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Project Number: 1474

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Attention: **Steve Pichette, P.Eng**

Subject: **BCDC Phase 2 – Preliminary HGL Analysis**

Introduction

Phase 2 of the Barrhaven Conservancy Development (aka Concervancy East) is located in Barrhaven, Ontario, north of the Jock River, south of the Fraser Clarke Creek and east of the Foster Creek. The proposed development is approximately 59.26 ha that will primarily comprise of single and townhouse residential lots. As a part of the City of Ottawa's review of the proposed development draft plan submitted in December 2020, it was requested that a preliminary hydraulic grade line (HGL) assessment be completed for the site to ensure that the proposed minor system within the development is adequately sized to safely convey flows to the Jock River under various conditions. As such the following memo outlines the approach taken in assessing the development's HGL and summarises the findings of this analysis.

Analysis Approach

Preliminary hydraulic grade line calculations for the proposed BCDC Phase 2 development were completed using PCSWMM modelling software. Pipe data, storm sewer layout and Rational Method flows in the storm sewer are as provided by DSEL. The Rational Method flows were calculated based on the 2-, 5- or 10-year level of service requirements, and the 100-year flows in the hydraulic grade line calculations were estimated as 14% greater than the Rational Method flows, to account for the additional flows captured by catchbasin grates, lead pipes and/or inlet control devices under the higher surface water depths of the 100-year storm. The proposed storm sewer infrastructure data was extracted from DSEL's detailed drawings and incorporated into a PCSWMM model, and flows derived by DSEL's rational method calculations were then applied to each Maintenance Hole (MH) in the model as steady flows (using the baseflow option). Exit losses were applied to all storm sewer pipes in the system based on the angle of the downstream connection.

As with BCDC Phase 1, the preliminary HGL analysis was completed under two conditions:

- 100-year rainfall event on the development and a 5-year spring water level on the Jock River
- 5-year rainfall event on the development and a 100-year spring water level on the Jock River

Note that the water level along the Jock River through the length of this development varies, and as such the nearest corresponding upstream water surface elevation calculated by RVCA's HEC-RAS floodplain mapping model of the Jock River was applied at each of the respective storm sewer outlets. Also, note that assuming a 5-year spring water level on the Jock River for a 100-year rainfall event on the development is an inherently conservative assumption, as the critical storm for the proposed development is a summer (intense rainfall) event while the critical storm for the Jock River is a Spring (snowmelt + rainfall) event. A preliminary Single Station Flood Frequency analysis was completed by JFSA using only summer flows (from May 15 to October 31) based on historical flow data recorded at the Moodie Drive Water Survey Canada gauge. This analysis found that the 100-year summer flow on the Jock River is around 99 m³/s, while the 5-year spring flow is around 123 m³/s.

Results

The maximum HGL obtained at each MH has been extracted from the 100-year event/5-year water level scenario and 5-year event/100-year water level scenario, with the results from this analysis provided in Tables 1 & 2, respectively. As all proposed units within this development will have sump pumps, the simulated HGL was compared against the top of MH elevation to ensure that all storm sewers infrastructure is sufficiently sized and is not surcharging to the major system during the assessed events.

From this analysis, it was found that the critical scenario for HGL within the development was the 5-year development event and 100-year water level on the Jock River scenario. Based on this scenario, no MHs will have an HGL elevation above the top of MH (minimum freeboard of 0.4 m at MH-6152), with an average freeboard of 0.76 m from the top of MH throughout the proposed development. For the 100-year event and 5-year water level on the Jock River, no MHs will have HGL elevations above the top of MH (minimum freeboard of 1.06 m at MH-6152), with an average freeboard of 1.39 m from the top of MH throughout the proposed development. As such it can be concluded that the proposed storm sewer infrastructure is sufficiently sized, to safely convey minor system flows from the development under various extreme conditions.

Conclusion

A preliminary HGL analysis for Phase 2 of the Barrhaven Conservancy Development was completed using PCSWMM based on storm sewer and flow details provided by DSEL. From this analysis, it was found that the proposed storm sewer infrastructure is sufficiently sized to convey all minor system flows to the Jock River and will not result in any MHs surcharging to the street under extreme events such as 100-year rainfall event on the development and a 5-year spring water level on the Jock River and, a 5-year rainfall event on the development and a 100-year spring water level on the Jock River. With the former being the more critical scenario for the HGL within the development.

Yours truly,
J.F Sabourin and Associates Inc.



Jonathon Burnett, P.Eng
Water Resources Engineer

cc: J.F Sabourin, M.Eng, P.Eng
Director of Water Resources Projects



Figures

Figure 1: PCSWMM Model Overview

Tables

Table 1: HGL Result Tables - 100-Year BCDC Development & 5-Year Jock River
Table 2: HGL Result Tables - 5-Year BCDC Development & 100-Year Jock River

Attachments

Attachment A: DSEL Rational Method Calculations

Attachment B: PCSWMM Model Results files



Table 1: BCDC Phase 2 - Preliminary HGL Analysis
100-Year BCDC Development & 5-Year Jock River

MH ID		Invert Elevation		Top of MH		Max HGL		Freeboard	
Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream
MH-1101	MH-1102	90.86	90.59	93.26	93.14	91.86	91.71	1.40	1.43
MH-1102	MH-1103	90.59	90.35	93.14	92.98	91.71	91.57	1.43	1.41
MH-1103	MH-1104	90.35	90.16	92.98	92.82	91.57	91.46	1.41	1.36
MH-1104	MH-1105	90.16	89.95	92.82	92.62	91.46	91.32	1.36	1.30
MH-1105	MH-1106	89.95	89.77	92.62	92.50	91.32	91.16	1.30	1.34
MH-1106	MH-HW101	89.77	89.67	92.50	92.50	91.16	91.09	1.34	1.41
MH-1201	MH-1202	91.44	91.13	93.39	93.21	92.03	91.87	1.36	1.34
MH-1202	MH-1204	91.13	90.84	93.21	93.16	91.87	91.82	1.34	1.34
MH-1203	MH-1204	91.40	90.84	93.34	93.16	92.02	91.82	1.32	1.34
MH-1204	MH-1210	90.84	90.60	93.16	93.07	91.82	91.77	1.34	1.30
MH-1205	MH-1207	91.49	91.20	93.36	93.25	92.02	91.93	1.34	1.32
MH-1206	MH-1207	91.47	91.20	93.27	93.25	91.93	91.93	1.34	1.32
MH-1207	MH-1209	91.20	90.92	93.25	93.16	91.93	91.84	1.32	1.32
MH-1208	MH-1209	91.41	90.92	93.28	93.16	92.00	91.84	1.28	1.32
MH-1209	MH-1210	90.92	90.60	93.16	93.07	91.84	91.77	1.32	1.30
MH-1210	MH-1218	90.60	90.28	93.07	92.96	91.77	91.62	1.30	1.34
MH-1211	MH-1213	91.57	91.21	93.36	93.27	92.03	91.87	1.33	1.40
MH-1212	MH-1213	91.51	91.21	93.31	93.27	91.89	91.87	1.42	1.40
MH-1213	MH-1216	91.21	90.93	93.27	93.19	91.87	91.83	1.40	1.36
MH-1214	MH-1216	91.41	90.93	93.28	93.19	91.92	91.83	1.36	1.36
MH-1215	MH-1216	91.42	90.93	93.22	93.19	91.84	91.83	1.38	1.36
MH-1216	MH-1217	90.93	90.78	93.19	93.09	91.83	91.78	1.36	1.31
MH-1217	MH-1218	90.78	90.28	93.09	92.96	91.78	91.62	1.31	1.34
MH-1218	MH-1220	90.28	90.17	92.96	92.87	91.62	91.56	1.34	1.31
MH-1219	MH-1220	91.11	90.17	92.98	92.87	91.67	91.56	1.31	1.31
MH-1220	MH-1221	90.17	90.07	92.87	92.78	91.56	91.49	1.31	1.29
MH-1221	MH-1222	90.07	89.94	92.78	92.68	91.49	91.41	1.29	1.27
MH-1222	MH-1223	89.94	89.77	92.68	92.57	91.41	91.28	1.27	1.29
MH-1223	MH-1224	89.77	89.69	92.57	92.55	91.28	91.22	1.29	1.33
MH-1224	MH-1230	89.69	89.56	92.55	92.50	91.22	91.09	1.33	1.41
MH-1227	MH-1228	90.61	90.39	92.71	92.53	91.19	91.13	1.52	1.40
MH-1228	MH-1229	90.39	90.34	92.53	92.51	91.13	91.12	1.40	1.39
MH-1229	MH-1230	90.34	89.56	92.51	92.50	91.12	91.09	1.39	1.41
MH-1230	MH-HW102	89.56	89.55	92.50	92.50	91.09	91.09	1.41	1.41
MH-2101	MH-2102	91.01	90.81	92.81	92.87	91.44	91.42	1.37	1.45
MH-2102	MH-2103	90.81	90.54	92.87	92.77	91.42	91.34	1.45	1.43
MH-2103	MH-2104	90.54	90.25	92.77	92.67	91.34	91.25	1.43	1.42
MH-2104	MH-2108	90.25	90.07	92.67	92.57	91.25	91.19	1.42	1.38
MH-2105	MH-2106	90.91	90.64	92.87	92.67	91.45	91.25	1.42	1.42
MH-2106	MH-2107	90.64	90.46	92.67	92.65	91.25	91.22	1.42	1.43
MH-2107	MH-2108	90.46	90.07	92.65	92.57	91.22	91.19	1.43	1.38
MH-2108	MH-2114	90.07	89.84	92.57	92.50	91.19	91.09	1.38	1.41
MH-2109	MH-2111	90.99	90.66	92.79	92.72	91.27	91.21	1.52	1.51
MH-2110	MH-2111	90.94	90.66	92.74	92.72	91.21	91.21	1.53	1.51
MH-2111	MH-2112	90.66	90.38	92.72	92.62	91.21	91.14	1.51	1.48
MH-2112	MH-2113	90.38	90.22	92.62	92.52	91.14	91.10	1.48	1.42
MH-2113	MH-2114	90.22	89.84	92.52	92.50	91.10	91.09	1.42	1.41
MH-2114	MH-HW201	89.84	89.80	92.50	92.50	91.09	91.06	1.41	1.44
MH-2201	MH-2202	91.51	91.21	93.31	93.22	91.72	91.68	1.59	1.54
MH-2202	MH-2204	91.21	90.99	93.22	93.05	91.68	91.61	1.54	1.44
MH-2203	MH-2204	91.35	90.99	93.24	93.05	91.61	91.61	1.63	1.44
MH-2204	MH-2207	90.99	90.78	93.05	92.96	91.61	91.55	1.44	1.41
MH-2205	MH-2206	91.42	91.12	93.22	93.13	91.71	91.64	1.51	1.49
MH-2206	MH-2207	91.12	90.78	93.13	92.96	91.64	91.55	1.49	1.41
MH-2207	MH-2210	90.78	90.54	92.96	92.86	91.55	91.46	1.41	1.40
MH-2208	MH-2209	91.14	90.85	93.09	92.99	91.63	91.56	1.46	1.43
MH-2209	MH-2210	90.85	90.54	92.99	92.86	91.56	91.46	1.43	1.40
MH-2210	MH-2213	90.54	90.31	92.86	92.77	91.46	91.39	1.40	1.38
MH-2211	MH-2212	91.11	90.82	92.98	92.88	91.64	91.52	1.34	1.36
MH-2212	MH-2213	90.82	90.31	92.88	92.77	91.52	91.39	1.36	1.38
MH-2213	MH-2215	90.31	90.14	92.77	92.68	91.39	91.31	1.38	1.37
MH-2214	MH-2215	90.94	90.14	92.73	92.68	91.32	91.31	1.41	1.37
MH-2215	MH-2216	90.14	90.00	92.68	92.57	91.31	91.24	1.37	1.33
MH-2216	MH-2217	90.00	89.86	92.57	92.45	91.24	91.16	1.33	1.29
MH-2217	MH-2218	89.86	89.81	92.45	92.44	91.16	91.13	1.29	1.31
MH-2218	MH-2225	89.81	89.69	92.44	92.40	91.13	91.06	1.31	1.34
MH-2219	MH-2221	90.92	90.67	92.72	92.57	91.32	91.29	1.40	1.28
MH-2220	MH-2221	90.92	90.67	92.72	92.57	91.30	91.29	1.42	1.28
MH-2221	MH-2222	90.67	90.36	92.57	92.56	91.			

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MH ID		Invert Elevation		Top of MH		Max HGL		Freeboard	
Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream
MH-2301	MH-2302	91.37	91.08	93.25	93.14	91.93	91.85	1.32	1.29
MH-2302	MH-2304	91.08	90.87	93.14	93.03	91.85	91.73	1.29	1.30
MH-2303	MH-2304	91.26	90.87	93.06	93.03	91.73	91.73	1.33	1.30
MH-2304	MH-2308	90.87	90.52	93.03	92.94	91.73	91.62	1.30	1.32
MH-2305	MH-2306	91.21	90.99	93.15	93.05	91.76	91.71	1.39	1.34
MH-2306	MH-2308	90.99	90.52	93.05	92.94	91.71	91.62	1.34	1.32
MH-2307	MH-2308	91.26	90.52	93.11	92.94	91.65	91.62	1.46	1.32
MH-2308	MH-2312	90.52	90.28	92.94	92.85	91.62	91.55	1.32	1.30
MH-2309	MH-2310	91.11	90.82	93.07	92.96	91.75	91.65	1.32	1.31
MH-2310	MH-2312	90.82	90.28	92.96	92.85	91.65	91.55	1.31	1.30
MH-2311	MH-2312	91.10	90.28	92.90	92.85	91.64	91.55	1.26	1.30
MH-2312	MH-2316	90.28	90.12	92.85	92.75	91.55	91.48	1.30	1.27
MH-2313	MH-2314	91.02	90.80	92.96	92.86	91.63	91.57	1.33	1.29
MH-2314	MH-2316	90.80	90.12	92.86	92.75	91.57	91.48	1.29	1.27
MH-2315	MH-2316	91.01	90.12	92.80	92.75	91.52	91.48	1.28	1.27
MH-2316	MH-2318	90.12	90.01	92.75	92.67	91.48	91.40	1.27	1.27
MH-2317	MH-2318	90.92	90.01	92.72	92.67	91.36	91.40	1.36	1.27
MH-2317	MH-2323	90.92	90.68	92.72	92.69	91.36	91.32	1.36	1.37
MH-2318	MH-2319	90.01	89.86	92.67	92.55	91.40	91.30	1.27	1.25
MH-2319	MH-2320	89.86	89.72	92.55	92.45	91.30	91.20	1.25	1.25
MH-2320	MH-2321	89.72	89.67	92.45	92.44	91.20	91.16	1.25	1.28
MH-2321	MH-2327	89.67	89.56	92.44	92.40	91.16	91.07	1.28	1.33
MH-2322	MH-2323	90.92	90.68	92.72	92.69	91.33	91.32	1.39	1.37
MH-2323	MH-2324	90.68	90.37	92.69	92.57	91.32	91.20	1.37	1.37
MH-2324	MH-2325	90.37	90.19	92.57	92.45	91.20	91.13	1.37	1.32
MH-2325	MH-2326	90.19	90.10	92.45	92.43	91.13	91.11	1.32	1.32
MH-2326	MH-2327	90.10	89.56	92.43	92.40	91.11	91.07	1.32	1.33
MH-2327	MH-HW203	89.56	89.55	92.40	92.40	91.07	91.06	1.33	1.34
MH-3101	MH-3102	90.74	90.44	92.54	92.61	91.30	91.26	1.24	1.35
MH-3102	MH-3103	90.44	90.20	92.61	92.49	91.26	91.09	1.35	1.40
MH-3103	MH-3104	90.20	89.84	92.49	92.48	91.09	91.07	1.40	1.41
MH-3104	MH-HW301	89.84	89.79	92.48	92.48	91.07	91.03	1.41	1.45
MH-3105	MH-3107	90.81	90.30	92.61	92.58	91.34	91.24	1.27	1.34
MH-3106	MH-3107	90.85	90.30	92.65	92.58	91.28	91.24	1.37	1.34
MH-3107	MH-3108	90.30	90.07	92.58	92.41	91.24	91.16	1.34	1.25
MH-3108	MH-3109	90.07	89.98	92.41	92.41	91.16	91.14	1.25	1.27
MH-3109	MH-3104	89.98	89.84	92.41	92.48	91.14	91.07	1.27	1.41
MH-3150	MH-HW302	89.83	89.79	92.42	92.42	91.04	91.02	1.38	1.40
MH-3201	MH-3202	90.95	90.67	92.90	92.80	91.45	91.37	1.45	1.43
MH-3202	MH-3204	90.67	90.47	92.80	92.70	91.37	91.28	1.43	1.42
MH-3203	MH-3204	90.89	90.47	92.84	92.70	91.40	91.28	1.44	1.42
MH-3204	MH-3208	90.47	90.23	92.70	92.61	91.28	91.22	1.42	1.39
MH-3205	MH-3206	90.93	90.66	92.80	92.71	91.44	91.35	1.36	1.36
MH-3206	MH-3208	90.66	90.23	92.71	92.61	91.35	91.22	1.36	1.39
MH-3207	MH-3208	90.87	90.23	92.66	92.61	91.25	91.22	1.41	1.39
MH-3208	MH-3209	90.23	90.07	92.61	92.52	91.22	91.14	1.39	1.38
MH-3209	MH-3210	90.07	89.92	92.52	92.42	91.14	91.06	1.38	1.36
MH-3210	MH-3150	89.92	89.83	92.42	92.42	91.06	91.04	1.36	1.38
MH-3211	MH-3212	90.70	90.46	92.65	92.49	91.27	91.14	1.38	1.35
MH-3212	MH-3213	90.46	90.36	92.49	92.48	91.14	91.12	1.35	1.36
MH-3213	MH-3214	90.36	90.24	92.48	92.41	91.12	91.08	1.36	1.33
MH-3214	MH-3150	90.24	89.83	92.41	92.42	91.08	91.04	1.33	1.38
MH-3301	MH-3303	91.01	90.65	93.04	92.88	91.59	91.49	1.45	1.39
MH-3302	MH-3303	91.16	90.65	92.96	92.88	91.66	91.49	1.30	1.39
MH-3303	MH-3305	90.65	90.48	92.88	92.79	91.49	91.43	1.39	1.36
MH-3304	MH-3305	91.01	90.48	92.88	92.79	91.55	91.43	1.33	1.36
MH-3305	MH-3307	90.48	90.32	92.79	92.70	91.43	91.37	1.36	1.33
MH-3306	MH-3307	90.95	90.32	92.82	92.70	91.54	91.37	1.28	1.33
MH-3307	MH-3309	90.32	90.14	92.70	92.61	91.37	91.31	1.33	1.30
MH-3308	MH-3309	90.81	90.14	92.76	92.61	91.47	91.31	1.29	1.30
MH-3309	MH-3313	90.14	89.98	92.61	92.53	91.31	91.21	1.30	1.32
MH-3310	MH-3311	90.89	90.68	92.83	92.71	91.39	91.32	1.44	1.39
MH-3311	MH-3312	90.68	90.42	92.71	92.62	91.32	91.25	1.39	1.37
MH-3312	MH-3313	90.42	89.98	92.62	92.53	91.25	91.21	1.37	1.32
MH-3313	MH-3314	89.98	89.88	92.53	92.48	91.21	91.13	1.32	1.35
MH-3314	MH-3319	89.88	89.74	92.48	92.40	91.13	91.03	1.35	1.37
MH-3315	MH-3317	90.87	90.33	92.66	92.56	91.27	91.13	1.39	1.43
MH-3316	MH-3317	90.83	90.33	92.63	92.56	91.19	91.13	1.44	1.43
MH-3317	MH-3318	90.33	90.10	92.56	92.40	91.			

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100-Year BCDC Development & 5-Year Jock River

MH ID		Invert Elevation		Top of MH		Max HGL		Freeboard	
Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream
MH-6103	MH-6101	90.55	90.35	92.77	92.55	91.49	91.37	1.28	1.18
MH-6104	MH-6108	90.47	90.05	92.50	92.50	91.26	91.21	1.24	1.29
MH-6106	MH-6107	90.22	90.17	92.55	92.55	91.30	91.29	1.25	1.26
MH-6107	MH-6108	90.17	90.05	92.55	92.50	91.29	91.21	1.26	1.29
MH-6108	MH-HW601	90.05	90.01	92.50	92.50	91.21	91.16	1.29	1.34
MH-6150	MH-6104	90.62	90.47	92.50	92.50	91.35	91.26	1.15	1.24
MH-6152	MH-6150	90.83	90.62	92.50	92.50	91.44	91.35	1.06	1.15
MH-6201	MH-6202	91.24	91.11	93.20	93.14	91.74	91.67	1.46	1.47
MH-6202	MH-6250	91.11	90.97	93.14	93.07	91.67	91.58	1.47	1.49
MH-6204	MH-6205	90.93	90.84	93.09	93.03	91.44	91.44	1.65	1.59
MH-6205	MH-6206	90.84	90.54	93.03	93.00	91.44	91.43	1.59	1.57
MH-6206	MH-6207	90.54	90.34	93.00	92.88	91.43	91.40	1.57	1.48
MH-6207	MH-6215	90.34	90.16	92.88	92.78	91.40	91.36	1.48	1.42
MH-6210	MH-6213	91.14	90.62	92.93	92.86	91.49	91.43	1.44	1.43
MH-6211	MH-6212	91.19	90.90	93.08	92.96	91.72	91.59	1.36	1.37
MH-6212	MH-6213	90.90	90.62	92.96	92.86	91.59	91.43	1.37	1.43
MH-6213	MH-6215	90.62	90.16	92.86	92.78	91.43	91.36	1.43	1.42
MH-6214	MH-6215	90.97	90.16	92.93	92.78	91.55	91.36	1.38	1.42
MH-6215	MH-6217	90.16	90.00	92.78	92.68	91.36	91.29	1.42	1.39
MH-6216	MH-6217	90.95	90.00	92.76	92.68	91.51	91.29	1.25	1.39
MH-6217	MH-6218	90.00	89.81	92.68	92.52	91.29	91.19	1.39	1.33
MH-6218	MH-6223	89.81	89.72	92.52	92.50	91.19	91.16	1.33	1.34
MH-6219	MH-6220	90.96	90.57	92.83	92.74	91.43	91.33	1.40	1.41
MH-6220	MH-6221	90.57	90.34	92.74	92.57	91.33	91.25	1.41	1.32
MH-6221	MH-6222	90.34	90.26	92.57	92.56	91.25	91.23	1.32	1.33
MH-6222	MH-6223	90.26	89.72	92.56	92.50	91.23	91.16	1.33	1.34
MH-6223	MH-HW602	89.72	89.68	92.50	92.50	91.16	91.14	1.34	1.36
MH-6250	MH-6206	90.97	90.54	93.07	93.00	91.58	91.43	1.49	1.57
MH-6301	MH-6303	91.43	91.21	93.23	93.13	91.70	91.65	1.53	1.48
MH-6302	MH-6303	91.37	91.21	93.17	93.13	91.65	91.65	1.52	1.48
MH-6303	MH-6304	91.21	91.00	93.13	93.11	91.65	91.61	1.48	1.50
MH-6304	MH-6305	91.00	90.67	93.11	92.98	91.61	91.48	1.50	1.50
MH-6305	MH-6306	90.67	90.47	92.98	92.80	91.48	91.38	1.50	1.42
MH-6306	MH-6307	90.47	90.26	92.80	92.66	91.38	91.27	1.42	1.39
MH-6307	MH-6308	90.26	90.08	92.66	92.54	91.27	91.19	1.39	1.35
MH-6308	MH-6309	90.08	90.00	92.54	92.53	91.19	91.17	1.35	1.36
MH-6309	MH-6323	90.00	89.67	92.53	92.50	91.17	91.12	1.36	1.38
MH-6310	MH-6311	91.30	91.11	93.10	93.10	91.58	91.58	1.52	1.52
MH-6311	MH-6312	91.11	90.87	93.10	92.98	91.58	91.51	1.52	1.47
MH-6312	MH-6314	90.87	90.55	92.98	92.86	91.51	91.43	1.47	1.43
MH-6314	MH-6316	90.55	90.38	92.86	92.77	91.43	91.36	1.43	1.41
MH-6315	MH-6316	90.97	90.38	92.84	92.77	91.43	91.36	1.41	1.41
MH-6316	MH-6317	90.38	90.24	92.77	92.64	91.36	91.27	1.41	1.37
MH-6317	MH-6321	90.24	90.06	92.64	92.54	91.27	91.19	1.37	1.35
MH-6318	MH-6319	90.86	90.59	92.81	92.63	91.47	91.26	1.34	1.37
MH-6319	MH-6320	90.59	90.42	92.63	92.62	91.26	91.23	1.37	1.39
MH-6320	MH-6321	90.42	90.06	92.62	92.54	91.23	91.19	1.39	1.35
MH-6321	MH-6322	90.06	90.00	92.54	92.51	91.19	91.15	1.35	1.36
MH-6322	MH-6323	90.00	89.67	92.51	92.50	91.15	91.12	1.36	1.38
MH-6323	MH-HW603	89.67	89.67	92.50	92.50	91.12	91.11	1.38	1.39
MH-6345	MH-6314	90.71	90.55	92.95	92.86	91.48	91.43	1.47	1.43
MH-6346	MH-6345	91.00	90.71	93.05	92.95	91.64	91.48	1.41	1.47
MH-6347	MH-6346	91.28	91.00	93.17	93.05	91.78	91.64	1.39	1.41
MH-7001	MH-7002	91.24	90.92	93.12	93.03	91.45	91.25	1.67	1.78
MH-7002	MH-7003	90.92	90.66	93.03	92.86	91.25	91.09	1.78	1.77
MH-7003	MH-7004	90.66	90.56	92.86	92.86	91.09	91.07	1.77	1.79
MH-7004	MH-7005	90.56	90.46	92.86	92.80	91.07	91.05	1.79	1.75
MH-7005	MH-7008	90.46	90.37	92.80	92.80	91.05	91.04	1.75	1.76
MH-7006	MH-7007	91.18	90.88	93.06	92.95	91.39	91.25	1.67	1.70
MH-7007	MH-7008	90.88	90.37	92.95	92.80	91.25	91.04	1.70	1.76
MH-7008	MH-HW701	90.37	90.34	92.80	92.80	91.04	91.02	1.76	1.78

Table 2: BCDC Phase 2 - Preliminary HGL Analysis
5-Year BCDC Development & 100-Year Jock River

MH ID		Invert Elevation		Top of MH		Max HGL		Freeboard	
Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream
MH-1101	MH-1102	90.86	90.59	93.26	93.14	92.37	92.25	0.89	0.89
MH-1102	MH-1103	90.59	90.35	93.14	92.98	92.25	92.15	0.89	0.83
MH-1103	MH-1104	90.35	90.16	92.98	92.82	92.15	92.07	0.83	0.75
MH-1104	MH-1105	90.16	89.95	92.82	92.62	92.07	91.96	0.75	0.66
MH-1105	MH-1106	89.95	89.77	92.62	92.50	91.96	91.83	0.66	0.67
MH-1106	MH-HW101	89.77	89.67	92.50	92.50	91.83	91.78	0.67	0.72
MH-1201	MH-1202	91.44	91.13	93.39	93.21	92.50	92.38	0.89	0.83
MH-1202	MH-1204	91.13	90.84	93.21	93.16	92.38	92.34	0.83	0.82
MH-1203	MH-1204	91.40	90.84	93.34	93.16	92.50	92.34	0.84	0.82
MH-1204	MH-1210	90.84	90.60	93.16	93.07	92.34	92.30	0.82	0.77
MH-1205	MH-1207	91.49	91.20	93.36	93.25	92.50	92.43	0.86	0.82
MH-1206	MH-1207	91.47	91.20	93.27	93.25	92.43	92.43	0.84	0.82
MH-1207	MH-1209	91.20	90.92	93.25	93.16	92.43	92.36	0.82	0.80
MH-1208	MH-1209	91.41	90.92	93.28	93.16	92.48	92.36	0.80	0.80
MH-1209	MH-1210	90.92	90.60	93.16	93.07	92.36	92.30	0.80	0.77
MH-1210	MH-1218	90.60	90.28	93.07	92.96	92.30	92.19	0.77	0.77
MH-1211	MH-1213	91.57	91.21	93.36	93.27	92.51	92.38	0.85	0.89
MH-1212	MH-1213	91.51	91.21	93.31	93.27	92.39	92.38	0.92	0.89
MH-1213	MH-1216	91.21	90.93	93.27	93.19	92.38	92.35	0.89	0.84
MH-1214	MH-1216	91.41	90.93	93.28	93.19	92.42	92.35	0.86	0.84
MH-1215	MH-1216	91.42	90.93	93.22	93.19	92.36	92.35	0.86	0.84
MH-1216	MH-1217	90.93	90.78	93.19	93.09	92.35	92.31	0.84	0.78
MH-1217	MH-1218	90.78	90.28	93.09	92.96	92.31	92.19	0.78	0.77
MH-1218	MH-1220	90.28	90.17	92.96	92.87	92.19	92.15	0.77	0.72
MH-1219	MH-1220	91.11	90.17	92.98	92.87	92.22	92.15	0.76	0.72
MH-1220	MH-1221	90.17	90.07	92.87	92.78	92.15	92.09	0.72	0.69
MH-1221	MH-1222	90.07	89.94	92.78	92.68	92.09	92.02	0.69	0.66
MH-1222	MH-1223	89.94	89.77	92.68	92.57	92.02	91.93	0.66	0.64
MH-1223	MH-1224	89.77	89.69	92.57	92.55	91.93	91.88	0.64	0.67
MH-1224	MH-1230	89.69	89.56	92.55	92.50	91.88	91.78	0.67	0.72
MH-1227	MH-1228	90.61	90.39	92.71	92.53	91.86	91.81	0.85	0.72
MH-1228	MH-1229	90.39	90.34	92.53	92.51	91.81	91.80	0.72	0.71
MH-1229	MH-1230	90.34	89.56	92.51	92.50	91.80	91.78	0.71	0.72
MH-1230	MH-HW102	89.56	89.55	92.50	92.50	91.78	91.78	0.72	0.72
MH-2101	MH-2102	91.01	90.81	92.81	92.87	92.04	92.03	0.77	0.84
MH-2102	MH-2103	90.81	90.54	92.87	92.77	92.03	91.97	0.84	0.80
MH-2103	MH-2104	90.54	90.25	92.77	92.67	91.97	91.89	0.80	0.78
MH-2104	MH-2108	90.25	90.07	92.67	92.57	91.89	91.85	0.78	0.72
MH-2105	MH-2106	90.91	90.64	92.87	92.67	92.05	91.90	0.82	0.77
MH-2106	MH-2107	90.64	90.46	92.67	92.65	91.90	91.87	0.77	0.78
MH-2107	MH-2108	90.46	90.07	92.65	92.57	91.87	91.85	0.78	0.72
MH-2108	MH-2114	90.07	89.84	92.57	92.50	91.85	91.77	0.72	0.73
MH-2109	MH-2111	90.99	90.66	92.79	92.72	91.92	91.86	0.87	0.86
MH-2110	MH-2111	90.94	90.66	92.74	92.72	91.87	91.86	0.87	0.86
MH-2111	MH-2112	90.66	90.38	92.72	92.62	91.86	91.81	0.86	0.81
MH-2112	MH-2113	90.38	90.22	92.62	92.52	91.81	91.78	0.81	0.74
MH-2113	MH-2114	90.22	89.84	92.52	92.50	91.78	91.77	0.74	0.73
MH-2114	MH-HW201	89.84	89.80	92.50	92.50	91.77	91.75	0.73	0.75
MH-2201	MH-2202	91.51	91.21	93.31	93.22	92.27	92.23	1.04	0.99
MH-2202	MH-2204	91.21	90.99	93.22	93.05	92.23	92.17	0.99	0.88
MH-2203	MH-2204	91.35	90.99	93.24	93.05	92.18	92.17	1.06	0.88
MH-2204	MH-2207	90.99	90.78	93.05	92.96	92.17	92.13	0.88	0.83
MH-2205	MH-2206	91.42	91.12	93.22	93.13	92.26	92.20	0.96	0.93
MH-2206	MH-2207	91.12	90.78	93.13	92.96	92.20	92.13	0.93	0.83
MH-2207	MH-2210	90.78	90.54	92.96	92.86	92.13	92.06	0.83	0.80
MH-2208	MH-2209	91.14	90.85	93.09	92.99	92.19	92.13	0.90	0.86
MH-2209	MH-2210	90.85	90.54	92.99	92.86	92.13	92.06	0.86	0.80
MH-2210	MH-2213	90.54	90.31	92.86	92.77	92.06	92.00	0.80	0.77
MH-2211	MH-2212	91.11	90.82	92.98	92.88	92.19	92.11	0.79	0.77
MH-2212	MH-2213	90.82	90.31	92.88	92.77	92.11	92.00	0.77	0.77
MH-2213	MH-2215	90.31	90.14	92.77	92.68	92.00	91.94	0.77	0.74
MH-2214	MH-2215	90.94	90.14	92.73	92.68	91.95	91.94	0.78	0.74
MH-2215	MH-2216	90.14	90.00	92.68	92.57	91.94	91.89	0.74	0.68
MH-2216	MH-2217	90.00	89.86	92.57	92.45	91.89	91.83	0.68	0.62
MH-2217	MH-2218	89.86	89.81	92.45	92.44	91.83	91.81	0.62	0.63
MH-2218	MH-2225	89.81	89.69	92.44	92.40	91.81	91.75	0.63	0.65
MH-2219	MH-2221	90.92	90.67	92.72	92.57	91.95	91.93	0.77	0.64
MH-2220	MH-2221	90.92	90.67	92.72	92.57	91.94	91.93	0.78	0.64
MH-2221	MH-2222	90.67	90.36	92.57	92.56	91.93</			

Table 2: BCDC Phase 2 - Preliminary HGL Analysis
5-Year BCDC Development & 100-Year Jock River

MH ID		Invert Elevation		Top of MH		Max HGL		Freeboard	
Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream
MH-2301	MH-2302	91.37	91.08	93.25	93.14	92.42	92.36	0.83	0.78
MH-2302	MH-2304	91.08	90.87	93.14	93.03	92.36	92.26	0.78	0.77
MH-2303	MH-2304	91.26	90.87	93.06	93.03	92.27	92.26	0.79	0.77
MH-2304	MH-2308	90.87	90.52	93.03	92.94	92.26	92.18	0.77	0.76
MH-2305	MH-2306	91.21	90.99	93.15	93.05	92.29	92.25	0.86	0.80
MH-2306	MH-2308	90.99	90.52	93.05	92.94	92.25	92.18	0.80	0.76
MH-2307	MH-2308	91.26	90.52	93.11	92.94	92.20	92.18	0.91	0.76
MH-2308	MH-2312	90.52	90.28	92.94	92.85	92.18	92.13	0.76	0.72
MH-2309	MH-2310	91.11	90.82	93.07	92.96	92.28	92.21	0.79	0.75
MH-2310	MH-2312	90.82	90.28	92.96	92.85	92.21	92.13	0.75	0.72
MH-2311	MH-2312	91.10	90.28	92.90	92.85	92.20	92.13	0.70	0.72
MH-2312	MH-2316	90.28	90.12	92.85	92.75	92.13	92.08	0.72	0.67
MH-2313	MH-2314	91.02	90.80	92.96	92.86	92.19	92.14	0.77	0.72
MH-2314	MH-2316	90.80	90.12	92.86	92.75	92.14	92.08	0.72	0.67
MH-2315	MH-2316	91.01	90.12	92.80	92.75	92.10	92.08	0.70	0.67
MH-2316	MH-2318	90.12	90.01	92.75	92.67	92.08	92.02	0.67	0.65
MH-2317	MH-2318	90.92	90.01	92.72	92.67	91.98	92.02	0.74	0.65
MH-2317	MH-2323	90.92	90.68	92.72	92.69	91.98	91.95	0.74	0.74
MH-2318	MH-2319	90.01	89.86	92.67	92.55	92.02	91.94	0.65	0.61
MH-2319	MH-2320	89.86	89.72	92.55	92.45	91.94	91.86	0.61	0.59
MH-2320	MH-2321	89.72	89.67	92.45	92.44	91.86	91.83	0.59	0.61
MH-2321	MH-2327	89.67	89.56	92.44	92.40	91.83	91.75	0.61	0.65
MH-2322	MH-2323	90.92	90.68	92.72	92.69	91.96	91.95	0.76	0.74
MH-2323	MH-2324	90.68	90.37	92.69	92.57	91.95	91.86	0.74	0.71
MH-2324	MH-2325	90.37	90.19	92.57	92.45	91.86	91.80	0.71	0.65
MH-2325	MH-2326	90.19	90.10	92.45	92.43	91.80	91.79	0.65	0.64
MH-2326	MH-2327	90.10	89.56	92.43	92.40	91.79	91.75	0.64	0.65
MH-2327	MH-HW203	89.56	89.55	92.40	92.40	91.75	91.75	0.65	0.65
MH-3101	MH-3102	90.74	90.44	92.54	92.61	91.94	91.91	0.60	0.70
MH-3102	MH-3103	90.44	90.20	92.61	92.49	91.91	91.78	0.70	0.71
MH-3103	MH-3104	90.20	89.84	92.49	92.48	91.78	91.76	0.71	0.72
MH-3104	MH-HW301	89.84	89.79	92.48	92.48	91.76	91.73	0.72	0.75
MH-3105	MH-3107	90.81	90.30	92.61	92.58	91.97	91.89	0.64	0.69
MH-3106	MH-3107	90.85	90.30	92.65	92.58	91.92	91.89	0.73	0.69
MH-3107	MH-3108	90.30	90.07	92.58	92.41	91.89	91.83	0.69	0.58
MH-3108	MH-3109	90.07	89.98	92.41	92.41	91.83	91.81	0.58	0.60
MH-3109	MH-3104	89.98	89.84	92.41	92.48	91.81	91.76	0.60	0.72
MH-3150	MH-HW302	89.83	89.79	92.42	92.42	91.73	91.71	0.69	0.71
MH-3201	MH-3202	90.95	90.67	92.90	92.80	92.04	91.98	0.86	0.82
MH-3202	MH-3204	90.67	90.47	92.80	92.70	91.98	91.91	0.82	0.79
MH-3203	MH-3204	90.89	90.47	92.84	92.70	92.00	91.91	0.84	0.79
MH-3204	MH-3208	90.47	90.23	92.70	92.61	91.91	91.86	0.79	0.75
MH-3205	MH-3206	90.93	90.66	92.80	92.71	92.03	91.96	0.77	0.75
MH-3206	MH-3208	90.66	90.23	92.71	92.61	91.96	91.86	0.75	0.75
MH-3207	MH-3208	90.87	90.23	92.66	92.61	91.88	91.86	0.78	0.75
MH-3208	MH-3209	90.23	90.07	92.61	92.52	91.86	91.80	0.75	0.72
MH-3209	MH-3210	90.07	89.92	92.52	92.42	91.80	91.74	0.72	0.68
MH-3210	MH-3150	89.92	89.83	92.42	92.42	91.74	91.73	0.68	0.69
MH-3211	MH-3212	90.70	90.46	92.65	92.49	91.90	91.80	0.75	0.69
MH-3212	MH-3213	90.46	90.36	92.49	92.48	91.80	91.79	0.69	0.69
MH-3213	MH-3214	90.36	90.24	92.48	92.41	91.79	91.75	0.69	0.66
MH-3214	MH-3150	90.24	89.83	92.41	92.42	91.75	91.73	0.66	0.69
MH-3301	MH-3303	91.01	90.65	93.04	92.88	92.15	92.07	0.89	0.81
MH-3302	MH-3303	91.16	90.65	92.96	92.88	92.20	92.07	0.76	0.81
MH-3303	MH-3305	90.65	90.48	92.88	92.79	92.07	92.02	0.81	0.77
MH-3304	MH-3305	91.01	90.48	92.88	92.79	92.12	92.02	0.76	0.77
MH-3305	MH-3307	90.48	90.32	92.79	92.70	92.02	91.98	0.77	0.72
MH-3306	MH-3307	90.95	90.32	92.82	92.70	92.11	91.98	0.71	0.72
MH-3307	MH-3309	90.32	90.14	92.70	92.61	91.98	91.93	0.72	0.68
MH-3308	MH-3309	90.81	90.14	92.76	92.61	92.06	91.93	0.70	0.68
MH-3309	MH-3313	90.14	89.98	92.61	92.53	91.93	91.86	0.68	0.67
MH-3310	MH-3311	90.89	90.68	92.83	92.71	91.99	91.94	0.84	0.77
MH-3311	MH-3312	90.68	90.42	92.71	92.62	91.94	91.89	0.77	0.73
MH-3312	MH-3313	90.42	89.98	92.62	92.53	91.89	91.86	0.73	0.67
MH-3313	MH-3314	89.98	89.88	92.53	92.48	91.86	91.80	0.67	0.68
MH-3314	MH-3319	89.88	89.74	92.48	92.40	91.80	91.72	0.68	0.68
MH-3315	MH-3317	90.87	90.33	92.66	92.56	91.90	91.79	0.76	0.77
MH-3316	MH-3317	90.83	90.33	92.63	92.56	91.84	91.79	0.79	0.77
MH-3317	MH-3318	90.33	90.10	92.56	92.40	91.79</			

Table 2: BCDC Phase 2 - Preliminary HGL Analysis
5-Year BCDC Development & 100-Year Jock River

MH ID		Invert Elevation		Top of MH		Max HGL		Freeboard	
Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream
MH-6103	MH-6101	90.55	90.35	92.77	92.55	92.15	92.05	0.62	0.50
MH-6104	MH-6108	90.47	90.05	92.50	92.50	91.97	91.93	0.53	0.57
MH-6106	MH-6107	90.22	90.17	92.55	92.55	92.00	91.99	0.55	0.56
MH-6107	MH-6108	90.17	90.05	92.55	92.50	91.99	91.93	0.56	0.57
MH-6108	MH-HW601	90.05	90.01	92.50	92.50	91.93	91.89	0.57	0.61
MH-6150	MH-6104	90.62	90.47	92.50	92.50	92.03	91.97	0.47	0.53
MH-6152	MH-6150	90.83	90.62	92.50	92.50	92.10	92.03	0.40	0.47
MH-6201	MH-6202	91.24	91.11	93.20	93.14	92.33	92.28	0.87	0.86
MH-6202	MH-6250	91.11	90.97	93.14	93.07	92.28	92.21	0.86	0.86
MH-6204	MH-6205	90.93	90.84	93.09	93.03	92.10	92.10	0.99	0.93
MH-6205	MH-6206	90.84	90.54	93.03	93.00	92.10	92.10	0.93	0.90
MH-6206	MH-6207	90.54	90.34	93.00	92.88	92.10	92.07	0.90	0.81
MH-6207	MH-6215	90.34	90.16	92.88	92.78	92.07	92.04	0.81	0.74
MH-6210	MH-6213	91.14	90.62	92.93	92.86	92.14	92.09	0.79	0.77
MH-6211	MH-6212	91.19	90.90	93.08	92.96	92.32	92.21	0.76	0.75
MH-6212	MH-6213	90.90	90.62	92.96	92.86	92.21	92.09	0.75	0.77
MH-6213	MH-6215	90.62	90.16	92.86	92.78	92.09	92.04	0.77	0.74
MH-6214	MH-6215	90.97	90.16	92.93	92.78	92.19	92.04	0.74	0.74
MH-6215	MH-6217	90.16	90.00	92.78	92.68	92.04	91.99	0.74	0.69
MH-6216	MH-6217	90.95	90.00	92.76	92.68	92.16	91.99	0.60	0.69
MH-6217	MH-6218	90.00	89.81	92.68	92.52	91.99	91.91	0.69	0.61
MH-6218	MH-6223	89.81	89.72	92.52	92.50	91.91	91.89	0.61	0.61
MH-6219	MH-6220	90.96	90.57	92.83	92.74	92.09	92.02	0.74	0.72
MH-6220	MH-6221	90.57	90.34	92.74	92.57	92.02	91.96	0.72	0.61
MH-6221	MH-6222	90.34	90.26	92.57	92.56	91.96	91.94	0.61	0.62
MH-6222	MH-6223	90.26	89.72	92.56	92.50	91.94	91.89	0.62	0.61
MH-6223	MH-HW602	89.72	89.68	92.50	92.50	91.89	91.87	0.61	0.63
MH-6250	MH-6206	90.97	90.54	93.07	93.00	92.21	92.10	0.86	0.90
MH-6301	MH-6303	91.43	91.21	93.23	93.13	92.29	92.24	0.94	0.89
MH-6302	MH-6303	91.37	91.21	93.17	93.13	92.25	92.24	0.92	0.89
MH-6303	MH-6304	91.21	91.00	93.13	93.11	92.24	92.22	0.89	0.89
MH-6304	MH-6305	91.00	90.67	93.11	92.98	92.22	92.12	0.89	0.86
MH-6305	MH-6306	90.67	90.47	92.98	92.80	92.12	92.04	0.86	0.76
MH-6306	MH-6307	90.47	90.26	92.80	92.66	92.04	91.95	0.76	0.71
MH-6307	MH-6308	90.26	90.08	92.66	92.54	91.95	91.89	0.71	0.65
MH-6308	MH-6309	90.08	90.00	92.54	92.53	91.89	91.87	0.65	0.66
MH-6309	MH-6323	90.00	89.67	92.53	92.50	91.87	91.84	0.66	0.66
MH-6310	MH-6311	91.30	91.11	93.10	93.10	92.20	92.19	0.90	0.91
MH-6311	MH-6312	91.11	90.87	93.10	92.98	92.19	92.14	0.91	0.84
MH-6312	MH-6314	90.87	90.55	92.98	92.86	92.14	92.08	0.84	0.78
MH-6314	MH-6316	90.55	90.38	92.86	92.77	92.08	92.02	0.78	0.75
MH-6315	MH-6316	90.97	90.38	92.84	92.77	92.08	92.02	0.76	0.75
MH-6316	MH-6317	90.38	90.24	92.77	92.64	92.02	91.96	0.75	0.68
MH-6317	MH-6321	90.24	90.06	92.64	92.54	91.96	91.89	0.68	0.65
MH-6318	MH-6319	90.86	90.59	92.81	92.63	92.10	91.95	0.71	0.68
MH-6319	MH-6320	90.59	90.42	92.63	92.62	91.95	91.92	0.68	0.70
MH-6320	MH-6321	90.42	90.06	92.62	92.54	91.92	91.89	0.70	0.65
MH-6321	MH-6322	90.06	90.00	92.54	92.51	91.89	91.86	0.65	0.65
MH-6322	MH-6323	90.00	89.67	92.51	92.50	91.86	91.84	0.65	0.66
MH-6323	MH-HW603	89.67	89.67	92.50	92.50	91.84	91.83	0.66	0.67
MH-6345	MH-6314	90.71	90.55	92.95	92.86	92.11	92.08	0.84	0.78
MH-6346	MH-6345	91.00	90.71	93.05	92.95	92.24	92.11	0.81	0.84
MH-6347	MH-6346	91.28	91.00	93.17	93.05	92.34	92.24	0.83	0.81
MH-7001	MH-7002	91.24	90.92	93.12	93.03	91.89	91.85	1.23	1.18
MH-7002	MH-7003	90.92	90.66	93.03	92.86	91.85	91.77	1.18	1.09
MH-7003	MH-7004	90.66	90.56	92.86	92.86	91.77	91.75	1.09	1.11
MH-7004	MH-7005	90.56	90.46	92.86	92.80	91.75	91.73	1.11	1.07
MH-7005	MH-7008	90.46	90.37	92.80	92.80	91.73	91.72	1.07	1.08
MH-7006	MH-7007	91.18	90.88	93.06	92.95	91.95	91.89	1.11	1.06
MH-7007	MH-7008	90.88	90.37	92.95	92.80	91.89	91.72	1.06	1.08
MH-7008	MH-HW701	90.37	90.34	92.80	92.80	91.72	91.71	1.08	1.09



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Attachment A

DSEL Rational Method Calculations

STORM SEWER CALCULATION SHEET (RATIONAL METHOD)

Local Roads Return Frequency = 2 years
 Collector Roads Return Frequency = 5 years
 Arterial Roads Return Frequency = 10 years

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Location	From Node	To Node	AREA (Ha)												FLOW							SEWER DATA											
			2 YEAR				5 YEAR				10 YEAR				100 YEAR				Time of Conc.	Intensity 2 Year (mm/h)	Intensity 5 Year (mm/h)	Intensity 10 Year (mm/h)	Intensity 100 Year (mm/h)	Peak Flow Q (l/s)	DIA. (mm) (actual)	DIA. (mm) (nominal)	TYPE (%)	SLOPE (m)	LENGTH (l/s)	CAPACITY (m/s)	VELOCITY (m/s)	TIME OF LOW (min)	RATIO Q/Q full
			AREA (Ha)	R Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R Indiv. 2.78 AC	Accum. 2.78 AC	(min)	(mm/h)	(mm/h)	(mm/h)	(mm/h)	(actual)	(nominal)	(%)	(m)	(l/s)	(m/s)	(m)							
Unknown Road7 - 07	1101	1102	5.05	5.05			0.00	0.00	2.27	0.80	5.05	5.05			0.00	0.00	10.00	76.81	104.19	122.14	178.56	1004	825	825	CONC	0.15	98.0	555.9418	1.0400	1.5705	1.807		
	1102	1103		0.00	5.05			0.00	0.00	0.37	0.80	0.82	5.87			0.00	0.00	11.57	71.26	96.57	113.16	165.37	1024	825	825	CONC	0.15	111.5	555.9418	1.0400	1.7869	1.842	
	1103	1104		0.00	5.05			0.00	0.00	0.51	0.80	1.13	7.01			0.00	0.00	13.36	65.94	89.27	104.57	152.76	1065	1050	1050	CONC	0.15	111.5	1057.6053	1.2214	1.5215	1.007	
	1104	1105		0.00	5.05			0.00	0.00	0.47	0.80	1.05	8.05			0.00	0.00	14.88	62.05	83.95	98.31	143.57	1105	1050	1050	CONC	0.15	125.0	1057.6053	1.2214	1.7057	1.045	
	1105	1106		0.00	5.05			0.00	0.00	0.27	0.80	0.60	8.65			0.00	0.00	16.58	58.26	78.76	92.22	134.62	1092	1050	1050	CONC	0.15	83.5	1057.6053	1.2214	1.1394	1.032	
To Unknown Road11 - 101, Pipe 1106 - HW101			5.05				0.00				8.65				0.00		17.72																
Unknown Road11 - 101																																	
Contribution From Unknown Road7 - 07, Pipe 1105 - 1106		5.05					0.00				8.65				0.00		17.72																
	1106	HW101 (TRUNK 8)	0.00	5.05			0.00	0.00	0.14	0.80	0.31	8.96			0.00	0.00	17.72	56.01	75.68	88.59	129.30	1077	1050	1050	CONC	0.15	62.0	1057.6053	1.2214	0.8460	1.018		
Unknown Road22 - 14																																	
Contribution From Unknown Road51 - 39, Pipe 1211 - 1213		0.52					0.00				0.00				0.00		11.20																
Contribution From Unknown Road51 - 39, Pipe 1212 - 1213		0.20					0.00				0.00				0.00		10.55																
	1213	1216	0.09	0.65	0.16	0.89		0.00	0.00		0.00	0.00			0.00	0.00	11.20	72.47	98.23	115.12	168.25	64	450	450	CONC	0.20	64.5	127.5033	0.8017	1.3409	0.503		
Contribution From Unknown Road50 - 38, Pipe 1214 - 1216		0.65					0.00				0.00				0.00		11.20																
Contribution From Unknown Road50 - 38, Pipe 1215 - 1216		0.20					0.00				0.00				0.00		10.56																
	1216	1217	0.07	0.65	0.13	1.86		0.00	0.00		0.00	0.00			0.00	0.00	12.55	68.24	92.43	108.29	158.21	127	600	600	CONC	0.15	62.5	237.8056	0.8411	1.2385	0.534		
To Unknown Road52 - 40, Pipe 1217 - 1218			1.86				0.00				0.00				0.00		13.78																
Unknown Road10 - 10			0.26	0.80	0.58	0.58		0.00	0.00		0.00	0.00			0.00	0.00																	
	1203	1204	0.35	0.65	0.63	1.21		0.00	0.00		0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	93	450	450	CONC	0.20	127.5	127.5033	0.8017	2.6506	0.729		
To Unknown Road52 - 40, Pipe 1204 - 1210			1.21				0.00				0.00				0.00		12.65																
Unknown Road9 - 09			1201	1202	0.48	0.80	1.07	1.07		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	82	450	450	CONC	0.20	122.5	127.5033	0.8017	2.5467	0.643	
To Unknown Road52 - 40, Pipe 1202 - 1204			1.07				0.00				0.00				0.00		12.55																
	1206	1207	0.09	0.65	0.16	0.16		0.00	0.00		0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	12	300	300	PVC	0.35	14.0	57.2089	0.8093	0.2883	0.218		
Contribution From Unknown Road51 - 39, Pipe 1205 - 1207		0.65					0.00				0.00				0.00		11.40																
	1207	1209	0.24	0.65	0.43	1.25		0.00	0.00		0.00	0.00			0.00	0.00	11.40	71.82	97.34	114.07	166.71	90	450	450	CONC	0.20	65.0	127.5033	0.8017	1.3513	0.702		
Contribution From Unknown Road50 - 38, Pipe 1208 - 1209		0.81					0.00				0.00				0.00		11.50																
	1209	1210	0.13	0.65	0.23	2.29		0.00	0.00		0.00	0.00			0.00	0.00	12.75	67.64	91.61	107.32	156.80	155	600	600	CONC	0.15	63.0	237.8056	0.8411	1.2484	0.653		
To Unknown Road52 - 40, Pipe 1210 - 1218			2.29				0.00				0.00				0.00		14.00																
Unknown Road37 - 27																																	
Contribution From Unknown Road52 - 40, Pipe 1210 - 1218		5.06					1.26				0.00				0.00		15.57																
Contribution From Unknown Road52 - 40, Pipe 1217 - 1218		1.86					0.87				0.00				0.00		15.42																
	1218	1220	0.09	0.80	0.20	7.12		0.00	2.13		0.00	0.00			0.00	0.00																	
	1218	1220	0.13	0.65	0.23	7.36		0.00	2.13		0.00	0.00			0.00	0.00	15.57	60.45	81.76	95.73	139.79	619	975	975	CONC	0.15	56.5	867.9562	1.1625	0.8100	0.713		
Contribution From Unknown Road49 - 37, Pipe 1219 - 1220		0.65					0.00				0.00				0.00		11.50																
	1220	1221	0.10	0.80	0.22	8.23		0.00	2.13		0.00	0.00			0.00	0.00																	
	1220	1221	0.13	0.65	0.23	8.47		0.00	2.13		0.00	0.00			0.00	0.00	16.38	58.69	79.35	92.90	135.63	666	975	975	CONC	0.15	58.5	867.9562	1.1625	0.8387	0.767		
To Unknown Road36 - 26, Pipe 1221 - 1222			8.47				2.13				0.00				0.00	</																	

STORM SEWER CALCULATION SHEET (RATIONAL METHOD)

Local Roads Return Frequency = 2 years
Collector Roads Return Frequency = 5 years
Arterial Roads Return Frequency = 10 years

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Arterial Roads Return Frequency = 10 years



Page 11

Definitions:

$Q = 2.78 \text{ AIR}$, where

Q = Peak Flow in Litre

A = Areas in hectares (

I = Rainfall Intensity (mm/h)

R = Runoff Coefficient

N

Notes:

1) Ottawa Rainfall-Intensity

2) Min. Velocity = 0.80 m/s

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4

signed:

H.L.

cked:

D.A.

