LETTING DATE

CONSTRUCTION PROJECT NO.

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

ANDERSON COUNTY
BLUEGRASS PARKWAY (BG-9002)
OVER KENTUCKY RIVER

ESTIMATE OF QUANTITIES

* REPAIR NUMBER		17	-	-	4,8	8	8	10,11	5,6	3	5,6,10	13	9	15,16,17	2	7	1	12	1	7	14	10	-	-	-	-	-	10	
BID ITEM CODE			02545	02568	02569	03295	03299	08151	22146EN	23032EN	23070NN	23378EC	23494EC	23859EC	23949EC	24084EC	24409EC	24422EC	24692EC	24879EC	24879EC	24879EC	24879EC	24982EC	25075EC	25117EC	26136EC	26137EC	26138EC	26141EC	
BID ITEM			Clearing And Grubbing	Mobilization	Demobilization	Expansion Joint Replace 2 IN	Armored Edge For Concrete	Steel Reinforcement - Epoxy Coated	Concrete Patching Repair	Bridge Barrier Retrofit	Girder Repair	Concrete Sealing	Inspection Walkway	Finger Expansion Joint	Bridge Cleaning & Preventive Maintenance	Stringer Repair	Drill Holes In Steel Members	Floorbeam Retrofit	Deck Drain Retrofit	Steel Repair Floorbeam Grinding	Steel Repair Triaxial Constraint	Steel Repair Tack Weld Removal	Concrete Coating	Queue Protection Vehicle	Furnish Queue Protection Vehicles	Portable Queue Warning Alert System	Queue Warning PCMS	Queue Warning Portable Radar Sensors	Galvanic Anode	See Sheet R02 For Roadway Bid Items
UNIT			L.S.	L.S.	L.S.	L.F.	L.F.	LBS.	S.F.	L.F.	Each	S.F.	L.F.	L.F.	L.S.	Each	Each	Each	Each	Each	Each	Each	Each	L.S.	Hour	Month	Month	Month	Month	Each	
Substructure	WB Pier 2								272			8460																	272	
	WB Pier 5								1695			8650																	1060	
	EB Pier 2								1757			8020																	944	
	EB Pier 5								1284			8830																	664	
WB Superstructure						30	30	134	39	2298	3	22350	1081	66		1	8	6	42	26	112	22								
EB Superstructure						30	30	134	52	2298	1	22350	1081	66		4	8	14	42	36	112	22								
BRIDGE TOTALS		1	1	1	60	60	268	5099	4596	4	78660	2162	132	1	5	16	20	84	62	224	44	1	720	18	18	108	108	2940	

* See Sheet S03 for Repair Identification Numbers

Revised 4/15/2024

INDEX OF SHEETS

SPECIAL NOTES

- Special Note For Clearing Bridge Site
- Special Note For Completion and Liquidated Damages
- Special Note For Concrete Coating
- Special Note For Concrete Patching Repair
- Special Note For Concrete Sealing
- Special Note For Embedded Galvanic Anodes
- Special Note For Inspection Walkway Replacement
- Special Note For Maintenance of Traffic
- Special Note For Painting Structural Steel Repairs
- Special Note For Portable Queue Warning Alert System
- Special Note For Queue Protection Vehicle
- Special Note For Non-Tracking Tack Coat
- Special Note For Portable Changeable Message Sign
- Special Note For Waterblasting Striping Removal
- See Proposal For Other Pertinent and Applicable Special Notes

SPECIAL PROVISIONS

STANDARD DRAWINGS

BHS-010	Railing System 40 Inch Single Slope
BHS-014	Thrie-Beam Guardrail Transition (TL-3)
BJE-001-14	Armored Edges
BJE-003	Expansion Joint Replacement 1"-3"
BJE-005	Expansion Joint Replacement General Notes
	See Sheet R01 For Roadway Standard Drawings

SPECIFICATIONS

2019 Standard Specifications for Road and Bridge Construction.

2020 AASHTO LRFD Bridge Design Specifications

STRUCTURE SHEETS S01-S30

STATE OF KENTUCKY
JASON DWAYNE JONES
37615
LICENSED PROFESSIONAL ENGINEER

ROADWAY SHEETS R01-R09

STATE OF KENTUCKY
BRETT EVAN RICE
34086
LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

PREPARED BY AECOM

DATE: 4/15/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

TITLE SHEET

CROSSING: KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO. S01	DRAWING NUMBER 28839

MicroStation v10.16.0.80 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$designs\filespecifications$$$$

GENERAL NOTES

ORIGINAL DRAWING NUMBERS:
THE ORIGINAL DRAWING NUMBERS FOR THIS BRIDGE ARE:
SUBSTRUCTURE: 15805, 15806, 15807
SUPERSTRUCTURE: 15808

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 CURRENT EDITION OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, WITH INTERIMS.

MATERIALS DESIGN SPECIFICATIONS:

FOR CLASS "A" REINFORCED CONCRETE	f'c = 3500 psi
FOR CLASS "AA" REINFORCED CONCRETE	f'c = 4000 psi
FOR CLASS "M" REINFORCED CONCRETE	f'c = 4000 psi
FOR STEEL REINFORCEMENT	fy = 60000 psi

MATERIAL SPECIFICATIONS:
AASHTO SPECIFICATIONS OR ASTM, CURRENT EDITION, AS DESIGNATED BELOW SHALL GOVERN THE MATERIALS FURNISHED.

HIGH STRENGTH BOLT CONNECTIONS:
UNLESS OTHERWISE SPECIFIED IN THE PLANS, ALL BOLTED CONNECTIONS SHALL BE ⅞" DIAMETER ASTM F3125 GRADE A325 TYPE 1 HIGH STRENGTH BOLTS, NUTS AND WASHERS. BOLT HOLES SHALL BE 1/16" LARGER THAN THE DIAMETER OF THE BOLTS. ALL BOLTS, NUTS, AND WASHERS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A153 OR F2329. ALL HIGH STRENGTH BOLTED CONNECTIONS ARE TO BE INSTALLED USING "DIRECT TENSION INDICATORS" (DTI'S) IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND ASTM F959. ALL DTI'S SHALL BE SUITABLE FOR USE WITH GALVANIZED STEEL BOLTS. INSTALLATION DETAILS OF THE DTI'S SHALL BE SHOWN ON THE SHOP PLANS.

BOLT THREADS SHALL BE EXCLUDED FROM THE SHEAR PLANE IN ALL BOLTED CONNECTIONS, UNLESS OTHERWISE NOTED.

CHARPY V-NOTCH:
ALL STEEL IN ROLLED BEAMS SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TOUGHNESS TEST FOR NON-FRACTURE CRITICAL COMPONENTS ZONE 2 IN ACCORDANCE WITH THE FOLLOWING:
AASHTO M270 GR 50 (UP TO 2" THICKNESS) OF 15 FT-LBS AT 40 DEG F.

ALL STEEL IN LONGITUDINAL WELDED STEEL PLATE GIRDERS AND FLOORBEAM RETROFITS SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TOUGHNESS TEST FOR FRACTURE CRITICAL COMPONENTS ZONE 2 IN ACCORDANCE WITH THE FOLLOWING:
AASHTO M270 GR 50 (UP TO 2" THICKNESS) OF 25 FT-LBS AT 40 DEG F.
AASHTO M270 GR 50 (2" TO 4" THICKNESS) OF 30 FT-LBS AT 40 DEG F.

SAMPLING AND TESTING PROCEDURES SHALL BE IN ACCORDANCE WITH AASHTO T243 CURRENT EDITION, UTILIZING (H) FREQUENCY TESTING. WHEN PLATE THICKNESS EXCEEDS 1½", FREQUENCY OF TESTING SHALL BE (P).

MILL TEST REPORTS:
NOTARIZED MILL TEST REPORTS SHALL BE FURNISHED IN TRIPLICATE TO THE DEPARTMENT SHOWING THAT ALL STRUCTURAL STEEL CONFORMS TO THE REQUIREMENTS OF THE SPECIFICATIONS.

CLEANING AND PAINTING STRUCTURAL STEEL:
REFER TO THE SPECIAL NOTE FOR PAINTING STRUCTURAL STEEL REPAIRS.

PAINTING DAMAGED AREAS:
ALL AREAS OF NEW OR EXISTING STRUCTURAL STEEL ON WHICH THE PAINT HAS BEEN DAMAGED BY THE CONTRACTOR SHALL BE CLEANED AND SPOT PAINTED TO THE SATISFACTION OF THE ENGINEER AND IN ACCORDANCE WITH THE SPECIAL NOTE FOR PAINTING STRUCTURAL STEEL REPAIRS. THE COST OF THE TOUCH-UP PAINT SHALL BE INCIDENTAL TO THE CONTRACT.

LEAD PAINT (RESIDUAL):
THE CONTRACTOR IS ADVISED TO TAKE ALL NECESSARY PROTECTIVE MEASURES, INCLUDING WORKER SAFETY AND ENVIRONMENTAL REGULATIONS, WHEN PERFORMING SURFACE PREPARATION AND/OR REMOVAL WORK. THE DEPARTMENT WILL NOT CONSIDER ANY CLAIMS BASED ON RESIDUAL LEAD PAINT.

IDENTIFICATION MARKING OF STEEL MEMBERS:
STEEL MILL AND FABRICATOR IDENTIFICATION MARKINGS FOR STEEL PLATES, SHAPES, OR FABRICATED MEMBERS SHALL BE BY METAL TAGS, SOAPSTONE, OR SOME OTHER READILY REMOVABLE MATERIAL, OR SHALL BE MARKED IN AN AREA OF THE COMPLETED MEMBER WHICH WILL BE ENCASED OR COVERED WITH CONCRETE. MARKING METHODS AND LOCATIONS ARE SUBJECT TO APPROVAL OF THE ENGINEER. PAINT OR WAX BASED CRAYONS SHALL NOT BE USED FOR MARKING.

WELD SIZES:
UNLESS SPECIFIED OTHERWISE, USE THE FOLLOWING FILLET WELD SIZES:

MATERIAL THICKNESS OF THICKER PART JOINED (IN.)	MINIMUM SIZE OF FILLET WELD (IN.)
TO ¼" INCLUSIVE	1/8"
¼" TO ½" INCLUSIVE	3/16"
½" TO ¾" INCLUSIVE	¼"
OVER ¾"	5/16"

WELDING SPECIFICATIONS:
ALL WELDING AND WELDING MATERIALS EXCEPT FOR REINFORCEMENT SHALL CONFORM TO "JOINT SPECIFICATION ANSI/AASHTO/AWS D1.5-2020 BRIDGE WELDING CODE". MODIFICATION AND ADDITIONS AS STATED ON THE PLANS SHALL SUPERSEDE THE JOINT SPECIFICATIONS.

WELDING PROCEDURES:
QUALIFICATION TEST OF ALL WELDING PROCEDURES, WHEN REQUIRED BY AWS, SHALL BE COMPLETED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO THE FINAL APPROVAL OF THE SHOP DRAWINGS AND THE START OF THE FABRICATION.

PROHIBITED FIELD WELDING:
EXCEPT WHERE SHOWN IN THE PLANS, NO WELDING OF ANY NATURE SHALL BE PERFORMED ON THE LOAD CARRYING MEMBERS OF THE BRIDGE WITHOUT THE WRITTEN CONSENT OF THE DIRECTOR OF STRUCTURAL DESIGN AND THEN ONLY IN THE MANNER AND AT THE LOCATIONS DESIGNATED IN THE AUTHORIZATION.

SHEAR CONNECTORS:
STUDS SHALL BE WELDED IN ACCORDANCE WITH AWS SPECIFICATIONS.

DIMENSIONS:
DIMENSIONS ARE FOR A NORMAL TEMPERATURE OF 60 DEGREES FAHRENHEIT. LAYOUT DIMENSIONS ARE HORIZONTAL DIMENSIONS.

VERIFYING FIELD CONDITIONS:
THE CONTRACTOR IS NOT TO ORDER ANY MATERIALS, PRODUCE ANY SHOP DRAWINGS, OR BEGIN ANY CONSTRUCTION ACTIVITIES UNTIL AFTER VERIFYING DIMENSIONS AND CONDITIONS IN THE FIELD. DIMENSIONS AND DETAILS SHOWN ON THESE PLANS IN RELATION TO THE EXISTING STRUCTURE SHALL BE CONSIDERED APPROXIMATE. EXISTING PLANS, IF AVAILABLE, SHALL NOT BE CONSIDERED ACCURATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND TO NOTIFY THE PROJECT ENGINEER AND THE DESIGNER OF ANY DIFFERENCES. FAILURE TO NOTIFY EITHER MAY DELAY DRAWING AND OTHER APPROVALS. THEREAFTER MAKE THE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING MATERIALS. ALL SPECIFICATION REQUIREMENTS SHALL REMAIN IN EFFECT. ANY VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK; HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK. IN ADDITION, THE OVERRUN AND UNDERRUN FORMULAS MAY BE APPLIED TO APPROPRIATE REPAIRS PROVIDED THAT THE REQUIREMENT OF ARTICLE 104.02.02 OF THE STANDARD SPECIFICATIONS IS SATISFIED. THE COST OF ALL LABOR, EQUIPMENT, SURVEYING, AND MATERIALS NECESSARY TO VERIFY FILED DIMENSIONS SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR "STAKING".

ARMORED EDGE:
FABRICATE ARMORED EDGE TO MATCH CROSS SLOPE AND PARABOLIC CROWN AT EACH END OF BRIDGE.

REINFORCEMENT:
DIMENSIONS SHOWN FROM THE FACE OF CONCRETE TO BARS ARE TO CENTER OF BARS UNLESS OTHERWISE SHOWN. CLEAR DISTANCE TO FACE OF CONCRETE IS 2" UNLESS OTHERWISE NOTED. SPACING OF BARS IS FROM CENTER TO CENTER OF BARS. ANY REINFORCING BARS DESIGNATED BY SUFFIX "e" IN THE PLANS SHALL BE EPOXY COATED IN ACCORDANCE WITH SECTION 811.10 OF THE STANDARD SPECIFICATIONS. ANY REINFORCING BARS DESIGNATED BY SUFFIX "s" IN A BILL OF REINFORCEMENT SHALL BE CONSIDERED A STIRRUP FOR PURPOSES OF BEND DIAMETERS.

CONCRETE COATING:
APPLY CONCRETE COATING IN ACCORDANCE WITH THE SPECIAL NOTE FOR CONCRETE COATING. CONCRETE COATING IS ESTIMATED AT 5350 SF. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THIS ESTIMATE AND BID APPROPRIATELY. NO PAYMENT ADJUSTMENTS WILL BE MADE IF THE ACTUAL QUANTITY IS DIFFERENT THAN THE ESTIMATE.

CONCRETE SEALER:
APPLY CONCRETE SEALER IN ACCORDANCE WITH THE SPECIAL NOTE CONCRETE SEALING.

COMPLETION OF THE STRUCTURE:
THE CONTRACTOR IS REQUIRED TO COMPLETE THE STRUCTURE 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 AND OTHERWISE CONSIDERED INCIDENTAL TO THE CONTRACT. THIS MAY INCLUDE COFFERDAMS, SHORING, EXCAVATIONS, BACKFILLING, REMOVAL OF ALL OR PARTS OF EXISTING STRUCTURES, PHASE CONSTRUCTION, INCIDENTAL MATERIALS, LABOR, OR ANYTHING ELSE REQUIRED TO COMPLETE THE STRUCTURE.

DAMAGE TO THE STRUCTURE:
THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY AND EXPENSE FOR REPAIR OF ANY AND ALL DAMAGE TO THE STRUCTURE, SHOULD SUCH DAMAGE RESULT FROM THE CONTRACTOR'S ACTIONS. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE FROM THE TIME OF MOBILIZATION UNTIL AFTER THE BRIDGE HAS BEEN REOPENED TO NORMAL TRAFFIC FOLLOWING COMPLETION OF ALL WORK REQUIRED IN THE CONTRACT. AFTER COMPLETION OF ALL OPERATIONS, THE STRUCTURE AND SITE SHALL BE LEFT IN A CONDITION THAT IS IN ACCORDANCE WITH SECTION 105.12 OF THE SPECIFICATIONS.

DISPOSAL OF MATERIALS:
ALL MATERIALS AND DEBRIS REMOVED FROM OR BENEATH THE BRIDGE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE RIGHT-OF-WAY.

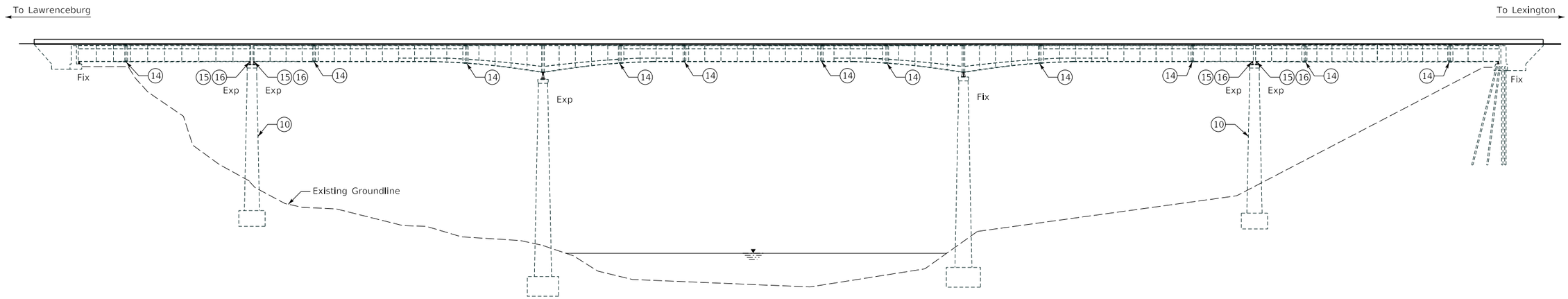
EXISTING STEEL REINFORCEMENT:
THE COST OF CUTTING, BENDING, AND CLEANING EXISTING STEEL REINFORCEMENT SHALL BE INCIDENTAL TO THE REPAIR ITEM BEING COMPLETED.

CONCRETE BEVELED EDGES:
ALL EXPOSED CONCRETE EDGES SHALL BE BEVELED ¾", UNLESS OTHERWISE SHOWN.

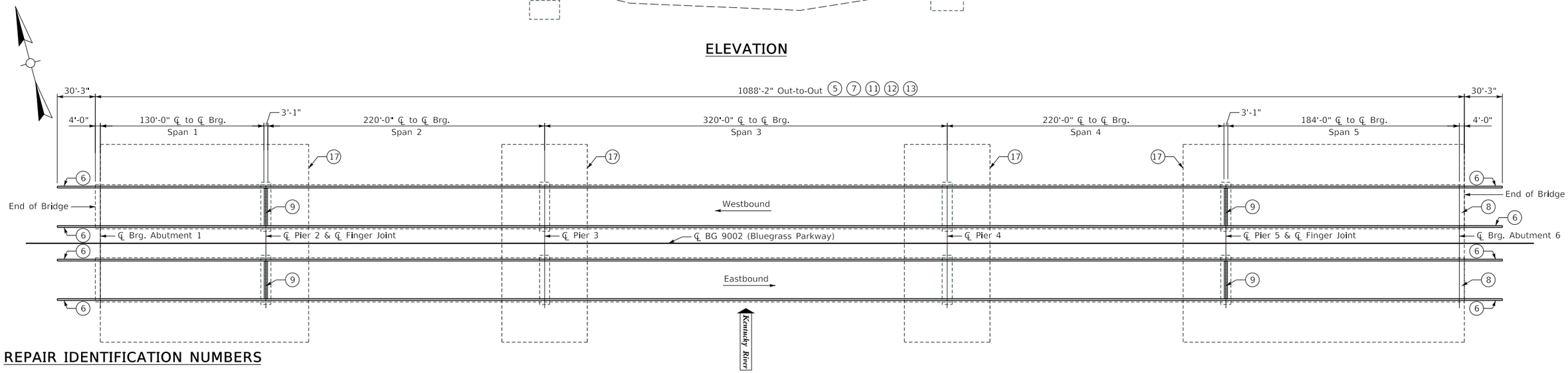
BEFORE YOU DIG:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIREMENTS AND CONFORMATION WITH THE UNDERGROUND FACILITY DAMAGE PREVENTION ACT OF 1994. THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING ANY UTILITIES ON THIS PROJECT. ALL UNDERGROUND UTILITIES SHALL BE LOCATED PRIOR TO CONSTRUCTION. ANY UTILITIES DISTURBED OR DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS WILL BE REPAIRED TO THE SATISFACTION OF THE UTILITY OWNER AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS ADVISED TO CALL (800) 752-6007 A MINIMUM OF TWO WORKING DAYS PRIOR TO EXCAVATION FOR INFORMATION ON THE LOCATION OF SOME, BUT NOT NECESSARILY ALL UNDERGROUND UTILITIES.

UTILITIES:
BEFORE BEGINNING WORK, LOCATE ALL EXISTING UTILITIES. CONSIDER LOCATION OF UTILITIES SHOWN ON THE DRAWINGS TO BE APPROXIMATE AND FOR INFORMATIONAL PURPOSES ONLY. THE DEPARTMENT DOES NOT WARRANT THE LOCATIONS AND ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS. THE CONTRACTOR MUST MAKE HIS OWN DETERMINATION. EXCEPT AS SHOWN ON THE PLANS, WORK AROUND AND DO NOT DISTURB EXISTING UTILITIES.

STRUCTURAL STEEL REPAIR FABRICATION:
STEEL REPAIRS AND STRUCTURAL STEEL ITEMS FALL UNDER SECTION 607.03.02 (a). SHOP FABRICATED MATERIALS FOR REINFORCING EXISTING BRIDGES REQUIRES AN AISC SBR, IBR, OR ABR CERTIFICATION.



ELEVATION



PLAN

REPAIR IDENTIFICATION NUMBERS

1. Steel Floorbeam Crack Repair (See Sheet S04 Framing Plan for Locations)
2. Steel Stringer Crack Repair (See Sheet S04 Framing Plan for Locations)
3. Steel Girder Crack Repair (See Sheet S04 Framing Plan for Locations)
4. Stringer and Girder End Retrofit at Abutment 6 (Eastbound Only) (See Sheet S04 Framing Plan for Locations)
5. Reinforced Concrete Railing Replacement (See Sheet S05 for Details)
6. Reinforced Concrete Railing Retrofit Over Wingwalls (See Sheet S06 for Details)
7. Girder Triaxial Constraint Retrofit (See Sheet S11 for Details)
8. Abutment 6 Expansion Joint Replacement (See Sheet S12 for Details)
9. Pier 2 and Pier 5 Finger Joint Replacement (See Sheets S13-S17 for Details)
10. Pier 2 and Pier 5 Concrete Patching (See Sheets S18-S21 for Details)
11. Deck Concrete Patching (See Sheets S22-S26 for Details)
12. Deck Drain Retrofit (See Sheet S27 for Details)
13. Inspection Walkway Replacement (See Sheets S28-S30 for Details)
14. Girder Bolted Splice Plate Tack Weld Removal
15. Clean and Paint Steel Below Pier 2 and 5 Finger Joints
16. Grease Pier 2 and Pier 5 Bearings
17. Cut and Spray Vegetation

REPAIR 14:

NOTES:

1. Remove girder bolted bottom flange splice plate tack welds and grind the surface smooth. Clean and spot paint locations after grinding in accordance with the SPECIAL NOTE FOR PAINTING STRUCTURAL STEEL REPAIRS.
2. The cost of all labor, materials, paint, and equipment necessary for Girder Bolted Splice Plate Tack Weld Removal (Repair 14) shall be incidental to the unit bid price for "Steel Repairs - Tack Weld Removal". Each location for "Steel Repairs - Tack Weld Removal" shall include removal of all tack welds at each splice location including both faces of the girder.
3. The cost of all labor, materials, paint, and equipment necessary to Clean and Paint Steel Below Pier 2 and Pier 5 Finger Joints (Repair 15) and Grease Pier 2 and Pier 5 Bearings (Repair 16) shall be incidental to the unit bid price for "Bridge Cleaning & Preventive Maintenance". Clean and paint the steel below the Pier 2 & 5 finger joints in accordance with Section 614.03.08 of the Standard Specifications
4. The cost of all labor, materials, and equipment necessary to Cut and Spray Vegetation (Repair 17) shall be incidental to the unit bid price for "Clearing and Grubbing". See the Special Note for Clearing Bridge Site for details.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

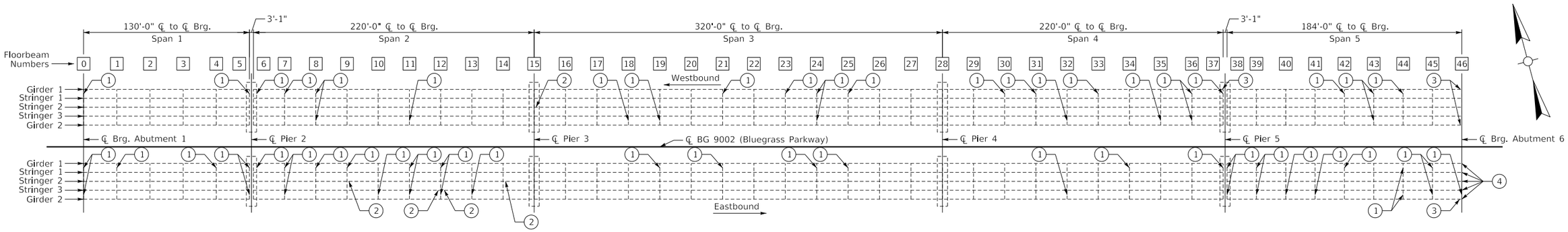
PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

LAYOUT
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S03	28839

MicroStation v10.16.0.80 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$design$file$specification$$$$



FRAMING PLAN

STRINGER REPAIR LOCATIONS
(See Sheet S09 For Details)

MARK	BRIDGE	STRINGER	SPAN	LOCATION
(2)	EB	2	2	FB9, East Side
(2)	EB	3	2	FB12, West Side
(2)	EB	3	2	FB12, East Side
(2)	EB	2	2	FB14, East Side
(2)	WB	2	2	FB15, Pier 3

GIRDER REPAIR LOCATIONS
(See Sheet S10 For Details)

MARK	BRIDGE	GIRDER	SPAN	LOCATION
(3)	EB	2	5	FB46, Abutment 6
(3)	WB	1	4	FB37, Pier 5
(3)	WB	1	5	FB46, Abutment 6
(3)	WB	2	5	FB46, Abutment 6

REPAIR IDENTIFICATION NUMBERS

(1) Steel Floorbeam Crack Repair (See Sheets S07 & S08 For Details)

(2) Steel Stringer Crack Repair (See Sheet S09 For Details)

(3) Steel Girder Crack Repair (See Sheet S10 For Details)

(4) Stringer and Girder End Retrofit at Abutment 6 (Eastbound Only) (See Sheet S12 For Details)

FLOORBEAM REPAIR LOCATIONS
(Westbound Bridge, See Sheets S07 & S08 For Details)

MARK	BRIDGE	FLOORBEAM	SPAN	LOCATION	REPAIR
(1)	WB	0	1	Girder 1 End	Grinding Only
(1)	WB	5	1	Girder 1 End	Grinding Only
(1)	WB	6	2	Girder 1 End	Grinding Only
(1)	WB	7	2	Girder 1 End	Grinding Only
(1)	WB	8	2	Girder 1 End	Grinding Only
(1)	WB	8	2	Girder 2 End	Grinding Only
(1)	WB	11	2	Girder 2 End	Grinding Only
(1)	WB	18	3	Girder 2 End	Grinding Only
(1)	WB	19	3	Girder 2 End	Grinding Only
(1)	WB	21	3	Girder 1 End	Grinding Only
(1)	WB	23	3	Girder 1 End	Grinding Only
(1)	WB	24	3	Girder 1 End	Grinding Only
(1)	WB	24	3	Girder 2 End	Grinding and Retrofit
(1)	WB	25	3	Girder 1 End	Grinding and Retrofit
(1)	WB	30	4	Girder 1 End	Grinding Only
(1)	WB	31	4	Girder 1 End	Grinding and Retrofit
(1)	WB	32	4	Girder 2 End	Grinding Only
(1)	WB	33	4	Girder 1 End	Grinding Only
(1)	WB	35	4	Girder 2 End	Grinding Only
(1)	WB	36	4	Girder 1 End	Grinding and Retrofit
(1)	WB	36	4	Girder 2 End	Grinding Only
(1)	WB	37	4	Girder 1 End	Grinding Only
(1)	WB	42	5	Girder 1 End	Grinding and Retrofit
(1)	WB	43	5	Girder 1 End	Grinding Only
(1)	WB	43	5	Girder 2 End	Grinding Only
(1)	WB	44	5	Girder 1 End	Grinding and Retrofit

Westbound "Floorbeam Retrofit" Total Quantity = 6

Westbound "Steel Repair - Floorbeam Grinding" Total Quantity = 26

FLOORBEAM REPAIR LOCATIONS
(Eastbound Bridge, See Sheet S07 & S08 For Details)

