REGULATIONS GOVERNING THE LAYING AND REPAIR OF CONCRETE SIDEWALKS, APRONS, AND CURBING

CONCRETE WALKS SHALL BE OF ONE-COURSE CONSTRUCTION AND SHALL BE 4.5 INCHES IN THICKNESS, EXCEPT ALONG ARTERIAL AND COLLECTOR STREETS WHERE THEY MUST BE 6 INCHES IN THICKNESS. CONCRETE FOR WALKS, CURBS, DRIVES, AND APRONS SHALL BE CLASS "C" CONCRETE AS PER ITEM 608 AND SPECIAL OF THE "SUPPLEMENTAL TO STATE SPECIFICATIONS FOR THE CITY OF CLEVELAND" 1967 .

WHEN CONCRETE BLOCKS ARE LAID ON CLAY, EXTRA EXCAVATION TO A DEPTH OF 1 1/2 INCHES MUST BE MADE AND FILLED WITH SAND OR GRAVEL TO ACT AS A FOUNDATION TO THE FOUR INCHES OF SIDEWALK PROPER.

NO BLOCKS OFF CONCRETE SHALL BE LARGER THAN 6 FEET AND THE JOINTS MUST BE CUT BY THE USE OF AN APPROVED GROOVING TOOL MAKING A GROOVE ONE-FOURTH (1/4") INCHES DEEP. ALL EDGES SHALL BE ROUNDED WITH AN APPROVED EDGING TOOL TO A RADIUS OF ONE-FOURTH INCH.

EXISTING APRONS AND "DRIVE AREAS" OF THE WALK MUST BE CONSTRUCTED OF CONCRETE. APRONS AND THE AREA OF WALK OVER WHICH VEHICLES DRIVE MUST BE NO LESS THAN 6 INCHES IN THICKNESS, AND MUST BE LAID IN ACCORDANCE WITH SUPPLEMENTAL TO STATE SPECIFICATIONS FOR THE CITY OF CLEVELAND.

AT ALL WATER-METER COVERS, GAS BOXES, HYDRANTS, OR OTHER OBSTRUCTIONS, NEATLY FITTED OPENINGS SHALL BE CUT IN THE SIDEWALK. NO WALK SHALL BE LAID UNTIL ALL THESE OBSTRUCTIONS HAVE BEEN RAISED OR LOWERED TO THE CORRECT ELEVATIONS.

NO OBSTRUCTIONS SHALL BE PLACED IN FRONT OF ANY CATCH BASIN, FIRE HYDRANT, FIRE ALARM BOX OR LETTERBOX, OR NEAR ENOUGH TO THE SAME TO INTERFERE WITH THEIR USE.

NO CHANGE IN THE WIDTH OF THE WALK TO BE LAID SHALL BE MADE FROM THAT OF EXISTING WALKS ON THE STREET AT THE TIME WORK IS DONE UNDER THIS PERMIT, UNLESS SPECIALLY PERMITTED BY THE DIRECTOR OF PUBLIC SERVICE. TREES, LAWNS, AND SHRUBBERY SHALL NOT BE INTERFERED WITH OR DESTROYED BY ANY WORK PERFORMED BY THE CONTRACTOR. WALKS MUST BE LAID TO THE SAME GRADE AS EXISTING WALKS ON THE STREET, UNLESS PERMISSION FOR CHANGE OF GRADE IS OBTAINED FROM THE DIRECTOR OF PUBLIC SERVICE.

ONLY ONE-HALF OF THE SIDEWALK IN THE BUSINESS DISTRICT CAN BE OBSTRUCTED AT ONE TIME, UNLESS CONTRACTOR HAS AN OBSTRUCTION PERMIT. GUTTERS MUST BE LEFT OPEN AT ALL TIMES.

THE SPACING BETWEEN THE WALK AND THE CURB LINE MUST BE GRADED TO ALLOW WATER DRAINAGE, AND MUST BE OF A GRADUAL SLOPE FROM THE WALK TO THE CURB LINE.

THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DIRT AND RUBBISH CAUSED BY HIS WORK.

FAILURE OF A CONTRACTOR TO COMPLY WITH THESE REGULATIONS SHALL RESULT IN THE WITHHOLDING OF FUTURE PERMITS AND SHALL SUBJECT THE HOLDER OF THIS PERMIT TO THE PENALTIES PRESCRIBED IN THE SIDEWALK ORDINANCE.

CURBING: CURBING SHALL CONFORM TO THE STANDARDS ESTABLISHED FOR SIZE AND QUALITY IN THE DISTRICT IN WHICH IT IS TO BE INSTALLED. CAST-IN-PLACE CONCRETE CURBS AND INTEGRAL CURBS, WHERE USED, SHALL CONFORM TO DETAIL PLAN NO. ME-246 OF THE CITY OF CLEVELAND.

COPIES OF THESE SPECIFICATIONS AND PLANS FOR PAVEMENT REPAIR AND LAYING OF CONCRETE SIDEWALKS MAY BE OBTAINED, UPON REQUEST, FROM THE DIVISION OF ENGINEERING AND CONSTRUCTION OF THE CITY OF CLEVELAND.

SCOPE OF WORK

A. THE CONTRACTOR SHALL RELOCATE OR REMOVE ALL CLEVELAND PUBLIC POWER FACILITIES AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER ONLY AFTER CPP HAS VISIBLY CONFIRMED THAT SAID CPP FACILITIES HAVE BEEN DE-ENERGIZED AND DISCONNECTED. THIS WORK SHALL BE PROPERLY COMPLETED, INCLUDING INCIDENTALS, AS SHOWN ON THE DRAWINGS AND HEREINAFTER SPECIFIED.

B. THE MAJOR ITEMS OF WORK TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR SHALL BE AS FOLLOWS:

WORK BY THE PROJECT CONTRACTOR:

THE CONTRACTOR SHALL CONSTRUCT THE CPP UNDERGROUND POWER DISTRIBUTION NETWORK WITHIN THE PROJECT LIMITS. THIS WORK INCLUDES BUT IS NOT LIMITED TO:

- FURNISHING AND INSTALLING CONCRETE ENCASED PVC DUCT BANKS OF VARIOUS ARRANGEMENTS

- FURNISHING AND INSTALLING PRECAST BUILT-IN-PLACE ELECTRICAL VAULTS (MANHOLES) LOCATED AT STA. 7+66 & STA. 11+82.

- FURNISHING AND INSTALLING ELECTRICAL VAULT RACKING SYSTEMS WITHIN VAULTS (MANHOLES).

- REMOVING EXISTING UNDERGROUND DUCT BANKS, VAULTS, MANHOLES AND PULL BOXES

- COORDINATING WITH CPP AND ITS CONTRACTORS

- REMOVING EXISTING CPP OWNED POWER POLES

- FURNISHING AND INSTALLING FIBER REINFORCED EPOXY (FRE) DUCT BANK SYSTEMS ACROSS BRIDGES INCLUDING BEAM SUPPORT SYSTEMS

- FINISHING AND INSTALLING WOODEN POWER POLES FOR TRANSITIONS FROM UNDERGROUND TO OVERHEAD SYSTEMS AND WHERE OVERHEAD SYSTEMS ARE IMPACTED BY PROJECT CONTRACTOR'S WORK

- FURNISHING AND INSTALLING OVERHEAD ELECTRICAL CABLES, SPLICES AND HARDWARE

WORK BY CPP:

- DE-ENERGIZING ELECTRICAL SYSTEM

- REMOVING EXISTING CPP PRIMARY DISTRIBUTION CABLES ACROSS SCRANTON ROAD OVER IR-90 AFTER CABLES HAVE BEEN DE-ENERGIZED.

- FURNISHING AND INSTALLING NEW ELECTRICAL CABLE IN DUCTS.

- TESTING NEW PRIMARY DISTRIBUTION CABLES.

- INSTALLING CABLE ID TAGS ON NEW CABLES AS NECESSARY.

- ENERGIZING ELECTRICAL SYSTEM

ALONG PORTIONS OF THE CORRIDOR, THE PROJECT CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE EXISTING ELECTRICAL SYSTEM UNTIL COMPLETION AND ACTIVATION OF THE PROPOSED UNDERGROUND POWER SYSTEM. THE CONTRACTOR SHALL COORDINATE THE DETAILS OF THIS WORK WITH CPP.

SUBMITTALS

IN ADDITION TO THE REQUIREMENTS OF CMS 105, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL BY CPP ENGINEERING DEPARTMENT ON ALL EQUIPMENT AND MATERIAL FURNISHED AND REQUIRED TO PERFORM THE WORK.

DEFINITIONS

WHENEVER IN THESE SPECIFICATIONS OR IN ANY DOCUMENT OR INSTRUCTIONS ON CONSTRUCTION WHERE THESE SPECIFICATIONS GOVERN, THE FOLLOWING TERMS (OR PRONOUNS IN PLACE OF THEM)ARE USED, THE INTENT AND MEANING SHALL BE INTERPRETED AS FOLLOWS: THE CITY OF CLEVELAND, IS THE DIRECTOR OF CITY OF CLEVELAND DEPARTMENT OF PUBLIC UTILITIES.

STATUS OF CITY INSPECTOR

INSPECTORS AS DESIGNATED BY THE CITY OF CLEVELAND SHALL BE AUTHORIZED TO INSPECT ALL WORK DONE AND MATERIALS FURNISHED. SUCH INSPECTING MAY EXTEND TO ALL OR ANY PART OF THE WORK, AND TO THE PREPARATION OR MANUFACTURING OF THE MATERIALS TO BE USED IN THE WORK. THE CITY INSPECTOR, AS DESIGNATED BY THE DIRECTOR OF PUBLIC UTILITIES SHALL GIVE WORK INSTRUCTIONS TO THE PROJECT ENGINEER.