Reference:

DATA MANAGEMENT SYSTEM

BARRHAVEN CONSERVANCY

City of Ottawa

Date: _____ Sheet No. _____

STORM SEWER CALCULATION SHEET (RATIONAL METHOD)

Local Roads Return Frequency = 2 years
 Collector Roads Return Frequency = 5 years
 Arterial Roads Return Frequency = 10 years

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Location	LOCATION		AREA (Ha)										FLOW							SEWER DATA										
			2 YEAR		5 YEAR		10 YEAR		100 YEAR		Time of	Intensity	Intensity	Intensity	Intensity	Peak Flow	DIA. (mm)	DIA. (mm)	TYPE	SLOPE	LENGTH	CAPACITY	VELOCITY	TIME OF	RATIO					
	From Node	To Node	AREA (Ha)	R	Indiv.	Accum.	AREA (Ha)	R	Indiv.	Accum.	AREA (Ha)	R	Indiv.	Accum.	(min)	(mm/h)	2 Year	5 Year	10 Year	100 Year	Q (l/s)	(actual)	(nominal)	(%)	(m)	(l/s)	(m/s)	LOW (min)	Q/Q full	
	2216	2217	0.46	0.65	0.83	7.05		0.00	1.63			0.00	0.00	17.96	55.57	75.08	87.89	128.27	514	900	900	CONC	0.15	79.5	701.1305	1.1021	1.2022	0.733		
	2217	2218	0.05	0.65	0.09	7.14		0.00	1.63			0.00	0.00	19.16	53.43	72.15	84.45	123.23	499	900	900	CONC	0.15	13.0	701.1305	1.1021	0.1966	0.711		
	2218	2225	0.03	0.65	0.05	7.19		0.00	1.63			0.00	0.00	19.36	53.09	71.70	83.91	122.45	498	900	900	CONC	0.15	23.5	701.1305	1.1021	0.3554	0.711		
	To Unknown Road27 - 201, Pipe 2225 - HW202				7.19			1.63				0.00	0.00	19.71																
	Unknown Road27 - 201																													
	Contribution From Unknown Road44 - 32, Pipe 2218 - 2225		7.19				1.63					0.00	0.00	19.71																
	Contribution From Unknown Road44 - 32, Pipe 2224 - 2225		2.24				0.00					0.00	0.00	14.59																
	2225	HW202 (TRUNK 5)			0.00	9.43		0.00	1.63			0.00	0.00	0.00	0.00	19.71	52.50	70.89	82.96	121.06	611	975	975	CONC	0.15	4.0	867.9562	1.1625	0.0573	0.703
	Unknown Road46 - 34																													
	Contribution From Unknown Road51 - 39, Pipe 2302 - 2304		1.25				0.00					0.00	0.00	12.93																
	Contribution From Unknown Road51 - 39, Pipe 2303 - 2304		0.13				0.00					0.00	0.00	10.31																
	2304	2308	0.09	0.65	0.16	1.54		0.00	0.00			0.00	0.00	12.93	67.13	90.91	106.50	155.58	103	450	450	CONC	0.20	64.5	127.5033	0.8017	1.3409	0.809		
	Contribution From Unknown Road50 - 38, Pipe 2306 - 2308		1.57				0.00					0.00	0.00	12.85																
	Contribution From Unknown Road50 - 38, Pipe 2307 - 2308		0.29				0.00					0.00	0.00	10.63																
	2308	2312	0.07	0.65	0.13	3.52		0.00	0.00			0.00	0.00	14.27	63.55	85.99	100.72	147.10	224	675	675	CONC	0.15	62.0	325.5584	0.9098	1.1358	0.688		
	Contribution From Unknown Road52 - 40, Pipe 2310 - 2312		0.00				1.70					0.00	0.00	12.95																
	Contribution From Unknown Road52 - 40, Pipe 2311 - 2312		0.00				0.36					0.00	0.00	10.64																
	2312	2316	0.07	0.65	0.13	3.65		0.00	2.06			0.00	0.00	15.41	60.83	82.27	96.34	140.67	391	825	825	CONC	0.15	56.5	555.9418	1.0400	0.9055	0.704		
	Contribution From Unknown Road49 - 37, Pipe 2314 - 2316		1.57				0.00					0.00	0.00	12.87																
	Contribution From Unknown Road49 - 37, Pipe 2315 - 2316		0.33				0.00					0.00	0.00	10.64																
	2316	2318	0.08	0.65	0.14	5.69		0.00	2.06			0.00	0.00	0.00	16.31	58.84	79.55	93.14	135.98	499	900	900	CONC	0.15	58.5	701.1305	1.1021	0.8847	0.711	
	To Unknown Road45 - 33, Pipe 2318 - 2319				5.69			2.06				0.00	0.00	17.20																
	Unknown Road45 - 33																													
	Contribution From Unknown Road34 - 25, Pipe 2317 - 2323		0.16				0.00					0.00	0.00	10.51																
	Contribution From Unknown Road34 - 25, Pipe 2322 - 2323		0.16				0.00					0.00	0.00	10.41																
	2323	2324	0.43	0.65	0.78	1.10		0.00	0.00			0.00	0.00	10.51	74.88	101.55	119.03	173.99	83	450	450	CONC	0.20	82.5	127.5033	0.8017	1.7151	0.647		
	2324	2325	0.48	0.65	0.87	1.97		0.00	0.00			0.00	0.00	12.23	69.19	93.73	109.82	160.46	136	600	600	CONC	0.15	82.5	237.8056	0.8411	1.6348	0.573		
	2325	2326	0.05	0.65	0.09	2.06		0.00	0.00			0.00	0.00	13.86	64.58	87.41	102.39	149.55	133	600	600	CONC	0.15	14.5	237.8056	0.8411	0.2873	0.559		
	2326	2327	0.03	0.65	0.05	2.11		0.00	0.00			0.00	0.00	14.15	63.84	86.40	101.20	147.80	135	600	600	CONC	0.15	21.5	237.8056	0.8411	0.4260	0.568		
	To Unknown Road28 - 202, Pipe 2327 - HW203				2.11			0.00				0.00	0.00	14.58																
	Contribution From Unknown Road46 - 34, Pipe 2316 - 2318		5.69				2.06					0.00	0.00	17.20																
	Contribution From Unknown Road34 - 25, Pipe 2317 - 2318		0.22				0.00					0.00	0.00	10.81																
	2318	2319	0.45	0.65	0.81	6.72		0.00	2.06			0.00	0.00	17.20	57.03	77.07	90.23	131.71	542	900	900	CONC	0.15	85.5	701.1305	1.1021	1.2930	0.773		
	2319	2320	0.44	0.65	0.80	7.52		0.00	2.06			0.00	0.00	18.49	54.60	73.75	86.33	125.98	562	900	900	CONC	0.15	73.0	701.1305	1.1021	1.1039	0.802		
	2320	2321	0.02	0.65	0.04	7.55		0.00	2.06			0.00	0.00	19.59	52.70	71.16	83.28	121.51	545	900	900	CONC	0.15	11.5	701.1305	1.1021	0.1739	0.777		
	2321	2327	0.03	0.65	0.05	7.61		0.00	2.06			0.00	0.00	19.77	52.41	70.77	82.82	120.84	544	900	900	CONC	0.15	25.5	701.1305	1.1021	0.3856	0.777		
	To Unknown Road28 - 202, Pipe 2327 - HW203				7.61			2.06				0.00	0.00	20.15																
	Unknown Road28 - 202																													
	Contribution From Unknown Road45 - 33, Pipe 2321 - 2327		7.61				2.06					0.00	0.00	20.15																
	Contribution From Unknown Road45 - 33, Pipe 2326 - 2327		2.11				0.00					0.00	0.00	14.58																
	2327	HW203 (TRUNK 4)			0.00	9.72		0.00	2.06			0.00	0.00	20.15	51.79	69.92	81.82	119.38</td												

STORM SEWER CALCULATION SHEET (RATIONAL METHOD)

Local Roads Return Frequency = 2 years
 Collector Roads Return Frequency = 5 years
 Arterial Roads Return Frequency = 10 years

Manning 0.013



Location	LOCATION		AREA (Ha)										FLOW							SEWER DATA										
			2 YEAR		5 YEAR		10 YEAR		100 YEAR		Time of	Intensity	Intensity	Intensity	Intensity	Peak Flow	DIA. (mm)	DIA. (mm)	TYPE	SLOPE	LENGTH	CAPACITY	VELOCITY	TIME OF	RATIO					
	From Node	To Node	AREA (Ha)	R	Indiv.	Accum.	AREA (Ha)	R	Indiv.	Accum.	AREA (Ha)	R	Indiv.	Accum.	(min)	(mm/h)	(mm/h)	(mm/h)	(mm/h)	Q (l/s)	(actual)	(nominal)	(%)	(m)	(l/s)	(m/s)	LOW (min)	Q/Q full		
	2219	2221	0.16	0.65	0.29	0.29		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	22	300	300	PVC	0.35	29.5	57.2089	0.8093	0.6075	0.388
To Unknown Road44 - 32, Pipe 2221 - 2222					0.29			0.00				0.00				0.00	10.61													
	2220	2221	0.10	0.65	0.18	0.18		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	14	300	300	PVC	0.35	24.5	57.2089	0.8093	0.5045	0.243
To Unknown Road44 - 32, Pipe 2221 - 2222					0.18			0.00				0.00				0.00	10.50													
	2317	2318	0.12	0.65	0.22	0.22		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	17	300	300	PVC	0.35	39.5	57.2089	0.8093	0.8134	0.291
To Unknown Road45 - 33, Pipe 2318 - 2319					0.22			0.00				0.00				0.00	10.81													
	2317	2323	0.09	0.65	0.16	0.16		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	12	300	300	PVC	0.35	25.0	57.2089	0.8093	0.5148	0.218
To Unknown Road45 - 33, Pipe 2323 - 2324					0.16			0.00				0.00				0.00	10.51													
	2322	2323	0.09	0.65	0.16	0.16		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	12	300	300	PVC	0.35	20.0	57.2089	0.8093	0.4119	0.218
To Unknown Road45 - 33, Pipe 2323 - 2324					0.16			0.00				0.00				0.00	10.41													
	3101	3102	0.18	0.65	0.33	0.33		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	25	300	300	PVC	0.35	42.0	57.2089	0.8093	0.8649	0.437
To Unknown Road47 - 35, Pipe 3102 - 3103					0.33			0.00				0.00				0.00	10.86													
	3105	3107	0.23	0.65	0.42	0.42		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	32	300	300	PVC	0.35	59.5	57.2089	0.8093	1.2253	0.558
To Unknown Road47 - 35, Pipe 3107 - 3108					0.42			0.00				0.00				0.00	11.23													
	3106	3107	0.17	0.65	0.31	0.31		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	24	300	300	PVC	0.35	42.0	57.2089	0.8093	0.8649	0.412
To Unknown Road47 - 35, Pipe 3107 - 3108					0.31			0.00				0.00				0.00	10.86													
	2101	2102	0.13	0.65	0.23	0.23		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	18	300	300	PVC	0.35	35.5	57.2089	0.8093	0.7310	0.315
	2102	2103	0.23	0.65	0.42	0.42		0.00	0.00		0.00	0.00		0.00	0.00	10.73	74.11	100.48	117.77	172.14	48	375	375	PVC	0.30	64.5	96.0323	0.8695	1.2364	0.502
To Unknown Road23 - 15, Pipe 2103 - 2104					0.65			0.00				0.00				0.00	11.97													
Unknown Road47 - 35																														
Contribution From Unknown Road34 - 25, Pipe 3101 - 3102			0.33					0.00				0.00				0.00	10.86													
	3102	3103	0.55	0.65	0.99	1.32		0.00	0.00		0.00	0.00		0.00	0.00	10.86	73.64	99.84	117.01	171.02	97	450	450	CONC	0.20	103.5	127.5033	0.8017	2.1517	0.762
	3103	3104	0.09	0.65	0.16	1.48		0.00	0.00		0.00	0.00		0.00	0.00	13.02	66.88	90.57	106.10	155.00	99	450	450	CONC	0.20	10.5	127.5033	0.8017	0.2183	0.777
To Unknown Road29 - 203, Pipe 3104 - HW301					1.48			0.00				0.00				0.00	13.23													
Contribution From Unknown Road34 - 25, Pipe 3105 - 3107			0.42					0.00				0.00				0.00	11.23													
Contribution From Unknown Road34 - 25, Pipe 3106 - 3107			0.31					0.00				0.00				0.00	10.86													
	3107	3108	0.62	0.65	1.12	1.84		0.00	0.00		0.00	0.00		0.00	0.00	11.23	72.40	98.14	115.01	168.08	133	600	600	CONC	0.15	116.5	237.8056	0.8411	2.3086	0.561
	3108	3109	0.18	0.65	0.33	2.17		0.00	0.00		0.00	0.00		0.00	0.00	13.53	65.46	88.61	103.80	151.62	142	600	600	CONC	0.15	16.5	237.8056	0.8411	0.3270	0.597
	3109	3104	0.17	0.65	0.31	2.48		0.00	0.00		0.00	0.00		0.00	0.00	13.86	64.59	87.43	102.40	149.58	160	600	600	CONC	0.15	47.0	237.8056	0.8411	0.9314	0.672
To Unknown Road29 - 203, Pipe 3104 - HW301					2.48			0.00				0.00				0.00	14.79													
Unknown Road29 - 203																														
Contribution From Unknown Road47 - 35, Pipe 3103 - 3104			1.48					0.00				0.00				0.00	13.23													
Contribution From Unknown Road47 - 35, Pipe 3109 - 3104			2.48					0.00				0.00				0.00	14.79													
	3104	HW301 (TRUNK 3)			0.00	3.96		0.00	0.00		0.00	0.00		0.00	0.00	14.79	62.26	84.23	98.65	144.06	246	675	675	CONC	0.15	31.0	325.5584	0.9098	0.5679	0.757
Unknown Road24 - 16																														
	3211	3212	0.62	0.65	1.12	1.12		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	86	450	450	CONC	0.20	103.0	127.5033	0.8017	2.1413	0.675
	3212	3213	0.08	0.65	0.14	1.26		0.00	0.00		0.00	0.00		0.00	0.00	12.14	69.46	94.10	110.25	161.10	88	450	450	CONC	0.20	10.5	127.5033	0.8017	0.2183	0.689
	3213	3214	0.18	0.65	0.33	1.59		0.00	0.00		0.00	0.00		0.00	0.00	12.36	68.79	93.19	109.18	159.53	109	525	525	CONC	0.20	49.0	192.3297	0.8885	0.9192	0.569
	3214	3150			0.00	1.59		0.00	0.00		0.00	0.00		0.00	0.00	13.28	66.15	89.56	104.92	153.27	105	525	525</td							

STORM SEWER CALCULATION SHEET (RATIONAL METHOD)

Local Roads Return Frequency = 2 years

Collector Roads Return Frequency = 5 years

Arterial Roads Return Frequency = 10 years

Manning 0.013



Location	LOCATION		AREA (Ha)								FLOW								SEWER DATA											
			2 YEAR		5 YEAR		10 YEAR		100 YEAR		Time of	Intensity	Intensity	Intensity	Intensity	Peak Flow	DIA. (mm)	DIA. (mm)	TYPE	SLOPE	LENGTH	CAPACITY	VELOCITY	TIME OF	RATIO					
	From Node	To Node	AREA (Ha)	R	Indiv.	Accum.	AREA (Ha)	R	Indiv.	Accum.	AREA (Ha)	R	Indiv.	Accum.	(min)	(mm/h)	(mm/h)	(mm/h)	(mm/h)	Q (l/s)	(actual)	(nominal)	(%)	(m)	(l/s)	(m/s)	LOW (min)	Q/Q full		
Contribution From Unknown Road49 - 37, Pipe 3206 - 3208	3208	3209	1.36				0.00				0.00				12.60															
Contribution From Unknown Road49 - 37, Pipe 3207 - 3208	3208	3210	0.25				0.00				0.00				10.89															
	3209	3210	0.19	0.65	0.34	2.08	0.00	2.46		0.00	0.00	0.00		0.00	13.67	65.11	88.13	103.23	150.79	352	750	750	CONC	0.15	58.5	431.1703	0.9760	0.9990	0.816	
To Unknown Road41 - 301, Pipe 3210 - 3150	3209	3210	0.42	0.65	0.76	2.84	0.00	2.46		0.00	0.00	0.00		0.00	14.66	62.57	84.66	99.15	144.79	386	825	825	CONC	0.15	77.0	555.9418	1.0400	1.2340	0.694	
Unknown Road41 - 301															15.90															
Contribution From Unknown Road24 - 16, Pipe 3209 - 3210	3210	3150	2.84				2.46				0.00				15.90															
	3150	3210	0.20	0.65	0.36	3.20	0.00	2.46		0.00	0.00	0.00		0.00	15.90	59.73	80.76	94.57	138.07	390	825	825	CONC	0.15	11.0	555.9418	1.0400	0.1763	0.701	
Contribution From Unknown Road24 - 16, Pipe 3214 - 3150	3150	HW302 (TRUNK 2)	1.59				0.00				0.00				13.50															
			0.00	4.79			0.00	2.46		0.00	0.00	0.00		0.00	16.07	59.34	80.24	93.95	137.17	481	900	900	CONC	0.15	25.0	701.1305	1.1021	0.3781	0.687	
Unknown Road26 - 20																														
	3306	3307	0.45	0.65	0.81	0.81	0.00	0.00		0.00	0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	62	375	375	PVC	0.30	85.5	96.0323	0.8695	1.6389	0.650
To Unknown Road25 - 19, Pipe 3307 - 3309			0.81				0.00			0.00		0.00		0.00	11.64															
	3308	3309	0.64	0.65	1.16	1.16	0.00	0.00		0.00	0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	89	450	450	CONC	0.20	106.5	127.5033	0.8017	2.2141	0.697
To Unknown Road25 - 19, Pipe 3309 - 3313			1.16				0.00			0.00		0.00		0.00	12.21															
Unknown Road30 - 21																														
	3302	3303	0.29	0.65	0.52	0.52	0.00	0.00		0.00	0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	40	300	300	PVC	0.35	60.0	57.2089	0.8093	1.2356	0.704
To Unknown Road25 - 19, Pipe 3303 - 3305			0.52				0.00			0.00		0.00		0.00	11.24															
	3304	3305	0.42	0.65	0.76	0.76	0.00	0.00		0.00	0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	58	375	375	PVC	0.30	73.0	96.0323	0.8695	1.3993	0.607
To Unknown Road25 - 19, Pipe 3305 - 3307			0.76				0.00			0.00		0.00		0.00	11.40															
Unknown Road25 - 19																														
	3301	3303	0.84	0.65	1.52	1.52	0.00	0.00		0.00	0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	117	525	525	CONC	0.20	102.0	192.3297	0.8885	1.9134	0.606
Contribution From Unknown Road30 - 21, Pipe 3302 - 3303			0.52				0.00			0.00		0.00		0.00	11.24															
	3303	3305	0.23	0.65	0.42	2.46	0.00	0.00		0.00	0.00	0.00		0.00	0.00	11.91	70.16	95.07	111.39	162.77	172	600	600	CONC	0.15	64.5	237.8056	0.8411	1.2781	0.725
Contribution From Unknown Road30 - 21, Pipe 3304 - 3305			0.76				0.00			0.00		0.00		0.00	11.40															
	3305	3307	0.19	0.65	0.34	3.56	0.00	0.00		0.00	0.00	0.00		0.00	0.00	13.19	66.39	89.89	105.31	153.84	236	675	675	CONC	0.15	52.5	325.5584	0.9098	0.9618	0.726
Contribution From Unknown Road26 - 20, Pipe 3306 - 3307			0.81				0.00			0.00		0.00		0.00	11.64															
	3307	3309	0.24	0.65	0.43	4.81	0.00	0.00		0.00	0.00	0.00		0.00	0.00	14.15	63.84	86.40	101.19	147.79	307	750	750	CONC	0.15	64.5	431.1703	0.9760	1.1015	0.712
Contribution From Unknown Road26 - 20, Pipe 3308 - 3309			1.16				0.00			0.00		0.00		0.00	12.21															
	3309	3313	0.22	0.65	0.40	6.36	0.00	0.00		0.00	0.00	0.00		0.00	0.00	15.25	61.17	82.74	96.89	141.49	389	825	825	CONC	0.15	58.5	555.9418	1.0400	0.9375	0.700
To Unknown Road48 - 36, Pipe 3313 - 3314			6.36				0.00			0.00		0.00		0.00	16.19															
Unknown Road49 - 37																														
	1219	1220	0.36	0.65	0.65	0.65	0.00	0.00		0.00	0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	50	375	375	PVC	0.30	78.0	96.0323	0.8695	1.4951	0.520
To Unknown Road37 - 27, Pipe 1220 - 1221			0.65				0.00			0.00		0.00		0.00	11.50															
	2315	2316	0.18	0.65	0.33	0.33	0.00	0.00		0.00	0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	25	300	300	PVC	0.35	31.0	57.2089	0.8093	0.6384	0.437
To Unknown Road46 - 34, Pipe 2316 - 2318			0.33				0.00			0.00		0.00		0.00	10.64															
	3207	3208	0.14	0.65	0.25	0.25	0.00	0.00		0.00	0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	19	300	300	PVC	0.35	43.0	57.2089	0.8093	0.8855	0.340
To Unknown Road24 - 16, Pipe 3208 - 3209			0.25				0.00			0.00		0.00		0.00	10.89															
	3315	3317	0.26	0.65	0.47	0.47	0.00	0.00		0.00	0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	36	300	300	PVC	0.35	66.0	57.2089	0.8093	1.3591	0.631
To Unknown Road48 - 36, Pipe 3317 - 3318			0.47				0.00			0.00		0.00		0.00	11.36															
	3316	3317	0.19	0.65	0.34	0.34	0.00	0.00		0.00	0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	26	300	300	PVC	0.35	49.0	57.2089	0.8093	1.0091	0.461

STORM SEWER CALCULATION SHEET (RATIONAL METHOD)

Local Roads Return Frequency = 2 years
 Collector Roads Return Frequency = 5 years
 Arterial Roads Return Frequency = 10 years

Manning 0.013



Location	LOCATION		AREA (Ha)										FLOW							SEWER DATA										
			2 YEAR		5 YEAR		10 YEAR		100 YEAR		Time of	Intensity	Intensity	Intensity	Intensity	Peak Flow	DIA. (mm)	DIA. (mm)	TYPE	SLOPE	LENGTH	CAPACITY	VELOCITY	TIME OF	RATIO					
	From Node	To Node	AREA (Ha)	R	Indiv.	Accum.	AREA (Ha)	R	Indiv.	Accum.	AREA (Ha)	R	Indiv.	Accum.	(min)	(mm/h)	(mm/h)	(mm/h)	(mm/h)	Q (l/s)	(actual)	(nominal)	(%)	(m)	(l/s)	(m/s)	LOW (min)	Q/Q full		
	2313	2314	0.50	0.65	0.90	0.90		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	69	450	450	CONC	0.20	72.5	127.5033	0.8017	1.5072	0.544
	2314	2316	0.37	0.65	0.67	1.57		0.00	0.00		0.00	0.00		0.00	0.00	11.51	71.46	96.85	113.50	165.86	112	525	525	CONC	0.20	72.5	192.3297	0.8885	1.3600	0.584
To Unknown Road46 - 34, Pipe 2316 - 2318																														
	3205	3206	0.40	0.65	0.72	0.72		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	56	375	375	PVC	0.30	65.0	96.0323	0.8695	1.2459	0.578
	3206	3208	0.35	0.65	0.63	1.36		0.00	0.00		0.00	0.00		0.00	0.00	11.25	72.33	98.04	114.90	167.92	98	450	450	CONC	0.20	65.0	127.5033	0.8017	1.3513	0.769
To Unknown Road24 - 16, Pipe 3208 - 3209																														
Unknown Road48 - 36																														
Contribution From Unknown Road49 - 37, Pipe 3315 - 3317																														
	0.47							0.00			0.00			0.00		11.36														
Contribution From Unknown Road49 - 37, Pipe 3316 - 3317																														
	0.34							0.00			0.00			0.00		11.01														
	3317	3318	0.58	0.65	1.05	1.86		0.00	0.00		0.00	0.00		0.00	0.00	11.36	71.95	97.52	114.29	167.02	134	600	600	CONC	0.15	113.0	237.8056	0.8411	2.2392	0.563
To Unknown Road42 - 302, Pipe 3318 - 3319																														
Contribution From Unknown Road52 - 40, Pipe 3310 - 3311																														
	0.00							0.65			0.00			0.00		11.51														
	3311	3312	0.18	0.65	0.33	0.33		0.00	0.65		0.00	0.00		0.00	0.00	11.51	71.46	96.85	113.50	165.86	86	450	450	CONC	0.20	56.5	127.5033	0.8017	1.1746	0.676
	3312	3313	0.37	0.65	0.67	0.99		0.00	0.65		0.00	0.00		0.00	0.00	12.68	67.84	91.88	107.64	157.27	127	600	600	CONC	0.15	71.0	237.8056	0.8411	1.4069	0.535
Contribution From Unknown Road25 - 19, Pipe 3309 - 3313																														
	6.36							0.00			0.00			0.00		16.19														
	3313	3314	0.10	0.65	0.18	7.54		0.00	0.65		0.00	0.00		0.00	0.00	16.19	59.09	79.89	93.54	136.57	497	900	900	CONC	0.15	29.5	701.1305	1.1021	0.4461	0.709
	3314	3319	0.07	0.65	0.13	7.66		0.00	0.65		0.00	0.00		0.00	0.00	16.64	58.15	78.61	92.04	134.36	497	900	900	CONC	0.15	53.5	701.1305	1.1021	0.8091	0.708
To Unknown Road42 - 302, Pipe 3319 - HW303																														
	7.66							0.65			0.00			0.00		17.45														
Unknown Road42 - 302																														
Contribution From Unknown Road48 - 36, Pipe 3317 - 3318																														
	1.86							0.00			0.00			0.00		13.60														
	3318	3319	0.07	0.65	0.13	1.99		0.00	0.00		0.00	0.00		0.00	0.00	13.60	65.29	88.38	103.52	151.22	130	600	600	CONC	0.15	8.5	237.8056	0.8411	0.1684	0.546
Contribution From Unknown Road48 - 36, Pipe 3314 - 3319																														
	7.66							0.65			0.00			0.00		17.45														
Unknown Road1 - 01																														
	6152	6150	0.26	0.65	0.47	0.47		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	36	300	300	PVC	0.35	42.0	57.2089	0.8093	0.8649	0.631
	6150	6104	0.07	0.65	0.13	0.60		0.00	0.00		0.00	0.00		0.00	0.00	10.86	73.64	99.84	117.01	171.02	44	300	300	PVC	0.35	22.0	57.2089	0.8093	0.4530	0.768
	6104	6108	0.20	0.65	0.36	0.96		0.00	0.00		0.00	0.00		0.00	0.00	11.32	72.09	97.71	114.51	167.35	69	375	375	PVC	0.30	22.0	96.0323	0.8695	0.4217	0.719
To Unknown Road53 - 601, Pipe 6108 - HW601																														
	0.96							0.00			0.00			0.00		11.74														
	0.07		0.65	0.13	0.13			0.00	1.39		0.00</																			

STORM SEWER CALCULATION SHEET (RATIONAL METHOD)

Local Roads Return Frequency = 2 years

Collector Roads Return Frequency = 5 years

Arterial Roads Return Frequency = 10 years

Manning 0.013



Location	From Node	To Node	AREA (Ha)												FLOW							SEWER DATA											
			2 YEAR				5 YEAR				10 YEAR				100 YEAR				Time of	Intensity	Intensity	Intensity	Intensity	Peak Flow	DIA. (mm)	DIA. (mm)	Type	Slope	Length	Capacity	Velocity	Time of	Ratio
			Area (Ha)	R	Indiv.	Accum.	Area (Ha)	R	Indiv.	Accum.	Area (Ha)	R	Indiv.	Accum.	Area (Ha)	R	Indiv.	Accum.	(min)	(mm/h)	(mm/h)	(mm/h)	(mm/h)	Q (l/s)	(actual)	(nominal)	(%)	(m)	(l/s)	(m/s)	Low (min)	Q/Q full	
Unknown Road39 - 29																																	
Contribution From Unknown Road4 - 04, Pipe 6205 - 6206	0.65					0.00					0.00				0.00		11.16																
Contribution From Unknown Road4 - 04, Pipe 6250 - 6206	1.64					0.00					0.00				0.00		12.42																
6206 6207	0.29	0.65	0.52	2.82		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	12.42	68.61	92.93	108.88	159.09	193	750	750	CONC	0.15	84.0	431.1703	0.9760	1.4345	0.449		
	0.23	0.65	0.42	3.23		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	13.86	64.61	87.45	102.43	149.61	286	825	825	CONC	0.15	69.5	555.9418	1.0400	1.1138	0.514		
6207 6215	1.07	0.40	1.19	4.42		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	14.97	61.84	83.66	97.97	143.06	490	900	900	CONC	0.15	62.5	701.1305	1.1021	0.9452	0.699		
To Unknown Road40 - 30, Pipe 6217 - 6218					7.93						0.00				0.00		15.91																
Unknown Road40 - 30																																	
Contribution From Unknown Road52 - 40, Pipe 6219 - 6220	0.00					0.54					0.00				0.00		11.01																
6220 6221	0.61	0.65	1.10	1.10		0.00	0.54		0.00	0.00		0.00	0.00		0.00	0.00	11.01	73.15	99.16	116.22	169.85	134	600	600	CONC	0.15	114.5	237.8056	0.8411	2.2689	0.565		
6221 6222	0.17	0.65	0.31	1.41		0.00	0.54		0.00	0.00		0.00	0.00		0.00	0.00	13.28	66.16	89.58	104.93	153.29	142	600	600	CONC	0.15	16.0	237.8056	0.8411	0.3171	0.596		
6222 6223	0.18	0.65	0.33	1.73		0.00	0.54		0.00	0.00		0.00	0.00		0.00	0.00	13.59	65.30	88.40	103.55	151.25	161	600	600	CONC	0.15	46.5	237.8056	0.8411	0.9215	0.678		
To Unknown Road54 - 602, Pipe 6223 - HW602					1.73						0.54				0.00		14.51																
Contribution From Unknown Road39 - 29, Pipe 6215 - 6217	7.93					0.00					0.00				0.00		15.91																
Contribution From Unknown Road52 - 40, Pipe 6216 - 6217	0.00					0.45					0.00				0.00		11.18																
6217 6218	0.56	0.65	1.01	8.94		0.00	0.45		0.00	0.00		0.00	0.00		0.00	0.00	15.91	59.69	80.71	94.51	137.99	570	975	975	CONC	0.15	104.0	867.9562	1.1625	1.4910	0.657		
6218 6223	0.09	0.65	0.16	9.10		0.00	0.45		0.00	0.00		0.00	0.00		0.00	0.00	17.41	56.62	76.51	89.57	130.74	550	975	975	CONC	0.15	11.0	867.9562	1.1625	0.1577	0.634		
To Unknown Road54 - 602, Pipe 6223 - HW602					9.10						0.45				0.00		17.56																
Unknown Road54 - 602																																	
Contribution From Unknown Road40 - 30, Pipe 6218 - 6223	9.10					0.45					0.00				0.00		17.56																
Contribution From Unknown Road40 - 30, Pipe 6222 - 6223	1.73					0.54					0.00				0.00		14.51																
6223 HW602						0.00	10.84				0.00	0.99			0.00		0.00	17.56	56.31	76.10	89.08	130.02	686	1050	1050	CONC	0.15	24.5	1057.6053	1.2214	0.3343	0.649	
Unknown Road4 - 04																																	
6302 6303	0.04	0.80	0.09	0.09		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	7	300	300	PVC	0.35	21.0	57.2089	0.8093	0.4325	0.119		
To Unknown Road33 - 24, Pipe 6303 - 6304					0.09						0.00				0.00		10.43																
6204 6205	0.33	0.65	0.60	0.60		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	46	600	600	CONC	0.15	39.0	237.8056	0.8411	0.7728	0.193		
6205 6206	0.03	0.65	0.05	0.65		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	10.77	73.96	100.28	117.53	171.79	48	600	600	CONC	0.15	19.5	237.8056	0.8411	0.3864	0.202		
To Unknown Road39 - 29, Pipe 6206 - 6207					0.65						0.00				0.00		11.16																
Contribution From Unknown Road38 - 28, Pipe 6201 - 6202	1.16					0.00					0.00				0.00		10.65	74.38	100.86	118.21	172.79	110	450	450	CONC	0.25	46.0	142.5531	0.8963	0.8554	0.773		
6202 6250	0.18	0.65	0.33	1.48		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	10.65	74.38	100.86	118.21	172.79	110	450	450	CONC	0.25	46.0	142.5531	0.8963	0.9111	0.824		
6250 6206	0.09	0.65	0.16	1.64		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	11.51	71.46	96.84	113.48	165.84	117	450	450	CONC	0.25	49.0	142.5531	0.8963	0.9111	0.824		
To Unknown Road39 - 29, Pipe 6206 - 6207					1.64						0.00				0.00		12.42																
Unknown Road8 - 08																																	
6301 6303	0.16	0.80	0.36	0.36		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	27	300	300	PVC	0.35	55.5	57.2089	0.8093	1.1429	0.478		
To Unknown Road33 - 24, Pipe 6303 - 6304					0.36						0.00				0.00		11.14																
Unknown Road33 - 24																																	
Contribution From Unknown Road8 - 08, Pipe 6301 - 6303	0.36					0.00					0.00				0.00		11.14																
Contribution From Unknown Road4 - 04, Pipe 6302 - 6303	0.09					0.00					0.00				0.00		10.43																
6303 6304	0.03	0.80	0.07	0.51		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	11.14	72.68	98.52	115.46	168.75	37	300</										

STORM SEWER CALCULATION SHEET (RATIONAL METHOD)

Local Roads Return Frequency = 2 years

Collector Roads Return Frequency = 5 years

Arterial Roads Return Frequency = 10 years

Manning 0.013



Location	LOCATION		AREA (Ha)										FLOW						SEWER DATA										
			2 YEAR		5 YEAR		10 YEAR		100 YEAR		Time of Conc.	Intensity 2 Year	Intensity 5 Year	Intensity 10 Year	Intensity 100 Year	Peak Flow Q (l/s)	DIA. (mm) (actual)	DIA. (mm) (nominal)	Type (%)	Slope (m)	Length (l/s)	Capacity (m/s)	Velocity (m/s)	Time of Low (min)	Ratio Q/Q full				
	From Node	To Node	Area (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	Area (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	Area (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	(min)	(mm/h)	(mm/h)	(mm/h)	(mm/h)	Q (l/s)	(actual)	(nominal)	(%)	(m)	(l/s)	(m/s)	LOW (min)		
Unknown Road52 - 40			0.00	0.00	0.06	0.65	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	300	300	PVC	0.35	31.0	57.2089	0.8093	0.6384	0.658		
To Unknown Road46 - 34, Pipe 2312 - 2316	2311	2312	0.00				0.36		0.00		0.00		0.00		10.00	76.81	104.19	122.14	178.56	38	300	300							
			0.00	0.00	0.06	0.65	0.11	0.22	0.00	0.00	0.00	0.00	0.00																
	3203	3204	0.00	0.00	0.08	0.65	0.14	0.36	0.00	0.00	0.00	0.00	0.00		10.00	76.81	104.19	122.14	178.56	79	450	450	CONC	0.20	94.5	127.5033	0.8017	1.9646	0.620
To Unknown Road24 - 16, Pipe 3204 - 3208			0.00				0.76		0.00		0.00		0.00		11.96														
			0.00	0.00	0.15	0.65	0.27	0.27	0.00	0.00	0.00	0.00	0.00																
	3310	3311	0.00	0.00	0.21	0.65	0.38	0.65	0.00	0.00	0.00	0.00	0.00	10.00	76.81	104.19	122.14	178.56	68	450	450	CONC	0.20	72.5	127.5033	0.8017	1.5072	0.532	
To Unknown Road48 - 36, Pipe 3311 - 3312			0.00				0.65		0.00		0.00		0.00		11.51														
	6216	6217	0.00	0.00	0.15	0.65	0.18	0.18	0.00	0.00	0.00	0.00	0.00																
To Unknown Road40 - 30, Pipe 6217 - 6218			0.00				0.45		0.00		0.00		0.00		11.18														
			0.00	0.00	0.14	0.65	0.25	0.25	0.00	0.00	0.00	0.00	0.00																
	6219	6220	0.00	0.00	0.16	0.65	0.29	0.54	0.00	0.00	0.00	0.00	0.00	10.00	76.81	104.19	122.14	178.56	56	375	375	PVC	0.30	52.5	96.0323	0.8695	1.0063	0.588	
To Unknown Road40 - 30, Pipe 6220 - 6221			0.00				0.54		0.00		0.00		0.00		11.01														
			0.00	0.00	0.09	0.65	0.16	0.16	0.00	0.00	0.00	0.00	0.00																
	6315	6316	0.00	0.00	0.19	0.65	0.34	0.51	0.00	0.00	0.00	0.00	0.00	10.00	76.81	104.19	122.14	178.56	53	375	375	PVC	0.30	45.5	96.0323	0.8695	0.8722	0.549	
To Unknown Road32 - 23, Pipe 6316 - 6317			0.00				0.51		0.00		0.00		0.00		10.87														
			0.00	0.00	0.13	0.65	0.23	0.23	0.00	0.00	0.00	0.00	0.00																
	2208	2209	0.00	0.00	0.15	0.65	0.27	0.51	0.00	0.00	0.00	0.00	0.00																
			0.00	0.00	0.17	0.65	0.31	0.81	0.00	0.00	0.00	0.00	0.00	10.00	76.81	104.19	122.14	178.56	85	450	450	CONC	0.20	68.0	127.5033	0.8017	1.4137	0.664	
	2209	2210	0.00	0.00	0.10	0.65	0.18	0.99	0.00	0.00	0.00	0.00	0.00																
To Unknown Road43 - 31, Pipe 2210 - 2213			0.00	0.00	0.25	0.65	0.45	1.63	0.00	0.00	0.00	0.00	0.00	11.41	71.77	97.28	113.99	166.59	158	600	600	CONC	0.15	72.5	237.8056	0.8411	1.4367	0.665	
			0.00	0.00	0.16	0.65	0.29	0.29	0.00	0.00	0.00	0.00	0.00																
	2309	2310	0.00	0.00	0.18	0.65	0.33	0.90	0.00	0.00	0.00	0.00	0.00	10.00	76.81	104.19	122.14	178.56	94	450	450	CONC	0.20	71.0	127.5033	0.8017	1.4760	0.738	
			0.00	0.00	0.13	0.65	0.23	1.14	0.00	0.00	0.00	0.00	0.00																
	2310	2312	0.00	0.00	0.13	0.65	0.23	1.37	0.00	0.00	0.00	0.00	0.00																
To Unknown Road46 - 34, Pipe 2312 - 2316			0.00				1.70		0.00		0.00		0.00		11.48	71.57	96.99	113.66	166.11	165	600	600	CONC	0.15	74.5	237.8056	0.8411	1.4763	0.693
			0.00	0.00	0.14	0.65	0.25	0.25	0.00	0.00	0.00	0.00	0.00																
	3201	3202	0.00	0.00	0.17	0.65	0.31	0.83	0.00	0.00	0.00	0.00	0.00	10.00	76.81	104.19	122.14	178.56	87	450	450	CONC	0.20	65.0	127.5033	0.8017	1.3513	0.679	
			0.00	0.00	0.12	0.65	0.22	1.05	0.00	0.00	0.00	0.00	0.00																
	3202	3204	0.00	0.00	0.16	0.65	0.29	1.34	0.00	0.00	0.00	0.00	0.00																
To Unknown Road24 - 16, Pipe 3204 - 3208			0.00				1.70		0.00		0.00		0.00		11.35	71.98	97.56	114.33	167.08	166	600	600	CONC	0.15	65.0	237.8056	0.8411	1.2880	0.697
			0.00	0.00	0.10	0.65	0.18	0.18	0.00	0.00	0.00	0.00	0.00																
	6102	6103	0.00	0.00	0.12	0.65	0.22	0.61	0.00	0.00	0.00	0.00	0.00	10.00	76.81	104.19	122.14	178.56	64	375	375	PVC	0.30	40.5	96.0323	0.8695	0.7763	0.667	
			0.00	0.00	0.14	0.65	0.25	0.25	0.00	0.00	0.00	0.00	0.00																
			Definitions: Q = 2.78 AIR, where Q = Peak Flow in Litres per second (L/s) A = Areas in hectares (ha) I = Rainfall Intensity (mm/h) R = Runoff Coefficient	Notes: 1) Ottawa Rainfall-Intensity Curve 2) Min. Velocity = 0.80 m/s																		Designed: H.L.	PROJECT:	BARRHAVEN CONSERVANCY					
																						Checked: D.A.	LOCATION:	City of Ottawa					
																						Dwg. Reference:	File Ref:	16-891	Date:	MARCH 2021	Sheet No.		

STORM SEWER CALCULATION SHEET (RATIONAL METHOD)

Local Roads Return Frequency = 2 years
 Collector Roads Return Frequency = 5 years
 Arterial Roads Return Frequency = 10 years

Manning 0.013



Location	From Node	To Node	AREA (Ha)												FLOW							SEWER DATA											
			2 YEAR				5 YEAR				10 YEAR				100 YEAR				Time of Conc.	Intensity 2 Year	Intensity 5 Year	Intensity 10 Year	Intensity 100 Year	Peak Flow Q (l/s)	DIA. (mm) (actual)	DIA. (mm) (nominal)	Type (%)	Slope (m)	Length (l/s)	Capacity (m/s)	Velocity (m/s)	Time of Low (min)	Ratio Q/Q full
			AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	(min)	(mm/h)	(mm/h)	(mm/h)	(mm/h)	Q (l/s)	DIA. (mm)	DIA. (mm)	Type	Slope	Length	Capacity	Velocity	Time of	
			0.00	0.00	0.14	0.65	0.25	0.87			0.00	0.00			0.00	0.00	10.78	73.95	100.26	117.51	171.76	140	525	525	CONC	0.20	61.5	192.3297	0.8885	1.1537	0.725		
To Unknown Road1 - 01, Pipe 6101 - 6106	6103	6101	0.00	0.00	0.15	0.65	0.27	1.39			0.00	0.00			0.00	0.00	11.93																
Contribution From Unknown Road9 - 09, Pipe 1201 - 1202			0.00	0.00	0.14	0.65	0.25	1.12			0.00	0.00			0.00	0.00	12.55																
Contribution From Unknown Road10 - 10, Pipe 1203 - 1204	1202	1204	0.00	1.07	0.15	0.65	0.27	0.27			0.00	0.00			0.00	0.00	12.55	68.24	92.42	108.28	158.21	98	450	450	CONC	0.20	36.5	127.5033	0.8017	0.7588	0.768		
Contribution From Unknown Road9 - 09, Pipe 1209 - 1210	1204	1210	0.00	2.28	0.09	0.65	0.16	0.43			0.00	0.00			0.00	0.00	12.65																
Contribution From Unknown Road9 - 09, Pipe 1209 - 1210	1210	1218	0.22	0.80	0.49	5.06			0.00	1.26			0.00	0.00			13.31	66.08	89.46	104.80	153.09	212	675	675	CONC	0.15	58.5	325.5584	0.9098	1.0717	0.651		
To Unknown Road37 - 27, Pipe 1218 - 1220	1218		0.00	4.57	0.14	0.65	0.25	0.94			0.00	0.00			0.00	0.00	14.00																
Contribution From Unknown Road22 - 14, Pipe 1216 - 1217	1218		0.00	4.57	0.18	0.65	0.33	1.26			0.00	0.00			0.00	0.00	15.57																
To Unknown Road37 - 27, Pipe 1218 - 1220	1217	1218	0.22	0.80	0.49	5.06			0.00	1.26			0.00	0.00			14.38	63.28	85.62	100.28	146.46	429	825	825	CONC	0.15	74.5	555.9418	1.0400	1.1939	0.771		
Unknown Road6 - 06	6347	6346	0.47	0.65	0.85	0.85			0.00	0.00			0.00	0.00			10.00	76.81	104.19	122.14	178.56	65	375	375	PVC	0.30	76.5	96.0323	0.8695	1.4664	0.679		
To Unknown Road2 - 02, Pipe 6345 - 6314	6346	6345	0.35	0.65	0.63	1.48			0.00	0.00			0.00	0.00			11.47	71.60	97.04	113.71	166.18	106	450	450	CONC	0.20	68.5	127.5033	0.8017	1.4241	0.832		
Unknown Road2 - 02	6214	6215	0.67	0.65	1.21	1.21			0.00	0.00			0.00	0.00			10.00	76.81	104.19	122.14	178.56	93	450	450	CONC	0.20	115.5	127.5033	0.8017	2.4012	0.729		
To Unknown Road39 - 29, Pipe 6215 - 6217	6215		1.21				0.00				0.00						12.40																
Contribution From Unknown Road3 - 03, Pipe 6212 - 6213	6210	6213	0.21	0.65	0.38	0.38			0.00	0.00			0.00	0.00			10.00	76.81	104.19	122.14	178.56	29	300	300	PVC	0.35	48.5	57.2089	0.8093	0.9988	0.509		
To Unknown Road39 - 29, Pipe 6215 - 6217	6213	6215	0.18	0.65	0.33	2.17			0.00	0.00			0.00	0.00			12.75																
Contribution From Unknown Road6 - 06, Pipe 6346 - 6345	6345	6314	0.20	0.65	0.36	1.84			0.00	0.00			0.00	0.00			12.75	67.64	91.60	107.32	156.79	147	600	600	CONC	0.15	58.5	237.8056	0.8411	1.1592	0.617		
To Unknown Road31 - 22, Pipe 6314 - 6316	6314	6316	0.13	0.80	0.29	3.81			0.00	0.00			0.00	0.00			12.89																
Unknown Road31 - 22	6310	6311	0.05	0.80	0.11	0.11			0.00	0.00			0.00	0.00			10.00	76.81	104.19	122.14	178.56	21	300	300	PVC	0.35	12.0	57.2089	0.8093	0.2471	0.368		
To Unknown Road32 - 23, Pipe 6316 - 6317	6311	6312	0.09	0.65	0.16	0.27			0.00	0.00			0.00	0.00			10.00	76.81	104.19	122.14	178.56	72	450	450	CONC	0.20	82.0	127.5033	0.8017	1.7047	0.561		
Unknown Road32 - 23	6312	6314	0.13	0.80	0.29	0.56			0.00	0.00			0.00	0.00			10.25	75.87	102.91	120.63	176.33												
Contribution From Unknown Road2 - 02, Pipe 6345 - 6314	6312	6314	0.21	0.65	0.38	0.94			0.00	0.00			0.00	0.00			11.95	70.04	94.90	111.20	162.49	117	525	525	CONC	0.20	82.0	192.3297	0.8885	1.5382	0.609		
To Unknown Road32 - 23, Pipe 6316 - 6317	6314	6316	0.15	0.80	0.33	1.28			0.00	0.00			0.00	0.00			11.95	70.04	94.90	111.20	162.49	244	675	675	CONC	0.15	62.5	325.5584	0.9098	1.1450	0.749		
Definitions: Q = 2.78 AIR, where Q = Peak Flow in Litres per second (L/s) A = Areas in hectares (ha) I = Rainfall Intensity (mm/h) R = Runoff Coefficient	Notes: 1) Ottawa Rainfall-Intensity Curve 2) Min. Velocity = 0.80 m/s																				Designed: H.L.		PROJECT: BARRHAVEN CONSERVANCY										
																				Checked: D.A.		LOCATION: City of Ottawa											
																				Dwg. Reference: File Ref: 16-891		Date: MARCH 2021		Sheet No. SHEET 9 OF 11									

STORM SEWER CALCULATION SHEET (RATIONAL METHOD)

Local Roads Return Frequency = 2 years
Collector Roads Return Frequency = 5 years
Arterial Roads Return Frequency = 10 years



Manning 0.0

Arterial Roads Return Frequency = 10 year

Fig. 3-11

Definitions:

$Q = 2.78 \text{ AIR}$, where

Q = Peak Flow in Litre

A = Areas in hectares (

I = Rainfall Intensity (mm/h)

R = Runoff Coefficient

Notes:

1) Ottawa Rainfall-Intensity

2) Min. Velocity = 0.80 m/s

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4

signed:

H.L.

cked:

D.A.