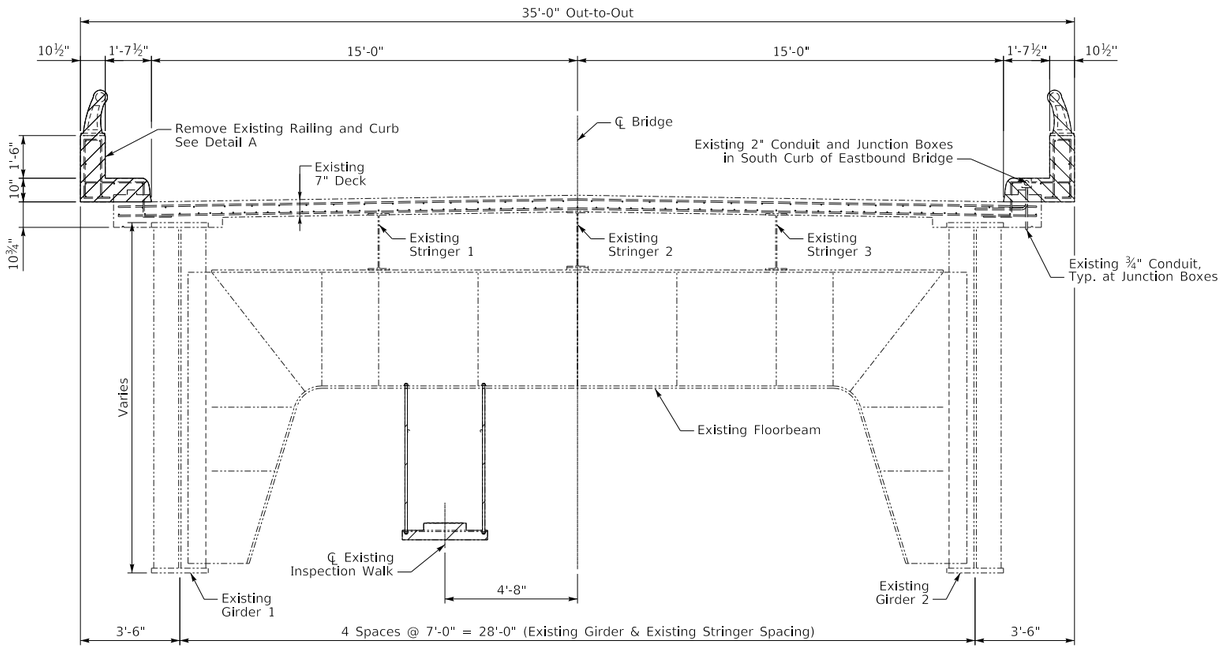
MARK	BRIDGE	FLOORBEAM	SPAN	LOCATION	REPAIR
(1)	EB	0	1	Girder 1 End	Grinding Only
(1)	EB	0	1	Girder 2 End	Grinding and Retrofit
(1)	EB	1	1	Girder 1 End	Grinding and Retrofit
(1)	EB	4	1	Girder 1 End	Grinding Only
(1)	EB	5	1	Girder 1 End	Grinding and Retrofit
(1)	EB	5	1	Girder 2 End	Grinding Only
(1)	EB	6	2	Girder 1 End	Grinding and Retrofit
(1)	EB	7	2	Girder 1 End	Grinding Only
(1)	EB	7	2	Girder 2 End	Grinding and Retrofit
(1)	EB	8	2	Girder 1 End	Grinding Only
(1)	EB	9	2	Girder 1 End	Grinding Only
(1)	EB	10	2	Girder 2 End	Grinding and Retrofit
(1)	EB	11	2	Girder 1 End	Grinding and Retrofit
(1)	EB	11	2	Girder 2 End	Grinding and Retrofit
(1)	EB	12	2	Girder 1 End	Grinding Only
(1)	EB	12	2	Girder 2 End	Grinding and Retrofit
(1)	EB	13	2	Girder 2 End	Grinding and Retrofit
(1)	EB	19	3	Girder 1 End	Grinding Only
(1)	EB	21	3	Girder 1 End	Grinding and Retrofit
(1)	EB	24	3	Girder 1 End	Grinding and Retrofit
(1)	EB	25	3	Girder 1 End	Grinding Only
(1)	EB	32	4	Girder 2 End	Grinding Only
(1)	EB	34	4	Girder 1 End	Grinding Only
(1)	EB	37	4	Girder 1 End	Grinding Only
(1)	EB	38	5	Girder 1 End	Grinding and Retrofit
(1)	EB	38	5	Girder 2 End	Grinding Only
(1)	EB	39	5	Girder 1 End	Grinding Only
(1)	EB	39	5	Girder 2 End	Grinding Only
(1)	EB	40	5	Girder 2 End	Grinding Only
(1)	EB	41	5	Girder 2 End	Grinding Only
(1)	EB	42	5	Girder 1 End	Grinding Only
(1)	EB	44	5	Girder 1 End	Grinding Only
(1)	EB	44	5	Girder 2 End	Grinding Only
(1)	EB	45	5	Girder 1 End	Grinding Only
(1)	EB	45	5	Girder 2 End	Grinding and Retrofit
(1)	EB	46	5	Girder 2 End	Grinding Only

Eastbound "Floorbeam Retrofit" Total Quantity = 14

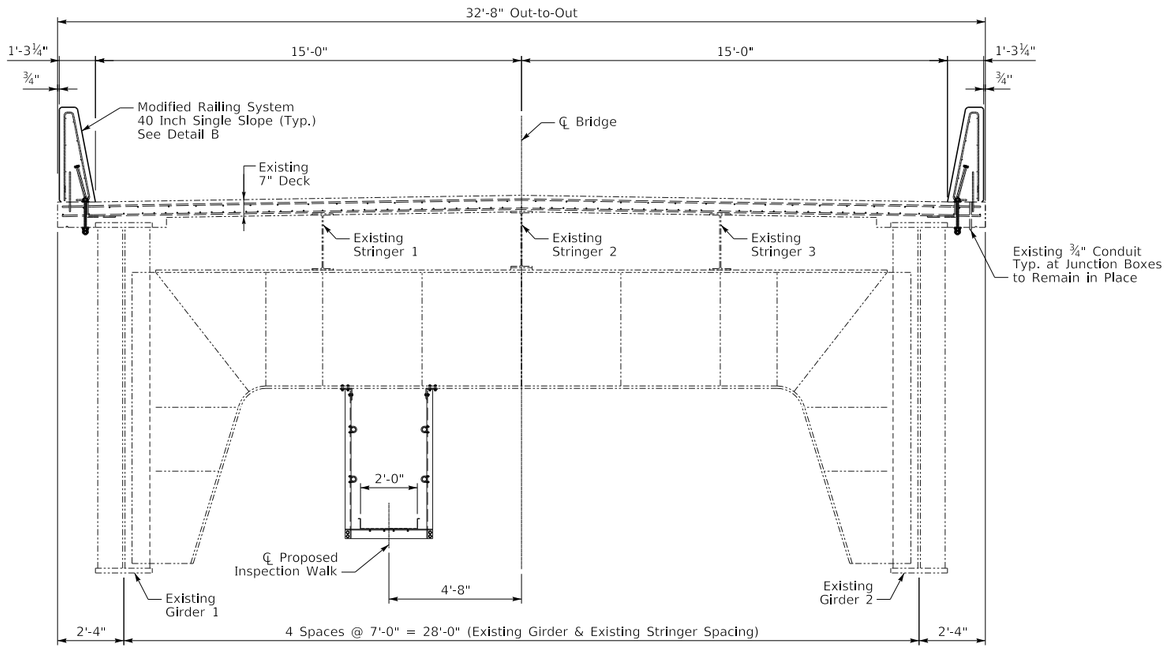
Eastbound "Steel Repair - Floorbeam Grinding" Total Quantity = 36

NOTE:

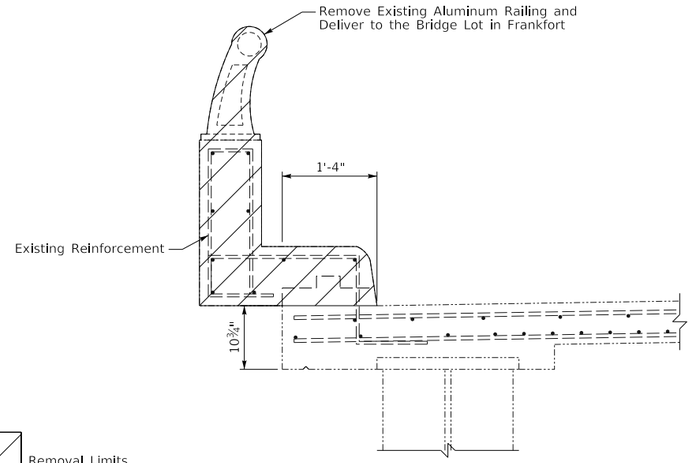
1. Floorbeam retrofit locations are selected for crack indications ¾" and longer from the 2021 inspection.



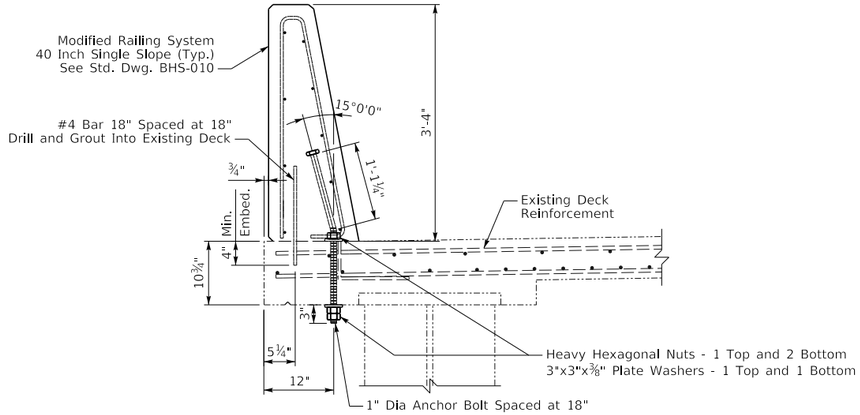
EXISTING TYPICAL SECTION



PROPOSED TYPICAL SECTION



DETAIL A



DETAIL B

NOTES:

1. Do not place proposed railings on top of deck overlay or seal coats.
2. Embed secondary (#4) anchor bars 1'-4" in length with a Type III Class C,D,E, or F anchor adhesive. The minimum adhesive anchor embedment depth is 4". The anchor adhesive chosen shall be able to achieve a basic bond strength in tension, Nba, of 10 kips. Submit signed and sealed calculations for the manufacturer's published literature showing the proposed anchor adhesive's ability to develop this load to the Engineer for approval prior to use. The (#4) anchor bars used for the adhesive anchorage system shall not be epoxy coated within the required embedment.
3. The 1" diameter anchor bolts shall conform to ASTM F1554 Grade 55. Heavy hexagonal nuts shall conform to ASTM A563.
4. 3"x3"x⅜" plate washers shall have a 1 1/16" diameter hole centered and conform to ASTM A36.
5. Galvanize anchor bolts, nuts, and plate washers conforming to ASTM A153 or ASTM F2329.
6. Core drill 1 1/16" diameter holes through existing deck. Percussion drilling is not permitted. Concrete spalls in the bottom of the deck exceeding ½" from edge of holes shall be patched at the Contractor's expense.
7. The cost of all labor, materials, and equipment necessary to remove and replace the bridge railings shall be incidental to the unit bid price for "Bridge Barrier Retrofit".

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

KENTUCKY TRANSPORTATION CABINET

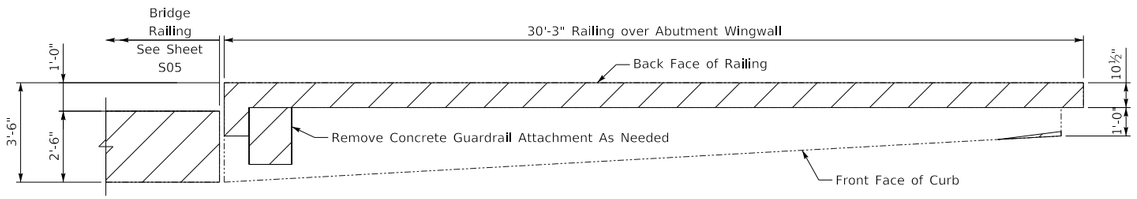
REVISION	DATE

PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

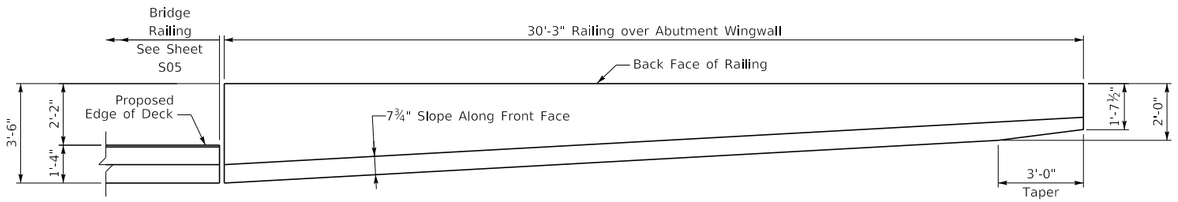
TYPICAL SECTION
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002	SHEET NO. S05	ANDERSON
		DRAWING NUMBER 28839



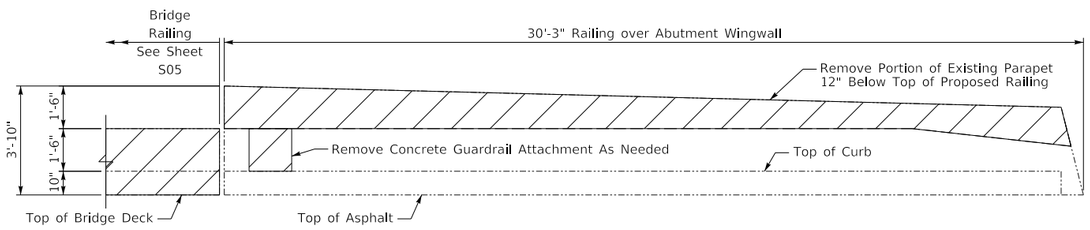
EXISTING PLAN

Northeast Wingwall Shown, Other Wingwalls Similar



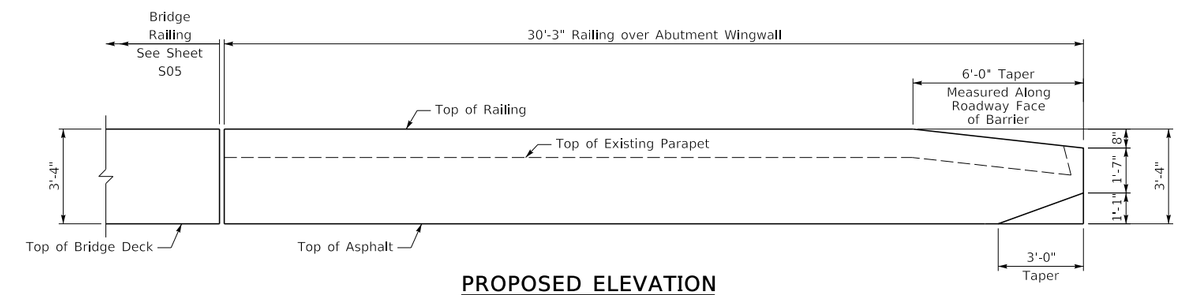
PROPOSED PLAN

Northeast Wingwall Shown, Other Wingwalls Similar



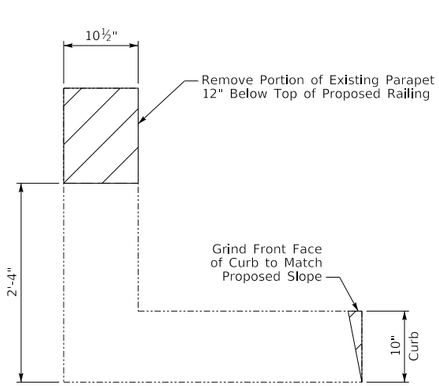
EXISTING ELEVATION

Northeast Wingwall Shown, Other Wingwalls Similar

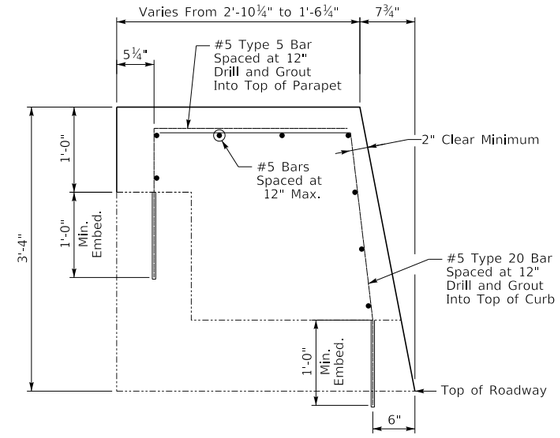


PROPOSED ELEVATION

Northeast Wingwall Shown, Other Wingwalls Similar

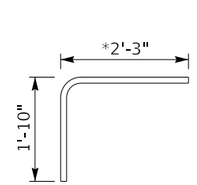


EXISTING SECTION

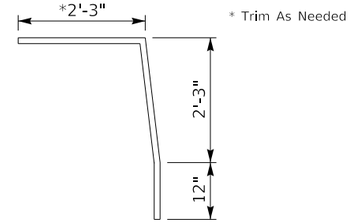


PROPOSED SECTION

Removal Limits



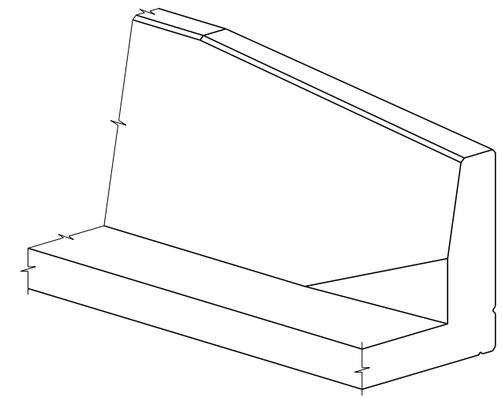
TYPE 5



TYPE 20

NOTES:

1. Use Class "AA" Concrete throughout.
2. All reinforcement shown on this sheet shall be epoxy coated Grade 60. Use stirrup bend diameters for all bent bars.
3. Remove existing concrete coating before placing new concrete.
4. The cost of all labor, materials, and equipment necessary to install the bridge railing over the wingwalls shall be incidental to the unit bid price for "Bridge Barrier Retrofit".



OBLIQUE VIEW

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

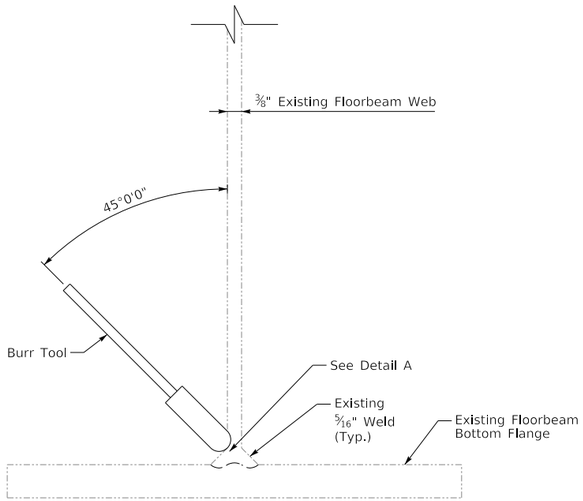
REVISION	DATE

PREPARED BY AECOM

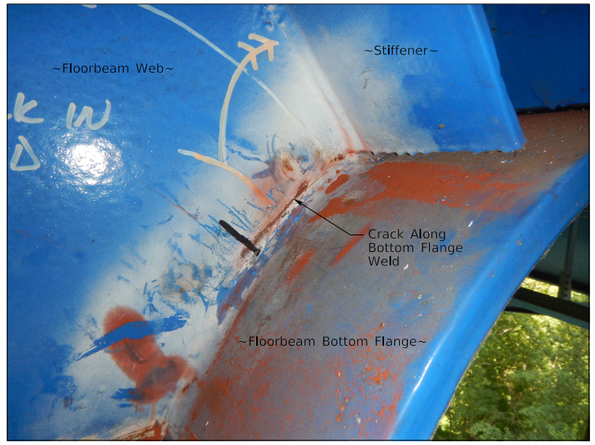
DATE: 3/11/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

BRIDGE RAILING OVER WINGWALLS
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S06	28839

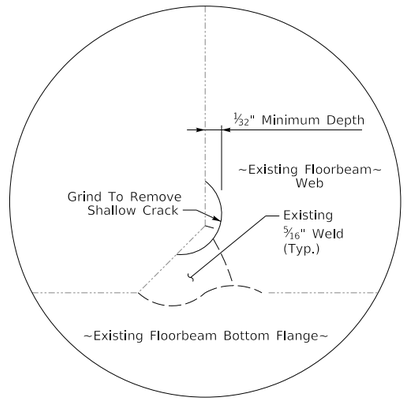


SECTION THROUGH FLOORBEAM

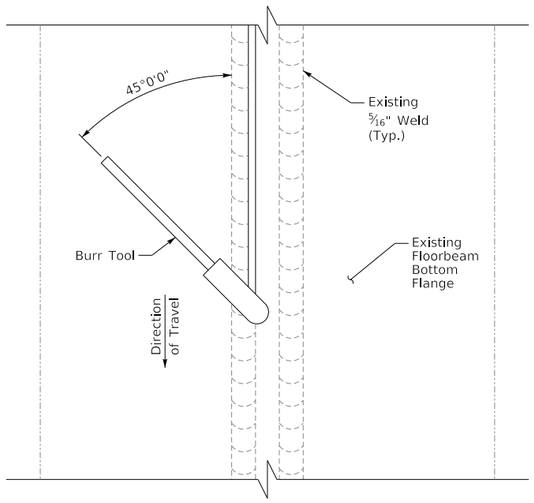


FLOORBEAM CRACK ALONG BOTTOM FLANGE WELD

(Eastbound Floorbeam 12 Near Girder 2 End Shown)



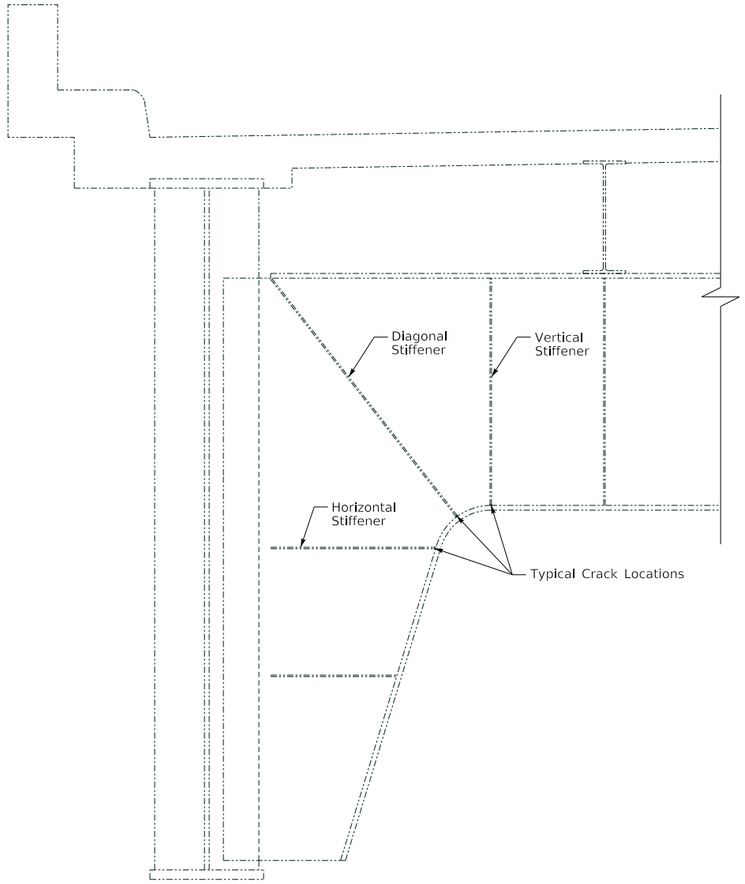
DETAIL A



PLAN

NOTES:

1. Floorbeam grinding is for removal of very shallow cracks. Floorbeam grinding should only be preformed at crack locations as directed by the Engineer.
2. Floorbeam cracks are typically located at the intersecting welds of the stiffeners and bottom flange. See the 2021 Fracture Critical Inspection Report for detailed crack locations. See the 2023 Fracture Critical Inspection Report for updated crack locations and lengths.
3. Use tungsten carbide rotary burrs with a tip radius of 3/16" to 1/2".
4. Do not use disc grinder.
5. Do not introduce significant removal of the base metal after crack grinding.
6. Do not introduce nicks or undercuts to the remaining weld or base metal.
7. Clean and spot paint locations after grinding in accordance with the SPECIAL NOTE FOR PAINTING STRUCTURAL STEEL REPAIRS.
8. The cost of all labor, materials, paint, and equipment necessary to complete floorbeam grinding shall be incidental to the unit bid price for "Steel Repairs - Floorbeam Grinding". Each location for "Steel Repairs - Floorbeam Grinding" shall include grinding on both sides of the floorbeam web at one floorbeam end.



PARTIAL FLOORBEAM ELEVATION

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

REVISION	DATE

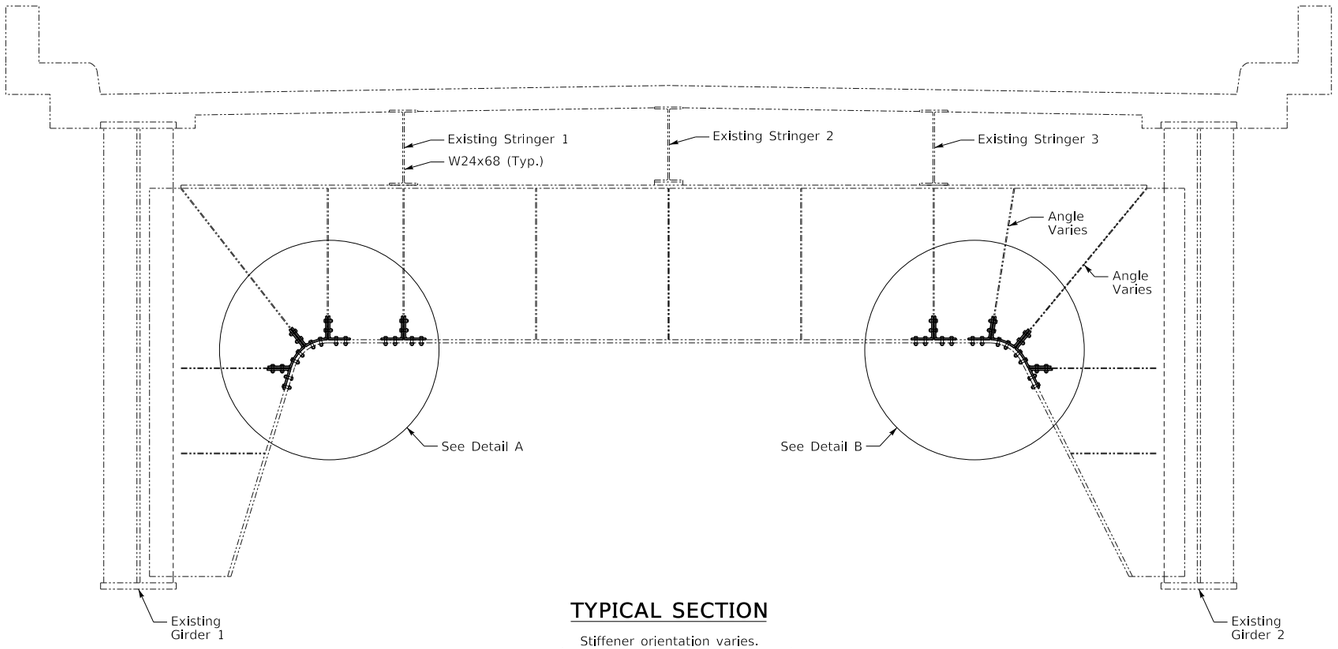
PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

FLOORBEAM GRINDING

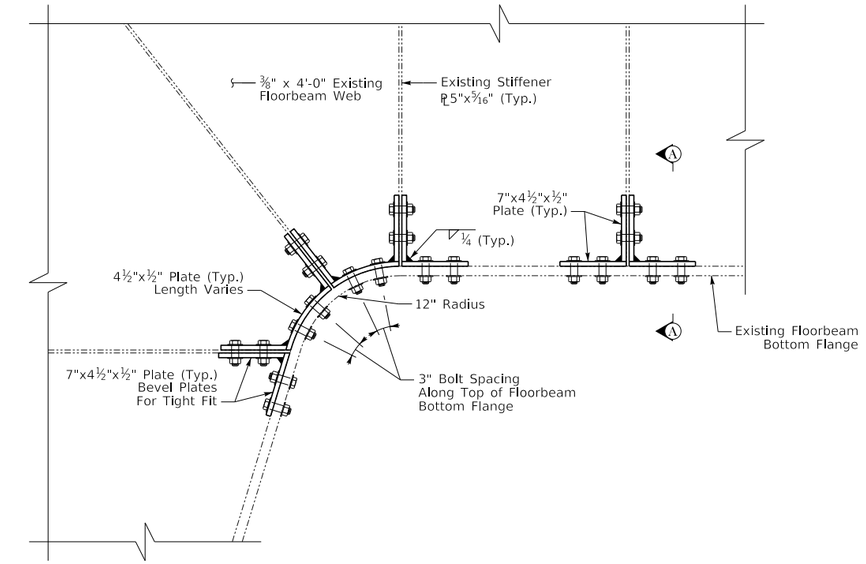
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S07	28839

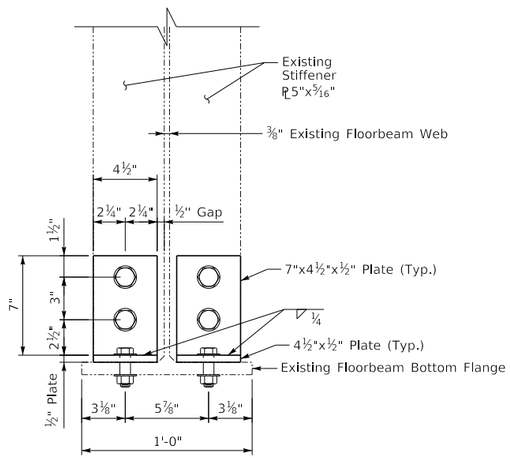


TYPICAL SECTION

Stiffener orientation varies.
Typical orientation is shown on the left.
Orientation near Piers 3 & 4 shown on right.



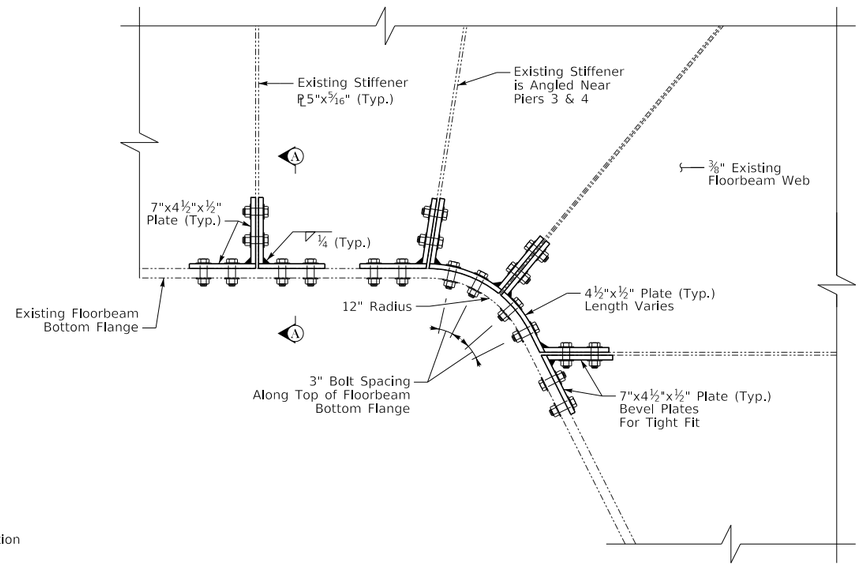
DETAIL A



SECTION A-A

NOTES:

1. See sheet S04 for floorbeam retrofit locations.
2. Stiffener location and angle vary depending on Floorbeam location. See Sheet 8 in the existing plans (Drawing Number 15808) for dimensions. The Contractor shall field verify angles and dimensions prior to ordering materials.
3. The welds connecting floorbeam retrofit plates may be field or shop welded.
4. Clean and paint new steel and existing steel in accordance with the SPECIAL NOTE FOR PAINTING STRUCTURAL STEEL REPAIRS.
5. The cost of all labor, materials, paint, and equipment necessary to install floorbeam retrofits shall be incidental to the unit bid price for "Floorbeam Retrofit". Each location for "Floorbeam Retrofit" shall include plating on both sides of the floorbeam web.



