

CITY OF ST. PAUL

Department of Public Works

CONSTRUCTION PLAN
for
SAINT PAUL STREET PAVING
of
GRIGGS/SCHIEFFER PHASE II

RESIDENTIAL STREET PAVING

CITY PROJECT NO. 21-P-1458

includes

GRADING, BITUMINOUS PAVING, CURB AND GUTTER, AGGREGATE BASE,
SIGNING AND STRIPING, WATER MAIN, STORM AND SANITARY SEWER,
SIDEWALKS AND DRIVEWAYS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED
BY ME UNDER THE DIRECT SUPERVISION OF A
DULY LICENSED PROFESSIONAL ENGINEER AND
THAT I AM A DULY CERTIFIED ENGINEER IN TRAINING
UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE ..XXXXX..... REG. NO. ...146758.....

APPROVED., DATE
Manager Street Engineering/Construction Division

APPROVED., DATE
Saint Paul City Engineer

CITY PROJECT
21-P-1458

SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF
TRANSPORTATION "STANDARD SPECIFICATIONS FOR
CONSTRUCTION" SHALL GOVERN. THESE SHALL BE FURTHER
AMENDED BY THE CITY OF SAINT PAUL "STANDARD
SUPPLEMENTAL SPECIFICATIONS FOR CONSTRUCTION" AND THE
SPECIAL PROVISIONS.

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL
CONFORM TO THE LATEST EDITION OF THE MMUTCD,
INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC
CONTROL ZONE LAYOUTS"

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY
QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED
ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED
"STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF
EXISTING SUBSURFACE UTILITY DATA".

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 3. STATEMENT OF ESTIMATED QUANTITIES
 - 4-5. EXISTING & PROPOSED SEWER STRUCTURES CHART
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 - 7-8. TYPICAL SECTIONS
 9. CONSTRUCTION DETAILS / STANDARD PLATES AND PLANS
 10. STAGING PLAN
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 17. INFILTRATION DETAILS TYPICAL CONNECTIONS
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 - 20-36. PAVING PLAN & SEWER PROFILE
 40. SANITARY SEWER CONSTRUCTION PLAN
 - W1-WXX. WATER MAIN PLANS
 - ST1-STXX. SIGNING AND STRIPING PLANS (FOR INFORMATION ONLY-WORK DONE BY OTHERS)
 - LT1-LTXX. LIGHTING PLANS (FOR INFORMATION ONLY-WORK DONE BY OTHERS)

THIS PLAN CONTAINS xx SHEETS



DESIGNED	CEE
DRAWN	ATT
APPROVED	CME

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	
Signature: _____	Date: _____
CHRISTOPHER M. ENGELMANN	Lic. No. 43350

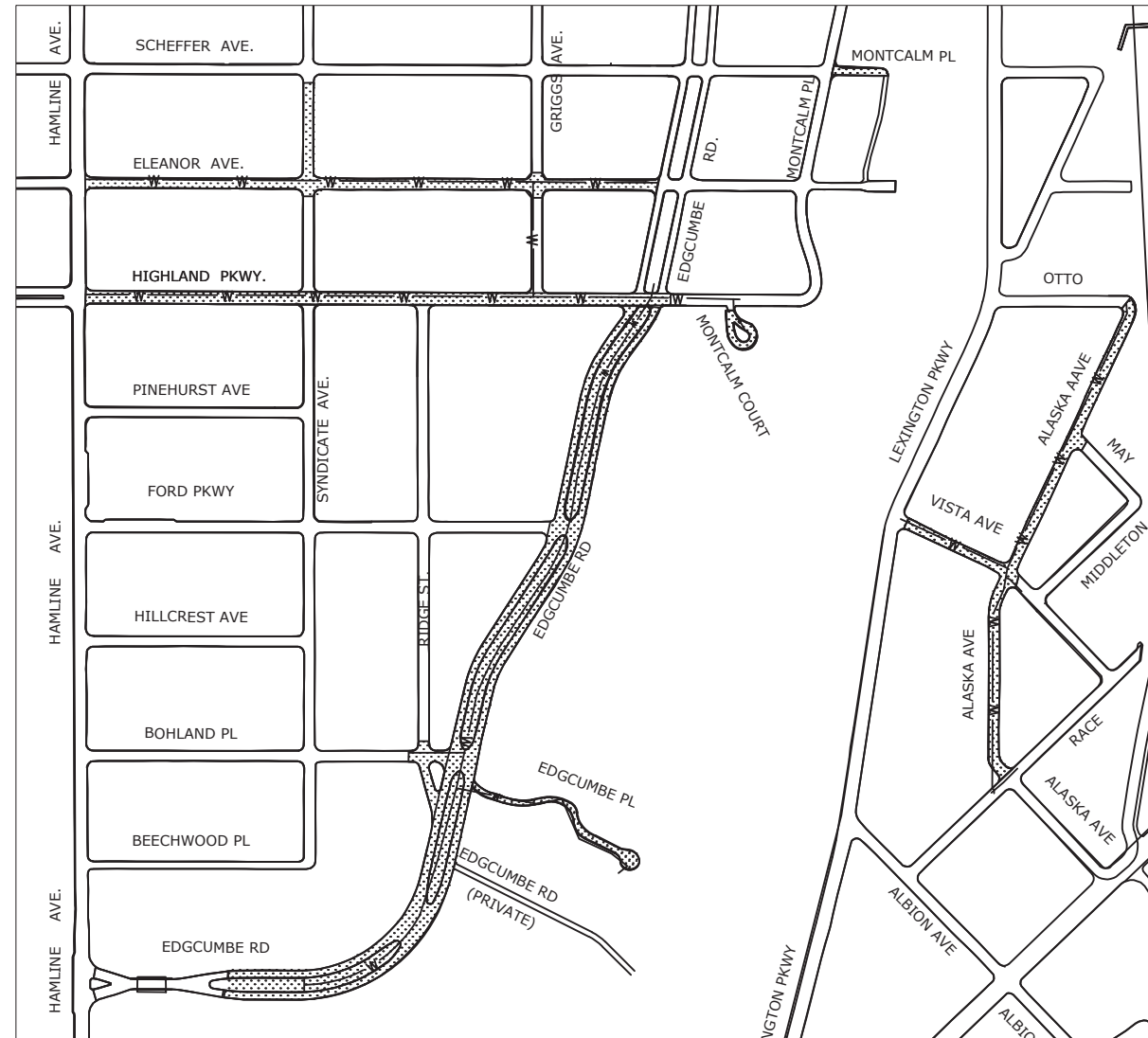
PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

GRIGGS/SCHIEFFER PHASE II

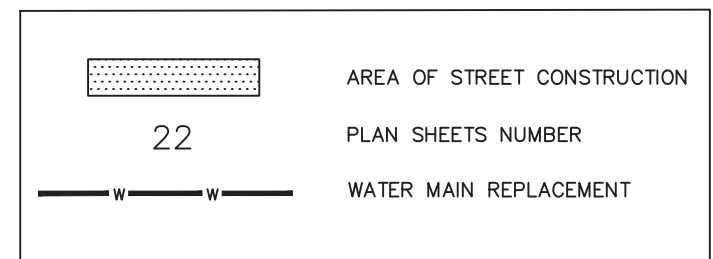
PROJECT: 21-P-1458	STATE AID PROJECT NUMBER: N.A.
DRAWER: 12	CAD NAME: PROJECTS/CURRENT/GRIGGS SCHEFFER PHASE II /DWG
DWG. NO. 1628	DATE: 9/22/2020
SHEET NO. 1 OF XX SHEETS	



NOTES



1. WATER, GAS, ELECTRIC, TELEPHONE COMMUNICATION, SEWER AND T.V. CABLE LINES SHOWN ON THE DRAWINGS AND CROSS-SECTIONS ARE PLOTTED FROM THE BEST INFORMATION AVAILABLE AT THE TIME OF PLAN PREPARATION, BUT MAY NOT REFLECT ACTUAL LOCATIONS OR ELEVATIONS, THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL UTILITIES BEFORE BEGINNING CONSTRUCTION WHICH MAY BE AFFECTED BY A UTILITY CONFLICT. THE CONTRACTOR SHALL GIVE 48 HOURS NOTICE TO THE OWNERS OF ALL KNOWN UTILITIES BEFORE STARTING ANY OPERATIONS AFFECTING THOSE PROPERTIES, OR BEGINNING EXCAVATION IN THE VICINITY OF THOSE PROPERTIES. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 1507 IN THE STANDARD SPECIFICATIONS.
2. ALL CURB RADII 20 FEET UNLESS OTHERWISE NOTED.
3. CONSTRUCT A 3 FOOT CONCRETE OUT WALK AT EACH RESIDENCE, AS BID ITEM 2521 4" CONC WALK OR AS DIRECTED BY THE ENGINEER.
4. WHERE EXISTING UTILITIES ARE IN CONFLICT WITH SEWER CONSTRUCTION THE UTILITY COMPANY WILL RELOCATE, OFFSET OR SUPPORT THE UTILITY UNLESS OTHERWISE INDICATED ON THE PLAN SHEET OR STATED IN THE SPECIAL PROVISIONS.
5. WHERE EXISTING FIRE HYDRANTS AND/OR LIGHT STANDARDS CONFLICT WITH SEWER CONSTRUCTION, THEY WILL BE RELOCATED BY OTHERS.
6. ALL CONCRETE WALK IN QUADRANT AREAS AT THE CORNERS OF INTERSECTIONS SHALL BE 6" THICK.
7. GAS MAINS SHOWN ON THE PLAN SHEETS ARE EXISTING MAINS. IN CONJUNCTION WITH THIS SEWER AND PAVING PROJECT, XCEL ENERGY MAY ABANDON SOME OF THE GAS MAINS IN THE AREA AND CONSTRUCT NEW MAINS IN THE SIDEWALK AREAS. A.S.T.M. DESIGNATION D2487 "STANDARD TEST METHOD FOR CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES".
8. RECORDS INDICATE THERE ARE PROPERTY IRONS AT THE BLOCK CORNERS IN THE PROJECT AREA. DO NOT DISTURB THESE IRONS WHEN REMOVING CONCRETE PANELS. IF REMOVED, REPLACEMENT BY A LICENSED SURVEYOR, AT THE CONTRACTOR'S EXPENSE.



GRIGGS/SCHAEFFER PHASE II



	DESIGNED	CEE	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA Signature: _____ Date: _____ CHRISTOPHER M. ENGELMANN Lic. No. 43350	PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS GRIGGS/SCHEFFER PHASE II	PROJECT: 21-P-1458		STATE AID PROJECT NUMBER: NOT APPLICABLE		
	DRAWN	ATT			DRAWER: 12	CAD NAME: PROJECTS/CURRENT/GRIGGS-SCHEFFER PHASE II/DWG			
	APPROVED	CME			DWG. NO. 1628	DATE: 9/22/2020	SHEET NO. 2 OF XX SHEETS		

\\Teal\cad\streets\streets\projects\current\Griggs-Scheffer Phase 2 P-1458\DWG\03-Statement of Estimated Quantity.dwg Oct 02, 2020 -- 8:54am

GRIGGS/SCHIEFFER PHASE 2 CITY PROJECT 21-P-1458 STATEMENT OF ESTIMATED QUANTITIES					7" Bituminous 7" Class 5 Base 12" Gr. Borrow		
ITEM NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY QUANTITY	HAMLIN TOTAL QUANTITY L = 2650'	SEWER QUANTITY	WATER QUANTITY
2021.501	MOBILIZATION	LUMP SUM	1	0.80	0.08	0.12	
2031.501	FIELD LABORATORY TYPE D	LUMP SUM	1	0.80	0.08	0.12	
2101.524	CLEARING	TREE	74	68	6		
2101.524	GRUBBING	TREE	74	68	6		
2101.624	TREE ROOT REMOVAL	TREE	20	20			
2101.624	WOOD CHIP DISPOSAL	TREE	20	20			
2102.503	PAVEMENT MARKING REMOVAL	LIN. FT.	500		500		
2104.502	REMOVE MANHOLE OR CATCH BASIN	EACH	90	80	10		
2104.502	SALVAGE MAIL BOX SUPPORT	EACH	20	20			
2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN. FT.	2930	1630	1300		
2104.503	REMOVE CONCRETE CURB OR CURB & GUTTER	LIN. FT.	19560	19560	1000		
2104.504	REMOVE PAVEMENT	SQ. YD.	32820	32420	400		
2104.504	REMOVE TRENCH PAVEMENT	SQ. YD.	100	100			
2104.504	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ. YD.	2265	2235	30		
2104.518	REMOVE CONCRETE WALK	SQ. FT.	53300	50800	2500		
2105.507	UNCLASSIFIED EXCAVATION (EXCAVATION AND HAUL)	CU. YD.					
2105.507	COMMON EXCAVATION (P) (Assumed 6' for Residential)	CU. YD.	6695	6625	70		
2105.507	SUBGRADE EXCAVATION (Assumed 12")	CU. YD.	11430	11160	270		
2105.507	ROCK EXCAVATION	CU. YD.	1000	1000			
2105.609	GRANULAR BORROW	TON	20575	20085	490		
2118.509	AGGREGATE SURFACING CLASS 5	TON	944	924	20		
2123.610	STREET SWEEPING (WITH PICKUP BROOM)	HOURL	120	90	30		
2211.507	AGGREGATE BASE (CV) CLASS 5 (P)	CU. YD.	6020	5960	60		
2232.504	MILL BITUMINOUS SURFACE (2.0")	SQ. YD.	11550		11550		
2301.602	DRILL AND GROUT REINFORCEMENT BAR (EPOXY COATED)	EACH	1120	912	208		
2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	2895	2280	615		
2360.504	TYPE SPWEA330F WEARING COURSE MIXTURE, 3-INCH THICK	SQ. YD.	450	440	10		
2360.509	TYPE SP 9.5 WEARING COURSE MIX (3.F)	TON	9080	7480	1600		
2360.509	TYPE SP 12.5 NON-WEARING COURSE MIX (3.F)	TON	2180	2100	80		
2411.607	CONCRETE STEPS	CU. YD.	30	30			
2451.507	AGGREGATE BACKFILL (CV)	CU. YD.					
2451.507	FINE FILTER AGGREGATE (CV)	CU. YD.					
2451.609	GRANULAR BACKFILL	TON					
2503.503	12" PERFORATED THERMOPLASTIC PIPE SEWER	LIN. FT.					
2503.503	8" DUCTILE IRON PIPE SEWER CLASS 52	LIN. FT.	120	120			
2503.503	12" C-900 PIPE SEWER	LIN. FT.	120	120			
2503.503	15" RC PIPE SEWER DESIGN 3006 CLASS V	LIN. FT.	2630	2280	350		
2503.503	18" RC PIPE SEWER DESIGN 3006 CLASS V	LIN. FT.					
2503.602	CONNECT INTO EXISTING STRUCTURE	EACH	40	32	8		
2503.602	SANITARY SEWER SERVICE REPAIR EXCAVATION	EACH	100			100	
2503.602	TELEWISE REPAIRED SEWER SERVICE (LATERAL LAUNCH FROM SEWER MAIN)	EACH	100			100	
2503.603	SANITARY SEWER SERVICE REPAIR	LIN. FT.	3500			3500	
2503.603	CLEAN AND TELEWISE SANITARY SEWER	LIN. FT.	12000			12000	
2503.603	CLEAN AND TELEWISE STORM SEWER	LIN. FT.	8000			8000	
2504.602	CURB BOX	EACH					
2504.602	ADJUST CURB BOX	EACH					
2504.602	REPAIR VALVE BOX	EACH					
2504.602	ADJUST VALVE BOX	EACH	89	73	16		
2504.602	VALVE BOX	EACH					
2504.602	WATER UTILITY HOLE	EACH					
2504.602	EXCAVATION FOR WATER MAIN OFFSET	EACH					
2504.602	HYDRANT	EACH					
2504.602	6" GATE VALVE AND BOX	EACH					
2504.602	8" GATE VALVE AND BOX	EACH					
2504.602	1" ORISEAL VALVE AND BOX	EACH					
2504.602	1.5" ORISEAL VALVE AND BOX	EACH					
2504.602	2" ORISEAL VALVE AND BOX (WASTING)	EACH					
2504.602	1" TEMPORARY AIR VENT	EACH					
2504.602	SACRIFICIAL ANODE	EACH					
2504.603	1" TYPE K COPPER PIPE	LIN. FT.					
2504.603	1.5" TYPE K COPPER PIPE	LIN. FT.					
2504.603	2" TYPE K COPPER PIPE	LIN. FT.					
2504.603	6" WATER MAIN REPLACEMENT (DUCTILE)	LIN. FT.					
2504.603	8" DI WATER MAIN REPLACEMENT (DUCTILE)	LIN. FT.					
2504.604	TWO-INCH INSULATION	SQ. YD.					
2504.608	DUCTILE AND GREY IRON FITTINGS	POUND					
2506.502	CASTING ASSEMBLY	EACH	106			106	
2506.502	ADJUST FRAME AND RING CASTING	EACH	106	76	30		
2506.502	CONSTRUCT MANHOLE DESIGN TYPE I	EACH					
2506.502	CONSTRUCT MANHOLE DESIGN TYPE III WITH SUMP	EACH					
2506.502	CONSTRUCT CATCH BASIN DESIGN TYPE 7A	EACH					
2506.502	CONSTRUCT CATCH BASIN DESIGN TYPE 7B	EACH	97	87	10		
2506.502	FURNISH AND INSTALL CATCH BASIN OUTLET HOOD-PVC	EACH					
2506.602	REHAB BRICK SANITARY MANHOLE-FORM AND POUR CONCRETE LINING SYSTEM	EACH	40			40	
2506.602	ADJUST CATCH BASIN CASTING ASSEMBLY	EACH	18	12	6		
2506.602	CASTING ASSEMBLY SPECIAL	EACH					
2511.504	GEOTEXTILE FILTER TYPE V (FOR INFILTRATION TRENCH)	SQ. YD.					
2521.518	4" CONCRETE WALK (Assumed 6')	SQ. FT.	70410	68110	2300		
2521.518	6" CONCRETE WALK	SQ. FT.	8570	7970	600		
2531.503	CONCRETE CURB AND GUTTER DESIGN B612 MODIFIED	LIN. FT.	11600	11600			
2531.503	CONCRETE CURB AND GUTTER DESIGN B624	LIN. FT.	16000	14900	1100		
2531.504	6" CONCRETE DRIVEWAY PAVEMENT	SQ. YD.	2240	2240			
2531.504	8" CONCRETE DRIVEWAY PAVEMENT	SQ. YD.	285	255	30		
2531.603	HAND FORM CONCRETE CURB	LIN. FT.	880	780	100		
2531.603	CONCRETE CURB DESIGN V	LIN. FT.	2580	2480	100		
2531.618	TRUNCATED DOMES (RECTANGULAR)	SQ.FT.	1176	976	200		
2540.602	INSTALL MAIL BX AND SUPPORT	EACH	10	10			
2540.602	INSTALL TEMPORARY MULTIPLE MAILBOX AND SUPPORT	EACH	4	4			
2563.601	TRAFFIC CONTROL	LUMP SUM	7	6.00	1.00	0.120	
2571.524	TRANSPLANT TREE (SPADE SIZE XX")	TREE					
2563.601	ALTERNATE PEDESTRIAN ROUTE	LUMP SUM	2	1.00	0.50	0.120	
2571.602	TREE PROTECTION (Assumed 2 per block)	EACH	44	38	6		
2573.502	STORM DRAIN INLET PROTECTION	EACH	158	118	40		
2573.502	STABILIZED CONSTRUCTION EXIT	EACH	29	29			
2573.503	SEDIMENT CONTROL LOGS TYPE ROCK	LIN. FT.	400	400			
2574.507	COMMON TOPSOIL BORROW (LV)	CU. YD.	4265	4165	100		
2575.504	SODDING, TYPE LAWN	SQ. YD.	29260	28590	670		
2575.508	HYDRAULIC STABILIZED FIBER MATRIX	POUND	12760	12480	300		
2582.503	4" SOLID LINE - PREF TAPE - INLAY	LIN. FT.	7500		7500		
2582.503	4" DOUBLE SOLID LINE - PREF TAPE - INLAY	LIN. FT.	2400		2400		
2582.503	PAVEMENT MESSAGE - PREF TAPE - INLAY	SQ. FT.	512		512		
2582.503	CROSSWALK MARKING - PREF TAPE - INLAY	SQ. FT.	500		500		
	SIGNING & STRIPIING (Additional costs not covered above)	LUMP SUM	6	5.00	1.00		
	INFILTRATION TRENCH	LUMP SUM	1	1			

STATEMENT OF ESTIMATED QUANTITIES



DESIGNED	CX	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA Signature: _____ Date: <u>3/13/2020</u> CHRISTOPHER M. ENGELMANN Lic. No. <u>43350</u>
DRAWN	CX	
APPROVED	CME	

PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

GRIGGS/SCHIEFFER PHASE II

PROJECT: 21-P-1458		STATE AID PROJECT NUMBER: N.A.	
DRAWER: 12		CAD NAME: PROJECTS/CURRENT/GRIGGS SCHEFFER PHASE 2/DWG	
DWG. NO. 1641		DATE: 10/02/2020	SHEET NO. 3 OF XX SHEETS

EXISTING SEWER STRUCTURES CHART								
GRIGGS/SCHEFFER PHASE 2								
ELEANOR (SHEETS XX-XX)								
STR NO.	STATION	OFFSET LT. CENTER	RT.	REMAIN AS IS	REMOVE CATCH BASIN	REHAB MANHOLE	ADJUST FR & RING CAST.	NOTES
1	9+97	1		X				OUT OF LIMITS
2	10+07		6				X	
3	10+40	16			X			
4	10+40		16		X			
5	12+17	X				X		
6	14+37	X				X		
7	16+43	41			X			
8	16+59	X				X		
9	16+66		6				X	
10	16+76	42			X			
11	16+92	17			X			
12	17+07		16		X			
13	17+15	X				X		
14	19+17	X				X		
15	21+18	X				X		
16	22+64	16			X			
17	22+82		16		X			
18	23+04		40	X				OUT OF LIMITS
19	23+20	X				X		
20	23+26	21					X	
21	23+30		44	X				OUT OF LIMITS
22	23+35		41	X				OUT OF LIMITS
23	25+20	X				X		
24	26+39		15		X			
25	26+52	17			X			
26	26+62		44	X				OUT OF LIMITS
27	26+68		6				X	
28	26+75	X		X				OUT OF LIMITS
29	26+85		33	X				OUT OF LIMITS
30	27+26		39	X				OUT OF LIMITS
31	27+34		43	X				OUT OF LIMITS
32	27+41		39	X				OUT OF LIMITS
33	27+43		8	X				OUT OF LIMITS
34	27+46		45	X				OUT OF LIMITS
35	27+57	33		X				OUT OF LIMITS
36	27+79	X		X				OUT OF LIMITS
TOTALS				14	10	8	4	

EXISTING SEWER STRUCTURES CHART								
GRIGGS/SCHEFFER PHASE 2								
HIGHLAND PKWY (SHEETS XX-XX)								
STR NO.	STATION	OFFSET LT. CENTER	RT.	REMAIN AS IS	REMOVE CATCH BASIN	REHAB MANHOLE	ADJUST FR & RING CAST.	NOTES
37	9+71	10		X				OUT OF LIMITS
38	9+73	53		X				OUT OF LIMITS
39	9+78		54	X				OUT OF LIMITS
40	10+00	12					X	
41	10+01		54	X				OUT OF LIMITS
42	10+12		92	X				OUT OF LIMITS
43	10+14		43	X				OUT OF LIMITS
44	10+16	42		X				OUT OF LIMITS
45	10+21	X				X		
46	10+38		18		X			
47	10+42	19			X			
48	12+34	X				X		
49	14+48	X				X		
50	16+59		1			X		
51	16+60		89	X				OUT OF LIMITS
52	16+43	43		X				OUT OF LIMITS
53	16+66		30				X	
54	16+66	41					X	
55	16+75	43		X				OUT OF LIMITS
56	16+99	18			X			
57	16+99		18		X			
58	18+45	1				X		
59	19+73		44	X				OUT OF LIMITS
60	19+90		90	X				OUT OF LIMITS
61	19+95		43	X				OUT OF LIMITS
62	20+06		43	X				OUT OF LIMITS
63	20+20		1			X		
64	20+29		18		X			
65	22+81	18			X			
66	23+03	43		X				OUT OF LIMITS
67	23+23	X				X		
68	23+10		18		X			
69	23+28	18					X	
70	23+34	62		X				OUT OF LIMITS
71	25+51		18		X			
72	25+65		53		X			
73	25+83	18			X			
74	25+99		7				X	
75	26+06		30		X			
76	26+09	X				X		
77	26+26	##		X				OUT OF LIMITS
78	26+42		46		X			
79	26+69		35		X			
80	26+72		6				X	
81	26+79	X				X		
TOTALS				17	13	9	6	

EXISTING SEWER STRUCTURES CHART								
GRIGGS/SCHEFFER PHASE 2								
EDGCUMBE (SHEETS XX-XX)								
STR NO.	STATION	OFFSET LT. CENTER	RT.	REMAIN AS IS	REMOVE CATCH BASIN	REHAB MANHOLE	ADJUST FR & RING CAST.	NOTES
82	10+03	59		X				OUT OF LIMITS
83	10+10	11		X				OUT OF LIMITS
84	10+12		73	X				OUT OF LIMITS
85	10+36		32	X				OUT OF LIMITS
86	10+38		107	X				OUT OF LIMITS
87	11+17		24	X				OUT OF LIMITS
88	11+18	24		X				OUT OF LIMITS
89	12+59		38	X				OUT OF LIMITS
90	12+93	19		X				OUT OF LIMITS
91	12+94		38	X				OUT OF LIMITS
92	12+94		19	X				OUT OF LIMITS
93	13+86		39	X				OUT OF LIMITS
94	13+97		14	X				OUT OF LIMITS
95	14+01	15		X				OUT OF LIMITS
96	16+80		47					
97	16+92	28					X	
98	17+07	17						
99	16+98		19					
100	16+95		41		X			
101	17+08	43						
102	19+25		142	X				OUT OF LIMITS
103	19+40		127	X				OUT OF LIMITS
104	20+83	41			X			
105	20+85	22					X	
106	21+05	7			X			
107	21+07		41		X			
108	21+43		21		X			
109	21+67		38			X		
110	21+88	36				X		
111	23+27		37			X		
112	23+61	37				X		
113	23+67	31					X	
114	23+86	71			X			
115	24+22	64			X			
116	24+24	41			X			
117	24+27	31					X	
118	24+78	##		X				OUT OF LIMITS
119	24+86	##		X				OUT OF LIMITS
120	25+02	76					X	
121	25+02	29					X	
122	25+04	##				X		
123	25+04	##		X				OUT OF LIMITS
124	25+21	37				X		
125	25+27		37			X		
126	25+36		40		X			
127	25+38	##			X			
128	25+43	##			X			
129	25+61	30					X	
130	25+61	42			X			
131	25+68	16			X			
132	25+86		21		X			
133	27+54		35			X		
134	27+62	33					X	
135	27+69	42			X			
136	27+82	43				X		
137	27+92	21			X			
138	28+01	33					X	
139	29+91	29					X	
140	29+91	37				X		
141	32+11	30				X		
142	32+19	23					X	
143	32+15	71			X			
144	32+31	65					X	
145	32+59	64			X			
146	32+65	36				X		
147	32+79	26					X	
148	32+96	42			X			
149	33+08	18			X			
150	33+23		21		X			
151	34+43	38				X		
152	36+18	38				X		
153	37+40	43				X		
TOTALS				19	21	15	13	

EXISTING SEWER CHART

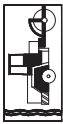


DESIGNED	CEE	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	
DRAWN	CEE		
APPROVED	CME		
Signature: _____		Date: <u> X/XX/XXXX </u>	
CHRISTOPHER M. ENGELMANN		Lic. No. <u> 43350 </u>	

PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

GRIGGS/SCHIEFFER PHASE 2

PROJECT: 21-P-1458	STATE AID PROJECT NUMBER: N.A.		
DRAWER: 12	CAD NAME: PROJECTS/CURRENT/GRIGGS SCHEFFER PHASE II		
DWG. NO. 1628	DATE: 10/6/2020	SHEET NO. 4	OF 40 SHEETS



C:\Users\16512\Desktop\Griggs Scheffer Phase 2\DWG\04-05 Sewer Charts.dwg Oct 06, 2020 - 4:20pm

EXISTING SEWER STRUCTURES CHART								
GRIGGS/SCHEFFER PHASE 2								
EDGCUMBE PLACE (SHEETS XX-XX)								
STR NO.	STATION	OFFSET		REMAIN AS IS	REMOVE CATCH BASIN	REHAB MANHOLE	ADJUST FR & RING CAST.	NOTES
		LT.	CENTER					
154	13+32	3				X		
155	14+32	2				X		
156	15+31	9				X		
157	16+07	13				X		
158	17+68	62		X				OUT OF LIMITS
TOTALS				1		4		

EXISTING SEWER STRUCTURES CHART								
GRIGGS/SCHEFFER PHASE 2								
ALASKA (SHEETS XX-XX)								
STR NO.	STATION	OFFSET		REMAIN AS IS	REMOVE CATCH BASIN	REHAB MANHOLE	ADJUST FR & RING CAST.	NOTES
		LT.	CENTER					
180	9+99			16	X			OUT OF LIMITS
181	10+00	17		X				OUT OF LIMITS
182	10+01			6			X	
183	10+24	37			X			
184	10+23			39	X			
185	10+33			40			X	
186	10+33			7			X	
187	10+40	1				X		
188	10+56	44			X			
189	10+56			42	X			
190	10+81	16			X			
191	10+82			16	X			
192	16+48	47			X			
193	16+59	1				X		
194	16+62			18			X	
195	16+81	41			X			
196	20+44			16	X			
197	20+99			18			X	
198	21+01		X			X		
199	21+06	17			X			
200	21+31			16	X			
201	25+06			31		X		
202	25+45	16			X			
203	25+23			24	X			
204	25+37	5				X		
TOTALS				2	13	5	5	

EXISTING SEWER STRUCTURES CHART								
GRIGGS/SCHEFFER PHASE 2								
MONTCALM COURT (SHEET XX)								
STR NO.	STATION	OFFSET		REMAIN AS IS	REMOVE CATCH BASIN	REHAB MANHOLE	ADJUST FR & RING CAST.	NOTES
		LT.	CENTER					
159	9+64			12	X			
160	9+82			6	X			
161	9+92			26			X	
162	10+01			4		X		
163	10+72	2					X	
164	11+08			3			X	
165	10+67			100	X			OUT OF LIMITS
167	11+31			188	X			OUT OF LIMITS
168	11+21			194	X			OUT OF LIMITS
169	11+16			224	X			OUT OF LIMITS
170	11+46			250	X			OUT OF LIMITS
171	11+81			258	X			OUT OF LIMITS
TOTALS				6	2	1	3	

EXISTING SEWER STRUCTURES CHART								
GRIGGS/SCHEFFER PHASE 2								
VISTA (SHEET XX)								
STR NO.	STATION	OFFSET		REMAIN AS IS	REMOVE CATCH BASIN	REHAB MANHOLE	ADJUST FR & RING CAST.	NOTES
		LT.	CENTER					
205	10+00			8	X			OUT OF LIMITS
206	9+78	33		X				OUT OF LIMITS
207	9+80	50		X				OUT OF LIMITS
208	10+06	38		X				OUT OF LIMITS
209	10+20	42		X				OUT OF LIMITS
TOTALS				5				

EXISTING SEWER STRUCTURES CHART								
GRIGGS/SCHEFFER PHASE 2								
MONTCALM PLACE (SHEET XX)								
STR NO.	STATION	OFFSET		REMAIN AS IS	REMOVE CATCH BASIN	REHAB MANHOLE	ADJUST FR & RING CAST.	NOTES
		LT.	CENTER					
172	9+53			9	X			OUT OF LIMITS
173	9+66	19		X				OUT OF LIMITS
174	9+70			2	X			OUT OF LIMITS
175	9+76			37	X			OUT OF LIMITS
176	9+90			45	X			OUT OF LIMITS
177	10+01	5		X				OUT OF LIMITS
178	10+10	18					X	
179	10+11			24	X			
TOTALS				6	1		1	

EXISTING SEWER CHART

	DESIGNED	CEE	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA		PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS	PROJECT: 21-P-1458		STATE AID N.A. PROJECT NUMBER:		
	DRAWN	CEE				DRAWER: 12		CAD NAME: PROJECTS/CURRENT/GRIGGS SCHEFFER PHASE II		
	APPROVED	CME	Signature: _____ Date: X/XX/XX CHRISTOPHER M. ENGELMANN Lic. No. 43350			DWG. NO. 1628		DATE: 10/6/2020 SHEET NO. 5 OF 40 SHEETS		

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PROPOSED SEWER STRUCTURES CHART										
GRIGGS/SCHEFFER PHASE 2										
ELEANOR (SHEETS XX-XX)										
STR NO.	STATION	OFFSET			MH	CB	12" PERF LIN. FT.	15" RCP LIN. FT.	18" RCP LIN. FT.	NOTES
		LT.	CENTER	RT.						
300	10+41			16		7B		35.4		
301	10+40	16				7B		32		
302	16+44	44				7A W/HOOD		25.7		
303	16+68	###			TYPE III W/SUMP					
304	16+69	50			TYPE III W/SUMP			55.7		
305	16+76	44				7A W/HOOD		50.3		
306	17+04			16		7B		32		
307	17+04	16				7B		43.5		
308	22+77			16		7B		0		
309	22+77	16				7B		32		
310	26+45	16				7B		31.8		
311	26+37			16		7B		32.9		
TOTAL PIPE LENGTH								371		

PROPOSED SEWER STRUCTURES CHART										
GRIGGS/SCHEFFER PHASE 2										
RIDGE (SHEET XX)										
STR NO.	STATION	OFFSET			MH	CB	12" PERF LIN. FT.	15" RCP LIN. FT.	18" RCP LIN. FT.	NOTES
		LT.	CENTER	RT.						
354	10+44	16				7B		32.1		
355	10+43			16		7B		51.9		
TOTAL PIPE LENGTH								84		

PROPOSED SEWER STRUCTURES CHART										
GRIGGS/SCHEFFER PHASE 2										
MONTCALM COURT (SHEET XX)										
STR NO.	STATION	OFFSET			MH	CB	12" PERF LIN. FT.	15" RCP LIN. FT.	18" RCP LIN. FT.	NOTES
		LT.	CENTER	RT.						
358	9+64			12		7B		19.9		
359	9+83			6		7B		22.1		
TOTAL PIPE LENGTH								42		

PROPOSED SEWER STRUCTURES CHART										
GRIGGS/SCHEFFER PHASE 2										
ALASKA (SHEET XX)										
STR NO.	STATION	OFFSET			MH	CB	12" PERF LIN. FT.	15" RCP LIN. FT.	18" RCP LIN. FT.	NOTES
		LT.	CENTER	RT.						
61	10+24	44				7B		52.2		
362	10+23			39		7B		9.6		
363	10+56	44				7B		32		
364	10+56			42		7B		23.5		
365	10+81	16				7B		32.6		
366	10+83			16		7B		50.5		
367	20+41			16		7B		57.9		
368	21+06	16				7B		44.6		
369	21+37			16		7B		38.1		
370	25+24			20		7B		28.5		
371	25+49	16				7B		15.9		
TOTAL PIPE LENGTH								385		

