UTILITIES

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS:

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, OHIO811, THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 HEADQUARTERS (MICHELLE CHANEY AT 330-786-2267) AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN ALL AREAS.

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 ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

ADESTA, A G4S COMPANY
ATTN: MICHAEL DANDARAW
4 WALKER WAY, SUITE #1
ALBANY, NY 12205
518-869-5053 ext. 122

OHIO EDISON
ATTN: MIKE BECK
730 SOUTH AVENUE
YOUNGSTOWN, OHIO 44502
330-740-7704 ext. 7704

WINDSTREAM
ATTN: RAMON FRENCH
205 S. HAMBDEN STREET
CHARDON, OH 44024
440-285-5537

CEI THE ILLUMINATING COMPANY
ATTN: JOHN ZASSICK
6896 MILLER ROAD
BRECKSVILLE, OHIO 44141
440-546-8706

ASHTABULA CO. DEPT. OF ENVIRONMENTAL SERVICES
ATTN: DOUG STARKEY
PO BOX 620
JEFFERSON, OHIO 44047
440-576-3725

DOMINION EAST OHIO
ATTN: KEVIN BIRT
320 SPRINGSIDE DRIVE, SUITE 320
AKRON, OHIO 44333
330-664-2541

TUSSEL, JR. COMPANY
ATTN: CLARENCE TUSSEL
141 E. JEFFERSON ST.
JEFFERSON STREET, OH 44047
440-576-3415

CENTURYLINK
ATTN: BOBBY WALTERS
3801 ELM ROAD
WARREN, OHIO 44483
440-244-8415

WORK LIMIT

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	1	0	1

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG64-22

703.05 DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

ITEM 408 - PRIME COAT, AS PER PLAN

APPLY "MC-70" AT A RATE OF 0.4 GALLONS PER SQUARE YARD, OR AS DETERMINED BY THE ENGINEER, TO THE COMPLETED COMPACTED AGGREGATE SHOULDER.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

IN LOW SHOULDER AREAS EXCEEDING 1", AND ADJACENT TO THE SAFETY EDGE, OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALL BE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1-1/2"	100
3/4"	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

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 G REFLECTIVE SHEETING, PER CMS 730.19.

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.

CALCULATED RCB
CHECKED MAC

GENERAL NOTES

ATB-
CULVERTS-FY2021

FARM DRAINS
ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE (RIGHT OF WAY) (CONSTRUCTION) LIMITS BY ITEM 611 CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 611 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 611, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

EROSION CONTROL PADS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

611 6" CONDUIT, TYPE B	20 FT
611 6" CONDUIT, TYPE E	20 FT
611 6" CONDUIT, TYPE F	20 FT
601 ROCK CHANNEL PROTECTION TYPE C WITH FILTER	2 CY

REVIEW OF DRAINAGE FACILITIES
BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

DRAINAGE DISCHARGE CONTINUANCE
FURNISH A DRAINAGE DISCHARGE CONTINUANCE FOR ANY DRAINAGE DISCHARGE DISTURBED BY THE WORK AND NOT SHOWN IN THE PLANS. THE LOCATION, TYPE (CONDUIT ORSWALE), SIZE AND GRADE OF THE DRAINAGE DISCHARGE CONTINUANCE WILL BE AGREED TO BY THE ENGINEER

FURNISH AN INSPECTION WELL AT THE RIGHT OF WAY LINE IN ACCORDANCE WITH SCD DM-3.1 FOR EACH DRAINAGE DISCHARGE THAT OUTLETS THROUGH A CURB OPENING, OR INTO A STORM SEWER OR DRAINAGE STRUCTURE. THE COST IS INCLUDED IN ITEM 611, INSPECTION WELL.

FURNISH A WELL GRADED TRANSITION BETWEEN THE DITCH AND THE SWALEWHEN OUTLETTING A SWALE TO A DITCH. THE COST FOR THE GRADED TRANSITION IS INCLUDED IN ITEM 203, EMBANKMENT AS PER PLAN.

FURNISH AN EROSION CONTROL PAD AS SHOWN IN SCD DM-1.1 WHEN OUTLETTING A CONDUIT TO A DITCH. THE COST FOR THE EROSION CONTROL PAD IS INCLUDED IN ITEM 611, CONDUIT, MISC: TYPE _ FOR DRAINAGE DISCHARGE CONTINUANCE.

FURNISH A DRILLED HOLE OR A CURB SECTION WITH A HOLE WHEN OUTLETTING A CONDUIT THROUGH A CURB OPENING. THE COST OF DRILLING, OR FURNISHING THE CURB SECTION WITH HOLE IS INCLUDED IN ITEM 611, CONDUIT, MISC.: TYPE _ FOR DRAINAGE DISCHARGE CONTINUANCE.

FURNISH A DRILLED CORE HOLE WHEN OUTLETTING INTO A STORM SEWER OR DRAINAGE STRUCTURE. THE COST OF THE DRILLED CORE HOLE IS INCLUDED IN ITEM 611, CONDUIT, MISC.: TYPE _ FOR DRAINAGE DISCHARGE CONTINUANCE.

DOCUMENTATION
THE CONTRACTOR SHALL FURNISH WRITTEN DOCUMENTATION TO THE ENGINEER AND TO THE DISTRICT R/W PERMIT OFFICE. THE DOCUMENTATION INCLUDES THE CONSTRUCTION PROJECT NUMBER, PID, COUNTY, ROUTE, SECTION, LATITUDE AND LONGITUDE OF THE DRAINAGE DISCHARGE AT THE R/W, THE NAME OF PROPERTY OWNER WITH ADDRESS, THE DATE THE DRAINAGE DISCHARGE WAS LOCATED, THE DATE THE DRAINAGE DISCHARGE CONTINUANCE WAS FURNISHED, A DETAILED DESCRIPTION OF THE WORK AND PICTURES OF THE DRAINAGE DISCHARGE CONTINUANCE (IN PDF OR JPEG FORMAT). THE DOCUMENTATION IS INCLUDED IN ITEM 611, CONDUIT, MISC.: TYPE _ FOR DRAINAGE DISCHARGE CONTINUANCE OR ITEM 203, EMBANKMENT AS PER PLAN.

DRAINAGE DISCHARGE CONTINUANCE REMOVAL THE ENGINEER MAY REQUIRE THE NEWLY INSTALLED DRAINAGE DISCHARGE CONTINUANCE TO BE REMOVED.

REMOVE THE NEWLY INSTALLED CONDUIT AND ANY EXISTING CONDUIT TO THE RIGHT OF WAY LINE. FOR CONDUIT THAT OUTLETS THROUGH THE CURB RESTORE THE CURB BY FILLING THE HOLE WITH CLASS QC 1 CONCRETE OR REPLACE THE CURB SECTION. FOR CONDUIT THAT OUTLETS TO A STORM SEWER OR DRAINAGE STRUCTURE LEAVE 6 INCHES PROTRUDING OUTSIDE OF THE CONDUIT. PLUG THE PROTRUDING CONDUIT WITH EITHER A MANUFACTURED CAP OR CLASS QC 1 CONCRETE. FOR CONDUIT THAT OUTLETS TO THE DITCH REMOVE THE EROSION CONTROL PAD. RESTORE ALL AREAS AS REQUIRED. PLUG THE EXISTING CONDUIT REGARDLESS OF SIZE AT THE RIGHT OF WAY LINE WITH CLASS QC 1 CONCRETE AND RESTORE ALL AREAS AS REQUIRED. ALL COSTS ARE INCLUDED IN ITEM 202, REMOVAL MISC. CONDUIT.

DAM THE SWALE THAT OUTLETS TO THE DITCH AT THE R/W AS DIRECTED BY THE ENGINEER. ALL COSTS ARE INCLUDED IN ITEM 203, EMBANKMENT AS PER PLAN.

REMOVE THE INSPECTION WELL AND RESTORE ALL AREAS AS REQUIRED. THE COST IS INCLUDED IN ITEM 202, REMOVAL MISC. INSPECTION WELL.