DETAIL B

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

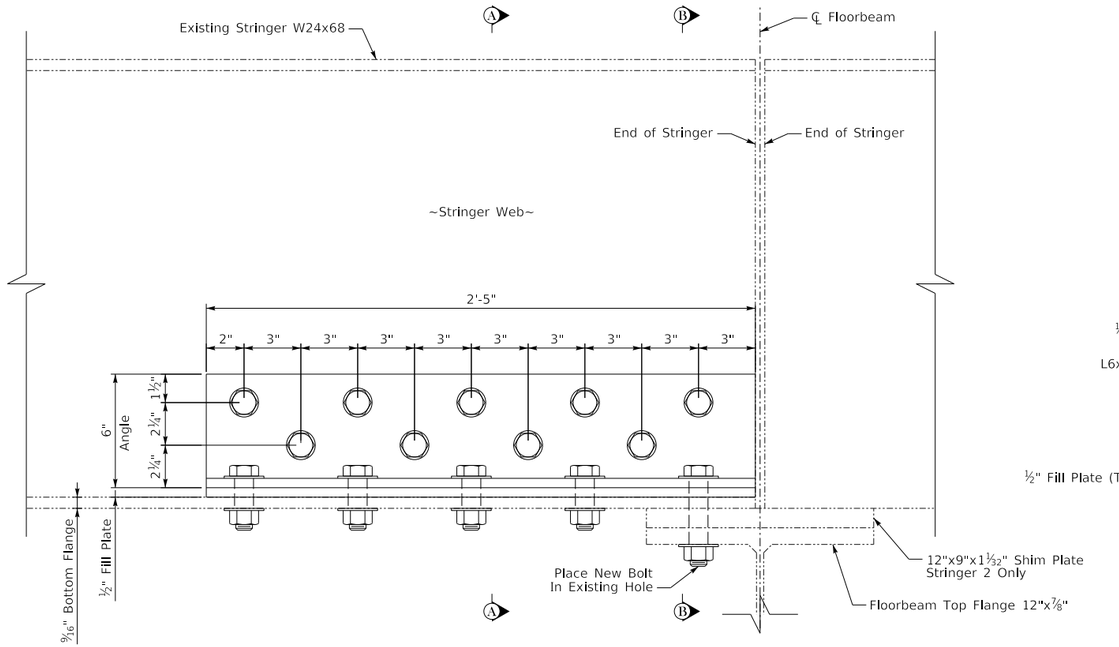
PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

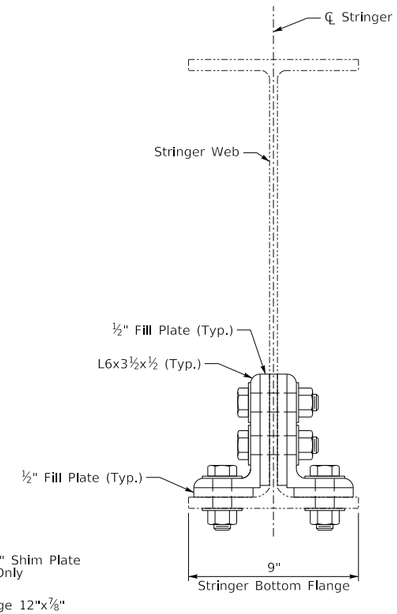
FLOORBEAM RETROFIT
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S08	28839

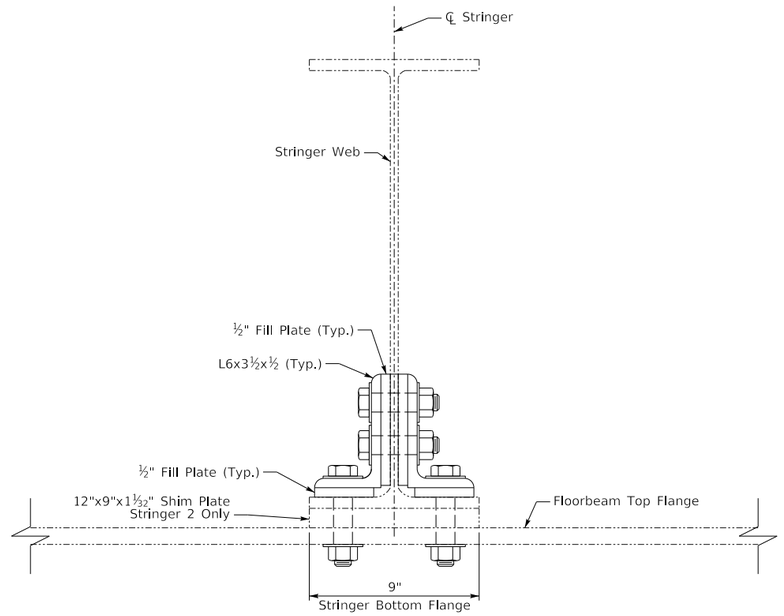
MicroStation v10.16.0.80 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$design$file$specification$$$$



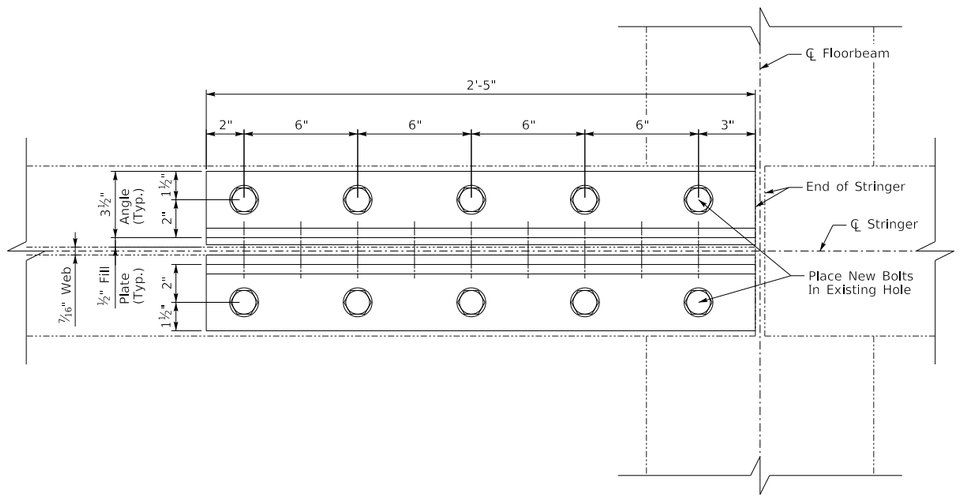
ELEVATION



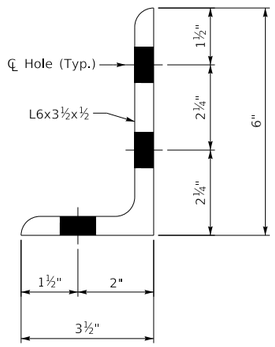
SECTION A-A



SECTION B-B



PLAN



SECTION THROUGH ANGLE

NOTES:

1. Clean and paint new steel and existing steel in accordance with the SPECIAL NOTE FOR PAINTING STRUCTURAL STEEL REPAIRS.
2. The cost of all labor, materials, paint, and equipment necessary to install stringer retrofits shall be incidental to the unit bid price for "Stringer Repair". Each location for "Stringer Repair" shall include plating on both sides of the stringer web.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

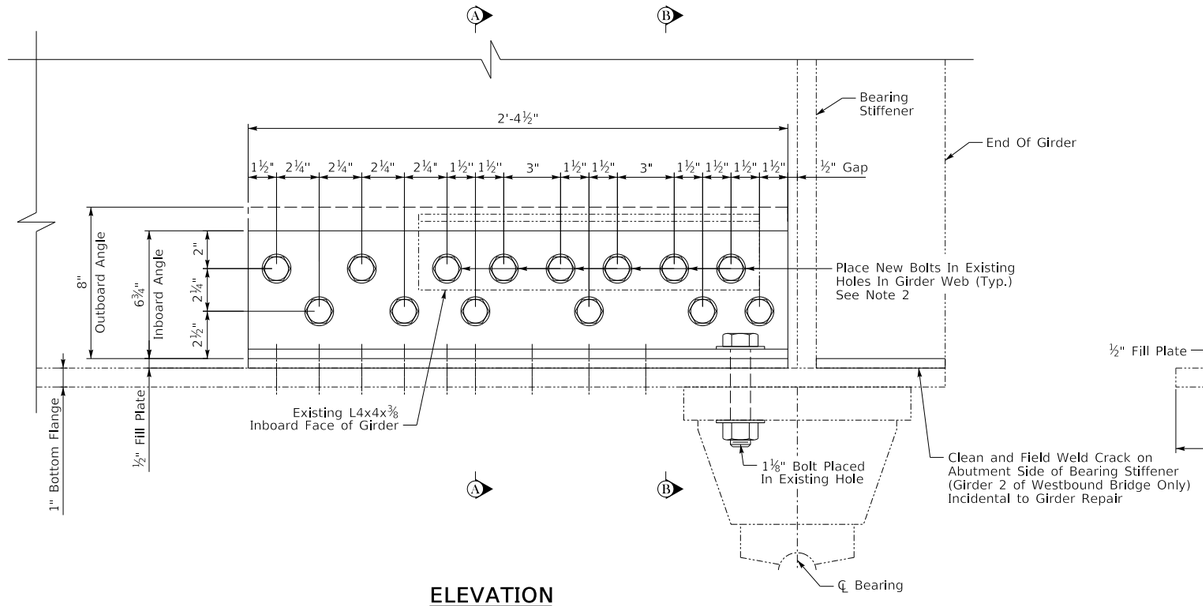
REVISION	DATE

PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY	
DESIGNED BY: J. JONES	Y. ZHAO	
DETAILED BY: J. JONES	Y. ZHAO	

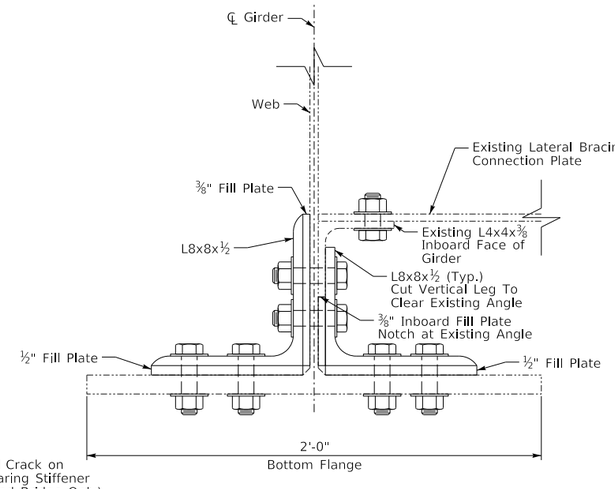
STRINGER REPAIR
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S09	28839

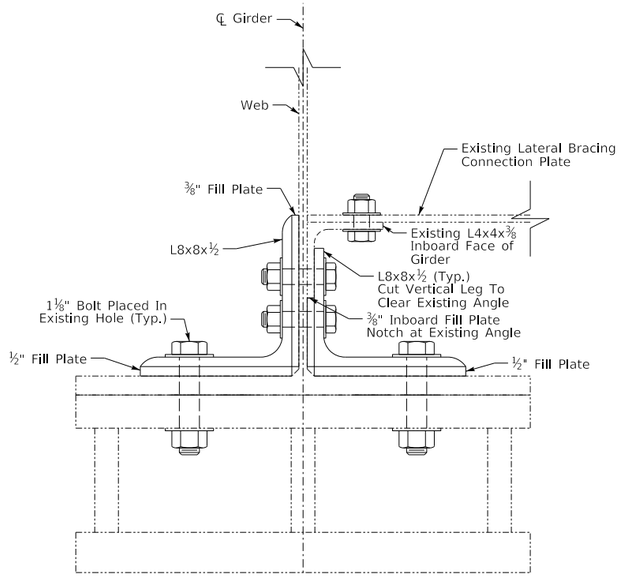


ELEVATION

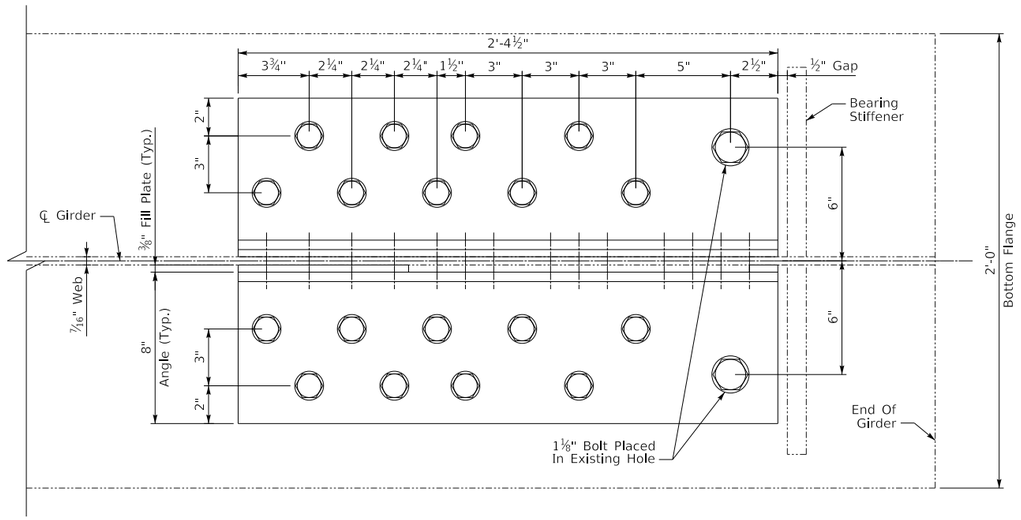
(Inboard Face of Girder Shown)



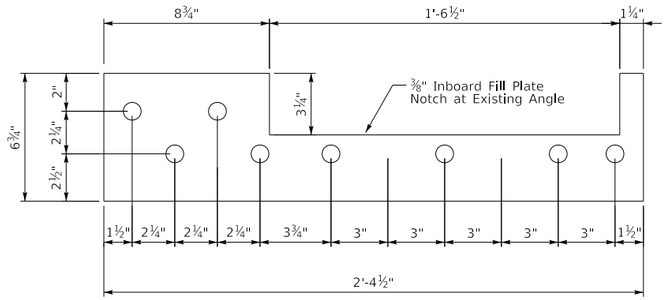
SECTION A-A



SECTION B-B



PLAN



INBOARD VERTICAL FILL PLATE

NOTES:

1. Do not remove lateral bracing connection bolts if heavy wind is expected. Remove and replace bolts within one business day.
2. Clean and paint new steel and existing steel in accordance with the SPECIAL NOTE FOR PAINTING STRUCTURAL STEEL REPAIRS.
3. The cost of all labor, materials, paint, and equipment necessary to install girder retrofits shall be incidental to the unit bid price for "Girder Repair". Each location for "Girder Repair" shall include plating on both sides of the girder web.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

PREPARED BY
AECOM

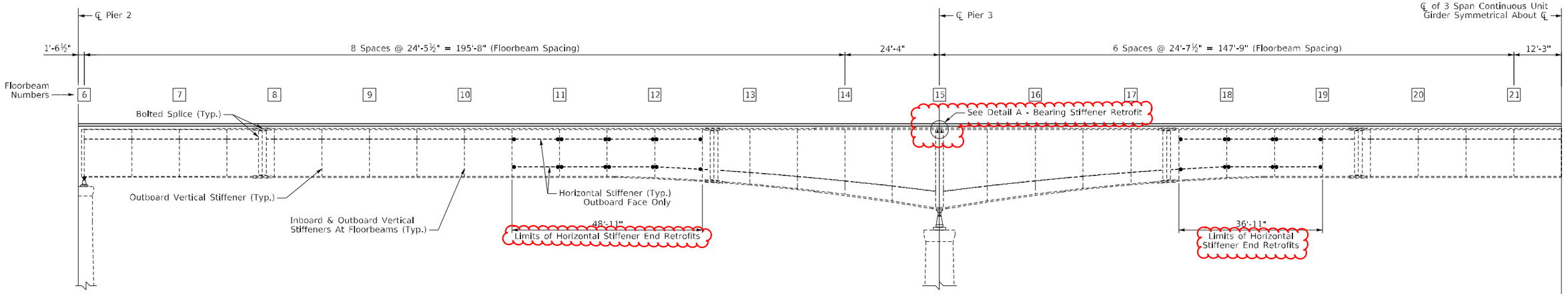
DATE: 3/11/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

GIRDER REPAIR

CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO. S10	DRAWING NUMBER 28839

MicroStation v10.16.0.80 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$designs\files\specification$$$$

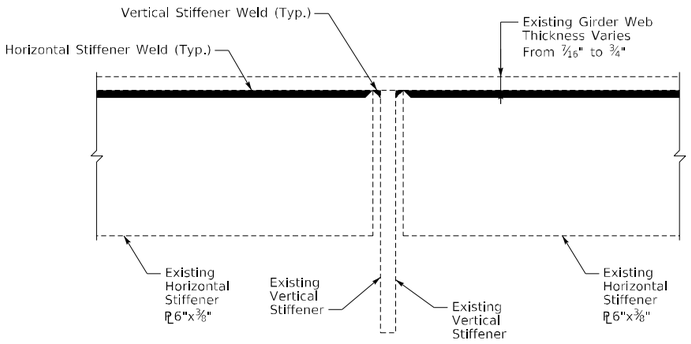


ELEVATION

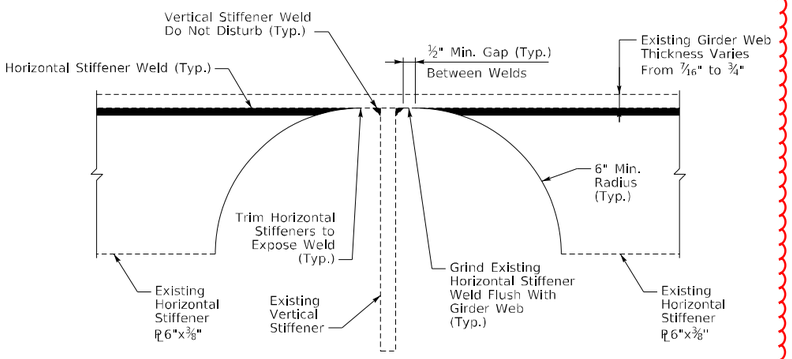
(Half of 3 Span Continuous Unit Shown)

• Denotes Each Horizontal Stiffener End Retrofit Location

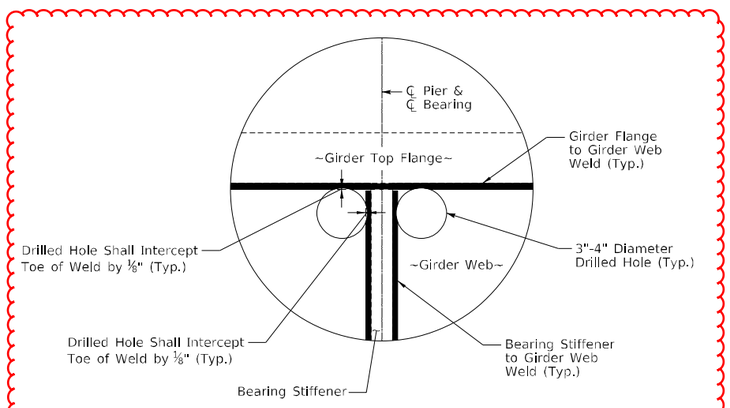
▲ Denotes Each Bearing Stiffener Retrofit Location



EXISTING PLAN - HORIZONTAL STIFFENER END RETROFIT



PROPOSED PLAN - HORIZONTAL STIFFENER END RETROFIT



DETAIL A - BEARING STIFFENER RETROFIT

NOTES - HORIZONTAL STIFFENER END RETROFIT:

1. Use a tungsten carbide tipped annular cutter or die grinder with tungsten carbide rotary burr bit to remove portions of the horizontal stiffener to expose the horizontal stiffener weld.
2. Use a die grinder with tungsten carbide rotary burr bit, with tip radius of 3/16" to ½", to remove welds connecting the horizontal stiffener to the girder web adjacent to the vertical stiffener. Do not use a disc grinder. The minimum gap between the weld toe of the vertical stiffener and horizontal stiffener welds shall be ½".
3. Sand the edges of the cope and exposed girder web. Progress from 60, 80, & 100 grit. Surfaces shall be smooth and free of cutting marks and gouges. The transition from the girder web to the horizontal stiffener and weld shall be smooth with no blunt edges.
4. Clean and paint locations in accordance with the SPECIAL NOTE FOR PAINTING STRUCTURAL STEEL REPAIRS.
5. The cost of all labor, materials, paint, and equipment necessary to complete the horizontal stiffener end retrofits shall be incidental to the unit bid price for "Steel Repair - Triaxial Constraint". Each location for "Steel Repair - Triaxial Constraint" includes one end of the horizontal stiffener, 56 locations per girder.

NOTES - BEARING STIFFENER RETROFIT:

1. Place a tungsten carbide tipped annular cutter into the corner at the intersection of the girder top flange and bearing stiffener plates. Adjust the drill such that the drilled hole will intercept the toes of the bearing stiffener-to-girder web (vertical) weld and girder flange-to-girder web (horizontal) weld by approximately ⅛". Drill the hole through the girder web.
2. Inspect the hole placement to confirm that it intercepts both the vertical and horizontal welds by ⅛". If the hole misses either weld toe, use a tungsten carbide rotary burr bit with a die grinder to widen the hole toward the missed weld toe. Grind until the weld toe has been sufficiently disconnected and there is no longer a continuous path for a fracture to bypass the hole and continue through the girder web.
3. Sand the edges of the drilled holes. Progress from 60, 80, & 100 grit. Surfaces shall be smooth and free of cutting marks and gouges. The transition from the girder web to the welds shall be smooth with no blunt edges.
4. Clean and paint locations in accordance with the SPECIAL NOTE FOR PAINTING STRUCTURAL STEEL REPAIRS.
5. The cost of all labor, materials, paint, and equipment necessary to complete the Bearing Stiffener Retrofit shall be incidental to the unit bid price for "Drill Holes in Steel Members". Each location for "Drill Holes in Steel Members" includes one drilled hole through the girder web on either side of the center bearing stiffeners at Pier 3 and Pier 4, 4 locations per girder.

Revised 4/15/2024

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

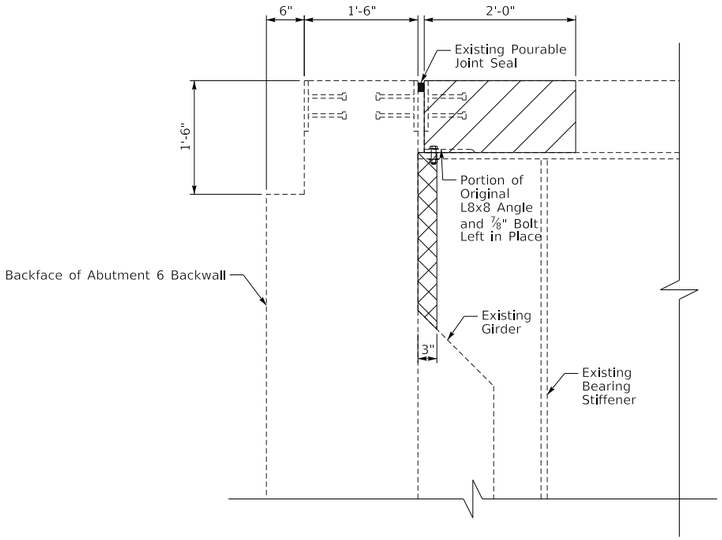
REVISION	DATE

PREPARED BY AECOM

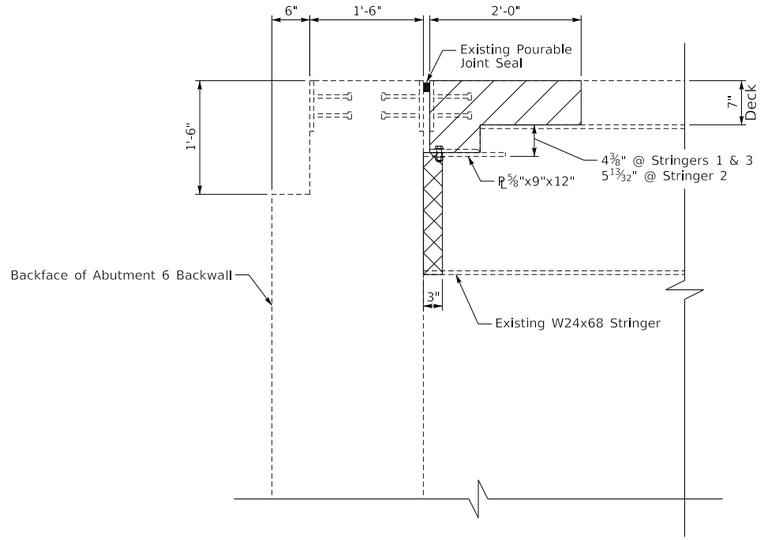
DATE: 4/15/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

TRIAXIAL CONSTRAINT RETROFIT
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002	SHEET NO. S11	ANDERSON
		DRAWING NUMBER 28839



EXISTING SECTION THROUGH GIRDER



EXISTING SECTION THROUGH STRINGER

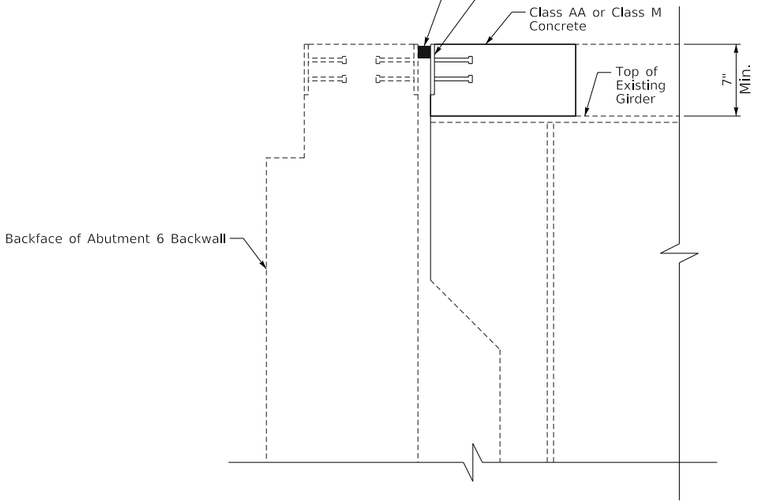
NOTES:

1. Westbound and Eastbound Bridges: Replace the Abutment 6 expansion joints in accordance with Standard Drawings BJE-001, BJE-003, and BJE-005.
2. Eastbound Bridge Only: Mechanically cut or use a plasma torch to remove the ends of the girders and stringers to the satisfaction of the Engineer. Use of oxy-acetylene torches will not be permitted. Grind the ends of the girders and stringers smooth and paint in accordance with the SPECIAL NOTE FOR PAINTING STRUCTURAL STEEL REPAIRS.
3. The cost for all labor, materials, paint, and equipment necessary to cut, grind, and paint the ends of the girders and stringers shall be incidental to the unit bid price for "Expansion Joint Replacement 2 IN".

