

### STORM SEWER

\* Bid Item  
\*\* For SW-545

For bedding and backfill purposes under Primary roads, use material complying with Article 4120.04 (Class A Crushed Stone) of the Standard Specifications for all bedding and backfill. Place and compact the material according to Article 2435.03, A and Article 2552.03, E (Class I materials).

INTAKES AND UTILITY ACCESSES						PIPES													
No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade	Bottom Well	Extension Length**	Notes	Line Number	Intake/Utility Access No.		Class 'D'	Pipe Diameter	Bid* Length	Design Length	Slope %	Flow Lines			Pipe Profile Sheet No.	Notes
								From	To						Inlet Elevation	Outlet Elevation	Other Elevation		
								Elev.	Elev.						FT				
I-101	52+88.32, 11.00	SW-402	849.5	844.5		Connect Ex. 24" Pipe Est. FL. 845.5	P-101	I-101	I-102		24	130.43	124.43	0.4	845.00	844.50			
I-102	51+60.00, 4.50	SW-507	849.25	843.902			P-102	I-102	I-104		30	49.89	43.89	0.4	844.40	844.23			
I-103	51+60.00, -44.50	SW-507	849.26	844.76			P-103	I-103	I-102		15	55	49	0.8	845.26	844.87			
I-104	51+53.26, 52.85	Mod SW-511	848.91	843.627		Use SW-604 Type 6 Grate	P-104	I-104	I-105		30	64.36	58.36	0.4	844.13	843.89			
I-105	1048+40.00, -24.50	SW-509	848.31	843.293			P-105	I-105	I-106		30	20.67	14.67	0.4	843.79	843.73			
I-106	1048+37.83, -7.83	SW-402	848.71	843.125			P-106	I-106	I-108		30	110.22	104.22	0.4	843.62	843.21			
I-107	1048+40.00, 24.50	SW-509	848.31	843.81			P-107	I-107	I-106		15	36.33	30.33	0.8	844.31	844.07			
I-108	1047+29.12, -7.83	SW-402	848.76	842.608			P-108	I-108	I-115		36	81.37	75.37	0.4	843.11	842.81			
I-109	1046+00, 37.00	SW-541	849.1	844.6			P-109	I-109	I-110		15	45.35	39.35	0.8	845.10	844.79			Cross Ex. Sanitary Est. Top - 840.0
I-110	1046+00, -7.93	SW-402	849.87	843.785		Connect Ex. 24" Pipe Est. FL. 845.5	P-110	I-110	I-112		24	92	86	0.8	844.29	843.60			
I-111	1046+00, -24.50	SW-507	849.48	844.98			P-111	I-111	I-110		15	20.57	14.57	0.8	845.48	845.36			
I-112	1046+90.00, -7.85	SW-402	848.59	842.856			P-112	I-112	I-108		24	40.62	34.62	0.5	843.36	843.18			
I-113	1046+91.87, -27.71	SW-509	848.2	843.7			P-113	I-113	I-112		15	23.2	17.2	0.8	844.20	844.06			
I-114	1046+90.00, 37.00	SW-541	847.82	843.32			P-114	I-114	I-112		15	45.27	39.27	0.8	843.82	843.51			
I-115	334+39.50, -26.50	SW-510	849.18	842.206			P-115	I-115	I-117		36	209.5	203.5	0.3	842.71	842.10			
I-116	334+60.00, 14.50	SW-507	849.35	844.85			P-116	I-116	I-115		15	50.91	44.91	0.8	845.35	844.99			
I-117	332+30.00, -26.50	SW-508	849.72	841.496			P-117	I-117	I-118		36	50.49	44.49	0.3	842.00	841.86			
I-118	331+81.51, -26.50	SW-508	849.54	841.262			P-118	I-118	I-120		36	72.81	66.81	0.3	841.76	841.56			Cross Ex. Sanitary Est. Top - 839.5
I-119	331+81.05, 14.50	SW-507	849.85	845.35			P-119	I-119	I-118		15	47	41	0.8	845.85	845.52			Cross Ex. Sanitary
I-120	331+ 8.70, -28.50	SW-402	849.2	841.012			P-120	I-120	I-124		36	135.7	129.7	0.2	841.51	841.25			
I-121	1330+42.24, -12.50	SW-402	849.3	844.8		Connect Ex. 12" Pipe Est. FL. 846.2	P-121	I-121	I-122		15	34.16	28.16	0.8	845.30	845.07			
I-122	1330+72.58, -20.50	SW-507	848.76	844.475			P-122	I-122	I-123		18	47	41	1	844.97	844.56			
I-123	1330+73.14, 20.50	SW-507	849.16	843.665			P-123	I-123	I-120		18	31.03	25.03	1	844.16	843.91			
I-124	329+75.00, -26.50	SW-508	848.84	840.702			P-124	I-124	I-126		36	176.79	170.79	0.2	841.20	840.86			
I-125	329+70.00, 14.50	SW-507	849.05	844.55			P-125	I-125	I-124		15	47.3	41.3	0.8	845.05	844.72			
I-126	328+00.21, -26.50	SW-508	848.09	840.311			P-126	I-126	I-128		36	60.71	54.71	0.2	840.81	840.70			
I-127	327+99.68, 14.50	SW-507	848.4	843.9			P-127	I-127	I-126		15	47	41	0.8	844.40	844.07			
I-128	327+41.50, -28.50	SW-402	847.75	840.121			P-128	I-128	I-132		42	143.5	137.5	0.2	840.62	840.35			
I-129	1326+91.22, -20.50	SW-507	847.76	843.26			P-129	I-129	I-130		15	32.68	26.68	0.8	843.76	843.55			Cross Ex. Sanitary Est. Top - 837.5
I-130	1326+91.24, 8.18	SW-402	848.03	842.947		Connect Ex. 15" Pipe Est. FL. 845.3	P-130	I-130	I-128		15	30.52	24.52	0.8	843.45	843.25			
I-131	1327+80.32, 22.45	SW-505	847.91	843.41			P-131	I-131	I-128		15	63.68	57.68	0.8	843.91	843.45			
I-132	326+00.00, -26.50	Mod SW-508	846.51	839.796			P-132	I-132	I-134		42	183.13	177.13	0.2	840.30	839.94			
I-133	326+00.00, 14.50	SW-541	846.82	842.32		With SW-542 Extension Unit	P-133	I-133	I-132		15	43.42	37.42	0.8	842.82	842.52			
I-134	324+18.87, -26.50	Mod SW-508	844.75	839.392			P-134	I-134	I-136		52"x32"	60.15	54.15	0.2	839.89	839.78			Cross Ex. Sanitary Est. Top - 839.4
I-135	324+18.55, 14.50	SW-541	845.06	840.56		With SW-542 Extension Unit	P-135	I-135	I-134		15	43.42	37.42	0.8	841.06	840.76			Cross Ex. Sanitary Est. Top - 838.8
I-136	323+60.35, -28.13	Mod SW-402	844.96	838.5			P-136	I-136	I-137		59"x36"	50.6044	44.6044	0.25	839.00	838.89			
I-137	323+12.00, -26.50	Mod SW-541	845.75	838.338			P-137	I-137	I-138		48	163	157	0.25	838.84	838.45			
I-138	321+50.00, -26.50	Mod SW-541	851.42	837.896			P-138	I-138	I-140		48	41.4164	35.4164	0.25	838.40	838.31			
I-139	323+17.89, 14.50	SW-507	845.91	840.91			P-139	I-139	I-137		15	40.9167	34.9167	0.8	841.41	841.13			
I-140	321+50.00, 14.50	Mod SW-508	851.73	837.757			P-140	I-140	I-141		48	34.6849	28.6849	0.25	838.26	838.19			
I-141	321+18.98, 32.03	SW-403	851	837.636			P-141	I-141	I-142		48	121.49	115.49	0.25	838.14	837.85			
I-142	321+09.33, 152.62	Mod SW-402	847.29	837.297		Use SW-604 Type 6 Grate	P-142	I-142	I-143		48	135.59	129.59	0.25	837.80	837.47			
I-143	321+05.47, 286.16	Mod SW-402	847.65	836.973															

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INTAKES AND UTILITY ACCESSES							PIPES															
							Design Length, Slope, and Flowlines are calculated from inside wall to inside wall along CL of pipe. An additional 6 ft length is added to Design Length to account for estimated length to center of structures.															
No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade	Bottom Well	Extension Length**	Notes	Line Number	Intake/Utility Access No.		Class 'D'	Pipe Diameter	Bid* Length	Design Length	Slope %	Flow Lines			Pipe Profile Sheet No.	Notes			
								From	To						IN	FT	FT			Inlet Elevation	Outlet Elevation	Other Elevation
I-200	1050+55.55, -24.50	SW-507	848.75	843.75			P-200	I-200	I-201		18	19.04	13.04	0.80	844.25	844.15						
I-201	1050+58.23, -9.47	SW-402	849.11	843.55			P-201	I-201	I-203		30	64.06	58.06	0.40	844.05	843.81						
I-202	1050+61.55, 24.50	SW-507	848.75	844.25			P-202	I-202	I-201		15	38.00	32.00	0.80	844.75	844.49						
I-203	1051+20.29, -8.48	SW-402	849.40	843.00			P-203	I-203	I-205		36	64.84	58.84	0.10	843.50	843.44			*Ex Pipe FL. Estimated From Survey			
I-204	1051+64.04, -8.48	SW-402	849.52	843.04		Place on Existing 30" Pipe (Est. FL. 843.5)	P-204	I-204	I-203		30	45.76	39.76	0.10	843.54	843.50			*Ex Pipe FL. Estimated From Survey			
I-205	1236+47.17, -8.81	Mod-SW-402	848.68	842.94		Place on Existing 42" Pipe (Est. FL. 843.5)													*Extend Ex. 12" Pipe Est. FL. 844.51			
I-206	1236+69.00, 15.90	SW-402	849.90	843.50			P-206	I-206	I-207		15	56.34	50.34	0.80	844.00	843.60						
I-207	1236+45.00, -0.50	SW-509	848.40	843.00			P-207	I-207	I-205		15	9.31	3.31	1.00	843.50	843.46			Cross Ex. Sanitary Est. Top - 841.3			
I-208	236+10.00, 14.49	SW-507	848.72	844.22			P-208	I-208	I-209		15	35.00	29.00	0.80	844.72	844.49						
I-209	236+10.00, -14.50	SW-507	848.72	843.89			P-209	I-209	I-210		15	77.34	71.34	0.50	844.39	844.03						
I-210	235+30.00, -14.52	SW-509	848.44	843.43			P-210	I-210	I-212		18	77.35	71.35	0.40	843.93	843.65						
I-211	235+32.11, 14.49	SW-509	848.44	843.94			P-211	I-211	I-210		15	35.00	29.00	0.80	844.44	844.21						
I-212	234+50.00, -14.51	SW-507	848.72	843.05			P-212	I-212	I-213		18	25.10	19.10	0.50	843.55	843.45						
I-213	234+50.00, 6.57	Mod SW-402	848.88	842.63		Place on Existing 42" Pipe (Est. FL. 843.1)																
I-214	1235+05.00, 14.50	SW-509	847.98	843.48			P-214	I-214	I-215		15	29.56	23.56	0.80	843.98	843.79						
I-215	1235+07.16, -11.08	Mod SW-402	849.06	842.69		Place on Existing 42" Pipe (Est. FL. 843.1)																
I-216	1334+15.00, -12.22	Mod SW-402	849.29	843.79		*Connect Existing 18" Pipe Est. FL 845.33	P-216	I-216	I-217		18	32.49	26.49	0.80	844.29	844.08						
I-217	1334+45.42, -20.50	SW-509	848.53	843.48			P-217	I-217	I-219		18	42.37	36.37	0.80	843.98	843.69						
I-218	1334+45.76, 20.50	SW-509	848.53	844.03			P-218	I-218	I-217		15	47.00	41.00	0.80	844.53	844.20						
I-219	233+29.67, -1.43	Mod SW-402	849.28	842.46		on Existing 42"/Twin 30" Pipes (Est. FL 842.6)																
I-220	1335+75.00, -14.88	SW-402	849.38	843.88		*Connect Existing 15" Pipe Est. FL 845.00	P-220	I-220	I-221		15	26.92	20.92	0.80	844.38	844.21						
I-221	1335+49.50, -20.50	SW-509	848.38	843.46			P-221	I-221	I-219		18	60.51	54.51	0.80	843.96	843.53						
I-222	1335+50.00, 20.50	SW-509	848.33	843.83			P-222	I-222	I-221		15	47.00	41.00	0.80	844.33	844.00						
I-223	231+70.00, -14.50	SW-507	848.32	843.32			P-223	I-223	I-224		15	15.07	9.07	0.80	843.82	843.75						
I-224	231+70.00, -1.43	Mod SW-402	848.57	841.99		ce on Existing Twin 30" Pipes (Est. FL 842.6)																
I-225	231+70.00, 26.50	SW-507	848.00	843.00			P-225	I-225	I-224		15	29.93	23.93	0.80	843.50	843.31						
I-227	1330+15.00, 8.32	Mod SW-402	848.00	842.50		*Connect Existing 21" Pipe Est. FL 844.45	P-227	I-227	I-228		24	51.53	45.53	1.50	843.00	842.32						
I-228	1330+64.27, 20.50	SW-509	846.63	841.67			P-228	I-228	I-236		24	43.56	37.56	0.50	842.17	841.98						
I-229	229+84.59, -14.50	SW-507	847.90	842.50			P-229	I-229	I-230		15	39.31	33.31	0.80	843.00	842.73						
I-230	1330+64.12, -20.50	SW-509	846.63	842.13			P-230	I-230	I-228		15	47.00	41.00	0.80	842.63	842.31						
I-232	1332+20.00, 8.40	SW-402	847.36	842.31			P-232	I-232	I-233		15	61.53	55.53	0.80	842.81	842.37						
I-233	1331+62.28, 20.50	SW-507	846.26	841.77		*Connect Existing 15" Pipe Est. FL 844.80	P-233	I-233	I-236		18	57.42	51.42	0.50	842.27	842.01						
I-234	229+84.14, 26.50	SW-507	847.58	842.33			P-234	I-234	I-235		15	39.79	33.79	0.80	842.83	842.56						
I-235	1331+62.50, -20.50	SW-507	846.26	841.96			P-235	I-235	I-233		15	47.00	41.00	0.50	842.46	842.25						
I-236	228+28.35, -1.38	Mod SW-402	846.53	841.37		ce on Existing Twin 30" Pipes (Est. FL 841.3)																
I-237	228+10.00, -1.38	Mod SW-402	846.35	839.15		Place on Existing 30" Pipe (Est. FL 841.14)	P-237A,B	I-237	I-238		30	114.00	108.00	0.30	839.65	839.33						
I-238	226+98.00, -1.38	Mod SW-402	844.28	838.78			P-238A,B	I-238	I-240		37"x23"	170.00	164.00	0.25	839.28	838.87			Cross Ex. Sanitary Est. Top - 838.8			
I-239	226+98.00, -14.50	SW-541	844.09	839.59		SW-542 Extension	P-239	I-239	I-238		15	11.03	5.03	0.80	840.09	840.05						
I-240	225+30.00, -0.26	Mod SW-402	843.89	838.32			P-240A,B	I-240	I-246		37"x23"	82.26	76.26	0.25	838.82	838.63						
I-241	226+05.38, -14.50	SW-509	843.23	839.13			P-241	I-241	I-242		15	45.41	39.41	0.50	839.63	839.43						
I-242	1326+74.84, -20.50	SW-545	842.93	838.83	12		P-242	I-242	I-243		15	47.00	41.00	0.50	839.33	839.13			Cross Ex. Sanitary Est. Top - 838.5			
I-243	1326+74.66, 20.50	SW-545	842.97	838.58	12		P-243	I-243	I-244		18	35.84	29.84	0.40	839.08	838.96						
I-244	225+30.11, -16.50	SW-402	843.65	838.41			P-244	I-244	I-240		18	15.74	9.74	0.40	838.91	838.87						
I-245	225+00.00, -14.50	SW-507	844.13	838.73			P-245	I-245	I-244		15	32.10	26.10	0.80	839.23	839.02						
I-246	224+50.00, 6.00	Mod SW-402	845.42	838.08			P-246	I-246	I-247		48	39.12	33.12	0.25	838.58	838.49						
I-247	224+12.88, 6.31	SW-403	846.64	837.90		Place on Existing 48" Pipe (Est. FL 838.4)																
I-248	223+50.00, -14.50	SW-507	848.79	843.79			P-248	I-248	I-250		15	27.83	21.83	0.80	844.29	844.12						
I-249	223+50.00, 26.50	SW-507	848.48	843.48			P-249	I-249	I-250		15	19.33	13.33	0.80	843.98	843.87						
I-250	223+48.38, 10.27	SW-403	848.87	837.80		Place on Existing 48" Pipe (Est. FL 838.30)																
I-251	223+24.34, 11.74	SW-403	850.00	837.70		Place on Existing 48" Pipe (Est. FL 838.20)																
I-254	227+15.00, 26.50	SW-545	844.09	839.59	12		P-254	I-254	I-238		15	34.91	28.91	0.80	840.09	839.86						
I-256	226+09.47, 26.50	SW-509	842.92	838.82			P-256	I-256	I-257		15	79.06	73.06	0.40	839.32	839.03			Cross Ex. Sanitary Est. Top - 838.1			
I-257	225+30.40, 28.50	SW-402	843.41	838.48																		

