

PIPE REMOVED OR ABANDONED

PIPE REMOVALS AND ABANDONMENTS ARE SUMMARIZED AND PAID FOR IN THE ROADWAY QUANTITIES.

MOT DRAINAGE ITEMS

WHERE DRAINAGE ITEMS ARE CALLED OUT IN THE PLANS FOR MOT, THEY SHALL MEET ALL THE REQUIREMENTS OF THAT ITEM AND SHALL ALSO INCLUDE REMOVAL OF THAT SAME ITEM WHEN IT IS NO LONGER NEEDED TO MAINTAIN POSITIVE DRAINAGE DURING MOT OPERATIONS, UNLESS OTHERWISE SPECIFIED IN THE PLANS.

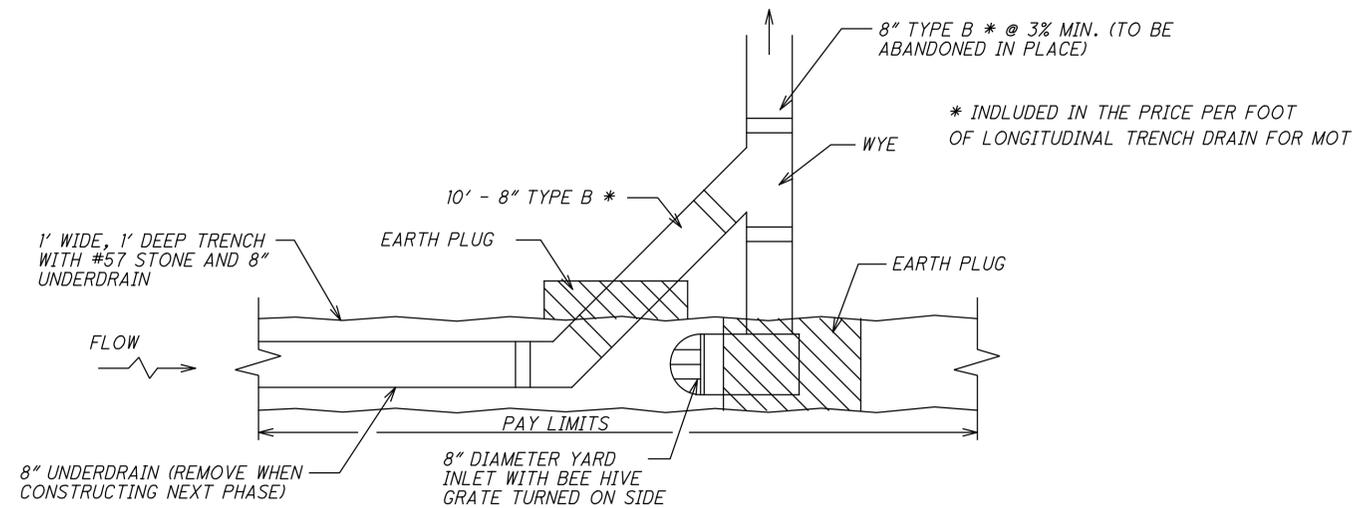
ITEM 611, INLET MISC.: INLET, CAPPED BELOW GRADE, AS PER PLAN

THIS WORK SHALL CONSIST OF CAPPING A PROPOSED BARRIER INLET OR PAVEMENT INLET BELOW GRADE AT THE PERMISSIBLE CONSTRUCTION JOINT (P.C.J.) AND PROVIDING AN APPROPRIATELY SIZED CONCRETE SLAB TOP. THE CONCRETE SLAB THICKNESS AND STEEL REINFORCING SHALL BE AS PER CB-4A-5A-8A. PAYMENT FOR THE INLET ITSELF SHALL BE PAID FOR UNDER THE APPROPRIATE BARRIER INLET ITEM OR PAVEMENT INLET ITEM. THIS ITEM IS INTENDED TO PAY FOR THE CONCRETE SLAB TOP AND THE ADDITIONAL LABOR AND MATERIALS INVOLVED TO CAP THE INLET AND PLACE EMBANKMENT OVER IT. IT SHALL ALSO INCLUDE REMOVAL AND DISPOSAL OF THE CONCRETE SLAB ONCE IT IS NO LONGER NEEDED FOR MOT PURPOSES.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID FOR EACH INLET CAPPED BELOW GRADE, AS PER PLAN AND SHALL INCLUDE ALL LABOR, MATERIALS, EMBANKMENT, EXCAVATION AND INCIDENTALS TO PLACE AND REMOVE A CONCRETE SLAB OVER A PROPOSED BARRIER INLET OR PAVEMENT INLET.



2



PROVIDING POSITIVE DRAINAGE DURING CONSTRUCTION
TRANSITION FROM LONGITUDINAL TRENCH TO CROSS DRAIN DETAIL (NTS)

NO.	DESCRIPTION	REV. BY	DATE
2	REMOVED NOTES	ENR	10-11-2023

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MAINTENANCE OF TRAFFIC GENERAL NOTES - DRAINAGE

FRA-70-13.11

63
1151

SHEET NUMBER									PARTICIPATION						ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED CJC	CHECKED CWL
P1/158	P1/159	P2/37	P2/38	P3/189	P3/190	P4/152	P4/153	P5/13	01/IMS/04	02/IMS/11	05/IMS/14	06/MPO/04	07/NHS/04/COL	08/ENH/04/COL								
				2					2						622	25051	2	EACH	ROADWAY (CONTINUED) CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN "C"	P3		
								1800		1800					622	41100	1800	FT	PORTABLE BARRIER, UNANCHORED			
		87				929			87				929		622	41101	1016	FT	PORTABLE BARRIER, UNANCHORED, AS PER PLAN	P2,P4		
1610									1610						622	41111	1610	FT	PORTABLE BARRIER, ANCHORED, AS PER PLAN	P1		
				205					205						622	90000	205	FT	BARRIER, MISC.: NEW JERSEY STYLE, TYPE B50, AS PER PLAN	P3		
				1					1						622	90200	1	EACH	BARRIER, MISC.: BACKUP STRUCTURE, AS PER PLAN "A"	P3		
				1					1						622	90200	1	EACH	BARRIER, MISC.: BACKUP STRUCTURE, AS PER PLAN "B"	P3		
						2			2						623	38500	2	EACH	MONUMENT ASSEMBLY, TYPE C			
22									22						623	40500	22	EACH	REFERENCE MONUMENT, TYPE A			
1									1						623	40520	1	EACH	RIGHT-OF-WAY MONUMENT, TYPE B			
LS									LS						SPECIAL	69098400	LS		EMERGENCY ACTION PLAN COORDINATION "4A"	P1		
				LS					LS						SPECIAL	69098400	LS		EMERGENCY ACTION PLAN COORDINATION "6A"	P3		
LS									LS						SPECIAL	69098400	LS		WCLPP R/W CONSTRUCTION CAMERA	P1		
LS									LS						SPECIAL	69098400	LS		USACE SURVEY AND AS-BUILTS	P1		
LS				LS		LS			LS						SPECIAL	69098400	LS		SURVEY CONTROL VERIFICATION	P1,P3,P4		
				LS					LS						SPECIAL	69098400	LS		EMERGENCY CLOSURE	P3		
LS				LS					LS							878	25000	LS	INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS			
																			EROSION CONTROL			
	1027			2164					3191						601	12001	3191	SY	RIPRAP, WITH GROUT, AS PER PLAN	P1,P3		
				3255			368	675	3623	675					601	21000	4298	SY	CONCRETE SLOPE PROTECTION			
	4			452					456						601	21050	456	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT			
	9			42					51						601	21060	51	SY	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT			
				186					186						601	21100	186	SY	SLOPE PROTECTION, MISC.: VEGETATED GEOCELL, AS PER PLAN	P3		
				5268					5268						601	32104	5268	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC			
				5				45	5	45					601	32200	50	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER			
	49						520		569						601	37501	569	FT	PAVED GUTTER, TYPE 1-2, AS PER PLAN	P1,P4		
	2		2	1			2	1	7	1					659	00100	8	EACH	SOIL ANALYSIS TEST	P3		
	1290		86	2769			1282	408	5427	360	48				659	00300	5835	CY	TOPSOIL	P3		
				2522					2522						659	00500	2522	SY	SEEDING AND MULCHING, CLASS 1	P3		
				2799				2806	2799	2375	431				659	00510	5605	SY	SEEDING AND MULCHING, CLASS 2			
				22424					22424						659	00530	22424	SY	SEEDING AND MULCHING, CLASS 3B	P3		
	11620		778						23952						659	10000	23952	SY	SEEDING AND MULCHING			
	581		39	1247				11554	578	184	22				659	14000	2629	SY	REPAIR SEEDING AND MULCHING	P3		
	581		39	1247					578	184	22				659	15000	2629	SY	INTER-SEEDING	P3		
	1.62		0.11	5.00					8.34	0.46	0.06				659	20000	8.86	TON	COMMERCIAL FERTILIZER	P3		
	2.40		0.16	6.00					10.95	0.67	0.09				659	31000	11.71	ACRE	LIME	P3		
	64		4	144					276	9	1				659	35000	286	MGAL	WATER	P3		
	26			1					53	30	4				659	40000	87	MSF	MOWING	P3		
	8								8						660	30000	8	SY	SODDING UNSTAKED			
	912								1037						670	00700	1037	SY	DITCH EROSION PROTECTION			
				1660					1660	297					670	00720	1957	SY	DITCH EROSION PROTECTION MAT, TYPE B			
				134					134						670	00760	134	SY	DITCH EROSION PROTECTION MAT, TYPE F			
													358		SPECIAL	69098100	358	FT	FILTER SOCK WITH IMPERMEABLE MATERIAL	P4		
	LS		LS	LS					LS	LS	LS				832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN			
	LS		LS	LS					LS	LS	LS				832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS			
	LS		LS	LS					LS	LS	LS				832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE			
	500000		250000	1150000					700000		2600000				832	30000	2600000	EACH	EROSION CONTROL			
	138								138						836	10000	138	SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1			
																			ENVIRONMENTAL / REMEDIATION			
	10				1000				1000						SPECIAL	69065000	1000	TON	WORK INVOLVING NON-REGULATED MATERIALS	P3		
	50				100				110						SPECIAL	69065002	110	TON	WORK INVOLVING HAZARDOUS WASTE	P1,P3		
	1000				500				550						SPECIAL	69065010	550	TON	WORK INVOLVING SOLID WASTE	P1,P3		
	1000				11000				12000						SPECIAL	69065022	12000	GAL	WORK INVOLVING NON-REGULATED WATER	P1,P3		
	1000				11000				12000						SPECIAL	69065024	12000	GAL	WORK INVOLVING REGULATED WATER	P1,P3		

BIG BUILD MASTER GENERAL SUMMARY

FRA-70-13.11

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NO.	DESCRIPTION	REV. BY	DATE
2	REVISED PART 3 ENV		10-16-23

SHEET NUMBER							PARTICIPATION					ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED CJC	CHECKED CWL
P1/160	P2/38	P3/190	P4/154	P4/155	P5/13	01/IMS/04	02/IMS/11												
DRAINAGE (CONTINUED)																			
2						2					611	98634	2	EACH	CATCH BASIN RECONSTRUCTED TO GRADE				
		1				1					611	98804	1	EACH	INLET, NO. 3B50				
4						4					611	98840	4	EACH	INLET, NO. 2-A-6				
1						1					611	98870	1	EACH	INLET, NO. 2-A-12				
1						1					611	98880	1	EACH	INLET, NO. 2-A-14				
		1				1					611	99094	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B				
			3			3					611	99110	3	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1				
2				4		2					611	99111	2	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN "4A"	P1			
				4		4					611	99111	4	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN "4B"	P4			
5		31	4		4	40	4				611	99114	44	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D				
		1				1					611	99115	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN "6A"	P3			
			8			8					611	99115	8	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN "4B"	P4			
1			1			2					611	99150	2	EACH	INLET ADJUSTED TO GRADE				
3						3					611	99154	3	EACH	INLET RECONSTRUCTED TO GRADE				
	△	13	2			15					611	99574	15	EACH	MANHOLE, NO. 3				
2			2			4					611	99575	4	EACH	MANHOLE, NO. 3, AS PER PLAN "A"	P1,P4			
			3			3					611	99575	3	EACH	MANHOLE, NO. 3, AS PER PLAN "B"	P4			
	△	2				2					611	99575	2	EACH	MANHOLE, NO. 3, AS PER PLAN "6A"	P3			
2	△	1				3					611	99654	3	EACH	MANHOLE ADJUSTED TO GRADE				
2						2					611	99655	2	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN "A"	P1			
	1		1			2					611	99655	2	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN "B"	P2,P4			
1	△	2				3					611	99660	3	EACH	MANHOLE RECONSTRUCTED TO GRADE				
1			5			6					611	99661	6	EACH	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN "A"	P1,P4			
			2			2					611	99661	2	EACH	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN "B"	P4			
		1				1					611	99661	1	EACH	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN "6A"	P3			
5		6				11					611	99710	11	EACH	PRECAST REINFORCED CONCRETE OUTLET				
		20				20					611	99720	20	EACH	INSPECTION WELL				
500	250		1000			1750					SPECIAL	61199820	1750	LB	MISCELLANEOUS METAL	P1,P2,P4			
		1856				1856					613	41200	1856	CY	LOW STRENGTH MORTAR BACKFILL				
	4			6		10					SPECIAL	69098000	10	EACH	CITY OF COLUMBUS STANDARD CURB AND GUTTER INLET (AA-S125A WITH GRATE AA-S128)	P2,P4			
				4		4					SPECIAL	69098000	4	EACH	CITY OF COLUMBUS DOUBLE CURB AND GUTTER INLET (AA-S125B WITH GRATE AA-S128)	P4			
	1					1					SPECIAL	69098000	1	EACH	CITY OF COLUMBUS MANHOLE, TYPE C (AA-S102)	P2			
		1				1					SPECIAL	69098000	1	EACH	MANHOLE, TYPE C (48")	P3			
		2				2					SPECIAL	69098000	2	EACH	DOUBLE CURB AND GUTTER INLET	P3			
		1				1					SPECIAL	69098000	1	EACH	MODIFIED DOUBLE CURB AND GUTTER INLET	P3			
		5				5					SPECIAL	69098000	5	EACH	MANHOLE ADJUSTED TO GRADE	P3			
	77			409		486					SPECIAL	69098100	486	FT	CITY OF COLUMBUS 6" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL	P2,P4			
				96		96					SPECIAL	69098100	96	FT	CITY OF COLUMBUS 6" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL, AS PER PLAN	P4			
				116		116					SPECIAL	69098100	116	FT	CITY OF COLUMBUS 8" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL	P4			
				71		71					SPECIAL	69098100	71	FT	CITY OF COLUMBUS 8" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL, AS PER PLAN	P4			
	366			92		458					SPECIAL	69098100	458	FT	CITY OF COLUMBUS 12" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL	P2,P4			
				293		293					SPECIAL	69098100	293	FT	CITY OF COLUMBUS 12" PIPE, WITH TYPE 1 BEDDING, WITH 912 COMPACTED GRANULAR MATERIAL, AS PER PLAN	P4			
		31				31					SPECIAL	69098100	31	FT	12" CONDUIT, TYPE 1	P3			
		41				41					SPECIAL	69098100	41	FT	24" CONDUIT, TYPE 1	P3			
		993				993					SPECIAL	69098100	993	FT	4" PIPE UNDERDRAIN	P3			
223		941				1164					839	29000	1164	FT	TRENCH DRAIN, TYPE A WITH STANDARD GRATE				
		44				44					839	30001	44	FT	TRENCH DRAIN, TYPE B WITH STANDARD GRATE, AS PER PLAN	P3			

BIG BUILD MASTER GENERAL SUMMARY

FRA-70-13.11

NO.	DESCRIPTION	REV. BY	DATE
2	REVISED PART 3 DR	CWL	10-16-23

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ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	PARTICIPATION		UNIT	DESCRIPTION	REFERENCE SHEET NO.
				01/IMS/04			
203	35001	465		465	CY	GRANULAR EMBANKMENT, AS PER PLAN	322
203	35110	680		680	CY	GRANULAR MATERIAL, TYPE B	
203	98100	231		231	SY	ROADWAY MISC.: COLUMN SUPPORTED WALLS	323 - 325
503	11100	LS		LS		COFFERDAMS AND EXCAVATION BRACING	
512	10100	254		254	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
516	13200	6		6	SF	1/2" PREFORMED EXPANSION JOINT FILLER	
516	13900	91		91	SF	2" PREFORMED EXPANSION JOINT FILLER	
601	21000	73		73	SY	CONCRETE SLOPE PROTECTION	
840	20001	2434		2434	SF	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	322
840	21000	451		451	CY	WALL EXCAVATION	
840	23000	1848		1848	CY	SELECT GRANULAR BACKFILL	
840	25010	177		177	FT	6" DRAINAGE PIPE, PERFORATED, AS PER PLAN	322
840	26000	91		91	FT	CONCRETE COPING	
840	26050	2434		2434	SF	AESTHETIC SURFACE TREATMENT	
840	27000	1		1	DAY	ON-SITE ASSISTANCE	
SPECIAL	20365000	2		2	EACH	SETTLEMENT PLATFORM	326



Plot Driver: \$PLOTDRIVERS\$
Pen Table: \$PENTBLLS\$

By: \$USER\$

\$DATE\$ \$TIME\$
File: \$FILEL\$

NO.	DESCRIPTION	REV. BY	DATE
2	ADDED CONCRETE SLOPE PROTECTION	WCB	10/16/2023

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUBLIN-CRAWFORD RD. COLUMBUS, OH 43231
614.880.7320 T * WWW.DYNOTEC.COM

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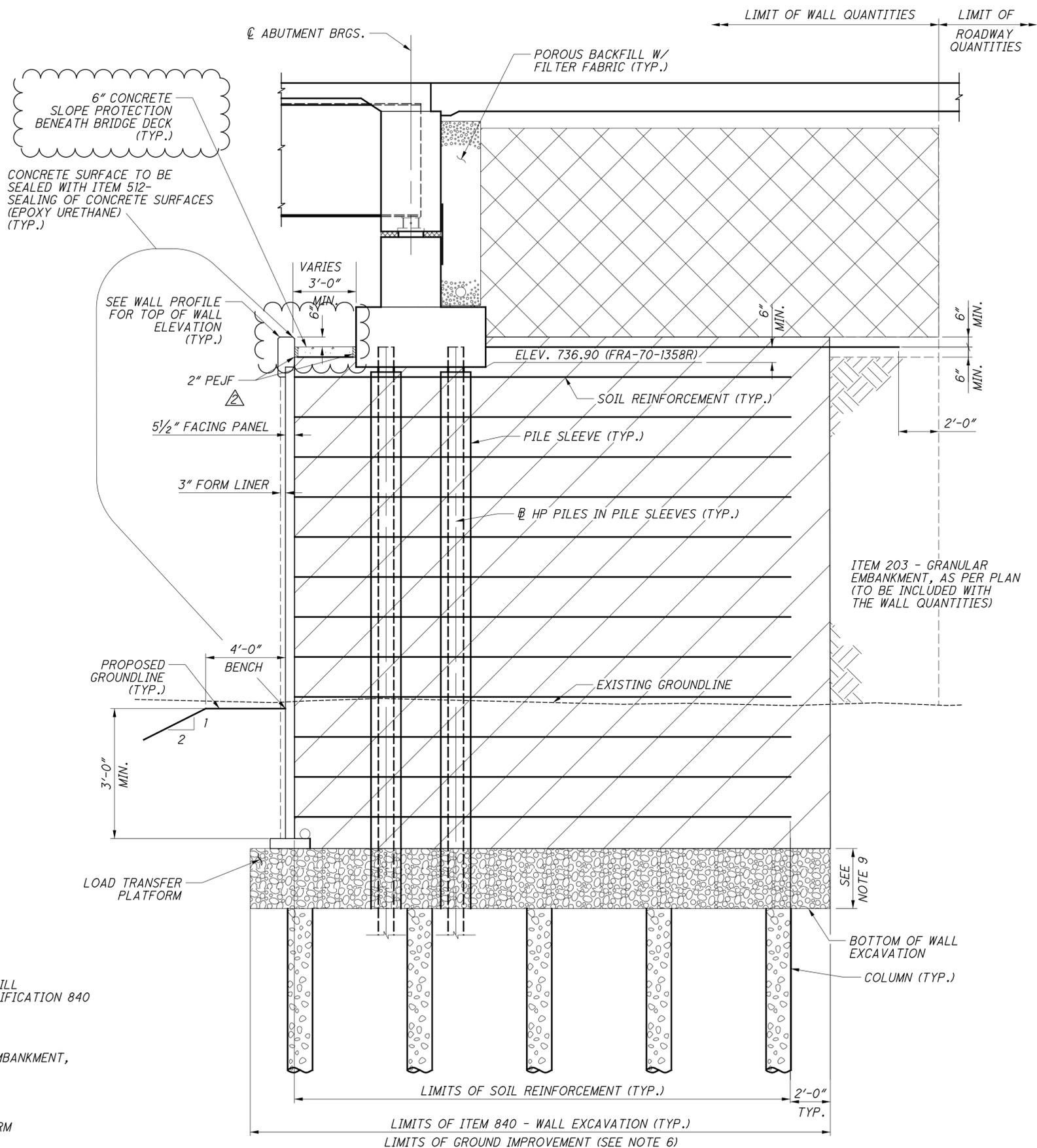
DATE
3/11/2105

STRUCTURE FILE NUMBER

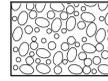
ESTIMATED QUANTITIES
MSE WALL 4W8
SOUTH SIDE BETWEEN FRA-70-1358A AND FRA-70-1373A

FRA-70-13-11
PID No. 77372

1 / 5
340
1151



LEGEND:

-  SELECT GRANULAR BACKFILL PER SUPPLEMENTAL SPECIFICATION 840
-  ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN
-  LOAD TRANSFER PLATFORM
-  ITEM 203 GRANULAR MATERIAL, TYPE B

SECTION A-A

NOTES:

1. FLOW LINE OF 6" DIA. PERFORATED PLASTIC PIPE WILL VARY TO PROVIDE POSITIVE DRAINAGE AT OUTLET. MINIMUM SLOPE OF PIPE SHALL BE 1/8" PER FOOT.
2. SOIL REINFORCEMENT LENGTH TO BE DETERMINED BY WALL SUPPLIER OF THE APPROVED WALL SYSTEM, AND SHALL COMPLY WITH THE REQUIREMENTS LISTED ON SHEET 322 OF 1151. ALL STRAPS SHALL BE THE SAME LENGTH.
3. THE THICKNESS OF MSE WALL PANELS IS ASSUMED AT 5 1/2".
4. COPING EXPANSION JOINTS SHALL BE SPACED NO MORE THAN 20 FEET APART AND ALIGNED WITH JOINTS BETWEEN FACING PANELS.
5. INSTALL PILE SLEEVES DURING THE CONSTRUCTION OF THE MSE WALL. PILE SLEEVES SHALL EXTEND FROM BOTTOM OF ABUTMENT FOOTING TO BOTTOM OF WALL EXCAVATION/LOAD TRANSFER PLATFORM AND SHALL BE INSTALLED AS PER SS 840.06.J.
6. GROUND IMPROVEMENT SHALL BE IN THE FORM OF INTERMITTENTLY SPACED COLUMNS SUPPORTING A LOAD TRANSFER PLATFORM (LTP). FOR ADDITIONAL INFORMATION, SEE NOTES ON SHEET 323-325 OF 1151.
7. SIZE AND SPACING OF COLUMNS ARE SHOWN FOR REPRESENTATION ONLY. ACTUAL SIZE AND SPACING TO BE DETERMINED BY THE CONTRACTOR.
8. A 3'-0" DEEP LOAD TRANSFER PLATFORM WAS ASSUMED FOR WALL EXCAVATION QUANTITIES.
9. LOAD TRANSFER PLATFORM; DESIGN IN ACCORDANCE WITH GENERAL NOTE: ITEM 203 - ROADWAY, MISC.: COLUMN SUPPORTED WALLS.

