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REF NO.	SHEET NO.	PHASING	614	614	614	614	614	614	614	614	614	614	614	614	615	622	622				
			INCREASED BARRIER DELINEATION FT	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL) EACH	BARRIER REFLECTOR, TYPE I ONE WAY EACH	BARRIER REFLECTOR, TYPE I BIDIRECTIONAL EACH	OBJECT MARKER, ONE WAY EACH	OBJECT MARKER, TWO WAY EACH	WORK ZONE EDGE LINE, CLASS I, 6" (WHITE) MILE	WORK ZONE EDGE LINE, CLASS I, 6" (YELLOW) MILE	WORK ZONE CENTER LINE, CLASS I MILE		WORK ZONE CHANNELIZING LINE, CLASS I, 12" FT	WORK ZONE STOP LINE, CLASS I FT	WORK ZONE ARROW, CLASS I EACH	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	PORTABLE BARRIER, 50", AS PER PLAN FT	PORTABLE BARRIER, 50", BRIDGE MOUNTED, AS PER PLAN FT			
PHASE 1A																					
EL-1	12	STA 14+00 TO STA 16+52																			
EL-2	12	STA 14+00 TO STA 16+52																			
EL-3	12-13	STA 14+00 TO STA 25+42																			
CL-1	12	STA 16+52 TO STA 24+50																			
CL-2	12-13	STA 22+90 TO STA 24+50																			
PHASE 1B																					
EL-1	14	STA 15+50 TO STA 25+90																			
EL-2	14	STA 14+00 TO STA 18+59																			
EL-3	14	STA 14+00 TO STA 18+59																			
EL-4	14	STA 19+00 TO STA 22+83																			
CL-1	14-15	STA 18+59 TO STA 25+76																			
IA-1	14	STA 17+79		1																	
IA-2	14	STA 19+60		1																	
IA-3	14	STA 22+15		1																	
IA-4	15	STA 23+80		1																	
PB-1	14-15	STA 18+00 TO STA 23+80	365			13		13									540	40			
PB-2	14	STA 19+85 TO STA 22+15	15			6		6									190	40			
	14	STA 19+00 TO STA 20+86													104						
	14	STA 21+15 TO STA 22+83													94						
PHASE 2																					
EL-1	16-17	STA 14+00 TO STA 24+50																			
EL-2	16-17	STA 14+00 TO STA 24+50																			
EL-3	16	STA 19+06 TO STA 22+79																			
EL-4	16	STA 19+00 TO STA 22+83																			
CL-1	17	STA 24+50 TO STA 25+79																			
CL-2	17	STA 24+50 TO STA 25+00																			
CH-1	17	STA 25+00 TO STA 25+85												85							
IA-1	16	STA 18+91		1																	
IA-2	16	STA 18+91		1																	
IA-3	16	STA 19+60		1																	
IA-4	16	STA 22+00		1																	
IA-5	16	STA 22+65		1																	
IA-6	16	STA 22+65		1																	
PB-1	16	STA 19+50 TO STA 22+00	35		6			6													
PB-2	16	STA 19+16 TO STA 22+65	134		8			8													
PB-3	16	STA 19+16 TO STA 22+65	134		8			8													
PB-4	16	STA 19+85 TO STA 22+00			6			6													
AR-1	17	STA 25+10																			
AR-2	17	STA 25+48																			
AR-3	17	STA 25+55																			
TOTALS CARRIED TO SHEET 11			683	10	28	19	28	19		1.31	0.35		85	3	198	1640	280				

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MAINTENANCE OF TRAFFIC SUBSUMMARY			
CUY - 43-6.04			
10		116	

