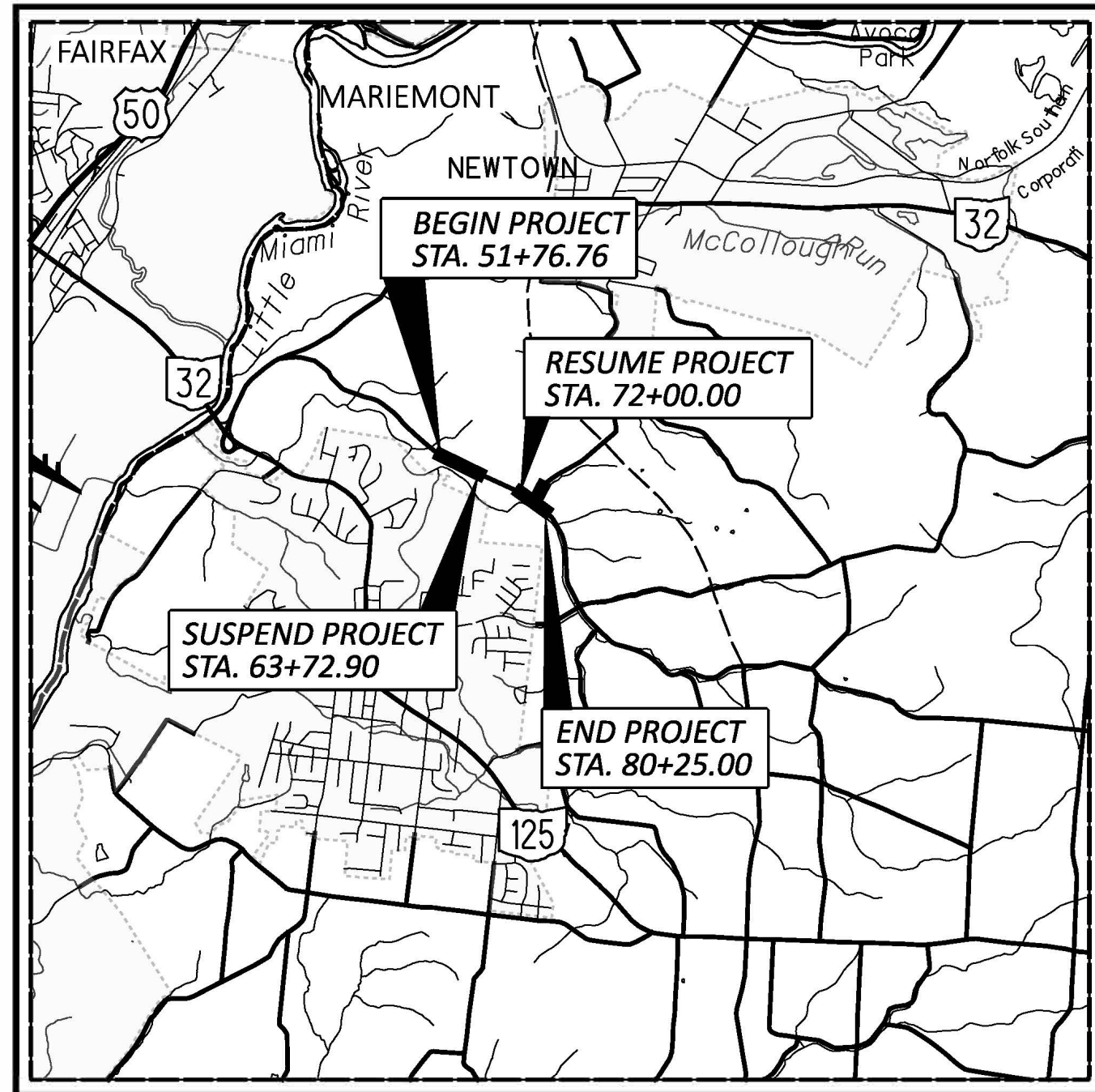


# STATE OF OHIO DEPARTMENT OF TRANSPORTATION

## HAM-CR 358-0.94

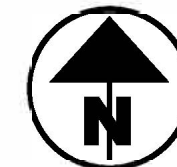
CLOUGH PIKE & NEWTOWN ROAD  
MILITARY SURVEY 2276 AND 2204

ANDERSON TOWNSHIP  
HAMILTON COUNTY, OHIO



**LOCATION MAP**

LATITUDE: 39°06'12" LONGITUDE: -84°22'20"



PORTION TO BE IMPROVED	=====
INTERSTATE HIGHWAY	=====
FEDERAL ROUTES	=====
STATE ROUTES	=====
COUNTY & TOWNSHIP ROADS	=====
OTHER ROADS	=====

DESIGN DESIGNATION	CLOUGH PIKE	NEWTOWN ROAD
CURRENT ADT (2026)	7700	7370
DESIGN YEAR ADT (2046)	9620	9200
DESIGN HOURLY VOLUME (2046)	960	920
DIRECTIONAL DISTRIBUTION	60%	60%
TRUCKS (24 HOUR B&C)	100	160
DESIGN SPEED	45 MPH	40 MPH
LEGAL SPEED	40 MPH	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	(04)- URBAN MINOR ARTERIAL	(05)- URBAN MAJOR COLLECTOR
NHS PROJECT	NO	NO

**DESIGN EXCEPTIONS**

NONE

**ADA DESIGN WAIVERS**

REQUIRED

**UNDERGROUND UTILITIES**  
Contact Two Working Days  
Before You Dig

**OHIO811.org**  
Before You Dig

**OHIO811, 8-1-1, or 1-800-362-2764**  
(Non members must be called directly)

PLAN PREPARED BY:



10200 Alliance Road,  
Suite 300  
Cincinnati OH 45242  
(513) 842-8200

**ENGINEER'S SEAL:**

SIGNED: \_\_\_\_\_  
DATE: 3/9/26

**ENGINEER'S SEAL:**

SIGNED: \_\_\_\_\_  
DATE: 3/9/26

SHEETS 55-58

**INDEX OF SHEETS:**

TITLE SHEET	1
SCHEMATIC PLAN	2
TYPICAL SECTIONS	3
GENERAL NOTES	4-5
MAINTENANCE OF TRAFFIC	6-11
GENERAL SUMMARY	12-13, 13A
SUBSUMMARY	14-15
PROJECT SITE PLAN	16
PLAN AND PROFILE	17-22
CROSS SECTIONS	23-44
INTERSECTION DETAILS	45
DRIVE DETAILS	46-47
STORM SEWER PROFILES	48
WATER WORKS	49-50
TRENCH DETAILS	51
CULVERT DETAILS	52-54
HEADWALL DETAILS	55-58
TRAFFIC SUBSUMMARY	59
TRAFFIC CONTROL SHEETS	60-61
RIGHT OF WAY PLANS	

**FEDERAL PROJECT NUMBER**

E240 (123)

**RAILROAD INVOLVEMENT**

NONE

**PROJECT DESCRIPTION**

CONSTRUCT LEFT TURN LANES ON CLOUGH PIKE AT THE INTERSECTION WITH NEWTOWN ROAD. ALSO COMPLETE THE SIDEWALK ALONG THE SOUTH SIDE OF CLOUGH PIKE BETWEEN COPPERLEAF DRIVE AND NEWTOWN ROAD.

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA:	2.27 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.2 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	2.47 ACRES

**2023 SPECIFICATIONS**

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS, CHANGES LISTED IN THE PROPOSAL, AND THE SUPPLEMENTAL SPECIFICATION 800 VERSION INDICATED ON THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE PART TIME CLOSING OF THE HIGHWAY TO TRAFFIC, AS NOTED ON SHEET P.6. DURING WHICH TIME DETOURS WILL BE PROVIDED AS SHOWN HEREIN. PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

Douglas A. Gruver, P.E.  
District 08 Deputy Director

Pamela Boratyn  
Director, Department of Transportation

**FUTURE MAINTENANCE OF PROPOSED ITEMS:**

ALL PROPOSED DRAINAGE STRUCTURES AND CONVEYANCES SHOWN ON THESE PLANS ARE NOT ACCEPTED BY THE BOARD OF COUNTY COMMISSIONERS OF HAMILTON COUNTY, AND THE COUNTY OF HAMILTON IS NOT RESPONSIBLE TO MAINTAIN, REPAIR OR REPLACE ANY PROPOSED DRAINAGE STRUCTURES AND CONVEYANCES SHOWN ON THESE PLANS. EXCEPT HEREIN MODIFIED, ANY PROPOSED DRAINAGE STRUCTURE AND CONVEYANCES CROSSING UNDERNEATH THE COUNTY ROAD SHALL BE THE RESPONSIBILITY OF THE BOARD OF COUNTY COMMISSIONERS OF HAMILTON COUNTY.

ALL PROPOSED SIDEWALK AND CURB RAMPS SHOWN ON THESE PLANS ARE NOT ACCEPTED BY THE BOARD OF COUNTY COMMISSIONERS OF HAMILTON COUNTY, AND THE COUNTY OF HAMILTON IS NOT RESPONSIBLE TO MAINTAIN, REPAIR OR REPLACE ANY PROPOSED SIDEWALK SHOWN ON THESE PLANS.

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	1/19/24	HW-2.2	7/20/18	800-2023 7/18/25	WATERWAY PERMIT
BP-4.1	7/19/13			832 7/18/25	CONDITIONS
BP-7.1	7/18/25	MT-97.10	7/18/25	851 1/17/25	3/20/25
CB-2-2A, 2B, 2C	7/19/24	MT-101.60	1/17/25	878 1/16/26	
		MT-101.90	7/17/20		
DM-1.1	1/17/25				
DM-1.2	1/17/25	TC-41.20	10/18/13		
		TC-41.30	4/21/23		
MGS-2.1	7/18/25	TC-41.40	10/18/13		
MGS-4.2	7/18/25	TC-42.20	10/18/13		
MGS-4.3	7/18/25	TC-52.10	10/18/13		
MGS-5.3	7/15/16	TC-52.20	1/15/21		
		TC-61.30	7/19/24		
RM-5.2	7/21/23	TC-71.10	7/18/25		
		TC-74.10	7/21/23		

TITLE SHEET

HAM-CR358-0.94

MODEL: Sheet PAPER: 34x22 (in.) DATE: 3/9/2026 TIME: 9:00:12 AM USER: cgaerke V:\1780\active\173620182\engineering\118484-400-Engineering\Roadway\Sheets\118484\_CTO01.dgn