Reference:

ANSWER

DATA MANAGEMENT

BARRHAVEN CONSERVANCY

City of Ottawa

Date: _____ Sheet No. _____

STORM SEWER CALCULATION SHEET (RATIONAL METHOD)

Local Roads Return Frequency = 2 years
 Collector Roads Return Frequency = 5 years
 Arterial Roads Return Frequency = 10 years

Manning 0.013



Location	LOCATION		AREA (Ha)										FLOW							SEWER DATA										
			2 YEAR		5 YEAR		10 YEAR		100 YEAR		Time of	Intensity	Intensity	Intensity	Intensity	Peak Flow	DIA. (mm)	DIA. (mm)	TYPE	SLOPE	LENGTH	CAPACITY	VELOCITY	TIME OF	RATIO					
	From Node	To Node	AREA (Ha)	R	Indiv.	Accum.	AREA (Ha)	R	Indiv.	Accum.	AREA (Ha)	R	Indiv.	Accum.	(min)	(mm/h)	(mm/h)	(mm/h)	(mm/h)	Q (l/s)	(actual)	(nominal)	(%)	(m)	(l/s)	(m/s)	LOW (min)	Q/Q full		
	2201	2202	0.22	0.65	0.40	0.40		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	31	300	300	PVC	0.35	43.0	57.2089	0.8093	0.8855	0.534
	2202	2204	0.30	0.65	0.54	0.94		0.00	0.00		0.00	0.00		0.00	0.00	10.89	73.56	99.74	116.89	170.85	69	450	450	CONC	0.20	73.0	127.5033	0.8017	1.5176	0.542
To Unknown Road43 - 31, Pipe 2204 - 2207																														
	2301	2302	0.36	0.65	0.65	0.65		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	50	375	375	PVC	0.30	72.0	96.0323	0.8695	1.3801	0.520
	2302	2304	0.33	0.65	0.60	1.25		0.00	0.00		0.00	0.00		0.00	0.00	11.38	71.88	97.43	114.17	166.86	90	450	450	CONC	0.20	74.5	127.5033	0.8017	1.5488	0.703
To Unknown Road46 - 34, Pipe 2304 - 2308																														
	7006	7007	0.37	0.65	0.67	0.67		0.00	0.00		0.00	0.00		0.00	0.00	10.00	76.81	104.19	122.14	178.56	51	375	375	PVC	0.30	74.5	96.0323	0.8695	1.4280	0.535
	7007	7008	0.44	0.65	0.80	1.46		0.00	0.00		0.00	0.00		0.00	0.00	11.43	71.72	97.21	113.92	166.48	105	450	450	CONC	0.20	112.0	127.5033	0.8017	2.3284	0.823
To Unknown Road56 - 701, Pipe 7008 - HW701																														
Contribution From Unknown Road50 - 38, Pipe 7002 - 7003																														
	7003	7004	0.05	0.65	0.09	1.66		0.00	0.00		0.00	0.00		0.00	0.00	12.94	67.10	90.86	106.44	155.51	112	525	525	CONC	0.20	13.5	192.3297	0.8885	0.2532	0.580
	7004	7005	0.15	0.65	0.27	1.93		0.00	0.00		0.00	0.00		0.00	0.00	13.19	66.39	89.89	105.30	153.82	128	600	600	CONC	0.15	45.5	237.8056	0.8411	0.9016	0.540
To Unknown Road56 - 701, Pipe 7005 - 7008																														
Unknown Road56 - 701																														
Contribution From Unknown Road51 - 39, Pipe 7004 - 7005																														
	7005	7008	0.00	1.93	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	14.10	63.99	86.60	101.43	148.14	124	600	600	CONC	0.15	13.0	237.8056	0.8411	0.2576	0.520
Contribution From Unknown Road51 - 39, Pipe 7007 - 7008																														
	7008	HW701 (Trunk 12)	0.00	3.40	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	14.35	63.34	85.71	100.38	146.61	215	675	675	CONC	0.15	18.5	325.5584	0.9098	0.3389	0.661
Definitions: Q = 2.78 AIR, where Q = Peak Flow in Litres per second (L/s) A = Areas in hectares (ha) I = Rainfall Intensity (mm/h) R = Runoff Coefficient																														
Notes: 1) Ottawa Rainfall-Intensity Curve 2) Min. Velocity = 0.80 m/s																														
Designed: <input type="text"/> H.L. Checked: <input type="text"/> D.A. Dwg. Reference: <input type="text"/> File Ref: <input type="text"/> 16-891 Date: <input type="text"/> MARCH 2021 Sheet No. <input type="text"/> SHEET 11 OF 11																														



Ottawa. ON
Paris. ON
Gatineau. QC
Montréal. QC
Québec. QC

Attachment B

PCSWMM Model Result files

1
 2 EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.015)
 3
 4
 5
 6 *****
 7 Element Count
 8 *****
 9 Number of rain gages 0
 10 Number of subcatchments ... 0
 11 Number of nodes 218
 12 Number of links 207
 13 Number of pollutants 0
 14 Number of land uses 0
 15
 16
 17 *****
 18 Node Summary
 19 *****
 20
 21 Name Type Invert Max. Ponded External
 22 -----
 23 MH-1101 JUNCTION 90.86 2.40 0.0 Yes
 24 MH-1102 JUNCTION 90.59 2.55 0.0 Yes
 25 MH-1103 JUNCTION 90.35 2.63 0.0 Yes
 26 MH-1104 JUNCTION 90.16 2.66 0.0 Yes
 27 MH-1105 JUNCTION 89.95 2.67 0.0 Yes
 28 MH-1106 JUNCTION 89.77 2.73 0.0
 29 MH-1201 JUNCTION 91.44 1.95 0.0 Yes
 30 MH-1202 JUNCTION 91.13 2.08 0.0 Yes
 31 MH-1203 JUNCTION 91.39 1.94 0.0 Yes
 32 MH-1204 JUNCTION 90.83 2.33 0.0 Yes
 33 MH-1205 JUNCTION 91.49 1.87 0.0 Yes
 34 MH-1206 JUNCTION 91.47 1.80 0.0 Yes
 35 MH-1207 JUNCTION 91.20 2.05 0.0 Yes
 36 MH-1208 JUNCTION 91.41 1.87 0.0 Yes
 37 MH-1209 JUNCTION 90.92 2.24 0.0 Yes
 38 MH-1210 JUNCTION 90.60 2.47 0.0 Yes
 39 MH-1211 JUNCTION 91.57 1.79 0.0 Yes
 40 MH-1212 JUNCTION 91.51 1.80 0.0 Yes
 41 MH-1213 JUNCTION 91.21 2.06 0.0 Yes
 42 MH-1214 JUNCTION 91.41 1.87 0.0 Yes
 43 MH-1215 JUNCTION 91.42 1.80 0.0 Yes
 44 MH-1216 JUNCTION 90.93 2.26 0.0
 45 MH-1217 JUNCTION 90.78 2.31 0.0 Yes
 46 MH-1218 JUNCTION 90.28 2.68 0.0
 47 MH-1219 JUNCTION 91.11 1.87 0.0 Yes
 48 MH-1220 JUNCTION 90.17 2.70 0.0
 49 MH-1221 JUNCTION 90.07 2.71 0.0 Yes
 50 MH-1222 JUNCTION 89.94 2.74 0.0 Yes
 51 MH-1223 JUNCTION 89.77 2.80 0.0
 52 MH-1224 JUNCTION 89.69 2.86 0.0
 53 MH-1227 JUNCTION 90.61 2.10 0.0 Yes
 54 MH-1228 JUNCTION 90.39 2.14 0.0
 55 MH-1229 JUNCTION 90.34 2.17 0.0
 56 MH-1230 JUNCTION 89.56 2.94 0.0
 57 MH-2101 JUNCTION 91.01 1.80 0.0 Yes
 58 MH-2102 JUNCTION 90.81 2.06 0.0 Yes
 59 MH-2103 JUNCTION 90.54 2.23 0.0 Yes
 60 MH-2104 JUNCTION 90.25 2.42 0.0 Yes
 61 MH-2105 JUNCTION 90.91 1.96 0.0 Yes
 62 MH-2106 JUNCTION 90.63 2.04 0.0 Yes
 63 MH-2107 JUNCTION 90.46 2.19 0.0 Yes
 64 MH-2108 JUNCTION 90.07 2.50 0.0 Yes
 65 MH-2109 JUNCTION 90.98 1.80 0.0 Yes
 66 MH-2110 JUNCTION 90.94 1.80 0.0

67	MH-2111	JUNCTION	90.66	2.06	0.0	Yes
68	MH-2112	JUNCTION	90.38	2.24	0.0	Yes
69	MH-2113	JUNCTION	90.22	2.30	0.0	Yes
70	MH-2114	JUNCTION	89.84	2.66	0.0	
71	MH-2201	JUNCTION	91.51	1.80	0.0	Yes
72	MH-2202	JUNCTION	91.21	2.01	0.0	Yes
73	MH-2203	JUNCTION	91.35	1.89	0.0	Yes
74	MH-2204	JUNCTION	90.98	2.06	0.0	Yes
75	MH-2205	JUNCTION	91.42	1.80	0.0	Yes
76	MH-2206	JUNCTION	91.12	2.01	0.0	Yes
77	MH-2207	JUNCTION	90.78	2.18	0.0	Yes
78	MH-2208	JUNCTION	91.14	1.95	0.0	Yes
79	MH-2209	JUNCTION	90.85	2.14	0.0	Yes
80	MH-2210	JUNCTION	90.54	2.32	0.0	
81	MH-2211	JUNCTION	91.11	1.87	0.0	Yes
82	MH-2212	JUNCTION	90.82	2.06	0.0	Yes
83	MH-2213	JUNCTION	90.31	2.46	0.0	
84	MH-2214	JUNCTION	90.94	1.79	0.0	Yes
85	MH-2215	JUNCTION	90.14	2.54	0.0	Yes
86	MH-2216	JUNCTION	90.00	2.57	0.0	
87	MH-2217	JUNCTION	89.86	2.60	0.0	
88	MH-2218	JUNCTION	89.81	2.63	0.0	
89	MH-2219	JUNCTION	90.92	1.80	0.0	Yes
90	MH-2220	JUNCTION	90.92	1.80	0.0	Yes
91	MH-2221	JUNCTION	90.67	1.90	0.0	Yes
92	MH-2222	JUNCTION	90.36	2.20	0.0	Yes
93	MH-2223	JUNCTION	90.18	2.26	0.0	
94	MH-2224	JUNCTION	90.09	2.33	0.0	
95	MH-2225	JUNCTION	89.69	2.71	0.0	
96	MH-2301	JUNCTION	91.37	1.88	0.0	Yes
97	MH-2302	JUNCTION	91.08	2.06	0.0	Yes
98	MH-2303	JUNCTION	91.26	1.80	0.0	Yes
99	MH-2304	JUNCTION	90.87	2.16	0.0	Yes
100	MH-2305	JUNCTION	91.21	1.94	0.0	Yes
101	MH-2306	JUNCTION	90.99	2.06	0.0	Yes
102	MH-2307	JUNCTION	91.26	1.85	0.0	Yes
103	MH-2308	JUNCTION	90.52	2.42	0.0	
104	MH-2309	JUNCTION	91.11	1.96	0.0	Yes
105	MH-2310	JUNCTION	90.82	2.14	0.0	Yes
106	MH-2311	JUNCTION	91.10	1.80	0.0	Yes
107	MH-2312	JUNCTION	90.28	2.57	0.0	
108	MH-2313	JUNCTION	91.02	1.94	0.0	Yes
109	MH-2314	JUNCTION	90.80	2.06	0.0	Yes
110	MH-2315	JUNCTION	91.01	1.79	0.0	Yes
111	MH-2316	JUNCTION	90.11	2.63	0.0	
112	MH-2317	JUNCTION	90.92	1.80	0.0	
113	MH-2318	JUNCTION	90.01	2.66	0.0	
114	MH-2319	JUNCTION	89.86	2.69	0.0	
115	MH-2320	JUNCTION	89.72	2.73	0.0	
116	MH-2321	JUNCTION	89.67	2.77	0.0	
117	MH-2322	JUNCTION	90.92	1.80	0.0	Yes
118	MH-2323	JUNCTION	90.68	2.01	0.0	Yes
119	MH-2324	JUNCTION	90.37	2.20	0.0	Yes
120	MH-2325	JUNCTION	90.19	2.27	0.0	
121	MH-2326	JUNCTION	90.10	2.33	0.0	
122	MH-2327	JUNCTION	89.56	2.84	0.0	
123	MH-3101	JUNCTION	90.74	1.80	0.0	Yes
124	MH-3102	JUNCTION	90.44	2.17	0.0	Yes
125	MH-3103	JUNCTION	90.20	2.29	0.0	Yes
126	MH-3104	JUNCTION	89.83	2.65	0.0	
127	MH-3105	JUNCTION	90.81	1.80	0.0	Yes
128	MH-3106	JUNCTION	90.85	1.80	0.0	Yes
129	MH-3107	JUNCTION	90.30	2.28	0.0	Yes
130	MH-3108	JUNCTION	90.07	2.34	0.0	Yes
131	MH-3109	JUNCTION	89.98	2.43	0.0	Yes
132	MH-3150	JUNCTION	89.83	2.59	0.0	

133	MH-3201	JUNCTION	90.95	1.95	0.0	Yes
134	MH-3202	JUNCTION	90.67	2.13	0.0	Yes
135	MH-3203	JUNCTION	90.89	1.95	0.0	Yes
136	MH-3204	JUNCTION	90.47	2.23	0.0	
137	MH-3205	JUNCTION	90.93	1.87	0.0	Yes
138	MH-3206	JUNCTION	90.66	2.05	0.0	Yes
139	MH-3207	JUNCTION	90.87	1.79	0.0	Yes
140	MH-3208	JUNCTION	90.23	2.38	0.0	
141	MH-3209	JUNCTION	90.07	2.45	0.0	Yes
142	MH-3210	JUNCTION	89.92	2.50	0.0	Yes
143	MH-3211	JUNCTION	90.70	1.96	0.0	Yes
144	MH-3212	JUNCTION	90.46	2.03	0.0	Yes
145	MH-3213	JUNCTION	90.36	2.12	0.0	Yes
146	MH-3214	JUNCTION	90.23	2.17	0.0	
147	MH-3301	JUNCTION	91.01	2.03	0.0	Yes
148	MH-3302	JUNCTION	91.16	1.80	0.0	Yes
149	MH-3303	JUNCTION	90.65	2.23	0.0	Yes
150	MH-3304	JUNCTION	91.01	1.87	0.0	Yes
151	MH-3305	JUNCTION	90.47	2.31	0.0	Yes
152	MH-3306	JUNCTION	90.95	1.87	0.0	Yes
153	MH-3307	JUNCTION	90.31	2.38	0.0	
154	MH-3308	JUNCTION	90.81	1.95	0.0	Yes
155	MH-3309	JUNCTION	90.14	2.47	0.0	
156	MH-3310	JUNCTION	90.89	1.94	0.0	Yes
157	MH-3311	JUNCTION	90.68	2.03	0.0	Yes
158	MH-3312	JUNCTION	90.42	2.20	0.0	Yes
159	MH-3313	JUNCTION	89.98	2.55	0.0	
160	MH-3314	JUNCTION	89.88	2.60	0.0	
161	MH-3315	JUNCTION	90.86	1.79	0.0	Yes
162	MH-3316	JUNCTION	90.83	1.80	0.0	Yes
163	MH-3317	JUNCTION	90.33	2.23	0.0	Yes
164	MH-3318	JUNCTION	90.10	2.30	0.0	
165	MH-3319	JUNCTION	89.74	2.66	0.0	
166	MH-6101	JUNCTION	90.35	2.20	0.0	Yes
167	MH-6102	JUNCTION	90.82	1.88	0.0	Yes
168	MH-6103	JUNCTION	90.55	2.22	0.0	Yes
169	MH-6104	JUNCTION	90.47	2.03	0.0	Yes
170	MH-6106	JUNCTION	90.22	2.33	0.0	
171	MH-6107	JUNCTION	90.17	2.38	0.0	Yes
172	MH-6108	JUNCTION	90.05	2.45	0.0	
173	MH-6150	JUNCTION	90.62	1.88	0.0	Yes
174	MH-6152	JUNCTION	90.83	1.67	0.0	Yes
175	MH-6201	JUNCTION	91.23	1.97	0.0	Yes
176	MH-6202	JUNCTION	91.11	2.03	0.0	Yes
177	MH-6204	JUNCTION	90.93	2.16	0.0	Yes
178	MH-6205	JUNCTION	90.84	2.19	0.0	Yes
179	MH-6206	JUNCTION	90.54	2.46	0.0	Yes
180	MH-6207	JUNCTION	90.34	2.54	0.0	Yes
181	MH-6210	JUNCTION	91.14	1.79	0.0	Yes
182	MH-6211	JUNCTION	91.19	1.89	0.0	Yes
183	MH-6212	JUNCTION	90.90	2.06	0.0	Yes
184	MH-6213	JUNCTION	90.62	2.24	0.0	Yes
185	MH-6214	JUNCTION	90.97	1.97	0.0	Yes
186	MH-6215	JUNCTION	90.16	2.62	0.0	
187	MH-6216	JUNCTION	90.95	1.81	0.0	Yes
188	MH-6217	JUNCTION	90.00	2.69	0.0	
189	MH-6218	JUNCTION	89.81	2.71	0.0	
190	MH-6219	JUNCTION	90.96	1.87	0.0	Yes
191	MH-6220	JUNCTION	90.57	2.17	0.0	Yes
192	MH-6221	JUNCTION	90.34	2.23	0.0	Yes
193	MH-6222	JUNCTION	90.26	2.30	0.0	Yes
194	MH-6223	JUNCTION	89.72	2.78	0.0	
195	MH-6250	JUNCTION	90.97	2.10	0.0	Yes
196	MH-6301	JUNCTION	91.43	1.80	0.0	Yes
197	MH-6302	JUNCTION	91.37	1.80	0.0	Yes
198	MH-6303	JUNCTION	91.21	1.92	0.0	Yes

199	MH-6304	JUNCTION	91.00	2.11	0.0	Yes
200	MH-6305	JUNCTION	90.67	2.31	0.0	Yes
201	MH-6306	JUNCTION	90.47	2.33	0.0	Yes
202	MH-6307	JUNCTION	90.26	2.40	0.0	Yes
203	MH-6308	JUNCTION	90.08	2.46	0.0	
204	MH-6309	JUNCTION	90.00	2.53	0.0	
205	MH-6310	JUNCTION	91.30	1.80	0.0	Yes
206	MH-6311	JUNCTION	91.11	1.99	0.0	Yes
207	MH-6312	JUNCTION	90.87	2.11	0.0	Yes
208	MH-6314	JUNCTION	90.55	2.31	0.0	Yes
209	MH-6315	JUNCTION	90.97	1.87	0.0	Yes
210	MH-6316	JUNCTION	90.38	2.39	0.0	Yes
211	MH-6317	JUNCTION	90.23	2.40	0.0	Yes
212	MH-6318	JUNCTION	90.86	1.95	0.0	Yes
213	MH-6319	JUNCTION	90.59	2.04	0.0	Yes
214	MH-6320	JUNCTION	90.42	2.20	0.0	Yes
215	MH-6321	JUNCTION	90.06	2.48	0.0	
216	MH-6322	JUNCTION	90.00	2.51	0.0	
217	MH-6323	JUNCTION	89.67	2.83	0.0	
218	MH-6345	JUNCTION	90.71	2.24	0.0	Yes
219	MH-6346	JUNCTION	91.00	2.05	0.0	Yes
220	MH-6347	JUNCTION	91.28	1.89	0.0	Yes
221	MH-7001	JUNCTION	91.24	1.88	0.0	Yes
222	MH-7002	JUNCTION	90.92	2.11	0.0	Yes
223	MH-7003	JUNCTION	90.66	2.20	0.0	
224	MH-7004	JUNCTION	90.56	2.30	0.0	Yes
225	MH-7005	JUNCTION	90.46	2.34	0.0	
226	MH-7006	JUNCTION	91.18	1.88	0.0	Yes
227	MH-7007	JUNCTION	90.88	2.07	0.0	Yes
228	MH-7008	JUNCTION	90.37	2.43	0.0	
229	MH-HW101	OUTFALL	89.67	1.05	0.0	
230	MH-HW102	OUTFALL	89.55	1.05	0.0	
231	MH-HW201	OUTFALL	89.80	0.82	0.0	
232	MH-HW202	OUTFALL	89.68	0.97	0.0	
233	MH-HW203	OUTFALL	89.55	0.97	0.0	
234	MH-HW301	OUTFALL	89.79	0.68	0.0	
235	MH-HW302	OUTFALL	89.79	0.90	0.0	
236	MH-HW303	OUTFALL	89.72	0.90	0.0	
237	MH-HW601	OUTFALL	90.01	0.60	0.0	
238	MH-HW602	OUTFALL	89.68	1.05	0.0	
239	MH-HW603	OUTFALL	89.67	0.97	0.0	
240	MH-HW701	OUTFALL	90.34	0.68	0.0	

241

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243 * *****

244 Link Summary

245 * *****

246	Name	From Node	To Node	Type	Length	%Slope
	Roughness					

247

248	STM-1101-1102 0.2000 0.0130	MH-1101	MH-1102	CONDUIT	98.0	
249	STM-1102-1103 0.1498 0.0130	MH-1102	MH-1103	CONDUIT	111.5	
250	STM-1103-1104 0.1498 0.0130	MH-1103	MH-1104	CONDUIT	111.5	
251	STM-1104-1105 0.1504 0.0130	MH-1104	MH-1105	CONDUIT	125.0	
252	STM-1105-1106 0.1497 0.0130	MH-1105	MH-1106	CONDUIT	83.5	
253	STM-1106-HW101 0.1500 0.0130	MH-1106	MH-HW101	CONDUIT	62.0	
254	STM-1201-1202 0.2000 0.0130	MH-1201	MH-1202	CONDUIT	122.5	

255	STM-1202-1204 0.2000 0.0130	MH-1202	MH-1204	CONDUIT	36.5
256	STM-1203-1204 0.2000 0.0130	MH-1203	MH-1204	CONDUIT	127.5
257	STM-1204-1210 0.1504 0.0130	MH-1204	MH-1210	CONDUIT	58.5
258	STM-1205-1207 0.3000 0.0130	MH-1205	MH-1207	CONDUIT	73.0
259	STM-1206-1207 0.3500 0.0130	MH-1206	MH-1207	CONDUIT	14.0
260	STM-1207-1209 0.2000 0.0130	MH-1207	MH-1209	CONDUIT	65.0
261	STM-1208-1209 0.3000 0.0130	MH-1208	MH-1209	CONDUIT	78.0
262	STM-1209-1210 0.1508 0.0130	MH-1209	MH-1210	CONDUIT	63.0
263	STM-1210-1218 0.1503 0.0130	MH-1210	MH-1218	CONDUIT	74.5
264	STM-1211-1213 0.3504 0.0130	MH-1211	MH-1213	CONDUIT	58.5
265	STM-1212-1213 0.3509 0.0130	MH-1212	MH-1213	CONDUIT	26.5
266	STM-1213-1216 0.2000 0.0130	MH-1213	MH-1216	CONDUIT	64.5
267	STM-1214-1216 0.3008 0.0130	MH-1214	MH-1216	CONDUIT	62.5
268	STM-1215-1216 0.3519 0.0130	MH-1215	MH-1216	CONDUIT	27.0
269	STM-1216-1217 0.1504 0.0130	MH-1216	MH-1217	CONDUIT	62.5
270	STM-1217-1218 0.1503 0.0130	MH-1217	MH-1218	CONDUIT	82.5
271	STM-1218-1220 0.1504 0.0130	MH-1218	MH-1220	CONDUIT	56.5
272	STM-1219-1220 0.3000 0.0130	MH-1219	MH-1220	CONDUIT	78.0
273	STM-1220-1221 0.1504 0.0130	MH-1220	MH-1221	CONDUIT	58.5
274	STM-1221-1222 0.1504 0.0130	MH-1221	MH-1222	CONDUIT	70.5
275	STM-1222-1223 0.1497 0.0130	MH-1222	MH-1223	CONDUIT	71.5
276	STM-1223-1224 0.1529 0.0130	MH-1223	MH-1224	CONDUIT	17.0
277	STM-1224-1230 0.1514 0.0130	MH-1224	MH-1230	CONDUIT	37.0
278	STM-1227-1228 0.1498 0.0130	MH-1227	MH-1228	CONDUIT	125.5
279	STM-1228-1229 0.1524 0.0130	MH-1228	MH-1229	CONDUIT	10.5
280	STM-1229-1230 0.1474 0.0130	MH-1229	MH-1230	CONDUIT	9.5
281	STM-1230-HW102 0.1500 0.0130	MH-1230	MH-HW102	CONDUIT	4.0
282	STM-2101-2102 0.3493 0.0130	MH-2101	MH-2102	CONDUIT	35.5
283	STM-2102-2103 0.3008 0.0130	MH-2102	MH-2103	CONDUIT	64.5
284	STM-2103-2104 0.2000 0.0130	MH-2103	MH-2104	CONDUIT	70.5
285	STM-2104-2108 0.1504 0.0130	MH-2104	MH-2108	CONDUIT	70.5
286	STM-2105-2106 0.2000 0.0130	MH-2105	MH-2106	CONDUIT	123.5
287	STM-2106-2107 0.2000 0.0130	MH-2106	MH-2107	CONDUIT	13.0

288	STM-2107-2108 0.1495 0.0130	MH-2107	MH-2108	CONDUIT	55.5
289	STM-2108-2114 0.1505 0.0130	MH-2108	MH-2114	CONDUIT	48.5
290	STM-2109-2111 0.3510 0.0130	MH-2109	MH-2111	CONDUIT	49.0
291	STM-2110-2111 0.3524 0.0130	MH-2110	MH-2111	CONDUIT	10.5
292	STM-2111-2112 0.2000 0.0130	MH-2111	MH-2112	CONDUIT	66.5
293	STM-2112-2113 0.1507 0.0130	MH-2112	MH-2113	CONDUIT	67.0
294	STM-2113-2114 0.1500 0.0130	MH-2113	MH-2114	CONDUIT	14.0
295	STM-2114-HW201 0.1509 0.0130	MH-2114	MH-HW201	CONDUIT	26.5
296	STM-2201-2202 0.3512 0.0130	MH-2201	MH-2202	CONDUIT	43.0
297	STM-2202-2204 0.2000 0.0130	MH-2202	MH-2204	CONDUIT	73.0
298	STM-2203-2204 0.3500 0.0130	MH-2203	MH-2204	CONDUIT	32.0
299	STM-2204-2207 0.2000 0.0130	MH-2204	MH-2207	CONDUIT	64.5
300	STM-2205-2206 0.3494 0.0130	MH-2205	MH-2206	CONDUIT	43.5
301	STM-2206-2207 0.2000 0.0130	MH-2206	MH-2207	CONDUIT	73.0
302	STM-2207-2210 0.1504 0.0130	MH-2207	MH-2210	CONDUIT	62.5
303	STM-2208-2209 0.2000 0.0130	MH-2208	MH-2209	CONDUIT	68.0
304	STM-2209-2210 0.1503 0.0130	MH-2209	MH-2210	CONDUIT	72.5
305	STM-2210-2213 0.1504 0.0130	MH-2210	MH-2213	CONDUIT	56.5
306	STM-2211-2212 0.3000 0.0130	MH-2211	MH-2212	CONDUIT	71.0
307	STM-2212-2213 0.2000 0.0130	MH-2212	MH-2213	CONDUIT	71.0
308	STM-2213-2215 0.1504 0.0130	MH-2213	MH-2215	CONDUIT	58.5
309	STM-2214-2215 0.3500 0.0130	MH-2214	MH-2215	CONDUIT	34.0
310	STM-2215-2216 0.1497 0.0130	MH-2215	MH-2216	CONDUIT	79.5
311	STM-2216-2217 0.1497 0.0130	MH-2216	MH-2217	CONDUIT	79.5
312	STM-2217-2218 0.1538 0.0130	MH-2217	MH-2218	CONDUIT	13.0
313	STM-2218-2225 0.1489 0.0130	MH-2218	MH-2225	CONDUIT	23.5
314	STM-2219-2221 0.3492 0.0130	MH-2219	MH-2221	CONDUIT	29.5
315	STM-2220-2221 0.3510 0.0130	MH-2220	MH-2221	CONDUIT	24.5
316	STM-2221-2222 0.2000 0.0130	MH-2221	MH-2222	CONDUIT	80.5
317	STM-2222-2223 0.1503 0.0130	MH-2222	MH-2223	CONDUIT	80.5
318	STM-2223-2224 0.1500 0.0130	MH-2223	MH-2224	CONDUIT	14.0
319	STM-2224-2225 0.1500 0.0130	MH-2224	MH-2225	CONDUIT	22.0
320	STM-2225-HW202 0.1500 0.0130	MH-2225	MH-HW202	CONDUIT	4.0

321	STM-2301-2302 0.3000 0.0130	MH-2301	MH-2302	CONDUIT	72.0
322	STM-2302-2304 0.2000 0.0130	MH-2302	MH-2304	CONDUIT	74.5
323	STM-2303-2304 0.3533 0.0130	MH-2303	MH-2304	CONDUIT	15.0
324	STM-2304-2308 0.2000 0.0130	MH-2304	MH-2308	CONDUIT	64.5
325	STM-2305-2306 0.2000 0.0130	MH-2305	MH-2306	CONDUIT	72.0
326	STM-2306-2308 0.2000 0.0130	MH-2306	MH-2308	CONDUIT	72.0
327	STM-2307-2308 0.3508 0.0130	MH-2307	MH-2308	CONDUIT	30.5
328	STM-2308-2312 0.1500 0.0130	MH-2308	MH-2312	CONDUIT	62.0
329	STM-2309-2310 0.2000 0.0130	MH-2309	MH-2310	CONDUIT	71.0
330	STM-2310-2312 0.1503 0.0130	MH-2310	MH-2312	CONDUIT	74.5
331	STM-2311-2312 0.3516 0.0130	MH-2311	MH-2312	CONDUIT	31.0
332	STM-2312-2316 0.1504 0.0130	MH-2312	MH-2316	CONDUIT	56.5
333	STM-2313-2314 0.2000 0.0130	MH-2313	MH-2314	CONDUIT	72.5
334	STM-2314-2316 0.2000 0.0130	MH-2314	MH-2316	CONDUIT	72.5
335	STM-2315-2316 0.3516 0.0130	MH-2315	MH-2316	CONDUIT	31.0
336	STM-2316-2318 0.1504 0.0130	MH-2316	MH-2318	CONDUIT	58.5
337	STM-2317-2318 0.3494 0.0130	MH-2317	MH-2318	CONDUIT	39.5
338	STM-2317-2323 0.3520 0.0130	MH-2317	MH-2323	CONDUIT	25.0
339	STM-2318-2319 0.1497 0.0130	MH-2318	MH-2319	CONDUIT	85.5
340	STM-2319-2320 0.1507 0.0130	MH-2319	MH-2320	CONDUIT	73.0
341	STM-2320-2321 0.1478 0.0130	MH-2320	MH-2321	CONDUIT	11.5
342	STM-2321-2327 0.1490 0.0130	MH-2321	MH-2327	CONDUIT	25.5
343	STM-2322-2323 0.3500 0.0130	MH-2322	MH-2323	CONDUIT	20.0
344	STM-2323-2324 0.2000 0.0130	MH-2323	MH-2324	CONDUIT	82.5
345	STM-2324-2325 0.1503 0.0130	MH-2324	MH-2325	CONDUIT	82.5
346	STM-2325-2326 0.1517 0.0130	MH-2325	MH-2326	CONDUIT	14.5
347	STM-2326-2327 0.1488 0.0130	MH-2326	MH-2327	CONDUIT	21.5
348	STM-2327-HW203 0.1556 0.0130	MH-2327	MH-HW203	CONDUIT	4.5
349	STM-3101-3102 0.3500 0.0130	MH-3101	MH-3102	CONDUIT	42.0
350	STM-3102-3103 0.2000 0.0130	MH-3102	MH-3103	CONDUIT	103.5
351	STM-3103-3104 0.2000 0.0130	MH-3103	MH-3104	CONDUIT	10.5
352	STM-3104-HW301 0.1516 0.0130	MH-3104	MH-HW301	CONDUIT	31.0
353	STM-3105-3107 0.3496 0.0130	MH-3105	MH-3107	CONDUIT	59.5

354	STM-3106-3107 0.3500 0.0130	MH-3106	MH-3107	CONDUIT	42.0
355	STM-3107-3108 0.1502 0.0130	MH-3107	MH-3108	CONDUIT	116.5
356	STM-3108-3109 0.1515 0.0130	MH-3108	MH-3109	CONDUIT	16.5
357	STM-3109-3104 0.1511 0.0130	MH-3109	MH-3104	CONDUIT	47.0
358	STM-3150-HW302 0.1520 0.0130	MH-3150	MH-HW302	CONDUIT	25.0
359	STM-3201-3202 0.2000 0.0130	MH-3201	MH-3202	CONDUIT	65.0
360	STM-3202-3204 0.1508 0.0130	MH-3202	MH-3204	CONDUIT	65.0
361	STM-3203-3204 0.2000 0.0130	MH-3203	MH-3204	CONDUIT	94.5
362	STM-3204-3208 0.1500 0.0130	MH-3204	MH-3208	CONDUIT	56.0
363	STM-3205-3206 0.3000 0.0130	MH-3205	MH-3206	CONDUIT	65.0
364	STM-3206-3208 0.2000 0.0130	MH-3206	MH-3208	CONDUIT	65.0
365	STM-3207-3208 0.3512 0.0130	MH-3207	MH-3208	CONDUIT	43.0
366	STM-3208-3209 0.1504 0.0130	MH-3208	MH-3209	CONDUIT	58.5
367	STM-3209-3210 0.1506 0.0130	MH-3209	MH-3210	CONDUIT	77.0
368	STM-3210-3150 0.1545 0.0130	MH-3210	MH-3150	CONDUIT	11.0
369	STM-3211-3212 0.2000 0.0130	MH-3211	MH-3212	CONDUIT	103.0
370	STM-3212-3213 0.2000 0.0130	MH-3212	MH-3213	CONDUIT	10.5
371	STM-3213-3214 0.2000 0.0130	MH-3213	MH-3214	CONDUIT	49.0
372	STM-3214-3150 0.2000 0.0130	MH-3214	MH-3150	CONDUIT	12.0
373	STM-3301-3303 0.2000 0.0130	MH-3301	MH-3303	CONDUIT	102.0
374	STM-3302-3303 0.3500 0.0130	MH-3302	MH-3303	CONDUIT	60.0
375	STM-3303-3305 0.1504 0.0130	MH-3303	MH-3305	CONDUIT	64.5
376	STM-3304-3305 0.3000 0.0130	MH-3304	MH-3305	CONDUIT	73.0
377	STM-3305-3307 0.1505 0.0130	MH-3305	MH-3307	CONDUIT	52.5
378	STM-3306-3307 0.3006 0.0130	MH-3306	MH-3307	CONDUIT	85.5
379	STM-3307-3309 0.1504 0.0130	MH-3307	MH-3309	CONDUIT	64.5
380	STM-3308-3309 0.2000 0.0130	MH-3308	MH-3309	CONDUIT	106.5
381	STM-3309-3313 0.1504 0.0130	MH-3309	MH-3313	CONDUIT	58.5
382	STM-3310-3311 0.2000 0.0130	MH-3310	MH-3311	CONDUIT	72.5
383	STM-3311-3312 0.2000 0.0130	MH-3311	MH-3312	CONDUIT	56.5
384	STM-3312-3313 0.1507 0.0130	MH-3312	MH-3313	CONDUIT	71.0
385	STM-3313-3314 0.1492 0.0130	MH-3313	MH-3314	CONDUIT	29.5
386	STM-3314-3319 0.1495 0.0130	MH-3314	MH-3319	CONDUIT	53.5

387	STM-3315-3317 0.3500 0.0130	MH-3315	MH-3317	CONDUIT	66.0
388	STM-3316-3317 0.3510 0.0130	MH-3316	MH-3317	CONDUIT	49.0
389	STM-3317-3318 0.1504 0.0130	MH-3317	MH-3318	CONDUIT	113.0
390	STM-3318-3319 0.1529 0.0130	MH-3318	MH-3319	CONDUIT	8.5
391	STM-3319-HW303 0.1500 0.0130	MH-3319	MH-HW303	CONDUIT	8.0
392	STM-6101-6106 0.1500 0.0130	MH-6101	MH-6106	CONDUIT	66.0
393	STM-6102-6103 0.3012 0.0130	MH-6102	MH-6103	CONDUIT	40.5
394	STM-6103-6101 0.2000 0.0130	MH-6103	MH-6101	CONDUIT	61.5
395	STM-6104-6108 0.3000 0.0130	MH-6104	MH-6108	CONDUIT	22.0
396	STM-6106-6107 0.1500 0.0130	MH-6106	MH-6107	CONDUIT	10.0
397	STM-6107-6108 0.1500 0.0130	MH-6107	MH-6108	CONDUIT	40.0
398	STM-6108-HW601 0.2000 0.0130	MH-6108	MH-HW601	CONDUIT	23.5
399	STM-6150-6104 0.3500 0.0130	MH-6150	MH-6104	CONDUIT	22.0
400	STM-6152-6150 0.3500 0.0130	MH-6152	MH-6150	CONDUIT	42.0
401	STM-6201-6202 0.2000 0.0130	MH-6201	MH-6202	CONDUIT	31.5
402	STM-6202-6250 0.2500 0.0130	MH-6202	MH-6250	CONDUIT	46.0
403	STM-6204-6205 0.1513 0.0130	MH-6204	MH-6205	CONDUIT	39.0
404	STM-6205-6206 0.1487 0.0130	MH-6205	MH-6206	CONDUIT	19.5
405	STM-6206-6207 0.1500 0.0130	MH-6206	MH-6207	CONDUIT	84.0
406	STM-6207-6215 0.1496 0.0130	MH-6207	MH-6215	CONDUIT	69.5
407	STM-6210-6213 0.3505 0.0130	MH-6210	MH-6213	CONDUIT	48.5
408	STM-6211-6212 0.3007 0.0130	MH-6211	MH-6212	CONDUIT	72.5
409	STM-6212-6213 0.2000 0.0130	MH-6212	MH-6213	CONDUIT	65.5
410	STM-6213-6215 0.1504 0.0130	MH-6213	MH-6215	CONDUIT	58.5
411	STM-6214-6215 0.2000 0.0130	MH-6214	MH-6215	CONDUIT	115.5
412	STM-6215-6217 0.1504 0.0130	MH-6215	MH-6217	CONDUIT	62.5
413	STM-6216-6217 0.3496 0.0130	MH-6216	MH-6217	CONDUIT	57.5
414	STM-6217-6218 0.1500 0.0130	MH-6217	MH-6218	CONDUIT	104.0
415	STM-6218-6223 0.1545 0.0130	MH-6218	MH-6223	CONDUIT	11.0
416	STM-6219-6220 0.3010 0.0130	MH-6219	MH-6220	CONDUIT	52.5
417	STM-6220-6221 0.1502 0.0130	MH-6220	MH-6221	CONDUIT	114.5
418	STM-6221-6222 0.1500 0.0130	MH-6221	MH-6222	CONDUIT	16.0
419	STM-6222-6223 0.1505 0.0130	MH-6222	MH-6223	CONDUIT	46.5

420	STM-6223-HW602 0.1510 0.0130	MH-6223	MH-HW602	CONDUIT	24.5
421	STM-6250-6206 0.2510 0.0130	MH-6250	MH-6206	CONDUIT	49.0
422	STM-6301-6303 0.3496 0.0130	MH-6301	MH-6303	CONDUIT	55.5
423	STM-6302-6303 0.3524 0.0130	MH-6302	MH-6303	CONDUIT	21.0
424	STM-6303-6304 0.3500 0.0130	MH-6303	MH-6304	CONDUIT	16.0
425	STM-6304-6305 0.2000 0.0130	MH-6304	MH-6305	CONDUIT	90.5
426	STM-6305-6306 0.1500 0.0130	MH-6305	MH-6306	CONDUIT	122.0
427	STM-6306-6307 0.1500 0.0130	MH-6306	MH-6307	CONDUIT	90.0
428	STM-6307-6308 0.1503 0.0130	MH-6307	MH-6308	CONDUIT	78.5
429	STM-6308-6309 0.1500 0.0130	MH-6308	MH-6309	CONDUIT	12.0
430	STM-6309-6323 0.1487 0.0130	MH-6309	MH-6323	CONDUIT	19.5
431	STM-6310-6311 0.3500 0.0130	MH-6310	MH-6311	CONDUIT	12.0
432	STM-6311-6312 0.2000 0.0130	MH-6311	MH-6312	CONDUIT	82.0
433	STM-6312-6314 0.2000 0.0130	MH-6312	MH-6314	CONDUIT	82.0
434	STM-6314-6316 0.1504 0.0130	MH-6314	MH-6316	CONDUIT	62.5
435	STM-6315-6316 0.3011 0.0130	MH-6315	MH-6316	CONDUIT	45.5
436	STM-6316-6317 0.1497 0.0130	MH-6316	MH-6317	CONDUIT	81.5
437	STM-6317-6321 0.1496 0.0130	MH-6317	MH-6321	CONDUIT	69.5
438	STM-6318-6319 0.2000 0.0130	MH-6318	MH-6319	CONDUIT	118.5
439	STM-6319-6320 0.2000 0.0130	MH-6319	MH-6320	CONDUIT	12.0
440	STM-6320-6321 0.1495 0.0130	MH-6320	MH-6321	CONDUIT	51.5
441	STM-6321-6322 0.1533 0.0130	MH-6321	MH-6322	CONDUIT	15.0
442	STM-6322-6323 0.1478 0.0130	MH-6322	MH-6323	CONDUIT	11.5
443	STM-6323-HW603 0.1455 0.0130	MH-6323	MH-HW603	CONDUIT	5.5
444	STM-6345-6314 0.1504 0.0130	MH-6345	MH-6314	CONDUIT	58.5
445	STM-6346-6345 0.2000 0.0130	MH-6346	MH-6345	CONDUIT	68.5
446	STM-6347-6346 0.2693 0.0130	MH-6347	MH-6346	CONDUIT	76.5
447	STM-7001-7002 0.3009 0.0130	MH-7001	MH-7002	CONDUIT	57.5
448	STM-7002-7003 0.2000 0.0130	MH-7002	MH-7003	CONDUIT	98.0
449	STM-7003-7004 0.2000 0.0130	MH-7003	MH-7004	CONDUIT	13.5
450	STM-7004-7005 0.1495 0.0130	MH-7004	MH-7005	CONDUIT	45.5
451	STM-7005-7008 0.1538 0.0130	MH-7005	MH-7008	CONDUIT	13.0
452	STM-7006-7007 0.3007 0.0130	MH-7006	MH-7007	CONDUIT	74.5

453	STM-7007-7008	MH-7007	MH-7008	CONDUIT	112.0
	0.2000	0.0130			
454	STM-7008-HW701	MH-7008	MH-HW701	CONDUIT	18.5
	0.1514	0.0130			

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Cross Section Summary

460	Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
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463	STM-1101-1102	CIRCULAR	0.90	0.64	0.23	0.90	1	809.65
464	STM-1102-1103	CIRCULAR	0.97	0.75	0.24	0.97	1	867.36
465	STM-1103-1104	CIRCULAR	1.05	0.87	0.26	1.05	1	1056.88
466	STM-1104-1105	CIRCULAR	1.05	0.87	0.26	1.05	1	1059.08
467	STM-1105-1106	CIRCULAR	1.05	0.87	0.26	1.05	1	1056.61
468	STM-1106-HW101	CIRCULAR	1.05	0.87	0.26	1.05	1	1057.67
469	STM-1201-1202	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
470	STM-1202-1204	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
471	STM-1203-1204	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
472	STM-1204-1210	CIRCULAR	0.68	0.36	0.17	0.68	1	326.04
473	STM-1205-1207	CIRCULAR	0.38	0.11	0.09	0.38	1	96.04
474	STM-1206-1207	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
475	STM-1207-1209	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
476	STM-1208-1209	CIRCULAR	0.38	0.11	0.09	0.38	1	96.04
477	STM-1209-1210	CIRCULAR	0.60	0.28	0.15	0.60	1	238.45
478	STM-1210-1218	CIRCULAR	0.82	0.53	0.21	0.82	1	556.60
479	STM-1211-1213	CIRCULAR	0.30	0.07	0.07	0.30	1	57.25
480	STM-1212-1213	CIRCULAR	0.30	0.07	0.07	0.30	1	57.29
481	STM-1213-1216	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
482	STM-1214-1216	CIRCULAR	0.38	0.11	0.09	0.38	1	96.17
483	STM-1215-1216	CIRCULAR	0.30	0.07	0.07	0.30	1	57.36
484	STM-1216-1217	CIRCULAR	0.60	0.28	0.15	0.60	1	238.14
485	STM-1217-1218	CIRCULAR	0.60	0.28	0.15	0.60	1	238.06
486	STM-1218-1220	CIRCULAR	0.97	0.75	0.24	0.97	1	869.29
487	STM-1219-1220	CIRCULAR	0.38	0.11	0.09	0.38	1	96.04
488	STM-1220-1221	CIRCULAR	0.97	0.75	0.24	0.97	1	869.24
489	STM-1221-1222	CIRCULAR	0.97	0.75	0.24	0.97	1	869.03
490	STM-1222-1223	CIRCULAR	0.97	0.75	0.24	0.97	1	867.00
491	STM-1223-1224	CIRCULAR	0.97	0.75	0.24	0.97	1	876.48
492	STM-1224-1230	CIRCULAR	0.97	0.75	0.24	0.97	1	871.91
493	STM-1227-1228	CIRCULAR	0.60	0.28	0.15	0.60	1	237.66
494	STM-1228-1229	CIRCULAR	0.60	0.28	0.15	0.60	1	239.70
495	STM-1229-1230	CIRCULAR	0.60	0.28	0.15	0.60	1	235.72
496	STM-1230-HW102	CIRCULAR	1.05	0.87	0.26	1.05	1	1057.67
497	STM-2101-2102	CIRCULAR	0.30	0.07	0.07	0.30	1	57.15
498	STM-2102-2103	CIRCULAR	0.38	0.11	0.09	0.38	1	96.16
499	STM-2103-2104	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
500	STM-2104-2108	CIRCULAR	0.60	0.28	0.15	0.60	1	238.10
501	STM-2105-2106	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
502	STM-2106-2107	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
503	STM-2107-2108	CIRCULAR	0.60	0.28	0.15	0.60	1	237.46
504	STM-2108-2114	CIRCULAR	0.68	0.36	0.17	0.68	1	326.14
505	STM-2109-2111	CIRCULAR	0.30	0.07	0.07	0.30	1	57.30
506	STM-2110-2111	CIRCULAR	0.30	0.07	0.07	0.30	1	57.41
507	STM-2111-2112	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
508	STM-2112-2113	CIRCULAR	0.60	0.28	0.15	0.60	1	238.41
509	STM-2113-2114	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
510	STM-2114-HW201	CIRCULAR	0.82	0.53	0.21	0.82	1	557.72
511	STM-2201-2202	CIRCULAR	0.30	0.07	0.07	0.30	1	57.31
512	STM-2202-2204	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
513	STM-2203-2204	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
514	STM-2204-2207	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
515	STM-2205-2206	CIRCULAR	0.30	0.07	0.07	0.30	1	57.17
516	STM-2206-2207	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51

517	STM-2207-2210	CIRCULAR	0.60	0.28	0.15	0.60	1	238.14
518	STM-2208-2209	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
519	STM-2209-2210	CIRCULAR	0.60	0.28	0.15	0.60	1	238.09
520	STM-2210-2213	CIRCULAR	0.75	0.44	0.19	0.75	1	431.83
521	STM-2211-2212	CIRCULAR	0.38	0.11	0.09	0.38	1	96.04
522	STM-2212-2213	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
523	STM-2213-2215	CIRCULAR	0.82	0.53	0.21	0.82	1	556.77
524	STM-2214-2215	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
525	STM-2215-2216	CIRCULAR	0.90	0.64	0.23	0.90	1	700.44
526	STM-2216-2217	CIRCULAR	0.90	0.64	0.23	0.90	1	700.44
527	STM-2217-2218	CIRCULAR	0.90	0.64	0.23	0.90	1	710.11
528	STM-2218-2225	CIRCULAR	0.90	0.64	0.23	0.90	1	698.68
529	STM-2219-2221	CIRCULAR	0.30	0.07	0.07	0.30	1	57.14
530	STM-2220-2221	CIRCULAR	0.30	0.07	0.07	0.30	1	57.30
531	STM-2221-2222	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
532	STM-2222-2223	CIRCULAR	0.60	0.28	0.15	0.60	1	238.07
533	STM-2223-2224	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
534	STM-2224-2225	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
535	STM-2225-HW202	CIRCULAR	0.97	0.75	0.24	0.97	1	868.01
536	STM-2301-2302	CIRCULAR	0.38	0.11	0.09	0.38	1	96.04
537	STM-2302-2304	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
538	STM-2303-2304	CIRCULAR	0.30	0.07	0.07	0.30	1	57.48
539	STM-2304-2308	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
540	STM-2305-2306	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
541	STM-2306-2308	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
542	STM-2307-2308	CIRCULAR	0.30	0.07	0.07	0.30	1	57.28
543	STM-2308-2312	CIRCULAR	0.68	0.36	0.17	0.68	1	325.58
544	STM-2309-2310	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
545	STM-2310-2312	CIRCULAR	0.60	0.28	0.15	0.60	1	238.09
546	STM-2311-2312	CIRCULAR	0.30	0.07	0.07	0.30	1	57.34
547	STM-2312-2316	CIRCULAR	0.82	0.53	0.21	0.82	1	556.80
548	STM-2313-2314	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
549	STM-2314-2316	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
550	STM-2315-2316	CIRCULAR	0.30	0.07	0.07	0.30	1	57.34
551	STM-2316-2318	CIRCULAR	0.90	0.64	0.23	0.90	1	702.17
552	STM-2317-2318	CIRCULAR	0.30	0.07	0.07	0.30	1	57.16
553	STM-2317-2323	CIRCULAR	0.30	0.07	0.07	0.30	1	57.38
554	STM-2318-2319	CIRCULAR	0.90	0.64	0.23	0.90	1	700.49
555	STM-2319-2320	CIRCULAR	0.90	0.64	0.23	0.90	1	702.77
556	STM-2320-2321	CIRCULAR	0.90	0.64	0.23	0.90	1	696.07
557	STM-2321-2327	CIRCULAR	0.90	0.64	0.23	0.90	1	698.88
558	STM-2322-2323	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
559	STM-2323-2324	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
560	STM-2324-2325	CIRCULAR	0.60	0.28	0.15	0.60	1	238.06
561	STM-2325-2326	CIRCULAR	0.60	0.28	0.15	0.60	1	239.18
562	STM-2326-2327	CIRCULAR	0.60	0.28	0.15	0.60	1	236.90
563	STM-2327-HW203	CIRCULAR	0.97	0.75	0.24	0.97	1	883.94
564	STM-3101-3102	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
565	STM-3102-3103	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
566	STM-3103-3104	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
567	STM-3104-HW301	CIRCULAR	0.68	0.36	0.17	0.68	1	327.32
568	STM-3105-3107	CIRCULAR	0.30	0.07	0.07	0.30	1	57.18
569	STM-3106-3107	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
570	STM-3107-3108	CIRCULAR	0.60	0.28	0.15	0.60	1	237.99
571	STM-3108-3109	CIRCULAR	0.60	0.28	0.15	0.60	1	239.02
572	STM-3109-3104	CIRCULAR	0.60	0.28	0.15	0.60	1	238.66
573	STM-3150-HW302	CIRCULAR	0.90	0.64	0.23	0.90	1	705.83
574	STM-3201-3202	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
575	STM-3202-3204	CIRCULAR	0.60	0.28	0.15	0.60	1	238.43
576	STM-3203-3204	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
577	STM-3204-3208	CIRCULAR	0.68	0.36	0.17	0.68	1	325.58
578	STM-3205-3206	CIRCULAR	0.38	0.11	0.09	0.38	1	96.04
579	STM-3206-3208	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
580	STM-3207-3208	CIRCULAR	0.30	0.07	0.07	0.30	1	57.31
581	STM-3208-3209	CIRCULAR	0.75	0.44	0.19	0.75	1	431.81
582	STM-3209-3210	CIRCULAR	0.82	0.53	0.21	0.82	1	557.18