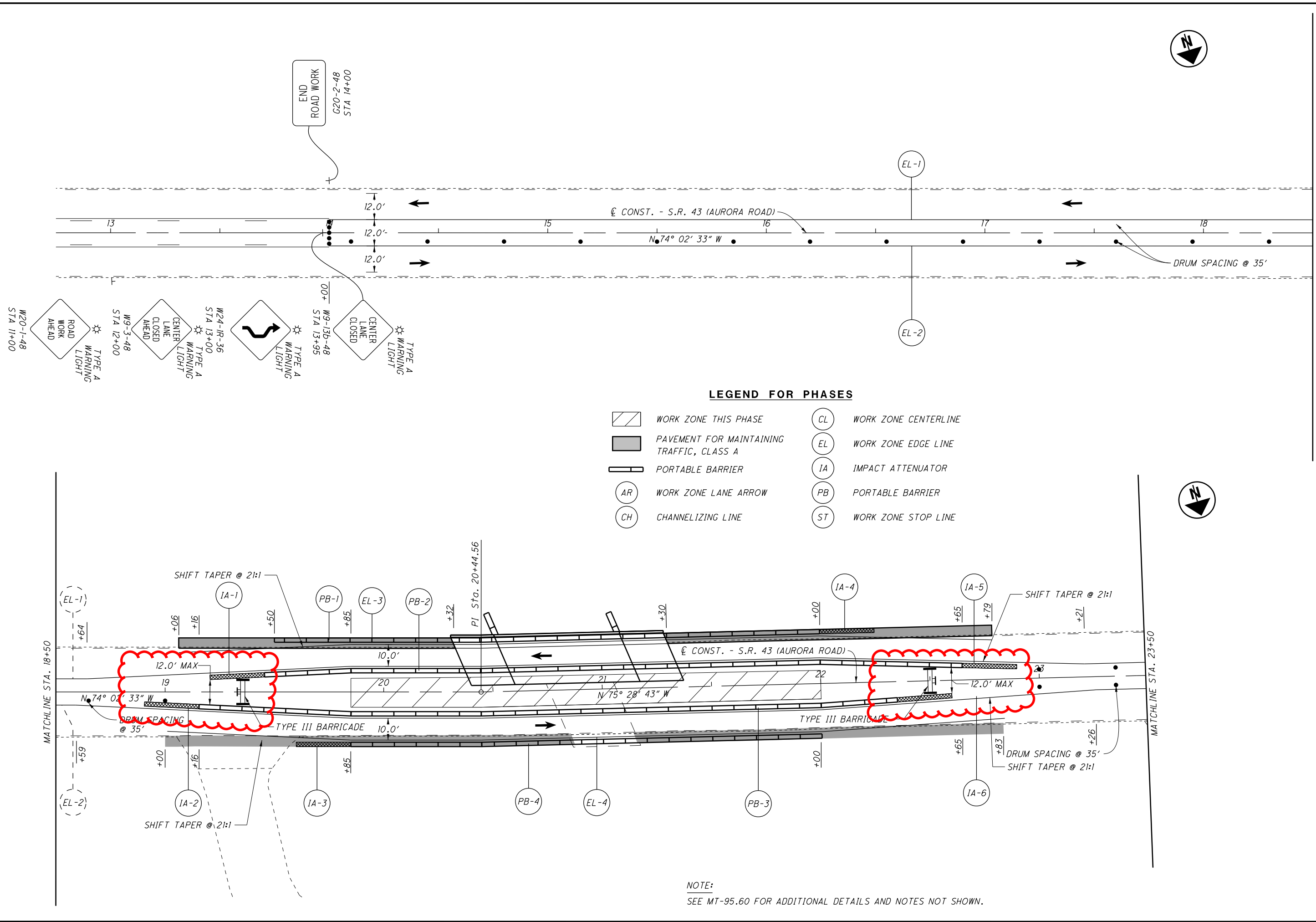
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REF NO.	SHEET NO.	STATION TO STATION	614	614	614	614	614	614	614	614	614	614	614	614	615	622	622			
			INCREASED BARRIER DELINEATION FT	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL) EACH	BARRIER REFLECTOR, TYPE I ONE WAY EACH	BARRIER REFLECTOR, TYPE I BIDIRECTIONAL EACH	OBJECT MARKER, ONE WAY EACH	OBJECT MARKER, TWO WAY EACH	WORK ZONE EDGE LINE, CLASS I, 6" (WHITE) MILE	WORK ZONE EDGE LINE, CLASS I, 6" (YELLOW) MILE	WORK ZONE CENTER LINE, CLASS I MILE		WORK ZONE CHANNELIZING LINE, CLASS I, 12" FT	WORK ZONE STOP LINE, CLASS I FT	WORK ZONE ARROW, CLASS I EACH	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY		PORTABLE BARRIER, 50", AS PER PLAN FT	PORTABLE BARRIER, 50", BRIDGE MOUNTED, AS PER PLAN FT	
PHASE 2 (CONTINUED)																				
ST-1	17	STA 25+79																		
ST-2	17	STA 25+85																		
	16	STA 19+06 TO STA 20+32																		
	16	STA 21+30 TO STA 22+79																		
PHASE 3																				
EL-1	18	STA 14+00 TO STA 17+02																		
EL-2	18	STA 14+00 TO STA 17+02																		
EL-3	18	STA 14+50 TO STA 25+94																		
EL-4	18-19	STA 19+02 TO STA 22+57																		
CL-1	18-19	STA 17+02 TO STA 25+76																		
CL-2	18-19	STA 23+00 TO STA 24+50																		
CH-1	19	STA 25+10 TO STA 25+94																		
IA-1	18	STA 19+60		1																
IA-2	18	STA 22+00		1																
PB-1	18	STA 19+20 TO STA 22+00	40			7		7												
PB-2	18	STA 19+85 TO STA 23+40	140			9		9												
AR-1	19	STA 25+10																		
AR-2	19	STA 25+48																		
AR-3	19	STA 25+55																		
ST-1	19	STA 25+76																		
ST-2	19	STA 25+94																		
PHASE 4																				
EL-1	20	STA 14+00 TO STA 19+02																		
EL-2	20	STA 14+00 TO STA 19+02																		
EL-3	20-21	STA 16+50 TO STA 25+76																		
CL-1	20-21	STA 19+02 TO STA 25+76																		
CL-2	20-21	STA 23+25 TO STA 25+00																		
CH-1	21	STA 25+00 TO STA 25+94																		
IA-1	21	STA 23+50		1																
AR-1	21	STA 25+10																		
AR-2	21	STA 25+48																		
AR-3	21	STA 25+55																		
ST-1	21	STA 25+76																		
ST-2	21	STA 25+94																		
PB-1	20	STA 18+60 TO STA 23+50	67			11		11												
SUBTOTALS FROM THIS SHEET			247	3		27		27		0.79		0.36		178	81	6		153		
SUBTOTALS FROM SHEET 10			683	10	28	19	28	19		1.31		0.35		85		3		198		
TOTALS CARRIED TO GENERAL SUMMARY			930	13	28	46	28	46		2.10		0.71		263	81	9		351		

