WEEKLY MAINTENANCE OF TRAFFIC MEETING

AFTER THE INITIAL PRE-MAINTENANCE OF TRAFFIC MEETING, THE CONTRACTOR SHALL MEET WITH THE PROJECT ENGINEER ON A WEEKLY BASIS TO GO OVER A DETAILED MAINTENANCE OF TRAFFIC REPORT OF AT LEAST 7 CALENDAR DAYS. THIS MEETING SHOULD BE HELD ON THE SAME DAY AND TIME OF EACH WEEK.

THE CONTRACTOR WILL PROVIDE TO THE PROJECT ENGINEER A WRITTEN DETAIL OF THE INFORMATION REQUIRED BY THE NOTIFICATION OF TRAFFIC RESTRICTIONS NOTE PRIOR TO THE MEETING.

IN ADDITION TO THE DETAILED MAINTENANCE OF TRAFFIC REPORT THE CONTRACTOR SHALL GIVE A GENERAL LOOK AHEAD OF AN ADDITIONAL 2 WEEKS OF UPCOMING WORK ACTIVITES. THIS WILL INCLUDE ANY NOTIFICATION REQUIREMENTS FOR RESTRICTIONS THAT HAVE A DURATION GREATER THAN 12 HOURS.

PRE-MAINTENANCE OF TRAFFIC MEETING

A PRE-MAINTENANCE OF TRAFFIC MEETING SHALL BE HELD (MINIMUM 14 WORK DAYS) PRIOR TO WORK BEGINNING OR ANY CHANGE OF PHASING. THIS MEETING SHALL INCLUDE THE DISTRICT WORK ZONE TRAFFIC MANAGER (D06.MOT@DOT.OHIO.GOV) AS WELL AS THE CONTRACTOR AND ANY OF HIS SUB-CONTRACTORS INVOLVED WITH TEMPORARY TRAFFIC CONTROL. FOR COLUMBUS SECTIONS OF ROADWAY, ALSO INCLUDE THE TEMPORARY CONTROL COORDINATOR (614-645-6269 OR 614-645-5845) FROM THE CITY OF COLUMBUS TRANSPORTATION DIVISION.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER M. GAL.

ITEM 614, WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN

WORK ZONE RAISED PAVEMENT MARKERS, AS PER PLAN, AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614 OR C&MS 621 AS SPECIFIED HEREIN.

RAISED PAVEMENT MARKERS IN USE DURING THE SNOW-PLOWING SEASON SHALL CONFORM TO 621. RAISED PAVEMENT MARKERS IN USE DURING THE NON-SNOW-PLOW SEASON SHALL CONFORM TO EITHER 614 OR TO 621.

THE SNOW-PLOWING SEASON SHALL RUN FROM THROUGH .

IF PROJECT DELAYS, NOT THE FAULT OF ODOT, CAUSE THE WORK TO EXTEND INTO THE SNOW-PLOWING SEASON, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WORK ZONE RAISED PAVEMENT MARKERS (WZRPMS) CONFORMING TO C&MS 614, WITH RAISED PAVEMENT MARKERS CONFORMING TO 621, AS DETERMINED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN, INCLUDING FILLING OF ANY DEPRESSIONS CREATED IN THE PAVEMENT AS PER C&MS 621.08.

RESURFACING OF THE TRANSITION AREAS SHALL BE PERFORMED AT THE TIME THAT THE SURFACE COURSE IS BEING APPLIED TO THE ENTIRE PROJECT. PRIOR TO APPLICATION OF THE SURFACE COURSE ON THE PROJECT, THE EXISTING PAVEMENT WITHIN THE TRANSITION AREA SHALL BE REMOVED TO A DEPTH NECESSARY TO REACH THE LEVEL OF THE INTERMEDIATE COURSE OF THE PAVEMENT, AS DETERMINED BY THE ENGINEER.

THE FOLLOWING BID ITEMS SHOULD BE INCLUDED IN THE PLANS:

ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE SY

ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH

PAYMENT FOR RESURFACING WITHIN THE TRANSITION AREA SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEMS FOR THE WORK REQUIRED, AS PROVIDED FOR IN THE PLANS.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING5/32S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER5/32S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

TRANSVERSE DRAINAGE CROSSINGS OF IR 270 AND US 23

BEFORE ANY ROADWAY CONSTRUCTION BEGINS THE CONTRACTOR SHALL CONSTRUCT THE TRANSVERSE DRAINAGE CROSSINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ADEQUATE DRAINAGE THROUGHOUT ALL PHASES OF CONSTRUCTION. THIS MAY REQUIRE CONSTRUCTION OF TEMPORARY CONDUITS AND/OR TEMPORARY DITCHING. TRAFFIC CONTROL DURING THIS OPERATION SHALL BE AS PER STANDARD DRAWING MT-97.10. ANY LANE RESTRICTIONS CAUSED BY THE TRANSVERSE DRAINAGE CROSSING WORK SHALL BE LIMITED TO BETWEEN THE HOURS OF 9:30 AM TO 3:30 PM TO MINIMIZE THE IMPACT ON TRAFFIC.

ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 UNLESS OTHERWISE NOTED IN THE PLANS.

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING REMOVAL AND INSTALLATION OF PIPES UNDER ITEMS 203 AND 603.

ITEM 301 ASPHALT CONCRETE BASE, PG64-22 (449) 150 CY 3

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 9 INCHES AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH. THE TRENCH WIDTH IS ASSUMED TO EQUAL THE SPAN TIMES 1.25 PLUS ONE FOOT.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITED STATED ABOVE AT NO ADDITIONAL COST.

TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT

OHIO TIM IS OHIO'S TRAFFIC INCIDENT MANAGEMENT PROGRAM WHICH IS COMMITTED TO MAINTAINING THE SAFE AND EFFECTIVE FLOW OF TRAFFIC DURING EMERGENCIES AS TO PREVENT FURTHER DAMAGE, INJURY OR UNDUE DELAY OF THE MOTORING PUBLIC. IN ADDITION TO COMPLYING WITH THE PROVISION OF OMUTCD CHAPTER 6I, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS, THE CONTRACTOR SHALL ACTIVELY PARTICIPATE IN TIM PLANNING AND IMPLEMENTATION AS OUTLINED BELOW.

1. SUPERINTENDENT SHALL IDENTIFY THE INDIVIDUAL PERSONS ON THE PROJECT WHO WILL, OR MAY NEED TO, PERFORM THE DUTIES HEREIN. AT A MINIMUM, INCLUDE THE SUPERINTENDENT, FOREMEN AND SUPERVISORS (OR EQUIVALENT) AS WELL AS THE WORKSITE TRAFFIC SUPERVISOR (WTS; IF APPLICABLE TO THE PROJECT). THESE INDIVIDUALLY IDENTIFIED PERSONS SHALL COLLECTIVELY BE KNOWN AS CONTRACTOR TRAFFIC INCIDENT MANAGEMENT (TIM) CONTACTS. NOTIFY THE PROJECT ENGINEER OF THE CONTRACTOR TIM CONTACTS (ALONG WITH CONTACT INFORMATION FOR EACH) AT OR BEFORE THE PRECONSTRUCTION MEETING.

2. SUPERINTENDENT SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONTRACTOR TIM CONTACT IS ADDED, REMOVED OR THE CONTACT INFORMATION CHANGES OVER THE COURSE OF THE PROJECT.

3. PRIOR THE FIRST DAY OF WORK IN THE FIELD, EACH CONTRACTOR TIM CONTACT ON THE PROJECT SHALL HAVE ATTENDED AND SUCCESSFULLY COMPLETED OHIO TIM TRAINING PROVIDED BY THE DEPARTMENT OR DESIGNEE. TRAINING INFORMATION CAN BE FOUND ONLINE.

4. SUPERINTENDENT, AT A MINIMUM, SHALL ATTEND AND ACTIVELY PARTICIPATE IN A DEPARTMENT SCHEDULED TIM MEETING BEFORE CONSTRUCTION WORK BEGINS AND BEFORE EACH PHASE CHANGE. THESE MEETINGS WILL RESULT IN A DEPARTMENT ISSUED PROJECT SPECIFIC TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP). AT THE TIM MEETINGS THE ATTENDING CONTRACTOR TIM CONTACTS SHALL:

A. COLLABORATE WITH ODOT AND SAFETY FORCES;

B. SHARE PROJECT SPECIFIC DETAILS THAT IMPACT TIM RESPONDERS; AND

C. RECOMMEND WAYS TO INCORPORATE NECESSARY EMERGENCY ACCESS AND OTHER TIM ELEMENTS FOR TIM RESPONDERS GIVEN PROJECT SPECIFIC WORK BEING COMPLETED AND PROJECT SPECIFIC PHASING.

5. CONTRACTOR TIM CONTACTS SHALL IMPLEMENT COMPONENTS OF THE RESULTING TIMP (SUCH AS APPROVED EMERGENCY INGRESS/EGRESS POINTS, ETC), AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.

6. CONTRACTOR TIM CONTACTS SHALL PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS WHEN AN INCIDENT/CRASH OCCURS:

A. IF OBSERVED OR PRESENT WHEN OCCURS, CALL 911 AND THEN NOTIFY THE TRAFFIC MANAGEMENT CENTER (TMC) TO PROVIDE THE FOLLOWING:

I. LOCATION, INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL
II. NUMBER AND TYPE OF VEHICLES INVOLVED, IF KNOWN
III. ESTIMATED EXTENT OF DAMAGE OR INJURY, IF KNOWN
IV. ESTIMATED NUMBER OF PATIENTS INVOLVED, IF KNOWN
V. ANY POTENTIAL HAZARDOUS CONDITIONS, IF KNOWN
VI.THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE, IF APPLICABLE AND VISIBLE

B. FOLLOWING AN INCIDENT/CRASH:

I. INITIATE TRAFFIC MANAGEMENT/PROVIDE TEMPORARY TRAFFIC CONTROL AS INDICATED IN THE TIMP, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
II. RECOMMEND ROADWAY REPAIR NEEDS.
III. PROVIDE REPAIR RESOURCES AND INITIATE REPAIRS, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
IV. ATTEND AND PARTICIPATE IN AN AFTER ACTION REVIEW (AAR).

ALL COSTS, UNLESS OTHERWISE SPECIFIED, RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614, MAINTAINING TRAFFIC. FAILURE TO PERFORM THE REQUIREMENTS OF THIS PLAN NOTE WILL RESULT IN A DAILY FINE OF 2% OF ITEM 614, MAINTAINING TRAFFIC AND MAY RESULT IN ONE OR MORE CONTRACTOR TIM CONTACTS BEING REMOVED FROM THE LIST OF OHIO TIM TRAINED INDIVIDUALS (AT THE SOLE DISCRETION OF THE OHIO TIM EXECUTIVE COMMITTEE). IN THE EVENT AN INDIVIDUAL IS REMOVED FROM THE OHIO TIM TRAINED LIST, THE INDIVIDUAL WILL BE REMOVED FROM CONTRACTOR TIM CONTACT RESPONSIBILITIES ON ALL PROJECTS.

DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL; AND, ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE (2, 3, 4, OR 5) (ONE-WAY OR BI-DIRECTIONAL) 1 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEM(S).

