

Segment ID on map	Manhole Start	Manhole Finish	Theoretical Length (m)	Inspected Length (m)	Diameter (mm)	Material	Flow Type	Location	Work Summary	LUMP SUM	LUMP SUM	Item 1.1 a)	Item 1.1 b)	Item 1.2	Item 1.3	Item 1.4	Item 1.5 a)	Item 1.5 b) (c) and d)	Item 1.5 f)	Item 1.6 a)	Item 1.6 b) and c)	Item 1.7	Item 1.8
										Specialized cleaning - Reaming in sewer lateral - 100 mm to 150 mm diameter	Chemical Grouting in Sewer Main	Specialized cleaning - Reaming in sewer pipe (Unit = L.M.)	Spot Specialized cleaning - Reaming in sewer pipe (Unit = EACH)	Spot Structural CIPP Lining of Sewer Pipe (Unit = EACH)	Complete Structural CIPP Lining of Sewer Pipe (Unit = L.M.)	Mechanical Sleeve Installation in Sewer Pipe (Unit = EACH)	Removal and disposal of storm sewer (Unit = L.M.)	Storm Sewer Pipe Replacement (Unit = L.M.)	Storm sewer Distribution Pipe - 350mm diameter (Unit L.M)	Removal and disposal of other sewer (Unit L.M)	Other sewer pipe replacement (Unit L.M)	Sewer Pipe Spot Excavation and Replacement (length between 2m and 5m) (unit = EACH)	CCTV Inspection of Mains & Sewer Laterals (Unit = L.M)
-	CB144	SEWER MAIN	1.8	4.4	100	CO	Storm	Colins Bay East (inside walls)	Investigate obstruction, possible need for SR-Excavation at 5.2 from CB144				1									1	
-	CB202A	FF-36A(BUILDING)	6.1	3.3	100	CSP	Storm	Frontenac (outside walls)	SR-Excavation at 0.3m from CB202A													1	
-	CB409	MHCB402	41.6	41.6	200	PVC	Storm	Colins Bay West (inside walls)	Lat-SPC-D at 28.1m from MHCB402	1													
-	CB411	MHCB403	76.2	75.8	250	PVC	Storm	Colins Bay West (inside walls)	SPC-D			76											
-	CB419	MH507 (Old MH405B)	70.5	60.6	200	PVC	Storm	Colins Bay West (inside walls)	Reinspect and evaluate for abandonment										70.5				70.5
-	MH404	MHCB403	21.0	20.7	450	PVC	Storm	Colins Bay West (inside walls)	SR-Grout infiltration at 1.5m from MH404		1												
-	MHCB210	OUTLET	13.8	10.5	300	CO	Storm	Frontenac (outside walls)	SR-CIPP between 8.5m-10.5m from MHCB210, SPC-D			14		1									
-	MHCB400	MHCB401	36.2	35.8	375	PVC	Storm	Colins Bay West (inside walls)	SR-Sleeve + SR-Grout between 4.9m - 5.4m from MHCB 400 at infiltration						1								
-	SAM100	SAM200	90.4	32.2	400	PVC	Sanitary	Colins Bay East (inside walls)	SPC-G			90											
-	SAM301	Building A-8 SUMP	59.3	2.5	100	PVC	Sanitary	Colins Bay West (inside walls)	SPC-D			59											
-	SAM303	Building B-8	26.7	47.8	200	PVC/ Cast Iron	Sanitary	Colins Bay West (inside walls)	SR-CIPP at open joint at 24.7m from MH303					1									
Line 12 to 11	12	11	8.1	10	200	Cast Iron	Sanitary	Colins Bay K1 Tunnel (inside walls)	SR-Sleeve at 1.9m from Access 12, SPC-OB(J) (lead joint) at 7.7m from Acces 12				1			1							
Line 9 to 8	9	8	49.8	13.6	200	Cast Iron	Sanitary	Colins Bay K1 Tunnel (inside walls)	Reinspect and evaluate for CIPP			see reversal			24.9								49.8
Line A to B	A	B	55.0	30.6	250	Cast Iron	Storm	Colins Bay K1 Tunnel (inside walls)	SPC-D			see reversal											
Line A to B	B	A	55.0	25.3	250	Cast Iron	Storm	Colins Bay K1 Tunnel (inside walls)	SPC-D			55											