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INTAKES AND UTILITY ACCESSES						PIPES													
No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade	Bottom Well	Extension Length**	Notes	Line Number	Intake/Utility Access No.		Class 'D'	Pipe Diameter	Bid* Length	Design Length	Slope %	Flow Lines			Pipe Profile Sheet No.	Notes
								From	To						Inlet Elevation	Outlet Elevation	Other Elevation		
			Elev.	Elev.	FT			IN	FT		FT								

I-257	225+30.40, 28.50	SW-402	843.41	838.48			P-257	I-257	I-240		18	28.26	22.26	0.40	838.98	838.89		
I-258	225+7.65, 34.29	SW-511	843.50	839.00			P-258	I-258	I-259		15	14.19	8.19	0.80	839.50	839.43		
I-259	225+00.00, 26.50	SW-507	843.82	838.83			P-259	I-259	I-257		15	32.40	26.40	0.80	839.33	839.12		

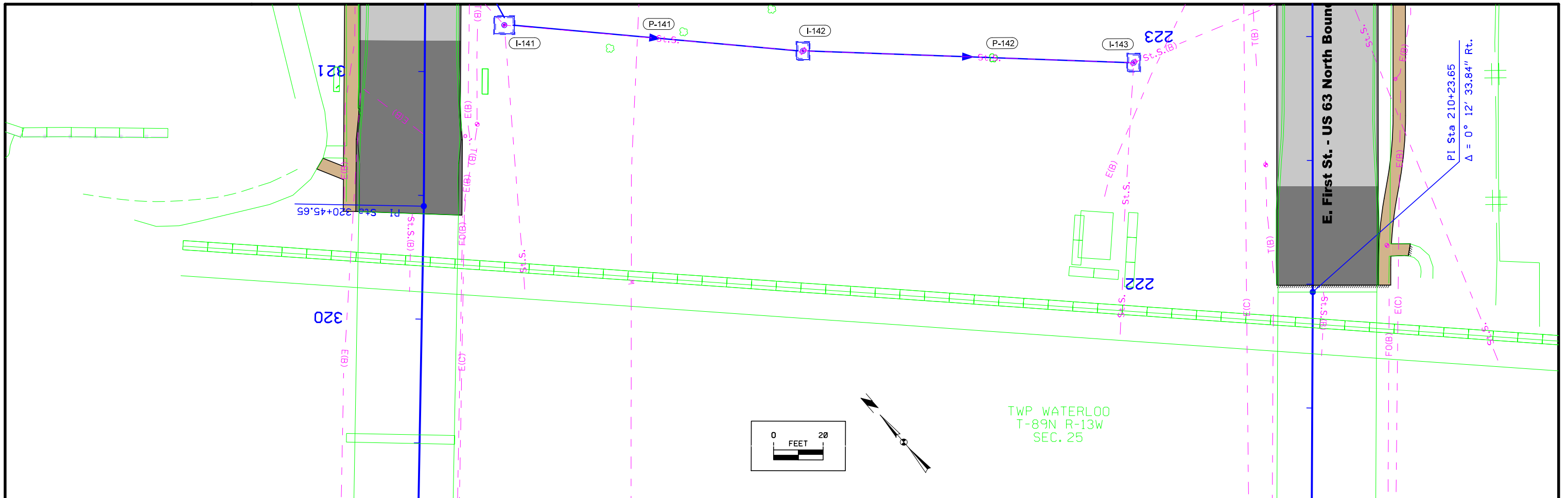


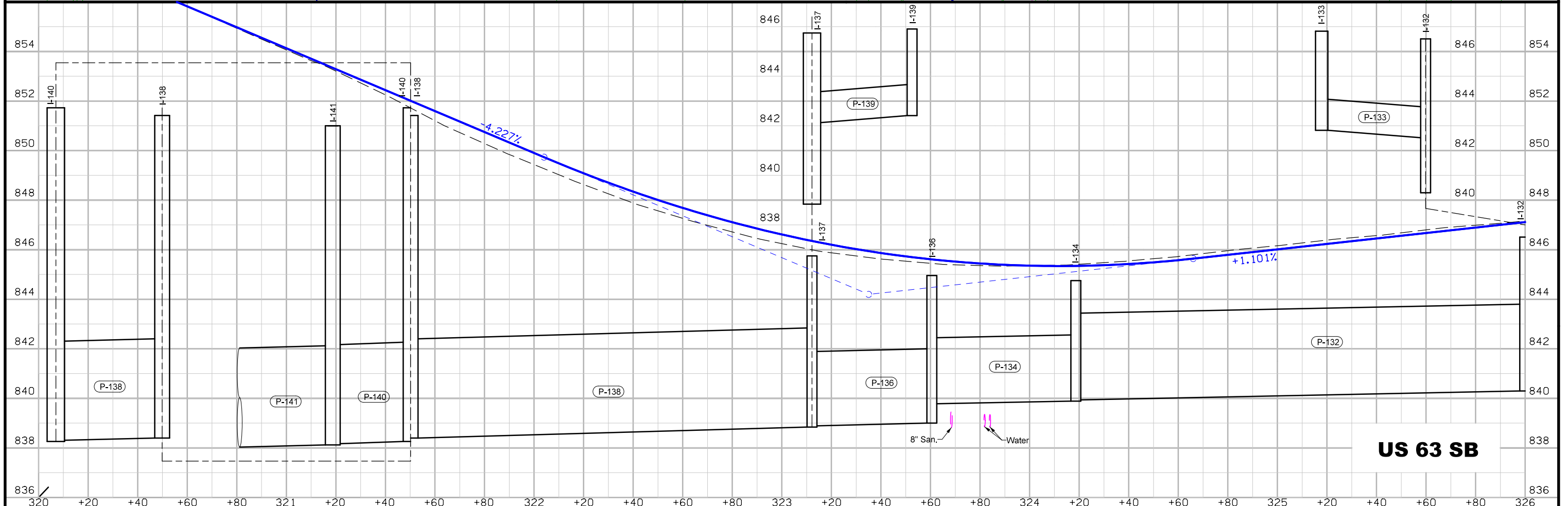
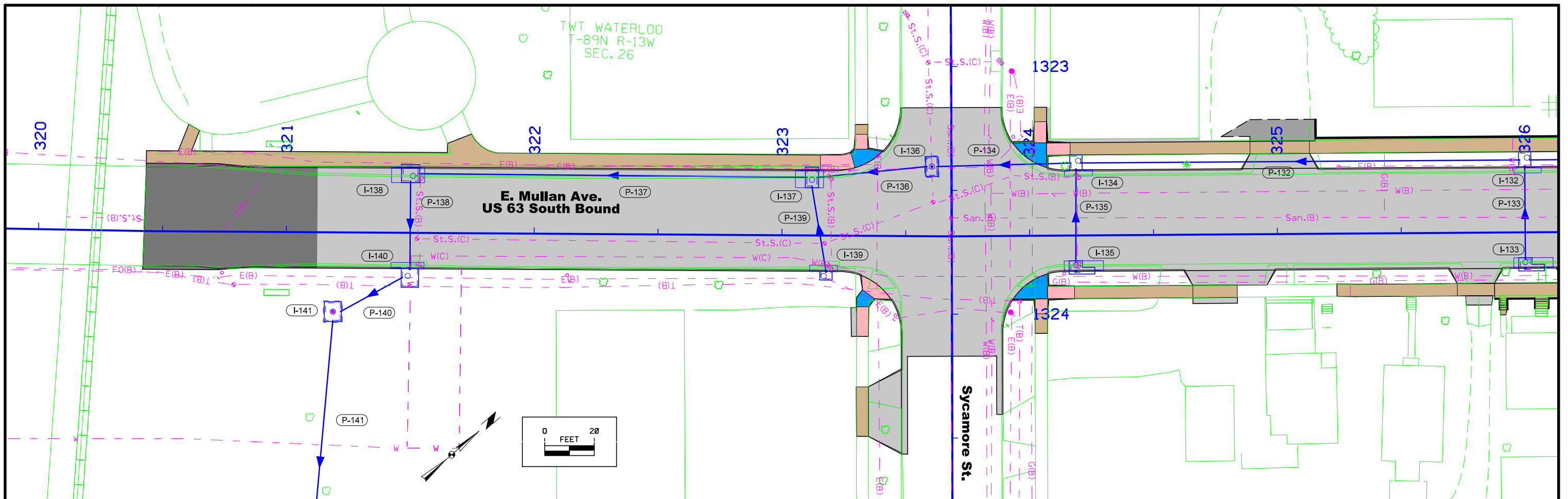
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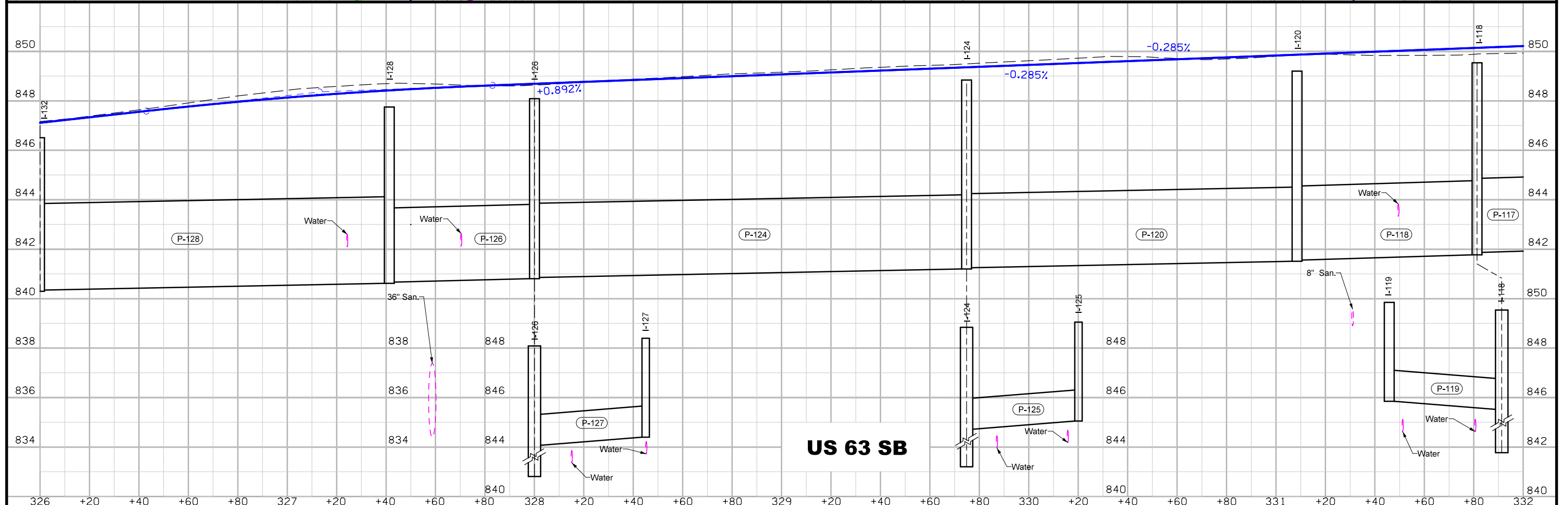
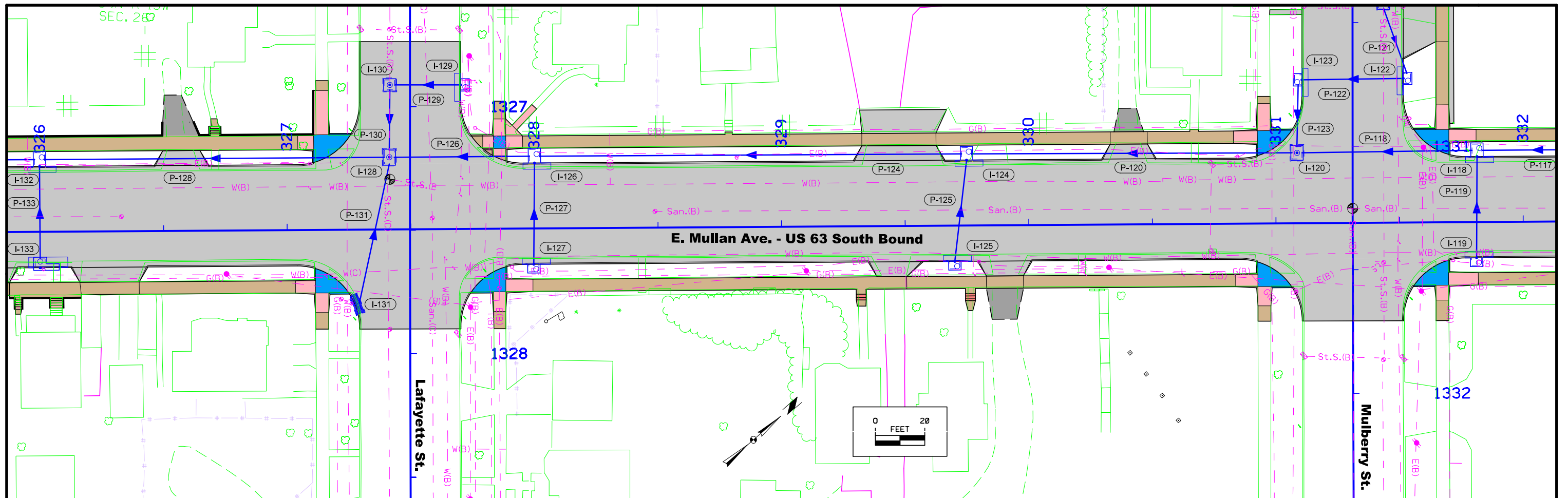
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For bedding and backfill purposes under Primary roads, use material complying with Article 4120.04 (Class A Crushed Stone) of the Standard Specifications for all bedding and backfill. Place and compact the material according to Article 2435.03, A and Article 2552.03, E (Class I materials).

