



SANITARY SEWER CALCULATION SHEET

Manning's n=0.013

LOCATION				RESIDENTIAL AREA AND POPULATION							COMM		INSTIT		PARK		C+H	INFILTRATION			TOTAL	PIPE							
STREET		FROM M.H.	TO M.H.	AREA (ha)	UNITS	POP.	CUMULATIVE		PEAK FACT.	PEAK FLOW (l/s)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	PEAK FLOW (l/s)	TOTAL AREA (ha)	ACCU. AREA (ha)	INFILT. FLOW (l/s)	TOTAL FLOW (l/s)	DIST (m)	DIA (mm)	SLOPE (%)	CAP. (FULL) (l/s)	RATIO Q act/Q cap	VEL.		
							AREA (ha)	POP.																			(FULL) (m/s)	(ACT.) (m/s)	
STREET 20																													
		200A	201A	0.26	12	32	0.26	32	3.7	0.38		0.00		0.00		0.00	0.00	0.26	0.26	0.09	0.47	45.0	200	0.65	26.44	0.02	0.84	0.32	
To STREET 19, Pipe 201A - 202A							0.26	32				0.00		0.00		0.00			0.26										
		206A	207A	0.33	15	41	0.33	41	3.7	0.49		0.00		0.00		0.00	0.00	0.33	0.33	0.11	0.60	51.0	200	0.75	28.40	0.02	0.90	0.36	
		207A	209A	0.75	37	100	1.08	141	3.6	1.63		0.00		0.00		0.00	0.00	0.75	1.08	0.36	1.98	119.5	200	0.35	19.40	0.10	0.62	0.40	
		209A	210A	0.13	4	11	1.21	152	3.6	1.75		0.00		0.00		0.00	0.00	0.13	1.21	0.40	2.15	10.5	200	0.35	19.40	0.11	0.62	0.40	
		210A	211A	0.17	6	16	1.38	168	3.5	1.93		0.00		0.00		0.00	0.00	0.17	1.38	0.46	2.38	52.5	200	0.35	19.40	0.12	0.62	0.42	
To STREET 19, Pipe 211A - 234A							1.38	168				0.00		0.00		0.00			1.38										
STREET 19																													
		236A	237A	0.20	8	22	0.20	22	3.7	0.26		0.00		0.00		0.00	0.00	0.20	0.20	0.07	0.33	39.5	200	0.65	26.44	0.01	0.84	0.28	
		237A	238A	0.14	4	11	0.34	33	3.7	0.39		0.00		0.00		0.00	0.00	0.14	0.34	0.11	0.51	11.0	200	0.35	19.40	0.03	0.62	0.26	
		238A	239A	0.56	27	73	0.90	106	3.6	1.23		0.00		0.00		0.00	0.00	0.56	0.90	0.30	1.53	90.5	200	0.35	19.40	0.08	0.62	0.36	
		239A	240A	0.57	27	73	1.47	179	3.5	2.05		0.00		0.00		0.00	0.00	0.57	1.47	0.49	2.53	95.0	200	0.35	19.40	0.13	0.62	0.42	
		240A	241A	0.50	23	62	1.97	241	3.5	2.73		0.00		0.00		0.00	0.00	0.50	1.97	0.65	3.38	103.5	200	0.35	19.40	0.17	0.62	0.46	
To STREET 16, Pipe 241A - 242A							1.97	241				0.00		0.00		0.00			1.97										
Contribution From STREET 20, Pipe 200A - 201A							0.26	32				0.00		0.00		0.00		0.26	0.26										
		201A	202A	0.19	7	19	0.45	51	3.7	0.60		0.00		0.00		0.00	0.00	0.19	0.45	0.15	0.75	52.5	200	0.35	19.40	0.04	0.62	0.29	
		202A	203A	0.14	2	7	0.59	58	3.6	0.68		0.00		0.00		0.00	0.00	0.14	0.59	0.19	0.88	11.0	200	1.35	38.11	0.02	1.21	0.49	
		203A	204A	0.43	11	37	1.02	95	3.6	1.11		0.00		0.00		0.00	0.00	0.43	1.02	0.34	1.44	76.5	200	1.35	38.11	0.04	1.21	0.57	
		204A	205A	0.51	13	44	1.53	139	3.6	1.60		0.00		0.00		0.00	0.00	0.51	1.53	0.50	2.11	83.5	200	0.35	19.40	0.11	0.62	0.40	
		205A	211A	0.36	10	34	1.89	173	3.5	1.98		0.00		0.00		0.00	0.00	0.36	1.89	0.62	2.61	68.5	200	0.35	19.40	0.13	0.62	0.43	
Contribution From STREET 20, Pipe 210A - 211A							1.38	168				0.00		0.00		0.00		1.38	3.27										
		211A	234A	0.22	5	17	3.49	358	3.4	3.99		0.00		0.00		0.00	0.00	0.22	3.49	1.15	5.14	63.0	200	0.35	19.40	0.26	0.62	0.52	
To STREET 16, Pipe 234A - 235A							3.49	358				0.00		0.00		0.00			3.49										
STREET 14																													
		229A	230A	0.12	3	8	0.12	8	3.7	0.10		0.00		0.00		0.00	0.00	0.12	0.12	0.04	0.14	29.5	200	0.65	26.44	0.01	0.84	0.22	
		230A	231A	0.15	6	16	0.27	24	3.7	0.29		0.00		0.00		0.00	0.00	0.15	0.27	0.09	0.38	27.5	200	0.35	19.40	0.02	0.62	0.24	
		231A	232A	0.53	25	68	0.80	92	3.6	1.07		0.00		0.00		0.00	0.00	0.53	0.80	0.26	1.34	90.5	200	0.35	19.40	0.07	0.62	0.35	
		232A	233A	0.49	23	62	1.29	154	3.5	1.77		0.00		0.00		0.00	0.00	0.49	1.29	0.43	2.20	89.5	200	0.35	19.40	0.11	0.62	0.41	
To STREET 16, Pipe 233A - 234A							1.29	154				0.00		0.00		0.00			1.29										
STREET 17																													
				0.12		0	0.12	0				0.00		0.00		0.00		0.12	0.12										
		224A	225A	0.15	3	10	0.27	10	3.7	0.12		0.00		0.00		0.00	0.00	0.15	0.27	0.09	0.21	39.0	200	0.65	26.44	0.01	0.84	0.24	
				0.49	11	37	0.76	47				0.00		0.00		0.00		0.49	0.76										
		225A	226A	0.68		79	1.44	126	3.6	1.46		0.00		0.00		0.00	0.00	0.68	1.44	0.48	1.93	93.0	200	0.35	19.40	0.10	0.62	0.39	
		226A	227A	0.14	2	7	1.58	133	3.6	1.54		0.00		0.00		0.00	0.00	0.14	1.58	0.52	2.06	11.5	200	0.35	19.40	0.11	0.62	0.40	
		227A	228A	0.17	3	10	1.75	143	3.6	1.65		0.00		0.00		0.00	0.00	0.17	1.75	0.58	2.23	52.0	200	0.35	19.40	0.11	0.62	0.41	
To STREET 18, Pipe 228A - 233A							1.75	143				0.00		0.00		0.00			1.75										
STREET 18																													
				0.10		0	0.10	0				0.00		0.00	0.95	0.95		1.05	1.05										
		222A	223A	0.42	20	54	0.52	54	3.6	0.64		0.00		0.00		0.95	0.10	0.42	1.47	0.49	1.23	76.5	200	0.35	19.40	0.06	0.62	0.34	
		223A	228A	0.44	22	59	0.96	113	3.6	1.31		0.00		0.00		0.95	0.10	0.44	1.91	0.63	2.04	76.5	200	0.35	19.40	0.11	0.62	0.40	
DESIGN PARAMETERS														Designed: A.S.				PROJECT: STITTSVILLE SOUTH URBAN EXPANSION AREA											
Park Flow =		9300	L/ha/day	0.10764		l/s/Ha		Industrial Peak Factor = as per MOE Graph						Checked: W.L.				LOCATION: City of Ottawa											
Average Daily Flow =		280	l/p/day					Extraneous Flow = 0.330 L/s/ha																					
Comm/Inst Flow =		28000	L/ha/day	0.3241		l/s/Ha																							
Industrial Flow =		35000	L/ha/day	0.40509		l/s/Ha																							
Max Res. Peak Factor =		4.00					Manning's n = (Conc) 0.013 (Pvc) 0.013																						
Commercial/Inst./Park Peak Factor =		1.00					Townhouse coeff= 2.7																						
Institutional =		0.32	l/s/Ha				Single house coeff= 3.4						Dwg. Reference: Sanitary Servicing Plan, Dwg. No. 4				File Ref: 21-1247				Date: Mar 2025		Sheet No. of		1 8				

