

STORM SEWER DESIGN SHEET																													
5 & 100 YEAR DESIGN STORM - NO CONTROL																													
PRE AND POST DEVELOPMENT																													
LOCATION					AREAS (ha)			INDIV. 2.78 AC	ACCUM. 2.78 AC	TIME OF CONC.	RAINFALL INTENSITY I (mm/hr) 100YR	RAINFALL INTENSITY I (mm/hr) 5YR	PEAK FLOW 100 YEAR PCSWMM Q (L/s)	PEAK FLOW 100 YEAR Q (L/s)	PEAK FLOW 5 YEAR Q (L/s)	Pipe	SEWER DATA						Total Time (min)	% Capacity 100 YEAR PCSWMM	% Capacity 100 YEAR	% Capacity 5 YEAR			
CATCHMENT	AREA TOTAL	C Value Calculated	FROM	TO	at C=0.20 (ha)	at C=0.50 (ha)	at C=0.95 (ha)										DIAMETER (mm)	SLOPE (%)	LENGTH (m)	CAPACITY (L/s)	VELOCITY (m/s)	TIME (minutes)							
PRE-DEVELOPMENT																													
EXT2	0.72	0.62		EMMA ST		0.500	0.220	1.275	1.275	10.00	156.29	99.01		199.27	126.24	Metric													
EXT1	0.29	0.50				0.29		0.403	0.403	11.00	152.87	95.59		18.58	38.50														
PRE	0.41	0.32		EMMA ST	0.34		0.07	0.369	0.369	10.00	156.29	99.01		57.74	36.58	Metric													
Total														318.58	201.33	Metric	1500	0.45	82.20	4792.40	2.71	0.51	0.51	0.0%	6.6%	4.2%			
POST-DEVELOPMENT																													
(Leeson W Side) 100	0.54					0.54		0.750	0.750	10.00	156.29	99.01		117.22	74.26														
(Leeson W Side) 101	0.09					0.09		0.122	0.122	10.00	156.29	99.01		18.99	12.03														
(Leeson E Side) 102	0.07						0.07	0.185	0.185	10.00	156.29	99.01		28.87	18.29														
(Leeson st east side properties) 103	0.31		TICB13	TICB12		0.31		0.431	0.997	10.00	156.29	99.01	173.00	155.79	98.70	Metric	300	16.69	5.40	395.06	5.59	0.02	10.02	43.8%	39.4%	25.0%			
POST-1	0.08		DI10	TICBMH9		0.08		0.111	0.111	10.00	156.29	99.01	27.00	17.37	11.00	Metric	300	4.82	14.50	212.30	3.00	0.08	10.08	12.7%	8.2%	5.2%			
POST-2	0.02		TICBMH9	TICBMH8			0.02	0.053	0.164	10.08	156.01	98.73	76.00	25.57	16.18	Metric	300	4.37	9.20	202.15	2.86	0.05	10.13	37.6%	12.6%	8.0%			
POST-3	0.07		TICBMH8	TICBMH7			0.07	0.185	0.349	10.13	155.82	98.54	89.00	54.32	34.35	Metric	1720	0.43	35.10	6677.05	2.87	0.20	10.34	1.3%	0.8%	0.5%			
POST-4	0.03		TICBMH7	TICBMH6			0.03	0.079	0.639	10.34	155.12	97.83	65.00	99.10	62.50	Metric	300	2.17	9.20	142.45	2.02	0.08	10.41	45.6%	69.6%	43.9%			
POST-6	0.01		TICBMH6	CBMH5			0.01	0.026	0.665	10.41	154.86	97.57	188.00	103.02	64.91	Metric	300	3.77	2.70	187.76	2.66	0.02	10.43	100.1%	54.9%	34.6%			
POST-5	0.08		ROOF	TICBMH7			0.08	0.211	0.211	10.00	156.29	99.01	48.00	32.99	20.90	Metric	300	4.36	13.80	201.92	2.86	0.08	10.08	23.8%	16.3%	10.4%			
POST-7	0.05		TICB12	CBMH11		0.05		0.069	1.066	10.02	156.23	98.96	145.00	166.58	105.51	Metric	300	16.76	21.50	395.88	5.60	0.06	10.08	36.6%	42.1%	26.7%			
POST-8	0.01		CBMH11	CBMH5		0.01		0.014	1.080	10.08	156.01	98.73	146.00	168.51	106.64	Metric	300	4.72	14.80	210.09	2.97	0.08	10.16	69.5%	80.2%	50.8%			
POST-6A	0.01		CBMH5	CBMH15			0.01	0.026	1.772	10.43	154.80	97.51	262.00	274.28	172.77	Metric	375	3.41	4.40	323.77	2.93	0.03	10.46	80.9%	84.7%	53.4%			