DESIGN AGENCY

**Stantec**  
10200 Alliance Road,  
Suite 300  
Cincinnati, OH 45242  
(513) 842-8200

DESIGNER

ZTM

REVIEWER

SNS 08/04/25

PROJECT ID

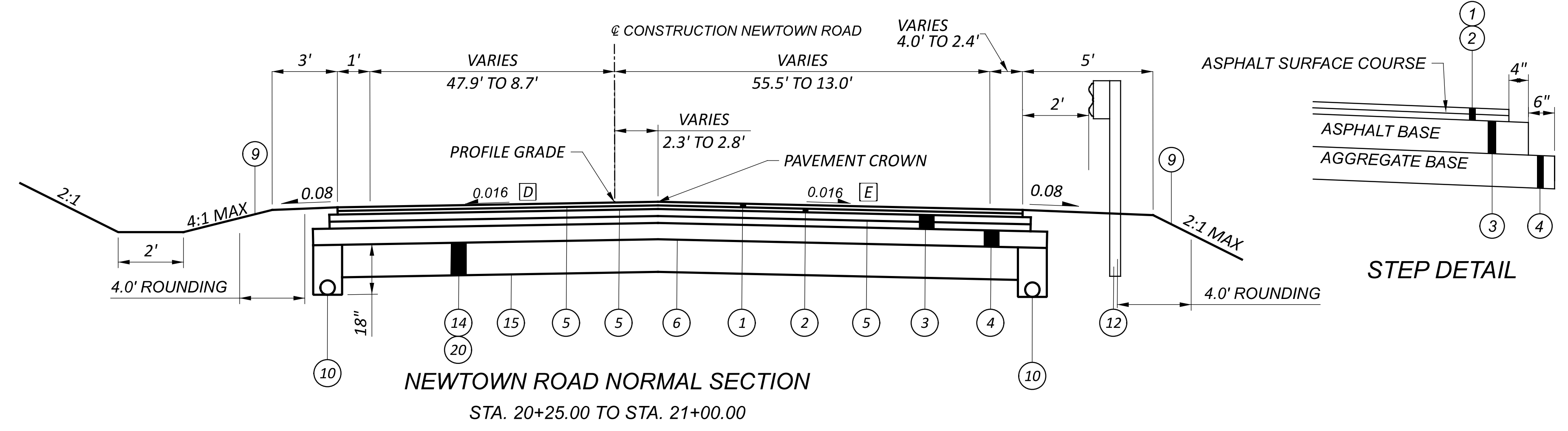
118484

SHEET TOTAL

P.1 | 61

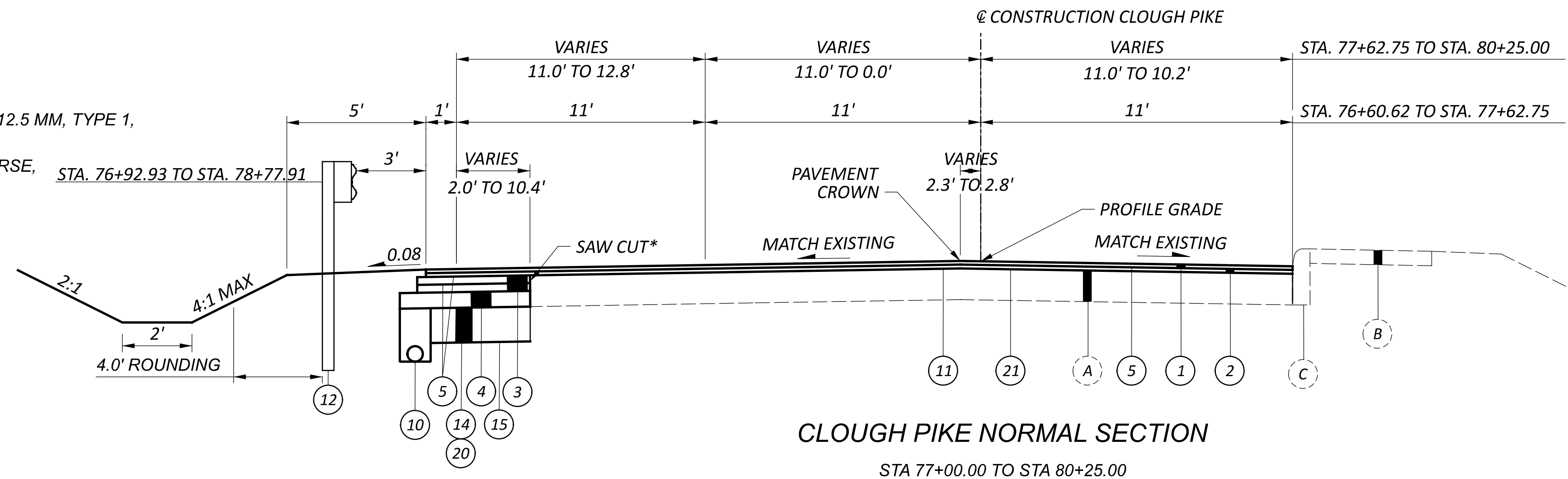
**LEGEND**

- ① ITEM 442 - 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B, PG70-22, (448)
- ② ITEM 441 - 1½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449)
- ③ ITEM 301 - 9" ASPHALT CONCRETE BASE, PG64-22, (449) (2 EQUAL LIFTS)
- ④ ITEM 304 - 6" AGGREGATE BASE
- ⑤ ITEM 407 - NON-TRACKING TACK COAT (APP. RATE 0.055)
- ⑥ ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING
- ⑦ ITEM 608 - 5" CONCRETE WALK
- ⑧ ITEM 304 - 4" AGGREGATE BASE
- ⑨ ITEM 659 - SEEDING AND MULCHING
- ⑩ ITEM 605 - 6" BASE PIPE UNDERDRAINS
- ⑪ ITEM 254 PAVEMENT PLANNING, ASPHALT CONCRETE, 3" DEPTH
- ⑫ GUARDRAIL, TYPE MGS, AS PER PLAN
- ⑬ ITEM 609 - 8" CONCRETE WALK
- ⑭ ITEM 204 - 12" GRANULAR MATERIAL, TYPE B
- ⑮ ITEM 204 - GEOTEXTILE FABRIC, 712.09, TYPE D
- ⑯ ITEM 441 - 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE 1, (449), (DRIVEWAYS)
- ⑰ ITEM 441 - 1½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (DRIVEWAYS)
- ⑱ ITEM 304 - 8" AGGREGATE BASE
- ⑲ ITEM 607 - FENCE, MISC.: WOOD FENCE
- ⑳ ITEM 204 - 12" EXCAVATION OF SUBGRADE
- ㉑ ITEM 407 - NON-TRACKING TACK COAT (APP. RATE 0.085)
- ㉒ ITEM 613 - LOW STRENGTH MORTAR BACKFILL
- A EXISTING PAVEMENT
- B EXISTING CONCRETE WALK
- C EXISTING CURB



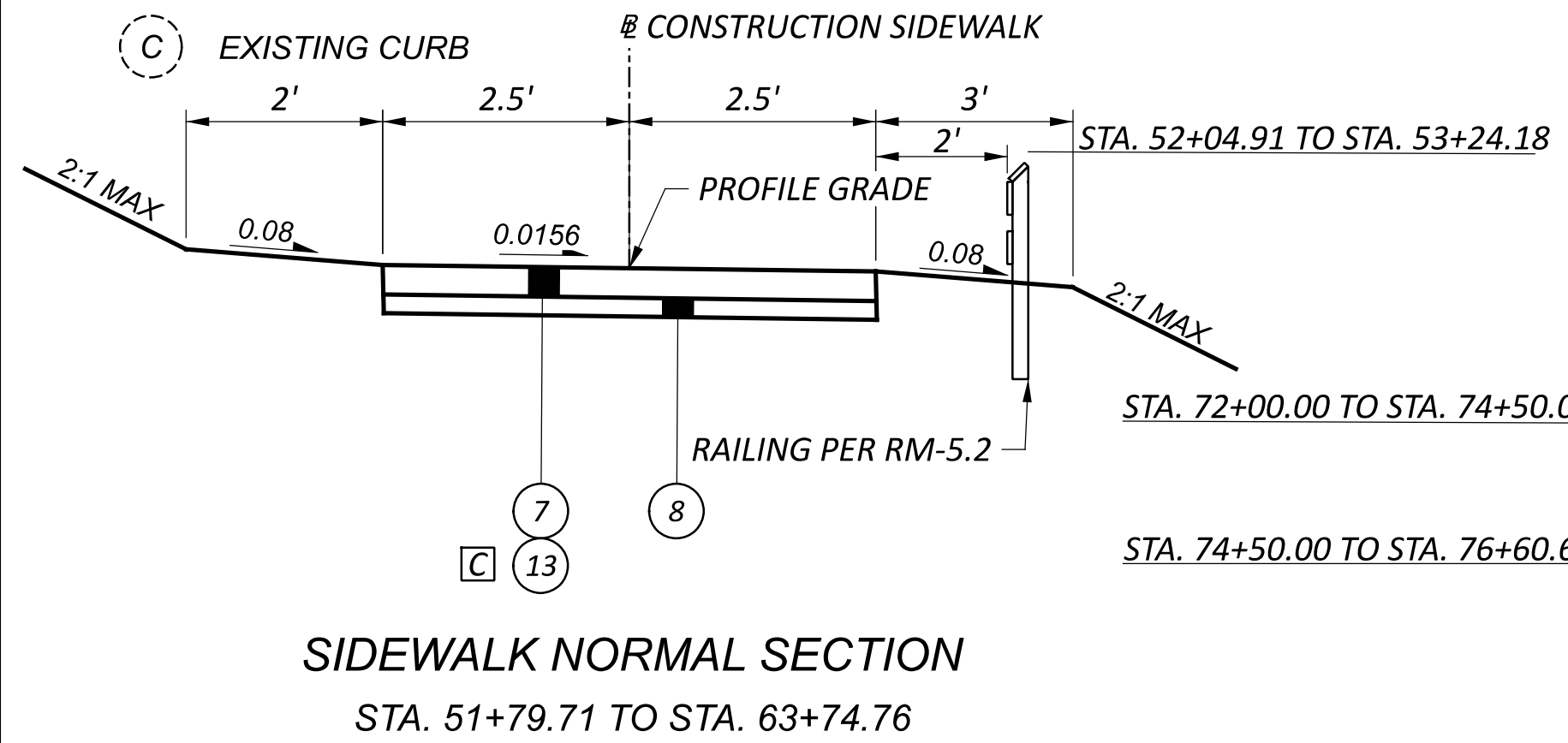
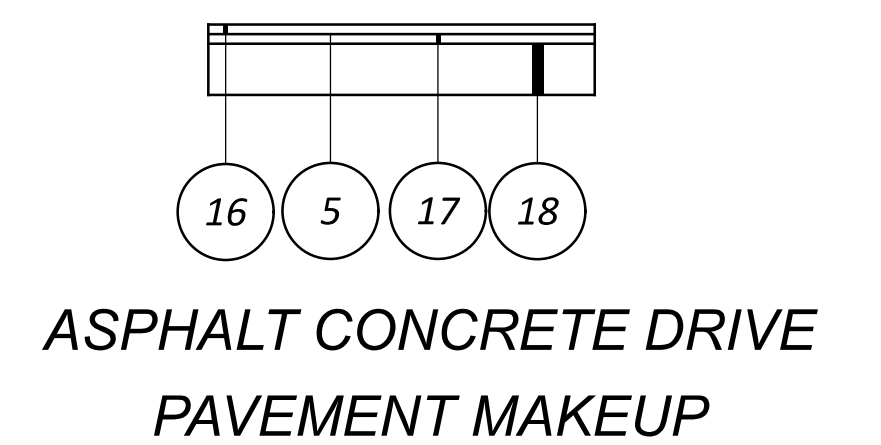
**NEWTOWN ROAD NORMAL SECTION**  
STA. 20+25.00 TO STA. 21+00.00

D TRANSITION FROM 0.016 AT STA. 20+85.00 TO 0.0084 AT STA. 21+00.00  
E TRANSITION FROM 0.016 AT STA. 20+70.00 TO 0.0314 AT STA. 21+00.00

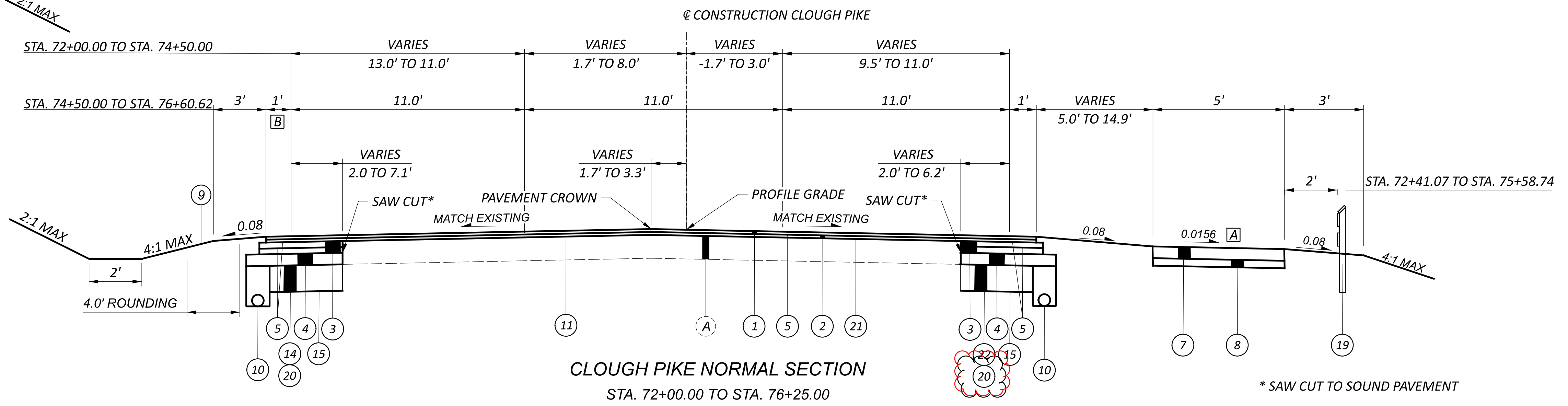


**CLOUGH PIKE NORMAL SECTION**  
STA. 77+00.00 TO STA. 80+25.00

A BEGIN SIDEWALK AT STA. 71+85.58  
B SHOULDER WIDTH VARIES FOR MAILBOX TURNOUT BETWEEN STA. 72+00.00 AND STA. 73+08.94, SEE PLAN SHEET P.19 FOR DETAILS



