Township of King Water Wastewater Master Plan - Water Capital Project List

New Project ID	Project Description	Size	Unit	Length (m)	New/ Upsizing?	Unit Cost	Cost	Crossings [count]	Crossings Cost	Subtotal	EA Schedule	Engineering	Contingency	GRAND TOTAL (2025 Dollars)	Estimated Construction Duration (months)	Planned Year	Funding Source
King City 2051 Water Upgrades									**$150,000**			0%	30%				
WAT-KING-02	Upgrade WM from 150mm to 200mm along Charles St, Melrose Ave, and John St	200	mm	735	Upsize	$ 935	$ 686,885	0	$ -	$ 686,885	Exempt	$ -	$ 206,065	$ 890,000	6 ~ 9	2031	Local Service
WAT-KING-03	Upgrade WM from 150mm to 200mm along Langdon Dr	200	mm	141	Upsize	$ 935	$ 131,835	0	$ -	$ 131,835	Exempt	$ -	$ 39,551	$ 170,000	3 ~ 6	2036	Local Service
WAT-KING-04	Upgrade WM from 150mm to 200mm along Findlay Ave	200	mm	510	Upsize	$ 935	$ 476,850	0	$ -	$ 476,850	Exempt	$ -	$ 143,055	$ 620,000	6 ~ 9	2036	Local Service
WAT-KING-05	Upgrade WM from 250mm to 300mm along Burns Blvd and Station Rd	300	mm	2704	Upsize	$ 1,360	$ 3,677,440	0	$ -	$ 3,677,440	Exempt	$ -	$ 1,103,232	$ 4,780,000	9 ~ 12	2036	DC Fundable
WAT-KING-06	Upgrade WM from 150mm to 200mm along Chuck Ormsby Cres and Richard Serra Crt	200	mm	585	Upsize	$ 935	$ 546,975	0	$ -	$ 546,975	Exempt	$ -	$ 164,093	$ 710,000	6 ~ 9	2036	Local Service
WAT-KING-08	Upgrade WM from 200mm to 250mm along Lavender Valley Rd and Spring Hill Dr	250	mm	1216	Upsize	$ 965	$ 1,173,440	0	$ -	$ 1,173,440	Exempt	$ -	$ 352,032	$ 1,530,000	6 ~ 9	2031	DC Fundable
WAT-KING-09	Proposed 300mm watermains east of Hwy 400	300	mm	2173	New	$ 1,360	$ 2,955,933	1	$ 150,000	$ 3,105,933	Exempt	$ -	$ 931,780	$ 4,040,000	9 ~ 12	2046	DC Fundable
WAT-KING-10	Proposed 300mm watermains along Jane St south of King Rd	300	mm	738	New	$ 1,360	$ 1,004,170	0	$ -	$ 1,004,170	Exempt	$ -	$ 301,251	$ 1,310,000	6 ~ 9	2031	DC Fundable
WAT-KING-11	Proposed 300mm watermains connecting 2955 King Rd and existing 250mm watermain on Burns Blvd	300	mm	1008	New	$ 1,360	$ 1,370,880	1	$ 150,000	$ 1,520,880	Exempt	$ -	$ 456,264	$ 1,980,000	6 ~ 9	2031	DC Fundable
WAT-KING-12	Proposed 300mm watermains along Jane St north of King Rd	300	mm	653	New	$ 1,360	$ 888,080	1	$ 150,000	$ 1,038,080	Exempt	$ -	$ 311,424	$ 1,350,000	6 ~ 9	2031	DC Fundable
WAT-KING-13	Proposed 200mm watermains for Mansions of King	200	mm	1222	New	$ 935	$ 1,142,290	1	$ 150,000	$ 1,292,290	Exempt	$ -	$ 387,687	$ 1,680,000	6 ~ 9	2031	DC Fundable
WAT-LCL-01	Proposed 300mm local watermains for Bushland Heights	300	mm	1001	New	$ 1,360	$ 1,361,360	1	$ 150,000	$ 1,511,360		$ -	$ 453,408	$ 1,960,000		2031	Local Service
WAT-LCL-02	Proposed 300mm local watermains for 2955 King Rd	300	mm	1716	New	$ 1,360	$ 2,333,760	2	$ 300,000	$ 2,633,760		$ -	$ 790,128	$ 3,420,000		2031	Local Service
WAT-LCL-03	Proposed local watermains for 13130 and 13176 Dufferin Street	150	mm	1026	New	$ 935	$ 959,310	3	$ 450,000	$ 1,409,310		$ -	$ 422,793	$ 1,830,000		2031	Local Service
WAT-LCL-04	Proposed local watermains from Tatton Crt to King Rd	150	mm	252	New	$ 935	$ 235,620	4	$ 600,000	$ 835,620		$ -	$ 250,686	$ 1,090,000		2031	Local Service
														$19,060,000.00			
Nobleton 2051 Water Upgrades																	
WAT-LCL-05	Proposed 200mm WM from Ballard Dr to Oliver Emmerson Ave	200	mm	200	New	$ 935	$ 187,000	1	$ 150,000	$ 337,000		$ -	$ 101,100	$ 440,000		2031	Local Service