583	STM-3210-3150	CIRCULAR	0.82	0.53	0.21	0.82	1	564.34
584	STM-3211-3212	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
585	STM-3212-3213	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
586	STM-3213-3214	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
587	STM-3214-3150	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
588	STM-3301-3303	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
589	STM-3302-3303	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
590	STM-3303-3305	CIRCULAR	0.60	0.28	0.15	0.60	1	238.13
591	STM-3304-3305	CIRCULAR	0.38	0.11	0.09	0.38	1	96.04
592	STM-3305-3307	CIRCULAR	0.68	0.36	0.17	0.68	1	326.09
593	STM-3306-3307	CIRCULAR	0.38	0.11	0.09	0.38	1	96.13
594	STM-3307-3309	CIRCULAR	0.75	0.44	0.19	0.75	1	431.75
595	STM-3308-3309	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
596	STM-3309-3313	CIRCULAR	0.82	0.53	0.21	0.82	1	556.77
597	STM-3310-3311	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
598	STM-3311-3312	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
599	STM-3312-3313	CIRCULAR	0.60	0.28	0.15	0.60	1	238.38
600	STM-3313-3314	CIRCULAR	0.90	0.64	0.23	0.90	1	699.19
601	STM-3314-3319	CIRCULAR	0.90	0.64	0.23	0.90	1	700.08
602	STM-3315-3317	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
603	STM-3316-3317	CIRCULAR	0.30	0.07	0.07	0.30	1	57.30
604	STM-3317-3318	CIRCULAR	0.60	0.28	0.15	0.60	1	238.17
605	STM-3318-3319	CIRCULAR	0.60	0.28	0.15	0.60	1	240.14
606	STM-3319-HW303	CIRCULAR	0.90	0.64	0.23	0.90	1	701.17
607	STM-6101-6106	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
608	STM-6102-6103	CIRCULAR	0.38	0.11	0.09	0.38	1	96.24
609	STM-6103-6101	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
610	STM-6104-6108	CIRCULAR	0.38	0.11	0.09	0.38	1	96.04
611	STM-6106-6107	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
612	STM-6107-6108	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
613	STM-6108-HW601	CIRCULAR	0.60	0.28	0.15	0.60	1	274.61
614	STM-6150-6104	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
615	STM-6152-6150	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
616	STM-6201-6202	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
617	STM-6202-6250	CIRCULAR	0.45	0.16	0.11	0.45	1	142.56
618	STM-6204-6205	CIRCULAR	0.60	0.28	0.15	0.60	1	238.83
619	STM-6205-6206	CIRCULAR	0.60	0.28	0.15	0.60	1	236.80
620	STM-6206-6207	CIRCULAR	0.75	0.44	0.19	0.75	1	431.20
621	STM-6207-6215	CIRCULAR	0.82	0.53	0.21	0.82	1	555.31
622	STM-6210-6213	CIRCULAR	0.30	0.07	0.07	0.30	1	57.25
623	STM-6211-6212	CIRCULAR	0.38	0.11	0.09	0.38	1	96.15
624	STM-6212-6213	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
625	STM-6213-6215	CIRCULAR	0.60	0.28	0.15	0.60	1	238.16
626	STM-6214-6215	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
627	STM-6215-6217	CIRCULAR	0.90	0.64	0.23	0.90	1	702.11
628	STM-6216-6217	CIRCULAR	0.30	0.07	0.07	0.30	1	57.18
629	STM-6217-6218	CIRCULAR	0.97	0.75	0.24	0.97	1	868.01
630	STM-6218-6223	CIRCULAR	0.97	0.75	0.24	0.97	1	881.06
631	STM-6219-6220	CIRCULAR	0.38	0.11	0.09	0.38	1	96.19
632	STM-6220-6221	CIRCULAR	0.60	0.28	0.15	0.60	1	237.99
633	STM-6221-6222	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
634	STM-6222-6223	CIRCULAR	0.60	0.28	0.15	0.60	1	238.25
635	STM-6223-HW602	CIRCULAR	1.05	0.87	0.26	1.05	1	1061.26
636	STM-6250-6206	CIRCULAR	0.45	0.16	0.11	0.45	1	142.85
637	STM-6301-6303	CIRCULAR	0.30	0.07	0.07	0.30	1	57.18
638	STM-6302-6303	CIRCULAR	0.30	0.07	0.07	0.30	1	57.41
639	STM-6303-6304	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
640	STM-6304-6305	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
641	STM-6305-6306	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
642	STM-6306-6307	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
643	STM-6307-6308	CIRCULAR	0.68	0.36	0.17	0.68	1	325.92
644	STM-6308-6309	CIRCULAR	0.68	0.36	0.17	0.68	1	325.58
645	STM-6309-6323	CIRCULAR	0.68	0.36	0.17	0.68	1	324.18
646	STM-6310-6311	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
647	STM-6311-6312	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
648	STM-6312-6314	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34

649	STM-6314-6316	CIRCULAR	0.68	0.36	0.17	0.68	1	326.01
650	STM-6315-6316	CIRCULAR	0.38	0.11	0.09	0.38	1	96.21
651	STM-6316-6317	CIRCULAR	0.75	0.44	0.19	0.75	1	430.76
652	STM-6317-6321	CIRCULAR	0.75	0.44	0.19	0.75	1	430.68
653	STM-6318-6319	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
654	STM-6319-6320	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
655	STM-6320-6321	CIRCULAR	0.60	0.28	0.15	0.60	1	237.43
656	STM-6321-6322	CIRCULAR	0.82	0.53	0.21	0.82	1	562.12
657	STM-6322-6323	CIRCULAR	0.82	0.53	0.21	0.82	1	551.93
658	STM-6323-HW603	CIRCULAR	0.97	0.75	0.24	0.97	1	854.76
659	STM-6345-6314	CIRCULAR	0.60	0.28	0.15	0.60	1	238.16
660	STM-6346-6345	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
661	STM-6347-6346	CIRCULAR	0.38	0.11	0.09	0.38	1	90.99
662	STM-7001-7002	CIRCULAR	0.38	0.11	0.09	0.38	1	96.18
663	STM-7002-7003	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
664	STM-7003-7004	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
665	STM-7004-7005	CIRCULAR	0.60	0.28	0.15	0.60	1	237.38
666	STM-7005-7008	CIRCULAR	0.60	0.28	0.15	0.60	1	240.85
667	STM-7006-7007	CIRCULAR	0.38	0.11	0.09	0.38	1	96.15
668	STM-7007-7008	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
669	STM-7008-HW701	CIRCULAR	0.68	0.36	0.17	0.68	1	327.04

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673 *****

674 NOTE: The summary statistics displayed in this report are
 675 based on results found at every computational time step,
 676 not just on results from each reporting time step.

677 *****

678

679 *****

680 Analysis Options

681 *****

682 Flow Units LPS

683 Process Models:

684 Rainfall/Runoff NO

685 RDII NO

686 Snowmelt NO

687 Groundwater NO

688 Flow Routing YES

689 Ponding Allowed NO

690 Water Quality NO

691 Flow Routing Method DYNWAVE

692 Surcharge Method EXTRAN

693 Starting Date 02/16/2021 00:00:00

694 Ending Date 02/16/2021 12:00:00

695 Antecedent Dry Days 0.0

696 Report Time Step 00:01:00

697 Routing Time Step 0.50 sec

698 Variable Time Step YES

699 Maximum Trials 41

700 Number of Threads 6

701 Head Tolerance 0.000010 m

702

703

	Volume	Volume
Flow Routing Continuity	hectare-m	10^6 ltr
*****	-----	-----
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.000	0.000
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	32.674	326.743
External Outflow	32.674	326.743
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000

715 Exfiltration Loss 0.000 0.000
 716 Initial Stored Volume 0.330 3.302
 717 Final Stored Volume 0.330 3.301
 718 Continuity Error (%) 0.000
 719
 720 *****
 721 Time-Step Critical Elements
 722 *****
 723 None
 724
 725
 726 *****
 727 Highest Flow Instability Indexes
 728 *****
 729 All links are stable.
 730
 731
 732 *****
 733 Routing Time Step Summary
 734 *****
 735 Minimum Time Step : 0.40 sec
 736 Average Time Step : 0.50 sec
 737 Maximum Time Step : 0.50 sec
 738 Percent in Steady State : 0.00
 739 Average Iterations per Step : 9.71
 740 Percent Not Converging : 0.01
 741 Time Step Frequencies :
 742 0.500 - 0.362 sec : 100.00 %
 743 0.362 - 0.263 sec : 0.00 %
 744 0.263 - 0.190 sec : 0.00 %
 745 0.190 - 0.138 sec : 0.00 %
 746 0.138 - 0.100 sec : 0.00 %
 747
 748
 749 *****
 750 Node Depth Summary
 751 *****
 752
 753
 754 -----
 755 -----
 756 -----
 757 Node Type Average Depth Meters Maximum Depth Meters Maximum HGL Meters Time of Max Occurrence days hr:min Reported Max Depth Meters
 758 -----
 759 MH-1101 JUNCTION 1.00 1.00 91.86 0 00:00 1.00
 760 MH-1102 JUNCTION 1.12 1.12 91.71 0 00:00 1.12
 761 MH-1103 JUNCTION 1.23 1.23 91.57 0 00:00 1.23
 762 MH-1104 JUNCTION 1.30 1.30 91.46 0 07:25 1.30
 763 MH-1105 JUNCTION 1.37 1.37 91.32 0 00:00 1.37
 764 MH-1106 JUNCTION 1.39 1.39 91.16 0 01:50 1.39
 765 MH-1201 JUNCTION 0.59 0.59 92.03 0 00:00 0.59
 766 MH-1202 JUNCTION 0.74 0.74 91.87 0 01:26 0.74
 767 MH-1203 JUNCTION 0.63 0.63 92.02 0 00:00 0.63
 768 MH-1204 JUNCTION 0.98 0.98 91.82 0 00:00 0.98
 769 MH-1205 JUNCTION 0.53 0.53 92.02 0 00:00 0.53
 770 MH-1206 JUNCTION 0.46 0.46 91.93 0 01:04 0.46
 771 MH-1207 JUNCTION 0.73 0.73 91.93 0 00:00 0.73
 772 MH-1208 JUNCTION 0.59 0.59 92.00 0 00:00 0.59
 773 MH-1209 JUNCTION 0.93 0.93 91.84 0 00:00 0.93
 774 MH-1210 JUNCTION 1.17 1.17 91.77 0 00:00 1.17
 775 MH-1211 JUNCTION 0.47 0.47 92.03 0 00:00 0.47
 776 MH-1212 JUNCTION 0.38 0.38 91.89 0 00:00 0.38
 777 MH-1213 JUNCTION 0.66 0.66 91.87 0 00:00 0.66
 778 MH-1214 JUNCTION 0.51 0.51 91.92 0 00:00 0.51
 779 MH-1215 JUNCTION 0.42 0.42 91.84 0 00:00 0.42
 780 MH-1216 JUNCTION 0.90 0.90 91.83 0 00:00 0.90

781	MH-1217	JUNCTION	1.00	1.00	91.78	0	00:00	1.00
782	MH-1218	JUNCTION	1.34	1.34	91.62	0	06:19	1.34
783	MH-1219	JUNCTION	0.55	0.55	91.67	0	00:00	0.55
784	MH-1220	JUNCTION	1.39	1.39	91.56	0	07:37	1.39
785	MH-1221	JUNCTION	1.43	1.43	91.49	0	00:00	1.43
786	MH-1222	JUNCTION	1.47	1.47	91.41	0	06:40	1.47
787	MH-1223	JUNCTION	1.51	1.51	91.28	0	00:00	1.51
788	MH-1224	JUNCTION	1.53	1.53	91.22	0	00:00	1.53
789	MH-1227	JUNCTION	0.58	0.58	91.19	0	02:44	0.58
790	MH-1228	JUNCTION	0.74	0.74	91.13	0	00:00	0.74
791	MH-1229	JUNCTION	0.77	0.77	91.12	0	00:00	0.77
792	MH-1230	JUNCTION	1.54	1.54	91.09	0	04:42	1.54
793	MH-2101	JUNCTION	0.43	0.43	91.44	0	02:18	0.43
794	MH-2102	JUNCTION	0.61	0.61	91.42	0	00:00	0.61
795	MH-2103	JUNCTION	0.80	0.80	91.34	0	00:00	0.80
796	MH-2104	JUNCTION	1.00	1.00	91.25	0	00:00	1.00
797	MH-2105	JUNCTION	0.53	0.53	91.45	0	02:01	0.53
798	MH-2106	JUNCTION	0.61	0.62	91.25	0	03:24	0.62
799	MH-2107	JUNCTION	0.76	0.76	91.22	0	05:38	0.76
800	MH-2108	JUNCTION	1.12	1.12	91.19	0	02:18	1.12
801	MH-2109	JUNCTION	0.29	0.29	91.27	0	00:00	0.29
802	MH-2110	JUNCTION	0.27	0.27	91.21	0	00:00	0.27
803	MH-2111	JUNCTION	0.54	0.54	91.21	0	00:00	0.54
804	MH-2112	JUNCTION	0.76	0.76	91.14	0	00:00	0.76
805	MH-2113	JUNCTION	0.88	0.88	91.10	0	00:00	0.88
806	MH-2114	JUNCTION	1.24	1.24	91.09	0	00:00	1.24
807	MH-2201	JUNCTION	0.22	0.22	91.72	0	08:06	0.22
808	MH-2202	JUNCTION	0.47	0.47	91.68	0	04:12	0.47
809	MH-2203	JUNCTION	0.27	0.27	91.61	0	08:18	0.27
810	MH-2204	JUNCTION	0.62	0.62	91.61	0	10:11	0.62
811	MH-2205	JUNCTION	0.29	0.29	91.71	0	08:06	0.29
812	MH-2206	JUNCTION	0.52	0.52	91.64	0	00:00	0.52
813	MH-2207	JUNCTION	0.77	0.77	91.55	0	00:00	0.77
814	MH-2208	JUNCTION	0.49	0.49	91.63	0	00:00	0.49
815	MH-2209	JUNCTION	0.70	0.70	91.56	0	00:00	0.70
816	MH-2210	JUNCTION	0.93	0.93	91.46	0	00:00	0.93
817	MH-2211	JUNCTION	0.53	0.53	91.64	0	00:00	0.53
818	MH-2212	JUNCTION	0.70	0.70	91.52	0	03:52	0.70
819	MH-2213	JUNCTION	1.08	1.08	91.39	0	10:11	1.08
820	MH-2214	JUNCTION	0.38	0.38	91.32	0	08:23	0.38
821	MH-2215	JUNCTION	1.17	1.17	91.31	0	00:00	1.17
822	MH-2216	JUNCTION	1.24	1.24	91.24	0	00:00	1.24
823	MH-2217	JUNCTION	1.30	1.30	91.16	0	04:38	1.30
824	MH-2218	JUNCTION	1.33	1.33	91.13	0	03:24	1.33
825	MH-2219	JUNCTION	0.40	0.40	91.32	0	00:00	0.40
826	MH-2220	JUNCTION	0.38	0.38	91.30	0	00:00	0.38
827	MH-2221	JUNCTION	0.63	0.63	91.29	0	06:33	0.63
828	MH-2222	JUNCTION	0.83	0.83	91.19	0	02:01	0.83
829	MH-2223	JUNCTION	0.94	0.94	91.12	0	04:15	0.94
830	MH-2224	JUNCTION	1.01	1.01	91.10	0	00:00	1.01
831	MH-2225	JUNCTION	1.38	1.38	91.06	0	00:00	1.38
832	MH-2301	JUNCTION	0.56	0.56	91.93	0	00:00	0.56
833	MH-2302	JUNCTION	0.77	0.77	91.85	0	09:27	0.77
834	MH-2303	JUNCTION	0.47	0.47	91.73	0	11:13	0.47
835	MH-2304	JUNCTION	0.86	0.86	91.73	0	00:00	0.86
836	MH-2305	JUNCTION	0.56	0.56	91.76	0	02:38	0.56
837	MH-2306	JUNCTION	0.72	0.72	91.71	0	03:53	0.72
838	MH-2307	JUNCTION	0.38	0.38	91.65	0	00:00	0.38
839	MH-2308	JUNCTION	1.10	1.10	91.62	0	11:13	1.10
840	MH-2309	JUNCTION	0.64	0.64	91.75	0	00:00	0.64
841	MH-2310	JUNCTION	0.83	0.83	91.65	0	11:13	0.83
842	MH-2311	JUNCTION	0.54	0.54	91.64	0	00:00	0.54
843	MH-2312	JUNCTION	1.28	1.28	91.55	0	00:00	1.28
844	MH-2313	JUNCTION	0.61	0.61	91.63	0	11:13	0.61
845	MH-2314	JUNCTION	0.77	0.77	91.57	0	00:00	0.77
846	MH-2315	JUNCTION	0.51	0.51	91.52	0	00:00	0.51

847	MH-2316	JUNCTION	1.37	1.37	91.48	0	00:00	1.37
848	MH-2317	JUNCTION	0.43	0.43	91.36	0	10:11	0.43
849	MH-2318	JUNCTION	1.40	1.40	91.40	0	03:24	1.40
850	MH-2319	JUNCTION	1.44	1.44	91.30	0	00:00	1.44
851	MH-2320	JUNCTION	1.48	1.48	91.20	0	01:59	1.48
852	MH-2321	JUNCTION	1.49	1.49	91.16	0	02:01	1.49
853	MH-2322	JUNCTION	0.41	0.41	91.33	0	00:00	0.41
854	MH-2323	JUNCTION	0.64	0.64	91.32	0	00:00	0.64
855	MH-2324	JUNCTION	0.83	0.83	91.20	0	02:18	0.83
856	MH-2325	JUNCTION	0.94	0.94	91.13	0	00:00	0.94
857	MH-2326	JUNCTION	1.00	1.00	91.11	0	02:01	1.00
858	MH-2327	JUNCTION	1.51	1.51	91.07	0	05:04	1.51
859	MH-3101	JUNCTION	0.57	0.57	91.30	0	00:00	0.57
860	MH-3102	JUNCTION	0.82	0.82	91.26	0	03:24	0.82
861	MH-3103	JUNCTION	0.89	0.89	91.09	0	08:23	0.89
862	MH-3104	JUNCTION	1.23	1.23	91.07	0	06:29	1.23
863	MH-3105	JUNCTION	0.53	0.53	91.34	0	04:38	0.53
864	MH-3106	JUNCTION	0.43	0.43	91.28	0	04:38	0.43
865	MH-3107	JUNCTION	0.94	0.94	91.24	0	00:00	0.94
866	MH-3108	JUNCTION	1.09	1.09	91.16	0	00:00	1.09
867	MH-3109	JUNCTION	1.16	1.16	91.14	0	00:00	1.16
868	MH-3150	JUNCTION	1.21	1.21	91.04	0	11:54	1.21
869	MH-3201	JUNCTION	0.50	0.50	91.45	0	00:00	0.50
870	MH-3202	JUNCTION	0.70	0.70	91.37	0	09:27	0.70
871	MH-3203	JUNCTION	0.51	0.51	91.40	0	10:11	0.51
872	MH-3204	JUNCTION	0.81	0.81	91.28	0	00:00	0.81
873	MH-3205	JUNCTION	0.50	0.50	91.44	0	02:01	0.50
874	MH-3206	JUNCTION	0.69	0.69	91.35	0	06:40	0.69
875	MH-3207	JUNCTION	0.38	0.38	91.25	0	00:00	0.38
876	MH-3208	JUNCTION	0.99	0.99	91.22	0	00:00	0.99
877	MH-3209	JUNCTION	1.07	1.07	91.14	0	00:00	1.07
878	MH-3210	JUNCTION	1.14	1.14	91.06	0	00:00	1.14
879	MH-3211	JUNCTION	0.57	0.57	91.27	0	06:33	0.57
880	MH-3212	JUNCTION	0.68	0.68	91.14	0	06:19	0.68
881	MH-3213	JUNCTION	0.76	0.76	91.12	0	06:04	0.76
882	MH-3214	JUNCTION	0.84	0.84	91.08	0	04:38	0.84
883	MH-3301	JUNCTION	0.58	0.58	91.59	0	00:00	0.58
884	MH-3302	JUNCTION	0.50	0.50	91.66	0	00:00	0.50
885	MH-3303	JUNCTION	0.85	0.85	91.49	0	04:38	0.85
886	MH-3304	JUNCTION	0.55	0.55	91.55	0	04:31	0.55
887	MH-3305	JUNCTION	0.95	0.95	91.43	0	02:52	0.95
888	MH-3306	JUNCTION	0.59	0.59	91.54	0	00:00	0.59
889	MH-3307	JUNCTION	1.06	1.06	91.37	0	00:00	1.06
890	MH-3308	JUNCTION	0.67	0.67	91.47	0	10:15	0.67
891	MH-3309	JUNCTION	1.17	1.17	91.31	0	08:23	1.17
892	MH-3310	JUNCTION	0.50	0.50	91.39	0	02:01	0.50
893	MH-3311	JUNCTION	0.63	0.63	91.32	0	00:00	0.63
894	MH-3312	JUNCTION	0.83	0.83	91.25	0	02:01	0.83
895	MH-3313	JUNCTION	1.23	1.23	91.21	0	00:00	1.23
896	MH-3314	JUNCTION	1.25	1.25	91.13	0	00:00	1.25
897	MH-3315	JUNCTION	0.41	0.41	91.27	0	00:00	0.41
898	MH-3316	JUNCTION	0.36	0.36	91.19	0	00:00	0.36
899	MH-3317	JUNCTION	0.80	0.80	91.13	0	03:24	0.80
900	MH-3318	JUNCTION	0.95	0.95	91.05	0	00:00	0.95
901	MH-3319	JUNCTION	1.30	1.30	91.03	0	08:02	1.30
902	MH-6101	JUNCTION	1.03	1.03	91.37	0	00:00	1.03
903	MH-6102	JUNCTION	0.75	0.75	91.57	0	04:38	0.75
904	MH-6103	JUNCTION	0.95	0.95	91.49	0	00:00	0.95
905	MH-6104	JUNCTION	0.79	0.79	91.26	0	10:20	0.79
906	MH-6106	JUNCTION	1.08	1.08	91.30	0	01:04	1.08
907	MH-6107	JUNCTION	1.11	1.11	91.29	0	00:00	1.11
908	MH-6108	JUNCTION	1.16	1.16	91.21	0	04:59	1.16
909	MH-6150	JUNCTION	0.72	0.72	91.35	0	00:00	0.72
910	MH-6152	JUNCTION	0.61	0.61	91.44	0	00:00	0.61
911	MH-6201	JUNCTION	0.50	0.50	91.74	0	00:00	0.50
912	MH-6202	JUNCTION	0.56	0.56	91.67	0	01:05	0.56

913	MH-6204	JUNCTION	0.51	0.51	91.44	0	05:29	0.51
914	MH-6205	JUNCTION	0.59	0.59	91.44	0	05:29	0.59
915	MH-6206	JUNCTION	0.89	0.89	91.43	0	00:00	0.89
916	MH-6207	JUNCTION	1.06	1.06	91.40	0	00:00	1.06
917	MH-6210	JUNCTION	0.35	0.35	91.49	0	00:00	0.35
918	MH-6211	JUNCTION	0.53	0.53	91.72	0	00:00	0.53
919	MH-6212	JUNCTION	0.68	0.68	91.59	0	00:00	0.68
920	MH-6213	JUNCTION	0.81	0.81	91.43	0	00:00	0.81
921	MH-6214	JUNCTION	0.59	0.59	91.55	0	00:00	0.59
922	MH-6215	JUNCTION	1.20	1.20	91.36	0	00:00	1.20
923	MH-6216	JUNCTION	0.56	0.56	91.51	0	09:08	0.56
924	MH-6217	JUNCTION	1.30	1.30	91.29	0	11:51	1.30
925	MH-6218	JUNCTION	1.38	1.38	91.19	0	08:23	1.38
926	MH-6219	JUNCTION	0.47	0.47	91.43	0	00:00	0.47
927	MH-6220	JUNCTION	0.76	0.76	91.33	0	00:00	0.76
928	MH-6221	JUNCTION	0.91	0.91	91.25	0	00:45	0.91
929	MH-6222	JUNCTION	0.98	0.98	91.23	0	00:00	0.98
930	MH-6223	JUNCTION	1.45	1.45	91.16	0	04:54	1.45
931	MH-6250	JUNCTION	0.61	0.61	91.58	0	00:00	0.61
932	MH-6301	JUNCTION	0.27	0.27	91.70	0	01:44	0.27
933	MH-6302	JUNCTION	0.28	0.28	91.65	0	10:13	0.28
934	MH-6303	JUNCTION	0.44	0.44	91.65	0	00:00	0.44
935	MH-6304	JUNCTION	0.61	0.61	91.61	0	06:40	0.61
936	MH-6305	JUNCTION	0.81	0.81	91.48	0	04:38	0.81
937	MH-6306	JUNCTION	0.92	0.92	91.38	0	00:00	0.92
938	MH-6307	JUNCTION	1.01	1.01	91.27	0	00:00	1.01
939	MH-6308	JUNCTION	1.11	1.11	91.19	0	06:11	1.11
940	MH-6309	JUNCTION	1.16	1.16	91.17	0	00:00	1.16
941	MH-6310	JUNCTION	0.28	0.28	91.58	0	06:03	0.28
942	MH-6311	JUNCTION	0.47	0.47	91.58	0	00:00	0.47
943	MH-6312	JUNCTION	0.64	0.64	91.51	0	06:40	0.64
944	MH-6314	JUNCTION	0.88	0.88	91.43	0	00:00	0.88
945	MH-6315	JUNCTION	0.47	0.47	91.43	0	00:00	0.47
946	MH-6316	JUNCTION	0.98	0.98	91.36	0	00:00	0.98
947	MH-6317	JUNCTION	1.04	1.04	91.27	0	00:00	1.04
948	MH-6318	JUNCTION	0.61	0.61	91.47	0	00:00	0.61
949	MH-6319	JUNCTION	0.67	0.67	91.26	0	03:24	0.67
950	MH-6320	JUNCTION	0.81	0.81	91.23	0	02:40	0.81
951	MH-6321	JUNCTION	1.13	1.13	91.19	0	02:47	1.13
952	MH-6322	JUNCTION	1.15	1.15	91.15	0	00:00	1.15
953	MH-6323	JUNCTION	1.44	1.44	91.12	0	08:37	1.44
954	MH-6345	JUNCTION	0.77	0.77	91.48	0	00:00	0.77
955	MH-6346	JUNCTION	0.64	0.64	91.64	0	00:00	0.64
956	MH-6347	JUNCTION	0.50	0.50	91.78	0	00:00	0.50
957	MH-7001	JUNCTION	0.21	0.21	91.45	0	00:00	0.21
958	MH-7002	JUNCTION	0.33	0.33	91.25	0	00:00	0.33
959	MH-7003	JUNCTION	0.43	0.43	91.09	0	00:01	0.43
960	MH-7004	JUNCTION	0.51	0.51	91.07	0	00:01	0.51
961	MH-7005	JUNCTION	0.58	0.58	91.05	0	00:00	0.58
962	MH-7006	JUNCTION	0.21	0.21	91.39	0	00:05	0.21
963	MH-7007	JUNCTION	0.36	0.36	91.25	0	00:00	0.36
964	MH-7008	JUNCTION	0.67	0.67	91.04	0	00:00	0.67
965	MH-HW101	OUTFALL	1.42	1.42	91.09	0	00:00	1.42
966	MH-HW102	OUTFALL	1.54	1.54	91.09	0	00:00	1.54
967	MH-HW201	OUTFALL	1.26	1.26	91.06	0	00:00	1.26
968	MH-HW202	OUTFALL	1.38	1.38	91.06	0	00:00	1.38
969	MH-HW203	OUTFALL	1.51	1.51	91.06	0	00:00	1.51
970	MH-HW301	OUTFALL	1.24	1.24	91.03	0	00:00	1.24
971	MH-HW302	OUTFALL	1.23	1.23	91.02	0	00:00	1.23
972	MH-HW303	OUTFALL	1.30	1.30	91.02	0	00:00	1.30
973	MH-HW601	OUTFALL	1.15	1.15	91.16	0	00:00	1.15
974	MH-HW602	OUTFALL	1.46	1.46	91.14	0	00:00	1.46
975	MH-HW603	OUTFALL	1.44	1.44	91.11	0	00:00	1.45
976	MH-HW701	OUTFALL	0.68	0.68	91.02	0	00:00	0.68
977								
978								

979 * ****
 980 Node Inflow Summary
 981 * ****
 982
 983

984			Maximum	Maximum		Lateral
985			Total	Flow		
986			Lateral	Total	Time of Max	Inflow
987	Node	Type	Inflow	Balance		Volume
988	ltr		Inflow	Inflow	Occurrence	
			Volume	Error		
	Percent		LPS	LPS	days hr:min	10^6 ltr
						10^6
989	MH-1101	JUNCTION	703.00	703.00	0 00:00	30.4
990	30.4	-0.000				
991	MH-1102	JUNCTION	65.00	768.00	0 08:52	2.81
992	33.2	-0.000				
993	MH-1103	JUNCTION	85.00	853.00	0 05:10	3.67
994	36.8	0.000				
995	MH-1104	JUNCTION	67.00	920.00	0 08:52	2.89
996	39.7	-0.000				
997	MH-1105	JUNCTION	6.00	926.00	0 01:44	0.259
998	40	0.000				
999	MH-1106	JUNCTION	0.00	926.00	0 00:59	0
1000	40	0.000				
1001	MH-1201	JUNCTION	93.47	93.47	0 00:00	4.04
1002	4.04	0.000				
1003	MH-1202	JUNCTION	18.13	111.60	0 11:41	0.783
1004	4.82	-0.000				
1005	MH-1203	JUNCTION	106.01	106.01	0 00:00	4.58
1006	4.58	0.000				
1007	MH-1204	JUNCTION	24.04	241.65	0 00:32	1.04
1008	10.4	0.000				
1009	MH-1205	JUNCTION	56.96	56.96	0 00:00	2.46
1010	2.46	0.000				
1011	MH-1206	JUNCTION	14.24	14.24	0 00:00	0.615
1012	0.615	0.000				
1013	MH-1207	JUNCTION	30.89	102.08	0 01:16	1.33
1014	4.41	-0.000				
1015	MH-1208	JUNCTION	71.20	71.20	0 00:00	3.08
1016	3.08	0.000				
1017	MH-1209	JUNCTION	3.68	176.97	0 04:54	0.159
1018	7.64	-0.000				
1019	MH-1210	JUNCTION	70.04	488.65	0 06:14	3.03
1020	21.1	0.000				
1021	MH-1211	JUNCTION	45.88	45.88	0 00:00	1.98
1022	1.98	0.000				
1023	MH-1212	JUNCTION	17.40	17.40	0 00:00	0.752
1024	0.752	0.000				
1025	MH-1213	JUNCTION	9.86	73.15	0 02:33	0.426
1026	3.16	-0.000				
1027	MH-1214	JUNCTION	56.96	56.96	0 00:00	2.46
1028	2.46	-0.000				
1029	MH-1215	JUNCTION	17.40	17.40	0 00:00	0.752
1030	0.752	-0.000				
1031	MH-1216	JUNCTION	0.00	147.51	0 05:13	0
1032	6.37	0.000				
1033	MH-1217	JUNCTION	77.52	225.03	0 02:56	3.35
1034	9.72	-0.000				
1035	MH-1218	JUNCTION	0.00	713.69	0 07:11	0
1036	30.8	-0.000				

1013	MH-1219 2.46	0.000	JUNCTION	56.96	56.96	0	00:00	2.46
1014	MH-1220 33.3	0.000	JUNCTION	0.00	770.64	0	02:56	0
1015	MH-1221 33.7	0.000	JUNCTION	10.26	780.90	0	07:11	0.443
1016	MH-1222 34.6	-0.000	JUNCTION	20.21	801.12	0	07:11	0.873
1017	MH-1223 34.6	0.000	JUNCTION	0.00	801.12	0	07:11	0
1018	MH-1224 34.6	-0.000	JUNCTION	0.00	801.12	0	02:26	0
1019	MH-1227 6.14	0.000	JUNCTION	142.15	142.15	0	00:00	6.14
1020	MH-1228 6.14	-0.000	JUNCTION	0.00	142.15	0	02:03	0
1021	MH-1229 6.14	-0.000	JUNCTION	0.00	142.15	0	09:02	0
1022	MH-1230 40.7	-0.000	JUNCTION	0.00	943.27	0	06:04	0
1023	MH-2101 0.889	-0.000	JUNCTION	20.57	20.57	0	00:00	0.889
1024	MH-2102 2.37	0.000	JUNCTION	34.39	54.96	0	00:00	1.49
1025	MH-2103 4.48	-0.000	JUNCTION	48.86	103.82	0	04:43	2.11
1026	MH-2104 6.32	-0.000	JUNCTION	42.42	146.24	0	06:40	1.83
1027	MH-2105 4.78	-0.000	JUNCTION	110.75	110.75	0	00:00	4.78
1028	MH-2106 4.98	-0.000	JUNCTION	4.41	115.16	0	02:13	0.191
1029	MH-2107 6.12	-0.000	JUNCTION	26.44	141.60	0	04:47	1.14
1030	MH-2108 12.6	0.000	JUNCTION	4.16	292.01	0	00:00	0.18
1031	MH-2109 1.44	-0.000	JUNCTION	33.23	33.23	0	00:00	1.44
1032	MH-2110 4.55e-05	0.090	JUNCTION	0.00	0.18	0	00:00	0
1033	MH-2111 3.84	-0.000	JUNCTION	55.66	89.15	0	00:00	2.4
1034	MH-2112 5.99	-0.000	JUNCTION	49.80	138.71	0	00:00	2.15
1035	MH-2113 6.42	0.000	JUNCTION	9.86	148.57	0	00:00	0.426
1036	MH-2114 19	0.000	JUNCTION	0.00	440.57	0	00:00	0
1037	MH-2201 1.5	0.000	JUNCTION	34.81	34.81	0	00:00	1.5
1038	MH-2202 3.4	-0.000	JUNCTION	43.99	78.80	0	11:44	1.9
1039	MH-2203 0.615	-0.000	JUNCTION	14.24	14.24	0	00:00	0.615
1040	MH-2204 5.38	0.000	JUNCTION	31.43	124.47	0	03:48	1.36
1041	MH-2205 1.78	0.000	JUNCTION	41.14	41.14	0	00:00	1.78
1042	MH-2206 3.73	-0.000	JUNCTION	45.20	86.34	0	06:44	1.95
1043	MH-2207 9.87	-0.000	JUNCTION	17.68	228.50	0	01:31	0.764
1044	MH-2208 4.17	0.000	JUNCTION	96.59	96.59	0	00:00	4.17
1045	MH-2209 7.79	-0.000	JUNCTION	83.76	180.35	0	02:53	3.62

1046	MH-2210 17.7	0.000	JUNCTION	0.00	408.84	0	01:31	0
1047	MH-2211 3.01	0.000	JUNCTION	69.62	69.62	0	00:00	3.01
1048	MH-2212 4.74	-0.000	JUNCTION	40.06	109.67	0	01:17	1.73
1049	MH-2213 22.4	0.000	JUNCTION	0.00	518.52	0	10:10	0
1050	MH-2214 0.547	0.000	JUNCTION	12.66	12.66	0	00:00	0.547
1051	MH-2215 23	-0.000	JUNCTION	2.28	533.45	0	06:11	0.0985
1052	MH-2216 23	-0.000	JUNCTION	0.00	533.45	0	01:31	0
1053	MH-2217 23	-0.000	JUNCTION	0.00	533.45	0	01:31	0
1054	MH-2218 23	-0.000	JUNCTION	0.00	533.46	0	01:44	0
1055	MH-2219 1.09	-0.000	JUNCTION	25.31	25.31	0	00:00	1.09
1056	MH-2220 0.683	-0.000	JUNCTION	15.82	15.82	0	00:00	0.683
1057	MH-2221 4.51	0.000	JUNCTION	63.29	104.43	0	05:47	2.73
1058	MH-2222 7.06	0.000	JUNCTION	59.11	163.53	0	08:48	2.55
1059	MH-2223 7.06	0.000	JUNCTION	0.00	163.53	0	03:04	0
1060	MH-2224 7.06	0.000	JUNCTION	0.00	163.54	0	09:18	0
1061	MH-2225 30.1	0.000	JUNCTION	0.00	696.99	0	01:21	0
1062	MH-2301 2.46	-0.000	JUNCTION	56.96	56.96	0	00:00	2.46
1063	MH-2302 4.41	0.000	JUNCTION	45.22	102.17	0	03:25	1.95
1064	MH-2303 0.478	0.000	JUNCTION	11.08	11.08	0	00:00	0.478
1065	MH-2304 5.08	-0.000	JUNCTION	4.30	117.55	0	07:01	0.186
1066	MH-2305 3.42	0.000	JUNCTION	79.11	79.11	0	00:00	3.42
1067	MH-2306 5.54	-0.000	JUNCTION	49.03	128.14	0	09:59	2.12
1068	MH-2307 1.09	-0.000	JUNCTION	25.31	25.31	0	00:00	1.09
1069	MH-2308 11.7	0.000	JUNCTION	0.00	271.00	0	06:25	0
1070	MH-2309 4.64	-0.000	JUNCTION	107.32	107.32	0	00:00	4.64
1071	MH-2310 8.11	0.000	JUNCTION	80.50	187.82	0	04:19	3.48
1072	MH-2311 1.85	0.000	JUNCTION	42.93	42.93	0	00:00	1.85
1073	MH-2312 21.7	0.000	JUNCTION	0.00	501.74	0	06:25	0
1074	MH-2313 3.42	-0.000	JUNCTION	79.11	79.11	0	00:00	3.42
1075	MH-2314 5.53	0.000	JUNCTION	48.97	128.08	0	11:23	2.12
1076	MH-2315 1.23	0.000	JUNCTION	28.48	28.48	0	00:00	1.23
1077	MH-2316 28.4	-0.000	JUNCTION	0.00	658.30	0	06:25	0
1078	MH-2317 1.27	0.000	JUNCTION	0.00	29.31	0	03:41	0

1079	MH-2318 28.4	0.000	JUNCTION	0.00	658.30	0	06:25	0
1080	MH-2319 27.2	-0.000	JUNCTION	0.00	628.99	0	06:25	0
1081	MH-2320 27.2	0.000	JUNCTION	0.00	628.99	0	06:25	0
1082	MH-2321 27.2	-0.000	JUNCTION	0.00	628.99	0	04:36	0
1083	MH-2322 0.615	0.000	JUNCTION	14.24	14.24	0	00:00	0.615
1084	MH-2323 4.72	-0.000	JUNCTION	65.62	109.17	0	02:16	2.83
1085	MH-2324 7.36	0.000	JUNCTION	61.25	170.42	0	03:41	2.65
1086	MH-2325 7.36	-0.000	JUNCTION	0.00	170.42	0	03:41	0
1087	MH-2326 7.36	0.000	JUNCTION	0.00	170.42	0	02:16	0
1088	MH-2327 34.5	-0.000	JUNCTION	0.00	799.42	0	06:25	0
1089	MH-3101 1.23	-0.000	JUNCTION	28.48	28.48	0	00:00	1.23
1090	MH-3102 4.78	0.000	JUNCTION	82.25	110.73	0	11:51	3.55
1091	MH-3103 4.88	0.000	JUNCTION	2.24	112.98	0	06:43	0.097
1092	MH-3104 12.8	0.000	JUNCTION	0.00	295.27	0	02:00	0
1093	MH-3105 1.57	-0.000	JUNCTION	36.39	36.39	0	00:00	1.57
1094	MH-3106 1.16	-0.000	JUNCTION	26.90	26.90	0	00:00	1.16
1095	MH-3107 6.57	0.000	JUNCTION	88.84	152.13	0	05:31	3.84
1096	MH-3108 6.99	0.000	JUNCTION	9.69	161.81	0	04:43	0.419
1097	MH-3109 7.88	-0.000	JUNCTION	20.48	182.30	0	00:16	0.885
1098	MH-3150 24.6	-0.000	JUNCTION	0.00	569.53	0	02:59	0
1099	MH-3201 4.27	-0.000	JUNCTION	98.73	98.73	0	00:00	4.27
1100	MH-3202 8.16	0.000	JUNCTION	90.18	188.91	0	05:25	3.9
1101	MH-3203 3.89	0.000	JUNCTION	90.15	90.15	0	00:00	3.89
1102	MH-3204 12.1	0.000	JUNCTION	0.00	279.06	0	09:29	0
1103	MH-3205 2.73	-0.000	JUNCTION	63.29	63.29	0	00:00	2.73
1104	MH-3206 4.83	0.000	JUNCTION	48.46	111.75	0	02:08	2.09
1105	MH-3207 0.957	0.000	JUNCTION	22.15	22.15	0	00:00	0.957
1106	MH-3208 17.8	0.000	JUNCTION	0.00	412.96	0	00:32	0
1107	MH-3209 19	-0.000	JUNCTION	27.36	440.32	0	09:11	1.18
1108	MH-3210 19.2	0.000	JUNCTION	4.49	444.81	0	02:38	0.194
1109	MH-3211 4.24	0.000	JUNCTION	98.09	98.09	0	00:00	4.24
1110	MH-3212 4.33	-0.000	JUNCTION	2.06	100.16	0	03:28	0.0891
1111	MH-3213 5.39	0.000	JUNCTION	24.55	124.71	0	02:13	1.06

1112	MH-3214		JUNCTION	0.00	124.71	0	04:38	0
	5.39	-0.000						
1113	MH-3301		JUNCTION	132.90	132.90	0	00:00	5.74
	5.74	0.000						
1114	MH-3302		JUNCTION	45.88	45.88	0	00:00	1.98
	1.98	-0.000						
1115	MH-3303		JUNCTION	17.78	196.57	0	06:56	0.768
	8.49	0.000						
1116	MH-3304		JUNCTION	66.45	66.45	0	00:00	2.87
	2.87	-0.000						
1117	MH-3305		JUNCTION	6.42	269.44	0	03:40	0.277
	11.6	0.000						
1118	MH-3306		JUNCTION	71.20	71.20	0	00:00	3.08
	3.08	0.000						
1119	MH-3307		JUNCTION	0.00	340.64	0	10:07	0
	14.7	0.000						
1120	MH-3308		JUNCTION	101.26	101.26	0	00:00	4.37
	4.37	0.000						
1121	MH-3309		JUNCTION	0.00	441.89	0	09:04	0
	19.1	-0.000						
1122	MH-3310		JUNCTION	77.27	77.27	0	00:00	3.34
	3.34	0.000						
1123	MH-3311		JUNCTION	21.06	98.32	0	01:33	0.91
	4.25	-0.000						
1124	MH-3312		JUNCTION	46.68	145.00	0	10:56	2.02
	6.26	-0.000						
1125	MH-3313		JUNCTION	0.00	586.90	0	00:39	0
	25.4	-0.000						
1126	MH-3314		JUNCTION	0.00	586.90	0	00:39	0
	25.4	0.000						
1127	MH-3315		JUNCTION	41.14	41.14	0	00:00	1.78
	1.78	-0.000						
1128	MH-3316		JUNCTION	30.06	30.06	0	00:00	1.3
	1.3	-0.000						
1129	MH-3317		JUNCTION	76.38	147.58	0	06:09	3.3
	6.38	0.000						
1130	MH-3318		JUNCTION	0.00	147.58	0	08:42	0
	6.38	-0.000						
1131	MH-3319		JUNCTION	0.00	734.48	0	05:32	0
	31.7	-0.000						
1132	MH-6101		JUNCTION	31.11	190.14	0	07:37	1.34
	8.21	0.000						
1133	MH-6102		JUNCTION	72.98	72.98	0	00:00	3.15
	3.15	0.000						
1134	MH-6103		JUNCTION	86.06	159.04	0	10:51	3.72
	6.87	-0.000						
1135	MH-6104		JUNCTION	28.65	78.71	0	09:59	1.24
	3.4	-0.000						
1136	MH-6106		JUNCTION	0.00	190.14	0	01:57	0
	8.21	0.000						
1137	MH-6107		JUNCTION	12.33	202.48	0	01:57	0.533
	8.75	-0.000						
1138	MH-6108		JUNCTION	0.00	281.18	0	01:26	0
	12.1	0.000						
1139	MH-6150		JUNCTION	8.92	50.06	0	02:42	0.385
	2.16	0.000						
1140	MH-6152		JUNCTION	41.14	41.14	0	00:00	1.78
	1.78	0.000						
1141	MH-6201		JUNCTION	101.26	101.26	0	00:00	4.37
	4.37	-0.000						
1142	MH-6202		JUNCTION	24.38	125.64	0	08:54	1.05
	5.43	0.000						
1143	MH-6204		JUNCTION	52.21	52.21	0	00:00	2.26
	2.26	0.000						
1144	MH-6205		JUNCTION	2.64	54.85	0	03:52	0.114
	2.37	-0.000						

1145	MH-6206 9.52	-0.000	JUNCTION	31.69	220.49	0	02:38	1.37
1146	MH-6207 14.1	-0.000	JUNCTION	105.38	325.87	0	05:00	4.55
1147	MH-6210 1.44	0.000	JUNCTION	33.23	33.23	0	00:00	1.44
1148	MH-6211 3.28	0.000	JUNCTION	75.94	75.94	0	00:00	3.28
1149	MH-6212 5.18	0.000	JUNCTION	43.95	119.89	0	08:16	1.9
1150	MH-6213 7.22	-0.000	JUNCTION	14.09	167.20	0	05:12	0.609
1151	MH-6214 4.58	-0.000	JUNCTION	106.01	106.01	0	00:00	4.58
1152	MH-6215 25.9	0.000	JUNCTION	0.00	599.08	0	05:00	0
1153	MH-6216 2.32	0.000	JUNCTION	53.66	53.66	0	00:00	2.32
1154	MH-6217 28.2	0.000	JUNCTION	0.00	652.74	0	02:38	0
1155	MH-6218 28.2	-0.000	JUNCTION	0.00	652.73	0	05:00	0
1156	MH-6219 2.78	-0.000	JUNCTION	64.39	64.39	0	00:00	2.78
1157	MH-6220 6.62	0.000	JUNCTION	88.80	153.20	0	09:59	3.84
1158	MH-6221 6.98	-0.000	JUNCTION	8.47	161.67	0	01:41	0.366
1159	MH-6222 7.94	0.000	JUNCTION	22.10	183.77	0	09:14	0.955
1160	MH-6223 36.1	0.000	JUNCTION	0.00	836.51	0	07:49	0
1161	MH-6250 5.79	0.000	JUNCTION	8.31	133.95	0	02:35	0.359
1162	MH-6301 1.35	0.000	JUNCTION	31.16	31.16	0	00:00	1.35
1163	MH-6302 0.336	0.000	JUNCTION	7.79	7.79	0	00:00	0.336
1164	MH-6303 1.83	0.000	JUNCTION	3.44	42.38	0	11:08	0.148
1165	MH-6304 4.7	-0.000	JUNCTION	66.51	108.89	0	07:20	2.87
1166	MH-6305 7.44	-0.000	JUNCTION	63.33	172.22	0	07:20	2.74
1167	MH-6306 9.45	0.000	JUNCTION	46.54	218.75	0	07:20	2.01
1168	MH-6307 10.8	0.000	JUNCTION	30.86	249.62	0	07:20	1.33
1169	MH-6308 10.8	-0.000	JUNCTION	0.00	249.62	0	07:20	0
1170	MH-6309 10.8	-0.000	JUNCTION	0.00	249.62	0	04:49	0
1171	MH-6310 1.04	-0.000	JUNCTION	23.98	23.98	0	00:00	1.04
1172	MH-6311 3.52	-0.000	JUNCTION	57.53	81.51	0	02:12	2.49
1173	MH-6312 5.77	0.000	JUNCTION	52.12	133.63	0	02:32	2.25
1174	MH-6314 12	0.000	JUNCTION	3.21	278.13	0	00:07	0.139
1175	MH-6315 2.6	-0.000	JUNCTION	60.10	60.10	0	00:00	2.6
1176	MH-6316 15.6	0.000	JUNCTION	22.35	360.58	0	10:20	0.965
1177	MH-6317 16.5	-0.000	JUNCTION	21.63	382.21	0	00:07	0.934