351
180
1640
280
2590
460

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MAINTENANCE OF TRAFFIC SUBSUMMARY
CUY - 43-6.04
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116

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NOTE:
SEE MT-95.60 FOR ADDITIONAL DETAILS AND NOTES NOT SHOWN.

MAINTENANCE OF TRAFFIC PLAN
PHASE 2 - STA 13+50 TO STA 23+50

CUY-43-6.04

16
116

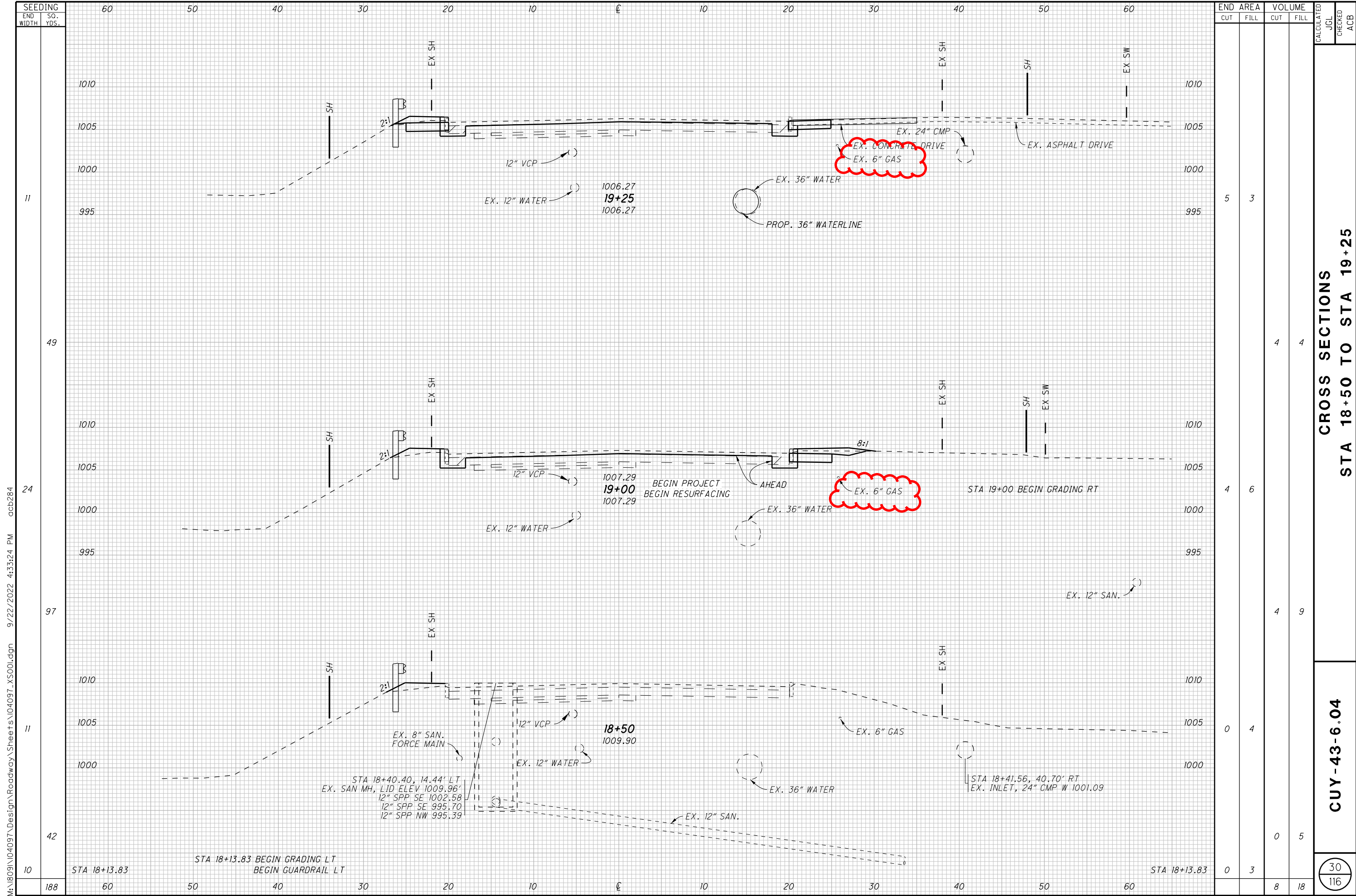
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SHEET NUM.											PART.	ALT	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE	
3, 4	5, 6, 7	10, 11		24	25	26	39	42	63	103	OFFICE CALCS	01/BRO/BR	(X)	EXT	TOTAL		NO.		
											88	88		SPECIAL	45130000	88	FT	PRESSURE RELIEF JOINT, TYPE A	
											71	71		452	12010	71	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS OC IP	
											549	549		609	26000	549	FT	CURB, TYPE 6	
																		WATER WORK	
								40				40		638	06705	40	FT	20" STEEL PIPE ENCASEMENT, OPEN CUT, AS PER PLAN	39
								40				40		638	06914	40	FT	54" STEEL PIPE ENCASEMENT, OPEN CUT, AS PER PLAN	39
								1				1		SPECIAL	63820538	1	EACH	6" GATE VALVE WITH VALVE BOX, CITY OF CLEVELAND SPECIFICATIONS	
								2				2		SPECIAL	63820586	2	EACH	12" GATE VALVE WITH VALVE BOX, CITY OF CLEVELAND SPECIFICATIONS	
								2				2		SPECIAL	63820738	2	EACH	2" AIR RELEASE VALVE, CITY OF CLEVELAND SPECIFICATIONS	
								1				1		SPECIAL	63820750	1	EACH	6" FIRE HYDRANT, CITY OF CLEVELAND SPECIFICATIONS	
								1				1		SPECIAL	63820752	1	EACH	FIRE HYDRANT REMOVED FOR STORAGE, CITY OF CLEVELAND SPECIFICATIONS	
								45				45		SPECIAL	63820770	45	FT	1" COPPER WATER SERVICE LINE, CITY OF CLEVELAND SPECIFICATIONS	
								2				2		638	98000	2	EACH	WATER WORK, MISC.:CONNECT TO EXISTING 12" CI WATERLINE	39
								1				1		638	98000	1	EACH	WATER WORK, MISC.:CONNECTION ASSEMBLY	39
							LS					LS		638	98100	LS		WATER WORK, MISC.:CATHODIC PROTECTION FOR 36" DUCTILE IRON WATERMAIN, COMPLETE IN PLACE	39
								288				288		638	98600	288	FT	WATER WORK, MISC.:12" WATER MAIN AND FITTINGS	39
								393				393		638	98600	393	FT	WATER WORK, MISC.:36" WATER MAIN AND FITTINGS	39
								15				15		638	98600	15	FT	WATER WORK, MISC.:6" WATER MAIN AND FITTINGS	39
																		WATER WORK ALTERNATES	
								2				2	X	638	98000	2	EACH	WATER WORK, MISC.:CONNECT TO EXISTING 36" PCC WATERMAIN (ALTERNATE 1)	39
								2				2	X	638	98000	2	EACH	WATER WORK, MISC.:CONNECT TO EXISTING 36" PCC WATERMAIN (ALTERNATE 2)	39
																		TRAFFIC CONTROL	
				13								13		626	00116	13	EACH	BARRIER REFLECTOR, TYPE 5, (BI-DIRECTIONAL)	
