



350 Worthington Road, Suite B
Westerville, OH 43082
614.882.4311

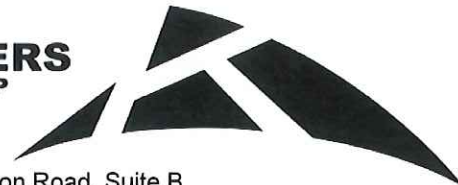
STORM SEWER COMPUTATIONS

Project: Storypoint Fairfield
Project Number: 150588.000

8/30/2016
i = Butler County Subdivision Regulations

Design Storm: 10 yr
Check Storm: 25 yr
Manning's n: 0.012

LOCATION			BASIN DATA									PIPE DATA									HGL CHECK							
Inlet	Station	Outlet	ΔA (ac)	ΣA (ac)	ΔT _c (min)	ΣT _c (min)	Design i (in/hr)	Coeff. C	ΔCA (ac)	ΣCA (ac)	Design Discharge (cfs)	Pipe Size (in)	Pipe Length (ft)	Pipe Slope (ft/ft)	US Invert (ft)	DS Invert (ft)	Mean Velocity (ft/sec)	Time in Pipe (min)	Σ Time	Pipe Full Capacity (cfs)	Check i (in/hr)	Check Discharge (cfs)	Mean Velocity (ft/sec)	Friction Slope (ft/ft)	Head Loss (ft)	TW Elevation (ft)	HW Elevation (ft)	Grate Elevation (ft)
524		523	0.76	0.76	10	10.59	5.06	0.72	0.55	0.55	2.78	15	125	0.0038	747.76	747.29	3.52	0.59	10.59	4.33	5.67	3.11	3.52	0.0038	0.47	748.05	748.52	750.58
523		520	0.11	0.88	10	10.85	5.02	0.60	0.07	0.62	3.10	15	56	0.0038	747.29	747.08	3.52	0.26	10.85	4.33	5.63	3.47	3.52	0.0038	0.21	747.84	748.05	751.00
522		521	0.27	0.27	10	10.54	5.07	0.58	0.16	0.16	0.80	15	115	0.0038	747.91	747.47	3.52	0.54	10.54	4.33	5.67	0.90	3.52	0.0038	0.44	748.23	748.67	750.23
521		520	0.26	0.54	10	11.04	4.99	0.58	0.15	0.31	1.55	15	104	0.0038	747.47	747.08	3.52	0.49	11.04	4.33	5.60	1.74	3.52	0.0038	0.39	747.84	748.23	750.13
520		519	0.10	1.52	10	11.53	4.92	0.40	0.04	0.97	4.77	18	106	0.0030	746.88	746.56	3.54	0.50	11.53	6.25	5.54	5.36	3.54	0.0030	0.32	747.52	747.84	750.21
519		518	0.37	1.89	10	11.96	4.86	0.62	0.23	1.20	5.84	24	89	0.0020	746.16	745.98	3.50	0.42	11.96	10.99	5.48	6.58	3.50	0.0020	0.18	747.34	747.52	750.08
518		508	0.37	2.26	10	12.30	4.82	0.63	0.23	1.43	6.91	24	72	0.0020	745.98	745.84	3.50	0.34	12.30	10.99	5.44	7.80	3.50	0.0020	0.14	747.20	747.34	750.27
517		512	0.31	0.31	10	10.30	7.26	0.75	0.23	0.23	1.70	12	63	0.0051	747.02	746.70	3.52	0.30	10.30	2.76	5.71	1.34	3.52	0.0051	0.32	747.40	747.72	751.58
516		515	0.33	0.33	10	10.26	7.27	0.78	0.26	0.26	1.86	15	55	0.0038	747.15	746.94	3.52	0.26	10.26	4.33	5.71	1.46	3.52	0.0038	0.21	747.93	748.14	751.64
515		514	0.19	0.52	10	10.46	7.24	0.71	0.14	0.39	2.83	15	43	0.0038	746.94	746.77	3.52	0.20	10.46	4.33	5.68	2.22	3.52	0.0038	0.16	747.77	747.93	751.51
514		513	0.11	0.63	10	10.74	7.19	0.70	0.07	0.47	3.35	15	59	0.0038	746.77	746.55	3.52	0.28	10.74	4.33	5.65	2.63	3.52	0.0038	0.22	747.55	747.77	752.10
513		512	0.14	0.76	10	10.93	7.16	0.83	0.11	0.58	4.15	15	40	0.0038	746.55	746.40	3.52	0.19	10.93	4.33	5.62	3.26	3.52	0.0038	0.15	747.40	747.55	752.04
512		511	0.21	1.29	10	11.42	7.07	0.80	0.17	0.99	6.97	18	121	0.0040	746.20	745.71	4.08	0.50	11.42	7.22	5.55	5.48	4.08	0.0040	0.49	746.91	747.40	751.64
511		504	0.28	1.57	10	11.88	4.87	0.79	0.22	1.21	5.88	18	98	0.0030	745.71	745.42	3.54	0.46	11.88	6.25	5.49	6.63	3.75	0.0034	0.33	746.58	746.91	751.90
510		509	0.21	0.21	10	10.82	5.03	0.95	0.20	0.20	0.98	18	175	0.0030	747.09	746.56	3.54	0.82	10.82	6.25	5.63	1.10	3.54	0.0030	0.52	747.72	748.25	749.75
509		508	0.20	0.41	10	11.65	4.91	0.93	0.19	0.38	1.89	18	175	0.0030	746.56	746.04	3.54	0.82	11.65	6.25	5.52	2.12	3.54	0.0030	0.52	747.20	747.72	749.41
508		507	0.28	2.95	10	12.98	4.72	0.90	0.25	2.07	9.79	36	146	0.0012	744.84	744.66	3.55	0.68	12.98	25.10	5.35	11.09	3.55	0.0012	0.17	747.02	747.20	749.07
507		506	0.20	3.15	10	13.44	4.67	0.70	0.14	2.21	10.30	36	97	0.0012	744.66	744.54	3.55	0.45	13.44	25.10	5.29	11.69	3.55	0.0012	0.12	746.90	747.02	748.95