NO.	DESCRIPTION	REV. BY	DATE
2	CONCRETE SLAB REVISIONS	WCB	10/16/2023

MISCELLANEOUS DETAILS
 MSE WALL 4W8 SECTIONS
 SOUTH SIDE BETWEEN FRA-70-1358A AND FRA-70-1373A

FRA-70-13-11
 PID No. 77372

4 / 5

343
1151

DESIGN AGENCY
DYNOTEC, INC.
 2331 E. DUBLIN-CRAWFORD RD. COLUMBUS, OH 43231
 614.880.7320 T • WWW.DYNOTEC.COM

DATE
3/11/2105
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 STRUCTURE FILE NUMBER

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ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	PARTICIPATION		UNIT	DESCRIPTION	REFERENCE SHEET NO.
				01/IMS/04			
203	20000	648		648	CY	EMBANKMENT	
203	35000	501		501	CY	GRANULAR EMBANKMENT	
203	35110	870		870	CY	GRANULAR MATERIAL, TYPE B	
512	10100	234		234	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
516	13200	7		7	SF	1/2" PREFORMED EXPANSION JOINT FILLER	
516	13900	92		92	SF	2" PREFORMED EXPANSION JOINT FILLER	
601	21000	36		36	SY	CONCRETE SLOPE PROTECTION	
840	20000	2422		2422	SF	MECHANICALLY STABILIZED EARTH WALL	
840	21000	1144		1144	CY	WALL EXCAVATION	
840	22000	351		351	SY	FOUNDATION PREPARATION	
840	23000	2695		2695	CY	SELECT GRANULAR BACKFILL	
840	23050	190		190	CY	NATURAL SOIL	
840	25010	184		184	FT	6" DRAINAGE PIPE, PERFORATED	322
840	26000	92		92	FT	CONCRETE COPING	
840	26050	2422		2422	SF	AESTHETIC SURFACE TREATMENT	
840	27000	1		1	DAY	ON-SITE ASSISTANCE	
SPECIAL	20365000	2		2	EACH	SETTLEMENT PLATFORM	326

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Plot Driver: \$PLOTDRIVERS
Pen Table: \$PENTBLLS

By: \$USER\$

\$DATE\$ \$TIME\$
File: \$FILE\$.S

NO.	DESCRIPTION	REV. BY	DATE
2	ADDED CONCRETE SLOPE PROTECTION	WCB	10/16/2023

DESIGN AGENCY
DYNOTEC, INC.
2931 E. DUBLIN-CRANVILLE RD. COLUMBUS, OH 43231
614.880.7320 T * WWW.DYNOTECINC.COM

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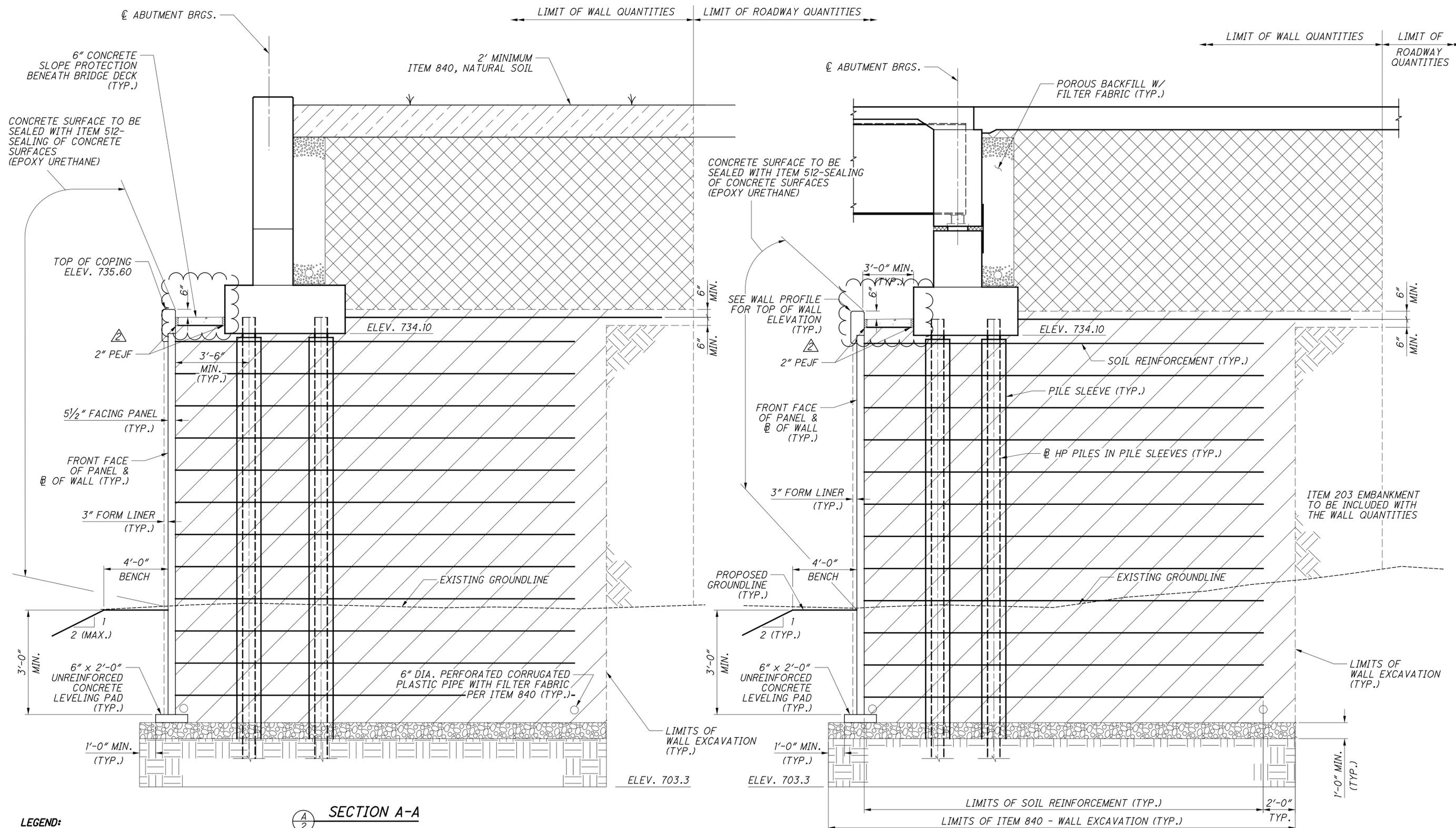
DATE
3/11/2015

ESTIMATED QUANTITIES
MSE WALL 4W10
WEST SIDE OF FRA-70-1358R AND FRA-70-1358A

FRA - 70 - 13 - 11
PID No. 77372

1 / 4
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Plot Driver: C:\000\Tcadd\Standards\p1c1g\0001\cadd\PDF\p1c1g Pen Table: N:\Jobs\CADD-Dynotec Projects\0001\Jobs\11662-South Trench (Structures)\Plotting\77372-South Trench.dwg
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LEGEND:

- | | | | |
|--|---|--|------------------------------------|
| | SELECT GRANULAR BACKFILL PER SUPPLEMENTAL SPECIFICATION 840 | | ITEM 840, NATURAL SOIL |
| | ITEM 203, EMBANKMENT | | ITEM 203, GRANULAR EMBANKMENT |
| | ITEM 203, GRANULAR MATERIAL, TYPE C | | ITEM 203 GRANULAR MATERIAL, TYPE B |

SECTION A-A

SECTION B-B

NOTES:
 FOR NOTES, SEE SHEET 4 / 4

NO.	DESCRIPTION	REV. BY	DATE
2	CONCRETE SLAB REVISIONS	WCB	10/16/2023

DESIGN AGENCY
DYNOTEC, INC.
 2931 E. DUBLIN-CRAWFORD RD. COLUMBUS, OH 43231
 614.880.7320 T • WWW.DYNOTEC.COM

DATE
 3/11/2015

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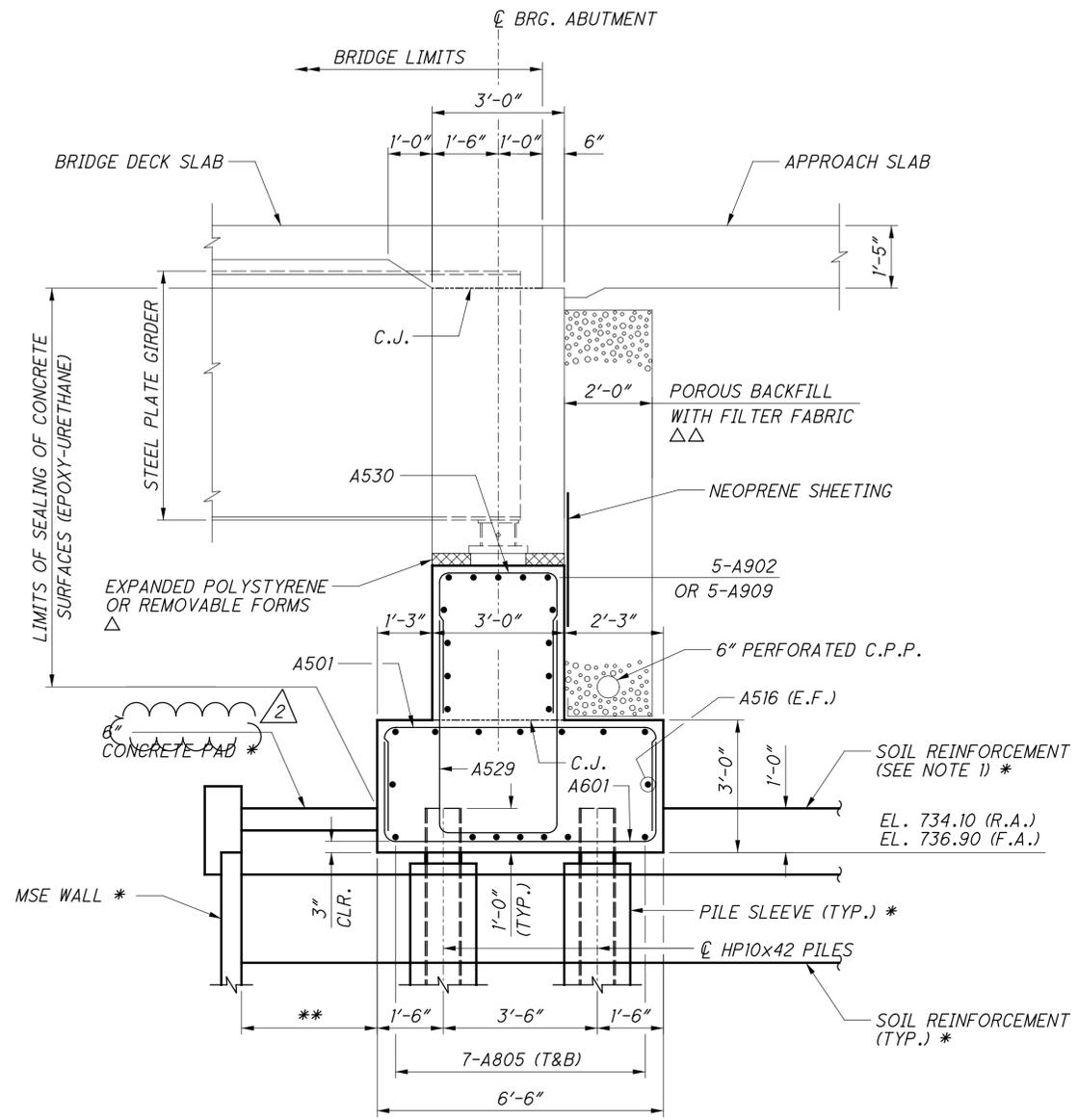
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MISCELLANEOUS DETAILS
 MSE WALL 4W10 SECTIONS
 WEST SIDE OF FRA-70-1358R AND FRA-70-1358A

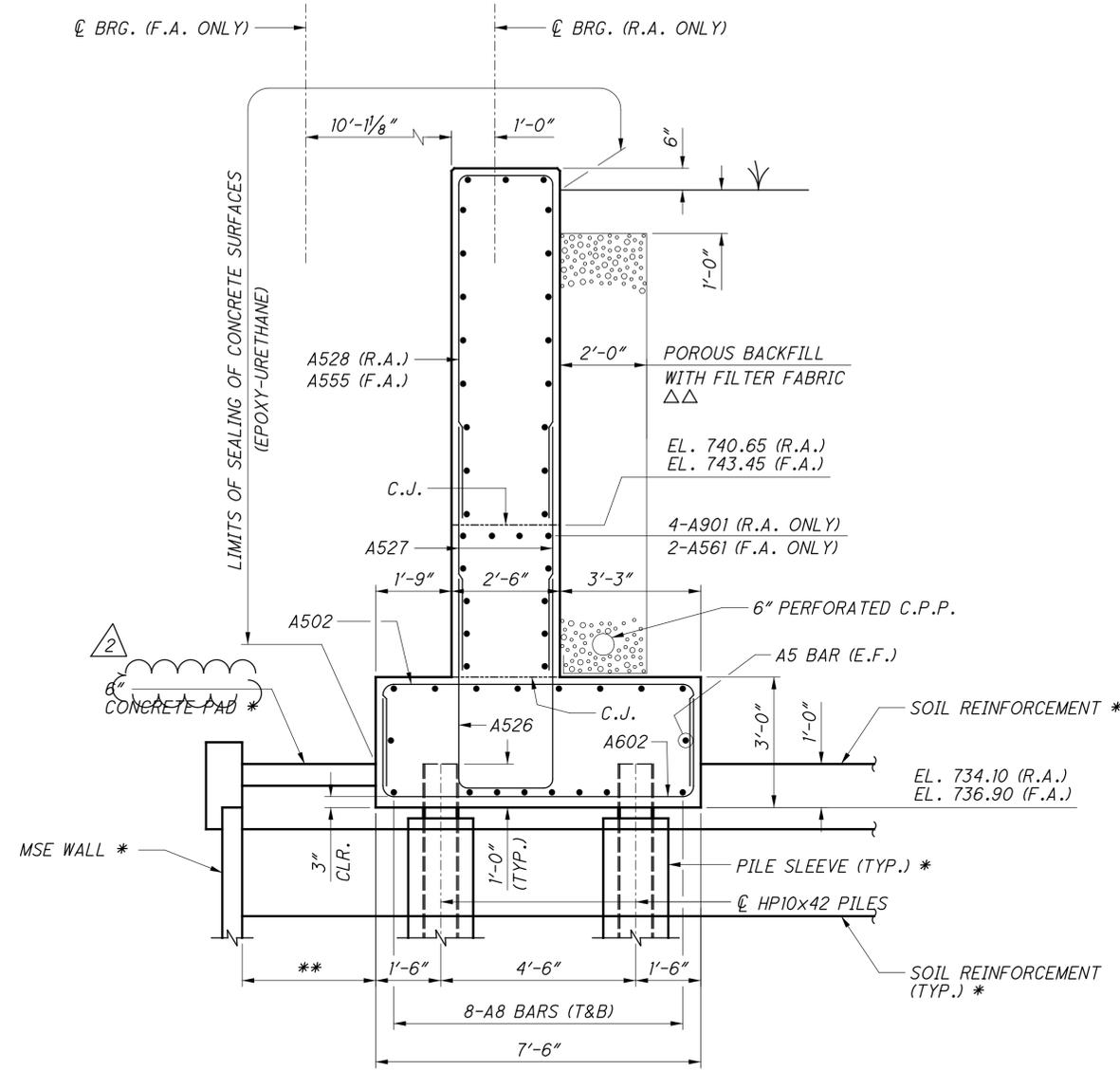
FRA-70-13-11
 PID No. 77372

3 / 4
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SECTION A-A
(LONGITUDINAL BARS ABOVE THE FOOTING ARE A5 BARS UNLESS NOTED OTHERWISE)



SECTION B-B
(LONGITUDINAL BARS ABOVE THE FOOTING ARE A5 BARS UNLESS NOTED OTHERWISE)

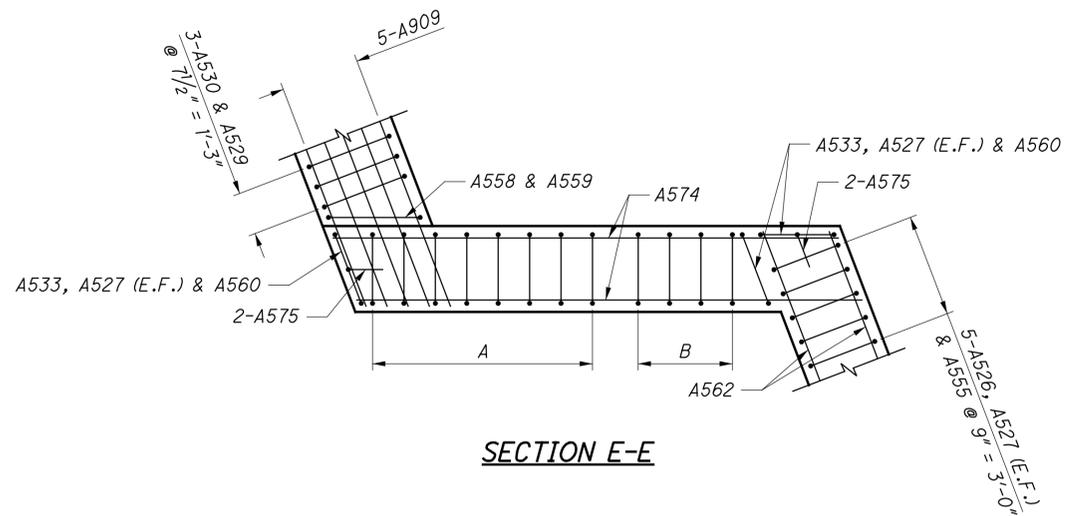
NOTES:

- SEE "PROPRIETARY RETAINING WALL DATA" GENERAL NOTE ON SHEET 4 / 47.
- MINIMUM LAP LENGTHS SHALL BE AS FOLLOWS:
 #5 BAR: 2'-1"
 #8 BAR: 5'-9"
 #9 BAR: 7'-3"
- SEE MECHANICAL CONNECTOR NOTE ON SHEET 4 / 47.
- PLACE TRANSVERSE BARS NORMAL TO ϕ BRG. UNLESS NOTED OTHERWISE.
- LOCATE 6" PERFORATED CORRUGATED PLASTIC PIPE AS CLOSE TO TOP OF FOOTING AS PRACTICABLE WHILE MAINTAINING A 1/8" PER FOOT SLOPE TOWARDS OUTLET.
- PLACE TYPE 2 WATERPROOFING, 3'-0" WIDE, CENTERED ON PHASE CONSTRUCTION JOINT, FROM TOP OF FOOTING TO BEAM SEAT.
- SEE STANDARD DRAWING SICD-2-14 FOR DIAPHRAGM GUIDE DETAILS AND PAYMENT.
- ALL WINGWALL CONCRETE AND ABUTMENT CONCRETE BELOW THE BEAM SEATS SHALL BE CLASS QC1 CONCRETE.