									10.5			10.5		630	02100	10.5	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
									41.5			41.5		630	03100	41.5	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
									32.7			32.7		630	80100	32.7	SF	SIGN, FLAT SHEET	
									7			7		630	84900	7	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
									1			1		630	85100	1	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
									6			6		630	86002	6	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
									0.4			0.4		642	00300	0.4	MILE	CENTER LINE, TYPE 1	
									136			136		642	00400	136	FT	CHANNELIZING LINE, 8", TYPE 1	
									28			28		642	00500	28	FT	STOP LINE, TYPE 1	
									8			8		642	01300	8	EACH	LANE ARROW, TYPE 1	
																		STRUCTURE OVER 20 FOOT SPAN (CUY-43-0607)	
																		FOR QUANTITIES SEE SHEET 67	
																		MAINTENANCE OF TRAFFIC	
	16											16		410	12000	16	CY	TRAFFIC COMPACTED SURFACE, TYPE A OR B	
	48											48		614	11110	48	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		930										930		614	11630	930	FT	INCREASED BARRIER DELINEATION	
		13										13		614	12380	13	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
		2										2		614	13000	2	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
												46		614	13310	46	EACH	BARRIER REFLECTOR, TYPE 1, (BI-DIRECTIONAL)	
												28		614	13310	28	EACH	BARRIER REFLECTOR, TYPE 1, (ONE WAY)	
												28		614	13350	28	EACH	OBJECT MARKER, ONE WAY	
												46		614	13360	46	EACH	OBJECT MARKER, TWO WAY	
	18											18		614	18601	18	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	6
												0.71		614	21000	0.71	MILE	WORK ZONE CENTER LINE, CLASS I	
												2.1		614	22010	2.1	MILE	WORK ZONE EDGE LINE, CLASS I, 6"	
												263		614	23010	263	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12"	
												81		614	26000	81	FT	WORK ZONE STOP LINE, CLASS I	
												9		614	30000	9	EACH	WORK ZONE ARROW, CLASS I	
												351		615	20000	351	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
	2											2		616	10000	2	MGAL	WATER	
		2,590										2,590		622	41011	2,590	FT	PORTABLE BARRIER, 50", AS PER PLAN	5
		460										460		622	41011	460	FT	PORTABLE BARRIER, 50", BRIDGE MOUNTED, AS PER PLAN	5
																		INCIDENTALS	
												LS		614	11000	LS		MAINTAINING TRAFFIC	
												6		619	16010	6	MNTH	FIELD OFFICE, TYPE B	
												LS		623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
												LS		624	10000	LS		MOBILIZATION	

