

SPECIFICATIONS

THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIALS SPECIFICATIONS, DATED JANUARY 1, 2019 SHALL GOVERN THIS IMPROVEMENT.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

UTILITIES

UTILITY NOTIFICATION: AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA THAT MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE REGISTERED UTILITY PROTECTION SERVICE AND THE OWNERS OF EACH UNDERGROUND UTILITY FACILITY SHOWN IN THE PLANS.

DUKE - GAS, DENISE GROSS/MARK BRANSCUM 139 EAST FOURTH STREET, ROOM 460A CINCINNATI, OH 45202 513-287-2517

CITY OF MIDDLETOWN WATER & SEWER DEPT. ONE DONHAM PLAZA MIDDLETOWN, OH 45042 513-425-7845 (TODD TADYCH) SCOTT@CITYOFMIDDLETOWN.ORG

DUKE ENERGY - ELECTRIC (DISTRIBUTION) ARRON WRIGHT 2010 DANA AVENUE CINCINNATI, OH 45207 513-458-3856 AARON WRIGHT AARON.WRIGHT@DUKE-ENERGY.COM

AT&T 7201 FAR HILLS AVENUE DAYTON, OHIO 45459 937-296-3588 (HOWARD LAUDERMILK) HL1596@ATT.COM

DUKE ENERGY - ELECTRIC (TRANSMISSION) TIM MEYER 139 E. 4TH STREET, ROOM 552A CINCINNATI, OH 45202 513-287-1266 (TIM MEYER) TIM.MEYER@DUKE-ENERGY.COM

TEXAS EASTERN TRANSMISSION 1157 S.R.122 WEST LEBANON, OHIO 45036 1-513-933-6031 (GLENN INGRAM) HGINGRAM@SPECTRAENERGY.COM

CITY OF FRANKLIN WATER & SEWER DEPARTMENT 1 BENJAMIN FRANKLIN WAY FRANKLIN, OHIO 45005 937-746-5001 (SONNY LEWIS) SLEWIS@FRANKLINOHIO.ORG

CINCINNATI BELL (UNDERGROUND) 221 EAST 4TH STREET BUILDING 121-900 CINCINNATI OHIO, 45202 OFFICE - 1-513-565-7043 (MARK CONNER) CELL - 1-513-565-7133 (PLEASE SEND UTILITY PLAN REVIEWS TO ROADPROJECTS@CINBELL.COM)

CITY OF FRANKLIN PUBLIC WORKS 202 BAXTER DRIVE FRANKLIN, OHIO 45005 937-746-5001 (STEVE INMAN) SINMAN@FRANKLINOHIO.ORG

CINCINNATI BELL TELEPHONE (AERIAL) 209 EAST 7TH STREET BUILDING 121-900 CINCINNATI OHIO, 45202 513-566-5120 (DORIAN JOHNSON) (PLEASE SEND UTILITY PLAN REVIEWS TO ROADPROJECTS@CINBELL.COM)

WARREN COUNTY WATER & SEWER 406 JUSTIC DRIVE LEBANON, OHIO 45036 513-695-1337 (CHRIS BRAUSCH) CHRIS.BRAUSCH@WARREN.OH.US

CHARTER COMMUNICATIONS/SPECTRUM 10920 KENWOOD ROAD BLUEASH, OHIO 45242 (SEND ALL PLANS/CORRESPONDENCE TO DL-SOUTHERN-OHIO-OUTSIDE-PLANT@CHARTER.COM)

CENTURYLINK TELEPHONE 803 E 12TH STREET GREENVILLE, OHIO 513-933-3502 (JORDAN LANGSTON) JORDAN.LANGSTON@CENTURYLINK.COM

METROPOLITIAN COMMUNICATIONS GROUP (MCG) 155 COMMERCE PARK DRIVE, SUITE #1 WESTERVILLE, OHIO 43082 614-392-2873 (CHAD HARKNESS) CHAD.HARKNESS@MCGFIBER.COM

SPRINT - FIBER OPTIC 11370 ENTERPRISE PARK DRIVE SHARONVILLE, OHIO 45241 513*459-5796 (STEVE HUGHES) STEVEN.HUGHES@SPRINT.COM

THAYER POWER AND COMMUNICATION LINE CONSTRUCTION COMPANY, LLC 950 FREEWAY DRIVE N. COLUMBUS, OHIO 43229 614-379-6419 (CHRISTOPHER MCCLOSKEY) CHRISMCCLOSKEY@THAYERPC.COM

BUTLER COUNTY ENGINEER'S OFFICE 1921 FAIRGROVE AVENUE HAMILTON, OHIO 45011 513-785-4107 (GREGORY WILKENS) WILKENS@BCCO.ORG

CROWN CASTLE FIBER 470 SCHROCK RD, SUITE B COLUMBUS, OH 43229 585-445-5813 (JON TARNOWSKI) JON.TARNOWSKI@CROWNCastle.COM

WARREN COUNTY ENGINEER'S OFFICE 210 WEST MAIN STREET LEBANON, OHIO 45036 513-695-3301 (NEIL TUNISON) NEIL.TUNISON@CO.WARREN.OH.US

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNERS OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C. THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS APPROXIMATE. THE EXACT LOCATION SHALL BE THE RESPONSIBILITY OF THE UTILITY OWNER. THE EXISTING UTILITIES IN THE PROJECT AREA SHALL BE PROTECTED DURING CONSTRUCTION.

COFFERDAMS AND EXCAVATION BRACING

THIS ITEM IS INCLUDED IN THE PLANS TO BE USED AS NEEDED BASED ON THE CONTRACTORS MEANS AND METHODS AT EACH WORK LOCATION. INCLUDES PAYMENT FOR THE WORK AT ALL PLAN LOCATIONS SHALL BE LUMP SUM BID ITEM 503 COFFERDAMS AND EXCAVATION BRACING.

ITEM 203, EMBANKMENT, AS PER PLAN

THIS ITEM CONSISTS OF ENGINEER BACKFILL BEHIND THE RETAINING WALL AS DETAILED ON SHEET 67. THE FOLLOWING QUANTITY HAS BEEN DETERMINED USING THE END AREA METHOD FROM SHEETS 37 - 39 AND HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 203 EMBANKMENT, AS PER PLAN 555 CY

PROJECTS LOCATED OVER A SOLE SOURCE AQUIFER

THE PROJECT AREA IS LOCATED OVER THE BURIED VALLEY AQUIFER SYSTEM, A DESIGNATED SOLE SOURCE AQUIFER. IN ORDER TO MINIMIZE THE POTENTIAL FOR A RELEASE IN THIS SENSITIVE AREA, ALL PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL BE PERFORMED IN AN ENVIRONMENTALLY RESPONSIBLE MANNER.

PROJECTS LOCATED OVER A SOLE SOURCE AQUIFER, CONTINUED

SPILLS OF FUELS, OILS, CHEMICALS OR OTHER MATERIALS WHICH COULD POSE A THREAT TO GROUNDWATER SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR. IF THE SPILL IS A REPORTABLE AMOUNT, THE CONTRACTOR SHOULD CONTACT MIDDLETOWN, OHIO FIRE DEPARTMENT 1-513-425-7766, FRANKLIN FIRE DEPARTMENT 1-937-746-4542 OR THE OHIO EPA'S SPILLS HOTLINE 1-800-282-9378 FOR CLEAN-UP OF THE SPILL FOR CLEAN-UP OF THE SPILL.

PROJECTS IN OR NEAR A DRINKING WATER SOURCE

THIS PROJECT IS LOCATED IN OR NEAR THE SOURCE OF A PUBLIC DRINKING WATER SUPPLY. IN ORDER TO MINIMIZE THE POTENTIAL TO CONTAMINATE THIS WATER SUPPLY, PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL BE PERFORMED IN AN ENVIRONMENTALLY RESPONSIBLE MANNER. THE CONTRACTOR SHALL IMMEDIATELY TAKE STEPS TO MITIGATE ANY EVENT, SUCH AS A SPILL OF FUELS, OILS, OR CHEMICALS, THAT COULD THREATEN TO CONTAMINATE THE DRINKING WATER SUPPLY. ANY SUCH SPILL OR EVENT SHALL BE REPORTED IMMEDIATELY TO THE MIDDLETOWN WATER TREATMENT FACILITY 1-513-425-7781 OR THE FRANKLIN OHIO WATER TREATMENT FACILITY 1-937-746-7634. IF THE SPILL IS A REPORTABLE AMOUNT, THE CONTRACTOR SHOULD CONTACT MIDDLETOWN, OHIO FIRE DEPARTMENT 1-513-425-7766, FRANKLIN FIRE DEPARTMENT 1-937-746-4542 OR THE OHIO EPA'S SPILLS HOTLINE 1-800-282-9378 FOR CLEAN-UP OF THE SPILL FOR CLEAN-UP OF THE SPILL.

