

East Side Lands (Woolwich) Sanitary Servicing EA
Sewer Alternative 1



Sewer Cost										Manhole Cost					Road Restoration Costs	Construction Costs	
Sewer Section	Street	Slope (%)	Size (mm)	Length (m)	U/S Depth (m)	D/S Depth (m)	Depth	Sewer Unit Cost (\$/m)	Sewer Total Cost (\$)	MH Dia. (mm)	Average MH Depth (m)	Number of MH	MH Unit Cost (\$)	Manhole Total Cost (\$)	Road Restoration (\$/m)	Construction Costs Total (\$)	Contingency (25%) Total \$
Trunk Sewer (north of Menno Street)																	
S0106	Wambolt Dr.	0.218	375	77.8	6.90	7.90	5-10 m	\$4,883	\$380,046	1200	7.40	1	\$15,474	\$15,474		\$395,520	\$494,400
S0107	Wambolt Dr.	0.276	375	409.6	8.00	5.00	5-10 m	\$4,883	\$1,999,854	1200	6.50	5	\$15,474	\$77,372		\$2,077,225	\$2,596,531
S0107A	Wambolt Dr.	0.276	375	409.6	5.00	2.80	<5 m	\$1,193	\$488,772	1200	3.90	5	\$7,561	\$37,804		\$526,576	\$658,220
S02A04	Kramp Rd.	0.422	375	142.3	2.90	2.80	<5 m	\$1,193	\$169,810	1200	2.85	2	\$6,090	\$12,180		\$181,990	\$227,488
S02A03	Kramp Rd.	0.221	375	199.2	2.90	5.50	<5 m	\$1,193	\$237,740	1200	4.20	3	\$7,561	\$22,682		\$260,422	\$325,528
S02A05	Wurster Place	0.217	375	692.8	5.50	3.30	<5 m	\$1,193	\$826,801	1200	4.40	8	\$7,561	\$60,486		\$887,287	\$1,109,109
S0501	Wurster Place Extens.	2.358	375	82.7	3.30	2.80	<5 m	\$1,193	\$98,670	1200	3.05	1	\$6,090	\$6,090		\$104,760	\$130,950
S0502	Wurster Place Extens.	0.167	600	395.3	4.10	5.20	<5 m	\$1,797	\$710,454	1500	4.65	5	\$17,021	\$85,105		\$795,560	\$994,450
S0503	Wurster Place Extens.	0.163	600	233.1	5.20	5.00	<5 m	\$1,797	\$419,014	1500	5.10	3	\$17,021	\$51,063		\$470,077	\$587,596
S0504	Wurster Place Extens.	0.168	600	309.7	5.00	8.80	5-10 m	\$5,708	\$1,767,852	1500	6.90	4	\$19,962	\$79,846		\$1,847,699	\$2,309,623
S0505	Wurster Place Extens.	0.169	600	207.0	8.90	6.50	5-10 m	\$5,708	\$1,181,805	1500	7.70	3	\$21,431	\$64,294		\$1,246,099	\$1,557,624
S0506	Wurster Place Extens.	0.165	600	346.3	6.50	9.50	5-10 m	\$5,708	\$1,976,885	1500	8.00	4	\$21,431	\$85,725		\$2,062,610	\$2,578,262
Total Trunk 03				3505.4					\$10,257,704				\$162,677	\$598,121	\$0	\$10,855,825	\$13,569,781
Trunk Sewer (South of Menno Street)																	
S1615	Lonsdale Rd. (NS)	0.164	750	146.4	13.50	16.90	11-15 m	\$10,509	\$1,538,836	1800	15.20	2	\$39,978	\$79,956		\$1,618,792	\$2,023,490
S1616	Lonsdale Rd. (NS)	0.167	750	238.9	16.90	15.00	15-20 m	\$16,814	\$4,016,152	1800	15.95	3	\$42,067	\$126,202		\$4,142,354	\$5,177,943
S1616	Lonsdale Rd. (NS)	0.167	750	238.9	15.00	11.00	11-15 m	\$10,509	\$2,510,095	1800	13.00	3	\$35,800	\$107,400		\$2,617,495	\$3,271,869
S1616	Lonsdale Rd. (NS)	0.167	750	238.9	11.00	6.4	5-10 m	\$6,568	\$1,568,809	1800	8.70	3	\$27,176	\$81,528		\$1,650,338	\$2,062,922
S1623	Lonsdale Rd. (NS)	0.163	750	190.7	6.50	5.60	5-10 m	\$6,568	\$1,252,737	1800	6.05	3	\$22,274	\$66,823		\$1,319,561	\$1,649,451
S2002	Airport Crossing	0.169	750	313.5	5.70	7.10	5-10 m	\$6,568	\$2,059,169	1800	6.40	4	\$22,274	\$89,098		\$2,148,267	\$2,685,334
S2003	Airport Crossing	0.164	750	285.9	7.20	5.10	5-10 m	\$6,568	\$1,878,127	1800	6.15	4	\$22,274	\$89,098	\$4,960,000	\$6,927,225	\$8,659,032
S2004	Airport Crossing	0.167	750	293.7	5.20	5.10	5-10 m	\$6,568	\$1,928,728	1800	5.15	4	\$20,805	\$83,219		\$2,011,947	\$2,514,933
LS by new terminal Building																\$1,500,000	\$1,875,000
S2005	Airport Crossing	0.166	750	373.0	5.20	9.50	5-10 m	\$6,568	\$2,450,191	1800	7.35	5	\$23,745	\$118,727		\$2,568,918	\$3,211,147
S1903	Fountain St	0.167	1050	652.7	9.50	11.90	11-15 m	\$13,231	\$8,636,319	2400	10.70	8	\$49,166	\$393,326	\$1,958,169	\$10,987,815	\$13,734,768
S2001	Fountain St	0.167	1050	796.2	11.90	9.90	11-15 m	\$13,231	\$10,534,297	2400	10.90	9	\$49,166	\$442,492	\$2,388,510	\$13,365,300	\$16,706,625
S2201_1	Fountain St	0.169	1050	183.7	10.00	7.50	5-10 m	\$8,270	\$1,519,183	2400	8.75	3	\$43,023	\$129,070	\$551,127	\$2,199,381	\$2,749,226
S_CC_01	Fountain St	0.158	1050	50.8	7.60	7.10	5-10 m	\$8,270	\$419,926	2400	7.35	1	\$40,262	\$40,262	\$152,340	\$612,527	\$765,659
S2202	Fountain St	0.170	1050	129.1	7.20	8.70	5-10 m	\$8,270	\$1,067,767	2400	7.95	2	\$41,061	\$82,122	\$387,363	\$1,537,253	\$1,921,566
3B Alt 1 St. 4																\$40,479,935	\$50,599,918
Total (Trunk03B)				4132.4					\$41,380,339				\$479,073	\$1,929,324	\$10,397,509	\$53,707,172	\$67,133,965
TOTAL TRUNK 03				7637.8					\$51,638,042				\$641,750	\$2,527,445	\$10,397,509	\$64,562,997	\$80,703,746
Local Sewers																	
S0103	North Dev Rd	0.217	375	133.5	2.80	5.00	<5 m	\$1,193	\$159,309	1200	3.90	2	\$7,561	\$15,121		\$174,430	\$218,037
S0102A	North Dev Rd	0.217	375	133.5	5.00	6.80	5-10 m	\$4,883	\$651,824	1200	5.90	2	\$14,005	\$28,009		\$679,834	\$849,792
S0102	North Dev Rd	0.363	300	309.6	6.90	5.00	5-10 m	\$4,740	\$1,467,509	1200	5.95	4	\$14,005	\$56,018		\$1,523,527	\$1,904,409
S0102A	North Dev Rd	0.363	300	309.6	5.00	2.80	<5 m	\$1,128	\$349,385	1200	3.90	4	\$7,561	\$30,243		\$379,628	\$474,535
North Dev Rd Total				886.2					\$2,628,027				\$43,131	\$129,392	\$0	\$2,757,419	\$3,446,773
S0105	Greenhouse Rd	0.273	300	881.6	2.90	2.80	<5 m	\$1,128	\$994,743	1200	2.85	10	\$6,090	\$60,899		\$1,055,642	\$1,319,553
S02A01	Greenhouse Rd	0.187	525	407.2	2.90	2.90	<5 m	\$1,400	\$570,161	1500	2.90	5	\$11,217	\$56,085		\$626,246	\$782,808
Greenhouse Rd Total				1288.8					\$1,564,904				\$17,307	\$116,984	\$0	\$1,681,888	\$2,102,360
S02A02	Kramp Rd	0.272	300	372.0	5.50	2.80	<5 m	\$1,128	\$419,770	1200	4.15	5	\$7,561	\$37,804		\$457,574	\$571,967
Kramp Rd West Total				372.0					\$419,770				\$7,561	\$37,804	\$0	\$457,574	\$571,967
S02B02	Kramp Rd	0.311	300	1042.6	2.90	2.80	<5 m	\$1,128	\$1,176,473	1200	2.85	12	\$6,090	\$73,079		\$1,249,552	\$1,561,940
Kramp Rd East Total				1042.6					\$1,176,473				\$6,090	\$73,079	\$0	\$1,249,552	\$1,561,940
S0108	Shantz Station Rd	0.268	300	100.7	2.80	3.40	<5 m	\$1,128	\$113,623	1200	3.10	2	\$6,090	\$12,180	\$302,082	\$427,885	\$534,856
S0109	Shantz Station Rd	0.266	300	433.0	3.40	4.30	<5 m	\$1,128	\$488,628	1200	3.85	5	\$7,561	\$37,804	\$1,299,084	\$1,825,516	\$2,281,895
S0110	Shantz Station Rd	0.265	300	293.8	4.40	3.40	<5 m	\$1,128	\$331,539	1200	3.90	4	\$7,561	\$30,243	\$881,442	\$1,243,224	\$1,554,030
S02B01	Shantz Station Rd	0.351	300	671.7	3.40	2.80	<5 m	\$1,128	\$757,960	1200	3.10	8	\$6,090	\$48,719	\$2,015,139	\$2,821,818	\$3,527,273
S02B03	Shantz Station Rd	0.189	450	164.1	2.90	3.00	<5 m	\$1,304	\$213,959	1200	2.95	2	\$6,090	\$12,180	\$492,177	\$718,316	\$897,894
S0302	Shantz Station Rd	0.166	600	594.8	3.00	6.20	5-10 m	\$5,708	\$3,395,157	1500	4.60	7	\$17,021	\$119,148	\$1,784,277	\$5,298,581	\$6,623,227
S0402	Shantz Station Rd	0.167	600	245.3	9.40	6.60	5-10 m	\$5,708	\$1,400,507	1500	8.00	3	\$21,431	\$64,294	\$736,017	\$2,200,818	\$2,751,023
S0403	Shantz Station Rd	0.287	600	519.2	9.90	2.80	5-10 m	\$5,708	\$2,963,557	1500	6.35	6	\$18,491	\$110,945	\$1,557,456	\$4,631,958	\$5,789,948
S0404_1	Shantz Station Rd	2.630	600	60.4	2.90	4.50	<5 m	\$1,797	\$108,649	1500	3.70	1	\$12,047	\$12,047	\$181,338	\$302,034	\$377,543
S_CC_11	Shantz Station Rd	0.170	600	82.2	4.50	5.30	<5 m	\$1,797	\$147,804	1500	4.90	1	\$17,021	\$17,021	\$246,687	\$411,512	\$514,390
Shantz Station (North of Menno)				3165.2					\$9,921,384				\$119,402	\$464,579	\$9,495,699	\$19,881,663	\$24,852,078
S0301	East Connection	0.167	525	438.4	2.90	3.60	<5 m	\$1,400	\$613,862	1500	3.25	5	\$11,217	\$56,085		\$669,948	\$837,435
S0602	East Connection	0.167	525	1002.4	3.70	6.10	5-10 m	\$5,217	\$5,228,925	1500	4.90	12	\$17,021	\$204,253		\$5,433,178	\$6,791,473
East Connector Total				1440.8					\$5,842,788				\$28,238	\$260,338	\$0	\$6,103,126	\$7,628,908
S0401	New Rd 3 (Rider Rd Ext.)	1.114	300	255.0	2.80	2.80	<5 m	\$1,128	\$287,720	1200	2.80	3	\$6,090	\$18,270		\$305,990	\$382,487
S0406	New Rd 3 (Rider Rd Ext.)	1.247	300	421.8	2.80	2.80	<5 m	\$1,128	\$475,978	1200	2.80	5	\$6,090	\$30,449		\$506,427	\$633,034
S0407	New Rd 3 (Rider Rd Ext.)	0.267	300	393.5	2.90	6.40	<5 m	\$1,128	\$444,031	1200	4.65	5	\$12,771	\$63,853		\$507,883	\$634,854
S0507	New Rd 3 (Rider Rd Ext.)	0.267	300	382.5	6.40	4.00	5-10 m	\$4,740	\$1,812,943	1200	5.20	5	\$12,771	\$63,853		\$1,876,796	\$2,345,994
New Rd 3 (Rider Rd Ext.)				1452.8					\$3,020,672				\$37,721	\$176,425	\$0	\$3,197,096	\$3,996,370
S12B01	Fountain St	0.171	525	163.6	6.10	5.70	5-10 m	\$5,217	\$853,675	1500	5.90	2	\$18,491	\$36,982	\$490,935	\$1,381,592	\$1,726,990
S12B02	Fountain St	0.166	600	252.4	5.70	7.30	5-10 m	\$5,708	\$1,440,644	1500	6.50	3	\$19,962	\$59,885	\$757,110	\$2,257,638	\$2

S1701	Menno Rd		0.187	450	181.5	2.10	4.60	<5 m	\$1,304	\$236,715	1200	3.35	3	\$6,090	\$18,270	\$544,524	\$799,509	\$999,386
Menno W Total					1094.9					\$2,666,098				\$41,895	\$143,159	\$3,284,562	\$6,093,819	\$7,617,274
S1605_1	Menno Rd		0.270	300	233.1	2.80	6.60	5-10 m	\$4,740	\$1,104,595	1200	4.70	3	\$12,771	\$38,312	\$699,174	\$1,842,081	\$2,302,601
S1610	Menno Rd		0.166	600	471.1	5.40	11.00	11-15 m	\$9,134	\$4,302,606	1500	8.20	6	\$21,431	\$128,588	\$1,413,234	\$5,844,428	\$7,305,535
S1609	Menno Rd		0.167	600	881.1	11.00	8.70	5-10 m	\$5,708	\$5,029,825	1500	9.85	10	\$24,864	\$248,643	\$2,643,354	\$7,921,823	\$9,902,278
S1608	Menno Rd		0.161	600	31.1	8.70	8.80	5-10 m	\$5,708	\$177,305	1500	8.75	1	\$23,391	\$23,391	\$93,180	\$293,876	\$367,345
S_CC_07	Menno Rd		0.166	600	211.2	8.90	10.90	5-10 m	\$5,708	\$1,205,826	1500	9.90	3	\$24,864	\$74,593	\$633,705	\$1,914,124	\$2,392,655
S1607	Menno Rd		0.167	750	413.1	11.00	11.80	11-15 m	\$10,509	\$4,340,798	1800	11.40	5	\$31,622	\$158,110	\$1,239,180	\$5,738,088	\$7,172,610
S1606	Menno Rd		0.168	750	286.5	11.90	13.50	11-15 m	\$10,509	\$3,010,679	1800	12.70	4	\$35,800	\$143,200	\$859,467	\$4,013,345	\$5,016,682
Menno E Total					2527.1					\$19,171,634				\$174,744	\$814,837	\$7,581,294	\$27,567,765	\$34,459,707
S1401	Woolwich St		0.367	300	169.1	2.80	2.80	<5 m	\$1,128	\$190,780	1200	2.80	2	\$6,090	\$12,180	\$507,213	\$710,172	\$887,715
S1402	Woolwich St		0.400	300	82.4	2.90	2.80	<5 m	\$1,128	\$92,983	1200	2.85	1	\$6,090	\$6,090	\$247,209	\$342,282	\$432,853
S1703	Woolwich St		0.270	300	136.8	2.90	3.80	<5 m	\$1,128	\$154,389	1200	3.35	2	\$6,090	\$12,180	\$410,463	\$577,031	\$721,289
S1704	Woolwich St		0.168	525	172.8	4.70	3.60	<5 m	\$1,400	\$241,957	1500	4.15	2	\$12,047	\$24,094	\$518,421	\$784,472	\$980,590
S1705_1	Woolwich St		7.905	525	7.8	3.70	4.30	<5 m	\$1,400	\$10,981	1500	4.00	1	\$12,047	\$12,047	\$32,529	\$46,557	\$58,197
S_CC_14	Woolwich St		0.167	525	239.8	4.40	7.80	5-10 m	\$5,217	\$1,251,104	1500	6.10	3	\$18,491	\$55,472	\$719,490	\$2,026,067	\$2,532,583
S1706	Woolwich St		0.166	525	258.5	7.90	8.70	5-10 m	\$5,217	\$1,348,593	1500	8.30	3	\$21,431	\$64,294	\$775,554	\$2,188,441	\$2,735,551
Woolwich Total					1067.3					\$3,290,788				\$82,285	\$186,356	\$3,201,879	\$6,679,023	\$8,348,779
S1601_1	Fountain St		1.321	450	365.5	6.10	3.80	<5 m	\$1,304	\$476,733	1200	4.95	5	\$12,771	\$63,853	\$1,096,647	\$1,637,233	\$2,046,542
S_CC_09	Fountain St		0.187	450	75.0	3.90	3.60	<5 m	\$1,304	\$97,872	1200	3.75	1	\$7,561	\$7,561	\$225,138	\$330,571	\$413,213
S1602	Fountain St		0.186	450	533.5	3.60	7.20	5-10 m	\$5,057	\$2,698,068	1200	5.40	6	\$12,771	\$76,623	\$1,600,557	\$4,375,249	\$5,469,061
S1801	Fountain St		0.167	750	400.6	8.80	6.30	5-10 m	\$6,568	\$2,631,167	1800	7.55	5	\$25,215	\$126,075	\$1,201,803	\$3,959,045	\$4,948,807
S1802	Fountain St		0.167	750	383.6	6.30	10.40	5-10 m	\$6,568	\$2,519,484	1800	8.35	5	\$25,215	\$126,075	\$1,150,791	\$3,796,350	\$4,745,438
S1902	Fountain St		0.168	750	250.3	10.50	9.10	5-10 m	\$6,568	\$1,644,193	1800	9.80	3	\$28,647	\$85,941	\$750,996	\$2,481,130	\$3,101,412
Fountain St. (Menno to Otter) Total					2008.6					\$10,067,518				\$112,179	\$486,128	\$6,025,932	\$16,579,578	\$20,724,473
S1622	Vance Rd Ext.		0.551	300	676.4	2.90	2.80	<5 m	\$1,128	\$763,250	1200	2.85	8	\$6,090	\$48,719	\$811,969	\$1,014,962	
S1621	Vance Rd Ext.		0.265	300	237.5	2.90	6.80	5-10 m	\$4,740	\$1,125,833	1200	4.85	3	\$12,771	\$38,312		\$1,164,145	\$1,455,181
S1620	Vance Rd Ext.		0.266	300	402.5	6.90	5.40	5-10 m	\$4,740	\$1,907,725	1200	6.15	5	\$14,005	\$70,023		\$1,977,748	\$2,472,185
S_CC_06	Vance Rd Ext.		0.664	300	513.6	5.40	2.80	<5 m	\$1,128	\$579,595	1200	4.10	6	\$7,561	\$45,364		\$624,960	\$781,199
S1619_1	Vance Rd Ext.		0.348	300	69.0	2.90	2.80	<5 m	\$1,128	\$77,870	1200	2.85	1	\$6,090	\$6,090		\$83,960	\$104,949
S1618	Vance Rd Ext.		0.189	450	185.1	2.90	4.10	<5 m	\$1,304	\$241,373	1500	3.50	3	\$12,047	\$36,141		\$277,514	\$346,893
S1617	Vance Rd Ext.		0.188	450	224.0	4.20	2.90	<5 m	\$1,304	\$292,090	1500	3.55	3	\$12,047	\$36,141		\$328,230	\$410,288
Vance Rd Ext.					2308.2					\$4,987,736				\$70,609	\$280,789	\$0	\$5,268,525	\$6,585,656
S1611	Shantz Station Rd		0.626	300	321.0	2.80	2.80	<5 m	\$1,128	\$362,187	1200	2.80	4	\$6,090	\$24,360	\$962,922	\$1,349,468	\$1,686,835
S1612	Shantz Station Rd		0.470	300	212.6	2.90	2.80	<5 m	\$1,128	\$239,928	1200	2.85	3	\$6,090	\$18,270	\$637,881	\$896,079	\$1,120,098
S1613_1	Shantz Station Rd		1.076	300	392.1	2.90	2.80	<5 m	\$1,128	\$442,473	1200	2.85	5	\$6,090	\$30,449	\$1,176,375	\$1,649,298	\$2,061,622
S1613_2	Shantz Station Rd		0.268	300	250.4	2.90	6.30	<5 m	\$1,128	\$282,573	1200	4.60	3	\$12,771	\$38,312	\$751,257	\$1,072,141	\$1,340,177
S1614	Shantz Station Rd		0.267	300	183.5	6.40	2.80	<5 m	\$1,128	\$207,019	1200	4.60	3	\$12,771	\$38,312	\$550,389	\$795,720	\$994,650
S2011	Shantz Station Rd		1.560	300	305.8	2.80	2.80	<5 m	\$1,128	\$345,060	1200	2.80	4	\$6,090	\$24,360	\$917,388	\$1,286,807	\$1,608,509
S2012	Shantz Station Rd		0.266	300	203.1	2.90	5.90	<5 m	\$1,128	\$229,190	1200	4.40	3	\$7,561	\$22,682	\$609,333	\$861,205	\$1,076,507
S2106	Shantz Station Rd		0.220	375	181.8	6.00	3.60	5-10 m	\$4,883	\$887,539	1200	4.80	3	\$12,771	\$38,312	\$545,301	\$1,471,151	\$1,838,939
S2107	Shantz Station Rd		0.867	375	415.2	3.70	2.80	<5 m	\$1,193	\$495,500	1200	3.25	5	\$6,090	\$30,449	\$1,245,615	\$1,771,564	\$2,214,455
S2109	Shantz Station Rd		1.121	375	216.8	2.90	2.80	<5 m	\$1,193	\$258,685	1200	2.85	3	\$6,090	\$18,270	\$650,298	\$927,253	\$1,159,066
Shantz Station Rd (S of Menno)					2682.3					\$3,750,154				\$82,412	\$283,774	\$8,046,759	\$12,080,687	\$15,100,859
S2115	Cober Rd		0.218	375	215.6	4.10	4.00	<5 m	\$1,193	\$257,243	1200	4.05	3	\$7,561	\$22,682		\$279,925	\$349,906
S_CC_05	Cober Rd		0.211	375	165.8	4.10	4.10	<5 m	\$1,193	\$197,862	1200	4.10	2	\$7,561	\$15,121		\$212,983	\$266,229
S_CC_04	Cober Rd		0.218	375	480.9	4.10	7.60	5-10 m	\$4,883	\$2,348,093	1200	5.85	6	\$14,005	\$84,028		\$2,432,120	\$3,040,150
S2116	Cober Rd		0.216	450	185.0	7.70	7.00	5-10 m	\$5,057	\$935,461	1200	7.35	3	\$15,474	\$46,423		\$981,884	\$1,227,354
Cober Total					1047.2					\$3,738,658				\$44,600	\$168,254	\$0	\$3,906,912	\$4,883,640
S2103	New Germany Ln		0.271	300	129.4	2.80	3.50	<5 m	\$1,128	\$145,967	1200	3.15	2	\$6,090	\$12,180		\$158,147	\$197,684
S2102_1	New Germany Ln		0.268	300	134.3	3.60	3.20	<5 m	\$1,128	\$151,596	1200	3.40	2	\$6,090	\$12,180		\$163,776	\$204,720
S_CC_10	New Germany Ln		0.266	300	176.7	3.20	3.50	<5 m	\$1,128	\$199,390	1200	3.35	2	\$6,090	\$12,180		\$211,570	\$264,463
S2101	New Germany Ln		0.266	300	229.4	3.60	4.10	<5 m	\$1,128	\$258,807	1200	3.85	3	\$7,561	\$22,682		\$281,489	\$351,862
S2006	New Germany Ln		0.266	300	356.8	2.80	4.00	<5 m	\$1,128	\$402,626	1200	3.40	4	\$6,090	\$24,360		\$426,986	\$533,732
New Germany Total					1026.6					\$1,158,387				\$31,920	\$83,581	\$0	\$1,241,968	\$1,552,460
S2110	Kossuth Rd		0.266	375	601.0	2.90	5.80	<5 m	\$1,193	\$717,256	1200	4.35	7	\$7,561	\$52,925	\$1,803,078	\$2,573,259	\$3,216,573
S2111	Kossuth Rd		0.267	375	378.5	5.80	7.20	5-10 m	\$4,883	\$1,848,349	1200	6.50	5	\$15,474	\$77,372	\$1,135,620	\$3,061,340	\$3,826,676
S2112	Kossuth Rd		0.268	375	325.1	7.30	6.30	5-10 m	\$4,883	\$1,587,303	1200	6.80	4	\$15,474	\$61,897	\$975,234	\$2,624,434	\$3,280,542
S2113	Kossuth Rd		0.185	450	388.5	7.00	7.80	5-10 m	\$5,057	\$1,964,731	1200	7.40	5	\$15,474	\$77,372	\$1,165,524	\$3,207,626	\$4,009,533
S2114	Kossuth Rd		0.187	450	321.6	7.90	6.00	5-10 m	\$5,057	\$1,626,450	1200	6.95	4	\$15,474	\$61,897	\$964,848	\$2,653,195	\$3,316,494
S2203_3	Kossuth Rd		0.192	450	15.6	6.00	6.00	5-10 m	\$5,057	\$78,825	1200	6.00	1	\$14,005	\$14,005	\$46,761	\$139,591	\$174,489
S_CC_03	Kossuth Rd		0.186	450	290.5	6.00	5.70	5-10 m	\$5,057	\$1,469,290	1200	5.85	4	\$14,005	\$56,018	\$871,617	\$2,396,925	\$2,996,157
S_CC_02	Kossuth Rd		0.282	450	124.3	5.80	7.70	5-10 m	\$5,057	\$628,483	1200	6.75	2	\$15,474	\$30,949	\$372,831	\$1,032,263	\$1,290,329
S2204	Kossuth Rd		0.189	450	180.0	7.80	6.40	5-10 m	\$5,057	\$910,079	1200	7.10	2	\$15,474	\$30,949	\$539,880	\$1,480,908	\$1,851,134
S2205	Kossuth Rd		0.187	450	192.2	6.40	8.50	5-10 m	\$5,057	\$972,003	1200	7.45	3	\$15,474	\$46,423	\$576,615	\$1,595,041	\$1,993,802
S2206	Kossuth Rd		0.166	600	452.0	8.60	6.20	5-10 m	\$5,708	\$2,580,337	1500	7.40	6	\$19,962	\$119,770	\$1,356,060	\$4,056,167	\$5,070,209
Kossuth West Total					3269.4					\$14,383,106				\$163,852	\$629,576	\$9,808,068	\$24,820,750	\$31,025,937
S_T01_1	Fountain St.		0.170	1050	213.8	3.90	4.70	<5 m	\$3,626	\$775,371	2400	4.30	3	\$3				

