


SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P.57		P.74		P.80						01/STR/10	02/STR/04						
STRUCTURE OVER 20 FOOT SPAN (DEL-00521-10.320)																	
LS										LS		202	11002	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN	P.54
111										111		202	22900	111	SY	APPROACH SLAB REMOVED	
LS										LS		503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
LS										LS		503	21300	LS		UNCLASSIFIED EXCAVATION	
LS										LS		505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION	
560										560		507	00100	560	FT	STEEL PILES HP10X42, FURNISHED	
480										480		507	00150	480	FT	STEEL PILES HP10X42, DRIVEN	
31,405										31,405		509	26000	31,405	LB	GALVANIZED STEEL REINFORCEMENT	
105										105		511	34444	105	CY	CLASS QC2 CONCRETE, BRIDGE DECK	
78										78		511	43510	78	CY	CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING	
89										89		512	10050	89	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
11										11		512	33000	11	SY	TYPE 2 WATERPROOFING	
48,000										48,000		513	10261	48,000	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3, AS PER PLAN	P.54
1,026										1,026		513	20000	1,026	EACH	WELDED STUD SHEAR CONNECTORS	
86										86		516	13200	86	SF	1/2" PREFORMED EXPANSION JOINT FILLER	
86										86		516	13600	86	SF	1" PREFORMED EXPANSION JOINT FILLER	
38										38		516	13900	38	SF	2" PREFORMED EXPANSION JOINT FILLER	
107										107		516	14020	107	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	
12										12		516	44000	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (12" X 12" X 1.914")	
132										132		517	70100	132	FT	RAILING (THREE STEEL TUBE BRIDGE RAILING)	
4										4		518	21200	4	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
127										127		SPECIAL	51822300	127	FT	STEEL DRIP STRIP	P.66
121										121		518	40000	121	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
52										52		518	40010	52	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
178										178		526	15001	178	SY	REINFORCED CONCRETE APPROACH SLABS (T=13"), AS PER PLAN	P.70
80										80		526	90031	80	FT	TYPE C INSTALLATION, AS PER PLAN	P.70
1										1		625	33000	1	EACH	STRUCTURE GROUNDING SYSTEM	
STRUCTURE 20 FOOT SPAN AND UNDER (DEL-00521-11.980)																	
		LS									LS	202	11000	LS		STRUCTURE REMOVED	
		LS									LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
		63									63	503	21100	63	CY	UNCLASSIFIED EXCAVATION	
		3,696									3,696	509	10000	3,696	LB	EPOXY COATED STEEL REINFORCEMENT	
		12									12	511	46000	12	SY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING	
		27									27	511	46510	27	CY	CLASS QC1 CONCRETE, FOOTING	
		1									1	511	46610	1	CY	CLASS QC1 CONCRETE, HEADWALL	
		41									41	512	10050	41	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
		189									189	512	33000	189	SY	TYPE 2 WATERPROOFING	
		26									26	516	13600	26	SF	1" PREFORMED EXPANSION JOINT FILLER	
		6									6	518	21200	6	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
		72									72	611	94936	72	FT	9' X 4' CONDUIT, TYPE A, 706.05	
STRUCTURE OVER 20 FOOT SPAN (DEL-00521-12.750)																	
		LS								LS		202	11002	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN	
		111								111		202	22900	111	SY	APPROACH SLAB REMOVED	
		LS								LS		503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
		605								605		503	21100	605	CY	UNCLASSIFIED EXCAVATION	
		19,112								19,112		509	10000	19,112	LB	EPOXY COATED STEEL REINFORCEMENT	
		313								313		511	46512	313	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	
		13								13		511	46010	13	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING	
		2								2		511	46610	2	CY	CLASS QC1 CONCRETE, HEADWALL	
		82								82		512	10050	82	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
		161								161		512	33000	161	SY	TYPE 2 WATERPROOFING	
		289								289		512	33010	289	SY	TYPE 3 WATERPROOFING	
		31								31		516	13600	31	SF	1" PREFORMED EXPANSION JOINT FILLER	
		13								13		518	21200	13	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
		72								72		611	70000	72	FT	CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE THREE SIDED FLAT TOPPED CULVERT (34'-0" SPAN X 10'-0" RISE)	

GENERAL SUMMARY

DESIGN AGENCY

 www.bgegroup.com
 5560 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER
 JEP

REVIEWER
 RG 08-28-24

PROJECT ID
 105433

SHEET TOTAL
 P.13 | 101

GENERAL NOTES:

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 9th EDITION, 2020, SUPPLEMENTAL SPECIFICATIONS 800, 832, AND 902, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:
 800-2023 REVISED 1/19/2024
 832 REVISED 7/21/2023
 902 REVISED 7/19/2019

DESIGN LOADING:

HL93 AND THE ALTERNATE MILITARY LOADING.
 FUTURE WEARING SURFACE (FWS) OF 60 POUNDS PER SQUARE FOOT.

