

# TRANSPORTATION CABINET DEPARTMENT OF HIGHWAYS

## BOONE COUNTY I-275 OVER OHIO RIVER

# CARROLL CROPPER MEMORIAL BRIDGE TRUSS REPAIRS

LETTING DATE

CONSTRUCTION PROJECT NO.

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### SPECIAL NOTES

FOR TRAFFIC CONTROL ON BRIDGE REPAIR CONTRACTS  
FOR CONTRACT COMPLETION DATE AND LIQUIDATED DAMAGES ON BRIDGE REPAIR CONTRACT  
FOR PORTABLE CHANGEABLE MESSAGE SIGNS  
FOR TEMPORARY WORKSITE SPEED LIMIT SIGN ASSEMBLY  
FOR PORTABLE QUEUE WARNING ALERT SYSTEM  
FOR TRAFFIC QUEUE PROTECTION SYSTEM  
FOR BOLTING PROCEDURES OF FULLY THREADED RODS

### SPECIAL PROVISIONS

### SPECIFICATIONS

2019 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.  
2020 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

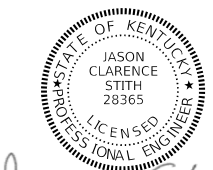
### MOT ESTIMATE OF QUANTITIES

BID ITEM CODE	02003	02562	02568	02569	02650	02671	02775	02898	03171	06549	06550	06551	06556	06557	08903	25075EC	25117EC	26136EC	26137EC	26138EC
BID ITEM	RELOCATE TEMP. CONC. MEDIUM BARRIER	TEMPORARY SIGNS	MOBILIZATION	DEMOBILIZATION	MAINTAIN AND CONTROL TRAFFIC	PORTABLE CHANGEABLE MESSAGE SIGNS	ARROW PANEL	RELOCATE CRASH CUSHION	CONC. BARRIER WALL, TYPE 9T	PAVE STRIPING - TEMP REM TAPE - B	PAVE STRIPING - TEMP REM TAPE - W	PAVE STRIPING - TEMP REM TAPE - Y	PAVE STRIPING - DUR TY 1 - 6 IN - W	PAVE STRIPING - DUR TY 1 - 6 IN - Y	CRASH CUSHION TY VI CLASS BT (TL3)	QUEUE PROTECTION VEHICLE	FURNISH QUEUE PROTECTION VEHICLES	PORTABLE QUEUE WARNING ALERT SYSTEM	QUEUE WARNING PCMS	QUEUE WARNING PORTABLE RADAR SENSORS
UNIT	LF	SF	LS	LS	LS	EACH	EACH	EACH	LF	LF	LF	LF	LF	LF	EACH	HOUR	MONTH	MONTH	MONTH	MONTH
BRIDGE TOTALS	2416	430	1	1	1	8	1	1	3472	8724	8724	8724	8608	7648	1	480	4	4	12	12

### ESTIMATE OF QUANTITIES

BID ITEM CODE	24879EC	24879EC	24879EC	24879EC	24879EC	24879EC	24879EC	24879EC	24879EC	24879EC	24879EC	24879EC	24879EC
BID ITEM	STEEL REPAIR - US U13-U14 AT U14	STEEL REPAIR - US U14-U15 AT U15	STEEL REPAIR - US U16-U17 AT U17	STEEL REPAIR - US T21-T22 AT T22	STEEL REPAIR - US L33-L32 AT T32	STEEL REPAIR - US L38-L39 AT L38	STEEL REPAIR - US L39-L40 AT L39	STEEL REPAIR - US L39-L40 AT L40	STEEL REPAIR - US L41-L42 AT L42	STEEL REPAIR - US L42-L43 AT L43	STEEL REPAIR - DS U13-U14 AT U14	STEEL REPAIR - DS T27-T29 AT T28	STEEL REPAIR - CORING TYPICAL
UNIT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
BRIDGE TOTALS	1	1	1	1	1	1	1	1	1	1	1	1	77

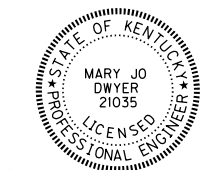
PLANS PREPARED BY:



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PLANS PREPARED BY:



*Mary Jo Dwyer*

MARY JO DWYER, P.E.  
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COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION DATE

DATE PLOTTED: 16-APR-2024

PREPARED BY  
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DATE: 04/12/2024  
DESIGNED BY: J STITH  
CHECKED BY: J KAUZLARICH  
DETAILED BY: J JACKSON  
J STITH

### TITLE SHEET

CROSSING  
OHIO RIVER

ROUTE: I-275  
ITEM NO.: COUNTY OF BOONE  
SHEET NO.: S1  
DRAWING NUMBER: 28873

## GENERAL NOTES

SCOPE OF WORK: THESE PLANS ARE TO BE USED TO REMEDIATE DISCONTINUITIES DISCOVERED IN COMPLETE JOINT PENETRATION WELDS OF THE MAIN TRUSS MEMBERS. THE REMEDIATION INCLUDES BOTH CORINGS AND PLATING ATTACHED TO THE TRUSS.

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 FOURTH EDITION 2017 AASHTO LRFD CONSTRUCTION SPECIFICATIONS AND THE 2020 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, NINTH EDITION.

DESIGN LIVE LOAD: THE DESIGN LIVE LOAD IS HS20-44.

DESIGN METHOD: ALL STRUCTURAL MEMBERS ARE DESIGNED TO HAVE A CAPACITY EQUIVALENT OR GREATER THAN THEIR REQUIRED CAPACITY PER LOAD AND RESISTANCE FACTOR DESIGN METHOD, AS SPECIFIED IN THE REFERENCED AASHTO SPECIFICATIONS.

MATERIALS DESIGN SPECIFICATIONS:

FOR STRUCTURAL STEEL (NEW)

Fy = 50000 PSI FOR GRADE 50

Fy = 70000 PSI FOR GRADE HPS 70W

FOR STRUCTURAL STEEL (EXISTING)

Fy = 32000 PSI FOR ASTM A373

Fy = 36000 PSI FOR ASTM A36

Fy = 50000 PSI FOR ASTM A440 AND A441 ≤ 3/4"

Fy = 100000 PSI FOR ASTM A514

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

STRUCTURAL STEEL

AASHTO	A.S.T.M.
M270 GR 50	A709 GR 50
M270 GR 50 (NSTM)	A709 GR 50 (NSTM)
M270 GR HPS 70W (NSTM)	A709 GR HPS 70W (NSTM)

HIGH STRENGTH BOLTS FOR STRUCTURAL JOINT

AASHTO	A.S.T.M.
M164	F3125 GRADE A325, TYPE 1
M253	F3125 GRADE A490, TYPE 1

CARBON AND ALLOY STEEL NUTS  
HARDENED STEEL WASHERS

A563 (DH), F436-1  
F436, TYPE 1

ALL NEW STRUCTURAL STEEL SPLICE PLATES SHALL BE ASTM A709 GRADE HPS70W (NSTM). ALL OTHER STRUCTURAL STEEL INCLUDING FILLER PLATES, CHEESE PLATES, CONNECTION PLATES, AND ANGLES SHALL BE ASTM A709 GRADE 50. STRUCTURAL STEEL SPLICE PLATES SHALL MEET THE SUPPLEMENTAL REQUIREMENTS FOR FRACTURE CRITICAL MEMBERS IN TABLE II (AASHTO M270) FOR ZONE 2.

MEMBERS IDENTIFIED AS A NONREDUNDANT STEEL TENSION MEMBER (NSTM) ARE THE SAME AS THE FORMER IDENTIFICATION AS FRACTURE CRITICAL MEMBER (FCM). NSTM MATERIAL AND FABRICATION REQUIREMENTS ARE THE SAME AS FCM REQUIREMENTS IN THE KYTC STANDARD SPECIFICATIONS AND THE AASHTO/AWS D1.5 BRIDGE WELDING CODE.

ASTM F3125 GRADE A490 BOLTS ARE TO BE COATED WITH A ZINC/ALUMINUM COATING IN ACCORDANCE WITH ASTM F1136/F1136M OR F2833.

THREADED ROD SHALL BE ASTM A354 GRADE BD WITH ASTM A563 HEAVY HEX NUTS AND ASTM F436, TYPE 1 WASHERS. ASTM A354 GRADE BD THREADED ROD SHALL HAVE PROTECTIVE COATING PER ASTM F3393 CLASSIFICATION CODE D. ALL ASTM A354 GRADE BD THREADED RODS REQUIRE MAGNETIC PARTICLE TESTING, SIMILAR TO THE REQUIREMENTS OF ASTM F3125 GRADE A490 BOLTS. ASTM A354 GRADE BD THREADED RODS SHALL BE CLEANED WITH GRIT BLASTING OR SIMILAR. ACID CLEANING OF ASTM A354 GRADE BD THREADED RODS IS NOT PERMITTED. INSTALLATION OF ASTM A354 GRADE BD THREADED RODS AND ASTM A563 NUTS SHOULD NOT EXCEED MINIMUM PRETENSIONING FORCES OF THE THREADED ROD BY MORE THAN 10%. THE USE OF DIRECT TENSION INDICATORS (DTI), IS PERMITTED AS SHOWN IN THREADED ROD INSTALLATION SEQUENCE, AND IN ACCORDANCE WITH KYTC STANDARD SPECIFICATION SECTION 607.03.05.

HIGH STRENGTH BOLT CONNECTIONS: ALL EXISTING BOLTS TO BE REPLACED ARE TO BE REPLACED WITH THE SAME DIAMETER REPLACEMENT BOLT. SEE SHEET S4 FOR BOLT SIZE LEGEND USED THROUGHOUT THE PLAN SET. ALL NEW BOLTS THROUGH HOLES DRILLED IN THE FIELD SHALL BE 1¼" DIAMETER HIGH STRENGTH BOLTS WITH 1⅜" DIAMETER FIELD DRILLED HOLES USING THE NEW SPLICE PLATES AS THE TEMPLATE. ALL BOLTED CONNECTIONS ARE DESIGNED AS CLASS A FRICTION TYPE CONNECTIONS. TIGHTENING SHALL BE IN ACCORDANCE WITH SECTION 607.03.05 OF THE STANDARD SPECIFICATIONS.

REMOVAL OF EXISTING BOLTS: THE CONTRACTOR WILL BE PERMITTED TO REMOVE BOLTS IN ANY MANNER WHICH DOES NOT DAMAGE ADJACENT STRUCTURAL STEEL. THIS MAY INCLUDE MECHANICAL REMOVAL OR OTHER METHOD APPROVED BY THE ENGINEER. USE OF CUTTING TORCHES WILL NOT BE PERMITTED.

REMOVE STEEL: ALL EXISTING STEEL THAT IS REMOVED AND NOT REUSED IN THE COMPLETED STRUCTURE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE BRIDGE SITE.

BOLT HOLES: BOLT HOLE SIZE AND LOCATIONS SHOWN ON THE PLANS ARE BASED ON THE SHOP DRAWINGS OF THE BRIDGE. THE CONTRACTOR SHALL VERIFY THE ACCURACY OF THESE SHOP PLANS BY FIELD INSPECTION.

SHOP DRAWINGS: FABRICATORS SHALL SUBMIT ALL REQUIRED SHOP PLANS, BY E-MAIL, TO THE DIVISION OF STRUCTURAL DESIGN COORDINATOR FOR REVIEW, THESE SUBMISSIONS SHALL DEPICT THE SHOP PLANS, IN .PDF FORMAT, AS EITHER 11"X17" OR 22"X36" SHEETS. THE DIVISION OF STRUCTURAL DESIGN WILL MAKE REVIEW COMMENTS ON THESE ELECTRONIC SUBMISSIONS AS NEEDED. UPON RECONCILIATION OF THE COMMENTS, FILES SHALL BE RETURNED TO THE DESIGNER. EACH SHEET WILL BE ELECTRONICALLY STAMPED BY THE DESIGNER AND DIVISION OF STRUCTURES. ONLY PLANS ELECTRONICALLY STAMPED ARE TO BE USED FOR FABRICATION.

CLEANING AND PAINTING: ALL NEW STRUCTURAL STEEL SHALL RECEIVE SURFACE PREPARATION AND SHOP APPLIED PRIME COATING IN ACCORDANCE WITH SECTION 607 OF THE STANDARD SPECIFICATIONS. NECESSARY TOUCH-UP/REPAIR OF THE SHOP APPLIED PRIME COAT ON THE NEW STEEL MAY BE PERFORMED IN THE FIELD. INTERMEDIATE AND FINISH COATINGS ARE NOT REQUIRED. PRIME COAT TO BE CAPABLE OF ACHIEVING CLASS A SLIP RESISTANT COEFFICIENT IN ACCORDANCE WITH SECTION 607 OF THE STANDARD SPECIFICATIONS. THE PRIME COAT SHALL CONFORM TO SECTION 821 OF THE STANDARD SPECIFICATIONS.

ALL EXISTING STEEL FAYING SURFACES WHERE NEW STEEL IS TO BE INSTALLED SHALL BE CLEANED AND RECEIVE THE PRIME COAT IN ACCORDANCE WITH SECTION 607 OF THE STANDARD SPECIFICATIONS. LEVEL OF CLEANING SHALL BE TO AN SSPC-SP15 (COMMERCIAL GRADE POWER TOOL CLEANING). ALL POWER TOOLS SHALL BE EQUIPPED WITH VACUUM SHROUDS AND FITTED WITH HEPA FILTERS AT THEIR AIR EXHAUSTS. MAINTAIN AND OPERATE ALL VACUUM SHROUD POWER TOOLS TO COLLECT GENERATED DEBRIS. UNLESS NOTED OTHERWISE ON THE PLANS, ALL NEW AND EXISTING STEEL WITHIN 12" OF THE WORK LIMITS OF EACH RETROFIT LOCATION SHALL BE CLEANED AND PAINTED WITH ONE COAT OF PRIMER CAPABLE OF ACHIEVING CLASS A SLIP RESISTANT COEFFICIENT AS DIRECTED BY THE ENGINEER.

ALL ITEMS NECESSARY TO COMPLETE CLEANING AND PAINTING OF EXISTING AND NEW STEEL SHALL BE INCIDENTAL TO THE APPROPRIATE BID ITEM.

TOUCH UP PAINTING: ALL AREAS OF NEW OR EXISTING STRUCTURAL STEEL ON WHICH THE PAINT HAS BEEN DAMAGED BY THE CONTRACTOR WITH A CUTTING TORCH OR BY OTHER MEASURING CONSTRUCTION OR AFTER FINAL PAINTING SHALL BE WIRE BRUSH CLEANED AND SPOT PAINTED AS DIRECTED BY THE ENGINEER. THE COST OF THIS TOUCH UP PAINTING IS INCIDENTAL TO THE WORK.

DIMENSIONS: DIMENSIONS SHOWN ON THESE PLANS ARE TAKEN FROM ORIGINAL CONSTRUCTION CONTRACT PLANS AND SUBSEQUENT RETROFIT PLANS, AND DO NOT NECESSARILY REFLECT REVISIONS MADE DURING CONSTRUCTION. THE CONTRACTOR SHALL VERIFY DIMENSIONS, INCLUDING THICKNESSES OF PARTS, WITH FIELD MEASUREMENTS PRIOR TO ORDERING MATERIALS OR FABRICATING STEEL. LAYOUT DIMENSIONS ARE HORIZONTAL MEASUREMENTS.

PROHIBITED FIELD WELDING: EXCEPT AS SHOWN ON PLANS, NO WELDING OF ANY NATURE SHALL BE PERFORMED ON THE LOAD CARRYING MEMBERS OF THE BRIDGE WITHOUT THE WRITTEN CONSENT OF THE DIRECTOR, DIVISION OF BRIDGES, OR AN AUTHORIZED REPRESENTATIVE, AND THEN ONLY IN THE MANNER AND AT THE LOCATIONS DESIGNATED IN THE AUTHORIZATION.

DAMAGE TO STRUCTURE: THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY AND EXPENSE FOR ANY AND ALL DAMAGE TO THE STRUCTURE, INCLUDING TRUSS MEMBERS, DURING THE REPAIR AND RETROFIT WORK; EVEN TO THE REMOVAL AND REPLACEMENT OF TRUSS MEMBERS AND FALLEN SPANS, SHOULD THE DAMAGE RESULT FROM THE CONTRACTOR'S ACTIONS.

RESIDUAL LEAD PAINT: RESIDUAL LEAD PAINT MAY STILL BE ON THE BRIDGE. THE CONTRACTOR IS ADVISED TO TAKE ALL NECESSARY PROTECTIVE MEASURES INCLUDING WORKER SAFETY AND ENVIRONMENTAL REGULATIONS WHEN PERFORMING SURFACE PREPARATION AND OTHER WORK. THE DEPARTMENT WILL NOT CONSIDER ANY CLAIMS BASED ON RESIDUAL LEAD PAINT.

PROTECTION OF VEHICLES: NO WORK WILL BE ALLOWED OVER MOVING TRAFFIC BEFORE INSTALLING FALL PROTECTION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT VEHICLES FROM DAMAGE AND HARM CAUSED BY FALLING DEBRIS OR OTHER OBJECTS RESULTING FROM THEIR OPERATIONS. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL THEIR ACTIONS IN ACCORDANCE WITH SECTION 107 OF THE STANDARD SPECIFICATIONS.

MAINTAINING TRAFFIC: TRAFFIC SHALL BE MAINTAINED AT ALL TIMES IN ACCORDANCE WITH THE PLANS AND SPECIAL NOTES FOR MAINTENANCE OF TRAFFIC.

PLANS OF EXISTING STRUCTURE: AS AN AID TO THE CONTRACTOR, A PORTION OF THE PLANS AND SHOP DRAWINGS OF THE EXISTING STRUCTURE ARE AVAILABLE FROM THE DIVISION OF MAINTENANCE UPON REQUEST. THE COMPLETENESS OF THESE DRAWINGS IS NOT GRANTED AND NO RESPONSIBILITY IS ASSUMED BY KYTC FOR THEIR ACCURACY. THE EXISTING DRAWING NUMBERS FOR THIS STRUCTURE INCLUDE: 17207, 17208, 17209, 17210, 19182, AND 27164. SHOP DRAWINGS FOR 17207, 17209, AND 17210 ARE ALSO AVAILABLE.




ON-SITE INSPECTION: THE CONTRACTOR SHALL MAKE A THOROUGH INSPECTION OF THE BRIDGE AND THE WORK SITE PRIOR TO SUBMITTING THE FEE AND SHALL BE THOROUGHLY FAMILIARIZED WITH THE EXISTING CONDITIONS SO THAT THE WORK CAN BE EXPEDITIOUSLY PERFORMED AFTER A CONTRACT CHANGE ORDER IS AWARDED. A SUITABLE METHOD OF PERFORMING THE WORK DESCRIBED HEREIN SHOULD BE INVESTIGATED. SUBMISSION OF THE FEE WILL BE CONSIDERED EVIDENCE OF THIS INSPECTION HAVING BEEN MADE. ANY CLAIMS RESULTING FROM SITE CONDITIONS WILL NOT BE HONORED BY KYTC.

PAYMENT: THE LUMP SUM FEE FOR REPAIRS SHALL INCLUDE STRUCTURAL STEEL, BOLTS, WASHERS, PAINT, BOLTS, TOOLS, EQUIPMENT, INCIDENTAL MATERIALS AND CLEANUP NECESSARY TO COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

FABRICATION: WITH THE EXCEPTION OF ONE LANE CLOSURE TO VERIFY DIMENSIONS, NO LANE CLOSURES WILL BE PERMITTED UNTIL THE CONTRACTOR HAS ACQUIRED AND FABRICATED ALL STRUCTURAL STEEL.

ALL HOLES ARE TO BE DRILLED FULL SIZE OR SUB-PUNCHED AND REAMED TO SIZE. THE SHOP DETAIL DRAWINGS SHALL INDICATE CLEARLY SUB-PUNCHED HOLES WHICH ARE TO BE REAMED AND/OR ASSEMBLED TO A TEMPLATE IN THE SHOP. HOLES WHICH ARE TO BE REAMED IN THE FIELD SHALL BE INDICATED ON THE SHOP DRAWINGS. ALL STEEL SHALL BE SO POSITIONED IN THE SPLICE PLATES AS TO PLACE THE DIRECTIONS OF FINISHED ROLLING PARALLEL TO THE DIRECTION OF PRIMARY STRESS. WELDED SPLICES SHALL NOT BE PERMITTED.

PRE-FABRICATION CONFERENCE: PRIOR TO THE START OF FABRICATION, THE CONTRACTOR, THE INSPECTOR AND THE ENGINEER SHALL HAVE A CONFERENCE TO INSURE THAT AGREEMENT HAS BEEN REACHED REGARDING THE FABRICATION AND CONSTRUCTION PROCEDURES AND THE INSPECTION THEREOF. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CALL THIS CONFERENCE AT A TIME AND PLACE MUTUALLY CONVENIENT TO ALL PARTIES CONCERNED.

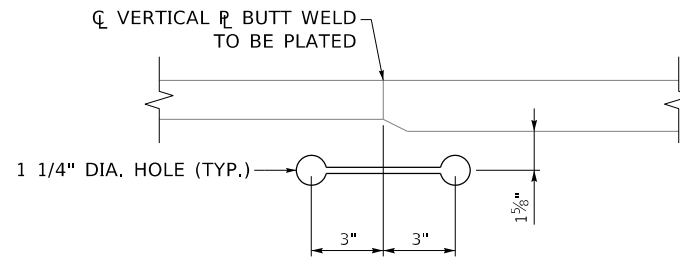
 <b>COMMONWEALTH OF KENTUCKY</b> DEPARTMENT OF HIGHWAYS	 <b>TEAM KENTUCKY</b> TRANSPORTATION CABINET	REVISION	DATE	PREPARED BY  <b>Michael Baker</b> INTERNATIONAL	DATE: 04/12/2024	CHECKED BY	<b>GENERAL NOTES</b>  CROSSING <b>OHIO RIVER</b>	ROUTE	ITEM NO.	COUNTY OF
					DESIGNED BY: J STITH	J KAUZLARICH		I-275	SHEET NO.	DRAWING NUMBER
					DETAILED BY: J JACKSON	J STITH		S2	28873	

## GENERAL NOTES

CONSTRUCTION PROCEDURE: THE CONTRACTOR SHALL FOLLOW THE GENERAL SEQUENCE OF CONSTRUCTION INCLUDED IN THESE PLANS. ALTERNATIVE SEQUENCES SHALL NOT BE ALLOWED WITHOUT THE WRITTEN CONSENT OF THE DIRECTOR, DIVISION OF BRIDGES, OR AN AUTHORIZED REPRESENTATIVE.

UNLESS NOTED OTHERWISE, WHERE BOLTS ARE REPLACED IN EXISTING CONDITIONS UNDER LOAD, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE GEOMETRY OF THE CONNECTIONS IS NOT CHANGED DURING REPLACEMENT OF BOLTS. A MAXIMUM OF TWO BOLTS MAY BE REMOVED AT ANY GIVEN TIME. STAGGER REMOVAL OF BOLTS SO THAT NO TWO ADJACENT BOLTS ARE REMOVED FROM THE CONNECTION AT THE SAME TIME.

CONTRACTOR'S SUBMITTALS: STABILITY OF PARTIAL EXISTING STRUCTURAL MEMBERS AND REMAINING STRUCTURAL MEMBERS ARE TO BE MAINTAINED BY THE CONTRACTOR DURING REPAIR, UNTIL ALL STEEL MEMBERS ARE IN-PLACE AND ALL BOLTS ARE PROPERLY INSTALLED. ERECTION LOADS INCLUDING SELF-WEIGHT OF THE STEEL MEMBERS, WIND LOADING AND CONSTRUCTION LIVE LOAD EFFECTS ARE TO BE EVALUATED BY THE CONTRACTOR FOR STABILITY OF THE STEEL MEMBERS DURING ANY STAGE OF CONSTRUCTION. CONTRACTOR IS TO SUBMIT CALCULATIONS, CONSTRUCTION SEQUENCES AND PROCEDURES, AND DETAILS OF TEMPORARY SUPPORT DEVICES AND STRUCTURES REQUIRED TO ACCOMPLISH THE REPAIRS INTENDED BY THIS CONTRACT.



### DOG-BONE RETROFIT DETAIL

INSTALL AT EACH BUTT WELD AT EACH LOCATION AS SPECIFIED IN THE PLANS

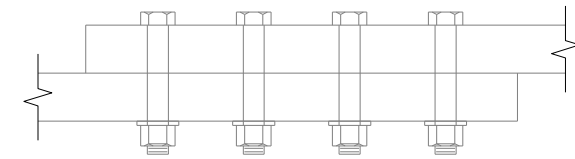
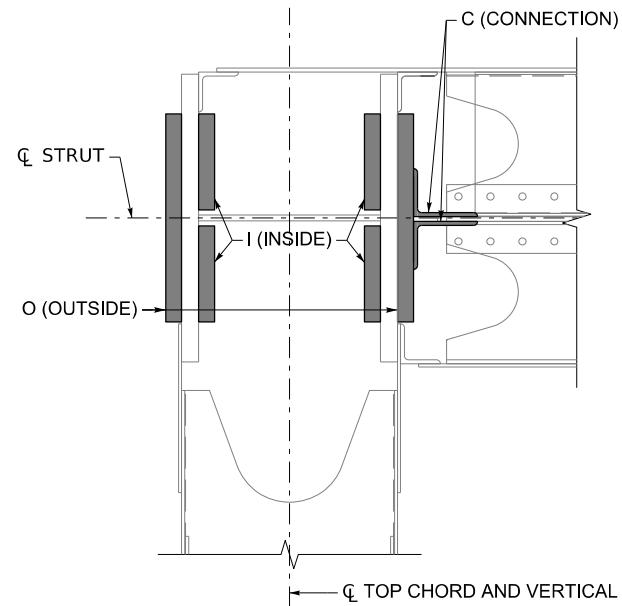
DOG-BONE RETROFIT PROCEDURE:

1. DRILL 1 1/4" DIA. HOLE IN HORIZONTAL PLATE.
2. WITH A CUTTING WHEEL OR PORTABLE PLASMA USE HOLES AS A START/STOP POINT FOR CUTTING SLOT PARALLEL TO VERTICAL PLATE.

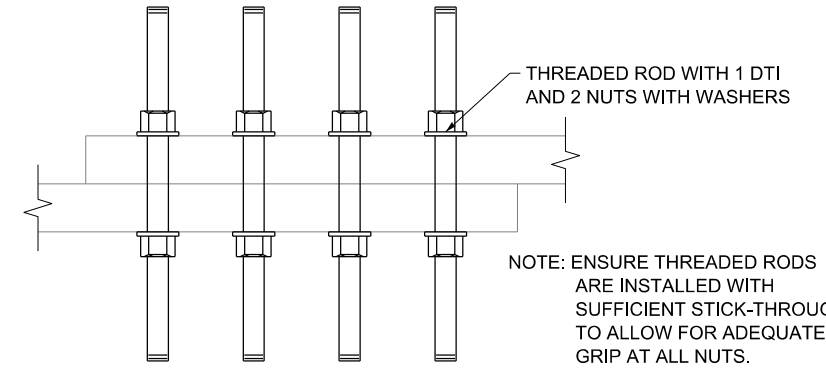
### PLATE MARKING CONVENTION

PLATE MARK	JOINT LOCATION	OUTSIDE/INSIDE	PLATE NUMBER
T22-O-1	T22	O	1
U14-I-2	U14	I	2
T32-C-1	T32	C	1

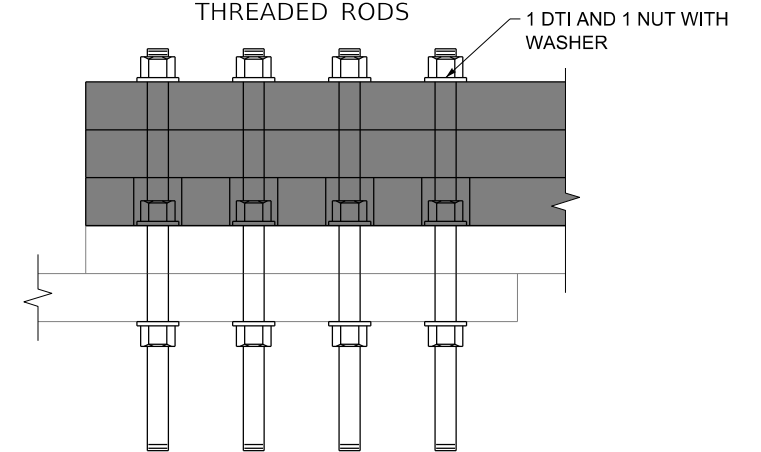
\*REFER TO BELOW SKETCH DEFINING OUTSIDE, INSIDE, AND CONNECTION PLATE MARKS



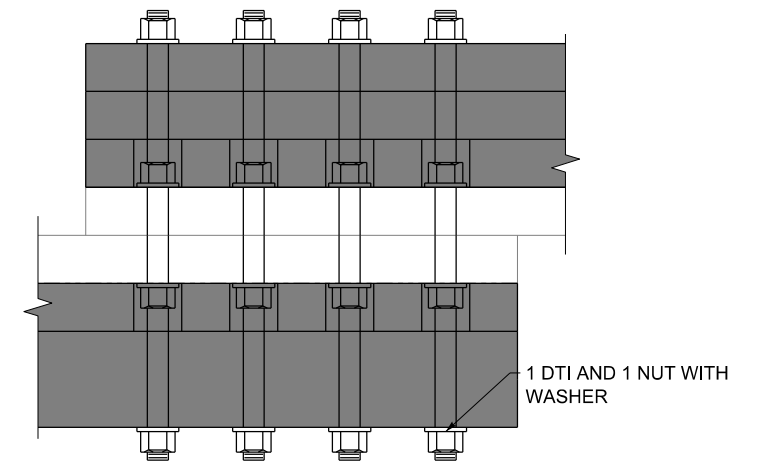
EXISTING CONDITION



REPLACE EXISTING BOLTS WITH  
THREADED RODS



INSTALL CHEESE PLATE AND OUTSIDE PLATES ON ONE SIDE



INSTALL CHEESE PLATE AND OUTSIDE PLATES ON REMAINING SIDE

### THREADED ROD INSTALLATION SEQUENCE



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



TEAM  
KENTUCKY  
TRANSPORTATION  
CABINET

REVISION	DATE

PREPARED BY  
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Phone: (502)-339-3557  
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DATE: 04/12/2024	CHECKED BY:
DESIGNED BY: J STITH	J KAUZLARICH
DETAILED BY: J JACKSON	J STITH

**GENERAL NOTES**  
CROSSING  
OHIO RIVER

ROUTE	ITEM NO.	COUNTY OF
I-275	S3	BOONE
SHEET NO.		DRAWING NUMBER
S3		28873

COUNTY OF  
**BOONE**  
DRAWING NUMBER  
**28873**

## BILL OF MATERIALS

PLATE MARK	TYPE	GRADE	NO. PLATES	PLATE WIDTH (IN)	PLATE THICKNESS (IN)	PLATE LENGTH		HOLE SIZE (IN)	GRADE 50 WEIGHT (LBS.)***	GRADE 70W WEIGHT (LBS.)***	OPTIONAL GRADE	OPTIONAL NO. PLATES	OPTIONAL PLATE THICKNESS (IN)	GRADE 50 WEIGHT (LBS.)***
						(FT)	(IN)							
U14-O-1	FILL	50	2	18 5/8*	2 1/2	7*	8 3/8*	13/8	2,439	---	---	---	---	2,439
U14-O-2	CHEESE	50	2	4 1/8*	1 1/2	2*	7/8*	2 3/4	87	---	---	---	---	87
U14-O-3	SPLICE	HPS 70W (NSTM)	2	18 5/8*	2 1/4	7*	8 3/8*	**	---	2,195	50 (NSTM)	2	3	2,927
U14-I-1	FILL	50	2	8 1/2*	1 1/2	4*	2 1/2*	13/8	365	---	---	---	---	365
U14-I-2	CHEESE	50	2	9 3/8*	1 1/2	4*	2 7/8*	**	406	---	---	---	---	406
U14-I-3	FILL	50	2	7 1/2*	1 13/16	3*	5 1/2*	13/8	320	---	---	---	---	320
U14-I-4	FILL	50	2	8 3/8*	1 13/16	3*	5 1/2*	13/8	357	---	---	---	---	357
U14-I-5	SPLICE	HPS 70W (NSTM)	2	8 1/2*	2 1/2	7*	8*	13/8	---	1,109	50 (NSTM)	2	3	1,330
U14-I-6	SPLICE	HPS 70W (NSTM)	2	9 3/8*	2 1/2	7*	8 3/8*	**	---	1,228	50 (NSTM)	2	3	1,473
U14-C-1	CHANNEL CONNECTION	50	1	C8x13.75	3/8	1	17/8	15/16	16	---	---	---	---	16
U14-C-2	ANGLE CONNECTION	50	4	L5x3.5	3/8	0	8	**	28	---	---	---	---	28
U14-C-3	FILL	50	3	3	4	0	5	1 1/16	51	---	---	---	---	51
U14-C-4	CHANNEL CONNECTION	50	1	C8x13.75	3/8	0	9 7/8	**	11	---	---	---	---	11
U14-C-5	ANGLE CONNECTION	50	2	L5x3.5	3/8	1 ****	8 1/2****	**	36	---	---	---	---	36
U15-O-1	CHEESE	50	1	26	1 1/2	2	8 3/4	2 3/4	362	---	---	---	---	362
U15-O-2	FILL	50	1	26*	2 5/8	3*	1 3/4*	13/8	731	---	---	---	---	731
U15-O-3	SPLICE	HPS 70W (NSTM)	1	26*	1 1/2	5*	10 5/8*	**	---	781	50 (NSTM)	1	2 1/4	1,172
U15-I-1	CHEESE	50	2	12	1 1/2	3	5	**	419	---	---	---	---	419
U15-I-2	FILL	50	2	12*	2 1/8	2*	5 1/2*	13/8	427	---	---	---	---	427
U15-I-3	SPLICE	HPS 70W (NSTM)	2	12*	1 3/4	5*	10 5/8*	**	---	841	50 (NSTM)	2	2 1/4	1,081
U17-O-1	CHEESE	50	1	26	1 1/2	1	11 3/4	2 3/4	263	---	---	---	---	263
U17-O-2	FILL	50	1	26*	2 3/8	2*	4 7/8*	13/8	506	---	---	---	---	506
U17-O-3	SPLICE	HPS 70W (NSTM)	1	26*	1	4*	4 3/4*	**	---	389	50 (NSTM)	1	1 1/4	486
U17-I-1	CHEESE	50	2	12	1 1/2	2	7 1/4	**	319	---	---	---	---	319
U17-I-2	FILL	50	2	12*	1 13/16	1*	9 3/8*	13/8	264	---	---	---	---	264
U17-I-3	SPLICE	HPS 70W (NSTM)	2	12*	1	4*	4 3/4*	**	---	359	50 (NSTM)	2	1 1/4	449
T22-O-1	CHEESE	50	1	26	1 1/2	1*	1/2*	2 3/4	138	---	---	---	---	138
T22-O-2	FILL	50	1	26*	2	2*	4 5/8*	13/8	422	---	---	---	---	422
T22-O-3	FILL	50	1	26	2	1*	6 3/8*	13/8	271	---	---	---	---	271
T22-O-4	SPLICE	HPS 70W (NSTM)	1	26*	1	4*	10 5/8*	**	---	432	50 (NSTM)	1	1 1/4	540
T22-I-1	CHEESE	50	1	12	1 1/2	3	1 1/4	**	190	---	---	---	---	190
T22-I-2	FILL	50	2	12*	1 3/4	1*	9 1/2	13/8	256	---	---	---	---	256
T22-I-3	SPLICE	HPS 70W (NSTM)	1	12*	1	4*	10 5/8	**	---	199	50 (NSTM)	1	1 1/4	249
T22-I-4	CHEESE	50	1	12	1 1/2	3	1 1/4	**	190	---	---	---	---	190
T22-I-5	SPLICE	HPS 70W (NSTM)	1	12*	1	4*	10 5/8*	**	---	199	50 (NSTM)	1	1 1/4	249
T22-C-1	ANGLE CONNECTION	50	1	L5x5	3/8	2 ****	4 3/8****	**	29	---	---	---	---	29
T32-O-1	CHEESE	50	1	26	1 1/2	1*	1/2*	2 3/4	138	---	---	---	---	138
T32-O-2	FILL	50	1	26*	2	2*	4 5/8*	13/8	422	---	---	---	---	422
T32-O-3	FILL	50	1	26	2	1*	6 3/8*	13/8	271	---	---	---	---	271
T32-O-4	SPLICE	HPS 70W (NSTM)	1	26*	1	4*	10 3/4*	**	---	433	50 (NSTM)	1	1 1/4	541
T32-I-1	CHEESE	50	1	12	1 1/2	3	1 1/4	**	190	---	---	---	---	190
T32-I-2	FILL	50	1	12*	1 3/4	1*	9 1/2*	13/8	128	---	---	---	---	128
T32-I-3	SPLICE	HPS 70W (NSTM)	1	12*	1	4*	10 3/4*	**	---	200	50 (NSTM)	1	1 1/4	250
T32-I-4	CHEESE	50	1	12	1 1/2	3	1 1/4	**	190	---	---	---	---	190
T32-I-5	FILL	50	1	12*	1 3/4	1*	9 1/2*	13/8	128	---	---	---	---	128
T32-I-6	SPLICE	HPS 70W (NSTM)	1	12*	1	4*	10 3/4*	**	---	200	50 (NSTM)	1	1 1/4	250
T32-I-7	CHEESE	50	1	12	1 1/2	3	9 3/4	**	234	---	---	---	---	234
T32-I-8	FILL	50	2	12*	1 3/4	2*	9 3/8*	13/8	397	---	---	---	---	397
T32-I-9	SPLICE	HPS 70W (NSTM)	1	12*	1 3/4	6*	7 1/4*	**	---	472	50 (NSTM)	1	2 1/4	607
T32-I-10	CHEESE	50	1	12	1 1/2	3	9 3/4	**	234	---	---	---	---	234
T32-I-11	SPLICE	HPS 70W (NSTM)	1	12*	1 3/4	6*	7 1/4*	**	---	472	50 (NSTM)	1	2 1/4	607
T32-C-1	ANGLE CONNECTION	50	1	L5x5	3/8	2 ****	4 1/2****	**	29	---	---	---	---	29
T32-C-2	ANGLE CONNECTION	50	1	L5x5	3/8	2 ****	4 1/2****	**	29	---	---	---	---	29
TOTAL									11,292	9,510			TOTAL	23,505

### NOTES

- ANGLE DIMENSIONS IN THE BILL OF MATERIALS ARE GIVEN WITH THE FIRST DIMENSION BEING THE LENGTH OF THE HORIZONTAL LEG AND THE SECOND DIMENSION BEING THE LENGTH OF THE VERTICAL LEG.
- FOR MATERIAL AND FABRICATION, NONREDUNDANT STEEL TENSION MEMBER ABBREVIATED AS NSTM IN THE BILL OF MATERIALS IS THE SAME AS THE FORMER FRACTURE CRITICAL MEMBER (FCM) DESIGNATION.
- PLATES WITH A 2 3/4" HOLE SIZE IN THE BILL OF MATERIAL ARE CHEESE PLATES. DETAIL SHEETS PROVIDE BOLT SYMBOLS WITH HOLE SIZES DIFFERING FROM THE 2 3/4" HOLE SIZE FOR THE CHEESE PLATES. USE 2 3/4" HOLES FOR ALL PLATES MARKED WITH 2 3/4" HOLES IN THE BILL OF MATERIAL.
- ALL FILL PLATE THICKNESSES CAN BE INCREASED OR DECREASED BY 1/16" AS NEEDED BY THE CONTRACTOR TO SIMPLIFY THE PLATE ORDER.
- TO PROVIDE CONTRACTOR FLEXIBILITY IN PLATE ORDERS, THE THICKNESS OF FILL PLATES AND CHEESE PLATES ARE NOMINAL THICKNESSES THAT CAN BE MADE UP OF TWO (2) PLATES IF DESIRED AS LONG AS NO PLATE THICKNESS IS LESS THAN 3/4".
- TO PROVIDE CONTRACTOR FLEXIBILITY IN PLATE ORDERS, THE THICKNESS OF SPLICES PLATES IS THE MINIMUM THICKNESS REQUIRED BUT CAN BE MADE UP OF MULTIPLE PLATES IF DESIRED AS LONG AS NO PLATE THICKNESS IS LESS THAN 3/4".
- IN THE CASE THAT THE CONTRACTOR SELECTS TO FURNISH SPLICE PLATES CORRESPONDING TO THE GRADE 50 OPTION GIVEN IN THE TABLE, THE MEMBER LENGTHS OF U14-C-1 AND U14-C-4 SHALL BE ADJUSTED, MAINTAINING WORKABLE GAUGES AND A MINIMUM EDGE DISTANCE OF 1 1/8".

### LEGEND

- INDICATES DRILL 1 3/8" DIA. HOLE IN EXISTING PLATE AND/OR NEW STEEL FOR INSTALLATION OF NEW 1 1/4" DIA. (A490) BOLTS. THREADS SHALL BE EXCLUDED FROM SHEAR PLANE.
- ⊗ INDICATES REMOVE EXISTING BOLTS AND REPLACE WITH NEW 1 1/8" DIA. (A490) THREADED RODS WITH 1 3/16" DIA. HOLES IN EXISTING AND NEW STEEL, UNLESS NOTED OTHERWISE.
- INDICATES REMOVE EXISTING BOLTS AND REPLACE WITH NEW 1 1/8" DIA. (A490) BOLTS WITH 1 1/4" DIA. HOLES IN EXISTING AND NEW STEEL, UNLESS NOTED OTHERWISE. THREADS SHALL BE EXCLUDED FROM SHEAR PLANE.
- ⊕ INDICATES REMOVE EXISTING BOLTS AND REPLACE WITH NEW 1" DIA. (A490) THREADED RODS WITH 1 1/16" DIA. HOLES IN EXISTING AND NEW STEEL, UNLESS NOTED OTHERWISE.
- INDICATES REMOVE EXISTING BOLTS AND REPLACE WITH NEW 1" DIA. (A490) BOLTS WITH 1 1/16" DIA. HOLES IN EXISTING AND NEW STEEL, UNLESS NOTED OTHERWISE. THREADS SHALL BE EXCLUDED FROM SHEAR PLANE.
- ⊕ INDICATES REMOVE EXISTING BOLTS AND REPLACE WITH NEW 7/8" DIA. (A325) BOLTS WITH 15/16" DIA. HOLES IN EXISTING AND NEW STEEL, UNLESS NOTED OTHERWISE. THREADS SHALL BE EXCLUDED FROM SHEAR PLANE.
- INDICATES EXISTING BOLTS AND BOLT HOLES.

\* DIMENSIONS ARE MINIMUM ORDERED PLATE DIMENSIONS, FOR PLATE GEOMETRY, SEE DETAIL SHEETS.

\*\* FOR BOLT HOLE SIZES, SEE DETAIL SHEETS.

\*\*\* WEIGHTS ARE CALCULATED FROM THE MINIMUM ORDERED PLATE DIMENSIONS.

\*\*\*\* IN THE CASE THAT THE CONTRACTOR SELECTS TO FURNISH SPLICE PLATES CORRESPONDING TO THE GRADE 50 OPTION GIVEN ABOVE, THE NOTED CONNECTION ELEMENTS SHALL BE USED AS TEMPLATES FOR DRILLING HOLES IN EXISTING CONNECTION PLATES TO AVOID MISALIGNMENT OF HOLES. IF NECESSARY, THE NOTED CONNECTION ELEMENTS MAY BE TRIMMED TO AVOID CONFLICTS WITH LATERAL BRACING CONNECTIONS AND MEMBERS SUCH THAT AN EDGE DISTANCE NO LESS THAN 1 1/8" SHALL BE PRESERVED IN ALL DIRECTIONS FROM EACH BOLT.



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION

DATE

**Michael Baker**  
INTERNATIONAL

PREPARED BY  
1850 Lyndon Farm Court  
Louisville, KY  
Phone: (502)-339-3557  
MBAKERINTL.COM

DATE: 04/12/2024

DESIGNED BY: MJ DWYER

DETAILED BY: J JACKSON

CHECKED BY

P COZZENS

MJ DWYER

**BILL OF MATERIALS 1**

CROSSING  
OHIO RIVER

ROUTE

I-275

ITEM NO.