**SIDEWALK NORMAL SECTION**  
STA. 51+79.71 TO STA. 63+74.76



**CLOUGH PIKE NORMAL SECTION**  
STA. 72+00.00 TO STA. 76+25.00

\* SAW CUT TO SOUND PAVEMENT

HAM-CR358-0.94

MODEL: Sheet PAPER SIZE: 34x22 (in.) DATE: 3/5/2026 TIME: 2:12:52 PM USER: cgaerke V:\1739\active\173620162\engineering\118484\400-Engineering\Roadway\Sheets\118484\_C3Y001.dgn

TYPICAL SECTIONS

DESIGN AGENCY  
**Stantec**  
10200 Alliance Road,  
Suite 300  
Cincinnati, OH 45242  
(513) 842-9200

DESIGNER  
ZTM

REVIEWER  
SNS 08/04/25

PROJECT ID  
118484

SHEET TOTAL  
P.3 | 61

SHEET NUM.										PART.	ALT	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	
4	5	6	7	14	15	49	55	59		01/MPO/ 28/ANDS	(X)	ITEM	EXT	TOTAL				
<b>ROADWAY</b>																		
LS					490					LS		201	11000	LS			CLEARING AND GRUBBING	
				287.5						490		202	23000	490	SY		PAVEMENT REMOVED	
				231						287.5		202	38000	287.5	FT		GUARDRAIL REMOVED	
				2						231		202	35100	231	FT		PIPE REMOVED, 24" DIAMETER AND UNDER	
										2		202	58100	2	EACH		CATCH BASIN REMOVED	
				2,593						2,593		203	10000	2,593	CY		EXCAVATION	
				1,979						1,979		203	20000	1,979	CY		EMBANKMENT	
					1,531					1,531		204	10000	1,531	SY		SUBGRADE COMPACTION	
					480					480		204	13000	480	CY		EXCAVATION OF SUBGRADE	
					370					370		204	30010	370	CY		GRANULAR MATERIAL, TYPE B	
1					1,110					1		204	45000	1	HOUR		PROOF ROLLING	4
				462.5						1,110		204	50000	1,110	SY		GEOTEXTILE FABRIC, 712.09, TYPE D	
				1						462.5		606	15051	462.5	FT		GUARDRAIL, TYPE MGS, AS PER PLAN	4
				2						1		606	26150	1	EACH		ANCHOR ASSEMBLY, MGS TYPE E, (MASH 2016)	
										2		606	26550	2	EACH		ANCHOR ASSEMBLY, MGS TYPE T	
				435						435		607	98000	435	FT		FENCE, MISC.:WOOD FENCE	5
				21						21		609	26000	21	FT		CURB, TYPE 6	
										LS		878	25000	LS			INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	
	LS									LS		SPECIAL	69098400	LS			SPECIAL - CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION	5
<b>EROSION CONTROL</b>																		
				26						26		601	11001	26	SY		RIPRAP, TYPE D, AS PER PLAN	
				2						2		601	32200	2	CY		ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
1										1		659	00100	1	EACH		SOIL ANALYSIS TEST	
556										556		659	00300	556	CY		TOPSOIL	
				5,000						5,000		659	10000	5,000	SY		SEEDING AND MULCHING	
0.68										0.68		659	20000	0.68	TON		COMMERCIAL FERTILIZER	
1.03										1.03		659	31000	1.03	ACRE		LIME	
28										28		659	35000	28	MGAL		WATER	
				319						319		670	00700	319	SY		DITCH EROSION PROTECTION	
				38,650						38,650		832	30000	38,650	EACH		EROSION CONTROL	
										LS		832	15000	LS			STORM WATER POLLUTION PREVENTION PLAN	
										LS		832	15002	LS			STORM WATER POLLUTION PREVENTION INSPECTIONS	
										LS		832	15010	LS			STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
<b>DRAINAGE</b>																		
				0.2						0.2		602	20000	0.2	CY		CONCRETE MASONRY	
				270						270		605	13300	270	FT		6" UNCLASSIFIED PIPE UNDERDRAINS	
				1,024						1,024		605	14000	1,024	FT		6" BASE PIPE UNDERDRAINS	
				104						104		611	00510	104	FT		6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
				3						3		611	98470	3	EACH		CATCH BASIN, NO. 2-2B	
				1	3					4		611	99654	4	EACH		MANHOLE ADJUSTED TO GRADE	
				2						2		611	99710	2	EACH		PRECAST REINFORCED CONCRETE OUTLET	
<b>DRAINAGE ALTERNATES</b>																		
				8						8	X	611	05700	8	FT		15" CONDUIT, TYPE A, (ALTERNATE 1)	
				8						8	X	611	05701	8	FT		15" CONDUIT, TYPE A, AS PER PLAN, 706.02, (ALTERNATE 2)	51
				80						80	X	611	06100	80	FT		15" CONDUIT, TYPE C, (ALTERNATE 1)	
				80						80	X	611	06101	80	FT		15" CONDUIT, TYPE C, AS PER PLAN, 706.02, (ALTERNATE 2)	51
				108						108	X	611	07400	108	FT		18" CONDUIT, TYPE B, (ALTERNATE 1)	
				108						108	X	611	07401	108	FT		18" CONDUIT, TYPE B, AS PER PLAN, 706.02, (ALTERNATE 2)	51
<b>PAVEMENT</b>																		
				2,145						2,145		254	01000	2,145	SY		PAVEMENT PLANING, ASPHALT CONCRETE, 3"	
				343						343		301	56000	343	CY		ASPHALT CONCRETE BASE, PG64-22, (449)	
				369						369		304	20000	369	CY		AGGREGATE BASE	
				524						524		407	20000	524	GAL		NON-TRACKING TACK COAT	
				145						145		441	70200	145	CY		ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449)	
				4						4		441	70500	4	CY		ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (DRIVEWAYS)	
				4						4		441	70600	4	CY		ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (DRIVEWAYS)	
				145						145		442	20050	145	CY		ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (448)	
				8,149						8,149		608	12000	8,149	SF		5" CONCRETE WALK	

GENERAL SUMMARY

DESIGN AGENCY



**Stantec**  
10200 Alliance Road,  
Suite 300  
Cincinnati, OH 45242  
(513) 842-9200

DESIGNER

**QC**

REVIEWER

SNS 08/04/25

PROJECT ID

**118484**

SHEET TOTAL

P.12 | 61





EARTHWORK QUANTITIES					
LOCATION	STATION		203		659
			EXCAVATION	EMBANKMENT	SEEDING & MULCHING
			CU YD	CU YD	
FROM	TO				
CLOUGH PIKE	51+76.76	63+74.69	1019	1664	2266
CLOUGH PIKE	71+85.58	80+25.00	1424	304	2581
NEWTOWN ROAD	20+50.00	21+00.00	150	11	153
TOTALS CARRIED TO GENERAL SUMMARY			2593	1979	5000

**EROSION CONTROL**

ITEM 832, EROSION CONTROL SHALL BE PERFORMED EXCEPT THAT STRAW BALES WILL NOT BE PERMITTED AS A FORM OF EROSION CONTROL. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 832, EROSION CONTROL 38,650 EACH

ROADWAY SUBSUMMARY																
SHEET NO.	REF. NO.	LOCATION	STATION		SIDE	202			606		607	609	626	638		
						PIPE REMOVED, 24" AND UNDER	CATCH BASIN REMOVED	GUARDRAIL REMOVED	GUARDRAIL, TYPE MGS, AS PER PLAN	ANCHOR ASSEMBLY, MGS TYPE E	ANCHOR ASSEMBLY, MGS TYPE T	FENCE, MISC.: WOOD FENCE	CURB, TYPE 6	BARRIER REFLECTOR, TYPE 2, BI-DIRECTIONAL, WHITE/WHITE	WATER WORK, MISC. REMOVING FIRE HYDRANT	WATER WORK, MISC. REMOVING EXISTING MANHOLE CURB AND COVER
						FT	EACH	FT	FT	EACH	EACH	FT	FT	EACH		
FROM	TO															
17	F1	CLOUGH PIKE	52+04.91	53+24.18	RT											
20	F2	CLOUGH PIKE	72+41.07	75+58.74	RT											
20-21	R1	CLOUGH PIKE	75+34.17	76+46.27	LT	113	1									
21	R2	NEWTOWN ROAD/CLOUGH PIKE	20+62.29	77+17.39	LT	118	1									
21	R3	NEWTOWN ROAD	20+02.62	21+00.00	RT			162.5								
21	R4	NEWTOWN ROAD	20+71.53		LT									1		
21	R5	NEWTOWN ROAD	20+79.38		LT										1	
18	G1	CLOUGH PIKE	55+56.69	56+24.13	RT			62.5	62.5		1			2		
18	G2	CLOUGH PIKE	56+50.55	57+17.91	RT			62.5	62.5		1			2		
21	G3	CLOUGH PIKE	76+61.07	78+55.21	LT			337.5	1					7		
21	C1	CLOUGH PIKE	76+56.79	76+84.60	RT									21		
SUBTOTAL						231	2	287.5	462.5	1	2	435	21	11	1	1
TOTALS CARRIED TO GENERAL SUMMARY						231	2	287.5	462.5	1	2	435	21	11	1	1

SUBSUMMARIES

DRAINAGE SUBSUMMARY																																						
SHEET NO.	REF. NO.	LOCATION	STATION		SIDE	601										602		605		611						670		FOR INFORMATION ONLY										
						RIPRAP, TYPE D, AS PER PLAN	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CONCRETE MASONRY	6" UNCLASSIFIED PIPE UNDERDRAINS	6" BASE PIPE UNDERDRAINS	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	15" CONDUIT, TYPE A	15" CONDUIT, TYPE A, AS PER PLAN	15" CONDUIT, TYPE C	15" CONDUIT, TYPE C, AS PER PLAN	18" CONDUIT, TYPE B	18" CONDUIT, TYPE B, AS PER PLAN	CATCH BASIN, NO. 2-2B	MANHOLE ADJUSTED TO GRADE	PRECAST REINFORCED CONCRETE OUTLET	DITCH EROSION PROTECTION	OUTLET INTO UNDERDRAIN	OUTLET INTO DRAINAGE STRUCTURE	11.25° BEND	22.50° BEND	45° BEND	90° BEND	PLUG	TEE	WYE							
						SY	SY	CY	CY	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	SY	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH					
17	D1	CLOUGH PIKE	52+38.73	52+50.35	RT																																	
19	D2	CLOUGH PIKE	61+85.12	61+87.44	RT			2	0.13				8	8																								
20	D3	CLOUGH PIKE	75+33.82	76+11.70	LT										80	80																						
20-21	D4	CLOUGH PIKE	76+11.70	76+46.27	LT																																	
21	D5	CLOUGH PIKE	76+46.27	77+13.11	LT																																	
21	D6	CLOUGH PIKE	77+16.59	77+20.95	LT	26																																
20	E1	CLOUGH PIKE	72+79.97	77+11.56	LT																																	
20-21	E2	CLOUGH PIKE	76+11.39	76+34.99	LT																																	
21	E3	CLOUGH PIKE	77+29.26	80+24.99	LT																																	
20	UD-1	CLOUGH PIKE	72+00.00	76+17.34	LT					135	287	16																										
20	UD-2	CLOUGH PIKE	72+00.00	76+05.97	RT		1.8			135	269	32																										
20-21	UD-3	NEWTOWN ROAD	20+32.89	21+00.00	LT						81	10																										
21	UD-4	NEWTOWN ROAD	20+23.50	21+00.00	RT						82	23																										
21	UD-5	CLOUGH PIKE	77+23.79	80+48.00	LT		1.8				304	23																										
SUBTOTAL						26	3.6	2	0.13	270	1023	104	8	8	80	80	108	108	3	1	2	319	1	2	0	0	3	1	5	1	0							
TOTALS CARRIED TO GENERAL SUMMARY						26	3.6	2	0.2	270	1023	104	8	8	80	80	108	108	3	1	2	319	1	2	0	0	3	1	5	1	0							

