M430: BRIDGE PAINTING EQUIPMENT ON SHOULDERS

IF BRIDGE PAINTING EQUIPMENT IS TO REMAIN ON THE SHOULDERS WHEN THE CONTRACTOR IS NOT WORKING, IT SHALL BE PLACED BEHIND PORTABLE CONCRETE BARRIER (PCB) AND A WORK ZONE IMPACT ATTENUATOR (WZIA) SHALL PROTECT THE LEADING BLUNT END OF THE PCB (SEE OMUTCD, FIGURE 6H-5 "SHOULDER CLOSURE ON FREEWAY" (TYPICAL APPLICATION 5)). IF THE CONTRACTOR CHOOSES TO PROTECT PAINTING EQUIPMENT WITH PCB AND A WZIA, THE COST SHALL BE CONSIDERED INCIDENTAL TO THE LUMP SUM BID FOR MAINTAINING TRAFFIC.

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

THE FOLLOWING ITEMS ARE QUANTIFIED IN THE SUBSUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1 (ONE-WAY)
ITEM 614, BARRIER REFLECTOR, TYPE 1 (BI-DIRECTIONAL)
ITEM 614, OBJECT MARKER, ONE-WAY
ITEM 614, OBJECT MARKER, TWO-WAY
ITEM 614, INCREASED BARRIER DELINEATION

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.

DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL

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

OBJECT MARKERS SHALL BE INSTALLED ON ALL TEMPORARY AND PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKERS SHALL CONFORM TO C&MS 614.03 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET WITH A 25 FOOT OFFSET FROM THE BARRIER REFLECTORS.

THE FOLLOWING ITEMS ARE QUANTIFIED IN THE SUBSUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 2 (ONE-WAY)
ITEM 614, OBJECT MARKER, 1-WAY

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

ITEM 630 - REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 630, THIS ITEM SHALL INCLUDE THE REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION OF REMOVED SIGN PANEL ON A TEMPORARY GROUND MOUNTED SIGN SUPPORT FOR USE DURING MAINTENANCE OF TRAFFIC WORK. THE TEMPORARY SIGN SUPPORT IS ITEMIZED SEPARATELY.

PAYMENT FOR THIS ITEM SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR REMOVING AND REERECTING EACH OF THE ABOVE ITEMS.

ITEM 630 - SIGNING, MISC.: TEMPORARY GROUND MOUNTED SIGN SUPPORT

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND 630, THIS ITEM SHALL PROVIDE A TEMPORARY SIGN SUPPORT FOR THE FOLLOWING CONDITIONS:

1. TO MOUNT THE REMOVED OVERHEAD EXTRUSHEET SIGN PANEL(S) WHEN THE EXISTING OVERHEAD SIGN SUPPORT IS REMOVED DUE TO CONSTRUCTION ACTIVITIES. ALL EFFORT SHOULD BE MADE TO LOCATE THE TEMPORARY SIGN SUPPORT NEAR THE REMOVED SIGN SUPPORT LOCATIONS.

2. TO MOUNT LEAD-IN SIGNAGE FOR THE CROSS OVERS WHERE NEW GROUND MOUNTED EXTRUSHEET SIGNS ARE PROVIDED. USE PROPOSED SIGN LOCATIONS SHOWN ON THE PLANS.

THE CONTRACTOR SHALL PROVIDE A TEMPORARY SIGN SUPPORT THAT IS SUFFICIENT TO SUPPORT THE REERECTED SIGN(S). THE TEMPORARY SIGN SUPPORT SHALL BE MOVEABLE WHEN CONSTRUCTION ACTIVITIES OR PROJECT COORDINATION FORCE A SIGN RELOCATION.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR EACH ITEM 630 - SIGNING, MISC.: TEMPORARY GROUND MOUNTED SIGN SUPPORT SPECIFIED IN THE PLANS.

EXISTING ODOT TRAFFIC COUNT STATION

THE CONTRACTOR IS ADVISED THAT AN EXISTING TRAFFIC COUNT STATION IS LOCATED ALONG IR-77 SOUTH OF THE PROJECT LIMITS. THE STATION IS LOCATED APPROXIMATELY 300 FEET NORTH OF THE EVERETT ROAD BRIDGE. THE TRAFFIC COUNT STATION CONSISTS OF DETECTOR LOOPS CUT INTO ALL TRAVEL LANES OF IR-77 AND A CONTROLLER CABINET LOCATED OFF THE SOUTHBOUND OUTSIDE SHOULDER.

THE CONTRACTOR SHALL NOT DISTURB THE TRAFFIC COUNT STATION, INCLUDING BUT NOT LIMITED TO THE PULL BOXES, DETECTOR LOOPS, AND CONTROL CABINET AND SUPPORT, AS PART OF THE CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT.

M442: TIME LIMITATION, TRAFFIC ON A MILLED SURFACE

THE MAXIMUM ALLOWABLE TIME FOR TRAFFIC TO BE PLACED ON A MILLED SURFACE SHALL BE 7 CONSECUTIVE CALENDAR DAYS. SHOULD THE CONTRACTOR FAIL TO MEET THIS REQUIREMENT, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $ 3000 PER DAY THAT THE TRAFFIC IS PLACED ON A MILLED SURFACE BEYOND THE SPECIFIED LIMIT.

"M443 TIME LIMITATION,
PAVEMENT MARKING REMOVAL"

NOTE DELETED

M444: DROPOFFS

THE CONTRACTOR WILL NOT BE PERMITTED TO LEAVE A DIFFERENCE IN ELEVATION BETWEEN THE MAINLINE MILLED SURFACES, AND ASPHALT SURFACE COURSE AND SIDE STREET APPROACHES/DRIVEWAYS GREATER THAN 1.25 INCH. THE CONTRACTOR SHALL PLACE A 12:1 ASPHALT WEDGE FOR ALL RESULTING ELEVATION DIFFERENCES GREATER THAN 1.25 INCH PRIOR TO OPENING TO TRAFFIC. THE PAVING OF INTERSECTION APPROACHES AND DRIVEWAYS SHALL BE PERFORMED WITHIN 7 DAYS OF MAINLINE SURFACE COURSE BEING APPLIED AND A DROPOFF BEING CREATED BETWEEN THE NEW SURFACE COURSE AND THE MILLED/EXISTING SIDE ROAD OR DRIVEWAY SURFACE. THE CONTRACTOR MAY ELECT TO PLACE A 12:1 ASPHALT WEDGE IN LIEU OF COMPLETING THE PAVING, HOWEVER THE ASPHALT CONCRETE USED FOR THE WEDGE SHALL BE CONSIDERED INCIDENTAL TO ITEM 614 – MAINTAINING TRAFFIC AND SHALL INCLUDE THE REMOVAL OF THE WEDGE BEFORE THE INTERSECTION/DRIVEWAY IS PAVED.

ITEM 614 - WORK ZONE PAVEMENT MARKING, MISC.: (BY TYPE) SPRAY THERMOPLASTIC

THE CONTRACTOR SHALL PLACE THE WORK ZONE PAVEMENT MARKING, MISC.: (BY TYPE) SPRAY THERMOPLASTIC PER ODOT SPECIFICATION 614.11 AND ODOT SPECIFICATION 648 WITH THE EXCEPTION ODOT SPECIFICATION 648.05 SHALL BE MODIFIED TO ALLOW PLACEMENT OF THE MATERIAL AT A TEMPERATURE OF NOT LESS THAN 35 DEGREES FAHRENHEIT.

THE WORK ZONE PAVEMENT MARKING, MISC.: ARROW, SPRAY THERMOPLASTIC IS A LANE REDUCTION ARROW

ESTIMATED QUANTITIES OF ITEM 614 WORK ZONE PAVEMENT MARKING, MISC.: (BY TYPE) SPRAY THERMOPLASTIC TO BE USED IN ACCORDANCE OF THE REQUIREMENTS OF C&MS 614.11 HAVE BEEN QUANTIFIED IN THE MAINTENANCE OF TRAFFIC SUBSUMMARY.

MAINTENANCE OF TRAFFIC LEGEND

DYL	WZ CENTER LINE, DOUBLE YELLOW	EXISTING SIGN	PORTABLE BARRIER
ELW	WZ EDGE LINE, WHITE, 6"		IMPACT ATTENUATOR
ELY	WZ EDGE LINE, YELLOW, 6"	EXISTING SIGN TO BE REMOVED	DRUMS (SPACING)
CH	WZ CHANNELIZING LINE, 12"	PROPOSED SIGN	
LL	WZ LANE LINE, 6"		XX ITEM, QUANTIFIED
DL	WZ DOTTED LINE, 6"	EXISTING SIGN SUPPORT	XX ITEM, PREVIOUSLY QUANTIFIED
WDL	WZ DOTTED LINE, 8"	PROPOSED SIGN SUPPORT	
TLY	WZ TRANSVERSE LINE, YELLOW	WORK ZONE	DIRECTION OF TRAVEL
CM	WZ CHEVRON MARKING	TEMPORARY PAVEMENT (NEW)	
IA	IMPACT ATTENUATOR		
PB	PORTABLE BARRIER	TEMPORARY PAVEMENT (BUILT IN PREVIOUS PHASE)	
Y	"Y" CONNECTOR	PMT PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
LA	WZ ARROW	S SIGN WORK (QUANTIFIABLE)	
RPM	RAISED PAVEMENT MARKER		
IBD	INCREASED BARRIER DELINEATION		
GR	GUARDRAIL BARRIER REFLECTORS		

MOT NOTES

SUM-77-28.75
MODEL: MN007 PAPERSIZE: 34x22 (in.) DATE: 8/1/2023 TIME: 11:07:29 AM USER: awiltshacher
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DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 220
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DESIGNER ACW
REVIEWER DRJ 08-26-22
PROJECT ID 111405
SHEET 31 TOTAL 927

SHEET NUMBER																			ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
34	35	36	37	38	39	40	41	42	43	44				45									
1641																			254	01000	1641	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.5" DEPTH)
132																			407	20000	132	GAL	NON-TRACKING TACK COAT
158																			411	10000	158	CY	STABILIZED CRUSHED AGGREGATE
69																			442	20001	69	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448), AS PER PLAN, PG70-22M
2400																			614	11110	2400	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
	210	429	210	1350	450			600											614	11630	3249	FT	INCREASED BARRIER DELINEATION
	3	13	2	3	3	5	3	3	5	1									614	12380	41	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)
LUMP																			614	12420	LUMP		DETOUR SIGNING
34																			614	12484	34	EACH	WORK ZONE INCREASED PENALTIES SIGN
2																			614	12756	2	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM
52	1308	800	1090	441	471	946	129	678	246	19									614	12801	6180	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN
250																			614	13000	250	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
	86	114	874	438	386	619	121	296	312	31									614	13310	3277	EACH	BARRIER REFLECTOR, TYPE 1, 1 WAY
					291	43													614	13310	334	EACH	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL
					87	8	59	39	79										614	13312	272	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL
	86	114	382	58	95	466	13	190	391	31									614	13350	1826	EACH	OBJECT MARKER, ONE WAY
			246	174	378	106	113	88											614	13360	1105	EACH	OBJECT MARKER, TWO WAY
300000																			614	18000	300000	EACH	MAINTAINING TRAFFIC, MISC.: SAFETY REPAIRS
300000																			614	18000	300000	EACH	MAINTAINING TRAFFIC, MISC.: BRIDGE DECK AND PAVEMENT PATCHING
144																			614	18601	144	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
6.2	8.47	2.25	19.78	5.11	8.46	22.07	5.97	7.25	2.03	0.6									614	98000	88.19	MILE	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, 6", SPRAY THERMOPLASTIC
1.21			4.33	0.16		3.82	0.08	0.31	0.17										614	98000	10.08	MILE	WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, 6", SPRAY THERMOPLASTIC
		0.1																	614	98000	0.1	MILE	WORK ZONE PAVEMENT MARKING, MISC.: CENTER LINE, SPRAY THERMOPLASTIC
5505	10765	6210	5629	5789	1363	3158	3734	4851	3018	204									614	98100	50226	FT	WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, 12", SPRAY THERMOPLASTIC
	373	1311	3390	3576	1485	2370	4697	2671	2655	420									614	98100	22948	FT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 6", SPRAY THERMOPLASTIC
			102					95											614	98100	197	FT	WORK ZONE PAVEMENT MARKING, MISC.: GORE MARKING, SPRAY THERMOPLASTIC
								16											614	98100	16	FT	WORK ZONE PAVEMENT MARKING, MISC.: STOP LINE, SPRAY THERMOPLASTIC
				2															614	98200	2	EACH	WORK ZONE PAVEMENT MARKING, MISC.: ARROW, SPRAY THERMOPLASTIC
LUMP																			615	10000	LUMP		ROADS FOR MAINTAINING TRAFFIC
28280	32821	1043	500	512															615	20000	63156	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
	3250	1372																	615	20001	4622	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN
895																			616	10000	895	MGAL	WATER
1.12																			618	40600	1.12	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)
			12290	8700	14520	4900	2700	2870											622	41011	45980	FT	PORTABLE BARRIER, 50", AS PER PLAN
					1	1			1	1									622	41050	4	EACH	PORTABLE BARRIER, "Y" CONNECTOR
	4270	5720	19080	2880	4760	23200	590	9060	15600	1540									622	41100	86700	FT	PORTABLE BARRIER, UNANCHORED
				1610															622	80000	1610	FT	GLARE SCREEN
														1116					630	80200	1116	SF	SIGN, GROUND MOUNTED EXTRUSHEET
														18					630	87101	18	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION, AS PER PLAN
														21					630	97700	21	EACH	SIGNING, MISC.: TEMPORARY GROUND MOUNTED SIGN SUPPORT
648																			808	18700	648	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY

MOT SUBSUMMARY

SUM-77-28.75

MODEL: MS001 PAPERSIZE: 34x22 (in.) DATE: 7/31/2023 TIME: 1:33:07 PM USER: awilbsacher
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DESIGNER ACW