S4

COUNTY OF  
BOONE

DRAWING NUMBER

28873

### BILL OF MATERIALS

PLATE MARK	TYPE	GRADE	NO. PLATES	PLATE WIDTH (IN)	PLATE THICKNESS (IN)	PLATE LENGTH		HOLE SIZE (IN)	GRADE 50 WEIGHT (LBS.)***	GRADE 70W WEIGHT (LBS.)***	OPTIONAL GRADE	OPTIONAL NO. PLATES	OPTIONAL PLATE THICKNESS	GRADE 50 WEIGHT (LBS.)***
						(FT)	(IN)							
L38-O-1	CHEESE	50	1	26	1 1/2	3*	5 1/8*	2 3/4	455	---	--	--	--	455
L38-O-2	FILL	50	1	26*	2 3/8	4*	1/8*	1 3/8	843	---	--	--	--	843
L38-O-3	SPLICE	HPS 70W (NSTM)	1	26*	1 3/4	7*	4 7/8*	**	---	1,147	50 (NSTM)	1	2 1/4	1,474
L39-O-1	CHEESE	50	1	26	1 1/2	1*	10*	2 3/4	243	---	--	--	--	243
L39-O-2	FILL	50	1	26*	2 1/8	5*	8 5/8*	1 3/8	1,075	---	--	--	--	1,075
L39-O-3	FILL	50	1	26*	2 1/8	5*	8 5/8*	1 3/8	1,075	---	--	--	--	1,075
L39-O-4	SPLICE	HPS 70W (NSTM)	1	26*	1 3/4	13*	3*	**	---	2,051	50 (NSTM)	1	2 1/4	2,638
L40-O-1	CHEESE	50	1	26	1 1/2	3*	1*	2 3/4	409	---	--	--	--	409
L40-O-2	FILL	50	1	26*	2 1/4	4*	6 1/8*	1 3/8	898	---	--	--	--	898
L40-O-3	SPLICE	HPS 70W (NSTM)	1	26*	1 3/4	7*	6 3/4*	**	---	1,171	50 (NSTM)	1	2 1/4	1,505
L42-O-1	CHEESE	50	1	26	1 1/2	2*	4 3/4*	2 3/4	318	---	--	--	--	318
L42-O-2	FILL	50	1	26*	2 1/4	5*	7 1/8*	1 3/8	1,114	---	--	--	--	1,114
L42-O-3	SPLICE	HPS 70W (NSTM)	1	26*	2 1/4	7*	11 1/2*	**	---	1,584	50 (NSTM)	1	2 3/4	1,936
L42-C-1	ANGLE CONNECTION	50	1	L3-1/2x3-1/2	3/8	1 ****	8 1/2****	**	15	---	--	--	--	15
L43-O-1	CHEESE	50	1	26	1 1/2	1*	10 1/2*	2 3/4	249	---	--	--	--	249
L43-O-2	FILL	50	1	26*	2 1/8	5*	11 5/8*	1 3/8	1,122	---	--	--	--	1,122
L43-O-3	FILL	50	1	26	2 1/8	0*	9 5/8*	1 3/8	151	---	--	--	--	151
L43-O-4	SPLICE	HPS 70W (NSTM)	1	26*	2	8*	7*	**	---	1,519	50 (NSTM)	1	2 3/4	2,088
U14-O-4	FILL	50	1	18 7/8*	2 1/2	8*	7/8*	1 3/8	1,296	---	--	--	--	1,296
U14-O-5	CHEESE	50	1	4 1/8*	1 1/2	2*	7/8*	2 3/4	44	---	--	--	--	44
U14-O-6	SPLICE	HPS 70W (NSTM)	1	18 7/8*	2 1/4	8*	7/8*	**	---	1,167	50 (NSTM)	1	3	1,556
U14-I-7	FILL	50	1	8 3/4*	1 1/2	4*	7*	**	205	---	--	--	--	205
U14-I-8	CHEESE	50	1	9 5/8*	1 1/2	4*	7 3/8*	**	227	---	--	--	--	227
U14-I-9	FILL	50	1	7 1/2*	1 13/16	3*	5 1/2*	1 3/8	160	---	--	--	--	160
U14-I-10	FILL	50	1	8 3/8*	1 13/16	3*	5 1/2*	1 3/8	179	---	--	--	--	179
U14-I-11	SPLICE	HPS 70W (NSTM)	1	8 3/4*	2 1/2	8*	1/2*	**	---	599	50 (NSTM)	1	3	718
U14-I-12	SPLICE	HPS 70W (NSTM)	1	9 5/8*	2 1/2	8*	7/8*	**	---	661	50 (NSTM)	1	3	793
T28-O-1	CHEESE	50	1	26	1 1/2	1*	1/2*	2 3/4	138	---	--	--	--	138
T28-O-2	FILL	50	1	26*	2	2*	8 5/8*	1 3/8	481	---	--	--	--	481
T28-O-3	FILL	50	1	26	2	1*	6 3/8*	**	271	---	--	--	--	271
T28-O-4	SPLICE	HPS 70W (NSTM)	1	26*	1	5*	2 3/4*	**	---	463	50 (NSTM)	1	1 1/4	578
T28-I-1	CHEESE	50	1	12	1 1/2	3	1 1/4	**	190	---	--	--	--	190
T28-I-2	FILL	50	2	12*	1 3/4	2*	1 1/2	1 3/8	304	---	--	--	--	304
T28-I-3	SPLICE	HPS 70W (NSTM)	1	12*	1	5*	2 3/4	**	---	214	50 (NSTM)	1	1 1/4	267
T28-I-4	CHEESE	50	1	12	1 1/2	3	1 1/4	**	190	---	--	--	--	190
T28-I-5	SPLICE	HPS 70W (NSTM)	1	12*	1	5*	2 3/4*	**	---	214	50 (NSTM)	1	1 1/4	267
T28-C-1	ANGLE CONNECTION	50	1	L5x5	3/8	2 ****	4 1/2****	**	29	---	--	--	--	29
TOTAL									11,679	10,788	TOTAL			25,500

\* DIMENSIONS ARE MINIMUM ORDERED PLATE DIMENSIONS, FOR PLATE GEOMETRY, SEE DETAIL SHEETS.

\*\* FOR BOLT HOLE SIZES, SEE DETAIL SHEETS.

\*\*\* WEIGHTS ARE CALCULATED FROM THE MINIMUM ORDERED PLATE DIMENSIONS.



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



REVISION	DATE

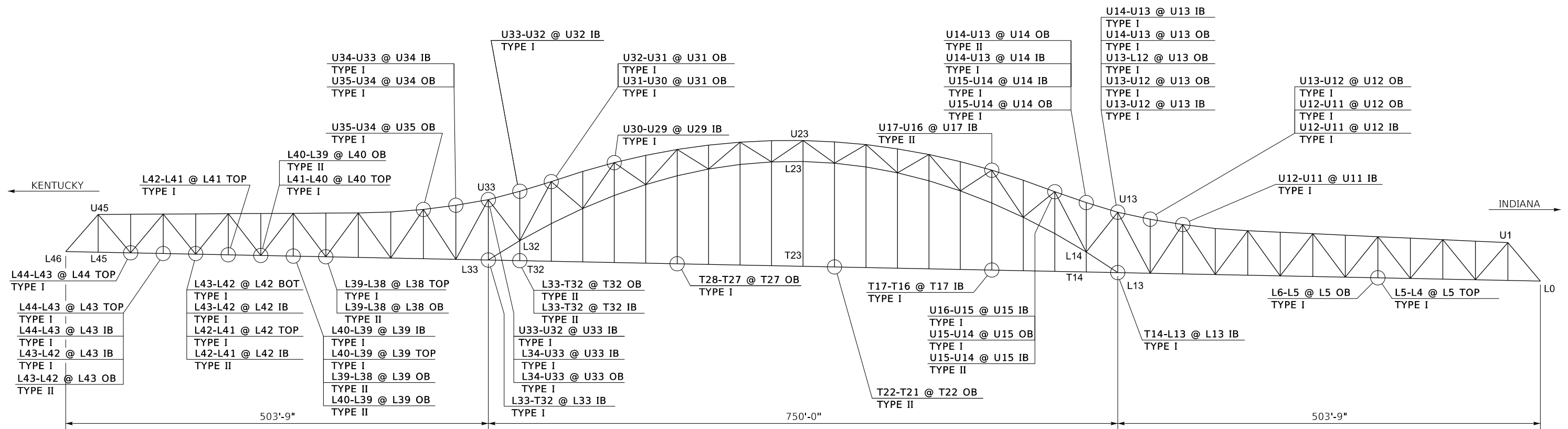
PREPARED BY  
**Michael Baker INTERNATIONAL**  
1850 Lyndon Farm Court  
Louisville, KY  
Phone: (502)-339-3557  
MBAKERINTL.COM

DATE: 04/12/2024	CHECKED BY:
DESIGNED BY: MJ DWYER	P COZZENS
DETAILED BY: J JACKSON	MJ DWYER

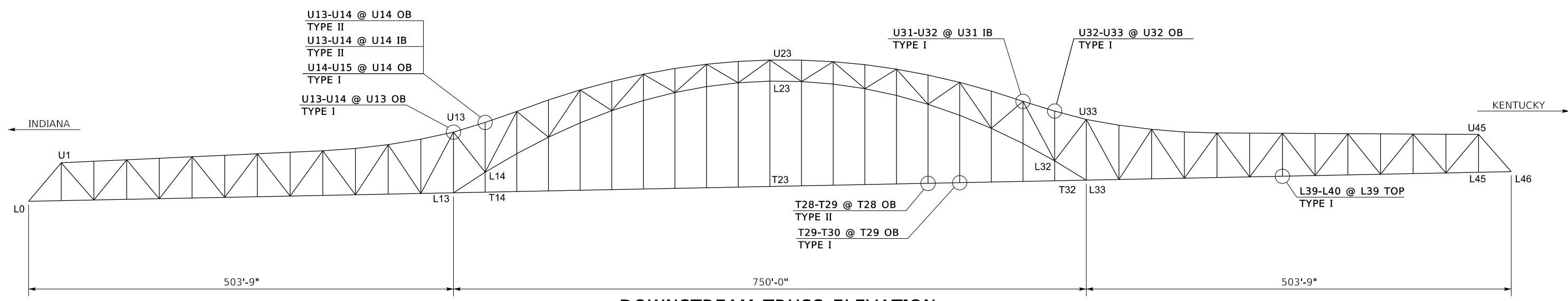
**BILL OF MATERIALS 2**

CROSSING  
**OHIO RIVER**

ROUTE	ITEM NO.	COUNTY OF
I-275	S5	BOONE
DRAWING NUMBER		28873



**UPSTREAM TRUSS ELEVATION**



**DOWNSTREAM TRUSS ELEVATION**

**LEGEND**

① TRUSS MEMBER      U = UPPER CHORD  
L = LOWER CHORD  
T = TIE

② @ PANEL POINT

③ IB = INBOARD VERTICAL PLATE  
OB = OUTBOARD VERTICAL PLATE  
W = WEB HORIZONTAL PLATE  
BOT = BOTTOM COVER PLATE  
TOP = TOP COVER PLATE

④ TYPE I = CORING  
TYPE II = PLATING

(SEE SHEET S7 FOR MORE DETAILS ON REPAIR TYPE)

	REVISION	DATE	PREPARED BY <b>Michael Baker INTERNATIONAL</b>	DATE: 04/12/2024 DESIGNED BY: MJ DWYER CHECKED BY: T JANICKE DETAILED BY: J JACKSON MJ DWYER	<b>REPAIR LOCATIONS</b> CROSSING OHIO RIVER	ROUTE	ITEM NO.	COUNTY OF
						I-275	S6	BOONE
COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS			1850 Lyndon Farm Court Louisville, KY Phone: (502)-339-3557 MBAKERINTL.COM					DRAWING NUMBER <b>28873</b>

## UPSTREAM TRUSS REPAIRS

MEMBER	LOCATION	PLATE	NON-DESTRUCTIVE TESTING				REMEDICATION PLAN		REMEDICATION				REMARKS	
			INDICATION LENGTH (IN.)	X* (IN)	Y (IN)	DATE TESTED	REPAIR TYPE	CORE DIAMETER (IN)	INDICATION LENGTH (IN.)	X* (IN)	Y (IN)	DATE + REMEDIATED		NDT TECHNICIAN INITIALS +
U35-U34	U35	OB-FLANGE	1.80	-0.60	12.25	4/4/2023	I	2						
U35-U34	U34	OB-FLANGE	1.00	0.00	22.25	4/4/2023	I	2						
U34-U33	U34	IB-FLANGE	2.50	0.00	3.00	4/4/2023	I***	2						SNOWMAN RETROFIT
L34-U33	U33	IB-FLANGE	2.00	-0.50	22.38	4/3/2023	I	2						
U33-U32	U33	IB-FLANGE	1.00	-1.00	2.50	4/11/2023	I	2						
U33-U32	U32	IB-FLANGE	0.50	-0.25	11.50	4/3/2023	I	2						
U32-U31	U32	IB-FLANGE	1.00	0.00	12.25	4/3/2023	I	2						
U32-U31	U31	OB-FLANGE	1.00	0.00	12.20	4/2/2023	I	2						
U31-U30	U31	OB-FLANGE	1.30	0.00	10.75	4/2/2023	I	2						
U30-U29	U29	IB-FLANGE	1.00	-0.25	12.50	4/2/2023	I	2						
U17-U16	U17	IB-FLANGE	6.50	-0.31	4.00	4/6/2023	II**	N/A						
U16-U15	U15	IB-FLANGE	1.00	+0.13	5.25	4/6/2023	I	2						
U16-U15	U15	IB-FLANGE	1.63	0.00	12.25	4/6/2023	I	2						
U15-U14	U15	IB-FLANGE	2.38	0.50	11.75	4/6/2023								
U15-U14	U15	IB-FLANGE	1.00	-0.25	3.00	4/6/2023	II**	N/A						
U15-U14	U15	IB-FLANGE	1.00	-0.25	5.50	4/6/2023								
U15-U14	U15	IB-FLANGE	1.00	-0.25	10.75	4/6/2023								
U15-U14	U14	OB-FLANGE	1.75	+0.5	12.00	4/6/2023	I	2						
U15-U14	U14	IB-FLANGE	1.00	+0.25	12.50	4/6/2023	I	2						
U15-U14	U14	OB-FLANGE	0.50	+4.5	11.75	4/6/2023	I	2						
U15-U14	U14	OB-FLANGE	2.75	-1.50	11.50	4/6/2023	I	2						
U14-U13	U14	IB-FLANGE	2.50	-0.25	11.75	4/6/2023	I	2						
U14-U13	U14	IB-FLANGE	1.00	+1.38	12.25	4/6/2023	I	2						
U14-U13	U14	OB-FLANGE	3.38	-1.00	11.50	4/6/2023	II**	N/A						
U14-U13	U14	OB-FLANGE	1.75	-1.75	11.60	4/6/2023								
U14-U13	U13	IB-FLANGE	1.75	-2.00	12.00	4/6/2023	I	2						
U14-U13	U13	OB-FLANGE	1.75	-1.25	13.00	4/6/2023	I***	2						SNOWMAN RETROFIT
U14-U13	U13	OB-FLANGE	1.75	-2.00	12.00	4/6/2023								
U13-U12	U13	IB-FLANGE	1.00	-0.75	11.40	4/6/2023	I	2						
U13-U12	U13	OB-FLANGE	0.75	-2.00	12.13	4/6/2023	I***	2						SNOWMAN RETROFIT
U13-U12	U13	OB-FLANGE	1.25	-0.50	12.13	4/6/2023								
U13-L12	U13	OB-FLANGE	0.75	0.00	12.25	4/6/2023	I	2						
U13-L12	U13	OB-FLANGE	1.50	1.00	5.50	4/6/2023	I	2						
U13-U12	U12	OB-FLANGE	1.00	-1.25	12.00	4/6/2023	I	2						
U12-U11	U12	IB-FLANGE	1.00	-1.25	12.75	4/6/2023	I	2						
U12-U11	U12	OB-FLANGE	1.00	-1.50	12.25	4/6/2023	I	2						
U12-U11	U12	OB-FLANGE	1.00	-1.25	12.00	4/6/2023	I	2						
U12-U11	U11	IB-FLANGE	1.00	-0.25	11.75	4/6/2023	I	2						
U12-U11	U11	IB-FLANGE	1.00	0.00	12.75	4/5/2023	I	2						
L33-T32	T32	IB-FLANGE	12.00	0.00	13.00	4/13/2023	II**	N/A						
L33-T32	T32	OB-FLANGE	5.75	0.00	13.00	4/13/2023	II**	N/A						
T28-T27	T27	MID	0.75	0.00	9.00	4/2/2023	I	2						
T28-T27	T27	OB-FLANGE	3.00	-0.13	0.75	4/2/2023	I***	2						SNOWMAN RETROFIT
T22-T21	T22	OB-FLANGE	7.00	0.00	4.00	4/3/2023	II**	N/A						
T17-T16	T17	IB-FLANGE	3.00	-0.38	21.25	4/5/2023	I***	2						SNOWMAN RETROFIT
L44-L43	L44	TOP-COVER	1.38	+0.13	0.88	4/7/2023	I	2						
L44-L43	L44	TOP-COVER	1.50	+5.25	16.50	4/7/2023	I	2						
L44-L43	L43	IB-MAIN	2.00	+1.25	20.00	4/7/2023	I	2						
L43-L42	L43	IB-MAIN	3.00	+4.00	2.50	4/12/2023	I***	2						SNOWMAN RETROFIT
L43-L42	L43	OB-MAIN	15.00	-4.50	7.50	4/12/2023	II**	N/A						
L43-L42	L42	BOT-COVER	2.13	+1.00	0.00	4/12/2023	I***	2						SNOWMAN RETROFIT
L43-L42	L42	IB-MAIN	3.50	-4.25	0.75	4/12/2023	I***	2						SNOWMAN RETROFIT
L43-L42	L42	TOP-COVER	2.25	+0.75	1.00	4/12/2023	I***	2						SNOWMAN RETROFIT
L42-L41	L42	IB-MAIN	1.13	0.00	8.13	4/12/2023								
L42-L41	L42	IB-MAIN	3.75	0.00	14.00	4/12/2023	II**	N/A						
L42-L41	L41	TOP-COVER	1.75	0.75	19.25	4/12/2023	I	2						
L41-L40	L40	TOP-COVER	1.50	-5.75	18.75	4/12/2023	I	2						
L40-L39	L40	OB-MAIN	24.00	+1.00	2.00	4/12/2023	II**	N/A						
L40-L39	L39	TOP-COVER	1.50	0.00	19.75	4/12/2023	I	2						
L40-L39	L39	IB-MAIN	2.00	+0.75	19.75	4/12/2023	I	2						
L40-L39	L39	OB-MAIN	8.75	+5.25	0.00	4/12/2023	II**	N/A						
L39-L38	L39	OB-MAIN	18.00	+0.75	8.00	4/12/2023	II**	N/A						
L39-L38	L38	TOP-COVER	3.75	0.00	20.00	4/12/2023	I***	2						3 CORE SNOWMAN RETROFIT
L39-L38	L38	OB-MAIN	19.75	+0.13	6.50	4/12/2023	II**	N/A						
L33-T32	L33	IB-FLANGE	2.50	0.00	13.00	4/13/2023	I***	2						SNOWMAN RETROFIT
T14-L13	L13	IB-FLANGE	1.50	-1.00	12.50	4/13/2023	I	2						
L6-L5	L5	OB-MAIN	1.50	-0.38	15.75	4/13/2023	I	2						
L5-L4	L5	TOP-COVER	1.25	-6.00	3.50	4/13/2023	I	2						
L5-L4	L5	TOP-COVER	4.25	-6.00	15.00	4/13/2023	I***	2						3 CORE SNOWMAN RETROFIT

### NOTES

- FOR ADDITIONAL NOTES, LEGEND, AND TYPE I REPAIR DETAILS, SEE SHEET S8.

## DOWNSTREAM TRUSS REPAIRS

MEMBER	LOCATION	PLATE	NON-DESTRUCTIVE TESTING				REMEDIATION PLAN		REMEDIATION				REMARKS		
			INDICATION LENGTH (IN.)	X* (IN)	Y (IN)	DATE TESTED	REPAIR TYPE	CORE DIAMETER (IN)	INDICATION LENGTH (IN.)	X* (IN)	Y (IN)	DATE + REMEDIATED		NDT TECHNICIAN INITIALS +	
U13-U14	U13	OB-FLANGE	3.30	0.00	11.00	3/23/2023	I***	2							SNOWMAN RETROFIT
U13-U14	U14	IB-FLANGE	1.50	+1.00	12.50	3/22/2023	II**	N/A							
			1.50	-0.25	12.50	3/22/2023									
		OB-FLANGE	3.00	0.00	11.00	3/22/2023	II**	N/A							
			1.80	+2.5	11.50	3/22/2023									
U14-U15	U14	OB-FLANGE	2.50	0.00	11.50	3/22/2023	I***	2						SNOWMAN RETROFIT	
U16-U17	U17	OB-FLANGE	1.30	0.00	12.25	3/22/2023	I	2							
U31-U32	U31	IB-FLANGE	0.75	-0.13	12.00	3/23/2023	I	2							
			0.75	0.25	12.00	3/21/2023	I	2							
U32-U33	U32	OB-FLANGE	0.50	-0.13	6.13	3/21/2023	I	2							
			0.75	0.25	12.75	3/21/2023	I	2							
T28-T29	T28	OB-FLANGE	26.00	0.00	0.00	3/15/2023	II**	N/A							
T29-T30	T29	OB-FLANGE	3.40	0.25	20.40	3/15/2023	I***	2							SNOWMAN RETROFIT
			0.75	0.12	18.00	3/15/2023	I	2							
L39-L40	L39	TOP - COVER	1.20	+0.5	4.25	3/21/2023	I	2							

\* + X DIMENSION REPRESENTS DEFECT BEING ON THE AHEAD/GREATER PANEL POINT SIDE OF THE WELD.  
 - X DIMENSION REPRESENTS DEFECT BEING ON THE BACK/SMALLER PANEL POINT OF THE WELD.  
 (EX: U4-U5 AT U5 WITH X = -0.4" REPRESENTS DEFECT BEING ON U4 SIDE OF THE WELD,  
 U7-U8 AT U8 WITH X = +0.8" REPRESENTS DEFECT BEING ON U8 SIDE OF THE WELD.)

\*\* SEE DETAIL SHEETS FOR TYPE II PLATING REPAIRS

\*\*\* USE 2-2" CORES WITH NO LESS THAN 1/2" OVERLAP TO CAPTURE THE INDICATION(S). GRIND SMOOTH ANY ROUGH EDGES AT THE INTERFACES OF THE TWO CORINGS

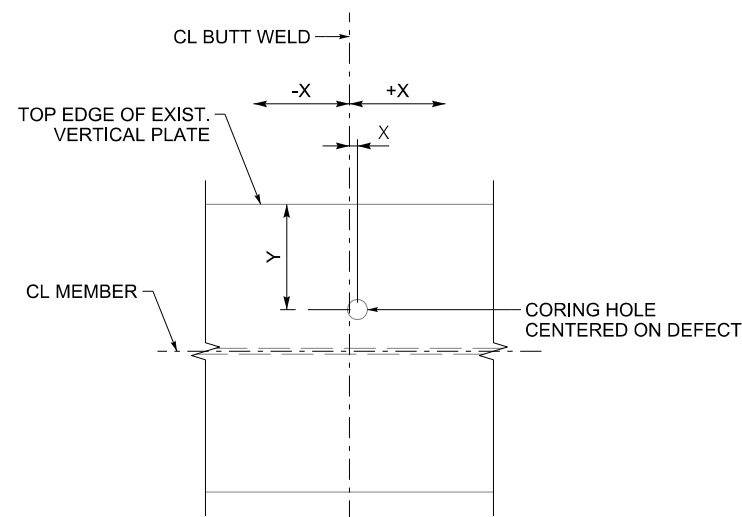
+ THE CONTRACTOR IS TO FILL OUT THIS INFORMATION ONCE REMEDIATION HAS BEEN COMPLETED. PROVIDE A COPY OF THE COMPLETED TABLE TO KYTC.

### REPAIR TYPE LEGEND

- I CORE HOLE AND PLATE
- II PLATING (SEE DETAIL SHEETS INCLUDE IN THIS PLAN SET)

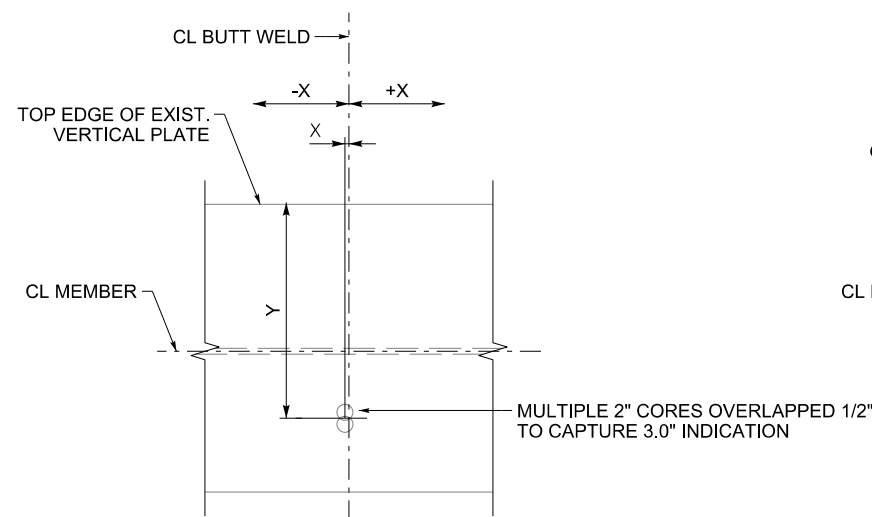
### NOTES

1. FOR WELD REPAIR TYPE I, THE LOCATION OF THE INDICATION IS TO BE FIELD LOCATED BY A QUALIFIED NDT TECHNICIAN WITH A MINIMUM OF AN ASNT LEVEL II UT CERTIFICATE PRIOR TO PERFORMANCE OF ANY WORK.
2. FOR WELD REPAIR TYPE I, CENTER THE CORE HOLE ON THE LENGTH OF THE INDICATION TO ENSURE THE INDICATION IS FULLY CONTAINED WITHIN THE CORED HOLE.
3. AFTER CORING HAS BEEN PERFORMED, PERFORM MT, OR PT, ON THE REMAINING HOLE TO CONFIRM SURFACE BREAKING INDICATIONS ARE NOT FOUND ON THE SURFACE OF THE CORED HOLE. IF ANY SUCH INDICATIONS ARE FOUND, USE LIGHT SURFACE DIE GRINDING TO REMOVE THEM.
4. IF ANY CORE INTERSECTS WITH A PERPENDICULAR PLATE, CUT CORE FROM THE PLATE AND USE A DIE GRINDER TO SMOOTH OUT TRANSITION AND REMOVE ANY SHARP CORNERS, NOTCHES, OR CUTS.



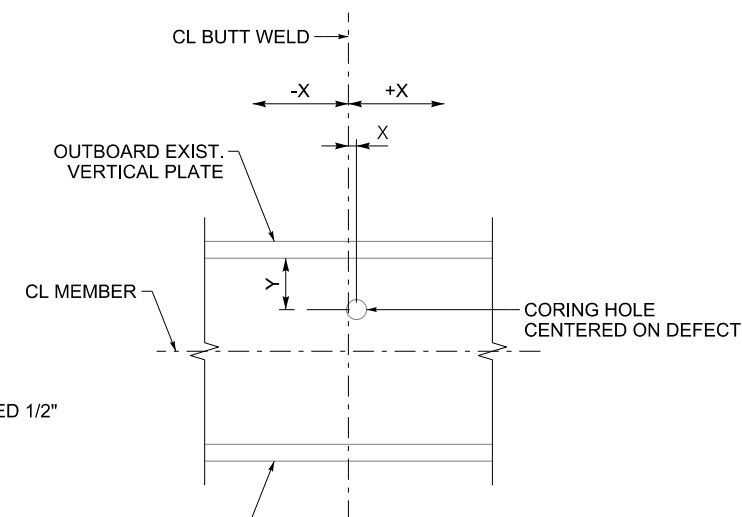
**ELEVATION**

INBOARD AND OUTBOARD VERTICAL PLATE REPAIRS



**PLAN**

EXAMPLE SNOWMAN DETAIL  
T17-T16 @ T17  
INBOARD GUSSET PLATE



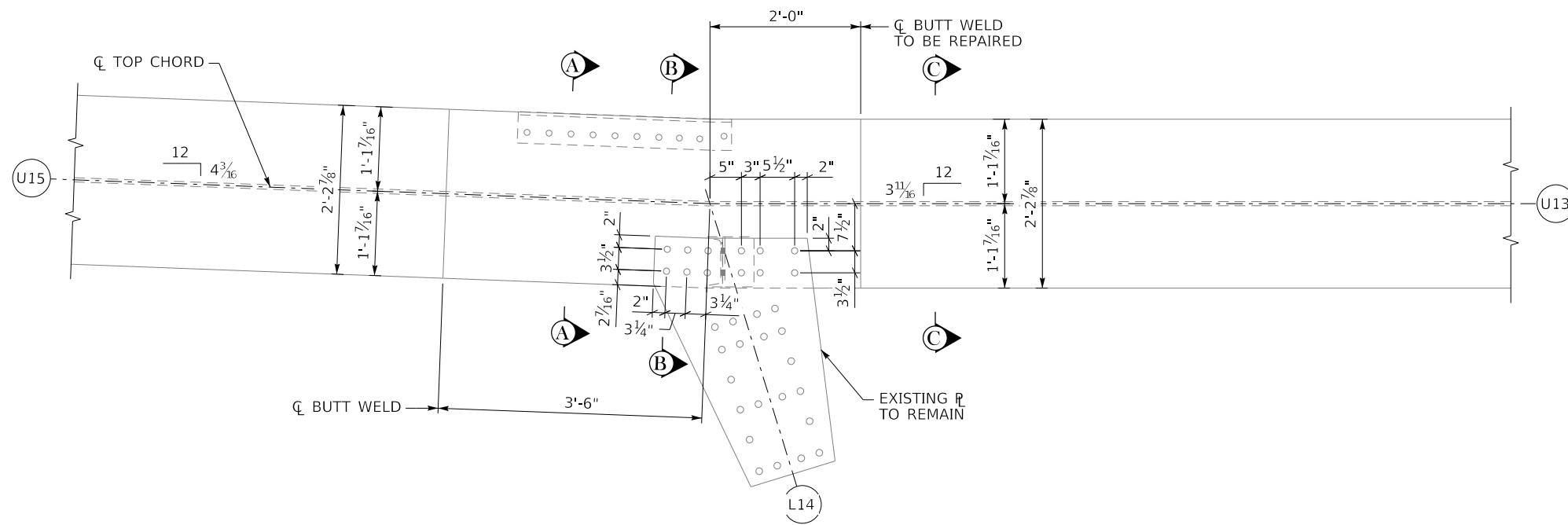
**PLAN**

HORIZONTAL PLATE REPAIRS

### TYPE I REPAIRS

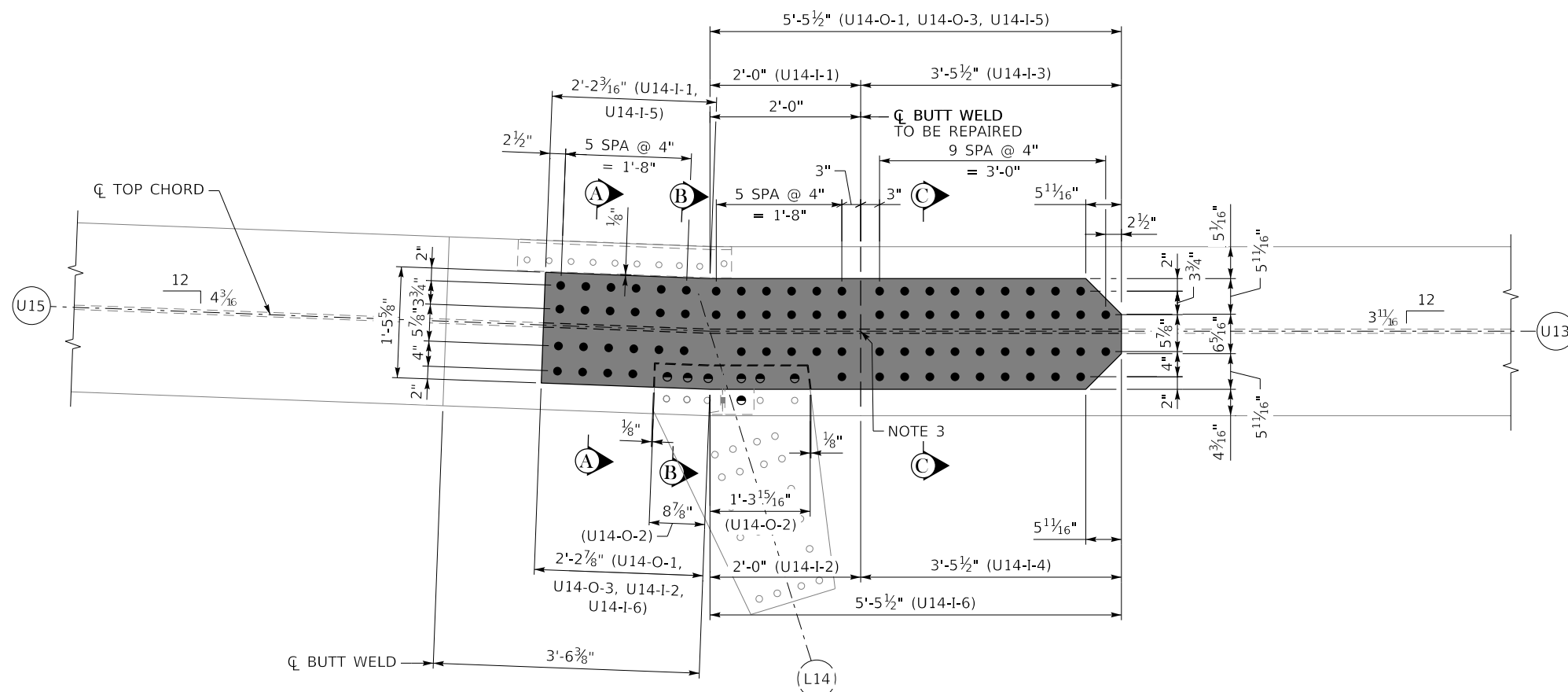
	REVISION	DATE	PREPARED BY <b>Michael Baker</b> INTERNATIONAL	DATE: 04/12/2024 DESIGNED BY: J STITH DETAILED BY: J JACKSON	CHECKED BY J KAUZLARICH J STITH	<b>REPAIR DETAILS</b> CROSSING OHIO RIVER	ROUTE I-275	ITEM NO. S8	COUNTY OF BOONE DRAWING NUMBER 28873
			1850 Lyndon Farm Court Louisville, KY Phone: (502)-339-3557 MBAKERINTL.COM		FILE NAME: pw://mb-us-pw.bentley.com:mb-us-pw-03/Documents/Louisville_KY/01_Projects/KYTC T1 Steel Bridges/008B00052N Carroll Cropper/3 Remediation/CADD/SHEETS/Carroll Repair Details.dgn				





**EXISTING ELEVATION - U14**

(UPSTREAM TRUSS, LOOKING DOWNSTREAM AT OUTBOARD FACE)



**PROPOSED ELEVATION - U14**

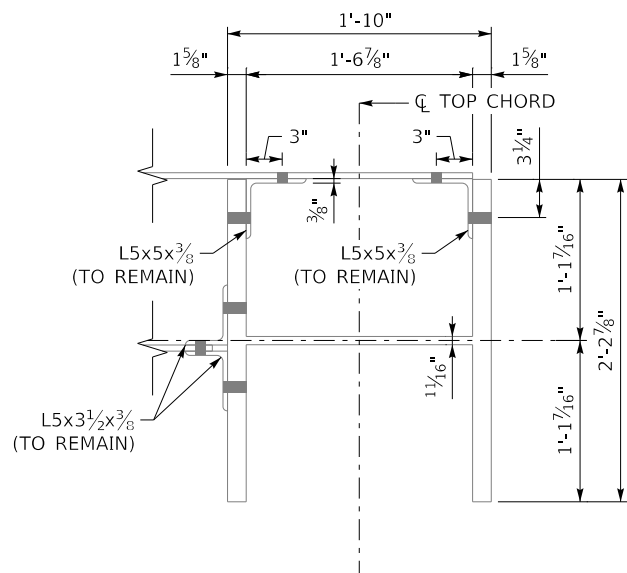
(UPSTREAM TRUSS, LOOKING DOWNSTREAM AT OUTBOARD FACE)

**CONSTRUCTION SEQUENCE**

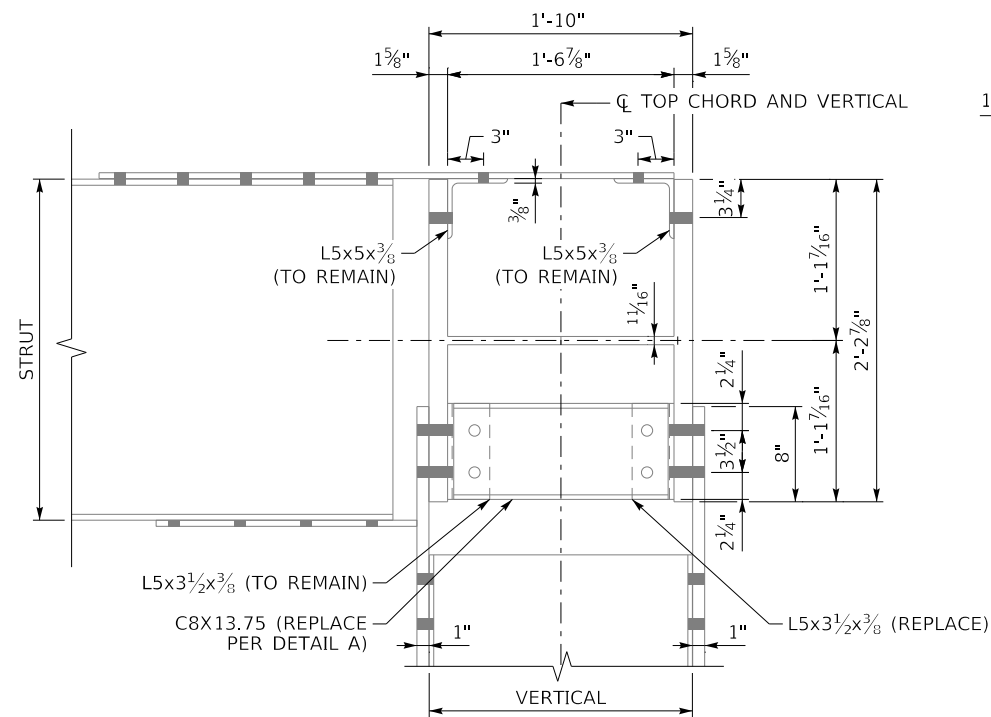
1. CONSTRUCT WEB DOG-BONE AT OB BUTT WELD. SEE RETROFIT DETAIL ON SHEET S3.
2. DISCONNECT AND REMOVE EXISTING C8x13.75 AND L5x3 1/2x3/8 ON OUTBOARD FLANGE ONLY. SEE SECTION B-B.
3. REMOVE EXISTING BOLTS AS SPECIFIED AND INSTALL THREADED RODS AT VERTICAL GUSSET CONNECTION ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
4. INSTALL CHEESE, FILL AND SPLICE PLATES AND CONNECTION ANGLES WITH NEW FASTENERS AS INDICATED.
5. INSTALL U14-C-1.

**NOTES**

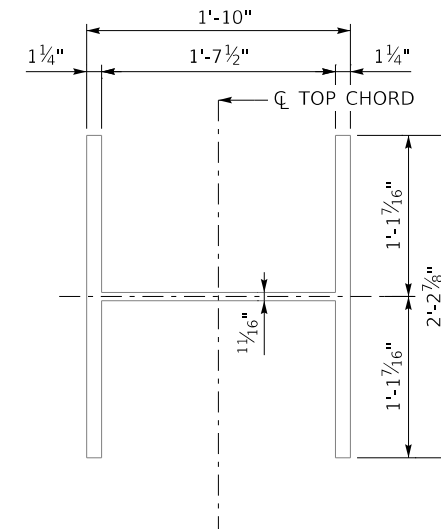
1. LATERAL BRACING NOT SHOWN FOR CLARITY.
2. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET S10.
3. CONSTRUCT DOG BONE RETROFIT DETAIL IN WEB, SEE SHEET S3.



**SECTION A-A**  
(EXISTING CONDITION)



**SECTION B-B**  
(EXISTING CONDITION)



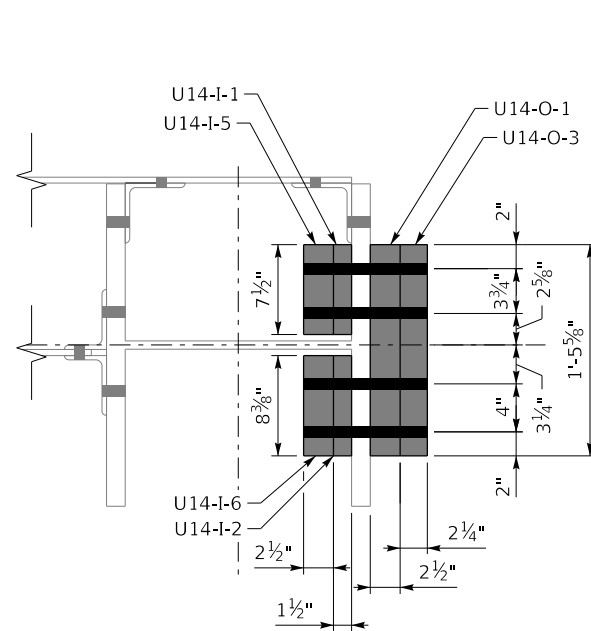
**SECTION C-C**  
(EXISTING CONDITION)

**LEGEND**

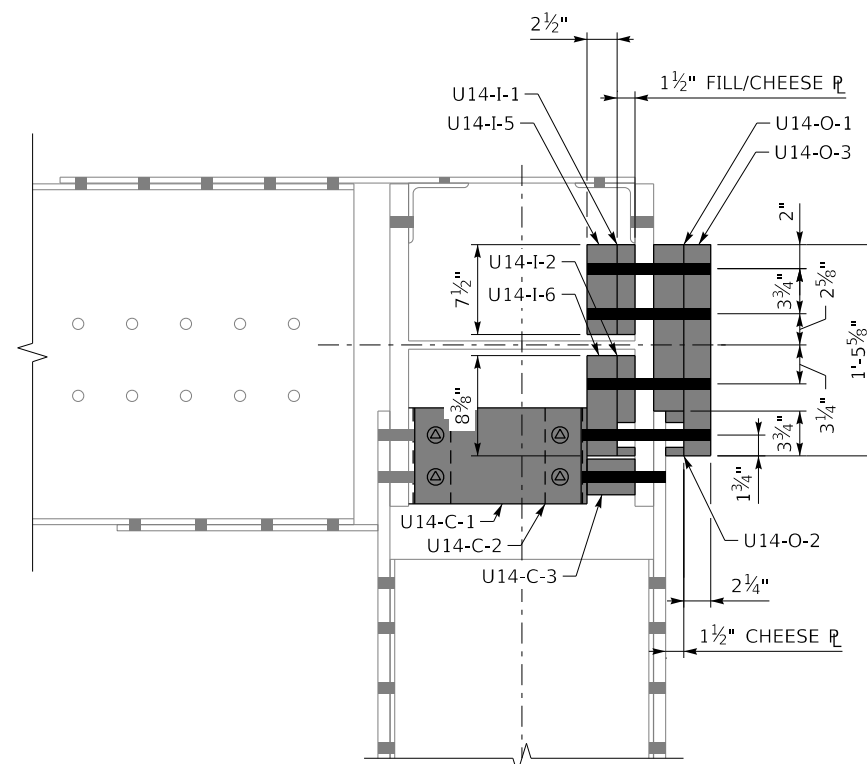
■ INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL. FOR BOLT HOLE AND SIZE, SEE SHEET S5.

**NOTES**

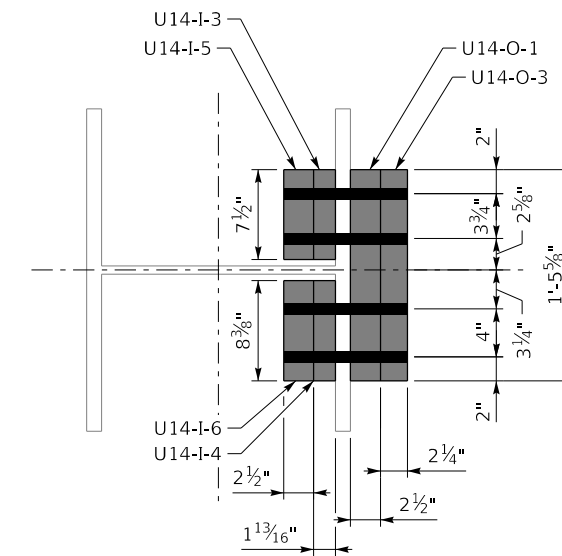
1. LATERAL BRACING NOT SHOWN FOR CLARITY.
2. FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET S9.