An allowance of $150,000 per wetland crossing is included. Actual costs depend on crossing length, site conditions, and the construction method used, such as HDD.

Township of King Water Wastewater Master Plan - Wastewater Capital Project List

ID	Project Description	Size	Unit	Length	New/ Upsizing?	Unit Cost	Base Cost	Crossings	Crossings Cost*	Subtotal	EA Schedule	Engineering	Contingency	GRAND TOTAL (2025 Dollars)	Estimated Construction Duration (months)	Planned Year	Funding Source
King City 2051 Wastewater Upgrades								**[count]**	**$150,000**			15%	30%				
WW-KING-01	Sewer Upgrade from 375 mm to 450mm from south of Kinghorn Rd to Kingsview SPS	450	mm	98	Upsize	4380	$ 428,456		-	$ 428,456	Exempt	$ 64,268	$ 128,537	$ 620,000	6~9	2046	DC Fundable
WW-KING-02	Sewer Upgrade from 375 mm to 450mm along King Rd	450	mm	540	Upsize	4380	$ 2,365,875		-	$ 2,365,875	Exempt	$ 354,881	$ 709,762	$ 3,430,000	9 ~ 12	2031	DC Fundable
WW-KING-03	Sewer Upgrade from 200 mm to 250mm along Bri Way and Rober Berry Cres	250	mm	300	Upsize	3490	$ 1,046,084		-	$ 1,046,084	Exempt	$ 156,913	$ 313,825	$ 1,520,000	9 ~ 12	2041	DC Fundable
WW-KING-05	Sewer Upgrade from 375 mm to 450mm along the sewer between Hogan Ct and Keele St, from Station Rd to King Rd	450	mm	872	Upsize	4380	$ 3,817,723	1	$ 150,000	$ 3,967,723	Exempt	$ 595,158	$ 1,190,317	$ 5,750,000	9 ~ 12	2031	DC Fundable
WW-KING-06	Sewer Upgrade from 250 mm to 350mm along Keele St	350	mm	231	Upsize	3950	$ 911,574		-	$ 911,574	Exempt	$ 136,736	$ 273,472	$ 1,320,000	6~9	2031	DC Fundable
WW-KING-07	Sewer Upgrade from 450 mm to 525mm along King Rd from Keele St to William St	525	mm	526	Upsize	4690	$ 2,466,477		-	$ 2,466,477	Exempt	$ 369,971	$ 739,943	$ 3,580,000	9 ~ 12	2036	DC Fundable
WW-KING-08	Sewer Upgrade from 200 mm to 250mm along King Rd and Alex Campbell Cres	250	mm	434	Upsize	3490	$ 1,515,328		-	$ 1,515,328	Exempt	$ 227,299	$ 454,598	$ 2,200,000	9 ~ 12	2031	Local Service
WW-KING-10	Upgrade of Alex Campbell SPS (130 to 150 L/s) (Pump modification, Forcemain 300mm, L= 700m, No Forcemain Upgrade)	20	L/s		Upsize	25000	$ 500,000			$ 500,000	Exempt	$ 75,000	$ 150,000	$ 730,000		2036	DC Fundable
WW-KING-11	Upgrade of Kinghorn SPS (110 L/s to 152 L/s) (Pump Replacement, Forcemain 350mm, L= 1000m, No Forcemain Upgrade)	42	L/s		Upsize		$ 1,500,000			$ 1,500,000	Exempt	$ 225,000	$ 450,000	$ 2,180,000		2046	DC Fundable
														$ 21,330,000			
Nobleton 2051 Wastewater Upgrades																	
WW-NOBL-01	Sewer Upgrade from 200 mm to 250mm along McCutcheon Ave	250	mm	462	Upsize	3490	$ 1,611,109	1	$ 150,000	$ 1,761,109	Exempt	$ 264,166	$ 528,333	$ 2,550,000	9 ~ 12	2031	Local Service
