


SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
		6	7	8	11	12	32	37	47	01/BRO/13	02/STR/04	03/S>2/04							
							LS			LS			202	11200	LS		ROADWAY		
			2,250		709						2,677	282	202	23000	2,959	SY	PORTIONS OF STRUCTURE REMOVED		
		125									125		202	23001	125	SY	PAVEMENT REMOVED	6	
						136						136	202	32500	136	FT	PAVEMENT REMOVED, AS PER PLAN		
					1,225						800	425	202	38000	1,225	FT	CURB AND GUTTER REMOVED		
					6						2	4	202	42010	6	EACH	GUARDRAIL REMOVED		
					4						4		202	42040	4	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E		
					8						4	4	202	47000	8	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T		
							1			1			202	58100	1	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED		
									2		2		202	58101	2	EACH	CATCH BASIN REMOVED		
							60			60			SPECIAL	20270000	60	FT	CATCH BASIN REMOVED, AS PER PLAN	6	
							197			204	119	78	203	10000	401	CY	FILL AND PLUG EXISTING CONDUIT, 24" RCP	33	
										24			203	20000	24	CY	EXCAVATION		
										146			203	35120	146	CY	EMBANKMENT		
					709						428	281	204	10000	709	SY	GRANULAR MATERIAL, TYPE C		
					6.91						5.54	1.37	209	60500	6.91	MILE	SUBGRADE COMPACTION		
					1,262.5						837.5	425	606	15050	1,262.5	FT	LINEAR GRADING		
					6						2	4	606	26150	6	EACH	GUARDRAIL, TYPE MGS		
					4						4		606	26550	4	EACH	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016		
					8						4	4	606	34600	8	EACH	ANCHOR ASSEMBLY, MGS TYPE T		
																	MGS BRIDGE TERMINAL ASSEMBLY, TYPE TST-2		
																	EROSION CONTROL		
									9		9		601	32210	9	CY	ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER		
		20								20			659	00300	20	CY	TOPSOIL		
		183								183			659	10000	183	SY	SEEDING AND MULCHING		
		9								9			659	14000	9	SY	REPAIR SEEDING AND MULCHING		
		9								9			659	15000	9	SY	INTER-SEEDING		
		0.03								0.03			659	20000	0.03	TON	COMMERCIAL FERTILIZER		
		1								1			659	35000	1	MGAL	WATER		
											5,000		832	30000	5,000	EACH	EROSION CONTROL		
																	DRAINAGE		
							LS			LS			503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN		
							9			9			512	10050	9	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)		
							LS			LS			518	21230	LS		POROUS BACKFILL WITH GEOTEXTILE FABRIC		
							8			8			602	20000	8	CY	CONCRETE MASONRY		
							87			87			611	20900	87	FT	CONCRETE MASONRY		
									2				611	98370	2	EACH	48" CONDUIT, TYPE B, AWWA C906 HDPE		
													611	98571	1	EACH	CATCH BASIN, NO. 6		
													611	98571	1	EACH	CATCH BASIN, NO. 2-5, AS PER PLAN	32	
									1				611	98630	1	EACH	CATCH BASIN ADJUSTED TO GRADE		
									1				611	98634	1	EACH	CATCH BASIN RECONSTRUCTED TO GRADE		
																	PAVEMENT		
		1,293									1,293		253	02000	1,293	CY	PAVEMENT REPAIR		
			4,510								4,510		254	01000	4,510	SY	PAVEMENT PLANING, ASPHALT CONCRETE, (1 1/2")		
					51,044						40,952	10,092	254	01000	51,044	SY	PAVEMENT PLANING, ASPHALT CONCRETE, (3 1/4")		
					79						298	31	301	56000	329	CY	ASPHALT CONCRETE BASE, PG64-22, (449)		
		52									52		301	56001	52	CY	ASPHALT CONCRETE BASE, (449), AS PER PLAN, PG64-22	6	
							197				119	78	304	20000	197	CY	AGGREGATE BASE		
							2,847				2,276	571	407	10000	2,847	GAL	TACK COAT		
							248				3,766	881	407	20000	4,647	GAL	TACK COAT		
							1,438				1,150	288	424	14001	1,438	CY	NON-TRACKING TACK COAT		
							3,235				2,587	648	441	10200	3,235	CY	FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B, (448), AS PER PLAN	6	
		135	188								323		441	70000	323	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)		
							24				24		442	90000	24	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22		
													609	12000	136	FT	ASPHALT CONCRETE, MISC.: BUTT JOINT INTERSECTIONS	6	
									136				617	10100	775	CY	COMBINATION CURB AND GUTTER, TYPE 2		
											630	145	617	10100	775	CY	COMPACTED AGGREGATE		
											2,442	601	875	10000	3,043	LB	LONGITUDINAL JOINT ADHESIVE		
																	TRAFFIC CONTROL		
													621	00100	260	EACH	RPM		
													621	54000	194	EACH	RAISED PAVEMENT MARKER REMOVED		
													626	00116	22	EACH	BARRIER REFLECTOR, TYPE 5, BIDIRECTIONAL		
													642	00104	7.02	MILE	EDGE LINE, 6", TYPE 1		
													642	00300	3.7	MILE	CENTER LINE, TYPE 1		
													644	00500	29	FT	STOP LINE		
													644	00630	150	FT	CROSSWALK LINE, 24"		
																	STRUCTURE REPAIR (LUC-64-1148)		
													202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	36	
													202	22900	140	SY	APPROACH SLAB REMOVED		
													502	21300	LS		UNCLASSIFIED EXCAVATION		
													509	10000	12,470	LB	EPOXY COATED STEEL REINFORCEMENT		
													509	28001	100	LB	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN	36	
													510	10000	440	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT		