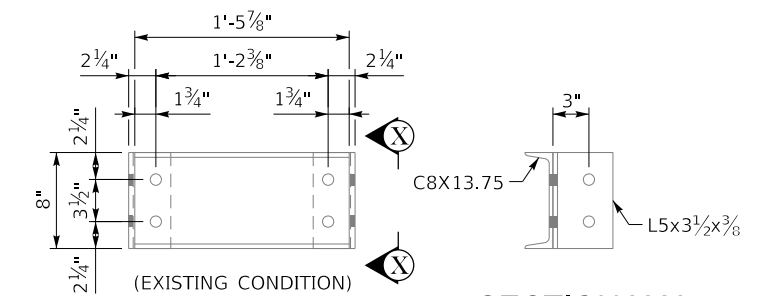
**SECTION A-A**  
(PROPOSED CONDITION)



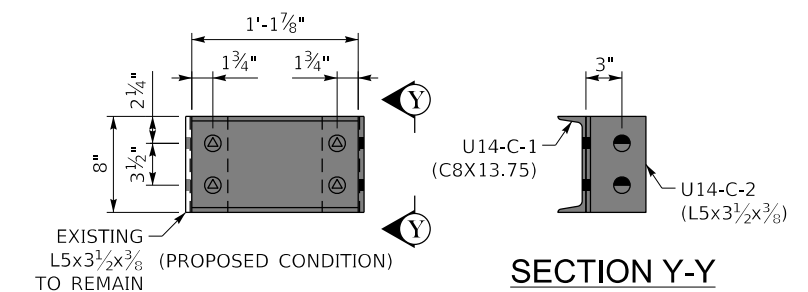
**SECTION B-B**  
(PROPOSED CONDITION)



**SECTION C-C**  
(PROPOSED CONDITION)

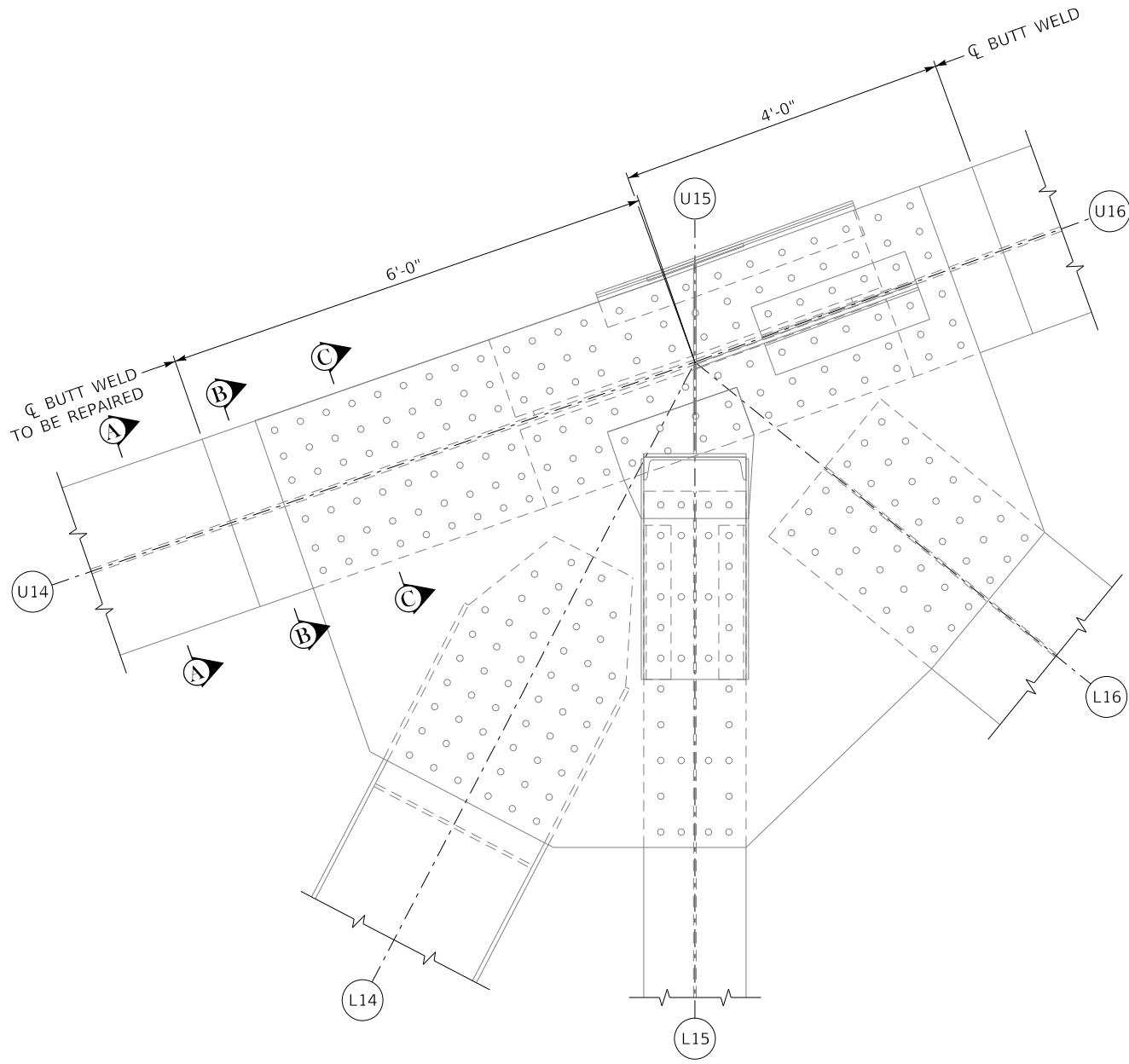


**SECTION X-X**

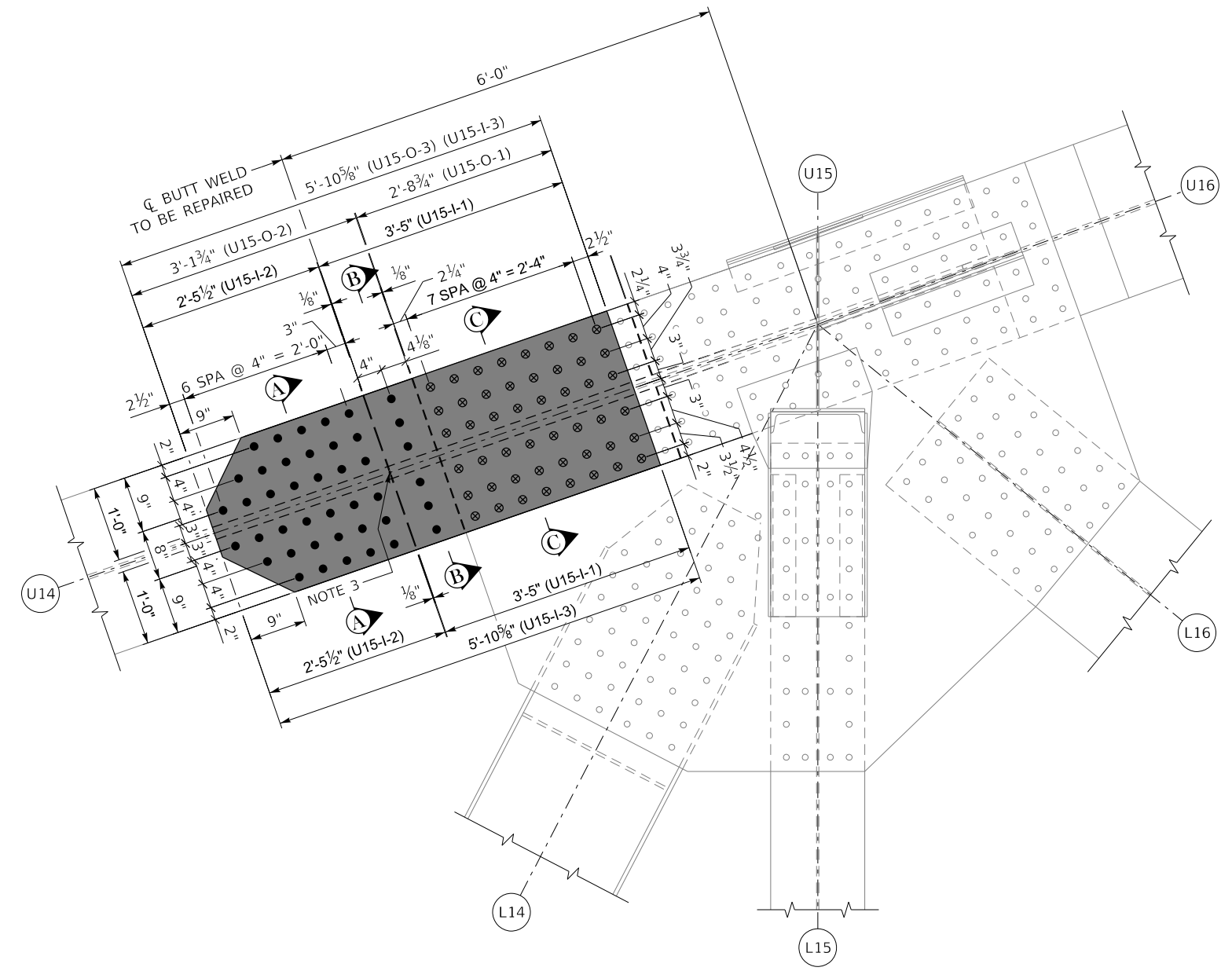


**SECTION Y-Y**

**DETAIL A**



**EXISTING ELEVATION - U15**  
(UPSTREAM TRUSS, LOOKING UPSTREAM AT INBOARD FACE)



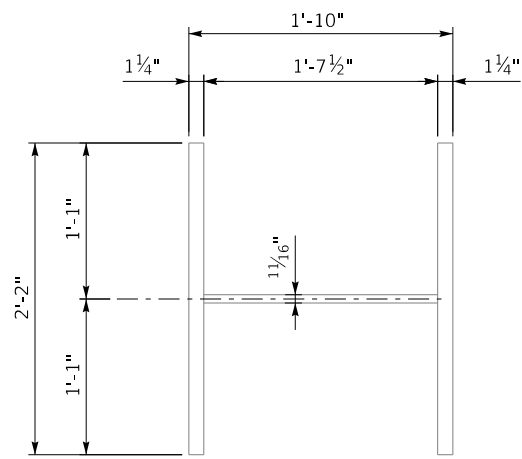
**PROPOSED ELEVATION - U15**  
(UPSTREAM TRUSS, LOOKING UPSTREAM AT INBOARD FACE)

**CONSTRUCTION SEQUENCE**

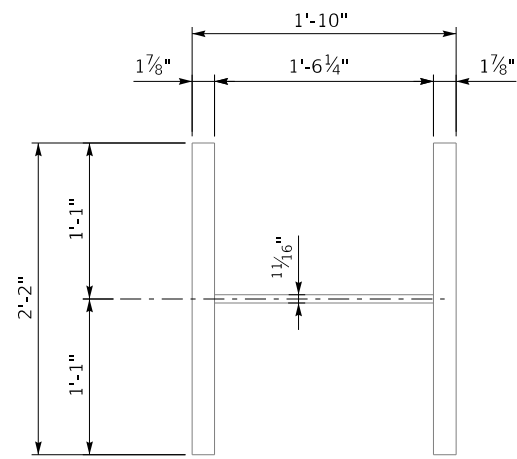
1. CONSTRUCT WEB DOG-BONE AT IB BUTT WELD. SEE RETROFIT DETAIL ON SHEET S3.
2. INSTALL THREADED RODS AT GUSSET CONNECTION ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
3. INSTALL CHEESE, FILL AND SPLICE PLATES WITH NEW FASTENERS AS INDICATED.

**NOTES**

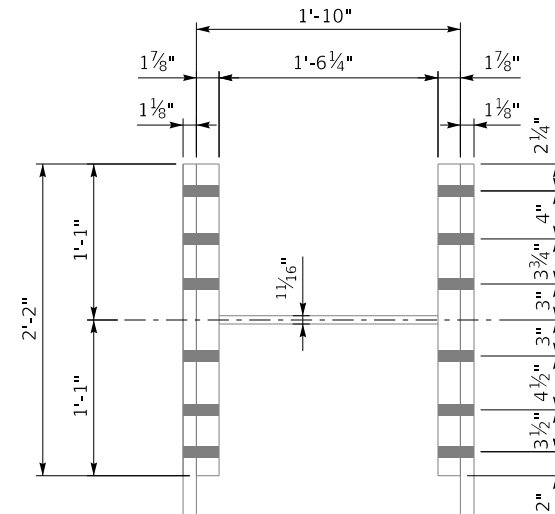
1. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET S12.
2. FOR BOLT LEGEND, SEE SHEET S4.
3. CONSTRUCT DOG BONE RETROFIT DETAIL IN WEB, SEE SHEET S3.



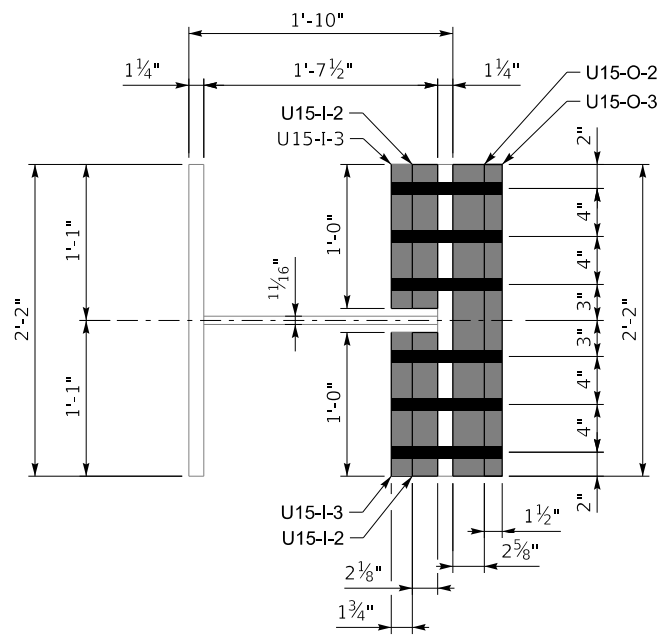
**SECTION A-A**  
(EXISTING CONDITION)



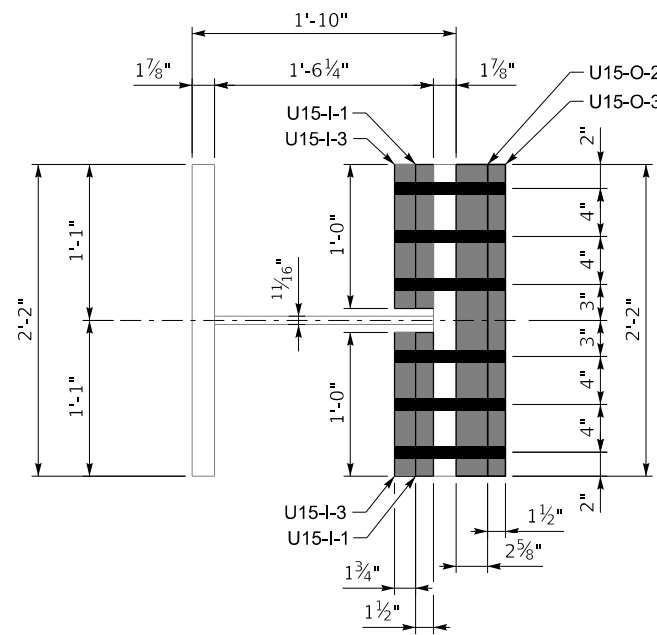
**SECTION B-B**  
(EXISTING CONDITION)



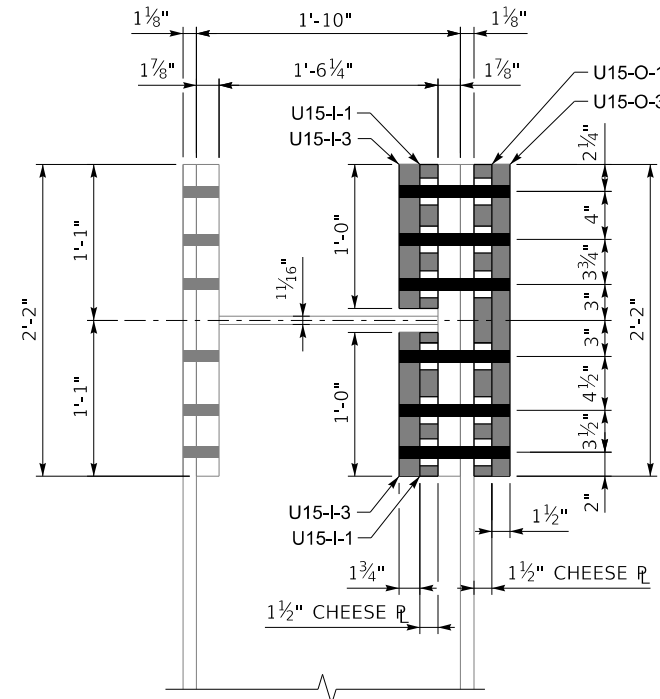
**SECTION C-C**  
(EXISTING CONDITION)



**SECTION A-A**  
(PROPOSED CONDITION)



**SECTION B-B**  
(PROPOSED CONDITION)



**SECTION C-C**  
(PROPOSED CONDITION)

**NOTES**

1. FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET S11.

**LEGEND**

■ INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL.  
 FOR BOLT HOLE AND SIZE, SEE SHEET S5.



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 15-APR-2024

PREPARED BY  
**Michael Baker INTERNATIONAL**  
 1650 Lyndon Farm Court  
 Louisville, KY  
 Phone: (502)-339-3557  
 M.BAKER@INTL.COM

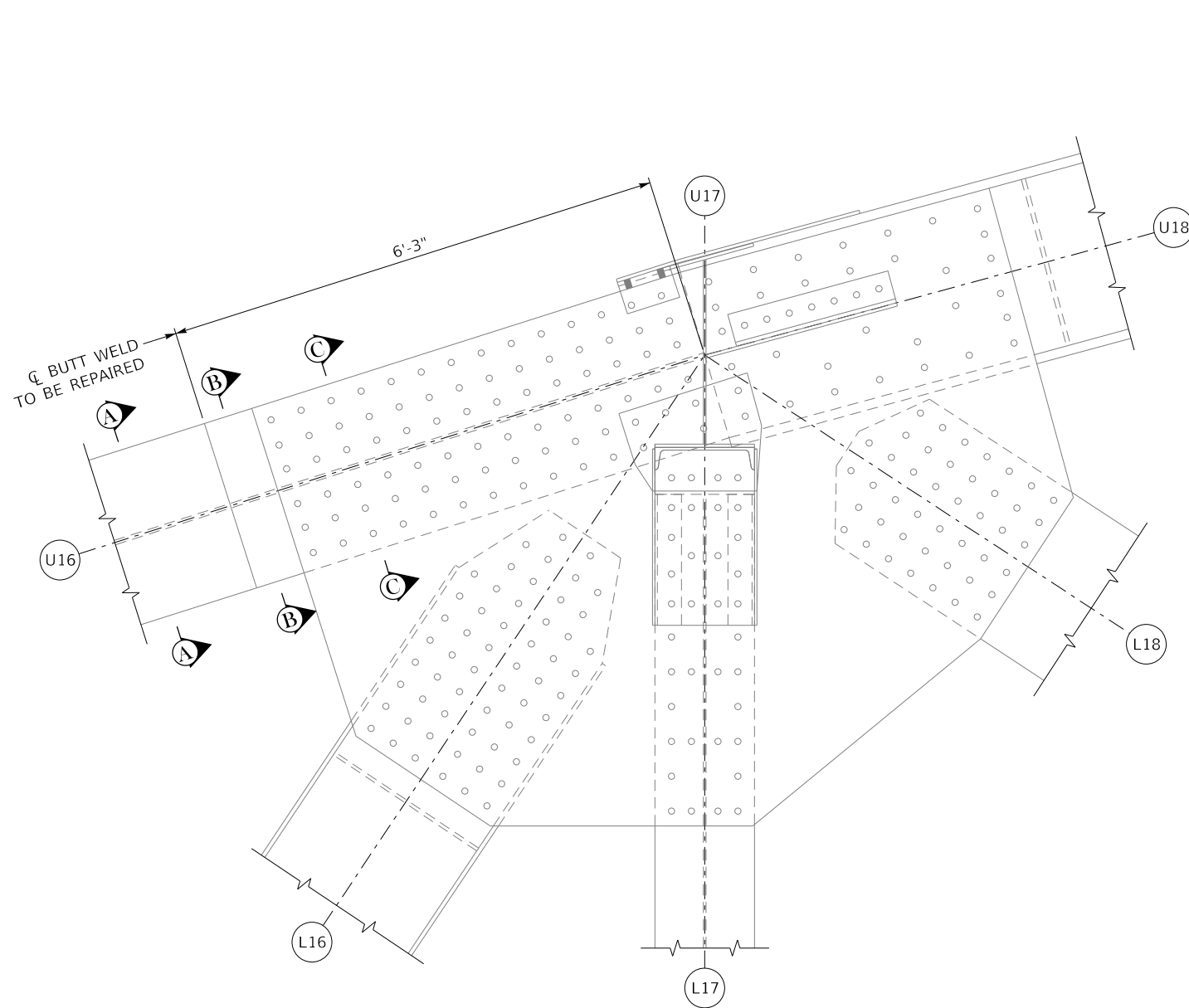
DATE: 04/12/2024	CHECKED BY:
DESIGNED BY: P COZZENS	T JANICKE
DETAILED BY: J JACKSON	P COZZENS

**US U15 IB REPAIR DETAIL**  
 CROSSING  
 OHIO RIVER

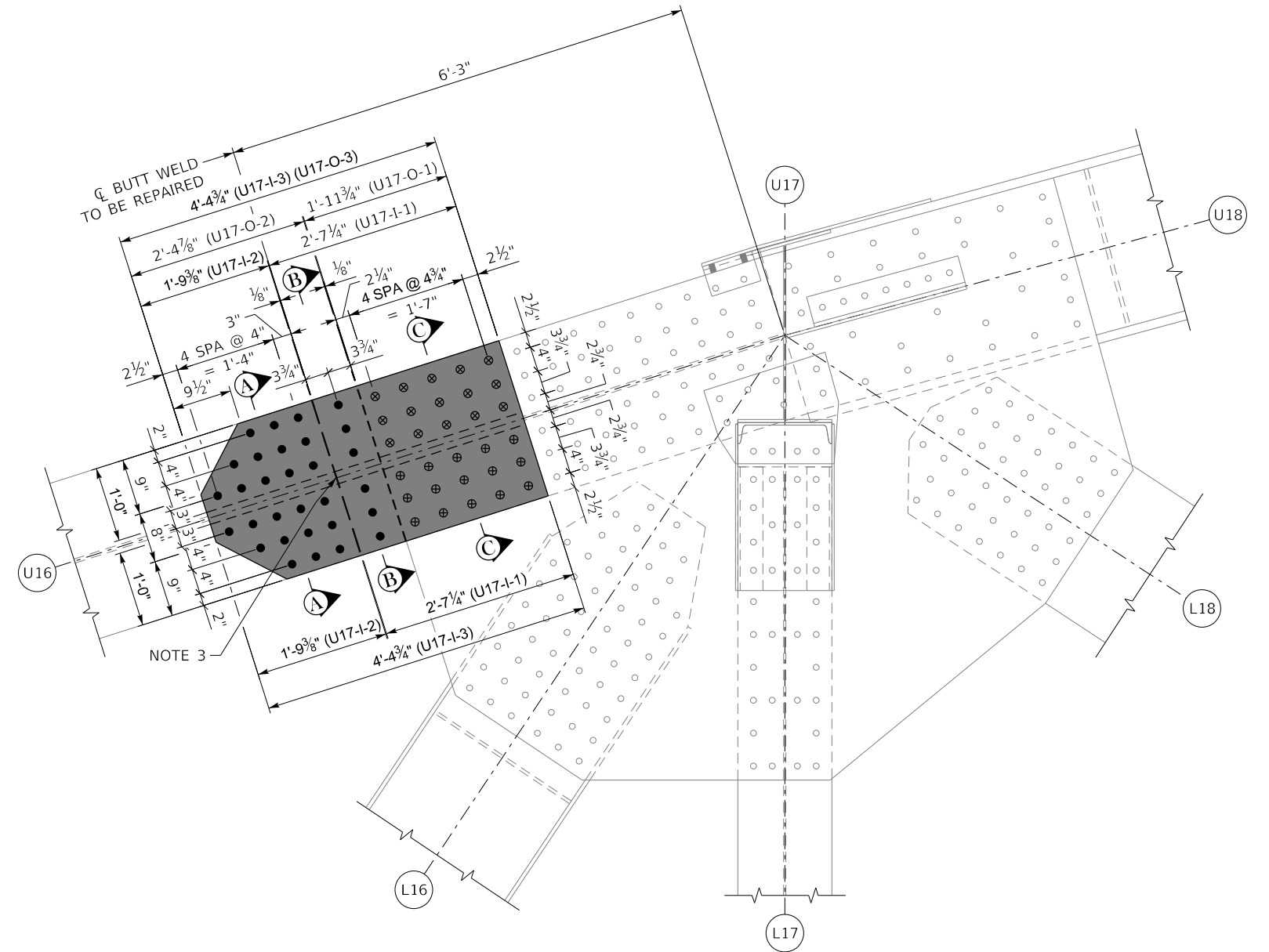
ROUTE	ITEM NO.	COUNTY OF
I-275	S12	BOONE
	DRAWING NUMBER	
	28873	

MicroStation v8.11.9.919

FILE NAME: pw://mb-us-pw.bentley.com/mb-us-pw-03/Documents/Louisville\_KY/01\_Projects/KYTC T1 Steel Bridges/008B00052N Carroll Cropper/3 Remediation/CADD/SHEETS/Carroll\_07\_U15-DETAIL\_02.dgn



**EXISTING ELEVATION - U17**  
(UPSTREAM TRUSS, LOOKING UPSTREAM AT INBOARD FACE)



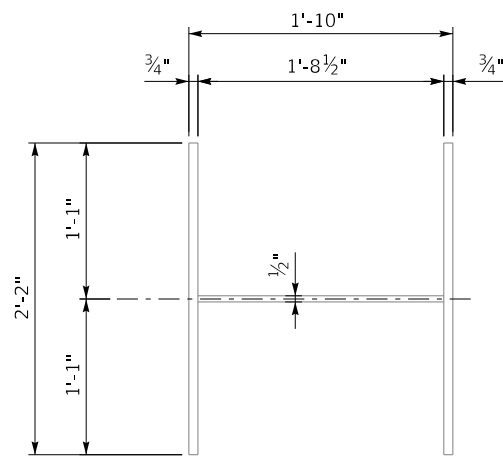
**PROPOSED ELEVATION - U17**  
(UPSTREAM TRUSS, LOOKING UPSTREAM AT INBOARD FACE)

**CONSTRUCTION SEQUENCE**

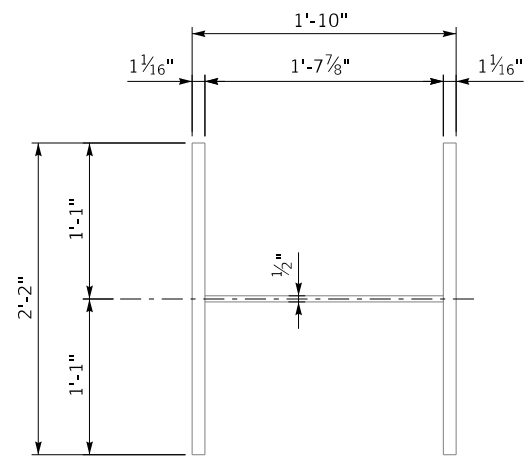
1. CONSTRUCT WEB DOG-BONE AT IB BUTT WELD. SEE RETROFIT DETAIL ON SHEET S3.
2. INSTALL THREADED RODS AT GUSSET CONNECTION ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
3. INSTALL CHEESE, FILL AND SPLICE PLATES WITH NEW FASTENERS AS INDICATED.

**NOTES**

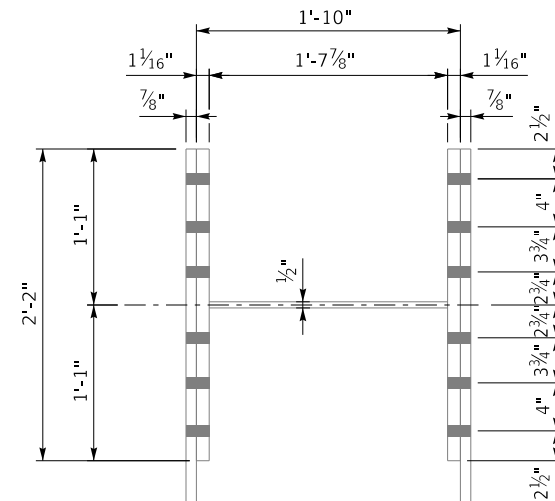
1. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET S14.
2. FOR BOLT LEGEND, SEE SHEET S4.
3. CONSTRUCT DOG BONE RETROFIT DEAL IN WEB. SEE SHEET S3.



**SECTION A-A**  
(EXISTING CONDITION)



**SECTION B-B**  
(EXISTING CONDITION)



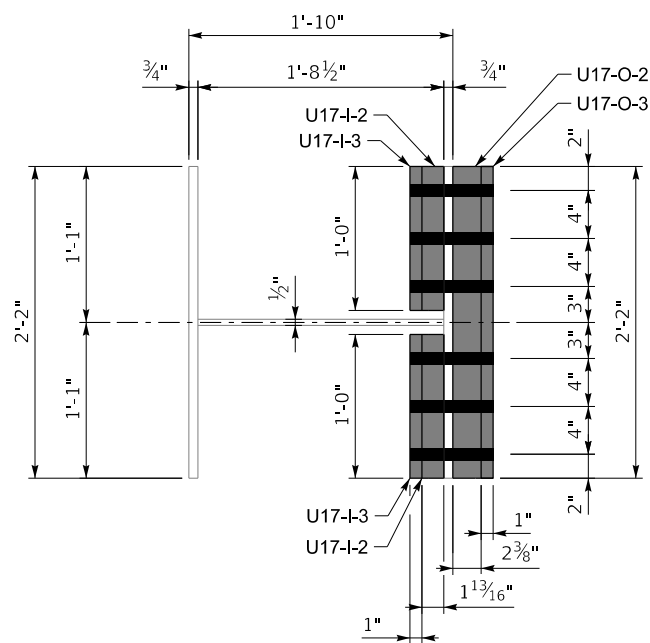
**SECTION C-C**  
(EXISTING CONDITION)

**LEGEND**

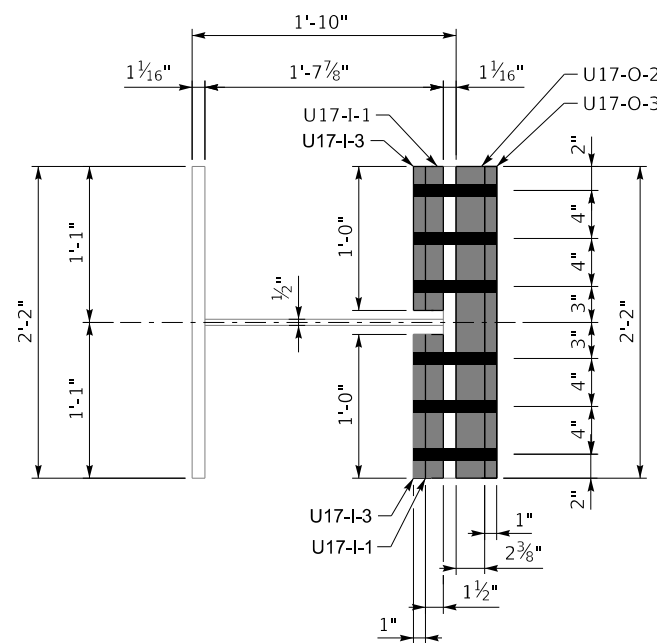
INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL.  
FOR BOLT HOLE AND SIZE, SEE SHEET S5.

**NOTES**

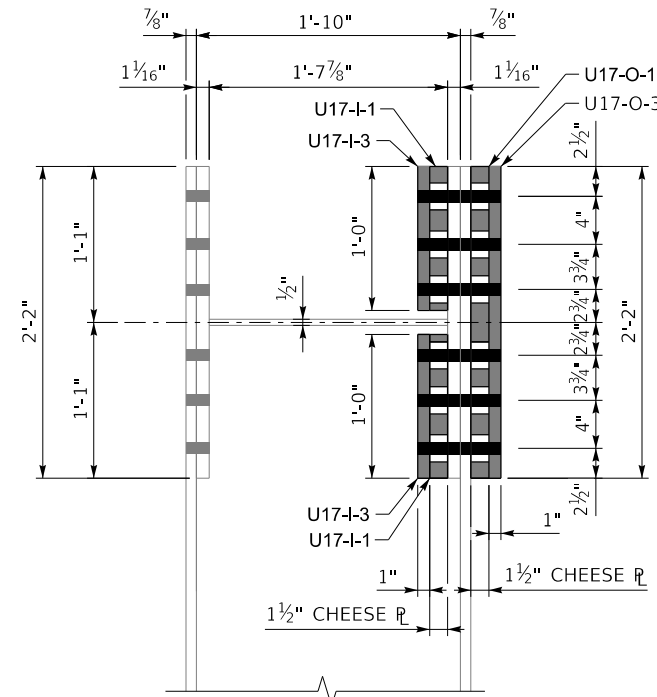
1. FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET S13.



**SECTION A-A**  
(PROPOSED CONDITION)



**SECTION B-B**  
(PROPOSED CONDITION)



**SECTION C-C**  
(PROPOSED CONDITION)



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 15-APR-2024

PREPARED BY  
**Michael Baker INTERNATIONAL**  
1650 Lyndon Farm Court  
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MBAKERINTL.COM

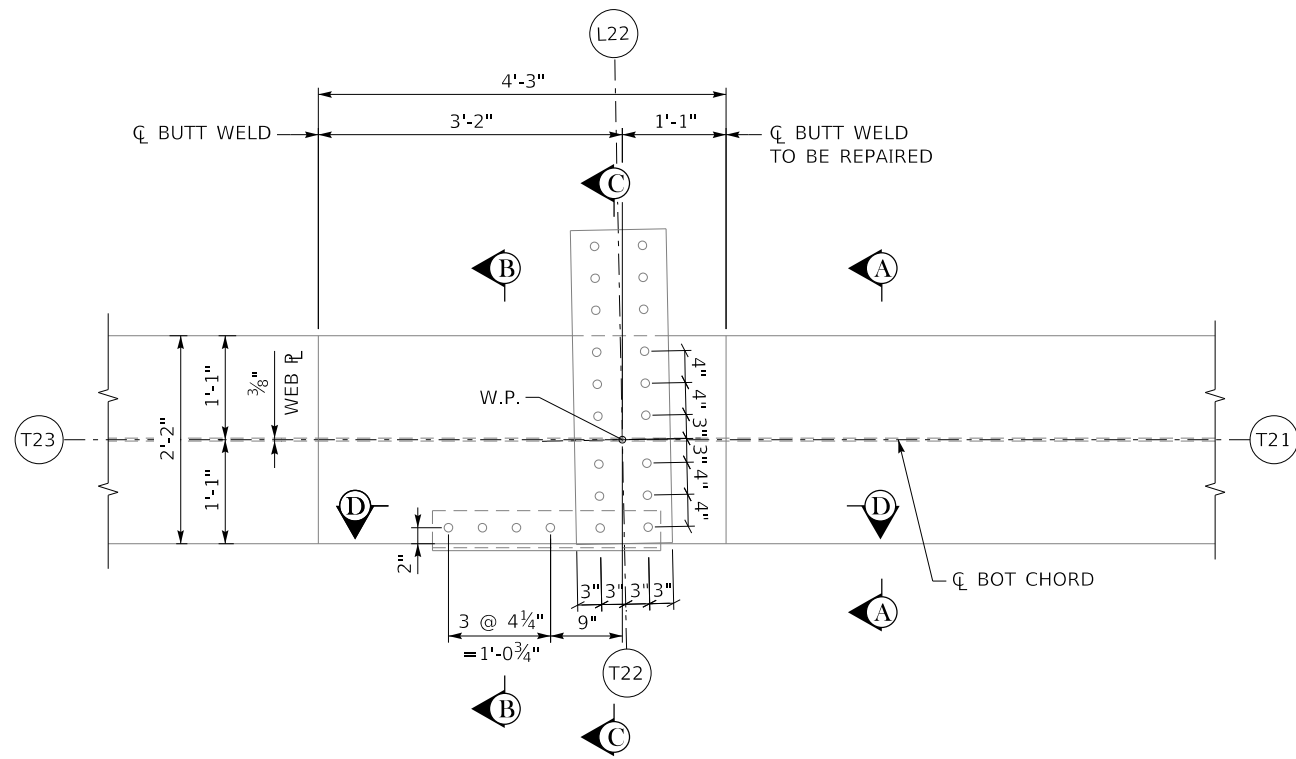
DATE: 04/12/2024	CHECKED BY:
DESIGNED BY: P COZZENS	T JANICKE
DETAILED BY: J JACKSON	P COZZENS

**US U17 IB REPAIR DETAIL**  
CROSSING  
OHIO RIVER

ROUTE	ITEM NO.	COUNTY OF
I-275	S14	BOONE
DRAWING NUMBER		28873

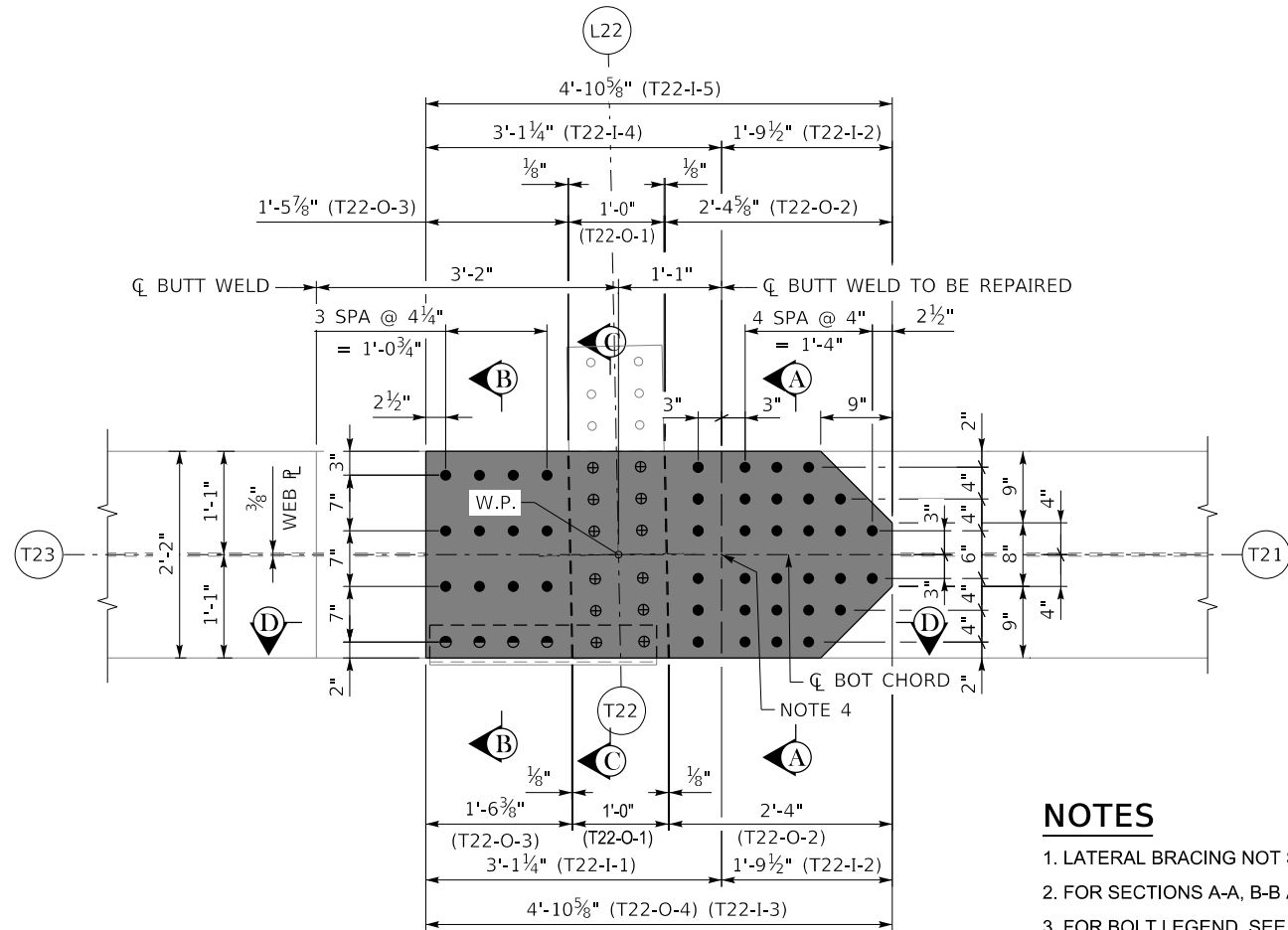
MicroStation v8.11.9.919

FILE NAME: pw://mb-us-pw.bentley.com/mb-us-pw-03/Documents/Louisville\_KY/01\_Projects/KYTC T1 Steel Bridges/008B00052N Carroll Cropper/3 Remediation/CADD/SHEETS/Carroll\_08\_U17-DETAIL\_02.dgn



**EXISTING ELEVATION - T22**

(UPSTREAM TRUSS, LOOKING DOWNSTREAM AT OUTBOARD FACE)

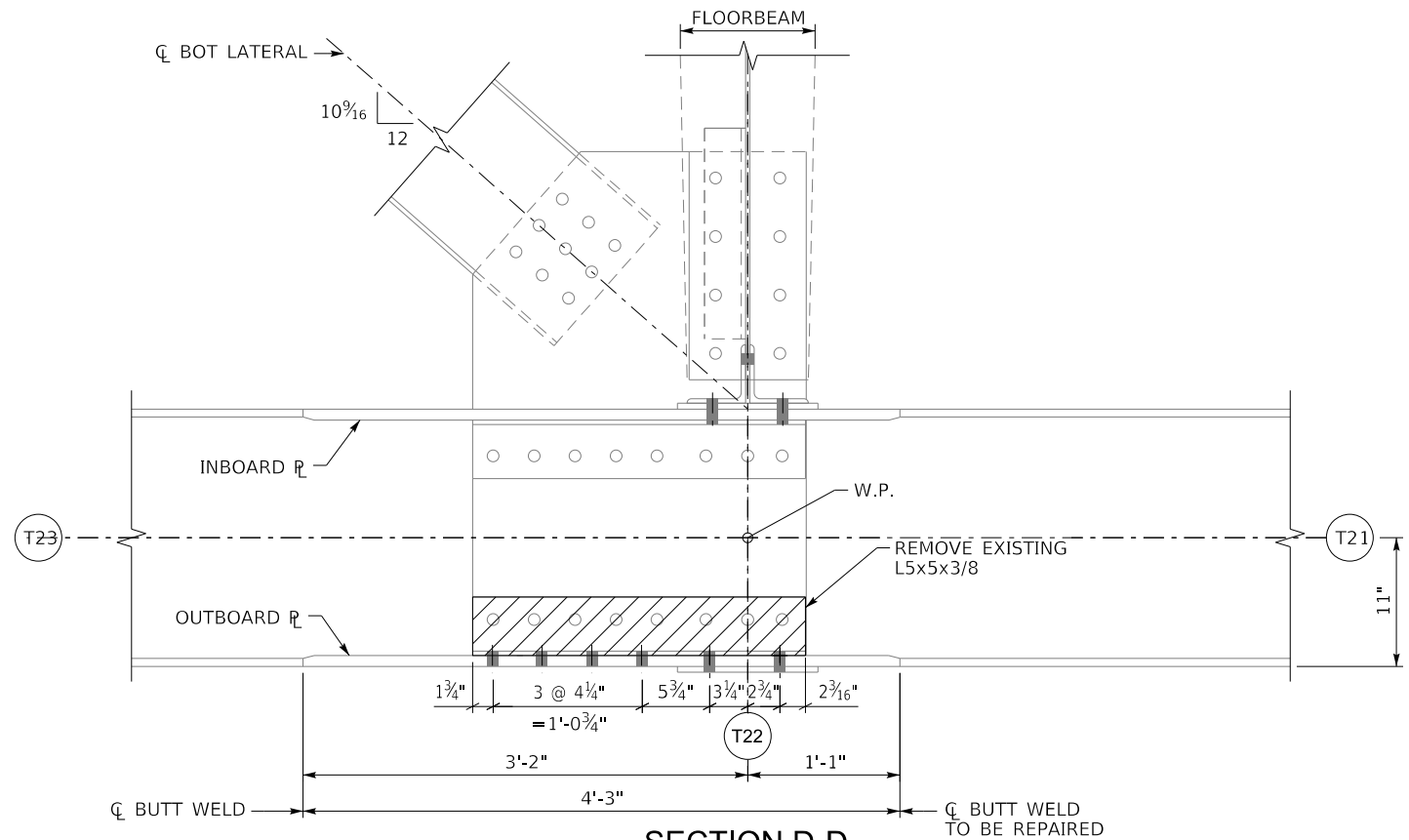


**PROPOSED ELEVATION - T22**

(UPSTREAM TRUSS, LOOKING DOWNSTREAM AT OUTBOARD FACE)

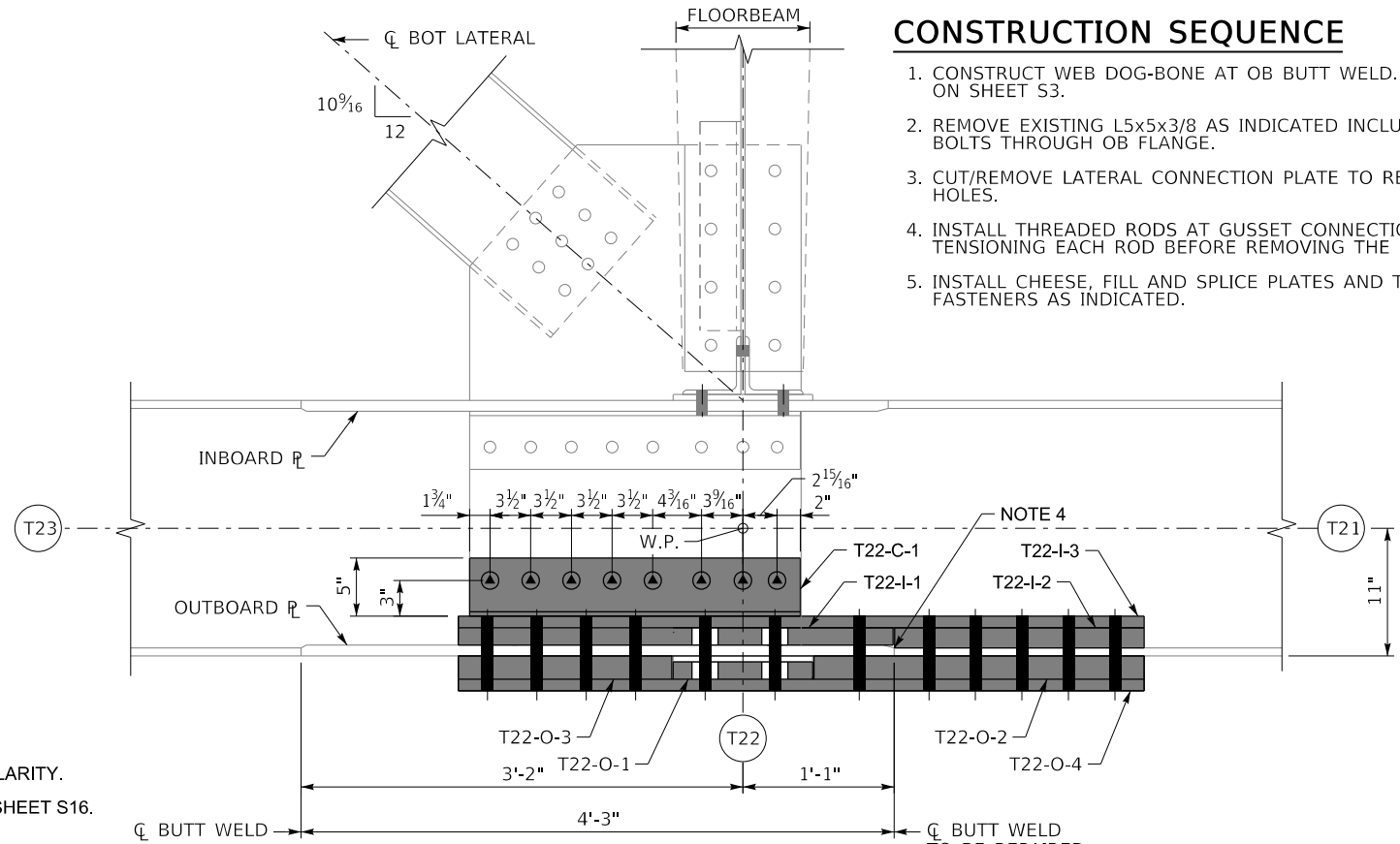
**NOTES**

1. LATERAL BRACING NOT SHOWN FOR CLARITY.
2. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET S16.
3. FOR BOLT LEGEND, SEE SHEET S4.
4. CONSTRUCT DOG BONE RETROFIT DETAIL IN WEB, SEE SHEET S3.



**SECTION D-D**

(EXISTING CONDITION)



**SECTION D-D**

(PROPOSED CONDITION)

**CONSTRUCTION SEQUENCE**

1. CONSTRUCT WEB DOG-BONE AT OB BUTT WELD. SEE RETROFIT DETAIL ON SHEET S3.
2. REMOVE EXISTING L5x5x3/8 AS INDICATED INCLUDING 6 EXISTING BOLTS THROUGH OB FLANGE.
3. CUT/REMOVE LATERAL CONNECTION PLATE TO REMOVE ORIGINAL HOLES.
4. INSTALL THREADED RODS AT GUSSET CONNECTION ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
5. INSTALL CHEESE, FILL AND SPLICE PLATES AND T22-C-1 WITH NEW FASTENERS AS INDICATED.