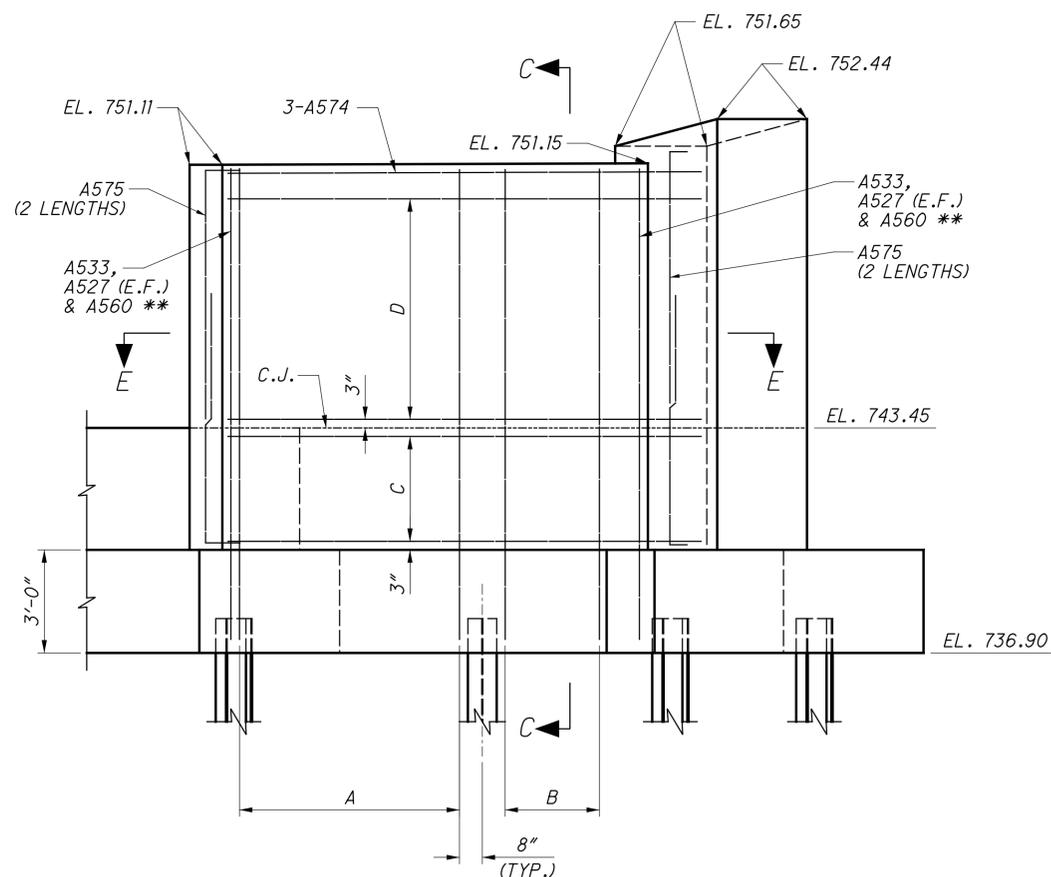
LEGEND:

C.J. = CONSTRUCTION JOINT
 C.P.P. = CORRUGATED PLASTIC PIPE
 E.F. = EACH FACE
 R.A. = REAR ABUTMENT
 F.A. = FORWARD ABUTMENT
 T&B = TOP AND BOTTOM
 * = SEE MSE WALL PLANS FOR DETAILS AND PAYMENT
 ** = 3'-6 3/8" (R.A.); VARIES, 2'-6 1/8" MIN. (F.A.)
 Δ = INCLUDED WITH SUPERSTRUCTURE CONCRETE FOR PAYMENT
 ΔΔ = TURN FILTER FABRIC 6" UP BACK FACE OF WALL AT BOTTOM

NO.	DESCRIPTION	REV. BY	DATE
2	REMOVED "REINFORCED"	CAS	10-12-2023



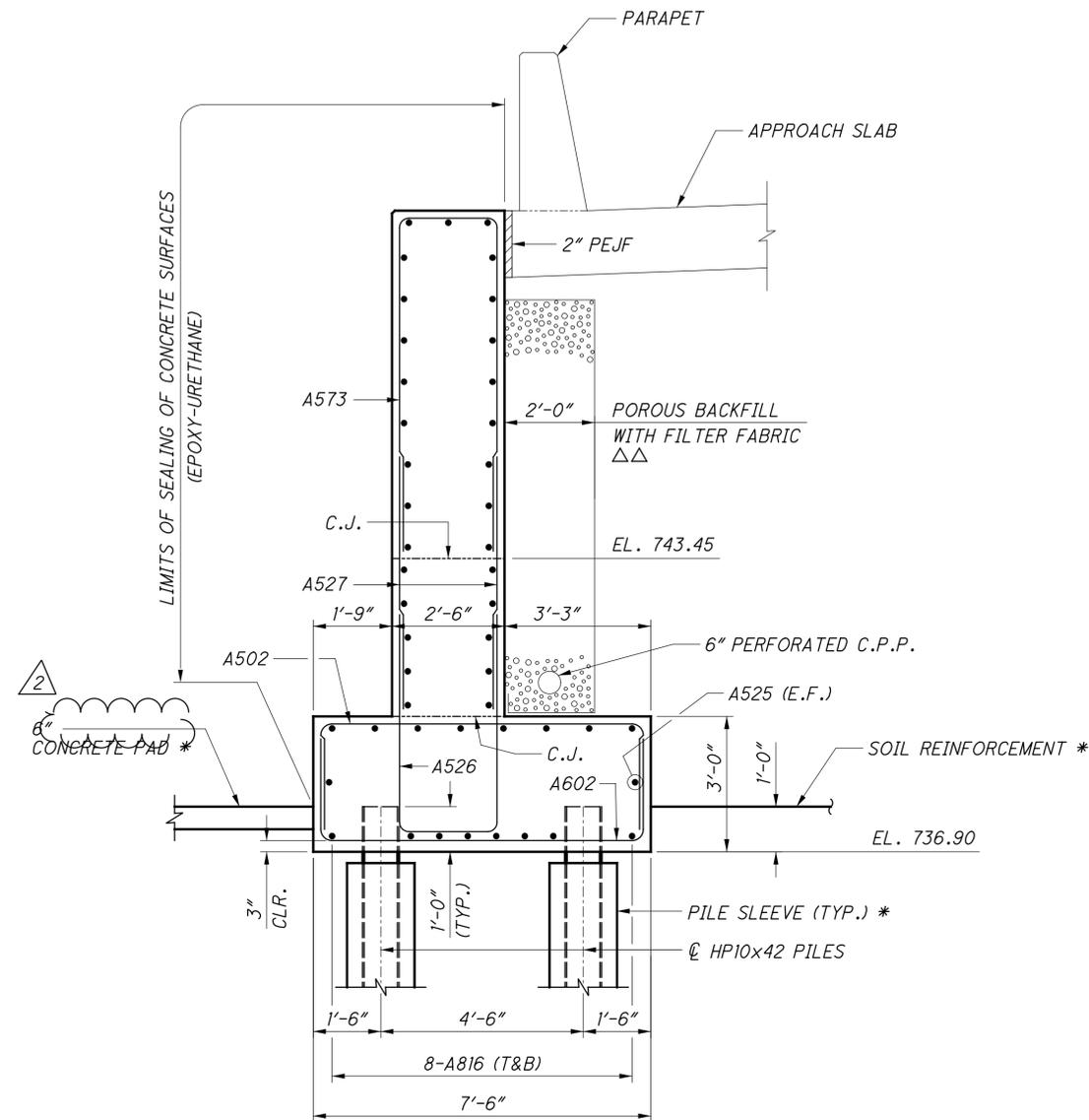
SECTION E-E



VIEW D-D
(DRAIN PIPES NOT SHOWN)

REINFORCING LEGEND:

- A = 8-A526, A527 (E.F.) & A573 @ 11" = 6'-5"
- B = 4-A526, A527 (E.F.) & A573 @ 11" = 2'-9"
- C = 5-A574 (E.F.) @ 9" = 3'-0"
- D = 8-A574 (E.F.) @ 11" = 6'-5"



SECTION C-C
(LONGITUDINAL BARS ABOVE THE FOOTING ARE A5 BARS)
(MSE WALL AND SOIL REINFORCEMENT BELOW FOOTING NOT SHOWN)

LEGEND:

- C.J. = CONSTRUCTION JOINT
- C.P.P. = CORRUGATED PLASTIC PIPE
- E.F. = EACH FACE
- PEJF = PREFORMED EXPANSION JOINT FILLER
- T&B = TOP AND BOTTOM
- * = SEE MSE WALL PLANS FOR DETAILS AND PAYMENT
- △△ = TURN FILTER FABRIC 6" UP BACK FACE OF WALL AT BOTTOM

NOTES:

1. SEE SHEET 13 / 47 FOR NOTES.

NO.	DESCRIPTION	REV. BY	DATE
2	REMOVED "REINFORCED"	CAS	10-12-2023

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SHEET NUMBER				PARTICIPATION										ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
42		78		01/IMS/04	02/IMS/11	03/NHS/10	04/NHS/10	05/IMS/14	06/MPO/04	07/NHS/04/COL	08/ENH/04/COL	09/IMS/17/COL							
																		LIGHTING FOR LIGHTING GENERAL SUMMARY	179
																		ELECTRICAL MANHOLE ADJUSTED TO GRADE	34
																		OTHER UTILITIES MANHOLE ADJUSTED TO GRADE	34
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																		TRAFFIC SIGNALS FOR TRAFFIC SIGNALS GENERAL SUMMARY	147
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																		STRUCTURE OVER 20 FOOT SPAN FOR FRA-70-1405C GENERAL SUMMARY	207
																		FOR FRA-70-1405C CAP GENERAL SUMMARY	260
																		FOR FRA-70-1405C AESTHETIC ENHANCEMENT GENERAL SUMMARY	314
																		FOR FRA-70-1395C AESTHETIC ENHANCEMENT GENERAL SUMMARY	370A
																		MAINTENANCE OF TRAFFIC FOR MAINTENANCE OF TRAFFIC GENERAL SUMMARY SEE PART 1	
																		WORK ZONE CROSSWALK LINE, CLASS I, 12", 740.06, TYPE 1	
																		PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
																		INCIDENTALS CONSTRUCTION LAYOUT STAKES AND SURVEYING	
																		MOBILIZATION	

NO.	DESCRIPTION	REV. BY	DATE
2	BRICK X-WALK TEMP.	CWL	10-13-23

4H PART 2 GENERAL SUMMARY

FRA - 70 - 14.05C

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TRAFFIC CONTROL LEGEND

→	TRAFFIC FLOW
◇	PROPOSED SIGN
◇	EXISTING SIGN TO REMAIN
◇	EXISTING SIGN TO BE REERECTED
+	SIGN SUPPORT
■	RPM (RAISED PAVEMENT MARKER)
S-#	PROPOSED SIGN
R-#	EXISTING SIGN TO BE REMOVED
BI-#	BICYCLE LANE SYMBOL MARKING
BD-#	BICYCLE DETECTOR MARKING
BS-#	SHARED LANE MARKING
CDS-#	CENTER LINE, DOUBLE SOLID
CL-#	CHANNELIZING LINE
CWL-#	CROSSWALK LINE
DL-#	DOTTED LINE, WHITE
ELW-#	EDGE LINE, WHITE
LA-#	LANE ARROW
LL-#	LANE LINE
SL-#	STOP LINE
TLW-#	TRANSVERSE/DIAGONAL LINE, WHITE
TLY-#	TRANSVERSE/DIAGONAL LINE, YELLOW
PS-#	PARKING LOT STALL MARKING
RM-#	EXISTING PARKING METER TO BE REMOVED

ITEM 644 - PAVEMENT MARKING, MISC.: EDGE LINE, 5"
ITEM 644 - PAVEMENT MARKING, MISC.: LANE LINE, 5"
ITEM 644 - PAVEMENT MARKING, MISC.: CENTER LINE, 5"
ITEM 645 - PAVEMENT MARKING, MISC.: LANE LINE, 5", TYPE A1 WITH CONTRAST
ITEM 645 - PAVEMENT MARKING, MISC.: CENTER LINE, 5", TYPE A1

THIS ITEM SHALL BE 5" WIDE.

PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT PRICE BID PER MILE.

ITEM 644 - PAVEMENT MARKING, MISC.: CHANNELIZING LINE, 10"
ITEM 645 - PAVEMENT MARKING, MISC.: CHANNELIZING LINE, 10" TYPE A1, WITH CONTRAST
ITEM 647 - PAVEMENT MARKING, MISC.: CROSSWALK LINE, 10", TYPE B90

THIS ITEM SHALL BE 10" WIDE.

PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT PRICE BID PER FEET.

ITEM 644 - PAVEMENT MARKING, MISC.: STOP LINE, 20"
ITEM 644 - PAVEMENT MARKING, MISC.: TRANSVERSE/DIAGONAL LINE, 20"
ITEM 647 - PAVEMENT MARKING, MISC.: STOP LINE, 20", TYPE B90

THIS ITEM SHALL BE 20" WIDE.

PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT PRICE BID PER FEET.

ITEM 644 - PAVEMENT MARKING, MISC.: BIKE LANE DOTTED LINE, 5"

THIS ITEM SHALL BE 5" WIDE AND SHALL HAVE A 2' SEGMENT WITH A 6' GAP BETWEEN SEGMENTS.

PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT PRICE BID PER FEET.

EXISTING PARKING KIOSKS

THE EXISTING PARKING KIOSKS SHALL REMAIN IN PLAN WHILE ON-STREET PARKING IS PERMITTED. WHEN THE CONTRACTOR IS PLANNING TO RESTRICT ON-STREET PARKING FOR THE DURATION OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY OF COLUMBUS (614-645-3111) 2 WEEKS PRIOR TO THE RESTRICTION. THE CITY OF COLUMBUS WILL BE RESPONSIBLE TO REMOVING THE EXISTING PARKING KIOSKS.

PAID PARKING OUT OF SERVICE FEES

AS INDICATED IN THE MAINTENANCE OF TRAFFIC PLAN NOTES AND PER COLUMBUS CITY CODE CHAPTER 2155.055 FEES FOR PARKING METERS OUT OF SERVICE, FOR ALL PAID PARKING (WHICH MAY INCLUDE PARKING METERS, KIOSKS, AND MOBILE PAYMENT ONLY ZONES) THAT ARE TAKEN OUT OF SERVICE (BAGGED OR REMOVED) DUE TO THE CONSTRUCTION OF THIS PROJECT, THE COST IS THE RESPONSIBILITY OF THE CONTRACTOR AS A PART OF THIS CONTRACT. WHILE THE ACTUAL PAID PARKING TO BE TAKEN OUT OF SERVICE IS NOT LISTED OR INCLUDED IN THESE PLANS, THE CONTRACTOR IS TO IDENTIFY THE PAID PARKING TO BE REMOVED FROM SERVICE, AND DETERMINE THE COST.

THE CONTRACTOR IS RESPONSIBLE FOR PAYING THE DAILY LOST PAID PARKING REVENUE FOR EACH PAID PARKING SPACE TAKEN OUT OF SERVICE.

TO CALCULATE AN ESTIMATE FOR THE LOST REVENUE, VISIT THE PARKING CALCULATOR AT: [HTTPS://GIS.COLUMBUS.GOV/PARKINGCALCULATOR](https://gis.columbus.gov/parkingcalculator). THE PARKING CALCULATOR IS A HELPFUL TOOL TO ASSIST IN PAID PARKING AREAS, ESPECIALLY IN AREAS WHERE THE PARKING SPACES ARE NOT DELINEATED WITH PAVEMENT MARKINGS. BELOW ARE INSTRUCTIONS FOR USING THE PARKING CALCULATOR:

1. SET VARIABLES FOR THE PARKING CALCULATOR:
 - FIND THE PROJECT LOCATION ON THE WEB MAP BY SEARCHING IN THE ADDRESS SEARCH BAR OR ZOOMING TO THE LOCATION.
 - DETERMINE IF THERE IS A MOBILE PAY ONLY ZONE, PARKING METERS ONLY OR BOTH IN THE PROJECT BOUNDARIES, THEN SELECT THE APPLICABLE BUTTON ON THE "PARKING COST REPORT".
 - USE THE DATE RANGE SELECTION TO SPECIFY WHEN METERS WILL BE OUT OF SERVICE. THE APPLICATION WILL AUTO-CALCULATE TO EXCLUDE SUNDAYS/HOLIDAYS WHEN METERS ARE OUT OF SERVICE.
2. SELECT THE AREA IMPACTED BY THE PROJECT:
 - SELECT THE POLYGON BUTTON AND DRAW OR OUTLINE THE AREA OF THE PAID PARKING THAT WILL BE OUT OF SERVICE. THE ERASER BUTTON (JUST BELOW THE POLYGON BUTTON) CAN BE USED TO CLEAR THE CURRENT DRAWING.
 - ONCE AN AREA IS SELECTED, THE CALCULATOR WILL OUTPUT THE TOTAL COST FOR THE DATE RANGE AND AREA SPECIFIED.
3. INTERPRET RESULTS:
 - ONCE YOU HAVE SELECTED YOUR AREA, VIEW THE PARKING COST REPORT, WHICH WILL PROVIDE THE AMOUNT OF PAID PARKING FEES DUE FOR THE LOCATION AND DURATION SELECTED.
 - THIS RATE ONLY INCLUDES THE LOST PAID PARKING REVENUE FEE AND DOES NOT INCLUDE ANY PERMIT FEES ASSESSED BY THE PERMIT OFFICE.

FOR QUESTIONS RELATED TO CALCULATING FEES, CONTACT THE CITY OF COLUMBUS, DIVISION OF PARKING SERVICES AT [PARKINGSERVICES@COLUMBUS.GOV](mailto:parkingservices@columbus.gov) FOR ASSISTANCE WITH ESTIMATING THE DAILY PAID PARKING REVENUE RATE. PROVIDE THE PROJECT ODOT PID AND CITY OF COLUMBUS E-PLAN IN THE SUBJECT LINE OF THE EMAIL.

ALL PAID PARKING SPACES ARE FREE ON SUNDAY AND CITY RECOGNIZED HOLIDAYS. THE FOLLOWING ARE CITY RECOGNIZED HOLIDAYS: NEW YEAR'S DAY, MARTIN LUTHER KING DAY, PRESIDENTS' DAY, MEMORIAL DAY, JUNETEENTH, INDEPENDENCE DAY, LABOR DAY, VETERANS DAY, THANKSGIVING DAY, AND CHRISTMAS DAY. ALL RATES ARE SUBJECT TO CHANGE BY THE CITY OF COLUMBUS. PLEASE NOTE, IF A HOLIDAY FALLS ON A SUNDAY BUT THE CITY RECOGNIZES THE HOLIDAY ON A MONDAY, THE PARKING IS FREE ON THE ACTUAL HOLIDAY, NOT THE DAY THE CITY RECOGNIZES THE HOLIDAY.

THIS COST IS TO BE INCLUDED IN THE BID FOR THIS PROJECT AS A PART OF ITEM 614 MAINTENANCE OF TRAFFIC, LUMP SUM.

AT THE TIME THE CONTRACTOR SUBMITS FOR THE STREET OCCUPANCY/EXCAVATION PERMIT, ALONG WITH THE PAID PARKING IDENTIFICATION NUMBERS TO BE INCLUDED ON THE PERMIT REQUEST FORM, THE CONTRACTOR IS TO PROVIDE A LISTING OF THE METER IDENTIFICATION NUMBERS AND MOBILE PAYMENT ZONE NUMBERS AND THE NUMBER OF DAYS THAT EACH PAID PARKING SPACE IS TO BE OUT OF SERVICE, TO THE DEPARTMENT OF PUBLIC SERVICE PERMIT OFFICE. THE PERMIT OFFICE WILL VERIFY THAT THE HOURLY RATES ARE CORRECT AND CALCULATE THE COST OF THE PERMIT.

ANY QUESTIONS ABOUT THIS SPECIAL PROVISION ARE TO BE SUBMITTED THROUGH THE OWNER AGENCY OFFERING THE SOLICITATION OF THIS BID AS A PRE-BID QUESTION.



NO.	DESCRIPTIONS	REV BY	DATE
2	NOTE ADDED	AKF	10/10/23

ITEM 644 - PAVEMENT MARKING, MISC.: BIKE DETECTOR MARKING

THE BIKE DETECTOR MARKING SHALL BE PLACED IN THE DETECTED BIKE LANE PER CITY OF COLUMBUS STANDARD CONSTRUCTION DRAWING 4305.

ITEM 644 - PAVEMENT MARKING, MISC.: DOTTED LINE, 5"

THIS ITEM SHALL BE 5" WIDE AND SHALL HAVE A 3' SEGMENT WITH A 9' GAP BETWEEN SEGMENTS.

PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT PRICE BID PER FEET.

ITEM 630 - SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN

FLAT SHEET SIGNS SHALL BE ATTACHED TO THE POLE USING CITY OF COLUMBUS STANDARD CONSTRUCTION DRAWING 4253.

PAYMENT FOR "ITEM 630 - SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN" SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND ALL PARTS NECESSARY TO ATTACH ONE SIGN.