ITEM 625 - CONDUIT, CONCRETE ENCASED, AS PER PLAN

THIS ITEM CONSISTS OF CONSTRUCTING NINE (9) 5 INCH CONDUITS IN A CONCRETE ENVELOPE WITH 4000 PSI (CITY OF CLEVELAND CONCRETE MIX SPECIFICATIONS) AS PER THE DETAILED DRAWINGS. ENCASED CONCRETE CONDUITS SHALL BE MEASURED FROM THE CENTER OF THE ADJUSTED CPP MANHOLES. PAYMENT SHALL BE FOR ACCEPTED QUANTITIES PER FOOT FOR FURNISHING AND INSTALLING THE NINE (9) 5 INCH CONDUITS ENCASED IN A CONCRETE ENVELOPE FOR ITEM 625 - CONDUIT, CONCRETE ENCASED, AS PER PLAN. ANY PAVEMENT, CURB AND SIDEWALK THAT IS OUTSIDE THE PROPOSED FULL DEPTH PAVEMENT LIMITS AND IS DISTURBED TO PERFORM THIS WORK SHALL BE REPLACED IN KIND. PAYMENT FOR PERFORMING THE WORK SHALL BE INCIDENTAL TO THIS ITEM.

THE FOLLOWING ITEMS HAVE BEEN ADDED TO THE PLANS AND CARRIED TO THE GENERAL SUMMARY FOR PERFORMING THIS WORK.

ITEM 625 - CONDUIT, CONCRETE ENCASED, AS PER PLAN (5" PVC)

ITEM 625 - TRENCH, 48" DEEP

ITEM 625 - CONDUIT, MISC.: CPP BRIDGE MOUNTED CONDUITS AND INCIDENTALS

THIS ITEM CONSISTS OF CONSTRUCTING THE FRE CONDUITS IN THE BRIDGE STRUCTURE, UTILITY SUPPORT HANGERS AND ALL INCIDENTAL ITEMS SUCH AS CONDUIT FRAME, COUPLINGS AND EXPANSION JOINTS. FRE CONDUIT SHALL CONFORM TO UL1684 & 1684A AND SHALL HAVE A MINIMUM WALL THICKNESS OF 0.110 INCHES. FRE CONDUIT SHALL HAVE A 5 INCH INSIDE DIAMETER MOUNTED AS INDICATED ON THE DRAWINGS. COUPLINGS SHALL HAVE A BELL ON ONE END AND A SPIGOT ON THE OTHER END. ALL COUPLINGS SHALL BE MADE OF THE SAME MATERIAL. EXPANSION FITTINGS SHALL BE PROVIDED ON ALL EXPOSED CONDUIT RUNS.

THIS ITEM SHALL ALSO INCLUDE ALL MATERIALS AND LABOR FOR GRID STYLE CONDUIT SUPPORT BRACKET AS SHOWN ON THE BRIDGE PLANS. THE CONTRACTOR SHALL COORDINATE WITH CPP AND GET CPP APPROVAL BEFORE ORDERING THE BRACKETS.

PAYMENT SHALL BE MADE AT THE BID PRICE PER LINEAR FOOT OF CONDUIT PER ITEM 625, CONDUIT, MISC.: CPP BRIDGE MOUNTED CONDUITS & INCIDENTALS AND INCLUDES THE ENTIRE LENGTH OF CONDUIT THAT RUNS ACROSS THE BRIDGE.

ITEM 625 - CONDUIT, CONCRETE ENCASED, AS PER PLAN (5" PVC)

A. WORK INCLUDED

THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR AND SHALL PROPERLY CONSTRUCT AND CONNECT TO MANHOLES, AS SHOWN ON THE PLANS OR AS DIRECTED. ALL NON-REINFORCED AND REINFORCED CONCRETE ENCASED PVC/FRE CONDUIT AS REQUIRED FOR THE PROPER COMPLETION OF THE WORK INCLUDED UNDER THIS CONTRACT. ALL CONDUITS SHALL BE CONCRETE ENCASED UNLESS NOTED OTHERWISE.

B. CONDUIT AND FITTINGS

POLYVINYL CHLORIDE PVC CONDUIT SHALL CONFIRM TO THE UL651 STANDARDS, 5 INCH IRON PIPE SIZE (I.P.S) WITH CONCRETE ENCASEMENT AS DETAILED ON THE PLANS. COUPLINGS SHALL BE SOCKET TYPE, END BELLS AT MANHOLE ENTRANCE, 5 DEGREES SWEEPS, 11 1/4 DEGREE TO 90 DEGREES INCLUDING FILED DEGREES ANGLE COUPLINGS, STANDARD COUPLINGS, VARIOUS BENDS AND PLUGS OR CAPS TO CLOSE UNUSED CONDUITS, SHALL BE MADE OF THE SAME MATERIAL AS THE CONDUIT. CONDUIT SPACERS SHALL BE SURE AS SHOWN IN THE PLAN DETAILS. CONCRETE BLOCK SPACERS WILL NOT BE ACCEPTED.

C. CONCRETE

CONCRETE USED FOR ENCASEMENT OF CONDUITS SHALL CONFORM TO ROADWAY PLAN GENERAL NOTE CONCRETE DESIGN MIX (CLEVELAND 650). 4000 PSI CITY OF CLEVELAND MIX.

D. INSTALLATION

CONDUIT SHALL BE INSTALLED BY THE BUILT-UP METHOD WITH JOINTS IN ADJACENT DUCTS STAGGERED. NECESSARY SPACERS SHALL BE PLACED AT NO GREATER THAN 8 FEET INTERVALS TO HOLD DUCTS IN THE DESIRED CONFIGURATION, WITH THE DUCT BANK BRACED SECURELY TO KEEP IT FROM SHIFTING AND FLOATING WHILE CONCRETE IS POURED. SEALER COMPOUND FURNISHED BY THE CONDUIT AND EACH SECTION SHALL BE TAPED SECURELY INTO PLACE IN THE PREVIOUS COUPLING TO OBTAIN JOINTS THAT ARE TIGHT AND LEAK-PROOF.

1. CONCRETE SHALL BE WORKED INTO SPACES BETWEEN DUCTS SO THAT THE CONDUIT BANK IS EFFECTIVELY ENCASED IN CONCRETE WITHOUT VOIDS OR EMPTY SPACES. REINFORCING RODS SHALL BE INSTALLED AS REQUIRED AND WHERE SHOWN ON THE PLANS.

2. CONDUIT WHICH IS CUT TO FIT SHORT SECTIONS SHALL BE DEBURRED ON THE DUCT END AND THE END OF THE BELL SHALL BE REAMED IN THE INSIDE DIAMETER FOR EACH ENTRY OF THE DUCT INTO COUPLING TO PRODUCE THE SAME JOINTING CONDITIONS AS PROVIDED BY FACTORY MADE CONDUIT SECTIONS.

3. THE END BELLS SHALL BE GROUTED IN PLACE.

4. INSTALL PULLING LINE IN EACH CONDUIT.

E. BACKFILLING

REFER TO NOTES "BACKFILL MATERIAL AND BACKFILLING PROCEDURES AND FLOWABLE FILL SPECIFICATION FOR UTILITY TRENCHES".

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ITEM 625 - CONDUIT, CONCRETE ENCASED, AS PER PLAN (5" PVC) (CONT.)

F. MEASUREMENT

THE NUMBER OF FEET OF CONDUIT TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF FEET FURNISHED AND PLACED AS MEASURED ALONG THE AXIS OF THE CONDUIT DUCT BANK LINE, INCLUDING FITTINGS. THE CONDUIT DUCT BANK LINE CONTAINS 9 CONDUITS.

G. PAYMENT

THE FOOTAGE MEASURED AS PROVIDED ABOVE SHALL BE PAID FOR AT THE CONTRACTOR PRICE BID PER FOOT UNDER ITEM 625 AS DESCRIBED BELOW, CLASSIFIED AS TO SIZE AND TYPE, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR EXCAVATING AND FOR FURNISHING, HAULING, PLACING THE NINE (9) - 5" CONDUITS IN THE DUCT BANK, FITTINGS, CAPPING, PULLING LINES, SPACERS, CONCRETE, REINFORCING STEEL, SHEETING AND BRACING, BACKFILL, PLASTIC CAUTION TAPE (OR RED TINTED CONCRETE), INCIDENTAL CONCRETE, REMOVAL OF ALL SURPLUS EXCAVATION AND DISCARDED MATERIAL, BREAKING AND RESTORATION OF EXISTING MANHOLE WALLS AND ALL LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED. THESE ITEMS AS MEASURED AS PROVIDED ABOUT SHALL BE PAID FOR UNDER:

ITEM UNIT DESCRIPTION

ITEM 625 - CONDUIT, CONCRETE ENCASED, AS PER PLAN (5" PVC)

MAINTAIN EXISTING LIGHTING AND POWER

THE CONTRACTOR SHALL NOT INTERRUPT EXISTING LIGHTING AND POWER EXCEPT FOR SUCH PERIODS AS THE ENGINEER MAY REQUIRE FOR THE PROPER CONSTRUCTION OF NEW FACILITIES TO BE IN PLACE AND OPERATION. FINAL CONNECTION SHALL BE MADE BY CPP AFTER ALL TESTING HAS BEEN CONDUCTED AND FACILITIES HAVE BEEN ACCEPTED BY CPP.

PAVEMENT REPAIR

CONCRETE PAVEMENT:

ALL PAVEMENT OPENINGS SHALL BE SAWED FULL DEPTH AND HAVE SMOOTH VERTICAL FACES. DOWELS SHALL BE REQUIRED.

CONCRETE REPAVING SHALL BE PERFORMED IN SUCH A MANNER THAT THE ENTIRE LANE AND/OR SLAB IN WHICH THE REPAIR AREA IS LOCATED SHALL BE RESTORED. SHOULD ANY PORTION OF THE REPAIR AREA EXTEND INTO AN ADJACENT LANE AND/OR SLAB, THAT LANE OR SLAB SHALL BE REPAVED.

ASPHALT PAVEMENT:

ALL PAVEMENT OPENINGS SHALL BE SAWED FULL DEPTH AND HAVE SMOOTH VERTICAL FACES. DOWELS SHALL BE REQUIRED.

ASPHALT RESURFACING SHALL BE PERFORMED IN SUCH A MANNER THAT THE ENTIRE LANE IN WHICH THE REPAIRS ARE LOCATED SHALL BE RESTORED. SHOULD ANY PORTION OF THE REPAIR AREA EXTEND INTO AN ADJACENT LANE, THAT LANE SHALL ALSO BE RESURFACED. FOR PAVEMENT WITH A WIDTH OF 40 FEET OR LESS, A LANE SHALL BE CONSIDERED 1/2 THE PAVEMENT WIDTH.