DESIGN STRESSES:

CAST-IN-PLACE STRUCTURES:
 CONCRETE CLASS "QC1" - $f_c = 4,000$ PSI SUBSTRUCTURE
 REINFORCING STEEL - ASTM A615 OR A996 - $F_y = 60,000$ PSI

FOUNDATION BEARING RESISTANCE:

REAR AND FORWARD CULVERT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 5.1 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT STATE BEARING PRESSURE OF 8.1 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 11.2 KIPS PER SQUARE FOOT.

STANDARD ABBREVIATIONS:

- BRGS. - BEARINGS
- C/C - CENTER TO CENTER
- C.J. - CONSTRUCTION JOINT
- CPP. - CORRUGATED PLASTIC PIPE
- CLR. - CLEAR
- DIA. - DIAMETER
- E.F. - EACH FACE
- EQ. - EQUAL
- EXIST. - EXISTING
- EXP. - EXPANSION
- F.A. - FORWARD ABUTMENT
- F.F. - FAR FACE
- F.S. - FIELD SPLICE
- MIN. - MINIMUM
- N.F. - NEAR FACE
- PEJF - PERFORMED EXPANSION JOINT FILLER
- R.A. - REAR ABUTMENT
- SPA. - SPACING/SPACES
- TYP. - TYPICAL
- MAX. - MAXIMUM
- SER. - SERIES
- STR. - STRAIGHT
- (T). - TOP
- (B). - BOTTOM
- (T&B). - TOP AND BOTTOM
- INC. - INCREMENT

THREE-SIDED CULVERT WALL AND TOP SLAB THICKNESS:

THE WALL AND TOP THICKNESSES SHOWN ON THE PLANS WERE OBTAINED FROM THE MANUFACTURERS AT THE TIME PLANS WERE PREPARED. IF THE WALL AND/OR TOP THICKNESS OF THE CULVERT PROPOSED ARE DIFFERENT FROM WHAT IS SHOWN IN THE PLANS, A MARKED COPY OF THE PROJECT PLANS, INCLUDING ALL PLAN NOTES AND DETAILS SHOWING ALL ITEMS AFFECTED BY THE DIFFERENT CULVERT DIMENSIONS, SHALL BE SUBMITTED FOR APPROVAL WITH THE SHOP DRAWINGS. ALL WORK REQUIRED TO ACCOMMODATE ANY REVISED DIMENSIONS SHALL BE AT NO EXTRA COST TO THE STATE.

ITEM 512, TYPE 2 WATERPROOFING:

MEMBRANE WATERPROOFING (SHEET TYPE 2) SHALL EXTEND VERTICALLY DOWN ALL SIDES OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. THE EXTERIOR JOINT GAP ON THE TOP AND SIDES BETWEEN THE PRECAST CULVERT SECTIONS SHALL BE FILLED WITH PORTLAND CEMENT MORTAR PRIOR TO INSTALLING THE MEMBRANE WATERPROOFING. JOINT WRAP AS SPECIFIED IN 611.08 AND CONCRETE SEALING AS SPECIFIED IN 611.09 ARE NOT REQUIRED UNDER THE LIMITS OF THE MEMBRANE WATERPROOFING. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE AND BID PER SQUARE YARD FOR ITEM 512, TYPE 2 WATERPROOFING.

ITEM 512, TYPE 3 WATERPROOFING:

MEMBRANE WATERPROOFING (SHEET TYPE 3) SHALL BE APPLIED TO THE TOP SURFACE OF THE PRECAST CULVERT SECTIONS. THE EXTERIOR JOINT GAP ON THE TOP AND SIDES BETWEEN THE PRECAST CULVERT SECTIONS SHALL BE FILLED WITH PORTLAND CEMENT MORTAR PRIOR TO INSTALLING THE MEMBRANE WATERPROOFING. JOINT WRAP AS SPECIFIED IN 611.08 AND CONCRETE SEALING AS SPECIFIED IN 611.09 ARE NOT REQUIRED UNDER THE LIMITS OF THE MEMBRANE WATERPROOFING. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE AND BID PER SQUARE YARD FOR ITEM 512, TYPE 3 WATERPROOFING.

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE DEL-521-12.75 BRIDGE (SFN 2103664) WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT AT THE BRIDGE.