MEASURES TO MINIMIZE HARM

THE FOLLOWING MEASURES TO MINIMIZE HARM WILL BE IMPLEMENTED, AS PER THE OFFICIAL WITH JURISDICTION (OWJ) LETTERS WITH THE CITY OF FRANKLIN, THE CITY OF MIDDLETOWN, AND MIAMI CONSERVANCY DISTRICT:

- 1) ACCESS TO THE GMRRT AND THE PARKING LOT ON BAXTER DRIVE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.
2) TEMPORARY CONSTRUCTION FENCING SHALL BE INSTALLED ALONG PROPOSED CONSTRUCTION LIMITS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES TO PROTECT THE EXISTING 4(F) PROPERTY AND THE PUBLIC.
3) APPROPRIATE SIGNAGE SHALL BE INSTALLED TO ALERT USERS OF THE GMRRT OF CONSTRUCTION ACTIVITIES, IF IN PROXIMITY TO RECREATIONAL FACILITIES OR FEATURES.
4) THE STAGING AND/OR STORAGE OF CONSTRUCTION EQUIPMENT OR MATERIALS SHALL NOT TAKE PLACE OUTSIDE PROPOSED CONSTRUCTION LIMITS THAT ARE WITHIN THE DEFINED BOUNDARIES OF THE 4(F) PROPERTY.
5) THE CONTRACTOR SHALL BE REQUIRED TO CLOSELY COORDINATE THE CONSTRUCTION SCHEDULE WITH ODOT AND THE CITY OF MIDDLETOWN PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.

ITEM 204, EXCAVATION OF SUBGRADE AND EMBANKMENT

WHENEVER ROCK OR SHALE IS ENCOUNTERED WITHIN 24" OF THE BOTTOM OF ASPHALT, IT IS TO BE REMOVED ACCORDING TO 204.05 AND REPLACED WITH ITEM 204 EMBANKMENT. REMOVE THE ROCK OR SHALE TO 12" BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT OR PAVED SHOULDERS, INCLUDING UNDER NEW CURBS AND GUTTERS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 204, EXCAVATION OF SUBGRADE 500 CY
ITEM 204, EMBANKMENT 500 CY

ITEM 204 SUBGRADE COMPACTION AND PROOF ROLLING

UNSUITABLE SUBGRADE SHALL BE CORRECTED BY MEANS OF UNDERCUTTING AND REPLACING AS DIRECTED BY THE ENGINEER. THE ANTICIPATED DEPTH OF UNDERCUT IS 18". PLACE A TYPE D GEOTEXTILE AT THE BOTTOM OF THE UNDERCUT PRIOR TO FILLING. BACKFILL THE UNDERCUT WITH ITEM 204 GRANULAR MATERIAL, TYPE C. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR SUBGRADE TREATMENT.

ITEM 204 - EXCAVATION OF SUBGRADE, 18 INCHES DEEP 3,000CY
ITEM 204 - GRANULAR MATERIAL, TYPE C 3,000CY
ITEM 204 - GEOTEXTILE FABRIC 6,000SY

ITEM 204 -PROOF ROLLING.

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204, PROOF ROLLING, 4 HOUR

ITEM 623 - CONSTRUCTION LAYOUT STAKES

THE CONTRACTOR IS TO PROVIDE ALL LABOR AND MATERIALS REQUIRED TO ADEQUATELY INSURE THE PROPER ELEVATIONS AND LOCATIONS OF ALL ITEMS INCLUDED IN THE WORK. THIS IS TO BE PAID FOR UNDER ITEM 623, LUMP SUM, CONSTRUCTION LAYOUT STAKES. PRIOR TO CONSTRUCTION, BENCH MARKS SHALL BE RE-ESTABLISHED OUTSIDE OF THE CONSTRUCTION LIMITS. THIS WORK SHALL BE PERFORMED UNDER THE SUPERVISION OF A PROFESSIONAL SURVEYOR, REGISTERED IN THE STATE OF OHIO. UNLESS OTHERWISE NOTED, ALL STATIONING AND OFFSET CALLOUTS ARE REFERENCED TO THE CONSTRUCTION CENTERLINE.

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS SECTIONS, EVEN THOUGH OTHERWISE SHOWN.

CONDUIT

THE LOCATIONS AND ELEVATIONS OF THE CONDUITS SHOWN ON THE PLANS ARE APPROXIMATE AND MAY BE CHANGED AT THE DIRECTION OF THE PROJECT ENGINEER TO BETTER ACCOMMODATE NATURAL DRAINAGE. INVERT ELEVATIONS OF STORM CONDUITS ARE TO BE FIELD VERIFIED AND ADJUSTED IF REQUIRED.

STORM SEWER PIPES

THE CONTRACTOR TO FIELD VERIFY THE SIZES AND TYPE OF EXISTING STORM SEWER PIPES BEFORE ORDERING COLLARS AND NEW STORM PIPES TO EXTEND LINES.

EXTEND PIPES BASED UPON MATERIAL TYPE. CONTRACTOR TO VERIFY PRIOR TO ORDERING MATERIAL
CONTRACTOR TO REMOVE HALF HEADWALL AND FULL HEADWALL BEFORE EXTENDING THE PIPES.

EXISTING SUBSURFACE DRAINAGE

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.
PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE. UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

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

601, TIED CONCRETE BLOCK MAT, TYPE 1, 6 SQ. YD.
611, PRECAST REINFORCED CONCRETE OUTLET, 3 EACH
605, 4" UNCLASSIFIED PIPE UNDERDRAINS 90 FT.

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607

DITCH PROFILE GRADES

NOTE THAT DITCH PROFILE GRADES ARE SHOWN ON CROSS SECTIONS.

ENDANGERED BAT HABITAT REMOVAL

THE PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT (MY OTIS SODALIS) AND THE NORTHERN LONG-EARED BAT (MY OTIS SEPTENTRIONALIS). NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OF GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED BETWEEN THE HOURS OF 9:00 PM AND 7:00 AM. IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING. ONLY TREES DEEMED NECESSARY WILL BE REMOVED. ANY TREE GREATER THAN 12" IN DIAMETER SCHEDULED FOR REMOVAL SHALL BE CONFIRMED WITH THE OWNER. THE CITY OF MIDDLETOWN ENGINEER CAN BE REACHED AT 1-513-425-7710, AND THE CITY OF FRANKLIN ENGINEER CAN BE REACHED AT 1-937-746-9921. ENGINEER SHALL RESPOND WITHIN TWO WORKING DAYS.

ITEM 203 - SPECIAL BENCHING

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN 203.05. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.05.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

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.

ITEM 614, MAINTENANCE OF TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES DURING WORKING HOURS BY USE OF THE EXISTING PAVEMENT.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER.

IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

GENERAL NOTES

BUT/WAR GMR TRAIL EXTENSION

CALCULATED LG CHECKED TGB

ITEM 614 – NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME TABLE

<u>ITEM</u>	<u>DURATION OF CLOSURE</u>	<u>NOTICE DUE TO PERMITS & PIO</u>
RAMP & ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTICE TO OFFICE OF COMMUNICATIONS TIME TABLE.

POST CONSTRUCTION STORM WATER TREATMENT

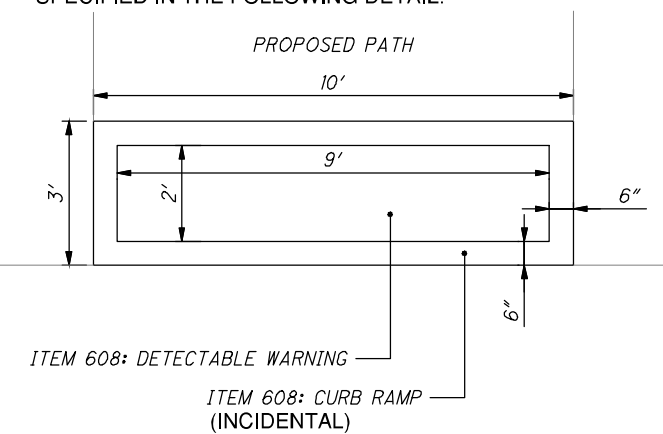
THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

VEGETATED FILTER STRIP

THIS PLAN UTILIZES VEGETATED FILTER STRIP(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4 INCH LIFT OF TOPSOIL AND ITEM 670, SLOPE EROSION PROTECTION TO ALL DISTURBED AREAS DESIGNATED AS VEGETATED FILTER STRIPS, THE EDGE OF SHOULDER, AND THE FORESLOPE AS SPECIFIED IN THE PLANS.