CONDUIT MATERIAL TYPES
THE FOLLOWING CONDUIT MATERIAL TYPES MAY BE USED: 707.33, 707.41 NON-PERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, AND 707.52 SDR35.

PAY ITEMS
EACH OF THE PAY ITEMS LISTED BELOW FOR CONDUIT MISCELLANEOUS TYPES B, C, E AND F FOR DRAINAGE DISCHARGE CONTINUANCE INCLUDE CONDUIT SIZES 2 INCH TO 10 INCH. THERE IS NO COST DIFFERENTIATION FOR SIZE IN THESE PAY ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER IN MAKING THE ABOVE DRAINAGE DISCHARGE CONTINUANCE:

ITEM 611, 1 EACH, INSPECTION WELL
ITEM 611, 5 FT, CONDUIT, MISC.: TYPE B FOR DRAINAGE DISCHARGE CONTINUANCE
ITEM 611, 5 FT, CONDUIT, MISC.: TYPE C FOR DRAINAGE DISCHARGE CONTINUANCE
ITEM 611, 5 FT, CONDUIT, MISC.: TYPE E FOR DRAINAGE DISCHARGE CONTINUANCE
ITEM 611, 5 FT, CONDUIT, MISC.: TYPE F FOR DRAINAGE DISCHARGE CONTINUANCE
ITEM 202, 5 FT, REMOVAL MISC.: CONDUIT
ITEM 202, 1 EACH, REMOVAL MISC.: INSPECTION WELL
ITEM 203, 50 CY, EMBANKMENT, AS PER PLAN

CROSS SECTION EARTHWORK SUMMARY

SHEET NO.	203 EXCAVATION CY	203 EMBANKMENT CY
15	74	219
21	59	192
29	21	122
37		23
38	29	16
42	37	140
43	4	94
51	26	149
52	35	59
TOTAL	285	1014

CALCULATED RCB
CHECKED MAC

GENERAL NOTES

ATB-CULVERTS-FY2021

SHEET NUM.													PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
		4	18	23	24	31	32	40	45	46	54	55	01/STR/CV		EXT	TOTAL			
																		ROADWAY	
													LS	201	11000	LS		CLEARING AND GRUBBING (ATB-45-1769)	
													LS	201	11000	LS		CLEARING AND GRUBBING (ATB-46-1106)	
													LS	201	11000	LS		CLEARING AND GRUBBING (ATB-46-1192)	
													LS	201	11000	LS		CLEARING AND GRUBBING (ATB-6-1723)	
													LS	201	11000	LS		CLEARING AND GRUBBING (ATB-6-2804)	
													LS	201	11000	LS		CLEARING AND GRUBBING (ATB-7-0090)	
										LS			LS	202	11000	LS		STRUCTURE REMOVED (ATB-46-1106)	
												LS	LS	202	11000	LS		STRUCTURE REMOVED (ATB-46-1192)	
					LS								LS	202	11000	LS		STRUCTURE REMOVED (ATB-6-2804)	
							LS						LS	202	11000	LS		STRUCTURE REMOVED (ATB-7-0090)	
			154	200		141		207	179		161		1,042	202	23000	1,042	SY	PAVEMENT REMOVED	
								118					118	202	35200	118	FT	PIPE REMOVED, OVER 24"	
			80										80	202	35201	80	FT	PIPE REMOVED, OVER 24", AS PER PLAN	18
			461		536		364	714		545		678	3,298	202	38000	3,298	FT	GUARDRAIL REMOVED	
					86								86	202	75000	86	FT	FENCE REMOVED	
		1											1	202	98100	1	EACH	REMOVAL MISC.: INSPECTION WELL	4
		5											5	202	98200	5	FT	REMOVAL MISC.: CONDUIT	4
		285	34	33		24		41	26		28		471	203	10000	471	CY	EXCAVATION	
		1,014											1,014	203	20000	1,014	CY	EMBANKMENT	
		50											50	203	20001	50	CY	EMBANKMENT, AS PER PLAN	4
			34	33		24		41	26		28		186	203	35120	186	CY	GRANULAR MATERIAL, TYPE C, 703.16	
			150	197		132		207	194		204		1,084	204	10000	1,084	SY	SUBGRADE COMPACTION	
			68	65		48		82	52		55		370	204	50000	370	SY	GEOTEXTILE FABRIC, TYPE D	
			400		350		275	550		375		400	2,350	606	15100	2,350	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS	
			100		75		75			75		75	400	606	17360	400	FT	GUARDRAIL, TYPE MGS, LONG-SPAN	
			3		3		3	3		3		4	19	606	26150	19	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	
			1		1		1	1		1			5	606	26550	5	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
																		EROSION CONTROL	
			12										12	601	10000	12	SY	RIPRAP	
			19										19	601	32104	19	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	
					19		4	6		49		43	121	601	32110	121	CY	ROCK CHANNEL PROTECTION, TYPE B WITH AGGREGATE FILTER	
		2											2	601	32200	2	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
			153	151		113		168	142		145		872	659	00300	872	CY	TOPSOIL	
			1,381	1,357		1,017		1,516	1,281		1,302		7,854	659	10000	7,854	SY	SEEDING AND MULCHING	
			69	68		51		76	64		65		393	659	14000	393	SY	REPAIR SEEDING AND MULCHING	
			0.19	0.18		0.14		0.2	0.17		0.18		1.06	659	20000	1.06	TON	COMMERCIAL FERTILIZER	
			0.29	0.28		0.21		0.31	0.26		0.27		1.62	659	31000	1.62	ACRE	LIME	
			7	7		5		8	7		7		41	659	35000	41	MGAL	WATER	
													16,500	832	30000	16,500	EACH	EROSION CONTROL	
																		DRAINAGE	
			8.9					1.9					10.8	602	20000	10.8	CY	CONCRETE MASONRY	
		20											20	611	00900	20	FT	6" CONDUIT, TYPE B	
		20											20	611	01400	20	FT	6" CONDUIT, TYPE E	
		20											20	611	01500	20	FT	6" CONDUIT, TYPE F	
								118					118	611	19200	118	FT	42" CONDUIT, TYPE A, 707.01 OR 707.02 METALLIC COATED (ALUMINIZED), 706.02 OR 707.33	
					52		38						90	611	94800	90	FT	8' X 4' CONDUIT, TYPE A, 706.05	
			54									44	98	611	94900	98	FT	8' X 5' CONDUIT, TYPE A, 706.05	
										41			41	611	94910	41	FT	8' X 6' CONDUIT, TYPE A, 706.05	
		5											5	611	97400	5	FT	CONDUIT, MISC.: TYPE B FOR DRAINAGE DISCHARGE CONTINUANCE	4
		5											5	611	97400	5	FT	CONDUIT, MISC.: TYPE C FOR DRAINAGE DISCHARGE CONTINUANCE	4
		5											5	611	97400	5	FT	CONDUIT, MISC.: TYPE E FOR DRAINAGE DISCHARGE CONTINUANCE	4
		5											5	611	97400	5	FT	CONDUIT, MISC.: TYPE F FOR DRAINAGE DISCHARGE CONTINUANCE	4
		1											1	611	99720	1	EACH	INSPECTION WELL	