GENERAL SUMMARY

DESIGN AGENCY

 DESIGNER
 NE
 REVIEWER
 JMF 08/09/24
 PROJECT ID
 96000
 SHEET TOTAL
 P.9 | 60

SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
			6	7	8	11	12	32	37	47	01/BRO/13	02/STR/04	03/S>2/04						
									37					511	34410	37	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE	
									6					511	45710	6	CY	CLASS QC1 CONCRETE, ABUTMENT	
									67					512	10050	67	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
									72					516	10000	72	FT	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL	
									7					516	13600	7	SF	1" PREFORMED EXPANSION JOINT FILLER	
									72					516	31000	72	FT	JOINT SEALER, 705.04	
									172					517	70100	172	FT	RAILING (THREE STEEL TUBE BRIDGE RAILING)	
									20					518	21200	20	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
									172					SPECIAL	51822300	172	FT	STEEL DRIP STRIP	43
									84					518	40000	84	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
									40					518	40012	40	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE	
									200					526	25000	200	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")	
									72					526	90010	72	FT	TYPE A INSTALLATION	
									2					601	20010	2	CY	CRUSHED AGGREGATE SLOPE PROTECTION	
									10					601	34300	10	CY	ROCK CHANNEL PROTECTION, TYPE D WITHOUT FILTER	
									344					848	10201	344	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN, 2" THICK	36
									344					848	20000	344	SY	SURFACE PREPARATION USING HYDRODEMOLITION	
									8					848	30201	8	CY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	36
									75					848	50000	75	SY	HAND CHIPPING	
									LS					848	50100	LS		TEST SLAB	
									344					848	50320	344	SY	EXISTING CONCRETE OVERLAY REMOVED, 1.25" THICK	
									75					848	50340	75	SY	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY	
																		STRUCTURE REPAIR (LUC-64-1174)	
									LS					202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	46
									140					202	22900	140	SY	APPROACH SLAB REMOVED	
									LS					509	21300	LS		UNCLASSIFIED EXCAVATION	
									9,487					509	10000	9,487	LB	EPOXY COATED STEEL REINFORCEMENT	
									100					509	20001	100	LB	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN	46
									406					510	10000	406	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
									32					511	34410	32	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE	
									7					511	45710	7	CY	CLASS QC1 CONCRETE, ABUTMENT	
									53					512	10050	53	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
									80					516	10000	80	FT	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL	
									7					516	13600	7	SF	1" PREFORMED EXPANSION JOINT FILLER	
									80					516	31000	80	FT	JOINT SEALER, 705.04	
									147					517	70100	147	FT	RAILING (THREE STEEL TUBE BRIDGE RAILING)	
									22					518	21200	22	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
									147					SPECIAL	51822300	147	FT	STEEL DRIP STRIP	52
									92					518	40000	92	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
									40					518	40012	40	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE	
									200					526	25000	200	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")	
									80					526	90010	80	FT	TYPE A INSTALLATION	
									2					601	20010	2	CY	CRUSHED AGGREGATE SLOPE PROTECTION	
									10					601	34300	10	CY	ROCK CHANNEL PROTECTION, TYPE D WITHOUT FILTER	
									293					848	10201	293	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN, 2" THICK	46
									293					848	20000	293	SY	SURFACE PREPARATION USING HYDRODEMOLITION	
									8					848	30201	8	CY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	46
									75					848	50000	75	SY	HAND CHIPPING	
									LS					848	50100	LS		TEST SLAB	
									293					848	50320	293	SY	EXISTING CONCRETE OVERLAY REMOVED, 1.25" THICK	
									75					848	50340	75	SY	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY	
																		MAINTENANCE OF TRAFFIC	
					24									614	11110	24	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
				8										614	12460	8	EACH	WORK ZONE MARKING SIGN	
				5										614	12500	5	EACH	REPLACEMENT SIGN	
				5										614	12600	5	EACH	REPLACEMENT DRUM	
					10									614	18600	10	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN	
				7										614	21100	7	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
				3.5										614	21550	3.5	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
				14										614	22110	14	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	
				7										614	22360	7	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	
																		INCIDENTALS	
									LS					614	11000	LS		MAINTAINING TRAFFIC	
														623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
														624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER
NE