Line B to C	B	C	14.6	18.3	250	Cast Iron	Storm	Colins Bay K1 Tunnel (inside walls)	SPC-D			18											
Line C to D	C	D	33.8	20.5	250	Cast Iron	Storm	Colins Bay K1 Tunnel (inside walls)	SPC-D, SPC-IL at 16.9m from MH D				see reversal										
Line C to D	D	C	33.8	17.7	250	Cast Iron	Storm	Colins Bay K1 Tunnel (inside walls)	SPC-D, SPC-IL at 16.9m from MH D				1										
Line D to E	D	E	47.4	13.7	250	Cast Iron	Storm	Colins Bay K1 Tunnel (inside walls)	SPC-D and reinspect, SR-CIPP at 13.4m from MHD. May require complete CIPP after complete inspection is completed.			47		1	23.7								23.7
Line D to E	E	D	47.4	18.7	250	Cast Iron	Storm	Colins Bay K1 Tunnel (inside walls)	SPC-D and reinspect, SR-CIPP at 13.4m from MHD. May require complete CIPP after complete inspection is completed.			see reversal	see reversal	see reversal									
SAL008	SAM005	SERVICE TUNNEL	24.4	24.6	250	PVC	Sanitary	Colins Bay West (inside walls)	SR-Excavation between 21.0m and 23.0m from SAM005 (displaced joint and ovalized pipe)													1	
SAL016	SAM010	SAM011	21.6	21.3	200	CO	Sanitary	Colins Bay East (inside walls)	CIPP						21.6								
SAL027	SAM055	Building A-11	39.2	12.4	150	Cast Iron	Sanitary	Frontenac (outside walls)	Reinspect and evaluate for CIPP						19.6								39.2
SAL029	SAM055	Building FF-32 SOUTH	35.1	32.7	150	Cats Iron	Sanitary	Frontenac (outside walls)	SPC-G			35											
SAL032	SAM058	SAM061	49.1	44.7	150	PVC	Sanitary	Frontenac (outside walls)	Blockage at 44.7m from MH058: investigate if capped or collapsed? Possible need for SR-Excavation.												1	49.1	
SAL038	SAM067	SAM068	51.9	51.2	300	AC	Sanitary	Frontenac (outside walls)	SPC-G			52											
SAL039	SAM068	SAM069	27.2	28.2	300	CO	Sanitary	Frontenac (outside walls)	SPC-G			28											
SAL040	SAM072	SAM071	60.0	52.1	150	Cast Iron	Sanitary	Frontenac (outside walls)	SR-Grout(J) at 1.6m from SAM072, SPC-D		1	60											
SAL042	SAM069	SAM073	64.2	65.4	300	CO	Sanitary	Frontenac (outside walls)	SR-Excavation or trenchless repair at 4.1m from SAM069 (infiltration at connection) - discuss with departmental representative, SPC-G			65										1	
SAL044	SAM073	Building FF-28	2.9	5.0	150	PVC/ Cast Iron	Sanitary	Frontenac (outside walls)	Excavation and replacement											5.0	5.0		
SAL045	SAM074	SAM075	125.2	129.5	300	AC	Sanitary	Frontenac (outside walls)	CIPP, SR-Grout at 117.9m from SAM074 (fracture with infiltration)		1				129.5								
SAL057	-	SAM306	81.8	4.3	300	CO	Sanitary	Colins Bay K1 Tunnel (inside walls)	SR-Excavation at 2.5m from SAM306 and reinspect to validate CIPP						40.9							1	
SAL093	SAM069	Building FF-28	70.0	30.2	150	Cast Iron	Sanitary	Frontenac (outside walls)	Debris and dirty lens throughout: state of sewer unknown. Reinspect using jetter or pumps.			70			35.0								70.0
SAL097	Building FF-14	PLUG	60	6.9	100	Cast Iron	Sanitary	Colins Bay West (inside walls)	Pipe Collapsed according to site supervisor notes. SR-Excavation at collapse. Reinspect after excavation						30.0							1	
