SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
			4	5			8	9		26			01/IMS/BR						
																		ROADWAY	
			LUMP										LUMP	201	11000	LS		CLEARING AND GRUBBING	
							82						82	202	23000	82	SY	PAVEMENT REMOVED	
							350						350	202	38000	350	FT	GUARDRAIL REMOVED	
										10,845			10,845	203	10000	10,845	CY	EXCAVATION	
										10,863			10,863	203	20000	10,863	CY	EMBANKMENT	
							920						920	203	35141	920	CY	GRANULAR MATERIAL, TYPE E, AS PER PLAN	4
							1,840						1,840	204	50001	1,840	SY	GEOTEXTILE FABRIC, AS PER PLAN	4
							1,021						1,021	204	10000	1,021	SY	SUBGRADE COMPACTION	
							350						350	606	13000	350	FT	GUARDRAIL, TYPE 5	
													LUMP	878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	
																		EROSION CONTROL	
							224						224	601	21060	224	SY	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	
							188						188	601	32200	188	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
							151						151	601	32000	151	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER	
			2										2	659	00100	2	EACH	SOIL ANALYSIS TEST	
			739										739	659	00300	739	CY	TOPSOIL	
			6,658										6,658	659	10000	6,658	SY	SEEDING AND MULCHING	
			333										333	659	14000	333	SY	REPAIR SEEDING AND MULCHING	
			0.93										0.93	659	20000	0.93	TON	COMMERCIAL FERTILIZER	
			1.38										1.38	659	31000	1.38	ACRE	LIME	
			37										37	659	35000	37	MGAL	WATER	
			333										333	659	15000	333	SY	INTER-SEEDING	
							85						85	670	00720	85	SY	DITCH EROSION PROTECTION MAT, TYPE B	
													25,000	832	30000	25,000	EACH	EROSION CONTROL	
													LUMP	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
													LUMP	832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
													LUMP	832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
																		DRAINAGE	
							1,904						1,904	518	40000	1,904	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
								0.6					0.6	602	20000	0.6	CY	CONCRETE MASONRY	
								389					389	605	14000	389	FT	6" BASE PIPE UNDERDRAINS	
								339					339	611	01500	339	FT	6" CONDUIT, TYPE F	
								58					58	611	06100	58	FT	15" CONDUIT, TYPE C	
								127					127	611	06700	127	FT	15" CONDUIT, TYPE F, 707.02 TYPE C OR 707.21	
								18					18	611	07400	18	FT	18" CONDUIT, TYPE B, 706.02	
								2					2	611	98450	2	EACH	CATCH BASIN, NO. 2-2A	
								4					4	611	99710	4	EACH	PRECAST REINFORCED CONCRETE OUTLET	
																		PAVEMENT	
								368					368	252	01500	368	FT	FULL DEPTH PAVEMENT SAWING	
								80					80	301	46000	80	CY	ASPHALT CONCRETE BASE, PG64-22	
								262					262	304	20000	262	CY	AGGREGATE BASE	
								7					7	407	10000	7	GAL	TACK COAT	
								7					7	442	20000	7	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448)	
								8					8	442	20100	8	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 MM, TYPE A (448)	
								362					362	609	24511	362	FT	CURB, TYPE 4-C, AS PER PLAN	4
																		MAINTENANCE OF TRAFFIC	
			4										4	614	18601	4	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	5
			65										65	616	10000	65	MGAL	WATER	
																		STRUCTURE 20 FOOT SPAN AND UNDER	
																		FOR STRUCTURE QUANTITIES SEE SHEET 36	
																		INCIDENTALS	
			LUMP										LUMP	614	11000	LS		MAINTAINING TRAFFIC	
													LUMP	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
													LUMP	624	10000	LS		MOBILIZATION	

CALCULATED MDH
CHECKED SCS

GENERAL SUMMARY

CLE-275-7.71

ESTIMATED QUANTITIES - STRUCTURE No.: CLE-275-7.71 (01/IMS/BR FUNDING SPLIT)					
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	SHEET
202	11200	LUMP	LS	PORTIONS OF STRUCTURE REMOVED	
202	98500	1600	CY	REMOVAL MISC.: WOODY DEBRIS REMOVAL	36
503	11101	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	36
509	10000	2244	LB	EPOXY COATED REINFORCING STEEL	
509	20000	100	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL	36
509	40000	26	LB	REINFORCING STEEL, MISC.: GALVANIZED REBAR	36
510	10001	48	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	36
511	53014	18	CY	CLASS QC3 CONCRETE , MISC: CULVERT INLET CONCRETE WITH QC/QA	31
512	10100	80	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	32
513	10020	LUMP	LS	STRUCTURAL STEEL MEMBERS, LEVEL 1	32
516	14600	69	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: FIELD INJECTION OF EXISTING JOINTS WITH HIGH DENSITY POLYURETHANE FOAM	34
519	11101	334	SF	PATCHING OF CONCRETE STRUCTURE, AS PER PLAN	34
520	10000	935	SF	PNEUMATICALLY PLACED CONCRETE SHOTCRETE	33