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION DATE

DATE PLOTTED: 15-APR-2024



PREPARED BY  
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Phone: (502)-339-3557  
MBAKERINTL.COM

DATE: 04/12/2024  
DESIGNED BY: P COZZENS  
DETAILED BY: J JACKSON

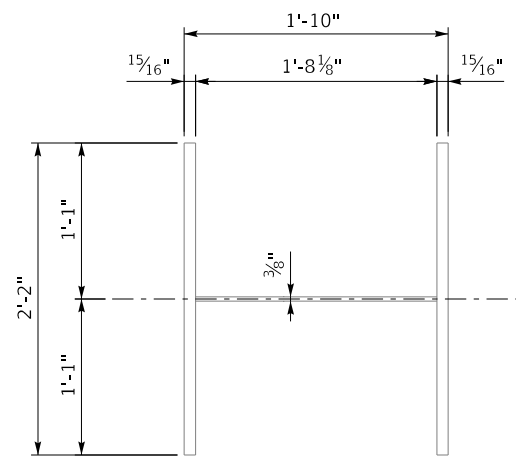
CHECKED BY  
J KAUZLARICH  
P COZZENS

**US T22 OB REPAIR DETAIL**  
CROSSING  
OHIO RIVER

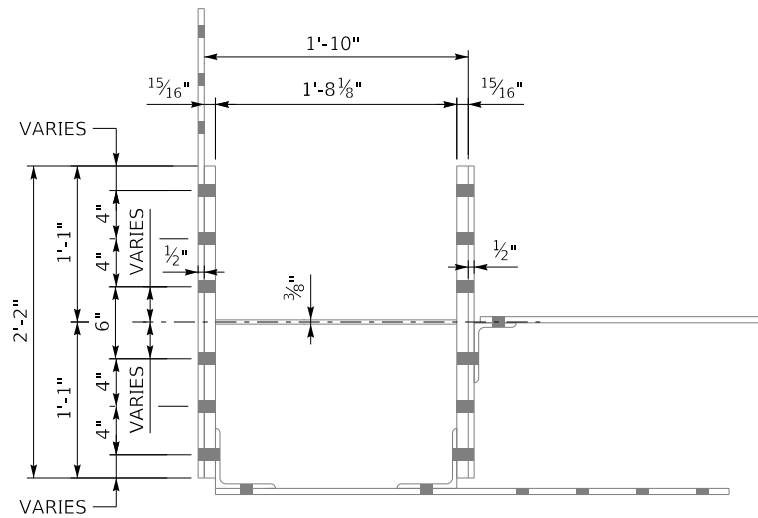
ROUTE  
I-275

ITEM NO.  
SHEET NO.  
S15

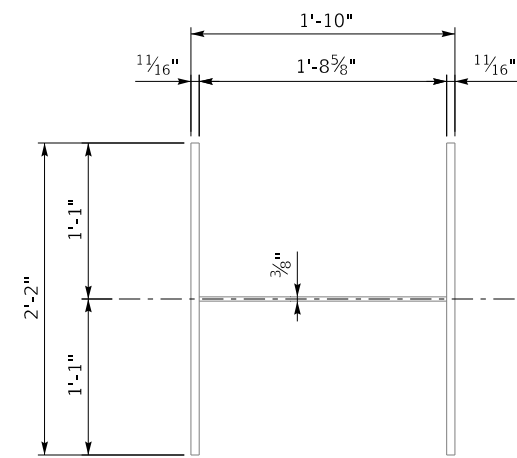
COUNTY OF  
BOONE  
DRAWING NUMBER  
28873



**SECTION B-B**  
(EXISTING CONDITION)



**SECTION C-C**  
(EXISTING CONDITION)



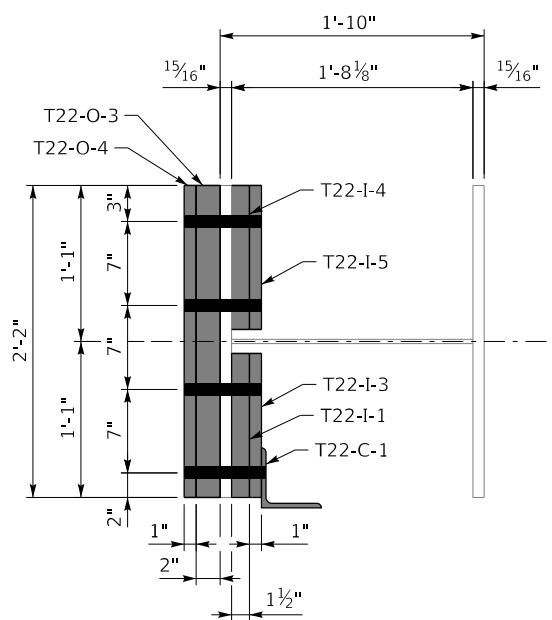
**SECTION A-A**  
(EXISTING CONDITION)

**LEGEND**

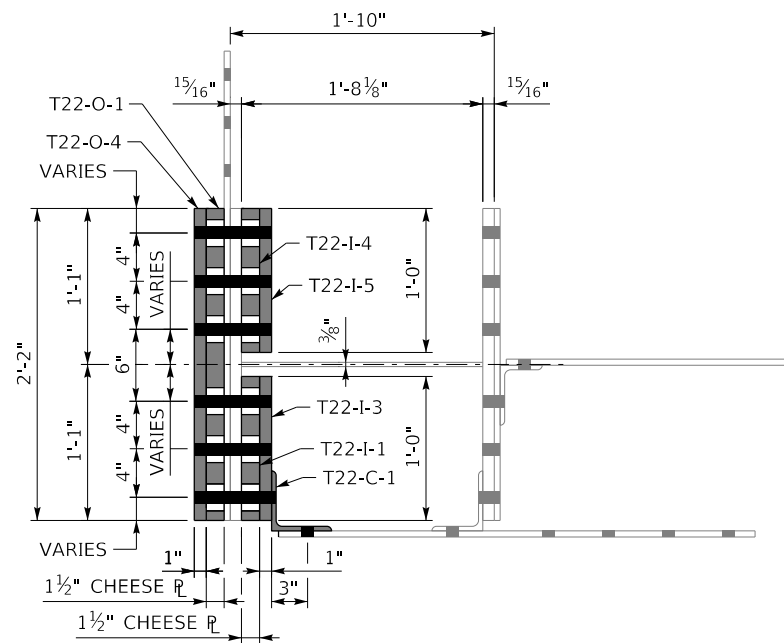
INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL.  
FOR BOLT HOLE AND SIZE, SEE SHEET S5.

**NOTES**

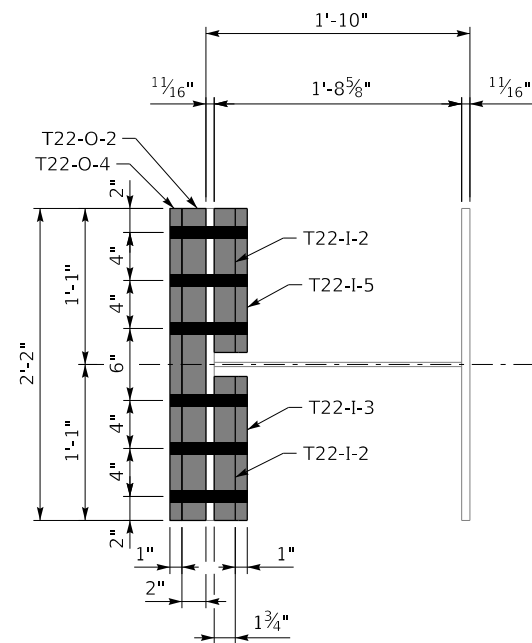
- LATERAL BRACING NOT SHOWN FOR CLARITY.
- FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET S15.



**SECTION B-B**  
(PROPOSED CONDITION)



**SECTION C-C**  
(PROPOSED CONDITION)



**SECTION A-A**  
(PROPOSED CONDITION)



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



REVISION	DATE

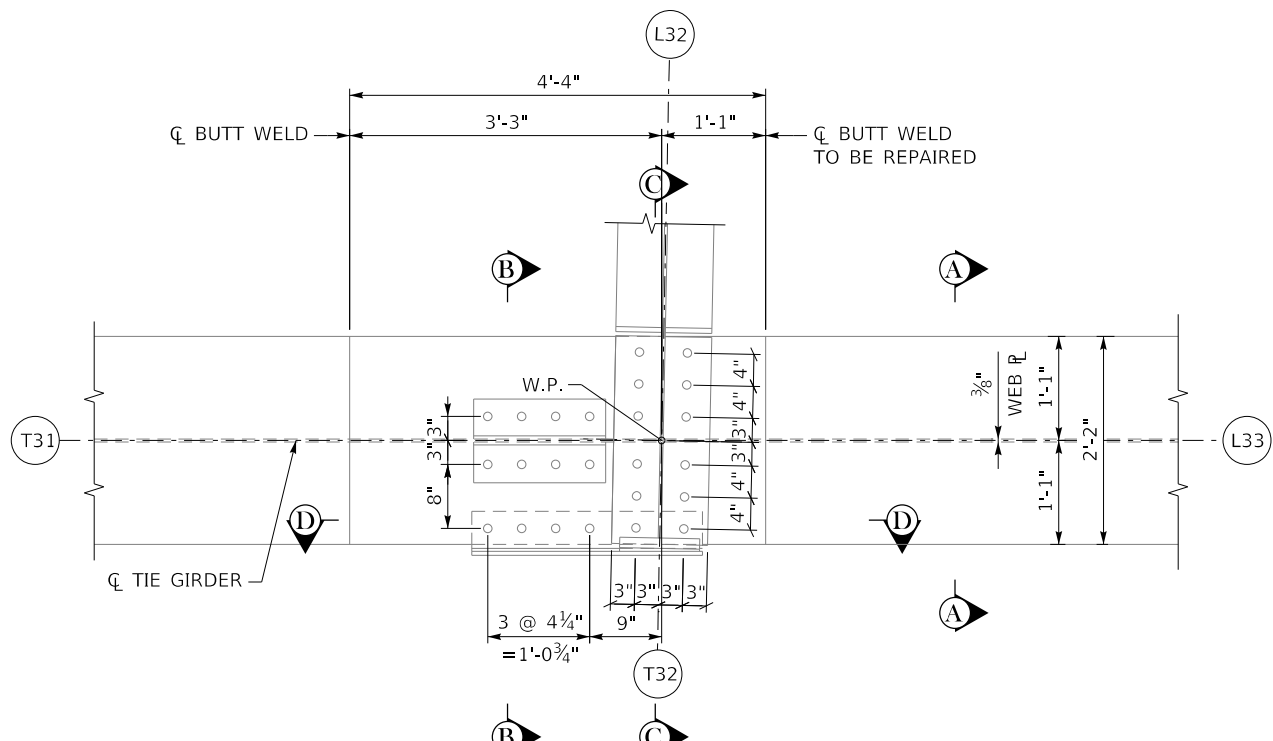
PREPARED BY  
**Michael Baker INTERNATIONAL**  
1650 Lyndon Farm Court  
Louisville, KY  
Phone: (502)-339-3557  
MBAKERINTL.COM

DATE: 04/12/2024	CHECKED BY: J KAUZLARICH
DESIGNED BY: P COZZENS	DETAILED BY: J JACKSON
	P COZZENS

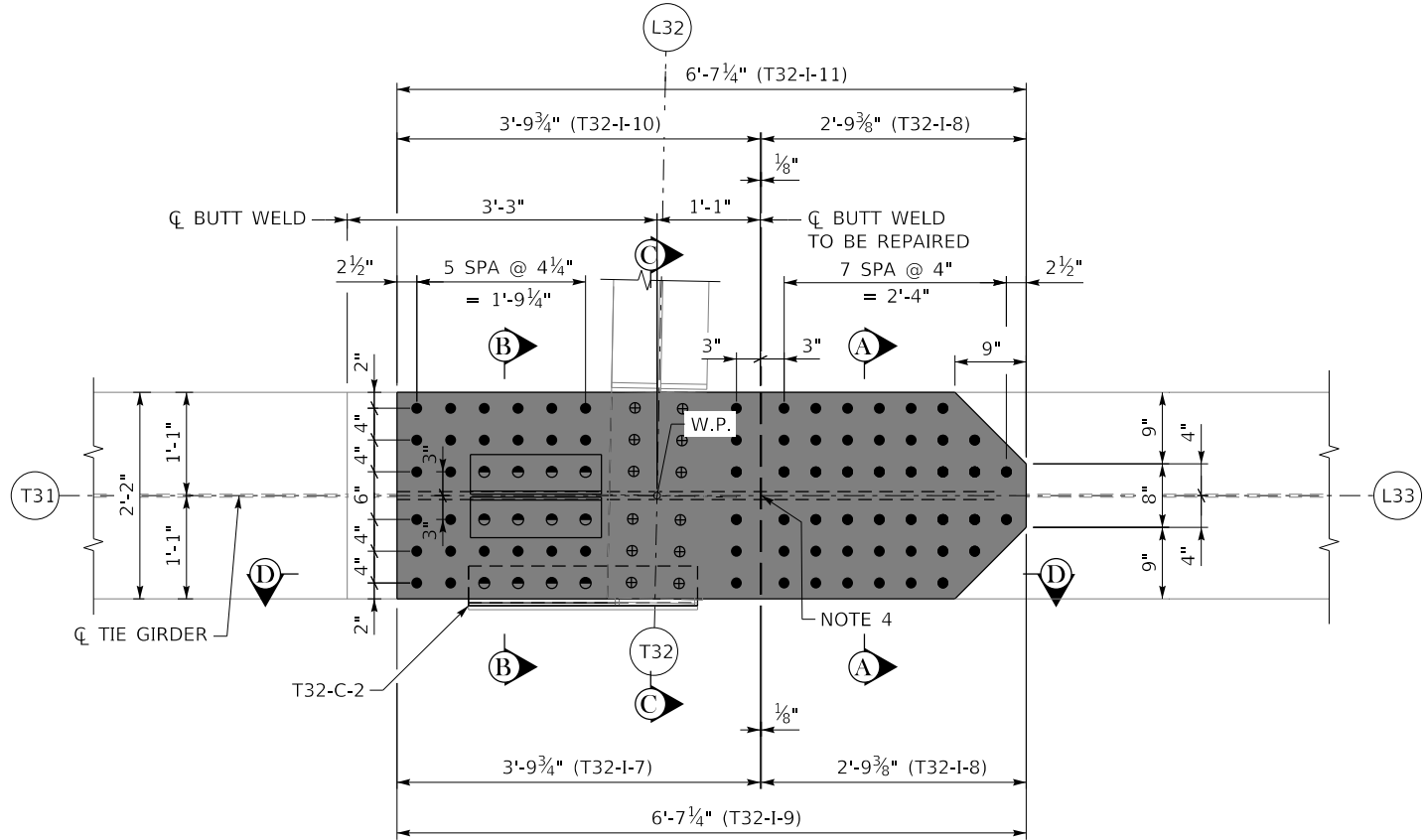
**US T22 OB REPAIR DETAIL**  
CROSSING  
OHIO RIVER

ROUTE: I-275	ITEM NO.:	COUNTY OF: BOONE
	SHEET NO. S16	DRAWING NUMBER: 28873

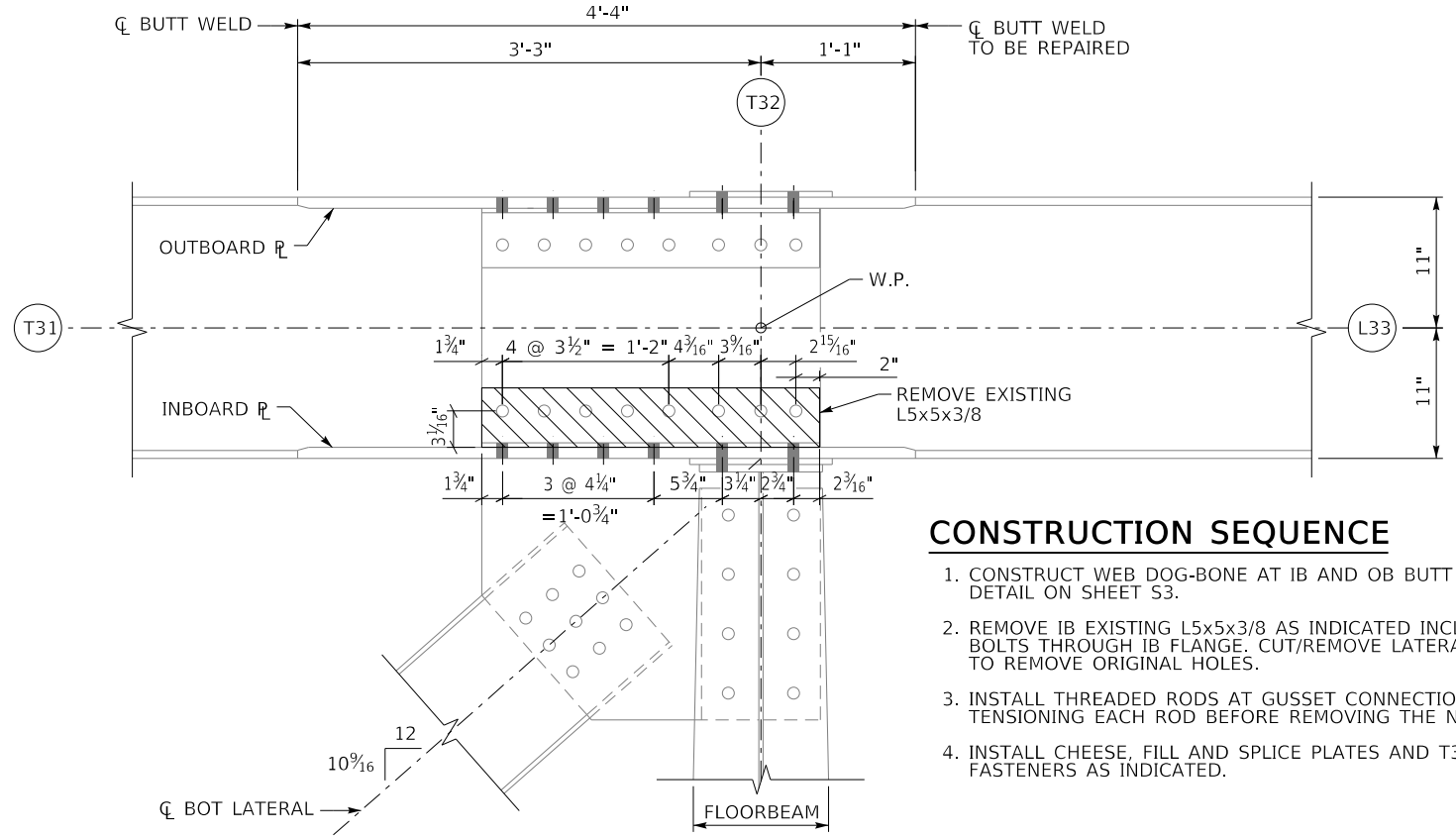




**EXISTING ELEVATION - T32**  
(UPSTREAM TRUSS, LOOKING UPSTREAM AT INBOARD FACE)

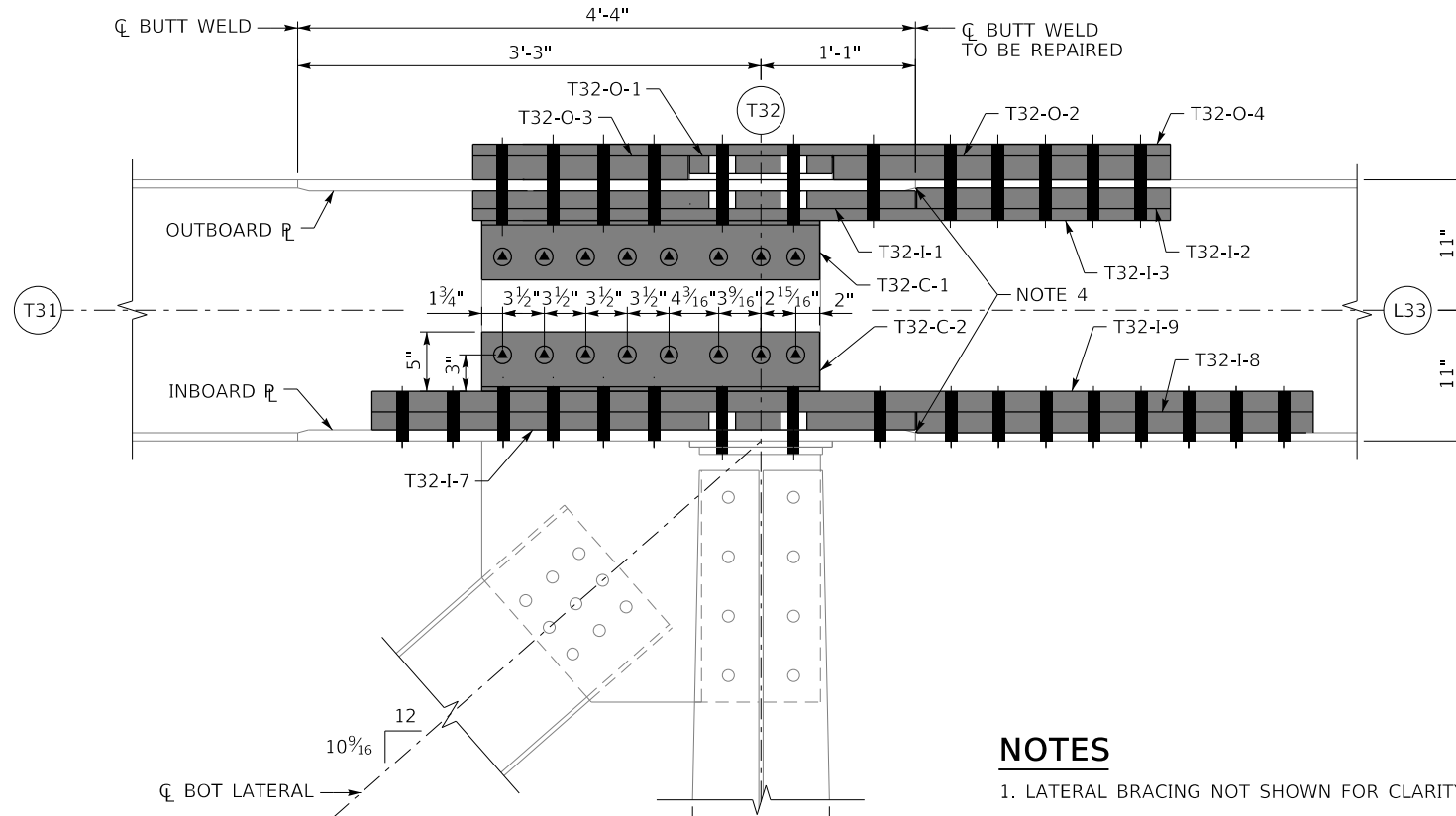


**PROPOSED ELEVATION - T32**  
(UPSTREAM TRUSS, LOOKING UPSTREAM AT INBOARD FACE)



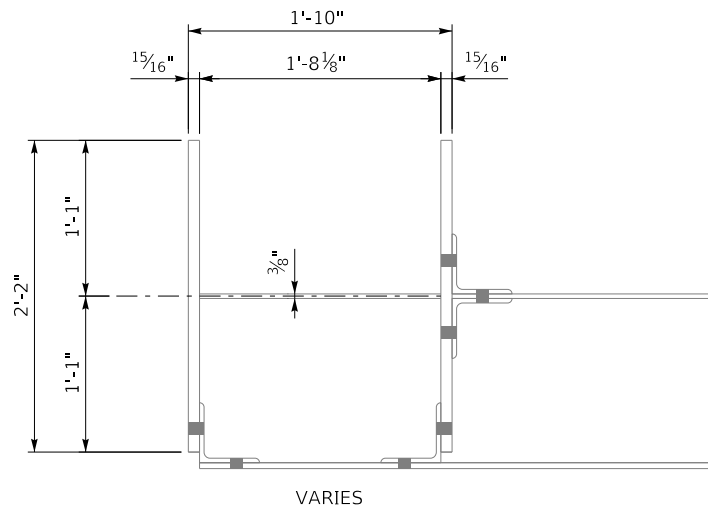
**SECTION D-D**  
(EXISTING CONDITION)

- CONSTRUCTION SEQUENCE**
1. CONSTRUCT WEB DOG-BONE AT IB AND OB BUTT WELD. SEE RETROFIT DETAIL ON SHEET S3.
  2. REMOVE IB EXISTING L5x5x3/8 AS INDICATED INCLUDING 6 EXISTING BOLTS THROUGH IB FLANGE. CUT/REMOVE LATERAL CONNECTION PLATE TO REMOVE ORIGINAL HOLES.
  3. INSTALL THREADED RODS AT GUSSET CONNECTION ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
  4. INSTALL CHEESE, FILL AND SPLICE PLATES AND T32-C-2 WITH NEW FASTENERS AS INDICATED.

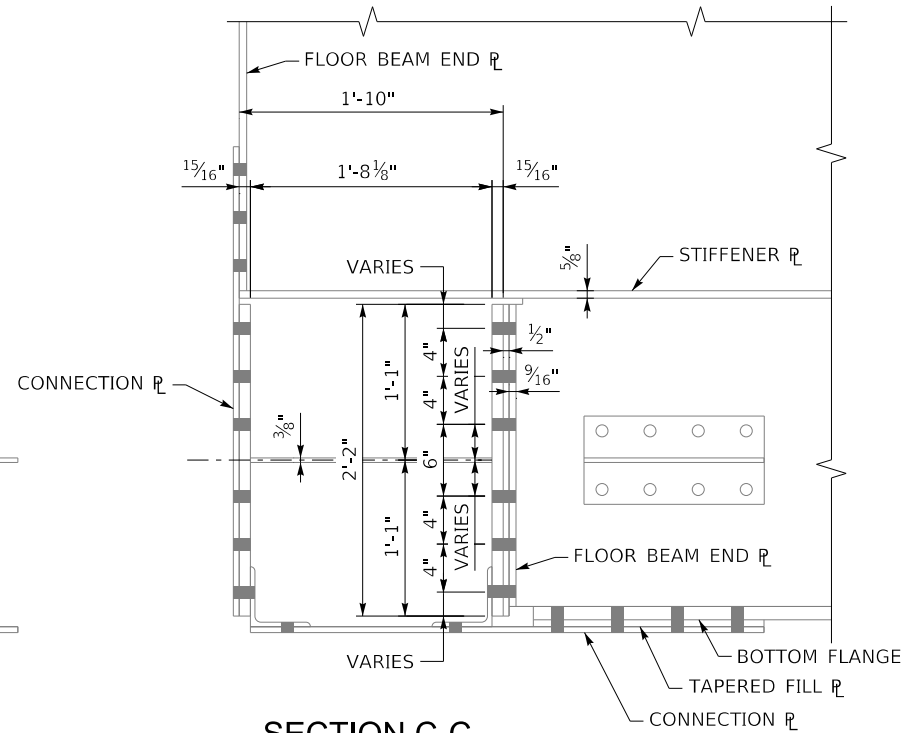


**SECTION D-D**  
(PROPOSED CONDITION)

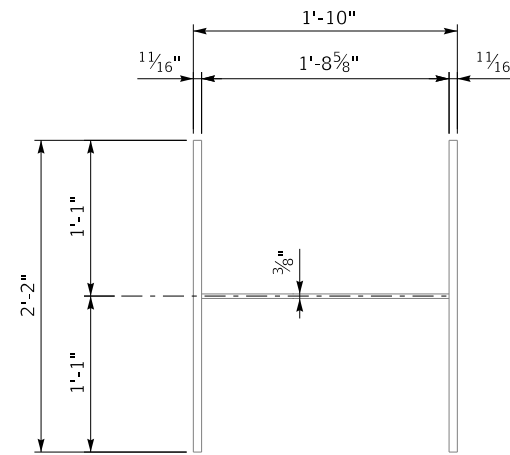
- NOTES**
1. LATERAL BRACING NOT SHOWN FOR CLARITY.
  2. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET S18.
  3. FOR BOLT LEGEND, SEE SHEET S4.
  4. CONSTRUCT DOG BONE RETROFIT DETAIL IN WEB, SEE SHEET S3.
  5. SEE SHEET S19 FOR OB REPAIRS.



**SECTION B-B**  
(EXISTING CONDITION)



**SECTION C-C**  
(EXISTING CONDITION)



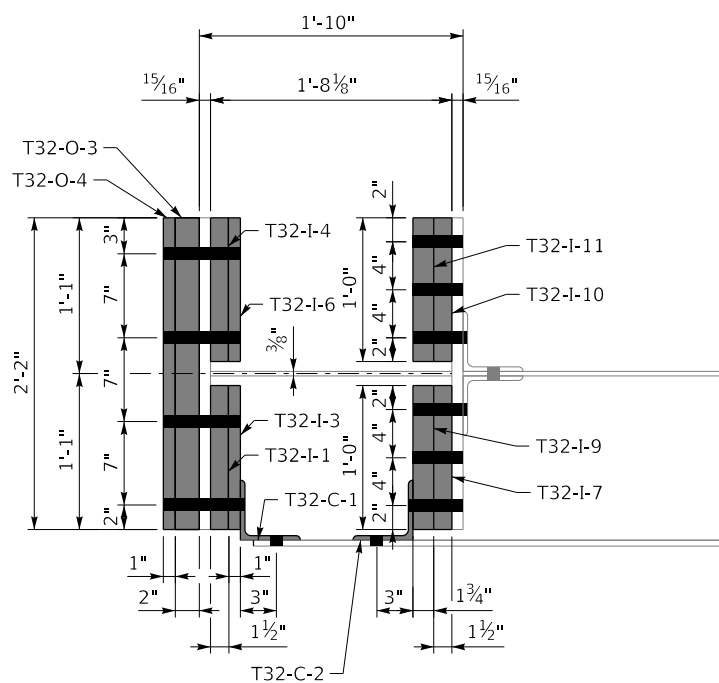
**SECTION A-A**  
(EXISTING CONDITION)

**LEGEND**

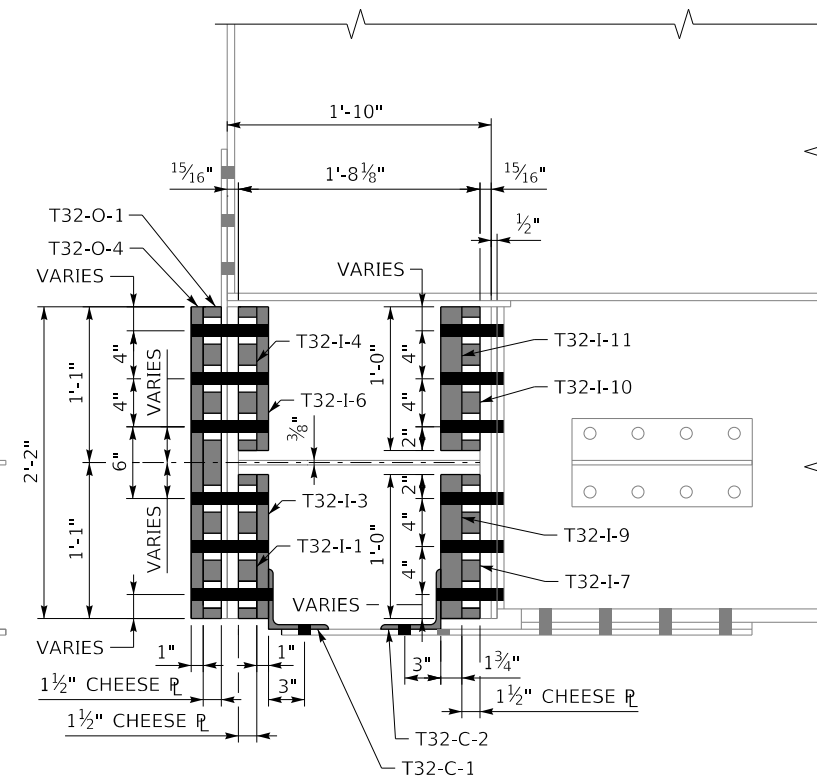
INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL.  
FOR BOLT HOLE AND SIZE, SEE SHEET S5.

**NOTES**

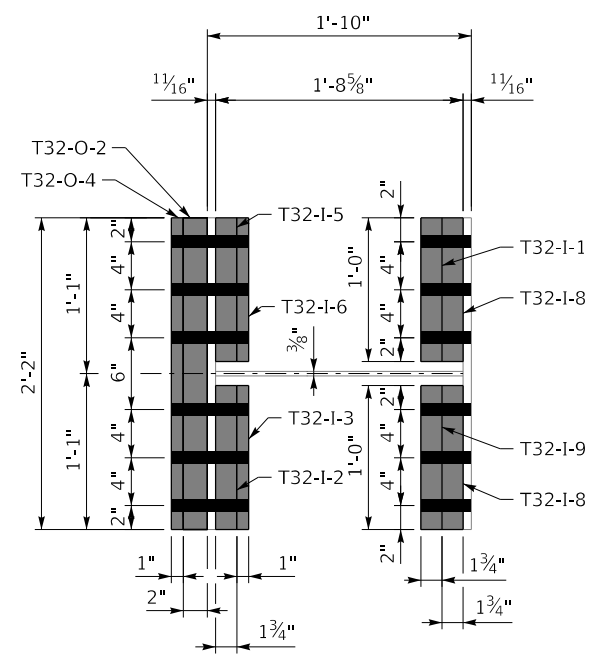
- LATERAL BRACING NOT SHOWN FOR CLARITY.
- FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET S17 AND S19.
- SEE SHEET S19 FOR OB REPAIRS.



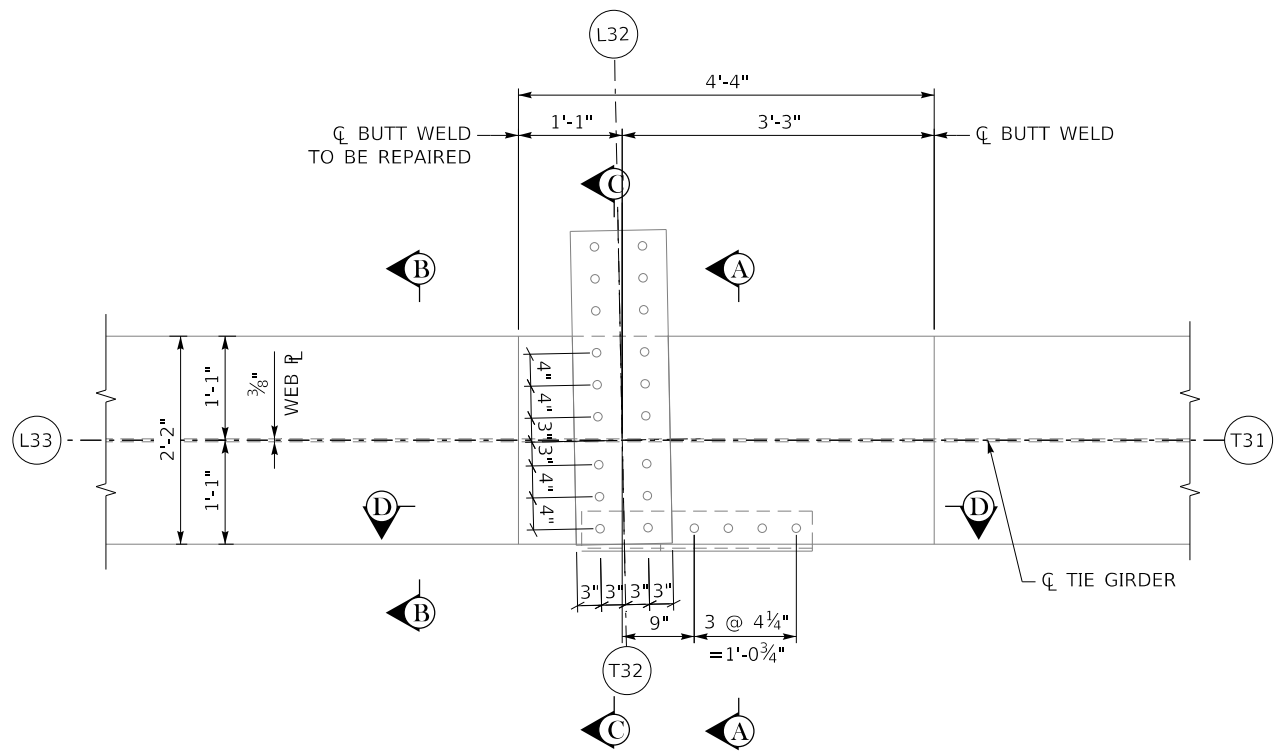
**SECTION B-B**  
(PROPOSED CONDITION)



**SECTION C-C**  
(PROPOSED CONDITION)

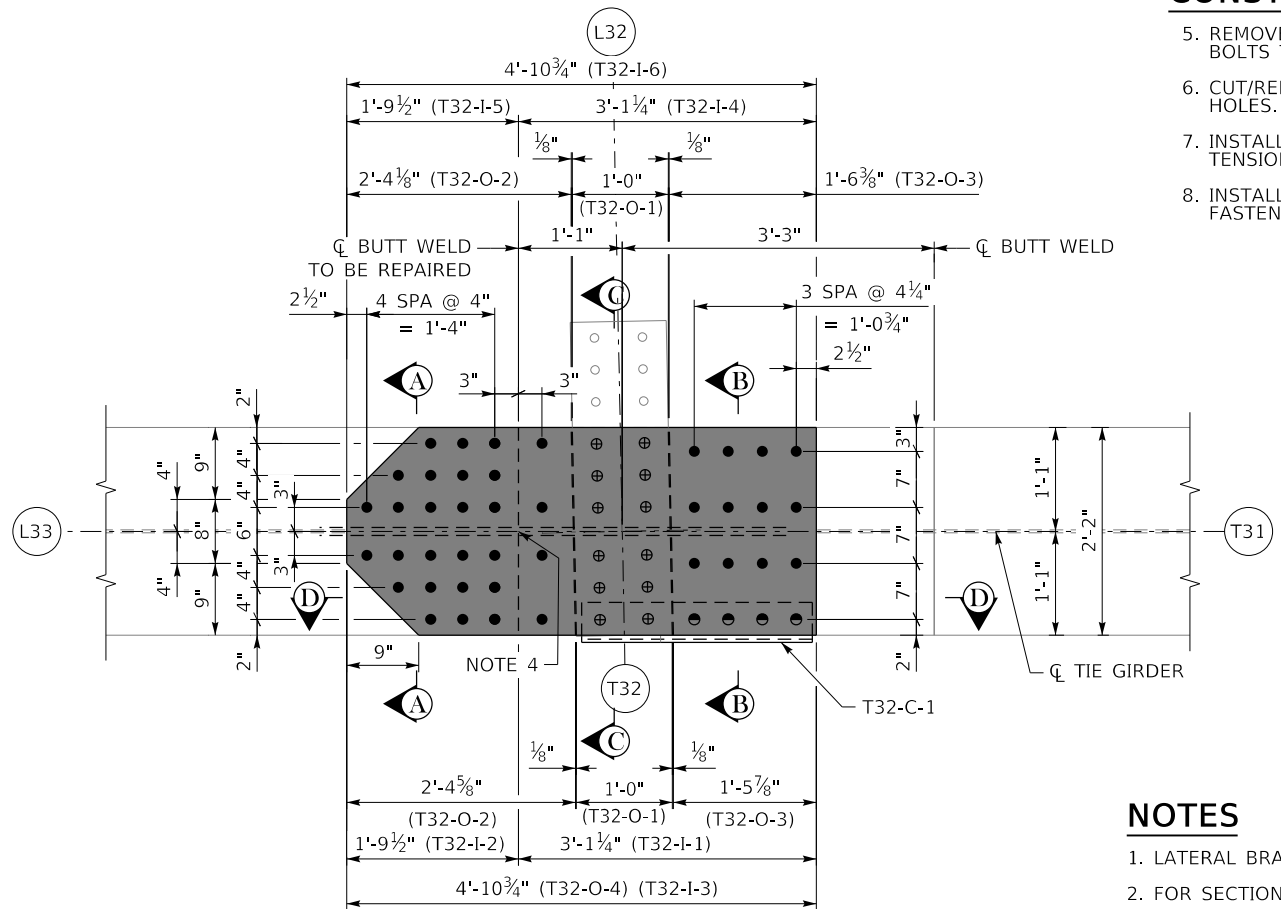


**SECTION A-A**  
(PROPOSED CONDITION)



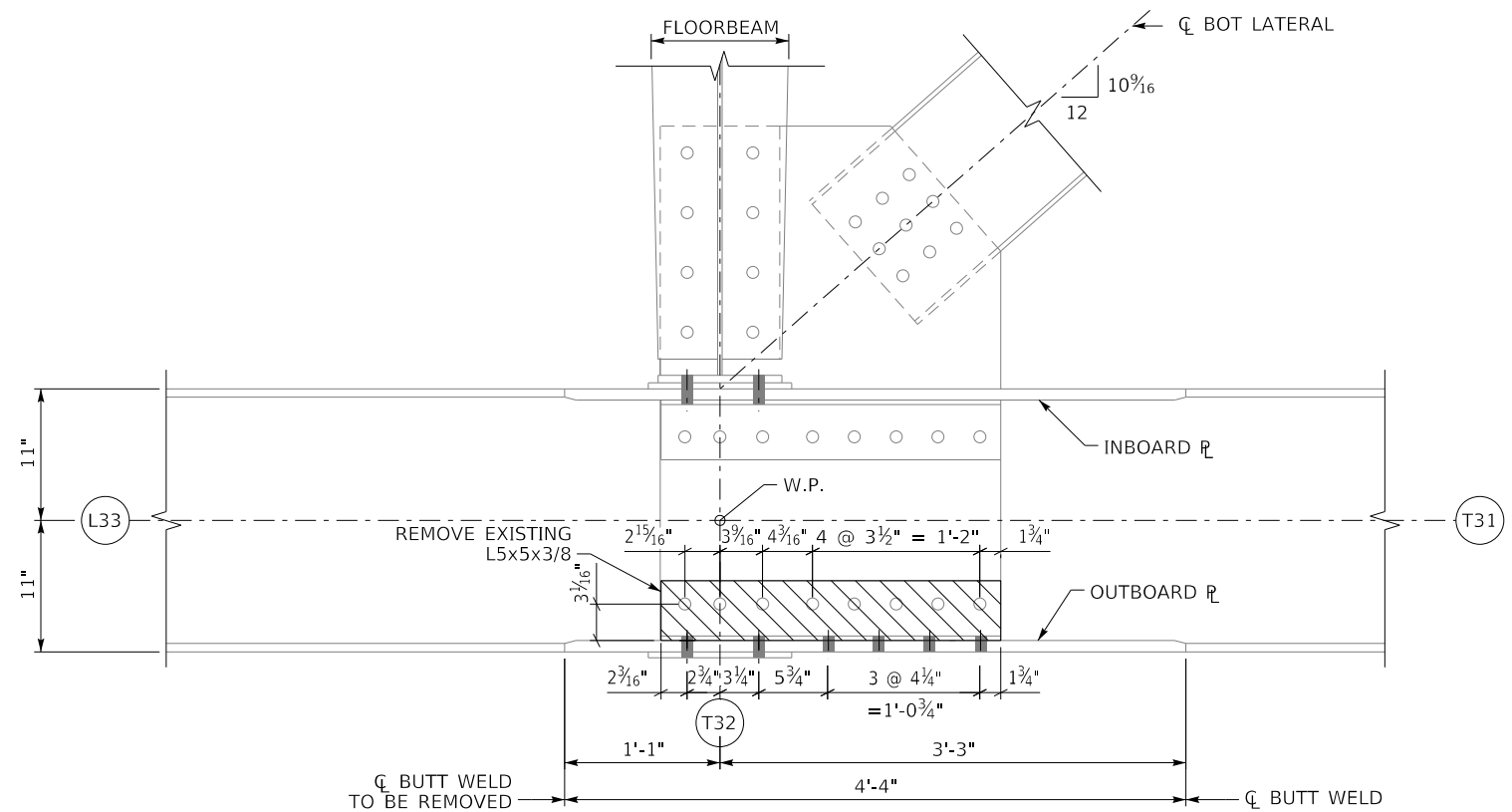
**EXISTING ELEVATION - T32**

(UPSTREAM TRUSS, LOOKING DOWNSTREAM AT OUTBOARD FACE)



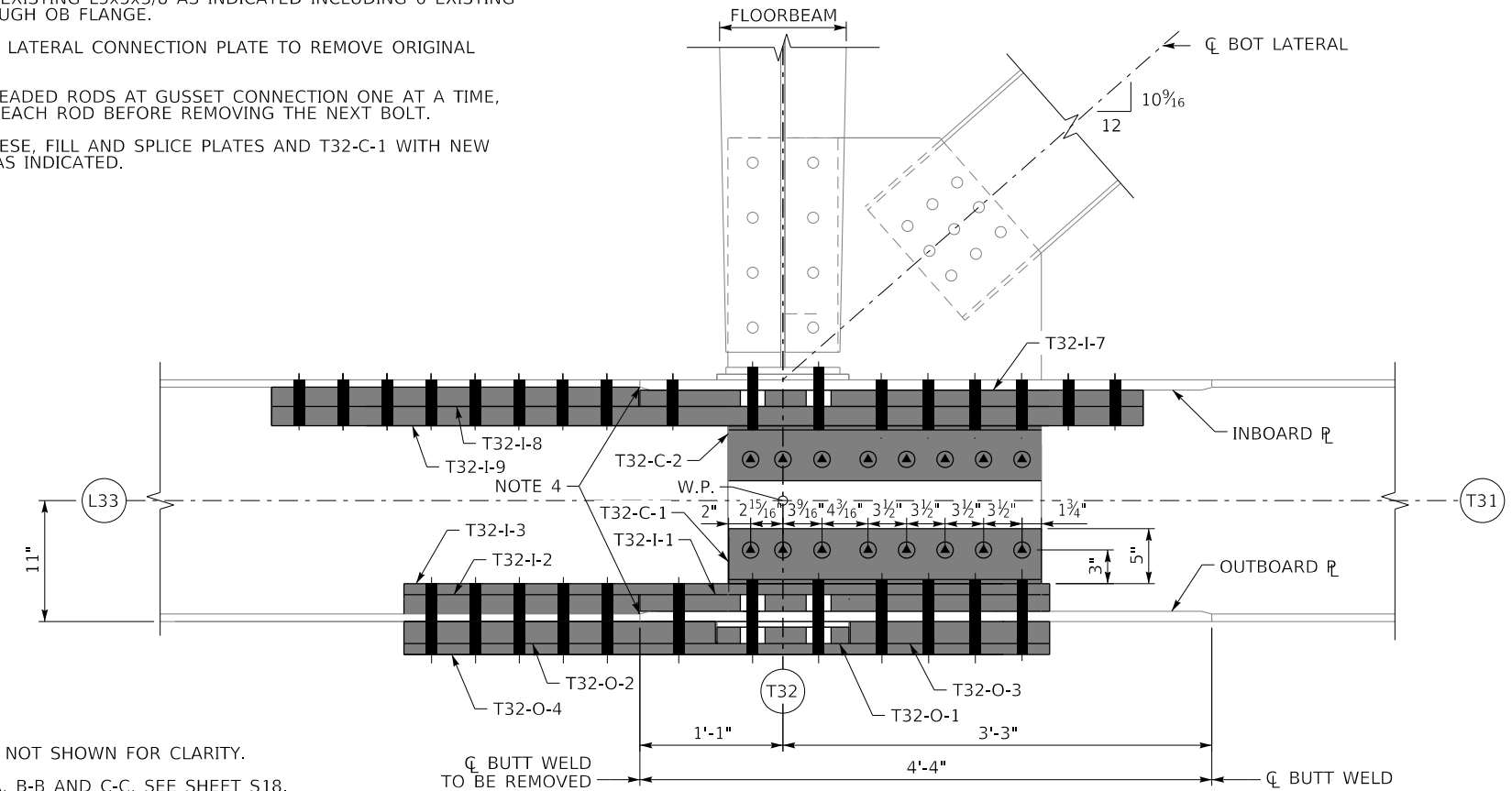
**PROPOSED ELEVATION - T32**

(UPSTREAM TRUSS, LOOKING DOWNSTREAM AT OUTBOARD FACE)



**SECTION D-D**

(EXISTING CONDITION)



**SECTION D-D**

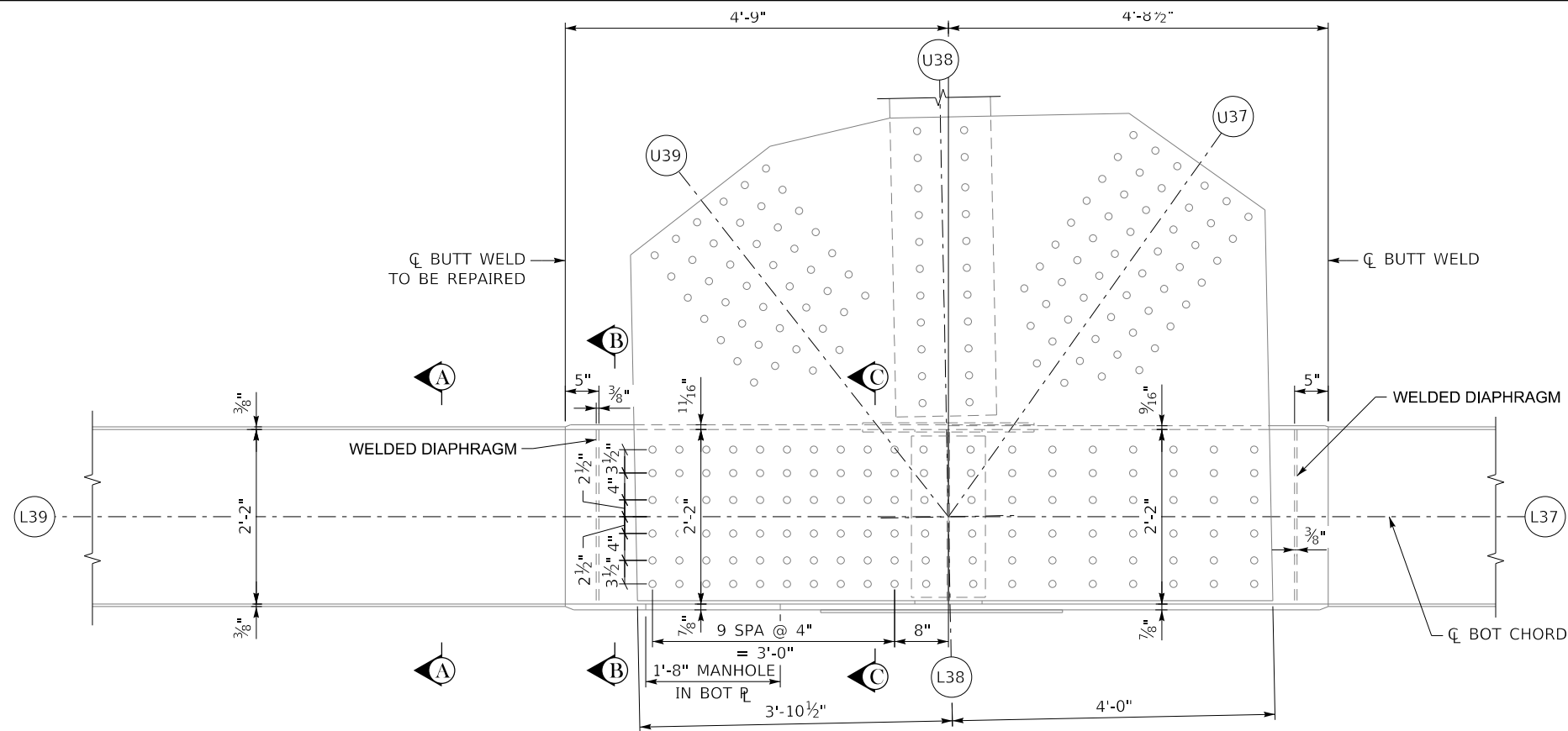
(PROPOSED CONDITION)

**CONSTRUCTION SEQUENCE**

5. REMOVE OB EXISTING L5x5x3/8 AS INDICATED INCLUDING 6 EXISTING BOLTS THROUGH OB FLANGE.
6. CUT/REMOVE LATERAL CONNECTION PLATE TO REMOVE ORIGINAL HOLES.
7. INSTALL THREADED RODS AT GUSSET CONNECTION ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
8. INSTALL CHEESE, FILL AND SPLICE PLATES AND T32-C-1 WITH NEW FASTENERS AS INDICATED.