SANITARY SEWER CALCULATION SHEET																														
Manning's n=0.013																														
LOCATION			RESIDENTIAL AREA AND POPULATION								COMM		INSTIT		PARK		C+I	INFILTRATION						PIPE						
STREET		FROM M.H.	TO M.H.	AREA (ha)	UNITS	POP.	CUMULATIVE		PEAK FACT.	PEAK FLOW (l/s)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	PEAK FLOW (l/s)	TOTAL AREA (ha)	ACCU. AREA (ha)	INFILT. FLOW (l/s)	TOTAL FLOW (l/s)	DIST (m)	DIA (mm)	SLOPE (%)	CAP. (FULL) (l/s)	RATIO Q act/Q cap	VEL.			
							AREA (ha)	POP.																			(FULL) (m/s)	(ACT.) (m/s)		
							1.75	143				0.00		0.00		0.00		1.75	3.66											
Contribution From STREET 17, Pipe 227A - 228A						2.91	275	3.5	3.10		0.00		0.00	0.95	0.10	0.20	3.86	1.27	4.47	63.0	200	0.35	19.40	0.23	0.62	0.50				
To STREET 16, Pipe 233A - 234A						2.91	275				0.00		0.00	0.95			3.86													
STREET 15																														
			0.21	3	10	0.21	10				0.00		0.00		0.00		0.21	0.21												
		215A	216A	1.17		135	1.38	145	3.6	1.67		0.00		0.00	0.00	0.00	1.17	1.38	0.46	2.13	36.0	200	0.65	26.44	0.08	0.84	0.50			
		216A	217A	0.27	5	17	1.65	162	3.5	1.86		0.00		0.00	0.00	0.00	0.27	1.65	0.54	2.41	65.0	200	0.35	19.40	0.12	0.62	0.42			
To STREET 13, Pipe 217A - 220A						1.65	162				0.00		0.00		0.00		1.65													
STREET 13																														
			0.10	4	11	0.10	11				0.00		0.00		0.00		0.10	0.10												
			0.19	3	10	0.29	21				0.00		0.00		0.00		0.19	0.29												
		212A	213A	0.19		0	0.48	21	3.7	0.25		0.00		0.00		0.00	0.19	0.48	0.16	0.41	35.5	200	0.65	26.44	0.02	0.84	0.30			
			0.25	10	27	0.73	48				0.00		0.00		0.00		0.25	0.73												
		213A	214A	0.31	7	24	1.04	72	3.6	0.85		0.00		0.00	0.00	0.00	0.31	1.04	0.34	1.19	95.5	200	0.35	19.40	0.06	0.62	0.34			
			0.19	5	17	1.23	89				0.00		0.00		0.00		0.19	1.23												
		214A	217A	0.20	9	24	1.43	113	3.6	1.31		0.00		0.00	0.00	0.00	0.20	1.43	0.47	1.78	64.0	200	0.35	19.40	0.09	0.62	0.38			
Contribution From STREET 15, Pipe 216A - 217A						1.65	162				0.00		0.00		0.00		1.65	3.08												
			0.06		0	3.14	275				0.00		0.00		0.00		0.06	3.14												
		217A	220A	0.19	8	22	3.33	297	3.5	3.33		0.00		0.00	0.00	0.00	0.19	3.33	1.10	4.43	63.0	200	0.35	19.40	0.23	0.62	0.50			
To STREET 16, Pipe 220A - 233A						3.33	297				0.00		0.00		0.00		3.33													
STREET 16																														
		218A	219A	0.25	6	20	0.25	20	3.7	0.24		0.00		0.00	0.00	0.00	0.25	0.25	0.08	0.32	24.5	200	0.65	26.44	0.01	0.84	0.28			
		219A	220A	0.40	9	31	0.65	51	3.7	0.60		0.00		0.00	0.00	0.00	0.40	0.65	0.21	0.82	68.0	250	0.25	29.73	0.03	0.61	0.26			
Contribution From STREET 13, Pipe 217A - 220A						3.33	297				0.00		0.00		0.00		3.33	3.98												
		220A	233A	0.25	5	17	4.23	365	3.4	4.06		0.00		0.00	0.00	0.00	0.25	4.23	1.40	5.46	63.0	300	0.20	43.25	0.13	0.61	0.41			
Contribution From STREET 18, Pipe 228A - 233A						2.91	275				0.00		0.00		0.95		3.86	8.09												
Contribution From STREET 14, Pipe 232A - 233A						1.29	154				0.00		0.00		0.00		1.29	9.38												
			0.12		0	8.55	794				0.00		0.00		0.95		0.12	9.50												
		233A	234A	1.85	178	409	10.40	1203	3.2	12.47		0.00		0.00	0.95	0.10	1.85	11.35	3.75	16.31	60.0	300	0.20	43.25	0.38	0.61	0.57			
Contribution From STREET 19, Pipe 211A - 234A						3.49	358				0.00		0.00		0.00		3.49	14.84												
		234A	235A	0.23	7	19	14.12	1580	3.1	16.03		0.00		0.00	0.95	0.10	0.23	15.07	4.97	21.10	58.0	300	0.20	43.25	0.49	0.61	0.61			
		235A	241A	0.26	8	22	14.38	1602	3.1	16.23		0.00		0.00	0.95	0.10	0.26	15.33	5.06	21.40	62.0	300	0.20	43.25	0.49	0.61	0.61			
Contribution From STREET 19, Pipe 240A - 241A						1.97	241				0.00		0.00		0.00		1.97	17.30												
		241A	242A	0.03		0	16.38	1843	3.1	18.46		0.00		0.00	0.95	0.10	0.03	17.33	5.72	24.28	17.0	300	0.20	43.25	0.56	0.61	0.63			
		242A	243A	0.04		0	16.42	1843	3.1	18.46		0.00		0.00	0.95	0.10	0.04	17.37	5.73	24.29	15.5	300	0.20	43.25	0.56	0.61	0.63			
		243A	265A	0.07		0	16.49	1843	3.1	18.46		0.00		0.00	0.95	0.10	0.07	17.44	5.76	24.32	37.0	300	0.20	43.25	0.56	0.61	0.63			
To STREET 21, Pipe 265A - 266A						16.49	1843				0.00		0.00		0.95		17.44													
STREET 23																														
		250A	251A	0.19	4	14	0.19	14	3.7	0.17		0.00		0.00		0.00	0.19	0.19	0.06	0.23	39.5	200	0.65	26.44	0.01	0.84	0.26			
To STREET 22, Pipe 251A - 254A						0.19	14				0.00		0.00		0.00		0.19													
		259A	260A	0.13	3	10	0.13	10	3.7	0.12		0.00		0.00	0.00	0.00	0.13	0.13	0.04	0.16	25.0	200	0.65	26.44	0.01	0.84	0.23			
		260A	261A	0.10	1	3	0.23	13	3.7	0.16		0.00		0.00	0.00	0.00	0.10	0.23	0.08	0.23	11.0	200	0.35	19.40	0.01	0.62	0.21			
DESIGN PARAMETERS														Designed: A.S.				PROJECT: STITTSVILLE SOUTH URBAN EXPANSION AREA												
Park Flow = 9300 L/ha/da Average Daily Flow = 280 l/p/day Comm/Inst Flow = 28000 L/ha/da Industrial Flow = 35000 L/ha/da Max Res. Peak Factor = 4.00 Commercial/Inst./Park Peak Factor = 1.00 Institutional = 0.32 I/s/Ha														Industrial Peak Factor = as per MOE Graph Extraneous Flow = 0.330 L/s/ha Minimum Velocity = 0.600 m/s Manning's n = (Conc) 0.013 (Pvc) 0.013 Townhouse coeff= 2.7 Single house coeff= 3.4				LOCATION: City of Ottawa												
														Dwg. Reference: Sanitary Servicing Plan, Dwg. No. 4				File Ref: 21-1247				Date: Mar 2025		Sheet No. 2		of 8				