CALCULATED RCB
CHECKED MAC

GENERAL SUMMARY

ATB-
CULVERTS-FY2021

SHEET NUM.													PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
		5	18	23	24	31	32	40	45	46	54	55	01/STR/CV		EXT	TOTAL			
																		PAVEMENT	
			477	522		448		540	452		433		2,872	254	01000	2,872	SY	PAVEMENT PLANING, ASPHALT CONCRETE, T=3"	
			57	58		55		60	49		49		328	255	20000	328	FT	FULL DEPTH PAVEMENT SAWING	
			58	73		47		58	70		53		359	301	46000	359	CY	ASPHALT CONCRETE BASE, PG64-22	
			26	33		22		35	32		33		181	304	20000	181	CY	AGGREGATE BASE	
			80	91		75		90	83		75		494	407	20000	494	GAL	NON-TRACKING TACK COAT	
			27	29		26		29	30		29		170	408	10001	170	GAL	PRIME COAT, AS PER PLAN	3
		200											200	411	10000	200	CY	STABILIZED CRUSHED AGGREGATE	
			40	44		38		45	38		37		242	441	50101	242	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG64-22	3
			4	4		4		4	5		4		25	617	10101	25	CY	COMPACTED AGGREGATE, AS PER PLAN	3
																		TRAFFIC CONTROL	
			3	4		3		4	4		3		21	621	00100	21	EACH	RPM	
			9		9		8	10		9		10	55	626	00110	55	EACH	BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL)	
			2	2		2		2	2		2		12	630	02100	12	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
			15	15		15		15	15		15		90	630	80100	90	SF	SIGN, FLAT SHEET, 730.20	
			0.1	0.07		0.06		0.07	0.07		0.07		0.44	642	00104	0.44	MILE	EDGE LINE, 6", TYPE 1	
			0.05	0.04		0.03		0.04	0.04		0.04		0.24	642	00300	0.24	MILE	CENTER LINE, TYPE 1	
																		RETAINING WALLS	
								LS					LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING (ATB-45-1769)	
										LS			LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING (ATB-46-1106)	
												LS	LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING (ATB-46-1192)	
			LS										LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING (ATB-6-1723)	
					LS								LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING (ATB-6-2804)	
							LS						LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING (ATB-7-0090)	
										LS			LS	503	21300	LS		UNCLASSIFIED EXCAVATION (WINGWALL FOOTING) (ATB-46-1106)	
												LS	LS	503	21300	LS		UNCLASSIFIED EXCAVATION (WINGWALL FOOTING) (ATB-46-1192)	
					LS								LS	503	21300	LS		UNCLASSIFIED EXCAVATION (WINGWALL FOOTING) (ATB-6-2804)	
							LS						LS	503	21300	LS		UNCLASSIFIED EXCAVATION (WINGWALL FOOTING) (ATB-7-0090)	
					2,772		2,946			4,612		3,768	14,098	509	10000	14,098	LB	EPOXY COATED REINFORCING STEEL	
					7		9			18		14	48	511	46010	48	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING	
					21		27			39		33	120	511	46510	120	CY	CLASS QC1 CONCRETE, FOOTING	
					2		1			2		2	7	511	46610	7	CY	CLASS QC1 CONCRETE, HEADWALL	
										LS			LS	518	21230	LS		POROUS BACKFILL WITH GEOTEXTILE FABRIC (ATB-46-1106)	
												LS	LS	518	21230	LS		POROUS BACKFILL WITH GEOTEXTILE FABRIC (ATB-46-1192)	
					LS								LS	518	21230	LS		POROUS BACKFILL WITH GEOTEXTILE FABRIC (ATB-6-2804)	
							LS						LS	518	21230	LS		POROUS BACKFILL WITH GEOTEXTILE FABRIC (ATB-7-0090)	
																		STRUCTURE REPAIR	
			38		37		39			58		49	221	512	10100	221	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
			76		62		46			90		87	361	512	33000	361	SY	TYPE 2 WATERPROOFING	
			68		66		48			52		56	290	512	33010	290	SY	TYPE 3 WATERPROOFING	
					26		24			34		30	114	516	13600	114	SF	1" PREFORMED EXPANSION JOINT FILLER	
																		MAINTENANCE OF TRAFFIC	
		LS											LS	614	12420	LS		DETOUR SIGNING (ATB-45-1769)	
		LS											LS	614	12420	LS		DETOUR SIGNING (ATB-46-1106)	
		LS											LS	614	12420	LS		DETOUR SIGNING (ATB-46-1192)	
		LS											LS	614	12420	LS		DETOUR SIGNING (ATB-6-1723)	
		LS											LS	614	12420	LS		DETOUR SIGNING (ATB-6-2804)	
		LS											LS	614	12420	LS		DETOUR SIGNING (ATB-7-0090)	
		50											50	614	13000	50	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
		12											12	614	18601	12	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	5
																		INCIDENTALS	
													LS	614	11000	LS		MAINTAINING TRAFFIC	
													9	619	16010	9	MNTH	FIELD OFFICE, TYPE B	
													LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
													LS	624	10000	LS		MOBILIZATION	

CALCULATED RCB
CHECKED MAC

GENERAL SUMMARY

ATB-
CULVERTS-FY2021

I:\ProjectData\ATB\106804_CULVERTS_FY2021\Design\Roadway\Sheets\106804_XS101.dgn XS_SHEET_temporary_model_name_1 3/18/2021 11:26:31 AM rbaughma

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	0		
		0	13
0	8		
		1	24
1	18		
		7	44
6	26		
28	22		
		19	18
25	30		
44	37		
		29	25
39	33		
18	38		
		16	49
0	17		
		0	29
0	14		
		1	16
1	3		
		1	1
0	0		
		74	219

CALCULATED RCB
CHECKED MAC

ATB-CULVERTS-FY2021

CROSS SECTIONS - U.S. 6 (17.23)
STA. 909+00.00 TO STA. 912+00.00

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, TOPSOIL	153 CU. YD.
659, SEEDING AND MULCHING	1381 SQ. YD.
659, REPAIR SEEDING AND MULCHING	69 SQ. YD.
659, COMMERCIAL FERTILIZER	0.19 TON
659, LIME	0.29 ACRES
659, WATER	7 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

UNSUITABLE SOILS

THE FOLLOWING ITEMS AND QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO ADDRESS UNSUITABLE SOILS ENCOUNTERED IN THE AREA UNDER THE PROPOSED CULVERT.

203, EXCAVATION	34 CU YD
203, GRANULAR MATERIAL, TYPE C (703.16)	34 CU YD
204, GEOTEXTILE FABRIC, TYPE D	68 SQ YD

STRUCTURE/CULVERT IDENTIFICATION SIGNS

STRUCTURE IDENTIFICATION SIGNS (I-H25b) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURE:
ATB-6-1723

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

630, SIGN, FLAT SHEET, 730.20, 1 SQ FT	
630, GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT	

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND/OR REMOVALS

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF PIPES.

STA. 910+48 TO STA. 910+67 & STA. 910+77 TO STA. 910+96	
202, PAVEMENT REMOVED	122 SY
204, SUBGRADE COMPACTION	150 SY
255, FULL DEPTH PAVEMENT SAWING	57 FT
301, ASPHALT CONCRETE BASE, PG64-22 (T=12")	50 CY
304, AGGREGATE BASE (T=6")	26 CY
407, NON-TRACKING TACK COAT @ 0.06 GAL/SY	18 GAL
STA. 910+67 TO STA. 910+77 (ATB-6-1723)	
202, PAVEMENT REMOVED	32 SY
301, ASPHALT CONCRETE BASE, PG64-22 (AVG=6.1")	8 CY
407, NON-TRACKING TACK COAT @ 0.06 GAL/SY	4 GAL

THE ABOVE QUANTITIES ARE BASED ON THE PAVEMENT WIDTHS GIVEN IN THE PLANS.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

RESURFACING AFTER PIPE INSTALLATION

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED TO RESURFACE THE ROADWAY AFTER THE COMPLETION OF THE CULVERT OR STRUCTURE PLACEMENT. THIS WORK DOES NOT HAVE TO BE COMPLETE DURING THE DETOUR PERIOD.

STA. 909+98 TO STA. 911+46 (ATB-6-1723)	
254, PAVEMENT PLANING, ASPHALT CONCRETE (T=3")	477 SY
407, NON-TRACKING TACK COAT @ 0.06 GAL/SY	58 GAL
408, PRIME COAT, AS PER PLAN @ 0.40 GAL/SY	27 GAL
441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG64-22 (2 - 1½" LIFTS)	40 CY
617, COMPACTED AGGREGATE, AS PER PLAN (T=2")	4 CY

THE ABOVE QUANTITIES ARE BASED ON A RESURFACING THE WIDTH OF THE PAVEMENT AND SHOULDERS AND A LENGTH OF 50' ON EACH SIDE OF THE REQUIRED TRENCH WIDTH FOR INSTALLATION AND/OR REMOVAL.