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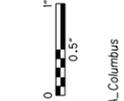
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34" x 22"

UTILITIES

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

LISTED BELOW ARE THE UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

CABLE

CHARTER COMMUNICATIONS/SPECTRUM (TIME WARNER COMMUNICATIONS)
3760 INTERCHANGE DRIVE
COLUMBUS, OH 43204
DL-MOH-CONSTRUCTION-FRELO-TEAM@charter.com

BREEZELINE (fka WOW)
3675 CORPORATE DRIVE
COLUMBUS, OHIO 43231
DL CMHFR@ATLANTICBB.COM
mfrey@breezeline.com
jborreson@breezeline.com

ELECTRIC

AMERICAN ELECTRIC POWER - TRANSMISSION
ATTN: MICHAEL CARR
8600 SMITHS MILL ROAD
NEW ALBANY, OHIO 43054
380-205-5072
TL_PublicProjects@aep.com
740-503-2819
eajulian@aep.com
mthooper@aep.com

AMERICAN ELECTRIC POWER - CITY PROJECTS/DISTRIBUTION
ENGINEERING LIAISON COORDINATOR: PAUL PAXTON
777 HOPEWELL DRIVE
HEATH, OH 43056
OFFICE: 740-348-5322
ppaxton@aep.com
ohfiberrelocate@aep.com
AEP SOLUTION CENTER:
800-277-2177

AMERICAN ELECTRIC POWER (SUBSTATION)
ATTN: MICHAEL STAUBS AND MATTHEW MYERS
777 HOPEWELL DRIVE
HEATH, OH 43056
614-716-1216
mhstaubs@aep.com
mgmyers@aep.com

CITY OF COLUMBUS

DIVISION OF POWER
CHARLES HORNER
3500 INDIANOLA AVENUE
COLUMBUS, OHIO 43214
OFFICE: 614-645-7569
CRHORNER@COLUMBUS.GOV

GAS

COLUMBIA GAS OF OHIO
LEADER FIELD ENGINEERING: ROB CALDWELL
3550 JOHNNY APPLESEED CT.
COLUMBUS, OHIO 43231
OFFICE: 614-818-2104
CELL: 614-370-1906
CUSTOMER SERVICE: 1-800-344-4077
DAMAGE PREVENTION 1-866-632-6243
COLUMBIAGAS.COLUMBUS@NISOURCE.COM
ALSO COPY ROB CALDWELL: rcaldwell@nisource.com

TELEPHONE/TELECOMMUNICATIONS

DONALD G. MARSHALL JR.
MANAGER OSP PLANNING
AT&T (FKA SBC)
111 N 4th ST
COLUMBUS, OHIO 43215
CELL: 614-216-2396
AT&T REPAIR SERVICE: 888-611-4466
DAMAGE PREVENTION: 937-296-3929
DM619W@ATT.COM
ALSO COPY:
GO1553@ATT.com
KG1963@ATT.COM
BT2178@ATT.COM

VERIZON BUSINESS (AKA MCI/XO)
757 COMMERCE CT
LEWIS CENTER, OH 43035
CELL: 614-593-6685 (JONES)
CELL: 614-816-0361 (DILLOW)
ROBERT.DILLOW@VERIZON.COM
MAURICE.JONES@VERIZON.COM
ALLAN.GUEST@VERIZON.COM
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MICHAEL.HENNON@VERIZONWIRELESS.COM
MICHAEL.BONDY@VERIZONWIRELESS.COM
SVEN.CHRISTIANSON@VERIZONWIRELESS.COM

COGENT COMMUNICATIONS (FKA SPRINT/T-MOBILE)
ATTN: STEVEN HUGHES
11370 ENTERPRISE PARK DR.
SHARONVILLE, OHIO 45241
OFFICE: 513-459-5796
CELL: 513-462-7221
shughes@cogentco.com

LUMEN (FKA CENTURY LINK/LEVEL 3 COMMUNICATIONS/ TW TELECOM)
250 WEST OLD WILSON BRIDGE RD, SUITE 130
WORTHINGTON, OHIO 43085
relocations@lumen.com
relocations@brightspeed.com
haley.wood@lumen.com

ZAYO GROUP (FKA CITY NET)
ATTN: ERIC L. ALEXANDER
251 NEILSTON STREET
COLUMBUS, OHIO 43215
614-989-9655
eric.alexander@zayo.com

SEWER

CITY OF COLUMBUS
DIVISION OF SEWERAGE AND DRAINAGE
SEWERAGE MAINTENANCE MANAGER
1250 FAIRWOOD AVENUE
COLUMBUS, OHIO 43206
614-645-7102

WATER

CITY OF COLUMBUS
DIVISION OF WATER
910 DUBLIN ROAD
COLUMBUS, OHIO 43215
614-645-7788

ODOT

ODOT TRAFFIC
ATTN: DAVID CARLIN
400 E. WILLIAMS ST.
DELAWARE, OH 43015
740-833-8024
David.Carlin@dot.gov

ODOT ITS (OUPS MEMBER)
EMAIL FOR LOCATES
CEN.ITS.LAB@DOT.OHIO.GOV
1606 WEST BROAD ST
COLUMBUS OHIO 43223
614-387-4113

CITY OF COLUMBUS UTILITIES

DAVE MCNALLY
ENGINEERING SUPERVISOR
DEPARTMENT OF TECHNOLOGY
CABLE INTERCONNECT SECTION
1355 MCKINLEY AVENUE
BUILDING C
COLUMBUS, OHIO 43222
OFFICE: 614-645-1501
CONTRACTOR LINE: 614-645-7756
CABLE LOCATES FAX: 614-645-6627
DWMCNALLY@COLUMBUS.GOV
ALSO COPY
DARRYL JOYCE AT DHJOYCE@COLUMBUS.GOV

CITY OF COLUMBUS (OUPS MEMBER)
DAMAGE PREVENTION SUPERVISOR
TRAFFIC SIGNALS
ATTN: BRAD HEGWOOD
1820 17th AVE.
COLUMBUS, OHIO 43219
OFFICE: 614-560-0839
bdhegwood@columbus.gov

CITY OF COLUMBUS
SUPPORT SERVICES DIVISION (COMMUNICATIONS)
ATTN: WILLIAM GRIFFITH
4211 GROVES ROAD
COLUMBUS, OH 43232
PHONE: 614-645-7344 EXT. 100
wrgriffith@columbus.gov
ATTN: JOHN GREMBOWSKI
RADIO ROOM: 614-724-4006
JAGembowski@columbus.gov

COTA
33 NORTH HIGH STREET
8th FLOOR OF WILLIAM J. LHOTA BUILDING
COLUMBUS, OHIO 43215
OFFICE: 614-308-4373
COTADESIGNREVIEW@COTA.COM
EVANSPMI@COTA.COM

ITEM SPECIAL - EMERGENCY ACTION PLAN

THIS ITEM INCLUDES ALL COSTS AND EXPENSES INCURRED BY THE CONTRACTOR TO COORDINATE WITH THE ARMY CORPS OF ENGINEERS, CITY OF COLUMBUS AND ODOT AS IT RELATES TO UPDATING THE EMERGENCY ACTION PLAN DURING CONSTRUCTION FOR THE CONTRACTOR'S ACTUAL MEANS AND METHODS FOR CONSTRUCTING THE FRA-70-1322L AND FRA-70-1323C BRIDGE PIERS 1, 2, AND 3 AND THE REAR ABUTMENTS, WHICH ARE LOCATED IN THE FLOODWALL RIGHT-OF-WAY AND MAINTAINING THE INTEGRITY OF THE FLOOD PROTECTION SYSTEM INCLUDING I-WALLS AND ADJACENT LEVEES. THIS ITEM ALSO INCLUDE ALL CONTRACTOR COST FOR ATTENDING WEEKLY PROGRESS MEETINGS AND PREPARING STATUS REPORTS RELATED TO THE WORK. CONTRACTOR SHALL SUBMIT A WORK PLAN TO ODOT, CITY OF COLUMBUS AND THE ARMY CORPS OF ENGINEERS OUTLINING THE PROPOSED SEQUENCE OF CONSTRUCTION WITHIN THE EXISTING FLOODWALL RIGHT-OF-WAY.

PAYMENT FOR THIS WORK SHALL BE MADE AT THE LUMP SUM PRICE BID WHICH SHALL CONSTITUTE FULL PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS TO COMPLETE THE WORK.

ITEM 690 - SPECIAL - EMERGENCY ACTION PLAN

(PHASE 6A) PART 2 PID NUMBER

BESIDES THE (PHASE 6A) PART 2 TITLE SHEET, ANY REFERENCES TO THE OLD PID NUMBER 89464 IN THIS PLAN SET SHALL EQUAL THE NEW PID NUMBER

SURVEY PARAMETERS

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: GEOID 99

HORIZONTAL POSITIONING

HORIZONTAL DATUM: NAD 83 (1986)
COORDINATE SYSTEM: OHIO STATE PLAN - SOUTH ZONE
COMBINED SCALE FACTOR: 1.000043907
ORIGIN OF COORDINATE SYSTEM:
FRANKLIN COUNTY MONUMENT "FRANK 143"
NORTHING = 711726.0754
EASTING = 1840542.0310

USE THE POSITIONING METHODS AND MONUMENTS TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 823.

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

RIGHT OF WAY PLANS

RIGHT OF WAY PLANS FOR THIS PROJECT (FRA-70-13.10) WERE PREPARED IN ADVANCE OF THE CONSTRUCTION PLANS. THE CONTRACTOR SHALL REFER TO AND COORDINATE WITH THESE PLANS WITH REGARD TO ANY RIGHT OF WAY ISSUES.

THE ALIGNMENT OF ROADWAYS MAY HAVE CHANGED SINCE THE RIGHT-OF-WAY PLANS WERE DEVELOPED. THE CONTRACTOR SHALL REFERENCE THE CONSTRUCTION PLANS FOR ALL CURRENT GEOMETRIC AND ALIGNMENT DATA USED FOR CONSTRUCTION OF THE PROJECT.

FLOOD INSURANCE RATE MAP (FIRM)

PANEL: 39049C0309K
FLOOD ZONE: AE
BASE FLOOD ELEVATION: 717 FEET
EFFECTIVE DATE: 6/17/2008

CITY OF COLUMBUS PERMITS

WHEN EXCAVATING WITHIN COLUMBUS PUBLIC RIGHT OF WAY LIMITS, THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FROM THE CITY OF COLUMBUS, DEPARTMENT OF PUBLIC SERVICE-PERMIT OFFICE BETWEEN THE HOURS OF 7:30 AM AND 4:00 PM MONDAY THROUGH FRIDAY. PERMIT MAY INCLUDE THE VALUE OF PARKING METERS RENDERED UNAVAILABLE TO THE PUBLIC AS A DIRECT RESULT OF THE WORK.
PHONE (614) 645-7497
FAX: (614) 645-1876
EMAIL: COLSPERMIT@COLUMBUS.GOV

SERVICE TAP LOCATIONS

EXISTING WATER LINE & SERVICE TAPS HAVE BEEN LOCATED IN THE PLANS WITH THE CITY OF COLUMBUS SERVICE TAP CARDS. THE SERVICE TAPS HAVE NOT BEEN LOCATED TO A SUE LEVEL "B".

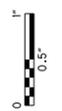
NO.	DESCRIPTION	REV. BY	DATE
2	UPDATED CONTACT INFO	ACW	10/13/23

CALCULATED
CHECKED

GENERAL NOTES

FRA-70-13.10

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702



ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE J, ASTM D4956 TYPE XI REFLECTIVE SHEETING, PER CMS 730.193.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ELECTRICAL AND TELECOMMUNICATION UTILITY REMOVAL

ALL ABANDONED UNDERGROUND UTILITIES, PRIVATELY OWNED ELECTRICAL AND TELECOMMUNICATION, IMPACTED BY PROPOSED IMPROVEMENTS ARE TO BE REMOVED BY THE CONTRACTOR AS NEEDED.

ALL COSTS ASSOCIATED WITH THE REMOVAL OF IMPACTED UTILITIES ARE INCIDENTAL TO THE PROJECT.

ITEM 606 - IMPACT ATTENUATOR, TYPE 3 (UNIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE TYPE 3 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE (REFER TO THE POSTED SHOP DRAWINGS FOR THE MOST CURRENT APPROVED PRODUCT MODELS). WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. THE FACE OF THE IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR THE FOLLOWING:

ITEM 606, IMPACT ATTENUATOR, TYPE 3, (UNIDIRECTIONAL), (62 MPH), (HAZARD WIDTH 24"), EACH

ITEM 606, IMPACT ATTENUATOR, TYPE 3, (UNIDIRECTIONAL), (62 MPH), (HAZARD WIDTH 69.41"), EACH

ITEM 606, IMPACT ATTENUATOR, TYPE 3, (UNIDIRECTIONAL), (62 MPH), (HAZARD WIDTH 90.0"), EACH

THE UNIT PRICE BID SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS/BACKSTOPS, TRANSITIONS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

ITEM 442 - ANTI-SEGREGATION EQUIPMENT

PROVIDE ANTI- SEGREGATION EQUIPMENT FOR ALL COURSES OF UNIFORM THICKNESS IN ACCORDANCE WITH CMS 401.12, FOR THE FREEWAY AND FREEWAY RAMPS.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), 76-22M, AS PER PLAN "B"

JOINT CORING IN ACCORDANCE WITH 446.04 IS NOT REQUIRED FOR COLD LONGITUDINAL JOINTS PLACED OVER VOID REDUCING ASPHALT MEMBRANE (VRAM). CONSTRUCT COLD LONGITUDINAL JOINTS OVER VRAM USING THE SAME TECHNIQUES, EQUIPMENT, AND ROLLER PATTERNS USED ON THE REST OF THE MAT. OBTAIN 10 MAT CORES FOR EACH LOT OF MATERIAL IN ACCORDANCE WITH 446.04. PAY FACTORS FOR EACH LOT OF MATERIAL WILL BE DETERMINED ACCORDING TO TABLE 446.04-2.

LONGITUDINAL JOINTS (FLEXIBLE PAVEMENT)

LOCATE LONGITUDINAL JOINTS IN THE SURFACE COURSE SUBJECT TO THE FOLLOWING REQUIREMENTS:

PLACE THE MAINLINE PAVEMENT SURFACE COURSE WITH A SINGLE COLD LONGITUDINAL JOINT LOCATED BETWEEN LANES 2 AND 3. WHERE THE NUMBER OF MAINLINE LANES EXCEEDS 4 LANES, A COLD JOINT IS PERMITTED BETWEEN LANES 4 AND 5. A COLD LONGITUDINAL JOINT IS PERMITTED BETWEEN THE SHOULDER AND MAINLINE PAVEMENT. NO OTHER COLD JOINTS ARE PERMITTED IN THE SURFACE COURSE OF MAINLINE PAVEMENT.

MEDIAN AND/OR CURBING ON APPROACH SLABS

WITHIN THE LIMITS OF THE APPROACH SLAB, TRANSITION THE SHAPE OF THE MEDIAN AND/OR CURBING ON APPROACH SLABS FROM THE STANDARD SECTION ON THE APPROACHES TO THE SECTION USED ON THE BRIDGE.

PAVEMENT RESTORATION FOR DRAINAGE STRUCTURE INSTALLATIONS ON CITY STREETS

ANY STORM SEWER CONSTRUCTION ON THE CITY STREET SYSTEM THAT REQUIRES PAVEMENT RESTORATION OF THE EXISTING PAVEMENT TO MAINTAIN TRAFFIC, SHALL BE RESTORED PER THE CITY OF COLUMBUS STANDARD DRAWING 1441. SEE MISC DETAIL SHEETS 402 - 408.

ALL LABOR, MATERIALS AND EQUIPMENT FOR THE PAVEMENT RESTORATION SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.



REGULATED WASTE AND WATER PLAN NOTE

SUBGRADE EXCAVATIONS MAY CONTAIN REGULATED MATERIALS. SEE SOIL BORING PROFILES AND PREVIOUS ENVIRONMENTAL STUDIES LOCATED IN THE CONSTRUCTION PROJECT FILE. ALL EXCAVATED MATERIAL FROM THE AREAS IDENTIFIED BY THIS NOTE SHALL BE MANAGED AS REGULATED MATERIALS UNTIL APPROPRIATELY REUSED AS A CONSTRUCTION MATERIAL OR DISPOSED OF IN A LICENSED DISPOSAL FACILITY. EXCAVATED MATERIALS MEETING THE REQUIREMENTS OF ITEM 203 CAN BE REUSED AS EMBANKMENT. EXCAVATED MATERIALS NOT SUITABLE FOR USE IN ITEM 203 EMBANKMENT SHALL BE TESTED FOR CHARACTERIZATION AND DISPOSED OF IN A LICENSED DISPOSAL FACILITY. EXCAVATED MATERIALS NOT BEING REUSED FOR EMBANKMENT ARE REFERRED TO AS WASTE MATERIALS FOR THE REMAINDER OF THIS NOTE.

PROVIDE AN EXCAVATION AND EMBANKMENT PLAN TO THE ENGINEER A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO PERFORMING EXCAVATION. THE EXCAVATION AND EMBANKMENT PLAN WILL INCLUDE A SCHEDULE OF EXCAVATION/EMBANKMENT ACTIVITIES, A SCHEDULE FOR TESTING AND DISPOSAL OF WASTE MATERIALS, AND IDENTIFY ALL TEMPORARY STOCKPILE LOCATIONS FOR THE EXCAVATED MATERIALS. PROVIDE A SAMPLING AND TESTING PLAN TO THE ENGINEER FOR THE PURPOSES OF CHARACTERIZING THE WASTE MATERIALS FOR PROPER DISPOSAL. PROVIDE THE SAMPLING AND TESTING PLAN TO THE ENGINEER AT THE SAME TIME AS THE EXCAVATION AND EMBANKMENT PLAN.

THE CONTRACTOR SHALL SEGREGATE WASTE MATERIALS INTO INDIVIDUAL STOCKPILES BY THE PARCEL OF GENERATION. EACH STOCKPILE OF WASTE MATERIAL WILL BE SAMPLED AND TESTED FOR PROPER DISPOSAL. PROVIDE THE ENGINEER WITH ALL WASTE MATERIAL SAMPLING RESULTS WITHIN FORTY-EIGHT (48) HOURS OF RECEIVING THE RESULTS. DO NOT MIX WASTE MATERIALS WITH MATERIALS FROM ANY OTHER SOURCE OF GENERATION UNTIL THE WASTE MATERIALS HAVE BEEN CHARACTERIZED.

WASTE MATERIAL NOT CHARACTERIZED AS HAZARDOUS WASTE SHALL BE MANAGED AS SOLID WASTE. TEMPORARY STORAGE OF SOLID WASTE SHALL BE IN COVERED, PORTABLE CONTAINERS FREE FROM HOLES OR DAMAGES. THE CONTRACTOR MAY ALSO UTILIZE TEMPORARY STOCKPILES OF THE SOLID WASTE WITH A SYNTHETIC COVER THAT PREVENTS INFILTRATION FROM RAINWATER AND SURROUNDED BY BERMS THAT PREVENTS CONTACT WITH STORMWATER RUN-ON. PROVIDE PROPER TRANSPORTATION AND DISPOSAL IN A LICENSED SOLID WASTE DISPOSAL FACILITY. THE CONTRACTOR SHALL FILL OUT AND SIGN ALL WASTE DISPOSAL FACILITY FORMS REQUIRED BY THE DISPOSAL FACILITY INCLUDING, BUT NOT LIMITED TO MATERIAL PROFILES, DATA SHEETS AND MATERIAL CERTIFICATIONS. PROVIDE A COPY OF ALL COMPLETED DISPOSAL FACILITY FORMS TO THE ENGINEER.

WASTE MATERIALS CHARACTERIZED AS HAZARDOUS WASTE SHALL IMMEDIATELY BE PLACED IN AN APPROPRIATELY LINED, COVERED CONTAINER, LABELED AS HAZARDOUS WASTE AND SECURED FOR TEMPORARY STORAGE. NOTIFY THE ENGINEER IMMEDIATELY IF SAMPLING RESULTS INDICATE THAT ANY WASTE MATERIALS ARE CHARACTERIZED AS HAZARDOUS. THE DEPARTMENT WILL SUBMIT A REQUEST FOR A RCRA SUBTITLE C SITE GENERATOR ID FROM OHIO EPA. UTILIZE PROPERLY HANDLED, STORAGE AND TRANSPORTATION METHODS UNTIL PROPERLY DISPOSED OF IN A LICENSED HAZARDOUS WASTE FACILITY. THE CONTRACTOR SHALL COMPLETE ALL MANIFEST AND PROVIDE THE COMPLETED MANIFESTS TO THE ENGINEER FOR SIGNATURE AS THE GENERATOR. PROVIDE THE ENGINEER WITH A COPY OF THE MANIFEST SIGNED BY THE DESIGNATED HAZARDOUS WASTE DISPOSAL FACILITY.

IF THE EXCAVATIONS REQUIRE DEWATERING FOR CONSTRUCTION PURPOSES, THE CONTRACTOR SHALL DEWATER, CONTAINERIZE AND DISPOSE OF THE LIQUID WASTE IN A LICENSED DISPOSAL FACILITY. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND CONDUCTING ALL TESTING NEEDED TO STORE, TRANSPORT, AND DISPOSE OF THE LIQUID WASTE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. INCLUDE DETAILS OF THE WASTE WATER SAMPLING AND TESTING AS PART OF THE WASTE MATERIAL SAMPLING AND TESTING PLAN. THE CONTRACTOR SHALL FILL OUT AND SIGN ALL LIQUID WASTE DISPOSAL FACILITY FORMS REQUIRED BY THE DISPOSAL FACILITY INCLUDING, BUT NOT LIMITED TO MATERIAL PROFILES, DATA SHEETS AND MATERIAL CERTIFICATIONS. PROVIDE A COPY OF ALL COMPLETED DISPOSAL FACILITY FORMS TO THE ENGINEER.

THE CONTRACTOR SHALL DEVELOP A HEALTH AND SAFETY PLAN PER OSHA REGULATION 1910.120 COVERING THE WORK FOR THIS NOTE.

THE CONTRACTOR SHALL PROVIDE ALL THE LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PROPERLY HANDLE, TEMPORARILY STORE, TEST FOR CHARACTERIZATION, HEALTH AND SAFETY PLAN, TRANSPORT, AND DISPOSE OF THE REGULATED MATERIALS, INCLUDING ANY REQUIRED PERMITS OR FEES. PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT PRICES BID PER TON AND PER GALLON. THE BASIS FOR CONVERSION OF CUBIC YARDS TO TONS IS 1.5 TON/CUBIC YARD. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY.