SANITARY SEWER CALCULATION SHEET																																
Manning's n=0.013																																
LOCATION				RESIDENTIAL AREA AND POPULATION								COMM		INSTIT		PARK		C+H	INFILTRATION						PIPE							
STREET		FROM M.H.	TO M.H.	AREA (ha)	UNITS	POP.	CUMULATIVE		PEAK FACT.	PEAK FLOW (l/s)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	PEAK FLOW (l/s)	TOTAL AREA (ha)	ACCU. AREA (ha)	INFILT. FLOW (l/s)	TOTAL FLOW (l/s)	DIST (m)	DIA (mm)	SLOPE (%)	CAP. (FULL) (l/s)	RATIO Q act/Q cap	VEL.					
							AREA (ha)	POP.																			(FULL) (m/s)	(ACT.) (m/s)				
		244A	245A	0.54	14	48	0.54	48	3.7	0.57		0.00		0.00		0.00	0.00	0.54	0.54	0.18	0.75	86.5	200	0.65	26.44	0.03	0.84	0.37				
		245A	246A	0.14	2	7	0.68	55	3.6	0.65		0.00		0.00		0.00	0.00	0.14	0.68	0.22	0.87	11.0	200	0.35	19.40	0.05	0.62	0.31				
		246A	251A	0.52	12	41	1.20	96	3.6	1.12		0.00		0.00		0.00	0.00	0.52	1.20	0.40	1.52	98.5	200	0.35	19.40	0.08	0.62	0.36				
To STREET 22, Pipe 251A - 254A							1.20	96				0.00		0.00		0.00			1.20													
		255A	256A	0.36	7	24	0.36	24	3.7	0.29		0.00		0.00		0.00	0.00	0.36	0.36	0.12	0.41	50.0	200	0.65	26.44	0.02	0.84	0.30				
		256A	257A	0.10	2	7	0.46	31	3.7	0.37		0.00		0.00		0.00	0.00	0.10	0.46	0.15	0.52	28.5	200	0.35	19.40	0.03	0.62	0.26				
		257A	258A	0.51	13	44	0.97	75	3.6	0.88		0.00		0.00		0.00	0.00	0.51	0.97	0.32	1.20	78.0	200	0.35	19.40	0.06	0.62	0.34				
		258A	261A	0.40	10	34	1.37	109	3.6	1.27		0.00		0.00		0.00	0.00	0.40	1.37	0.45	1.72	74.5	200	0.35	19.40	0.09	0.62	0.38				
		261A	262A	0.19	4	14	1.79	136	3.6	1.57		0.00		0.00		0.00	0.00	0.19	1.79	0.59	2.16	50.5	200	0.35	19.40	0.11	0.62	0.41				
		262A	263A	0.05		0	1.84	136	3.6	1.57		0.00		0.00		0.00	0.00	0.05	1.84	0.61	2.18	34.0	200	0.35	19.40	0.11	0.62	0.41				
To STREET 21, Pipe 263A - 264A							1.84	136				0.00		0.00		0.00			1.84													
STREET 26																																
		247A	248A	0.24	5	17	0.24	17	3.7	0.20		0.00		0.00		0.00	0.00	0.24	0.24	0.08	0.28	45.5	200	0.65	26.44	0.01	0.84	0.27				
		248A	249A	0.34	7	24	0.58	41	3.7	0.49		0.00		0.00		0.00	0.00	0.34	0.58	0.19	0.68	69.5	200	0.35	19.40	0.03	0.62	0.29				
To STREET 22, Pipe 249A - 251A							0.58	41				0.00		0.00		0.00			0.58													
STREET 22																																
Contribution From STREET 26, Pipe 248A - 249A							0.58	41				0.00		0.00		0.00		0.58	0.58													
		249A	251A				0.58	41	3.7	0.49		0.00		0.00		0.00	0.00	0.00	0.58	0.19	0.68	9.0	200	0.35	19.40	0.03	0.62	0.29				
Contribution From STREET 23, Pipe 246A - 251A							1.20	96				0.00		0.00		0.00		1.20	1.78													
Contribution From STREET 23, Pipe 250A - 251A							0.19	14				0.00		0.00		0.00		0.19	1.97													
		251A	254A	0.10		0	2.07	151	3.6	1.74		0.00		0.00		0.00	0.10	2.07	0.68	2.42	63.0	200	0.35	19.40	0.12	0.62	0.42					
To STREET 21, Pipe 254A - 263A							2.07	151				0.00		0.00		0.00			2.07													
STREET 21																																
		252A	253A	0.43	10	34	0.43	34	3.7	0.41		0.00		0.00		0.00	0.00	0.43	0.43	0.14	0.55	51.0	200	0.65	26.44	0.02	0.84	0.33				
		253A	254A	0.44	10	34	0.87	68	3.6	0.80		0.00		0.00		0.00	0.00	0.44	0.87	0.29	1.09	73.5	200	0.35	19.40	0.06	0.62	0.33				
Contribution From STREET 22, Pipe 251A - 254A							2.07	151				0.00		0.00		0.00		2.07	2.94													
		254A	263A	0.72	17	58	3.66	277	3.5	3.12		0.00		0.00		0.00	0.00	0.72	3.66	1.21	4.33	118.5	200	0.35	19.40	0.22	0.62	0.50				
Contribution From STREET 23, Pipe 262A - 263A							1.84	136				0.00		0.00		0.00		1.84	5.50													
		263A	264A	0.28	8	27	5.78	440	3.4	4.85		0.00		0.00		0.00	0.00	0.28	5.78	1.91	6.76	44.0	200	0.35	19.40	0.35	0.62	0.56				
		264A	265A	0.07	1	3	5.85	443	3.4	4.88		0.00		0.00		0.00	0.00	0.07	5.85	1.93	6.81	16.0	200	0.35	19.40	0.35	0.62	0.56				
Contribution From STREET 16, Pipe 243A - 265A							16.49	1843				0.00		0.00		0.95		17.44	23.29													
		265A	266A	0.05		0	22.39	2286	3.0	22.46		0.00		0.00		0.95	0.10	0.05	23.34	7.70	30.27	28.0	300	0.20	43.25	0.70	0.61	0.66				
		266A	267A	0.16		0	22.55	2286	3.0	22.46		0.00		0.00		0.95	0.10	0.16	23.50	7.76	30.32	89.0	300	0.20	43.25	0.70	0.61	0.66				
				0.06	1	3	22.61	2289				0.00		0.00		0.95		0.06	23.56													
		267A	268A	0.16	2	7	22.77	2296	3.0	22.55		0.00		0.00		0.95	0.10	0.16	23.72	7.83	30.48	20.0	300	0.20	43.25	0.70	0.61	0.66				
		268A	272A	0.26	4	14	23.03	2310	3.0	22.68		0.00		0.00		0.95	0.10	0.26	23.98	7.91	30.69	79.5	300	0.20	43.25	0.71	0.61	0.66				
To STREET 24, Pipe 272A - 273A							23.03	2310				0.00		0.00		0.95			23.98													
STREET 24																																
		275A	276A	0.18	4	14	0.18	14	3.7	0.17		0.00		0.00		0.00	0.00	0.18	0.18	0.06	0.23	38.5	200	0.65	26.44	0.01	0.84	0.26				
		276A	277A	0.14	2	7	0.32	21	3.7	0.25		0.00		0.00		0.00	0.00	0.14	0.32	0.11	0.36	11.0	200	0.35	19.40	0.02	0.62	0.23				
		277A	279A	0.60	14	48	0.92	69	3.6	0.81		0.00		0.00		0.00	0.00	0.60	0.92	0.30	1.11	109.5	200	0.35	19.40	0.06	0.62	0.33				
		279A	280A	0.02		0	0.94	69	3.6	0.81		0.00		0.00		0.00	0.00	0.02	0.94	0.31	1.12	11.0	200	0.35	19.40	0.06	0.62	0.33				
DESIGN PARAMETERS														Designed: A.S.					PROJECT: STITTSVILLE SOUTH URBAN EXPANSION AREA													
Park Flow = 9300 L/ha/day Average Daily Flow = 280 l/p/day Comm/Inst Flow = 28000 L/ha/day Industrial Flow = 35000 L/ha/day Max Res. Peak Factor = 4.00 Commercial/Inst./Park Peak Factor = 1.00 Institutional = 0.32 l/s/Ha														Checked: W.L.					LOCATION: City of Ottawa													
Industrial Peak Factor = as per MOE Graph Extraneous Flow = 0.330 L/s/ha Minimum Velocity = 0.600 m/s Manning's n = (Conc) 0.013 (Pvc) 0.013 Townhouse coeff= 2.7 Single house coeff= 3.4														Dwg. Reference: Sanitary Servicing Plan, Dwg. No. 4					File Ref: 21-1247				Date: Mar 2025				Sheet No. of		3 8			