REVIEWER DRJ 08-26-22

PROJECT ID 111405

SHEET 33 TOTAL 927

MQ003

REF NO.	SHEET NO.	LOCATION	STATION FROM	STATION TO	SIDE	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL) EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN (1-WAY WHITE) EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN (1-WAY YELLOW) EACH	614 BARRIER REFLECTOR, TYPE 1, 1 WAY EACH	614 OBJECT MARKER, ONE WAY EACH	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE PAVEMENT MARKING, MISC.: CENTER LINE, SPRAY THERMOPLASTIC (DOUBLE YELLOW) MILE	614 WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, 6", SPRAY THERMOPLASTIC (WHITE) MILE	614 WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, 6", SPRAY THERMOPLASTIC (YELLOW) MILE	614 WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, 12", SPRAY THERMOPLASTIC FT	614 WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 6", SPRAY THERMOPLASTIC FT	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN SY	622 PORTABLE BARRIER, UNANCHORED FT
IBD-3	79	IR-77	960+00	961+50	LT						150								
IA-4	79	IR-77	961+70		LT	1													
PMT-9	80	IR-77	987+50	992+50	LT												410		
ELW-5	80	IR-77	993+50	1021+88	LT		138						0.53						
CH-5	80	IR-77	993+50	1025+50	LT		146								3187				
ELY-5	80	IR-77	993+50	1025+50	LT			132						0.6					
ELY-6	80	IR-77	995+00	1022+20	RT			111						0.52					
CH-6	80	IR-77	995+00	1022+20	RT		124								2732				
ELW-6	80	IR-77	995+00	1015+78	RT		55						0.4						
IA-5	81	IR-77	1001+61		RT	1													
PB-5	81	IR-77	1001+61	1013+76	RT				24	24									1220
IBD-4	81	IR-77	1001+81	1003+00	RT						119								
PB-6	81	IR-77	1004+25	1017+30	LT				26	26									1300
PMT-5	81	IR-77	1007+38	1011+03	LT												372		
DL-1	81	IR-77	1009+00	1016+31	RT		27									735			
PMT-6	81	IR-77	1013+12	1018+30	LT												261		
IBD-5	81	IR-77	1015+50	1017+10	LT						160								
CH-7	81	IR-77	1016+31	1019+20	RT		15								291				
DL-2	81	IR-77	1016+72	1022+50	LT		37									576			
IA-6	81	IR-77	1017+30		LT	1													
ELW-7	81	IR-77	1019+20	1022+20	RT		15						0.06						
	82	NO NEW																	
PB-7	83	IR-77	1046+50	1059+85	LT				27	27									1340
PMT-7	83	IR-77	1048+00	1058+39	CL													1372	
IA-7	83	IR-77	1049+80		RT	1													
PB-8	83	IR-77	1049+80	1057+44	RT				15	15									760
IA-8	83	IR-77	1059+85		LT	1													
	84	NO NEW																	
IA-11	85	SR-303	154+90		RT	1													
PB-11	85	SR-303	154+90	158+10	RT				6	6									320
IA-12	85	SR-303	155+20		LT	1													
PB-12	85	SR-303	155+20	157+60	LT				5	5									240
IA-13	85	SR-303	157+60		LT	1													
IA-14	85	SR-303	158+10		RT	1													
ELW-11	85	SR-303	153+65	158+97	LT								0.09						
DYL-11	85	SR-303	153+65	155+00	CL							0.03							
IA-15	85	SR-303	154+95		LT	1													
PB-13	85	SR-303	154+95	157+55	LT				5	5									260
ELY-11	85	SR-303	155+00	157+57	RT									0.05					
IA-16	85	SR-303	155+10		RT	1													
PB-14	85	SR-303	155+10	157+90	RT				6	6									280
IA-17	85	SR-303	157+55		LT	1													
IA-18	85	SR-303	157+90		RT	1													
DYL-12	85	SR-303	153+65	157+41	CL							0.07							
SUBTOTAL						13	557	243	114	114	429	0.1	1.08	1.17	6210	1311	1043	1372	5720
TOTALS CARRIED TO SUBSUMMARY SHEET						13	800		114	114	429	0.1	2.25		6210	1311	1043	1372	5720

MOT ESTIMATED QUANTITIES

SUM-77-28.75

MODEL: MQ003 PAPERSIZE: 34x22 (in.) DATE: 7/31/2023 TIME: 1:26:09 PM USER: awilstacher
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GANNETT FLEMING
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Columbus, OH 43231

DESIGNER ACW

REVIEWER DRJ 08-26-22

PROJECT ID 111405

SHEET 36 TOTAL 927

SHEET NUMBER														FUNDING			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
0C	20	21	22	23	24	33	187	194	195	575	648	650	654	01/IMS/04	02/IMS/03	05/S>2/04						
																					ROADWAY	
	LS													LUMP			201	11000	LS		CLEARING AND GRUBBING	
								36						35		1	202	20010	36	EACH	HEADWALL REMOVED	
108540					32									108572			202	23000	108572	SY	PAVEMENT REMOVED	
							1135							1135			202	30700	1135	FT	CONCRETE BARRIER REMOVED	
							85							85			202	32000	85	FT	CURB REMOVED	
								3389						3190		199	202	35100	3389	FT	PIPE REMOVED, 24" AND UNDER	
								539						539			202	35200	539	FT	PIPE REMOVED, OVER 24"	
							16391							16391			202	38000	16391	FT	GUARDRAIL REMOVED	
								3						3			202	58000	3	EACH	MANHOLE REMOVED	
							30	37						66		1	202	58100	67	EACH	CATCH BASIN REMOVED	
									1681					1681			SPECIAL	20270000	1681	FT	FILL AND PLUG EXISTING CONDUIT	22
							40824							40824			202	75000	40824	FT	FENCE REMOVED	
		2												2			202	98100	2	EACH	REMOVAL MISC.: INSPECTION WELL	21
		200												200			202	98200	200	FT	REMOVAL MISC.: CONDUIT	21
					136584			631						91523	45692		203	10000	137215	CY	EXCAVATION	
					56600									37736	18864		203	20000	56600	CY	EMBANKMENT	
		25												17	8		203	20001	25	CY	EMBANKMENT, AS PER PLAN	21
		3990												2662	1328		204	13000	3990	CY	EXCAVATION OF SUBGRADE	
		3990												2662	1328		204	30010	3990	CY	GRANULAR MATERIAL, TYPE B	
		11970												7984	3986		204	50000	11970	SY	GEOTEXTILE FABRIC	
6607														4405	2202		206	10500	6607	TON	CEMENT	
253902														169269	84633		206	11000	253902	SY	CURING COAT	
249497														166331	83166		206	15010	249497	SY	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	
4407														2939	1468		206	15020	4407	SY	CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP	
148														99	49		206	20000	148	HOUR	TEST ROLLING	
														LUMP			206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	
							292							292			209	60201	292	STA	LINEAR GRADING, AS PER PLAN	22
							25924							25924			606	15050	25924	FT	GUARDRAIL, TYPE MGS	
							300							300			606	15550	300	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS	
							37							37			606	26150	37	EACH	ANCHOR ASSEMBLY, MGS TYPE E MASH 2016	
							27							27			606	26550	27	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
							21							21			606	35002	21	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
							9							9			606	35102	9	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
							10214							10214			SPECIAL	60655010	10214	FT	CABLE BARRIER WITH CONCRETE LINE POST FOUNDATION	23
							12							12			SPECIAL	60655150	12	EACH	CABLE BARRIER, ANCHOR ASSEMBLY	23
							116							116			SPECIAL	60655190	116	EACH	CABLE BARRIER, POST REFLECTOR	23
							41678							41678			607	15000	41678	FT	FENCE, TYPE 47	
							63							63			607	40500	63	EACH	GATE, TYPE 47	
							713							713			622	24000	713	FT	CONCRETE BARRIER, TYPE D	
							20							20			622	25000	20	EACH	CONCRETE BARRIER END SECTION, TYPE D	
			4				20							24			622	25050	24	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
														LUMP			623	11000	LS		PROVIDING ELECTRONIC INSTRUMENTATION	
4														4			623	40520	4	EACH	RIGHT-OF-WAY MONUMENT, TYPE B	
6														6			SPECIAL	69098000	6	EACH	VERTICAL CLEARANCE	20
				LS										LUMP			SPECIAL	69098400	LS		AS-BUILT CONSTRUCTION RECORD DRAWINGS	23
	LS													LUMP			SPECIAL	69098400	LS		SURVEY CONTROL VERIFICATION	20
																					EROSION CONTROL	
								93						87		6	601	11000	93	SY	RIPRAP, TYPE D	
			25					68						93			601	21050	93	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
							301							301			601	21060	301	SY	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	
								778						778			601	32004	778	CY	ROCK CHANNEL PROTECTION, TYPE A WITH GEOTEXTILE FABRIC	
								74						74			601	32104	74	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	
								46						40		6	601	32204	46	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC	
			2											2			659	00100	2	EACH	SOIL ANALYSIS TEST	
			21145					5790						26935			659	00300	26935	CY	TOPSOIL	
			190487											190487			659	10000	190487	SY	SEEDING AND MULCHING	
			9525											9525			659	14000	9525	SY	REPAIR SEEDING AND MULCHING	
			9525											9525			659	15000	9525	SY	INTER-SEEDING	

SHEET 1

SUM-77-28.75

MODEL: 111405_GG001_1 PAPERSIZE: 34x22 (in.) DATE: 8/22/2023 TIME: 1:14:54 PM USER: cmann
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GENERAL SUMMARY

DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

DESIGNER
TQD

REVIEWER
DRJ 10/04/22

PROJECT ID
111405

SHEET 181 TOTAL 927

SHEET NUMBER														FUNDING			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
0C	20	21	22	23	24	33	187	194	195	575	648	650	654	01/IMS/04	02/IMS/03	05/S>2/04						
																					MAINTENANCE OF TRAFFIC - CONTINUED FROM PREVIOUS PAGE	
						158								158			411	10000	158	CY	STABILIZED CRUSHED AGGREGATE	
						69								69			442	20001	69	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448), AS PER PLAN, PG70-22M	30
						2400								2400			614	11110	2400	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
						3249								3249			614	11630	3249	FT	INCREASED BARRIER DELINEATION	
						41								41			614	12380	41	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	28
						LS								LUMP			614	12420	LS		DETOUR SIGNING	28
						34								34			614	12484	34	EACH	WORK ZONE INCREASED PENALTIES SIGN	
						2								2			614	12756	2	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM	
						6180								6180			614	12801	6180	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	27
						250								250			614	13000	250	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
						3277								3277			614	13310	3277	EACH	BARRIER REFLECTOR, TYPE 1, 1 WAY	
						334								334			614	13310	334	EACH	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	
						272								272			614	13312	272	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	
						1826								1826			614	13350	1826	EACH	OBJECT MARKER, ONE WAY	
						1105								1105			614	13360	1105	EACH	OBJECT MARKER, TWO WAY	
						300000								300000			614	18000	300000	EACH	MAINTAINING TRAFFIC, MISC.: SAFETY REPAIRS	32
						300000								300000			614	18000	300000	EACH	MAINTAINING TRAFFIC, MISC.: BRIDGE DECK AND PAVEMENT PATCHING	32
						144								144			614	18601	144	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	27
						88.19								88.19			614	98000	88.19	MILE	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, 6", SPRAY THERMOPLASTIC	31
						10.08								10.08			614	98000	10.08	MILE	WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, 6", SPRAY THERMOPLASTIC	31
						0.1								0.1			614	98000	0.1	MILE	WORK ZONE PAVEMENT MARKING, MISC.: CENTER LINE, SPRAY THERMOPLASTIC	31
						50226								50226			614	98100	50226	FT	WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, 12", SPRAY THERMOPLASTIC	31
						22948								22948			614	98100	22948	FT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 6", SPRAY THERMOPLASTIC	31
						197								197			614	98100	197	FT	WORK ZONE PAVEMENT MARKING, MISC.: GORE MARKING, SPRAY THERMOPLASTIC	31
						16								16			614	98100	16	FT	WORK ZONE PAVEMENT MARKING, MISC.: STOP LINE, SPRAY THERMOPLASTIC	31
						2								2			614	98200	2	EACH	WORK ZONE PAVEMENT MARKING, MISC.: ARROW, SPRAY THERMOPLASTIC	31
						LS								LUMP			615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
						63156								63156			615	20000	63156	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
						4622								4622			615	20001	4622	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	29
						895								895			616	10000	895	MGAL	WATER	
						1.12								1.12			618	40600	1.12	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
						45980								45980			622	41011	45980	FT	PORTABLE BARRIER, 50", AS PER PLAN	26
						4								4			622	41050	4	EACH	PORTABLE BARRIER, "Y" CONNECTOR	
						86700								86700			622	41100	86700	FT	PORTABLE BARRIER, UNANCHORED	
						1610								1610			622	80000	1610	FT	GLARE SCREEN	
						1116								1116			630	80200	1116	SF	SIGN, GROUND MOUNTED EXTRUSHEET	
						18								18			630	87101	18	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION, AS PER PLAN	31
						21								21			630	97700	21	EACH	SIGNING, MISC.: TEMPORARY GROUND MOUNTED SIGN SUPPORT	31
						648								648			808	18700	648	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
																					INCIDENTALS	
														LUMP			108	10000	LS		CPM PROGRESS SCHEDULE	
														LUMP			614	11000	LS		MAINTAINING TRAFFIC	
														42			619	16021	42	MNTH	FIELD OFFICE, TYPE C, AS PER PLAN	23
														LUMP			623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
														LUMP			624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

SUM-77-28.75

MODEL: 111405_GG001_6 PAPERSIZE: 34x22 (in.) DATE: 8/3/2023 TIME: 12:33:50 PM USER: cmann
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DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

DESIGNER
TQD

REVIEWER
DRJ 10/04/22

PROJECT ID
111405

SHEET 186 | TOTAL 927

SUM-77-3096 L/R BRIDGE SUMMARY

CALCULATED: RAZ 05/20/22 | **CHECKED**: SAT 05/24/22 | **UPDATED**: SAT 10/05/22 | **REVISED**: SAT/BAB 01/05/23

ITEM	ITEM EXT.	TOTAL PER SPLIT		TOTAL PER BRIDGE			GRAND TOTAL	UNIT	DESCRIPTION	LEFT BRIDGE			RIGHT BRIDGE			GENERAL	SHEET REF.
		03/IMS/14	04/IMS/13	LEFT	RIGHT	GEN				ABUT.	PIER	SUPER	ABUT.	PIER	SUPER		
202	11203		LS			LS	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN							LS	2
202	22900	488		244	244		488	SY	APPROACH SLAB REMOVED			244			244		
503	21100		372	185	187		372	CY	UNCLASSIFIED EXCAVATION	137	48		136	51			
505	11100		LS			LS	LS		PILE DRIVING EQUIPMENT MOBILIZATION							LS	
507	00200		2,040	1,030	1,010		2,040	FT	STEEL PILES HP12X53, FURNISHED	690	340		690	320			
507	00250		1,840	930	910		1,840	FT	STEEL PILES HP12X53, DRIVEN	630	300		630	280			
509	10001		66,334	32,875	33,459		66,334	LB	EPOXY COATED STEEL REINFORCEMENT, AS PER PLAN	4,387	7,998	20,490	4,420	8,189	20,850		3
509	20001		600	300	300		600	LB	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN			300			300		3
509	30020		5,826	2,913	2,913		5,826	FT	NO. 4 DEFORMED GFRP REINFORCEMENT			2,913			2,913		3
510	10001		44	22	22		44	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	22			22				3
511	34446		123	61	62		123	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			61			62		
511	34451		60	30	30		60	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN			30			30		3
511	42012		39	19	20		39	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		19			20			
511	44112		42	21	21		42	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	21			21				
511	46512		78	39	39		78	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	25	14		25	14			
512	33000		30	15	15		30	SY	TYPE 2 WATERPROOFING	15			15				
SPECIAL	51275500		583	290	293		583	SY	SEALING , SEALING OF CONCRETE SURFACES	27	67	196	25	72	196		
513	10260		87,385	43,635	43,750		87,385	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3			43,635			43,750		
513	20000		996	498	498		996	EACH	WELDED STUD SHEAR CONNECTORS			498			498		
514	00050		1,258	629	629		1,258	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			629			629		
514	00056		1,258	629	629		1,258	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			629			629		
514	00060		6,636	3,312	3,324		6,636	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			3,312			3,324		
514	00066		6,636	3,312	3,324		6,636	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			3,312			3,324		
514	00504		4	2	2		4	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			2			2		
514	10000		6	3	3		6	EACH	FINAL INSPECTION REPAIR			3			3		
516	10010	155	59	107	107		214	FT	ARMORLESS PREFORMED JOINT SEAL			107			107		
516	13600		34	17	17		34	SF	1" PREFORMED EXPANSION JOINT FILLER	17			17				
516	13900		185	92	93		185	SF	2" PREFORMED EXPANSION JOINT FILLER	92			93				
516	14020		60	30	30		60	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	30			30				
516	44300		8	4	4		8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (13"x13"x4.08" BEARING WITH 14"x14" LOAD PLATE AND BEVELED HP10x42 PEDESTAL)	4			4				
516	44300		8	4	4		8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (15"x18"x4.08" BEARING WITH 16"x19" LOAD PLATE)		4			4			
518	12201		4	2	2		4	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN			2			2		3
518	21200		45	22	23		45	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	22			23				
518	40000		120	60	60		120	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	60			60				
518	40010		60	30	30		60	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	30			30				
526	25011	424	180	302	302		604	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN			302			302		40
526	90030	155	59	107	107		214	FT	TYPE C INSTALLATION			107			107		
601	20000		290	142	148		290	SY	CRUSHED AGGREGATE SLOPE PROTECTION	142			148				
625	33000		2	1	1		2	EACH	STRUCTURE GROUNDING SYSTEM	1			1				