THE FOLLOWING ESTIMATED QUANTITIES FOR THE WORK ABOVE:

690E65000-ITEM SPECIAL-WORK INVOLVING NON-REGULATED MATERIAL	1000 TON
690E65010-ITEM SPECIAL-WORK INVOLVING SOLID WASTE	500 TON
690E65002-ITEM SPECIAL-WORK INVOLVING HAZARDOUS WASTE	100 TON
690E65022-ITEM SPECIAL-WORK INVOLVING NON-REGULATED WATER	10,000 GALLON
690E65024-ITEM SPECIAL-WORK INVOLVING REGULATED WATER	10,000 GALLON

NO.	DESCRIPTION	REV. BY	DATE
2	ADDED NOTE	ACW	10/13/23

CALCULATED
CHECKED

GENERAL NOTES

FRA - 70-13.10

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 msconsultants.com
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SHEET NUM.													PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
33	36	39	117	159	200	201	202	203	205	206	Office	37	01/MS/04	EXT	TOTAL				
ENVIRONMENTAL / REMEDIATION																			
												1,000	1,000	SPECIAL	69065000	1,000	TON	WORK INVOLVING NON-REGULATED MATERIALS	37
												100	100	SPECIAL	69065002	100	TON	WORK INVOLVING HAZARDOUS WASTE	37
												500	500	SPECIAL	69065010	500	TON	WORK INVOLVING SOLID WASTE	37
1,000												10,000	1,000	SPECIAL	69065022	11,000	GAL	WORK INVOLVING NON-REGULATED WATER	33/37
1,000												10,000	1,000	SPECIAL	69065024	11,000	GAL	WORK INVOLVING REGULATED WATER	33/37
DRAINAGE																			
					2								2	602	20000	2	CY	CONCRETE MASONRY	
									6,054	6,986			13,040	605	05110	13,040	FT	4" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
									3,536	3,416			6,952	605	06020	6,952	FT	4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
		200											200	605	13300	200	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
	100												100	611	00400	100	FT	4" CONDUIT, TYPE E, MISC FOR DRAINAGE DISCHARGE CONTINUANCE	
		200											200	611	00406	200	FT	4" CONDUIT, TYPE F	
	100												100	611	00406	100	FT	4" CONDUIT, TYPE F, MISC FOR DRAINAGE DISCHARGE CONTINUANCE	
									454	356			810	611	00410	810	FT	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	
						21							21	611	00900	21	FT	6" CONDUIT, TYPE B	
						7							7	611	01100	7	FT	6" CONDUIT, TYPE C	
			224										224	611	01800	224	FT	8" CONDUIT, TYPE B	
	100												100	611	01800	100	FT	8" CONDUIT, TYPE B, MISC FOR DRAINAGE DISCHARGE CONTINUANCE	
	100												100	611	02000	100	FT	8" CONDUIT, TYPE C, MISC FOR DRAINAGE DISCHARGE CONTINUANCE	
						5							5	611	03300	5	FT	10" CONDUIT, TYPE C	
						21							21	611	03700	21	FT	10" CONDUIT, TYPE F	
				81									109	611	04400	109	FT	12" CONDUIT, TYPE B	
						1,807							1,807	611	05900	1,807	FT	15" CONDUIT, TYPE B	
						67							67	611	05900	67	FT	15" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11	
						951							951	611	06100	951	FT	15" CONDUIT, TYPE C	
						450							450	611	07400	450	FT	18" CONDUIT, TYPE B	
						413							413	611	07600	413	FT	18" CONDUIT, TYPE C	
						50							50	611	08900	50	FT	21" CONDUIT, TYPE B	
						56							56	611	09100	56	FT	21" CONDUIT, TYPE C	
						86							86	611	09700	86	FT	21" CONDUIT, TYPE F	
						129							129	611	10400	129	FT	24" CONDUIT, TYPE B	
						13							13	611	98370	13	EACH	CATCH BASIN, NO. 6	
						8							8	611	98410	8	EACH	CATCH BASIN, NO. 8	
						1							1	611	98470	1	EACH	CATCH BASIN, NO. 2-2B	
		1		1									1	611	98804	1	EACH	INLET, NO. 3B50	
													1	611	99094	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B	
													31	611	99114	31	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	
													1	611	99115	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN	386G
						13							13	611	99574	13	EACH	MANHOLE, NO. 3	
						2							2	611	99575	2	EACH	MANHOLE, NO. 3, AS PER PLAN	36
						1							1	611	99654	1	EACH	MANHOLE ADJUSTED TO GRADE	
						2							2	611	99660	2	EACH	MANHOLE RECONSTRUCTED TO GRADE	
						1							1	611	99661	1	EACH	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN	36
		4								2			6	611	99710	6	EACH	PRECAST REINFORCED CONCRETE OUTLET	
	20												20	611	99720	20	EACH	INSPECTION WELL	
											1,856		2	SPECIAL	69098000	2	EACH	DOUBLE CURB AND GUTTER INLET	400
													1	SPECIAL	69098000	1	EACH	MODIFIED DOUBLE CURB AND GUTTER INLET	34/400A
													1	SPECIAL	69098000	1	EACH	MANHOLE, TYPE C (48")	34/399A
													5	SPECIAL	69098000	5	EACH	MANHOLE ADJUSTED TO GRADE	36
													31	SPECIAL	69098100	31	FT	12" CONDUIT, TYPE 1	36
													41	SPECIAL	69098100	41	FT	24" CONDUIT, TYPE 1	36
										993			993	SPECIAL	69098100	993	FT	4" PIPE UNDERDRAIN	34
		101						840					941	839	29000	941	FT	TRENCH DRAIN, TYPE A WITH STANDARD GRATE	
								44					44	839	30001	44	FT	TRENCH DRAIN, TYPE B WITH STANDARD GRATE, AS PER PLAN, TYPE A	34

GENERAL SUMMARY

FRA - 70-13.10

NO.	DESCRIPTION	REV. BY	DATE
2	ADDED/CHANGED QUANTITIES	ACW	10/13/23

190
702

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REF NO.	SHEET NO.	STATION TO STATION		SEALING OF CONCRETE SURFACES	CONCRETE SLOPE PROTECTION	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN			607	626	622	622	670	611	611	611	611	611	611	622	611	839	606	
		RAMP D3 = (RD3)	I-70 WB = (I70WB)																					I-70 EB = (I70EB)
F4	224	3058+00.00 LT (RD3)	TO 3058+87.89 LT (RD3)	SY	SY	EACH			102															
E12	224	3058+00.00 LT (RD3)	TO 3058+50.09 LT (RD3)										43											
E13	224	165+19.00 RT (I70WB)	TO 170+11.78 RT (I70WB)																					
E14	224	169+27.81 RT (I70WB)	TO 166+11.84 RT (I70WB)																					
D45	224	165+10.00 RT (I70WB)	TO 166+00.00 RT (I70WB)				18																	
D47	224	165+24.97 LT (I70WB)	TO 165+99.77 LT (I70WB)																					
D49	224	169+50.00 RT (I70WB)	TO 169+50.04 RT (I70WB)											4	89									
D50	224	169+08.28 LT (I70WB)	TO 169+50.00 RT (I70WB)				18																	
D51	224	169+08.28 LT (I70WB)	TO 3062+00.00 LT (RD3)																					
D52	224	3062+00.00 LT (RD3)	TO 7001+00.84 LT (RD7)																					
D53	224,227	169+45.30 LT (I70EB)	TO 172+38.52 LT (I70EB)																					
D55	224,227	169+08.30 LT (I70WB)	TO 170+57.35 LT (I70WB)											5		296								
D55A	224,227	3061+94.33 RT (RD3)	TO 3063+45.63 RT (RD3)																					
B34B	224	166+02.59 LT (I70EB)	TO 166+20.53 LT (I70EB)				26																	
B35	224	165+20.10 RT (I70WB)	TO 165+89.90 RT (I70WB)				62																	
B35A	224	166+10.10 RT (I70WB)	TO 166+11.84 RT (I70WB)				2																	
B36	224	3058+20.25 LT (RD3)	TO 3058+30.16 LT (RD3)				10																	
B37	224	3058+49.99 LT (RD3)	TO 3058+63.08 LT (RD3)				12																	
B38	224	169+17.31 RT (I70WB)	TO 169+39.90 RT (I70WB)				20																	
B39	224	169+60.10 RT (I70WB)	TO 171+00.00 RT (I70WB)				125																	
B40	224	169+47.84 LT (I70EB)	TO 171+00.00 LT (I70EB)				247																	
B40A	224	169+29.96 LT (I70EB)	TO 169+47.84 LT (I70EB)				26																	
GR8	224	3058+06.57 RT (RD3)	TO 3058+33.87 RT (RD3)																					
BR5	224	3058+63.18 LT (RD3)	TO 3061+61.74 LT (RD3)																					
BR5A	224,227	7000+54.00 LT (RD7)	TO 7006+77.19 LT (RD7)																					
BR6	224	166+11.92 RT (I70WB)	TO 169+17.23 RT (I70WB)																					
BR6A	224	166+22.51 LT (I70EB)	TO 169+27.92 LT (I70EB)																					
TOTALS CARRIED TO SUBSUMMARY							566		102	28	163	8	43	9	340	296	67	2	2	154	215	1		

NO.	DESCRIPTION	REV. BY	DATE
2	MANHOLE ITEM CHANGE	ACW	10/13/23

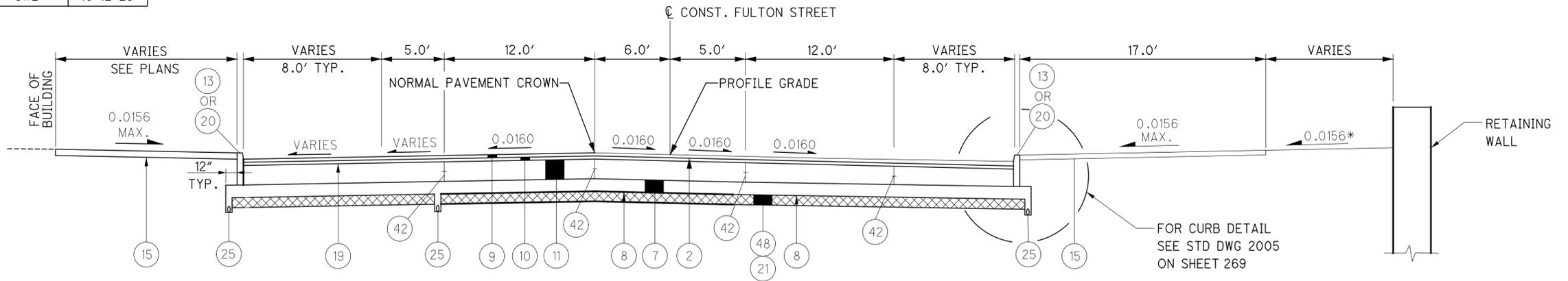
ESTIMATED QUANTITIES
 CALCULATED ACW CHECKED TAZ
 FRA - 70 - 13.10
 226
 702
 ms consultants, inc.

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 www.msconsultants.com
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 Model: Sheet
 3.4" x 22"

REF NO.	SHEET NO.	STATION TO STATION I-70 WB = (I70WB) I-71 SB = (I71SB)		512	622	622	626	622	601	611	611	611	611	611	611	611	839					
				SEALING OF CONCRETE SURFACES	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN "C"	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	CONCRETE SLOPE PROTECTION	12" CONDUIT, TYPE B	15" CONDUIT, TYPE B	CATCH BASIN, NO. 6	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN	MANHOLE, NO. 3, AS PER PLAN	TRENCH DRAIN, TYPE A WITH STANDARD GRATE					
E28	236	285+50.00 LT (I71SB)	TO	189+50.00 LT (I70WB)					226													
D70	236	188+11.82 RT (I70WB)	TO	188+26.63 RT (I70WB)						4								11				
D71	236	188+25.89 RT (I70WB)	TO	188+75.87 RT (I70WB)						4	50	1						11				
D72	236	188+61.06 RT (I70WB)	TO	188+75.87 RT (I70WB)						4	31	1						11				
D73	236	188+75.13 RT (I70WB)	TO	189+06.44 RT (I70WB)						4	10	1						11				
D74	236	189+06.44 RT (I70WB)	TO	189+21.25 RT (I70WB)							65					1	1					
D75	236	189+07.18 RT (I70WB)	TO	189+15.82 RT (I70WB)							14											
D76	236	189+15.82 RT (I70WB)	TO	189+18.92 LT (I70WB)	18						50											
D77	236	189+17.35 LT (I70WB)	TO	189+18.92 LT (I70WB)	18						50			1								
D78	236	188+66.49 LT (I70WB)	TO	189+17.35 LT (I70WB)	18						50											
D79	236	188+15.62 LT (I70WB)	TO	188+66.49 LT (I70WB)	18																	
B50	236	188+25.80 LT (I70WB)	TO	188+56.33 LT (I70WB)	27	1	1	1														
B51	236	188+76.66 LT (I70WB)	TO	189+07.17 LT (I70WB)	27	1	1	1														
B52	236,239	189+27.53 LT (I70WB)	TO	193+00.00 LT (I70WB)	330	2		4	336													
TOTALS CARRIED TO SUBSUMMARY					438	4	2	6	336	226	12	270	3	1	2	1	1	33				

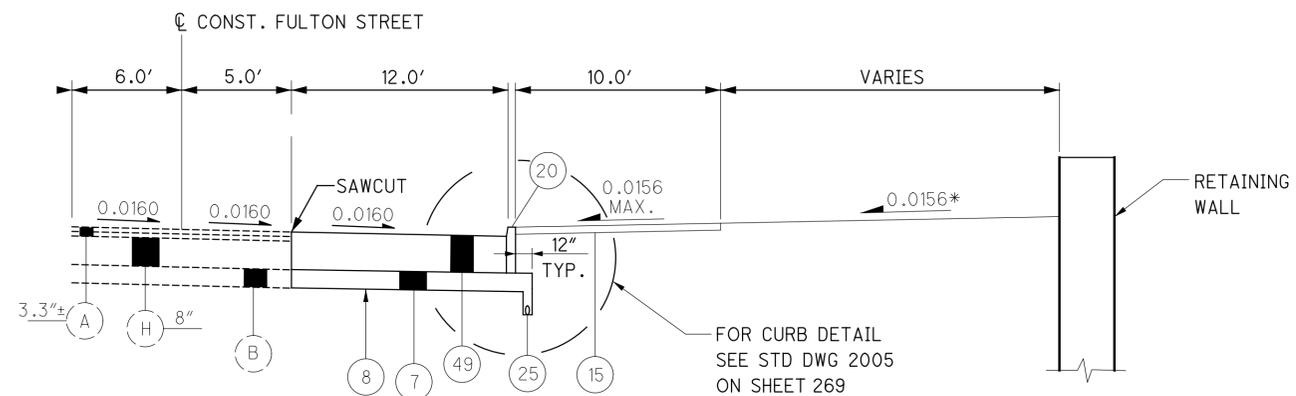
NO.	DESCRIPTION	REV. BY	DATE
1	MANHOLE ITEM CHANGE	ACW	10/13/23

NO.	DESCRIPTION	REV. BY	DATE
2	SPECIFIED 13 & 20	CWL	10-12-23



FULTON STREET SECTION

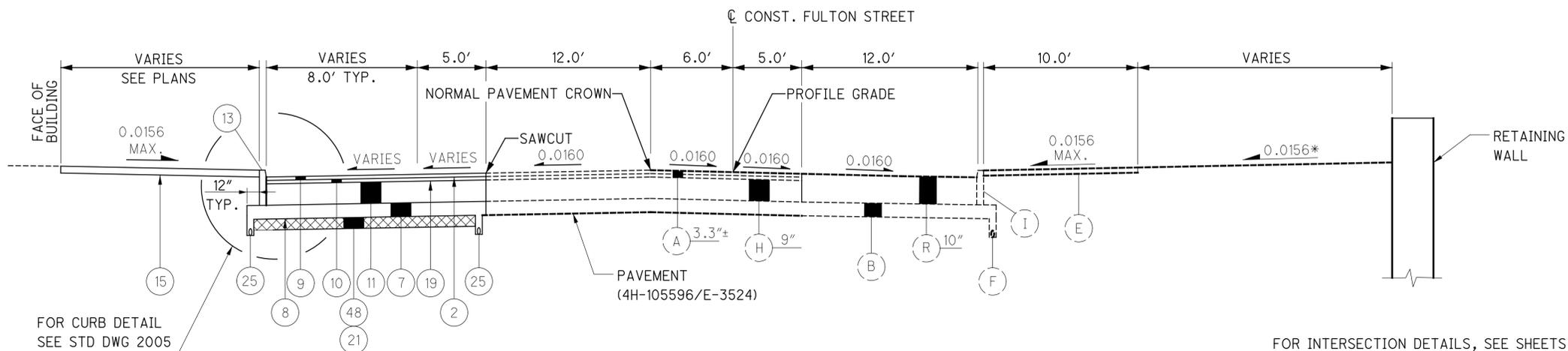
LIMITING STATIONS
 STA. 26+00.00 TO STA. 30+94.12
 STA. 32+11.34 TO STA. 32+17.34



FULTON STREET BUS PAD RECONSTRUCTION/EXTENSION

LIMITING STATIONS
 STA. 37+10.35 TO STA. 37+24.08
 STA. 38+25.35 TO STA. 38+37.35

NOTE:
 CONCRETE BUS PAD
 (4H-105596/E-3524)
 STA. 24+75.00 TO STA. 26+00.00



FULTON STREET SECTION

LIMITING STATIONS
 STA. 24+71.88 TO STA. 26+00.00

FOR INTERSECTION DETAILS, SEE SHEETS 253-254
 FOR PROPOSED LEGEND, SEE SHEET 11
 FOR INTERSECTION PAVEMENT DETAIL, SEE SHEET 19
 FOR BRICK PAVER CROSSWALK DETAIL, SEE SHEET 260
 FOR PAVEMENT ELEVATION TABLES, SEE SHEET 250
 FOR CONCRETE INTERSECTION PAVEMENT DETAIL, SEE SHEET 19

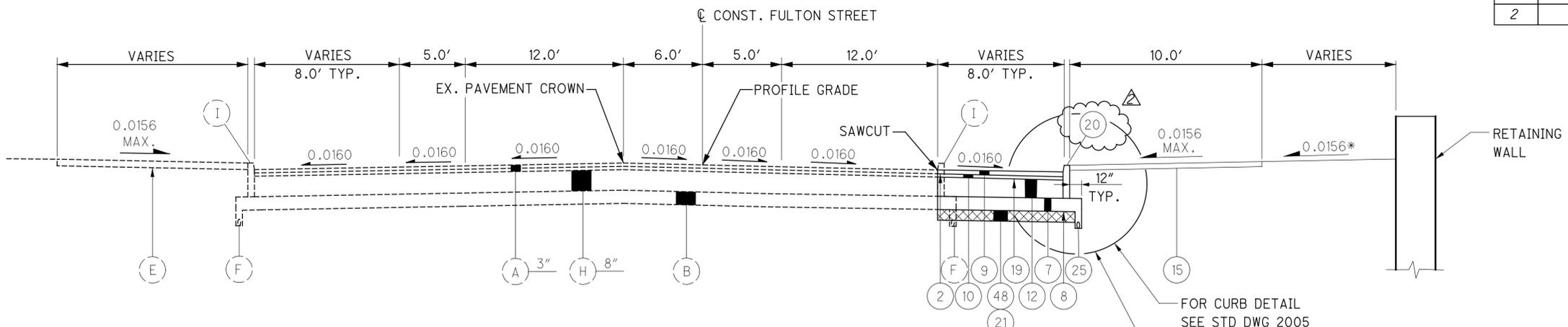
* OR AS SHOWN ON CROSS SECTIONS

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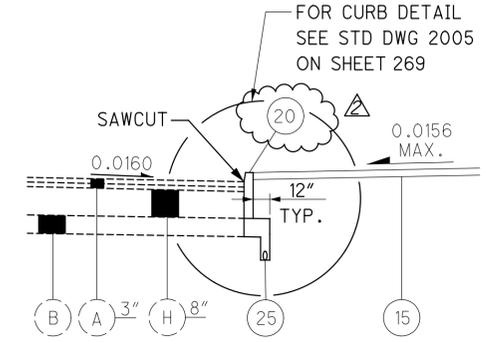
TYPICAL SECTIONS

FRA-70-14.05

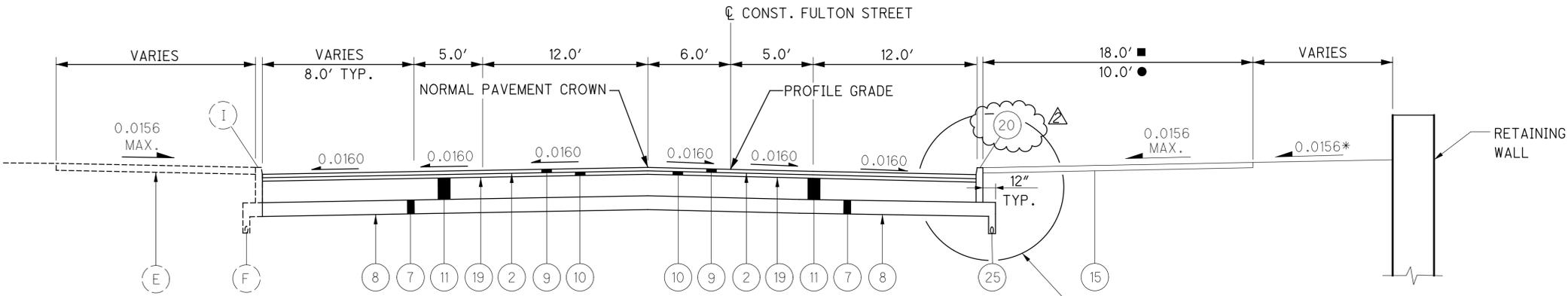
NO.	DESCRIPTION	REV. BY	DATE
2	FIXED CURB BALLOON #	CWL	10-12-23



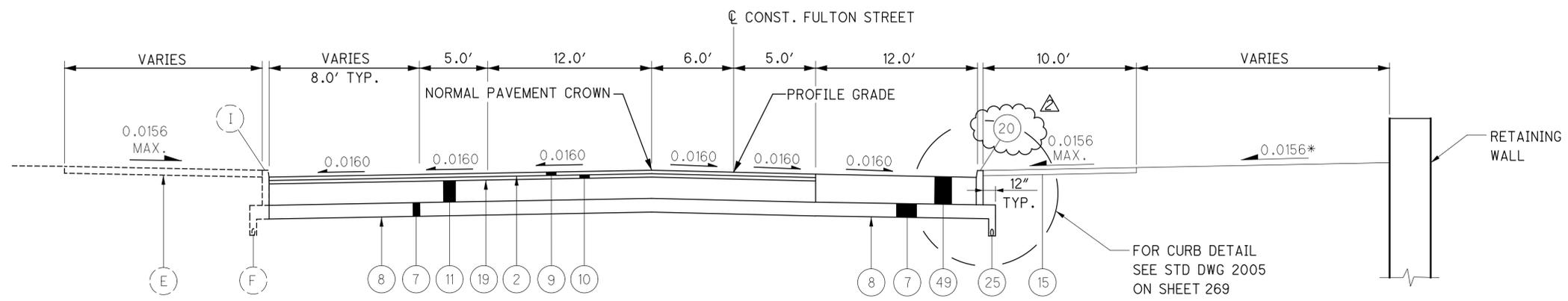
FULTON STREET WIDENING SECTION
 LIMITING STATIONS
 STA. 32+17.34 TO STA. 35+73.34



CURB DETAIL "A"
 STA. 35+56.14 RT. TO STA. 35+73.34 RT.