SANITARY SEWER CALCULATION SHEET																														
Manning's n=0.013																														
LOCATION			RESIDENTIAL AREA AND POPULATION								COMM		INSTIT		PARK		C+H	INFILTRATION					PIPE							
STREET		FROM M.H.	TO M.H.	AREA (ha)	UNITS	POP.	CUMULATIVE		PEAK FACT.	PEAK FLOW (l/s)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	PEAK FLOW (l/s)	TOTAL AREA (ha)	ACCU. AREA (ha)	INFILT. FLOW (l/s)	TOTAL FLOW (l/s)	DIST (m)	DIA (mm)	SLOPE (%)	CAP. (FULL) (l/s)	RATIO Q act/Q cap	VEL.			
							AREA (ha)	POP.																			(FULL) (m/s)	(ACT.) (m/s)		
		280A	281A	0.12	1	3	1.06	72	3.6	0.85		0.00		0.00		0.00	0.00	0.12	1.06	0.35	1.20	44.5	200	0.35	19.40	0.06	0.62	0.34		
		281A	282A	0.16	4	14	1.22	86	3.6	1.01		0.00		0.00		0.00	0.00	0.16	1.22	0.40	1.41	11.0	200	0.35	19.40	0.07	0.62	0.36		
		282A	283A	0.50	12	41	1.72	127	3.6	1.47		0.00		0.00		0.00	0.00	0.50	1.72	0.57	2.04	79.5	200	0.35	19.40	0.10	0.62	0.40		
		283A	284A	0.53	15	51	2.25	178	3.5	2.04		0.00		0.00		0.00	0.00	0.53	2.25	0.74	2.78	87.0	200	0.35	19.40	0.14	0.62	0.44		
To SANITARY OUTLET 2, Pipe 284A - 285A						2.25	178					0.00		0.00		0.00			2.25											
		270A	271A	0.53	7	24	0.53	24	3.7	0.29		0.00		0.00		0.00	0.00	0.53	0.53	0.17	0.46	31.5	200	0.65	26.44	0.02	0.84	0.32		
		271A	272A	0.06	1	3	0.59	27	3.7	0.32		0.00		0.00		0.00	0.00	0.06	0.59	0.19	0.52	19.5	250	0.25	29.73	0.02	0.61	0.23		
Contribution From STREET 21, Pipe 268A - 272A						23.03	2310					0.00		0.00		0.95		23.98	24.57											
				0.04		0	23.66	2337				0.00		0.00		0.95		0.04	24.61											
		272A	273A	0.59	14	48	24.25	2385	3.0	23.34		0.00		0.00		0.95	0.10	0.59	25.20	8.32	31.76	113.5	300	0.20	43.25	0.73	0.61	0.67		
		273A	284A	0.14	2	7	24.39	2392	3.0	23.40		0.00		0.00		0.95	0.10	0.14	25.34	8.36	31.87	13.0	300	0.20	43.25	0.74	0.61	0.67		
To SANITARY OUTLET 2, Pipe 284A - 285A						24.39	2392					0.00		0.00		0.95			25.34											
SANITARY OUTLET 2																														
Contribution From STREET 24, Pipe 273A - 284A						24.39	2392					0.00		0.00		0.95		25.34	25.34											
Contribution From STREET 24, Pipe 283A - 284A						2.25	178					0.00		0.00		0.00		2.25	27.59											
		284A	285A				26.64	2570	3.0	24.98		0.00		0.00		0.95	0.10	0.00	27.59	9.10	34.18	31.0	300	0.20	43.25	0.79	0.61	0.68		
		285A	286A				26.64	2570	3.0	24.98		0.00		0.00		0.95	0.10	0.00	27.59	9.10	34.18	22.5	300	0.20	43.25	0.79	0.61	0.68		
		286A	287A				26.64	2570	3.0	24.98		0.00		0.00		0.95	0.10	0.00	27.59	9.10	34.18	2.5	450	2.50	450.79	0.08	2.83	1.66		
To SANITARY OUTLET 1, Pipe 287A - 288A						26.64	2570					0.00		0.00		0.95			27.59											
STREET 2																														
		160A	161A	0.24	8	22	0.24	22	3.7	0.26		0.00		0.00		0.00	0.00	0.24	0.24	0.08	0.34	48.0	200	0.65	26.44	0.01	0.84	0.28		
To STREET 1, Pipe 161A - 162A						0.24	22					0.00		0.00		0.00			0.24											
		164A	165A	0.57	27	73	0.57	73	3.6	0.86		0.00		0.00		0.00	0.00	0.57	0.57	0.19	1.05	78.0	200	0.65	26.44	0.04	0.84	0.41		
		165A	166A	0.44	22	59	1.01	132	3.6	1.53		0.00		0.00		0.00	0.00	0.44	1.01	0.33	1.86	81.0	200	0.35	19.40	0.10	0.62	0.39		
To STREET 3, Pipe 166A - 169A						1.01	132					0.00		0.00		0.00			1.01											
STREET 1																														
				0.09	2	7	0.09	7				0.00		0.00		0.00		0.09	0.09											
		167A	168A	0.54	27	73	0.63	80	3.6	0.94		0.00		0.00		0.00	0.00	0.54	0.63	0.21	1.15	109.5	200	0.65	26.44	0.04	0.84	0.42		
		168A	169A	0.63	31	84	1.26	164	3.5	1.88		0.00		0.00		0.00	0.00	0.63	1.26	0.42	2.30	112.5	200	0.35	19.40	0.12	0.62	0.41		
To STREET 4, Pipe 169A - 170A						1.26	164					0.00		0.00		0.00			1.26											
		157A	158A	0.74	18	61	0.74	61	3.6	0.72		0.00		0.00		0.00	0.00	0.74	0.74	0.24	0.96	104.5	200	0.65	26.44	0.04	0.84	0.40		
		158A	159A	0.14	2	7	0.88	68	3.6	0.80		0.00		0.00		0.00	0.00	0.14	0.88	0.29	1.09	11.0	200	1.40	38.81	0.03	1.24	0.54		
		159A	161A	0.20	4	14	1.08	82	3.6	0.96		0.00		0.00		0.00	0.00	0.20	1.08	0.36	1.32	52.0	200	2.60	52.89	0.02	1.68	0.70		
Contribution From STREET 2, Pipe 160A - 161A						0.24	22					0.00		0.00		0.00		0.24	1.32											
				0.22	11	30	1.54	134				0.00		0.00		0.00		0.22	1.54											
		161A	162A	0.26	7	24	1.80	158	3.5	1.82		0.00		0.00		0.00	0.00	0.26	1.80	0.59	2.41	83.0	200	0.35	19.40	0.12	0.62	0.42		
				0.24	12	32	2.04	190				0.00		0.00		0.00		0.24	2.04											
		162A	163A	0.25	7	24	2.29	214	3.5	2.43		0.00		0.00		0.00	0.00	0.25	2.29	0.76	3.19	88.0	200	0.35	19.40	0.16	0.62	0.45		
To STREET 3, Pipe 163A - 166A						2.29	214					0.00		0.00		0.00			2.29											
STREET 5																														
		128A	123A	0.51	14	48	0.51	48	3.7	0.57		0.00		0.00		0.00	0.00	0.51	0.51	0.17	0.74	96.0	200	0.65	26.44	0.03	0.84	0.36		
DESIGN PARAMETERS													Designed:					PROJECT:												
Park Flow =		9300	L/ha/da	0.10764	I/s/Ha								A.S.					STITTSVILLE SOUTH URBAN EXPANSION AREA												
Average Daily Flow =		280	I/p/day								Industrial Peak Factor = as per MOE Graph																			
Comm/Inst Flow =		28000	L/ha/da	0.3241	I/s/Ha																									
Industrial Flow =		35000	L/ha/da	0.40509	I/s/Ha								Minimum Velocity =																	
Max Res. Peak Factor =		4.00									Manning's n = (Conc)					0.013 (Pvc) 0.013														
Commercial/Inst./Park Peak Factor =		1.00									Townhouse coeff=					2.7														
Institutional =		0.32	I/s/Ha								Single house coeff=					3.4														
													Dwg. Reference:					File Ref:				Date:		Sheet No.		4				
													Sanitary Servicing Plan, Dwg. No. 4					21-1247				Mar 2025		of		8				