WW-NOBL-02	Sewer Upgrade from 200 mm to 450mm along Hill Farm Rd and Lynwood Cres	450	mm	726	Upsize	4380	$ 3,179,010	1	$ 150,000	$ 3,329,010	Exempt	$ 499,351	$ 998,703	$ 4,830,000	9 ~ 12	2036	DC Fundable
WW-NOBL-03	Sewer Upgrade from 200 mm to 250mm along Hwy 27	250	mm	64	Upsize	3490	$ 222,303		-	$ 222,303	Exempt	$ 33,345	$ 66,691	$ 320,000	6~9	2031	Local Service
WW-NOBL-04	Sewer Upgrade from 200 mm to 300mm along Old King Rd; Sewer Upgrade from 250 mm to 300mm along King Rd	300	mm	514	Upsize	3720	$ 1,910,902		-	$ 1,910,902	Exempt	$ 286,635	$ 573,270	$ 2,770,000	9 ~ 12	2031	DC Fundable
WW-NOBL-05	Sewer Upgrade from 200 mm to 250mm along Paradise Valley Trail and Kettle Vly Trl	250	mm	315	Upsize	3490	$ 1,099,869		-	$ 1,099,869	Exempt	$ 164,980	$ 329,961	$ 1,590,000	6~9	2036	Local Service
WW-NOBL-06	Sewer Upgrade from 200 mm to 300mm along Parkheigths Trail	300	mm	82	Upsize	3720	$ 304,792		-	$ 304,792	Exempt	$ 45,719	$ 91,438	$ 440,000	6~9	2036	DC Fundable
WW-NOBL-07	Sewer Upgrade from 300 mm to 450 mm through Nobleton Park pipe	450	mm	228	Upsize	4380	$ 997,939		-	$ 997,939	Exempt	$ 149,691	$ 299,382	$ 1,450,000	6~9	2041	DC Fundable
WW-NOBL-07-A	Sewer Upgrade from 300 mm to 450 mm along Parkview pipe	450	mm	137	Upsize	4380	$ 599,053		-	$ 599,053	Exempt	$ 89,858	$ 179,716	$ 870,000	6~9	2041	DC Fundable
WW-NOBL-07-B	Sewer Upgrade from 300 mm to 400 mm along Crestview Rd	400	mm	250	Upsize	4240	$ 1,061,950		-	$ 1,061,950	Exempt	$ 159,293	$ 318,585	$ 1,540,000	6~9	2041	DC Fundable
	Sewer Upgrade from 250 mm to 400 mm from Crestview to Highway 27	400	mm	149	Upsize	4240	$ 633,442	1	$ 150,000	$ 783,442	Exempt	$ 117,516	$ 235,033	$ 1,140,000	6~9	2041	DC Fundable
WW-NOBL-07-C	Sewer Upgrade from 250 mm to 400 mm along Highway 27	400	mm	190	Upsize	4240	$ 804,198	1	$ 150,000	$ 954,198	Exempt	$ 143,130	$ 286,259	$ 1,380,000	6~9	2041	DC Fundable
WW-NOBL-07-D	Sewer Upgrade from 250 mm to 400 mm along Oliver Emerson Ave	400	mm	258	Upsize	4240	$ 1,093,920	1	$ 150,000	$ 1,243,920	Exempt	$ 186,588	$ 373,176	$ 1,800,000	6~9	2041	DC Fundable
WW-NOBL-07-E	Sewer Upgrade from 200 mm to 300 mm along Larkie Ave	300	mm	485	Upsize	3720	$ 1,804,200		-	$ 1,804,200	Exempt	$ 270,630	$ 541,260	$ 2,620,000	9 ~ 12	2041	DC Fundable
WW-NOBL-07-F	Sewer Upgrade from 200 mm to 300 mm along Wilkie Ave	300	mm	103	Upsize	3720	$ 383,160		-	$ 383,160	Exempt	$ 57,474	$ 114,948	$ 560,000	6~9	2041	DC Fundable
WW-NOBL-08	Sewer Upgrade from 600 mm to 750mm near Janet Ave to SPS	750	mm	43	Upsize	5760	$ 247,680		-	$ 247,680	Exempt	$ 37,152	$ 74,304	$ 360,000	6~9	2036	DC Fundable
														$ 24,220,000			