PROPOSED SEWER STRUCTURES CHART										
GRIGGS/SCHEFFER PHASE 2										
HIGHLAND PKWY (SHEETS XX-XX)										
STR NO.	STATION	OFFSET			MH	CB	12" PERF LIN. FT.	15" RCP LIN. FT.	18" RCP LIN. FT.	NOTES
		LT.	CENTER	RT.						
312	10+44			16		7B		32		
313	10+43	16				7B		44.1		
314	17+03	16				7B		32		
315	17+03			16		7B		40.3		
316	20+33			16		7B		38.2		
317	21+50			10	TYPE III W/SUMP					
318	22+75			10	TYPE III W/SUMP			59.6		
319	22+76	16				7A W/HOOD		26		
320	23+10			16		7A W/HOOD		35.8		
321	25+46			16		7B		41.7		
322	25+73	16				7B		35		
TOTAL PIPE LENGTH								385		

PROPOSED SEWER STRUCTURES CHART										
GRIGGS/SCHEFFER PHASE 2										
FORD (SHEET XX)										
STR NO.	STATION	OFFSET			MH	CB	12" PERF LIN. FT.	15" RCP LIN. FT.	18" RCP LIN. FT.	NOTES
		LT.	CENTER	RT.						
356	13+31			16		7A W/HOOD		17.5		
357	13+47	16				7A W/HOOD		21.9		
TOTAL PIPE LENGTH								39		

PROPOSED SEWER STRUCTURES CHART									
GRIGGS/SCHEFFER PHASE 2									
MONTCALM PLACE (SHEET XX)									
STR NO.	STATION	OFFSET		MH	CB	12" PERF LIN. FT.	15" RCP LIN. FT.	18" RCP LIN. FT.	NOTES
		LT.	RT.						
360	10+09		35		7B		52.6		
TOTAL PIPE LENGTH							53		

PROPOSED SEWER STRUCTURES CHART										
GRIGGS/SCHEFFER PHASE 2										
VISTA (SHEET XX)										
STR NO.	STATION	OFFSET			MH	CB	12" PERF LIN. FT.	15" RCP LIN. FT.	18" RCP LIN. FT.	NOTES
		LT.	CENTER	RT.						
372	13+26			16		7B		32		
373	13+26	16				7B		64.4		
TOTAL PIPE LENGTH								96		

PROPOSED SEWER STRUCTURES CHART										
GRIGGS/SCHEFFER PHASE 2										
EDGCUMBE (SHEETS XX-XX)										
STR NO.	STATION	OFFSET			MH	CB	12" PERF LIN. FT.	15" RCP LIN. FT.	18" RCP LIN. FT.	NOTES
		LT.	CENTER	RT.						
323	13+86			39	TYPE IV					
324	14+16			30	TYPE III W/SUMP			30.9		
325	16+81			35	TYPE III W/SUMP		0			
326	16+92	28			TYPE IV			63.9		
327	16+95			40		7A W/HOOD		16.5		
328	16+97			20		7A W/HOOD		19.9		
329	17+06	40				7A W/HOOD		17.6		
330	17+06	20				7A W/HOOD		16		
331	19+72			45	TYPE III W/SUMP					
332	20+76	17			TYPE III W/SUMP		123.6			
333	21+14	40				7A W/HOOD		20.1		
334	21+14	20				7A W/HOOD		28.3		
335	21+07			40		7A W/HOOD		66.6		
336	21+43			20		7A W/HOOD		43.2		
337	24+17	40				7B		13.7		
338	25+36			40		7B		77.2		
339	25+60	40				7B		10		
340	25+68	20				7B		12.4		
341	25+74			20		7B		42.3		
342	27+69	40				7B		11		
343	27+92	20				7B		16.2		
344	29+25	29			TYPE IV					
345	29+42	12			TYPE III W/ SUMP			24		
346	32+04	9			TYPE III W/SUMP		260			
347	32+93	40				7A W/HOOD		19.1		
348	32+98	20				7A W/HOOD		19.8		
349	33+06			20		7A W/HOOD		40.8		
350	38+79	40				7B		38.4		
351	39+15	20				7B		29.6		
352	39+27			20		7B		25.5		
353	39+42			40		7B		34.1		
TOTAL PIPE LENGTH							384	737		

PROPOSED SEWER CHART

	DESIGNED	CEE	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA		PREPARED BY	STREET ENGINEERING DIVISION	FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS	PROJECT: 21-P-1458		STATE AID PROJECT NUMBER: NOT APPLICABLE		
	DRAWN	ATT						DRAWER: 12		CAD NAME: PROJECTS/CURRENT/GRIGGS SCHEFFER PHASE II		
	APPROVED	CME	Signature: _____ Date: _____ CHRISTOPHER M. ENGELMANN Lic. No. 43350					DWG. NO. 1628		DATE: 9/22/2020 SHEET NO. 6 OF XX SHEETS		
GRIGGS/SCHEFFER PHASE II												

NOTES:

1. CONTRACTOR SHALL PLACE SEDIMENT CONTROL LOGS AS DIRECTED BY THE ENGINEER.
2. CONTRACTOR SHALL NOTIFY ELIZABETH HOSCH, CAPITAL REGION WATERSHED DISTRICT, 651-644-8888 PRIOR TO BEGINNING CONSTRUCTION ACTIVITY
3. ALL PAVED SURFACES WITHIN AND ADJACENT TO THE PROJECT AREA SHALL BE SWEEPED FREE OF SEDIMENT WITHIN 24 HOURS OF DISCOVERY.
4. SEE SPECIFICATIONS FOR STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
5. SPECIFIED EROSION/SEDIMENT CONTROL MEASURES ARE THE MINIMUM. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.
6. SEDIMENT CONTROL SHALL CONFORM TO CITY OF ST PAUL STANDARD PLATE NO. 2400A, 2401 AND OR 2402
7. CONTRACTOR SHALL PROVIDE CONSTRUCTION EXITS AT ALL EXITS FROM ACTIVE CONSTRUCTION. SEE MnDOT 2573.3

LEGEND:



DIRECTION OF FLOW

2

INTERIM SEDIMENT CONTROL AND STORM DRAIN INLET PROTECTION FOR NEW CATCH BASINS
SEE DETAIL (NO. INDICATES CB'S REQUIRING CONTROL)

4

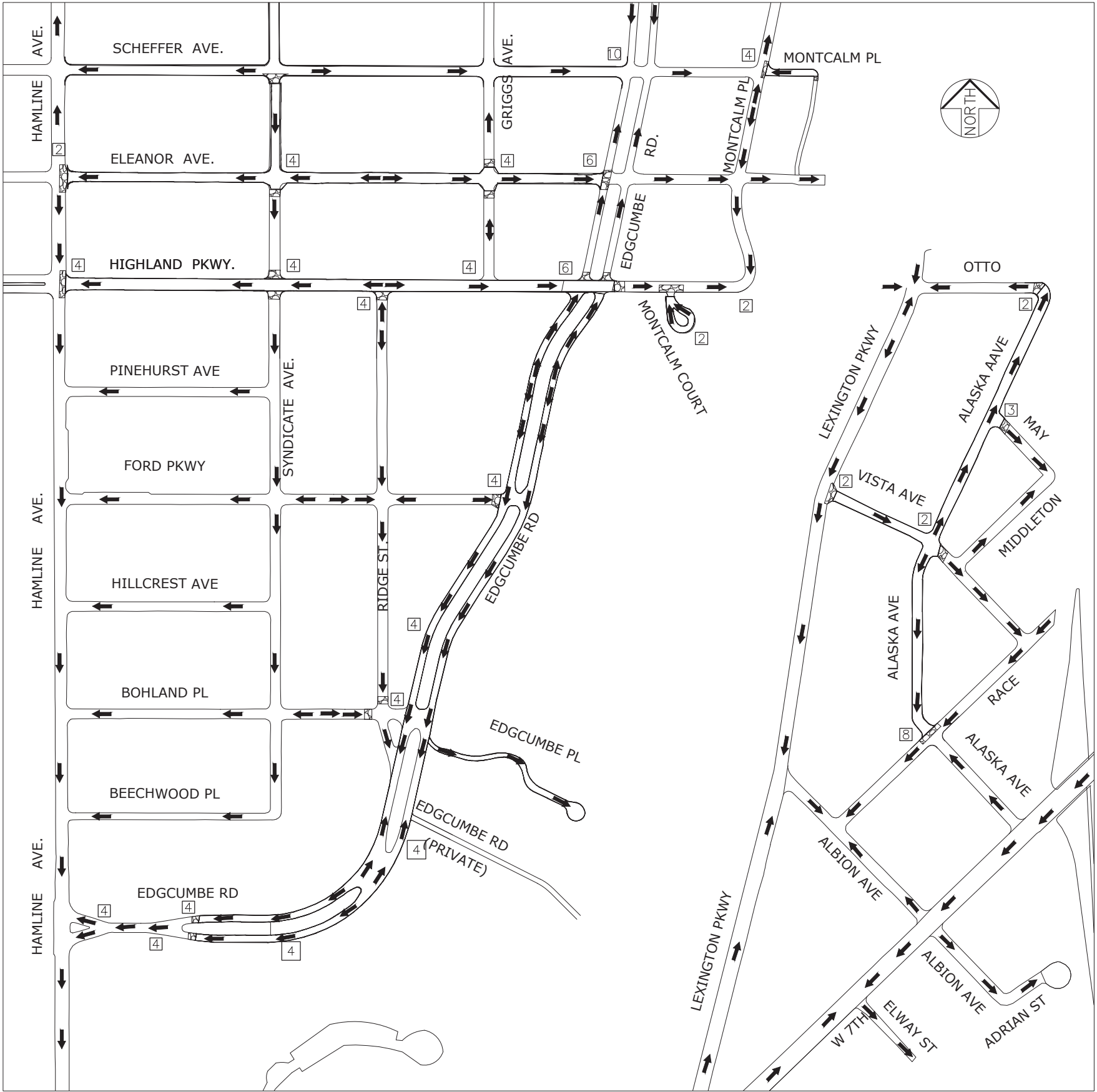
EXISTING CATCH BASINS OR SIDE INLETS REQUIRING STORM DRAIN INLET PROTECTION
SEE DETAIL (NO. INDICATES CB'S REQUIRING CONTROL.)



LOCATION OF INFILTRATION TRENCH



CONSTRUCTION EXITS PER MN DOT 2573.3



EROSION AND SEDIMENT CONTROL PLAN



DESIGNED	CEE
DRAWN	ATT
APPROVED	CME

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

Signature: _____ Date: _____
CHRISTOPHER M. ENGELMANN Lic. No. 43350

PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

GRIGGS/SCHEFFER PHASE II

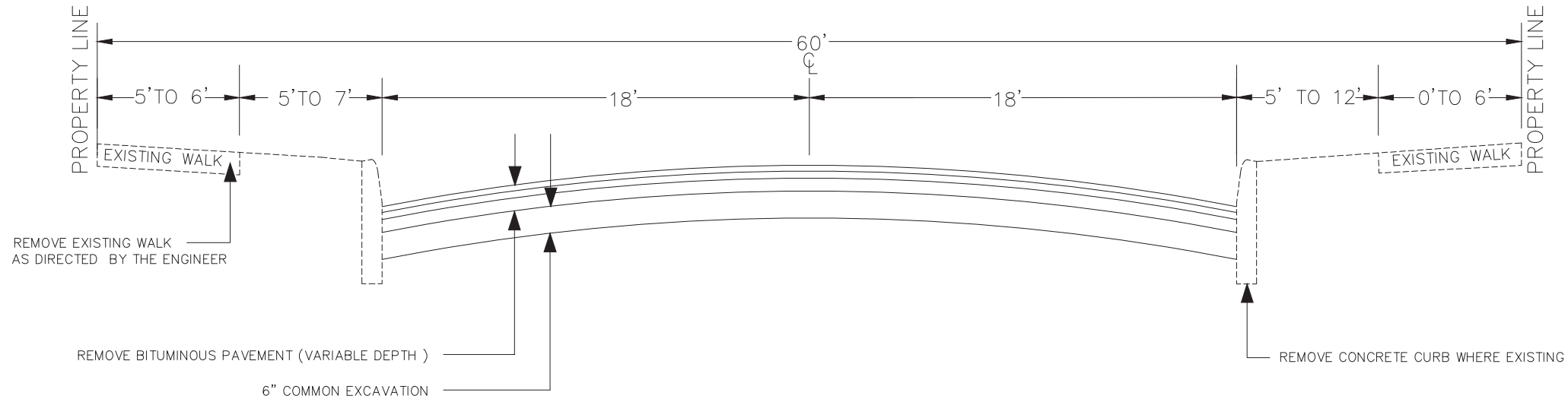
PROJECT: 21-P-1458
DRAWER: 12
DWG. NO. 1628

STATE AID PROJECT NUMBER: NOT APPLICABLE
CAD NAME: PROJECTS/CURRENT/GRIGGS-SCHEFFER PHASE II/DWG
DATE: 9/22/2020
SHEET NO. 6 OF X SHEETS

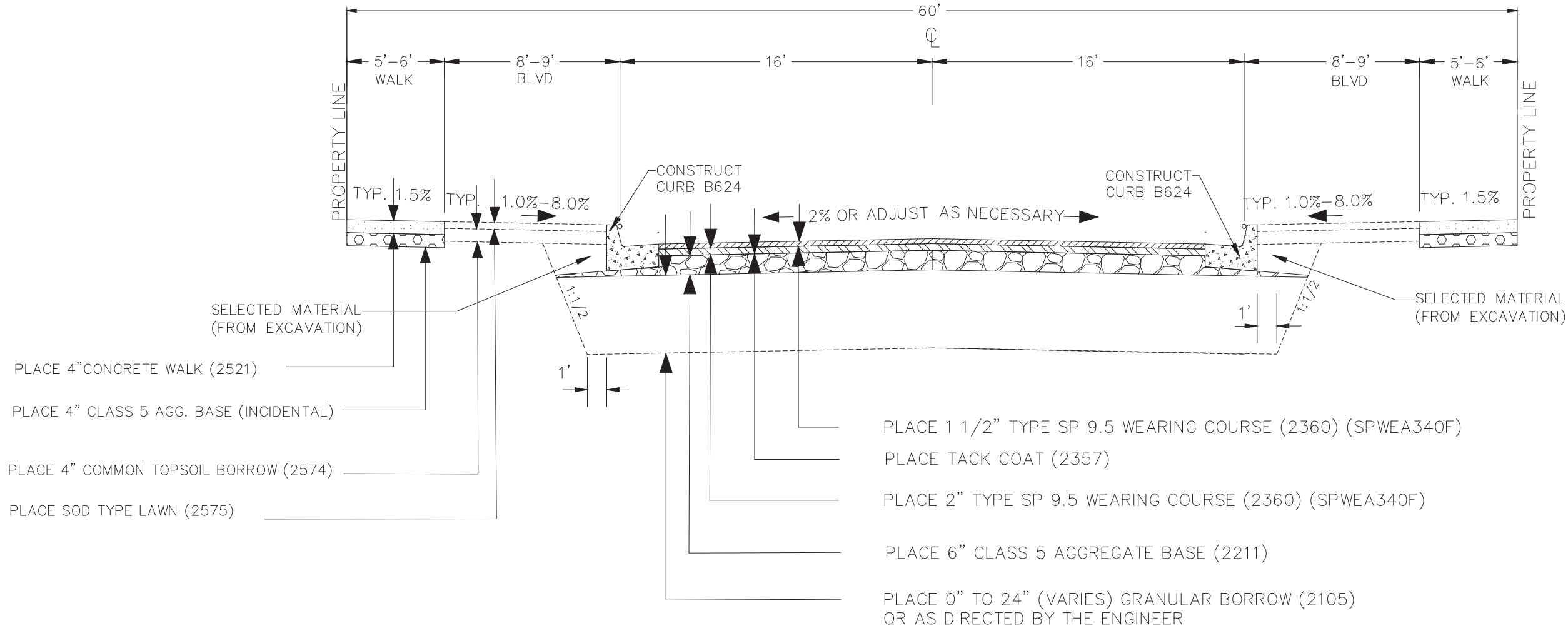


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EXISTING RESIDENTIAL TYPICAL SECTION



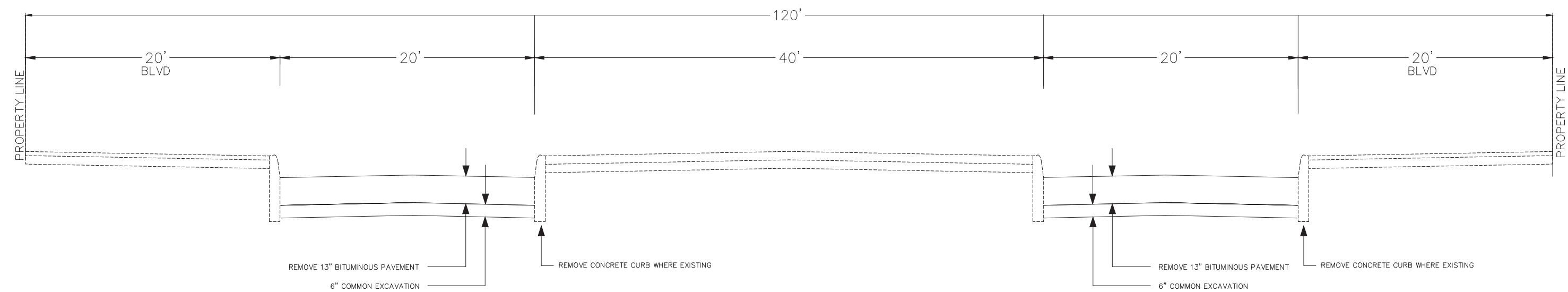
PROPOSED RESIDENTIAL TYPICAL SECTION



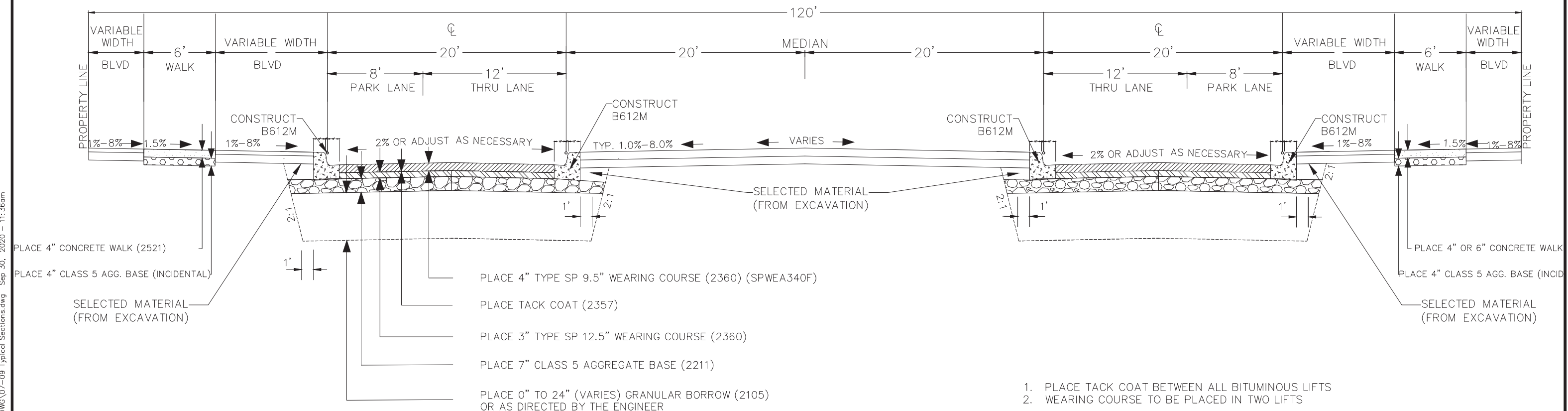
RESIDENTIAL TYPICAL SECTION

	DESIGNED	CEE	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA Signature: _____ Date: _____ CHRISTOPHER M. ENGELEMANN Lic. No. 43350	PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS GRIGGS/SCHEFFER PHASE II	PROJECT: 21-P-1458		STATE AID PROJECT NUMBER: NOT APPLICABLE		
	DRAWN	ATT			DRAWER: 12	CAD NAME: PROJECT/CURRENT/GRIGGS-SCHEFFER PHASE II/DWG			
	APPROVED	CME			DWG. NO. 1628	DATE: 9/25/20	SHEET NO. 7 OF XX SHEETS		

EXISTING EDGCUMBE ROAD TYPICAL SECTION



PROPOSED EDGCUMBE ROAD TYPICAL SECTION



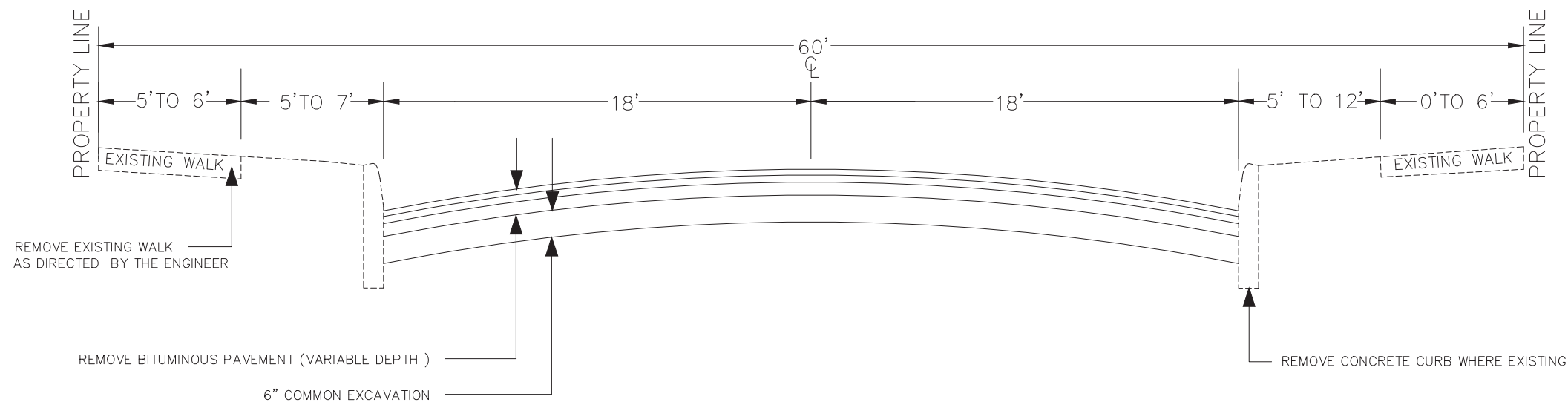
1. PLACE TACK COAT BETWEEN ALL BITUMINOUS LIFTS
2. WEARING COURSE TO BE PLACED IN TWO LIFTS

EDGCUMBE ROAD TYPICAL SECTION

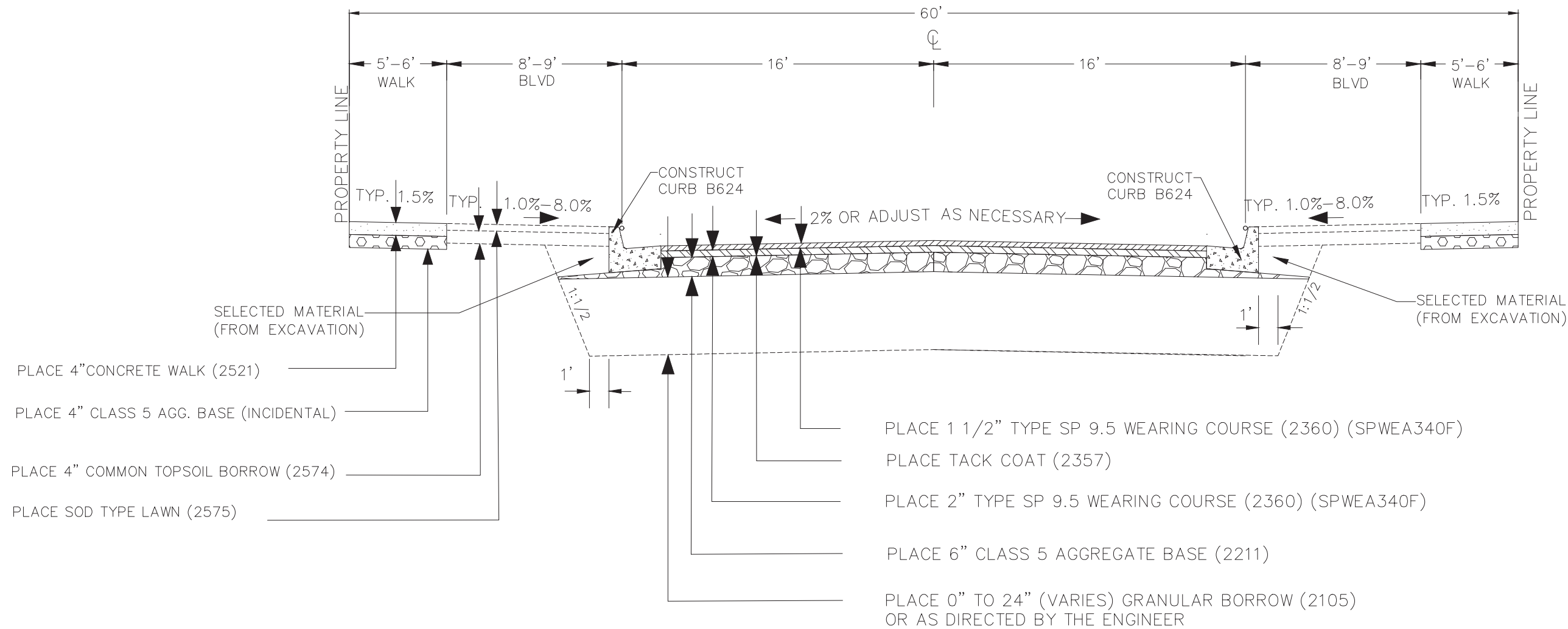
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	DESIGNED	CEE	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS	PROJECT: 21-P-1458	STATE AID PROJECT NUMBER: NOT APPLICABLE			
	DRAWN	ATT				DRAWER: 12			
	APPROVED	CME				DWG. NO. 1628			
Signature: _____ Date: _____ CHRISTOPHER ENGELEMAN Lic. No. 43350				GRIGGS SCHEFFER PHASE II		CAD NAME: PROJECT/CURRENT/GRIGGS-SCHEFFER II/PLAN SHEETS			
						DATE: 9/25/2020 SHEET NO. 8 OF XX SHEETS			

EXISTING HIGHLAND PARKWAY TYPICAL SECTION



PROPOSED HIGHLAND PARKWAY TYPICAL SECTION



HIGHLAND PARKWAY TYPICAL SECTION

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DESIGNED	CEE	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA Signature: _____ Date: _____ CHRISTOPHER M. ENGELEMANN Lic. No. 43350	
DRAWN	ATT		
APPROVED	CME		

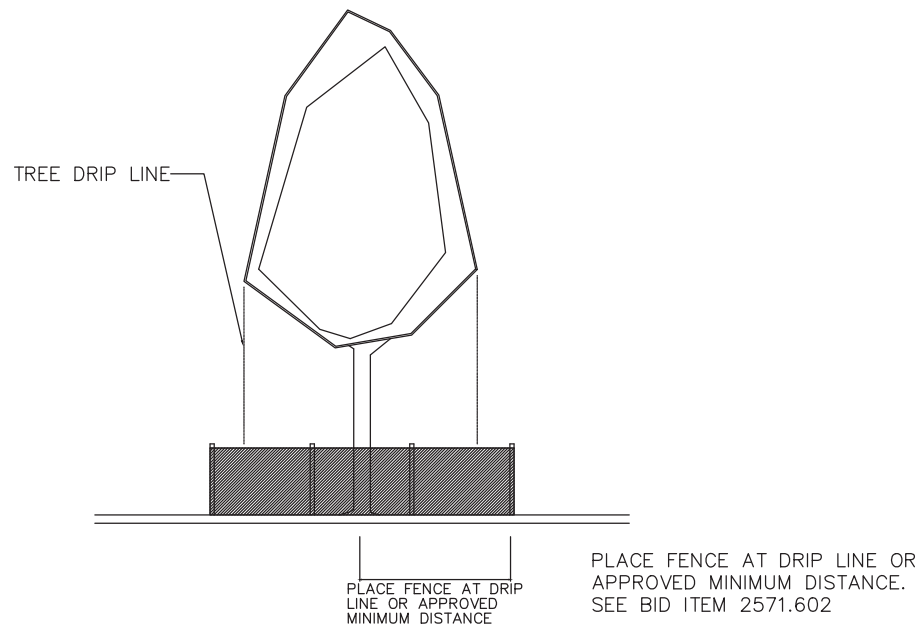
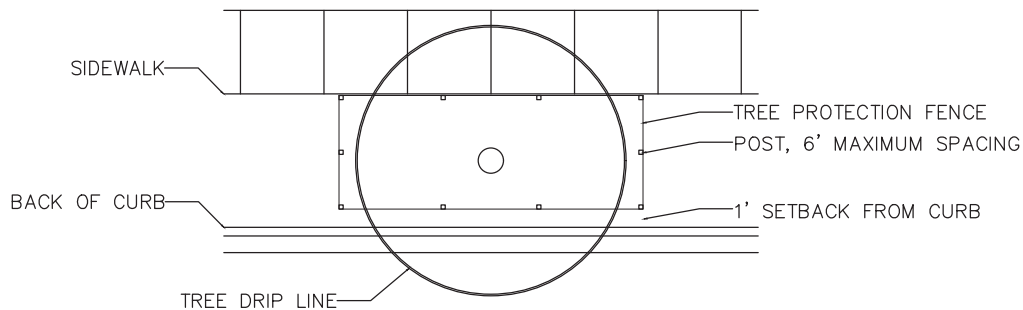
PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

GRIGGS/SCHEFFER PHASE II

PROJECT: 21-P-1458		STATE AID PROJECT NUMBER: N/P	
DRAWER:	12	CAD NAME: PROJECT/CURRENT/GRIGGS-SCHEFFER PHASE II/DWG	
DWG. NO.	1628	DATE: 10/5/20	SHEET NO. 9 OF XX SHEETS

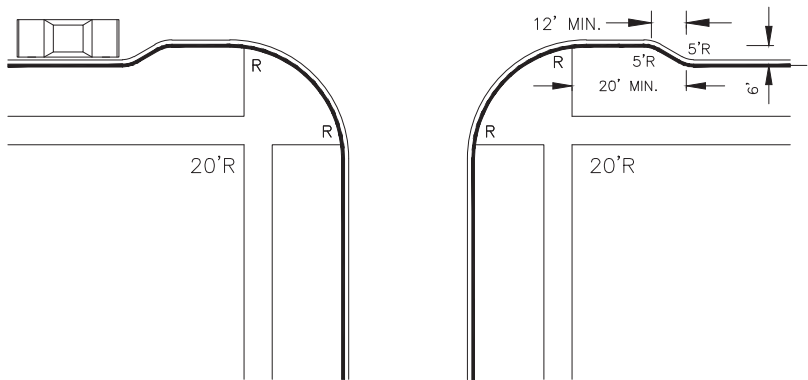


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NOTES:

1. TREE PROTECTION FENCING SHALL BE INSTALLED, ACCORDING TO PLAN, PRIOR TO DEMOLITION OR OTHER SITE WORK. CONTACT CITY FORESTER (651.632.5129) PRIOR TO ANY RELOCATION OF THE TREE PROTECTION FENCING TO BE APPROVED BY CITY FORESTER.TREE PROTECTION FENCING SHALL BE MAINTAINED FOR THE DURATION OF THE CONSTRUCTION PROCESS.
2. CONSTRUCTION MATERIALS, STOCKPILES, EQUIPMENT, VEHICLES, AND TEMPORARY FACILITIES SHALL NOT BE STORED OR OPERATED WITHIN THE TREE PROTECTION ZONE.
3. ROOTS OUTSIDE OF THE TREE PROTECTION ZONE EXPOSED OR DAMAGED DURING EXCAVATION OR OTHER CONSTRUCTION ACTIVITY SHALL BE CLEANLY CUT AS DIRECTED BY THE CITY FORESTER.
4. ADDITIONAL TREE PROTECTION MEASURES MAY BE REQUIRED.
5. LIMIT GRADING WITHIN THE DRIP LINE OF EXISTING TREES, GRADING WITHIN 5' OF THE TRUNK OF TREE SHALL BE DONE BY HAND OR SMALL EQUIPMENT TO MINIMIZE DAMAGE TO TREE ROOTS.
6. SUPPLEMENTAL WATER IS TO BE PROVIDED DURING PERIODS OF DRY AND HOT WEATHER, TYPICALLY WHEN RAINFALL IS BELOW 1" PER WEEK.
7. SOIL COMPACTION WITHIN THE DRIP LINE OF A STREET TREE, DUE TO CONSTRUCTION ACTIVITIES, TO BE RESTORED TO THE SATISFACTION OF, AND AT NO COST TO, THE CITY.
8. EXISTING STREET TREES ARE TO BE PROTECTED AT ALL TIMES. TREES DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE RESTORED OR REPLACED TO THE SATISFACTION OF, AND AT NO COST TO, THE CITY AS DETERMINED BY THE FORESTRY MANAGER. THE CONTRACTOR IS ADVISED TO DOCUMENT PRE-EXISTING CONDITIONS PRIOR TO THE START OF CONSTRUCTION.



