

TRANSPORTATION CABINET DEPARTMENT OF HIGHWAYS

JEFFERSON COUNTY I-65 OVER OHIO RIVER JOHN F. KENNEDY MEMORIAL BRIDGE TRUSS REPAIRS STEEL PLATING AND CORING

LETTING DATE

CONSTRUCTION PROJECT NO.

INDEX OF SHEETS

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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
2017 AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS

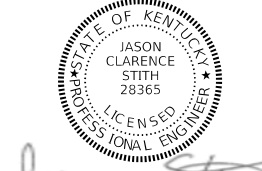
MOT ESTIMATE OF QUANTITIES

BID ITEM CODE	02562	02568	02569	02650	02671	02775	06549	06550	06551	20411ED
BID ITEM	TEMPORARY SIGNS	MOBILIZATION	DEMOBILIZATION	MAINTAIN AND CONTROL TRAFFIC	PORTABLE CHANGEABLE MESSAGE SIGNS	ARROW PANEL	PAVE STRIPING - TEMP REM TAPE - B	PAVE STRIPING - TEMP REM TAPE - W	PAVE STRIPING - TEMP REM TAPE - Y	LAW ENFORCEMENT OFFICER
UNIT	SF	LS	LS	LS	EACH	EACH	LF	LF	LF	HOURL
BRIDGE TOTALS	428	1	1	1	3	2	1680	3340	5860	240

ESTIMATE OF QUANTITIES

BID ITEM CODE	24879EC	24879EC	24879EC	24879EC	24879EC	24879EC	24879EC
BID ITEM	STEEL REPAIR - US U26-U27 AT U27	STEEL REPAIR - US U27-U28 AT U28	STEEL REPAIR - US U62-U64 AT U63	STEEL REPAIR - US M11-L12 AT M11	STEEL REPAIR - CORING TYPICAL	STEEL REPAIR - GRINDING	STEEL REPAIR - CORING W/ BARRIER REMOVAL
UNIT	EACH	EACH	EACH	EACH	EACH	EACH	EACH
BRIDGE TOTALS	1	1	1	1	31	1	2

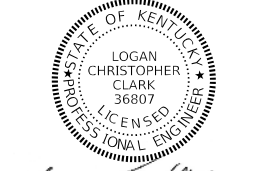
PLANS PREPARED BY:



Jason Stith

JASON STITH, P.E.
KY NO. 28365

PLANS PREPARED BY:



Logan Clark

LOGAN CLARK, P.E.
KY NO. 36807

GENERAL NOTES

SCOPE OF WORK: THESE PLANS ARE TO BE USED TO REINFORCE THE FLANGE PLATE BUTT WELDS ON THE UPSTREAM TRUSS AT JOINTS M11, U27, AND U63. PLANS ARE ALSO INCLUDED TO REMOVE A BARRIER SECTION AT L13 AND L23 TO ALLOW FOR REMOVAL OF AN INDICATION IN FLANGE PLATE BUTT WELD BY MEANS OF CORE DRILLING OF THE VERTICAL MEMBER BUTT WELD, AS WELL AS A NUMBER OF OTHER LOCATIONS REQUIRING CORING OR GRINDING.

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: ALL STRUCTURAL STEEL MODIFICATIONS ARE DESIGNED BY THE LOAD AND RESISTANCE FACTOR METHOD AS SPECIFIED IN THE CURRENT AASHTO SPECIFICATIONS.

DESIGN METHOD: ALL NEW STRUCTURAL MEMBERS ARE DESIGNED TO HAVE A CAPACITY EQUIVALENT OR GREATER THAN THE LOAD AND RESISTANCE FACTOR DESIGN METHOD OF THE EXISTING MEMBER COMPONENT ASSUMED LOSS BY A FRACTURE EVENT, 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 WITH MINIMUM CVN TOUGHNESS
OF 35 FT-LBF @ -10°F

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 HIGH YIELD STRENGTH STRUCTURAL ALLOY STEEL

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

CONCRETE
USE CLASS AA (4,000 PSI) IN ACCORDANCE WITH SECTION 601 OF THE STANDARD SPECIFICATIONS.

STRUCTURAL STEEL	
AASHTO	A.S.T.M.
M270 GR 50	A709 GR 50
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	A563 (DH), F436-1
HARDENED STEEL WASHERS	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 A325, TYPE 1 BOLTS ARE TO BE GALVANIZED BOLTS. 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: UNLESS OTHERWISE PROVIDED ON THE PLANS, ALL NEW BOLTS SHALL BE 1¼" OR 7⁄8" DIAMETER HIGH STRENGTH BOLTS. 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 LOCATIONS SHOWN ON THE PLANS ARE BASED ON THE AVAILABLE 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 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 DURING 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 APPROPRIATE BID ITEM.

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.




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: 14525, 14744, 15150, 235584, 23792, AND INDOT BRIDGE FILE I-65-0-4811. SHOP DRAWINGS FOR 14744 AND 23792 ARE ALSO AVAILABLE.

ON-SITE INSPECTION: THE CONTRACT 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 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 BID ITEM 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: 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.

	COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS		REVISION	DATE	PREPARED BY 	DATE: 03/25/2024	CHECKED BY	GENERAL NOTES CROSSING OHIO RIVER	ROUTE	I-65	ITEM NO. 5-10074	COUNTY OF JEFFERSON
			_____	_____	_____	DESIGNED BY: B. CHAVEL	J. STITH				SHEET NO. S2	DRAWING NUMBER 28331

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.

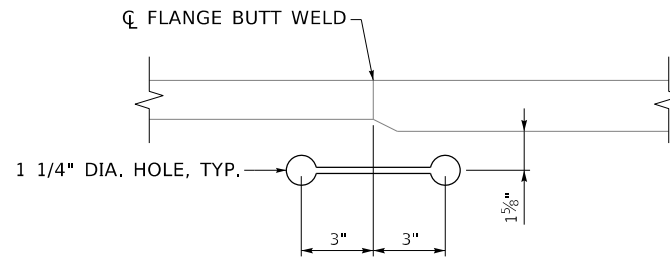
DETAILED PROCEDURES ON REPAIRS AT LOCATIONS WITH LATERAL BRACING, SEE U27 AND U63 DETAIL SHEETS.

FOR M11 AND U28:

1. CONSTRUCT WEB DOG-BONE AT EACH BUTT WELD (2 LOCATIONS FOR M11 AND 2 LOCATIONS FOR U28). SEE WEB DOG-BONE RETROFIT DETAIL ON THIS SHEET.
2. REMOVE AND REPLACE EXISTING 1 1/4" DIAMETER BOLTS WITH 1 1/4" DIAMETER THREADED RODS. ENSURE SUFFICIENT PROJECTING LENGTH FOR GRIP OF NEW PLATES PLUS WASHERS AND NUTS.
3. INSTALL CHEESE PLATES, FILLER PLATE, AND SPLICE PLATE ON ONE SIDE OF THE FLANGE. INSTALL NUTS ON THE OUTSIDE OF THE SPLICE PLATE.
4. INSTALL CHEESE PLATES, FILLER PLATE, AND SPLICE PLATE ON OTHER SIDE OF THE FLANGE. INSTALL NUTS ON THE OUTSIDE OF THE SPLICE PLATE.
5. REPEAT STEPS 1 - 4 FOR THE OTHER FLANGE.

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.

COMPLETION OF THE STRUCTURE: THE CONTRACTOR IS REQUIRED TO COMPLETE THE STRUCTURE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. MATERIAL, LABOR, OR CONSTRUCTION OPERATIONS NOT OTHERWISE SPECIFIED, ARE TO BE INCLUDED IN THE BID ITEM MOST APPROPRIATE TO THE WORK INVOLVED AND OTHERWISE CONSIDERED INCIDENTAL TO THE CONTRACT. THIS MAY INCLUDE REMOVAL OF ALL OR PARTS OF EXISTING STRUCTURES, PHASE CONSTRUCTION, INCIDENTAL MATERIALS, LABOR, OR ANYTHING ELSE REQUIRED TO COMPLETE THE STRUCTURE.



WEB DOG-BONE RETROFIT DETAIL

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

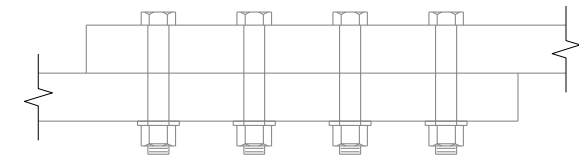
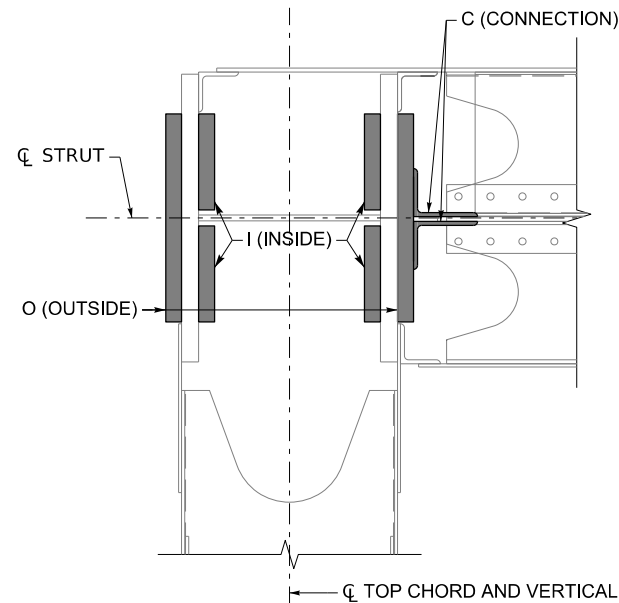
WEB DOG-BONE RETROFIT PROCEDURE:

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

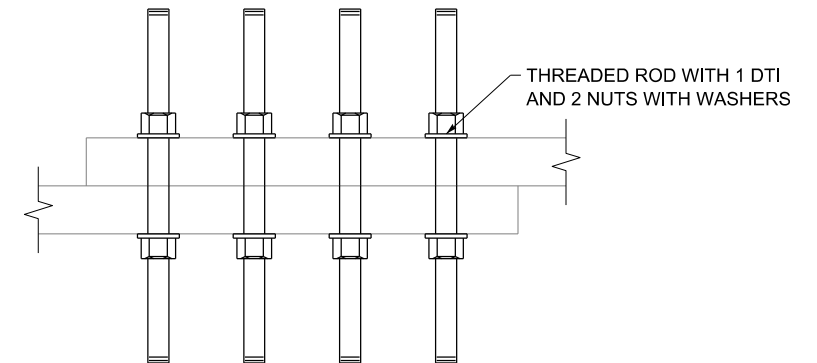
PLATE MARKING CONVENTION

PLATE MARK	JOINT LOCATION	OUTSIDE/INSIDE	PLATE NUMBER
M11-O-1	M11	O	1
U27-I-2	U27	I	2
U63-C-3	U63	C	3

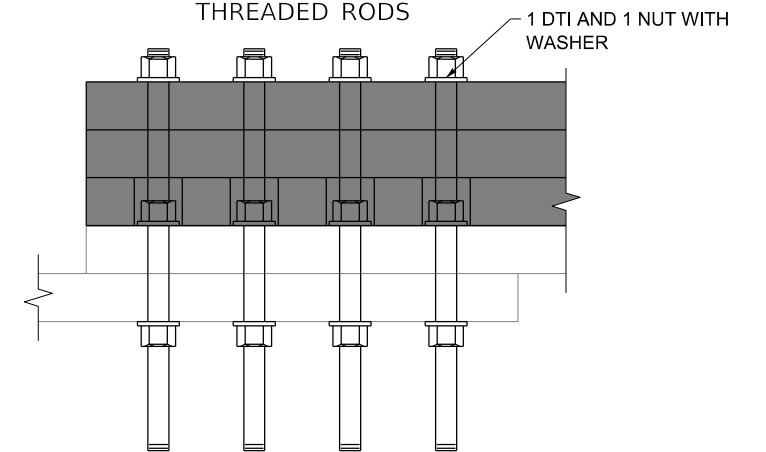
*REFER TO BELOW SKETCH DEFINING OUTSIDE, INSIDE, AND CONNECTION PLATE MARKS



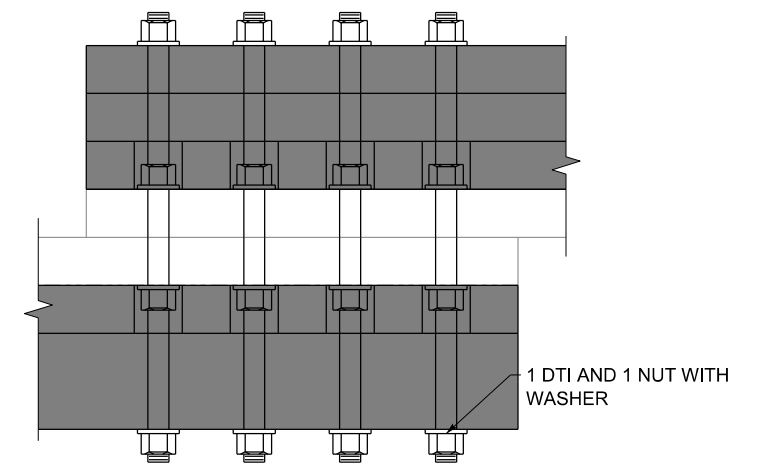
EXISTING CONDITION



REPLACE EXISTING BOLTS WITH THREADED RODS



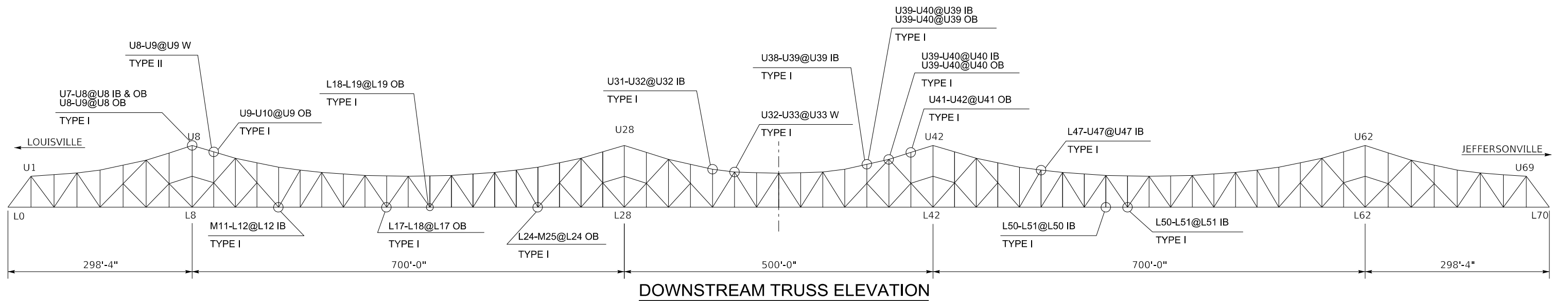
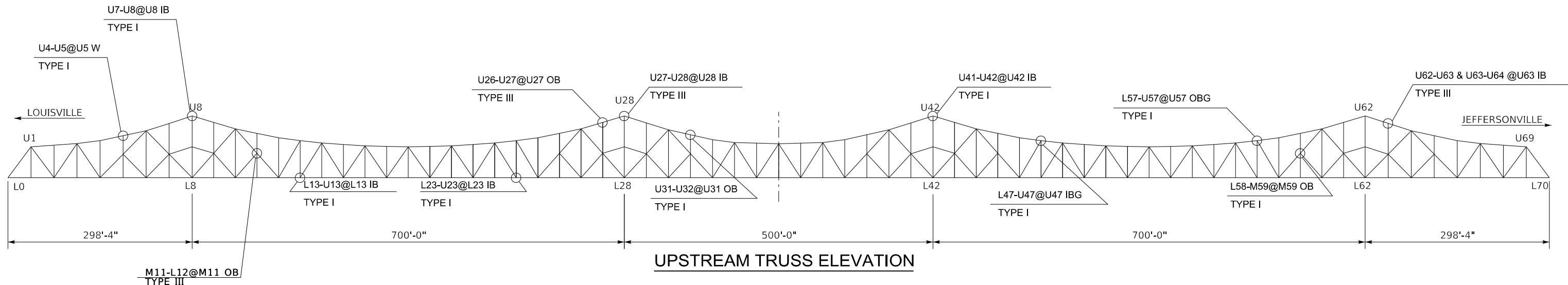
INSTALL CHEESE PLATE AND OUTSIDE PLATES ON ONE SIDE



INSTALL CHEESE PLATE AND OUTSIDE PLATES ON REMAINING SIDE

THREADED ROD INSTALLATION SEQUENCE

	COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS		REVISION	DATE	PREPARED BY Michael Baker INTERNATIONAL	DATE: 03/25/2024	CHECKED BY J. STITH	GENERAL NOTES CROSSING OHIO RIVER	ROUTE I-65	ITEM NO. 5-10074	COUNTY OF JEFFERSON



LEGEND

- 1 TRUSS MEMBER U = UPPER CHORD
L = LOWER CHORD
M = MIDDLE PANEL
- 2 @ PANEL POINT
- 3 IB = INBOARD VERTICAL PLATE
OB = OUTBOARD VERTICAL PLATE
W = WEB HORIZONTAL PLATE
IBG = INBOARD GUSSET PLATE
OBG = OUTBOARD GUSSET PLATE
- 4 TYPE I = CORING
TYPE II = GRINDING
TYPE III = PLATING

(SEE SHEET S8 FOR MORE DETAILS ON REPAIR TYPE)



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 25-MAR-2024

PREPARED BY
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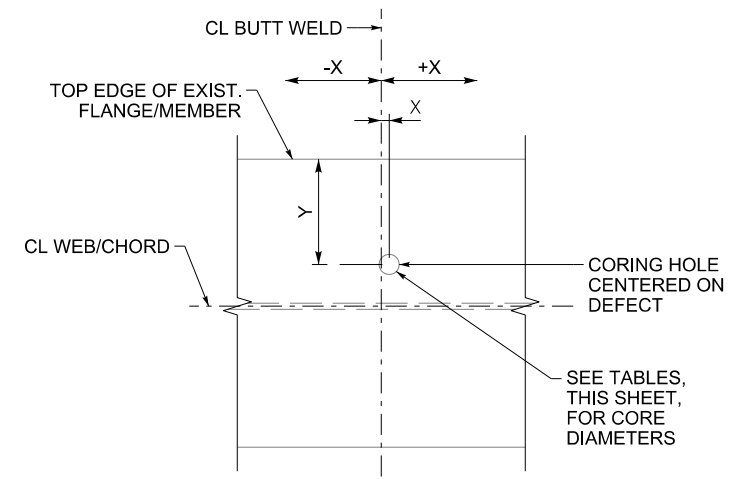
DATE: 03/25/2024	CHECKED BY:
DESIGNED BY: T. NEWGARD	A. WILLOUGHBY
DETAILED BY: S. BENGOCHEA	T. NEWGARD

REPAIR LOCATIONS
CROSSING
OHIO RIVER

ROUTE	ITEM NO.	COUNTY OF
I-65	5-10074	JEFFERSON
	SHEET NO.	DRAWING NUMBER
	S5	28331

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 †
U4-U5	U5	WEB	0.6	-0.4	15.5	12/7/2022	I	2						
U7-U8	U8	INBOARD	0.8	+0.8	27.0	12/9/2022	I	2						
U26-U27	U27	OUTBOARD	1.3	+1	6.0	12/10/2022	III**	N/A						
			3.5	+1	11.0	12/10/2022								
U27-U28	U28	INBOARD	1.0	0.0	6.0	12/10/2022	III**	N/A						
			0.8	-0.3	12.0	12/10/2022								
			0.8	-1.0	14.8	12/10/2022								
U31-U32	U31	OUTBOARD	0.8	+0.3	13.1	12/2/2022	I	2						
U41-U42	U42	INBOARD	0.5	+0.3	30.0	12/4/2022	I	2						
U62-U63	U63	INBOARD	5.5	0.0	8.5	12/3/2022	III**	N/A						
U63-U64	U63	INBOARD	0.5	-1.0	8.0	12/3/2022								
M11-L12	M11	OUTBOARD	8.0	-0.7	0.0	12/7/2022	III**	N/A						
L58-M59	M59	OUTBOARD	0.6	+1.1	18.3	12/3/2022	I	2						
L13-U13	L13	INBOARD	0.8	0.0	0.0	12/3/2022	I	2						
L23-U23	L23	INBOARD	0.5	0.0	0.0	12/5/2022	I	2						
L47-U47	U47	INBOARD GUSSET	0.6	1.0	21.2	12/5/2022	I	2						
L57-U57	U57	OUTBOARD GUSSET	1.2			12/3/2022	I	2						