3 ADDENDUM # 3 05/08/2023

CALCULATED MBE CHECKED RCH

MAINTENANCE OF TRAFFIC GENERAL NOTES

FRA-270-51.50

22A 554

SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
487	509										01/IMS/04	02/IMS/14	03/NHS/43						
																		STRUCTURE REPAIR (FRA-023-0517 SFN 2513447)	
738												738		512	10100	738	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	485
51												51		512	10300	51	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
4												4		512	10600	4	FT	CONCRETE REPAIR BY EPOXY INJECTION	
35												35		512	33000	35	SY	TYPE 2 WATERPROOFING	
187												187		SPECIAL	51271500	187	SY	URETHANE TOP COAT SEALER	485
16												16		516	13600	16	SF	1" PREFORMED EXPANSION JOINT FILLER	
41												41		516	13900	41	SF	2" PREFORMED EXPANSION JOINT FILLER	
61												61		516	14020	61	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	
61												61		516	42600	61	FT	ELASTOMERIC BEARING PAD, MISC.: 8" WIDE X 1" THICK ELASTOMERIC BEARING STRIP	
												LUMP		516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	485
8												8		518	21200	8	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
63												63		518	40000	63	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
246												246		518	40011	246	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	485
1,682											3	1,682		SPECIAL	51900100 3	1,682	SF	COMPOSITE FIBER WRAP SYSTEM	
41												41		519	11101	41	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	485
161												161		526	25011	161	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN	486
57												57		526	90030	57	FT	TYPE C INSTALLATION	
136												136		840	23000	136	CY	SELECT GRANULAR BACKFILL	
599												599		848	10000	599	SY	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, 2 1/2" THICK	
599												599		848	20000	599	SY	SURFACE PREPARATION USING HYDRODEMOLITION	
9												9		848	30000	9	CY	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	
1												1		848	50000	1	SY	HAND CHIPPING	
LUMP												LUMP		848	50100	LS		TEST SLAB	
599												599		848	50320	599	SY	EXISTING CONCRETE OVERLAY REMOVED, 1 1/2" THICK	
631												631		863	00100	631	SY	GEOGRID, TYPE P1	
																		STRUCTURE REPAIR (FRA-270-5264, SFN 2513536)	
												LUMP		202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	507
	89											89		202	22900	89	SY	APPROACH SLAB REMOVED	
	89											89		202	23500	89	SY	WEARING COURSE REMOVED	
	206											206		503	21100	206	CY	UNCLASSIFIED EXCAVATION	
	122,504											122,504		509	10000	122,504	LB	EPOXY COATED REINFORCING STEEL	
	117											117		509	30020	117	FT	NO. 4 GFRP DEFORMED BARS	
	495											495		510	10000	495	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
	326											326		511	34412	326	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE	
	106											106		511	34450	106	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)	
	14											14		511	41010	14	CY	CLASS QC1 CONCRETE, PIER ABOVE FOOTINGS	
	72											72		511	45710	72	CY	CLASS QC1 CONCRETE, ABUTMENT	
	1,250											1,250		512	10100	1,250	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
	34											34		512	33000	34	SY	TYPE 2 WATERPROOFING	
	372,900											372,900		513	10280	372,900	LB	STRUCTURAL STEEL MEMBERS, LEVEL 4	
	4,701											4,701		513	20000	4,701	EACH	WELDED STUD SHEAR CONNECTORS	
	24,100											24,100		514	00060	24,100	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
	24,100											24,100		514	00066	24,100	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
	15											15		514	10000	15	EACH	FINAL INSPECTION REPAIR	
	61											61		516	11210	61	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	
	18											18		516	13900	18	SF	2" PREFORMED EXPANSION JOINT FILLER	

3 ADDENDUM #3
05/08/2023

CALCULATED ACF CHECKED CSR

GENERAL SUMMARY

FRA-270-51.50

SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
21	22	22A	23	38	509						01/IMS/04	02/IMS/14	03/NHS/43						
																		STRUCTURE REPAIR (FRA-270-5264, SFN 2513536)	
					8							8		516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN	
																		(LOAD PLATE 20" X 16" X 1.50", NEOPRENE 15" DIA. X 2.950")	
					4							4		516	44101	4	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN	
																		(LOAD PLATE 28" X 19" X 1.50", NEOPRENE 20" X 18" X 3.850")	
					8							8		516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN	
																		(LOAD PLATE 25" X 25" X 1.50", NEOPRENE 24" DIA. X 4.975")	
					48							48		518	21200	48	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
					456							456		SPECIAL	51900100	456	SF	COMPOSITE FIBER WRAP SYSTEM (2)	
					98							~~98~~		~~518~~	~~11100~~	~~98~~	~~SF~~	~~PATCHING CONCRETE STRUCTURE~~	
					148							148		526	25010	148	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15")	
					58							58		526	90030	58	FT	TYPE C INSTALLATION	
																		MAINTENANCE OF TRAFFIC	
		150									150			301	56000	150	CY	ASPHALT CONCRETE BASE, PG64-22 (449) (3)	
			122								122			611	04400	122	FT	12" CONDUIT, TYPE B	
			2								2			611	98470	2	EACH	CATCH BASIN, NO. 2-2B	
	400										400			614	11110	400	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
			17								15	2		614	12384	17	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	
LUMP											LUMP			614	12420	LS		DETOUR SIGNING	
10											10			614	12500	10	EACH	REPLACEMENT SIGN	
100											100			614	12600	100	EACH	REPLACEMENT DRUM	
			4,763								4,731	32		614	12800	4,763	EACH	WORK ZONE RAISED PAVEMENT MARKER	
			739								681	58		614	13310	739	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	19
			321								309	12		614	13350	321	EACH	OBJECT MARKER, ONE WAY	19
72											~~72~~			~~614~~	~~18601~~	~~72~~	~~SNMT~~	~~PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN~~	21
											3.53			614	22350	3.53	MI	WORK ZONE EDGE LINE, CLASS III, 4", 642 PAINT (4)	
			0.08								~~0.06~~	~~0.02~~		~~614~~	~~20000~~	~~0.08~~	~~MILE~~	~~WORK ZONE LANE LINE, CLASS I, 4"~~	
			15.54								15.31	0.23		614	22000	15.54	MILE	WORK ZONE EDGE LINE, CLASS I, 4"	
			55,082								55,082			614	23000	55,082	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8"	
			2,540								1,961	579		614	24000	2,540	FT	WORK ZONE DOTTED LINE, CLASS I	
			254								~~254~~			~~614~~	~~25000~~	~~254~~	~~FT~~	~~WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I~~	
											1.67			614	20550	1.67	MI	WORK ZONE LANE LINE, CLASS III, 4", 642 PAINT (4)	
			112								~~112~~			~~614~~	~~26000~~	~~112~~	~~FT~~	~~WORK ZONE STOP LINE, CLASS I~~	
			14								14			614	30000	14	EACH	WORK ZONE ARROW, CLASS I	
			8								8			614	31640	8	EACH	WORK ZONE WORD ON PAVEMENT, 96", CLASS I	
				LUMP							LUMP			615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
			21,695								21,695			615	20000	21,695	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
			15,930								15,350	580		622	41100	15,930	FT	PORTABLE BARRIER, UNANCHORED	
																		INCIDENTALS	
											LUMP			108	10000	LS		CPM PROGRESS SCHEDULE	
											LUMP			614	11000	LS		MAINTAINING TRAFFIC	
											24			619	16020	24	MNTH	FIELD OFFICE, TYPE C	
											LUMP			623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
											LUMP			624	10000	LS		MOBILIZATION	