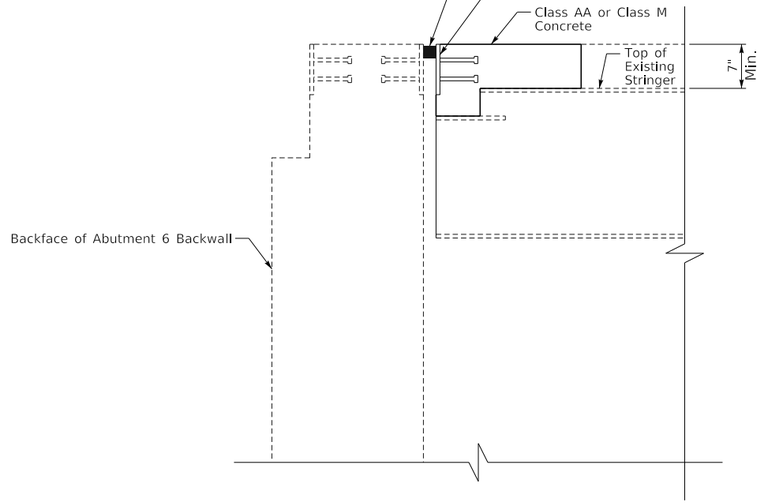
LEGEND

Deck Removal Limits

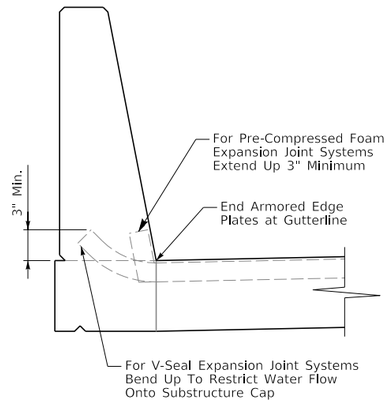
Remove Ends of Steel Girders and Stringers (Eastbound Bridge Only)



PROPOSED SECTION THROUGH GIRDER



PROPOSED SECTION THROUGH STRINGER



PROPOSED SECTION THROUGH RAILING

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

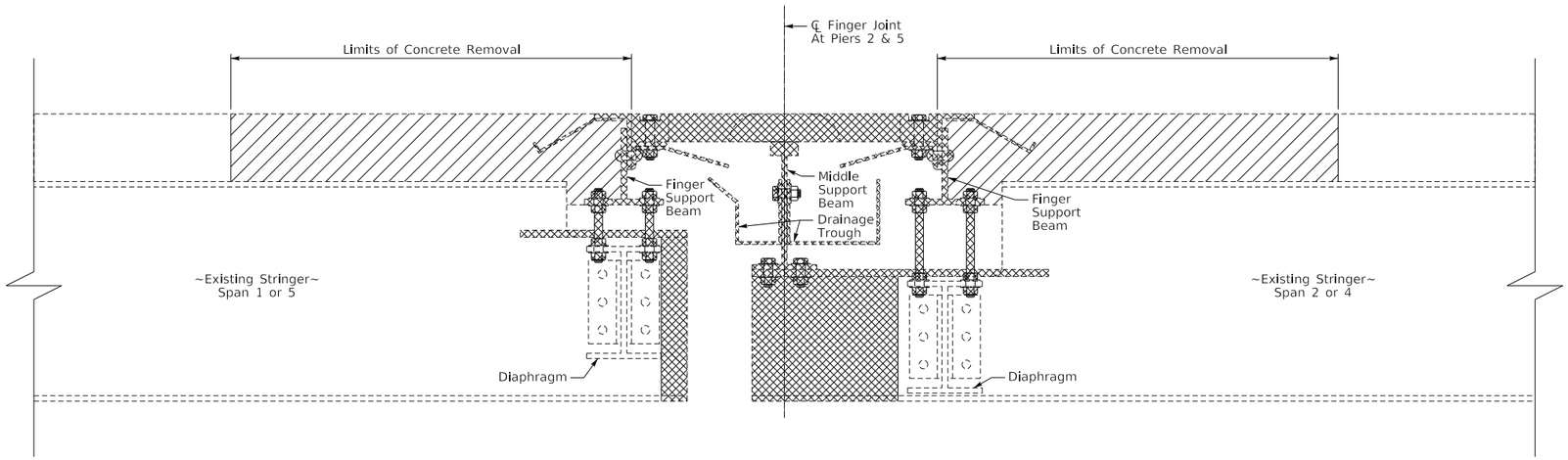
REVISION	DATE

PREPARED BY
AECOM

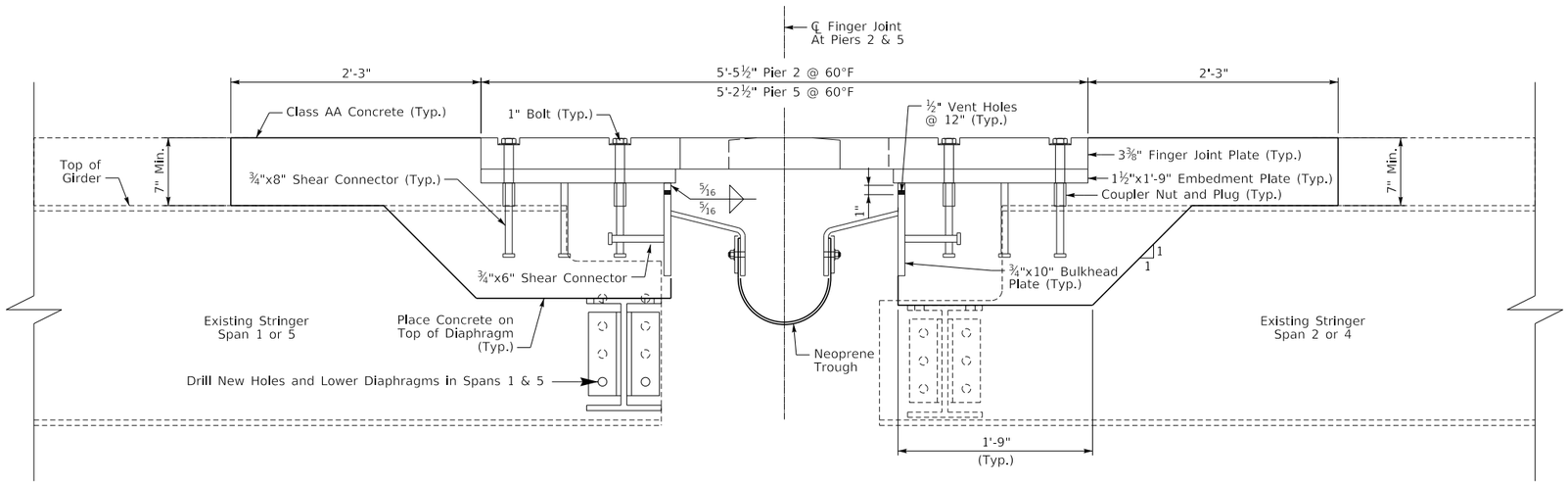
DATE: 3/11/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

ABUTMENT 6 JOINT REPLACEMENT
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S12	28839



EXISTING JOINT SECTION THROUGH STRINGER



PROPOSED JOINT SECTION THROUGH STRINGER

PROPOSED WORK

1. Remove existing finger joint plates.
2. Saw cut and remove concrete deck to the limit show adjacent to the joint. Do not damage the existing deck steel reinforcement. Clean and straighten steel reinforcement.
3. Remove finger support beams, drainage trough, middle support beam, and connections.
4. Mechanically cut or use a plasma torch to remove the ends of the stringers to the satisfaction of the Engineer. Use of oxy-acetylene torches will not be permitted.
5. Drill new row of bolt holes and lower Span 1 & 5 diaphragms down to next bolt hole.
6. Install steel embedment plates with steel anchors into new concrete.
7. Place deck steel reinforcement and Class AA Concrete.
8. Install neoprene drainage troughs. Slope drainage troughs so that water drains at the centerline of bridge.
9. Install drainage collection box and downspouts at centerline of bridge.
10. Install proposed finger joint plates.

LEGEND

Deck Removal Limits

Remove Steel Components

EXPANSION JOINT WIDTH ADJUSTED FOR TEMPERATURE		
Temperature °F	Pier 2 Finger Joint Width (in)	Pier 5 Finger Joint Width (in)
0	68.636	64.391
10	68.113	64.076
20	67.590	63.760
30	67.068	63.445
40	66.545	63.130
50	66.023	62.815
60	65.500	62.500
70	64.977	62.185
80	64.455	61.870
90	63.932	61.555
100	63.410	61.240
110	62.887	60.924
120	62.365	60.609

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

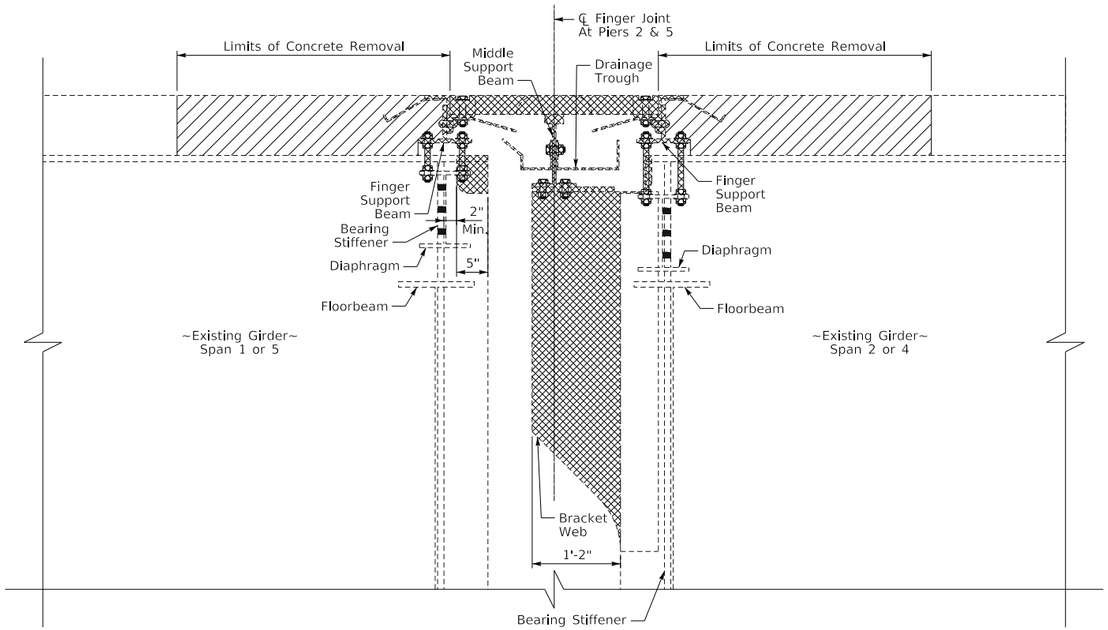
PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

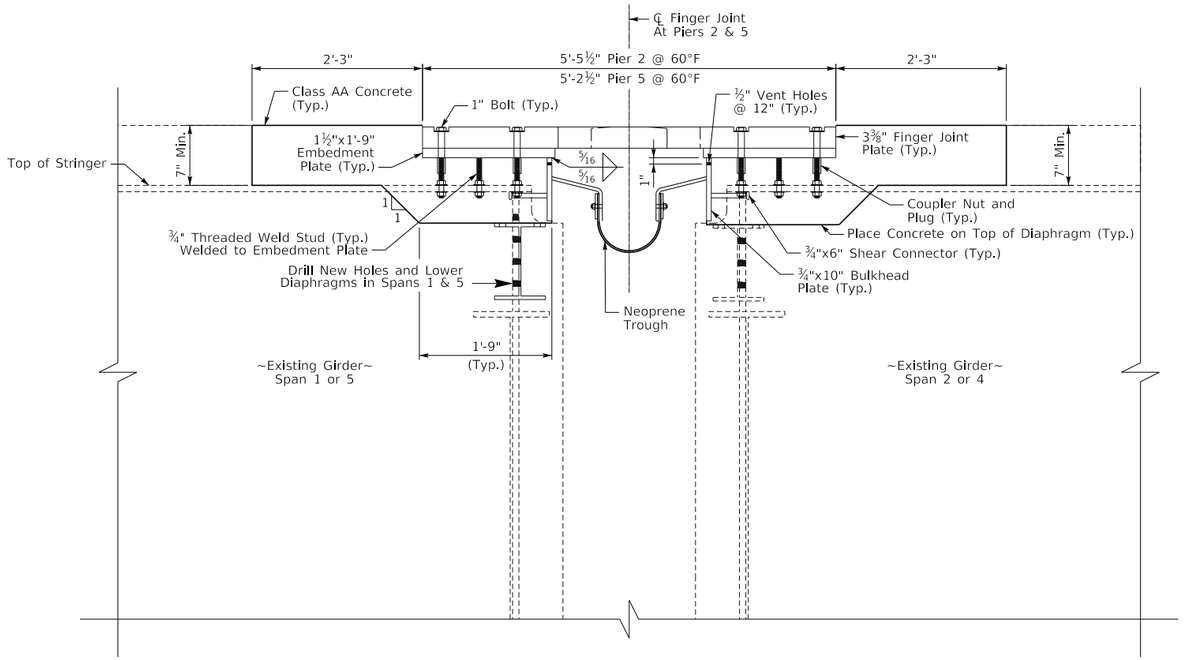
FINGER JOINT REPLACEMENT
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S13	28839

MicroStation v10.16.0.80 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$design$file$specification$$$$



EXISTING JOINT SECTION THROUGH GIRDER



PROPOSED JOINT SECTION THROUGH GIRDER

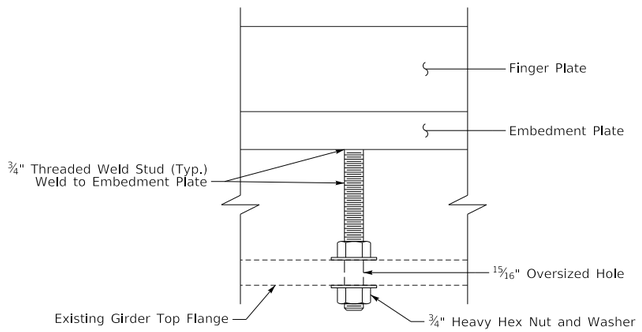
NOTES:

1. Shop drawings for the finger joints shall be prepared and submitted in accordance with Section 607.03 of the Standard Specifications. Joint shop drawings and neoprene trough shop drawings shall be coordinated to ensue that joints and troughs will fit up with field assembled.
2. Steel plates shall conform to AASHTO M270 Grade 50.
3. Finger plates, embedment plates, and barrier plates shall be hot dip galvanized conforming to ASTM A123 after fabrication. The finger plates shall be galvanized separately from the embedment plates.
4. Finger plates shall be cut from full width plates.
5. Embedment plates shall have match drilled holes using the finger plates to ensure accuracy of field fit up.
6. High strength bolts shall conform to ASTM F3125 Grade A325 and be hot dip galvanized conforming to ASTM A153.
7. Heavy hex nuts shall conform to A563-DH and be hot dip galvanized conforming to ASTM A153.
8. Hardened washers shall conform to F436 and be hot dip galvanized conforming to ASTM A153.
9. Shear connectors shall conform to ASTM A108 Grade 1015, automatic end welded.
10. ¾" steel threaded weld studs shall conform to ASTM A108.
11. ½" stainless steel threaded weld studs shall conform to ASTM A493.
12. Drain pipe shall be 8" round standard weight ASTM A83 or A500.
13. 16"x8" Concentric Pipe Reducer shall conform to ASTM B16.9.
14. Drainage trough shall be neoprene reinforced with 1 or 2 piles of tightly woven nylon fabric.

LEGEND

Deck Removal Limits

Remove Steel Components



GIRDER ATTACHMENT DETAIL

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

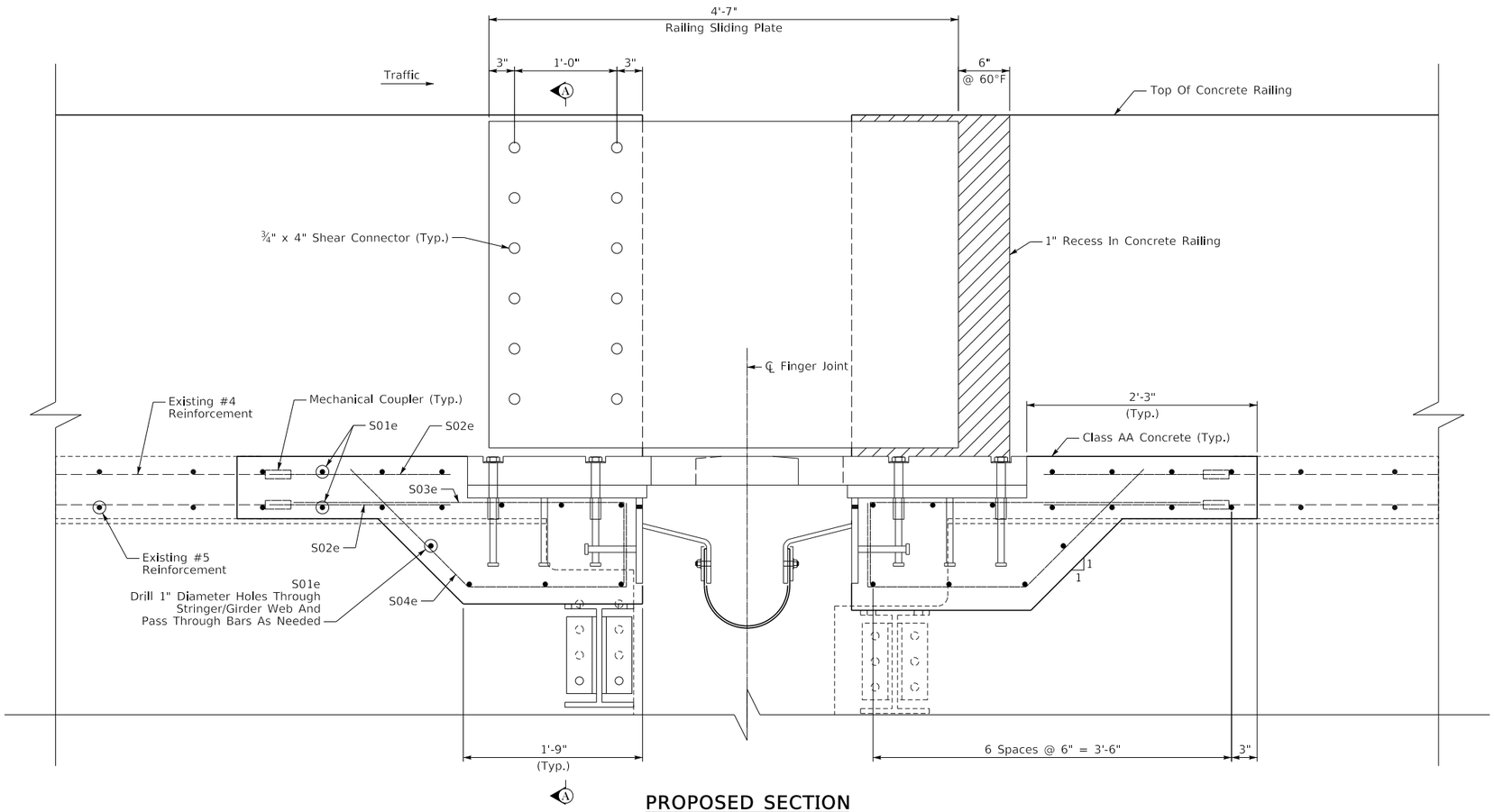
PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

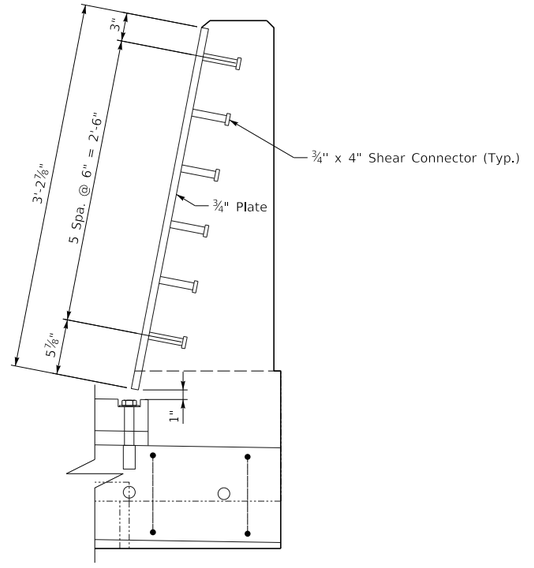
FINGER JOINT REPLACEMENT
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S14	28839

MicroStation v10.16.0.80 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$designs\files$$specifications$$$$



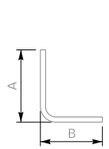
PROPOSED SECTION



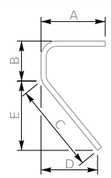
SECTION A-A

BILL OF REINFORCEMENT - FINGER JOINT REPLACEMENT

MARK	TYPE	SIZE	NO.	LENGTH		LOCATION	A		B		C		D		E	
				FT.	IN.		FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.
S01e	Str	5	120	32	4	Slab										
S02e	Str	5	256	1	10	Slab										
S03e	5	5	240	4	3	Slab	3	5	0	10						
S04e	15	5	240	3	11	Slab	0	10	1	6	1	7	1	2	1	2



TYPE 5



TYPE 15

NOTES:

1. The railing sliding plate shall be anchored in the direction as shown with respect to oncoming traffic.
2. The cost of all labor, materials, and equipment necessary to supply and install the railing sliding plates shall be incidental to the unit bid price for "Finger Expansion Joint".
3. The cost of all labor, materials, and equipment necessary to remove and replace reinforced concrete adjacent to the finger joints shall be incidental to the unit bid price for "Finger Expansion Joint".
4. The existing longitudinal steel reinforcement shall be cutoff 6" minimum from the deck removal line. Proposed steel reinforcement shall be spliced with the existing bars using a mechanical connectors.
5. The existing transverse steel reinforcement within the construction limits shall be removed and replaced.
6. The maximum spacing for reinforcement shall be 12".
7. Place railing steel reinforcement in accordance with Sheet S05 in areas where the existing railing and deck is removed.

LEGEND

Recess In Concrete

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

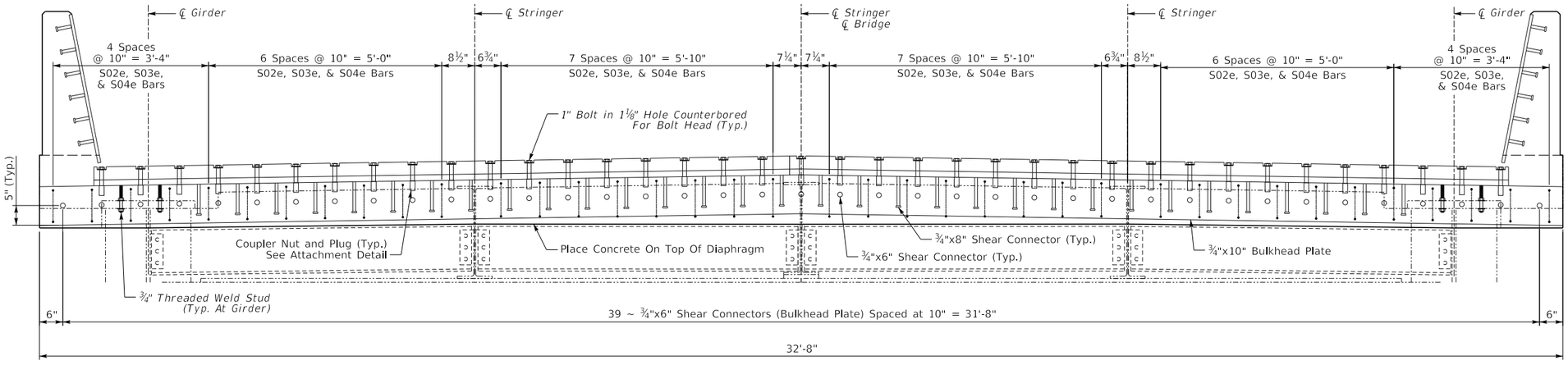
REVISION	DATE

PREPARED BY
AECOM

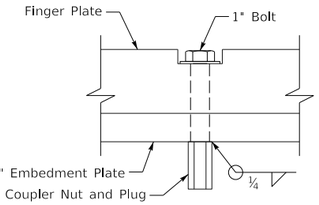
DATE: 3/11/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

FINGER JOINT REPLACEMENT
CROSSING
KENTUCKY RIVER

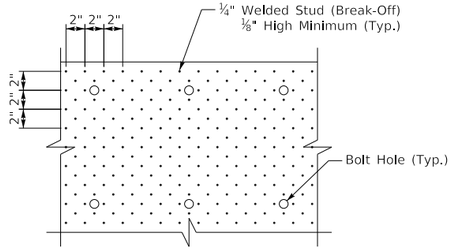
ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S15	28839



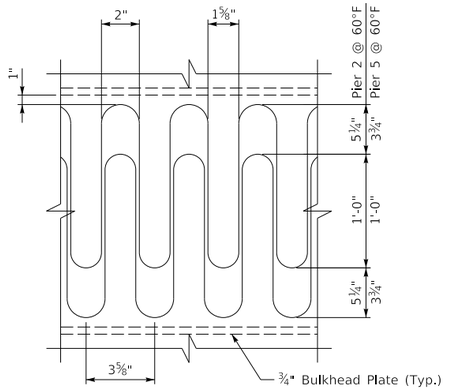
ELEVATION



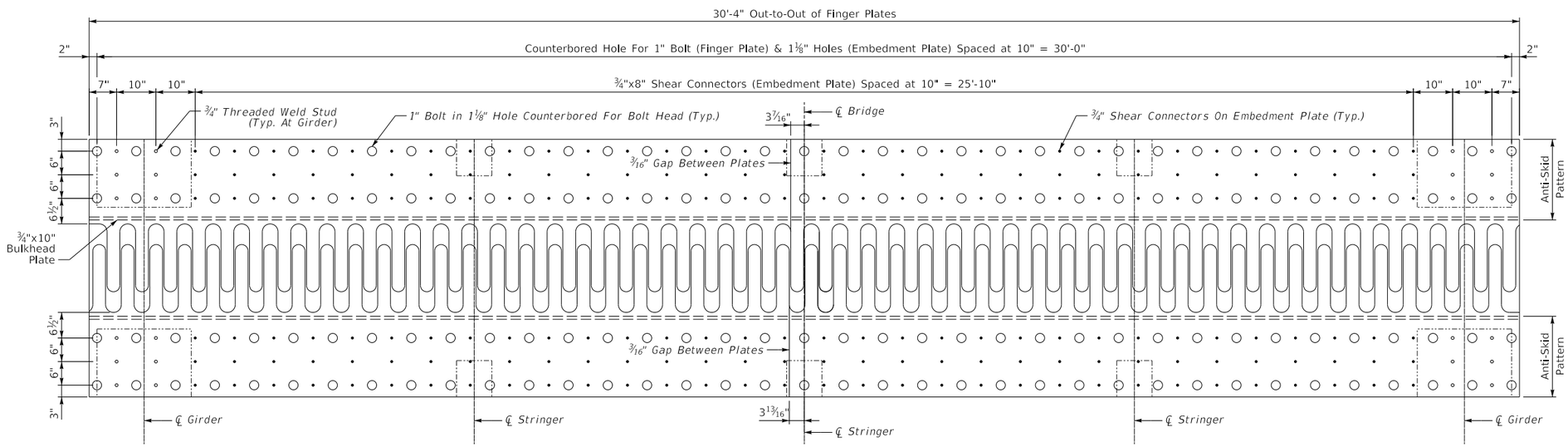
ATTACHMENT DETAIL



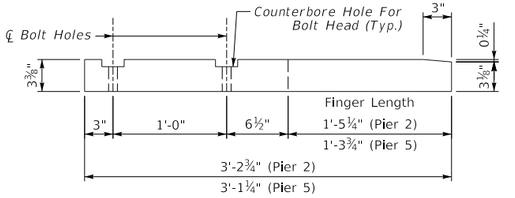
ANTI-SKID PATTERN DETAIL



FINGER PLATE DETAIL



PLAN



FINGER PLATE ELEVATION

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

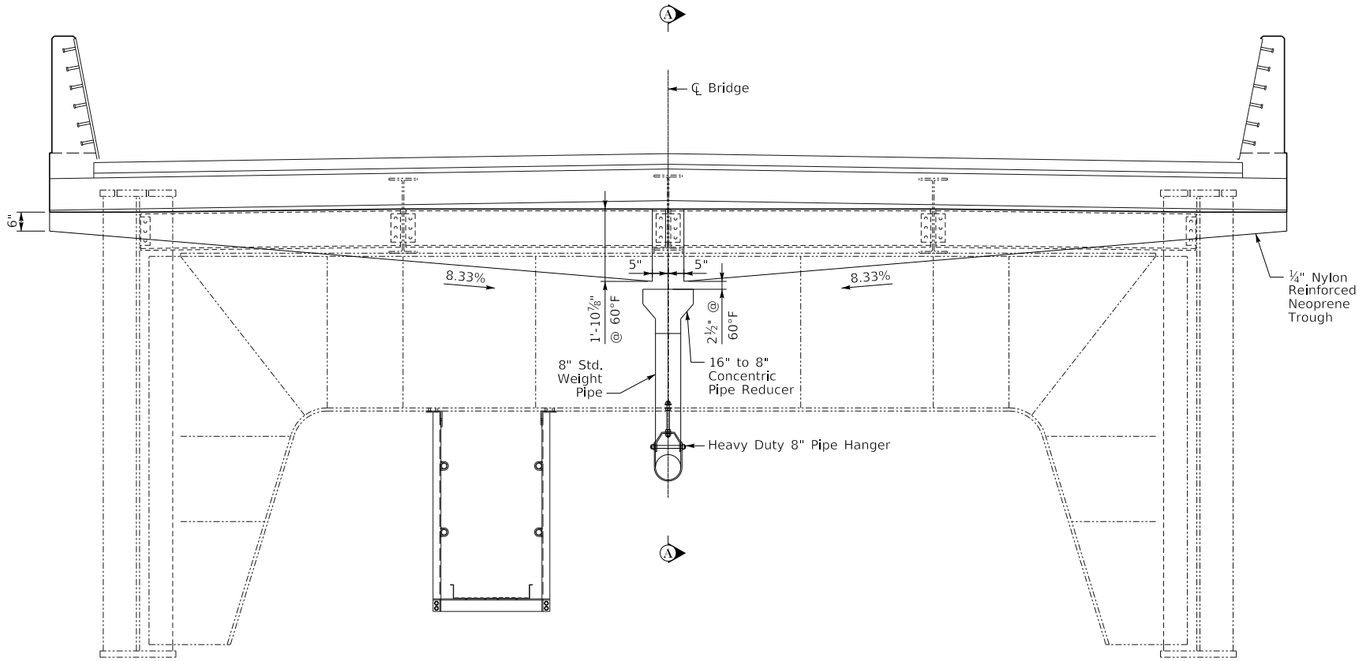
PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

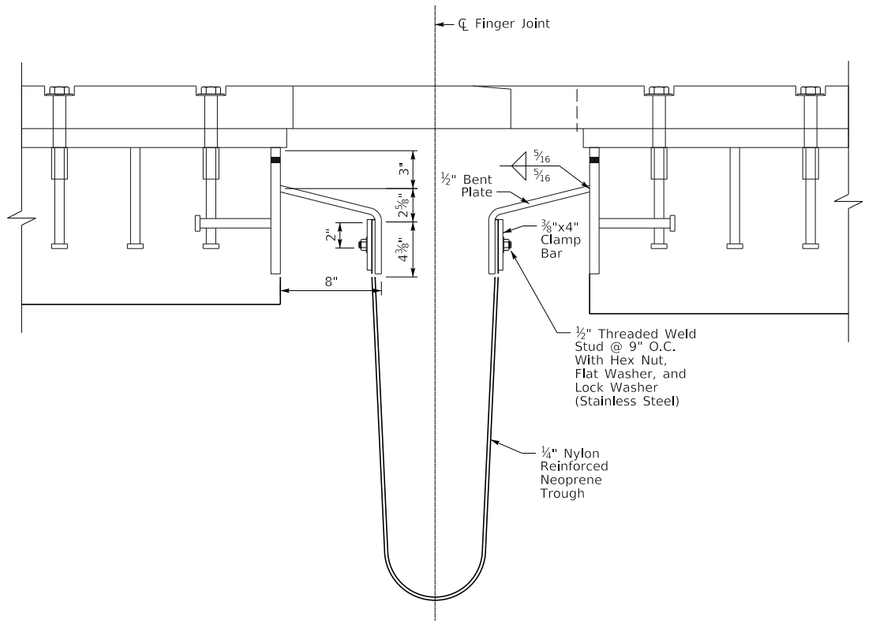
FINGER JOINT REPLACEMENT
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S16	28839

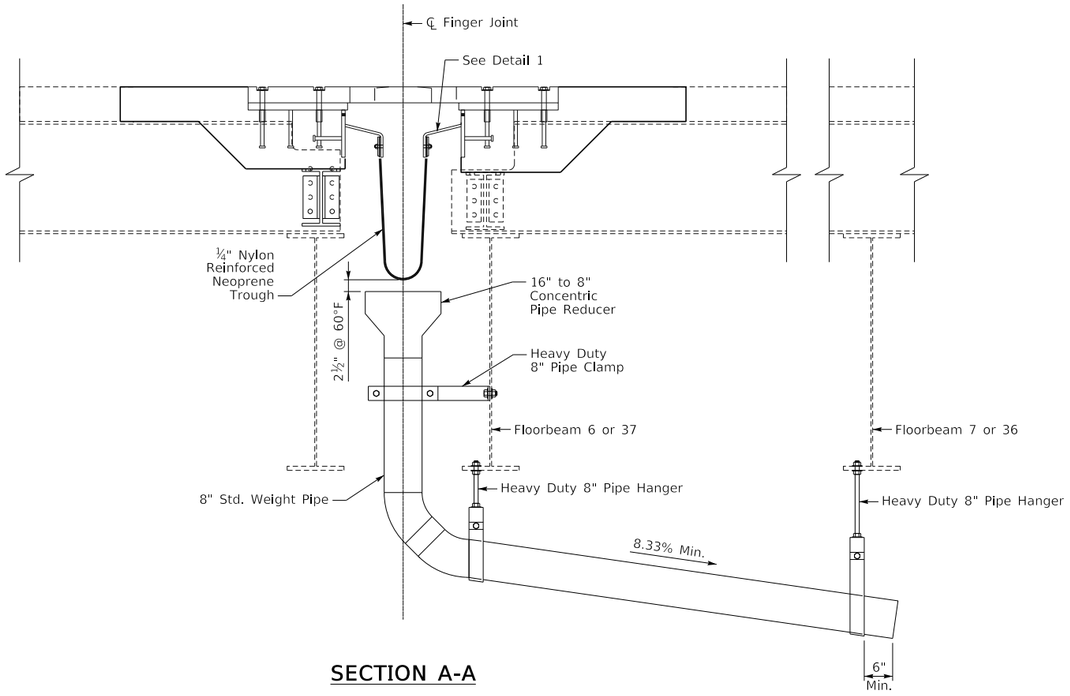
MicroStation v10.16.0.80 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$designs\file$$specifications$$$$