DESIGN AGENCY



**Stantec**  
10200 Alliance Road,  
Suite 300  
Cincinnati, OH 45242  
(513) 842-9200

DESIGNER

QC

REVIEWER

SNS 12/03/24

PROJECT ID

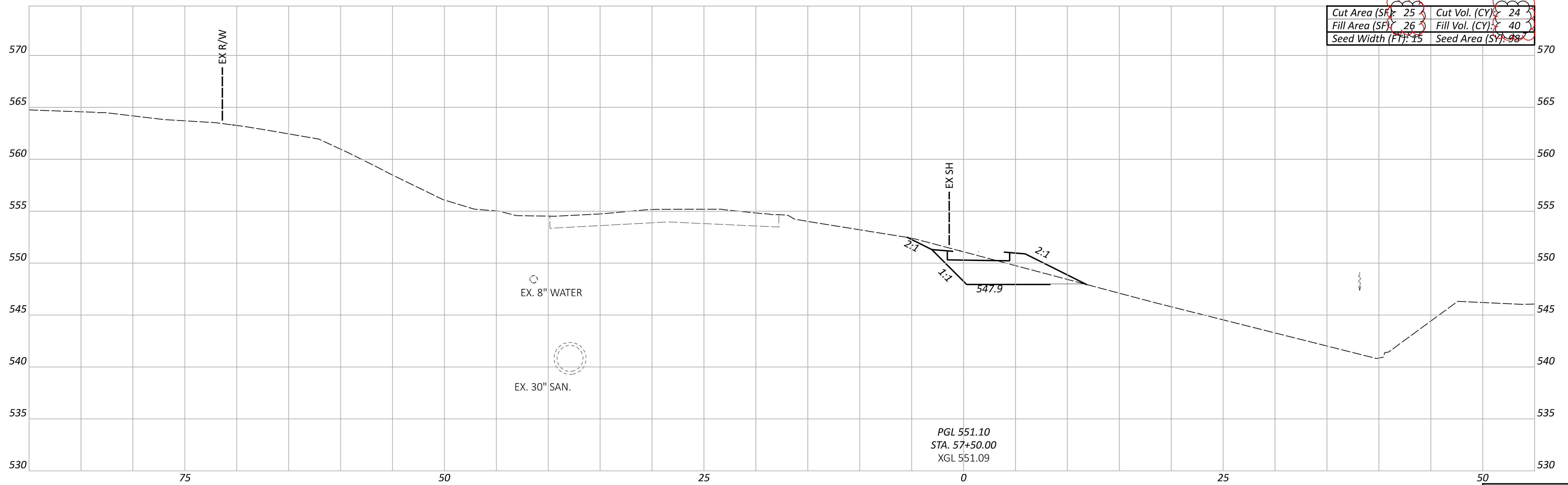
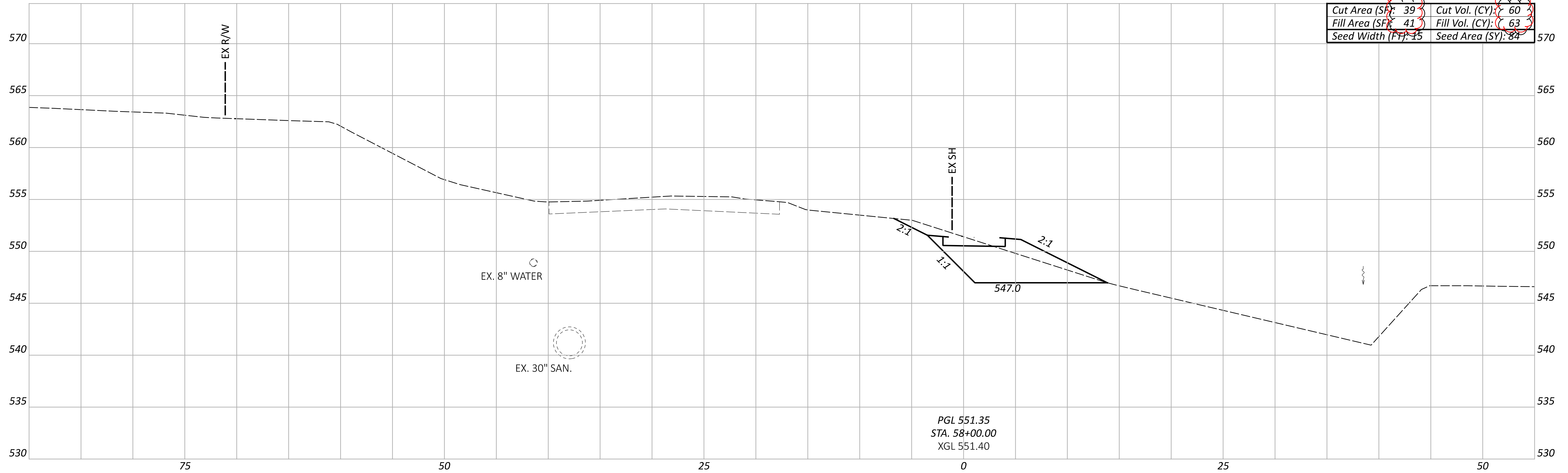
118484

SHEET TOTAL

P.14 61

UTILITY SUBSUMMARY						
SHEET NO.	REF. NO.	LOCATION	STATION	SIDE	611	638
					MANHOLE ADJUSTED TO GRADE	RESETTING EXISTING VALVE BOXES COMPLETE (CIN. 1125)
					EACH	EACH
20	U1	CLOUGH PIKE	73+71.32	LT	1	
21	U2	CLOUGH PIKE	76+61.60	LT	1	
21	U3	CLOUGH PIKE	76+67.96	RT		1
			76+70.05			1
			76+71.38			1
			77+14.42			1
21	U4	CLOUGH PIKE	78+91.76	LT	1	
SUBTOTAL					3	4
TOTALS CARRIED TO GENERAL SUMMARY					3	4

PAVEMENT SUBSUMMARY																												
SHEET NO.	REF. NO.	STATION		SIDE	AREA (COMPUTER GENERATED)	202	204				254	301	304			407			441		442	608			613	ADDITIONAL AREAS FOR STEP DETAIL		
		FROM	TO			PAVEMENT REMOVED	SUBGRADE COMPACTION	12" EXCAVATION OF SUBGRADE	12" GRANULAR MATERIAL, TYPE B (AREA*1/27)	GEOTEXTILE FABRIC, 712.09, TYPE D	PAVEMENT PLANING 3"	9" ASPHALT CONCRETE BASE, PG64-22, (449) (AREA*0.75/27)	4" AGGREGATE BASE (AREA*0.33/27)	6" AGGREGATE BASE (AREA*0.50/27)	8" AGGREGATE BASE (AREA*0.67/27)	NON-TRACKING TACK COAT 3 LAYERS (AREA*0.055*3/9)	NON-TRACKING TACK COAT (AREA*0.055/9)	NON-TRACKING TACK COAT (AREA*0.085*9)	1-1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449) (AREA*0.125/27)	1-1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE 1, (449) (DRIVEWAYS) (AREA*0.125/27)	1-1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449) (DRIVEWAYS) (AREA*0.125/27)	1-1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (448), PG70-22 (AREA*0.125/27)	5" CONCRETE WALK	8" CONCRETE WALK	CURB RAMP		LOW STRENGTH MORTAR BACKFILL	
					SF	SY	SY	CY	CY	SY	SY	CY	CY	CY	CY	GAL	GAL	GAL	CY	CY	CY	CY	SF	SF	SF	CY		
17-19	P1	51+79.71	63+74.76	RT	5962							72.9										5874	88					
18	P2	56+23.56	56+52.93	RT	312									7.7			1.9		1.4	1.4								
18	P3	56+29.68	56+47.28	RT	138									3.4			0.8		0.6	0.6								
18	P4	56+30.38	56+53.74	RT	355							6.6																
20	P5	72+39.55	72+80.81	LT	424									10.5			2.6		2.0	2.0								
20-21	P6	72+00.00	80+25.00	LT & RT	19300												117.9	182.3	89.4		89.4							
20-21	P7	72+00.00	80+25.00	LT	9217	47.0	1109.3	369.8	369.8	1109.3	2144.4	264.6	184.9		169.0				42.7		42.7					ITEM 301 ADD 307 SF ITEM 204 & ITEM 304 ADD 767 SF		
20-21	P8	72+00.00	76+38.82	RT	2590	435.0	327.9	109.3			76.0	54.6		47.5					12.0		12.0			109.3		ITEM 301 ADD 145 SF ITEM 204 & ITEM 304 ADD 361 SF		
20	P9	71+85.55	76+25.86	RT	2160						26.4										2160							
20-21	P10	76+21.80	76+36.68	RT	87																		87					
21	P11	76+60.72	76+71.35	RT	76																		76					
21	P12	76+58.74	76+69.70	RT	71	8.0	93.1				2.0	1.3		1.3					0.3		0.3							
22	P13	76+65.79	46+84.60	RT	115																115							
SUBTOTAL						490.0	1530.3	479.1	369.8	1109.3	2144.4	342.6	99.3	247.4	21.6	217.8	123.2	182.3	144.4	4	4	144.4	8149	88	163	109.3		
TOTALS CARRIED TO GENERAL SUMMARY						490	1531	480	370	1110	2145	343		369			524			145	4	4	145	8149	88	163	110	