*An allowance of $150,000 per wetland crossing is included. Actual costs depend on crossing length, site conditions, and the construction method used, such as HDD.

King City 2051 Upgrades				
		WAT-KING-02		
ID	**From Node**	**To Node**	**Length (m)**	**Upgraded Diameter (mm)**
KWWM_0058	J236	J200	103	200
KWWM_0179	J202	J88	112	200
KWWM_0372	J1004	J202	104	200
KWWM_0373	J1236	J88	144	200
KWWM_0371	J1236	J1238	157	200
KWWM_0071	J200	J1238	115	200
		WAT-KING-03		
ID	**From Node**	**To Node**	**Length (m)**	**Upgraded Diameter (mm)**
KWWM_0220	J102	J434	141	200
		WAT-KING-04		
ID	**From Node**	**To Node**	**Length (m)**	**Upgraded Diameter (mm)**
KWWM_0070	J94	J30	181	200
KWWM_0250	J974	J94	329	200
		WAT-KING-05		
ID	**From Node**	**To Node**	**Length (m)**	**Upgraded Diameter (mm)**
KWWM_0018	J30	J32	336	300
KWWM_0057	J104	J106	441	300
KWWM_0064	J112	J30	125	300
KWWM_0112	J164	J166	54	300
KWWM_0113	J168	J170	55	300
KWWM_0015	J32	J524	224	300
KWWM_0069	J112	J560	198	300
KWWM_0259	J106	J974	89	300
KWWM_0209	J170	J572	77	300
KWWM_0205	J572	J166	200	300
KWWM_0204	J164	J524	150	300
KWWM_0248	J974	J112	755	300
		WAT-KING-06		
ID	**From Node**	**To Node**	**Length (m)**	**Upgraded Diameter (mm)**
KWWM_0346	J972	J566	222	200
KWWM_0074	J108	J126	168	200
KWWM_0324	J972	J126	195	200
		WAT-KING-08		
ID	**From Node**	**To Node**	**Length (m)**	**Upgraded Diameter (mm)**
KWWM_0225	J136	J138	262	250
KWWM_0082	J460	J136	91	250
KWWM_0228	J474	J476	125	250
KWWM_0229	J478	J480	53	250
KWWM_0234	J138	J474	10	250
KWWM_0224	J480	J456	317	250
KWWM_0185	J476	J132	178	250
KWWM_0078	J132	J478	180	250
		WAT-KING-09		
ID	**From Node**	**To Node**	**Length (m)**	**Proposed Diameter (mm)**
P345	J926	J1645	630	300
P347	J1645	J1647	425	300
P349	J1647	J1655	1118	300