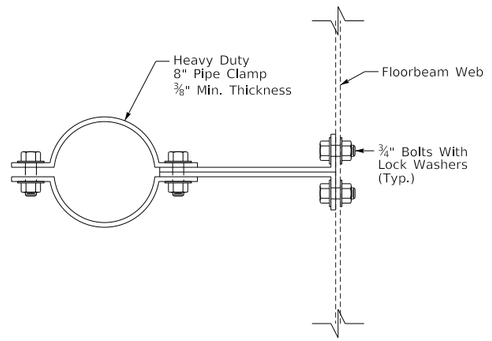
ELEVATION



DETAIL 1

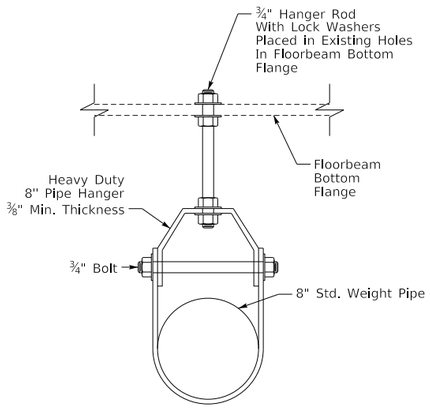


SECTION A-A



PIPE SUPPORT DETAIL

(Install at Floorbeams 6 & 37)



PIPE HANGER DETAIL

(Install at Floorbeams 6, 7, 36, & 37)

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

FINGER JOINT REPLACEMENT

CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S17	28839

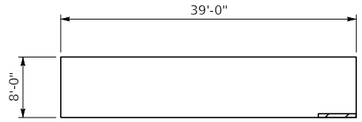
MicroStation v10.16.0.80 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$design$file$specification$$$$

LEGEND

Concrete Patching

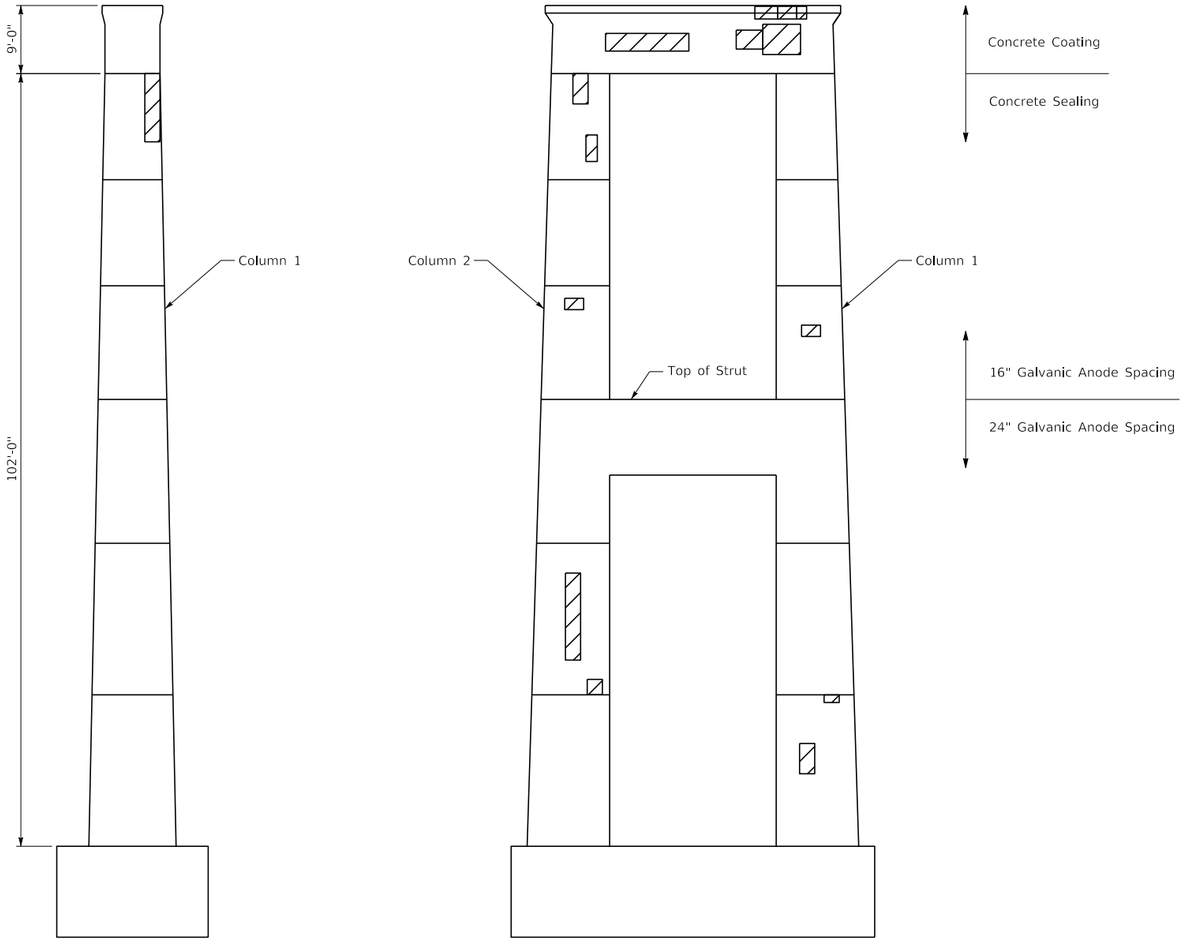
NOTES:

1. The total anticipated quantity for Westbound Pier 2 concrete patching is 272 square feet, including a 25% contingency.
2. See Special Note for Concrete Patching Repair for additional notes and specifications.
3. Install galvanic anodes for all concrete patches. See the Special Note for Embedded Galvanic Anodes for details.
4. Apply concrete coating to all faces of the pier caps. See Special Note for Concrete Coating for details.
5. Apply concrete sealing to all faces of the columns above the groundline. See Special Note for Concrete Sealing for Details.



PLAN - TOP OF CAP

PLAN - UNDERSIDE OF CAP



NORTH FACE

EAST FACE

WEST FACE

SOUTH FACE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY
DESIGNED BY: D. CIUCU	J. JONES
DETAILED BY: D. CIUCU	J. JONES

WESTBOUND PIER 2 PATCHING

CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002	SHEET NO. S18	ANDERSON
		DRAWING NUMBER 28839

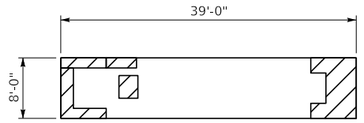
MicroStation v10.16.0.80 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$design$file$specification$$$$

LEGEND

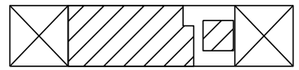
Concrete Patching

NOTES:

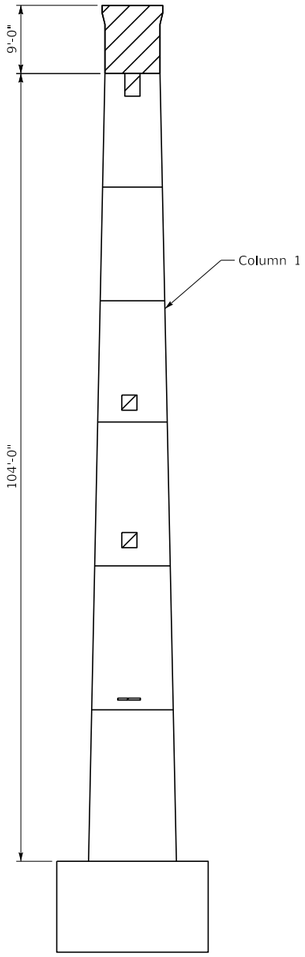
1. The total anticipated quantity for Westbound Pier 5 concrete patching is 1695 square feet, including a 25% contingency.
2. See Special Note for Concrete Patching Repair for additional notes and specifications.
3. Install galvanic anodes for all concrete patches. See the Special Note for Embedded Galvanic Anodes for details.
4. Apply concrete coating to all faces of the pier caps. See Special Note for Concrete Coating for details.
5. Apply concrete sealing to all faces of the columns above the groundline. See Special Note for Concrete Sealing for Details.



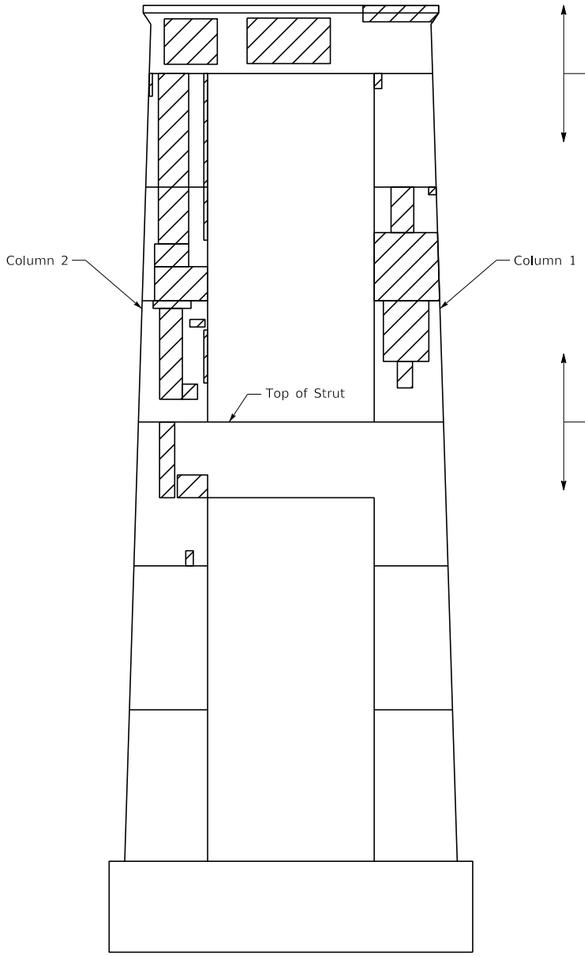
PLAN - TOP OF CAP



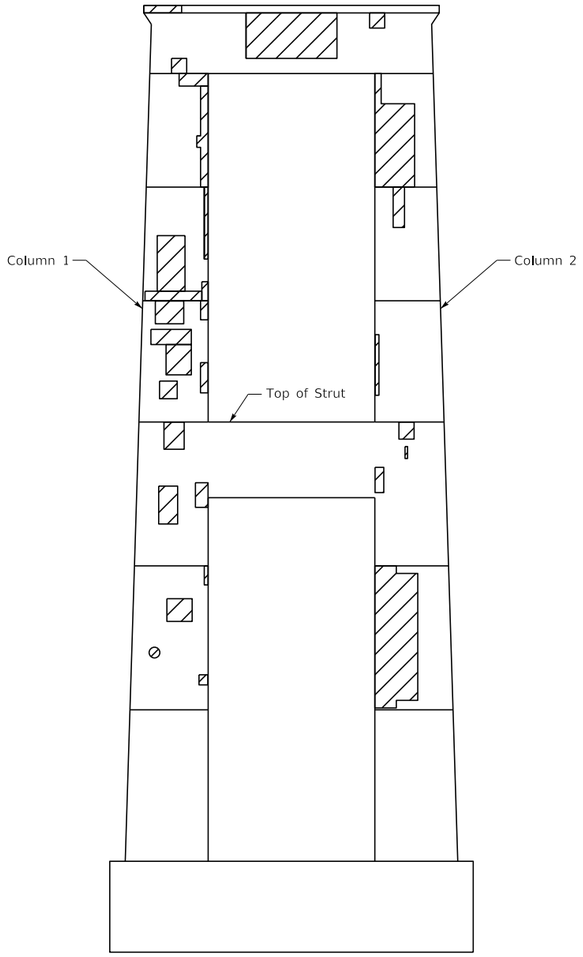
PLAN - UNDERSIDE OF CAP



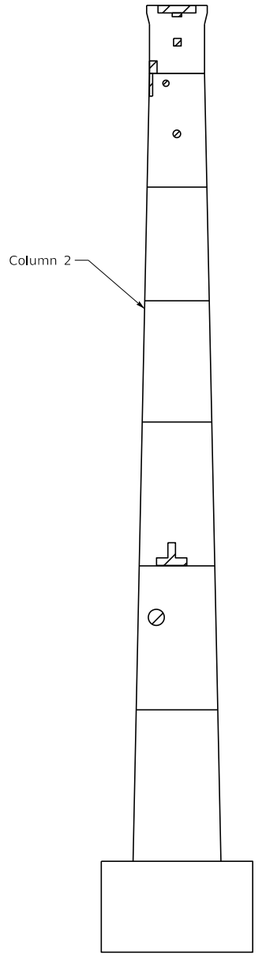
NORTH FACE



EAST FACE



WEST FACE



SOUTH FACE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY
DESIGNED BY: D. CIUCU	J. JONES
DETAILED BY: D. CIUCU	J. JONES

WESTBOUND PIER 5 PATCHING

CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO. S19	DRAWING NUMBER 28839

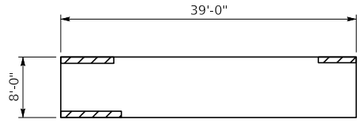
MicroStation v10.16.0.80 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$designs$file$specification$$$$

LEGEND

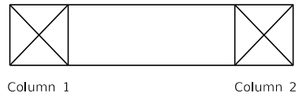
Concrete Patching

NOTES:

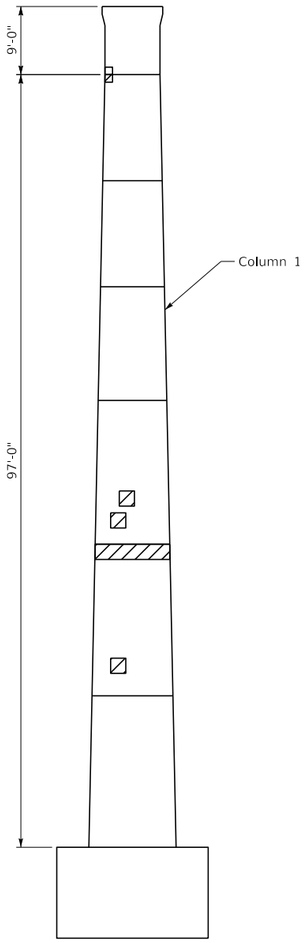
1. The total anticipated quantity for Eastbound Pier 2 concrete patching is 1757 square feet, including a 25% contingency.
2. See Special Note for Concrete Patching Repair for additional notes and specifications.
3. Install galvanic anodes for all concrete patches. See the Special Note for Embedded Galvanic Anodes for details.
4. Apply concrete coating to all faces of the pier caps. See Special Note for Concrete Coating for details.
5. Apply concrete sealing to all faces of the columns above the groundline. See Special Note for Concrete Sealing for Details.



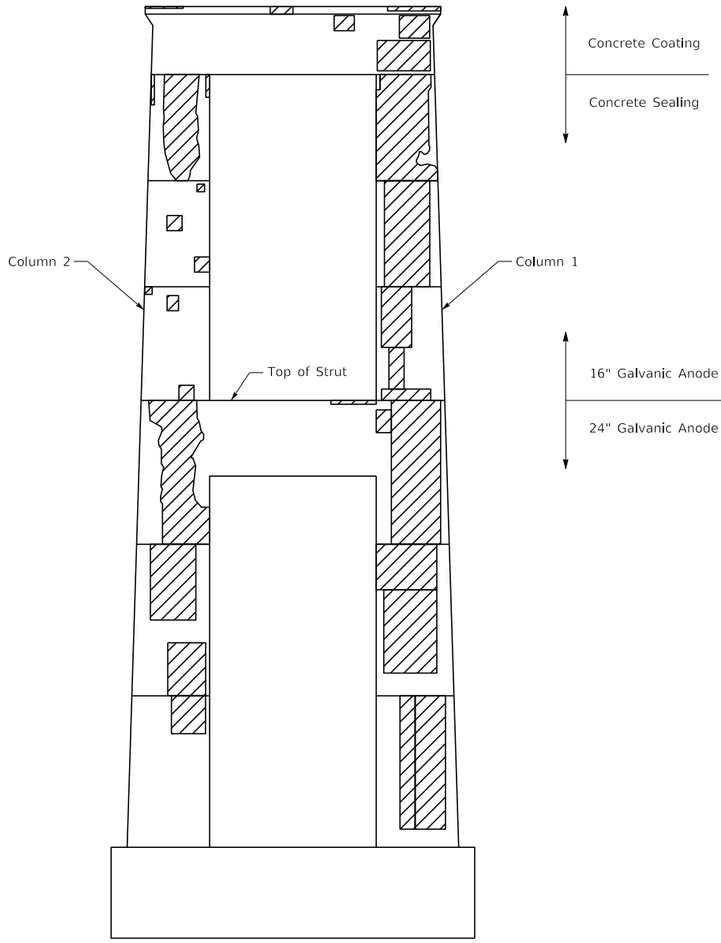
PLAN - TOP OF CAP



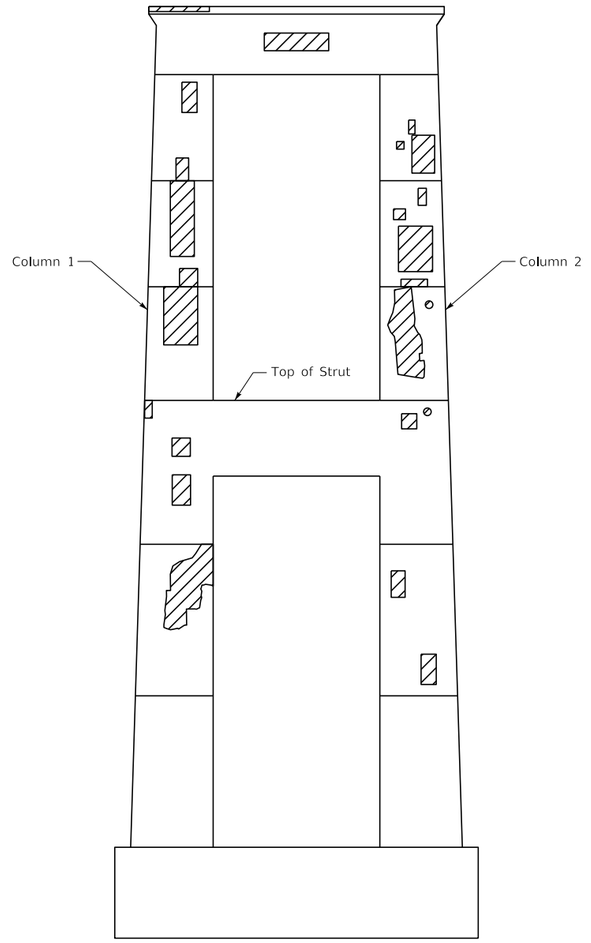
PLAN - UNDERSIDE OF CAP



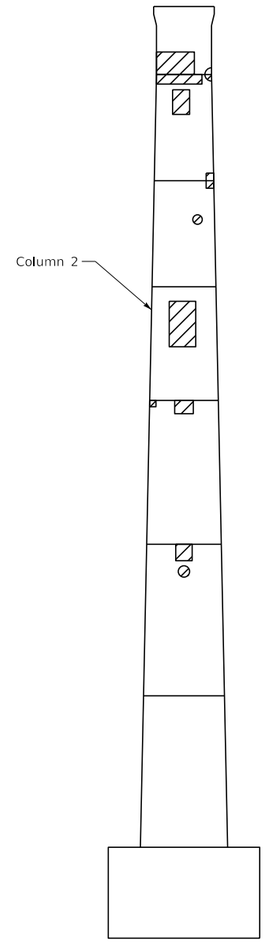
NORTH FACE



EAST FACE



WEST FACE



SOUTH FACE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY
DESIGNED BY: D. CIUCU	J. JONES
DETAILED BY: D. CIUCU	J. JONES

EASTBOUND PIER 2 PATCHING

CROSSING
KENTUCKY RIVER

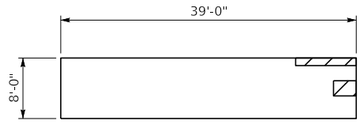
ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S20	28839

LEGEND

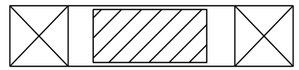
Concrete Patching

NOTES:

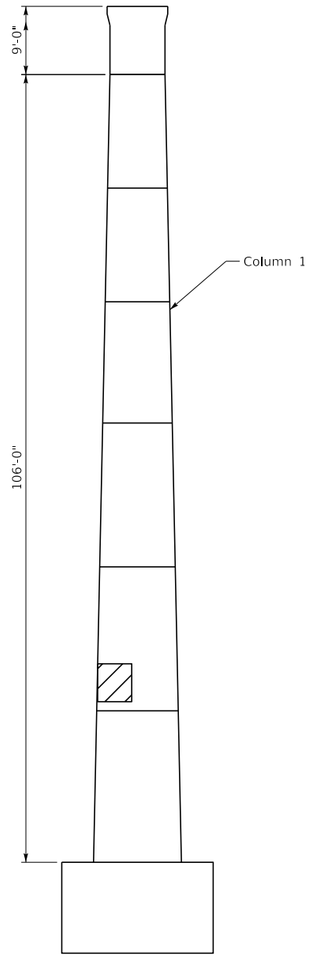
1. The total anticipated quantity for Eastbound Pier 5 concrete patching is 1284 square feet, including a 25% contingency.
2. See Special Note for Concrete Patching Repair for additional notes and specifications.
3. Install galvanic anodes for all concrete patches. See the Special Note for Embedded Galvanic Anodes for details.
4. Apply concrete coating to all faces of the pier caps. See Special Note for Concrete Coating for details.
5. Apply concrete sealing to all faces of the columns above the groundline. See Special Note for Concrete Sealing for Details.



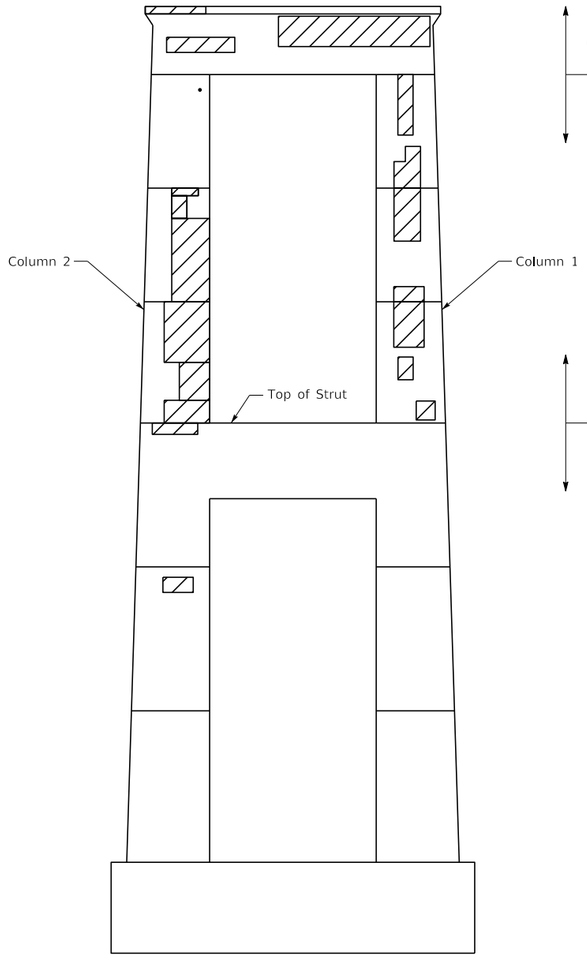
PLAN - TOP OF CAP



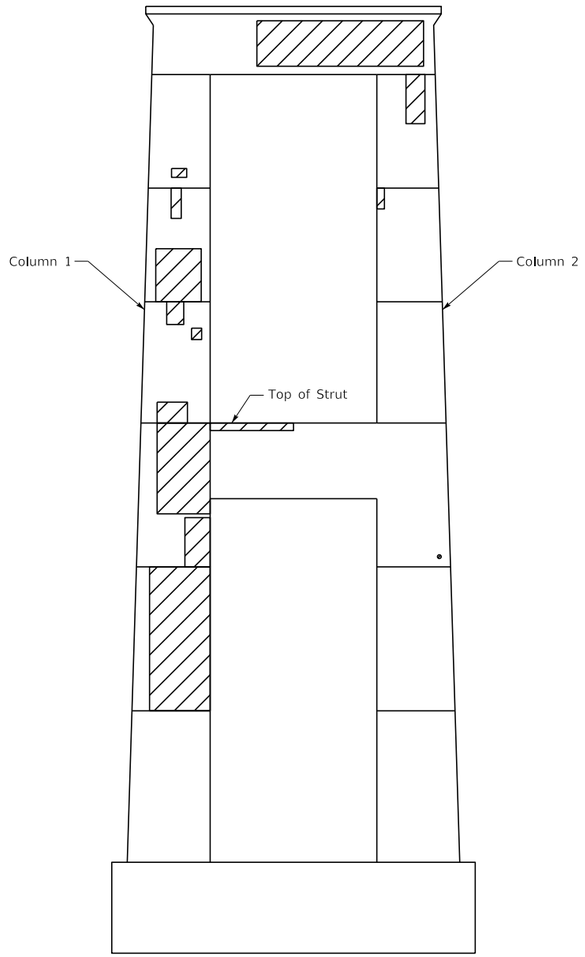
PLAN - UNDERSIDE OF CAP



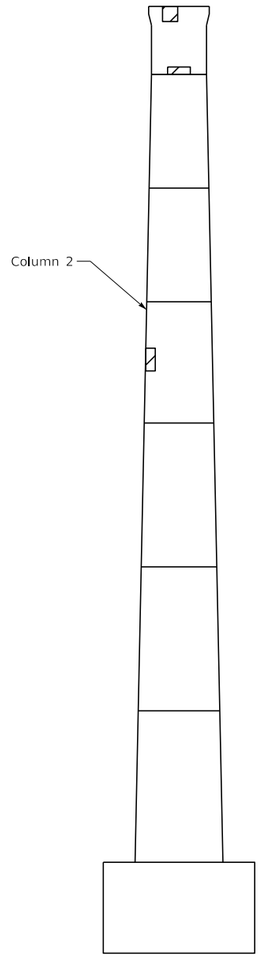
NORTH FACE



EAST FACE



WEST FACE



SOUTH FACE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

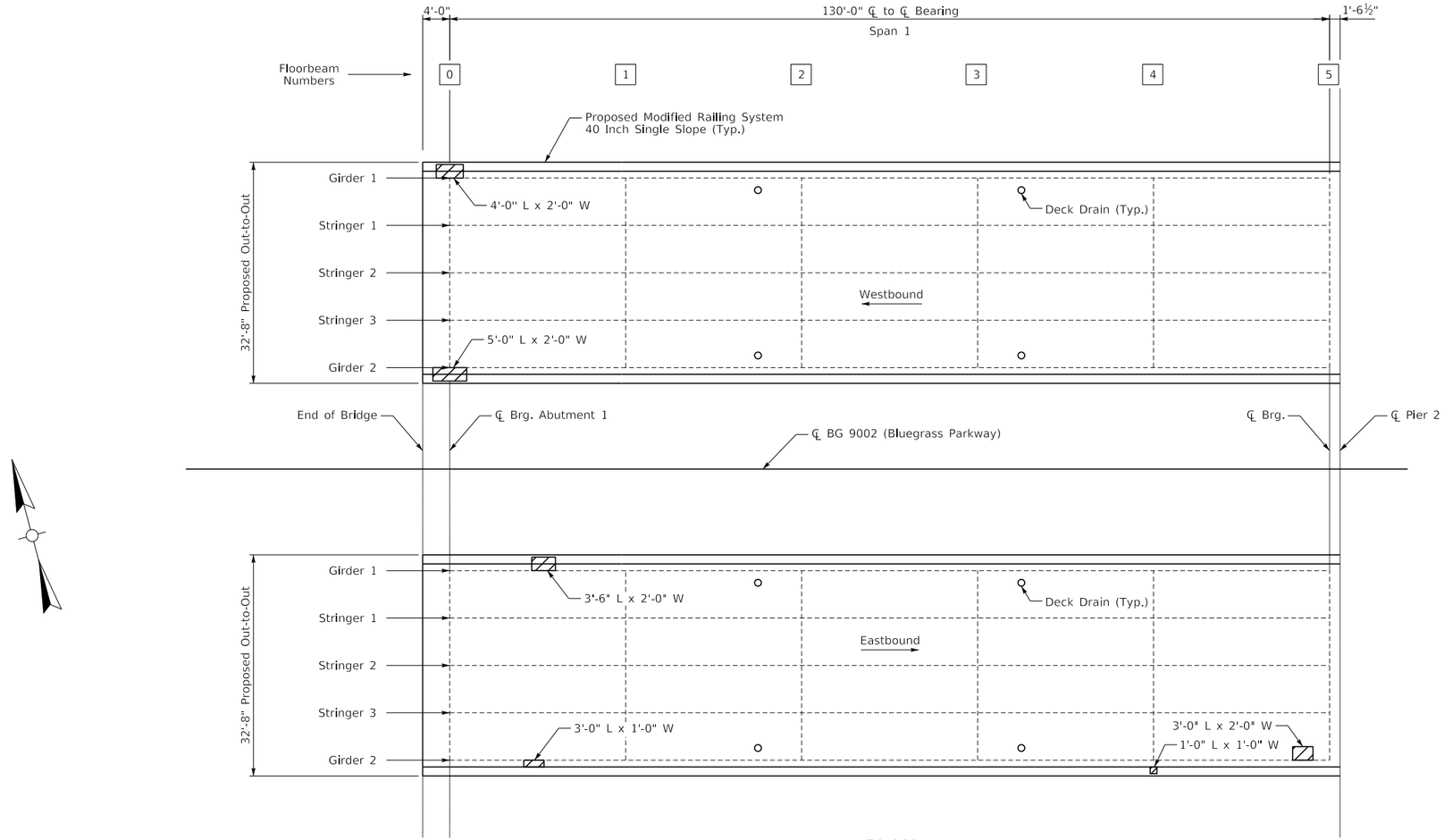
REVISION	DATE

PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY
DESIGNED BY: D. CIUCU	J. JONES
DETAILED BY: D. CIUCU	J. JONES

EASTBOUND PIER 5 PATCHING
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S21	28839



PLAN

LEGEND

Concrete Patching

NOTES:

1. All deck patches are located in the underside of the deck and require overhead patching. See the SPECIAL NOTE FOR CONCRETE PATCHING REPAIR for specifications.
2. The total anticipated quantity for Span 1 Westbound concrete patching is 23 square feet, including a 25% contingency.
3. The total anticipated quantity for Span 1 Eastbound concrete patching is 22 square feet, including a 25% contingency.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

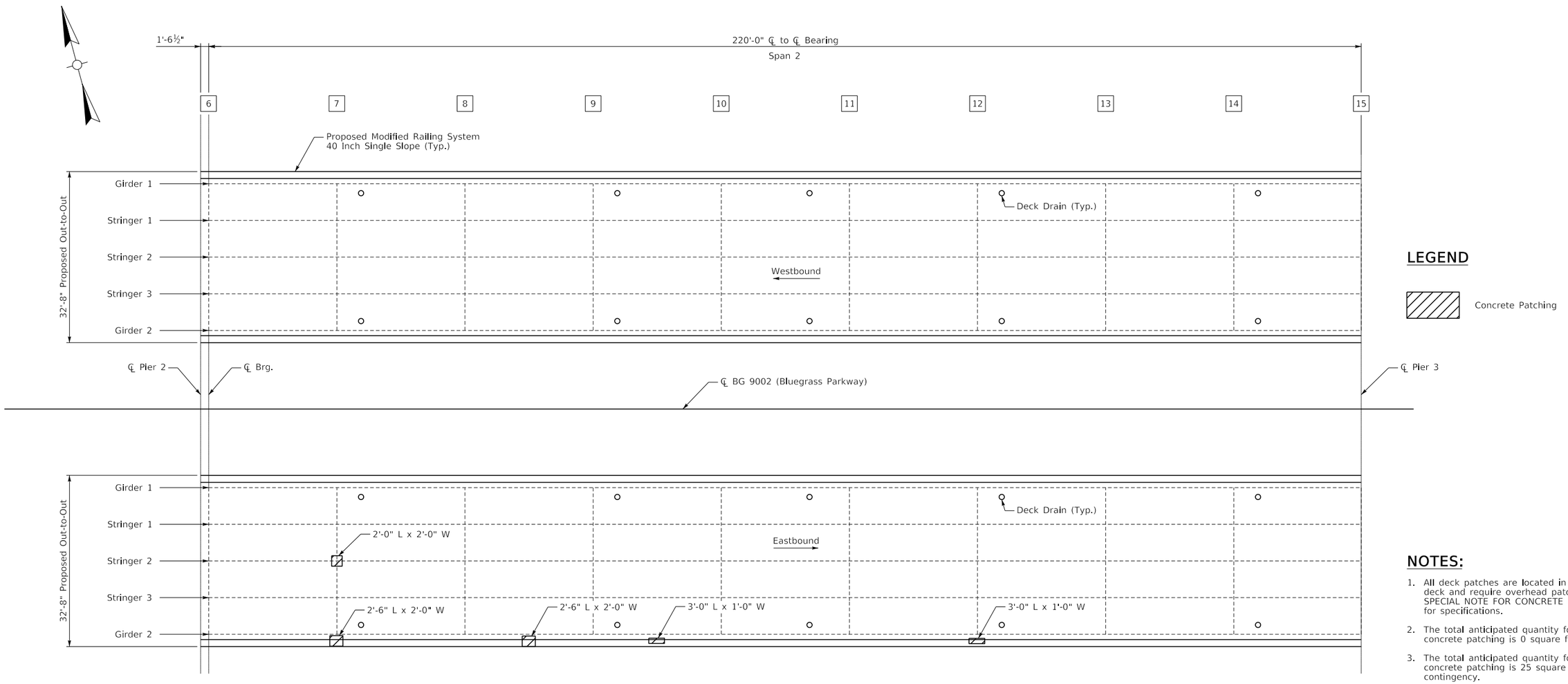
REVISION	DATE

PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY
DESIGNED BY: D. CIUCU	J. JONES
DETAILED BY: D. CIUCU	J. JONES

DECK PATCHING - SPAN 1
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S22	28839



PLAN

LEGEND

Concrete Patching

NOTES:

1. All deck patches are located in the underside of the deck and require overhead patching. See the SPECIAL NOTE FOR CONCRETE PATCHING REPAIR for specifications.
2. The total anticipated quantity for Span 2 Westbound concrete patching is 0 square feet.
3. The total anticipated quantity for Span 2 Eastbound concrete patching is 25 square feet, including a 25% contingency.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

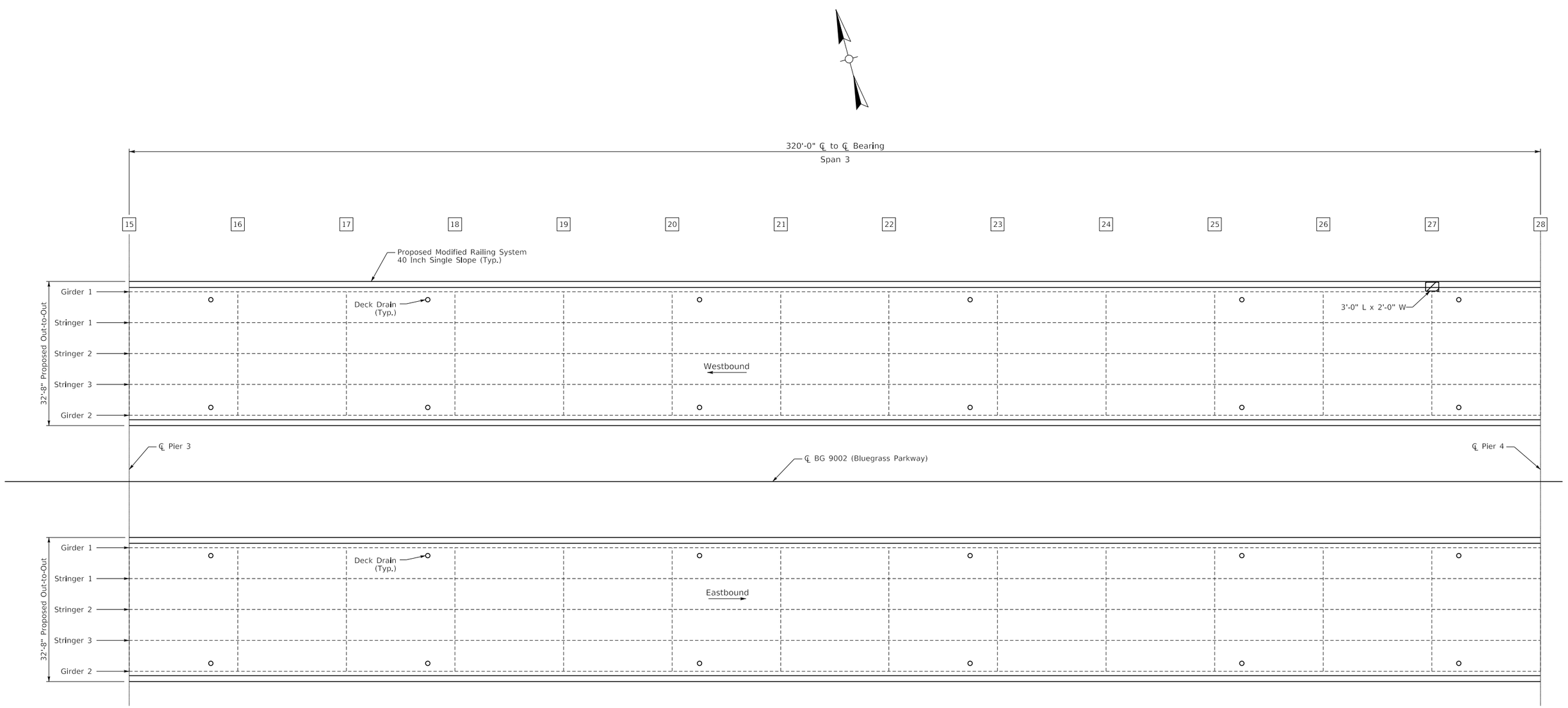
PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY
DESIGNED BY: D. CIUCU	J. JONES
DETAILED BY: D. CIUCU	J. JONES

DECK PATCHING – SPAN 2

CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S23	28839



PLAN

LEGEND

Concrete Patching

NOTES:

1. All deck patches are located in the underside of the deck and require overhead patching. See the SPECIAL NOTE FOR CONCRETE PATCHING REPAIR for specifications.
2. The total anticipated quantity for Span 3 Westbound concrete patching is 8 square feet, including a 25% contingency.
3. The total anticipated quantity for Span 3 Eastbound concrete patching is 0 square feet.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

PREPARED BY
AECOM

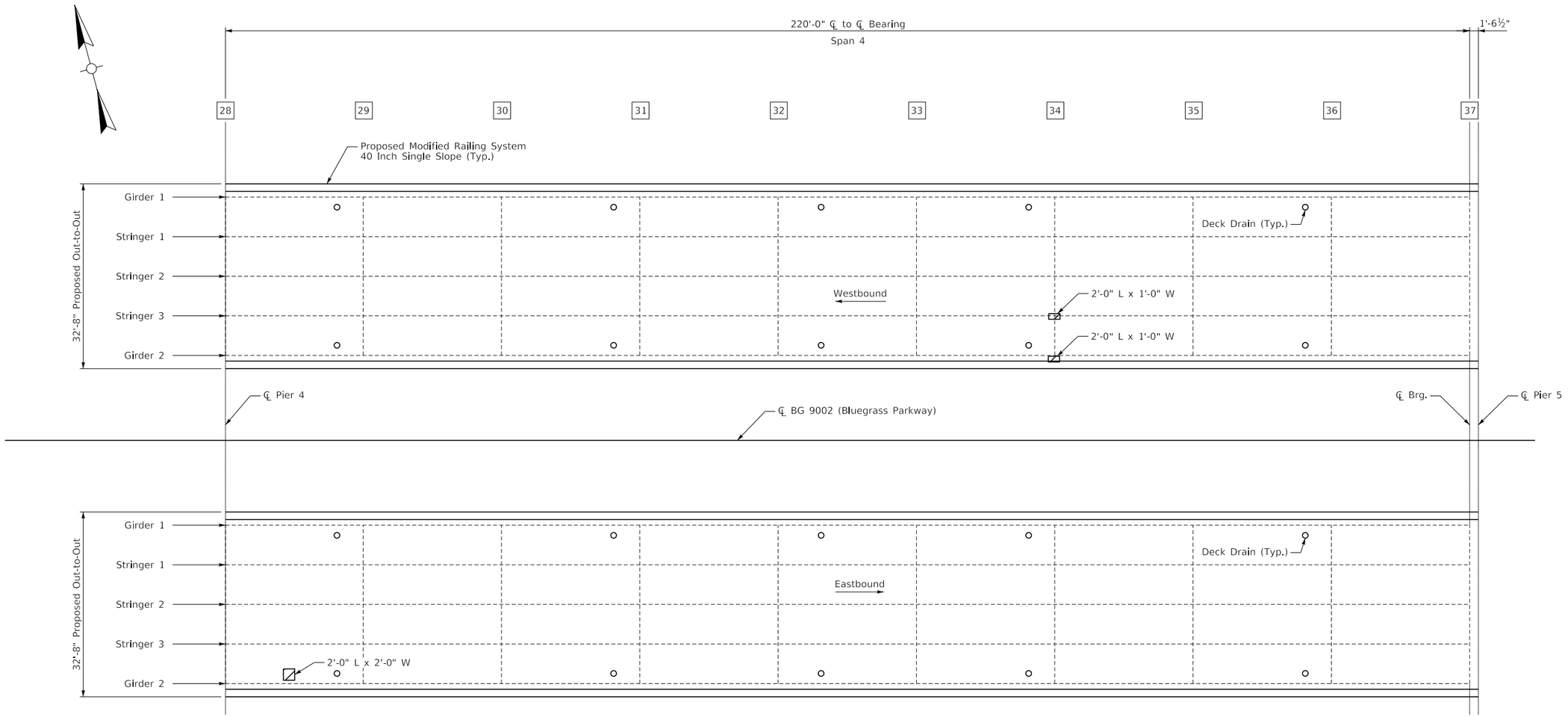
DATE: 3/11/2024	CHECKED BY	
DESIGNED BY: D. CIUCU	J. JONES	
DETAILED BY: D. CIUCU	J. JONES	

DECK PATCHING - SPAN 3

CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO. S24	DRAWING NUMBER 28839

MicroStation v10.16.0.80 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$designs$file$specification$$$$



PLAN

LEGEND

Concrete Patching

NOTES:

1. All deck patches are located in the underside of the deck and require overhead patching. See the SPECIAL NOTE FOR CONCRETE PATCHING REPAIR for specifications.
2. The total anticipated quantity for Span 4 Westbound concrete patching is 5 square feet, including a 25% contingency.
3. The total anticipated quantity for Span 4 Eastbound concrete patching is 5 square feet, including a 25% contingency.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

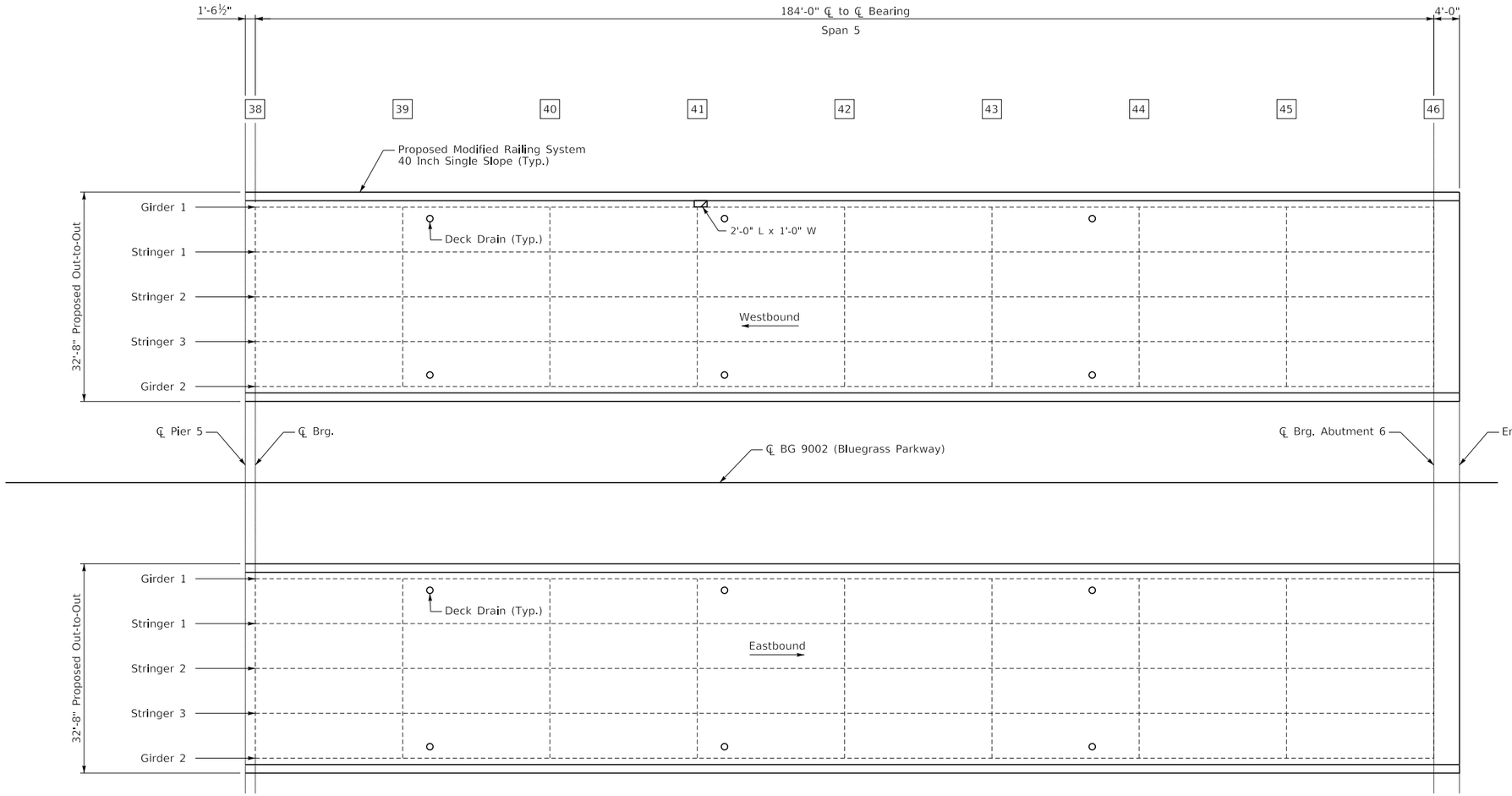
REVISION	DATE

PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY
DESIGNED BY: D. CIUCU	J. JONES
DETAILED BY: D. CIUCU	J. JONES

DECK PATCHING - SPAN 4
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S25	28839



PLAN

LEGEND

Concrete Patching

NOTES:

1. All deck patches are located in the underside of the deck and require overhead patching. See the SPECIAL NOTE FOR CONCRETE PATCHING REPAIR for specifications.
2. The total anticipated quantity for Span 5 Westbound concrete patching is 3 square feet, including a 25% contingency.
3. The total anticipated quantity for Span 5 Eastbound concrete patching is 0 square feet.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

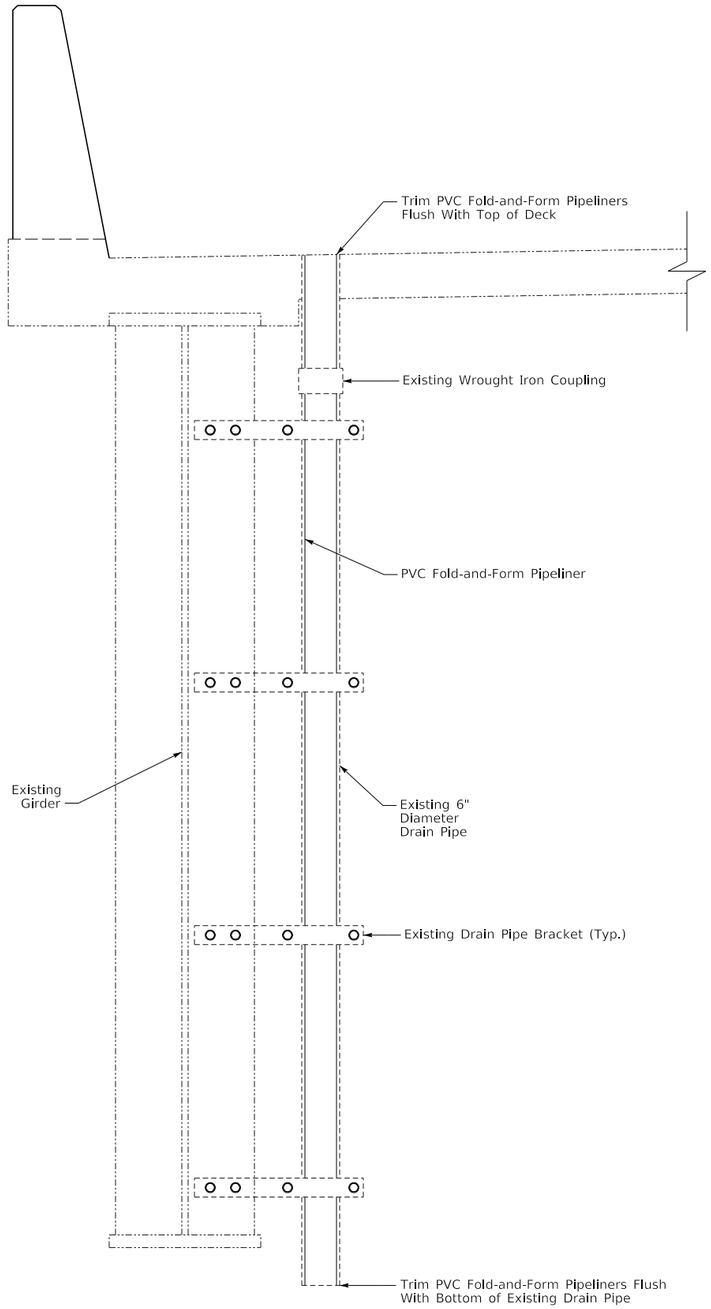
PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY
DESIGNED BY: D. CIUCU	J. JONES
DETAILED BY: D. CIUCU	J. JONES

DECK PATCHING - SPAN 5
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S26	28839

MicroStation v10.16.0.80 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$design$file$specification$$$$



ELEVATION

NOTES:

1. Tighten loose drain pipe connections.
2. Clean and prepare the existing drain pipes to receive the PVC Fold-and-Form pipeliners to the satisfaction of the Engineer.
3. Install PVC Fold-and-Form pipeliners in accordance with the manufacturers specifications. The PVC Fold-and-Form pipeliners shall be continuous and joint-less from the top of the deck to the bottom of the existing drain pipe. The PVC Fold-and-Form pipeliners shall fit sufficiently tight within the existing pipe so as to not leak at the top of the deck. If leakage occurs, the Contractor shall seal these areas using a material compatible with PVC Fold-and-Form pipeliners as directed by the Engineer.
4. The PVC Fold-and-Form pipeliners shall conform to ASTM F1784.
5. The cost of all labor, materials, and equipment necessary to install PVC Fold-and-Form pipeliners, including surface preparation, shall be included in the unit bid price for "Deck Drain Retrofit".
6. See Sheets S22-S26 for deck drain locations.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

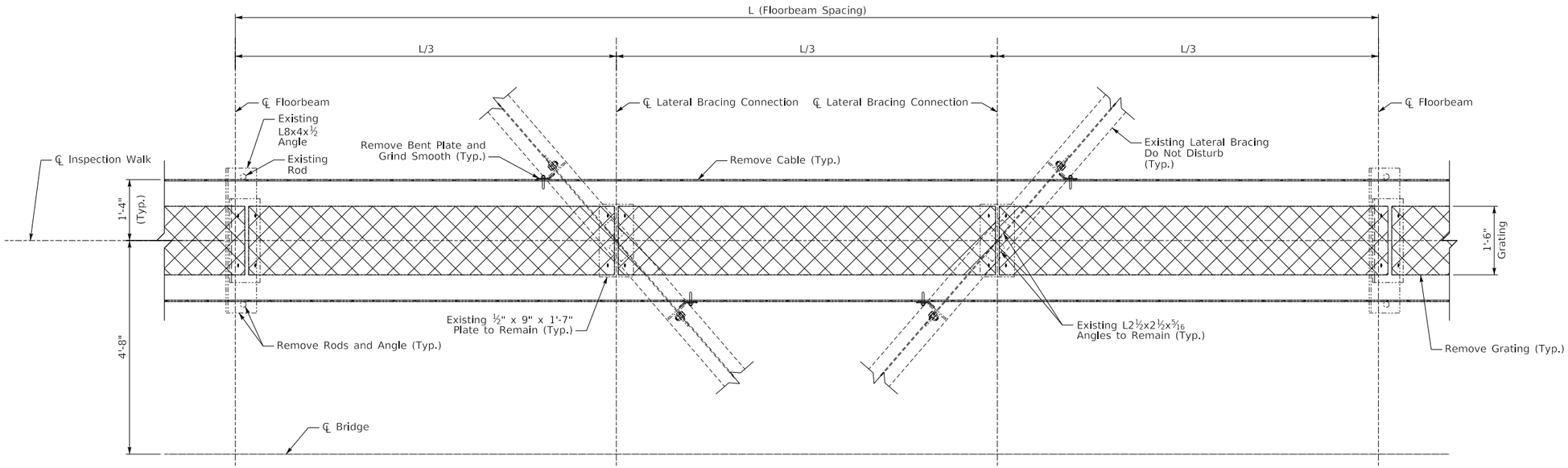
PREPARED BY
AECOM

DATE: 3/11/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

DECK DRAIN RETROFIT

CROSSING
KENTUCKY RIVER

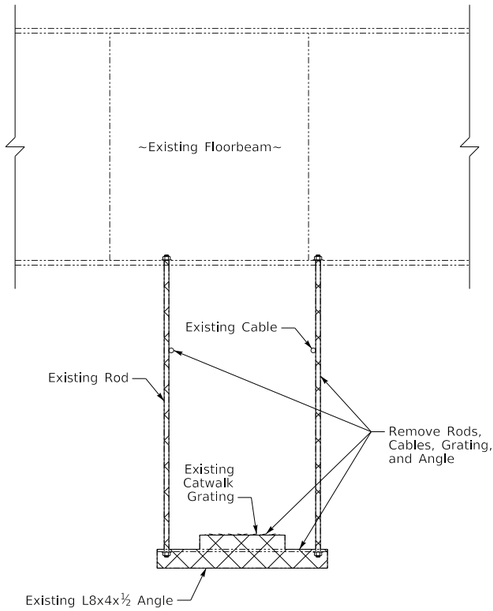
ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO.	DRAWING NUMBER
	S27	28839



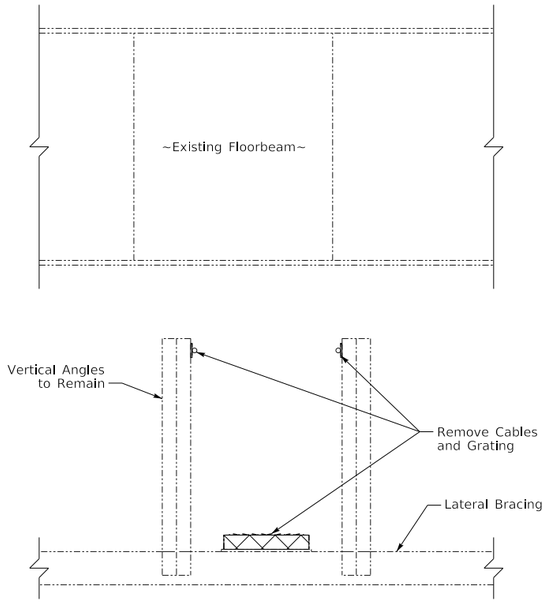
EXISTING PLAN

LEGEND

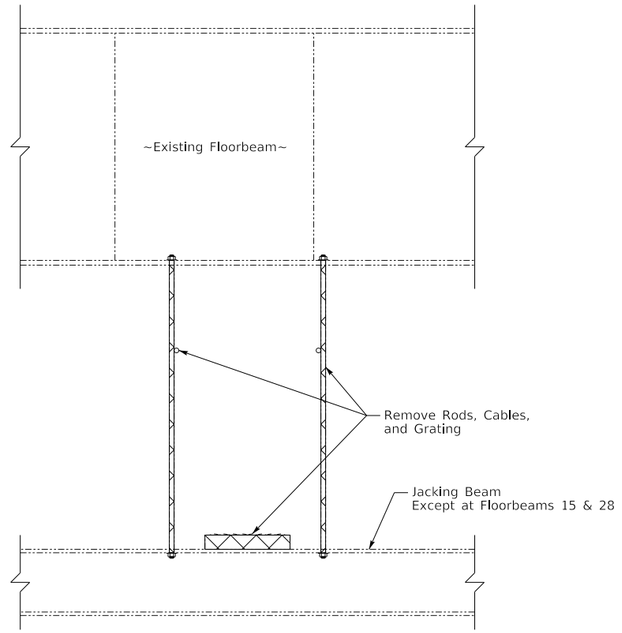
Remove Inspection Walk Components



EXISTING SECTION AT TYPICAL FLOORBEAMS



EXISTING SECTION BETWEEN FLOORBEAMS



EXISTING SECTION AT JACKING BEAMS FLOORBEAMS 0, 5, 6, 37, 38, & 46

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

PREPARED BY AECOM

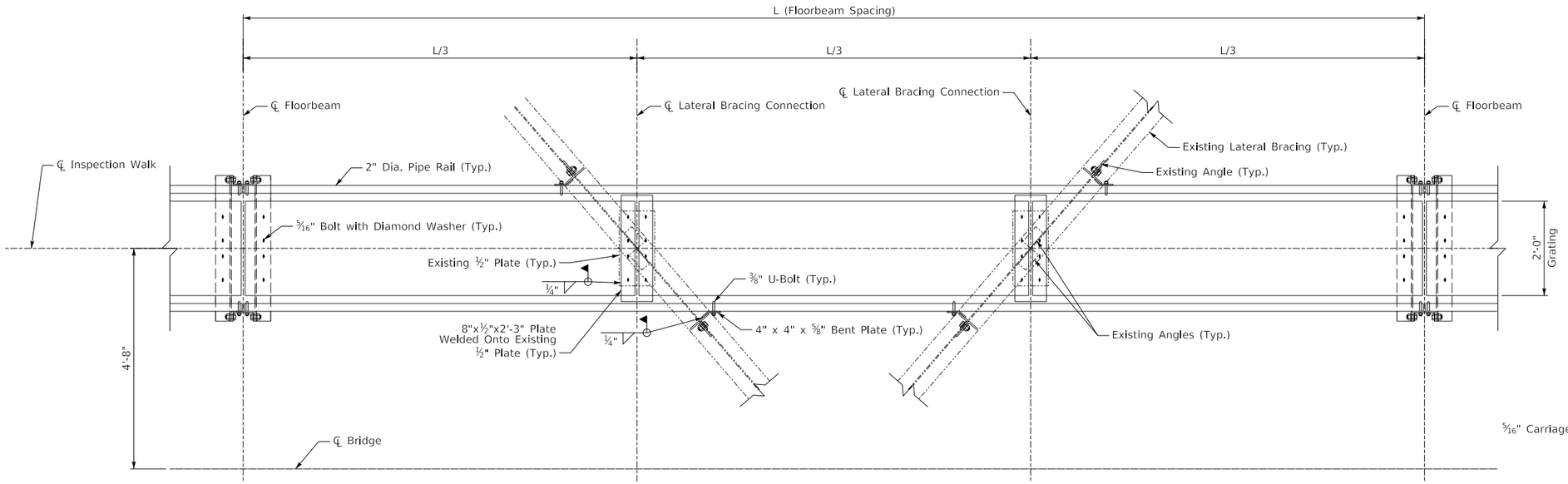
DATE: 3/11/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

INSPECTION WALK REPLACEMENT

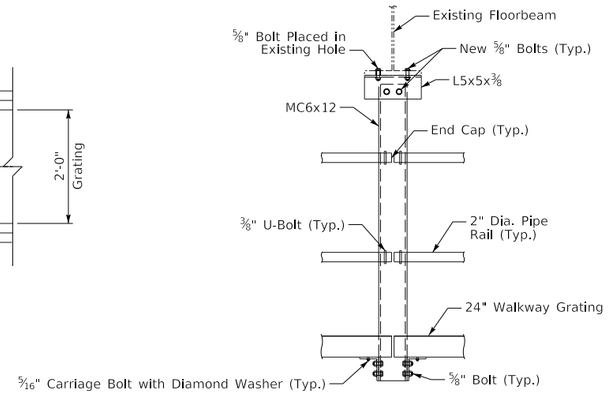
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO. S28	DRAWING NUMBER 28839