ESTIMATED QUANTITIES
BRIDGE NO. SUM-77-3096 L & R
IR-77 OVER STATE ROUTE 303

SFN 7704534 (L)
SFN 7704569 (R)
DESIGN AGENCY: GANNETT FLEMING, 2300 Corporate Exchange Dr. Suite 200, Columbus, OH 43231
DESIGNER: RAZ | CHECKER: SAT
REVIEWER: MTO
PROJECT ID: 111405
SUBSET: 4 | TOTAL: 46
SHEET: 676 | TOTAL: 927

SUM-77-28.75

SUM-77-3187 L/R BRIDGE SUMMARY

CALCULATED: RAZ 05/18/22 | **CHECKED**: SAT 05/19/22 | **UPDATED**: SAT 10/05/22 | **REVISED**: SAT/BAB 01/05/23

ITEM	ITEM EXT.	TOTAL PER SPLIT		TOTAL PER BRIDGE			GRAND TOTAL	UNIT	DESCRIPTION	LEFT BRIDGE			RIGHT BRIDGE			GENERAL	SHEET REF.
		03/IMS/14	04/IMS/13	LEFT	RIGHT	GEN				ABUT.	PIER	SUPER	ABUT.	PIER	SUPER		
202	11203		LS			LS	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN							LS	3
202	22900	491		246	245		491	SY	APPROACH SLAB REMOVED			246			245		
503	21100		363	189	174		363	CY	UNCLASSIFIED EXCAVATION	140	49		123	51			
505	11100		LS			LS	LS		PILE DRIVING EQUIPMENT MOBILIZATION							LS	
507	00500		1,140	570	570		1,140	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	570			570				
507	00550		1,260	630	630		1,260	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	630			630				
507	00700		840	420	420		840	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN		420			420			
507	00750		920	460	460		920	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED		460			460			
509	10001		65,762	32,668	33,094		65,762	LB	EPOXY COATED STEEL REINFORCEMENT, AS PER PLAN	4,428	7,968	20,272	4,459	8,197	20,438		4
509	20001		600	300	300		600	LB	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN			300			300		4
509	30020		5,642	2,821	2,821		5,642	FT	NO. 4 DEFORMED GFRP REINFORCEMENT			2,821			2,821		
510	10001		44	22	22		44	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	22			22				4
511	34446		119	59	60		119	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			59			60		
511	34451		58	29	29		58	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN			29			29		4
511	42012		39	19	20		39	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		19			20			
511	44112		42	21	21		42	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	21			21				
511	46512		82	41	41		82	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	26	15		26	15			
512	33000		30	15	15		30	SY	TYPE 2 WATERPROOFING	15			15				
SPECIAL	51275500		567	282	285		567	SY	SEALING , SEALING OF CONCRETE SURFACES	26	67	189	28	68	189		
513	10260		83,666	41,755	41,911		83,666	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3			41,755			41,911		
513	20000		960	480	480		960	EACH	WELDED STUD SHEAR CONNECTORS			480			480		
514	00050		1,094	547	547		1,094	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			547			547		
514	00056		1,094	547	547		1,094	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			547			547		
514	00060		5,837	2,911	2,926		5,837	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			2,911			2,926		
514	00066		5,837	2,911	2,926		5,837	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			2,911			2,926		
514	00504		4	2	2		4	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			2			2		
514	10000		6	3	3		6	EACH	FINAL INSPECTION REPAIR			3			3		
516	10010	152	68	110	110		220	FT	ARMORLESS PREFORMED JOINT SEAL			110			110		
516	13600		34	17	17		34	SF	1" PREFORMED EXPANSION JOINT FILLER	17			17				
516	13900		192	96	96		192	SF	2" PREFORMED EXPANSION JOINT FILLER	96			96				
516	14020		60	30	30		60	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	30			30				
516	44300		8	4	4		8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (13"x13"x4.08" BEARING WITH 14"x14" LOAD PLATE AND BEVELED HP10x42 PEDESTAL)	4			4				
516	44300		8	4	4		8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (15"x18"x4.08" BEARING WITH 16"x19" LOAD PLATE)		4			4			
518	12201		4	2	2		4	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN			2			2		4
518	21200		45	23	22		45	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	23			22				
518	40000		120	60	60		120	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	60			60				
518	40010		100	50	50		100	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	50			50				
523	20001		8	4	4		8	EACH	DYNAMIC LOAD TESTING, AS PER PLAN	2	2		2	2			4
523	20501		8	4	4		8	EACH	RESTRIKE, AS PER PLAN	2	2		2	2			4
526	25011	423	182	303	302		605	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN			303			302		41
526	90030	152	68	110	110		220	FT	TYPE C INSTALLATION			110			110		
601	20000		315	155	160		315	SY	CRUSHED AGGREGATE SLOPE PROTECTION	155			160				
625	33000		2	1	1		2	EACH	STRUCTURE GROUNDING SYSTEM	1			1				

ESTIMATED QUANTITIES
BRIDGE NO. SUM-77-3187 L & R
IR-77 OVER BRUSH RD.

SFN 7704593 (L)
SFN 7704623 (R)

DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

DESIGNER RAZ | CHECKER SAT
REVIEWER MTO
PROJECT ID 111405
SUBSET 5 | TOTAL 47
SHEET 723 | TOTAL 927

SUM-77-28.75

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/31/2023 TIME: 10:18:03 AM USER: stony
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PLOT DRIVER: OHDOT_PDF.pltcfg PENTABLE: 111405_OHDOT_Pen.tbl
SUBMITTAL: Tracings PENTABLE SUBSET: 2

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, 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.

A QUANTITY OF 300 POUNDS HAS BEEN INCLUDED TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO CMS 709.00.

ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN

DOWEL HOLES FOR #5 REINFORCING SHALL BE 7/8" DIAMETER AND A MINIMUM OF 12" DEEP. DOWEL HOLES FOR #8 REINFORCING SHALL BE 1.5" DIAMETER AND A MINIMUM OF 18" DEEP. PRIOR TO DRILLING HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AIDE OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. THE DEPARTMENT WILL PAY FOR DOWEL HOLES AND GROUTING WITH ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN.

ITEM 511 - CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN

IN ADDITION TO THE BRIDGE DECK PARAPETS, THE DEPARTMENT WILL PAY FOR CONCRETE PARAPETS ON THE APPROACH SLABS WITH ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN.

AS PART OF CONSTRUCTING THE BRIDGE PARAPETS, FURNISH AND INSTALL 4" DIAMETER CONDUITS, COUPLINGS, AND FITTINGS, FROM PULL BOX TO PULL BOX AS SHOWN IN THE PLANS. FURNISH AND INSTALL THE CONDUIT, COUPLINGS, AND FITTINGS AS PER CMS 625.

THE DEPARTMENT WILL PAY FOR FURNISHING AND INSTALLING THE 4" DIAMETER CONDUITS, COUPLINGS, AND FITTINGS WITH ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN.

THE DEPARTMENT WILL PAY FOR FURNISHING AND INSTALLING THE PULL BOXES WITH ITEM 625 - PULL BOX IN THE ROADWAY QUANTITIES.

ITEM 518 - SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 518, SCUPPERS SHALL BE NEENAH FOUNDRY MODEL R-4014-C1 HEAVY DUTY SCUPPERS WITH TYPE A BOLTED GRATE OR APPROVED EQUAL. FURNISH AND INSTALL DOWNSPOUTS AND CONNECTIONS AS SHOWN IN THE PLANS AND AS PER CMS 518. INCLUDE THE COST FOR THE DOWNSPOUTS AND CONNECTIONS WITH ITEM 518 - SCUPPERS INCLUDING SUPPORTS, AS PER PLAN.

PILES DRIVEN TO FULL ESTIMATED LENGTH WITH PILE/SOIL SETUP

THE ULTIMATE BEARING VALUE (UBV) IS 261.4 KIPS FOR THE 12" CIP CONCRETE PILES AT THE ABUTMENTS. PART OF THE UBV WILL BE ACHIEVED THROUGH PILE/SOIL SETUP, WHICH IS A TIME DEPENDENT INCREASE IN RESISTANCE THAT OCCURS IN SOME SOILS.

NOTIFY THE ENGINEER AT LEAST 5 DAYS BEFORE DRIVING PILES SO THAT THE ENGINEER CAN NOTIFY THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICE OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF GEOTECHNICAL ENGINEERING.

DRIVE THE FIRST TWO PILES AT EACH SUBSTRUCTURE TO THE FULL ESTIMATED LENGTH LISTED IN THE PILE DESIGN LOADS NOTE ON SHEET 3/34. PERFORM DYNAMIC LOAD TESTING ON BOTH PILES WHILE DRIVING. AFTER DRIVING AND TESTING THE FIRST TWO PILES, DRIVE THE REMAINING PILES AT EACH SUBSTRUCTURE TO THE SAME DEPTH AS THE FIRST TWO PILES. AFTER DRIVING ALL PILES TO THE ESTIMATED LENGTH, CEASE ALL DRIVING OPERATIONS AT EACH SUBSTRUCTURE FOR A PERIOD OF 7 DAYS FOR ABUTMENTS. INCLUDE THE WAITING PERIOD AS A SEPARATE ACTIVITY IN THE PROGRESS SCHEDULE. AFTER THE WAITING PERIOD, PERFORM PILE RESTRIKES ON BOTH OF THE FIRST TWO PILES AT EACH SUBSTRUCTURE (ONE RESTRIKE ITEM).

IF THE REQUIRED UBV IS ACHIEVED AT THE END OF INITIAL DRIVING, USE THE DYNAMIC LOAD TESTING RESULTS TO ESTABLISH DRIVING CRITERIA ACCORDING TO C&MS 507.05 FOR ALL THE REMAINING PRODUCTION PILES.

SUBMIT ALL TEST RESULTS TO THE ENGINEER. IF THE RESTRIKE TEST RESULTS INDICATE THAT THE FIRST TWO PILES AT A SUBSTRUCTURE ACHIEVED THE REQUIRED UBV, ALL PILES IN THAT SUBSTRUCTURE MAY BE ACCEPTED BY THE ENGINEER.

IF THE RESTRIKE TEST RESULTS INDICATE THAT EITHER OF THE FIRST TWO PILES AT A SUBSTRUCTURE DID NOT ACHIEVE THE REQUIRED UBV, IMMEDIATELY NOTIFY THE ENGINEER SO THAT THE ENGINEER CAN NOTIFY THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICE OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF GEOTECHNICAL ENGINEERING. THE ENGINEER WILL REVIEW THE TEST RESULTS AND ESTABLISH ADDITIONAL RESTRIKE TESTING OR DRIVING CRITERIA FOR THE PILING IN THAT SUBSTRUCTURE WITH THE ASSISTANCE OF THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICE OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF GEOTECHNICAL ENGINEERING.

IF DIRECTED BY THE ENGINEER, PERFORM ADDITIONAL RESTRIKE TESTING OR DRIVE ALL PILES AT A SUBSTRUCTURE TO THE ESTABLISHED DRIVING CRITERIA. THE DEPARTMENT WILL PAY FOR SPLICING OF THE PILES BEYOND THE ESTIMATED LENGTH PROVIDED IN THE PLANS UNDER C&MS 109.05 WITH A NEGOTIATED PRICE PER SPLICE.

THIS PLAN NOTE INCLUDES A QUANTITY OF ONE EACH ITEM 523 DYNAMIC LOAD TESTING, AS PER PLAN AND A QUANTITY OF ONE EACH ITEM 523 RESTRIKE, AS PER PLAN PER EACH SUBSTRUCTURE UNIT

STANDARD PLAN DETAILING NOMENCLATURE

THROUGHOUT THE PLANS, SECTIONS AND DETAILS ARE REFERENCED TO THEIR CORRESPONDING VIEWS THROUGH THE USE OF STANDARD CALLOUTS. THE VIEWS OF SECTIONS, ELEVATIONS, AND DETAILS WILL HAVE UNIQUE NUMBERS ON THE PAGES ON WHICH THEY ARE SHOWN.

LETTERS WILL BE UTILIZED FOR SECTION AND ELEVATION CALLOUTS. NUMBERS WILL BE UTILIZED FOR DETAIL CALLOUTS.

