

I:\ProjectData\MUS\04700\Design\Structures\MUS060\_401C\_Sheets\04700\_GG002.dgn\_GeneralSummary Page 2 3/18/2020 10:16:51 AM tgreenwa

SHEET NUM.										PART.			ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	JEM	CHECKED	TAG
			6					53	55	01/S<2/BR				EXT	TOTAL							
<b>STRUCTURE OVER 20 FOOT SPAN (BRIDGE NO. MUS-60-1401)</b>																						
										57			202	11301	57	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUPERSTRUCTURE)	23				
										94			202	11301	94	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUBSTRUCTURE)	23				
										400			202	22900	400	SY	APPROACH SLAB REMOVED					
										237.5			202	38500	237.5	FT	BRIDGE RAILING REMOVED					
										LS			503	11100	LS		COFFERDAMS AND EXCAVATION BRACING					
									LS			503	21301	LS		UNCLASSIFIED EXCAVATION, AS PER PLAN	53					
										592			SPECIAL	50771200	592	FT	PILE ENCASEMENT	40				
								33,816		33,816			509	10000	33,816	LB	EPOXY COATED REINFORCING STEEL					
										105			511	32210	105	CY	CLASS OC2 CONCRETE, SUPERSTRUCTURE					
										122			511	43510	122	CY	CLASS OC1 CONCRETE, ABUTMENT INCLUDING FOOTING					
										86			512	10050	86	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)					
										125			516	13201	125	SF	1/2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN	23				
										150			516	13601	150	SF	1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN	23				
										172			516	14014	172	FT	INTEGRAL ABUTMENT EXPANSION JOINT SEAL					
										158			516	31011	158	FT	2" DEEP JOINT SEALER, AS PER PLAN	23				
										LS			516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	23				
										237.5			517	72306	237.5	FT	RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL POSTS)					
										237.5			517	75600	237.5	FT	DEEP BEAM BRIDGE RETROFIT RAILING					
										94			518	21200	94	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC					
										271			SPECIAL	51822300	271	FT	STEEL DRIP STRIP	43				
										166			518	40000	166	FT	6" PERFORATED CORRUGATED PLASTIC PIPE					
										60			518	40010	60	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS					
										400			526	25001	400	SY	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN	53				
										833			847	10201	833	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY, AS PER PLAN (T = 1 3/4 IN)	23				
										11			847	20201	11	CY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	23				
										LS			847	30000	LS		TEST SLAB					
										897			847	30400	897	SY	EXISTING CONCRETE OVERLAY REMOVED (T = 1 1/4 IN)					
										118			847	50000	118	SY	HAND CHIPPING					
<b>MAINTENANCE OF TRAFFIC</b>																						
			8							8			614	12338	8	EACH	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)					
			37							37			614	13312	37	EACH	BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL)					
			37							37			614	13360	37	EACH	OBJECT MARKER, TWO WAY					
			1.53							1.53			614	22000	1.53	MILE	WORK ZONE EDGE LINE, CLASS 1, 4"					
			1,010							1,010			622	41000	1,010	FT	PORTABLE BARRIER, 32"					
			710							710			622	41020	710	FT	PORTABLE BARRIER, 32", BRIDGE MOUNTED					
			0.5							0.5			642	30000	0.5	FT	REMOVAL OF PAVEMENT MARKING					
			2							2			SPECIAL	69050350	2	EACH	MAILBOX REMOVED AND RESET	9				
<b>INCIDENTALS</b>																						
										LS			614	11000	LS		MAINTAINING TRAFFIC					
										LS			623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	5				
										LS			624	10000	LS		MOBILIZATION					

GENERAL SUMMARY

MUS - 60 - 14.01

**STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS**

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15 DATED/REVISED: 07-17-2015  
CPA-1-08 DATED/REVISED: 07-18-2018  
DBR-1-92 DATED/REVISED: 07-15-2011  
PCB-91 DATED/REVISED: 01-18-2013

**REFERENCE**

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

**DESIGN SPECIFICATIONS**

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2012, INCLUDING THE 2012 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

**MONOLITHIC WEARING COURSE**

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1/4" THICK.

**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 SIDES.

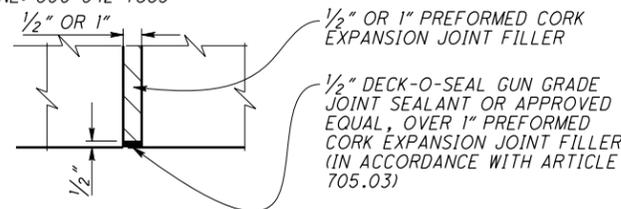
**CUT LINE CONSTRUCTION JOINT PREPARATION**

FOR ABUTMENT BACKWALL REMOVALS SAW CUT BOUNDRIES 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.