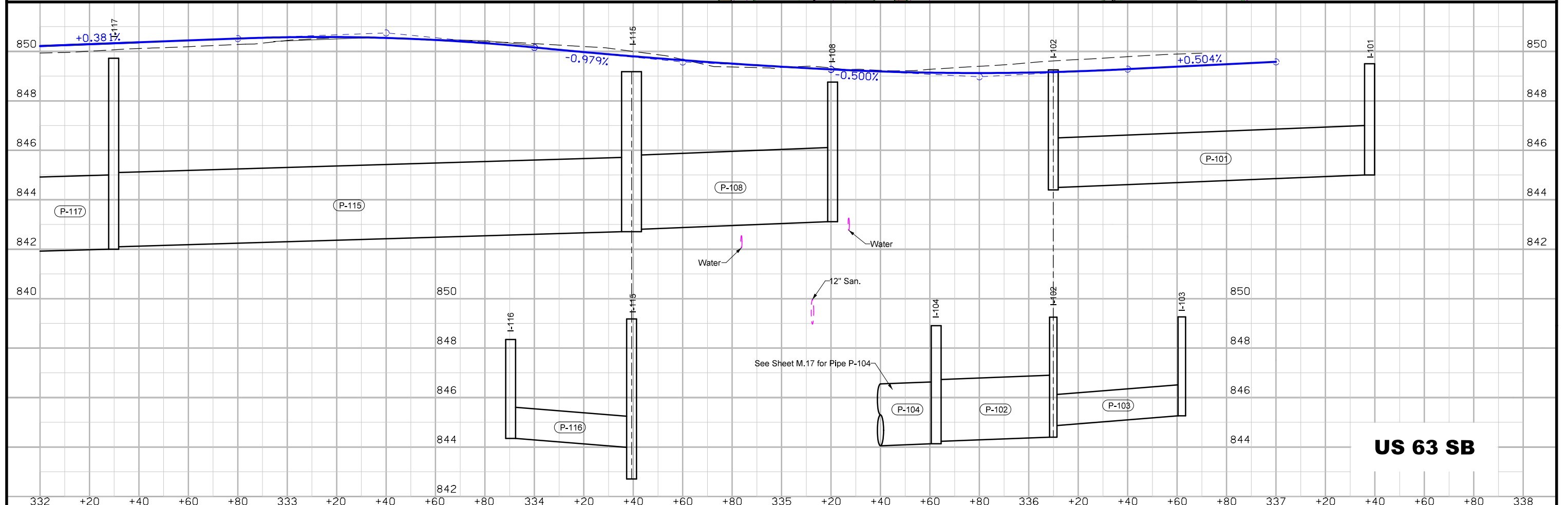
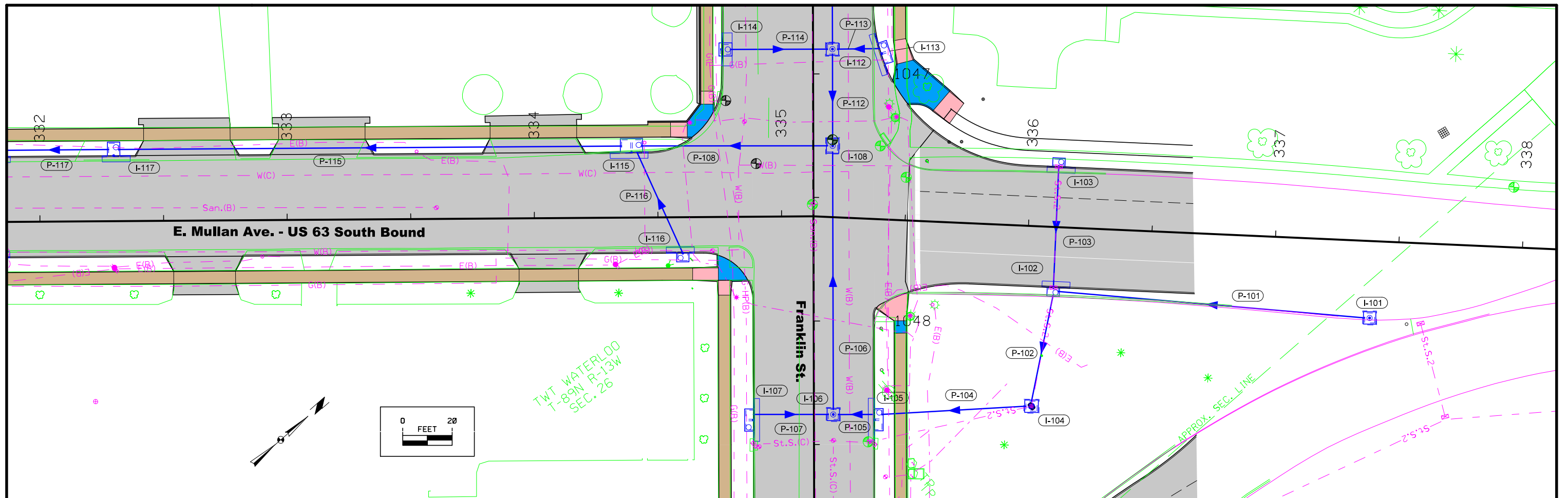
INTAKES AND UTILITY ACCESSES						PIPES													
No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade	Bottom Well	Extension Length**	Notes	Line Number	Intake/Utility Access No.		Class 'D'	Pipe Diameter	Bid* Length	Design Length	Slope %	Flow Lines			Pipe Profile Sheet No.	Notes
			Elev.	Elev.	FT			IN	FT		FT	Inlet Elevation	Outlet Elevation		Other Elevation				
			From	To															
I-423	310+90.00, -38.50	SW-545	845.97	841.47	12		P-423	I-423	I-339		15	25.67	19.67	1.00	841.97	841.77			
I-501	3645891.94, E=5232102	SW-402	848.00	842.85		Place On Ex. 36" Pipe Est. FL. 843.35	P-501	Apron	I-501		36	12.00	6.00	1.00	844.25	844.31	844.39		36" RCP Apron FL EL. 844.39
I-502	3645974.52, E=5232169	SW-511	846.00	843.00		Connect Existing 15" Pipe Est. FL. 843.50													
I-503	3646142.23, E=5232255	SW-402	843.00	839.00		Connect Existing 15" Pipe Est. FL. 840.60	P-503	I-503	I-504		15	42.00	36.00	0.40	839.50	839.36			
I-504	3646126.42, E=5232292	SW-511	841.50	838.86			P-504	I-504	Exist		15	74.90	68.90	0.40	839.36	839.08			Connect to Ex. Inake



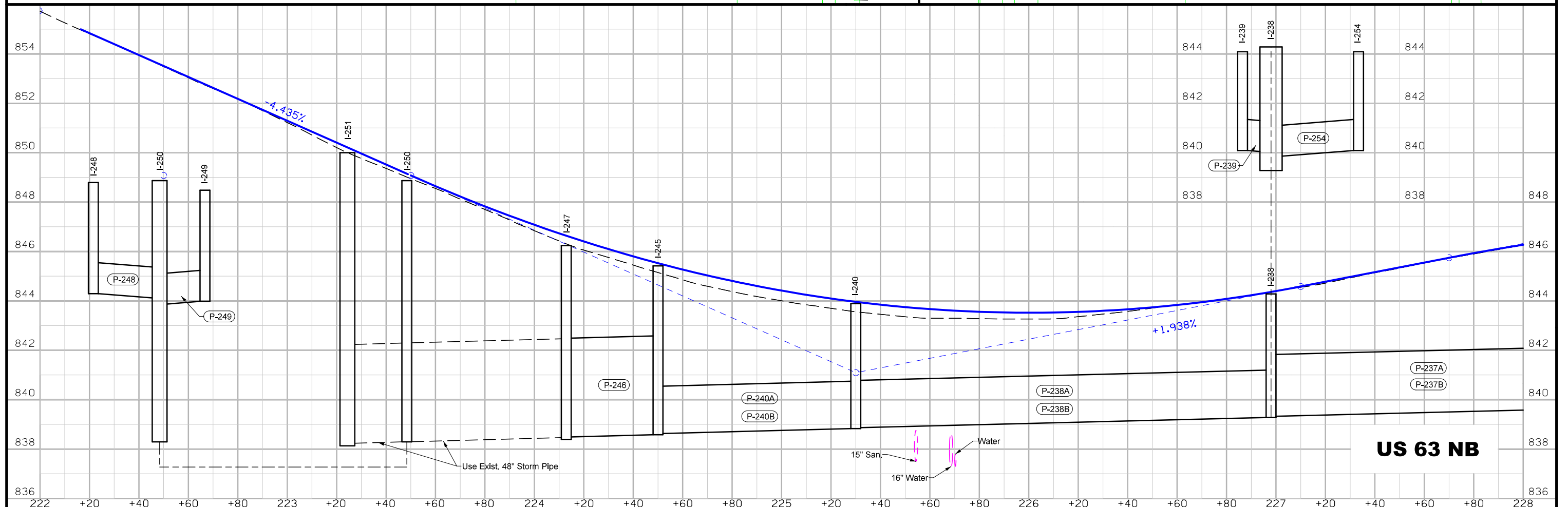
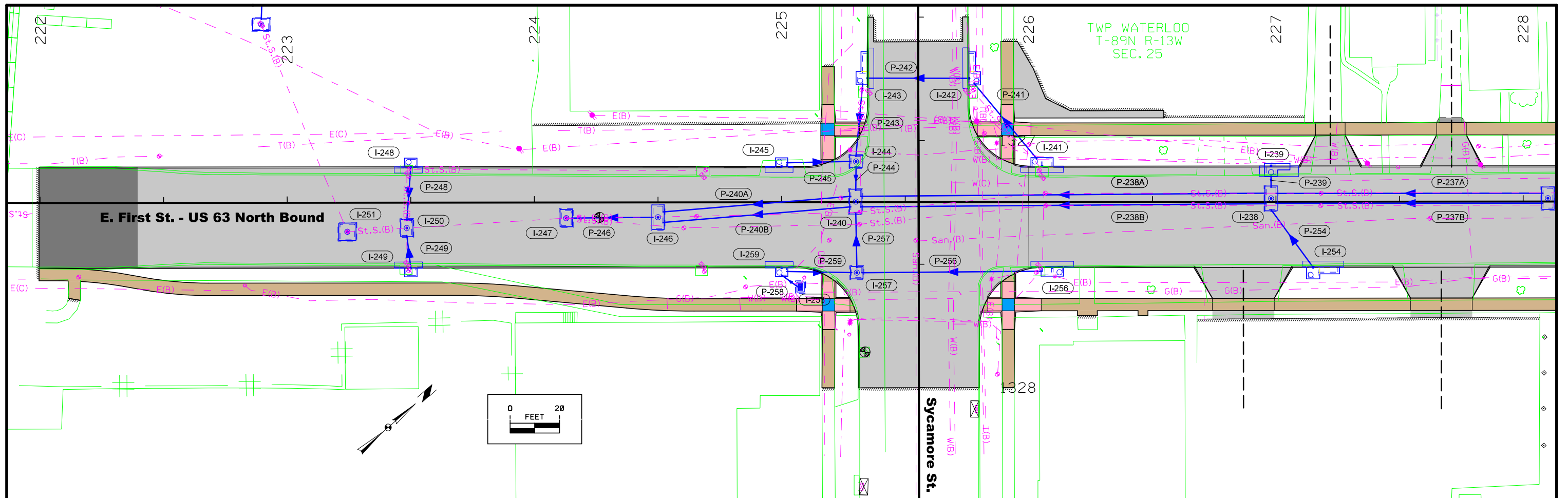