East Side Lands (Woolwich) Sanitary Servicing EA
Sewer Alternative 1 LCC



#	Year			Sewer Reach	Description	Ital Expense (2018 Dollars)		Sewer O&M (Flushing)		Annual Lift Station Energy Costs		Annual Lift Station O&M		Annual Lift Station Equip & Materials Costs		Lift Station Upgrades Costs		atal Annual Cash Flo	Total Cost (PV)						
		Rate	PV Factor			Cost Est 2025 Dollars	Present Value	Pipe Length (m)	Cumulative Pipe Length (m)	Flushing / m = Annual	\$14 PV	Monthly Energy = LS 4	\$3,961 LS for new TB	\$58 PV	Monthly Labour= LS 4	\$3,500 LS for new TB	\$3,500 PV	Monthly = LS 4	\$1,320 LS for new TB	\$19 PV	Per Event= LS 4	\$2,829,583 LS for new TB	\$41,667 PV		
0	2025	4%	1.00	Trunk 03B	Trunk 03B (South of Menno)	\$67,133,965	\$67,133,965	4132	4132		\$0			\$0			\$0			\$0			\$0	\$67,133,965	\$67,133,965
1	2026	4%	0.96	Menno East	Lonsdale / Wurster Ext to 300m East (Limit of Ex. CMP)	\$5,016,682	\$5,016,682	286	4419		\$0			\$0			\$0			\$0			\$0	\$5,016,682	\$5,016,682
2	2027	4%	0.92	Fountain South	Fountain St. (Kossuth to Middle block)	\$6,748,279	\$6,239,163	730	5149		\$0			\$0			\$0			\$0			\$0	\$6,748,279	\$6,239,163
3	2028	4%	0.89	LS 4		\$50,599,918	\$44,983,143		5149				\$700	\$0		\$42,000	\$0		\$233			\$0	\$50,642,851	\$44,983,143	
4	2029	4%	0.85	LS at new Terminal Building		\$1,875,000	\$1,602,758		5149	\$72,083	\$61,617	\$47,537	\$700	\$40,635	\$42,000	\$42,000	\$35,902	\$15,846	\$233	\$13,545		\$0	\$2,095,399	\$1,754,456	
5	2030	4%	0.82	Fountain (Menno to Otter)		\$20,724,473	\$17,034,006	2009	7157		\$0	\$47,537	\$700	\$39,072	\$42,000	\$42,000	\$34,521	\$15,846	\$233	\$13,024		\$0	\$20,872,789	\$17,120,623	
6	2031	4%	0.79	Woolwich St.		\$8,348,779	\$6,598,161	1067	8225		\$0	\$47,537	\$700	\$37,569	\$42,000	\$42,000	\$33,193	\$15,846	\$233	\$12,523		\$0	\$8,497,095	\$6,681,446	
7	2032	4%	0.76	Menno W	S1701 Reach	\$999,386	\$759,451	182	8406		\$0	\$47,537	\$700	\$36,124	\$42,000	\$42,000	\$31,917	\$15,846	\$233	\$12,041		\$0	\$1,147,702	\$839,533	
8	2033	4%	0.73	East Connector Rd.		\$7,628,908	\$5,574,368	1441	9847		\$0	\$47,537	\$700	\$34,735	\$42,000	\$42,000	\$30,689	\$15,846	\$233	\$11,578		\$0	\$7,777,224	\$5,651,370	
9	2034	4%	0.70	Fountain St. N of Menno		\$9,154,702	\$6,431,972	828	10675	\$149,445	\$104,998	\$47,537	\$700	\$33,399	\$42,000	\$42,000	\$29,509	\$15,846	\$233	\$11,133		\$0	\$9,452,463	\$6,611,011	
10	2035	4%	0.68	Menno W	Rest of Menno W	\$6,617,888	\$4,470,808	913	11588		\$0	\$47,537	\$700	\$32,114	\$42,000	\$42,000	\$28,374	\$15,846	\$233	\$10,705		\$0	\$6,766,204	\$4,542,001	
11	2036	4%	0.65	Kossuth Rd.	Last Third Until S-CC-02	\$10,205,473	\$6,629,281	948	12536		\$0	\$47,537	\$700	\$30,879	\$42,000	\$42,000	\$27,282	\$15,846	\$233	\$10,293		\$0	\$10,353,789	\$6,697,736	
12	2037	4%	0.62				\$0		12536		\$0	\$47,537	\$700	\$29,691	\$42,000	\$42,000	\$26,233	\$15,846	\$233	\$9,897		\$0	\$148,316	\$65,822	
13	2038	4%	0.60				\$0		12536		\$0	\$47,537	\$700	\$28,549	\$42,000	\$42,000	\$25,224	\$15,846	\$233	\$9,516		\$0	\$148,316	\$63,290	
14	2039	4%	0.58				\$0		12536	\$175,510	\$101,353	\$47,537	\$700	\$27,451	\$42,000	\$42,000	\$24,254	\$15,846	\$233	\$9,150		\$0	\$323,826	\$162,209	
15	2040	4%	0.56	Cober Rd.		\$4,883,640	\$2,711,712	1047	13584		\$0	\$47,537	\$700	\$26,396	\$42,000	\$42,000	\$23,321	\$15,846	\$233	\$8,799		\$0	\$5,031,956	\$2,770,227	
16	2041	4%	0.53	Kossuth Rd.	Middle Third until S2113	\$10,496,672	\$5,604,259	1016	14600		\$0	\$47,537	\$700	\$25,380	\$42,000	\$42,000	\$22,424	\$15,846	\$233	\$8,460		\$0	\$10,644,988	\$5,660,524	
17	2042	4%	0.51	New Germany Rd.	S2006 Reach	\$533,732	\$274,004	357	14957		\$0	\$47,537	\$700	\$24,404	\$42,000	\$42,000	\$21,562	\$15,846	\$233	\$8,135		\$0	\$682,048	\$328,105	
18	2043	4%	0.49	Lonsdale Rd. (Vance Rd.)	Until S-CC-06	\$1,643,329	\$811,194	992	15948		\$0	\$47,537	\$700	\$23,466	\$42,000	\$42,000	\$20,732	\$15,846	\$233	\$7,822		\$41,667	\$0	\$1,833,312	\$863,213
19	2044	4%	0.47				\$0		15948	\$223,278	\$105,977	\$47,537	\$700	\$22,563	\$42,000	\$42,000	\$19,935	\$15,846	\$233	\$7,521	\$2,829,583		\$1,343,040	\$3,201,177	\$1,499,037
20	2045	4%	0.46	New Germany Rd.	End of New Germany	\$1,018,728	\$464,934	670	16618		\$0	\$47,537	\$700	\$21,695	\$42,000	\$42,000	\$19,168	\$15,846	\$233	\$7,232		\$0	\$1,167,044	\$513,029	
21	2046	4%	0.44				\$0		16618		\$0	\$47,537	\$700	\$20,861	\$42,000	\$42,000	\$18,431	\$15,846	\$233	\$6,954		\$0	\$148,316	\$46,245	
22	2047	4%	0.42				\$0		16618		\$0	\$47,537	\$700	\$20,058	\$42,000	\$42,000	\$17,722	\$15,846	\$233	\$6,686		\$0	\$148,316	\$44,467	
23	2048	4%	0.41				\$0		16618		\$0	\$47,537	\$700	\$19,287	\$42,000	\$42,000	\$17,041	\$15,846	\$233	\$6,429		\$0	\$148,316	\$42,757	
24	2049	4%	0.39				\$0		16618	\$232,655	\$90,764	\$47,537	\$700	\$18,385	\$42,000	\$42,000	\$16,385	\$15,846	\$233	\$6,182		\$0	\$380,971	\$131,876	
25	2050	4%	0.38				\$0		16618		\$0	\$47,537	\$700	\$17,832	\$42,000	\$42,000	\$15,755	\$15,846	\$233	\$5,944		\$0	\$148,316	\$39,531	
26	2051	4%	0.36				\$0		16618		\$0	\$47,537	\$700	\$17,146	\$42,000	\$42,000	\$15,149	\$15,846	\$233	\$5,715		\$0	\$148,316	\$38,010	
27	2052	4%	0.35				\$0		16618		\$0	\$47,537	\$700	\$16,487	\$42,000	\$42,000	\$14,566	\$15,846	\$233	\$5,496		\$0	\$148,316	\$36,548	
28	2053	4%	0.33				\$0		16618		\$0	\$47,537	\$700	\$15,853	\$42,000	\$42,000	\$14,006	\$15,846	\$233	\$5,284		\$0	\$148,316	\$35,143	
29	2054	4%	0.32				\$0		16618	\$232,655	\$74,601	\$47,537	\$700	\$15,243	\$42,000	\$42,000	\$13,467	\$15,846	\$233	\$5,081		\$0	\$380,971	\$108,392	
30	2055	4%	0.31	Lonsdale Rd. (Vance Rd.)	First half	\$4,942,327	\$1,523,812	1316	17935		\$0	\$47,537	\$700	\$14,657	\$42,000	\$42,000	\$12,949	\$15,846	\$233	\$4,886		\$0	\$5,090,643	\$1,556,303	
31	2056	4%	0.30	Kossuth rd.	Final Third	\$10,323,791	\$3,060,594	1305	19239		\$0	\$47,537	\$700	\$14,093	\$42,000	\$42,000	\$12,451	\$15,846	\$233	\$4,698		\$0	\$10,472,107	\$3,091,836	
32	2057	4%	0.29	Shantz Rd. S	Last half starting at S2012	\$6,288,967	\$1,792,720	1017	20256		\$0	\$47,537	\$700	\$13,551	\$42,000	\$42,000	\$11,972	\$15,846	\$233	\$4,517		\$0	\$6,437,283	\$1,822,760	
33	2058	4%	0.27				\$0		20256		\$0	\$47,537	\$700	\$13,030	\$42,000	\$42,000	\$11,512	\$15,846	\$233	\$4,343		\$0	\$148,316	\$28,885	
34	2059	4%	0.26				\$0		20256	\$283,586	\$74,740	\$47,537	\$700	\$12,528	\$42,000	\$42,000	\$11,069	\$15,846	\$233	\$4,176		\$0	\$431,902	\$102,513	
35	2060	4%	0.25				\$0		20256		\$0	\$47,537	\$700	\$12,047	\$42,000	\$42,000	\$10,643	\$15,846	\$233	\$4,016		\$41,667	\$0	\$189,983	\$26,706
36	2061	4%	0.24				\$0		20256		\$0	\$47,537	\$700	\$11,583	\$42,000	\$42,000	\$10,234	\$15,846	\$233	\$3,861	\$2,829,583		\$689,481	\$2,977,899	\$715,159
37	2062	4%	0.23				\$0		20256		\$0	\$47,537	\$700	\$11,138	\$42,000	\$42,000	\$9,840	\$15,846	\$233	\$3,713		\$0	\$148,316	\$24,691	
38	2063	4%	0.23				\$0		20256		\$0	\$47,537	\$700	\$10,709	\$42,000	\$42,000	\$9,462	\$15,846	\$233	\$3,570		\$0	\$148,316	\$23,741	
39	2064	4%	0.22				\$0		20256	\$283,586	\$61,431	\$47,537	\$700	\$10,297	\$42,000	\$42,000	\$9,098	\$15,846	\$233	\$3,432		\$0	\$431,902	\$84,259	
40	2065	4%	0.21	Shantz Rd S	Rest of Shantz Rd S	\$8,811,892	\$1,835,421	1665	21922		\$0	\$47,537	\$700	\$9,901	\$42,000	\$42,000	\$8,748	\$15,846	\$233	\$3,300		\$0	\$8,960,208	\$1,857,371	
41	2066	4%	0.20				\$0		21922		\$0	\$47,537	\$700	\$9,521	\$42,000	\$42,000	\$8,412	\$15,846	\$233	\$3,174		\$0	\$148,316	\$21,106	
42	2067	4%	0.19	Menno St. E	Rest of Menno E	\$19,877,759	\$3,827,958	1616	23538		\$0														

East Side Lands (Woolwich) Sanitary Servicing EA
Sewer Alternative 2



Sewer Cost										Manhole Costs					Road Restoration Costs	Construction Costs	
Sewer Section	Street	Slope (%)	Size (mm)	Length (m)	U/S Depth (m)	D/S Depth (m)	Depth	Sewer Unit Cost (\$/m)	Sewer Total Cost (\$)	MH Dia. (mm)	Average MH Depth (m)	Number of MH	MH Unit Cost (\$)	MH Total Cost	Road Reconstruction (\$/m)	Construction Costs Total (\$)	Contingency (25%) Total \$
S0106	Wambolt Dr.	0.257	375	77.83	6.90	7.90	5-10 m	\$ 4,883	\$380,046	1200	7.40	1	\$15,474	\$15,474		\$395,520	\$494,400
S0107	Wambolt Dr.	0.272	375	409.57	8.00	5.00	5-10 m	\$ 4,883	\$1,999,854	1200	6.50	5	\$15,474	\$77,372		\$2,077,225	\$2,596,531
S0107	Wambolt Dr.	0.272	375	409.57	5.00	2.80	<5 m	\$ 1,193	\$488,772	1200	3.90	5	\$7,561	\$37,804		\$526,576	\$658,220
S02A04	Kramp Rd.	0.422	375	142.29	2.90	2.80	<5 m	\$ 1,193	\$169,810	1200	2.85	2	\$6,090	\$12,180		\$181,990	\$227,488
S02A03	Kramp Rd.	0.271	375	199.22	2.90	5.50	<5 m	\$ 1,193	\$237,740	1200	4.20	3	\$7,561	\$22,682		\$260,422	\$325,528
S02A05	Wurster Place	0.266	375	692.82	5.50	3.30	<5 m	\$ 1,193	\$826,801	1200	4.40	8	\$7,561	\$60,486		\$887,287	\$1,109,109
S0501	Wurster Place Extens.	1.826	375	82.68	3.30	2.80	<5 m	\$ 1,193	\$98,670	1200	3.05	1	\$6,090	\$6,090		\$104,760	\$130,950
S0502	Wurster Place Extens.	0.167	600	395.25	4.10	5.20	<5 m	\$ 1,797	\$710,454	1500	4.65	5	\$17,021	\$85,105		\$795,560	\$994,450
S0503	Wurster Place Extens.	0.167	600	233.11	5.20	5.00	5-10 m	\$ 5,708	\$1,330,721	1500	5.10	3	\$17,021	\$51,063		\$1,381,785	\$1,727,231
S0504	Wurster Place Extens.	0.165	600	309.69	5.00	8.80	5-10 m	\$ 5,708	\$1,767,852	1500	6.90	4	\$19,962	\$79,846		\$1,847,699	\$2,309,623
S0505	Wurster Place Extens.	1.333	600	207.03	8.90	6.50	5-10 m	\$ 5,708	\$1,181,805	1500	7.70	3	\$21,431	\$64,294		\$1,246,099	\$1,557,624
S0506	Wurster Place Extens.	0.167	600	346.31	6.50	9.50	5-10 m	\$ 5,708	\$1,976,885	1500	8.00	4	\$21,431	\$85,725		\$2,062,610	\$2,578,262
Total (Trunk 03)				3505.4					\$11,169,412				\$162,677	\$598,121	\$0	\$11,767,533	\$14,709,416
S1615	Lonsdale Rd. (NS)	0.164	750	146.4	9.50	12.90	11-15 m	\$ 10,509	\$1,538,836	1800	11.20	2	\$31,622	\$63,244		\$1,602,080	\$2,002,601
S1616	Lonsdale Rd. (NS)	0.398	750	238.9	12.90	10.00	11-15 m	\$ 10,509	\$2,510,095	1800	11.45	3	\$31,622	\$94,866		\$2,604,961	\$3,256,202
S1616	Lonsdale Rd. (NS)	0.398	750	238.9	10.00	5.00	5-10 m	\$ 6,568	\$1,568,809	1800	7.50	3	\$25,215	\$75,645		\$1,644,454	\$2,055,568
S1616	Lonsdale Rd. (NS)	0.398	750	238.9	5.00	2.80	<5 m	\$ 2,418	\$577,500	1800	3.90	3	\$15,831	\$47,492		\$624,991	\$781,239
S1623	Lonsdale Rd. (NS)	0.551	750	190.7	3.00	2.80	<5 m	\$ 2,418	\$461,149	1800	2.90	3	\$14,844	\$44,533		\$505,683	\$632,103
S2002	Airport Crossing	0.166	750	313.5	2.90	4.20	<5 m	\$ 2,418	\$758,008	1800	3.55	4	\$15,831	\$63,322		\$821,330	\$1,026,662
S2003	Airport Crossing	0.360	750	285.9	4.30	2.80	<5 m	\$ 2,418	\$691,364	1800	3.55	4	\$15,831	\$63,322	\$4,960,000	\$5,714,686	\$7,143,358
S2004	Airport Crossing	0.167	750	293.7	2.90	2.80	<5 m	\$ 2,418	\$709,990	1800	2.85	4	\$14,844	\$59,378		\$769,368	\$961,710
New LS for Terminal Building																\$1,500,000	\$1,875,000
S2005	Airport Crossing	0.169	750	373.0	2.90	7.20	5-10 m	\$ 6,568	\$2,450,191	1800	5.05	5	\$20,805	\$104,024		\$2,554,215	\$3,192,769
S1903	Fountain St	0.165	1050	652.7	7.30	9.60	5-10 m	\$ 8,270	\$5,397,699	2400	8.45	8	\$41,061	\$328,490	\$1,958,169	\$7,684,358	\$9,605,448
S2001	Fountain St	0.167	1050	796.2	9.60	7.60	5-10 m	\$ 8,270	\$6,583,936	2400	8.60	9	\$43,023	\$387,211	\$2,388,510	\$9,359,657	\$11,699,571
S2201_1	Fountain St	3.320	1050	183.7	7.70	6.50	5-10 m	\$ 8,270	\$1,519,183	2400	7.10	3	\$40,262	\$120,785	\$551,127	\$2,191,095	\$2,738,869
S_CC_01	Fountain St	0.177	1050	50.8	6.60	6.10	5-10 m	\$ 8,270	\$419,926	2400	6.35	1	\$38,121	\$38,121	\$152,340	\$610,386	\$762,983
S2202	Fountain St	0.163	1050	129.1	6.20	7.70	5-10 m	\$ 8,270	\$1,067,767	2400	6.95	2	\$40,262	\$80,523	\$387,363	\$1,535,654	\$1,919,567
Alt 2 LS 4																\$36,788,985	\$45,986,231
Total (Trunk03B)				4132.4					\$26,254,455				\$389,173	\$1,570,956	\$10,397,509	\$38,222,920	\$47,778,649
TOTAL TRUNK				7637.8					\$37,423,866				\$551,850		\$10,397,509	\$49,990,452	\$62,488,065

Local Sewers																	
S0103	North Dev Rd	0.217	375	133.5	2.80	5.00	<5 m	\$ 1,193	\$159,309	1200	3.90	2	\$7,561	\$15,121		\$174,430	\$218,037
S0102A	North Dev Rd	0.217	375	133.5	5.00	6.80	5-10 m	\$ 4,883	\$651,824	1200	5.90	2	\$14,005	\$28,009		\$679,834	\$849,792
S0102	North Dev Rd	0.363	300	309.6	6.90	5.00	5-10 m	\$ 4,740	\$1,467,509	1200	5.95	4	\$14,005	\$56,018		\$1,523,527	\$1,904,409
S0102A	North Dev Rd	0.363	300	309.6	5.00	2.80	<5 m	\$ 1,128	\$349,385	1200	3.90	4	\$7,561	\$30,243		\$379,628	\$474,535
North Dev Rd Total				886.2					\$2,628,027				\$43,131	\$129,392	\$0	\$2,757,419	\$3,446,773
S0105	Greenhouse Rd	0.273	300	881.6	2.90	2.80	<5 m	\$ 1,128	\$994,743	1200	2.85	10	\$6,090	\$60,899		\$1,055,642	\$1,319,553
S02A01	Greenhouse Rd	0.187	525	407.2	2.90	2.90	<5 m	\$ 1,400	\$570,161	1500	2.90	5	\$11,217	\$56,085		\$626,246	\$782,808
Greenhouse Rd Total				1288.8					\$1,564,904				\$17,307	\$116,984	\$0	\$1,681,888	\$2,102,360
S02A02	Kramp Rd	0.266	300	372.0	5.50	2.80	<5 m	\$ 1,128	\$419,770	1200	4.15	5	\$7,561	\$37,804		\$457,574	\$571,967
Kramp Rd West Total				372.0					\$419,770				\$7,561	\$37,804	\$0	\$457,574	\$571,967
S02B02	Kramp Rd	0.311	300	1042.6	2.90	2.80	<5 m	\$ 1,128	\$1,176,473	1200	2.85	12	\$6,090	\$73,079		\$1,249,552	\$1,561,940
Kramp Rd East Total				1042.6					\$1,176,473				\$6,090	\$73,079	\$0	\$1,249,552	\$1,561,940
S0108	Shantz Station Rd	0.268	300	100.7	2.80	3.40	<5 m	\$ 1,128	\$113,623	1200	3.10	2	\$6,090	\$12,180	\$302,082	\$421,795	\$527,244
S0109	Shantz Station Rd	0.266	300	433.0	3.40	4.30	<5 m	\$ 1,128	\$488,628	1200	3.85	5	\$7,561	\$37,804	\$1,299,084	\$1,795,273	\$2,244,091
S0110	Shantz Station Rd	0.265	300	293.8	4.40	3.40	<5 m	\$ 1,128	\$331,539	1200	3.90	4	\$7,561	\$30,243	\$881,442	\$1,220,542	\$1,525,678
S02B01	Shantz Station Rd	0.351	300	671.7	3.40	2.80	<5 m	\$ 1,128	\$757,960	1200	3.10	8	\$6,090	\$48,719	\$2,015,139	\$2,779,189	\$3,473,986
S02B03	Shantz Station Rd	0.219	450	164.1	2.90	3.00	<5 m	\$ 1,304	\$213,959	1200	2.95	2	\$6,090	\$12,180	\$492,177	\$712,226	\$890,282
S0302	Shantz Station Rd	0.166	600	594.8	3.00	6.20	5-10 m	\$ 5,708	\$3,395,157	1500	4.60	7	\$17,021	\$119,148	\$1,784,277	\$5,196,455	\$6,495,569
S0402	Shantz Station Rd	1.296	600	245.3	6.20	9.80	5-10 m	\$ 5,708	\$1,400,507	1500	8.00	3	\$21,431	\$64,294	\$736,017	\$2,157,956	\$2,697,445
S0403	Shantz Station Rd	1.649	600	519.2	9.90	2.80	5-10 m	\$ 5,708	\$2,963,557	1500	6.35	6	\$18,491	\$110,945	\$1,557,456	\$4,539,504	\$5,674,380
S0404_1	Shantz Station Rd	2.184	600	60.4	2.90	4.50	<5 m	\$ 1,797	\$108,649	1500	3.70	1	\$12,047	\$12,047	\$181,338	\$302,034	\$377,543
S_CC_11	Shantz Station Rd	0.268	600	82.2	4.50	5.30	<5 m	\$ 1,797	\$147,804	1500	4.90	1	\$17,021	\$17,021	\$246,687	\$411,512	\$514,390
Shantz Station (North of Menno)				3165.2					\$9,921,384				\$119,402	\$464,579	\$9,495,699	\$19,536,486	\$24,420,607
S0301	East Connection	0.187	525	438.4	2.90	3.60	<5 m	\$ 1,400	\$613,862	1500	3.25	5	\$11,217	\$56,085		\$669,948	\$837,435
S0602	East Connection	0.187	525	1002.4	3.70	6.10	<5 m	\$ 1,400	\$1,403,460	1500	4.90	12	\$17,021	\$204,253		\$1,607,713	\$2,009,641
East Connector Total				1440.8					\$2,017,322				\$28,238	\$260,338	\$0	\$2,277,661	\$2,847,076
S0401	New Rd 3 (Rider Rd Ext.)	0.165	300	255.0	2.80	2.80	5-10 m	\$ 4,740	\$1,208,501	1200	2.80	3	\$6,090	\$18,270		\$1,226,770	\$1,533,463
S0406	New Rd 3 (Rider Rd Ext.)	0.168	300	421.8	2.80	2.80	5-10 m	\$ 4,740	\$1,999,232	1200	2.80	5	\$6,090	\$30,449		\$2,029,681	\$2,537,101
S0407	New Rd 3 (Rider Rd Ext.)	0.165	300	393.5	2.90	6.40	5-10 m	\$ 4,740	\$1,865,045	1200	4.65	5	\$12,771	\$63,853		\$1,928,898	\$2,411,122
S0507	New Rd 3 (Rider Rd Ext.)	0.167	300	382.5	6.40	4.00	5-10 m	\$ 4,740	\$1,812,943	1200	5.20	5	\$12,771	\$63,853		\$1,876,796	\$2,345,994
New Rd 3 (Rider Rd Ext.)				1452.8					\$6,885,720				\$37,721	\$176,425	\$0	\$7,062,145	\$8,827,681
S12B01	Fountain St	0.183	525	163.6	6.10	5.70	5-10 m	\$ 5,217	\$853,675	1500	5.90	2	\$18,491	\$36,982	\$490,935	\$1,381,592	\$1,726,990
S12B02	Fountain St	0.186	600	252.4	5.70	7.30	5-10 m	\$ 5,708	\$1,440,644	1500	6.50	3	\$19,962	\$59,885	\$757,110	\$2,257,638	\$2,822,048
S12B03	Fountain St	0.187	600	411.6	7.40	6.00	5-10 m	\$ 5,708	\$2,349,813	1500	6.70	5	\$19,962	\$99,808	\$1,234,911	\$3,684,532	\$4,605,664

Fountain St (N of Menno) Total				827.7					\$4,644,131				\$58,414	\$196,674	\$2,482,956	\$7,323,762	\$9,154,702	
S1604	Menno Rd	0.267	300	127.2	2.80	8.00	5-10 m	\$	4,740	\$603,101	1200	5.40	2	\$12,771	\$25,541	\$381,744	\$1,010,386	\$1,262,983
S1603	Menno Rd	0.266	300	233.2	8.00	5.30	5-10 m	\$	4,740	\$1,105,197	1200	6.65	3	\$15,474	\$46,423	\$699,555	\$1,851,175	\$2,313,969
S1702	Menno Rd	0.866	450	552.9	6.10	2.10	<5 m	\$	1,304	\$721,086	1200	4.10	7	\$7,561	\$52,925	\$1,658,739	\$2,432,750	\$3,040,937
S1701	Menno Rd	0.215	450	181.5	2.10	4.60	<5 m	\$	1,304	\$236,715	1200	3.35	3	\$6,090	\$18,270	\$544,524	\$799,509	\$999,386
Menno W Total				1094.9					\$2,666,098				\$41,895	\$143,159	\$3,284,562	\$6,093,819	\$7,617,274	
S1605_1	Menno Rd	0.266	300	233.1	2.80	6.60	<5 m	\$	1,128	\$262,982	1200	4.70	3	\$12,771	\$38,312	\$699,174	\$1,000,468	\$1,250,585
S1610	Menno Rd	0.267	600	471.1	5.40	11.00	5-10 m	\$	5,708	\$2,689,129	1500	8.20	6	\$21,431	\$128,588	\$1,413,234	\$4,230,951	\$5,288,689
Alt 2 LS 1																	\$12,638,621	\$15,798,276
S1609	Menno Rd	0.432	600	881.1	2.80	2.80	<5 m	\$	1,797	\$1,583,777	1500	2.80	10	\$11,217	\$112,171	\$2,643,354	\$4,339,302	\$5,424,127
S1608	Menno Rd	0.998	600	31.1	2.90	3.60	<5 m	\$	1,797	\$55,829	1500	3.25	1	\$11,217	\$11,217	\$93,180	\$160,226	\$200,283
S_CC_07	Menno Rd	0.265	600	211.2	3.60	5.60	<5 m	\$	1,797	\$379,687	1500	4.60	3	\$17,021	\$51,063	\$633,705	\$1,064,455	\$1,330,569
S1607	Menno Rd	0.186	750	413.1	5.70	6.60	5-10 m	\$	6,568	\$2,712,999	1800	6.15	5	\$22,274	\$111,372	\$1,239,180	\$4,063,551	\$5,079,439
S1606	Menno Rd	0.188	750	286.5	6.60	8.20	5-10 m	\$	6,568	\$1,881,674	1800	7.40	4	\$23,745	\$94,981	\$859,467	\$2,836,122	\$3,545,153
Menno E Total				2527.1					\$9,566,077				\$119,777	\$547,704	\$7,581,294	\$17,695,076	\$22,118,845	
S1401	Woolwich St	0.367	300	169.1	2.80	2.80	<5 m	\$	1,128	\$190,780	1200	2.80	2	\$6,090	\$12,180	\$507,213	\$710,172	\$887,715
S1402	Woolwich St	0.400	300	82.4	2.90	2.80	<5 m	\$	1,128	\$92,983	1200	2.85	1	\$6,090	\$6,090	\$247,209	\$346,282	\$432,853
S1703	Woolwich St	0.270	300	136.8	2.90	3.80	<5 m	\$	1,128	\$154,389	1200	3.35	2	\$6,090	\$12,180	\$410,463	\$577,031	\$721,289
S1704	Woolwich St	0.185	525	172.8	4.70	3.60	<5 m	\$	1,400	\$241,957	1500	4.15	2	\$12,047	\$24,094	\$518,421	\$784,472	\$980,590
S1705_1	Woolwich St	4.845	525	7.8	3.70	4.30	<5 m	\$	1,400	\$10,981	1500	4.00	1	\$12,047	\$12,047	\$23,529	\$46,557	\$58,197
S_CC_14	Woolwich St	0.188	525	239.8	4.40	7.80	5-10 m	\$	5,217	\$1,251,104	1500	6.10	3	\$18,491	\$55,472	\$719,490	\$2,026,067	\$2,532,583
S1706	Woolwich St	0.190	525	258.5	7.90	8.70	5-10 m	\$	5,217	\$1,348,593	1500	8.30	3	\$21,431	\$64,294	\$775,554	\$2,188,441	\$2,735,551
Woolwich Total				1067.3					\$3,290,788				\$82,285	\$186,356	\$3,201,879	\$6,679,023	\$8,348,779	
S1601_1	Fountain St	1.116	450	365.5	6.10	3.80	5-10 m	\$	5,057	\$1,848,624	1200	4.95	5	\$12,771	\$63,853	\$1,096,647	\$3,009,124	\$3,761,405
S_CC_09	Fountain St	0.213	450	75.0	3.90	3.60	<5 m	\$	1,304	\$97,872	1200	3.75	1	\$7,561	\$7,561	\$225,138	\$330,571	\$413,213
S1602	Fountain St	0.217	450	533.5	3.60	7.20	<5 m	\$	1,304	\$695,793	1200	5.40	6	\$12,771	\$76,623	\$1,600,557	\$2,372,973	\$2,966,216
S1801	Fountain St	0.165	750	400.6	8.80	6.30	5-10 m	\$	6,568	\$2,631,167	1800	7.55	5	\$25,215	\$126,075	\$1,201,803	\$3,959,045	\$4,948,807
S1802	Fountain St	0.167	750	383.6	6.30	10.40	5-10 m	\$	6,568	\$2,519,484	1800	8.35	5	\$25,215	\$126,075	\$1,150,791	\$3,796,350	\$4,745,438
Alt 2 LS 2																	\$10,056,481	\$12,570,601
S1902	Fountain St	0.168	750	250.3	10.50	9.10	5-10 m	\$	6,568	\$1,644,193	1800	9.80	3	\$28,647	\$85,941	\$750,996	\$2,481,130	\$3,101,412
Fountain St. (Menno to Otter) Total				2008.6					\$9,437,134				\$112,179	\$486,128	\$6,025,932	\$15,949,193	\$19,936,492	
S1622	Vance Rd Ext.	0.551	300	676.4	2.90	2.80	<5 m	\$	1,128	\$763,250	1200	2.85	8	\$6,090	\$48,719		\$811,969	\$1,014,962
S1621	Vance Rd Ext.	0.265	300	237.5	2.90	6.80	5-10 m	\$	4,740	\$1,125,833	1200	4.85	3	\$12,771	\$38,312		\$1,164,145	\$1,455,181
S1620	Vance Rd Ext.	0.266	300	402.5	6.90	5.40	5-10 m	\$	4,740	\$1,907,725	1200	6.15	5	\$14,005	\$70,023		\$1,977,748	\$2,472,185
S_CC_06	Vance Rd Ext.	0.670	300	513.6	5.40	2.80	<5 m	\$	1,128	\$579,595	1200	4.10	6	\$7,561	\$45,364		\$624,960	\$781,199
S1619_1	Vance Rd Ext.	0.217	300	69.0	2.90	2.80	<5 m	\$	1,128	\$77,870	1200	2.85	1	\$6,090	\$6,090		\$83,960	\$104,949
S1618	Vance Rd Ext.	0.189	450	185.1	2.90	4.10	<5 m	\$	1,304	\$241,373	1500	3.50	3	\$12,047	\$36,141		\$277,514	\$346,893
S1617	Vance Rd Ext.	0.188	450	224.0	4.20	2.90	<5 m	\$	1,304	\$292,090	1500	3.55	3	\$12,047	\$36,141		\$328,230	\$410,288
Vance Rd Ext.				2308.2					\$4,987,736				\$70,609	\$280,789	\$0	\$5,268,525	\$6,585,656	
S1611	Shantz Station Rd	0.267	300	183.5	2.80	2.80	<5 m	\$	1,128	\$207,019	1200	2.80	3	\$6,090	\$18,270	\$550,389	\$775,678	\$969,598
S1612	Shantz Station Rd	0.268	300	250.4	2.90	2.80	<5 m	\$	1,128	\$282,573	1200	2.85	3	\$6,090	\$18,270	\$751,257	\$1,052,099	\$1,315,124
S1613_1	Shantz Station Rd	0.470	300	212.6	2.90	2.80	<5 m	\$	1,128	\$239,928	1200	2.85	3	\$6,090	\$18,270	\$637,881	\$896,079	\$1,120,098
S1613_2	Shantz Station Rd	1.076	300	392.1	2.90	6.30	<5 m	\$	1,128	\$442,473	1200	4.60	5	\$12,771	\$63,853	\$1,176,375	\$1,682,701	\$2,103,377
S1614	Shantz Station Rd	0.626	300	321.0	6.40	2.80	<5 m	\$	1,128	\$362,187	1200	4.60	4	\$12,771	\$51,082	\$962,922	\$1,376,191	\$1,720,239
S2011	Shantz Station Rd	1.560	300	305.8	2.80	2.80	<5 m	\$	1,128	\$345,060	1200	2.80	4	\$6,090	\$24,360	\$917,388	\$1,286,807	\$1,608,509
S2012	Shantz Station Rd	0.266	300	203.1	2.90	5.90	<5 m	\$	1,128	\$229,190	1200	4.40	3	\$7,561	\$22,682	\$609,333	\$861,205	\$1,076,507
S2106	Shantz Station Rd	0.220	375	181.8	6.00	3.60	5-10 m	\$	4,883	\$887,539	1200	4.80	3	\$12,771	\$38,312	\$545,301	\$1,471,151	\$1,838,939
S2107	Shantz Station Rd	0.867	375	415.2	3.70	2.80	<5 m	\$	1,193	\$495,500	1200	3.25	5	\$6,090	\$30,449	\$1,245,615	\$1,771,564	\$2,214,455
S2109	Shantz Station Rd	1.121	375	216.8	2.90	2.80	<5 m	\$	1,193	\$258,685	1200	2.85	3	\$6,090	\$18,270	\$650,298	\$927,253	\$1,159,066
Shantz Station Rd. (S of Menno)				2682.3					\$3,750,154				\$82,412	\$303,816	\$8,046,759	\$12,100,729	\$15,125,911	
S2115	Cober Rd	0.218	375	215.6	4.10	4.00	<5 m	\$	1,193	\$257,243	1200	4.05	3	\$7,561	\$22,682		\$279,925	\$349,906
S_CC_05	Cober Rd	0.211	375	165.8	4.10	4.10	<5 m	\$	1,193	\$197,862	1200	4.10	2	\$7,561	\$15,121		\$212,983	\$266,229
S_CC_04	Cober Rd	0.218	375	480.9	4.10	7.60	5-10 m	\$	4,883	\$2,348,093	1200	5.85	6	\$14,005	\$84,028		\$2,432,120	\$3,040,150
S2116	Cober Rd	0.578	450	185.0	7.70	7.00	5-10 m	\$	5,057	\$935,461	1200	7.35	3	\$15,474	\$46,423		\$981,884	\$1,227,354
Cober Total				1047.2					\$2,803,197				\$44,600	\$168,254	\$0	\$3,906,912	\$4,883,640	
S2103	New Germany Ln	0.271	300	129.4	2.80	3.50	<5 m	\$	1,128	\$145,967	1200	3.15	2	\$6,090	\$12,180		\$158,147	\$197,684
S2102_1	New Germany Ln	0.268	300	134.3	3.60	3.20	<5 m	\$	1,128	\$151,596	1200	3.40	2	\$6,090	\$12,180		\$163,770	\$204,720
S_CC_10	New Germany Ln	0.266	300	176.7	3.20	3.50	<5 m	\$	1,128	\$199,390	1200	3.35	2	\$6,090	\$12,180		\$211,576	\$264,463
S2101	New Germany Ln	0.266	300	229.4	3.60	4.10	<5 m	\$	1,128	\$258,807	1200	3.85	3	\$7,561	\$22,682		\$281,489	\$351,862
S2006	New Germany Ln	0.266	300	356.8	2.80	4.00	<5 m	\$	1,128	\$402,626	1200	3.40	4	\$6,090	\$24,360		\$426,986	\$533,732
New Germany Total				1026.6					\$1,158,387				\$31,920	\$83,581	\$0	\$1,241,968	\$1,552,460	
S2110	Kossuth Rd	0.266	375	601.0	2.90	5.80	<5 m	\$	1,193	\$717,256	1200	4.35	7	\$7,561	\$52,925	\$1,803,078	\$2,573,259	\$3,216,573
S2111	Kossuth Rd	0.267	375	378.5	5.80	7.20	5-10 m	\$	4,883	\$1,848,349	1200	6.50	5	\$15,474	\$77,372	\$1,135,620	\$3,061,340	\$3,826,676
S2112	Kossuth Rd	0.268	375	325.1	7.30	6.30	5-10 m	\$	4,883	\$1,587,303	1200	6.80	4	\$15,474	\$61,897	\$975,234	\$2,624,434	\$3,280,542
S2113	Kossuth Rd	0.185	450	388.5	7.00	7.80	5-10 m	\$	5,057	\$1,964,731	1200	7.40	5	\$15,474	\$77,372	\$1,165,524	\$3,207,626	\$4,009,533
S2114	Kossuth Rd	0.187	450	321.6	7.90	6.00	5-10 m	\$	5,057	\$1,626,450	1200	6.95	4	\$15,474	\$61,897	\$964,848	\$2,653,195	\$3,316,494
S2203_3	Kossuth Rd	0.192	450	15.6	6.00	6.00	5-10 m	\$	5,057	\$78,825	1200	6.00	1	\$14,005	\$14,005	\$46,761	\$139,591	\$174,489
S_CC_03	Kossuth Rd	0.189	450	290.5	6.00	5.70	5-10 m	\$	5,057	\$1,469,290	1200	5.85	4	\$14,005	\$56,018	\$871,617	\$2,396,925	\$2,996,157
S_CC_02	Kossuth Rd	0.274	450	124.3	5.80	7.70	5-10 m	\$										