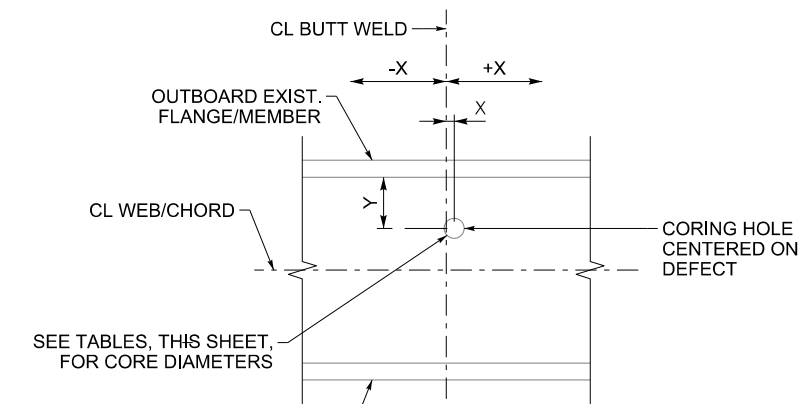


ELEVATION

INBOARD AND OUTBOARD VERTICAL PLATE REPAIRS

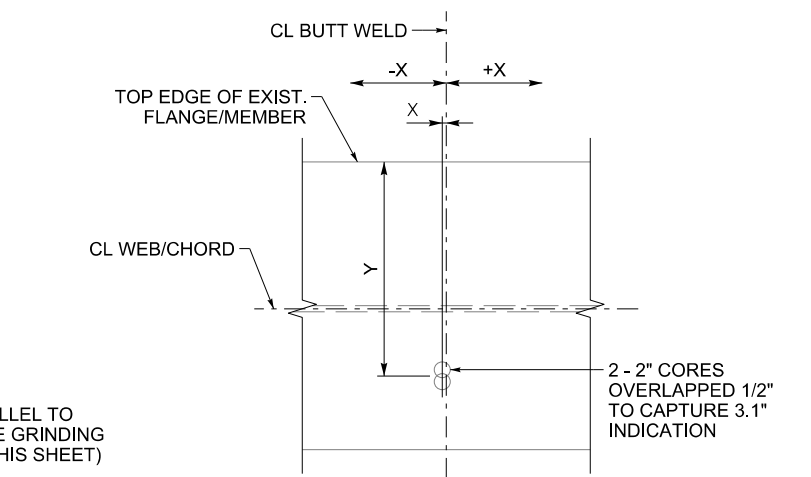
DOWNSTREAM TRUSS REPAIRS

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	
U7-U8	U8	INBOARD	0.9	-0.8	17.4	11/14/2022	I	2					
		OUTBOARD	1.6	+0.1	17.4	11/14/2022	I	2					
		OUTBOARD	1.2	+1.2	15.3	11/13/2022	I	2					
U8-U9	U8	OUTBOARD	0.6	+0.7	31.6	11/14/2022	I	2					
U8-U9	U9	WEB	N/A	N/A	N/A	N/A	II	N/A					
U9-U10	U9	OUTBOARD	0.6	-1.4	18.4	11/14/2022	I***	2					
			0.8	-0.1	18.8	11/14/2022							
U31-U32	U32	INBOARD	2.2	0.0	5.1	11/10/2022	I	3					
U32-U33	U33	WEB	0.6	0.0	6.0	11/9/2022	I	2					
U38-U39	U39	INBOARD	1.0	+0.2	4.2	11/13/2022	I	2					
		INBOARD	3.1	-0.5	27.2	11/13/2022	I***	2					
U39-U40	U39	OUTBOARD	1.0	+0.2	16.0	11/13/2022	I	2					
		OUTBOARD	0.7	-1.0	23.0	11/13/2022	I	2					
		INBOARD	1.3	0.8	6.6	11/13/2022	I	2					
U39-U40	U40	INBOARD	1.0	+0.6	29.5	11/14/2022	I	2					
		OUTBOARD	0.5	-0.6	7.1	11/14/2022	I	2					
U41-U42	U41	OUTBOARD	1.0	0.0	17.8	11/9/2022	I	2					
L17-L18	L17	OUTBOARD	0.8	+0.4	18.1	11/13/2022	I	2					
L18-L19	L19	OUTBOARD	1.5	+0.8	18.5	11/13/2022	I	2					
L50-L51	L50	INBOARD	1.5	0.0	17.5	11/9/2022	I	2					
L50-L51	L51	INBOARD	0.8	0.0	17.8	11/8/2022	I	2					
M11-L12	L12	INBOARD	1.0	+0.3	18.8	11/16/2022	I	2					
L24-M25	L24	OUTBOARD	1.5	+1.3	0.1	11/16/2022	I	2					
L47-U47	U47	INBOARD	0.3	+0.9	18.9	11/17/2022	I	2					



PLAN

WEB PLATE REPAIRS



PLAN

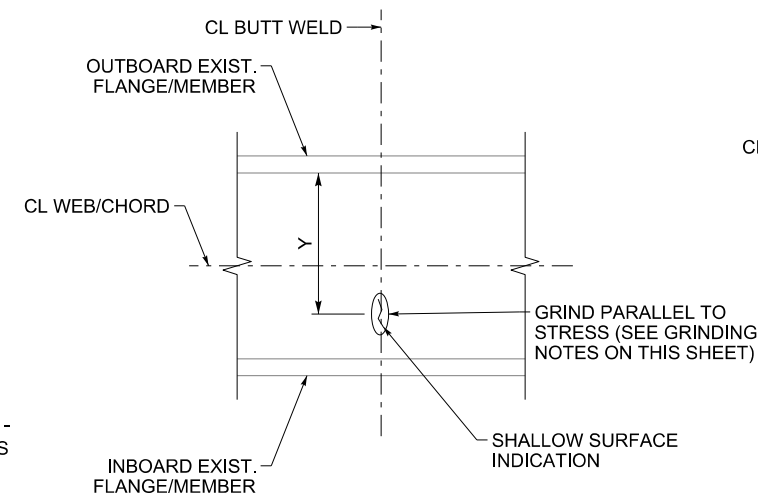
U39-U40 AT U39 INBOARD GUSSET PLATE

REPAIR TYPE LEGEND

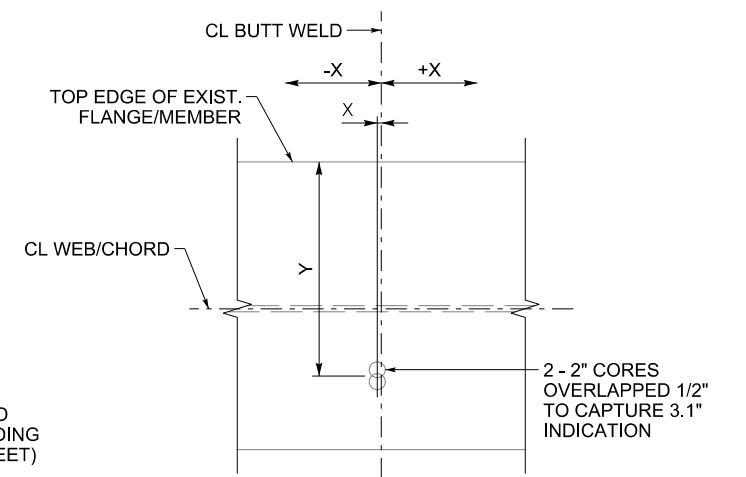
- I CORE HOLE AND PLATE
- II SURFACE GRINDING
- III PLATING (SEE DETAIL SHEETS INCLUDE IN THIS PLAN SET)

WELD GRINDING NOTES

- LOCATE THE ENDS OF THE SHALLOW INDICATION USING NDT TESTING.
- MARK EACH END AND NOTE THE ANTICIPATED DEPTH.
- USING A DISC GRINDER AND FLAPPER WHEEL (40 - 60 GRIT). REMOVE MATERIAL IN SHALLOW PASSES TO THE ANTICIPATED DEPTH. FINISH SAND USING 100 GRIT.
- FLARE THE REMOVAL AT A 10:1 SLOPE TO THE PLATE SURFACE IN VERTICAL AND HORIZONTAL DIRECTIONS.
- VERIFY INDICATION REMOVAL BY NDE.



TYPE II REPAIRS



TYPE I REPAIRS

* +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 III PLATING REPAIRS

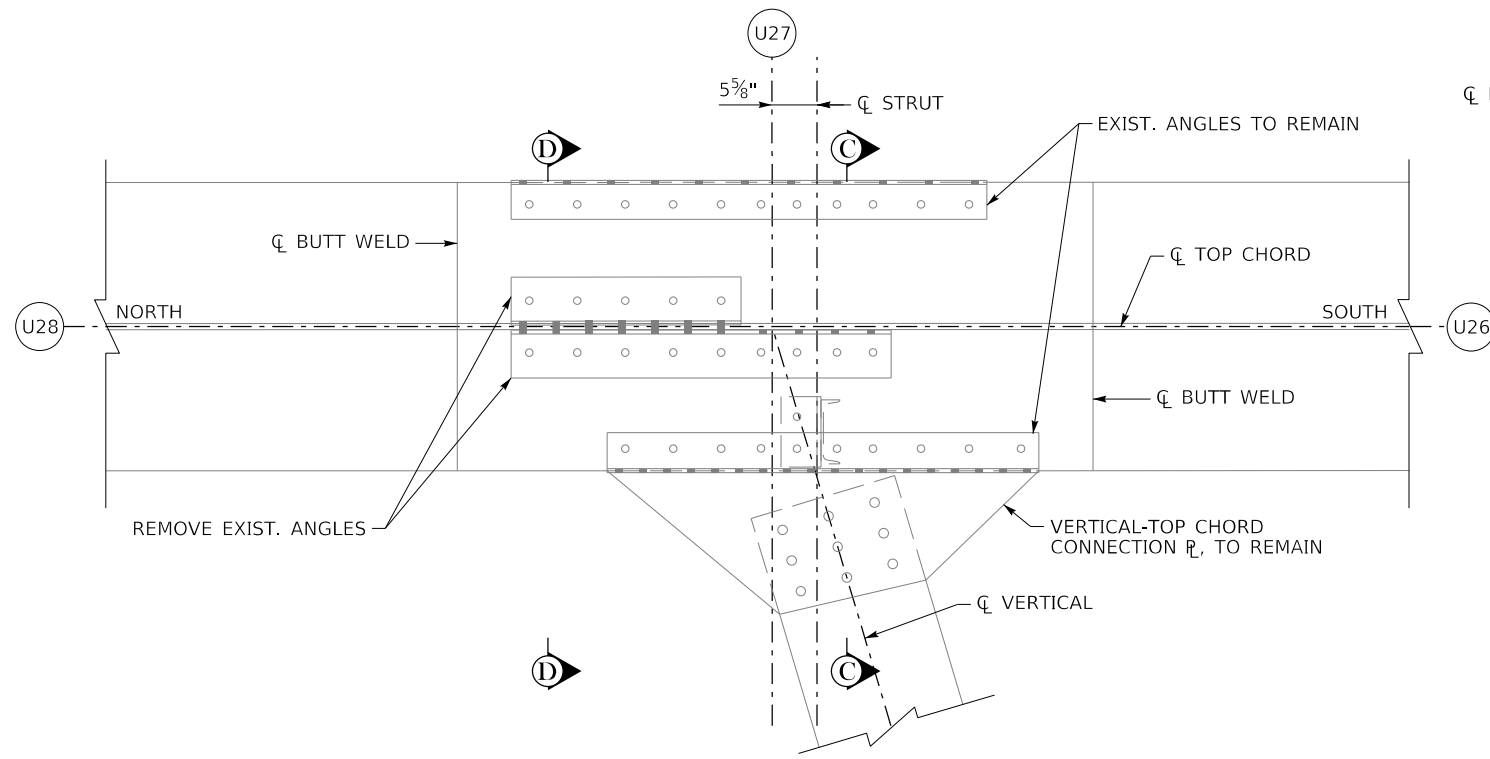
*** USE 2-2" CORES WITH 1/2" OVERLAP TO CAPTURE THE INDICATION(S). GRIND SMOOTH ANY ROUGH EDGES AT THE INTERFACES OF THE TWO CORINGS

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

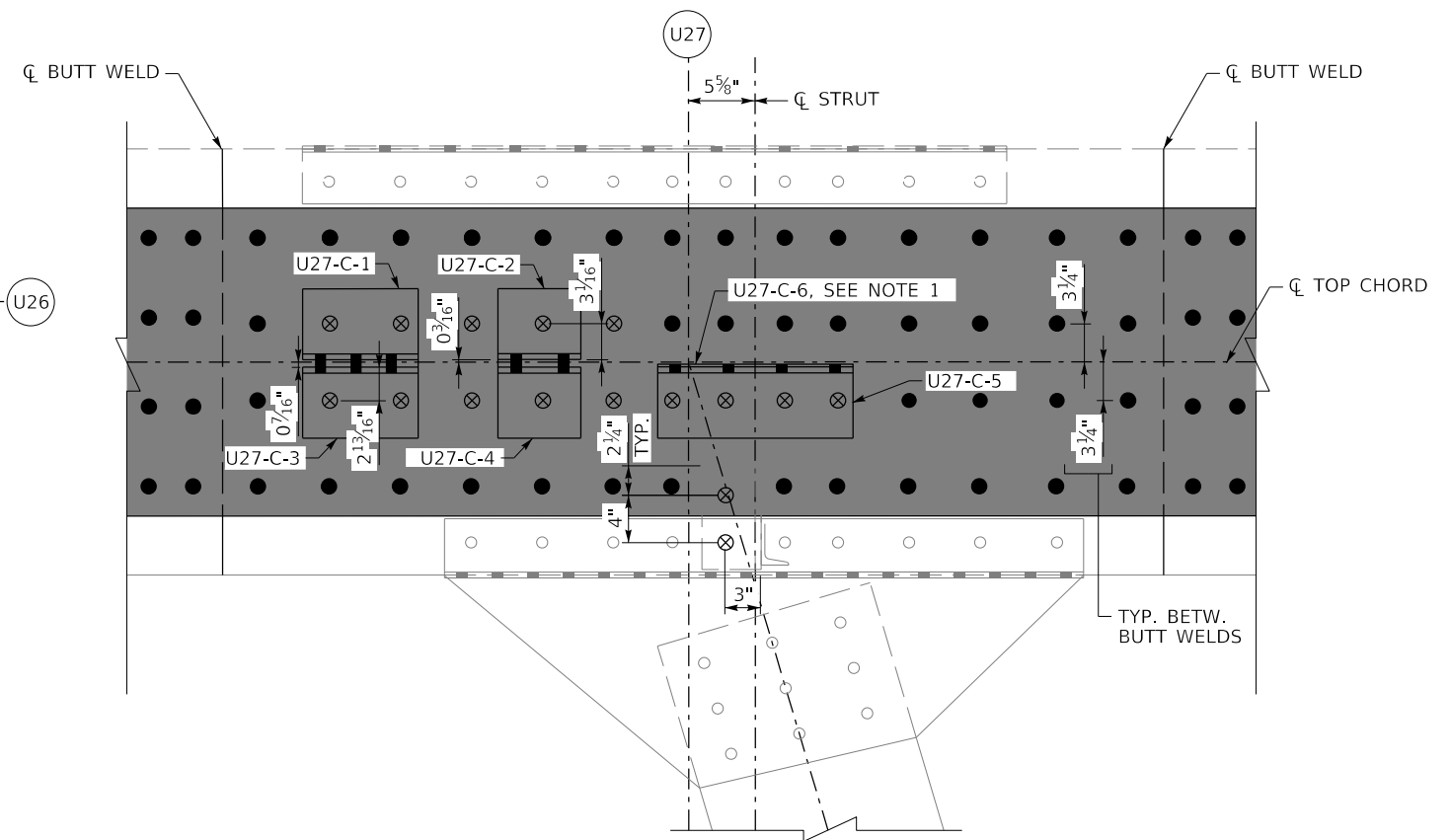
NOTES

- 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.
- 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.
- 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 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, NOTCHS, OR CUTS.

	REVISION REVISION 1 - REVISED REPAIR TABLES	DATE 03-07-24	PREPARED BY Michael Baker INTERNATIONAL	DATE: 03/25/2024	CHECKED BY J. STITH	REPAIR LOCATIONS AND DETAILS CROSSING OHIO RIVER	ROUTE I-65	ITEM NO. 5-10074	COUNTY OF JEFFERSON
				DESIGNED BY: T. NEWGARD	J. STITH		SHEET NO. S6	DRAWING NUMBER 28331	

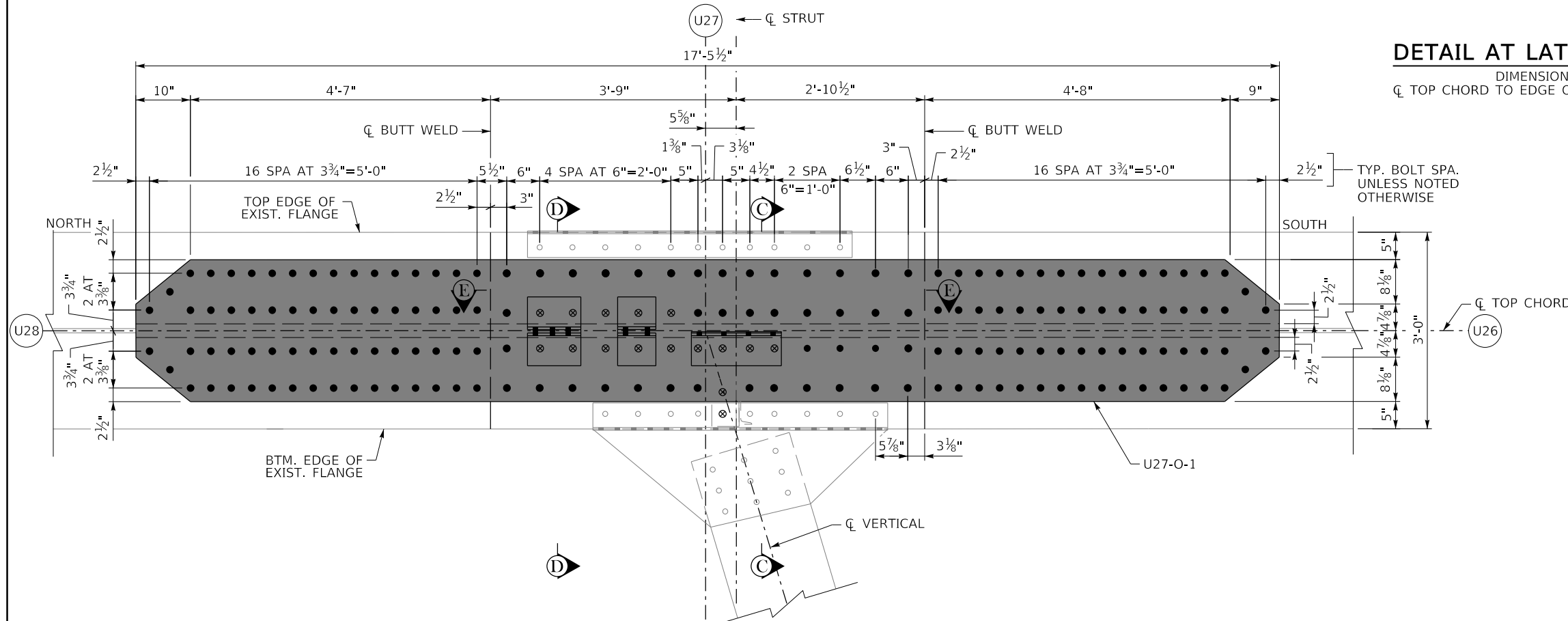


EXISTING ELEVATION
INBOARD FLANGE SHOWN



DETAIL AT LATERAL BRACING CONNECTIONS

DIMENSIONS TO ANGLE CONNECTIONS ARE FROM
CL TOP CHORD TO EDGE OF ANGLE, AND EDGE OF ANGLE TO CENTER OF BOLT



PROPOSED ELEVATION
INBOARD FLANGE SHOWN

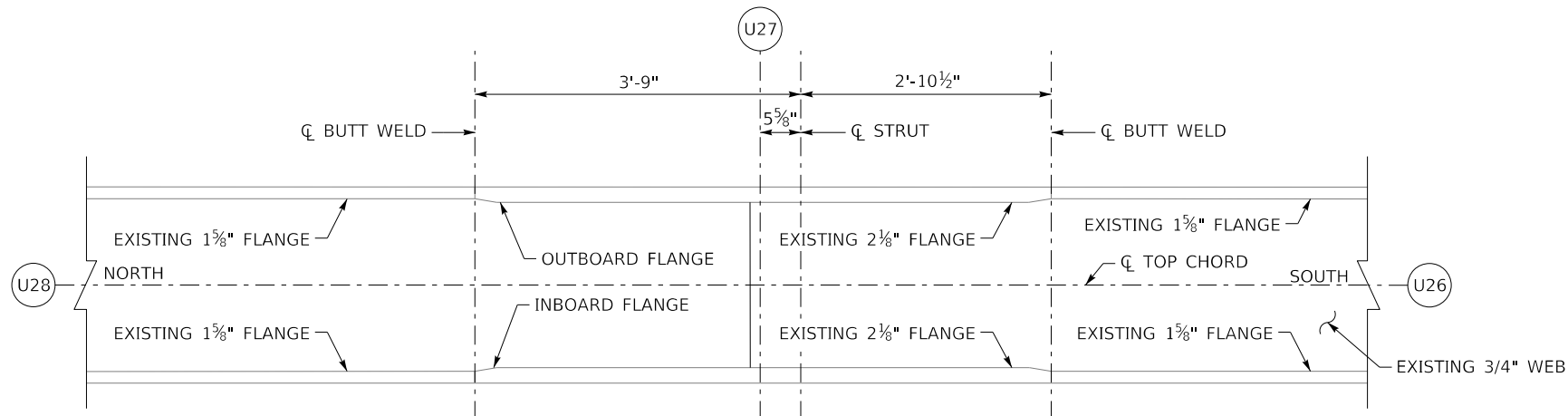
LEGEND

- 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 REMOVE EXISTING BOLTS AND REPLACE WITH NEW 1 1/4" DIA. (A325) BOLTS WITH 1 5/16" DIA. HOLES IN EXISTING AND NEW STEEL, UNLESS NOTED OTHERWISE.
- INDICATES EXISTING BOLTS AND BOLT HOLES.