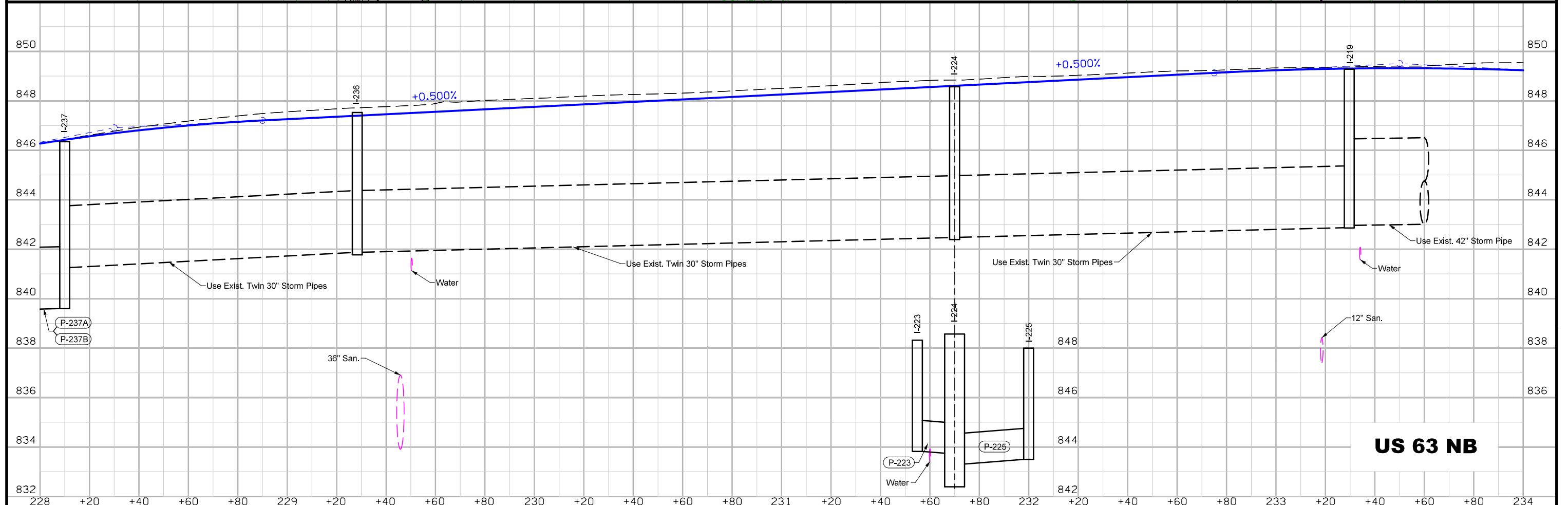
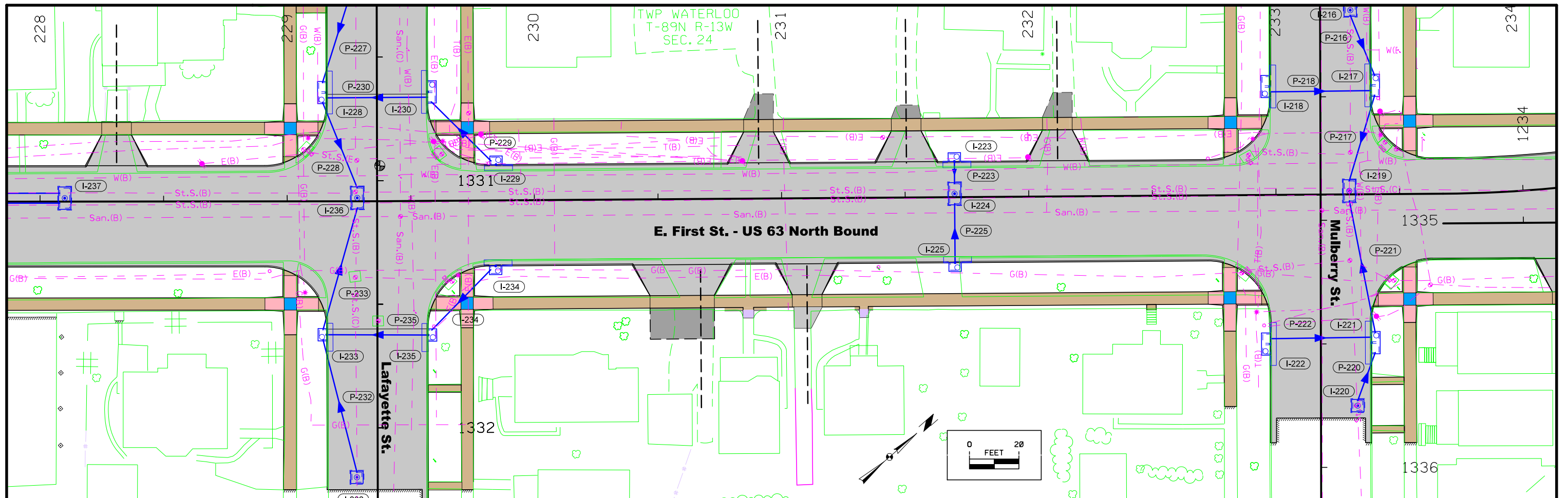


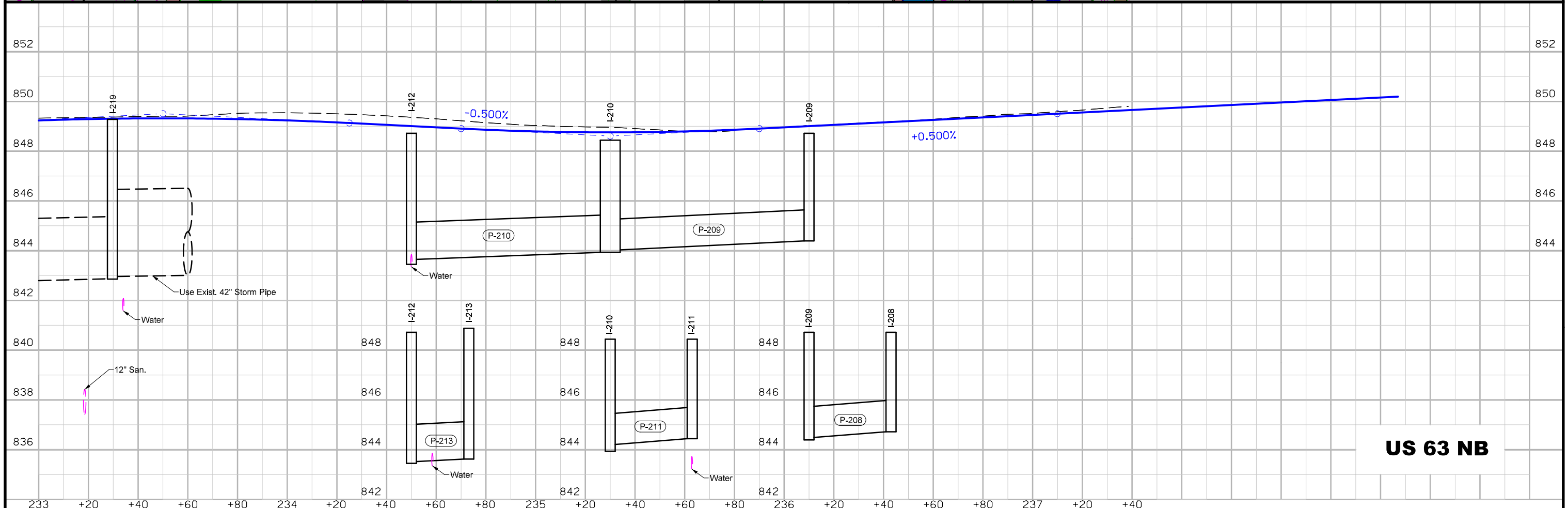
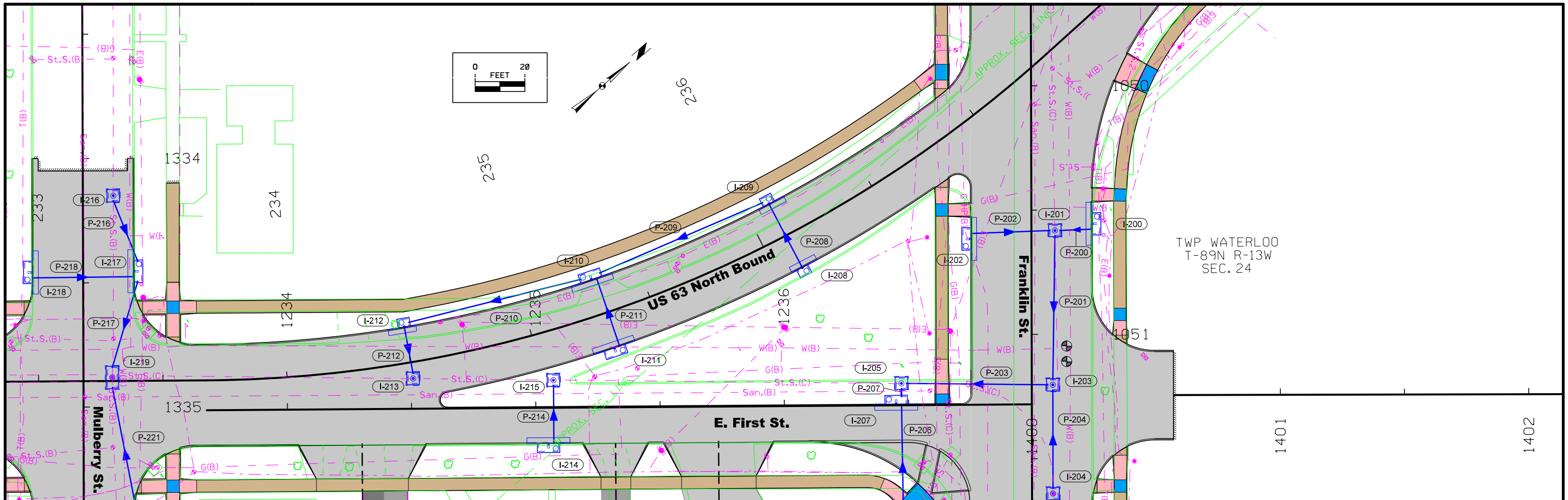


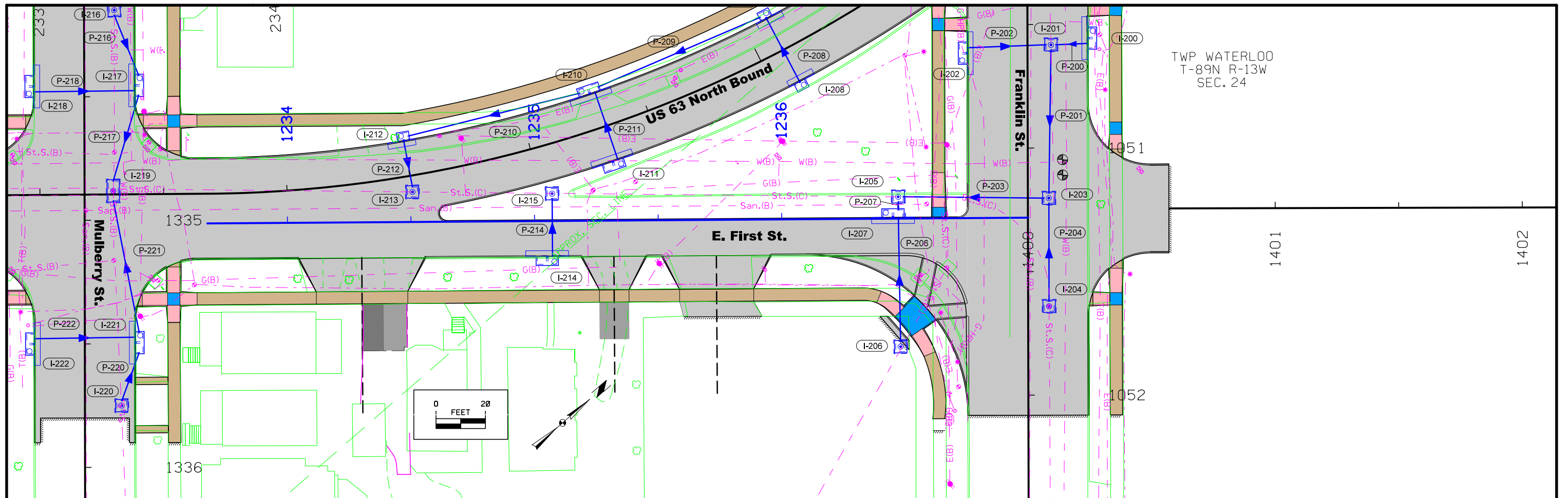


**US 63 SB**

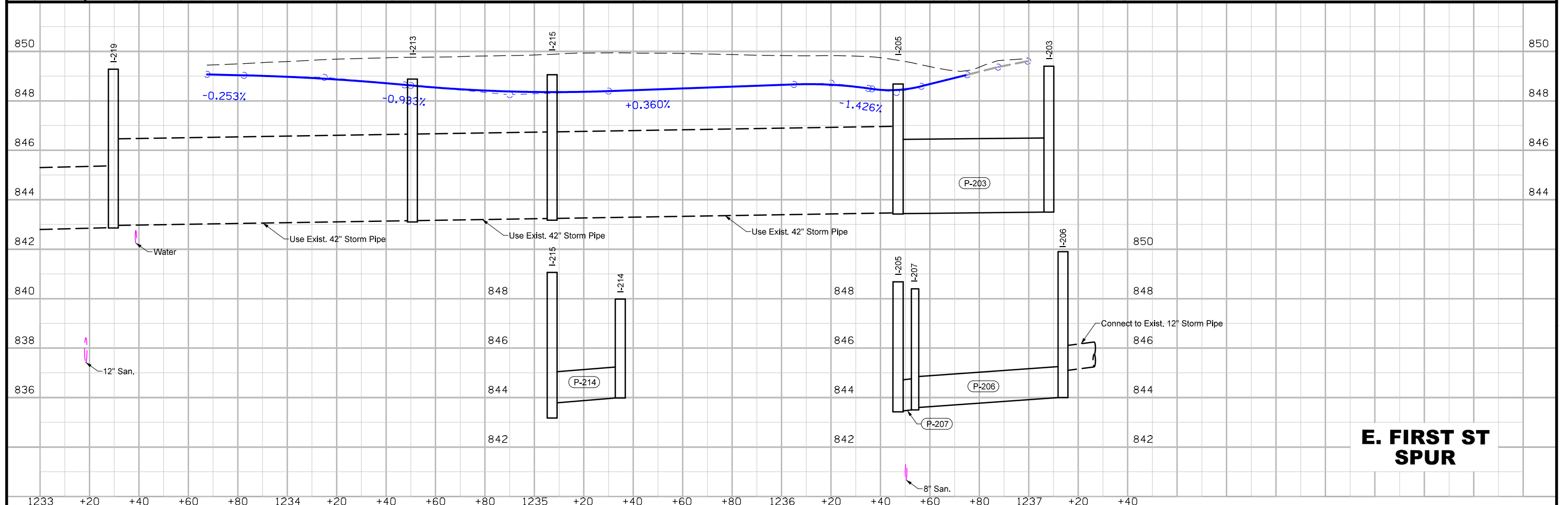
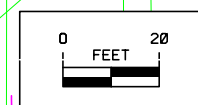