East Side Lands (Woolwich) Sanitary Servicing EA
Sewer Alternative 2 LCC



#	Year			Sewer Reach	Description	Capital Expense (2018 Dollars)			Sewer O&M (Flushing)			Annual List Station Energy Costs				Monthly Lift Station O&M					Monthly Lift Station Equip & Materials					Monthly Lift Station Upgrades					Total Annual Cash Flow	Total Cost (PV)	
						Cost Est	Present	Pipe	Cumulative Pipe	Flushing / m =	\$14	\$1,019	\$949	\$58	\$3,961	= Monthly Energy	Monthly Labour=	\$3,500	\$3,500	\$3,500	\$3,500	Monthly =	\$ 340	\$ 316	\$ 19	\$ 1,320	Per Event=	\$ 727,500	\$ 677,917	\$ 41,667	\$ 2,829,583		
		Rate	PV Factor			2025 Dollars	Value	Length (m)	Length (m)	Annual	PV	LS 1	LS 2	LS at New TB	LS 4	PV	LS 1	LS 2	LS at New TB	LS 4	PV	LS 1	LS 2	LS at New TB	LS 4	PV	LS 1	LS 2	LS at New TB	LS 4	PV		
0	2025	4%	1.00	Trunk 03B	Trunk 03B (South of Menno)	\$47,778,649	\$47,778,649	4132	4132		\$0					\$0					\$0					\$0					\$0	\$47,778,649	\$47,778,649
1	2026	4%	0.96	Menno East	Lonsdale / Wurster Ext to 300m East (Limit of Ex. CMP)	\$3,545,153	\$3,545,153	286	4419		\$0					\$0					\$0					\$0					\$0	\$3,545,153	\$3,545,153
2	2027	4%	0.92	Fountain South	Fountain St. (Kossuth to Middle block)	\$9,492,866	\$8,776,688	730	5149		\$0					\$0					\$0					\$0					\$0	\$9,492,866	\$8,776,688
3	2028	4%	0.89	LS at new Terminal Building		\$1,875,000	\$1,666,868		5149		\$0				\$47,537	\$42,260				\$42,000	\$37,338				\$15,846	\$14,087				\$0	\$1,980,383	\$1,760,553	
4	2029	4%	0.85		LS 4		\$45,986,231	\$39,309,223		5149	\$72,083	\$61,617				\$47,537	\$41,233			\$42,000	\$42,000	\$42,000	\$71,804		\$3,796	\$233	\$15,846	\$13,744			\$0	\$46,206,630	\$39,497,621
4	2029	4%	0.85		LS 2		\$12,570,601	\$10,745,403		5149		\$0		\$11,389	\$700	\$47,537	\$50,969			\$42,000	\$42,000	\$42,000	\$107,705	\$3,796	\$233	\$15,846	\$16,990			\$0	\$12,776,103	\$10,921,066	
5	2030	4%	0.82	Fountain (Menno to Otter)		\$19,936,492	\$16,386,343	2009	7157		\$0				\$11,389	\$700	\$47,537	\$49,008	\$42,000	\$42,000	\$42,000	\$103,563	\$3,796	\$233	\$15,846	\$16,336				\$0	\$20,141,993	\$16,555,250	
6	2031	4%	0.79	Woolwich St.		\$8,348,779	\$6,598,161	1067	8225		\$0		\$11,389	\$700	\$47,537	\$47,123			\$42,000	\$42,000	\$42,000	\$99,580	\$3,796	\$233	\$15,846	\$15,708				\$0	\$8,554,280	\$6,760,572	
7	2032	4%	0.76	Menno W	\$1701 Reach	\$999,386	\$759,451	182	8406		\$0				\$11,389	\$700	\$47,537	\$45,311	\$42,000	\$42,000	\$42,000	\$95,750	\$3,796	\$233	\$15,846	\$15,104				\$0	\$1,204,887	\$915,615	
8	2033	4%	0.73	East Connector Rd.		\$2,847,076	\$2,080,331	1441	9847	\$137,858	\$100,731				\$11,389	\$700	\$47,537	\$43,568	\$42,000	\$42,000	\$42,000	\$92,067	\$3,796	\$233	\$15,846	\$14,523				\$0	\$3,190,435	\$2,331,220	
9	2034	4%	0.70	Fountain St. N of Menno		\$9,154,702	\$6,431,972	828	10675		\$0				\$11,389	\$700	\$47,537	\$41,892	\$42,000	\$42,000	\$42,000	\$88,526	\$3,796	\$233	\$15,846	\$13,964				\$0	\$9,360,204	\$6,576,355	
10	2035	4%	0.68	Menno W	Rest of Menno W	\$6,617,888	\$4,470,808	913	11588		\$0				\$11,389	\$700	\$47,537	\$40,281	\$42,000	\$42,000	\$42,000	\$85,121	\$3,796	\$233	\$15,846	\$13,427				\$0	\$6,823,389	\$4,609,637	
11	2036	4%	0.65	Kossuth Rd.	Last Third Until S-CC-02	\$9,803,795	\$6,368,358	948	12536		\$0		\$11,389	\$700	\$47,537	\$38,732			\$42,000	\$42,000	\$42,000	\$81,847	\$3,796	\$233	\$15,846	\$12,911				\$0	\$10,009,297	\$6,501,848	
12	2037	4%	0.62			\$0	\$0		12536		\$0				\$11,389	\$700	\$47,537	\$37,242	\$42,000	\$42,000	\$42,000	\$78,699	\$3,796	\$233	\$15,846	\$12,414				\$0	\$205,501	\$128,356	
13	2038	4%	0.60			\$0	\$0		12536	\$175,510	\$105,407				\$11,389	\$700	\$47,537	\$35,810	\$42,000	\$42,000	\$42,000	\$75,672	\$3,796	\$233	\$15,846	\$11,937				\$0	\$381,012	\$228,826	
14	2039	4%	0.58			\$0	\$0		12536		\$0				\$11,389	\$700	\$47,537	\$34,433	\$42,000	\$42,000	\$42,000	\$72,762	\$3,796	\$233	\$15,846	\$11,478				\$0	\$205,501	\$118,672	
15	2040	4%	0.56	Cober Rd.		\$4,883,640	\$2,711,712	1047	13584		\$0				\$11,389	\$700	\$47,537	\$33,108	\$42,000	\$42,000	\$42,000	\$69,963	\$3,796	\$233	\$15,846	\$11,036				\$0	\$5,089,141	\$2,825,819	
16	2041	4%	0.53	Kossuth Rd.	Middle Third until S2113	\$10,496,672	\$5,604,259	1016	14600		\$0				\$11,389	\$700	\$47,537	\$31,835	\$42,000	\$42,000	\$42,000	\$67,272	\$3,796	\$233	\$15,846	\$10,612				\$0	\$10,702,174	\$5,713,978	
17	2042	4%	0.51	New Germany Rd.	S2006 Reach	\$533,732	\$274,004	357	14957		\$0				\$11,389	\$700	\$47,537	\$30,610	\$42,000	\$42,000	\$42,000	\$64,685	\$3,796	\$233	\$15,846	\$10,203				\$0	\$739,234	\$379,503	
18	2043	4%	0.49	Lonsdale Rd. (Vance Rd.)	Until S-CC-06	\$1,643,329	\$811,194	992	15948	\$223,278	\$110,216				\$11,389	\$700	\$47,537	\$29,433	\$42,000	\$42,000	\$42,000	\$62,197	\$3,796	\$233	\$15,846	\$9,811				\$ 2,829,583	\$1,396,762	\$4,901,692	\$2,419,613
19	2044	4%	0.47			\$0	\$0		15948		\$0				\$11,389	\$700	\$47,537	\$28,301	\$42,000	\$42,000	\$42,000	\$59,805	\$3,796	\$233	\$15,846	\$9,434			\$ 41,667	\$19,777	\$247,168	\$117,316	
20	2045	4%	0.46	New Germany Rd.	End of New Germany	\$1,018,728	\$464,934	670	16618		\$0				\$11,389	\$700	\$47,537	\$27,213	\$42,000	\$42,000	\$42,000	\$57,505	\$3,796	\$233	\$15,846	\$9,071			\$ 677,917	\$309,392	\$1,902,146	\$868,115	
21	2046	4%	0.44			\$0	\$0		16618		\$0				\$11,389	\$700	\$47,537	\$26,166	\$42,000	\$42,000	\$42,000	\$55,293	\$3,796	\$233	\$15,846	\$8,722				\$0	\$205,501	\$90,181	
22	2047	4%	0.42			\$0	\$0		16618		\$0				\$11,389	\$700	\$47,537	\$25,160	\$42,000	\$42,000	\$42,000	\$53,166	\$3,796	\$233	\$15,846	\$8,387				\$0	\$205,501	\$86,712	
23	2048	4%	0.41			\$0	\$0		16618	\$232,655	\$94,394				\$11,389	\$700	\$47,537	\$24,192	\$42,000	\$42,000	\$42,000	\$51,122	\$3,796	\$233	\$15,846	\$8,064				\$0	\$438,156	\$177,771	
24	2049	4%	0.39			\$0	\$0		16618		\$0				\$11,389	\$700	\$47,537	\$23,261	\$42,000	\$42,000	\$42,000	\$49,155	\$3,796	\$233	\$15,846	\$7,754				\$0	\$205,501	\$80,170	
25	2050	4%	0.38			\$0	\$0		16618		\$0				\$11,389	\$700	\$47,537	\$22,367	\$42,000	\$42,000	\$42,000	\$47,265	\$3,796	\$233	\$15,846	\$7,456				\$0	\$205,501	\$77,087	
26	2051	4%	0.36			\$0	\$0		16618		\$0				\$11,389	\$700	\$47,537	\$21,506	\$42,000	\$42,000	\$42,000	\$45,447	\$3,796	\$233	\$15,846	\$7,169				\$0	\$205,501	\$74,122	
27	2052	4%	0.35			\$0	\$0		16618		\$0				\$11,389	\$700	\$47,537	\$20,679	\$42,000	\$42,000	\$42,000	\$43,699	\$3,796	\$233	\$15,846	\$6,893				\$0	\$205,501	\$71,271	
28	2053	4%	0.33			\$0	\$0		16618	\$232,655	\$77,585				\$11,389	\$700	\$47,537	\$19,884	\$42,000	\$42,000	\$42,000	\$42,018	\$3,796	\$233	\$15,846	\$6,628				\$0	\$438,156	\$146,115	
29	2054	4%	0.32			\$0	\$0		16618		\$0				\$11,389	\$700	\$47,537	\$19,119	\$42,000	\$42,000	\$42,000	\$40,402	\$3,796	\$233	\$15,846	\$6,373				\$0	\$205,501	\$65,894	
30	2055	4%	0.31	Lonsdale Rd. (Vance Rd.)	First half	\$4,942,327	\$1,523,812	1316	17935		\$0				\$11,389	\$700	\$47,537	\$18,384	\$42,000	\$42,000	\$42,000	\$38,848	\$3,796	\$233	\$15,846	\$6,128				\$0	\$5,147,828	\$1,587,172	
31	2056	4%	0.30	Kossuth rd.	Final Third	\$10,323,791	\$3,060,594	1305	19239		\$0				\$11,389	\$700	\$47,537	\$17,677	\$42,000	\$42,000	\$42,000	\$37,354	\$3,796	\$233	\$15,846	\$5,892				\$0	\$10,529,292	\$3,121,517	
32	2057	4%	0.29	Shantz Rd. S	Last half starting at S2012	\$6,286,967	\$1,792,720	1017	20256		\$0				\$11,389	\$700	\$47,537	\$16,997	\$42,000	\$42,000	\$												

East Side Lands (Woolwich) Sanitary Servicing EA
Sewer Alternative 3



Sewer Cost										Manhole Costs					Road Restoration Costs	Construction Costs	
Sewer Section	Street	Slope (%)	Size (mm)	Length (m)	U/S Depth (m)	D/S Depth (m)	Depth	Sewer Unit Cost (\$/m)	Sewer Total Cost (\$)	MH Dia. (mm)	Average MH Depth (m)	Number of MH	MH Unit Cost (\$)	MH Total Cost	Road Restoration (\$/m)	Construction Costs Total (\$)	Contingency Total \$
S0106	Wambolt Dr.	0.257	375	77.8	6.90	7.90	5-10 m	\$4,883	\$380,046	1200	7.40	1	\$15,474	\$15,474		\$395,520	\$494,400
S0107	Wambolt Dr.	0.272	375	409.6	8.00	5.00	5-10 m	\$4,883	\$1,999,854	1200	6.50	5	\$15,474	\$77,372		\$2,077,225	\$2,596,531
S0108	Wambolt Dr.	0.272	375	409.6	5.00	2.80	<5 m	\$1,193	\$488,772	1200	3.90	5	\$7,561	\$37,804		\$526,576	\$684,549
S02A03	Kramp Rd.	0.379	375	142.3	3.50	3.30	<5 m	\$1,193	\$169,810	1200	3.40	2	\$6,090	\$12,180		\$181,990	\$227,488
S02A04	Kramp Rd.	0.301	375	199.2	2.20	5.00	<5 m	\$1,193	\$237,740	1200	3.60	3	\$7,561	\$22,682		\$260,422	\$325,528
S02A05	Wurster Place	0.266	375	692.8	5.50	3.30	<5 m	\$1,193	\$826,801	1200	4.40	8	\$7,561	\$60,486		\$887,287	\$1,109,109
S0501	Wurster Place Extens.	1.826	375	82.7	3.30	2.80	<5 m	\$1,193	\$98,670	1200	3.05	1	\$6,090	\$6,090		\$104,760	\$130,950
S0502	Wurster Place Extens.	0.167	600	395.3	4.10	5.20	5-10 m	\$5,708	\$2,256,291	1500	4.65	5	\$17,021	\$85,105		\$2,341,396	\$2,926,745
S0503	Wurster Place Extens.	0.163	600	233.1	5.20	5.00	5-10 m	\$5,708	\$1,330,721	1500	5.10	3	\$17,021	\$51,063		\$1,381,785	\$1,727,231
S0504	Wurster Place Extens.	0.168	600	309.7	5.00	8.80	5-10 m	\$5,708	\$1,767,852	1500	6.90	4	\$19,962	\$79,846		\$1,847,699	\$2,309,623
S0505	Wurster Place Extens.	0.169	600	207.0	8.90	6.50	5-10 m	\$5,708	\$1,181,805	1500	7.70	3	\$21,431	\$64,294		\$1,246,099	\$1,557,624
S0506	Wurster Place Extens.	0.165	600	346.3	6.50	9.50	5-10 m	\$5,708	\$1,976,885	1500	8.00	4	\$21,431	\$85,725		\$2,062,610	\$2,578,262
Total (Trunk 03)										\$12,715,248			\$162,677	\$598,121	\$0	\$13,313,369	\$16,668,040
S1615	Lonsdale Rd. (NS)	0.171	900	73.2	13.50	15.00	11-15 m	\$11,934	\$873,749	1800	14.25	1	\$37,890	\$37,890		\$911,638	\$1,139,548
S1615	Lonsdale Rd. (NS)	0.171	900	73.2	15.00	16.90	15-20 m	\$19,094	\$1,397,998	1800	15.95	1	\$42,067	\$42,067		\$1,440,066	\$1,800,082
S1616	Lonsdale Rd. (NS)	0.166	900	358.3	16.90	11.00	11-15 m	\$11,934	\$4,275,685	1800	13.95	4	\$37,890	\$151,558		\$4,427,243	\$5,534,053
S1616	Lonsdale Rd. (NS)	0.166	900	358.3	11.00	6.40	5-10 m	\$7,459	\$2,672,303	1800	8.70	4	\$27,176	\$108,704		\$2,781,007	\$3,476,259
S1617	Lonsdale Rd. (EW)	0.170	900	224.0	6.50	8.50	5-10 m	\$7,459	\$1,670,501	1800	7.50	3	\$25,215	\$75,645		\$1,746,146	\$2,182,682
S1618	Lonsdale Rd. (EW)	0.162	900	185.1	8.60	8.00	5-10 m	\$7,459	\$1,380,448	1800	8.30	3	\$25,215	\$75,645		\$1,456,093	\$1,820,117
S1619_1	Lonsdale Rd. (EW)	0.174	900	69.0	8.10	8.50	5-10 m	\$7,459	\$514,715	1800	8.30	1	\$25,215	\$25,215		\$539,930	\$674,912
S_CC_06	Lonsdale Rd. (EW)	0.165	900	256.8	8.60	10.00	5-10 m	\$7,459	\$1,915,547	1800	9.30	3	\$27,176	\$81,528		\$1,997,076	\$2,496,345
S_CC_06	Lonsdale Rd. (EW)	0.165	900	256.8	10.00	15.50	11-15 m	\$11,934	\$3,064,876	1800	12.75	3	\$35,800	\$107,400		\$3,172,276	\$3,965,345
S1624	Lonsdale Rd. (NS)	0.168	900	308.7	15.50	13.00	11-15 m	\$11,934	\$3,684,494	1800	14.25	4	\$37,890	\$151,558		\$3,836,052	\$4,795,065
S1625	Lonsdale Rd. (NS)	0.168	900	112.8	13.00	13.60	11-15 m	\$11,934	\$1,346,198	1800	13.30	2	\$35,800	\$71,600		\$1,417,798	\$1,772,248
S1626	Airport Crossing	0.167	900	599.2	13.60	10.90	11-15 m	\$11,934	\$7,150,562	1800	12.25	7	\$33,712	\$235,981	\$6,430,000	\$13,816,543	\$17,270,679
S2115	Cober Rd	0.167	900	215.6	10.90	10.70	5-10 m	\$7,459	\$1,607,766	1800	10.80	3	\$31,622	\$94,866		\$1,702,632	\$2,128,290
S_CC_05	Cober Rd	0.163	900	165.8	10.80	10.70	5-10 m	\$7,459	\$1,236,638	1800	10.75	2	\$31,622	\$63,244		\$1,299,882	\$1,624,853
S_CC_04	Cober Rd	0.167	900	477.8	10.80	14.00	11-15 m	\$11,934	\$5,702,496	1800	12.40	6	\$33,712	\$202,270		\$5,904,766	\$7,380,957
S2116	Cober Rd	0.168	900	185.0	14.00	13.30	11-15 m	\$11,934	\$2,207,512	1800	13.65	3	\$37,890	\$113,669		\$2,321,181	\$2,901,476
S2113	Kossuth Rd	0.165	900	388.5	13.30	14.10	11-15 m	\$11,934	\$4,636,397	1800	13.70	5	\$37,890	\$189,448	\$1,165,524	\$5,991,369	\$7,489,211
S2114	Kossuth Rd	0.168	900	321.6	14.20	12.10	11-15 m	\$11,934	\$3,838,118	1800	13.15	4	\$35,800	\$143,200	\$964,848	\$4,946,166	\$6,182,708
S2203_3	Kossuth Rd	0.192	900	15.6	12.20	12.20	11-15 m	\$11,934	\$186,013	1800	12.20	1	\$33,712	\$33,712	\$46,761	\$266,486	\$333,107
S_CC_03	Kossuth Rd	0.165	900	290.5	12.20	11.90	11-15 m	\$11,934	\$3,467,250	1800	12.05	4	\$33,712	\$134,846	\$871,617	\$4,473,713	\$5,592,141
S_CC_02	Kossuth Rd	0.167	900	186.0	11.90	13.80	11-15 m	\$11,934	\$2,219,780	1800	12.85	3	\$35,800	\$107,400	\$558,021	\$2,885,201	\$3,606,501
S2204	Kossuth Rd	0.167	900	180.0	13.90	12.40	11-15 m	\$11,934	\$2,147,628	1800	13.15	2	\$35,800	\$71,600	\$539,883	\$2,759,111	\$3,448,889
S2205	Kossuth Rd	0.166	900	192.2	12.50	14.50	11-15 m	\$11,934	\$2,293,746	1800	13.50	3	\$37,890	\$113,669	\$576,615	\$2,984,030	\$3,730,037
S2206	Kossuth Rd	0.166	900	452.1	14.60	12.20	11-15 m	\$11,934	\$5,395,414	1800	13.40	6	\$35,800	\$214,800	\$1,356,330	\$6,966,544	\$8,708,180
Alt 3 LS 4																\$53,871,679	\$67,339,598
Total (Trunk03D)										\$64,885,835			\$776,492	\$2,647,514	\$12,509,599	\$80,042,948	\$100,053,685
TOTAL TRUNK										\$77,601,083			\$939,169			\$93,356,317	\$116,721,725
Local Sewers																	
S0103	North Dev Rd	0.217	375	133.5	2.80	5.00	<5 m	\$1,193	\$159,309	1200	3.90	2	\$7,561	\$15,121		\$174,430	\$218,037
S0102A	North Dev Rd	0.217	375	133.5	5.00	6.80	5-10 m	\$4,883	\$651,824	1200	5.90	2	\$14,005	\$28,009		\$679,834	\$849,792
S0102	North Dev Rd	0.363	300	309.6	6.90	5.00	5-10 m	\$4,740	\$1,467,509	1200	5.95	4	\$14,005	\$56,018		\$1,523,527	\$1,904,409
S0102A	North Dev Rd	0.363	300	309.6	5.00	2.80	<5 m	\$1,128	\$349,385	1200	3.90	4	\$7,561	\$30,243		\$379,628	\$474,535
North Dev Rd				886.2					\$2,628,027				\$43,131	\$129,392	\$0	\$2,757,419	\$3,446,773
S0105	Greenhouse Rd	0.273	300	881.6	2.90	2.80	<5 m	\$1,128	\$994,743	1200	2.85	10	\$6,090	\$60,899		\$1,055,642	\$1,319,553
S02A01	Greenhouse Rd	0.187	525	407.2	2.90	2.90	<5 m	\$1,400	\$570,161	1500	2.90	5</					

S12B02	Fountain St	0.190	600	252.4	5.70	7.30	5-10 m	\$5,708	\$1,440,644	1500	6.50	3	\$19,962	\$59,885	\$757,110	\$2,257,638	\$2,822,048
S12B03	Fountain St	0.185	600	411.6	7.40	6.00	5-10 m	\$5,708	\$2,349,813	1500	6.70	5	\$19,962	\$99,808	\$1,234,911	\$3,684,532	\$4,605,664
Fountain St (N of Menno)				827.7					\$4,644,131				\$58,414	\$196,674	\$2,482,956	\$7,323,762	\$9,154,702
S1604	Menno Rd	0.267	300	127.2	2.80	8.00	5-10 m	\$4,740	\$603,101	1200	5.40	2	\$12,771	\$25,541	\$381,744	\$1,010,386	\$1,262,983
S1603	Menno Rd	0.266	300	233.2	8.00	5.30	5-10 m	\$4,740	\$1,105,197	1200	6.65	3	\$15,474	\$46,423	\$699,555	\$1,851,175	\$2,313,969
S1702	Menno Rd	0.839	450	552.9	6.10	2.10	<5 m	\$1,304	\$721,086	1200	4.10	7	\$7,561	\$52,925	\$1,658,739	\$2,432,750	\$3,040,937
S1701	Menno Rd	0.215	450	181.5	2.10	4.60	<5 m	\$1,304	\$236,715	1200	3.35	3	\$6,090	\$18,270	\$544,524	\$799,509	\$999,386
Menno W				1094.9					\$2,666,098				\$41,895	\$143,159	\$3,284,562	\$6,093,819	\$7,617,274
S1605_1	Menno Rd	0.166	300	233.1	2.80	6.60	<5 m	\$1,128	\$262,982	1200	4.70	3	\$12,771	\$38,312	\$699,174	\$1,000,468	\$1,250,585
S1610	Menno Rd	0.432	600	471.1	5.40	11.00	5-10 m	\$5,708	\$2,689,129	1500	8.20	6	\$21,431	\$128,588	\$1,413,234	\$4,230,951	\$5,288,689
S1609	Menno Rd	1.900	600	881.1	11.00	8.70	5-10 m	\$5,708	\$5,029,825	1500	9.85	10	\$24,864	\$248,643	\$2,643,354	\$7,921,823	\$9,902,278
S1608	Menno Rd	0.166	600	31.1	8.70	8.80	5-10 m	\$5,708	\$177,305	1500	8.75	1	\$23,391	\$23,391	\$93,180	\$293,876	\$367,345
S_CC_07	Menno Rd	0.167	600	211.2	8.90	10.90	5-10 m	\$5,708	\$1,205,826	1500	9.90	3	\$24,864	\$74,593	\$633,705	\$1,914,124	\$2,392,655
S1607	Menno Rd	0.168	750	413.1	11.00	11.80	11-15 m	\$10,509	\$4,340,798	1800	11.40	5	\$31,622	\$158,110	\$1,239,180	\$5,738,088	\$7,172,610
S1606	Menno Rd	0.270	750	286.5	11.90	13.50	11-15 m	\$10,509	\$3,010,679	1800	12.70	4	\$35,800	\$143,200	\$859,467	\$4,013,345	\$5,016,682
Menno East				2527.1					\$13,705,865				\$174,744	\$814,837	\$7,581,294	\$25,112,675	\$31,390,844
S1401	Woolwich St	0.367	300	169.1	2.80	2.80	<5 m	\$1,128	\$190,780	1200	2.80	2	\$6,090	\$12,180	\$507,213	\$710,172	\$887,715
S1402	Woolwich St	0.400	300	82.4	2.90	2.80	<5 m	\$1,128	\$92,983	1200	2.85	1	\$6,090	\$6,090	\$247,209	\$346,282	\$432,853
S1703	Woolwich St	0.270	300	136.8	2.90	3.80	<5 m	\$1,128	\$154,389	1200	3.35	2	\$6,090	\$12,180	\$410,463	\$577,031	\$721,289
S1704	Woolwich St	0.185	525	172.8	4.70	3.60	<5 m	\$1,400	\$241,957	1500	4.15	2	\$12,047	\$24,094	\$518,421	\$784,472	\$980,590
S1705_1	Woolwich St	4.845	525	7.8	3.70	4.30	<5 m	\$1,400	\$10,981	1500	4.00	1	\$12,047	\$12,047	\$23,529	\$46,557	\$58,197
S_CC_14	Woolwich St	0.188	525	239.8	4.40	7.80	5-10 m	\$5,217	\$1,251,104	1500	6.10	3	\$18,491	\$55,472	\$719,490	\$2,026,067	\$2,532,583
S1706	Woolwich St	0.190	525	258.5	7.90	8.70	5-10 m	\$5,217	\$1,348,593	1500	8.30	3	\$21,431	\$64,294	\$775,554	\$2,188,441	\$2,735,551
Woolwich				1067.3					\$3,290,788				\$82,285	\$186,356	\$3,201,879	\$6,679,023	\$8,348,779
S1601_1	Fountain St	1.113	450	365.5	6.10	3.80	5-10 m	\$5,057	\$1,848,624	1200	4.95	5	\$12,771	\$63,853	\$1,096,647	\$3,009,124	\$3,761,405
S_CC_09	Fountain St	0.213	450	75.0	3.90	3.60	<5 m	\$1,304	\$97,872	1200	3.75	1	\$7,561	\$7,561	\$225,138	\$330,571	\$413,213
S1602	Fountain St	0.217	450	533.5	3.60	7.20	<5 m	\$1,304	\$695,793	1200	5.40	6	\$12,771	\$76,623	\$1,600,557	\$2,372,973	\$2,966,216
S1801	Fountain St	0.167	750	400.6	8.80	6.30	5-10 m	\$6,568	\$2,631,167	1800	7.55	5	\$25,215	\$126,075	\$1,201,803	\$3,959,045	\$4,948,807
S1802	Fountain St	0.167	750	383.6	6.30	10.40	5-10 m	\$6,568	\$2,519,484	1800	8.35	5	\$25,215	\$126,075	\$1,150,791	\$3,796,350	\$4,745,438
S1902	Fountain St	0.168	750	249.4	10.50	9.10	5-10 m	\$6,568	\$1,638,045	1800	9.80	3	\$28,647	\$85,941	\$748,188	\$2,472,174	\$3,090,218
S1903	Fountain St	0.166	750	652.3	9.10	11.40	5-10 m	\$6,568	\$4,284,175	1800	10.25	8	\$28,647	\$229,175	\$1,956,825	\$6,470,175	\$8,087,719
S2001	Fountain St	0.167	750	796.2	11.50	9.50	11-15 m	\$10,509	\$8,366,844	1800	10.50	9	\$31,622	\$284,599	\$2,388,507	\$11,039,950	\$13,799,937
S2201_1	Fountain St	0.169	750	183.7	9.60	7.10	5-10 m	\$6,568	\$1,206,610	1800	8.35	3	\$25,215	\$75,645	\$551,127	\$1,833,382	\$2,291,727
S_CC_01	Fountain St	0.158	750	50.8	7.10	6.70	5-10 m	\$6,568	\$333,526	1800	6.90	1	\$23,745	\$23,745	\$152,340	\$509,611	\$637,014
S2202	Fountain St	0.164	750	128.3	6.70	8.20	5-10 m	\$6,568	\$842,720	1800	7.45	2	\$23,745	\$47,491	\$384,918	\$1,275,129	\$1,593,911
Fountain St. (Menno to Kossuth)				3818.9					\$24,464,861				\$245,153	\$1,146,783	\$11,456,841	\$37,068,484	\$46,335,605
S1622	Vance Rd Ext.	0.268	300	676.4	2.90	2.80	<5 m	\$1,128	\$763,250	1200	2.85	8	\$6,090	\$48,719	\$811,969	\$1,014,962	
S1621	Vance Rd Ext.	0.265	300	237.5	2.90	6.80	<5 m	\$1,128	\$268,039	1200	4.85	3	\$12,771	\$38,312		\$306,350	\$382,938
S1620	Vance Rd Ext.	0.268	300	402.5	6.90	5.40	5-10 m	\$4,740	\$1,907,725	1200	6.15	5	\$14,005	\$70,023		\$1,977,748	\$2,472,185
Vance Rd Ext.				1316.5					\$2,939,014				\$32,865	\$157,054	\$0	\$3,096,068	\$3,870,084
S1614	Shantz Station Rd	0.626	300	321.0	2.80	2.80	<5 m	\$1,128	\$362,187	1200	2.80	4	\$6,090	\$24,360	\$962,922	\$1,349,468	\$1,686,835
S1613_1	Shantz Station Rd	0.470	300	212.6	2.90	2.80	<5 m	\$1,128	\$239,928	1200	2.85	3	\$6,090	\$18,270	\$637,881	\$896,079	\$1,120,098
S1613_2	Shantz Station Rd	1.076	300	392.1	2.90	2.80	<5 m	\$1,128	\$442,473	1200	2.85	5	\$6,090	\$30,449	\$1,176,375	\$1,649,298	\$2,061,622
S1612	Shantz Station Rd	0.268	300	250.4	2.90	6.30	<5 m	\$1,128	\$282,573	1200	4.60	3	\$12,771	\$38,312	\$751,257	\$1,072,141	\$1,340,177
S1611	Shantz Station Rd	0.267	300	183.5	6.40	2.80	5-10 m	\$4,740	\$869,536	1200	4.60	3	\$12,771	\$38,312	\$550,389	\$1,458,237	\$1,822,796
S2011	Shantz Station Rd	1.560	300	305.8	2.80	2.80	<5 m	\$1,128	\$345,060	1200	2.80	4	\$6,090	\$24,360	\$917,388	\$1,286,807	\$1,608,509
S2012	Shantz Station Rd	0.266	300	203.1	2.90	5.90	<5 m	\$1,128	\$229,190	1200	4.40	3	\$7,561	\$22,682	\$609,333	\$861,205	\$1,076,507
S2106	Shantz Station Rd	0.270	375	181.8	6.00	3.60	5-10 m	\$4,883	\$887,539	1200	4.80	3	\$12,771	\$38,312	\$545,301	\$1,471,151	\$1,838,939
S2107	Shantz Station Rd	0.845	375	415.2	3.70	2.80	<5 m	\$1,193	\$495,500	1200	3.25	5	\$6,090	\$30,449	\$1,245,615	\$1,771,564	\$2,214,455
S2109	Shantz Station Rd	1.121	375	216.8	2.90	2.80	<5 m	\$1,193	\$258,685	1200	2.85	3	\$6,090	\$18,270	\$650,298	\$927,253	\$1,159,066
Shantz Station Rd (S of Menno)				2682.3					\$4,412,670				\$82,412	\$283,774	\$8,046,759	\$12,743,204	\$15,929,005
S2103	New Germany Ln	0.271	300	129.4	2.80	3.50	<5 m	\$1,128	\$145,967	1200	3.15	2	\$6,090	\$12,180		\$158,147	\$197,684
S2102_1	New Germany Ln	0.268	300	134.3	3.60	3.20	<5 m	\$1,128	\$151,596	1200	3.40	2	\$6,090	\$12,180		\$163,776	\$204,720
S_CC_10	New Germany Ln	0.266	300	176.7	3.20	3.50	<5 m	\$1,128	\$199,390	1200	3.35	2	\$6,090	\$12,180		\$211,570	\$264,463
S2101	New Germany Ln	0.266	300	229.4	3.60	4.10	<5 m	\$1,128	\$258,807	1200	3.85	3	\$7,561	\$22,682		\$281,489	\$351,862
S2006	New Germany Ln	0.266	300	356.8	2.80	4.00	<5 m	\$1,128	\$402,626	1200	3.40	4	\$6,090	\$24,360		\$426,986	\$533,732
New Germany				1026.6					\$1,158,387				\$31,920	\$83,581	\$0	\$1,241,968	\$1,552,460
S2110	Kossuth Rd	0.264	375	601.0	2.90	5.50	<5 m	\$1,193	\$717,256	1200	4.20	7	\$7,561	\$52,925	\$1,803,078	\$2,573,259	\$3,216,573
S2111	Kossuth Rd	0.187	375	378.5	5.50	6.70	5-10 m	\$4,883	\$1,848,349	1200	6.10	5	\$14,005	\$70,023	\$1,135,620	\$3,053,992	\$3,817,490
S2112	Kossuth Rd	0.195	375	325.1	6.80	5.70	5-10 m	\$4,883	\$1,587,303	1200	6.25	4	\$14,005	\$56,018	\$975,234	\$2,618,555	\$3,273,194
Kossuth East/ West				1304.6					\$4,152,907				\$35,570	\$178,966	\$3,913,932	\$8,245,806	\$10,307,257
S_T01_1	Fountain St.	0.170	1050	213.8	3.90	4.70	<5 m	\$3,626	\$775,371	2400	4.30	3	\$31,676	\$95,027	\$641,520	\$1,511,918	\$1,889,898
S_T01_2	Fountain St.	0.170	1050	472.8	4.70	6.30	5-10 m	\$8,270	\$3,910,163	2400	5.50	6	\$38,121	\$228,724	\$1,418,523	\$5,557,411	\$6,946,763
S_T02	Fountain St.	0.171	1050	43.2	6.30	6.30	5-10 m	\$8,270	\$357,243	2400	6.30	1	\$38,121	\$38,121	\$129,600	\$524,964	\$656,204
Fountain St - Kossuth to Middle Block				729.9					\$5,042,778				\$107,917	\$361,872	\$2,189,643	\$7,594,293	\$9,492,866
TOTAL ALL LOCAL SEWERS				26044.1					\$88,725,418				\$1,152,626	\$4,811,657	\$51,653,565	\$148,201,319	\$185,251,648
TOTAL ALL SEWERS AND TRUNK				35495.6					\$166,326,501				\$2,091,795	\$4,811,657	\$51,653,565	\$295,429,314	\$369,312,972