WAT-KING-10				
ID	From Node	To Node	Length (m)	Proposed Diameter (mm)
P317	J1569	J926	334	300
P375	J1569	J1655	404	300
WAT-KING-11				
ID	From Node	To Node	Length (m)	Proposed Diameter (mm)
P357	J1585	J1651	429	300
P365	J1653	J1637	348	300
P367	J1653	J1585	231	300
WAT-KING-12				
ID	From Node	To Node	Length (m)	Proposed Diameter (mm)
P385	J926	J1659	653	300
WAT-KING-13				
ID	From Node	To Node	Length (m)	Proposed Diameter (mm)
P321	J1637	J1685	520	200
P383	J1657	J1497	219	200
P427	J1685	J1657	96	200
WAT-LCL-01				
ID	From Node	To Node	Length (m)	Proposed Diameter (mm)
P429	J1659	J1717	582	300
P487	J1717	J1719	266	300
P489	J1719	J1685	153	300
WAT-LCL-02				
ID	From Node	To Node	Length (m)	Proposed Diameter (mm)
P377	J1579	J1567	255	300
P363	J1579	J1653	385	300
P379	J116	J1579	341	300
P207	J1567	J1569	192	300
P381	J1655	J1567	543	300
WAT-LCL-03				
ID	From Node	To Node	Length (m)	Proposed Diameter (mm)
P147	J1531	J1661	78	150
P389	J1661	J1533	191	150
P481	J1661	J470	266	150
P149	J1533	J1527	107	150
P153	J1531	J1527	177	150
P477	J1533	J1711	117	150
P479	J1527	J1713	90	150
WAT-LCL-04				
ID	From Node	To Node	Length (m)	Proposed Diameter (mm)
P485	J242	J1715	253	150
Nobleton 2051 Upgrades				
WAT-LCL-05				
ID	From Node	To Node	Length (m)	Proposed Diameter (mm)
P491	J1286	J1176	197	200
NWWM_0171	J1286	J1186	3	200

*The pipe information in this table reflects the proposed pipe conditions.

King City 2051 Upgrades

WW-KING-01

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
KSPI_0668	5	KSMH_0711	275.02	274.74	450	55.41	152.19	0.75
KSPI_0677	KSMH_0712	KSPS_0007	274.51	274.47	450	17.73	181.72	1.34
KSPI_0670	KSMH_0711	KSMH_0712	274.69	274.57	450	24.68	180.70	0.91

WW-KING-02

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
KSPI_0356	KSMH_0164	KSMH_0102	293.92	293.05	450	104.46	188.66	0.72
KSPI_0357	KSMH_0415	KSMH_0447	283.98	281.67	450	101.95	198.30	0.46
KSPI_0008	KSMH_0447	KSMH_0386	281.61	281.17	450	20.36	211.78	0.47
KSPI_0101	KSMH_0102	KSMH_0466	293.04	291.01	450	102.69	197.87	0.49
KSPI_0095	KSMH_0380	KSMH_0415	287.42	284.02	450	87.72	198.16	0.35
KSPI_0244	KSMH_0466	KSMH_0380	291.00	287.46	450	110.01	197.92	0.39
26	KSMH_0718	KSMH_0164	294.15	294.00	450	12.97	185.07	0.88

WW-KING-03

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
KSPI_0602	KSMH_0585	KSMH_0586	287.45	287.09	250	63.13	42.16	0.94
KSPI_0599	KSMH_0583	KSMH_0584	287.79	287.68	250	29.30	41.88	1.15
KSPI_0603	KSMH_0586	KSMH_0587	287.07	287.02	250	9.73	42.26	0.99
KSPI_0575	KSMH_0589	KSMH_0588	288.53	288.32	250	43.86	41.07	1.00
KSPI_0601	KSMH_0584	KSMH_0585	287.67	287.47	250	31.56	41.98	0.88
KSPI_0600	KSMH_0587	KSMH_0599	286.98	285.28	250	76.58	42.34	0.48
KSPI_0598	KSMH_0588	KSMH_0583	288.34	287.86	250	45.56	41.25	0.67