(4) ADDENDUM # 3 05/08/2023

CALCULATED ACF CHECKED CSR

GENERAL SUMMARY

FRA-270-51.50

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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	DATED (REVISED)	07/17/15
AS-2-15	DATED (REVISED)	01/18/19
BP-5.1	DATED (REVISED)	01/18/19
SBR-1-20	DATED (REVISED)	07/17/20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800	DATED	07/19/24
844	DATED	04/20/18

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING INCLUDES:

VEHICULAR LIVE LOAD: HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KSF

DESIGN DATA:

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI (ALL REINFORCING STEEL SHALL BE EPOXY COATED)

MONOLITHIC WEARING SURFACE:

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

MAINTENANCE OF TRAFFIC:

MAINTENANCE OF TRAFFIC FOR THE STRUCTURE WORK SHALL BE COORDINATED WITH THE OVERALL PROJECT. REFER TO THE MAINTENANCE OF TRAFFIC NOTES AND DETAILS ELSEWHERE IN THE PLANS.

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 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.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND [41 KILOGRAM] CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN: (CONT.):

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED PR BLUNTED CHISEL TYPE TOOLS.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH [25 MM] 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.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOERAM 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 WITHH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

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 511 - CONCRETE, MISC.: EMBEDDED GALVANIC ANODE (EGA):

THIS PAY ITEM SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, SERVICES, AND INCIDENTALS TO PROPERLY INSTALL EMBEDDED GALVANIC ANODES AND PROPOSED CONCRETE IN THE PROPOSED ABUTMENT BACKWALLS. SUPPLY AND INSTALL ANODES ACCORDING TO ODOT SUPPLEMENTAL SPECIFICATION 844.

GALVANIC ANODES SHALL BE INSTALLED AT THE LOCATIONS AND SPACING AS SPECIFIED IN THE PLANS. IN NO CASE, SHALL THE SPACING EXCEED 18 INCHES.

THE CONTRACTOR SHALL PERFORM THIS WORK AS TO NOT DAMAGE THE EMBEDDED ANODES NOR CREATE ANY AIR VOIDS AROUND THE EMBEDDED ANODES WHILE SETTING FORMWORK AND PLACING CONCRETE.

THE PRICE FOR ALL MATERIAL AND LABOR NECESSARY FOR THE IMPROVEMENTS DESCRIBED ABOVE TO BE INCLUDED IN THE EACH UNIT BID FOR ITEM 511 - CONCRETE MISC.: EMBEDDED GALVANIC ANODE (EGA), FOR PAYMENT.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN:

THE CONTRACTOR MAY REDUCE THE VERTICAL CLEARANCE UNDER THE FRA-23-0517 BRIDGE TO NO LOWER THAN 14'-0" FOR THE BRIDGE DECK REPAIR ON THE SOUTH SIDE OF THE BRIDGE. SIGNS SHALL BE PROVIDED ON THE BRIDGE AND DISPLAYED ON PORTABLE MESSAGE SIGNS IN ADVANCE OF THE BRIDGE. SEE ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN. THE CONTRACTOR SHALL NOTIFY TIM PEDDICORD, DISTRICT BRIDGE ENGINEER AT TIM.PEDDICORD@DOT.OHIO.GOV OR 740-833-8082 TWO WEEKS IN ADVANCE OF THE RESTRICTION SO THAT THE OFFICE OF PERMITS ARE AWARE OF THE RESTRICTION.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN:

CONCRETE QUANTITIES FOR THE RAILING ARE INCLUDED WITH THIS ITEM FOR PAYMENT.

NO SLIP FORM OF RAILING WILL BE PERMITTED. ODOT STANDARD DRAWING SBR-1-20 IS APPLICABLE.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE):

THE COLOR OF THE FINISH COAT FOR ALL SURFACES SHALL BE FEDERAL COLOR NUMBER 595B-27778 (LIGHT, NEUTRAL, SEMIGLOSS), UNLESS NOTED OTHERWISE.

INCLUDE THE COST OF REMOVAL OF EXISTING SEALER ON EXISTING ABUTMENTS IN THE UNIT PRICE BID FOR THIS ITEM.