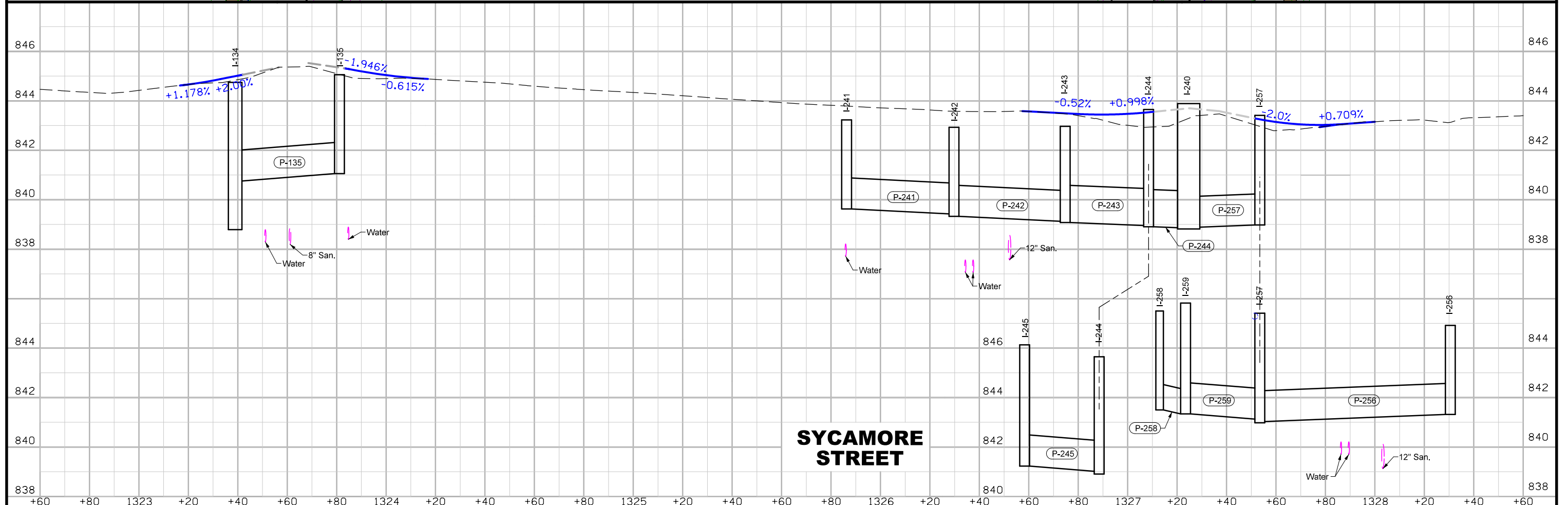
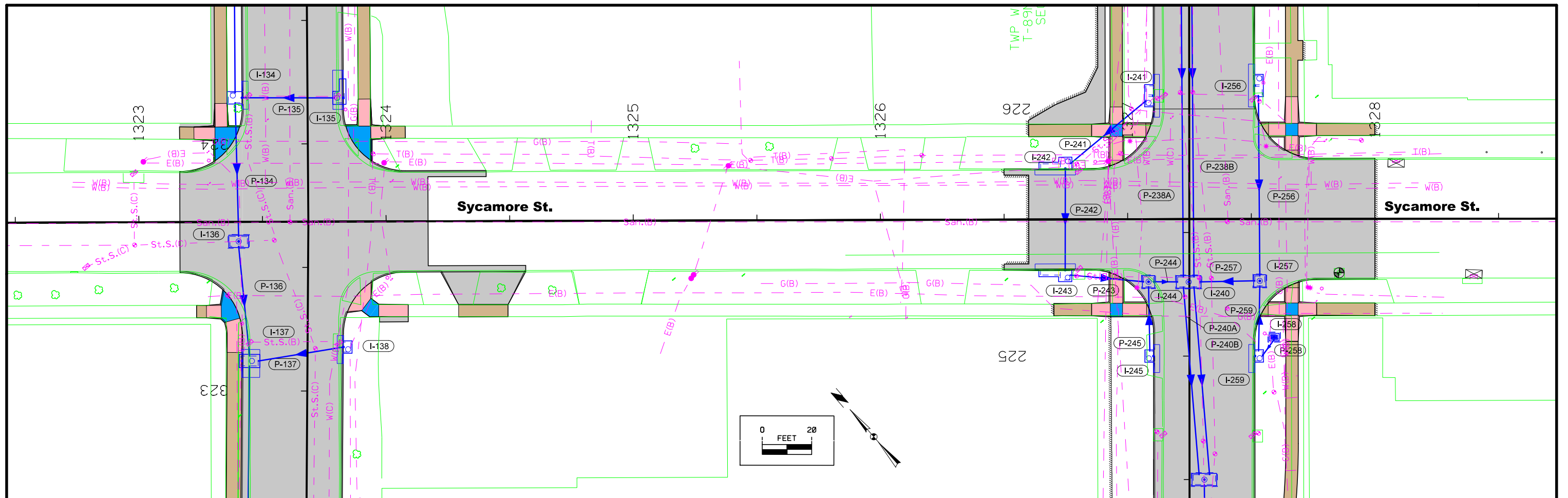


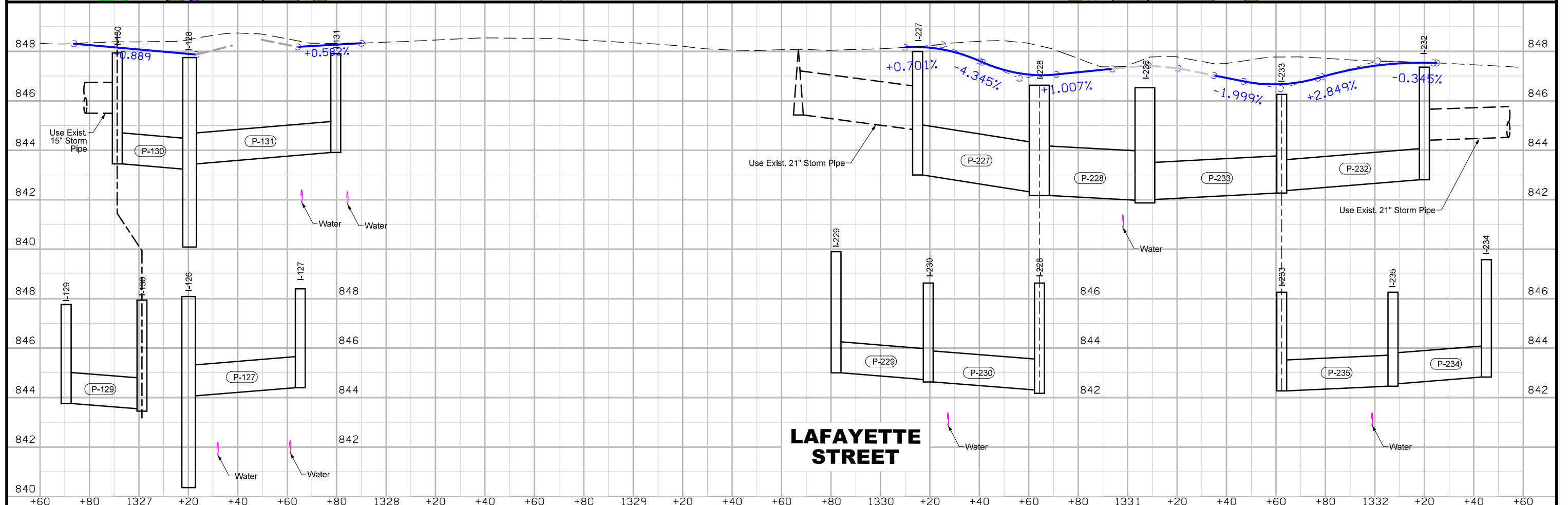
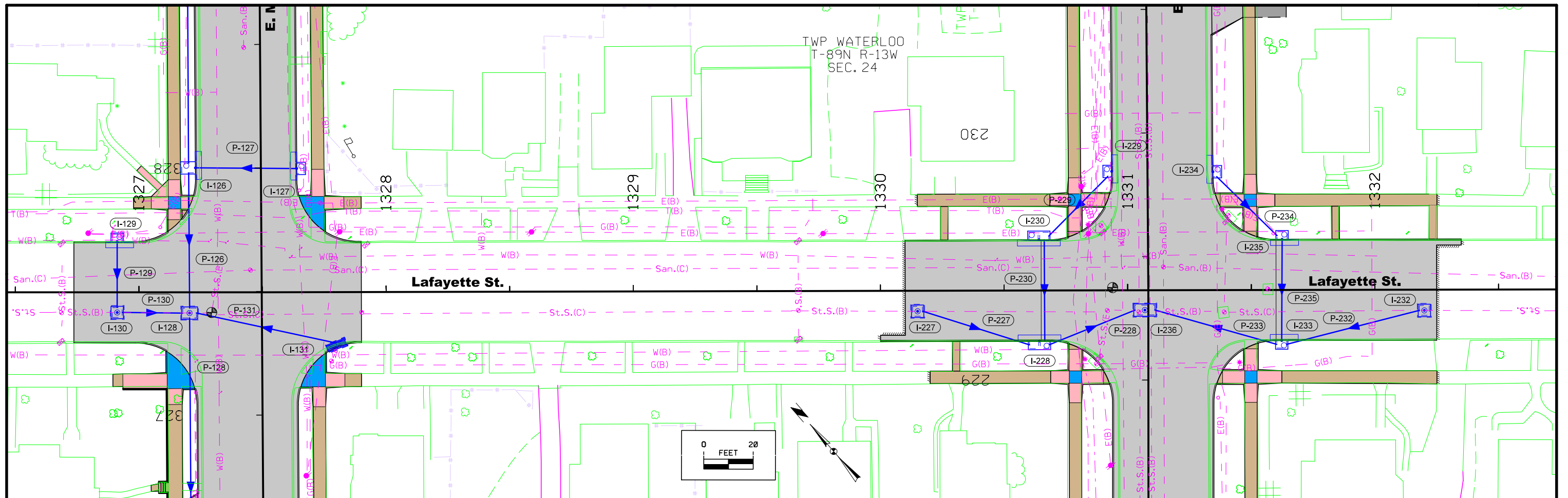
TWP WATERLOO  
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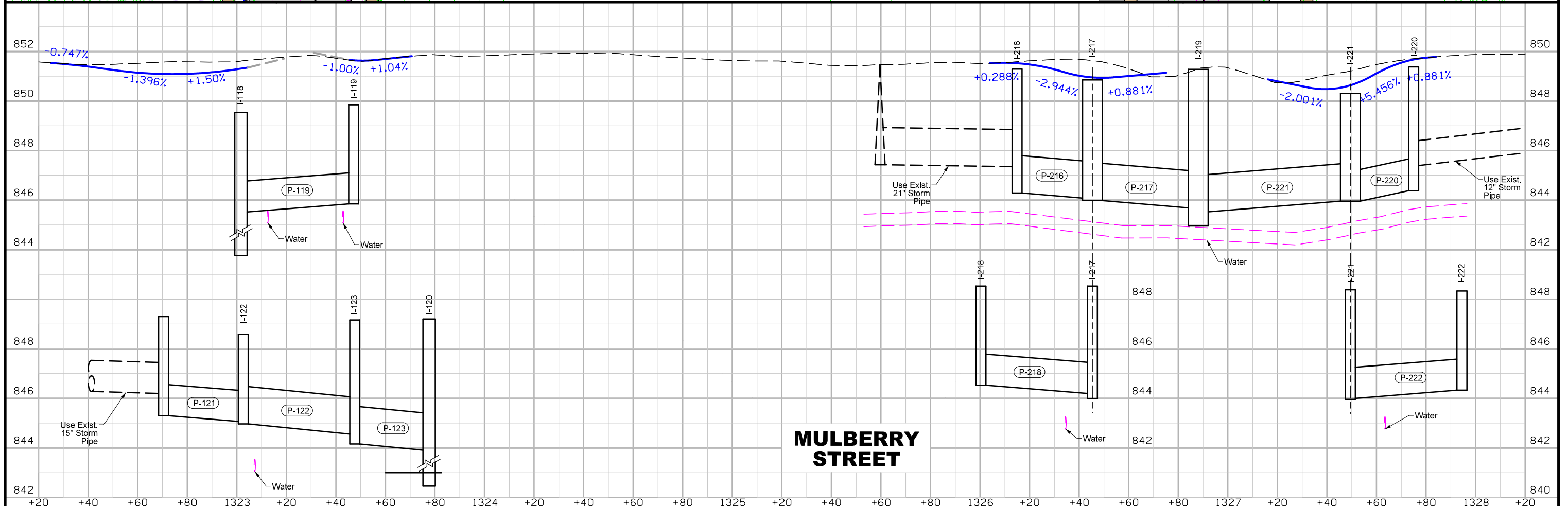
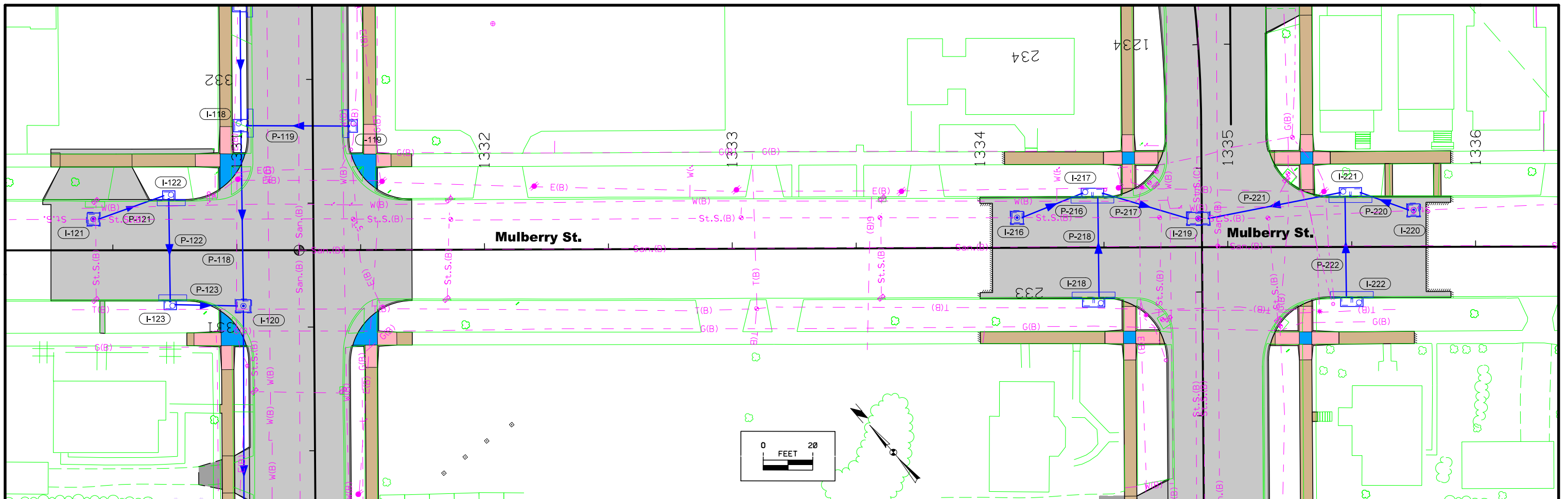