FULTON STREET SECTION
 LIMITING STATIONS
 STA. 35+73.34 TO STA. 35+87.12 ■
 STA. 37+00.39 TO STA. 37+06.39 ●



FULTON STREET SECTION WITH BUS PAD RECONSTRUCTION/EXTENSION
 LIMITING STATIONS
 STA. 37+06.39 TO STA. 37+10.35

* OR AS SHOWN ON CROSS SECTIONS

FOR INTERSECTION DETAILS, SEE SHEETS 253-254
 FOR PROPOSED LEGEND, SEE SHEET 11
 FOR INTERSECTION PAVEMENT DETAIL, SEE SHEET 19
 FOR BRICK PAVER CROSSWALK DETAIL, SEE SHEET 260
 FOR PAVEMENT ELEVATION TABLES, SEE SHEET 250
 FOR CONCRETE INTERSECTION PAVEMENT DETAIL, SEE SHEET 19

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TYPICAL SECTIONS

FRA-70-14.05

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

BRIDGE VERTICAL CLEARANCE

ANY WORK (FALSEWORK, TRAFFIC PROTECTION, CONTAINMENT, ETC.) OVER LIVE TRAFFIC BY THE CONTRACTOR THAT REDUCES THE EXISTING BRIDGE VERTICAL CLEARANCE IS PROHIBITED UNLESS FOUR (4) WEEKS ADVANCE NOTICE IS PROVIDED TO THE ENGINEER WITH NEW PROPOSED VERTICAL CLEARANCES. THE CONTRACTOR SHALL PROVIDE FIELD MEASUREMENTS BEFORE ALLOWING TRAFFIC UNDERNEATH. IF ANY WORK IS TO OCCUR BELOW 14'-6", THEN SIGNS ON THE STRUCTURE AND ADVANCE WARNING SIGNS SHALL BE INSTALLED A MINIMUM OF TWO (2) WEEKS PRIOR TO PERFORMING SUCH WORK. SIGNING SHALL BE IN ACCORDANCE WITH THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (OMUTCD) AND THE OHIO "TRAFFIC ENGINEERING MANUAL" (TEM). NO WORK OVER TRAFFIC SHALL OCCUR WITH A VERTICAL CLEARANCE LESS THAN 14'-0". LOWERING THE VERTICAL CLEARANCE DURING CONSTRUCTION IS CONSIDERED THE CONTRACTOR'S MEANS AND METHODS OF ACCOMPLISHING THE WORK, AND THEREFORE THE STATE IS NOT RESPONSIBLE FOR ANY DAMAGE FROM VEHICULAR IMPACTS THAT MAY RESULT AS PER CMS 107.10. PAYMENT FOR ANY SIGNS, SIGN SUPPORTS, ETC. MATERIALS AND LABOR SHALL BE INCLUDED UNDER ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614 - WORK ZONE IMPACT ATTENUATOR FOR 24' WIDE HAZARDS (UNIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS. THE APPROVED LIST IS AVAILABLE AT THE "ROADWAY STANDARDS: PROPRIETARY ROADSIDE SAFETY DEVICES" WEB PAGE ON THE OFFICE OF ROADWAY ENGINEERING WEBSITE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

TEMPORARY FENCE

SNOW FENCE SHALL BE UTILIZED AS TEMPORARY FENCING ALONG THE PROJECT CORRIDOR. SNOW FENCE SHALL BE PLACED BY THE CONTRACTOR WHEN DIRECTED BY THE ENGINEER. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN AND REPAIR THE SNOW FENCE. AN ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 607 - FENCE, SNOW, AS PER PLAN 1000 FT



NO.	DESCRIPTIONS	REV BY	DATE
2	REVISED NOTE	AKF	10/11/23

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.
- DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).
- IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:
 - FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).
 - FOR OPERATIONS WITHOUT POSITIVE PROTECTION OCCURRING WITHIN 10 FEET OF AN OPEN TRAVELED LANE THAT MEET ALL OF THE FOLLOWING CRITERIA:
 - ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY; AND
 - AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION; AND,
 - AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)

"WITHOUT POSITIVE PROTECTION" MEANS USE OF DRUMS, CONES, SHADOW VEHICLE, ETC, WITHOUT PROTECTION FROM PORTABLE BARRIER OR OTHER RIGID BARRIER ALONG THE WORK AREA. THIS PHRASE DOES NOT APPLY TO CASES WHERE POSITIVE PROTECTION IS REQUIRED. MOBILE OPERATIONS ARE REGARDED AS "WITHOUT POSITIVE PROTECTION". FOR WORK ZONES USING A COMBINATION OF BARRIER AND TEMPORARY TRAFFIC CONTROL DEVICES (CONES, DRUMS, ETC), THE DESIGNATION SHALL BE BASED UPON THE TYPE OF DEVICES USED IN THE AREA THAT WORKERS ARE LOCATED.

IF MULTIPLE ACTIVE LOCALIZED QUALIFYING WORK AREAS OCCUR WITHOUT POSITIVE PROTECTION, PER MAINLINE TRAFFIC DIRECTION, PROVIDE A UNIFORMED LEO AND OFFICIAL PATROL CAR IN ADVANCE OF:

- THE FIRST ACTIVE WORK AREA THAT DRIVERS WILL ENCOUNTER; OR
- THE ACTIVE WORK AREA LATERALLY CLOSEST TO THE OPEN TRAVELED LANE; OR
- OTHER LOCATION AS APPROVED BY THE ENGINEER.

THE UNIFORMED LEO AND OFFICIAL PATROL CAR MAY RELOCATE AMONG THE LISTED LOCATIONS AS APPROPRIATE AS THE OPERATIONS PROCEED IN THE LOCALIZED QUALIFYING WORK AREAS.

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION (OR AT THE POINT OF ROAD CLOSURE), AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS (CONTINUED)

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE THAT SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 2000 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

CONTRACTOR COORDINATION WITH COTA

WHEN A COTA BUS STOP FALLS WITHIN A CONSTRUCTION ZONE, THAT BUS STOP SHALL BE TEMPORARILY CLOSED. TWO (2) WEEKS PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL CONTACT SERVICE PROGRAM MANAGER OF THE CENTRAL OHIO TRANSIT AUTHORITY (COTA) AT PHONE (614) 308-4373 OR E-MAIL EVANSPM@cota.com TO COORDINATE PROPER BUS MOVEMENTS THROUGH OR AROUND THE JOB SITE DURING THE PROJECT. THIS WILL INCLUDE, BUT NOT LIMITED TO, THE TEMPORARY RELOCATION OR REMOVAL OF COTA SIGNS AND/OR BUS STOP LOCATIONS.

NOTIFICATION OF THE TEMPORARY BUS STOP CLOSURE SHALL BE POSTED AT THE BUS STOP A MINIMUM OF TWO WEEKS BEFORE THE CLOSURE. PRIOR TO ANY CLOSURE, PEDESTRIAN DETOUR SIGNS SHALL BE POSTED DIRECTING PEDESTRIANS TO THE NEAREST BUS STOP. THE PEDESTRIAN DETOUR ROUTE AND DETOUR SIGNAGE IS SUBJECT TO APPROVAL OF THE ENGINEER AND COTA AND SHALL BE IN FULL COMPLIANCE WITH ODOT STANDARDS. THE PEDESTRIAN BUS STOP DETOUR SHALL NOT CONFLICT WITH THE PEDESTRIAN DETOUR OUTLINED IN THIS PLAN UNLESS APPROVED BY THE ENGINEER. ALL WORK DESCRIBED HEREIN SHALL BE INCLUDED WITHIN ITEM 614 - MAINTAINING TRAFFIC.

PAVEMENT MARKING REMOVAL

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL OF PAVEMENT MARKINGS WHERE IN CONFLICT WITH ANY MAINTENANCE OF TRAFFIC PAVEMENT MARKINGS DETAILED IN THE PLANS AND IN THE MANNER DESCRIBED IN THE SPECIFICATIONS. PAYMENT FOR REMOVAL OF PAVEMENT MARKINGS INCLUDING ALL LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS NECESSARY TO REMOVE THE PAVEMENT MARKING AND PROPERLY DISPOSE OF ANY EXCESS MATERIAL SHALL BE INCLUDED IN ITEM 614 MAINTAINING TRAFFIC. UPON COMPLETION OF ALL MAINTENANCE OPERATIONS, ALL REMAINING PAVEMENT MARKINGS APPLIED WITHIN MAINTENANCE PART SHALL BE REMOVED. PAYMENT SHALL BE INCLUDED WITHIN ITEM 614 - MAINTAINING TRAFFIC.

PEDESTRIAN TRAFFIC

THE SAFETY OF PEDESTRIAN TRAFFIC SHALL BE CONSIDERED AT ALL TIMES IN THE PROVISION OF TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS AND NOTES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE LIGHTS, SIGNS, BARRICADES, AND OTHER DEVICES TO WARN OF AND PHYSICALLY SEPARATE PEDESTRIANS FROM HAZARDS INCIDENTAL TO THE CONSTRUCTION AND DEMOLITION OPERATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND SAFE MOVEMENT OF PEDESTRIANS THROUGH, AROUND, OR DETOURED AWAY FROM THE CONSTRUCTION SITE. TRAFFIC CONTROL FOR PEDESTRIAN MOVEMENT SHALL BE AS PER FIGURES TA-28 AND TA-29 OF PART VI OF THE FEDERAL MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND THE ODOT STANDARD DRAWINGS REFERENCED ON THE TITLE SHEET. ALL SIDEWALK DIVERSIONS SHALL BE PRE-APPROVED BY THE PROJECT ENGINEER.

THE CONTRACTOR SHALL MAINTAIN CROSSWALKS IN ACCORDANCE WITH MT-110.10. A SIDEWALK CLOSURE SCHEDULE SHALL BE GIVEN TO COTA'S REPRESENTATIVE ANDREW VOLENIK (614-308-7373) AND THE CITY.

ALL ABOVE WORK SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

PEDESTRIAN PATHWAY PROVISION AND MAINTENANCE

- ADVANCED NOTIFICATION OF SIDEWALK CLOSURES, AND PEDESTRIAN GUIDANCE, SHALL BE PROVIDED AS PART OF ITEM 614. THIS SHALL INCLUDE SIGNAGE AND WRITTEN NOTICE TO THE ENGINEER, AND THE SURROUNDING COMMUNITY AS SPECIFIED. SIDEWALK CLOSED SIGNS, AND DETOUR SIGNS, SHALL BE ON BARRICADES WHICH COMPLETELY OBSTRUCT THE EXISTING WALKWAY. EQUIVALENT INFORMATION SHALL BE PROVIDED IN ALTERNATE FORMATS FOR PEDESTRIANS WHO HAVE VISUAL DISABILITIES. SEE TA-28 AND TA-29 OF PART IV OF THE FEDERAL MUTCD FOR TYPICAL TEMPORARY TRAFFIC CONTROL DEVICE USAGE AND TECHNIQUES FOR PEDESTRIAN MOVEMENT.
- 36 INCH HIGH LONGITUDINAL WALKWAY CHANNELIZING DEVICES, OR BARRIERS WITH CONTINUOUS EDGING AT THE BOTTOM WITHIN 6 INCHES OF THE GROUND OR UN-SPACED DRUMS OR TALL CONES, SHALL BE PROVIDED TO ACHIEVE ACCESSIBILITY FOR A WALKING CANE-USER. CONES, TAPE AND OTHER DISCONTINUOUS BARRIERS SHALL NOT BE APPLIED IN AREAS USED BY PEDESTRIANS. THERE SHALL NOT BE ANY ABRUPT CHANGES IN GRADE OR TERRAIN THAT COULD CAUSE A TRIPPING HAZARD OR COULD BE A BARRIER TO WHEELCHAIR USE. WALKWAYS SHALL BE 60 INCHES WIDE, WITH NO PROTRUSIONS OF MORE THAN 4 INCHES FROM THE CHANNELIZING DEVICES. (REF. AS ABOVE)
- IF A SIGNIFICANT POTENTIAL EXISTS FOR VEHICLE INCURSIONS TO THE PEDESTRIAN PATH, PEDESTRIANS SHALL BE REROUTED OR TEMPORARY TRAFFIC BARRIERS SHALL BE INSTALLED. IF A TEMPORARY TRAFFIC BARRIER IS USED TO SHIELD PEDESTRIANS, IT SHALL BE DESIGNED TO ACCOMMODATE SITE CONDITIONS, PROVIDE AN ACCESSIBLE PASSAGE, AND BE DETECTABLE BY PEOPLE WITH DISABILITIES (REF. AS ABOVE)
- PEDESTRIAN ACCESS TO RESIDENCES AND BUSINESSES SHALL BE MAINTAINED AT ALL TIMES. MAINTAIN ACCESS TO BLOCKS FROM ONE END OR THE OTHER. FINISH WORK AT ONE END OF A BLOCK BEFORE DISTURBING THE OTHER END, OR INSTALL A TEMPORARY SIDEWALK.

PAYMENT FOR MAINTAINING PEDESTRIAN ACCESS SHALL BE INCLUDED AS LUMP SUM IN ITEM 614 - MAINTAINING TRAFFIC.

SHEET NUMBER										PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
42	43	44	45	46	47	48	50		260	01/IMS/04							
		1,000								1000		607	30001	1000	FT	FENCE, SNOW, AS PER PLAN	44
	2	2000								2000		614	11110	2000	HOURL	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
										2		SPECIAL	614E11300	2	EACH	WORK ZONE TRAFFIC SIGNAL	43
										27376		614	11630	27376	FT	INCREASED BARRIER DELINEATION	
										13		614	12380	13	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
				LS						LS		614	12420	LS		DETOUR SIGNING	
										11		614	12470	11	EACH	WORK ZONE SPEED LIMIT SIGN	
										10		614	12484	10	EACH	WORK ZONE INCREASED PENALTIES SIGN	
										50		614	12500	50	EACH	REPLACEMENT SIGN	
	2	300								300		614	12600	300	EACH	REPLACEMENT DRUM	
										2		614	12756	2	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM	
										3645		614	12800	3645	EACH	WORK ZONE RAISED PAVEMENT MARKER	
										1440		614	13310	1440	EACH	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	
										48		614	18601	48	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	45
										3.41		614	20056	3.41	MILE	WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	
										0.62		614	20200	0.62	MILE	WORK ZONE LANE LINE, CLASS I, 4", 740.06, TYPE I	
										13.08		614	22056	13.08	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT	
										1.42		614	22200	1.42	MILE	WORK ZONE EDGE LINE, CLASS I, 4", 740.06, TYPE I	
										30704		614	23110	30704	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	
										275		614	23400	275	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 740.06, TYPE I	
										7974		614	24100	7974	FT	WORK ZONE DOTTED LINE, CLASS I, 4", 807 PAINT	
										857		614	24400	857	FT	WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE I	
										1159		614	25000	1159	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I	
										53		614	26400	53	FT	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I	
										466		614	27070	466	FT	WORK ZONE CROSSWALK LINE, CLASS I, 12", 740.06, TYPE I	
										12		614	30400	12	EACH	WORK ZONE ARROW, CLASS I, 740.06, TYPE I	
LS										LS		615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
										4600		615	20000	4600	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
										255		615	25000	629	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
										200		615	25001	200	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 1	48
										200		615	25001	200	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 2	48
										200		615	25001	200	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 3	48
										200		615	25001	200	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 4	48
										550		616	10000	550	MGAL	WATER	
										2		622	41050	2	EACH	PORTABLE BARRIER, "Y" CONNECTOR	
										28884		622	41101	28884	FT	PORTABLE BARRIER, UNANCHORED, AS PER PLAN	46
										48		808	18700	48	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
										48		896	00010	48	SNMT	PORTABLE NON-INTRUSIVE TRAFFIC SENSOR, CLASS I	
										48		896	00020	48	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN	

MAINTENANCE OF TRAFFIC GENERAL SUMMARY

FRA - 70-14.05

NO.	DESCRIPTION	REV. BY	DATE
2	REV. NOTE/BRICK X-WALK TEMP.	CWL	10-13-23

SHEET NUMBER						PARTICIPATION				ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	40		178			01/IMS/04		06/MPO/04	08/ENH/04/COL						
														PAVEMENT	
15017						15017				302	56000	15017	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
9706			34			9711		29		304	20000	9740	CY	AGGREGATE BASE	
			5			5				305	11010	5	SY	7" CONCRETE BASE, CLASS QC 1P	
293						293				305	12010	293	SY	8" CONCRETE BASE, CLASS QC 1P	
4095						3924		171		305	13010	4095	SY	9" CONCRETE BASE, CLASS QC 1P	
316			1			302		15		407	13900	317	GAL	TACK COAT, 702.13	
8725			1			8716		10		407	20000	8726	GAL	NON-TRACKING TACK COAT	
153			1			148		6		441	50101	154	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG64-22	28
214			1			206		9		441	50300	215	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
2977						2977				442	00100	2977	CY	ANTI-SEGREGATION EQUIPMENT	
2054						2054				442	10001	2054	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (446), AS PER PLAN, PG70-22M	28
2496						2496				442	10080	2496	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A (446)	
215						215				SPECIAL	45130000	215	FT	PRESSURE RELIEF JOINT, TYPE A	262
			113			113				452	12050	113	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	
12						12				452	14011	12	SY	10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN	28
862						862				452	15010	862	SY	12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
264			142			406				609	98000	406	FT	CURB, MISC.: COLUMBUS 18" CONCRETE CURB	28
1222 462										609	98000	1222 462	FT	CURB, MISC.: COLUMBUS 18" GRANITE CURB "A"	28
										609	98000	462	FT	CURB, MISC.: COLUMBUS 18" GRANITE CURB "B"	28
900						900				SPECIAL	69098100	900	FT	SAWING AND SEALING CONCRETE JOINTS	33
22749						22749				872	10000	22749	FT	VOID REDUCING ASPHALT MEMBRANE (VRAM)	

CALCULATED	ATR	CHECKED	CWL
4B PART 4 GENERAL SUMMARY			
FRA - 70 - 14.05			
NO.	DESCRIPTION	REV. BY	DATE
2	REVISED 609 "B"	CWL	10-12-23
156			
855			

O:\2015\201507\FRA\6093\ROADWAY\SHETS\6093\6095.DGN
 10/12/2023
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ITEM 608 - WALKWAY, MISC.: BRICK PAVER CROSSWALK

CONCRETE BASE, AGGREGATE BASE, AND SUBGRADE COMPACTION SHALL BE INCLUDED IN ITEM 608 - WALKWAY, MISC.: BRICK PAVER CROSSWALK.

MATERIAL NOTES

BRICK PAVERS
SEE CITY OF COLUMBUS SS 1524 NOTES ON SHEETS 31 - 33.
FOR PATTERN LAYOUTS, SEE SHEET 261

BRICK PAVER CONSTRUCTION FOR CROSSWALKS SHALL FOLLOW THE CITY OF COLUMBUS SUPPLEMENTAL SPECIFICATION 1524.

ALL BRICK PAVEMENT PLACEMENT WILL REQUIRE ALL NEW BRICK PAVERS, FURNISHED AND INSTALLED BY THE CONTRACTOR. NO SALVAGEABLE BRICKS ARE TO BE REUSED.

THE FOLLOWING SUPPLIER CAN PROVIDE THE NEW BRICKS:

PINE HALL BRICK
2701 SHOREFAIR DRIVE
WINSTON-SALEM, NC 27105
(800) 334-8689
LOCAL: (336)-721-7500
www.pinehallbrick.com

THE BELDEN BRICK COMPANY
P.O. BOX 20910
CANTON, OH 44701-0910
(330) 451-2031
www.beldenbrick.com

(OR APPROVED EQUAL)

BRICK SPECIFICATIONS
MATERIAL: SOLID FIRECLAY BRICK
SIZE: 8" x 4" x 2 3/4" (HEAVY DUTY)
8" x 4" x 2 1/4" (LIGHT DUTY)
COLOR: PATHWAY FULL RANGE

PAVER WALK CONCRETE BASE

ALL WORK FOR THE CONCRETE BASE SHALL CONFORM TO ITEM 305.

THE CONCRETE BASE SHALL BE CORE DRILLED WITH A 2" DIAMETER BIT THROUGH THE ENTIRE DEPTH OF THE BASE. THE WEEP HOLES SHALL BE LOCATED FLUSH WITH THE PROPOSED CURB AND IN ALL LOW LYING AREAS ALONG THE SLAB WHICH COULD POTENTIALLY TRAP WATER. THE WEEP HOLES SHALL BE SPACED EVERY 6 FOOT ON CENTER. WEEP HOLES ARE TO BE PLACED ALONG LOWEST LEG OF SETTING BED AND ALONG THE ADJACENT LEGS IN 6 FOOT INTERVALS. AT LEAST ONE WEEP HOLE SHOULD BE AT THE LOWEST POINT OF THE SETTING BED. FINAL LAYOUT OF WEEP HOLES SHALL BE SET BY THE CONTRACTOR AND MARKED ON THE BASE PRIOR TO DRILLING FOR APPROVAL BY THE ENGINEER. ONCE THE CORING IS COMPLETE THE HOLE SHALL BE FILLED WITH #9 WASHED AGGREGATE.

NON-ANGULAR, AND CLEANED FILTER FABRIC SHALL BE PLACED ALONG THE CURB LINE AT A WIDTH OF 12" AND TURNED UP ALONG THE CURB PRIOR TO THE PLACEMENT OF THE SETTING BED. COSTS FOR WEEP HOLE INSTALLATION, INCLUDING DRILLING, AGGREGATE FILL, AND FILTER FABRIC SHALL BE INCLUDED WITHIN THE BID COSTS FOR ITEM 608 - WALKWAY, MISC.: BRICK PAVER CROSSWALK.

NEOPRENE - MODIFIED ASPHALT ADHESIVE

FURNISH NEOPRENE-MODIFIED ASPHALT ADHESIVE THAT CONTAINS 2 PERCENT NEOPRENE, GRADE WMI, OXIDIZED ASPHALT WITH A 150 DEGREE SOFTEN POINT (77 PENETRATION), AND 10 PERCENT LONG-FIBERED INERT MATERIAL, AS SUPPLIED BY:

KARNAK
330 CENTRAL AVENUE
CLARK, NJ 07066
(800) 526-4236
WWW.KARNAKCORP.COM

HANOVER ARCHITECTURAL PRODUCTS, INC.
240 BENDER ROAD
HANOVER, PA 17331
(717) 637-0500
WWW.HANOVERPAVERS.COM

(OR APPROVED EQUAL)

ALL COSTS FOR EQUIPMENT, LABOR, AND MATERIALS SHALL BE INCLUDED WITHIN THE BID COSTS FOR ITEM 608 - WALKWAY, MISC.: BRICK PAVER CROSSWALK.

BITUMINOUS SETTING BED

FURNISH ASPHALT CEMENT CONFORMING TO ASTM D3381, VISCOSITY GRADE AC-10 OR AC-20. FURNISH FINE AGGREGATE OF NATURAL SAND AND/OR STONE SAND, COMPOSED OF HARD, TOUGH, DURABLE, UNCOATED PARTICLES, FREE FROM CLAY, SILT, ORGANIC MATERIAL OR OTHER DELETERIOUS SUBSTANCES. INSURE THE SAND IS UNIFORMLY GRADED WITH ALL MATERIAL PASSING THE NO. 4 SIEVE AND MEETING THE REQUIREMENTS OF ASTM C136.

COMBINE THE DRIED FINE AGGREGATE WITH HOT ASPHALT CEMENT AND MIX HEAT TO APPROXIMATELY 300 DEGREES FAHRENHEIT AT AN ASPHALT PLANT.

PROVIDE AN APPROXIMATE PROPORTION OF MATERIALS OF 7 PERCENT ASPHALT CEMENT AND 93 PERCENT FINE AGGREGATE.

PROVIDE EACH TO APPORTION BY WEIGHT TO 140 POUNDS OF ASPHALT CEMENT AND 1860 POUNDS OF FINE AGGREGATE.