IF A SECTION, ELEVATION, OR DETAIL VIEW IS ON THE SAME SHEET FROM WHICH IT IS CUT, THE CALLOUT WILL APPEAR AS FOLLOWS:

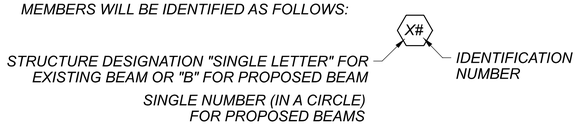
SECTION, ELEVATION, OR DETAIL IDENTIFICATION

IF A SECTION, ELEVATION, OR DETAIL VIEW IS ON A DIFFERENT SHEET FROM WHICH IT IS CUT, THE CALLOUT WILL APPEAR AS FOLLOWS:

SECTION, ELEVATION, OR DETAIL IDENTIFICATION

SHEET WHERE THE CORRESPONDING SECTION, ELEVATION, OR DETAIL CALLOUT OR VIEW CAN BE FOUND

MEMBERS WILL BE IDENTIFIED AS FOLLOWS:



STANDARD PLAN ABBREVIATIONS AND SYMBOLS

ABUT =	ABUTMENT	NB =	NORTHBOUND
ADT =	AVERAGE DAILY TRAFFIC	NE =	NORTHEAST
ADTT =	AVERAGE DAILY TRUCK TRAFFIC	NF =	NEAR FACE
APP =	APPROACH	NO =	NUMBER
APPR =	APPROXIMATE	N.P.C.P.P. =	NON-PERFORATED CORRUGATED PLASTIC PIPE
AVE =	AVENUE	NW =	NORTHWEST
(B#) =	BEAM NUMBER (PROPOSED)	O/O =	OUT TO OUT
		OD =	OUTSIDE DIAMETER
(#) =	BEAM LETTER (EXISTING)	OH =	OVERHANG
		OHWM =	ORDINARY HIGH WATER MARK
BF =	BOTTOM FLANGE	OVHD =	OVERHEAD
BM =	BENCHMARK	ODOT =	OHIO DEPARTMENT OF TRANSPORTATION
BOTT =	BOTTOM	P.V.I. =	POINT OF VERTICAL INTERSECTION
BRG =	BEARING	PC =	POINT OF CURVE
BTWN =	BETWEEN	PCB =	PORTABLE CONCRETE BARRIER
C.B. =	CHORD BEARING	P.C.P.P. =	PERFORATED CORRUGATED PLASTIC PIPE
C/C =	CENTER TO CENTER	PEJF =	PREFORMED EXPANSION JOINT FILLER
CB =	CATCH BASIN	PGL =	PROFILE GRADE LINE
CCTV =	CLOSED CIRCUIT TELEVISION	PI =	POINT OF INTERSECTION
CIP =	CAST IN PLACE	PMVC =	POINT OF MINIMUM VERTICAL CLEARANCE
CJ =	CONSTRUCTION JOINT	POT =	POINT ON TANGENT
CJ-O =	OPTIONAL CONSTRUCTION JOINT	PROP =	PROPOSED
CLR =	CLEAR	PT =	POINT OF TANGENT
CMP =	CORRUGATED METAL PIPE	PVMT =	PAVEMENT
CMS =	CONSTRUCTION MATERIAL SPECIFICATIONS	RA =	REAR ABUTMENT
CONST =	CONSTRUCTION	RCP =	REINFORCED CONCRETE PIPE
CP =	COVER PLATE	RDWY =	ROADWAY
CSP/N =	CORRUGATED STEEL PIPE (NON-PERFORATED)	REF =	REFERENCE
CSP/P =	PERFORATED CORRUGATED STEEL PIPE	REINF. =	REINFORCING OR REBAR
DIA =	DIAMETER	REQ'D =	REQUIRED
DND =	DO NOT DISTURB	RT =	RIGHT
DPRM =	DIAPHRAGM	R/W =	RIGHT OF WAY
E/P =	EDGE OF PAVEMENT	S/O =	SERIES OF
E/S =	EDGE OF SHOULDER	SR =	STATE ROUTE
EB =	EASTBOUND	SB =	SOUTHBOUND
EF =	EACH FACE	SCD =	STANDARD CONSTRUCTION DRAWING
ELEC =	ELECTRIC	SE =	SOUTHEAST
ELEV or EL =	ELEVATION	SER =	SERIES
EX =	EXISTING	SF =	SQUARE FEET
EXP =	EXPANSION	SHLDR =	SHOULDER
F/F =	FACE TO FACE	SPA =	SPACES
FA =	FORWARD ABUTMENT	ST =	STREET OR SPAN TOTAL
FF =	FAR FACE/FILL FACE	STA =	STATION
FO =	FIBER OPTIC	STD =	STANDARD
FTG =	FOOTING	STG =	STAGE
FWD =	FORWARD	STM =	STORM
GR =	GUARDRAIL	STRUCT =	STRUCTURE
H.C. =	HORIZONTAL CURVE	SW =	SOUTHWEST
HORZ =	HORIZONTAL	T/ =	TOP OF
I/I =	INSIDE TO INSIDE	T/B =	TOP AND BOTTOM
IR =	INTERSTATE ROUTE	T/T =	TOE TO TOE
JT =	JOINT	TBR =	TO BE REMOVED
LT =	LEFT	TEMP =	TEMPORARY
MAX =	MAXIMUM	TYP =	TYPICAL
MH =	MANHOLE	U.N.O. =	UNLESS NOTED OTHERWISE
MHC =	MINIMUM HORIZONTAL CLEARANCE	VC =	VERTICAL CURVE
MIN =	MINIMUM	VERT =	VERTICAL
MISC =	MISCELLANEOUS	WB =	WEST BOUND
MVC =	MINIMUM VERTICAL CLEARANCE	WTR =	WATER
		WW =	WINGWALL
		YR =	YEAR

PERMITS FOR SECTION 401 AND 404 TEMPORARY ACCESS FILLS

THE TEMPORARY ACCESS FILL INFORMATION USED FOR THE PERMIT APPLICATION IS AVAILABLE FOR INFORMATIONAL PURPOSED ONLY AND IS PROVIDED AS PART OF THE DESIGNER CALCULATIONS. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING THEIR OWN TEMPORARY ACCESS FILL AND THE DESIGN SHOULD CORRESPOND WITH REQUIREMENTS OF SS 832 AND THOSE FOUND IN THE SPECIAL PROVISIONS.

FOR THIS PROJECT, PERMITS FOR SECTION 401 AND 404 OF THE CLEAN WATER ACT, ARE BASED ON THE LIMITS OF TEMPORARY CONSTRUCTION FILL PLACED IN THE WATERS OF THE UNITED STATES AS SHOWN IN THE SPECIAL PROVISIONS. SHOULD THE CONTRACTOR CHOOSE TO DEVIATE FROM THE PROPOSED TAF, THE CONTRACTOR IS REQUIRED TO COORDINATE THE REQUEST FOR THE CAUSEWAY AND ACCESS FILL(S) WITH THE PROJECT ENGINEER AND OES, IF A PERMIT MODIFICATION IS REQUIRED REFER TO SUPPLEMENT SPECIFICATION 832.06 FOR APPLICATION REQUIREMENTS AND TIME FRAMES.

CHANNEL DISTURBED DUE TO TEMPORARY CROSSING LENGTH OF CHANNEL DISTURBED = 42.0 FT

SCOUR ELEVATIONS

THE DESIGN FLOOD AND CHECK FLOOD SCOUR ELEVATIONS ARE PROVIDED BELOW:

	REAR ABUTMENT	PIER NO. 1	PIER NO. 2	FORWARD ABUTMENT
DESIGN FLOOD	N/A	968.87	968.77	N/A
CHECK FLOOD	N/A	968.71	968.61	N/A

GENERAL NOTES 2 OF 2
BRIDGE NO. SUM-77-3197L
I-77 OVER FURNACE RUN

SFN 7704658 (L)

DESIGN AGENCY
ARCADIS
222 SOUTH MAIN STREET SUITE 200
AKRON, OHIO 44308
(330) 434-4555
www.arcadis.com

DESIGNER	CHECKER
RJB	CMD

REVIEWER: RBB 01-13-23

PROJECT ID: 111405

SUBSET	TOTAL
4	34

SHEET	TOTAL
769	927

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SUM-77-3197L BRIDGE SUMMARY

CALC: EKZ 5/21/22 | CHECK: RJB 1/10/23

ITEM	ITEM EXT.	03/IMS/14 RECONST.	04/IMS/13 WIDENING	GRAND TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER	GENERAL	APP/REF SHEET NO.
202	11203		LS	LS	LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	3
202	22900	230		230	SY	APPROACH SLAB REMOVED				230	
503	11100		LS	LS	LS	COFFERDAMS AND EXCAVATION BRACING				LS	
503	21100		140	140	CY	UNCLASSIFIED EXCAVATION	140				
505	11100		LS	LS	LS	PILE DRIVING EQUIPMENT MOBILIZATION				LS	
507	00500		780	780	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	780				
507	00551		840	840	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN	840				4
509	10001		33,438	33,438	LB	EPOXY COATED STEEL REINFORCEMENT, AS PER PLAN	4,248	5,136	23,218	836	4
509	20001		300	300	LB	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN				300	4
509	30020		3238	3238	FT	NO. 4 DEFORMED GFRP REINFORCEMENT			2482	756	
510	10001		22	22	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	22				4
511	34446		72	72	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			72		
511	34451		33	33	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN			33		4
511	42012		31	31	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		31			
511	44112		30	30	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	30				
511	46512		31	31	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	31				
512	33000		8	8	SY	TYPE 2 WATERPROOFING	8				
SPECIAL	51275500		321	321	SY	SEALING OF CONCRETE SURFACES	34	74	169	44	
513	10260		47770	47770	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3			47770		
513	20000		762	762	EACH	WELDED STUD SHEAR CONNECTORS			762		
514	00050		769	769	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			769		
514	00056		769	769	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			769		
514	00060		3223	3223	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			3223		
514	00066		3223	3223	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			3223		
514	00504		1	1	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			1		
514	10000		3	3	EACH	FINAL INSPECTION REPAIR			3		
516	10010	97	25	122	FT	ARMORLESS PREFORMED JOINT SEAL				122	
516	13600		17	17	SF	1" PREFORMED EXPANSION JOINT FILLER				17	
516	13900		47	47	SF	2" PREFORMED EXPANSION JOINT FILLER	47				
516	14020		34	34	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	34				
516	44100		4	4	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (17"x11"x2.53" BEARING WITH 18"x12" BEVELED LOAD PLATE)		4			
516	44101		4	4	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (13"x10"x2.27" BEARING WITH 14"x10" LOAD PLATE AND BEVELED HP10x42 PEDESTAL)	4				19
518	12201		4	4	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN			4		4
518	21200		25	25	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	25				
518	40000		58	58	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	58				
518	40010		58	58	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	58				
523	20001		2	2	EACH	DYNAMIC LOAD TESTING, AS PER PLAN	2				4
523	20501		1	1	EACH	RESTRIKE, AS PER PLAN	1				4
524	94946		114	114	FT	DRILLED SHAFTS, 72" DIAMETER, ABOVE BEDROCK		114			
526	25011	239	68	307	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN				307	30 , 31
526	90030	97	25	122	FT	TYPE C INSTALLATION				122	
601	20000		478	478	SY	CRUSHED AGGREGATE SLOPE PROTECTION	478				
625	33000		1	1	EACH	STRUCTURE GROUNDING SYSTEM				1	
894	10000		2	2	EACH	THERMAL INTEGRITY PROFILER (TIP) TEST		2			

ESTIMATED QUANTITIES
BRIDGE NO. SUM-77-3197L
I-77 OVER FURNACE RUN

SFN 7704658 (L)

DESIGN AGENCY
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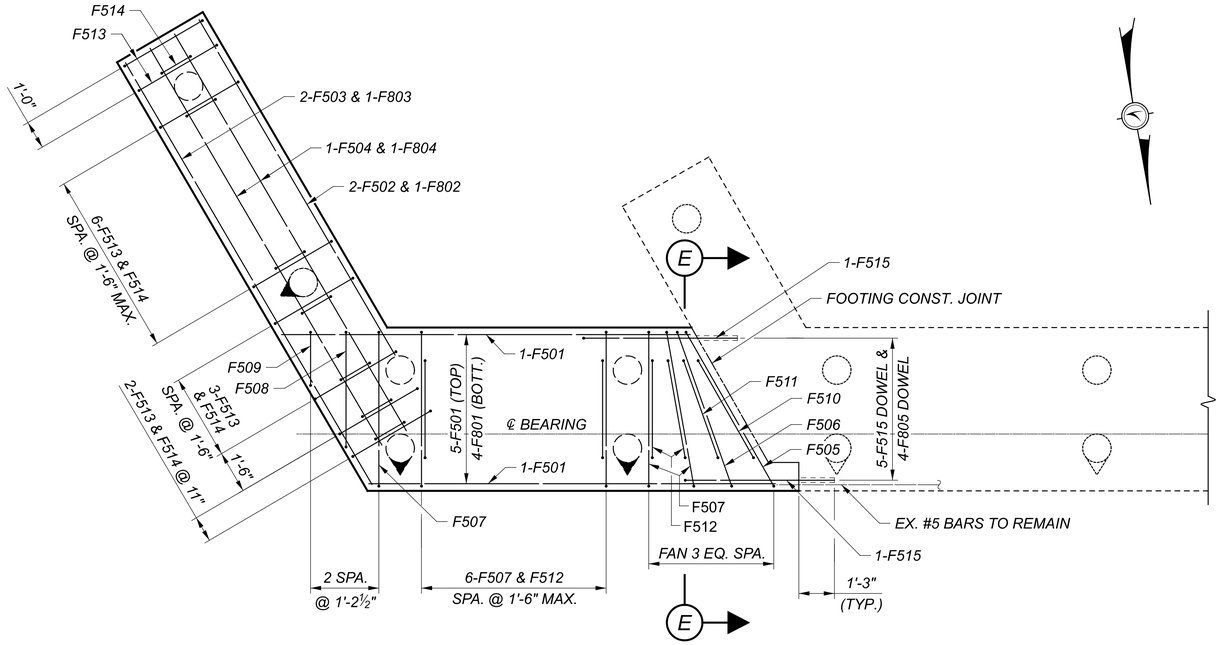
DESIGNER	CHECKER
RJB	CMD

