

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

ALL-30-14.93
MONROE TWP
ALLEN COUNTY

PROJECT DESCRIPTION

THIS STRUCTURE IS LOCATED OVER U.S. 30 IN ALLEN COUNTY. REPAIR DAMAGED BRIDGE (RESULT OF OVER-HEIGHT VEHICLE HIT) BY REPLACING PORTION OF EXTERIOR BEAM, CROSSFRAMES, PORTION OF DECK, PARAPET, SCUPPERS, AND ROCKER BEARINGS. HEAT STRAIGHTEN INTERIOR BEAM. PAINT REPLACEMENT BEAM, CROSSFRAMES, AND DAMAGED HEAT STRAIGHTENED BEAM.

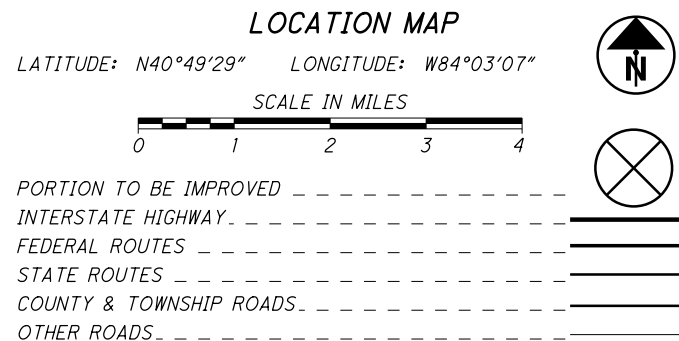
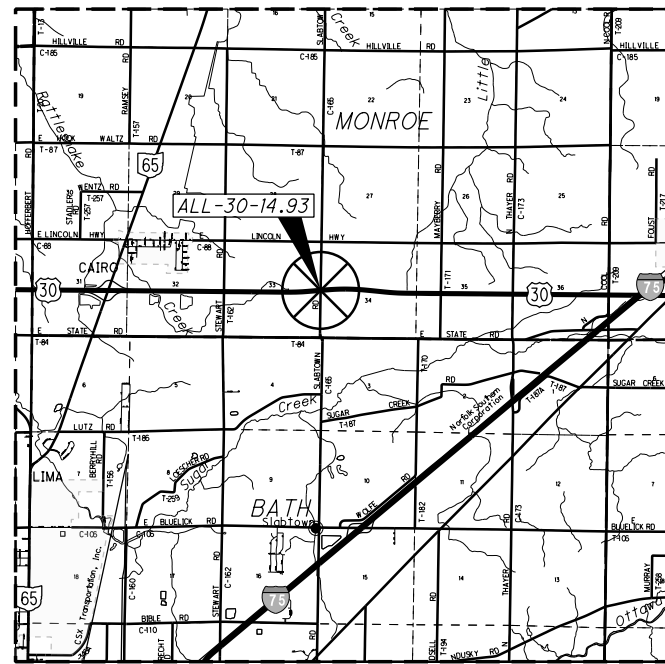
PROJECT EARTH DISTURBED AREA: 0.00 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: N/A (NOI NOT REQUIRED) *

* = MAINTENANCE PROJECT

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 3.



DESIGN DESIGNATION (U.S. 30)

CURRENT ADT (2021)	-----	12000
DESIGN YEAR ADT (2041)	-----	16800
DESIGN HOURLY VOLUME (2041)	-----	1270
DIRECTIONAL DISTRIBUTION	-----	0.51
TRUCKS (24 HOUR B&C)	-----	0.48
DESIGN SPEED	-----	75 MPH
LEGAL SPEED	-----	70 MPH
DESIGN FUNCTIONAL CLASSIFICATION:		
03 OTHER PRINCIPAL ARTERIAL (RURAL)		
NHS PROJECT	-----	YES

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT ONE
LIMA, OHIO

ENGINEERS SEAL:

SIGNED: *Mark A. Limbaugh*
DATE: 2/12/21

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STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
GSD-1-19	1/18/19			800	1/15/21	ASBESTOS	
BR-1-67	2/1/69			832	10/19/18	REPORT	
RB-1-55	7/19/13			849	1/18/13	1/11/21	
SD-1-65	11/8/65						
MT-95.30	7/19/19						
MT-95.45	1/17/20						
MT-95.50	7/21/17						
MT-95.60	4/19/19						
MT-101.60	1/17/20						
MT-105.10	1/17/20						

APPROVED *Christopher A. Hughes*
DATE 02/12/2021 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

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FEDERAL PROJECT NO.
NON-FEDERAL

PID NO.
114446

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NONE

ALL-30-14.93

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SHEET NUM.				PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
2	3	4	7	01/NFP/BR	EXT	TOTAL				
									<i>EROSION CONTROL</i>	
1,000				1,000	832	30000	1,000	EACH	EROSION CONTROL	2
									<i>STRUCTURE OVER 20 FOOT SPAN (ALL-30-14.93)</i>	
			LS	LS	202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	8
			34,917	34,917	509	10001	34,917	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	8
			117	117	511	34444	117	CY	CLASS QC2 CONCRETE, BRIDGE DECK	
			27	27	511	34448	27	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)	
			197	197	512	10100	197	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
			6	6	512	10300	6	SY	SEALING CONCRETE BRIDGE DECKS WITH HMMW RESIN	
			17,600	17,600	513	10261	17,600	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3, AS PER PLAN	8
			1	1	513	21001	1	EACH	TRIMMING OF BEAM END, AS PER PLAN	9
			131	131	514	00050	131	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
			131	131	514	00056	131	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
			1,234	1,234	514	00060	1,234	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
			1,234	1,234	514	00066	1,234	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
			2	2	514	10000	2	EACH	FINAL INSPECTION REPAIR	
			2	2	516	46200	2	EACH	BEARING DEVICE, ROCKER	
			5	5	516	46700	5	EACH	RESET BEARING	
			LS	LS	516	46930	LS		BEARING DEVICE, MISC.:TEMPORARY BEARINGS	14A
			LS	LS	516	47000	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE	
			4	4	518	12300	4	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN	9
			4	4	614	13310	4	EACH	BARRIER REFLECTOR, TYPE 1 (BI-DIRECTIONAL)	
			0.03	0.03	642	00300	0.03	MILE	CENTER LINE, TYPE 1	
			LS	LS	849	10000	LS		DAMAGE ASSESSMENT	
			LS	LS	849	10500	LS		SURFACE PREPARATION	
			7	7	849	10600	7	hour	REPAIRING DAMAGED MEMBERS BY GRINDING	
			LS	LS	849	10700	LS		STRAIGHTENING DAMAGED MEMBERS	
									<i>MAINTENANCE OF TRAFFIC</i>	
	80			80	614	11110	80	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
	1			1	614	12500	1	EACH	REPLACEMENT SIGN	
	1			1	614	12600	1	EACH	REPLACEMENT DRUM	
		3		3	614	18600	3	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN	
		1.25		1.25	614	22210	1.25	MILE	WORK ZONE EDGE LINE, CLASS 1, 6", 740.06, TYPE 1	
		420		420	614	24402	420	FT	WORK ZONE DOTTED LINE, CLASS 1, 6", 740.06, TYPE 1	
									<i>INCIDENTALS</i>	
				LS	614	11000	LS		MAINTAINING TRAFFIC	3
				3	619	16010	3	MNTH	FIELD OFFICE, TYPE B	
				LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
				LS	624	10000	LS		MOBILIZATION	

