

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

- A-1-69 DATED: 07-19-02
- AS-1-15 DATED: 07-17-15
- GSD-1-19 DATED: 01-18-19
- SICD-1-96 DATED: 07-18-14
- SICD-2-14 DATED: 07-18-14
- TST-1-99 DATED: 07-20-18

REFERENCE

EXISTING BRIDGE PLANS MAY BE INSPECTED AND ARE PROVIDED WITH THIS PROJECT'S BIDDING DOCUMENTS.

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION (2002), AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

DESIGN LOADING

HL-93 WITH FUTURE WEARING SURFACE (FWS) OF 60 LBS./SQ. FT.

DESIGN DATA

CONCRETE CLASS OC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
 CONCRETE CLASS OC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
 REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60 KSI
 STRUCTURAL STEEL - ASTM A709, GRADE 50, MINIMUM YIELD STRENGTH 50,000 PSI

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 CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID 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.

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL
2 1/2" CONCRETE COVER
CURB AND SCUPPERS

ITEM 516 - 2" DEEP JOINT SEALER, AS PER PLAN

A 2" DEEP X 1" WIDE STRIP SHALL BE SAWCUT OUT OF ALL ROADWAY SURFACE ASPHALT ABUTTING THE BRIDGE AFTER THE FINAL SURFACE COURSE HAS BEEN CONSTRUCTED. JOINT SEALER AS PER 705.04 SHALL BE USED TO SEAL THE JOINT CREATED.

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

CUT LINE CONSTRUCTION JOINT PREPARATION

FOR ABUTMENT BACKWALL REMOVALS 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. INSTALL DOWEL BARS IF SPECIFIED. 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.

BRIDGE PAINTING LIMITATIONS

PRIOR TO THE ARRIVAL OF THE BRIDGE PAINTERS THE PRIME CONTRACTOR SHALL COMPLETE ALL CLEARING AND GRUBBING FROM WITHIN THE CONSTRUCTION LIMITS SHOWN INCLUDING REMOVAL OF ALL TREES. BRIDGE PAINTING/ ABRASIVE BLASTING WILL EXCLUDE END DAMS AND SCUPPERS TO BE GALVANIZED. PAYMENT FOR THE CLEARING AND GRUBBING IS INCLUDED IN ITEM 201 CLEARING AND GRUBBING.

PAINTING OF STRUCTURAL STEEL

ALL STRUCTURAL STEEL SHALL BE PAINTED IN ACCORDANCE WITH SECTION 514 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE FINISH COAT COLOR SHALL BE GREEN FS-595C-14260.

PORTION OF STRUCTURE REMOVED, AS PER PLAN, SUBSTRUCTURE

THERE SHALL BE NO SAWCUTS BELOW THE BEAM SEAT ELEVATION AT ANY LOCATION EXCEPT AS DETAILED IN THE PLAN. ALL CONCRETE REMOVED FROM THE SAWCUT DOWN TO THE BEAM SEAT SHALL BE REMOVED BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUPERSTRUCTURE (CONCRETE)

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF THE CONCRETE DECK INCLUDING PARAPETS FROM STEEL SUPPORTING SYSTEMS (GIRDERS, CROSSFRAMES, ETC.). THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK 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 EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

PROTECTION OF TRAFFIC: PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (RAILROAD, VEHICULAR, PEDESTRIAN, BOAT, ETC.) AS PER CMS 2013 501.05.B.2.

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 GIRDERS), 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, SCUPPER AND 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; AND SUPPORTS FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) LOCATED ON THE TOP FLANGES OF EXISTING STEEL MEMBERS AND GRIND THE FLANGE SURFACES SMOOTH. CAREFULLY GRIND PARALLEL TO THE FLANGES. THIS ITEM SHALL ALSO INCLUDE REMOVAL OF EXISTING WELDED ATTACHMENTS ON THE FASCIA BEAMS.

EXISTING END CROSSFRAMES: REMOVE THE EXISTING END CROSSFRAMES AND WELDS FROM THE BEAMS. THE CONTRACTOR SHALL BE CAREFUL WHEN REMOVING THE CROSSFRAMES AND WELDS FROM THE BEAMS SO NO DAMAGE IS DONE TO THE BEAMS. ANY DAMAGE DONE TO THE BEAMS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE. THIS ITEM SHALL ALSO INCLUDE FIELD DRILLING HOLES IN THE WEB OF THE EXISTING BEAMS FOR PLACEMENT OF THE DIAPHRAGM STEEL.

EXISTING EXPANSION JOINTS: REMOVE THE EXPANSION JOINTS. THE CONTRACTOR SHALL BE CAREFUL WHEN REMOVING THE EXPANSION JOINTS FROM THE BEAMS SO NO DAMAGE IS DONE TO THE BEAMS. ANY DAMAGE DONE TO THE BEAMS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF CONCRETE REMOVALS ON A CUBIC YARD 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, SUPERSTRUCTURE (CONCRETE).

