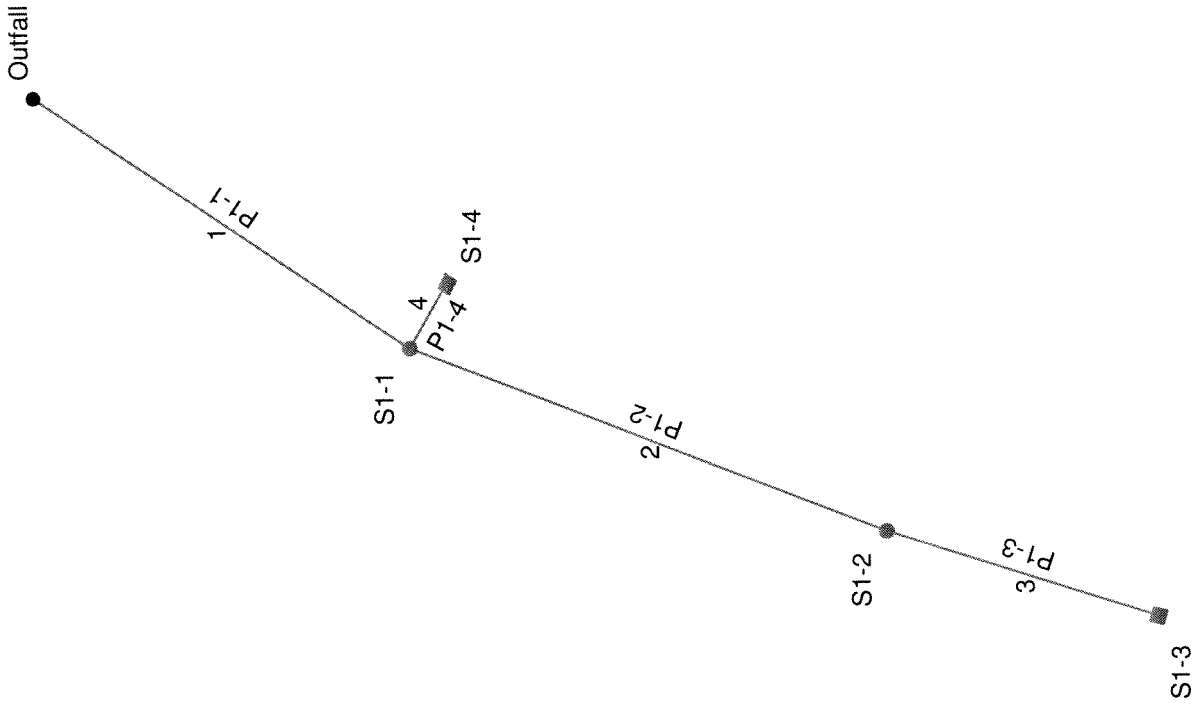


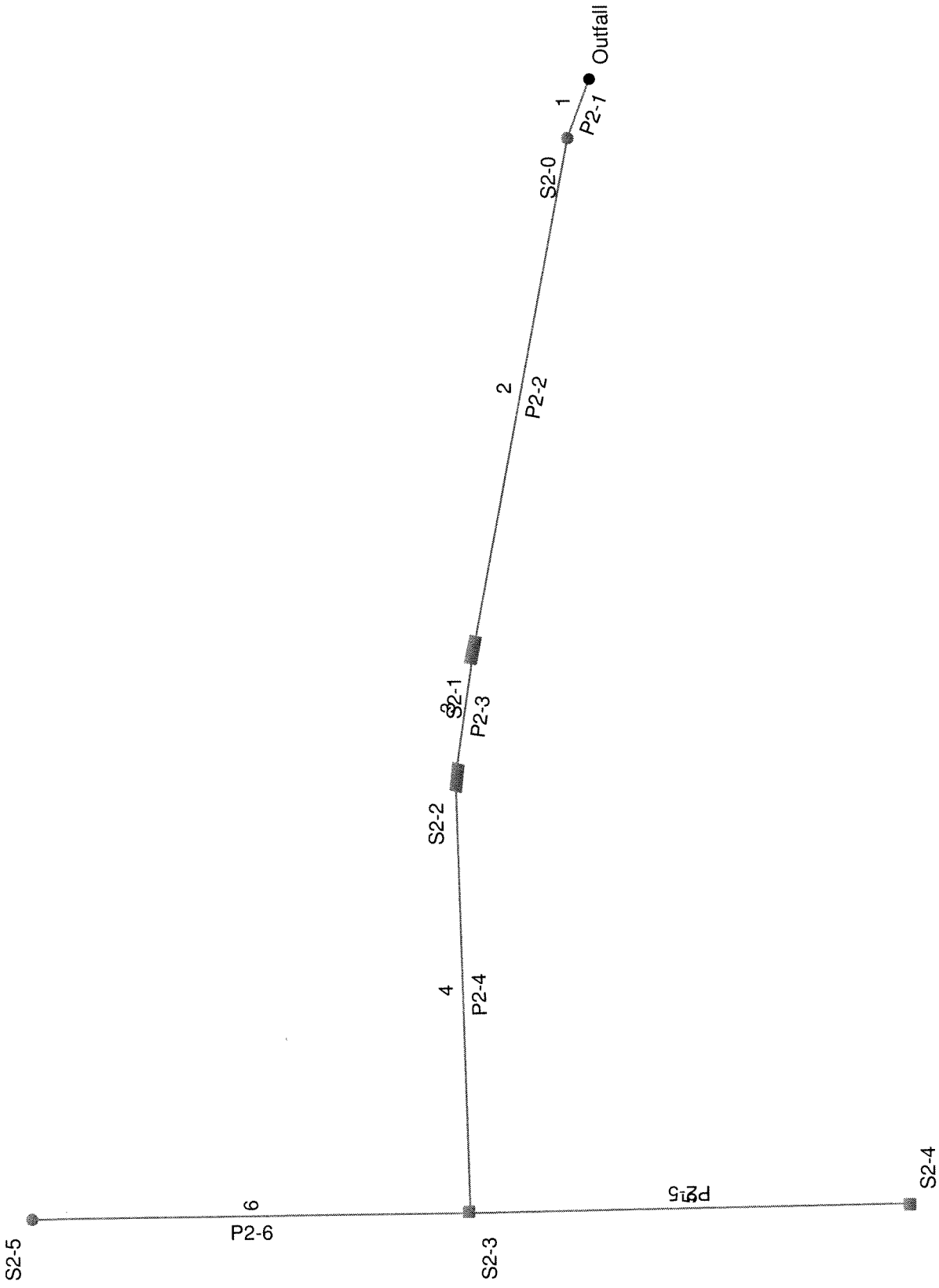
Hydraflow Storm Sewers Extension for AutoCAD® Civil 3D® 2008 Plan



Line No	To Line	Type of struc	n - value	Len (ft)	Drainage Area			Time of conc (min)	Time of flow in sect (min)	Inten (l) (in/hr)	Total CA	Add Q		Inlet elev (ft)	Elev of HGL			Rise Span	HGL Pipe	Actual		Date: 06-15-2009	Frequency: 5 yrs	Proj: SWS Line 1.stm								
					Incr- ment (ac)	Sub- total (ac)	Sum CA					Q	Total flow		Up (ft)	Down (ft)	Fall (ft)			Size (in)	Slope (%)				Vel (ft/s)	Cap (cfs)	Line description					
																												Q (cfs)	Elev of Invert	Span	Vel (ft/s)	Cap (cfs)
1	End	MH	0.013	133.000	0.00	0.00	0.00	17.15	0.50	4.39	2.18	0.00	1387.00	1379.38	1376.55	2.83	30	2.13	6.73	21.56			P1-1									
					0.00	0.00	0.00					21.56		1380.33	1377.50	2.83	30	2.13	12.19	59.82												