**E. FIRST ST  
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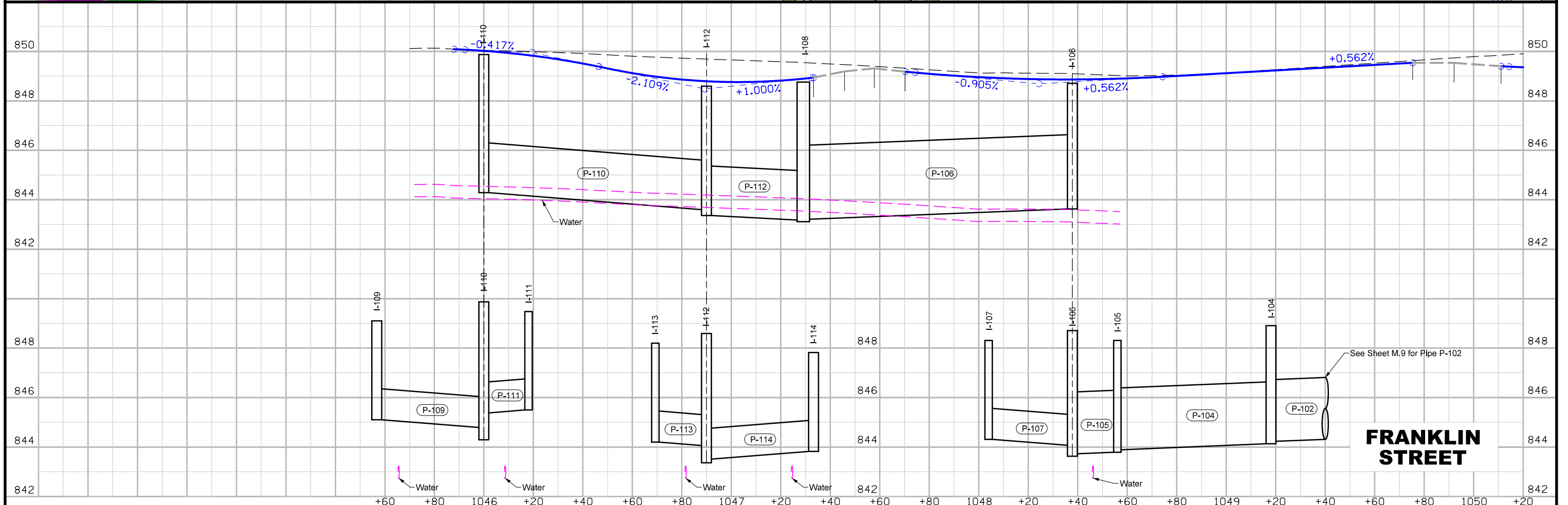
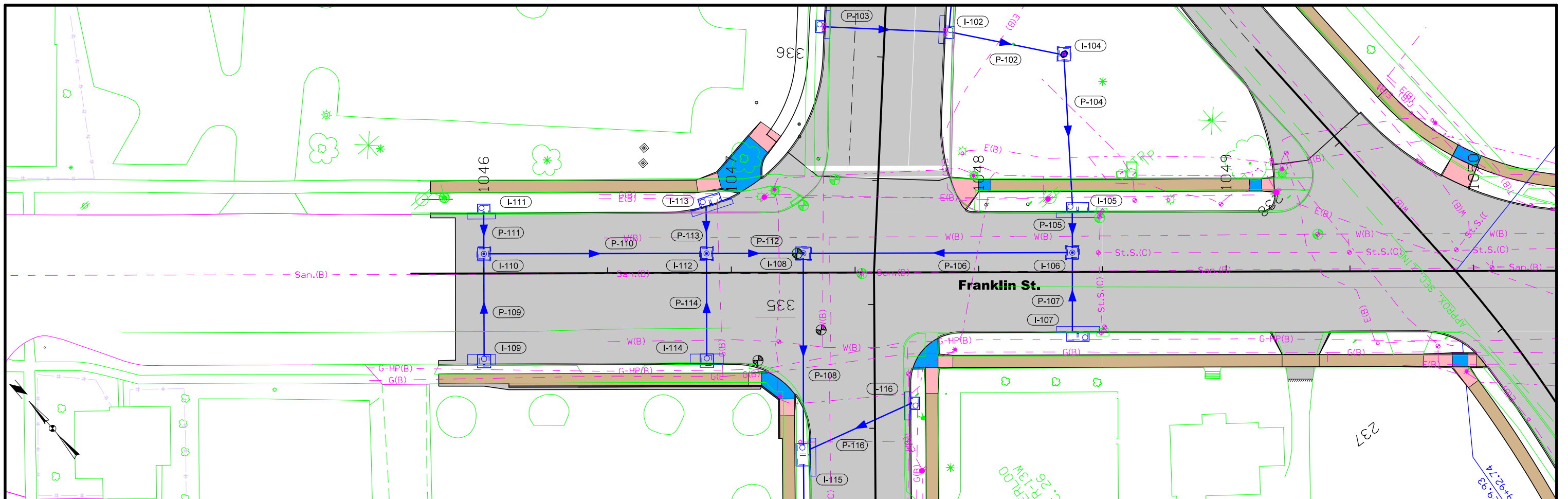




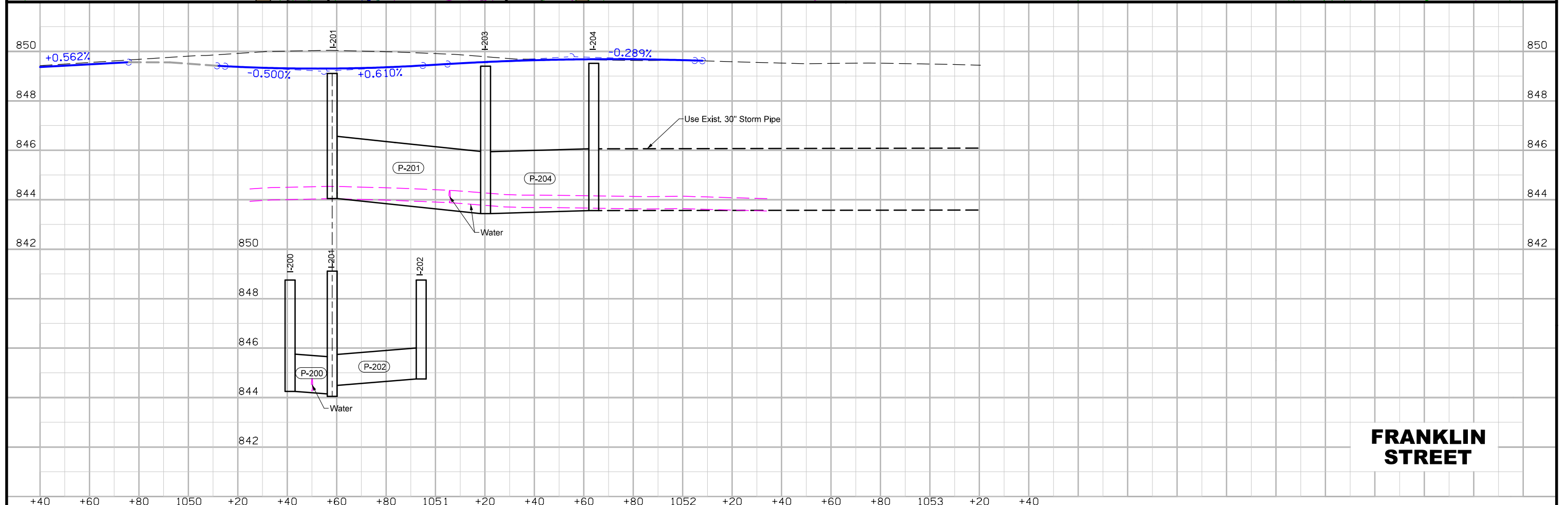
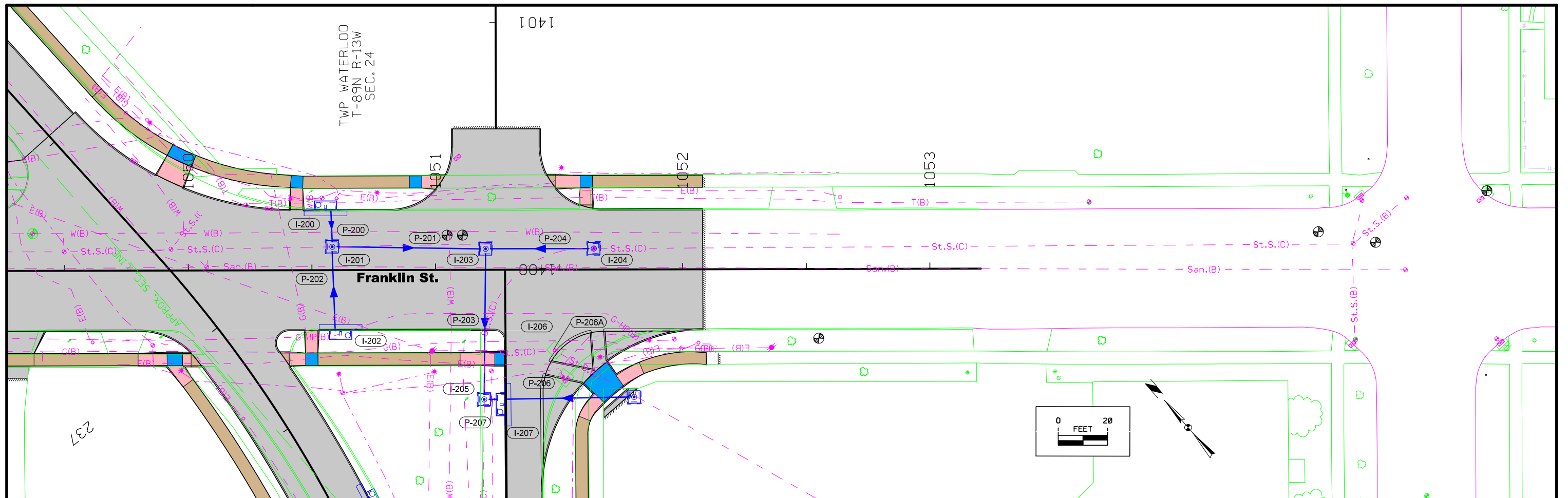




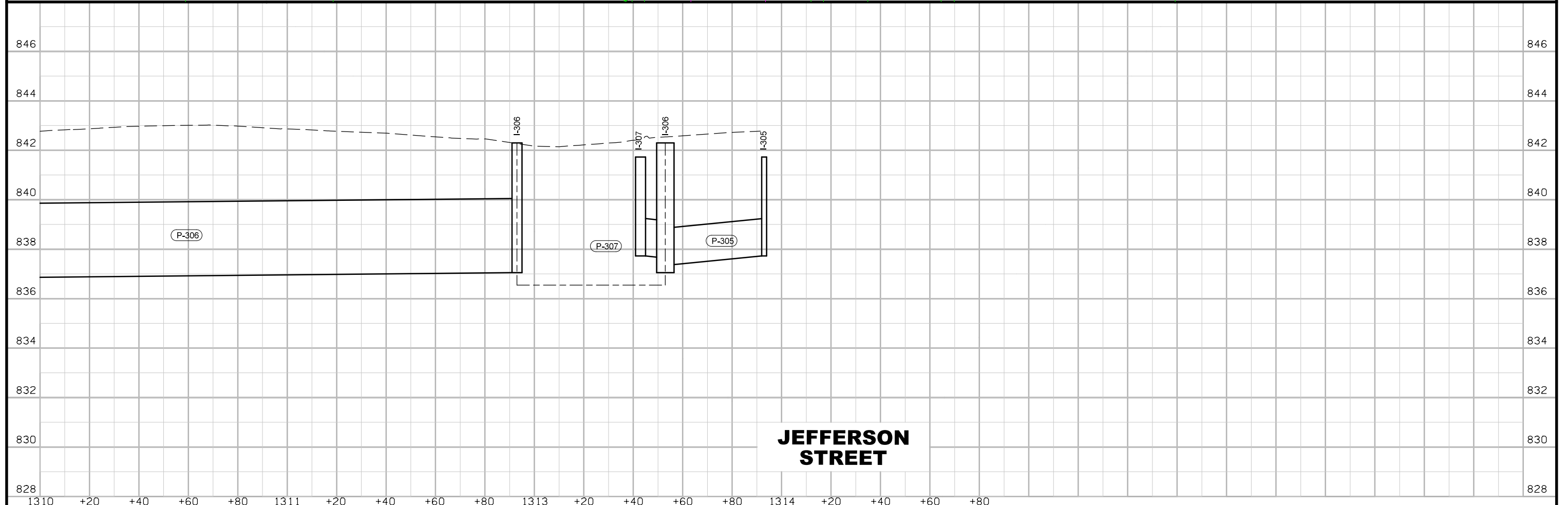
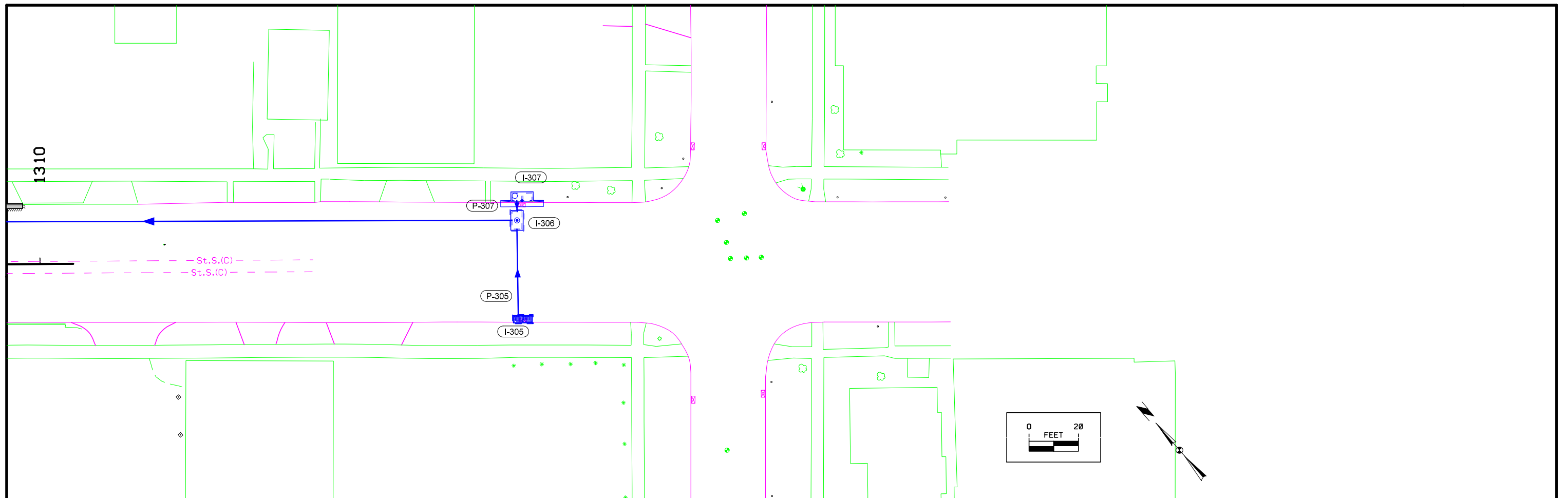