REVIEWER
JMF 08/09/24

PROJECT ID
96000

SHEET TOTAL
P.10 60

**STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:
 REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):**

AS-1-15	DATED	1-20-2023
AS-2-15	DATED	1-20-2023
DS-1-92	DATED	7-15-2022
TST-2-21	DATED	7-16-2021

**AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:
 848 DATED 7-19-2024**

DESIGN DATA:

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTR.)
 CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTR.)
 REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

DECK PROTECTION METHOD:

SUPERPLASTICIZED DENSE CONCRETE OVERLAY
 STEEL DRIP STRIP

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

SUPERSTRUCTURE:

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF PORTIONS OF THE CONCRETE SLAB INCLUDING, RAILINGS, DECK JOINTS AND OTHER APPURTENANCES FROM SUPPORTING SYSTEMS. 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 OF EQUIPMENT IS PROHIBITED. THE DECK SHALL BE SAWCUT FULL DEPTH. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

PROTECTION OF TRAFFIC: PRIOR TO DEMOLITION OF ANY PORTION OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, BOAT, ETC.) AS PER CMS 2016 501.05.B.2.

REMOVAL METHODS: THE CONTRACTOR SHALL SAW CUT THE FULL DEPTH OF THE EXISTING SLAB AT THE REMOVAL LIMITS SHOWN IN THE PLANS.

SUBSTRUCTURE:

DESCRIPTION: 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 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 AND 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.

CUT LINE CONSTRUCTION JOINT PREPARATION

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

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.

PORTIONS OF NEW CONCRETE DECK:

FINISHED SURFACES OF NEW CLASS QC2 CONCRETE DECK REPAIRS IN CONTACT WITH THE WEARING SURFACE SHALL BE PREPARED BY HYDRO-DEMOLITION OR RECEIVE A SIMILAR HAND TOOLED FINISH PRIOR TO PLACEMENT OF THE SUPERPLASTICIZED DENSE CONCRETE OVERLAY. NEW DECK REPAIRS SHALL BE WATER CURED AS PER 511 FOR A MINIMUM OF 72 HOURS BEFORE HYDRO-DEMOLITION OR PLACEMENT OF THE WEARING SURFACE.

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 FILED 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 513.02.

BASE CONTRACT BID PRICES UPON A 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.

ITEM 509, CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN

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 BE 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.

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL PLACED IN BEHIND THE ABUTMENTS SHALL BE 703.17 MATERIAL PLACED IN 6 INCH LIFTS AS PER 304.05.

EXISTING BRIDGE PLANS:

EXISTING PLANS MAY BE INSPECTED AT THE DISTRICT TWO OFFICE AT 317 E. POE RD., BOWLING GREEN, OH.

