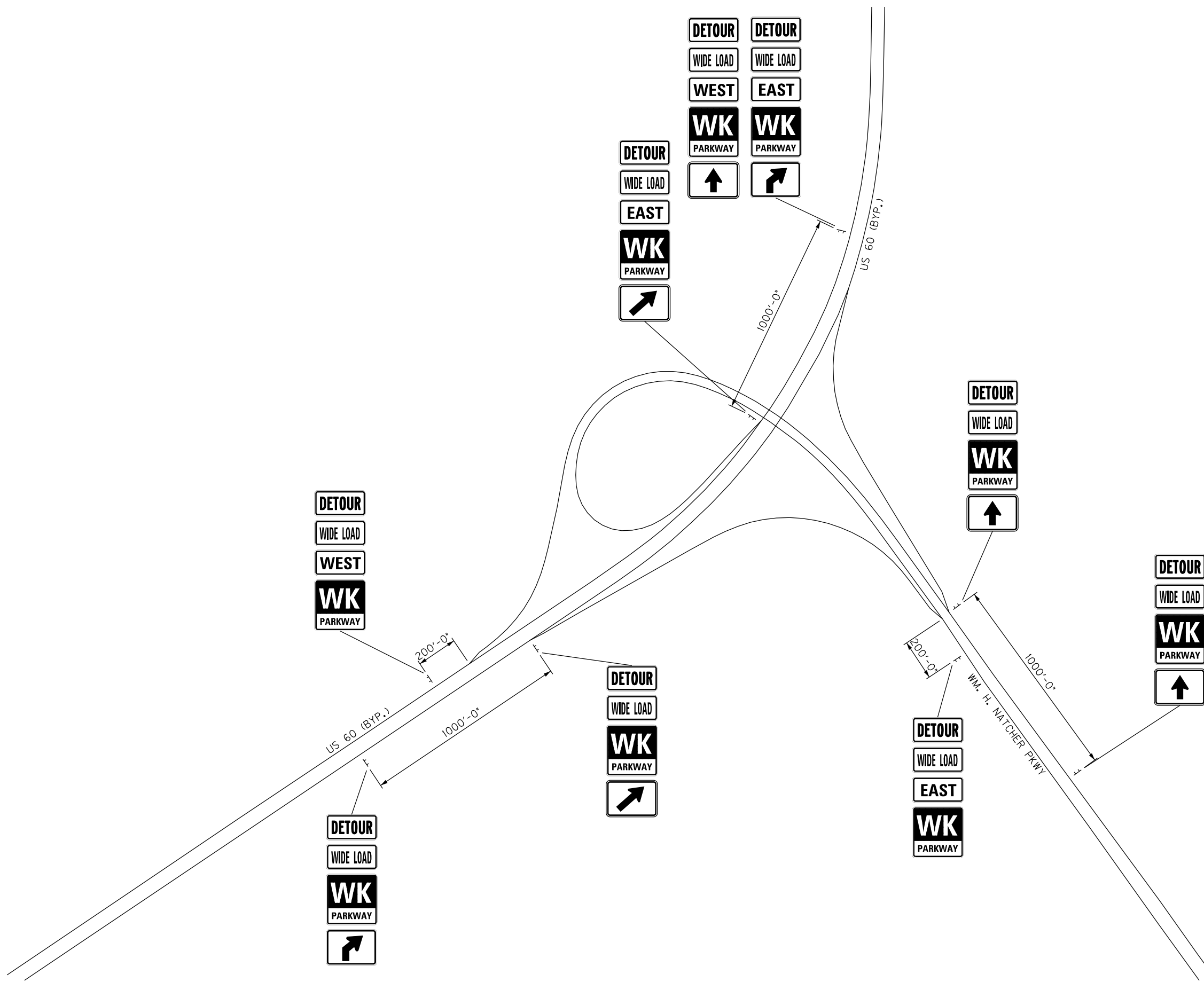
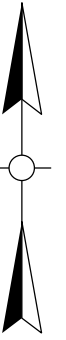
DETOUR PLAN - DETAIL B