REVIEWER: RBB 01-13-23

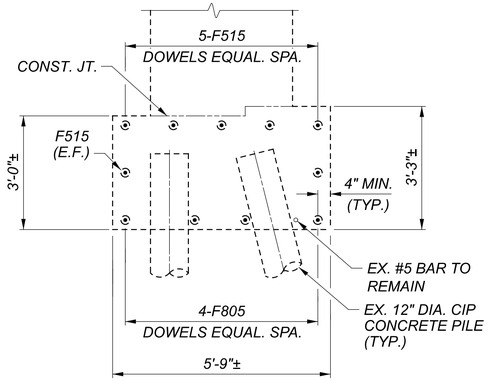
PROJECT ID: 111405

SUBSET	TOTAL
5	34

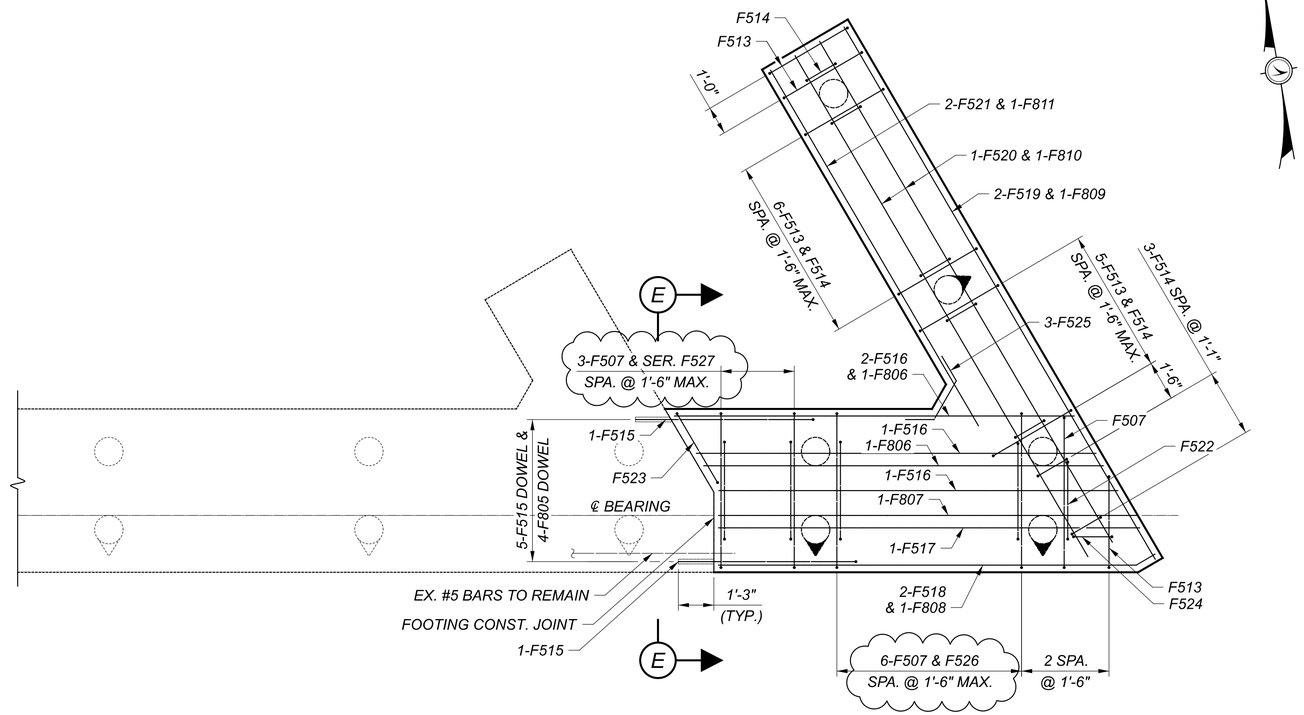
SHEET	TOTAL
770	927



REAR ABUTMENT FOOTING REINFORCING



E DOWEL LAYOUT DETAIL
DOWEL INTO EXISTING FOOTING



FORWARD ABUTMENT FOOTING REINFORCING

FOOTING REINFORCING DETAILS
BRIDGE NO. SUM-77-3197L
I-77 OVER FURNACE RUN

SFN 7704658 (L)

DESIGN AGENCY
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DESIGNER	CHECKER
RJB	CMD

REVIEWER
RBB 01-13-23

PROJECT ID
111405

SUBSET	TOTAL
13	34

SHEET	TOTAL
778	927

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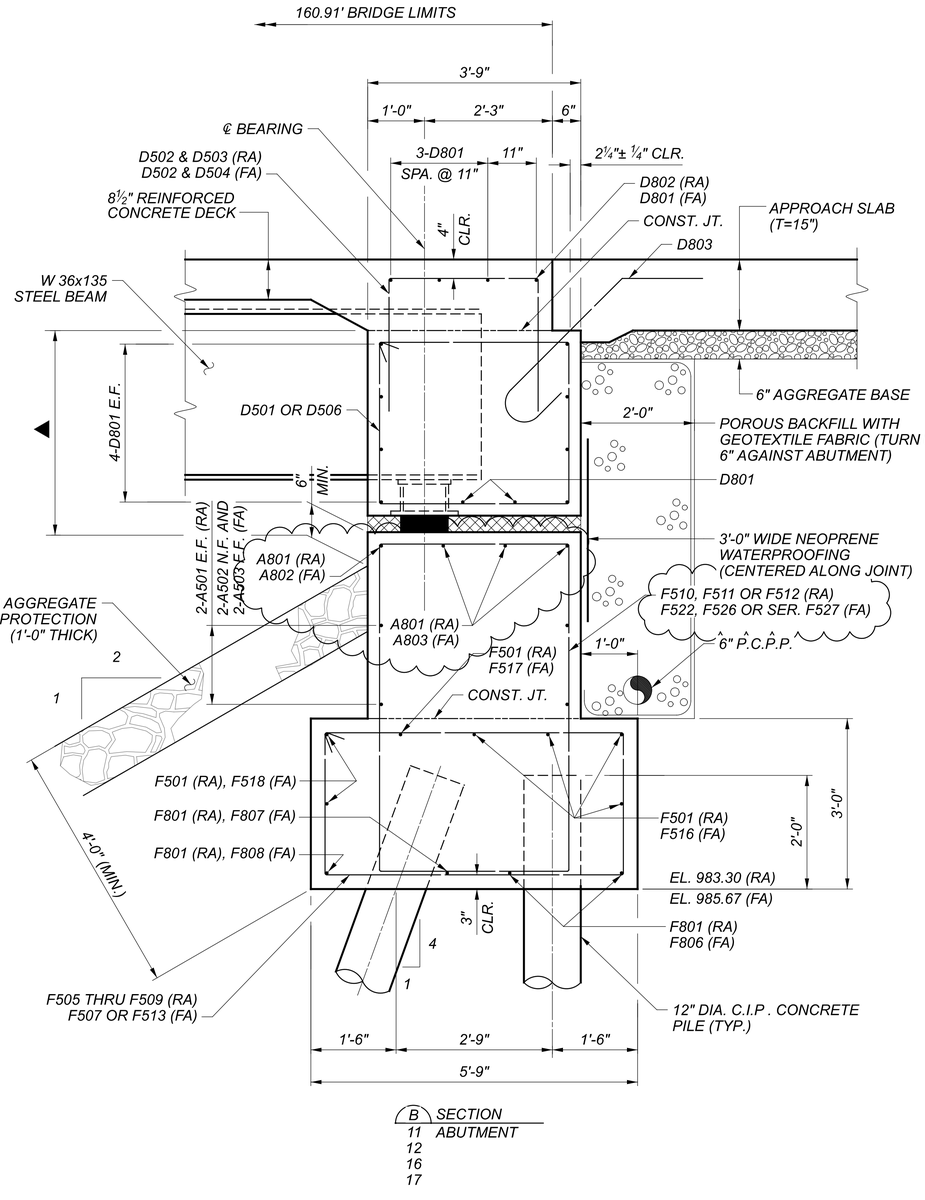
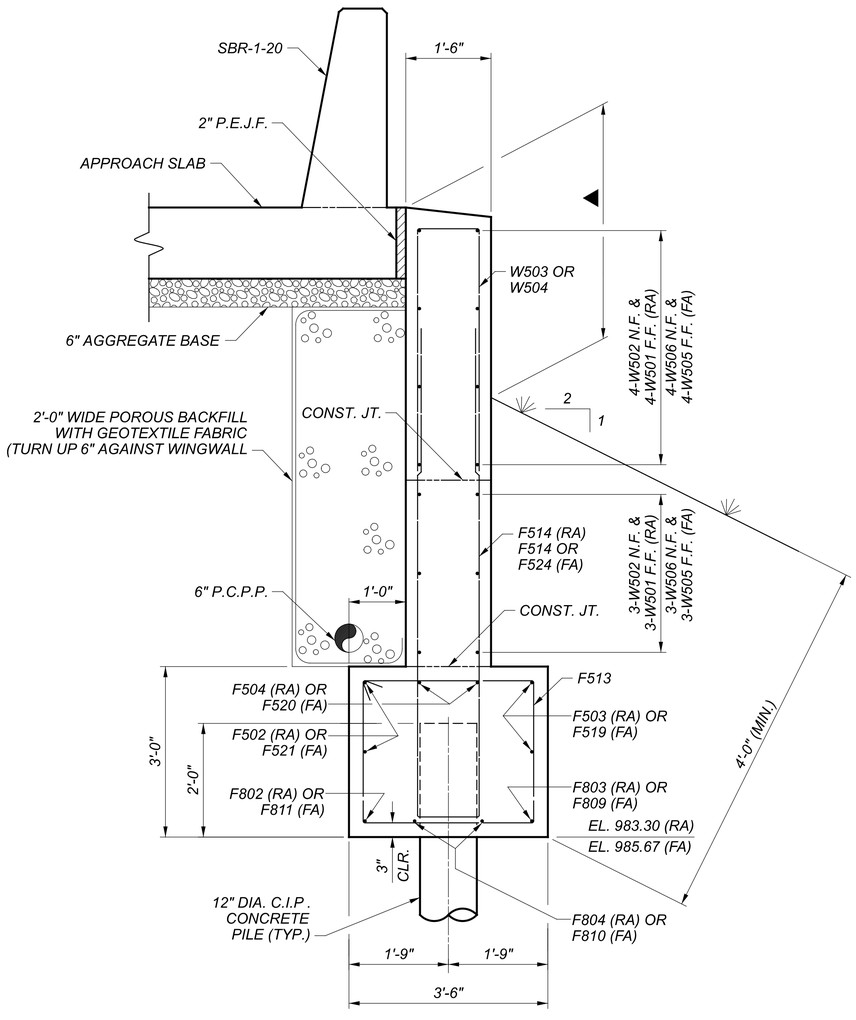


B SECTION
11 ABUTMENT
12
16
17



D SECTION
11 WINGWALL
12
16
17

LEGEND

▲ INDICATES LIMITS OF ITEM 512 - SPECIAL - SEALING, SEALING OF CONCRETE SURFACES

ABUTMENT SECTIONS
BRIDGE NO. SUM-77-3197L
I-77 OVER FURNACE RUN

SFN
7704658 (L)

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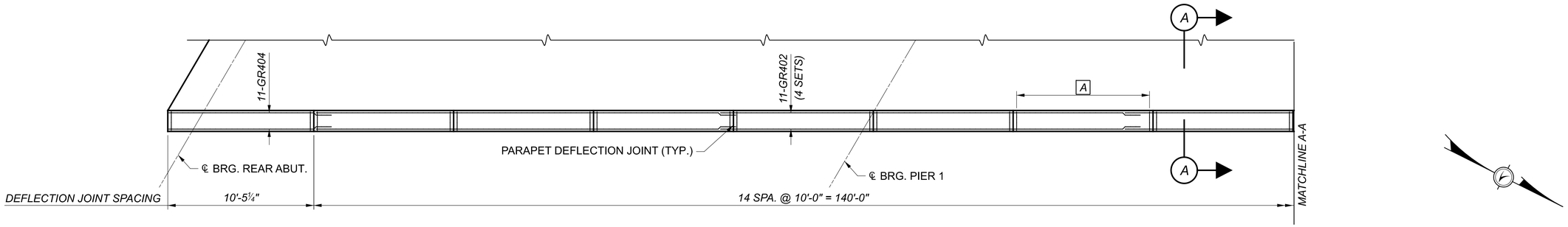
DESIGNER	CHECKER
RJB	CMD

REVIEWER
RBB 01-13-23

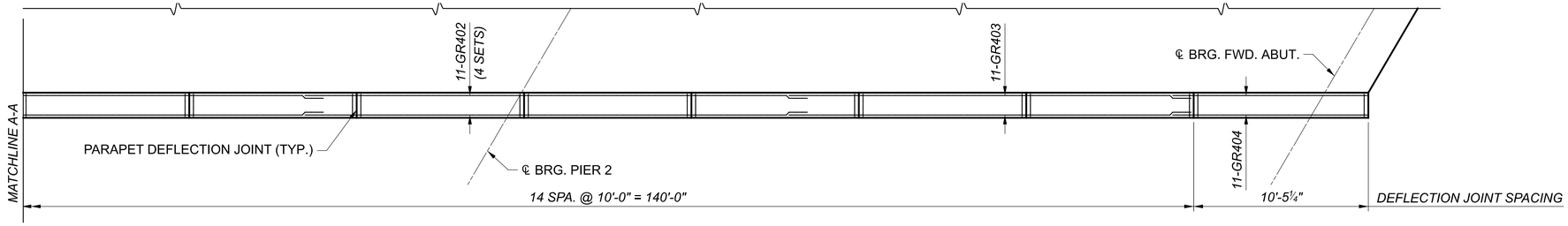
PROJECT ID
111405

SUBSET	TOTAL
14	34

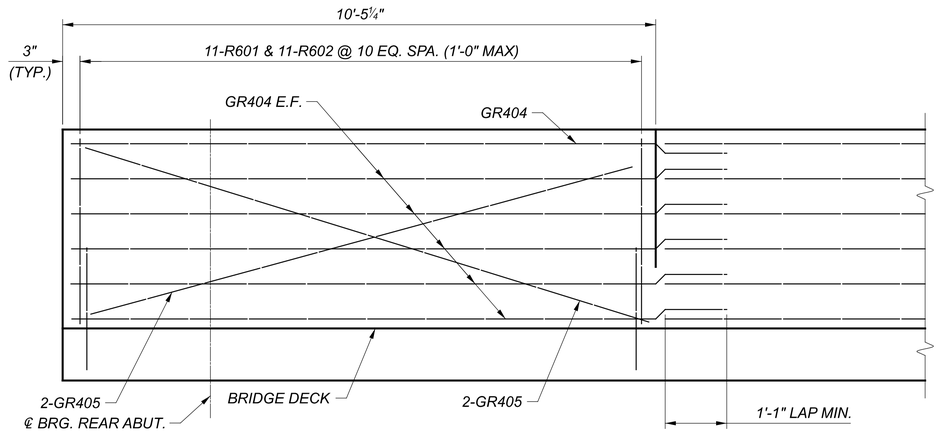
SHEET	TOTAL
779	927



RIGHT PARAPET PLAN



RIGHT PARAPET PLAN



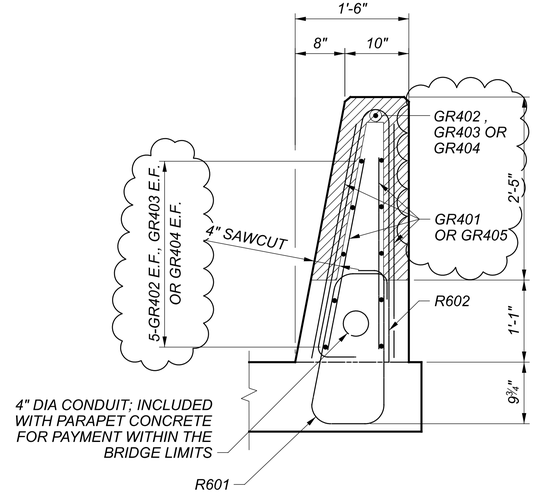
END PARAPET ELEVATION
REAR END PANEL SHOWN, FORWARD PANEL SIMILAR

NOTES:

1. *FOR ADDITIONAL PARAPET DETAILS, REFER TO STANDARD BRIDGE DRAWING SBR-1-20.*

LEGEND:

A *11-R601, 11-R602 @ 10 EQ. SPA. (1'-0" MAX.)*
4-GR401 (TYP. FOR 10'-0" PANELS)



A *SECTION*
PARAPET REINFORCING

RIGHT PARAPET DETAILS
BRIDGE NO. SUM-77-3197L
I-77 OVER FURNACE RUN

SFN 7704658 (L)

DESIGN AGENCY
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DESIGNER	CHECKER
RJB	CMD

REVIEWER
RBB 01-13-23

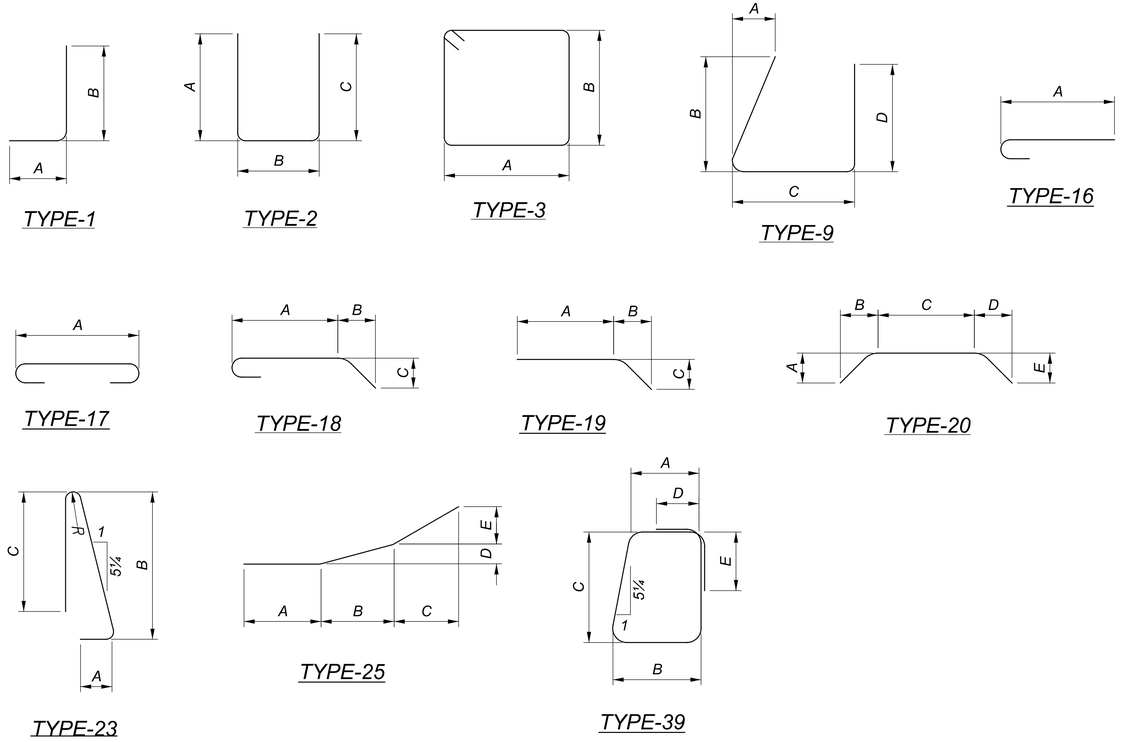
PROJECT ID
111405

SUBSET	TOTAL
29	34

SHEET	TOTAL
794	927

MARK	MAT'RL TYPE	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
DECK (EPOXY COATED STEEL REINFORCEMENT - ECSR)												
S401	ECSR	65	30'-0"	1303	STR	-260						
S402	ECSR	13	21'-10"	190	STR							
	ECSR											
S501	ECSR	65	30'-0"	2034	STR	-407						
S502	ECSR	13	27'-3"	370	STR							
S503	ECSR	48	40'-6"	2028	STR							
S504	ECSR	6	3'-0"	19	STR							
S505	ECSR	1 SR OF 11	4'-1" TO 12'-1"	93	16	3'-6" TO 11'-6"						0'-9⅝"
S506	ECSR	1 SR OF 11	3'-6" TO 11'-6"	86	STR							0'-9⅝"
# S507	ECSR	337	12'-6"	4394	16	11'-11"						
# S508	ECSR	337	11'-11"	4189	STR							
S509	ECSR	343	7'-6"	2683	16	6'-11"						
S510	ECSR	1 SR OF 5	4'-1" TO 7'-3"	30	16	3'-6" TO 6'-8"						0'-9½"
# S511	ECSR	2 SR OF 11	2'-4" TO 10'-1"	142	STR							0'-9¼"
S512	ECSR	16	4'-9"	79	20	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"		
DECK ECSR SUBTOTAL				17,640								
PARAPET (EPOXY COATED STEEL REINFORCEMENT - ECSR)												
R601	ECSR	176	7'-5"	1961	39	0'-9½"	1'-3"	2'-3"	0'-7"	1'-0"		
R602	ECSR	176	7'-0"	1850	23	0'-6"	3'-3"	3'-3"			0'-2"	
R603	ECSR	8 SR OF 11	4'-4" TO 5'-2"	628	1	1'-0"	3'-6" TO 4'-4"					0'-1"
R604	ECSR	32	4'-4"	208	1	1'-0"	3'-6"					
PARAPET ECSR SUBTOTAL				4,647								

MARK	MAT'RL TYPE	NUMBER TOTAL	BAR LENGTH	TOTAL LENGTH	TYPE	DIMENSIONS A	B	C	D	E	R	INC
PARAPET (GLASS FIBER POLYMER REINFORCEMENT - GFRP)												
GR401	GFRP	104	10'-0"	1040	STR							
GR402	GFRP	44	30'-0"	1320	STR							
GR403	GFRP	11	24'-0"	264	STR							
GR404	GFRP	22	11'-7"	255	STR							
GR405	GFRP	8	10'-4"	83	STR							
GR406	GFRP	24	5'-1"	122	STR							
GR407	GFRP	24	6'-5"	154	25	2'-6"	2'-5"	1'-5"	0'-1½"	0'-5"		
PARAPET GFRP SUBTOTAL				3,238								



REINFORCING BEND DIAGRAMS

\# ALL OR A PORTION OF BARS PROVIDED WITH MECHANICAL CONNECTOR

REINFORCING NOTES

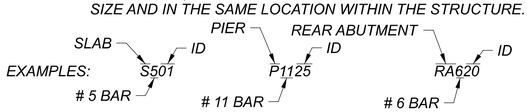
1. ALL STEEL REINFORCEMENT BARS SHALL BE EPOXY COATED. PAYMENT FOR REINFORCING, INCLUDING MECHANICAL CONNECTORS, SHALL BE MADE WITH ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN.
2. "STR." IN THE TYPE COLUMN INDICATES STRAIGHT BARS.
3. "SER OF" DENOTES SERIES OF BARS, E.G "X" SER OF "Y" = "X" SERIES OF "Y" BARS/SERIES.
4. REFER TO C.M.S SECTION 509.05 FOR STANDARD BEND DIMENSIONS.
5. MECHANICAL CONNECTORS: AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED IN ACCORDANCE WITH C.M.S. SECTION 509.07. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER RECOMMENDED PROCEDURES.

CONNECTORS AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS THAT HAVE BEEN DAMAGED OR THAT OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY AND UNIFORMITY, MAY BE REPAIRED AS DIRECTED BY THE ENGINEER, OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEETS THE SPECIFICATIONS. FOR BARS UTILIZING A MECHANICAL CONNECTOR, THE BAR LENGTH FOR PAYMENT IS MEASURED TO THE CENTER OF THE PLANNED MECHANICAL CONNECTION. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED AND THOSE COSTS SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 509. CONNECTORS AND DOWEL BAR EXTENSIONS SHALL CONFORM TO AND BE INCLUDED IN THE BID PRICE FOR ITEM 509.

REINFORCING CALLOUT NOMENCLATURE

BAR SIZE AND LOCATION ARE INDICATED IN THE BAR MARK.

LOCATION: THE BEGINING 1 OR 2 LETTERS INDICATES WHERE THE BAR IS INITIALLY CAST INTO.
SIZE: THE FIRST NUMBER (IF 3 TOTAL NUMBERS) OR TWO NUMBERS (IF 4 TOTAL NUMBERS)
UNIQUE ID: THE LAST TWO NUMBERS ARE AN INDEX NUMBER. THE INDEX NUMBER NEED NOT BE SEQUENTIAL, IT IS SIMPLY TO ALLOW A UNIQUE IDENTIFICATION OF BARS OF THE SAME SIZE AND IN THE SAME LOCATION WITHIN THE STRUCTURE.



LOCATION MARKS USED:
F = FOOTING
P = PIER
R = RAIL (PARAPET)
A = ABUTMENT
WW = WINGWALL
D = ABUTMENT DIAPHRAGM
S = SLAB (DECK)

REINFORCING LIST 2 OF 2
BRIDGE NO. SUM-77-3197L
I-77 OVER FURNACE RUN

SFN 7704658 (L)

DESIGN AGENCY
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DESIGNER	CHECKER
RJB	CMD

REVIEWER: RBB 01-13-23

PROJECT ID: 111405

SUBSET	TOTAL
34	34

SHEET	TOTAL
799	927

SUM-77-28.75 PENTABLE SUBSET: 1 SUBMITTAL: Tracings PLOT DRIVER: OHDOT_PDF.pltcfg PENTABLE: 111405_OHDOT_Pen.tbl
MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/27/2023 TIME: 3:44:50 PM USER: cferrell
pw:\\gfnet-pw.bentley.com:gfnet-pw-01\Documents\Projects\67490\111405\402-Engineering-ARCADIS\Structures\111405_SFN7704658_SL002.dgn
FILE: ...\111405_SFN7704658_SL002.dgn

SUM-77-28.75

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, 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.

A QUANTITY OF 300 POUNDS HAS BEEN INCLUDED TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO CMS 709.00.

ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN

DOWEL HOLES FOR #5 REINFORCING SHALL BE 7/8" DIAMETER AND A MINIMUM OF 12" DEEP. DOWEL HOLES FOR #8 REINFORCING SHALL BE 1.5" DIAMETER AND A MINIMUM OF 18" DEEP. PRIOR TO DRILLING HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AIDE OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. THE DEPARTMENT WILL PAY FOR DOWEL HOLES AND GROUTING WITH ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN.

ITEM 511 - CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN

IN ADDITION TO THE BRIDGE DECK PARAPETS, THE DEPARTMENT WILL PAY FOR CONCRETE PARAPETS ON THE APPROACH SLABS WITH ITEM 511 - CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN.

AS PART OF CONSTRUCTING THE BRIDGE PARAPETS, FURNISH AND INSTALL 4" DIAMETER CONDUITS, COUPLINGS, AND FITTINGS, FROM PULL BOX TO PULL BOX AS SHOWN IN THE PLANS. FURNISH AND INSTALL THE CONDUIT, COUPLINGS, AND FITTINGS AS PER CMS 625.

THE DEPARTMENT WILL PAY FOR FURNISHING AND INSTALLING THE 4" DIAMETER CONDUITS, COUPLINGS, AND FITTINGS WITH ITEM 511 - CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN.

THE DEPARTMENT WILL PAY FOR FURNISHING AND INSTALLING THE PULL BOXES WITH ITEM 625 - PULL BOX IN THE ROADWAY QUANTITIES.

ITEM 518 - SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 518, SCUPPERS SHALL BE NEENAH FOUNDRY MODEL R-4014-C1 HEAVY DUTY SCUPPERS WITH TYPE A BOLTED GRATE OR APPROVED EQUAL. FURNISH AND INSTALL DOWNSPOUTS AND CONNECTIONS AS SHOWN IN THE PLANS AND AS PER CMS 518. INCLUDE THE COST FOR THE DOWNSPOUTS AND CONNECTIONS WITH ITEM 518 - SCUPPERS INCLUDING SUPPORTS, AS PER PLAN.

PILES DRIVEN TO FULL ESTIMATED LENGTH WITH PILE/SOIL SETUP

THE ULTIMATE BEARING VALUE (UBV) IS 298.6 KIPS FOR THE 12" CIP CONCRETE PILES AT THE ABUTMENTS. PART OF THE UBV WILL BE ACHIEVED THROUGH PILE/SOIL SETUP, WHICH IS A TIME DEPENDENT INCREASE IN RESISTANCE THAT OCCURS IN SOME SOILS.

NOTIFY THE ENGINEER AT LEAST 5 DAYS BEFORE DRIVING PILES SO THAT THE ENGINEER CAN NOTIFY THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICE OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF GEOTECHNICAL ENGINEERING.

DRIVE THE FIRST TWO PILES AT EACH SUBSTRUCTURE TO THE FULL ESTIMATED LENGTH LISTED IN THE PILE DESIGN LOADS NOTE ON SHEET 3/34. PERFORM DYNAMIC LOAD TESTING ON BOTH PILES WHILE DRIVING. AFTER DRIVING AND TESTING THE FIRST TWO PILES, DRIVE THE REMAINING PILES AT EACH SUBSTRUCTURE TO THE SAME DEPTH AS THE FIRST TWO PILES. AFTER DRIVING ALL PILES TO THE ESTIMATED LENGTH, CEASE ALL DRIVING OPERATIONS AT EACH SUBSTRUCTURE FOR A PERIOD OF 7 DAYS FOR THE ABUTMENTS. INCLUDE THE WAITING PERIOD AS A SEPARATE ACTIVITY IN THE PROGRESS SCHEDULE. AFTER THE WAITING PERIOD, PERFORM PILE RESTRIKES ON BOTH OF THE FIRST TWO PILES AT EACH SUBSTRUCTURE (ONE RESTRIKE ITEM).

IF THE REQUIRED UBV IS ACHIEVED AT THE END OF INITIAL DRIVING, USE THE DYNAMIC LOAD TESTING RESULTS TO ESTABLISH DRIVING CRITERIA ACCORDING TO C&MS 507.05 FOR ALL THE REMAINING PRODUCTION PILES.

SUBMIT ALL TEST RESULTS TO THE ENGINEER. IF THE RESTRIKE TEST RESULTS INDICATE THAT THE FIRST TWO PILES AT A SUBSTRUCTURE ACHIEVED THE REQUIRED UBV, ALL PILES IN THAT SUBSTRUCTURE MAY BE ACCEPTED BY THE ENGINEER.