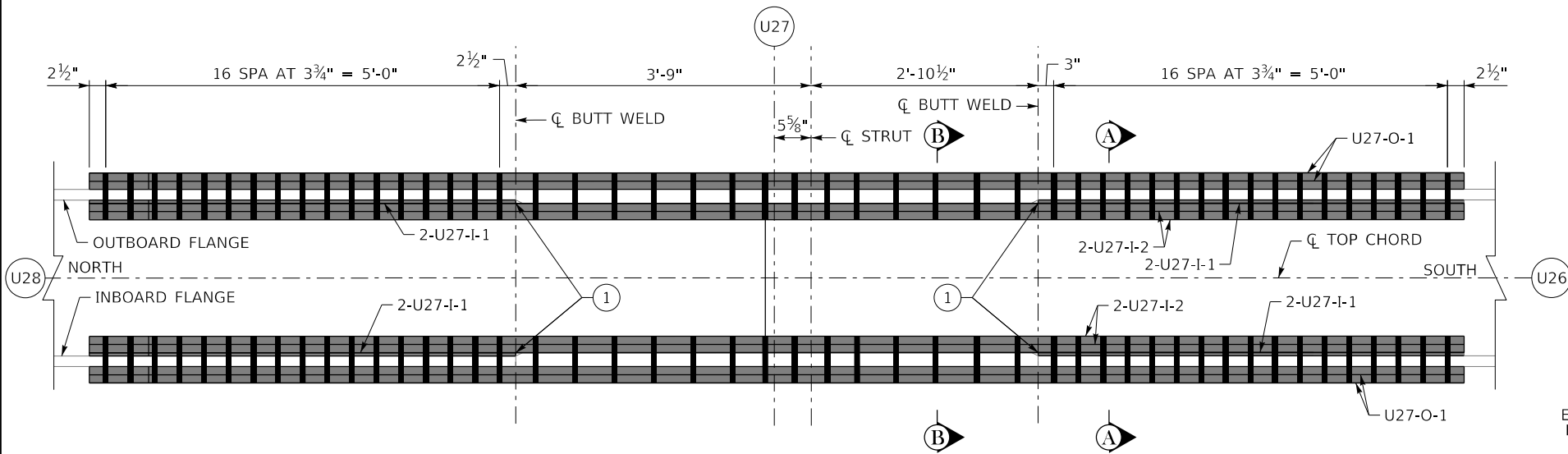
NOTES

1. PROVIDE U27-C-6 FILL PLATE IF NEEDED TO FILL GAP AND PROVIDE TIGHT FIT BETWEEN EXISTING MEMBER AND ANGLE CONNECTION.
2. FOR SECTION C-C AND D-D, SEE SHEET S9.
3. FOR SECTION E-E, SEE SHEET S10.

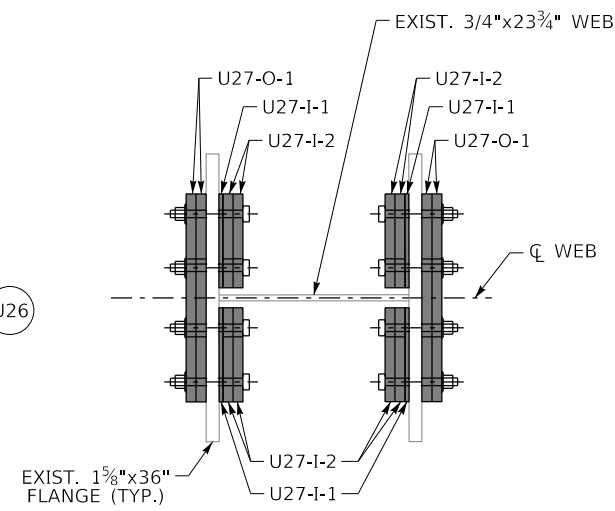
	REVISION	DATE	PREPARED BY Michael Baker INTERNATIONAL 1850 Lyndon Farm Court Louisville, KY Phone: (502)-339-3557 MBAKERINTL.COM	DATE: 03/25/2024 DESIGNED BY: T. NEWGARD DETAILED BY: S. BENGOCHEA	CHECKED BY S. OLSON T. NEWGARD	U27 REPAIR DETAIL CROSSING OHIO RIVER	ROUTE	ITEM NO.	COUNTY OF
							I-65	5-10074	JEFFERSON
								SHEET NO.	DRAWING NUMBER
								S7	28331



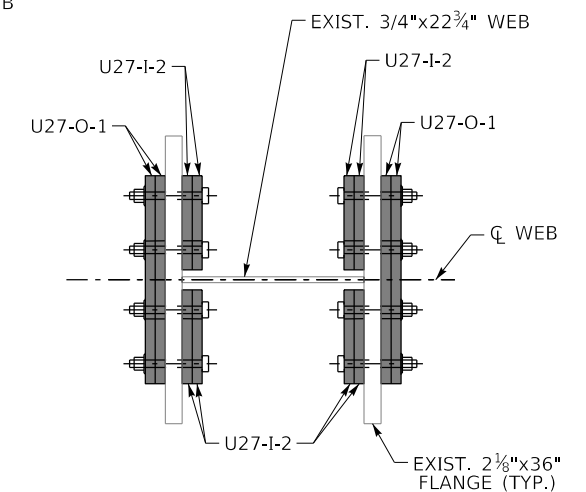
EXISTING PLAN



PROPOSED PLAN



PROPOSED SECTION A-A



PROPOSED SECTION B-B

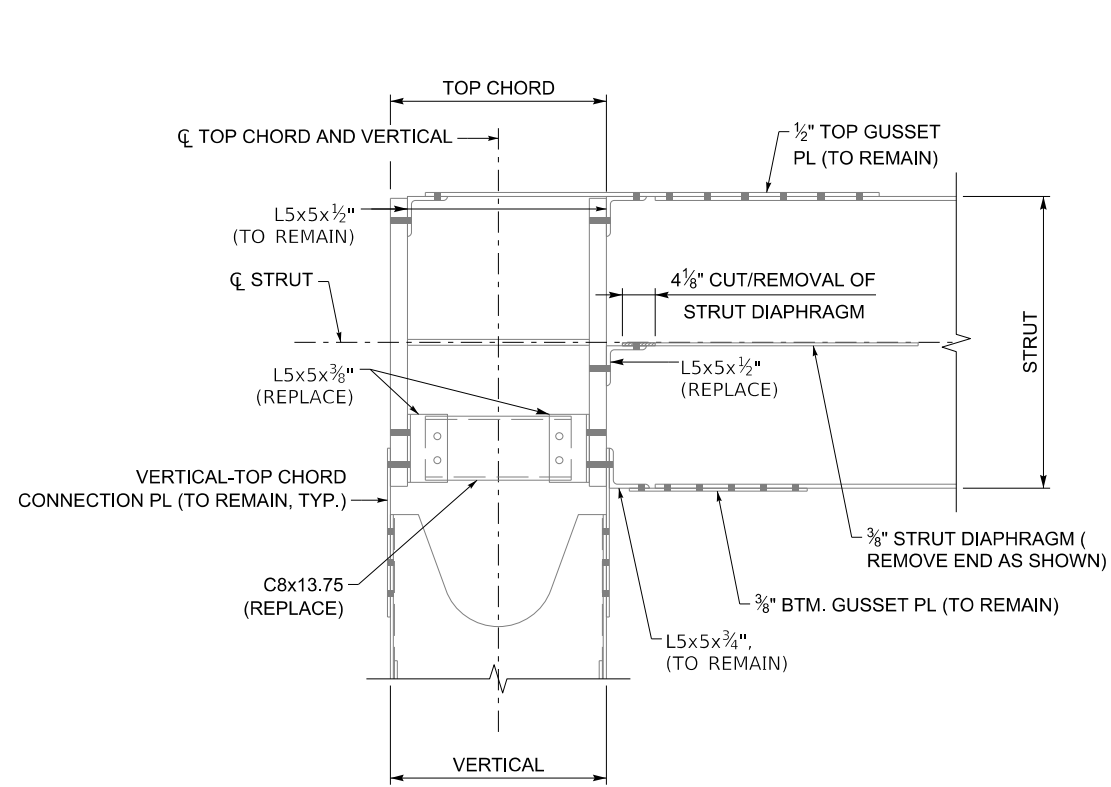
LEGEND

- INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL. FOR BOLT HOLE AND SIZE, SEE SHEET S7.
- ① CONSTRUCT WEB DOG-BONE. FOR WEB DOG-BONE RETROFIT DETAIL, SEE SHEET S3.

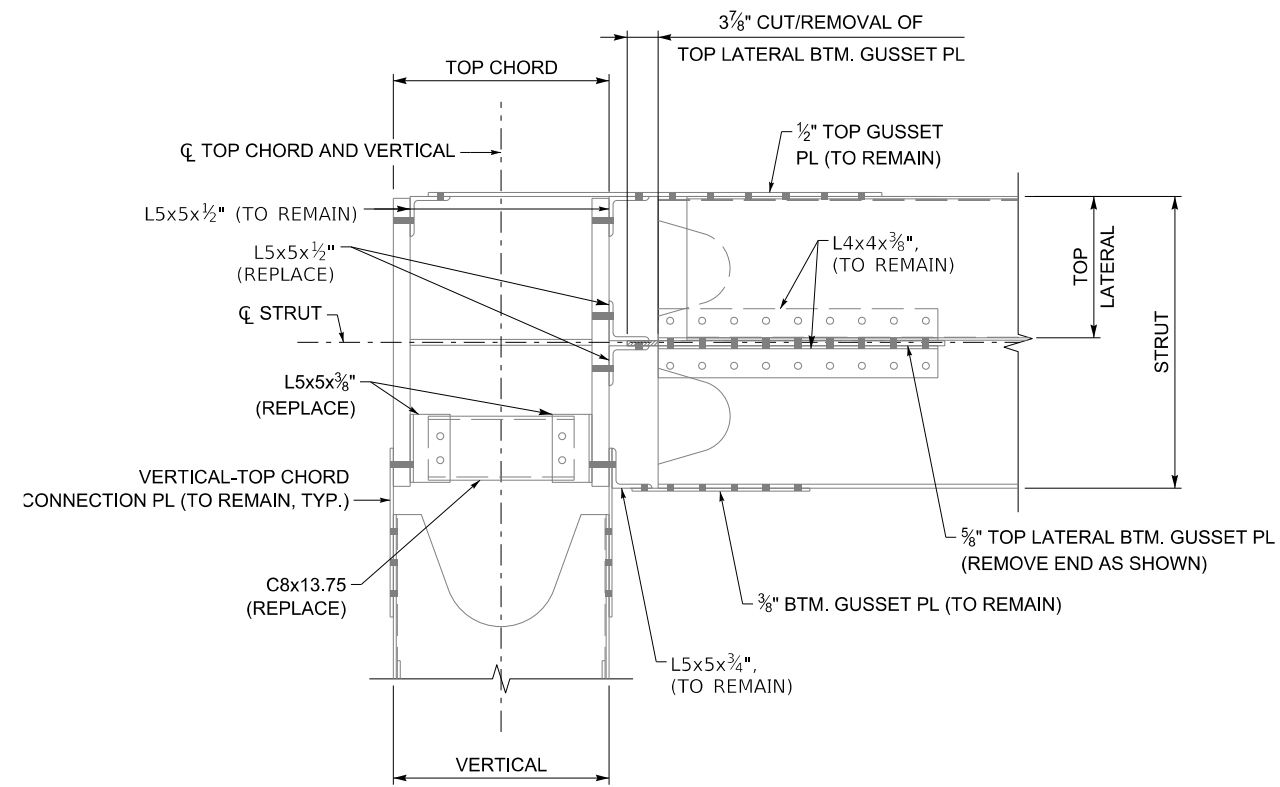
NOTES

LATERAL BRACING NOT SHOWN FOR CLARITY. FOR LATERAL BRACING DETAILS, SEE SHEET S10.

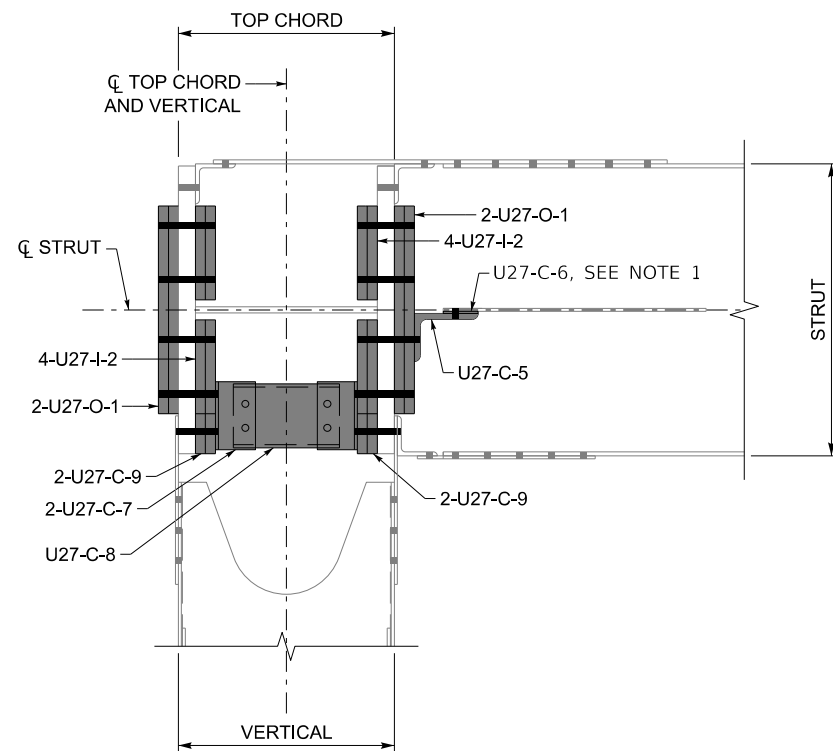
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				DESIGNED BY: T. NEWGARD	S. OLSON		I-65	5-10074	JEFFERSON
				DETAILED BY: S. BENGOCHEA	T. NEWGARD		SHEET NO.	DRAWING NUMBER	
MicroStation v10.17.01.58							S8	28331	



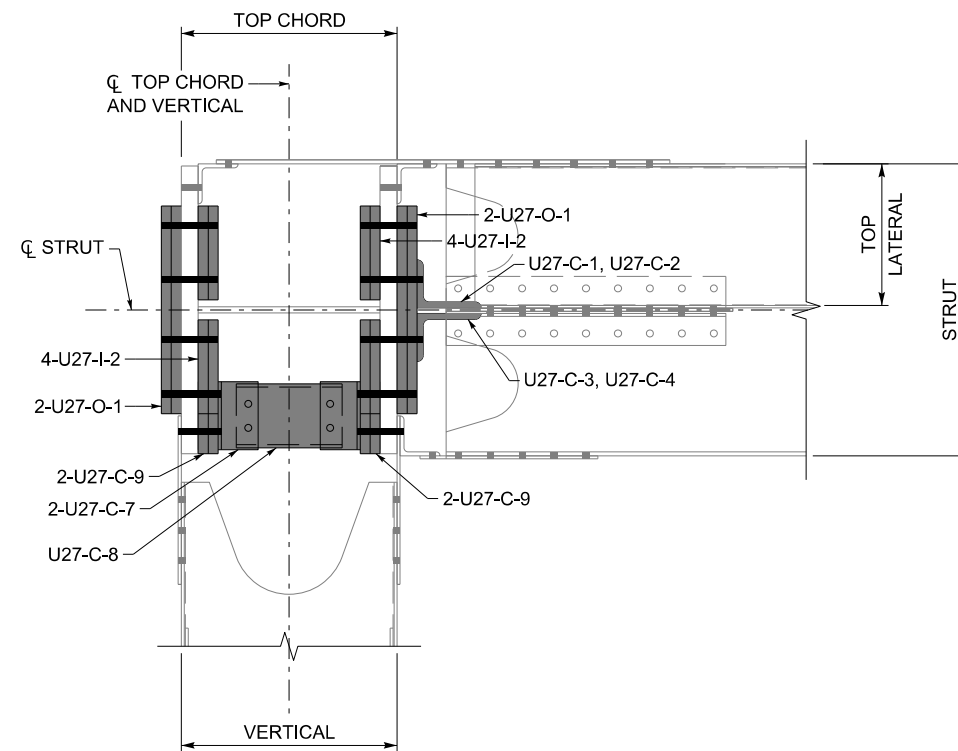
EXISTING SECTION C-C



EXISTING SECTION D-D



PROPOSED SECTION C-C



PROPOSED SECTION D-D

LEGEND

■ INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL. FOR BOLT HOLE AND SIZE, SEE SHEET S7.

NOTES

1. PROVIDE U27-C-6 FILL PLATE IF NEEDED TO FILL GAP AND PROVIDE TIGHT FIT BETWEEN EXISTING MEMBER AND ANGLE CONNECTION.
2. FOR THE LOCATIONS OF SECTION C-C AND D-D, SEE SHEET S7.



