



Exhibit J:
SewerCAD
Capacity
Analysis



MATW SewerCAD Model Analysis

MATW's sewer system has a SewerCAD model that is used for capacity analysis. The various Authority and private pump stations and projected loadings are in the SewerCAD Model and it is used to evaluate capacity. Flows for Alternatives 1B, 3B, and 4B were inputted into the SewerCAD as described in Chapter 5. There were no projected overloads in the conveyance system and the velocities in all major conveyance lines were between 2 and 10 feet per second as listed in the table below.

	ID	Label	Start Node	Stop Node	Length (Scaled) (ft)	Diameter (in)	Manning's n	Hazen-Williams C	Flow (gal/day)	Velocity (ft/s)	Headloss (Friction) (ft)
236: P-4	236	P-4	J-5	J-2	86.4	6.000	0.010	130.0	979,772.87	7.72	3.14
275: P-34	275	P-34	J-33	J-29	138.8	5.952	0.011	118.2	748,177.56	5.99	3.80
290: P-49	290	P-49	J-51	J-45	425.8	2.124	0.010	130.0	94,978.14	5.97	32.32
535: P-88	535	P-88	W-16	PMP-16	309.8	2.124	0.013	130.0	94,978.14	5.97	0.01
536: P-89	536	P-89	PMP-16	J-51	26.9	2.124	0.013	130.0	94,978.14	5.97	2.04
545: P-52(1)	545	P-52(1)	J-47	J-52	1,090.7	5.952	0.010	130.0	723,884.90	5.80	23.54
612: P-98(1)	612	P-98(1)	J-52	J-57	20.3	5.952	0.010	130.0	723,884.85	5.80	0.44
613: P-98(2)	613	P-98(2)	J-57	W-Westfall#2	92.2	5.952	0.010	130.0	723,884.85	5.80	1.99
296: P-55	296	P-55	J-49	J-83	21.5	3.996	0.010	130.0	297,490.14	5.29	0.62
581: P-96	581	P-96	W-20	PMP-20	68.7	3.996	0.013	130.0	297,490.14	5.29	0.00
582: P-97	582	P-97	PMP-20	J-49	17.8	3.996	0.013	130.0	297,490.14	5.29	0.58
253: P-12	253	P-12	J-7	J-8	285.9	4.044	0.010	130.0	288,936.52	5.01	7.40
356: P-60	356	P-60	W-2	PMP-2	201.9	4.044	0.013	130.0	288,936.52	5.01	0.00
357: P-61	357	P-61	PMP-2	J-7	7.6	4.044	0.013	130.0	288,936.52	5.01	0.20
268: P-27	268	P-27	J-29	J-28	723.3	7.920	0.010	130.0	1,090,174.22	4.93	8.29
264: P-23	264	P-23	J-28	SW-NW	2,143.3	7.920	0.010	130.0	1,090,174.13	4.93	24.56
240: P-8	240	P-8	J-8	J-4	585.1	6.084	0.010	130.0	617,732.49	4.73	8.46
237: P-5	237	P-5	J-4	J-1	84.8	6.084	0.010	130.0	617,732.31	4.73	1.23
233: P-1	233	P-1	J-1	WWTP-1	398.2	6.084	0.010	130.0	617,732.18	4.73	5.76
234: P-2	234	P-2	J-2	WWTP-2	395.0	7.920	0.010	130.0	979,772.87	4.43	3.71
239: P-7	239	P-7	J-9	J-5	615.0	7.920	0.010	130.0	979,772.87	4.43	5.78
257: P-16	257	P-16	J-11	J-9	402.7	7.920	0.010	130.0	979,772.87	4.43	3.79
262: P-21	262	P-21	J-15	J-11	241.5	7.920	0.010	130.0	979,772.87	4.43	2.27
332: P-58	332	P-58	J-13	J-15	3.8	7.920	0.011	118.2	979,772.87	4.43	0.03