1178	MH-6318		JUNCTION	115.50	115.50	0	00:00	4.99
	4.99	-0.000						
1179	MH-6319		JUNCTION	1.59	117.09	0	04:40	0.0689
	5.06	0.000						
1180	MH-6320		JUNCTION	25.26	142.36	0	00:06	1.09
	6.15	-0.000						
1181	MH-6321		JUNCTION	0.00	524.57	0	00:07	0
	22.7	0.000						
1182	MH-6322		JUNCTION	0.00	524.57	0	11:20	0
	22.7	-0.000						
1183	MH-6323		JUNCTION	0.00	774.19	0	09:42	0
	33.4	-0.000						
1184	MH-6345		JUNCTION	20.34	141.29	0	02:23	0.879
	6.1	-0.000						
1185	MH-6346		JUNCTION	46.58	120.94	0	00:01	2.01
	5.22	-0.000						
1186	MH-6347		JUNCTION	74.36	74.36	0	00:00	3.21
	3.21	0.000						
1187	MH-7001		JUNCTION	55.38	55.38	0	00:00	2.39
	2.39	-0.000						
1188	MH-7002		JUNCTION	75.13	130.50	0	00:00	3.25
	5.64	-0.000						
1189	MH-7003		JUNCTION	0.00	130.50	0	00:01	0
	5.64	-0.000						
1190	MH-7004		JUNCTION	15.96	146.46	0	00:00	0.689
	6.33	0.000						
1191	MH-7005		JUNCTION	0.00	146.46	0	00:02	0
	6.33	0.000						
1192	MH-7006		JUNCTION	58.54	58.54	0	00:00	2.53
	2.53	0.000						
1193	MH-7007		JUNCTION	61.14	119.68	0	00:05	2.64
	5.17	-0.000						
1194	MH-7008		JUNCTION	0.00	266.14	0	00:00	0
	11.5	0.000						
1195	MH-HW101		OUTFALL	0.00	926.00	0	00:59	0
	40	0.000						
1196	MH-HW102		OUTFALL	0.00	943.27	0	01:22	0
	40.7	0.000						
1197	MH-HW201		OUTFALL	0.00	440.57	0	00:00	0
	19	0.000						
1198	MH-HW202		OUTFALL	0.00	696.99	0	04:34	0
	30.1	0.000						
1199	MH-HW203		OUTFALL	0.00	799.42	0	10:06	0
	34.5	0.000						
1200	MH-HW301		OUTFALL	0.00	295.27	0	02:00	0
	12.8	0.000						
1201	MH-HW302		OUTFALL	0.00	569.53	0	02:59	0
	24.6	0.000						
1202	MH-HW303		OUTFALL	0.00	734.48	0	05:32	0
	31.7	0.000						
1203	MH-HW601		OUTFALL	0.00	281.18	0	05:16	0
	12.1	0.000						
1204	MH-HW602		OUTFALL	0.00	836.51	0	03:24	0
	36.1	0.000						
1205	MH-HW603		OUTFALL	0.00	774.19	0	09:42	0
	33.4	0.000						
1206	MH-HW701		OUTFALL	0.00	266.14	0	00:02	0
	11.5	0.000						

1207
1208
1209 *****

1210 Node Surcharge Summary
1211 *****
1212
1213 Surcharging occurs when water rises above the top of the highest conduit.
1214 -----

1215				Max. Height Above Crown Meters	Min. Depth Below Rim Meters
1216			Hours Surcharged		
1217	Node	Type			
<hr/>					
1219	MH-1101	JUNCTION	12.00	0.099	1.401
1220	MH-1102	JUNCTION	12.00	0.142	1.434
1221	MH-1103	JUNCTION	12.00	0.177	1.406
1222	MH-1104	JUNCTION	12.00	0.234	1.356
1223	MH-1105	JUNCTION	12.00	0.298	1.300
1224	MH-1106	JUNCTION	12.00	0.284	1.339
1225	MH-1201	JUNCTION	12.00	0.139	1.363
1226	MH-1202	JUNCTION	12.00	0.229	1.338
1227	MH-1203	JUNCTION	12.00	0.177	1.318
1228	MH-1204	JUNCTION	12.00	0.226	1.344
1229	MH-1205	JUNCTION	12.00	0.155	1.338
1230	MH-1206	JUNCTION	12.00	0.158	1.338
1231	MH-1207	JUNCTION	12.00	0.204	1.321
1232	MH-1208	JUNCTION	12.00	0.215	1.281
1233	MH-1209	JUNCTION	12.00	0.295	1.315
1234	MH-1210	JUNCTION	12.00	0.343	1.304
1235	MH-1211	JUNCTION	12.00	0.168	1.326
1236	MH-1212	JUNCTION	12.00	0.078	1.423
1237	MH-1213	JUNCTION	12.00	0.158	1.396
1238	MH-1214	JUNCTION	12.00	0.131	1.365
1239	MH-1215	JUNCTION	12.00	0.123	1.376
1240	MH-1216	JUNCTION	12.00	0.205	1.359
1241	MH-1217	JUNCTION	12.00	0.339	1.313
1242	MH-1218	JUNCTION	12.00	0.313	1.337
1243	MH-1219	JUNCTION	12.00	0.179	1.315
1244	MH-1220	JUNCTION	12.00	0.313	1.305
1245	MH-1221	JUNCTION	12.00	0.434	1.285
1246	MH-1222	JUNCTION	12.00	0.473	1.272
1247	MH-1223	JUNCTION	12.00	0.471	1.291
1248	MH-1224	JUNCTION	12.00	0.498	1.330
1249	MH-1228	JUNCTION	12.00	0.106	1.404
1250	MH-1229	JUNCTION	12.00	0.143	1.393
1251	MH-1230	JUNCTION	12.00	0.165	1.405
1252	MH-2101	JUNCTION	12.00	0.130	1.373
1253	MH-2102	JUNCTION	12.00	0.238	1.449
1254	MH-2103	JUNCTION	12.00	0.352	1.429
1255	MH-2104	JUNCTION	12.00	0.399	1.423
1256	MH-2105	JUNCTION	12.00	0.084	1.424
1257	MH-2106	JUNCTION	12.00	0.135	1.420
1258	MH-2107	JUNCTION	12.00	0.160	1.431
1259	MH-2108	JUNCTION	12.00	0.213	1.381
1260	MH-2111	JUNCTION	12.00	0.007	1.514
1261	MH-2112	JUNCTION	12.00	0.160	1.480
1262	MH-2113	JUNCTION	12.00	0.221	1.420
1263	MH-2114	JUNCTION	12.00	0.287	1.415
1264	MH-2202	JUNCTION	12.00	0.023	1.541
1265	MH-2204	JUNCTION	12.00	0.072	1.444
1266	MH-2206	JUNCTION	12.00	0.071	1.491
1267	MH-2207	JUNCTION	12.00	0.130	1.408
1268	MH-2208	JUNCTION	12.00	0.045	1.456
1269	MH-2209	JUNCTION	12.00	0.102	1.435
1270	MH-2210	JUNCTION	12.00	0.121	1.395
1271	MH-2211	JUNCTION	12.00	0.151	1.343
1272	MH-2212	JUNCTION	12.00	0.252	1.355
1273	MH-2213	JUNCTION	12.00	0.185	1.383
1274	MH-2214	JUNCTION	12.00	0.082	1.412
1275	MH-2215	JUNCTION	12.00	0.193	1.370
1276	MH-2216	JUNCTION	12.00	0.316	1.330
1277	MH-2217	JUNCTION	12.00	0.372	1.293
1278	MH-2218	JUNCTION	12.00	0.397	1.308
1279	MH-2219	JUNCTION	12.00	0.102	1.397
1280	MH-2220	JUNCTION	12.00	0.081	1.416

1281	MH-2221	JUNCTION	12.00	0.157	1.276
1282	MH-2222	JUNCTION	12.00	0.228	1.375
1283	MH-2223	JUNCTION	12.00	0.284	1.320
1284	MH-2224	JUNCTION	12.00	0.348	1.327
1285	MH-2225	JUNCTION	12.00	0.394	1.336
1286	MH-2301	JUNCTION	12.00	0.181	1.322
1287	MH-2302	JUNCTION	12.00	0.321	1.288
1288	MH-2303	JUNCTION	12.00	0.174	1.328
1289	MH-2304	JUNCTION	12.00	0.223	1.302
1290	MH-2305	JUNCTION	12.00	0.106	1.389
1291	MH-2306	JUNCTION	12.00	0.195	1.344
1292	MH-2307	JUNCTION	12.00	0.084	1.462
1293	MH-2308	JUNCTION	12.00	0.161	1.322
1294	MH-2309	JUNCTION	12.00	0.191	1.316
1295	MH-2310	JUNCTION	12.00	0.232	1.307
1296	MH-2311	JUNCTION	12.00	0.238	1.261
1297	MH-2312	JUNCTION	12.00	0.244	1.297
1298	MH-2313	JUNCTION	12.00	0.160	1.333
1299	MH-2314	JUNCTION	12.00	0.249	1.289
1300	MH-2315	JUNCTION	12.00	0.215	1.279
1301	MH-2316	JUNCTION	12.00	0.286	1.267
1302	MH-2317	JUNCTION	12.00	0.135	1.363
1303	MH-2318	JUNCTION	12.00	0.321	1.265
1304	MH-2319	JUNCTION	12.00	0.521	1.250
1305	MH-2320	JUNCTION	12.00	0.547	1.254
1306	MH-2321	JUNCTION	12.00	0.561	1.277
1307	MH-2322	JUNCTION	12.00	0.107	1.391
1308	MH-2323	JUNCTION	12.00	0.170	1.368
1309	MH-2324	JUNCTION	12.00	0.232	1.369
1310	MH-2325	JUNCTION	12.00	0.283	1.322
1311	MH-2326	JUNCTION	12.00	0.344	1.323
1312	MH-2327	JUNCTION	12.00	0.395	1.334
1313	MH-3101	JUNCTION	12.00	0.267	1.235
1314	MH-3102	JUNCTION	12.00	0.366	1.353
1315	MH-3103	JUNCTION	12.00	0.409	1.397
1316	MH-3104	JUNCTION	12.00	0.435	1.412
1317	MH-3105	JUNCTION	12.00	0.231	1.270
1318	MH-3106	JUNCTION	12.00	0.134	1.370
1319	MH-3107	JUNCTION	12.00	0.239	1.342
1320	MH-3108	JUNCTION	12.00	0.433	1.251
1321	MH-3109	JUNCTION	12.00	0.497	1.272
1322	MH-3150	JUNCTION	12.00	0.309	1.375
1323	MH-3201	JUNCTION	12.00	0.050	1.450
1324	MH-3202	JUNCTION	12.00	0.101	1.429
1325	MH-3203	JUNCTION	12.00	0.059	1.444
1326	MH-3204	JUNCTION	12.00	0.107	1.421
1327	MH-3205	JUNCTION	12.00	0.130	1.364
1328	MH-3206	JUNCTION	12.00	0.239	1.360
1329	MH-3207	JUNCTION	12.00	0.080	1.414
1330	MH-3208	JUNCTION	12.00	0.153	1.393
1331	MH-3209	JUNCTION	12.00	0.243	1.384
1332	MH-3210	JUNCTION	12.00	0.283	1.360
1333	MH-3211	JUNCTION	12.00	0.121	1.384
1334	MH-3212	JUNCTION	12.00	0.200	1.351
1335	MH-3213	JUNCTION	12.00	0.233	1.359
1336	MH-3214	JUNCTION	12.00	0.288	1.332
1337	MH-3301	JUNCTION	12.00	0.056	1.449
1338	MH-3302	JUNCTION	12.00	0.199	1.304
1339	MH-3303	JUNCTION	12.00	0.161	1.388
1340	MH-3304	JUNCTION	12.00	0.174	1.325
1341	MH-3305	JUNCTION	12.00	0.263	1.365
1342	MH-3306	JUNCTION	12.00	0.218	1.280
1343	MH-3307	JUNCTION	12.00	0.300	1.329
1344	MH-3308	JUNCTION	12.00	0.216	1.288
1345	MH-3309	JUNCTION	12.00	0.267	1.300
1346	MH-3310	JUNCTION	12.00	0.049	1.445

1347	MH-3311	JUNCTION	12.00	0.125	1.394
1348	MH-3312	JUNCTION	12.00	0.230	1.372
1349	MH-3313	JUNCTION	12.00	0.297	1.322
1350	MH-3314	JUNCTION	12.00	0.295	1.349
1351	MH-3315	JUNCTION	12.00	0.107	1.388
1352	MH-3316	JUNCTION	12.00	0.060	1.440
1353	MH-3317	JUNCTION	12.00	0.172	1.430
1354	MH-3318	JUNCTION	12.00	0.288	1.348
1355	MH-3319	JUNCTION	12.00	0.337	1.367
1356	MH-6101	JUNCTION	12.00	0.426	1.176
1357	MH-6102	JUNCTION	12.00	0.372	1.135
1358	MH-6103	JUNCTION	12.00	0.424	1.275
1359	MH-6104	JUNCTION	12.00	0.418	1.238
1360	MH-6106	JUNCTION	12.00	0.454	1.247
1361	MH-6107	JUNCTION	12.00	0.484	1.262
1362	MH-6108	JUNCTION	12.00	0.431	1.291
1363	MH-6150	JUNCTION	12.00	0.364	1.155
1364	MH-6152	JUNCTION	12.00	0.310	1.062
1365	MH-6201	JUNCTION	12.00	0.054	1.461
1366	MH-6202	JUNCTION	12.00	0.050	1.468
1367	MH-6206	JUNCTION	12.00	0.020	1.566
1368	MH-6207	JUNCTION	12.00	0.233	1.479
1369	MH-6210	JUNCTION	12.00	0.047	1.441
1370	MH-6211	JUNCTION	12.00	0.153	1.358
1371	MH-6212	JUNCTION	12.00	0.235	1.374
1372	MH-6213	JUNCTION	12.00	0.160	1.428
1373	MH-6214	JUNCTION	12.00	0.139	1.376
1374	MH-6215	JUNCTION	12.00	0.180	1.416
1375	MH-6216	JUNCTION	12.00	0.257	1.250
1376	MH-6217	JUNCTION	12.00	0.242	1.386
1377	MH-6218	JUNCTION	12.00	0.380	1.326
1378	MH-6219	JUNCTION	12.00	0.096	1.403
1379	MH-6220	JUNCTION	12.00	0.160	1.407
1380	MH-6221	JUNCTION	12.00	0.253	1.316
1381	MH-6222	JUNCTION	12.00	0.317	1.326
1382	MH-6223	JUNCTION	12.00	0.376	1.337
1383	MH-6250	JUNCTION	12.00	0.134	1.489
1384	MH-6303	JUNCTION	12.00	0.052	1.481
1385	MH-6304	JUNCTION	12.00	0.162	1.496
1386	MH-6305	JUNCTION	12.00	0.211	1.498
1387	MH-6306	JUNCTION	12.00	0.297	1.415
1388	MH-6307	JUNCTION	12.00	0.337	1.390
1389	MH-6308	JUNCTION	12.00	0.374	1.351
1390	MH-6309	JUNCTION	12.00	0.430	1.363
1391	MH-6311	JUNCTION	12.00	0.020	1.523
1392	MH-6312	JUNCTION	12.00	0.116	1.471
1393	MH-6314	JUNCTION	12.00	0.200	1.431
1394	MH-6315	JUNCTION	12.00	0.092	1.407
1395	MH-6316	JUNCTION	12.00	0.156	1.410
1396	MH-6317	JUNCTION	12.00	0.269	1.366
1397	MH-6318	JUNCTION	12.00	0.157	1.344
1398	MH-6319	JUNCTION	12.00	0.191	1.367
1399	MH-6320	JUNCTION	12.00	0.214	1.388
1400	MH-6321	JUNCTION	12.00	0.249	1.350
1401	MH-6322	JUNCTION	12.00	0.293	1.359
1402	MH-6323	JUNCTION	12.00	0.306	1.383
1403	MH-6345	JUNCTION	12.00	0.168	1.473
1404	MH-6346	JUNCTION	12.00	0.194	1.410
1405	MH-6347	JUNCTION	12.00	0.126	1.392

1406

1407

Node Flooding Summary

1411
1412 No nodes were flooded.

1413
 1414
 1415 * * * * *
 1416 Outfall Loading Summary
 1417 * * * * *
 1418
 1419 -----
 1420 Flow Avg Max Total
 1421 Freq Flow Flow Volume
 1422 Outfall Node Pcnt LPS LPS 10^6 ltr
 1423 -----
 1424 MH-HW101 100.00 926.00 926.00 40.003
 1425 MH-HW102 100.00 943.27 943.27 40.749
 1426 MH-HW201 100.00 440.55 440.57 19.032
 1427 MH-HW202 100.00 696.99 696.99 30.110
 1428 MH-HW203 100.00 799.41 799.42 34.534
 1429 MH-HW301 100.00 295.27 295.27 12.756
 1430 MH-HW302 100.00 569.52 569.53 24.603
 1431 MH-HW303 100.00 734.47 734.48 31.729
 1432 MH-HW601 100.00 281.18 281.18 12.147
 1433 MH-HW602 100.00 836.50 836.51 36.137
 1434 MH-HW603 100.00 774.18 774.19 33.445
 1435 MH-HW701 100.00 266.14 266.14 11.497
 1436 -----
 1437 System 100.00 7563.48 7563.50 326.742
 1438
 1439
 1440 * * * * *
 1441 Link Flow Summary
 1442 * * * * *
 1443
 1444 -----
 1445 Maximum Time of Max Maximum Max/
 1446 |Flow| Occurrence |Veloc| Full Max/
 1447 Link Type LPS days hr:min m/sec Flow Depth
 1448 -----
 1449 STM-1101-1102 CONDUIT 703.00 0 08:52 1.11 0.87 1.00
 1450 STM-1102-1103 CONDUIT 768.00 0 05:10 1.03 0.89 1.00
 1451 STM-1103-1104 CONDUIT 853.00 0 08:52 0.99 0.81 1.00
 1452 STM-1104-1105 CONDUIT 920.00 0 01:44 1.06 0.87 1.00
 1453 STM-1105-1106 CONDUIT 926.00 0 00:59 1.07 0.88 1.00
 1454 STM-1106-HW101 CONDUIT 926.00 0 00:59 1.07 0.88 1.00
 1455 STM-1201-1202 CONDUIT 93.47 0 11:41 0.59 0.73 1.00
 1456 STM-1202-1204 CONDUIT 111.60 0 10:07 0.70 0.88 1.00
 1457 STM-1203-1204 CONDUIT 106.01 0 07:18 0.67 0.83 1.00
 1458 STM-1204-1210 CONDUIT 241.65 0 03:08 0.68 0.74 1.00
 1459 STM-1205-1207 CONDUIT 56.96 0 00:12 0.52 0.59 1.00
 1460 STM-1206-1207 CONDUIT 14.24 0 00:37 0.20 0.25 1.00
 1461 STM-1207-1209 CONDUIT 102.08 0 04:54 0.64 0.80 1.00
 1462 STM-1208-1209 CONDUIT 71.20 0 04:06 0.64 0.74 1.00
 1463 STM-1209-1210 CONDUIT 176.97 0 07:41 0.63 0.74 1.00
 1464 STM-1210-1218 CONDUIT 488.65 0 07:11 0.91 0.88 1.00
 1465 STM-1211-1213 CONDUIT 45.88 0 02:33 0.65 0.80 1.00
 1466 STM-1212-1213 CONDUIT 17.40 0 01:19 0.25 0.30 1.00
 1467 STM-1213-1216 CONDUIT 73.15 0 07:55 0.46 0.57 1.00
 1468 STM-1214-1216 CONDUIT 56.96 0 10:26 0.52 0.59 1.00
 1469 STM-1215-1216 CONDUIT 17.40 0 06:29 0.25 0.30 1.00
 1470 STM-1216-1217 CONDUIT 147.51 0 02:56 0.52 0.62 1.00
 1471 STM-1217-1218 CONDUIT 225.03 0 02:56 0.80 0.95 1.00
 1472 STM-1218-1220 CONDUIT 713.69 0 02:56 0.96 0.82 1.00
 1473 STM-1219-1220 CONDUIT 56.96 0 03:38 0.52 0.59 1.00
 1474 STM-1220-1221 CONDUIT 770.64 0 07:11 1.03 0.89 1.00
 1475 STM-1221-1222 CONDUIT 780.90 0 07:11 1.05 0.90 1.00
 1476 STM-1222-1223 CONDUIT 801.12 0 07:11 1.07 0.92 1.00
 1477 STM-1223-1224 CONDUIT 801.12 0 02:26 1.07 0.91 1.00
 1478 STM-1224-1230 CONDUIT 801.12 0 07:11 1.07 0.92 1.00

1479	STM-1227-1228	CONDUIT	142.15	0	02:03	0.50	0.60	0.99
1480	STM-1228-1229	CONDUIT	142.15	0	09:02	0.50	0.59	1.00
1481	STM-1229-1230	CONDUIT	142.16	0	08:55	0.50	0.60	1.00
1482	STM-1230-HW102	CONDUIT	943.27	0	01:22	1.09	0.89	1.00
1483	STM-2101-2102	CONDUIT	20.57	0	00:00	0.29	0.36	1.00
1484	STM-2102-2103	CONDUIT	54.96	0	04:43	0.50	0.57	1.00
1485	STM-2103-2104	CONDUIT	103.82	0	06:40	0.65	0.81	1.00
1486	STM-2104-2108	CONDUIT	146.24	0	06:40	0.52	0.61	1.00
1487	STM-2105-2106	CONDUIT	110.75	0	02:13	0.70	0.87	1.00
1488	STM-2106-2107	CONDUIT	115.16	0	04:47	0.72	0.90	1.00
1489	STM-2107-2108	CONDUIT	141.60	0	00:00	0.50	0.60	1.00
1490	STM-2108-2114	CONDUIT	292.01	0	00:00	0.82	0.90	1.00
1491	STM-2109-2111	CONDUIT	33.27	0	00:00	0.47	0.58	0.98
1492	STM-2110-2111	CONDUIT	0.22	0	00:00	0.00	0.00	0.95
1493	STM-2111-2112	CONDUIT	88.91	0	00:00	0.56	0.70	1.00
1494	STM-2112-2113	CONDUIT	138.71	0	00:00	0.49	0.58	1.00
1495	STM-2113-2114	CONDUIT	148.57	0	00:00	0.53	0.62	1.00
1496	STM-2114-HW201	CONDUIT	440.57	0	00:00	0.82	0.79	1.00
1497	STM-2201-2202	CONDUIT	34.81	0	11:44	0.54	0.61	0.86
1498	STM-2202-2204	CONDUIT	78.80	0	11:44	0.50	0.62	1.00
1499	STM-2203-2204	CONDUIT	14.24	0	02:17	0.21	0.25	0.95
1500	STM-2204-2207	CONDUIT	124.47	0	07:25	0.58	0.65	1.00
1501	STM-2205-2206	CONDUIT	41.14	0	06:44	0.58	0.72	0.98
1502	STM-2206-2207	CONDUIT	86.34	0	06:44	0.54	0.68	1.00
1503	STM-2207-2210	CONDUIT	228.50	0	01:21	0.81	0.96	1.00
1504	STM-2208-2209	CONDUIT	96.59	0	02:53	0.61	0.76	1.00
1505	STM-2209-2210	CONDUIT	180.35	0	00:00	0.64	0.76	1.00
1506	STM-2210-2213	CONDUIT	408.84	0	10:10	0.93	0.95	1.00
1507	STM-2211-2212	CONDUIT	69.62	0	01:17	0.63	0.72	1.00
1508	STM-2212-2213	CONDUIT	109.67	0	03:24	0.69	0.86	1.00
1509	STM-2213-2215	CONDUIT	518.52	0	01:31	0.97	0.93	1.00
1510	STM-2214-2215	CONDUIT	12.66	0	04:09	0.18	0.22	1.00
1511	STM-2215-2216	CONDUIT	533.45	0	01:31	0.84	0.76	1.00
1512	STM-2216-2217	CONDUIT	533.45	0	01:31	0.84	0.76	1.00
1513	STM-2217-2218	CONDUIT	533.46	0	01:44	0.84	0.75	1.00
1514	STM-2218-2225	CONDUIT	533.46	0	00:00	0.84	0.76	1.00
1515	STM-2219-2221	CONDUIT	25.31	0	08:12	0.36	0.44	1.00
1516	STM-2220-2221	CONDUIT	15.82	0	10:15	0.22	0.28	1.00
1517	STM-2221-2222	CONDUIT	104.43	0	08:48	0.66	0.82	1.00
1518	STM-2222-2223	CONDUIT	163.53	0	03:04	0.58	0.69	1.00
1519	STM-2223-2224	CONDUIT	163.54	0	09:18	0.58	0.69	1.00
1520	STM-2224-2225	CONDUIT	163.54	0	08:12	0.58	0.69	1.00
1521	STM-2225-HW202	CONDUIT	696.99	0	04:34	0.93	0.80	1.00
1522	STM-2301-2302	CONDUIT	56.96	0	03:25	0.52	0.59	1.00
1523	STM-2302-2304	CONDUIT	102.17	0	00:43	0.64	0.80	1.00
1524	STM-2303-2304	CONDUIT	11.08	0	01:11	0.16	0.19	1.00
1525	STM-2304-2308	CONDUIT	117.55	0	07:01	0.74	0.92	1.00
1526	STM-2305-2306	CONDUIT	79.11	0	09:59	0.50	0.62	1.00
1527	STM-2306-2308	CONDUIT	128.14	0	10:58	0.59	0.67	1.00
1528	STM-2307-2308	CONDUIT	25.31	0	03:27	0.36	0.44	1.00
1529	STM-2308-2312	CONDUIT	271.00	0	06:50	0.76	0.83	1.00
1530	STM-2309-2310	CONDUIT	107.32	0	04:19	0.67	0.84	1.00
1531	STM-2310-2312	CONDUIT	187.82	0	08:45	0.66	0.79	1.00
1532	STM-2311-2312	CONDUIT	42.93	0	02:14	0.61	0.75	1.00
1533	STM-2312-2316	CONDUIT	501.75	0	06:25	0.94	0.90	1.00
1534	STM-2313-2314	CONDUIT	79.11	0	11:23	0.50	0.62	1.00
1535	STM-2314-2316	CONDUIT	128.08	0	00:04	0.59	0.67	1.00
1536	STM-2315-2316	CONDUIT	28.48	0	11:45	0.40	0.50	1.00
1537	STM-2316-2318	CONDUIT	658.30	0	06:25	1.03	0.94	1.00
1538	STM-2317-2318	CONDUIT	29.31	0	03:41	0.41	0.51	1.00
1539	STM-2317-2323	CONDUIT	29.31	0	03:41	0.41	0.51	1.00
1540	STM-2318-2319	CONDUIT	628.99	0	06:25	0.99	0.90	1.00
1541	STM-2319-2320	CONDUIT	628.99	0	06:25	0.99	0.90	1.00
1542	STM-2320-2321	CONDUIT	628.99	0	04:36	0.99	0.90	1.00
1543	STM-2321-2327	CONDUIT	628.99	0	11:16	0.99	0.90	1.00
1544	STM-2322-2323	CONDUIT	14.24	0	06:56	0.20	0.25	1.00

1545	STM-2323-2324	CONDUIT	109.17	0	03:41	0.69	0.86	1.00
1546	STM-2324-2325	CONDUIT	170.42	0	03:41	0.60	0.72	1.00
1547	STM-2325-2326	CONDUIT	170.42	0	02:16	0.60	0.71	1.00
1548	STM-2326-2327	CONDUIT	170.42	0	03:41	0.60	0.72	1.00
1549	STM-2327-HW203	CONDUIT	799.42	0	10:06	1.07	0.90	1.00
1550	STM-3101-3102	CONDUIT	28.48	0	11:51	0.40	0.50	1.00
1551	STM-3102-3103	CONDUIT	110.73	0	06:43	0.70	0.87	1.00
1552	STM-3103-3104	CONDUIT	112.98	0	04:42	0.71	0.89	1.00
1553	STM-3104-HW301	CONDUIT	295.27	0	02:00	0.83	0.90	1.00
1554	STM-3105-3107	CONDUIT	36.39	0	08:29	0.51	0.64	1.00
1555	STM-3106-3107	CONDUIT	26.90	0	05:31	0.38	0.47	1.00
1556	STM-3107-3108	CONDUIT	152.13	0	04:43	0.54	0.64	1.00
1557	STM-3108-3109	CONDUIT	161.82	0	00:16	0.57	0.68	1.00
1558	STM-3109-3104	CONDUIT	182.30	0	03:54	0.64	0.76	1.00
1559	STM-3150-HW302	CONDUIT	569.53	0	02:59	0.90	0.81	1.00
1560	STM-3201-3202	CONDUIT	98.73	0	05:25	0.62	0.77	1.00
1561	STM-3202-3204	CONDUIT	188.91	0	10:56	0.67	0.79	1.00
1562	STM-3203-3204	CONDUIT	90.15	0	02:22	0.57	0.71	1.00
1563	STM-3204-3208	CONDUIT	279.06	0	03:18	0.78	0.86	1.00
1564	STM-3205-3206	CONDUIT	63.29	0	02:08	0.57	0.66	1.00
1565	STM-3206-3208	CONDUIT	111.75	0	09:33	0.70	0.88	1.00
1566	STM-3207-3208	CONDUIT	22.15	0	02:30	0.31	0.39	1.00
1567	STM-3208-3209	CONDUIT	412.96	0	09:11	0.93	0.96	1.00
1568	STM-3209-3210	CONDUIT	440.32	0	02:38	0.82	0.79	1.00
1569	STM-3210-3150	CONDUIT	444.81	0	07:43	0.83	0.79	1.00
1570	STM-3211-3212	CONDUIT	98.09	0	03:28	0.62	0.77	1.00
1571	STM-3212-3213	CONDUIT	100.16	0	02:13	0.63	0.79	1.00
1572	STM-3213-3214	CONDUIT	124.71	0	04:38	0.58	0.65	1.00
1573	STM-3214-3150	CONDUIT	124.71	0	07:36	0.58	0.65	1.00
1574	STM-3301-3303	CONDUIT	132.90	0	09:21	0.61	0.69	1.00
1575	STM-3302-3303	CONDUIT	45.88	0	03:17	0.65	0.80	1.00
1576	STM-3303-3305	CONDUIT	196.57	0	03:40	0.70	0.83	1.00
1577	STM-3304-3305	CONDUIT	66.45	0	04:43	0.60	0.69	1.00
1578	STM-3305-3307	CONDUIT	269.44	0	10:07	0.75	0.83	1.00
1579	STM-3306-3307	CONDUIT	71.20	0	09:57	0.64	0.74	1.00
1580	STM-3307-3309	CONDUIT	340.64	0	11:29	0.77	0.79	1.00
1581	STM-3308-3309	CONDUIT	101.26	0	07:28	0.64	0.79	1.00
1582	STM-3309-3313	CONDUIT	441.89	0	08:32	0.83	0.79	1.00
1583	STM-3310-3311	CONDUIT	77.27	0	01:33	0.49	0.61	1.00
1584	STM-3311-3312	CONDUIT	98.32	0	10:56	0.62	0.77	1.00
1585	STM-3312-3313	CONDUIT	145.00	0	03:27	0.51	0.61	1.00
1586	STM-3313-3314	CONDUIT	586.90	0	00:39	0.92	0.84	1.00
1587	STM-3314-3319	CONDUIT	586.90	0	02:10	0.92	0.84	1.00
1588	STM-3315-3317	CONDUIT	41.14	0	04:14	0.58	0.72	1.00
1589	STM-3316-3317	CONDUIT	30.06	0	07:25	0.43	0.52	1.00
1590	STM-3317-3318	CONDUIT	147.58	0	08:42	0.52	0.62	1.00
1591	STM-3318-3319	CONDUIT	147.58	0	03:11	0.52	0.61	1.00
1592	STM-3319-HW303	CONDUIT	734.48	0	05:32	1.15	1.05	1.00
1593	STM-6101-6106	CONDUIT	190.14	0	01:57	0.67	0.80	1.00
1594	STM-6102-6103	CONDUIT	72.98	0	10:51	0.66	0.76	1.00
1595	STM-6103-6101	CONDUIT	159.04	0	07:37	0.73	0.83	1.00
1596	STM-6104-6108	CONDUIT	78.71	0	00:18	0.71	0.82	1.00
1597	STM-6106-6107	CONDUIT	190.15	0	01:57	0.67	0.80	1.00
1598	STM-6107-6108	CONDUIT	202.48	0	05:16	0.72	0.85	1.00
1599	STM-6108-HW601	CONDUIT	281.18	0	05:16	0.99	1.02	1.00
1600	STM-6150-6104	CONDUIT	50.06	0	09:59	0.71	0.87	1.00
1601	STM-6152-6150	CONDUIT	41.14	0	02:42	0.58	0.72	1.00
1602	STM-6201-6202	CONDUIT	101.26	0	08:54	0.64	0.79	1.00
1603	STM-6202-6250	CONDUIT	125.64	0	02:35	0.79	0.88	1.00
1604	STM-6204-6205	CONDUIT	52.22	0	03:52	0.20	0.22	0.89
1605	STM-6205-6206	CONDUIT	54.85	0	05:00	0.19	0.23	1.00
1606	STM-6206-6207	CONDUIT	220.49	0	05:00	0.50	0.51	1.00
1607	STM-6207-6215	CONDUIT	325.87	0	05:00	0.61	0.59	1.00
1608	STM-6210-6213	CONDUIT	33.23	0	09:46	0.47	0.58	1.00
1609	STM-6211-6212	CONDUIT	75.94	0	08:16	0.69	0.79	1.00
1610	STM-6212-6213	CONDUIT	119.89	0	05:51	0.75	0.94	1.00

1611	STM-6213-6215	CONDUIT	167.21	0	09:17	0.59	0.70	1.00
1612	STM-6214-6215	CONDUIT	106.01	0	02:52	0.67	0.83	1.00
1613	STM-6215-6217	CONDUIT	599.08	0	02:38	0.94	0.85	1.00
1614	STM-6216-6217	CONDUIT	53.66	0	05:55	0.76	0.94	1.00
1615	STM-6217-6218	CONDUIT	652.73	0	05:00	0.87	0.75	1.00
1616	STM-6218-6223	CONDUIT	652.74	0	08:29	0.87	0.74	1.00
1617	STM-6219-6220	CONDUIT	64.39	0	09:59	0.58	0.67	1.00
1618	STM-6220-6221	CONDUIT	153.20	0	01:41	0.54	0.64	1.00
1619	STM-6221-6222	CONDUIT	161.67	0	09:14	0.57	0.68	1.00
1620	STM-6222-6223	CONDUIT	183.77	0	02:55	0.65	0.77	1.00
1621	STM-6223-HW602	CONDUIT	836.51	0	03:24	0.97	0.79	1.00
1622	STM-6250-6206	CONDUIT	133.95	0	11:34	0.84	0.94	1.00
1623	STM-6301-6303	CONDUIT	31.16	0	07:20	0.45	0.54	0.95
1624	STM-6302-6303	CONDUIT	7.79	0	10:13	0.11	0.14	0.97
1625	STM-6303-6304	CONDUIT	42.38	0	07:20	0.60	0.74	1.00
1626	STM-6304-6305	CONDUIT	108.89	0	07:20	0.68	0.85	1.00
1627	STM-6305-6306	CONDUIT	172.22	0	07:20	0.61	0.72	1.00
1628	STM-6306-6307	CONDUIT	218.75	0	07:20	0.77	0.92	1.00
1629	STM-6307-6308	CONDUIT	249.62	0	07:20	0.70	0.77	1.00
1630	STM-6308-6309	CONDUIT	249.62	0	04:49	0.70	0.77	1.00
1631	STM-6309-6323	CONDUIT	249.62	0	11:07	0.70	0.77	1.00
1632	STM-6310-6311	CONDUIT	23.98	0	02:12	0.34	0.42	0.97
1633	STM-6311-6312	CONDUIT	81.51	0	02:32	0.51	0.64	1.00
1634	STM-6312-6314	CONDUIT	133.64	0	00:07	0.62	0.69	1.00
1635	STM-6314-6316	CONDUIT	278.13	0	10:20	0.78	0.85	1.00
1636	STM-6315-6316	CONDUIT	60.10	0	02:51	0.54	0.62	1.00
1637	STM-6316-6317	CONDUIT	360.58	0	00:07	0.82	0.84	1.00
1638	STM-6317-6321	CONDUIT	382.21	0	00:07	0.87	0.89	1.00
1639	STM-6318-6319	CONDUIT	115.50	0	04:40	0.73	0.91	1.00
1640	STM-6319-6320	CONDUIT	117.09	0	00:06	0.74	0.92	1.00
1641	STM-6320-6321	CONDUIT	142.36	0	09:17	0.50	0.60	1.00
1642	STM-6321-6322	CONDUIT	524.57	0	11:20	0.98	0.93	1.00
1643	STM-6322-6323	CONDUIT	524.57	0	09:42	0.98	0.95	1.00
1644	STM-6323-HW603	CONDUIT	774.19	0	09:42	1.04	0.91	1.00
1645	STM-6345-6314	CONDUIT	141.29	0	04:15	0.50	0.59	1.00
1646	STM-6346-6345	CONDUIT	120.94	0	02:23	0.76	0.95	1.00
1647	STM-6347-6346	CONDUIT	74.36	0	00:01	0.67	0.82	1.00
1648	STM-7001-7002	CONDUIT	55.38	0	00:00	0.97	0.58	0.51
1649	STM-7002-7003	CONDUIT	130.50	0	00:01	0.85	0.68	0.67
1650	STM-7003-7004	CONDUIT	130.50	0	00:00	0.68	0.68	0.83
1651	STM-7004-7005	CONDUIT	146.46	0	00:02	0.55	0.62	0.89
1652	STM-7005-7008	CONDUIT	146.46	0	00:02	0.52	0.61	0.98
1653	STM-7006-7007	CONDUIT	58.54	0	00:05	0.75	0.61	0.67
1654	STM-7007-7008	CONDUIT	119.68	0	00:00	0.85	0.94	0.83
1655	STM-7008-HW701	CONDUIT	266.14	0	00:02	0.74	0.81	1.00

1656

1657

Flow Classification Summary

1661

1662

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class									
		Up Dry		Down Dry		Sub Dry		Sup Crit		Up Crit	
		Dry	Dry	Dry	Dry	Crit	Crit	Crit	Crit	Ltd	Ctrl
STM-1101-1102	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
STM-1102-1103	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
STM-1103-1104	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
STM-1104-1105	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
STM-1105-1106	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
STM-1106-HW101	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
STM-1201-1202	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
STM-1202-1204	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
STM-1203-1204	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
STM-1204-1210	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00

1875
 1876 *****
 1877 Conduit Surcharge Summary
 1878 *****

1881 1882 1883 1884	Conduit	----- Hours Full -----			Hours	Hours
		Both Ends	Upstream	Dnstream	Above Full Normal Flow	Capacity Limited
1885	STM-1101-1102	12.00	12.00	12.00	0.01	0.01
1886	STM-1102-1103	12.00	12.00	12.00	0.01	0.01
1887	STM-1103-1104	12.00	12.00	12.00	0.01	0.01
1888	STM-1104-1105	12.00	12.00	12.00	0.01	0.01
1889	STM-1105-1106	12.00	12.00	12.00	0.01	12.00
1890	STM-1106-HW101	12.00	12.00	12.00	0.01	0.01
1891	STM-1201-1202	12.00	12.00	12.00	0.01	0.01
1892	STM-1202-1204	12.00	12.00	12.00	0.01	0.01
1893	STM-1203-1204	12.00	12.00	12.00	0.01	0.01
1894	STM-1204-1210	12.00	12.00	12.00	0.01	0.01
1895	STM-1205-1207	12.00	12.00	12.00	0.01	0.01
1896	STM-1206-1207	12.00	12.00	12.00	0.01	0.01
1897	STM-1207-1209	12.00	12.00	12.00	0.01	0.01
1898	STM-1208-1209	12.00	12.00	12.00	0.01	0.01
1899	STM-1209-1210	12.00	12.00	12.00	0.01	0.01
1900	STM-1210-1218	12.00	12.00	12.00	0.01	12.00
1901	STM-1211-1213	12.00	12.00	12.00	0.01	0.01
1902	STM-1212-1213	12.00	12.00	12.00	0.01	0.01
1903	STM-1213-1216	12.00	12.00	12.00	0.01	0.01
1904	STM-1214-1216	12.00	12.00	12.00	0.01	0.01
1905	STM-1215-1216	12.00	12.00	12.00	0.01	0.01
1906	STM-1216-1217	12.00	12.00	12.00	0.01	0.01
1907	STM-1217-1218	12.00	12.00	12.00	0.01	12.00
1908	STM-1218-1220	12.00	12.00	12.00	0.01	0.01
1909	STM-1219-1220	12.00	12.00	12.00	0.01	0.01
1910	STM-1220-1221	12.00	12.00	12.00	0.01	0.01
1911	STM-1221-1222	12.00	12.00	12.00	0.01	0.01
1912	STM-1222-1223	12.00	12.00	12.00	0.01	12.00
1913	STM-1223-1224	12.00	12.00	12.00	0.01	12.00
1914	STM-1224-1230	12.00	12.00	12.00	0.01	12.00
1915	STM-1227-1228	0.01	0.01	12.00	0.01	0.01
1916	STM-1228-1229	12.00	12.00	12.00	0.01	0.01
1917	STM-1229-1230	12.00	12.00	12.00	0.01	12.00
1918	STM-1230-HW102	12.00	12.00	12.00	0.01	0.01
1919	STM-2101-2102	12.00	12.00	12.00	0.01	0.01
1920	STM-2102-2103	12.00	12.00	12.00	0.01	0.01
1921	STM-2103-2104	12.00	12.00	12.00	0.01	0.01
1922	STM-2104-2108	12.00	12.00	12.00	0.01	0.01
1923	STM-2105-2106	12.00	12.00	12.00	0.01	0.01
1924	STM-2106-2107	12.00	12.00	12.00	0.01	12.00
1925	STM-2107-2108	12.00	12.00	12.00	0.01	0.01
1926	STM-2108-2114	12.00	12.00	12.00	0.01	12.00
1927	STM-2109-2111	0.01	0.01	12.00	0.01	0.01
1928	STM-2110-2111	0.01	0.01	12.00	0.01	0.01
1929	STM-2111-2112	12.00	12.00	12.00	0.01	0.01
1930	STM-2112-2113	12.00	12.00	12.00	0.01	0.01
1931	STM-2113-2114	12.00	12.00	12.00	0.01	0.01
1932	STM-2114-HW201	12.00	12.00	12.00	0.01	0.01
1933	STM-2201-2202	0.01	0.01	12.00	0.01	0.01
1934	STM-2202-2204	12.00	12.00	12.00	0.01	0.01
1935	STM-2203-2204	0.01	0.01	12.00	0.01	0.01
1936	STM-2204-2207	12.00	12.00	12.00	0.01	0.01
1937	STM-2205-2206	0.01	0.01	12.00	0.01	0.01
1938	STM-2206-2207	12.00	12.00	12.00	0.01	0.01
1939	STM-2207-2210	12.00	12.00	12.00	0.01	0.01
1940	STM-2208-2209	12.00	12.00	12.00	0.01	0.01

1941	STM-2209-2210	12.00	12.00	12.00	0.01	0.01
1942	STM-2210-2213	12.00	12.00	12.00	0.01	0.01
1943	STM-2211-2212	12.00	12.00	12.00	0.01	0.01
1944	STM-2212-2213	12.00	12.00	12.00	0.01	0.01
1945	STM-2213-2215	12.00	12.00	12.00	0.01	0.01
1946	STM-2214-2215	12.00	12.00	12.00	0.01	0.01
1947	STM-2215-2216	12.00	12.00	12.00	0.01	0.01
1948	STM-2216-2217	12.00	12.00	12.00	0.01	0.01
1949	STM-2217-2218	12.00	12.00	12.00	0.01	12.00
1950	STM-2218-2225	12.00	12.00	12.00	0.01	12.00
1951	STM-2219-2221	12.00	12.00	12.00	0.01	0.01
1952	STM-2220-2221	12.00	12.00	12.00	0.01	0.01
1953	STM-2221-2222	12.00	12.00	12.00	0.01	0.01
1954	STM-2222-2223	12.00	12.00	12.00	0.01	0.01
1955	STM-2223-2224	12.00	12.00	12.00	0.01	0.01
1956	STM-2224-2225	12.00	12.00	12.00	0.01	12.00
1957	STM-2225-HW202	12.00	12.00	12.00	0.01	0.01
1958	STM-2301-2302	12.00	12.00	12.00	0.01	0.01
1959	STM-2302-2304	12.00	12.00	12.00	0.01	0.01
1960	STM-2303-2304	12.00	12.00	12.00	0.01	0.01
1961	STM-2304-2308	12.00	12.00	12.00	0.01	0.01
1962	STM-2305-2306	12.00	12.00	12.00	0.01	0.01
1963	STM-2306-2308	12.00	12.00	12.00	0.01	0.01
1964	STM-2307-2308	12.00	12.00	12.00	0.01	0.01
1965	STM-2308-2312	12.00	12.00	12.00	0.01	0.01
1966	STM-2309-2310	12.00	12.00	12.00	0.01	0.01
1967	STM-2310-2312	12.00	12.00	12.00	0.01	0.01
1968	STM-2311-2312	12.00	12.00	12.00	0.01	0.01
1969	STM-2312-2316	12.00	12.00	12.00	0.01	0.01
1970	STM-2313-2314	12.00	12.00	12.00	0.01	0.01
1971	STM-2314-2316	12.00	12.00	12.00	0.01	0.01
1972	STM-2315-2316	12.00	12.00	12.00	0.01	0.01
1973	STM-2316-2318	12.00	12.00	12.00	0.01	0.01
1974	STM-2317-2318	12.00	12.00	12.00	0.01	0.01
1975	STM-2317-2323	12.00	12.00	12.00	0.01	0.01
1976	STM-2318-2319	12.00	12.00	12.00	0.01	0.01
1977	STM-2319-2320	12.00	12.00	12.00	0.01	0.01
1978	STM-2320-2321	12.00	12.00	12.00	0.01	12.00
1979	STM-2321-2327	12.00	12.00	12.00	0.01	12.00
1980	STM-2322-2323	12.00	12.00	12.00	0.01	0.01
1981	STM-2323-2324	12.00	12.00	12.00	0.01	0.01
1982	STM-2324-2325	12.00	12.00	12.00	0.01	0.01
1983	STM-2325-2326	12.00	12.00	12.00	0.01	0.01
1984	STM-2326-2327	12.00	12.00	12.00	0.01	12.00
1985	STM-2327-HW203	12.00	12.00	12.00	0.01	0.01
1986	STM-3101-3102	12.00	12.00	12.00	0.01	0.01
1987	STM-3102-3103	12.00	12.00	12.00	0.01	0.01
1988	STM-3103-3104	12.00	12.00	12.00	0.01	12.00
1989	STM-3104-HW301	12.00	12.00	12.00	0.01	0.01
1990	STM-3105-3107	12.00	12.00	12.00	0.01	0.01
1991	STM-3106-3107	12.00	12.00	12.00	0.01	0.01
1992	STM-3107-3108	12.00	12.00	12.00	0.01	0.01
1993	STM-3108-3109	12.00	12.00	12.00	0.01	0.01
1994	STM-3109-3104	12.00	12.00	12.00	0.01	0.01
1995	STM-3150-HW302	12.00	12.00	12.00	0.01	0.01
1996	STM-3201-3202	12.00	12.00	12.00	0.01	0.01
1997	STM-3202-3204	12.00	12.00	12.00	0.01	0.01
1998	STM-3203-3204	12.00	12.00	12.00	0.01	0.01
1999	STM-3204-3208	12.00	12.00	12.00	0.01	0.01
2000	STM-3205-3206	12.00	12.00	12.00	0.01	0.01
2001	STM-3206-3208	12.00	12.00	12.00	0.01	12.00
2002	STM-3207-3208	12.00	12.00	12.00	0.01	0.01
2003	STM-3208-3209	12.00	12.00	12.00	0.01	0.01
2004	STM-3209-3210	12.00	12.00	12.00	0.01	0.01
2005	STM-3210-3150	12.00	12.00	12.00	0.01	0.01
2006	STM-3211-3212	12.00	12.00	12.00	0.01	0.01

2007	STM-3212-3213	12.00	12.00	12.00	0.01	0.01
2008	STM-3213-3214	12.00	12.00	12.00	0.01	0.01
2009	STM-3214-3150	12.00	12.00	12.00	0.01	12.00
2010	STM-3301-3303	12.00	12.00	12.00	0.01	0.01
2011	STM-3302-3303	12.00	12.00	12.00	0.01	0.01
2012	STM-3303-3305	12.00	12.00	12.00	0.01	0.01
2013	STM-3304-3305	12.00	12.00	12.00	0.01	0.01
2014	STM-3305-3307	12.00	12.00	12.00	0.01	0.01
2015	STM-3306-3307	12.00	12.00	12.00	0.01	0.01
2016	STM-3307-3309	12.00	12.00	12.00	0.01	0.01
2017	STM-3308-3309	12.00	12.00	12.00	0.01	0.01
2018	STM-3309-3313	12.00	12.00	12.00	0.01	12.00
2019	STM-3310-3311	12.00	12.00	12.00	0.01	0.01
2020	STM-3311-3312	12.00	12.00	12.00	0.01	0.01
2021	STM-3312-3313	12.00	12.00	12.00	0.01	0.01
2022	STM-3313-3314	12.00	12.00	12.00	0.01	12.00
2023	STM-3314-3319	12.00	12.00	12.00	0.01	12.00
2024	STM-3315-3317	12.00	12.00	12.00	0.01	0.01
2025	STM-3316-3317	12.00	12.00	12.00	0.01	0.01
2026	STM-3317-3318	12.00	12.00	12.00	0.01	0.01
2027	STM-3318-3319	12.00	12.00	12.00	0.01	12.00
2028	STM-3319-HW303	12.00	12.00	12.00	12.00	12.00
2029	STM-6101-6106	12.00	12.00	12.00	0.01	0.01
2030	STM-6102-6103	12.00	12.00	12.00	0.01	0.01
2031	STM-6103-6101	12.00	12.00	12.00	0.01	0.01
2032	STM-6104-6108	12.00	12.00	12.00	0.01	0.01
2033	STM-6106-6107	12.00	12.00	12.00	0.01	12.00
2034	STM-6107-6108	12.00	12.00	12.00	0.01	12.00
2035	STM-6108-HW601	12.00	12.00	12.00	12.00	12.00
2036	STM-6150-6104	12.00	12.00	12.00	0.01	12.00
2037	STM-6152-6150	12.00	12.00	12.00	0.01	0.01
2038	STM-6201-6202	12.00	12.00	12.00	0.01	12.00
2039	STM-6202-6250	12.00	12.00	12.00	0.01	0.01
2040	STM-6205-6206	0.01	0.01	12.00	0.01	0.01
2041	STM-6206-6207	12.00	12.00	12.00	0.01	0.01
2042	STM-6207-6215	12.00	12.00	12.00	0.01	0.01
2043	STM-6210-6213	12.00	12.00	12.00	0.01	0.01
2044	STM-6211-6212	12.00	12.00	12.00	0.01	0.01
2045	STM-6212-6213	12.00	12.00	12.00	0.01	12.00
2046	STM-6213-6215	12.00	12.00	12.00	0.01	0.01
2047	STM-6214-6215	12.00	12.00	12.00	0.01	0.01
2048	STM-6215-6217	12.00	12.00	12.00	0.01	0.01
2049	STM-6216-6217	12.00	12.00	12.00	0.01	12.00
2050	STM-6217-6218	12.00	12.00	12.00	0.01	0.01
2051	STM-6218-6223	12.00	12.00	12.00	0.01	12.00
2052	STM-6219-6220	12.00	12.00	12.00	0.01	0.01
2053	STM-6220-6221	12.00	12.00	12.00	0.01	0.01
2054	STM-6221-6222	12.00	12.00	12.00	0.01	0.01
2055	STM-6222-6223	12.00	12.00	12.00	0.01	12.00
2056	STM-6223-HW602	12.00	12.00	12.00	0.01	0.01
2057	STM-6250-6206	12.00	12.00	12.00	0.01	12.00
2058	STM-6301-6303	0.01	0.01	12.00	0.01	0.01
2059	STM-6302-6303	0.01	0.01	12.00	0.01	0.01
2060	STM-6303-6304	12.00	12.00	12.00	0.01	0.01
2061	STM-6304-6305	12.00	12.00	12.00	0.01	0.01
2062	STM-6305-6306	12.00	12.00	12.00	0.01	0.01
2063	STM-6306-6307	12.00	12.00	12.00	0.01	0.01
2064	STM-6307-6308	12.00	12.00	12.00	0.01	0.01
2065	STM-6308-6309	12.00	12.00	12.00	0.01	12.00
2066	STM-6309-6323	12.00	12.00	12.00	0.01	12.00
2067	STM-6310-6311	0.01	0.01	12.00	0.01	0.01
2068	STM-6311-6312	12.00	12.00	12.00	0.01	0.01
2069	STM-6312-6314	12.00	12.00	12.00	0.01	0.01
2070	STM-6314-6316	12.00	12.00	12.00	0.01	0.01
2071	STM-6315-6316	12.00	12.00	12.00	0.01	0.01
2072	STM-6316-6317	12.00	12.00	12.00	0.01	0.01