**NOTES**

1. LATERAL BRACING NOT SHOWN FOR CLARITY.
2. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET S18.
3. FOR BOLT LEGEND, SEE SHEET S4.
4. CONSTRUCT DOG BONE RETROFIT DETAIL IN WEB, SEE SHEET S3.

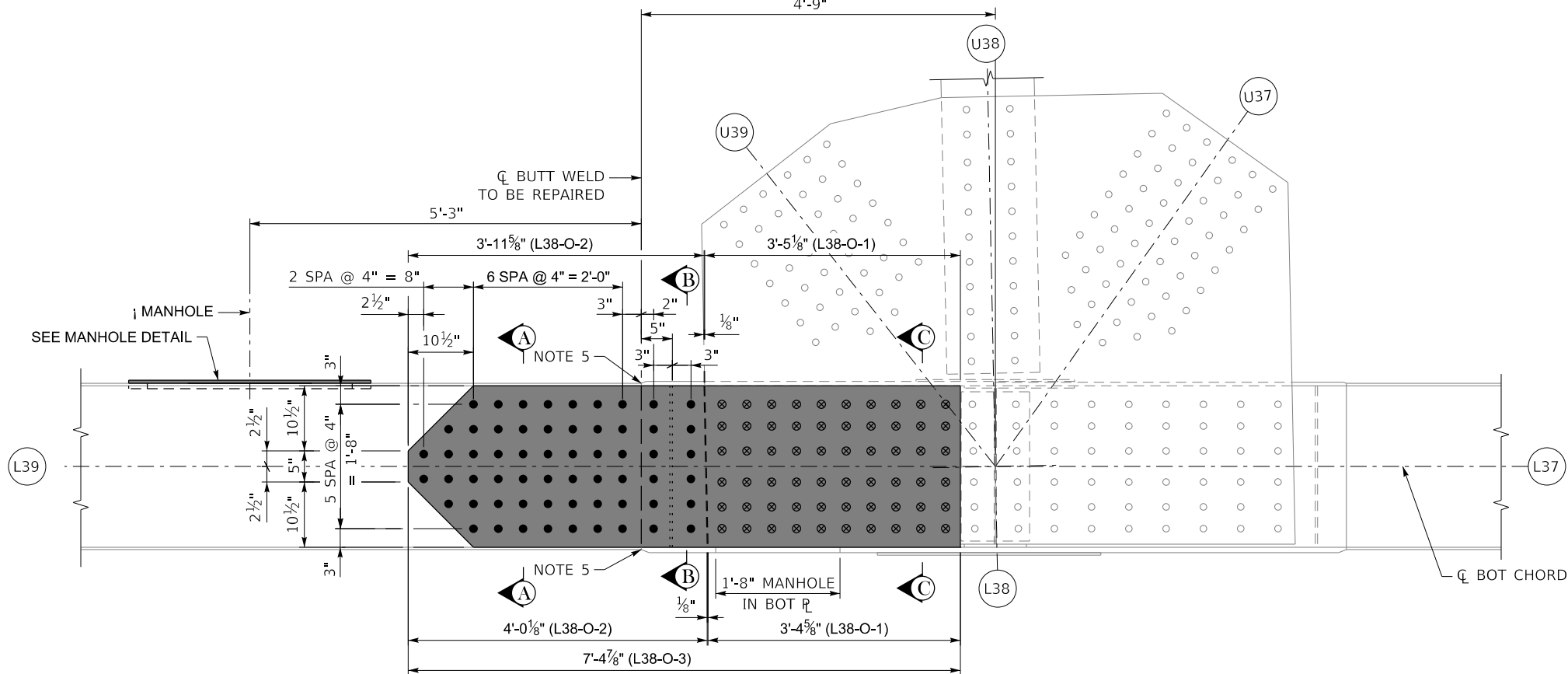


**EXISTING ELEVATION - L38**

(UPSTREAM TRUSS, LOOKING DOWNSTREAM AT OUTBOARD FACE)  
4'-9"

**CONSTRUCTION SEQUENCE**

1. CONSTRUCT COVER PLATE DOG-BONES AT OB BUTT WELDS. SEE RETROFIT DETAIL ON SHEET S3.
2. INSTALL THREADED RODS AT GUSSET CONNECTION ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
3. INSTALL CHEESE, FILL AND SPLICE PLATES WITH NEW FASTENERS AS INDICATED.



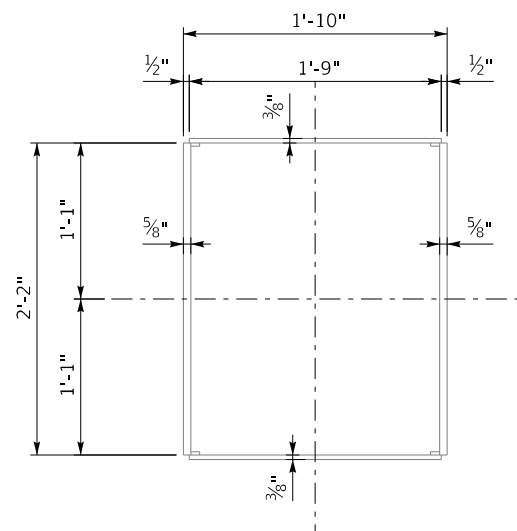
**PROPOSED ELEVATION - L38**

(UPSTREAM TRUSS, LOOKING DOWNSTREAM AT OUTBOARD FACE)  
4'-9"

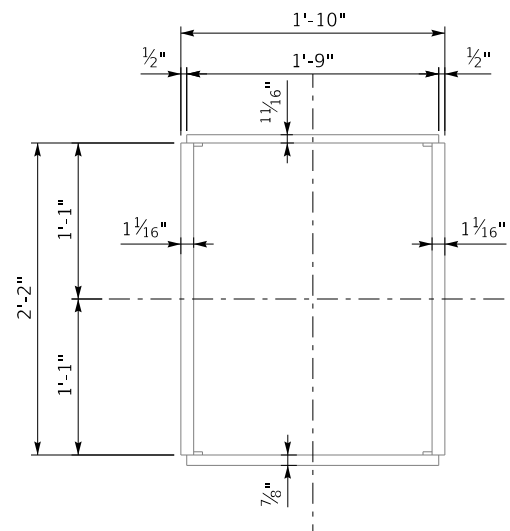
**NOTES**

1. LATERAL BRACING NOT SHOWN FOR CLARITY.
2. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET S21.
3. FOR BOLT LEGEND, SEE SHEET S4.
4. FOR MANHOLE DETAIL, SEE SHEET S29.
5. CONSTRUCT DOG BONE RETROFIT DETAIL IN TOP AND BOTTOM COVER PLATES, SEE SHEET S3.

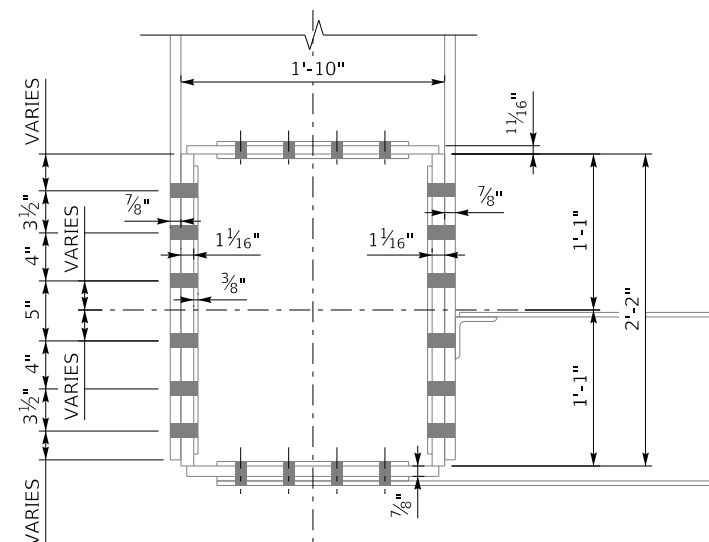
	REVISION	DATE	PREPARED BY <b>Michael Baker INTERNATIONAL</b>	DATE: 04/12/2024 DESIGNED BY: P COZZENS DETAILED BY: J JACKSON	CHECKED BY T NEWGARD P COZZENS	<b>US L38 OB REPAIR DETAIL</b> CROSSING OHIO RIVER	ROUTE	ITEM NO.	COUNTY OF
				1650 Lyndon Farm Court Louisville, KY Phone: (502)-339-3557 MBAKERINTL.COM				I-275	SHEET NO. S20
MicroStation v8.11.9.919 USER: MaryJo.Dwyer		DATE PLOTTED: 15-APR-2024		FILE NAME: pw://mb-us-pw.bentley.com/mb-us-pw-03/Documents/Louisville_KY/01_Projects/KYTC T1 Steel Bridges/008B00052N Carrol Cropper/3 Remediation/CADD/SHEETS/Carroll_05_L38-DETAIL_01.dgn					



**SECTION A-A**  
(EXISTING CONDITION)



**SECTION B-B**  
(EXISTING CONDITION)



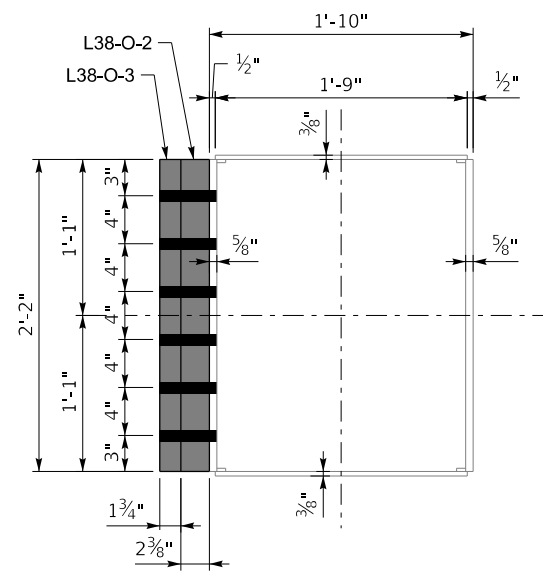
**SECTION C-C**  
(EXISTING CONDITION)

**LEGEND**

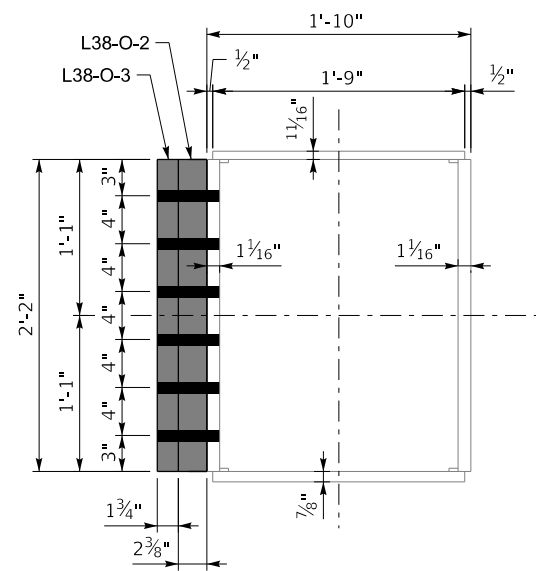
INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL. FOR BOLT HOLE AND SIZE, SEE SHEET S5.

**NOTES**

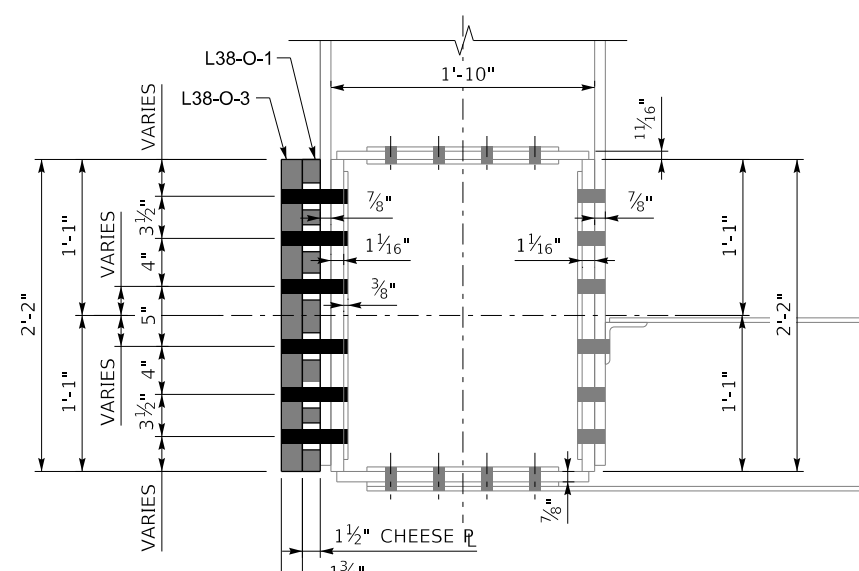
- LATERAL BRACING NOT SHOWN FOR CLARITY.
- FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET S20.



**SECTION A-A**  
(PROPOSED CONDITION)



**SECTION B-B**  
(PROPOSED CONDITION)



**SECTION C-C**  
(PROPOSED CONDITION)



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 15-APR-2024

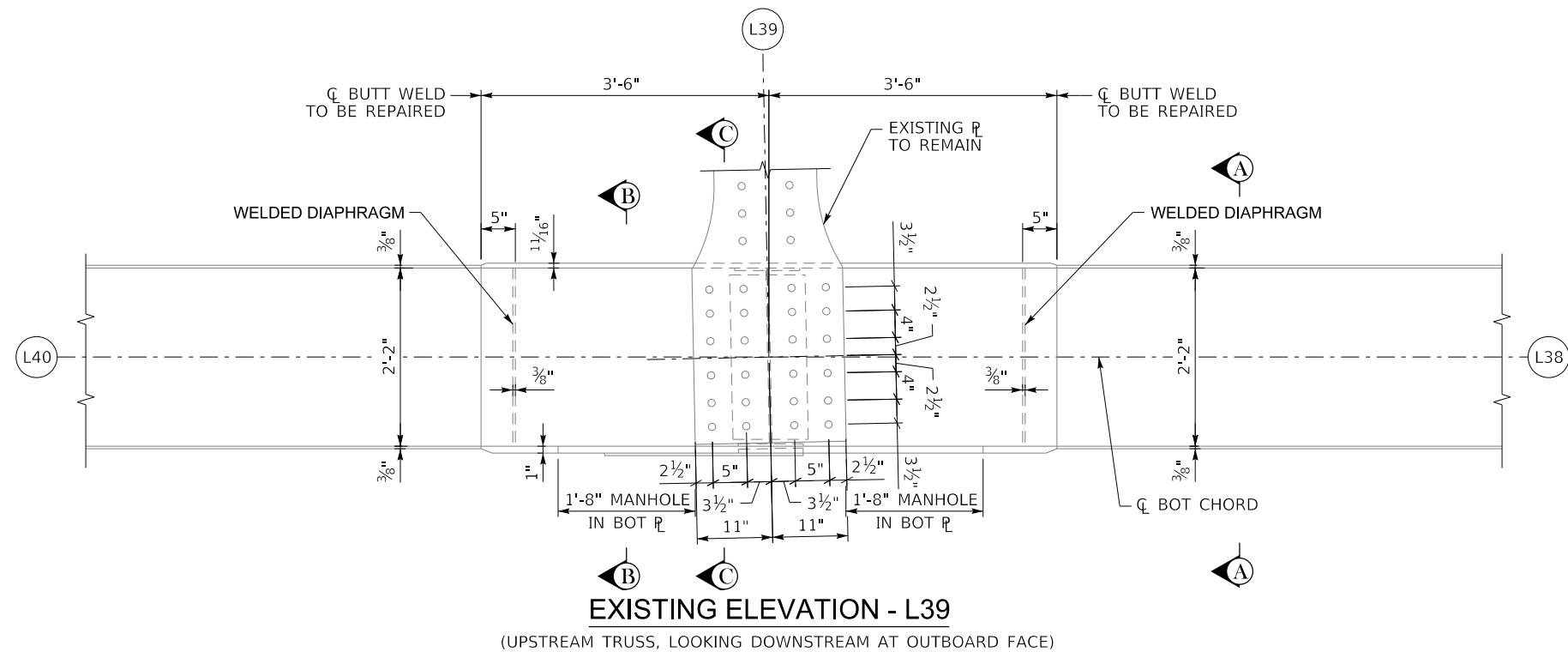
PREPARED BY  
**Michael Baker INTERNATIONAL**  
1650 Lyndon Farm Court  
Louisville, KY  
Phone: (502)-339-3557  
MBAKERINTL.COM

DATE: 04/12/2024	CHECKED BY: T NEWGARD
DESIGNED BY: P COZZENS	DETAILED BY: J JACKSON
	P COZZENS

**US L38 OB REPAIR DETAIL**  
CROSSING  
OHIO RIVER

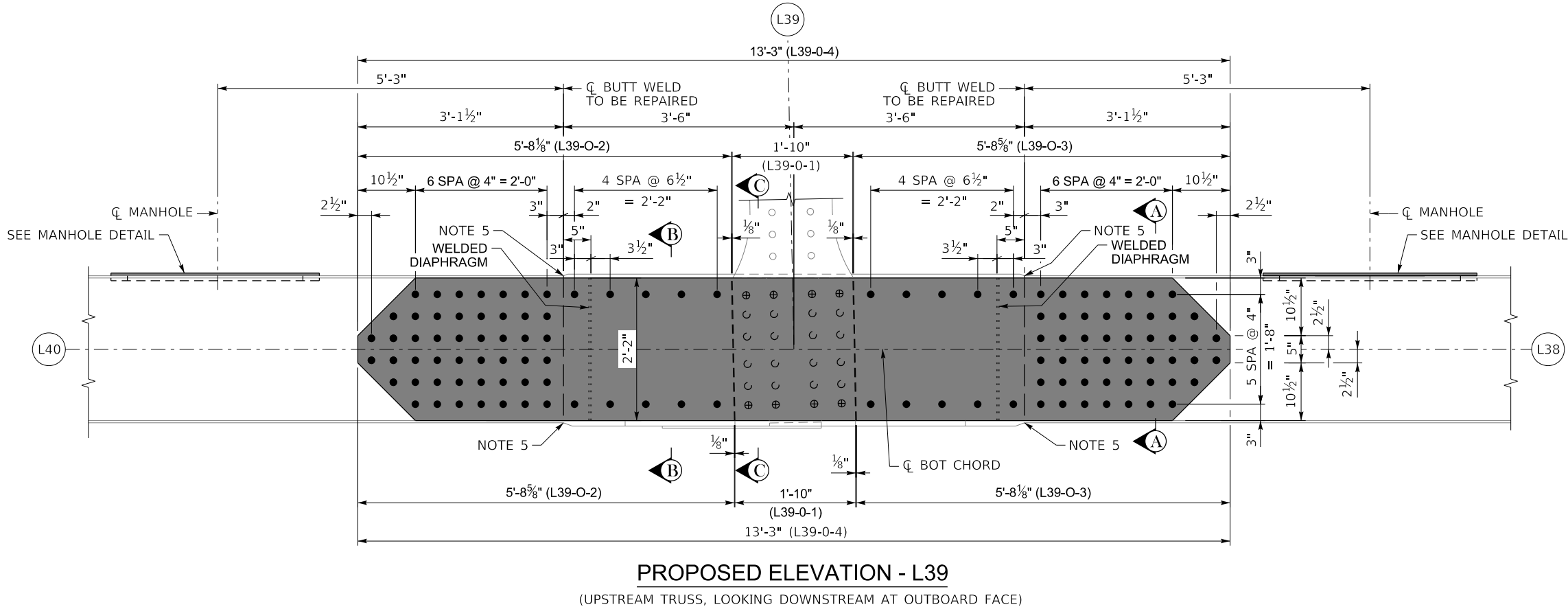
ROUTE: I-275	ITEM NO.:
	SHEET NO. S21

COUNTY OF BOONE
DRAWING NUMBER 28873



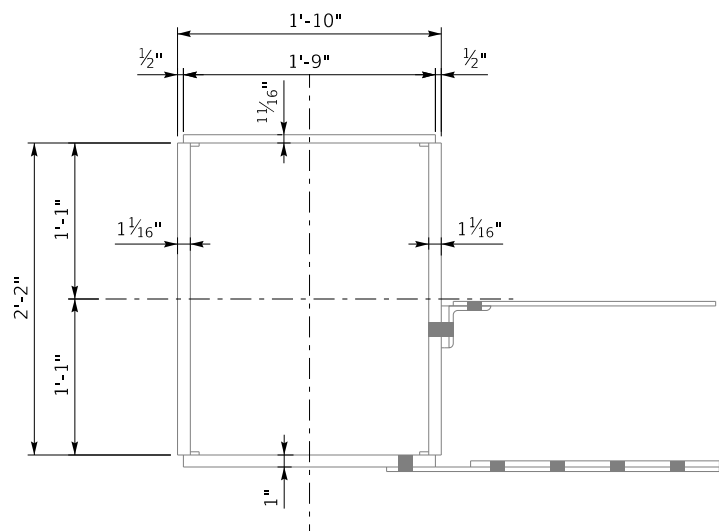
**CONSTRUCTION SEQUENCE**

1. CONSTRUCT COVER PLATE DOG-BONES AT OB BUTT WELDS. SEE RETROFIT DETAIL ON SHEET S3.
2. INSTALL THREADED RODS AT GUSSET CONNECTION ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
3. INSTALL CHEESE, FILL AND SPLICE PLATES WITH NEW FASTENERS AS INDICATED.

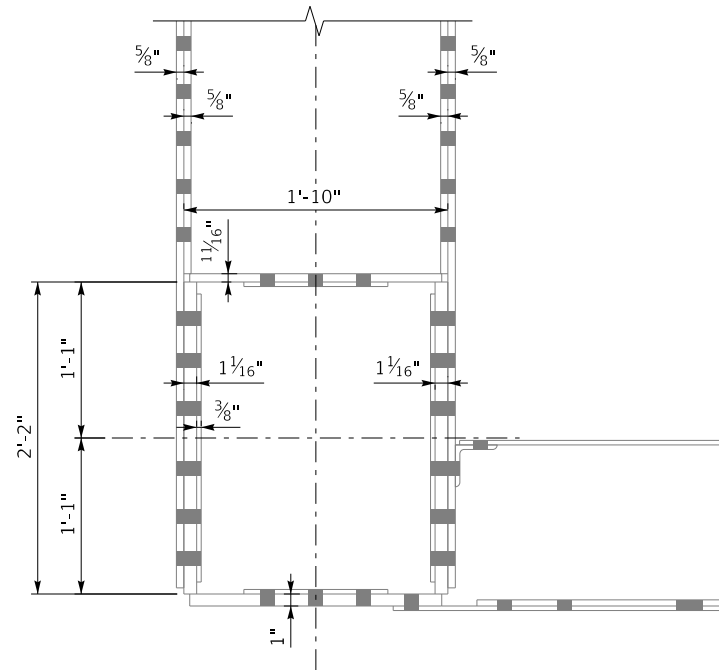


**NOTES**

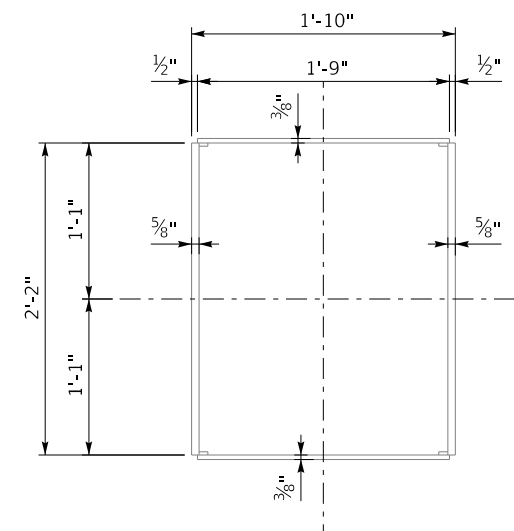
1. LATERAL BRACING NOT SHOWN FOR CLARITY.
2. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET S23.
3. FOR BOLT LEGEND, SEE SHEET S4.
4. FOR MANHOLE DETAIL, SEE SHEET S29.
5. CONSTRUCT DOG BONE RETROFIT DETAIL IN THE TOP AND BOTTOM COVER PLATES, SEE SHEET S3.



**SECTION B-B**  
(EXISTING CONDITION)



**SECTION C-C**  
(EXISTING CONDITION)



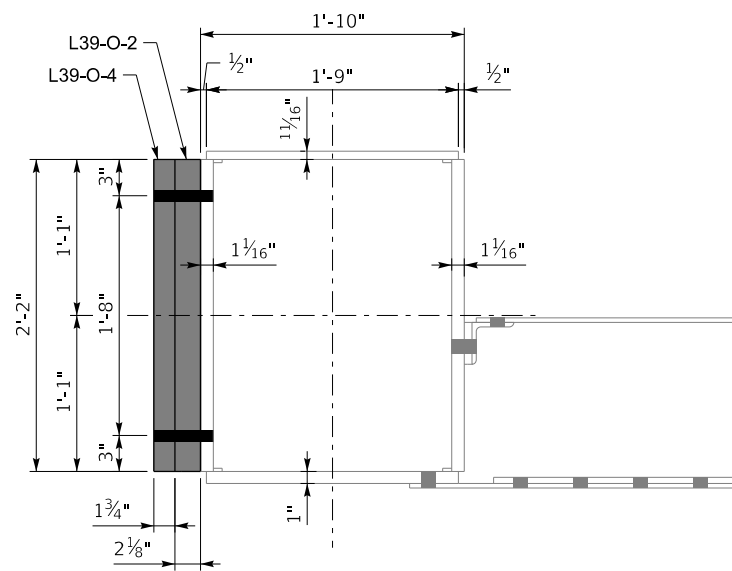
**SECTION A-A**  
(EXISTING CONDITION)

**LEGEND**

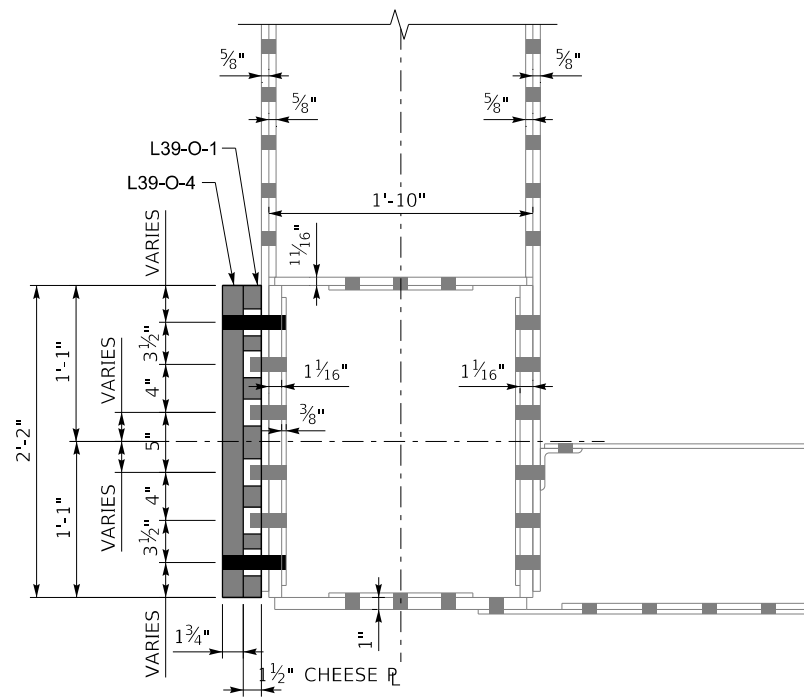
INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL.  
FOR BOLT HOLE AND SIZE, SEE SHEET S5.

**NOTES**

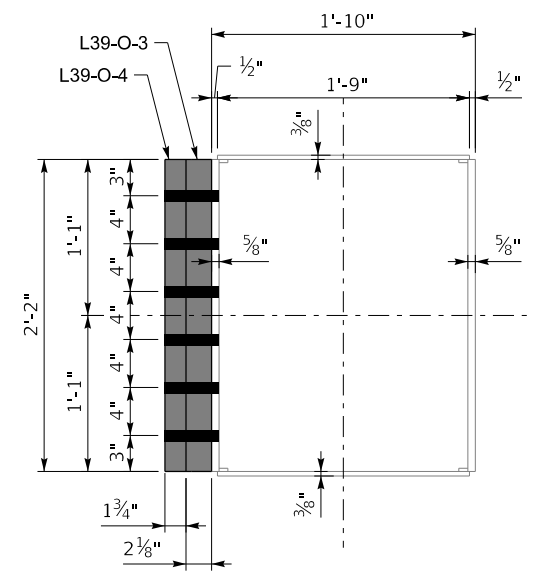
- LATERAL BRACING NOT SHOWN FOR CLARITY.
- FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET S22.



**SECTION B-B**  
(PROPOSED CONDITION)



**SECTION C-C**  
(PROPOSED CONDITION)



**SECTION A-A**  
(PROPOSED CONDITION)



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



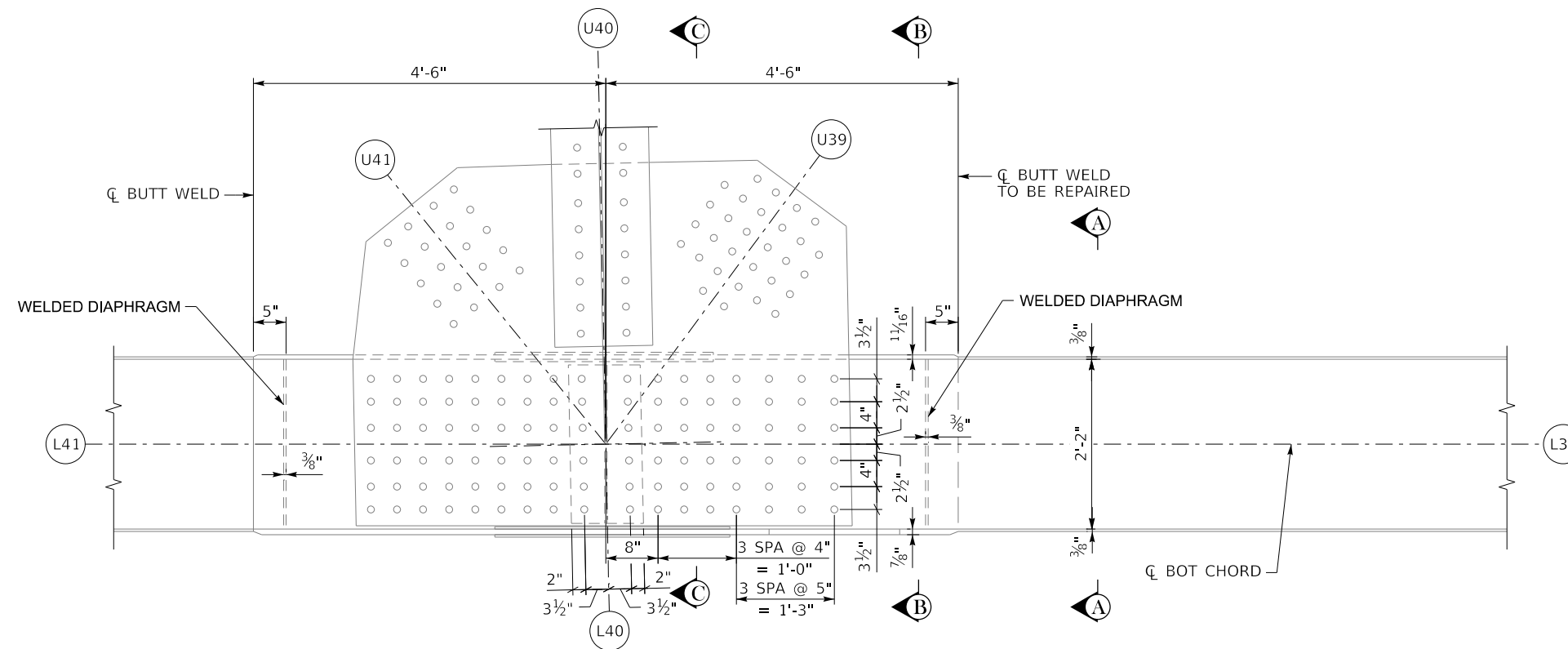
REVISION	DATE

PREPARED BY  
**Michael Baker**  
INTERNATIONAL  
1650 Lyndon Farm Court  
Louisville, KY  
Phone: (502)-339-3557  
MBAKERINTL.COM

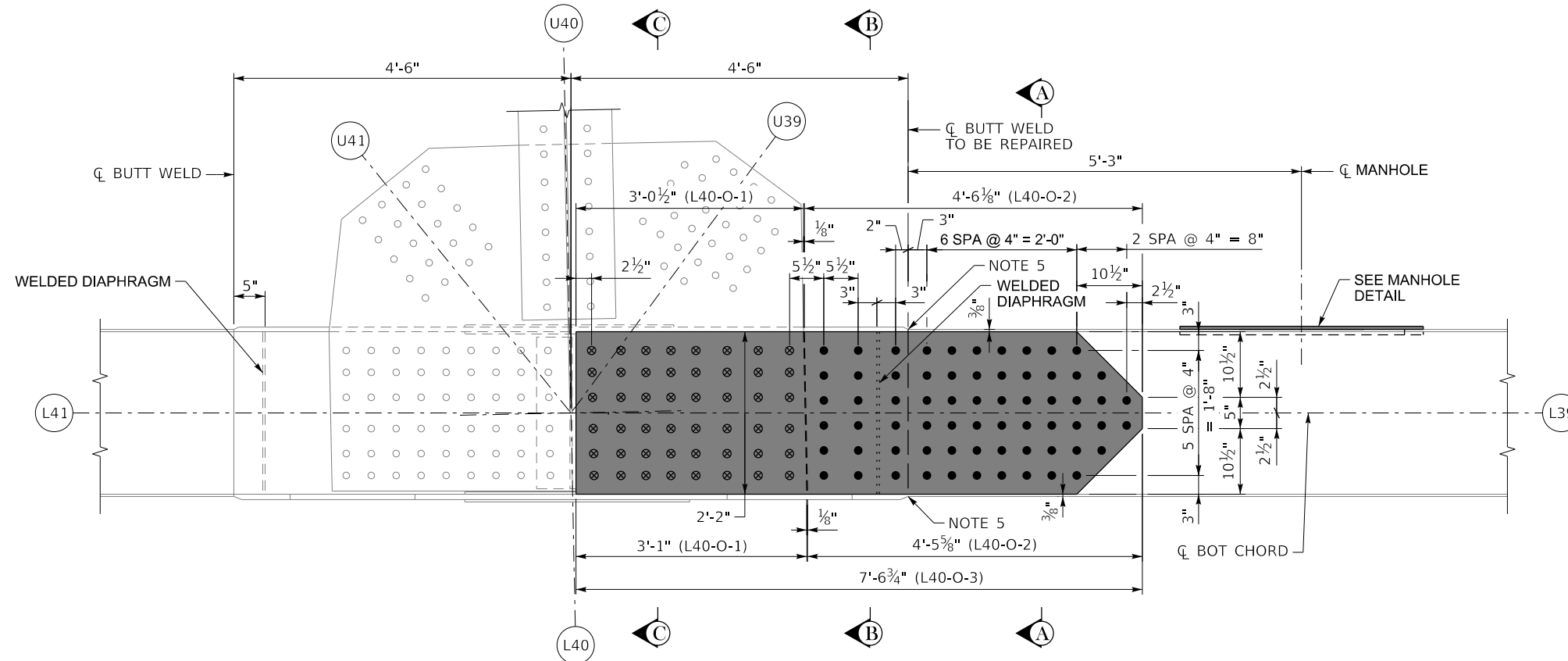
DATE: 04/12/2024	CHECKED BY:
DESIGNED BY: P COZZENS	T NEWGARD
DETAILED BY: J JACKSON	P COZZENS

**US L39 OB REPAIR DETAIL**  
CROSSING  
OHIO RIVER

ROUTE	ITEM NO.	COUNTY OF
I-275	S23	BOONE
SHEET NO.		DRAWING NUMBER
S23		28873



**EXISTING ELEVATION - L40**  
(LOOKING DOWNSTREAM AT OUTBOARD FACE)



**PROPOSED ELEVATION - L40**  
(LOOKING DOWNSTREAM AT OUTBOARD FACE)

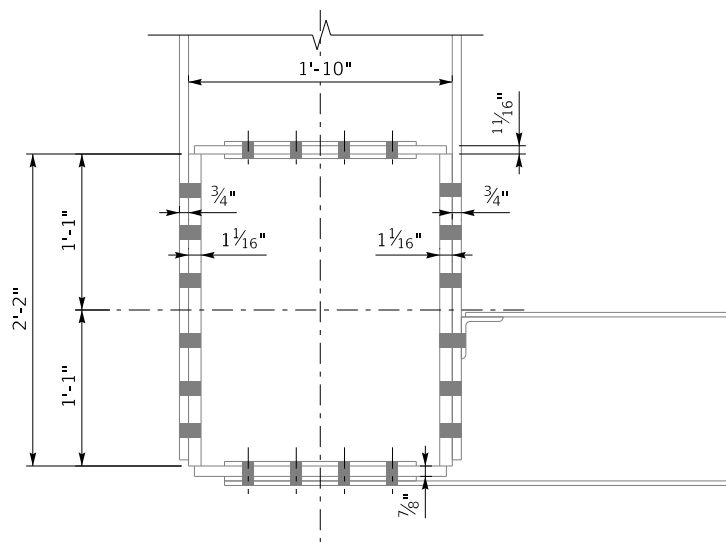
**CONSTRUCTION SEQUENCE**

1. CONSTRUCT COVER PLATE DOG-BONES AT OB BUTT WELDS. SEE RETROFIT DETAIL ON SHEET S3.
2. INSTALL THREADED RODS AT GUSSET CONNECTION ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
3. INSTALL CHEESE, FILL AND SPLICE PLATES WITH NEW FASTENERS AS INDICATED.

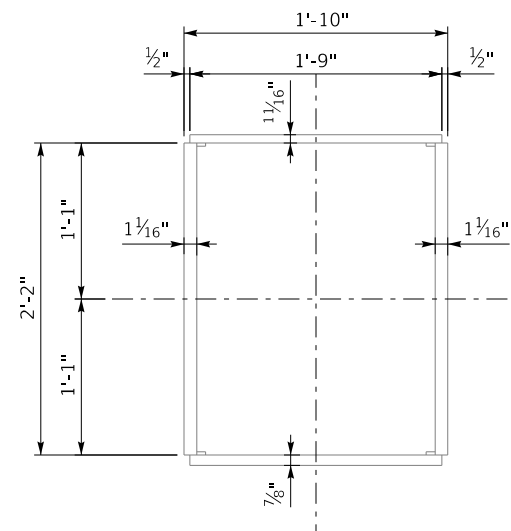
**NOTES**

1. LATERAL BRACING NOT SHOWN FOR CLARITY.
2. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET S25.
3. FOR BOLT LEGEND, SEE SHEET S4.
4. FOR MANHOLE DETAIL, SEE SHEET S29.
5. CONSTRUCT DOG BONE RETROFIT DETAIL IN TOP AND BOTTOM COVER PLATES, SEE SHEET S3.