SAL102	SAM053	Building A-11	7.6	9.4	100	PVC	Sanitary	Frontenac (outside walls)	Blockage at 31.0m from Building A-11: investigate if capped or collapsed. SR-Excavation may be required.												1	9.4	
SAL112	SAM063	SAM062	4.4	3.3	150	PVC	Sanitary	Frontenac (outside walls)	Blockage 3.3 from SAM062: investigate if capped or collapsed. Pipe is still accessible via SAM062.												1	4.4	
SAL113	SAM062	Building FF-36B	5.0	9.4	100	PVC	Sanitary	Frontenac (outside walls)	SR-Excavation between 8-9m from SAM062 (sag in pipe holding water), SR-Grout(J) + SPC-E(J) at 4.4m from SAM062		1											1	
SAL115	SAM065	SAM064	56.7	57.0	200	PVC	Sanitary	Frontenac (outside walls)	SPC-G			57											
SAL118	SAM066	SAM051	287.1		100	n/a	Sanitary	Frontenac (outside walls)	Reinspect with flusher. No access from upstream manhole. Coordinate pumping station shutdown with departmental representative.														287.1
STL107	MHCB104	CB103	8.3	7.8	250	CO	Storm	Colins Bay West (inside walls)	CIPP						8.3								8.3
STL113	Building B-3	MHCB104	8.6	7.5	200	CO	Storm	Colins Bay West (inside walls)	CIPP, investigate and excavate possible break at structure B-3 pipe connection						8.6							1	
STL116	MHCB126	MHCB127	24.9	25.0	200	PVC/CO	Storm	Colins Bay East (inside walls)	CIPP						25.0								
STL117	CB130	MHCB127	38.0	37.0	200	CO	Storm	Colins Bay East (inside walls)	CIPP						38.0								
STL118	CB130	MHCB129	18.1	9.1	200	CO	Storm	Colins Bay East (inside walls)	CIPP						18.1								
STL120	CB128	MHCB129	27.5	12.7	150	CO	Storm	Colins Bay East (inside walls)	SPC-OB at 14.3m from CB128 (concrete)				see reversal										
STL120	MHCB129	CB128	27.5	14.3	150	CO	Storm	Colins Bay East (inside walls)	SPC-OB at 14.3m from CB128 (concrete)				1										

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										Specialized cleaning - Reaming in sewer lateral - 100 mm to 150 mm diameter	Chemical Grouting in Sewer Main	Specialized cleaning - Reaming in sewer pipe (Unit = L.M.)	Spot Specialized cleaning - Reaming in sewer pipe (Unit = EACH)	Spot Structural CIPP Lining of Sewer Pipe (Unit = EACH)	Complete Structural CIPP Lining of Sewer Pipe (Unit = L.M.)	Mechanical Sleeve Installation in Sewer Pipe (Unit = EACH)	Removal and diaposal of storm sewer (Unit = L.M.)	Storm Sewer Pipe Replacement (Unit = L.M.)	Storm sewer Distribution Pipe - 350mm diameter (Unit L.M)	Removal and diaposal of other sewer (Unit L.M)	Other sewer pipe replacement (Unit L.M)	Sewer Pipe Spot Excavation and Replacement (length between 2m and 5m) (unit = EACH)	CCTV Inspection of Mains & Sewer Laterals (Unit = L.M)
STL123	MH500 (Old MH135)	MHCB127	83.2	48.0	250	CO	Storm	Colins Bay East (inside walls)	CIPP + SPC-E(I), SPC-OB at 0m from MHCB127 (concrete blocking pipe), SPC-IL at 46.5m from MH135				2		83.2								83.2
STL123	MHCB127	MH500 (Old MH135)	83.2	71.4	250	CO	Storm	Colins Bay East (inside walls)	CIPP + SPC-E(I), SPC-OB at 0m from MHCB127 (concrete blocking pipe), SPC-IL at 46.5m from MH135				see reversal		see reversal								
STL124	MH500 (Old MH135)	CB136	4.6	4.6	250	CO	Storm	Colins Bay East (inside walls)	CIPP						4.6								4.6