2073	STM-6317-6321	12.00	12.00	12.00	0.01	0.01
2074	STM-6318-6319	12.00	12.00	12.00	0.01	0.01
2075	STM-6319-6320	12.00	12.00	12.00	0.01	12.00
2076	STM-6320-6321	12.00	12.00	12.00	0.01	0.01
2077	STM-6321-6322	12.00	12.00	12.00	0.01	12.00
2078	STM-6322-6323	12.00	12.00	12.00	0.01	12.00
2079	STM-6323-HW603	12.00	12.00	12.00	0.01	0.01
2080	STM-6345-6314	12.00	12.00	12.00	0.01	0.01
2081	STM-6346-6345	12.00	12.00	12.00	0.01	12.00
2082	STM-6347-6346	12.00	12.00	12.00	0.01	0.01
2083	STM-7008-HW701	0.01	0.01	12.00	0.01	0.01

2084

2085

2086 Analysis begun on: Fri Feb 19 16:48:01 2021

2087 Analysis ended on: Fri Feb 19 16:48:40 2021

2088 Total elapsed time: 00:00:39

1
 2 EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.015)
 3 -----
 4
 5 5-Year flow in the storm sewers, 100 Year water level on the Jock River
 6
 7
 8 ****
 9 Element Count
 10 ****
 11 Number of rain gages 0
 12 Number of subcatchments ... 0
 13 Number of nodes 218
 14 Number of links 207
 15 Number of pollutants 0
 16 Number of land uses 0
 17
 18
 19 ****
 20 Node Summary
 21 ****
 22
 23 Name Type Invert
 24 Elev. Max. Ponded
 25 Depth Area External
 26 Area Inflow
 27
 28 MH-1101 JUNCTION 90.86 2.40 0.0 Yes
 29 MH-1102 JUNCTION 90.59 2.55 0.0 Yes
 30 MH-1103 JUNCTION 90.35 2.63 0.0 Yes
 31 MH-1104 JUNCTION 90.16 2.66 0.0 Yes
 32 MH-1105 JUNCTION 89.95 2.67 0.0 Yes
 33 MH-1106 JUNCTION 89.77 2.73 0.0 Yes
 34 MH-1201 JUNCTION 91.44 1.95 0.0 Yes
 35 MH-1202 JUNCTION 91.13 2.08 0.0 Yes
 36 MH-1203 JUNCTION 91.39 1.94 0.0 Yes
 37 MH-1204 JUNCTION 90.83 2.33 0.0 Yes
 38 MH-1205 JUNCTION 91.49 1.87 0.0 Yes
 39 MH-1206 JUNCTION 91.47 1.80 0.0 Yes
 40 MH-1207 JUNCTION 91.20 2.05 0.0 Yes
 41 MH-1208 JUNCTION 91.41 1.87 0.0 Yes
 42 MH-1209 JUNCTION 90.92 2.24 0.0 Yes
 43 MH-1210 JUNCTION 90.60 2.47 0.0 Yes
 44 MH-1211 JUNCTION 91.57 1.79 0.0 Yes
 45 MH-1212 JUNCTION 91.51 1.80 0.0 Yes
 46 MH-1213 JUNCTION 91.21 2.06 0.0 Yes
 47 MH-1214 JUNCTION 91.41 1.87 0.0 Yes
 48 MH-1215 JUNCTION 91.42 1.80 0.0 Yes
 49 MH-1216 JUNCTION 90.93 2.26 0.0 Yes
 50 MH-1217 JUNCTION 90.78 2.31 0.0 Yes
 51 MH-1218 JUNCTION 90.28 2.68 0.0 Yes
 52 MH-1219 JUNCTION 91.11 1.87 0.0 Yes
 53 MH-1220 JUNCTION 90.17 2.70 0.0 Yes
 54 MH-1221 JUNCTION 90.07 2.71 0.0 Yes
 55 MH-1222 JUNCTION 89.94 2.74 0.0 Yes
 56 MH-1223 JUNCTION 89.77 2.80 0.0 Yes
 57 MH-1224 JUNCTION 89.69 2.86 0.0 Yes
 58 MH-1227 JUNCTION 90.61 2.10 0.0 Yes
 59 MH-1228 JUNCTION 90.39 2.14 0.0 Yes
 60 MH-1229 JUNCTION 90.34 2.17 0.0 Yes
 61 MH-1230 JUNCTION 89.56 2.94 0.0 Yes
 62 MH-2101 JUNCTION 91.01 1.80 0.0 Yes
 63 MH-2102 JUNCTION 90.81 2.06 0.0 Yes
 64 MH-2103 JUNCTION 90.54 2.23 0.0 Yes
 65 MH-2104 JUNCTION 90.25 2.42 0.0 Yes
 66 MH-2105 JUNCTION 90.91 1.96 0.0 Yes
 67 MH-2106 JUNCTION 90.63 2.04 0.0 Yes
 68 MH-2107 JUNCTION 90.46 2.19 0.0 Yes
 69 MH-2108 JUNCTION 90.07 2.50 0.0 Yes

67	MH-2109	JUNCTION	90.98	1.80	0.0	Yes
68	MH-2110	JUNCTION	90.94	1.80	0.0	
69	MH-2111	JUNCTION	90.66	2.06	0.0	Yes
70	MH-2112	JUNCTION	90.38	2.24	0.0	Yes
71	MH-2113	JUNCTION	90.22	2.30	0.0	Yes
72	MH-2114	JUNCTION	89.84	2.66	0.0	
73	MH-2201	JUNCTION	91.51	1.80	0.0	Yes
74	MH-2202	JUNCTION	91.21	2.01	0.0	Yes
75	MH-2203	JUNCTION	91.35	1.89	0.0	Yes
76	MH-2204	JUNCTION	90.98	2.06	0.0	Yes
77	MH-2205	JUNCTION	91.42	1.80	0.0	Yes
78	MH-2206	JUNCTION	91.12	2.01	0.0	Yes
79	MH-2207	JUNCTION	90.78	2.18	0.0	Yes
80	MH-2208	JUNCTION	91.14	1.95	0.0	Yes
81	MH-2209	JUNCTION	90.85	2.14	0.0	Yes
82	MH-2210	JUNCTION	90.54	2.32	0.0	
83	MH-2211	JUNCTION	91.11	1.87	0.0	Yes
84	MH-2212	JUNCTION	90.82	2.06	0.0	Yes
85	MH-2213	JUNCTION	90.31	2.46	0.0	
86	MH-2214	JUNCTION	90.94	1.79	0.0	Yes
87	MH-2215	JUNCTION	90.14	2.54	0.0	Yes
88	MH-2216	JUNCTION	90.00	2.57	0.0	
89	MH-2217	JUNCTION	89.86	2.60	0.0	
90	MH-2218	JUNCTION	89.81	2.63	0.0	
91	MH-2219	JUNCTION	90.92	1.80	0.0	Yes
92	MH-2220	JUNCTION	90.92	1.80	0.0	Yes
93	MH-2221	JUNCTION	90.67	1.90	0.0	Yes
94	MH-2222	JUNCTION	90.36	2.20	0.0	Yes
95	MH-2223	JUNCTION	90.18	2.26	0.0	
96	MH-2224	JUNCTION	90.09	2.33	0.0	
97	MH-2225	JUNCTION	89.69	2.71	0.0	
98	MH-2301	JUNCTION	91.37	1.88	0.0	Yes
99	MH-2302	JUNCTION	91.08	2.06	0.0	Yes
100	MH-2303	JUNCTION	91.26	1.80	0.0	Yes
101	MH-2304	JUNCTION	90.87	2.16	0.0	Yes
102	MH-2305	JUNCTION	91.21	1.94	0.0	Yes
103	MH-2306	JUNCTION	90.99	2.06	0.0	Yes
104	MH-2307	JUNCTION	91.26	1.85	0.0	Yes
105	MH-2308	JUNCTION	90.52	2.42	0.0	
106	MH-2309	JUNCTION	91.11	1.96	0.0	Yes
107	MH-2310	JUNCTION	90.82	2.14	0.0	Yes
108	MH-2311	JUNCTION	91.10	1.80	0.0	Yes
109	MH-2312	JUNCTION	90.28	2.57	0.0	
110	MH-2313	JUNCTION	91.02	1.94	0.0	Yes
111	MH-2314	JUNCTION	90.80	2.06	0.0	Yes
112	MH-2315	JUNCTION	91.01	1.79	0.0	Yes
113	MH-2316	JUNCTION	90.11	2.63	0.0	
114	MH-2317	JUNCTION	90.92	1.80	0.0	
115	MH-2318	JUNCTION	90.01	2.66	0.0	
116	MH-2319	JUNCTION	89.86	2.69	0.0	
117	MH-2320	JUNCTION	89.72	2.73	0.0	
118	MH-2321	JUNCTION	89.67	2.77	0.0	
119	MH-2322	JUNCTION	90.92	1.80	0.0	Yes
120	MH-2323	JUNCTION	90.68	2.01	0.0	Yes
121	MH-2324	JUNCTION	90.37	2.20	0.0	Yes
122	MH-2325	JUNCTION	90.19	2.27	0.0	
123	MH-2326	JUNCTION	90.10	2.33	0.0	
124	MH-2327	JUNCTION	89.56	2.84	0.0	
125	MH-3101	JUNCTION	90.74	1.80	0.0	Yes
126	MH-3102	JUNCTION	90.44	2.17	0.0	Yes
127	MH-3103	JUNCTION	90.20	2.29	0.0	Yes
128	MH-3104	JUNCTION	89.83	2.65	0.0	
129	MH-3105	JUNCTION	90.81	1.80	0.0	Yes
130	MH-3106	JUNCTION	90.85	1.80	0.0	Yes
131	MH-3107	JUNCTION	90.30	2.28	0.0	Yes
132	MH-3108	JUNCTION	90.07	2.34	0.0	Yes

133	MH-3109	JUNCTION	89.98	2.43	0.0	Yes
134	MH-3150	JUNCTION	89.83	2.59	0.0	
135	MH-3201	JUNCTION	90.95	1.95	0.0	Yes
136	MH-3202	JUNCTION	90.67	2.13	0.0	Yes
137	MH-3203	JUNCTION	90.89	1.95	0.0	Yes
138	MH-3204	JUNCTION	90.47	2.23	0.0	
139	MH-3205	JUNCTION	90.93	1.87	0.0	Yes
140	MH-3206	JUNCTION	90.66	2.05	0.0	Yes
141	MH-3207	JUNCTION	90.87	1.79	0.0	Yes
142	MH-3208	JUNCTION	90.23	2.38	0.0	
143	MH-3209	JUNCTION	90.07	2.45	0.0	Yes
144	MH-3210	JUNCTION	89.92	2.50	0.0	Yes
145	MH-3211	JUNCTION	90.70	1.96	0.0	Yes
146	MH-3212	JUNCTION	90.46	2.03	0.0	Yes
147	MH-3213	JUNCTION	90.36	2.12	0.0	Yes
148	MH-3214	JUNCTION	90.23	2.17	0.0	
149	MH-3301	JUNCTION	91.01	2.03	0.0	Yes
150	MH-3302	JUNCTION	91.16	1.80	0.0	Yes
151	MH-3303	JUNCTION	90.65	2.23	0.0	Yes
152	MH-3304	JUNCTION	91.01	1.87	0.0	Yes
153	MH-3305	JUNCTION	90.47	2.31	0.0	Yes
154	MH-3306	JUNCTION	90.95	1.87	0.0	Yes
155	MH-3307	JUNCTION	90.31	2.38	0.0	
156	MH-3308	JUNCTION	90.81	1.95	0.0	Yes
157	MH-3309	JUNCTION	90.14	2.47	0.0	
158	MH-3310	JUNCTION	90.89	1.94	0.0	Yes
159	MH-3311	JUNCTION	90.68	2.03	0.0	Yes
160	MH-3312	JUNCTION	90.42	2.20	0.0	Yes
161	MH-3313	JUNCTION	89.98	2.55	0.0	
162	MH-3314	JUNCTION	89.88	2.60	0.0	
163	MH-3315	JUNCTION	90.86	1.79	0.0	Yes
164	MH-3316	JUNCTION	90.83	1.80	0.0	Yes
165	MH-3317	JUNCTION	90.33	2.23	0.0	Yes
166	MH-3318	JUNCTION	90.10	2.30	0.0	
167	MH-3319	JUNCTION	89.74	2.66	0.0	
168	MH-6101	JUNCTION	90.35	2.20	0.0	Yes
169	MH-6102	JUNCTION	90.82	1.88	0.0	Yes
170	MH-6103	JUNCTION	90.55	2.22	0.0	Yes
171	MH-6104	JUNCTION	90.47	2.03	0.0	Yes
172	MH-6106	JUNCTION	90.22	2.33	0.0	
173	MH-6107	JUNCTION	90.17	2.38	0.0	Yes
174	MH-6108	JUNCTION	90.05	2.45	0.0	
175	MH-6150	JUNCTION	90.62	1.88	0.0	Yes
176	MH-6152	JUNCTION	90.83	1.67	0.0	Yes
177	MH-6201	JUNCTION	91.23	1.97	0.0	Yes
178	MH-6202	JUNCTION	91.11	2.03	0.0	Yes
179	MH-6204	JUNCTION	90.93	2.16	0.0	Yes
180	MH-6205	JUNCTION	90.84	2.19	0.0	Yes
181	MH-6206	JUNCTION	90.54	2.46	0.0	Yes
182	MH-6207	JUNCTION	90.34	2.54	0.0	Yes
183	MH-6210	JUNCTION	91.14	1.79	0.0	Yes
184	MH-6211	JUNCTION	91.19	1.89	0.0	Yes
185	MH-6212	JUNCTION	90.90	2.06	0.0	Yes
186	MH-6213	JUNCTION	90.62	2.24	0.0	Yes
187	MH-6214	JUNCTION	90.97	1.97	0.0	Yes
188	MH-6215	JUNCTION	90.16	2.62	0.0	
189	MH-6216	JUNCTION	90.95	1.81	0.0	Yes
190	MH-6217	JUNCTION	90.00	2.69	0.0	
191	MH-6218	JUNCTION	89.81	2.71	0.0	
192	MH-6219	JUNCTION	90.96	1.87	0.0	Yes
193	MH-6220	JUNCTION	90.57	2.17	0.0	Yes
194	MH-6221	JUNCTION	90.34	2.23	0.0	Yes
195	MH-6222	JUNCTION	90.26	2.30	0.0	Yes
196	MH-6223	JUNCTION	89.72	2.78	0.0	
197	MH-6250	JUNCTION	90.97	2.10	0.0	Yes
198	MH-6301	JUNCTION	91.43	1.80	0.0	Yes

199	MH-6302	JUNCTION	91.37	1.80	0.0	Yes
200	MH-6303	JUNCTION	91.21	1.92	0.0	Yes
201	MH-6304	JUNCTION	91.00	2.11	0.0	Yes
202	MH-6305	JUNCTION	90.67	2.31	0.0	Yes
203	MH-6306	JUNCTION	90.47	2.33	0.0	Yes
204	MH-6307	JUNCTION	90.26	2.40	0.0	Yes
205	MH-6308	JUNCTION	90.08	2.46	0.0	
206	MH-6309	JUNCTION	90.00	2.53	0.0	
207	MH-6310	JUNCTION	91.30	1.80	0.0	Yes
208	MH-6311	JUNCTION	91.11	1.99	0.0	Yes
209	MH-6312	JUNCTION	90.87	2.11	0.0	Yes
210	MH-6314	JUNCTION	90.55	2.31	0.0	Yes
211	MH-6315	JUNCTION	90.97	1.87	0.0	Yes
212	MH-6316	JUNCTION	90.38	2.39	0.0	Yes
213	MH-6317	JUNCTION	90.23	2.40	0.0	Yes
214	MH-6318	JUNCTION	90.86	1.95	0.0	Yes
215	MH-6319	JUNCTION	90.59	2.04	0.0	Yes
216	MH-6320	JUNCTION	90.42	2.20	0.0	Yes
217	MH-6321	JUNCTION	90.06	2.48	0.0	
218	MH-6322	JUNCTION	90.00	2.51	0.0	
219	MH-6323	JUNCTION	89.67	2.83	0.0	
220	MH-6345	JUNCTION	90.71	2.24	0.0	Yes
221	MH-6346	JUNCTION	91.00	2.05	0.0	Yes
222	MH-6347	JUNCTION	91.28	1.89	0.0	Yes
223	MH-7001	JUNCTION	91.24	1.88	0.0	Yes
224	MH-7002	JUNCTION	90.92	2.11	0.0	Yes
225	MH-7003	JUNCTION	90.66	2.20	0.0	
226	MH-7004	JUNCTION	90.56	2.30	0.0	Yes
227	MH-7005	JUNCTION	90.46	2.34	0.0	
228	MH-7006	JUNCTION	91.18	1.88	0.0	Yes
229	MH-7007	JUNCTION	90.88	2.07	0.0	Yes
230	MH-7008	JUNCTION	90.37	2.43	0.0	
231	MH-HW101	OUTFALL	89.67	1.05	0.0	
232	MH-HW102	OUTFALL	89.55	1.05	0.0	
233	MH-HW201	OUTFALL	89.80	0.82	0.0	
234	MH-HW202	OUTFALL	89.68	0.97	0.0	
235	MH-HW203	OUTFALL	89.55	0.97	0.0	
236	MH-HW301	OUTFALL	89.79	0.68	0.0	
237	MH-HW302	OUTFALL	89.79	0.90	0.0	
238	MH-HW303	OUTFALL	89.72	0.90	0.0	
239	MH-HW601	OUTFALL	90.01	0.60	0.0	
240	MH-HW602	OUTFALL	89.68	1.05	0.0	
241	MH-HW603	OUTFALL	89.67	0.97	0.0	
242	MH-HW701	OUTFALL	90.34	0.68	0.0	

243

244

246 Link Summary

248	Name	From Node	To Node	Type	Length	%Slope
	Roughness					

249

250	STM-1101-1102 0.2000 0.0130	MH-1101	MH-1102	CONDUIT	98.0	
251	STM-1102-1103 0.1498 0.0130	MH-1102	MH-1103	CONDUIT	111.5	
252	STM-1103-1104 0.1498 0.0130	MH-1103	MH-1104	CONDUIT	111.5	
253	STM-1104-1105 0.1504 0.0130	MH-1104	MH-1105	CONDUIT	125.0	
254	STM-1105-1106 0.1497 0.0130	MH-1105	MH-1106	CONDUIT	83.5	
255	STM-1106-HW101 0.1500 0.0130	MH-1106	MH-HW101	CONDUIT	62.0	

256	STM-1201-1202 0.2000 0.0130	MH-1201	MH-1202	CONDUIT	122.5
257	STM-1202-1204 0.2000 0.0130	MH-1202	MH-1204	CONDUIT	36.5
258	STM-1203-1204 0.2000 0.0130	MH-1203	MH-1204	CONDUIT	127.5
259	STM-1204-1210 0.1504 0.0130	MH-1204	MH-1210	CONDUIT	58.5
260	STM-1205-1207 0.3000 0.0130	MH-1205	MH-1207	CONDUIT	73.0
261	STM-1206-1207 0.3500 0.0130	MH-1206	MH-1207	CONDUIT	14.0
262	STM-1207-1209 0.2000 0.0130	MH-1207	MH-1209	CONDUIT	65.0
263	STM-1208-1209 0.3000 0.0130	MH-1208	MH-1209	CONDUIT	78.0
264	STM-1209-1210 0.1508 0.0130	MH-1209	MH-1210	CONDUIT	63.0
265	STM-1210-1218 0.1503 0.0130	MH-1210	MH-1218	CONDUIT	74.5
266	STM-1211-1213 0.3504 0.0130	MH-1211	MH-1213	CONDUIT	58.5
267	STM-1212-1213 0.3509 0.0130	MH-1212	MH-1213	CONDUIT	26.5
268	STM-1213-1216 0.2000 0.0130	MH-1213	MH-1216	CONDUIT	64.5
269	STM-1214-1216 0.3008 0.0130	MH-1214	MH-1216	CONDUIT	62.5
270	STM-1215-1216 0.3519 0.0130	MH-1215	MH-1216	CONDUIT	27.0
271	STM-1216-1217 0.1504 0.0130	MH-1216	MH-1217	CONDUIT	62.5
272	STM-1217-1218 0.1503 0.0130	MH-1217	MH-1218	CONDUIT	82.5
273	STM-1218-1220 0.1504 0.0130	MH-1218	MH-1220	CONDUIT	56.5
274	STM-1219-1220 0.3000 0.0130	MH-1219	MH-1220	CONDUIT	78.0
275	STM-1220-1221 0.1504 0.0130	MH-1220	MH-1221	CONDUIT	58.5
276	STM-1221-1222 0.1504 0.0130	MH-1221	MH-1222	CONDUIT	70.5
277	STM-1222-1223 0.1497 0.0130	MH-1222	MH-1223	CONDUIT	71.5
278	STM-1223-1224 0.1529 0.0130	MH-1223	MH-1224	CONDUIT	17.0
279	STM-1224-1230 0.1514 0.0130	MH-1224	MH-1230	CONDUIT	37.0
280	STM-1227-1228 0.1498 0.0130	MH-1227	MH-1228	CONDUIT	125.5
281	STM-1228-1229 0.1524 0.0130	MH-1228	MH-1229	CONDUIT	10.5
282	STM-1229-1230 0.1474 0.0130	MH-1229	MH-1230	CONDUIT	9.5
283	STM-1230-HW102 0.1500 0.0130	MH-1230	MH-HW102	CONDUIT	4.0
284	STM-2101-2102 0.3493 0.0130	MH-2101	MH-2102	CONDUIT	35.5
285	STM-2102-2103 0.3008 0.0130	MH-2102	MH-2103	CONDUIT	64.5
286	STM-2103-2104 0.2000 0.0130	MH-2103	MH-2104	CONDUIT	70.5
287	STM-2104-2108 0.1504 0.0130	MH-2104	MH-2108	CONDUIT	70.5
288	STM-2105-2106 0.2000 0.0130	MH-2105	MH-2106	CONDUIT	123.5

289	STM-2106-2107 0.2000 0.0130	MH-2106	MH-2107	CONDUIT	13.0
290	STM-2107-2108 0.1495 0.0130	MH-2107	MH-2108	CONDUIT	55.5
291	STM-2108-2114 0.1505 0.0130	MH-2108	MH-2114	CONDUIT	48.5
292	STM-2109-2111 0.3510 0.0130	MH-2109	MH-2111	CONDUIT	49.0
293	STM-2110-2111 0.3524 0.0130	MH-2110	MH-2111	CONDUIT	10.5
294	STM-2111-2112 0.2000 0.0130	MH-2111	MH-2112	CONDUIT	66.5
295	STM-2112-2113 0.1507 0.0130	MH-2112	MH-2113	CONDUIT	67.0
296	STM-2113-2114 0.1500 0.0130	MH-2113	MH-2114	CONDUIT	14.0
297	STM-2114-HW201 0.1509 0.0130	MH-2114	MH-HW201	CONDUIT	26.5
298	STM-2201-2202 0.3512 0.0130	MH-2201	MH-2202	CONDUIT	43.0
299	STM-2202-2204 0.2000 0.0130	MH-2202	MH-2204	CONDUIT	73.0
300	STM-2203-2204 0.3500 0.0130	MH-2203	MH-2204	CONDUIT	32.0
301	STM-2204-2207 0.2000 0.0130	MH-2204	MH-2207	CONDUIT	64.5
302	STM-2205-2206 0.3494 0.0130	MH-2205	MH-2206	CONDUIT	43.5
303	STM-2206-2207 0.2000 0.0130	MH-2206	MH-2207	CONDUIT	73.0
304	STM-2207-2210 0.1504 0.0130	MH-2207	MH-2210	CONDUIT	62.5
305	STM-2208-2209 0.2000 0.0130	MH-2208	MH-2209	CONDUIT	68.0
306	STM-2209-2210 0.1503 0.0130	MH-2209	MH-2210	CONDUIT	72.5
307	STM-2210-2213 0.1504 0.0130	MH-2210	MH-2213	CONDUIT	56.5
308	STM-2211-2212 0.3000 0.0130	MH-2211	MH-2212	CONDUIT	71.0
309	STM-2212-2213 0.2000 0.0130	MH-2212	MH-2213	CONDUIT	71.0
310	STM-2213-2215 0.1504 0.0130	MH-2213	MH-2215	CONDUIT	58.5
311	STM-2214-2215 0.3500 0.0130	MH-2214	MH-2215	CONDUIT	34.0
312	STM-2215-2216 0.1497 0.0130	MH-2215	MH-2216	CONDUIT	79.5
313	STM-2216-2217 0.1497 0.0130	MH-2216	MH-2217	CONDUIT	79.5
314	STM-2217-2218 0.1538 0.0130	MH-2217	MH-2218	CONDUIT	13.0
315	STM-2218-2225 0.1489 0.0130	MH-2218	MH-2225	CONDUIT	23.5
316	STM-2219-2221 0.3492 0.0130	MH-2219	MH-2221	CONDUIT	29.5
317	STM-2220-2221 0.3510 0.0130	MH-2220	MH-2221	CONDUIT	24.5
318	STM-2221-2222 0.2000 0.0130	MH-2221	MH-2222	CONDUIT	80.5
319	STM-2222-2223 0.1503 0.0130	MH-2222	MH-2223	CONDUIT	80.5
320	STM-2223-2224 0.1500 0.0130	MH-2223	MH-2224	CONDUIT	14.0
321	STM-2224-2225 0.1500 0.0130	MH-2224	MH-2225	CONDUIT	22.0

322	STM-2225-HW202 0.1500 0.0130	MH-2225	MH-HW202	CONDUIT	4.0
323	STM-2301-2302 0.3000 0.0130	MH-2301	MH-2302	CONDUIT	72.0
324	STM-2302-2304 0.2000 0.0130	MH-2302	MH-2304	CONDUIT	74.5
325	STM-2303-2304 0.3533 0.0130	MH-2303	MH-2304	CONDUIT	15.0
326	STM-2304-2308 0.2000 0.0130	MH-2304	MH-2308	CONDUIT	64.5
327	STM-2305-2306 0.2000 0.0130	MH-2305	MH-2306	CONDUIT	72.0
328	STM-2306-2308 0.2000 0.0130	MH-2306	MH-2308	CONDUIT	72.0
329	STM-2307-2308 0.3508 0.0130	MH-2307	MH-2308	CONDUIT	30.5
330	STM-2308-2312 0.1500 0.0130	MH-2308	MH-2312	CONDUIT	62.0
331	STM-2309-2310 0.2000 0.0130	MH-2309	MH-2310	CONDUIT	71.0
332	STM-2310-2312 0.1503 0.0130	MH-2310	MH-2312	CONDUIT	74.5
333	STM-2311-2312 0.3516 0.0130	MH-2311	MH-2312	CONDUIT	31.0
334	STM-2312-2316 0.1504 0.0130	MH-2312	MH-2316	CONDUIT	56.5
335	STM-2313-2314 0.2000 0.0130	MH-2313	MH-2314	CONDUIT	72.5
336	STM-2314-2316 0.2000 0.0130	MH-2314	MH-2316	CONDUIT	72.5
337	STM-2315-2316 0.3516 0.0130	MH-2315	MH-2316	CONDUIT	31.0
338	STM-2316-2318 0.1504 0.0130	MH-2316	MH-2318	CONDUIT	58.5
339	STM-2317-2318 0.3494 0.0130	MH-2317	MH-2318	CONDUIT	39.5
340	STM-2317-2323 0.3520 0.0130	MH-2317	MH-2323	CONDUIT	25.0
341	STM-2318-2319 0.1497 0.0130	MH-2318	MH-2319	CONDUIT	85.5
342	STM-2319-2320 0.1507 0.0130	MH-2319	MH-2320	CONDUIT	73.0
343	STM-2320-2321 0.1478 0.0130	MH-2320	MH-2321	CONDUIT	11.5
344	STM-2321-2327 0.1490 0.0130	MH-2321	MH-2327	CONDUIT	25.5
345	STM-2322-2323 0.3500 0.0130	MH-2322	MH-2323	CONDUIT	20.0
346	STM-2323-2324 0.2000 0.0130	MH-2323	MH-2324	CONDUIT	82.5
347	STM-2324-2325 0.1503 0.0130	MH-2324	MH-2325	CONDUIT	82.5
348	STM-2325-2326 0.1517 0.0130	MH-2325	MH-2326	CONDUIT	14.5
349	STM-2326-2327 0.1488 0.0130	MH-2326	MH-2327	CONDUIT	21.5
350	STM-2327-HW203 0.1556 0.0130	MH-2327	MH-HW203	CONDUIT	4.5
351	STM-3101-3102 0.3500 0.0130	MH-3101	MH-3102	CONDUIT	42.0
352	STM-3102-3103 0.2000 0.0130	MH-3102	MH-3103	CONDUIT	103.5
353	STM-3103-3104 0.2000 0.0130	MH-3103	MH-3104	CONDUIT	10.5
354	STM-3104-HW301 0.1516 0.0130	MH-3104	MH-HW301	CONDUIT	31.0

355	STM-3105-3107 0.3496 0.0130	MH-3105	MH-3107	CONDUIT	59.5
356	STM-3106-3107 0.3500 0.0130	MH-3106	MH-3107	CONDUIT	42.0
357	STM-3107-3108 0.1502 0.0130	MH-3107	MH-3108	CONDUIT	116.5
358	STM-3108-3109 0.1515 0.0130	MH-3108	MH-3109	CONDUIT	16.5
359	STM-3109-3104 0.1511 0.0130	MH-3109	MH-3104	CONDUIT	47.0
360	STM-3150-HW302 0.1520 0.0130	MH-3150	MH-HW302	CONDUIT	25.0
361	STM-3201-3202 0.2000 0.0130	MH-3201	MH-3202	CONDUIT	65.0
362	STM-3202-3204 0.1508 0.0130	MH-3202	MH-3204	CONDUIT	65.0
363	STM-3203-3204 0.2000 0.0130	MH-3203	MH-3204	CONDUIT	94.5
364	STM-3204-3208 0.1500 0.0130	MH-3204	MH-3208	CONDUIT	56.0
365	STM-3205-3206 0.3000 0.0130	MH-3205	MH-3206	CONDUIT	65.0
366	STM-3206-3208 0.2000 0.0130	MH-3206	MH-3208	CONDUIT	65.0
367	STM-3207-3208 0.3512 0.0130	MH-3207	MH-3208	CONDUIT	43.0
368	STM-3208-3209 0.1504 0.0130	MH-3208	MH-3209	CONDUIT	58.5
369	STM-3209-3210 0.1506 0.0130	MH-3209	MH-3210	CONDUIT	77.0
370	STM-3210-3150 0.1545 0.0130	MH-3210	MH-3150	CONDUIT	11.0
371	STM-3211-3212 0.2000 0.0130	MH-3211	MH-3212	CONDUIT	103.0
372	STM-3212-3213 0.2000 0.0130	MH-3212	MH-3213	CONDUIT	10.5
373	STM-3213-3214 0.2000 0.0130	MH-3213	MH-3214	CONDUIT	49.0
374	STM-3214-3150 0.2000 0.0130	MH-3214	MH-3150	CONDUIT	12.0
375	STM-3301-3303 0.2000 0.0130	MH-3301	MH-3303	CONDUIT	102.0
376	STM-3302-3303 0.3500 0.0130	MH-3302	MH-3303	CONDUIT	60.0
377	STM-3303-3305 0.1504 0.0130	MH-3303	MH-3305	CONDUIT	64.5
378	STM-3304-3305 0.3000 0.0130	MH-3304	MH-3305	CONDUIT	73.0
379	STM-3305-3307 0.1505 0.0130	MH-3305	MH-3307	CONDUIT	52.5
380	STM-3306-3307 0.3006 0.0130	MH-3306	MH-3307	CONDUIT	85.5
381	STM-3307-3309 0.1504 0.0130	MH-3307	MH-3309	CONDUIT	64.5
382	STM-3308-3309 0.2000 0.0130	MH-3308	MH-3309	CONDUIT	106.5
383	STM-3309-3313 0.1504 0.0130	MH-3309	MH-3313	CONDUIT	58.5
384	STM-3310-3311 0.2000 0.0130	MH-3310	MH-3311	CONDUIT	72.5
385	STM-3311-3312 0.2000 0.0130	MH-3311	MH-3312	CONDUIT	56.5
386	STM-3312-3313 0.1507 0.0130	MH-3312	MH-3313	CONDUIT	71.0
387	STM-3313-3314 0.1492 0.0130	MH-3313	MH-3314	CONDUIT	29.5

388	STM-3314-3319 0.1495 0.0130	MH-3314	MH-3319	CONDUIT	53.5
389	STM-3315-3317 0.3500 0.0130	MH-3315	MH-3317	CONDUIT	66.0
390	STM-3316-3317 0.3510 0.0130	MH-3316	MH-3317	CONDUIT	49.0
391	STM-3317-3318 0.1504 0.0130	MH-3317	MH-3318	CONDUIT	113.0
392	STM-3318-3319 0.1529 0.0130	MH-3318	MH-3319	CONDUIT	8.5
393	STM-3319-HW303 0.1500 0.0130	MH-3319	MH-HW303	CONDUIT	8.0
394	STM-6101-6106 0.1500 0.0130	MH-6101	MH-6106	CONDUIT	66.0
395	STM-6102-6103 0.3012 0.0130	MH-6102	MH-6103	CONDUIT	40.5
396	STM-6103-6101 0.2000 0.0130	MH-6103	MH-6101	CONDUIT	61.5
397	STM-6104-6108 0.3000 0.0130	MH-6104	MH-6108	CONDUIT	22.0
398	STM-6106-6107 0.1500 0.0130	MH-6106	MH-6107	CONDUIT	10.0
399	STM-6107-6108 0.1500 0.0130	MH-6107	MH-6108	CONDUIT	40.0
400	STM-6108-HW601 0.2000 0.0130	MH-6108	MH-HW601	CONDUIT	23.5
401	STM-6150-6104 0.3500 0.0130	MH-6150	MH-6104	CONDUIT	22.0
402	STM-6152-6150 0.3500 0.0130	MH-6152	MH-6150	CONDUIT	42.0
403	STM-6201-6202 0.2000 0.0130	MH-6201	MH-6202	CONDUIT	31.5
404	STM-6202-6250 0.2500 0.0130	MH-6202	MH-6250	CONDUIT	46.0
405	STM-6204-6205 0.1513 0.0130	MH-6204	MH-6205	CONDUIT	39.0
406	STM-6205-6206 0.1487 0.0130	MH-6205	MH-6206	CONDUIT	19.5
407	STM-6206-6207 0.1500 0.0130	MH-6206	MH-6207	CONDUIT	84.0
408	STM-6207-6215 0.1496 0.0130	MH-6207	MH-6215	CONDUIT	69.5
409	STM-6210-6213 0.3505 0.0130	MH-6210	MH-6213	CONDUIT	48.5
410	STM-6211-6212 0.3007 0.0130	MH-6211	MH-6212	CONDUIT	72.5
411	STM-6212-6213 0.2000 0.0130	MH-6212	MH-6213	CONDUIT	65.5
412	STM-6213-6215 0.1504 0.0130	MH-6213	MH-6215	CONDUIT	58.5
413	STM-6214-6215 0.2000 0.0130	MH-6214	MH-6215	CONDUIT	115.5
414	STM-6215-6217 0.1504 0.0130	MH-6215	MH-6217	CONDUIT	62.5
415	STM-6216-6217 0.3496 0.0130	MH-6216	MH-6217	CONDUIT	57.5
416	STM-6217-6218 0.1500 0.0130	MH-6217	MH-6218	CONDUIT	104.0
417	STM-6218-6223 0.1545 0.0130	MH-6218	MH-6223	CONDUIT	11.0
418	STM-6219-6220 0.3010 0.0130	MH-6219	MH-6220	CONDUIT	52.5
419	STM-6220-6221 0.1502 0.0130	MH-6220	MH-6221	CONDUIT	114.5
420	STM-6221-6222 0.1500 0.0130	MH-6221	MH-6222	CONDUIT	16.0

421	STM-6222-6223 0.1505 0.0130	MH-6222	MH-6223	CONDUIT	46.5
422	STM-6223-HW602 0.1510 0.0130	MH-6223	MH-HW602	CONDUIT	24.5
423	STM-6250-6206 0.2510 0.0130	MH-6250	MH-6206	CONDUIT	49.0
424	STM-6301-6303 0.3496 0.0130	MH-6301	MH-6303	CONDUIT	55.5
425	STM-6302-6303 0.3524 0.0130	MH-6302	MH-6303	CONDUIT	21.0
426	STM-6303-6304 0.3500 0.0130	MH-6303	MH-6304	CONDUIT	16.0
427	STM-6304-6305 0.2000 0.0130	MH-6304	MH-6305	CONDUIT	90.5
428	STM-6305-6306 0.1500 0.0130	MH-6305	MH-6306	CONDUIT	122.0
429	STM-6306-6307 0.1500 0.0130	MH-6306	MH-6307	CONDUIT	90.0
430	STM-6307-6308 0.1503 0.0130	MH-6307	MH-6308	CONDUIT	78.5
431	STM-6308-6309 0.1500 0.0130	MH-6308	MH-6309	CONDUIT	12.0
432	STM-6309-6323 0.1487 0.0130	MH-6309	MH-6323	CONDUIT	19.5
433	STM-6310-6311 0.3500 0.0130	MH-6310	MH-6311	CONDUIT	12.0
434	STM-6311-6312 0.2000 0.0130	MH-6311	MH-6312	CONDUIT	82.0
435	STM-6312-6314 0.2000 0.0130	MH-6312	MH-6314	CONDUIT	82.0
436	STM-6314-6316 0.1504 0.0130	MH-6314	MH-6316	CONDUIT	62.5
437	STM-6315-6316 0.3011 0.0130	MH-6315	MH-6316	CONDUIT	45.5
438	STM-6316-6317 0.1497 0.0130	MH-6316	MH-6317	CONDUIT	81.5
439	STM-6317-6321 0.1496 0.0130	MH-6317	MH-6321	CONDUIT	69.5
440	STM-6318-6319 0.2000 0.0130	MH-6318	MH-6319	CONDUIT	118.5
441	STM-6319-6320 0.2000 0.0130	MH-6319	MH-6320	CONDUIT	12.0
442	STM-6320-6321 0.1495 0.0130	MH-6320	MH-6321	CONDUIT	51.5
443	STM-6321-6322 0.1533 0.0130	MH-6321	MH-6322	CONDUIT	15.0
444	STM-6322-6323 0.1478 0.0130	MH-6322	MH-6323	CONDUIT	11.5
445	STM-6323-HW603 0.1455 0.0130	MH-6323	MH-HW603	CONDUIT	5.5
446	STM-6345-6314 0.1504 0.0130	MH-6345	MH-6314	CONDUIT	58.5
447	STM-6346-6345 0.2000 0.0130	MH-6346	MH-6345	CONDUIT	68.5
448	STM-6347-6346 0.2693 0.0130	MH-6347	MH-6346	CONDUIT	76.5
449	STM-7001-7002 0.3009 0.0130	MH-7001	MH-7002	CONDUIT	57.5
450	STM-7002-7003 0.2000 0.0130	MH-7002	MH-7003	CONDUIT	98.0
451	STM-7003-7004 0.2000 0.0130	MH-7003	MH-7004	CONDUIT	13.5
452	STM-7004-7005 0.1495 0.0130	MH-7004	MH-7005	CONDUIT	45.5
453	STM-7005-7008 0.1538 0.0130	MH-7005	MH-7008	CONDUIT	13.0

454	STM-7006-7007	MH-7006	MH-7007	CONDUIT	74.5
	0.3007	0.0130			
455	STM-7007-7008	MH-7007	MH-7008	CONDUIT	112.0
	0.2000	0.0130			
456	STM-7008-HW701	MH-7008	MH-HW701	CONDUIT	18.5
	0.1514	0.0130			

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459 Cross Section Summary
 460 *****

462	Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
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465	STM-1101-1102	CIRCULAR	0.90	0.64	0.23	0.90	1	809.65
466	STM-1102-1103	CIRCULAR	0.97	0.75	0.24	0.97	1	867.36
467	STM-1103-1104	CIRCULAR	1.05	0.87	0.26	1.05	1	1056.88
468	STM-1104-1105	CIRCULAR	1.05	0.87	0.26	1.05	1	1059.08
469	STM-1105-1106	CIRCULAR	1.05	0.87	0.26	1.05	1	1056.61
470	STM-1106-HW101	CIRCULAR	1.05	0.87	0.26	1.05	1	1057.67
471	STM-1201-1202	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
472	STM-1202-1204	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
473	STM-1203-1204	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
474	STM-1204-1210	CIRCULAR	0.68	0.36	0.17	0.68	1	326.04
475	STM-1205-1207	CIRCULAR	0.38	0.11	0.09	0.38	1	96.04
476	STM-1206-1207	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
477	STM-1207-1209	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
478	STM-1208-1209	CIRCULAR	0.38	0.11	0.09	0.38	1	96.04
479	STM-1209-1210	CIRCULAR	0.60	0.28	0.15	0.60	1	238.45
480	STM-1210-1218	CIRCULAR	0.82	0.53	0.21	0.82	1	556.60
481	STM-1211-1213	CIRCULAR	0.30	0.07	0.07	0.30	1	57.25
482	STM-1212-1213	CIRCULAR	0.30	0.07	0.07	0.30	1	57.29
483	STM-1213-1216	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
484	STM-1214-1216	CIRCULAR	0.38	0.11	0.09	0.38	1	96.17
485	STM-1215-1216	CIRCULAR	0.30	0.07	0.07	0.30	1	57.36
486	STM-1216-1217	CIRCULAR	0.60	0.28	0.15	0.60	1	238.14
487	STM-1217-1218	CIRCULAR	0.60	0.28	0.15	0.60	1	238.06
488	STM-1218-1220	CIRCULAR	0.97	0.75	0.24	0.97	1	869.29
489	STM-1219-1220	CIRCULAR	0.38	0.11	0.09	0.38	1	96.04
490	STM-1220-1221	CIRCULAR	0.97	0.75	0.24	0.97	1	869.24
491	STM-1221-1222	CIRCULAR	0.97	0.75	0.24	0.97	1	869.03
492	STM-1222-1223	CIRCULAR	0.97	0.75	0.24	0.97	1	867.00
493	STM-1223-1224	CIRCULAR	0.97	0.75	0.24	0.97	1	876.48
494	STM-1224-1230	CIRCULAR	0.97	0.75	0.24	0.97	1	871.91
495	STM-1227-1228	CIRCULAR	0.60	0.28	0.15	0.60	1	237.66
496	STM-1228-1229	CIRCULAR	0.60	0.28	0.15	0.60	1	239.70
497	STM-1229-1230	CIRCULAR	0.60	0.28	0.15	0.60	1	235.72
498	STM-1230-HW102	CIRCULAR	1.05	0.87	0.26	1.05	1	1057.67
499	STM-2101-2102	CIRCULAR	0.30	0.07	0.07	0.30	1	57.15
500	STM-2102-2103	CIRCULAR	0.38	0.11	0.09	0.38	1	96.16
501	STM-2103-2104	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
502	STM-2104-2108	CIRCULAR	0.60	0.28	0.15	0.60	1	238.10
503	STM-2105-2106	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
504	STM-2106-2107	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
505	STM-2107-2108	CIRCULAR	0.60	0.28	0.15	0.60	1	237.46
506	STM-2108-2114	CIRCULAR	0.68	0.36	0.17	0.68	1	326.14
507	STM-2109-2111	CIRCULAR	0.30	0.07	0.07	0.30	1	57.30
508	STM-2110-2111	CIRCULAR	0.30	0.07	0.07	0.30	1	57.41
509	STM-2111-2112	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
510	STM-2112-2113	CIRCULAR	0.60	0.28	0.15	0.60	1	238.41
511	STM-2113-2114	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
512	STM-2114-HW201	CIRCULAR	0.82	0.53	0.21	0.82	1	557.72
513	STM-2201-2202	CIRCULAR	0.30	0.07	0.07	0.30	1	57.31
514	STM-2202-2204	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
515	STM-2203-2204	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
516	STM-2204-2207	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34

517	STM-2205-2206	CIRCULAR	0.30	0.07	0.07	0.30	1	57.17
518	STM-2206-2207	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
519	STM-2207-2210	CIRCULAR	0.60	0.28	0.15	0.60	1	238.14
520	STM-2208-2209	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
521	STM-2209-2210	CIRCULAR	0.60	0.28	0.15	0.60	1	238.09
522	STM-2210-2213	CIRCULAR	0.75	0.44	0.19	0.75	1	431.83
523	STM-2211-2212	CIRCULAR	0.38	0.11	0.09	0.38	1	96.04
524	STM-2212-2213	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
525	STM-2213-2215	CIRCULAR	0.82	0.53	0.21	0.82	1	556.77
526	STM-2214-2215	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
527	STM-2215-2216	CIRCULAR	0.90	0.64	0.23	0.90	1	700.44
528	STM-2216-2217	CIRCULAR	0.90	0.64	0.23	0.90	1	700.44
529	STM-2217-2218	CIRCULAR	0.90	0.64	0.23	0.90	1	710.11
530	STM-2218-2225	CIRCULAR	0.90	0.64	0.23	0.90	1	698.68
531	STM-2219-2221	CIRCULAR	0.30	0.07	0.07	0.30	1	57.14
532	STM-2220-2221	CIRCULAR	0.30	0.07	0.07	0.30	1	57.30
533	STM-2221-2222	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
534	STM-2222-2223	CIRCULAR	0.60	0.28	0.15	0.60	1	238.07
535	STM-2223-2224	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
536	STM-2224-2225	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
537	STM-2225-HW202	CIRCULAR	0.97	0.75	0.24	0.97	1	868.01
538	STM-2301-2302	CIRCULAR	0.38	0.11	0.09	0.38	1	96.04
539	STM-2302-2304	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
540	STM-2303-2304	CIRCULAR	0.30	0.07	0.07	0.30	1	57.48
541	STM-2304-2308	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
542	STM-2305-2306	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
543	STM-2306-2308	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
544	STM-2307-2308	CIRCULAR	0.30	0.07	0.07	0.30	1	57.28
545	STM-2308-2312	CIRCULAR	0.68	0.36	0.17	0.68	1	325.58
546	STM-2309-2310	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
547	STM-2310-2312	CIRCULAR	0.60	0.28	0.15	0.60	1	238.09
548	STM-2311-2312	CIRCULAR	0.30	0.07	0.07	0.30	1	57.34
549	STM-2312-2316	CIRCULAR	0.82	0.53	0.21	0.82	1	556.80
550	STM-2313-2314	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
551	STM-2314-2316	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
552	STM-2315-2316	CIRCULAR	0.30	0.07	0.07	0.30	1	57.34
553	STM-2316-2318	CIRCULAR	0.90	0.64	0.23	0.90	1	702.17
554	STM-2317-2318	CIRCULAR	0.30	0.07	0.07	0.30	1	57.16
555	STM-2317-2323	CIRCULAR	0.30	0.07	0.07	0.30	1	57.38
556	STM-2318-2319	CIRCULAR	0.90	0.64	0.23	0.90	1	700.49
557	STM-2319-2320	CIRCULAR	0.90	0.64	0.23	0.90	1	702.77
558	STM-2320-2321	CIRCULAR	0.90	0.64	0.23	0.90	1	696.07
559	STM-2321-2327	CIRCULAR	0.90	0.64	0.23	0.90	1	698.88
560	STM-2322-2323	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
561	STM-2323-2324	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
562	STM-2324-2325	CIRCULAR	0.60	0.28	0.15	0.60	1	238.06
563	STM-2325-2326	CIRCULAR	0.60	0.28	0.15	0.60	1	239.18
564	STM-2326-2327	CIRCULAR	0.60	0.28	0.15	0.60	1	236.90
565	STM-2327-HW203	CIRCULAR	0.97	0.75	0.24	0.97	1	883.94
566	STM-3101-3102	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
567	STM-3102-3103	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
568	STM-3103-3104	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
569	STM-3104-HW301	CIRCULAR	0.68	0.36	0.17	0.68	1	327.32
570	STM-3105-3107	CIRCULAR	0.30	0.07	0.07	0.30	1	57.18
571	STM-3106-3107	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
572	STM-3107-3108	CIRCULAR	0.60	0.28	0.15	0.60	1	237.99
573	STM-3108-3109	CIRCULAR	0.60	0.28	0.15	0.60	1	239.02
574	STM-3109-3104	CIRCULAR	0.60	0.28	0.15	0.60	1	238.66
575	STM-3150-HW302	CIRCULAR	0.90	0.64	0.23	0.90	1	705.83
576	STM-3201-3202	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
577	STM-3202-3204	CIRCULAR	0.60	0.28	0.15	0.60	1	238.43
578	STM-3203-3204	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
579	STM-3204-3208	CIRCULAR	0.68	0.36	0.17	0.68	1	325.58
580	STM-3205-3206	CIRCULAR	0.38	0.11	0.09	0.38	1	96.04
581	STM-3206-3208	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
582	STM-3207-3208	CIRCULAR	0.30	0.07	0.07	0.30	1	57.31

583	STM-3208-3209	CIRCULAR	0.75	0.44	0.19	0.75	1	431.81
584	STM-3209-3210	CIRCULAR	0.82	0.53	0.21	0.82	1	557.18
585	STM-3210-3150	CIRCULAR	0.82	0.53	0.21	0.82	1	564.34
586	STM-3211-3212	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
587	STM-3212-3213	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
588	STM-3213-3214	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
589	STM-3214-3150	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
590	STM-3301-3303	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
591	STM-3302-3303	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
592	STM-3303-3305	CIRCULAR	0.60	0.28	0.15	0.60	1	238.13
593	STM-3304-3305	CIRCULAR	0.38	0.11	0.09	0.38	1	96.04
594	STM-3305-3307	CIRCULAR	0.68	0.36	0.17	0.68	1	326.09
595	STM-3306-3307	CIRCULAR	0.38	0.11	0.09	0.38	1	96.13
596	STM-3307-3309	CIRCULAR	0.75	0.44	0.19	0.75	1	431.75
597	STM-3308-3309	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
598	STM-3309-3313	CIRCULAR	0.82	0.53	0.21	0.82	1	556.77
599	STM-3310-3311	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
600	STM-3311-3312	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
601	STM-3312-3313	CIRCULAR	0.60	0.28	0.15	0.60	1	238.38
602	STM-3313-3314	CIRCULAR	0.90	0.64	0.23	0.90	1	699.19
603	STM-3314-3319	CIRCULAR	0.90	0.64	0.23	0.90	1	700.08
604	STM-3315-3317	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
605	STM-3316-3317	CIRCULAR	0.30	0.07	0.07	0.30	1	57.30
606	STM-3317-3318	CIRCULAR	0.60	0.28	0.15	0.60	1	238.17
607	STM-3318-3319	CIRCULAR	0.60	0.28	0.15	0.60	1	240.14
608	STM-3319-HW303	CIRCULAR	0.90	0.64	0.23	0.90	1	701.17
609	STM-6101-6106	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
610	STM-6102-6103	CIRCULAR	0.38	0.11	0.09	0.38	1	96.24
611	STM-6103-6101	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
612	STM-6104-6108	CIRCULAR	0.38	0.11	0.09	0.38	1	96.04
613	STM-6106-6107	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
614	STM-6107-6108	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
615	STM-6108-HW601	CIRCULAR	0.60	0.28	0.15	0.60	1	274.61
616	STM-6150-6104	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
617	STM-6152-6150	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
618	STM-6201-6202	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
619	STM-6202-6250	CIRCULAR	0.45	0.16	0.11	0.45	1	142.56
620	STM-6204-6205	CIRCULAR	0.60	0.28	0.15	0.60	1	238.83
621	STM-6205-6206	CIRCULAR	0.60	0.28	0.15	0.60	1	236.80
622	STM-6206-6207	CIRCULAR	0.75	0.44	0.19	0.75	1	431.20
623	STM-6207-6215	CIRCULAR	0.82	0.53	0.21	0.82	1	555.31
624	STM-6210-6213	CIRCULAR	0.30	0.07	0.07	0.30	1	57.25
625	STM-6211-6212	CIRCULAR	0.38	0.11	0.09	0.38	1	96.15
626	STM-6212-6213	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
627	STM-6213-6215	CIRCULAR	0.60	0.28	0.15	0.60	1	238.16
628	STM-6214-6215	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
629	STM-6215-6217	CIRCULAR	0.90	0.64	0.23	0.90	1	702.11
630	STM-6216-6217	CIRCULAR	0.30	0.07	0.07	0.30	1	57.18
631	STM-6217-6218	CIRCULAR	0.97	0.75	0.24	0.97	1	868.01
632	STM-6218-6223	CIRCULAR	0.97	0.75	0.24	0.97	1	881.06
633	STM-6219-6220	CIRCULAR	0.38	0.11	0.09	0.38	1	96.19
634	STM-6220-6221	CIRCULAR	0.60	0.28	0.15	0.60	1	237.99
635	STM-6221-6222	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
636	STM-6222-6223	CIRCULAR	0.60	0.28	0.15	0.60	1	238.25
637	STM-6223-HW602	CIRCULAR	1.05	0.87	0.26	1.05	1	1061.26
638	STM-6250-6206	CIRCULAR	0.45	0.16	0.11	0.45	1	142.85
639	STM-6301-6303	CIRCULAR	0.30	0.07	0.07	0.30	1	57.18
640	STM-6302-6303	CIRCULAR	0.30	0.07	0.07	0.30	1	57.41
641	STM-6303-6304	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21
642	STM-6304-6305	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
643	STM-6305-6306	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
644	STM-6306-6307	CIRCULAR	0.60	0.28	0.15	0.60	1	237.82
645	STM-6307-6308	CIRCULAR	0.68	0.36	0.17	0.68	1	325.92
646	STM-6308-6309	CIRCULAR	0.68	0.36	0.17	0.68	1	325.58
647	STM-6309-6323	CIRCULAR	0.68	0.36	0.17	0.68	1	324.18
648	STM-6310-6311	CIRCULAR	0.30	0.07	0.07	0.30	1	57.21

649	STM-6311-6312	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
650	STM-6312-6314	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
651	STM-6314-6316	CIRCULAR	0.68	0.36	0.17	0.68	1	326.01
652	STM-6315-6316	CIRCULAR	0.38	0.11	0.09	0.38	1	96.21
653	STM-6316-6317	CIRCULAR	0.75	0.44	0.19	0.75	1	430.76
654	STM-6317-6321	CIRCULAR	0.75	0.44	0.19	0.75	1	430.68
655	STM-6318-6319	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
656	STM-6319-6320	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
657	STM-6320-6321	CIRCULAR	0.60	0.28	0.15	0.60	1	237.43
658	STM-6321-6322	CIRCULAR	0.82	0.53	0.21	0.82	1	562.12
659	STM-6322-6323	CIRCULAR	0.82	0.53	0.21	0.82	1	551.93
660	STM-6323-HW603	CIRCULAR	0.97	0.75	0.24	0.97	1	854.76
661	STM-6345-6314	CIRCULAR	0.60	0.28	0.15	0.60	1	238.16
662	STM-6346-6345	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
663	STM-6347-6346	CIRCULAR	0.38	0.11	0.09	0.38	1	90.99
664	STM-7001-7002	CIRCULAR	0.38	0.11	0.09	0.38	1	96.18
665	STM-7002-7003	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
666	STM-7003-7004	CIRCULAR	0.53	0.22	0.13	0.53	1	192.34
667	STM-7004-7005	CIRCULAR	0.60	0.28	0.15	0.60	1	237.38
668	STM-7005-7008	CIRCULAR	0.60	0.28	0.15	0.60	1	240.85
669	STM-7006-7007	CIRCULAR	0.38	0.11	0.09	0.38	1	96.15
670	STM-7007-7008	CIRCULAR	0.45	0.16	0.11	0.45	1	127.51
671	STM-7008-HW701	CIRCULAR	0.68	0.36	0.17	0.68	1	327.04
672								
673								
674								
675	*****							
676	NOTE: The summary statistics displayed in this report are							
677	based on results found at every computational time step,							
678	not just on results from each reporting time step.							
679	*****							
680								
681	*****							
682	Analysis Options							
683	*****							
684	Flow Units	LPS						
685	Process Models:							
686	Rainfall/Runoff	NO						
687	RDII	NO						
688	Snowmelt	NO						
689	Groundwater	NO						
690	Flow Routing	YES						
691	Ponding Allowed	NO						
692	Water Quality	NO						
693	Flow Routing Method	DYNWAVE						
694	Surcharge Method	EXTRAN						
695	Starting Date	02/16/2021 00:00:00						
696	Ending Date	02/16/2021 02:00:00						
697	Antecedent Dry Days	0.0						
698	Report Time Step	00:01:00						
699	Routing Time Step	0.50 sec						
700	Variable Time Step	YES						
701	Maximum Trials	41						
702	Number of Threads	6						
703	Head Tolerance	0.000010 m						
704								
705								
706	*****							
707	Flow Routing Continuity	Volume hectare-m	Volume 10^6 ltr					
708	*****							
709	Dry Weather Inflow	0.000	0.000					
710	Wet Weather Inflow	0.000	0.000					
711	Groundwater Inflow	0.000	0.000					
712	RDII Inflow	0.000	0.000					
713	External Inflow	4.777	47.769					
714	External Outflow	4.777	47.769					

715 Flooding Loss 0.000 0.000
 716 Evaporation Loss 0.000 0.000
 717 Exfiltration Loss 0.000 0.000
 718 Initial Stored Volume 0.332 3.318
 719 Final Stored Volume 0.332 3.318
 720 Continuity Error (%) 0.000

721
 722
 723 ****
 724 Time-Step Critical Elements
 725 ****

726 None

727
 728
 729 ****
 730 Highest Flow Instability Indexes
 731 ****
 732 All links are stable.