CROSS SECTIONS  
 STA. 57+50.00 TO STA. 58+00.00

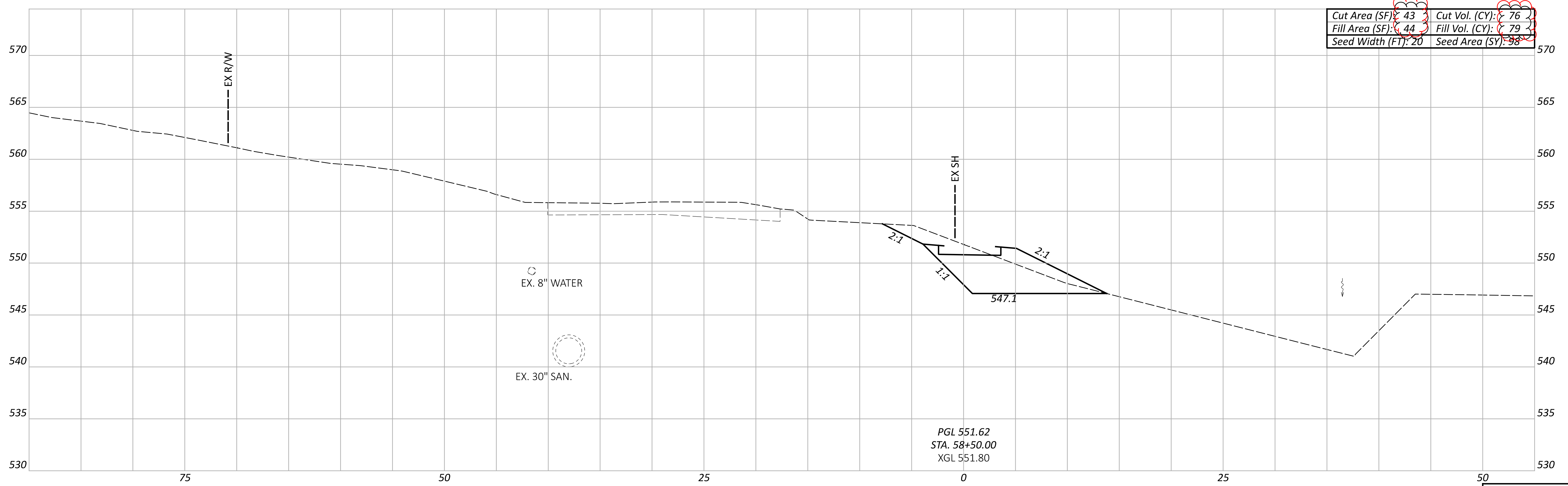
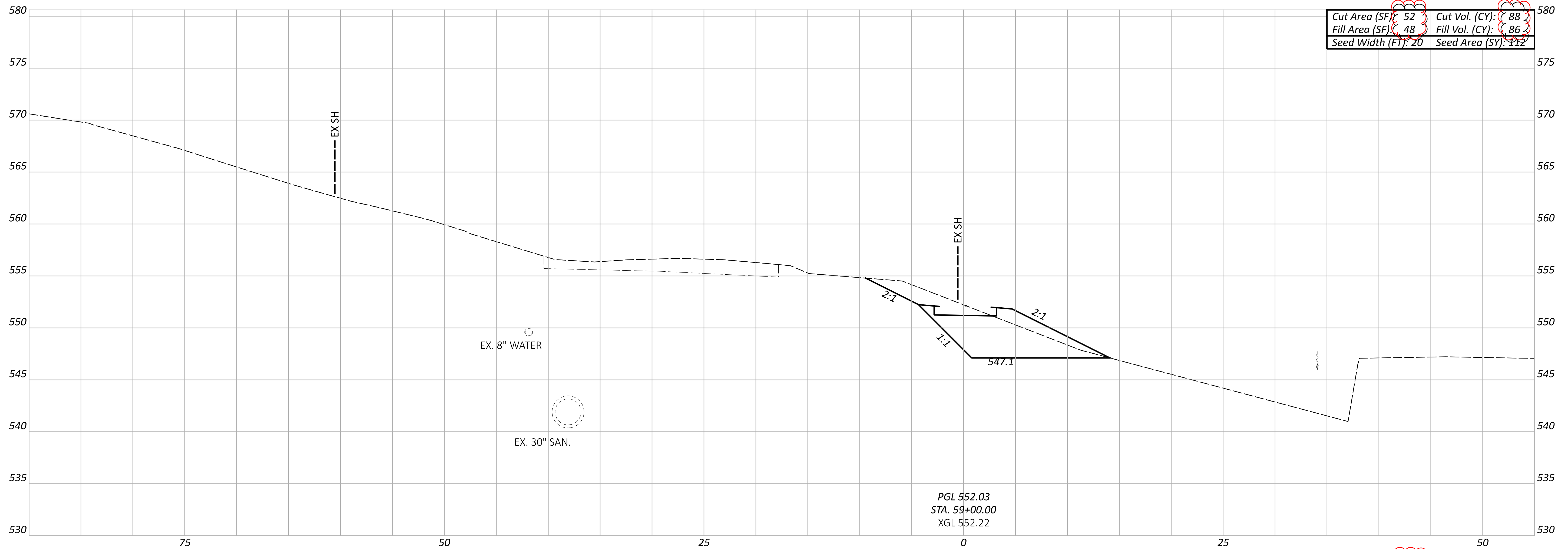
DESIGN AGENCY  
  
 10200 Alliance Road,  
 Suite 300  
 Cincinnati, OH 45242  
 (513) 842-9200

DESIGNER  
 ZTM

REVIEWER  
 SNS 08/04/25

PROJECT ID  
 118484

Sheet Totals	118484
Seeding	182
Cut	84
Fill	103
SHEET TOTAL	P.29   61



CROSS SECTIONS  
 STA. 58+50.00 TO STA. 59+00.00

DESIGN AGENCY

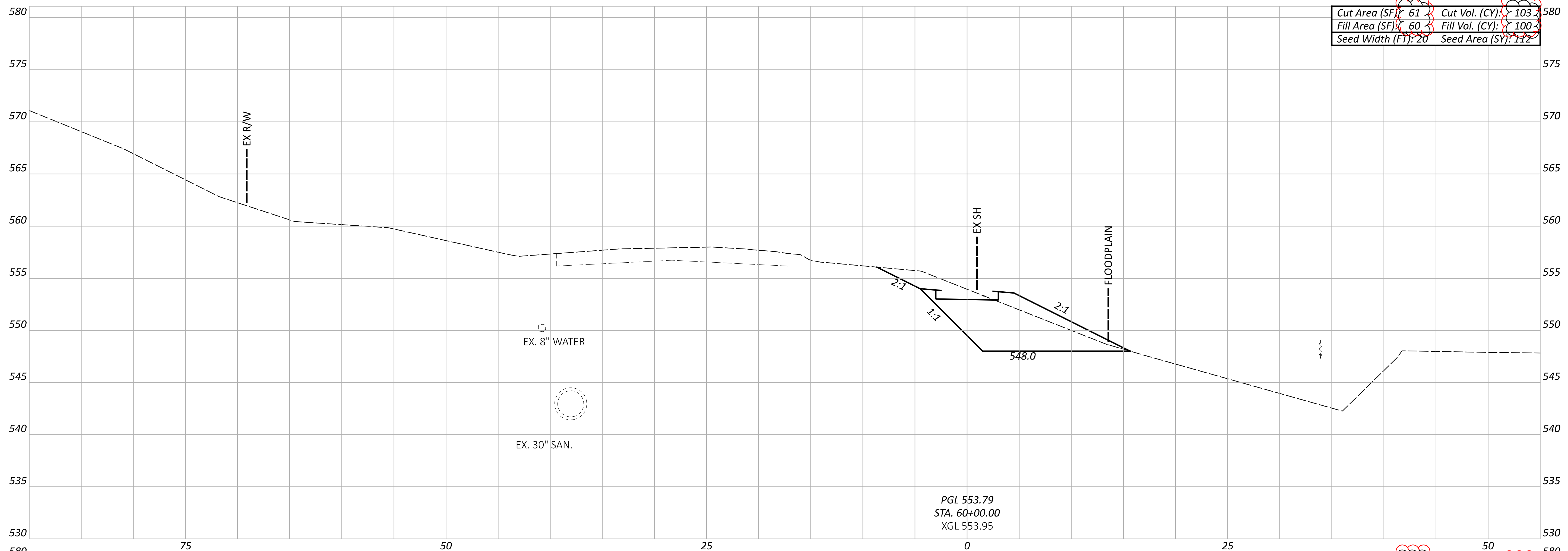
10200 Alliance Road,  
 Suite 300  
 Cincinnati, OH 45242  
 (513) 842-9200

DESIGNER  
 ZTM

REVIEWER  
 SNS 08/04/25

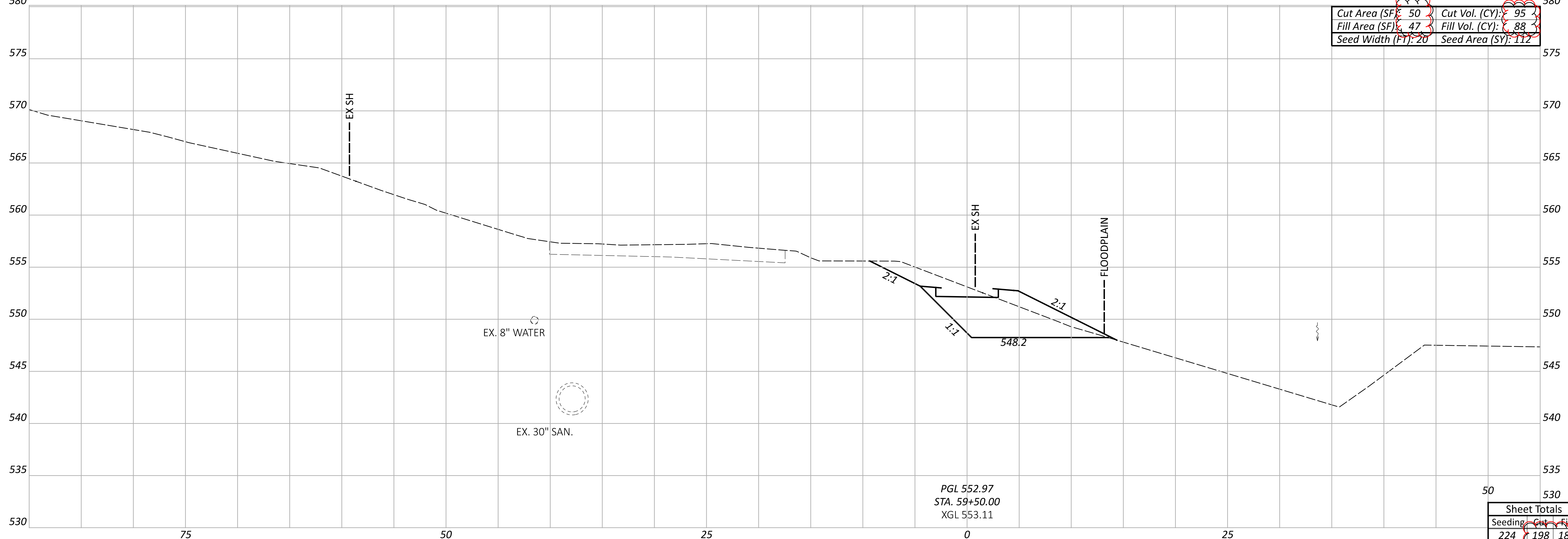
PROJECT ID  
 118484

Sheet Totals	118484
Seeding	210
Cut	164
Fill	165
SHEET TOTAL	P.30   61



Cut Area (SF):	61	Cut Vol. (CY):	103.2
Fill Area (SF):	60	Fill Vol. (CY):	100.2
Seed Width (FT):	20	Seed Area (SY):	112

PGL 553.79  
 STA. 60+00.00  
 XGL 553.95



Cut Area (SF):	50	Cut Vol. (CY):	95
Fill Area (SF):	47	Fill Vol. (CY):	88
Seed Width (FT):	20	Seed Area (SY):	112

PGL 552.97  
 STA. 59+50.00  
 XGL 553.11

Sheet Totals			118484
Seeding	Cut	Fill	SHEET TOTAL
224	198	188	P.31   61

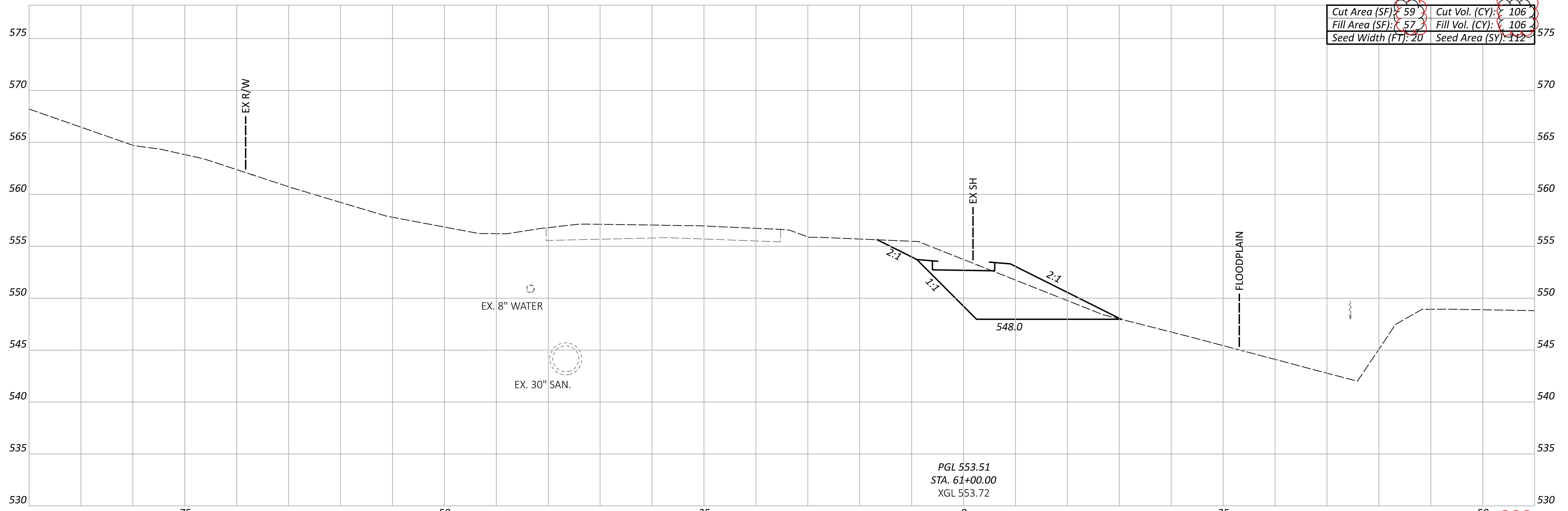
CROSS SECTIONS  
 STA. 59+50.00 TO STA. 60+00.00