EXTEND OVER CUT IN LONGITUDINAL DIRECTION 2 FEET UNTO UNDISTURBED SUBGRADE.

ITEM 202 - REMOVAL MISC.: CPP DUCT BANK

THE CONTRACTOR SHALL REMOVE ALL CPP CONDUIT THAT RUNS THRU THE MANHOLES LOCATED AT STA. 7+66 AND STA. 11+82 AFTER CPP HAS REMOVED THE PRIMARY DISTRIBUTION CABLE FROM THESE CONDUITS. PAYMENT FOR ALL THE LABOR, EQUIPMENT AND MATERIALS NEEDED TO PERFORM THIS WORK HAS BEEN INCLUDED WITH ITEM 202-REMOVAL MISC.: CPP DUCT BANK AND CARRIED TO THE GENERAL SUMMARY.

ITEM 202 - REMOVAL MISC.: CPP CONDUIT BANK 166 FT

CPP - POWER CABLE INSTALLATION

AFTER THE CONTRACTOR HAS INSTALLED THE PVC DUCTS IN THE PAVEMENT AND APPROACH SLABS AND FRE DUCTS ACROSS THE BRIDGE, CPP WILL BE INSTALLING ELECTRICAL CABLE IN THE NEW DUCTS AND SPLICING INTO ITS EXISTING FACILITIES. CONTRACTOR SHALL GIVE CPP THREE WEEKS NOTICE PRIOR TO ALLOWING CPP ON SITE TO COMMENCE THIS WORK. ALL DUCTS MUST BE IN PLACE BEFORE CPP CAN BEGIN THEIR WORK. CPP SHALL THEN BE ALLOWED A MINIMUM OF THREE CALENDAR WEEKS TO COMPLETE INSTALLATION AND SPLICING. CPP MAY NOT ALWAYS NEED EXCLUSIVE ACCESS TO THE SITE DURING THIS WORK AND THE CONTRACTOR AND CPP SHALL COORDINATE ACCORDINGLY TO FACILITATE COMPLETION OF THE PROPOSED WORK.

CPP - POWER CABLE REMOVAL

CPP SHALL REMOVE THE EXISTING ELECTRICAL CABLE IN THE CONDUIT THAT RUNS THRU THE CPP MANHOLES LOCATED AT STA. 7+66 AND STA. 11+82. CONTRACTOR SHALL GIVE CPP THREE WEEKS NOTICE PRIOR TO ALLOWING CPP ON SITE TO COMMENCE THIS WORK. CPP SHALL BE ALLOWED A MINIMUM OF ONE CALENDAR WEEK TO COMPLETE REMOVING THE CABLES. CPP MAY NOT ALWAYS NEED EXCLUSIVE ACCESS TO THE SITE DURING THIS WORK AND THE CONTRACTOR AND CPP SHALL COORDINATE ACCORDINGLY TO FACILITATE COMPLETION OF THE PROPOSED WORK.

CALCULATED AA CHECKED EAH

CLEVELAND PUBLIC POWER NOTES

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SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5	5A	5D	6			24	25	26	35	36			01/BRO/BR						
																		ROADWAY	
LS													LS	201	11000	LS		CLEARING AND GRUBBING	
						406							406	202	23000	406	SY	PAVEMENT REMOVED	
						1,115							1,115	202	30000	1,115	SF	WALK REMOVED	
						194							194	202	32000	194	FT	CURB REMOVED	
						27							27	202	35100	27	FT	PIPE REMOVED, 24" AND UNDER	
						54							54	202	38000	54	FT	GUARDRAIL REMOVED	
						1							1	202	58100	1	EACH	CATCH BASIN REMOVED	
						1							1	202	58200	1	EACH	INLET REMOVED	
	50												50	SPECIAL	20270110	50	FT	PIPE CLEANOUT, 24" AND UNDER	5A
	50												50	SPECIAL	20270120	50	FT	PIPE CLEANOUT, 27" TO 48"	5A
	50												50	SPECIAL	20270130	50	FT	PIPE CLEANOUT OVER 48"	5A
						29							29	202	75200	29	FT	FENCE REMOVED FOR REUSE	
						2							2	202	75254	2	EACH	GATE REMOVED FOR REUSE	
						6							6	202	98100	6	EACH	REMOVAL MISC.: CONCRETE BOLLARD	29
									525	31			556	203	10000	556	CY	EXCAVATION	
									3				3	203	20000	3	CY	EMBANKMENT	
								740					740	204	10000	740	SY	SUBGRADE COMPACTION	
1													1	204	45000	1	HOUR	PROOF ROLLING	
						1							1	606	26550	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
						1							1	606	26551	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T, AS PER PLAN	5
						29							29	607	23100	29	FT	FENCE REBUILT	
						2							2	607	61111	2	EACH	GATE REBUILT, AS PER PLAN	5A
						1,114							1,114	608	11000	1,114	SF	4-1/2" CONCRETE WALK	
						279							279	608	52000	279	SF	CURB RAMP	
	1,000												1,000	SPECIAL	69099400	1,000	LB	MISCELLANEOUS METAL	5A
		1											1	SPECIAL	69098000	1	EACH	UTILITY TEST HOLE	5A
																		EROSION CONTROL	
1													1	659	00100	1	EACH	SOIL ANALYSIS TEST	
3													3	659	00300	3	CY	TOPSOIL	
26													26	659	10000	26	SY	SEEDING AND MULCHING	
0.01													0.01	659	20000	0.01	TON	COMMERCIAL FERTILIZER	
0.01													0.01	659	31000	0.01	ACRE	LIME	
1													1	659	35000	1	MGAL	WATER	
													5,000	832	30000	5,000	EACH	EROSION CONTROL	
																		DRAINAGE	
	50						95						145	605	13300	145	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
							37						37	605	14000	37	FT	6" BASE PIPE UNDERDRAINS	
							74						74	611	00510	74	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
	50												50	611	01500	50	FT	6" CONDUIT, TYPE F	
							24						24	611	04400	24	FT	12" CONDUIT, TYPE B	
							2						2	611	98690	2	EACH	CATCH BASIN, MISC.:C.O.C. TWIN BASIN - CB-3	41
						6							6	611	99654	6	EACH	MANHOLE ADJUSTED TO GRADE	
	5												5	611	99710	5	EACH	PRECAST REINFORCED CONCRETE OUTLET	
																		PAVEMENT	
								293					293	252	01500	293	FT	FULL DEPTH PAVEMENT SAWING	
								463					463	254	01000	463	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.5" THICK)	
								124					124	304	20000	124	CY	AGGREGATE BASE	
			10					66					76	407	10000	76	GAL	TACK COAT	
								24					24	407	13900	24	GAL	TACK COAT, 702.13	
			50					34					84	441	50000	84	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
								20					20	441	50300	20	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
								144					144	SPECIAL	45131000	144	FT	PRESSURE RELIEF JOINT, TYPE B	29
								400					400	452	11010	400	SY	7" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
						329							329	609	98000	329	FT	CURB, MISC.: CITY OF CLEVELAND CAST-IN-PLACE CONCRETE CURB	39
																		WATER WORK	
						1							1	638	10400	1	EACH	FIRE HYDRANT ADJUSTED TO GRADE	
						4							4	638	10800	4	EACH	VALVE BOX ADJUSTED TO GRADE	

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GENERAL SUMMARY

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SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5A		6	18	24	42	45	45A	46				01/BRO/BR	02/NFP/BR						
																		LIGHTING	
							2					2		202	75801	2	EACH	DISCONNECT EXISTING CIRCUIT, AS PER PLAN	45A
								24				24		625	00450	24	EACH	CONNECTION, FUSED PULL APART	
								16				16		625	10614	16	EACH	LIGHT POLE ANCHOR BOLTS ON STRUCTURE	
								3,741				3,741		625	23000	3,741	FT	NO. 4 AWG 600 VOLT DISTRIBUTION CABLE	
								312				312		625	23306	312	FT	NO. 10 AWG 600 VOLT DISTRIBUTION CABLE	
								1,516				1,516		625	25402	1,516	FT	CONDUIT, 2", 725.05	
								1,050				1,050		625	25803	1,050	FT	CONDUIT, CONCRETE ENCASED, AS PER PLAN (2")	45
								4				4		625	27561	4	EACH	LUMINAIRE, INSTALLATION ONLY, AS PER PLAN	45
								417				417		625	29200	417	FT	TRENCH, 48" DEEP	
								7				7		625	29920	7	EACH	STRUCTURE JUNCTION BOX	
								2				2		625	31506	2	EACH	PULL BOX REMOVED AND REPLACED	
								1				1		625	33000	1	EACH	STRUCTURE GROUNDING SYSTEM	
								1				1		625	34001	1	EACH	POWER SERVICE, AS PER PLAN	45
								1				1		625	34450	1	EACH	CONTROL CENTER CABINET, COMPLETE	
								4				4		625	35011	4	EACH	REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN	45
								2				2		625	39520	2	EACH	PULL BOX CLEANED	
						LS						LS		SPECIAL	62540000	LS		MAINTAIN EXISTING LIGHTING	45
								5				5		625	98000	5	EACH	LIGHTING, MISC.: CPP STREET LIGHTING PULL BOX	45
																		ELECTRICAL	
								166					166	202	98200	166	FT	REMOVAL MISC.:CPP DUCT BANK	5D
								2					2	611	99690	2	EACH	MANHOLE, MISC.: REPLACE EXISTING CASTINGS	47
								210					210	625	25803	210	FT	CONDUIT, CONCRETE ENCASED, AS PER PLAN (5" PVC)	5C
								2,862					2,862	625	25920	2,862	FT	CONDUIT, MISC.: CPP BRIDGE MOUNTED CONDUITS AND INCIDENTALS	5C
								210					210	625	29200	210	FT	TRENCH, 48" DEEP	
																		TRAFFIC CONTROL	
					26							26		630	03100	26	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
			1									1		630	79000	1	EACH	SIGN HANGER ASSEMBLY, SPAN WIRE	
			7.5									7.5		630	80100	7.5	SF	SIGN, FLAT SHEET	
					1							1		630	84900	1	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
					9							9		630	85100	9	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
					3							3		630	86002	3	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
		0.5										0.5		642	00300	0.5	MILE	CENTER LINE, TYPE 1	
		0.08										0.08		644	00104	0.08	MILE	EDGE LINE, 6"	
		0.26										0.26		644	00204	0.26	MILE	LANE LINE, 6"	
		1,100										1,100		644	00404	1,100	FT	CHANNELIZING LINE, 12"	
		250										250		644	00720	250	FT	CHEVRON MARKING	
		180										180		644	01510	180	FT	DOTTED LINE, 6"	
					0.3							0.3		646	10000	0.3	MILE	EDGE LINE, 4"	
					0.18							0.18		646	10200	0.18	MILE	CENTER LINE	
					55							55		646	10400	55	FT	STOP LINE	
					261							261		646	10500	261	FT	CROSSWALK LINE	
					229							229		646	10600	229	FT	TRANSVERSE/DIAGONAL LINE	
					200							200		646	20500	200	FT	DOTTED LINE	
					3							3		646	20600	3	EACH	BIKE LANE SYMBOL MARKING	
					5							5		646	20650	5	EACH	SHARED LANE MARKING	
																		TRAFFIC SIGNALS	
			35									35		625	25400	35	FT	CONDUIT, 2", 725.04	
			35									35		625	29000	35	FT	TRENCH	
			1									1		625	30706	1	EACH	PULL BOX, 725.08, 24"	
			2									2		632	05007	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	16
			1									1		632	05065	1	EACH	VEHICULAR SIGNAL HEAD, (LED), 4-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	16
			52									52		632	30200	52	FT	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES	
			52									52		632	30600	52	FT	TETHER WIRE, WITH ACCESSORIES	
			270									270		632	40600	270	FT	SIGNAL CABLE, 6 CONDUCTOR, NO. 14 AWG	
			242									242		632	40700	242	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
			1									1		632	70400	1	EACH	CONDUIT RISER, 2" DIAMETER	
			1									1		632	80700	1	EACH	SIGNAL SUPPORT, MISC.: WEATHERHEAD	
			2									2		632	89301	2	EACH	WOOD POLE, AS PER PLAN	16
			2									2		632	89400	2	EACH	DOWN GUY	