PAVEMENT MARKINGS

ALL PAVEMENT MARKINGS THAT ARE REMOVED DURING THE CULVERT REPLACEMENT WILL BE REPLACED WITH ITEM 642 - TRAFFIC PAINT. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

621, RPM	3 EA
642, EDGE LINE, 6", TYPE 1	0.1 MI
642, CENTER LINE, TYPE 1	0.05 MI

ITEM 202, PIPE REMOVED, OVER 24", AS PER PLAN

THIS ITEM OF WORK SHALL INCLUDE THE REMOVAL OF AN ESTIMATED 10-20 CUBIC YARDS OF EXISTING CONCRETE FROM BETWEEN THE EXISTING 42"x60" CORRUGATED METAL PIPES WHICH ARE TO BE REMOVED AT THIS LOCATION.

REF NO.	SHEET NO.	STATION TO STATION					202 PIPE REMOVED, OVER 24", AS PER PLAN (FT)	202 GUARDRAIL REMOVED (FT)	503 COFFERDAMS AND EXCAVATION BRACING (ATB-6-1723) (LS)	512 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) (SY)	512 TYPE 2 WATERPROOFING (SY)	512 TYPE 3 WATERPROOFING (SY)	601 RIPRAP (SY)	601 ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC (CY)	602 CONCRETE MASONRY (CY)	611 8' X 5' CONDUIT, TYPE A, 706.05 (FT)	606 GUARDRAIL, TYPE MGS WITH LONG POSTS (FT)	606 ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016) (EACH)	606 ANCHOR ASSEMBLY, MGS TYPE T (EACH)	606 GUARDRAIL, TYPE MGS, LONG-SPAN (FT)	626 BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL) (EACH)
R1	14	909+66.86	LT	TO	911+97.11	LT		231													
R2	14	909+41.95	RT		911+71.12	RT		230													
R3	14	910+72.00	LT/RT				80														
D1	14	910+72.00	LT/RT						LS	38	76	68	12	19	8.9	54					
GR1	14	909+22.00	LT		912+84.50	LT											212.5	2		50	5
GR2	14	908+87.54	RT		911+84.50	RT											187.5	1	1	50	4
TOTALS CARRIED TO GENERAL SUMMARY							80	461	LS	38	76	68	12	19	8.9	54	400	3	1	100	9

DESIGN AGENCY ODOT DISTRICT 4

DESIGNED	DRAWN	REVIEWED	DATE
RCB	RCB	XXX	MM/DD/YY
CHECKED	REVISED	STRUCTURE FILE NUMBER	
XXX	XXX	.	

ASHTABULA COUNTY
STA. 910+44
STA. 911+00

CULVERT NOTES AND QUANTITIES
ATB-6-1723
US 6 OVER TRIB. OF PYMATUNING CREEK

ATB-CULVERTS-FY2021
PID No. 106804

3 / 4

18
64

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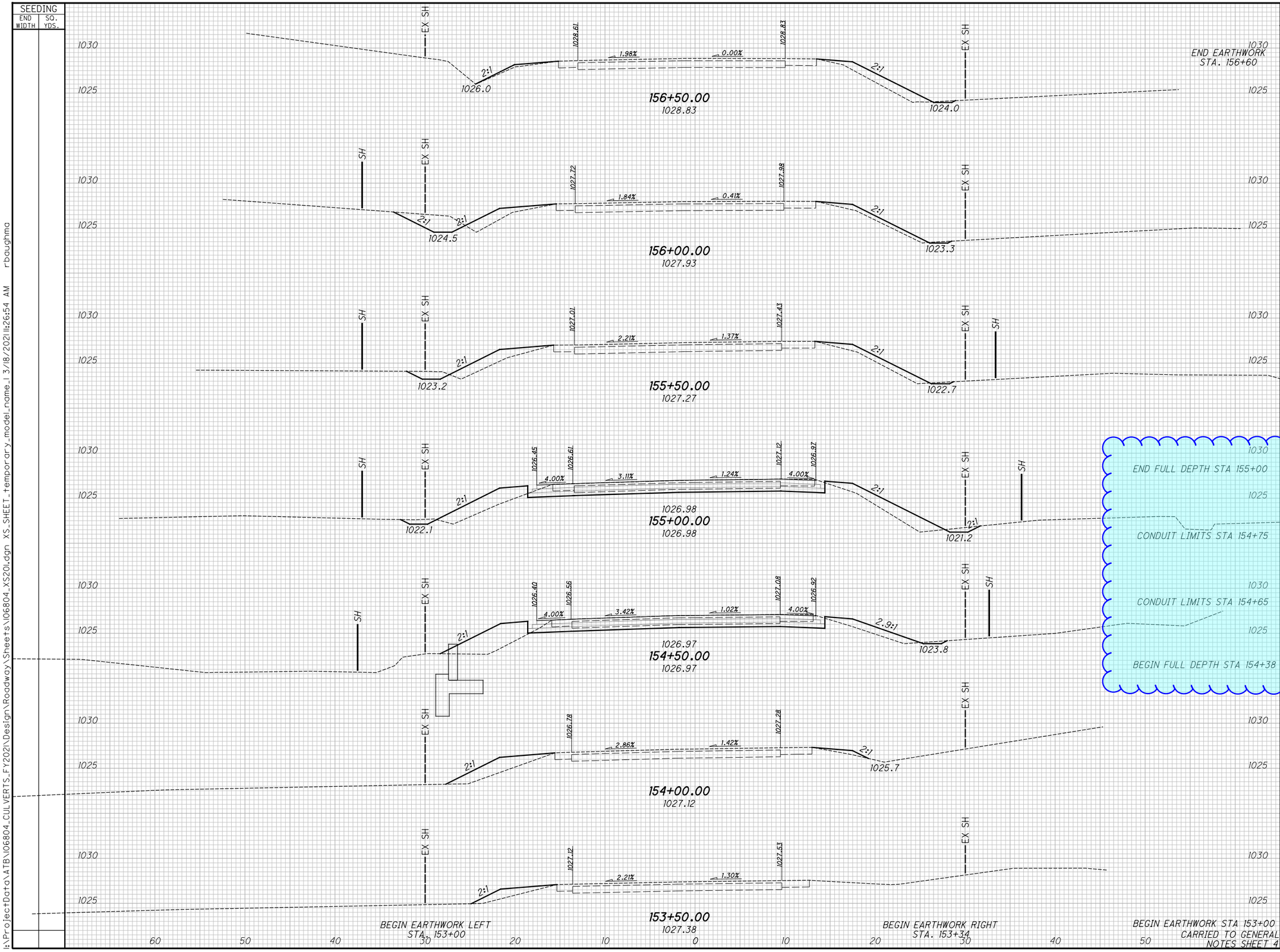
SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		0	2
1	11		
		9	21
9	12		
		11	27
3	17		
		6	42
3	28		
18	27		
		17	26
18	27		
15	24		
		15	24
15	24		
1	26		
		1	27
0	13		
		0	18
0	6		
		0	6
0	0		
		59	182