IF THE RESTRIKE TEST RESULTS INDICATE THAT EITHER OF THE FIRST TWO PILES AT A SUBSTRUCTURE DID NOT ACHIEVE THE REQUIRED UBV, IMMEDIATELY NOTIFY THE ENGINEER SO THAT THE ENGINEER CAN NOTIFY THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICE OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF GEOTECHNICAL ENGINEERING. THE ENGINEER WILL REVIEW THE TEST RESULTS AND ESTABLISH ADDITIONAL RESTRIKE TESTING OR DRIVING CRITERIA FOR THE PILING IN THAT SUBSTRUCTURE WITH THE ASSISTANCE OF THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICE OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF GEOTECHNICAL ENGINEERING.

IF DIRECTED BY THE ENGINEER, PERFORM ADDITIONAL RESTRIKE TESTING OR DRIVE ALL PILES AT A SUBSTRUCTURE TO THE ESTABLISHED DRIVING CRITERIA. THE DEPARTMENT WILL PAY FOR SPLICING OF THE PILES BEYOND THE ESTIMATED LENGTH PROVIDED IN THE PLANS UNDER C&MS 109.05 WITH A NEGOTIATED PRICE PER SPLICE.

THIS PLAN NOTE INCLUDES A QUANTITY OF ONE EACH ITEM 523 DYNAMIC LOAD TESTING, AS PER PLAN AND A QUANTITY OF ONE EACH ITEM 523 RESTRIKE, AS PER PLAN PER EACH SUBSTRUCTURE UNIT

STANDARD PLAN DETAILING NOMENCLATURE

THROUGHOUT THE PLANS, SECTIONS AND DETAILS ARE REFERENCED TO THEIR CORRESPONDING VIEWS THROUGH THE USE OF STANDARD CALLOUTS. THE VIEWS OF SECTIONS, ELEVATIONS, AND DETAILS WILL HAVE UNIQUE NUMBERS ON THE PAGES ON WHICH THEY ARE SHOWN.

LETTERS WILL BE UTILIZED FOR SECTION AND ELEVATION CALLOUTS. NUMBERS WILL BE UTILIZED FOR DETAIL CALLOUTS.

IF A SECTION, ELEVATION, OR DETAIL VIEW IS ON THE SAME SHEET FROM WHICH IT IS CUT, THE CALLOUT WILL APPEAR AS FOLLOWS:

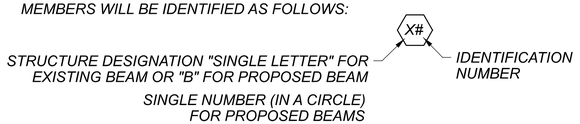
SECTION, ELEVATION, OR DETAIL IDENTIFICATION

IF A SECTION, ELEVATION, OR DETAIL VIEW IS ON A DIFFERENT SHEET FROM WHICH IT IS CUT, THE CALLOUT WILL APPEAR AS FOLLOWS:

SECTION, ELEVATION, OR DETAIL IDENTIFICATION

SHEET WHERE THE CORRESPONDING SECTION, ELEVATION, OR DETAIL CALLOUT OR VIEW CAN BE FOUND

MEMBERS WILL BE IDENTIFIED AS FOLLOWS:



STANDARD PLAN ABBREVIATIONS AND SYMBOLS

ABUT =	ABUTMENT	NB =	NORTHBOUND
ADT =	AVERAGE DAILY TRAFFIC	NE =	NORTHEAST
ADTT =	AVERAGE DAILY TRUCK TRAFFIC	NF =	NEAR FACE
APP =	APPROACH	NO =	NUMBER
APPR =	APPROXIMATE	N.P.C.P.P. =	NON-PERFORATED CORRUGATED PLASTIC PIPE
AVE =	AVENUE	NW =	NORTHWEST
(B#) =	BEAM NUMBER (PROPOSED)	O/O =	OUT TO OUT
		OD =	OUTSIDE DIAMETER
<#> =	BEAM LETTER (EXISTING)	OH =	OVERHANG
		OHWM =	ORDINARY HIGH WATER MARK
BF =	BOTTOM FLANGE	OVHD =	OVERHEAD
BM =	BENCHMARK	ODOT =	OHIO DEPARTMENT OF TRANSPORTATION
BOTT =	BOTTOM	P.V.I. =	POINT OF VERTICAL INTERSECTION
BRG =	BEARING	PC =	POINT OF CURVE
BTWN =	BETWEEN	PCB =	PORTABLE CONCRETE BARRIER
C.B. =	CHORD BEARING	P.C.P.P. =	PERFORATED CORRUGATED PLASTIC PIPE
C/C =	CENTER TO CENTER	PEJF =	PREFORMED EXPANSION JOINT FILLER
CB =	CATCH BASIN	PGL =	PROFILE GRADE LINE
CCTV =	CLOSED CIRCUIT TELEVISION	PI =	POINT OF INTERSECTION
CIP =	CAST IN PLACE	PMVC =	POINT OF MINIMUM VERTICAL CLEARANCE
CJ =	CONSTRUCTION JOINT	POT =	POINT ON TANGENT
CJ-O =	OPTIONAL CONSTRUCTION JOINT	PROP =	PROPOSED
CLR =	CLEAR	PT =	POINT OF TANGENT
CMP =	CORRUGATED METAL PIPE	PVMT =	PAVEMENT
CMS =	CONSTRUCTION MATERIAL SPECIFICATIONS	RA =	REAR ABUTMENT
CONST =	CONSTRUCTION	RCP =	REINFORCED CONCRETE PIPE
CP =	COVER PLATE	RDWY =	ROADWAY
CSP/N =	CORRUGATED STEEL PIPE (NON-PERFORATED)	REF =	REFERENCE
CSP/P =	PERFORATED CORRUGATED STEEL PIPE	REINF. =	REINFORCING OR REBAR
DIA =	DIAMETER	REQ'D =	REQUIRED
DND =	DO NOT DISTURB	RT =	RIGHT
DPRM =	DIAPHRAGM	R/W =	RIGHT OF WAY
E/P =	EDGE OF PAVEMENT	S/O =	SERIES OF
E/S =	EDGE OF SHOULDER	SR =	STATE ROUTE
EB =	EASTBOUND	SB =	SOUTHBOUND
EF =	EACH FACE	SCD =	STANDARD CONSTRUCTION DRAWING
ELEC =	ELECTRIC	SE =	SOUTHEAST
ELEV or EL =	ELEVATION	SER =	SERIES
EX =	EXISTING	SF =	SQUARE FEET
EXP =	EXPANSION	SHLDR =	SHOULDER
F/F =	FACE TO FACE	SPA =	SPACES
FA =	FORWARD ABUTMENT	ST =	STREET OR SPAN TOTAL
FF =	FAR FACE/FILL FACE	STA =	STATION
FO =	FIBER OPTIC	STD =	STANDARD
FTG =	FOOTING	STG =	STAGE
FWD =	FORWARD	STM =	STORM
GR =	GUARDRAIL	STRUCT =	STRUCTURE
H.C. =	HORIZONTAL CURVE	SW =	SOUTHWEST
HORZ =	HORIZONTAL	T/ =	TOP OF
I/I =	INSIDE TO INSIDE	T/B =	TOP AND BOTTOM
IR =	INTERSTATE ROUTE	T/T =	TOE TO TOE
JT =	JOINT	TBR =	TO BE REMOVED
LT =	LEFT	TEMP =	TEMPORARY
MAX =	MAXIMUM	TYP =	TYPICAL
MH =	MANHOLE	U.N.O. =	UNLESS NOTED OTHERWISE
MHC =	MINIMUM HORIZONTAL CLEARANCE	VC =	VERTICAL CURVE
MIN =	MINIMUM	VERT =	VERTICAL
MISC =	MISCELLANEOUS	WB =	WEST BOUND
MVC =	MINIMUM VERTICAL CLEARANCE	WTR =	WATER
		WW =	WINGWALL
		YR =	YEAR

PERMITS FOR SECTION 401 AND 404 TEMPORARY ACCESS FILLS

THE TEMPORARY ACCESS FILL INFORMATION USED FOR THE PERMIT APPLICATION IS AVAILABLE FOR INFORMATIONAL PURPOSED ONLY AND IS PROVIDED AS PART OF THE DESIGNER CALCULATIONS. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING THEIR OWN TEMPORARY ACCESS FILL AND THE DESIGN SHOULD CORRESPOND WITH REQUIREMENTS OF SS 832 AND THOSE FOUND IN THE SPECIAL PROVISIONS.

FOR THIS PROJECT, PERMITS FOR SECTION 401 AND 404 OF THE CLEAN WATER ACT, ARE BASED ON THE LIMITS OF TEMPORARY CONSTRUCTION FILL PLACED IN THE WATERS OF THE UNITED STATES AS SHOWN IN THE SPECIAL PROVISIONS. SHOULD THE CONTRACTOR CHOOSE TO DEVIATE FROM THE PROPOSED TAF, THE CONTRACTOR IS REQUIRED TO COORDINATE THE REQUEST FOR THE CAUSEWAY AND ACCESS FILL(S) WITH THE PROJECT ENGINEER AND OES, IF A PERMIT MODIFICATION IS REQUIRED REFER TO SUPPLEMENT SPECIFICATION 832.06 FOR APPLICATION REQUIREMENTS AND TIME FRAMES.

CHANNEL DISTURBED DUE TO TEMPORARY CROSSING LENGTH OF CHANNEL DISTURBED = 42.0 FT

SCOUR ELEVATIONS

THE DESIGN FLOOD AND CHECK FLOOD SCOUR ELEVATIONS ARE PROVIDED BELOW:

	REAR ABUTMENT	PIER NO. 1	PIER NO. 2	FORWARD ABUTMENT
DESIGN FLOOD	N/A	968.87	968.77	N/A
CHECK FLOOD	N/A	968.71	968.61	N/A

ITEM 894 - THERMAL INTEGRITY PROFILER (T.I.P.) TEST

PERFORM INTEGRITY TESTING ON THE DRILLED SHAFTS AT EACH PIER BY THERMAL INEGRITY PROFILING (T.I.P.). PERFORM T.I.P. TESTING PER ASTM D7949, "STANDARD TEST METHODS FOR THERMAL INTEGRITY PROFILING OF CONCRETE DEEP FOUNDATIONS," METHOD B, AND PER SUPPLEMENTAL SPECIFICATION 894.

GENERAL NOTES 2 OF 2
BRIDGE NO. SUM-77-3197R
I-77 OVER FURNACE RUN

SFN 7704682 (R)

DESIGN AGENCY
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222 SOUTH MAIN STREET SUITE 200
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DESIGNER	CHECKER
RJB	FJG

REVIEWER: RBB 01-13-23

PROJECT ID: 111405

SUBSET	TOTAL
4	34

SHEET	TOTAL
803	927

SUM-77-3197R BRIDGE SUMMARY

CALC: ARO 6/1/22 | CHECK: RJB 1/10/23

ITEM	ITEM EXT.	03/IMS/14 RECONST.	04/IMS/13 WIDENING	GRAND TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER	GENERAL	APP/REF SHEET NO.
202	11203		LS	LS	LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	3
202	22900	274		274	SY	APPROACH SLAB REMOVED				274	
503	11000		LS	LS	LS	COFFERDAMS AND EXCAVATION BRACING				LS	
503	21100		142	142	CY	UNCLASSIFIED EXCAVATION	142				
505	11100		LS	LS	LS	PILE DRIVING EQUIPMENT MOBILIZATION				LS	
507	00500		810	810	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	810				
507	00551		870	870	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN	870				3
509	10001		37,285	37,285	LB	EPOXY COATED STEEL REINFORCEMENT, AS PER PLAN	4,715	5,684	26,050	836	4
509	20001		300	300	LB	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN				300	4
509	30020		3,407	3,407	FT	NO. 4 DEFORMED GFRP REINFORCEMENT			2,651	756	
510	10001		22	22	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	22				4
511	34447		81	81	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN			81		20
511	34451		36	36	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN			36		4
511	42012		38	38	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		38			
511	44112		37	37	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	37				
511	46512		32	32	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	32				
512	33000		8	8	SY	TYPE 2 WATERPROOFING	8				
SPECIAL	51275500		370	370	SY	SEALING OF CONCRETE SURFACES	46	98	182	44	
513	10260		51,445	51,445	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3			51,445		
513	20000		906	906	EACH	WELDED STUD SHEAR CONNECTORS			906		
514	00050		834	834	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			834		
514	00056		834	834	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			834		
514	00060		3,500	3,500	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			3,500		
514	00066		3,500	3,500	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			3,500		
514	00504		1	1	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			1		
514	10000		3	3	EACH	FINAL INSPECTION REPAIR			3		
516	10010	115	26	141	FT	ARMORLESS PREFORMED JOINT SEAL				141	
516	13600		17	17	SF	1" PREFORMED EXPANSION JOINT FILLER				17	
516	13900		47	47	SF	2" PREFORMED EXPANSION JOINT FILLER	47				
516	14020		38	38	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	38				
516	44100		4	4	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (17"x11"x2.53" BEARING WITH 18"x12" LOAD PLATE AND BEVELED HP10x42 PEDESTAL)		4			
516	44101		4	4	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (13"x10"x2.27" BEARING WITH 14"x11" LOAD PLATE AND BEVELED HP10x42 PEDESTAL), AS PER PLAN	4				19
518	12201		3	3	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN			3		4
518	21200		24	24	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	24				
518	40000		55	55	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	55				
518	40010		59	59	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	59				
523	20001		2	2	EACH	DYNAMIC LOAD TESTING, AS PER PLAN	2				4
523	20501		1	1	EACH	RESTRIKE, AS PER PLAN	1				4
524	94946		114	114	FT	DRILLED SHAFTS, 72" DIAMETER, ABOVE BEDROCK		114			
526	25011	283	68	351	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN				351	30 , 31
526	90030	115	25	140	FT	TYPE C INSTALLATION				140	
601	20000		587	587	SY	CRUSHED AGGREGATE SLOPE PROTECTION	587				
625	33000		1	1	EACH	STRUCTURE GROUNDING SYSTEM				1	
894	10000		2	2	EACH	THERMAL INTEGRITY PROFILER (TIP) TEST		2			

ESTIMATED QUANTITIES
BRIDGE NO. SUM-77-3197R
I-77 OVER FURNACE RUN

SFN 7704682 (R)

DESIGN AGENCY
ARCADIS
222 SOUTH MAIN STREET SUITE 200
AKRON, OHIO 44308
(330) 434-4555
www.arcadis.com