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 25-MAR-2024

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

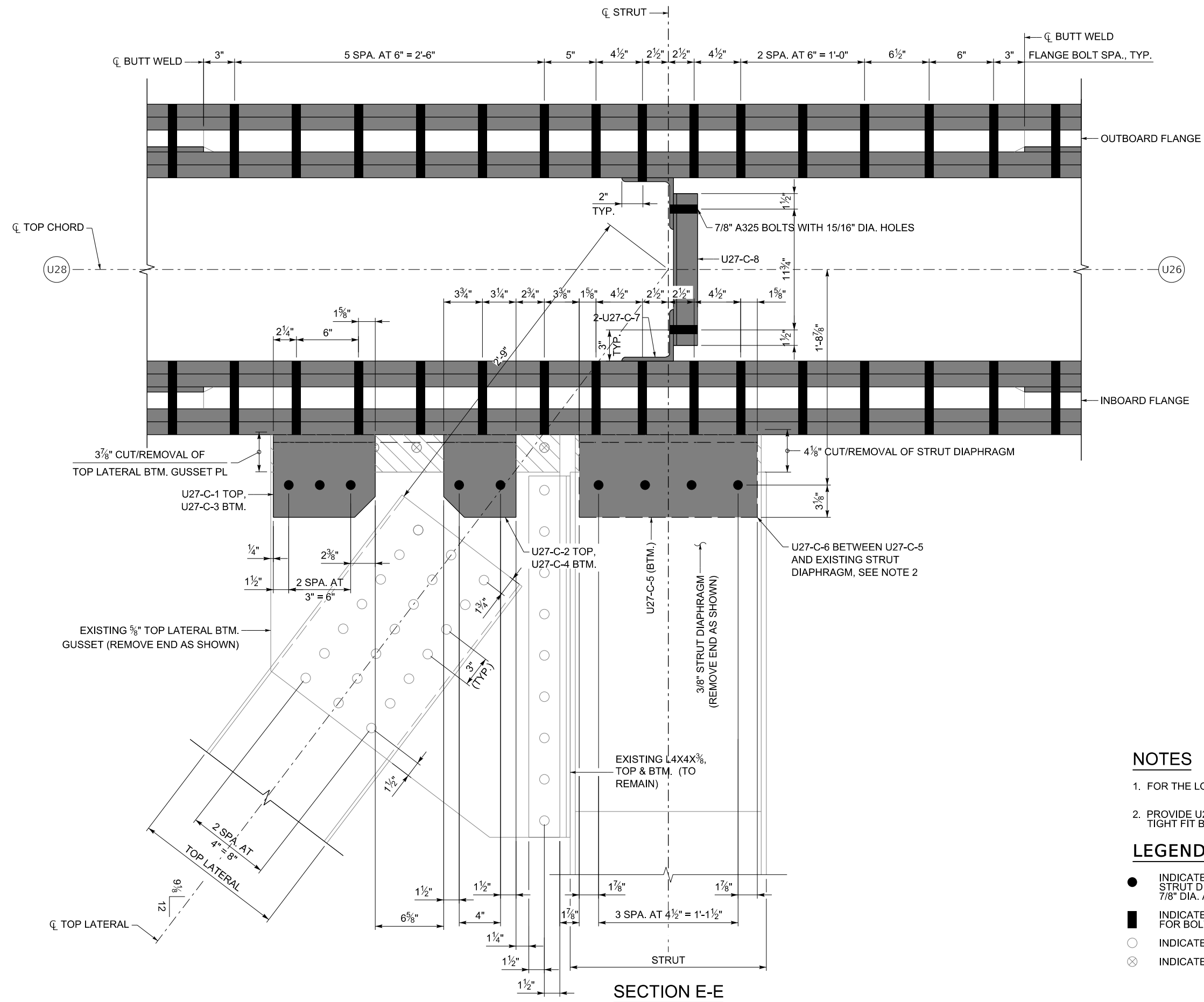
DATE: 03/25/2024	CHECKED BY:
DESIGNED BY: T. NEWGARD	S. OLSON
DETAILED BY: S. BENGOCHEA	T. NEWGARD

U27 REPAIR DETAIL
CROSSING
OHIO RIVER

ROUTE
I-65

ITEM NO.
5-10074
SHEET NO.
S9

COUNTY OF
JEFFERSON
DRAWING NUMBER
28331



NOTES

- FOR THE LOCATION OF SECTION E-E, SEE SHEET S7.
- PROVIDE U27-C-6 FILL PLATE IF NEEDED TO FILL GAP AND PROVIDE TIGHT FIT BETWEEN EXISTING MEMBER AND ANGLE CONNECTION.

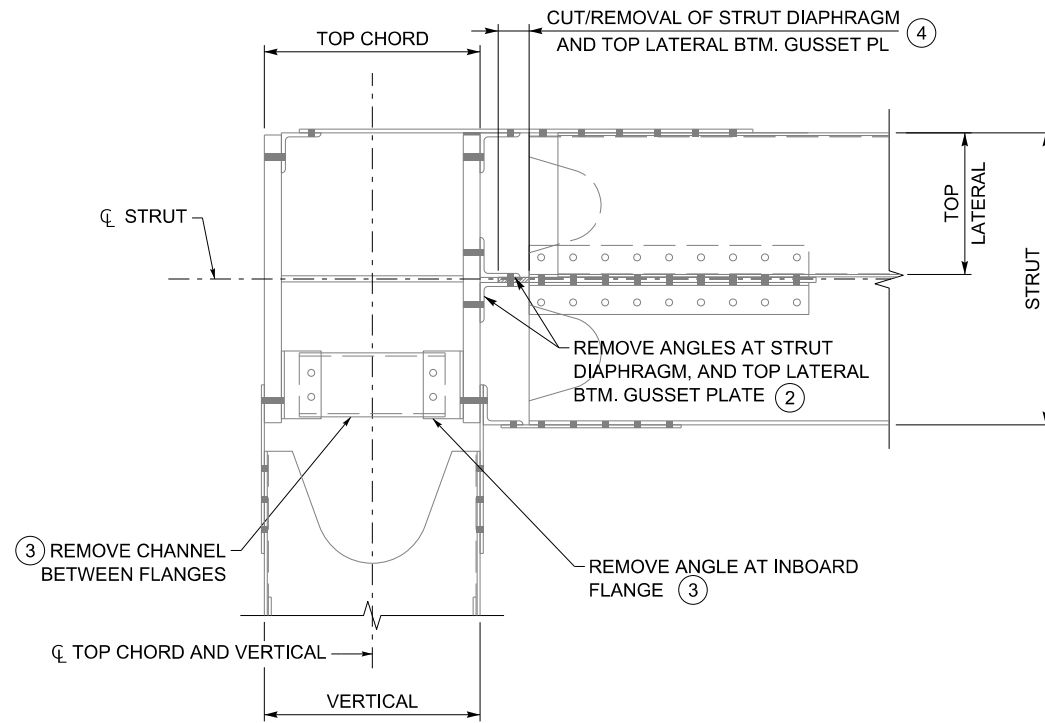
LEGEND

- INDICATES DRILL 15/16" DIA. HOLE IN EXISTING GUSSET PLATE, STRUT DIAPHRAGM, AND NEW STEEL FOR INSALLATION OF NEW 7/8" DIA. A325 BOLTS.
- INDICATES DRILL HOLE IN EXISTING FLANGE AND NEW STEEL FOR BOLT AND BOLT HOLE SIZES, SEE SHEET S7.
- INDICATES EXISTING BOLTS TO REMAIN IN PLACE.
- ⊗ INDICATES REMOVE EXISTING BOLTS.

SECTION E-E

	REVISION	DATE	PREPARED BY Michael Baker INTERNATIONAL	DATE: 03/25/2024 DESIGNED BY: T. NEWGARD DETAILED BY: S. BENGOCHEA	CHECKED BY S. OLSON T. NEWGARD	U27 PLAN AT BRACING MID ANGLES CROSSING OHIO RIVER	ROUTE	ITEM NO.	COUNTY OF
								I-65	5-10074
								S10	DRAWING NUMBER
									28331

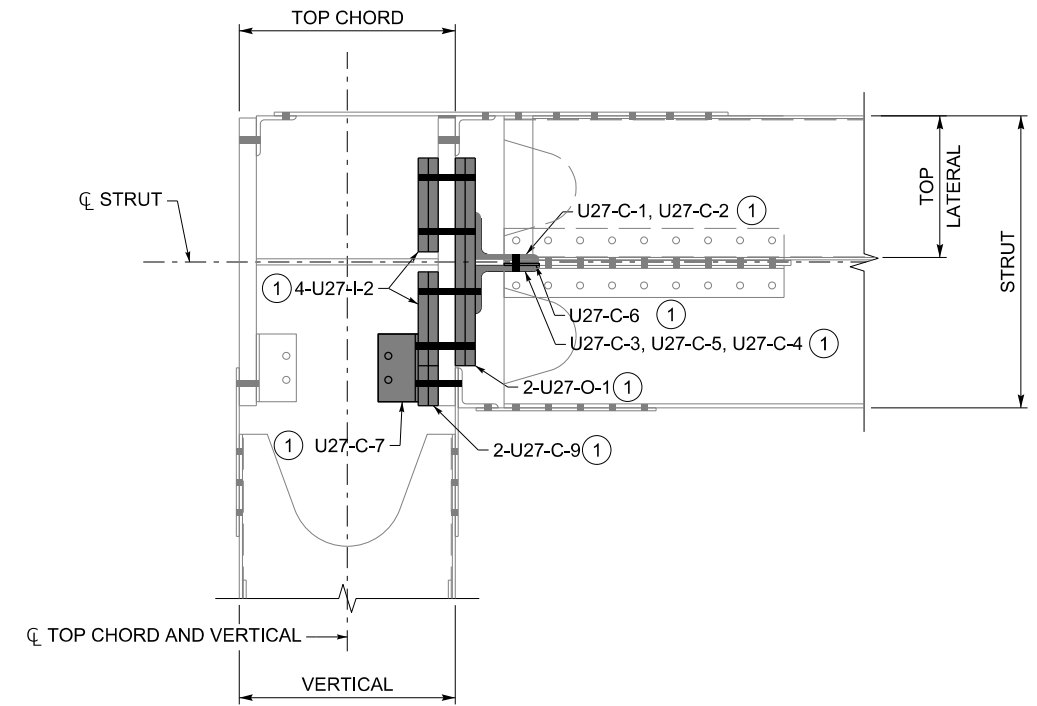
U27 CONSTRUCTION SEQUENCE



1. CONSTRUCT WEB DOG-BONE AT EACH BUTT WELD (4 LOCATIONS FOR U27 REPAIRS). SEE WEB DOG-BONE RETROFIT DETAIL ON SHEET S3.
2. REMOVE ANGLE CONNECTIONS AT THE STRUT DIAPHRAGM, AND TOP LATERAL BOTTOM GUSSET PLATE.
3. REMOVE ANGLE AT THE INBOARD FLANGE, AND CHANNEL BETWEEN FLANGES.
4. CUT/REMOVE ENDS OF STRUT DIAPHRAGM, AND TOP LATERAL BOTTOM GUSSET PLATE. FOR REMOVAL LIMITS, SEE SHEET S10.

STEP A

REMOVAL FOR INBOARD FLANGE PLATING



1. INSTALL OUTSIDE SPLICE PLATES (U27-O-1), INSIDE SPLICE PLATES (U27-I-2), FILLER PLATES (U27-I-1), (U27-C-6), (U27-C-9) AND ANGLES (U27-C-1), (U27-C-2), (U27-C-3), (U27-C-4), (U27-C-5), AND (U27-C-7). INSTALL WITH NEW BOLTS PER SHEET S7, AND S10.

STEP B

INBOARD FLANGE PLATING



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 25-MAR-2024

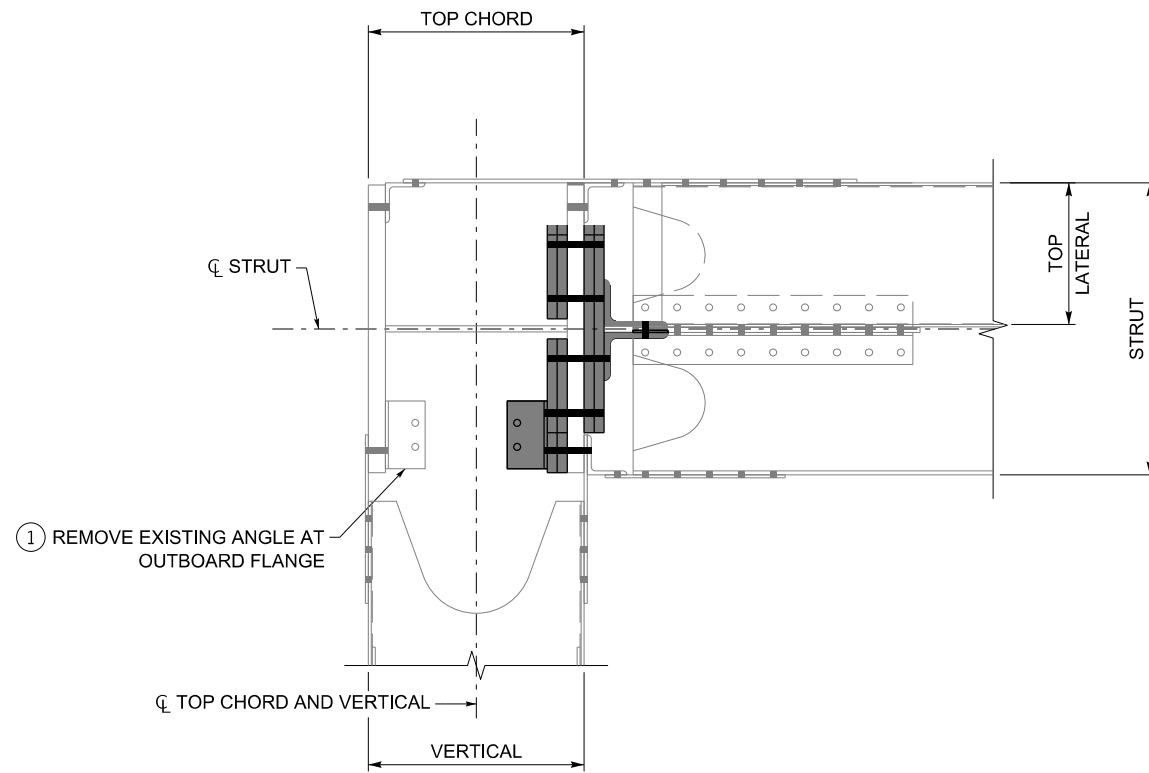
PREPARED BY
Michael Baker INTERNATIONAL
1850 Lyndon Farm Court
Louisville, KY
Phone: (502)-339-3557
MBAKERINTL.COM

DATE: 03/25/2024	CHECKED BY:
DESIGNED BY: T. NEWGARD	S. OLSON
DETAILED BY: S. BENGOCHEA	T. NEWGARD

U27 CONSTRUCTION SEQUENCE
CROSSING
OHIO RIVER

ROUTE	ITEM NO.	COUNTY OF
I-65	5-10074	JEFFERSON
	SHEET NO.	DRAWING NUMBER
	S11	28331

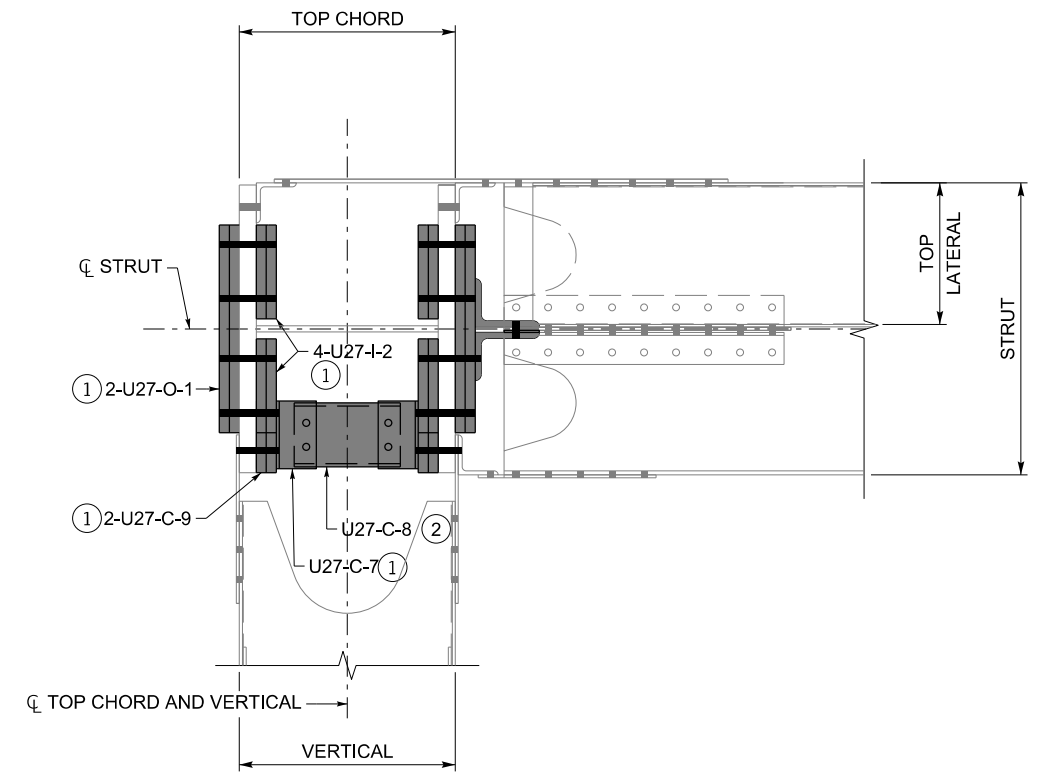
U27 CONSTRUCTION SEQUENCE



1. REMOVE ANGLE AT THE OUTBOARD FLANGE.

STEP C

REMOVAL FOR OUTBOARD FLANGE PLATING



1. INSTALL SPLICE PLATE (U27-O-1), INSIDE SPLICE PLATE (U27-I-2), FILLER PLATE (U27-C-9) AND ANGLE (U27-C-7). INSTALL WITH BOLTS PER SHEET S7.
2. INSTALL CHANNEL (U27-C-8) BETWEEN FLANGES. INSTALL WITH NEW 7/8" DIA. (A325) BOLTS WITH 15/16" DIA. HOLES.