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ESTIMATED QUANTITIES										
ITEM	EXTENSION	01/NFP/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #	
202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN			LUMP			8
509	10001	34,917	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN			34,917			8
511	34444	117	CY	CLASS QC2 CONCRETE, BRIDGE DECK			117			
511	34448	27	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)			24			
512	10100	197	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)			197			11
512	10300	6	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN			6			8
513	10261	17,600	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3, AS PER PLAN			17600			8
513	21001	1	EACH	TRIMMING OF BEAM END, AS PER PLAN			1			9
514	00050	131	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			131			9
514	00056	131	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			131			9
514	00060	1,234	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			1,234			9
514	00066	1,234	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			1,234			9
514	10000	2	EACH	FINAL INSPECTION REPAIR			2			9
516	46200	2	EACH	BEARING DEVICE, ROCKER	1	1				9
516	46700	5	EACH	RESET BEARING	3	2				9
516	46950	LS		BEARING DEVICE, MISC. TEMPORARY BEARINGS				LUMP		14A
516	47000	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE				LUMP		
518	12301	4	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN			4			9
614	13310	4	EACH	BARRIER REFLECTOR, TYPE 1			4			
642	00300	0.03	MILE	CENTER LINE, TYPE 1			0.03			9
849	10000	LS		DAMAGE ASSESSMENT				LUMP		10
849	10500	LS		SURFACE PREPARATION				LUMP		10
849	10600	7	HOUR	REPAIRING DAMAGED MEMBERS BY GRINDING			7			10
849	10700	LS		STRAIGHTENING DAMAGED MEMBERS				LUMP		10

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

GSD-1-96	DATED/REVISED	1/18/19
BR-1-67	DATED/REVISED	2/1/69
RB-1-55	DATED/REVISED	7/19/13
SD-1-65	DATED/REVISED	11/8/65

SEE PROJECT REFERENCE-ONLY FILES FOR DRAWINGS ABOVE.

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800	DATED	1/15/21
849	DATED	1/18/13

EXISTING BRIDGE PLANS

THE EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT 1 OFFICE, 1885 McCULLOUGH STREET, LIMA, OHIO 45801. ALSO SEE REFERENCE-ONLY FILES - FTP SERVER

DESIGN LOADING

SUPERSTRUCTURE: HS-20 AND ALTERNATE MILITARY LOADING (AML)

DESIGN DATA

STRUCTURAL STEEL (NEW WF36X135 AND WF36X170 BEAMS): ASTM A709 GRADE 36 OR GRADE 50 OR GRADE 50W

STRUCTURAL STEEL (CROSSFRAMES): ASTM A36

STRUCTURAL STEEL (EXISTING STRUCTURE) ASTM A36

STEEL RESTRAINT OR PRELOAD LIMITS: EXISTING ASTM A36 - DO NOT SUBJECT ANY PART OF THE STRUCTURE TO A JACKING, PULLING OR RESTRAINING UNIT STRESS EXCEEDING 18,000 PSI (124.1 MPA)

CONCRETE QC2- COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL

PROPOSED WORK:

- 1.) REMOVE ALL THE REMAINING CONCRETE DECK AND PARAPETS NORTH OF THE MEDIAN PIER CENTERLINE. TAKE CARE TO AVOID DAMAGE TO THE SOUTHERN HALF OF THE DECK TO REMAIN. IF USING LAPS INSTEAD OF MECHANICAL CONNECTORS, TAKE CARE TO AVOID DAMAGE TO THE EXISTING REBAR THAT WILL BE USED TO LAP.
- 2.) REMOVE DAMAGED CROSSFRAMES
- 3.) PREPARE SURFACES FOR HEAT STRAIGHTENING AND GRIND TO REMOVE SHARP EDGES FROM GROOVES AND GOUGES IN DAMAGED BEAM.
- 4.) HEAT STRAIGHTEN BEAM 3 OVER W.B. US 30 PER SUPPLEMENTAL SPECIFICATION 849.
- 5.) CUT END OF BEAM 4 TO AN EVEN, STRAIGHT END.
- 6.) INSTALL NEW BEAM 4 SECTIONS AND SPLICE PLATES BETWEEN CUT END TO NORTH ABUTMENT; INSTALL NEW ROCKER BEARINGS.
- 7.) RESET OUT-OF-ADJUSTMENT ROCKER BEARINGS
- 8.) REPLACE THE REMOVED CROSSFRAMES
- 9.) REPLACE SCUPPERS
- 10.) SURFACE PREP. AND PAINT REPLACED BEAM, DAMAGED AREA OF BEAMS AND REPLACED CROSSFRAMES
- 11.) PLACE FORMS, REINFORCING STEEL & MECHANICAL CONNECTORS (IF USED INSTEAD OF LAP SPLICING WITH EXISTING REINFORCING STEEL), AND REPLACE CONCRETE DECK
- 12.) REPLACE PARAPETS
- 13.) SEAL PORTION OF DECK WHERE OLD AND NEW MEET WITH HMWM RESIN
- 14.) SEAL PARAPET, DECK EDGE, AND 6" UNDER DECK EDGE WITH EPOXY-URETHANE SEALER

DEMOLITION DEBRIS

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT DEMOLITION FROM ENTERING TRAFFIC. ANY MATERIAL THAT DOES ENTER TRAFFIC SHALL BE IMMEDIATELY REMOVED.