DESIGN AGENCY  
  
 10200 Alliance Road,  
 Suite 300  
 Cincinnati, OH 45242  
 (513) 842-9200

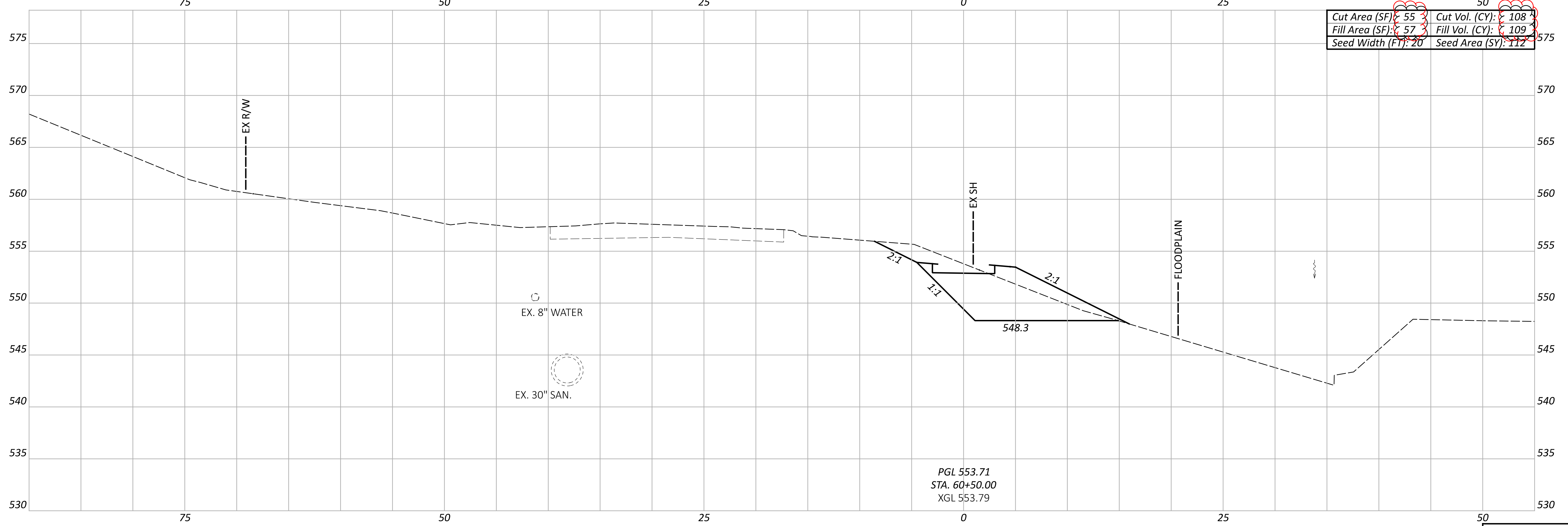
DESIGNER  
 ZTM

REVIEWER  
 SNS 08/04/25

PROJECT ID  
 118484



Cut Area (SF): 59	Cut Vol. (CY): 106
Fill Area (SF): 57	Fill Vol. (CY): 106
Seed Width (FT): 20	Seed Area (SY): 112



Cut Area (SF): 55	Cut Vol. (CY): 108
Fill Area (SF): 57	Fill Vol. (CY): 109
Seed Width (FT): 20	Seed Area (SY): 112

CROSS SECTIONS  
 STA. 60+50.00 TO STA. 61+00.00

DESIGN AGENCY  
  
**Stantec**  
 10200 Alliance Road,  
 Suite 300  
 Cincinnati, OH 45242  
 (513) 842-9200

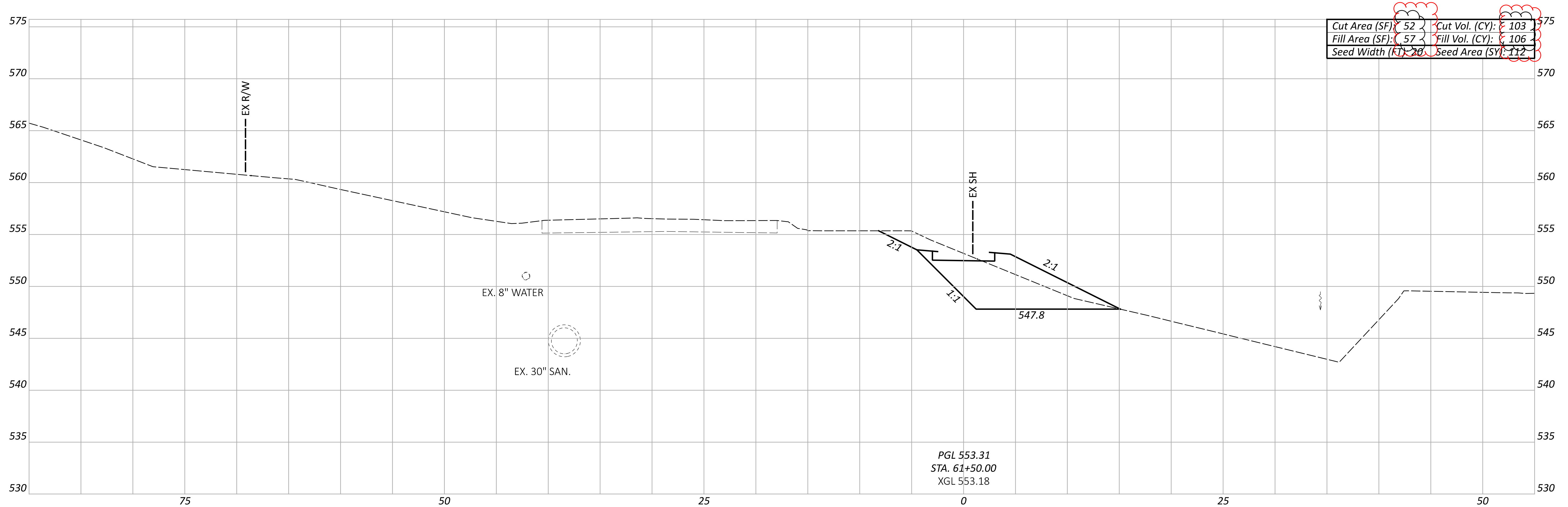
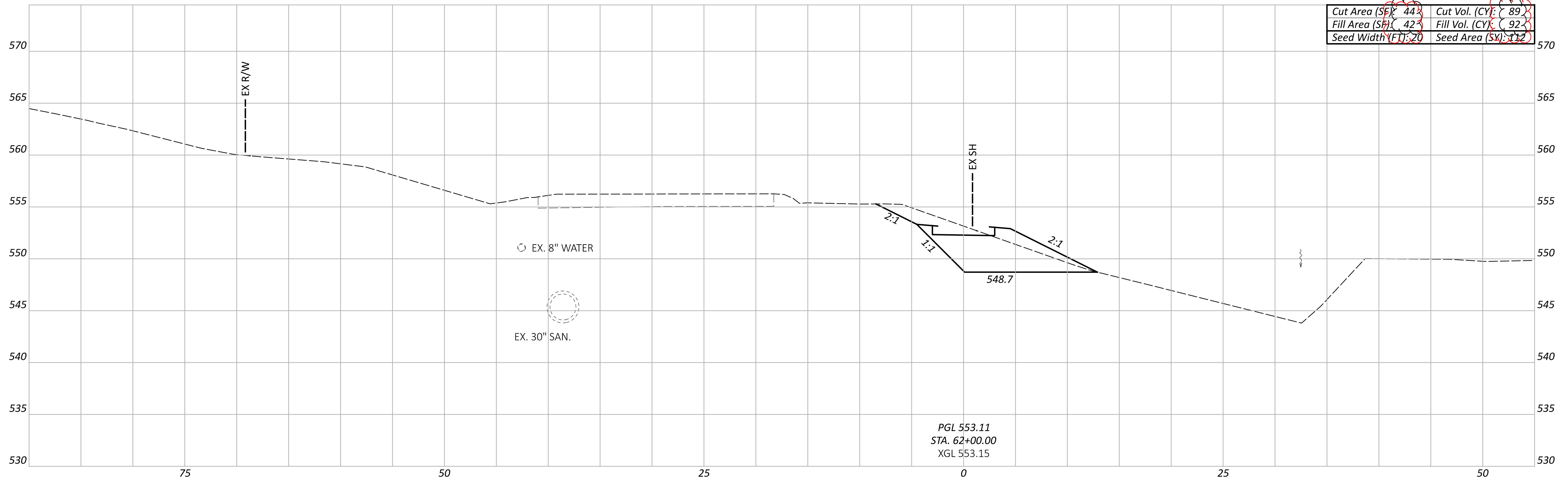
DESIGNER  
 ZTM

REVIEWER  
 SNS 08/04/25

PROJECT ID  
 118484

Sheet Totals		
Seeding	Cut	Fill
224	214	215

SHEET TOTAL  
 P.32 61



CROSS SECTIONS  
 STA. 61+50.00 TO STA. 62+00.00

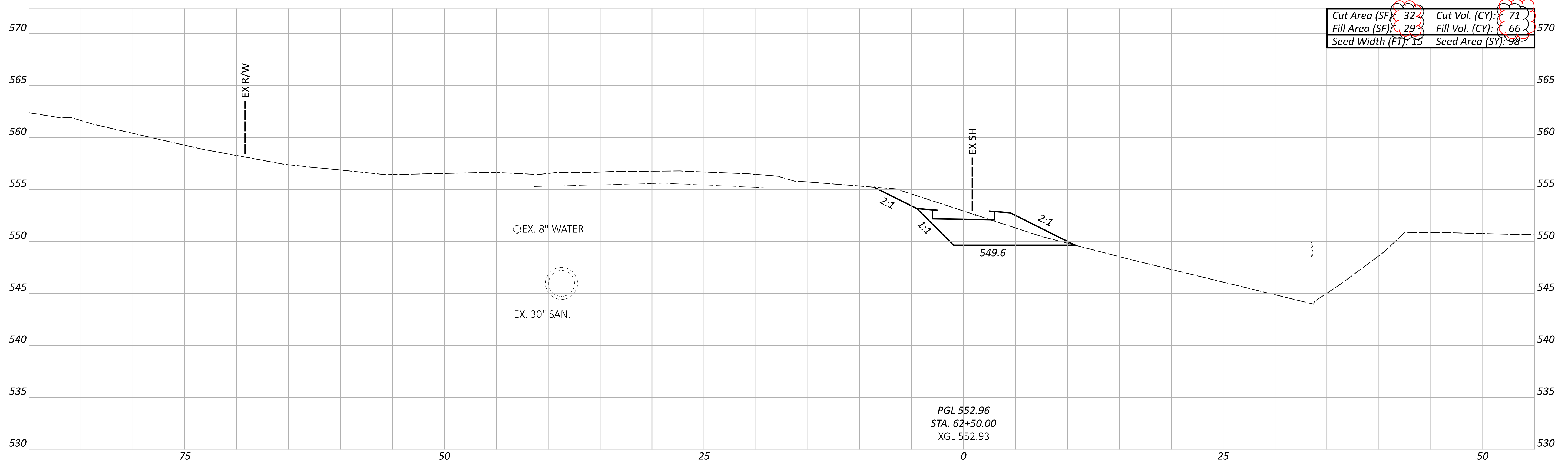
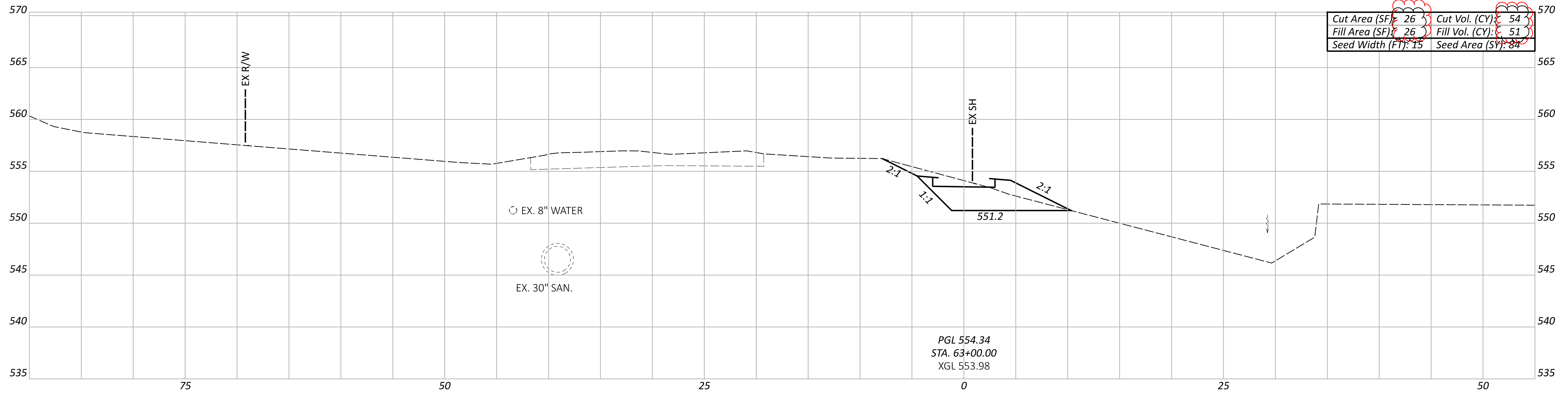
DESIGN AGENCY  
  