ITEM 848, SUPERPLASTICIZED DENSE CONCRETE OVERLAY, USING HYDRODEMOLITION, 2" THICK, AS PER PLAN

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

IN ADDITION TO THE REQUIREMENTS OF CMS 511 AND SS 848, THE CONCRETE MIX/OVERLAY SHALL HAVE 100% VIRGIN POLYPROPYLENE FIBERS IN FIBRILLATED NETWORK FORM. APPLICATION RATE SHALL BE 2 POUNDS PER CUBIC YARD OF CONCRETE AND FIBERS SHALL BE 1.25" MINIMUM IN LENGTH. FIBERS SHALL BE THOROUGHLY INCORPORATED INTO THE CONCRETE MIX IN SUCH A WAY THAT NO "BALLING" OCCURS. UPON INSPECTION 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.

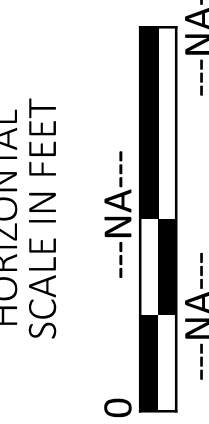
FIBERS SHALL BE ADDED AT THE BATCH PLANT PRIOR TO THE ADDITION OF ADMIXTURES IN ORDER TO MAXIMIZE CONCRETE MIXING TIME. FIBERS SHALL NOT AFFECT WATER-CEMENT RATIO, SLUMP OR THE ABILITY OF THE CONCRETE TO ACHIEVE 4,500 PSI MINIMUM CONCRETE STRENGTH.

ENVIRONMENTAL COMMITMENTS

FINISHED SURFACES OF NEW CLASS QC2 CONCRETE DECK ACCESS TO OAK OPENINGS METROPARK, SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION ACTIVITIES, EXCEPT FOR THE TIME NEEDED TO TEMPORARILY OCCUPY THE PROPERTY WITHIN THE CONSTRUCTION LIMITS, WHICH SHALL BE LESS THAN THE TIME NEEDED FOR CONSTRUCTION.

THE PROJECT SPONSOR AND/OR CONTRACTOR SHALL INSTALL APPROPRIATE CLOSURE SIGNS WITHIN PROPOSED CONSTRUCTION AREAS OF OAK OPENINGS METROPARK ALERTING USERS OF CONSTRUCTION ACTIVITIES AND ACCESS RESTRICTIONS OR CLOSURES. THE SIGNS SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES AND SHALL BE VISIBLE TO USERS OF THE PARKS TO EXPLAIN WHICH AREAS WILL BE CLOSED DURING CONSTRUCTION AND TO DIRECT USERS TO SECONDARY ACCESS POINTS. THE SIGNS SHALL MEET ALL ODOT AND LOCAL SPECIFICATIONS.

THE CONTRACTOR SHALL CLOSELY COORDINATE THE CONSTRUCTION SCHEDULE WITH ODOT AND METROPARKS TOLEDO. PRIOR TO THE START OF CONSTRUCTION.

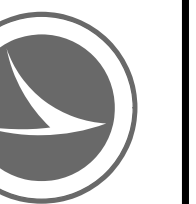


GENERAL NOTES
BRIDGE NO. LUC-64-1148
SR 64 OVER SWAN CREEK

SFN

4802527

DESIGN AGENCY



DESIGNER	CHECKER
NMS	DJG

REVIEWER

NMS 08/12/24

PROJECT ID	96000
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SUBSET	TOTAL
2	10

SHEET	TOTAL
36	60

ESTIMATED QUANTITIES (01/BRO/13)