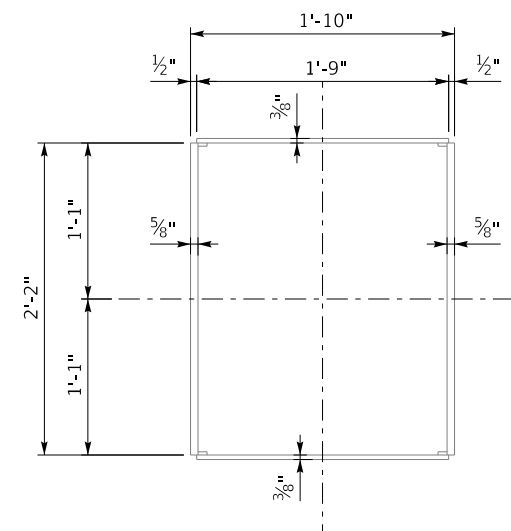




**SECTION C-C**  
(EXISTING CONDITION)



**SECTION B-B**  
(EXISTING CONDITION)



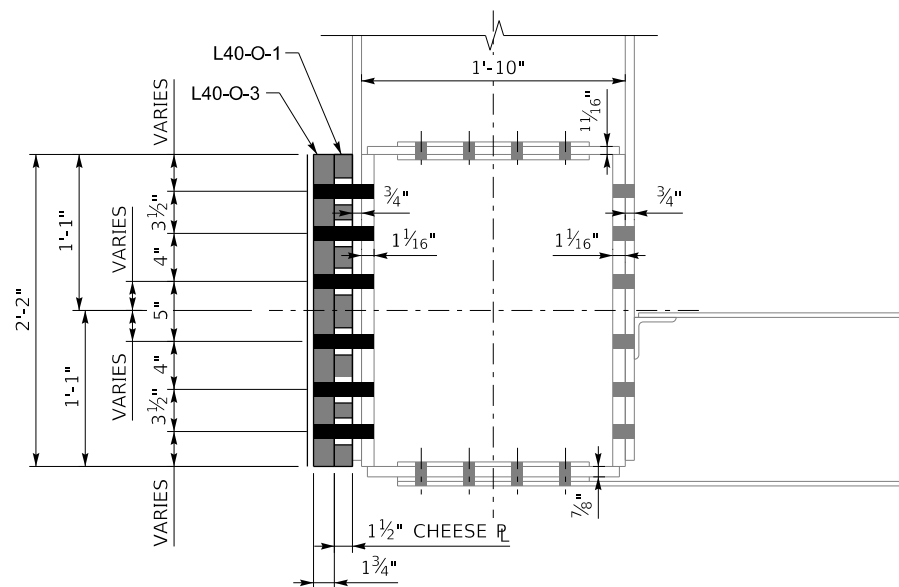
**SECTION A-A**  
(EXISTING CONDITION)

**LEGEND**

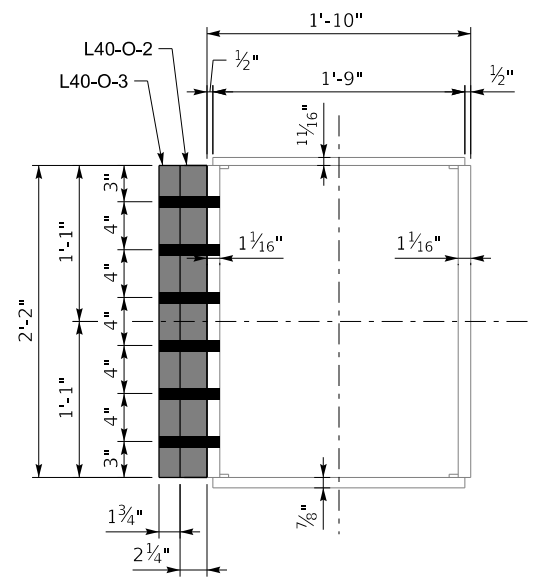
INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL.  
FOR BOLT HOLE AND SIZE, SEE SHEET S5.

**NOTES**

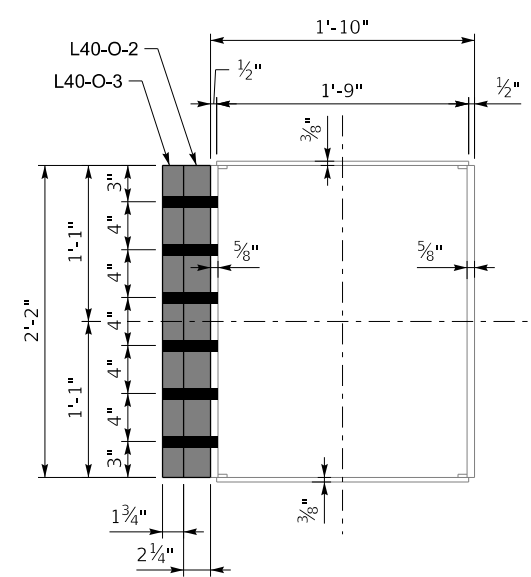
- LATERAL BRACING NOT SHOWN FOR CLARITY.
- FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET S24.



**SECTION C-C**  
(PROPOSED CONDITION)



**SECTION B-B**  
(PROPOSED CONDITION)



**SECTION A-A**  
(PROPOSED CONDITION)



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

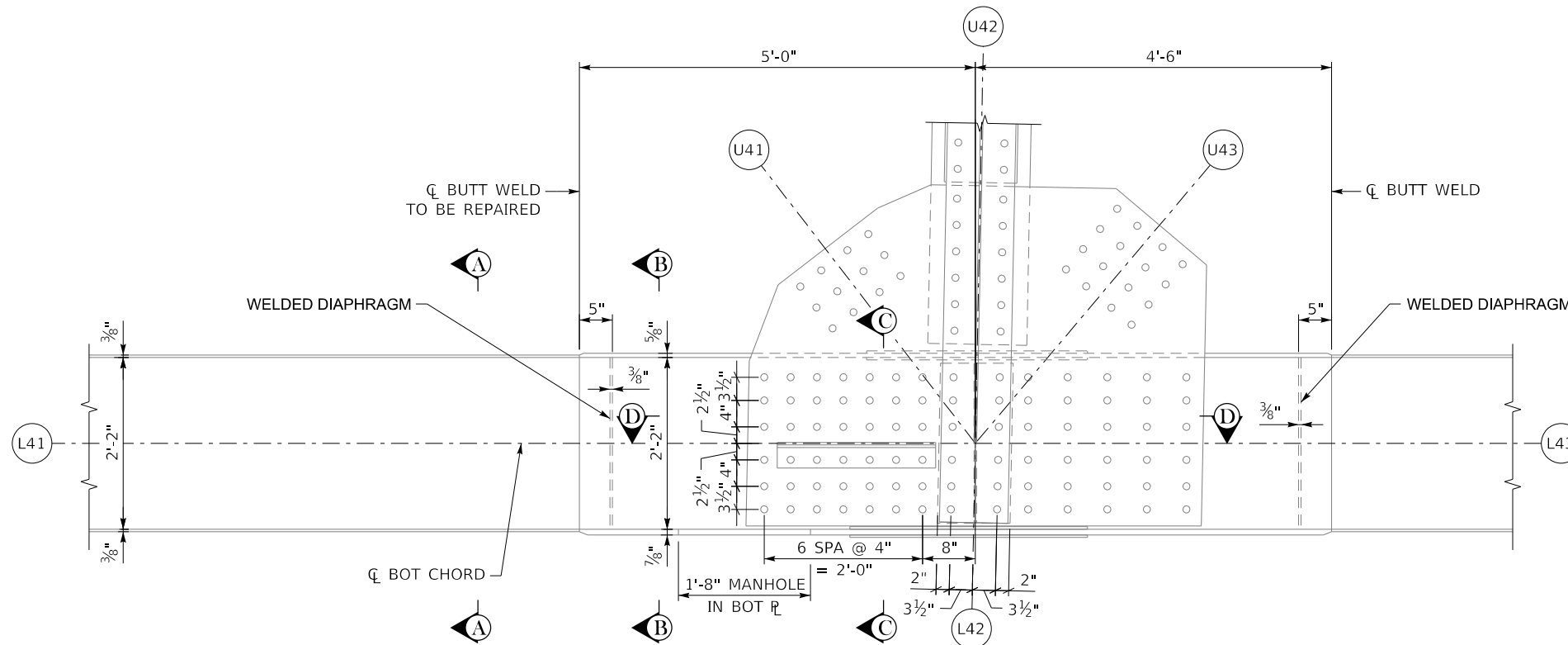
DATE PLOTTED: 15-APR-2024

PREPARED BY  
**Michael Baker INTERNATIONAL**  
1650 Lyndon Farm Court  
Louisville, KY  
Phone: (502)-339-3557  
MBAKERINTL.COM

DATE: 04/12/2024	CHECKED BY:
DESIGNED BY: P COZZENS	T NEWGARD
DETAILED BY: J JACKSON	P COZZENS

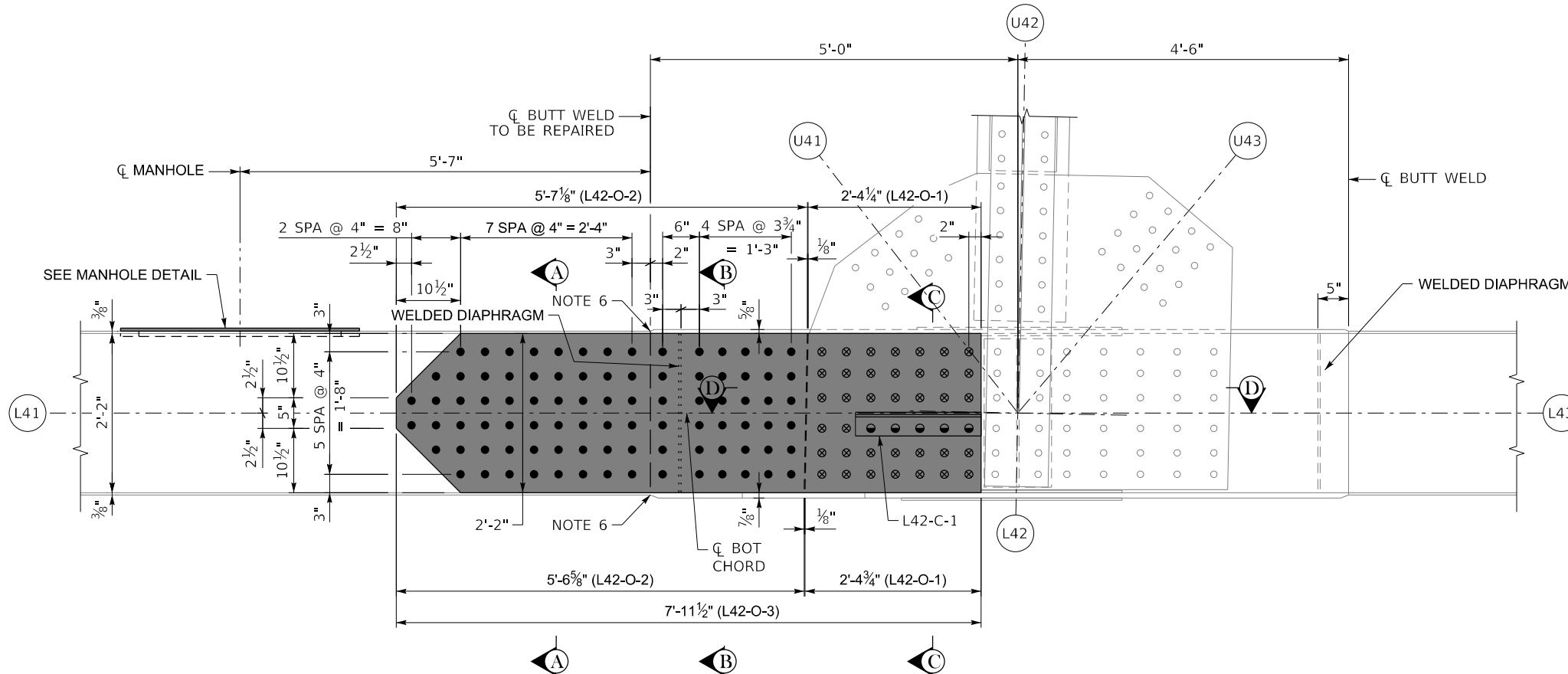
**US L40 OB REPAIR DETAIL**  
CROSSING  
OHIO RIVER

ROUTE	ITEM NO.	COUNTY OF
I-275	S25	BOONE
	DRAWING NUMBER	
	28873	



**EXISTING ELEVATION - L42**

(UPSTREAM TRUSS, LOOKING UPSTREAM AT INBOARD FACE)



**PROPOSED ELEVATION - L42**

(PROPOSED TRUSS, LOOKING UPSTREAM AT INBOARD FACE)

**CONSTRUCTION SEQUENCE**

1. CONSTRUCT COVER PLATE DOG-BONES AT IB BUTT WELDS. SEE RETROFIT DETAIL ON SHEET S3.
2. INSTALL THREADED RODS AT GUSSET CONNECTION ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
3. DISCONNECT AND REMOVE IB EXISTING L3½x3½x¾ AS INDICATED. CUT/REMOVE SPECIFIED END PORTION OF MID-HEIGHT LATERAL CONNECTION PLATE.
4. INSTALL CHEESE, FILL AND SPLICE PLATES AND L42-C-1 WITH NEW FASTENERS AS INDICATED.

**NOTES**

1. LATERAL BRACING NOT SHOWN FOR CLARITY.
2. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET S27.
3. FOR SECTION D-D, SEE SHEET S28.
4. FOR BOLT LEGEND, SEE SHEET S4.
5. FOR MANHOLE DETAIL, SEE SHEET S29.
6. CONSTRUCT DOG BONE RETROFIT DETAIL IN TOP AND BOTTOM COVER PLATES, SEE SHEET S3.



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION      DATE

DATE PLOTTED: 15-APR-2024

PREPARED BY  
**Michael Baker**  
INTERNATIONAL  
1850 Lyndon Farm Court  
Louisville, KY  
Phone: (502)-339-3557  
MBAKERINTL.COM

DATE: 04/12/2024  
DESIGNED BY: P COZZENS  
DETAILED BY: J JACKSON

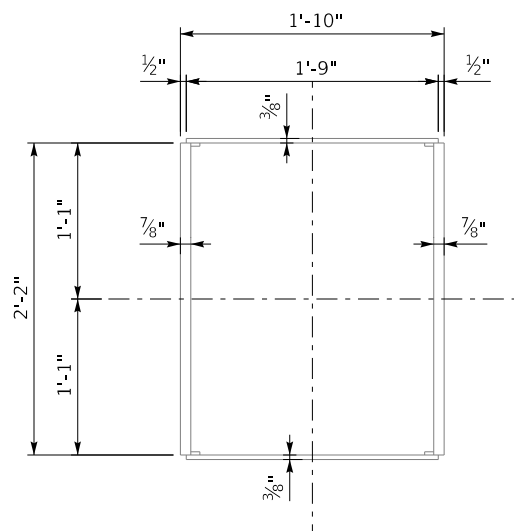
CHECKED BY  
T NEWGARD  
P COZZENS

**US L42 IB REPAIR DETAIL**  
CROSSING  
OHIO RIVER

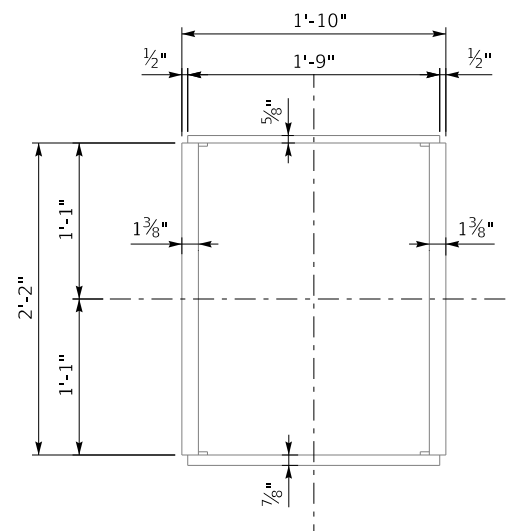
ROUTE  
I-275

ITEM NO.  
SHEET NO.  
S26

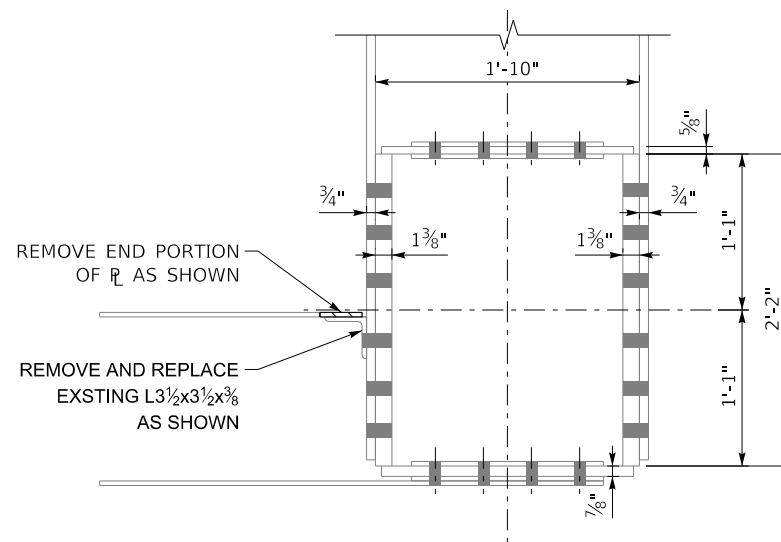
COUNTY OF  
**BOONE**  
DRAWING NUMBER  
**28873**



**SECTION A-A**  
(EXISTING CONDITION)



**SECTION B-B**  
(EXISTING CONDITION)



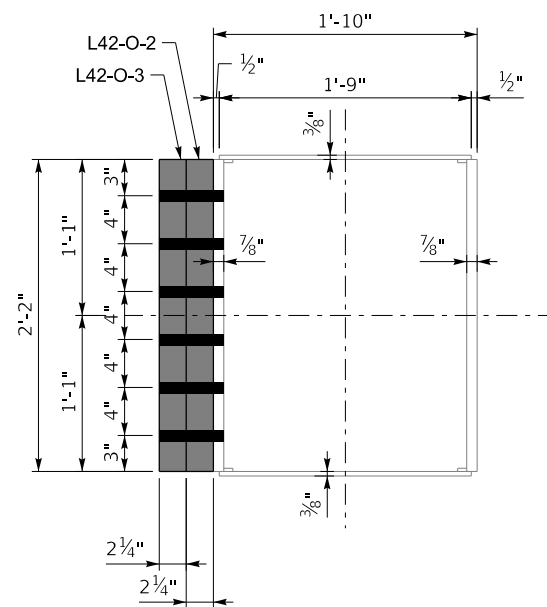
**SECTION C-C**  
(EXISTING CONDITION)

**LEGEND**

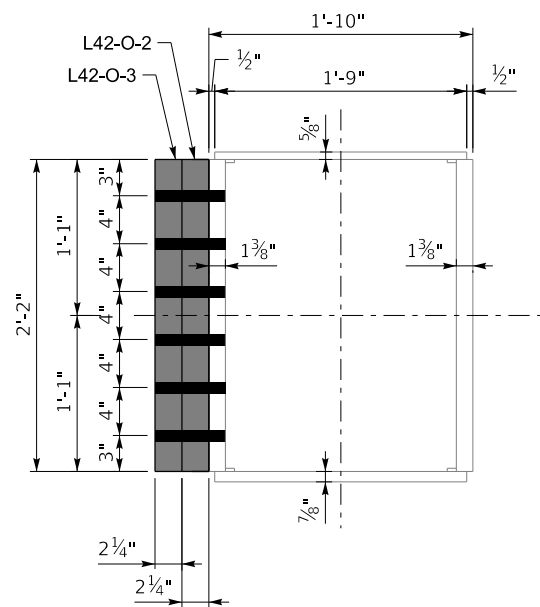
■ INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL. FOR BOLT HOLE AND SIZE, SEE SHEET S5.

**NOTES**

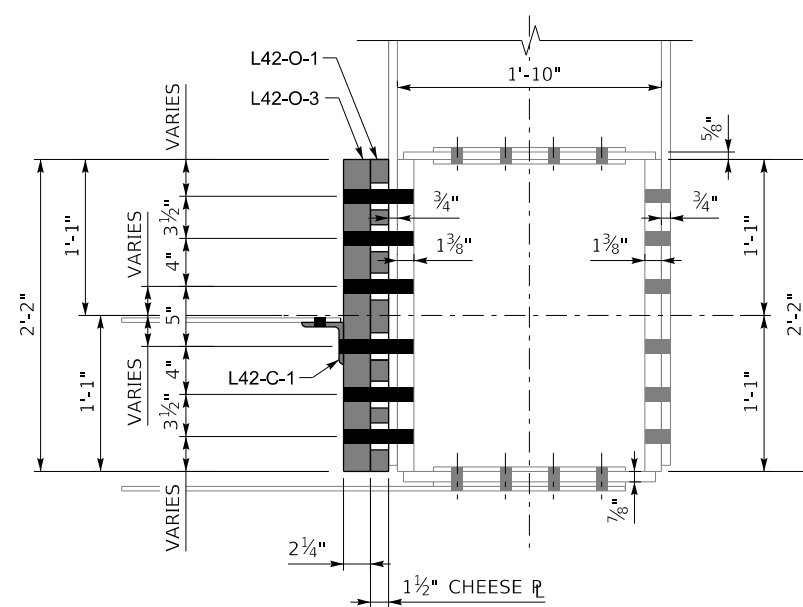
1. LATERAL BRACING NOT SHOWN FOR CLARITY.
2. FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET S26.



**SECTION A-A**  
(PROPOSED CONDITION)



**SECTION B-B**  
(PROPOSED CONDITION)



**SECTION C-C**  
(PROPOSED CONDITION)



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 15-APR-2024



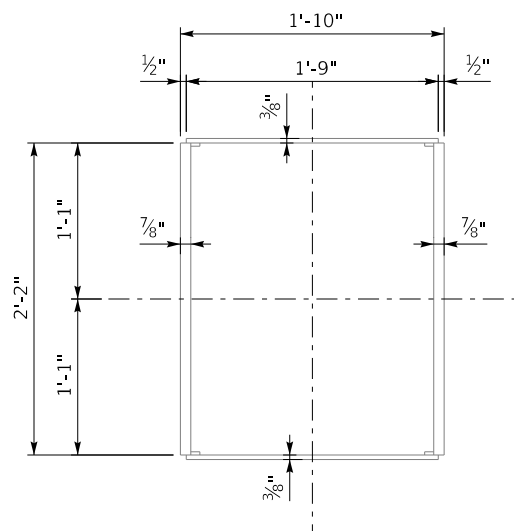
PREPARED BY  
1650 Lyndon Farm Court  
Louisville, KY  
Phone: (502)-339-3557  
MBAKERINTL.COM

DATE: 04/12/2024	CHECKED BY: T NEWGARD
DESIGNED BY: P COZZENS	DETAILED BY: J JACKSON
	P COZZENS

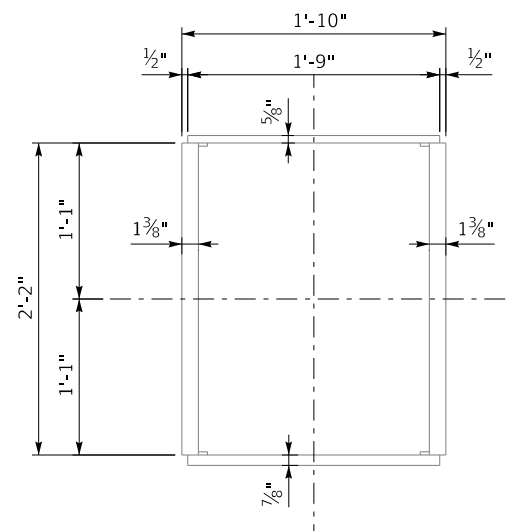
**US L42 IB REPAIR DETAIL**  
CROSSING  
OHIO RIVER

ROUTE: I-275	ITEM NO.:
	SHEET NO. S27

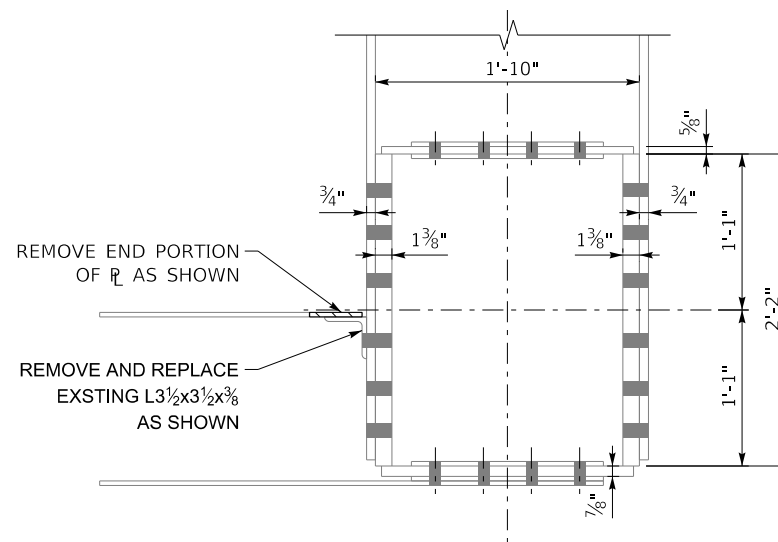
COUNTY OF BOONE
DRAWING NUMBER 28873



**SECTION A-A**  
(EXISTING CONDITION)



**SECTION B-B**  
(EXISTING CONDITION)



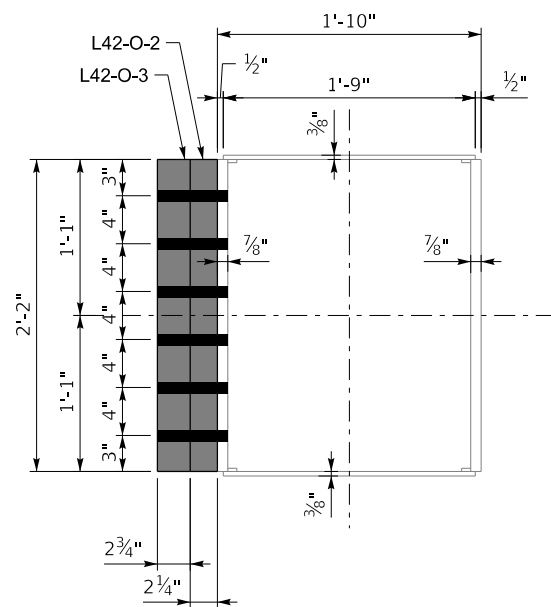
**SECTION C-C**  
(EXISTING CONDITION)

**LEGEND**

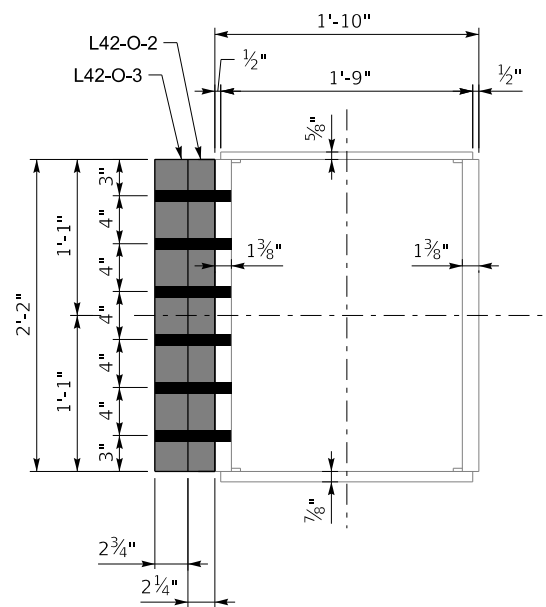
■ INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL. FOR BOLT HOLE AND SIZE, SEE SHEET S5.

**NOTES**

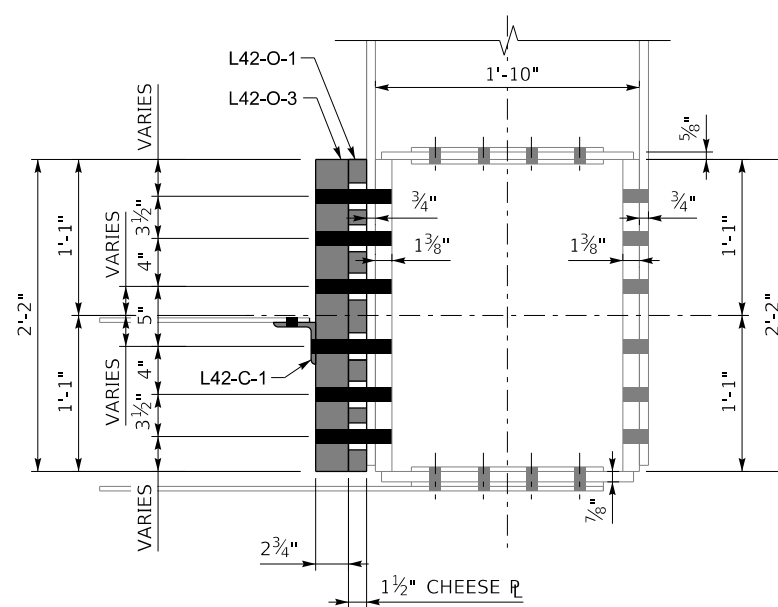
1. LATERAL BRACING NOT SHOWN FOR CLARITY.
2. FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET S26.



**SECTION A-A**  
(PROPOSED CONDITION)



**SECTION B-B**  
(PROPOSED CONDITION)



**SECTION C-C**  
(PROPOSED CONDITION)



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 11-APR-2024



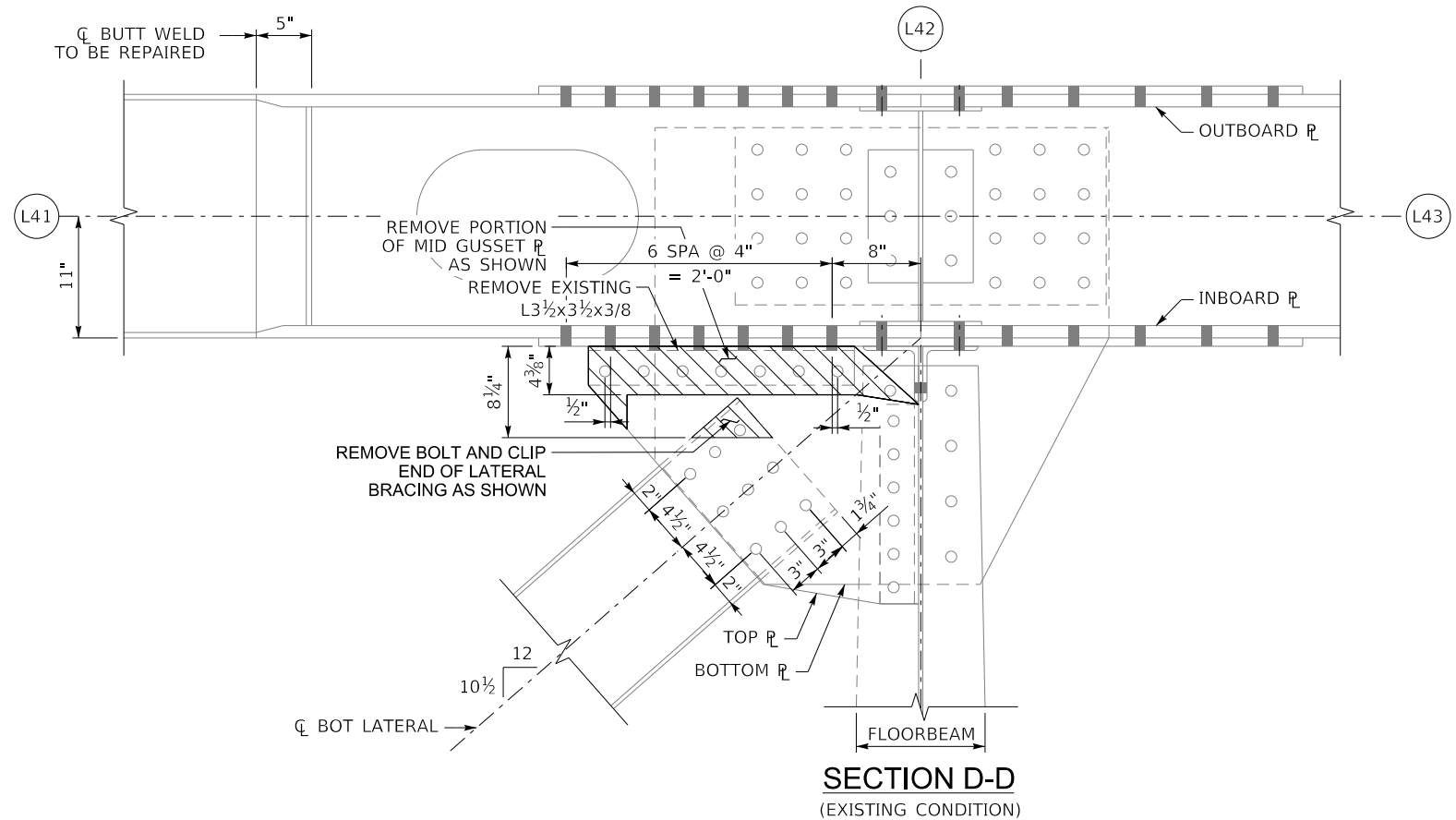
PREPARED BY  
1650 Lyndon Farm Court  
Louisville, KY  
Phone: (502)-339-3557  
MBAKERINTL.COM

FILE NAME: pw://mb-us-pw.bentley.com/mb-us-pw-03/Documents/Louisville\_KY/01\_Projects/KYTC T1 Steel Bridges/008B00052N Carroll Cropper/3 Remediation/CADD/SHEETS/Carroll\_02\_L42-DETAIL\_02a.dgn

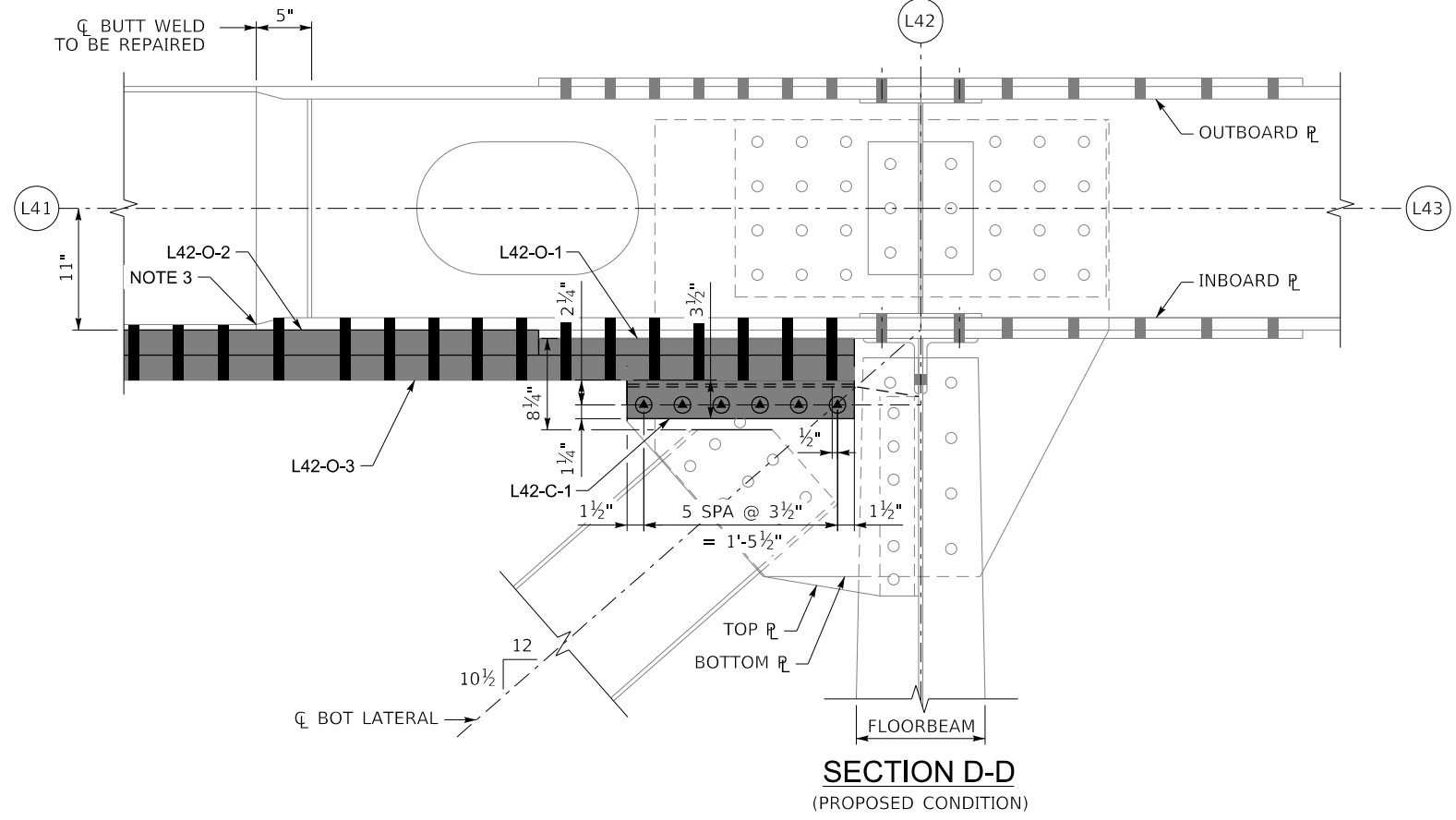
DATE: 04/12/2024	CHECKED BY:
DESIGNED BY: P COZZENS	T NEWGARD
DETAILED BY: J JACKSON	P COZZENS

**US L42 IB REPAIR DETAIL**  
CROSSING  
OHIO RIVER

ROUTE	ITEM NO.	COUNTY OF
I-275	S27A	BOONE
	DRAWING NUMBER	
	28873	



**SECTION D-D**  
(EXISTING CONDITION)



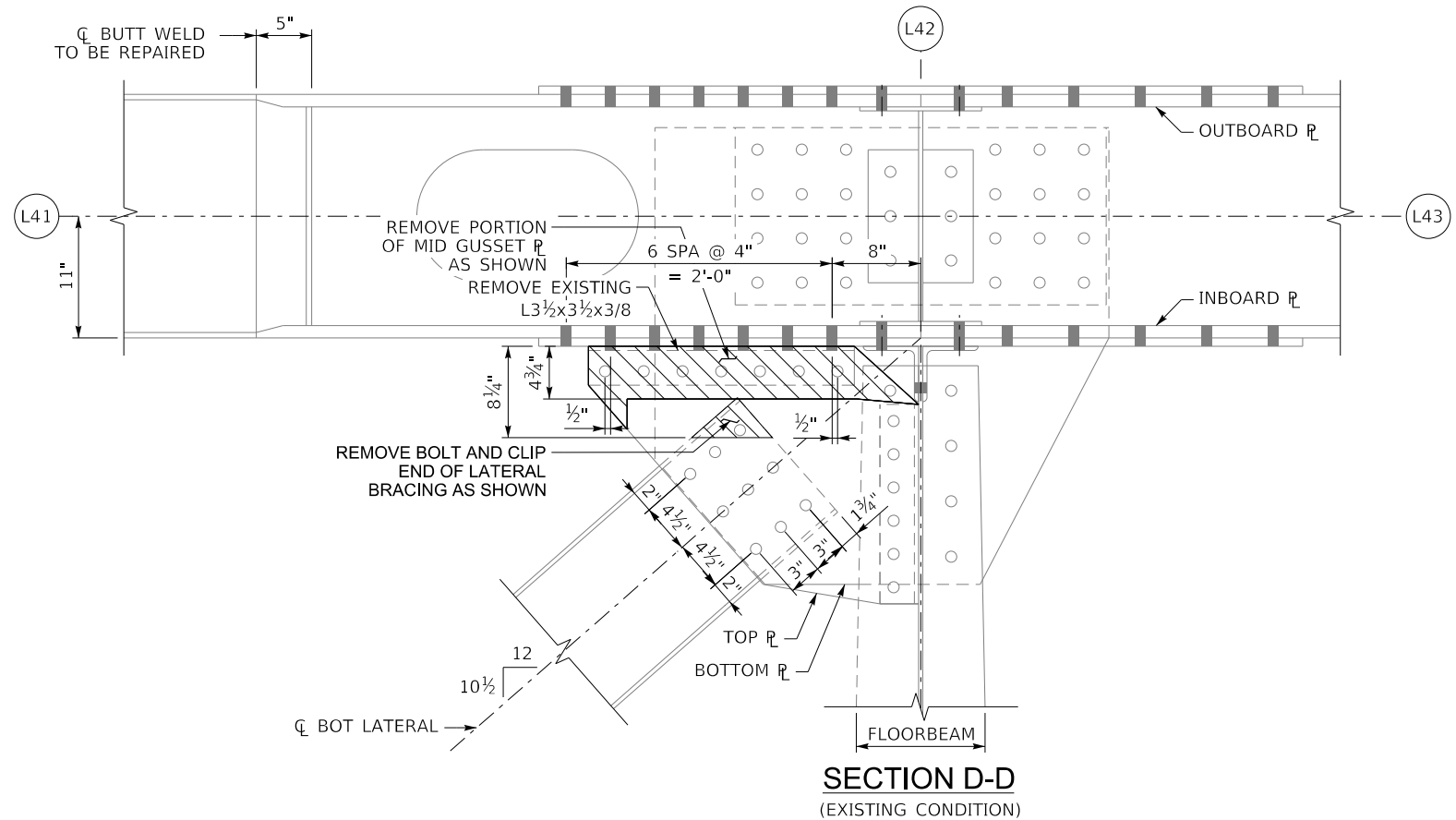
**SECTION D-D**  
(PROPOSED CONDITION)

**LEGEND**

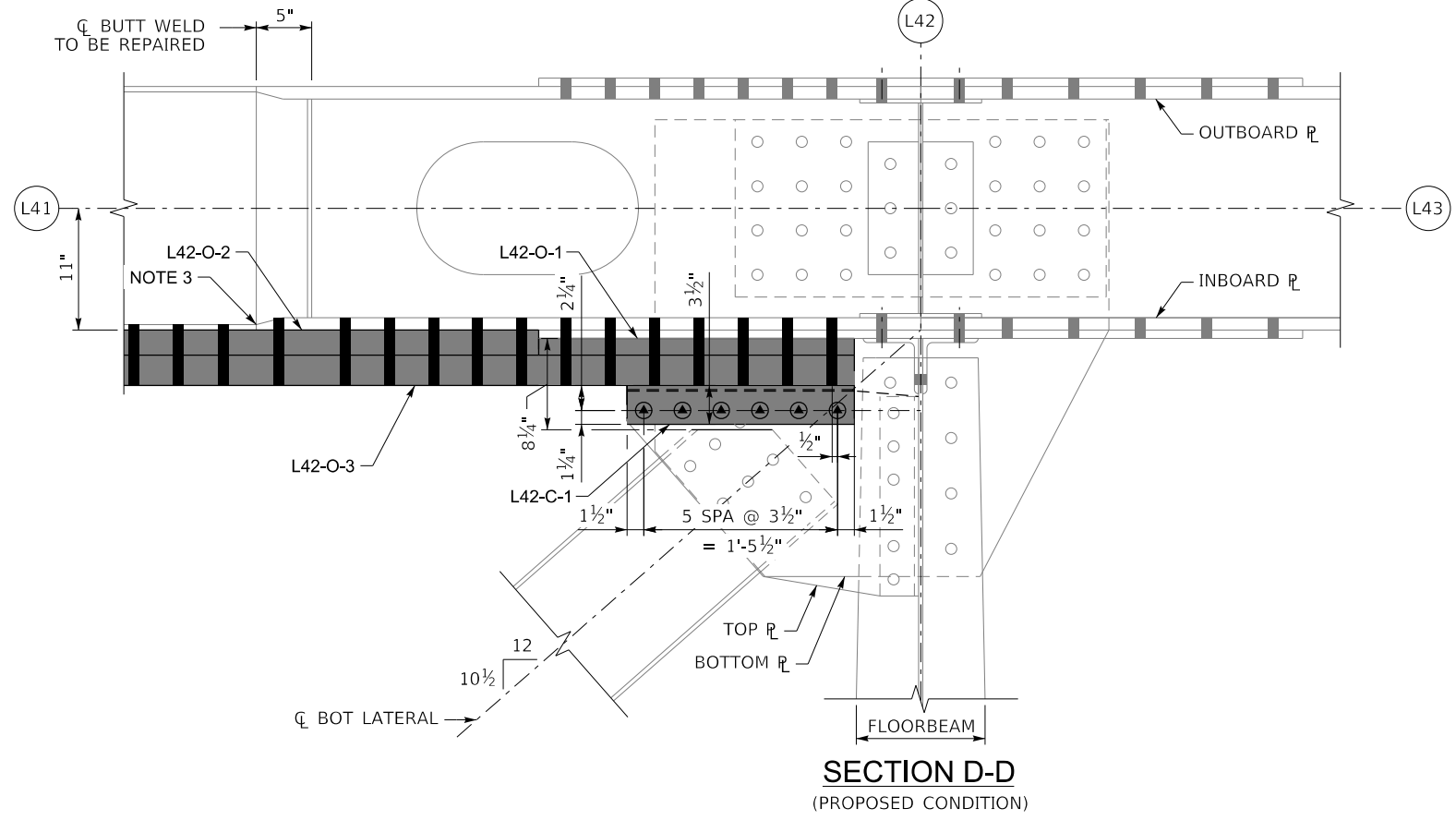
- INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL. FOR BOLT HOLE AND SIZE, SEE SHEET S5.
- INDICATES DRILL 1 3/8" DIA. HOLE IN EXISTING FLANGE AND/OR NEW STEEL FOR INSTALLATION OF NEW 1 1/4" DIA. (A490) BOLTS. BOLTS BETWEEN BUTT WELDS SHALL BE NEW 7/8" DIA. (A325) BOLTS WITH 15/16" DIA. HOLES.
- INDICATES EXISTING BOLTS AND BOLT HOLES.

**NOTES**

1. LATERAL BRACING NOT SHOWN FOR CLARITY.
2. FOR LOCATION OF SECTIONS D-D, SEE SHEET S26.
3. CONSTRUCT DOG BONE RETROFIT DETAIL IN TOP AND BOTTOM COVER PLATES, SEE SHEET S3.