DESIGNER RJB | CHECKER FJG
REVIEWER RBB 01-13-23
PROJECT ID 111405
SUBSET 5 | TOTAL 34
SHEET 804 | TOTAL 927

SUM-77-28.75 PENTABLE SUBSET: 1 SUBMITTAL: Tracings PLOT DRIVER: OHDOT_PDF.pltcfg PENTABLE: 111405_OHDOT_Pen.tbl
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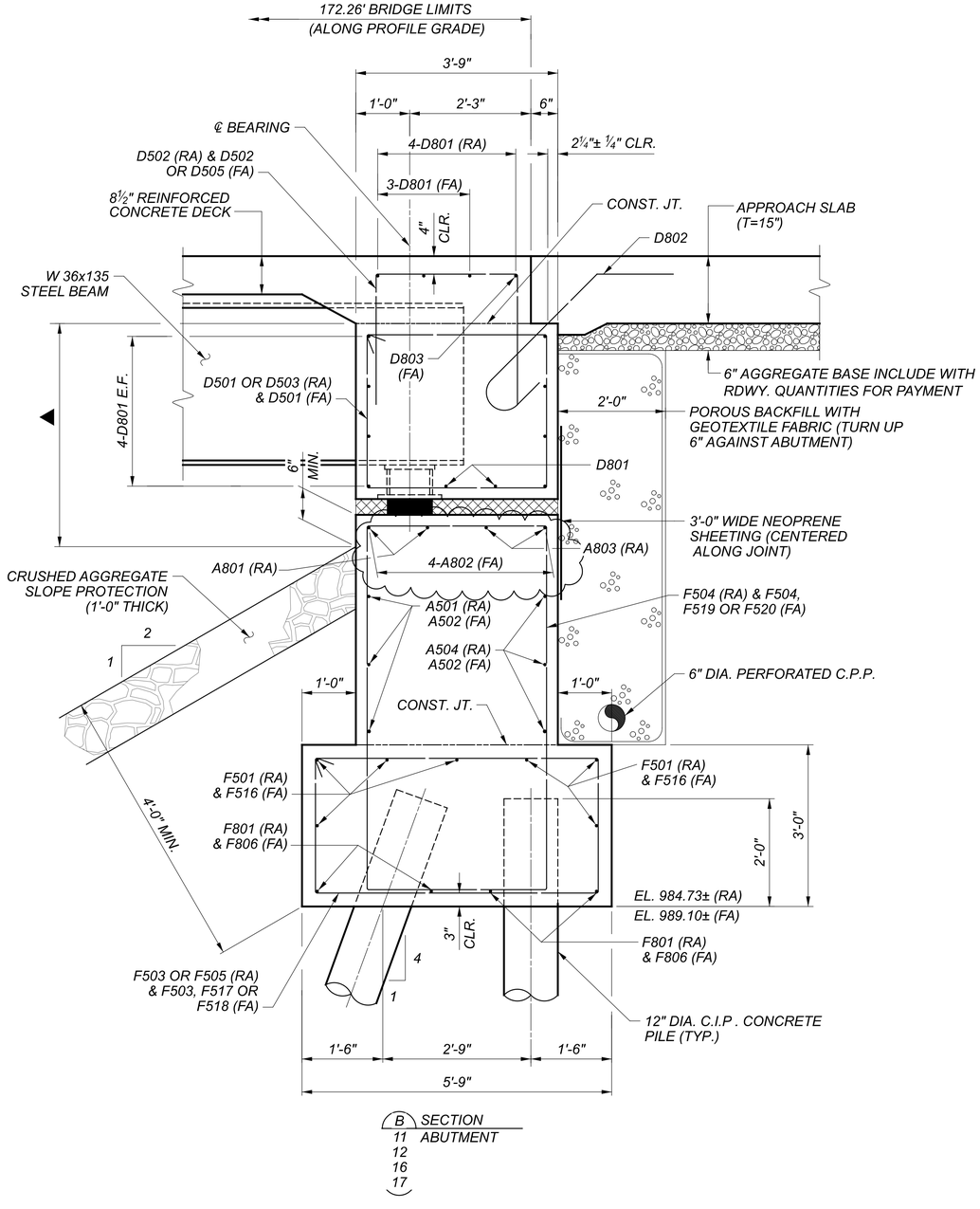
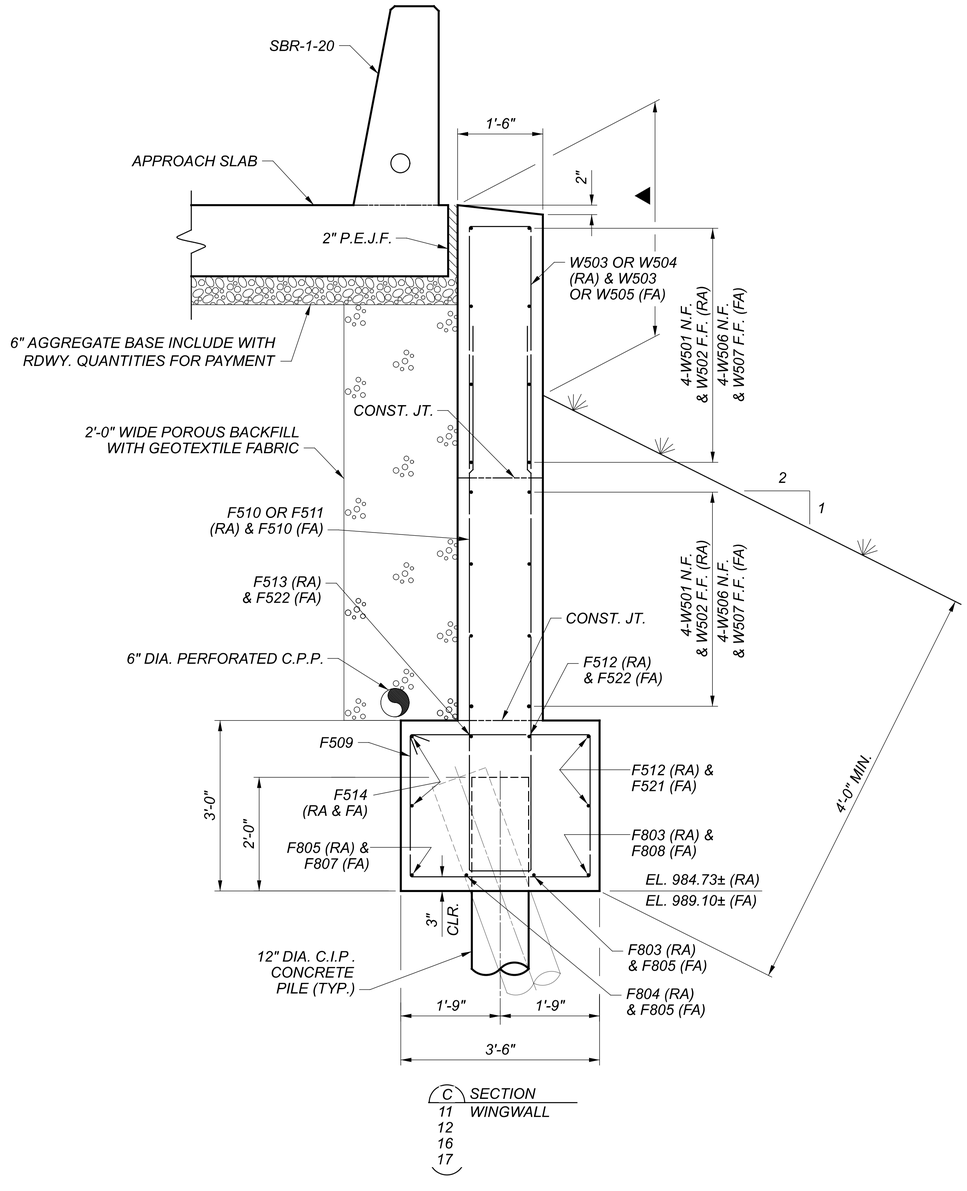


B SECTION
11 ABUTMENT
12
16
17



C SECTION
11 WINGWALL
12
16
17

LEGEND

▲ INDICATES LIMITS OF ITEM 512 - SPECIAL - SEALING, SEALING OF CONCRETE SURFACES

ABUTMENT SECTIONS
BRIDGE NO. SUM-77-3197R
I-77 OVER FURNACE RUN

SFN
7704682 (R)

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DESIGNER	CHECKER
RJB	FJG

REVIEWER
RBB 01-13-23

PROJECT ID
111405

SUBSET	TOTAL
14	34

SHEET	TOTAL
813	927

SUM-77-28.75 PENTABLE SUBSET: 1 SUBMITTAL: Tracings PLOT DRIVER: OHDOT_PDF.pltcfg PENTABLE: 111405_OHDOT_Pen.tbl

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MARK	MAT'RL TYPE	NUMBER REAR	NUMBER FORWARD	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	INC
ABUTMENT FOOTING (EPOXY COATED STEEL REINFORCEMENT - ECSR)													
F501	ECSR	7		7	15'-2"	111	STR						
F502	ECSR	7	7	14	5'-7"	82	1	1'-0"	4'-9"				
F503	ECSR	11	10	21	16'-8"	305	3	5'-5"	2'-7"				
F504	ECSR	11	9	20	20'-6"	428	3	3'-5"	6'-6"				
F505	ECSR	1		1	14'-2"	15	3	4'-2"	2'-7"				
F506	ECSR	1		1	9'-6"	10	3	1'-10"	2'-7"				
F507	ECSR	3		3	4'-8"	15	19	3'-9"	0'-9"	0'-6"			
F508	ECSR	3		3	7'-4"	23	20	2'-9"	1'-7"	1'-1"	1'-7"	2'-9"	
F509	ECSR	13	14	27	12'-2"	343	3	3'-2"	2'-7"				
F510	ECSR	15	13	28	20'-11"	611	2	10'-0"	1'-2"	10'-0"			
F511	ECSR	1		1	21'-1"	22	2	10'-0"	1'-4"	10'-0"			
F512	ECSR	3		3	21'-5"	67	STR						
F513	ECSR	1		1	20'-9"	22	STR						
F514	ECSR	2	2	4	13'-6"	56	STR						
F515	ECSR	1		1	11'-2"	12	3	2'-8"	2'-7"				
F516	ECSR		7	7	14'-11"	109	STR						
F517	ECSR		1	1	17'-4"	18	3	5'-9"	2'-7"				
F518	ECSR		1	1	18'-4"	19	3	6'-3"	2'-7"				
F519	ECSR		1	1	21'-0"	22	3	3'-8"	6'-6"				
F520	ECSR		1	1	21'-6"	22	3	3'-11"	6'-6"				
F521	ECSR		2	2	17'-2"	36	STR						
F522	ECSR		2	2	16'-8"	35	STR						
F801	ECSR	4		4	15'-2"	162	STR						
F802	ECSR	4	4	8	7'-6"	160	1	1'-4"	6'-5"				
F803	ECSR	2		2	21'-5"	114	STR						
F804	ECSR	1		1	20'-9"	55	STR						
F805	ECSR	1	2	3	16'-8"	134	STR						
F806	ECSR		4	4	14'-11"	159	STR						
F807	ECSR		1	1	13'-6"	36	STR						
F808	ECSR		1	1	17'-2"	46	STR						
ABUTMENT ECSR SUBTOTAL						3,309							

MARK	MAT'RL TYPE	NUMBER REAR	NUMBER FORWARD	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	INC
ABUTMENT STEM (EPOXY COATED STEEL REINFORCEMENT - ECSR)													
A501	ECSR	3		3	15'-11"	50	1	1'-0"	15'-1"				
A502	ECSR		6	6	15'-1"	94	1	1'-0"	14'-3"				
A503	ECSR		1	1	16'-4"	17	3	3'-11"	3'-11"				
A504	ECSR	3		3	14'-11"	47	1	1'-0"	14'-1"				
A801	ECSR	2		2	16'-2"	86	1	1'-4"	15'-1"				
A802	ECSR		4	4	15'-4"	164	1	1'-4"	14'-3"				
A803	ECSR	2		2	15'-2"	81	1	1'-4"	14'-1"				
W501	ECSR	8		8	19'-3"	161	STR						
W502	ECSR	8		8	18'-7"	155	STR						
W503	ECSR	15	13	28	8'-9"	256	2	3'-11"	1'-2"	3'-11"			
W504	ECSR	1		1	8'-11"	9	2	3'-11"	1'-4"	3'-11"			
W505	ECSR		1	1	20'-0"	21	3	8'-4"	1'-4"				
W506	ECSR		8	8	15'-7"	130	STR						
W507	ECSR		8	8	16'-2"	135	STR						
ABUTMENT ECSR SUBTOTAL						1,406							
SEMI-INTEGRAL DIAPHRAGM (EPOXY COATED STEEL REINFORCEMENT - ECSR)													
D501	ECSR	10	11	21	14'-2"	310	3	3'-11"	2'-10"				
D502	ECSR	11	10	21	7'-10"	172	2	2'-5"	3'-3"	2'-5"			
D503	ECSR	1		1	15'-8"	16	3	4'-8"	2'-10"				
D504	ECSR	5		5	5'-10"	30	1	3'-0"	3'-0"				
D505	ECSR		1	1	7'-2"	7	2	2'-5"	2'-7"	2'-5"			
# D801	ECSR	14	13	27	14'-3"	1027	STR						
D802	ECSR	10	11	21	5'-3"	294	18	3'-0"	1'-0"	1'-0"			
# D803	ECSR		1	1	14'-2"	38	19	12'-10"	1'-2"	0'-8"			
SEMI-INTEGRAL DIAPHRAGM ECSR SUBTOTAL						1,894							

MARK	MAT'RL TYPE	NUMBER PIER NO. 1	NUMBER PIER NO. 2	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	INC
PIER (EPOXY COATED STEEL REINFORCEMENT - ECSR)													
P501	ECSR	20	21	41	13'-4"	570	3	3'-8"	2'-8"				
P502	ECSR	20	21	41	5'-5"	232	9	0'-9"	0'-9"	3'-8"	1'-0"		
P503	ECSR	20	21	41	4'-5"	189	9	0'-9"	0'-9"	2'-8"	1'-0"		
P504	ECSR	4	4	8	8'-8"	72	STR						
P505	ECSR	8	8	16	12'-4"	206	3	2'-8"	3'-2"				
P506	ECSR	2 SR OF 5	2 SR OF 5	4 SR OF 5	11'-4" TO 12'-2"	245	3	2'-8"	2'-8" TO 3'-1"				0'-1¼"
P801	ECSR	20		20	22'-5"	1197	16	21'-6"					
P802	ECSR	3	3	6	8'-9"	140	20	0'-6"	2'-4"	4'-0"	2'-4"	0'-6"	
P803	ECSR	5	5	10	13'-7"	363	2	2'-8"	8'-8"	2'-8"			
P804	ECSR		20	20	24'-3"	1295	16	23'-4"					
P805	ECSR	20	20	40	11'-0"	1175	STR						
PIER ECSR SUBTOTAL						5,684							

ALL OR A PORTION OF BARS PROVIDED WITH MECHANICAL CONNECTOR

REINFORCING NOTES AND DETAILS

FOR REINFORCING GENERAL NOTES AND BEND DIAGRAMS, SEE SHEET 34/34

REINFORCING LIST 1 OF 2
BRIDGE NO. SUM-77-3197R
I-77 OVER FURNACE RUN

SFN 7704682 (R)

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DESIGNER	CHECKER
RJB	FJG

REVIEWER: RBB 01-13-23

PROJECT ID: 111405

SUBSET	TOTAL
33	34

SHEET	TOTAL
832	927

SUM-77-28.75