ITEM 202 REMOVAL MISC: EXISTING INTERMEDIATE CROSSFRAMES

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING INTERMEDIATE CROSSFRAMES SHOWN ON SHEET 12/25. THE CONTRACTOR SHALL BE CAREFUL WHEN REMOVING THE CROSSFRAMES AND WELDS FROM THE BEAMS SO NO DAMAGE IS DONE TO THE BEAMS. ANY DAMAGE TO THE BEAMS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

ALL WORK REQUIRED TO PERFORM THE ABOVE WORK SHALL BE PAID AT THE UNIT PRICE FOR ITEM 202 REMOVAL MISC: EXISTING INTERMEDIATE CROSSFRAMES.

ITEM 202 REMOVAL MISC: BEARINGS

THIS ITEM SHALL INCLUDE THE REMOVAL OF ALL ABUTMENT BEARING COMPONENTS AS WELL AS REMOVING RUST, WELDS AND ANY OTHER DEBRIS FROM THE BEAMS TO PREPARE THEM FOR THE ATTACHMENT OF THE NEW BEARINGS. DRILL OUT EXISTING ANCHOR RODS AND ENSURE THAT THE NEW BEARINGS HAVE A LEVEL SURFACE TO REST ON. THE CONTRACTOR SHALL BE CAREFUL WHEN REMOVING THE BEARINGS AND WELDS FROM THE BEAMS SO NO DAMAGE IS DONE TO THE BEAMS. ANY DAMAGE TO THE BEAMS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

ALL WORK REQUIRED TO PERFORM THE ABOVE WORK SHALL BE PAID AT THE UNIT PRICE FOR ITEM 202 REMOVAL MISC: BEARINGS.

INSPECTION OF EXISTING STRUCTURAL STEEL

THE ENGINEER WILL VISUALLY INSPECT ALL EXISTING BUTT-WELDED SPLICES AND/OR TOP FLANGE COVER PLATE FILLET WELDS TO ENSURE THE WELDS, PLATES AND 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 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUPERSTRUCTURE (CONCRETE). 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.

WELDED ATTACHMENTS

WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" OR 5/16" FOR GREATER THAN 3/4" THICK.

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 2.4 KIPS FOR A TOTAL MACHINE LOAD OF 19.2 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM 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".

SURFACE SMOOTHNESS FOR BRIDGES AND APPROACHES

AT THE COMPLETION OF WORK FOR ALL PHASES OF CONSTRUCTION THE CONTRACTOR SHALL PERFORM THE FOLLOWING AS PER PROPOSAL NOTE 555:

1. CLEAN, SWEEP, AND PREPARE THE FINAL DECK AND FINAL ROADWAY SURFACE.
2. MEASURE, GRIND, AND RE-MEASURE THE BRIDGE AND/OR ROADWAY AS NECESSARY.
3. PERFORM GROOVING OF THE BRIDGE DECK.

POROUS BACKFILL WITH GEOTEXTILE FABRIC

POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, UNLESS OTHERWISE STATED IN THE PLAN, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.

FILL UNDER APPROACH SLABS

ITEM 304, AGGREGATE BASE SHALL BE USED TO BRING THE SUBBASE TO GRADE FOR THE NEW APPROACH SLABS AS DETAILED ON THE APPROACH SLAB DETAIL SHEETS AND SHALL EXTEND 1'-6" ON BOTH SIDES OF EACH APPROACH SLAB.

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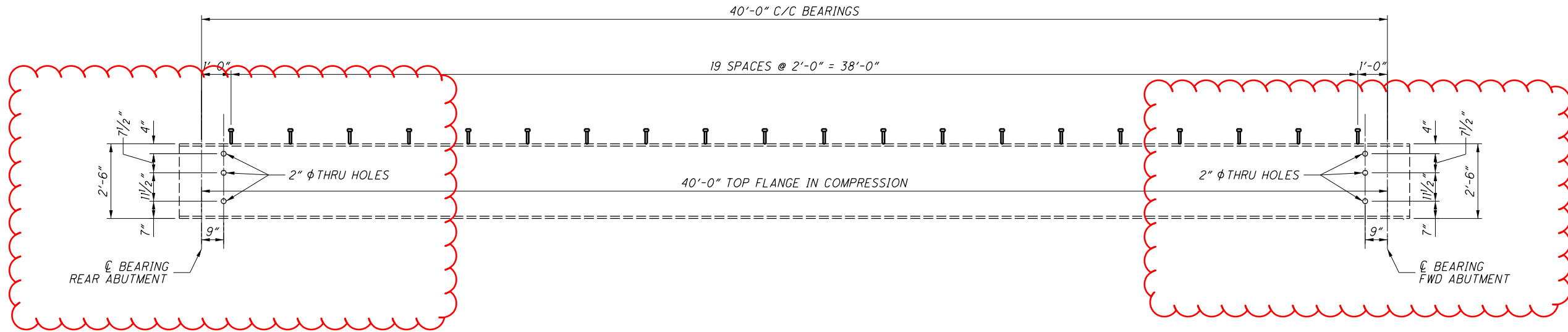
DESIGN AGENCY		OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
DESIGNED	JKS	CHECKED	TAG
DRAWN	JKS	REVIEWED	XXX
DATE	2/7/20	STRUCTURE FILE NUMBER	4505018
BRIDGE NOTES			
BRIDGE NO.: LIC-79-1991 OVER WILKINS RUN			
LIC-79-19.90		PID No. 97988	
2 / 25		20 43	