CURB BUMP-OUT

STANDARD DETAIL PLATES

ST. PAUL DRG. NO.	STANDARD DETAIL
1206D	CONCRETE DRIVEWAY, TYPE 6
1304C	SIGN COLLAR PLACEMENT
2007F	CATCH BASIN, DESIGN TYPE 3C
2015I	CATCH BASIN, DESIGN TYPE 7A
2016B	CATCH BASIN, DESIGN TYPE 7B
2101E	MANHOLE, TYPE I
2102F	MANHOLE, TYPE II
2103F	MANHOLE, TYPE III & III-S
2104F	MANHOLE, TYPE IV
2105F	MANHOLE, TYPE V & VS
2107D	MANHOLE, TYPE VII
2111C	MANHOLE, TYPE IV PRECAST
2113	REHAB BRICK M.H. FORM AND POUR CONCRETE LINER
2201E	FRAME CASTING A
2202D	COVER CASTINGS B
2203	COVER CASTINGS D
2211A	CATCH BASIN, DESIGN TYPE 7A CASTING DETAILS
2212A	MODIFIED TYPE 7A CASTING DETAILS
2213	1" MANHOLE ADJUSTMENT RING
2214A	1 1/2" MANHOLE ADJUSTMENT RING
2215A	2" MANHOLE ADJUSTMENT RING
2306G	RECONNECTION OF HOUSE SERVICES
2309D	CATCH BASIN CONNECTION
2311B	ANCHOR CLAMP DETAIL
2317D	CLASS "D" PIPE BEDDING
2318D	CONCRETE SADDLE FOR PIPE CROSSINGS
2319E	SADDLE CONNECTIONS FOR HOUSE SERVICES
2321C	MANHOLE ADJUST
2322F	MANHOLE RECONSTRUCT
2323B	MANHOLE ABANDONMENT
2400A	STORM DRAIN INLET PROTECTION
2401	STORM DRAIN INLET PROTECTION
2402	STORM DRAIN INLET PROTECTION
2403	STORM DRAIN INLET PROTECTION
3000B	CONCRETE CURB
3003C	PEDESTRIAN CURB RAMP FOR THE HANDICAPPED
3005E	PEDESTRIAN CURB RAMP FOR THE HANDICAPPED
3006E	PEDESTRIAN CURB RAMP FOR THE HANDICAPPED
3008A	SAWED / SEALED JOINTS
3100C	CONCRETE CURB AND GUTTER, DESIGN B
3102B	CONC. CURB & GUTTER OPENING FOR DRIVEWAYS
3107A	CONC. CURB & GUTTER DESIGN D-418
6200B	RESET MONUMENT
MnDOT STANDARD DETAIL PLATES	
THESE STANDARD PLATES AS APPROVED BY THE FHWA SHALL APPLY	
MnDOT DRG. NO.	STANDARD DETAIL
3000L	REINFORCED CONCRETE PIPE (5 SHEETS)
3006G	GASKET JOINT FOR R. C. PIPE (2 SHEETS)
3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3145G	CONCRETE PIPE TIES
4010H	CONCRETE SHORT CONE & ADJUSTING RING
7038A	DETECTABLE WARNING SURFACE TRUNCATED DOMES
8000J	CHANNELIZER

CONSTRUCTION DETAILS & STANDARD DETAIL PLATES



DESIGNED	CEE	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	
DRAWN	AT		
APPROVED	CME		
Signature: _____		Date: _____	
CHRISTOPHER M. ENGELMANN		Lic. No. 43350	

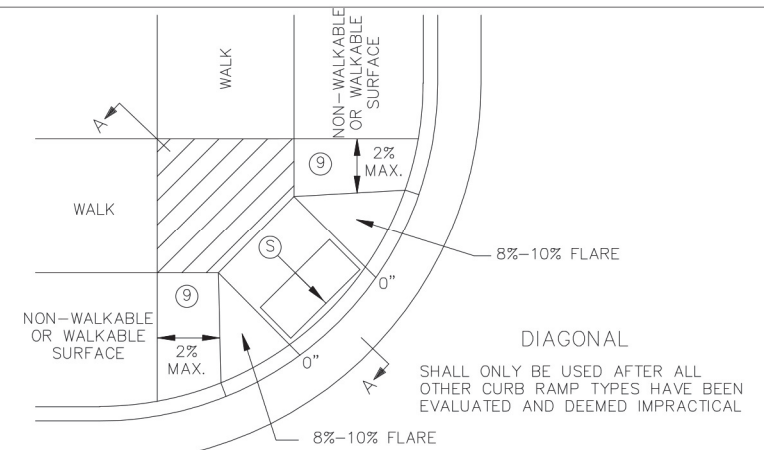
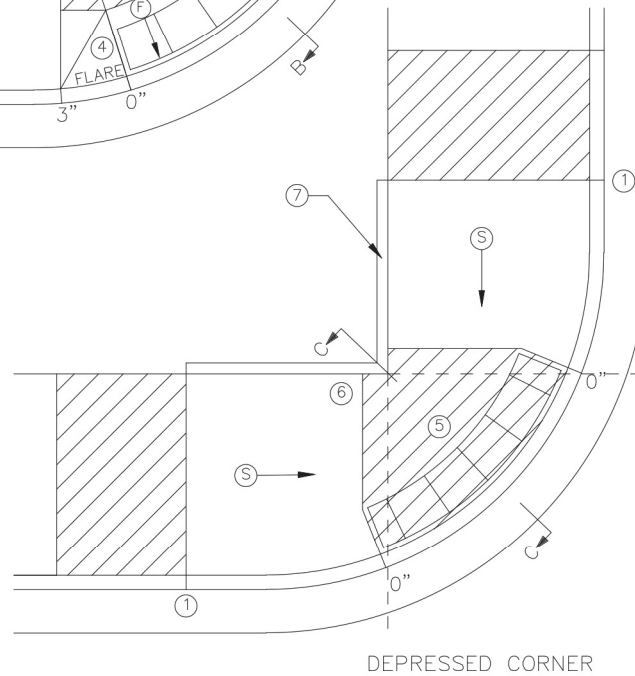
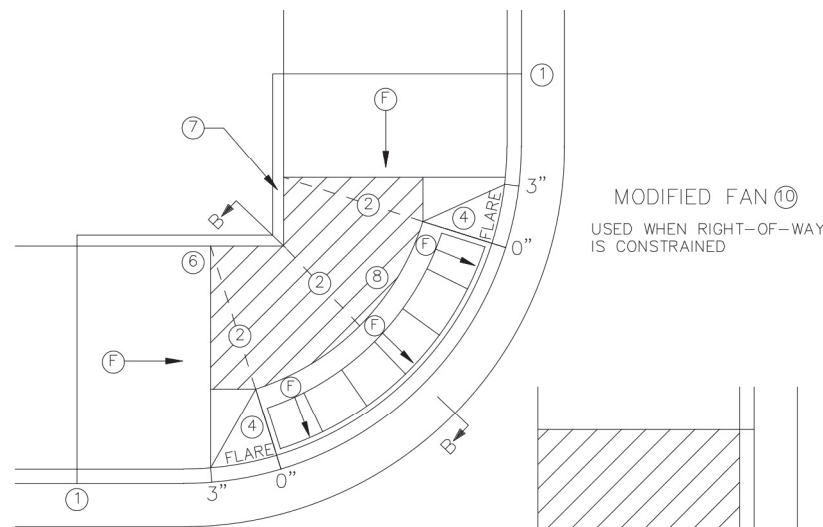
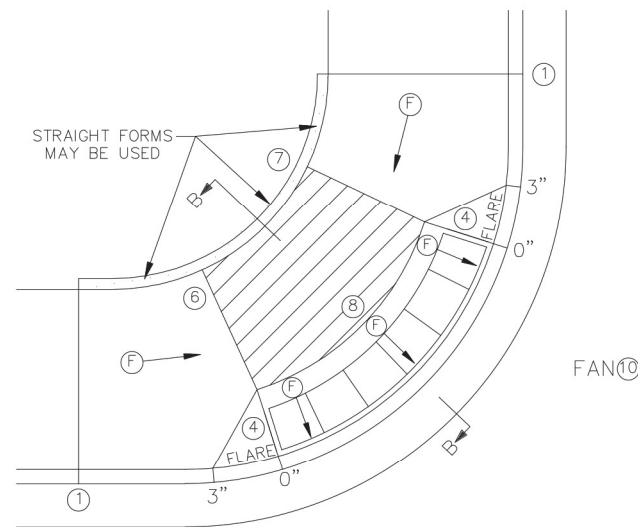
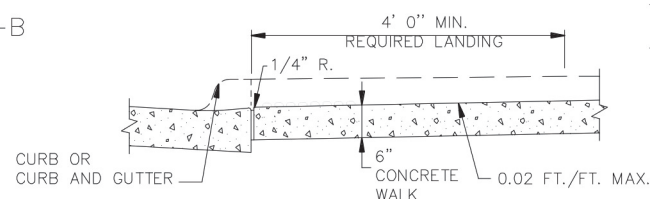
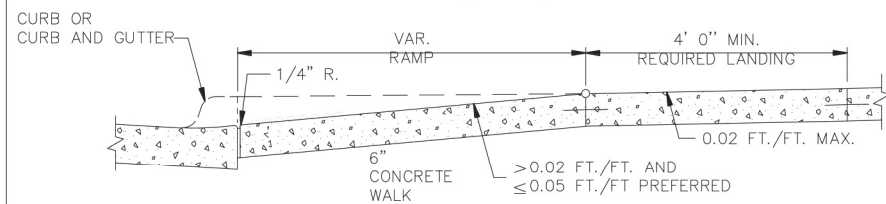
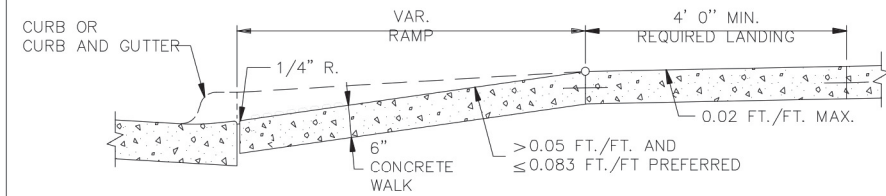
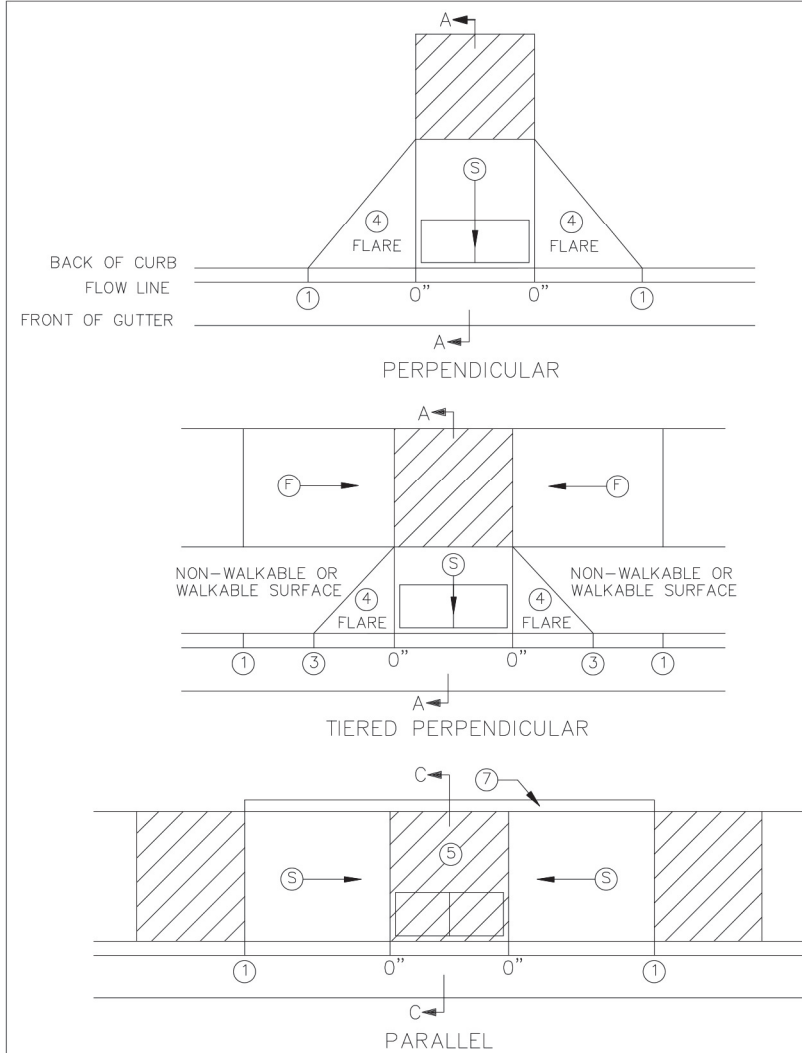
PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

GRIGGS/SCHEFFER PHASE II

PROJECT: 21-P-1458	STATE AID PROJECT NUMBER: NOT APPLICABLE
DRAWER: 12	CAD NAME: PROJECTS/CURRENT/GRIGGS-SCHEFFER PHASE II/DWG
DWG. NO. 1628	DATE: 9/11/2020 SHEET NO. 10 OF XX SHEETS



D:\001-Griggs-Schreffler\2 DWG\DWG\11-16 MnDOT Ped Ramp Details Template.dwg Sep 30, 2020 - 12:44pm



NOTES:

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE GREATER THAN 2%.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30' OF VERTICAL RISE WHEN THE LONGITUDINAL RUNNING SLOPE IS GREATER THAN 5.0%.

CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR. 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOPS OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.

ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL, THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH. EXCEPT AS STATED IN 6 BELOW.

TO ENSURE INITIAL RAMPS AND INITIAL LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS SHALL BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 AND THE ADA SPECIAL PROVISIONS - PROSECUTION OF WORK (ADA).

TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

WHEN THE BOULEVARD IS 4' WIDE OR LESS, THE TOP OF CURB TAPER SHALL MATCH THE RAMP SLOPES TO REDUCE NEGATIVE BOULEVARD SLOPES FROM THE TOP BACK OF CURB TO THE PAR.

ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER ENTIRE WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK. DETECTABLE WARNING SHOULD BE 6" LESS THAN THE PAR/TRAIL WIDTH. ARC LENGTH OF RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.

RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB.

- 1 MATCH FULL HEIGHT CURB.
- 2 4' MINIMUM DEPTH LANDING REQUIRED ACROSS TOP OF RAMP.
- 3 3" HIGH CURB WHEN USING A 3' LONG RAMP, 4" HIGH CURB WHEN USING A 4' LONG RAMP.
- 4 SEE SHEET 4 OF 6, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS, WHEN INITIAL LANDING IS AT FULL CURB HEIGHT.
- 5 DETECTABLE WARNINGS MAY BE PART OF THE 4' X 4' MIN. LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.
- 6 THE GRADE BREAK SHALL BE PERPENDICULAR TO THE BACK OF WALK. THIS WILL ENSURE THAT THE GRADE BREAK IS PERPENDICULAR TO THE DIRECTION OF TRAVEL. (TYPICAL FOR ALL)
- 7 WHEN ADJACENT TO GRASS, GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.
- 8 A 7' MIN TOP RADIUS GRADE BREAK REQUIRED TO BE CONSTRUCTIBLE.
- 9 PAVE FULL WALK WIDTH.
- 10 "S" SLOPES ON FANS SHALL ONLY BE USED WHEN ALL OTHER FEASIBLE OPTIONS HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL.

LEGEND	
THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.	
(S)	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.
(F)	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.
[Hatched Box]	LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PAR.
x"	CURB HEIGHT

REVISION:
APPROVED: JANUARY 23, 2017
OPERATIONS ENGINEER

m
MINNESOTA
DEPARTMENT
OF
TRANSPORTATION

Tom G
STATE DESIGN ENGINEER

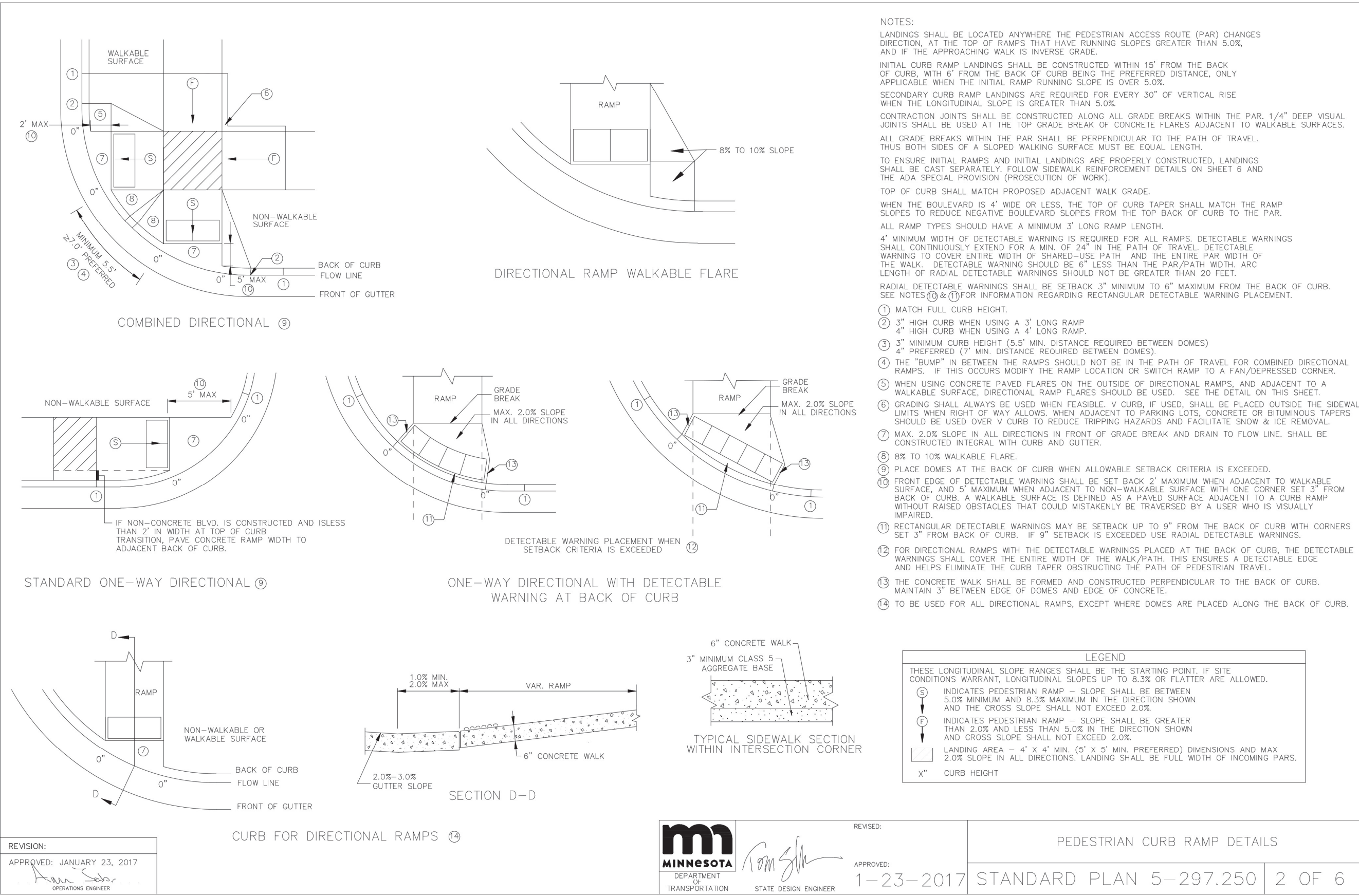
REVISED:
APPROVED:
1-23-2017

PEDESTRIAN CURB RAMP DETAILS

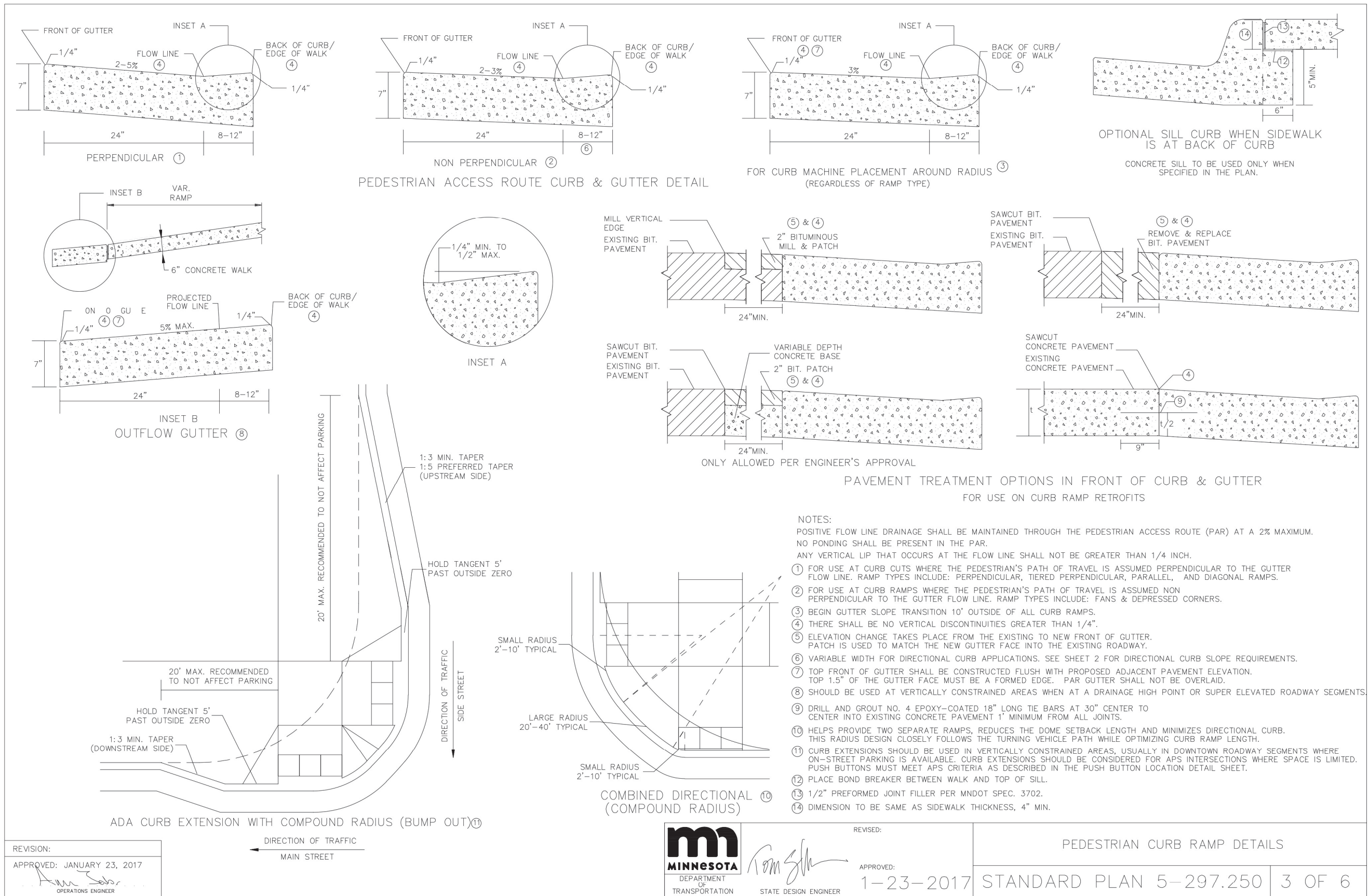
STANDARD PLAN 5-297.250 1 OF 6

11 OF XX

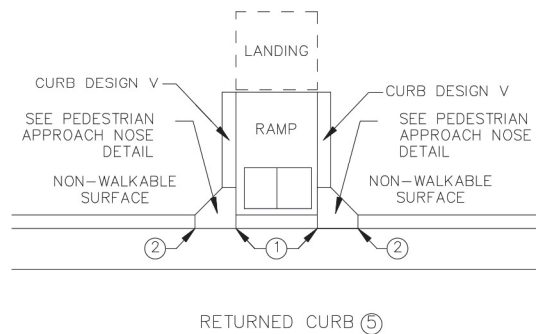
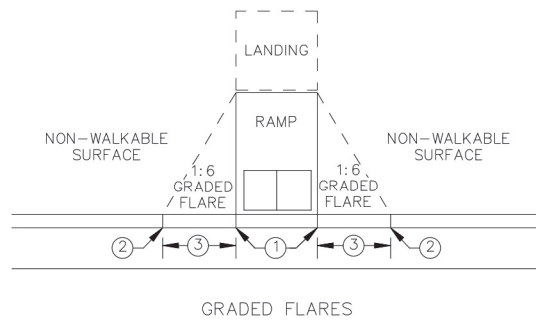
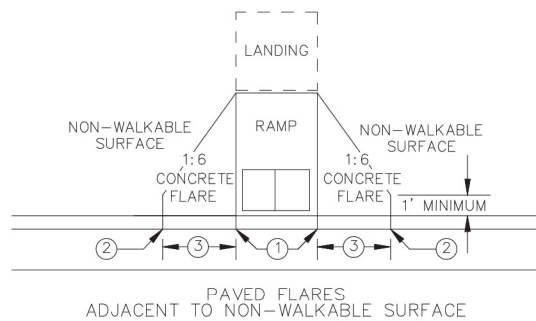
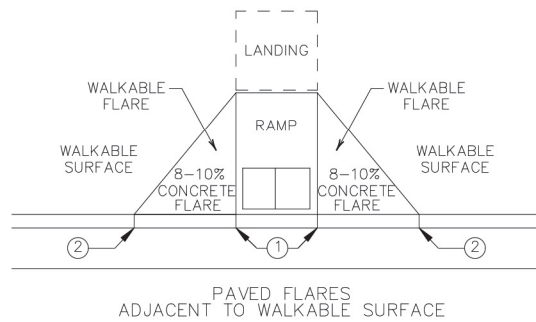
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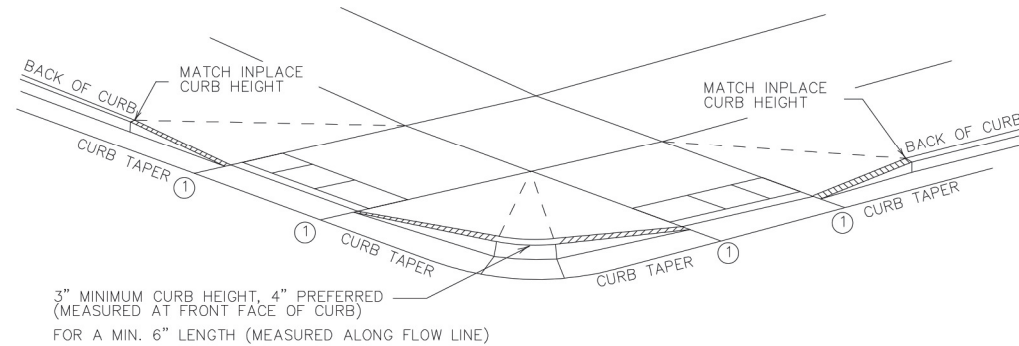
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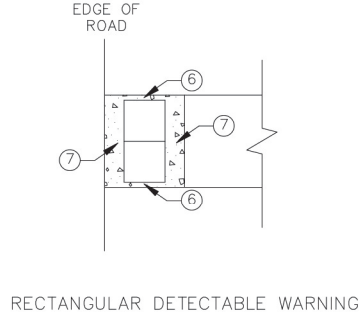
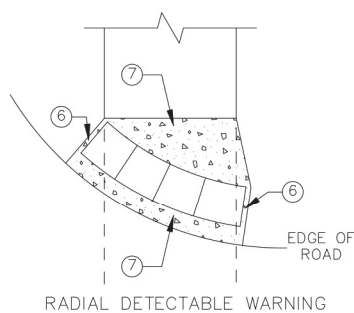
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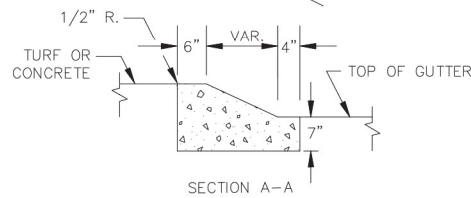
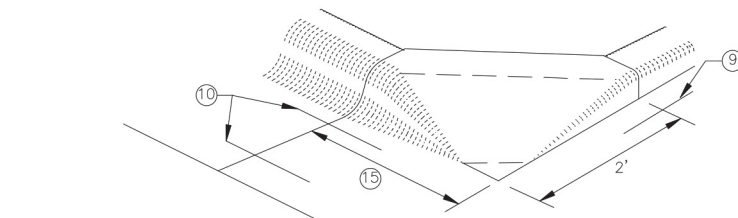
TYPICAL SIDE TREATMENT OPTIONS ④ ⑪



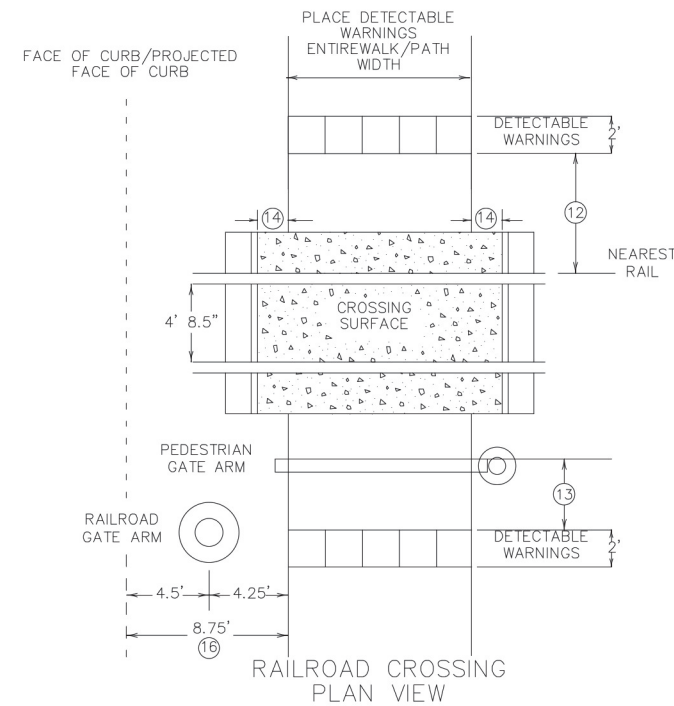
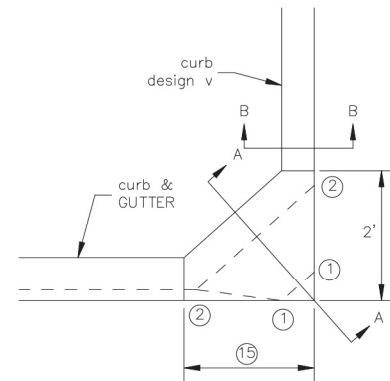
DETECTABLE EDGE WITH CURB AND GUTTER ⑧



DETECTABLE EDGE WITHOUT CURB AND GUTTER



PEDESTRIAN APPROACH NOSE DETAIL (FOR RETURNED CURB SIDE TREATMENT)



- NOTES:
- SEE STANDARD PLATE 7038 AND THIS SHEET FOR ADDITIONAL DETAILS ON DETECTABLE WARNING.
- A WALKABLE SURFACE IS DEFINED AS A PAVED SURFACE ADJACENT TO A CURB RAMP WITHOUT RAISED OBSTACLES THAT COULD MISTAKENLY BE TRAVERSED BY A USER WHO IS VISUALLY IMPAIRED.
- CONCRETE FLARE LENGTHS ADJACENT TO NON-WALKABLE SURFACES SHOULD BE LESS THAN 8' LONG MEASURED ALONG THE RAMP FROM THE BACK OF CURB.
- ① 0" CURB HEIGHT.
- ② FULL CURB HEIGHT.
- ③ 2' FOR 4" HIGH CURB AND 3' FOR 6" HIGH CURB.
- ④ SIDE TREATMENTS ARE APPLICABLE TO ALL RAMP TYPES AND SHOULD BE IMPLEMENTED AS NEEDED AS FIELD CONDITIONS DICTATE. THE ENGINEER SHALL DETERMINE THE RAMP SIDE TREATMENTS BASED ON MAINTENANCE OF BOTH ROADWAY AND SIDEWALK, ADJACENT PROPERTY CONSIDERATIONS, AND MITIGATING CONSTRUCTION IMPACTS.
- ⑤ TYPICALLY USED FOR MEDIANS AND ISLANDS.
- ⑥ WHEN NO CONCRETE FLARES ARE PROPOSED, THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE EDGE OF ROADWAY. MAINTAIN 3" MAX. BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
- ⑦ IF NO CURB AND GUTTER IS PLACED IN RURAL SECTIONS, DETECTABLE WARNINGS SHALL BE PLACED 1' FROM THE EDGE OF BITUMINOUS ROADWAY AND/OR BITUMINOUS SHARED-USE PATH TO PROVIDE VISUAL CONTRAST.
- ⑧ ALL CONSTRUCTED CURBS MUST HAVE A CONTINUOUS DETECTABLE EDGE FOR THE VISUALLY IMPAIRED. THIS DETECTABLE EDGE REQUIRES DETECTABLE WARNINGS WHEREVER THERE IS ZERO-INCH HIGH CURB. CURB TAPERS ARE CONSIDERED A DETECTABLE EDGE WHEN THE TAPER STARTS WITHIN 3" OF THE EDGE OF THE DETECTABLE WARNINGS AND UNIFORMLY RISES TO A 3-INCH MINIMUM CURB HEIGHT. ANY CURB NOT PART OF A CURB TAPER AND LESS THAN 3 INCHES IN HEIGHT IS NOT CONSIDERED A DETECTABLE EDGE AND THEREFORE IS NOT COMPLIANT WITH ACCESSIBILITY STANDARDS.
- ⑨ DRILL AND GROUT 1 - NO. 4 12" LONG REINFORCEMENT BAR (EPOXY COATED) WITH 3" MIN. COVER. REINFORCEMENT BARS ARE NOT NEEDED IF THE APPROACH NOSE IS POURED INTEGRAL WITH THE V CURB.
- ⑩ DRILL AND GROUT 2 - NO. 4 12" LONG REINFORCEMENT BARS (EPOXY COATED) WITH 3" MIN. COVER. REINFORCEMENT BARS ARE NOT NEEDED IF THE APPROACH NOSE IS POURED INTEGRAL WITH THE CURB AND GUTTER.
- ⑪ SIDE TREATMENT EXAMPLES SHOWN ARE WHEN THE INITIAL LANDING IS APPROXIMATELY LEVEL WITH THE FULL HEIGHT CURB (I.E. 6' LONG RAMP FOR 6" HIGH CURB). WHEN THE INITIAL LANDING IS MORE THAN 1" BELOW FULL HEIGHT CURB REFER TO SHEETS 1 & 2 TO MODIFY THE CURB HEIGHT TAPERS AND MAINTAIN POSITIVE BOULEVARD DRAINAGE.
- ⑫ NEAREST EDGE OF DETECTABLE WARNING SURFACES SHALL BE PLACED 12' MINIMUM TO 15' MAXIMUM FROM THE NEAREST RAIL. FOR SKEWED RAILWAYS IN NO INSTANCE SHALL THE DETECTABLE WARNING BE CLOSER THAN 12' MEASURED PERPENDICULAR TO THE NEAREST RAIL.
- ⑬ WHEN PEDESTRIAN GATES ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE SIDE OF THE GATES OPPOSITE THE RAIL, 2' FROM THE APPROACHING SIDE OF THE GATE ARM. THIS CRITERIA GOVERNS OVER NOTE ⑫.
- ⑭ CROSSING SURFACE SHALL EXTEND 2' MINIMUM PAST THE OUTSIDE EDGE OF WALK OR SHARED-USE PATH.
- ⑮ 3' FOR MEDIANS AND SPLITTER ISLANDS. NOSE CAN BE REDUCED TO 2' ON FREE RIGHT ISLANDS.
- ⑯ SIDEWALK TO BE PLACED 8.75' MIN. FROM THE FACE OF CURB/PROJECTED FACE OF CURB. THIS ENSURES MIN. CLEARANCE BETWEEN THE SIDEWALK AND GATE ARM COUNTERWEIGHT SUPPORTS.