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GENERAL SUMMARY			
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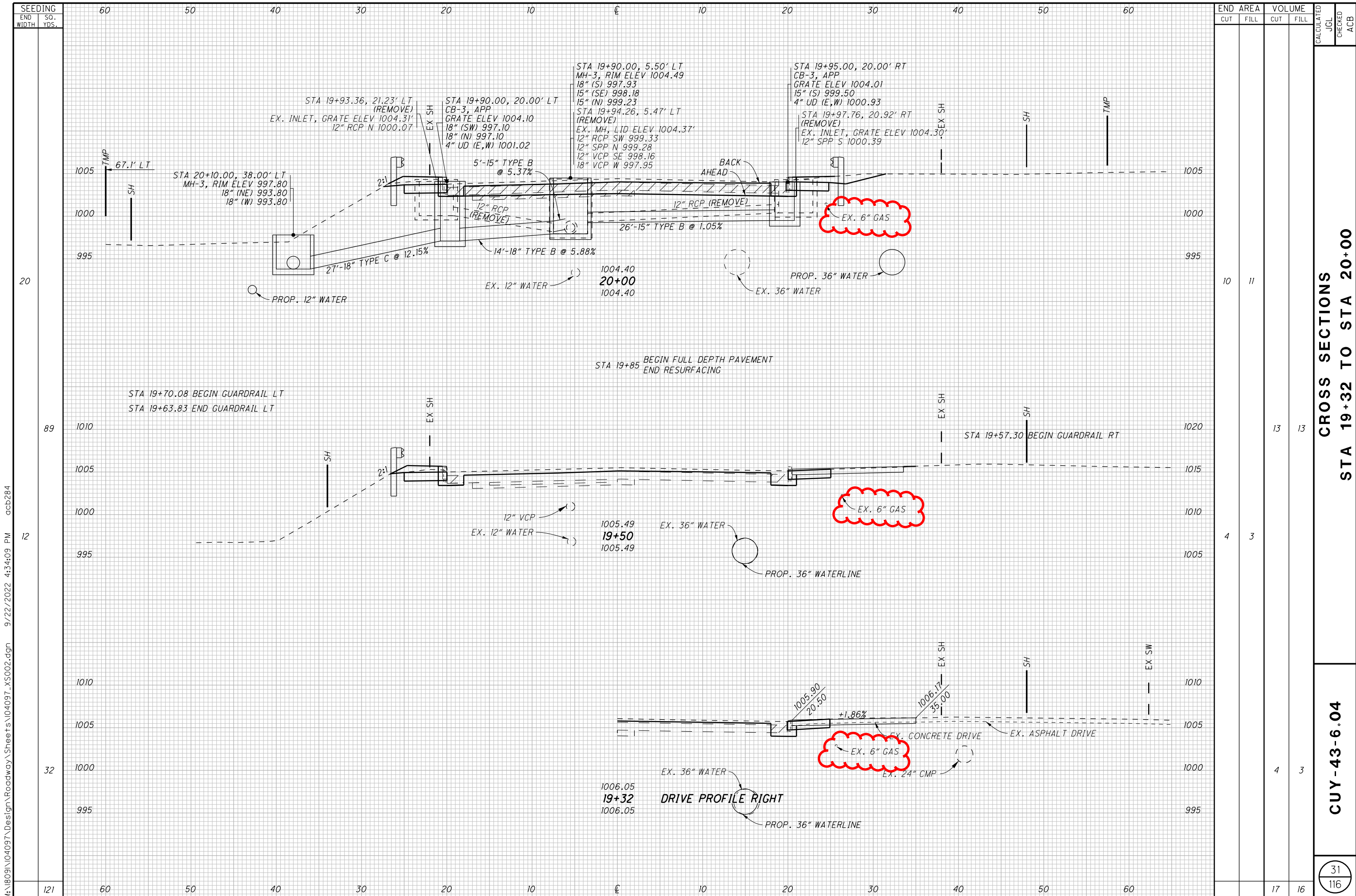
END STA	AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
188	0	3	8	18		
42	0	4	0	5		
97	4	6	4	9		
24	4	6	4	4		
49	5	3	4	4		
11	5	3	4	4		

**CROSS SECTIONS
 STA 18+50 TO STA 19+25**

CUY-43-6.04

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 116

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END STA	AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
10		11				
13		13				
4		3				
4		3				
17		16				

CROSS SECTIONS
STA 19+32 TO STA 20+00

CUY-43-6.04

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STANDARDS FOR WATERWORK

ALL WATER WORK SHALL CONFORM TO THE CLEVELAND DIVISION OF WATER STANDARDS AND SPECIFICATIONS.