STL130	CB140	MH501 (Old MH139)	9.4	12.8	300	VCP	Storm	Colins Bay East (inside walls)	CIPP						12.8								
STL131	CB132	MHCB129	48.7	31.5	200	CO	Storm	Colins Bay East (inside walls)	SR-Sleeve at 7.9m from CB132, SPC-IL at 31.5m from CB132				see reversal			see reversal							
STL131	MHCB129	CB132	48.7	18.9	200	CO	Storm	Colins Bay East (inside walls)	SR-Sleeve at 7.9m from CB132, SPC-IL at 31.5m from CB132				1			1							
STL132	CB131	CB132	51.1	52.9	200	CO	Storm	Colins Bay East (inside walls)	CIPP + SPC-D						52.9								
STL143	CB407	MH406	94.8	40.0	200	PVC	Storm	Colins Bay West (inside walls)	CIPP						94.8								
STL155	Towards B-9	MH121	39.1	35.8	375	CO	Storm	Colins Bay West (inside walls)	CIPP						39.1								
STL156	MHCB119	SEWER MAIN	7.3	2.7	150	CO	Storm	Colins Bay West (inside walls)	SR-CIPP + SPC-OB(I) at 2.7m from MHCB119				1	1									
STL157	MH118	MHCB119	32.0	10.7	150	n/a	Storm	Colins Bay West (inside walls)	Excavation and replacement											32.0	32.0		
STL159	CB419	MH118	9.8	4.1	200	CSP	Storm	Colins Bay West (inside walls)	Reinspect and evaluate need to be removed											9.8		9.8	
STL162	CB141	MHCB142	38.0	39.5	200	CO	Storm	Colins Bay East (inside walls)	Reinspect and evaluate for CIPP						19.8								
STL163	MHCB143	MHCB142	22.4	22.8	200	CO	Storm	Colins Bay East (inside walls)	CIPP						22.8								
STL164	MHCB143	CB144	82.5	18.5	200	CO	Storm	Colins Bay East (inside walls)	CIPP, SR-Excavation at collapse at 18.5m from MHCB143.						82.5						1		
STL170	MH502 (Old MH149)	MH151	70.1	70.0	300	CO	Storm	Colins Bay East (inside walls)	To be removed - abandoned								70.1						
STL171	CB150	SEWER MAIN	7.7		100 or 150	n/a	Storm	Colins Bay East (inside walls)	To be removed - abandoned								7.7						
STL172	MH151	MH152	13.9	13.3	300	CO	Storm	Colins Bay East (inside walls)	To be removed - abandoned								13.9						
STL173	MH503 (Old MH153)	MH152	18.6	18.2	375	CO	Storm	Colins Bay East (inside walls)	To be removed - abandoned								18.6						
STL174	CB154	MHCB155A	140.0	28.0	150	CO	Storm	Colins Bay East (inside walls)	Reinspect and evaluate for CIPP						70.0							140.0	
STL174A	MHCB155A	MHCB155	145.0	28.0	150	CO	Storm	Colins Bay East (inside walls)	Reinspect and evaluate for CIPP						72.5							145.0	
STL175	MHCB155	OUTLET	155.2		200	CSP	Storm	Frontenac (outside walls)	Reinspect and evaluate for CIPP						77.6							155.2	
STL180	MH510 (Old MH200)	MH509	150	100.6	450	Concrete	Storm	Frontenac (outside walls)	To be removed - abandoned								150.0						
STL180A	Chamber with 4 pipes under wall	SEWER MAIN STL303 (old STL180)	90		450	Concrete	Storm	Frontenac (outside walls)	To be removed - abandoned								90.0						
STL180A	MH121	Chamber with 4 pipes under wall	26	26	450	CO	Storm	Frontenac (outside walls)	To be removed - abandoned								26.0						
STL180A - Pipe under wall	MH121	MH510 (Old MH200)	7.8	7.9	450	Cast Iron	Storm	Frontenac (outside walls)	To be removed - abandoned								7.9						
STL180A - Pipe under wall	MH121	MH510 (Old MH200)	8.5	8.5	450	Cast Iron	Storm	Frontenac (outside walls)	To be removed - abandoned								8.5						