634: P-103	634	P-103	J-60	J-83	235.7	5.571	0.010	130.0	396,000.00	3.62	2.24
636: P-104	636	P-104	J-61	J-60	47.7	5.571	0.010	130.0	396,000.00	3.62	0.49
638: P-105	638	P-105	ARV-1	J-61	223.8	5.571	0.010	130.0	396,000.00	3.62	2.15
640: P-106	640	P-106	J-63	ARV-1	268.2	5.571	0.010	130.0	396,000.00	3.62	2.58
642: P-107	642	P-107	J-64	J-63	53.8	5.571	0.010	130.0	396,000.00	3.62	0.53
644: P-108	644	P-108	J-65	J-64	49.9	5.571	0.010	130.0	396,000.00	3.62	0.52
646: P-109	646	P-109	ICO-2	J-65	31.9	5.571	0.010	130.0	396,000.00	3.62	0.27
648: P-110	648	P-110	J-67	ICO-2	303.9	5.571	0.010	130.0	396,000.00	3.62	2.96
650: P-111	650	P-111	J-68	J-67	21.3	5.571	0.010	130.0	396,000.00	3.62	0.19
652: P-112	652	P-112	ICO-3	J-68	162.9	5.571	0.010	130.0	396,000.00	3.62	1.59
654: P-113	654	P-113	J-70	ICO-3	157.5	5.571	0.010	130.0	396,000.00	3.62	1.55
656: P-114	656	P-114	J-71	J-70	13.2	5.571	0.010	130.0	396,000.00	3.62	0.07
658: P-115	658	P-115	ICO-4	J-71	233.2	5.571	0.010	130.0	396,000.00	3.62	2.27
666: P-118	666	P-118	J-75	ICO-5	72.7	5.571	0.010	130.0	396,000.00	3.62	0.80
668: P-119	668	P-119	J-76	J-75	64.1	5.571	0.010	130.0	396,000.00	3.62	0.64
670: P-120	670	P-120	J-77	J-76	30.0	5.571	0.010	130.0	396,000.00	3.62	0.27
674: P-121(1)	674	P-121(1)	J-79	J-77	301.2	5.571	0.010	130.0	396,000.00	3.62	2.84
675: P-121(2)	675	P-121(2)	ICO-6	J-79	26.3	5.571	0.010	130.0	396,000.00	3.62	0.24
677: P-117(1)	677	P-117(1)	J-80	ICO-4	33.1	5.571	0.010	130.0	396,000.00	3.62	0.40
680: P-117(2)(1)	680	P-117(2)(1)	J-81	J-80	25.0	5.571	0.010	130.0	396,000.00	3.62	0.23
683: P-117(2)(2)	683	P-117(2)(2)(1)	J-82	J-81	53.2	5.571	0.010	130.0	396,000.00	3.62	0.49
684: P-117(2)(2)	684	P-117(2)(2)(2)	ICO-5	J-82	349.4	5.571	0.010	130.0	396,000.00	3.62	3.27
278: P-37	278	P-37	J-35	J-34	964.2	7.752	0.011	118.2	748,177.73	3.53	7.29
276: P-35	276	P-35	J-34	J-33	55.6	7.752	0.011	118.2	748,177.56	3.53	0.42
273: P-32	273	P-32	J-32	J-30	714.9	3.144	0.010	130.0	120,237.09	3.45	12.43
445: P-74	445	P-74	W-9	PMP-9	9.9	3.144	0.013	130.0	120,237.09	3.45	0.00
446: P-75	446	P-75	PMP-9	J-32	11.7	3.144	0.013	130.0	120,237.09	3.45	0.20
295: P-54	295	P-54	J-83	J-47	86.9	5.952	0.010	130.0	376,736.62	3.02	0.56
686: P-122	686	P-122	J-47	J-83	86.9	5.571	0.010	130.0	-316,753.53	2.90	0.56
261: P-20	261	P-20	J-14	J-12	238.0	6.084	0.010	130.0	328,796.15	2.52	1.07
331: P-57	331	P-57	J-13	J-14	3.7	6.084	0.011	118.2	328,796.15	2.52	0.01
256: P-15	256	P-15	J-10	J-8	6.2	6.084	0.010	130.0	328,795.97	2.52	0.03
258: P-17	258	P-17	J-12	J-10	432.5	6.084	0.011	118.2	328,795.97	2.52	2.32