REVISION:
APPROVED: JANUARY 23, 2017
<i>Amr Sebr</i> OPERATIONS ENGINEER



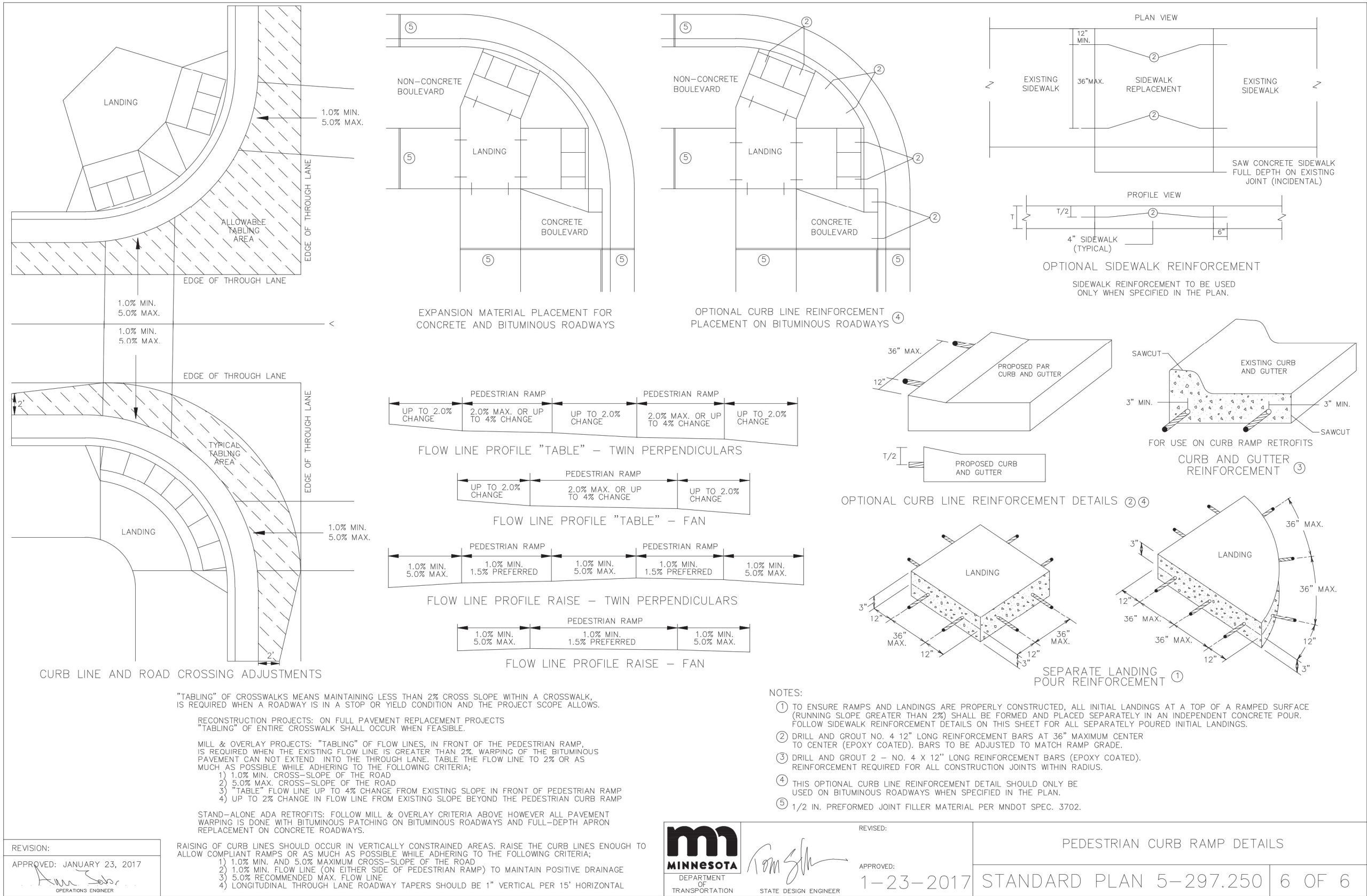
STATE DESIGN ENGINEER

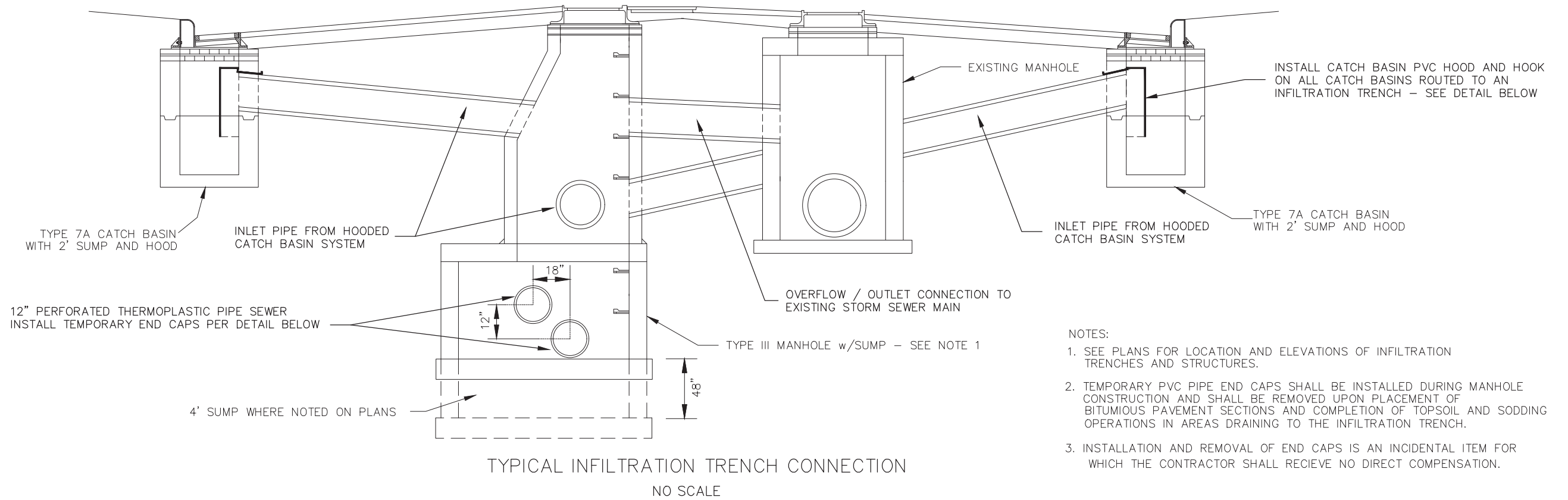
APPROVED: 1-23-2017

PEDESTRIAN CURB RAMP DETAILS

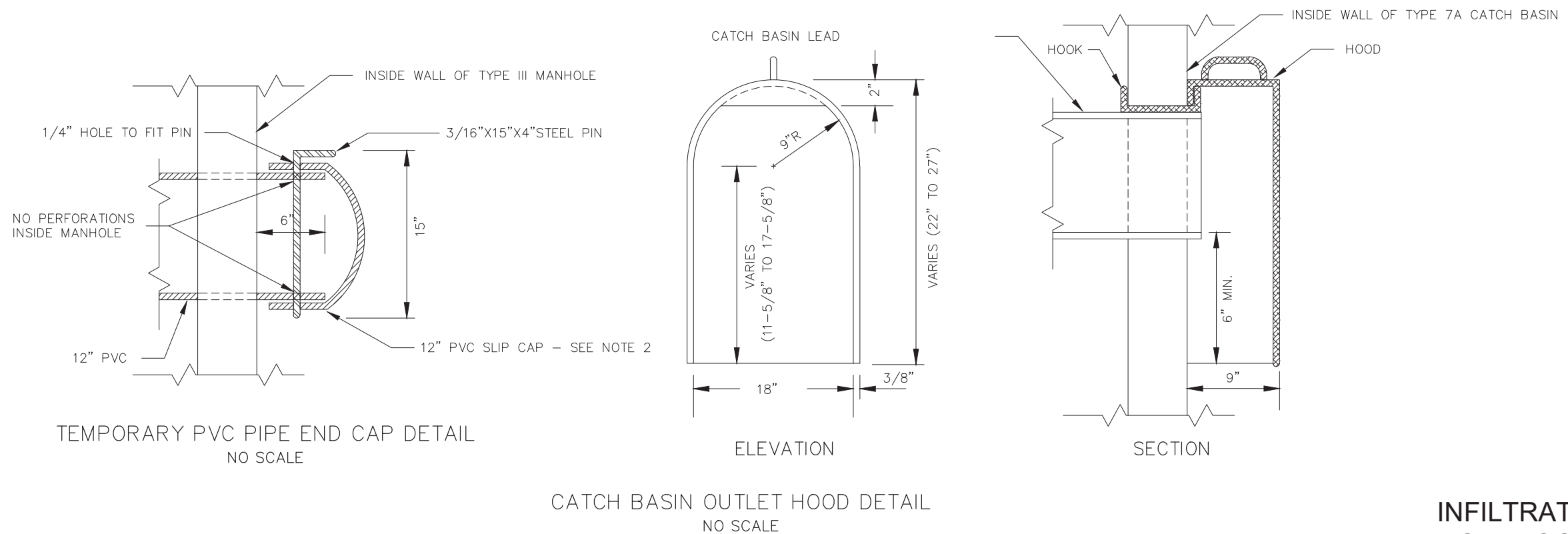
STANDARD PLAN 5-297.250 4 OF 6

14 OF XX





INFILTRATION TRENCH TYPICAL CONNECTIONS



INFILTRATION TRENCH C.B. HOOD DETAIL

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DESIGNED	CEE
DRAWN	ATT
APPROVED	CME

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	
Signature: _____	Date: _____
CHRISTOPHER M. ENGELMANN	Lic. No. 43350

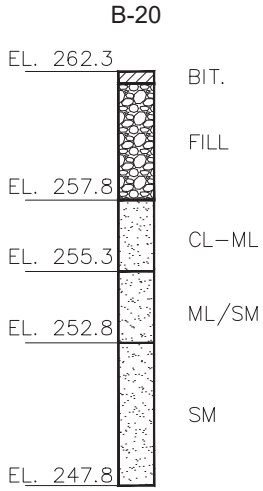
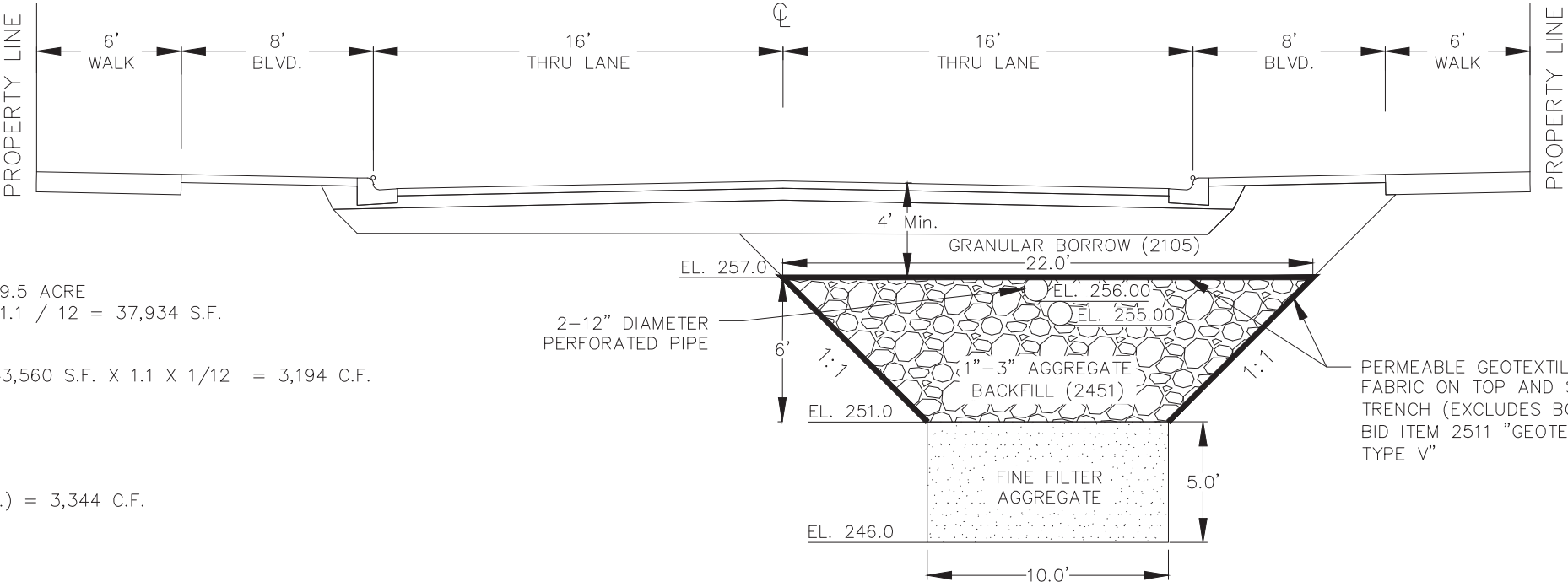
PREPARED BY	STREET ENGINEERING DIVISION	FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS
GRIGGS/SCHEFFER PHASE II		

PROJECT: 21-P-1458	STATE AID PROJECT NUMBER: N.A.
DRAWER: 12	CAD NAME: PROJECTS/CURRENT/GRIGGS-SCHEFFER PHASE II/DWG
DWG. NO. 1628	DATE: 9/10/2020
SHEET NO. 17 OF XX SHEETS	



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TRENCH #1 TYPICAL SECTION
SYNDICATE STREET – ELEANOR AVE. TO SCHEFFER AVE.
STA. 14+20 TO STA. 15+05



TOTAL PROPOSED IMPERVIOUS AREA = 413,820 S.F. = 9.5 ACRE
TOTAL REQUIRED INFILTRATION VOLUME = 413,820 S.F. X 1.1 / 12 = 37,934 S.F.

AREA OF WATER FROM SUBWATERSHED = 1.761 ACRE
VOLUME OF WATER FROM SUBWATERSHED = 0.800 AC. X 43,560 S.F. X 1.1 X 1/12 = 3,194 C.F.

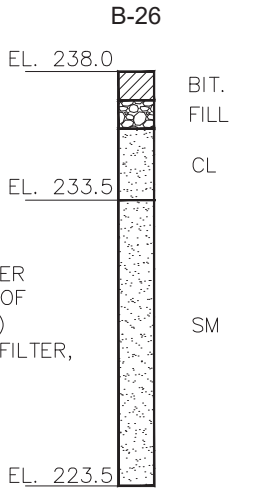
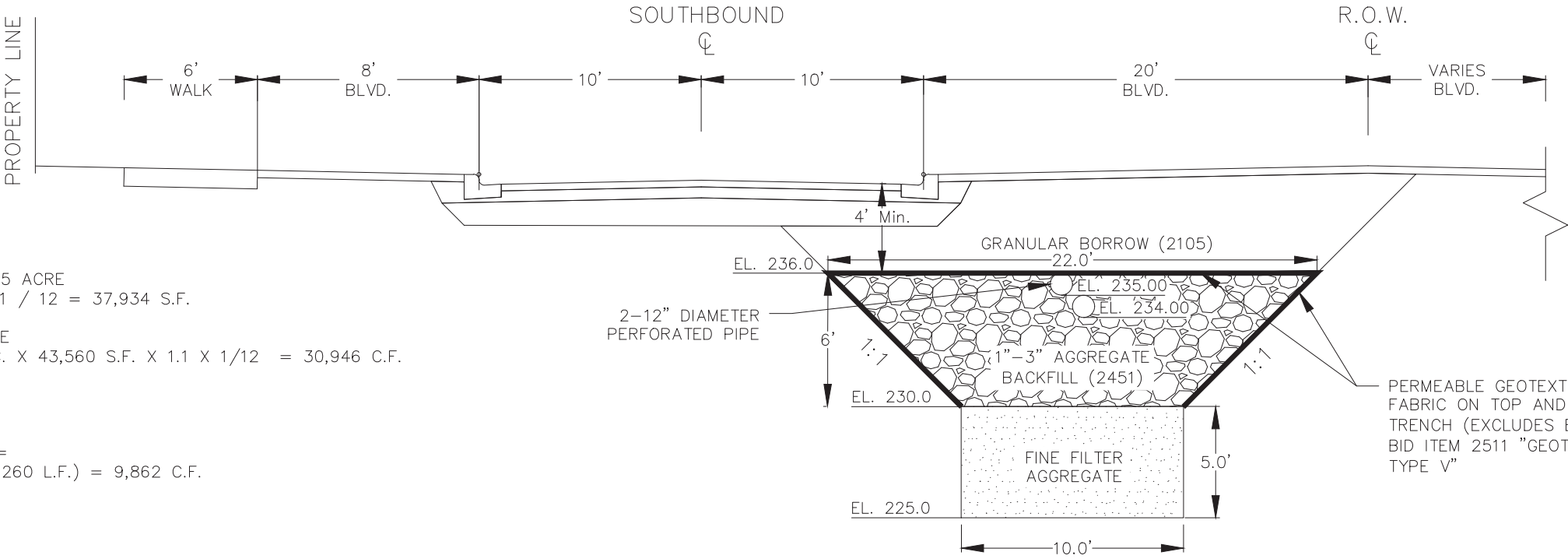
AREA OF 2-12" PIPES = 1.57 S.F.
TRENCH #1 AREA = 96 S.F.

TRENCH #1 AGGREGATE BACKFILL TRENCH CAPACITY =
((96 S.F. - 1.57 S.F.) X 85 L.F. X 40%) + (1.57 X 85 L.F.) = 3,344 C.F.

TRENCH #1 STORAGE = 3,344 C.F.

SEE SHEET 25 FOR PROFILE

TRENCH #2 TYPICAL SECTION
EDGCUMBE ROAD
STA. 39+42 TO STA. 42+02



NOTE:
THE CONTRACTOR SHALL CONTACT THE CAPITOL
REGION WATERSHED DISTRICT (651-644-8888)
AT LEAST 24 HOURS IN ADVANCE OF THE
CONSTRUCTION OF THE INFILTRATION TRENCH.

PROPOSED IMPERVIOUS AREA = 413,820 S.F. = 9.5 ACRE
REQUIRED INFILTRATION VOLUME = 413,820 S.F. X 1.1 / 12 = 37,934 S.F.

AREA OF WATER FROM SUBWATERSHED = 15.544 ACRE
VOLUME OF WATER FROM SUBWATERSHED = 7.750 AC. X 43,560 S.F. X 1.1 X 1/12 = 30,946 C.F.

AREA OF 2-12" PIPES = 1.57 S.F.
TRENCH #2 AREA = 96 S.F.

TRENCH #2 AGGREGATE BACKFILL TRENCH CAPACITY =
((96 S.F. - 1.57 S.F.) X 260 L.F. X 40%) + (1.57 X 260 L.F.) = 9,862 C.F.

TRENCH #2 STORAGE = 9,862 C.F.

SEE SHEET 28 FOR PROFILE

INFILTRATION TRENCH DETAILS



DESIGNED	CX
DRAWN	CX
APPROVED	CME

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	
Signature: _____	Date: _____
CHRISTOPHER M. ENGELMANN	Lic. No. 43350

PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

GRIGGS/SCHEFFER PHASE II

PROJECT: 21-P-1458
DRAWER: 12
DWG. NO. 1641

STATE AID PROJECT NUMBER: N.A.	
CAD NAME: PROJECTS/CURRENT/GRIGGS SCHEFFER PHASE 2/DWG	
DATE: 10/02/2020	SHEET NO. 18 OF XX SHEETS



NOTE:
THE CONTRACTOR SHALL CONTACT THE CAPITOL
REGION WATERSHED DISTRICT (651-644-8888)
AT LEAST 24 HOURS IN ADVANCE OF THE
CONSTRUCTION OF THE INFILTRATION TRENCH.

PROPOSED IMPERVIOUS AREA = 413,820 S.F. = 9.5 ACRE
REQUIRED INFILTRATION VOLUME = 413,820 S.F. X 1.1 / 12 = 37,934 S.F.

AREA OF WATER FROM SUBWATERSHED = 1.478 ACRE
VOLUME OF WATER FROM SUBWATERSHED = 0.75 AC. X 43,560 S.F. X 1.1 X 1/12 = 2,995 C.F.

AREA OF 2-12" PIPES = 1.57 S.F.
TRENCH #3 AREA = 84 S.F.

TRENCH #3 AGGREGATE BACKFILL TRENCH CAPACITY =
((84 S.F. - 1.57 S.F.) X 270 L.F. X 40%) + (1.57 X 270 L.F.) = 9,174 C.F.

TRENCH #3 STORAGE = 9,174 C.F.

SEE SHEET 29 FOR PROFILE

PROPOSED IMPERVIOUS AREA = 413,820 S.F. = 9.5 ACRE
REQUIRED INFILTRATION VOLUME = 413,820 S.F. X 1.1 / 12 = 37,934 S.F.

AREA OF WATER FROM SUBWATERSHED = 17.356 ACRE
VOLUME OF WATER FROM SUBWATERSHED = 8.678 AC. X 43,560 S.F. X 1.1 X 1/12 = 34,651 C.F.

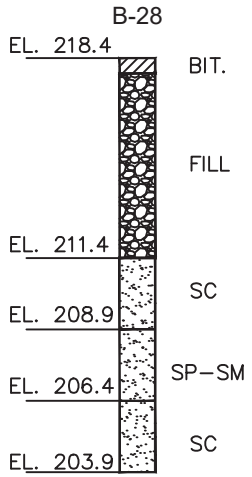
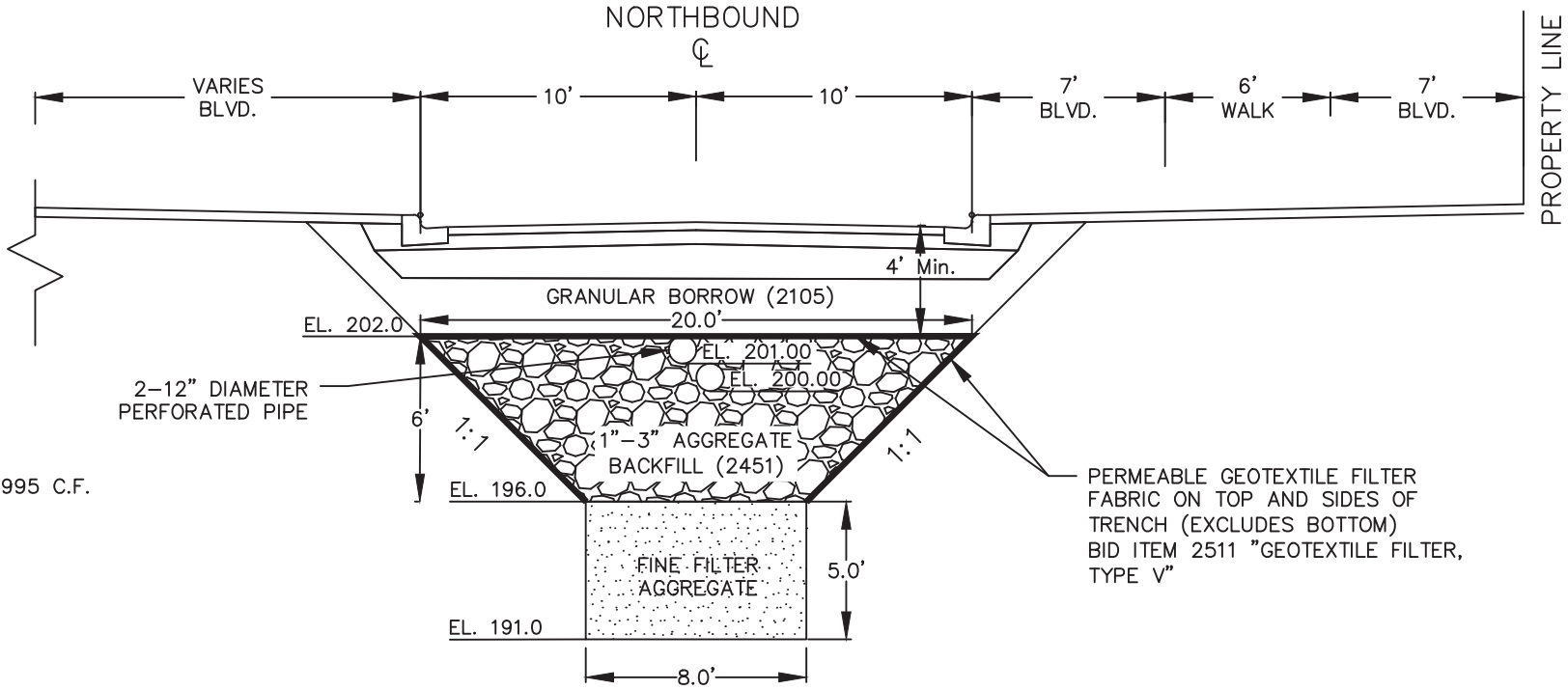
AREA OF 2-12" PIPES = 1.57 S.F.
TRENCH #4 TOP AREA = 5,684 S.F. AND BOTTOM AREA = 3,942 S.F.

TRENCH #4 AGGREGATE BACKFILL TRENCH CAPACITY =
TOTAL VOLUME OF ECCENTRIC HEXAGONAL-SHAPED TRENCH = (5684+3942) / 2 * 6 = 28,878 C.F.
(28,683 C.F. X 40%) + (1.57 X 124 L.F.) = 11,668 C.F.

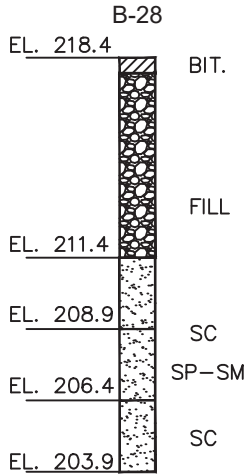
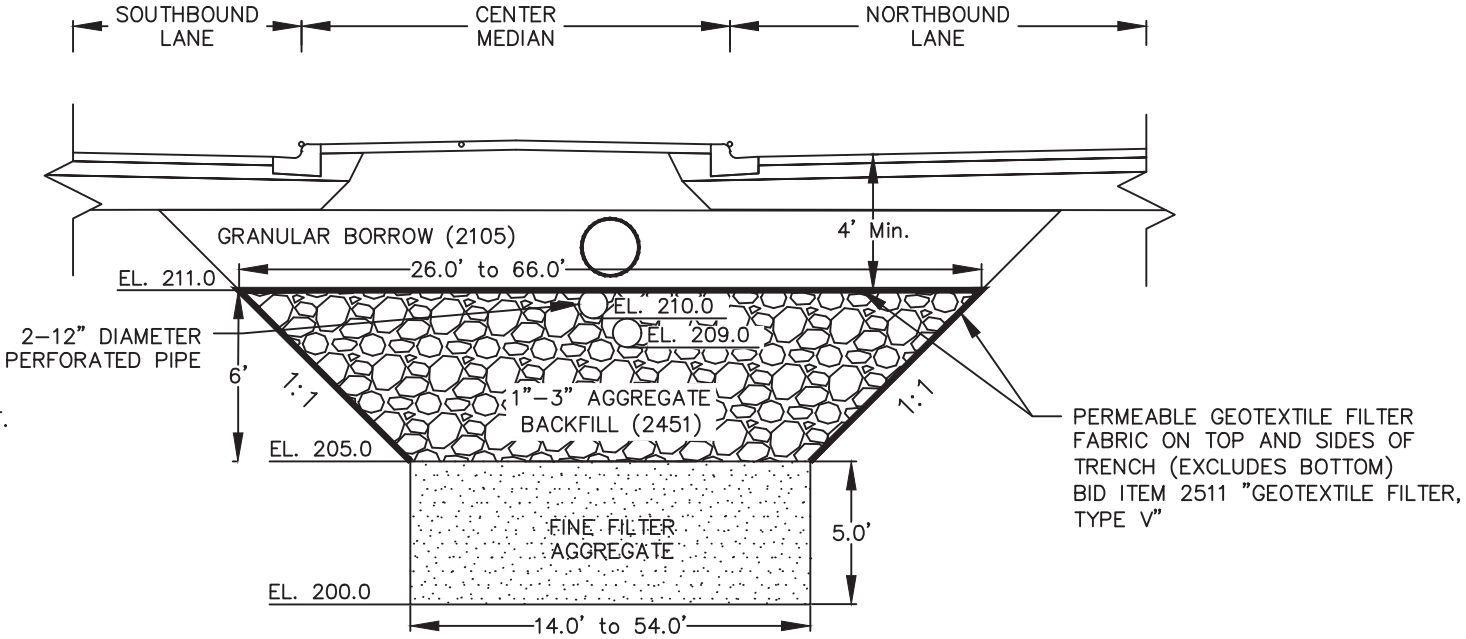
TRENCH #4 STORAGE = 11,668 C.F.

SEE SHEET 30 FOR PROFILE

TRENCH #3 TYPICAL SECTION
EDGCUMBE ROAD
STA. 14+15 TO STA. 16+85



TRENCH #4 TYPICAL SECTION
EDGCUMBE ROAD
STA. 19+88 TO STA. 21+12



INFILTRATION TRENCH DETAILS



DESIGNED	CX
DRAWN	CX
APPROVED	CME

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	
Signature: _____	Date: _____
CHRISTOPHER M. ENGELMANN	Lic. No. 43350

PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

GRIGGS/SCHEFFER PHASE II

PROJECT: 21-P-1458

DRAWER: 12

DWG. NO. 1641

STATE AID PROJECT NUMBER: N.A.

CAD NAME: PROJECTS/CURRENT/GRIGGS SCHEFFER PHASE 2/DWG

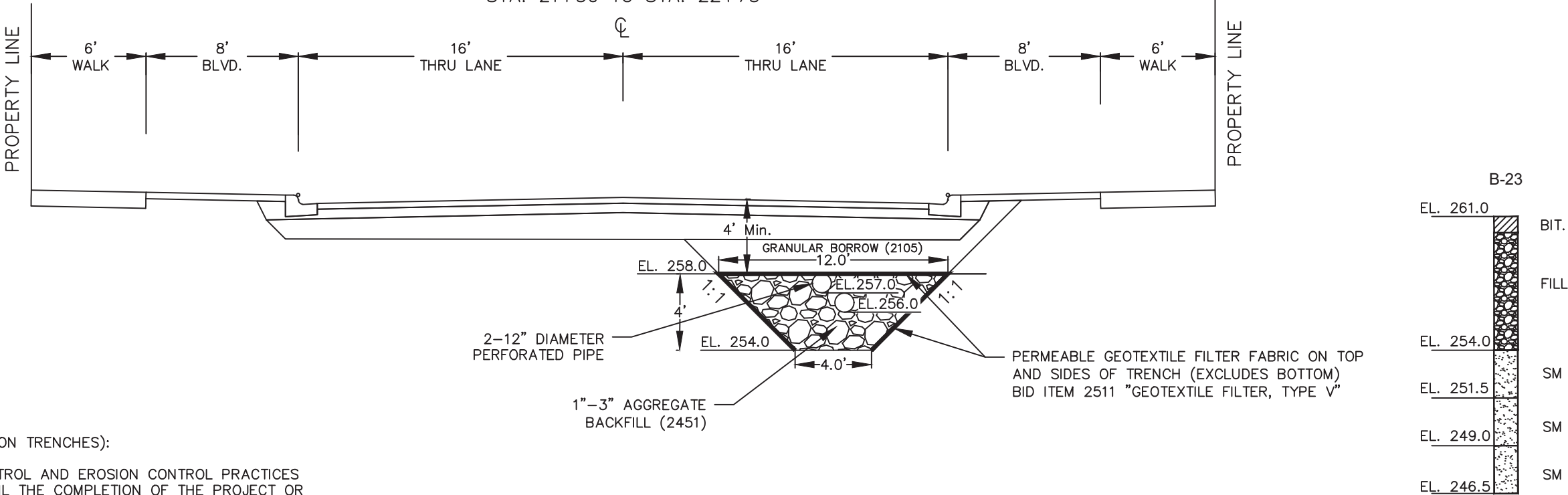
DATE: 10/02/2020 SHEET NO. 19 OF XX SHEETS



\\\\Teal\\cod\\streets\\projects\\current\\Griggs-Scheffer Phase 2 P-1458 DWG\\18-20-Infiltation Trench Details.dwg Oct 01, 2020 - 3:50pm

\\\\Teal\\cad\\streets\\projects\\current\\Griggs-Scheffer Phase 2 P-1458.DWG\\18-20-Infiltration Trench Details.dwg Oct 01, 2020 - 3:56pm

TRENCH #5 TYPICAL SECTION
HIGHLAND PARKWAY – RIDGE ST. TO GRIGGS ST.
STA. 21+50 TO STA. 22+75



NOTES (APPLY TO ALL INFILTRATION TRENCHES):

1. INFILTRATION PERIMETER CONTROL AND EROSION CONTROL PRACTICES SHALL REMAIN IN PLACE UNTIL THE COMPLETION OF THE PROJECT OR VEGETATION HAS BEEN ESTABLISHED (WHICHEVER IS LATER).
2. INSTALLATION OF INFILTRATION PRACTICES SHALL BE DONE DURING PERIODS OF DRY WEATHER AND COMPLETED BEFORE A RAINFALL EVENT. PLACEMENT OF ENGINEERING SOILS SHALL BE ON DRY, NATIVE SOIL ONLY.
3. THE CONTRACTOR SHALL CONTACT THE CAPITOL REGION WATERSHED DISTRICT (651-644-8888) AT LEAST 24 HOURS IN ADVANCE OF THE CONSTRUCTION OF THE INFILTRATION TRENCH.
4. EXCAVATION OF INFILTRATION AREAS SHALL BE COMPLETED USING A BACKHOE WITH A TOOTHED BUCKET.
5. NATIVE SOILS IN INFILTRATION AREAS SHALL BE DE-COMPACTED TO A MINIMUM DEPTH OF 18 INCHES.
6. THE BOTTOM EXCAVATION SURFACE OF INFILTRATION AREAS SHALL BE LEVEL WITHOUT DIPS OR SWALES.
7. DURING CONSTRUCTION, STORMWATER MUST BE ROUTED AROUND INFILTRATION AREAS UNTIL ALL CONSTRUCTION ACTIVITY HAS CEASED AND TRIBUTARY SURFACES ARE CLEANED OF SEDIMENT.
8. THE CONTRACTOR WILL BE REQUIRED TO EXCAVATE A TEST PIT (AT LEAST TWO PER TRENCH) DURING CONSTRUCTION AT LEAST 5- FEET BELOW THE PROPOSED BOTTOM OF THE TRENCH. VERIFICATION OF SOIL IS REQUIRED BY THE ENGINEER BEFORE INSTALLATION OF THE TRENCH CAN BEGIN. EXCAVATION FOR THE TEST PIT SHALL BE PAID FOR UNDER BID ITEM 2105 "UNCLASSIFIED EXCAVATION".
9. ENGINEERED SOIL SHALL REMAIN UNCONTAMINATED (NOT MIXED WITH OTHER SOIL) BEFORE AND DURING INSTALLATION.
10. AGGREGATE BACKFILL SHALL BE:
 - 10.1.1.1. DOUBLE-WASHED RIVER ROCK
 - 10.1.1.2. ACCEPTABLE ROCK TYPES: IGNEOUS AND CRYSTALLINE METOMORPHIC (GRANITE, RHYOLITE, GABBRO, BASALT, QUARTZITE)
 - 10.1.1.3. UNACCEPTABLE ROCK TYPES: CARBONATE (LIMESTONE, DOLOMITE, DOLOSTONE AND NON-CHRYSTALLINE METAMORPHIC (SHALE)

PROPOSED IMPERVIOUS AREA = 413,820 S.F. = 9.5 ACRE
REQUIRED INFILTRATION VOLUME = 413,820 S.F. X 1.1 / 12 = 37,934 S.F.

AREA OF WATER FROM SUBWATERSHED = 1.534 ACRE
VOLUME OF WATER FROM SUBWATERSHED = 0.990 AC. X 43,560 S.F. X 1.1 X 1/12 = 3,953 C.F.

AREA OF 2-12" PIPES = 1.57 S.F.
TRENCH #5 AREA = 32 S.F.

TRENCH #5 AGGREGATE BACKFILL TRENCH CAPACITY =
((32 S.F. - 1.57 S.F.) X 125 L.F. X 40%) + (1.57 X 125 L.F.) = 1,718 C.F.