STL180A - Pipe under wall	MH121	MH510 (Old MH200)	2.8	2.8	450	Cast Iron	Storm	Frontenac (outside walls)	To be removed - abandoned								2.8						
STL180A - Pipe under wall	MH121	MH510 (Old MH200)	4	4	450	Cast Iron	Storm	Frontenac (outside walls)	To be removed - abandoned								4.0						
STL182A	E	MH156	70.0	1.2	450	VCP	Storm	Colins Bay K1 Tunnel (inside walls)	Reinspect pipe. May require SR-Excavation and CIPP.						35.0						1	70.0	
STL191	MH127	SEWER MAIN STL190	14.3	14.3	100	VCP	Storm	Frontenac (outside walls)	SR-CIPP at fractures 6.7m from MH217					1									
STL192	CB218	SEWER MAIN STL198	17.2	17.2	250	VCP	Storm	Frontenac (outside walls)	CIPP						17.2								
STL193	MHCB220	SEWER MAIN STL198	15.0	15.0	200	Cast Iron/CSP/VCP	Storm	Frontenac (outside walls)	CIPP						15.0								
STL194	MHCB220	Building FF-27	19.6	19.6	150	PVC	Storm	Frontenac (outside walls)	CIPP						19.6								
STL196	MHCB220	Building FF-28	15.8	15.8	150	PVC	Storm	Frontenac (outside walls)	Investigate pipe break and roots inside Building FF-27 and repair			16									1	15.8	
STL198	CB221	OUTLET	200.0	8.3	250	VCP	Storm	Frontenac (outside walls)	SR-Excavation at 8.3m from CB211 due to collapse, CIPP						200.0						1	200.0	
STL203	MH226	MH225	20.0	17.7	100 or 150	VCP	Storm	Frontenac (outside walls)	SR-Excavation at 1m from MH226 due to large break, CIPP, SPC-D						20.0						1		
STL204	MH226	MH227	38.0	36.6	100 or 150	VCP	Storm	Frontenac (outside walls)	SR-Excavation at 1m from MH227 due to large break, CIPP						38.0						1		
STL205	MH227	Pipe blocked	20.0	11.6	100 or 150	Cast Iron	Storm	Frontenac (outside walls)	Reinspect using flusher. SR-Excavation at burried end/blockage.						10.0						1	20.0	
STL207	CB215	Building FF-28	10.0	0.0	100 or 150	Cast Iron	Storm	Frontenac (outside walls)	Excavation and replacement										10.0	10.0			
STL208	CB216	westward	10.0	1.0	100	CSP	Storm	Frontenac (outside walls)	Reinspect using flusher						5.0							10.0	
STL210	CB214	OUTLET	30.0	7.6	300	CSP	Storm	Frontenac (outside walls)	CIPP						30.0								
STL211	CB212	CB213	12.6	12.6	300	CSP	Storm	Frontenac (outside walls)	CIPP						12.6								
STL212	CB213	OUTLET	25.5	25.5	400	CSP	Storm	Frontenac (outside walls)	CIPP, SPC-D						25.5								
STL217-STL218	CB211	OUTLET	62.0	34.9	300	CSP	Storm	Frontenac (outside walls)	Excavation and replacement										62.0	62.0			
STL223	CB206	MH207	51.2	41.7	150	CO	Storm	Frontenac (outside walls)	CIPP						51.2								
STL223	MH207	CB206	51.2	40.6	150	CO	Storm	Frontenac (outside walls)	CIPP						see reversal								
STL224	CB208	MH207	20.0	6.5	150	n/a	Storm	Frontenac (outside walls)	Camera under water the entire length: state of sewer unknown. Reinspect using jetter or pumps. May require additional work once inspected.						see reversal							see reversal	
STL224	MH207	CB208	20.0	19.8	150	n/a	Storm	Frontenac (outside walls)	Camera under water the entire length: state of sewer unknown. Reinspect using jetter or pumps. May require additional work once inspected.						10.0							20.0	