STEP D

OUTBOARD FLANGE PLATING



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 25-MAR-2024

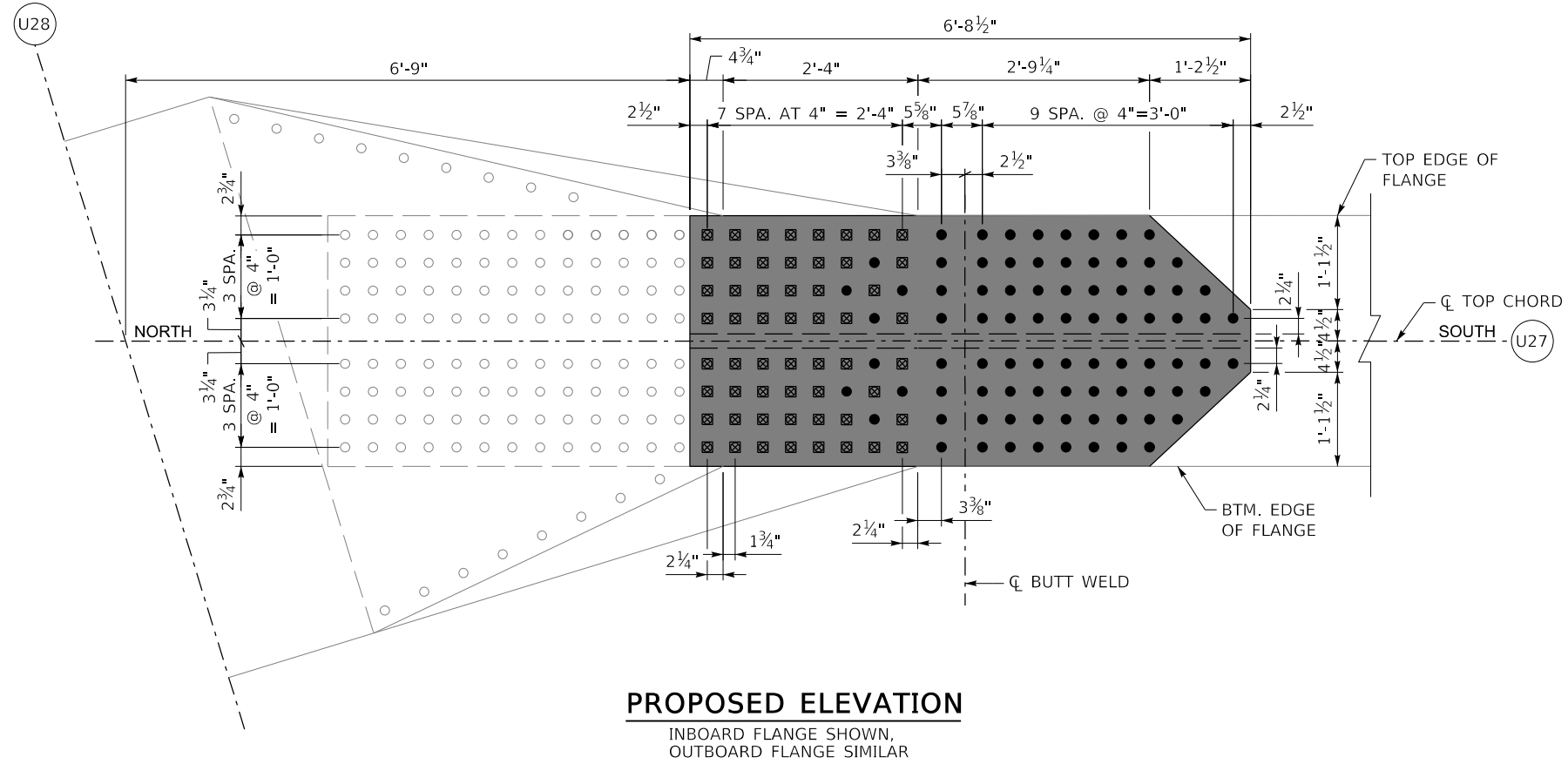
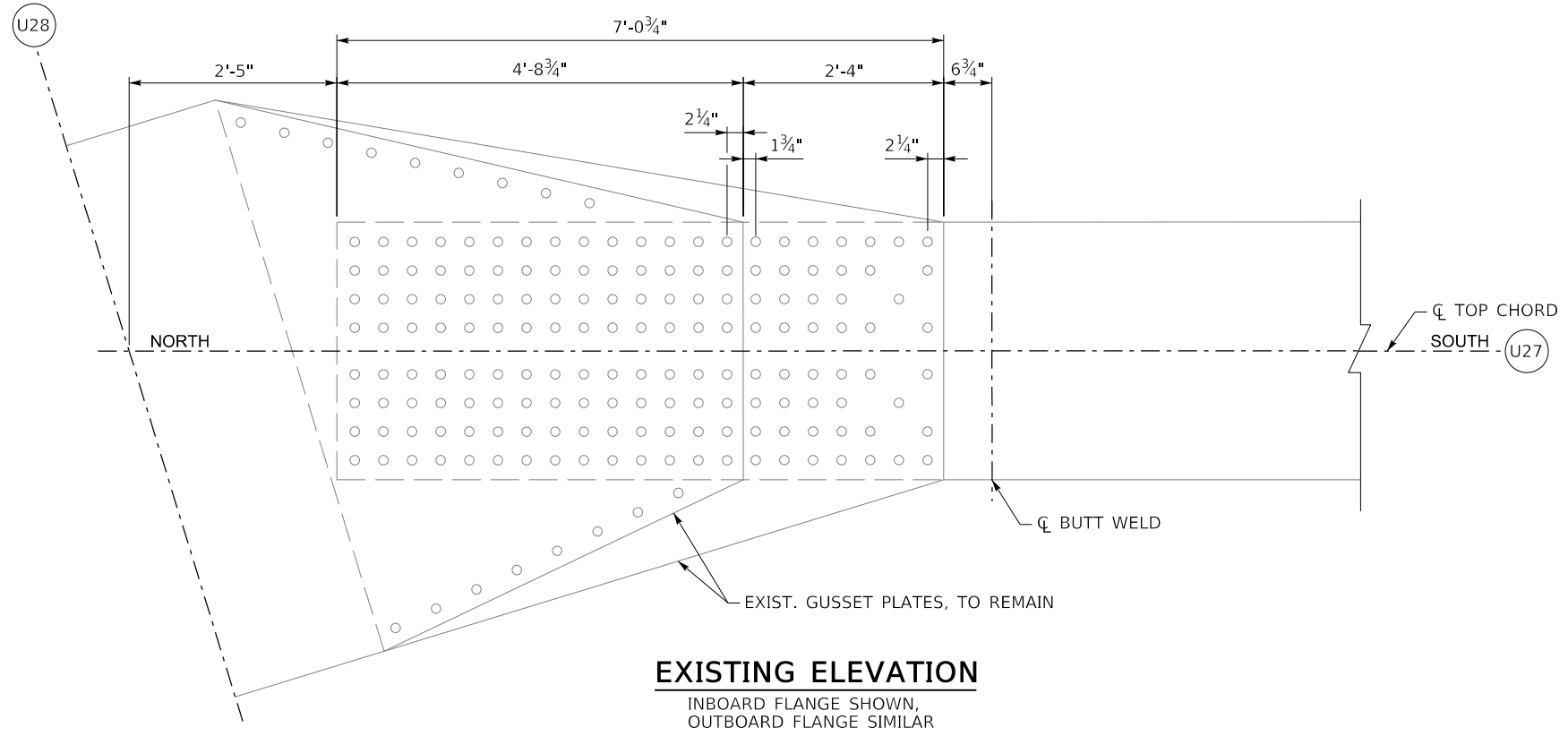
PREPARED BY
Michael Baker INTERNATIONAL
1850 Lyndon Farm Court
Louisville, KY
Phone: (502)-339-3557
MBAKERINTL.COM

DATE: 03/25/2024	CHECKED BY: S. OLSON
DESIGNED BY: T. NEWGARD	Detailed by: S. BENGOCHEA
	T. NEWGARD

FILE NAME: pw://mb-us-pw.bentley.com:mb-us-pw-03/Documents/Louisville_KY/01_Projects/KYTC T1 Steel Bridges/056B00214L JFK(3) Repairs/CADD/SHEETS/U27-CON_SEQ_02.dgn

U27 CONSTRUCTION SEQUENCE
CROSSING
OHIO RIVER

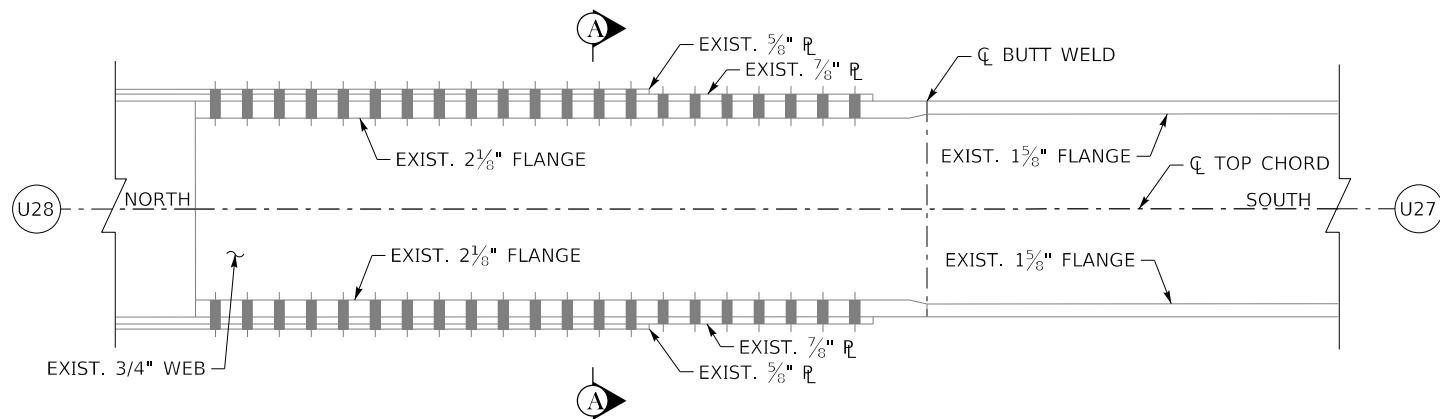
ROUTE: I-65	ITEM NO.: 5-10074	COUNTY OF: JEFFERSON
	SHEET NO.: S12	DRAWING NUMBER: 28331



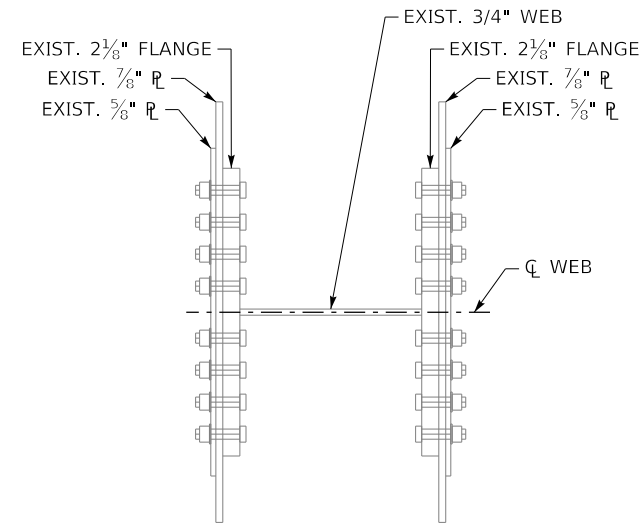
LEGEND

- INDICATES DRILL 1 3/8" DIA. HOLE IN EXISTING FLANGE AND NEW STEEL FOR INSTALLATION OF NEW 1 1/4" DIA. (A490) BOLTS.
- ⊗ INDICATES REMOVE EXISTING BOLTS AND REPLACE WITH NEW 1 1/4" (A354 GR. BD) THREADED RODS WITH 1 5/16" DIA. HOLES IN EXISTING AND NEW STEEL.
- INDICATES EXISTING BOLTS TO REMAIN IN PLACE.

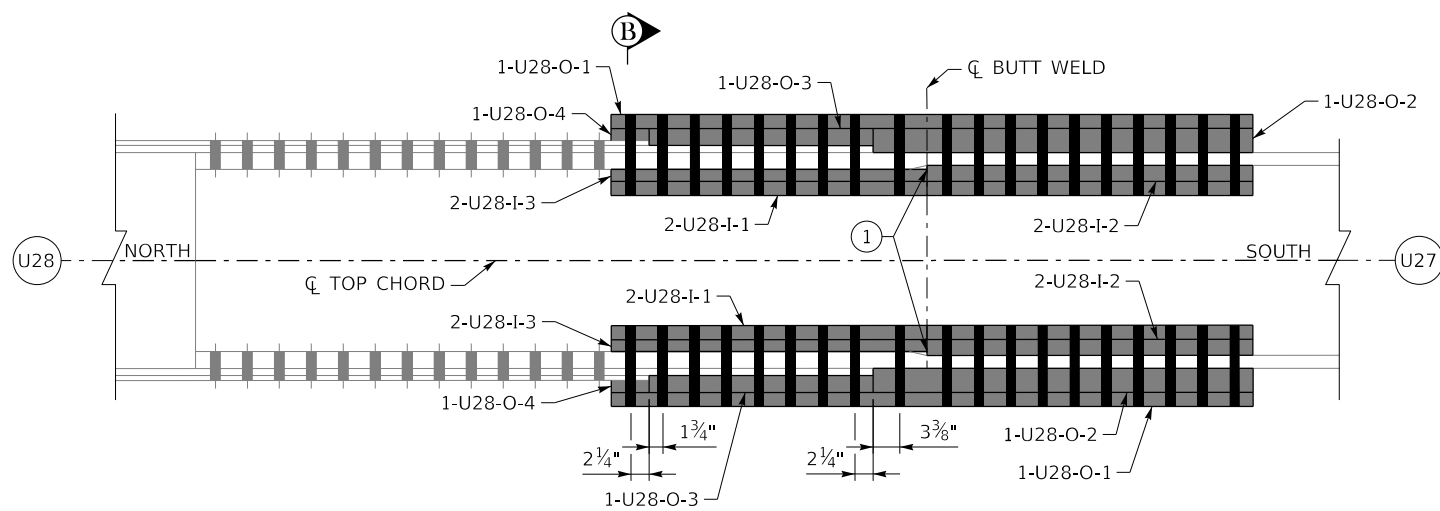
	COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS		REVISION	DATE	PREPARED BY Michael Baker INTERNATIONAL	1850 Lyndon Farm Court Louisville, KY Phone: (502)-339-3557 MBAKERINTL.COM	DATE: 03/25/2024 DESIGNED BY: J. SKILES DETAILED BY: S. BENGOCHEA	CHECKED BY T. NEWGARD J. SKILES	U28 REPAIR DETAIL CROSSING OHIO RIVER	ROUTE I-65	ITEM NO. 5-10074 SHEET NO. S13	COUNTY OF JEFFERSON DRAWING NUMBER 28331
			USER: MaryJo.Dwyer DATE PLOTTED: 25-MAR-2024	FILE NAME: pw://mb-us-pw.bentley.com/mb-us-pw-03/Documents/Louisville_KY/01_Projects/KYTC_T1_Steel_Bridges/056B00214L JFK(3) Repairs/CADD/SHEETS/U28-DETAIL_01.dgn								



EXISTING PLAN

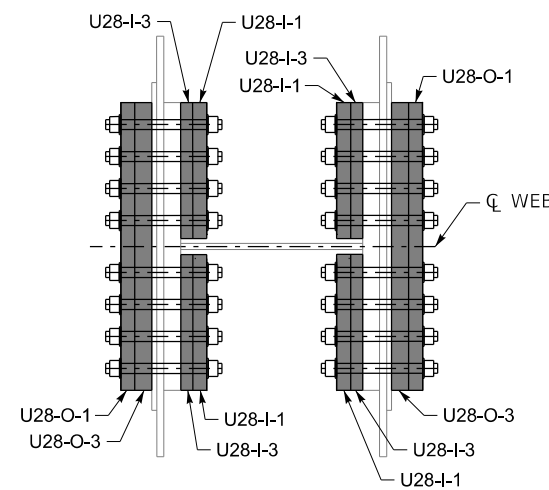


EXISTING SECTION A-A



PROPOSED PLAN

DIMENSIONS SHOWN ARE TYP. AT BOTH FLANGES

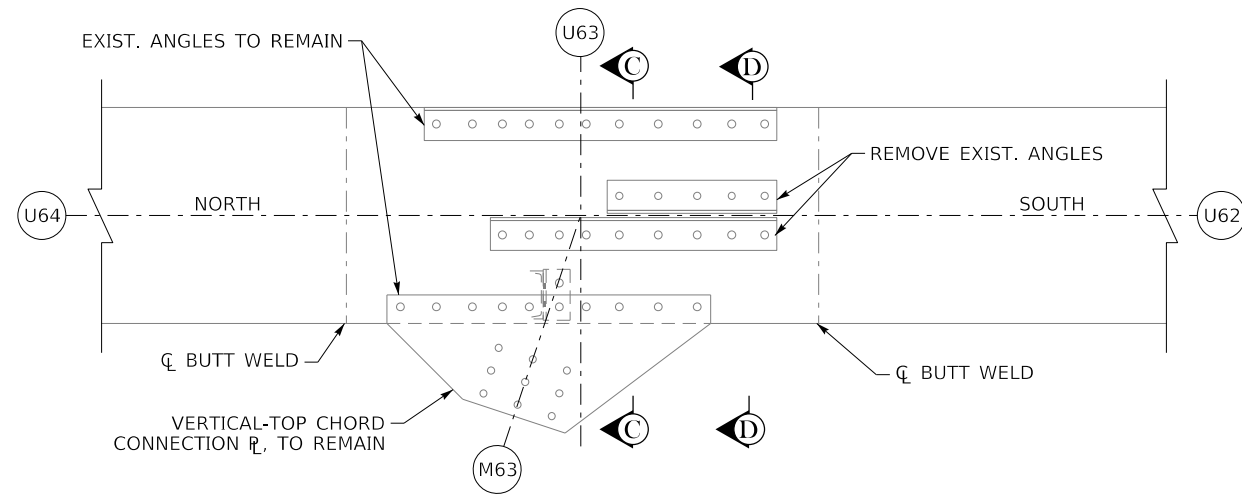


PROPOSED SECTION B-B

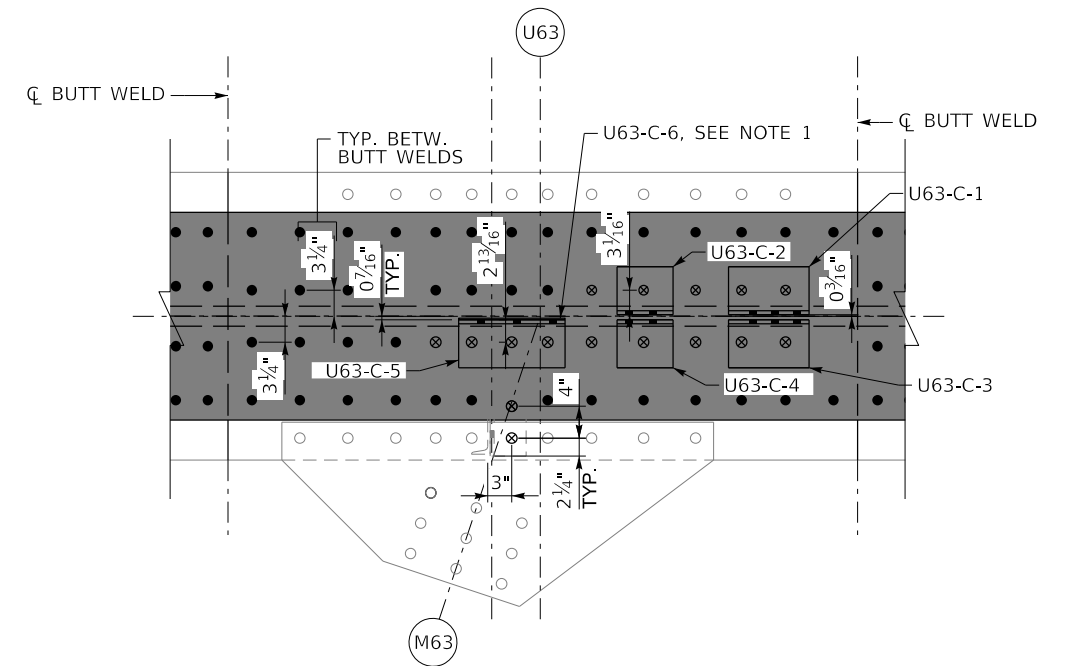
LEGEND

- ① CONSTRUCT WEB DOG-BONE RETROFIT DETAIL. FOR WEB DOG-BONE RETROFIT DETAIL, SEE SHEET S3.
- INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL. FOR BOLT HOLE AND SIZE, SEE SHEET S13.

	REVISION _____ _____ _____	DATE _____ _____ _____	PREPARED BY Michael Baker INTERNATIONAL <small>1850 Lyndon Farm Court Louisville, KY Phone: (502)-339-3557 MBAKERINTL.COM</small>	DATE: 03/25/2024 DESIGNED BY: J. SKILES DETAILED BY: S. BENGOCHEA	CHECKED BY T. NEWGARD J. SKILES	U28 REPAIR DETAIL CROSSING OHIO RIVER	ROUTE I-65	ITEM NO. 5-10074 SHEET NO. S14	COUNTY OF JEFFERSON DRAWING NUMBER 28331
	MicroStation v10.17.01.58 USER: MaryJo.Dwyer DATE PLOTTED: 25-MAR-2024			FILE NAME: pw://mb-us-pw.bentley.com:mb-us-pw-03/Documents/Louisville_KY/01_Projects/KYTC T1 Steel Bridges/056B00214L JFK(3) Repairs/CADD/SHEETS/U28-DETAIL_02.dgn					

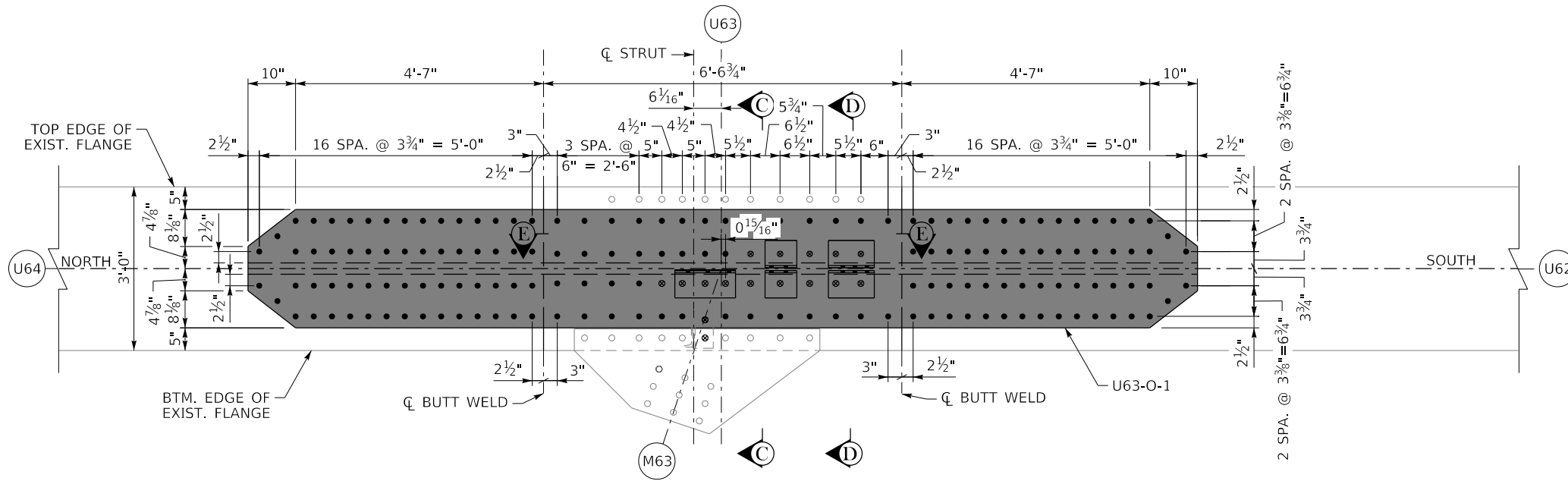


EXISTING INBOARD PLATE ELEVATION



DETAIL AT LATERAL BRACING CONNECTIONS

DIMENSIONS TO ANGLE CONNECTIONS ARE FROM CL TOP CHORD TO EDGE OF ANGLE, AND EDGE OF ANGLE TO CENTER OF BOLT



PROPOSED INBOARD PLATE ELEVATION

LEGEND

- 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 REMOVE EXISTING BOLTS AND REPLACE WITH NEW 1 1/4" DIA. (A325) BOLTS WITH 1 5/16" DIA. HOLES IN EXISTING AND NEW STEEL, UNLESS NOTED OTHERWISE.
- INDICATES EXISTING BOLTS AND BOLT HOLES.