WW-KING-05

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
KSPI_0243	KSMH_0071	KSMH_0122	283.43	283.22	450	71.18	136.55	0.88
KSPI_0238	KSMH_0497	KSMH_0071	283.68	283.43	450	70.81	136.55	0.80
KSPI_0163	KSMH_0501	KSMH_0310	284.32	284.19	450	42.73	136.55	0.87
KSPI_0019	KSMH_0203	KSMH_0014	285.54	285.42	450	32.36	136.55	0.78
KSPI_0298	KSMH_0122	KSMH_0412	281.07	280.35	450	83.51	138.00	0.52
KSPI_0326	KSMH_0076	KSMH_0203	285.90	285.59	450	62.42	136.55	0.68
KSPI_0160	KSMH_0101	KSMH_0111	284.97	284.66	450	118.31	136.55	0.93
KSPI_0270	KSMH_0356	KSMH_0497	283.90	283.69	450	78.52	136.55	0.92
KSPI_0018	KSMH_0310	KSMH_0356	284.17	283.93	450	75.79	136.55	0.85
KSPI_0104	KSMH_0014	KSMH_0101	285.36	284.98	450	118.50	136.55	0.84
KSPI_0034	KSMH_0111	KSMH_0501	284.66	284.34	450	117.49	136.55	0.92

WW-KING-06

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
KSPI_0088	KSMH_0359	KSMH_0201	288.65	288.59	350	12.96	82.97	0.83
KSPI_0273	KSMH_0495	KSMH_0500	289.35	288.99	350	69.86	68.40	0.65
KSPI_0327	KSMH_0500	KSMH_0359	288.97	288.67	350	70.61	82.97	0.87
KSPI_0328	KSMH_0257	KSMH_0495	289.75	289.36	350	77.35	60.69	0.58

WW-KING-07

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
KSPI_0007	KSMH_0416	KSMH_0347	296.23	295.86	525	21.54	233.62	0.41
KSPI_0161	KSMH_0365	KSMH_0416	297.40	297.18	525	18.48	230.30	0.49
KSPI_0002	KSMH_0347	KSMH_0156	294.92	294.85	525	16.38	238.41	0.41
KSPI_0055	KSMH_0062	KSMH_0436	300.55	299.73	500	132.01	198.48	0.67
KSPI_0188	KSMH_0417	KSMH_0365	297.92	297.46	525	35.16	227.16	0.46
KSPI_0158	KSMH_0436	KSMH_0433	299.69	299.35	525	80.51	218.46	0.78
KSPI_0177	KSMH_0433	KSMH_0417	299.34	299.13	525	88.29	222.37	1.06
KSPI_0024	KSMH_0171	KSMH_0062	301.10	300.57	500	133.53	179.21	0.75

WW-KING-08

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
KSPI_0311	KSMH_0095	KSMH_0348	295.19	293.30	250	62.34	26.59	0.26
KSPI_0172	KSMH_0437	KSMH_0440	297.57	297.13	250	84.50	25.78	0.60
KSPI_0131	KSMH_0293	KSMH_0342	298.49	298.04	250	85.00	22.38	0.51
KSPI_0133	KSMH_0440	KSMH_0334	297.09	296.93	250	30.19	26.33	0.61
KSPI_0310	KSMH_0334	KSMH_0095	296.90	295.22	250	73.60	26.33	0.32
KSPI_0140	KSMH_0342	KSMH_0437	298.00	297.58	250	86.00	24.84	0.60
KSPI_0316	KSMH_0348	KSMH_0271	293.27	293.18	250	12.56	26.69	0.53

Nobleton 2051 Upgrades

WW-NOBL-01

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
NSPI_0716	NSMH_0571	NSMH_0570	268.71	267.44	250	87.87	25.14	0.35
NSPI_0717	NSMH_0570	NSMH_0572	267.30	266.64	250	57.56	26.63	0.42
NSPI_0718	NSMH_0572	NSMH_0573	266.50	266.11	250	69.95	26.82	0.60
NSPI_0719	NSMH_0573	NSMH_0574	266.09	265.88	250	43.20	27.06	0.65
NSPI_0720	NSMH_0574	NSMH_0575	265.86	265.37	250	93.37	27.41	0.63
NSPI_0721	NSMH_0575	NSMH_0576	265.32	262.69	250	109.69	27.76	0.30