**ITEM 516 1" OR 1/2" PERFORMED EXPANSION JOINT FILLER, AS PER PLAN**

ALL 1/2" P.E.J.F. CALLED FOR IN THE PLANS SHALL BE PERFORMED CORK JOINT FILLER (IN ACCORDANCE WITH ARTICLE 705.03). RECESS JOINT FILLER 1/2" FOR ALL JOINTS (SEE DETAIL). SEAL ALL JOINTS WITH DECK-O-SEAL GUN GRADE JOINT SEALANT OR AN APPROVED EQUAL. THE COLOR SHALL BE STONE GRAY. APPROVED MANUFACTURER'S APPLICATION METHODS SHALL BE FOLLOWED DURING SURFACE PREPARATION AND APPLICATION FOR MAXIMUM EFFECTIVENESS.

DECK-O-SEAL  
P.O. BOX 397  
HAMPSHIRE, IL 60140  
PHONE: 800-542-7665



PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 516 - 1/2" P.E.J.F., A.P.P. SQ.FT., AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK DESCRIBED.

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

UPON COMPLETION OF THE PROPOSED BRIDGE DECK OVERLAY, APPROACH SLAB, AND ASPHALT THE CONTRACTOR SHALL SAW CUT ALONG THE END OF THE BRIDGE DECK ENDS (WITHOUT CUTTING THE DECK) AN AREA 1" WIDE BY 2" DEEP AND FILL THIS AREA WITH HOT APPLIED JOINT SEALER 705.04.

**POROUS BACKFILL WITH GEOTEXTILE FABRIC**

POROUS BACKFILL WITH GEOTEXTILE FABRIC, THE THICKNESS AS DETAILED IN THIS PLAN, SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.

**ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN**

FURNISH APPROACH SLABS CONFORMING TO CMS 526. THE ACCEPTED QUANTITIES SHALL INCLUDE: CONCRETE, REINFORCING STEEL, JOINT FILLERS, JOINT SEALERS, JOINT SEALS, WATERPROOFING, AND ANY OTHER INCIDENTALS SHOWN ON THE APPROACH SLAB DETAIL SHEETS UNLESS OTHERWISE NOTED IN THE PLANS. THE DEPARTMENT WILL MEASURE APPROACH SLABS BY THE NUMBER OF SQUARE YARDS.

**CONSTRUCTION SEQUENCE**

SEE MAINTAINENCE OF TRAFFIC SHEET 6/55 TO 10/55 FOR THE PLAN SEQUENCE OF OPERATIONS.

**ITEM 202 PORTION OF STRUCTURE REMOVED, AS PER PLAN (SUBSTRUCTURE)**

THERE SHALL BE NO SAWCUTS BELOW THE TOP OF FOOTER ELEVATION AT ANY LOCATION EXCEPT AS DETAILED IN THE PLAN. ALL CONCRETE REMOVED FROM THE SAWCUT DOWN TO THE FOOTER 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 I.E. EXISTING ABUTMENT PILES. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER.

CUTTING EXISTING ABUTMENT PILES TO PROPOSED ELEVATIONS AS SHOWN ON THE EXISTING ABUTMENT SHEETS SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 202 - PORTION OF STRUCTURE REMOVED, AS PER PLAN (SUBSTRUCTURE).

**ITEM 848 SUPERPLASTICIZED DENSE CONCRETE OVERLAY, AS PER PLAN (1 3/4" THICKNESS)**

**ITEM 848 SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN**

THIS ITEM SHALL CONFORM TO SS 848 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

THE OVERLAY MATERIAL SHALL MEET THE FOLLOWING CRITERIA: 2 LBS. / C.Y. POLYPROPYLENE MICROFIBERS 11#4" MIN. SHALL BE ADDED TO THE MIX.

THE MICROFIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INPSECTION OF THE MIX AT THE TIME OF PLACEMENT IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR.

CONCRETE SUPPLIERS SHOULD RECOGINIZE THAT ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CONCRETE SUPPLIERS CHOICE OF ONE OF THESE ADMIXTURES DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS.

**REMOVAL OF CONCRETE DECK EDGES**

CONCRETE REMOVAL ON DECK EDGES SHALL BE DONE BY THE USE OF 63 - 85 LB. CLASS JACKHANNERS ONLY. NO OTHER METHOD SHALL BE USED UNLESS APPROVED BY THE DISTRICT 5 CONSTRUCTION ENGINEER.

**EXISTING STRUCTURE VERIFICATION**

DETAILS AND DIMENSIONS SHOWN ON THIS PLAN PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMETNS. 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 AND 105.02.

THE EXISTING PLANS MAY BE INSPECTED IN THE BIDDING DOCUMENTS FOR THE PROJECT.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS TAHT HAVE BEEN VERIFIED IN THE FIELD.

**ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN**

THIS WORK CONSISTS OF TEMPORARY SUPPORT OF EXISTING SUPERSTRUCTURE AT DECK ENDS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH C&MS 501.05.

AFTER THE PROPOSED REHABILITATION OF EACH ABUTMENT, DECK ENDS, AND FULL DEPTH REPAIR FOLLOWING EACH PHASE, THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COST TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

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DESIGN AGENCY		OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
DESIGNED	CHECKED	DRAWN	REVIEWED
JEM	TAG	JEM	CPS
BRIDGE NOTES		DATE	
BRIDGE NO. MUS-60-1401		12/8/2019	
OVER FEAT RUN		STRUCTURE FILE NUMBER	
		6004777	
MUS-60-14.01			
PID No. 104700			
2/34			
23			
55			