ITEM SPECIAL - URETHANE TOP COAT SEALER

THE URETHANE TOP COAT SEALER SHALL BE AS PER ITEM 512. THE COLOR OF THE URETHANE TOP COAT SEALER SHALL BE FEDERAL COLOR NUMBER 595B-27778 (LIGHT NEUTRAL, SEMIGLOSS). THE URETHANE TOP COAT SEALER SHALL BE APPLIED OVER THE FIBER WRAP EPOXY COATING PER PROPOSAL NOTE 519.

PAYMENT FOR ALL THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM SPECIAL - URETHANE TOP COAT SEALER, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

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

THIS WORK CONSISTS OF JACKING OPERATIONS REQUIRED TO RAISE THE EXISTING SLAB VERTICALLY TO REPLACE THE EXISTING ABUTMENT BEARINGS AS SHOWN IN THE PLANS.

THE MAXIMUM DIFFERENTIAL JACKING HEIGHT ALONG THE GRADE BETWEEN ADJACENT SUBSTRUCTURES SHALL BE 1 INCH OR LESS. THIS HEIGHT MAY BE MODIFIED IF CALCULATIONS, BY THE CONTRACTOR'S OHIO REGISTERED PROFESSIONAL ENGINEER, SHOW THE SUPERSTRUCTURE COMPONENTS WILL NOT BE TEMPORARILY STRESSED BEYOND ALLOWABLE STRESSES FOR THOSE COMPONENTS AND THAT NO PERMANENT STRESSES WILL BE INDUCED IN THE COMPONENTS AFTER THEY OBTAIN THEIR FINAL POSITION.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF, DURING THE JACKING OPERATIONS, DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. THE DEPARTMENT WILL NOT PAY FOR THE COST OF ANY REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUMBIT A REPAIR PLAN TO THE ENGINEER, THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THIS ITEM WILL ALSO INCLUDE ANY CONCRETE SLOPE PROTECTION REMOVAL AND/OR REPAIR/REPLACEMENT NECESSARY EITHER AS A REQUIREMENT FOR (OR RESULT OF) THE JACKING OPERATION.

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.

ITEM 518 - 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN:

PAYMENT FOR THE FOLLOWING ITEMS ARE INCLUDED WITH ITEM 518, 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN:

- ITEM 611, PRECAST REINFORCED CONCRETE OUTLET, SEE STD. ROADYWAY CONSTRUCTION DRAWING DM-1.1 FOR ADDITIONAL NOTES AND DETAILS.

- 4'X4' TIED CONCRETE BLOCK MAT, TYPE 1 GROUTED PER CMS 601.1.11. TOP TO BE FLUSH WITH SURFACE OF SLOPE.

- ANIMAL GUARD

3 ITEM SPECIAL - STRUCTURE, MISC.: COMPOSITE FIBER WRAP SYSTEM:

COMPOSITE FIBER WRAP SYSTEM SHALL BE PER PROPOSAL NOTE 519.

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN:

PRIOR TO THE SURFACE CLEANING SPECIFIED IN C&MS 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

3 ADDENDUM #3
05/08/2023

DLZ
6121 HUNTLEY ROAD • COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
EMW/MHK	EMW/MHK	DOR/CJS	12/6/22
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PAT/MJL		2513447	

STRUCTURE GENERAL NOTES - 1
BRIDGE NO. FRA-023-0517
RAMP L OVER U.S. 23

FRA-270-51.50
PID No. 92616

3 / 22

485
554

CALC. BY: MHK DATE: 8/24/22
CHKD. BY: JDA DATE: 9/1/22

ESTIMATED QUANTITIES

FUNDING	ITEM	ITEM EXTENSION	TOTAL	UNIT	DESCRIPTION	REAR ABUTMENT	FORWARD ABUTMENT	PIERS	SUPER-STRUCTURE	GENERAL	REF. SHEET NO.
02/IMS/BR											
	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					LS	3
166	202	22900	166	SY	APPROACH SLAB REMOVED					166	
143	202	23500	143	SY	WEARING COURSE REMOVED					143	
9	204	30010	9	CY	GRANULAR MATERIAL, TYPE B					9	18
2,471	204	50000	2,471	SY	GEOTEXTILE FABRIC					2,471	18
436	503	21100	436	CY	UNCLASSIFIED EXCAVATION	218	218				
40,400	509	10000	40,400	LB	EPOXY COATED STEEL REINFORCEMENT	3,608	3,608		33,185		
110	509	30020	110	FT	NO. 4 GFRP DEFORMED BARS				110		
208	510	10000	208	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	105	103				
88	511	34447	88	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN				88		3
63	511	34451	63	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN				63		3
41	511	45711	41	CY	CLASS QC1 CONCRETE, ABUTMENT, AS PER PLAN	21	20				12
172	511	81300	172	EACH	CONCRETE, MISC.: EMBEDDED GALVANIC ANODE (EGA)	88	84				3
738	512	10100	738	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	55	51	86	488	58	
51	512	10300	51	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN				51		
4	512	10600	4	FT	CONCRETE REPAIR BY EPOXY INJECTION	0	4				
35	512	33000	35	SY	TYPE 2 WATERPROOFING	18	17				
187	512	71500	187	SY	SPECIAL - URETHANE TOP COAT SEALER			187			3
16	516	13600	16	SF	1" PREFORMED EXPANSION JOINT FILLER				16		
41	516	13900	41	SF	2" PREFORMED EXPANSION JOINT FILLER	28	13				
61	516	14020	61	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	32	30				
61	516	42600	61	FT	ELASTOMERIC BEARING PAD, MISC.: 8" WIDE x 1" THICK ELASTOMERIC BEARING STRIP	32	30				
LS	516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					LS	3, 8
8	518	21200	8	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	4	4				
63	518	40000	63	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	33	30				
246	518	40011	246	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	208	38				3
1,682	SPECIAL	51900100	1,682 (3)	SF	SPECIAL - COMPOSITE FIBER WRAP SYSTEM			1,682 (3)			
41	519	11101	41	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	34		7			3
161	526	25011	161	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN					161	3, 19
57	526	90030	57	FT	TYPE C INSTALLATION					57	
136	840	23000	136	CY	SELECT GRANULAR BACKFILL	68	68				18
599	848	10000	599	SY	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (2 1/2" THICK)				599		
599	848	20000	599	SY	SURFACE PREPARATION USING HYDRODEMOLITION				599		
9	848	30000	9	CY	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY				9		
1	848	50000	1	SY	HAND CHIPPING				1		
LS	848	50100	LS		TEST SLAB					LS	
599	848	50320	599	SY	EXISTING CONCRETE OVERLAY REMOVED (1 1/2" THICK)				599		
631	863	00100	631	SY	GEOGRID, TYPE P1	314	317				18