					0.00	0.00	0.00							1377.83	1375.00		Cir															
2	1	MH	0.013	149.826	0.00	0.00	0.00	15.56	1.60	4.59	1.67	0.00	1388.50	1380.26	1380.05	0.21	30	0.14	3.16	7.68			P1-2									
					0.00	0.00	0.00					7.68		1381.83	1380.33		30	1.00	8.36	41.04												
					0.00	0.00	0.00							1379.33	1377.83	1.50	Cir															
3	2	DrGrt	0.013	82.945	0.00	0.00	0.00	15.00	0.56	4.66	1.67	0.00	1390.50	1381.65	1380.64	1.01	24	1.22	5.79	7.81			P1-3									
					0.00	0.00	0.00					7.81		1382.66	1381.83		24	1.00	7.20	22.63												
					0.00	0.00	0.00							1380.66	1379.83	0.83	Cir															
4	1	DrCrb	0.013	22.594	0.00	0.00	0.00	15.00	0.05	4.66	0.50	12.00	1387.50	1380.75	1380.33	0.42	18	1.87	8.12	14.34			P1-4									
					0.00	0.00	0.00					14.34		1380.60	1380.33		18	1.20	6.50	11.48												
					0.00	0.00	0.00							1379.10	1378.83	0.27	Cir															