CALCULATED AA
CHECKED JEP

GENERAL SUMMARY

CUY-90-14.52

21
91

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	6	7	8	18						52			01/BRO/BR						
																		TRAFFIC SIGNALS CONTINUED	
				1									1	632	90100	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	
				2									2	809	69100	2	EACH	STOP LINE RADAR DETECTION	
																		STRUCTURE OVER 20 FOOT SPAN (CUY-90-1452)	
										LS			LS	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	50
										254			254	202	22901	254	SY	APPROACH SLAB REMOVED, AS PER PLAN	50
										LS			LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
										82			82	503	21100	82	CY	UNCLASSIFIED EXCAVATION	
										218,028			218,028	509	10000	218,028	LB	EPOXY COATED REINFORCING STEEL	
										616			616	510	10000	616	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
										4			4	511	33501	4	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	50
										798			798	511	34446	798	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK	
										70			70	511	34450	70	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)	
										23			23	511	42510	23	CY	CLASS QC1 CONCRETE, PIER CAP	
										37			37	511	44110	37	CY	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING	
										35			35	511	53012	35	CY	CLASS QC2 CONCRETE, MISC.: PARAPET AND SIDEWALK WITH QC/QA	61
										902			902	512	10050	902	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
										1,873			1,873	512	10100	1,873	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
										74			74	512	10300	74	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
										19			19	512	10600	19	FT	CONCRETE REPAIR BY EPOXY INJECTION	
										4			4	512	33000	4	SY	TYPE 2 WATERPROOFING	
										1,044			1,044	512	74000	1,044	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
										6,200			6,200	513	10200	6,200	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF	
										4,905			4,905	513	20000	4,905	EACH	WELDED STUD SHEAR CONNECTORS	
										30,700			30,700	514	00050	30,700	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
										30,700			30,700	514	00056	30,700	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
										30,400			30,400	514	00060	30,400	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
										30,400			30,400	514	00066	30,400	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
										36			36	514	00504	36	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
										15			15	514	10000	15	EACH	FINAL INSPECTION REPAIR	
										158			158	516	10010	158	FT	ARMORLESS PREFORMED JOINT SEAL	
										21			21	516	13200	21	SF	1/2" PREFORMED EXPANSION JOINT FILLER	
										31			31	516	13600	31	SF	1" PREFORMED EXPANSION JOINT FILLER	
										180			180	516	13900	180	SF	2" PREFORMED EXPANSION JOINT FILLER	
										149			149	516	14020	149	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	
										1			1	516	43300	1	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE) (12"X12"X3.70")	
										14			14	516	44200	14	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (12"X18"X3.70")	
										21			21	516	44200	21	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (15"X20"X3.25")	
										LS			LS	516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	50
										110			110	518	21200	110	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
										774			774	519	11101	774	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	50
										99			99	526	10010	99	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=12")	
										163			163	526	25010	163	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15")	
										129			129	526	90031	129	FT	TYPE C INSTALLATION, AS PER PLAN	51
										1,524			1,524	SPECIAL	53013000	1,524	SF	FORM LINER	51
										755			755	607	39901	755	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN	50
																		MAINTENANCE OF TRAFFIC	
		240											240	614	11110	240	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
			12										12	614	12384	12	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	
	LS												LS	614	12420	LS		DETOUR SIGNING	
		72											72	614	13310	72	EACH	BARRIER REFLECTOR, TYPE 1 , ONE-WAY	
		72											72	614	13350	72	EACH	OBJECT MARKER, ONE WAY	
		6											6	614	18601	6	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	7
			0.01										0.01	614	21000	0.01	MILE	WORK ZONE CENTER LINE, CLASS I	
			0.89										0.89	614	22000	0.89	MILE	WORK ZONE EDGE LINE, CLASS I, 4"	
			2,379										2,379	614	23000	2,379	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8"	
			277										277	614	24000	277	FT	WORK ZONE DOTTED LINE, CLASS I	

CALCULATED AA
CHECKED JEP

GENERAL SUMMARY

CUY-90-14.52

REF NO.	SHEET NO.	STATION TO STATION			202 PAVEMENT REMOVED	202 WALK REMOVED	202 CURB REMOVED	202 PIPE REMOVED, 24" AND UNDER	202 GUARDRAIL REMOVED	202 CATCH BASIN REMOVED	202 INLET REMOVED	202 FENCE REMOVED FOR REUSE	202 GATE REMOVED FOR REUSE	202 REMOVAL MISC.:CONCRETE BOLLARD	606 ANCHOR ASSEMBLY, MGS TYPE T	606 ANCHOR ASSEMBLY, MGS TYPE T, AS PER PLAN	607 FENCE REBUILT	607 GATE REBUILT, AS PER PLAN	608 4-1/2" CONCRETE WALK	608 CURB RAMP		609 CURB, MISC.:CITY OF CLEVELAND CAST-IN-PLACE CONCRETE CURB	611 MANHOLE ADJUSTED TO GRADE	638 VALVE BOX ADJUSTED TO GRADE	638 FIRE HYDRANT ADJUSTED TO GRADE
			TO		SY	SF	FT	FT	FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	FT	EACH	SF	SF		FT	EACH	EACH	EACH
R-1	27	7+00.00		8+05.18	175.11																				
R-2	27	6+93.64		7+81.61		481.25																			
R-3	27	7+00.00		7+41.56		337.54																			
R-4	27	8+02.87		8+10.60		66.382																			
R-5	27	7+00.00		7+81.50			97.15																		
R-6	27	7+00.00		7+41.43			41.43																		
R-7	27	7+10.69		7+15.29				8		1															
R-8	27	7+16.28		7+23.26				10.59			1														
R-9	27	7+23.26		7+29.26				8																	
R-10	27	7+44.34		7+69.81					25.51																
R-11	27	8+07.97		8+11.55					15.9																
R-12	27	8+07.97		8+10.60								12.84													
R-13	27	7+44.32		7+44.32										1											
D-1	27	7+02.66		7+02.66																			1		
D-2	27	7+03.36		7+03.36																			1		
D-3	27	7+47.68		7+47.68																			1		
D-4	27	7+81.05		7+81.05																			1		
D-5	27	7+85.72		7+85.72																			1		
W-1	27	7+23.71		7+23.71																				1	
W-2	27	7+37.37		7+37.37																				1	
R-14	28	11+11.91		12+05.00	230.47																				
R-15	28	11+55.03		11+75.00		229.7																			
R-16	28	11+11.68		11+13.70			10.22																		
R-17	28	11+54.54		11+75.00			41.5																		
R-18	28	12+01.65		12+05.00			3.38																		
R-19	28	11+10.54		11+11.21					12.5																
R-20	28	11+08.37		11+09.04								16													
R-21	28	11+35.40		11+59.59									2												
R-22	28	11+16.72		11+34.06										4											
R-23	28	11+31.16		11+31.16										1											
D-6	28	11+59.55		11+59.55																			1		
W-3	28	11+45.14		11+45.14																				1	
W-4	28	11+72.09		11+72.09																				1	
W-5	28	11+25.11		11+25.11																					1
GR-1	29	8+07.97		8+11.55												1									
GR-2	29	11+10.54		11+11.21											1										
F-1	29	8+07.97		8+10.60													13								
F-2	29	11+08.37		11+09.04													16								
F-3	29	11+35.40		11+59.59														2							
SW-1	29	6+93.64		7+78.55															608.1	112.5					
SW-2	29	7+00.00		7+41.80															325.99						
SW-3	29	8+02.87		8+11.84															57.69	26.62					
SW-4	29	11+55.26		11+75.00															121.57	139.3					
C-1	29	7+00.00		7+81.50																		93.94			
C-2	29	7+00.00		7+95.05																		95.05			
C-3	29	8+02.38		8+05.39																		14.23			
C-4	29	11+13.70		11+36.35																		34.52			
C-5	29	11+54.54		11+75.00																		41.5			
C-6	29	11+55.78		12+05.00																		49.22			
TOTALS CARRIED TO GENERAL SUMMARY					406	1115	194	27	54	1	1	29	2	6	1	1	29	2	1114	279		329	6	4	1