END FULL DEPTH STA 155+00

CONDUIT LIMITS STA 154+75

CONDUIT LIMITS STA 154+65

BEGIN FULL DEPTH STA 154+38

BEGIN EARTHWORK STA 153+00
CARRIED TO GENERAL
NOTES SHEET 4

CALCULATED RCB | CHECKED MAC

CROSS SECTIONS - U.S. 6 (28.04)
STA. 153+27.00 TO STA. 156+60.00

ATB-
CULVERTS-FY2021

21
64

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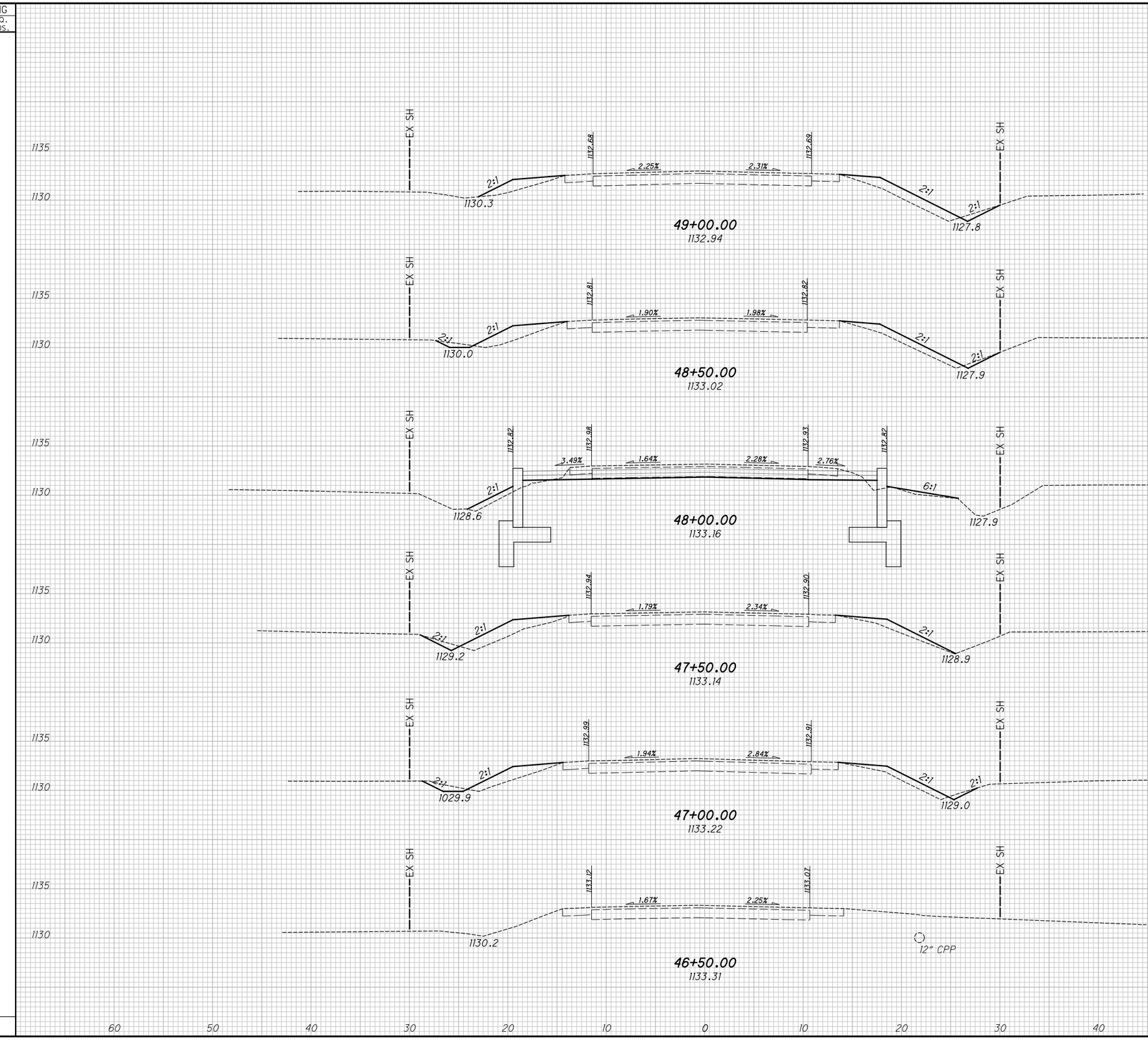
SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
END EARTHWORK STA. 49+61	0	0	
		1	18
	1	16	
		3	30
	2	16	
		1	14
END FULL DEPTH STA 48+13	0	4	
	5	4	
		3	3
CONDUIT LIMITS STA 47+95	5	4	
CONDUIT LIMITS STA 47+85	8	15	
		5	10
BEGIN FULL DEPTH STA 47+67	8	15	
	1	15	
		1	9
	1	15	
		4	26
	3	13	
		3	12
BEGIN EARTHWORK STA 46+50	0	0	
CARRIED TO GENERAL NOTES SHEET 4		21	122