**Stantec**  
 10200 Alliance Road,  
 Suite 300  
 Cincinnati, OH 45242  
 (513) 842-9200

DESIGNER  
 ZTM

REVIEWER  
 SNS 08/04/25

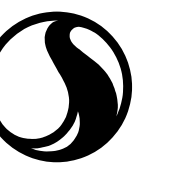
PROJECT ID  
 118484

Sheet Totals				118484	
Seeding	Cut	Fill	SHEET	TOTAL	
224	192	198	P.33	61	



CROSS SECTIONS  
 STA. 62+50.00 TO STA. 63+00.00

DESIGN AGENCY



10200 Alliance Road,  
 Suite 300  
 Cincinnati, OH 45242  
 (513) 842-9200

DESIGNER

ZTM

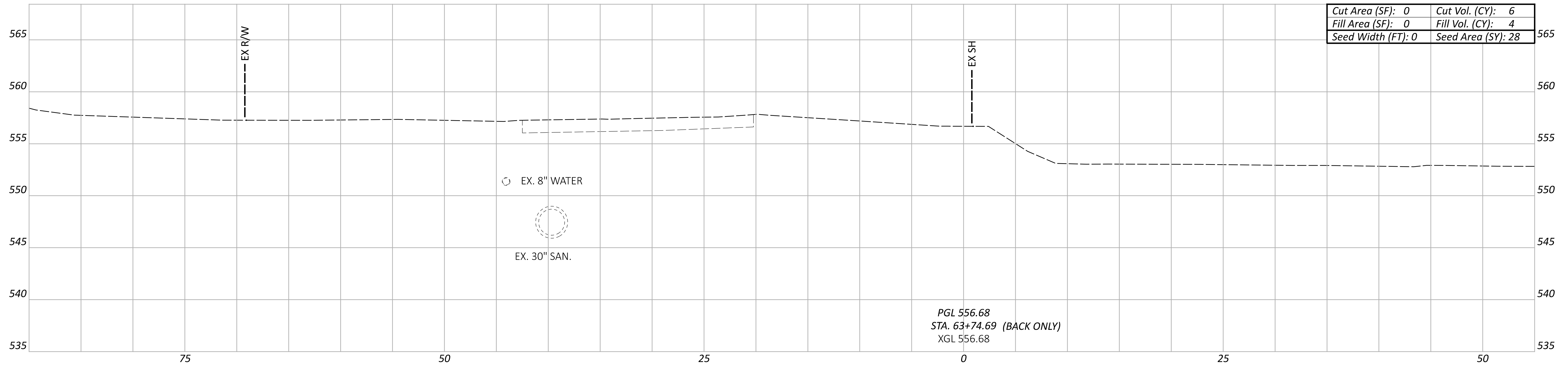
REVIEWER

SNS 08/04/25

PROJECT ID

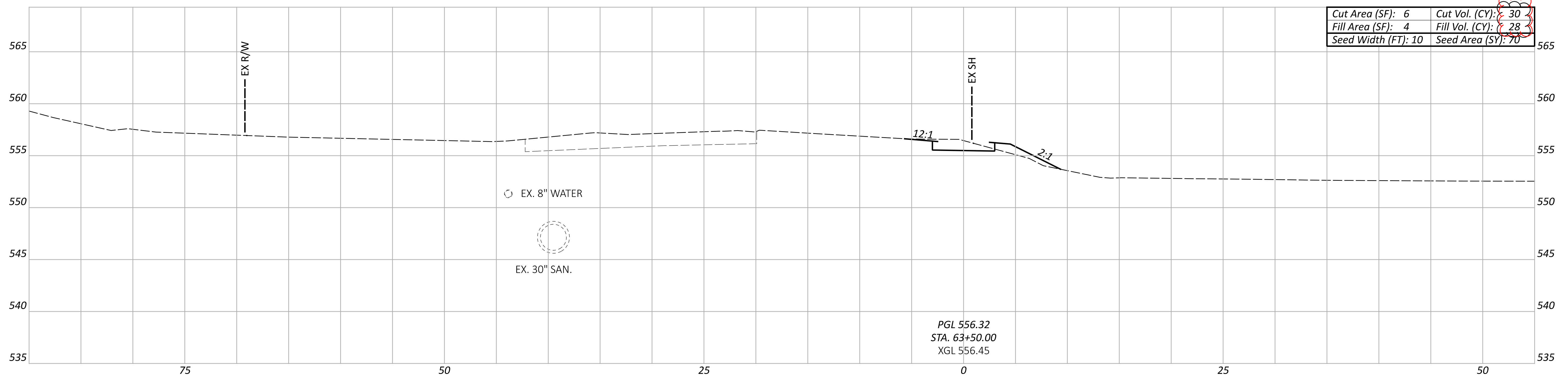
118484

Sheet Totals		118484
Seeding	Cut	Fill
182	125	117



Cut Area (SF): 0	Cut Vol. (CY): 6
Fill Area (SF): 0	Fill Vol. (CY): 4
Seed Width (FT): 0	Seed Area (SY): 28

PGL 556.68  
 STA. 63+74.69 (BACK ONLY)  
 XGL 556.68



Cut Area (SF): 6	Cut Vol. (CY): 30
Fill Area (SF): 4	Fill Vol. (CY): 28
Seed Width (FT): 10	Seed Area (SY): 70

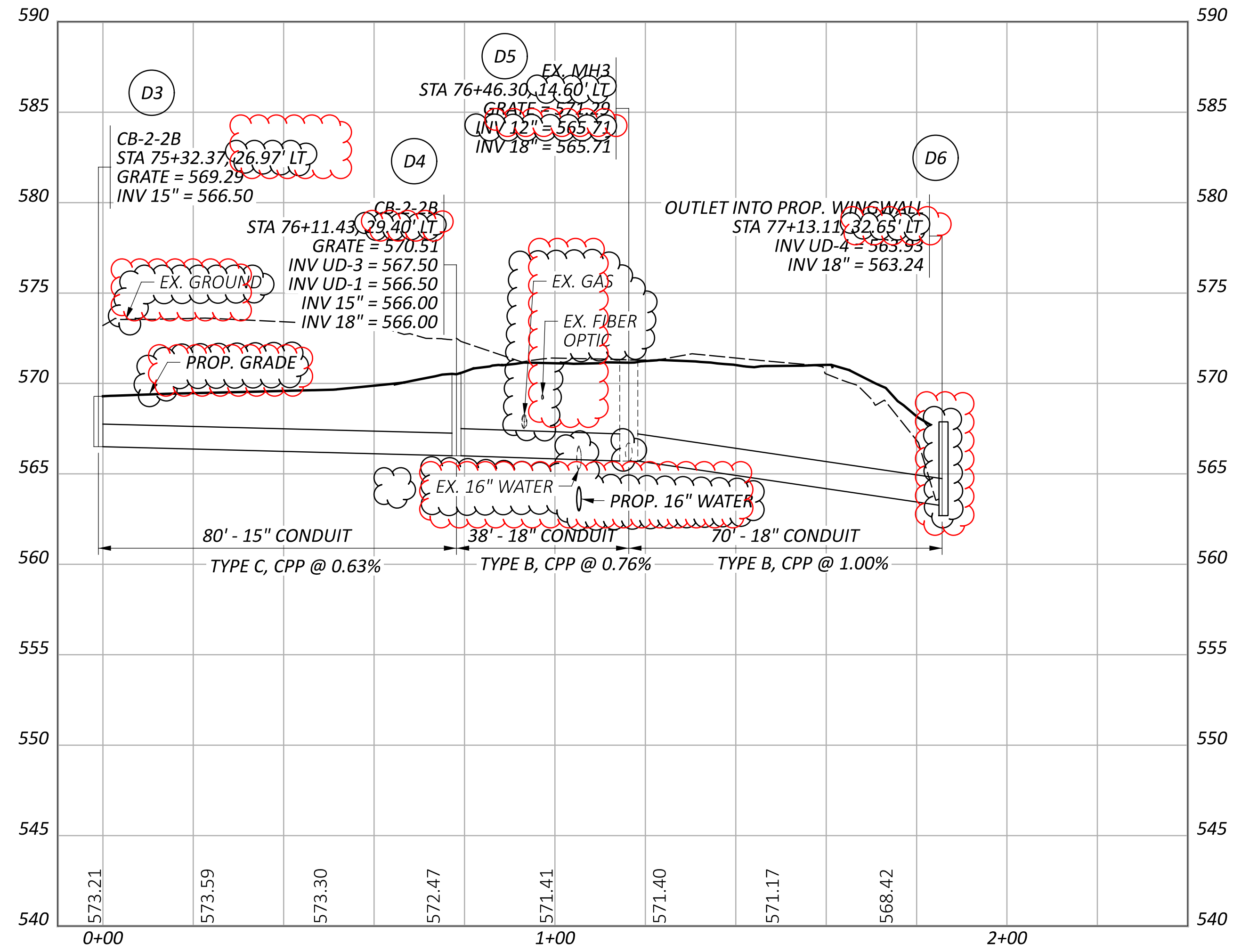
PGL 556.32  
 STA. 63+50.00  
 XGL 556.45

CROSS SECTIONS  
 STA. 63+50.00 TO STA. 63+74.69



DESIGN AGENCY  
 ZTM  
 REVIEWER  
 SNS 08/04/25

Sheet Totals	118484
Seeding	98
Exc.	36
Fill	32
SHEET TOTAL	P.35   61



STORM SEWER PROFILES  
CLOUGH PIKE AND NEWTOWN ROAD

DESIGN AGENCY



**Stantec**  
10200 Alliance Road,  
Suite 300  
Cincinnati, OH 45242  
(513) 842-9200

DESIGNER

ZTM

REVIEWER

SNS 08/04/25

PROJECT ID

118484

SHEET TOTAL

P.48 | 61

**GENERAL NOTES**

DESIGN SPECIFICATIONS: THIS STANDARD DRAWING CONFORMS TO "LRFD BRIDGE DESIGN SPECIFICATION" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS AND THE BRIDGE DESIGN MANUAL.

DESIGN DATA: THE FOLLOWING DESIGN DATA IS ASSUMED:

INTERNAL ANGLE OF FRICTION OF BACKFILL SOIL,  $\phi_{bf} = 30^\circ$   
 TOTAL UNIT WEIGHT OF BACKFILL SOIL = 120 PCF  
 INTERNAL ANGLE OF FRICTION (DRAINED), FOUNDATION SOIL,  $\phi_f = 30^\circ$   
 UNDRAINED SHEAR STRENGTH (COHESIVE), FOUNDATION SOIL,  $S_{uf} = 1500$  PSF  
 UNIT WEIGHT OF CONCRETE = 150 PCF

CONCRETE - COMPRESSIVE STRENGTH 4000 PSI  
 (FOOTING, WINGWALL AND FORESLOPE WALL)

REINFORCING STEEL - ASTM A615, A616, OR A617  
 GRADE 60 MINIMUM YIELD STRENGTH  
 60,000 PSI (ALL REINFORCING SHALL BE EPOXY COATED)

BASED ON THE ASSUMED DESIGN DATA, THE WINGWALLS ACHIEVE FACTORED BEARING RESISTANCES THAT ARE GREATER THAN THEIR RESPECTIVE BEARING PRESSURES. IF A BACKFILL MATERIAL WITH A HIGHER INTERNAL ANGLE OF FRICTION OR A LIGHTER TOTAL UNIT WEIGHT IS USED; OR IF A FOUNDATION SOIL WITH A HIGHER DRAINED INTERNAL ANGLE OF FRICTION OR A HIGHER UNDRAINED SHEAR STRENGTH IS ENCOUNTERED; THEN THE STABILITY OF THE WINGWALLS IS SATISFACTORY.