SANITARY SEWER CALCULATION SHEET																													
Manning's n=0.013																													
LOCATION			RESIDENTIAL AREA AND POPULATION								COMM		INSTIT		PARK		C+I+I	INFILTRATION					PIPE						
STREET		FROM M.H.	TO M.H.	AREA	UNITS	POP.	CUMULATIVE		PEAK FACT.	PEAK FLOW (l/s)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	PEAK FLOW (l/s)	TOTAL AREA (ha)	ACCU. AREA (ha)	INFILT. FLOW (l/s)	TOTAL FLOW (l/s)	DIST (m)	DIA (mm)	SLOPE (%)	CAP. (FULL) (l/s)	RATIO Q act/Q cap	VEL.		
							AREA (ha)	POP.																			(FULL) (m/s)	(ACT.) (m/s)	
		123A	122A	0.64	17	58	1.15	106	3.6	1.23		0.00		0.00		0.00	0.00	0.64	1.15	0.38	1.61	102.0	200	0.35	19.40	0.08	0.62	0.37	
		122A	121A	0.14	2	7	1.29	113	3.6	1.31		0.00		0.00		0.00	0.00	0.14	1.29	0.43	1.74	11.0	200	0.35	19.40	0.09	0.62	0.38	
		121A	120A	0.20	4	14	1.49	127	3.6	1.47		0.00		0.00		0.00	0.00	0.20	1.49	0.49	1.96	52.0	200	0.35	19.40	0.10	0.62	0.39	
Contribution From STREET 4, Pipe 125A - 120A							1.47	126			0.00		0.00		0.00		1.47	2.96											
		120A	119A	0.20	4	14	3.16	267	3.5	3.01		0.00		0.00		0.00	0.00	0.20	3.16	1.04	4.05	60.0	200	0.35	19.40	0.21	0.62	0.49	
To STREET 8, Pipe 119A - 156A							3.16	267			0.00		0.00		0.00			3.16											
STREET 7																													
		147A	148A	0.23	4	14	0.23	14	3.7	0.17		0.00		0.00		0.00	0.00	0.23	0.23	0.08	0.24	48.0	200	0.65	26.44	0.01	0.84	0.26	
To STREET 6, Pipe 148A - 149A							0.23	14			0.00		0.00		0.00			0.23											
		151A	152A	0.58	13	44	0.58	44	3.7	0.52		0.00		0.00		0.00	0.58	0.58	0.19	0.71	76.0	200	0.65	26.44	0.03	0.84	0.36		
		152A	153A	0.42	12	41	1.00	85	3.6	0.99		0.00		0.00		0.00	0.42	1.00	0.33	1.32	79.0	200	0.35	19.40	0.07	0.62	0.35		
To STREET 3, Pipe 153A - 156A							1.00	85			0.00		0.00		0.00			1.00											
STREET 6																													
		154A	155A	0.78	19	65	0.78	65	3.6	0.77		0.00		0.00		0.00	0.78	0.78	0.26	1.02	109.0	200	0.65	26.44	0.04	0.84	0.40		
		155A	156A	0.61	17	58	1.39	123	3.6	1.42		0.00		0.00		0.00	0.61	1.39	0.46	1.88	110.5	200	0.35	19.40	0.10	0.62	0.39		
To STREET 3, Pipe 156A - 163A							1.39	123			0.00		0.00		0.00			1.39											
		144A	145A	0.64	14	47	0.64	47	3.7	0.56		0.00		0.00		0.00	0.64	0.64	0.21	0.77	96.0	200	0.70	27.44	0.03	0.87	0.37		
		145A	146A	0.14	2	7	0.78	54	3.6	0.64		0.00		0.00		0.00	0.14	0.78	0.26	0.90	11.0	200	0.75	28.40	0.03	0.90	0.41		
		146A	148A	0.23																									