TRENCH #5 STORAGE = 1,718 C.F.

SEE SHEET 28 FOR PROFILE

INFILTRATION TRENCH DETAILS



DESIGNED CX
DRAWN CX
APPROVED CME

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
Signature: _____ Date: _____
CHRISTOPHER M. ENGELMANN Lic. No. 43350

PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

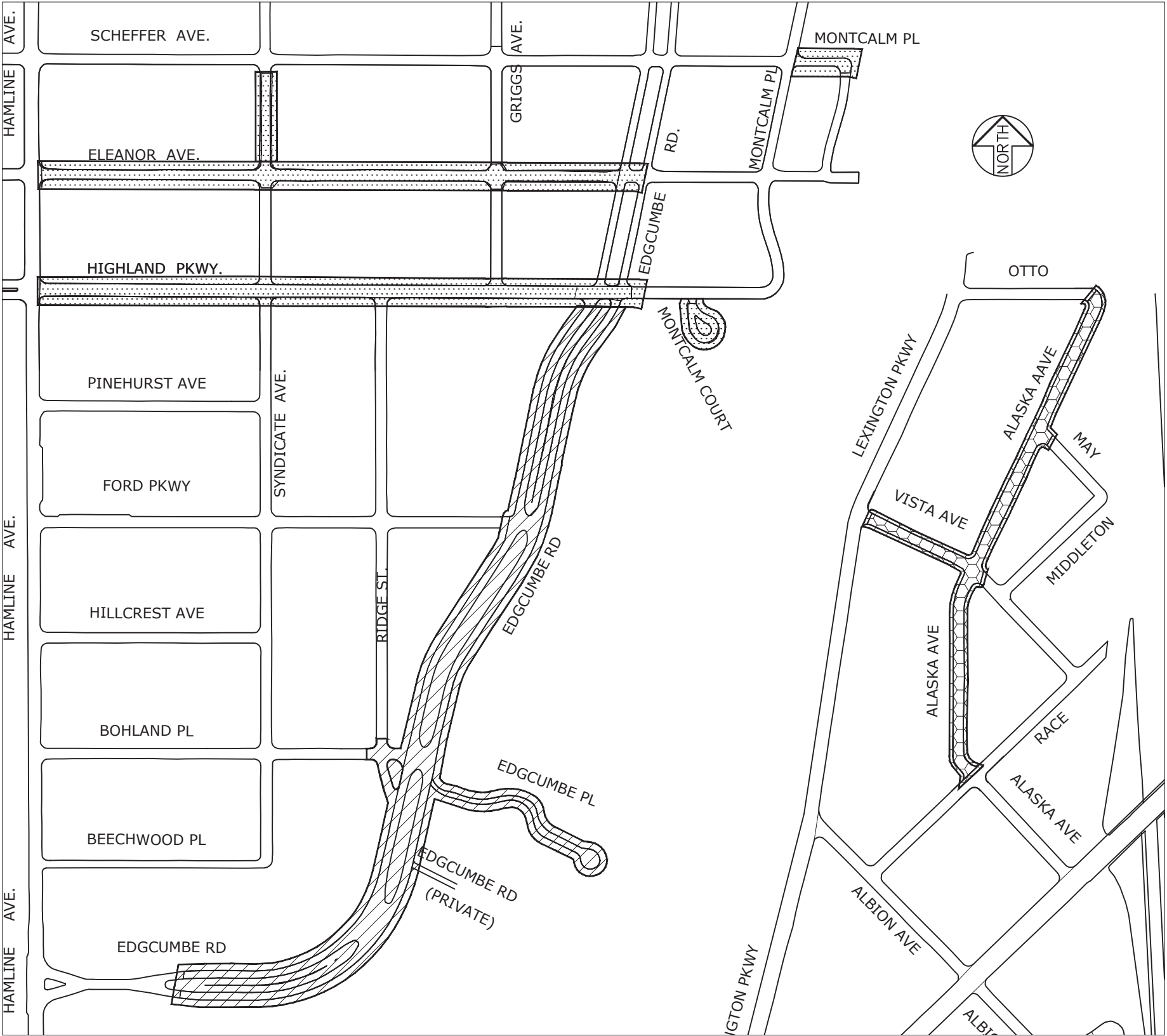
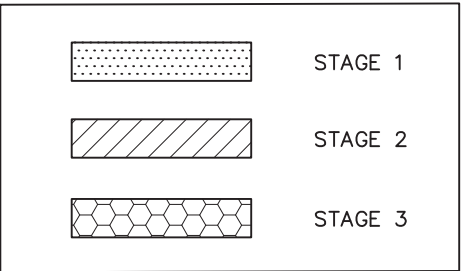
GRIGGS/SCHEFFER PHASE 2

PROJECT: 21-P-1458 STATE AID PROJECT NUMBER: N.A.
DRAWER: 12 CAD NAME: PROJECTS/CURRENT/GRIGGS SCHEFFER PHASE 2/DWG
DWG. NO. 1641 DATE: 10/02/2020 SHEET NO. 20 OF XX SHEETS



STAGING PLAN

- 1) CONSTRUCTION ON BAYARD AVENUE SHALL BEGIN FIRST DURING STAGE 1.
- 2) CONSECUTIVE STAGES SHALL NOT PROCEED UNTIL THE CURB AND GUTTER, FLATWORK AND BASE COURSE ARE INSTALLED ON THE PREVIOUS STAGE.
- 3) ALL BARRICADES, PAVEMENT MARKINGS AND SIGNS NECESSARY, SHALL BE INCIDENTAL TO LUMP SUM BID ITEM 2563.601, "TRAFFIC CONTROL".
- 4) THE ORDER OF THE STAGING PLAN SHALL NOT BE ALTERED WITHOUT THE APPROVAL OF THE ENGINEER.
- 5) DELIVERY ACCESS TO BUSINESSES SHALL BE MAINTAINED AT ALL TIMES AND CONTRACTOR SHALL COORDINATE WITH INDIVIDUAL BUSINESS OWNERS TO ENSURE ACCESS.
- 6) HAMLINE AVENUE SHALL BE MAINTAINED TO HAVE BOTH DIRECTION OF TRAFFIC OPEN AT ALL TIMES.
- 7) EDGCUMBE ROAD SHALL BE MAINTAINED TO HAVE BOTH DIRECTION OF TRAFFIC OPEN AT ALL TIMES.
- 8) ALL WORK FOR STAGE THREE IS CONTAINED UNDER BID ALTERNATE ONE.



STAGING PLAN



DESIGNED	CEE
DRAWN	ATT
APPROVED	CME

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

Signature: _____ Date: _____

CHRISTOPHER M. ENGELMANN Lic. No. 43350

PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

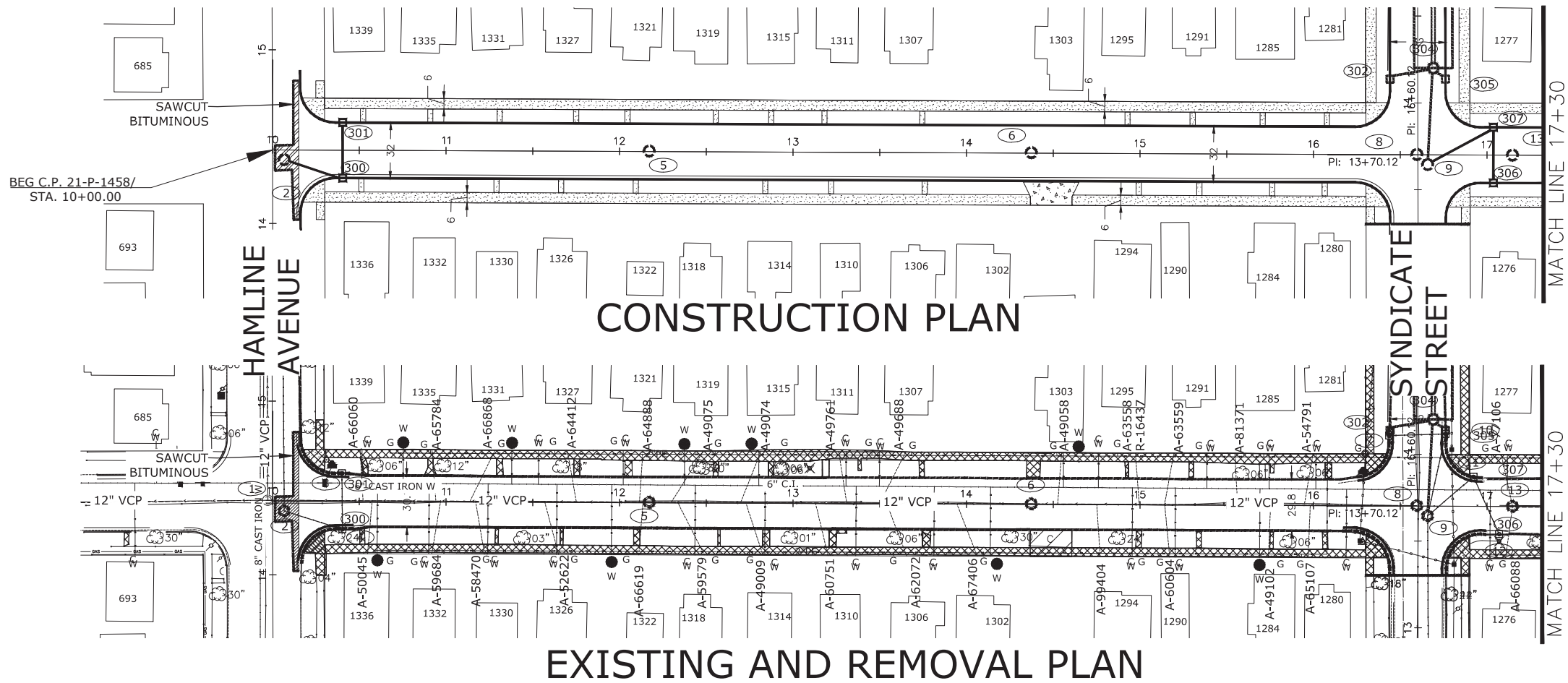
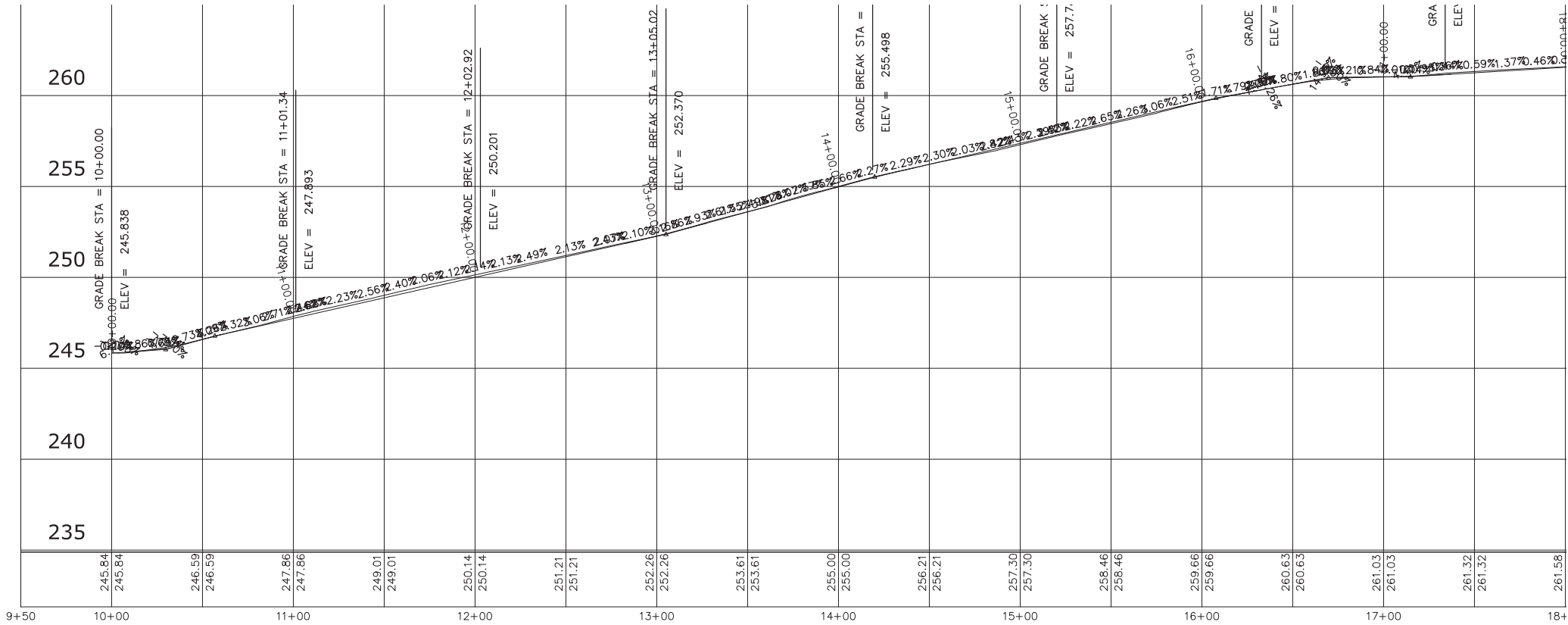
GRIGGS/SCHEFFER PHASE II

PROJECT: 21-P-1458	STATE AID PROJECT NUMBER: NOT APPLICABLE
DRAWER: 12	CAD NAME: PROJECTS/CURRENT/GRIGGS/SCHEFFER PHASE II/DWG
DWG. NO. 1628	DATE: 9/10/2020 SHEET NO. 21 OF XX SHEETS

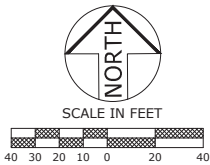


D:\001-Griggs-Scheffer2\DWG\DWG\Griggs-Scheffer Phase 2 Base map.dwg Oct 06, 2020 -- 12:03pm

PROFILE VIEW OF ELEANOR



ELEANOR AVENUE



ELEANOR AVENUE

ELEANOR AVENUE
HAMLINE TO SYNDICATE

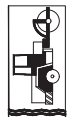


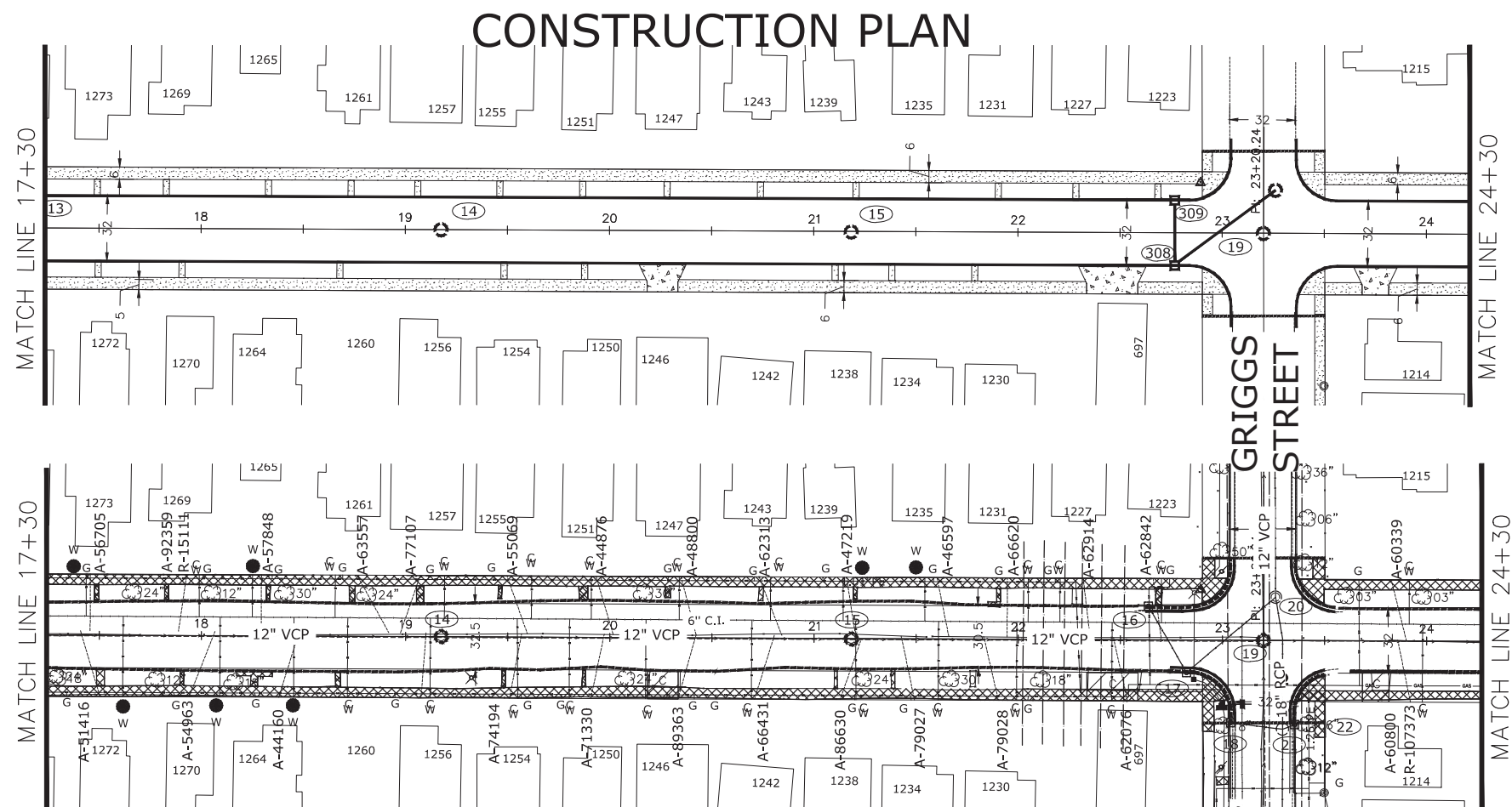
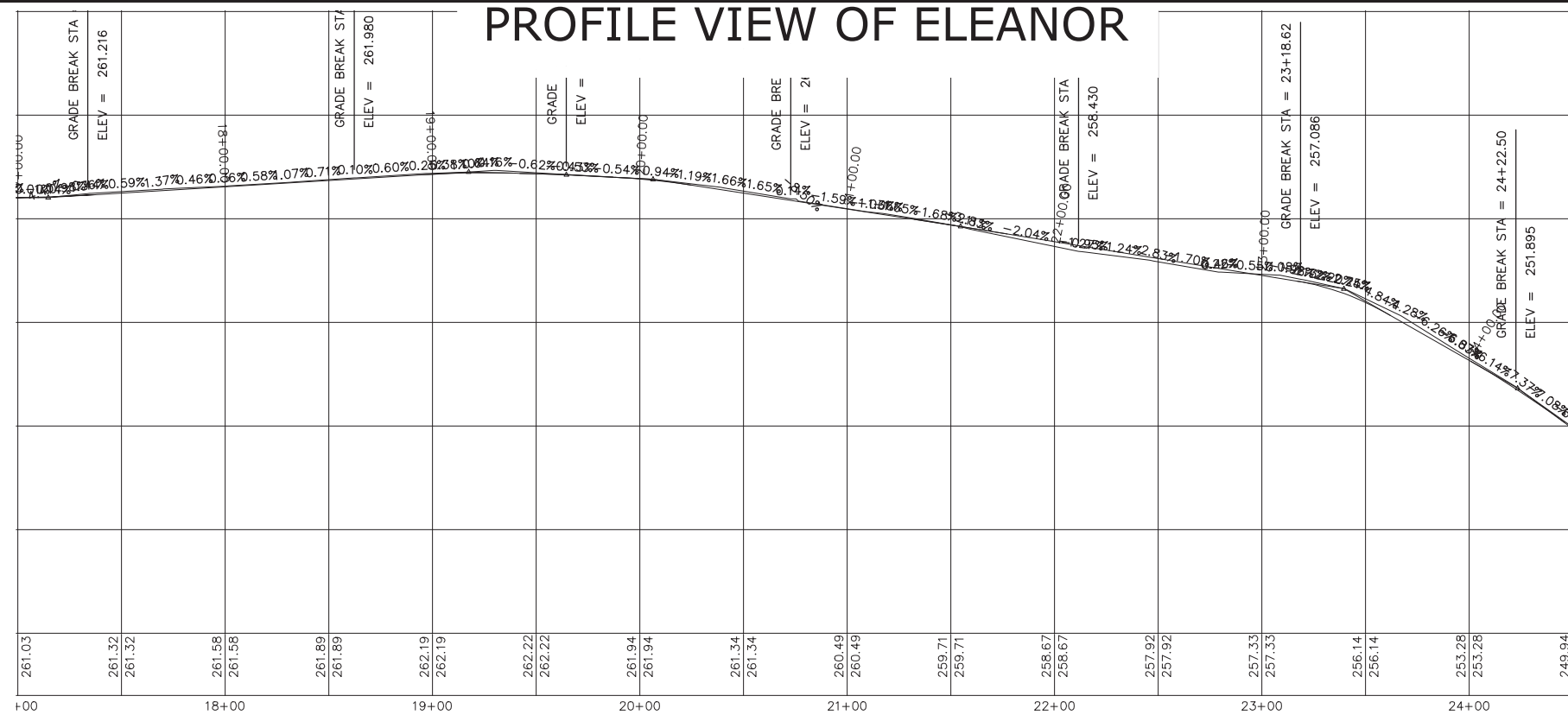
DESIGNED	CEE	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA Signature: _____ Date: _____ CHRISTOPHER M. ENGELMANN Lic. No. 43350
DRAWN	ATT	
APPROVED	CME	

PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

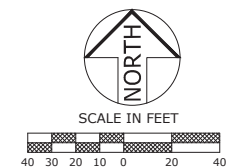
GRIGGS/SCHEFFER PHASE II

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DRAWER: 12	CAD NAME: PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG
DWG. NO. 1628	DATE: 9/30/20
SHEET NO. 22	OF XX SHEETS





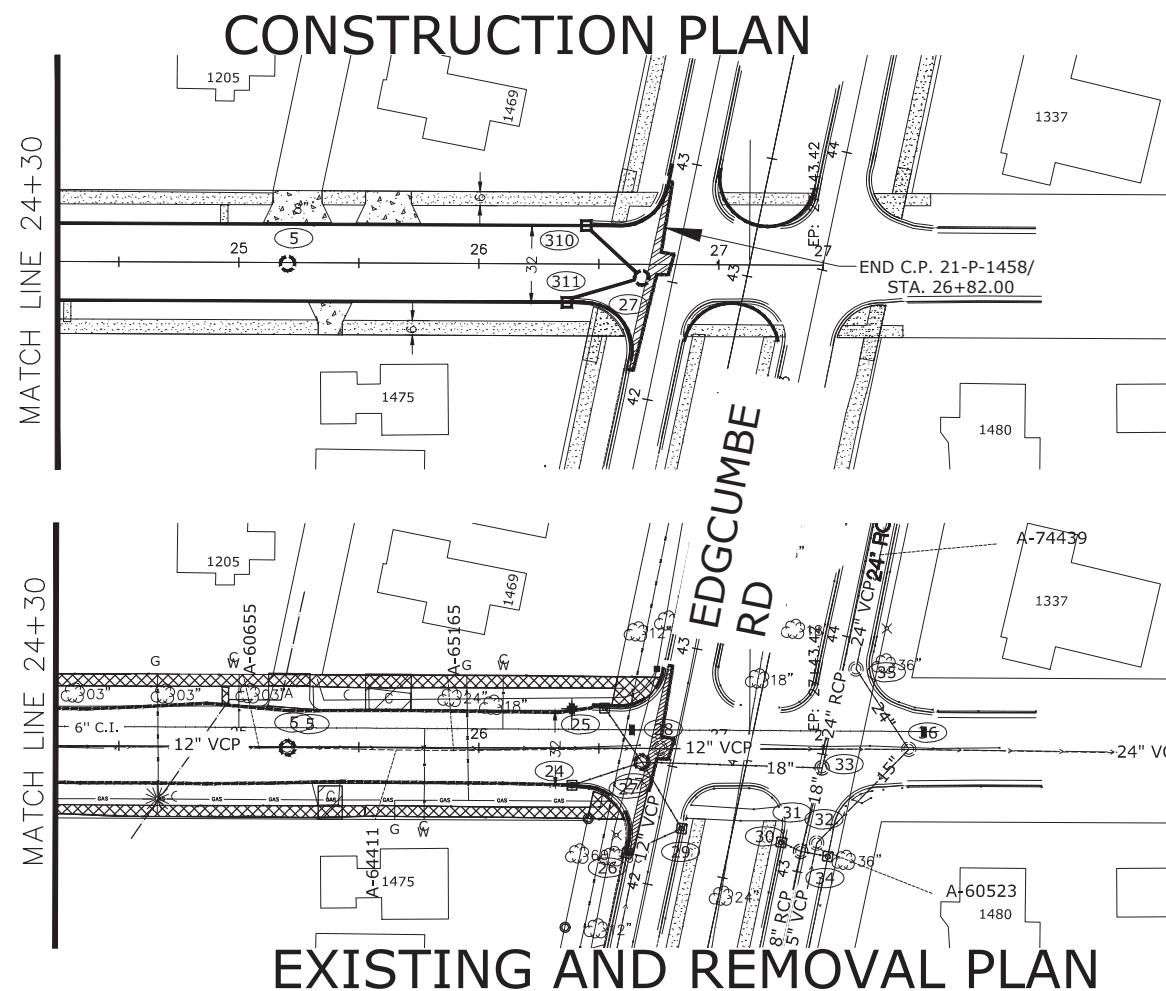
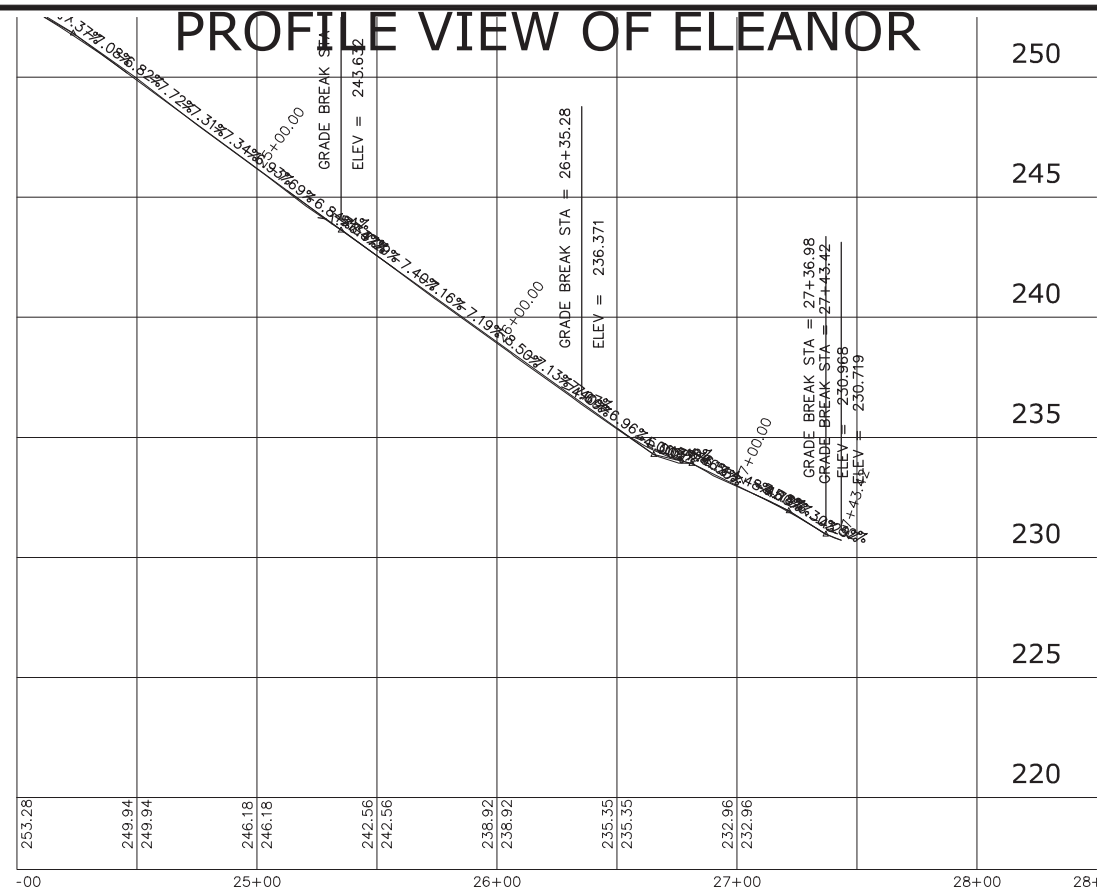
ELEANOR AVENUE



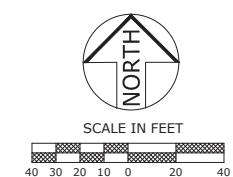
ELEANOR AVENUE

ELEANOR AVENUE
SYNDICATE TO GRIGGS

	DESIGNED	CEE	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA Signature: _____ Date: _____ CHRISTOPHER M. ENGELMANN Lic. No. 43350	PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS <h2 style="text-align: center;">GRIGGS/SCHEFFER PHASE II</h2>	PROJECT: 21-P-1458	STATE AID PROJECT NUMBER: N/A		
	DRAWN	ATT			DRAWER: 12	CAD NAME: PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG		
	APPROVED	CME			DWG. NO. 1628	DATE: 10/2/20	SHEET NO. 23 OF XX SHEETS	



ELEANOR AVENUE

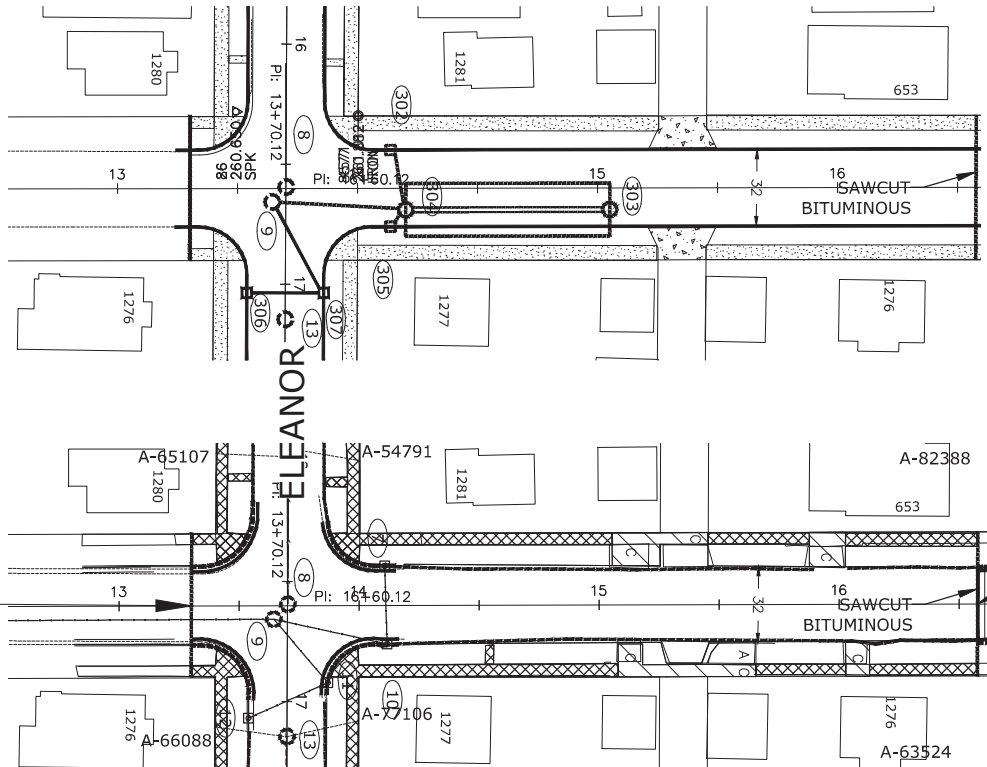
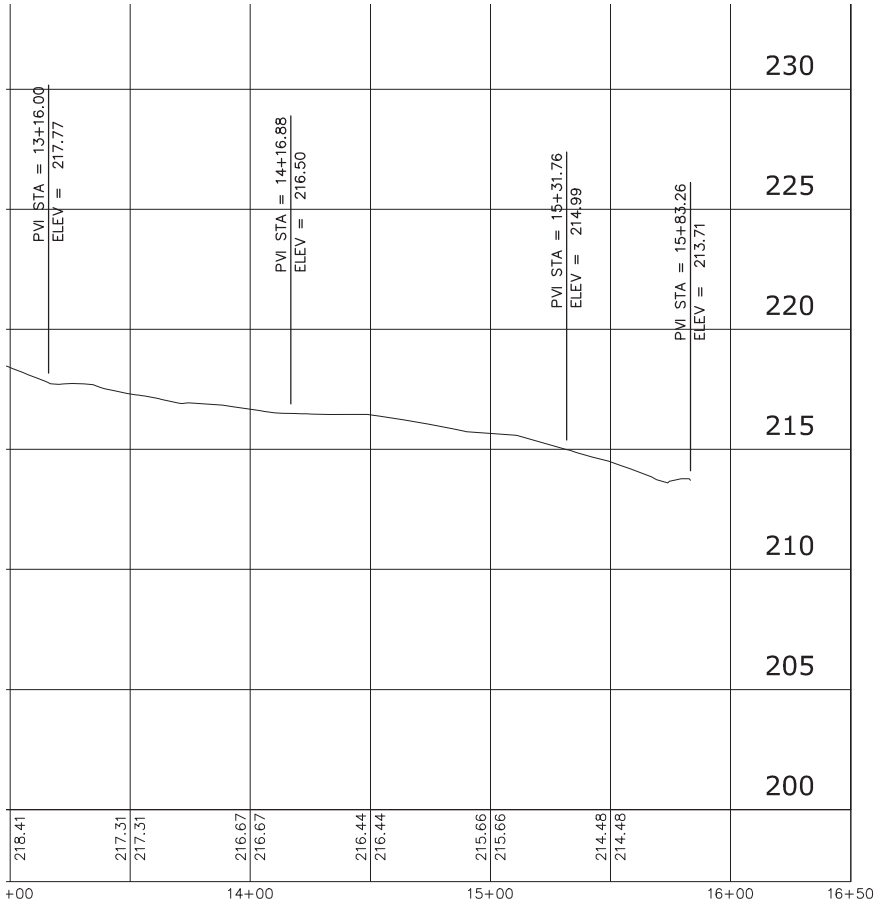