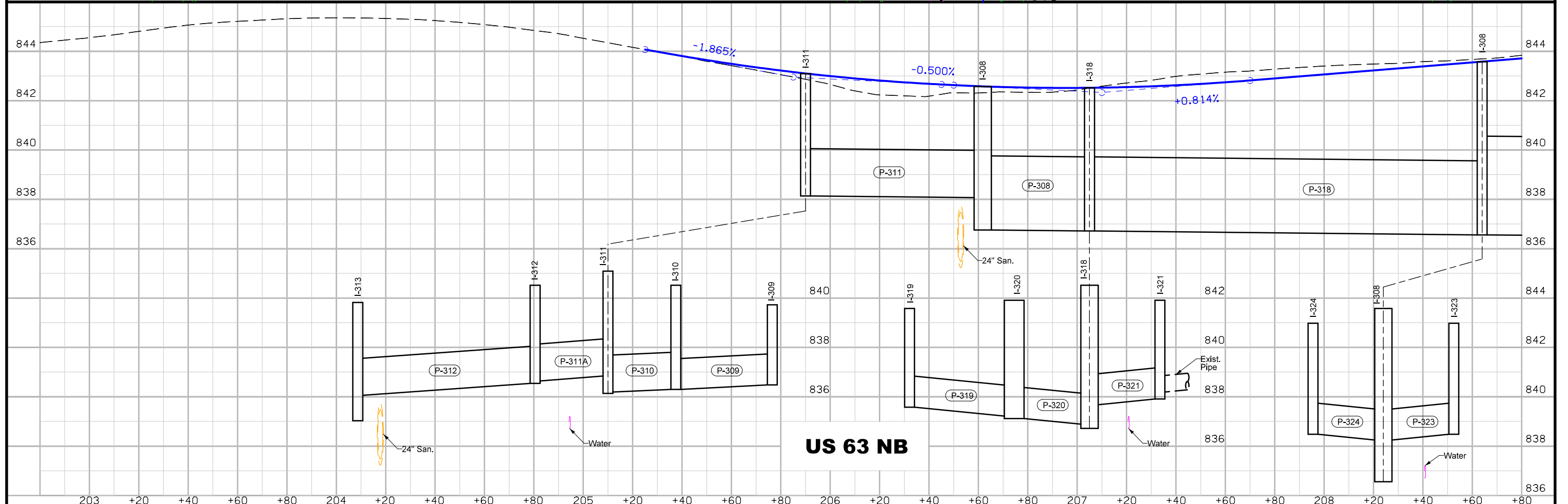
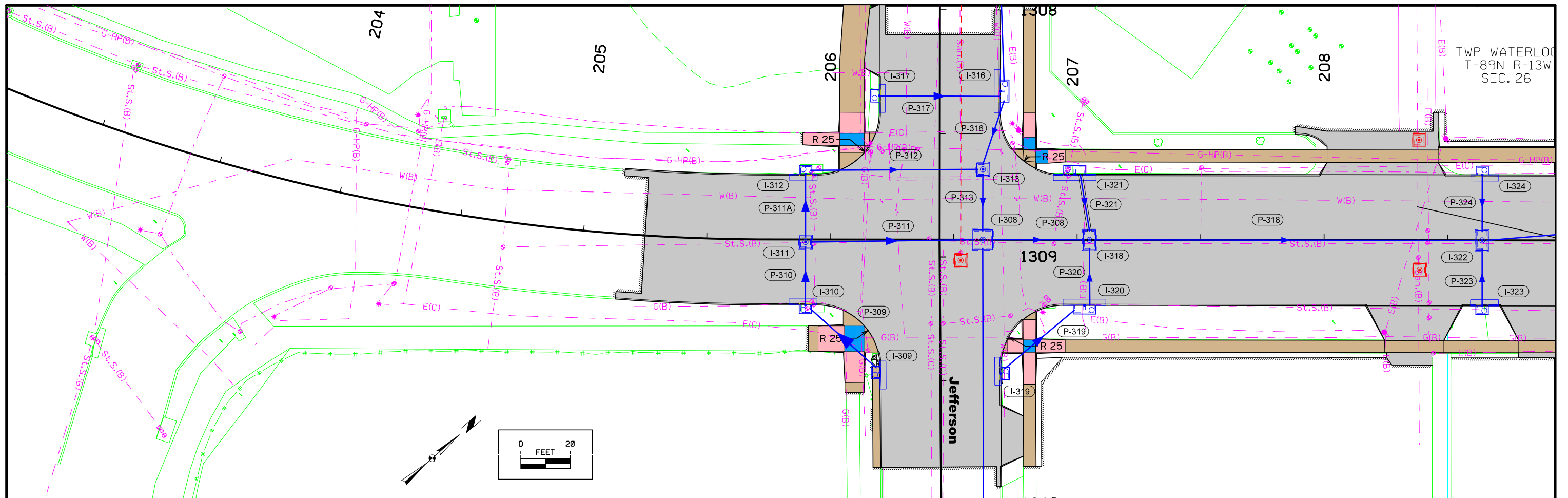
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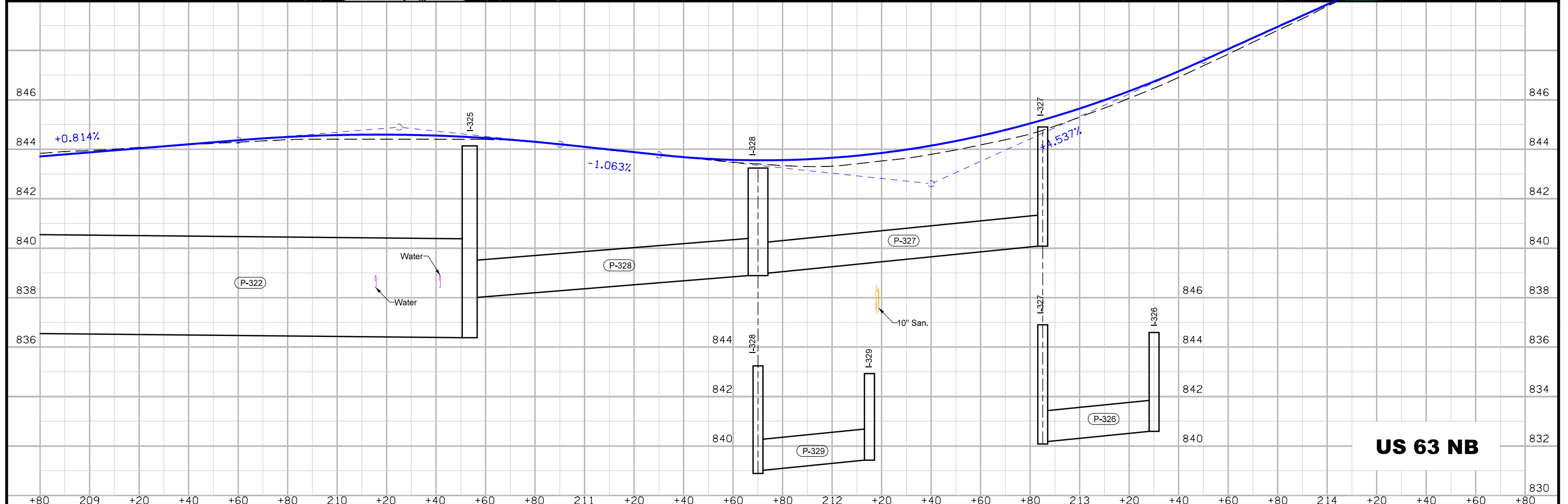
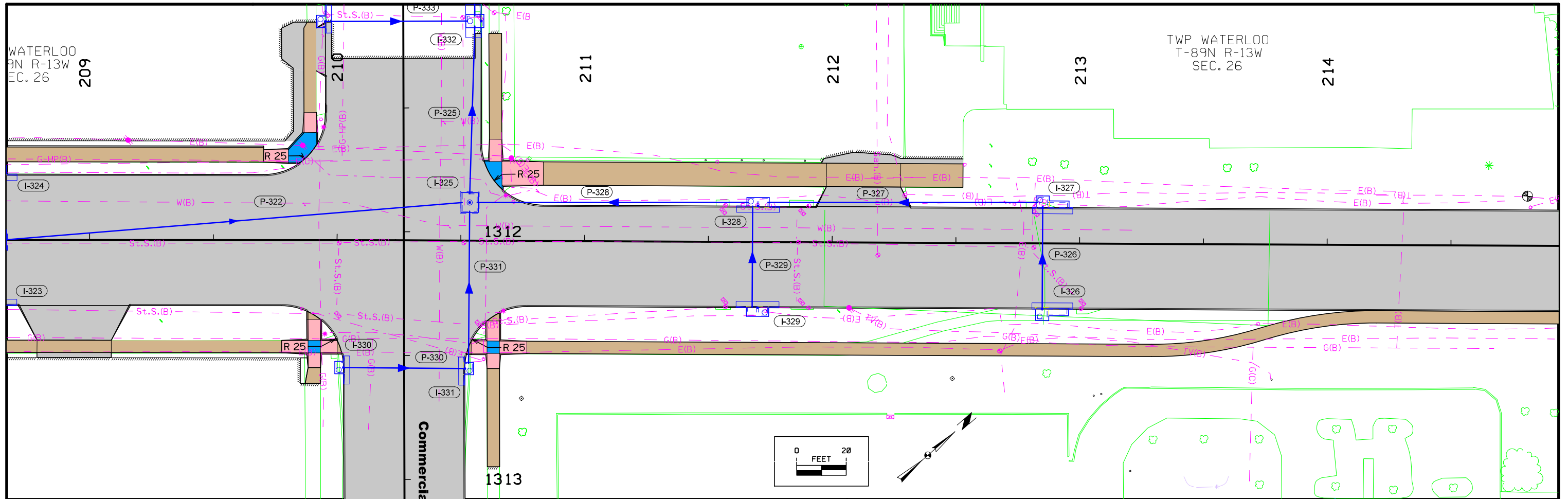