East Side Lands (Woolwich) Sanitary Servicing EA
Sewer Alternative 3 LCC



#	Year			Sewer Reach	Description		Capital Expense (2018 Dollars)			Sewer O&M (Flushing)			Annual Lift Station Energy Costs		Annual Lift Station O&M		Annual Lift Station Equip & Materials		Lift Station Upgrades		Total Annual Cash Flow	Total Cost (PV)
						Total Flow	Cost Est	Present	Pipe	Cumulative Pipe	Flushing / m =	\$14	Monthly Energy =	\$ 3,961	Monthly Labour=	\$3,500	Monthly =	\$ 1,320	Per Event=	\$ 2,829,583		
		Rate	PV Factor			L/s	2025 Dollars	Value	Length (m)	Length (m)	LS 4	PV	LS 4	PV	LS 4	PV	LS 4	PV	LS 4	PV		
0	2025	4%	1.00	Trunk 03D	Trunk 03D (South of Menno)		\$100,053,685	\$100,053,685	5946	5946	\$83,246	\$83,246		\$0		\$0		\$0		\$0	\$100,136,931	\$100,136,931
1	2026	4%	0.96	Menno East	Lonsdale / Wurster Ext to 300m East (Limit of Ex. CMP)		\$5,016,682	\$4,823,733	286	6233	\$4,011	\$3,857		\$0		\$0		\$0		\$0	\$5,020,693	\$4,827,589
2	2027	4%	0.92	Fountain South	Fountain St. (Kossuth to Middle block)	34.47	\$9,492,866	\$8,776,688	730	6963	\$10,218	\$9,447		\$0		\$0		\$0		\$0	\$9,503,084	\$8,786,135
3	2028	4%	0.89					\$0		6963	\$0	\$0		\$0		\$0		\$0		\$0	\$0	\$0
4	2029	4%	0.85	LS 4			\$67,339,598	\$57,562,171		6963	\$0	\$0	\$47,537	\$40,635	\$42,000	\$35,902	\$15,846	\$13,545		\$0	\$67,444,981	\$57,652,252
5	2030	4%	0.82	Fountain (Menno to Kossuth)			\$46,335,605	\$38,084,490	3819	10781	\$53,465	\$43,945	\$47,537	\$39,072	\$42,000	\$34,521	\$15,846	\$13,024		\$0	\$46,494,453	\$38,215,052
6	2031	4%	0.79	Woolwich St.			\$8,348,779	\$6,598,161	1067	11849	\$14,942	\$11,809	\$47,537	\$37,569	\$42,000	\$33,193	\$15,846	\$12,523		\$0	\$8,469,103	\$6,693,255
7	2032	4%	0.76	Menno W	\$1701 Reach	137.67	\$999,386	\$759,451	182	12030	\$2,541	\$1,931	\$47,537	\$36,124	\$42,000	\$31,917	\$15,846	\$12,041		\$0	\$1,107,310	\$841,464
8	2033	4%	0.73	East Connector Rd.			\$7,628,908	\$5,574,368	1441	13471	\$20,171	\$14,739	\$47,537	\$34,735	\$42,000	\$30,689	\$15,846	\$11,578		\$0	\$7,754,461	\$5,666,109
9	2034	4%	0.70	Fountain St. N of Menno			\$9,154,702	\$6,431,972	828	14299	\$11,587	\$8,141	\$47,537	\$33,399	\$42,000	\$29,509	\$15,846	\$11,133		\$0	\$9,271,672	\$6,514,154
10	2035	4%	0.68	Menno W	Rest of Menno W		\$6,617,888	\$4,470,808	913	15212	\$12,787	\$8,638	\$47,537	\$32,114	\$42,000	\$28,374	\$15,846	\$10,705		\$0	\$6,736,058	\$4,550,639
11	2035	4%	0.65					\$0		15212	\$0	\$0	\$47,537	\$30,879	\$42,000	\$27,282	\$15,846	\$10,293		\$0	\$105,383	\$68,455
12	2035	4%	0.62					\$0		15212	\$0	\$0	\$47,537	\$29,691	\$42,000	\$26,233	\$15,846	\$9,897		\$0	\$105,383	\$65,822
13	2036	4%	0.60					\$0		15212	\$0	\$0	\$47,537	\$28,549	\$42,000	\$25,224	\$15,846	\$9,516		\$0	\$105,383	\$63,290
14	2037	4%	0.58			331.51		\$0		15212	\$0	\$0	\$47,537	\$27,451	\$42,000	\$24,254	\$15,846	\$9,150		\$0	\$105,383	\$60,856
15	2038	4%	0.56	New Germany Rd.	\$2006 Reach	351.51	\$533,732	\$296,363	357	15569	\$4,995	\$2,774	\$47,537	\$26,396	\$42,000	\$23,321	\$15,846	\$8,799	\$ 2,829,583	\$1,571,167	\$3,473,694	\$1,928,819
16	2039	4%	0.53					\$0		15569	\$0	\$0	\$47,537	\$25,380	\$42,000	\$22,424	\$15,846	\$8,460		\$0	\$105,383	\$56,265
17	2040	4%	0.51					\$0		15569	\$0	\$0	\$47,537	\$24,404	\$42,000	\$21,562	\$15,846	\$8,135		\$0	\$105,383	\$54,101
18	2041	4%	0.49					\$0		15569	\$0	\$0	\$47,537	\$23,466	\$42,000	\$20,732	\$15,846	\$7,822		\$0	\$105,383	\$52,020
19	2042	4%	0.47					\$0		15569	\$0	\$0	\$47,537	\$22,563	\$42,000	\$19,935	\$15,846	\$7,521		\$0	\$105,383	\$50,019
20	2043	4%	0.46	New Germany Rd.	End of New Germany		\$1,018,728	\$464,934	670	16239	\$9,377	\$4,279	\$47,537	\$21,695	\$42,000	\$19,168	\$15,846	\$7,232		\$0	\$1,133,487	\$517,309
21	2044	4%	0.44					\$0		16239	\$0	\$0	\$47,537	\$20,861	\$42,000	\$18,431	\$15,846	\$6,954		\$0	\$105,383	\$46,245
22	2045	4%	0.42			378.51		\$0		16239	\$0	\$0	\$47,537	\$20,058	\$42,000	\$17,722	\$15,846	\$6,686		\$0	\$105,383	\$44,467
23	2046	4%	0.41					\$0		16239	\$0	\$0	\$47,537	\$19,287	\$42,000	\$17,041	\$15,846	\$6,429		\$0	\$105,383	\$42,757
24	2047	4%	0.39					\$0		16239	\$0	\$0	\$47,537	\$18,545	\$42,000	\$16,385	\$15,846	\$6,182		\$0	\$105,383	\$41,112
25	2048	4%	0.38					\$0		16239	\$0	\$0	\$47,537	\$17,832	\$42,000	\$15,755	\$15,846	\$5,944		\$0	\$105,383	\$39,531
26	2049	4%	0.36					\$0		16239	\$0	\$0	\$47,537	\$17,146	\$42,000	\$15,149	\$15,846	\$5,715		\$0	\$105,383	\$38,010
27	2050	4%	0.35					\$0		16239	\$0	\$0	\$47,537	\$16,487	\$42,000	\$14,566	\$15,846	\$5,496		\$0	\$105,383	\$36,548
28	2051	4%	0.33					\$0		16239	\$0	\$0	\$47,537	\$15,853	\$42,000	\$14,006	\$15,846	\$5,284		\$0	\$105,383	\$35,143
29	2052	4%	0.32					\$0		16239	\$0	\$0	\$47,537	\$15,243	\$42,000	\$13,467	\$15,846	\$5,081		\$0	\$105,383	\$33,791
30	2053	4%	0.31	Lonsdale Rd. (Vance Rd.)			\$3,870,084	\$1,193,219	1316	17555	\$18,430	\$5,682	\$47,537	\$14,657	\$42,000	\$12,949	\$15,846	\$4,886	\$ 2,829,583	\$872,413	\$6,823,481	\$2,103,806
31	2054	4%	0.30	Kossuth rd.			\$10,307,257	\$3,055,692	1305	18860	\$18,265	\$5,415	\$47,537	\$14,093	\$42,000	\$12,451	\$15,846	\$4,698		\$0	\$10,430,905	\$3,092,349
32	2055	4%	0.29	Shantz Rd. S	Last half starting at \$2012	465.12	\$6,288,967	\$1,792,720	1017	19877	\$14,236	\$4,058	\$47,537	\$13,551	\$42,000	\$11,972	\$15,846	\$4,517		\$0	\$6,408,585	\$1,826,818
33	2056	4%	0.27					\$0		19877	\$0	\$0	\$47,537	\$13,030	\$42,000	\$11,512	\$15,846	\$4,343		\$0	\$105,383	\$28,885
34	2057	4%	0.26					\$0		19877	\$0	\$0	\$47,537	\$12,528	\$42,000	\$11,069	\$15,846	\$4,176		\$0	\$105,383	\$27,774
35	2058	4%	0.25					\$0		19877	\$0	\$0	\$47,537	\$12,047	\$42,000	\$10,643	\$15,846	\$4,016		\$0	\$105,383	\$26,706
36	2059	4%	0.24					\$0		19877	\$0	\$0	\$47,537	\$11,583	\$42,000	\$10,234	\$15,846	\$3,861		\$0	\$105,383	\$25,678
37	2060	4%	0.23					\$0		19877	\$0	\$0	\$47,537	\$11,138	\$42,000	\$9,840	\$15,846	\$3,713		\$0	\$105,383	\$24,691
38	2061	4%	0.23					\$0		19877	\$0	\$0	\$47,537	\$10,709	\$42,000	\$9,462	\$15,846	\$3,570		\$0	\$105,383	\$23,741
39	2062	4%	0.22					\$0		19877	\$0	\$0	\$47,537	\$10,297	\$42,000	\$9,098	\$15,846	\$3,432		\$0	\$105,383	\$22,828
40	2063	4%	0.21	Shantz Rd S	Rest of Shantz Rd S		\$9,640,038	\$2,007,914	1665	21542	\$23,316	\$4,856	\$47,537	\$9,901	\$42,000	\$8,748	\$15,846	\$3,300		\$0	\$9,768,736	\$2,034,721
41	2064	4%	0.20					\$0		21542	\$0	\$0	\$47,537	\$9,521	\$42,000	\$8,412	\$15,846	\$3,174		\$0	\$105,383	\$21,106
42	2065	4%	0.19	Menno St. E	Rest of Menno E		\$26,374,162	\$5,079,002	2241	23783	\$31,369	\$6,041	\$47,537	\$9,154	\$42,000	\$8,088	\$15,846	\$3,051		\$0	\$26,510,913	\$5,105,337
43	2066	4%	0.19					\$0		23783	\$0	\$0	\$47,537	\$8,802	\$42,000	\$7,777	\$15,846	\$2,934		\$0	\$105,383	\$19,514
44	2067	4%	0.18					\$0		23783	\$0	\$0	\$47,537	\$8,464	\$42,000	\$7,478	\$15,846	\$2,821		\$0	\$105,383	\$18,763
46	2069	4%	0.16			567.11		\$0		23783	\$0	\$0	\$47,537	\$7,825	\$42,000	\$6,914	\$15,846	\$2,608		\$0	\$105,383	\$17,347
47	2070	4%	0.16					\$0		23783	\$0	\$0	\$47,537	\$7,524	\$42,000	\$6,648	\$15,846	\$2,508		\$0	\$105,383	\$16,680
48	2071	4%	0.15					\$0		23783	\$0	\$0	\$47,537	\$7,235	\$42,000	\$6,392	\$15,846	\$2,412		\$0	\$105,383	\$16,039
49	2072	4%	0.15					\$0		23783	\$0	\$0	\$47,537	\$6,957	\$42,000	\$6,146	\$15,846	\$2,319		\$0	\$105,383	\$15,422
50	2073	4%	0.14	North development (above menno)			\$50,291,905	\$7,076,705	11713	35496	\$163,983	\$23,074	\$47,537	\$6,689	\$42,000	\$5,910	\$15,846	\$2,230		\$0	\$50,561,270	\$7,114,609
								\$0														
					Total		\$369,312,972	\$0	35495.60		\$496,938	\$241,933	\$2,186,702	\$881,141	\$1,932,000	\$778,508	\$728,901	\$293,714	\$5,659,167	\$2,443,581	\$380,316,680	\$258,740,952

East Side Lands (Woolwich) Sanitary Servicing EA
Sewer Alternative 4



Sewer Cost										Manhole Costs						Road Restoration Costs	Construction Costs	
Sewer Section	Street	Slope (%)	Size (mm)	Length (m)	U/S Depth (m)	D/S Depth (m)	Depth	Sewer Unit Cost (\$/m)	Sewer Total Cost (\$)	MH Dia. (mm)	Average MH Depth (m)	Number of MH	MH Unit Cost (\$)			Construction Costs Total (\$)	Contingency Total \$	
S0106	Wambolt Dr.	0.257	375	77.83	6.9	7.9	5-10 m	\$4,883	\$380,046	1200	7.4	1	\$15,474	\$15,474		\$395,520	\$494,400	
S0107	Wambolt Dr.	0.272	375	409.57	8.0	5.0	5-10 m	\$4,883	\$1,999,854	1200	6.5	5	\$15,474	\$77,372		\$2,077,225	\$2,596,531	
S0108	Wambolt Dr.	0.272	375	409.57	5.0	2.8	<5 m	\$1,193	\$488,772	1200	3.9	5	\$7,561	\$37,804		\$526,576	\$684,549	
S02A03	Kramp Rd.	0.379	375	142.29	3.5	3.3	<5 m	\$1,193	\$169,810	1200	3.4	2	\$6,090	\$12,180		\$181,990	\$227,488	
S02A04	Kramp Rd.	0.301	375	199.22	2.2	5.0	<5 m	\$1,193	\$237,740	1200	3.6	3	\$7,561	\$22,682		\$260,422	\$325,528	
S02A05	Wurster Place	0.266	375	692.82	5.5	3.3	<5 m	\$1,193	\$826,801	1200	4.4	8	\$7,561	\$60,486		\$887,287	\$1,109,109	
S0501	Wurster Place Extens.	1.826	375	82.68	3.3	2.8	<5 m	\$1,193	\$98,670	1200	3.1	1	\$6,090	\$6,090		\$104,760	\$130,950	
S0502	Wurster Place Extens.	0.167	600	395.25	4.1	5.2	<5 m	\$1,797	\$710,454	1500	4.7	5	\$17,021	\$85,105		\$795,560	\$994,450	
S0503	Wurster Place Extens.	0.163	600	233.11	5.2	5.0	<5 m	\$1,797	\$419,014	1500	5.1	3	\$17,021	\$51,063		\$470,077	\$587,596	
S0504	Wurster Place Extens.	0.168	600	309.69	5.0	8.8	5-10 m	\$5,708	\$1,767,852	1500	6.9	4	\$19,962	\$79,846		\$1,847,699	\$2,309,623	
S0505	Wurster Place Extens.	0.169	600	207.03	8.9	6.5	5-10 m	\$5,708	\$1,181,805	1500	7.7	3	\$21,431	\$64,294		\$1,246,099	\$1,557,624	
S0506	Wurster Place Extens.	0.165	600	346.31	6.5	9.5	5-10 m	\$5,708	\$1,976,885	1500	8.0	4	\$21,431	\$85,725		\$2,062,610	\$2,578,262	
Total (Trunk 03)				3505.37					\$10,257,704				\$162,677	\$598,121	\$0	\$10,855,825	\$13,596,110	
S1615	Lonsdale Rd. (NS)	0.171	900	146.43	9.5	12.9	11-15 m	\$11,934	\$1,747,498	1800	11.2	2	\$31,622	\$63,244		\$1,810,742	\$2,263,428	
S1616	Lonsdale Rd. (NS)	0.220	900	358.28	12.9	10.0	11-15 m	\$11,934	\$4,275,685	1800	11.5	4	\$31,622	\$126,488		\$4,402,173	\$5,502,716	
S1616	Lonsdale Rd. (NS)	0.220	900	358.28	10.0	2.8	5-10 m	\$7,459	\$2,672,303	1800	6.4	4	\$22,274	\$89,098		\$2,761,401	\$3,451,751	
S1617	Lonsdale Rd. (EW)	0.170	900	223.97	2.9	4.9	<5 m	\$3,053	\$683,748	1800	3.9	3	\$15,831	\$47,492		\$731,239	\$914,049	
S1618	Lonsdale Rd. (EW)	0.167	900	185.08	5.0	4.4	<5 m	\$3,053	\$565,027	1800	4.7	3	\$20,805	\$62,414		\$627,441	\$784,302	
S1619_1	Lonsdale Rd. (EW)	0.159	900	69.01	4.5	4.9	<5 m	\$3,053	\$210,676	1800	4.7	1	\$20,805	\$20,805		\$231,481	\$289,351	
S_CC_06	Lonsdale Rd. (EW)	0.167	900	513.64	4.9	11.8	5-10 m	\$7,459	\$3,831,095	1800	8.4	6	\$25,215	\$151,290		\$3,982,385	\$4,977,981	
S1624	Lonsdale Rd. (EW)	0.165	900	308.74	11.9	9.3	5-10 m	\$7,459	\$2,302,808	1800	10.6	4	\$31,622	\$126,488		\$2,429,297	\$3,036,621	
S1625	Lonsdale Rd. (EW)	0.168	900	112.81	9.4	10.0	5-10 m	\$7,459	\$841,374	1800	9.7	2	\$28,647	\$57,294	\$6,430,000	\$7,328,668	\$9,160,835	
S1626	Airport Crossing	0.167	900	599.18	10.0	7.2	5-10 m	\$7,459	\$4,469,101	1800	8.6	7	\$27,176	\$190,233		\$4,659,334	\$5,824,167	
S2115	Cober Rd	0.167	900	215.56	7.3	7.1	5-10 m	\$7,459	\$1,607,766	1800	7.2	3	\$23,745	\$71,236		\$1,679,002	\$2,098,752	
Alt 4 LS 3	Kossuth Rd															\$25,062,795	\$31,328,494	
S_CC_05	Cober Rd	0.163	900	165.80	7.2	7.1	5-10 m	\$7,459	\$1,236,638	1800	7.2	2	\$23,745	\$47,491		\$1,284,129	\$1,605,161	
S_CC_04	Cober Rd	0.167	900	477.84	7.1	10.4	5-10 m	\$7,459	\$3,564,060	1800	8.8	6	\$27,176	\$163,057		\$3,727,117	\$4,658,896	
S2116	Cober Rd	0.168	900	184.98	10.4	9.7	5-10 m	\$7,459	\$1,379,695	1800	10.1	3	\$28,647	\$85,941		\$1,465,636	\$1,832,045	
S2113	Kossuth Rd	0.165	900	388.51	2.8	3.5	<5 m	\$3,053	\$1,186,068	1800	3.2	5	\$14,844	\$74,222	\$1,165,524	\$2,425,815	\$3,032,268	
S2114	Kossuth Rd	0.547	900	321.62	3.6	2.8	<5 m	\$3,053	\$981,855	1800	3.2	4	\$14,844	\$59,378	\$964,848	\$2,006,081	\$2,507,601	
S2203_3	Kossuth Rd	3.464	900	15.59	2.9	3.3	<5 m	\$3,053	\$47,585	1800	3.1	1	\$14,844	\$14,844	\$46,761	\$109,191	\$136,488	
S_CC_03	Kossuth Rd	0.496	900	290.54	3.4	4.0	<5 m	\$3,053	\$886,981	1800	3.7	4	\$15,831	\$63,322	\$871,617	\$1,821,920	\$2,277,400	
S_CC_02	Kossuth Rd	0.167	900	186.01	4.1	6.0	<5 m	\$3,053	\$567,857	1800	5.1	3	\$20,805	\$62,414	\$558,021	\$1,188,292	\$1,485,366	
S2204	Kossuth Rd	0.167	900	179.96	6.0	4.5	5-10 m	\$7,459	\$1,342,268	1800	5.3	2	\$20,805	\$41,610	\$539,883	\$1,923,760	\$2,404,700	
S2205	Kossuth Rd	0.166	900	192.21	4.6	6.7	5-10 m	\$7,459	\$1,433,591	1800	5.7	3	\$22,274	\$66,823	\$576,615	\$2,077,030	\$2,596,287	
S2206	Kossuth Rd	0.166	900	452.11	6.7	4.4	5-10 m	\$7,459	\$3,372,134	1800	5.6	6	\$22,274	\$133,647	\$1,356,330	\$4,862,111	\$6,077,638	
Alt 4 LS 4	Kossuth Rd															\$35,659,102	\$44,573,878	
Total (Trunk03D)				5946.14					\$39,205,814				\$505,455	\$1,818,831	\$12,509,599	\$53,534,244	\$66,917,805	
TOTAL TRUNK				9451.51					\$49,463,518				\$668,132			\$64,390,069	\$80,513,915	

Local Sewers																	
S0103	North Dev Rd	0.217	375	133.49	2.8	5.0	<5 m	\$1,193	\$159,309	1200	3.9	2	\$7,561	\$15,121		\$174,430	\$218,037
S0102A	North Dev Rd	0.217	375	133.49	5.0	6.8	5-10 m	\$4,883	\$651,824	1200	5.9	2	\$14,005	\$28,009		\$679,834	\$849,792
S0102	North Dev Rd	0.363	300	309.63	6.9	5.0	5-10 m	\$4,740	\$1,467,509	1200	6.0	4	\$14,005	\$56,018		\$1,523,527	\$1,904,409
S0102A	North Dev Rd	0.363	300	309.63	5.0	2.8	<5 m	\$1,128	\$349,385	1200	3.9	4	\$7,561	\$30,243		\$379,628	\$474,535
North Dev Rd				886.24					\$2,628,027				\$43,131	\$129,392	\$0	\$2,757,419	\$3,446,773
S0105	Greenhouse Rd	0.273	300	881.55	2.9	2.8	<5 m	\$1,128	\$994,743	1200	2.9	10	\$6,090	\$60,899		\$1,055,642	\$1,319,553
S02A01	Greenhouse Rd	0.187	525	407.21	2.9	2.9	<5 m	\$1,400	\$570,161	1500	2.9	5	\$11,217	\$56,085		\$626,246	\$782,808
Greenhouse Rd				1288.76					\$1,564,904				\$17,307	\$116,984	\$0	\$1,681,888	\$2,102,360
S02A02	Kramp Rd	0.266	300	372.01	5.5	2.8	<5 m	\$1,128	\$419,770	1200	4.2	5	\$7,561	\$37,804		\$457,574	\$571,967
Kramp Rd West																	