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SEE SHEET
202	22900	140	SY	APPROACH SLAB REMOVED				140	
202	11203	LS	LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	2
503	21300	LS	LS	UNCLASSIFIED EXCAVATION				LUMP	
509	10000	12470	LB	EPOXY COATED STEEL REINFORCEMENT	939		11540		
509	20001	100	LB	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCMENT, AS PER PLAN				100	2
510	10000	440	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	112		328		
511	45710	6	CY	CLASS QC1 CONCRETE, ABUTMENT	6				
511	34410	37	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE			37		
512	10050	67	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	16		41		
516	10000	72	FT	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL				72	
516	31000	72	FT	JOINT SEALER, 705.04				72	
516	13600	7	SF	1" PREFORMED EXPANSION JOINT FILLER	10				
517	70100	172	FT	RAILING (THREE STEEL TUBE BRIDGE RAILING)			172		
518	21200	20	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	20				
518	40000	84	FT	6" PERFORATED CORRUGATED PLASTIC PIPE				84	
518	40012	40	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE				40	
SPECIAL	51822300	172	FT	STEEL DRIP STRIP			172		
526	25000	200	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")				200	
526	90010	72	FT	TYPE A INSTALLATION				72	
601	20010	2	CY	CRUSHED AGGREGATE SLOPE PROTECTION				2	
601	34300	10	CY	ROCK CHANNEL PROTECTION, TYPE D WITHOUT FILTER				10	
848	10201	344	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN, 2" THICK			344		2
848	20000	344	SY	SURFACE PREPARATION USING HYDRODEMOLITION			344		
848	30201	8	CY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN			8		2
848	50000	75	SY	HAND CHIPPING			75		
848	50100	LS	LS	TEST SLAB				LUMP	
848	50320	344	SY	EXISTING CONCRETE OVERLAY REMOVED, 1.25" THICK			344		
848	50340	75	SY	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			75		

ESTIMATED QUANTITIES
 BRIDGE NO. LUC-64-1148
 SR 64 OVER SWAN CREEK

SFN
 4802527
 DESIGN AGENCY



DESIGNER: NMS
 CHECKER: DJG

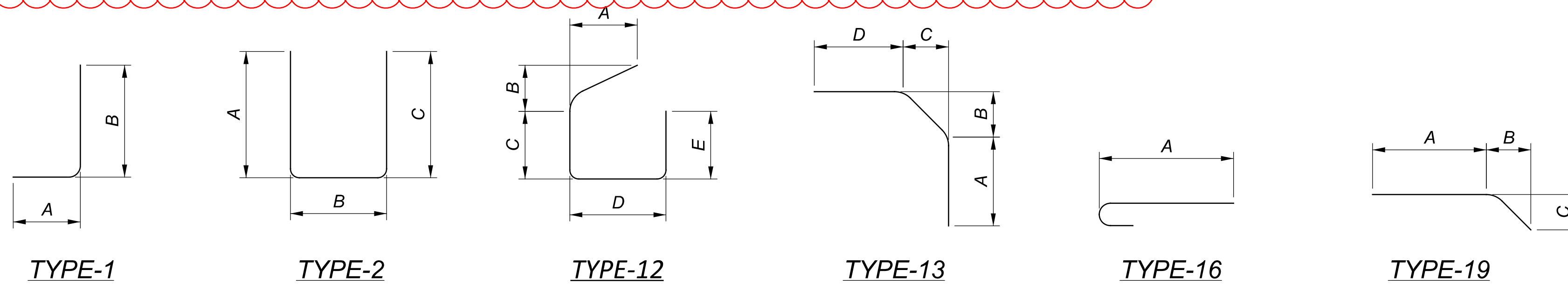
REVIEWER:
 NMS 08/12/24

PROJECT ID:
 96000

SUBSET	TOTAL
3	10

SHEET	TOTAL
37	60

MARK	NUMBER		LENGTH	WEIGHT	TYPE	DIMENSIONS							
		TOTAL				A	B	C	D	E	R	INC	
A501		8	22'-2"	186	2	10'-9"	0'-11"	10'-9"					
A502		8	5'-10"	49	2	2'-7"	0'-11"	2'-7"					
A503		12	5'-6"	69	2	2'-5"	0'-11"	2'-5"					
A504		8	6'-2"	52	1	4'-4"	2'-0"						
A505		24	3'-4"	84	STR								
A506		32	4'-6"	151	1	2'-0"	2'-8"						
D801		48	3'-1"	396	13	1'-3"	0'-8"	0'-8"	1'-0"				
SUB-TOTAL				987									
S401		172	5'-0"	574	STR								
S402		148	5'-10"	577	12	0'-10 3/4"	1'-2 1/2"	2'-2 1/2"	1'-2"	1'-3"			
S501		40	16'-1"	671	STR								
S502		20	11'-8"	243	STR								
S601		156	5'-3"	1230	STR								
S801		40	30'-4"	3240	16	29'-6"							
S802		20	36'-6"	1949	STR								
S803		40	28'-1"	2999	STR								
SUB-TOTAL				11,483									



NOTES

ALL REINFORCING STEEL SHALL BE EPOXY COATED.

THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE. FOR EXAMPLE, AN A501 IS A #5 BAR. DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES THE INSIDE RADIUS.

REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL BE INCLUDED WITH THE ASSOCIATED CONCRETE ITEM.

REINFORCING STEEL LIST
 BRIDGE NO. LUC-64-1148
 SR 64 OVER SWAN CREEK

SFN 4802527

DESIGN AGENCY



DESIGNER CHECKER

NMS DJG

REVIEWER

NMS 08/12/24

PROJECT ID

96000

SUBSET TOTAL

10 10

SHEET TOTAL

44 60

**STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:
REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):**

AS-1-15 DATED 1-20-2023
AS-2-15 DATED 1-20-2023
DS-1-92 DATED 7-15-2022
TST-2-21 DATED 7-16-2021

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:
848 DATED 7-19-2024

DESIGN DATA:

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTR.)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTR.)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

DECK PROTECTION METHOD:

SUPERPLASTICIZED DENSE CONCRETE OVERLAY
STEEL DRIP STRIP

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

SUPERSTRUCTURE:

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF PORTIONS OF THE CONCRETE SLAB INCLUDING, RAILINGS, DECK JOINTS AND OTHER APPURTENANCES FROM SUPPORTING SYSTEMS. 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 OF EQUIPMENT IS PROHIBITED. THE DECK SHALL BE SAWCUT FULL DEPTH. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

PROTECTION OF TRAFFIC: PRIOR TO DEMOLITION OF ANY PORTION OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, BOAT, ETC.) AS PER CMS 2016 501.05.B.2.

REMOVAL METHODS: THE CONTRACTOR SHALL SAW CUT THE FULL DEPTH OF THE EXISTING SLAB AT THE REMOVAL LIMITS SHOWN IN THE PLANS.

SUBSTRUCTURE:

DESCRIPTION: 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 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 AND 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.

CUT LINE CONSTRUCTION JOINT PREPARATION

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.

PORTIONS OF NEW CONCRETE DECK:

FINISHED SURFACES OF NEW CLASS QC2 CONCRETE DECK REPAIRS IN CONTACT WITH THE WEARING SURFACE SHALL BE PREPARED BY HYDRO-DEMOLITION OR RECEIVE A SIMILAR HAND TOOLED FINISH PRIOR TO PLACEMENT OF THE SUPERPLASTICIZED DENSE CONCRETE OVERLAY. NEW DECK REPAIRS SHALL BE WATER CURED AS PER 511 FOR A MINIMUM OF 72 HOURS BEFORE HYDRO-DEMOLITION OR PLACEMENT OF THE WEARING SURFACE.

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 FILED 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 513.02.

BASE CONTRACT BID PRICES UPON A 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.

ITEM 509, CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN

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 BE 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.

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL PLACED IN BEHIND THE ABUTMENTS SHALL BE 703.17 MATERIAL PLACED IN 6 INCH LIFTS AS PER 304.05.

EXISTING BRIDGE PLANS:

EXISTING PLANS MAY BE INSPECTED AT THE DISTRICT TWO OFFICE AT 317 E. POE RD., BOWLING GREEN, OH.

ITEM 848, SUPERPLASTICIZED DENSE CONCRETE OVERLAY, USING HYDRODEMOLITION, 2" THICK, AS PER PLAN

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

IN ADDITION TO THE REQUIREMENTS OF CMS 511 AND SS 848, THE CONCRETE MIX/OVERLAY SHALL HAVE 100% VIRGIN POLYPROPYLENE FIBERS IN FIBRILLATED NETWORK FORM. APPLICATION RATE SHALL BE 2 POUNDS PER CUBIC YARD OF CONCRETE AND FIBERS SHALL BE 1.25" MINIMUM IN LENGTH. FIBERS SHALL BE THOROUGHLY INCORPORATED INTO THE CONCRETE MIX IN SUCH A WAY THAT NO "BALLING" OCCURS. UPON INSPECTION 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.