**SECTION D-D**  
(EXISTING CONDITION)



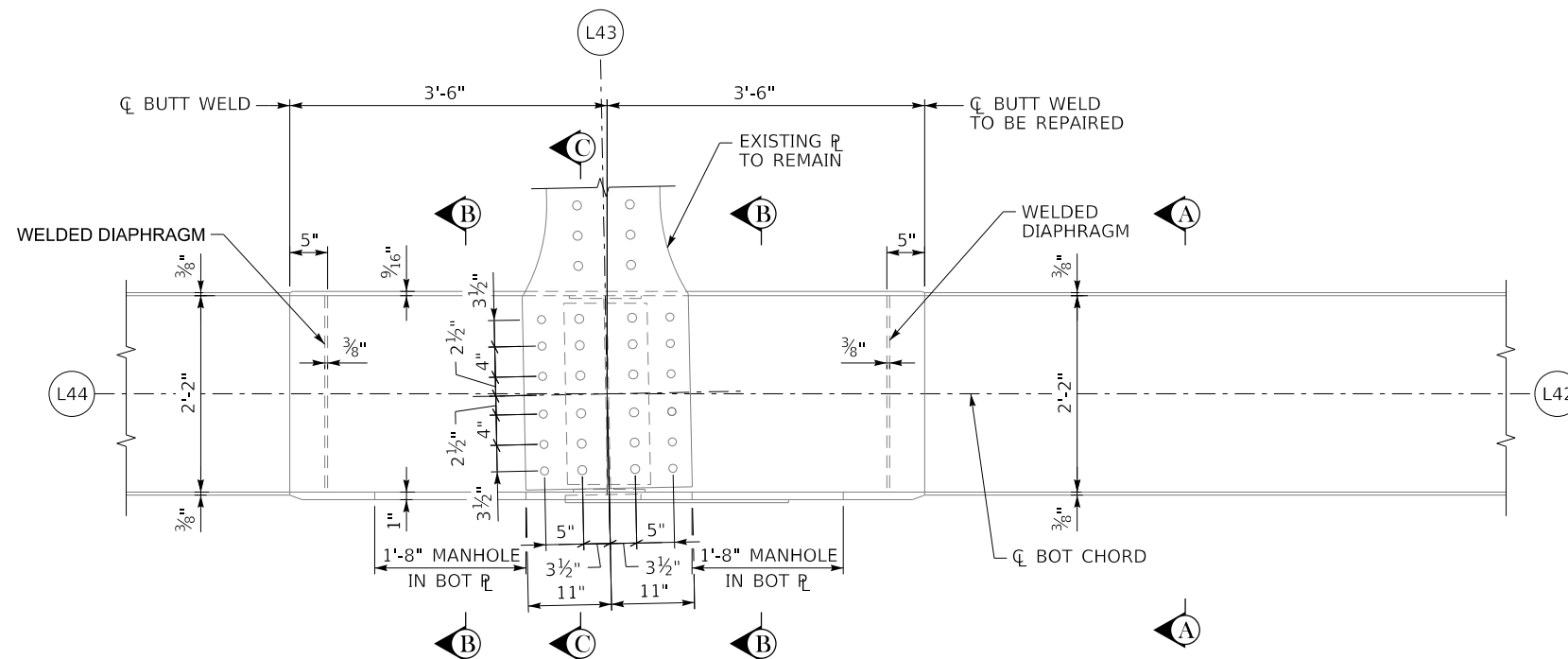
**SECTION D-D**  
(PROPOSED CONDITION)

**LEGEND**

- INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL. FOR BOLT HOLE AND SIZE, SEE SHEET S5.
- INDICATES DRILL 1 3/8" DIA. HOLE IN EXISTING FLANGE AND/OR NEW STEEL FOR INSALLATION OF NEW 1 1/4" DIA. (A490) BOLTS. BOLTS BETWEEN BUTT WELDS SHALL BE NEW 7/8" DIA. (A325) BOLTS WITH 15/16" DIA. HOLES.
- INDICATES EXISTING BOLTS AND BOLT HOLES.

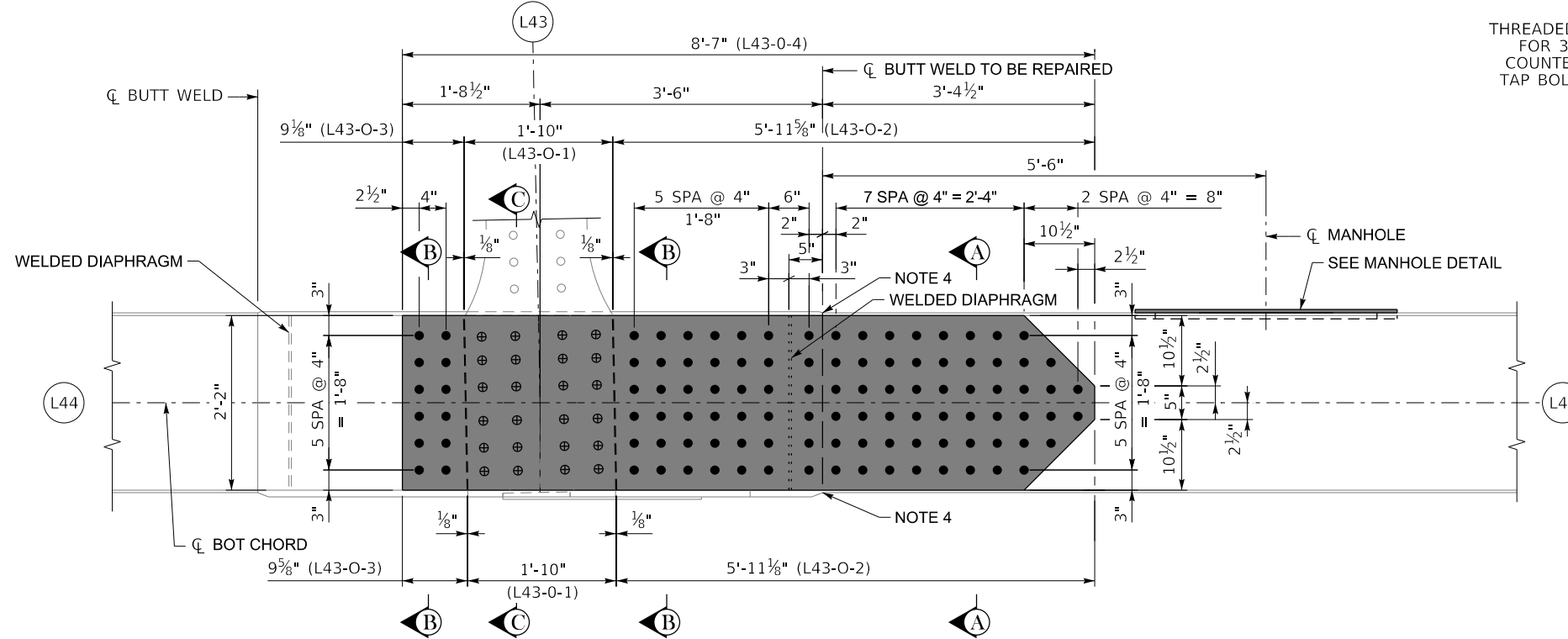
**NOTES**

1. LATERAL BRACING NOT SHOWN FOR CLARITY.
2. FOR LOCATION OF SECTIONS D-D, SEE SHEET S26.
3. CONSTRUCT DOG BONE RETROFIT DETAIL IN TOP AND BOTTOM COVER PLATES, SEE SHEET S3.



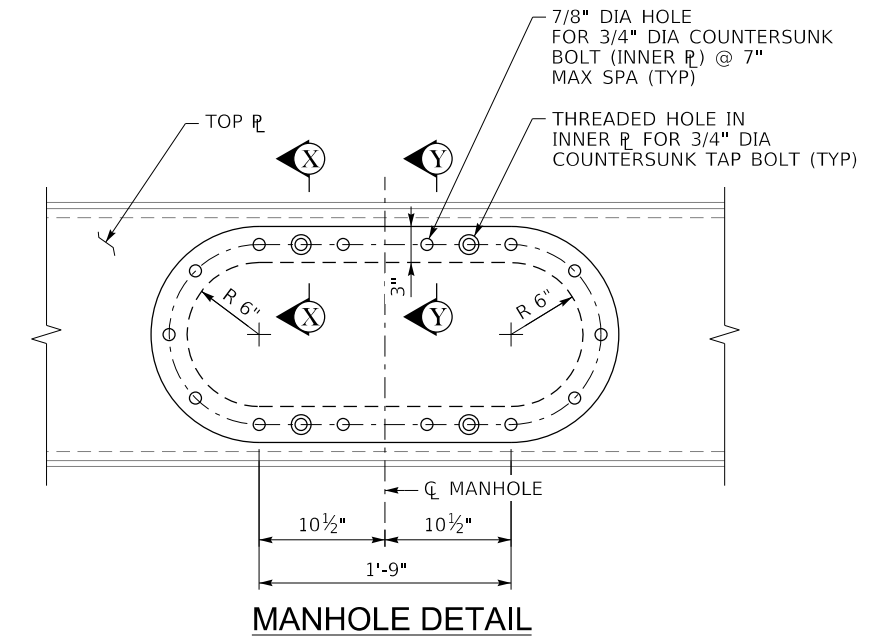
**EXISTING ELEVATION - L43**

(UPSTREAM TRUSS, LOOKING DOWNSTREAM AT OUTBOARD FACE)

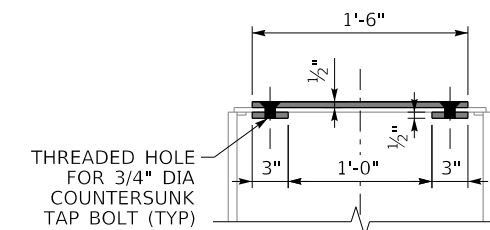


**PROPOSED ELEVATION - L43**

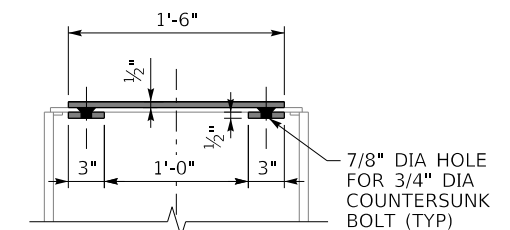
(UPSTREAM TRUSS, LOOKING DOWNSTREAM AT OUTBOARD FACE)



**MANHOLE DETAIL**



**SECTION X-X**



**SECTION Y-Y**

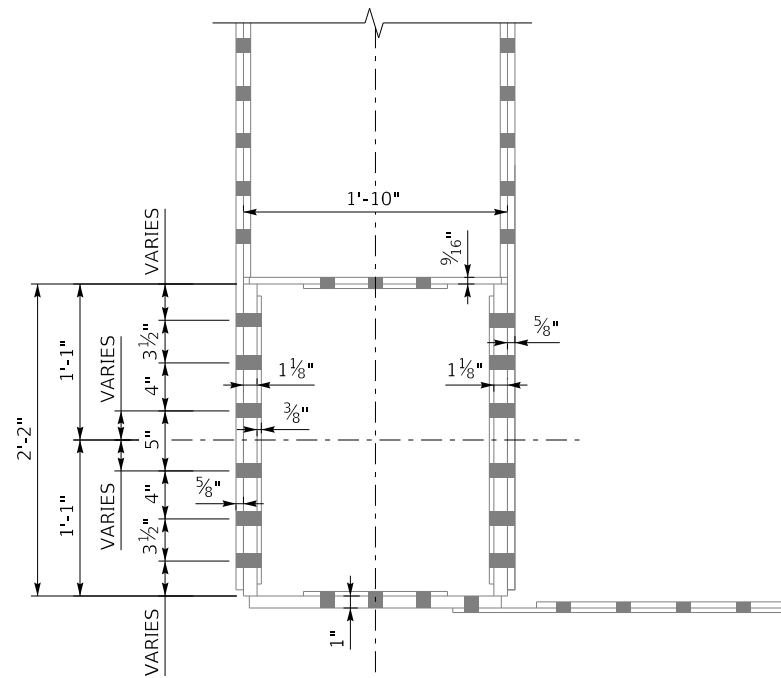
**NOTES**

1. LATERAL BRACING NOT SHOWN FOR CLARITY.
2. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET S30.
3. FOR BOLT LEGEND, SEE SHEET S4.
4. CONSTRUCT DOG BONE RETROFIT DETAIL IN TOP AND BOTTOM COVER PLATES, SEE SHEET S3.

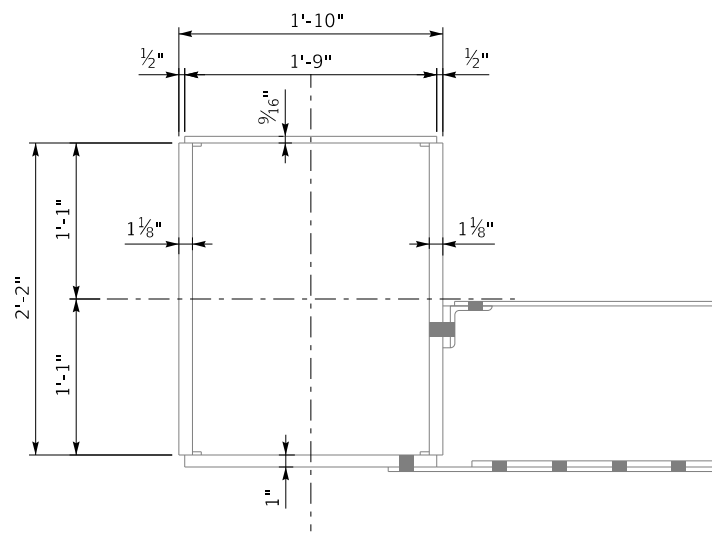
**CONSTRUCTION SEQUENCE**

1. CONSTRUCT COVER PLATE DOG-BONES AT OB BUTT WELDS. SEE RETROFIT DETAIL ON SHEET S3.
2. INSTALL THREADED RODS AT GUSSET CONNECTION ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
3. INSTALL CHEESE, FILL AND SPLICE PLATES WITH NEW FASTENERS AS INDICATED.

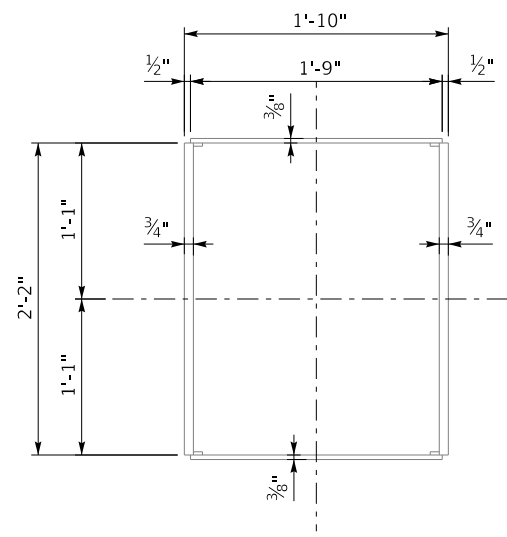
<p>COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS</p>	REVISION	DATE	<p>PREPARED BY <b>Michael Baker INTERNATIONAL</b></p>	<p>DATE: 04/12/2024</p>	<p>CHECKED BY T NEWGARD</p>	<p><b>US L43 OB REPAIR DETAIL</b></p>	ROUTE	ITEM NO.	COUNTY OF	
				<p>DESIGNED BY: P COZZENS</p>	<p>DETAILED BY: J JACKSON</p>		<p>CROSSING OHIO RIVER</p>	I-275	S29	BOONE
<p>MicroStation v8.11.9.919</p>	<p>USER: MaryJo.Dwyer</p>	<p>DATE PLOTTED: 15-APR-2024</p>	<p>1650 Lyndon Farm Court Louisville, KY Phone: (502)-339-3557 MBAKERINTL.COM</p>	<p>FILE NAME: pw://mb-us-pw.bentley.com:mb-us-pw-03/Documents/Louisville_KY/01_Projects/KYTC T1 Steel Bridges/008B00052N Carroll Cropper/3 Remediation/CADD/SHEETS/Carroll_01_L43-DETAIL_01.dgn</p>					DRAWING NUMBER	28873



**SECTION C-C**  
(EXISTING CONDITION)



**SECTION B-B**  
(EXISTING CONDITION)



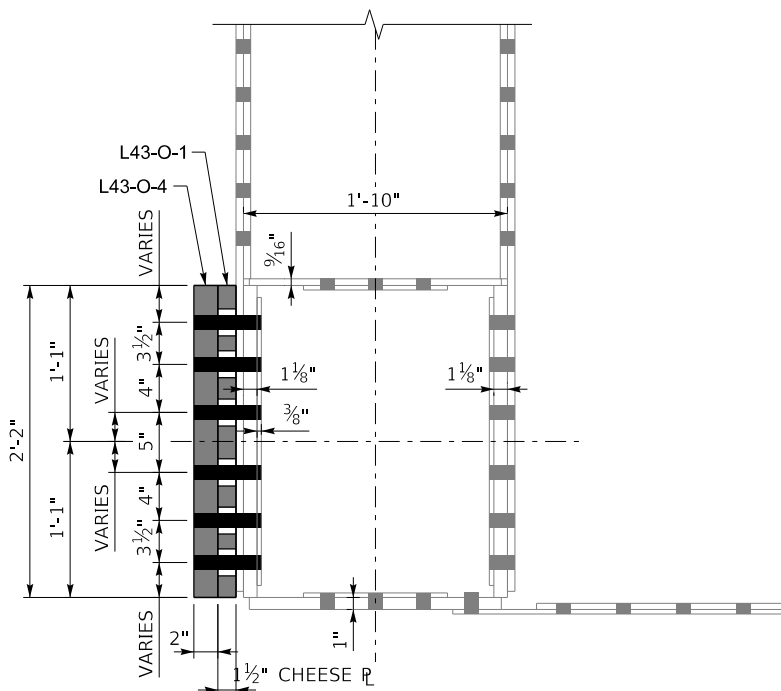
**SECTION A-A**  
(EXISTING CONDITION)

**LEGEND**

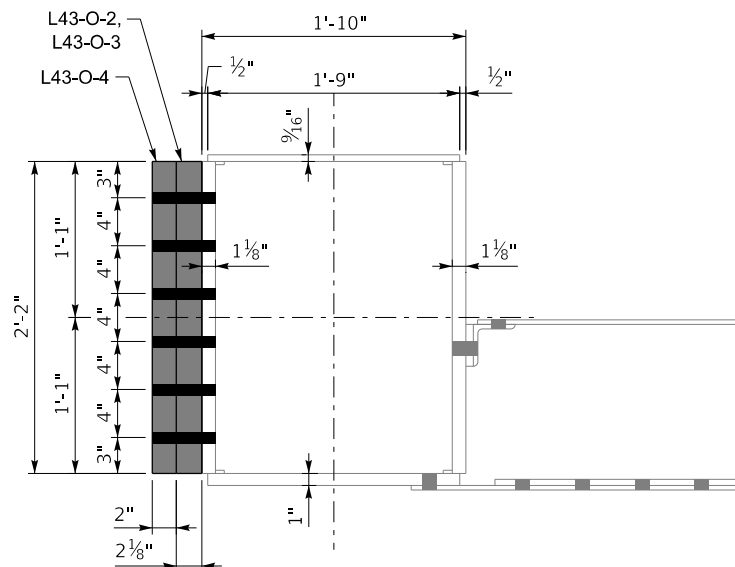
INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL.  
FOR BOLT HOLE AND SIZE, SEE SHEET S5.

**NOTES**

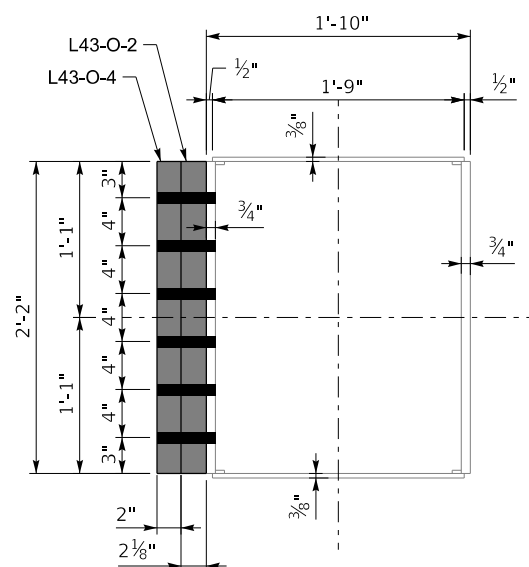
- LATERAL BRACING NOT SHOWN FOR CLARITY.
- FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET S29.



**SECTION C-C**  
(PROPOSED CONDITION)



**SECTION B-B**  
(PROPOSED CONDITION)



**SECTION A-A**  
(PROPOSED CONDITION)



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION

DATE

**Michael Baker**  
**INTERNATIONAL**

PREPARED BY  
1650 Lyndon Farm Court  
Louisville, KY  
Phone: (502)-339-3557  
MBAKERINTL.COM

DATE PLOTTED: 15-APR-2024

FILE NAME: pw://mb-us-pw.bentley.com:mb-us-pw-03/Documents/Louisville\_KY/01\_Projects/KYTC T1 Steel Bridges/008B00052N Carroll Cropper/3 Remediation/CADD/SHEETS/Carroll\_01\_L43-DETAIL\_02.dgn

DATE: 04/12/2024

CHECKED BY

DESIGNED BY: P COZZENS

T NEWGARD

DETAILED BY: J JACKSON

P COZZENS

**US L43 OB REPAIR DETAIL**

CROSSING  
OHIO RIVER

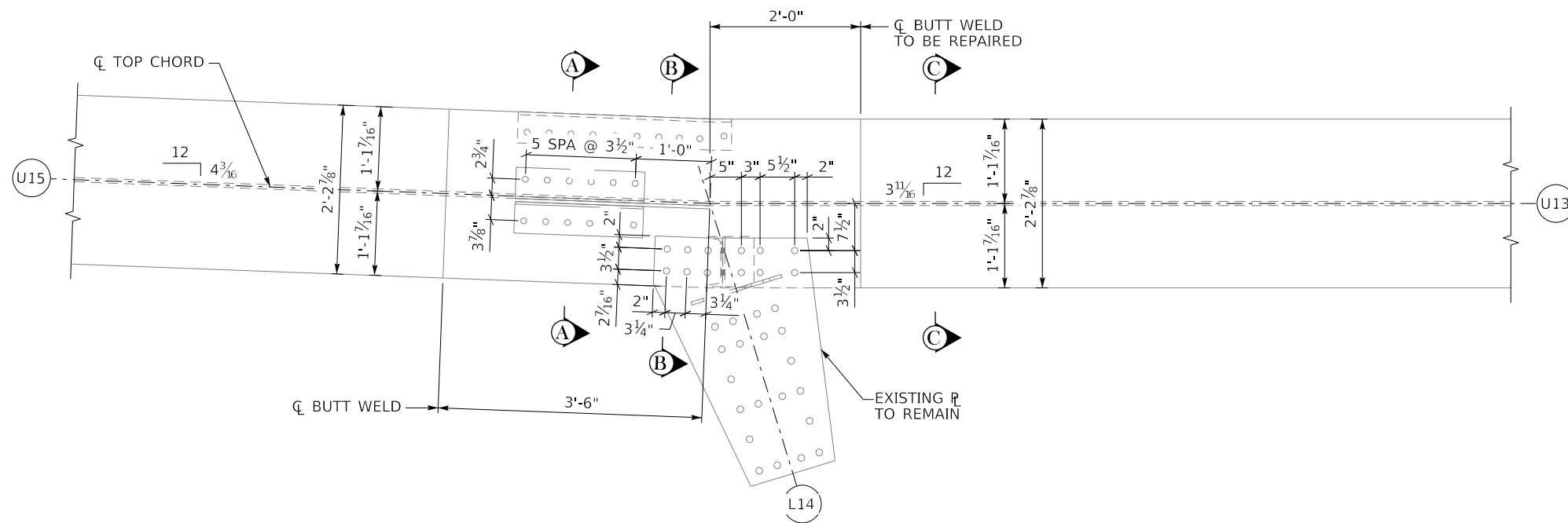
ROUTE  
I-275

ITEM NO.  
S30

COUNTY OF  
BOONE  
DRAWING NUMBER  
28873

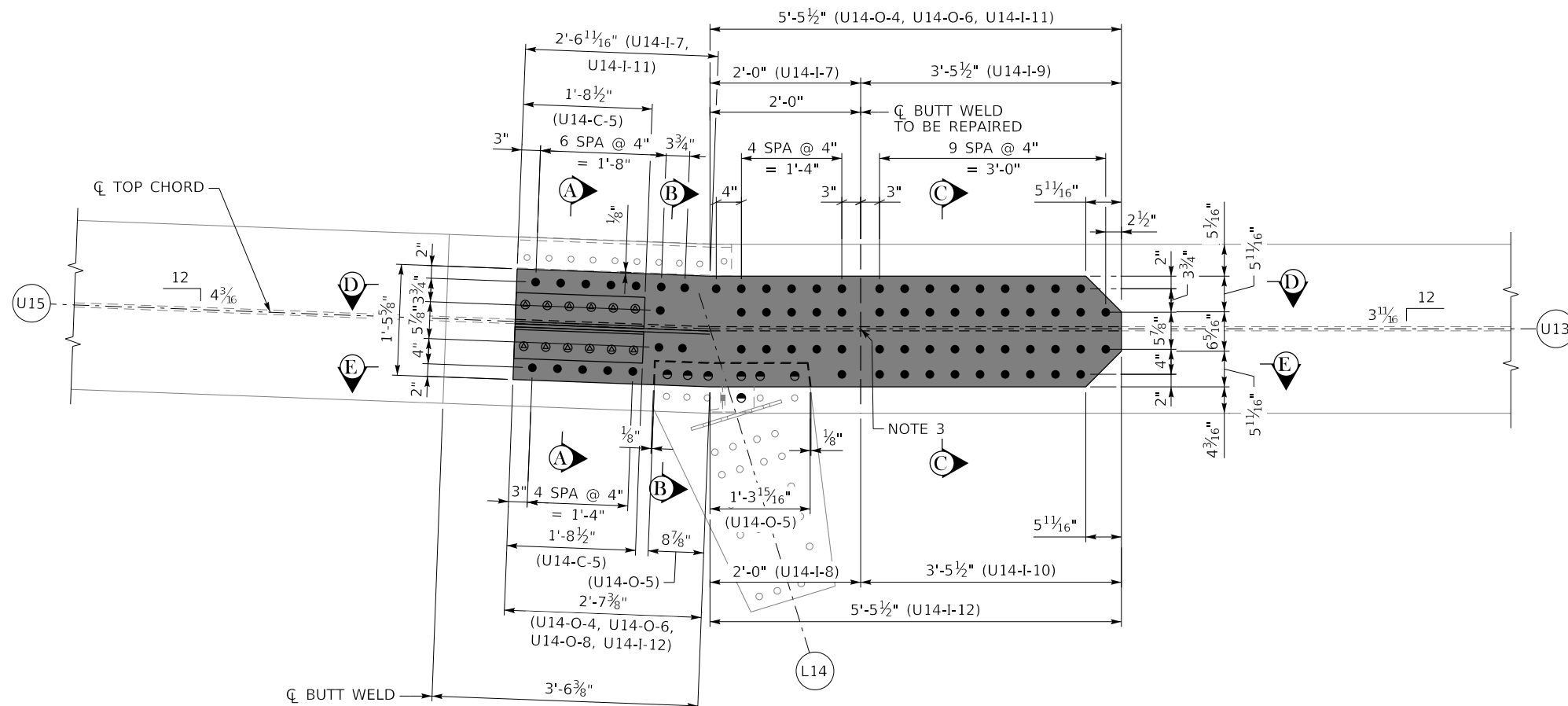
MicroStation v8.11.9.919





**EXISTING ELEVATION - U14**

(DOWNSTREAM TRUSS, LOOKING DOWNSTREAM AT INBOARD FACE)



**PROPOSED ELEVATION - U14**

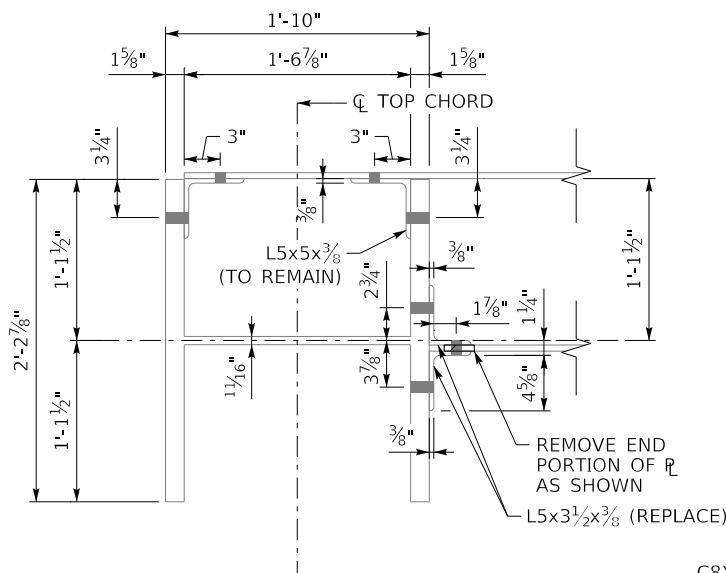
(DOWNSTREAM TRUSS, LOOKING DOWNSTREAM AT INBOARD FACE)

**CONSTRUCTION SEQUENCE**

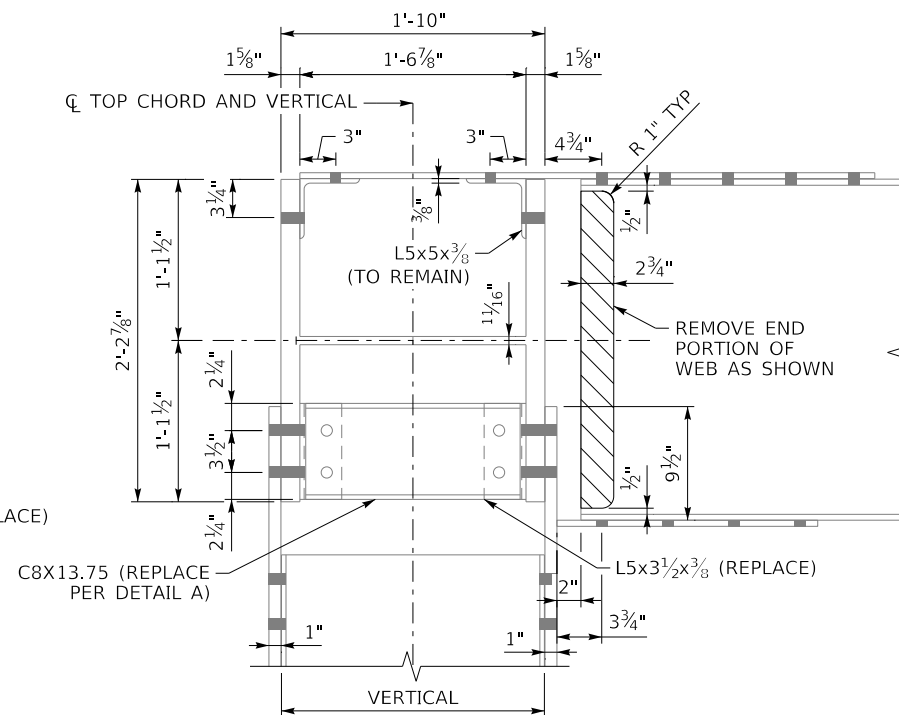
1. CONSTRUCT WEB DOG-BONE AT IB AND OB BUTT WELDS. SEE RETROFIT DETAIL ON SHEET S3.
2. DISCONNECT CHANNEL DIAPHRAGM AND REMOVE EXISTING DIAPHRAGM CONNECTION ANGLE ON IB AND OB FLANGES.
3. COPE/REMOVE END PORTION OF WEB OF STRUT.
4. INSTALL THREADED RODS AT IB AND OB VERTICAL GUSSET CONNECTIONS ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
5. INSTALL OB CHEESE, FILL, SPLICE PLATES AND CONNECTION ANGLES WITH NEW FASTENERS AS INDICATED.
6. ATTACH CHANNEL DIAPHRAGM TO CONNECTION ANGLES.

**NOTES**

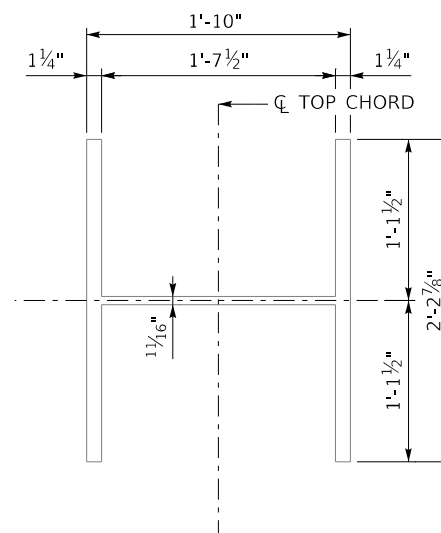
1. LATERAL BRACING NOT SHOWN FOR CLARITY.
2. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET S32.
3. CONSTRUCT DOG BONE RETROFIT DETAIL IN WEB, SEE SHEET S3.



**SECTION A-A**  
(EXISTING CONDITION)



**SECTION B-B**  
(EXISTING CONDITION)



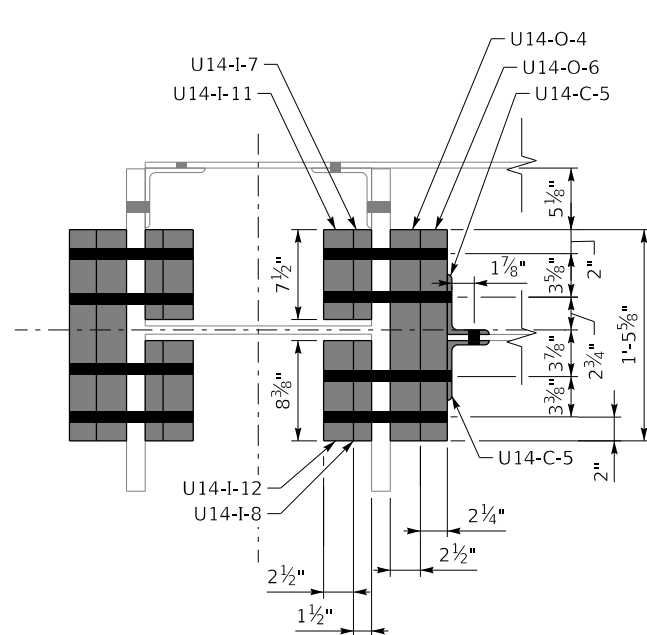
**SECTION C-C**  
(EXISTING CONDITION)

**LEGEND**

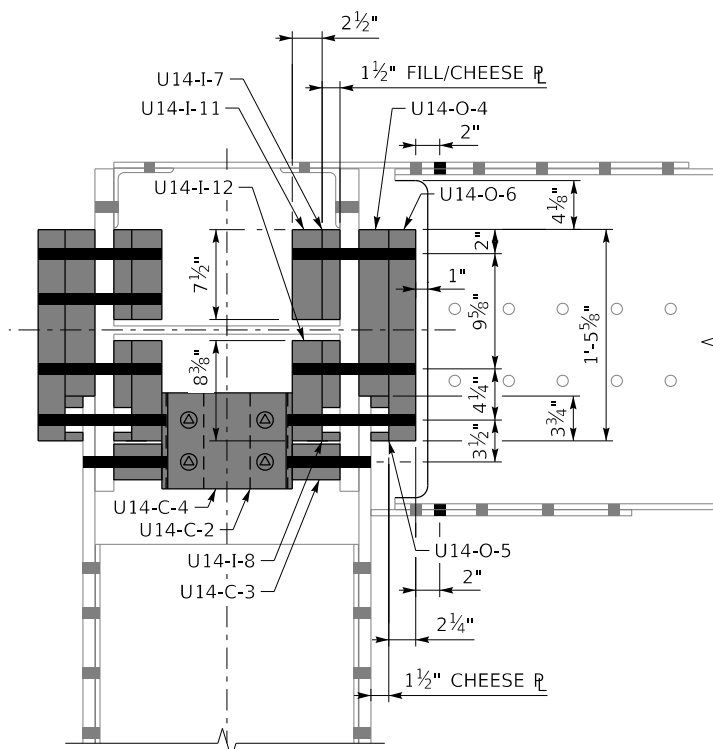
INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL. FOR BOLT HOLE AND SIZE, SEE SHEET S5.

**NOTES**

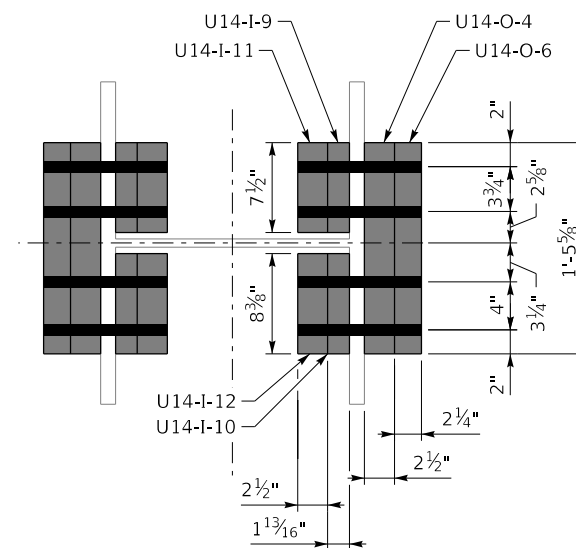
- LATERAL BRACING NOT SHOWN FOR CLARITY.
- FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET S31.



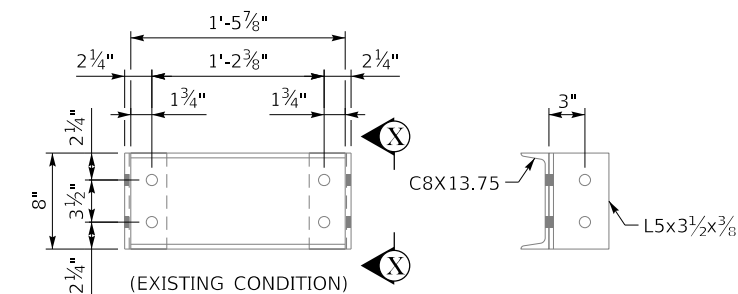
**SECTION A-A**  
(PROPOSED CONDITION)



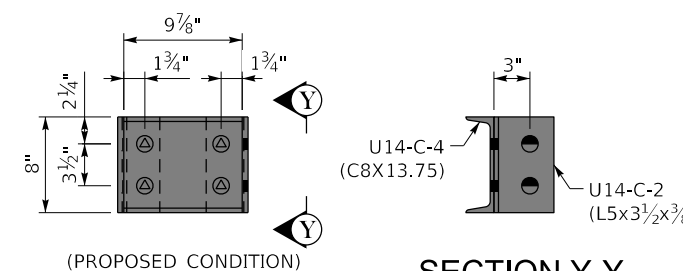
**SECTION B-B**  
(PROPOSED CONDITION)



**SECTION C-C**  
(PROPOSED CONDITION)



**SECTION X-X**



**SECTION Y-Y**

**DETAIL A**



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION DATE

DATE PLOTTED: 15-APR-2024

PREPARED BY  
**Michael Baker INTERNATIONAL**  
1650 Lyndon Farm Court  
Louisville, KY  
Phone: (502)-339-3557  
MBAKERINTL.COM

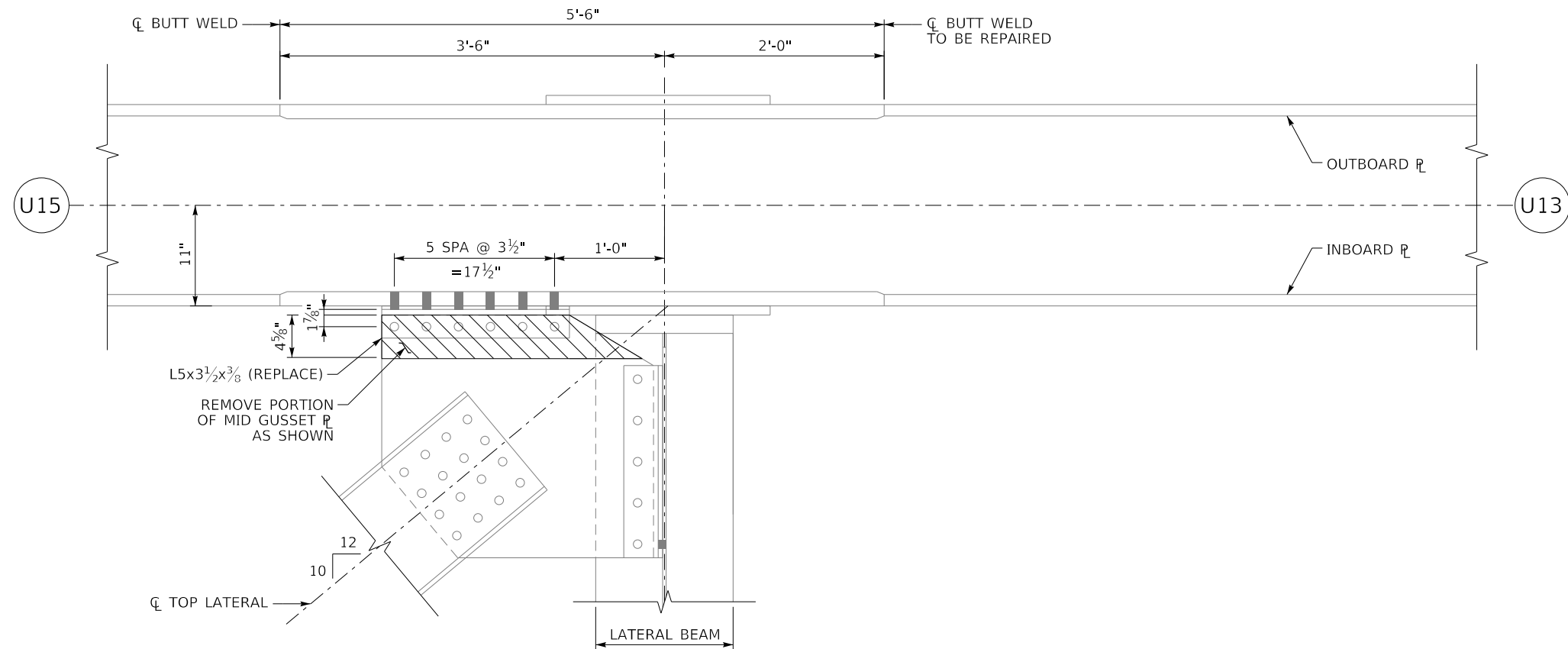
FILE NAME: pw://mb-us-pw.bentley.com/mb-us-pw-03/Documents/Louisville\_KY/01\_Projects/KYTC T1 Steel Bridges/008B00052N Carroll Cropper/3 Remediation/CADD/SHEETS/Carroll\_12\_U14-DETAIL\_02.dgn

DATE: 04/12/2024  
DESIGNED BY: P COZZENS  
CHECKED BY: T JANICKE  
DETAILED BY: C CLUFF  
P COZZENS

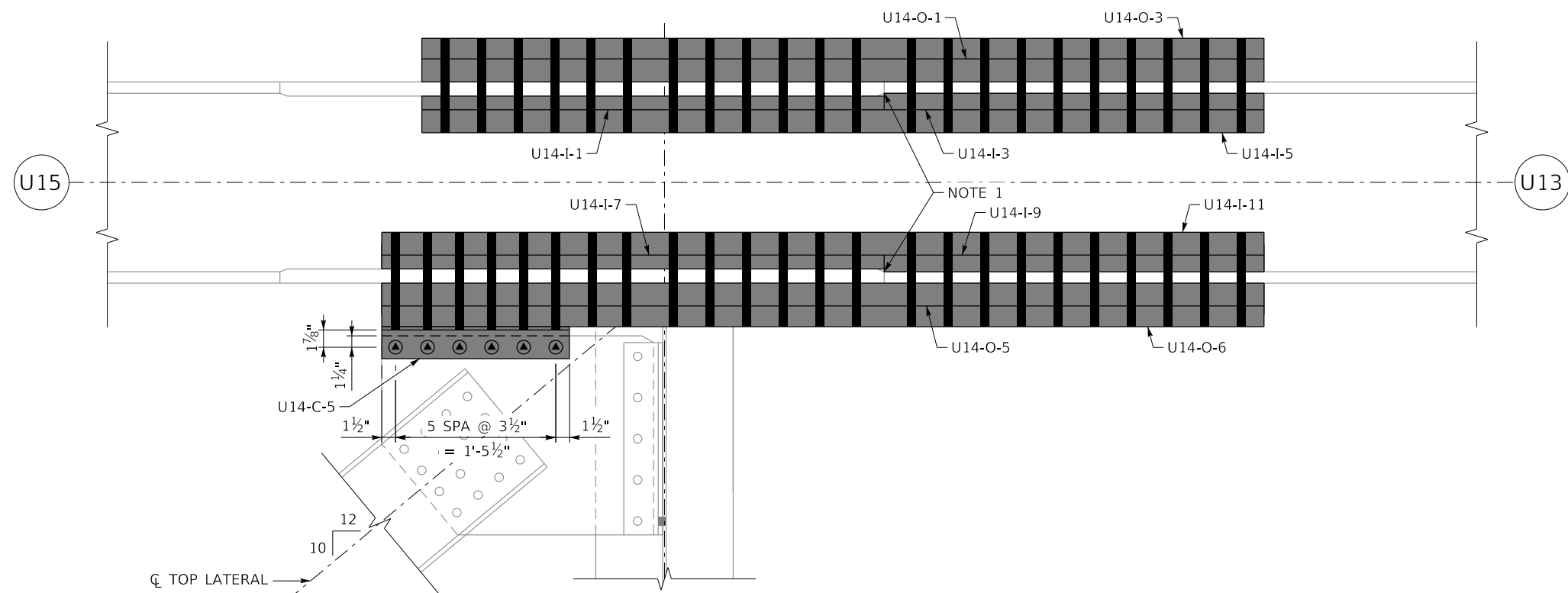
**DS U14 IB REPAIR DETAIL**  
CROSSING  
OHIO RIVER

ROUTE  
I-275  
ITEM NO.  
S32

COUNTY OF  
BOONE  
DRAWING NUMBER  
28873



**SECTION D-D - U14**  
(EXISTING CONDITION)



**SECTION D-D - U14**  
(PROPOSED CONDITION)

**NOTES**

1. CONSTRUCT DOG BONE RETROFIT DETAIL IN WEB, SEE SHEET S3.



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION      DATE

DATE PLOTTED: 15-APR-2024

PREPARED BY  
**Michael Baker**  
INTERNATIONAL  
1650 Lyndon Farm Court  
Louisville, KY  
Phone: (502)-339-3557  
MBAKERINTL.COM