ITEM 608 – DETECTABLE WARNINGS, AS PER PLAN

CONSTRUCT CURB RAMPS PER BP 7.1. ANY INCIDENTAL CONCRETE REQUIRED IS INCLUDED WITH THE COST OF DETECTABLE WARNINGS, AS PER PLAN. THIS QUANTITY INCLUDES PAYMENT AND PLACEMENT OF THE ITEMS SPECIFIED IN THE FOLLOWING DETAIL:



CALCULATED
LG
CHECKED
TGB

GENERAL NOTES

BUT/WAR GMR TRAIL EXTENSION

5A
67

SHEET NUM.								PART.		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5	8	9	10	52	67			01/CMQ/OT	02/CMQ/OT						
ROADWAY															
LS								LS	LS	201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN	5
	1								1	202	20010	1	EACH	HEADWALL REMOVED	
	65								65	202	35100	65	FT	PIPE REMOVED, 24" AND UNDER	
	21								21	202	35200	21	FT	PIPE REMOVED, OVER 24"	
	1562							1,562		202	38000	1,562	FT	GUARDRAIL REMOVED	
				8398				3,929	4,469	203	10000	8,398	CY	EXCAVATION	
				15026				6,145	8,881	203	20000	15,026	CY	EMBANKMENT	
500								215	285	204	13000	500	CY	EXCAVATION OF SUBGRADE	
3000								1,290	1,710	204	13000	3,000	CY	EXCAVATION OF SUBGRADE 18" DEEP	
500								215	285	204	20000	500	CY	EMBANKMENT	
3000								1,290	1,710	204	30020	3,000	CY	GRANULAR MATERIAL, TYPE C	
4								2	2	204	45000	4	HOUR	PROOF ROLLING	
6000								2,580	3,420	204	50000	6,000	SY	GEOTEXTILE FABRIC	
	300							225	75	606	15050	300	FT	GUARDRAIL, TYPE MGS	
	50							25	25	606	15150	50	FT	GUARDRAIL, TYPE MGS HALF POST SPACING	
	1550							975	575	606	15250	1,550	FT	GUARDRAIL, TYPE MGS QUARTER POST SPACING	
	2							1	1	606	26100	2	EACH	ANCHOR ASSEMBLY, TYPE E, (MASH 2016)	5
	2							2		606	26500	2	EACH	ANCHOR ASSEMBLY, TYPE T	
	1805							860	945	607	98000	1,805	FT	FENCE, MISC.: RM 5.2 WOOD FENCE	5
	708							357	351	607	98000	708	FT	FENCE, MISC.:RM 5.2 WOOD FENCE, AS PER PLAN	67
	12								12	608	53021	12	SF	DETECTABLE WARNING, AS PER PLAN	5 A
	9							9		617	10100	9	CY	COMPACTED AGGREGATE, 2"	
EROSION CONTROL															
	125							55	70	653	10000	125	CY	TOPSOIL FURNISHED AND PLACED, 4"	
	1123			20727				9,878	11,972	659	00510	21,850	SY	SEEDING AND MULCHING, CLASS 2	
	1123							478	645	670	00500	1,123	SY	SLOPE EROSION PROTECTION	
								LS	LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
								LS	LS	832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
								LS	LS	832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
								50,224	66,576	832	30000	116,800	EACH	EROSION CONTROL	
DRAINAGE															
LS								LS	LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
		12						4.9	7.1	601	11000	12	SY	RIPRAP, TYPE D, 6" SLAB	
		29						7	22	601	21050	29	SY	TIED CONCRETE BLOCK MAT, TYPE 1	
		15						0.0	15.0	601	21060	15	SY	TIED CONCRETE BLOCK MAT, TYPE 2	
		12						12		601	32100	12	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	
		67						43	24	601	32200	67	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
		12						6.1	5.9	602	20000	12	CY	CONCRETE MASONRY	
90								40	50	605	98000	90	FT	UNDERDRAINS, MISC.:ENCOUNTERED	5
		142						50	92	611	00406	142	FT	4" CONDUIT, TYPE F, FOR UNDERDRAIN OUTLETS	
		53						34	19	611	04200	53	FT	12" CONDUIT, TYPE A, 706.02	
		55							55	611	04900	55	FT	12" CONDUIT, TYPE D	
		35						35		611	06400	35	FT	15" CONDUIT, TYPE D	
		139							139	611	10200	139	FT	24" CONDUIT, TYPE A, 707.01, AL COATED	
		15						15		611	16200	15	FT	36" CONDUIT, TYPE A, 707.01, AL COATED	
		36						36		611	16600	36	FT	36" CONDUIT, TYPE C	
		21							21	611	22200	21	FT	54" CONDUIT, TYPE A, 707.01, AL COATED	
		55							55	611	24300	55	FT	60" CONDUIT, TYPE D, 707.01, AL COATED	
		19						19		611	28000	19	FT	84" CONDUIT, TYPE A, 707.03	
		1							1	611	98470	1	EACH	CATCH BASIN, NO. 2-2B	
		6						2	4	611	99574	6	EACH	MANHOLE, NO. 3	
3		4						3	4	611	99710	7	EACH	PRECAST REINFORCED CONCRETE OUTLET	

CALCULATED
 GAB
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GENERAL SUMMARIES
BUT/WAR GMR TRAIL EXTENSION
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SHEET NUM.								PART.		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5	8	9	10	52	67			01/CMQ/OT	02/CMQ/OT						
			9652					4150	5502	204	10000	9652	SY	PAVEMENT	
			734					315	419	301	46000	734	CY	SUBGRADE COMPACTION	
			1609					692	917	304	20000	1609	CY	ASPHALT CONCRETE BASE, PG64-22, 3"	
			454					195	259	407	10000	454	GAL	AGGREGATE BASE, 6"	
			286					123	163	441	50000	286	CY	TACK COAT @ 0.055 GAL/SY	
														ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22, 1.25"	
														TRAFFIC CONTROL	
		18						11	7	626	00110	18	EACH	BARRIER REFLECTOR, TYPE 2, (ONE-WAY)	
		312						228	96	630	03100	324	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
		7						2	5	630	80100	7	SF	SIGN, FLAT SHEET	
		25						22	3	630	85100	25	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
		25						19	6	630	86002	25	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
														RETAINING WALLS (361+50 to 368+56)	
555								277	278	203	20001	555	CY	EMBANKMENT, AS PER PLAN	67
					485			242	243	204	50100	485	SY	GEOTEXTILE FABRIC, 712.09, TYPE A	
					2848			1424	1424	507	00400	2,848	FT	STEEL PILES, MISC.:SOLDIER PILES	67
1808								904	904	524	94602	1,808	FT	DRILLED SHAFTS, 30" DIAMETER, ABOVE BEDROCK	
					712			356	356	524	94604	712	FT	DRILLED SHAFTS, 30" DIAMETER, INTO BEDROCK	
					4350			2175	2175	610	50010	4,350	SF	RETAINING WALL, MISC.:PRECAST LAGGING	67
					LS			LS	LS	610	60000	LS		RETAINING WALL, MISC.:CAST-IN-PLACE LAGGING	67
					89			44	45	866	00101	89	EACH	GROUND ANCHOR, AS PER PLAN (80 KIP DESIGN LOAD AT 30 DEG)	67
														INCIDENTALS	
LS								LS	LS	614	11000	LS		MAINTAINING TRAFFIC	
LS								LS	LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
LS								LS	LS	624	10000	LS		MOBILIZATION	

CALCULATED
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GENERAL SUMMARIES
 BUT/WAR GMR TRAIL EXTENSION
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 67