NOTES

1. PROVIDE U63-C-6 FILL PLATE IF NEEDED TO FILL GAP AND PROVIDE TIGHT FIT BETWEEN EXISTING MEMBER AND ANGLE CONNECTION.
2. FOR SECTION C-C AND D-D, SEE SHEET S17.
3. EXISTING REPAIR AT THE OUTBOARD FLANGE OF U63 TO REMAIN. ALL REPAIRS FOR U63 IN THIS PLAN SET ARE FOR THE INBOARD FLANGE ONLY (NO REPAIRS AND PLATING AT THE OUTBOARD FLANGE).



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

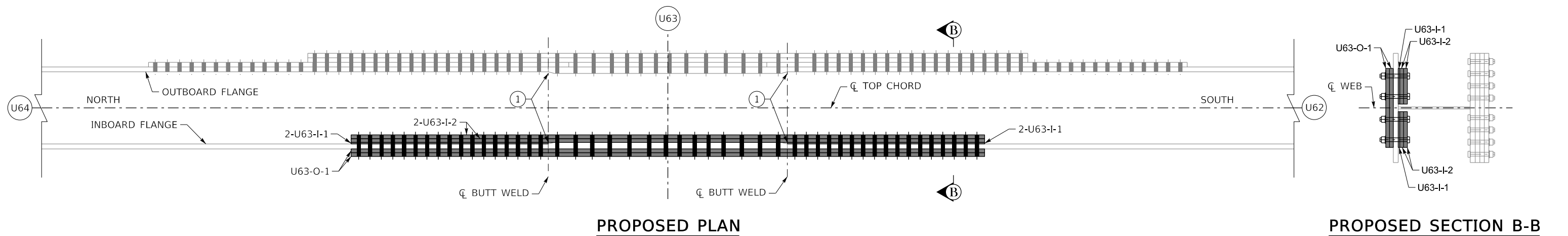
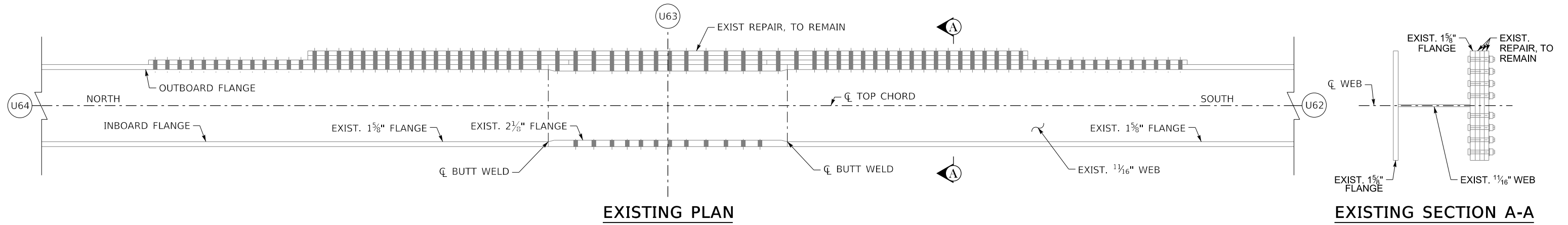
DATE PLOTTED: 25-MAR-2024

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

DATE: 03/25/2024	CHECKED BY: T. NEWGARD
DESIGNED BY: J. SKILES	DETAILED BY: R. WHITE
	J. SKILES

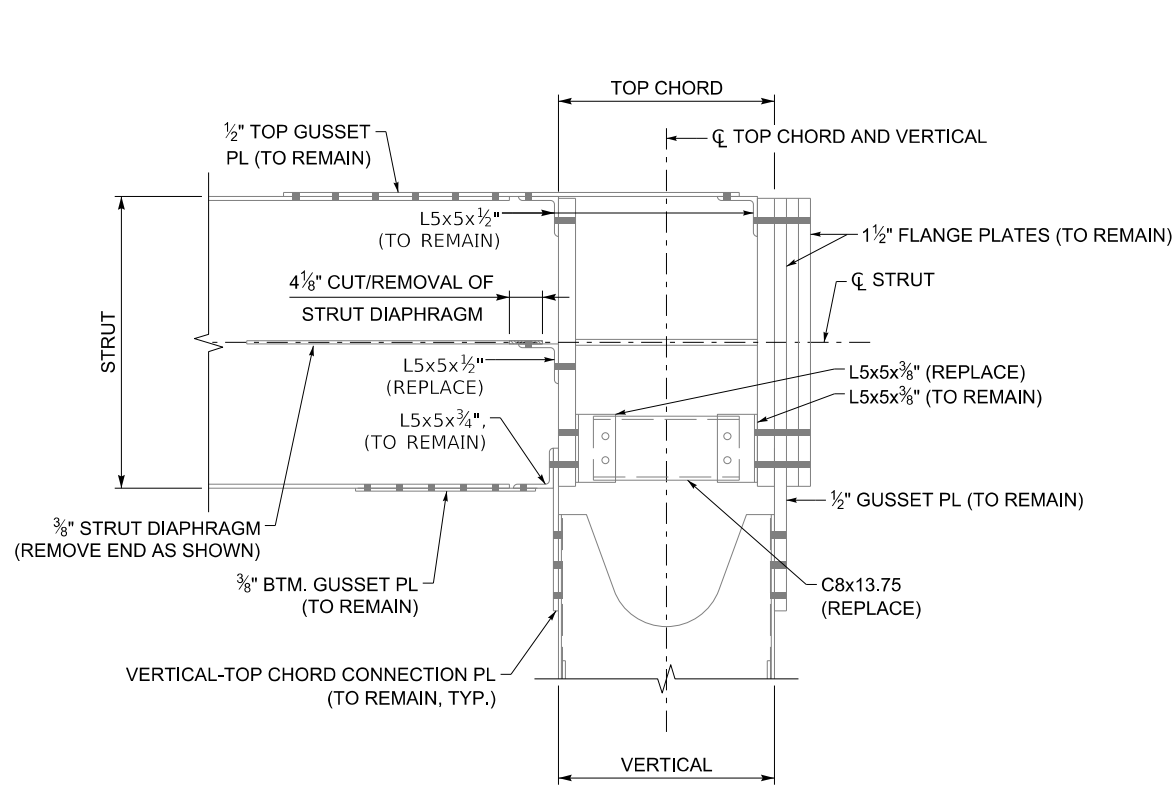
U63 REPAIR DETAIL
CROSSING
OHIO RIVER

ROUTE: I-65	ITEM NO.: 5-10074	COUNTY OF: JEFFERSON
	SHEET NO.: S15	DRAWING NUMBER: 28331

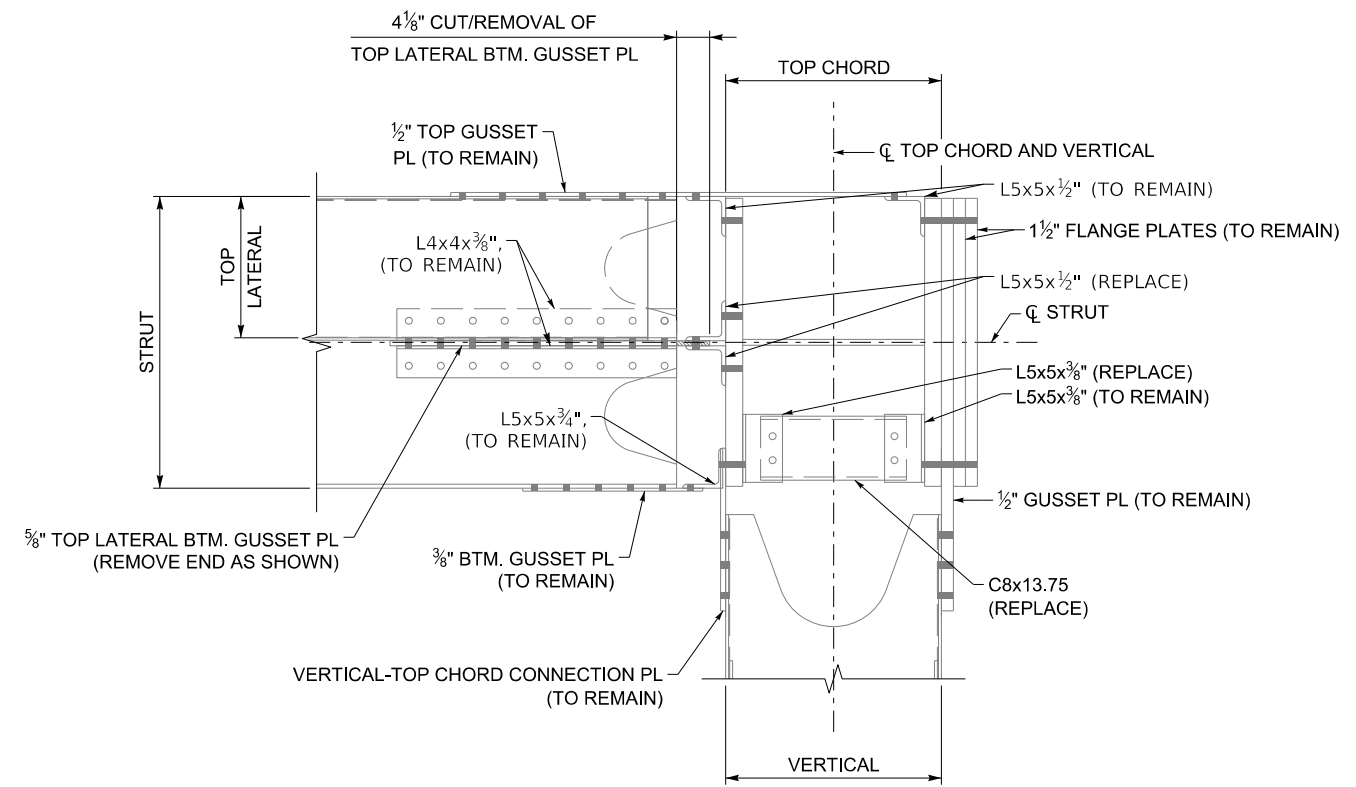


- LEGEND**
- ① CONSTRUCT WEB DOG-BONE. FOR WEB DOG-BONE RETROFIT DETAIL, SEE SHEET S3.

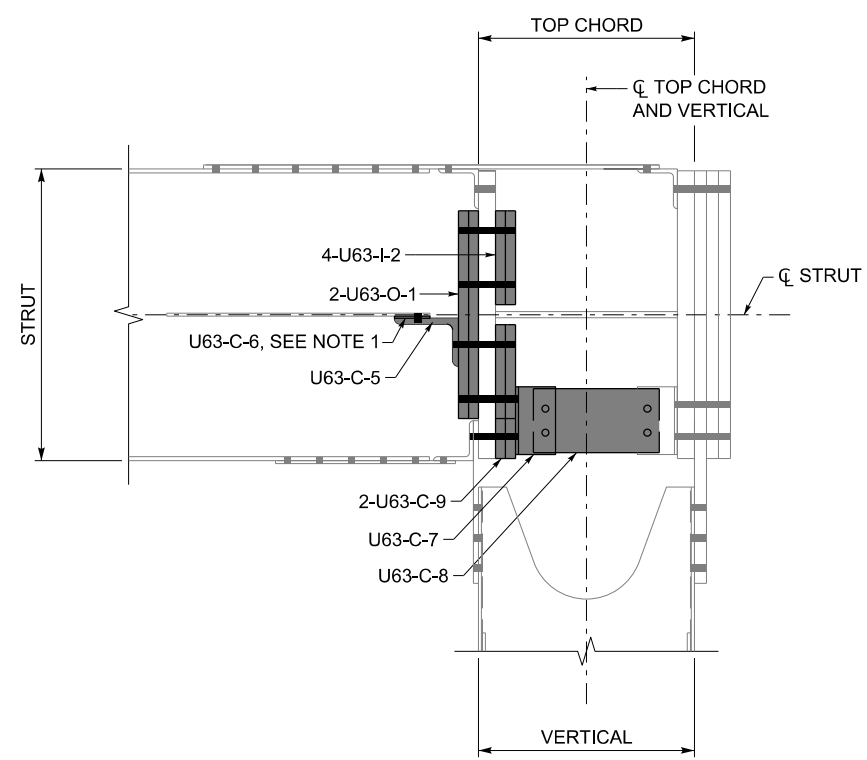
	REVISION _____ _____ _____	DATE _____ _____ _____	PREPARED BY Michael Baker INTERNATIONAL <small>1850 Lyndon Farm Court Louisville, KY Phone: (502)-339-3557 MBAKERINTL.COM</small>	DATE: 03/25/2024 DESIGNED BY: J. SKILES DETAILED BY: R. WHITE	CHECKED BY T. NEWGARD J. SKILES	U63 REPAIR DETAIL CROSSING OHIO RIVER	ROUTE I-65	ITEM NO. 5-10074 SHEET NO. S16	COUNTY OF JEFFERSON DRAWING NUMBER 28331
	MicroStation v10.17.01.58 USER: MaryJo.Dwyer DATE PLOTTED: 25-MAR-2024			FILE NAME: pw://mb-us-pw.bentley.com:mb-us-pw-03/Documents/Louisville_KY/01_Projects/KYTC T1 Steel Bridges/056B00214L JFK(3) Repairs/CADD/SHEETS/U63-DETAIL_02.dgn					



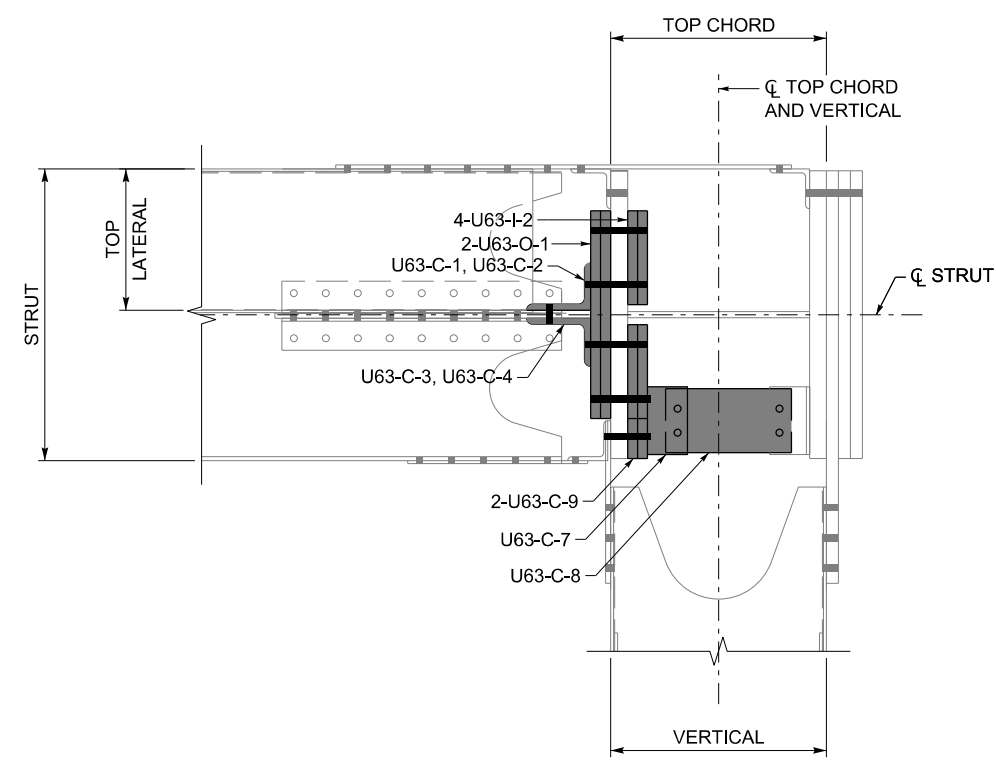
EXISTING SECTION C-C



EXISTING SECTION D-D



PROPOSED SECTION C-C



PROPOSED SECTION D-D

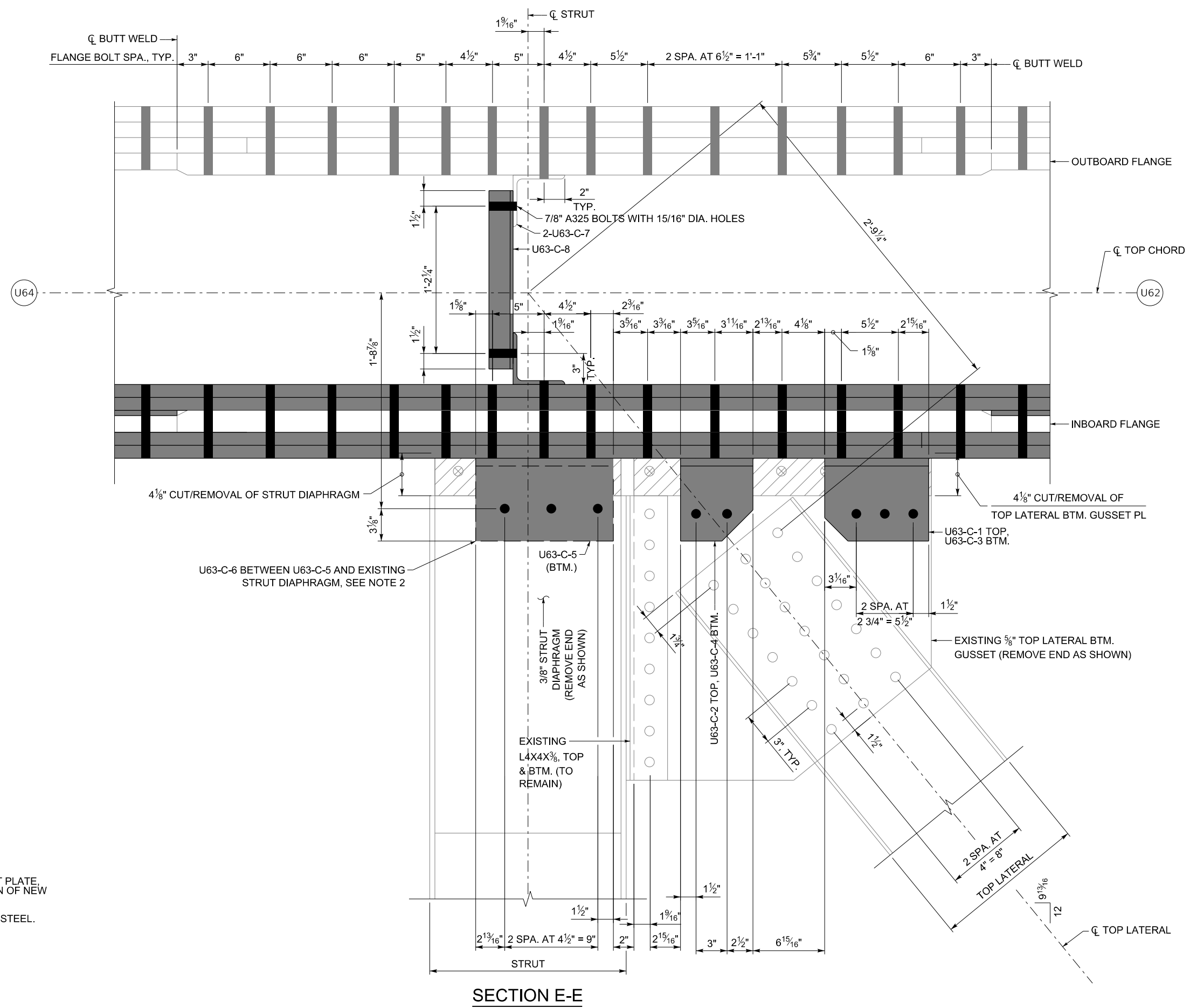
LEGEND

INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL. FOR BOLT HOLE AND SIZE, SEE SHEET S15.