108	0.05		CBMH15	TICBMH1		0.05		0.069	1.841	10.00	156.29	99.01	246.00	287.77	182.31	Metric	375	4.38	4.60	366.94	3.32	0.02	10.02	67.0%	78.4%	49.7%			
105	0.05		TICB4	TICBMH3			0.05	0.132	0.132	10.00	156.29	99.01	31.00	20.62	13.06	Metric	300	5.00	8.00	216.23	3.06	0.04	10.04	14.3%	9.5%	6.0%			
104	0.57		TICBMH3	TICBMH1		0.57		0.792	0.924	10.02	156.21	98.93	182.00	144.28	91.38	Metric	450	3.62	64.20	542.45	3.41	0.31	10.34	33.6%	26.6%	16.8%			
106	0.02		TICB2	TICBMH1			0.02	0.053	0.053	10.02	156.21	98.93	125.00	8.24	5.22	Metric	300	2.50	8.00	152.90	2.16	0.06	10.08	81.8%	5.4%	3.4%			
107	0.05		TICBMH1	TICBMH14			0.05	0.132	2.950	10.46	154.71	97.42	509.00	456.35	287.36	Metric	525	2.01	34.90	609.72	2.82	0.21	10.66	83.5%	74.8%	47.1%			
			TICBMH14	PIPE				0.000	2.950	10.66	154.01	96.72		454.27	285.29	Metric	525	2.55	10.20	686.76	3.17	0.05	10.72	0.0%	66.1%	41.5%			
PCSWMM 100 year flow not accurate due to backflow from William Street																													
SUBDIVISION	37.87		UPSTREAM	EXMH17				55.795	55.795	44.57	88.23	46.08		4919.00	2571.01	Metric	1200	0.68	22.00	3214.98	2.84	0.13	44.70	0.0%	153.0%	80.0%			
			EXMH17	EXMH12				55.795	44.57		88.23	46.08		4919.00	2571.01	Metric	1500	3.63	67.20	13468.03	7.62	0.15	44.85	0.0%	36.5%	19.1%			
			EXMH12	EXMH6				55.795	44.57		88.23	46.08		4919.00	2571.01	Metric	1500	12.06	79.90	24548.48	13.89	0.10	44.94	0.0%	20.0%	10.5%			
William Street 1220x1920 pipe outlet	1.78		EXMH6	EXMH3		1.78		2.476	58.270	44.94	87.82	45.83		5117.25	2670.61	Metric	1500	4.58	24.00	15289.01	8.65	0.05	44.99	0.0%	33.5%	17.5%			
William Street 1220x1920 pipe outlet			EXMH3	Pipe				0.000	58.270	44.99	87.77	45.80		5114.29	2668.82	Metric	1500	0.49	14.40	4948.22	2.80	0.09	45.07	0.0%	103.4%	53.9%			
William Street 1220x1920 pipe outlet	0.98		Pipe	EXMH1		0.98		1.358	62.578	45.07	87.67	45.74		5486.44	2862.55	Metric	1500	0.49	67.80	4948.22	2.80	0.40	45.48	0.0%	110.9%	57.9%			
William Street 1220x1920 pipe outlet			EXMH1	Outlet				0.000	62.578	45.48	87.23	45.48		5458.88	2845.94	Metric	1500	0.52	21.07	5151.67	2.92	0.12	45.60	0.0%	106.0%	55.2%			
PROJECT :			40-60 EMMA ST					Designed By : KP						Comments: Roughness 0.013 Coeff. "n" Bransby Williams tc=0.057*L/(Sw^0.2*A^0.1) L=watershed length, m Sw=watershed slope, % A= watershed Area, ha										I _{SYR} = 30.7*T^0.699 I _{100YR} = 51*T^0.699 *From MTO IDF Lookup for Fergus Shand Dam overleaf Fergus Shand Dam Chicago Storm Parameters 5 Year 100 Year A 1459.072 6933.019 B 13.69 34.6989 C 0.85 0.998					
PROJECT NUMBER :			191-102											I=A/(t+B) ^c															
CLIENT :			Sheldon Creek Developments																										
DATE :			June 23, 2025																										

West side Leeson and Storm System can handle this flow

REAR YARD SWALE DESIGNED FOR 100 YEAR STORM, add 40L/s from Catchment 100

equivalent pipe

area from GM Blue Plan Report Catchment 2 less area 101 above

remainder of catchment 3 from GM Blue Plan Report 2.37 HA plus 101 less areas above