ELEANOR AVENUE

ELEANOR AVENUE
STA.24+30 TO EDGCUMBE

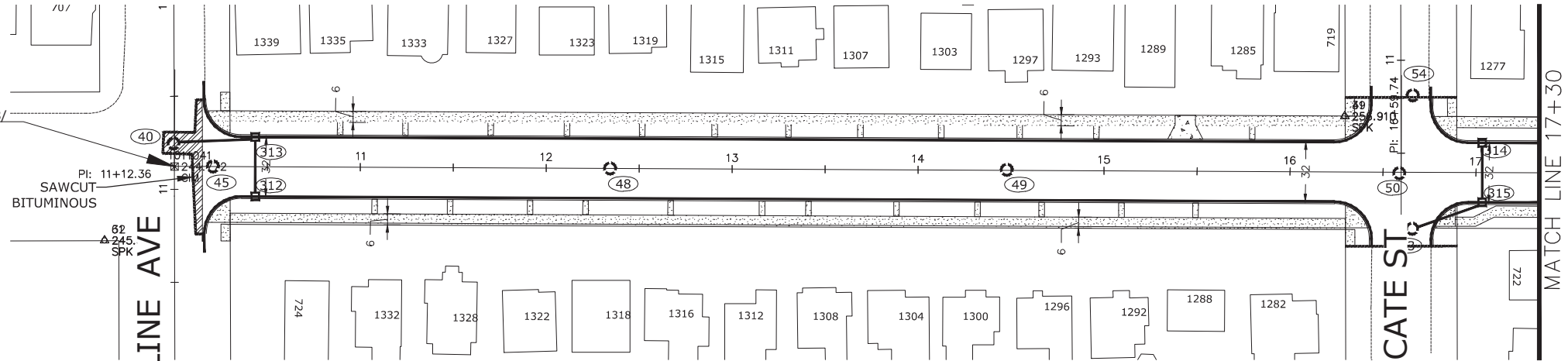
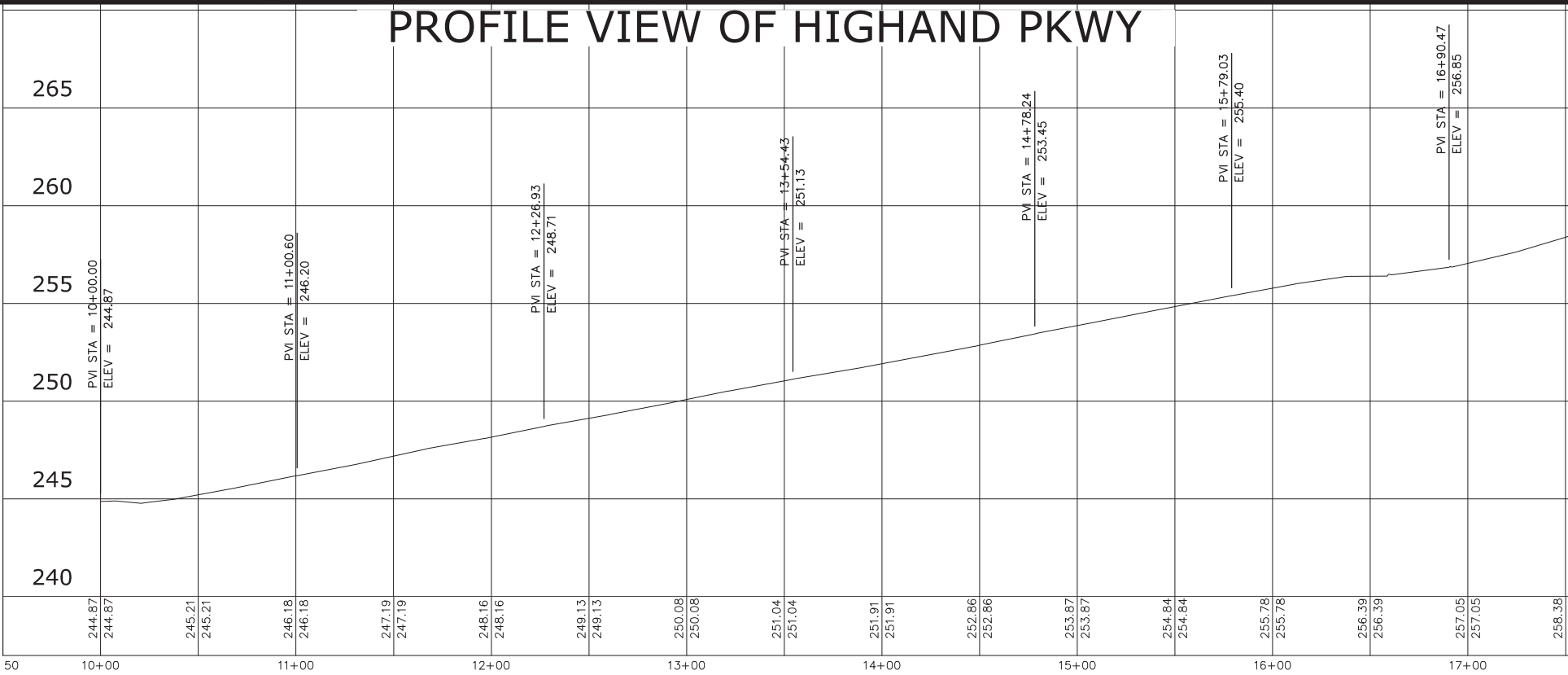
	DESIGNED	CEE	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA Signature: _____ Date: _____ CHRISTOPHER M. ENGELMANN Lic. No. 43350	PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS <h2 style="text-align: center;">GRIGGS/SCHEFFER PHASE II</h2>	PROJECT: 21-P-1458	STATE AID PROJECT NUMBER: N/A		
	DRAWN	ATT			DRAWER: 12	CAD NAME: PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG		
	APPROVED	CME			DWG. NO. 1628	DATE: 10/4/20	SHEET NO. 24 OF XX SHEETS	

CONSTRUCTION PLAN

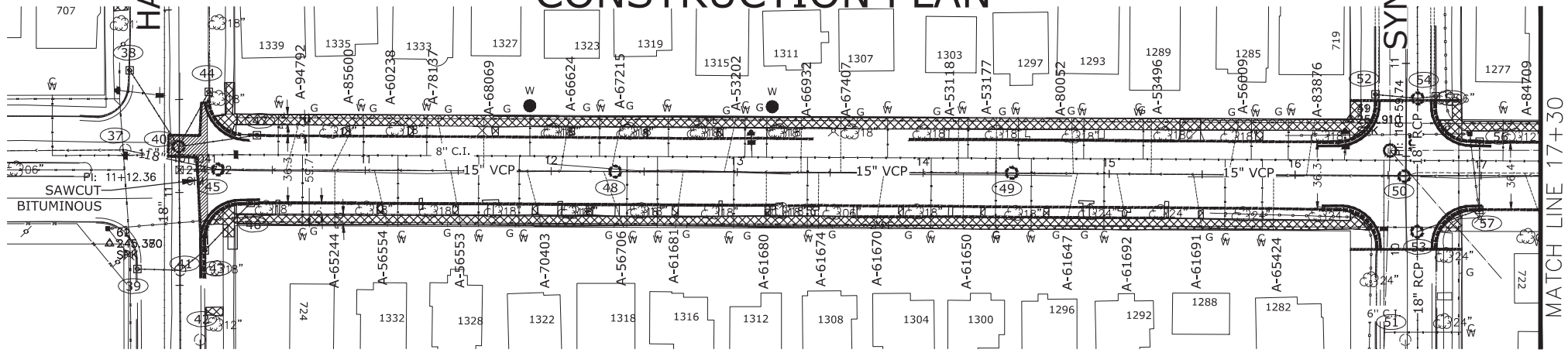


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PROFILE VIEW OF HIGHAND PKWY



CONSTRUCTION PLAN



EXISTING AND REMOVAL PLAN

HIGHLAND PKWY

HIGHLAND PKWY



SCALE IN FEET
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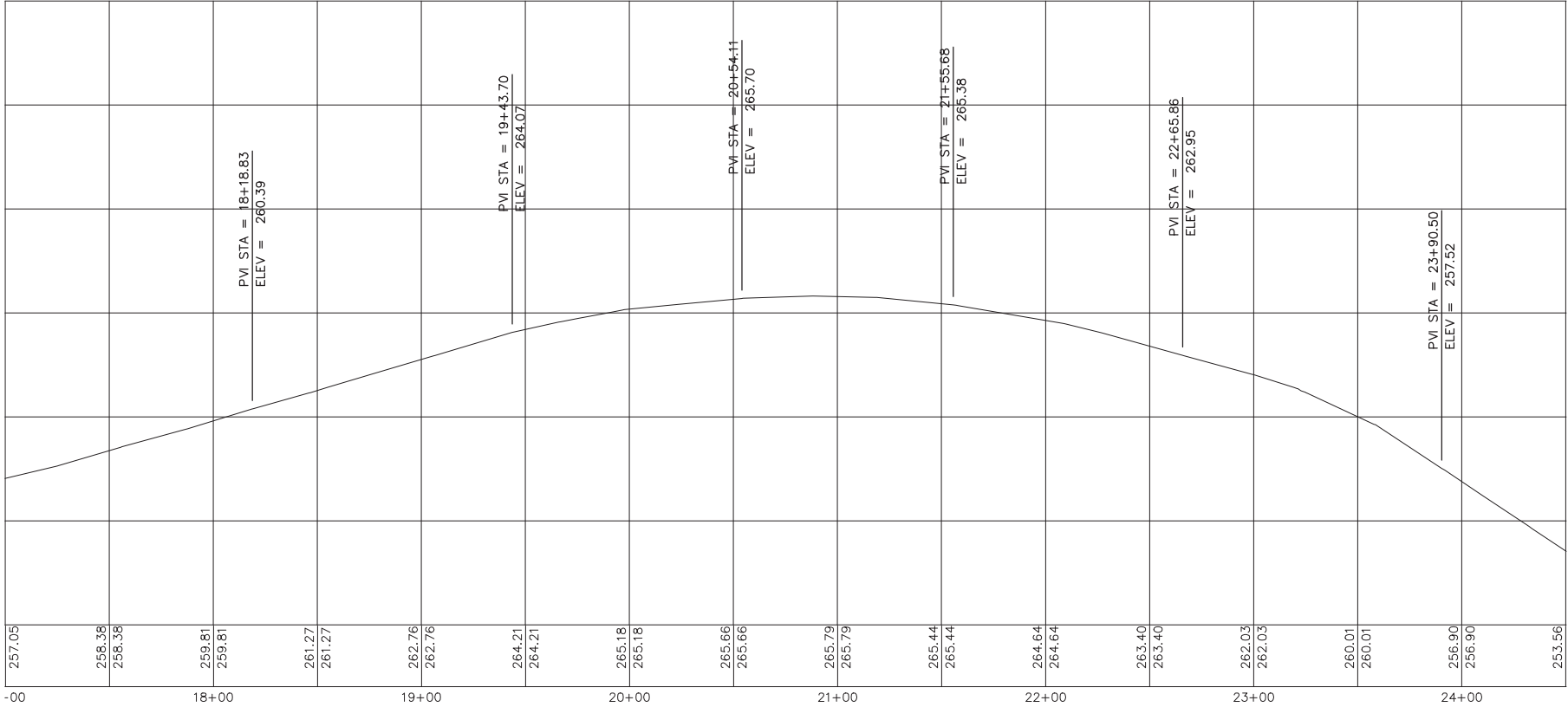
HIGHLAND PKWY
HAMLINE TO SYNDICATE

	DESIGNED	CEE	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA		PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS	PROJECT: 21-P-1458	STATE AID PROJECT NUMBER: N/A	
	DRAWN	ATT					CAD NAME: PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG	
	APPROVED	CME	Signature: CHRISTOPHER M. ENGELMANN Date: 43350 Lic. No.				DRAWER: 12	DWG. NO. 1628

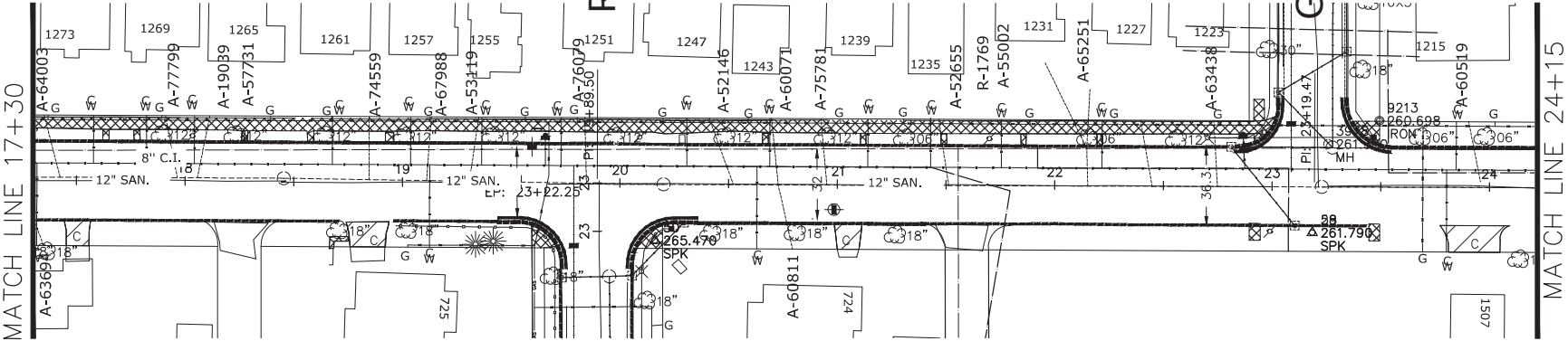
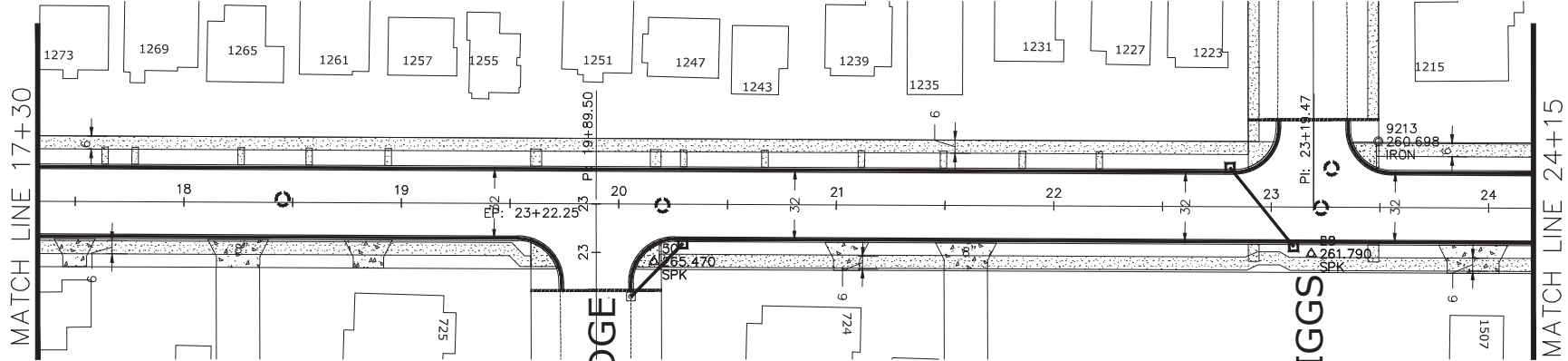
GRIGGS/SCHEFFER PHASE II

D:\001-Griggs-Scheffer2\DWG\Griggs-Scheffer Phase 2 Basemap10-5.dwg Oct 06, 2020 - 2:26pm

PROFILE VIEW OF HIGHLAND PKWY



CONSTRUCTION PLAN

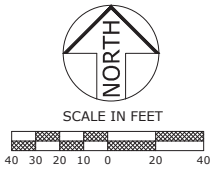


EXISTING AND REMOVAL PLAN

HIGHLAND PKWY

HIGHLAND PKWY

HIGHLAND PKWY
STA.17+30 TO GRIGGS



DESIGNED	CEE
DRAWN	ATT
APPROVED	CEM

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	
Signature: _____	Date: _____
CHRISTOPHER M. ENGELMANN	Lic. No. 43350

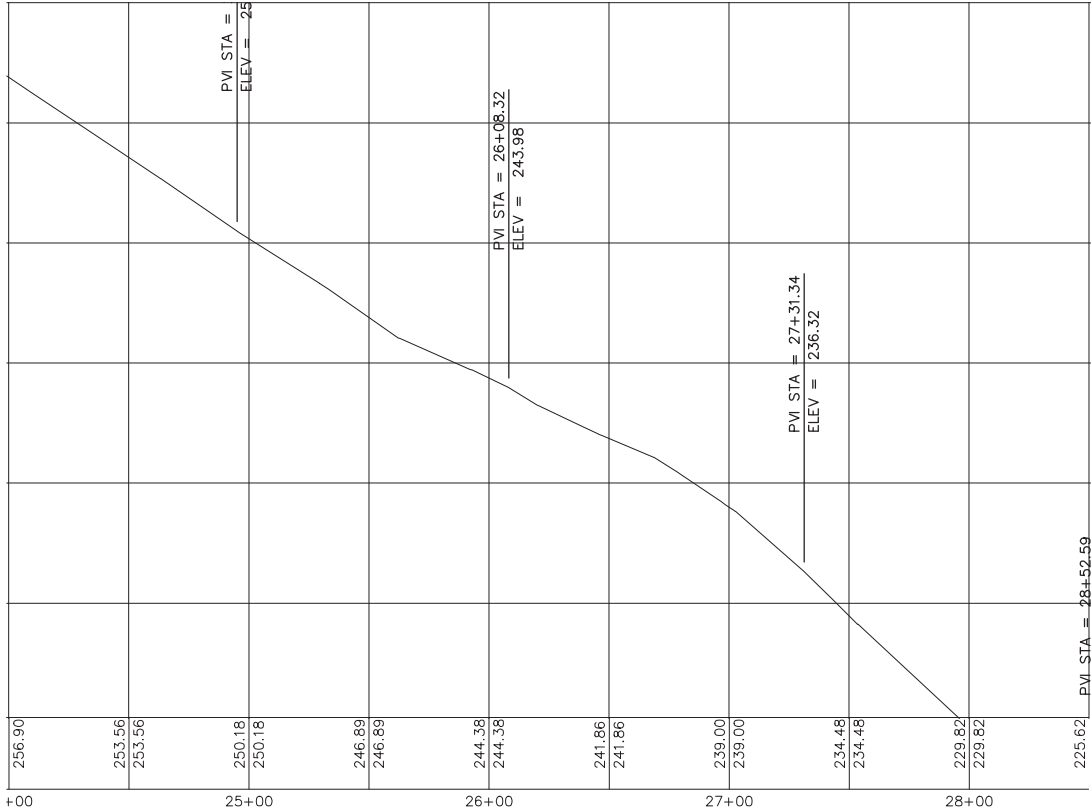
PREPARED BY	STREET ENGINEERING DIVISION	FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS
GRIGGS/SCHIEFFER PHASE II		

PROJECT:	21-P-1458
DRAWER:	12
DWG. NO.	1628

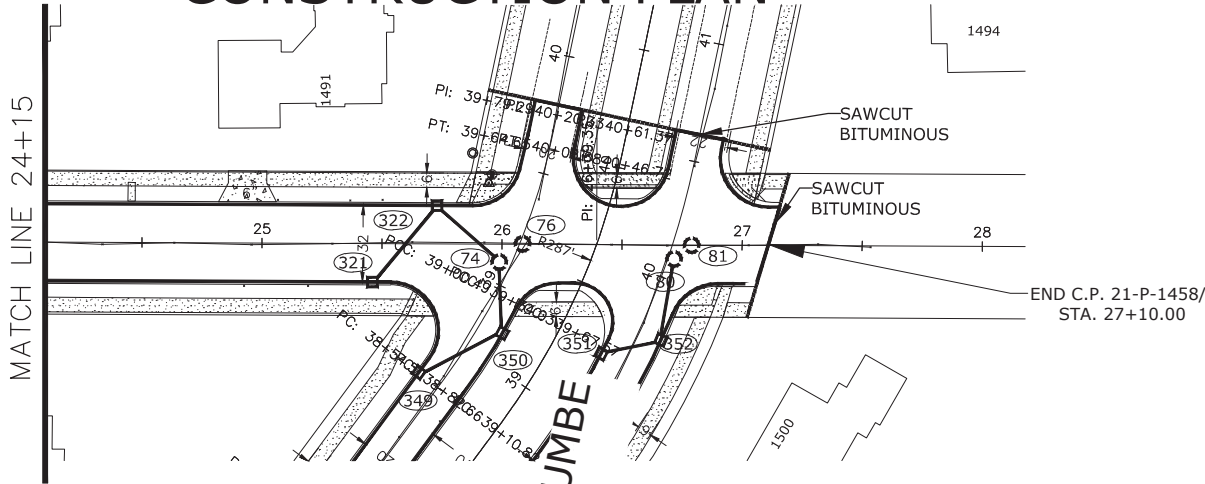
STATE AID PROJECT NUMBER:	N/A
CAD NAME:	PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG
DATE:	10/6/20
SHEET NO.	27 OF XX SHEETS



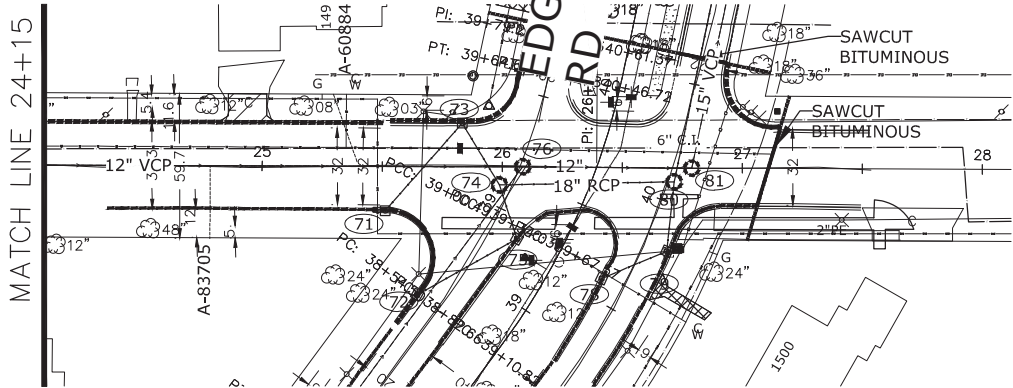
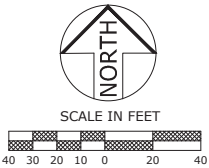
PROFILE VIEW OF HIGHLAND PKWY



CONSTRUCTION PLAN



HIGHLAND PKWY



HIGHLAND PKWY

EXISTING AND REMOVAL PLAN

HIGHLAND PKWY
GRIGGS TO EDGCUMBE



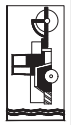
DESIGNED	CEE
DRAWN	ATT
APPROVED	CME

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	
Signature: _____	Date: _____
CHRISTOPHER M. ENGELMANN	Lic. No. 43350

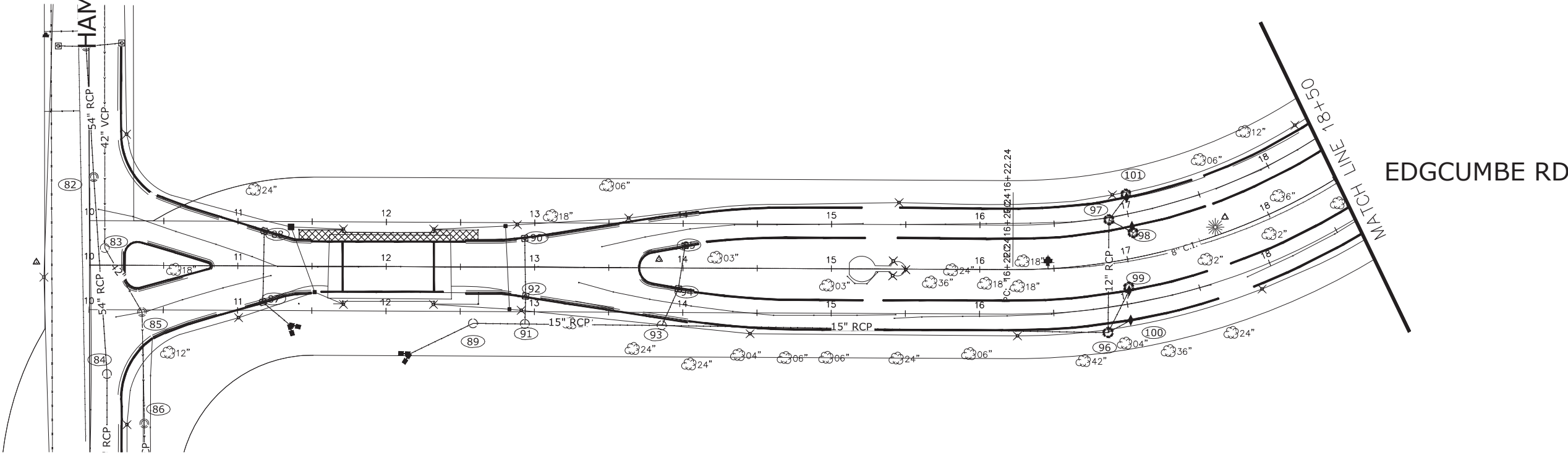
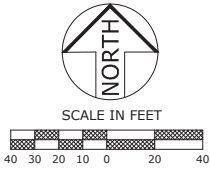
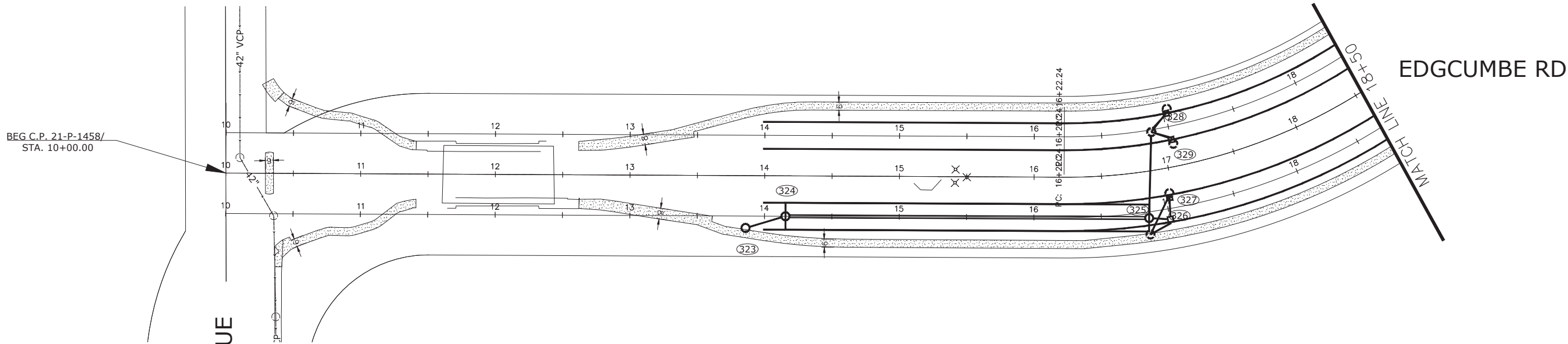
PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

GRIGGS/SCHIEFFER PHASE II

PROJECT: 21-P-1458	STATE AID PROJECT NUMBER: N/A		
DRAWER: 12	CAD NAME: PROJECTS/CURRENT/GRIGGS/SCHIEFFER PHASE II/DWG		
DWG. NO. 1628	DATE: 10/6/20	SHEET NO. 28	OF XX SHEETS



CONSTRUCTION PLAN

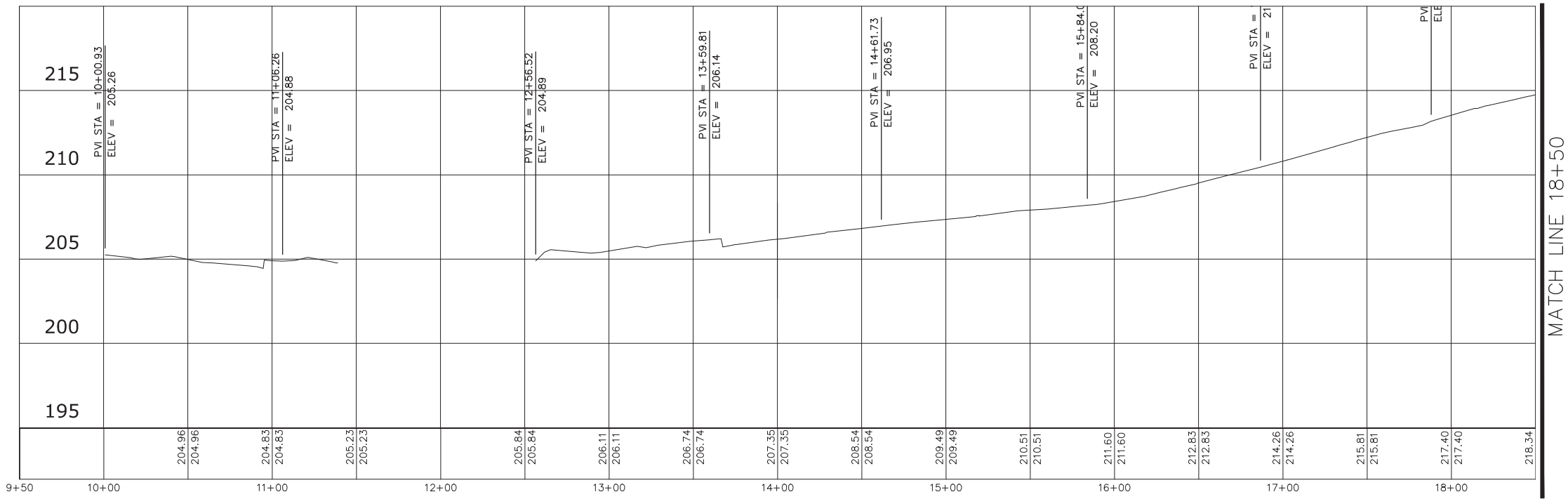
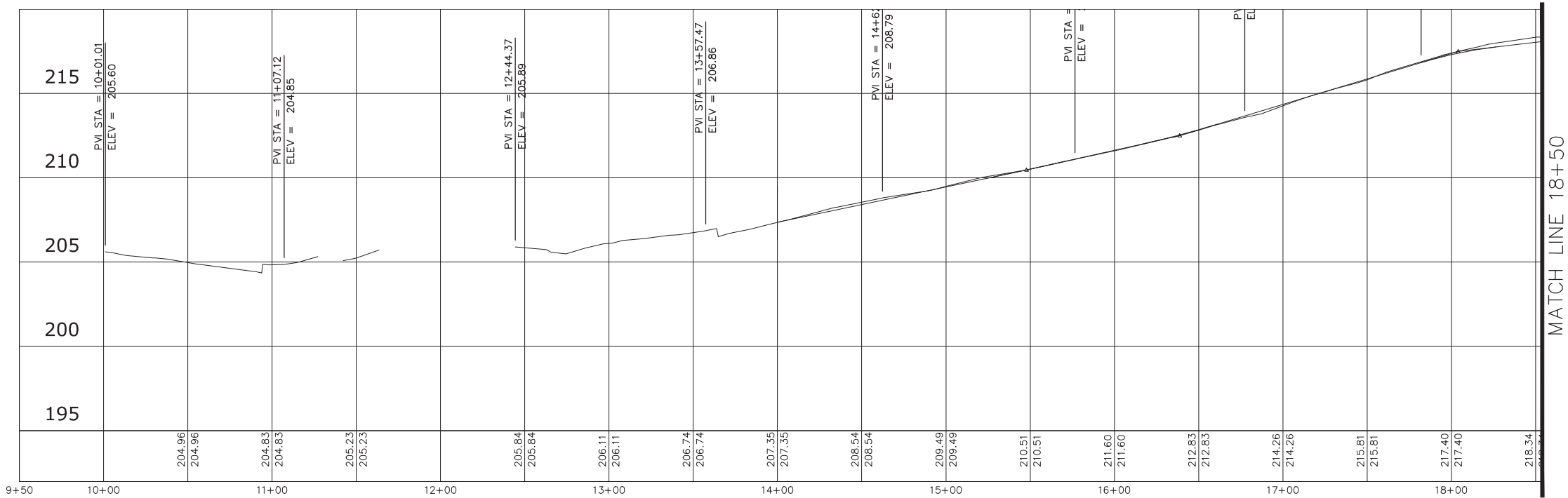


EXISTING AND REMOVAL PLAN

EDGUMBE RD
HAMLINE TO ST. 17+30

	DESIGNED	CEE	<div>I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA</div> <div>Signature: _____ Date: _____ CHRISTOPHER M. ENGELMANN Lic. No. 43350</div>	<div>PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS</div> <div>GRIGGS/SCHAEFFER PHASE II</div>	PROJECT: 21-P-1458		STATE AID PROJECT NUMBER: N/A		
	DRAWN	ATT			DRAWER: 12	CAD NAME: PROJECTS/CURRENT/GRIGGS/SCHAEFFER PHASE II/DWG			
	APPROVED	CME			DWG. NO. 1628	DATE: 10/5/20	SHEET NO. 29 OF XX SHEETS		

PROFILE VIEW OF SWB EDGCUMBE RD



PROFILE VIEW OF NEB EDGCUMBE RD

EDGCUMBE RD PROFILE VIEW
HAMLINE TO ST. 18+50



DESIGNED	CEE
DRAWN	ATT
APPROVED	CME

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

Signature: _____ Date: _____
CHRISTOPHER M. ENGELMANN Lic. No. 43350

PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

GRIGGS/SCHEFFER PHASE II

PROJECT: 21-P-1458

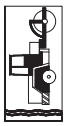
DRAWER: 12

DWG. NO. 1628

STATE AID PROJECT NUMBER: N/A

CAD NAME: PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG

DATE: 10/4/20 SHEET NO. 30 OF XX SHEETS



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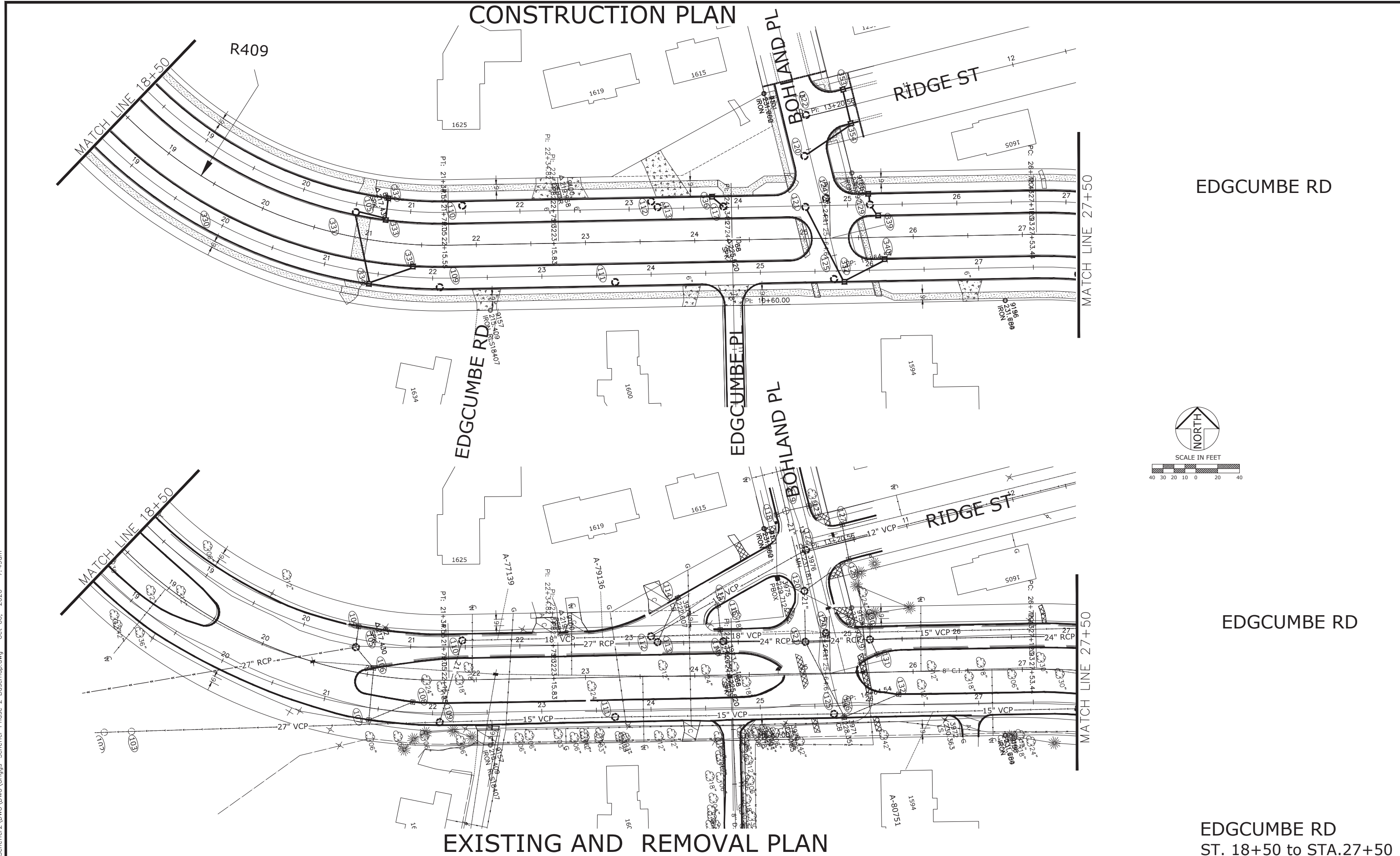
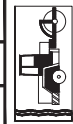
DESIGNED	CEE
DRAWN	ATT
APPROVED	CME