DECK PLACEMENT DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.2 KIPS FOR A TOTAL MACHINE LOAD OF 17.6 KIPS. A MIN. OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAX. SPACING OF OVERHANG FALSEWORK BRACKETS OF 48"

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05, 105.02 AND 513.04. BASE CONTRACT BID PRICES UPON RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

INSPECTION OF EXISTING STRUCTURAL STEEL

THE ENGINEER WILL VISUALLY INSPECT ALL EXISTING TOP FLANGE COVER PLATE FILLET WELDS TO ENSURE THE WELDS, PLATES AND BEAMS OR GIRDERS ARE FREE OF DEFECTS AND CRACKS. IF NECESSARY, REMOVE ALL DECK SLAB HAUNCH FORMS IMMEDIATELY ADJACENT TO SUCH WELDS THAT MAY INTERFERE WITH THE ENGINEER'S INSPECTION. THE INSPECTION WILL NOT TAKE PLACE UNTIL THE TOP FLANGES ARE CLEANED ACCORDING TO 511.10, BUT IT WILL BE DONE BEFORE THE DECK SLAB REINFORCEMENT IS INSTALLED. THE DEPARTMENT WILL PAY FOR THE COST ASSOCIATED WITH THIS INSPECTION WITH ITEM 511, CLASS QC2 CONCRETE, BRIDGE DECK. THE ENGINEER WILL REPORT ALL CRACKS FOUND TO THE OFFICE OF CONSTRUCTION ADMINISTRATION, BRIDGE CONSTRUCTION SPECIALIST, ALONG WITH SPECIFIC INFORMATION ON LOCATION OF THE CRACKS, LENGTH, AND DEPTH SO AN EVALUATION AND REPAIR OR REPLACEMENT RECOMMENDATION CAN BE MADE.

CUT LINE CONSTRUCTION JOINT PREPARATION

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

PORTION TO BE REMOVED, AS PER PLAN
ALL DECK & PARAPET NORTH OF MEDIAN PIER & SCUPPERS, 1 FULL SET OF CROSSFRAMES, 6 SETS OF CROSSFRAME ANGLE REMNANT STUBS WHERE PREVIOUSLY CUT AND REMOVED WITH EXTERIOR BEAM PORTION, 2 DAMAGED ANGLE SECTIONS FROM END CROSSFRAME

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

DECK AND PARAPET

THE RIGHT (EAST) PARAPET HAS BEEN REMOVED FROM APPROXIMATELY 16 FEET NORTH OF PIER 2 (MEDIAN PIER) TO THE FORWARD (NORTH) ABUTMENT. THE EXTERIOR BAY OF BRIDGE DECK HAS BEEN REMOVED IN THIS AREA TO WITHIN ±1 FOOT FROM BEAM 3 (WESTERN INTERIOR) BY PROJECT PID 114404.

SAWCUT THE DECK ALONG THE C OF BEARING AT PIER 2 AND REMOVE THE REMAINING NORTH HALF OF THE BRIDGE DECK AND PARAPET FROM PIER 2 TO THE FORWARD ABUTMENT. EITHER PRESERVING THE REQUIRED 43" LAP LENGTH FOR EXISTING LONGITUDINAL BARS AT THE CUT TO FORM A LAP SPLICE OR USING A MECHANICAL CONNECTOR PER C&MS 509 AND NOTE ON THE TRANSVERSE DECK SECTION SHEET.

CROSS-FRAMES

FLAME OR SAW CUT THE EXISTING MEMBERS TO WITHIN 1/8 INCH OF THE EXISTING MAIN MATERIAL USING A MECHANICAL GUIDE ACCORDING TO C&MS 513.12. PROVIDE SHIELDING AS NECESSARY TO PREVENT DAMAGE TO MAIN OR SECONDARY MEMBERS THAT REMAIN. GRIND THE EXISTING MAIN OR SECONDARY MEMBER SMOOTH IN PREPARATION FOR COMPLETE PENETRATION OR FILLET WELDING. PROVIDE A SURFACE FINISH ACCORDING TO ANSI B46.1 OF 250 MIL (TO ACCOMMODATE THE PROPOSED REPLACEMENT MATERIALS). DETERMINE FINAL QUANTITIES BY FIELD MEASUREMENTS.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2-INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS (STEEL BEAM), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS.

DUE TO THE POSSIBLE PRESENCE OF ATTACHMENTS (E.G., FINISHING MACHINE, FORM SUPPORTS, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

EXISTING WELDED ATTACHMENTS: REMOVE EXISTING WELDED ATTACHMENTS (E.G., FINISHING MACHINE AND FORM SUPPORTS) LOCATED ON THE TOP FLANGES OF EXISTING STEEL MEMBERS AND GRIND THE FLANGE SURFACES SMOOTH. CAREFULLY GRIND PARALLEL TO THE FLANGES.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN: IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

ITEM 512 - SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN

APPLY HMWM RESIN TO AN AREA 2 FEET WIDE, CENTERED ON THE JUNCTION OF THE EXISTING CONCRETE DECK AND REPLACED CONCRETE DECK SURFACE OVER PIER 2 (MEDIAN PIER).

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 3, AS PER PLAN:

ALL REQUIREMENTS OF 513 APPLY TO SHOP FABRICATED MEMBERS. PERFORM WORK FOR FIELD FABRICATED MEMBERS ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING FIELD FABRICATION TO BE PRE-QUALIFIED AS SPECIFIED IN SUPPLEMENT 1078. SUBMIT A WRITTEN LETTER OF MATERIAL ACCEPTANCE, 501.06, TO THE ENGINEER. PROVIDE SHOP DRAWINGS ACCORDING TO 513.06 OR SUPPLY THE ENGINEER WITH "AS BUILT" DRAWINGS MEETING 513.06 AFTER COMPLETION OF FIELD FABRICATION. THE ENGINEER WILL REVIEW THE SUBMITTED DRAWINGS FOR CONCURRENCE WITH THE FINAL AS-BUILT CONDITION. THE ENGINEER MAY CONTACT THE OFFICE OF STRUCTURAL ENGINEERING FOR TECHNICAL ASSISTANCE. IF THE ENGINEER IS SATISFIED WITH THE "AS-BUILT" DRAWINGS AND THE DELIVERED MATERIALS. SUPPLY A COPY OF THE DRAWINGS, STAMPED, SEALED AND DATED, ACCORDING TO 51002, TO THE STRUCTURAL, WELDING AND METALS SECTION OF THE OFFICE OF MATERIAL MANAGEMENT FOR RECORD PURPOSES. THE MEMBERS INCLUDED IN THIS ITEM ARE PROVIDED IN TABLE 2 AND 3.