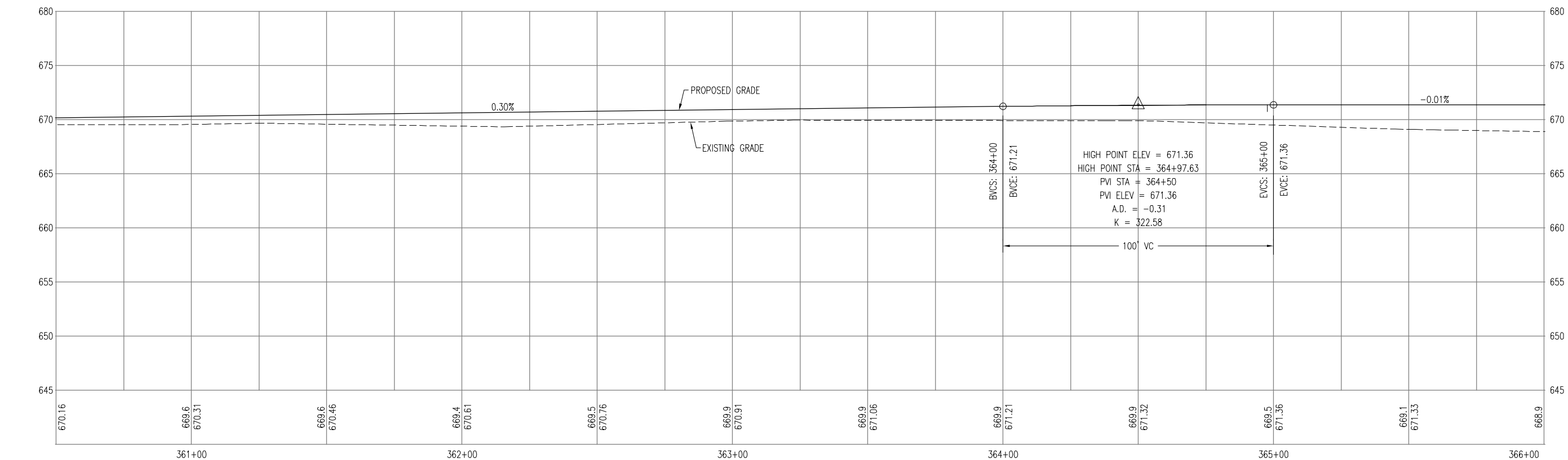
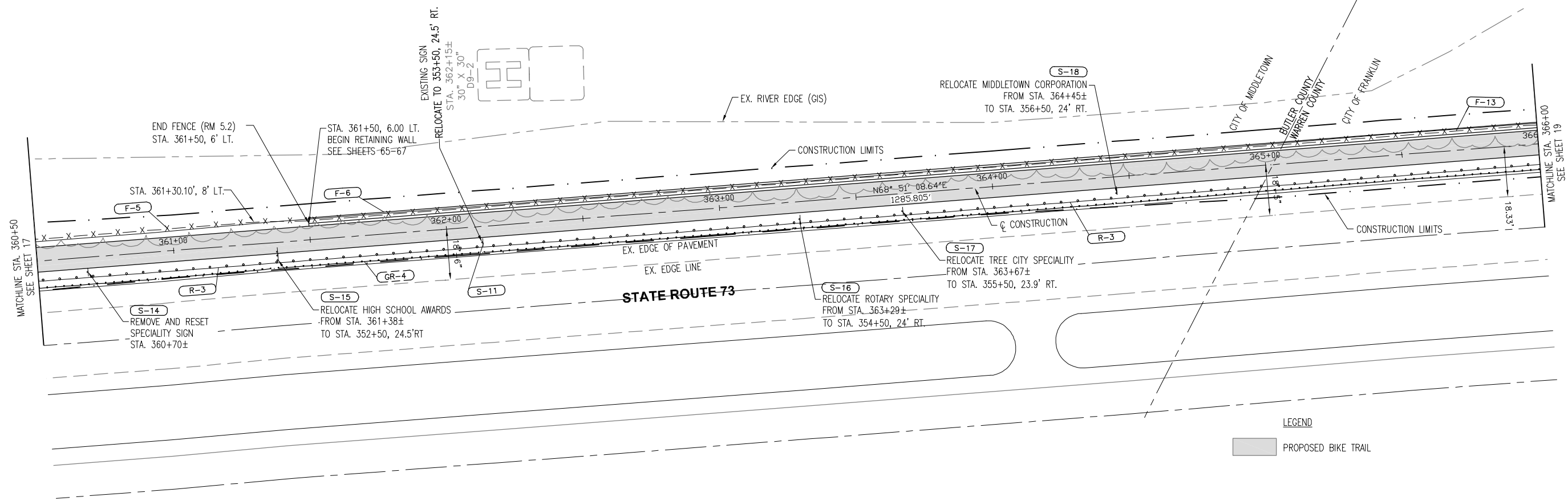
SHEET NO.	REFERENCE NO.	STATION		SIDE	202				606				607		608	617	626	630			651	659	670		
		FROM	TO		HEADWALL REMOVED	PIPE REMOVED, 24" AND UNDER	PIPE REMOVED, OVER 24"	GUARDRAIL REMOVED	GAURDRAIL, TYPE MGS	GAURDRAIL, TYPE MGS, HALF POST SPACING	GAURDRAIL, TYPE MGS, QUARTER POST SPACING	ANCHOR ASSEMBLY, MGS, TYPE E, (MASH 2016)	ANCHOR ASSEMBLY, MGS, TYPE T	FENCE, MISC: RM-5.2 WOOD FENCE	FENCE, MISC: RM-5.2 WOOD FENCE, AS PER PLAN	DETECTABLE WARNING, AS PER PLAN	COMPACTED AGGREGATE, 2"	BARRIER REFLECTOR, TYPE 2, (ONE-WAY)	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	SIGN, FLAT SHEET	GROUND MOUNTED SUPPORT, NO 3 POST	TOPSOIL FURNISHED AND PLACED, 4"	SEEDING AND MULCHING, CLASS 2	SLOPE EROSION PROTECTION
		EA	FT		FT	FT	FT	FT	FT	EACH	EACH	FT	FT	SF	CY	EACH	EACH	EACH	SF	FT	CY	SY	SY		
13	F-1	335+11	335+53	L																					
14	S-1	341+40	-	R																					
14	GR-1	341+45	342+95	R						150		1									12/12				
14	F-2	341+87	342+85	L										101											
14	R-2	341+95	345+01	R																					
14	S-8	343+17	-	R					307																
14	GR-2	342+95	344+95	R						175	25		1				3	1	1	2	12				
14	F-3	343+63	345+61	L										200											
14	S-2	343+85	-	R																	12/12				
15	V-1	344+00	348+29	L																					
15	S-3	346+48	-	R																					
15	S-4	348+27	-	R																					
15	F-4	348+90	349+82	L										94											
17	GR-3	356+70	357+10	R							25		1												
17	GR-4	357+10	372+20	R					75	25	1400	1	1				14								
17	F-5	357+31	361+50	L										421											
17	S-12	357+55	-	R																					
17	R-3	357+57	370+12	R					1255																
17	S-13	358+63	-	R																					
17	S-9	359+82	-	R																					
18	S-14	360+70	-	R																					
18	S-15	361+38	-	R																					
18	F-6	361+50	365+07	L											357		4.5								
19	S-11	362+15	-	R																					
18	S-16	363+29	-	R																					
18	S-17	363+67	-	R																					
18	S-18	364+45	-	R																					
19	R-4	366+80	-	L	1																				
19	F-7	368+56	369+50	L										96											
19	F-8	368+56	373+47	L										493											
19	R-6	368+77	-	L																					
19	F-13	365+07	368+58	L																					
20	S-5	374+54	-	R																					
21	F-9	377+06	377+47	L										43											
21	F-10	381+79	382+20	L										43											
21	R-5	382+12	-	L																					
22	S-6	384+84	-	R																					
22	F-13	387+60	389+50	L										190											
23	R-7	393+08	-	-																					
24	F-11	395+81	396+23	L										44											
24	R-8	396+00	-	-																					
25	V-2	399+75	404+50	L																					
25	S-7	403+67	-	R																					
26	V-3	404+50	405+56	L																					
26	R-9	406+18	-	-																					
26	S-10	406+50	-	R															2.25	12					
26	S-19	408+27	-	R															2.25	12					
26	F-12	407+79	408+13	L										36											
26	D-1	408+18	-	-																					
SUBTOTALS					1	65	21	1,562	250	75	1,550	2	2	1,805	708	12	9	18	25	25	6.5	324	125	1,123	1,123
CARRIED TO GENERAL SUMMARY					1	65	21	1,562	250	75	1,550	2	2	1,805	708	12	9	18	25	25	7	324	125	1,123	1,123