SANITARY SEWER CALCULATION SHEET

Manning's $n=0.013$

LOCATION				RESIDENTIAL AREA AND POPULATION							COMM		INSTIT		PARK		C+H	INFILTRATION					PIPE						
STREET		FROM M.H.	TO M.H.	AREA (ha)	UNITS	POP.	CUMULATIVE		PEAK FACT.	PEAK FLOW (l/s)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	PEAK FLOW (l/s)	TOTAL AREA (ha)	ACCU. AREA (ha)	INFILT. FLOW (l/s)	TOTAL FLOW (l/s)	DIST (m)	DIA (mm)	SLOPE (%)	CAP. (FULL) (l/s)	RATIO Q act/Q cap	VEL.		
							AREA (ha)	POP.																			(FULL) (m/s)	(ACT.) (m/s)	
		134A	137A	0.47	22	59	2.17	228	3.5	2.59		0.00		0.00		0.00	0.00	0.47	2.17	0.72	3.30	86.5	200	0.35	19.40	0.17	0.62	0.46	
To STREET 12, Pipe 137A - 140A							2.17	228				0.00		0.00		0.00			2.17										
STREET 9																													
				0.09		0	0.09	0				0.00		0.00		0.00		0.09	0.09										
		118A	115A	0.46	22	59	0.55	59	3.6	0.70		0.00		0.00		0.00	0.00	0.46	0.55	0.18	0.88	70.5	200	0.65	26.44	0.03	0.84	0.38	
		115A	114A	0.47	24	65	1.02	124	3.6	1.44		0.00		0.00		0.00	0.00	0.47	1.02	0.34	1.77	80.5	200	0.35	19.40	0.09	0.62	0.38	
		114A	113A	0.42	20	54	1.44	178	3.5	2.04		0.00		0.00		0.00	0.00	0.42	1.44	0.48	2.51	80.0	200	0.35	19.40	0.13	0.62	0.42	
To STREET 12, Pipe 113A - 140A							1.44	178				0.00		0.00		0.00			1.44										
STREET 8																													
		116A	117A	0.44	22	59	0.44	59	3.6	0.70		0.00		0.00		0.00	0.00	0.44	0.44	0.15	0.84	64.0	200	0.65	26.44	0.03	0.84	0.38	
		117A	119A	0.29	13	35	0.73	94	3.6	1.10		0.00		0.00		0.00	0.00	0.29	0.73	0.24	1.34	65.5	200	0.35	19.40	0.07	0.62	0.35	
Contribution From STREET 5, Pipe 120A - 119A							3.16	267				0.00		0.00		0.00		3.16	3.89										
		119A	156A				3.89	361	3.4	4.02		0.00		0.00		0.00	0.00	0.00	3.89	1.28	5.30	60.0	200	0.35	19.40	0.27	0.62	0.52	
To STREET 3, Pipe 156A - 163A							3.89	361				0.00		0.00		0.00			3.89										
		100A	101A	0.36	18	49	0.36	49	3.7	0.58		0.00		0.00		0.00	0.00	0.36	0.36	0.12	0.70	53.0	200	0.65	26.44	0.03	0.84	0.36	
		101A	102A	0.16	3	10	0.52	59	3.6	0.70		0.00		0.00		0.00	0.00	0.16	0.52	0.17	0.87	11.0	200	0.35	19.40	0.04	0.62	0.31	
		102A	103A	0.16	3	10	0.68	69	3.6	0.81		0.00		0.00		0.00	0.00	0.16	0.68	0.22	1.04	44.5	200	0.35	19.40	0.05	0.62	0.33	
		103A	104A	0.14	2	7	0.82	76	3.6	0.89		0.00		0.00		0.00	0.00	0.14	0.82	0.27	1.16	11.0	200	0.35	19.40	0.06	0.62	0.34	
		104A	105A	0.39	10	34	1.21	110	3.6	1.28		0.00		0.00		0.00	0.00	0.39	1.21	0.40	1.68	64.5	200	0.35	19.40	0.09	0.62	0.37	
		105A	106A	0.41	10	34	1.62	144	3.6	1.66		0.00		0.00		0.00	0.00	0.41	1.62	0.53	2.19	66.5	200	0.35	19.40	0.11	0.62	0.41	
		106A	107A	0.14	2	7	1.76	151	3.6	1.74		0.00		0.00		0.00	0.00	0.14	1.76	0.58	2.32	11.0	200	0.35	19.40	0.12	0.62	0.41	
		107A	108A	0.33	7	24	2.09	175	3.5	2.00		0.00		0.00		0.00	0.00	0.33	2.09	0.69	2.69	89.5	200	0.35	19.40	0.14	0.62	0.43	
		108A	111A	0.32	6	20	2.41	195	3.5	2.23		0.00		0.00		0.00	0.00	0.32	2.41	0.80	3.02	85.5	200	0.35	19.40	0.16	0.62	0.45	
To STREET 12, Pipe 111A - 113A							2.41	195				0.00		0.00		0.00			2.41										
STREET 12																													
		135A	136A	0.31	5	17	0.31	17	3.7	0.20		0.00		0.00		0.00	0.00	0.31	0.31	0.10	0.31	58.5	200	0.65	26.44	0.01	0.84	0.28	
				0.40	7	24	0.71	41				0.00		0.00		0.00		0.40	0.71										
Contribution From STREET 10, Pipe 134A - 137A			136A	137A	3.24	372	856	3.95	897	3.3	9.49		0.00		0.00		0.00	3.24	3.95	1.30	10.79	85.0	200	0.35	19.40	0.56	0.62	0.63	
							2.17	228				0.00		0.00		0.00		2.17	6.12										
To STREET 3, Pipe 140A - 143A			137A	140A	0.14	1	3	6.26	1128	3.2	11.74		0.00		0.00		0.00	0.14	6.26	2.07	13.81	58.5	300	0.20	43.25	0.32	0.61	0.54	
							6.26	1128				0.00		0.00		0.00			6.26										
				0.09	1	3	0.09	3				0.00		0.00		0.00		0.09	0.09										
		109A	110A	0.11		0	0.20	3	3.8	0.04		0.00		0.00		0.00	0.00	0.11	0.20	0.07	0.10	24.0	200	3.10	57.75	0.00	1.84	0.34	
		110A	111A	0.46	7	24	0.66	27	3.7	0.32		0.00		0.00	2.45	2.45	0.26	2.91	3.11	1.03	1.61	106.5	200	0.40	20.74	0.08	0.66	0.39	
Contribution From STREET 8, Pipe 108A - 111A							2.41	195				0.00		0.00		0.00		2.41	5.52										
			111A	113A	0.25	4	14	3.32	236	3.5	2.67		0.00		0.00		2.45	0.26	0.25	5.77	1.90	4.84	60.0	200	0.35	19.40	0.25	0.62	0.51
Contribution From STREET 9, Pipe 114A - 113A							1.44	178				0.00		0.00		0.00		1.44	7.21										
			113A	140A	0.21	4	14	4.97	428	3.4	4.72		0.00		0.00		2.45	0.26	7.42	2.45	7.44	57.5	200	0.35	19.40	0.38	0.62	0.57	
To STREET 3, Pipe 140A - 143A							4.97	428				0.00		0.00		2.45			7.42										