S12B03	Fountain St	0.185	600	411.64	7.4	6.0	5-10 m	\$5,708	\$2,349,813	1500	6.7	5	\$19,962	\$99,808	\$1,234,911	\$3,684,532	\$4,605,664
Fountain St (N of Menno)				827.65					\$4,644,131				\$58,414	\$196,674	\$2,482,956	\$7,323,762	\$9,154,702
S1604	Menno Rd	0.267	300	127.25	2.8	8.0	5-10 m	\$4,740	\$603,101	1200	5.4	2	\$12,771	\$25,541	\$381,744	\$1,010,386	\$1,262,983
S1603	Menno Rd	0.266	300	233.19	8.0	5.3	5-10 m	\$4,740	\$1,105,197	1200	6.7	3	\$15,474	\$46,423	\$699,555	\$1,851,175	\$2,313,969
S1702	Menno Rd	0.839	450	552.91	6.1	2.1	<5 m	\$1,304	\$721,086	1200	4.1	7	\$7,561	\$52,925	\$1,658,739	\$2,432,750	\$3,040,937
S1701	Menno Rd	0.215	450	181.51	2.1	4.6	<5 m	\$1,304	\$236,715	1200	3.4	3	\$6,090	\$18,270	\$544,524	\$799,509	\$999,386
Menno W				1094.85					\$2,666,098				\$41,895	\$143,159	\$3,284,562	\$6,093,819	\$7,617,274
S1605_1	Menno Rd	0.166	300	233.06	2.8	6.6	5-10 m	\$4,740	\$1,104,595	1200	4.7	3	\$12,771	\$38,312	\$699,174	\$1,842,081	\$2,302,601
S1610	Menno Rd	0.432	600	471.08	5.4	11.0	5-10 m	\$5,708	\$2,689,129	1500	8.2	6	\$21,431	\$128,588	\$1,413,234	\$4,230,951	\$5,288,689
Alt 4 LS 1				Kossuth Rd												\$12,638,621	\$15,798,276
S1609	Menno Rd	1.900	600	881.12	2.8	2.8	<5 m	\$1,797	\$1,583,777	1500	2.8	10	\$11,217	\$112,171	\$2,643,354	\$4,339,302	\$5,424,127
S1608	Menno Rd	0.166	600	31.06	2.9	3.6	<5 m	\$1,797	\$55,829	1500	3.3	1	\$11,217	\$11,217	\$93,180	\$160,226	\$200,283
S_CC_07	Menno Rd	0.167	600	211.24	3.6	5.6	<5 m	\$1,797	\$379,687	1500	4.6	3	\$17,021	\$51,063	\$633,705	\$1,064,455	\$1,330,569
S1607	Menno Rd	0.168	750	413.06	5.7	6.6	5-10 m	\$6,568	\$2,712,999	1500	6.2	5	\$18,491	\$92,454	\$1,239,180	\$4,044,633	\$5,055,791
S1606	Menno Rd	0.270	750	286.49	6.6	8.2	5-10 m	\$6,568	\$1,881,674	1500	7.4	4	\$19,962	\$79,846	\$859,467	\$2,820,987	\$3,526,234
Menno East				2527.10					\$8,526,016				\$112,110	\$513,651	\$7,581,294	\$18,502,635	\$23,128,294
S1401	Woolwich St	0.367	300	169.07	2.8	2.8	<5 m	\$1,128	\$190,780	1200	2.8	2	\$6,090	\$12,180	\$507,213	\$710,172	\$887,715
S1402	Woolwich St	0.400	300	82.40	2.9	2.8	<5 m	\$1,128	\$92,983	1200	2.9	1	\$6,090	\$6,090	\$247,209	\$346,282	\$432,853
S1703	Woolwich St	0.270	300	136.82	2.9	3.8	<5 m	\$1,128	\$154,389	1200	3.4	2	\$6,090	\$12,180	\$410,463	\$577,031	\$721,289
S1704	Woolwich St	0.185	525	172.81	4.7	3.6	<5 m	\$1,400	\$241,957	1500	4.2	2	\$12,047	\$24,094	\$518,421	\$784,472	\$980,590
S1705_1	Woolwich St	4.845	525	7.84	3.7	4.3	<5 m	\$1,400	\$10,981	1500	4.0	1	\$12,047	\$12,047	\$23,529	\$46,557	\$58,197
S_CC_14	Woolwich St	0.188	525	239.83	4.4	7.8	5-10 m	\$5,217	\$1,251,104	1500	6.1	3	\$18,491	\$55,472	\$719,490	\$2,026,067	\$2,532,583
S1706	Woolwich St	0.190	525	258.52	7.9	8.7	5-10 m	\$5,217	\$1,348,593	1500	8.3	3	\$21,431	\$64,294	\$775,554	\$2,188,441	\$2,735,551
Woolwich				1067.29					\$3,290,788				\$82,285	\$186,356	\$3,201,879	\$6,679,023	\$8,348,779
S1601_1	Fountain St	1.113	450	365.55	6.1	3.8	<5 m	\$1,304	\$476,733	1200	5.0	5	\$12,771	\$63,853	\$1,096,647	\$1,637,233	\$2,046,542
S_CC_09	Fountain St	0.213	450	75.05	3.9	3.6	<5 m	\$1,304	\$97,872	1200	3.8	1	\$7,561	\$7,561	\$225,138	\$330,571	\$413,213
S1602	Fountain St	0.217	450	533.52	3.6	7.2	5-10 m	\$5,057	\$2,698,068	1200	5.4	6	\$12,771	\$76,623	\$1,600,557	\$4,375,249	\$5,469,061
S1801	Fountain St	0.167	750	400.60	8.8	6.3	5-10 m	\$6,568	\$2,631,167	1500	7.6	5	\$21,431	\$107,157	\$1,201,803	\$3,940,127	\$4,925,159
S1802	Fountain St	0.167	750	383.60	6.3	10.4	5-10 m	\$6,568	\$2,519,484	1500	8.4	5	\$21,431	\$107,157	\$1,150,791	\$3,777,432	\$4,721,790
Alt 4 LS 2				Kossuth Rd												\$11,298,088	\$14,122,610
S1902	Fountain St	0.746	750	249.40	2.8	2.8	<5 m	\$2,418	\$602,986	1500	2.8	3	\$11,217	\$33,651	\$748,188	\$1,384,826	\$1,731,032
S1903	Fountain St	0.166	750	652.28	2.9	5.2	<5 m	\$2,418	\$1,577,062	1500	4.1	8	\$12,047	\$96,375	\$1,956,825	\$3,630,262	\$4,537,827
S2001	Fountain St	0.167	750	796.17	5.2	3.3	<5 m	\$2,418	\$1,924,967	1500	4.3	9	\$12,047	\$108,422	\$2,388,507	\$4,421,896	\$5,527,370
S2201_1	Fountain St	3.032	750	183.71	3.3	6.2	5-10 m	\$6,568	\$1,206,610	1500	4.8	3	\$17,021	\$51,063	\$551,127	\$1,808,800	\$2,261,000
S_CC_01	Fountain St	0.177	750	50.78	6.3	5.8	5-10 m	\$6,568	\$333,526	1500	6.1	1	\$18,491	\$18,491	\$152,340	\$504,356	\$630,445
S2202	Fountain St	0.164	750	128.31	5.9	7.4	5-10 m	\$6,568	\$842,720	1500	6.7	2	\$19,962	\$39,923	\$384,918	\$862,682	\$1,078,352
Fountain St. (Menno to Kossuth)				3818.95					\$14,911,196				\$166,749	\$710,275	\$11,456,841	\$26,673,433	\$33,341,791
S1622	Vance Rd Ext.	0.551	300	676.40	2.9	2.8	<5 m	\$1,128	\$763,250	1200	2.9	8	\$6,090	\$48,719		\$811,969	\$1,014,962
S1621	Vance Rd Ext.	0.167	300	237.54	2.9	6.8	5-10 m	\$4,740	\$1,125,833	1200	4.9	3	\$12,771	\$38,312		\$1,164,145	\$1,455,181
S1620	Vance Rd Ext.	0.473	300	402.51	6.9	5.4	5-10 m	\$4,740	\$1,907,725	1200	6.2	5	\$14,005	\$70,023		\$1,977,748	\$2,472,185
Vance Rd Ext.				1316.45					\$3,796,808				\$32,865	\$157,054	\$0	\$3,953,862	\$4,942,327
S1614	Shantz Station Rd	0.626	300	320.97	2.8	2.8	<5 m	\$1,128	\$362,187	1200	2.8	4	\$6,090	\$24,360	\$962,922	\$1,349,468	\$1,686,835
S1613_1	Shantz Station Rd	0.470	300	212.63	2.9	2.8	<5 m	\$1,128	\$239,928	1200	2.9	3	\$6,090	\$18,270	\$637,881	\$896,079	\$1,120,098
S1613_2	Shantz Station Rd	1.076	300	392.13	2.9	2.8	<5 m	\$1,128	\$442,473	1200	2.9	5	\$6,090	\$30,449	\$1,176,375	\$1,649,298	\$2,061,622
S1612	Shantz Station Rd	0.268	300	250.42	2.9	6.3	<5 m	\$1,128	\$282,573	1200	4.6	3	\$12,771	\$38,312	\$751,257	\$1,072,141	\$1,340,177
S1611	Shantz Station Rd	0.267	300	183.46	6.4	2.8	5-10 m	\$4,740	\$869,536	1200	4.6	3	\$12,771	\$38,312	\$550,389	\$1,458,237	\$1,822,796
S2011	Shantz Station Rd	1.560	300	305.80	2.8	2.8	<5 m	\$1,128	\$345,060	1200	2.8	4	\$6,090	\$24,360	\$917,388	\$1,286,807	\$1,608,509
S2012	Shantz Station Rd	0.266	300	203.11	2.9	5.9	<5 m	\$1,128	\$229,190	1200	4.4	3	\$7,561	\$22,682	\$609,333	\$861,205	\$1,076,507
S2106	Shantz Station Rd	0.270	375	181.77	6.0	3.6	5-10 m	\$4,883	\$887,539	1200	4.8	3	\$12,771	\$38,312	\$545,301	\$1,471,151	\$1,838,939
S2107	Shantz Station Rd	0.845	375	415.21	3.7	2.8	<5 m	\$1,193	\$495,500	1200	3.3	5	\$6,090	\$30,449	\$1,245,615	\$1,771,564	\$2,214,455
S2109	Shantz Station Rd	1.121	375	216.77	2.9	2.8	<5 m	\$1,193	\$258,685	1200	2.9	3	\$6,090	\$18,270	\$650,298	\$927,253	\$1,159,066
Shantz Station Rd (S. of Menno)				2682.25					\$4,412,670				\$82,412	\$283,774	\$8,046,759	\$12,743,204	\$15,929,005
S2103	New Germany Ln	0.271	300	129.36	2.8	3.5	<5 m	\$1,128	\$145,967	1200	3.2	2	\$6,090	\$12,180		\$158,147	\$197,684
S2102_1	New Germany Ln	0.268	300	134.35	3.6	3.2	<5 m	\$1,128	\$151,596	1200	3.4	2	\$6,090	\$12,180		\$163,776	\$204,720
S_CC_10	New Germany Ln	0.266	300	176.70	3.2	3.5	<5 m	\$1,128	\$199,390	1200	3.4	2	\$6,090	\$12,180		\$211,570	\$264,463
S2101	New Germany Ln	0.266	300	229.36	3.6	4.1	<5 m	\$1,128	\$258,807	1200	3.9	3	\$7,561	\$22,682		\$281,489	\$351,862
S2006	New Germany Ln	0.266	300	356.81	2.8	4.0	<5 m	\$1,128	\$402,626	1200	3.4	4	\$6,090	\$24,360		\$426,986	\$533,732
New Germany				1026.58					\$1,158,387				\$31,920	\$83,581	\$0	\$1,241,968	\$1,552,460
S2110	Kossuth Rd	0.266	375	601.03	2.9	5.5	<5 m	\$1,193	\$717,256	1200	4.2	7	\$7,561	\$52,925	\$1,803,078	\$2,573,259	\$3,216,573
S2111	Kossuth Rd	0.267	375	378.54	5.5	6.7	5-10 m	\$4,883	\$1,848,349	1200	6.1	5	\$14,005	\$70,023	\$1,135,620	\$3,053,992	\$3,817,490
S2112	Kossuth Rd	0.268	375	325.08	6.8	5.7	5-10 m	\$4,883	\$1,587,303	1200	6.3	4	\$14,005	\$56,018	\$975,234	\$2,618,555	\$3,273,194
Kossuth East/ West				1304.64					\$4,152,907				\$35,570	\$178,966	\$3,913,932	\$8,245,806	\$10,307,257
S_T01_1	Fountain St.	0.170	1050	213.84	3.9	4.7	<5 m	\$3,626	\$775,371	2400	4.3	3	\$31,676	\$95,027	\$641,520	\$1,511,918	\$1,889,898
S_T01_2	Fountain St.	0.170	1050	472.84	4.7	6.3	5-10 m	\$8,270	\$3,910,163	2400	5.5	6	\$38,121	\$228,724	\$1,418,523	\$5,557,411	\$6,946,763
S_T02	Fountain St.	0.171	1050	43.20	6.3	6.3	5-10 m	\$8,270	\$357,243	2400	6.3	1	\$38,121	\$38,121	\$129,600	\$524,964	\$656,204
Fountain St - Kossuth to Middle Block				729.88					\$5,042,778				\$107,917	\$361,872	\$2,189,643	\$7,594,293	\$9,492,866
TOTAL ALL LOCAL SEWERS				26044.1					\$77,175,797					\$4,073,964	\$51,653,565	\$134,380,120	\$167,975,150

TOTAL ALL SEWERS AND TRUNK				35495.6					\$126,639,315					\$4,073,964	\$51,653,565	\$283,428,796	\$354,312,324
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East Side Lands (Woolwich) Sanitary Servicing EA
Sewer Alternative 4 LCC



	Year		Sewer Reach	Description	Capital Expense (2018 Dollars)			Sewer O&M (Flushing)		Annual Lift Station Energy Costs					Annual Lift Station O&M					Annual Lift Station Equip & Materials					Lift Station Upgrades					Total Annual Cash Flow	Total Cost (PV)		
		Rate	PV Factor			Cost Est 2025 Dollars	Present Value	Pipe Length	Flushing / m = Annual	\$14 PV	Monthly Energy = LS 1	\$1,019 LS 2	\$949 LS 3	\$2,245 LS 4	\$3,961 PV	Monthly Labour= LS 1	\$3,500 LS 2	\$3,500 LS 3	\$3,500 LS 4	\$3,500 PV	Monthly = LS 1	\$340 LS 2	\$316 LS 3	\$748 LS 4	\$1,320 PV	Per Event= LS 1	\$ 727,500 LS 2	\$ 677,917 LS 3	\$ 1,603,333 LS 4	\$ 2,829,583 PV			
0	2025	4%	1.00	Trunk 03D	Trunk 03D (South of Menno)	\$66,917,805	\$66,917,805	5946	5946	\$0					\$0					\$0					\$0					\$0	\$66,917,805	\$66,917,805	
1	2026	4%	0.96	Menno East	Lonsdale / Wurster Ext to 300m East (Limit of Ex. CMP)	\$3,526,234	\$3,390,610	286	6233	\$0					\$0					\$0					\$0					\$0	\$3,526,234	\$3,390,610	
2	2027	4%	0.92	Fountain South	Fountain St. (Kossuth to Middle block)	\$9,492,866	\$8,776,688	730	6963	\$0					\$0					\$0					\$0					\$0	\$9,492,866	\$8,776,688	
3	2028	4%	0.89	LS 2		\$14,122,610	\$12,554,949		6963	\$0					\$0					\$0					\$0					\$0	\$14,122,610	\$12,554,949	
4	2029	4%	0.85	LS 4		\$44,573,878	\$38,101,938		6963	\$97,475	\$83,322	\$11,389			\$9,735		\$42,000			\$35,902		\$3,796			\$3,245					\$0	\$44,728,539	\$38,234,142	
4	2029	4%	0.85	Fountain (Menno to Kossuth)		\$33,341,791	\$28,500,703	3819	10781	\$0	\$11,389			\$47,537	\$50,370		\$42,000		\$42,000	\$71,804	\$3,796			\$15,846	\$16,790					\$0	\$33,504,359	\$28,639,666	
5	2030	4%	0.82	Woolwich St.		\$8,348,779	\$6,862,087	1067	11849	\$0	\$11,389			\$47,537	\$48,433		\$42,000		\$42,000	\$69,042	\$3,796			\$15,846	\$16,144					\$0	\$8,511,347	\$6,995,706	
6	2031	4%	0.79	Menno W	\$1701 Reach	\$999,386	\$789,829	182	12030	\$0	\$11,389			\$47,537	\$46,570		\$42,000		\$42,000	\$66,386	\$3,796			\$15,846	\$15,523					\$0	\$1,161,954	\$918,309	
7	2032	4%	0.76	East Connector Rd.		\$7,628,908	\$5,797,343	1441	13471	\$0	\$11,389			\$47,537	\$44,779		\$42,000		\$42,000	\$63,833	\$3,796			\$15,846	\$14,926					\$0	\$7,791,476	\$5,920,881	
8	2033	4%	0.73	Fountain St. N of Menno		\$9,154,702	\$6,689,251	828	14299	\$200,182	\$146,271	\$11,389			\$47,537	\$43,057		\$42,000		\$42,000	\$61,378	\$3,796			\$15,846	\$14,352					\$0	\$9,517,452	\$6,954,309
9	2034	4%	0.70	Menno W	Rest of Menno W	\$6,617,888	\$4,649,640	913	15212	\$0	\$11,389			\$47,537	\$41,401		\$42,000		\$42,000	\$59,017	\$3,796			\$15,846	\$13,800					\$0	\$6,780,456	\$4,763,858	
10	2035	4%	0.68			\$0	\$0		15212	\$0	\$11,389			\$47,537	\$39,808		\$42,000		\$42,000	\$56,747	\$3,796			\$15,846	\$13,269					\$0	\$162,568	\$109,825	
11	2035	4%	0.65			\$0	\$0		15212	\$0	\$11,389			\$47,537	\$38,277		\$42,000		\$42,000	\$54,565	\$3,796			\$15,846	\$12,759					\$0	\$162,568	\$105,601	
12	2035	4%	0.62			\$0	\$0		15212	\$0	\$11,389			\$47,537	\$36,805		\$42,000		\$42,000	\$52,466	\$3,796			\$15,846	\$12,268					\$0	\$162,568	\$101,539	
13	2036	4%	0.60			\$0	\$0		15212	\$212,968	\$127,903	\$11,389			\$47,537	\$35,389		\$42,000		\$42,000	\$50,448	\$3,796			\$15,846	\$11,796					\$0	\$375,536	\$225,537
14	2037	4%	0.58	New Germany Rd.	\$2006 Reach	\$533,732	\$308,217	357	15569	\$0	\$11,389			\$47,537	\$34,028		\$42,000		\$42,000	\$48,508	\$3,796			\$15,846	\$11,343					\$0	\$696,300	\$402,096	
15	2038	4%	0.56			\$0	\$0		15569	\$0	\$11,389			\$47,537	\$32,720		\$42,000		\$42,000	\$46,642	\$3,796			\$15,846	\$10,907					\$0	\$162,568	\$90,268	
16	2039	4%	0.53			\$0	\$0		15569	\$0	\$11,389	\$26,936		\$47,537	\$45,842		\$42,000	\$42,000	\$42,000	\$67,272	\$3,796	\$8,979		\$15,846	\$15,281					\$0	\$240,483	\$128,396	
17	2040	4%	0.51			\$0	\$0		15569	\$0	\$11,389	\$26,936		\$47,537	\$44,079		\$42,000	\$42,000	\$42,000	\$64,685	\$3,796	\$8,979		\$15,846	\$14,693			\$ 677,917	\$348,024	\$918,399	\$471,482		
18	2041	4%	0.49			\$0	\$0		15569	\$217,964	\$107,593	\$11,389	\$26,936		\$47,537	\$42,384		\$42,000	\$42,000	\$42,000	\$62,197	\$3,796	\$8,979		\$15,846	\$14,128					\$0	\$458,447	\$226,302
19	2042	4%	0.47	New Germany Rd.	End of New Germany	\$1,018,728	\$483,532	670	16239	\$0	\$11,389	\$26,936		\$47,537	\$40,754		\$42,000	\$42,000	\$42,000	\$59,805	\$3,796	\$8,979		\$15,846	\$13,585					\$ 2,829,583	\$1,343,040	\$4,088,794	\$1,940,715
20	2043	4%	0.46	LS 3		\$31,328,494	\$14,297,916		16239	\$0	\$11,389	\$26,936		\$47,537	\$39,186		\$42,000	\$42,000	\$42,000	\$57,505	\$3,796	\$8,979		\$15,846	\$13,062					\$0	\$31,568,977	\$14,407,669	
21	2044	4%	0.44			\$0	\$0		16239	\$0	\$11,389	\$26,936		\$47,537	\$37,679		\$42,000	\$42,000	\$42,000	\$55,293	\$3,796	\$8,979		\$15,846	\$12,560					\$0	\$0	\$0	
22	2045	4%	0.42			\$0	\$0		16239	\$0	\$11,389	\$26,936		\$47,537	\$36,230		\$42,000	\$42,000	\$42,000	\$53,166	\$3,796	\$8,979		\$15,846	\$12,077					\$0	\$0	\$0	
23	2046	4%	0.41			\$0	\$0		16239	\$227,341	\$92,238	\$11,389	\$26,936		\$47,537	\$34,836		\$42,000	\$42,000	\$42,000	\$51,122	\$3,796	\$8,979		\$15,846	\$11,612					\$0	\$467,823	\$189,808
24	2047	4%	0.39			\$0	\$0		16239	\$0	\$11,389	\$26,936		\$47,537	\$33,497		\$42,000	\$42,000	\$42,000	\$49,155	\$3,796	\$8,979		\$15,846	\$11,166					\$0	\$240,483	\$93,817	
25	2048	4%	0.38			\$0	\$0		16239	\$0	\$11,389	\$26,936		\$47,537	\$32,208		\$42,000	\$42,000	\$42,000	\$47,265	\$3,796	\$8,979		\$15,846	\$10,736					\$0	\$240,483	\$90,209	
26	2049	4%	0.36			\$0	\$0		16239	\$0	\$11,389	\$26,936		\$47,537	\$30,969		\$42,000	\$42,000	\$42,000	\$45,447	\$3,796	\$8,979		\$15,846	\$10,323					\$0	\$240,483	\$86,740	
27	2050	4%	0.35			\$0	\$0		16239	\$0	\$11,389	\$26,936		\$47,537	\$29,778		\$42,000	\$42,000	\$42,000	\$43,699	\$3,796	\$8,979		\$15,846	\$9,926					\$0	\$240,483	\$83,403	
28	2051	4%	0.33			\$0	\$0		16239	\$227,341	\$75,813	\$11,389	\$26,936		\$47,537	\$28,633		\$42,000	\$42,000	\$42,000	\$42,018	\$3,796	\$8,979		\$15,846	\$9,544					\$0	\$467,823	\$156,008
29	2052	4%	0.32	Lonsdale Rd. (Vance Rd.)		\$4,942,327	\$1,584,764	1316	17555	\$0	\$11,389	\$26,936		\$47,537	\$27,532		\$42,000	\$42,000	\$42,000	\$40,402	\$3,796	\$8,979		\$15,846	\$9,177					\$0	\$5,182,810	\$1,661,875	
30	2053	4%	0.31	Kossuth rd.		\$10,307,257	\$3,177,920	1305	18860	\$0	\$11,389	\$26,936		\$47,537	\$26,473		\$42,000	\$42,000	\$42,000	\$38,848	\$3,796	\$8,979		\$15,846	\$8,824					\$0	\$10,547,740	\$3,252,065	
31	2054	4%	0.30	Shantz Rd. S	Last half starting at S2012	\$6,288,967	\$1,864,429	1017	19877	\$0	\$11,389	\$26,936		\$47,537	\$25,455		\$42,000	\$42,000	\$42,000	\$37,354	\$3,796	\$8,979		\$15,846	\$8,485			\$ 1,603,333	\$475,325	\$8,132,783	\$2,411,047		
32	2055	4%	0.29			\$0	\$0		19877	\$0	\$11,389	\$26,936		\$47,537	\$24,476		\$42,000	\$42,000	\$42,000	\$35,917	\$3,796	\$8,979		\$15,846	\$8,159					\$0	\$240,483	\$68,551	
33	2056	4%	0.27			\$0	\$0		19877	\$278,272	\$76,273	\$11,389	\$26,936		\$47,537	\$23,534		\$42,000	\$42,000	\$42,000	\$34,536	\$3,796	\$8,979		\$15,846	\$7,845					\$0	\$518,754	\$142,188
34	2057	4%	0.26			\$0	\$0		19877	\$0	\$11,389	\$26,936		\$47,537	\$22,629		\$42,000	\$42,000	\$42,000	\$33,208	\$3,796	\$8,979		\$15,846	\$7,543			\$ 677,917	\$178,666	\$918,399			

East Side Lands (Woolwich) Sanitary Servicing EA
Sewer Alternative 5



Sewer Cost										Manhole Costs					Road Restoration Costs	Construction Costs	
Sewer Section	Street	Slope (%)	Size (mm)	Length (m)	U/S Depth (m)	D/S Depth (m)	Depth	Sewer Unit Cost (\$/m)	Sewer Total Cost (\$)	MH Dia. (mm)	Average MH Depth (m)	Number of MH	MH Unit Cost (\$)	MH Total (\$)	Road Restoration (\$/m)	Construction Costs Total (\$)	Contingency Total \$
S0106	Wambolt Dr.	0.218	375	77.8	6.90	7.90	5-10 m	\$4,883	\$380,046	1200	7.40	1	\$15,474	\$15,474		\$395,520	\$494,400
S0107	Wambolt Dr.	0.276	375	409.6	8.00	5.00	5-10 m	\$4,883	\$1,999,854	1200	6.50	5	\$15,474	\$77,372		\$2,077,225	\$2,596,531
S0107	Wambolt Dr.	0.276	375	409.6	5.00	2.80	<5 m	\$1,193	\$488,772	1200	3.90	5	\$7,561	\$37,804		\$526,576	\$658,220
S02A04	Kramp Rd.	0.422	375	142.3	2.90	2.80	<5 m	\$1,193	\$169,810	1200	2.85	2	\$6,090	\$12,180		\$181,990	\$227,488
S02A03	Kramp Rd.	0.221	375	199.2	2.90	5.50	<5 m	\$1,193	\$237,740	1200	4.20	3	\$7,561	\$22,682		\$260,422	\$325,528
S02A05	Wurster Place	0.217	375	692.8	7.40	4.90	<5 m	\$1,193	\$826,801	1200	6.15	8	\$14,005	\$112,037		\$938,838	\$1,173,548
S0501	Wurster Place Extens.	2.358	375	82.7	4.90	2.80	<5 m	\$1,193	\$98,670	1200	3.85	1	\$7,561	\$7,561		\$106,231	\$132,789
S0502	Wurster Place Extens.	0.167	600	395.3	3.90	4.80	<5 m	\$1,797	\$710,454	1500	4.35	5	\$12,047	\$60,234		\$770,689	\$963,361
S0503	Wurster Place Extens.	0.167	600	233.1	4.80	4.50	<5 m	\$1,797	\$419,014	1500	4.65	3	\$17,021	\$51,063		\$470,077	\$587,596
S0504	Wurster Place Extens.	0.168	600	309.7	4.50	8.10	5-10 m	\$5,708	\$1,767,852	1500	6.30	4	\$18,491	\$73,963		\$1,841,816	\$2,302,269
S0505	Wurster Place Extens.	0.164	600	207.0	8.20	5.70	5-10 m	\$5,708	\$1,181,805	1500	6.95	3	\$19,962	\$59,885		\$1,241,690	\$1,552,112
S0506	Wurster Place Extens.	0.167	750	346.3	5.70	8.50	5-10 m	\$6,568	\$2,274,568	1500	7.10	4	\$19,962	\$79,846		\$2,354,415	\$2,943,018
Total (Trunk 03)				3505.4					\$10,555,387				\$161,207	\$610,101	\$0	\$11,165,488	\$13,956,860
S1615	Lonsdale Rd. (NS)	0.164	900	146.4	8.30	11.60	11-15 m	\$11,934	\$1,747,498	1800	9.95	2	\$28,647	\$57,294		\$1,804,792	\$2,255,990
S1616	Lonsdale Rd. (NS)	0.164	900	358.3	11.70	5.00	5-10 m	\$7,459	\$2,672,303	1800	8.35	3	\$25,215	\$75,645		\$2,747,948	\$3,434,935
S1616	Lonsdale Rd. (NS)	0.247	900	358.3	5.00	1.70	<5 m	\$3,053	\$1,093,792	1800	3.35	3	\$14,844	\$44,533		\$1,138,325	\$1,422,907
S1623	Lonsdale Rd. (NS)	0.269	900	714.6	1.80	1.70	<5 m	\$3,053	\$2,181,717	1800	1.75	6	\$12,331	\$73,983		\$2,255,700	\$2,819,625
S2002	Airport Crossing	0.125	900	390.7	1.80	4.20	<5 m		\$0	1800	3.00	4	\$14,844	\$59,378	\$4,960,000	\$5,019,378	\$6,274,222
S2003	Airport Crossing	0.130	900	53.9	4.30	5.50	<5 m		\$0	1800	4.90	1	\$20,805	\$20,805		\$20,805	\$26,006
S2004	Airport Crossing	0.124	900	129.1	5.50	6.70	5-10 m	\$7,459	\$963,151	2400	6.10	2	\$38,121	\$76,241		\$1,039,393	\$1,299,241
LS by new terminal Building																\$1,500,000	\$1,875,000
S2005	Airport Crossing	0.128	1050	250.3	6.80	5.20	5-10 m	\$8,270	\$2,070,115	2400	6.00	3	\$38,121	\$114,362	\$750,993	\$2,935,470	\$3,669,337
S1903	Fountain St	0.124	1050	652.7	5.30	7.30	5-10 m	\$8,270	\$5,397,699	2400	6.30	6	\$38,121	\$228,724	\$1,958,169	\$7,584,593	\$9,480,741
S2001	Fountain St	0.126	1050	796.2	7.30	5.00	5-10 m	\$8,270	\$6,583,928	2400	6.15	7	\$38,121	\$266,845	\$2,388,507	\$9,239,280	\$11,549,099
S2201_1	Fountain St	0.125	1050	183.7	5.00	2.50	<5 m	\$3,626	\$666,118	2400	3.75	2	\$31,676	\$63,351	\$1,351,127	\$2,080,596	\$2,600,746
S_CC_01	Fountain St	0.118	1050	50.8	2.50	2.00	<5 m	\$3,626	\$184,125	2400	2.25	1	\$23,751	\$23,751	\$152,340	\$360,216	\$450,270
S2202	Fountain St	0.124	1050	129.1	2.00	3.50	<5 m	\$3,626	\$468,185	2400	2.75	2	\$29,401	\$58,802	\$387,363	\$914,350	\$1,142,937
Total (Trunk03B)				4214.2					\$24,028,632				\$353,996	\$1,163,714	\$11,948,499	\$37,140,845	\$46,426,056
TOTAL TRUNK				7719.6					\$34,584,019				\$515,203	\$1,773,815	\$11,948,499	\$48,306,333	\$60,382,916

Local Sewers																	
S0103	North Dev Rd	0.217	375	133.5	2.80	5.00	<5 m	\$1,193	\$159,309	1200	3.90	2	\$7,561	\$15,121		\$174,430	\$218,037
S0102A	North Dev Rd	0.217	375	133.5	5.00	6.80	5-10 m	\$4,883	\$651,824	1200	5.90	2	\$14,005	\$28,009		\$679,834	\$849,792
S0102	North Dev Rd	0.363	300	309.6	6.90	5.00	5-10 m	\$4,740	\$1,467,509	1200	5.95	4	\$14,005	\$56,018		\$1,523,527	\$1,904,409
S0102A	North Dev Rd	0.363	300	309.6	5.00	2.80	<5 m	\$1,128	\$349,385	1200	3.90	4	\$7,561	\$30,243		\$379,628	\$474,535
North Dev Rd				886.2					\$2,628,027				\$43,131	\$129,392	\$0	\$2,757,419	\$3,446,773
S0105	Greenhouse Rd	0.273	300	881.6	2.90	2.80	<5 m	\$1,128	\$994,743	1200	2.85	10	\$6,090	\$60,899		\$1,055,642	\$1,319,553
S02A01	Greenhouse Rd	0.187	450	407.2	2.90	3.00	<5 m	\$1,304	\$531,067	1200	2.95	5	\$6,090	\$30,449		\$561,517	\$701,896
Greenhouse Rd				1288.8					\$1,525,811				\$12,180	\$91,348	\$0	\$1,617,159	\$2,021,449
S02A02	Kramp Rd	0.266	300	372.0	5.50	2.80	<5 m	\$1,128	\$419,770	1200	4.15	5	\$7,561	\$37,804		\$457,574	\$571,967
Kramp Rd West				372.0					\$419,770				\$7,561	\$37,804	\$0	\$457,574	\$571,967
S02B02	Kramp Rd	0.311	300	1042.6	2.90	2.80	<5 m	\$1,128	\$1,176,473	1200	2.85	12	\$6,090	\$73,079		\$1,249,552	\$1,561,940
Kramp Rd East				1042.6					\$1,176,473				\$6,090	\$73,079	\$0	\$1,249,552	\$1,561,940
S0108	Shantz Station Rd	0.268	300	100.7	2.80	3.40	<5 m	\$1,128	\$113,623	1200	3.10	2	\$6,090	\$12,180	\$302,082	\$427,885	\$534,856
S0109	Shantz Station Rd	0.266	300	433.0	3.40	4.30	<5 m	\$1,128	\$488,628	1200	3.85	5	\$7,561	\$37,804	\$1,299,084	\$1,825,516	\$2,281,895
S0110	Shantz Station Rd	0.265	300	293.8	4.40	3.40	<5 m	\$1,128	\$331,539	1200	3.90	4	\$7,561	\$30,243		\$1,243,224	\$1,554,030
S02B01	Shantz Station Rd	0.351	300	671.7	3.40	2.80	<5 m	\$1,128	\$757,960	1200	3.10	8	\$6,090	\$48,719	\$2,015,139	\$2,821,818	\$3,527,273
S02B03	Shantz Station Rd	0.219	450	164.1	2.90	3.00	<5 m	\$1,304	\$213,959	1200	2.95	2	\$6,090	\$12,180		\$492,177	\$718,316
S0302	Shantz Station Rd	0.166	600	594.8	3.00	6.20	5-10 m	\$5,708	\$3,395,157	1500	4.60	7	\$17,021	\$119,148	\$1,784,277	\$5,298,581	\$6,623,227
S0402	Shantz Station Rd	0.167	600	245.3	6.20	9.80	5-10 m	\$5,708	\$1,400,507	1500	8.00	3	\$21,431	\$64,294		\$736,017	\$2,201,818
S0403	Shantz Station Rd	0.277	600	259.6	9.90	5.00	5-10 m	\$5,708	\$1,481,773	1500	7.45	3	\$19,962	\$59,885		\$2,320,383	\$2,900,479
S0403	Shantz Station Rd	2.498	600	259.6	5.00	2.80	<5 m	\$1,797	\$466,576	1500	3.90	3	\$12				