CROSSING
GREEN RIVER

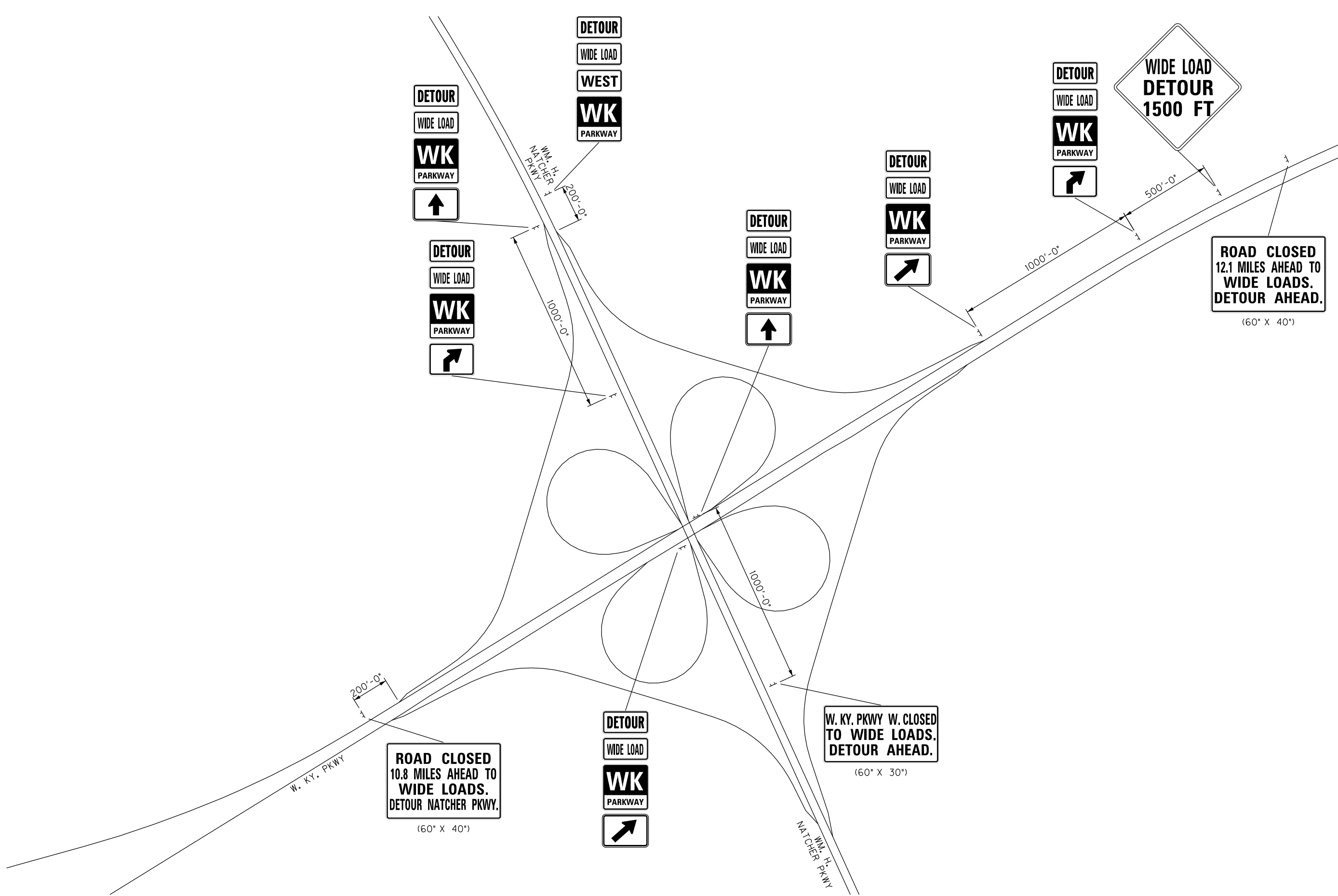
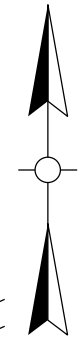
ROUTE
WK PKWY

ITEM NO.
SHEET NO. M15

COUNTY OF MUHLENBERG
DRAWING NUMBER 28704



	REVISION	DATE	PREPARED BY BURGESS & NIPLE Engineers ■ Architects ■ Planners	DATE: November 1, 2024	CHECKED BY	DETOUR PLAN - DETAIL C CROSSING GREEN RIVER	ROUTE	ITEM NO.	COUNTY OF
				DESIGNED BY: D. Richardson	C. Villier		WK PKWY	SHEET NO.	MUHENBERG
				DETAILED BY: D. Richardson	C. Villier		M16	DRAWING NUMBER	
MicroStation v8.11.9.919 USER: Richardson		DATE PLOTTED: October 28, 2024		FILE NAME: P:\PR59281\CADD\SHEETS\MUHENBERG CO\DETOUR 4.DGN				28704	