CALCULATED RCB | CHECKED MAC

CROSS SECTIONS - S.R. 7 (00.90)
STA. 46+50.00 TO STA. 49+61.00

ATB-CULVERTS-FY2021

29
64

60 50 40 30 20 10 0 10 20 30 40 50

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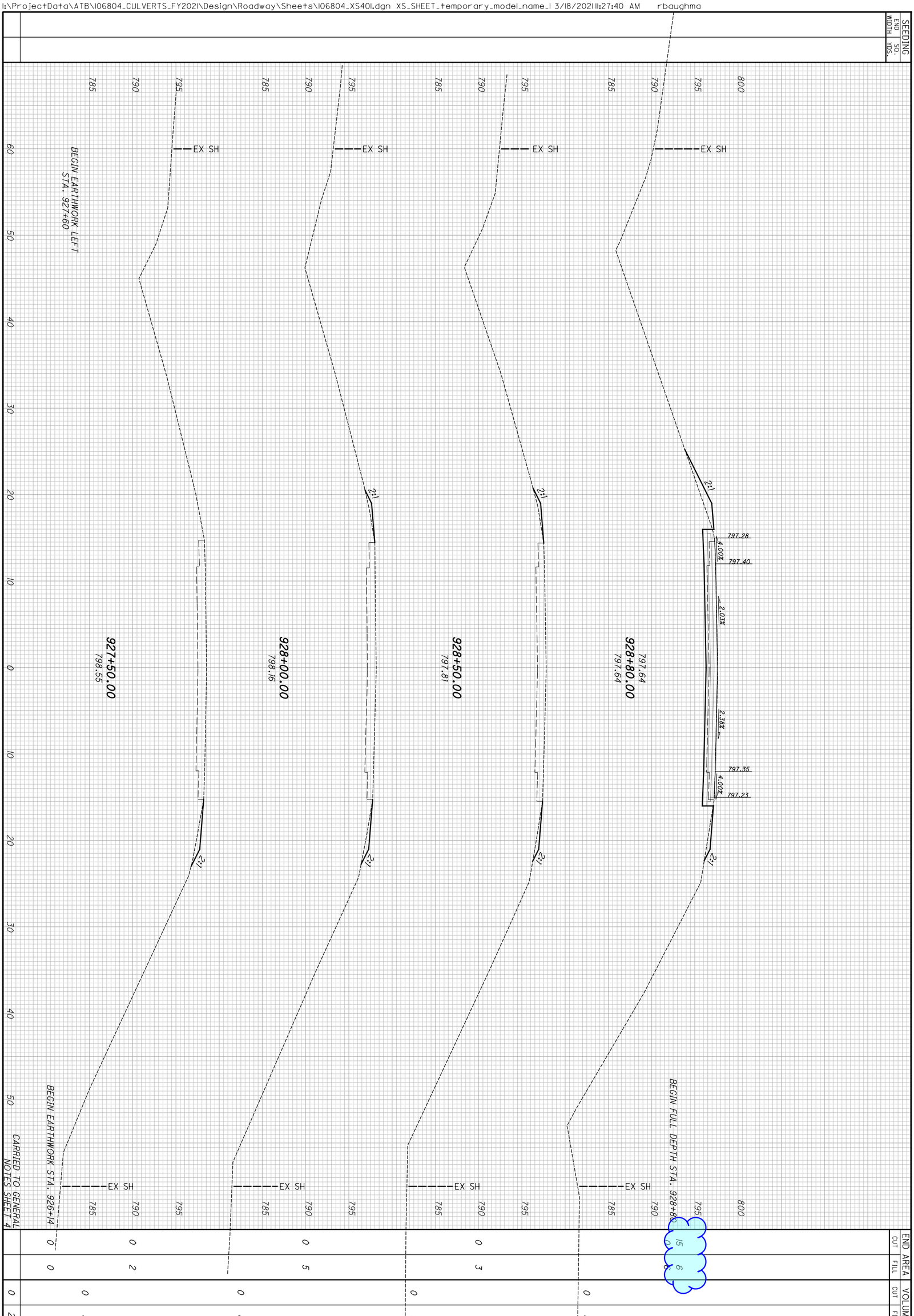
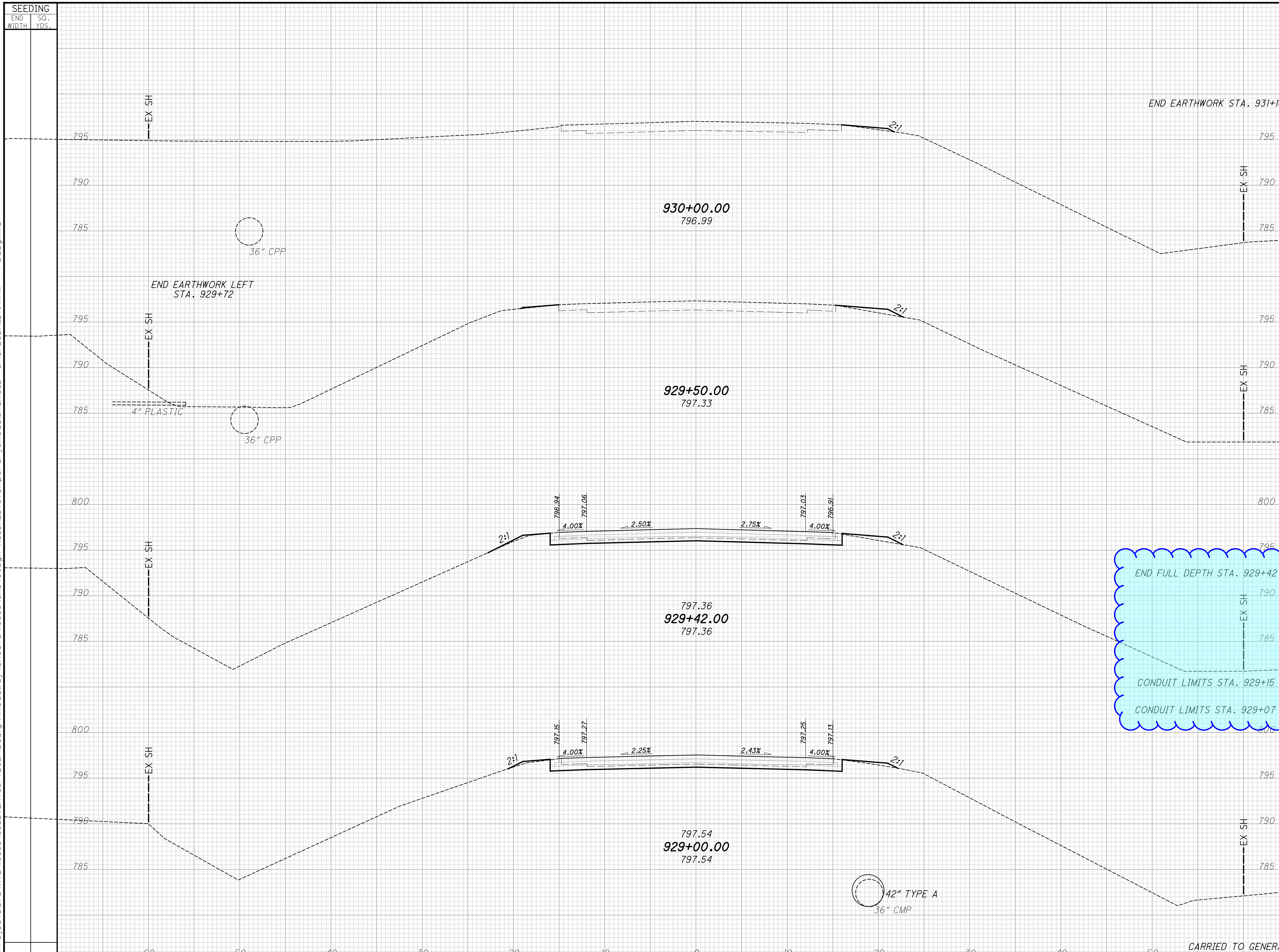


37/64	ATB-CULVERTS-FY2021	CROSS SECTIONS - S.R. 45 (17.69) STA. 926+14.00 TO STA. 928+80.00	CALCULATED RCB CHECKED MAC

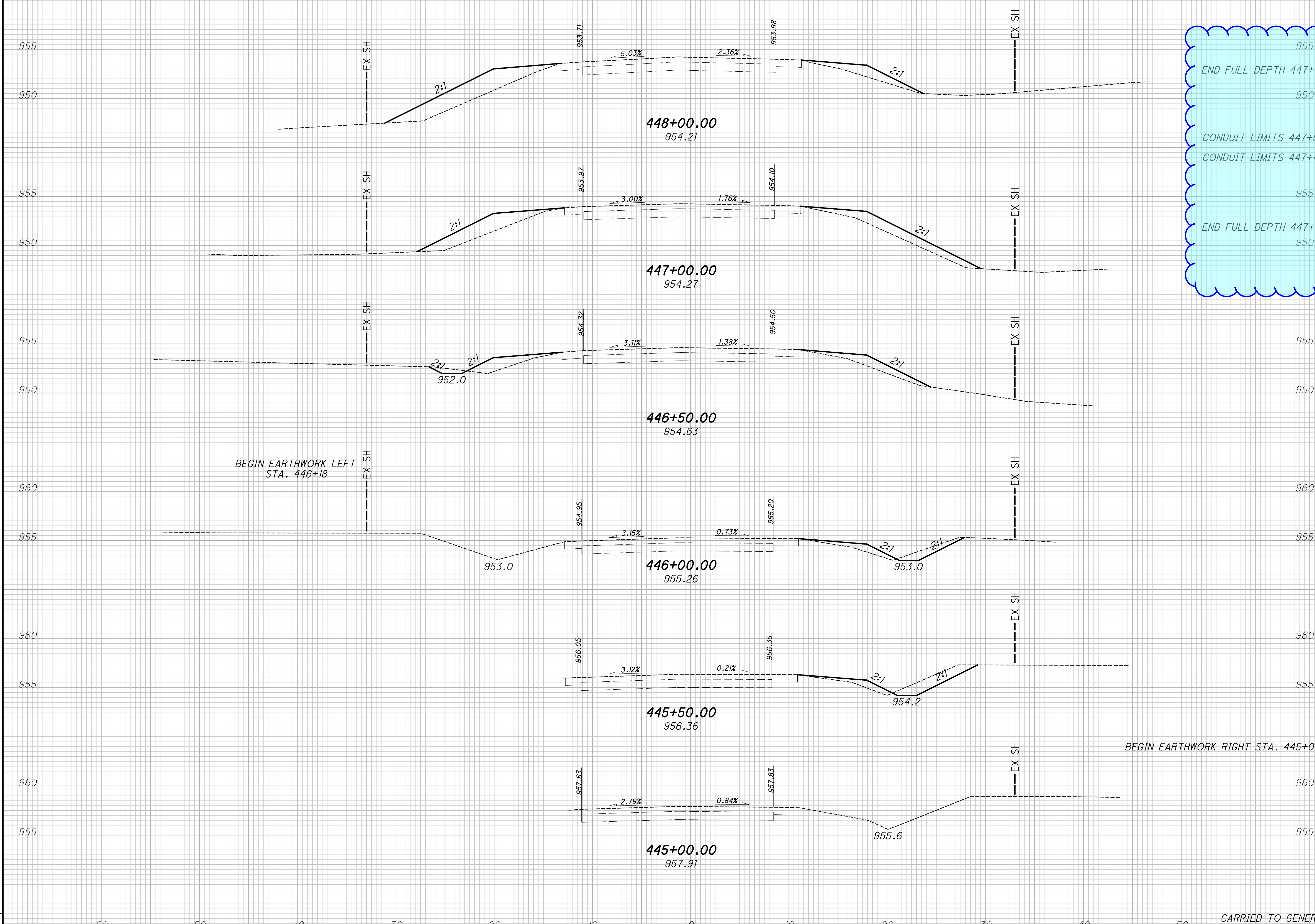


Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
END EARTHWORK STA. 931+18	0	0		
			0	2
930+00.00	0	1		
			0	3
929+50.00	0	2		
			0	1
END FULL DEPTH STA. 929+42	0	3		
929+42.00	14	3		
			14	4
CONDUIT LIMITS STA. 929+15	14	6		
CONDUIT LIMITS STA. 929+07	15	6		
			15	6
Total			29	16

CALCULATED RCB
CHECKED MAC

CROSS SECTIONS - S.R. 45 (17.69)
STA. 929+00.00 TO STA. 931+18.00

ATB-CULVERTS-FY2021



SEEDING END WIDTH	SEEDING SQ. YDS.