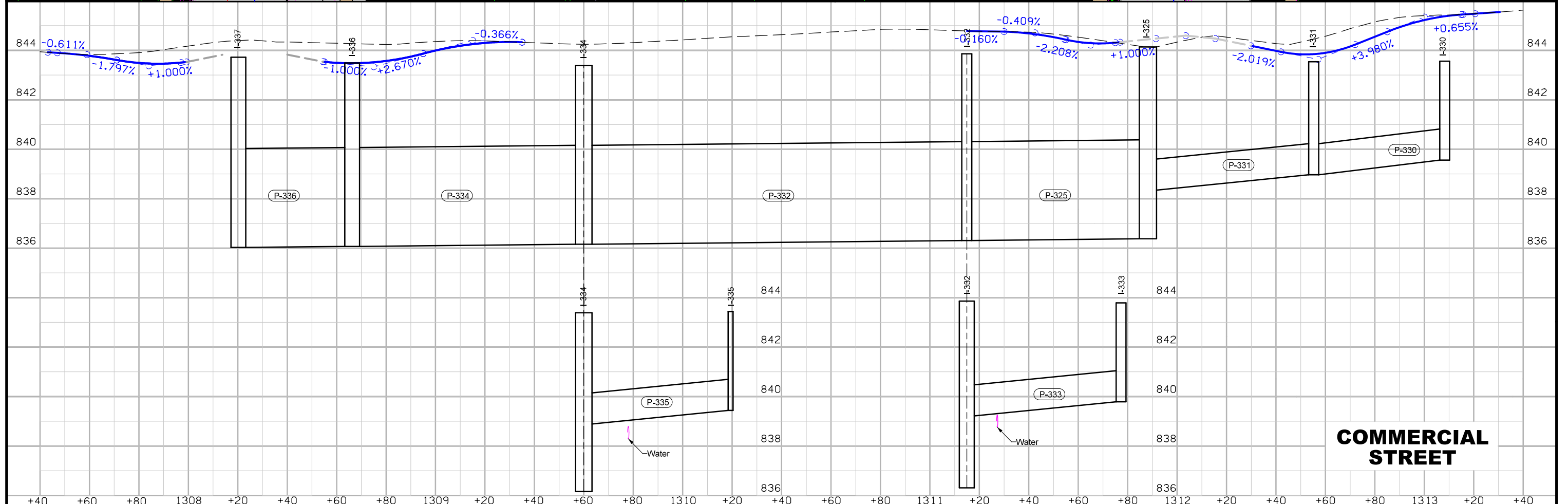
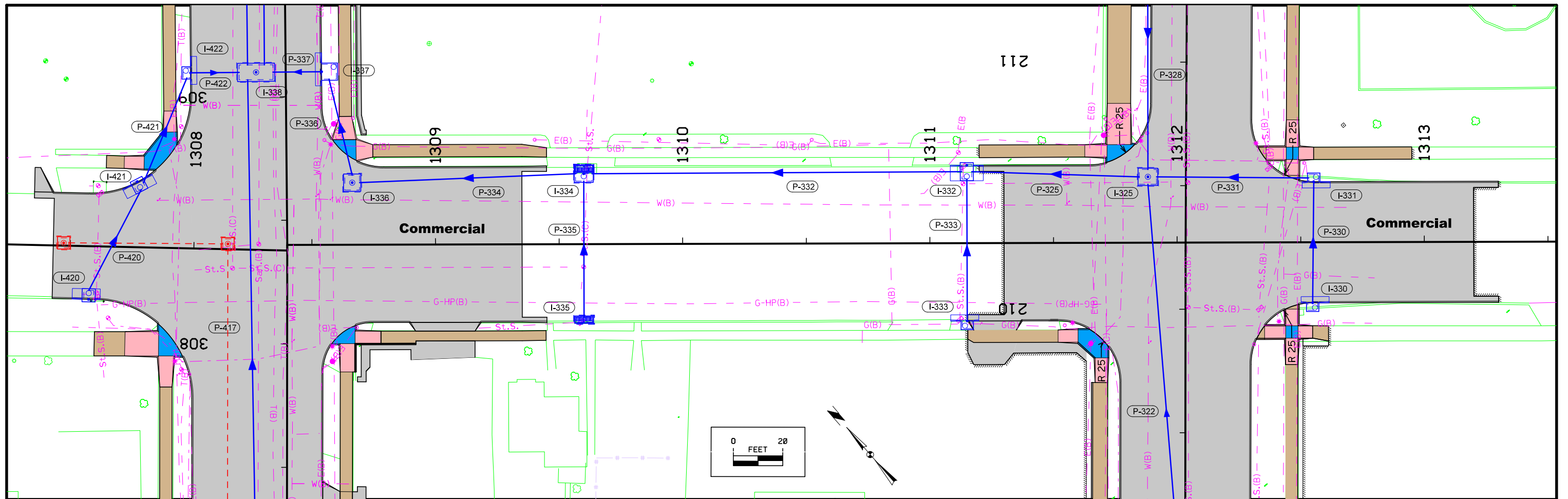
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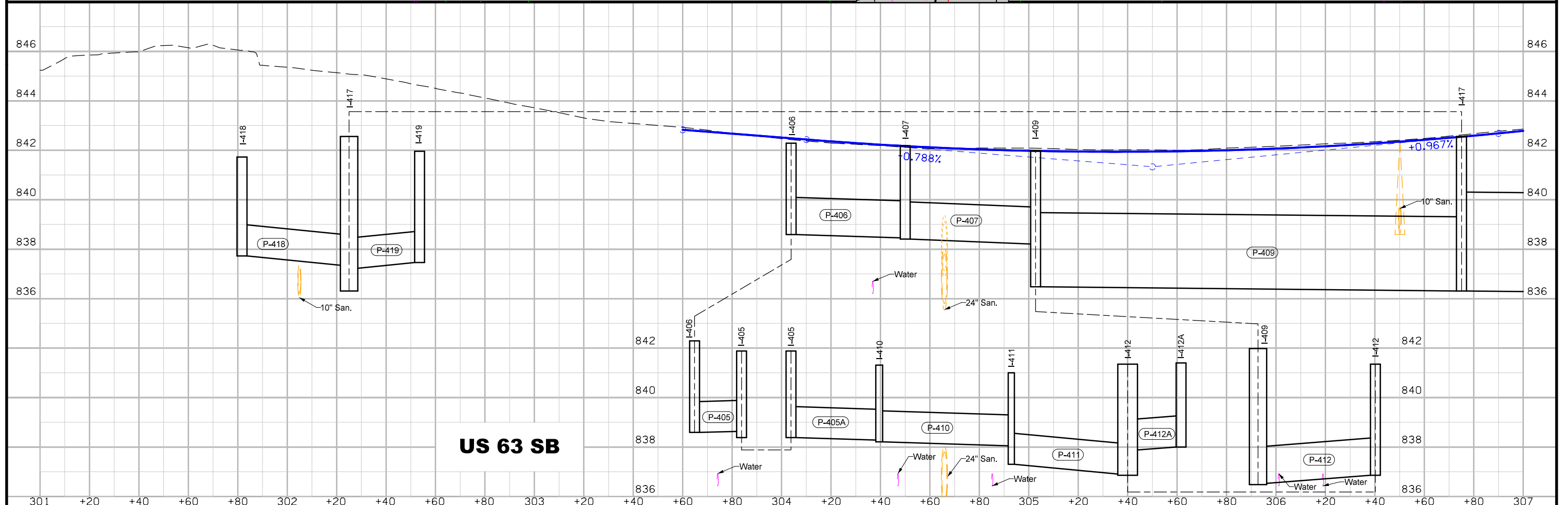
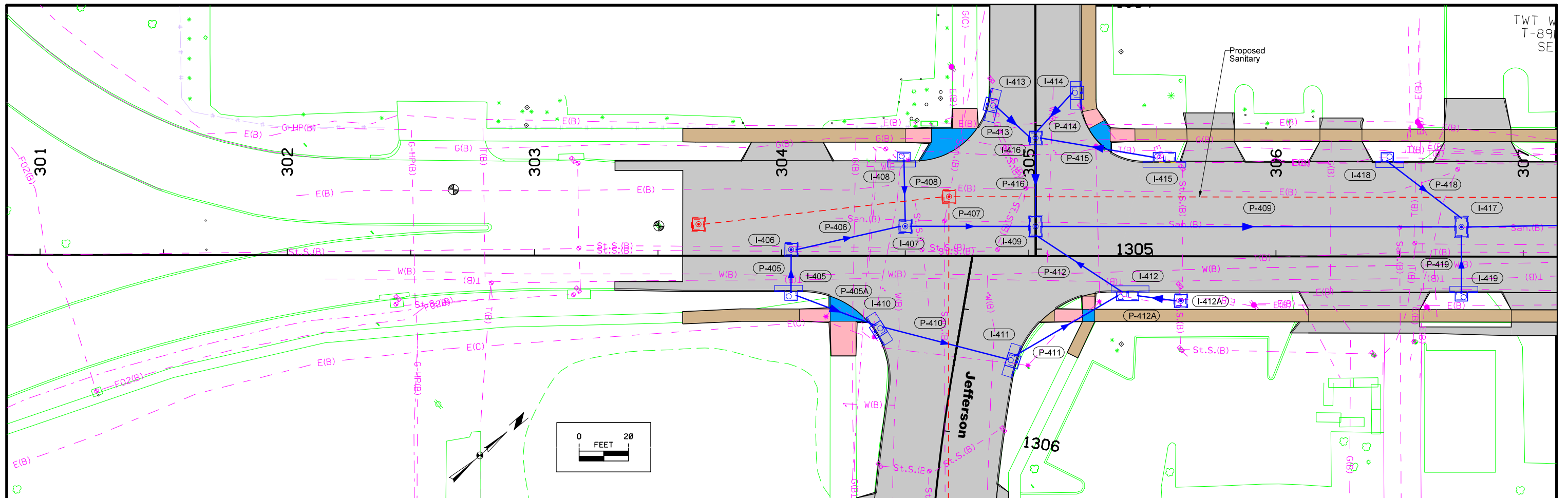
**JEFFERSON  
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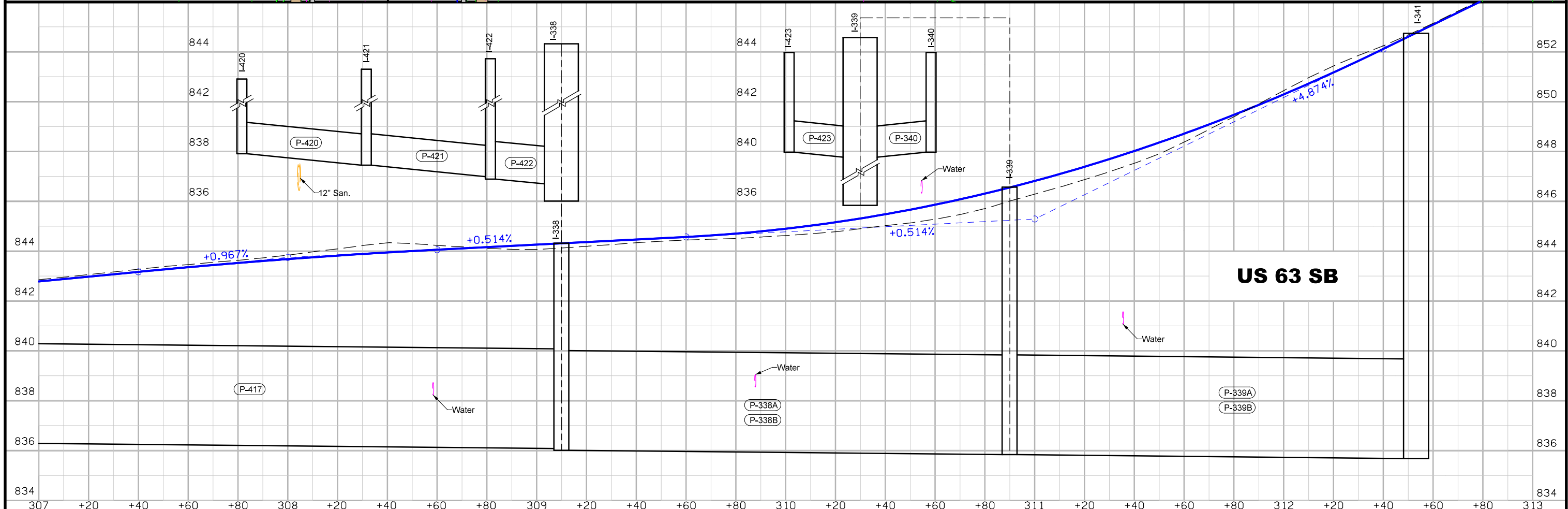
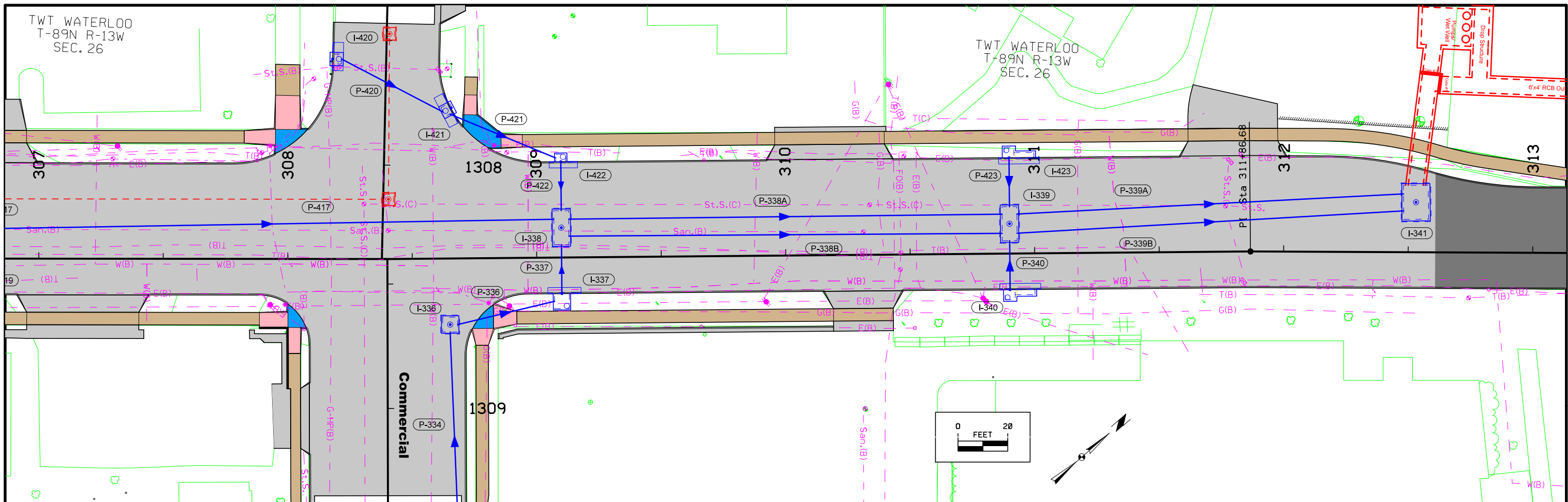




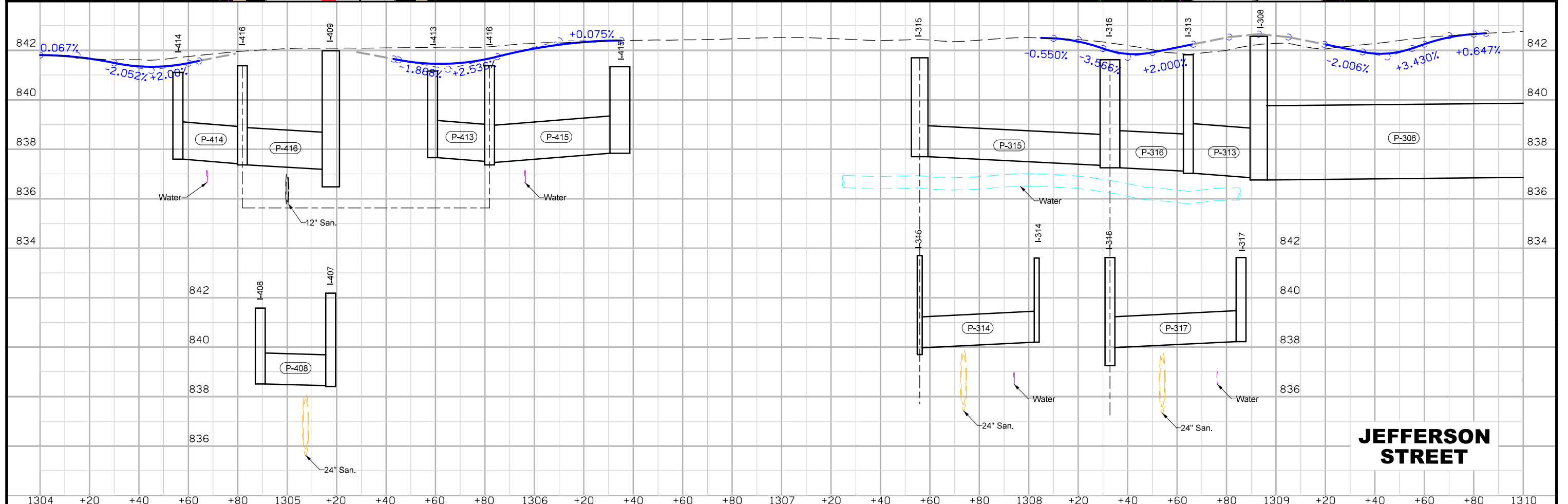
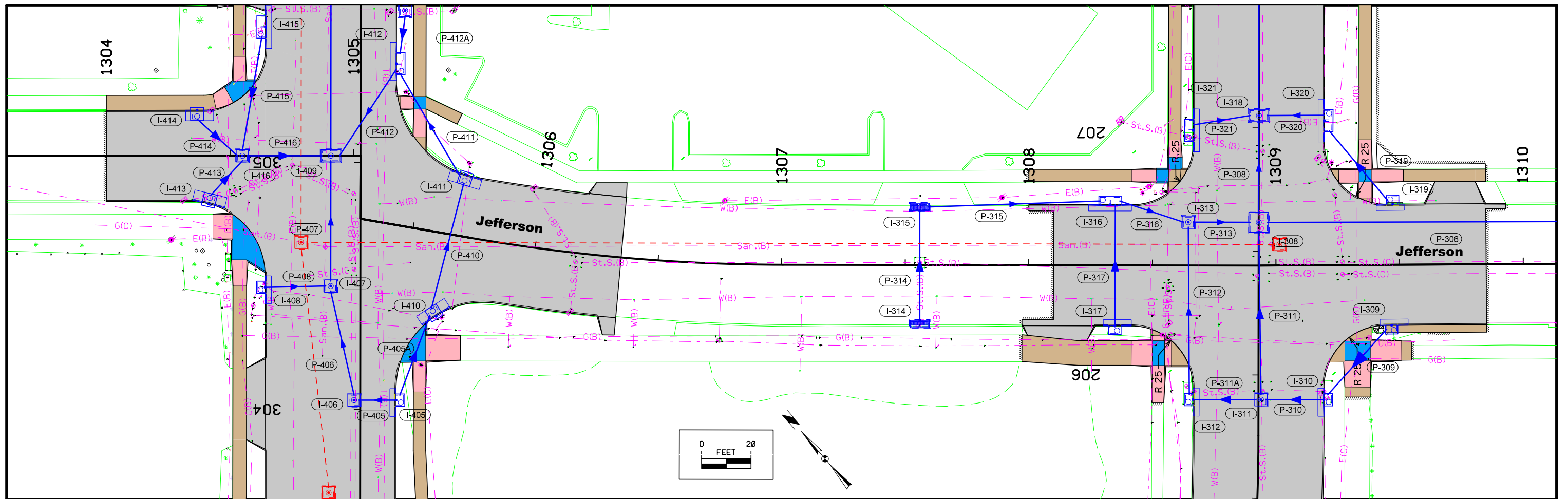




**US 63 SB**







**JEFFERSON STREET**