**PRECAST CONCRETE (STA 52+54)**

THE DEPARTMENT WILL PERMIT THE USE OF PRECAST CONCRETE IN LIEU OF CAST-IN-PLACE CONCRETE FOR HEADWALLS AND WINGWALLS IN ACCORDANCE WITH C&MS 602.03. THE PRECAST WALLS MUST FOLLOW SS851. THE DEPARTMENT WILL PAY FOR THE WINGWALL AND HEADWALL CONCRETE IN SQUARE FEET AS DETAILED IN SS851.08. THE TOTAL QUANTITY OF CAST-IN-PLACE WINGWALL AND HEADWALL CONCRETE IS 146 SF.

**PRECAST CONCRETE (STA 77+19)**

THE DEPARTMENT WILL NOT PERMIT THE USE OF PRECAST HEADWALLS, WINGWALLS, OR FOOTINGS AT THIS LOCATION.

POROUS BACKFILL WITH FILTER FABRIC 1'-6" THICK SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND TO 12" BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6" ABOVE THE TOP ELEVATION OF THE WEEPHOLE.

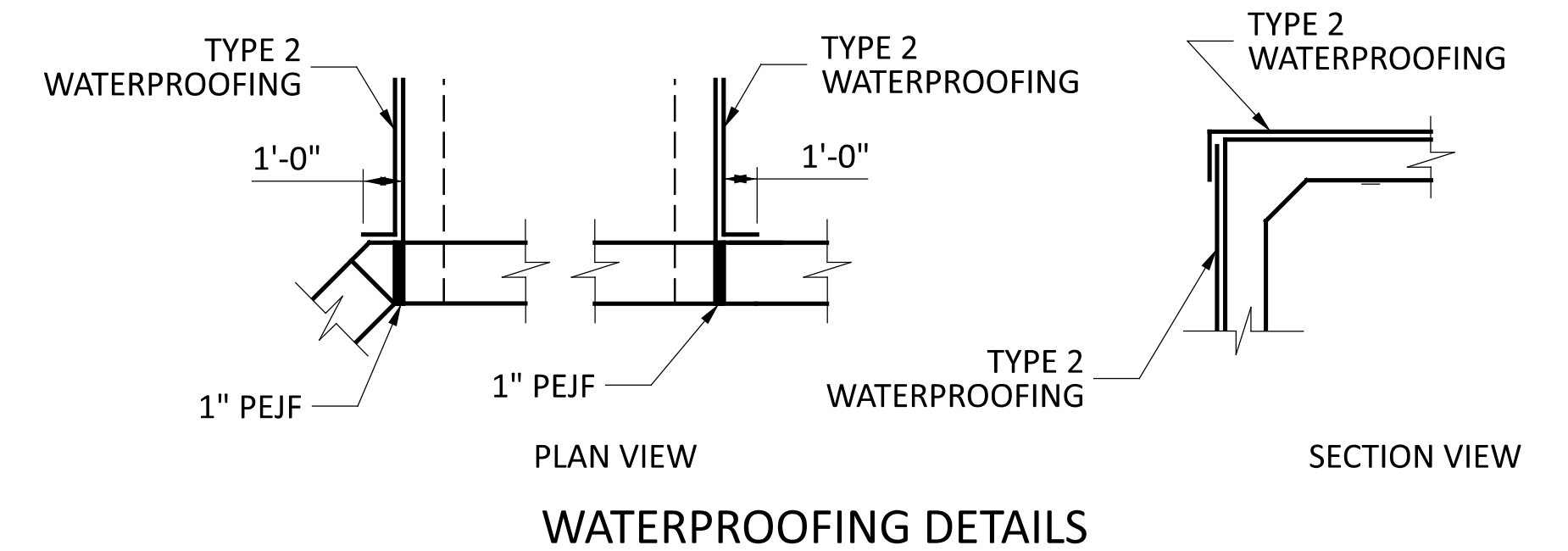
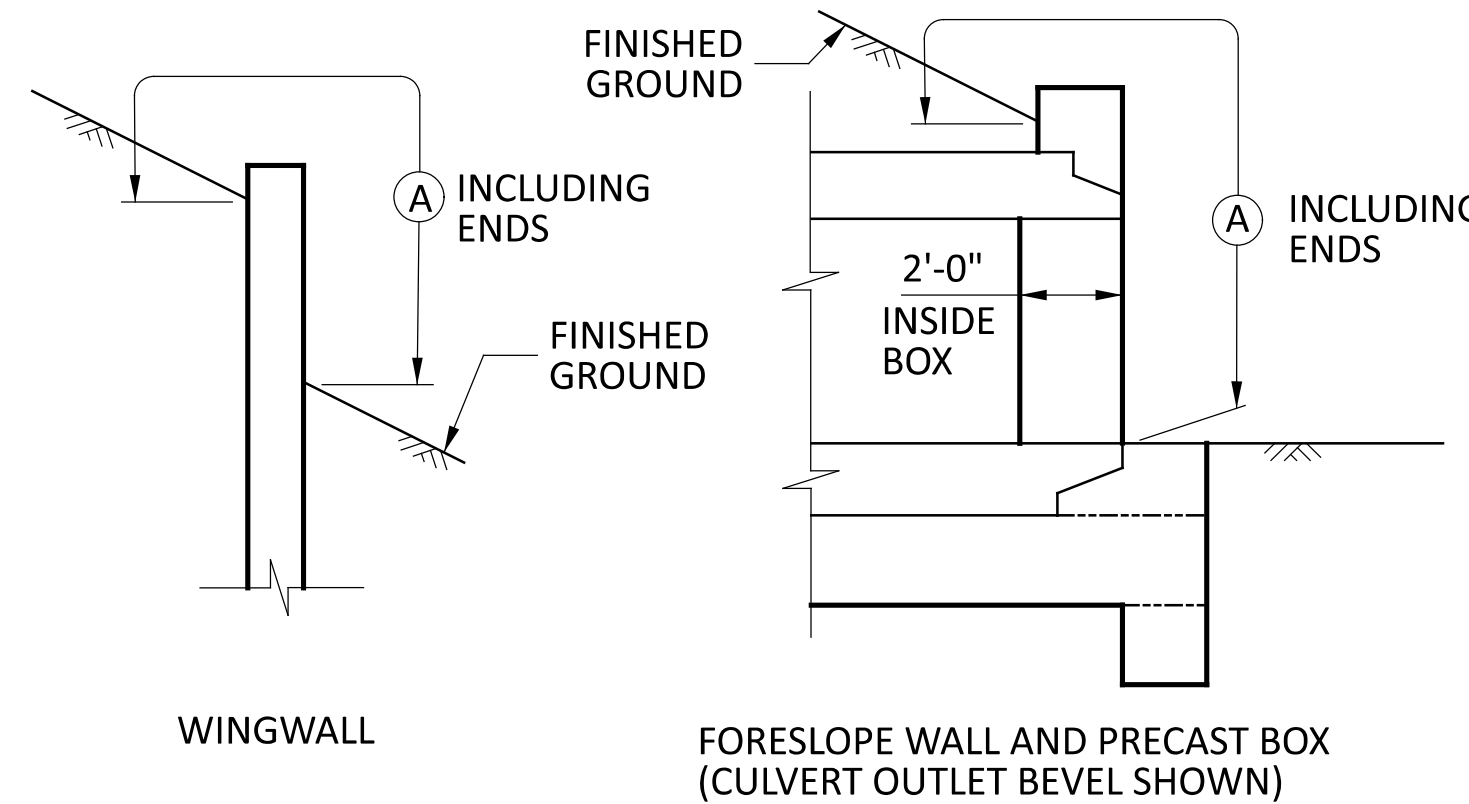
WEEPHOLES SHALL BE PLACED 6" TO 12" ABOVE THE NORMAL WATER ELEVATION OR GROUND LINE AND SHALL HAVE A MAXIMUM SPACING OF 10'-0". A MINIMUM OF ONE WEEPHOLE SHALL BE PROVIDED PER WINGWALL.

PREFORMED EXPANSION JOINT FILLER: PREFORMED EXPANSION JOINT FILLER (PEJF) CONFORMING TO CMS 705.03, 1 INCH THICK, SHALL BE PLACED ABOVE THE FOOTING BETWEEN THE SIDES OF THE BOX CULVERT AND THE ENDS OF THE WINGWALLS. PAYMENT FOR MATERIALS AND INSTALLATION SHALL BE INCLUDED WITH ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER.

SEALING OF FORESLOPE WALL AND WINGWALLS: ALL EXPOSED FORESLOPE WALL AND WINGWALL CONCRETE SHALL BE SEALED WITH EPOXY-URETHANE SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DIAGRAMS BELOW. PAYMENT FOR THE EPOXY-URETHANE SEALER SHALL BE PER ITEM 512 - SEALING OF CONCRETE SURFACES.

WATERPROOFING: TYPE 2 WATERPROOFING, PER CMS 512.09 AND 711.25, SHALL EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING.

TYPE 2 WATERPROOFING, PER CMS 512.09 AND 711.25 SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING.



**LIMITS OF ITEM 512-SEALING CONCRETE SURFACES**

(A) - SEAL ENTIRE CONCRETE SURFACE AREA

ESTIMATED QUANTITIES - HEADWALL STA 52+54.09				
ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION
202	11200	LUMP	LS	PORTIONS OF STRUCTURE REMOVED
503	11101	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (CFN NONE)
503	21300	LUMP	LS	UNCLASSIFIED EXCAVATION
509	10000	1872	LB	EPOXY COATED STEEL REINFORCEMENT
511	46000	14	SY	CLASS QC1 CONCRETE, RETAINING WALL OR WINGWALL, NOT INCLUDING FOOTING
511	46510	12	CY	CLASS QC1 CONCRETE, FOOTING
511	46610	1	CY	CLASS QC1 CONCRETE, HEADWALL
512	10100	15	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	33000	52	SY	TYPE 2 WATERPROOFING
516	13600	10	SF	1" PREFORMED EXPANSION JOINT FILLER
518	21230	LUMP	LS	POROUS BACKFILL WITH GEOTEXTILE FABRIC
601	32100	27	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
611	97400	30	FT	CONDUIT, MISC.: 4' X 4' CONDUIT, TYPE A, 706.05,

ESTIMATED QUANTITIES - HEADWALL STA 77+19.87				
ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION
202	11200	LUMP	LS	PORTIONS OF STRUCTURE REMOVED
503	11100	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING
503	21300	LUMP	LS	UNCLASSIFIED EXCAVATION
509	10000	1414	LB	EPOXY COATED STEEL REINFORCEMENT
511	46000	14	SY	CLASS QC1 CONCRETE, RETAINING WALL OR WINGWALL, NOT INCLUDING FOOTING
511	46510	13	CY	CLASS QC1 CONCRETE, FOOTING
511	46610	1	CY	CLASS QC1 CONCRETE, HEADWALL
512	10100	9	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	33000	15	SY	TYPE 2 WATERPROOFING
516	13600	10	SF	1" PREFORMED EXPANSION JOINT FILLER
518	21230	LUMP	LS	POROUS BACKFILL WITH GEOTEXTILE FABRIC
611	97400	8	FT	CONDUIT, MISC.: 48" X 52" CONDUIT, TYPE A, 706.05,

NOTE: TOTALS CARRIED TO GENERAL SUMMARY SHEET

NOTE: TOTALS CARRIED TO GENERAL SUMMARY SHEET