DESIGN DATA

CLASS QC1 CONCRETE WITH QC/QA, HEADWALL
CLASS QC1 CONCRETE WITH QC/QA, CULVERT
-COMPRESSIVE STRENGTH 4.0 KSI

EPOXY COATED REINFORCING STEEL - ASTM A775 MINIMUM YIELD STRENGTH 60 KSI
GALVANIZED REINFORCING STEEL - ASTM A767 MINIMUM YIELD STRENGTH 60 KSI

STRUCTURAL STEEL - ASTM A709 MINIMUM YEILD STRENGTH 50 KSI

STRUCTURAL STEEL PLATES AND THREADED RODS SHALL BE GALVANIZED PER C&MS 711.02

REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE. REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

STRUCTURAL STEEL MEMBERS, LEVEL 1

PAYMENT FOR THE PROPOSED BEAM SECTIONS, STEEL PLATES, INCIDENTALS ASSOCIATED WITH THEIR INTALLATION ARE INCLUDED WITH ITEM 513, STRUCTURAL STEEL MEMBERS, LEVEL 1. FURNISH STRUCTURAL STEEL SHAPES, PLATES AND THREADED RODS ACCORDING TO C&MS 711.01. THE THREADED RODS SHALL CONFORM TO ASTM A 449. GALVANIZE ALL STRUCTURAL PLATES, AND THREADED RODS IN ACCORDANCE WITH C&MS 711.02.

ITEM 510, DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN:

INSTALL ADHESIVE ANCHORS ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS PUBLISHED IN THE ICC-ES REPORTS LISTED BELOW.

WWW.ICC-ES.ORG/EVALUATION REPORTS/

THE HOLES FOR THE ADHESIVE ANCHORS SHALL BE DRILLED WITH A HAMMER DRILL AND CARBIDE BIT. PRIOR TO THE INSTALLATION OF THE ANCHORS, THE HOLES SHALL BE CLEANED AND DRIED IN A MANNER CONSISTENT WITH THE MANUFACTURER'S REQUIREMENTS FOR DRY CONCRETE.

SELECT FROM ONE OF THE FOLLOWING APPROVED PRODUCTS:

HILTI HIT-HY 200 ADHESIVE ANCHORS
ICC-ES REPORT ESR-3187)

DEWALT PURE110+ EPOXY ADHESIVE ANCHOR SYSTEM
(ICC-ES REPORT ESR-3298)

SIMPSON STRONG-TIE SET-3G EPOXY ADHESIVE ANCHORS
ICC-ES REPORT ESR-4057)

ATC ULTRABOND HS-1CC ADHESIVE ANCHOR SYSTEM
(ICC-ES REPORT ESR-4094)

COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN

COFFERDAMS AND EXCAVATION BRACING INSTALLED FOR THE PROJECT ARE FOR DEWATERING THE WORK AREA. COFFERDAMS AND EXCAVATION BRACING DESIGN, CONSTRUCTION, AND REIMBURSEMENT FOR DAMAGE IS BASED ON CMS 503. THE CONTRACTOR MUST COMPLY WITH THE IN-STREAM RESTRICTION IN THE SPECIAL PROVISIONS - WATERWAY PERMIT. ADDING FILL TO OR EXCAVATING FROM THE STREAM TO DEWATER THE WORK AREA REQUIRES A TEMPORARY ACCESS FILL (TAF) SUBMISSION PER THE SPECIAL PROVISIONS. FILLING THE EXCAVATED AREA AFTERWARDS IS CONSIDERED A PERMANENT FILL AND MAY VIOLATE THE WATERWAY PERMIT'S THRESHOLDS OF IMPACTS.

IF THE CONTRACTOR WILL USE PUMPS TO DEWATER THE SITE OR DIVERT FLOW AROUND THE WORK SITE, THEN THE CONTRACTOR WILL NEED TO SIZE THE PUMP(S) AND/OR DIVERSION TO HANDLE TWICE THE HIGHEST MONTHLY FLOW WITHOUT PRODUCING A RISE IN THE BACKWATER ABOVE THE OHWM. ACCORDING TO STREAMSTATS, TWICE THE HIGHEST MONTHLY FLOW THAT NEEDS TO BYPASS THE DEWATERED WORK SITE IS 20.6 CFS.
ALL WORK ASSOCIATED WITH COFFERDAMS AND EXCAVATION BRACING, INCLUDING ALL REQUIREMENTS OF THE TAF SUBMISSION, SHALL BE PAID FOR WITH THE COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN PAY ITEM.