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SUPER.	ABUT.	PIER	GENERAL	PARTICIPATION		ALT. (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
				01/STR/BR								
											STRUCTURE OVER 20 FOOT SPAN (BRIDGE NO. LIC-79-1991)	
	37			37			202	11301	37	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUBSTRUCTURE (CONCRETE)	2/25
40				40			202	11301	40	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUPERSTRUCTURE (CONCRETE)	2/25
			80	80			202	22900	80	SY	APPROACH SLAB REMOVED	
90				90			202	38500	90	FT	BRIDGE RAILING REMOVED	
LS				LS			202	98000	LS		REMOVAL MISC.: EXISTING INTERMEDIATE CROSSFRAMES	2/25
	14			14			202	98100	14	EACH	REMOVAL MISC.: BEARINGS	2/25
			LS	LS			503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
			LS	LS			503	21301	S		UNCLASSIFIED EXCAVATION, AS PER PLAN	3/25
14,823	1,858			16,681			509	25001	16,681	LB	REINFORCING STEEL, AS PER PLAN	3/25
				136			510	10000	136	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
89				89			511	21521	89	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN	3/25
	2			2			511	33501	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	16/25
	19			19			511	50210	19	CY	CLASS QC1 CONCRETE, SUBSTRUCTURE	
				247			512	10050	247	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
1,108				1,108			513	10201	1,108	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	3/25
280				280			513	20000	280	EACH	WELDED STUD SHEAR CONNECTORS	
2,460				2,460			514	00050	2,460	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
2,460				2,460			514	00056	2,460	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
2,460				2,460			514	00060	2,460	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
2,460				2,460			514	00066	2,460	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
5				5			514	00504	5	MNHR	GRINDING FINES, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
4				4			514	10000	4	EACH	FINAL INSPECTION REPAIR	
250				250			514	27700	250	SF	FIELD PAINTING, MISC.: PRIMARY MEMBER ENDS	3/25
	90			90			516	13901	90	SF	2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN	3/25
124				124			516	14020	124	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	
			83	83			516	31011	83	FT	2" DEEP JOINT SEALER, AS PER PLAN	2/25
	14			14			516	44300	14	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-6"x1'-4"x4.7226")	15/25
			LS	LS			516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	3/25
93.58				93.58			517	70001	93.58	FT	RAILING (TWIN STEEL TUBE), AS PER PLAN	3/25
4				4			518	12000	4	EACH	SCUPPERS, INCLUDING SUPPORTS	3/25
	48			48			518	21200	48	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
				182			519	11100	182	SF	PATCHING CONCRETE STRUCTURE	
			252	252			526	30011	252	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/OA (T=17"), AS PER PLAN	23-25/25

DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	DATE	2/7/20
	REVIEWED TAG	4505018
	DRAWN JKS	XXX
	CHECKED TAG	
BRIDGE QUANTITIES BRIDGE NO.: LIC-79-1991 OVER WILKINS RUN		
LIC-79-19.90 PID No. 97988		
4/25		
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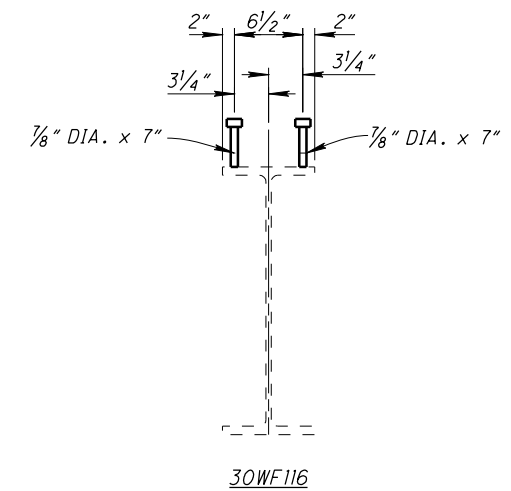
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LONGITUDINAL SHEAR CONNECTOR SPACING

PROFILE & CAMBER NOT SHOWN

NOT TO SCALE



LONGITUDINAL SHEAR CONNECTOR DETAIL

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