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506		505	0.24	3.38	10	13.85	4.61	0.75	0.18	2.39	11.00	36	88	0.0012	744.54	744.44	3.55	0.41	13.85	25.10	5.24	12.51	3.55	0.0012	0.11	746.80	746.90	748.91
505		504	0.48	3.86	10	14.71	4.51	0.83	0.40	2.78	12.54	36	182	0.0012	744.44	744.22	3.55	0.85	14.71	25.10	5.14	14.31	3.55	0.0012	0.22	746.58	746.80	749.40
504		503	0.14	4.00	10	15.27	4.44	0.89	0.13	2.91	12.92	36	120	0.0012	744.22	744.08	3.55	0.56	15.27	25.10	5.08	14.78	3.55	0.0012	0.14	746.44	746.58	749.66
503		502	0.26	5.83	10	15.83	4.38	0.82	0.21	4.33	18.95	36	120	0.0012	744.08	743.93	3.55	0.56	15.83	25.10	5.02	21.72	3.55	0.0012	0.14	746.29	746.44	748.90
502		501	0.18	6.01	10	16.42	4.31	0.66	0.12	4.45	19.17	36	125	0.0012	743.93	743.78	3.55	0.59	16.42	25.10	4.96	22.03	3.55	0.0012	0.15	746.14	746.29	748.82
501		500	0.92	6.93	10	16.55	4.30	0.70	0.64	5.09	21.86	36	28	0.0012	743.78	743.75	3.55	0.13	16.55	25.10	4.94	25.13	3.56	0.0012	0.03	746.11	746.14	748.01
404		401	0.32	0.32	10	10.80	5.03	0.89	0.28	0.28	1.43	12	169	0.0051	745.17	744.31	3.52	0.80	10.80	2.76	5.64	1.61	3.52	0.0051	0.86	746.42	747.28	749.55
403		402	0.51	0.51	10	10.26	5.11	0.84	0.43	0.43	2.21	12	76	0.0100	746.68	745.92	4.93	0.26	10.26	3.87	5.71	2.47	4.93	0.0100	0.76	747.93	748.69	751.12
402		401	0.37	0.88	10	10.65	5.05	0.80	0.30	0.73	3.69	12	126	0.0120	745.82	744.31	5.40	0.39	10.65	4.24	5.66	4.13	5.40	0.0120	1.52	746.42	747.93	750.32
401		400	0.34	1.54	10	10.88	5.02	0.83	0.28	1.29	6.49	15	28	0.0110	744.06	743.75	6.00	0.08	10.88	7.36	5.63	7.27	6.00	0.0110	0.31	746.11	746.42	748.28
307		304	0.38	0.38	10	10.53	5.07	0.74	0.28	0.28	1.41	12	141	0.0080	746.95	745.82	4.41	0.53	10.53	3.46	5.67	1.58	4.41	0.0080	1.13	746.39	747.52	750.26
306		302	0.34	0.34	10	10.61	5.06	0.73	0.25	0.25	1.26	12	172	0.0090	746.85	745.30	4.67	0.61	10.61	3.67	5.66	1.41	4.67	0.0090	1.55	745.97	747.52	750.26
305		304	0.58	0.58	10	10.84	5.02	0.73	0.42	0.42	2.13	18	179	0.0030	745.86	745.32	3.54	0.84	10.84	6.25	5.63	2.39	3.54	0.0030	0.54	746.39	746.93	748.65
304		303	0.28	1.24	10	11.23	4.97	0.82	0.23	0.93	4.62	18	82	0.0030	745.32	745.07	3.54	0.39	11.23	6.25	5.58	5.19	3.54	0.0030	0.25	746.14	746.39	749.17
303		302	0.29	1.53	10	11.47	4.93	0.81	0.24	1.17	5.76	18	53	0.0033	744.97	744.80	3.71	0.24	11.47	6.55	5.55	6.48	3.71	0.0033	0.17	745.97	746.14	749.44
302		301	0.27	2.14	10	12.27	4.82	0.77	0.21	1.62	7.82	24	169	0.0020	744.30	743.96	3.50	0.80	12.27	10.99	5.44	8.83	3.50	0.0020	0.34	745.63	745.97	748.70
301		300	0.15	2.28	10	12.53	4.78	0.81	0.12	1.74	8.33	24	55	0.0020	743.86	743.75	3.50	0.26	12.53	10.99	5.41	9.41	3.50	0.0020	0.11	745.52	745.63	749.09