CALCULATED
GAB
CHECKED
TGB

ROADWAY SUB-SUMMARY

BUT/WAR GMR TRAIL EXTENSION

8
67



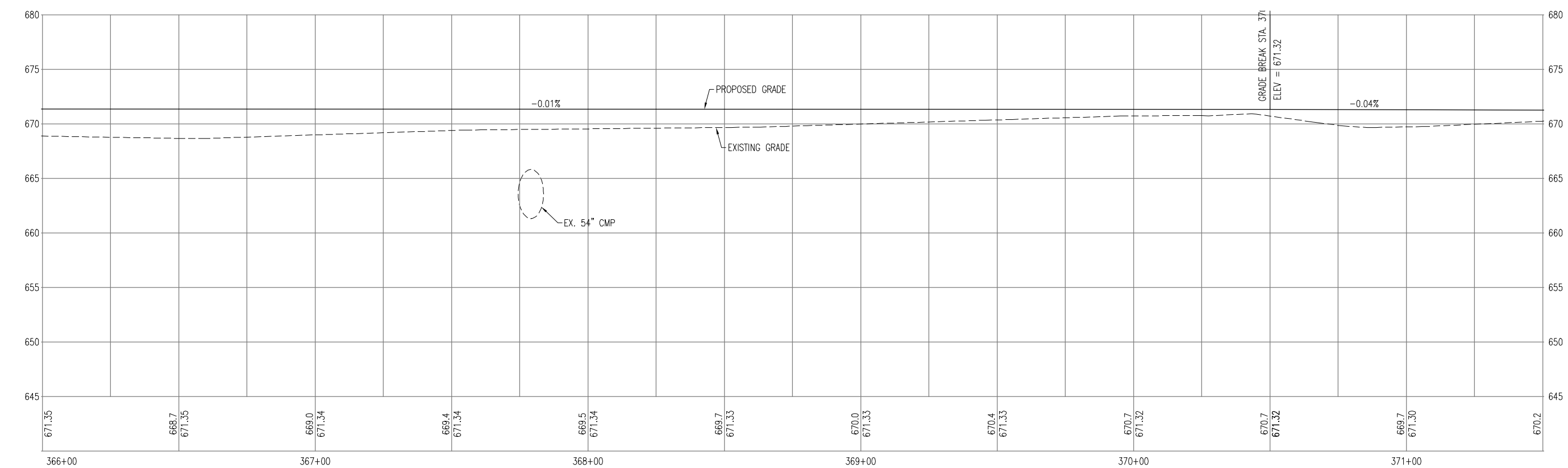
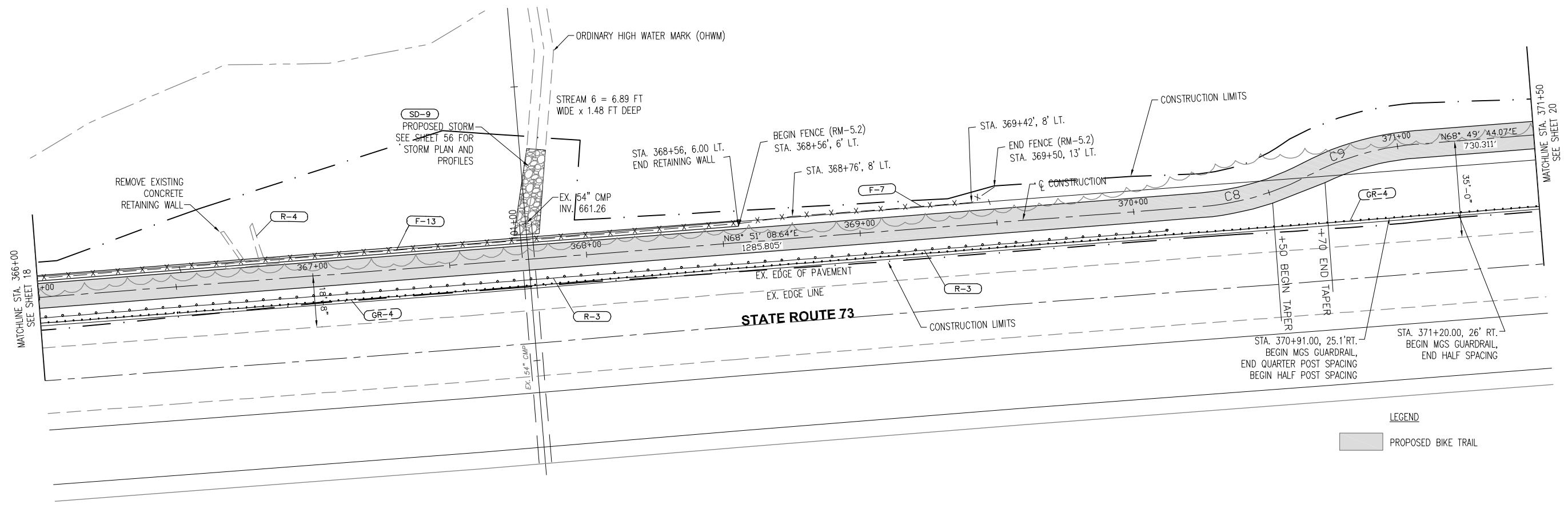
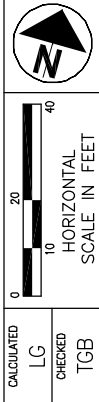
Centerline Profile

Scale: 1" = 5' VERTICAL
1" = 20' HORIZONTAL

PLAN & PROFILE
Sta. 360+50 to Sta. 366+00

BUT/WAR GMR TRAIL EXTENSION

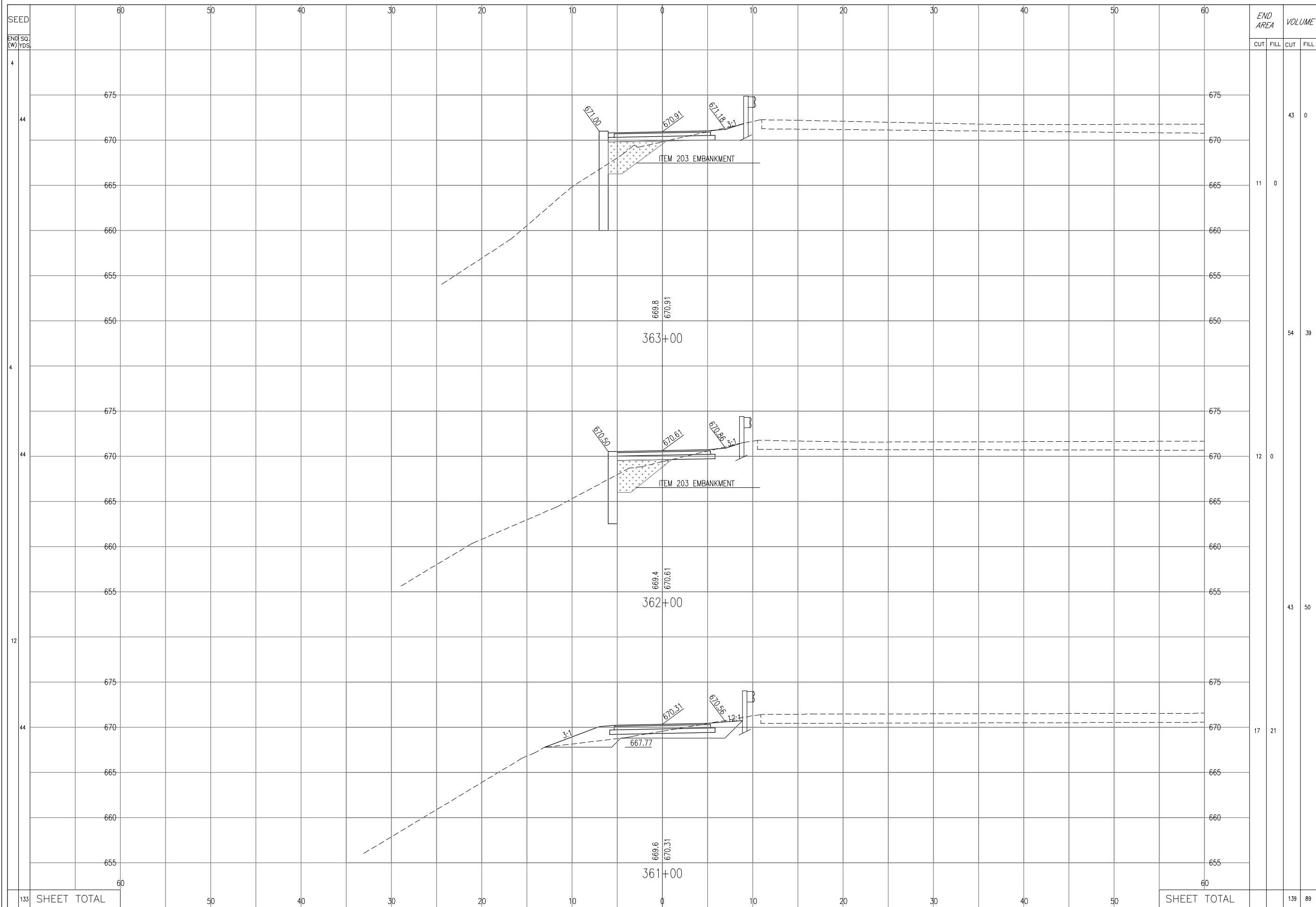
CURVE TABLE							
CURVE	PI	NORTHING	EASTING	DELTA ANGLE	RADIUS	LENGTH	TANGENT
CB	370+45.56	569555.2420	1452450.1912	23°44'90"	100.00	40.93	20.75
C9	370+86.47	569412.8286	1452590.6134	23°42'55"	100.00	40.89	20.73