NOTES

1. PROVIDE U63-C-6 FILL PLATE IF NEEDED TO FILL GAP AND PROVIDE TIGHT FIT BETWEEN EXISTING MEMBER AND ANGLE CONNECTION.
2. FOR THE LOCATIONS OF SECTIONS C-C AND D-D, SEE SHEET S15.

	REVISION	DATE	PREPARED BY Michael Baker INTERNATIONAL 1850 Lyndon Farm Court Louisville, KY Phone: (502)-339-3557 MBAKERINTL.COM	DATE: 03/25/2024 DESIGNED BY: T. NEWGARD DETAILED BY: S. BENGOCHEA	CHECKED BY S. OLSON T. NEWGARD	U63 REPAIR DETAIL CROSSING OHIO RIVER	ROUTE	ITEM NO.	COUNTY OF
							I-65	5-10074	JEFFERSON
								SHEET NO.	DRAWING NUMBER
								S17	28331



NOTES

1. FOR THE LOCATION OF SECTION E-E, SEE SHEET S15.
2. PROVIDE U63-C-6 FILL PLATE IF NEEDED TO FILL GAP AND PROVIDE TIGHT FIT BETWEEN EXISTING MEMBER AND ANGLE CONNECTION.

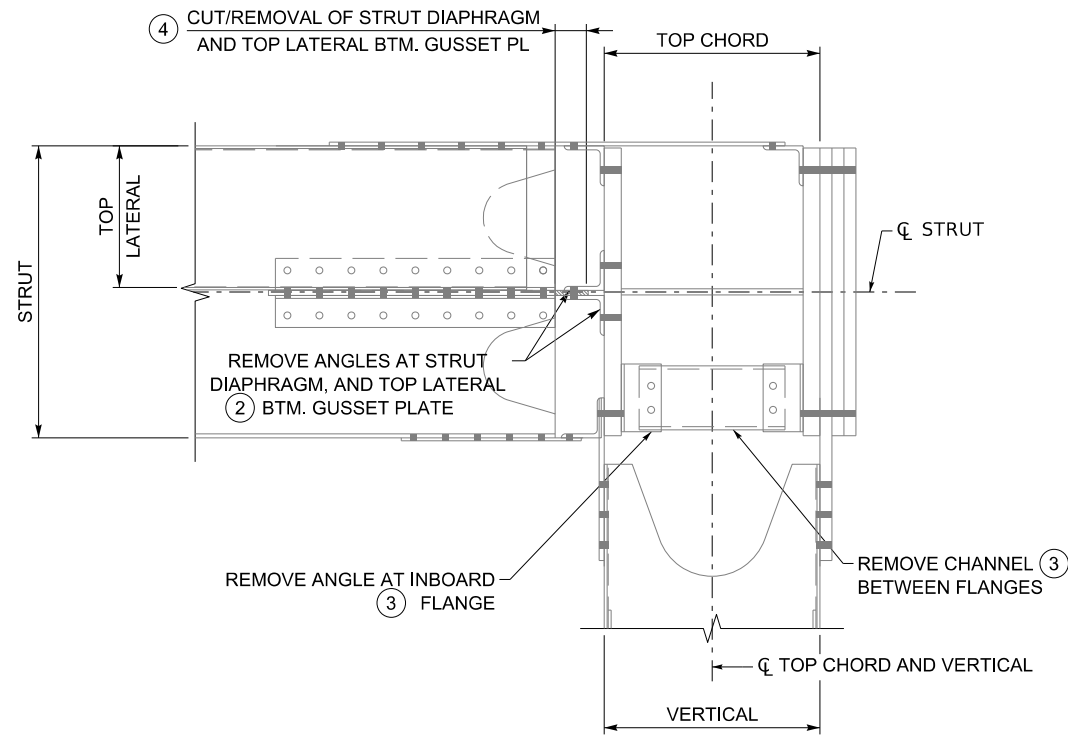
LEGEND

- INDICATES DRILL 15/16" DIA. HOLE IN EXISTING GUSSET PLATE, STRUT DIAPHRAGM, AND NEW STEEL FOR INSALLATION OF NEW 7/8" DIA. A325 BOLTS.
- INDICATES DRILL HOLE IN EXISTING FLANGE AND NEW STEEL. FOR BOLT AND BOLT HOLE SIZES, SEE SHEET S15.
- INDICATES EXISTING BOLTS TO REMAIN IN PLACE.
- ⊗ INDICATES REMOVE EXISTING BOLTS.

SECTION E-E

<p>COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS</p>	REVISION	DATE	PREPARED BY Michael Baker INTERNATIONAL	DATE: 03/25/2024 DESIGNED BY: T. NEWGARD DETAILED BY: S. BENGOCHEA	CHECKED BY S. OLSON T. NEWGARD	U63 PLAN AT BRACING MID ANGLES CROSSING OHIO RIVER	ROUTE	ITEM NO.	COUNTY OF
							I-65	5-10074	JEFFERSON
								SHEET NO. S18	DRAWING NUMBER 28331

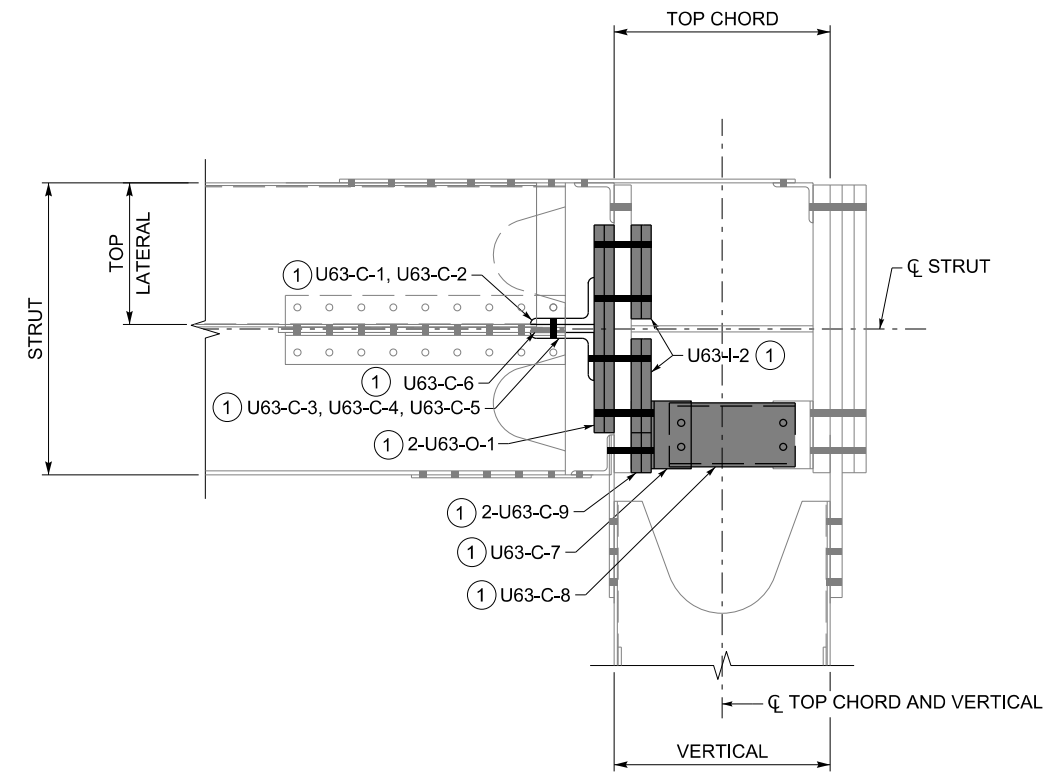
U63 CONSTRUCTION SEQUENCE



1. CONSTRUCT WEB DOG BONE AT EACH BUTT WELD (4 LOCATIONS FOR U63 REPAIRS). SEE WEB DOGBONE RETROFIT DETAIL ON SHEET S3.
2. REMOVE ANGLE CONNECTIONS AT THE STRUT DIAPHRAGM, AND TOP LATERAL BOTTOM GUSSET PLATE.
3. REMOVE ANGLE AT THE INBOARD FLANGE, AND CHANNEL BETWEEN FLANGES.
4. CUT/REMOVE ENDS OF STRUT DIAPHRAGM, AND TOP LATERAL BOTTOM GUSSET PLATE. FOR REMOVAL LIMITS, SEE SHEET S18.

STEP A

REMOVAL FOR INBOARD FLANGE PLATING



1. INSTALL OUTSIDE SPLICE PLATE (U63-O-1), FILLER PLATES (U63-I-1), (U63-C-6), (U63-C-9) INSIDE SPLICE PLATE (U63-I-2), AND ANGLES/ CHANNEL (U63-C-1), (U63-C-2), (U63-C-3), (U63-C-4), (U63-C-5), (U63-C-7), AND (U63-C-8). INSTALL WITH BOLTS PER SHEET S15, AND S18.

STEP B

INBOARD FLANGE PLATING



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

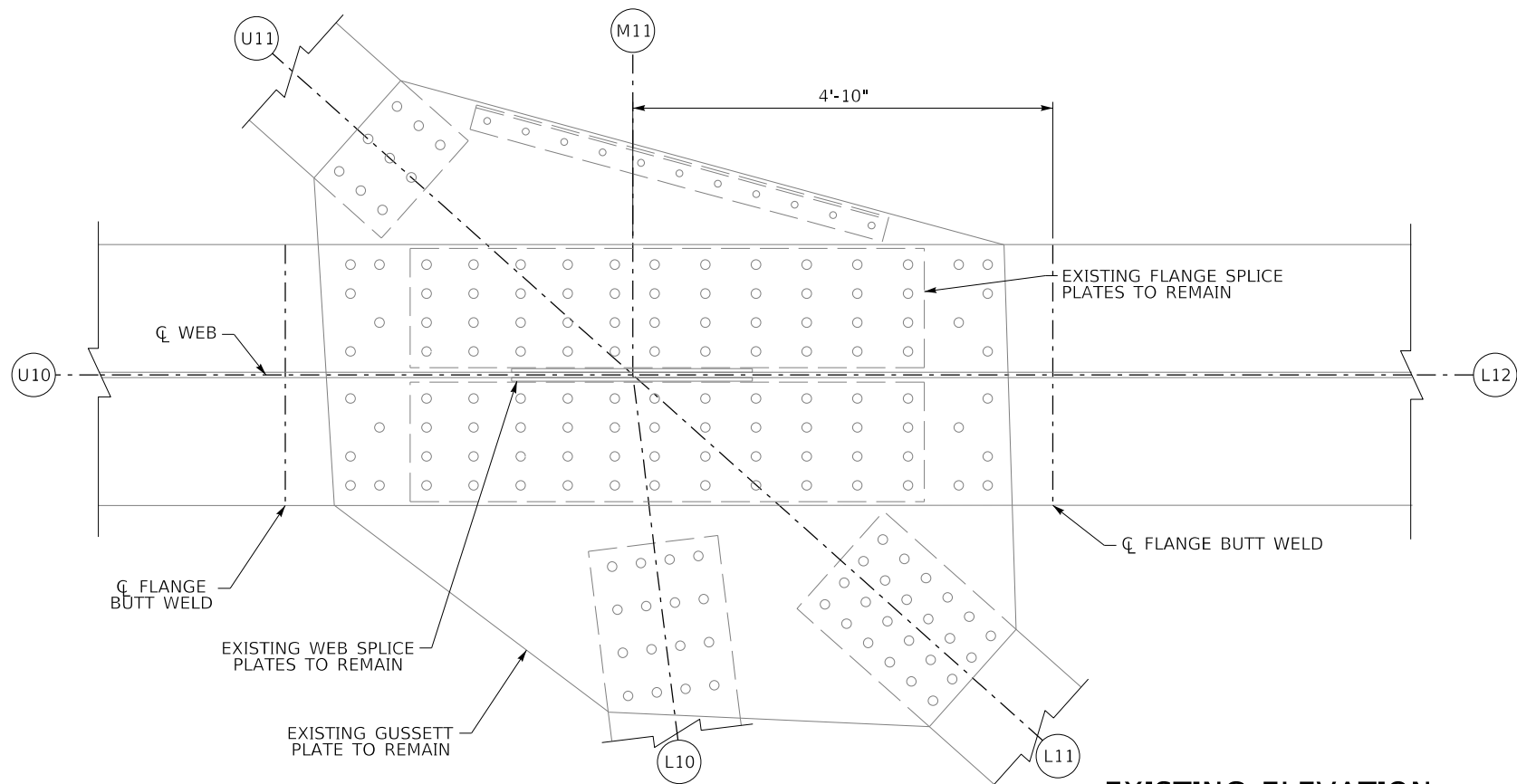
DATE PLOTTED: 25-MAR-2024

PREPARED BY
Michael Baker INTERNATIONAL
1850 Lyndon Farm Court
Louisville, KY
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MBAKERINTL.COM

DATE: 03/25/2024	CHECKED BY:
DESIGNED BY: T. NEWGARD	S. OLSON
DETAILED BY: S. BENGOCHEA	T. NEWGARD

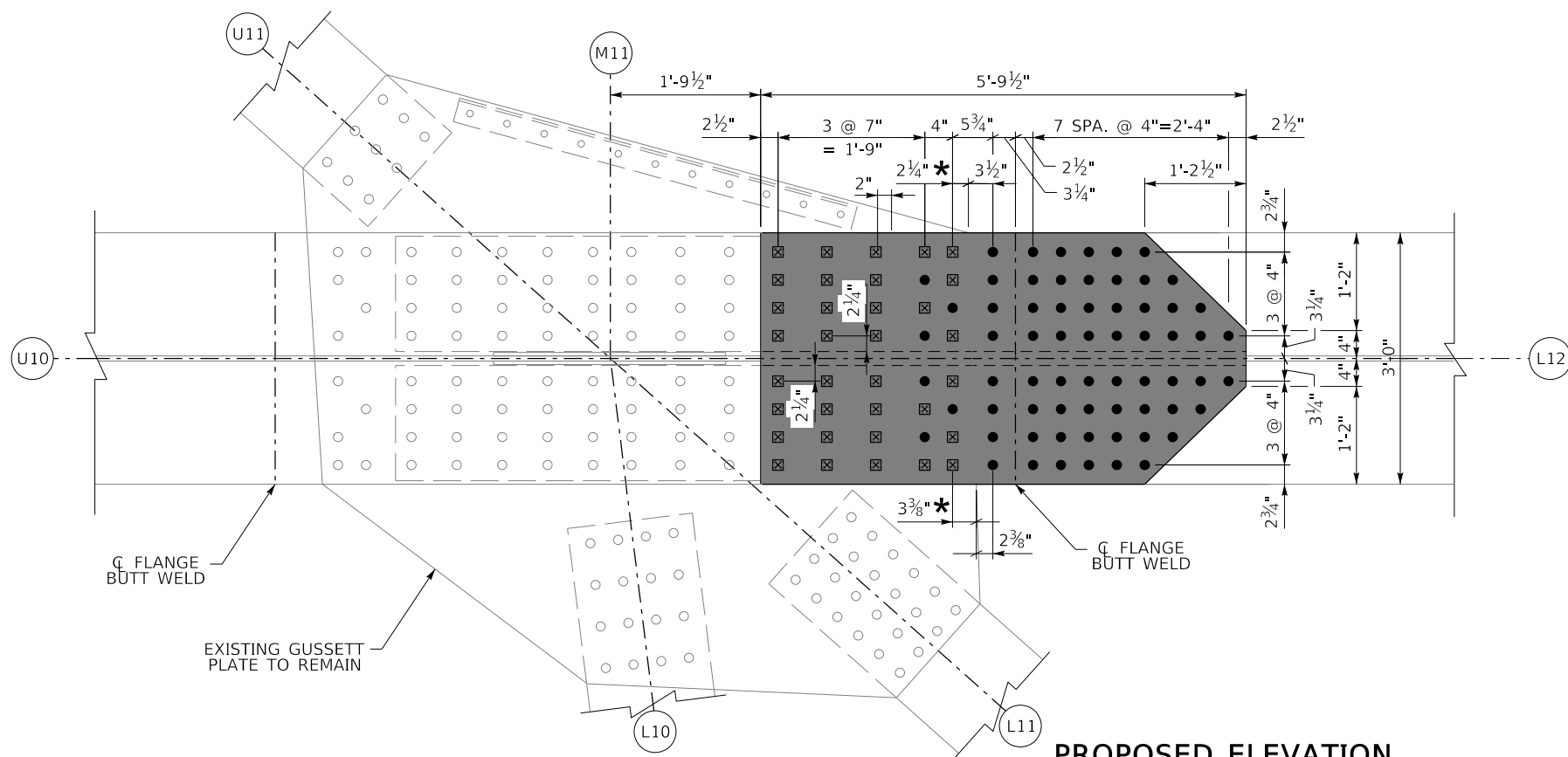
U63 CONSTRUCTION SEQUENCE
CROSSING
OHIO RIVER

ROUTE	ITEM NO.	COUNTY OF
I-65	5-10074	JEFFERSON
	SHEET NO.	DRAWING NUMBER
	S19	28331



EXISTING ELEVATION

OUTBOARD FLANGE SHOWN,
INBOARD FLANGE SIMILAR



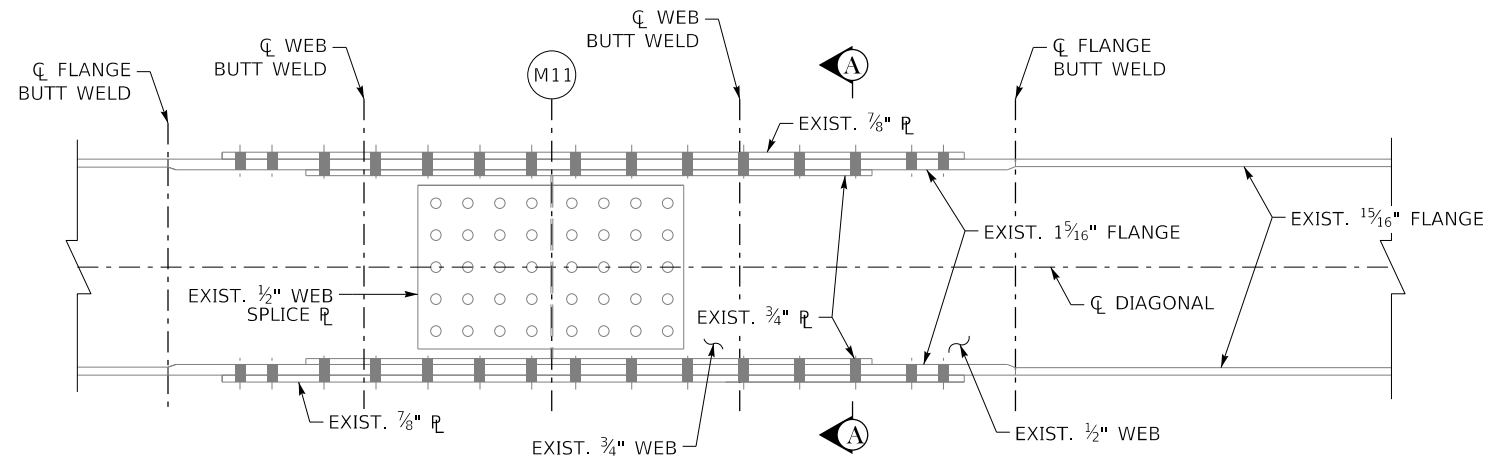
PROPOSED ELEVATION

OUTBOARD FLANGE SHOWN,
INBOARD FLANGE SIMILAR

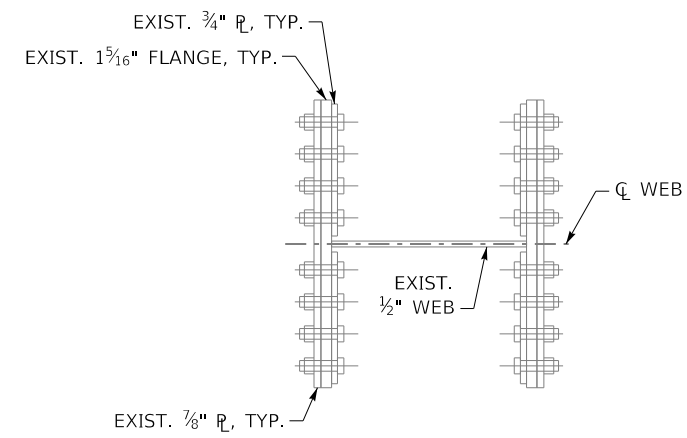
LEGEND

- INDICATES DRILL 1 3/8" DIA. HOLE IN EXISTING FLANGE AND/OR NEW STEEL FOR INSTALLATION OF NEW 1 1/4" DIA. (A490) BOLTS.
- ⊗ INDICATES REMOVE EXISTING BOLTS AND REPLACE WITH NEW 1 1/4" DIA. (A354 GR. BD) THREADED RODS WITH 1 5/16" DIA. HOLES IN EXISTING AND NEW STEEL.
- INDICATES EXISTING HOLE IN EXISTING PLATES.
- * FIELD VERIFY DIMENSION AND ADJUST LENGTH OF TAPERED FILL PLATES ACCORDINGLY.