REPLACEMENT CROSSFRAME MEMBERS ARE TO BE PAINTED PER CMS 514 FIELD PAINTING AS NOTED IN THESE PLANS.

IF SPLICE PLATE BOLTS ARE LOOSTENED OR REMOVED, THEY MUST BE REPLACED WITH NEW BOLTS PER CMS 711.09.

THE DEPARTMENT WILL INCLUDE ALL MATERIALS, TOOLS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 3, AS PER PLAN: POUND.

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ODOT D1
CAPITAL
PROGRAMS

CHECKED
EJS
REVIEWED
JRC

DESIGNED
MAL

PLAN INSERT SHEET
COLLISION REPAIR AND HEAT
STRAIGHTENING NOTES

ALL -30-14.93

3 / 9

8
14

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ITEM 513 - TRIMMING OF BEAM END, AS PER PLAN

TRIM THE EXTERIOR BEAM AT THE EXISTING TORCH CUT LOCATION TO A SQUARE STRAIGHT CUT READY FOR SPLICING WITH THE REPLACEMENT BEAM. ENSURE THAT THE LENGTH REMOVED DOES NOT PREVENT THE REPLACEMENT BEAM FROM MEETING AT THE NEW SPLICE LOCATION.

ITEM 514 - SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL

- ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT**
- ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL, INTERM. COAT**
- ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL, FINISH COAT**
- ITEM 514 - FINAL INSPECTION REPAIR**

NEW REPLACEMENT EXTERIOR BEAM 4, REPLACEMENT CROSSFRAMES, AND REPLACEMENT ROCKER BEARINGS SHALL BE DELIVERED SHOP COATED WITH PRIME COAT PER C&S 513.27 & 513.30.

TRIMMED END OF EXISTING BEAM, EXISTING MEMBER PAINT REMOVAL / PAINT DAMAGE AREAS AT REPLACEMENT CROSSFRAME CONNECTIONS, AND BEAM 3 AREA OF PAINT REMOVAL / PAINT DAMAGE AT HEAT STRAIGHTENING REPLACEMENT CROSSFRAME CONNECTION AREAS WILL RECEIVE SURFACE PREPARATION AND PRIME COAT PER C&S ITEM 514.

INTERMEDIATE AND FINISH COAT PAINT PER C&S ITEM 514 THE FOLLOWING AREAS:

REPLACEMENT EXTERIOR BEAM 4 (INCLUDING SPLICES AND PAINT REMOVAL / PAINT DAMAGE AREA AT TRIMMED END OF EXISTING BEAM, ALL REPLACEMENT CROSSFRAME MEMBERS (AND EXISTING MEMBER PAINT REMOVAL / PAINT DAMAGE AREAS AT REPLACEMENT CROSSFRAME CONNECTIONS), BEAM 3 AREA OF PAINT REMOVAL / PAINT DAMAGE AT HEAT STRAIGHTENING LOCATION, REPLACED ROCKER BEARINGS

ITEM 516 - BEARING DEVICE, ROCKER

PROVIDE ROCKERS ACCORDING TO STD. DWG. RB-1-55. USE R-100 ROCKER AT BEAM 4 FORWARD ABUTMENT (NORTH) AND R-175 ROCKER AT BEAM 4 PIER 3 (NORTH SHOULDER)

ITEM 516 - RESET BEARING

RESET ALL 3 REMAINING FORWARD (NORTH) ABUTMENT BEARINGS AND RESET BEAM 3 (EAST INTERIOR) BEARING AT PIER 3 (NORTH SHOULDER) AND BEAM 4 (EAST EXTERIOR) AT PIER 2 (MEDIAN).

ITEM 518 - SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN

REPLACE SCUPPERS AT LOCATIONS SHOWN ON SHEET 10. USE TYPE 1 SCUPPERS PER DRAWING SD-1-65 REV. 11/8/65 IN THE REFERENCE-ONLY FILES.