(3) ADDENDUM #3 05/08/2023

DLZ
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DESIGNED	DRAWN	REVIEWED	DATE
EMW/MHK	EMW/MHK	DOR/CJS	12/6/22
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PAT/JDA		2513447	

ESTIMATED QUANTITIES
BRIDGE NO. FRA-023-0517
RAMP L OVER U.S. 23

FRA-270-51.50
PID No. 92616

5 / 22

487
554

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

A-1-20	REVISED	01-21-22
AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
EXJ-4-87	REVISED	07-15-22
GSD-1-19	REVISED	01-15-21
SBR-1-20	REVISED	07-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

800 DATED 10-21-22

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION LRFD BRIDGE DESIGN SPECIFICATIONS ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

SPECIAL DESIGN SPECIFICATIONS:

THIS BRIDGE REQUIRED THE USE OF A THREE-DIMENSIONAL MODEL USING THE FINITE ELEMENT METHOD TO ANALYZE THE SUPERSTRUCTURE. THE COMPUTER PROGRAM USED FOR STRUCTURAL ANALYSIS WAS OPENBRIDGE DESIGNER CE 2021 RELEASE 2. THE BRIDGE COMPONENTS DESIGNED BY THIS METHOD WERE THE GIRDERS, PIER AND ABUTMENT CROSSFRAMES, AND INTERMEDIATE CROSSFRAMES. THE THREE-DIMENSIONAL MODEL WAS USED TO:

1. DETERMINE GIRDER AND CROSSFRAME MEMBER FORCES AND MOMENTS.
2. DETERMINE DEAD AND LIVE LOAD REACTIONS FOR ELASTOMERIC BEARING DESIGN.
3. DETERMINE ANTICIPATED DEAD LOAD DEFLECTIONS FOR EACH GIRDER DUE TO THE PLACEMENT OF THE DECK SLAB AND PARAPETS FOR PURPOSES OF CALCULATING GIRDER CAMBER AND DECK SCREED ELEVATIONS.
4. DETERMINE ANTICIPATED MOVEMENT DUE TO TEMPERATURE EFFECTS FOR SIZING OF STRIP SEAL EXPANSION JOINTS.

REFINED ANALYSIS WAS REQUIRED BECAUSE OF THE UNUSUAL GEOMETRY OF THE FRAMING PLAN, WHICH WAS DESIGNED TO CLOSELY MATCH THE EXISTING FRAMING PLAN WITH THE GIRDER BEND POINTS LOCATED AT THE EXISTING PIERS, SO AS TO ALLOW REUSE OF THE EXISTING SUBSTRUCTURE.

DEAD LOAD DISTRIBUTION: DEAD LOADS WERE APPLIED IN THE THREE-DIMENSIONAL MODEL BASED ON THE ACTUAL SELF-WEIGHT OF MEMBERS AND PLATES (GIRDERS, CROSSFRAMES, AND DECK SLAB) WITH THE SUPERIMPOSED DEAD LOADS APPLIED AS UNIFORM AREA LOADS ON THE DECK SLAB.

LIVE LOAD DISTRIBUTION FACTORS:

EXTERIOR MEMBERS - 1.676 FOR WHEEL (OR AXLE) LOAD AND 0.838 FOR LANE LOAD MOMENTS.
- 1.676 FOR WHEEL (OR AXLE) LOAD AND 0.838 FOR LANE LOAD SHEAR.

INTERIOR MEMBERS - 1.396 FOR WHEEL (OR AXLE) LOAD AND 0.698 FOR LANE LOAD MOMENTS.
- 1.784 FOR WHEEL (OR AXLE) LOAD AND 0.892 FOR LANE LOAD SHEAR.

DESIGN LOADING:

OPERATIONAL IMPORTANCE: A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA:

DESIGN LOADING:

VEHICULAR LIVE LOAD: HL-93
FUTURE WEARING SURFACE (FWS) OF 60 PSF

DESIGN DATA:

QC/QA CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60,000 PSI

STRUCTURAL STEEL - ASTM A709 GRADE 50, YIELD STRENGTH 50 KSI

MONOLITHIC WEARING SURFACE:

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

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.

EXISTING STRUCTURE PLANS:

THE FOLLOWING EXISTING PLANS MAY BE EXAMINED BY THE PROSPECTIVE BIDDERS AT THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 6, 400 E. WILLIAM STREET, DELAWARE, OH 43015, TEL 740-833-8000:

1. ORIGINAL CONSTRUCTION, FRA-200-9.46 (1961)

MAINTENANCE OF TRAFFIC:

MAINTENANCE OF TRAFFIC FOR THE STRUCTURE WORK SHALL BE COORDINATED WITH THE OVERALL PROJECT. REFER TO MAINTENANCE OF TRAFFIC NOTES AND DETAILS ELSEWHERE IN THE PLANS.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEM THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE DEPARTMENT WILL NOT PERMIT THE USE OF EXPLOSIVES, HEADACHE BALLS AND/PR HOE-RAMS WILL NOT BE PERMITTED. DO NOT BEGIN WORK UNTIL THE ENGINEER ACCEPTS THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUNDS CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH CONCRETE REINFORCEMENT THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

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. 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.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE 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.