ALL COSTS FOR EQUIPMENT, LABOR AND MATERIALS SHALL BE INCLUDED WITHIN THE BID COSTS FOR ITEM 608 - WALKWAY, MISC.: BRICK PAVER CROSSWALK. NO SEPARATE PAYMENT SHALL BE MADE.

BRICK PAVER JOINTING SAND AND SEALER

BRICKS PAVERS SHALL BE TOPPED WITH JOINTING SAND WITH PAVER JOINTS BEING COMPLETELY FILLED WITH SPECIFIED SAND TO THE BOTTOM OF BRICK PAVER CHAMFERS (OR 1/8" BELOW TOP OF PAVER) AS SPECIFIED; GRADATION FOR JOINTING SAND SHALL BE POLYMERIC MANUFACTURED SAND MEETING THE GRADATION REQUIREMENTS OF ASTM C144.

METHOD OF MEASUREMENT

PAVERS SHALL BE MEASURE BY THE SQUARE FOOTAGE OF THE FINISHED PAVERS THAT ARE CONSIDERED COMPLETED IN PLACE.

BASIS OF PAYMENT

THE ACCEPTED QUANTITIES OF PAVERS WILL BE PAID FOR AT THE CONTRACT PRICE DESIGNATED FOR EACH PAVER TYPE SHOWN ON THE PLANS. EXCAVATION, BACKFILL, SUBGRADE PREPARATION AND COMPACTION, EXPANSION JOINT MATERIAL, ASPHALT ADHESIVE, BITUMINOUS SETTING BED, CONCRETE BASE, AND OTHER RELATED MISCELLANEOUS ITEMS SHALL NOT BE PAID FOR SEPARATELY. ALL COSTS SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 608 - WALKWAY, MISC.: BRICK PAVER CROSSWALK.

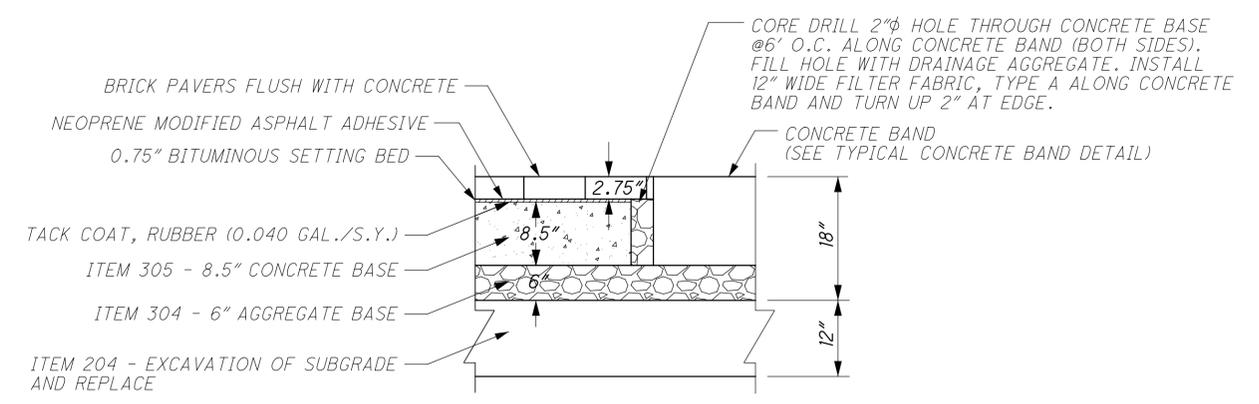
BRICK PAVER CROSSWALK CONSTRUCTION

THE BRICK PAVER CROSSWALKS SHALL BE CONSTRUCTED LATER IN THE CONSTRUCTION PHASING TO MINIMIZE RISKS OF POTENTIAL DAMAGE. TEMPORARY PAVEMENT AND TEMPORARY PAVEMENT MARKINGS SHALL BE USED UNTIL THE FINAL BRICK PAVER CROSSWALKS ARE CONSTRUCTED.

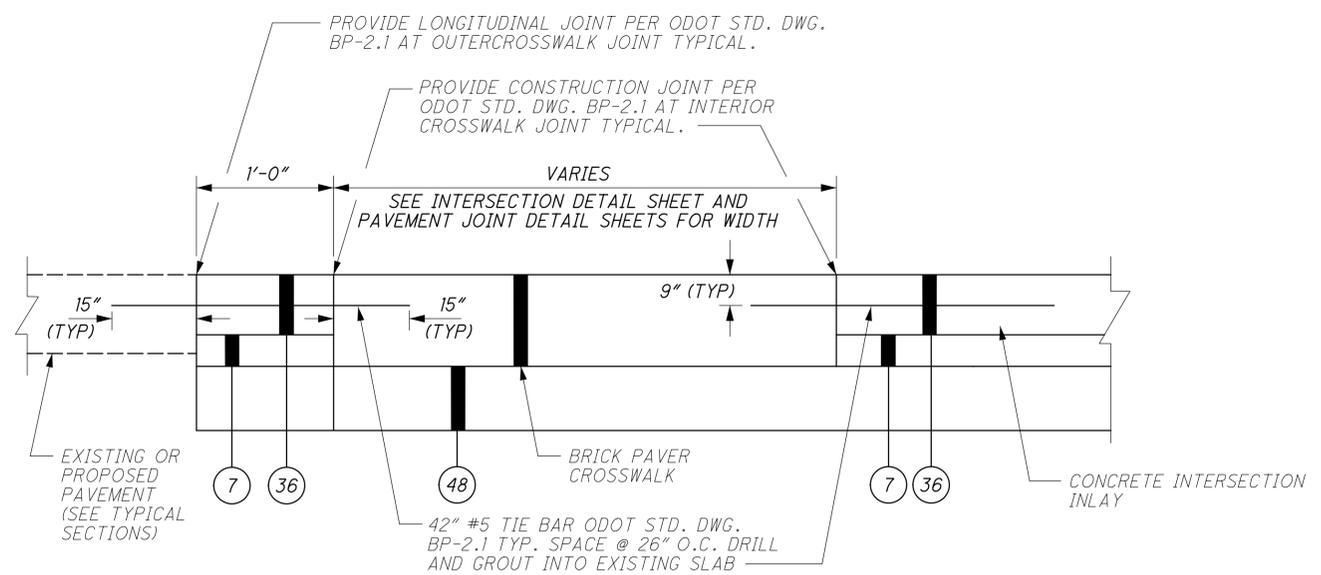
THE FOLLOWING QUANTITIES ARE INCLUDED FOR THE WORK NOTED ABOVE:

ITEM 614 - WORK ZONE CROSSWALK LINE, CLASS 1, 12", 740.06, TYPE 1 466 FT

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B 374 SY



BRICK PAVER CROSSWALK DETAIL



ITEM 452 - 12" NON-REINFORCED CONCRETE PAVEMENT TYPICAL CONCRETE BAND SECTION AT CROSSWALKS

ALL COSTS ASSOCIATED WITH THE FORMING AND CONSTRUCTION OF THE CONCRETE CROSSWALK BANDS SHALL BE INCLUDED IN ITEM 452 - 12" NON-REINFORCED CONCRETE PAVEMENT.

SEE SHEET 11 FOR LEGEND.

NO.	DESCRIPTION	REV. BY	DATE
2	ADDED BRICK X-WALK NOTE	CWL	10-13-23

01-2015-2015370 VFA 16065 ROADWAY SHEETS 1606504013.DGN
 10/13/2023 10:49:21 AM
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ITEM SPECIAL - STRUCTURES: PRECAST FACADE PANELS

THIS BID ITEM CONSISTS OF PRECAST FACADE PANELS MANUFACTURED AND CONSTRUCTED IN ACCORDANCE WITH THIS SPECIFICATION AND DESIGNED IN ACCORDANCE WITH THE 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY AASHTO, AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

DESIGN STRESSES:

CONCRETE - COMPRESSIVE STRENGTH 4.0 KSI
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

MATERIALS - CONCRETE

THE CONCRETE FOR THE WALL SECTIONS SHALL BE COMPOSED OF PORTLAND CEMENT, FINE & COARSE AGGREGATES, ADMIXTURES, AND WATER. PORTLAND CEMENT SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION C150, TYPE I, II, OR III. THE AIR ENTRAINING ADMIXTURE SHALL CONFORM TO AASHTO M154. THE CONCRETE SHALL CONTAIN 6% ±2% ENTRAINED AIR, AND SLUMP SHALL BE MAINTAINED WITHIN THE RANGE OF 1" TO 4". THE SLUMP MAY BE INCREASED TO 7" PROVIDED THE INCREASE IS ACHIEVED BY THE ADDITION OF A CHEMICAL WATER-REDUCING ADMIXTURE APPROVED BY THE ENGINEER.

MATERIALS - REINFORCING AND HARDWARE

REINFORCEMENT SHALL CONSIST OF WELDED WIRE FABRIC CONFORMING TO ASTM A185 OR A497, OR DEFORMED BILLET-STEEL BARS CONFORMING TO ASTM A615, A616, OR A617, GRADE 60. ALL ANGLES AND PLATES SHALL BE ASTM A36 STEEL.

SHOP DRAWING REQUIREMENTS

THE MANUFACTURER SHALL SUBMIT DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO MANUFACTURE. THE SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING:

- ALL STRUCTURAL DESIGN AND LOADING INFORMATION.
- A PLAN VIEW.
- ALL ELEVATION VIEWS.
- ALL DIMENSIONS.

MANUFACTURING SHALL NOT BEGIN UNTIL WRITTEN APPROVAL OF THE SUBMITTED SHOP DRAWINGS HAS BEEN RECEIVED.

TESTING AND INSPECTION:

ACCEPTABILITY OF THE CONCRETE FOR THE PRECAST PANELS WILL BE DETERMINED ON THE BASIS OF COMPRESSION TESTS, CERTIFICATIONS, AND VISUAL INSPECTION. THE CONCRETE STRENGTH REQUIREMENTS FOR THE PRECAST PANELS SHALL BE CONSIDERED ATTAINED REGARDLESS OF CURING AGE WHEN COMPRESSION TEST RESULTS INDICATE STRENGTH WILL CONFORM TO 28-DAY SPECIFICATIONS AS STATED BELOW. THE MANUFACTURER SHALL FURNISH FACILITIES AND PERFORM ALL NECESSARY SAMPLING AND TESTING IN AN EXPEDITIOUS AND SATISFACTORY MANNER. PANELS UTILIZING TYPE I OR II CEMENT SHALL BE CONSIDERED ACCEPTABLE FOR PLACEMENT IN THE WALL WHEN 7-DAY INITIAL STRENGTHS EXCEED 85% OF 28-DAY REQUIREMENTS. PANELS UTILIZING TYPE III CEMENT SHALL BE CONSIDERED ACCEPTABLE FOR PLACEMENT IN THE WALL PRIOR TO 28 DAYS ONLY WHEN COMPRESSIVE STRENGTH TEST RESULTS INDICATE THAT THE STRENGTH EXCEEDS THE 28-DAY SPECIFICATION.

MANUFACTURE

THE AGGREGATES, CEMENT AND WATER SHALL BE PROPORTIONED AND MIXED IN A BATCH MIXER TO PRODUCE A HOMOGENEOUS CONCRETE MEETING THE STRENGTH REQUIREMENTS OF THESE NOTES. THE PROPORTION OF PORTLAND CEMENT IN THE MIXTURE SHALL NOT BE LESS THAN 564 POUNDS PER CUBIC YARD OF CONCRETE.

THE WALL SECTIONS SHALL BE CURED FOR A SUFFICIENT LENGTH OF TIME SO THAT THE CONCRETE WILL DEVELOP THE SPECIFIED COMPRESSIVE STRENGTH IN 28 DAYS OR LESS. ANY ONE OF THE METHODS OF CURING OR COMBINATION THEREOF SHALL BE USED:

STEAM CURING - THE SECTIONS MAY BE LOW PRESSURE, STEAM CURED BY A SYSTEM THAT WILL MAINTAIN A MOIST ATMOSPHERE.

WATER CURING - THE SECTIONS MAY BE WATER CURED BY ANY METHOD THAT WILL KEEP THE SECTIONS MOIST.

THE FORMS USED IN MANUFACTURE SHALL BE SUFFICIENTLY RIGID AND ACCURATE TO MAINTAIN THE SECTION DIMENSIONS WITHIN THE PERMISSIBLE VARIATIONS GIVEN IN THESE NOTES. ALL CASTING SURFACE SHALL BE OF SMOOTH MATERIAL.

THE WALL SECTIONS SHALL BE STORED IN SUCH A MANNER TO PREVENT CRACKING OR DAMAGES.

THE FRONT FACE OF THE REINFORCED CONCRETE PANELS SHALL HAVE A SMOOTH CONCRETE FINISH AND INCORPORATE THE PATTERNS SHOWN IN THE STRUCTURE AESTHETIC DETAIL PLANS. CAULKING BETWEEN PRECAST PANELS SHALL BE IN ACCORDANCE WITH THE PLAN DETAILS. THE BACK SIDE OF THE REINFORCED CONCRETE PANELS SHALL HAVE A UNIFORM SURFACE FINISH AND SHALL BE ROUGH SCREED TO ELIMINATE OPEN POCKETS OF AGGREGATE AND SURFACE DISTORTIONS IN EXCESS OF 1/4".

ALL PANELS SHALL BE MANUFACTURED WITH ALL PANEL DIMENSIONS WITHIN 1/4".

COMPRESSIVE STRENGTH

ACCEPTANCE OF THE CONCRETE PANELS WITH RESPECT TO COMPRESSIVE STRENGTH WILL BE DETERMINED ON THE BASIS OF PRODUCTION LOTS. A PRODUCTION LOT IS DEFINED AS A GROUP OF PANELS THAT WILL BE REPRESENTED BY A SINGLE COMPRESSIVE STRENGTH SAMPLE AND WILL CONSIST OF EITHER 6 PANELS OR A SINGLE DAY'S PRODUCTION, WHICHEVER IS LESS.

DURING THE PRODUCTION OF THE CONCRETE PANELS, THE MANUFACTURER WILL RANDOMLY SAMPLE THE CONCRETE IN ACCORDANCE WITH ASTM C 172. A SINGLE COMPRESSIVE STRENGTH SAMPLE, CONSISTING OF A MINIMUM OF FOUR CYLINDERS, WILL BE RANDOMLY SELECTED FOR EVERY PRODUCTION LOT.

CYLINDERS FOR COMPRESSIVE STRENGTH TESTS SHALL BE 6" DIA. X 1'-0" SPECIMENS PREPARED IN ACCORDANCE WITH ASTM C 31. FOR EVERY COMPRESSIVE STRENGTH SAMPLE, A MINIMUM OF 2 CYLINDERS WILL BE CURED IN THE SAME MANNER AS THE PANELS AND TESTED AT APPROXIMATELY 7 DAYS. THE AVERAGE COMPRESSIVE STRENGTH OF THESE CYLINDERS, WHEN TESTED IN ACCORDANCE WITH ASTM C 39, WILL PROVIDE A TEST RESULT WHICH WILL DETERMINE THE INITIAL STRENGTH OF THE CONCRETE. IN ADDITION, 2 CYLINDERS SHALL BE CURED IN ACCORDANCE WITH ASTM C 31 AND TESTED AT 28 DAYS. THE AVERAGE COMPRESSIVE STRENGTH OF THESE TWO CYLINDERS, WHEN TESTED IN ACCORDANCE WITH ASTM C 39, WILL PROVIDE A COMPRESSIVE STRENGTH TEST RESULT WHICH WILL DETERMINE THE COMPRESSIVE STRENGTH OF THE PRODUCTION LOT.

IF THE INITIAL STRENGTH TEST RESULTS INDICATE A COMPRESSIVE STRENGTH IN EXCESS OF 4000 PSI, THEN THESE TEST RESULTS WILL BE UTILIZED AS THE COMPRESSIVE STRENGTH TEST RESULT FOR THE PRODUCTION LOT AND THE REQUIREMENT FOR TESTING AT 28 DAYS WILL BE WAIVED FOR THAT PARTICULAR PRODUCTION LOT.

ACCEPTANCE OF A PRODUCTION LOT WILL BE MADE IF THE COMPRESSIVE STRENGTH TEST RESULT IS GREATER THAN OR EQUAL TO 4000 PSI. IF THE RESULT IS LESS THAN 4000 PSI, THE ACCEPTANCE OF THE PRODUCTION LOT WILL BE BASED ON ITS MEETING THE FOLLOWING THREE ACCEPTANCE CRITERIA:

- 90% OF THE COMPRESSIVE STRENGTH TEST RESULTS FOR THE OVERALL PRODUCTION SHALL EXCEED 4000 PSI.
- THE AVERAGE OF ANY SIX CONSECUTIVE COMPRESSIVE STRENGTH TEST RESULTS SHALL EXCEED 4000 PSI.
- NO INDIVIDUAL COMPRESSIVE STRENGTH TEST RESULT SHALL FALL BELOW 3600 PSI.

IN THE EVENT THAT A PRODUCTION LOT FAILS TO MEET THE SPECIFIED COMPRESSIVE STRENGTH REQUIREMENTS, THE PRODUCTION LOT SHALL BE REJECTED. SUCH REJECTION SHALL PREVAIL UNLESS THE MANUFACTURER, AT HIS OWN EXPENSE, OBTAINS AND SUBMITS EVIDENCE ACCEPTABLE TO THE ENGINEER THAT THE STRENGTH AND QUALITY OF THE CONCRETE PLACED WITHIN THE PANELS OF THE PRODUCTION LOT IS ACCEPTABLE. IF SUCH EVIDENCE CONSISTS OF TESTS MADE ON CORES TAKEN FROM THE PANELS WITHIN THE PRODUCTION LOT, THE CORES SHALL BE OBTAINED AND TESTED IN ACCORDANCE WITH THE SPECIFICATIONS OF ASTM C42.

REJECTION

PANELS SHALL BE SUBJECT TO REJECTION BECAUSE OF FAILURE TO MEET ANY OF THE REQUIREMENTS SPECIFIED ABOVE. IN ADDITION, ANY OR ALL OF THE FOLLOWING DEFECTS MAY BE SUFFICIENT CAUSE FOR REJECTION:

- DEFECTS THAT INDICATE IMPERFECT MOLDING.
- DEFECTS INDICATING HONEYCOMBED OR OPEN TEXTURED CONCRETE.
- DEFECTS IN THE PHYSICAL CHARACTERISTICS OF THE CONCRETE, SUCH AS BROKEN OR CHIPPED CONCRETE.
- STAINED FORM FACE, DUE TO EXCESS FORM OIL OR OTHER CONTAMINATIONS.
- SIGNS OF AGGREGATE SEGREGATION.
- BROKEN OR CRACKED CORNERS.
- LIFTING INSERTS NOT USABLE.
- EXPOSED REINFORCING STEEL.
- INSUFFICIENT CONCRETE COMPRESSIVE STRENGTH.

THE ENGINEER WILL DECIDE IF AN ATTEMPT MAY BE MADE TO REPAIR A DEFECTIVE PANEL. THE CONTRACTOR OR MANUFACTURER SHALL MAKE THE REPAIRS. IF THE REPAIRS ARE MADE TO THE ENGINEER'S SATISFACTION, THE PANEL WILL BE ACCEPTABLE.

MARKING

THE DATE OF MANUFACTURE, THE PRODUCTION LOT NUMBER AND THE PIECE MARK SHALL BE CLEARLY SCRIBED ON THE BACK SURFACE OF EACH PANEL.

WALL ERECTION

PANELS ARE HANDLED BY MEANS OF A LIFTING DEVICE CONNECTED TO THE LIFTING INSERT WHICH IS CAST INTO THE UPPER EDGE OR BACK SIDE OF THE PANELS. ALL PANELS SHALL BE BRACED TO RESIST THE TEMPORARY CONSTRUCTION LOADS INCLUDING WIND LOADS, PRIOR TO CAST-IN-PLACE COPING CONSTRUCTION.

MEASUREMENT & PAYMENT

PAYMENT FOR ITEM SPECIAL - STRUCTURES: PRECAST FACADE PANELS COVERS ALL LABOR, MATERIAL, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK DESCRIBED ABOVE AND SHALL ALSO INCLUDE ALL LABOR, MATERIAL, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE ELASTOMERIC BEARING PADS, STEEL CONNECTION ANGLES/PLATES, NEOPRENE FILLER, POLYURETHANE SEALANT, AND 1" P.E.J.F. ABOVE THE TOP OF THE PANELS AS SHOWN IN THE PLANS.

ITEM SPECIAL - STRUCTURES: SANITARY SERVICE TO CAPS

WORK TO BE PERFORMED UNDER THIS ITEM SHALL INCLUDE FURNISHING AND INSTALLING 6" DIAMETER INSULATED SANITARY LINE FOR EACH CAP AT THE LOCATIONS SHOWN ON THE PLANS. PIPE ON THE BRIDGE SHALL BE DUCTILE IRON PER CITY OF COLUMBUS CMSC 801.03. THIS ITEM ALSO INCLUDES FURNISHING AND INSTALLING THE HANGER ASSEMBLIES REQUIRED TO SUPPORT THE INSULATED LINES, AS WELL AS WATERTIGHT PUSH-ON OR MECHANICAL JOINTS UNDER THE BRIDGE. THE JOINTS SHALL BE LOCATED NO MORE THAN 2.5 FEET FROM THE SUPPORTS. SPECIAL UTILITY CROSSFRAMES WILL BE PAID UNDER ITEM 513 STRUCTURAL STEEL. THE UTILITIES AND INSULATION SHALL EXTEND THROUGH AND NO LESS THAN 5 FEET BEYOND THE ABUTMENT BACKWALLS AND BE CAPPED FOR FUTURE USE.

PAYMENT WILL BE MADE AT THE LUMP SUM PRICE BID FOR ITEM SPECIAL - STRUCTURE, MISC.: SANITARY SERVICE TO CAPS, WHICH PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENTS AND INCIDENTALS TO COMPLETE THE WORK.