ITEM 642 - CENTER LINE, TYPE 1

MATCH EXISTING CENTER LINE MARKINGS ON REPLACED PORTION OF DECK

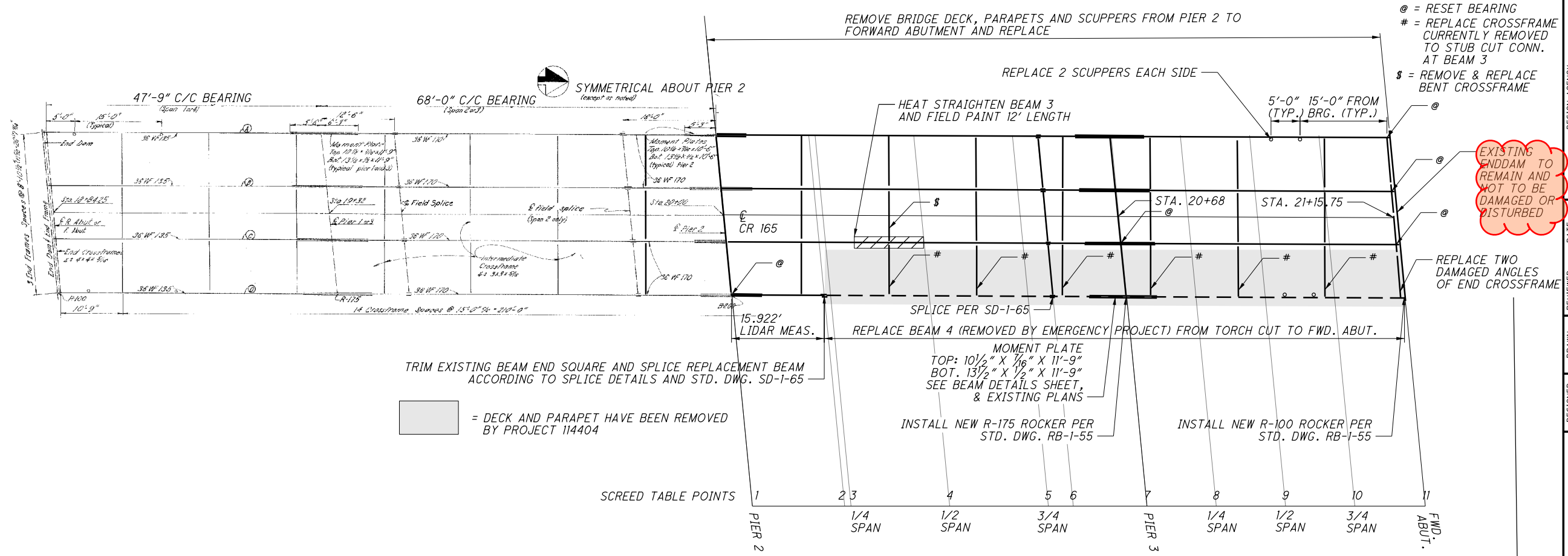
DESIGNED MAL
CHECKED EJS
REVIEWED JRC

ODOT D1
CAPITAL
PROGRAMS

PLAN INSERT SHEET
COLLISION REPAIR AND HEAT
STRAIGHTENING NOTES

ALL-30-14.93

4/9
9/14



DESIGN AGENCY
ODOT, DISTRICT ONE,
CAPITAL PROGRAMS

REVIEWED DATE
JRC 2/12/2021
STRUCTURE FILE NUMBER
0200549

DRAWN MAL
REVISOR MAL

DESIGNED MAL
CHECKED EJS

FRAMING REPAIR PLAN
ALL-30-1493
CR 165 SLABTOWN ROAD OVER U.S. 30

ALL-30-14-93
PID No. 114446

5/9

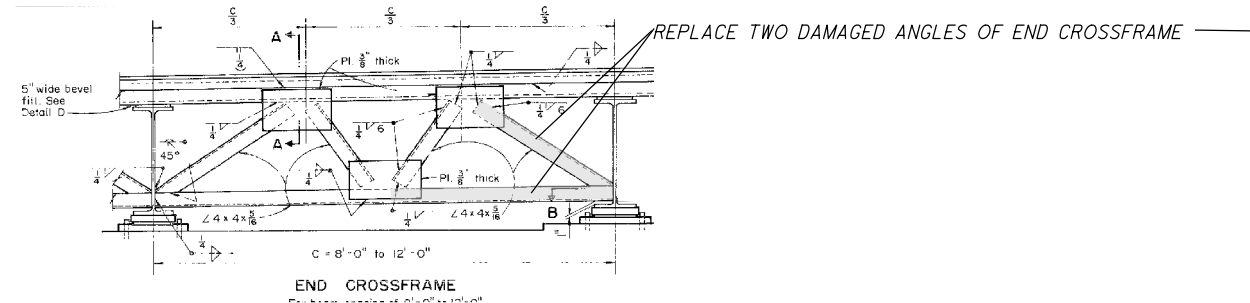
10/14

Replacement Exterior beam length -- measured from LIDAR along centerline of bottom flange placed at correct height above rocker or bolster.

	LIDAR	LIDAR ADJUSTED	plan value
abutment to shoulder pier 3	47.7948	47.75	47.75 feet
shoulder pier 3 to cut	51.9527	51.9975	52.00 feet
cut to median pier 2	15.9222	16.00	16.00 feet

SCD SD-1-65 extra beam length beyond bearing - from bearing to 3" clearance from backwall 0.753692 feet

FINAL BEAM DIMENSIONS
 WF36x135 60.25 feet (12.5' splice to pier3 + 47.75' span 4 + 0.753962 feet extra beyond bearing)
 WF36x170 39.5778 ROUND UP TO 40 FEET DUE TO TRIMMING TORCH CUT BY ITEM 513 TRIMMING OF BEAM END, APP



FORWARD ABUTMENT BEAM LIMIT DETAIL

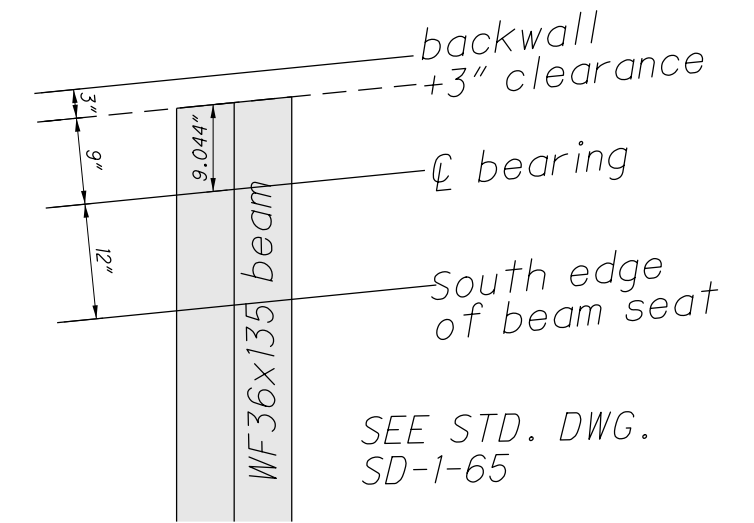
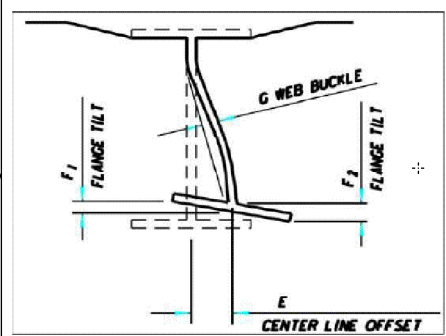
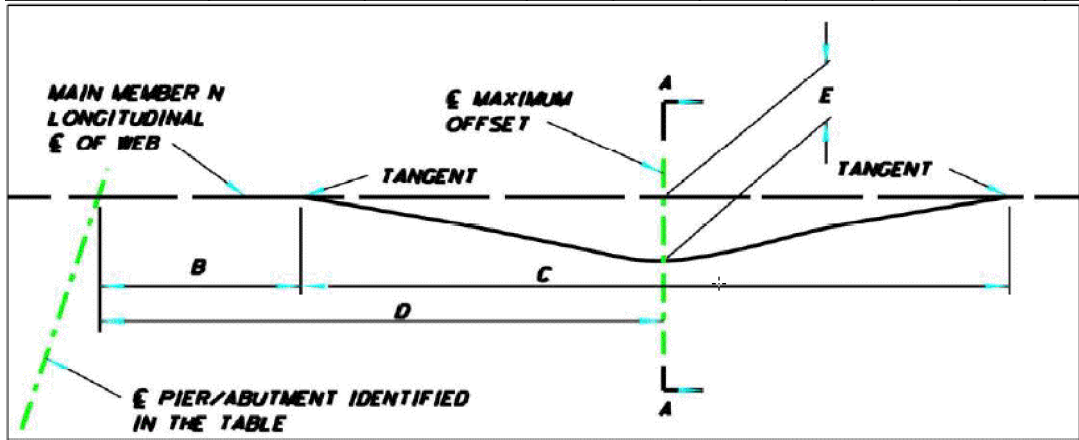