NOTES: Intensity = 66.04 / (Inlet time + 12.90) ^ 0.80 (in/hr) ; Time of flow in section is based on full flow.

SWS Line 2



Date: 06-15-2009

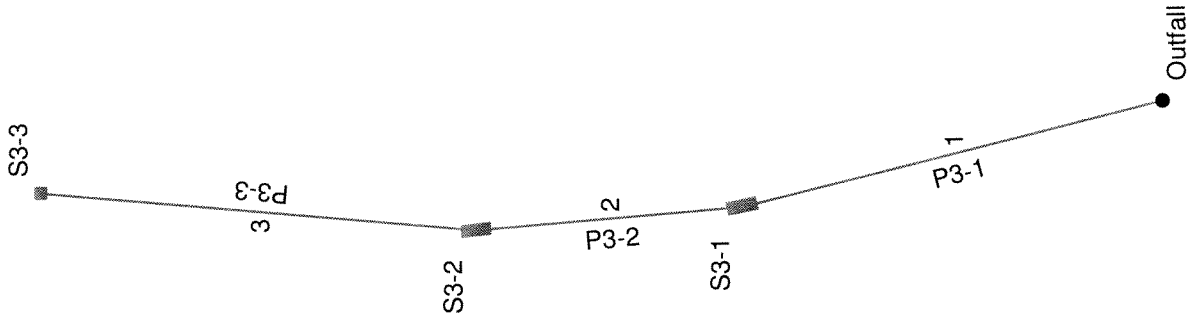
Number of lines: 6

Project File: SWS Line 2.stm

Line No	To Line	Type of struc	n - value	Len (ft)	Drainage Area			Time of conc (min)	Time of flow in sect (min)	Inten (l) (in/hr)	Total CA	Add Q		Inlet elev (ft)	Elev of HGL			Rise Span	HGL Pipe	Actual		Date: 06-15-2009					
					C1 = 0.2	C2 = 0.5	C3 = 0.9					Total flow	Q (cfs)		Up (ft)	Down (ft)	Fall (ft)			Size (in)	Slope (%)		Vel (ft/s)	Cap (cfs)			
																									Incr-ment (ac)	Sub-total (ac)	Sum CA
1	End	MH	0.013	23.636	0.00	0.00	0.00	19.00	0.15	4.19	1.95	0.00	1378.50	1375.94	1376.41	1374.41	0.02	24	0.09	3.29	8.17	P2-1					
					0.00	0.00	0.00					8.17		1376.50	1376.50	1374.50	0.09	24	0.38	4.44	13.95						
					0.00	0.00	0.00							1374.50	1374.50	1374.50		Cir									
2	1	DrCrib	0.013	195.869	0.00	0.00	0.00	17.79	1.21	4.32	1.95	0.00	1389.70	1382.73	1376.04	6.69	24	3.41	4.21	8.42	8.42	P2-2					
					0.00	0.00	0.00					8.42		1383.70	1376.50	1374.50		24	3.68	13.80	43.36						
					0.00	0.00	0.00							1381.70	1374.50	1374.50		Cir									
3	2	DrCrib	0.013	47.972	0.00	0.00	0.00	17.58	0.21	4.34	1.55	0.00	1389.70	1383.69	1383.06	0.63	18	1.32	5.91	6.73	6.73	P2-3					
					0.00	0.00	0.00					6.73		1384.20	1383.70	1382.20	0.50	18	1.04	6.07	10.72						
					0.00	0.00	0.00							1382.70	1382.20	1382.20		Cir									
4	3	DrGrt	0.013	164.360	0.00	0.00	0.00	16.93	0.65	4.42	1.14	0.00	1387.80	1385.21	1384.20	1.01	15	0.61	4.12	5.06	5.06	P2-4					
					0.00	0.00	0.00					5.06		1384.82	1384.20	1382.95	0.62	15	0.38	3.23	3.97						
					0.00	0.00	0.00							1383.57	1382.95	1382.95		Cir									
5	4	DrGrt	0.013	164.337	0.00	0.00	0.00	15.00	1.93	4.66	0.37	0.00	1388.40	1385.96	1385.84	0.12	15	0.07	1.42	1.74	1.74	P2-5					
					0.00	0.00	0.00					1.74		1385.81	1384.82	1383.57	0.99	15	0.60	4.08	5.01						
					0.00	0.00	0.00							1384.56	1383.57	1383.57		Cir									