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	
Signature: _____	Date: _____
CHRISTOPHER M. ENGELMANN	Lic. No. 43350

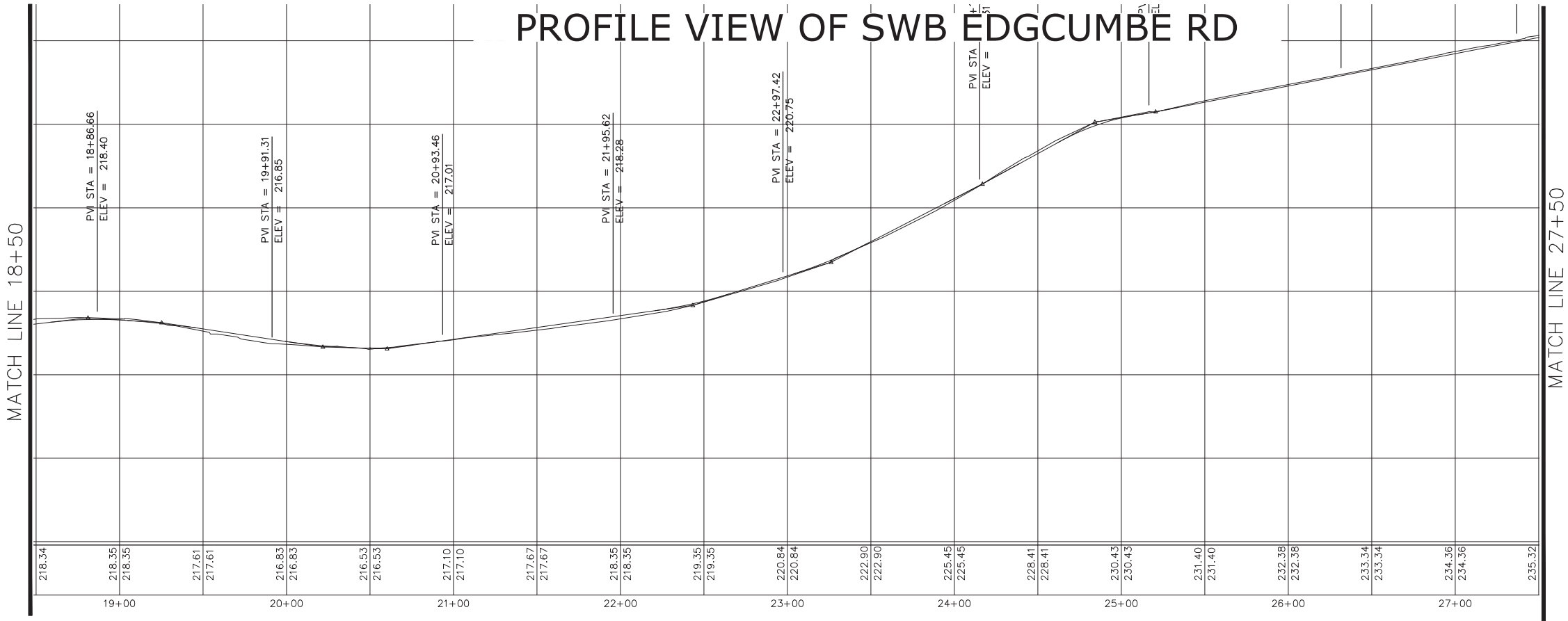
PREPARED BY	STREET ENGINEERING DIVISION	FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS
GRIGGS/SCHEFFER PHASE II		

PROJECT:	21-P-1458
DRAWER:	12
DWG. NO.	1628

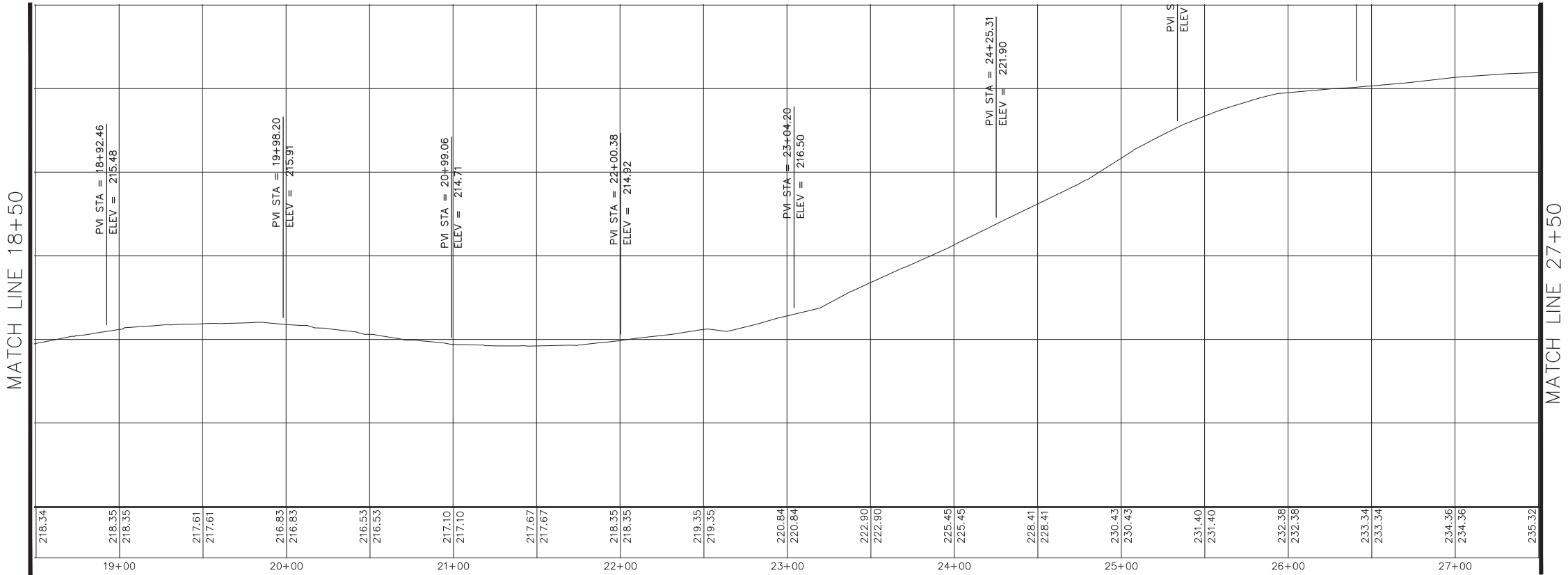
STATE AID PROJECT NUMBER: N/A	
CAD NAME: PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG	
DATE: 9/21/20	SHEET NO. 31 OF XX SHEETS



PROFILE VIEW OF SWB EDGCUMBE RD



PROFILE VIEW OF NEB EDGCUMBE RD



EDGCUMBE RD PROFILE VIEW
STA. 18+50 TO STA.27+50



DESIGNED	CEE
DRAWN	ATT
APPROVED	CME

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

Signature: _____ Date: _____
CHRISTOPHER M. ENGELMANN Lic. No. 43350

PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

GRIGGS/SCHEFFER PHASE II

PROJECT: 21-P-1458

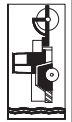
DRAWER: 12

DWG. NO. 1628

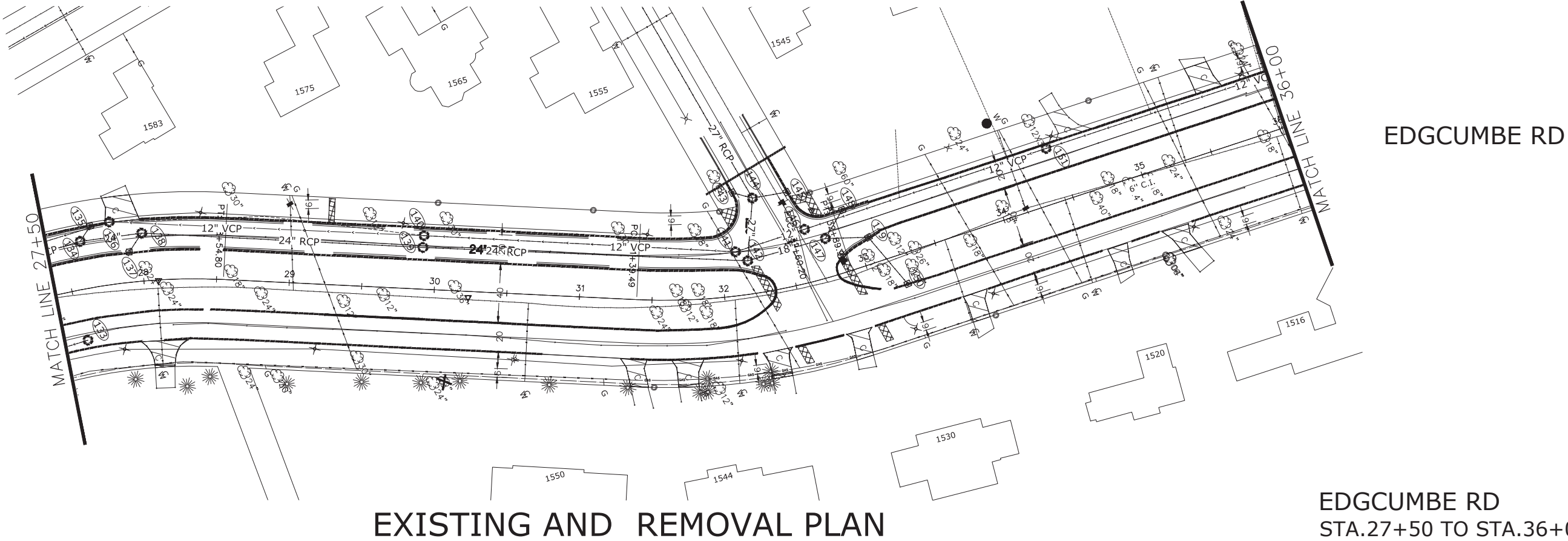
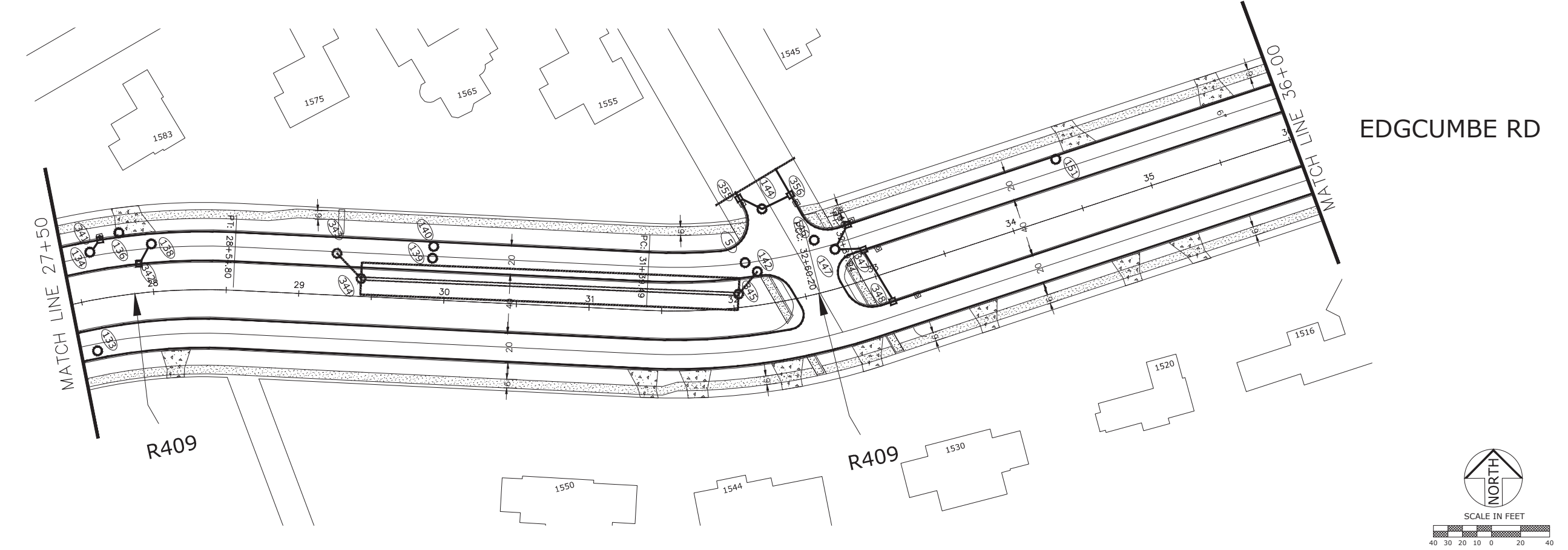
STATE AID PROJECT NUMBER: N/A

CAD NAME: PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG

DATE: 9/21/20 SHEET NO. 32 OF XX SHEETS



CONSTRUCTION PLAN



EXISTING AND REMOVAL PLAN

EDGCUMBE RD
STA.27+50 TO STA.36+00



DESIGNED	CEE
DRAWN	ATT
APPROVED	CME

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

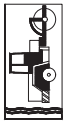
Signature: _____ Date: _____
CHRISTOPHER M. ENGELMANN Lic. No. 43350

PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

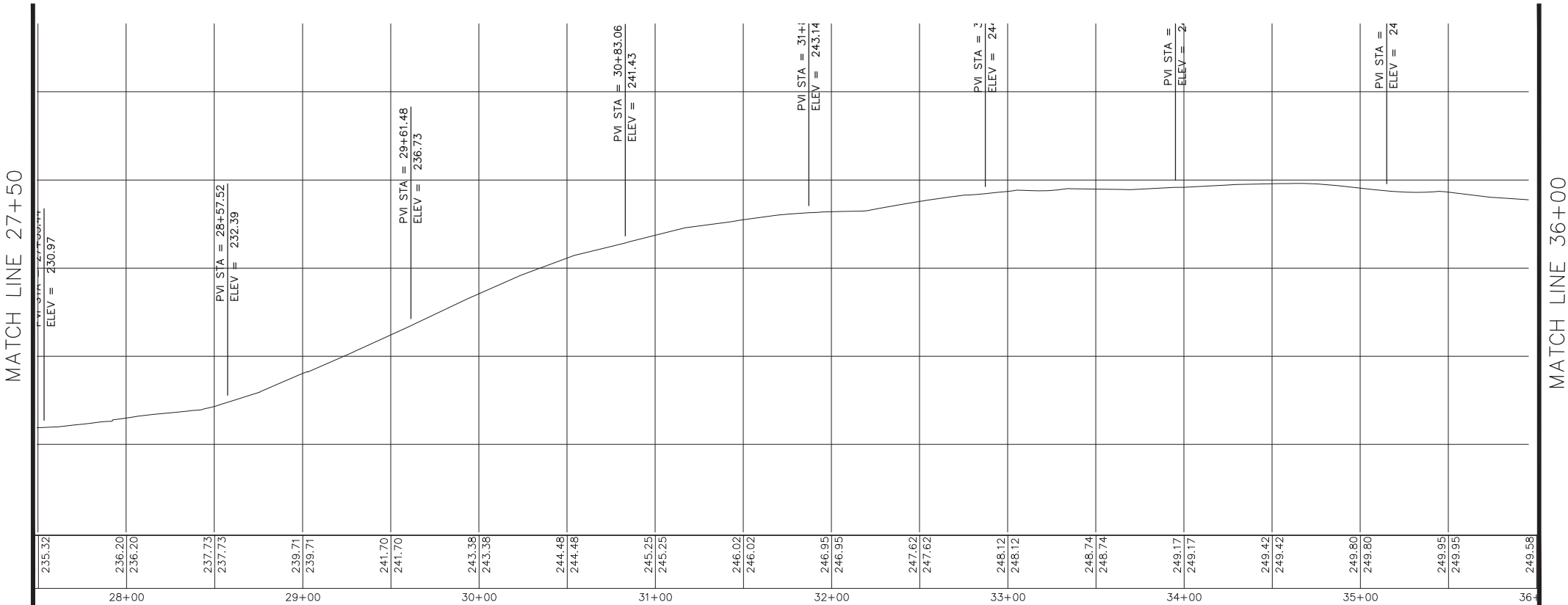
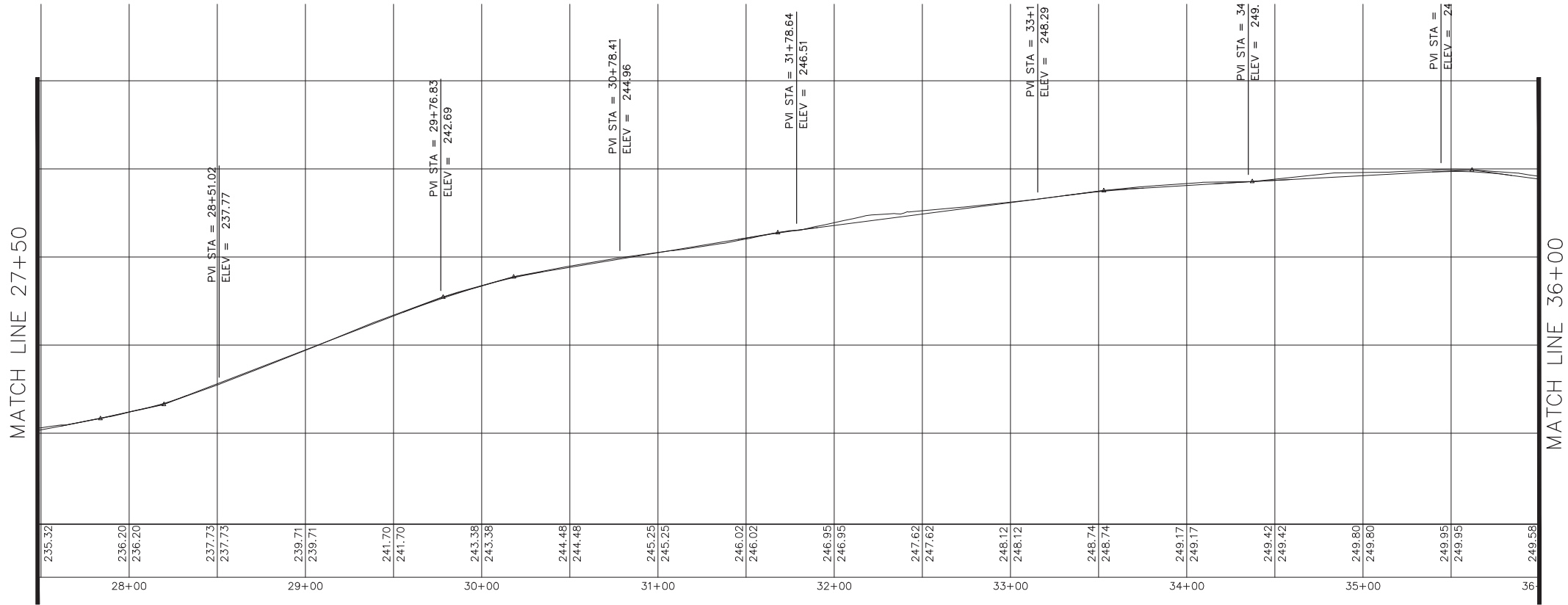
GRIGGS/SCHAEFFER PHASE II

PROJECT: 21-P-1458
DRAWER: 12
DWG. NO. 1628

STATE AID PROJECT NUMBER: N/A
CAD NAME: PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG
DATE: 9/21/20 SHEET NO. 33 OF XX SHEETS



PROFILE VIEW OF SWB EDGCUMBE RD



PROFILE VIEW OF NEB EDGCUMBE RD

EDGCUMBE RD PROFILE VIEW
STA.27+50 TO STA.36+00

D:\001-Griggs-Scheffer2\DWG\Griggs-Scheffer Phase 2 Basemap.dwg Oct 06, 2020 - 8:45am



DESIGNED	CEE
DRAWN	ATT
APPROVED	CME

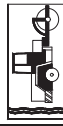
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	
Signature: _____	Date: _____
CHRISTOPHER M. ENGELMANN	Lic. No. 43350

PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

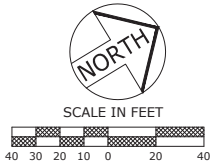
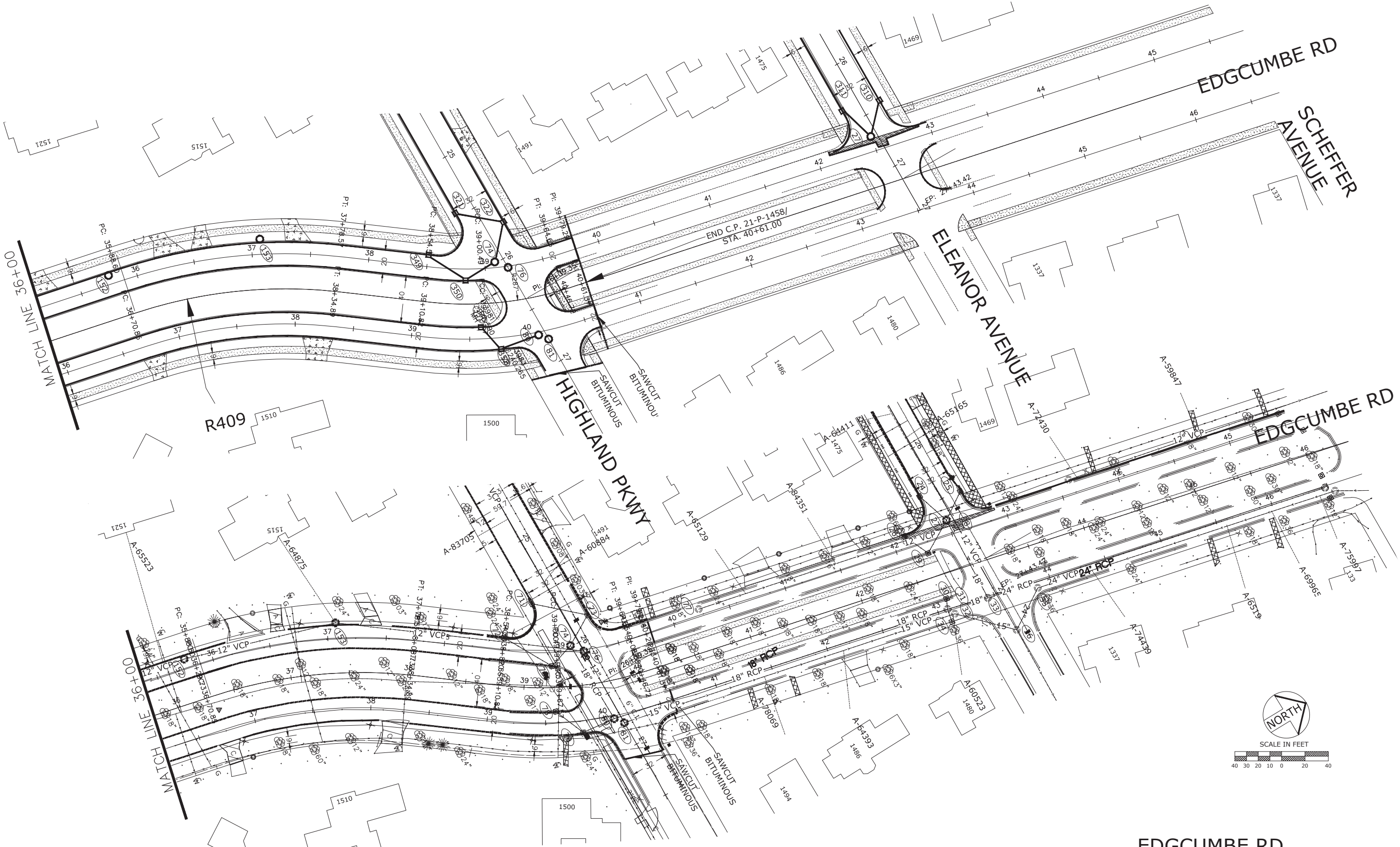
GRIGGS/SCHEFFER PHASE II

PROJECT:	21-P-1458
DRAWER:	12
DWG. NO.	1628

STATE AID PROJECT NUMBER:	N/A
CAD NAME:	PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG
DATE:	9/22/20
SHEET NO.	34 OF XX SHEETS



CONSTRUCTION PLAN

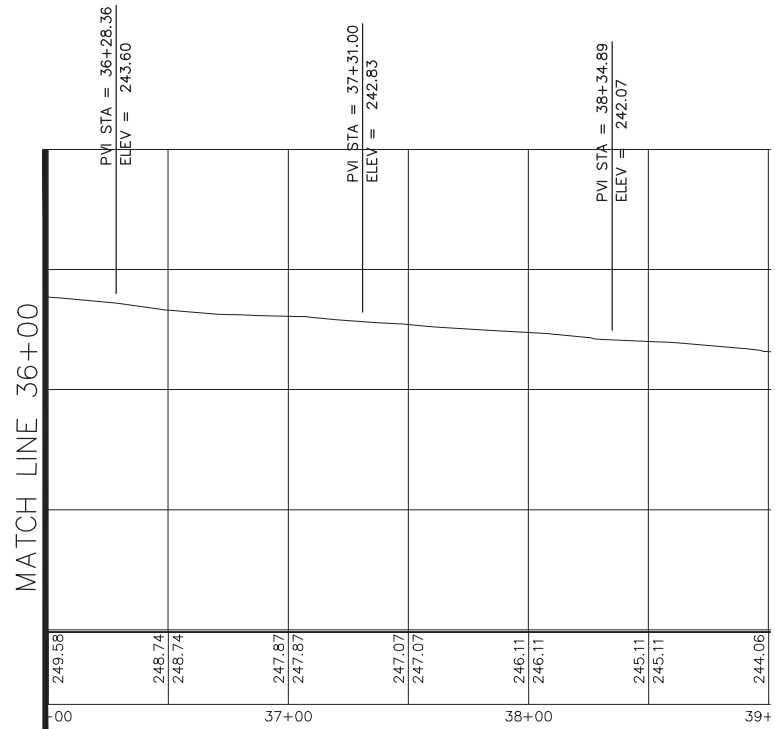
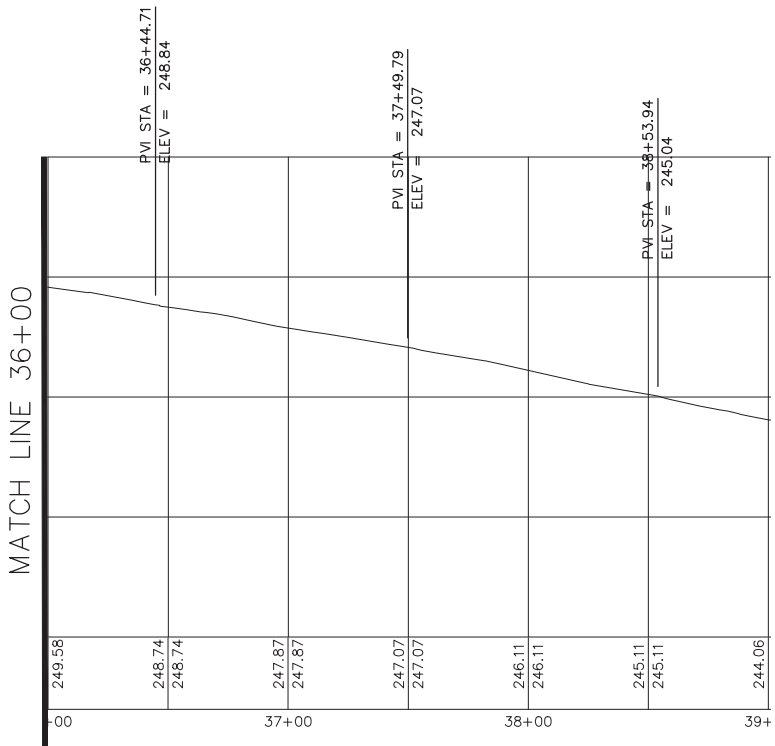


EXISTING AND REMOVAL PLAN

EDGCUMBE RD
STA.36+00 TO FORD PKWY

	DESIGNED	CEE	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA		PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS	GRIGGS/SCHEFFER PHASE II		PROJECT: 21-P-1458		STATE AID PROJECT NUMBER: N/A		
	DRAWN	ATT						DRAWER: 12		CAD NAME: PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG		
	APPROVED	CME	Signature: _____ Date: _____ CHRISTOPHER M. ENGELMANN Lic. No. 43350					DWG. NO. 1628		DATE: 9/23/20		

PROFILE VIEW OF SWB EDGCUMBE RD



PROFILE VIEW OF NEB EDGCUMBE RD

EDGCUMBE RD PROFILE VIEW
STA.36+00 TO FORD PKWY



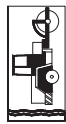
DESIGNED	CEE
DRAWN	ATT
APPROVED	CME

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	
Signature: _____	Date: _____
CHRISTOPHER M. ENGELMANN	Lic. No. 43350

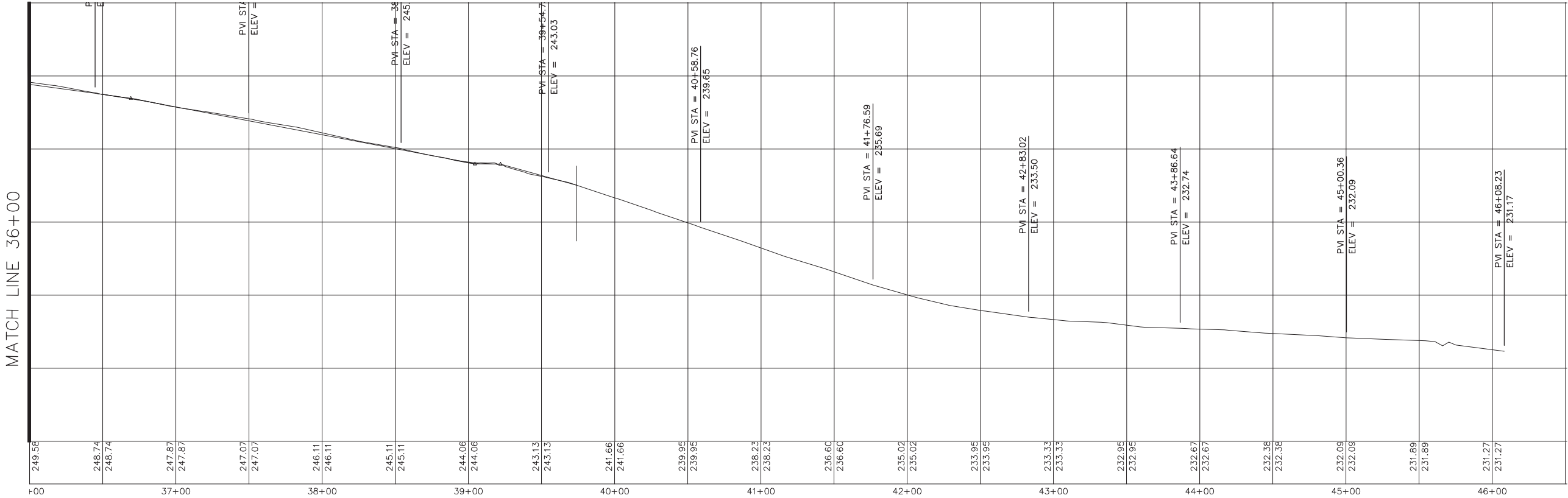
PREPARED BY	STREET ENGINEERING DIVISION	FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS
GRIGGS - SCHEFFER PHASE II		

PROJECT:	21-P-1458
DRAWER:	12
DWG. NO.	1628

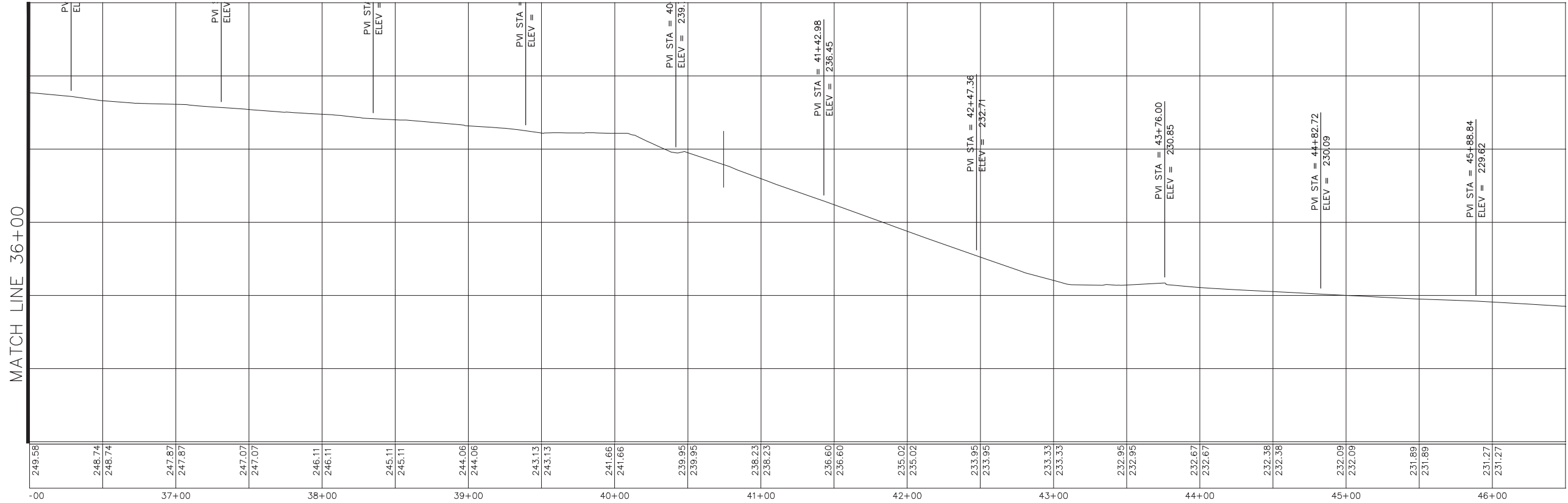
STATE AID PROJECT NUMBER:		NOT APPLICABLE			
CAD NAME: PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG					
DATE:	9/23/20	SHEET NO.	36	OF	XX SHEETS