REINFORCING STEEL, MISC.: GALVANIZED REBAR

PROVIDE GALVANIZED REINFORCING STEEL FOR B601 BARS. GALVANIZED STEEL WILL CONFORM TO ASTM A 767, CLASS 1. THE GALVANIZED COATED REINFORCING STEEL WILL MEET ALL OTHER REQUIREMENTS OF 509. IF THE GALVANIZED SURFACE BECOMES DAMAGED DURING HANDLING IN THE FIELD, REPAIRS WILL CONFORM TO ASTM A 780. FURNISH CERTIFIED MATERIAL ACCORDING TO SUPPLEMENT 1068.

JOINT SEALER, MISC.: FIELD INJECTION OF EXISTING JOINT WITH HIGH DENSITY POLYURETHANE FOAM

THIS WORK CONSISTS OF INJECTING THE VERTICAL JOINT AT THE LOCATIONS SHOWN IN THE PLANS WITH HIGH DENSITY POLYURETHANE (HDP). SUPPLY A CLOSED-CELL HIGH-DENSITY POLYURETHANE (TIGER FOAM OR APPROVED EQUAL) MEETING THE PROPERTIES SPECIFIED BELOW. FOR APPROVAL AT LEAST 24 HOURS PRIOR TO THE BEGINNING OF WORK, SUPPLY THE TECHNICAL SPECIFICATIONS TO THE PROJECT ENGINEER.

PROPERTY	ASTM TEST	REQUIRED VALUE
MATERIAL DENSITY	D1622	1.2 LB/CU FT
TENSILE STRENGTH	D1623	20 PSI MINIMUM
COMPRESSION STRENGTH	D1621	7 PSI MINIMUM
WATER ABSORPTION	D2127	LESS THAN 2% VOLUME

FOR VERIFICATION PURPOSES, THE CONTRACTOR SHALL ALLOW THE PROJECT ENGINEER UNLIMITED ACCESS TO ALL EQUIPMENT, HDP MATERIAL DATA SHEETS AND ANY OTHER PRINTED HDP INFORMATION RELATED TO THE PROJECT.

REMOVE STONES AND OTHER FOREIGN MATERIALS WITHIN THE VERTICAL JOINT BEFORE APPLICATION OF THE FOAM. PREPARE THE APPLICATION SURFACE AND INSTALL THE PRODUCT AS PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. REMOVE ANY EXCESS POLYURETHENE MATERIAL REMAING AFTER APPLICATION IS COMPLETE AND SUBSEQUENTLY SEAL WITH EPOXY-URETHANE SEALER (FEDERAL COLOR #17778).

THE DEPARTMENT WILL MEASURE THE ACTUAL LENGTH OF THE JOINT TO BE SEALED BY HIGH DENSITY POLYURETHANE FOAM. PAYMENT FOR ACCEPTED QUANTITIES COMPLETE IN PLACE WILL BE MADE AT CONTRACT PRICE FOR:

JOINT SEALER, MISC.: FIELD INJECTION OF EXISTING JOINT WITH HIGH DENSITY POLYURETHANE FOAM

ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO PLACE PROPERLY THE HDP SHALL BE INCLUDED IN THE COST OF THE BID ITEM.

ITEM 202 REMOVAL MISC.: WOODY DEBRIS REMOVAL

THE CONTRACTOR SHALL FURNISH ALL MATERIAL, EQUIPMENT, LABOR, AND INCIDENTAL ITEMS, INCLUDING MOBILIZATION, NECESSARY TO PROPERLY REMOVE AND DISPOSE OF ALL DEBRIS ACCUMULATED ON AND AROUND THE CULVERT INLET. DISPOSE OF DEBRIS MATERIAL OFFSITE ACCORDING TO C&MS 105.16, 105.17 AND 201.02.B

THE QUANTITIES SHOWN IN THE PLANS ARE BASED OF FIELD MEASUREMENTS AND OBSERVATIONS. THE ESIMATED CUBIC YARD QUANTITIES INLCUDE AIR VOIDS INHERANT IN STREAM DEPOSITED PILES OF WOODY DEBRIS, AND REPRESENT THE VOLUME OF SPACE OCCUPIED BY THE DEBRIS PILES, NOT THE VOLUME OF THE DEBRIS MATERIAL ONLY. THE VOLUME OF THE MATERIAL SHALL BE AGREED UPON PRIOR TO THE DEBRIS BEING REMOVED.

PAYMENT FOR ALL THE ABOVE WILL BE MADE AT THE CONTRACT BID PRICE FOR ITEM 202 REMOVAL MISC.: WOODY DEBRIS REMOVAL

DESIGN AGENCY
OHIO DEPT OF TRANSPORTATION
DISTRICT 8 BRIDGE OFFICE

DESIGNED GTF | DRAWN GTF | REVIEWED CAH | DATE 8/26/20
CHECKED | REVISED | STRUCTURE FILE NUMBER 1305689

CULVERT REPAIR ESTIMATED QUANTITIES & NOTES
STRUCTURE No.: CLE-275-0771
CARRYING HALL RUN

CLE-275-7.71
PID No. 110554

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