WATERLINE SHUTDOWN RESTRICTIONS

THE CONTRACTOR SHALL NOTIFY THE CLEVELAND DIVISION OF WATER (CONTACT INFORMATION BELOW) IN WRITING A MINIMUM OF 30 DAYS IN ADVANCE OF THE DATE THE WATERLINE SHUTDOWN IS NEEDED.

CLEVELAND DIVISION OF WATER
ATTN: FRED ROBERTS
1201 LAKESIDE AVE.
CLEVELAND, OH 44114
(216) 664-2444

WATERLINE CLOSURES ARE RESTRICTED TO THE PERIOD BETWEEN NOVEMBER 1 AND MAY 1, AND SHALL NOT EXCEED 2 MONTHS IN TOTAL DURATION.

WATER SERVICE LOCATIONS

WATER SERVICES SHOWN IN THE PLANS ARE BASED ON FIELD SURVEY WORK, RECORD PLANS AND INFORMATION PROVIDED BY CLEVELAND DIVISION OF WATER. THE CONTRACTOR SHALL BE INFORMED THE ACTUAL LOCATIONS IN THE FIELD MAY VARY FROM WHAT IS SHOWN IN THE PLANS, HOWEVER NO ADDITIONAL COMPENSATION SHALL BE MADE TO ACCOMMODATE THESE VARIANCES.

ITEM 638 - WATER WORK, MISC.: WATER MAIN AND FITTINGS (VARIOUS SIZES)

THIS ITEM SHALL MEET ALL OF CLEVELAND DIVISION OF WATER STANDARD REQUIREMENTS FOR WATERLINE INSTALLATION.

ALL PIPE JOINTS SHALL BE BOLTLESS RESTRAINED PIPE JOINTS (MCWANE TR FLEX OR APPROVED EQUAL).

ANY SURFACE RESTORATION REQUIRED FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 638 - WATER WORK, MISC.: WATER MAIN AND FITTINGS.

ALL ADDITIONAL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ALL RESPECTIVE SIZES OF ITEM 638 - WATER WORK, MISC.: WATER MAIN AND FITTINGS.

ITEM 638 - WATER WORK, MISC.: CONNECT TO EXISTING 12" CI WATERMAIN

THE CONTRACTOR SHALL CONNECT TO THE EXISTING 12" CI PIPE PER THE DETAIL ON SHEET 44.

THIS WORK SHALL BE COORDINATED WITH THE CLEVELAND DIVISION OF WATER AS OUTLINED IN THEIR NOTES ON SHEET 40.

THE CONTRACTOR SHALL INCLUDE IN THE UNIT BID PRICE FOR ITEM 638 - WATER WORK, MISC.: CONNECT TO EXISTING 12" CI WATERMAIN, THE COST FOR ABANDONING AND/OR REMOVING EXISTING WATER MAINS, AS WELL AS ANY COST ASSOCIATED WITH THRUST BLOCKS, CAPS OR OTHER APPURTENANT FITTINGS NECESSARY FOR THE ABANDONMENT AND/OR REMOVAL.

ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ALL RESPECTIVE SIZES OF ITEM 638 - WATER WORK, MISC.: CONNECT TO EXISTING 12" CI WATERMAIN.

ITEM 638 - WATER WORK, MISC.: CONNECT TO EXISTING 36" PCC WATERMAIN (ALTERNATE 1)

THE CONTRACTOR SHALL CONNECT TO THE EXISTING PCC PIPE WITH A FORTERRA TRANSITION (OR APPROVED EQUAL) AS DETAILED ON SHEET 43.

THIS WORK SHALL BE COORDINATED WITH THE CLEVELAND DIVISION OF WATER AS OUTLINED IN THEIR NOTES ON SHEET 40.

THE CONTRACTOR SHALL INCLUDE IN THE UNIT BID PRICE FOR ITEM 638 - WATER WORK, MISC.: CONNECT TO EXISTING 36" PCC WATERMAIN, THE COST FOR ABANDONING AND/OR REMOVING EXISTING WATER MAINS, AS WELL AS ANY COST ASSOCIATED WITH THRUST BLOCKS, CAPS OR OTHER APPURTENANT FITTINGS NECESSARY FOR THE ABANDONMENT AND/OR REMOVAL.

ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ALL RESPECTIVE SIZES OF ITEM 638 - WATER WORK, MISC.: CONNECT TO EXISTING 36" PCC WATERMAIN.