CALCULATED AA
CHECKED JEP

ROADWAY SUBSUMMARY

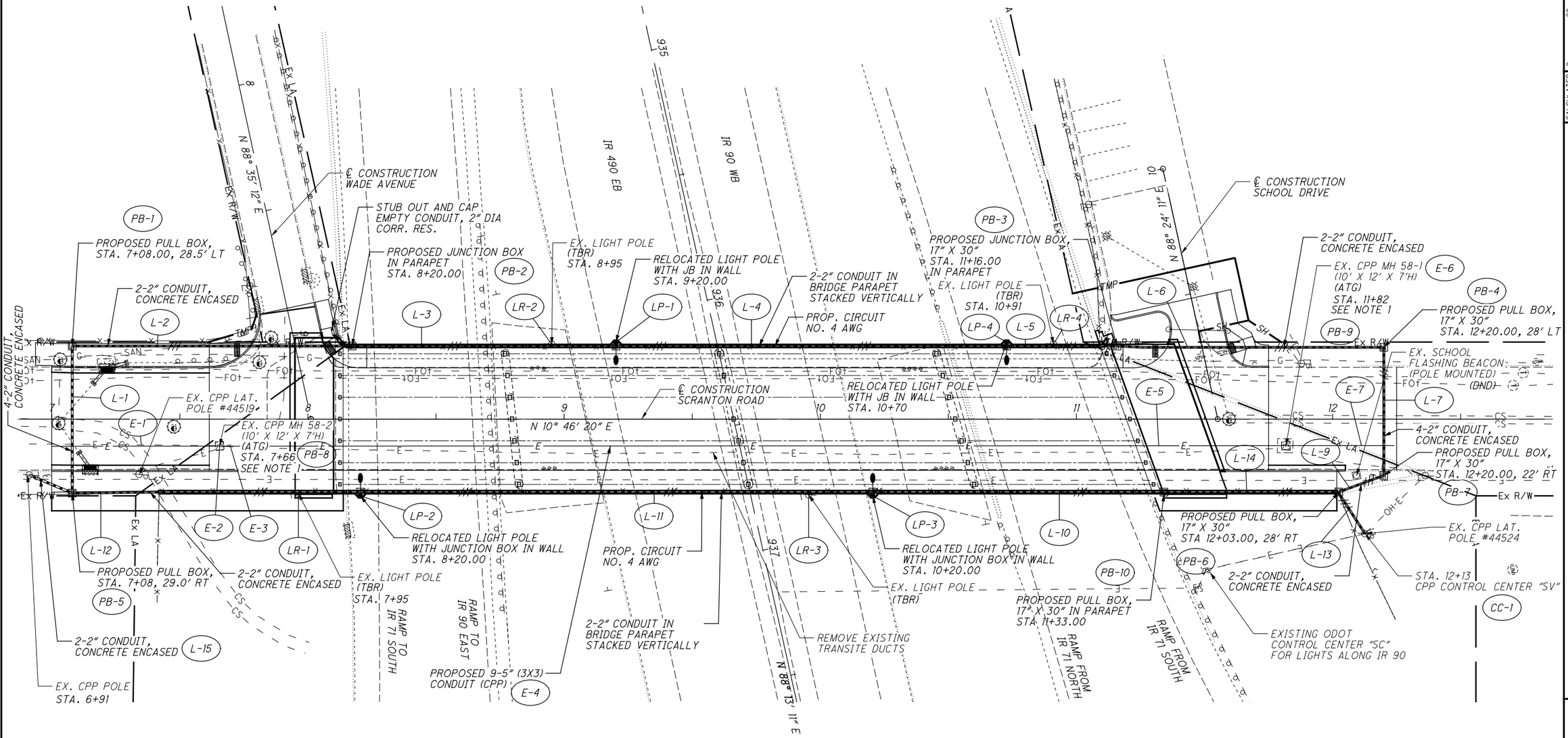
CUY-90-14.52

REF NO.	SHEET NO.	STATION TO STATION			SIDE	202 REMOVAL MISC.:CPP DUCT BANK (FT)	625 CONNECTION, FUSED PULL APART (EACH)	625 LIGHT POLE ANCHOR BOLTS ON STRUCTURE (EACH)	625 NO. 4 AWG 600 VOLT DISTRIBUTION CABLE (FT)	625 NO. 10 AWG 600 VOLT DISTRIBUTION CABLE (FT)	625 CONDUIT, 2", 725.05 (FT)	625 CONDUIT, CONCRETE ENCASED, AS PER PLAN (2") (FT)	625 CONDUIT, CONCRETE ENCASED, AS PER PLAN (5" PVC) (FT)	625 CONDUIT, MISC.:CPP BRIDGE MOUNTED CONDUITS AND INCIDENTALS (FT)	625 LUMINAIRE, INSTALLATION ONLY, AS PER PLAN (EACH)	625 TRENCH, 48" DEEP (FT)		625 STRUCTURE JUNCTION BOX (EACH)	625 PULL BOX REMOVED AND REPLACED (EACH)	625 STRUCTURE GROUNDING SYSTEM (EACH)	625 CONTROL CENTER CABINET, COMPLETE (EACH)	625 REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN (EACH)	625 PULL BOX CLEANED (EACH)	SPECIAL MAINTAIN EXISTING LIGHTING (LUMP)	625 LIGHTING, MISC.: CPP STREET LIGHTING PULL BOX (EACH)	632 POWER SERVICE, AS PER PLAN (EACH)	611 MANHOLE, MISC.: REPLACE EXISTING CASTINGS (EACH)
			TO													LIGHTING	ELECTRICAL									
LP-1	47	9+20.00			LT		2	4		78					1			1		1						
LP-2	47	8+20.00			RT		2	4		78					1			1								
LP-3	47	10+20.00			RT		2	4		78					1			1								
LP-4	47	10+70.00			LT		2	4		78					1			1								
L-1	47	7+08.00		7+08.00	LT/RT							232				58										
L-2	47	7+08.00		8+20.00	LT				366			224				112										
L-3	47	8+20.00		9+20.00	LT				330		200															
L-4	47	9+20.00		10+70.00	LT				480		300															
L-5	47	10+70.00		11+16.00	LT				168		92															
L-6	47	11+16.00		12+20.00	LT				342			208				104										
L-7	47	12+20.00		12+20.00	LT/RT				180			200				50										
L-9	47	12+20.00		12+03.00	RT				90			40				20										
L-10	47	11+33.00		10+20.00	RT				369		226															
L-11	47	10+20.00		8+20.00	RT				630		400															
L-12	47	8+20.00		7+08.00	RT				369		158	68				34										
L-13	47	12+03.00		12+13.00	RT				90			40				20										
L-14	47	11+33.00		12+03.00	RT				240		140															1
L-15	47	6+91.00		7+08.00	RT				87			38				19										
LR-1	47	7+95.00			RT																	1				
LR-2	47	8+95.00			LT																	1				
LR-3	47	9+95.00			RT																	1				
LR-4	47	10+91.00			LT																	1				
PB-1	47	7+08.00			LT		2																		1	
PB-2	47	8+20.00			LT		2											1								
PB-3	47	11+16.00			LT		2											1								
PB-4	47	12+20.00			LT		2																		1	
PB-5	47	7+08.00			RT		2																		1	
PB-6	47	12+03.00			RT		2																		1	
PB-7	47	12+20.00			RT		2																		1	
PB-8	47	7+66.00			RT														1				1			
PB-9	47	11+82.00			RT														1				1			
PB-10	47	11+33.00			RT		2											1								
CC-1	47	12+13.00			RT																1					
		ELECTRICAL																								
E-1	47	7+00.00		7+66.00	RT	66							66				66									
E-2	47	7+66.00			RT																					1
E-3	47	7+66.00		8+10.05	RT	45							45				45									
E-4	47	8+10.05		11+27.33	RT									2862												
E-5	47	11+27.33		11+82.00	RT	55							55				55									
E-6	47	11+82.00			RT																					1
E-7	47	11+82.00		12+25.00	RT								44				44									
SUB TOTAL																417	210									
TOTALS CARRIED TO GENERAL SUMMARY						166	24	16	3741	312	1516	1050	210	2862	4	627		7	2	1	1	4	2	LUMP	5	1	2

CALCULATED AA
CHECKED JEP

LIGHTING AND ELECTRICAL SUBMSUMMARY

CUY-90-14.52



NOTES:

1. CONTRACTOR SHALL REPLACE THE EXISTING SQUARE CASTING WITH A 36" ROUND CASTING AT THE EXISTING CPP MANHOLES LOCATED AT STATIONS 7+66 AND 11+82. PAYMENT FOR ALL MATERIALS, LABOR AND EQUIPMENT NEEDED TO REPLACE THE SQUARE CASTING WITH A CIRULAR CASTING SHALL BE INCLUDED WITH:

   ITEM 611 - MANHOLE, MISC.: REPLACE EXISTING CASTING.

   PRIOR TO FABRICATING AND REPLACING THE CPP MANHOLES LOCATED AT STA. 7+66 AND STA. 11+82, THE CONTRACTOR SHALL COORDINATE WITH CPP REGARDING THE DETAILS FOR INSTALLATION OF CIRCUITS AND RACKING SYSTEMS.