6	4	DrGrt	0.013	164.330	0.00	0.00	0.00	15.00	1.69	4.66	0.43	0.00	1387.80	1385.99	1385.83	0.16	15	0.09	1.62	1.99	1.99	P2-6					
					0.00	0.00	0.00					1.99		1385.44	1384.82	1383.57	0.62	15	0.38	3.23	3.97						
					0.00	0.00	0.00							1384.19	1383.57	1383.57		Cir									

NOTES: Intensity = 66.04 / (Inlet time + 12.90) ^ 0.80 (in/hr) ; Time of flow in section is based on full flow.

SWS Line 3



Date: 06-15-2009

Number of lines: 3

Project File: SWS Line 3.stm

Line No	To Line	Type of struc	n-value	Len (ft)	Drainage Area			Time of conc (min)	Time of flow in sect (min)	Inten (l) (in/hr)	Total CA	Add Q		Inlet elev (ft)	Elev of HGL			Rise Span	HGL Pipe	Actual		Date: 06-15-2009				
					Incre-ment (ac)	Sub-total (ac)	Sum CA					Total flow	Q (cfs)		Up (ft)	Down (ft)	Fall (ft)			Size (in)	Slope (%)		Vel (ft/s)	Cap (cfs)	Frequency: 5 yrs	Proj: SWS Line 3.stm
1	End	DrCrb	0.013	157.326	0.00	0.00	0.00	16.37	0.78	4.49	2.36	0.00	1380.90	1376.44	1376.15	0.29	24	0.19	4.00	10.59	P3-1					
					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	4.44	13.96	1377.00	1376.40	0.60	24	0.38	4.44		13.96				
					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62	4.56	1.82	8.31	1382.20	1375.00	0.10	24	0.11		3.33	8.31	P3-2		
2	1	DrCrb	0.013	97.012	0.00	0.00	0.00	15.75	0.62	4.66	0.92	0.00	1378.50	1376.74	1376.63	0.10	24	0.44	0.00	4.28	P3-3					
					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	4.45	13.99	1377.37	1377.00	0.37	24	0.38	0.00		0.00				
					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	4.66	0.92	4.28	1375.37	1375.00	0.59	24	0.44		0.00	0.00			
3	2	DrGrt	0.013	157.441	0.00	0.00	0.00	15.00	0.75	4.66	0.92	0.00	1378.50	1377.55	1376.85	0.69	15	0.44	0.00	4.28	P3-3					
					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	4.45	13.99	1377.21	1376.62	0.59	15	0.38	0.00		0.00				
					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	4.66	0.92	4.28	1375.96	1375.37	0.59	15	0.38		0.00	0.00			

NOTES: Intensity = 66.04 / (Inlet time + 12.90) ^ 0.80 (in/hr) ; Time of flow in section is based on full flow.

SWS Line 3