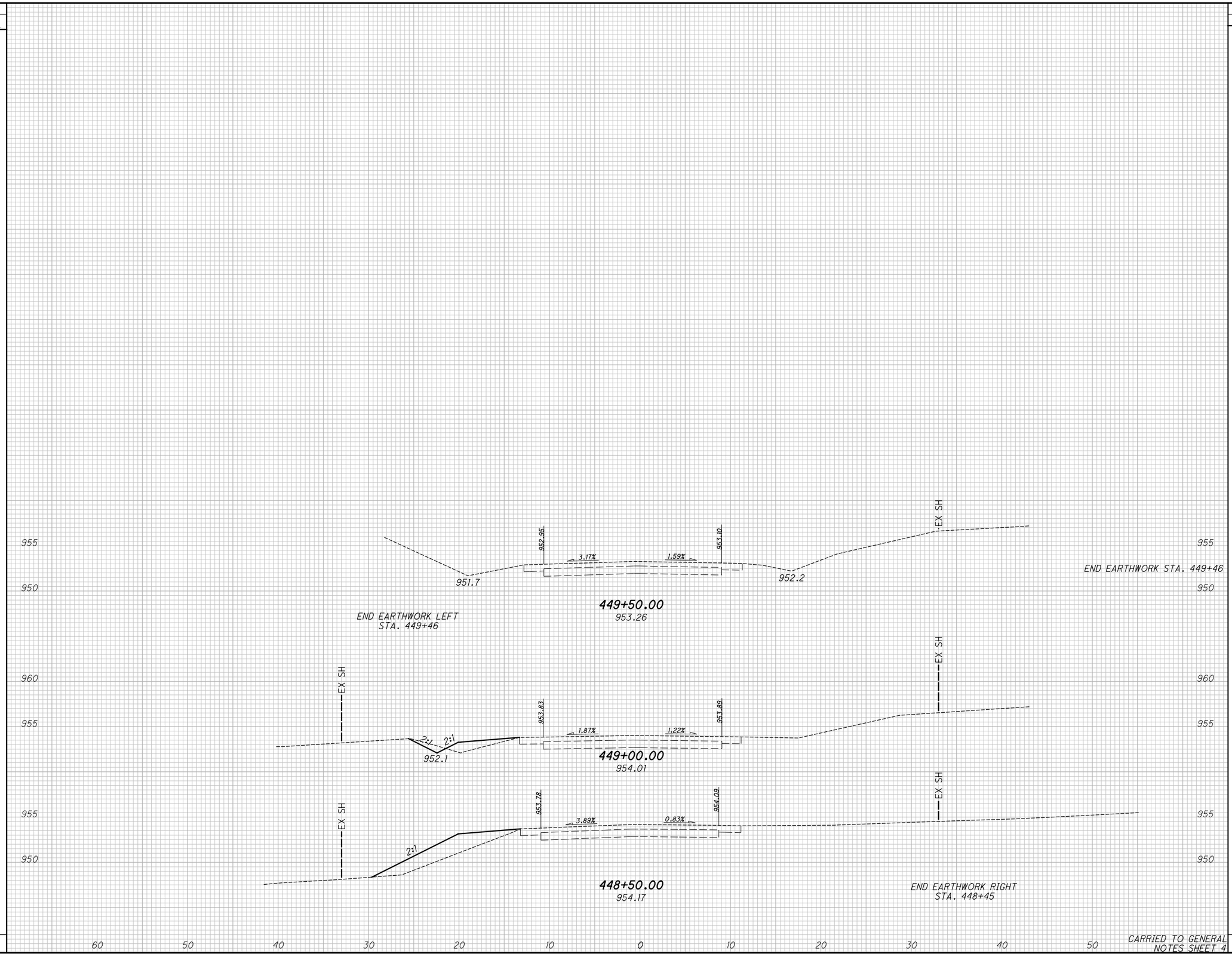
Station / Note	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
448+00.00				
END FULL DEPTH 447+83	0	32		
	6	32		
			6	33
CONDUIT LIMITS 447+55	6	32		
CONDUIT LIMITS 447+45	7	28		
			7	29
END FULL DEPTH 447+17	7	28		
	0	28		
			1	52
446+50.00	1	14		
			5	17
446+00.00	4	4		
			11	6
445+50.00	8	3		
			7	3
BEGIN EARTHWORK RIGHT STA. 445+07	0	0		
CARRIED TO GENERAL NOTES SHEET 4			37	140

CALCULATED RCB
CHECKED MAC

CROSS SECTIONS S.R. 46 (11.06)
STA. 445+00.00 TO STA. 448+00.00

ATB-CULVERTS-FY2021

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		2	4
2	5		
		2	24
0	21		
		0	66
		2	94

CALCULATED RCB
CHECKED MAC

CROSS SECTIONS - S.R. 46 (11.06)
STA. 448+50.00 TO STA. 449+50.00

ATB-
CULVERTS-FY2021

43
64

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SURVEYING PARAMETERS

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

VERTICAL POSITIONING
ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: 2012A

HORIZONTAL POSITIONING
REFERENCE FRAME: NAD83 (2011) (EPOCH: 2010.0000)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO NORTH 3401
COMBINED SCALE FACTOR: 0.99995356286
ORIGIN OF SCALE (X,Y): EASTING (X): 0, NORTHING (Y): 0

USE THE POSITIONING METHODS AND MONUMENT 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 CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

PROJECT CONTROL POINTS (LOCAL GROUND COORDINATES)

Point	North	East	Station	Offset (Sta. Offset of Centerline of R/W SR46)	Elevation (NAVD88 Geoid 12a)
SV348	729,615.8060	2,438,426.5620	446+49.36	-15.93	953.77
	Feature: BM 'x' cut in the Southeast most bolt of the South guardrail anchor pad of the West side SR 46.				
T400	728,953.9140	2,438,446.6410	439+87.16	-16.76	961.97
	Feature: IPINS #5 rebar set w/ Red ODOT cap				
T500	729,843.1570	2,438,449.9680	448+75.85	14.64	954.08
	Feature: IPINS #5 rebar set w/ Red ODOT cap				
VM429	727,961.6186	2,438,494.7488	429+93.84	0.00	
	Feature: monbox				
VM486	733,625.1021	2,438,315.8768	486+60.15	0.00	
	Feature: monbox				

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, TOPSOIL	142 CU. YD.
659, SEEDING AND MULCHING	1281 SQ. YD.
659, REPAIR SEEDING AND MULCHING	64 SQ. YD.
659, COMMERCIAL FERTILIZER	0.17 TON
659, LIME	0.26 ACRES
659, WATER	7 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

UNSUITABLE SOILS

THE FOLLOWING ITEMS AND QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO ADDRESS UNSUITABLE SOILS ENCOUNTERED IN THE AREA UNDER THE PROPOSED CULVERT.

203, EXCAVATION	26 CU YD
203, GRANULAR MATERIAL, TYPE C (703.16)	26 CU YD
204, GEOTEXTILE FABRIC, TYPE D	52 SQ YD

STRUCTURE/CULVERT IDENTIFICATION SIGNS

STRUCTURE IDENTIFICATION SIGNS (I-H25b) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURE:
ATB-46-1106

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:
630, SIGN, FLAT SHEET, 730.20, 1 SQ FT
630, GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND/OR REMOVALS

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF PIPES.