S1607	Menno Rd	0.167	750	413.1	5.70	6.60	5-10 m	\$6,568	\$2,712,999	1800	6.15	5	\$22,274	\$111,372	\$1,239,180	\$4,063,551	\$5,079,439
S1606	Menno Rd	0.168	750	286.5	6.60	8.20	5-10 m	\$6,568	\$1,881,674	1800	7.40	4	\$23,745	\$94,981	\$859,467	\$2,836,122	\$3,545,153
S1605_1	Menno Rd	0.270	300	233.1	2.80	6.60	<5 m	\$1,128	\$262,982	1200	4.70	3	\$12,771	\$38,312	\$699,174	\$1,000,468	\$1,250,585
Menno East				2531.5					\$9,328,111				\$119,677	\$547,704	\$7,594,443	\$17,733,241	\$22,166,551
S1401	Woolwich St	0.367	300	169.1	2.80	2.80	<5 m	\$1,128	\$190,780	1200	2.80	2	\$6,090	\$12,180	\$507,213	\$710,172	\$887,715
S1402	Woolwich St	0.400	300	82.4	2.90	2.80	<5 m	\$1,128	\$92,983	1200	2.85	1	\$6,090	\$6,090	\$247,209	\$346,282	\$432,853
S1703	Woolwich St	0.270	300	136.8	2.90	3.80	<5 m	\$1,128	\$154,389	1200	3.35	2	\$6,090	\$12,180	\$410,463	\$577,031	\$721,289
S1704	Woolwich St	0.185	525	173.8	4.70	3.60	<5 m	\$1,400	\$241,957	1500	4.15	2	\$12,047	\$24,094	\$518,421	\$784,472	\$980,590
S1705_1	Woolwich St	4.845	525	7.8	3.70	4.30	<5 m	\$1,400	\$10,981	1500	4.00	1	\$12,047	\$12,047	\$23,529	\$46,557	\$58,197
S_CC_14	Woolwich St	0.188	525	239.8	4.40	7.80	5-10 m	\$5,217	\$1,251,104	1500	6.10	3	\$18,491	\$55,472	\$719,490	\$2,026,067	\$2,532,583
S1706	Woolwich St	0.190	525	258.5	7.90	8.70	5-10 m	\$5,217	\$1,348,593	1500	8.30	3	\$21,431	\$64,294	\$775,554	\$2,188,441	\$2,735,551
Woolwich				1067.3					\$3,290,788				\$82,285	\$186,356	\$3,201,879	\$6,679,023	\$8,348,779
S1601_1	Fountain St	1.157	450	365.5	6.10	3.80	<5 m	\$1,304	\$476,733	1200	4.95	5	\$12,771	\$63,853	\$1,096,647	\$1,637,233	\$2,046,542
S_CC_09	Fountain St	0.213	450	75.0	3.90	3.60	<5 m	\$1,304	\$97,872	1200	3.75	1	\$7,561	\$7,561	\$225,138	\$330,571	\$413,213
S1602	Fountain St	0.217	450	533.5	3.60	7.20	5-10 m	\$5,057	\$2,698,068	1200	5.40	6	\$12,771	\$76,623	\$1,600,557	\$4,375,249	\$5,469,061
S1801	Fountain St	0.165	750	400.6	8.80	6.30	5-10 m	\$6,568	\$2,631,167	1800	7.55	5	\$25,215	\$126,075	\$1,201,803	\$3,959,045	\$4,948,807
Alt 5 LS 2																\$10,125,960	\$12,657,451
S1802	Fountain St	0.109	750	383.6	6.30	9.10	5-10 m	\$6,568	\$2,519,484	1800	7.70	5	\$25,215	\$126,075	\$1,150,791	\$3,796,350	\$4,745,438
Fountain St. (Menno to Jetliner Crt)				1758.3					\$8,423,325				\$83,532	\$400,187	\$5,274,936	\$14,098,448	\$17,623,060
S1622	Vance Rd Ext.	0.551	300	676.4	2.90	2.80	<5 m	\$1,128	\$763,250	1200	2.85	8	\$6,090	\$48,719		\$811,969	\$1,014,962
S1621	Vance Rd Ext.	0.215	375	237.5	2.90	6.70	5-10 m	\$4,883	\$1,159,864	1200	4.80	3	\$12,771	\$38,312		\$1,198,176	\$1,497,720
S1620	Vance Rd Ext.	0.216	375	402.5	6.80	5.10	5-10 m	\$4,883	\$1,965,390	1200	5.95	5	\$14,005	\$70,023		\$2,035,414	\$2,544,267
S_CC_06	Vance Rd Ext.	0.267	450	513.6	5.10	0.40	<5 m	\$1,304	\$669,873	1200	2.75	6	\$6,090	\$36,539		\$706,412	\$883,015
S1619_1	Vance Rd Ext.	0.188	450	69.0	0.50	2.40	<5 m	\$1,304	\$90,003	1200	1.45	1	\$4,159	\$4,159		\$94,161	\$117,702
S1618	Vance Rd Ext.	0.167	525	185.1	2.40	1.60	<5 m	\$1,400	\$259,142	1500	2.00	3	\$9,096	\$27,289		\$286,431	\$358,038
S1617	Vance Rd Ext.	0.473	525	224.0	1.60	1.00	<5 m	\$1,400	\$313,591	1500	1.30	3	\$7,612	\$22,836		\$336,427	\$420,534
Vance Rd Ext.				2308.2					\$5,221,112				\$59,822	\$247,877	\$0	\$5,468,990	\$6,836,237
S1614	Shantz Station Rd	0.626	300	321.0	2.80	2.80	<5 m	\$1,128	\$362,187	1200	2.80	4	\$6,090	\$24,360	\$962,922	\$1,686,835	\$1,686,835
S1613_1	Shantz Station Rd	0.470	300	212.6	2.90	2.80	<5 m	\$1,128	\$239,928	1200	2.85	3	\$6,090	\$18,270	\$637,881	\$896,079	\$1,120,098
S1613_2	Shantz Station Rd	1.076	300	392.1	2.90	2.80	<5 m	\$1,128	\$442,473	1200	2.85	5	\$6,090	\$30,449	\$1,176,375	\$1,649,298	\$2,061,622
S1612	Shantz Station Rd	0.268	300	250.4	2.90	6.30	<5 m	\$1,128	\$282,573	1200	4.60	3	\$12,771	\$38,312	\$751,257	\$1,072,141	\$1,340,177
S1611	Shantz Station Rd	0.267	300	183.5	6.40	2.80	5-10 m	\$4,740	\$869,536	1200	4.60	3	\$12,771	\$38,312	\$550,389	\$1,458,237	\$1,822,796
S2011	Shantz Station Rd	1.560	300	305.8	2.80	2.80	<5 m	\$1,128	\$345,060	1200	2.80	4	\$6,090	\$24,360	\$917,380	\$1,286,807	\$1,608,509
S2012	Shantz Station Rd	0.266	300	203.1	2.90	5.90	<5 m	\$1,128	\$229,190	1200	4.40	3	\$7,561	\$22,682	\$609,333	\$861,205	\$1,076,507
S2106	Shantz Station Rd	0.270	375	181.8	6.00	3.60	5-10 m	\$4,883	\$887,539	1200	4.80	3	\$12,771	\$38,312	\$545,301	\$1,471,151	\$1,838,939
S2107	Shantz Station Rd	0.845	375	415.2	3.70	2.80	<5 m	\$1,193	\$495,500	1200	3.25	5	\$6,090	\$30,449	\$1,245,615	\$1,771,564	\$2,214,455
S2109	Shantz Station Rd	1.121	375	216.8	2.90	2.80	<5 m	\$1,193	\$258,685	1200	2.85	3	\$6,090	\$18,270	\$650,298	\$927,253	\$1,159,066
Shantz Station Rd (S of Menno)				2682.3					\$4,412,670				\$82,412	\$283,774	\$8,046,759	\$12,743,204	\$15,929,005
S2115	Cober Rd	0.218	375	215.6	3.90	3.80	<5 m	\$1,193	\$257,243	1200	3.85	3	\$7,561	\$22,682		\$279,925	\$349,906
S_CC_05	Cober Rd	0.211	375	165.8	3.80	3.60	<5 m	\$1,193	\$197,862	1200	3.70	2	\$7,561	\$15,121		\$212,983	\$266,229
S_CC_04	Cober Rd	0.218	375	480.9	3.70	6.90	<5 m	\$1,193	\$573,883	1200	5.30	6	\$12,771	\$76,623		\$650,507	\$813,134
S2116	Cober Rd	0.216	375	185.0	7.00	6.20	5-10 m	\$4,883	\$903,222	1200	6.60	3	\$15,474	\$46,423		\$949,645	\$1,187,056
Cober				1047.2					\$1,932,210				\$43,366	\$160,850	\$0	\$2,093,060	\$2,616,325
S2103	New Germany Ln	0.224	300	129.4	2.80	3.50	<5 m	\$1,128	\$145,967	1200	3.15	2	\$6,090	\$12,180		\$158,147	\$197,684
S2102_1	New Germany Ln	0.223	300	134.3	3.50	3.00	<5 m	\$1,128	\$151,596	1200	3.25	2	\$6,090	\$12,180		\$163,776	\$204,720
S_CC_10	New Germany Ln	0.226	300	176.7	3.10	3.30	<5 m	\$1,128	\$199,390	1200	3.20	2	\$6,090	\$12,180		\$211,570	\$264,463
S2101	New Germany Ln	0.227	300	229.4	3.30	3.70	<5 m	\$1,128	\$258,807	1200	3.50	3	\$7,561	\$22,682		\$281,489	\$351,862
S2006	New Germany Ln	0.224	300	356.8	2.80	3.90	<5 m	\$1,128	\$402,626	1200	3.35	4	\$6,090	\$24,360		\$426,986	\$533,732
New Germany				1026.6					\$1,158,387				\$31,920	\$83,581	\$0	\$1,241,968	\$1,552,460
S2110	Kossuth Rd	0.225	375	601.0	2.80	5.50	<5 m	\$1,193	\$717,256	1200	4.15	7	\$7,561	\$52,925	\$1,803,078	\$2,573,259	\$3,216,573
S2111	Kossuth Rd	0.225	375	378.5	5.50	6.80	5-10 m	\$4,883	\$1,848,349	1200	6.15	5	\$14,005	\$70,023	\$1,135,620	\$3,053,992	\$3,817,490
S2112	Kossuth Rd	0.225	375	325.1	6.80	5.70	5-10 m	\$4,883	\$1,587,303	1200	6.25	4	\$14,005	\$56,018	\$975,234	\$2,618,555	\$3,273,194
S2113	Kossuth Rd	0.124	525	388.5	6.30	6.90	5-10 m	\$5,217	\$2,026,702	1500	6.60	5	\$19,962	\$99,808	\$1,165,524	\$3,292,034	\$4,115,043
S2114	Kossuth Rd	0.124	525	321.6	6.90	4.70	5-10 m	\$5,217	\$1,677,752	1500	5.80	4	\$18,491	\$73,963	\$964,848	\$2,716,563	\$3,395,703
S2203_3	Kossuth Rd	0.128	525	15.6	4.80	4.70	<5 m	\$1,400	\$21,824	1500	4.75	1	\$17,021	\$17,021	\$46,761	\$85,606	\$107,008
S_CC_03	Kossuth Rd	0.127	525	290.5	4.70	4.30	<5 m	\$1,400	\$406,801	1500	4.50	4	\$17,021	\$68,084	\$871,617	\$1,346,502	\$1,683,128
S_CC_02	Kossuth Rd	0.185	525	124.3	4.30	6.10	<5 m	\$1,400	\$174,008	1500	5.20	2	\$17,021	\$34,042	\$372,831	\$580,881	\$726,101
S2204	Kossuth Rd	0.122	525	180.0	6.20	4.60	5-10 m	\$5,217	\$938,785	1500	5.40	2	\$17,021	\$34,042	\$539,880	\$1,512,707	\$1,890,884
S2205	Kossuth Rd	0.125	525	192.2	4.60	6.60	5-10 m	\$5,217	\$1,002,662	1500	5.60	3	\$18,491	\$55,472	\$576,615	\$1,634,750	\$2,043,437
S2206	Kossuth Rd	0.126	600	452.0	6.70	4.10	5-10 m	\$5,708	\$2,580,337	1500	5.40	6	\$17,021	\$102,126	\$1,356,060	\$4,038,524	\$5,048,155
Kossuth East/ West				3269.4					\$12,981,778				\$177,618	\$663,526	\$9,808,068	\$23,453,373	\$29,316,716
S_T01_1	Fountain St	0.125	1050	105.0	4.20	4.50	<5 m	\$3,626	\$380,746	2400	4.35	2	\$31,676	\$63,351	\$315,018	\$759,115	\$948,894
S_T01_2	Fountain St	0.125	1050	581.7	4.80	6.30	5-10 m	\$8,270	\$4,810,134	2400	5.55	7	\$38,121	\$266,845	\$1,745,013	\$6,821,992	\$8,527,490
S_T02	Fountain St	0.125	1050	43.2	6.40	6.30	5-10 m	\$8,270	\$357,243	2400	6.35	1	\$38,121	\$38,121	\$129,600	\$395,364	\$494,204
Fountain St - Kossuth to Middle Block				729.9					\$5,548,123				\$107,917	\$368,317	\$2,189,631	\$7,976,471	\$9,970,588
TOTAL ALL LOCAL SEWERS				27991.5					\$82,979,275				\$1,147,322	\$4,226,735	\$51,378,927	\$138,914,993	\$173,643,742
TOTAL ALL SEWERS AND TRUNK				35711.0					\$117,563,294				\$1,662,525	\$6,000,550	\$63,327,426	\$211,485,908	\$264,357,385

East Side Lands (Woolwich) Sanitary Servicing EA
Sewer Alternative 5 LCC



#	Year			Sewer Reach	Description	Capital Expense (2018 Dollars)			Sewer O&M (Flushing)			Annual Lift Station Energy Costs				Annual Lift Station O&M				Annual Lift Station Equip & Materials				Lift Station Upgrades				Total Annual Cash Flow	Total Cost (PV)
						Cost Est	Present	Pipe	Cumulative Pipe	Flushing / m =	\$14	Monthly Energy =	\$1,019	\$949	\$58	Monthly Labour=	\$ 3,500	\$ 3,500	\$ 3,500	Monthly=	\$ 340	\$ 316	\$ 19	Per Event=	\$ 727,500	\$ 677,917	\$ 41,667		
		Rate	PV Factor			2025 Dollars	Value	Length (m)	Length (m)	Annual	PV	Annual			PV				PV				PV						
0	2025	4%	1.00	Trunk 03B	Trunk 03B (South of Menno)	\$46,426,056	\$46,426,056	4214	4214		\$0				\$0			\$0				\$0				\$0	\$46,426,056	\$46,426,056	
1	2026	4%	0.96	Menno East	Lonsdale / Wurster Ext to 300m East (Limit of Ex. CMP)	\$3,545,153	\$3,408,801	286	4501		\$0				\$0			\$0				\$0				\$0	\$3,545,153	\$3,408,801	
2	2027	4%	0.92	Fountain South	Fountain St. (Kossuth to Middle block)	\$9,970,588	\$9,218,369	730	5231		\$0				\$0			\$0				\$0				\$0	\$9,970,588	\$9,218,369	
3	2028	4%	0.89	LS 2		\$12,657,451	\$11,252,427		5231		\$0				\$0			\$0				\$0				\$0	\$12,657,451	\$11,252,427	
4	2029	4%	0.85	LS at new Terminal Building		\$1,875,000	\$1,602,758		5231	\$73,228	\$62,596	\$11,389			\$9,735	\$42,000	\$35,902		\$3,796		\$3,245				\$0	\$2,005,413	\$1,714,236		
5	2030	4%	0.82	Fountain (Menno to Otter)		\$17,623,060	\$14,484,871	1758	6989		\$0	\$11,389	\$700		\$9,936	\$42,000	\$42,000	\$69,042	\$3,796	\$233	\$3,312				\$0	\$17,723,179	\$14,567,161		
6	2031	4%	0.79	Woolwich St.		\$8,348,779	\$6,598,161	1067	8056		\$0	\$11,389	\$700		\$9,554	\$42,000	\$42,000	\$66,386	\$3,796	\$233	\$3,185				\$0	\$8,448,897	\$6,677,286		
7	2032	4%	0.76	Menno W	\$1701 Reach	\$999,386	\$759,451	182	8238		\$0	\$11,389	\$700		\$9,187	\$42,000	\$42,000	\$63,833	\$3,796	\$233	\$3,062				\$0	\$1,099,504	\$835,533		
8	2033	4%	0.73	East Connector Rd.		\$7,280,633	\$5,319,887	1441	9678		\$0	\$11,389	\$700		\$8,833	\$42,000	\$42,000	\$61,378	\$3,796	\$233	\$2,944				\$0	\$7,380,751	\$5,393,043		
9	2034	4%	0.70	Fountain St. N of Menno		\$9,154,702	\$6,431,972	828	10506	\$147,086	\$103,340	\$11,389	\$700		\$8,494	\$42,000	\$42,000	\$59,017	\$3,796	\$233	\$2,831				\$0	\$9,401,907	\$6,605,655		
10	2035	4%	0.68	Menno W	Rest of Menno W	\$6,617,888	\$4,470,808	913	11419		\$0	\$11,389	\$700		\$8,167	\$42,000	\$42,000	\$56,747	\$3,796	\$233	\$2,722				\$0	\$6,718,007	\$4,538,445		
11	2035	4%	0.65	Kossuth Rd.	Last Third Until S-CC-02	\$9,708,576	\$6,306,506	948	12368		\$0	\$11,389	\$700		\$7,853	\$42,000	\$42,000	\$54,565	\$3,796	\$233	\$2,618				\$0	\$9,808,695	\$6,371,541		
12	2035	4%	0.62				\$0		12368		\$0	\$11,389	\$700		\$7,551	\$42,000	\$42,000	\$52,466	\$3,796	\$233	\$2,517				\$0	\$100,119	\$62,534		
13	2036	4%	0.60				\$0		12368		\$0	\$11,389	\$700		\$7,260	\$42,000	\$42,000	\$50,448	\$3,796	\$233	\$2,420				\$0	\$100,119	\$60,129		
14	2037	4%	0.58				\$0		12368	\$173,151	\$99,990	\$11,389	\$700		\$6,981	\$42,000	\$42,000	\$48,508	\$3,796	\$233	\$2,327				\$0	\$273,270	\$157,806		
15	2038	4%	0.56	Cober Rd.		\$2,616,325	\$1,452,752	1047	13415		\$0	\$11,389	\$700		\$6,713	\$42,000	\$42,000	\$46,642	\$3,796	\$233	\$2,238				\$0	\$2,716,444	\$1,508,345		
16	2039	4%	0.53	Kossuth Rd.	Middle Third until S2113	\$9,300,882	\$4,965,817	1016	14431		\$0	\$11,389	\$700		\$6,454	\$42,000	\$42,000	\$44,848	\$3,796	\$233	\$2,151				\$0	\$9,401,001	\$5,019,271		
17	2040	4%	0.51	New Germany Rd.	S2006 Reach	\$533,732	\$274,004	357	14788		\$0	\$11,389	\$700		\$6,206	\$42,000	\$42,000	\$43,123	\$3,796	\$233	\$2,069				\$0	\$633,851	\$325,402		
18	2041	4%	0.49	Lonsdale Rd. (Vance Rd.)	Until S-CC-06	\$1,779,289	\$878,307	992	15780		\$0	\$11,389	\$700		\$5,967	\$42,000	\$42,000	\$41,465	\$3,796	\$233	\$1,989	\$ 677,917		\$334,639	\$2,557,324	\$1,262,367			
19	2042	4%	0.47				\$0		15780	\$220,919	\$104,857	\$11,389	\$700		\$5,738	\$42,000	\$42,000	\$39,870	\$3,796	\$233	\$1,913				\$0	\$321,037	\$152,378		
20	2043	4%	0.46	New Germany Rd.	End of New Germany	\$1,018,728	\$464,934	670	16450		\$0	\$11,389	\$700		\$5,517	\$42,000	\$42,000	\$38,337	\$3,796	\$233	\$1,839				\$0	\$1,118,847	\$510,627		
21	2044	4%	0.44				\$0		16450		\$0	\$11,389	\$700		\$5,305	\$42,000	\$42,000	\$36,862	\$3,796	\$233	\$1,768				\$0	\$100,119	\$43,935		
22	2045	4%	0.42				\$0		16450		\$0	\$11,389	\$700		\$5,101	\$42,000	\$42,000	\$35,444	\$3,796	\$233	\$1,700				\$0	\$100,119	\$42,246		
23	2046	4%	0.41				\$0		16450		\$0	\$11,389	\$700		\$4,905	\$42,000	\$42,000	\$34,081	\$3,796	\$233	\$1,635				\$0	\$100,119	\$40,621		
24	2047	4%	0.39				\$0		16450	\$230,295	\$89,843	\$11,389	\$700		\$4,716	\$42,000	\$42,000	\$32,770	\$3,796	\$233	\$1,572	\$ 41,667	\$16,255		\$372,081	\$145,157			
25	2048	4%	0.38				\$0		16450		\$0	\$11,389	\$700		\$4,535	\$42,000	\$42,000	\$31,510	\$3,796	\$233	\$1,512				\$0	\$100,119	\$37,556		
26	2049	4%	0.36				\$0		16450		\$0	\$11,389	\$700		\$4,360	\$42,000	\$42,000	\$30,298	\$3,796	\$233	\$1,453				\$0	\$100,119	\$36,112		
27	2050	4%	0.35				\$0		16450		\$0	\$11,389	\$700		\$4,193	\$42,000	\$42,000	\$29,133	\$3,796	\$233	\$1,398				\$0	\$100,119	\$34,723		
28	2051	4%	0.33				\$0		16450	\$230,295	\$76,798	\$11,389	\$700		\$4,031	\$42,000	\$42,000	\$28,012	\$3,796	\$233	\$1,344				\$0	\$330,414	\$110,186		
29	2052	4%	0.32				\$0		16450		\$0	\$11,389	\$700		\$3,876	\$42,000	\$42,000	\$26,935	\$3,796	\$233	\$1,292				\$0	\$100,119	\$32,103		
30	2053	4%	0.31	Lonsdale Rd. (Vance Rd.)	First half	\$5,056,948	\$1,559,152	1316	17766		\$0	\$11,389	\$700		\$3,727	\$42,000	\$42,000	\$25,899	\$3,796	\$233	\$1,242				\$0	\$5,157,067	\$1,590,020		
31	2054	4%	0.30	Kossuth rd.	Final Third	\$10,307,257	\$3,055,692	1305	19071		\$0	\$11,389	\$700		\$3,584	\$42,000	\$42,000	\$24,903	\$3,796	\$233	\$1,195				\$0	\$10,407,376	\$3,085,373		
32	2055	4%	0.29	Shantz Rd. S	Last half starting at S2012	\$6,288,967	\$1,792,720	1017	20088		\$0	\$11,389	\$700		\$3,446	\$42,000	\$42,000	\$23,945	\$3,796	\$233	\$1,149				\$0	\$6,389,086	\$1,821,260		
33	2056	4%	0.27				\$0		20088	\$281,227	\$77,083	\$11,389	\$700		\$3,314	\$42,000	\$42,000	\$23,024	\$3,796	\$233	\$1,105	\$ 677,917		\$185,813	\$1,059,262	\$290,338			
34	2057	4%	0.26				\$0		20088		\$0	\$11,389	\$700		\$3,186	\$42,000	\$42,000	\$22,138	\$3,796	\$233	\$1,062				\$0	\$100,119	\$26,386		
35	2058	4%	0.25				\$0		20088		\$0	\$11,389	\$700		\$3,064	\$42,000	\$42,000	\$21,287	\$3,796	\$233	\$1,021				\$0	\$100,119	\$25,372		
36	2059	4%	0.24				\$0		20088		\$0	\$11,389	\$700		\$2,946	\$42,000	\$42,000	\$20,468	\$3,796	\$233	\$982				\$0	\$100,119	\$24,396		
37	2060	4%	0.23				\$0		20088		\$0	\$11,389	\$700		\$2,832	\$42,000	\$42,000	\$19,681	\$3,796	\$233	\$944				\$0	\$100,119	\$23,457		
38	2061	4%	0.23				\$0		20088	\$281,227	\$63,356	\$11,389	\$700		\$2,723	\$42,000	\$42,000	\$18,924	\$3,796	\$233	\$908				\$0	\$381,345	\$85,912		
39	2062	4%	0.22				\$0		20088		\$0	\$11,389	\$700		\$2,619	\$42,000	\$42,000	\$18,196	\$3,796	\$233	\$873	\$ 41,667	\$9,026		\$141,785	\$30,714			
40	2063	4%	0.21	Shantz Rd S	Rest of Shantz Rd S																								

East Side Lands (Woolwich) Sanitary Servicing EA

Sewer Alternative 6



Sewer Cost										Manhole Costs					Road Restoration Costs	Construction Costs	
Sewer Section	Street	Slope (%)	Size (mm)	Length (m)	U/S Depth (m)	D/S Depth (m)	Depth	Sewer Unit Cost (\$/m)	Sewer Total Cost (\$)	MH Dia. (mm)	Average MH Depth (m)	Number of MH	MH Unit Cost (\$)			Construction Costs Total (\$)	Contingency Total \$
S0106	Wambolt Dr.	0.257	375	77.83	6.9	7.9	5-10 m	\$4,883	\$380,046	1200	7.4	1	\$15,474	\$15,474		\$395,520	\$494,400
S0107	Wambolt Dr.	0.272	375	409.57	8.0	5.0	5-10 m	\$4,883	\$1,999,854	1200	6.5	5	\$15,474	\$77,372		\$2,077,225	\$2,596,531
S0107	Wambolt Dr.	0.272	375	409.57	5.0	2.8	<5 m	\$1,193	\$488,772	1200	3.9	5	\$7,561	\$37,804		\$526,576	\$658,220
S02A03	Kramp Rd.	0.379	375	142.29	3.5	3.3	<5 m	\$1,193	\$169,810	1200	3.4	2	\$6,090	\$12,180		\$181,990	\$227,488
S02A04	Kramp Rd.	0.301	375	199.22	2.2	5.0	<5 m	\$1,193	\$237,740	1200	3.6	3	\$7,561	\$22,682		\$260,422	\$325,528
S02A05	Wurster Place	0.266	450	692.82	7.4	4.9	5-10 m	\$5,057	\$3,503,672	1200	6.2	8	\$14,005	\$112,037		\$3,615,709	\$4,519,637
S0501	Wurster Place Extens.	1.826	525	82.68	4.9	2.8	<5 m	\$1,400	\$115,767	1500	3.9	1	\$12,047	\$12,047		\$127,813	\$159,767
S0502	Wurster Place Extens.	0.124	600	395.25	3.9	4.8	<5 m	\$1,797	\$710,454	1500	4.4	5	\$12,047	\$60,234		\$770,689	\$963,361
S0503	Wurster Place Extens.	0.124	600	233.11	4.8	4.5	<5 m	\$1,797	\$419,014	1500	4.7	3	\$17,021	\$51,063		\$470,077	\$587,596
S0504	Wurster Place Extens.	0.126	600	309.69	4.5	8.1	5-10 m	\$5,708	\$1,767,852	1500	6.3	4	\$18,491	\$73,963		\$1,841,816	\$2,302,269
S0505	Wurster Place Extens.	0.126	600	207.03	8.2	5.7	5-10 m	\$5,708	\$1,181,805	1500	7.0	3	\$19,962	\$59,885		\$1,241,690	\$1,552,112
S0506	Wurster Place Extens.	0.124	750	346.31	5.7	8.5	5-10 m	\$6,568	\$2,274,568	1500	7.1	4	\$19,962	\$79,846		\$2,354,415	\$2,943,018
Total (Trunk 03)					3505.37				\$13,249,355				\$165,693	\$614,587	\$0	\$13,863,942	\$17,329,928
S1615	Lonsdale Rd. (NS)	0.123	900	146.43	8.5	11.8	11-15 m	\$11,934	\$1,747,498	1800	10.2	2	\$28,647	\$57,294		\$1,804,792	\$2,255,990
S1616	Lonsdale Rd. (NS)	0.126	900	238.85	11.8	10.0	11-15 m	\$11,934	\$2,850,456	1800	10.9	3	\$31,622	\$94,866		\$2,945,323	\$3,681,653
S1616	Lonsdale Rd. (NS)	0.125	900	238.85	10.0	5.0	5-10 m	\$7,459	\$1,781,535	1800	7.5	3	\$25,215	\$75,645		\$1,857,180	\$2,321,475
S1616	Lonsdale Rd. (NS)	0.126	900	238.85	5.0	1.0	<5 m	\$3,053	\$729,195	1800	3.0	3	\$14,844	\$44,533		\$773,728	\$967,160
S1617	Lonsdale Rd. (EW)	0.125	900	223.97	1.1	3.0	<5 m	\$3,053	\$683,748	1800	2.1	3	\$12,331	\$36,992		\$720,739	\$900,924
S1618	Lonsdale Rd. (EW)	0.124	900	185.08	3.0	2.4	<5 m	\$3,053	\$565,027	1800	2.7	3	\$14,844	\$44,533		\$609,560	\$761,951
S1619_1	Lonsdale Rd. (EW)	0.130	900	69.01	2.4	2.8	<5 m	\$3,053	\$210,676	1800	2.6	1	\$14,844	\$14,844		\$225,521	\$281,901
S_CC_06	Lonsdale Rd. (EW)	0.125	900	256.82	2.8	5.0	<5 m	\$3,053	\$784,047	1800	3.9	3	\$15,831	\$47,492		\$831,539	\$1,039,423
S_CC_06	Lonsdale Rd. (EW)	0.125	900	256.82	5.0	9.5	5-10 m	\$7,459	\$1,915,547	1800	7.3	3	\$23,745	\$71,236		\$1,986,783	\$2,483,479
S1624	Lonsdale Rd. (NS)	0.126	900	308.74	9.6	6.9	5-10 m	\$7,459	\$2,302,808	1800	8.3	4	\$25,215	\$100,860		\$2,403,668	\$3,004,586
S1625	Lonsdale Rd. (NS)	0.124	900	112.81	6.9	7.4	5-10 m	\$7,459	\$841,374	1800	7.2	2	\$23,745	\$47,491		\$888,865	\$1,111,081
S1626	Airport Crossing	0.125	900	599.18	7.5	4.4	5-10 m	\$7,459	\$4,469,101	1800	6.0	7	\$22,274	\$155,921	\$6,430,000	\$11,055,022	\$13,818,778
S2115	Cober Rd.	0.125	900	215.56	4.4	4.2	<5 m	\$3,053	\$658,070	1800	4.3	3	\$15,831	\$47,492		\$705,561	\$881,952
S_CC_05	Cober Rd.	0.121	900	165.80	4.2	4.0	<5 m	\$3,053	\$506,165	1800	4.1	2	\$15,831	\$31,661		\$537,826	\$672,282
S_CC_04	Cober Rd.	0.126	900	477.84	4.1	7.1	5-10 m	\$7,459	\$3,564,060	1800	5.6	6	\$22,274	\$133,647		\$3,697,707	\$4,622,134
S2116	Cober Rd.	0.124	900	184.98	7.1	6.3	5-10 m	\$7,459	\$1,379,695	1800	6.7	3	\$23,745	\$71,236		\$1,450,931	\$1,813,664
S2113	Kossuth Rd.	0.126	900	388.51	6.3	6.9	5-10 m	\$7,459	\$2,897,748	1800	6.6	5	\$23,745	\$118,727		\$3,016,475	\$3,770,594
S2114	Kossuth Rd.	0.124	900	321.62	6.9	4.8	5-10 m	\$7,459	\$2,398,824	1800	5.9	4	\$22,274	\$89,098	\$964,848	\$3,452,770	\$4,315,962
S2203_3	Kossuth Rd.	0.128	900	15.59	4.8	4.8	<5 m	\$3,053	\$47,585	1800	4.8	1	\$20,805	\$20,805	\$46,761	\$115,151	\$143,939
S_CC_03	Kossuth Rd.	0.124	900	290.54	4.8	4.3	<5 m	\$3,053	\$886,981	1800	4.6	4	\$20,805	\$83,219	\$871,617	\$1,841,817	\$2,302,271
S_CC_02	Kossuth Rd.	0.124	900	186.01	4.3	6.2	5-10 m	\$7,459	\$1,387,363	1800	5.3	3	\$20,805	\$62,414	\$558,021	\$2,007,798	\$2,509,747
S2204	Kossuth Rd.	0.128	900	179.96	6.2	4.6	5-10 m	\$7,459	\$1,342,268	1800	5.4	2	\$20,805	\$41,610	\$1,339,883	\$2,723,760	\$3,404,700
S2205	Kossuth Rd.	0.125	900	192.21	4.7	6.7	5-10 m	\$7,459	\$1,433,591	1800	5.7	3	\$22,274	\$66,823	\$576,615	\$2,077,030	\$2,596,287
S2206	Kossuth Rd.	0.124	900	452.11	6.7	4.1	5-10 m	\$7,459	\$3,372,134	1800	5.4	6	\$20,805	\$124,829	\$1,356,330	\$4,853,293	\$6,066,616
Total (Trunk03D)					5946.14				\$38,755,496				\$503,158	\$1,683,268	\$12,144,075	\$52,582,839	\$65,728,548
TOTAL TRUNK					9451.51				\$52,004,851				\$668,851			\$66,446,781	\$83,058,476