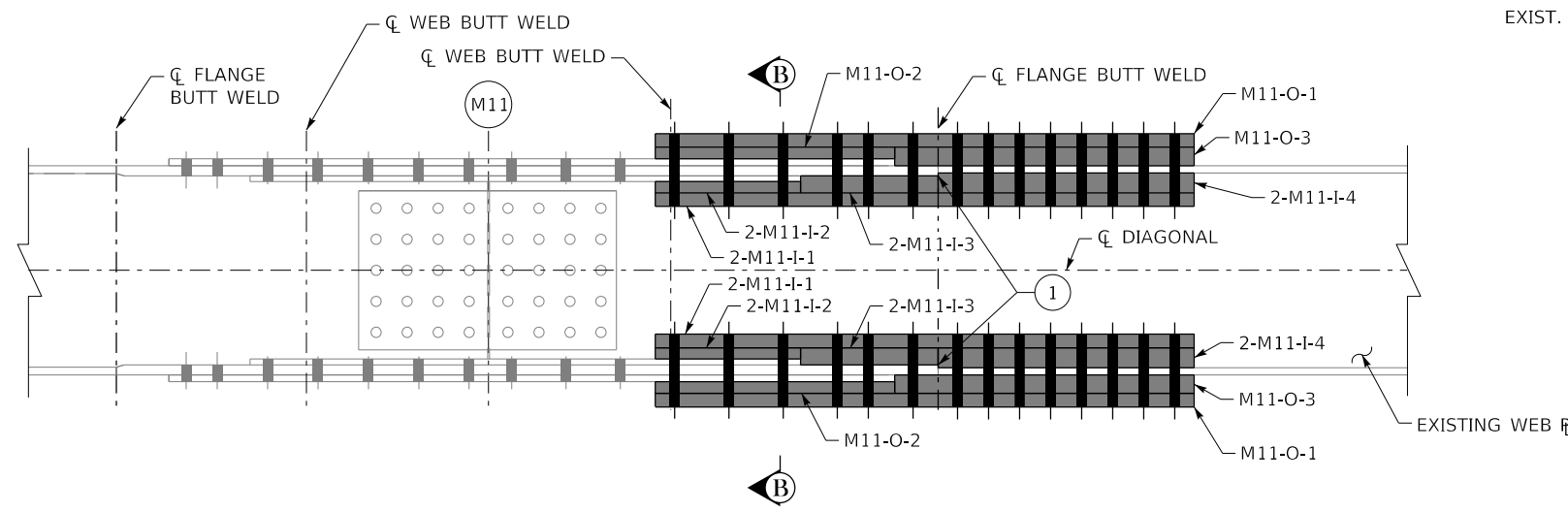
	COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS 	REVISION	DATE	PREPARED BY	DATE: 03/25/2024	CHECKED BY	M11-L12 REPAIR DETAIL CROSSING OHIO RIVER	ROUTE	ITEM NO.	COUNTY OF
					1650 Lyndon Farm Court Louisville, KY Phone: (502)-339-3557 MBAKERINTL.COM	DESIGNED BY: S. OLSON T. NEWGARD DETAILED BY: S. BENGOCHEA S. OLSON		I-65	5-10074 SHEET NO. S20	JEFFERSON DRAWING NUMBER 28331
MicroStation v10.17.01.58	USER: MaryJo.Dwyer	DATE PLOTTED: 25-MAR-2024	FILE NAME: pw://mb-us-pw.bentley.com:mb-us-pw-03/Documents/Louisville_KY/01_Projects/KYTC T1 Steel Bridges/056B00214L JFK/3) Repairs/CADD/SHEETS/M11-L12 DETAIL_01.dgn							



EXISTING PLAN

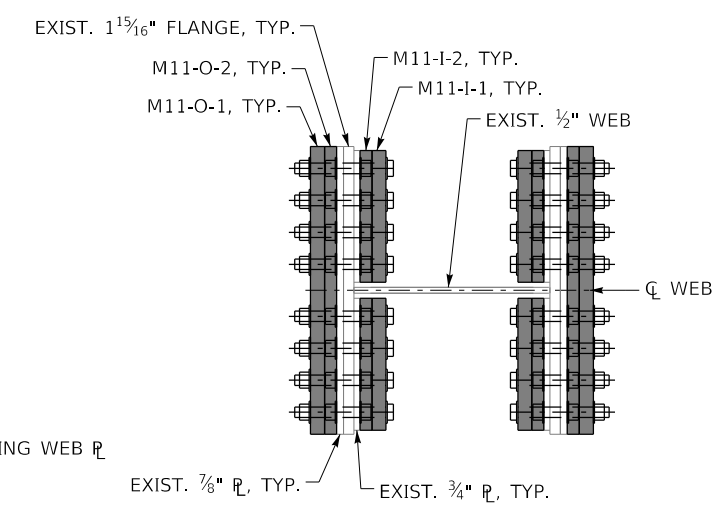


EXISTING SECTION A-A



PROPOSED PLAN

DIMENSIONS SHOWN ARE TYP. AT BOTH FLANGES



PROPOSED SECTION B-B

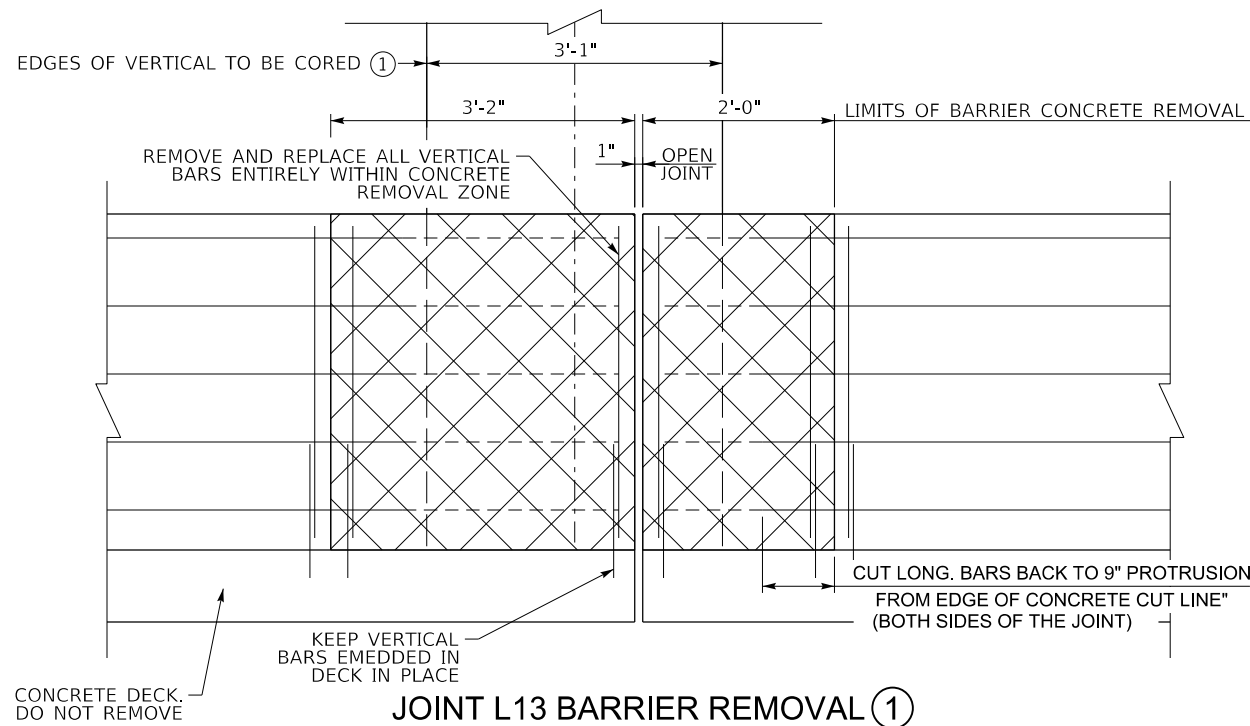
LEGEND

- INDICATES HOLE IN EXISTING FLANGE AND NEW STEEL. FOR BOLT HOLE AND SIZE, SEE SHEET S20.
- ① CONSTRUCT WEB DOG-BONE. FOR WEB DOG-BONE RETROFIT DETAIL, SEE SHEET S3.

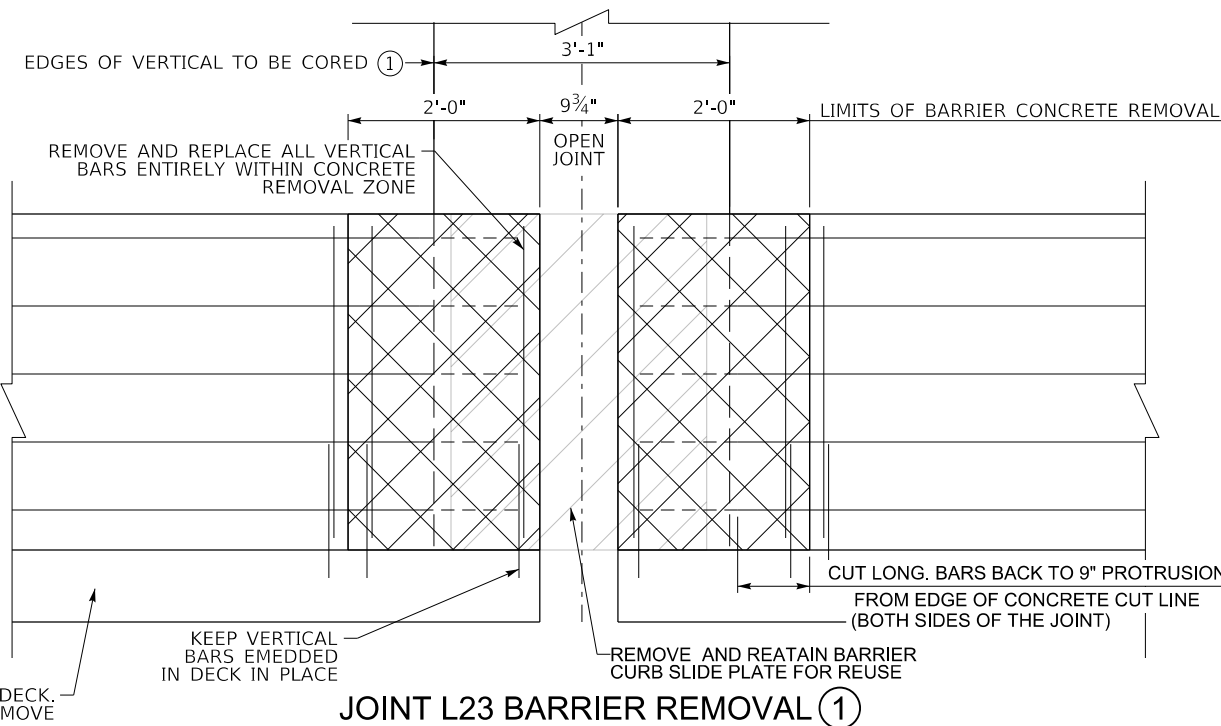
APPROXIMATE QUANTITIES	CONCRETE - CLASS AA	STEEL REINFORCEMENT - EPOXY COATED	MECHANICAL REINF COUPLER #5 EPOXY COATED
LOCATION	CUYD	LBS	EA
BARRIER AT L13	1	130	20
BARRIER AT L23	1	96	20

BILL OF REINFORCEMENT

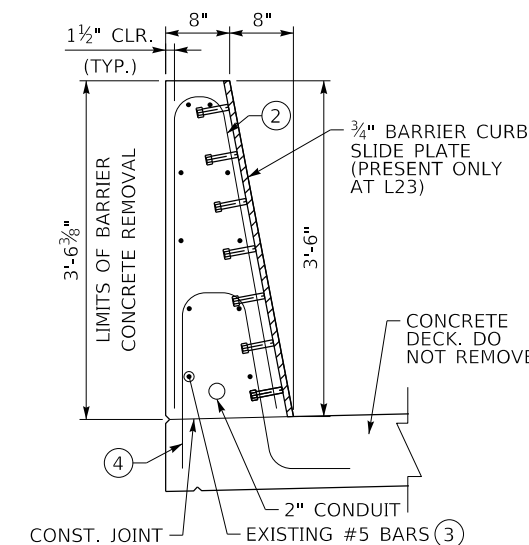
MARK.	TYPE.	NO.	SIZE	LENGTH	LOCATION
5B101e	BENT	23	5	7'-0 1/4"	BARRIER VERTICAL
5B102e	STR.	10	5	2'-3"	L13 HORIZONTAL
5B103e	STR.	30	5	1'-1"	BARRIER HORIZONTAL



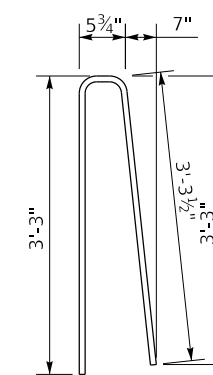
JOINT L13 BARRIER REMOVAL ①



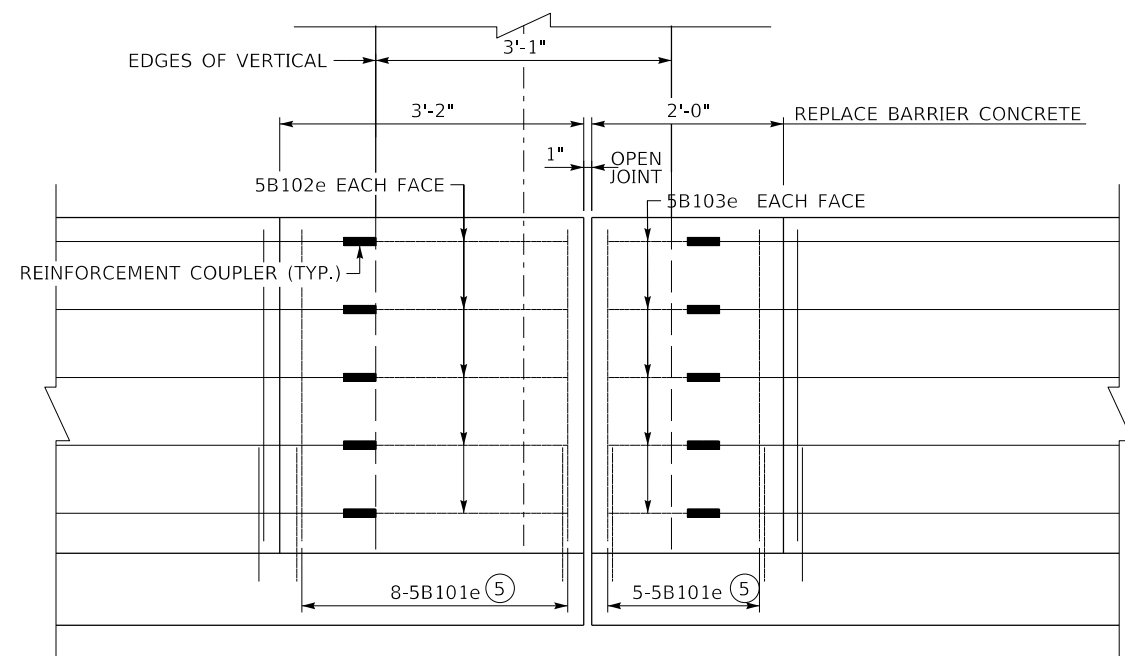
JOINT L23 BARRIER REMOVAL ①



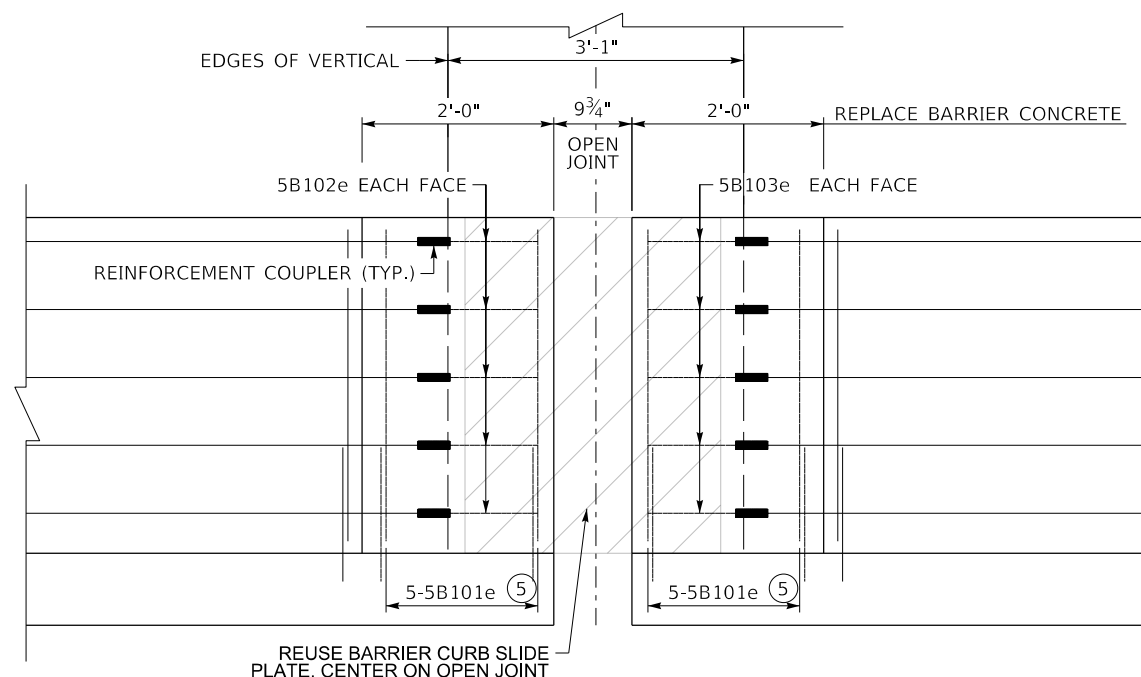
EXISTING SECTION



5B101e



JOINT L13 BARRIER REPLACEMENT



JOINT L23 BARRIER REPLACEMENT

LEGEND



NOTES

- ① PERFORM CORING OF INDICATION IN FLANGE PLATE BUTT WELD OF THE VERTICAL MEMBER AFTER THE BARRIER IS REMOVED.
- ② EXISTING VERTICAL BARS TO BE REPLACED WITH 5B103E WITHIN LIMITS OF BARRIER CONCRETE REMOVAL.
- ③ TO BE COUPLED WITH NEW LONG. BARS WITHIN LIMITS OF BARRIER CONCRETE REMOVAL. BEND EXISTING LONG. BAR INWARD TO FIT COUPLER WITHIN VERTICAL REINFORCEMENT.
- ④ KEEP VERTICAL BARS EMBEDDED IN DECK.
- ⑤ LINE UP WITH PROTRUDING VERTICALS.
- ⑥ THE COST OF CLASS AA CONCRETE, STEEL REINFORCEMENT - EPOXY COATED, ADN MECHANICAL REINF COUPLER #5 EPOXY COATED ARE INCIDENTAL TO BID ITEM STEEL REPAIR - CORING W/ BARRIER REMOVAL.



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 25-MAR-2024



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1650 Lyndon Farm Court
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Phone: (502)-339-3557
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DATE: 03/25/2024
DESIGNED BY: J. SKILES
DETAILED BY: R. WHITE

CHECKED BY
A. WILLOUGHBY
A. WILLOUGHBY

BARRIER REPAIR DETAIL
CROSSING
OHIO RIVER

ROUTE
I-65

ITEM NO.
5-10074
SHEET NO.
S22

COUNTY OF
JEFFERSON
DRAWING NUMBER
28331