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 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE):

COLOR OF THE SEALER SHALL BE LIGHT NEUTRAL, FEDERAL COLOR NO. 17778.

ITEM 514 - FIELD PAINTING OF STRUCTURAL STEEL:

COLOR OF THE FINISH COAT SHALL BE GREEN, FEDERAL COLOR NO. 14277.

3 ITEM SPECIAL - STRUCTURE, MISC.: COMPOSITE FIBER WRAP SYSTEM:

COMPOSITE FIBER WRAP SYSTEM SHALL BE PER PROPOSAL NOTE 519.

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.

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".

3 ADDENDUM #3
05/08/2023

DLZ
6121 HUNTLEY ROAD • COLUMBUS, OHIO 43229

DESIGNED PAT/CJS
DRAWN PAT/JG
CHECKED JN/MHK
REVIEWED MJL
DATE 12/6/22
REVISED
STRUCTURE FILE NUMBER 2513536

GENERAL NOTES - 1
BRIDGE NO. FRA-270-5264
RAMP L OVER I.R. 270

FRA-270-51.50
PID No. 92616

CALC. BY: PAT/MHK DATE: 9/13/22
CHKD. BY: BPS/JDA DATE: 9/14/22

FUNDING	ESTIMATED QUANTITIES											
02/IMS/BR	ITEM	ITEM EXTENSION	TOTAL	UNIT	DESCRIPTION	REAR ABUTMENT	FORWARD ABUTMENT	PIERS	SUPER-STRUCTURE	GENERAL	REF. SHEET NO.
	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					LS	3
89	202	22900	89	SY	APPROACH SLAB REMOVED					89	
89	202	23500	89	SY	WEARING COURSE REMOVED					89	
206	503	21100	206	CY	UNCLASSIFIED EXCAVATION	94	112				
122,504	509	10000	122,504	LB	EPOXY COATED STEEL REINFORCEMENT	4,254	4,654	2,318	111,278	0	
117	509	30020	117	FT	NO. 4 GFRP DEFORMED BARS				117		
495	510	10000	495	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	138	149	208			
326	511	34412	326	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE				326		
106	511	34450	106	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)				106		
14	511	41010	14	CY	CLASS QC1 CONCRETE, PIER ABOVE FOOTINGS			14			
72	511	45710	72	CY	CLASS QC1 CONCRETE, ABUTMENT	36	37				
1,250	512	10100	1,250	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	66	79	252	853		
34	512	33000	34	SY	TYPE 2 WATERPROOFING	16	18				
372,900	513	10280	372,900	LB	STRUCTURAL STEEL MEMBERS, LEVEL 4				372,900		
4,701	513	20000	4,701	EACH	WELDED STUD SHEAR CONNECTORS				4,701		
24,100	514	00060	24,100	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT				24,100		
24,100	514	00066	24,100	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT				24,100		
15	514	10000	15	EACH	FINAL INSPECTION REPAIR				15		
61	516	11210	61	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL				61		
18	516	13900	18	SF	2" PREFORMED EXPANSION JOINT FILLER	9	9				
8	516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN	4	4				18
					(LOAD PLATE 20" x 16" x 1.50", NEOPRENE 15" DIA. x 2.950")						
4	516	44101	4	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN			4			20
					(LOAD PLATE 28" x 19" x 1.50", NEOPRENE 20" x 18"x 3.850")						
8	516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN			8			19
					(LOAD PLATE 25" x 25" x 1.50", NEOPRENE 24" DIA. x 4.975")						
48	518	21200	48	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	23	25				
			3								
456	SPECIAL	51900100	456	SF	SPECIAL - COMPOSITE FIBER WRAP SYSTEM			3 456			
98	519	11100	98	SF	PATCHING CONCRETE STRUCTURE	4	81	13			
148	526	25010	148	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15")					148	
58	526	90030	58	FT	TYPE C INSTALLATION					58	