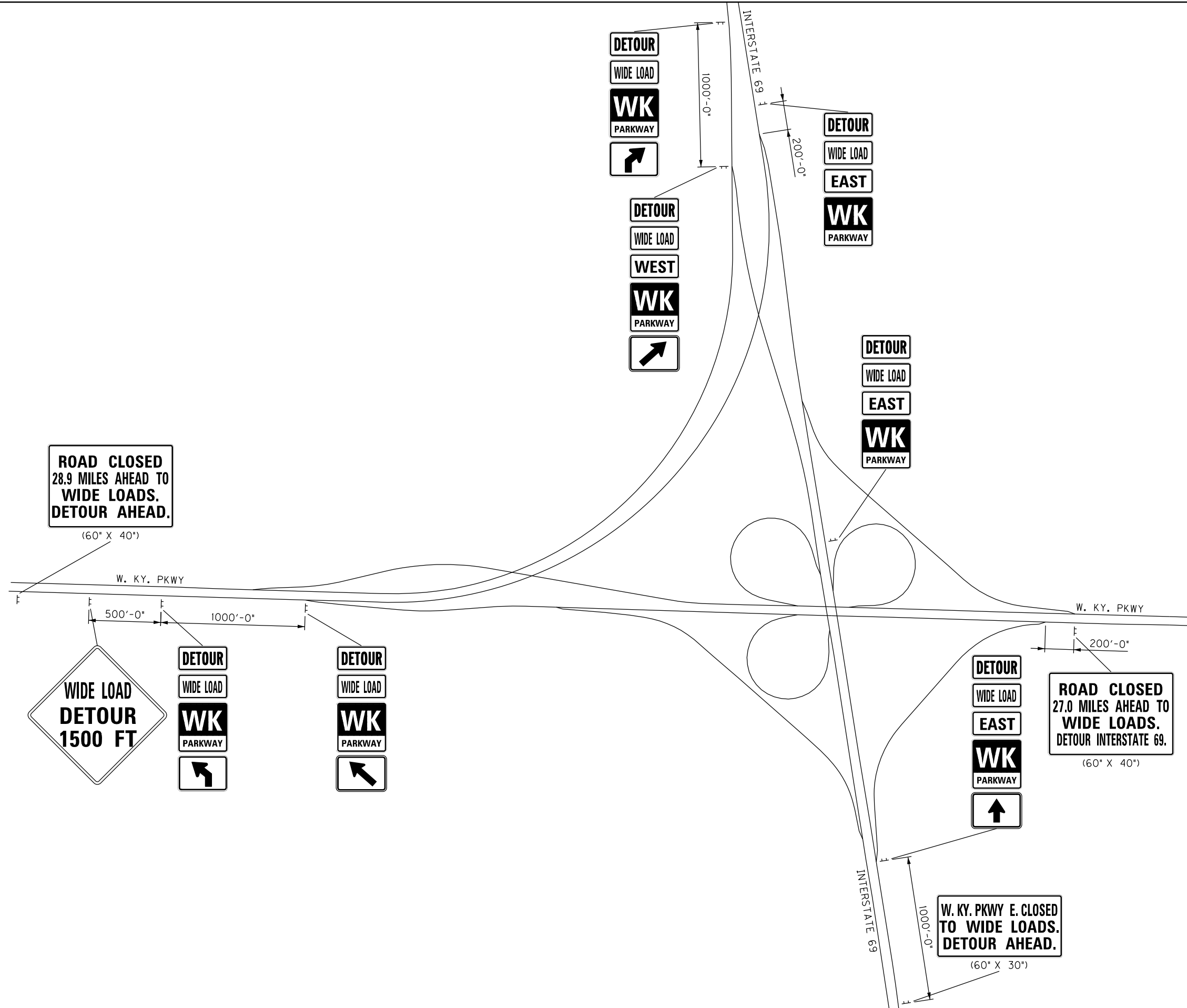
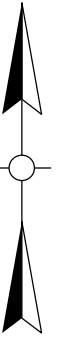
ROAD CLOSED
10.8 MILES AHEAD TO
WIDE LOADS.
DETOUR NATCHER PKWY.
(60" X 40")

W. KY. PKWY W. CLOSED
TO WIDE LOADS.
DETOUR AHEAD.
(60" X 30")

ROAD CLOSED
12.1 MILES AHEAD TO
WIDE LOADS.
DETOUR AHEAD.
(60" X 40")

WIDE LOAD
DETOUR
1500 FT

	REVISION	DATE	PREPARED BY BURGESS & NIPLE Engineers ■ Architects ■ Planners	DATE: November 1, 2024	CHECKED BY	DETOUR PLAN - DETAIL D CROSSING GREEN RIVER	ROUTE	ITEM NO.	COUNTY OF
				DESIGNED BY: D. Richardson	C. Villier		WK PKWY	SHEET NO.	MUHLENBERG
				DETAILED BY: D. Richardson	C. Villier		M17	DRAWING NUMBER	
MicroStation v8.11.9.919 USER: Richardson		DATE PLOTTED: October 28, 2024		FILE NAME: P:\PR59281\CADD\SHEETS\MUHLENBERG CO\DETOUR 5.DGN				28704	



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



REVISION	DATE

PREPARED BY
BURGESS & NIPLE
Engineers ■ Architects ■ Planners

DATE: November 1, 2024
DESIGNED BY: D. Richardson
DETAILED BY: D. Richardson

CHECKED BY
C. Villier
C. Villier

DETOUR PLAN - DETAIL E

CROSSING
GREEN RIVER

ROUTE
WK PKWY

ITEM NO.
SHEET NO. M18

COUNTY OF
MUHLENBERG
DRAWING NUMBER
28704