Table No. 1 - Damaged Main Member to be Heat Straightened

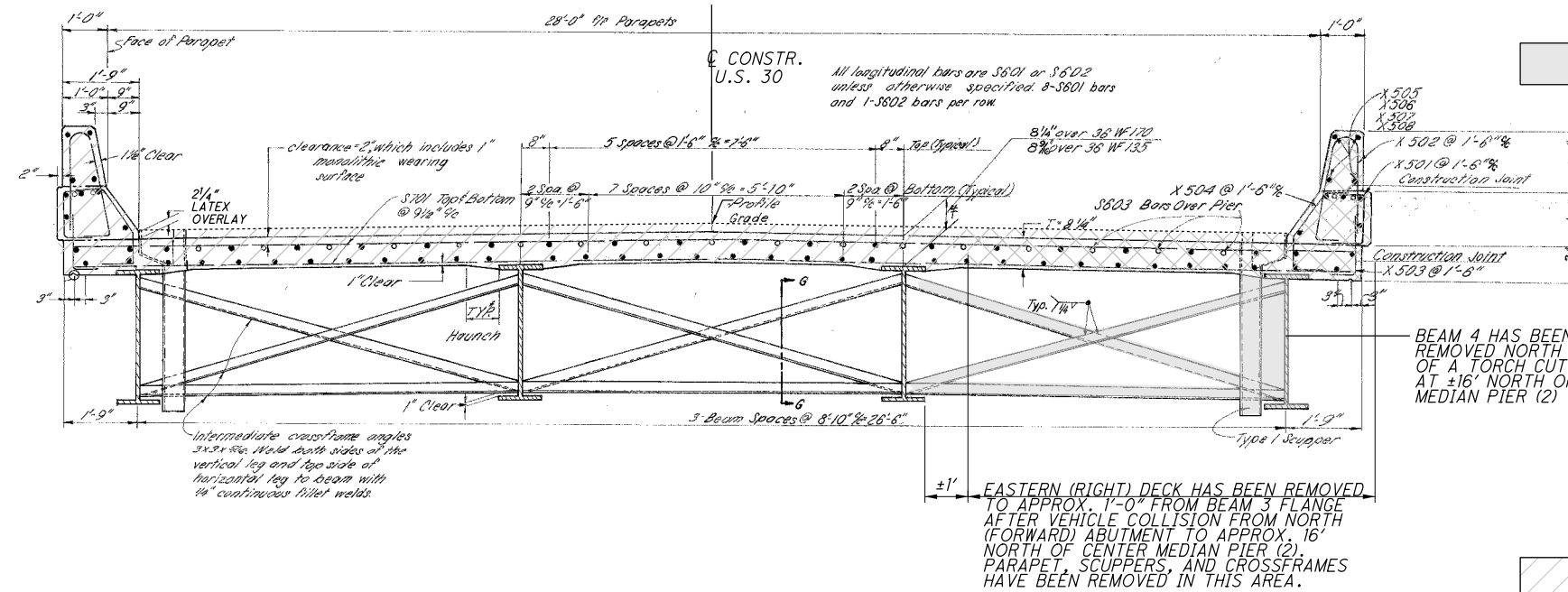
Damage Section	Beam No.	Pier/Abut Reference	B	C	D	E	F1	F2	G	J	Grind Nicks and Gouges
Web at the top	3	Pier 3	17.5'	8'	21.5'	<-1"	<-1"	<-1"	-1.5"		X



Section A-A
 Negative E Values are bent left
 Negative F Values are bent down
 Negative G values are bent left
 J = Length of epoxy injection

NOTE: ODOT SURVEY LIDAR SCAN POINT CLOUD OF BEAM IS AVAILABLE IN REFERENCE-ONLY CADD FILES.

I:\Projectdata\114446\Design\Structure\Sheets\114446SH001.dgn Sheet 05-MAR-2021 3:10PM mlmbaug



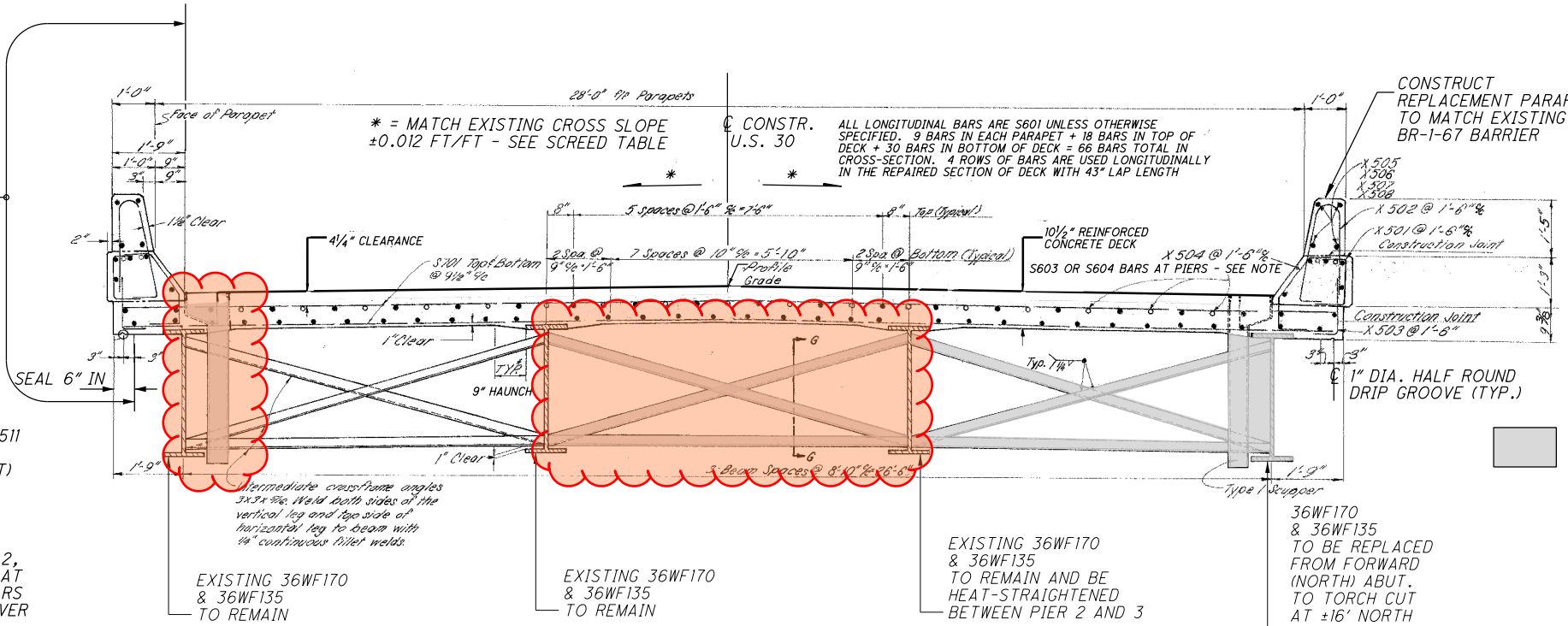
SCUPPER AND CROSSFRAMES REMOVED ON OR BEFORE 12/24/2021