3 ADDENDUM #3
05/08/2023

DLZ
6121 HUNTLEY ROAD • COLUMBUS, OHIO 43229

DESIGNED PAT/MHK
DRAWN PAT/MHK
CHECKED JN/JDA
REVIEWED MJL
DATE 12/6/22
REVISED
STRUCTURE FILE NUMBER 2513536

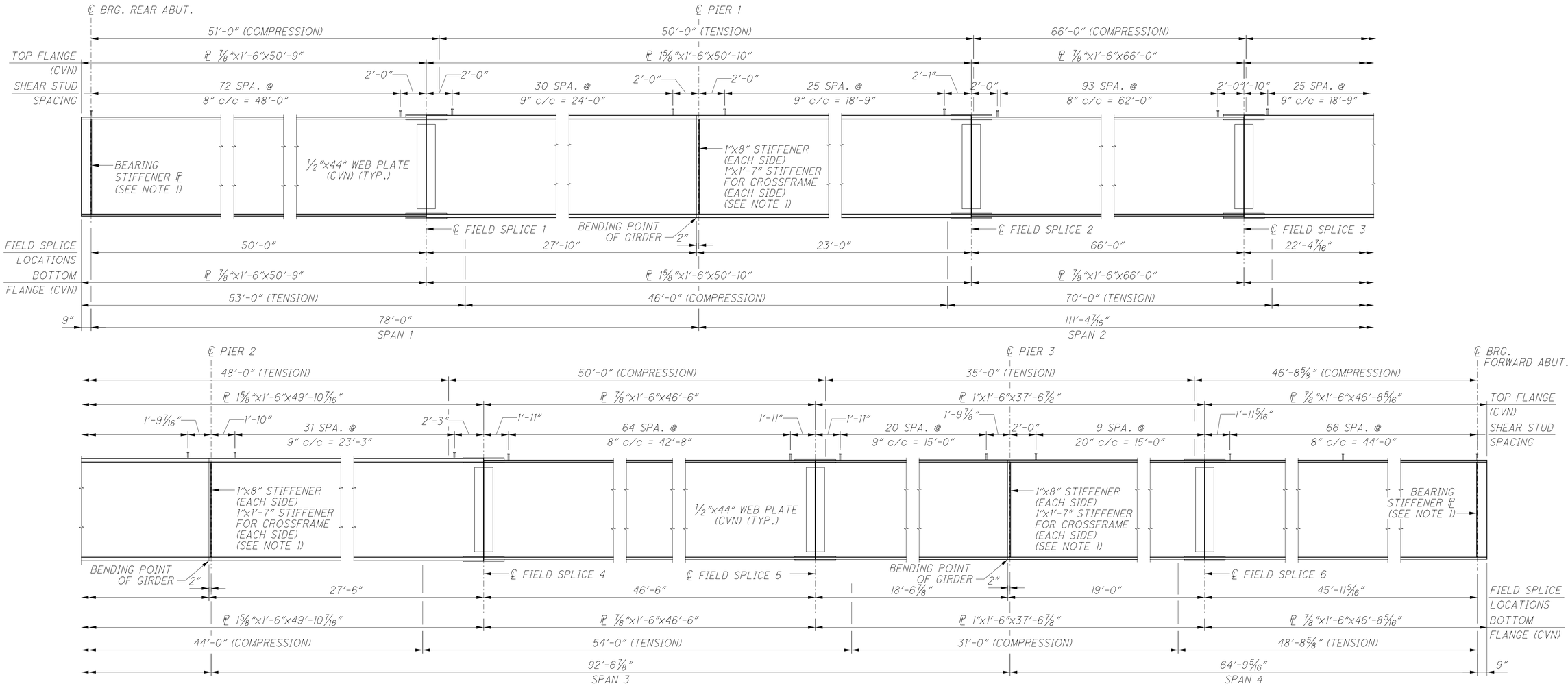
ESTIMATED QUANTITIES
BRIDGE NO. FRA-270-5264
RAMP L OVER I.R. 270

FRA-270-51.50
PID No. 92616

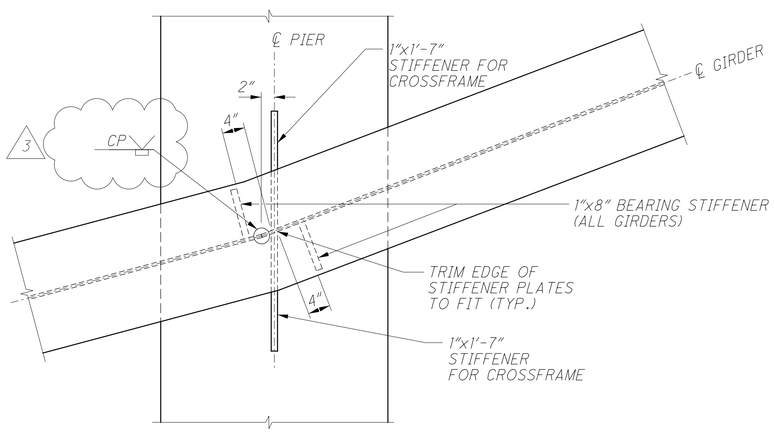
5 / 41

509
554

x:\Projects\2013\1321\1010\FRA\92616\structures\FRA270_5264\sheets\270_5264EQ001.dgn 5/5/2023 4:44:35 PM jagler

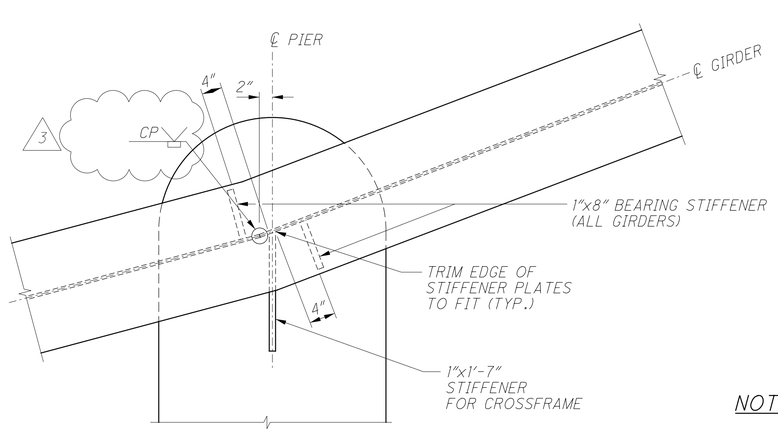


GIRDER B ELEVATION



TYPICAL INTERIOR GIRDER BENDING POINT DETAIL

(FOR BENDING ANGLE, SEE FRAMING PLAN ON SHEET 21/41)



TYPICAL EXTERIOR GIRDER BENDING POINT DETAIL

(FOR BENDING ANGLE, SEE FRAMING PLAN ON SHEET 21/41)

3 ADDENDUM #3 05/08/2023

NOTES

1. FOR GIRDER NOTES AND DETAILS, SEE SHEET 22/41.

DLZ
6121 HUNTLEY ROAD • COLUMBUS, OHIO 43229

DESIGNED JN/JD
DRAWN DAF/JG
CHECKED PAT/MHK
REVIEWED MJL
DATE 12/6/22
REVISED
STRUCTURE FILE NUMBER 2513536

GIRDER B ELEVATION
BRIDGE NO. FRA-270-5264
RAMP L OVER I.R. 270

FRA-270-51.50
PID No. 92616

23 / 41

527
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