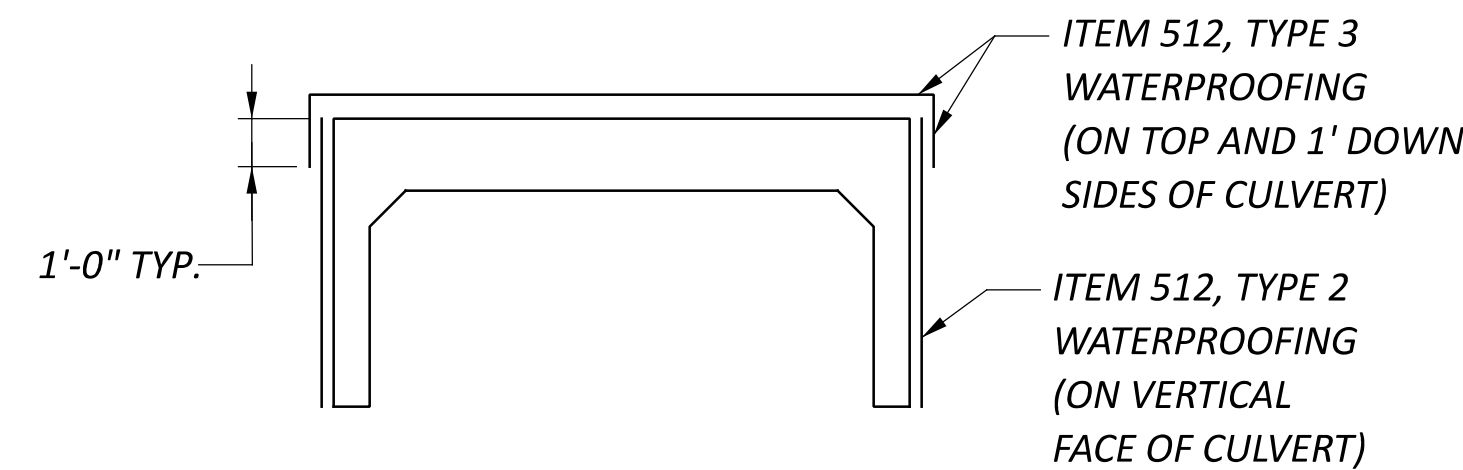
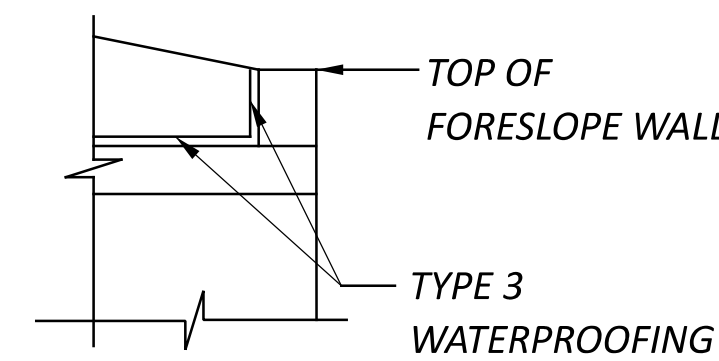
A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO THE OEPA ELECTRONICALLY OR VIA US MAIL TO:

OHIO EPA
 DAPC-ASBESTOS
 P.O. BOX 1049
 COLUMBUS, OHIO 43216-1049

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR REHABILITATION. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER.

INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED.

THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM.



ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION
202	11002	LUMP	LUMP	STRUCTURE REMOVED, OVER 20 FOOT SPAN
202	22900	111	SY	APPROACH SLAB REMOVED
503	11100	LUMP	LUMP	COFFERDAMS AND EXCAVATION BRACING
503	21100	605	CY	UNCLASSIFIED EXCAVATION
509	10000	19112	LB	EPOXY COATED STEEL REINFORCEMENT
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512	33000	161	SY	TYPE 2 WATERPROOFING
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516	13600	31	SF	1" PREFORMED EXPANSION JOINT FILLER
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611	70000	72	FT	CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE THREE SIDED FLAT TOPPED CULVERT (34'-0" SPAN x 10'-0" RISE)

GENERAL NOTES AND ESTIMATED QUANTITIES
 BRIDGE NO. DEL-00521-12.750
 S.R. 521 OVER LITTLE WALNUT CREEK

SFN 2103665
 DESIGN AGENCY

 5960 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016
 DESIGNER: LA CHECKER: RG/GA
 REVIEWER: GTB 06-05-24
 PROJECT ID: 105433
 SUBSET: 2 TOTAL: 10
 SHEET: P.80 TOTAL: 101