EXISTING TRANSVERSE SECTION

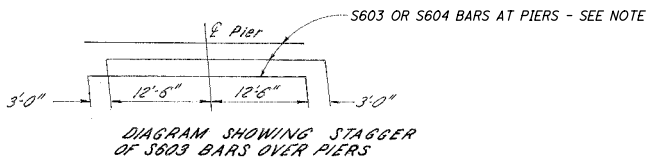
ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

PORTION OF DECK REMOVED 12/24/2021

LIMITS OF ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN TYP. BOTH SIDES



- NOTES:
- DECK & PARAPET CONCRETE SHALL BE ITEM 511 CONCRETE, CLASS QC2, BRIDGE DECK AND ITEM 511, CLASS QC2, BRIDGE DECK (PARAPET)
 - S603 BARS: STAGGERED OVER NORTH SHOULDER PIER 3, 17 BARS IN DECK TOP, 2 BARS IN EACH PARAPET AT MID-LEVEL.
 - S604 BARS: STAGGERED OVER MEDIAN PIER 2, 17 BARS IN DECK, 2 BARS IN EACH PARAPET AT MID-LEVEL. CONNECT TO EXISTING S603 BARS EXPOSED AT THE EDGE OF DECK REMOVAL OVER PIER, EITHER BY PRESERVING THE REQUIRED 43" LAP LENGTH OF EXISTING S603 BAR TO FORM A LAP SPLICE OR BY USING A MECHANICAL CONNECTOR PER C&M 509. USE SAME CONNECTION FOR S601 BARS MEETING EXISTING AT REMOVAL / REPLACEMENT JOINT.
 - MECHANICAL CONNECTORS USED ON THE BOTTOM LONGITUDINAL BARS MUST MEET C&M 509 REQUIREMENTS AND BE THIN ENOUGH TO KEEP 1/2" COVER FROM THE BOTTOM OF THE DECK TO THE BOTTOM OF THE CONNECTOR. IF THIS CANNOT BE MET, PRESERVE 43" OF EXISTING BOTTOM LONG. BARS AND USE LAP SPLICES.