DESIGN PARAMETERS							Designed:		PROJECT:				
Park Flow =	9300	L/ha/da	0.10764	I/s/Ha			A.S.	STITTSVILLE SOUTH URBAN EXPANSION AREA					
Average Daily Flow =	280	I/p/day	Industrial Peak Factor = as per MOE Graph										
Comm/Inst Flow =	28000	L/ha/da	0.3241	I/s/Ha	Extraneous Flow = 0.330 L/s/ha		Checked:	LOCATION:					
Industrial Flow =	35000	L/ha/da	0.40509	I/s/Ha	Minimum Velocity = 0.600 m/s		W.L.	City of Ottawa					
Max Res. Peak Factor =	4.00				Manning's n = (Conc) 0.013 (Pvc) 0.013								
Commercial/Inst./Park Peak Factor =	1.00				Townhouse coeff= 2.7		Dwg. Reference:	File Ref:	21-1247	Date:	Sheet No.	6	
Institutional =	0.32	I/s/Ha			Single house coeff= 3.4		Sanitary Servicing Plan, Dwg. No. 4			Mar 2025	of	8	

SANITARY SEWER CALCULATION SHEET

Manning's n=0.013

LOCATION			RESIDENTIAL AREA AND POPULATION								COMM	INSTIT		PARK		C+I	INFILTRATION					PIPE									
STREET		FROM M.H.	TO M.H.	AREA	UNITS	POP.	CUMULATIVE		PEAK FACT.	PEAK FLOW (l/s)	AREA	ACCU. AREA (ha)	AREA	ACCU. AREA (ha)	AREA	ACCU. AREA (ha)	PEAK FLOW (l/s)	TOTAL AREA (ha)	ACCU. AREA (ha)	INFILT. FLOW (l/s)	TOTAL FLOW (l/s)	DIST (m)	DIA (mm)	SLOPE (%)	CAP. (FULL) (l/s)	RATIO Q act/Q cap	VEL.				
				(ha)			AREA (ha)	POP.			(ha)	(ha)	(ha)	(ha)	(ha)	(ha)		(ha)	(ha)	(l/s)	(l/s)	(m)	(mm)	(%)	(l/s)		(FULL) (m/s)	(ACT.) (m/s)			
STREET 3																															
Contribution From STREET 12, Pipe 113A - 140A							4.97	428				0.00		0.00		2.45		7.42	7.42												
Contribution From STREET 12, Pipe 137A - 140A							6.26	1128				0.00		0.00		0.00		6.26	13.68												
Contribution From STREET 11, Pipe 139A - 140A							1.01	129				0.00		0.00		0.00		1.01	14.69												
		140A	143A	0.21	8	22	12.45	1707	3.1	17.21		0.00		0.00		2.45	0.26	0.21	14.90	4.92	22.39	61.5	300	0.20	43.25	0.52	0.61	0.62			
Contribution From STREET 10, Pipe 142A - 143A							1.40	164				0.00		0.00		0.00		1.40	16.30												
		143A	150A	0.23	9	24	14.08	1895	3.1	18.93		0.00		0.00		2.45	0.26	0.23	16.53	5.45	24.65	60.0	300	0.20	43.25	0.57	0.61	0.63			
Contribution From STREET 6, Pipe 149A - 150A							2.16	167				0.00		0.00		0.00		2.16	18.69												
		150A	153A	0.22	9	24	16.46	2086	3.1	20.67		0.00		0.00		2.45	0.26	0.22	18.91	6.24	27.17	60.0	300	0.20	43.25	0.63	0.61	0.64			
Contribution From STREET 7, Pipe 152A - 153A							1.00	85				0.00		0.00		0.00		1.00	19.91												
		153A	156A	0.20	7	19	17.66	2190	3.0	21.60		0.00		0.00		2.45	0.26	0.20	20.11	6.64	28.50	60.0	300	0.20	43.25	0.66	0.61	0.65			
Contribution From STREET 8, Pipe 119A - 156A							3.89	361				0.00		0.00		0.00		3.89	24.00												
Contribution From STREET 6, Pipe 155A - 156A							1.39	123				0.00		0.00		0.00		1.39	25.39												
		156A	163A	0.21	8	22	23.15	2696	3.0	26.08		0.00		0.00		2.45	0.26	0.21	25.60	8.45	34.79	60.0	300	0.20	43.25	0.80	0.61	0.68			
Contribution From STREET 1, Pipe 162A - 163A							2.29	214				0.00		0.00		0.00		2.29	27.89												
		163A	166A	0.23	9	24	25.67	2934	3.0	28.15		0.00		0.00		2.45	0.26	0.23	28.12	9.28	37.69	60.0	300	0.20	43.25	0.87	0.61	0.69			
Contribution From STREET 2, Pipe 165A - 166A							1.01	132				0.00		0.00		0.00		1.01	29.13												
		166A	169A	0.20	7	19	26.88	3085	2.9	29.45		0.00		0.00		2.45	0.26	0.20	29.33	9.68	39.39	60.0	300	0.20	43.25	0.91	0.61	0.69			
To STREET 4, Pipe 169A - 170A							26.88	3085				0.00		0.00		2.45			29.33												
STREET 4																															
		128A	174A	0.18	4	14	0.18	14	3.7	0.17		0.00		0.00		0.00	0.00	0.18	0.18	0.06	0.23	44.5	200	0.65	26.44	0.01	0.84	0.26			
To SANITARY OUTLET 1, Pipe 174A - 175A							0.18	14				0.00		0.00		0.00			0.18												