FIBERS SHALL BE ADDED AT THE BATCH PLANT PRIOR TO THE ADDITION OF ADMIXTURES IN ORDER TO MAXIMIZE CONCRETE MIXING TIME. FIBERS SHALL NOT AFFECT WATER-CEMENT RATIO, SLUMP OR THE ABILITY OF THE CONCRETE TO ACHIEVE 4,500 PSI MINIMUM CONCRETE STRENGTH.

ENVIRONMENTAL COMMITMENTS

FINISHED SURFACES OF NEW CLASS QC2 CONCRETE DECK ACCESS TO OAK OPENINGS METROPARK, SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION ACTIVITIES, EXCEPT FOR THE TIME NEEDED TO TEMPORARILY OCCUPY THE PROPERTY WITHIN THE CONSTRUCTION LIMITS, WHICH SHALL BE LESS THAN THE TIME NEEDED FOR CONSTRUCTION.

THE PROJECT SPONSOR AND/OR CONTRACTOR SHALL INSTALL APPROPRIATE CLOSURE SIGNS WITHIN PROPOSED CONSTRUCTION AREAS OF OAK OPENINGS METROPARK ALERTING USERS OF CONSTRUCTION ACTIVITIES AND ACCESS RESTRICTIONS OR CLOSURES. THE SIGNS SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES AND SHALL BE VISIBLE TO USERS OF THE PARKS TO EXPLAIN WHICH AREAS WILL BE CLOSED DURING CONSTRUCTION AND TO DIRECT USERS TO SECONDARY ACCESS POINTS. THE SIGNS SHALL MEET ALL ODOT AND LOCAL SPECIFICATIONS.

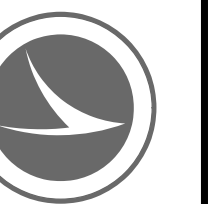
THE CONTRACTOR SHALL CLOSELY COORDINATE THE CONSTRUCTION SCHEDULE WITH ODOT AND METROPARKS TOLEDO. PRIOR TO THE START OF CONSTRUCTION.

GENERAL NOTES
BRIDGE NO. LUC-64-1174
SR 64 OVER NEISS DITCH

SFN

4802551

DESIGN AGENCY



DESIGNER NMS CHECKER DJG

REVIEWER NMS 08/12/24

PROJECT ID 96000


SUBSET TOTAL 2 10

SHEET TOTAL 46 60

ESTIMATED QUANTITIES (01/BRO/13)										
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SEE SHEET	
202	22900	140	SY	APPROACH SLAB REMOVED				140		
202	11203	LS	LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	2	
503	21300	LS	LS	UNCLASSIFIED EXCAVATION				LUMP		
509	10000	9487	LB	EPOXY COATED STEEL REINFORCEMENT	1251		8547			
509	20001	100	LB	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCMENT, AS PER PLAN				200	2	
510	10000	406	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	126		280			
511	45710	7	CY	CLASS QC1 CONCRETE, ABUTMENT	7					
511	34410	32	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE			32			
512	10050	53	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	18		35			
516	10000	80	FT	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL				72		
516	31000	80	FT	JOINT SEALER, 705.04				72		
516	13600	7	SF	1" PREFORMED EXPANSION JOINT FILLER	7					
517	70100	147	FT	RAILING (THREE STEEL TUBE BRIDGE RAILING)			147			
518	21200	22	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	22					
518	40000	92	FT	6" PERFORATED CORRUGATED PLASTIC PIPE				92		
518	40012	40	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE				40		
SPECIAL	51822300	147	FT	STEEL DRIP STRIP			147			
526	25000	200	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")				200		
526	90010	80	FT	TYPE A INSTALLATION				72		
601	20010	2	CY	CRUSHED AGGREGATE SLOPE PROTECTION				2		
601	34300	10	CY	ROCK CHANNEL PROTECTION, TYPE D WITHOUT FILTER				10		
848	10201	293	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN, 2" THICK			293		2	
848	20000	293	SY	SURFACE PREPARATION USING HYDRODEMOLITION			293			
848	30201	8	CY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN			8		2	
848	50000	75	SY	HAND CHIPPING			75			
848	50100	LS	LS	TEST SLAB				LUMP		
848	50320	293	SY	EXISTING CONCRETE OVERLAY REMOVED, 1.25" THICK			293			
848	50340	75	SY	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			75			