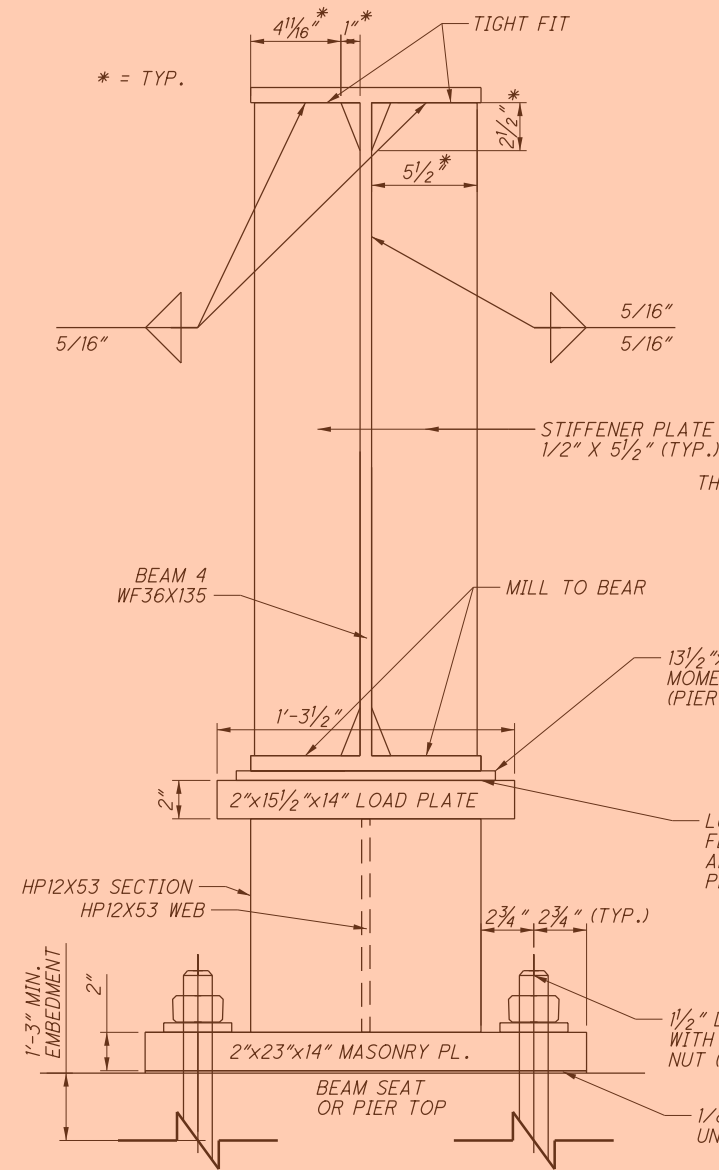


PROPOSED TRANSVERSE SECTION

CROSSFRAMES, SCUPPER AND BEAM REPLACED SEE SHEET 10 FOR LOCATIONS

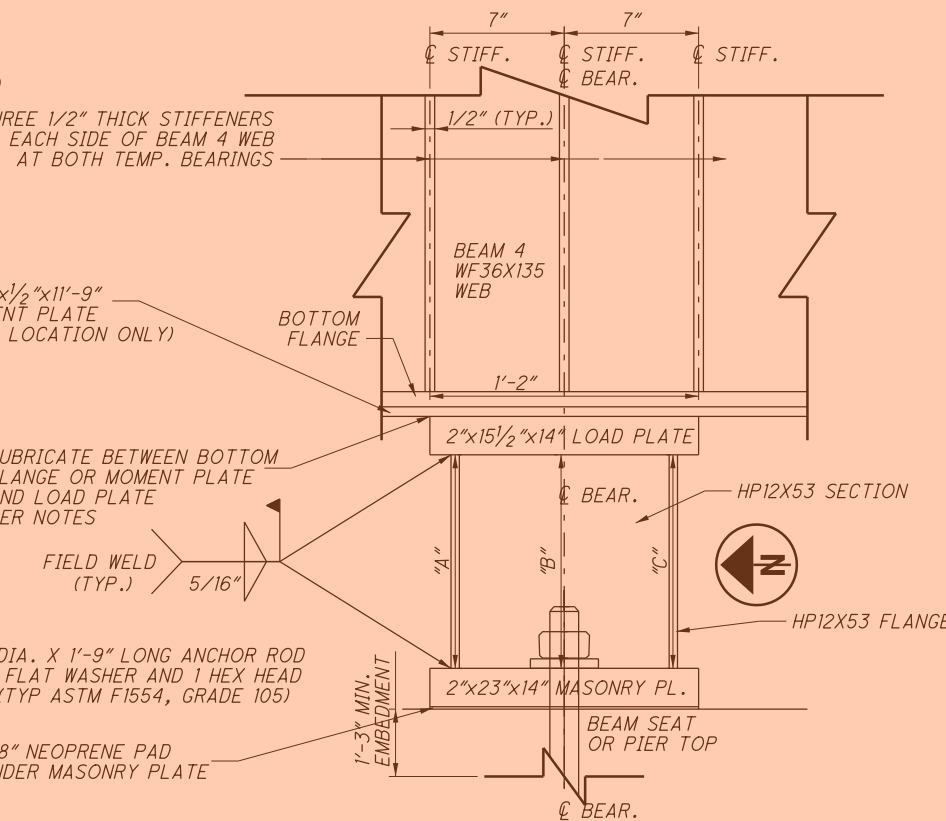
DESIGN AGENCY	ODOT, DISTRICT ONE, CAPITAL PROGRAMS
DATE	2/12/2021
REVIEWED	JRC
STRUCTURE FILE NUMBER	0200549
DRAWN	MAL
REVISER	MAL
DESIGNED	MAL
CHECKED	EJS
REMOVAL DETAILS AND TRANSVERSE SECTION	
ALL-30-1439	
CR 165 SLABTOWN ROAD OVER U.S. 30	
ALL-30-14.93	
PID No. 114446	
6/9	
11	
14	

**TEMP. BEARING.
TRANSVERSE VIEW**



BEVELLED HEIGHT OF HP12X53 SUPPORT MEMBER (INCH)			
LOCATION	DIM. "A"	DIM. "B"	DIM. "C."
FORWARD ABUT.	6.614	6.625	6.636
PIER 3	11.122	11.125	11.128

**TEMP. BEARING.
LONGITUDINAL VIEW**



NOTES:

DUE TO ANTICIPATED RB-1-55 BEARING AVAILABILITY DELAYS, TEMPORARY BEARINGS SHALL BE INSTALLED AT THE REPLACEMENT BEAM 4 PIER 3 AND FORWARD ABUTMENT BEARING LOCATIONS UNTIL ITEM 516 - BEARING DEVICE, ROCKER RB-1-55 R-100 AND R-175 CAN BE DELIVERED AND INSTALLED AS PERMANENT BEARINGS.

BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL TEMPORARY BEARINGS. PAYMENT WILL BE AT THE CONTRACT PRICE FOR ITEM 516, BEARING DEVICE, MISC.: TEMPORARY BEARINGS, LUMP SUM.

THE STEEL LOAD PLATES, MASONRY PLATES, AND HP SECTIONS SHALL BE ASTM A572/A709, GRADE 50 STEEL

THE LUBRICANT USED BETWEEN BOTTOM FLANGE AND THE LOAD PLATE SHALL BE OF THE SOLID TYPE AND CONSIST OF GRAPHITE, METALLIC SUBSTANCES HAVING LUBRICATING PROPERTIES AND A LUBRICATING BINDER. MATERIALS WHICH DO NOT HAVE LUBRICATING QUALITIES OR WHICH PROMOTE CHEMICAL OR ELECTROLYTIC REACTIONS WILL NOT BE ACCEPTABLE. THE LUBRICANT SHALL BE COMPRESSED INTO THE LUBRICATION RECESSES WITH HYDRAULIC PRESSURE OF AT LEAST FIVE TIMES THE DESIGN UNIT LOADING TO FORM A DENSE, NON-PLASTIC LUBRICANT.

PROVIDE FOUR EXTRA 1/8" NEOPRENE PADS IN CASE ADDITIONAL SHIM THICKNESS IS REQUIRED.

ALL TEMPORARY BEARING STEEL LOAD PLATES, MASONRY PLATES, HP 12 x 53 STEEL SHAPES, 1/8" NEOPRENE PADS, FASTNERS, AND LUBRICANT ARE INCLUDED WITH THIS ITEM FOR PAYMENT.

WHEN ROCKER RB-1-55 R-100 AND R-175 ARE DELIVERED AND INSTALLED AS PERMANENT BEARINGS, DAMAGED PAINT ON THE BEAMS SHALL BE REPAIRED IN ACCORDANCE WITH ITEM 514 PAINTING NOTES ON SHEET 9/14. DAMAGED PAINT REPAIR RELATED TO REMOVAL OF TEMPORARY BEARINGS SHALL BE CONSIDERED INCIDENTAL TO ITEM 516, BEARING DEVICE, MISC. LUMP SUM

TEMPORARY BEARING DETAILS

ALL - 30 - 1493
CR 165 SLABTOWN ROAD OVER U.S. 30

ALL - 30 - 14.93
PID No. 114446

9A / 9

14A
14

DESIGN AGENCY
ODOT, DISTRICT ONE
CAPITAL PROGRAMS

REVIEWED
JFC
DATE
3/2/2021
STRUCTURE FILE NUMBER
0200549

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