		128A	127A	0.18	4	14	0.18	14	3.7	0.17		0.00		0.00		0.00	0.00	0.18	0.18	0.06	0.23	52.0	200	0.65	26.44	0.01	0.84	0.26			
		127A	126A	0.14	2	7	0.32	21	3.7	0.25		0.00		0.00		0.00	0.00	0.14	0.32	0.11	0.36	11.0	200	0.35	19.40	0.02	0.62	0.23			
		126A	125A	0.61	16	54	0.93	75	3.6	0.88		0.00		0.00		0.00	0.00	0.61	0.93	0.31	1.19	100.0	200	0.35	19.40	0.06	0.62	0.34			
		125A	120A	0.54	15	51	1.47	126	3.6	1.46		0.00		0.00		0.00	0.00	0.54	1.47	0.49	1.94	98.0	200	0.35	19.40	0.10	0.62	0.39			
To STREET 5, Pipe 120A - 119A							1.47	126				0.00		0.00		0.00			1.47												
Contribution From STREET 3, Pipe 166A - 169A							26.88	3085				0.00		0.00		2.45		29.33	29.33												
Contribution From STREET 1, Pipe 168A - 169A							1.26	164				0.00		0.00		0.00		1.26	30.59												
				0.04		0	28.18	3249				0.00		0.00		2.45		0.04	30.63												
				0.22	10	27	28.40	3276				0.00		0.00		2.45		0.22	30.85												
		169A	170A	0.27	8	27	28.67	3303	2.9	31.31		0.00		0.00		2.45	0.26	0.27	31.12	10.27	41.85	94.0	375	0.20	78.41	0.53	0.71	0.72			
				0.23	5	17	28.90	3320				0.00		0.00		2.45		0.23	31.35												
		170A	171A	0.24	12	32	29.14	3352	2.9	31.73		0.00		0.00		2.45	0.26	0.24	31.59	10.42	42.42	82.5	375	0.20	78.41	0.54	0.71	0.72			
				0.25	12	32	29.39	3384				0.00		0.00		2.45		0.25	31.84												
		171A	172A	0.27	8	27	29.66	3411	2.9	32.23		0.00		0.00		2.45	0.26	0.27	32.11	10.60	43.09	81.5	375	0.20	78.41	0.55	0.71	0.72			
		172A	173A	0.14	2	7	29.80	3418	2.9	32.29		0.00		0.00		2.45	0.26	0.14	32.25	10.64	43.19	11.0	375	0.20	78.41	0.55	0.71	0.72			
		173A	174A	0.03		0	29.83	3418	2.9	32.29		0.00		0.00		2.45	0.26	0.03	32.28	10.65	43.20	8.0	375	0.20	78.41	0.55	0.71	0.72			
To SANITARY OUTLET 1, Pipe 174A - 175A							29.83	3418				0.00		0.00		2.45			32.28												
SANITARY OUTLET 1																															
Contribution From STREET 4, Pipe 128A - 174A							0.18	14				0.00		0.00		0.00		0.18	0.18												
Contribution From STREET 4, Pipe 173A - 174A							29.83	3418				0.00		0.00		2.45		32.28	32.46												
		174A	175A				30.01	3432	2.9	32.41		0.00		0.00		2.45	0.26	0.00	32.46	10.71	43.38	65.0	375	0.20	78.41	0.55	0.71	0.73			
		175A	176A				30.01	3432	2.9	32.41		0.00		0.00		2.45	0.26	0.00	32.46	10.71	43.38	40.0	375	0.20	78.41	0.55	0.71	0.73			
		176A	287A				30.01	3432	2.9	32.41		0.00		0.00		2.45	0.26	0.00	32.46	10.71	43.38	11.0	375	0.20	78.41	0.55	0.71	0.73			
DESIGN PARAMETERS															Designed: A.S.					PROJECT: STITTSVILLE SOUTH URBAN EXPANSION AREA											
Park Flow = 9300 L/ha/da 0.10764 l/s/Ha															Checked: W.L.					LOCATION: City of Ottawa											
Average Daily Flow = 280 l/p/day															Dwg. Reference: Sanitary Servicing Plan, Dwg. No. 4					File Ref: 21-1247					Date: Mar 2025					Sheet No. 7	
Comm/Inst Flow = 28000 L/ha/da 0.3241 l/s/Ha																														of 8	
Industrial Flow = 35000 L/ha/da 0.40509 l/s/Ha																															
Max Res. Peak Factor = 4.00																															
Commercial/Inst./Park Peak Factor = 1.00																															
Institutional = 0.32 l/s/Ha																															
Industrial Peak Factor = as per MOE Graph																															
Extraneous Flow = 0.330 L/s/ha																															
Minimum Velocity = 0.600 m/s																															
Manning's n = (Conc) 0.013 (Pvc) 0.013																															
Townhouse coeff= 2.7																															
Single house coeff= 3.4																															

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SANITARY SEWER CALCULATION SHEET

Manning's $n=0.013$

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