733
 734
 735 ****
 736 Routing Time Step Summary
 737 ****
 738 Minimum Time Step : 0.40 sec
 739 Average Time Step : 0.50 sec
 740 Maximum Time Step : 0.50 sec
 741 Percent in Steady State : 0.00
 742 Average Iterations per Step : 41.00
 743 Percent Not Converging : 100.00
 744 Time Step Frequencies :
 745 0.500 - 0.362 sec : 100.00 %
 746 0.362 - 0.263 sec : 0.00 %
 747 0.263 - 0.190 sec : 0.00 %
 748 0.190 - 0.138 sec : 0.00 %
 749 0.138 - 0.100 sec : 0.00 %

750
 751 ****
 752 Node Depth Summary
 753 ****

754
 755
 756 -----
 757 -----
 758 Average Maximum Maximum Time of Max Reported
 759 Depth Depth HGL Occurrence Max Depth
 760 Node Type Meters Meters Meters days hr:min Meters
 761 MH-1101 JUNCTION 1.51 1.51 92.37 0 01:44 1.51
 762 MH-1102 JUNCTION 1.67 1.67 92.25 0 01:22 1.67
 763 MH-1103 JUNCTION 1.80 1.81 92.15 0 00:31 1.81
 764 MH-1104 JUNCTION 1.91 1.91 92.07 0 00:18 1.91
 765 MH-1105 JUNCTION 2.00 2.01 91.96 0 01:25 2.00
 766 MH-1106 JUNCTION 2.07 2.07 91.83 0 01:24 2.07
 767 MH-1201 JUNCTION 1.06 1.06 92.50 0 00:05 1.06
 768 MH-1202 JUNCTION 1.25 1.25 92.38 0 01:19 1.25
 769 MH-1203 JUNCTION 1.10 1.10 92.50 0 00:40 1.10
 770 MH-1204 JUNCTION 1.50 1.50 92.34 0 00:51 1.50
 771 MH-1205 JUNCTION 1.00 1.01 92.50 0 01:29 1.01
 772 MH-1206 JUNCTION 0.95 0.95 92.43 0 00:24 0.95
 773 MH-1207 JUNCTION 1.23 1.23 92.43 0 00:55 1.23
 774 MH-1208 JUNCTION 1.07 1.07 92.48 0 01:59 1.07
 775 MH-1209 JUNCTION 1.44 1.44 92.36 0 00:28 1.44
 776 MH-1210 JUNCTION 1.70 1.70 92.30 0 01:47 1.70
 777 MH-1211 JUNCTION 0.94 0.94 92.51 0 00:27 0.94
 778 MH-1212 JUNCTION 0.88 0.88 92.39 0 01:19 0.88
 779 MH-1213 JUNCTION 1.17 1.17 92.38 0 01:53 1.17
 780 MH-1214 JUNCTION 1.01 1.01 92.42 0 01:19 1.01

781	MH-1215	JUNCTION	0.94	0.94	92.36	0	01:19	0.94
782	MH-1216	JUNCTION	1.42	1.42	92.35	0	00:30	1.42
783	MH-1217	JUNCTION	1.53	1.53	92.31	0	00:27	1.53
784	MH-1218	JUNCTION	1.91	1.91	92.19	0	00:51	1.91
785	MH-1219	JUNCTION	1.11	1.11	92.22	0	01:20	1.11
786	MH-1220	JUNCTION	1.97	1.97	92.15	0	01:05	1.97
787	MH-1221	JUNCTION	2.03	2.03	92.09	0	00:54	2.03
788	MH-1222	JUNCTION	2.08	2.08	92.02	0	00:09	2.08
789	MH-1223	JUNCTION	2.15	2.15	91.93	0	00:06	2.15
790	MH-1224	JUNCTION	2.19	2.19	91.88	0	01:15	2.19
791	MH-1227	JUNCTION	1.25	1.25	91.86	0	01:17	1.25
792	MH-1228	JUNCTION	1.42	1.42	91.81	0	01:28	1.42
793	MH-1229	JUNCTION	1.46	1.46	91.80	0	01:23	1.46
794	MH-1230	JUNCTION	2.23	2.23	91.78	0	01:26	2.23
795	MH-2101	JUNCTION	1.03	1.03	92.04	0	01:39	1.03
796	MH-2102	JUNCTION	1.22	1.22	92.03	0	00:44	1.22
797	MH-2103	JUNCTION	1.43	1.43	91.97	0	01:08	1.43
798	MH-2104	JUNCTION	1.65	1.65	91.89	0	01:59	1.65
799	MH-2105	JUNCTION	1.13	1.14	92.05	0	01:24	1.14
800	MH-2106	JUNCTION	1.26	1.26	91.90	0	01:24	1.26
801	MH-2107	JUNCTION	1.41	1.41	91.87	0	00:22	1.41
802	MH-2108	JUNCTION	1.78	1.78	91.85	0	01:46	1.78
803	MH-2109	JUNCTION	0.93	0.93	91.92	0	00:00	0.93
804	MH-2110	JUNCTION	0.93	0.93	91.87	0	00:00	0.93
805	MH-2111	JUNCTION	1.20	1.20	91.86	0	00:28	1.20
806	MH-2112	JUNCTION	1.43	1.43	91.81	0	00:00	1.43
807	MH-2113	JUNCTION	1.56	1.56	91.78	0	01:01	1.56
808	MH-2114	JUNCTION	1.93	1.93	91.77	0	00:57	1.93
809	MH-2201	JUNCTION	0.76	0.76	92.27	0	01:24	0.76
810	MH-2202	JUNCTION	1.02	1.02	92.23	0	01:36	1.02
811	MH-2203	JUNCTION	0.83	0.83	92.18	0	01:35	0.83
812	MH-2204	JUNCTION	1.18	1.19	92.17	0	01:58	1.19
813	MH-2205	JUNCTION	0.84	0.84	92.26	0	01:36	0.84
814	MH-2206	JUNCTION	1.08	1.08	92.20	0	00:33	1.08
815	MH-2207	JUNCTION	1.35	1.35	92.13	0	01:41	1.35
816	MH-2208	JUNCTION	1.05	1.05	92.19	0	00:46	1.05
817	MH-2209	JUNCTION	1.28	1.28	92.13	0	01:52	1.28
818	MH-2210	JUNCTION	1.52	1.52	92.06	0	01:06	1.52
819	MH-2211	JUNCTION	1.08	1.08	92.19	0	00:25	1.08
820	MH-2212	JUNCTION	1.28	1.28	92.11	0	00:31	1.28
821	MH-2213	JUNCTION	1.70	1.70	92.00	0	00:00	1.70
822	MH-2214	JUNCTION	1.01	1.01	91.95	0	01:47	1.01
823	MH-2215	JUNCTION	1.80	1.80	91.94	0	00:24	1.80
824	MH-2216	JUNCTION	1.88	1.89	91.89	0	00:22	1.88
825	MH-2217	JUNCTION	1.97	1.97	91.83	0	00:57	1.97
826	MH-2218	JUNCTION	2.00	2.00	91.81	0	00:51	2.00
827	MH-2219	JUNCTION	1.03	1.03	91.95	0	00:49	1.03
828	MH-2220	JUNCTION	1.01	1.01	91.94	0	00:49	1.01
829	MH-2221	JUNCTION	1.26	1.26	91.93	0	00:42	1.26
830	MH-2222	JUNCTION	1.49	1.49	91.85	0	01:58	1.49
831	MH-2223	JUNCTION	1.62	1.62	91.80	0	00:57	1.62
832	MH-2224	JUNCTION	1.69	1.69	91.78	0	01:06	1.69
833	MH-2225	JUNCTION	2.07	2.07	91.75	0	01:56	2.07
834	MH-2301	JUNCTION	1.05	1.05	92.42	0	01:26	1.05
835	MH-2302	JUNCTION	1.28	1.28	92.36	0	00:28	1.28
836	MH-2303	JUNCTION	1.01	1.01	92.27	0	01:24	1.01
837	MH-2304	JUNCTION	1.39	1.39	92.26	0	00:28	1.39
838	MH-2305	JUNCTION	1.08	1.08	92.29	0	01:53	1.08
839	MH-2306	JUNCTION	1.26	1.26	92.25	0	00:28	1.26
840	MH-2307	JUNCTION	0.94	0.94	92.20	0	00:53	0.94
841	MH-2308	JUNCTION	1.66	1.66	92.18	0	01:22	1.66
842	MH-2309	JUNCTION	1.17	1.17	92.28	0	00:48	1.17
843	MH-2310	JUNCTION	1.38	1.39	92.21	0	00:23	1.38
844	MH-2311	JUNCTION	1.09	1.09	92.20	0	01:43	1.09
845	MH-2312	JUNCTION	1.85	1.85	92.13	0	00:05	1.85
846	MH-2313	JUNCTION	1.17	1.17	92.19	0	00:28	1.17

847	MH-2314	JUNCTION	1.35	1.35	92.14	0	00:10	1.35
848	MH-2315	JUNCTION	1.10	1.10	92.10	0	01:36	1.10
849	MH-2316	JUNCTION	1.96	1.96	92.08	0	01:22	1.96
850	MH-2317	JUNCTION	1.06	1.06	91.98	0	01:32	1.06
851	MH-2318	JUNCTION	2.01	2.01	92.02	0	01:35	2.01
852	MH-2319	JUNCTION	2.08	2.08	91.94	0	00:40	2.08
853	MH-2320	JUNCTION	2.14	2.14	91.86	0	00:40	2.14
854	MH-2321	JUNCTION	2.16	2.16	91.83	0	00:25	2.16
855	MH-2322	JUNCTION	1.03	1.04	91.96	0	01:59	1.04
856	MH-2323	JUNCTION	1.27	1.27	91.95	0	00:07	1.27
857	MH-2324	JUNCTION	1.49	1.49	91.86	0	00:14	1.49
858	MH-2325	JUNCTION	1.62	1.62	91.80	0	00:36	1.62
859	MH-2326	JUNCTION	1.68	1.68	91.79	0	00:25	1.68
860	MH-2327	JUNCTION	2.20	2.20	91.75	0	01:22	2.20
861	MH-3101	JUNCTION	1.20	1.20	91.94	0	01:32	1.20
862	MH-3102	JUNCTION	1.46	1.46	91.91	0	00:41	1.46
863	MH-3103	JUNCTION	1.57	1.57	91.78	0	01:44	1.57
864	MH-3104	JUNCTION	1.92	1.92	91.76	0	01:05	1.92
865	MH-3105	JUNCTION	1.16	1.16	91.97	0	00:15	1.16
866	MH-3106	JUNCTION	1.08	1.08	91.92	0	00:53	1.08
867	MH-3107	JUNCTION	1.59	1.59	91.89	0	01:35	1.59
868	MH-3108	JUNCTION	1.76	1.76	91.83	0	00:03	1.76
869	MH-3109	JUNCTION	1.83	1.83	91.81	0	01:51	1.83
870	MH-3150	JUNCTION	1.90	1.90	91.73	0	00:07	1.90
871	MH-3201	JUNCTION	1.09	1.09	92.04	0	00:30	1.09
872	MH-3202	JUNCTION	1.31	1.31	91.98	0	01:20	1.31
873	MH-3203	JUNCTION	1.11	1.11	92.00	0	01:17	1.11
874	MH-3204	JUNCTION	1.44	1.44	91.91	0	00:45	1.44
875	MH-3205	JUNCTION	1.10	1.10	92.03	0	01:35	1.10
876	MH-3206	JUNCTION	1.30	1.30	91.96	0	01:24	1.30
877	MH-3207	JUNCTION	1.02	1.02	91.88	0	01:51	1.02
878	MH-3208	JUNCTION	1.63	1.63	91.86	0	01:55	1.63
879	MH-3209	JUNCTION	1.73	1.73	91.80	0	00:23	1.73
880	MH-3210	JUNCTION	1.82	1.82	91.74	0	00:15	1.82
881	MH-3211	JUNCTION	1.20	1.20	91.90	0	00:34	1.20
882	MH-3212	JUNCTION	1.34	1.34	91.80	0	00:33	1.34
883	MH-3213	JUNCTION	1.42	1.42	91.79	0	01:31	1.42
884	MH-3214	JUNCTION	1.52	1.52	91.75	0	01:23	1.52
885	MH-3301	JUNCTION	1.14	1.14	92.15	0	01:02	1.14
886	MH-3302	JUNCTION	1.04	1.04	92.20	0	01:47	1.04
887	MH-3303	JUNCTION	1.43	1.43	92.07	0	01:56	1.43
888	MH-3304	JUNCTION	1.12	1.12	92.12	0	01:35	1.12
889	MH-3305	JUNCTION	1.55	1.55	92.02	0	00:24	1.55
890	MH-3306	JUNCTION	1.16	1.16	92.11	0	01:20	1.16
891	MH-3307	JUNCTION	1.66	1.67	91.98	0	01:40	1.67
892	MH-3308	JUNCTION	1.25	1.25	92.06	0	01:47	1.25
893	MH-3309	JUNCTION	1.79	1.79	91.93	0	00:38	1.79
894	MH-3310	JUNCTION	1.10	1.11	91.99	0	01:05	1.10
895	MH-3311	JUNCTION	1.26	1.26	91.94	0	00:28	1.26
896	MH-3312	JUNCTION	1.47	1.47	91.89	0	01:49	1.47
897	MH-3313	JUNCTION	1.87	1.88	91.86	0	00:20	1.87
898	MH-3314	JUNCTION	1.92	1.92	91.80	0	01:30	1.92
899	MH-3315	JUNCTION	1.04	1.04	91.90	0	00:06	1.04
900	MH-3316	JUNCTION	1.01	1.01	91.84	0	01:06	1.01
901	MH-3317	JUNCTION	1.46	1.46	91.79	0	00:07	1.46
902	MH-3318	JUNCTION	1.63	1.63	91.73	0	01:58	1.63
903	MH-3319	JUNCTION	1.98	1.98	91.72	0	00:51	1.98
904	MH-6101	JUNCTION	1.71	1.71	92.05	0	01:43	1.71
905	MH-6102	JUNCTION	1.38	1.38	92.20	0	01:20	1.38
906	MH-6103	JUNCTION	1.60	1.60	92.15	0	01:38	1.60
907	MH-6104	JUNCTION	1.50	1.50	91.97	0	01:50	1.50
908	MH-6106	JUNCTION	1.78	1.78	92.00	0	01:20	1.78
909	MH-6107	JUNCTION	1.81	1.81	91.99	0	01:57	1.81
910	MH-6108	JUNCTION	1.87	1.87	91.93	0	01:20	1.87
911	MH-6150	JUNCTION	1.41	1.41	92.03	0	01:34	1.41
912	MH-6152	JUNCTION	1.28	1.28	92.10	0	00:41	1.28

913	MH-6201	JUNCTION	1.10	1.10	92.33	0	00:24	1.10
914	MH-6202	JUNCTION	1.17	1.17	92.28	0	00:00	1.17
915	MH-6204	JUNCTION	1.17	1.17	92.10	0	01:59	1.17
916	MH-6205	JUNCTION	1.26	1.26	92.10	0	00:13	1.26
917	MH-6206	JUNCTION	1.55	1.55	92.10	0	00:10	1.55
918	MH-6207	JUNCTION	1.73	1.73	92.07	0	01:34	1.73
919	MH-6210	JUNCTION	1.00	1.00	92.14	0	00:10	1.00
920	MH-6211	JUNCTION	1.12	1.12	92.32	0	00:26	1.12
921	MH-6212	JUNCTION	1.31	1.31	92.21	0	01:21	1.31
922	MH-6213	JUNCTION	1.47	1.47	92.09	0	00:04	1.47
923	MH-6214	JUNCTION	1.22	1.22	92.19	0	01:35	1.22
924	MH-6215	JUNCTION	1.88	1.88	92.04	0	00:54	1.88
925	MH-6216	JUNCTION	1.20	1.20	92.16	0	00:38	1.20
926	MH-6217	JUNCTION	1.99	1.99	91.99	0	00:59	1.99
927	MH-6218	JUNCTION	2.10	2.10	91.91	0	01:20	2.10
928	MH-6219	JUNCTION	1.13	1.14	92.09	0	01:36	1.13
929	MH-6220	JUNCTION	1.45	1.45	92.02	0	01:51	1.45
930	MH-6221	JUNCTION	1.62	1.62	91.96	0	00:12	1.62
931	MH-6222	JUNCTION	1.68	1.69	91.94	0	00:58	1.69
932	MH-6223	JUNCTION	2.17	2.17	91.89	0	00:31	2.17
933	MH-6250	JUNCTION	1.24	1.24	92.21	0	00:57	1.24
934	MH-6301	JUNCTION	0.86	0.86	92.29	0	00:00	0.86
935	MH-6302	JUNCTION	0.87	0.88	92.25	0	00:27	0.88
936	MH-6303	JUNCTION	1.04	1.04	92.24	0	01:05	1.04
937	MH-6304	JUNCTION	1.22	1.22	92.22	0	00:43	1.22
938	MH-6305	JUNCTION	1.44	1.45	92.12	0	01:38	1.44
939	MH-6306	JUNCTION	1.57	1.57	92.04	0	01:48	1.57
940	MH-6307	JUNCTION	1.69	1.70	91.95	0	01:14	1.70
941	MH-6308	JUNCTION	1.81	1.81	91.89	0	01:14	1.81
942	MH-6309	JUNCTION	1.87	1.87	91.87	0	00:29	1.87
943	MH-6310	JUNCTION	0.90	0.90	92.20	0	01:23	0.90
944	MH-6311	JUNCTION	1.08	1.08	92.19	0	01:29	1.08
945	MH-6312	JUNCTION	1.27	1.27	92.14	0	00:53	1.27
946	MH-6314	JUNCTION	1.53	1.53	92.08	0	01:49	1.53
947	MH-6315	JUNCTION	1.11	1.11	92.08	0	00:05	1.11
948	MH-6316	JUNCTION	1.65	1.65	92.02	0	00:11	1.65
949	MH-6317	JUNCTION	1.72	1.72	91.96	0	00:57	1.72
950	MH-6318	JUNCTION	1.24	1.25	92.10	0	01:15	1.25
951	MH-6319	JUNCTION	1.36	1.36	91.95	0	00:19	1.36
952	MH-6320	JUNCTION	1.51	1.51	91.92	0	01:01	1.51
953	MH-6321	JUNCTION	1.84	1.84	91.89	0	00:49	1.84
954	MH-6322	JUNCTION	1.86	1.86	91.86	0	01:27	1.86
955	MH-6323	JUNCTION	2.16	2.16	91.84	0	00:05	2.16
956	MH-6345	JUNCTION	1.40	1.40	92.11	0	01:12	1.40
957	MH-6346	JUNCTION	1.24	1.24	92.24	0	01:46	1.24
958	MH-6347	JUNCTION	1.07	1.07	92.34	0	00:57	1.07
959	MH-7001	JUNCTION	0.65	0.65	91.89	0	00:52	0.65
960	MH-7002	JUNCTION	0.93	0.93	91.85	0	01:12	0.93
961	MH-7003	JUNCTION	1.11	1.11	91.77	0	01:38	1.11
962	MH-7004	JUNCTION	1.20	1.20	91.75	0	00:18	1.20
963	MH-7005	JUNCTION	1.27	1.27	91.73	0	00:44	1.27
964	MH-7006	JUNCTION	0.77	0.77	91.95	0	01:23	0.77
965	MH-7007	JUNCTION	1.00	1.00	91.89	0	00:24	1.00
966	MH-7008	JUNCTION	1.36	1.36	91.72	0	00:00	1.36
967	MH-HW101	OUTFALL	2.11	2.11	91.78	0	00:00	2.11
968	MH-HW102	OUTFALL	2.23	2.23	91.78	0	00:00	2.23
969	MH-HW201	OUTFALL	1.95	1.95	91.75	0	00:00	1.95
970	MH-HW202	OUTFALL	2.07	2.07	91.75	0	00:00	2.07
971	MH-HW203	OUTFALL	2.20	2.20	91.75	0	00:00	2.20
972	MH-HW301	OUTFALL	1.94	1.94	91.73	0	00:00	1.94
973	MH-HW302	OUTFALL	1.92	1.92	91.71	0	00:00	1.92
974	MH-HW303	OUTFALL	1.99	1.99	91.71	0	00:00	1.99
975	MH-HW601	OUTFALL	1.88	1.88	91.89	0	00:00	1.88
976	MH-HW602	OUTFALL	2.19	2.19	91.87	0	00:00	2.19
977	MH-HW603	OUTFALL	2.16	2.16	91.83	0	00:00	2.16
978	MH-HW701	OUTFALL	1.37	1.37	91.71	0	00:00	1.37

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 981 *****
 982 Node Inflow Summary
 983 *****
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 985

			Maximum Total Lateral Inflow Inflow Volume	Maximum Flow Total Balance Inflow Occurrence Error	Lateral Inflow Volume	10^6 ltr	10^6
986	Node ltr	Type	LPS	LPS days hr:min			
987	Percent						
988							
989							
990							
991	MH-1101 4.44	JUNCTION -0.000	616.67	616.67 0 00:00		4.44	
992	MH-1102 4.85	JUNCTION -0.000	57.02	673.68 0 01:48		0.411	
993	MH-1103 5.39	JUNCTION 0.000	74.56	748.25 0 00:57		0.537	
994	MH-1104 5.81	JUNCTION 0.000	58.77	807.02 0 01:39		0.423	
995	MH-1105 5.85	JUNCTION -0.000	5.26	812.28 0 01:09		0.0379	
996	MH-1106 5.85	JUNCTION -0.000	0.00	812.28 0 00:47		0	
997	MH-1201 0.59	JUNCTION -0.000	81.99	81.99 0 00:00		0.59	
998	MH-1202 0.705	JUNCTION -0.000	15.91	97.90 0 00:55		0.115	
999	MH-1203 0.67	JUNCTION 0.000	92.99	92.99 0 00:00		0.67	
1000	MH-1204 1.53	JUNCTION -0.000	21.09	211.97 0 00:56		0.152	
1001	MH-1205 0.36	JUNCTION -0.000	49.96	49.96 0 00:00		0.36	
1002	MH-1206 0.0899	JUNCTION 0.000	12.49	12.49 0 00:00		0.0899	
1003	MH-1207 0.645	JUNCTION 0.000	27.09	89.55 0 00:21		0.195	
1004	MH-1208 0.45	JUNCTION -0.000	62.45	62.45 0 00:00		0.45	
1005	MH-1209 1.12	JUNCTION 0.000	3.23	155.23 0 01:31		0.0233	
1006	MH-1210 3.09	JUNCTION -0.000	61.44	428.64 0 01:19		0.442	
1007	MH-1211 0.29	JUNCTION -0.000	40.25	40.25 0 00:00		0.29	
1008	MH-1212 0.11	JUNCTION -0.000	15.27	15.27 0 00:00		0.11	
1009	MH-1213 0.462	JUNCTION -0.000	8.65	64.17 0 00:17		0.0623	
1010	MH-1214 0.36	JUNCTION -0.000	49.96	49.96 0 00:00		0.36	
1011	MH-1215 0.11	JUNCTION -0.000	15.27	15.27 0 00:00		0.11	
1012	MH-1216 0.932	JUNCTION 0.000	0.00	129.40 0 01:00		0	
1013	MH-1217 1.42	JUNCTION 0.000	68.00	197.40 0 00:57		0.49	

1014	MH-1218 4.51	0.000	JUNCTION	0.00	626.04	0	01:19	0
1015	MH-1219 0.36	0.000	JUNCTION	49.96	49.96	0	00:00	0.36
1016	MH-1220 4.87	-0.000	JUNCTION	0.00	676.00	0	01:19	0
1017	MH-1221 4.93	0.000	JUNCTION	9.00	685.00	0	01:47	0.0648
1018	MH-1222 5.06	-0.000	JUNCTION	17.73	702.74	0	00:27	0.128
1019	MH-1223 5.06	-0.000	JUNCTION	0.00	702.74	0	00:27	0
1020	MH-1224 5.06	0.000	JUNCTION	0.00	702.74	0	00:15	0
1021	MH-1227 0.898	0.000	JUNCTION	124.69	124.69	0	00:00	0.898
1022	MH-1228 0.898	-0.000	JUNCTION	0.00	124.69	0	00:26	0
1023	MH-1229 0.898	0.000	JUNCTION	0.00	124.70	0	01:51	0
1024	MH-1230 5.96	-0.000	JUNCTION	0.00	827.44	0	01:54	0
1025	MH-2101 0.13	0.000	JUNCTION	18.04	18.04	0	00:00	0.13
1026	MH-2102 0.347	0.000	JUNCTION	30.17	48.21	0	01:35	0.217
1027	MH-2103 0.656	-0.000	JUNCTION	42.86	91.07	0	01:30	0.309
1028	MH-2104 0.924	-0.000	JUNCTION	37.21	128.28	0	01:32	0.268
1029	MH-2105 0.699	0.000	JUNCTION	97.15	97.15	0	00:00	0.699
1030	MH-2106 0.727	0.000	JUNCTION	3.87	101.02	0	01:17	0.0279
1031	MH-2107 0.894	-0.000	JUNCTION	23.19	124.22	0	00:35	0.167
1032	MH-2108 1.84	-0.000	JUNCTION	3.65	256.15	0	01:32	0.0263
1033	MH-2109 0.21	0.000	JUNCTION	29.15	29.15	0	00:00	0.21
1034	MH-2110 6.36e-05	0.004	JUNCTION	0.00	0.03	0	00:00	0
1035	MH-2111 0.561	0.000	JUNCTION	48.83	78.00	0	00:00	0.352
1036	MH-2112 0.876	-0.000	JUNCTION	43.68	121.66	0	01:01	0.315
1037	MH-2113 0.938	0.000	JUNCTION	8.65	130.31	0	00:00	0.0623
1038	MH-2114 2.78	0.000	JUNCTION	0.00	386.45	0	01:31	0
1039	MH-2201 0.22	0.000	JUNCTION	30.53	30.53	0	00:00	0.22
1040	MH-2202 0.498	0.000	JUNCTION	38.59	69.12	0	01:40	0.278
1041	MH-2203 0.0899	-0.000	JUNCTION	12.49	12.49	0	00:00	0.0899
1042	MH-2204 0.786	-0.000	JUNCTION	27.57	109.19	0	01:14	0.199
1043	MH-2205 0.26	-0.000	JUNCTION	36.08	36.08	0	00:00	0.26
1044	MH-2206 0.545	0.000	JUNCTION	39.65	75.73	0	01:57	0.285
1045	MH-2207 1.44	0.000	JUNCTION	15.51	200.43	0	01:36	0.112
1046	MH-2208 0.61	-0.000	JUNCTION	84.72	84.72	0	00:00	0.61

1047	MH-2209 1.14	0.000	JUNCTION	73.47	158.20	0	00:29	0.529
1048	MH-2210 2.58	-0.000	JUNCTION	0.00	358.63	0	01:59	0
1049	MH-2211 0.44	0.000	JUNCTION	61.07	61.07	0	00:00	0.44
1050	MH-2212 0.693	-0.000	JUNCTION	35.14	96.21	0	01:05	0.253
1051	MH-2213 3.27	0.000	JUNCTION	0.00	454.84	0	01:22	0
1052	MH-2214 0.0799	-0.000	JUNCTION	11.10	11.10	0	00:00	0.0799
1053	MH-2215 3.37	-0.000	JUNCTION	2.00	467.94	0	01:36	0.0144
1054	MH-2216 3.37	0.000	JUNCTION	0.00	467.94	0	01:28	0
1055	MH-2217 3.37	-0.000	JUNCTION	0.00	467.94	0	01:59	0
1056	MH-2218 3.37	0.000	JUNCTION	0.00	467.94	0	00:47	0
1057	MH-2219 0.16	-0.000	JUNCTION	22.21	22.21	0	00:00	0.16
1058	MH-2220 0.0999	0.000	JUNCTION	13.88	13.88	0	00:00	0.0999
1059	MH-2221 0.66	0.000	JUNCTION	55.52	91.60	0	00:07	0.4
1060	MH-2222 1.03	-0.000	JUNCTION	51.85	143.45	0	01:26	0.373
1061	MH-2223 1.03	-0.000	JUNCTION	0.00	143.45	0	01:26	0
1062	MH-2224 1.03	-0.000	JUNCTION	0.00	143.45	0	00:21	0
1063	MH-2225 4.4	0.000	JUNCTION	0.00	611.40	0	00:19	0
1064	MH-2301 0.36	-0.000	JUNCTION	49.96	49.96	0	00:00	0.36
1065	MH-2302 0.645	0.000	JUNCTION	39.66	89.63	0	00:56	0.286
1066	MH-2303 0.0699	-0.000	JUNCTION	9.72	9.72	0	00:00	0.0699
1067	MH-2304 0.742	0.000	JUNCTION	3.77	103.11	0	01:24	0.0271
1068	MH-2305 0.5	-0.000	JUNCTION	69.39	69.39	0	00:00	0.5
1069	MH-2306 0.809	0.000	JUNCTION	43.01	112.40	0	00:27	0.31
1070	MH-2307 0.16	0.000	JUNCTION	22.21	22.21	0	00:00	0.16
1071	MH-2308 1.71	0.000	JUNCTION	0.00	237.72	0	01:08	0
1072	MH-2309 0.678	0.000	JUNCTION	94.14	94.14	0	00:00	0.678
1073	MH-2310 1.19	-0.000	JUNCTION	70.61	164.75	0	01:23	0.508
1074	MH-2311 0.271	-0.000	JUNCTION	37.66	37.66	0	00:00	0.271
1075	MH-2312 3.17	-0.000	JUNCTION	0.00	440.13	0	01:25	0
1076	MH-2313 0.5	-0.000	JUNCTION	69.39	69.39	0	00:00	0.5
1077	MH-2314 0.809	-0.000	JUNCTION	42.96	112.35	0	01:33	0.309
1078	MH-2315 0.18	0.000	JUNCTION	24.98	24.98	0	00:00	0.18
1079	MH-2316 4.16	0.000	JUNCTION	0.00	577.46	0	00:28	0

1080	MH-2317 0.185	0.000	JUNCTION	0.00	25.71	0	01:00	0
1081	MH-2318 4.16	-0.000	JUNCTION	0.00	577.46	0	00:28	0
1082	MH-2319 3.97	0.000	JUNCTION	0.00	551.75	0	00:51	0
1083	MH-2320 3.97	0.000	JUNCTION	0.00	551.75	0	01:48	0
1084	MH-2321 3.97	-0.000	JUNCTION	0.00	551.75	0	00:51	0
1085	MH-2322 0.0899	0.000	JUNCTION	12.49	12.49	0	00:00	0.0899
1086	MH-2323 0.689	-0.000	JUNCTION	57.56	95.76	0	01:00	0.414
1087	MH-2324 1.08	0.000	JUNCTION	53.73	149.49	0	01:00	0.387
1088	MH-2325 1.08	0.000	JUNCTION	0.00	149.49	0	01:00	0
1089	MH-2326 1.08	-0.000	JUNCTION	0.00	149.50	0	01:00	0
1090	MH-2327 5.05	-0.000	JUNCTION	0.00	701.24	0	01:10	0
1091	MH-3101 0.18	-0.000	JUNCTION	24.98	24.98	0	00:00	0.18
1092	MH-3102 0.699	0.000	JUNCTION	72.15	97.13	0	00:11	0.519
1093	MH-3103 0.714	-0.000	JUNCTION	1.97	99.10	0	01:38	0.0142
1094	MH-3104 1.86	-0.000	JUNCTION	0.00	259.01	0	01:44	0
1095	MH-3105 0.23	-0.000	JUNCTION	31.92	31.92	0	00:00	0.23
1096	MH-3106 0.17	-0.000	JUNCTION	23.59	23.59	0	00:00	0.17
1097	MH-3107 0.961	-0.000	JUNCTION	77.93	133.44	0	00:28	0.561
1098	MH-3108 1.02	-0.000	JUNCTION	8.50	141.94	0	00:32	0.0612
1099	MH-3109 1.15	0.000	JUNCTION	17.97	159.91	0	00:32	0.129
1100	MH-3150 3.6	-0.000	JUNCTION	0.00	499.58	0	01:25	0
1101	MH-3201 0.624	-0.000	JUNCTION	86.61	86.61	0	00:00	0.624
1102	MH-3202 1.19	-0.000	JUNCTION	79.10	165.71	0	01:18	0.57
1103	MH-3203 0.569	0.000	JUNCTION	79.08	79.08	0	00:00	0.569
1104	MH-3204 1.76	0.000	JUNCTION	0.00	244.79	0	00:05	0
1105	MH-3205 0.4	0.000	JUNCTION	55.51	55.51	0	00:00	0.4
1106	MH-3206 0.706	0.000	JUNCTION	42.51	98.03	0	01:36	0.306
1107	MH-3207 0.14	-0.000	JUNCTION	19.43	19.43	0	00:00	0.14
1108	MH-3208 2.61	-0.000	JUNCTION	0.00	362.25	0	01:00	0
1109	MH-3209 2.78	-0.000	JUNCTION	24.00	386.25	0	01:02	0.173
1110	MH-3210 2.81	0.000	JUNCTION	3.94	390.19	0	00:17	0.0284
1111	MH-3211 0.62	-0.000	JUNCTION	86.05	86.05	0	00:00	0.62
1112	MH-3212 0.633	0.000	JUNCTION	1.81	87.86	0	00:24	0.013

1113	MH-3213 0.788	-0.000	JUNCTION	21.54	109.40	0	00:09	0.155
1114	MH-3214 0.788	0.000	JUNCTION	0.00	109.40	0	00:09	0
1115	MH-3301 0.839	-0.000	JUNCTION	116.58	116.58	0	00:00	0.839
1116	MH-3302 0.29	0.000	JUNCTION	40.25	40.25	0	00:00	0.29
1117	MH-3303 1.24	-0.000	JUNCTION	15.60	172.43	0	00:17	0.112
1118	MH-3304 0.42	0.000	JUNCTION	58.29	58.29	0	00:00	0.42
1119	MH-3305 1.7	-0.000	JUNCTION	5.63	236.35	0	00:10	0.0405
1120	MH-3306 0.45	-0.000	JUNCTION	62.45	62.45	0	00:00	0.45
1121	MH-3307 2.15	0.000	JUNCTION	0.00	298.80	0	00:58	0
1122	MH-3308 0.64	0.000	JUNCTION	88.82	88.82	0	00:00	0.64
1123	MH-3309 2.79	-0.000	JUNCTION	0.00	387.63	0	01:29	0
1124	MH-3310 0.488	0.000	JUNCTION	67.78	67.78	0	00:00	0.488
1125	MH-3311 0.621	0.000	JUNCTION	18.47	86.25	0	01:57	0.133
1126	MH-3312 0.916	0.000	JUNCTION	40.95	127.20	0	01:34	0.295
1127	MH-3313 3.71	-0.000	JUNCTION	0.00	514.82	0	00:20	0
1128	MH-3314 3.71	-0.000	JUNCTION	0.00	514.82	0	01:05	0
1129	MH-3315 0.26	-0.000	JUNCTION	36.08	36.08	0	00:00	0.26
1130	MH-3316 0.19	-0.000	JUNCTION	26.37	26.37	0	00:00	0.19
1131	MH-3317 0.932	0.000	JUNCTION	67.00	129.45	0	00:14	0.482
1132	MH-3318 0.932	0.000	JUNCTION	0.00	129.45	0	01:40	0
1133	MH-3319 4.64	-0.000	JUNCTION	0.00	644.28	0	01:20	0
1134	MH-6101 1.2	0.000	JUNCTION	27.29	166.79	0	00:25	0.196
1135	MH-6102 0.461	-0.000	JUNCTION	64.01	64.01	0	00:00	0.461
1136	MH-6103 1	-0.000	JUNCTION	75.49	139.51	0	00:01	0.544
1137	MH-6104 0.497	-0.000	JUNCTION	25.13	69.04	0	00:54	0.181
1138	MH-6106 1.2	-0.000	JUNCTION	0.00	166.79	0	01:24	0
1139	MH-6107 1.28	0.000	JUNCTION	10.81	177.61	0	00:28	0.0779
1140	MH-6108 1.78	-0.000	JUNCTION	0.00	246.65	0	00:47	0
1141	MH-6150 0.316	0.000	JUNCTION	7.83	43.91	0	00:57	0.0563
1142	MH-6152 0.26	-0.000	JUNCTION	36.08	36.08	0	00:00	0.26
1143	MH-6201 0.64	-0.000	JUNCTION	88.82	88.82	0	00:00	0.64
1144	MH-6202 0.794	-0.000	JUNCTION	21.39	110.21	0	00:50	0.154
1145	MH-6204 0.33	0.000	JUNCTION	45.80	45.80	0	00:00	0.33

1146	MH-6205 0.346	-0.000	JUNCTION	2.31	48.11	0	01:31	0.0167
1147	MH-6206 1.39	0.000	JUNCTION	27.79	193.41	0	00:31	0.2
1148	MH-6207 2.06	-0.000	JUNCTION	92.44	285.85	0	00:00	0.666
1149	MH-6210 0.21	0.000	JUNCTION	29.15	29.15	0	00:00	0.21
1150	MH-6211 0.48	-0.000	JUNCTION	66.62	66.62	0	00:00	0.48
1151	MH-6212 0.757	0.000	JUNCTION	38.55	105.17	0	01:48	0.278
1152	MH-6213 1.06	-0.000	JUNCTION	12.36	146.67	0	00:02	0.089
1153	MH-6214 0.67	-0.000	JUNCTION	92.99	92.99	0	00:00	0.67
1154	MH-6215 3.78	0.000	JUNCTION	0.00	525.51	0	00:00	0
1155	MH-6216 0.339	-0.000	JUNCTION	47.07	47.07	0	00:00	0.339
1156	MH-6217 4.12	-0.000	JUNCTION	0.00	572.57	0	00:00	0
1157	MH-6218 4.12	0.000	JUNCTION	0.00	572.57	0	00:00	0
1158	MH-6219 0.407	0.000	JUNCTION	56.48	56.48	0	00:00	0.407
1159	MH-6220 0.968	-0.000	JUNCTION	77.90	134.38	0	00:55	0.561
1160	MH-6221 1.02	0.000	JUNCTION	7.43	141.81	0	00:16	0.0535
1161	MH-6222 1.16	-0.000	JUNCTION	19.39	161.20	0	00:16	0.14
1162	MH-6223 5.28	-0.000	JUNCTION	0.00	733.78	0	00:00	0
1163	MH-6250 0.846	0.000	JUNCTION	7.29	117.50	0	00:59	0.0525
1164	MH-6301 0.197	0.000	JUNCTION	27.33	27.33	0	00:00	0.197
1165	MH-6302 0.0492	-0.000	JUNCTION	6.83	6.83	0	00:00	0.0492
1166	MH-6303 0.268	0.000	JUNCTION	3.01	37.18	0	01:22	0.0217
1167	MH-6304 0.688	0.000	JUNCTION	58.34	95.52	0	00:11	0.42
1168	MH-6305 1.09	-0.000	JUNCTION	55.55	151.07	0	01:32	0.4
1169	MH-6306 1.38	0.000	JUNCTION	40.82	191.89	0	01:32	0.294
1170	MH-6307 1.58	-0.000	JUNCTION	27.07	218.96	0	00:00	0.195
1171	MH-6308 1.58	-0.000	JUNCTION	0.00	218.96	0	00:00	0
1172	MH-6309 1.58	0.000	JUNCTION	0.00	218.96	0	01:38	0
1173	MH-6310 0.151	0.000	JUNCTION	21.03	21.03	0	00:00	0.151
1174	MH-6311 0.515	-0.000	JUNCTION	50.47	71.50	0	00:19	0.363
1175	MH-6312 0.844	-0.000	JUNCTION	45.72	117.22	0	00:31	0.329
1176	MH-6314 1.76	-0.000	JUNCTION	2.82	243.97	0	00:08	0.0203
1177	MH-6315 0.38	-0.000	JUNCTION	52.72	52.72	0	00:00	0.38
1178	MH-6316 2.28	-0.000	JUNCTION	19.60	316.30	0	00:25	0.141

1179	MH-6317 2.41	0.000	JUNCTION	18.98	335.27	0	01:02	0.137
1180	MH-6318 0.729	0.000	JUNCTION	101.31	101.31	0	00:00	0.729
1181	MH-6319 0.74	-0.000	JUNCTION	1.40	102.71	0	01:27	0.0101
1182	MH-6320 0.899	0.000	JUNCTION	22.16	124.88	0	01:28	0.16
1183	MH-6321 3.31	0.000	JUNCTION	0.00	460.15	0	00:51	0
1184	MH-6322 3.31	-0.000	JUNCTION	0.00	460.15	0	00:51	0
1185	MH-6323 4.89	0.000	JUNCTION	0.00	679.11	0	01:41	0
1186	MH-6345 0.892	0.000	JUNCTION	17.84	123.93	0	00:54	0.128
1187	MH-6346 0.764	-0.000	JUNCTION	40.86	106.09	0	00:17	0.294
1188	MH-6347 0.47	0.000	JUNCTION	65.23	65.23	0	00:00	0.47
1189	MH-7001 0.35	0.000	JUNCTION	48.58	48.58	0	00:00	0.35
1190	MH-7002 0.824	-0.000	JUNCTION	65.90	114.48	0	00:44	0.474
1191	MH-7003 0.824	-0.000	JUNCTION	0.00	114.48	0	00:44	0
1192	MH-7004 0.925	-0.000	JUNCTION	14.00	128.48	0	00:42	0.101
1193	MH-7005 0.925	0.000	JUNCTION	0.00	128.48	0	00:42	0
1194	MH-7006 0.37	-0.000	JUNCTION	51.35	51.35	0	00:00	0.37
1195	MH-7007 0.756	0.000	JUNCTION	53.63	104.98	0	01:15	0.386
1196	MH-7008 1.68	0.000	JUNCTION	0.00	233.46	0	01:15	0
1197	MH-HW101 5.85	0.000	OUTFALL	0.00	812.28	0	00:47	0
1198	MH-HW102 5.96	0.000	OUTFALL	0.00	827.44	0	01:54	0
1199	MH-HW201 2.78	0.000	OUTFALL	0.00	386.45	0	01:12	0
1200	MH-HW202 4.4	0.000	OUTFALL	0.00	611.40	0	00:19	0
1201	MH-HW203 5.05	0.000	OUTFALL	0.00	701.24	0	01:10	0
1202	MH-HW301 1.86	0.000	OUTFALL	0.00	259.01	0	01:44	0
1203	MH-HW302 3.6	0.000	OUTFALL	0.00	499.58	0	01:25	0
1204	MH-HW303 4.64	0.000	OUTFALL	0.00	644.28	0	01:20	0
1205	MH-HW601 1.78	0.000	OUTFALL	0.00	246.65	0	00:47	0
1206	MH-HW602 5.28	0.000	OUTFALL	0.00	733.78	0	00:00	0
1207	MH-HW603 4.89	0.000	OUTFALL	0.00	679.11	0	01:41	0
1208	MH-HW701 1.68	0.000	OUTFALL	0.00	233.46	0	01:15	0
1209								
1210								
1211	*****							
1212	Node Surcharge Summary							
1213	*****							
1214								