ITEM SPECIAL - STRUCTURES: CITY OF COLUMBUS DUCT COMPLETE

GENERAL: THIS WORK INCLUDES ALL LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS NECESSARY TO INSTALL A COMPLETE DUCT BANK FOR USE BY CITY OF COLUMBUS EXTENDING ACROSS THE BRIDGE AND THROUGH EACH ABUTMENT WALL, AS SHOWN IN THE PLANS. THE INSTALLATION SHALL INCLUDE SIX (6) 5-INCH DIAMETER EXTRA HEAVY WALL (XHW) FIBERGLASS CONDUIT, CONDUIT EXPANSION JOINTS, OFFSET COUPLINGS AND BENDS, ANCHOR POINT AND INTERMEDIATE BASE MOUNT CONDUIT RACKS, THREADED ADAPTERS, GALVANIZED STEEL CONDUIT THROUGH ABUTMENT WALLS, AND ALL OTHER INCIDENTALS TO COMPLETE THE INSTALLATION. STRUCTURAL STEEL SUPPORT MEMBERS CONNECTED TO BRIDGE BEAMS ARE PAID UNDER ITEM 513 STRUCTURAL STEEL MEMBERS, LEVEL UF. ADJACENT BURIED CONDUIT CONNECTED TO THE GALVANIZED STEEL CONDUIT AT BRIDGE APPROACH AREAS IS PAID UNDER SEPARATE ITEMS.

MATERIALS: COUDUIT, FITTINGS SUPPORT RACK, ACCESSORIES, ETC. SHALL BE FURNISHED BY THE SAME MANUFACTURER AND BE DESIGNED TO WORK TOGETHER AS A SYSTEM. CONDUIT SHALL MEET OR EXCEED THE LATEST REQUIREMENTS OF UL2515A, FOR EXTRA HEAVY WALL REINFORCED THERMOSETTING RESIN CONDUIT (RTRC) AND FITTINGS, AND NEMA TC14-2002. A TWO-COMPONENT EPOXY ADHESIVE SHALL BE SUPPLIED BY THE SAME MANUFACTURER OF THE CONDUIT AND FITTINGS TO RETAIN ALL UL LISTINGS. STEEL CONDUIT THROUGH ABUTMENT WALLS SHALL BE HOT-DIPPED GALVANIZED SCHEDULE 40 PIPE. GROUT USED AT ABUTMENT BACKWALLS SHALL BE NONSHRINK, NON-METALLIC TYPE.

BRIDGE CONDUIT AND ACCESSORIES SHALL BE FURNISHED BY ONE OF THE FOLLOWING OR APPROVED EQUAL.

UNITED FIBERGLASS OF AMERICA
2145 AIRPARK DRIVE
SPRINGFIELD, OHIO 45503
(937)-325-7305

OSBURN ASSOCIATES, INC
11931 STATE ROUTE 93N
LOGAN, OHIO 43138
(740) 385-6869

THE GALVANIZED STEEL SPLIT CASING PIPE SHALL BE FURNISHED BY:
PITTSBURGH PIPE & SUPPLY CORP.
170 HAMPTON AVENUE
SAINT LOUIS, MO 63139
1 (800) 325-2653

OR APPROVED EQUAL.

INSTALLATION: INSTALLATION SHALL BE IN STRICT CONFORMANCE WITH THE MANUFACTURER'S REQUIREMENTS AND INDUSTRY STANDARDS.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY LUMP SUM FOR ALL WORK, LABOR, MATERIAL, EQUIPMENT, & INCIDENTALS TO INSTALL A COMPLETE DUCT BANK FOR "ITEM SPECIAL - STRUCTURES: DUCT BANK COMPLETE"



DESIGNED	DGN	CHECKED	RHC
DRAWN	RPR	REVISED	
REVIEWED	TJW	DATE	4-21-23
STRUCTURE FILE NUMBER	2505654		

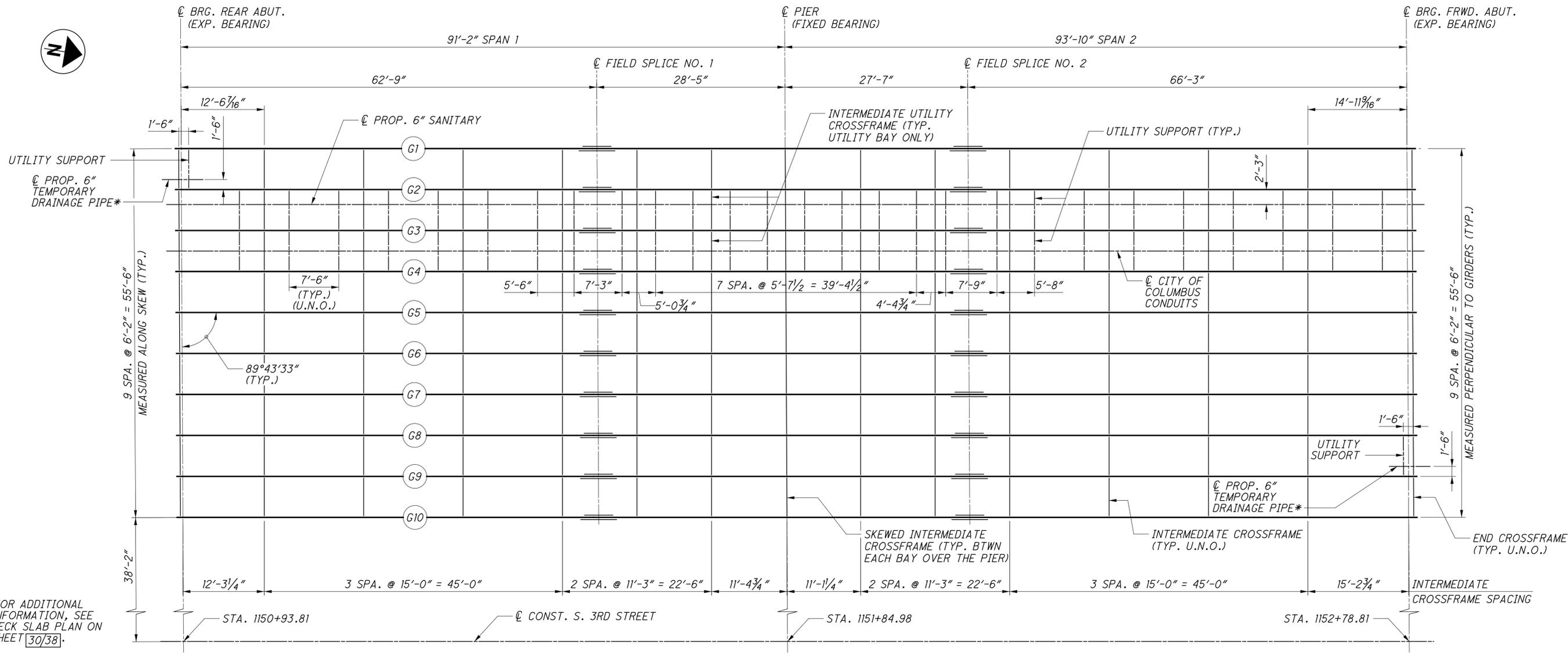
GENERAL NOTES - 2
BRIDGE NO. FRA-33-1747C - CAPS
S. 3RD STREET (U.S. 33) OVER I-70/71

FRA-70-14.05
PID No. 96053
3 / 38

NO.	DESCRIPTION	REV. BY	DATE
2	REVISED NOTE	DJC	10-16-23

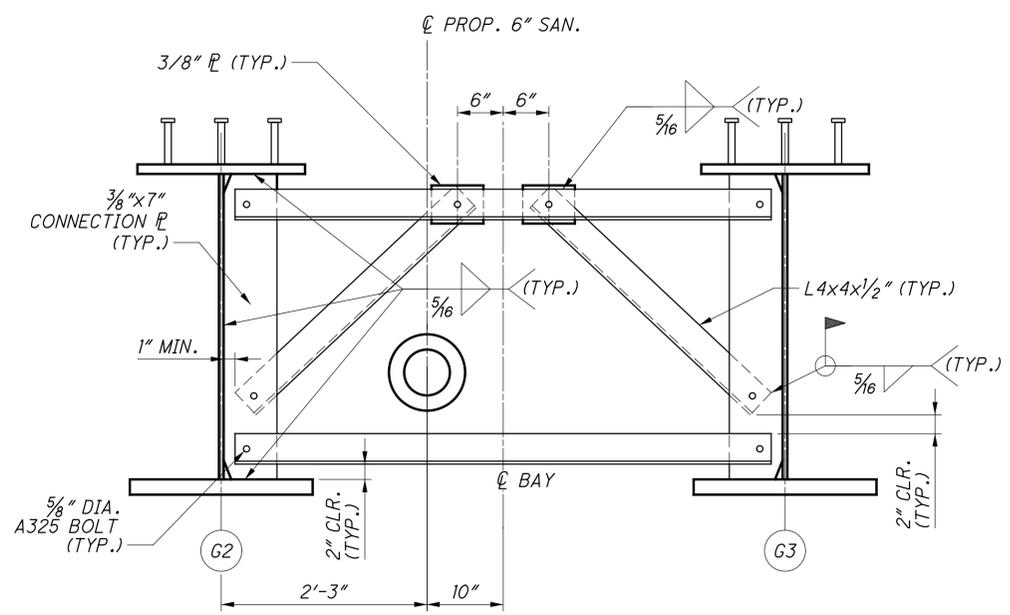
603
855

01_2015_2015370_VFRM_96053_STRUCTURES\FRA03_1747C_SHEETS CAPS\03_1174GR001.DGN
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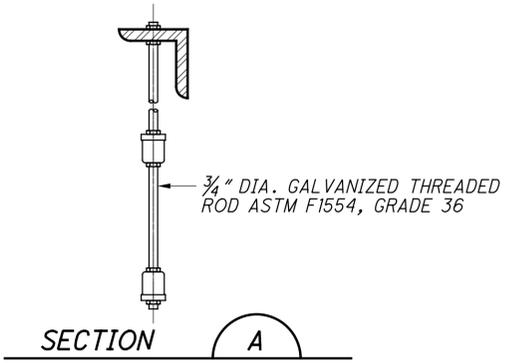
* FOR ADDITIONAL INFORMATION, SEE DECK SLAB PLAN ON SHEET 30/38.

FRAMING PLAN - WEST CAP



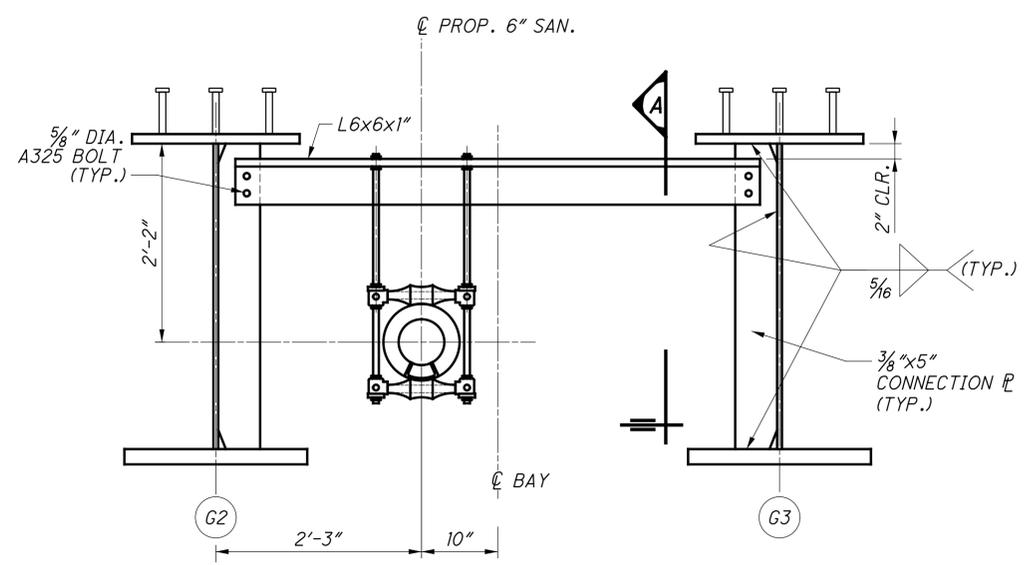
UTILITY BAY INTERMEDIATE CROSSFRAME

ADJACENT CROSSFRAMES NOT SHOWN FOR CLARITY TYPICAL AT ALL LOCATIONS INDICATED IN FRAMING PLANS. WEST CAP SHOWN EAST CAP SIMILAR, BUT OPPOSITE



NOTES:

- INTERMEDIATE CROSSFRAMES SHALL BE TYPE A USING L4X4X1/2" ANGLES AS DETAILED IN STD. DWG. GSD-1-19.
- FOR CAMBER AND DEFLECTION TABLE, SEE SHT. NO. 25/38 THRU 27/38.
- FOR CITY OF COLUMBUS CONDUIT DETAILS, SEE SHT. NO. 23/38.
- THE LONGITUDINAL SLOPE OF THE SANITARY LINE SHALL BE MAINTAINED AT 1.08% (WEST CAP) & 1.07% (EAST CAP).



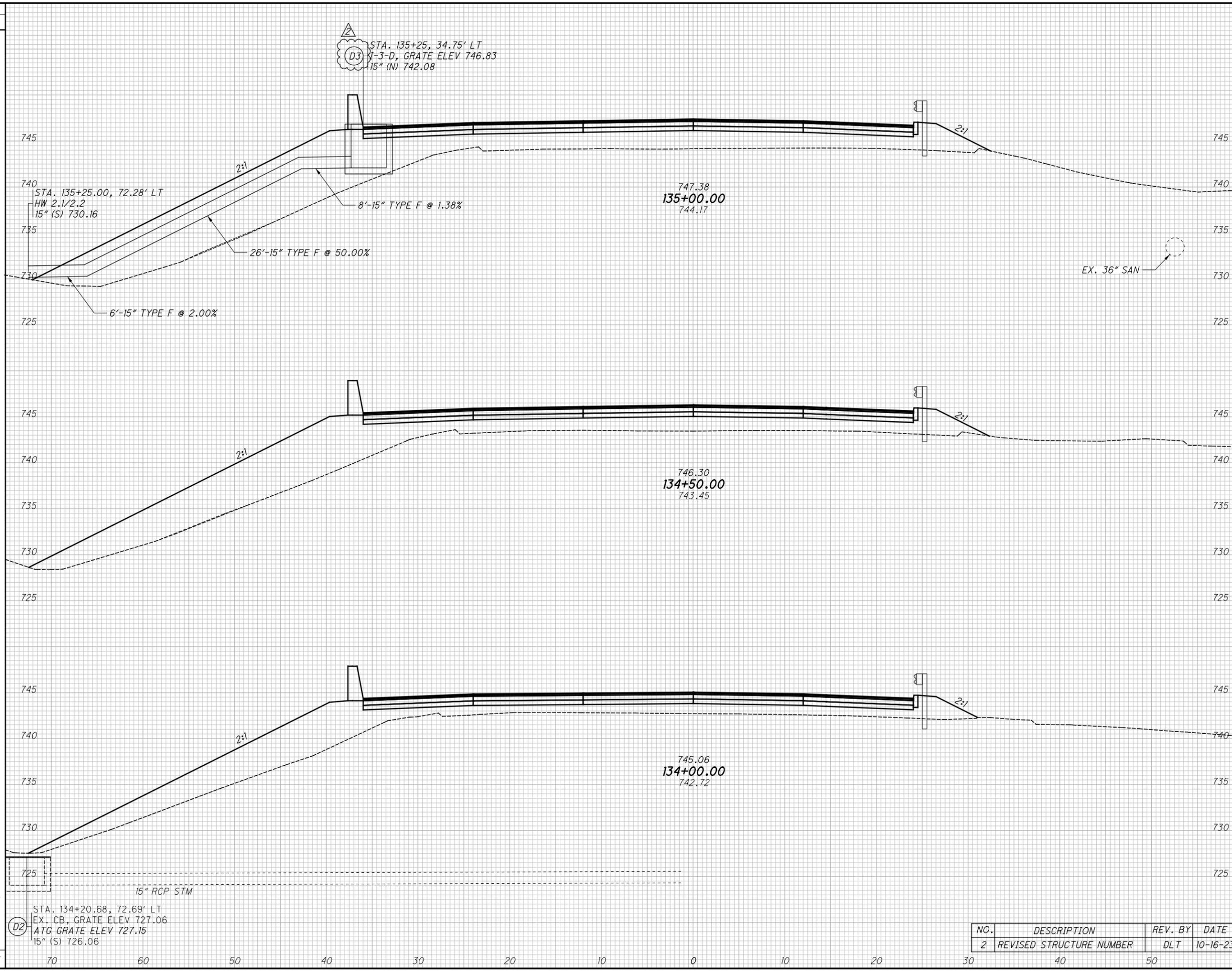
UTILITY SUPPORT DETAIL

TYPICAL EXTERIOR BAYS OF CAPS, WEST CAP SHOWN EAST CAP SIMILAR, BUT OPPOSITE

NO.	DESCRIPTION	REV. BY	DATE
2	REMOVED REF. TO WATER LINE	DJC	10-16-23

01-2015-2015370 VFA 96053 STRUCTURES\FRA\03-1747C SHEETS CAPS\03-1174CS0001.DGN
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END AREA	VOLUME		CALCULATED GAN	CHECKED CWB
	CUT	FILL		
0	331	0	545	
0	257	0	406	
0	181	0	243	
0	1194	0		

CROSS SECTIONS I70 EB
STA. 134+00.00 TO STA. 135+00.00

FRA-70-13.01

33
 137

NO.	DESCRIPTION	REV. BY	DATE
2	REVISED STRUCTURE NUMBER	DLT	10-16-23

STA. 135+25, 34.75' LT
 1-3-D, GRATE ELEV 746.83
 15" (N) 742.08

STA. 135+25.00, 72.28' LT
 HW 2.1/2.2
 15" (S) 730.16

747.38
135+00.00
 744.17

746.30
134+50.00
 743.45

745.06
134+00.00
 742.72

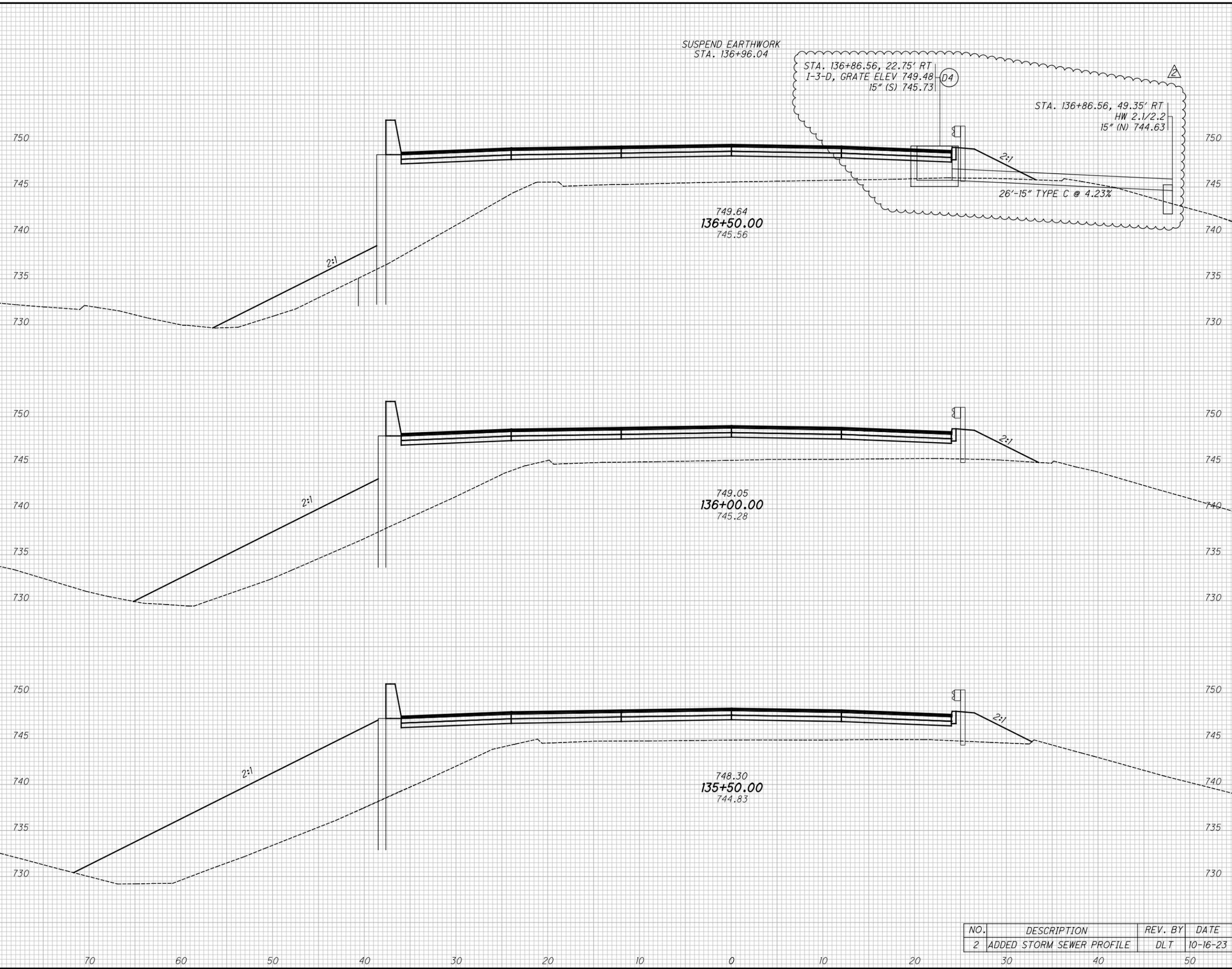
STA. 134+20.68, 72.69' LT
 EX. CB, GRATE ELEV 727.06
 ATG GRATE ELEV 727.15
 15" (S) 726.06

15" RCP STM

EX. 36" SAN

N:\03\60\08353\05430_FRA-70-13.01\Design\Roadway\Sheets\05430_XS001.dgn XS_SHEET_temporary_model_name_6 10/16/2023 10:26:40 AM dtout

SEEDING	END AREA		VOLUME		CALCULATED GAN	CHECKED CWB
	END WIDTH	SO. YDS.	CUT	FILL		
12			0	271		
67			0	471		
12			0	237		
173			237	613		
48			0	425		
267			0	700		
507	70	60	237	1784		



END AREA	VOLUME		CALCULATED GAN	CHECKED CWB
	CUT	FILL		
0	271			
0	471			
0	237			
237	613			
0	425			
0	700			
237	1784			

CROSS SECTIONS 170 EB
STA. 135+50.00 TO STA. 136+50.00

FRA-70-13.01

NO.	DESCRIPTION	REV. BY	DATE
2	ADDED STORM SEWER PROFILE	DLT	10-16-23

34
137

N:\03\60\08353\05430_FRA-70-13.01\Design\Roadway\Sheets\05430_XS001.dgn XS_SHEET_temporary_model_name_11 10/16/2023 10:26:41AM dtout