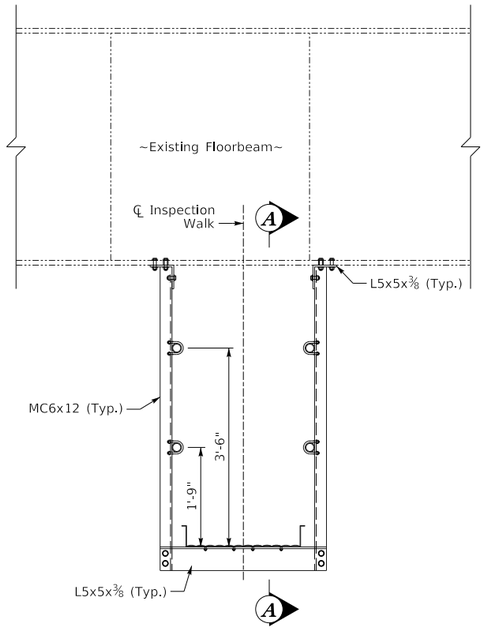
MicroStation v10.16.0.80 USER: $$$$USER$$$$ DATE PLOTTED: $$$$DATE$$$$ FILE NAME: $$$$design$file$specification$$$$



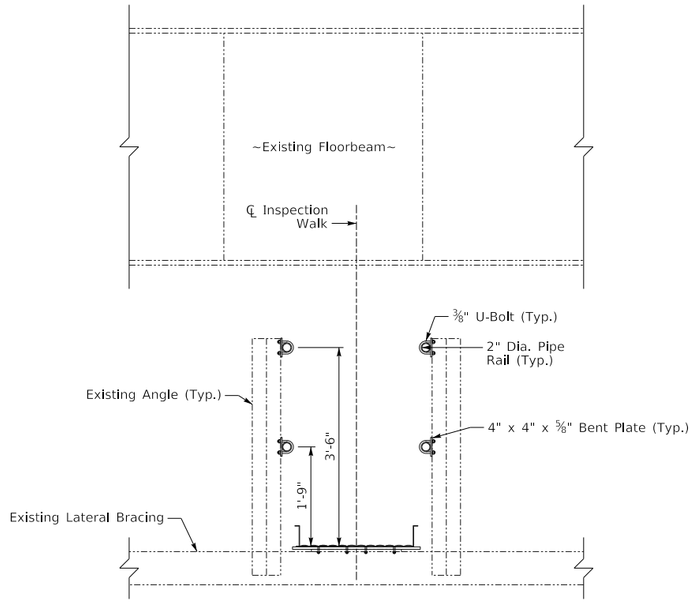
PROPOSED PLAN



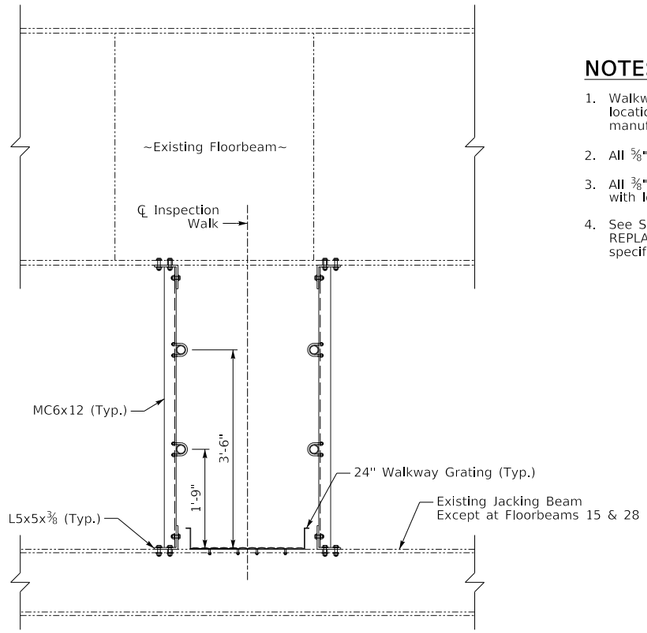
SECTION A-A



PROPOSED SECTION AT TYPICAL FLOORBEAMS



PROPOSED SECTION BETWEEN FLOORBEAMS



PROPOSED SECTION AT JACKING BEAMS FLOORBEAMS 0, 5, 6, 37, 38, & 46

NOTES

1. Walkway grating shall be spliced at support locations only and in accordance with the manufacturer's recommendations.
2. All 5/8" bolts shall be ASTM F3125, Grade A325.
3. All 3/8" bolts shall be A307 and accompanied with locking washers.
4. See SPECIAL NOTE FOR INSPECTION WALKWAY REPLACEMENT for additional notes and specifications.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

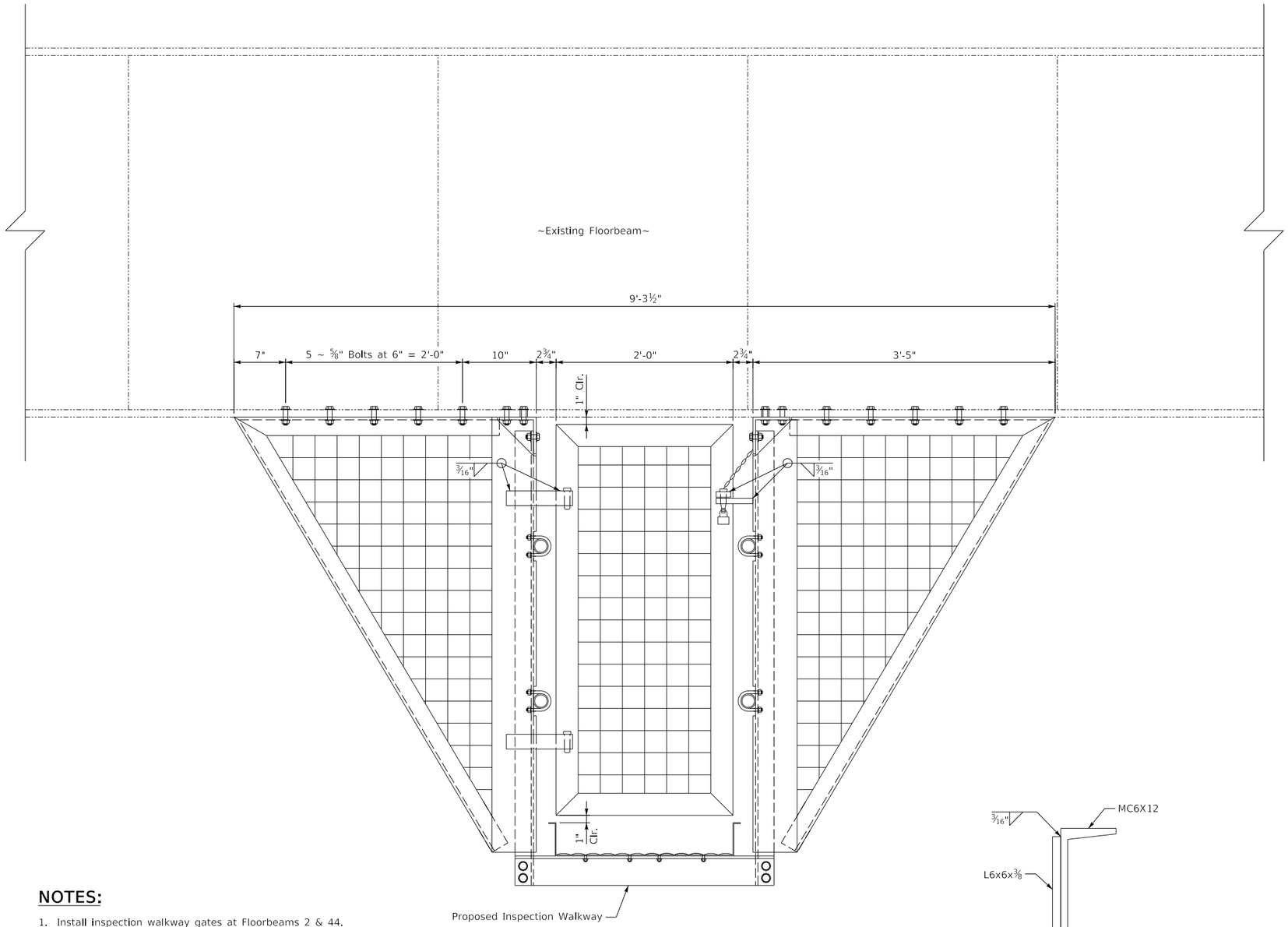
REVISION	DATE

PREPARED BY
AECOM

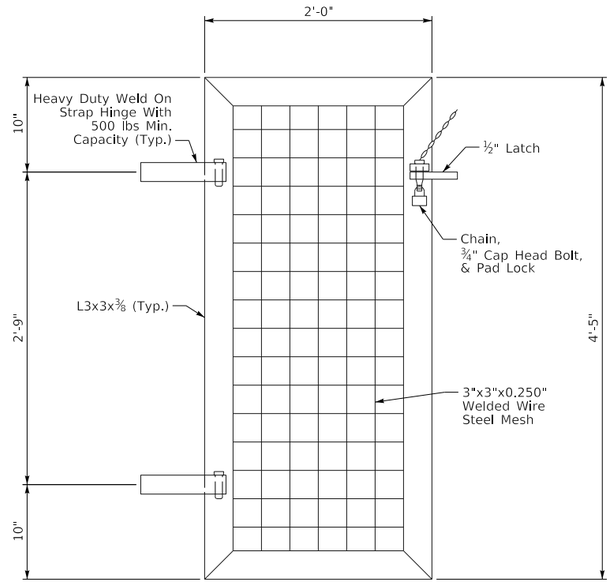
DATE: 3/11/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

INSPECTION WALK REPLACEMENT
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002		ANDERSON
	SHEET NO. S29	DRAWING NUMBER 28839

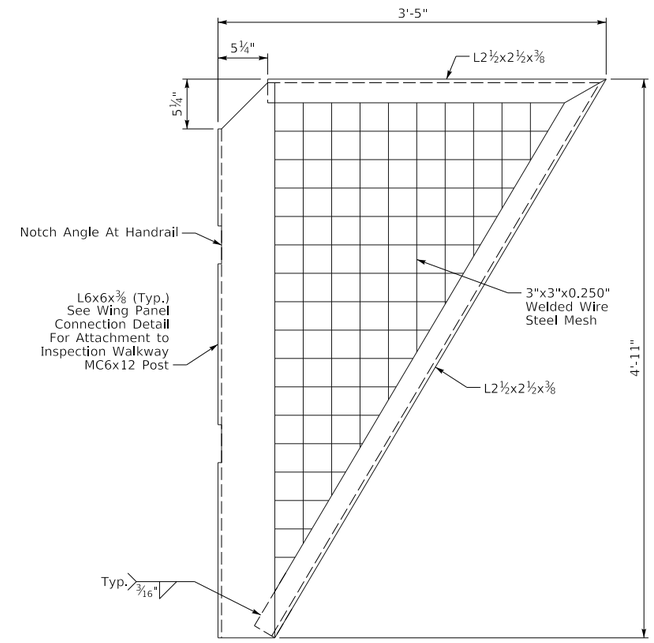


ELEVATION



GATE DETAIL

WING PANEL CONNECTION DETAIL



WING PANEL DETAIL

NOTES:

1. Install inspection walkway gates at Floorbeams 2 & 44.
2. Paint steel in accordance with Section 821 of the Standard Specifications.
3. The cost of all labor, materials, and equipment necessary to install the inspection walkway gate shall be incidental to the unit bid price for "Inspection Walkway".

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
KENTUCKY TRANSPORTATION CABINET

REVISION	DATE

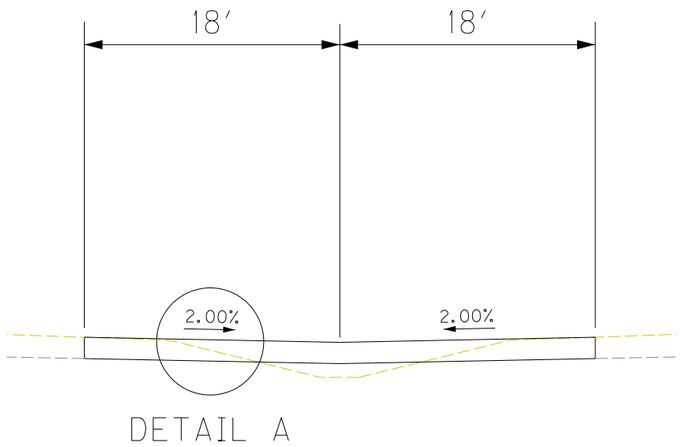
PREPARED BY
AECOM

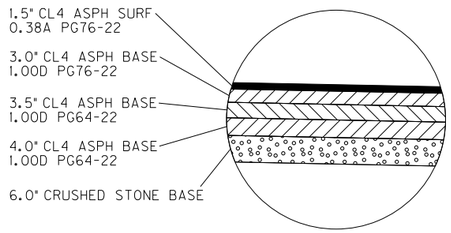
DATE: 3/11/2024	CHECKED BY
DESIGNED BY: J. JONES	Y. ZHAO
DETAILED BY: J. JONES	Y. ZHAO

INSPECTION WALKWAY GATE
CROSSING
KENTUCKY RIVER

ROUTE	ITEM NO.	COUNTY OF
BG 9002	SHEET NO. S30	ANDERSON
		DRAWING NUMBER 28839

CROSSOVER TYPICAL SECTION





DETAIL A

CROSSOVER
NEW CONSTRUCTION
GRADE, DRAIN, AND ASPHALT PAVEMENT
USING

CROSSOVER

APPROXIMATELY 16.5" BASE —
- 6.0" CRUSHED STONE BASE
- 4.0" CL4 ASPHALT BASE 1.00D PG 64-22
- 3.5" CL4 ASPHALT BASE 1.00D PG 64-22
- 3.0" CL4 ASPHALT BASE 1.00D PG 76-22

APPROXIMATELY 1.5" SURFACE — 1.5" CL4 ASPHALT SURFACE 0.38A PG76-22

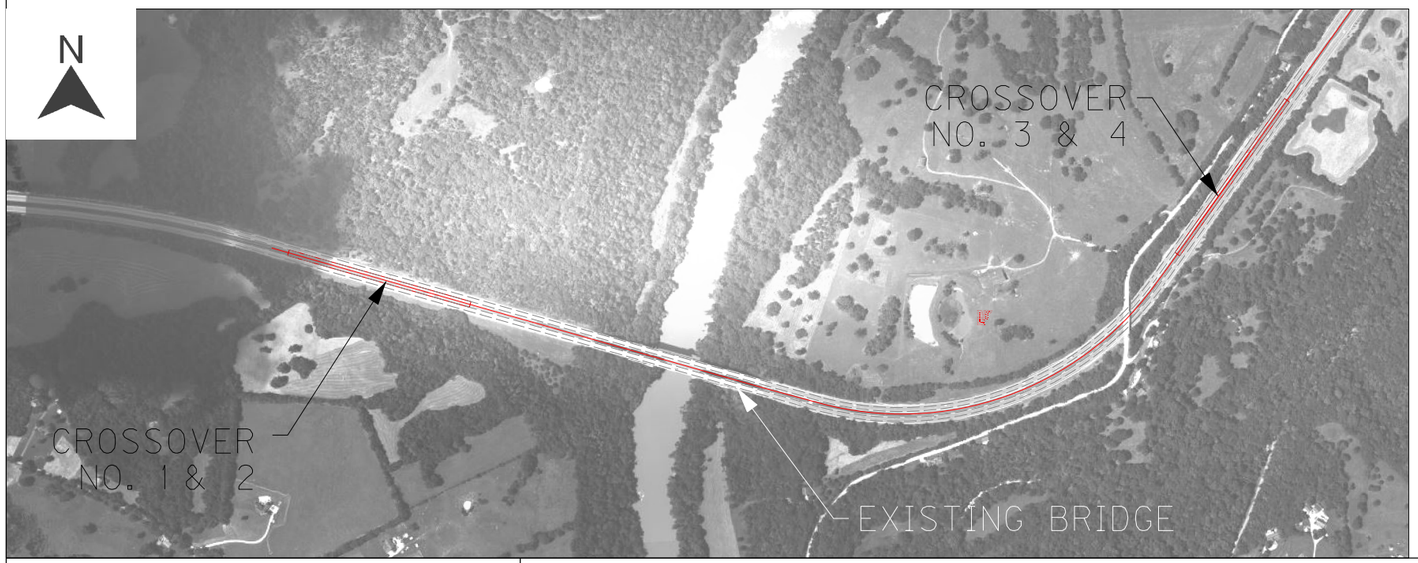
ASPHALT MATERIAL FOR TACK NON-TRACKING APPLIED AT A RATE OF 0.70 LBS/SY

NOTES:

SUPERELEVATED SHOULDERS - CONSTRUCT TO STANDARD SUPERELEVATION, EXCEPT NOT FLATTER THAN THE SLOPE INDICATED FOR SUPERELEVATION.

USE SAME STEP-OUT WIDTH AS THE THICKNESS OF THE COURSE ABOVE THAT COURSE.

STANDARD DRAWINGS	
RBB-002-09	Guardrail and Bridge End Drainage For Twin Structures
RBC-110-12	Connection Details of Crash Cushion Type VI to Double Face Guardrail
RBE-200-07	Crash Cushion Type IX
RBI-001-12	Typical Guardrail Installations
RBI-002-07	Typical Guardrail Installations
RBI-005-08	Guardrail Installation At Bridge Columns
RBI-006-07	Guardrail Installation At Sign Supports
RBR-001-13	Steel Beam Guardrail (“W” Beam)
RBR-005-11	Guardrail Components
RBR-010-06	Guardrail Terminal Sections
RBR-015-06	Steel Guardrail Posts
RBR-016-05	Timber Guardrail Posts
RBR-018	Guardrail System Transition
RBR-055-01	Delineators For Guardrail
BHS-014	Thrie Beam Guardrail Transition TL-3
RDB-105-06	Sloped and Flared box Inlet - Outlet
RDB-106-05	Grates for Sloped and Flared Box Inlet-Outlet
RDD-001-06	Paved Ditch Type 1
RDD-040-05	Channel Lining Class II And III
RDI-001-10	Culvert And Storm Sewer Pipe Types And Cover Heights
RDI-002-05	Culvert, Entrance & Storm Sewer Pipe Types & Cover Heights
RDI-016-03	Non-Circular Pipe Alternates
RDI-021-01	Pipe Bedding For Culverts, Entrance, And Storm Sewer Reinforced Conc. Pipe
RDI-026-01	Pipe Bedding Trench Condition Reinforced Conc. Pipe
RDI-035-02	Coatings, Linings and Pavings For Non-Structural Plate Pipe
RDI-040-01	Erosion Control Blanket Slope Installation
RDI-041-01	Erosion Control Blanket Channel Installation
RDM-105-03	Frame and Lid Type 2
RDP-001-06	Perforated Pipe Types And Cover Heights
RDP-005-05	Perforated Pipe For Subgrade Drainage On Two-Lane (Class 2) And Multi-Lane Roads
RDP-010-09	Perforated Pipe Headwalls
RDX-001-06	Junction Box
RDX-002-04	Junction Box (Dimensions & Quantities)
RDX-210-03	Temporary Silt Fence
RDX-225-01	Silt Trap Type B
RDX-230-01	Silt Trap Type C
TPM-170-01	Flexible Delineator Post Arrangements For Horizontal Curves
TPM-171-01	Flexible Delineator Post Arrangements For Interchange Ramp And Crossovers
TPR-115	Shoulder & Edgeline Rumble Strip Placement Details
TPR-130	Rumble Strip Details Multi-Lane Roadways and Ramps
TTC-115-04	Lane Closure Multi-Lane Highway Case I
TTC-120-04	Lane Closure Multi-Lane Highway Case II
TTC-135-03	Shoulder Closure
TTC-145-04	Median Crossover Case II
TTC-146-04	Median Crossover Case II
TTD-120-03	Double Fine Signs
TTD-125-03	Pavement Condition Warning Signs
TTD-130	Speed Zone Signing For Work Zones
TTS-110-02	Mobile Operation For Paint Striping Case III
TTS-115-02	Mobile Operation For Paint Striping Case IV



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: CROSSOVER TYPICAL SECTION

DRAWING NO. 28839
COUNTIES OF ANDERSON & WOODFORD
SHEET NO. R01

GENERAL NOTES

BEFORE YOU DIG
THE CONTRACTOR IS INSTRUCTED TO CALL 1-800-752-6007 TO REACH KY 811, THE ONE-CALL SYSTEM FOR INFORMATION ON THE LOCATION OF EXISTING UNDERGROUND UTILITIES. THE CALL IS TO BE PLACED A MINIMUM OF TWO (2) AND NO MORE THAN TEN (10) BUSINESS DAYS PRIOR TO EXCAVATION. THE CONTRACTOR SHOULD BE AWARE THAT OWNERS OF UNDERGROUND FACILITIES ARE NOT REQUIRED TO BE MEMBERS OF THE KY 811 ONE-CALL BEFORE-U-DIG (BUD) SERVICE. THE CONTRACTOR MUST COORDINATE EXCAVATION WITH THE UTILITY OWNERS, INCLUDING THOSE WHO DO NOT SUBSCRIBE TO KY 811. IT MAY BE NECESSARY FOR THE CONTRACTOR TO CONTACT THE COUNTY COURT CLERK TO DETERMINE WHAT UTILITY COMPANIES HAVE FACILITIES IN THE AREA.

STANDARD DRAWINGS
STANDARD DRAWINGS ARE NOT ATTACHED TO THESE PLANS. A STANDARD DRAWING BOOK AND THE HEADWALL SUPPLEMENTAL BOOK MAY BE OBTAINED FROM THE POLICY SUPPORT BRANCH OF THE DEPARTMENT OF ADMINISTRATIVE SERVICES IN FRANKFORT, KY AT (502) 564-3670.

NOTICE - CAUTION CLASSIFICATION
SEE THE CURRENT EDITION OF THE KENTUCKY STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION: THE RIGHT IS RESERVED BY THE DEPARTMENT TO HAVE OTHER WORK PERFORMED BY OTHER CONTRACTORS AND BY ITS OWN FORCES AND TO PERMIT PUBLIC UTILITY COMPANIES AND OTHERS TO DO WORK DURING THE CONSTRUCTION OF, AND WITHIN THE LIMITS OF OR ADJACENT TO, THE PROJECT. THE CONTRACTOR SHALL CONDUCT THEIR OPERATIONS AND COOPERATE WITH SUCH OTHER PARTIES SO THAT INTERFERENCE WITH SUCH OTHER WORK WILL BE REDUCED TO A MINIMUM. THE CONTRACTOR SHALL AGREE, AND HEREBY DOES AGREE, TO MAKE NO CLAIMS AGAINST THE DEPARTMENT FOR ADDITIONAL COMPENSATION DUE TO DELAYS OR OTHER CONDITIONS CREATED BY THE OPERATIONS OF SUCH OTHER PARTIES. SHOULD A DIFFERENCE OF OPINION ARISE AS TO THE RIGHTS OF THE CONTRACTOR AND OTHERS WORKING WITHIN THE LIMITS OF OR ADJACENT TO THE PROJECT, THE ENGINEER WILL DECIDE AS TO THE RESPECTIVE RIGHTS OF THE VARIOUS PARTIES INVOLVED IN ORDER TO ASSURE THE COMPLETION OF THE DEPARTMENT'S WORK IN GENERAL HARMONY AND IN A SATISFACTORY MANNER, AND THEIR DECISION SHALL BE FINAL AND BINDING UPON THE CONTRACTOR.

FAILURE TO COMPLETE WORK ON TIME
FOR EACH CALENDAR DAY BEYOND THE AGREED UPON FIXED COMPLETION DATE OR SPECIFIED WORKING DAYS, THE DEPARTMENT WILL ASSESS LIQUIDATED DAMAGES PER THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

COMPACTION OF ASPHALT MIXTURES
WILL ACCEPT THE COMPACTION OF ASPHALT MIXTURES FURNISHED FOR DRIVING LANES AT ONE INCH (25 MM) OR GREATER ON THIS PROJECT BY OPTION A ACCORDING TO THE CURRENT STANDARD SPECIFICATIONS. USE JOINT CORES AS DESCRIBED IN THE STANDARD SPECIFICATIONS FOR SURFACE MIXTURES ONLY. WILL ACCEPT THE COMPACTION OF ALL OTHER ASPHALT MIXTURES BY OPTION B.

EROSION AND SEDIMENT CONTROL
PRIOR TO ANY CLEARING, GRUBBING AND EXCAVATION, CONSTRUCT PERIMETER CONTROLS SUCH AS BUT NOT LIMITED TO TEMPORARY SILT FENCE, PERMANENT EROSION AND SEDIMENT CONTROLS MEASURES, SILT TRAPS, SEDIMENTATION BASINS, ETC. TO ENSURE THAT DISTURBED SEDIMENT DOES NOT LEAVE THE PROJECT SITE AND/OR TO CONTROL SEDIMENT PER THE PLANS.

MARKING REMOVAL
REMOVAL OF THE EXISTING STRIPING WILL BE DONE BY WATER ABRASIVE BLASTING SO THE STRIPE IS NO LONGER VISIBLE ON THE PAVEMENT WITHOUT DAMAGING THE PAVEMENT. ANY DAMAGE TO THE PAVEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.

CONSTRUCTION MATERIAL DISPOSAL
ALL CONCRETE PAVEMENT, ASPHALT MATERIAL, AND ANY OTHER MATERIAL THAT IS REQUIRED TO BE REMOVED SHALL BE DISPOSED OF OFF THE RIGHT-OF-WAY AT SITES ACQUIRED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER, AT NO ADDITIONAL COST TO THE DEPARTMENT, PER THE CURRENT EDITION OF THE KYTC STANDARD SPECIFICATIONS.

SIGNING
THE CONTRACTOR WILL COORDINATE WITH THE ENGINEER ON WHAT SIGNS WILL BE REMOVED AND/OR RESET/REPLACED PRIOR TO ANY WORK TAKING PLACE. THIS WORK WILL BE INCIDENTAL TO MAINTAIN AND CONTROL TRAFFIC.

BLASTING
BLASTING WILL NOT BE PERMITTED ON THIS PROJECT.

PIPE REMOVAL
REMOVAL OF ANY UNNECESSARY PIPE WILL BE INCIDENTAL TO THE PROJECT.

CROSSOVERS
CROSSOVERS ARE TO BE LEFT IN PLACE AFTER CONSTRUCTION. PERMANENT TUBULAR MARKERS SHALL BE PLACED EVERY 40' LONGITUDINAL ALONG THE CENTER OF THE CROSSOVER TO CLOSE THE CROSSOVERS AT COMPLETION.