STA. 447+17 TO STA. 447+83

202, PAVEMENT REMOVED	152 SY
204, SUBGRADE COMPACTION	194 SY
255, FULL DEPTH PAVEMENT SAWING	49 FT
301, ASPHALT CONCRETE BASE, PG64-22 (T=10")	50 CY
304, AGGREGATE BASE (T=6")	32 CY
407, NON-TRACKING TACK COAT @ 0.06 GAL/SY	22 GAL

STA. 447+45 TO STA. 447+55 (ATB-46-1106)

202, PAVEMENT REMOVED	67 SY
301, ASPHALT CONCRETE BASE, PG64-22 (AVG=23.2")	20 CY
407, NON-TRACKING TACK COAT @ 0.06 GAL/SY	6 GAL

THE ABOVE QUANTITIES ARE BASED ON THE PAVEMENT WIDTHS GIVEN IN THE PLANS.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

RESURFACING AFTER PIPE INSTALLATION

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED TO RESURFACE THE ROADWAY AFTER THE COMPLETION OF THE CULVERT OR STRUCTURE PLACEMENT. THIS WORK DOES NOT HAVE TO BE COMPLETE DURING THE DETOUR PERIOD.

STA. 446+67 TO STA. 448+33 (ATB-46-1106)

254, PAVEMENT PLANING, ASPHALT CONCRETE (T=3")	452 SY
407, NON-TRACKING TACK COAT @ 0.06 GAL/SY	55 GAL
408, PRIME COAT, AS PER PLAN @ 0.40 GAL/SY	30 GAL
441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG64-22 (2 - 1½" LIFTS)	38 CY
617, COMPACTED AGGREGATE, AS PER PLAN (T=2")	5 CY

THE ABOVE QUANTITIES ARE BASED ON A RESURFACING THE WIDTH OF THE PAVEMENT AND SHOULDERS AND A LENGTH OF 50' ON EACH SIDE OF THE REQUIRED TRENCH WIDTH FOR INSTALLATION AND/OR REMOVAL.

PAVEMENT MARKINGS

ALL PAVEMENT MARKINGS THAT ARE REMOVED DURING THE CULVERT REPLACEMENT WILL BE REPLACED WITH ITEM 642 - TRAFFIC PAINT. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

621, RPM	4 EA
642, EDGE LINE, 6", TYPE 1	0.07 MI
642, CENTER LINE, TYPE 1	0.04 MI

DESIGN AGENCY ODOT DISTRICT 4
REVIEWED XXX DATE MM/DD/YY STRUCTURE FILE NUMBER .
DRAWN RCB REVISED XXX
DESIGNED RCB CHECKED XXX
ASHTABULA COUNTY STA. 447+17 STA. 447+83

CULVERT NOTES
ATB-46-1106
SR 46 OVER TRIB. OF SKIDMORE LAKE

ATB-CULVERTS-FY2021
PID No. 106804

2 / 6

45 / 64

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
4	30		
7	30		
		6	27
7	30		
8	35		
		7	32
8	35		
0	35		
		1	52
1	16		
		6	25
6	11		
		6	12
0	2		
		0	1
0	0		
		26	149

END FULL DEPTH 493+14

CONDUIT LIMITS STA. 492+90

CONDUIT LIMITS STA. 492+80

BEGIN FULL DEPTH 492+55

BEGIN EARTHWORK STA. 490+90

CARRIED TO GENERAL NOTES SHEET 4

CALCULATED	CHECKED
RCB	MAC

CROSS SECTIONS - S.R. 46 (11.92)
STA. 490+50.00 TO STA. 493+00.00

ATB-
CULVERTS-FY2021

51
64

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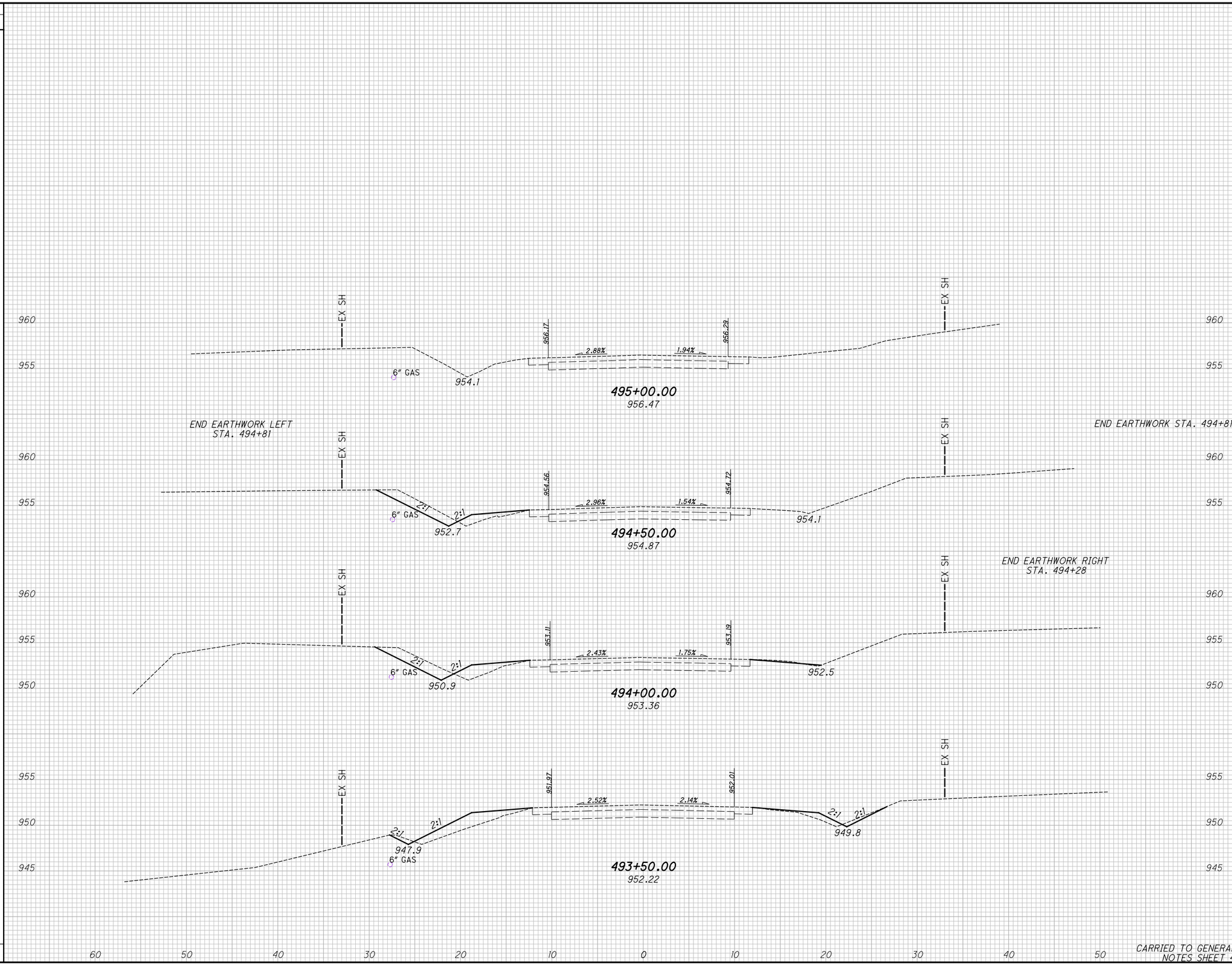
SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		5	2
8	4		
		16	9
9	6		
		10	19
2	14		
		4	29
		35	59

CALCULATED	CHECKED
RCB	MAC

CROSS SECTIONS - S.R. 46 (11.92)
STA. 493+50.00 TO STA. 495+00.00

ATB-
CULVERTS-FY2021

52
64