WW-NOBL-02

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
NSPI_0259	NSMH_0620	NSMH_0093	254.32	254.23	450	17.89	128.27	0.63
NSPI_0513	NSMH_0132	41	258.23	258.18	450	26.01	105.99	0.89
NSPI_0283	NSMH_0258	NSMH_0298	257.68	257.39	450	64.76	106.30	0.56
NSPI_0300	41	NSMH_0372	258.18	258.00	450	47.40	106.11	0.60
NSPI_0208	NSMH_0391	NSMH_0463	255.84	255.50	450	62.89	107.25	0.48
NSPI_0217	NSMH_0118	NSMH_0390	254.87	254.68	450	40.43	115.59	0.59
NSPI_0053	NSMH_0334	NSMH_0382	256.59	256.46	450	28.71	106.79	0.55
NSPI_0044	NSMH_0372	NSMH_0258	257.95	257.75	450	40.57	106.24	0.53
NSPI_0050	NSMH_0463	NSMH_0118	255.42	254.92	450	99.30	109.44	0.54
NSPI_0215	NSMH_0263	NSMH_0334	257.04	256.61	450	80.14	106.61	0.51
NSPI_0002	NSMH_0298	NSMH_0263	257.35	257.07	450	58.25	106.44	0.54
NSPI_0086	NSMH_0382	NSMH_0391	256.43	255.88	450	109.60	107.10	0.53
NSPI_0490	NSMH_0390	NSMH_0620	254.61	254.41	450	49.86	115.99	0.64

WW-NOBL-03

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
NSPI_0016	NSMH_0266	NSMH_0342	261.46	261.16	250	63.70	21.55	0.53

WW-NOBL-04

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
NSPI_0204	NSMH_0085	NSMH_0252	260.50	259.50	300	59.95	62.22	0.50
NSPI_0126	NSMH_0108	NSMH_0348	257.82	257.42	300	83.67	33.66	0.50
NSPI_0012	NSMH_0342	NSMH_0085	261.09	260.51	300	92.19	55.36	0.72
NSPI_0220	NSMH_0348	NSMH_0233	257.40	255.56	300	95.07	102.00	0.76
NSPI_0180	NSMH_0252	NSMH_0348	259.42	259.15	300	30.26	63.37	0.69
NSPI_0131	NSMH_0312	NSMH_0108	258.24	257.89	300	77.05	31.97	0.49
NSPI_0231	NSMH_0233	NSMH_0093	255.44	254.33	300	75.49	106.36	0.90

WW-NOBL-05

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
NSPI_0474	NSMH_0278	NSMH_0458	265.40	265.12	250	51.24	32.36	0.73
NSPI_0189	NSMH_0283	NSMH_0100	263.85	263.56	250	58.81	34.03	0.81
NSPI_0476	NSMH_0165	39	264.82	264.66	250	17.83	33.68	0.60
NSPI_0144	NSMH_0141	NSMH_0283	264.36	263.86	250	100.06	33.86	0.80
NSPI_0442	NSMH_0458	NSMH_0165	265.12	264.84	250	59.41	32.52	0.79
NSPI_0160	39	NSMH_0141	264.66	264.41	250	27.79	33.75	0.60

WW-NOBL-06

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q

NSPI_0127	NSMH_0100	NSMH_0147	263.56	263.18	300	81.93	43.29	0.66

WW-NOBL-07

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
NSPI_0129	NSMH_0371	NSMH_0389	250.45	250.38	400	21.86	109.66	0.92
NSPI_0029	NSMH_0623	NSMH_0369	251.66	251.11	300	106.93	107.61	1.55
NSPI_0073	NSMH_0322	NSMH_0371	250.67	250.48	300	24.11	107.61	1.24
NSPI_0286	NSMH_0369	NSMH_0322	251.09	250.74	300	74.95	107.61	1.62