ESTIMATED QUANTITIES
 BRIDGE NO. LUC-64-1174
 SR 64 OVER NEISS DITCH

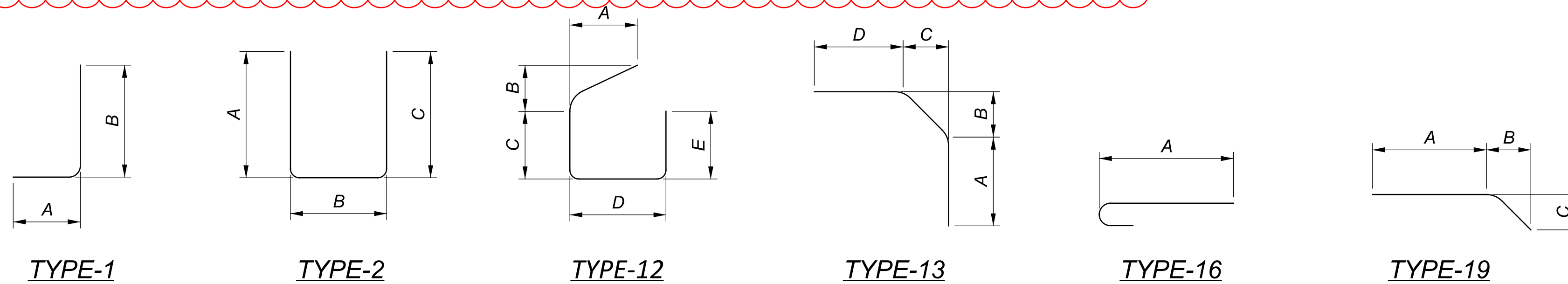
SFN
 4802551
 DESIGN AGENCY



DESIGNER: NMS
 CHECKER: DJG
 REVIEWER: NMS 08/12/24
 PROJECT ID: 96000

SUBSET	TOTAL
3	10
SHEET	TOTAL
47	60

MARK	NUMBER		LENGTH	WEIGHT	TYPE	DIMENSIONS								
		TOTAL				A	B	C	D	E	R	INC		
A501		4	24'-2"	101	2	11'-2"	0'-11"	11'-9"						
A502		4	7'-3"	30	2	3'-0"	0'-11"	3'-7"						
A503		14	5'-6"	80	2	2'-5"	0'-11"	2'-5"						
A504		8	5'-8"	48	1	3'-10"	2'-0"							
A505		28	3'-4"	99	STR									
A506		36	4'-6"	170	1	2'-0"	2'-8"							
A507		4	14'-11"	89	2	10'-0"	0'-11"	10'-7"						
A508		4	6'-3"	26	2	2'-6"	0'-11"	3'-1"						
D801		54	3'-1"	445	13	1'-3"	0'-8"	0'-8"	1'-0"					
SUB-TOTAL				1,088										
S401		146	5'-3"	512	STR									
S402		126	6'-5"	491	12	0'-10 3/4"	1'-2 1/2"	2'-2 1/2"	1'-2"	1'-3"				
S501		32	13'-8"	456	STR									
S502		16	9'-11"	165	STR									
S601		134	5'-3"	1057	STR									
S801		32	26'-4"	2250	16	25'-6"								
S802		16	31'-6"	1346	STR									
S803		32	24'-10"	2122	STR									
SUB-TOTAL				8,399										



NOTES

ALL REINFORCING STEEL SHALL BE EPOXY COATED.

THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE. FOR EXAMPLE, AN A501 IS A #5 BAR. DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES THE INSIDE RADIUS.

REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL BE INCLUDED WITH THE ASSOCIATED CONCRETE ITEM.

REINFORCING STEEL LIST
 BRIDGE NO. LUC-64-1174
 SR 64 OVER NEISS DITCH

SFN	4802551
DESIGN AGENCY	
DESIGNER	CHECKER
NMS	DJG
REVIEWER	
NMS	08/12/24
PROJECT ID	96000
SUBSET	TOTAL
10	10
SHEET	TOTAL
54	60