Centerline Profile
 Scale
 1" = 5' VERTICAL
 1" = 20' HORIZONTAL

PLAN & PROFILE
 Sta. 366+00 to Sta. 371+50

BUT/WAR GMR TRAIL EXTENSION

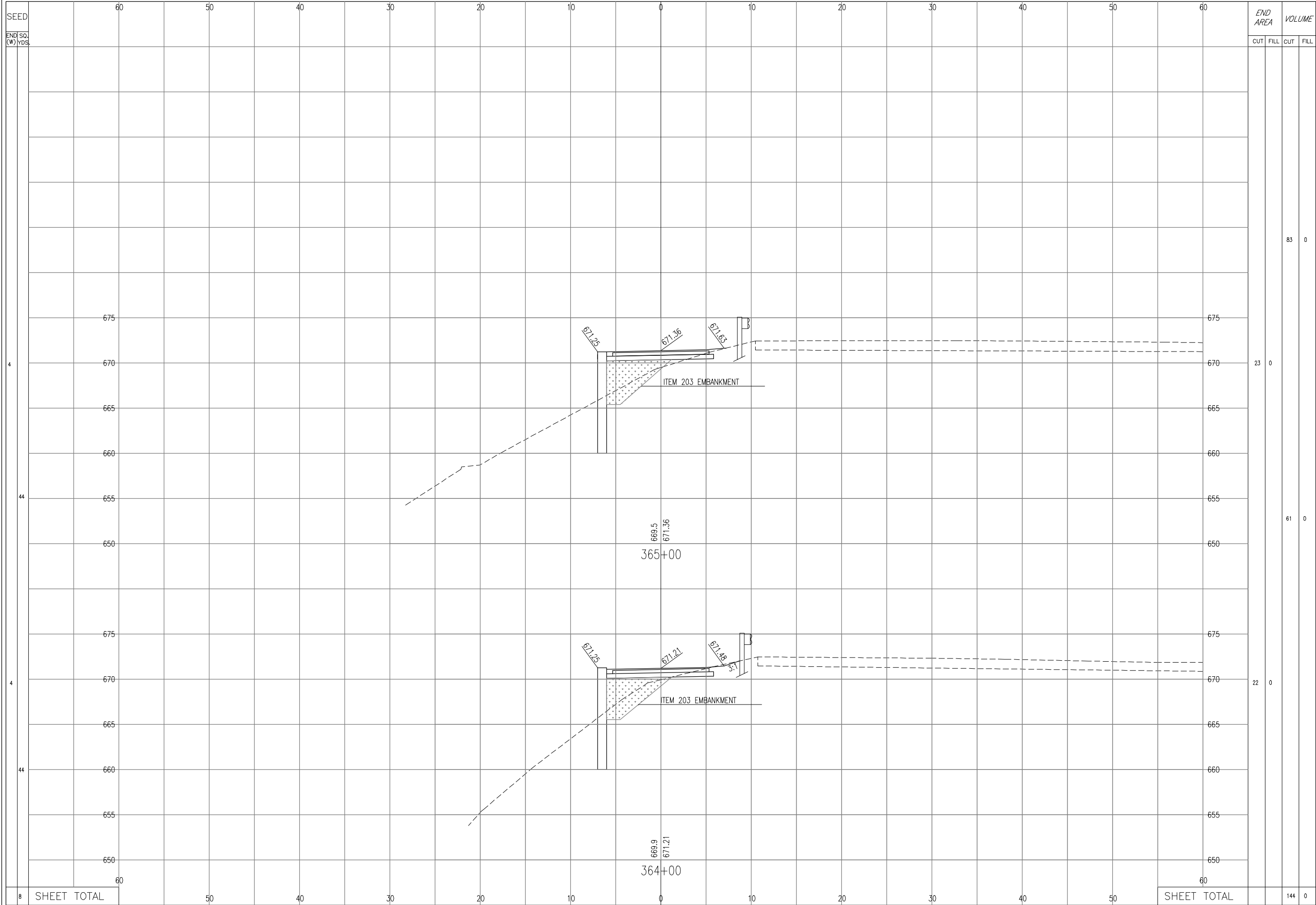


END STA. (W)	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
4				
44			43	0
4				
44	11	0	54	39
4				
44				
44	12	0		
12			43	50
4				
44				
44	17	21		
60				
133	SHEET TOTAL		139	89