1215 Surcharging occurs when water rises above the top of the highest conduit.

1216	-----	-----	-----	Max. Height Above Crown	Min. Depth Below Rim
1217	-----	-----	Hours Surcharged	Meters	Meters
1218	-----	-----			
1219	Node	Type			
1220	-----	-----	-----	-----	-----
1221	MH-1101	JUNCTION	2.00	0.612	0.888
1222	MH-1102	JUNCTION	2.00	0.691	0.885
1223	MH-1103	JUNCTION	2.00	0.755	0.828
1224	MH-1104	JUNCTION	2.00	0.838	0.752
1225	MH-1105	JUNCTION	2.00	0.935	0.663
1226	MH-1106	JUNCTION	2.00	0.958	0.665
1227	MH-1201	JUNCTION	2.00	0.613	0.889
1228	MH-1202	JUNCTION	2.00	0.739	0.828
1229	MH-1203	JUNCTION	2.00	0.652	0.843
1230	MH-1204	JUNCTION	2.00	0.749	0.821
1231	MH-1205	JUNCTION	2.00	0.630	0.863
1232	MH-1206	JUNCTION	2.00	0.654	0.842
1233	MH-1207	JUNCTION	2.00	0.701	0.824
1234	MH-1208	JUNCTION	2.00	0.696	0.800
1235	MH-1209	JUNCTION	2.00	0.811	0.799
1236	MH-1210	JUNCTION	2.00	0.877	0.770
1237	MH-1211	JUNCTION	2.00	0.641	0.853
1238	MH-1212	JUNCTION	2.00	0.584	0.917
1239	MH-1213	JUNCTION	2.00	0.668	0.886
1240	MH-1214	JUNCTION	2.00	0.631	0.865
1241	MH-1215	JUNCTION	2.00	0.640	0.859
1242	MH-1216	JUNCTION	2.00	0.725	0.839
1243	MH-1217	JUNCTION	2.00	0.871	0.781
1244	MH-1218	JUNCTION	2.00	0.880	0.770
1245	MH-1219	JUNCTION	2.00	0.737	0.757
1246	MH-1220	JUNCTION	2.00	0.894	0.724
1247	MH-1221	JUNCTION	2.00	1.031	0.688
1248	MH-1222	JUNCTION	2.00	1.090	0.655
1249	MH-1223	JUNCTION	2.00	1.118	0.644
1250	MH-1224	JUNCTION	2.00	1.159	0.669
1251	MH-1227	JUNCTION	2.00	0.655	0.847
1252	MH-1228	JUNCTION	2.00	0.788	0.722
1253	MH-1229	JUNCTION	2.00	0.827	0.709
1254	MH-1230	JUNCTION	2.00	0.854	0.716
1255	MH-2101	JUNCTION	2.00	0.734	0.769
1256	MH-2102	JUNCTION	2.00	0.845	0.842
1257	MH-2103	JUNCTION	2.00	0.977	0.804
1258	MH-2104	JUNCTION	2.00	1.046	0.776
1259	MH-2105	JUNCTION	2.00	0.686	0.822
1260	MH-2106	JUNCTION	2.00	0.782	0.773
1261	MH-2107	JUNCTION	2.00	0.813	0.778
1262	MH-2108	JUNCTION	2.00	0.873	0.721
1263	MH-2109	JUNCTION	2.00	0.633	0.872
1264	MH-2110	JUNCTION	2.00	0.629	0.875
1265	MH-2111	JUNCTION	2.00	0.663	0.858
1266	MH-2112	JUNCTION	2.00	0.832	0.808
1267	MH-2113	JUNCTION	2.00	0.902	0.739
1268	MH-2114	JUNCTION	2.00	0.971	0.731
1269	MH-2201	JUNCTION	2.00	0.462	1.041
1270	MH-2202	JUNCTION	2.00	0.570	0.994
1271	MH-2203	JUNCTION	2.00	0.532	1.062
1272	MH-2204	JUNCTION	2.00	0.636	0.880
1273	MH-2205	JUNCTION	2.00	0.536	0.964
1274	MH-2206	JUNCTION	2.00	0.628	0.934
1275	MH-2207	JUNCTION	2.00	0.707	0.831
1276	MH-2208	JUNCTION	2.00	0.602	0.899
1277	MH-2209	JUNCTION	2.00	0.678	0.859
1278	MH-2210	JUNCTION	2.00	0.718	0.798
1279	MH-2211	JUNCTION	2.00	0.708	0.786
1280	MH-2212	JUNCTION	2.00	0.835	0.772

1281	MH-2213	JUNCTION	2.00	0.800	0.768
1282	MH-2214	JUNCTION	2.00	0.713	0.781
1283	MH-2215	JUNCTION	2.00	0.826	0.737
1284	MH-2216	JUNCTION	2.00	0.965	0.681
1285	MH-2217	JUNCTION	2.00	1.040	0.625
1286	MH-2218	JUNCTION	2.00	1.071	0.634
1287	MH-2219	JUNCTION	2.00	0.732	0.767
1288	MH-2220	JUNCTION	2.00	0.715	0.782
1289	MH-2221	JUNCTION	2.00	0.793	0.640
1290	MH-2222	JUNCTION	2.00	0.890	0.713
1291	MH-2223	JUNCTION	2.00	0.961	0.643
1292	MH-2224	JUNCTION	2.00	1.028	0.647
1293	MH-2225	JUNCTION	2.00	1.083	0.647
1294	MH-2301	JUNCTION	2.00	0.671	0.832
1295	MH-2302	JUNCTION	2.00	0.829	0.780
1296	MH-2303	JUNCTION	2.00	0.709	0.793
1297	MH-2304	JUNCTION	2.00	0.759	0.766
1298	MH-2305	JUNCTION	2.00	0.635	0.860
1299	MH-2306	JUNCTION	2.00	0.736	0.803
1300	MH-2307	JUNCTION	2.00	0.638	0.908
1301	MH-2308	JUNCTION	2.00	0.723	0.760
1302	MH-2309	JUNCTION	2.00	0.721	0.786
1303	MH-2310	JUNCTION	2.00	0.785	0.754
1304	MH-2311	JUNCTION	2.00	0.795	0.704
1305	MH-2312	JUNCTION	2.00	0.821	0.720
1306	MH-2313	JUNCTION	2.00	0.720	0.773
1307	MH-2314	JUNCTION	2.00	0.821	0.717
1308	MH-2315	JUNCTION	2.00	0.799	0.695
1309	MH-2316	JUNCTION	2.00	0.879	0.674
1310	MH-2317	JUNCTION	2.00	0.756	0.742
1311	MH-2318	JUNCTION	2.00	0.931	0.655
1312	MH-2319	JUNCTION	2.00	1.156	0.615
1313	MH-2320	JUNCTION	2.00	1.206	0.595
1314	MH-2321	JUNCTION	2.00	1.228	0.610
1315	MH-2322	JUNCTION	2.00	0.735	0.763
1316	MH-2323	JUNCTION	2.00	0.800	0.738
1317	MH-2324	JUNCTION	2.00	0.889	0.712
1318	MH-2325	JUNCTION	2.00	0.958	0.647
1319	MH-2326	JUNCTION	2.00	1.024	0.643
1320	MH-2327	JUNCTION	2.00	1.083	0.646
1321	MH-3101	JUNCTION	2.00	0.904	0.598
1322	MH-3102	JUNCTION	2.00	1.014	0.705
1323	MH-3103	JUNCTION	2.00	1.095	0.711
1324	MH-3104	JUNCTION	2.00	1.126	0.721
1325	MH-3105	JUNCTION	2.00	0.860	0.641
1326	MH-3106	JUNCTION	2.00	0.777	0.727
1327	MH-3107	JUNCTION	2.00	0.891	0.690
1328	MH-3108	JUNCTION	2.00	1.103	0.581
1329	MH-3109	JUNCTION	2.00	1.172	0.597
1330	MH-3150	JUNCTION	2.00	0.993	0.691
1331	MH-3201	JUNCTION	2.00	0.641	0.859
1332	MH-3202	JUNCTION	2.00	0.711	0.819
1333	MH-3203	JUNCTION	2.00	0.662	0.841
1334	MH-3204	JUNCTION	2.00	0.738	0.790
1335	MH-3205	JUNCTION	2.00	0.724	0.770
1336	MH-3206	JUNCTION	2.00	0.854	0.745
1337	MH-3207	JUNCTION	2.00	0.718	0.776
1338	MH-3208	JUNCTION	2.00	0.798	0.748
1339	MH-3209	JUNCTION	2.00	0.906	0.721
1340	MH-3210	JUNCTION	2.00	0.964	0.679
1341	MH-3211	JUNCTION	2.00	0.754	0.751
1342	MH-3212	JUNCTION	2.00	0.863	0.688
1343	MH-3213	JUNCTION	2.00	0.900	0.692
1344	MH-3214	JUNCTION	2.00	0.965	0.655
1345	MH-3301	JUNCTION	2.00	0.614	0.891
1346	MH-3302	JUNCTION	2.00	0.743	0.760

1347	MH-3303	JUNCTION	2.00	0.743	0.806
1348	MH-3304	JUNCTION	2.00	0.741	0.758
1349	MH-3305	JUNCTION	2.00	0.860	0.768
1350	MH-3306	JUNCTION	2.00	0.789	0.709
1351	MH-3307	JUNCTION	2.00	0.909	0.720
1352	MH-3308	JUNCTION	2.00	0.802	0.702
1353	MH-3309	JUNCTION	2.00	0.890	0.677
1354	MH-3310	JUNCTION	2.00	0.655	0.839
1355	MH-3311	JUNCTION	2.00	0.747	0.772
1356	MH-3312	JUNCTION	2.00	0.868	0.734
1357	MH-3313	JUNCTION	2.00	0.944	0.675
1358	MH-3314	JUNCTION	2.00	0.960	0.684
1359	MH-3315	JUNCTION	2.00	0.739	0.756
1360	MH-3316	JUNCTION	2.00	0.711	0.789
1361	MH-3317	JUNCTION	2.00	0.837	0.765
1362	MH-3318	JUNCTION	2.00	0.970	0.666
1363	MH-3319	JUNCTION	2.00	1.024	0.680
1364	MH-6101	JUNCTION	2.00	1.107	0.495
1365	MH-6102	JUNCTION	2.00	1.009	0.498
1366	MH-6103	JUNCTION	2.00	1.077	0.622
1367	MH-6104	JUNCTION	2.00	1.125	0.531
1368	MH-6106	JUNCTION	2.00	1.152	0.549
1369	MH-6107	JUNCTION	2.00	1.185	0.561
1370	MH-6108	JUNCTION	2.00	1.150	0.572
1371	MH-6150	JUNCTION	2.00	1.052	0.467
1372	MH-6152	JUNCTION	2.00	0.976	0.396
1373	MH-6201	JUNCTION	2.00	0.646	0.869
1374	MH-6202	JUNCTION	2.00	0.658	0.860
1375	MH-6204	JUNCTION	2.00	0.570	0.988
1376	MH-6205	JUNCTION	2.00	0.627	0.930
1377	MH-6206	JUNCTION	2.00	0.682	0.904
1378	MH-6207	JUNCTION	2.00	0.903	0.809
1379	MH-6210	JUNCTION	2.00	0.697	0.791
1380	MH-6211	JUNCTION	2.00	0.749	0.762
1381	MH-6212	JUNCTION	2.00	0.862	0.747
1382	MH-6213	JUNCTION	2.00	0.822	0.766
1383	MH-6214	JUNCTION	2.00	0.774	0.741
1384	MH-6215	JUNCTION	2.00	0.859	0.737
1385	MH-6216	JUNCTION	2.00	0.902	0.605
1386	MH-6217	JUNCTION	2.00	0.937	0.691
1387	MH-6218	JUNCTION	2.00	1.097	0.609
1388	MH-6219	JUNCTION	2.00	0.760	0.739
1389	MH-6220	JUNCTION	2.00	0.846	0.721
1390	MH-6221	JUNCTION	2.00	0.957	0.612
1391	MH-6222	JUNCTION	2.00	1.025	0.618
1392	MH-6223	JUNCTION	2.00	1.101	0.612
1393	MH-6250	JUNCTION	2.00	0.762	0.861
1394	MH-6301	JUNCTION	2.00	0.559	0.939
1395	MH-6302	JUNCTION	2.00	0.575	0.924
1396	MH-6303	JUNCTION	2.00	0.648	0.885
1397	MH-6304	JUNCTION	2.00	0.766	0.892
1398	MH-6305	JUNCTION	2.00	0.845	0.864
1399	MH-6306	JUNCTION	2.00	0.954	0.758
1400	MH-6307	JUNCTION	2.00	1.020	0.707
1401	MH-6308	JUNCTION	2.00	1.076	0.649
1402	MH-6309	JUNCTION	2.00	1.137	0.656
1403	MH-6310	JUNCTION	2.00	0.596	0.905
1404	MH-6311	JUNCTION	2.00	0.632	0.911
1405	MH-6312	JUNCTION	2.00	0.744	0.843
1406	MH-6314	JUNCTION	2.00	0.847	0.784
1407	MH-6315	JUNCTION	2.00	0.738	0.761
1408	MH-6316	JUNCTION	2.00	0.819	0.747
1409	MH-6317	JUNCTION	2.00	0.951	0.684
1410	MH-6318	JUNCTION	2.00	0.795	0.706
1411	MH-6319	JUNCTION	2.00	0.876	0.682
1412	MH-6320	JUNCTION	2.00	0.906	0.696

1413 MH-6321 JUNCTION 2.00 0.951 0.648
 1414 MH-6322 JUNCTION 2.00 1.004 0.648
 1415 MH-6323 JUNCTION 2.00 1.024 0.665
 1416 MH-6345 JUNCTION 2.00 0.804 0.837
 1417 MH-6346 JUNCTION 2.00 0.792 0.812
 1418 MH-6347 JUNCTION 2.00 0.692 0.826
 1419 MH-7001 JUNCTION 2.00 0.275 1.230
 1420 MH-7002 JUNCTION 2.00 0.404 1.184
 1421 MH-7003 JUNCTION 2.00 0.524 1.090
 1422 MH-7004 JUNCTION 2.00 0.596 1.105
 1423 MH-7005 JUNCTION 2.00 0.640 1.069
 1424 MH-7006 JUNCTION 2.00 0.394 1.109
 1425 MH-7007 JUNCTION 2.00 0.554 1.063
 1426 MH-7008 JUNCTION 2.00 0.615 1.076
 1427
 1428
 1429 ****
 1430 Node Flooding Summary
 1431 ****
 1432
 1433 No nodes were flooded.
 1434
 1435
 1436 ****
 1437 Outfall Loading Summary
 1438 ****
 1439
 1440 -----
 1441 Flow Avg Max Total
 1442 Freq Flow Flow Volume
 1443 Outfall Node Pcnt LPS LPS 10^6 ltr
 1444 -----
 1445 MH-HW101 100.00 812.28 812.28 5.848
 1446 MH-HW102 100.00 827.43 827.44 5.957
 1447 MH-HW201 100.00 386.45 386.45 2.782
 1448 MH-HW202 100.00 611.39 611.40 4.402
 1449 MH-HW203 100.00 701.24 701.24 5.049
 1450 MH-HW301 100.00 259.01 259.01 1.865
 1451 MH-HW302 100.00 499.58 499.58 3.597
 1452 MH-HW303 100.00 644.27 644.28 4.639
 1453 MH-HW601 100.00 246.65 246.65 1.776
 1454 MH-HW602 100.00 733.77 733.78 5.283
 1455 MH-HW603 100.00 679.11 679.11 4.890
 1456 MH-HW701 100.00 233.46 233.46 1.681
 1457 -----
 1458 System 100.00 6634.63 6634.65 47.769
 1459
 1460
 1461 ****
 1462 Link Flow Summary
 1463 ****
 1464
 1465 -----
 1466 Maximum Time of Max Maximum Max/ Max/
 1467 |Flow| Occurrence |Veloc| Full Full
 1468 Link Type LPS days hr:min m/sec Flow Depth
 1469 -----
 1470 STM-1101-1102 CONDUIT 616.67 0 01:48 0.97 0.76 1.00
 1471 STM-1102-1103 CONDUIT 673.69 0 00:57 0.90 0.78 1.00
 1472 STM-1103-1104 CONDUIT 748.25 0 01:39 0.86 0.71 1.00
 1473 STM-1104-1105 CONDUIT 807.02 0 01:09 0.93 0.76 1.00
 1474 STM-1105-1106 CONDUIT 812.28 0 00:47 0.94 0.77 1.00
 1475 STM-1106-HW101 CONDUIT 812.28 0 00:47 0.94 0.77 1.00
 1476 STM-1201-1202 CONDUIT 81.99 0 00:55 0.52 0.64 1.00
 1477 STM-1202-1204 CONDUIT 97.90 0 00:26 0.62 0.77 1.00
 1478 STM-1203-1204 CONDUIT 92.99 0 01:45 0.58 0.73 1.00

1479	STM-1204-1210	CONDUIT	211.97	0	00:26	0.59	0.65	1.00
1480	STM-1205-1207	CONDUIT	49.96	0	01:17	0.45	0.52	1.00
1481	STM-1206-1207	CONDUIT	12.49	0	01:54	0.18	0.22	1.00
1482	STM-1207-1209	CONDUIT	89.55	0	00:20	0.56	0.70	1.00
1483	STM-1208-1209	CONDUIT	62.45	0	00:08	0.57	0.65	1.00
1484	STM-1209-1210	CONDUIT	155.23	0	00:38	0.55	0.65	1.00
1485	STM-1210-1218	CONDUIT	428.64	0	01:19	0.80	0.77	1.00
1486	STM-1211-1213	CONDUIT	40.25	0	01:54	0.57	0.70	1.00
1487	STM-1212-1213	CONDUIT	15.27	0	00:39	0.22	0.27	1.00
1488	STM-1213-1216	CONDUIT	64.17	0	01:42	0.40	0.50	1.00
1489	STM-1214-1216	CONDUIT	49.96	0	00:35	0.45	0.52	1.00
1490	STM-1215-1216	CONDUIT	15.27	0	01:18	0.22	0.27	1.00
1491	STM-1216-1217	CONDUIT	129.40	0	00:57	0.46	0.54	1.00
1492	STM-1217-1218	CONDUIT	197.40	0	00:54	0.70	0.83	1.00
1493	STM-1218-1220	CONDUIT	626.04	0	01:19	0.84	0.72	1.00
1494	STM-1219-1220	CONDUIT	49.96	0	01:43	0.45	0.52	1.00
1495	STM-1220-1221	CONDUIT	676.00	0	01:47	0.91	0.78	1.00
1496	STM-1221-1222	CONDUIT	685.00	0	00:27	0.92	0.79	1.00
1497	STM-1222-1223	CONDUIT	702.74	0	00:27	0.94	0.81	1.00
1498	STM-1223-1224	CONDUIT	702.74	0	00:15	0.94	0.80	1.00
1499	STM-1224-1230	CONDUIT	702.74	0	01:19	0.94	0.81	1.00
1500	STM-1227-1228	CONDUIT	124.69	0	00:26	0.44	0.52	1.00
1501	STM-1228-1229	CONDUIT	124.70	0	01:51	0.44	0.52	1.00
1502	STM-1229-1230	CONDUIT	124.70	0	00:58	0.44	0.53	1.00
1503	STM-1230-HW102	CONDUIT	827.44	0	01:54	0.96	0.78	1.00
1504	STM-2101-2102	CONDUIT	18.04	0	01:35	0.26	0.32	1.00
1505	STM-2102-2103	CONDUIT	48.21	0	01:30	0.44	0.50	1.00
1506	STM-2103-2104	CONDUIT	91.07	0	01:32	0.57	0.71	1.00
1507	STM-2104-2108	CONDUIT	128.28	0	01:46	0.45	0.54	1.00
1508	STM-2105-2106	CONDUIT	97.15	0	01:17	0.61	0.76	1.00
1509	STM-2106-2107	CONDUIT	101.03	0	00:35	0.64	0.79	1.00
1510	STM-2107-2108	CONDUIT	124.22	0	00:55	0.44	0.52	1.00
1511	STM-2108-2114	CONDUIT	256.15	0	01:31	0.72	0.79	1.00
1512	STM-2109-2111	CONDUIT	29.15	0	00:00	0.41	0.51	1.00
1513	STM-2110-2111	CONDUIT	0.03	0	00:00	0.00	0.00	1.00
1514	STM-2111-2112	CONDUIT	77.98	0	01:01	0.49	0.61	1.00
1515	STM-2112-2113	CONDUIT	121.66	0	00:00	0.43	0.51	1.00
1516	STM-2113-2114	CONDUIT	130.31	0	01:01	0.46	0.55	1.00
1517	STM-2114-HW201	CONDUIT	386.45	0	01:12	0.72	0.69	1.00
1518	STM-2201-2202	CONDUIT	30.53	0	01:40	0.43	0.53	1.00
1519	STM-2202-2204	CONDUIT	69.12	0	00:57	0.43	0.54	1.00
1520	STM-2203-2204	CONDUIT	12.49	0	00:31	0.18	0.22	1.00
1521	STM-2204-2207	CONDUIT	109.19	0	01:30	0.50	0.57	1.00
1522	STM-2205-2206	CONDUIT	36.08	0	01:57	0.51	0.63	1.00
1523	STM-2206-2207	CONDUIT	75.73	0	01:21	0.48	0.59	1.00
1524	STM-2207-2210	CONDUIT	200.43	0	01:36	0.71	0.84	1.00
1525	STM-2208-2209	CONDUIT	84.72	0	00:29	0.53	0.66	1.00
1526	STM-2209-2210	CONDUIT	158.20	0	01:05	0.56	0.66	1.00
1527	STM-2210-2213	CONDUIT	358.63	0	00:47	0.81	0.83	1.00
1528	STM-2211-2212	CONDUIT	61.07	0	01:05	0.55	0.64	1.00
1529	STM-2212-2213	CONDUIT	96.21	0	00:08	0.60	0.75	1.00
1530	STM-2213-2215	CONDUIT	454.84	0	01:36	0.85	0.82	1.00
1531	STM-2214-2215	CONDUIT	11.10	0	01:43	0.16	0.19	1.00
1532	STM-2215-2216	CONDUIT	467.94	0	01:28	0.74	0.67	1.00
1533	STM-2216-2217	CONDUIT	467.94	0	01:59	0.74	0.67	1.00
1534	STM-2217-2218	CONDUIT	467.94	0	00:47	0.74	0.66	1.00
1535	STM-2218-2225	CONDUIT	467.95	0	01:36	0.74	0.67	1.00
1536	STM-2219-2221	CONDUIT	22.21	0	01:14	0.31	0.39	1.00
1537	STM-2220-2221	CONDUIT	13.88	0	01:55	0.20	0.24	1.00
1538	STM-2221-2222	CONDUIT	91.60	0	01:26	0.58	0.72	1.00
1539	STM-2222-2223	CONDUIT	143.45	0	01:26	0.51	0.60	1.00
1540	STM-2223-2224	CONDUIT	143.45	0	00:21	0.51	0.60	1.00
1541	STM-2224-2225	CONDUIT	143.45	0	01:30	0.51	0.60	1.00
1542	STM-2225-HW202	CONDUIT	611.40	0	00:19	0.82	0.70	1.00
1543	STM-2301-2302	CONDUIT	49.96	0	00:56	0.45	0.52	1.00
1544	STM-2302-2304	CONDUIT	89.63	0	01:22	0.56	0.70	1.00

1545	STM-2303-2304	CONDUIT	9.72	0	01:48	0.14	0.17	1.00
1546	STM-2304-2308	CONDUIT	103.11	0	01:38	0.65	0.81	1.00
1547	STM-2305-2306	CONDUIT	69.39	0	00:27	0.44	0.54	1.00
1548	STM-2306-2308	CONDUIT	112.40	0	01:45	0.52	0.58	1.00
1549	STM-2307-2308	CONDUIT	22.21	0	00:56	0.31	0.39	1.00
1550	STM-2308-2312	CONDUIT	237.72	0	01:22	0.66	0.73	1.00
1551	STM-2309-2310	CONDUIT	94.14	0	01:23	0.59	0.74	1.00
1552	STM-2310-2312	CONDUIT	164.75	0	01:08	0.58	0.69	1.00
1553	STM-2311-2312	CONDUIT	37.66	0	00:45	0.53	0.66	1.00
1554	STM-2312-2316	CONDUIT	440.13	0	00:28	0.82	0.79	1.00
1555	STM-2313-2314	CONDUIT	69.39	0	01:33	0.44	0.54	1.00
1556	STM-2314-2316	CONDUIT	112.35	0	01:21	0.52	0.58	1.00
1557	STM-2315-2316	CONDUIT	24.98	0	01:28	0.35	0.44	1.00
1558	STM-2316-2318	CONDUIT	577.46	0	00:28	0.91	0.82	1.00
1559	STM-2317-2318	CONDUIT	25.71	0	01:00	0.36	0.45	1.00
1560	STM-2317-2323	CONDUIT	25.71	0	01:00	0.36	0.45	1.00
1561	STM-2318-2319	CONDUIT	551.75	0	00:51	0.87	0.79	1.00
1562	STM-2319-2320	CONDUIT	551.75	0	01:48	0.87	0.79	1.00
1563	STM-2320-2321	CONDUIT	551.75	0	00:51	0.87	0.79	1.00
1564	STM-2321-2327	CONDUIT	551.75	0	01:23	0.87	0.79	1.00
1565	STM-2322-2323	CONDUIT	12.49	0	01:33	0.18	0.22	1.00
1566	STM-2323-2324	CONDUIT	95.76	0	01:00	0.60	0.75	1.00
1567	STM-2324-2325	CONDUIT	149.49	0	01:00	0.53	0.63	1.00
1568	STM-2325-2326	CONDUIT	149.50	0	01:00	0.53	0.63	1.00
1569	STM-2326-2327	CONDUIT	149.50	0	01:00	0.53	0.63	1.00
1570	STM-2327-HW203	CONDUIT	701.24	0	01:10	0.94	0.79	1.00
1571	STM-3101-3102	CONDUIT	24.98	0	00:11	0.35	0.44	1.00
1572	STM-3102-3103	CONDUIT	97.13	0	01:38	0.61	0.76	1.00
1573	STM-3103-3104	CONDUIT	99.10	0	01:00	0.62	0.78	1.00
1574	STM-3104-HW301	CONDUIT	259.01	0	01:44	0.72	0.79	1.00
1575	STM-3105-3107	CONDUIT	31.92	0	00:07	0.45	0.56	1.00
1576	STM-3106-3107	CONDUIT	23.59	0	00:24	0.33	0.41	1.00
1577	STM-3107-3108	CONDUIT	133.44	0	00:32	0.47	0.56	1.00
1578	STM-3108-3109	CONDUIT	141.94	0	00:32	0.50	0.59	1.00
1579	STM-3109-3104	CONDUIT	159.91	0	00:45	0.57	0.67	1.00
1580	STM-3150-HW302	CONDUIT	499.58	0	01:25	0.79	0.71	1.00
1581	STM-3201-3202	CONDUIT	86.61	0	01:18	0.54	0.68	1.00
1582	STM-3202-3204	CONDUIT	165.71	0	01:45	0.59	0.70	1.00
1583	STM-3203-3204	CONDUIT	79.08	0	00:06	0.50	0.62	1.00
1584	STM-3204-3208	CONDUIT	244.79	0	01:00	0.68	0.75	1.00
1585	STM-3205-3206	CONDUIT	55.51	0	01:36	0.50	0.58	1.00
1586	STM-3206-3208	CONDUIT	98.03	0	00:30	0.62	0.77	1.00
1587	STM-3207-3208	CONDUIT	19.43	0	00:02	0.27	0.34	1.00
1588	STM-3208-3209	CONDUIT	362.25	0	01:02	0.82	0.84	1.00
1589	STM-3209-3210	CONDUIT	386.25	0	00:17	0.72	0.69	1.00
1590	STM-3210-3150	CONDUIT	390.19	0	00:59	0.73	0.69	1.00
1591	STM-3211-3212	CONDUIT	86.05	0	00:24	0.54	0.67	1.00
1592	STM-3212-3213	CONDUIT	87.86	0	00:09	0.55	0.69	1.00
1593	STM-3213-3214	CONDUIT	109.40	0	00:09	0.51	0.57	1.00
1594	STM-3214-3150	CONDUIT	109.40	0	00:54	0.51	0.57	1.00
1595	STM-3301-3303	CONDUIT	116.58	0	01:24	0.54	0.61	1.00
1596	STM-3302-3303	CONDUIT	40.25	0	01:20	0.57	0.70	1.00
1597	STM-3303-3305	CONDUIT	172.43	0	01:53	0.61	0.72	1.00
1598	STM-3304-3305	CONDUIT	58.29	0	01:59	0.53	0.61	1.00
1599	STM-3305-3307	CONDUIT	236.35	0	00:58	0.66	0.72	1.00
1600	STM-3306-3307	CONDUIT	62.45	0	01:19	0.57	0.65	1.00
1601	STM-3307-3309	CONDUIT	298.80	0	01:29	0.68	0.69	1.00
1602	STM-3308-3309	CONDUIT	88.82	0	00:21	0.56	0.70	1.00
1603	STM-3309-3313	CONDUIT	387.63	0	00:13	0.73	0.70	1.00
1604	STM-3310-3311	CONDUIT	67.78	0	01:57	0.43	0.53	1.00
1605	STM-3311-3312	CONDUIT	86.25	0	01:34	0.54	0.68	1.00
1606	STM-3312-3313	CONDUIT	127.20	0	01:34	0.45	0.53	1.00
1607	STM-3313-3314	CONDUIT	514.82	0	01:05	0.81	0.74	1.00
1608	STM-3314-3319	CONDUIT	514.82	0	01:20	0.81	0.74	1.00
1609	STM-3315-3317	CONDUIT	36.08	0	00:07	0.51	0.63	1.00
1610	STM-3316-3317	CONDUIT	26.37	0	01:49	0.37	0.46	1.00

1611	STM-3317-3318	CONDUIT	129.45	0	01:40	0.46	0.54	1.00
1612	STM-3318-3319	CONDUIT	129.46	0	00:01	0.46	0.54	1.00
1613	STM-3319-HW303	CONDUIT	644.28	0	01:20	1.01	0.92	1.00
1614	STM-6101-6106	CONDUIT	166.79	0	01:24	0.59	0.70	1.00
1615	STM-6102-6103	CONDUIT	64.01	0	00:01	0.58	0.67	1.00
1616	STM-6103-6101	CONDUIT	139.51	0	00:25	0.64	0.73	1.00
1617	STM-6104-6108	CONDUIT	69.04	0	01:37	0.63	0.72	1.00
1618	STM-6106-6107	CONDUIT	166.80	0	00:28	0.59	0.70	1.00
1619	STM-6107-6108	CONDUIT	177.61	0	00:47	0.63	0.75	1.00
1620	STM-6108-HW601	CONDUIT	246.65	0	00:47	0.87	0.90	1.00
1621	STM-6150-6104	CONDUIT	43.91	0	00:54	0.62	0.77	1.00
1622	STM-6152-6150	CONDUIT	36.08	0	00:57	0.51	0.63	1.00
1623	STM-6201-6202	CONDUIT	88.82	0	00:50	0.56	0.70	1.00
1624	STM-6202-6250	CONDUIT	110.21	0	00:59	0.69	0.77	1.00
1625	STM-6204-6205	CONDUIT	45.80	0	01:31	0.16	0.19	1.00
1626	STM-6205-6206	CONDUIT	48.11	0	01:56	0.17	0.20	1.00
1627	STM-6206-6207	CONDUIT	193.41	0	00:00	0.44	0.45	1.00
1628	STM-6207-6215	CONDUIT	285.85	0	00:00	0.53	0.51	1.00
1629	STM-6210-6213	CONDUIT	29.15	0	00:56	0.41	0.51	1.00
1630	STM-6211-6212	CONDUIT	66.62	0	01:48	0.60	0.69	1.00
1631	STM-6212-6213	CONDUIT	105.17	0	01:30	0.66	0.82	1.00
1632	STM-6213-6215	CONDUIT	146.67	0	01:22	0.52	0.62	1.00
1633	STM-6214-6215	CONDUIT	92.99	0	00:02	0.58	0.73	1.00
1634	STM-6215-6217	CONDUIT	525.51	0	00:00	0.83	0.75	1.00
1635	STM-6216-6217	CONDUIT	47.07	0	00:51	0.67	0.82	1.00
1636	STM-6217-6218	CONDUIT	572.57	0	00:00	0.77	0.66	1.00
1637	STM-6218-6223	CONDUIT	572.58	0	00:00	0.77	0.65	1.00
1638	STM-6219-6220	CONDUIT	56.48	0	00:55	0.51	0.59	1.00
1639	STM-6220-6221	CONDUIT	134.38	0	00:16	0.48	0.56	1.00
1640	STM-6221-6222	CONDUIT	141.81	0	00:16	0.50	0.60	1.00
1641	STM-6222-6223	CONDUIT	161.21	0	01:34	0.57	0.68	1.00
1642	STM-6223-HW602	CONDUIT	733.78	0	00:00	0.85	0.69	1.00
1643	STM-6250-6206	CONDUIT	117.50	0	01:36	0.74	0.82	1.00
1644	STM-6301-6303	CONDUIT	27.33	0	01:36	0.39	0.48	1.00
1645	STM-6302-6303	CONDUIT	6.83	0	00:43	0.10	0.12	1.00
1646	STM-6303-6304	CONDUIT	37.18	0	00:11	0.53	0.65	1.00
1647	STM-6304-6305	CONDUIT	95.52	0	01:32	0.60	0.75	1.00
1648	STM-6305-6306	CONDUIT	151.07	0	01:32	0.53	0.64	1.00
1649	STM-6306-6307	CONDUIT	191.89	0	00:00	0.68	0.81	1.00
1650	STM-6307-6308	CONDUIT	218.96	0	00:00	0.61	0.67	1.00
1651	STM-6308-6309	CONDUIT	218.96	0	01:38	0.61	0.67	1.00
1652	STM-6309-6323	CONDUIT	218.97	0	00:29	0.61	0.68	1.00
1653	STM-6310-6311	CONDUIT	21.03	0	00:19	0.30	0.37	1.00
1654	STM-6311-6312	CONDUIT	71.50	0	00:31	0.45	0.56	1.00
1655	STM-6312-6314	CONDUIT	117.22	0	00:31	0.54	0.61	1.00
1656	STM-6314-6316	CONDUIT	243.97	0	01:02	0.68	0.75	1.00
1657	STM-6315-6316	CONDUIT	52.72	0	00:06	0.48	0.55	1.00
1658	STM-6316-6317	CONDUIT	316.30	0	01:02	0.72	0.73	1.00
1659	STM-6317-6321	CONDUIT	335.27	0	00:51	0.76	0.78	1.00
1660	STM-6318-6319	CONDUIT	101.31	0	01:27	0.64	0.79	1.00
1661	STM-6319-6320	CONDUIT	102.71	0	01:28	0.65	0.81	1.00
1662	STM-6320-6321	CONDUIT	124.88	0	01:47	0.44	0.53	1.00
1663	STM-6321-6322	CONDUIT	460.15	0	00:51	0.86	0.82	1.00
1664	STM-6322-6323	CONDUIT	460.15	0	01:14	0.86	0.83	1.00
1665	STM-6323-HW603	CONDUIT	679.11	0	01:41	0.91	0.79	1.00
1666	STM-6345-6314	CONDUIT	123.93	0	00:54	0.44	0.52	1.00
1667	STM-6346-6345	CONDUIT	106.09	0	00:54	0.67	0.83	1.00
1668	STM-6347-6346	CONDUIT	65.23	0	00:17	0.59	0.72	1.00
1669	STM-7001-7002	CONDUIT	48.58	0	00:44	0.44	0.51	1.00
1670	STM-7002-7003	CONDUIT	114.48	0	00:44	0.53	0.60	1.00
1671	STM-7003-7004	CONDUIT	114.48	0	00:42	0.53	0.60	1.00
1672	STM-7004-7005	CONDUIT	128.48	0	00:42	0.45	0.54	1.00
1673	STM-7005-7008	CONDUIT	128.48	0	01:15	0.45	0.53	1.00
1674	STM-7006-7007	CONDUIT	51.35	0	01:15	0.46	0.53	1.00
1675	STM-7007-7008	CONDUIT	104.98	0	00:36	0.66	0.82	1.00
1676	STM-7008-HW701	CONDUIT	233.46	0	01:15	0.65	0.71	1.00

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 Flow Classification Summary

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class						-----		
		Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl	
STM-1101-1102	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1102-1103	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1103-1104	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1104-1105	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1105-1106	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1106-HW101	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1201-1202	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1202-1204	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1203-1204	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1204-1210	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1205-1207	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1206-1207	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1207-1209	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1208-1209	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1209-1210	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1210-1218	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1211-1213	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1212-1213	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1213-1216	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1214-1216	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1215-1216	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1216-1217	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1217-1218	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1218-1220	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1219-1220	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1220-1221	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1221-1222	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1222-1223	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1223-1224	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1224-1230	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1227-1228	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1228-1229	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1229-1230	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-1230-HW102	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2101-2102	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2102-2103	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2103-2104	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2104-2108	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2105-2106	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2106-2107	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2107-2108	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2108-2114	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2109-2111	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2110-2111	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2111-2112	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2112-2113	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2113-2114	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2114-HW201	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2201-2202	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2202-2204	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2203-2204	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2204-2207	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2205-2206	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2206-2207	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-2207-2210	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00

1875	STM-6315-6316	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1876	STM-6316-6317	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1877	STM-6317-6321	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1878	STM-6318-6319	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1879	STM-6319-6320	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1880	STM-6320-6321	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1881	STM-6321-6322	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1882	STM-6322-6323	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1883	STM-6323-HW603	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1884	STM-6345-6314	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1885	STM-6346-6345	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1886	STM-6347-6346	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1887	STM-7001-7002	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1888	STM-7002-7003	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1889	STM-7003-7004	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1890	STM-7004-7005	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1891	STM-7005-7008	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1892	STM-7006-7007	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1893	STM-7007-7008	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1894	STM-7008-HW701	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00

1895

1896

Conduit Surcharge Summary

1900

1901

Conduit	Both	Hours	Full	Upstream	Dnstream	Above	Hours	Capacity
	Ends	Full	Normal	Flow	Limited			
STM-1101-1102	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1102-1103	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1103-1104	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1104-1105	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1105-1106	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1106-HW101	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1201-1202	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1202-1204	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1203-1204	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1204-1210	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1205-1207	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1206-1207	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1207-1209	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1208-1209	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1209-1210	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1210-1218	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1211-1213	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1212-1213	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1213-1216	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1214-1216	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1215-1216	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1216-1217	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1217-1218	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1218-1220	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1219-1220	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1220-1221	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1221-1222	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1222-1223	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1223-1224	2.00	2.00	2.00	2.00	0.01	0.01	2.00	
STM-1224-1230	2.00	2.00	2.00	2.00	0.01	0.01	2.00	
STM-1227-1228	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1228-1229	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-1229-1230	2.00	2.00	2.00	2.00	0.01	0.01	2.00	
STM-1230-HW102	2.00	2.00	2.00	2.00	0.01	0.01	0.01	
STM-2101-2102	2.00	2.00	2.00	2.00	0.01	0.01	0.01	

1941	STM-2102-2103	2.00	2.00	2.00	0.01	0.01
1942	STM-2103-2104	2.00	2.00	2.00	0.01	0.01
1943	STM-2104-2108	2.00	2.00	2.00	0.01	0.01
1944	STM-2105-2106	2.00	2.00	2.00	0.01	0.01
1945	STM-2106-2107	2.00	2.00	2.00	0.01	0.01
1946	STM-2107-2108	2.00	2.00	2.00	0.01	0.01
1947	STM-2108-2114	2.00	2.00	2.00	0.01	2.00
1948	STM-2109-2111	2.00	2.00	2.00	0.01	0.01
1949	STM-2110-2111	2.00	2.00	2.00	0.01	0.01
1950	STM-2111-2112	2.00	2.00	2.00	0.01	0.01
1951	STM-2112-2113	2.00	2.00	2.00	0.01	0.01
1952	STM-2113-2114	2.00	2.00	2.00	0.01	0.01
1953	STM-2114-HW201	2.00	2.00	2.00	0.01	0.01
1954	STM-2201-2202	2.00	2.00	2.00	0.01	0.01
1955	STM-2202-2204	2.00	2.00	2.00	0.01	0.01
1956	STM-2203-2204	2.00	2.00	2.00	0.01	0.01
1957	STM-2204-2207	2.00	2.00	2.00	0.01	0.01
1958	STM-2205-2206	2.00	2.00	2.00	0.01	0.01
1959	STM-2206-2207	2.00	2.00	2.00	0.01	0.01
1960	STM-2207-2210	2.00	2.00	2.00	0.01	0.01
1961	STM-2208-2209	2.00	2.00	2.00	0.01	0.01
1962	STM-2209-2210	2.00	2.00	2.00	0.01	0.01
1963	STM-2210-2213	2.00	2.00	2.00	0.01	0.01
1964	STM-2211-2212	2.00	2.00	2.00	0.01	0.01
1965	STM-2212-2213	2.00	2.00	2.00	0.01	0.01
1966	STM-2213-2215	2.00	2.00	2.00	0.01	0.01
1967	STM-2214-2215	2.00	2.00	2.00	0.01	0.01
1968	STM-2215-2216	2.00	2.00	2.00	0.01	0.01
1969	STM-2216-2217	2.00	2.00	2.00	0.01	0.01
1970	STM-2217-2218	2.00	2.00	2.00	0.01	0.02
1971	STM-2218-2225	2.00	2.00	2.00	0.01	2.00
1972	STM-2219-2221	2.00	2.00	2.00	0.01	0.01
1973	STM-2220-2221	2.00	2.00	2.00	0.01	0.01
1974	STM-2221-2222	2.00	2.00	2.00	0.01	0.01
1975	STM-2222-2223	2.00	2.00	2.00	0.01	0.01
1976	STM-2223-2224	2.00	2.00	2.00	0.01	0.01
1977	STM-2224-2225	2.00	2.00	2.00	0.01	0.01
1978	STM-2225-HW202	2.00	2.00	2.00	0.01	0.01
1979	STM-2301-2302	2.00	2.00	2.00	0.01	0.01
1980	STM-2302-2304	2.00	2.00	2.00	0.01	0.01
1981	STM-2303-2304	2.00	2.00	2.00	0.01	0.01
1982	STM-2304-2308	2.00	2.00	2.00	0.01	0.01
1983	STM-2305-2306	2.00	2.00	2.00	0.01	0.01
1984	STM-2306-2308	2.00	2.00	2.00	0.01	0.01
1985	STM-2307-2308	2.00	2.00	2.00	0.01	0.01
1986	STM-2308-2312	2.00	2.00	2.00	0.01	0.01
1987	STM-2309-2310	2.00	2.00	2.00	0.01	0.01
1988	STM-2310-2312	2.00	2.00	2.00	0.01	0.01
1989	STM-2311-2312	2.00	2.00	2.00	0.01	0.01
1990	STM-2312-2316	2.00	2.00	2.00	0.01	0.01
1991	STM-2313-2314	2.00	2.00	2.00	0.01	0.01
1992	STM-2314-2316	2.00	2.00	2.00	0.01	0.01
1993	STM-2315-2316	2.00	2.00	2.00	0.01	0.01
1994	STM-2316-2318	2.00	2.00	2.00	0.01	0.01
1995	STM-2317-2318	2.00	2.00	2.00	0.01	0.01
1996	STM-2317-2323	2.00	2.00	2.00	0.01	0.01
1997	STM-2318-2319	2.00	2.00	2.00	0.01	0.01
1998	STM-2319-2320	2.00	2.00	2.00	0.01	0.01
1999	STM-2320-2321	2.00	2.00	2.00	0.01	2.00
2000	STM-2321-2327	2.00	2.00	2.00	0.01	2.00
2001	STM-2322-2323	2.00	2.00	2.00	0.01	0.01
2002	STM-2323-2324	2.00	2.00	2.00	0.01	0.01
2003	STM-2324-2325	2.00	2.00	2.00	0.01	0.01
2004	STM-2325-2326	2.00	2.00	2.00	0.01	0.01
2005	STM-2326-2327	2.00	2.00	2.00	0.01	0.02
2006	STM-2327-HW203	2.00	2.00	2.00	0.01	0.01

2007	STM-3101-3102	2.00	2.00	2.00	0.01	0.01
2008	STM-3102-3103	2.00	2.00	2.00	0.01	0.01
2009	STM-3103-3104	2.00	2.00	2.00	0.01	0.01
2010	STM-3104-HW301	2.00	2.00	2.00	0.01	0.01
2011	STM-3105-3107	2.00	2.00	2.00	0.01	0.01
2012	STM-3106-3107	2.00	2.00	2.00	0.01	0.01
2013	STM-3107-3108	2.00	2.00	2.00	0.01	0.01
2014	STM-3108-3109	2.00	2.00	2.00	0.01	0.01
2015	STM-3109-3104	2.00	2.00	2.00	0.01	0.01
2016	STM-3150-HW302	2.00	2.00	2.00	0.01	0.01
2017	STM-3201-3202	2.00	2.00	2.00	0.01	0.01
2018	STM-3202-3204	2.00	2.00	2.00	0.01	0.01
2019	STM-3203-3204	2.00	2.00	2.00	0.01	0.01
2020	STM-3204-3208	2.00	2.00	2.00	0.01	0.01
2021	STM-3205-3206	2.00	2.00	2.00	0.01	0.01
2022	STM-3206-3208	2.00	2.00	2.00	0.01	0.01
2023	STM-3207-3208	2.00	2.00	2.00	0.01	0.01
2024	STM-3208-3209	2.00	2.00	2.00	0.01	0.01
2025	STM-3209-3210	2.00	2.00	2.00	0.01	0.01
2026	STM-3210-3150	2.00	2.00	2.00	0.01	0.01
2027	STM-3211-3212	2.00	2.00	2.00	0.01	0.01
2028	STM-3212-3213	2.00	2.00	2.00	0.01	0.01
2029	STM-3213-3214	2.00	2.00	2.00	0.01	0.01
2030	STM-3214-3150	2.00	2.00	2.00	0.01	2.00
2031	STM-3301-3303	2.00	2.00	2.00	0.01	0.01
2032	STM-3302-3303	2.00	2.00	2.00	0.01	0.01
2033	STM-3303-3305	2.00	2.00	2.00	0.01	0.01
2034	STM-3304-3305	2.00	2.00	2.00	0.01	0.01
2035	STM-3305-3307	2.00	2.00	2.00	0.01	0.01
2036	STM-3306-3307	2.00	2.00	2.00	0.01	0.01
2037	STM-3307-3309	2.00	2.00	2.00	0.01	0.01
2038	STM-3308-3309	2.00	2.00	2.00	0.01	0.01
2039	STM-3309-3313	2.00	2.00	2.00	0.01	0.01
2040	STM-3310-3311	2.00	2.00	2.00	0.01	0.01
2041	STM-3311-3312	2.00	2.00	2.00	0.01	0.01
2042	STM-3312-3313	2.00	2.00	2.00	0.01	0.01
2043	STM-3313-3314	2.00	2.00	2.00	0.01	2.00
2044	STM-3314-3319	2.00	2.00	2.00	0.01	0.01
2045	STM-3315-3317	2.00	2.00	2.00	0.01	0.01
2046	STM-3316-3317	2.00	2.00	2.00	0.01	0.01
2047	STM-3317-3318	2.00	2.00	2.00	0.01	0.01
2048	STM-3318-3319	2.00	2.00	2.00	0.01	2.00
2049	STM-3319-HW303	2.00	2.00	2.00	0.01	0.01
2050	STM-6101-6106	2.00	2.00	2.00	0.01	0.01
2051	STM-6102-6103	2.00	2.00	2.00	0.01	0.01
2052	STM-6103-6101	2.00	2.00	2.00	0.01	0.01
2053	STM-6104-6108	2.00	2.00	2.00	0.01	0.01
2054	STM-6106-6107	2.00	2.00	2.00	0.01	0.01
2055	STM-6107-6108	2.00	2.00	2.00	0.01	1.83
2056	STM-6108-HW601	2.00	2.00	2.00	0.01	0.01
2057	STM-6150-6104	2.00	2.00	2.00	0.01	0.01
2058	STM-6152-6150	2.00	2.00	2.00	0.01	0.01
2059	STM-6201-6202	2.00	2.00	2.00	0.01	0.01
2060	STM-6202-6250	2.00	2.00	2.00	0.01	0.01
2061	STM-6204-6205	2.00	2.00	2.00	0.01	0.01
2062	STM-6205-6206	2.00	2.00	2.00	0.01	0.01
2063	STM-6206-6207	2.00	2.00	2.00	0.01	0.01
2064	STM-6207-6215	2.00	2.00	2.00	0.01	0.01
2065	STM-6210-6213	2.00	2.00	2.00	0.01	0.01
2066	STM-6211-6212	2.00	2.00	2.00	0.01	0.01
2067	STM-6212-6213	2.00	2.00	2.00	0.01	0.01
2068	STM-6213-6215	2.00	2.00	2.00	0.01	0.01
2069	STM-6214-6215	2.00	2.00	2.00	0.01	0.01
2070	STM-6215-6217	2.00	2.00	2.00	0.01	0.01
2071	STM-6216-6217	2.00	2.00	2.00	0.01	0.01
2072	STM-6217-6218	2.00	2.00	2.00	0.01	0.01

2073	STM-6218-6223	2.00	2.00	2.00	0.01	2.00
2074	STM-6219-6220	2.00	2.00	2.00	0.01	0.01
2075	STM-6220-6221	2.00	2.00	2.00	0.01	0.01
2076	STM-6221-6222	2.00	2.00	2.00	0.01	0.01
2077	STM-6222-6223	2.00	2.00	2.00	0.01	0.01
2078	STM-6223-HW602	2.00	2.00	2.00	0.01	0.01
2079	STM-6250-6206	2.00	2.00	2.00	0.01	0.01
2080	STM-6301-6303	2.00	2.00	2.00	0.01	0.01
2081	STM-6302-6303	2.00	2.00	2.00	0.01	0.01
2082	STM-6303-6304	2.00	2.00	2.00	0.01	0.01
2083	STM-6304-6305	2.00	2.00	2.00	0.01	0.01
2084	STM-6305-6306	2.00	2.00	2.00	0.01	0.01
2085	STM-6306-6307	2.00	2.00	2.00	0.01	0.01
2086	STM-6307-6308	2.00	2.00	2.00	0.01	0.01
2087	STM-6308-6309	2.00	2.00	2.00	0.01	0.01
2088	STM-6309-6323	2.00	2.00	2.00	0.01	2.00
2089	STM-6310-6311	2.00	2.00	2.00	0.01	0.01
2090	STM-6311-6312	2.00	2.00	2.00	0.01	0.01
2091	STM-6312-6314	2.00	2.00	2.00	0.01	0.01
2092	STM-6314-6316	2.00	2.00	2.00	0.01	0.01
2093	STM-6315-6316	2.00	2.00	2.00	0.01	0.01
2094	STM-6316-6317	2.00	2.00	2.00	0.01	0.01
2095	STM-6317-6321	2.00	2.00	2.00	0.01	0.01
2096	STM-6318-6319	2.00	2.00	2.00	0.01	0.01
2097	STM-6319-6320	2.00	2.00	2.00	0.01	0.64
2098	STM-6320-6321	2.00	2.00	2.00	0.01	0.01
2099	STM-6321-6322	2.00	2.00	2.00	0.01	2.00
2100	STM-6322-6323	2.00	2.00	2.00	0.01	2.00
2101	STM-6323-HW603	2.00	2.00	2.00	0.01	0.01
2102	STM-6345-6314	2.00	2.00	2.00	0.01	0.01
2103	STM-6346-6345	2.00	2.00	2.00	0.01	0.01
2104	STM-6347-6346	2.00	2.00	2.00	0.01	0.01
2105	STM-7001-7002	2.00	2.00	2.00	0.01	0.01
2106	STM-7002-7003	2.00	2.00	2.00	0.01	0.01
2107	STM-7003-7004	2.00	2.00	2.00	0.01	0.01
2108	STM-7004-7005	2.00	2.00	2.00	0.01	0.01
2109	STM-7005-7008	2.00	2.00	2.00	0.01	0.01
2110	STM-7006-7007	2.00	2.00	2.00	0.01	0.01
2111	STM-7007-7008	2.00	2.00	2.00	0.01	0.01
2112	STM-7008-HW701	2.00	2.00	2.00	0.01	0.01

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2114

2115 Analysis begun on: Thu Mar 4 12:35:41 2021

2116 Analysis ended on: Thu Mar 4 12:36:05 2021

2117 Total elapsed time: 00:00:24