PROFILE VIEW OF SWB EDGCUMBE RD



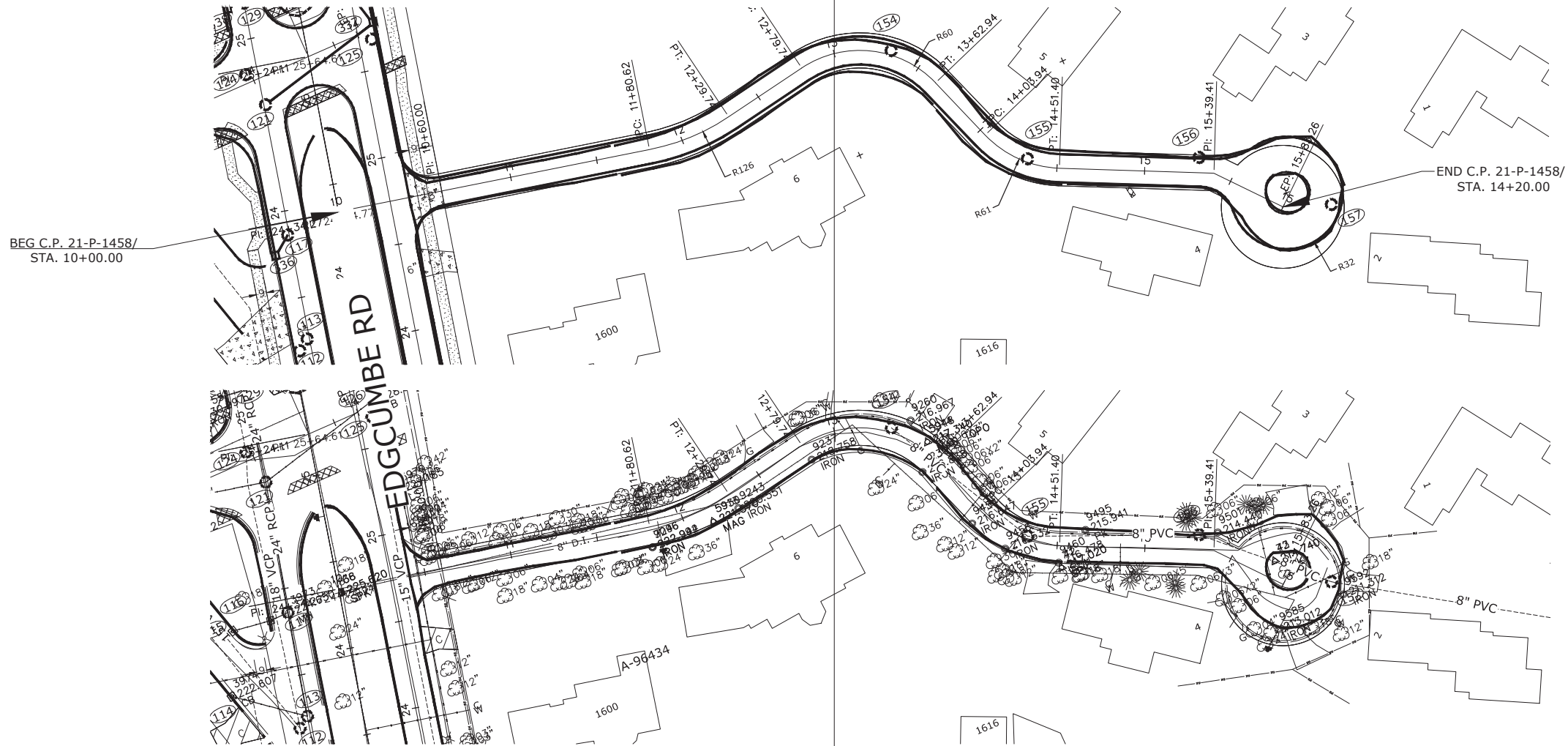
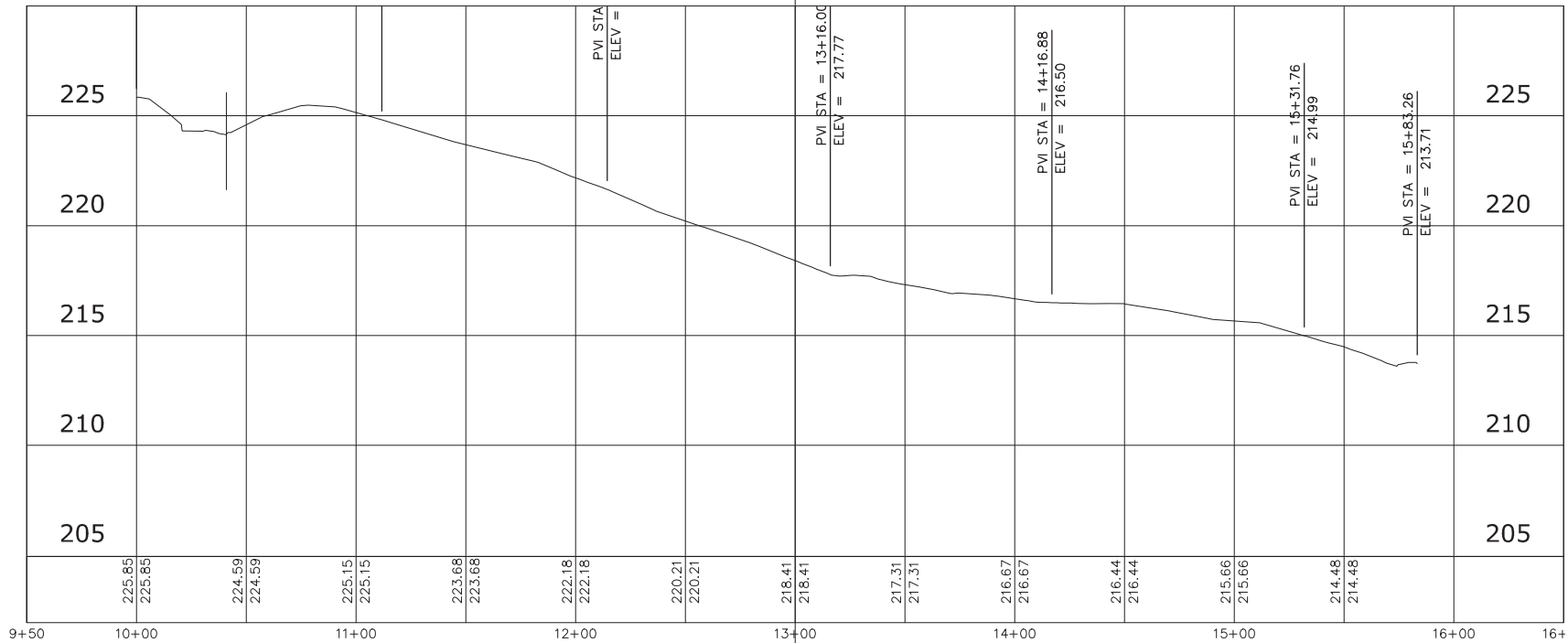
PROFILE VIEW OF NEB EDGCUMBE RD



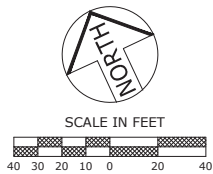
EDGCUMBE RD PROFILE VIEW
STA.36+00 TO SCHEFFER AVENUE

	DESIGNED	CEE	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA		PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS		PROJECT: 21-P-1458		STATE AID PROJECT NUMBER: N/A	
	DRAWN	ATT			GRIGGS/SCHEFFER PHASE II		DRAWER: 12		CAD NAME: PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG	
	APPROVED	CME	Signature: CHRISTOPHER M. ENGELMANN		Date: 43350	DWG. NO. 1628		DATE: 9/23/20	SHEET NO. 36 OF XX SHEETS	

CONSTRUCTION PLAN



EDGCUMBE PL



EDGCUMBE PL

EXISTING AND REMOVAL PLAN

EDGCUMBE PL
EDGCUMBE RD TO CUL-DE-SAC



DESIGNED	CEE
DRAWN	ATT
APPROVED	CME

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	
Signature: _____	Date: _____
CHRISTOPHER M. ENGELMANN	Lic. No. 43350

PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

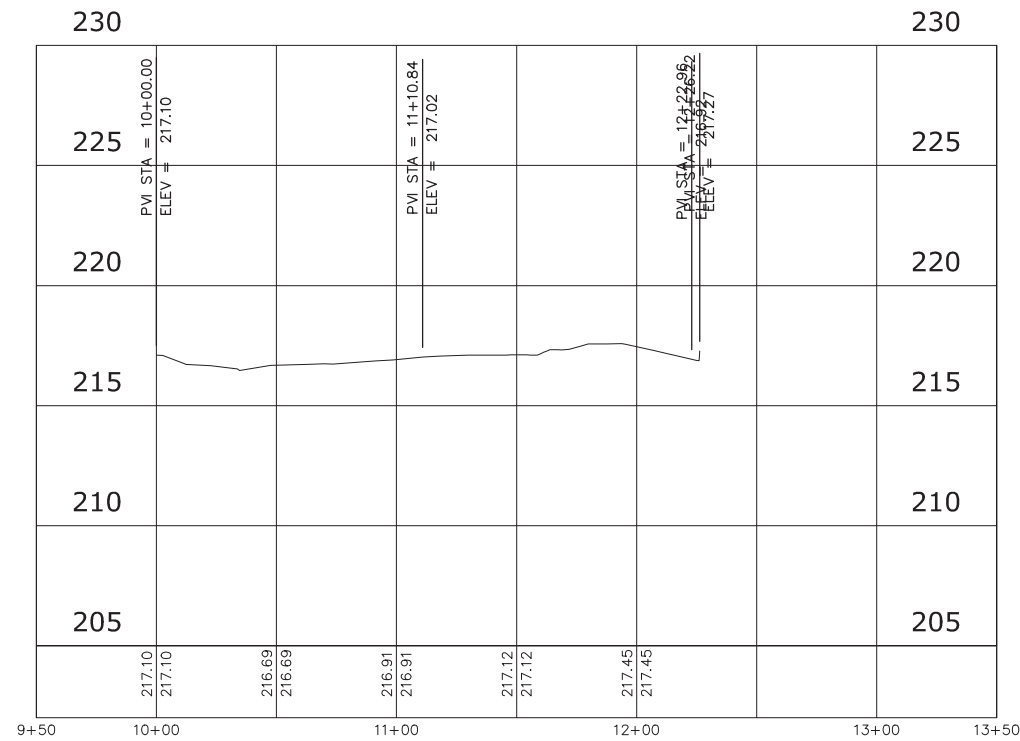
GRIGGS/SCHEFFER PHASE II

PROJECT:	21-P-1458
DRAWER:	12
DWG. NO.	1628

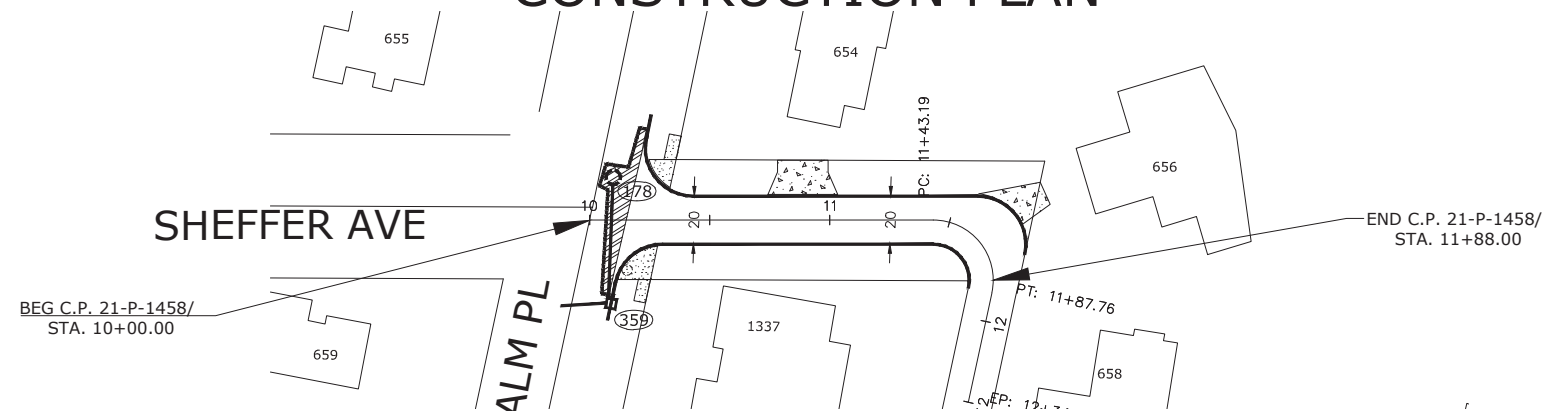
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CAD NAME:	PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG
DATE:	9/24/2020
SHEET NO.	37 OF XX SHEETS



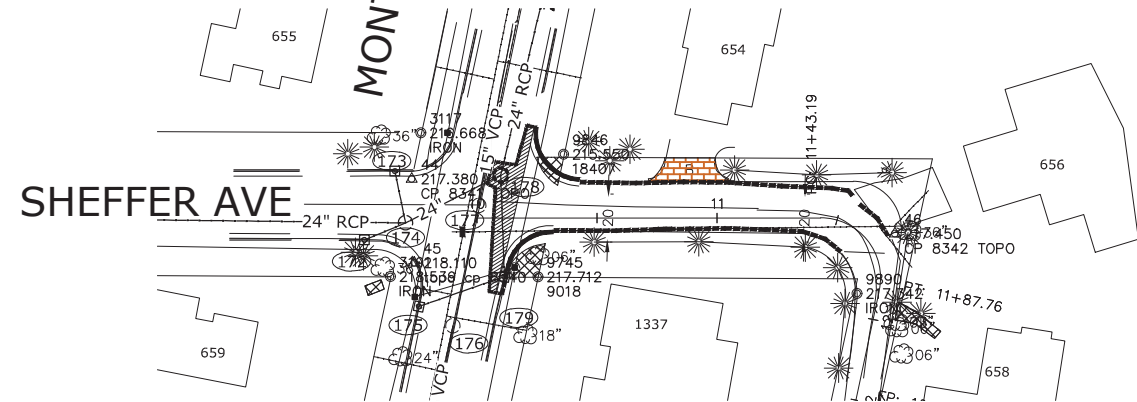
PROFILE VIEW OF MONTCALM PLACE



CONSTRUCTION PLAN



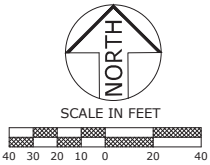
MONTCALM PL



MONTCALM PL

EXISTING AND REMOVAL PLAN

MONTCALM PL
MONTCALM PL TO STA.11+80

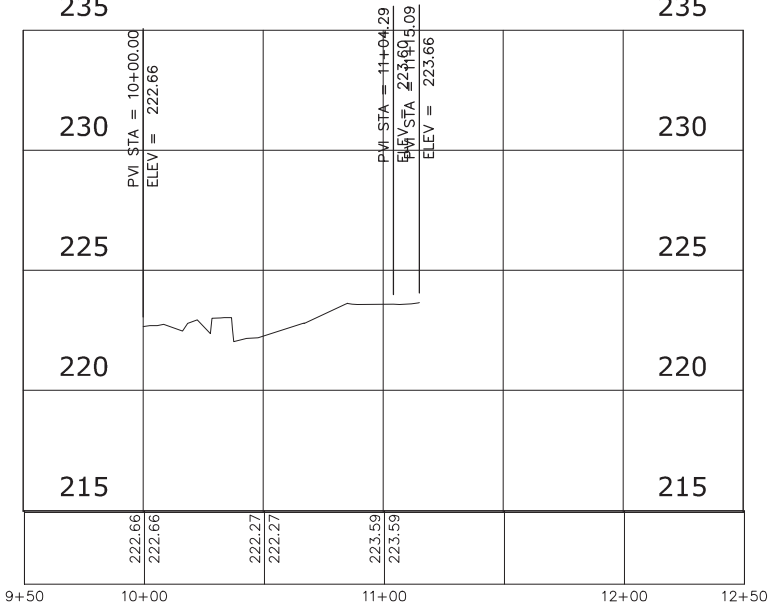


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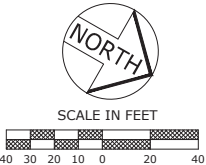
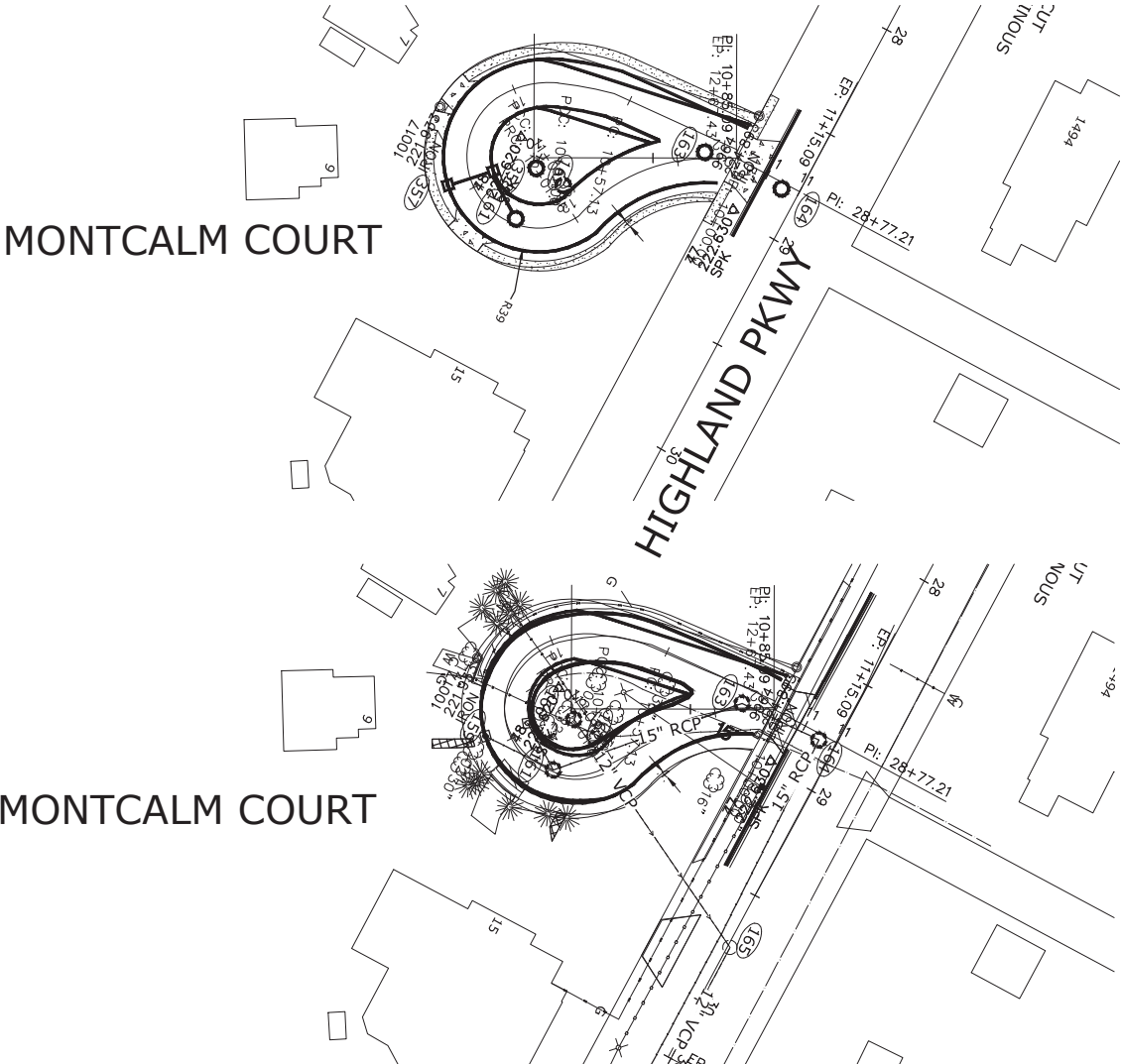
	DESIGNED	CEE	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS	PROJECT: 21-P-1458	STATE AID PROJECT NUMBER: N/A			
	DRAWN	ATT				DRAWER: 12	CAD NAME: PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG		
	APPROVED	CME					DWG. NO. 1628	DATE: 9/25/2020	

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PROFILE VIEW OF MONTCALM COURT



CONSTRUCTION PLAN



EXISTING AND REMOVAL PLAN

MONTCALM COURT



DESIGNED	CEE	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA Signature: _____ Date: _____ CHRISTOPHER M. ENGELMANN Lic. No. 43350
DRAWN	ATT	
APPROVED	CME	

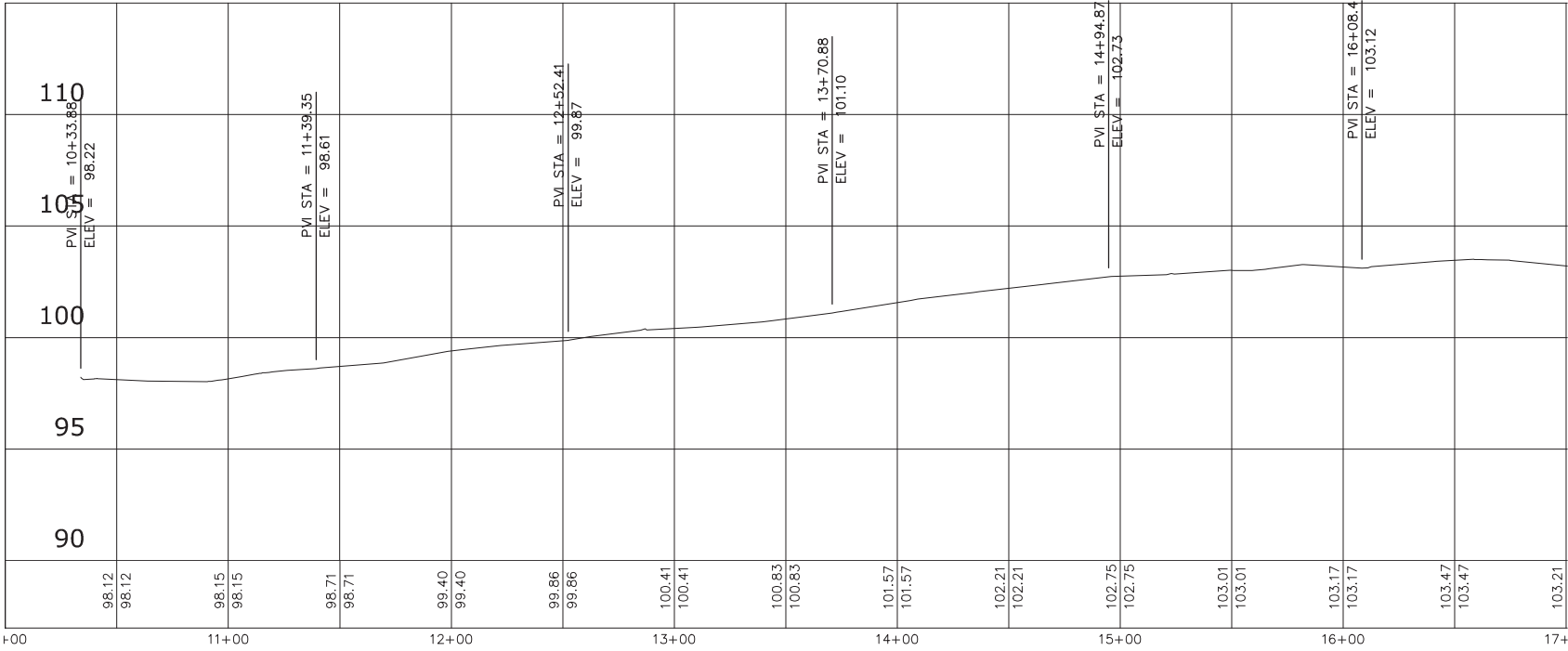
PREPARED BY STREET ENGINEERING DIVISION FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS

GRIGGS/SCHEFFER PHASE II

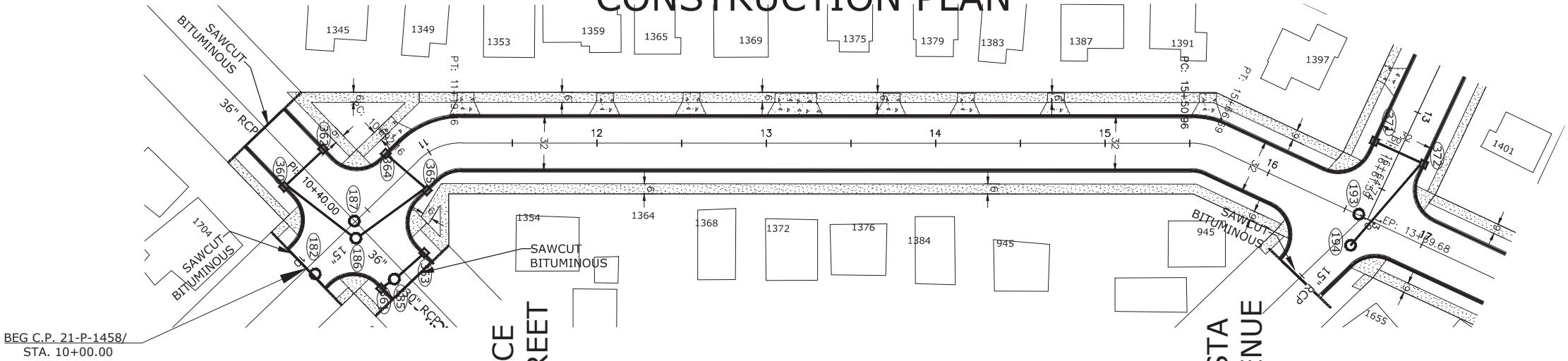
PROJECT: 21-P-1458	STATE AID PROJECT NUMBER: N/A		
DRAWER: 12	CAD NAME: PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG		
DWG. NO. 1628	DATE: 9/25/20	SHEET NO. 40	OF XX SHEETS



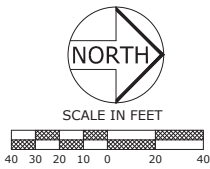
PROFILE VIEW OF ALASKA



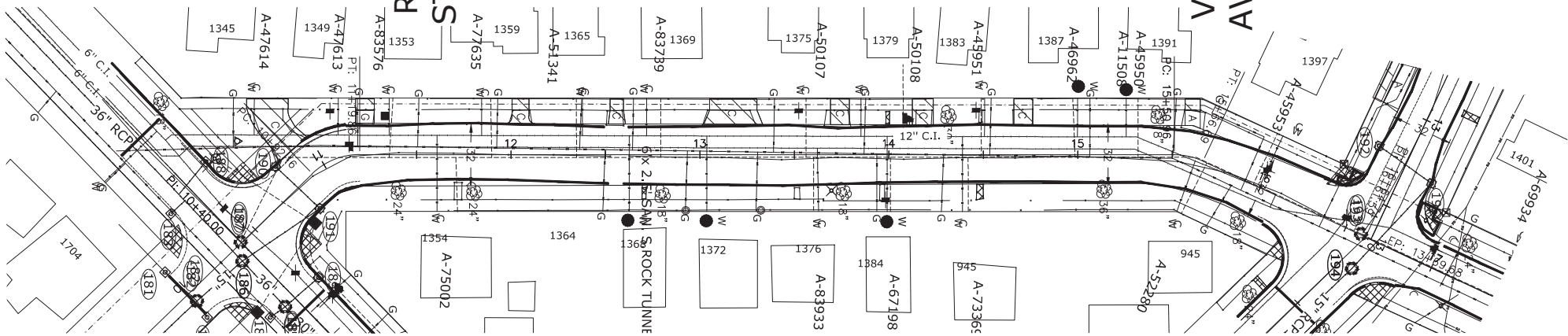
CONSTRUCTION PLAN



BEG C.P. 21-P-1458/
STA. 10+00.00



EXISTING AND REMOVAL PLAN



ALASKA AVENUE

ALASKA AVENUE

ALASKA AVENUE
Race to Vista



DESIGNED	CEE
DRAWN	ATT
APPROVED	CME

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	
Signature: _____	Date: _____
CHRISTOPHER M. ENGELMANN	Lic. No. 43350

PREPARED BY	STREET ENGINEERING DIVISION	FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS
GRIGGS/SCHEFFER PHASE II		

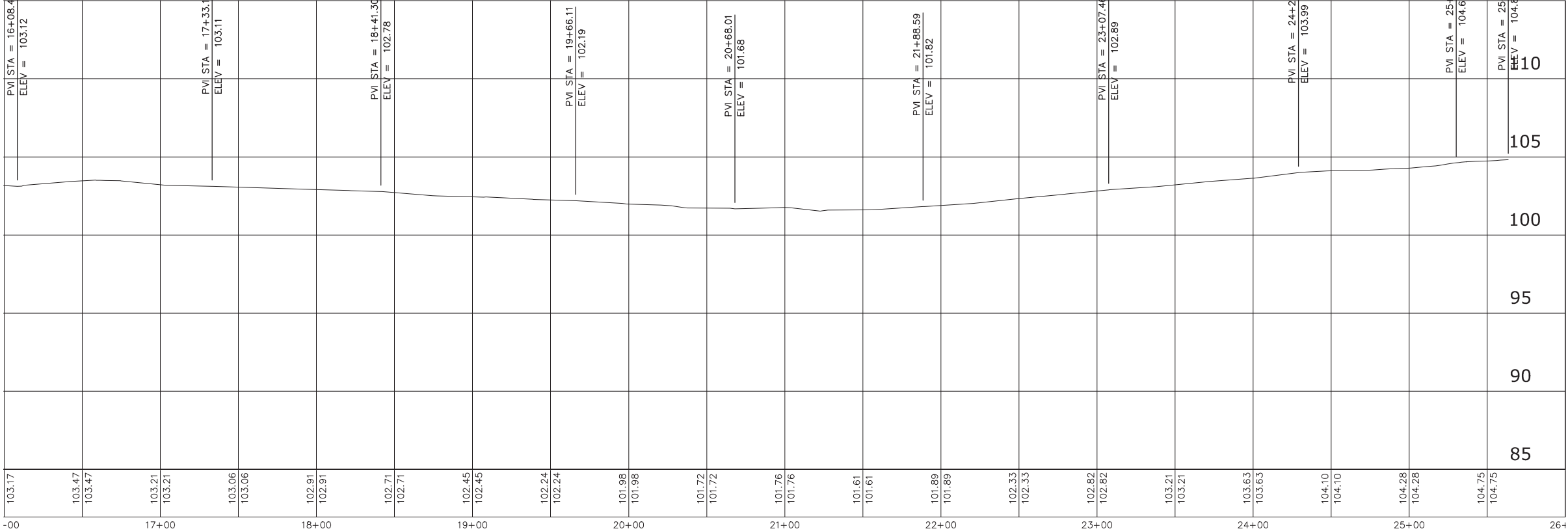
PROJECT:	21-P-1458
DRAWER:	12
DWG. NO.	1628

STATE AID PROJECT NUMBER:	N/A
CAD NAME:	PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG
DATE:	9/25/2020
SHEET NO.	41 OF XX SHEETS

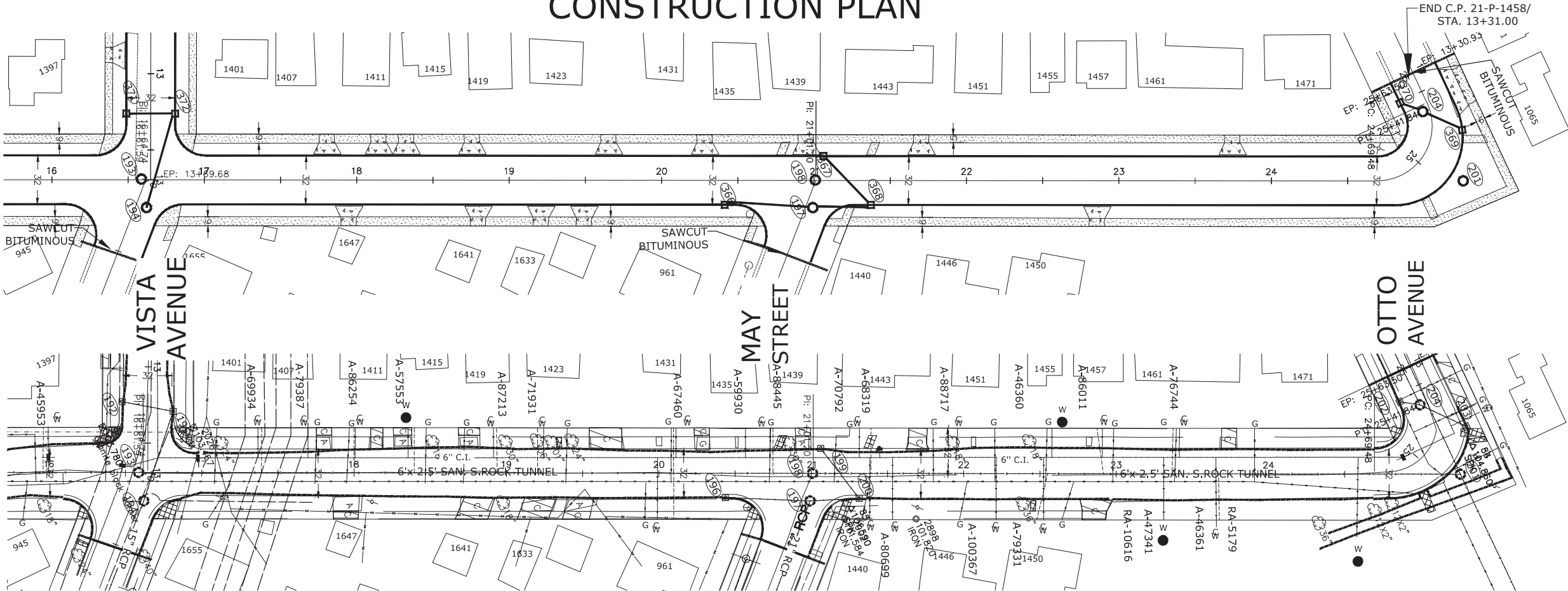


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PROFILE VIEW OF ALASKA



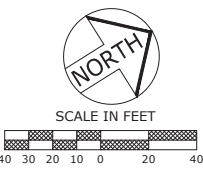
CONSTRUCTION PLAN



ALASKA AVENUE

ALASKA AVENUE

ALASKA
Vista to Otto



EXISTING AND REMOVAL PLAN

	DESIGNED	CEE	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA Signature: _____ Date: _____ CHRISTOPHER M. ENGELMANN Lic. No. 43350		PREPARED BY	STREET ENGINEERING DIVISION	FOR THE CITY OF ST. PAUL, DEPARTMENT OF PUBLIC WORKS	PROJECT:	21-P-1458	STATE AID	N/A
	DRAWN	ATT			DRAWER:	12	CAD NAME:	PROJECTS/CURRENT/GRIGGS - SCHEFFER PHASE II/DWG			
	APPROVED	CME			DWG. NO.	1628	DATE:	9/29/2020	SHEET NO.	42 OF XX SHEETS	

GRIGGS/SCHEFFER PHASE II

120