DATE: 04/12/2024  
DESIGNED BY: P COZZENS  
DETAILED BY: C CLUFF

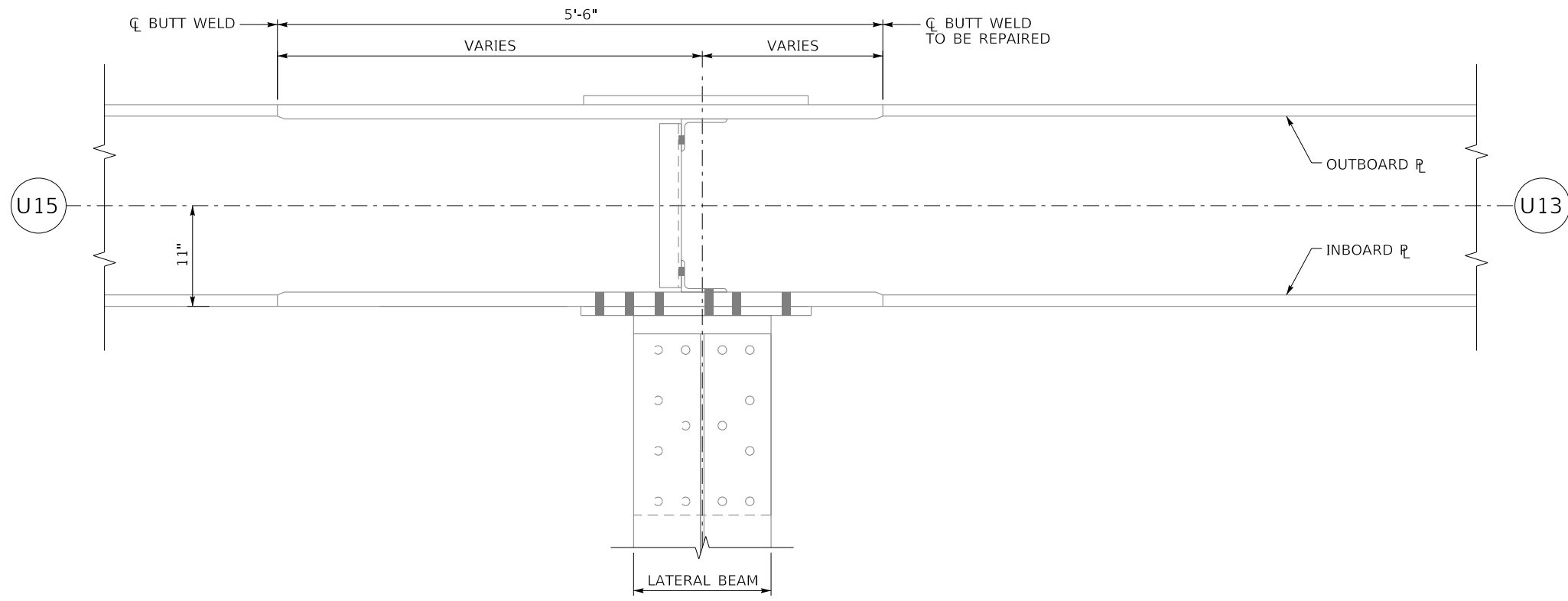
CHECKED BY  
T JANICKE  
P COZZENS

**DS U14 OB REPAIR DETAIL**  
CROSSING  
OHIO RIVER

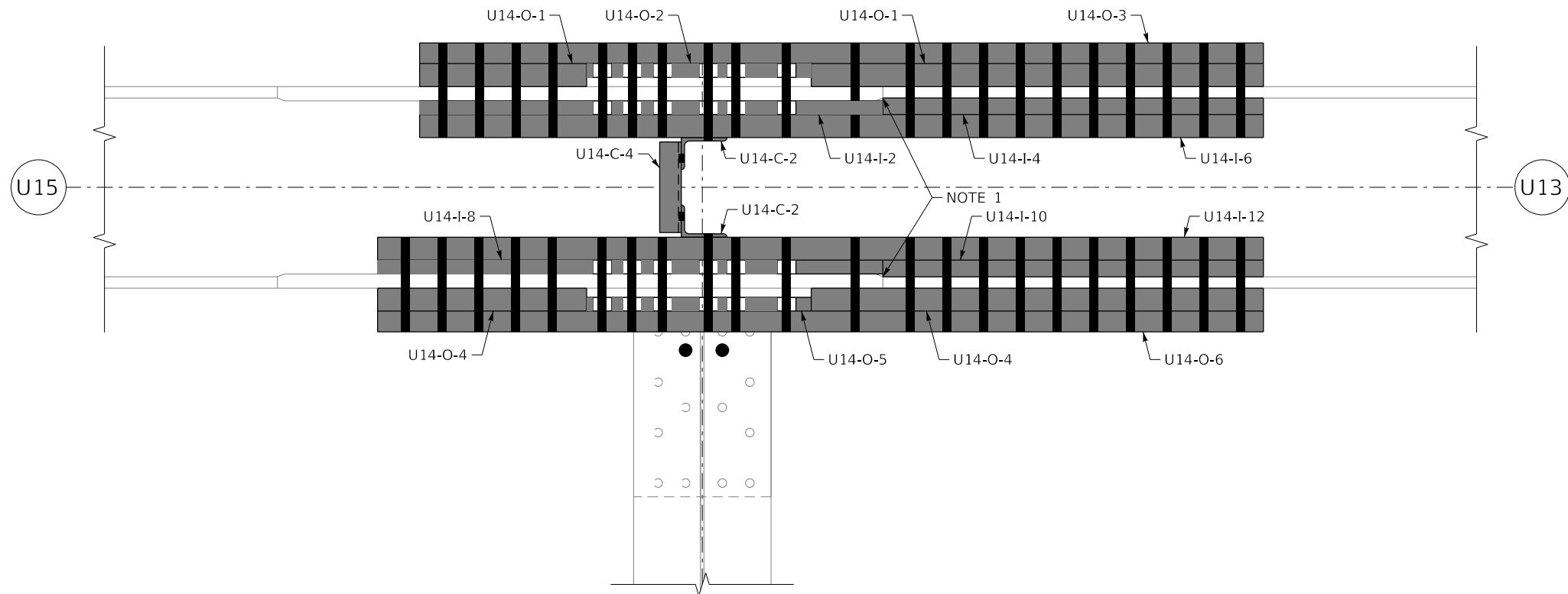
ROUTE  
I-275

ITEM NO.  
SHEET NO.  
S33

COUNTY OF  
**BOONE**  
DRAWING NUMBER  
28873



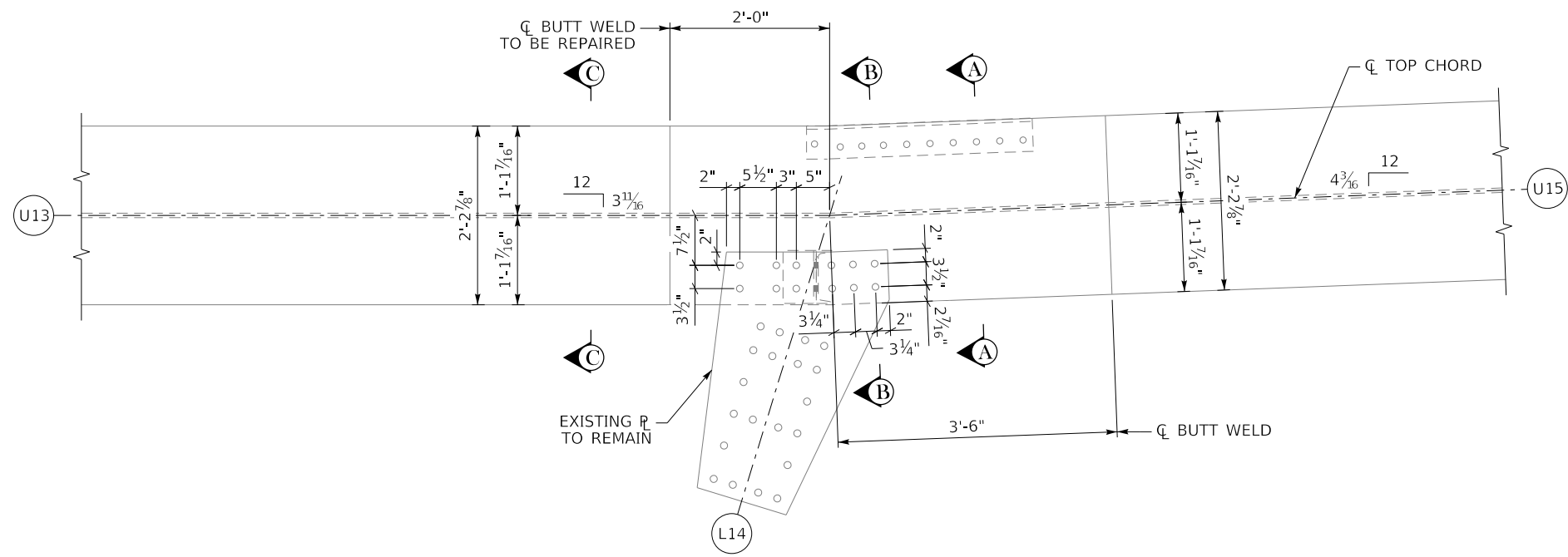
**SECTION E-E - U14**  
(EXISTING CONDITION)



**SECTION E-E - U14**  
(PROPOSED CONDITION)

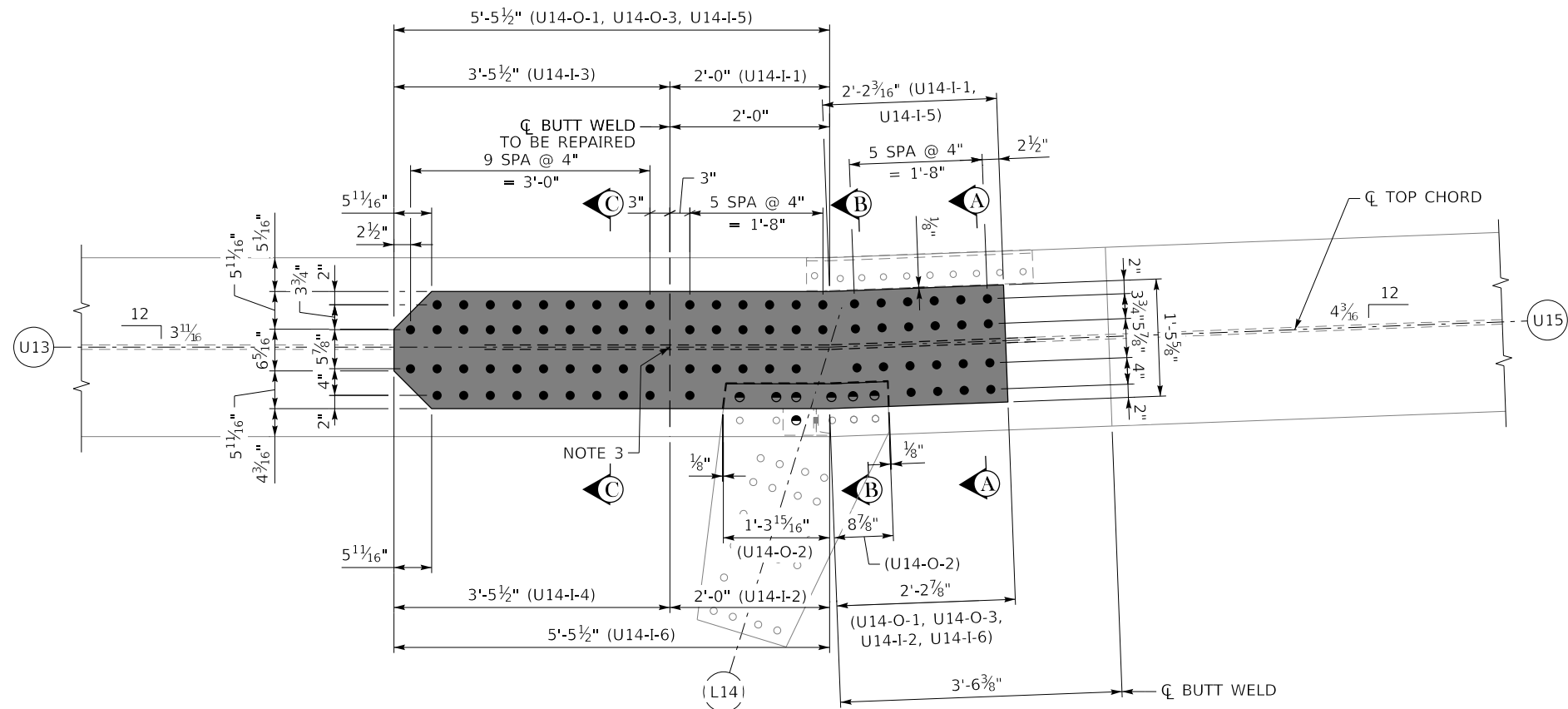
**NOTES**

1. CONSTRUCT DOG BONE RETROFIT DETAIL IN WEB, SEE SHEET S3.



**EXISTING ELEVATION - U14**

(DOWNSTREAM TRUSS, LOOKING DOWNSTREAM AT OUTBOARD FACE)



**PROPOSED ELEVATION - U14**

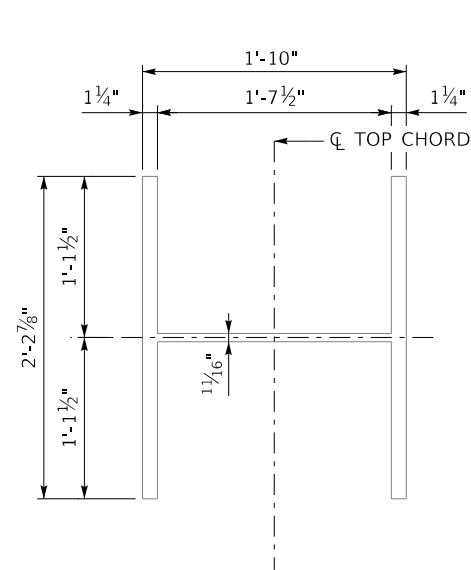
(DOWNSTREAM TRUSS, LOOKING DOWNSTREAM AT OUTBOARD FACE)

**CONSTRUCTION SEQUENCE**

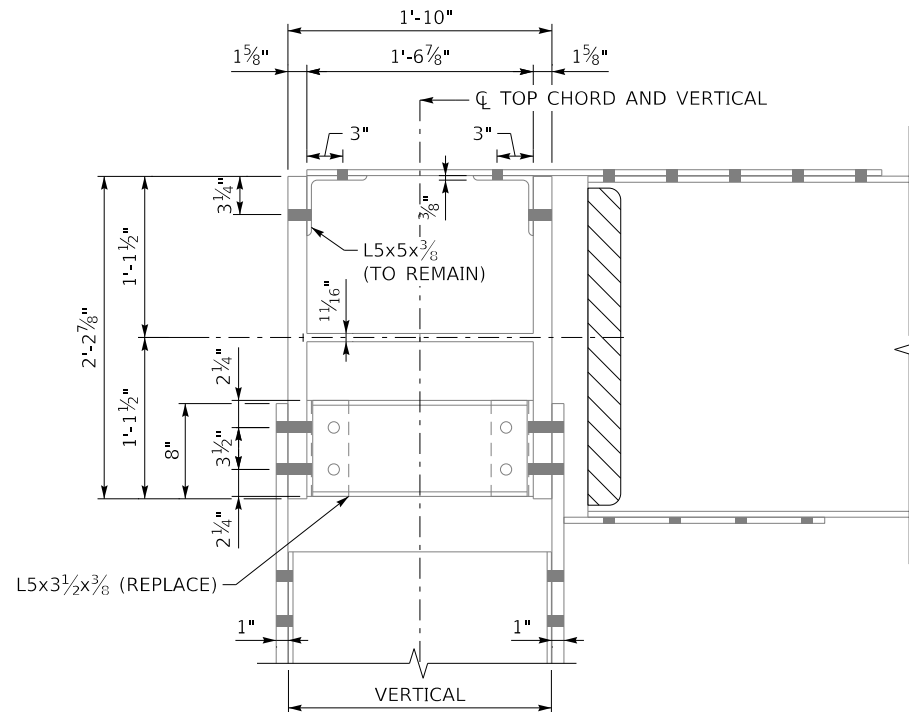
1. CONSTRUCT WEB DOG-BONE AT OB BUTT WELD. SEE RETROFIT DETAIL ON SHEET S3.
2. DISCONNECT CHANNEL DIAPHRAGM AND REMOVE EXISTING DIAPHRAGM CONNECTION ANGLE ON OUTBOARD FLANGE ONLY.
3. INSTALL THREADED RODS AT VERTICAL GUSSET CONNECTION ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
4. INSTALL CHEESE, FILL AND SPLICE PLATES AND CONNECTION ANGLES WITH NEW BOLTS. TENSION NUTS ONTO THREADED RODS ALREADY IN PLACE AT VERTICAL GUSSET CONNECTION.
5. INSTALL NEW CHANNEL DIAPHRAGM CONNECTION.

**NOTES**

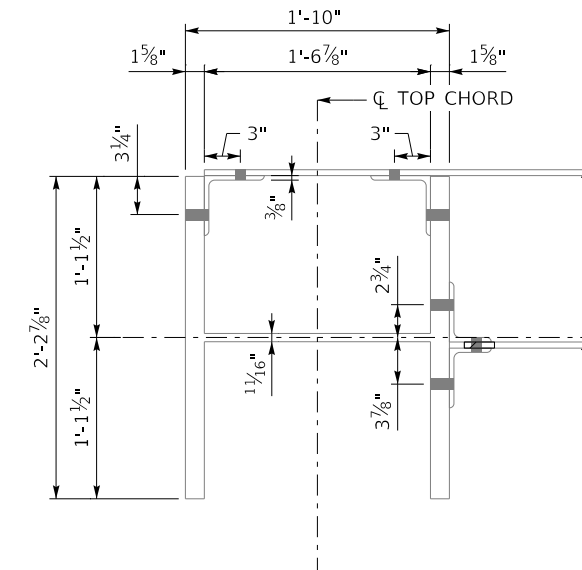
1. LATERAL BRACING NOT SHOWN FOR CLARITY.
2. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET S36.
3. CONSTRUCT DOG BONE RETROFIT DETAIL IN WEB, SEE SHEET S3.



**SECTION C-C**  
(EXISTING CONDITION)



**SECTION B-B**  
(EXISTING CONDITION)



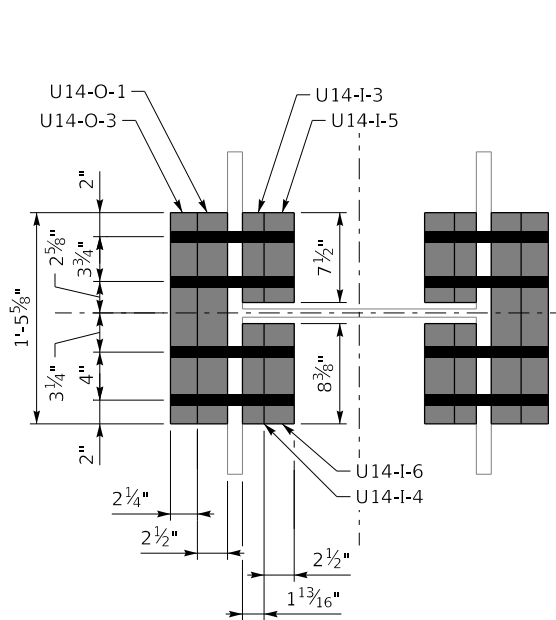
**SECTION A-A**  
(EXISTING CONDITION)

**LEGEND**

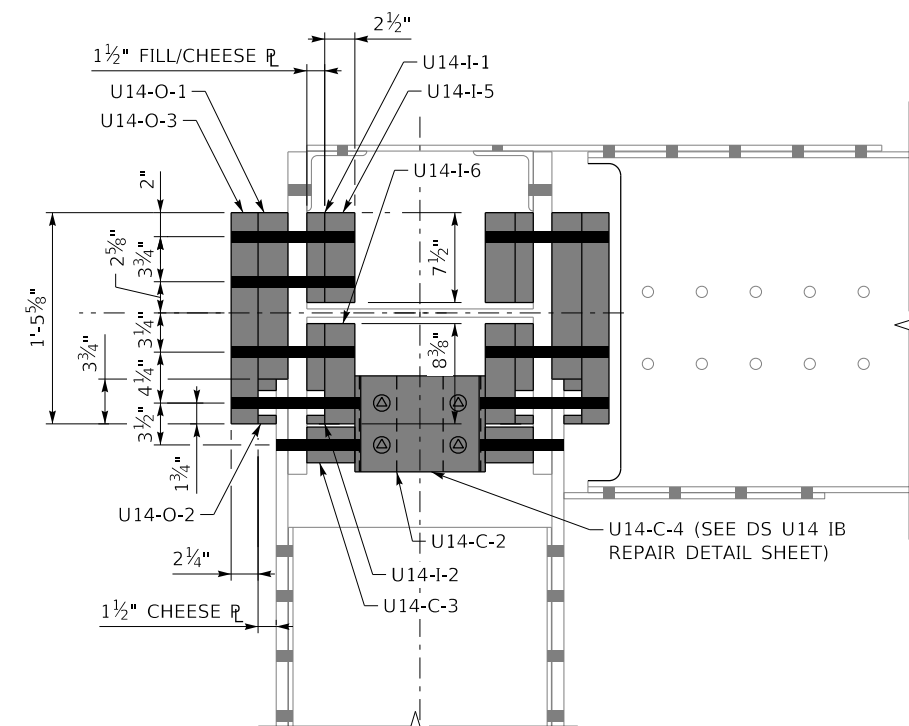
INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL. FOR BOLT HOLE AND SIZE, SEE SHEET S5.

**NOTES**

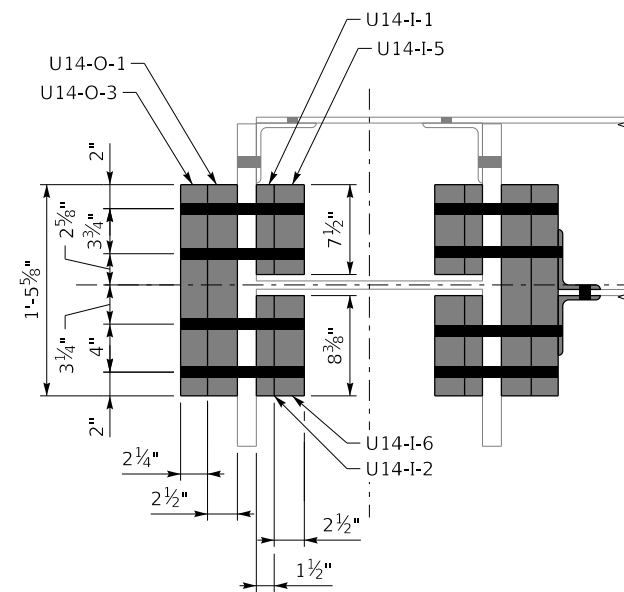
- LATERAL BRACING NOT SHOWN FOR CLARITY.
- FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET S35.



**SECTION C-C**  
(PROPOSED CONDITION)



**SECTION B-B**  
(PROPOSED CONDITION)



**SECTION A-A**  
(PROPOSED CONDITION)



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION DATE

DATE PLOTTED: 15-APR-2024

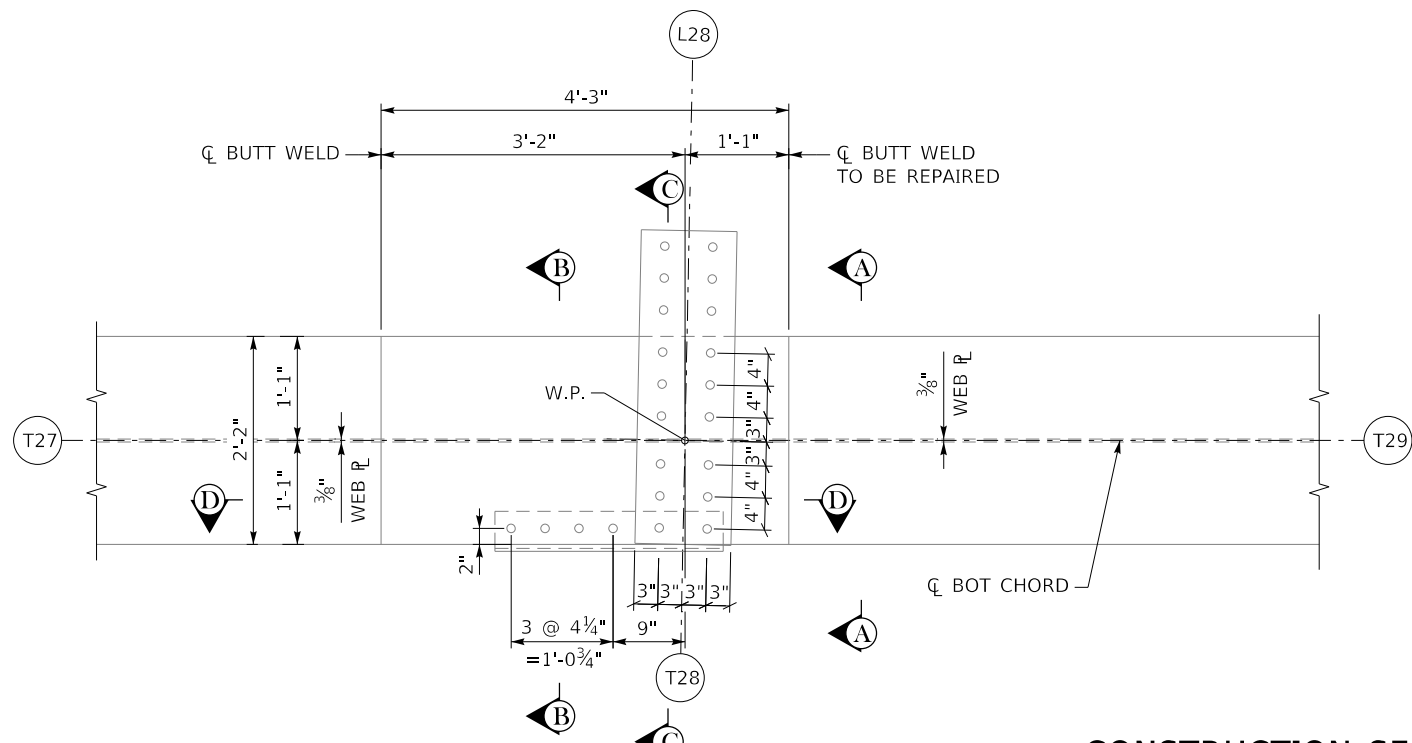
PREPARED BY  
**Michael Baker INTERNATIONAL**  
1650 Lyndon Farm Court  
Louisville, KY  
Phone: (502)-339-3557  
MBAKERINTL.COM

DATE: 04/12/2024  
DESIGNED BY: P COZZENS  
CHECKED BY: T JANICKE  
DETAILED BY: C CLUFF  
P COZZENS

**DS U14 OB REPAIR DETAIL**  
CROSSING  
OHIO RIVER

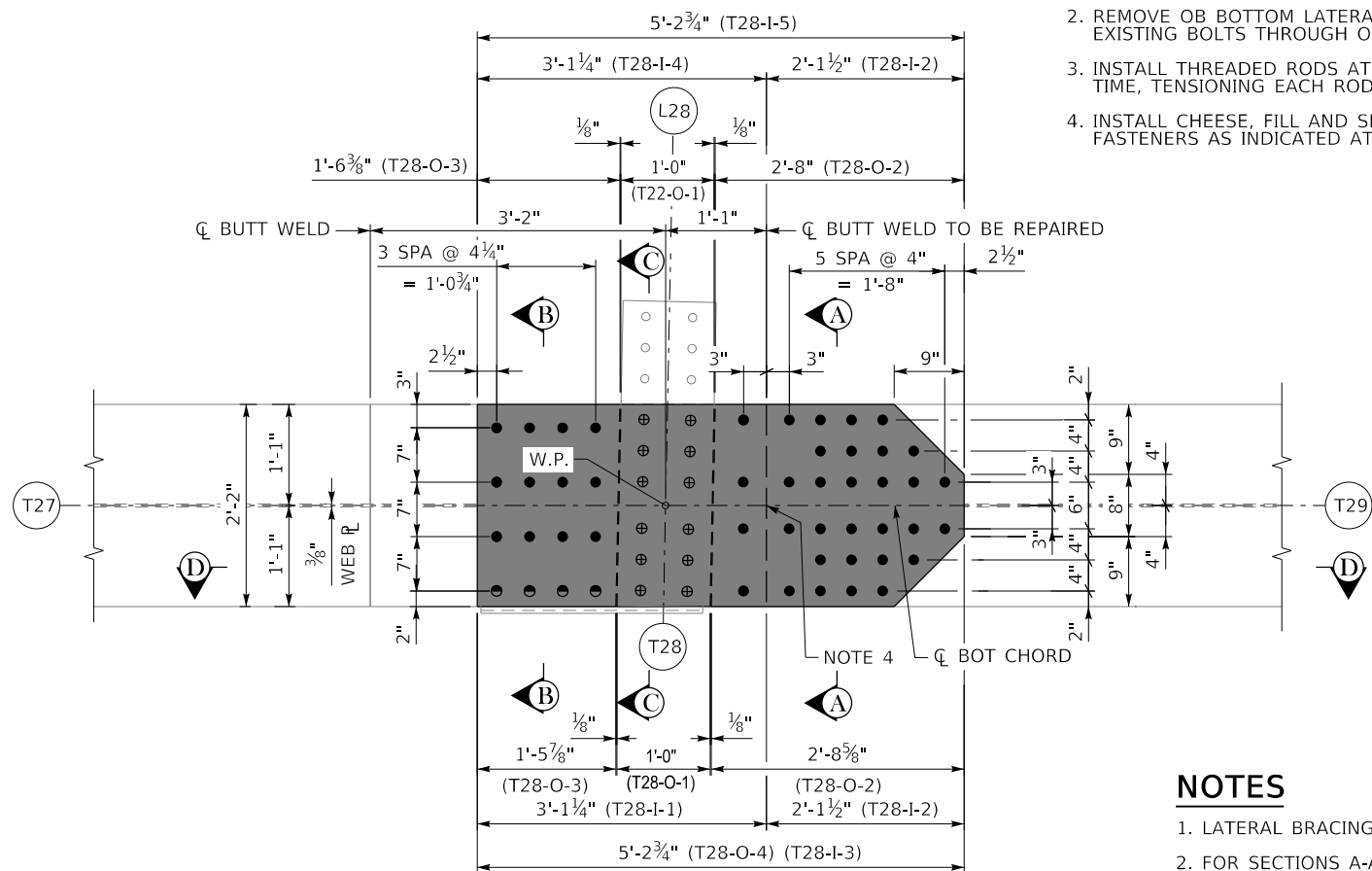
ROUTE  
I-275  
ITEM NO.  
S36

COUNTY OF  
BOONE  
DRAWING NUMBER  
28873



**EXISTING ELEVATION - T28**

(DOWNSTREAM TRUSS, LOOKING UPSTREAM AT OUTBOARD FACE)



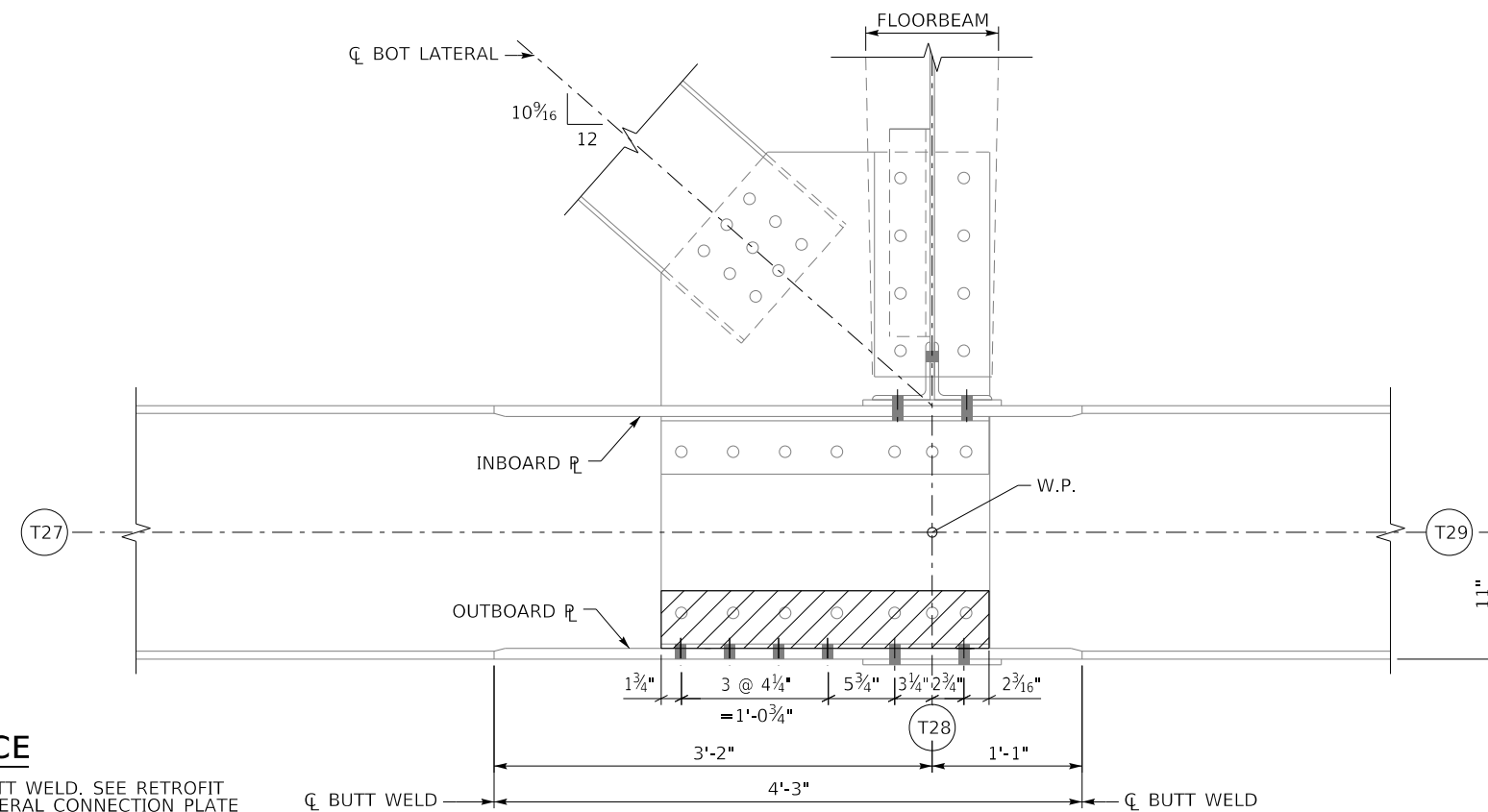
**PROPOSED ELEVATION - T28**

**CONSTRUCTION SEQUENCE**

1. CONSTRUCT WEB DOG-BONE AT OB BUTT WELD. SEE RETROFIT DETAIL ON SHEET S3. CUT/REMOVE LATERAL CONNECTION PLATE TO REMOVE OB ORIGINAL HOLES.
2. REMOVE OB BOTTOM LATERAL CONNECTION ANGLE INCLUDING 6 EXISTING BOLTS THROUGH OB FLANGE.
3. INSTALL THREADED RODS AT GUSSET CONNECTION ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
4. INSTALL CHEESE, FILL AND SPLICE PLATES AND T28-C-1 WITH NEW FASTENERS AS INDICATED AT GUSSET CONNECTION.

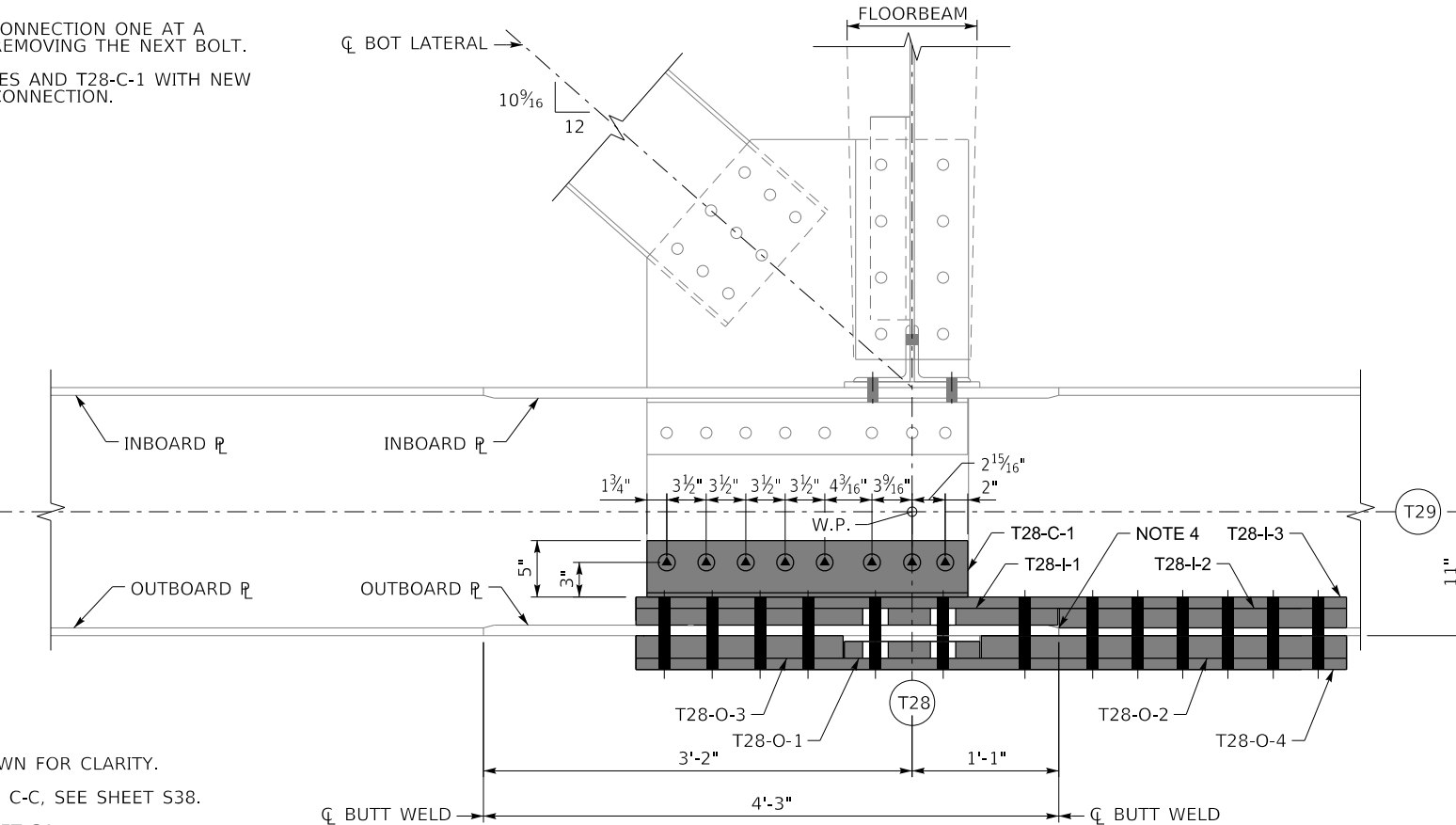
**NOTES**

1. LATERAL BRACING NOT SHOWN FOR CLARITY.
2. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET S38.
3. FOR BOLT LEGEND, SEE SHEET S4.
4. CONSTRUCT DOG BONE RETROFIT DETAIL IN WEB, SEE SHEET S3.



**SECTION D-D**

(EXISTING CONDITION)



**SECTION D-D**

(PROPOSED CONDITION)



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION DATE

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PREPARED BY  
1650 Lyndon Farm Court  
Louisville, KY  
Phone: (502)-339-3557  
MBAKERINTL.COM

DATE: 04/12/2024  
DESIGNED BY: P COZZENS  
DETAILED BY: J JACKSON

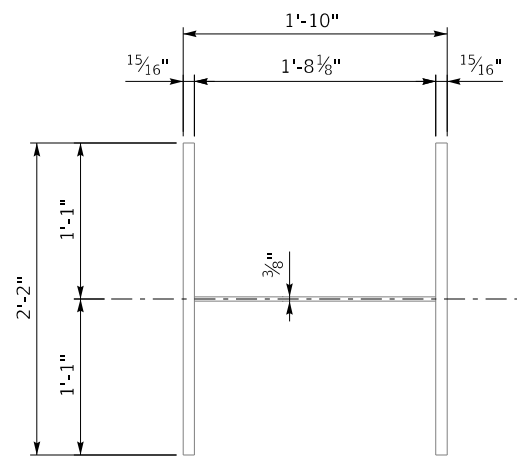
CHECKED BY  
J KAUZLARICH  
P COZZENS

**DS T28 OB REPAIR DETAIL**  
CROSSING  
OHIO RIVER

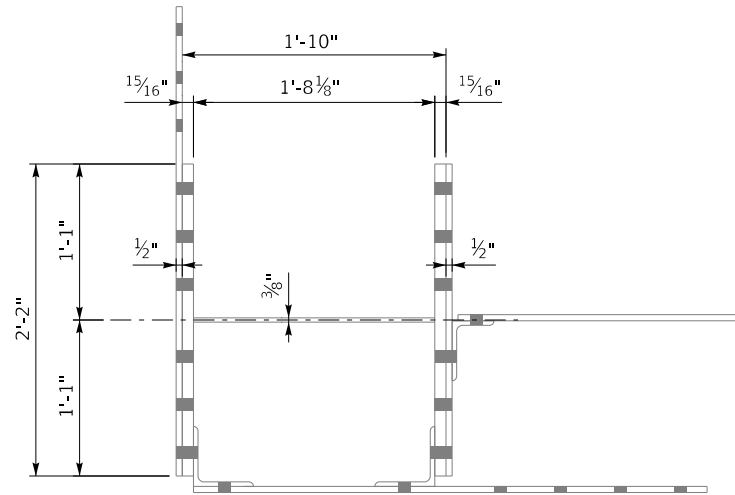
ROUTE  
I-275

ITEM NO.  
SHEET NO.  
S37

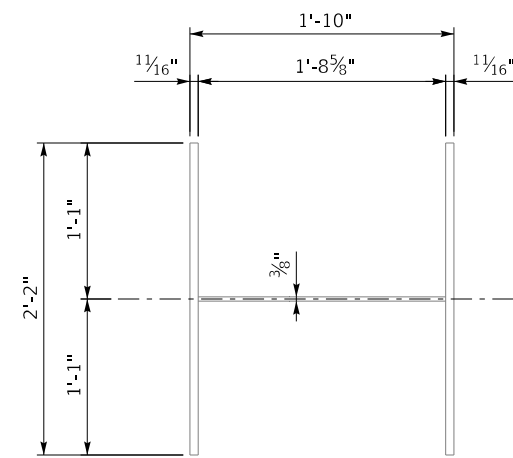
COUNTY OF  
BOONE  
DRAWING NUMBER  
28873



**SECTION B-B**  
(EXISTING CONDITION)



**SECTION C-C**  
(EXISTING CONDITION)



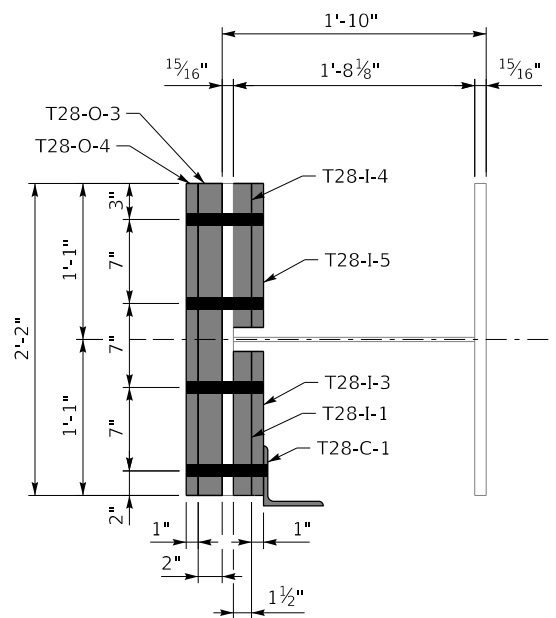
**SECTION A-A**  
(EXISTING CONDITION)

**LEGEND**

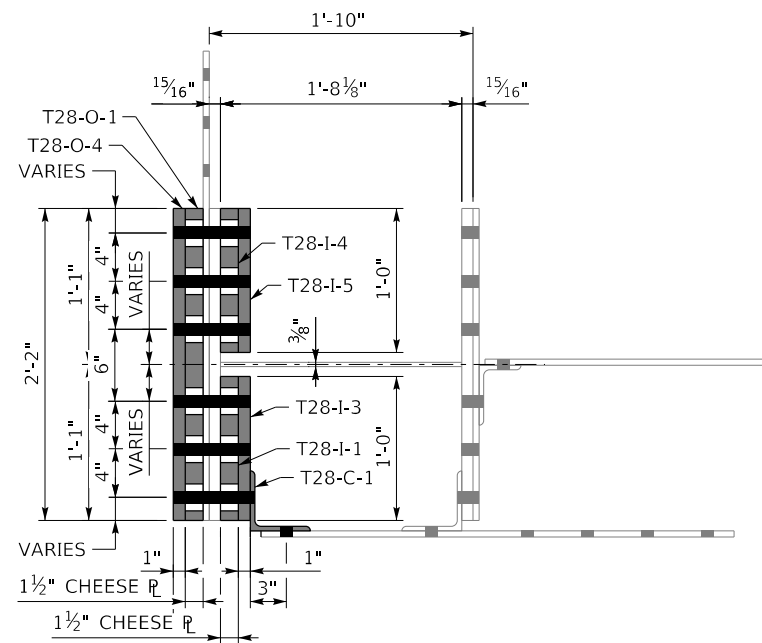
INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL.  
FOR BOLT HOLE AND SIZE, SEE SHEET S5.

**NOTES**

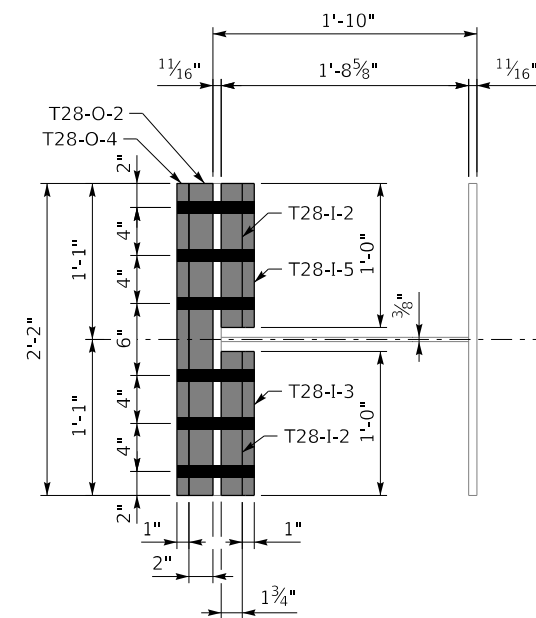
- LATERAL BRACING NOT SHOWN FOR CLARITY.
- FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET S37.



**SECTION B-B**  
(PROPOSED CONDITION)



**SECTION C-C**  
(PROPOSED CONDITION)



**SECTION A-A**  
(PROPOSED CONDITION)



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 15-APR-2024



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Louisville, KY  
Phone: (502)-339-3557  
MBAKERINTL.COM

DATE: 04/12/2024	CHECKED BY:
DESIGNED BY: P COZZENS	J KAUZLARICH
DETAILED BY: J JACKSON	P COZZENS

**DS T28 OB REPAIR DETAIL**  
CROSSING  
OHIO RIVER

ROUTE  
I-275

ITEM NO.  
S38

COUNTY OF  
BOONE  
DRAWING NUMBER  
28873