2. FOR LIGHTING NOTES SEE SHEETS 45- 45B

3. FOR CLEVELAND PUBLIC POWER (ELECTRICAL) NOTES SEE SHEETS 5B- 5D

4. CAP 5" CONDUIT AT STA. 7+00.00 AND STA. 12+25.00.

LEGEND

(ATG)	ADJUSTED TO GRADE
(TBR)	TO BE REMOVED
(DND)	DO NOT DISTURB

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED AA
CHECKED EAH

LIGHTING AND ELECTRICAL PLAN
STA. 7+00 TO STA. 13+00

CUY-90-14.52

CUY-090-1452 ESTIMATED QUANTITIES

MADE BY: CCJ DATE: 01/24/19 | CHECKED BY: EDW DATE: 01/25/19

ITEM	ITEM EXT.	TOTAL	UNITS	DESCRIPTION	CUY-090-1452 ABUTS.	PIERS	SUPER.	GENERAL	SHT. REF.
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	3
202	22901	254	SQ YD	APPROACH SLAB REMOVED, AS PER PLAN				254	3
503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING				LUMP	
503	21100	82	CU YD	UNCLASSIFIED EXCAVATION	82				
509	10000	218028	LB	EPOXY COATED REINFORCING STEEL	17462	3603	196963		
510	10000	616	EACH	DOWEL HOLES WITH NON-SHRINK, NONMETALLIC GROUT	402	214			
511	33501	4	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	4				3
511	34446	798	CU YD	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			798		
511	34450	70	CU YD	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			70		
511	42510	23	CU YD	CLASS QC1 CONCRETE, PIER CAP		23			
511	44110	37	CU YD	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING	37				
511	53012	35	CU YD	CLASS QC2 CONCRETE, MISC.: PARAPET AND SIDEWALK WITH QC/QA				35	
512	10050	902	SQ YD	SEALING OF CONCRETE SURFACES (NON-EPOXY)				902	
512	10100	1873	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	685	475	713		
512	10300	74	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN			74		
512	10600	19	FT	CONCRETE REPAIR BY EPOXY INJECTION	19				
512	33000	4	SQ YD	TYPE 2 WATERPROOFING	4				
512	74000	1044	SQ YD	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	617	427			
513	10200	6200	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF			6200		
513	20000	4905	EACH	WELDED STUD SHEAR CONNECTORS			4905		
514	00050	30700	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			30700		
514	00056	30700	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			30700		
514	00060	30400	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			30400		
514	00066	30400	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			30400		
514	00504	36	MN HR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			36		
514	10000	15	EACH	FINAL INSPECTION REPAIR			15		
516	10010	158	FT	ARMORLESS PREFORMED JOINT SEAL				158	
516	13200	21	SQ FT	1/2" PREFORMED EXPANSION JOINT FILLER	21				
516	13600	31	SQ FT	1" PREFORMED EXPANSION JOINT FILLER				31	
516	13900	180	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	180				
516	14020	149	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	149				
516	43300	1	EACH	ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES ONLY (12"x12"x3.70") (NEOPRENE)	1				
516	44200	14	EACH	ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES (12"x18"x3.70") AND LOAD PLATE (13"x19"x1.50") (NEOPRENE)	14				
516	44200	21	EACH	ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES (15"x20"x3.25") AND LOAD PLATE (16"x21"x1.50") (NEOPRENE)		21			
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN				LUMP	3
518	21200	110	CU YD	POROUS BACKFILL WITH GEOTEXTILE FABRIC	110				
519	11101	774	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	774				3
526	10010	99	SQ YD	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=12")				99	
526	25010	163	SQ YD	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15")				163	
526	90031	129	FT	TYPE C INSTALLATION, AS PER PLAN				129	
530	13000	1524	SQ FT	SPECIAL - FORM LINER			1252	272	4
607	39901	755	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN			134	621	4

NOTES:

1. TOTALS CARRIED TO GENERAL SUMMARY SHEET 22/91

DESIGN AGENCY
PRIME AE
8415 Pulsar Place, Suite 300
Columbus Ohio 43240

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CCJ	CCJ	GTB	1/29/2019
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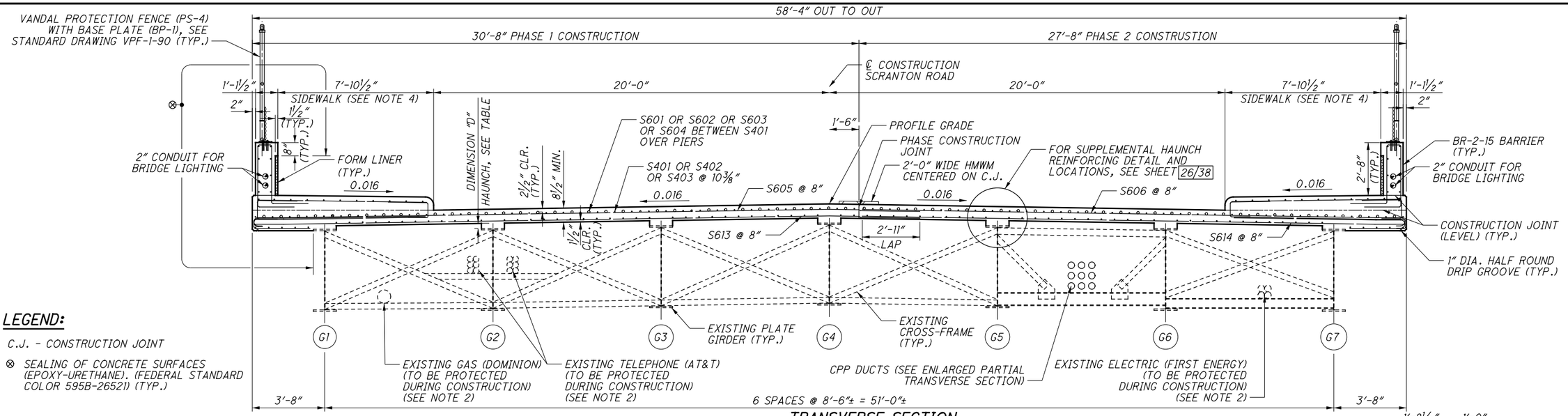
EDW		1809261	

ESTIMATED QUANTITIES
BRIDGE NO. CUY-090-1452
SCRANTON ROAD OVER IR 90

CUY-90-14.52
PID No. 97390

5/38

52/91



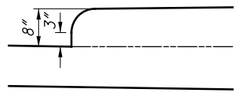
TRANSVERSE SECTION

LEGEND:

C.J. - CONSTRUCTION JOINT

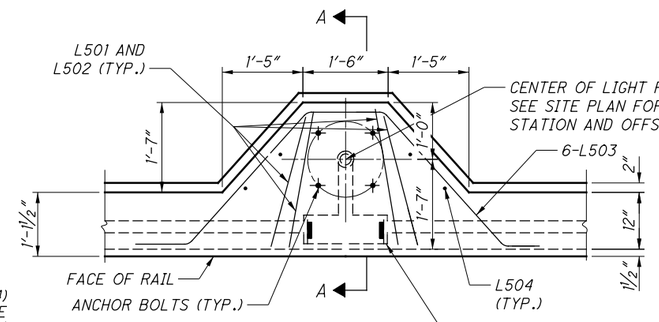
⊗ SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). (FEDERAL STANDARD COLOR 595B-26521) (TYP.)

DIMENSION "D" TABLE - HUANCH THICKNESS @ ℄ GIRDER					
GIRDER	R.A.	P1	P2	P3	F.A.
G1	3 9/16"	3 11/16"	3 15/16"	4 1/4"	5 1/16"
G2	2 11/16"	2 9/16"	3 1/16"	3 7/16"	3 11/16"
G3	2 11/16"	3 1/16"	3 1/16"	3 1/2"	3 11/16"
G4	2 3/4"	3"	3 3/16"	3 5/8"	3"
G5	3 1/4"	3 1/4"	3"	3 7/16"	3 3/16"
G6	2 13/16"	2 11/16"	2 13/16"	3 3/16"	3 3/8"
G7	4 9/16"	4 1/8"	4"	4 1/4"	4 3/8"

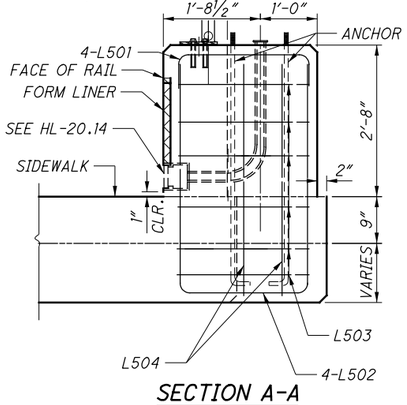


CURB DETAIL

(TYPICAL)



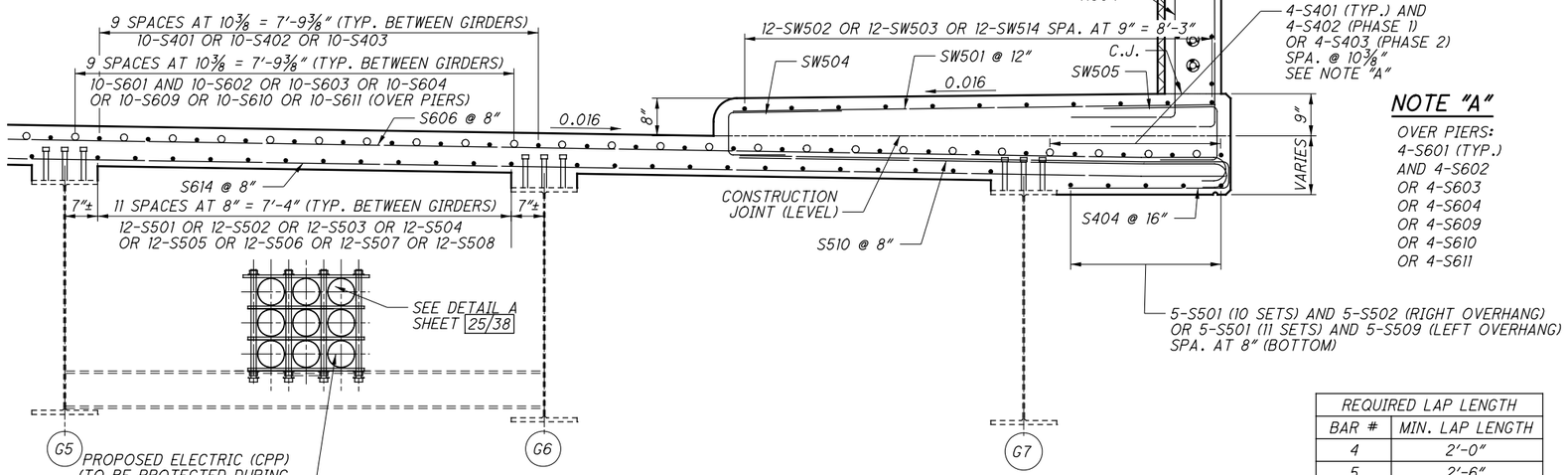
PLAN



SECTION A-A

LIGHT POLE PILASTER DETAILS

FOR MORE DETAILS, SEE STD. DWG. HL-20.14
(4 REQUIRED)



ENLARGED PARTIAL TRANSVERSE SECTION

(CROSSFRAMES AND UTILITIES NOT SHOWN)

NOTE "A"

OVER PIERS:
4-S601 (TYP.)
AND 4-S602
OR 4-S603
OR 4-S604
OR 4-S609
OR 4-S610
OR 4-S611

REQUIRED LAP LENGTH	
BAR #	MIN. LAP LENGTH
4	2'-0"
5	2'-6"
6	2'-11"

NOTES:

1. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH GIRDER HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 2 INCHES AND A CONSTANT HAUNCH WIDTH OF EACH GIRDER FLANGE. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE.

   THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE GIRDER, FROM THE SURFACE OF THE DECK TO THE TOP OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.

2. UTILITIES SHALL BE PROTECTED DURING CONSTRUCTION. SEE NOTE FOR ITEM 202 PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN ON SHEET 3/38.

3. SIDEWALK AND RAILING AREA WITH FORM LINER SHALL BE SEALED WITH NON-EPOXY SEALER.

4. THE SIDEWALK CONCRETE IS INCLUDED WITH ITEM 511 CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK FOR PAYMENT.

5. FOR ADDITIONAL STRUCTURE CONDUIT DETAILS, SEE STD. DWG. HL 30.32.

DESIGN AGENCY
PRIME AE
8415 Pulsar Place, Suite 300
Columbus Ohio 43240

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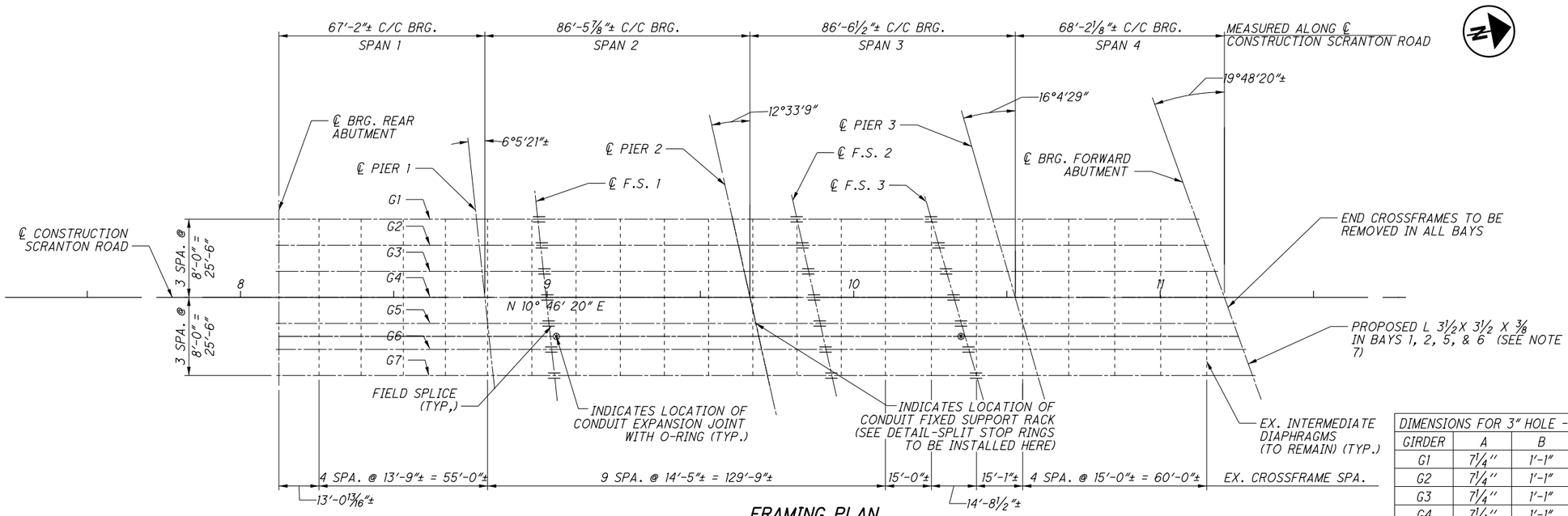
CCJ		1809261	

TRANSVERSE SECTION
BRIDGE NO. CUY-090-1452
SCRANTON ROAD OVER IR 90

CUY-90-14.52
PID No. 97390

21/38
68/91

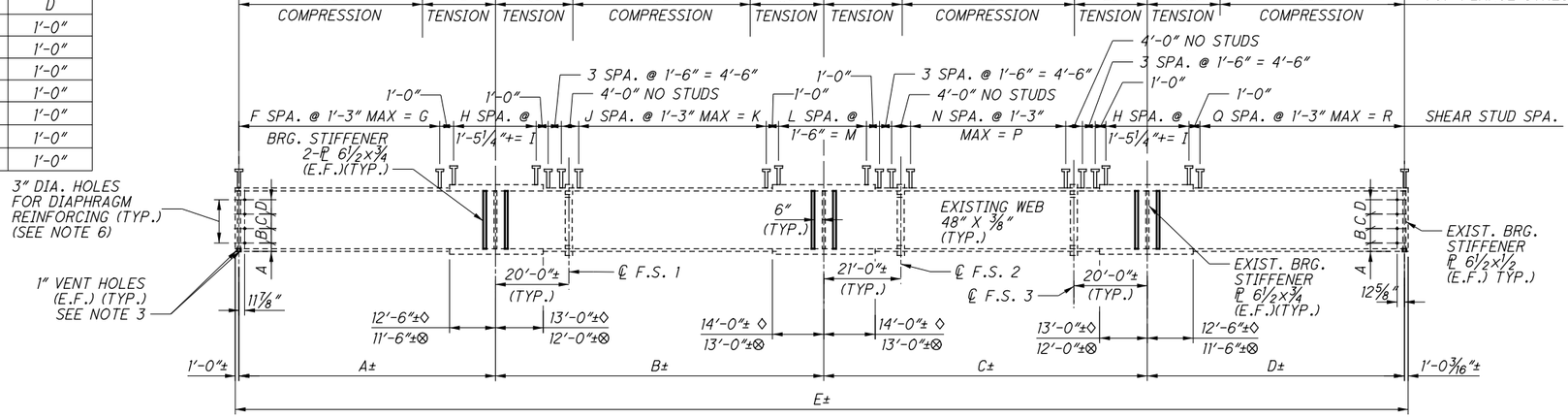


FRAMING PLAN

(EXISTING AND PROPOSED UTILITES NOT SHOWN)

DIMENSIONS FOR 3" HOLE - FORWARD ABUTMENT				
GIRDER	A	B	C	D
G1	7¼"	1'-1"	1'-0"	11"
G2	7¼"	1'-1"	1'-0"	11"
G3	7¼"	1'-1"	1'-0"	11"
G4	7¼"	1'-1"	1'-2½"	8½"
G5	5½"	1'-2½"	1'-3"	8"
G6	5½"	1'-2½"	1'-3"	8"
G7	5½"	1'-2½"	1'-3"	8"

DIMENSIONS FOR 3" HOLE - REAR ABUTMENT				
GIRDER	A	B	C	D
G1	10½"	1'-0"	1'-0"	1'-0"
G2	10½"	1'-0"	1'-0"	1'-0"
G3	10½"	1'-0"	1'-0"	1'-0"
G4	10½"	1'-0"	1'-0"	1'-0"
G5	10½"	1'-0"	1'-0"	1'-0"
G6	10½"	1'-0"	1'-0"	1'-0"
G7	10½"	1'-0"	1'-0"	1'-0"



GIRDER ELEVATION

(INTERMEDIATE STIFFENERS OMITTED FOR CLARITY)

GIRDER ELEVATION TABLE																									
GIRDER	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	F	G (FT)	H	I (FT)	J	K (FT)	L	M (FT)	N	P (FT)	Q	R (FT)	S (FT)	T (FT)	U (FT)	V (FT)	W (FT)	X (FT)	Y (FT)	Z (FT)	AA (FT)	BB
G1	64'-5 1/2"	83'-6 1/2"	84'-10"	66'-4 1/2"	301'-2 1/2"	42	51'-5 1/2"	17	24'-6"	38	47'-0 1/2"	18	27'-0"	32	39'-10"	43	53'-4 1/2"	46'-3"	18'-2"	19'-5 1/2"	44'-1 1/2"	20'-0"	20'-4 "	45'-9 "	18'-9"	19'-6"	46'-10 1/2"
G2	65'-4"	84'-6 1/2"	85'-4 1/2"	67'-0"	304'-3"	42	52'-4"	17	24'-6"	39	48'-0 1/2"	18	27'-0"	33	40'-4 1/2"	44	54'-0"	46'-11 1/2"	18'-5 "	19'-6"	45'-6"	19'-6"	20'-3"	46'-3"	18'-10 1/2"	19'-3"	47'-8 1/2"
G3	66'-3"	85'-6"	85'-11 1/2"	67'-7"	307'-4 "	43	53'-3"	17	24'-6"	40	49'-0"	18	27'-0"	33	40'-11 1/2"	44	54'-7"	47'-4 1/2"	18'-10 1/2"	20'-2 "	45'-2 "	20'-2 1/2"	20'-7 "	46'-4 "	19'-0 1/2"	19'-3"	48'-4 "
G4	67'-2 "	86'-6"	86'-6"	68'-2 1/2"	310'-4 1/2"	44	54'-2 "	17	24'-6"	40	50'-0"	18	27'-0"	34	41'-6"	45	55'-2 1/2"	48'-0 1/2"	19'-1"	20'-4 "	45'-9"	20'-5"	21'-3 1/2"	45'-9"	19'-5"	19'-9"	48'-5 1/2"
G5	68'-1 "	87'-6 "	87'-0 1/2"	68'-10"	313'-5 1/2"	45	55'-1 "	17	24'-6"	41	51'-0"	18	27'-0"	34	42'-0 1/2"	45	55'-10"	48'-11 1/2"	19'-1 1/2"	20'-5 1/2"	46'-6 1/2"	20'-6 "	21'-4 1/2"	45'-10 1/2"	19'-9 1/2"	19'-9"	49'-1 "
G6	68'-11 1/2"	88'-5 1/2"	87'-7 1/2"	69'-5"	316'-6"	46	56'-11 1/2"	16	23'-0"	43	52'-11 1/2"	17	25'-6"	35	42'-7 1/2"	46	57'-5"	49'-7"	19'-4 1/2"	20'-7 1/2"	47'-5 1/2"	20'-5 "	21'-5 1/2"	46'-6 1/2"	19'-7 1/2"	19'-10"	49'-7 "
G7	69'-10 1/2"	89'-5 1/2"	88'-2"	70'-0 1/2"	319'-7 "	46	56'-10 1/2"	17	24'-6"	43	52'-11 1/2"	18	27'-0"	35	43'-2"	46	57'-0 1/2"	50'-1 1/2"	19'-9 "	20'-11 1/2"	48'-5 1/2"	20'-0 1/2"	21'-4 "	47'-0"	19'-10"	19'-10 1/2"	50'-2"