CALCULATED
LC
CHECKED
TGB

**CROSS SECTIONS
STA. 361+00 to STA. 363+00**

BUT/WAR GMR TRAIL EXTENSION

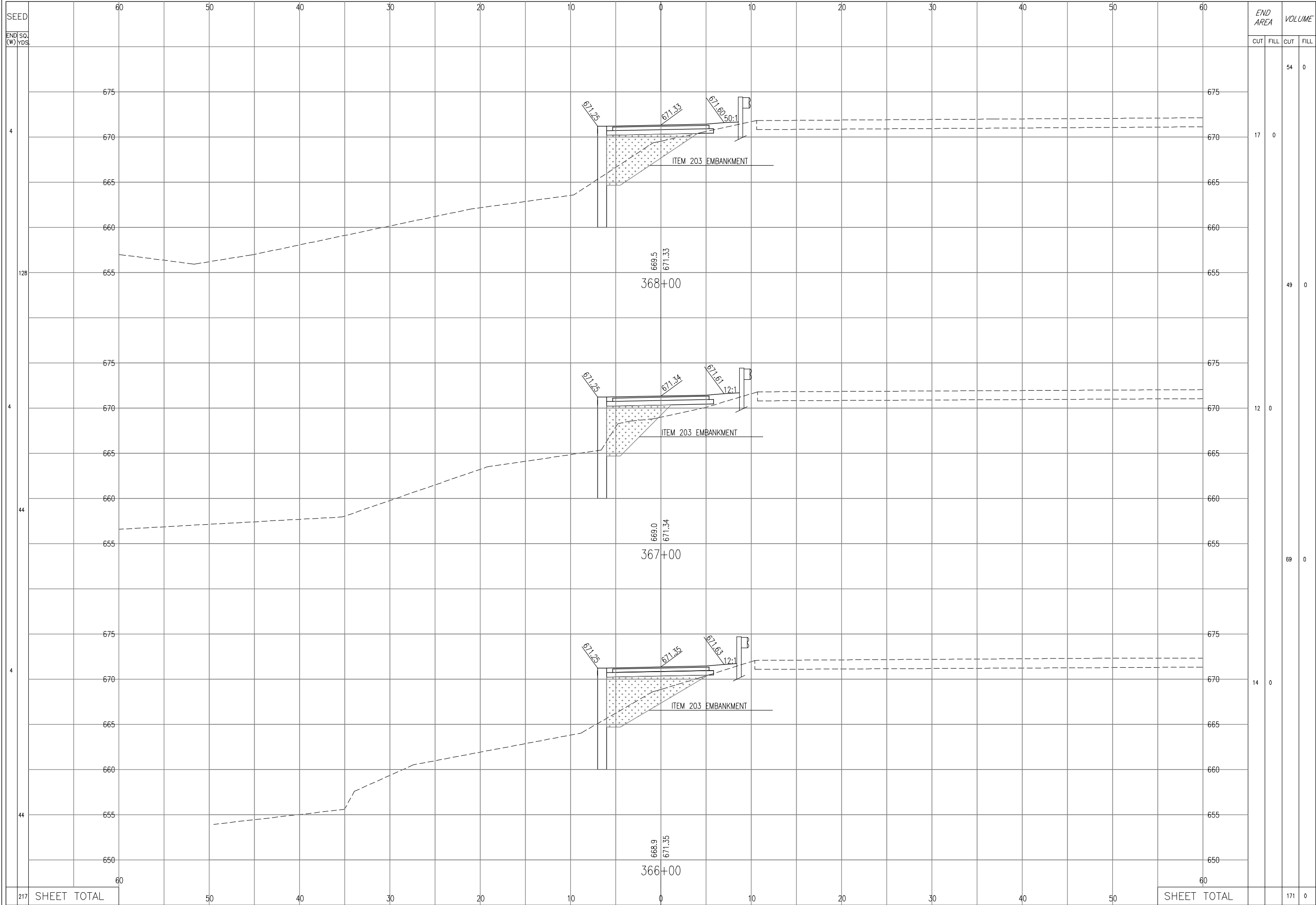


END AREA		VOLUME	
CUT	FILL	CUT	FILL
		83	0
		23	0
		61	0
		22	0
SHEET TOTAL		144	0

CALCULATED
LG
CHECKED
TGB

**CROSS SECTIONS
STA. 364+00 to STA. 365+00**

BUT/WAR GMR TRAIL EXTENSION

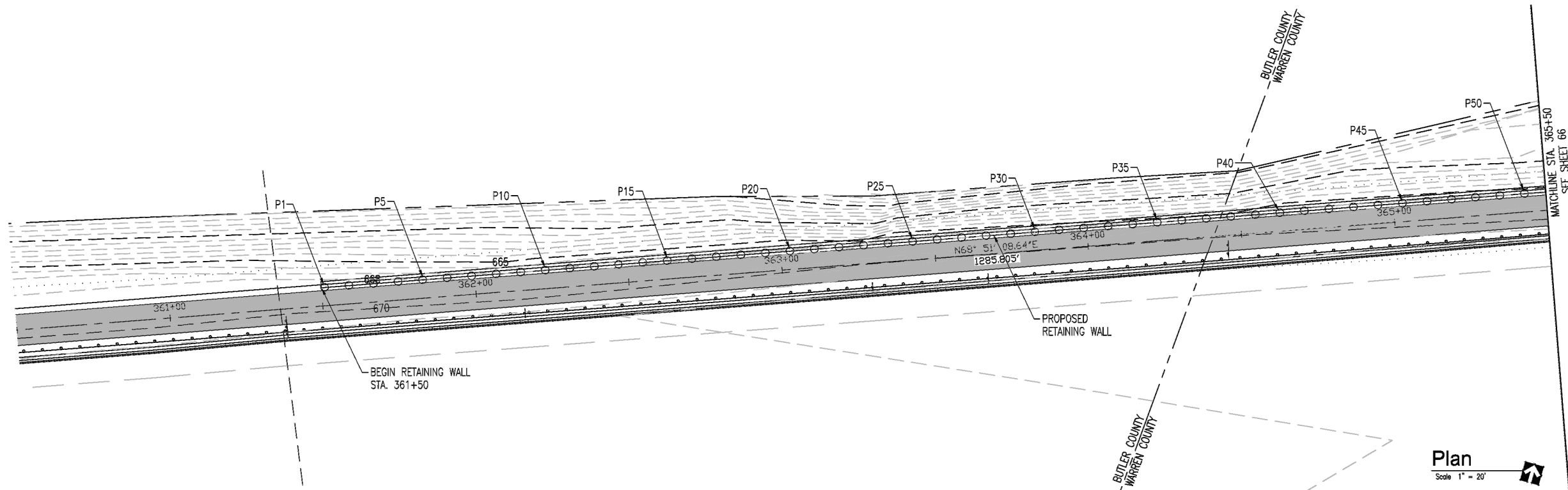


END STA. (W) YDS.	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
675			54	0
670	17	0		
665				
660				
655			49	0
675				
670	12	0		
665				
660				
655			69	0
675				
670	14	0		
665				
660				
655				
650				
60				
SHEET TOTAL			171	0

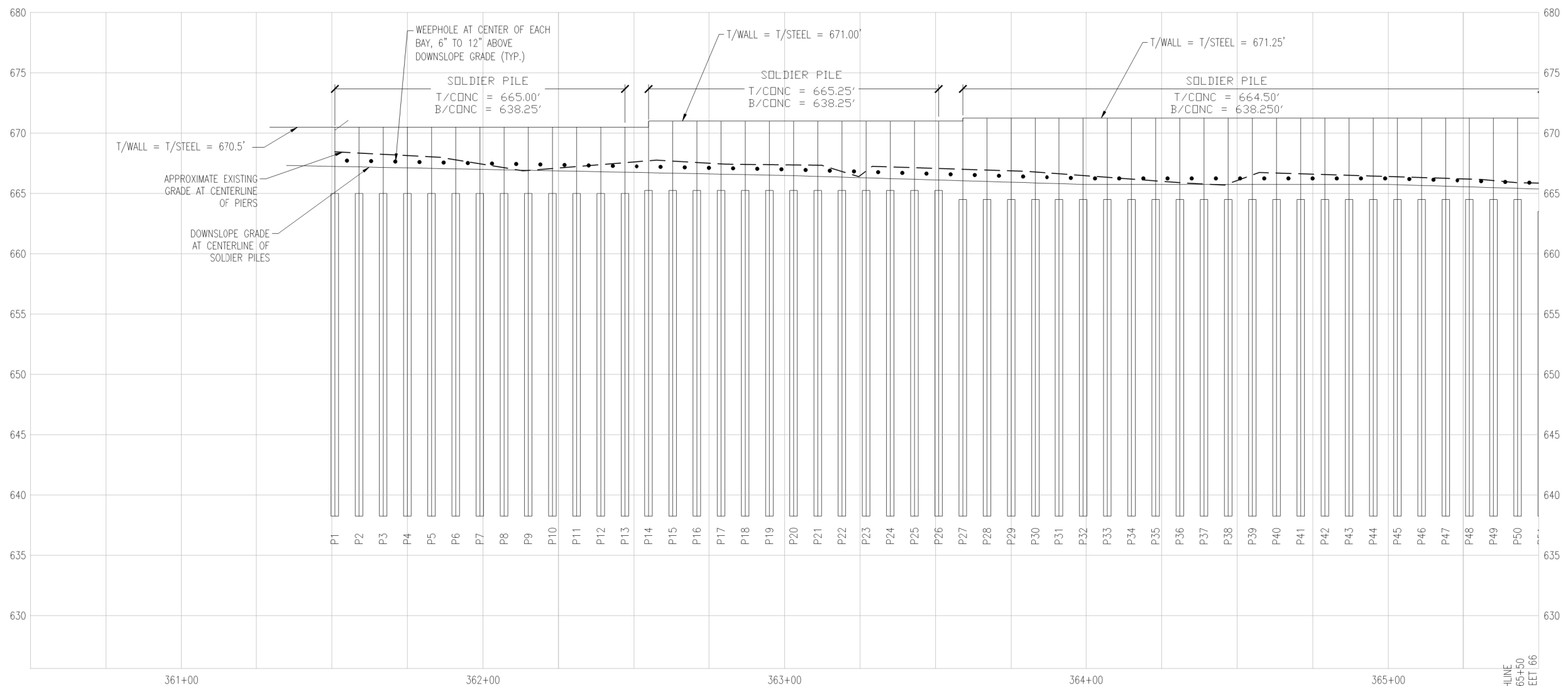
CALCULATED
LC
CHECKED
TGB

**CROSS SECTIONS
STA. 366+00 to STA. 368+00**

BUT/WAR GMR TRAIL EXTENSION



Plan
Scale 1" = 20'



Centerline Profile

Scale
1" = 5' VERTICAL
1" = 20' HORIZONTAL

REV.	DATE	BY	DESCRIPTION
1	2-12-19	DWW	ADDED 18" CULVERT & REMOVED FENCE DETAIL
2	4-7-20	DWW	ADJUSTED TOP OF WALL ELEVATIONS TO MATCH TRAIL