WW-NOBL-07-A

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
NSPI_0498	NSMH_0337	NSMH_0623	251.88	251.69	300	29.29	107.61	1.37
NSPI_0035	NSMH_0076	NSMH_0381	252.59	252.29	300	47.96	105.70	1.36
NSPI_0241	NSMH_0381	NSMH_0337	252.26	251.90	300	59.52	105.73	1.39

WW-NOBL-07-B

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
NSPI_0027	NSMH_0324	NSMH_0076	252.70	252.62	300	18.98	59.47	0.93
NSPI_0147	NSMH_0129	NSMH_0365	253.24	253.05	300	40.05	59.13	0.88
NSPI_0039	NSMH_0109	NSMH_0129	253.76	253.26	300	106.12	58.93	0.89
NSPI_0400	NSMH_0050	NSMH_0009	254.54	253.94	250	118.91	56.69	1.34
NSPI_0441	NSMH_0009	42	253.90	253.87	300	8.19	58.89	0.87
NSPI_0440	42	NSMH_0109	253.87	253.82	300	14.43	58.89	0.67
NSPI_0399	NSMH_0049	NSMH_0050	254.78	254.58	250	30.49	54.69	1.13
NSPI_0272	NSMH_0365	NSMH_0324	253.02	252.73	300	62.69	59.40	0.90

WW-NOBL-07-C

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
NSPI_0397	NSMH_0036	NSMH_0048	255.66	255.47	250	55.66	54.69	1.57
NSPI_0398	NSMH_0048	NSMH_0049	255.46	254.87	250	116.20	54.69	1.29
NSPI_0396	NSMH_0008	NSMH_0036	256.09	255.90	200	17.81	0.46	0.01

WW-NOBL-07-D

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
NSPI_0395	NSMH_0035	NSMH_0036	256.03	255.68	250	79.16	54.23	1.45
NSPI_0394	NSMH_0046	NSMH_0035	256.36	256.05	250	74.90	46.73	1.24
NSPI_0393	NSMH_0045	NSMH_0046	256.58	256.38	250	43.80	46.64	1.22
NSPI_0392	NSMH_0044	NSMH_0045	256.86	256.62	250	60.26	46.64	1.24

WW-NOBL-07-E

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
NSPI_0429	NSMH_0016	NSMH_0017	275.38	257.09	200	35.92	24.59	0.93
NSPI_0430	NSMH_0017	NSMH_0044	257.06	256.93	200	25.58	24.62	0.98
NSPI_0428	NSMH_0015	NSMH_0016	258.02	257.41	200	98.48	24.50	0.95
NSPI_0424	NSMH_0013	NSMH_0014	258.95	258.65	200	67.04	24.20	1.10
NSPI_0425	NSMH_0014	NSMH_0015	258.62	258.04	200	98.53	24.29	0.96
NSPI_0422	NSMH_0011	NSMH_0012	259.89	259.59	200	57.43	23.77	1.00
NSPI_0423	NSMH_0012	NSMH_0013	259.55	258.97	200	102.15	24.05	0.97

WW-NOBL-07-F

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
NSPI_0413	NSMH_0052	NSMH_0053	260.38	260.25	200	29.42	37.59	1.72
NSPI_0414	NSMH_0053	NSMH_0011	260.23	259.91	200	73.88	37.74	1.74

WW-NOBL-08

ID	From ID	To ID	From Invert	To Invert	Diameter (mm)	Length (m)	Total Flow (L/s)	Pipe Capacity, q/Q
NSPI_0296	NSMH_0389	54	247.88	247.70	600	43.17	427.63	1.32
OUTLET	54	OUTLET_MH	247.00	246.00	600	23.00	468.74	0.37

*Total Flow (L/s) is calculated under future 2051 conditions with system upgrades

*The pipe information in this table reflects the proposed pipe conditions.