LEGEND:

◇= G1-G5, G7

⊗= G6

NOTES:

1. FOR EXISTING INTERMEDIATE CROSSFRAME TYPE, SPLICE DESIGN AND INTERMEDIATE STIFFENER LOCATIONS, SEE ORIGINAL PLANS.
2. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION." DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST ¼" FOR THICKNESSES UP TO ¾" OR 5/16" FOR GREATER THEN ¾" THICK.
3. FOR 1" VENT HOLE LOCATIONS, SEE BEARING DETAIL SHEET 29/38.
4. FOR PROPOSED BEARING STIFFENER DETAILS, SEE SHEET 25/38 .
5. GIRDER PAINT COLOR SHALL BE FEDERAL COLOR 595B-16440 (LIGHT GULL GRAY).
6. PAYMENT FOR FIELD DRILLED HOLES TO BE INCLUDED WITH ITEM 511-CLASS QC2 CONCRETE WITH QC/QA BRIDGE DECK.
7. FOR END CROSS-FRAME MODIFICATION DETAILS, SEE SHEET 25/38.
8. FOR FIXED SUPPORT RACK DETAILS, SEE SHEET 25/38.
9. PAYMENT LIMITS FOR ITEM 514 SHALL BE AS FOLLOWS: FOR SURFACE PREPRATION AND PRIME COAT, LIMITS SHALL INCLUDE THE ENTIRE BEAM LENGTH. FOR INTERMEDIATE COAT AND FINAL COAT, LIMITS SHALL EXTEND FROM FACE TO FACE OF ABUTMENT DIAPHRAGM.

DESIGN AGENCY
PRIME AE
8415 Pulsar Place, Suite 300
Columbus, Ohio 43240

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EDW		1809261	

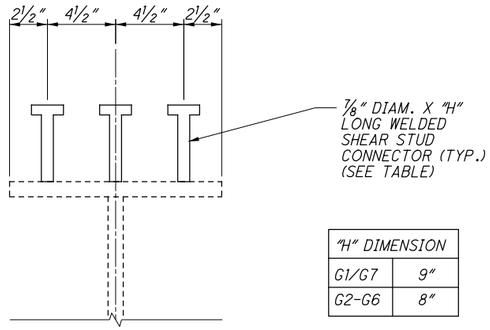
FRAMING PLAN & GIRDER ELEVATION
BRIDGE NO. CUY-090-1452
SCRANTON ROAD OVER IR 90

CUY-90-14.52
PID No. 97390

24 / 38

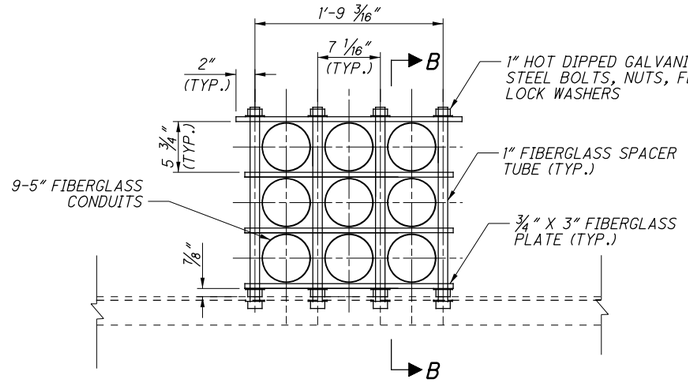
71 / 91

Q:\Transportation\Projects\ODOT\District 12\CUY090_1452\97390\structures\CUY090_1452C\sheets\090_1452CSD001.dgn 2/5/2021 3:48:33 PM Aakuraju

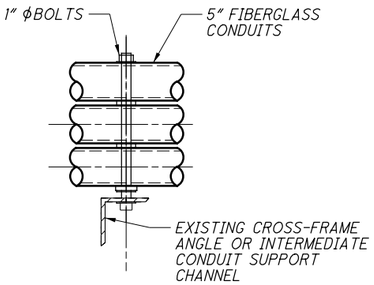


"H" DIMENSION	
G1/G7	9"
G2-G6	8"

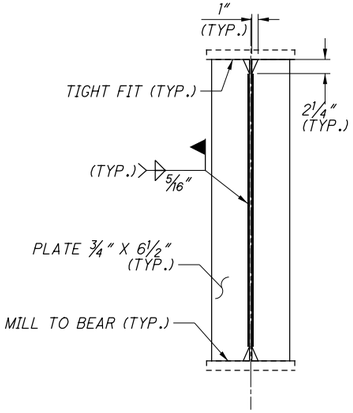
SHEAR CONNECTOR DETAIL



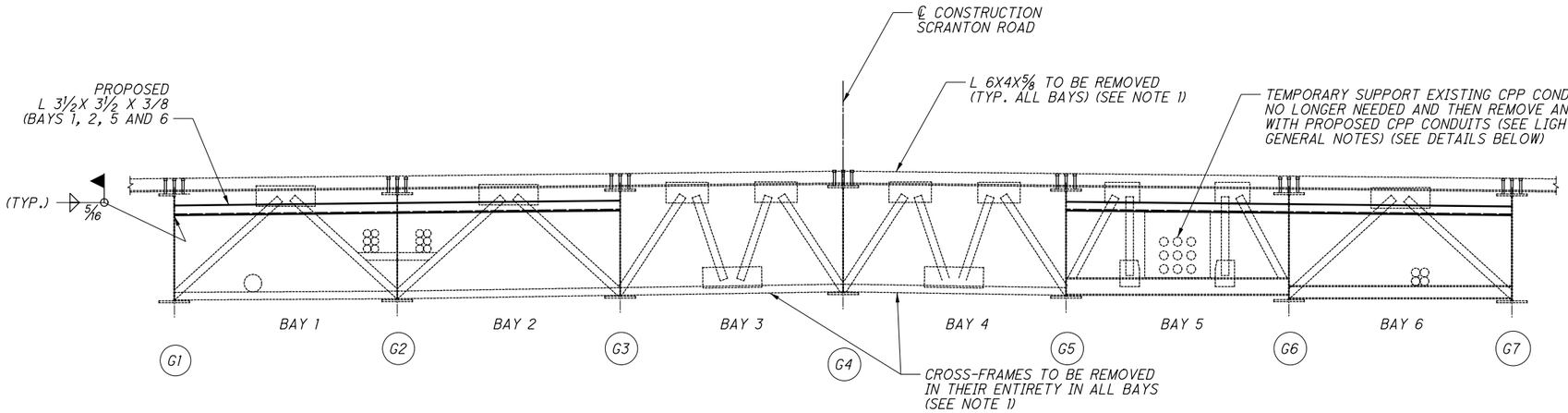
DETAIL A



DETAIL B-B

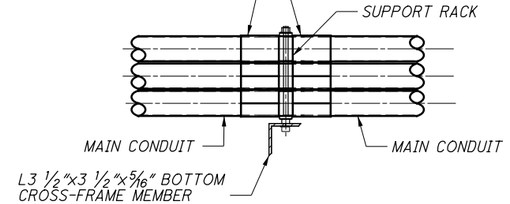


NEW PIER BEARING STIFFENERS



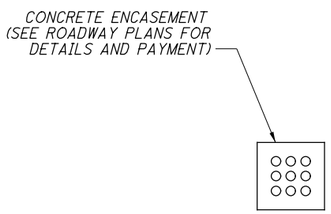
ABUTMENT CROSS-FRAME MODIFICATION

(FORWARD ABUTMENT SHOWN, REAR ABUTMENT OPPOSITE HAND)



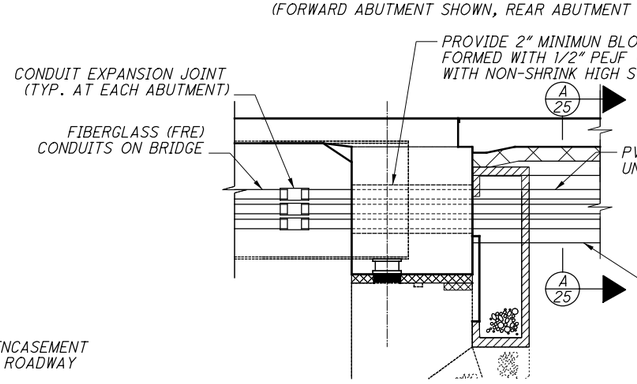
FIXED SUPPORT RACK

UTILITY CONDUIT SPLIT STOP RING (SEE NOTE 2)



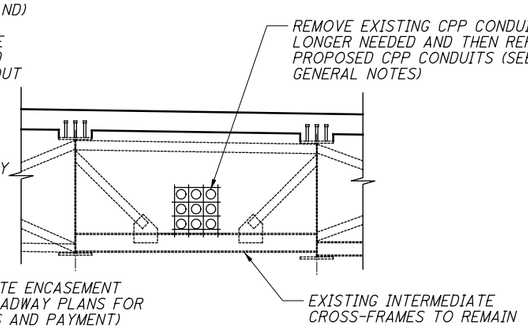
VIEW A-A

CPP CONDUITS - CONCRETE ENCASEMENT UNDER APPROACH SLABS AND ROADWAY



CPP CONDUIT - THRU ABUTMENT DETAIL

(FORWARD ABUTMENT SHOWN, REAR ABUTMENT OPPOSITE HAND)



CPP CONDUIT - EXISTING CROSS-FRAME DETAIL

(FORWARD ABUTMENT SHOWN, REAR ABUTMENT OPPOSITE HAND)

NOTES:

1. CONTRACTOR SHALL PROVIDE ADDITIONAL TEMPORARY SUPPORT FOR EXISTING UTILITIES AS NECESSARY PRIOR TO POURING ABUTMENT DIAPHRAGM CONCRETE.
2. CEMENT SPLIT STOP RINGS TO MAIN CONDUIT LINE.

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GIRDER AND END CROSS-FRAME DETAILS
BRIDGE NO. CUY-090-1452
SCRANTON ROAD OVER IR 90

CUY-90-14.52
PID No. 97390