ITEM 638 - WATER WORK, MISC.: CONNECT TO EXISTING 36" PCC WATERMAIN (ALTERNATE 2)

THIS ITEM SHALL MEET THE REQUIREMENTS OF ITEM 638 - WATER WORK, MISC.: CONNECT TO EXISTING 36" PCC WATERMAIN, AND IN ADDITION THE CONTRACTOR SHALL INSTALL A VALVE ASSEMBLY PER SM-STD2B AND CONNECT TO THE EXISTING 36" PCC WATERLINE WITH A FORTERRA TRANSITION (OR APPROVED EQUAL).

FULL DEPTH PAVEMENT PER THE TYPICAL SECTION SHALL BE PLACED IN THE AREAS DISTURBED BY THE INSTALLATION OF THE VALVE ASSEMBLY.

ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ALL RESPECTIVE SIZES OF ITEM 638 - WATER WORK, MISC.: CONNECT TO EXISTING 36" PCC WATERMAIN. (ALTERNATE 2)

ITEM 638 - WATER WORK, MISC.: CONNECTION ASSEMBLY

THE CONTRACTOR SHALL COMPLETE THE SERVICE CONNECTION PER THE CLEVELAND DIVISION OF WATER STANDARD DRAWING STD-C04.

THIS ITEM INCLUDES THE TAPPING SADDLE, COUPLINGS, CORP STOP, CURB STOP, CURB BOX AND ALL WORK PER THE STANDARD DETAIL, AND THE REMOVAL OF THE EXISTING SERVICE CONNECTION, VALVES, PIPE, CURB STOPS AND BOXES, AND OTHER MATERIALS ASSOCIATED WITH THE EXISTING SERVICE CONNECTION. THIS WORK DOES NOT INCLUDE THE COPPER SERVICE PIPE WHICH SHALL BE FURNISHED UNDER ITEM 638 - 1" COPPER SERVICE BRANCH.

ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 638 - WATER WORK MISC.: CONNECTION ASSEMBLY.

**20" STEEL PIPE ENCASEMENT, OPEN CUT, AS PER PLAN.
54" STEEL PIPE ENCASEMENT, OPEN CUT, AS PER PLAN.**

THE CARRIER PIPE SHALL BE ENCASED WITH A 20", SCHEDULE 20 STEEL PIPE WITH A WALL THICKNESS OF 3/8" AS DETAILED IN STANDARD DRAWING STD-016.

COST FOR CONCRETE ENCASEMENT OF WATERLINE AND BACKFILL FOR THE STREAM EXCAVATION AS REQUIRED BY STANDARD DRAWINGS STD-019 & STD-020 SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 638 - 20" STEEL PIPE ENCASEMENT, OPEN CUT, AS PER PLAN. OR ITEM 638 - 54" STEEL PIPE ENCASEMENT, OPEN CUT, AS PER PLAN.

ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 638 - 20" STEEL PIPE ENCASEMENT, OPEN CUT, AS PER PLAN. OR ITEM 638 - 54" STEEL PIPE ENCASEMENT, OPEN CUT, AS PER PLAN.

ITEM 638 - WATERWORK MISC.: CATHODIC PROTECTION FOR 36" DUCTILE IRON WATERMAIN, COMPLETE IN PLACE

THIS ITEM OF WORK SHALL CONSIST OF INSTALLING A CATHODIC PROTECTION SYSTEM PER CLEVELAND WATER DEPARTMENT STANDARD DRAWINGS SM-STD10 & SM-STD12. THIS WORK INCLUDES FURNISHING ALL LABOR, EQUIPMENT, APPLIANCES, AND MATERIALS IN PERFORMING ALL OPERATIONS NECESSARY FOR THE INSTALLATION OF ALL ELECTRICAL WORK FOR AN ELECTROLYSIS TEST STATION IN STRICT ACCORDANCE WITH THIS SECTION AND CLEVELAND WATER DEPARTMENT STANDARD DRAWING SM-STD10 AND APPROVAL OF THE ENGINEER. THIS WORK ALSO INCLUDES THE FURNISHING OF 26-60LB ZINC VERTICAL SACRIFICIAL ANODES AT THE BEGINNING AND END OF THE INSTALLED PIPE, PLUS ANODE LOCATED AT APPROXIMATELY 10 FOOT SPACINGS ALONG THE WATERMAIN AS INDICATED ON THE PLANS. THE VERTICAL ANODES SHALL BE LOCATED 3 FEET HORIZONTAL OFFSET FROM THE PIPE AND THE TOP OF THE VERTICAL ANODE SHALL BE LOCATED BELOW THE OUTSIDE INVERT OF THE WATERMAIN PIPE. TWO ELECTROLYSIS TEST STATIONS WILL BE INSTALLED AT EITHER END OF THE ALIGNMENT. THIS WORK INCLUDES THE ELECTRICAL CONTINUITY BONDING OF ALL NEW PIPE SEGMENTS.