RETAINING WALL PLAN & PROFILE
STA. 361+50 TO STA. 365+50

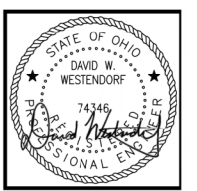
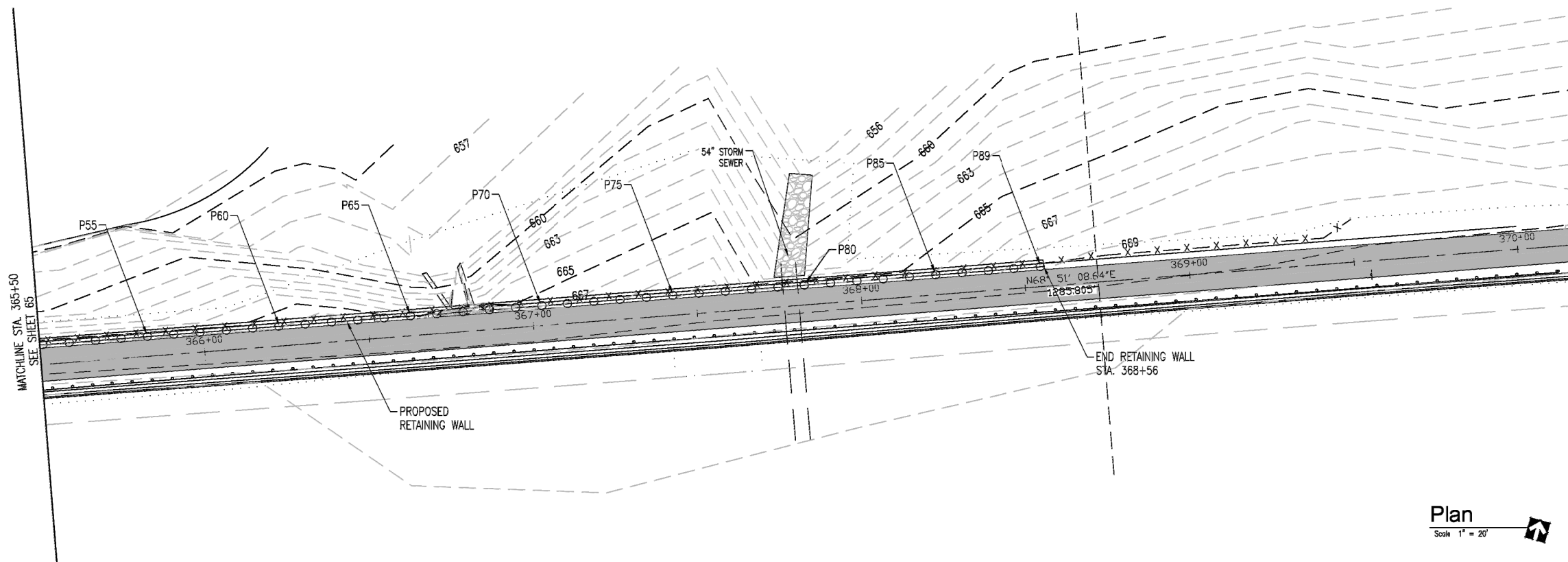


EXHIBIT 1

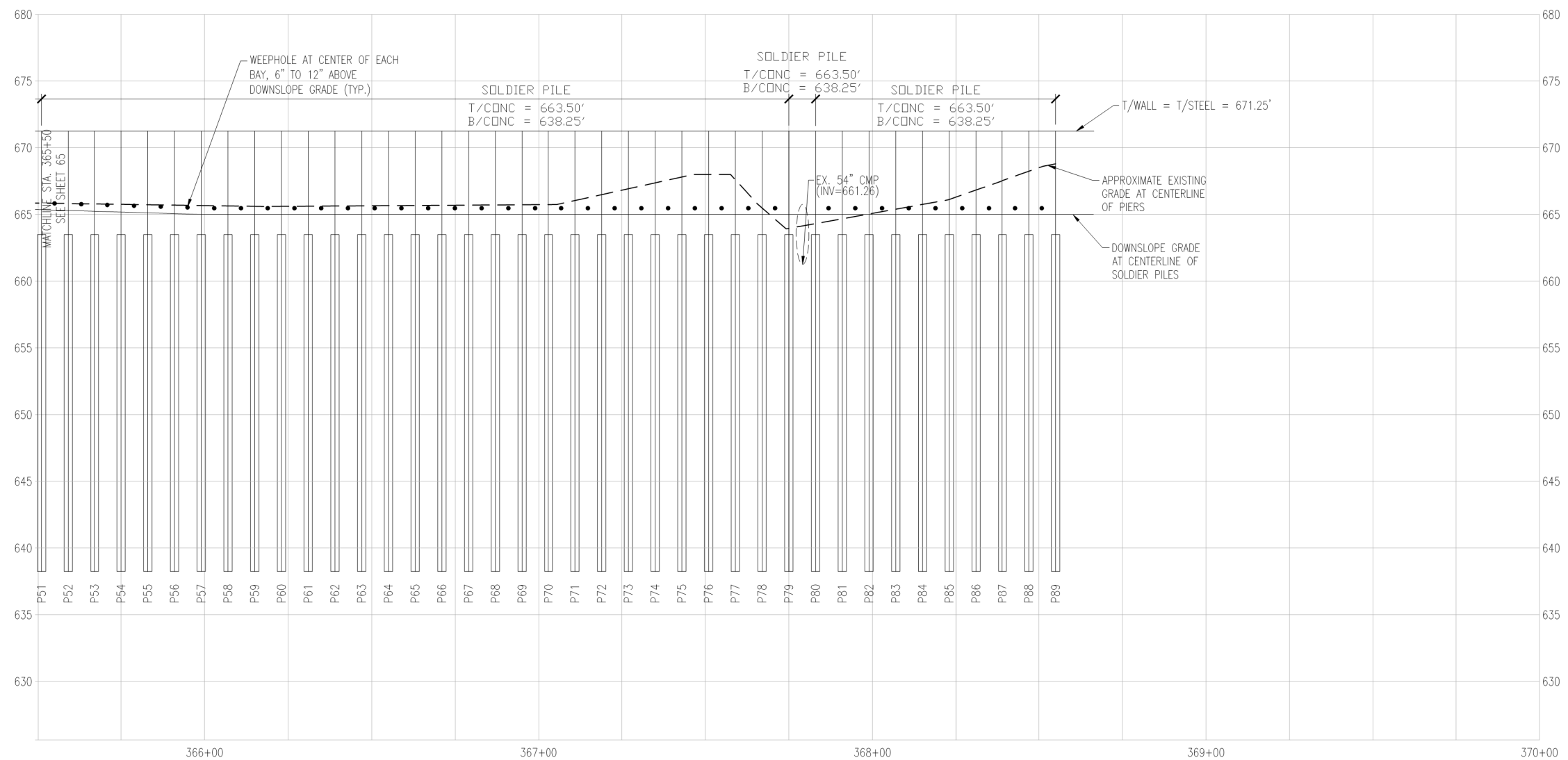
DESIGNED BY:	DWW
DRAWN BY:	KM
APP'D. BY:	DWW
SCALE:	AS SHOWN
DATE:	04/07/2020
JOB NO.:	N1165434
ACAD NO.:	RW.DWG
SHEET NO.:	1

WALL DESIGNED BY
Terracon
Consulting Engineers and Scientists
611 LUNKEN PARK DRIVE CINCINNATI, OHIO 45226
PH. (513) 321-5816 FAX. (513) 321-4540

BUT/WAR GMR TRAIL EXTENSION

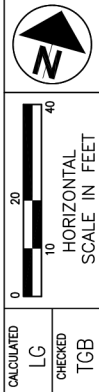


Plan
Scale 1" = 20'



Centerline Profile
Scale 1" = 5' VERTICAL
1" = 20' HORIZONTAL

REV.	DATE	BY	DESCRIPTION
1	2-12-19	DWW	ADDED 18" CULVERT & REMOVED FENCE DETAIL
2	4-7-20	DWW	ADJUSTED TOP OF WALL ELEVATIONS TO MATCH TRAIL



RETAINING WALL PLAN & PROFILE
STA. 361+50 TO STA. 365+50

BUT/WAR GMR TRAIL EXTENSION
66
67



EXHIBIT 2	
DESIGNED BY:	DWW
DRAWN BY:	KM
APP'D. BY:	DWW
SCALE:	AS SHOWN
DATE:	04/07/2020
JOB NO.:	N1185434
ACAD NO.:	RW.DWG
SHEET NO.:	2

WALL DESIGNED BY
Terracon
Consulting Engineers and Scientists
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