Local Sewers																	
S0103	North Dev Rd	0.217	375	133.49	2.8	5.0	<5 m	\$1,193	\$159,309	1200	3.9	2	\$7,561	\$15,121		\$174,430	\$218,037
S0102A	North Dev Rd	0.217	375	133.49	5.0	6.8	5-10 m	\$4,883	\$651,824	1200	5.9	2	\$14,005	\$28,009		\$679,834	\$849,792
S0102	North Dev Rd	0.363	300	309.63	6.9	5.0	5-10 m	\$4,740	\$1,467,509	1200	6.0	4	\$14,005	\$56,018		\$1,523,527	\$1,904,409
S0102A	North Dev Rd	0.363	300	309.63	5.0	2.8	<5 m	\$1,128	\$349,385	1200	3.9	4	\$7,561	\$30,243		\$379,628	\$474,535
North Dev Rd					886.24				\$2,628,027				\$43,131	\$129,392	\$0	\$2,757,419	\$3,446,773
S0105	Greenhouse Rd	0.273	300	881.55	2.9	2.8	<5 m	\$1,128	\$994,743	1200	2.9	10	\$6,090	\$60,899		\$1,055,642	\$1,319,553
S02A01	Greenhouse Rd	0.187	450	407.21	2.9	3.0	<5 m	\$1,304	\$531,067	1200	3.0	5	\$6,090	\$30,449		\$561,517	\$701,896
Greenhouse Rd					1288.76				\$1,525,811				\$12,180	\$91,348	\$0	\$1,617,159	\$2,021,449
S02A02	Kramp Rd	0.266	300	372.01	5.5	2.8	<5 m	\$1,128	\$419,770	1200	4.2	5	\$7,561	\$37,804		\$457,574	\$571,967
Kramp Rd West					372.01				\$419,770				\$7,561	\$37,804	\$0	\$457,574	\$571,967
S02B02	Kramp Rd	0.311	300	1042.60	2.9	2.8	<5 m	\$1,128	\$1,176,								

S12B01	Fountain St.	0.183	525	163.65	6.5	6.0	5-10 m	\$5,217	\$853,675	1500	6.3	2	\$18,491	\$36,982	\$490,935	\$1,381,592	\$1,726,990
S12B02	Fountain St.	0.186	600	252.37	6.1	7.7	5-10 m	\$5,708	\$1,440,644	1500	6.9	3	\$19,962	\$59,885	\$757,110	\$2,257,638	\$2,822,048
S12B03	Fountain St.	0.187	600	411.64	7.8	6.4	5-10 m	\$5,708	\$2,349,813	1500	7.1	5	\$19,962	\$99,808	\$1,234,911	\$3,684,532	\$4,605,664
Fountain St (N of Menno)				827.65					\$4,644,131				\$58,414	\$196,674	\$2,482,956	\$7,323,762	\$9,154,702
S1604	Menno St.	0.267	300	127.25	2.8	8.0	5-10 m	\$4,740	\$603,101	1200	5.4	2	\$12,771	\$25,541	\$381,744	\$1,010,386	\$1,262,983
S1603	Menno St.	0.266	300	233.19	8.0	5.3	5-10 m	\$4,740	\$1,105,197	1200	6.7	3	\$15,474	\$46,423	\$699,555	\$1,851,175	\$2,313,969
S1702	Menno St.	0.808	450	552.91	6.1	2.1	<5 m	\$1,304	\$721,086	1200	4.1	7	\$7,561	\$52,925	\$1,658,739	\$2,432,750	\$3,040,937
S1701	Menno St.	0.220	450	181.51	2.1	4.6	<5 m	\$1,304	\$236,715	1200	3.4	3	\$6,090	\$18,270	\$544,524	\$799,509	\$999,386
Menno W				1094.85					\$2,666,098				\$41,895	\$143,159	\$3,284,562	\$6,093,819	\$7,617,274
S1605_1	Menno St.	0.270	300	233.06	2.8	6.6	5-10 m	\$4,740	\$1,104,595	1200	4.7	3	\$12,771	\$38,312	\$699,174	\$1,842,081	\$2,302,601
S1610	Menno St.	0.168	600	471.08	5.4	11.0	5-10 m	\$5,708	\$2,689,129	1500	8.2	6	\$21,431	\$128,588	\$1,413,234	\$4,230,951	\$5,288,689
Alt 6 LS 1																\$12,638,621	\$15,798,276
S1609	Menno St.	0.432	600	881.12	2.8	2.8	<5 m	\$1,797	\$1,583,777	1500	2.8	10	\$11,217	\$112,171	\$2,643,354	\$4,339,302	\$5,424,127
S1608	Menno St.	1.674	600	31.06	2.9	3.6	<5 m	\$1,797	\$55,829	1500	3.3	1	\$11,217	\$11,217	\$93,180	\$160,226	\$200,283
S_CC_07	Menno St.	0.166	600	211.24	3.6	5.6	<5 m	\$1,797	\$379,687	1500	4.6	3	\$17,021	\$51,063	\$633,705	\$1,064,455	\$1,330,569
S1607	Menno St.	0.167	750	413.06	5.7	6.6	5-10 m	\$6,568	\$2,712,999	1500	6.2	5	\$18,491	\$92,454	\$1,239,180	\$4,044,633	\$5,055,791
S1606	Menno St.	0.164	750	286.49	6.6	8.2	5-10 m	\$6,568	\$1,881,674	1500	7.4	4	\$19,962	\$79,846	\$859,467	\$2,820,987	\$3,526,234
Menno East				2527.10					\$8,526,016				\$112,110	\$513,651	\$7,581,294	\$18,502,635	\$23,128,294
S1401	Woolwich St	0.367	300	169.07	2.8	2.8	<5 m	\$1,128	\$190,780	1200	2.8	2	\$6,090	\$12,180	\$507,213	\$710,172	\$887,715
S1402	Woolwich St	0.400	300	82.40	2.9	2.8	<5 m	\$1,128	\$92,983	1200	2.9	1	\$6,090	\$6,090	\$247,209	\$346,282	\$432,853
S1703	Woolwich St	0.270	300	136.82	2.9	3.8	<5 m	\$1,128	\$154,389	1200	3.4	2	\$6,090	\$12,180	\$410,463	\$577,031	\$721,289
S1704	Woolwich St	0.185	525	172.81	4.7	3.6	<5 m	\$1,400	\$241,957	1500	4.2	2	\$12,047	\$24,094	\$518,421	\$784,472	\$980,590
S1705_1	Woolwich St	4.845	525	7.84	3.7	4.3	<5 m	\$1,400	\$10,981	1500	4.0	1	\$12,047	\$12,047	\$23,529	\$46,557	\$58,197
S_CC_14	Woolwich St	0.188	525	239.83	4.4	7.8	5-10 m	\$5,217	\$1,251,104	1500	6.1	3	\$18,491	\$55,472	\$719,490	\$2,026,067	\$2,532,583
S1706	Woolwich St	0.190	525	258.52	7.9	8.7	5-10 m	\$5,217	\$1,348,593	1500	8.3	3	\$21,431	\$64,294	\$775,554	\$2,188,441	\$2,735,551
Woolwich				1067.29					\$3,290,788				\$82,285	\$186,356	\$3,201,879	\$6,679,023	\$8,348,779
S1601_1	Fountain St.	1.113	450	365.55	6.4	3.8	<5 m	\$1,304	\$476,733	1200	5.1	5	\$12,771	\$63,853	\$1,096,647	\$2,046,542	
S_CC_09	Fountain St.	0.213	450	75.05	3.9	3.6	<5 m	\$1,304	\$97,872	1200	3.8	1	\$7,561	\$7,561	\$225,138	\$330,571	\$413,213
S1602	Fountain St.	0.217	450	533.52	3.6	7.2	5-10 m	\$5,057	\$2,698,068	1200	5.4	6	\$12,771	\$76,623	\$1,600,557	\$4,375,249	\$5,469,061
S1801	Fountain St.	0.167	750	400.60	8.8	6.3	5-10 m	\$6,568	\$2,631,167	1800	7.6	5	\$25,215	\$126,075	\$1,201,803	\$3,959,045	\$4,948,807
S1802	Fountain St.	0.167	750	383.60	6.3	10.4	5-10 m	\$6,568	\$2,519,484	1800	8.4	5	\$25,215	\$126,075	\$1,150,791	\$3,796,350	\$4,745,438
Alt 6 LS 2																\$11,298,088	\$14,122,610
S1902	Fountain St.	0.746	750	249.40	2.8	2.8	<5 m	\$2,418	\$602,986	1800	2.8	3	\$14,844	\$44,533	\$748,188	\$1,395,708	\$1,744,635
S1903	Fountain St.	0.166	750	652.28	2.9	5.2	<5 m	\$2,418	\$1,577,062	1800	4.1	8	\$15,831	\$126,645	\$1,956,825	\$3,660,531	\$4,575,664
S2001	Fountain St.	0.167	750	796.17	5.2	3.3	<5 m	\$2,418	\$1,924,967	1800	4.3	9	\$15,831	\$142,475	\$2,388,507	\$4,455,949	\$5,569,596
S2201_1	Fountain St.	0.599	750	183.71	3.3	1.7	<5 m	\$2,418	\$444,169	1800	2.5	3	\$14,844	\$44,533	\$551,127	\$1,039,830	\$1,299,787
S_CC_01	Fountain St.	0.945	750	50.78	1.8	1.8	<5 m	\$2,418	\$122,775	1800	1.8	1	\$12,331	\$12,331	\$152,340	\$287,446	\$359,307
S2202	Fountain St.	0.164	750	128.31	1.8	3.3	<5 m	\$2,418	\$310,217	1800	2.6	2	\$14,844	\$29,689	\$384,918	\$325,061	\$406,326
Fountain St. (Menno to Kossuth)				3818.95					\$13,405,501				\$172,057	\$800,393	\$11,456,841	\$25,262,973	\$31,578,716
S1622	Vance Rd Ext.	0.551	300	676.40	2.9	2.8	<5 m	\$1,128	\$763,250	1200	2.9	8	\$6,090	\$48,719		\$811,969	\$1,014,962
S1621	Vance Rd Ext.	0.167	300	237.54	2.9	6.8	5-10 m	\$4,740	\$1,125,833	1200	4.9	3	\$12,771	\$38,312		\$1,164,145	\$1,455,181
S1620	Vance Rd Ext.	0.473	300	402.51	6.9	5.4	5-10 m	\$4,740	\$1,907,725	1200	6.2	5	\$14,005	\$70,023		\$1,977,748	\$2,472,185
Vance Rd Ext.				1316.45					\$3,796,808				\$32,865	\$157,054	\$0	\$3,953,862	\$4,942,327
S1614	Shantz Station Rd	0.626	300	320.97	2.8	2.8	<5 m	\$1,128	\$362,187	1200	2.8	4	\$6,090	\$24,360	\$962,922	\$1,349,468	\$1,686,835
S1613_1	Shantz Station Rd	0.470	300	212.63	2.9	2.8	<5 m	\$1,128	\$239,928	1200	2.9	3	\$6,090	\$18,270	\$637,881	\$896,079	\$1,120,098
S1613_2	Shantz Station Rd	1.076	300	392.13	2.9	2.8	<5 m	\$1,128	\$442,473	1200	2.9	5	\$6,090	\$30,449	\$1,176,375	\$1,649,298	\$2,061,622
S1612	Shantz Station Rd	0.268	300	250.42	2.9	6.3	<5 m	\$1,128	\$282,573	1200	4.6	3	\$12,771	\$38,312	\$751,257	\$1,072,141	\$1,340,177
S1611	Shantz Station Rd	0.267	300	183.46	6.4	2.8	5-10 m	\$4,740	\$869,536	1200	4.6	3	\$12,771	\$38,312	\$550,389	\$1,458,237	\$1,822,796
S2011	Shantz Station Rd	1.560	300	305.80	2.8	2.8	<5 m	\$1,128	\$345,060	1200	2.8	4	\$6,090	\$24,360	\$917,388	\$1,286,807	\$1,608,509
S2012	Shantz Station Rd	0.266	300	203.11	2.9	5.9	<5 m	\$1,128	\$229,190	1200	4.4	3	\$7,561	\$22,682	\$609,333	\$861,205	\$1,076,507
S2106	Shantz Station Rd	0.270	375	181.77	6.0	3.6	5-10 m	\$4,883	\$887,539	1200	4.8	3	\$12,771	\$38,312	\$545,301	\$1,471,151	\$1,838,939
S2107	Shantz Station Rd	0.845	375	415.21	3.7	2.8	<5 m	\$1,193	\$495,500	1200	3.3	5	\$6,090	\$30,449	\$1,245,615	\$1,771,564	\$2,214,455
S2109	Shantz Station Rd	1.121	375	216.77	2.9	2.8	<5 m	\$1,193	\$258,685	1200	2.9	3	\$6,090	\$18,270	\$650,298	\$927,253	\$1,159,066
Shantz Station Rd (S of Menno)				2682.25					\$4,412,670				\$82,412	\$283,774	\$8,046,759	\$12,743,204	\$15,929,005
S2103	New Germany Ln	0.263	300	129.36	2.8	3.5	<5 m	\$1,128	\$145,967	1200	3.2	2	\$6,090	\$12,180		\$158,147	\$197,684
S2102_1	New Germany Ln	0.313	300	134.35	3.5	3.1	<5 m	\$1,128	\$151,596	1200	3.3	2	\$6,090	\$12,180		\$163,776	\$204,720
S_CC_10	New Germany Ln	0.266	300	176.70	3.1	3.4	<5 m	\$1,128	\$199,390	1200	3.3	2	\$6,090	\$12,180		\$211,570	\$264,463
S2101	New Germany Ln	0.266	300	229.36	3.4	3.8	<5 m	\$1,128	\$258,807	1200	3.6	3	\$7,561	\$22,682		\$281,489	\$351,862
S2006	New Germany Ln	0.266	300	356.81	2.8	3.9	<5 m	\$1,128	\$402,626	1200	3.4	4	\$6,090	\$24,360		\$426,986	\$533,732
New Germany				1026.58					\$1,158,387				\$31,920	\$83,581	\$0	\$1,241,968	\$1,552,460
S2110	Kossuth Rd.	0.266	375	601.03	2.9	5.2	<5 m	\$1,193	\$717,256	1200	4.1	7	\$7,561	\$52,925	\$1,803,078	\$2,573,259	\$3,216,573
S2111	Kossuth Rd.	0.267	375	378.54	5.3	6.3	5-10 m	\$4,883	\$1,848,349	1200	5.8	5	\$14,005	\$70,023	\$1,135,620	\$3,053,992	\$3,817,490
S2112	Kossuth Rd.	0.268	375	325.08	6.4	5.1	5-10 m	\$4,883	\$1,587,303	1200	5.8	4	\$14,005	\$56,018	\$975,234	\$2,618,555	\$3,273,194
Kossuth East/ West				1304.64					\$4,152,907				\$35,570	\$178,966	\$3,913,932	\$8,245,806	\$10,307,257
S_T01_1	Fountain St.	0.125	1050	213.84	4.2	4.8	<5 m	\$3,626	\$775,371	2400	4.5	3	\$36,650	\$109,950	\$641,520	\$1,526,841	\$1,908,551
S_T01_2	Fountain St.	0.125	1050	472.84	4.9	6.3	5-10 m	\$8,270	\$3,910,163	2400	5.6	6	\$38,121	\$228,724	\$1,418,523	\$5,557,411	\$6,946,763
S_T02	Fountain St.	0.125	1050	43.20	6.4	6.3	5-10 m	\$8,270	\$357,243	2400	6.4	1	\$38,121	\$38,121	\$129,600	\$395,364	\$494,204
Fountain St - Kossuth to Middle Block				729.88					\$4,685,535				\$112,891	\$376,795	\$2,189,643	\$7,479,615	\$9,349,519
TOTAL ALL LOCAL SEWERS				26044.1					\$75,126,589					\$4,084,080	\$51,653,565	\$132,573,789	\$165,717,236

TOTAL ALL SEWERS, SPS, AND TRUNK				35495.6					\$127,131,441					\$4,084,080
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East Side Lands (Woolwich) Sanitary Servicing EA
Sewer Alternative 6 LCC



#	Year			Sewer Reach	Description	Capital Expense (2018 Dollars)					Sewer O&M (Flushing)	Annual LS Energy Costs				Annual Lift Station O&M				Annual Lift Station Equip & Material				Lift Station Upgrades				Total Annual Cash Flow	Total Cost (PV)
						Cost Est	Present	Pipe	Cumulative Pipe	Flushing / m =	\$14	Monthly Energy =	\$1,019	\$949	\$58	Monthly Labour=	\$3,500	\$3,500	\$3,500	Monthly =	\$340	\$316	\$19	Per Event=	\$ 727,500	\$ 677,917	\$ 41,667		
			Rate	PV Factor		2025 Dollars	Value	Length (m)	Length (m)	Annual	PV	LS 1	LS 2	LS 3	PV	LS 1	LS 2	LS 3	PV	LS 1	LS 2	LS 3	PV	LS 1	LS 2	LS 3	PV		
0	2025	4%	1.00	Trunk 03D	Trunk 03D (South of Menno)	\$65,728,548	\$65,728,548	5946	5946		\$0				\$0				\$0				\$0				\$0	\$65,728,548	\$65,728,548
1	2026	4%	0.96	Menno East	Lonsdale / Wurster Ext to 300m East (Limit of Ex. CMP)	\$3,526,234	\$3,390,610	286	6233		\$0				\$0				\$0				\$0				\$0	\$3,526,234	\$3,390,610
2	2027	4%	0.92	Fountain South	Fountain St. (Kossuth to Middle block)	\$9,349,519	\$8,644,156	730	6963		\$0				\$0				\$0				\$0				\$0	\$9,349,519	\$8,644,156
3	2028	4%	0.89	LS 2		\$14,122,610	\$12,554,949		6963		\$0				\$0				\$0				\$0				\$0	\$14,122,610	\$12,554,949
4	2029	4%	0.85				\$0		6963	\$97,475	\$83,322		\$11,389		\$9,735		\$42,000		\$35,902		\$3,796		\$3,245				\$0	\$154,660	\$132,204
5	2030	4%	0.82	Fountain (Menno to Kossuth)		\$31,578,716	\$25,955,403	3819	10781		\$0		\$11,389		\$9,361		\$42,000		\$34,521		\$3,796		\$3,120				\$0	\$31,635,901	\$26,002,405
6	2031	4%	0.79	Woolwich St.		\$8,348,779	\$6,598,161	1067	11849		\$0		\$11,389		\$9,001		\$42,000		\$33,193		\$3,796		\$3,000				\$0	\$8,405,964	\$6,643,355
7	2032	4%	0.76	Menno W	S1701 Reach	\$999,386	\$759,451	182	12030		\$0		\$11,389		\$8,655		\$42,000		\$31,917		\$3,796		\$2,885				\$0	\$1,056,571	\$802,907
8	2033	4%	0.73	East Connector Rd.		\$7,289,825	\$5,326,604	1441	13471		\$0		\$11,389		\$8,322		\$42,000		\$30,689		\$3,796		\$2,774				\$0	\$7,347,011	\$5,368,389
9	2034	4%	0.70	Fountain St. N of Menno		\$9,154,702	\$6,431,972	828	14299	\$200,182	\$140,645		\$11,389		\$8,002		\$42,000		\$29,509		\$3,796		\$2,667				\$0	\$9,412,069	\$6,612,795
10	2035	4%	0.68	Menno W	Rest of Menno W	\$6,617,888	\$4,470,808	913	15212		\$0		\$11,389		\$7,694		\$42,000		\$28,374		\$3,796		\$2,565				\$0	\$6,675,073	\$4,509,440
11	2035	4%	0.65				\$0		15212		\$0		\$11,389		\$7,398		\$42,000		\$27,282		\$3,796		\$2,466				\$0	\$57,185	\$37,147
12	2035	4%	0.62				\$0		15212		\$0		\$11,389		\$7,114		\$42,000		\$26,233		\$3,796		\$2,371				\$0	\$57,185	\$35,718
13	2036	4%	0.60				\$0		15212		\$0		\$11,389		\$6,840		\$42,000		\$25,224		\$3,796		\$2,280				\$0	\$57,185	\$34,344
14	2037	4%	0.58				\$0		15212	\$212,968	\$122,984		\$11,389		\$6,577		\$42,000		\$24,254		\$3,796		\$2,192				\$0	\$270,154	\$156,007
15	2038	4%	0.56	New Germany Rd.	S2006 Reach	\$1,552,460	\$862,026	1027	16239		\$0		\$11,389		\$6,324		\$42,000		\$23,321		\$3,796		\$2,108				\$0	\$1,609,646	\$893,779
16	2039	4%	0.53				\$0		16239		\$0		\$11,389		\$6,081		\$42,000		\$22,424		\$3,796		\$2,027				\$0	\$57,185	\$30,532
17	2040	4%	0.51				\$0		16239		\$0		\$11,389		\$5,847		\$42,000		\$21,562		\$3,796		\$1,949				\$0	\$57,185	\$29,357
18	2041	4%	0.49				\$0		16239		\$0		\$11,389		\$5,622		\$42,000		\$20,732		\$3,796		\$1,874			\$ 677,917	\$334,639	\$735,102	\$362,867
19	2042	4%	0.47				\$0		16239	\$227,341	\$107,905		\$11,389		\$5,406		\$42,000		\$19,935		\$3,796		\$1,802				\$0	\$284,526	\$135,048
20	2043	4%	0.46	New Germany Rd.	End of New Germany	\$1,018,728	\$464,934	670	16908		\$0		\$11,389		\$5,198		\$42,000		\$19,168		\$3,796		\$1,733				\$0	\$1,075,913	\$491,033
21	2044	4%	0.44				\$0		16908		\$0		\$11,389		\$4,998		\$42,000		\$18,431		\$3,796		\$1,666				\$0	\$57,185	\$25,095
22	2045	4%	0.42				\$0		16908		\$0		\$11,389		\$4,806		\$42,000		\$17,722		\$3,796		\$1,602				\$0	\$57,185	\$24,130
23	2046	4%	0.41				\$0		16908		\$0		\$11,389		\$4,621		\$42,000		\$17,041		\$3,796		\$1,540				\$0	\$57,185	\$23,202
24	2047	4%	0.39				\$0		16908	\$236,717	\$92,348		\$11,389		\$4,443		\$42,000		\$16,385		\$3,796		\$1,481				\$0	\$293,903	\$114,658
25	2048	4%	0.38				\$0		16908		\$0		\$11,389		\$4,272		\$42,000		\$15,755		\$3,796		\$1,424				\$0	\$57,185	\$21,451
26	2049	4%	0.36				\$0		16908		\$0		\$11,389		\$4,108		\$42,000		\$15,149		\$3,796		\$1,369				\$0	\$57,185	\$20,626
27	2050	4%	0.35				\$0		16908		\$0		\$11,389		\$3,950		\$42,000		\$14,566		\$3,796		\$1,317				\$0	\$57,185	\$19,833
28	2051	4%	0.33				\$0		16908		\$0		\$11,389		\$3,798		\$42,000		\$14,006		\$3,796		\$1,266				\$0	\$57,185	\$19,070
29	2052	4%	0.32				\$0		16908	\$236,717	\$75,904		\$11,389		\$3,652		\$42,000		\$13,467		\$3,796		\$1,217				\$0	\$293,903	\$94,240
30	2053	4%	0.31	Lonsdale Rd. (Vance Rd.)		\$4,942,327	\$1,523,812	1316	18225		\$0		\$11,389		\$3,511		\$42,000		\$12,949		\$3,796		\$1,170				\$0	\$4,999,512	\$1,541,443
31	2054	4%	0.30	Kossuth rd.		\$10,307,257	\$3,055,692	1305	19529		\$0		\$11,389		\$3,376		\$42,000		\$12,451		\$3,796		\$1,125				\$0	\$10,364,442	\$3,072,645
32	2055	4%	0.29	Shantz Rd. S	Last half starting at S2012	\$6,288,967	\$1,792,720	1017	20546		\$0		\$11,389		\$3,247		\$42,000		\$11,972		\$3,796		\$1,082				\$0	\$6,346,152	\$1,809,021
33	2056	4%	0.27				\$0		20546		\$0		\$11,389		\$3,122		\$42,000		\$11,512		\$3,796		\$1,041			\$ 677,917	\$185,813	\$735,102	\$201,487
34	2057	4%	0.26				\$0		20546	\$287,648	\$75,810		\$11,389		\$3,002		\$42,000		\$11,069		\$3,796		\$1,001				\$0	\$344,834	\$90,882
35	2058	4%	0.25				\$0		20546		\$0		\$11,389		\$2,886		\$42,000		\$10,643		\$3,796		\$962				\$0	\$57,185	\$14,492
36	2059	4%	0.24				\$0		20546		\$0		\$11,389		\$2,775		\$42,000		\$10,234		\$3,796		\$925				\$0	\$57,185	\$13,934
37	2060	4%	0.23				\$0		20546		\$0		\$11,389		\$2,668		\$42,000		\$9,840		\$3,796		\$889				\$0	\$57,185	\$13,398
38	2061	4%	0.23				\$0		20546		\$0		\$11,389		\$2,566		\$42,000		\$9,462		\$3,796		\$855				\$0	\$57,185	\$12,883
39	2062	4%	0.22				\$0		20546	\$287,648	\$62,311		\$11,389		\$2,467		\$42,000		\$9,098		\$3,796		\$822				\$0	\$344,834	\$74,698
40	2063	4%	0.21	Shantz Rd S	Rest of Shantz Rd S	\$9,640,038	\$2,007,914	1665	22212		\$0		\$11,389		\$2,372		\$42,000		\$8,748		\$3,796		\$791				\$0	\$9,697,223	\$2,019,825
41	2064	4%	0.20	LS 1		\$15,798,276	\$3,164,046		22212		\$0		\$11,389		\$2,281		\$42,000		\$8,412		\$3,796		\$760				\$0	\$15,855,462	\$3,175,499
42	2065	4%	0.19	Menno St. E	Rest of Menno E	\$19,602,059	\$3,774,865	2241	24452		\$0		\$11,389		\$2,19														