STL225	MH207	OUTLET	154.9	157.8	300	CO/PVC	Storm	Frontenac (outside walls)	CIPP + SPC-E(I) + SPC-R(I)						157.8								
STL226	CB202	Building FF-36A	2.9	2.0	100 or 150	PVC	Storm	Frontenac (outside walls)	Camera under water the entire length: state of sewer unknown. Reinspect using jetter or pumps. May require additional work once inspected.						1.5							2.9	
STL232	MHCB205	OUTLET	36.9	35.1	300	CSP	Storm	Frontenac (outside walls)	SR-CIPP at 18.7m and 24.9m from MHCB205					2									

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STL399 (Old STL182)	MH506 (old MH405)	MH156	26.6		525	CP	Storm	Colins Bay West (inside walls)	Excavation and upgrade, remove and abandon old pipe								26.6	26.6					
STL400 (Old STL182)	MH506 (old MH405)	MH507 (old MH405B)	45		525	CP	Storm	Colins Bay West (inside walls)	Excavation and upgrade, remove and abandon old pipe								45.0	45.0					
STL401 (Old STL180)	MH508	MH507 (old MH405B)	19.1		525	CP	Storm	Colins Bay West (inside walls)	Excavation and upgrade, remove and abandon old pipe								19.1	19.1					
STL402 (Old STL180)	MH509	MH508	47.4		350	CP	Storm	Frontenac (under wall)	Excavation and upgrade - 3 pipes 15,8m long , remove and abandon old pipe								47.4		47.4				
STL403	MH510 (Old MH200)	MH509	111.6		525	CP	Storm	Frontenac (outside walls)	Excavation and upgrade, remove and abandon old pipe								new sewer	111.6					
STL404 (Old STL178)	MH510 (Old MH200)	MH505 (Old MH201)	89		600	CP	Storm	Frontenac (outside walls)	Excavation and upgrade, remove and abandon old pipe								89.0	89.0					
STL405 (Old STL177)	MH505 (Old MH201)	STORM OUTFLOW	50.4		600	CP	Storm	Frontenac (outside walls)	Excavation and upgrade, remove and abandon old pipe								50.4	50.4					
STL406	MH500 (Old MH135)	MH500A	55		450	CP	Storm	Colins Bay East (inside walls)	Excavation and upgrade - new pipe installation								new sewer	55.0					
STL407	MH500A	MH501 (Old MH139)	60		450	CP	Storm	Colins Bay East (inside walls)	Excavation and upgrade - new pipe installation								new sewer	60.0					
STL126	MH500 (Old MH135)	MH501 (Old MH139)	109.6		300	CP	Storm	Colins Bay East (inside walls)	SR-Excavation at 102.6m from MH135 (hole), CIPP + SPC-E(I), SPC-D				1		109.6						1	109.6	
STL408 (STL165)	MH502 (Old MH149)	MH501 (Old MH139)	90.7		525	CP	Storm	Colins Bay East (inside walls)	Excavation and upgrade, remove and abandon old pipe								90.7	90.7					
STL409	MH503 (Old MH153)	MH502 (Old MH149)	89.8		525	CP	Storm	Colins Bay East (inside walls)	Excavation and upgrade, remove and abandon old pipe								new sewer	89.8					
STL410 (Old STL176A)	MH504 (Old MH153A)	MH503 (Old MH153)	59.4		350	CP	Storm	Frontenac (under wall)	Excavation and upgrade - 3 pipes 19,8m long , remove and abandon old pipe								59.4		59.4				
STL411 (Old STL176)	MH504 (Old MH153A)	MH505 (Old MH201)	121.4		525	CP	Storm	Frontenac (outside walls)	Excavation and upgrade, remove and abandon old pipe								121.4	121.4					
APPROXIMATE TOTAL QUANTITIES (TO BE VALIDATED ON SITE)										1	4	744	9	7	1814	3	949	759	107	189	109	19	1654