THE INSTALLATION, MATERIAL AND EQUIPMENT REQUIRED FOR THE ELECTROLYSIS TEST STATION SHALL CONFORM TO THE SPECIFICATIONS SHOWN IN CLEVELAND WATER DEPARTMENT STANDARD DRAWING SM-STD10 AND SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE AND THE ELECTRICAL CODES OF THE STATE OF OHIO AND THE POLITICAL SUBDIVISIONS, AS APPLICABLE TO THE LOCATION IN WHICH THE WORK IS TO BE PERFORMED AND WITH THE APPROVAL OF THE ENGINEER.

PAYMENT WILL BE MADE AT THE CONTRACT LUMP SUM UNIT PRICE BID, WHICH SHALL INCLUDE ALL ELECTRICAL WORK REQUIRED FOR THE INSTALLATION OF THE ELECTROLYSIS TEST STATION; ADDITIONAL EXCAVATION FOR THE ANODE BEDS AND COVERING OF THE ANODES WITH NATIVE EARTH BACKFILL TAKEN FROM THE BOTTOM OF THE PIPE TRENCH, BACKFILL AND OR PREMIUM BACKFILL TO BRING THE TRENCH BED TO GRADE, ADDITIONAL SHEETING AND SHORING (INCLUDING USE OF TRENCH BOX) NEEDED TO INSTALL ANODE BED, REPAIR AND/OR REPLACEMENT OF MATERIALS DUE TO DEFECTS; TRENCH DEWATERING, AND ROCK EXCAVATION AND THE FURNISHING OF ALL MATERIALS, LABOR, TOOLS, EQUIPMENT, AND INCIDENTALS AS SPECIFIED FOR THE PROPER COMPLETION OF THE WORK INCLUDED UNDER THIS CONTRACT.

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WATERLINE NOTES

CUY - 43-6.04

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CALC: TAC DATE: 2/1/2021
 CHECKED: ACB DATE: 2/17/2021

ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ALT. (X)	ABUT.	SUPER.	GEN.	SEE STRUCTURE SHEET
202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	2 / 36
202	22900	183	SY	APPROACH SLAB REMOVED				183	
202	23500	308	SY	WEARING COURSE REMOVED			308		
503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN				LS	2 / 36
503	21100	139	CY	UNCLASSIFIED EXCAVATION				139	
505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION				LS	
507	00501	1020	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN		1020			2 / 36
507	00551	1140	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN		1140			2 / 36
509	10000	40334	LB	EPOXY COATED REINFORCING STEEL		17206	23128		
511	34447	147	CY	CLASS OC2 CONCRETE WITH OC/OA, BRIDGE DECK, AS PER PLAN			147		23 / 36
511	43512	107	CY	CLASS OC1 CONCRETE WITH OC/OA, ABUTMENT INCLUDING FOOTING		107			
512	10050	120	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)			71	49	
512	10101	225	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN		48	133	44	2 / 36
512	10300	58	SY	SEALING CONCRETE BRIDGE DECKS WITH HMMW RESIN			58		
512	33000	26	SY	TYPE 2 WATERPROOFING		26			
513	10220	56363	LB	STRUCTURAL STEEL MEMBERS, LEVEL 1			56363		
513	20000	2304	EACH	WELDED STUD SHEAR CONNECTORS			2304		
514	00800	56363	LB	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			56363		
514	00851	56363	LB	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			56363		2 / 36
514	10000	12	EACH	FINAL INSPECTION REPAIR			12		
516	13200	114	SF	1/2" PREFORMED EXPANSION JOINT FILLER		94	20		
516	13600	94	SF	1" PREFORMED EXPANSION JOINT FILLER		94			
516	13900	55	SF	2" PREFORMED EXPANSION JOINT FILLER		55			
516	14014	136	FT	INTEGRAL ABUTMENT EXPANSION JOINT SEAL		136			
516	44101	16	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 2 1/16"x10"x1'-0" WITH 1 1/2"x11"x1" LOAD PLATE		16			22 / 36
518	21200	96	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		96			
518	40000	157	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		157			
518	40010	48	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		48			
523	20000	2	EACH	DYNAMIC LOAD TESTING		2			
526	15001	240	SY	REINFORCED CONCRETE APPROACH SLABS (T=13"), AS PER PLAN				240	29 / 36 THRU 31 / 36
SPECIAL	53013000	622	SF	FORM LINER			622		
STRUCTURE ALTERNATES									
517	75120	196	FT	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING) (ALTERNATE 1)	X		115	81	
517	75121	196	FT	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING), AS PER PLAN (ALTERNATE 2)	X		115	81	2 / 36

DESIGN AGENCY
ENGINEERING ASSOCIATES, INC.
 895 EAGLE PASS - WOOSTER, OHIO 44691
 TELEPHONE: (330) 345-6556
 FAX: (330) 345-8077

DATE
 9-17-21
 REVIEWED
 SDS
 STRUCTURE FILE NUMBER
 1803396

DRAWN
 TAC
 REVISIONS

DESIGNED
 ACB
 CHECKED
 BDH

ESTIMATED QUANTITIES
 BRIDGE NO. CUY-43-0607
 OVER HAWTHORNE CREEK

CUY-43-6.04
 PID No. 104097