East Side Lands (Woolwich) Sanitary Servicing EA
Sewer Alternative 7



Sewer Cost										Manhole Costs						Road Restoration Costs	Construction Costs	
Sewer Section	Street	Slope (%)	Size (mm)	Length (m)	U/S Depth (m)	D/S Depth (m)	Depth	Sewer Unit Cost (\$/m)	Sewer Total Cost (\$)	MH Dia. (mm)	Average MH Depth (m)	Number of MH	MH Unit Cost (\$)			Construction Costs Total (\$)	Contingency Total \$	
S0106	Wambolt Dr.	0.218	375	77.83	6.9	7.9	5-10 m	\$4,883	\$380,046	1200	7.4	1	\$15,474	\$15,474		\$395,520	\$494,400	
S0107	Wambolt Dr.	0.276	375	409.57	8.0	5.0	5-10 m	\$4,883	\$1,999,854	1200	6.5	5	\$15,474	\$77,372		\$2,077,225	\$2,596,531	
S0107	Wambolt Dr.	0.276	375	409.57	5.0	2.8	<5 m	\$1,193	\$488,772	1200	3.9	5	\$7,561	\$37,804		\$526,576	\$658,220	
S02A03	Kramp Rd.	0.309	375	142.29	3.5	3.3	<5 m	\$1,193	\$169,810	1200	3.4	2	\$6,090	\$12,180		\$181,990	\$227,488	
S02A04	Kramp Rd.	0.301	375	199.22	2.2	5.0	<5 m	\$1,193	\$237,740	1200	3.6	3	\$7,561	\$22,682		\$260,422	\$325,528	
S02A05	Wurster Pl. Ext.	0.217	375	692.82	7.4	4.9	5-10 m	\$4,883	\$3,382,927	1200	6.2	8	\$14,005	\$112,037		\$3,494,964	\$4,368,704	
S0501	Wurster Pl. Ext.	2.358	375	82.68	4.9	2.8	<5 m	\$1,193	\$98,670	1200	3.9	1	\$7,561	\$7,561		\$106,231	\$132,789	
S0502	Wurster Pl. Ext.	0.124	600	395.25	3.9	4.8	<5 m	\$1,797	\$710,454	1500	4.4	5	\$12,047	\$60,234		\$770,689	\$963,361	
S0503	Wurster Pl. Ext.	0.124	600	233.11	4.8	4.5	<5 m	\$1,797	\$419,014	1500	4.7	3	\$17,021	\$51,063		\$470,077	\$587,596	
S0504	Wurster Pl. Ext.	0.126	600	309.69	4.5	8.1	5-10 m	\$5,708	\$1,767,852	1500	6.3	4	\$18,491	\$73,963		\$1,841,816	\$2,302,269	
S0505	Wurster Pl. Ext.	0.126	600	207.03	8.2	5.7	5-10 m	\$5,708	\$1,181,805	1500	7.0	3	\$19,962	\$59,885		\$1,241,690	\$1,552,112	
S0506	Wurster Pl. Ext.	0.124	750	346.31	5.7	8.5	5-10 m	\$6,568	\$2,274,568	1500	7.1	4	\$19,962	\$79,846		\$2,354,415	\$2,943,018	
Total (Trunk 03)				3505.37					\$13,111,513		5.35		\$161,207	\$610,101	\$0	\$13,721,614	\$17,152,017	
S1615	Lonsdale Rd.	0.123	900	146.43	8.5	11.8	11-15 m	\$11,934	\$1,747,498	1800	10.2	2	\$28,647	\$57,294		\$1,804,792	\$2,255,990	
S1616	Lonsdale Rd.	0.126	900	238.85	11.8	10.0	11-15 m	\$11,934	\$2,850,456	1800	10.9	3	\$31,622	\$94,866		\$2,945,323	\$3,681,653	
S1616	Lonsdale Rd.	0.126	900	238.85	10.0	5.0	5-10 m	\$7,459	\$1,781,535	1800	7.5	3	\$25,215	\$75,645		\$1,857,180	\$2,321,475	
S1616	Lonsdale Rd.	0.126	900	238.85	5.0	1.0	<5 m	\$3,053	\$729,195	1800	3.0	3	\$14,844	\$44,533		\$773,728	\$967,160	
S2013	Airport Crossing	0.283	600	714.64	1.1	1.1	<5 m	\$1,797	\$1,284,542	1500	1.1	8	\$7,612	\$60,897		\$1,345,439	\$1,681,799	
S2014	Jetliner Crt.	0.125	750	390.74	1.1	3.6	<5 m	\$2,418	\$944,716	1500	2.4	5	\$9,096	\$45,481	\$4,960,000	\$5,950,198	\$7,437,747	
S2015	Jetliner Crt.	0.130	750	53.86	3.6	4.8	<5 m	\$2,418	\$130,224	1500	4.2	1	\$12,047	\$12,047		\$142,271	\$177,839	
S1802_2	Jetliner Crt.	0.124	900	129.13	4.8	6.1	5-10 m	\$7,459	\$963,151	1800	5.5	2	\$20,805	\$41,610		\$1,004,761	\$1,255,951	
S1902	Fountain St.	0.128	900	250.33	6.1	4.6	5-10 m	\$7,459	\$1,867,133	1800	5.4	3	\$20,805	\$62,414	\$750,993	\$2,680,541	\$3,350,676	
S1903	Fountain St.	0.124	900	652.72	4.6	6.6	5-10 m	\$7,459	\$4,868,438	1800	5.6	8	\$22,274	\$178,196	\$1,958,169	\$7,004,803	\$8,756,003	
S2001	Fountain St.	0.126	900	796.17	6.7	4.4	<5 m	\$3,053	\$2,430,609	1800	5.6	9	\$22,274	\$200,470	\$2,388,507	\$5,019,586	\$6,274,483	
S2201_1	Fountain St.	0.174	900	183.71	4.4	1.9	<5 m	\$3,053	\$560,842	1800	3.2	3	\$14,844	\$44,533	\$551,127	\$1,156,502	\$1,445,627	
S_CC_01	Fountain St.	1.004	900	50.78	1.9	1.9	<5 m	\$3,053	\$155,025	1800	1.9	1	\$12,331	\$12,331	\$152,340	\$319,696	\$399,620	
S2202	Fountain St.	0.124	900	129.12	1.9	3.4	<5 m	\$3,053	\$394,191	1800	2.7	2	\$14,844	\$29,689	\$387,363	\$811,243	\$1,014,054	
Total (Trunk 03B)				4214.20					\$20,707,557		4.92		\$257,262	\$960,006	\$11,148,499	\$32,816,062	\$41,020,077	
S1617	Lonsdale Rd. Ext.	0.125	750	223.97	1.1	3.0	<5 m	\$2,418	\$541,507	1500	2.1	3	\$9,096	\$27,289		\$568,796	\$710,995	
S1618	Lonsdale Rd. Ext.	0.124	750	185.08	3.0	2.4	<5 m	\$2,418	\$447,484	1500	2.7	3	\$11,217	\$33,651		\$481,135	\$601,419	
S1619_1	Lonsdale Rd. Ext.	0.130	750	69.01	2.4	2.8	<5 m	\$2,418	\$166,849	1500	2.6	1	\$11,217	\$11,217		\$178,066	\$222,583	
S_CC_06	Lonsdale Rd. Ext.	0.125	750	513.64	2.8	9.5	5-10 m	\$6,568	\$3,373,639	1500	6.2	6	\$18,491	\$110,945		\$3,484,584	\$4,355,730	
S1624	Airport Crossing	0.123	750	308.74	9.6	6.9	5-10 m	\$6,568	\$2,027,839	1500	8.3	4	\$21,431	\$85,725		\$2,113,565	\$2,641,956	
S1625	Airport Crossing	0.133	750	112.81	6.9	7.4	5-10 m	\$6,568	\$740,909	1500	7.2	2	\$19,962	\$39,923		\$780,832	\$976,040	
S1626	Airport Crossing	0.124	750	599.18	7.5	4.4	5-10 m	\$6,568	\$3,935,464	1500	6.0	7	\$18,491	\$129,435	\$6,430,000	\$10,494,899	\$13,118,624	
S2115	Cober Rd.	0.125	750	215.56	4.4	4.2	<5 m	\$2,418	\$521,171	1500	4.3	3	\$12,047	\$36,141		\$557,311	\$696,639	
S_CC_05	Cober Rd.	0.127	750	165.80	4.2	4.0	<5 m	\$2,418	\$400,867	1500	4.1	2	\$12,047	\$24,094		\$424,960	\$531,200	
S_CC_04	Cober Rd.	0.126	750	477.84	4.1	7.1	5-10 m	\$6,568	\$3,138,490	1500	5.6	6	\$18,491	\$110,945		\$3,249,435	\$4,061,794	
S2116	Cober Rd.	0.124	750	184.98	7.1	6.3	5-10 m	\$6,568	\$1,214,951	1500	6.7	3	\$19,962	\$59,885		\$1,274,836	\$1,593,545	
S2113	Kossuth Rd.	0.126	750	388.51	6.3	6.9	5-10 m	\$6,568	\$2,551,740	1500	6.6	5	\$19,962	\$99,808	\$1,165,524	\$3,817,072	\$4,771,340	
S2114	Kossuth Rd.	0.124	750	321.62	6.9	4.8	5-10 m	\$6,568	\$2,112,390	1500	5.9	4	\$18,491	\$73,963	\$964,848	\$3,151,201	\$3,939,001	
S2203_3	Kossuth Rd.	0.128	750	15.59	4.8	4.8	<5 m	\$2,418	\$37,686	1500	4.8	1	\$17,021	\$17,021		\$101,468	\$126,835	
S_CC_03	Kossuth Rd.	0.124	750	290.54	4.8	4.3	<5 m	\$2,418	\$702,461	1500	4.6	4	\$17,021	\$68,084	\$871,617	\$1,642,163	\$2,052,703	
S_CC_02	Kossuth Rd.	0.124	750	186.01	4.3	6.2	<5 m	\$2,418	\$449,725	1500	5.3	3	\$17,021	\$51,063	\$558,021	\$1,058,810	\$1,323,512	
S2204	Kossuth Rd.	0.128	900	179.96	6.2	4.6	5-10 m	\$7,459	\$1,342,268	1800	5.4	2	\$20,805	\$41,610	\$1,339,883	\$2,723,760	\$3,404,700	
S2205	Kossuth Rd.	0.125	900	192.21	4.7	6.7	5-10 m	\$7,459	\$1,433,591	1800	5.7	3	\$22,274	\$66,823	\$576,615	\$2,077,030	\$2,596,287	
S2206	Kossuth Rd.	0.124	900	452.11	6.7	4.1	5-10 m	\$7,459	\$3,372,134	1800	5.4	6	\$20,805	\$124,829	\$1,356,330	\$4,853,293	\$6,066,616	
Total (Trunk03D)				5083.14					\$28,511,166		5.2		\$325,851	\$1,212,451	\$13,309,599	\$43,033,216	\$53,791,520	
TOTAL TRUNK																		

S_CC_11	Shantz Station Rd	0.170	600	82.23	4.5	5.3	<5 m	\$1,797	\$147,804	1500	4.9	1	\$17,021	\$17,021	\$246,687	\$411,512	\$514,390
Shantz Station (North of Menno)				3165.23					\$9,921,384				\$119,402	\$464,579	\$9,495,699	\$19,881,663	\$24,852,078
S0301	East Connection	0.187	450	438.42	3.0	3.8	<5 m	\$1,304	\$571,773	1200	3.4	5	\$6,090	\$30,449		\$602,222	\$752,778
S0602	East Connection	0.187	450	1002.36	3.9	6.4	5-10 m	\$5,057	\$5,069,037	1200	5.2	12	\$12,771	\$153,247		\$5,222,284	\$6,527,855
East Connector				1440.78					\$5,640,810				\$18,860	\$183,696	\$0	\$5,824,506	\$7,280,633
S0401	New Rd 3 (Rider Rd Ext.)	1.114	300	254.98	2.8	2.8	<5 m	\$1,128	\$287,720	1200	2.8	3	\$6,090	\$18,270		\$305,990	\$382,487
S0406	New Rd 3 (Rider Rd Ext.)	0.820	300	421.82	2.8	2.8	<5 m	\$1,128	\$475,978	1200	2.8	5	\$6,090	\$30,449		\$506,427	\$633,034
S0407	New Rd 3 (Rider Rd Ext.)	0.267	300	393.51	2.9	6.4	<5 m	\$1,128	\$444,031	1200	4.7	5	\$12,771	\$63,853		\$507,883	\$634,854
S0507	New Rd 3 (Rider Rd Ext.)	0.267	375	382.51	6.4	3.8	5-10 m	\$4,883	\$1,867,743	1200	5.1	5	\$12,771	\$63,853		\$1,931,596	\$2,414,495
New Rd 3 (Rider Rd Ext.)				1452.82					\$3,075,472				\$37,721	\$176,425	\$0	\$3,251,897	\$4,064,871
S12B01	Fountain St.	0.183	525	163.65	6.5	6.0	5-10 m	\$5,217	\$853,675	1500	6.3	2	\$18,491	\$36,982	\$490,935	\$1,381,592	\$1,726,990
S12B02	Fountain St.	0.186	600	252.37	6.1	7.7	5-10 m	\$5,708	\$1,440,644	1500	6.9	3	\$19,962	\$59,885	\$757,110	\$2,257,638	\$2,822,048
S12B03	Fountain St.	0.187	600	411.64	7.8	6.4	5-10 m	\$5,708	\$2,349,813	1500	7.1	5	\$19,962	\$99,808	\$1,234,911	\$3,684,532	\$4,605,664
Fountain St (N of Menno)				827.65					\$4,644,131				\$58,414	\$196,674	\$2,482,956	\$7,323,762	\$9,154,702
S1604	Menno St.	0.267	300	127.25	2.8	8.0	5-10 m	\$4,740	\$603,101	1200	5.4	2	\$12,771	\$25,541	\$381,744	\$1,010,386	\$1,262,983
S1603	Menno St.	0.266	300	233.19	8.0	5.3	5-10 m	\$4,740	\$1,105,197	1200	6.7	3	\$15,474	\$46,423	\$699,555	\$1,851,175	\$2,313,969
S1702	Menno St.	0.808	450	552.91	6.1	2.1	<5 m	\$1,304	\$721,086	1200	4.1	7	\$7,561	\$52,925	\$1,658,739	\$2,432,750	\$3,040,937
S1701	Menno St.	0.220	450	181.51	2.1	4.6	<5 m	\$1,304	\$236,715	1200	3.4	3	\$6,090	\$18,270	\$544,524	\$799,509	\$999,386
Menno W				1094.85					\$2,666,098				\$41,895	\$143,159	\$3,284,562	\$6,093,819	\$7,617,274
S1605_1	Menno St.	0.270	300	233.06	2.8	6.6	5-10 m	\$4,740	\$1,104,595	1200	4.7	3	\$12,771	\$38,312	\$699,174	\$1,842,081	\$2,302,601
S1610	Menno St.	0.168	600	471.08	5.4	11.0	5-10 m	\$5,708	\$2,689,129	1500	8.2	6	\$21,431	\$128,588	\$1,413,234	\$4,230,951	\$5,288,689
Alt 6 LS 1	Menno St.															\$12,638,621	\$15,798,276
S1609	Menno St.	0.432	600	881.12	2.8	2.8	<5 m	\$1,797	\$1,583,777	1500	2.8	10	\$11,217	\$112,171	\$2,643,354	\$4,339,302	\$5,424,127
S1608	Menno St.	1.674	600	31.06	2.9	3.5	<5 m	\$1,797	\$55,829	1500	3.2	1	\$11,217	\$11,217	\$93,180	\$160,226	\$200,283
S_CC_07	Menno St.	0.166	600	211.24	3.6	5.6	<5 m	\$1,797	\$379,687	1500	4.6	3	\$17,021	\$51,063	\$633,705	\$1,064,455	\$1,330,569
S1607	Menno St.	0.167	750	413.06	5.6	6.5	5-10 m	\$6,568	\$2,712,999	1500	6.1	5	\$18,491	\$92,454	\$1,239,180	\$4,044,633	\$5,055,791
S1606	Menno St.	0.164	750	286.49	6.5	8.1	5-10 m	\$6,568	\$1,881,674	1500	7.3	4	\$19,962	\$79,846	\$859,467	\$2,820,987	\$3,526,234
Menno East				2527.10					\$8,526,016				\$112,110	\$513,651	\$7,581,294	\$18,502,635	\$23,128,294
S1401	Woolwich St	0.367	300	169.07	2.8	2.8	<5 m	\$1,128	\$190,780	1200	2.8	2	\$6,090	\$12,180	\$507,213	\$710,172	\$887,715
S1402	Woolwich St	0.400	300	82.40	2.9	2.8	<5 m	\$1,128	\$92,983	1200	2.9	1	\$6,090	\$6,090	\$247,209	\$346,282	\$432,853
S1703	Woolwich St	0.270	300	136.82	2.9	3.8	<5 m	\$1,128	\$154,389	1200	3.4	2	\$6,090	\$12,180	\$410,463	\$577,031	\$721,289
S1704	Woolwich St	0.185	525	172.81	4.7	3.6	<5 m	\$1,400	\$241,957	1500	4.2	2	\$12,047	\$24,094	\$518,421	\$784,472	\$980,590
S1705_1	Woolwich St	4.845	525	7.84	3.7	4.3	<5 m	\$1,400	\$10,981	1500	4.0	1	\$12,047	\$12,047	\$23,529	\$46,557	\$58,197
S_CC_14	Woolwich St	0.188	525	239.83	4.4	7.8	5-10 m	\$5,217	\$1,251,104	1500	6.1	3	\$18,491	\$55,472	\$719,490	\$2,026,067	\$2,532,583
S1706	Woolwich St	0.190	525	258.52	7.9	8.7	5-10 m	\$5,217	\$1,348,593	1500	8.3	3	\$21,431	\$64,294	\$775,554	\$2,188,441	\$2,735,551
Woolwich				1067.29					\$3,290,788				\$82,285	\$186,356	\$3,201,879	\$6,679,023	\$8,348,779
S1601_1	Fountain St.	1.321	450	365.55	6.4	3.8	<5 m	\$1,304	\$476,733	1200	5.1	5	\$12,771	\$63,853	\$1,096,647	\$1,637,233	\$2,046,542
S_CC_09	Fountain St.	0.187	450	75.05	3.9	3.6	<5 m	\$1,304	\$97,872	1200	3.8	1	\$7,561	\$7,561	\$225,138	\$330,571	\$413,213
S1602	Fountain St.	0.186	450	533.52	3.6	7.2	5-10 m	\$5,057	\$2,698,068	1200	5.4	6	\$12,771	\$76,623	\$1,600,557	\$4,375,249	\$5,469,061
S1801	Fountain St.	0.167	750	400.60	8.8	6.3	5-10 m	\$6,568	\$2,631,167	1800	7.6	5	\$25,215	\$126,075	\$1,201,803	\$3,959,045	\$4,948,807
S1802_1	Fountain St.	0.167	750	251.74	6.3	9.1	5-10 m	\$6,568	\$1,653,421	1800	7.7	3	\$25,215	\$75,645	\$755,211	\$2,484,277	\$3,105,347
AE_P2	Fountain St.															\$7,923,371	\$9,904,213
Fountain St. (Menno to Kossuth)				1626.45					\$7,557,262				\$83,532	\$349,757	\$4,879,356	\$12,786,375	\$15,982,969
S1622	Vance Rd Ext.	0.551	300	676.40	2.9	2.8	<5 m	\$1,128	\$763,250	1200	2.9	8	\$6,090	\$48,719		\$811,969	\$1,014,962
S1621	Vance Rd Ext.	0.167	300	237.54	2.9	6.8	5-10 m	\$4,740	\$1,125,833	1200	4.9	3	\$12,771	\$38,312		\$1,164,145	\$1,455,181
S1620	Vance Rd Ext.	0.473	300	402.51	6.9	5.4	5-10 m	\$4,740	\$1,907,725	1200	6.2	5	\$14,005	\$70,023		\$1,977,748	\$2,472,185
Vance Rd Ext.				1316.45					\$3,796,808				\$32,865	\$157,054	\$0	\$3,953,862	\$4,942,327
S1614	Shantz Station Rd	0.626	300	320.97	2.8	2.8	<5 m	\$1,128	\$362,187	1200	2.8	4	\$6,090	\$24,360	\$962,922	\$1,686,835	
S1613_1	Shantz Station Rd	0.470	300	212.63	2.9	2.8	<5 m	\$1,128	\$239,928	1200	2.9	3	\$6,090	\$18,270	\$637,881	\$896,079	\$1,120,098
S1613_2	Shantz Station Rd	1.076	300	392.13	2.9	2.8	<5 m	\$1,128	\$442,473	1200	2.9	5	\$6,090	\$30,449	\$1,176,375	\$1,649,298	\$2,061,622
S1612	Shantz Station Rd	0.268	300	250.42	2.9	6.3	<5 m	\$1,128	\$282,573	1200	4.6	3	\$12,771	\$38,312	\$751,257	\$1,072,141	\$1,340,177
S1611	Shantz Station Rd	0.267	300	183.46	6.4	2.8	5-10 m	\$4,740	\$869,536	1200	4.6	3	\$12,771	\$38,312	\$550,389	\$1,458,237	\$1,822,796
S2011	Shantz Station Rd	1.560	300	305.80	2.8	2.8	<5 m	\$1,128	\$345,060	1200	2.8	4	\$6,090	\$24,360	\$917,388	\$1,286,807	\$1,608,509
S2012	Shantz Station Rd	0.266	300	203.11	2.9	5.9	<5 m	\$1,128	\$229,190	1200	4.4	3	\$7,561	\$22,682	\$609,333	\$861,205	\$1,076,507
S2106	Shantz Station Rd	0.270	375	181.77	6.0	3.6	5-10 m	\$4,883	\$887,539	1200	4.8	3	\$12,771	\$38,312	\$545,301	\$1,471,151	\$1,838,939
S2107	Shantz Station Rd	0.845	375	415.21	3.7	2.8	<5 m	\$1,193	\$495,500	1200	3.3	5	\$6,090	\$30,449	\$1,245,615	\$1,771,564	\$2,214,455
S2109	Shantz Station Rd	1.121	375	216.77	2.9	2.8	<5 m	\$1,193	\$258,685	1200	2.9	3	\$6,090	\$18,270	\$650,298	\$927,253	\$1,159,066
Shantz Station Rd (S of Menno)				2682.25					\$4,412,670				\$82,412	\$283,774	\$8,046,759	\$12,743,204	\$15,929,005
S2103	New Germany Ln	0.263	300	129.36	2.8	3.5	<5 m	\$1,128	\$145,967	1200	3.2	2	\$6,090	\$12,180		\$158,147	\$197,684
S2102_1	New Germany Ln	0.313	300	134.35	3.5	3.1	<5 m	\$1,128	\$151,596	1200	3.3	2	\$6,090	\$12,180		\$163,776	\$204,720
S_CC_10	New Germany Ln	0.266	300	176.70	3.1	3.4	<5 m	\$1,128	\$199,390	1200	3.3	2	\$6,090	\$12,180		\$211,570	\$264,463
S2101	New Germany Ln	0.266	300	229.36	3.4	3.8	<5 m	\$1,128	\$258,807	1200	3.6	3	\$7,561	\$22,682		\$281,489	\$351,862
S2006	New Germany Ln	0.266	300	356.81	2.8	3.9	<5 m	\$1,128	\$402,626	1200	3.4	4	\$6,090	\$24,360		\$426,986	\$533,732
New Germany				1026.58					\$1,158,387				\$31,920	\$83,581	\$0	\$1,241,968	\$1,552,460
S2110	Kossuth Rd.	0.266	375	601.03	2.9	5.2	<5 m	\$1,193	\$717,256	1200	4.1	7	\$7,561	\$52,925	\$1,803,078	\$2,573,259	\$3,216,573
S2111	Kossuth Rd.	0.267	375	378.54	5.3	6.3	5-10 m	\$4,883	\$1,848,349	1200	5.8	5	\$14,005	\$70,023	\$1,135,620	\$3,053,992	\$3,817,490
S2112	Kossuth Rd.	0.268	375	325.08	6.4	5.1	5-10 m	\$4,883	\$1,587,303	1200	5.8	4	\$14,005	\$56,018	\$975,234	\$2,618,555	\$3,273,194
Kossuth East/ West				1304.64					\$4,152,907				\$35,570	\$178,966	\$3,913,932	\$8,245,806	\$10,307,257
S_T01_1	Fountain St.	0.125	1050	213.84	4.2	4.8	<5 m	\$3,626	\$775,371	2400	4.5	3	\$36,650	\$109,950	\$641,520	\$1,526,841	\$1,908,551
S_T01_2	Fountain St.	0.125	1050	472.84	4.9	6.3	5-10 m	\$8,270	\$3,910,163	2400	5.6	6	\$38,121	\$228,724	\$1,418,523	\$5,557,411	\$6,946,763
S_T02	Fountain St.	0.125	1050	43.20	6.4	6.3	5-10 m	\$8,270	\$357,243	2400	6.4	1	\$38,121	\$38,121	\$129,600	\$395,364	\$494,204
Fountain St - Kossuth to Middle Block				729.88					\$4,685,535				\$112,891	\$376,795	\$2,189,643	\$7,479,615	\$9,349,519
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East Side Lands (Woolwich) Sanitary Servicing EA
Sewer Alternative 7 LCC



#	Year			Sewer Reach	Description	Total Flow	Capital Expense (2018 Dollars)			Annual Sewer O&M (Flushing)			Annual Lift Station Energy Costs				Annual Lift Station O&M Costs				Annual Lift Station Equip & Materials Cost				Lift Station Upgrades				Total Annual Cash Flow	Total Cost (PV)	
		Rate	PV Factor			L/s	Cost Est 2025 Dollars	Present Value	Pipe Length (m)	Cumulative Pipe Length (m)	Flushing / m = Annual	\$14 PV	Monthly Energy = Annual LS 1	\$1,019 Annual LS 2	\$949 Annual LS 3	\$0 PV	Monthly Labour= Annual LS 1	\$3,500 Annual LS 2	\$3,500 Annual LS 3	\$3,500 PV	Monthly Cost = LSF1	\$340 LSF2	\$316 PTB LS	\$0 PV	Per Event= LS 1	\$ 727,500 LS 2	\$ 677,917 LS 3	\$ - PV			
0	2025	4%	1.00	Trunk 03B	Trunk 03B (South of Menno) Lonsdale / Wurster Ext to 300m East (Limit of Ex. CMP)		\$41,020,077	\$41,020,077	4214	4214		\$0				\$0				\$0				\$0				\$0	\$41,020,077	\$41,020,077	
1	2026	4%	0.96	Menno East			\$3,526,234	\$3,390,610	286	4501		\$0				\$0				\$0				\$0				\$0	\$3,526,234	\$3,390,610	
2	2027	4%	0.92	Fountain South	Fountain St. (Kossuth to Middle block)		\$9,349,519	\$8,644,156	730	5231		\$0				\$0				\$0				\$0				\$0	\$9,349,519	\$8,644,156	
3	2028	4%	0.89	LS 2			\$9,904,213	\$8,804,809		5231		\$0				\$0				\$0				\$0				\$0	\$9,904,213	\$8,804,809	
4	2029	4%	0.85					\$0		5231				\$11,389		\$9,735		\$42,000		\$35,902		\$3,796		\$3,245				\$0	\$57,185	\$48,882	
5	2030	4%	0.82	Fountain (Menno to Otter)			\$15,982,969	\$13,136,835	1626	6857	\$95,998	\$78,904		\$11,389		\$9,361		\$42,000		\$34,521		\$3,796		\$3,120				\$0	\$16,136,153	\$13,262,741	
6	2031	4%	0.79	Woolwich St.			\$8,348,779	\$6,598,161	1067	7924		\$0		\$11,389		\$9,001		\$42,000		\$33,193		\$3,796		\$3,000				\$0	\$8,405,964	\$6,643,355	
7	2032	4%	0.76	Menno W	S1701 Reach		\$999,386	\$759,451	182	8106		\$0		\$11,389		\$8,655		\$42,000		\$31,917		\$3,796		\$2,885				\$0	\$1,056,571	\$802,907	
8	2033	4%	0.73	East Connector Rd.			\$7,280,633	\$5,319,887	1441	9547		\$0		\$11,389		\$8,322		\$42,000		\$30,689		\$3,796		\$2,774				\$0	\$7,337,818	\$5,361,672	
9	2034	4%	0.70	Fountain St. N of Menno			\$9,154,702	\$6,431,972	828	10374		\$0		\$11,389		\$8,002		\$42,000		\$29,509		\$3,796		\$2,667				\$0	\$9,211,888	\$6,472,150	
10	2035	4%	0.68	Menno W	Rest of Menno W		\$6,617,888	\$4,470,808	913	11288	\$158,026	\$106,757		\$11,389		\$7,694		\$42,000		\$28,374		\$3,796		\$2,565				\$0	\$6,833,100	\$4,616,197	
11	2035	4%	0.65	Kossuth Rd.	Trunk 3D Last Third Until S-CC-02		\$13,391,115	\$8,698,613	1010	12298		\$0		\$11,389		\$7,398		\$42,000		\$27,282		\$3,796		\$2,466				\$0	\$13,448,300	\$8,735,759	
12	2035	4%	0.62				\$0			12298		\$0		\$11,389		\$7,114		\$42,000		\$26,233		\$3,796		\$2,371				\$0	\$57,185	\$35,718	
13	2036	4%	0.60				\$0			12298		\$0		\$11,389		\$6,840		\$42,000		\$25,224		\$3,796		\$2,280				\$0	\$57,185	\$34,344	
14	2037	4%	0.58				\$0			12298		\$0		\$11,389		\$6,577		\$42,000		\$24,254		\$3,796		\$2,192				\$0	\$57,185	\$33,023	
15	2038	4%	0.56	Trunk 3D	Trunk 3D until S-CC-02		\$40,400,405	\$22,432,911	4073	16371	\$229,190	\$127,261		\$11,389		\$6,324		\$42,000		\$23,321		\$3,796		\$2,108				\$0	\$40,686,781	\$22,591,925	
16	2039	4%	0.53	New Germany Rd.	S2006 Reach		\$533,732	\$284,964	357	16728		\$0		\$11,389		\$6,081		\$42,000		\$22,424		\$3,796		\$2,027				\$0	\$590,918	\$315,496	
17	2040	4%	0.51				\$0			16728		\$0		\$11,389		\$5,847		\$42,000		\$21,562		\$3,796		\$1,949				\$0	\$57,185	\$29,357	
18	2041	4%	0.49				\$0			16728		\$0		\$11,389		\$5,622		\$42,000		\$20,732		\$3,796		\$1,874		\$ 677,917		\$334,639	\$735,102	\$362,867	\$27,143
19	2042	4%	0.47				\$0			16728		\$0		\$11,389		\$5,406		\$42,000		\$19,935		\$3,796		\$1,802				\$0	\$57,185	\$27,143	
20	2043	4%	0.46	New Germany Rd.	End of New Germany		\$1,018,728	\$464,934	670	17397	\$243,562	\$111,159		\$11,389		\$5,198		\$42,000		\$19,168		\$3,796		\$1,733				\$0	\$1,319,476	\$602,192	
21	2044	4%	0.44				\$0			17397		\$0		\$11,389		\$4,998		\$42,000		\$18,431		\$3,796		\$1,666				\$0	\$4,999,512	\$25,095	
22	2045	4%	0.42				\$0			17397		\$0		\$11,389		\$4,806		\$42,000		\$17,722		\$3,796		\$1,602				\$0	\$10,364,442	\$24,130	
23	2046	4%	0.41				\$0			17397		\$0		\$11,389		\$4,621		\$42,000		\$17,041		\$3,796		\$1,540				\$0	\$6,346,152	\$23,202	
24	2047	4%	0.39				\$0			17397		\$0		\$11,389		\$4,443		\$42,000		\$16,385		\$3,796		\$1,481				\$0	\$57,185	\$22,309	
25	2048	4%	0.38				\$0			17397	\$243,562	\$91,364		\$11,389		\$4,272		\$42,000		\$15,755		\$3,796		\$1,424				\$0	\$300,748	\$112,816	
26	2049	4%	0.36				\$0			17397		\$0		\$11,389		\$4,108		\$42,000		\$15,149		\$3,796		\$1,369				\$0	\$57,185	\$20,626	
27	2050	4%	0.35				\$0			17397		\$0		\$11,389		\$3,950		\$42,000		\$14,566		\$3,796		\$1,317				\$0	\$57,185	\$19,833	
28	2051	4%	0.33				\$0			17397		\$0		\$11,389		\$3,798		\$42,000		\$14,006		\$3,796		\$1,266				\$0	\$57,185	\$19,070	
29	2052	4%	0.32				\$0			17397		\$0		\$11,389		\$3,652		\$42,000		\$13,467		\$3,796		\$1,217				\$0	\$57,185	\$18,337	
30	2053	4%	0.31	Lonsdale Rd. (Vance Rd.)	Branch Outside of Trunk 3D		\$4,942,327	\$1,523,812	1316	18714	\$261,993	\$80,777		\$11,389		\$3,511		\$42,000		\$12,949		\$3,796		\$1,170				\$0	\$5,261,505	\$1,622,220	
31	2054	4%	0.30	Kossuth rd. East/West	Branch Outside of Trunk 3D		\$10,307,257	\$3,055,692	1305	20018		\$0		\$11,389		\$3,376		\$42,000		\$12,451		\$3,796		\$1,125				\$0	\$10,364,442	\$3,072,645	
32	2055	4%	0.29	Shantz Rd. S	Last half starting at S2012		\$6,288,967	\$1,792,720	1017	21035		\$0		\$11,389		\$3,247		\$42,000		\$11,972		\$3,796		\$1,082				\$0	\$6,346,152	\$1,809,021	
33	2056	4%	0.27				\$0			21035		\$0		\$11,389		\$3,122		\$42,000		\$11,512		\$3,796		\$1,041				\$0	\$57,185	\$15,674	
34	2057	4%	0.26				\$0			21035		\$0		\$11,389		\$3,002		\$42,000		\$11,069		\$3,796		\$1,001				\$0	\$57,185	\$15,071	
35	2058	4%	0.25				\$0			21035	\$294,494	\$74,629		\$11,389		\$2,886		\$42,000		\$10,643		\$3,796		\$962		\$ 677,917	\$171,795	\$1,029,596	\$260,915		
36	2059	4%	0.24				\$0			21035		\$0		\$11,389		\$2,775		\$42,000		\$10,234		\$3,796		\$925				\$0	\$57,185	\$13,934	
37	2060	4%	0.23				\$0			21035		\$0		\$11,389		\$2,668		\$42,000		\$9,840		\$3,796		\$889				\$0	\$57,185	\$13,398	
38	2061	4%	0.23				\$0			21035		\$0		\$11,389		\$2,566		\$42,000		\$9,462		\$3,796		\$855				\$0	\$57,185	\$12,883	
39	2062	4%	0.22				\$0			21035		\$0		\$11,389		\$2,467		\$42,000		\$9,098		\$3,796		\$822				\$0	\$57,185	\$12,388	
40	2063	4%	0.21	Shantz Rd S	Rest of Shantz Rd S		\$9,640,038	\$2,007,914	1665	22701	\$317,809	\$66,196		\$11,389		\$2,372		\$42,000		\$8,748		\$3,796		\$791				\$0	\$10,015,032	\$2,086,022	
41	2064	4%	0.20	LS 1			\$15,798,276	\$3,164,046		22701		\$0		\$11,389		\$2,281		\$42,000		\$8,412		\$3,796		\$760				\$0	\$15,855,462	\$3,175,499	
42	2065	4%																													