GENERAL SUMMARY

ITEM	DESCRIPTION	UNITS	QUANTITY	ROADWAY TOTAL
3	CRUSHED STONE BASE	TON	3188	3188
217	CL4 ASPH BASE 1.00D PG64-22	TON	3812	3812
219	CL4 ASPH BASE 1.00D PG76-22	TON	1525	1525
342	CL4 ASPH SURF 0.38A PG76-22	TON	762	762
522	STORM SEWER PIPE-18 IN	LF	2358	2358
1440	SLOPED BOX INLET-OUTLET TYPE 1	EACH	4	4
2014	BARRICADE-TYPE III	EACH	8	8
2165	REMOVE PAVED DITCH	SQYD	257	257
2483	CHANNEL LINING CLASS II	TON	50	50
2562	TEMPORARY SIGNS	SQFT	500	500
2650	MAINTAIN AND CONTROL TRAFFIC	LS	1	1
2655	CROSSOVER (CROSSOVER NO. 1 & NO. 2)	LS	1	1
2655	CROSSOVER (CROSSOVER NO. 3 & NO. 4)	LS	1	1
2671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	2	2
2696	SHOULDER RUMBLE STRIPS	LF	4620	4620
2775	ARROW PANEL	EACH	2	2
3171	CONCRETE BARRIER WALL TYPE 9T	LF	1200	1200
3225	TUBULAR MARKERS	EACH	276	276
6511	PAVE STRIPING-TEMP PAINT-6 IN	LF	45000	45000
6542	PAVE STRIPING-THERMO-6 IN W	LF	15000	15000
6543	PAVE STRIPING-THERMO-6 IN Y	LF	12000	12000
6549	PAVE STRIPING-TEMP REM TAPE-B	LF	500	500
6613	INLAID PAVEMENT MARKER-B W/R	EACH	150	150
8903	CRASH CUSHION TY VI CLASS BT TL3	EACH	2	2
20318ES508	RELOCATE CONC BARRIER WALL	LF	1200	1200
21415ND	EROSION CONTROL	LS	1	1
23139EN	STRIPING REMOVAL	LF	45000	45000
23952EC	DRAINAGE JUNCTION BOX TY B	EACH	6	6

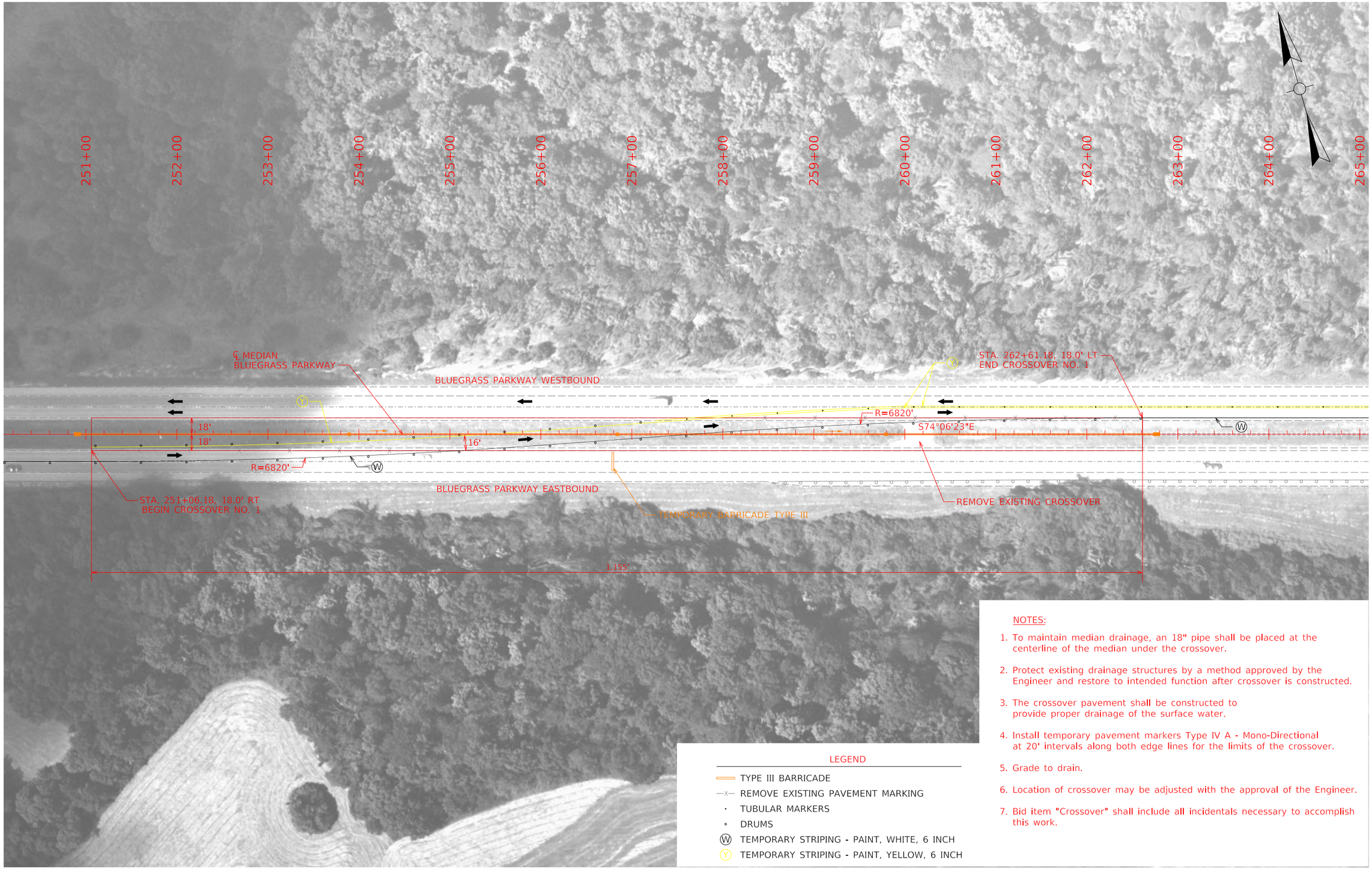
GUARDRAIL SUMMARY

LOCATION				ITEM DESCRIPTION	DELINEATOR FOR GUARDRAIL M/W	DELINEATOR FOR GUARDRAIL M/Y	GUARDRAIL TERMINAL SECTION NO 1	CRASH CUSHION TYPE IX-A	GUARDRAIL END TREATMENT TYPE 1	REMOVE CRASH CUSHION	THRIE BEAM GUARDRAIL TRANSITION TL-3	GUARDRAIL-STEEL W BEAM-S FACE	GUARDRAIL-STEEL W BEAM-D FACE	REMOVE GUARDRAIL	TEMP GUARDRAIL
STATIONS			SIDE	ITEM CODE	1982	1983	2360	2365	2367	20432ES112	25078ED	2351	2352	2381	2397
EB BLUEGRASS PARKWAY				UNIT TO BID	EACH							LINEAR FEET			
267+66	TO	270+40	LT			3	1	1		1	1	75	137.5		
269+21	TO	270+40	RT		1						1	100		100	
281+25	TO	282+44	RT		1						1	100		100	
281+25	TO	283+75	LT						1		1			250	250
WB BLUEGRASS PARKWAY															
267+90	TO	270+40	LT						1		1			250	250
267+90	TO	270+40	RT						1		1			250	250
281+25	TO	282+44	LT		1						1	100		100	
281+25	TO	283+98	RT			3	1	1		1	1	75	137.5		
				TOTAL:	3	6	2	2	3	2	8	450	275	1050	750

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY TRANSPORTATION CABINET

DRAWING TITLE: GENERAL SUMMARIES & GENERAL NOTES

DRAWING NO. 28839
COUNTIES OF ANDERSON & WOODFORD
SHEET NO. R02



LEGEND

- TYPE III BARRICADE
- REMOVE EXISTING PAVEMENT MARKING
- TUBULAR MARKERS
- DRUMS
- (W) TEMPORARY STRIPING - PAINT, WHITE, 6 INCH
- (Y) TEMPORARY STRIPING - PAINT, YELLOW, 6 INCH

NOTES:

1. To maintain median drainage, an 18" pipe shall be placed at the centerline of the median under the crossover.
2. Protect existing drainage structures by a method approved by the Engineer and restore to intended function after crossover is constructed.
3. The crossover pavement shall be constructed to provide proper drainage of the surface water.
4. Install temporary pavement markers Type IV A - Mono-Directional at 20' intervals along both edge lines for the limits of the crossover.
5. Grade to drain.
6. Location of crossover may be adjusted with the approval of the Engineer.
7. Bid item "Crossover" shall include all incidentals necessary to accomplish this work.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: CROSSOVER NO. 1

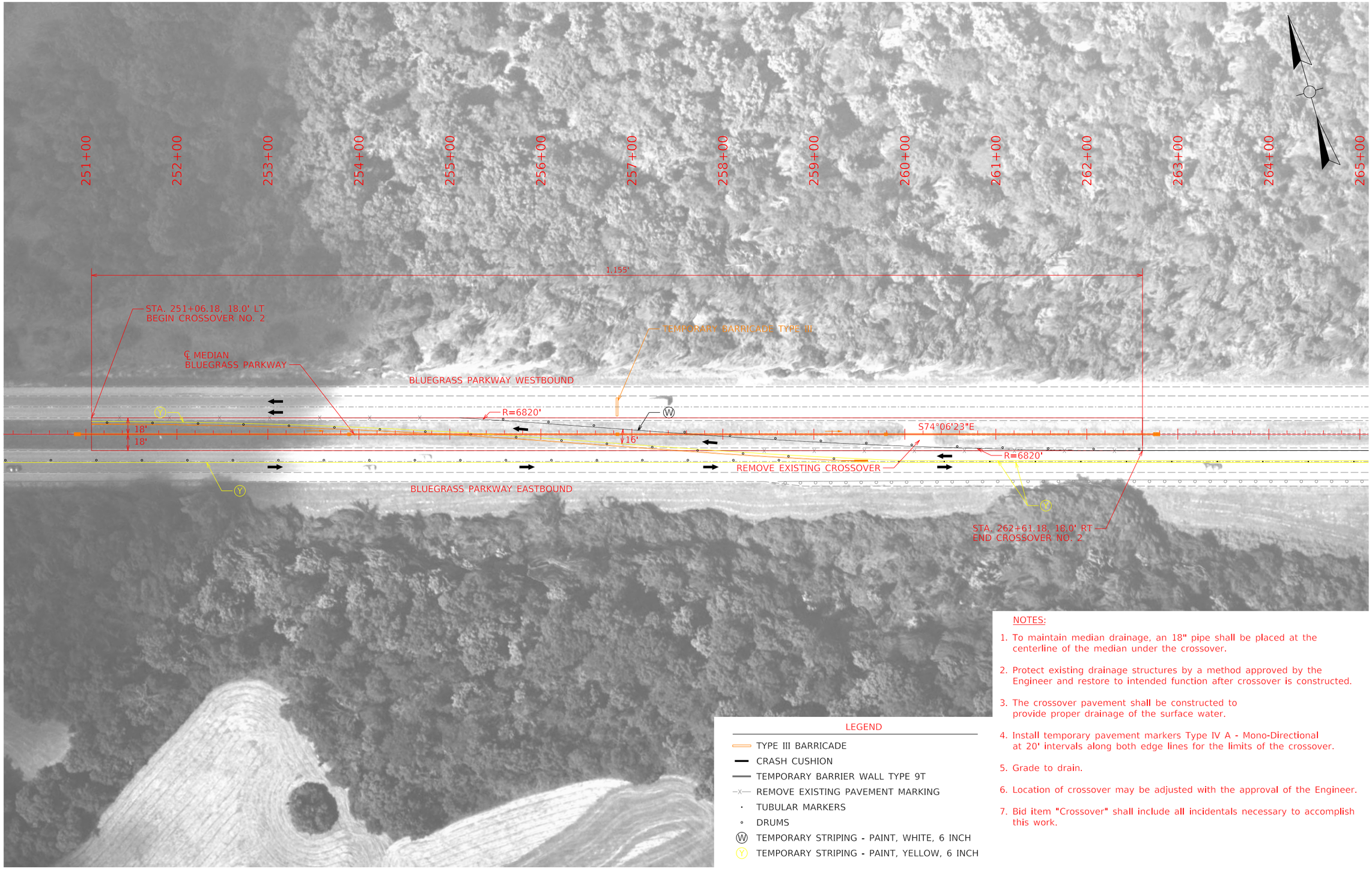
HORIZONTAL SCALE
SCALE: 1"=50'

0' 50' 100' 200'

STA 251+00 TO 265+00

DRAWING NO. 28839
COUNTY OF ANDERSON
SHEET NO. R03

OpenRoads Designer v10.16.2.267
USER: Brett.Rice
FILE NAME: C:\PWWORKING\USKY\DMS07870\CROSSOVER 1.DGN



LEGEND

- TYPE III BARRICADE
- CRASH CUSHION
- TEMPORARY BARRIER WALL TYPE 9T
- REMOVE EXISTING PAVEMENT MARKING
- TUBULAR MARKERS
- DRUMS
- (W) TEMPORARY STRIPING - PAINT, WHITE, 6 INCH
- (Y) TEMPORARY STRIPING - PAINT, YELLOW, 6 INCH

NOTES:

1. To maintain median drainage, an 18" pipe shall be placed at the centerline of the median under the crossover.
2. Protect existing drainage structures by a method approved by the Engineer and restore to intended function after crossover is constructed.
3. The crossover pavement shall be constructed to provide proper drainage of the surface water.
4. Install temporary pavement markers Type IV A - Mono-Directional at 20' intervals along both edge lines for the limits of the crossover.
5. Grade to drain.
6. Location of crossover may be adjusted with the approval of the Engineer.
7. Bid item "Crossover" shall include all incidentals necessary to accomplish this work.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: CROSSOVER NO. 2

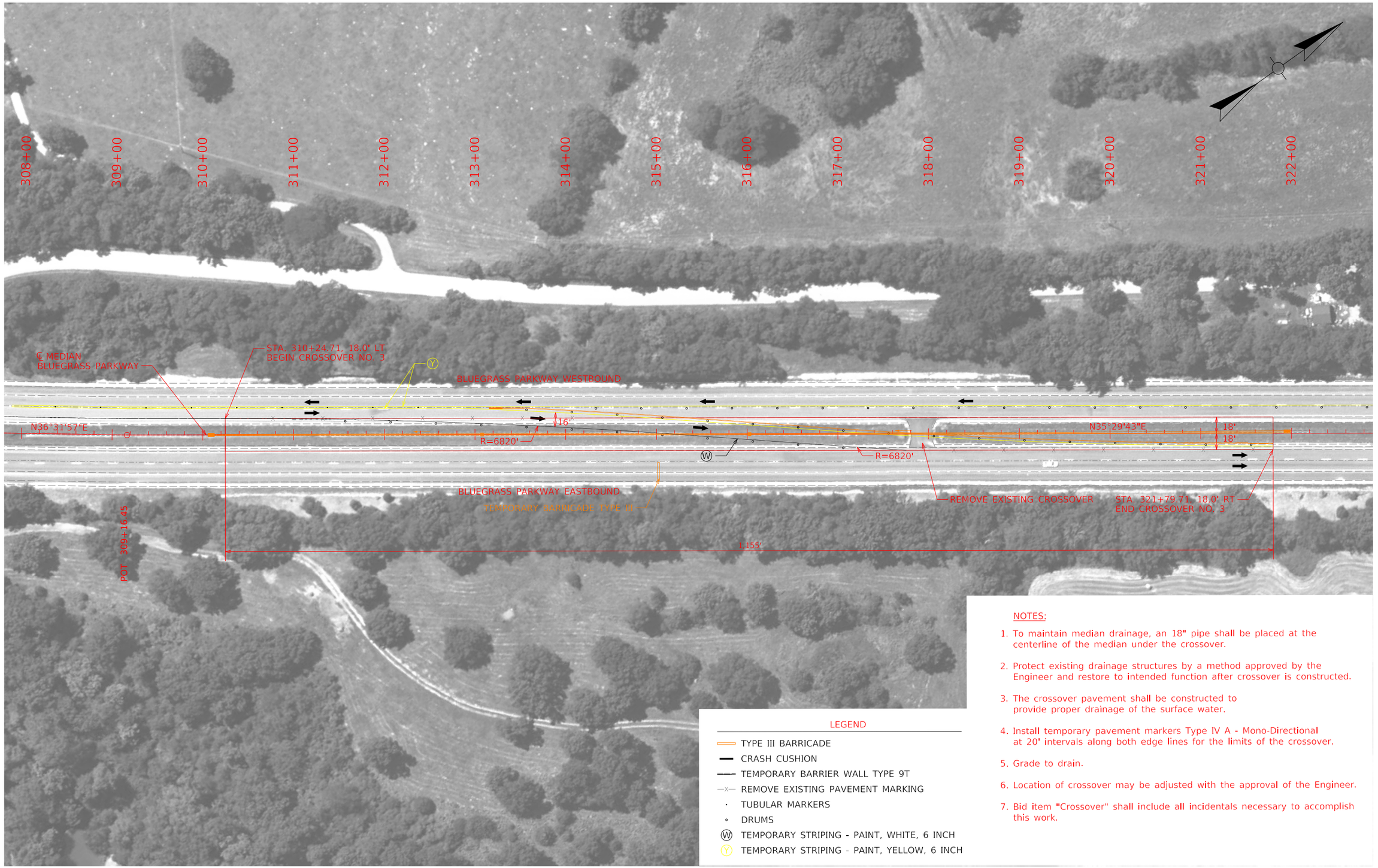
HORIZONTAL SCALE
SCALE: 1"=50'

0' 50' 100' 200'

STA 251+00 TO 265+00

DRAWING NO. 28839
COUNTY OF ANDERSON
SHEET NO. R04

OpenRoads Designer v10.16.2.267
USER: Brett.Rice
FILE NAME: C:\PWWORKING\USKY\DMS07870\CROSSOVER 2.DGN



LEGEND

- TYPE III BARRICADE
- CRASH CUSHION
- TEMPORARY BARRIER WALL TYPE 9T
- REMOVE EXISTING PAVEMENT MARKING
- TUBULAR MARKERS
- DRUMS
- (W) TEMPORARY STRIPING - PAINT, WHITE, 6 INCH
- (Y) TEMPORARY STRIPING - PAINT, YELLOW, 6 INCH

NOTES:

1. To maintain median drainage, an 18" pipe shall be placed at the centerline of the median under the crossover.
2. Protect existing drainage structures by a method approved by the Engineer and restore to intended function after crossover is constructed.
3. The crossover pavement shall be constructed to provide proper drainage of the surface water.
4. Install temporary pavement markers Type IV A - Mono-Directional at 20' intervals along both edge lines for the limits of the crossover.
5. Grade to drain.
6. Location of crossover may be adjusted with the approval of the Engineer.
7. Bid item "Crossover" shall include all incidentals necessary to accomplish this work.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: CROSSOVER NO. 3

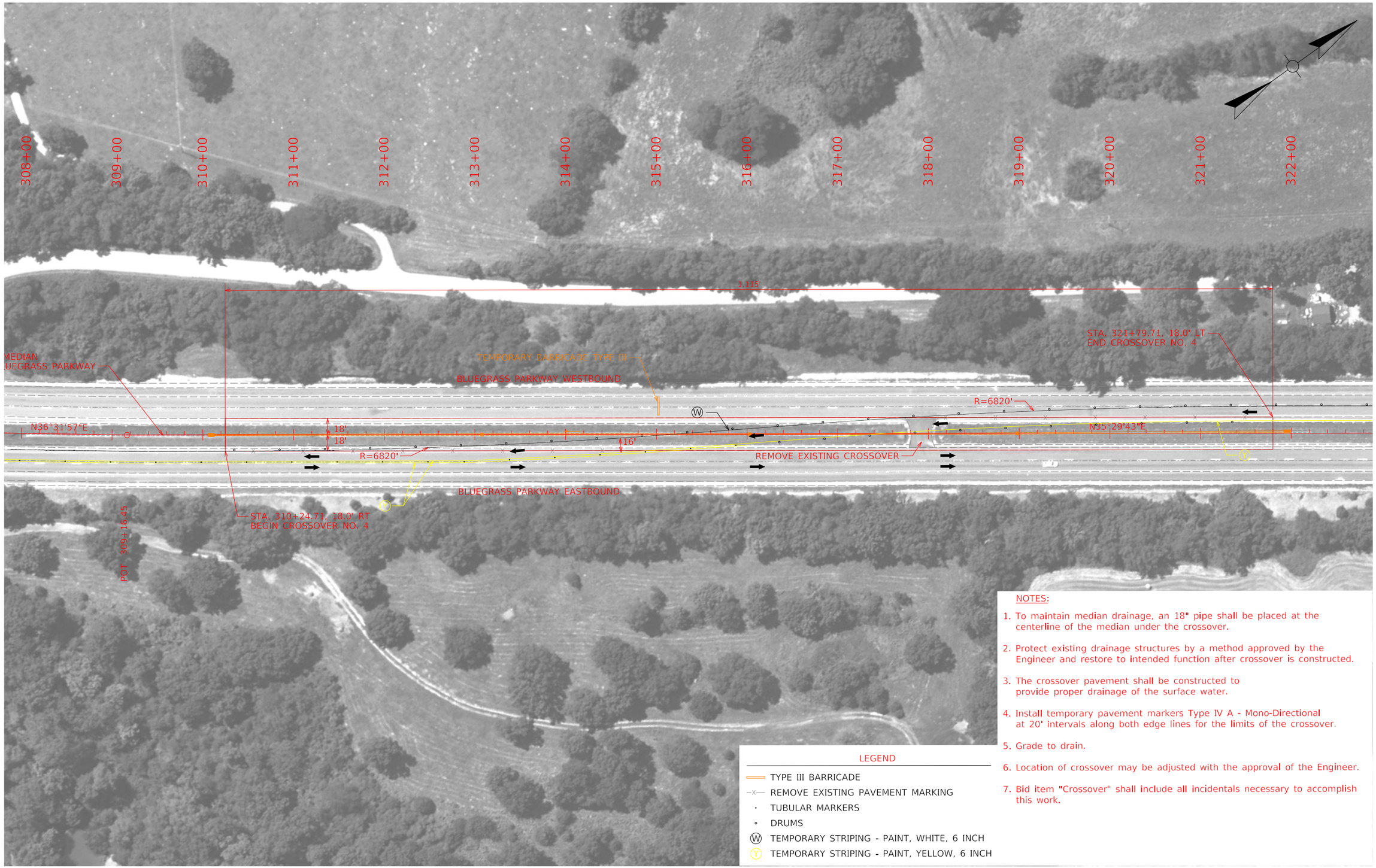
HORIZONTAL SCALE
SCALE: 1"=50'

0' 50' 100' 200'

STA 308+00 TO 322+00

DRAWING NO. 28839
COUNTY OF WOODFORD
SHEET NO. R05

OpenRoads Designer v10.16.2.267
USER: Brett.Rice
FILE NAME: C:\PWWORKING\USKY\DMS07870\CROSSOVER 1.DGN



LEGEND

- TYPE III BARRICADE
- REMOVE EXISTING PAVEMENT MARKING
- TUBULAR MARKERS
- DRUMS
- (W) TEMPORARY STRIPING - PAINT, WHITE, 6 INCH
- (Y) TEMPORARY STRIPING - PAINT, YELLOW, 6 INCH

NOTES:

1. To maintain median drainage, an 18" pipe shall be placed at the centerline of the median under the crossover.
2. Protect existing drainage structures by a method approved by the Engineer and restore to intended function after crossover is constructed.
3. The crossover pavement shall be constructed to provide proper drainage of the surface water.
4. Install temporary pavement markers Type IV A - Mono-Directional at 20' intervals along both edge lines for the limits of the crossover.
5. Grade to drain.
6. Location of crossover may be adjusted with the approval of the Engineer.
7. Bid item "Crossover" shall include all incidentals necessary to accomplish this work.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY TRANSPORTATION CABINET

DRAWING TITLE: CROSSOVER NO. 4

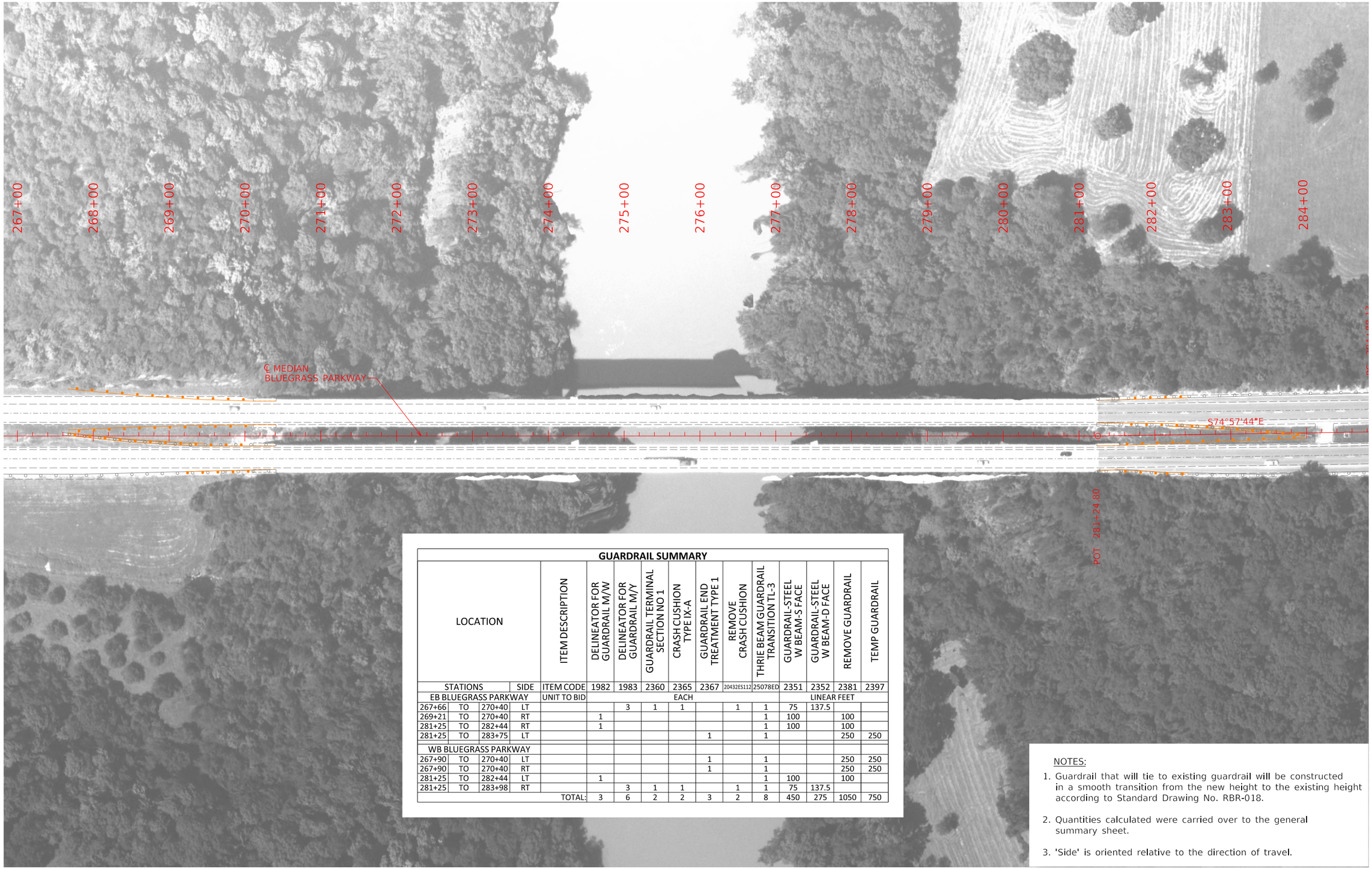
HORIZONTAL SCALE
SCALE: 1"=50'

0' 50' 100' 200'

STA 308+00 TO 322+00

DRAWING NO. 28839
COUNTY OF WOODFORD
SHEET NO. R06

OpenRoads Designer v10.16.2.267
USER: Brett.Rice
FILE NAME: C:\PWWORKING\USKY\DMS07870\CROSSOVER 2.DGN



GUARDRAIL SUMMARY

LOCATION				ITEM DESCRIPTION	DELINEATOR FOR GUARDRAIL M/W	DELINEATOR FOR GUARDRAIL M/Y	GUARDRAIL TERMINAL SECTION NO 1	CRASH CUSHION TYPE IX-A	GUARDRAIL END TREATMENT TYPE 1	REMOVE CRASH CUSHION	THRIE BEAM GUARDRAIL TRANSITION TL-3	GUARDRAIL-STEEL W BEAM-S FACE	GUARDRAIL-STEEL W BEAM-D FACE	REMOVE GUARDRAIL	TEMP GUARDRAIL
STATIONS			SIDE	ITEM CODE	1982	1983	2360	2365	2367	20432ES112	25078ED	2351	2352	2381	2397
EB BLUEGRASS PARKWAY				UNIT TO BID	EACH							LINEAR FEET			
267+66	TO	270+40	LT			3	1	1		1	1	75	137.5		
269+21	TO	270+40	RT		1						1	100		100	
281+25	TO	282+44	RT		1						1	100		100	
281+25	TO	283+75	LT						1		1			250	250
WB BLUEGRASS PARKWAY															
267+90	TO	270+40	LT						1		1			250	250
267+90	TO	270+40	RT						1		1			250	250
281+25	TO	282+44	LT		1						1	100		100	
281+25	TO	283+98	RT			3	1	1		1	1	75	137.5		
TOTAL:					3	6	2	2	3	2	8	450	275	1050	750

NOTES:

1. Guardrail that will tie to existing guardrail will be constructed in a smooth transition from the new height to the existing height according to Standard Drawing No. RBR-018.
2. Quantities calculated were carried over to the general summary sheet.
3. 'Side' is oriented relative to the direction of travel.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: GUARDRAIL

HORIZONTAL SCALE
SCALE: 1"=60'

0' 60' 120' 240'

STA 267+00 TO 284+00

DRAWING NO. 28839
COUNTIES OF ANDERSON & WOODFORD
SHEET NO. R07

OpenRoads Designer v10.16.2.267 USER: Brett.Rice FILE NAME: C:\PWWORKING\USKY\DMS07869\ALG 1 & 3.DGN

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

TEAM KENTUCKY TRANSPORTATION CABINET

DRAWING TITLE: CROSSOVER NO. 1 & 2 PROFILE

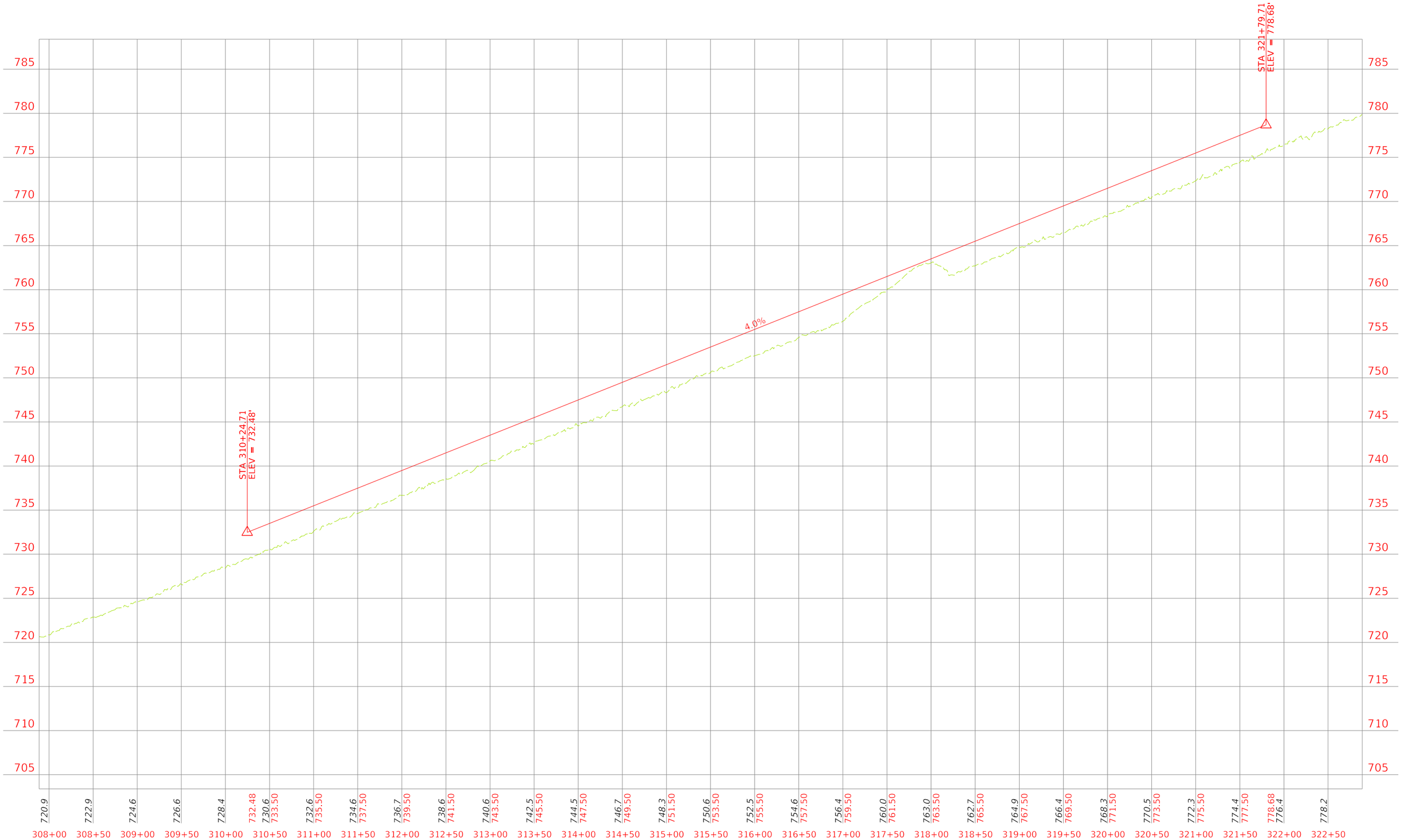
0′ 50′ 100′ 200′
HORIZONTAL SCALE: 1"=50′

0′ 5′ 10′ 20′
VERTICAL SCALE: 1"=5′

STA 251+00 TO 265+00

DRAWING NO. 28839
COUNTY OF ANDERSON
SHEET NO. R08

OpenRoads Designer v10.16.2.267
USER: Brett.Rice
FILE NAME: C:\PWWORKING\USKY\DMS07870\CROSSOVER 1.DGN



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

TEAM KENTUCKY

DRAWING TITLE: CROSSOVER NO. 3 & 4 PROFILE

0' 50' 100' 200'
HORIZONTAL SCALE: 1"=50'

0' 5' 10' 20'
VERTICAL SCALE: 1"=5'

STA 308+00 TO 322+00

DRAWING NO. 28839
COUNTY OF WOODFORD
SHEET NO. R09

OpenRoads Designer v10.16.2.267
USER: Brett.Rice
FILE NAME: C:\PWWORKING\USKY\DMS07870\CROSSOVER 1.DGN